EAU

APRIL 2026

PROJECT ID: 1530-06-79

WITH: N/A

COUNTY: BUFFALO

ORDER OF SHEETS

TOTAL SHEETS = 130

23

N

DESIGN DESIGNATION

A.A.D.T.	(2022)	=	1880
A.A.D.T.	(2042)	=	1880
D.H.V.		=	282
D.D.		=	50/50
T.		=	22.5%
DESIGN SPEED		=	55 MPH
ESALS		=	820,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

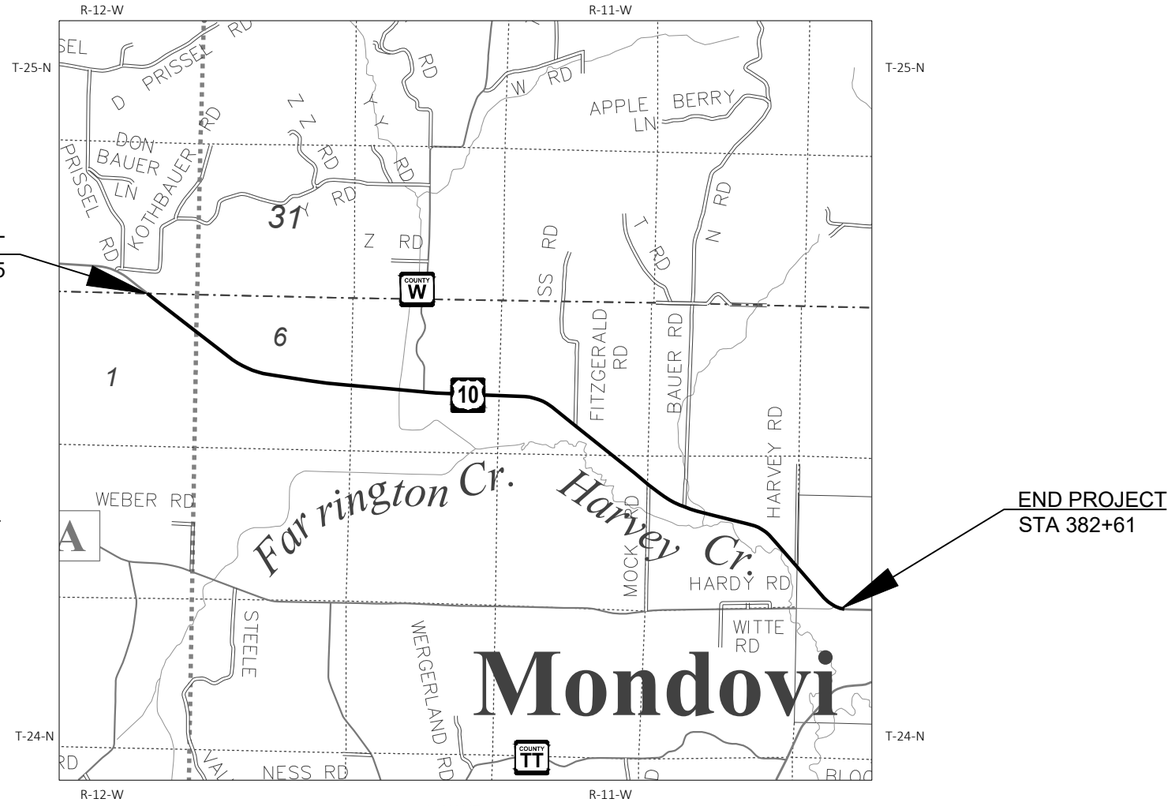
DURAND - MONDOVI

PEPIN COUNTY LINE TO CTH A

USH 10
BUFFALO COUNTY

STATE PROJECT NUMBER
1530-06-79

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1530-06-79		



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 5.217 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BUFFALO COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ORIGINAL PLANS PREPARED BY

cbs²

WISCONSIN
Geoff C. Rasmussen
E-45686
St. Paul
Minnesota
PROFESSIONAL ENGINEER

DATE: 10/16/2025 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CBS SQUARED, INC.
Designer	CBS SQUARED, INC.
Project Manager	JOHN BAINTER
Regional Examiner	SW REGION
Regional Supervisor	JOHN BAINTER

APPROVED FOR THE DEPARTMENT

DATE: 10/16/2025 (Signature)

E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 10/16/2025 12:26 PM

PLOT BY : GEOFF RASMUSSEN

PLOT NAME :

2

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. SURVEY MARKERS SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

THE EXISTING RIGHT OF WAY ON THIS PLAN IS APPROXIMATE AND BASED ON AVAILABLE PLAT INFORMATION.

THE CENTERLINE AS SHOWN IN THE PLANS MAY REQUIRE ADJUSTMENT TO MATCH FIELD CONDITIONS. ANY ADJUSTMENTS SHALL BE INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.

SUPERELEVATION RATES AS SHOWN ON THE PLAN SHEETS REPRESENT THE APPROXIMATE EXISTING RATES. EXISTING SUPERELEVATION RATES ARE TO BE MAINTAINED.

CROSS SLOPES AS SHOWN ON THE TYPICAL SECTION WILL VARY AT THE INTERSECTIONS.

THE LOCATIONS OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE DIMENSIONS OF BOX CULVERTS AS SHOWN IN THE PLAN ARE REPRESENTED AS WIDTH x HEIGHT. DIMENSIONS ARE BASED ON INSPECTION REPORTS AND AS-BUILTS, WHEN AVAILABLE, AND MAY REQUIRE FIELD VERIFICATION.

WHEN THE QUANTITY OF BASE AGGREGATE IS MEASURED BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED OR E-MATTED AS SPECIFIED IN PLANS. PAYMENT FOR RESTORATION ITEMS ARE INCLUDED IN BID ITEMS 'BARRIER SYSTEM GRADING SHAPING FINISHING' AND 'CLEANING DITCH'.

APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED PAVEMENT SURFACES AND 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

THE CONTRACTOR'S PAVING OPERATIONS 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.

STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
AH	AHEAD
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ASPH	ASPHALTIC
AVG	AVERAGE
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
BR	BRIDGE
CL OR C/L	CENTER LINE
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CR	CREEK
CABC	CRUSHED AGGREGATE BASE COURSE
CY OR CUYD	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
DIA	DIAMETER
DISCH	DISCHARGE
E	EAST
EB	EASTBOUND
EL OR ELEV	ELEVATION
EW	END WALL
ENT	ENTRANCE
EXC	EXCAVATION
EX	EXISTING
FERT	FERTILIZER
FE	FIELD ENTRANCE
FL OR F/L	FLOW LINE
FT	FOOT
HMA	HOT MIX ASPHALT
CWT	HUNDREDWEIGHT
INL	INLET
INV	INVERT
JCT	JUNCTION
LT	LEFT
L	LENGTH OF CURVE
LIN FT OR LF	LINEAR FOOT
LS	LUMP SUM
NC	NORMAL CROWN
N	NORTH
NB	NORTHBOUND
NO	NUMBER
PT	POINT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
LB	POUND
PE	PRIVATE ENTRANCE
R	RADIUS
RL OR R/L	REFERENCE LINE
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
SHLDR	SHOULDER
SB	SOUTHBOUND
SF OR SQ FT	SQUARE FEET
SY OR SQ YD	SQUARE YARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAY
SE	SUPERELEVATION
T	TANGENT
TEMP	TEMPORARY
USH	UNITED STATES HIGHWAY
V	VELOCITY OR DESIGN SPEED
VC	VERTICAL CURVE
WB	WESTBOUND
YD	YARD

UTILITY CONTACTS

ELECTRIC

RIVERLAND ENERGY COOPERATIVE - ELECTRICITY
TIM HOLTAN
N28988 STATE ROAD 93
P.O. BOX 277
ARCADIA, WI 54612-0277
(608) 323-3381
THOLTAN@RIVERLANDENERGY.COM

XCEL ENERGY - ELECTRICITY
JOHN KELSER
1414 W HAMILTON AVE
P.O. BOX 8
EAU CLAIRE, WI 54702
JOHN.KELSER@XCELENERGY.COM

DAIRYLAND POWER COOP - ELECTRICITY
MICHAEL LYDON
P.O. BOX 817
LA CROSSE, WI 54602-0817
(608) 787-1381
MICHAEL.LYDON@DAIRYLANDPOWER.COM

GAS/PETROLEUM

MIDWEST NATURAL GAS, INC. - GAS/PETROLEUM
NICK MAIER
3600 HWY 157
P.O. BOX 429
LA CROSSE, WI 54602-0429
(608) 781-1011
NICKM@MIDWESTNATURALGAS.COM

MIDWEST NATURAL GAS, INC. - GAS/PETROLEUM
AARON WELSH
3600 HWY 157
P.O. BOX 429
LA CROSSE, WI 54602-0429
(608) 781-1011
AARONW@MIDWESTNATURALGAS.COM

COMMUNICATIONS

CHIPPEWA VALLEY CABLE, INC - COMMUNICATION LINE
MATT HOYT
318 3RD AVE W
DURAND, WI 54736
(715) 672-4204
MATT@NTECFIBER.COM

FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
MICHAEL PEART
106 N 5TH STREET
ATWATER, MN 56209
(320) 441-8788
MICHAEL.PEART@FTR.COM

NTEC - COMMUNICATION LINE
MATT HOYT
318 3RD AVE W
DURAND, WI 54736
(715) 672-4204
MATT@NTECFIBER.COM

WINDSTREAM NTI, LLC - COMMUNICATION LINE
ERIC BECKER
314 N DANZ AVENUE
GREEN BAY, WI 54302
(920) 461-9825
ERIC.BECKER@WINDSTREAM.COM

WINDSTREAM KDL, LLC - COMMUNICATION LINE
ERIC BECKER
314 N DANZ AVENUE
GREEN BAY, WI 54302
(920) 461-9825
ERIC.BECKER@WINDSTREAM.COM

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 24.69 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.82 ACRES

AREA CONTACTS

WISDOT CONTACT

JOHN BAINTER, PE
WISDOT SOUTHWEST REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 785-9729
JOHN.BAINTER@DOT.WI.GOV

DESIGN CONTACT

GEOFF RASMUSSEN, PE
CBS SQUARED, INC.
6115 FIRST AVENUE NE
SUITE 415
MINNEAPOLIS, MN 55413
(715) 492-2400
GRASMUSSEN@CBSSQUAREDINC.COM

WISCONSIN DNR CONTACT

AMY LESIK
DNR NORTHWEST REGION
1300 WEST CLAIREMONT AVE
EAU CLAIRE, WI 54701
(715)836-6571
(715)495-1903
AMYL.LESIK@WISCONSIN.GOV

ORDER OF SECTION 2 SHEETS

CONTRACTOR TO PROTECT DN7077 GPS AND KEEP CONSTRUCTION EQUIPMENT AT LEAST 10 FEET AWAY FROM DN7077 GPS.

ENSURE THAT DN7077 GPS IS/ARE NOT DISTURBED, BUMPED OR MOVED DURING THE DURATION OF THE PROJECT. NOTIFY JACOB ROCKWEILER IMMEDIATELY IF DN7077 GPS IS/ARE DISTURBED, BUMPED OR MOVED DURING CONSTRUCTION OPERATIONS.

JACOB ROCKWEILER, P.E., WISCONSIN HEIGHT MODERNIZATION PROGRAM MANAGER WITH THE WISCONSIN DEPARTMENT OF TRANSPORTATION WHOSE PHONE NUMBER IS (608) 516-6362 AND EMAIL IS JACOB.ROCKWEILER@DOT.WI.GOV

BEGIN PROJECT
STA 107+15
Y=406388.637
X=580066.026

PEPIN COUNTY
BUFFALO COUNTY

KOTTNBAUER RD

APPROXIMATE FLOODPLAIN LIMITS

BEAM GUARD

ENVIRONMENTALLY SENSITIVE AREA
PROJECT BEGIN TO STA 114+50 LT & RT

USH 10

STA 158+08
EXISTING STRUCTURE C-06-228 (NO WORK)

STA 193+25
EXISTING STRUCTURE C-06-225 (NO WORK)

ENVIRONMENTALLY SENSITIVE AREA
STA 191+60 TO STA 211+60 LT & RT

HARVEY CREEK

CTH W

BEAM GUARD

APPROXIMATE FLOODPLAIN LIMITS

STA 213+57
EXISTING STRUCTURE C-06-231
CLEANING BOX CULVERTS REQ'D

APPROXIMATE FLOODPLAIN LIMITS

STA 201+50
EXISTING STRUCTURE B-06-111 (NO WORK)

DN7077 GPS MONUMENT

MATCHLINE 240+00

FITZGERALD RD

STA 243+04
EXISTING STRUCTURE C-06-229
CLEANING BOX CULVERTS REQ'D

FARRINGTON CREEK

STA 263+61
EXISTING STRUCTURE C-06-230
SEALING BOX CULVERT JOINTS REQ'D

ARCHAEOLOGICAL SITE

BEAM GUARD

DRIVEWAY RELOCATION

ARCHAEOLOGICAL SITE

HOLMES CREEK

ENVIRONMENTALLY SENSITIVE AREA
STA 311+00 TO STA 331+00 LT & RT

BAUER RD

STA 308+52
EXISTING STRUCTURE C-06-248
CLEANING BOX CULVERTS REQ'D

MOCK RD

BEAM GUARD

APPROXIMATE FLOODPLAIN LIMITS

USH 10

STA 320+89
EXISTING STRUCTURE B-06-112 (NO WORK)

ENVIRONMENTALLY SENSITIVE AREA
STA 331+00 TO STA 340+00 RT

HARVEY RD

STA 355+75
EXISTING STRUCTURE C-06-232
CLEANING BOX CULVERTS REQ'D

CITY OF MONDOVI

MCKINLEY ST

ENVIRONMENTALLY SENSITIVE AREA
STA 342+00 TO STA 362+00 RT

CTH A

END PROJECT
STA 382+61

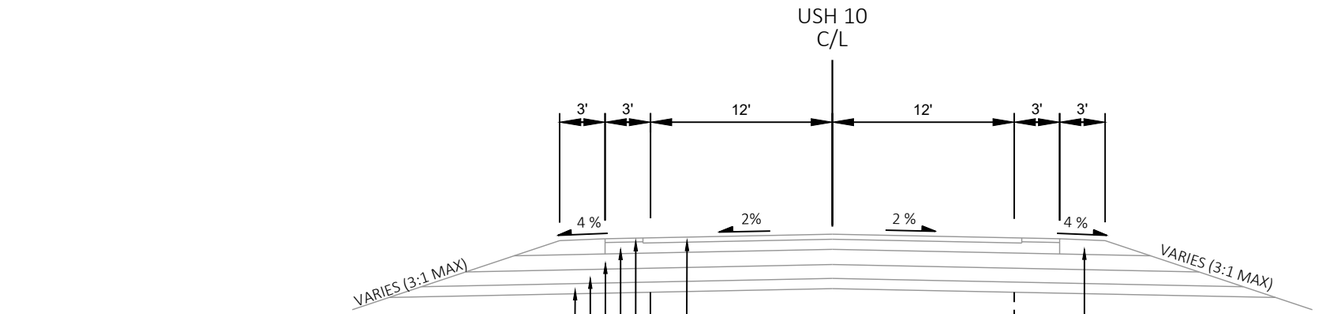
PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 01

PLOT DATE : 2/17/2026 5:27 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:1000 FT

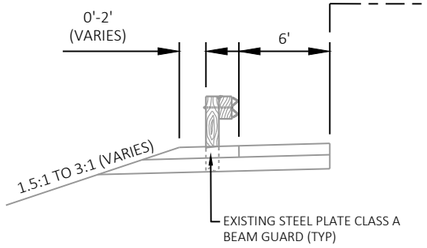
WISDOT/CADDS SHEET 42

2



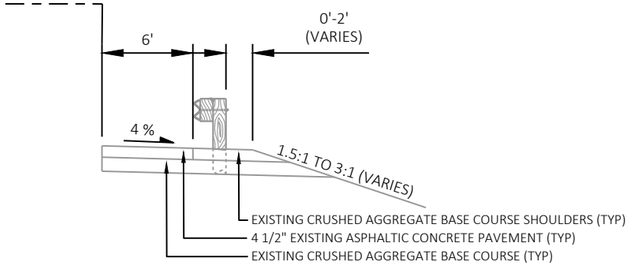
TYPICAL EXISTING SECTION

USH 10
STA 107+15 TO 201+39
STA 201+75 TO 320+34
STA 321+44 TO 360+78



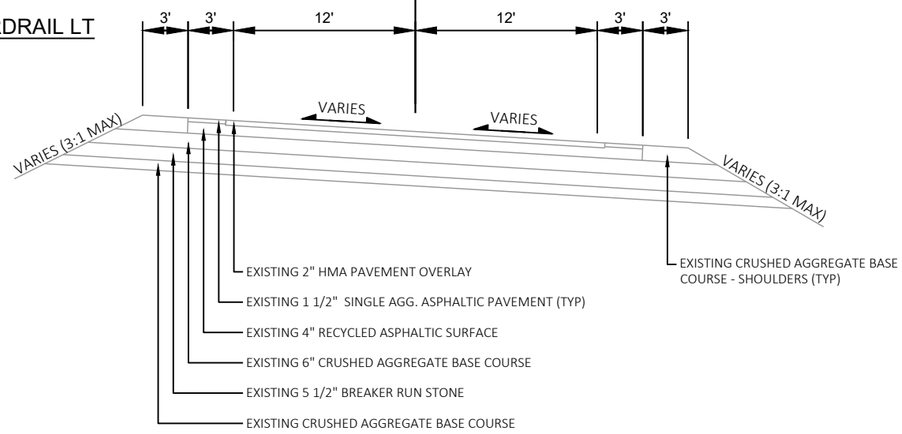
TYPICAL EXISTING PARTIAL SECTION - GUARDRAIL LT

USH 10
STA 156+93 TO 159+01
STA 200+56 TO 202+52
STA 262+65 TO 264+65



TYPICAL EXISTING PARTIAL SECTION - GUARDRAIL RT

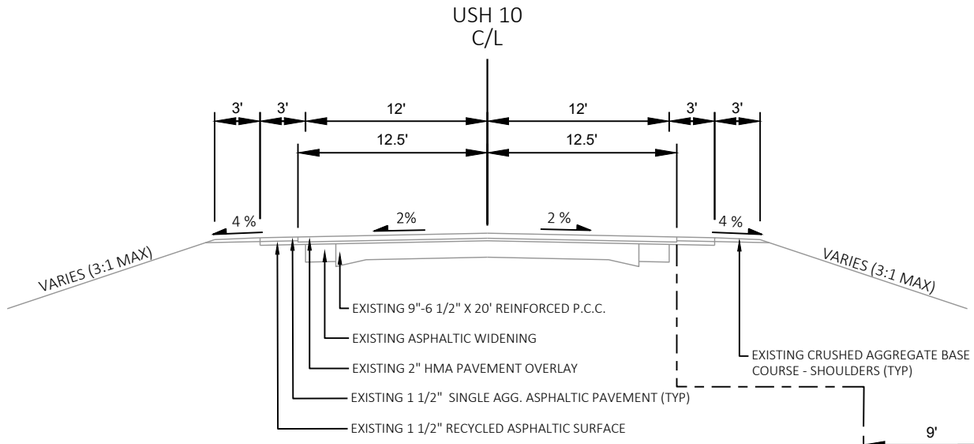
USH 10
STA 156+99 TO 159+10
STA 164+05 TO 166+14
STA 200+59 TO 202+56
STA 210+30 TO 214+22
STA 262+42 TO 263+91
STA 307+52 TO 309+66



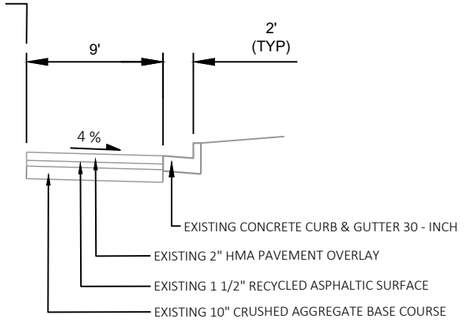
TYPICAL EXISTING SUPERELEVATED SECTION

USH 10
STA 107+15 TO 201+39
STA 201+75 TO 320+34
STA 321+44 TO 360+78

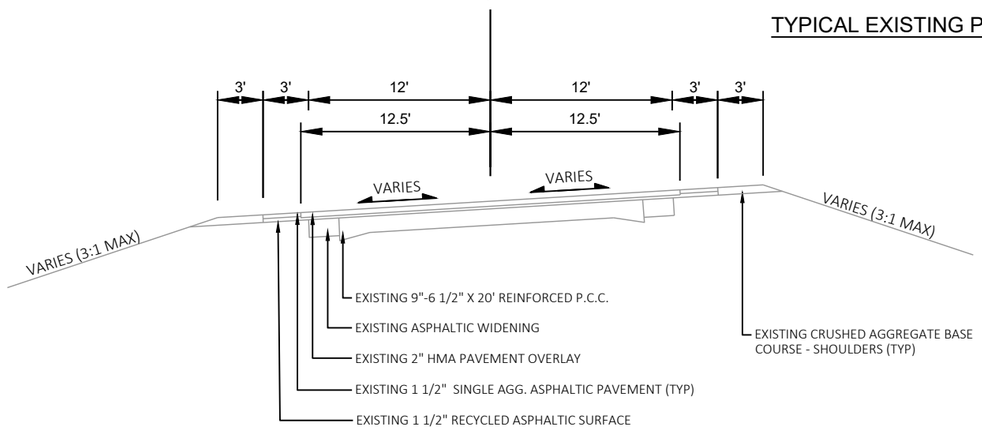
PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	TYPICAL SECTIONS	SHEET 4	E



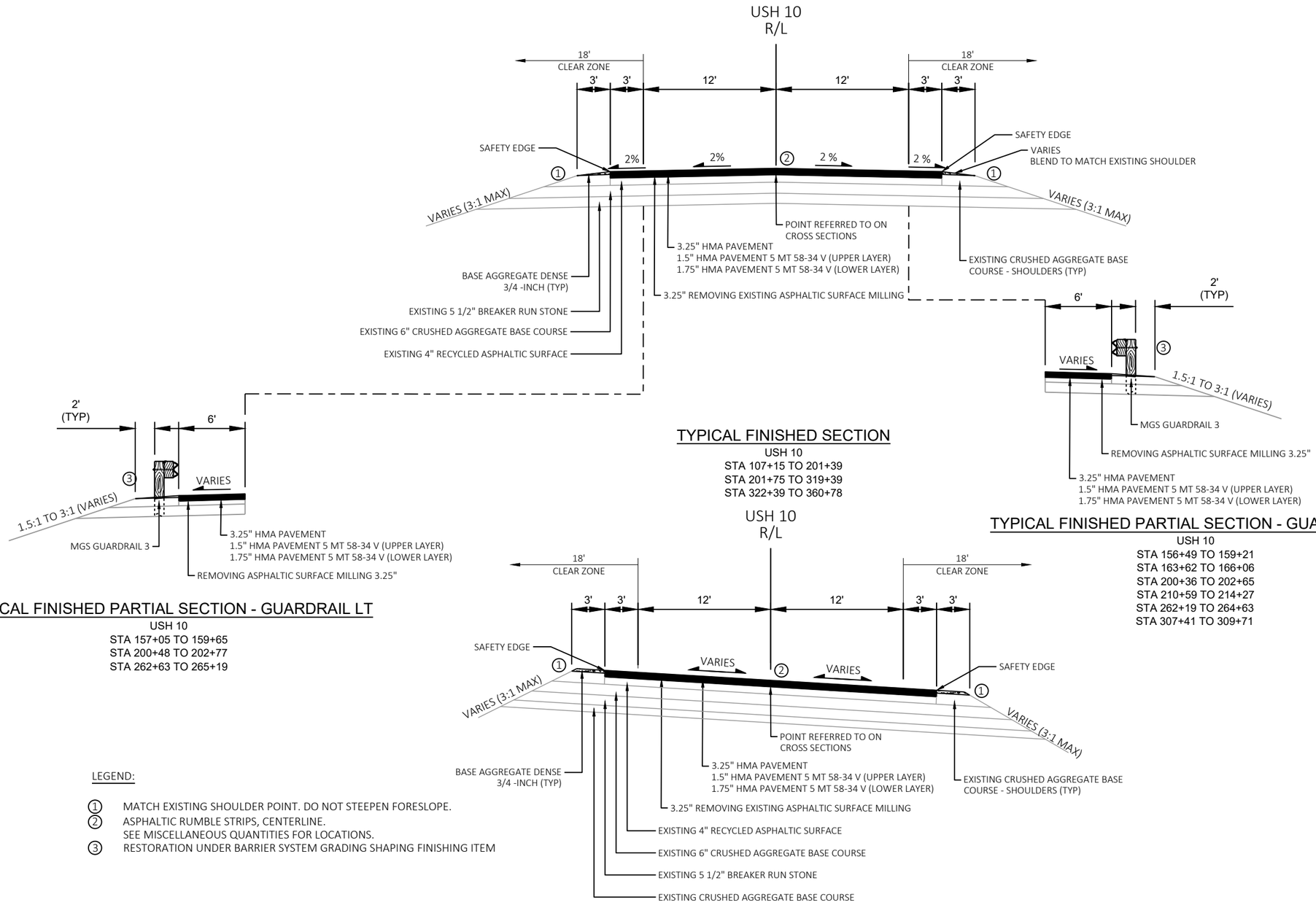
TYPICAL EXISTING SECTION
USH 10
STA 360+78 TO 382+61



TYPICAL EXISTING PARTIAL SECTION - CURB & GUTTER RT
USH 10
STA 377+90 TO 382+61



TYPICAL EXISTING SUPERELEVATED SECTION
USH 10
STA 360+78 TO 382+61



TYPICAL FINISHED SECTION

USH 10
STA 107+15 TO 201+39
STA 201+75 TO 319+39
STA 322+39 TO 360+78

TYPICAL FINISHED PARTIAL SECTION - GUARDRAIL RT

USH 10
STA 156+49 TO 159+21
STA 163+62 TO 166+06
STA 200+36 TO 202+65
STA 210+59 TO 214+27
STA 262+19 TO 264+63
STA 307+41 TO 309+71

TYPICAL FINISHED PARTIAL SECTION - GUARDRAIL LT

USH 10
STA 157+05 TO 159+65
STA 200+48 TO 202+77
STA 262+63 TO 265+19

LEGEND:

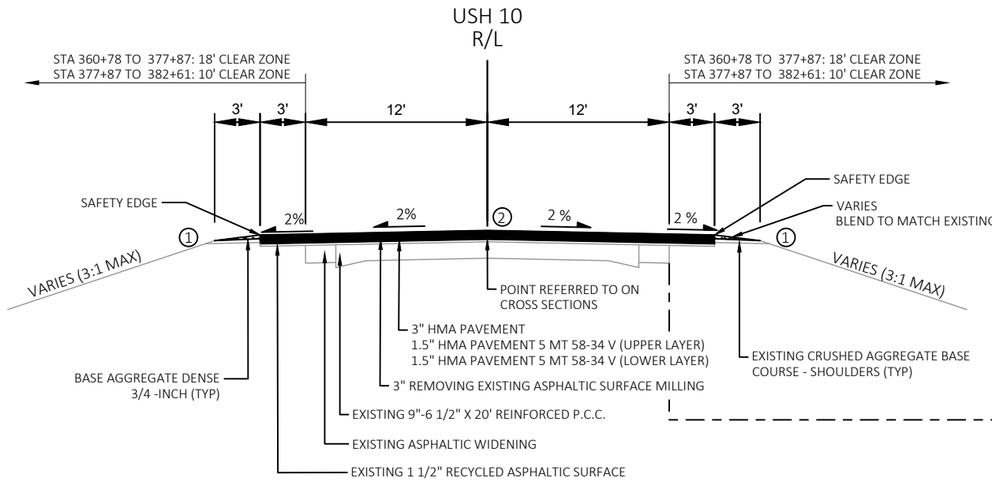
① MATCH EXISTING SHOULDER POINT. DO NOT STEEPEN FORESLOPE.
② ASPHALTIC RUMBLE STRIPS, CENTERLINE.
SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS.
③ RESTORATION UNDER BARRIER SYSTEM GRADING SHAPING FINISHING ITEM

TYPICAL FINISHED SUPERELEVATED SECTION

USH 10
STA 107+15 TO 201+39
STA 201+75 TO 320+34
STA 321+44 TO 360+78

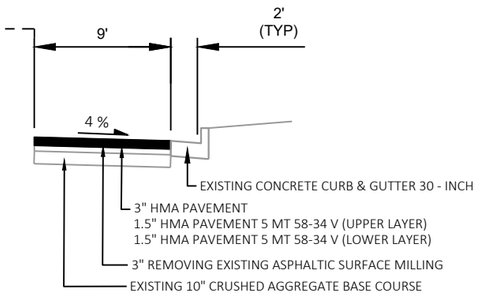
PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	TYPICAL SECTIONS	SHEET 6	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 03
PLOT DATE : 2/17/2026 5:27 PM
PLOT BY : CHRIS BURNS
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



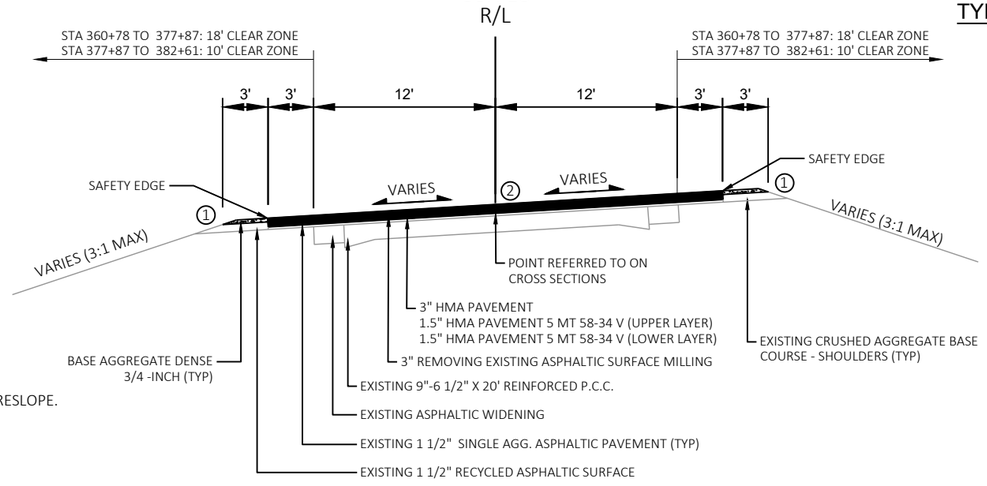
TYPICAL FINISHED SECTION

USH 10
STA 360+78 TO 382+61



TYPICAL FINISHED PARTIAL SECTION - CURB & GUTTER RT

USH 10
STA 377+90 TO 382+61



LEGEND:

① MATCH EXISTING SHOULDER POINT. DO NOT STEEPEN FORESLOPE.
② ASPHALTIC RUMBLE STRIPS, CENTERLINE.
SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS.

TYPICAL FINISHED SUPERELEVATED SECTION

USH 10
STA 360+78 TO 382+61

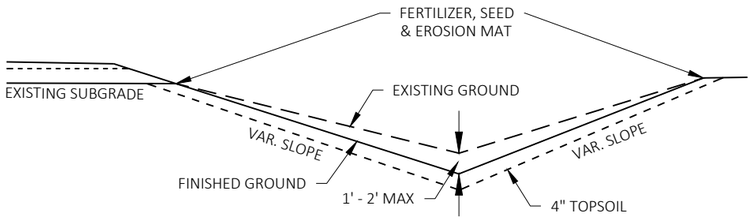
PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	TYPICAL SECTIONS	SHEET 7	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 04
PLOT DATE : 2/17/2026 5:27 PM
PLOT BY : CHRIS BURNS
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

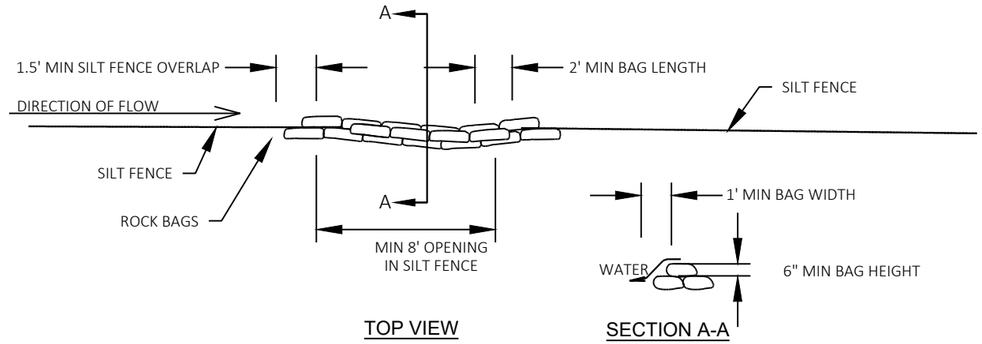
USH 10						
SUPERELEVATION TABLE						
	STATION	LEFT SHOULDER	LEFT LANE	RIGHT LANE	RIGHT SHOULDER	NOTES
END NORMAL SHOULDER	139+45.54	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL CROWN	139+96.54	-4.0%	-2.0%	-2.0%	-4.0%	
LEVEL CROWN	140+47.54	-4.0%	-2.0%	0.0%	-4.0%	
REVERSE CROWN	140+98.54	-4.0%	-2.0%	2.0%	-4.0%	
BEGIN FULL SUPER	141+49.54	-4.0%	-4.0%	4.0%	-4.0%	
END FULL SUPER	155+07.88	-4.0%	-4.0%	4.0%	-4.0%	
REVERSE CROWN	155+58.88	-4.0%	-2.0%	2.0%	-4.0%	
LEVEL CROWN	156+09.88	-4.0%	-2.0%	0.0%	-4.0%	
BEGIN NORMAL CROWN	156+60.88	-4.0%	-2.0%	-2.0%	-4.0%	
BEGIN NORMAL SHOULDER	157+11.88	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL SHOULDER	168+38.24	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL CROWN	168+89.24	-4.0%	-2.0%	-2.0%	-2.0%	
LEVEL CROWN	169+40.24	-4.0%	-2.0%	0.0%	0.0%	
BEGIN FULL SUPER	169+91.24	-4.0%	-2.0%	2.0%	2.0%	
END FULL SUPER	178+09.91	-4.0%	-2.0%	2.0%	2.0%	
LEVEL CROWN	178+60.91	-4.0%	-2.0%	0.0%	0.0%	
BEGIN NORMAL CROWN	179+11.91	-4.0%	-2.0%	-2.0%	-2.0%	
BEGIN NORMAL SHOULDER	179+62.91	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL SHOULDER	210+24.44	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL CROWN	210+75.44	-4.0%	-2.0%	-2.0%	-4.0%	
LEVEL CROWN	211+26.44	-4.0%	-2.0%	0.0%	-4.0%	
BEGIN FULL SUPER	211+52.44	-4.0%	-2.0%	1.0%	-4.0%	
END FULL SUPER	216+49.78	-4.0%	-2.0%	1.0%	-4.0%	
LEVEL CROWN	216+75.78	-4.0%	-2.0%	0.0%	-4.0%	
BEGIN NORMAL CROWN	217+00.78	-4.0%	-2.0%	-2.0%	-4.0%	
BEGIN NORMAL SHOULDER	217+51.78	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL SHOULDER	243+15.47	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL CROWN	243+66.47	-2.0%	-2.0%	-2.0%	-4.0%	
LEVEL CROWN	244+17.47	0.0%	0.0%	-2.0%	-4.0%	
REVERSE CROWN	244+68.47	2.0%	2.0%	-2.0%	-4.0%	
BEGIN FULL SUPER	245+52.47	5.3%	5.3%	-5.3%	-5.3%	
END FULL SUPER	255+10.00	5.3%	5.3%	-5.3%	-5.3%	
REVERSE CROWN	255+94.00	2.0%	2.0%	-2.0%	-4.0%	
LEVEL CROWN	256+45.00	0.0%	0.0%	-2.0%	-4.0%	
BEGIN NORMAL CROWN	256+96.00	-2.0%	-2.0%	-2.0%	-4.0%	
BEGIN NORMAL SHOULDER	257+47.00	-4.0%	-2.0%	-2.0%	-4.0%	

USH 10						
SUPERELEVATION TABLE						
	STATION	LEFT SHOULDER	LEFT LANE	RIGHT LANE	RIGHT SHOULDER	NOTES
END NORMAL CROWN	301+08.51	-4.0%	-2.0%	-2.0%	-4.0%	
LEVEL CROWN	301+59.51	-4.0%	-2.0%	0.0%	-4.0%	
REVERSE CROWN	302+10.51	-4.0%	-2.0%	2.0%	-4.0%	
BEGIN FULL SUPER	302+56.51	-4.0%	-3.8%	3.8%	-4.0%	
END FULL SUPER	318+10.97	-4.0%	-3.8%	3.8%	-4.0%	
REVERSE CROWN	318+56.97	-4.0%	-2.0%	2.0%	-4.0%	
LEVEL CROWN	319+07.97	-4.0%	-2.0%	0.0%	-4.0%	
BEGIN NORMAL CROWN	319+58.97	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL SHOULDER	335+47.31	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL CROWN	335+98.31	-2.0%	-2.0%	-2.0%	-4.0%	
LEVEL CROWN	336+49.31	0.0%	0.0%	-2.0%	-4.0%	
REVERSE CROWN	337+00.31	2.0%	2.0%	-2.0%	-4.0%	
BEGIN FULL SUPER	337+97.31	5.8%	5.8%	-5.8%	-5.8%	
END FULL SUPER	345+72.23	5.8%	5.8%	-5.8%	-5.8%	
REVERSE CROWN	346+69.23	2.0%	2.0%	-2.0%	-4.0%	
LEVEL CROWN	347+20.23	0.0%	0.0%	-2.0%	-4.0%	
BEGIN NORMAL CROWN	347+71.23	-2.0%	-2.0%	-2.0%	-4.0%	
BEGIN NORMAL SHOULDER	348+22.23	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL SHOULDER	372+95.85	-4.0%	-2.0%	-2.0%	-4.0%	
END NORMAL CROWN	373+34.85	-4.0%	-2.0%	-2.0%	-2.0%	
LEVEL CROWN	373+73.85	-4.0%	-2.0%	0.0%	0.0%	
REVERSE CROWN	374+12.85	-4.0%	-2.0%	2.0%	2.0%	
BEGIN FULL SUPER	374+31.85	-4.0%	-3.0%	3.0%	3.0%	
END PROJECT	382+61	-4.0%	-3.0%	3.0%	3.0%	MATCH EXISTING

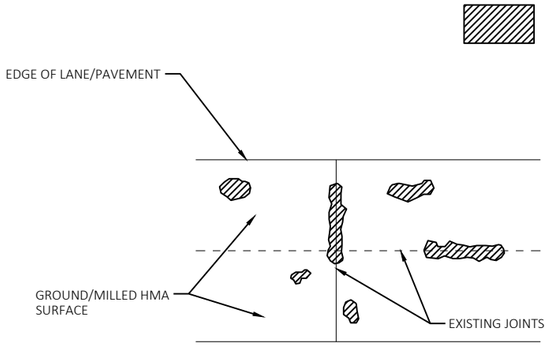
NOTE: SUPERELEVATION RATES AS SHOWN ON THE PLAN SHEETS REPRESENT THE APPROXIMATE EXISTING RATES. EXISTING SUPERELEVATION RATES ARE TO BE MAINTAINED. SUPERELEVATIONS TO BE FIELD VERIFIED.



DITCH CLEANING DETAIL



ROCK BAGS USED FOR SILT FENCE RELIEF

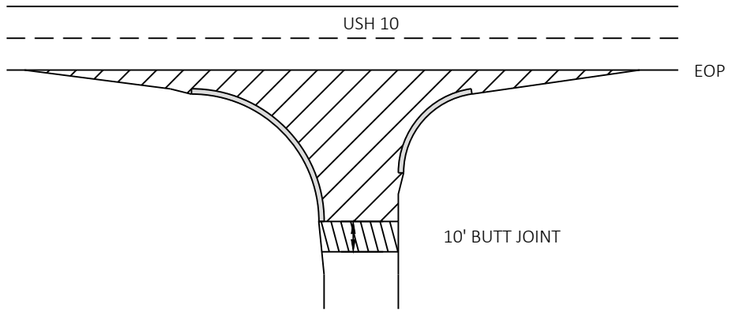


NOTES

-AFTER THE EXISTING PAVEMENT IS MILLED/GROUND TO DEPTH SPECIFIED ON TYPICAL, REMOVE REMAINDER OF CRACKFILL, PATCHING AND UNSOUND HMA.

-REPAVE AREAS WITH ASPHALTIC SURFACE PAID SEPARATELY FROM THIS ITEM.

PREPARE FOUNDATION FOR ASPHALTIC PAVING



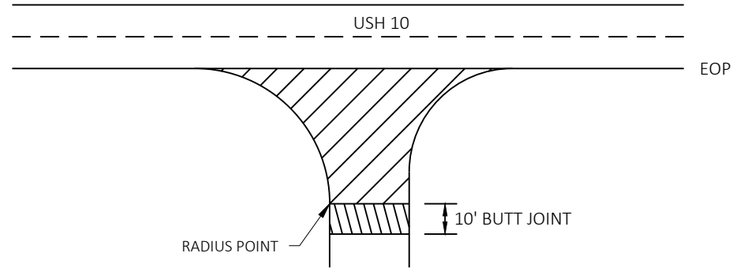
REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE BUTT JOINT IS NOT REQUIRED

SAWING IS INCIDENTAL TO REMOVING ASPHALTIC SURFACE BUTT JOINTS BID ITEM.

SIDE ROADS - WITH CURB AND GUTTER



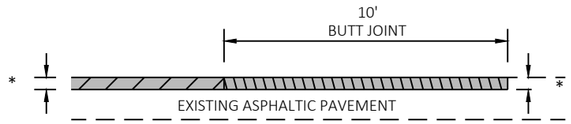
REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE BUTT JOINT IS NOT REQUIRED

SAWING IS INCIDENTAL TO REMOVING ASPHALTIC SURFACE BUTT JOINTS BID ITEM.

SIDE ROADS - WITHOUT CURB AND GUTTER



HMA PAVEMENT

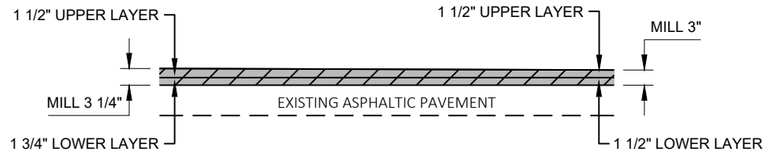
REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

* STA 107+15 TO STA 360+78 = 3.25"
STA 360+78 TO STA 382+61 = 3"

NOTE:
SAWING IS INCIDENTAL TO REMOVING ASPHALTIC SURFACE BUTT JOINTS BID ITEM.

BUTT JOINT
SIDEROADS
BEGIN / END PROJECT LIMITS



HMA PAVEMENT

REMOVING ASPHALTIC SURFACE MILLING

MILL DEPTH TRANSITION DETAIL
USH 10 STA 360+78

2

2

FITZGERALD RD

N

USH 10

265+50

266+00

266+50

STA 265+47.09, 20.35' RT

STA 265+96.92, 18.00' RT

NTEC (COMMUNICATION)
(APPROXIMATE LOCATION)

R30'

R30'

FO FO FO FO FO FO FO FO

SLOPE INTERCEPT

STA 265+30.00
45.00' RT

STA 265+60, 45.00' RT

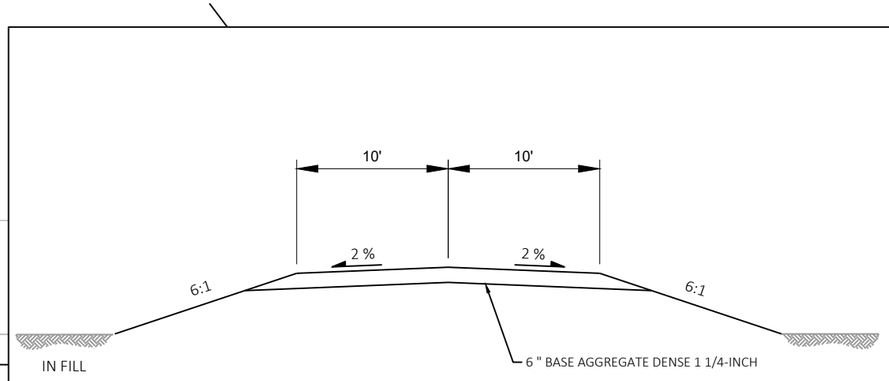
STA 265+80, 45.00' RT

STA 266+10.00
45.00' RT

OH OH OH OH OH OH OH OH

APPROXIMATE EXISTING R/W

RIVERLAND ENERGY CO-OP
(ELECTRIC)



TYPICAL SECTION FOR FIELD ENTRANCE
STA 265+70

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	DRIVEWAY DETAILS	SHEET 11	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\021003-CD-DWY.DWG
LAYOUT NAME - 01

PLOT DATE : 2/17/2026 5:27 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- SILT FENCE
- WATER FLOW ARROW
- EROSION MAT URBAN CLASS I TYPE A
- ROCK BAGS USED FOR SILT FENCE RELIEF
- TURTLE EXCLUSION FENCE

NOTE: ALL DISTURBED AREAS NOT SHOWN TO BE RESTORED WITH EROSION MAT SHALL BE RESTORED WITH MULCH, OR AS DIRECTED BY THE ENGINEER. ALL RESTORATION ITEMS ARE INCLUDED IN BID ITEM 'BARRIER SYSTEM GRADING SHAPING FINISHING'.

N

PT: 155+41.88

SLOPE INTERCEPT (TYP)

EAT POST #1 +96.52, -20.0'LT

EAT POST #5 +21.50, -19.0'LT

EAT POST #9 +46.48, -18.0'LT

REMOVE EXISTING GUARDRAIL

FRONTIER (COMMUNICATIONS) (APPROXIMATE LOCATION)

MGS GUARDRAIL 3 L

STA 158+62.10, -18.00' LT

MGS GUARDRAIL 3

EAT POST #9 +15.23, -18.0'LT

EAT POST #5 +40.21, -19.0'LT

EAT POST #1 +65.19, -20.0'LT

EXISTING FENCE TO REMAIN

MGS GUARDRAIL TERMINAL EAT

USH 10

55

160

MGS GUARDRAIL TERMINAL EAT

MGS GUARDRAIL 3

MGS GUARDRAIL 3 L

MGS GUARDRAIL 3

MGS GUARDRAIL TERMINAL EAT

EXISTING FENCE TO REMAIN

EAT POST #1 +40.51, 20.0'RT

EAT POST #5 +65.49, 19.0'RT

EAT POST #9 +90.47, 18.0'RT

EAT POST #1 +21.68, 20.0'RT

EXISTING R/W (TYP)

REMOVE EXISTING GUARDRAIL

STA 157+43.59, 18.00' RT

NTEC (COMMUNICATIONS) (APPROXIMATE LOCATION)

28'

8'

STA 158+08 C-06-228
EXISTING 72" X 144" BOX CULVERT
RIPRAP MEDIUM REQ'D RT

EAT POST #9 +71.72, 18.0'RT

EAT POST #5 +90.45, 19.0'RT

STA 158+56.09, 18.00' RT

RIVERLAND ENERGY CO-OP (ELECTRIC)

EXISTING FENCE TO REMAIN

STA 165+10
EXISTING 60" X 42" BOX CULVERT
CLEANING BOX CULVERT REQ'D

N

FRONTIER (COMMUNICATIONS) (APPROXIMATE LOCATION)

USH 10

MGS GUARDRAIL TERMINAL EAT

MGS GUARDRAIL TERMINAL EAT

EAT POST #1 +59.39, 20.0'RT

EAT POST #9 +09.35, 18.0'RT

EAT POST #5 +84.37, 19.0'RT

CULVERT OVERBURDEN DEPTH LESS THAN 3'. DO NOT INSTALL MGS POST NEAR STA 165+09. SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL", DETAIL "MISSING POST IN MGS GUARDRAIL NEAR EAT" FOR MORE DETAILS

EAT POST #9 +53.10, 18.0'RT

EAT POST #1 +03.06, 20.0'RT

EAT POST #5 +78.08, 19.0'RT

SLOPE INTERCEPT (TYP)

EXISTING R/W (TYP)

NTEC (COMMUNICATIONS) (APPROXIMATE LOCATION)

MGS GUARDRAIL 3

REMOVE EXISTING GUARDRAIL

RIVERLAND ENERGY CO-OP (ELECTRIC)

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	BEAMGUARD DETAILS	SHEET 12	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\021002-CD-BG.DWG
LAYOUT NAME - 01

PLOT DATE : 2/17/2026 5:27 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- SILT FENCE
- WATER FLOW ARROW
- EROSION MAT URBAN CLASS I TYPE A
- R — ROCK BAGS USED FOR SILT FENCE RELIEF
- TURTLE EXCLUSION FENCE

NOTE: ALL DISTURBED AREAS NOT SHOWN TO BE RESTORED WITH EROSION MAT SHALL BE RESTORED WITH MULCH, OR AS DIRECTED BY THE ENGINEER. ALL RESTORATION ITEMS ARE INCLUDED IN BID ITEM 'BARRIER SYSTEM GRADING SHAPING FINISHING'.

STA 201+60
B-06-111
EXISTING 72" X 48" BOX CULVERT

HARVEY CREEK

MGS THRIE BEAM TRANSITION
EAT POST #9 +98.58, -21.5'LT
REMOVE EXISTING GUARDRAIL
EAT POST #5 +73.70, -22.5'LT
MGS GUARDRAIL TERMINAL EAT
EAT POST #1 +48.72, -20.5'LT
EXISTING STEEL RAILING TYPE W
MGS THRIE BEAM TRANSITION
EAT POST #9 +27.85, -21.5'LT
EAT POST #5 +52.83, -22.5'LT
MGS GUARDRAIL TERMINAL EAT
EAT POST #1 +77.81, -20.5'LT
FRONTIER (COMMUNICATIONS)
MGS GUARDRAIL 3

USH 10
200

MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT
EAT POST #1 +36.22, 23.5'RT
MGS GUARDRAIL TERMINAL EAT
EAT POST #9 +86.18, 21.5'RT
EAT POST #5 +61.20, 22.5'RT
MGS THRIE BEAM TRANSITION
EAT POST #1 +65.31, 23.5'RT
EAT POST #5 +40.33, 22.5'RT
EAT POST #9 +15.35, 21.5'RT
SLOPE INTERCEPT (TYP)
EXISTING R/W (TYP)
RIVERLAND ENERGY CO-OP (ELECTRIC)
REMOVE EXISTING GUARDRAIL
EXISTING STEEL RAILING TYPE W
NTEC (COMMUNICATIONS) (APPROXIMATE LOCATION)
MGS THRIE BEAM TRANSITION

STA 213+57 C-06-231
EXISTING 72" X 42" BOX CULVERT
CLEANING BOX CULVERT REQ'D

FRONTIER (COMMUNICATIONS) (APPROXIMATE LOCATION)

CTH W
PC: 211+43.77

USH 10
210
215

MGS GUARDRAIL TERMINAL EAT
MGS GUARDRAIL TERMINAL EAT
EAT POST #1 +59.13, 20.0'RT
EAT POST #5 +85.69, 19.0'RT
EAT POST #9 +09.13, 18.0'RT
MGS GUARDRAIL 3 K
EAT POST #5 +02.39, 19.0'RT
EAT POST #1 +27.32, 20.0'RT
EAT POST #9 +77.46, 18.0'RT
EXISTING R/W (TYP)
RIVERLAND ENERGY CO-OP (ELECTRIC)
REMOVE EXISTING GUARDRAIL
NTEC (COMMUNICATIONS) (APPROXIMATE LOCATION)
CULVERT OVERBURDEN DEPTH LESS THAN 3'. DO NOT INSTALL MGS POST NEAR STA 213+58. SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL", DETAIL "MISSING POST IN MGS GUARDRAIL NEAR EAT" FOR MORE DETAILS
SLOPE INTERCEPT (TYP)

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	BEAMGUARD DETAILS	SHEET 13	E

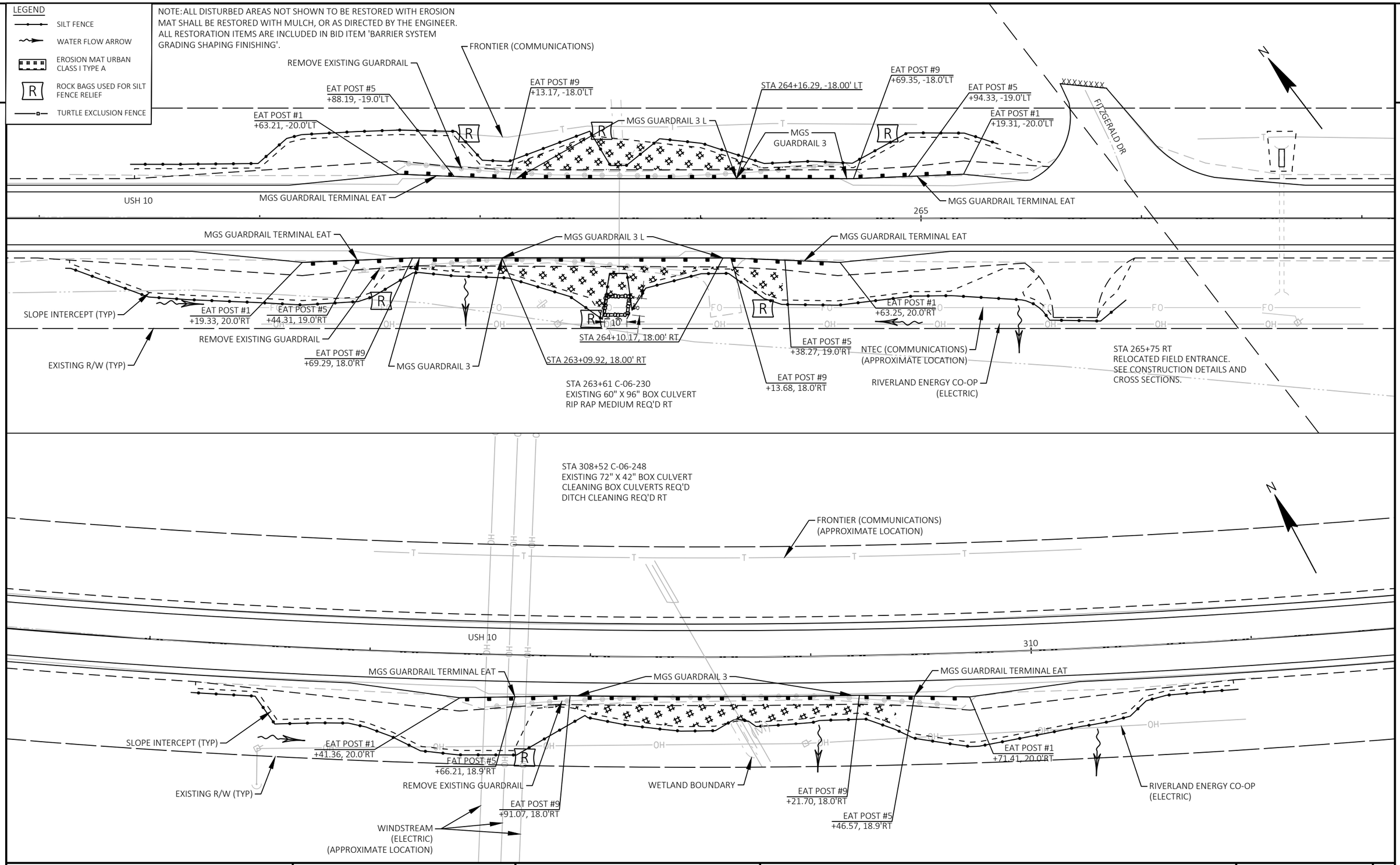
FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\021002-CD-BG.DWG
LAYOUT NAME - 02
PLOT DATE : 2/17/2026 5:28 PM
PLOT BY : CHRIS BURNS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2

LEGEND

- SILT FENCE
- WATER FLOW ARROW
- EROSION MAT URBAN CLASS I TYPE A
- R — ROCK BAGS USED FOR SILT FENCE RELIEF
- TURTLE EXCLUSION FENCE

NOTE: ALL DISTURBED AREAS NOT SHOWN TO BE RESTORED WITH EROSION MAT SHALL BE RESTORED WITH MULCH, OR AS DIRECTED BY THE ENGINEER. ALL RESTORATION ITEMS ARE INCLUDED IN BID ITEM 'BARRIER SYSTEM GRADING SHAPING FINISHING'.



PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	BEAMGUARD DETAILS	SHEET 14	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\021002-CD-BG.DWG
LAYOUT NAME - 03
PLOT DATE : 2/17/2026 5:28 PM
PLOT BY : CHRIS BURNS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

GENERAL NOTES:

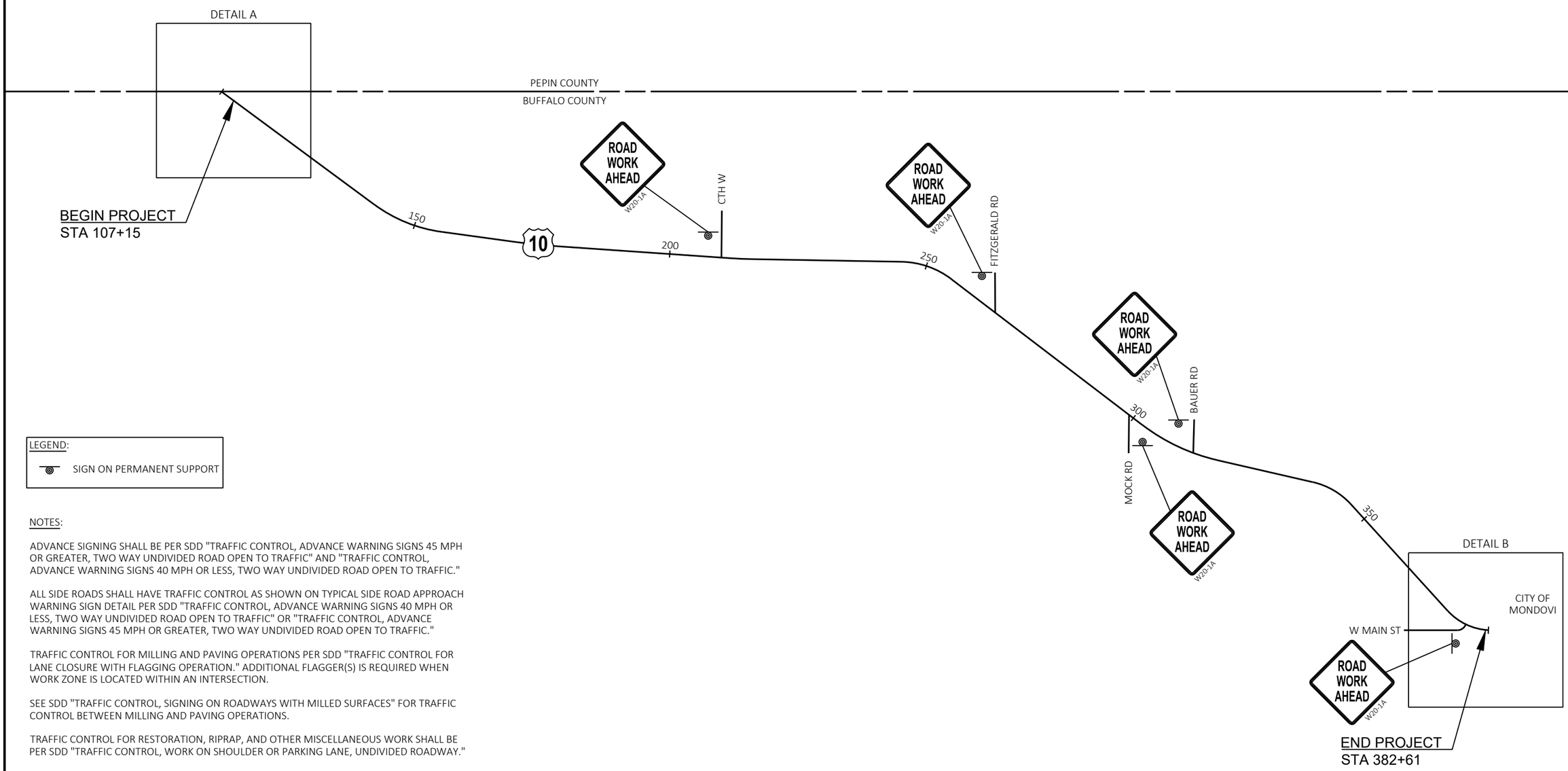
THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

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

N

2



LEGEND:

SIGN ON PERMANENT SUPPORT

NOTES:

ADVANCE SIGNING SHALL BE PER SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC."

ALL SIDE ROADS SHALL HAVE TRAFFIC CONTROL AS SHOWN ON TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL PER SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" OR "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC."

TRAFFIC CONTROL FOR MILLING AND PAVING OPERATIONS PER SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION." ADDITIONAL FLAGGER(S) IS REQUIRED WHEN WORK ZONE IS LOCATED WITHIN AN INTERSECTION.

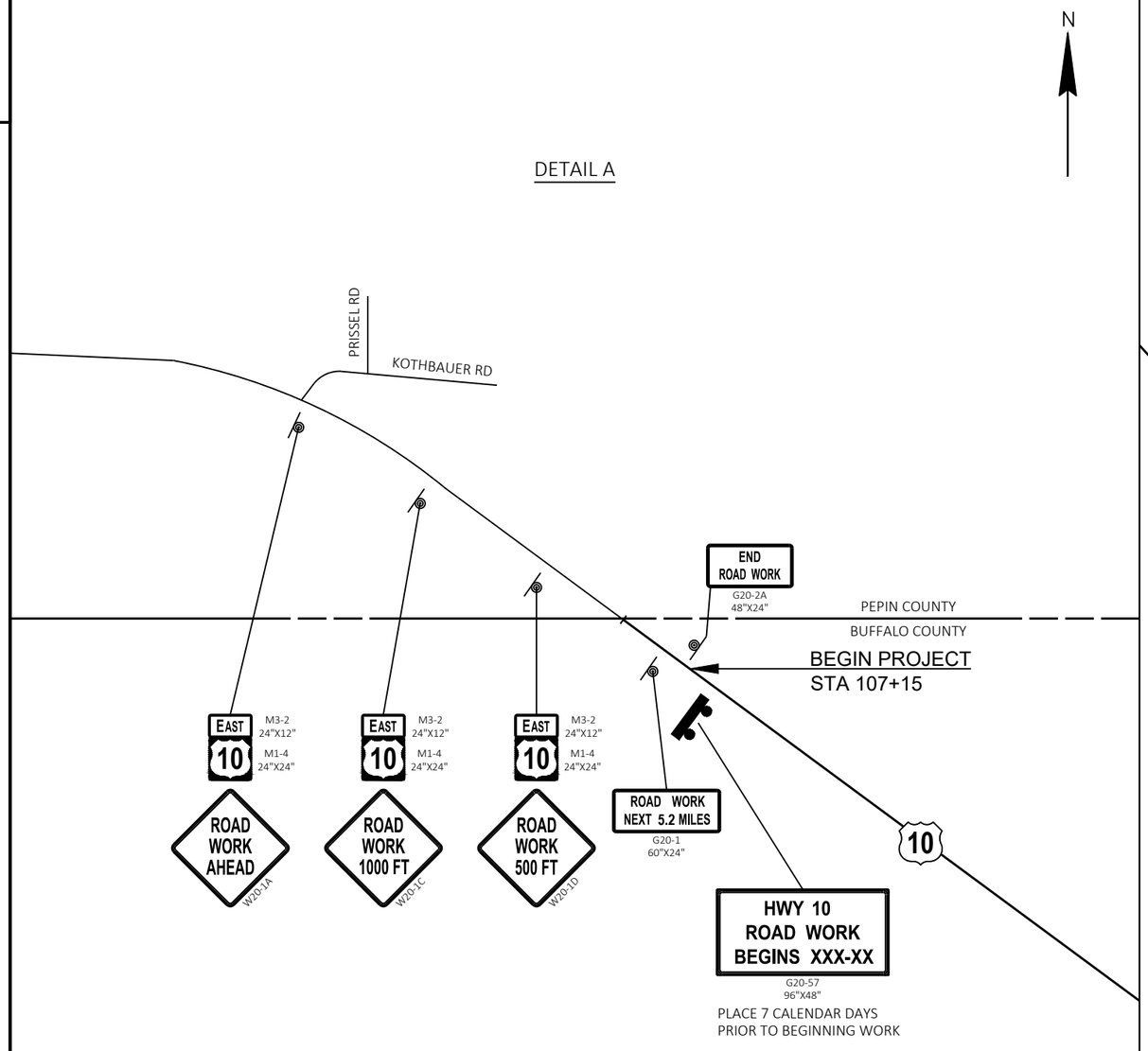
SEE SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES" FOR TRAFFIC CONTROL BETWEEN MILLING AND PAVING OPERATIONS.

TRAFFIC CONTROL FOR RESTORATION, RIPRAP, AND OTHER MISCELLANEOUS WORK SHALL BE PER SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY."

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	TRAFFIC CONTROL OVERVIEW	SHEET 15	E

2

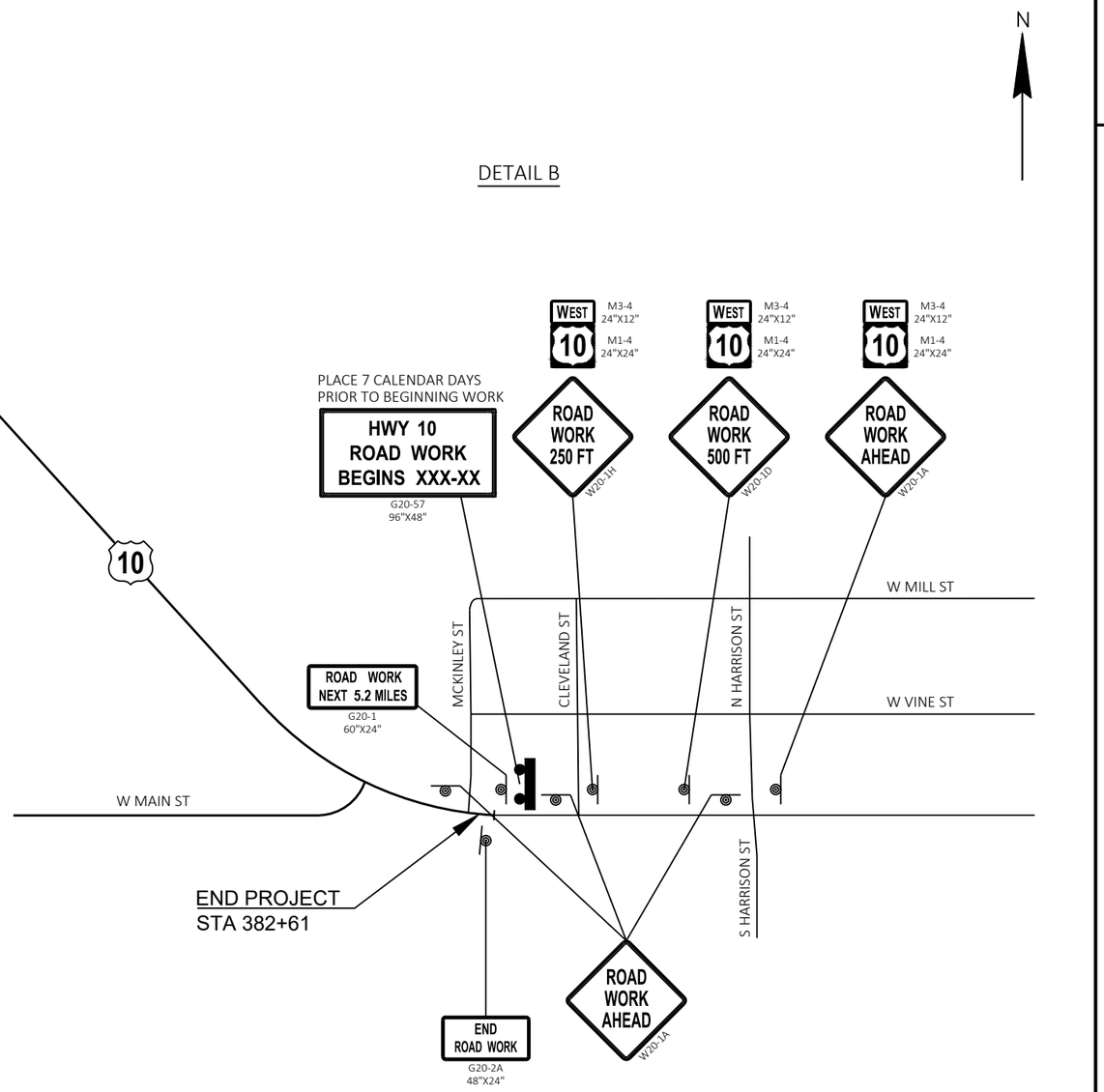
DETAIL A



LEGEND:

- SIGN ON PERMANENT SUPPORT, SINGLE POST
- SIGN ON PERMANENT SUPPORT, DOUBLE POST

DETAIL B



PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	TRAFFIC CONTROL OVERVIEW	SHEET 16	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\025000-AW.DWG
LAYOUT NAME - 02

PLOT DATE : 2/17/2026 5:28 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:500 FT

Estimate Of Quantities

1530-06-79

Line	Item	Item Description	Unit	Total	Qty
0002	202.0105	Roadside Clearing	STA	3.000	3.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	455.000	455.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	94,200.000	94,200.000
0008	204.0165	Removing Guardrail	LF	1,715.000	1,715.000
0010	208.0100	Borrow	CY	10.000	10.000
0012	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1530-06-79	EACH	1.000	1.000
0014	213.0100	Finishing Roadway (project) 01. 1530-06-79	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	822.000	822.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	31.000	31.000
0020	455.0605	Tack Coat	GAL	11,470.000	11,470.000
0022	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0024	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	3.000	3.000
0026	460.2005	Incentive Density PWL HMA Pavement	DOL	10,230.000	10,230.000
0028	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	13,760.000	13,760.000
0030	460.2010	Incentive Air Voids HMA Pavement	DOL	17,270.000	17,270.000
0032	460.6645	HMA Pavement 5 MT 58-34 V	TON	17,270.000	17,270.000
0034	460.9000.S	Material Transfer Vehicle	EACH	1.000	1.000
0036	465.0105	Asphaltic Surface	TON	500.000	500.000
0038	465.0110	Asphaltic Surface Patching	TON	300.000	300.000
0040	465.0560	Asphaltic Rumble Strips, Centerline	LF	18,205.000	18,205.000
0042	520.8000	Concrete Collars for Pipe	EACH	3.000	3.000
0044	520.8700	Cleaning Culvert Pipes	EACH	14.000	14.000
0046	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	8.000	8.000
0048	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	8.000	8.000
0050	522.0142	Culvert Pipe Reinforced Concrete Class III 42-Inch	LF	8.000	8.000
0052	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	1.000	1.000
0054	606.0200	Riprap Medium	CY	43.000	43.000
0056	614.0010	Barrier System Grading Shaping Finishing	EACH	11.000	11.000
0058	614.2300	MGS Guardrail 3	LF	487.500	487.500
0060	614.2330	MGS Guardrail 3 K	LF	262.500	262.500
0062	614.2340	MGS Guardrail 3 L	LF	425.000	425.000
0064	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0066	614.2610	MGS Guardrail Terminal EAT	EACH	18.000	18.000
0068	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1530-06-79	EACH	1.000	1.000
0070	619.1000	Mobilization	EACH	1.000	1.000
0072	624.0100	Water	MGAL	10.100	10.100
0074	628.1504	Silt Fence	LF	6,600.000	6,600.000
0076	628.1520	Silt Fence Maintenance	LF	6,600.000	6,600.000
0078	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0080	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0082	628.7570	Rock Bags	EACH	234.000	234.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0300	Traffic Control Drums	DAY	300.000	300.000
0088	643.0900	Traffic Control Signs	DAY	1,060.000	1,060.000
0090	643.1000	Traffic Control Signs Fixed Message	SF	36.000	36.000
0092	643.3165	Temporary Marking Line Paint 6-Inch	LF	43,370.000	43,370.000
0094	643.3170	Temporary Marking Line Epoxy 6-Inch	LF	21,690.000	21,690.000
0096	643.5000	Traffic Control	EACH	1.000	1.000
0098	645.0120	Geotextile Type HR	SY	104.000	104.000

1530-06-79

Line	Item	Item Description	Unit	Total	Qty
0100	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	78,802.000	78,802.000
0102	646.4720	Marking Line Same Day Epoxy 6-Inch	LF	1,200.000	1,200.000
0104	648.0100	Locating No-Passing Zones	MI	5.220	5.220
0106	650.8000	Construction Staking Resurfacing Reference	LF	27,546.000	27,546.000
0108	650.9911	Construction Staking Supplemental Control (project) 01. 1530-06-79	EACH	1.000	1.000
0110	740.0440	Incentive IRI Ride	DOL	16,110.000	16,110.000
0112	999.2005.S	Maintaining Bird Deterrent System (station) 01. 120+22	EACH	1.000	1.000
0114	999.2005.S	Maintaining Bird Deterrent System (station) 02. 165+10	EACH	1.000	1.000
0116	999.2005.S	Maintaining Bird Deterrent System (station) 03. 213+57	EACH	1.000	1.000
0118	999.2005.S	Maintaining Bird Deterrent System (station) 04. 263+61	EACH	1.000	1.000
0120	999.2005.S	Maintaining Bird Deterrent System (station) 05. 295+95	EACH	1.000	1.000
0122	999.2005.S	Maintaining Bird Deterrent System (station) 06. 308+52	EACH	1.000	1.000
0124	999.2105.S	Maintaining Climbing Turtle Exclusion Fence	LF	2,925.000	2,925.000
0126	SPV.0060	Special 01. Cleaning Ditch	EACH	18.000	18.000
0128	SPV.0060	Special 02. Cleaning Box Culverts	EACH	12.000	12.000
0130	SPV.0090	Special 01. Sealing Box Culvert Joint C-06-230	LF	26.000	26.000
0132	SPV.0090	Special 02. Install and Maintain Turtle Fence	LF	2,200.000	2,200.000

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202_ROADSIDE CLEARING

CATEGORY	STATION	TO	STATION	LOCATION	202.0105 ROADSIDE CLEARING STA	REMARKS
0010	131+44	-	131+44	USH 10 LT & RT	1	LIGHT BRUSH CLEARING
0010	151+26	-	151+26	USH 10 LT & RT	1	LIGHT BRUSH CLEARING
0010	169+20	-	169+20	USH 10 RT	1	LIGHT BRUSH CLEARING
				TOTAL 0010	3	

204_HMA MILLING

CATEGORY	STATION	TO	STATION	LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
0010	107+15	-	382+61	USH 10	455	94,200	INCLUDES SIDE ROADS
				TOTAL 0010	455	94,200	

208_EARTHWORK

CATEGORY	STATION	TO	STATION	LOCATION	208.0100 BORROW CY	REMARKS
0010	265+70	-	265+70	USH 10 RT	10	RELOCATED FIELD ENTRANCE
				TOTAL 0010	10	

305_AGGREGATES

CATEGORY	STATION	TO	STATION	LOCATION	305.0110* BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
0010	107+15	-	382+61	USH 10	520	—	8	SHOULDERS
0010	214+41	-	214+41	USH 10 RT	—	3	0.1	EXISTING FIELD ENTRANCE
0010	265+70	-	265+70	USH 10 RT	—	28	0.5	RELOCATED FIELD ENTRANCE
0010		UNDISTRIBUTED		USH 10	100	—	1.5	
				TOTAL 0010	620	31	10.1	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	MISCELLANEOUS QUANTITIES	SHEET 19	E

460_HMA

CATEGORY	STATION	TO	STATION	LOCATION	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	460.6645 HMA PAVEMENT 5 MT 58-34 V TON	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF	REMARKS
0010	170+15	-	382+61	PROJECT	—	1	3	—	—	—	—	
0010	170+15	-	360+78	USH 10	10,430	—	—	15,820	—	—	17,215	
0010	360+78	-	382+61	USH 10	1,040	—	—	1,450	—	—	990	RUMBLE STRIPS TO END AT STA 376+60
0010		UNDISTRIBUTED		USH 10	-	—	—	—	500	—	—	PAVEMENT REPAIR AFTER MILLING
0010		UNDISTRIBUTED		USH 10	-	—	—	—	—	300	—	POT HOLES, POP-OUTS, RAMPING, ETC
				TOTAL 0010	11,470	1	3	17,270	500	300	18,205	

PWL MIXTURE USE TABLE

Project ID	Location	Station	Mixture Use	Underlying Surface	Bid Item	Tons	Thickness	Quality Management Program to be used for:	
								Mixture Acceptance	Density Acceptance
1530-06-79	12-Ft Driving Lanes - USH 10	170+15 to 360+78	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	4,982	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
1530-06-79	Shoulders & Side Roads - USH 10	170+15 to 360+78	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	3,553	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the Department; Not eligible for incentive
1530-06-79	12-Ft Driving Lanes - USH 10	360+78 to 382+61.08	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	489	1.5"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
1530-06-79	Shoulders & Side Roads - USH 10	360+78 to 382+61.08	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	236	1.5"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the Department; Not eligible for incentive
1530-06-79	12-Ft Driving Lanes - USH 10	170+15 to 360+78	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	4,270	1.5"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
1530-06-79	Shoulders & Side Roads - USH 10	170+15 to 360+78	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	3,045	1.5"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the Department; Not eligible for incentive
1530-06-79	12-Ft Driving Lanes - USH 10	360+78 to 382+61.08	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	489	1.5"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
1530-06-79	Shoulders & Side Roads - USH 10	360+78 to 382+61.08	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	236	1.5"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the Department; Not eligible for incentive
1530-06-79	Project	170+15 to 382+61.08	Patching	Existing Base Aggregate	Asphaltic Surface	500	Varies	QMP as per Standard Specification 465	Acceptance by ordinary compaction
1530-06-79	Project	170+15 to 382+61.08	Patching	Existing Base Aggregate	Asphaltic Surface Patching	300	Varies	QMP as per Standard Specification 465	Acceptance by ordinary compaction

520_CULVERTS

CATEGORY	STATION	TO	STATION	LOCATION	520.8000 CONCRETE COLLARS FOR PIPE EACH	520.8700 CLEANING CULVERT PIPES EACH	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	522.0142 CULVERT PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	522.1042 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42-INCH EACH	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY	SPV.0060.01 SPECIAL (01. CLEANING DITCH) EACH	SPV.0060.02 SPECIAL (02. CLEANING BOX CULVERTS) EACH	SPV.0090.01 SPECIAL (01. SEALING BOX CULVERT JOINT C-06-230) LF	REMARKS
0010	111+82	-	111+82	USH 10 LT	1	—	—	—	8	1	—	—	—	—	—	EXISTING 42" RCP
0010	120+22	-	120+22	USH 10	—	—	—	—	—	—	—	—	—	1	—	EXISTING 42"X72" BOX CULVERT
0010	131+44	-	131+44	USH 10 LT & RT	—	—	—	—	—	—	—	—	—	1	—	EXISTING 36"X42" BOX CULVERT
0010	143+95	-	143+95	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 30" RCP
0010	151+26	-	151+26	USH 10	—	1	—	—	—	—	—	—	—	—	—	EXISTING 30" RCP
0010	158+08	-	158+08	USH 10 RT	—	—	—	—	—	—	32	73	—	—	—	EXISTING 144"X72" BOX CULVERT
0010	165+10	-	165+10	USH 10	—	—	—	—	—	—	—	—	—	1	—	EXISTING 42"X60" BOX CULVERT
0010	169+20	-	169+20	USH 10	—	—	—	—	—	—	—	—	—	1	—	EXISTING 36"X42" BOX CULVERT
0010	181+13	-	181+13	USH 10	—	1	—	—	—	—	—	—	—	—	—	EXISTING 30" RCP
0010	193+40	-	193+40	USH 10	—	1	—	—	—	—	—	—	—	—	—	EXISTING 30" CMP
0010	213+57	-	213+57	USH 10	—	—	—	—	—	—	—	—	—	1	—	EXISTING 96"X36" BOX CULVERT
0010	221+62	-	221+62	USH 10	—	—	—	—	—	—	—	—	—	1	—	EXISTING 48"X96" BOX CULVERT
0010	224+95	-	224+95	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 30" RCP
0010	224+99	-	224+99	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 30" RCP
0010	230+42	-	230+42	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 30" RCP
0010	234+19	-	234+19	USH 10	—	—	—	—	—	—	—	—	1	—	—	EXISTING 30" RCP
0010	236+90	-	236+90	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 30" RCP
0010	243+04	-	243+04	USH 10	—	—	—	—	—	—	—	—	1	1	—	EXISTING 42"X72" BOX CULVERT
0010	247+41	-	247+41	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 30" RCP
0010	251+91	-	251+91	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 30" RCP
0010	263+61	-	263+61	USH 10 RT	—	—	—	—	—	—	5	14	—	—	26	EXISTING 60"X96" BOX CULVERT
0010	266+64	-	266+64	USH 10 LT	1	1	8	—	—	—	—	—	—	—	—	EXISTING 24" RCP
0010	273+55	-	273+55	USH 10	—	—	—	—	—	—	—	—	1	1	—	EXISTING 48"X42" BOX CULVERT
0010	277+53	-	277+53	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 24" RCP
0010	286+08	-	286+08	USH 10 LT & RT	1	—	—	8	—	—	—	—	1	—	—	2-EXISTING 30" RCP
0010	295+95	-	295+95	USH 10	—	—	—	—	—	—	—	—	1	1	—	EXISTING 42"X72" BOX CULVERT
0010	308+52	-	308+52	USH 10	—	—	—	—	—	—	—	—	1	1	—	EXISTING 48"X72" BOX CULVERT
0010	328+66	-	328+66	USH 10 RT	—	—	—	—	—	—	6	17	1	—	—	EXISTING 72"X72" BOX CULVERT
0010	348+82	-	348+82	USH 10	—	—	—	—	—	—	—	—	—	1	—	EXISTING 42"X72" BOX CULVERT
0010	355+75	-	355+75	USH 10	—	—	—	—	—	—	—	—	1	1	—	EXISTING 60"X48" BOX CULVERT
0010	361+62	-	361+62	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 36" RCP
0010	377+73		377+73	USH 10	—	1	—	—	—	—	—	—	1	—	—	EXISTING 24" RCP
				TOTAL 0010	3	14	8	8	8	1	43	104	18	12	26	

999_BIRD DETERRENT SYSTEM

CATEGORY	STATION	LOCATION	999.2005.S.01 MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. 120+22) EACH	999.2005.S.02 MAINTAINING BIRD DETERRENT SYSTEM (STATION) (02. 165+10) EACH	999.2005.S.03 MAINTAINING BIRD DETERRENT SYSTEM (STATION) (03. 213+57) EACH	999.2005.S.04 MAINTAINING BIRD DETERRENT SYSTEM (STATION) (04. 263+61) EACH	999.2005.S.05 MAINTAINING BIRD DETERRENT SYSTEM (STATION) (05. 295+95) EACH	999.2005.S.06 MAINTAINING BIRD DETERRENT SYSTEM (STATION) (06. 308+52) EACH
0010	120+22	USH 10	1					
0010	165+10	USH 10		1				
0010	213+57	USH 10			1			
0010	263+61	USH 10				1		
0010	295+95	USH 10					1	
0010	308+52	USH 10						1
		TOTAL 0010	1	1	1	1	1	1

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614_MGS GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	* 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2340 MGS GUARDRAIL 3 L LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	REMARKS
0010	156+49	-	149+22	USH 10 RT	211	25	1	50	—	112.5	—	2	MGS GUARDRAIL 3 L SPAN LENGTH 25'
0010	157+05	-	159+65	USH 10 LT	210	25	1	62.5	—	112.5	—	2	MGS GUARDRAIL 3 L SPAN LENGTH 25'
0010	163+59	-	166+03	USH 10 RT	210	22	1	137.5	—	—	—	2	REMOVE POST AT STA 165+09
0010	200+36	-	201+39	USH 10 RT	80	14	1	12.5	—	—	39.4	1	W-BEAM ACROSS B-06-111 NOT CONSIDERED SALVAGED RAIL
0010	200+49	-	201+39	USH 10 LT	81	14	1	—	—	—	39.4	1	W-BEAM ACROSS B-06-111 NOT CONSIDERED SALVAGED RAIL
0010	201+75	-	202+65	USH 10 RT	81	8	1	—	—	—	39.4	1	W-BEAM ACROSS B-06-111 NOT CONSIDERED SALVAGED RAIL
0010	201+75	-	202+78	USH 10 LT	78	8	1	12.5	—	—	39.4	1	W-BEAM ACROSS B-06-111 NOT CONSIDERED SALVAGED RAIL
0010	210+59	-	214+27	USH 10 RT	200	19	1	—	262.5	—	—	2	REMOVE POST AT STA 213+59
0010	262+19	-	264+64	USH 10 RT	149	23	1	37.5	—	100	—	2	MGS GUARDRAIL 3 L SPAN LENGTH 12.5'
0010	262+63	-	265+19	USH 10 LT	200	20	1	50	—	100	—	2	MGS GUARDRAIL 3 L SPAN LENGTH 12.5'
0010	307+41	-	309+71	USH 10 RT	215	24	1	125	—	—	—	2	
				TOTAL 0010	1,715	202	11	487.5	262.5	425	157.6	18	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

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614.0010-BARRIER SYSTEM GRADING SHAPING FINISHING

---ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY---

CATEGORY	STATION	TO	STATION	LOCATION	EXCAVATION COMMON CY	BORROW CY	SALVAGED TOPSOIL SY	MULCHING SY	EROSION MAT URBAN CLASS I TYPE A SY	FERTILIZER TYPE A CWT	SEEDING MIX NO. 30 LB	SEEDING TEMPORARY LB	SEED WATER MGAL	CONSTRUCTION STAKING SLOPE STAKES LF
0010	155+05	-	160+60	USH 10 RT	21	140	570	450	120	0.4	10.3	5.2	3	595
0010	155+60	-	161+00	USH 10 LT	10	130	560	560	-	0.4	10.1	5.1	2	-
0010	162+25	-	167+50	USH 10 RT	12	37	250	160	90	0.2	4.5	2.3	1	525
0010	198+40	-	201+39	USH 10 RT	9	14	170	170	-	0.2	3.1	1.6	1	299
0010	198+50	-	201+39	USH 10 LT	4	42	200	200	-	0.2	3.6	1.8	1	-
0010	201+75	-	204+60	USH 10 RT	8	23	200	167	33	0.2	3.6	1.8	1	300
0010	201+75	-	204+75	USH 10 LT	6	16	120	97	23	0.1	2.2	1.1	1	-
0010	210+00	-	215+75	USH 10 RT	5	43	420	230	190	0.3	7.6	3.8	1	575
0010	261+00	-	266+00	USH 10 RT	13	97	440	310	130	0.3	8.0	4.0	2	500
0010	261+25	-	265+60	USH 10 LT	9	65	360	235	125	0.3	6.5	3.3	1	-
0010	306+00	-	311+00	USH 10 RT	9	120	480	360	120	0.4	8.7	4.4	2	500
				TOTAL 0010	106	727	3,770	2,939	831	3.0	68.2	34.4	16	3,294

628_EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7570 ROCK BAGS EACH
0010	107+15	-	382+61	UNDISTRIBUTED	1320	1320	47
0010	104+27		115+27	USH 10 LT & RT	—	—	—
0010	155+05	-	160+60	USH 10 RT	570	570	34
0010	155+60	-	161+00	USH 10 LT	550	550	34
0010	162+25	-	167+50	USH 10 RT	580	580	—
0010	191+50		211+50	USH 10 LT & RT			
0010	198+40	-	201+39	USH 10 RT	330	330	—
0010	198+50	-	201+39	USH 10 LT	320	320	—
0010	201+75	-	204+60	USH 10 RT	320	320	—
0010	201+75	-	204+75	USH 10 LT	310	310	—
0010	210+00	-	215+75	USH 10 RT	620	620	—
0010	261+00	-	266+00	USH 10 RT	590	590	51
0010	261+25	-	265+60	USH 10 LT	510	510	51
0010	306+00	-	311+00	USH 10 RT	580	580	17
				TOTAL 0010	6,600	6,600	234

999_TURTLE EXCLUSION FENCE

CATEGORY	STATION	TO	STATION	LOCATION	999.2105.S MAINTAINING CLIMBING TURTLE EXCLUSION FENCE LF	SPV.0090.02 SPECIAL (02. INSTALL AND MAINTAIN TURTLE FENCE) LF
0010	104+27	-	115+27	USH 10 LT & RT		2,200
0010	199+25	-	203+75	USH 10 LT & RT	900	
0010	318+75	-	323+25	USH 10 LT & RT	900	
0010	327+75		333+50	USH 10 RT	575	
0010	349+50	-	355+00	USH 10 RT	550	
				TOTAL 0010	2,925	2,200

643_TRAFFIC CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	DAYS**	EACH**	* 643.0900 TRAFFIC CONTROL SIGNS DAY	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	REMARKS
0010		PROJECT LIMITS		USH 10	—	—	—	36	PLACE G20-57 SIGNS 7 DAYS PRIOR TO START OF CONSTRUCTION
0010	107+15	-	382+61	USH 10	60	17	1,020	—	SEE NOTE
				TOTAL 0010			1,020	36	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

**FOR INFORMATION ONLY

NOTE: FOLLOW SDD 'TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC' AND SDD 'TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC'

643_TC SHOULDER CLOSURE

CATEGORY	STATION	TO	STATION	LOCATION	DAYS**	EACH**	643.0300 TRAFFIC CONTROL DRUMS DAY	EACH**	643.0900 * TRAFFIC CONTROL SIGNS DAY	REMARKS
0010	107+15	-	382+61	USH 10	20	15	300	2	40	DRAINAGE REPAIR/GUADRAIL WORK - SDD 'TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY'
				TOTAL 0010			300		40	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

**FOR INFORMATION ONLY

3

646_PAVEMENT MARKINGS

CATEGORY	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW) LF	643.3170 TEMPORARY MARKING LINE EPOXY 6-INCH (YELLOW) LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) LF	646.4720 MARKING LINE SAME DAY EPOXY 6-INCH (YELLOW) LF	648.0100 LOCATING NO-PASSING ZONES MI
0010	107+15	-	382+61	USH 10	43370	—	55092	—	—	5.22
0010	107+15	-	376+61	USH 10	—	21690	—	23710	—	—
0010	376+61	-	382+61	USH 10	—	—	—	—	1200	—
				SUBTOTAL			55092	23710		
				TOTAL 0010	43370	21690	78802		1200	5.22

1) PLACE TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW) CENTERLINE ON MILLED SURFACE AND LOWER LAYER.
2) PLACE TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW) CENTERLINE PRIOR TO RUMBLE STRIPS.
3) PLACE MARKING GROOVED WET REFLECTIVE EPOXY 6-INCH (YELLOW) CENTERLINE AFTER RUMBLE STRIPS ARE INSTALLED.
4) STA 201+39 - 201+75 - DO NOT PLACE MARKING LINE GROOVED WET REF EPOXY 6-INCH ON STRUCTURE.
5) THE FOLLOWING SDDS SHALL BE FOLLOWED FOR PAVEMENT MARKING APPLICATIONS:
 - 'PERMANENT LONGITUDINAL PAVEMENT MARKINGS'
 - 'TEMPORARY LONGITUDINAL PAVEMENT MARKING'
 - 'PAVEMENT MARKING (INTERSECTIONS)'

3

650_CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 1530-06-79) EACH
0010	107+15	-	382+61	USH 10	27,546	1
				TOTAL 0010	27,546	1

SPV.0060-CLEANING DITCH

ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY

CATEGORY	STATION	TO	STATION	LOCATION	ESTIMATED LENGTH LF	EXCAVATION COMMON CY	SALVAGED TOPSOIL SY	EROSION MAT URBAN CLASS I TYPE A SY	FERTILIZER TYPE A CWT	SEEDING MIX NO. 30 LB	SEEDING TEMPORARY LB	SEED WATER MGAL
0010	143+95	-	143+95	USH 10 LT & RT	22	2	15	15	0.01	0.3	0.2	0.3
0010	224+95		224+95	USH 10 LT & RT	22	2	15	15	0.01	0.3	0.2	0.3
0010	224+99	-	224+99	USH 10 LT & RT	22	2	15	15	0.01	0.3	0.2	0.3
0010	230+42	-	230+42	USH 10 LT & RT	22	2	15	15	0.01	0.3	0.2	0.3
0010	234+19	-	234+19	USH 10 LT & RT	22	2	15	15	0.01	0.3	0.2	0.3
0010	236+90	-	236+90	USH 10 LT & RT	22	2	15	15	0.01	0.3	0.2	0.3
0010	243+04	-	243+04	USH 10 LT & RT	26	3	17	17	0.02	0.4	0.2	0.3
0010	247+41	-	247+41	USH 10 LT & RT	22	2	15	15	0.01	0.3	0.2	0.3
0010	251+91	-	251+91	USH 10 LT & RT	22	2	15	15	0.01	0.3	0.2	0.3
0010	273+55	-	273+55	USH 10 LT & RT	24	3	16	16	0.02	0.3	0.2	0.3
0010	277+53		277+53	USH 10 LT & RT	20	2	13	13	0.01	0.3	0.2	0.2
0010	286+08	-	286+08	USH 10 RT	12	1	8	8	0.01	0.2	0.1	0.2
0010	295+95	-	295+95	USH 10 RT	16	2	11	11	0.01	0.2	0.1	0.2
0010	308+52	-	308+52	USH 10 RT	16	2	11	11	0.01	0.2	0.1	0.2
0010	328+66	-	328+66	USH 10 RT	16	2	11	11	0.01	0.2	0.1	0.2
0010	355+75	-	355+75	USH 10 RT	16	2	11	11	0.01	0.2	0.1	0.2
0010	361+62	-	361+62	USH 10 RT	12	1	8	8	0.01	0.2	0.1	0.2
0010	377+73		377+73	USH 10 RT	10	1	7	7	0.01	0.2	0.1	0.1
0010	107+15		377+73	UNDISTRIBUTED	43	5	29	29	0.03	0.6	0.4	0.6
				TOTAL 0010		43	258	258	0.23	5.4	3.3	5.1

ENVIRONMENTALLY SENSITIVE AREA
PROJECT BEGIN TO STA 114+50 LT & RT

BEGIN PROJECT
STA 107+15
Y=406388.637
X=580066.026
MATCH EXISTING
BUTT JOINT REQ'D
BEGIN CENTERLINE RUMBLE STRIPS
2-LANE RURAL

BP: 104+27.00

STA 111+82
EXISTING 42" RCP
REMOVE 8 LF 42" CPRC LT
42" RCCP CL III REQ'D
CONCRETE COLLARS FOR PIPE REQ'D
42" AEW REQ'D

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

EXISTING R/W (TYP)

105 | S53°32'56"E | 110 | USH 10 | 115

60'

50'

CP 1

STA 117+46
FE AGG

MATCHLINE 119+00

NTEC (COMMUNICATIONS)
(APPROXIMATE LOCATION)

APPROXIMATE FLOODPLAIN BOUNDARY (TYP)

INSTALL AND MAINTAIN TURTLE FENCE (TYP)

CONTROL POINT & BENCHMARK TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
1	106+29.93	22.97 RT	406420.704	579983.950	854.33	REBAR

STA 131+44
EXISTING 36"x42" BOX CULVERT
CLEANING BOX CULVERTS REQ'D
ROADSIDE CLEARING REQ'D LT & RT

STA 120+08
PE AGG

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

EXISTING R/W (TYP)

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

STA 133+95
FE AGG

MATCHLINE 119+00

120 | S53°32'56"E | 125 | USH 10 | 130

3688.54'

60'

50'

MATCHLINE 134+00

NTEC (COMMUNICATIONS)
(APPROXIMATE LOCATION)

NTEC (COMMUNICATIONS)
(APPROXIMATE LOCATION)

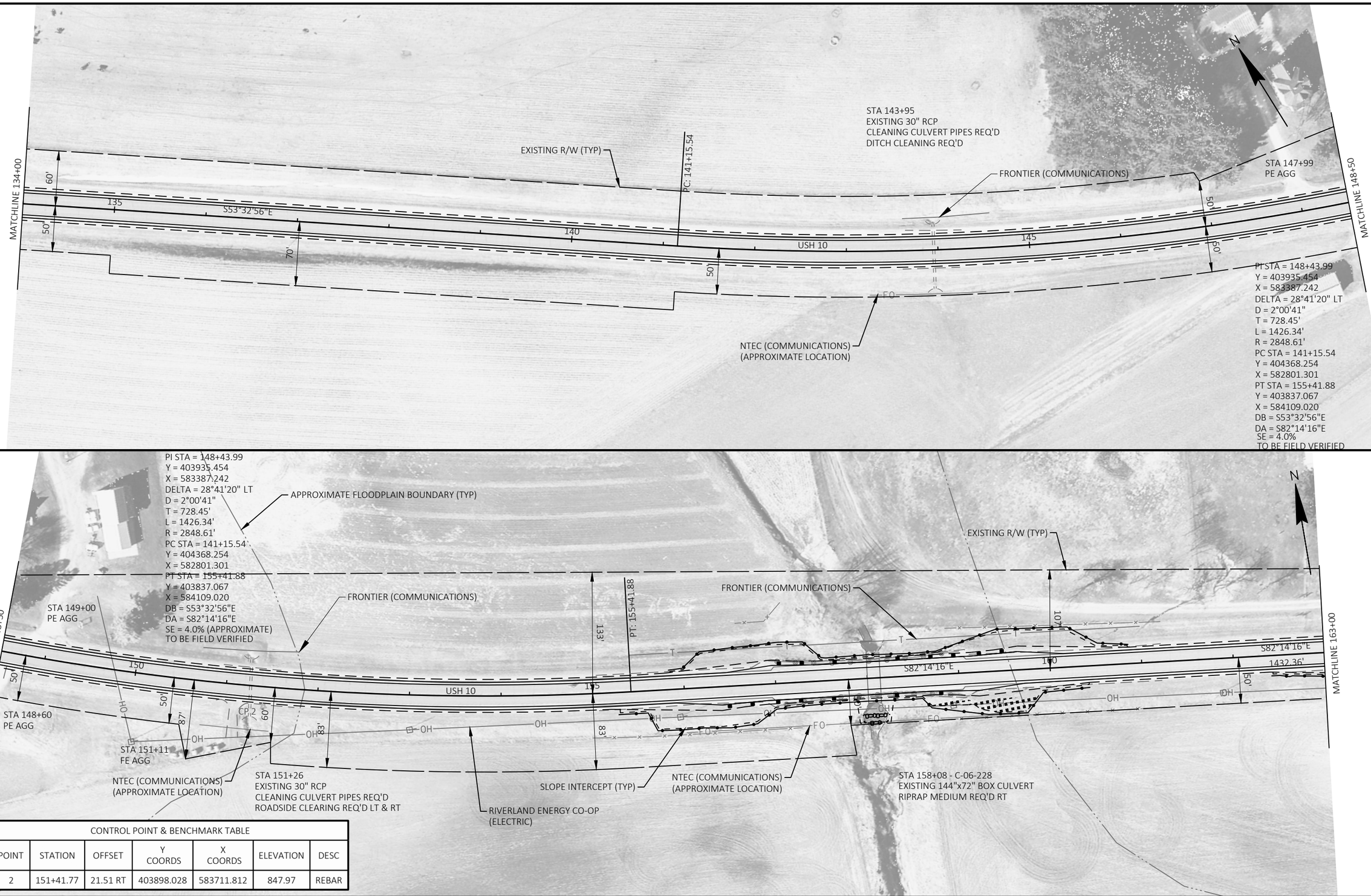
STA 120+22
EXISTING 42"x72" BOX CULVERT
CLEANING BOX CULVERTS REQ'D

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 25	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 3/4/2026 2:19 PM PLOT BY : GEOFF RASMUSSEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



CONTROL POINT & BENCHMARK TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
2	151+41.77	21.51 RT	403898.028	583711.812	847.97	REBAR

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 26	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 02

PLOT DATE : 2/17/2026 5:34 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

PI STA = 174+00.73
Y = 403586.005
X = 585950.842
DELTA = 3°48'41" LT
D = 0°26'49"
T = 426.49'
L = 852.67'
R = 12817.73'
PC STA = 169+74.24
Y = 403643.608
X = 585528.259
PT STA = 178+26.91
Y = 403556.620
X = 586376.320
DB = S82°14'16"E
DA = S86°02'57"E
SE = 2.0%
TO BE FIELD VERIFIED

N

STA 165+10
EXISTING 42"x60" BOX CULVERT
CLEANING BOX CULVERTS REQ'D

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

FRONTIER (COMMUNICATIONS)

PC: 169+74.24

EXISTING R/W (TYP)

STA 164+77
PE AGG

MATCHLINE 163+00

82'

165

S82°14'16"E
1432.36'

170

USH 10

175

50'

60'

50'

60'

50'

MATCHLINE 178+00

OH
FO
OH
OH
HO
HO

SLOPE INTERCEPT (TYP)

NTEC (COMMUNICATIONS)
(APPROXIMATE LOCATION)

RIVERLAND ENERGY CO-OP
(ELECTRIC)

NTEC (COMMUNICATIONS)
(APPROXIMATE LOCATION)

WETLAND BOUNDARY

RIVERLAND ENERGY CO-OP
(ELECTRIC)

STA 169+20
EXISTING 36"x42" BOX CULVERT
CLEANING BOX CULVERTS REQ'D
ROADSIDE CLEARING REQ'D RT

STA 176+00
FE AGG

APPROXIMATE FLOODPLAIN BOUNDARY (TYP)

5

5

ENVIRONMENTALLY SENSITIVE AREA
STA 191+60 TO STA 211+60 LT & RT

N

APPROXIMATE FLOODPLAIN BOUNDARY (TYP)

WETLAND BOUNDARY (TYP)

PT: 178+26.91

FRONTIER (COMMUNICATIONS)

STA 181+22
PE AGG

EXISTING R/W (TYP)

STA 184+51
FE AGG

MATCHLINE 178+00

50'

50'

180

185

S86°02'57"E

190

USH 10

MATCHLINE 193+00

OH
OH
OH
OH

STA 181+13
EXISTING 30" RCP
CLEANING CULVERT PIPES REQ'D

NTEC (COMMUNICATIONS)
(APPROXIMATE LOCATION)

RIVERLAND ENERGY CO-OP
(ELECTRIC)

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 27	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 03

PLOT DATE : 2/17/2026 5:35 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

ENVIRONMENTALLY SENSITIVE AREA
STA 191+60 TO STA 211+60 LT & RT

STA 193+25 - C-06-225
EXISTING 72"x72" BOX CULVERT
NO WORK PROPOSED

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

EXISTING R/W (TYP)

STA 196+54
FE AGG

B-06-111
NO WORK PROPOSED

FRONTIER (COMMUNICATIONS)

STA 203+96
FE AGG

STA 205+77
EXISTING 48"x72" BOX CULVERT
NO WORK PROPOSED

MATCHLINE 193+00

MATCHLINE 207+50

50'

60'

S86°02'57"E

195

USH 10

200

205

CP 3

STA 193+40
EXISTING 30" CMP
CLEANING CULVERT PIPES REQ'D

STA 196+52
FE AGG

TURTLE EXCLUSION FENCE
INSTALLED BY OTHERS (TYP)

SLOPE INTERCEPT (TYP)

NTEC (COMMUNICATIONS)
(APPROXIMATE LOCATION)

RIVERLAND ENERGY CO-OP
(ELECTRIC)

HARVEY CREEK

APPROXIMATE FLOODPLAIN BOUNDARY (TYP)

WETLAND BOUNDARY (TYP)

N

CONTROL POINT & BENCHMARK TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
3	196+28.25	23.27 RT	403409.292	588171.775	829.83	REBAR

5

5

ENVIRONMENTALLY SENSITIVE AREA
STA 191+60 TO STA 211+60 LT & RT

CTH W

PC: 211+43.77

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

EXISTING R/W (TYP)

PT: 216+58.45

FRONTIER (COMMUNICATIONS)

STA 213+92
PE AGG

MATCHLINE 207+50

MATCHLINE 222+00

60'

50'

S86°02'57"E

210

215

USH 10

S88°59'19"E

220

SLOPE INTERCEPT (TYP)

STA 213+57 - C-06-231
EXISTING 96"x36" BOX CULVERT
CLEANING BOX CULVERTS REQ'D

STA 214+41
FE AGG

PI STA = 214+01.17
Y = 403310.356
X = 589942.082
DELTA = 2°56'22" LT
D = 0°34'16"
T = 257.39'
L = 514.67'
R = 10032.29'
PC STA = 211+43.77
Y = 403328.090
X = 589685.300
PT STA = 216+58.45
Y = 403305.812
X = 590199.435
DB = S86°02'57"E
DA = S88°59'19"E
SE = 1.0%
TO BE FIELD VERIFIED

NTEC (COMMUNICATIONS)
(APPROXIMATE LOCATION)

RIVERLAND ENERGY CO-OP
(ELECTRIC)

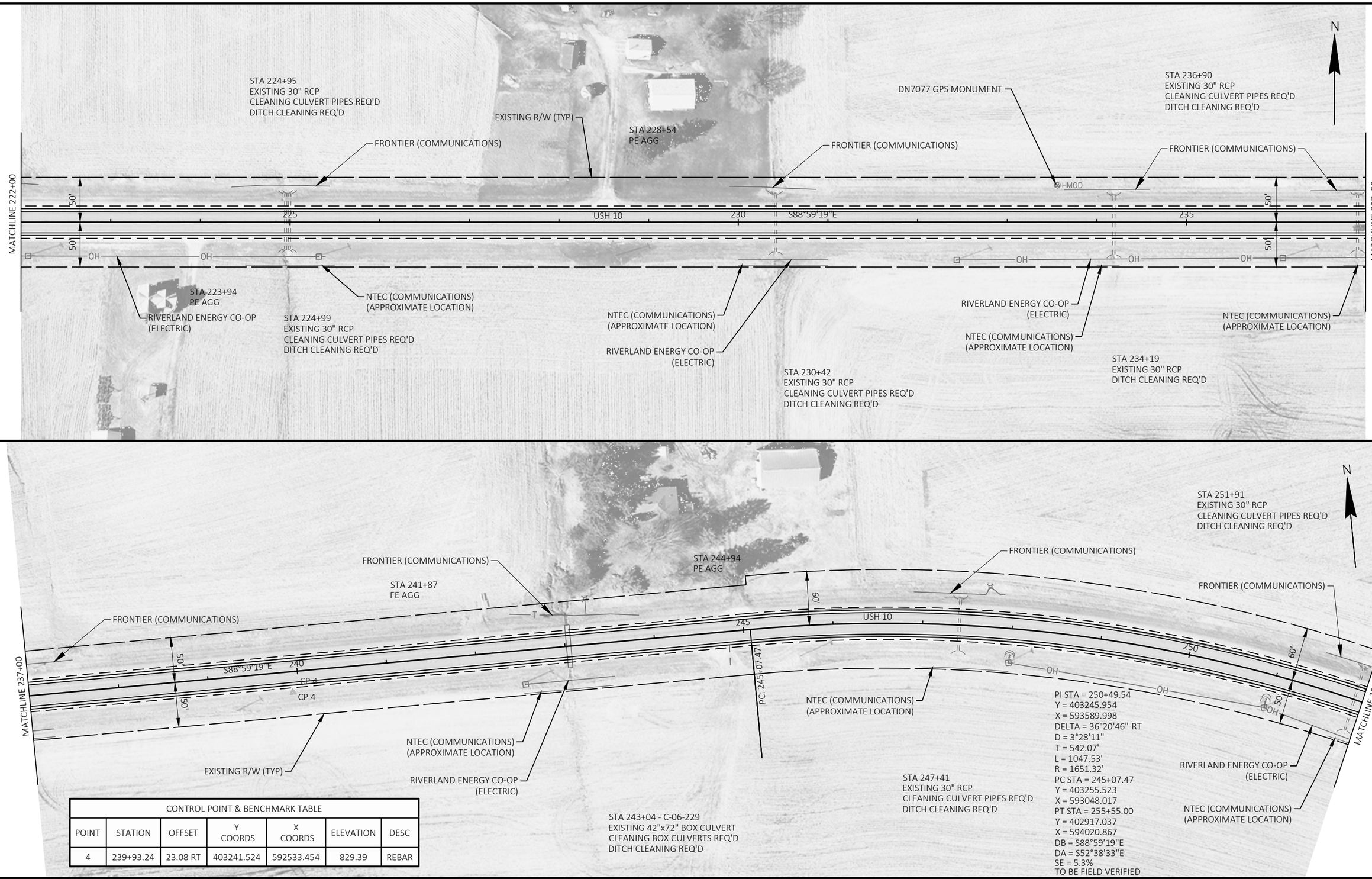
NTEC (COMMUNICATIONS)
(APPROXIMATE LOCATION)

RIVERLAND ENERGY CO-OP
(ELECTRIC)

STA 221+62
EXISTING 48"x96" BOX CULVERT
CLEANING BOX CULVERTS REQ'D

N

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 28	E



CONTROL POINT & BENCHMARK TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
4	239+93.24	23.08 RT	403241.524	592533.454	829.39	REBAR

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 29 E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 05

PLOT DATE : 2/17/2026 5:35 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

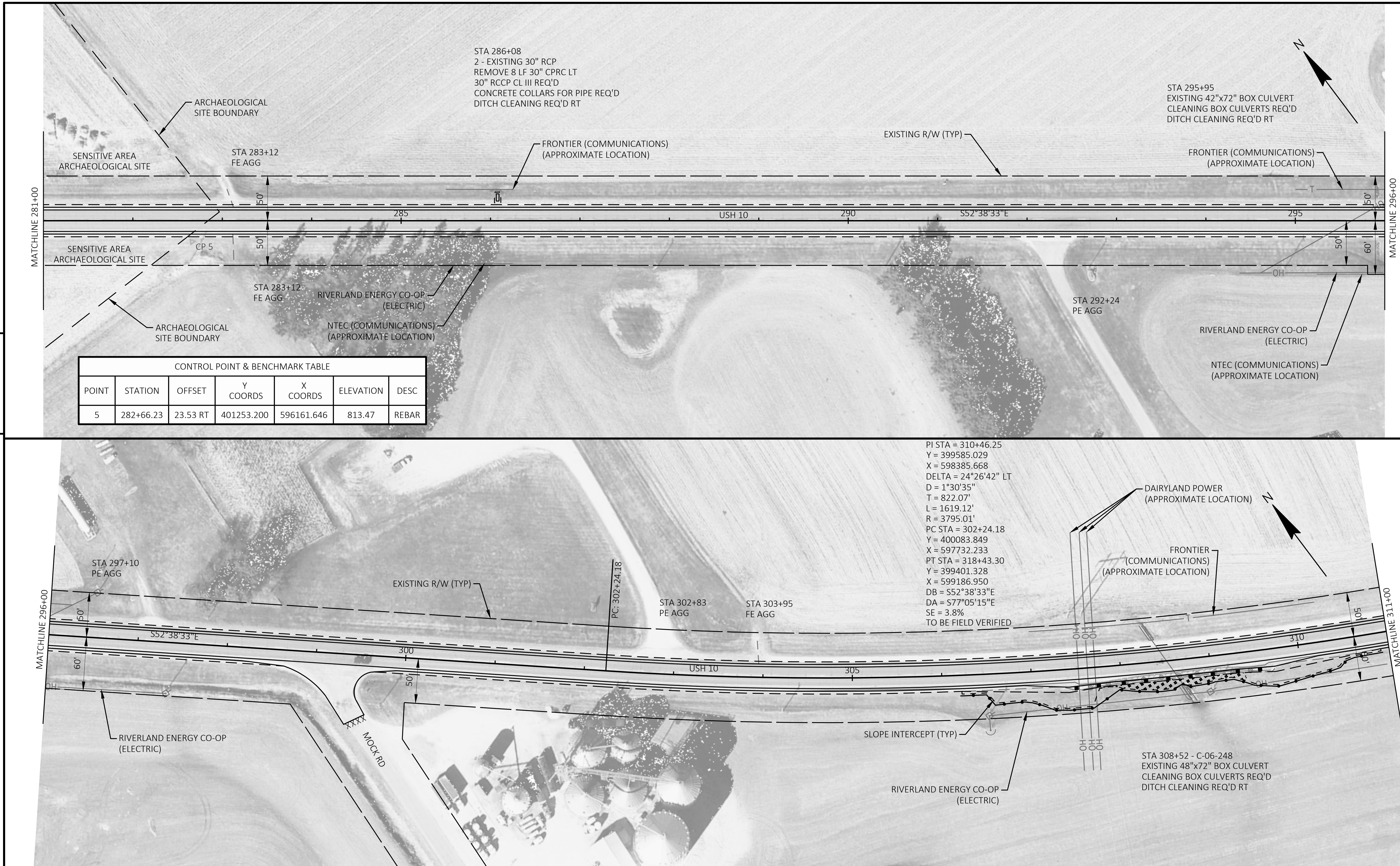
5 5

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 30 E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 06

PLOT DATE : 2/17/2026 5:35 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



CONTROL POINT & BENCHMARK TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
5	282+66.23	23.53 RT	401253.200	596161.646	813.47	REBAR

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 31	E

ENVIRONMENTALLY SENSITIVE AREA
STA 311+00 TO STA 331+00 LT & RT

PI STA = 310+46.25
Y = 399585.029
X = 598385.668
DELTA = 24°26'42" LT
D = 1°30'35"
T = 822.07'
L = 1619.12'
R = 3795.01'
PC STA = 302+24.18
Y = 400083.849
X = 597732.233
PT STA = 318+43.30
Y = 399401.328
X = 599186.950
DB = S52°38'33"E
DA = S77°05'15"E
SE = 3.8%
TO BE FIELD VERIFIED

BAUER RD

HOLMES CREEK

EXISTING GUARDRAIL TO REMAIN
PAVE ASPHALT TO FACE OF RAIL

EXISTING R/W (TYP)

PT: 318+43.30

MATCHLINE 311+00

MATCHLINE 325+50

50'

60'

315

320

325

USH 10

S77°05'15"E

STA 313+30
PE AGG

STA 318+59
FE AGG

B-06-0387
NO WORK PROPOSED

TURTLE EXCLUSION FENCE
INSTALLED BY OTHERS (TYP)

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

APPROXIMATE FLOODPLAIN BOUNDARY (TYP)

N

5

5

ENVIRONMENTALLY SENSITIVE AREA
STA 311+00 TO STA 331+00 LT & RT

ENVIRONMENTALLY SENSITIVE AREA
STA 331+00 TO STA 340+00 RT

STA 327+09
FE AGG

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

EXISTING R/W (TYP)

PC: 337+47.98

MATCHLINE 325+50

MATCHLINE 340+00

60'

50'

330

335

340

USH 10

S77°05'15"E

CP 6

OH

STA 327+74
PE AGG

STA 328+66
EXISTING 72"x72" BOX CULVERT
DITCH CLEANING REQ'D RT
RIPRAP MEDIUM REQ'D RT

STA 331+33
FE AGG

RIVERLAND ENERGY CO-OP
(ELECTRIC)

TURTLE EXCLUSION FENCE
INSTALLED BY OTHERS (TYP)

APPROXIMATE FLOODPLAIN BOUNDARY (TYP)

PI STA = 341+98.75
Y = 398874.975
X = 601482.834
DELTA = 34°50'35" RT
D = 3°59'19"
T = 450.77'
L = 873.58'
R = 1436.51'
PC STA = 337+47.98
Y = 398975.704
X = 601043.466
PT STA = 346+21.56
Y = 398541.280
X = 601785.883
DB = S77°05'15"E
DA = S42°14'40"E
SE = 5.8%
TO BE FIELD VERIFIED

N

CONTROL POINT & BENCHMARK TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
6	325+88.49	23.47 RT	399211.926	599908.049	803.99	REBAR

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 32	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 08

PLOT DATE : 3/3/2026 3:06 PM PLOT BY : GEOFF RASMUSSEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 348+82
EXISTING 42"x72" BOX CULVERT
CLEANING BOX CULVERTS REQ'D

STA 344+68
FE AGG

PT: 346+21.56

STA 341+10
FE AGG

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

STA 354+39
PE AGG

345

USH 10

350

S42° 14'40"E

MATCHLINE 340+00

50'

50'

EXISTING R/W (TYP)

PI STA = 341+98.75
Y = 398874.975
X = 601482.834
DELTA = 34°50'35" RT
D = 3°59'19"
T = 450.77'
L = 873.58'
R = 1436.51'
PC STA = 337+47.98
Y = 398975.704
X = 601043.466
PT STA = 346+21.56
Y = 398541.280
X = 601785.883
DB = S77°05'15"E
DA = S42°14'40"E
SE = 5.8%
TO BE FIELD VERIFIED

STA 345+15
FE AGG

OH

70'

APPROXIMATE FLOODPLAIN BOUNDARY (TYP)

RIVERLAND ENERGY CO-OP
(ELECTRIC)

TURTLE EXCLUSION FENCE
INSTALLED BY OTHERS (TYP)

50'

50'

MATCHLINE 355+00

ENVIRONMENTALLY SENSITIVE AREA
STA 342+00 TO STA 362+00 RT

5

5

APPROXIMATE FLOODPLAIN BOUNDARY (TYP)

FRONTIER (COMMUNICATIONS)
(APPROXIMATE LOCATION)

HARVEY RD

PAVEMENT TRANSITION
FROM 3.25" MILL & OVERLAY
TO 3" MILL & OVERLAY

EXISTING R/W (TYP)

STA 367+58
PE AGG

MATCHLINE 355+00

50'

60'

50'

S42°14'40"E

360

USH 10

365

50'

50'

50'

MATCHLINE 370+00

CP 7

STA 361+10
PE AGG

STA 355+75 : C-06-232
EXISTING 60"x48" BOX CULVERT
CLEANING BOX CULVERTS REQ'D
DITCH CLEANING REQ'D RT

STA 361+62
EXISTING 36" RCP
CLEANING CULVERT PIPES REQ'D
DITCH CLEANING REQ'D RT

CONTROL POINT & BENCHMARK TABLE

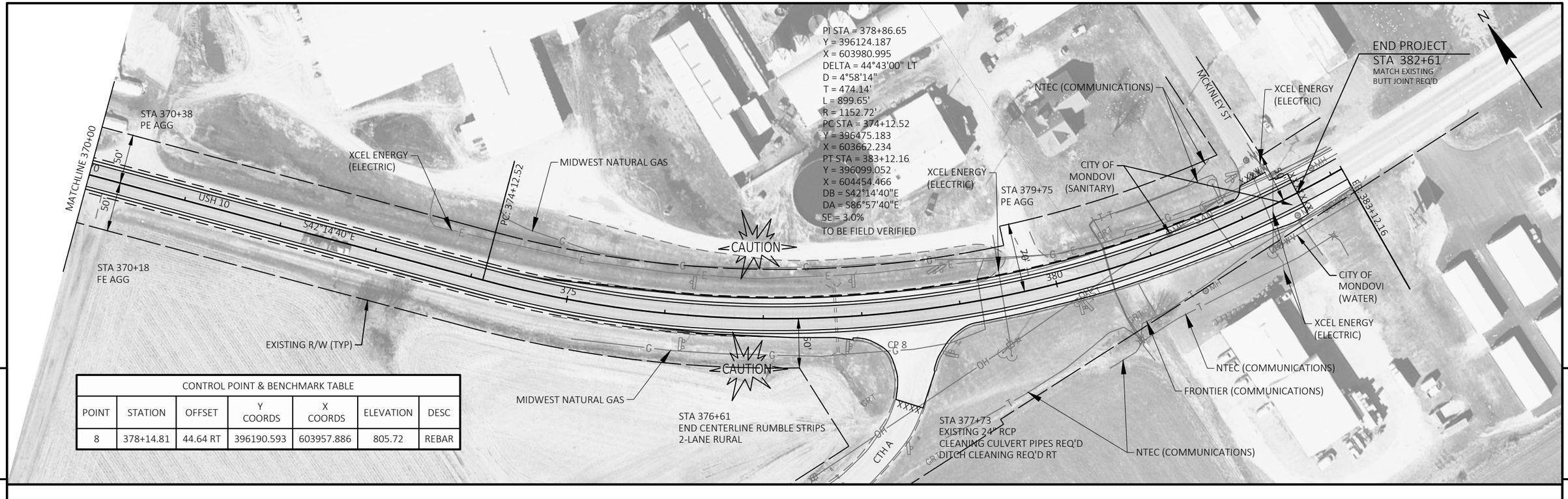
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
7	356+80.41	22.62 RT	397742.229	602480.999	797.63	REBAR

ENVIRONMENTALLY SENSITIVE AREA
STA 342+00 TO STA 362+00 RT

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 33	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 09

PLOT DATE : 3/3/2026 3:08 PM PLOT BY : GEOFF RASMUSSEN PLOT NAME : PLOT SCALE : 1 IN:100 FT



CONTROL POINT & BENCHMARK TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
8	378+14.81	44.64 RT	396190.593	603957.886	805.72	REBAR

5

5

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	PLAN	SHEET 34	E

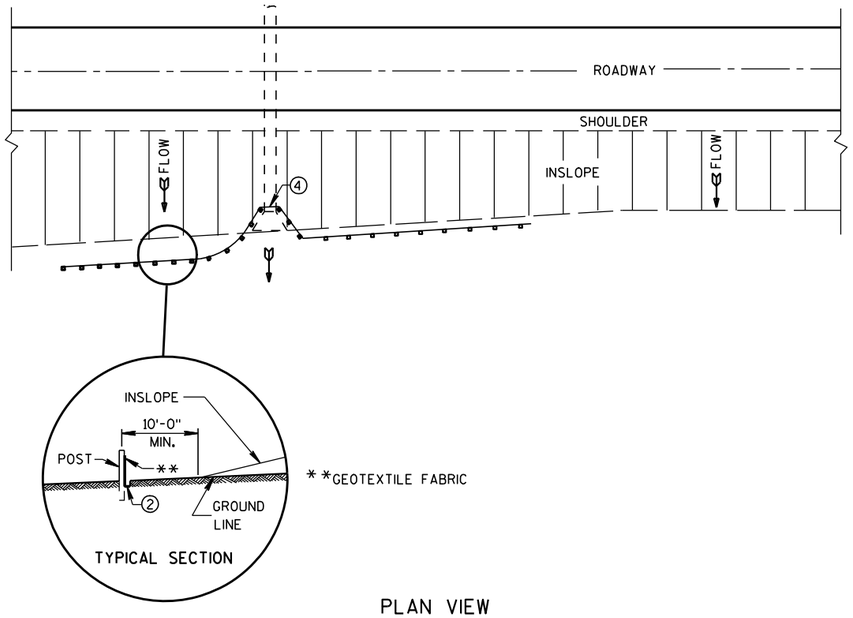
FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 10

PLOT DATE : 2/17/2026 5:35 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

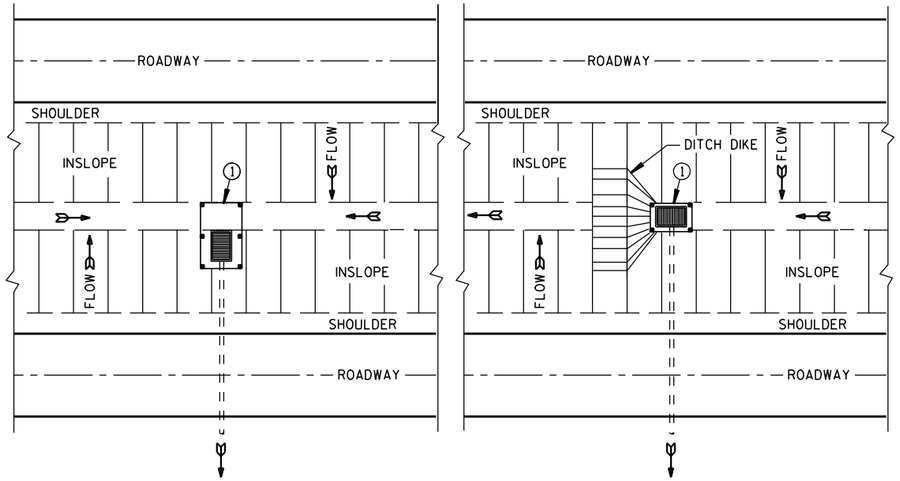
Standard Detail Drawing List

08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	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)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14D01-01	TURTLE EXCLUSION FENCE CLIMBING TURTLE
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-10A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



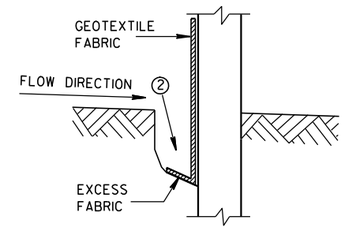
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

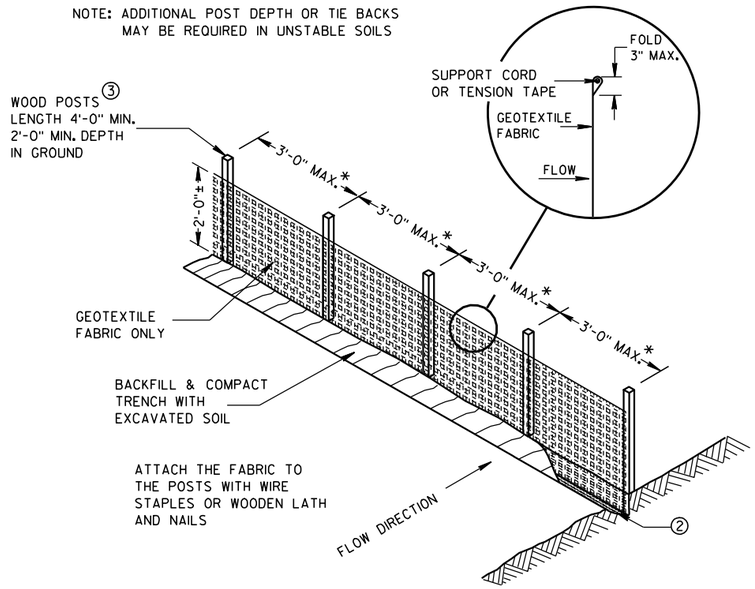
GENERAL NOTES

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.

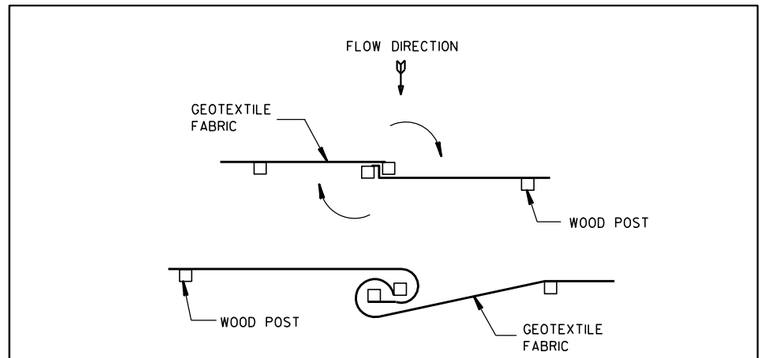


TRENCH DETAIL

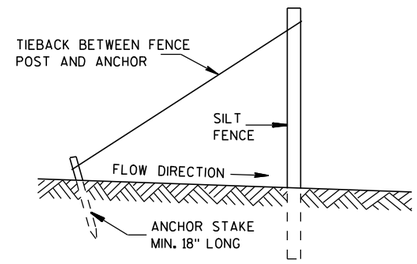


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



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

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

METAL APRON ENDWALLS

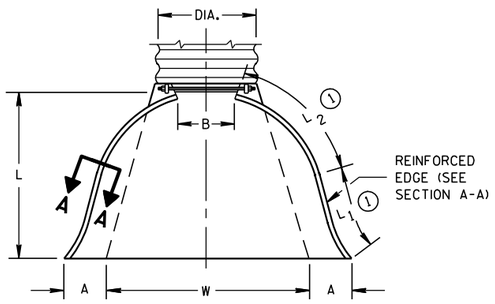
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

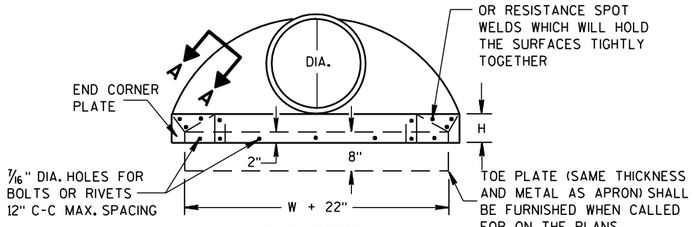
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

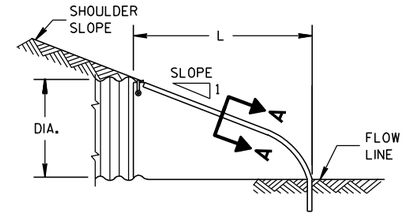
*MINIMUM
**MAXIMUM



PLAN VIEW

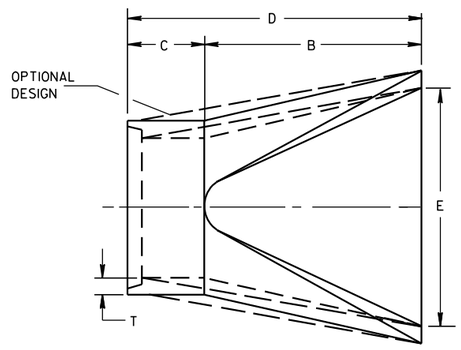


END VIEW

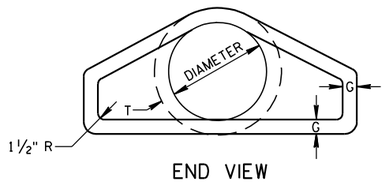


SIDE ELEVATION

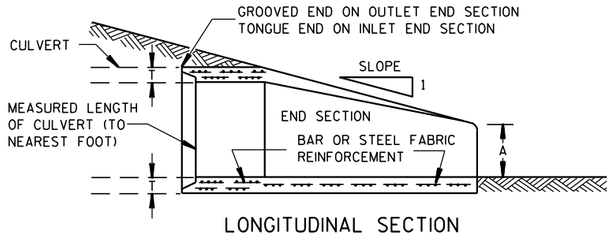
METAL ENDWALLS



PLAN

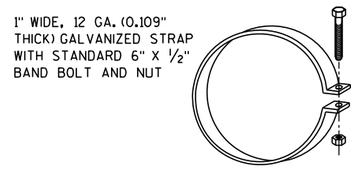


END VIEW



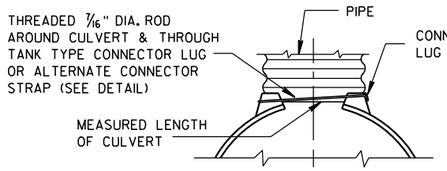
LONGITUDINAL SECTION

CONCRETE ENDWALLS

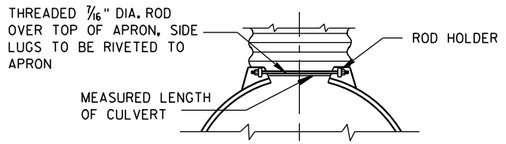


ALTERNATE FOR TYPE 1 CONNECTION

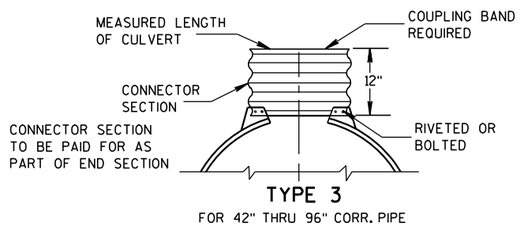
END SECTION CONNECTOR STRAP



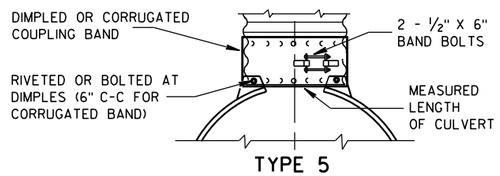
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

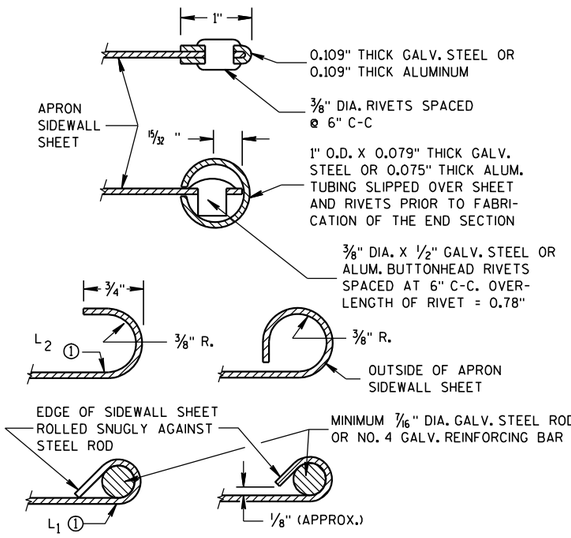
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

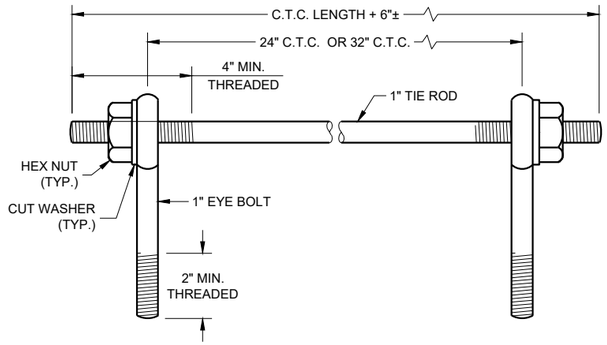
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

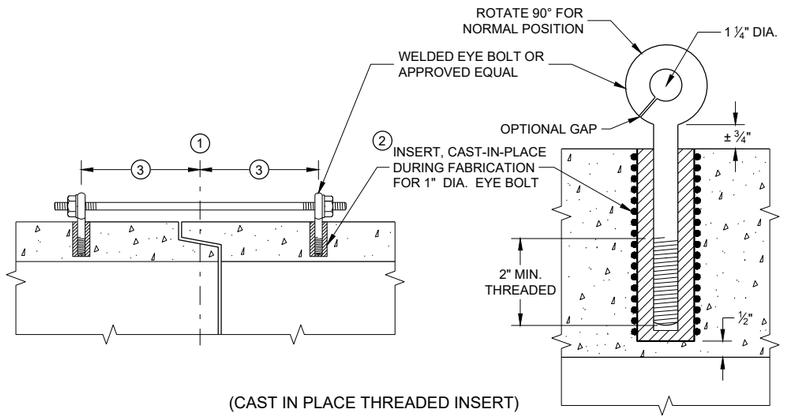
S.D.D. 8 F 1-11

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

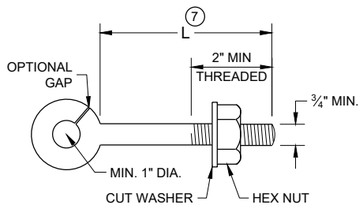
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

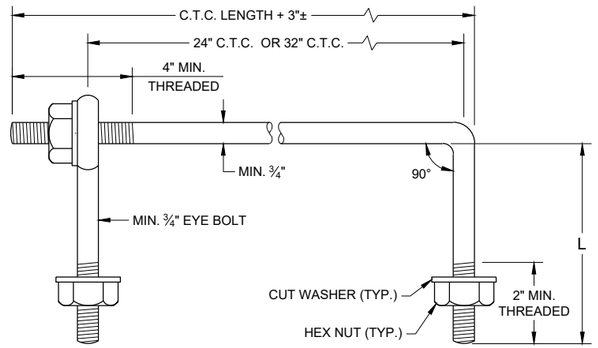
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

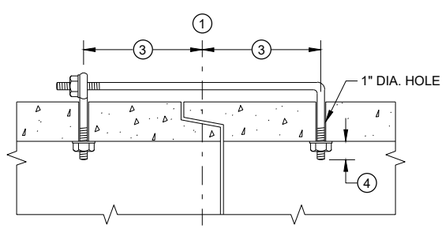


EYE BOLT (7)

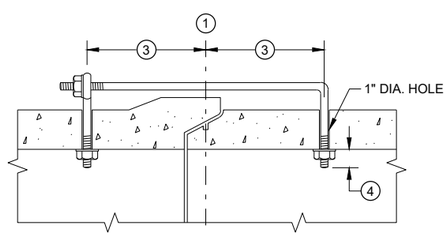
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

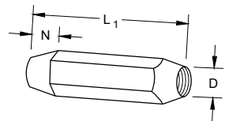
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

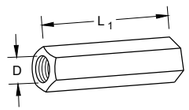
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



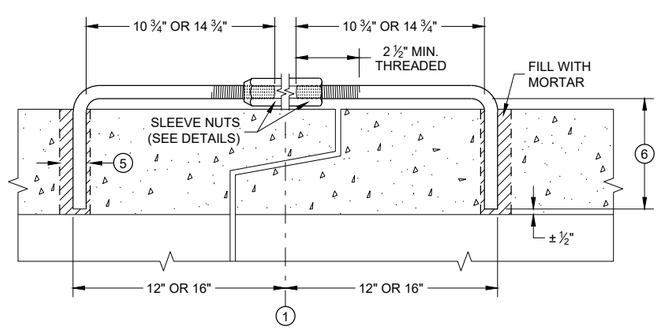
TAPERED



PLAIN

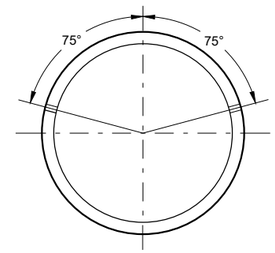
RIGHT AND LEFT THREADS

SLEEVE NUTS



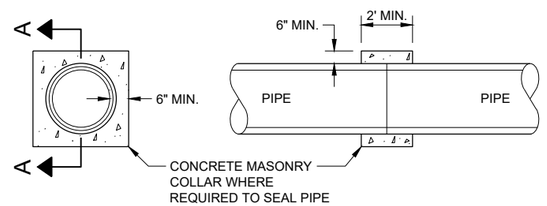
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

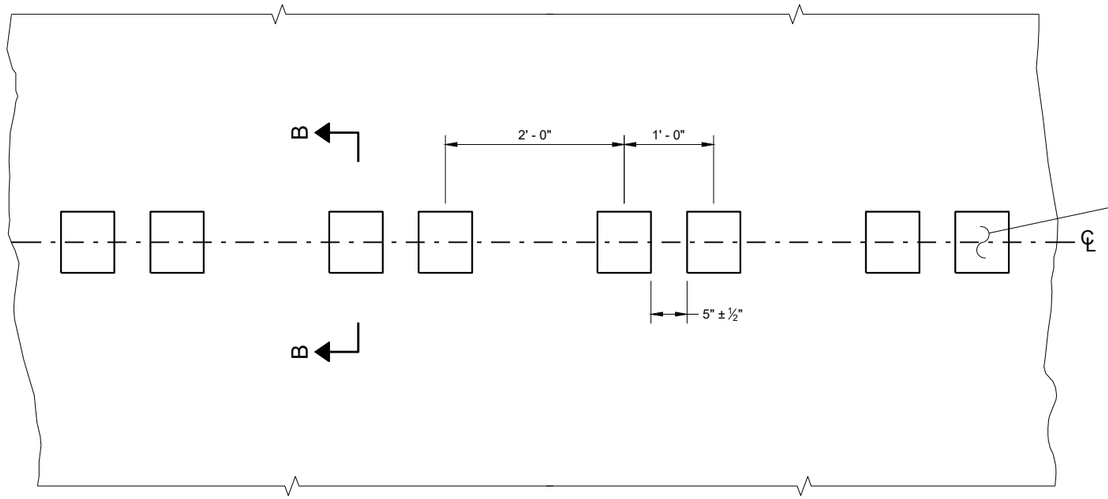
SDD 08F04 - 08

SDD 08F04 - 08

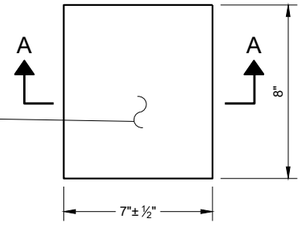
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

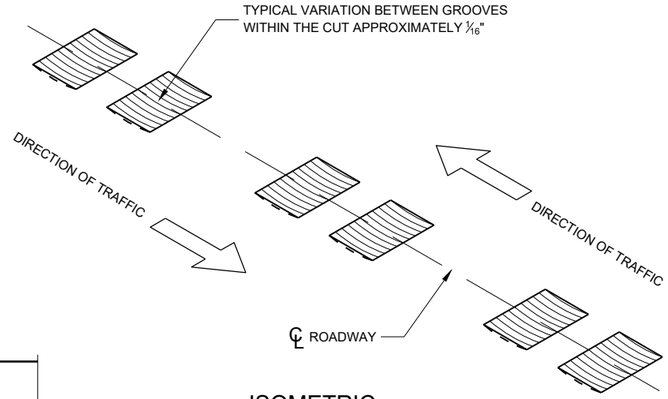
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



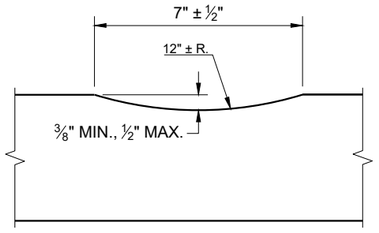
PLAN DETAIL VIEW



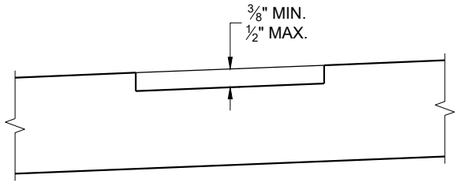
PLAN VIEW
(SINGLE GROOVE)



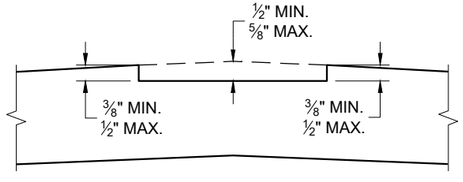
ISOMETRIC



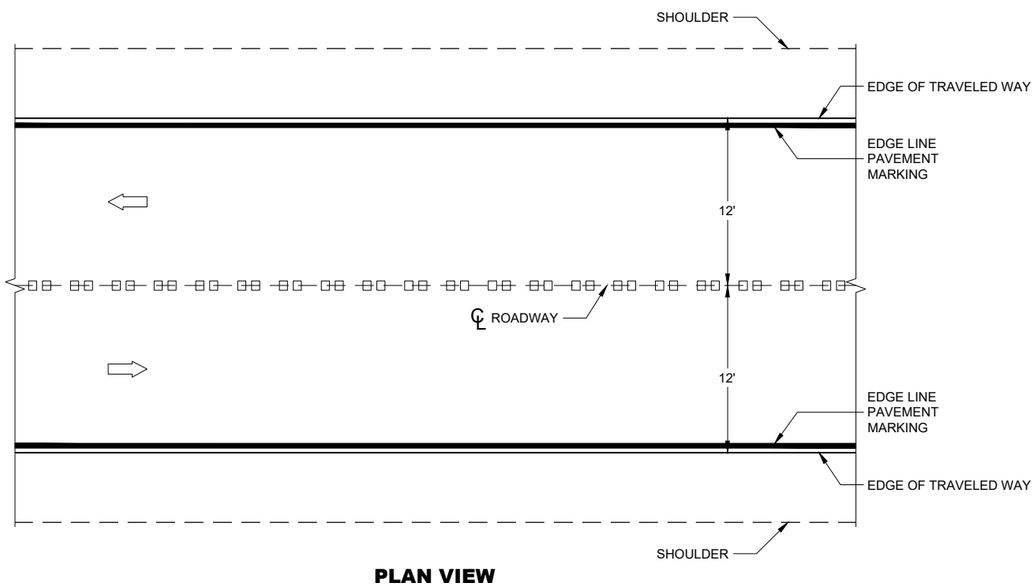
SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



PLAN VIEW

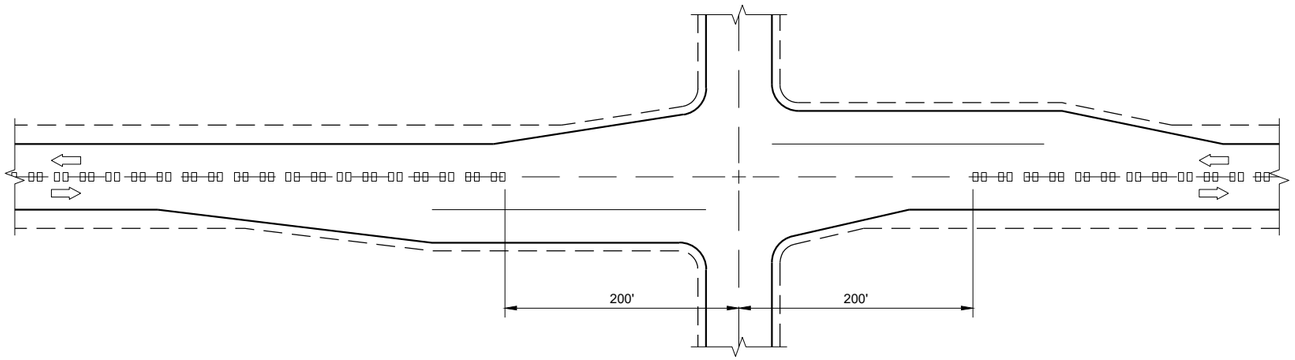
CENTERLINE RUMBLE STRIPS - ASPHALT

CENTERLINE RUMBLE STRIPS - ASPHALT

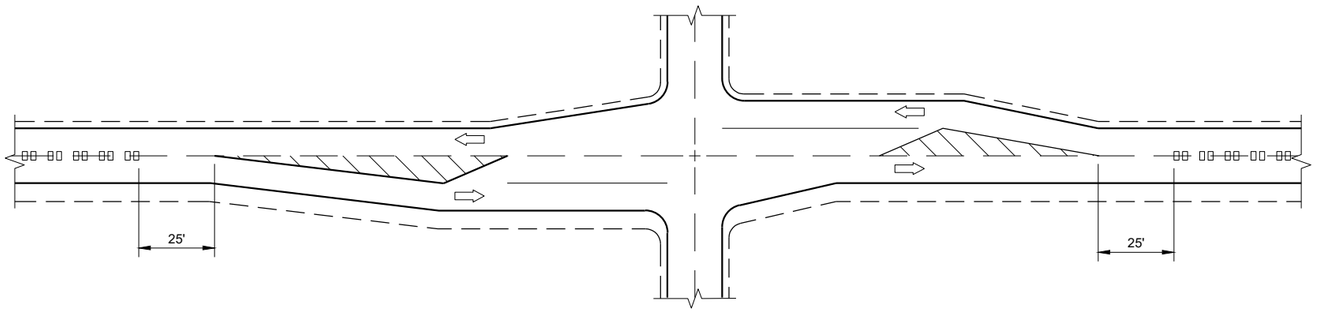
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

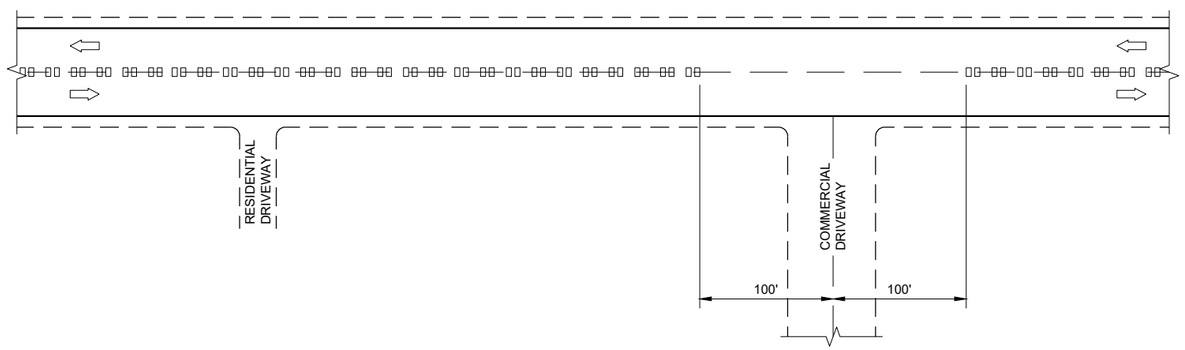
SDD 13A11 - 04a



CENTERLINE GROOVES AT INTERSECTIONS



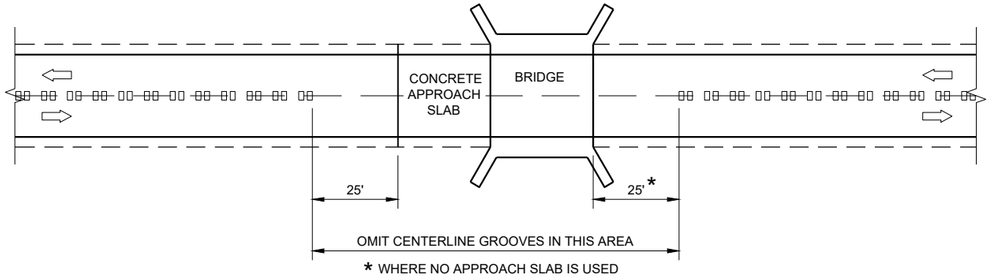
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



CENTERLINE GROOVES AT DRIVEWAYS (1)

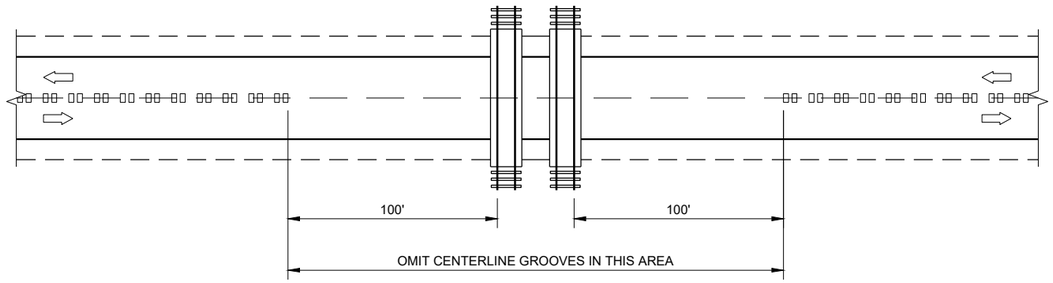
GENERAL NOTES

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



* WHERE NO APPROACH SLAB IS USED

CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

CENTER LINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

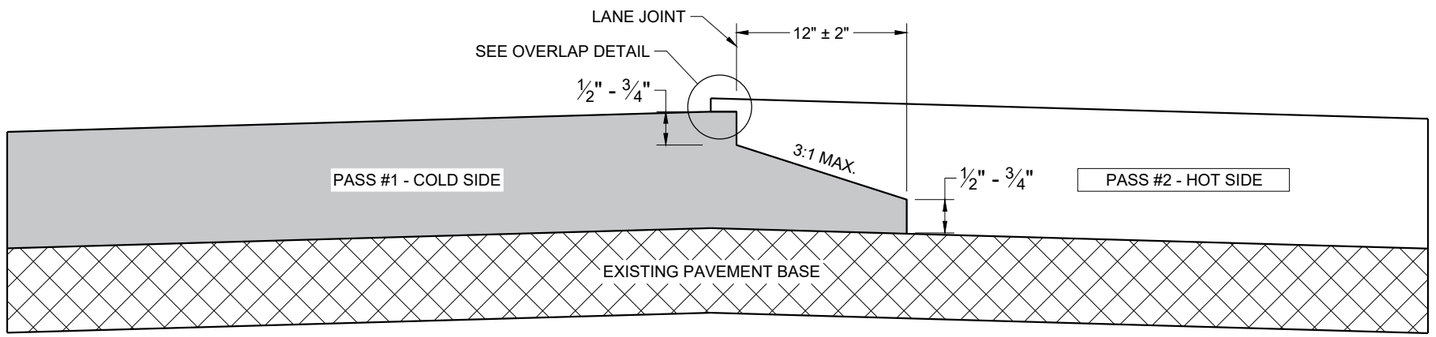
/S/ John Jenkins
ROADWAY STANDARDS DEVE ENGINEER

FHWA

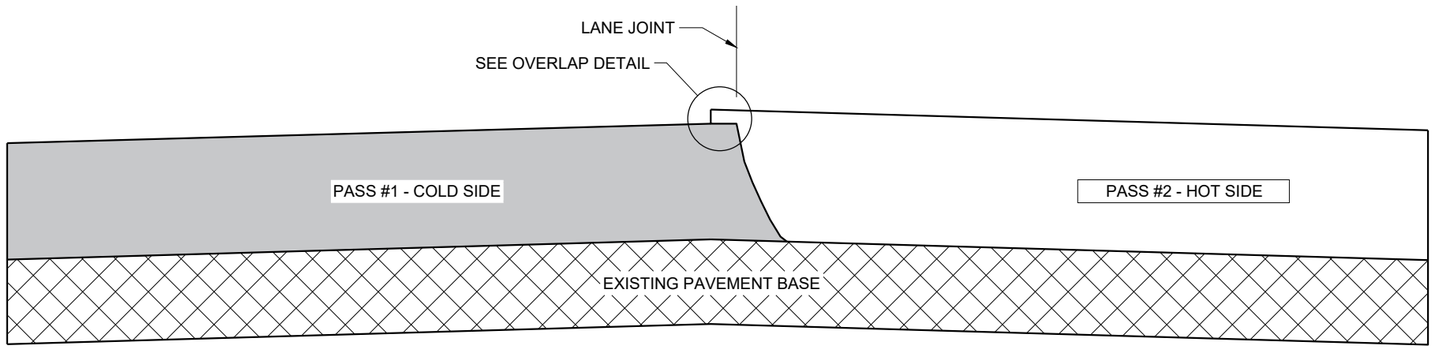
6

SDD 13A11 - 04d

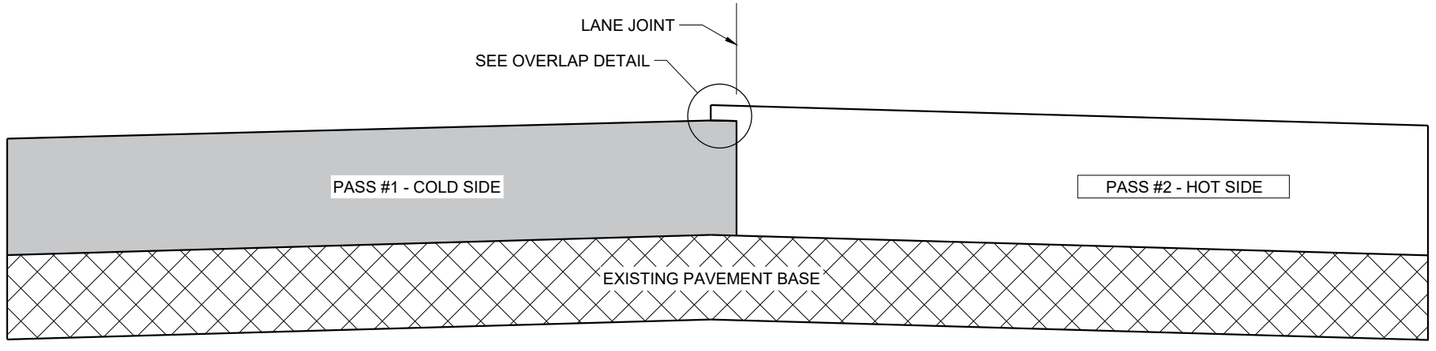
SDD 13A11 - 04d



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

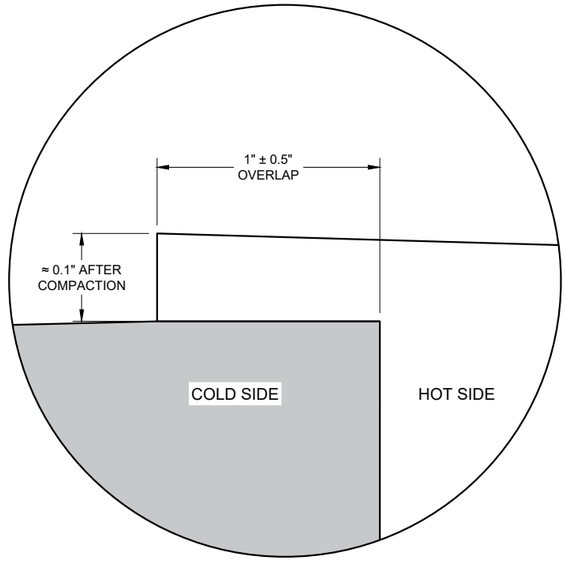
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

6

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SDD 13C19 - 03

SDD 13C19 - 03

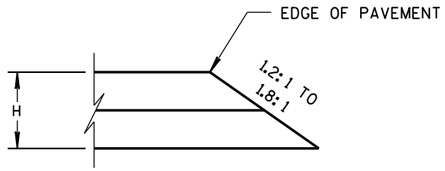
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

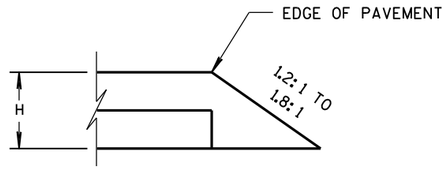
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



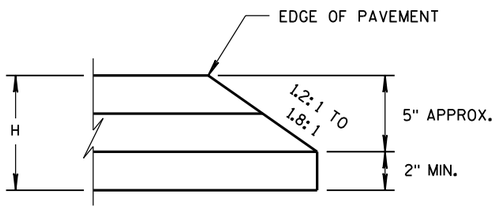
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



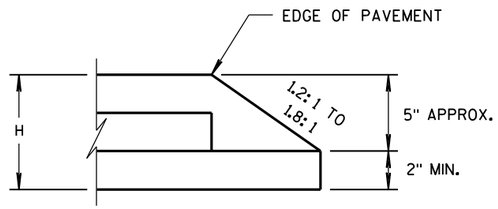
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

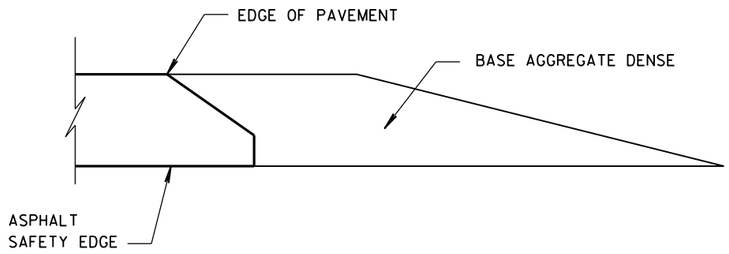
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

(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.

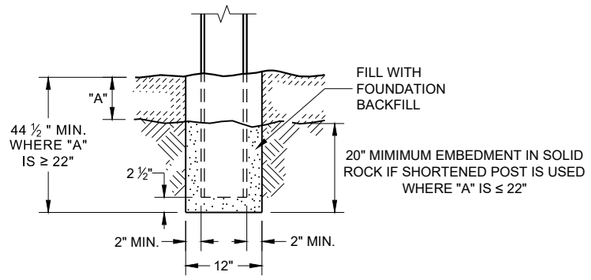
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

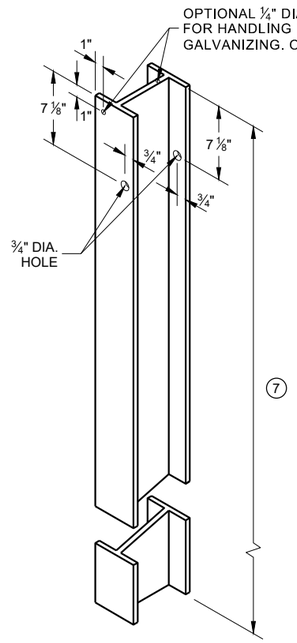
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

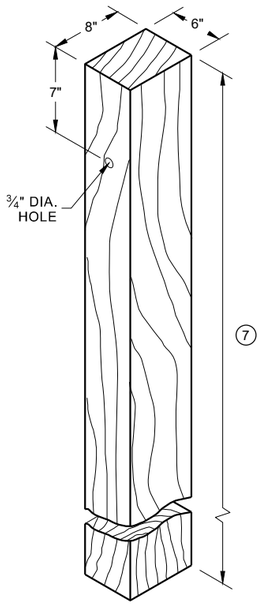
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



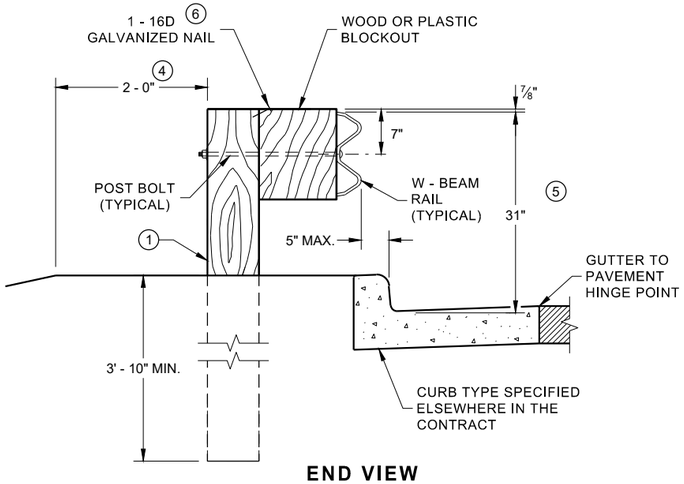
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



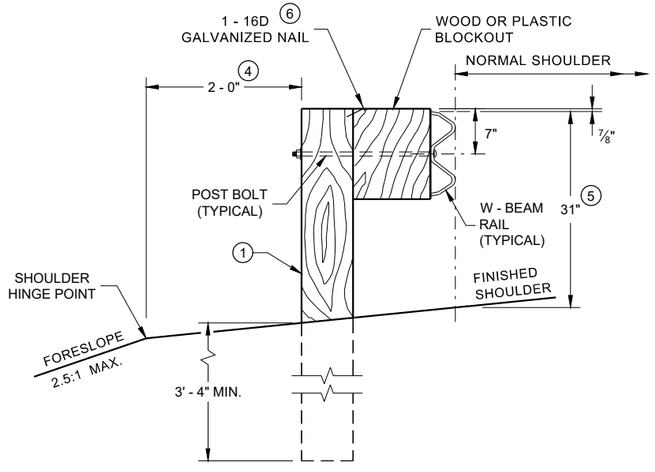
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



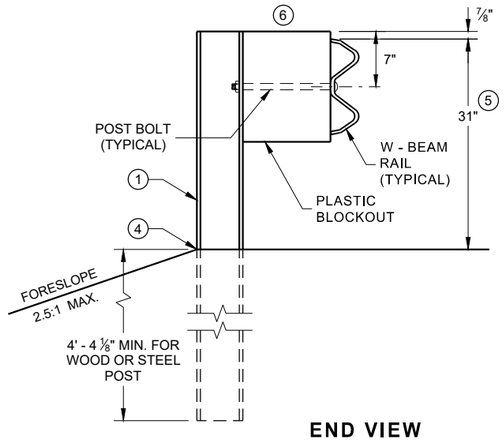
WOOD POST (6" X 8") NOMINAL (1)



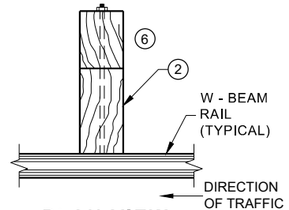
END VIEW
LOCATED ALONG A CURBED ROADWAY



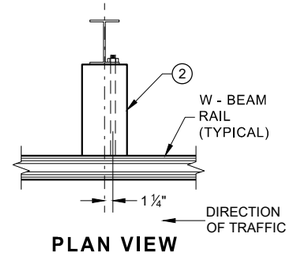
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



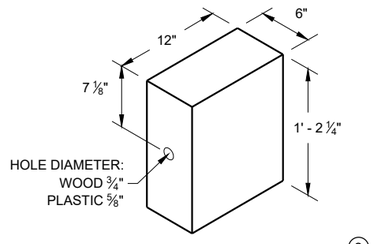
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



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 - 07a

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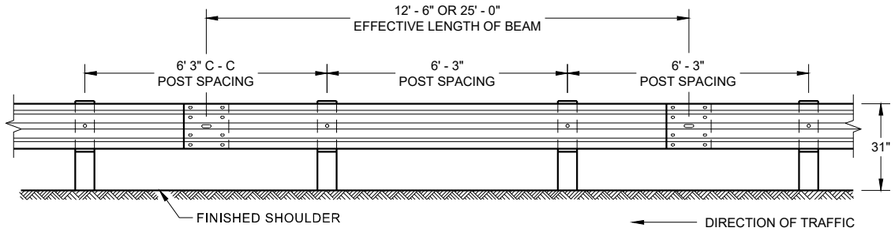
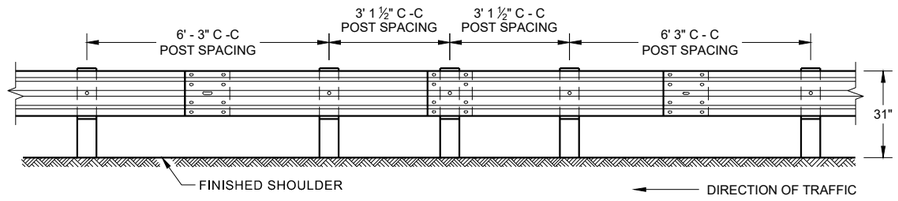
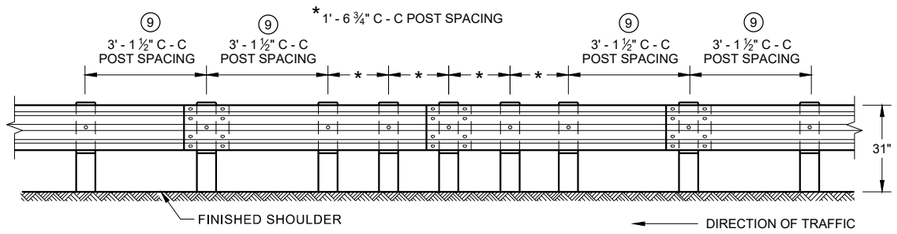
SDD 14B42 - 07a



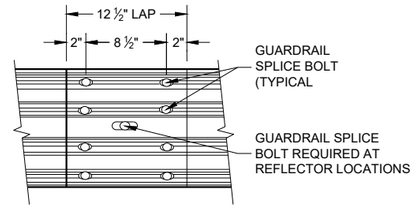
FRONT VIEW
POST SPACING STANDARD INSTALLATION



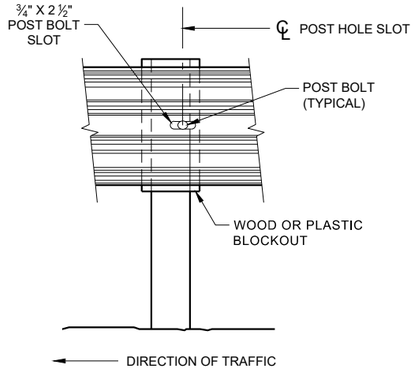
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



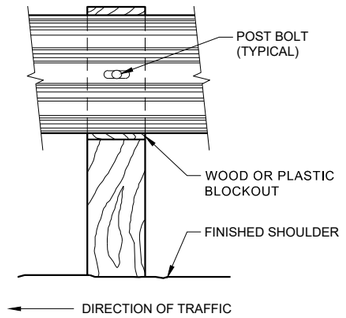
FRONT VIEW
QUARTER POST SPACING (QS)



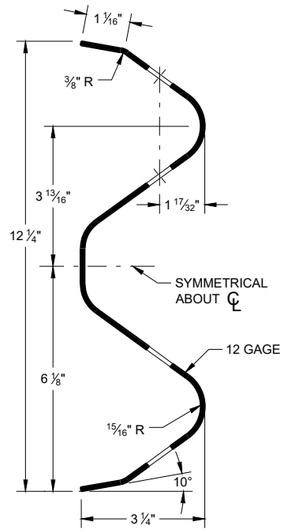
FRONT VIEW
MID-SPAN BEAM SPLICE



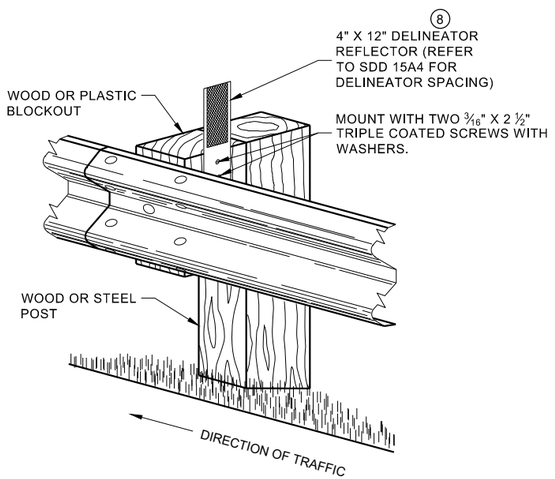
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

POST BOLTS ARE A ⅝" 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.

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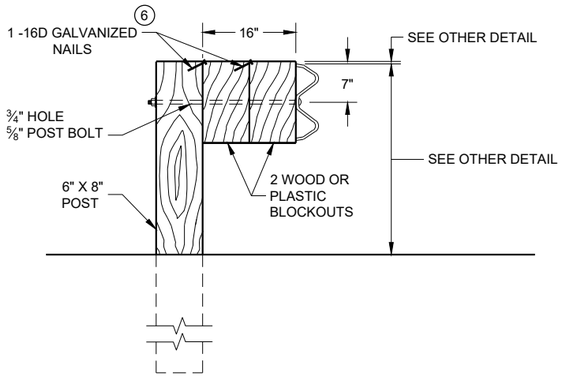
SDD 14B42 - 07b

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b

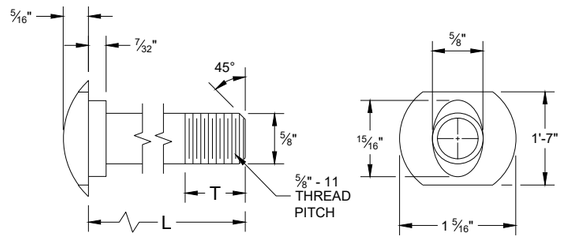


DETAIL FOR 16" BLOCKOUT DEPTH

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.

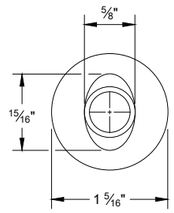
NOTE:

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.

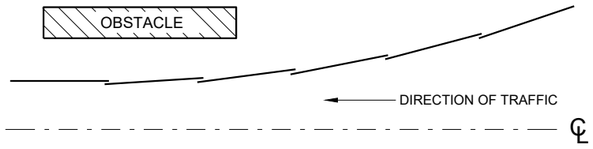


POST BOLT TABLE

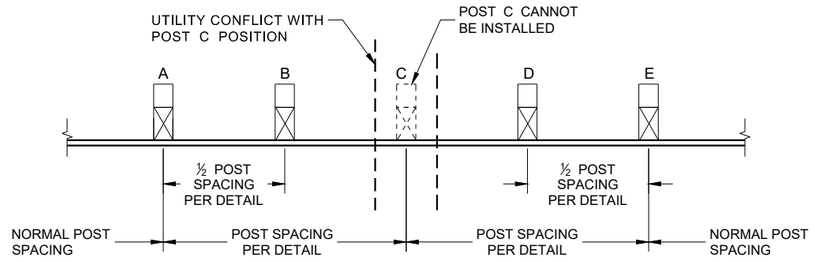
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



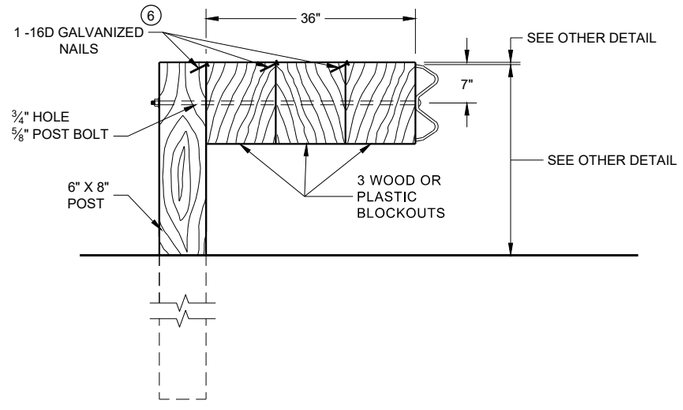
ALTERNATE BOLT HEAD



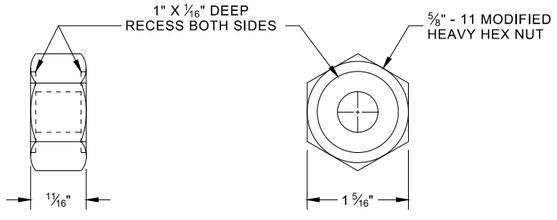
PLAN VIEW
BEAM LAPPING DETAIL



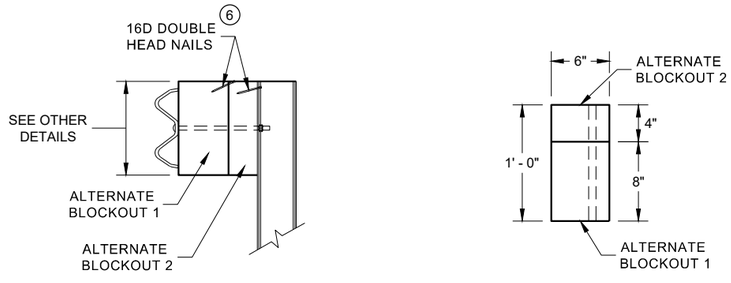
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



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.

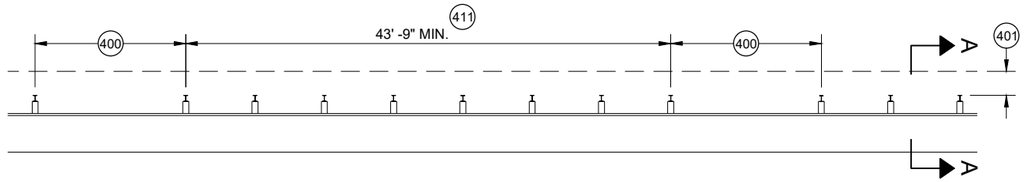
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

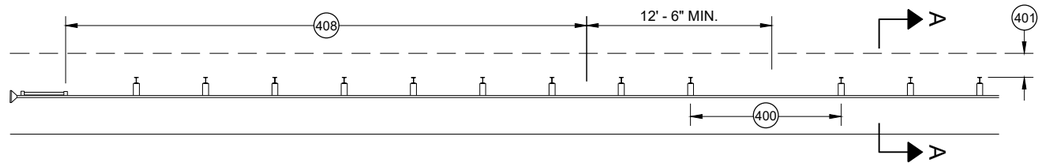
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

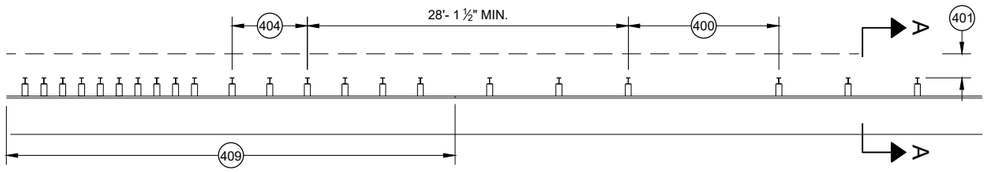
SDD 14B42 - 07c



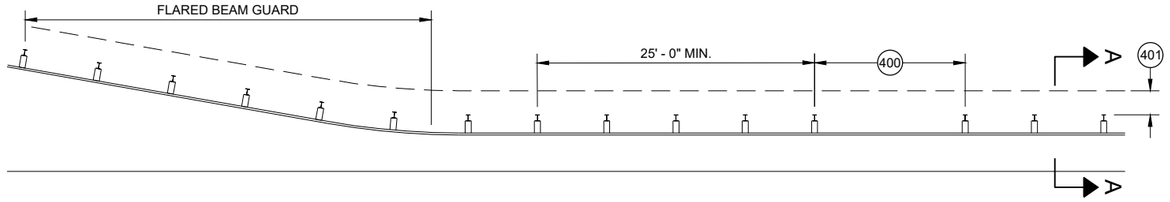
MISSING POST IN MGS GUARDRAIL



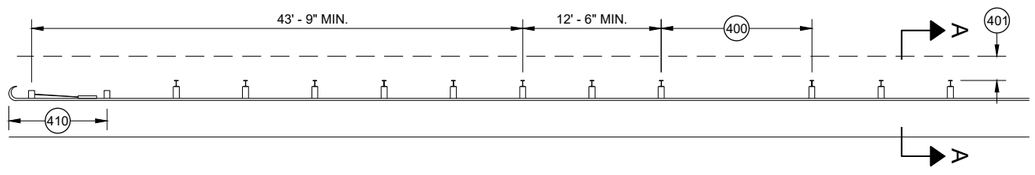
MISSING POST IN MGS GUARDRAIL NEAR EAT



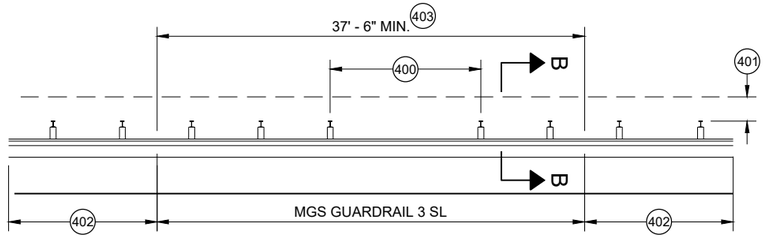
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

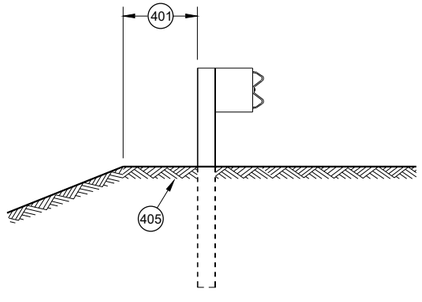


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

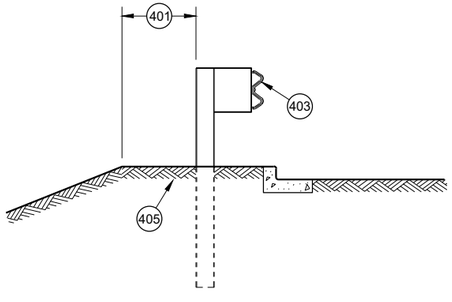


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

400 MAX SPAN 12' - 6"
401 2' MIN.
402 MGS GUARDRAIL 3
403 NESTING BEAM GUARD
404 ASYMMETRIC TRANSITION
405 SOIL WELL DRAINED AND COMPACTED
406 SEE OTHER DRAWINGS IN THIS SDD
407 SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
408 SEE SDD 14B44
409 SEE SDD 14B45
410 SEE SDD 14B47
411 MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

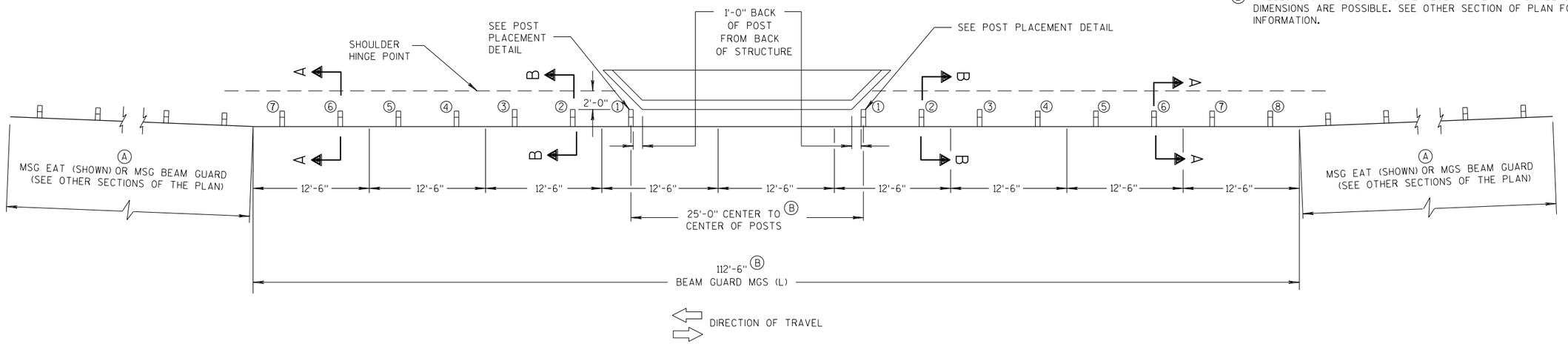
GENERAL NOTES

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

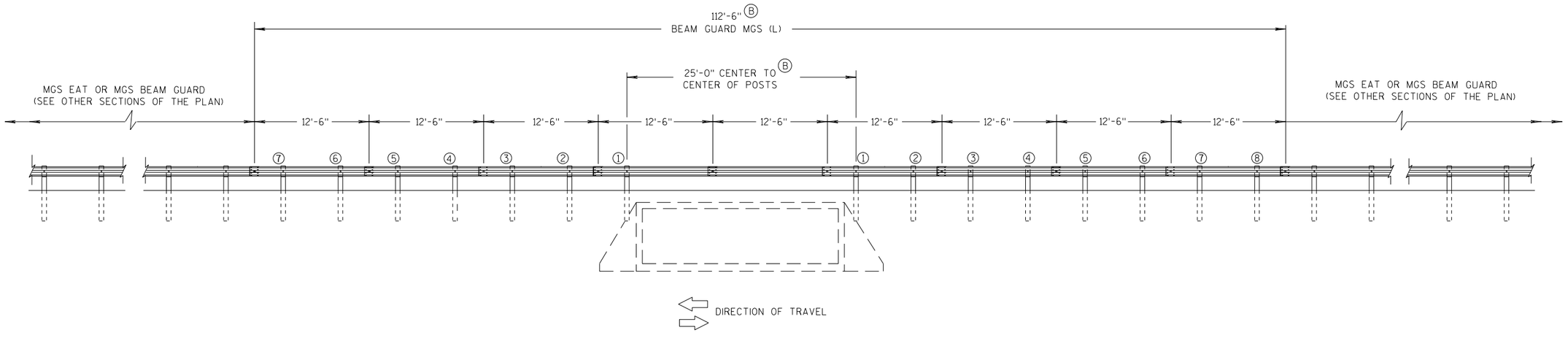
SEE SDD 14 B 42 FOR MORE DETAILS.

(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

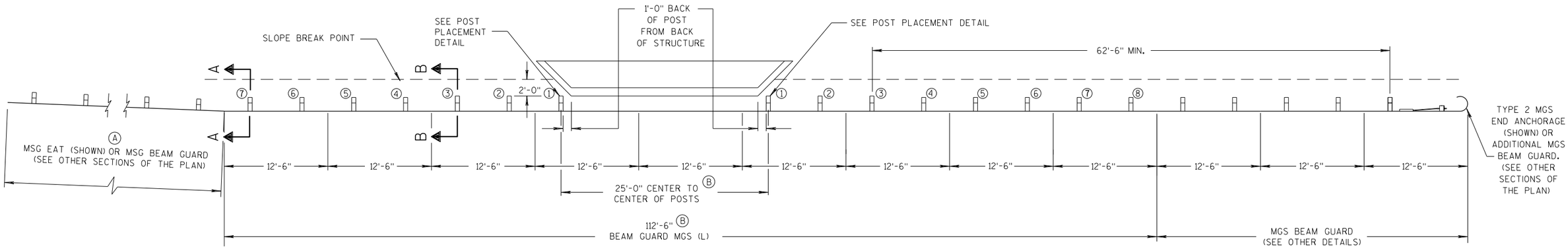
GENERAL NOTES

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

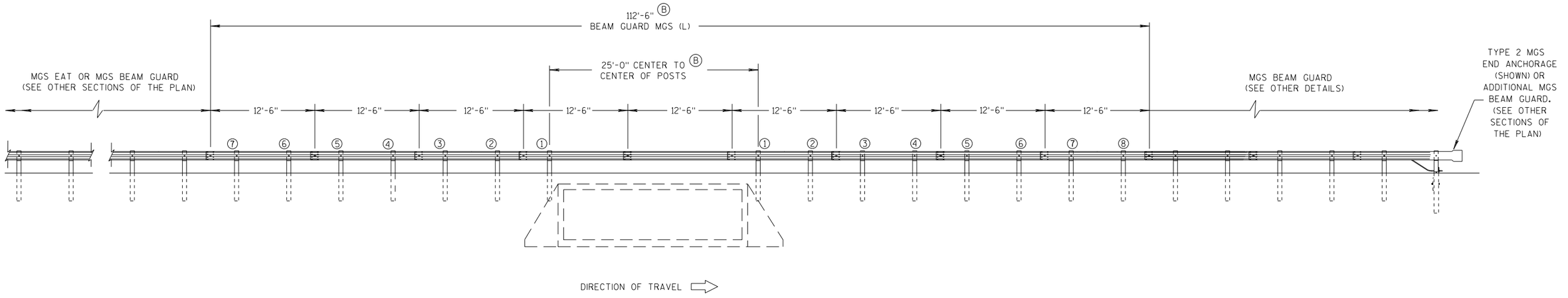
SEE SDD 14 B 42 FOR MORE DETAILS.

(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



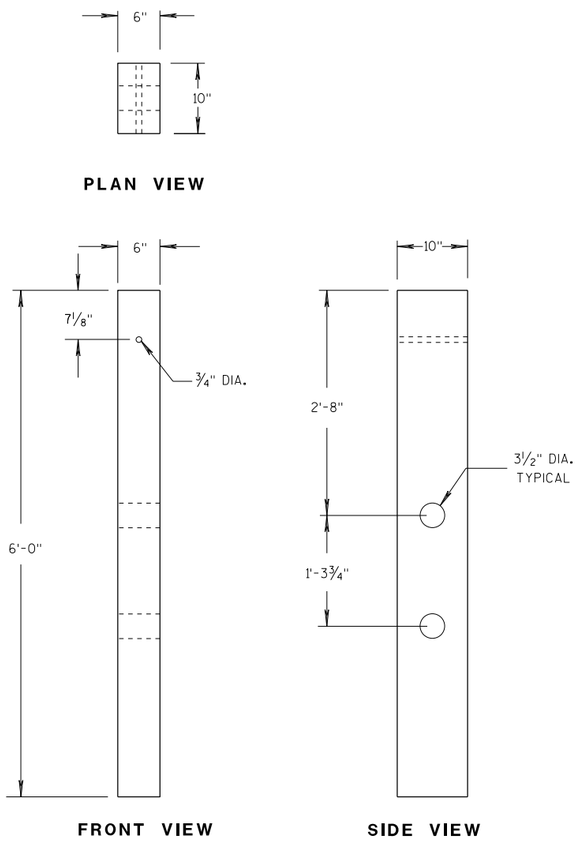
ELEVATION VIEW

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

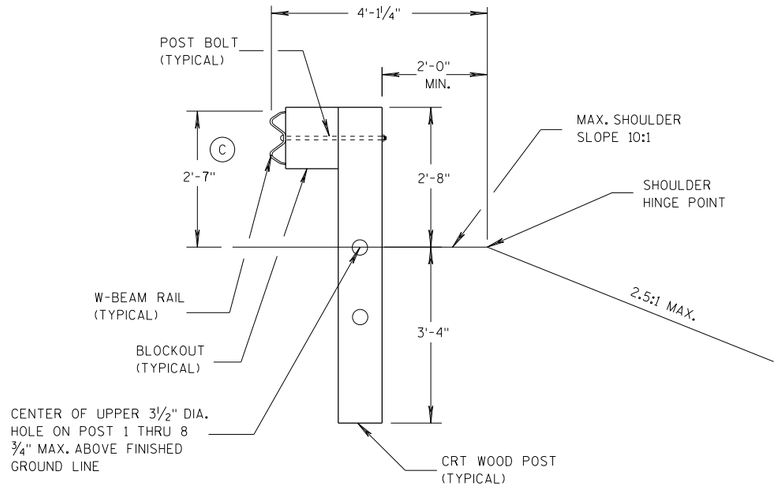
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	48

6

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



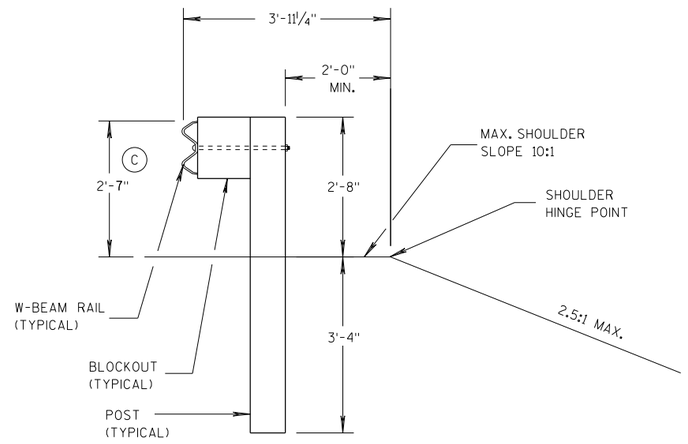
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



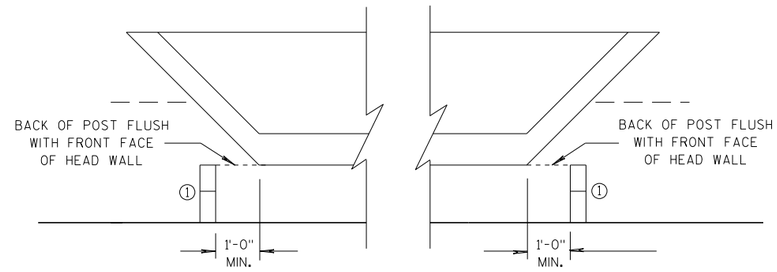
SECTION A-A

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 D49 NT
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.

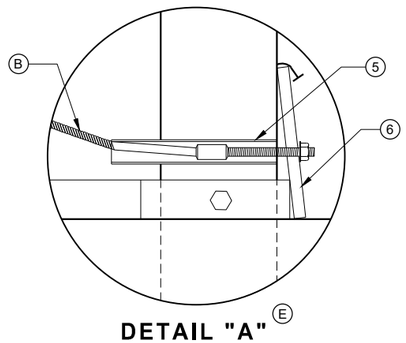
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

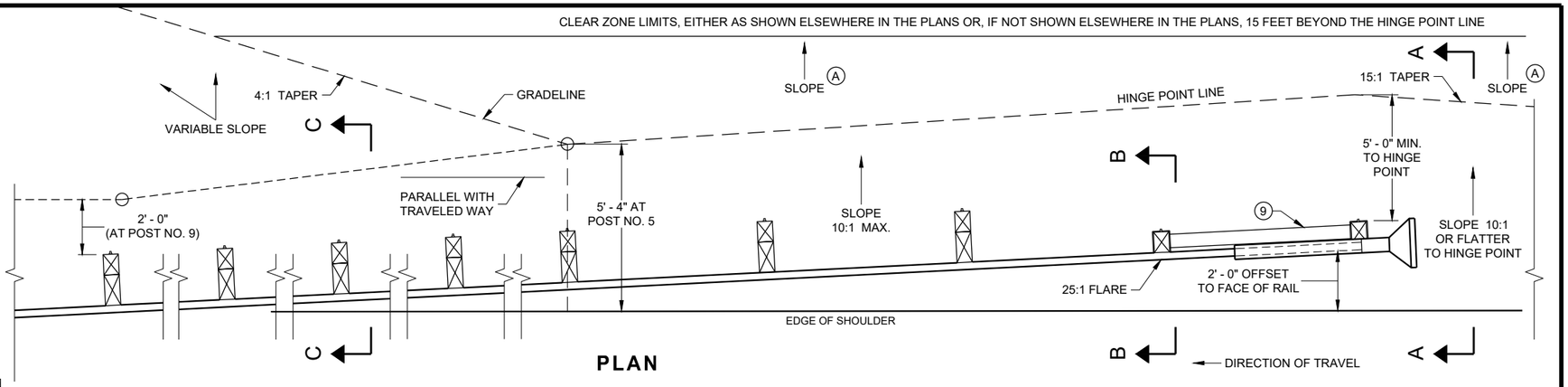
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

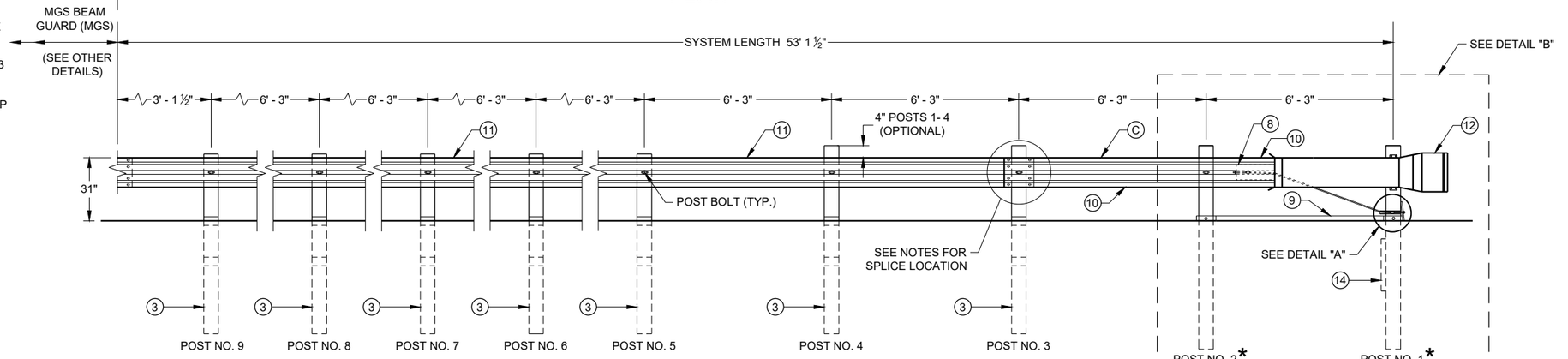
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



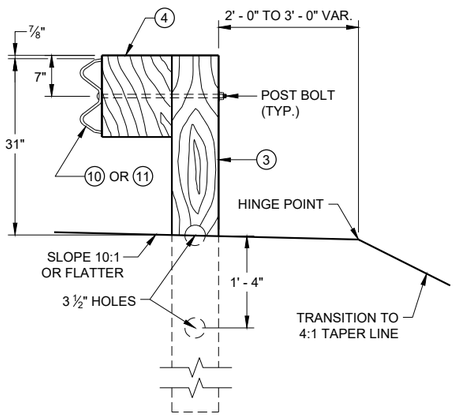
DETAIL "A" (E)



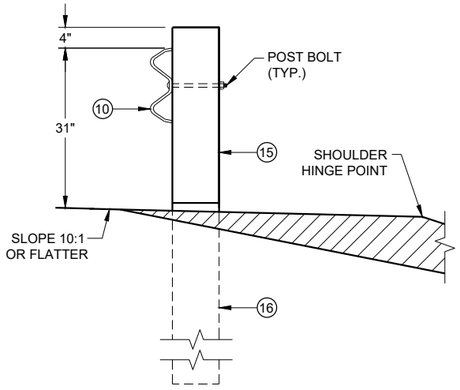
PLAN



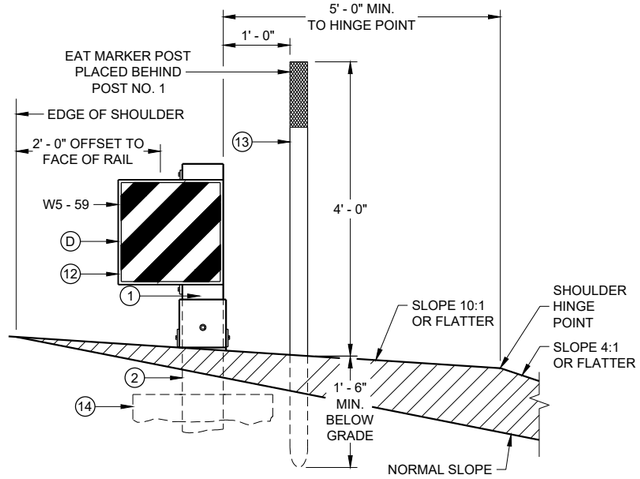
ELEVATION



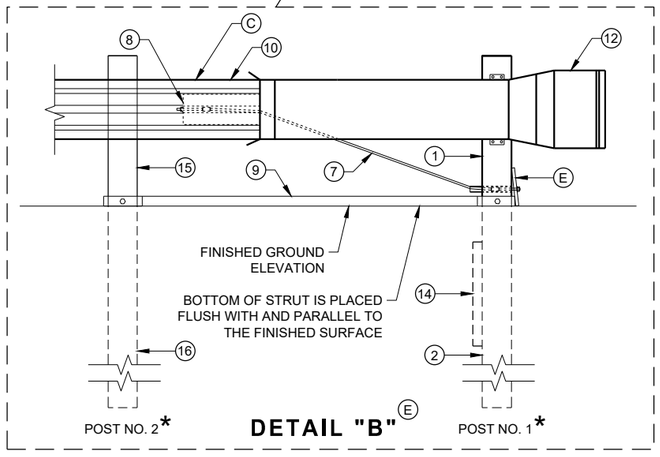
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*

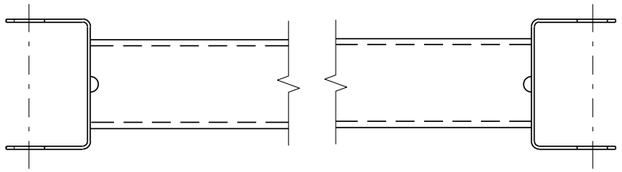


DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

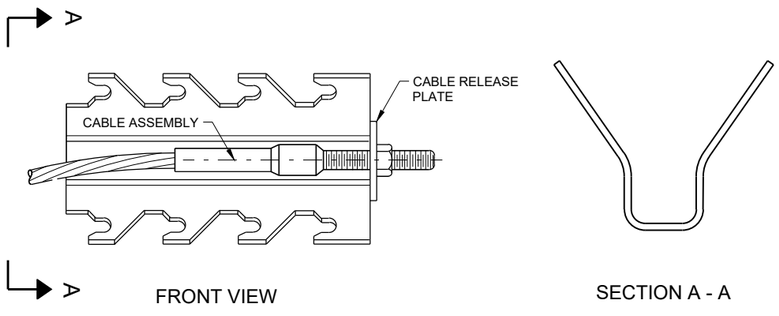
SDD 14B44 - 04a



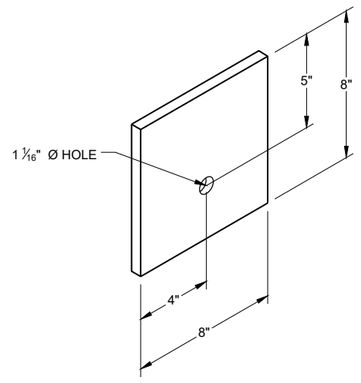
GENERIC GROUND STRUT ⑨ Ⓔ

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 Ⓔ



BEARING PLATE ⑥ Ⓔ

6

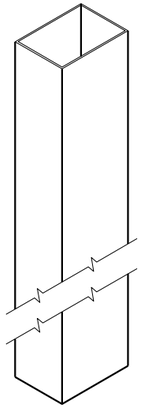
6

SDD 14B44 - 04b

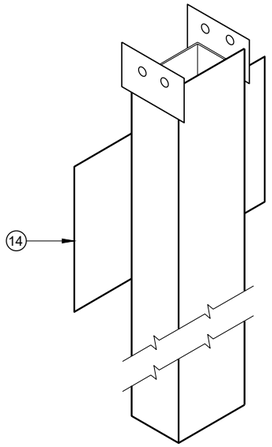
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

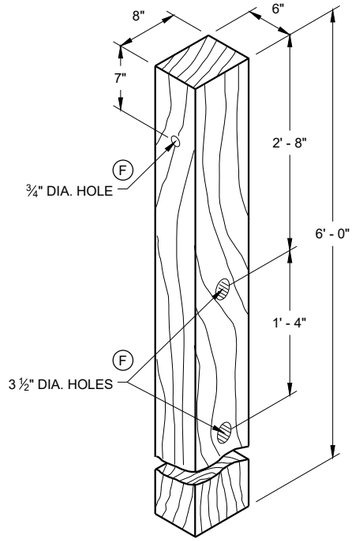
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



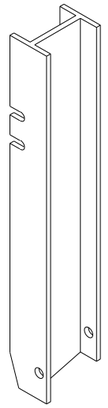
UPPER POST NO. 1 (1) (E)



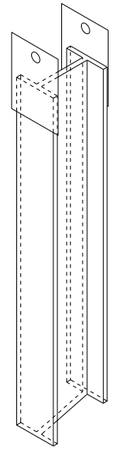
LOWER POST NO. 1 (2) (E)



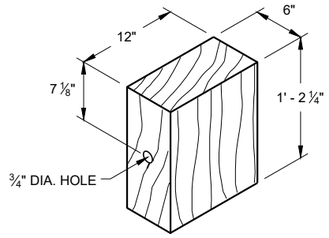
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



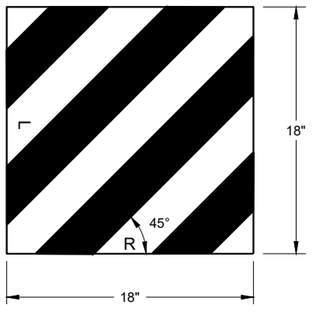
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

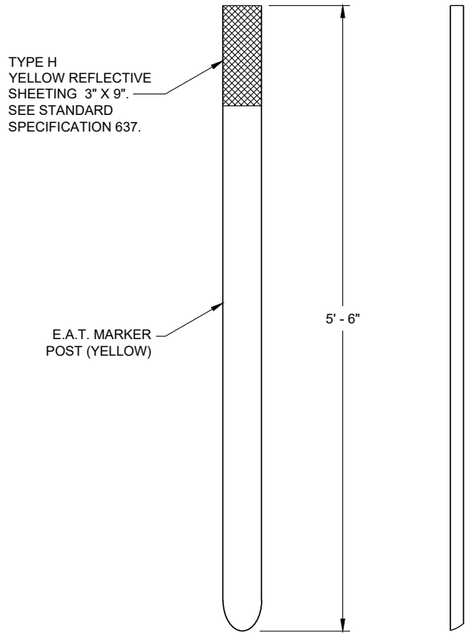


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



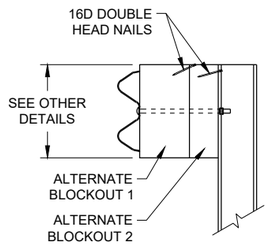
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

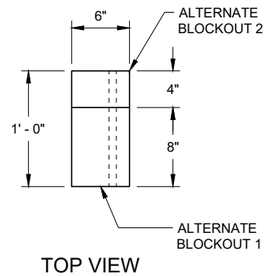


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

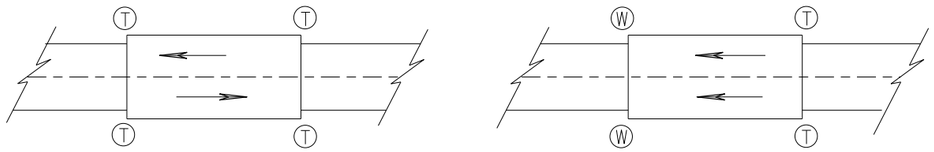
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

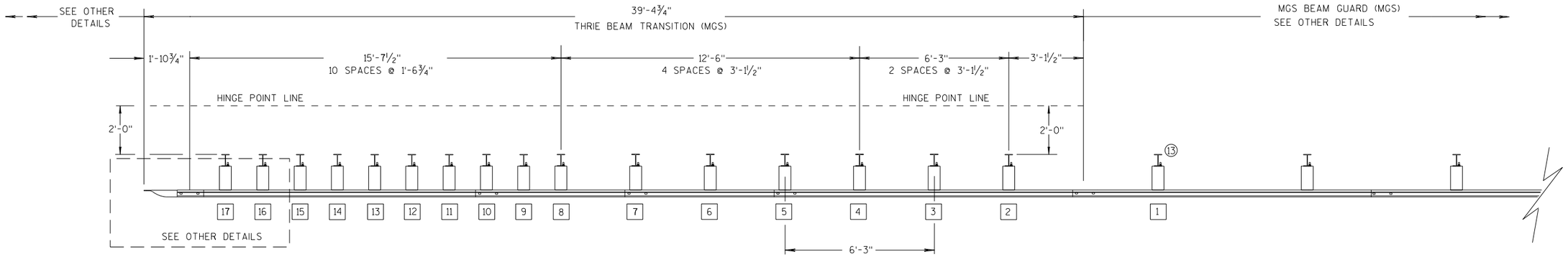
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

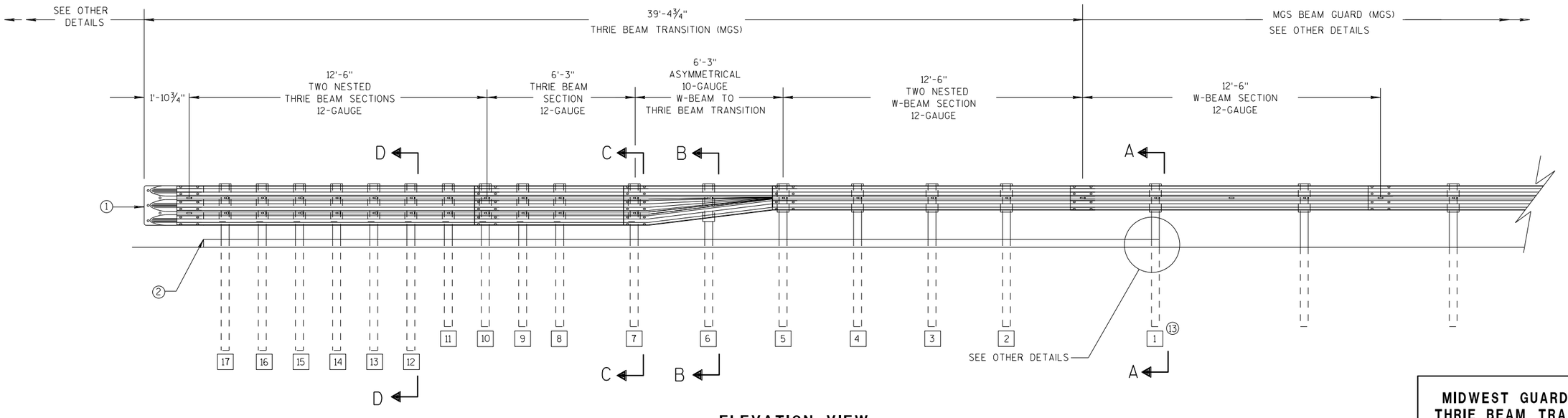
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 45-5a

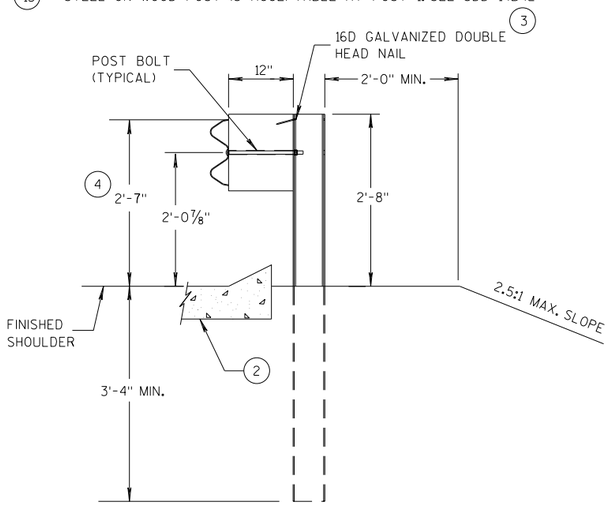
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

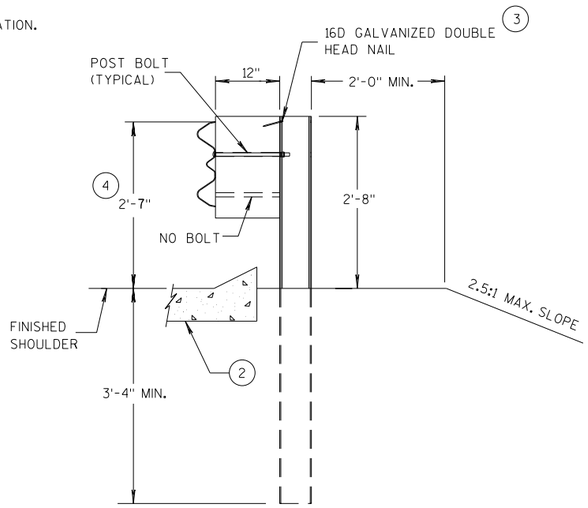
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



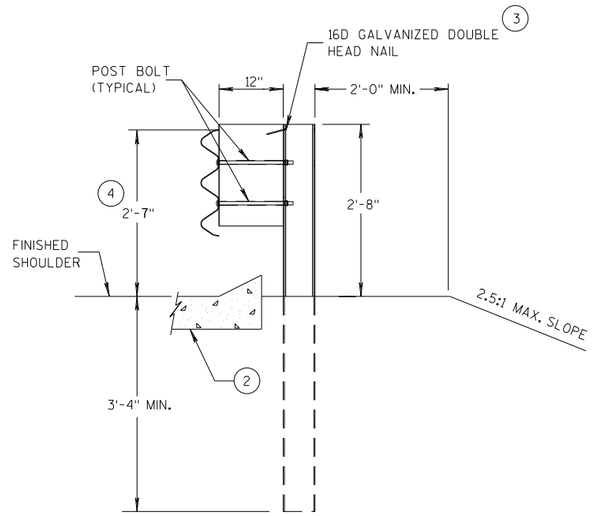
SECTION A-A (13)

POSTS 1-5



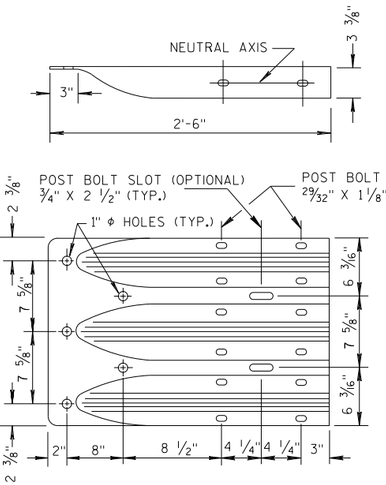
SECTION B-B

POST 6

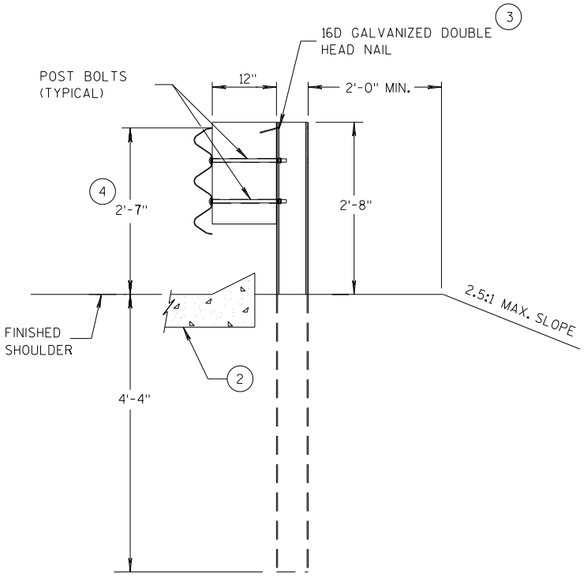


SECTION C-C

POSTS 7-11

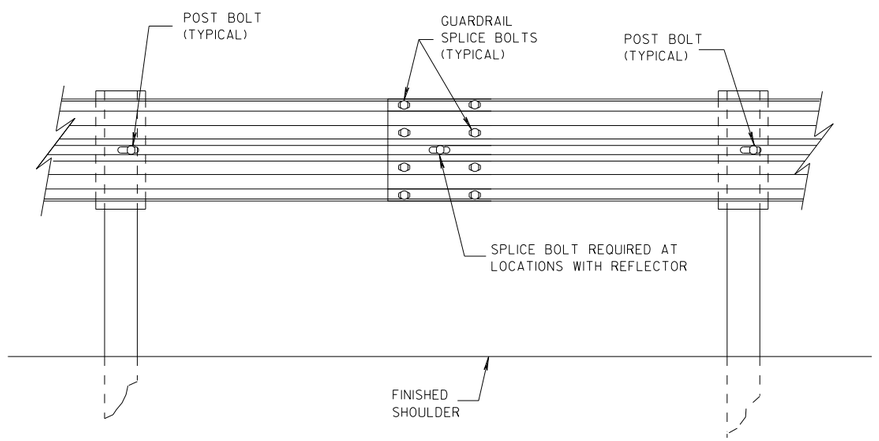


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

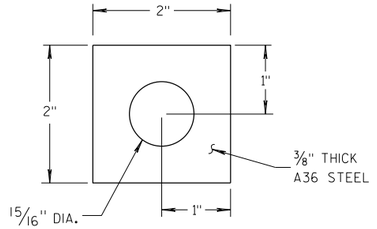
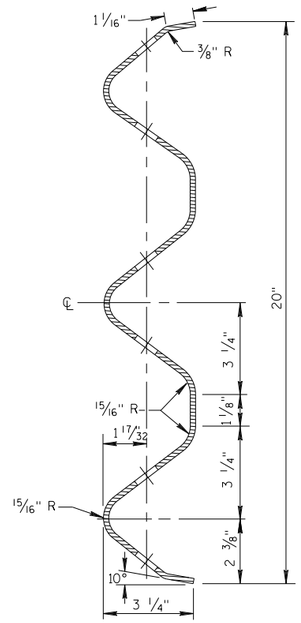


PLATE WASHER DETAIL



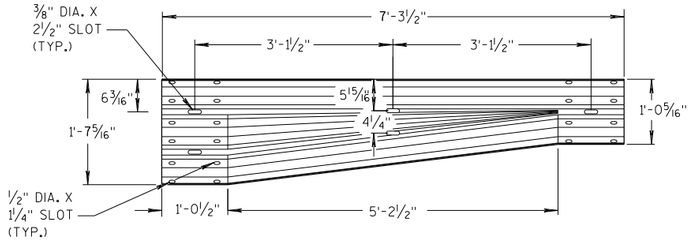
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

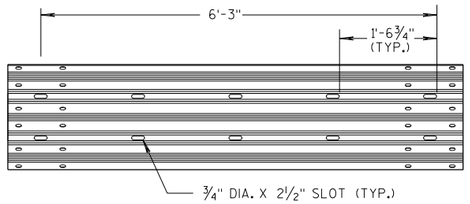
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORT

6

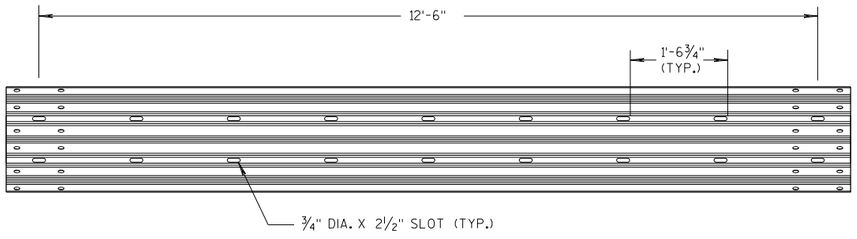
S.D.D. 14 B 45-5b



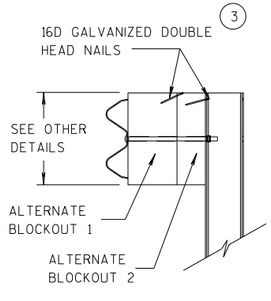
W-BEAM TO THRIE BEAM TRANSITION SECTION



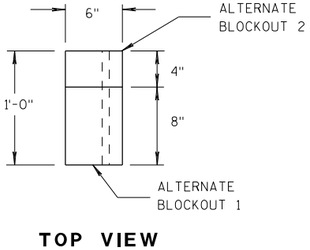
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

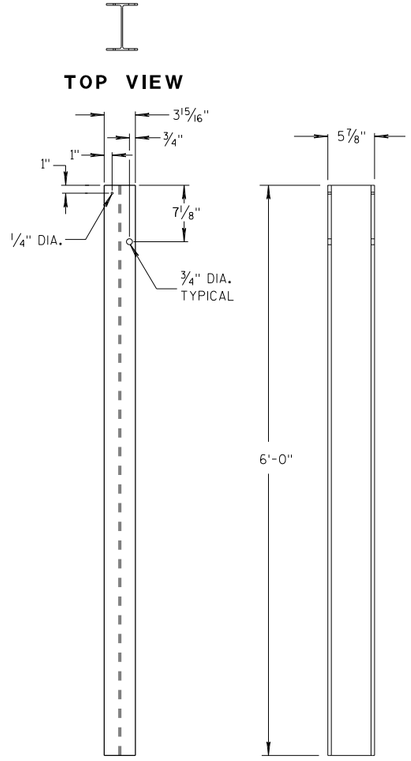


SIDE VIEW



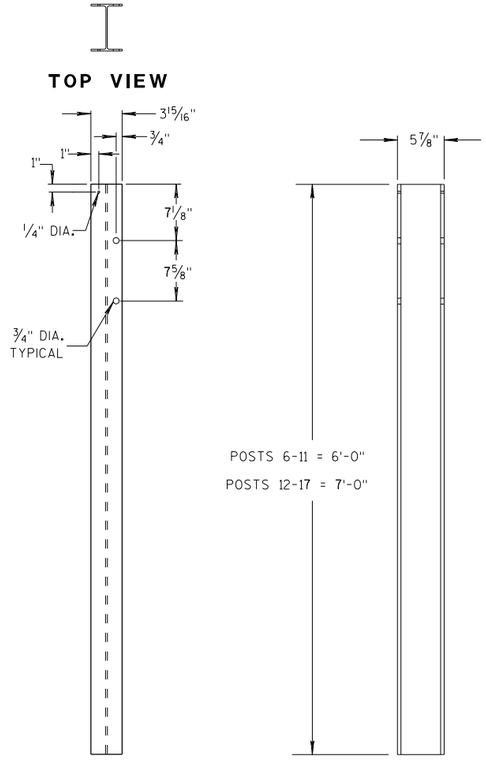
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



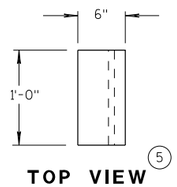
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

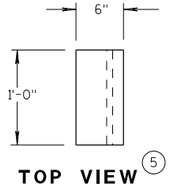


FRONT VIEW SIDE VIEW

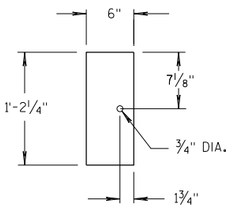
STEEL POSTS 6-17



TOP VIEW (5)

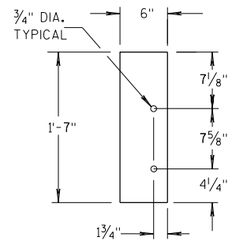


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS 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.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 55

6

S.D.D. 14 B 45-5c

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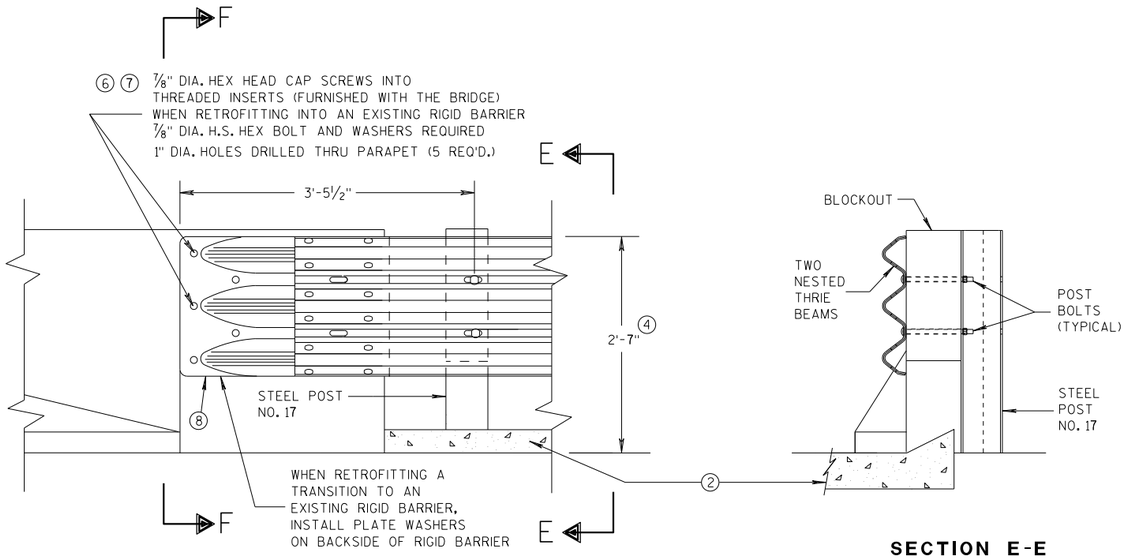
S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

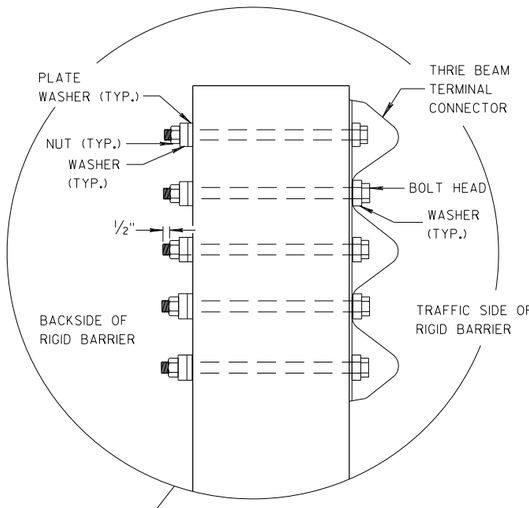
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

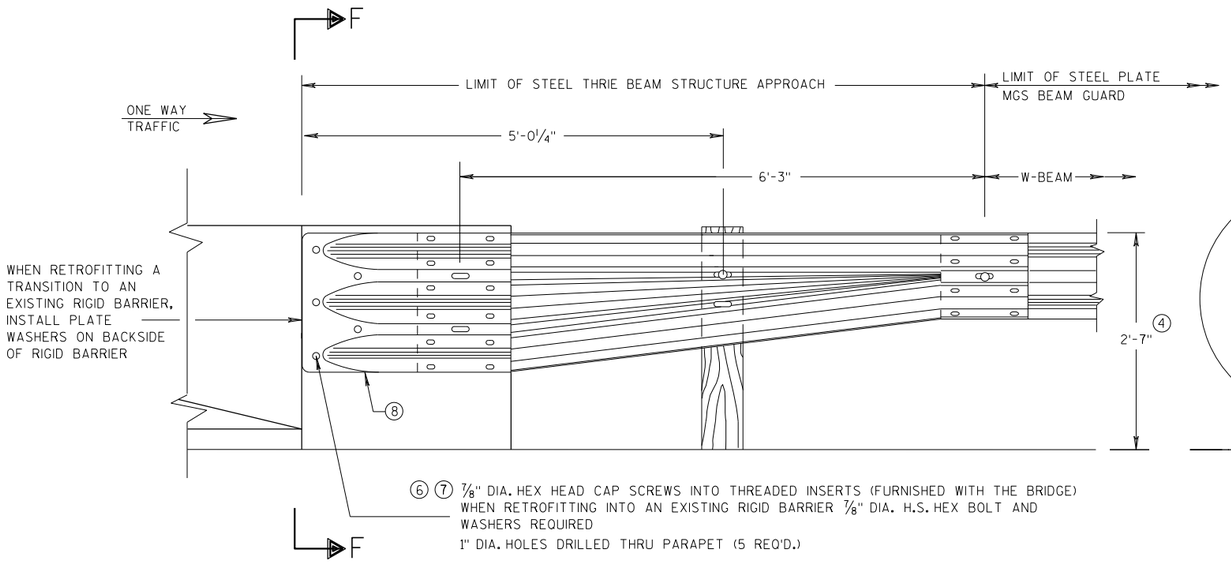
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

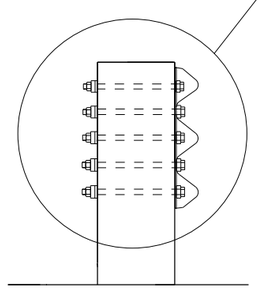
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

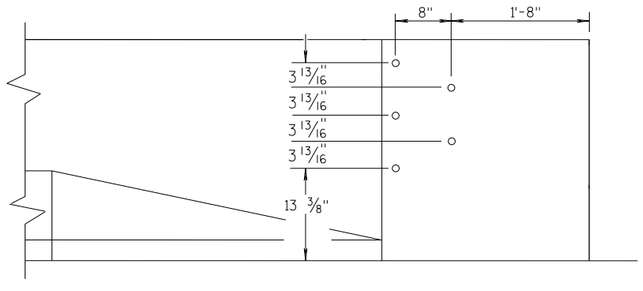




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

6

S.D.D. 14 B 45-5d

6

S.D.D. 14 B 45-5d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

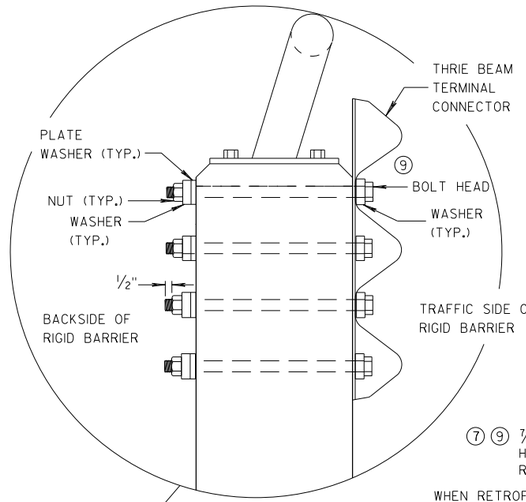
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

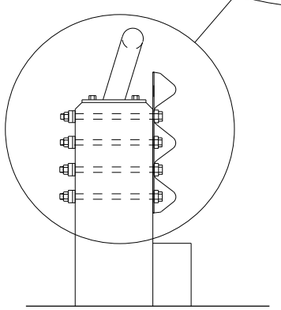
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

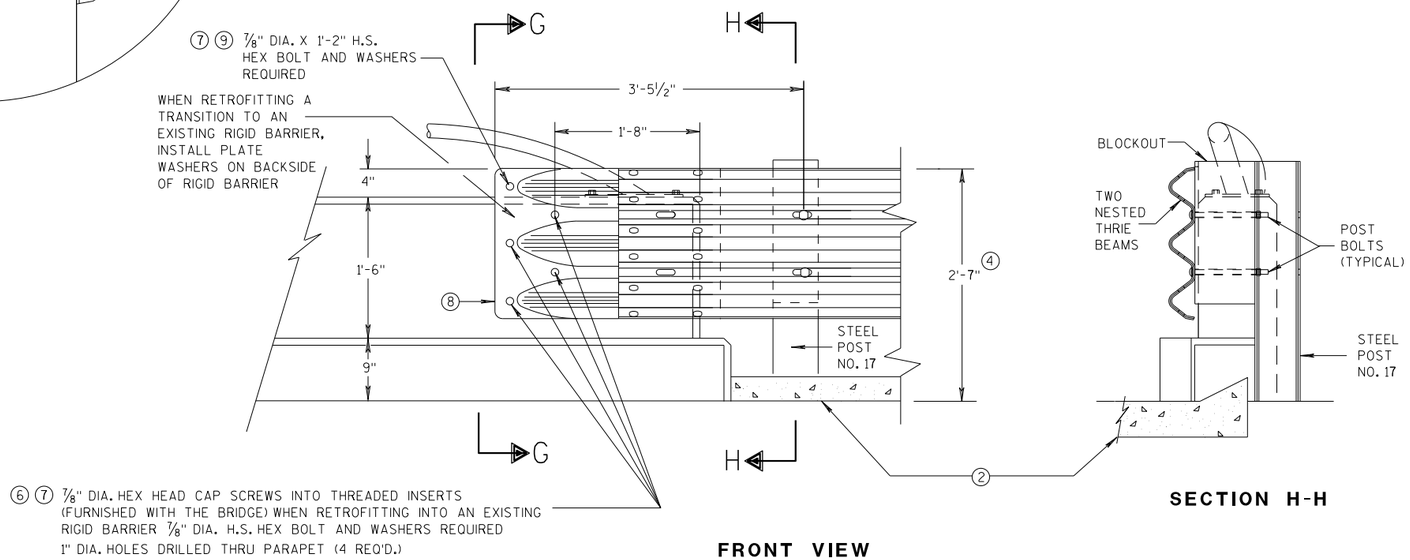
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





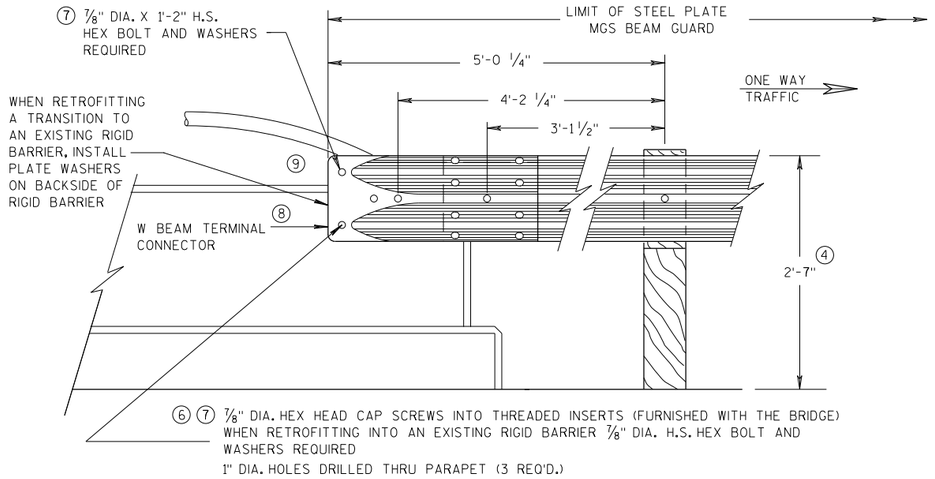
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVIS — NT
FHWA

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S.D.D. 14 B 45-5e

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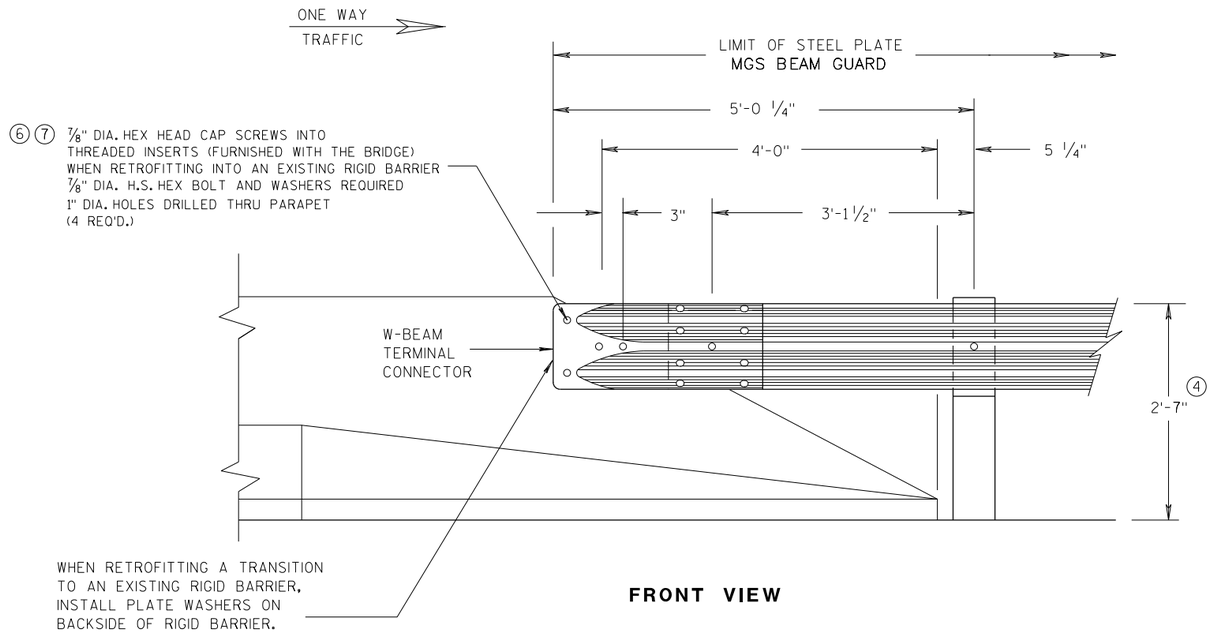
S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

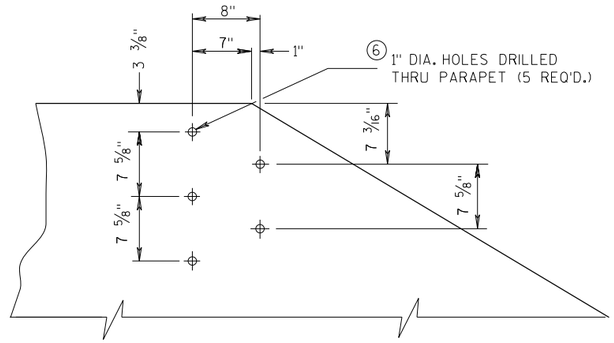
GENERAL NOTES

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

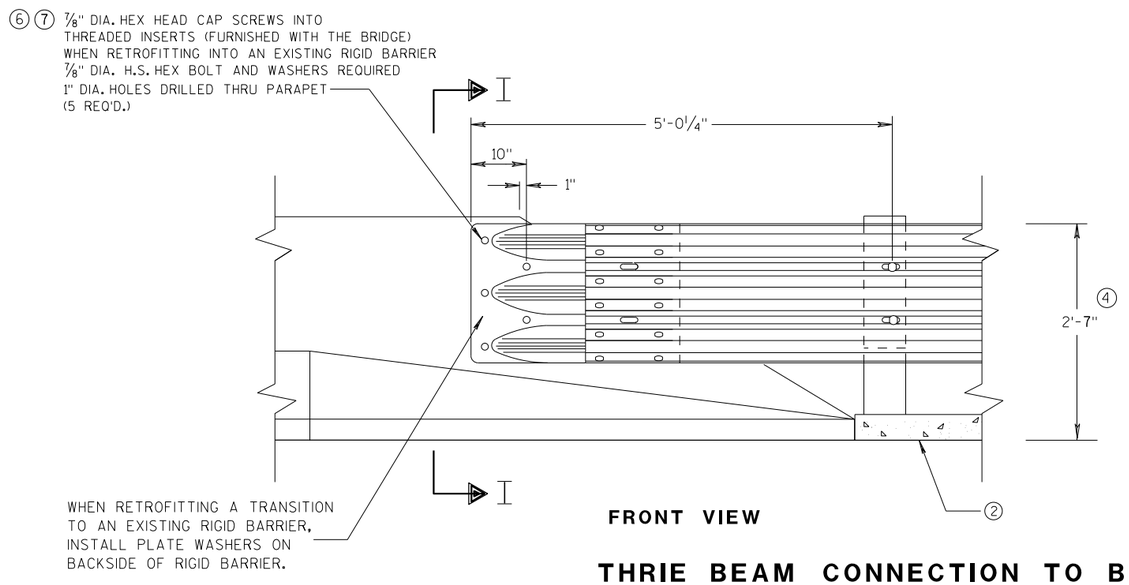
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

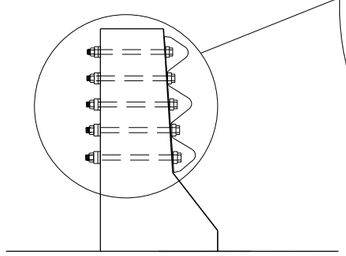
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



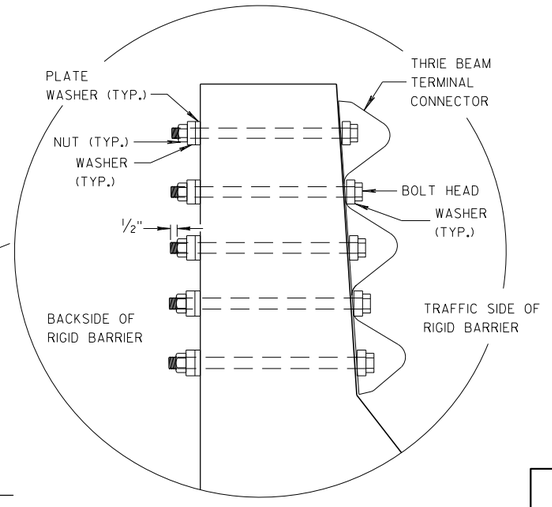
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS I[illegible] UNIT SUPERVI[illegible]ENT
FHWA

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S.D.D. 14 B 45-5f

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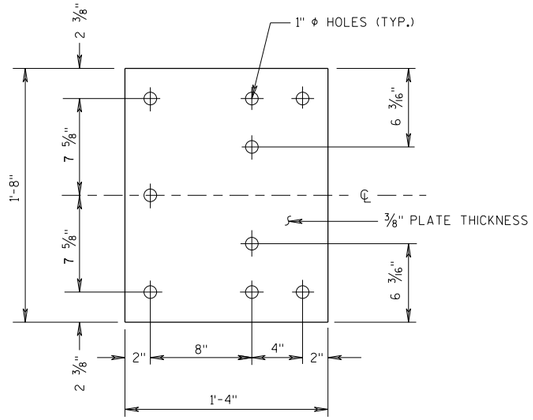
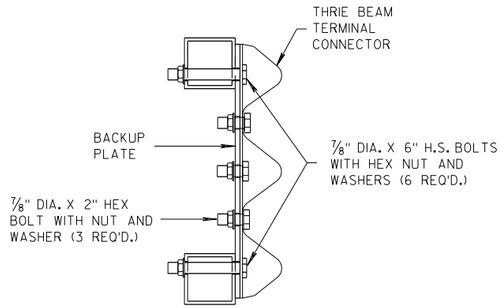
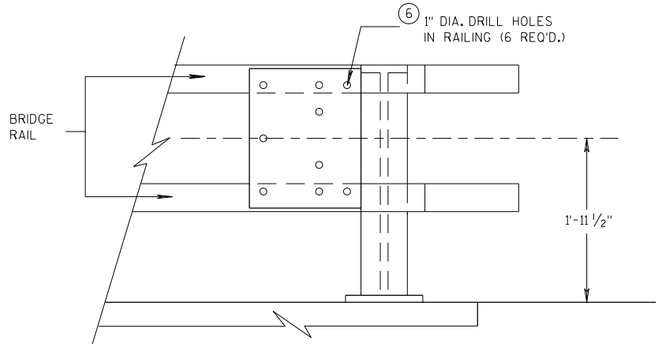
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

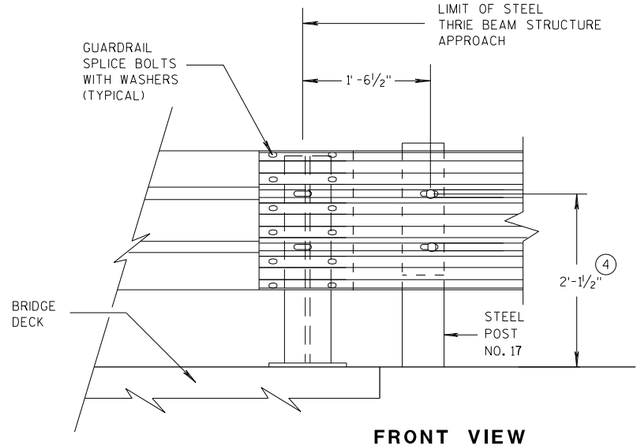


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

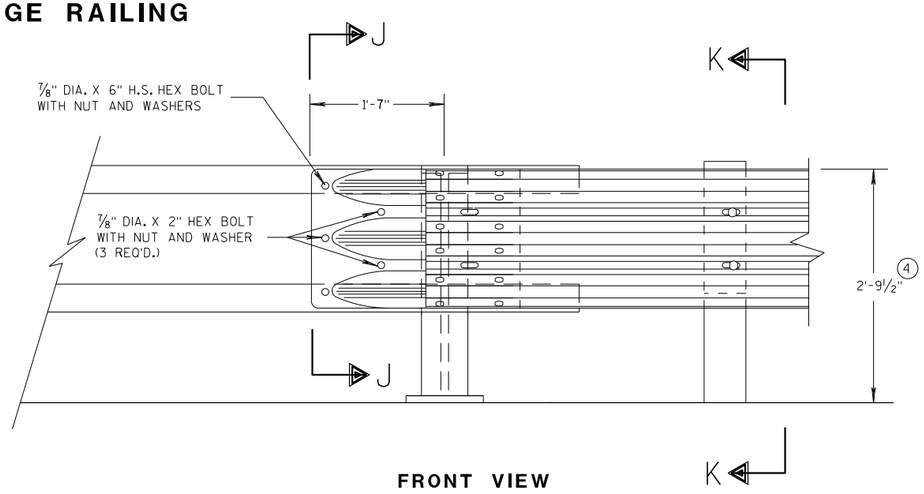
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

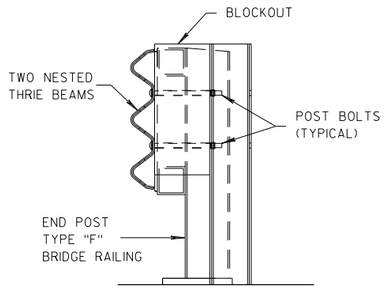


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
FHWA

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

6

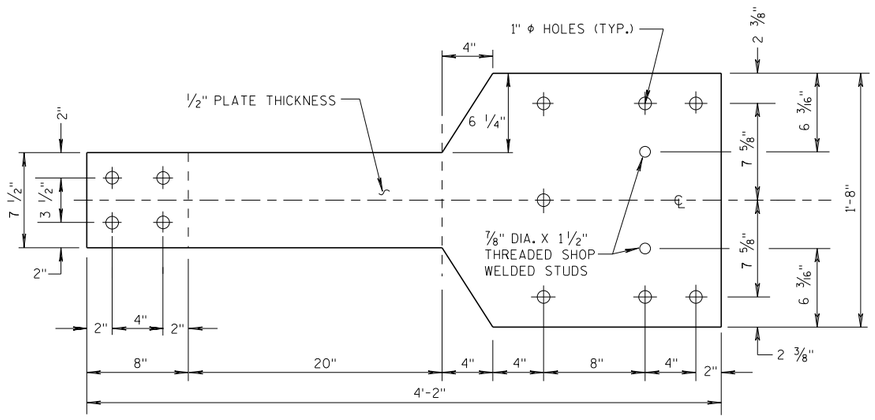
S.D.D. 14 B 45-5g

6

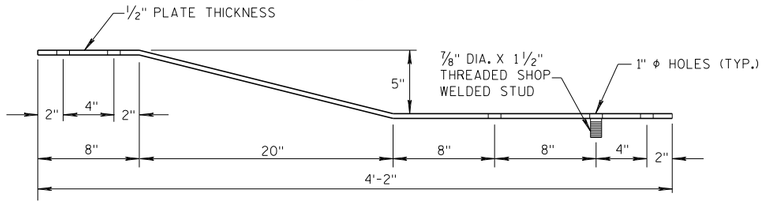
S.D.D. 14 B 45-5g

GENERAL NOTES

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

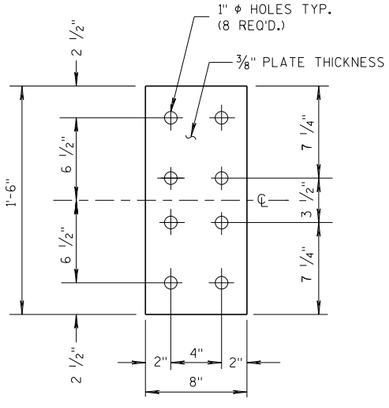


FRONT VIEW



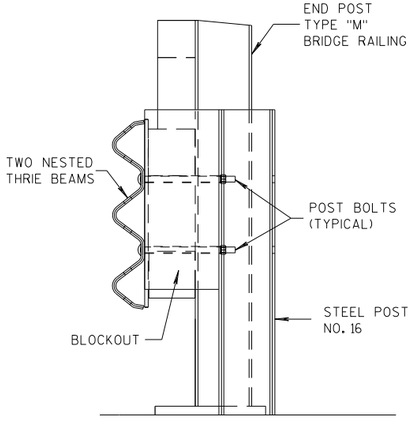
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

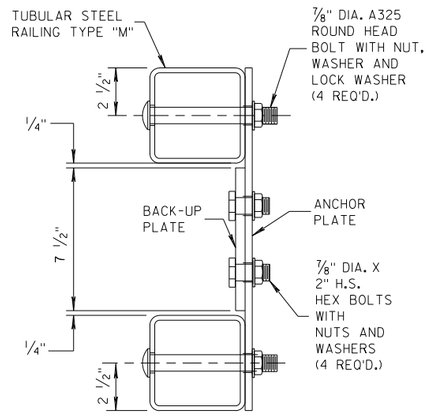


FRONT VIEW

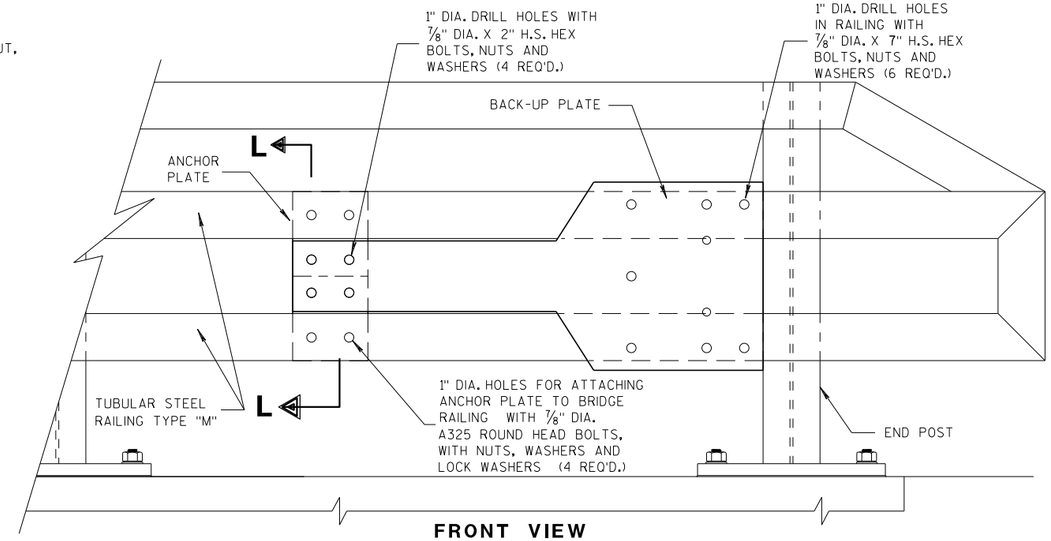
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

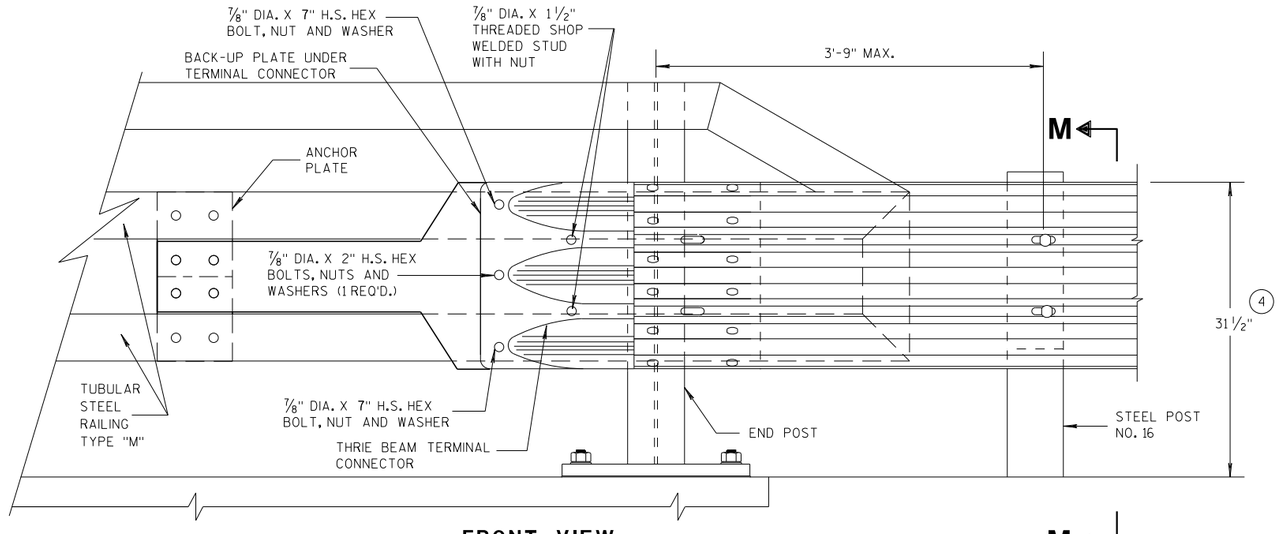


SECTION L-L

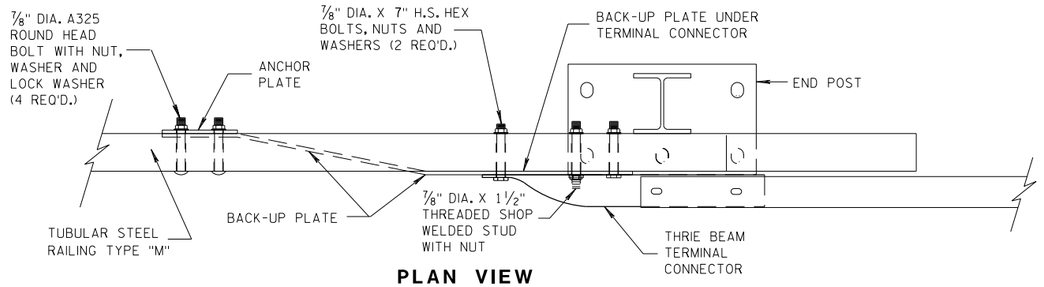


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

6

S.D.D. 14 B 45-5h

6

S.D.D. 14 B 45-5h

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

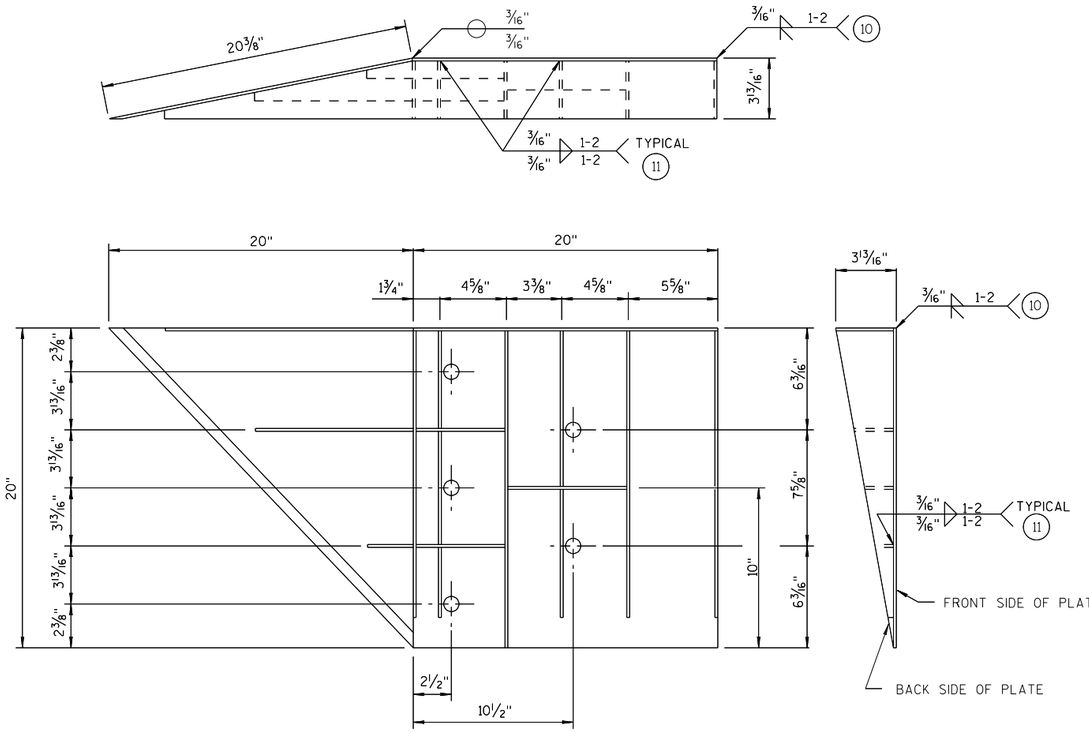
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

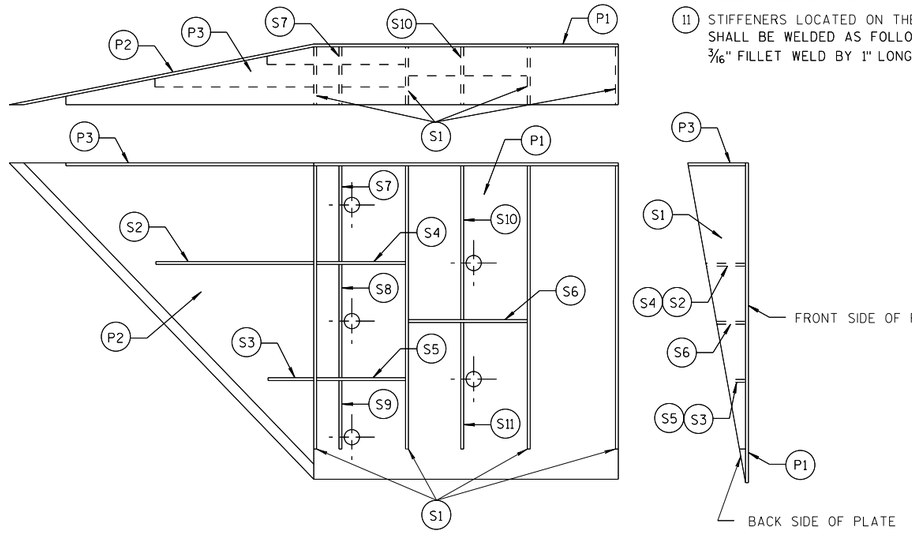


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI

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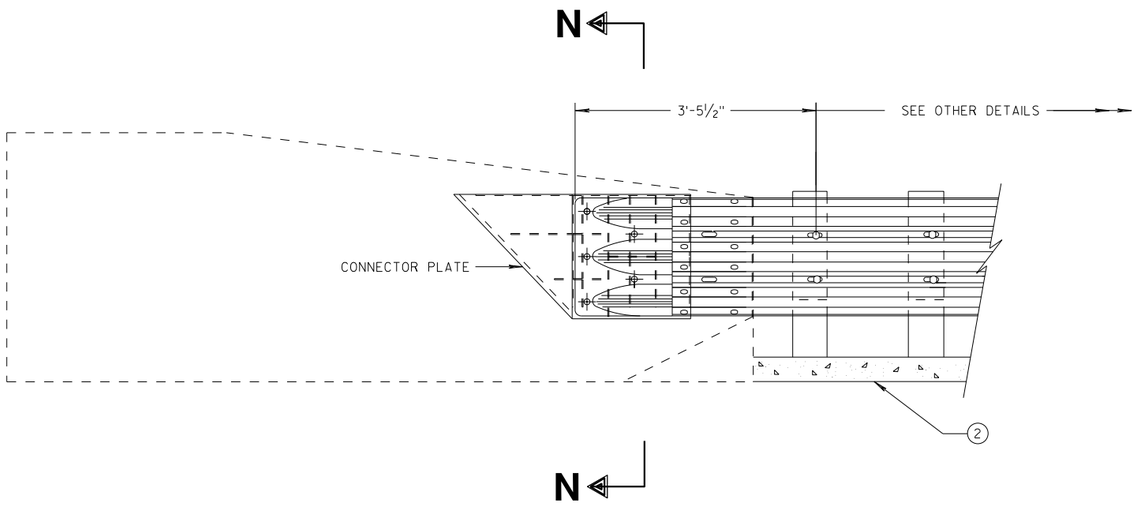
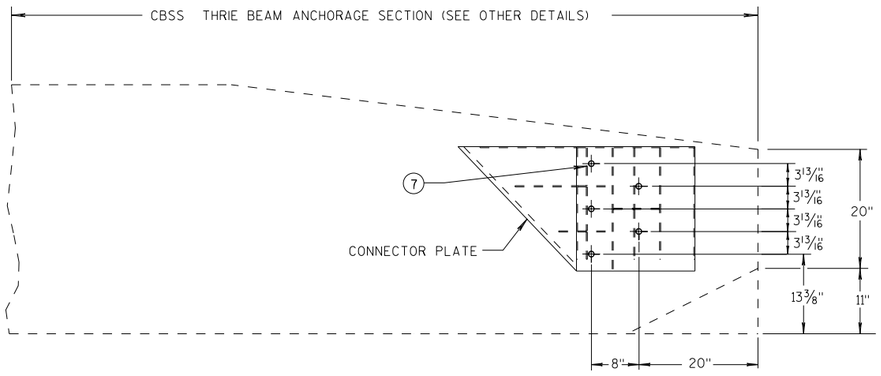
S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



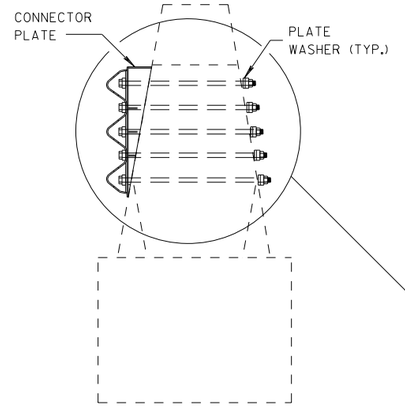
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

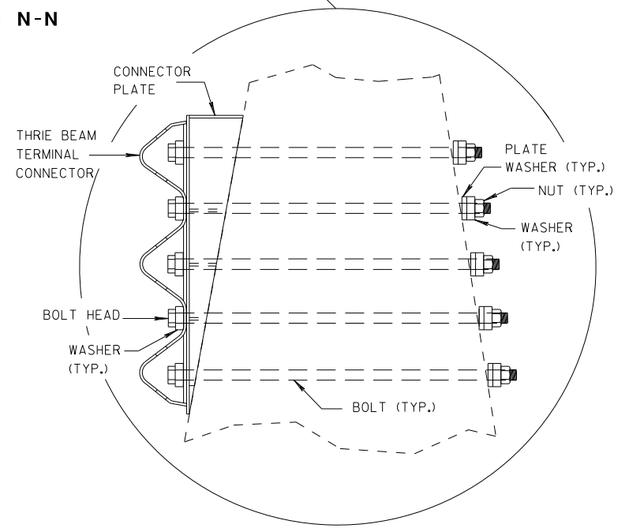
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DI UNIT SUPERVIS
FHWA

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S.D.D. 14 B 45-5j

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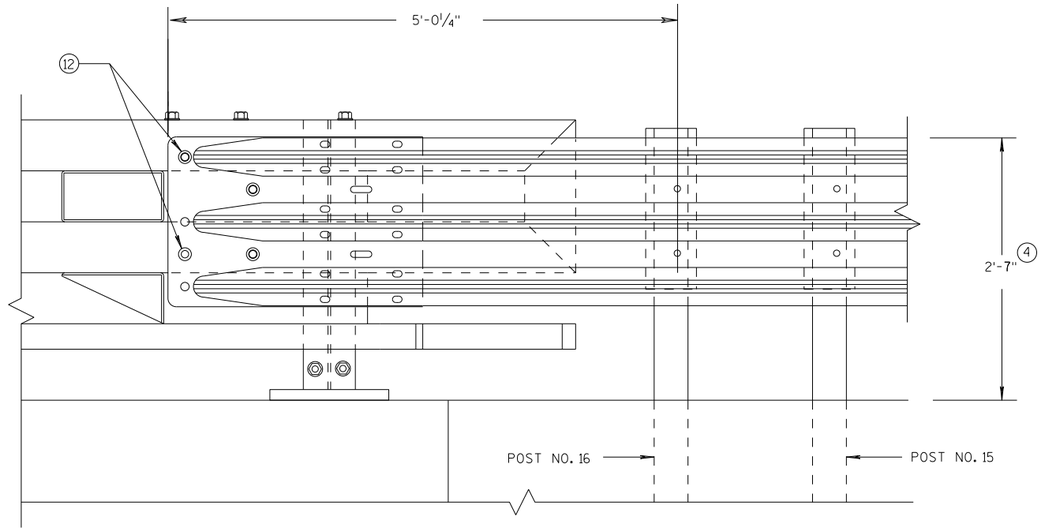
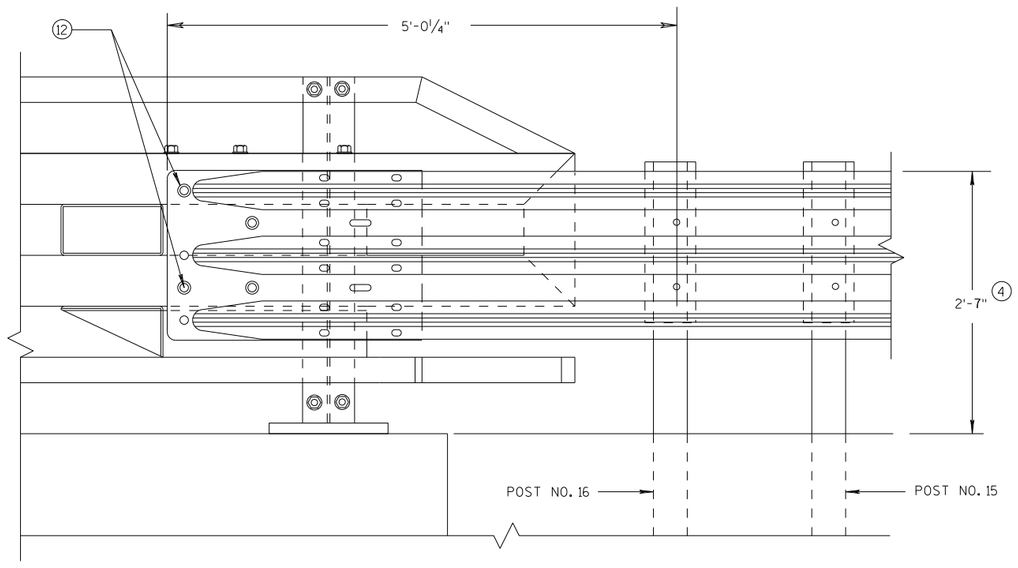
S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

FHWA

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S.D.D. 14 B 45-5k

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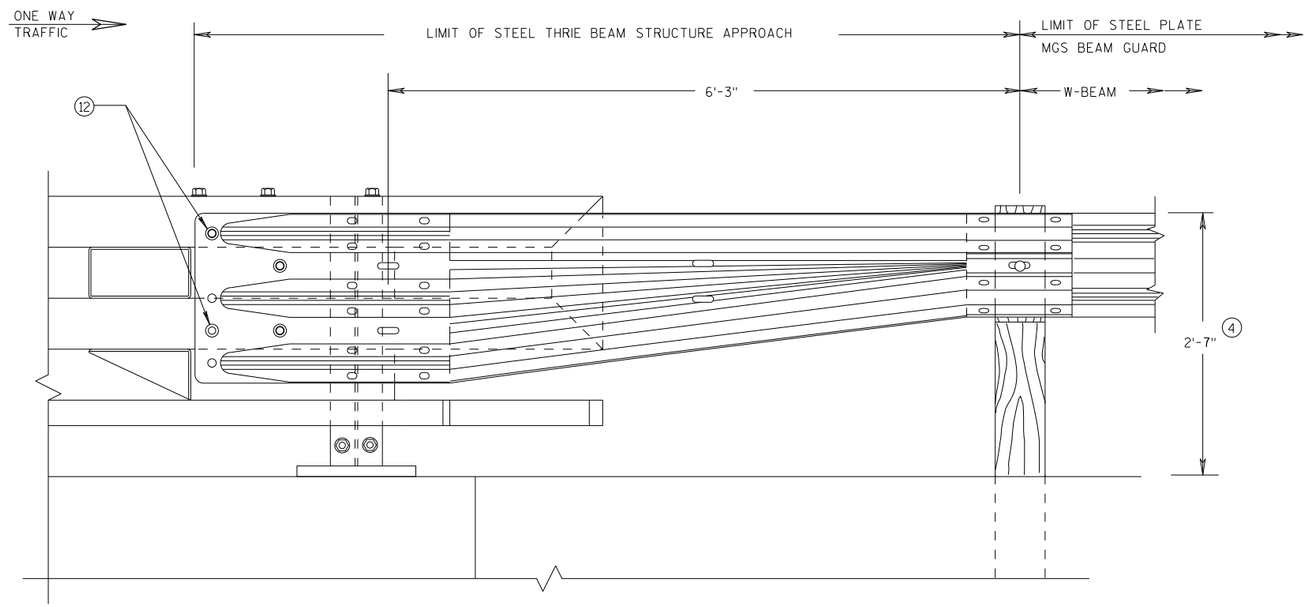
S.D.D. 14 B 45-5k



FRONT VIEW

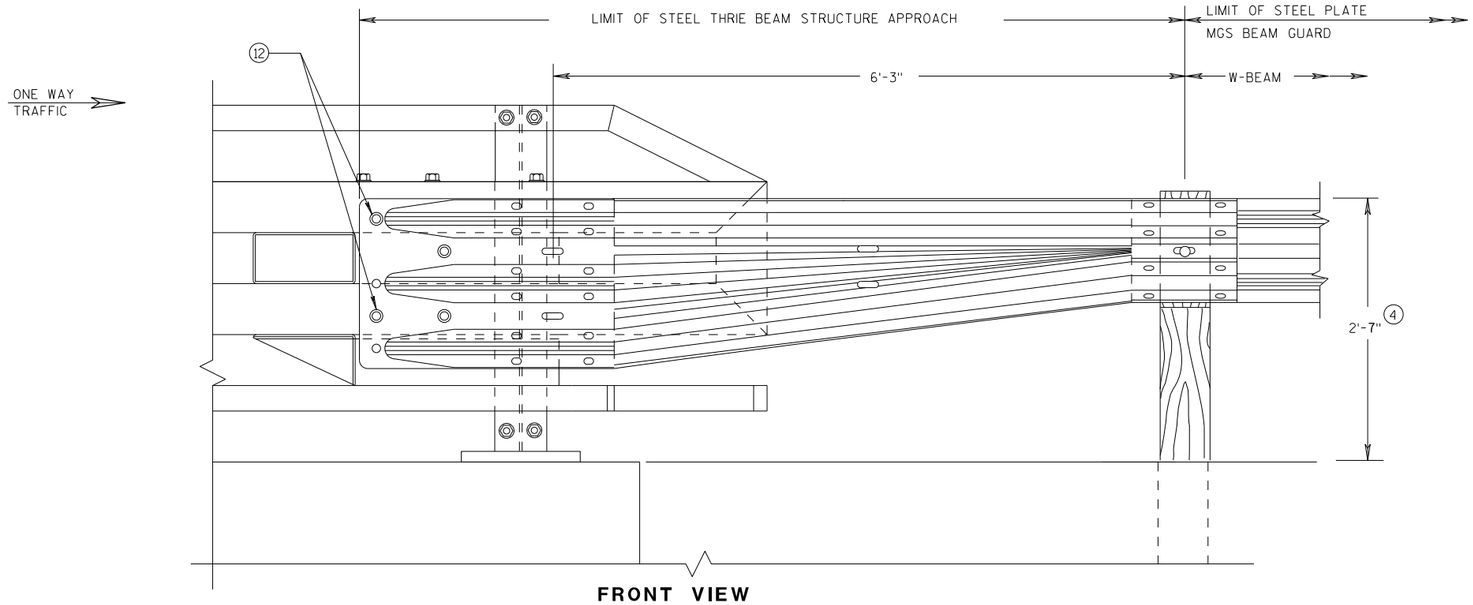
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

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S.D.D. 14 B 45-5L

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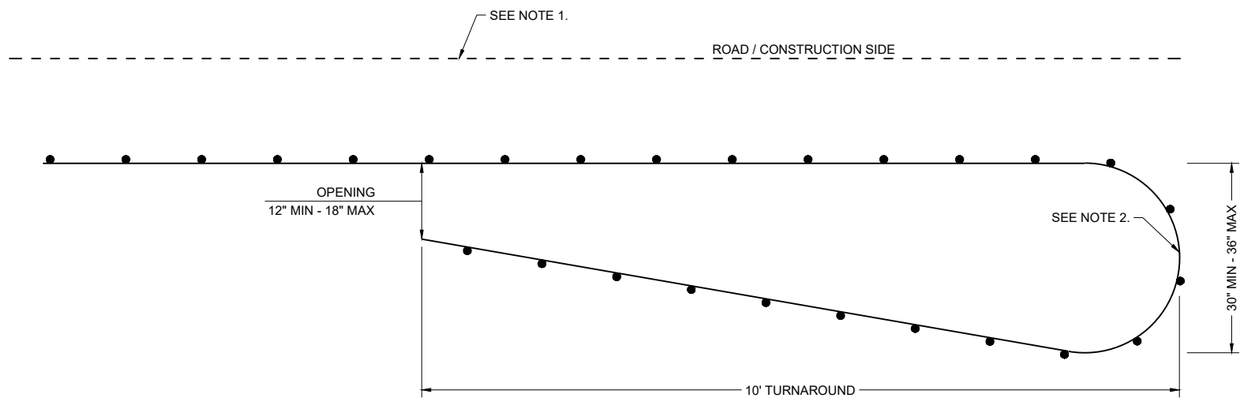
S.D.D. 14 B 45-5L

GENERAL NOTES:

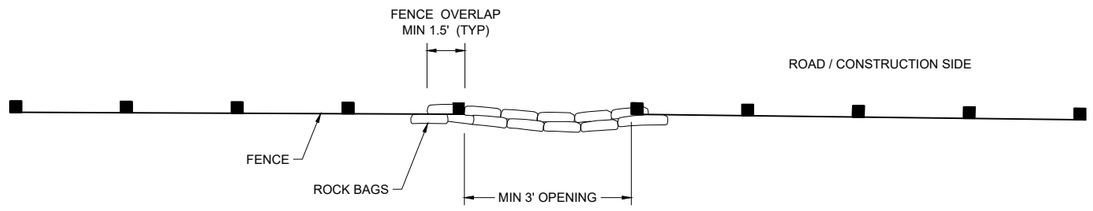
1. WHERE SILT FENCE IS REQUIRED, IT SHALL BE PLACED ON THE CONSTRUCTION SIDE OF THE EXCLUSION FENCING, OR COMBINED WITH THE EXCLUSION FENCING AS ALLOWED IN THE SPECIFICATIONS. STAKES ON THIS DETAIL ARE OPPOSITE OF STANDARD SILT FENCE FOR SEDIMENT CONTROL.
2. PLACE TURNAROUNDS AT ALL TERMINI ENDS OF THE EXCLUSION FENCING.
3. IF TEMPORARY ACCESS POINTS ARE NEEDED DURING CONSTRUCTION THAT REQUIRE OPENINGS IN THE EXCLUSION FENCING, ACCESS OPENINGS SHOULD BE TIGHTLY SECURED WITH BALES OF HAY OR STRAW WHENEVER CONSTRUCTION RELATED ACTIVITIES ARE NOT OCCURRING. REINSTALL EXCLUSION FENCING WHEN THE WORK REQUIRING THE TEMPORARY ACCESS OPENING IS COMPLETED.
4. THE FENCE CAP MAY BE A 6" UNDER DRAIN PIPE, SLIT DOWN THE CENTER AND PLACED OVER THE FENCE. COMMERCIALLY AVAILABLE SAFETY CAPS WITH A LIP MAY BE USED. OTHER DNR APPROVED METHODS TO PREVENT TURTLES FROM PASSING OVER THE TOP OF THE FENCE MAY BE USED.

   SECURELY FASTEN THE CAP TO PREVENT IT FROM BEING DISLODGED.

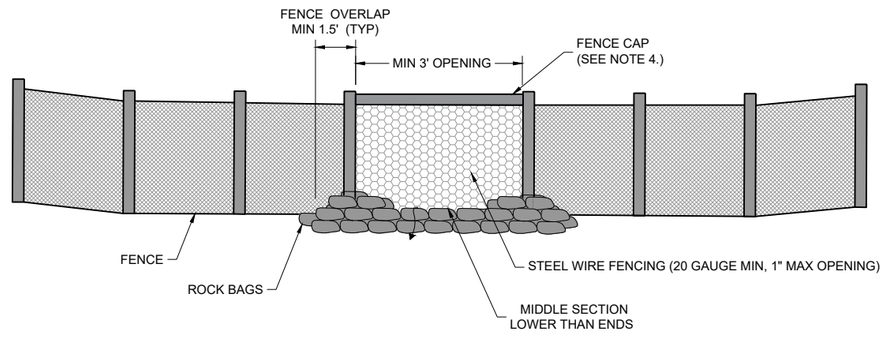


PLAN VIEW

CLIMBING TURTLE EXCLUSION FENCE DETAIL



PLAN VIEW



FRONT VIEW

CLIMBING TURTLE FENCE RELIEF DETAIL

TURTLE EXCLUSION FENCE
CLIMBING TURTLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
AUGUST 2025
DATE

/S/ ALYSSA BARRETTE
CHIEF STATEWIDE ENVIRONMENTAL SERVICES
BUREAU OF TECHNICAL SER

FHWA

6
SDD 14D01-01

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.

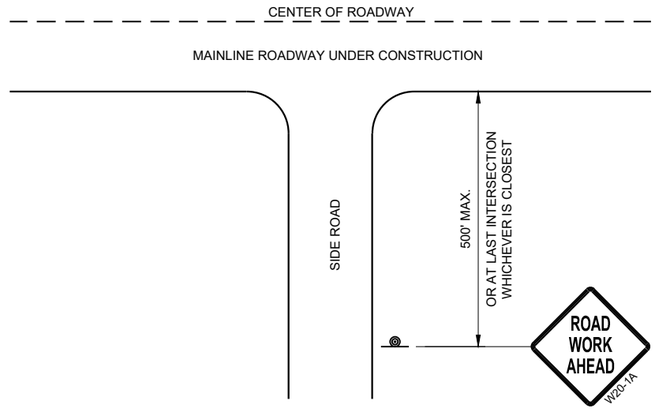
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



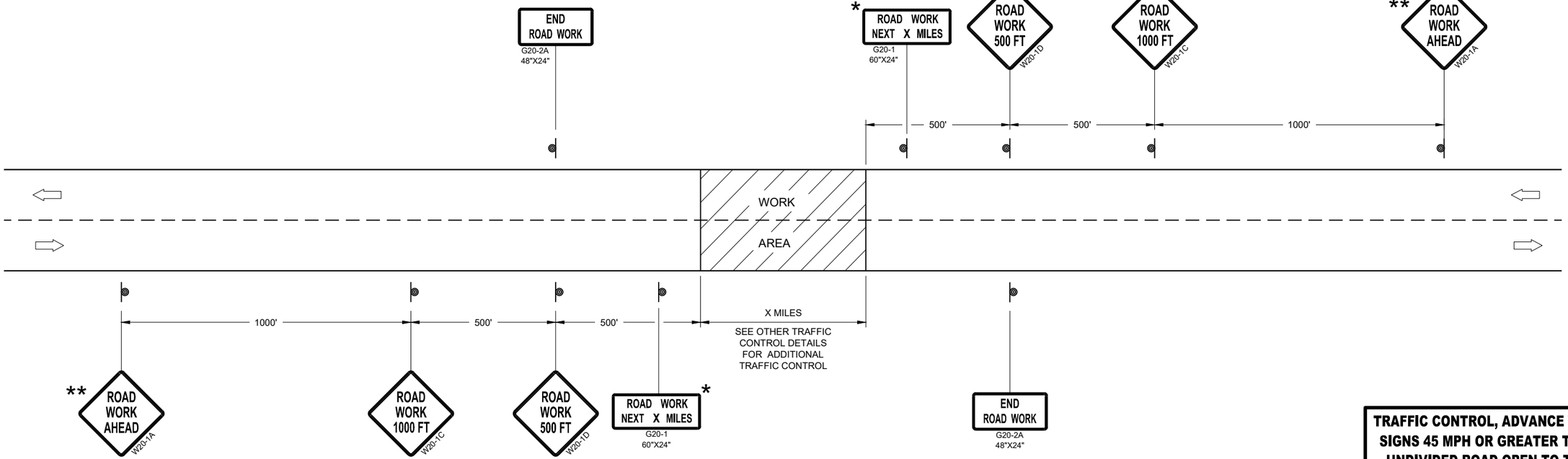
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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 TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

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

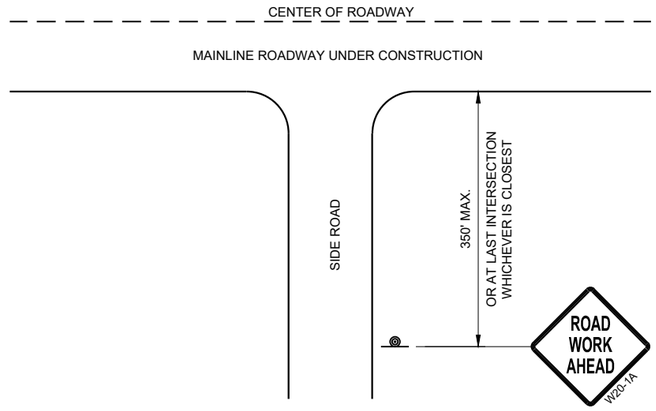
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



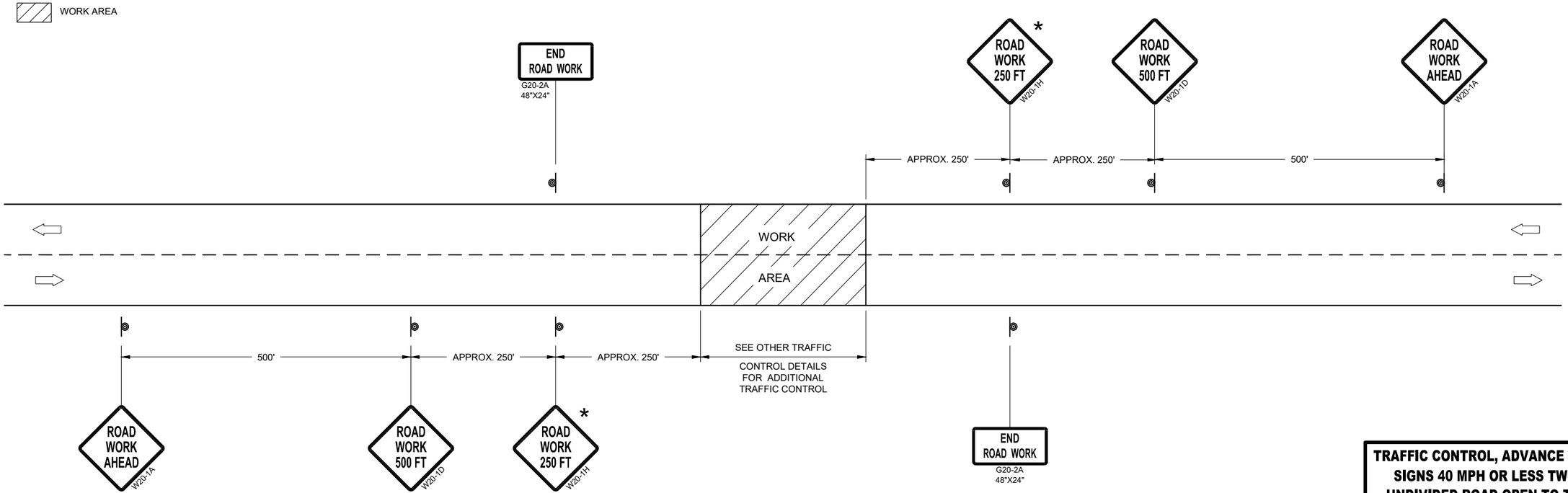
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C05 - 05

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

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

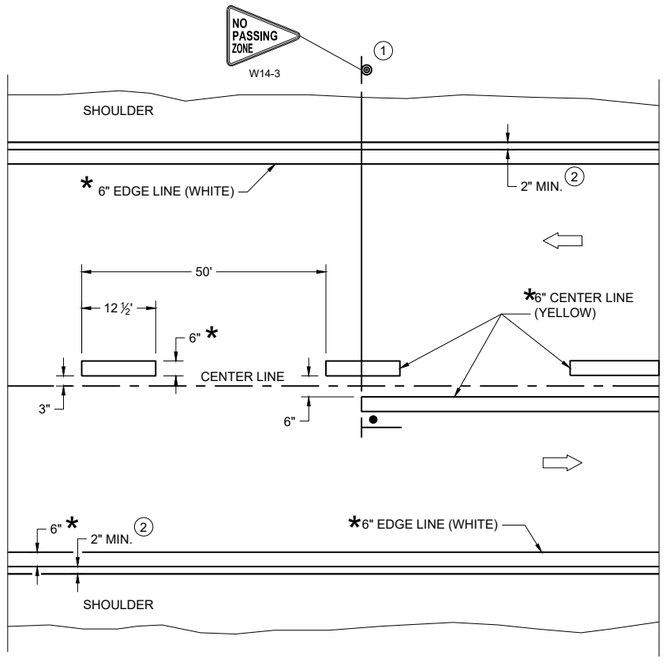
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

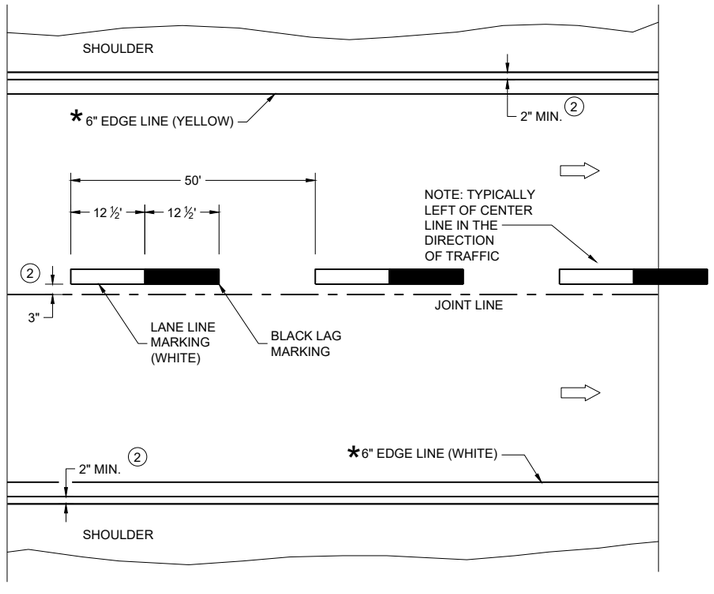
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

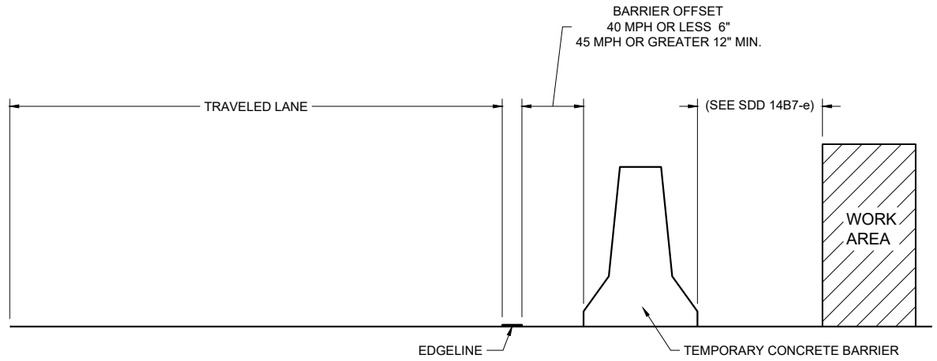
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

SDD 15C08-24a



TEMPORARY BARRIER OFFSET FROM EDGELINE

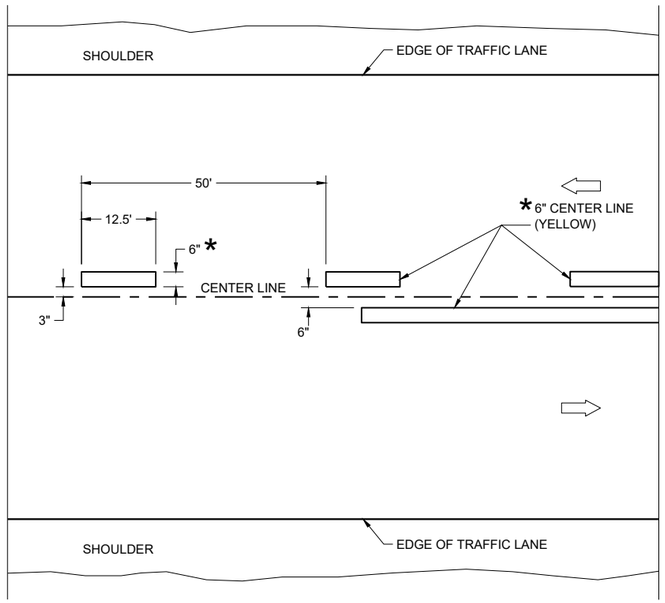
GENERAL NOTES

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

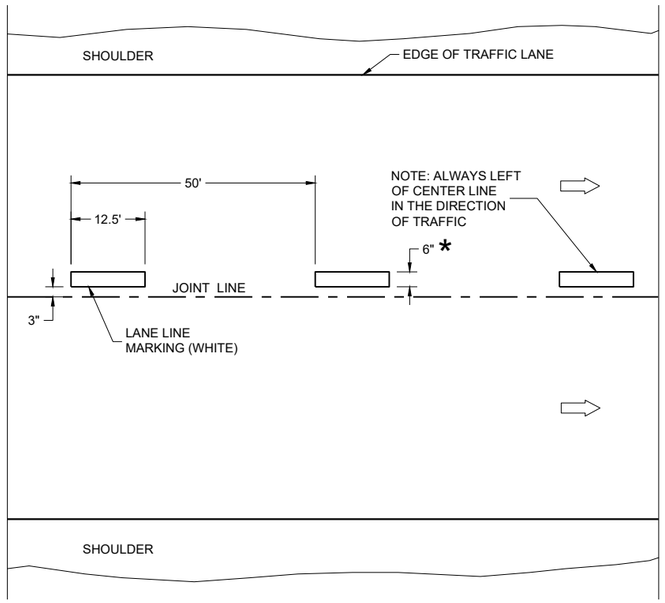
LEGEND

⇨ DIRECTION OF TRAFFIC

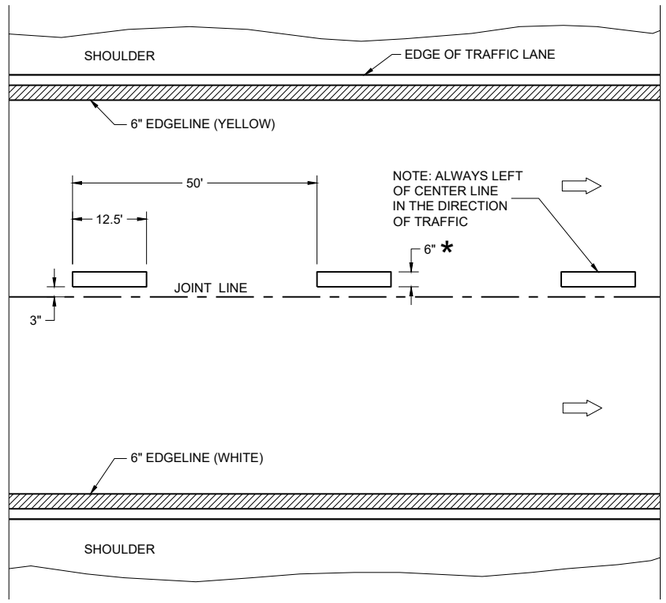
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

6

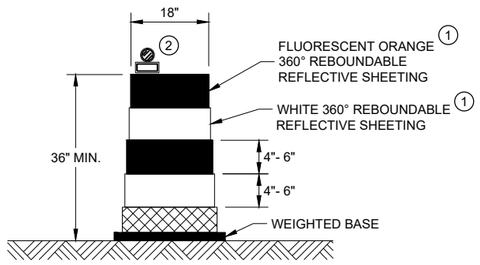
SDD 15C08-24b

6

SDD 15C08-24b

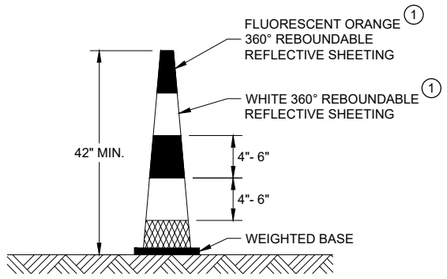
GENERAL NOTES

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

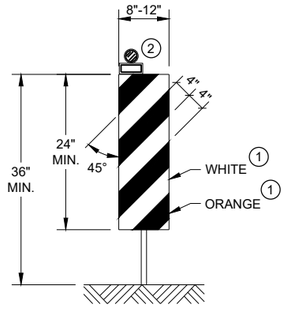
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

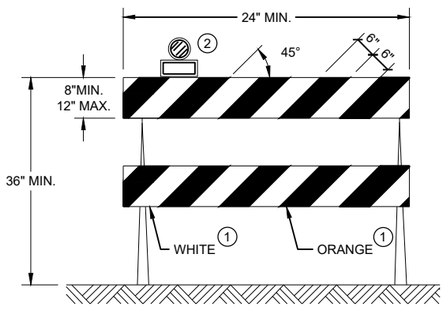
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



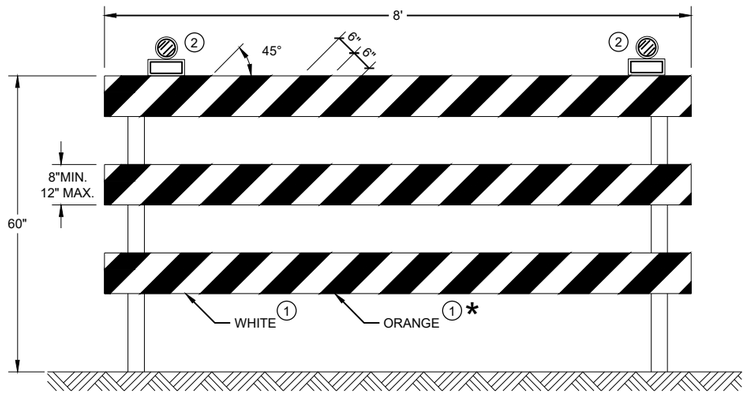
VERTICAL PANEL

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
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b

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.

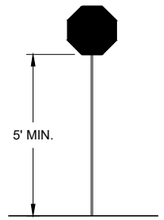
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM 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.



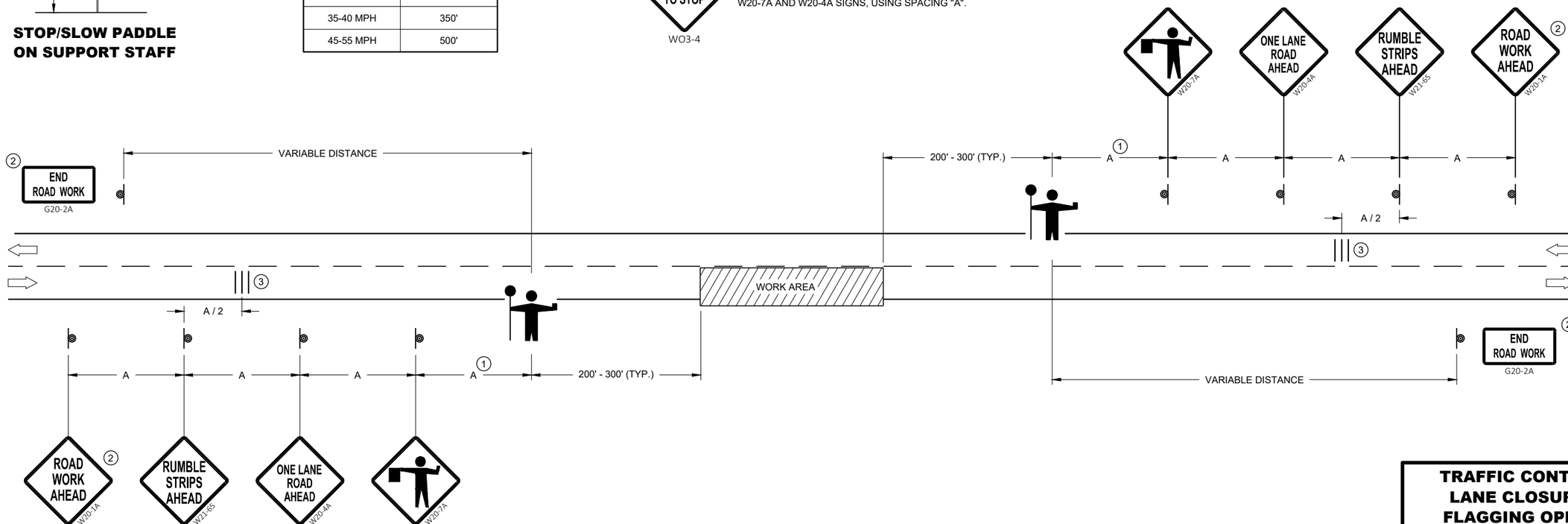
STOP/SLOW PADDLE ON SUPPORT STAFF

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15C12 - 09a

SDD 15C12 - 09a

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH

WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

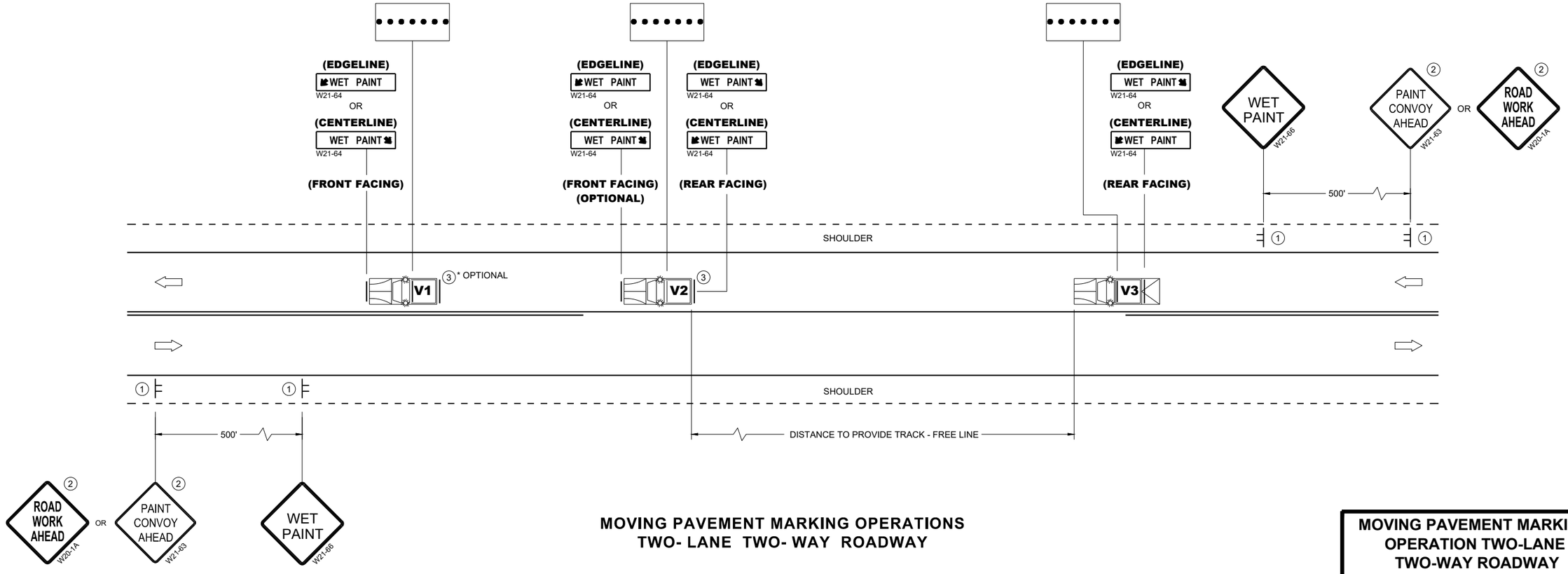
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

(3) V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



MOVING PAVEMENT MARKING OPERATIONS
TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — STATE ELECTRICAL ENGINEER

FHWA

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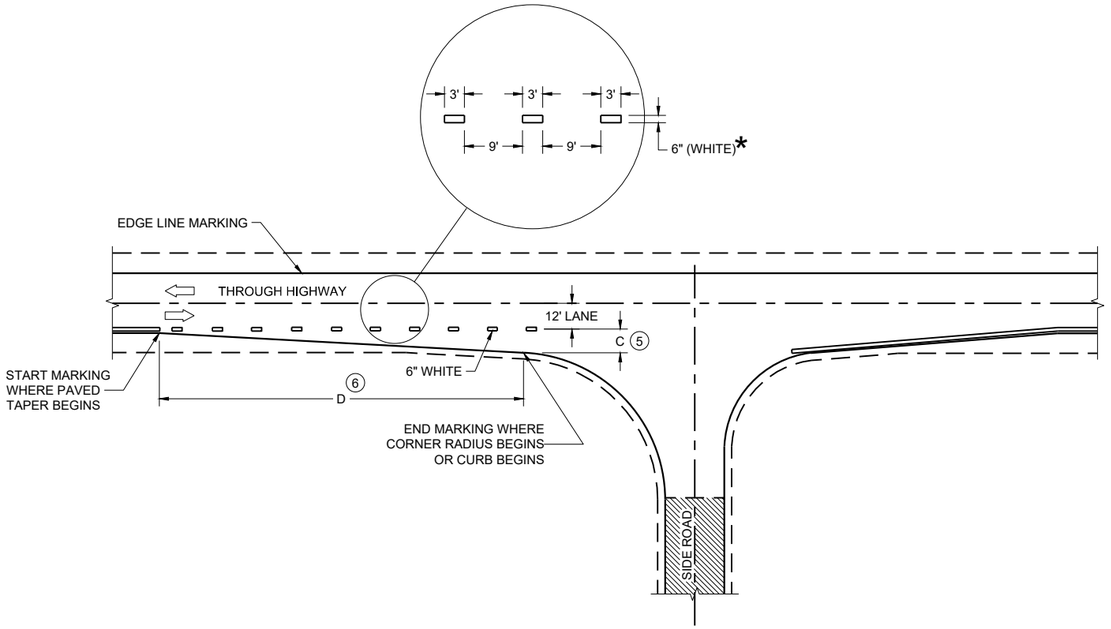
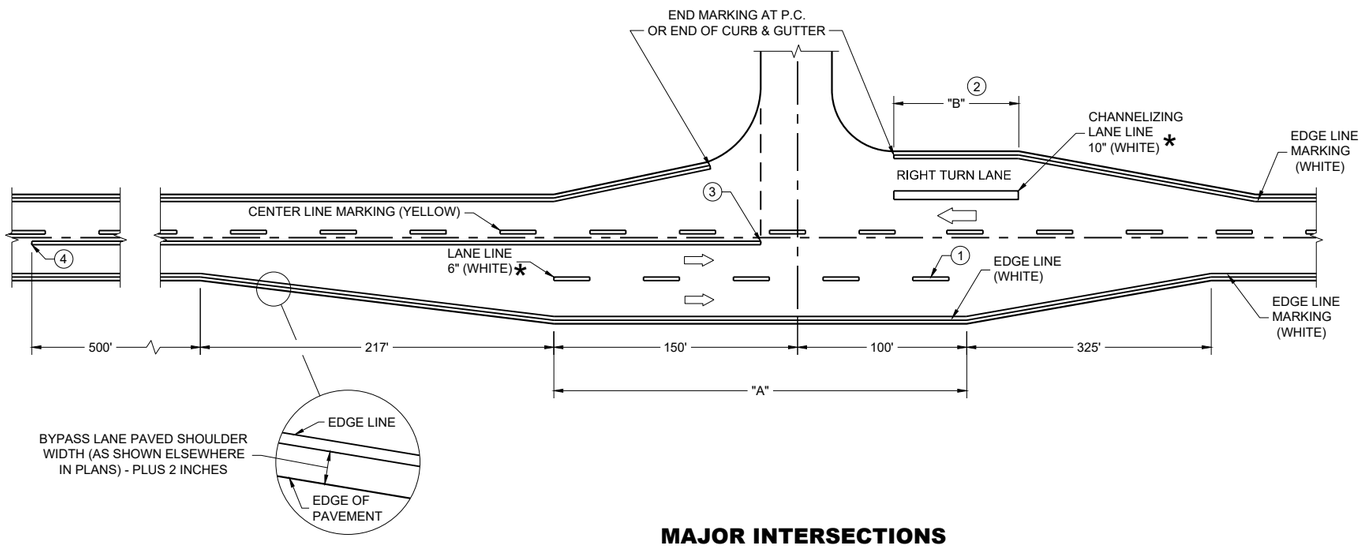
SDD 15C19-11a



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

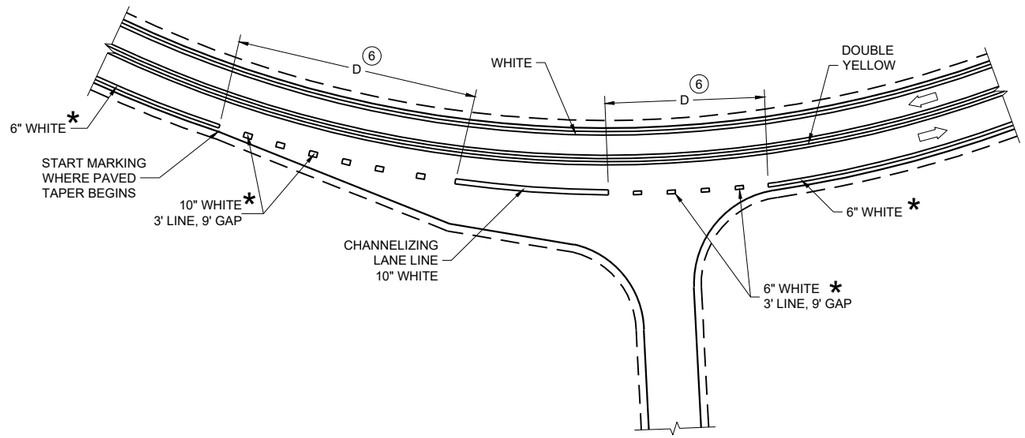
GENERAL NOTES

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.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

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

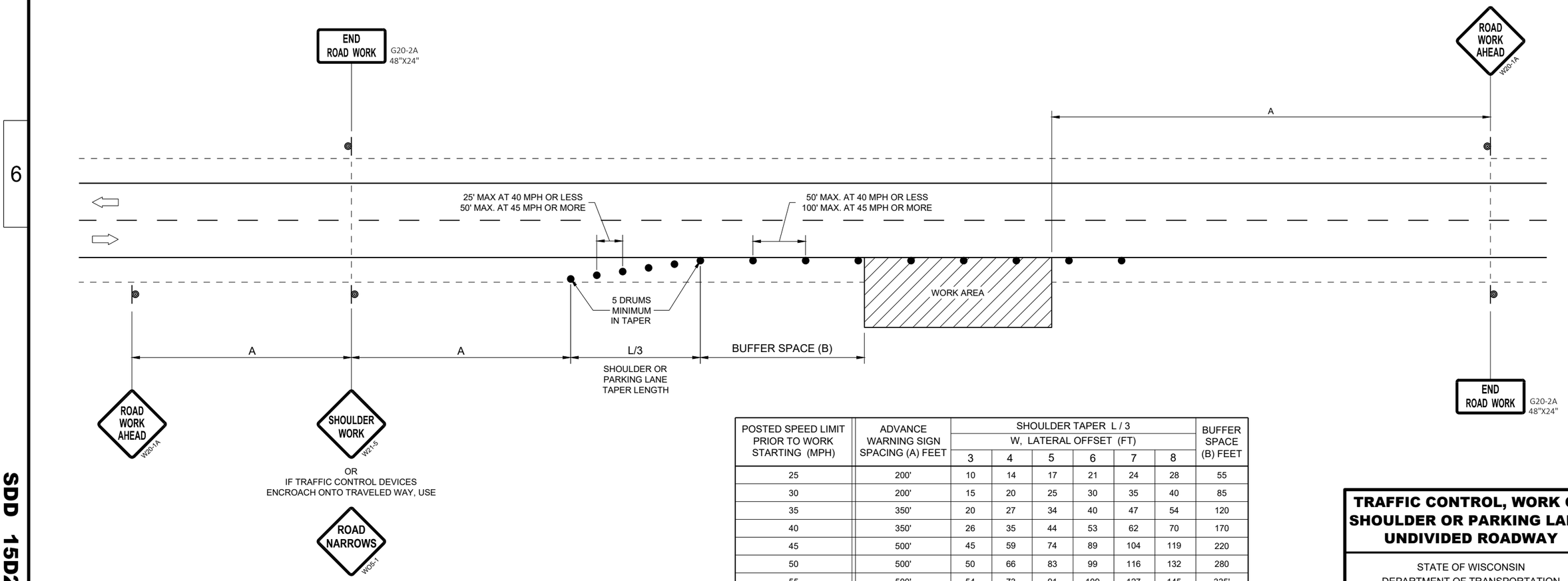
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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 WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

SDD 15D28 - 04

SDD 15D28 - 04

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

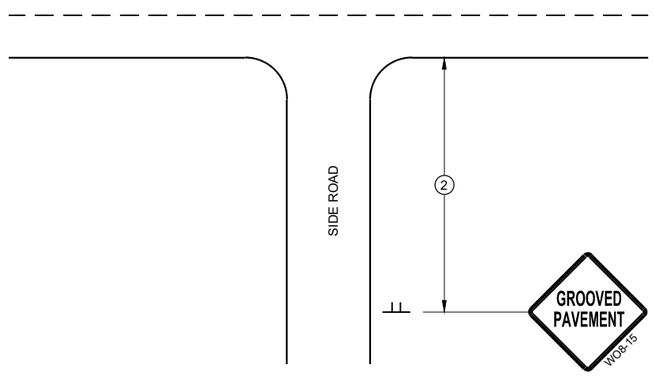
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

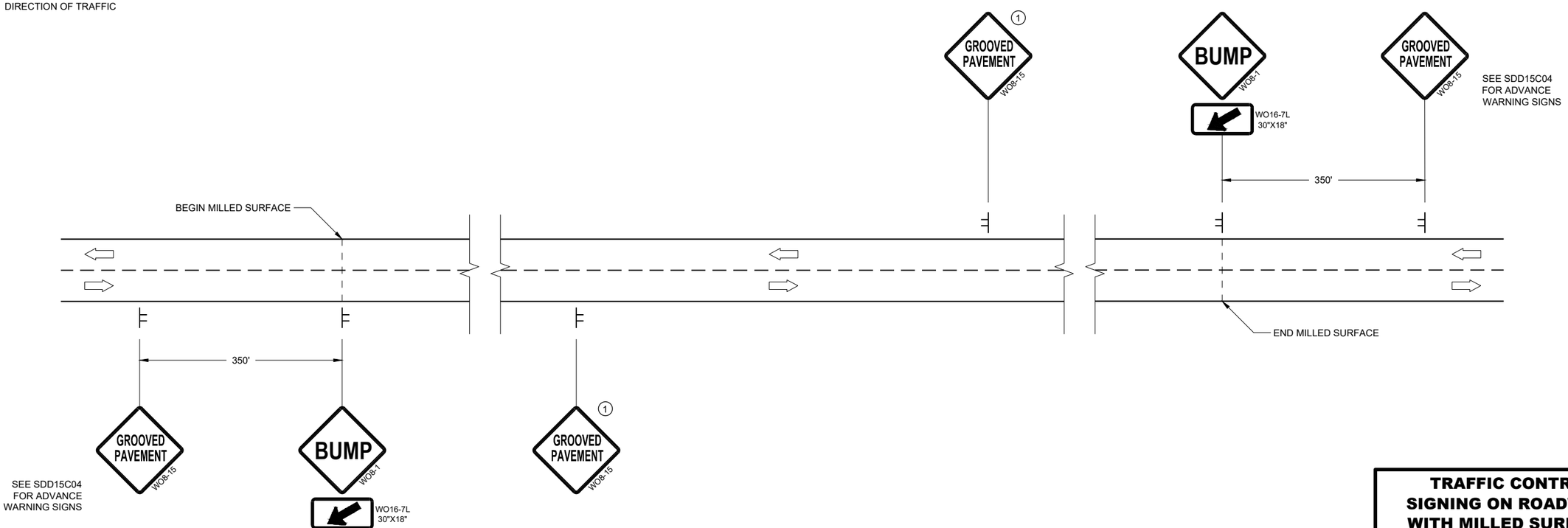
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15D44 - 02

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

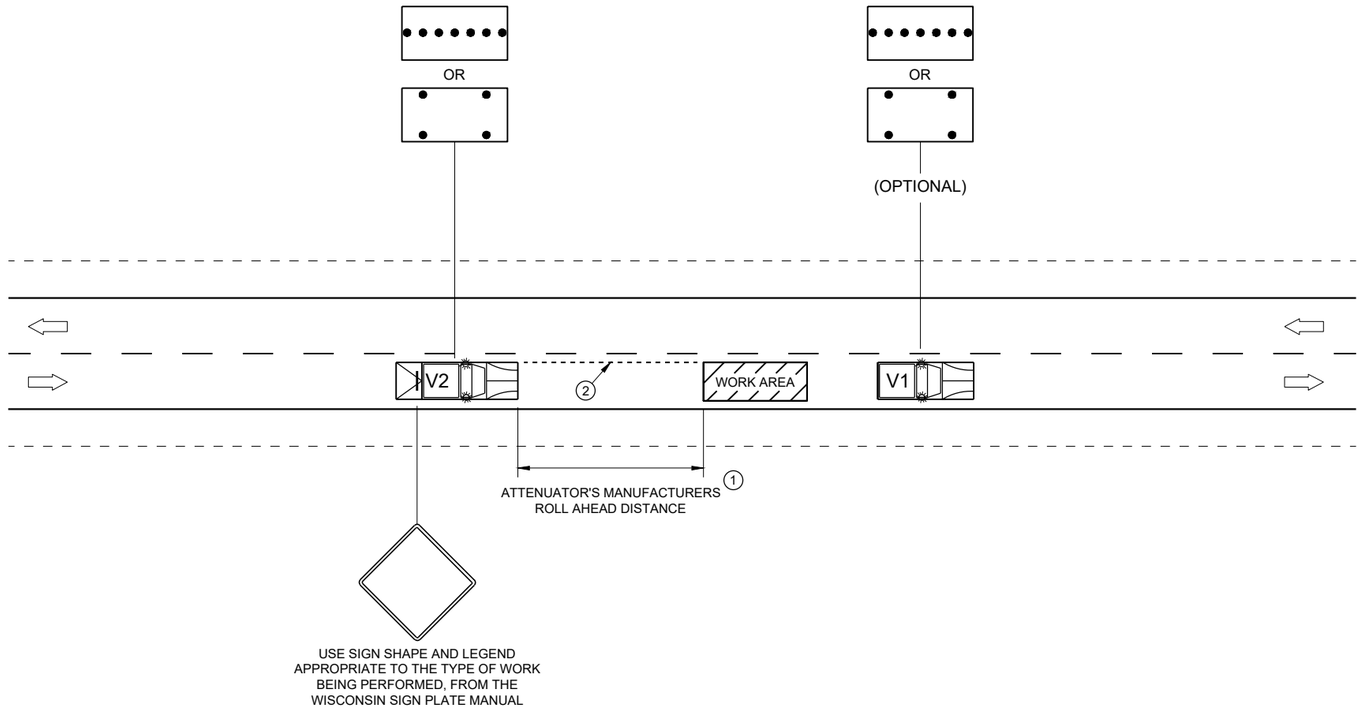
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



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SDD 15D51 - 01

TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

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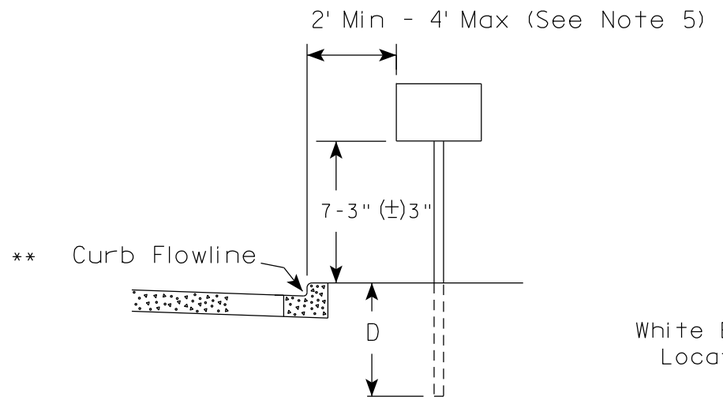
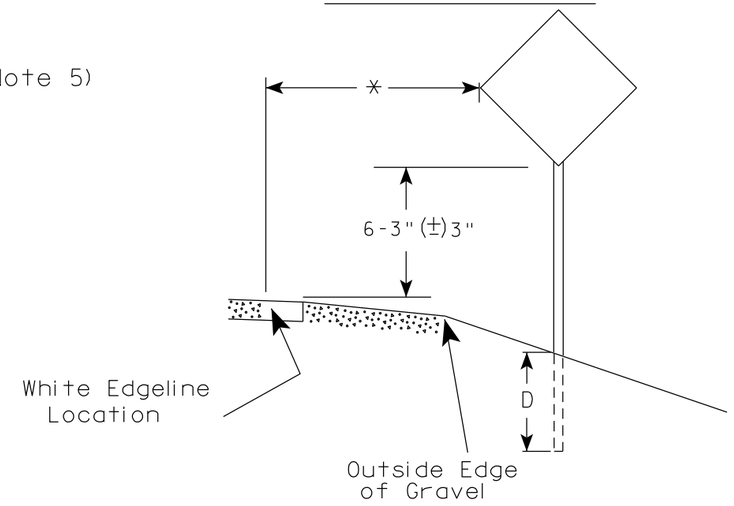
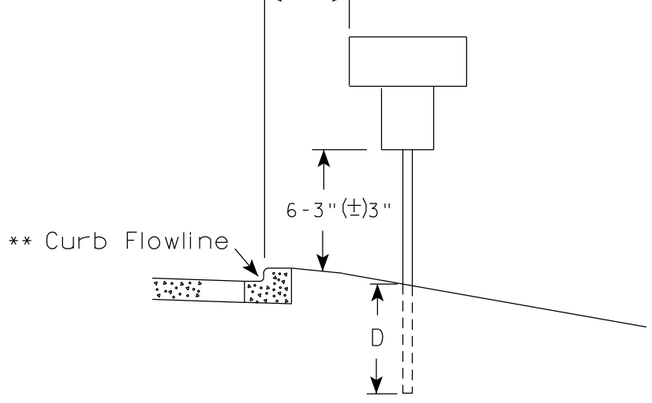
SDD 15D51 - 01

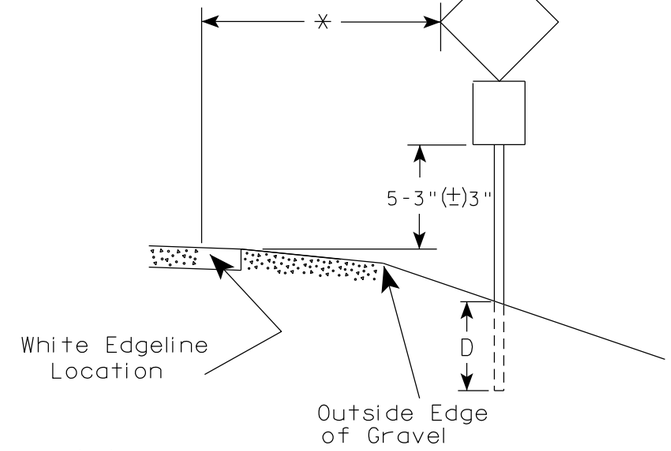
URBAN AREA



RURAL AREA (See Note 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. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

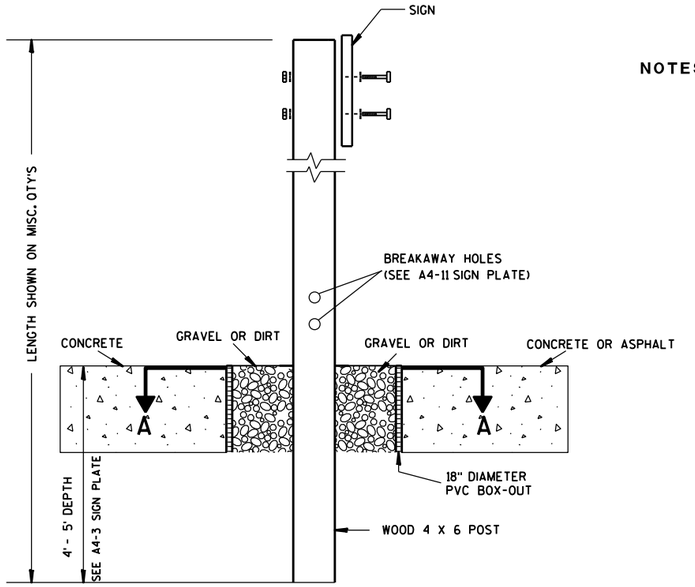
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

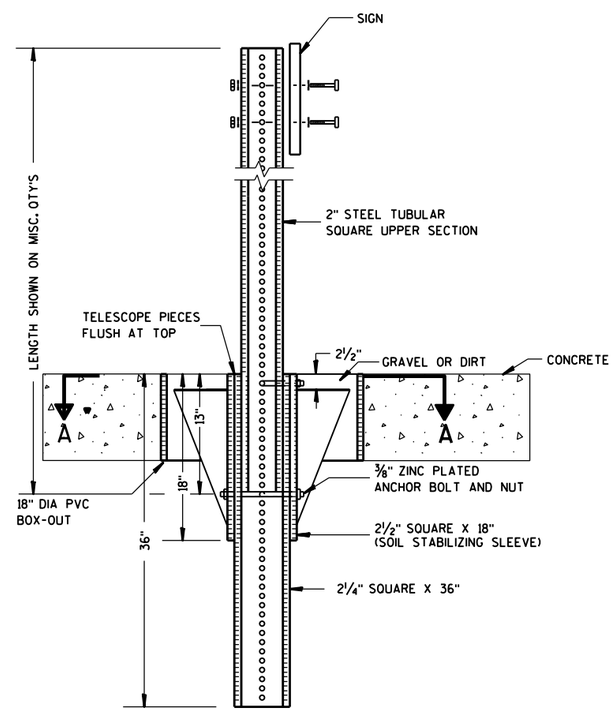
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 77	E



ELEVATION VIEW

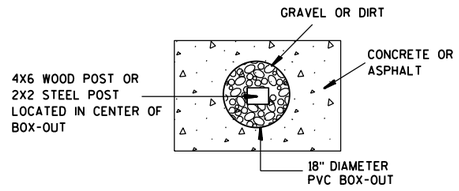
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

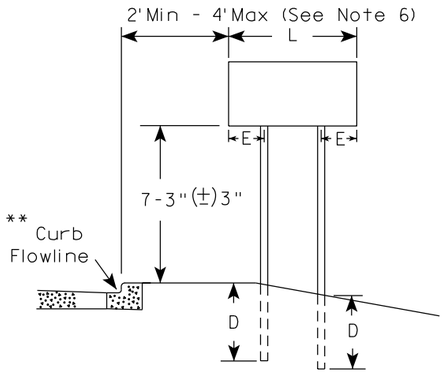
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

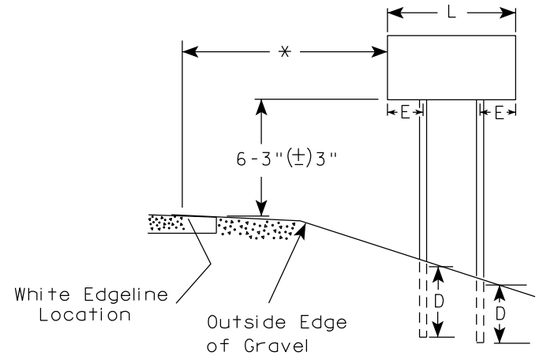
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

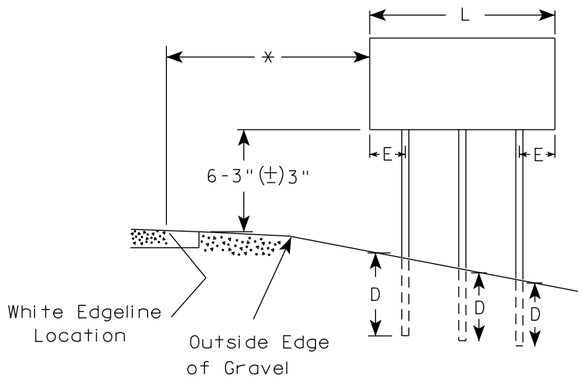
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

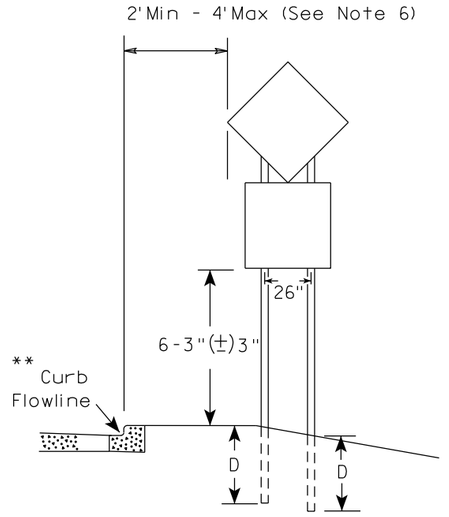
URBAN AREA



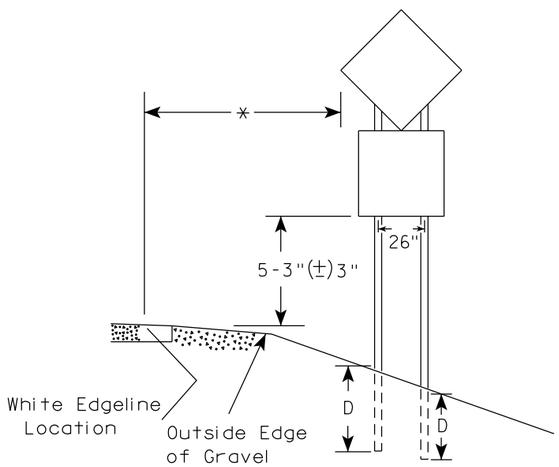
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±) 3".

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** 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. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

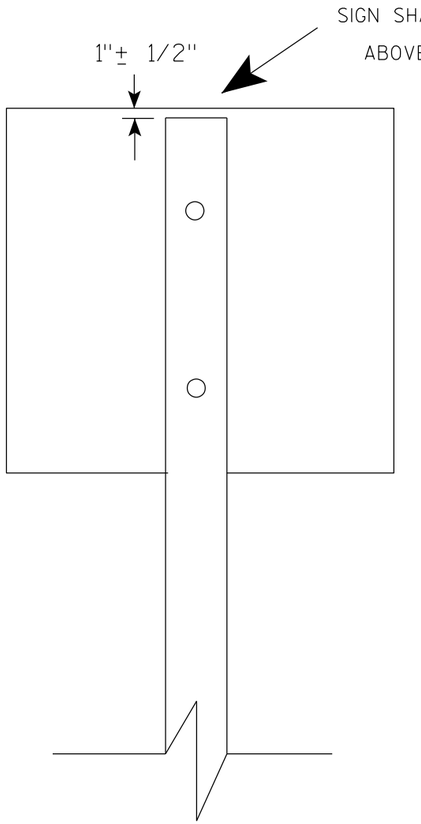
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

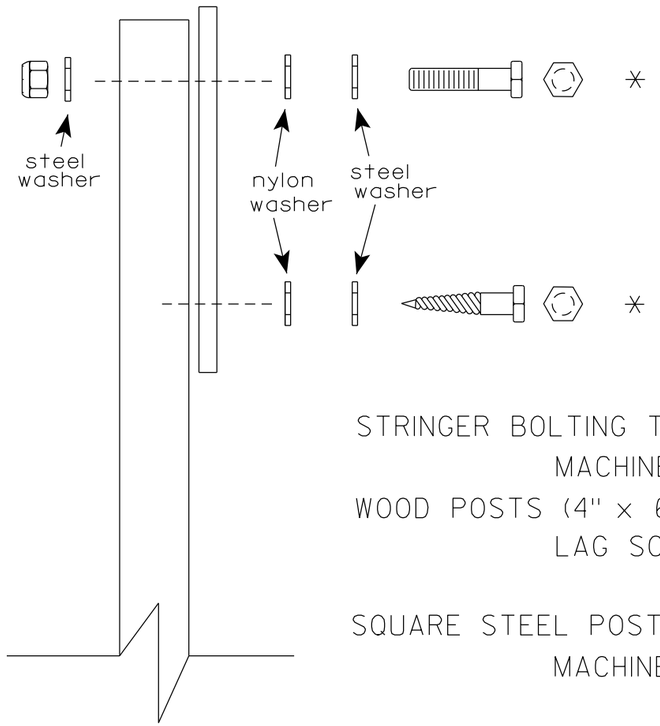
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 79	E





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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

* 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, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

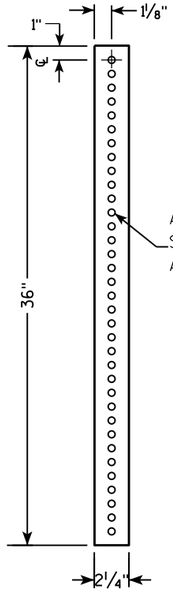
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

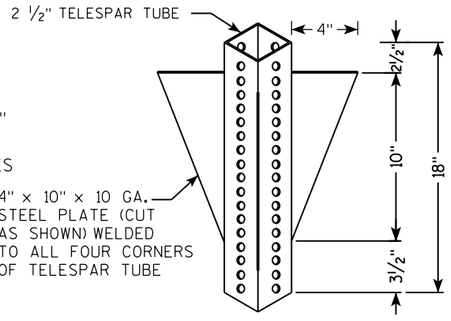
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

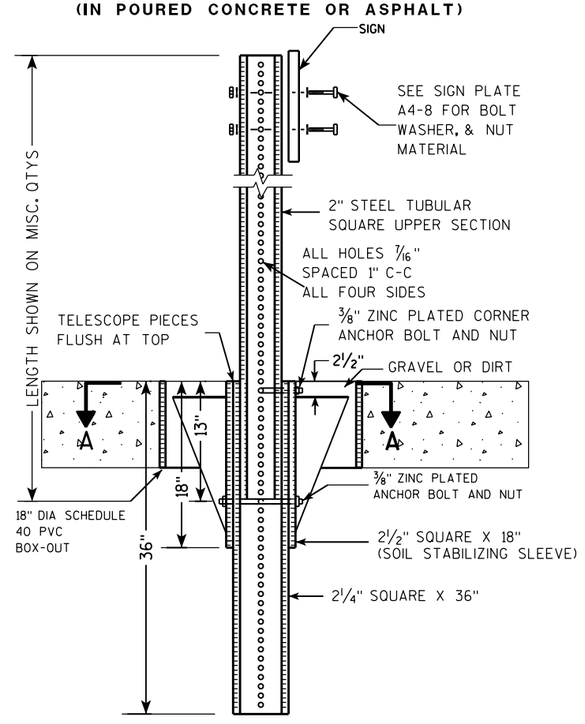
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



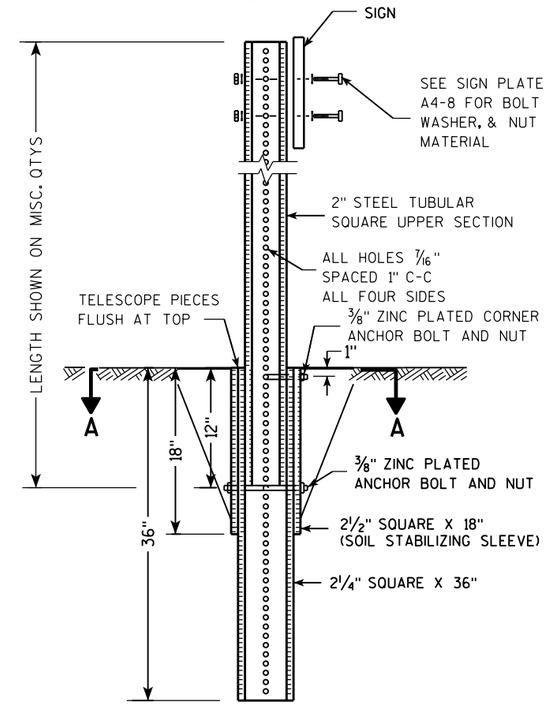
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

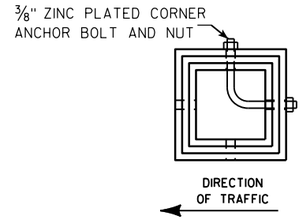


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required 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).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

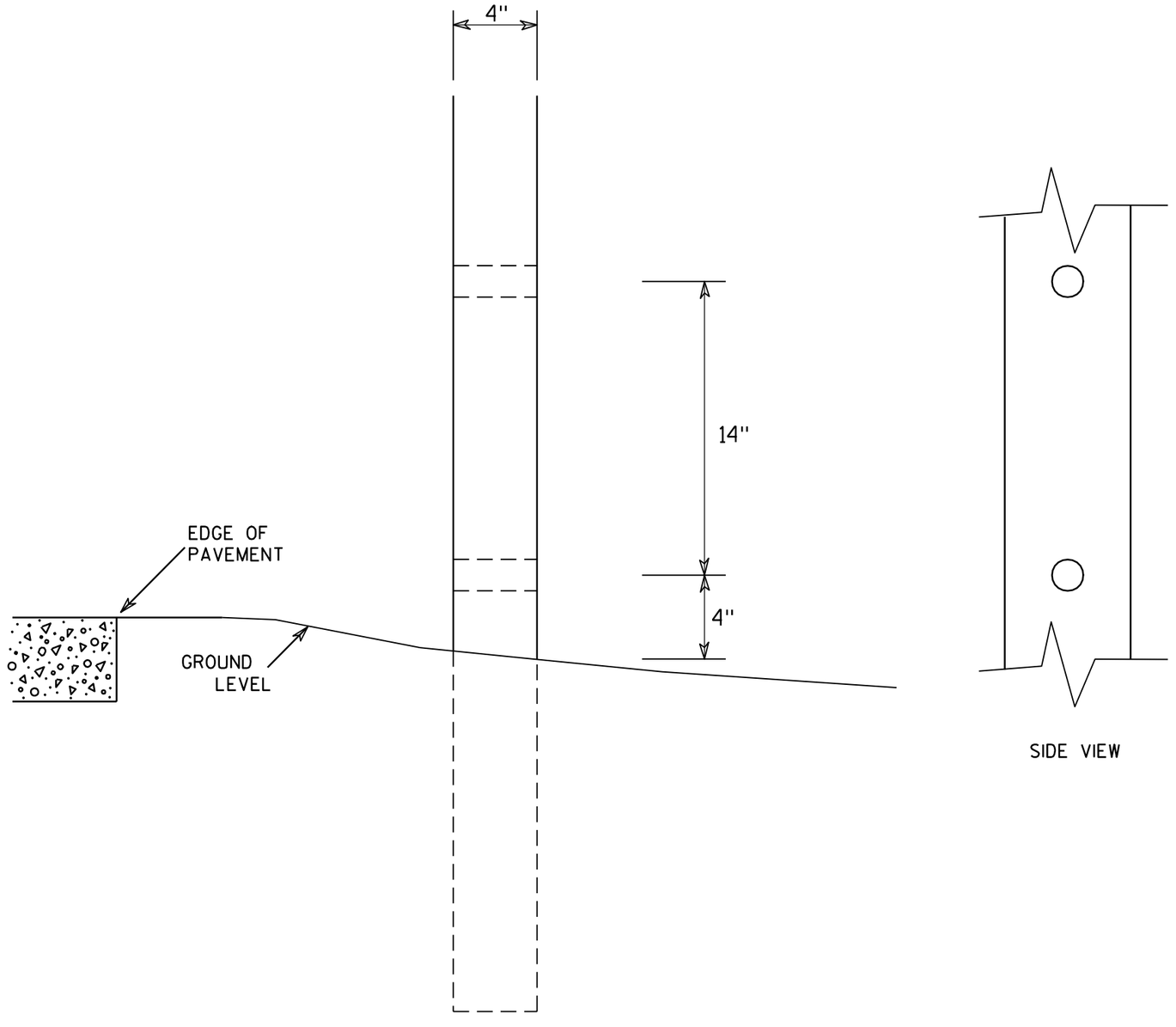
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 81 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

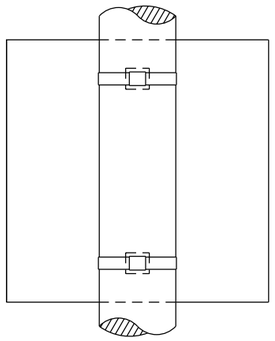
APPROVED Chester J Spang for State Traffic Engineer

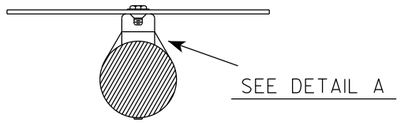
DATE 3/27/97 PLATE NO. A4-11.2

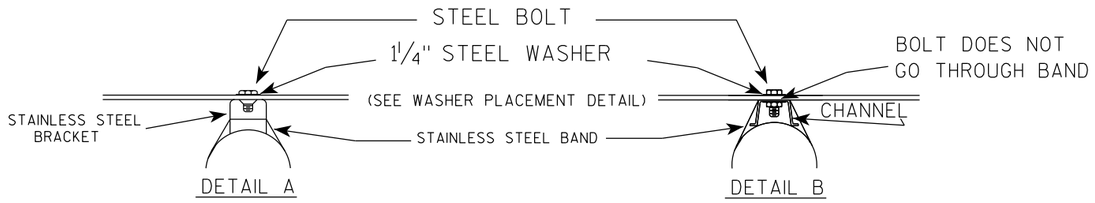
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 82	E

BANDING

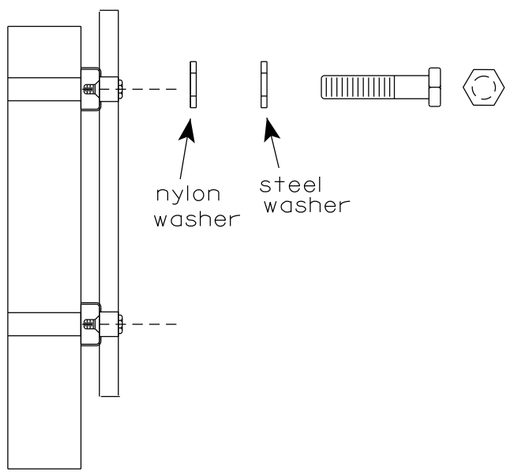
SINGLE SIGN







WASHER PLACEMENT

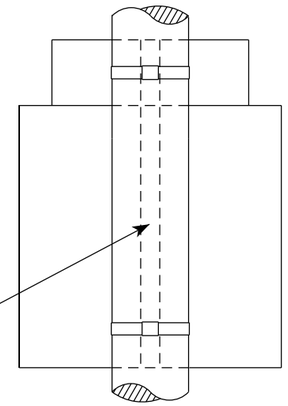


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

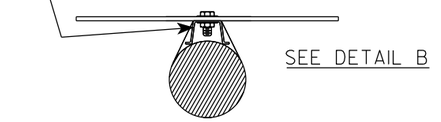
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

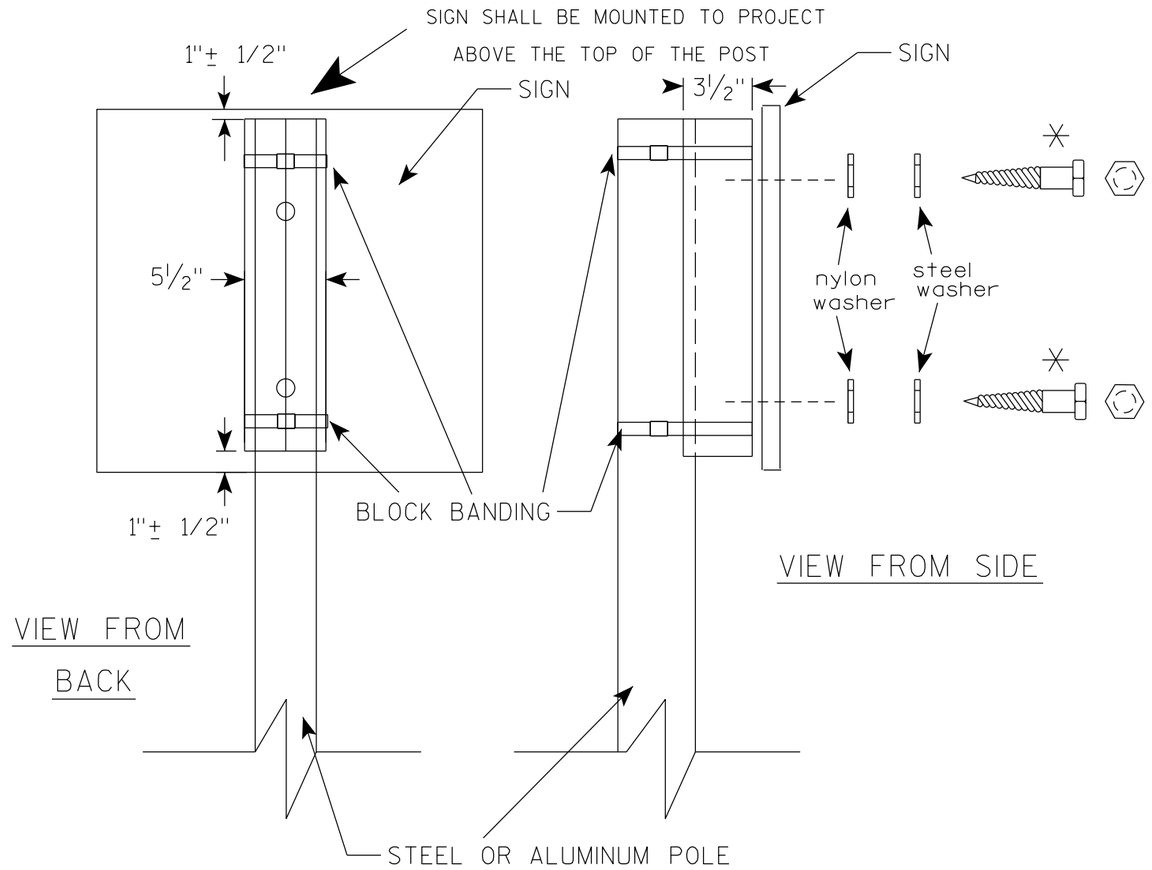
DATE 6/10/19 PLATE NO. A5-9.4

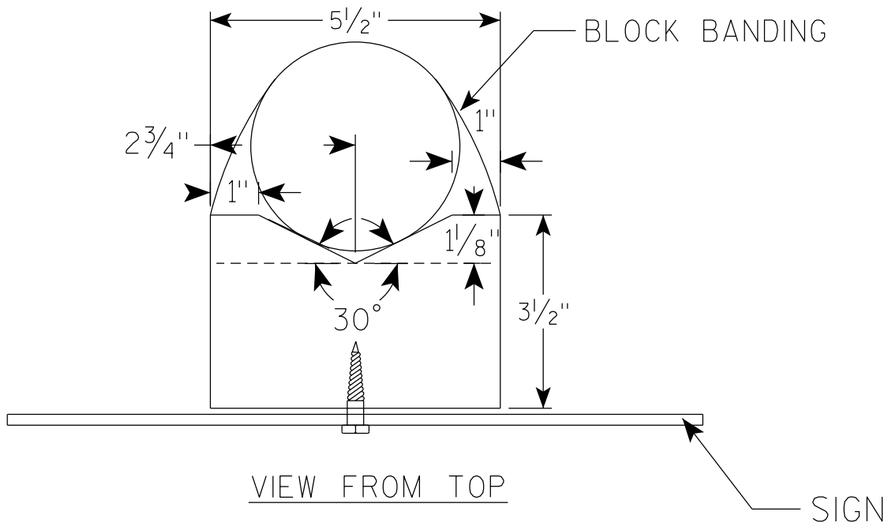
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 83	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

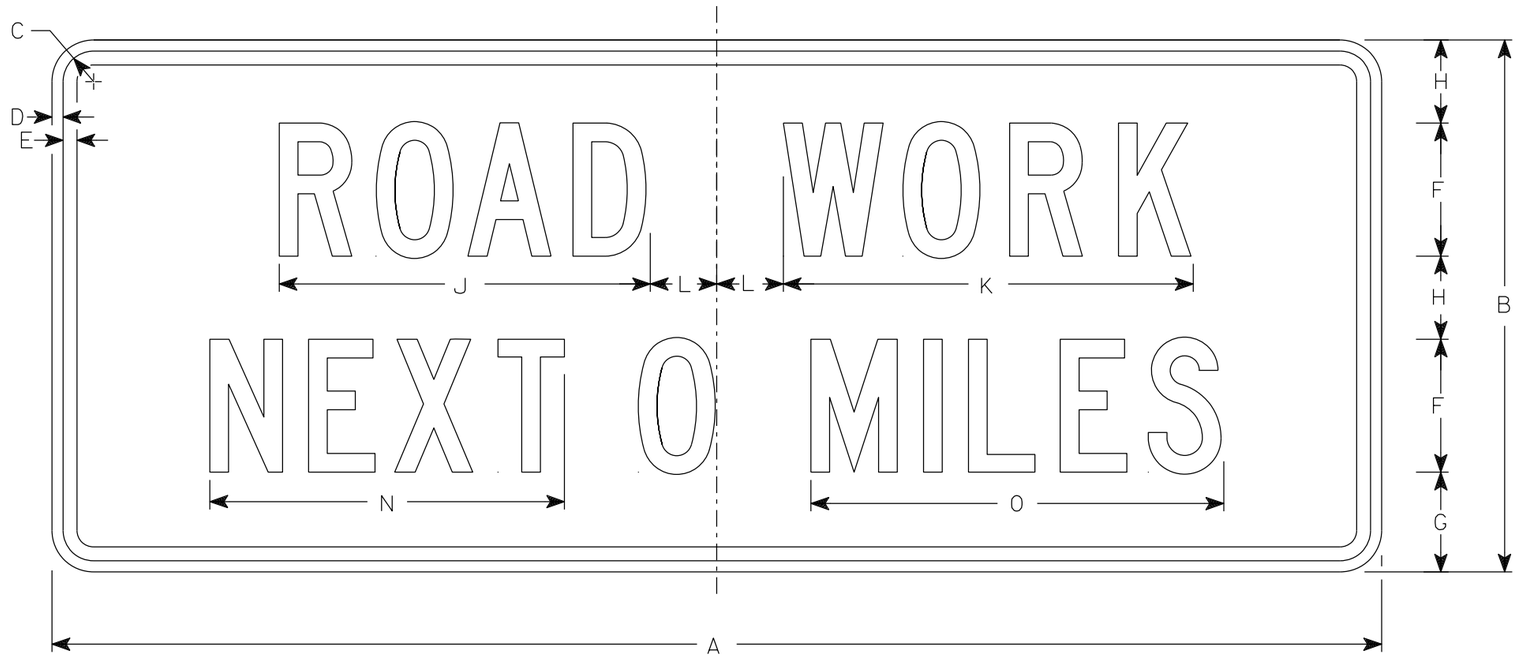
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 84 E



G20-1

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10.0
2M	60	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10.0
3	60	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10.0
4	60	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10.0
5	60	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10.0

STANDARD SIGN
G20-1

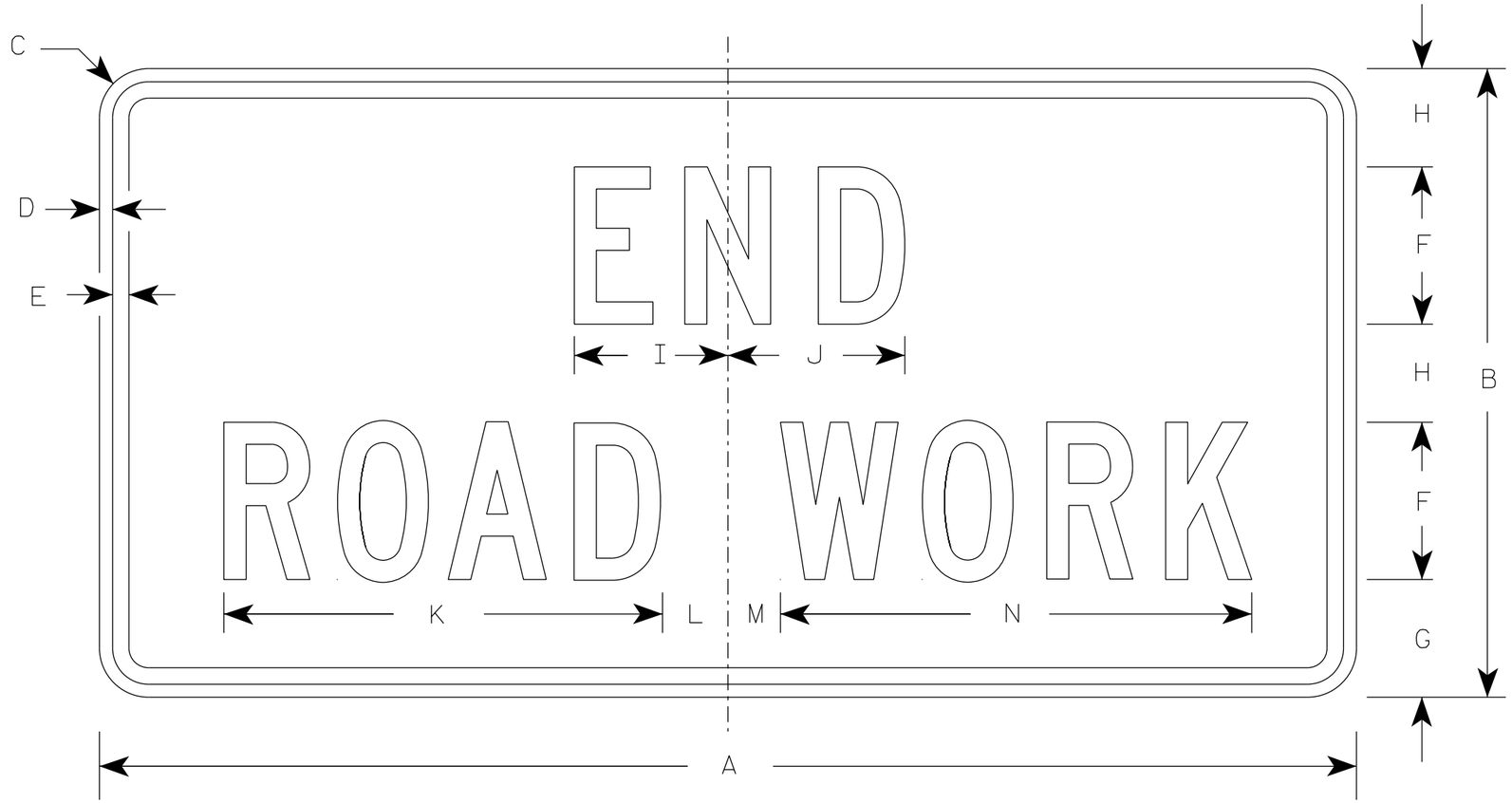
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 85	E

7



G20-2A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

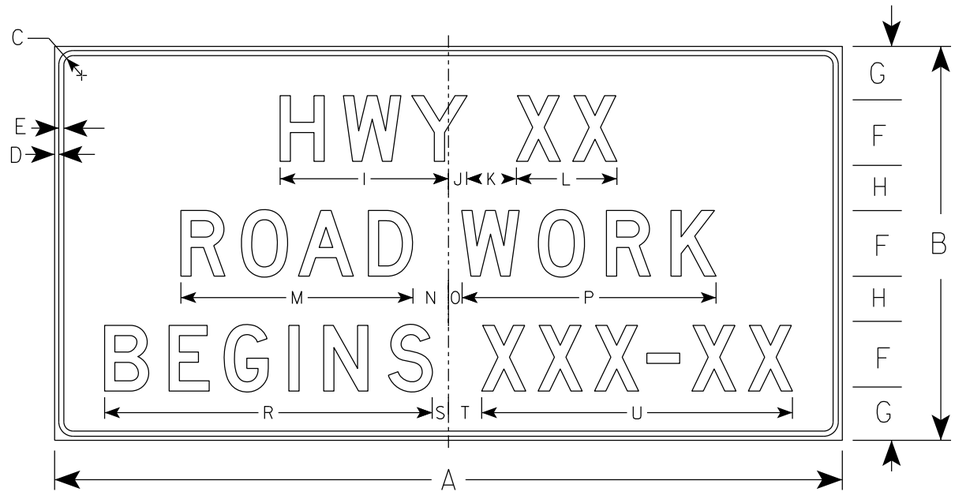
DATE 1/26/2023 PLATE NO. G20-2A.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 86 E

7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

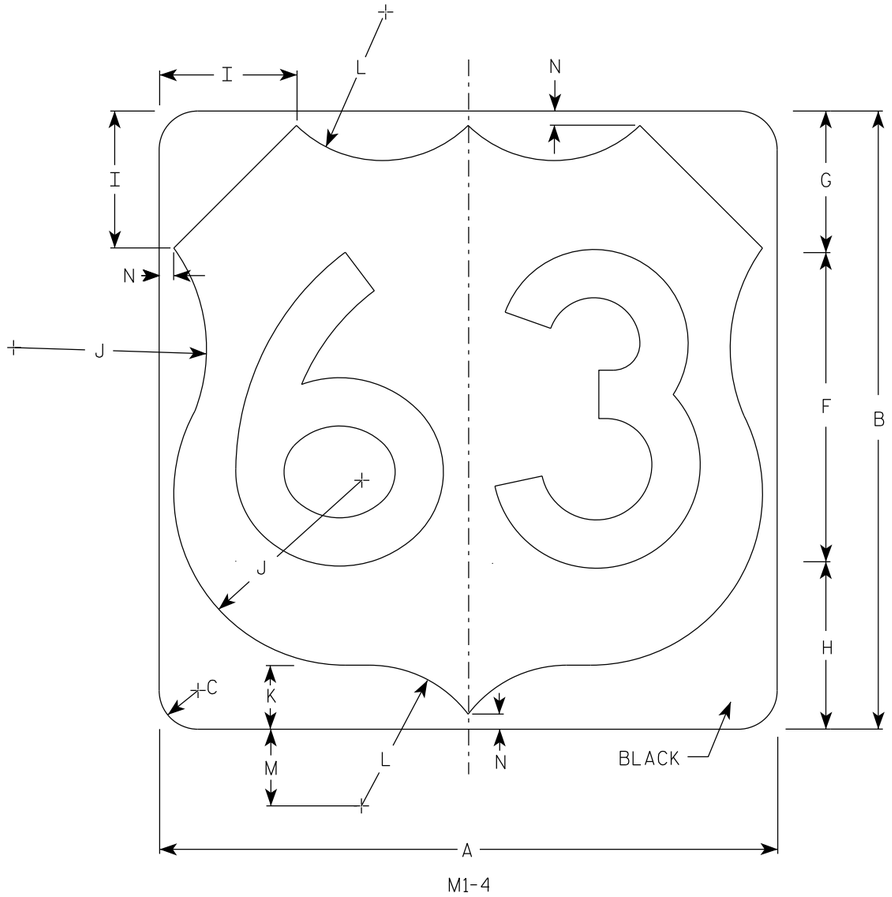
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

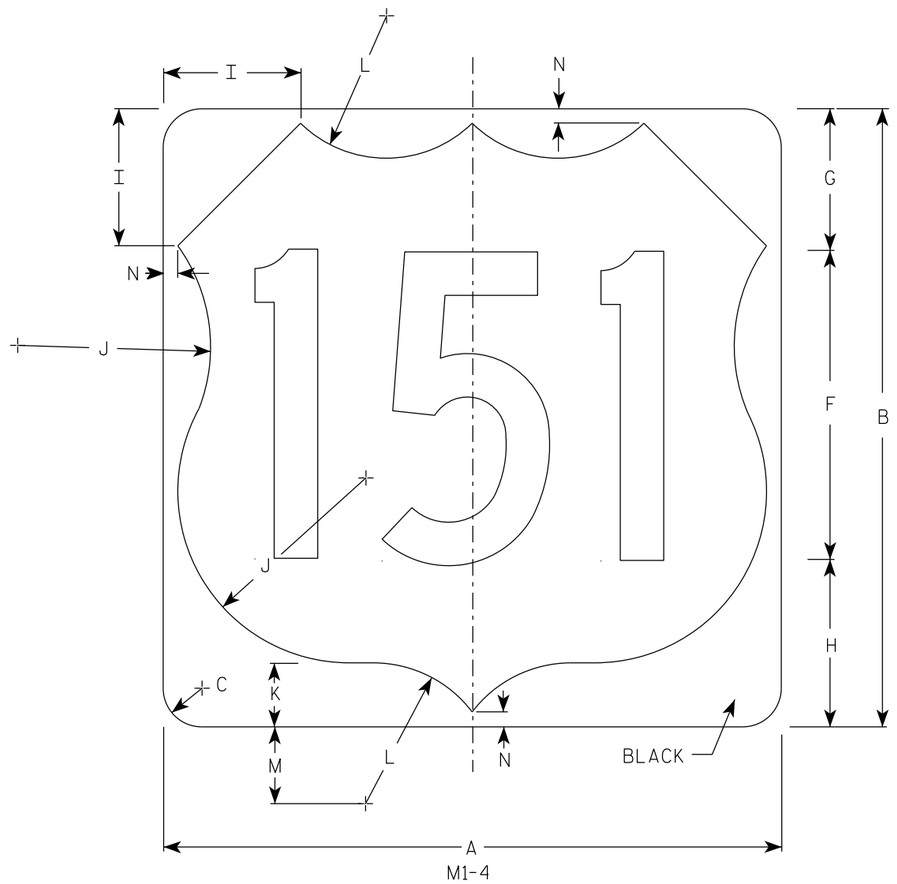
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 87 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs Series C



M1-4



M1-4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	24	1 ½			12	5 ½	6 ½	5	7 ½	2 ½	5 ½	3	½													4.0
2M	24	24	1 ½			12	5 ½	6 ½	5	7 ½	2 ½	5 ½	3	½													4.0
3	36	36	2 ¼			18	8 ¼	9 ¼	7 ¼	11 ¼	3 ¾	8 ¼	4 ½	¾													9.0
4	36	36	2 ¼			18	8 ¼	9 ¼	7 ¼	11 ¼	3 ¾	8 ¼	4 ½	¾													9.0
5	36	36	2 ¼			18	8 ¼	9 ¼	7 ¼	11 ¼	3 ¾	8 ¼	4 ½	¾													9.0

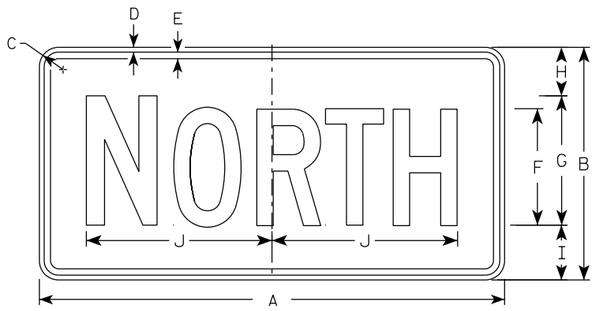
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

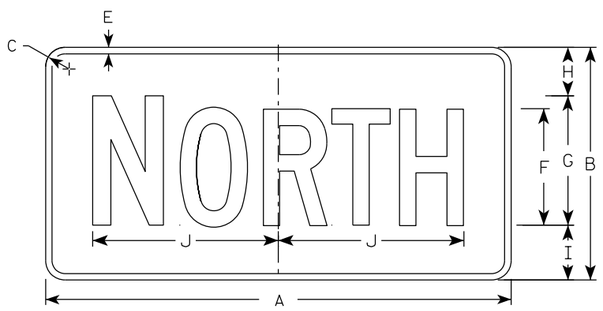
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/22 PLATE NO. M1-4.11

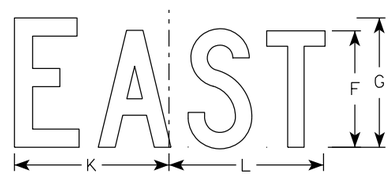
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 88 | E



M3-1
MM3-1
MP3-1

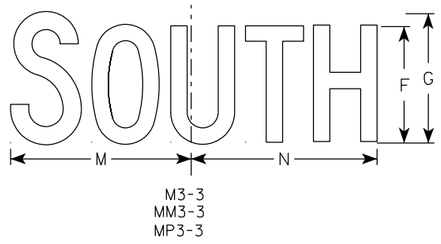


MB3-1
MK3-1
MN3-1

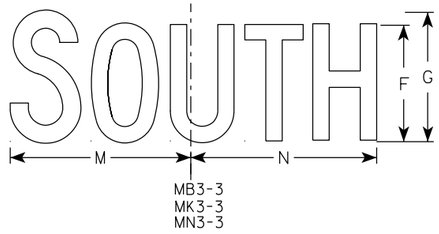


M3-2
MM3-2
MP3-2

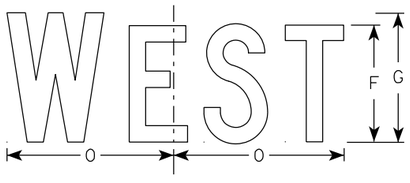
MB3-2
MK3-2
MN3-2



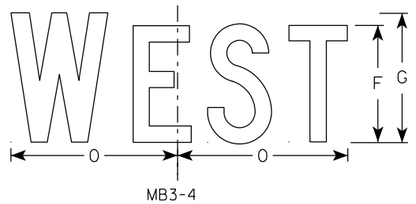
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
2M	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

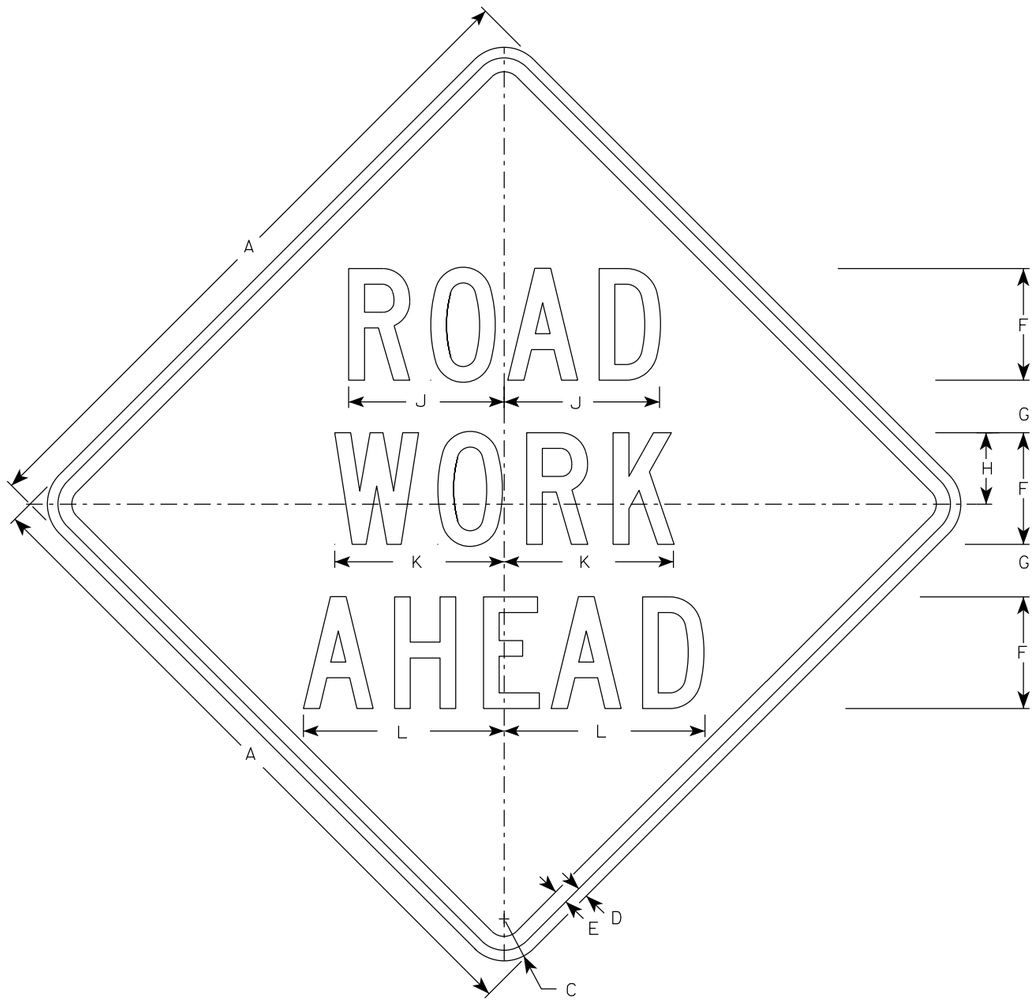
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

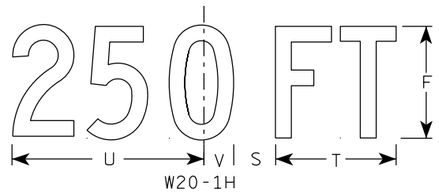
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

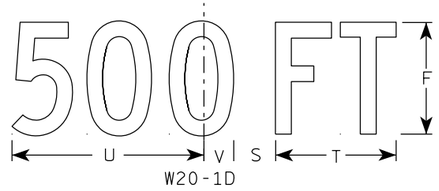
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 89	E



W20-1A

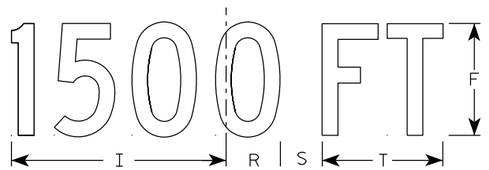


W20-1H



W20-1D

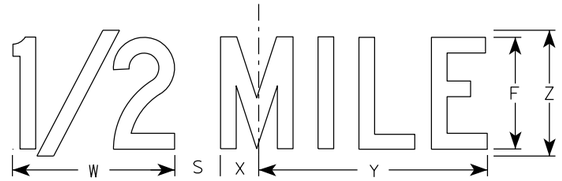
W20-1C



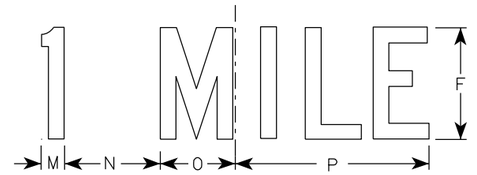
W20-1B

NOTES

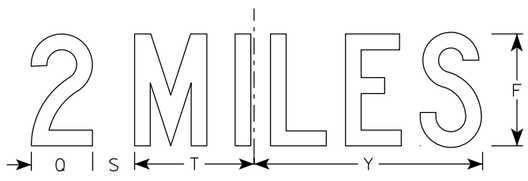
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

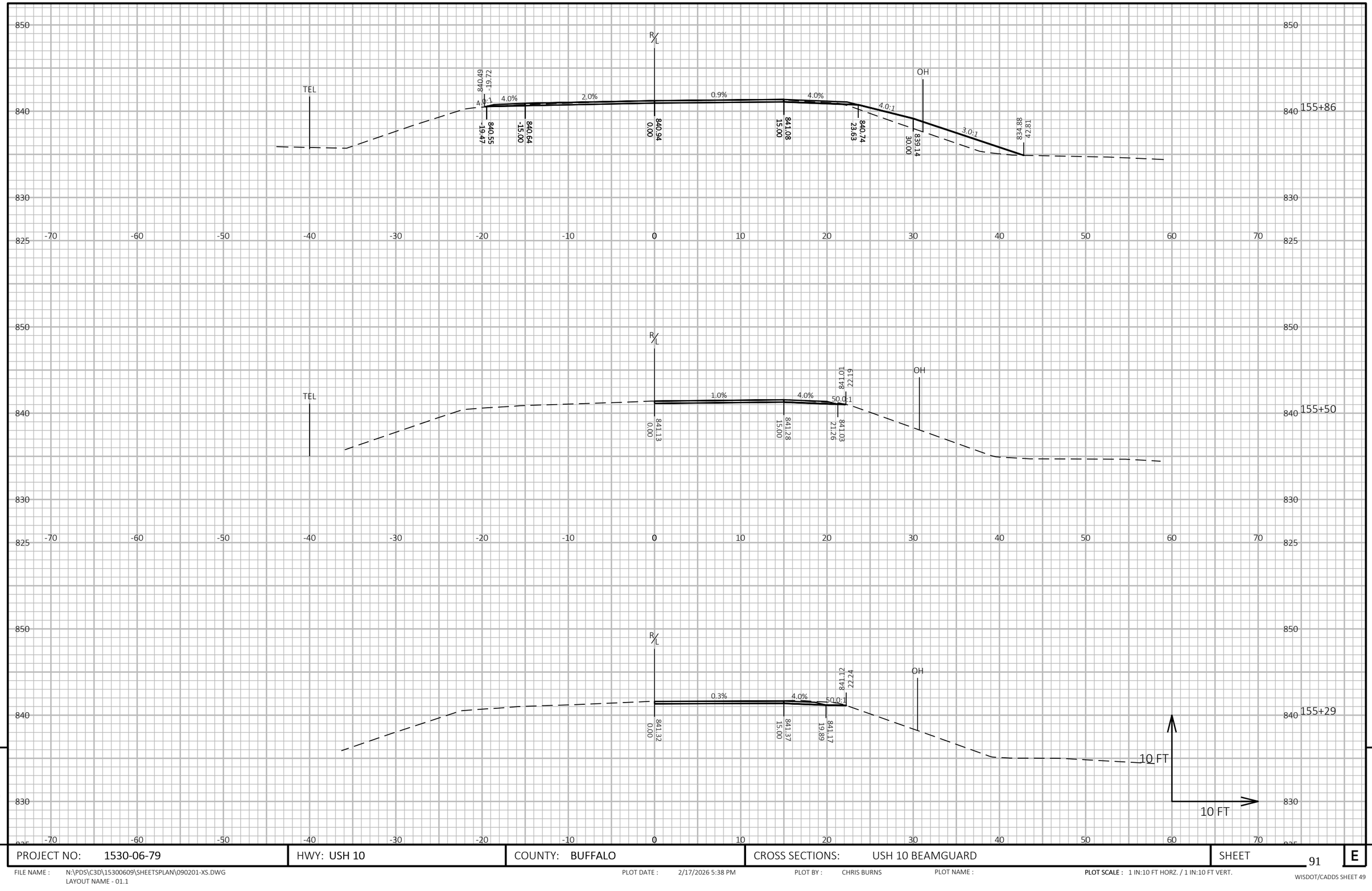
SHEET NO: 90 E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 10-JAN 2024 11:16 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

7

7

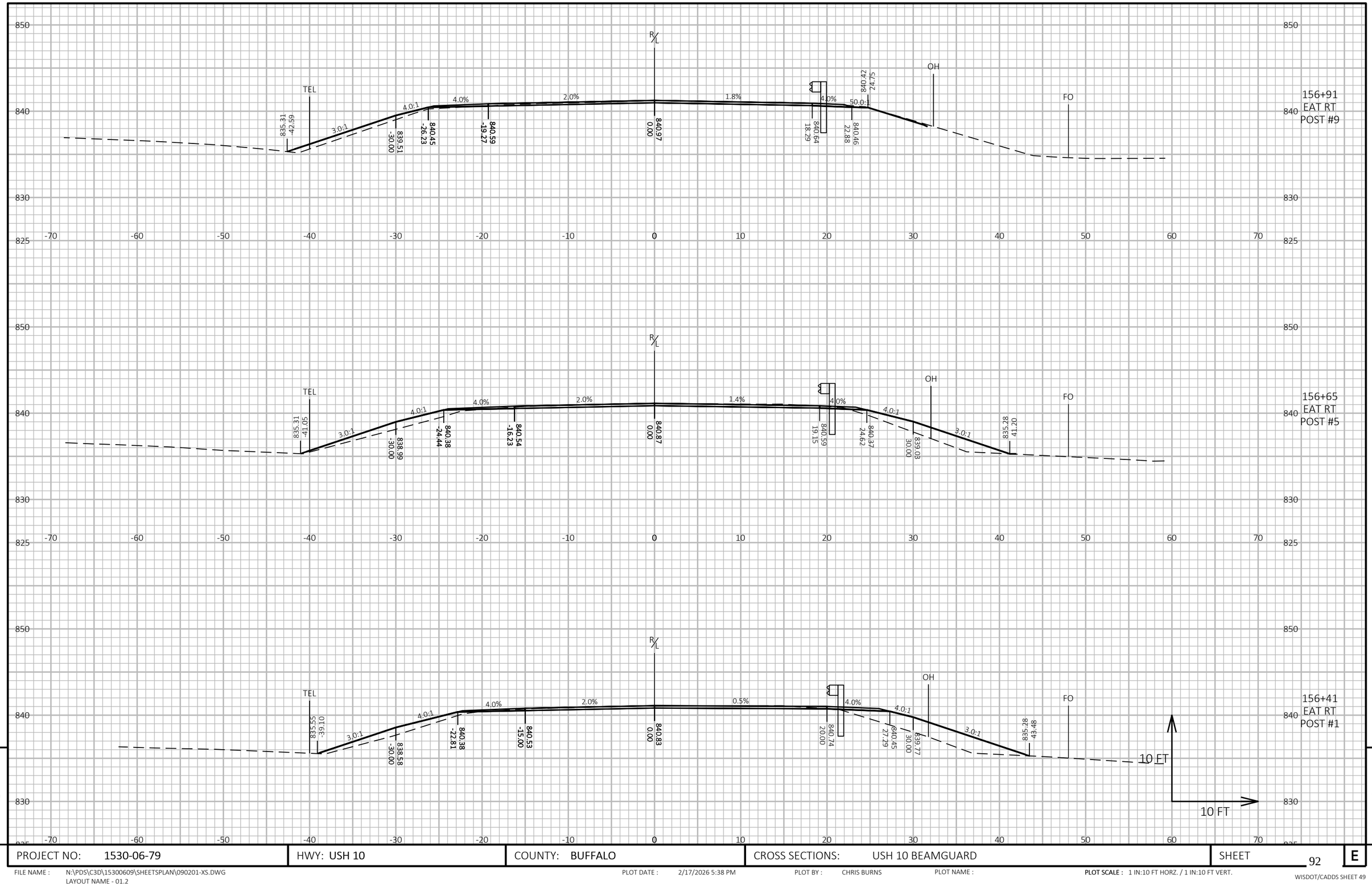


PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 91	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01.1

PLOT DATE : 2/17/2026 5:38 PM PLOT BY : CHRIS BURNS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 92	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01.2

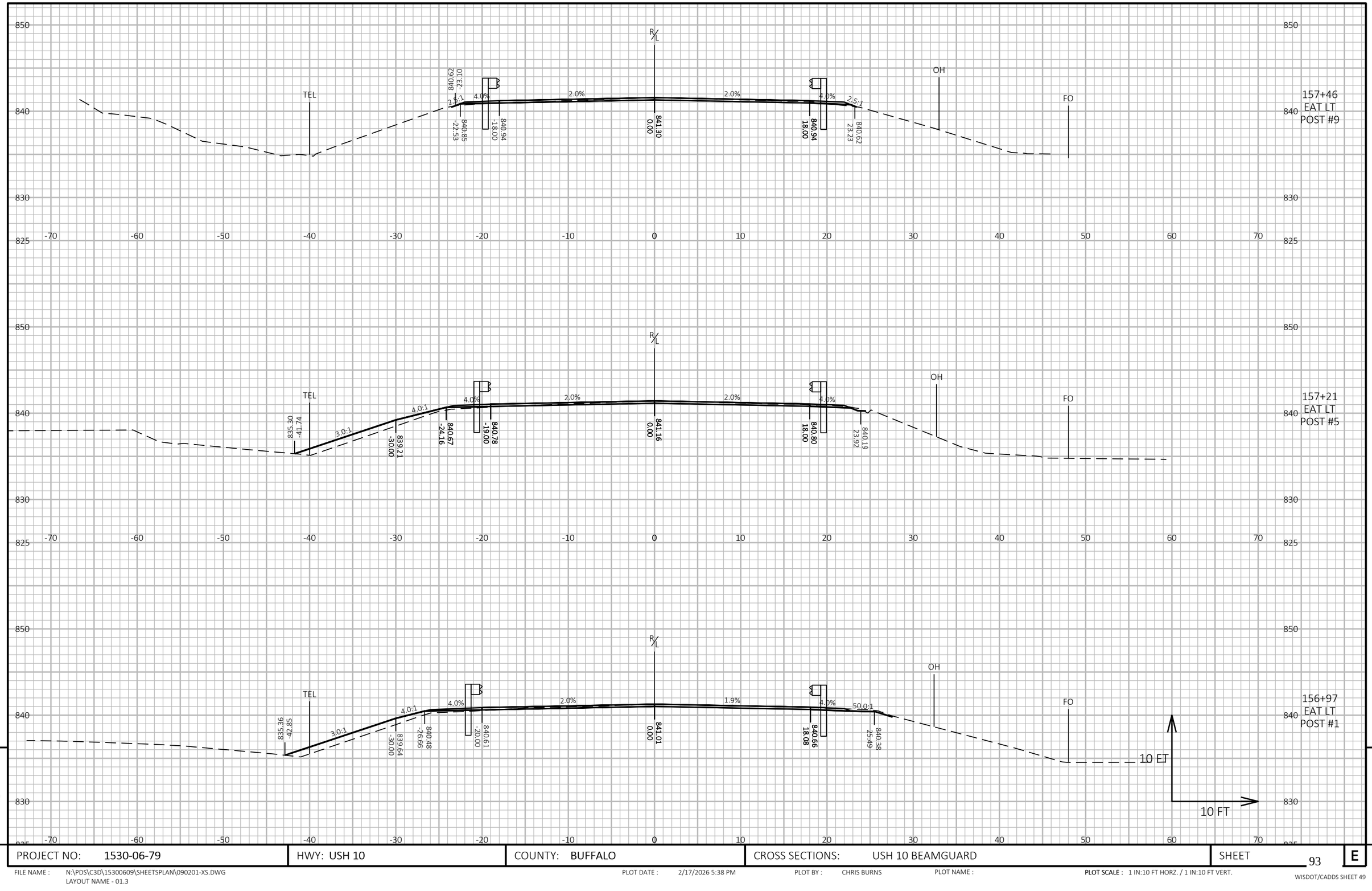
PLOT DATE : 2/17/2026 5:38 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 93	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01.3

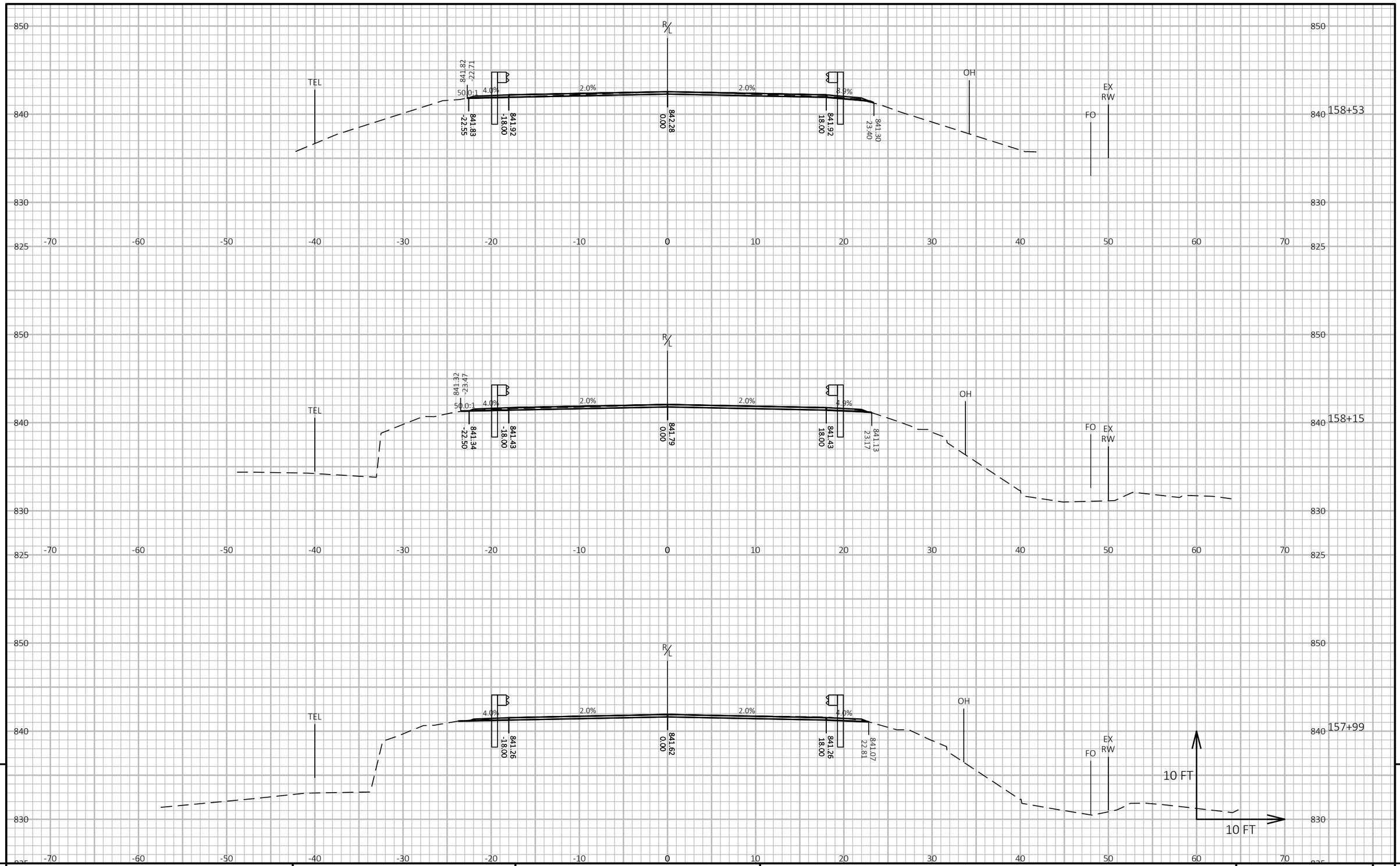
PLOT DATE : 2/17/2026 5:38 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 94	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01.4

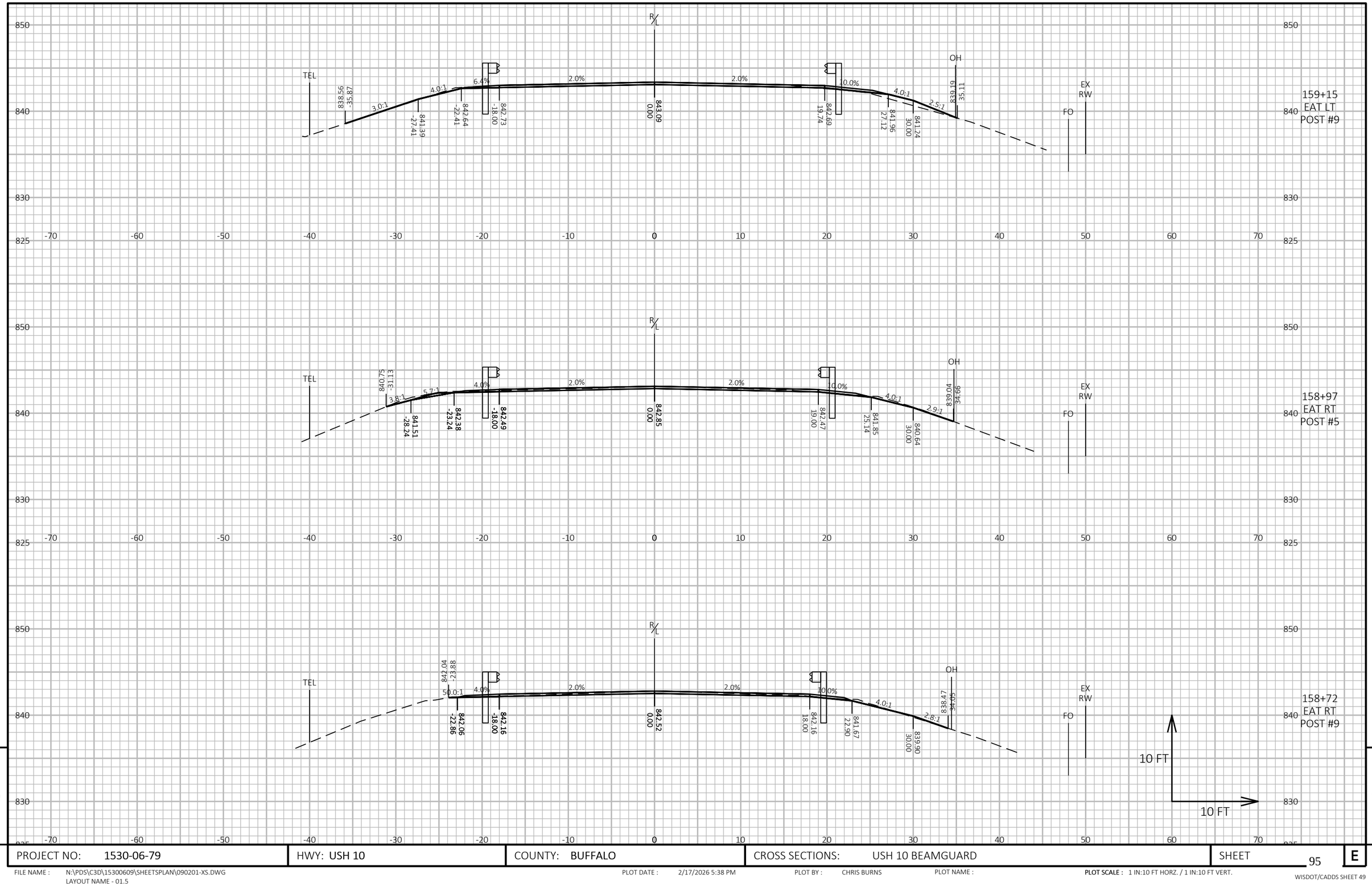
PLOT DATE : 2/17/2026 5:38 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 95	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01.5

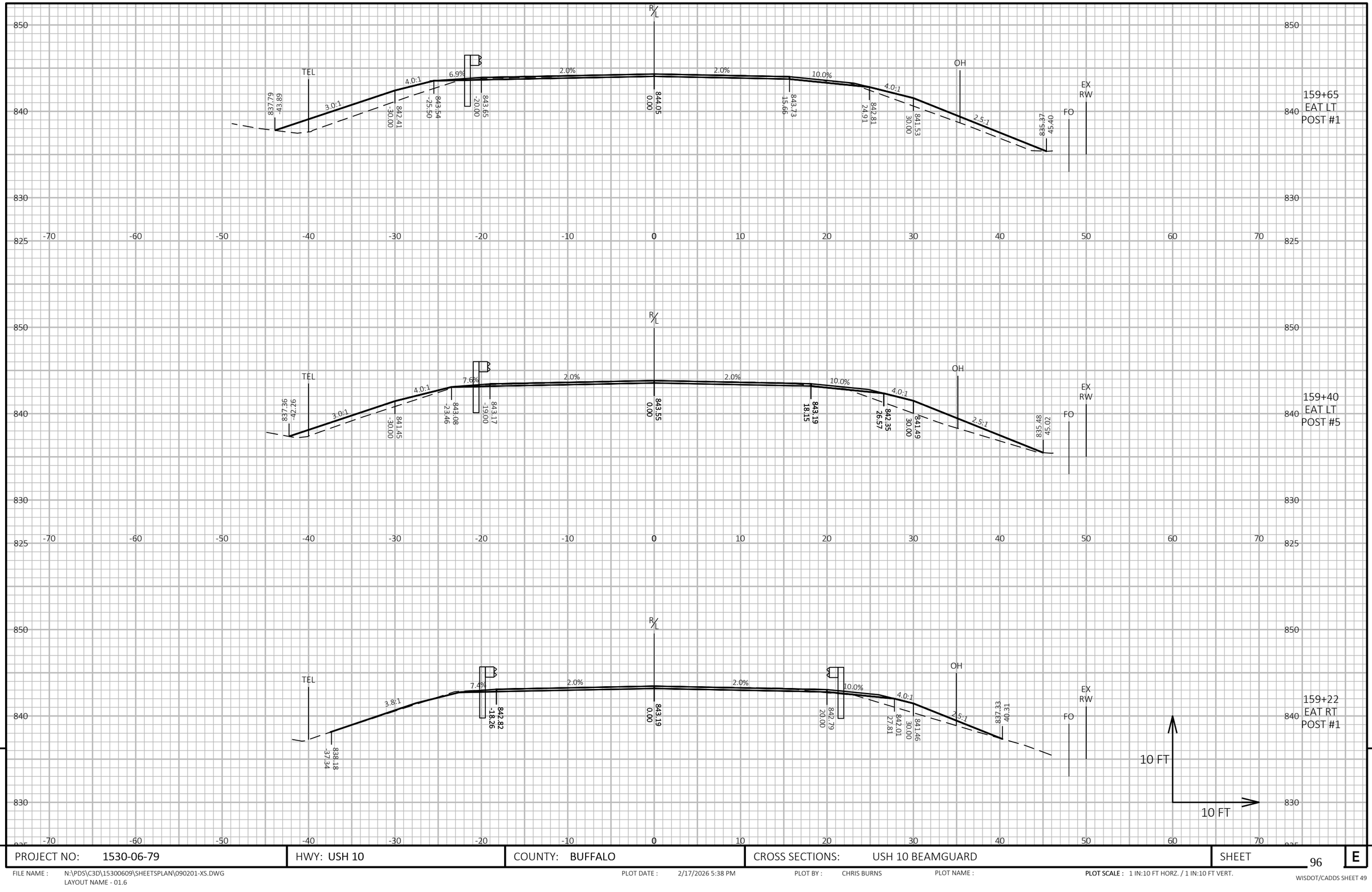
PLOT DATE : 2/17/2026 5:38 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 96	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01.6

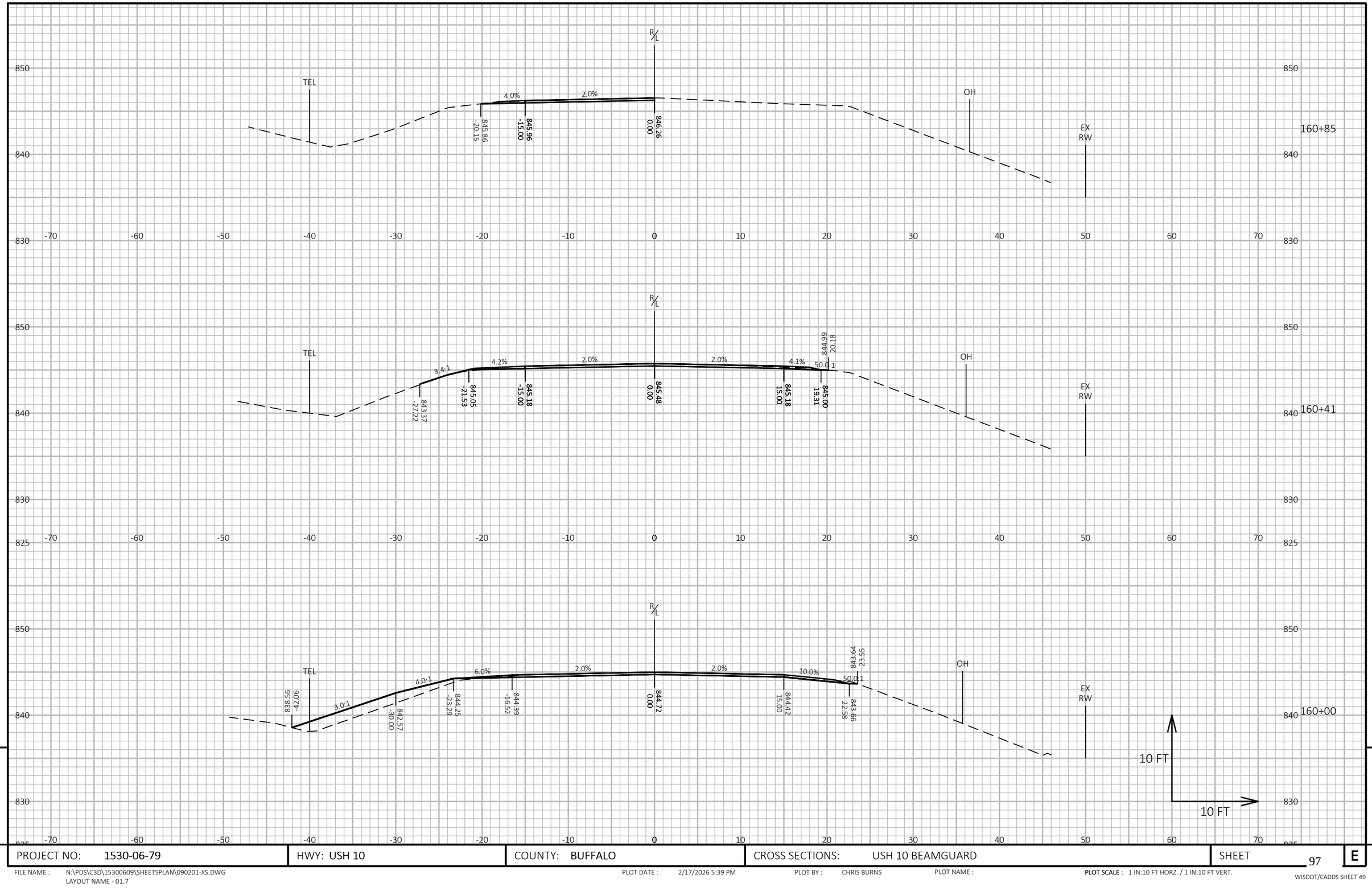
PLOT DATE : 2/17/2026 5:38 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 97	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01.7

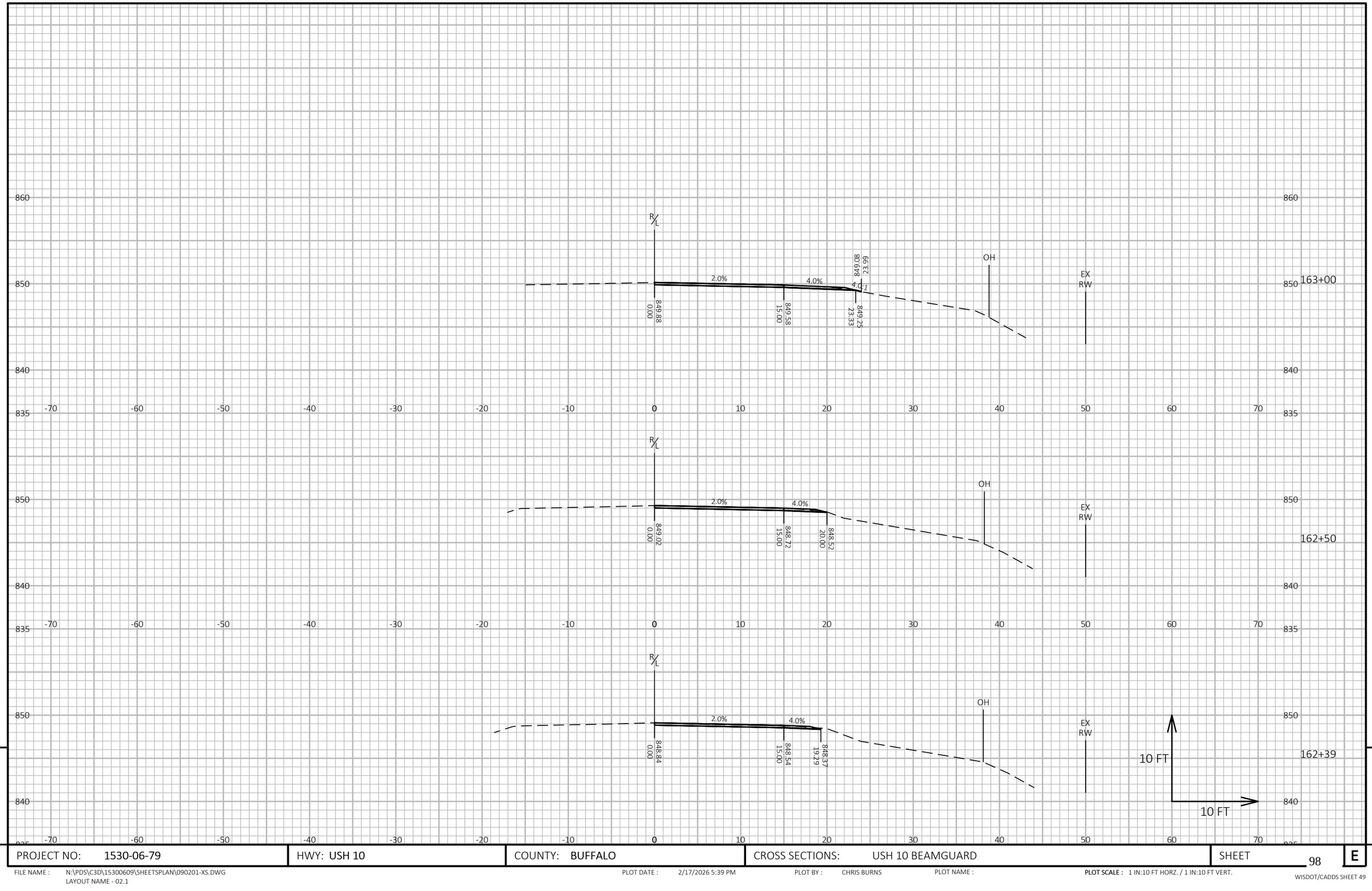
PLOT DATE : 2/17/2026 5:39 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49

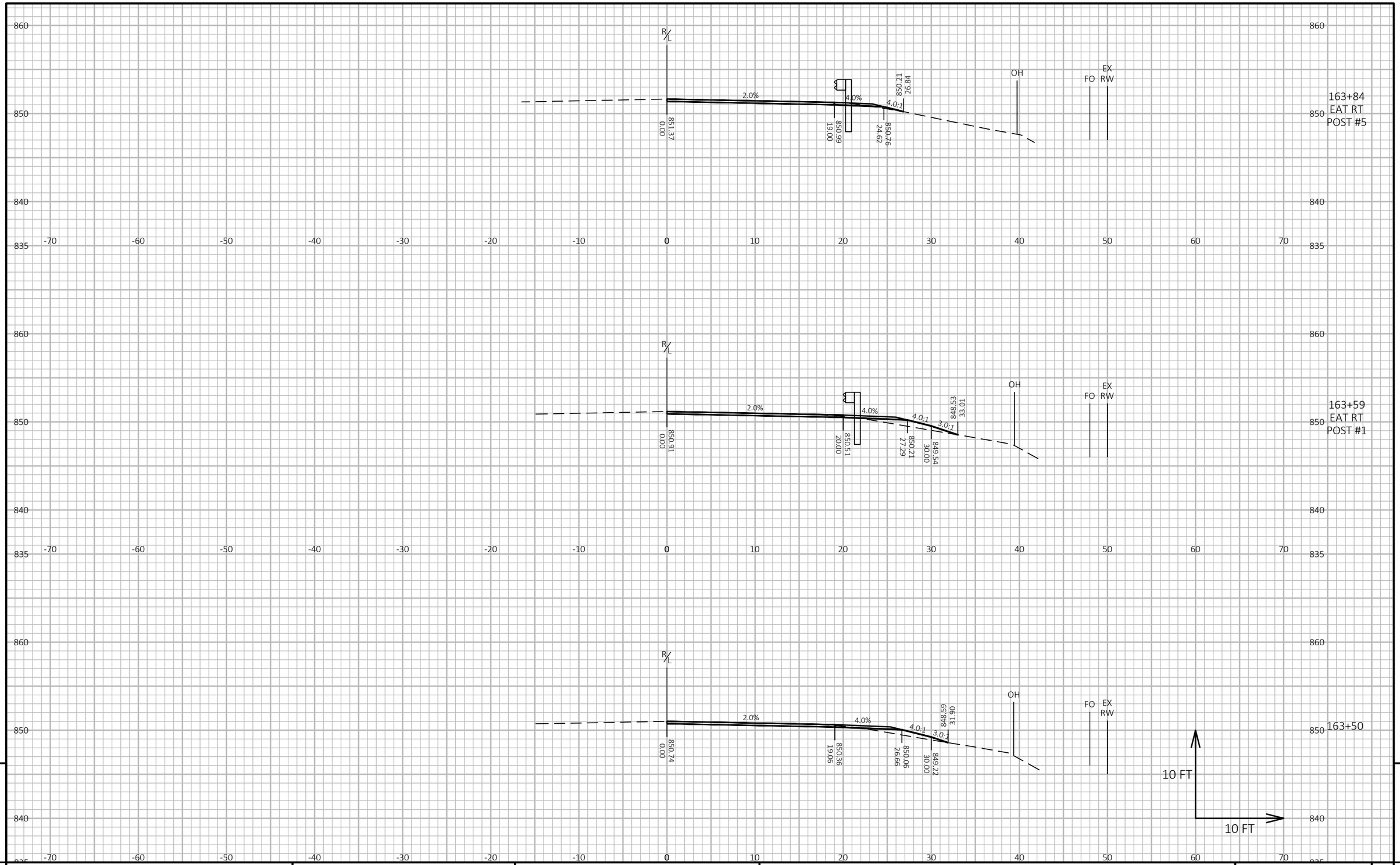


PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 98	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02.1

PLOT DATE : 2/17/2026 5:39 PM PLOT BY : CHRIS BURNS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 99	E

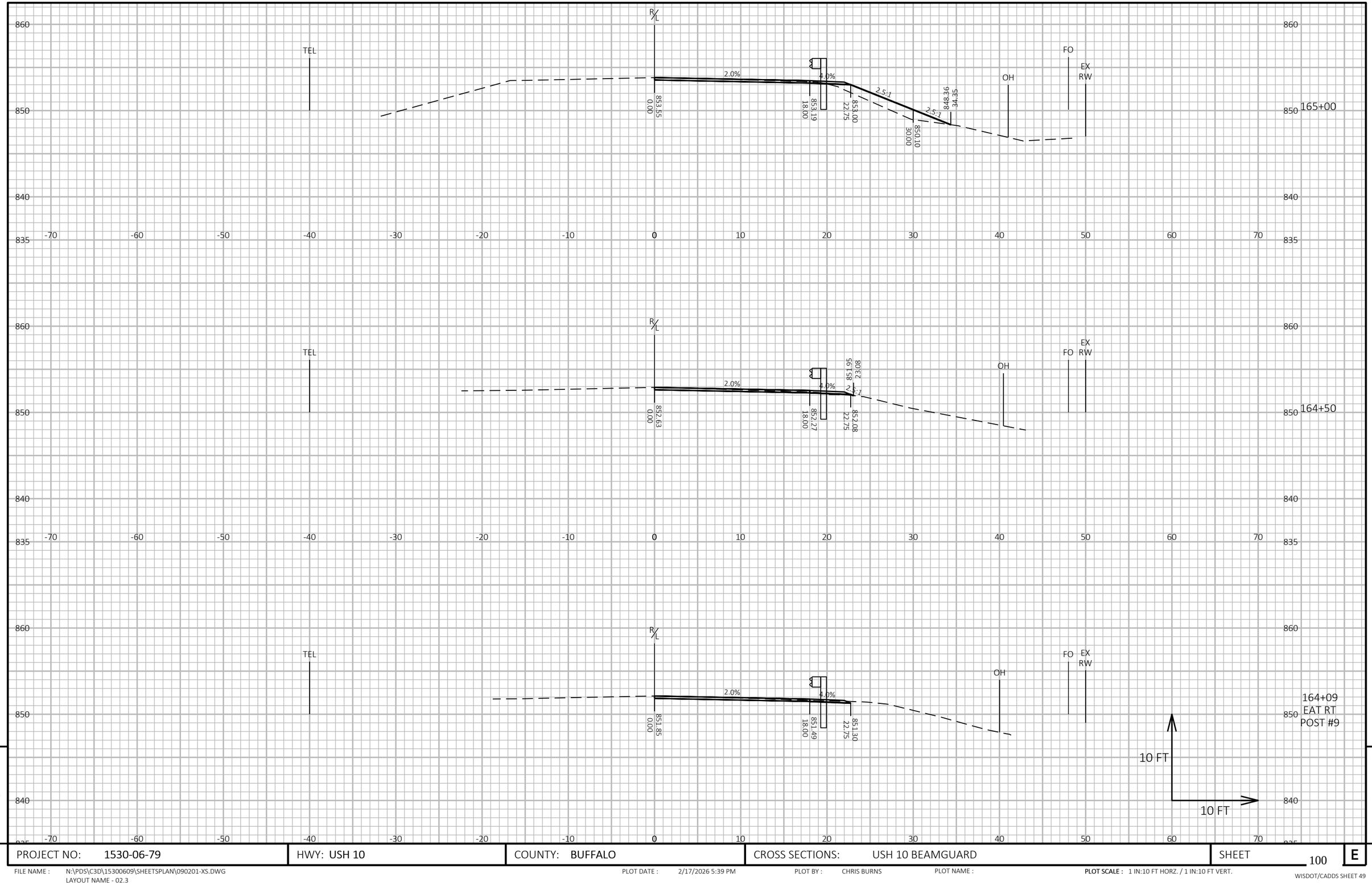
FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02.2

PLOT DATE : 2/17/2026 5:39 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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



9

9

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 100	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02.3

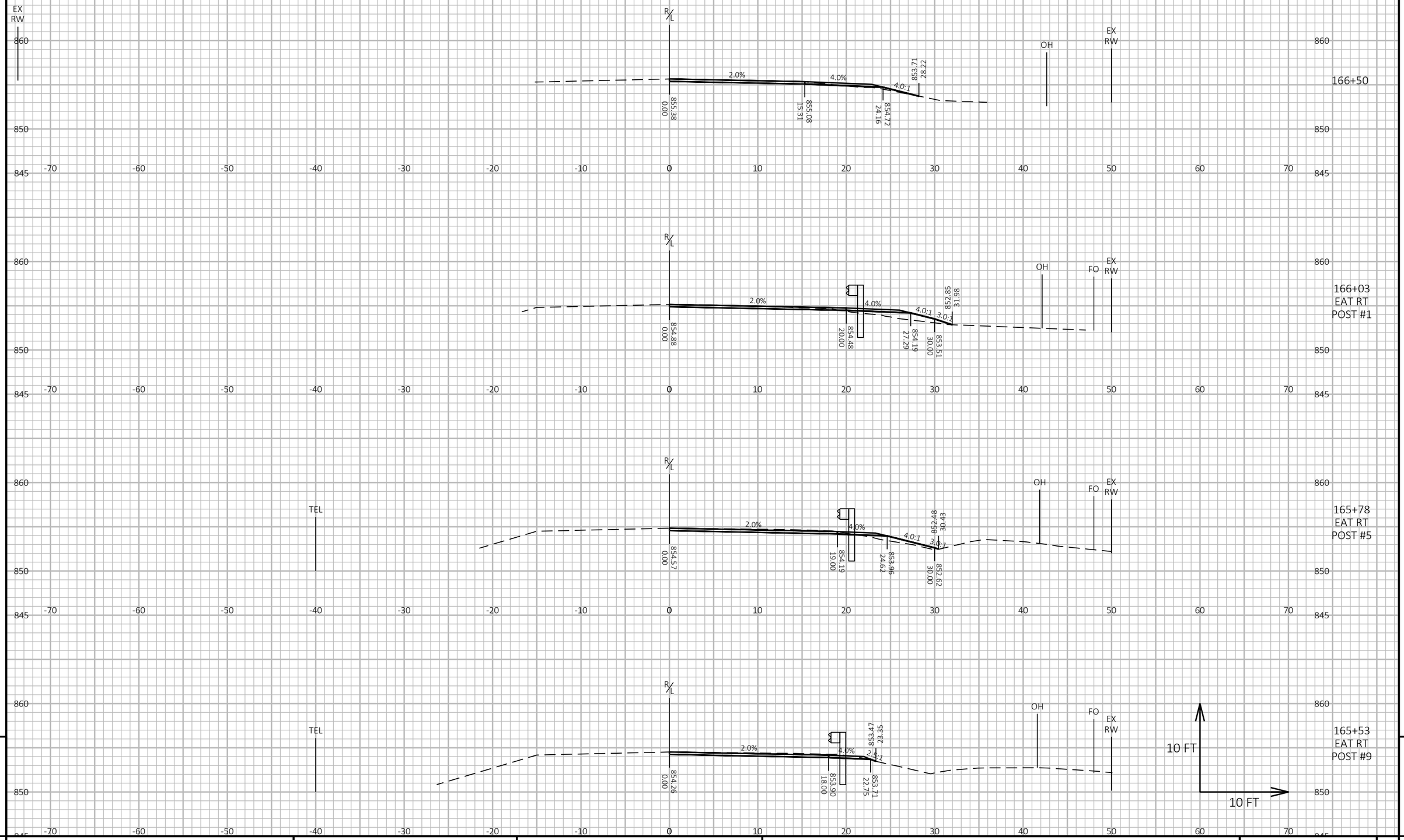
PLOT DATE : 2/17/2026 5:39 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 101	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02.4

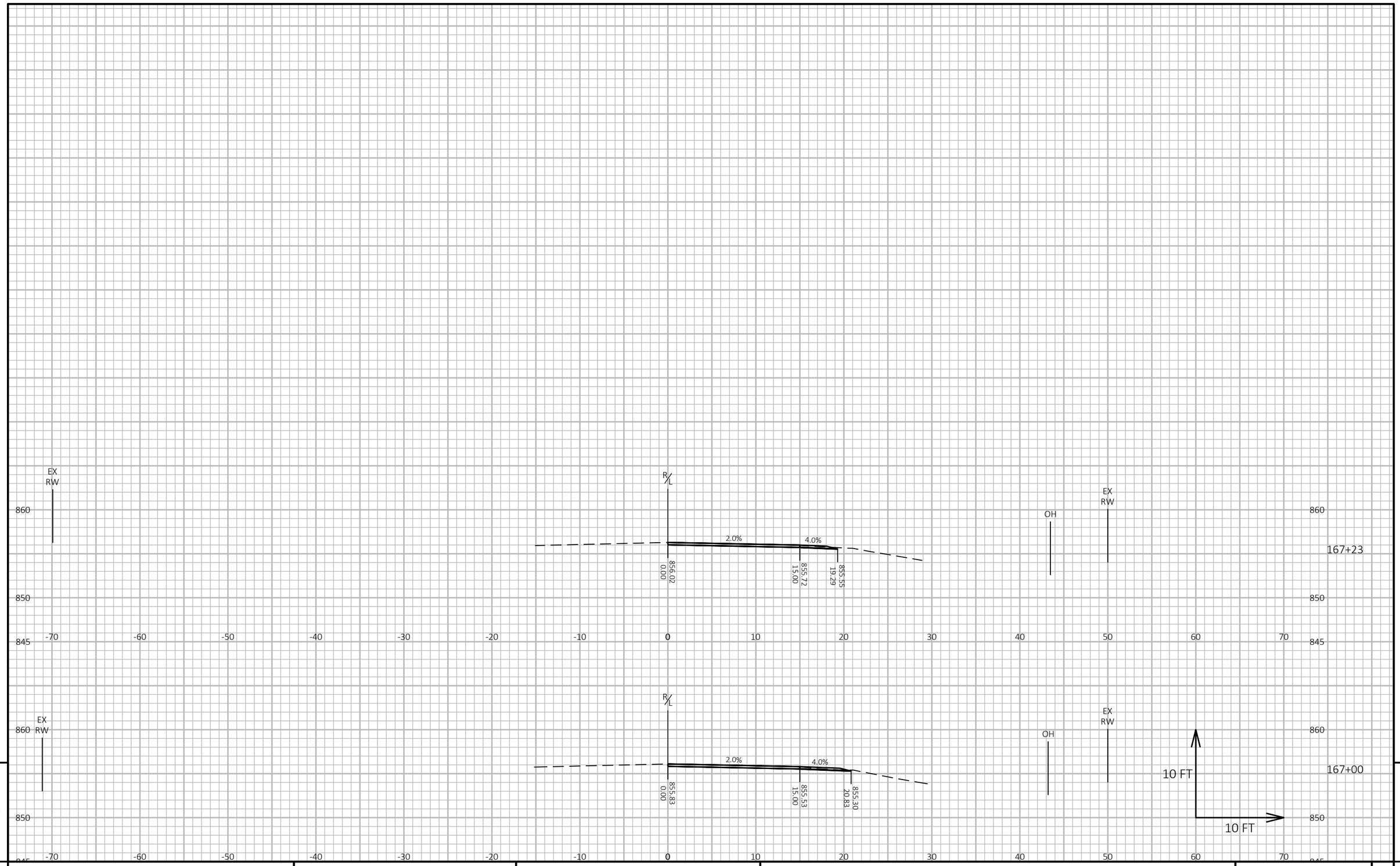
PLOT DATE : 2/17/2026 5:39 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 102	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02.5

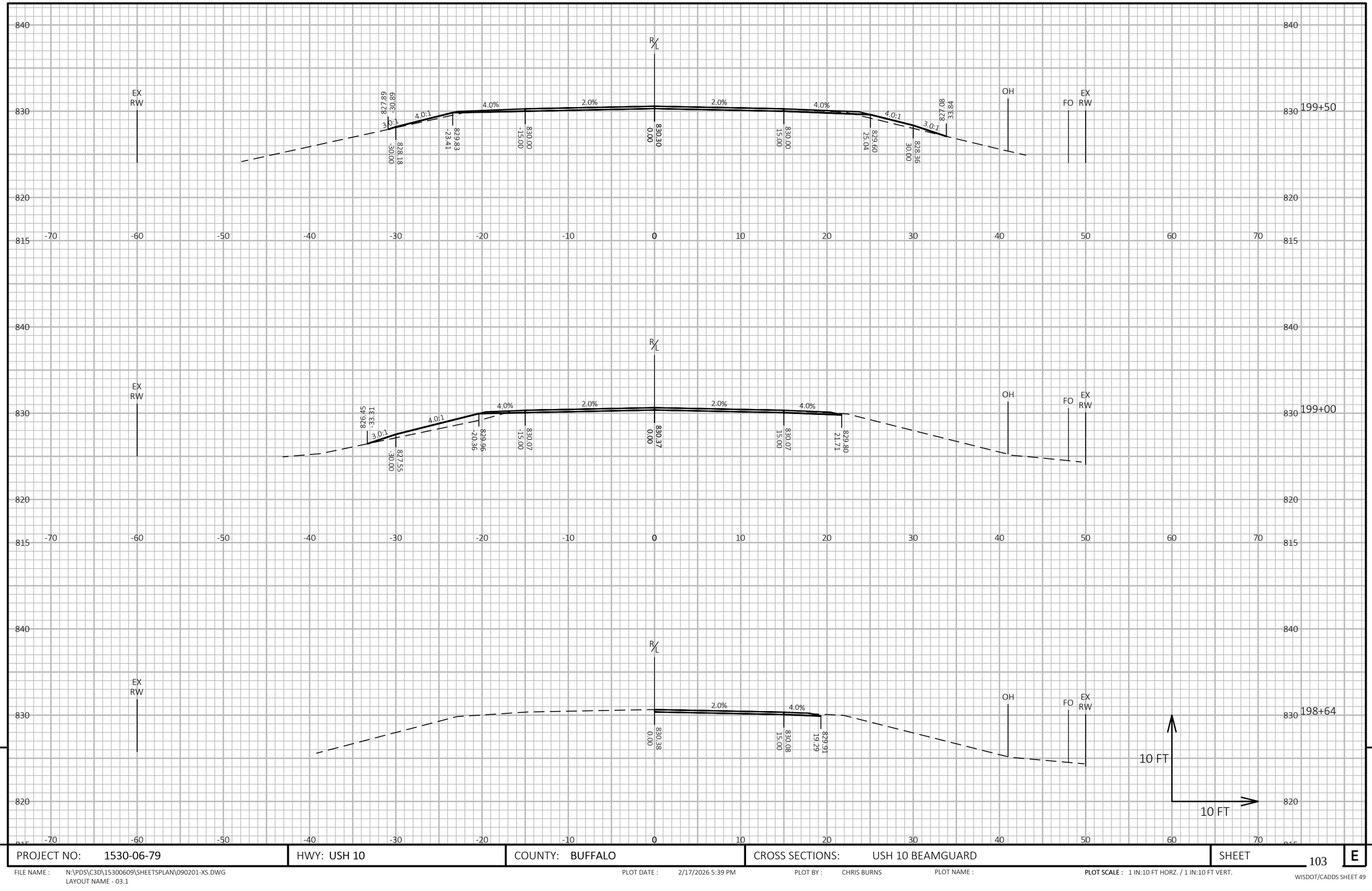
PLOT DATE : 2/17/2026 5:39 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

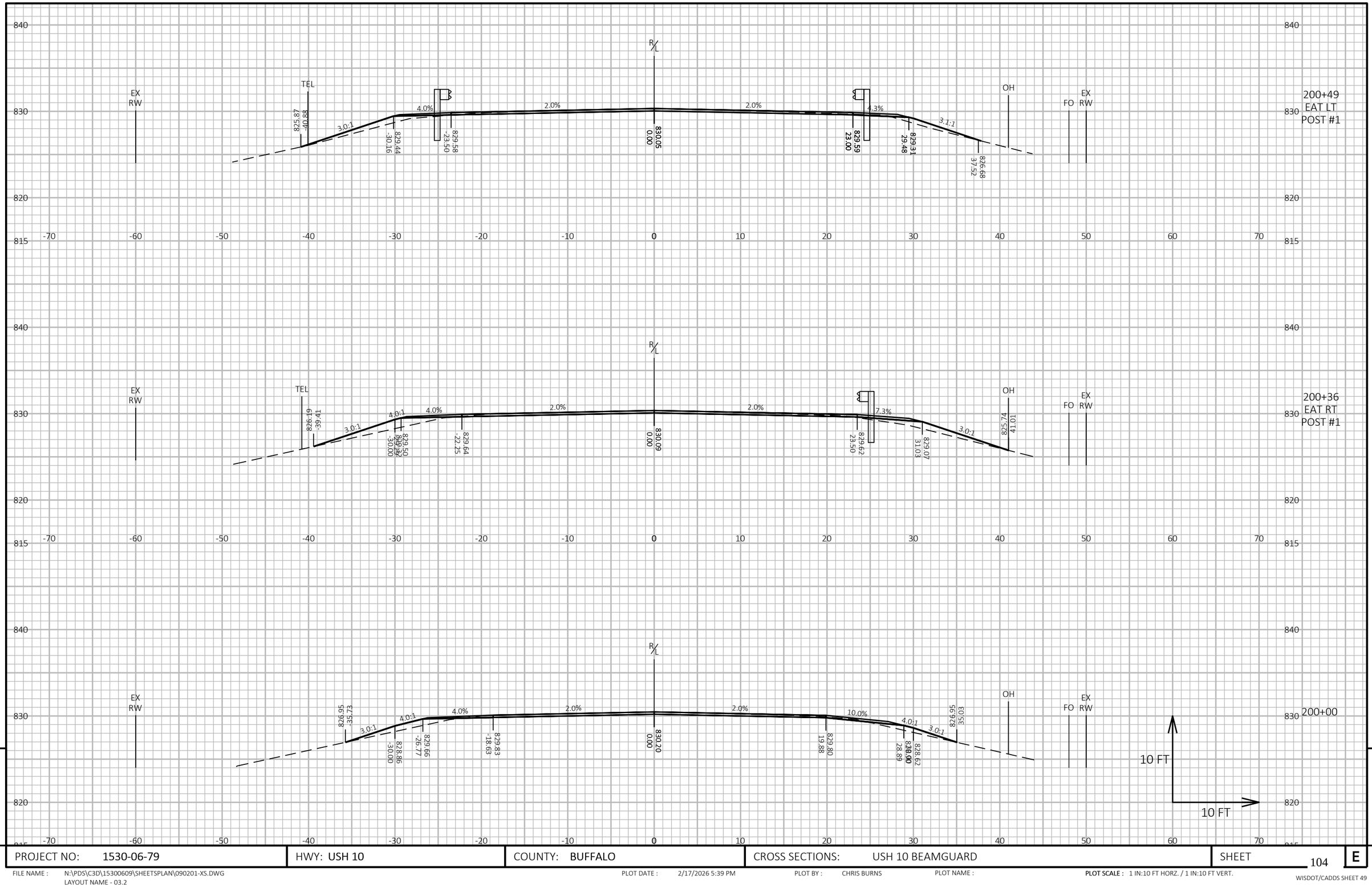
9

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 103	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03.1

PLOT DATE : 2/17/2026 5:39 PM PLOT BY : CHRIS BURNS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

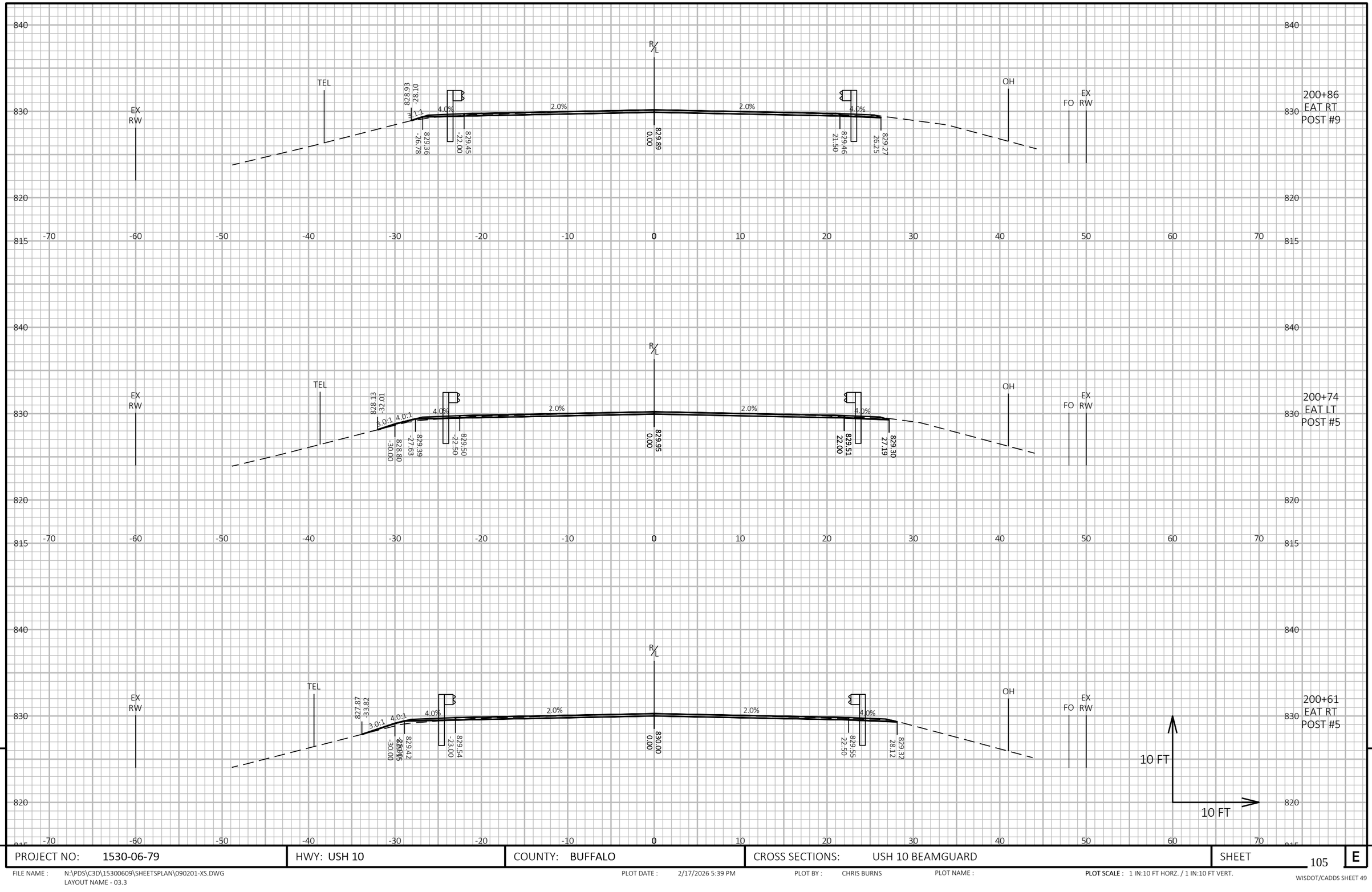
PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 104	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03.2

PLOT DATE : 2/17/2026 5:39 PM PLOT BY : CHRIS BURNS PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 105	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03.3

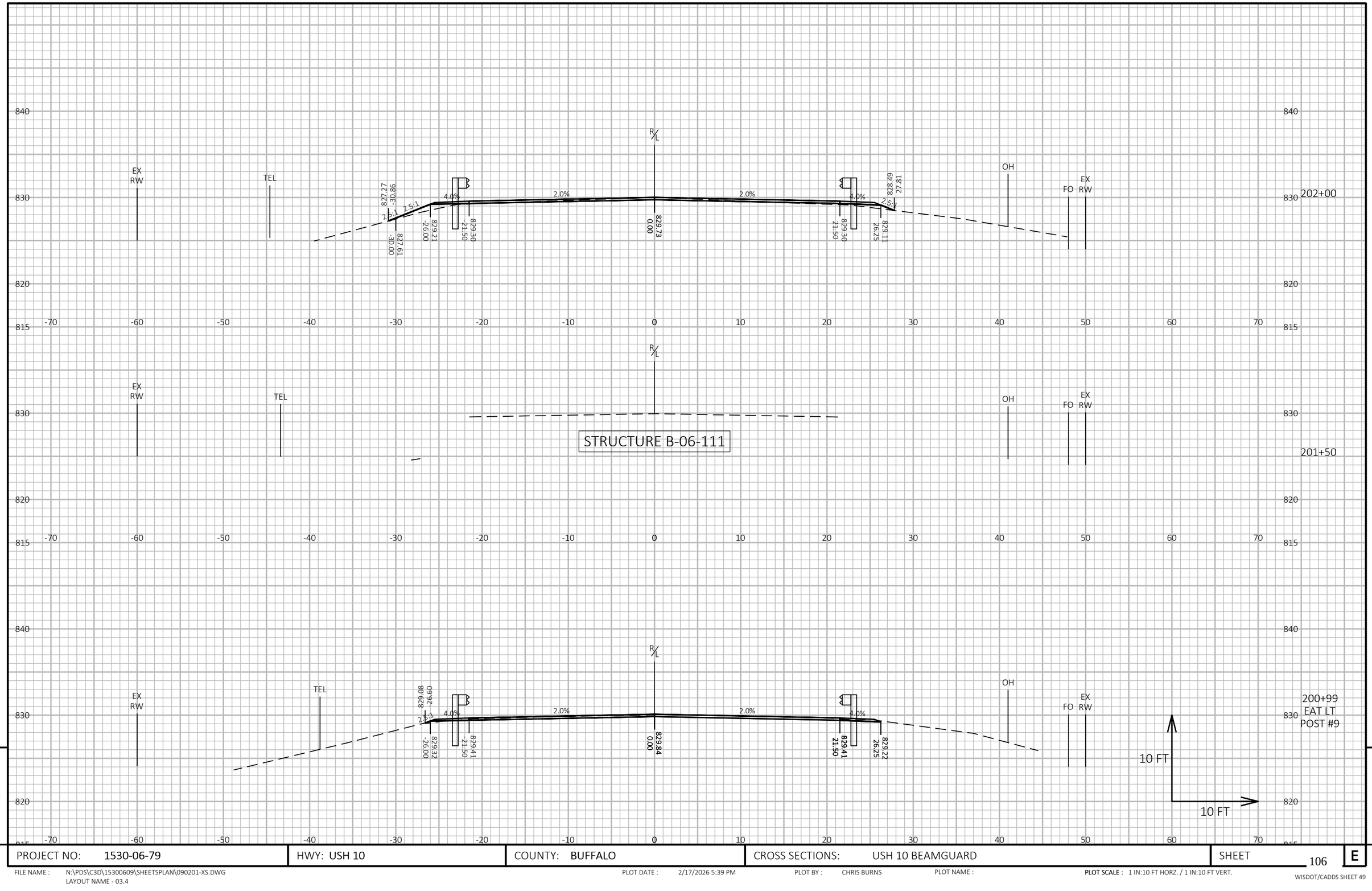
PLOT DATE : 2/17/2026 5:39 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 106	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03.4

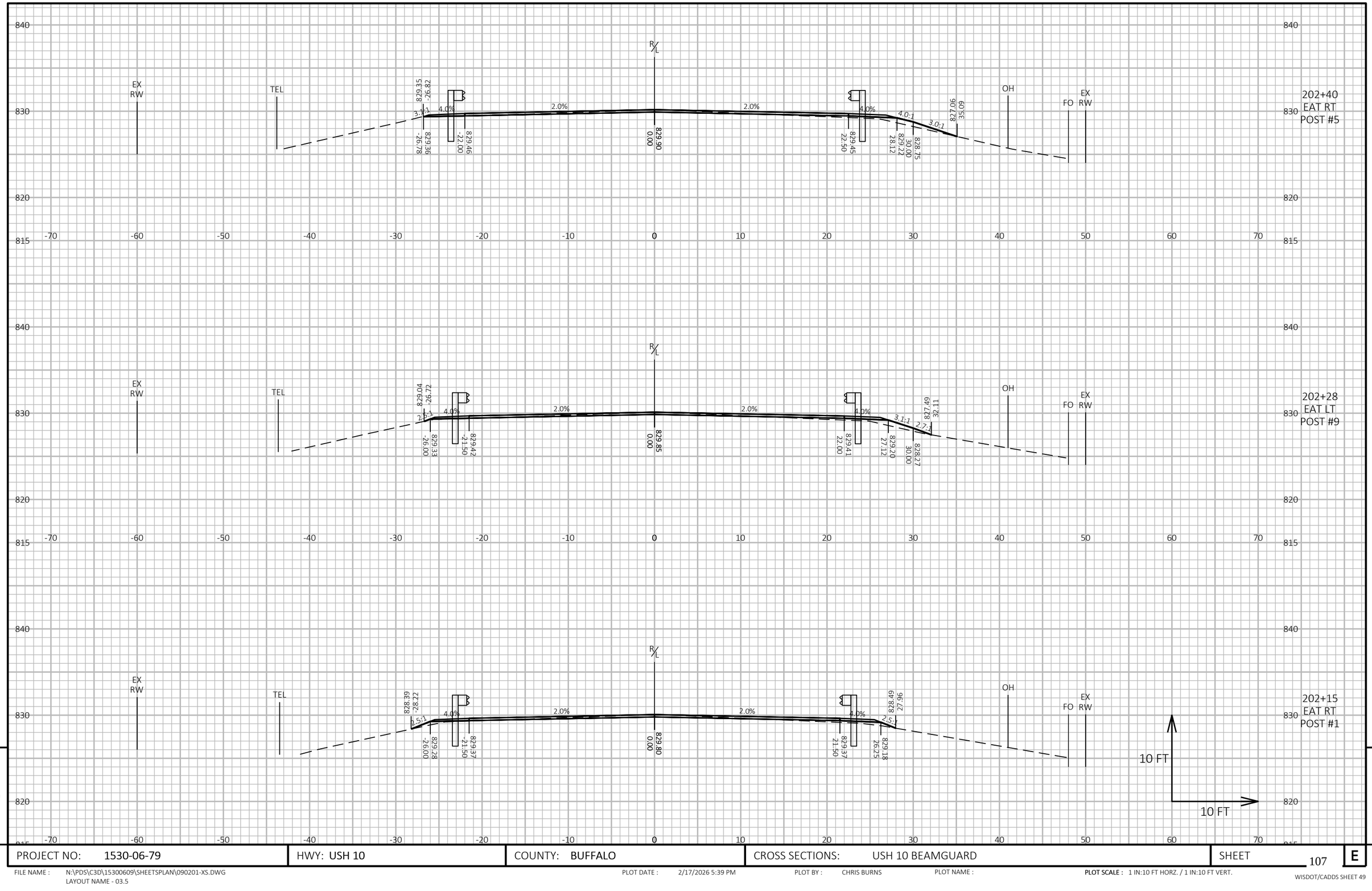
PLOT DATE : 2/17/2026 5:39 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49

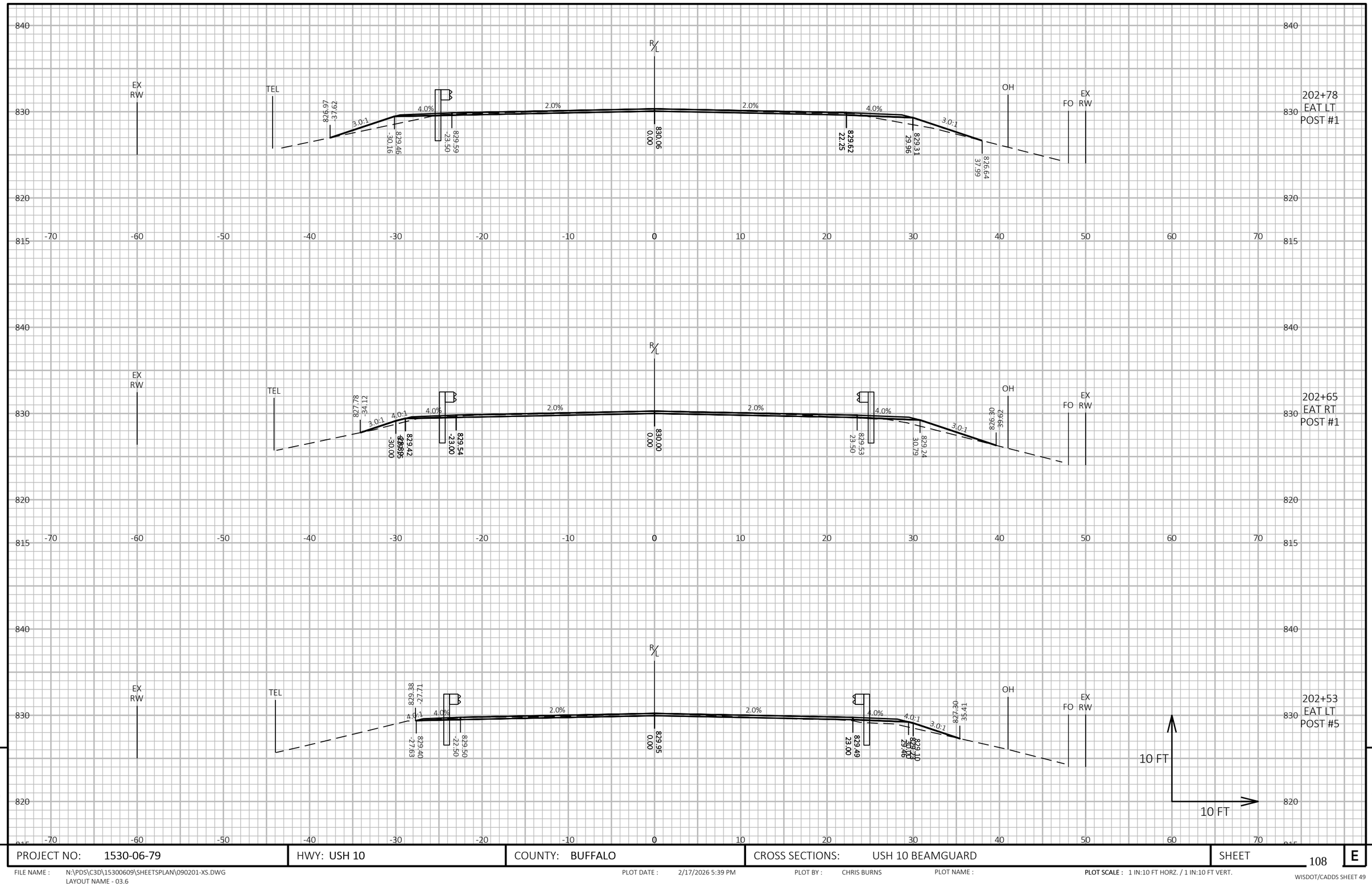


PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 107	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03.5

PLOT DATE : 2/17/2026 5:39 PM PLOT BY : CHRIS BURNS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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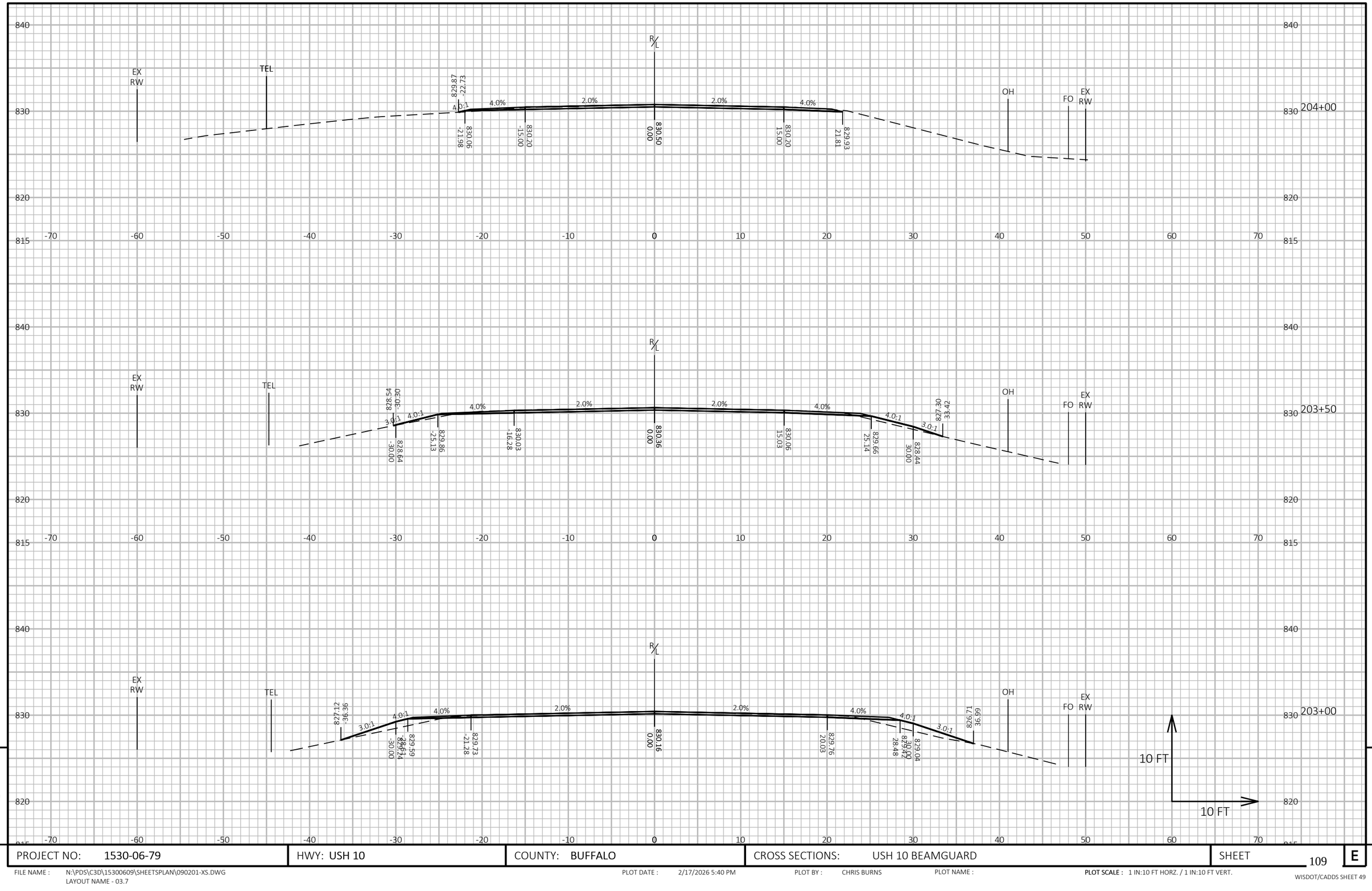
PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 108	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03.6

PLOT DATE : 2/17/2026 5:39 PM PLOT BY : CHRIS BURNS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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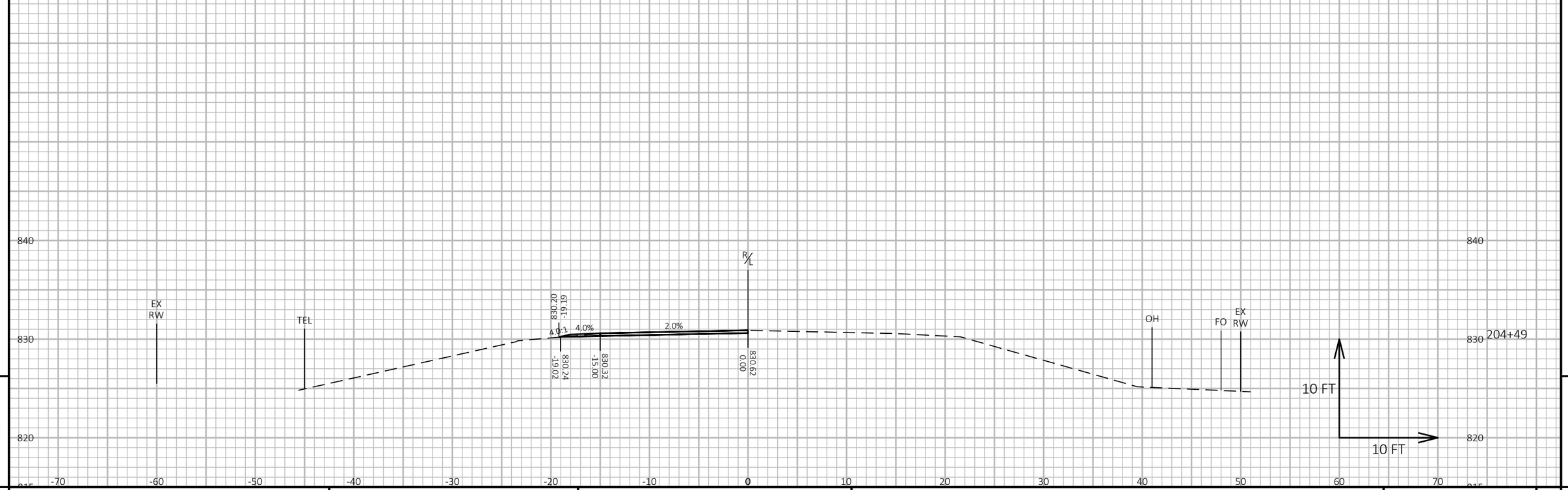
PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 109	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03.7

PLOT DATE : 2/17/2026 5:40 PM PLOT BY : CHRIS BURNS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 110	E

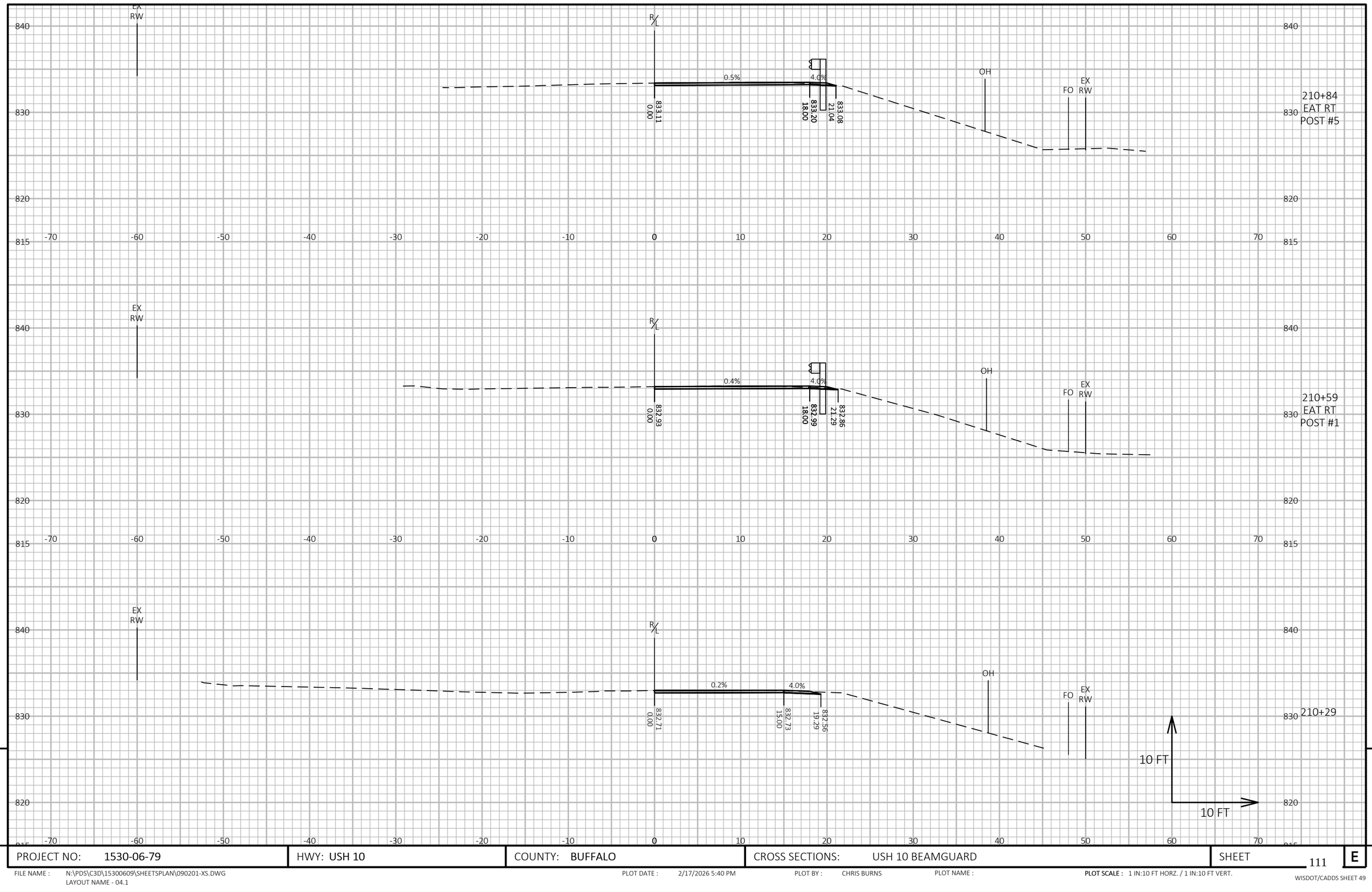
FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03.8

PLOT DATE : 2/17/2026 5:40 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 111	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04.1

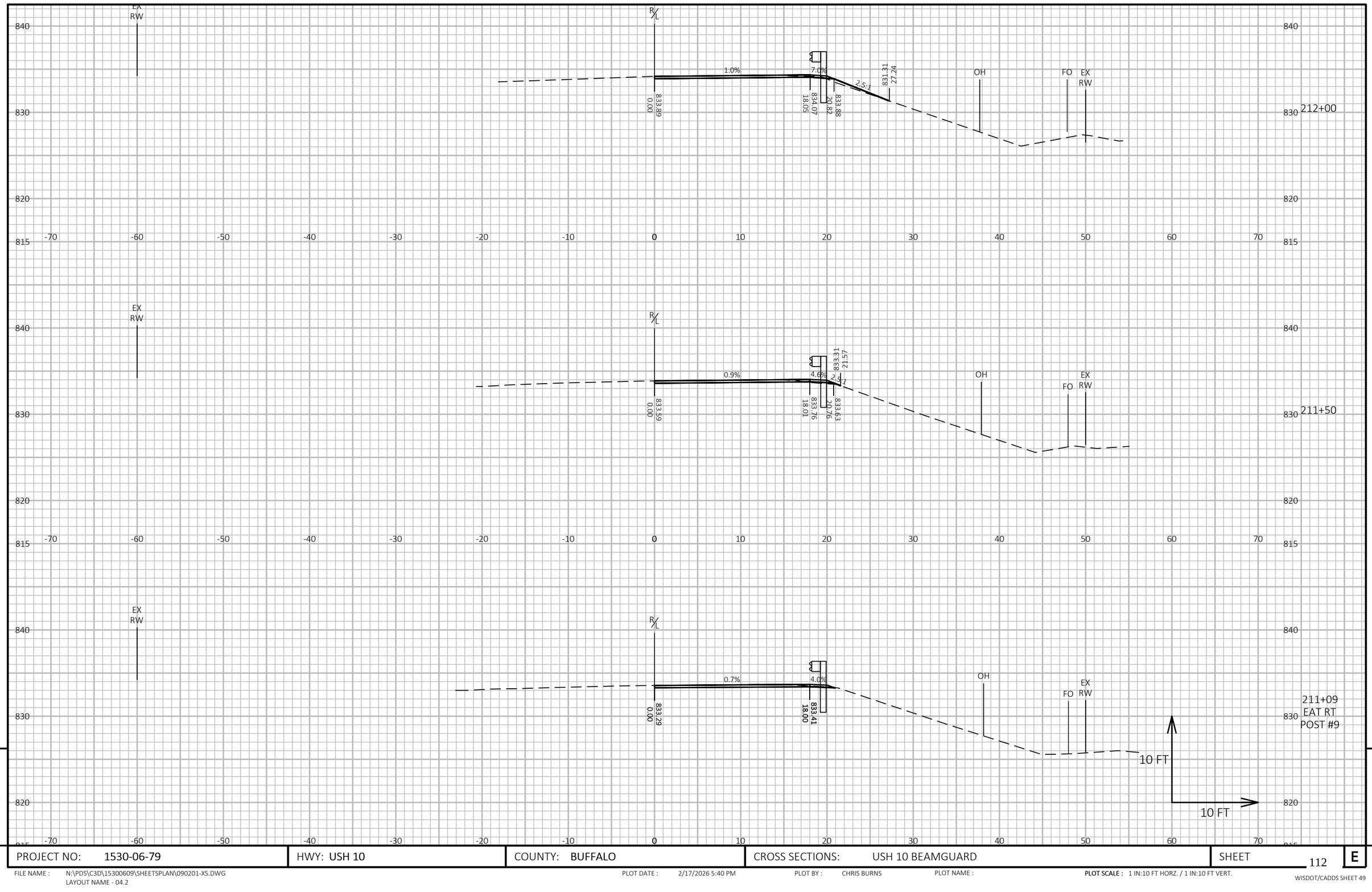
PLOT DATE : 2/17/2026 5:40 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 112	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04.2

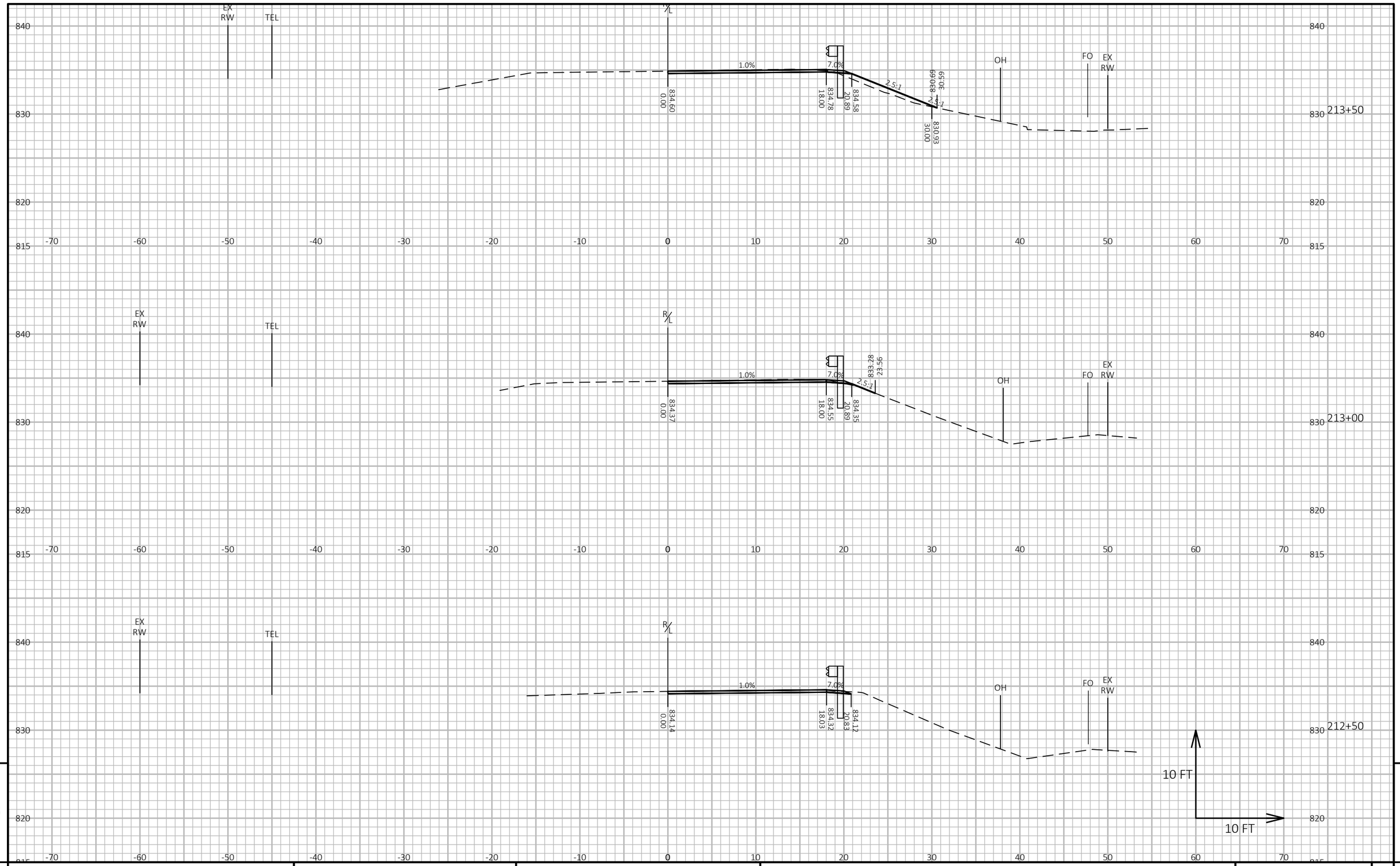
PLOT DATE : 2/17/2026 5:40 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 113	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04.3

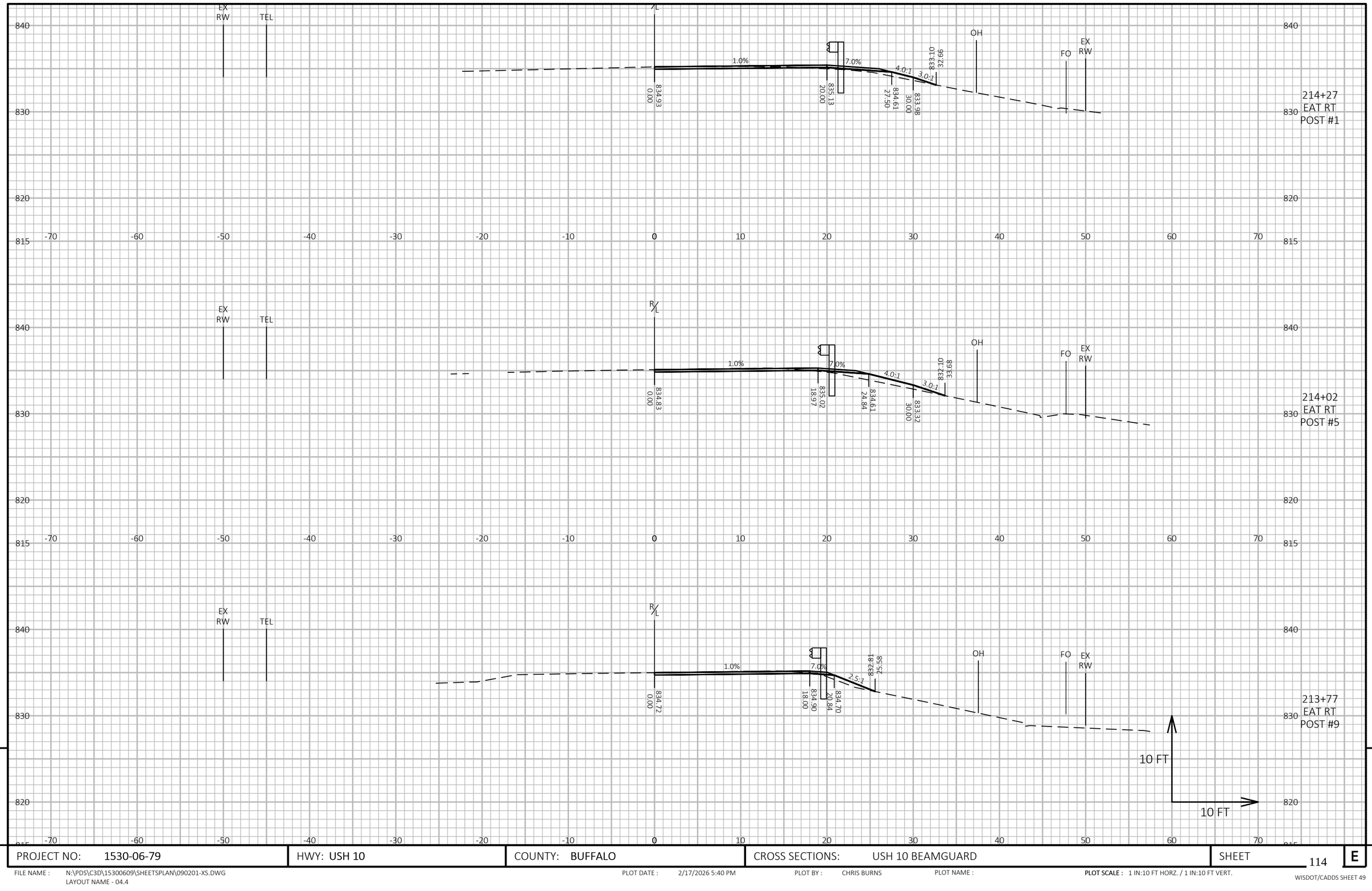
PLOT DATE : 2/17/2026 5:40 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 114	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04.4

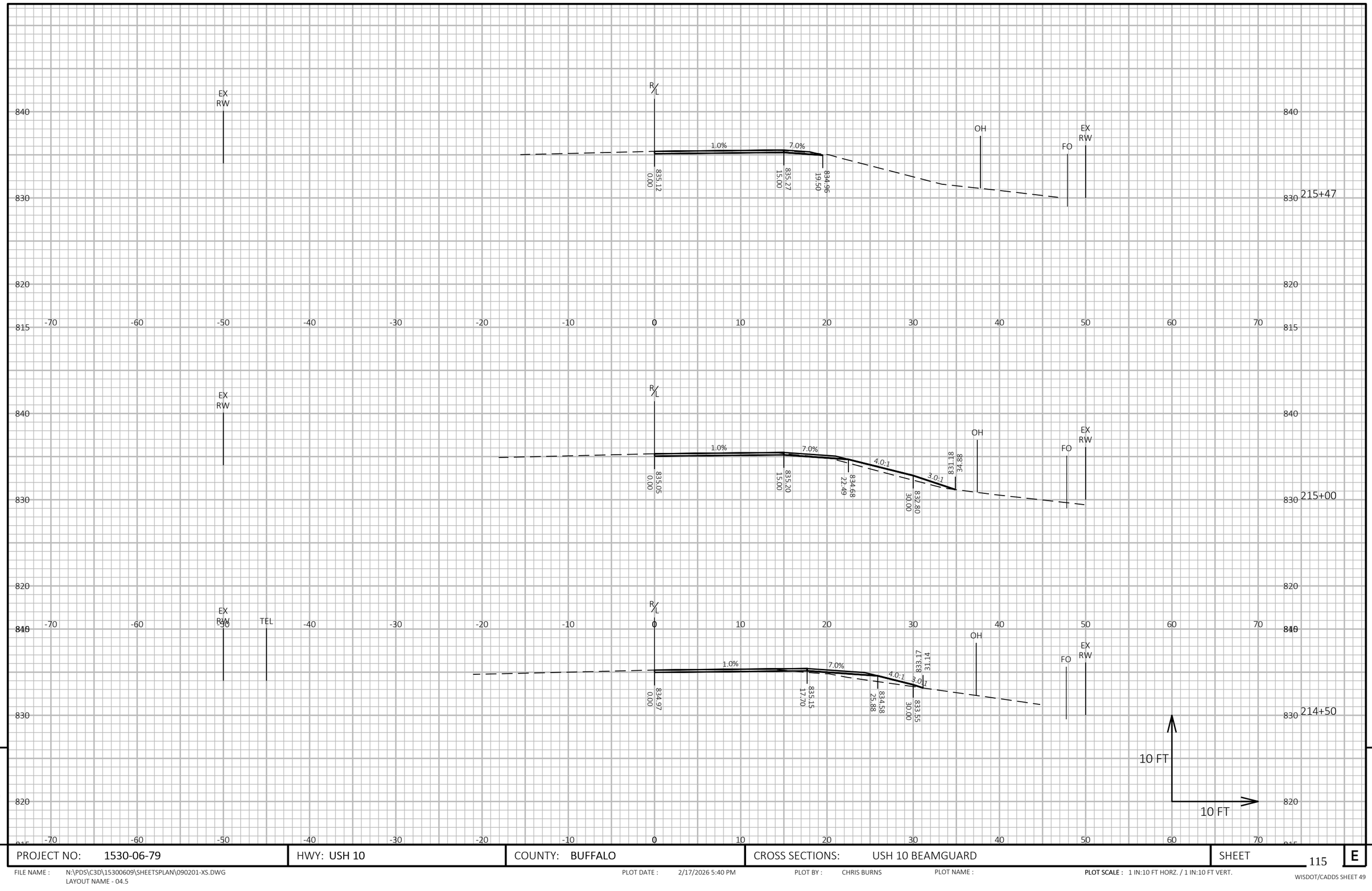
PLOT DATE : 2/17/2026 5:40 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 115	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04.5

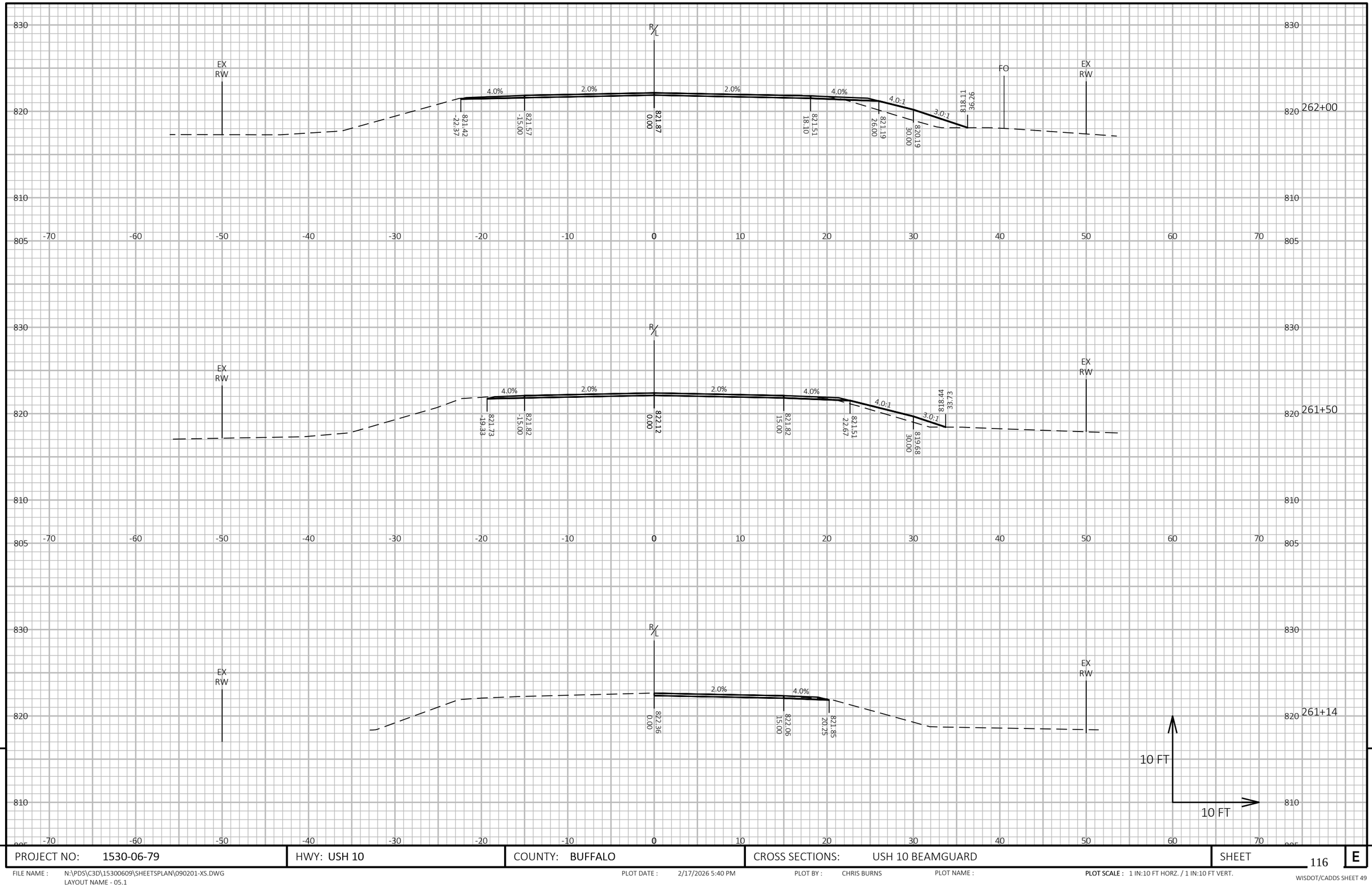
PLOT DATE : 2/17/2026 5:40 PM

PLOT BY : CHRIS BURNS

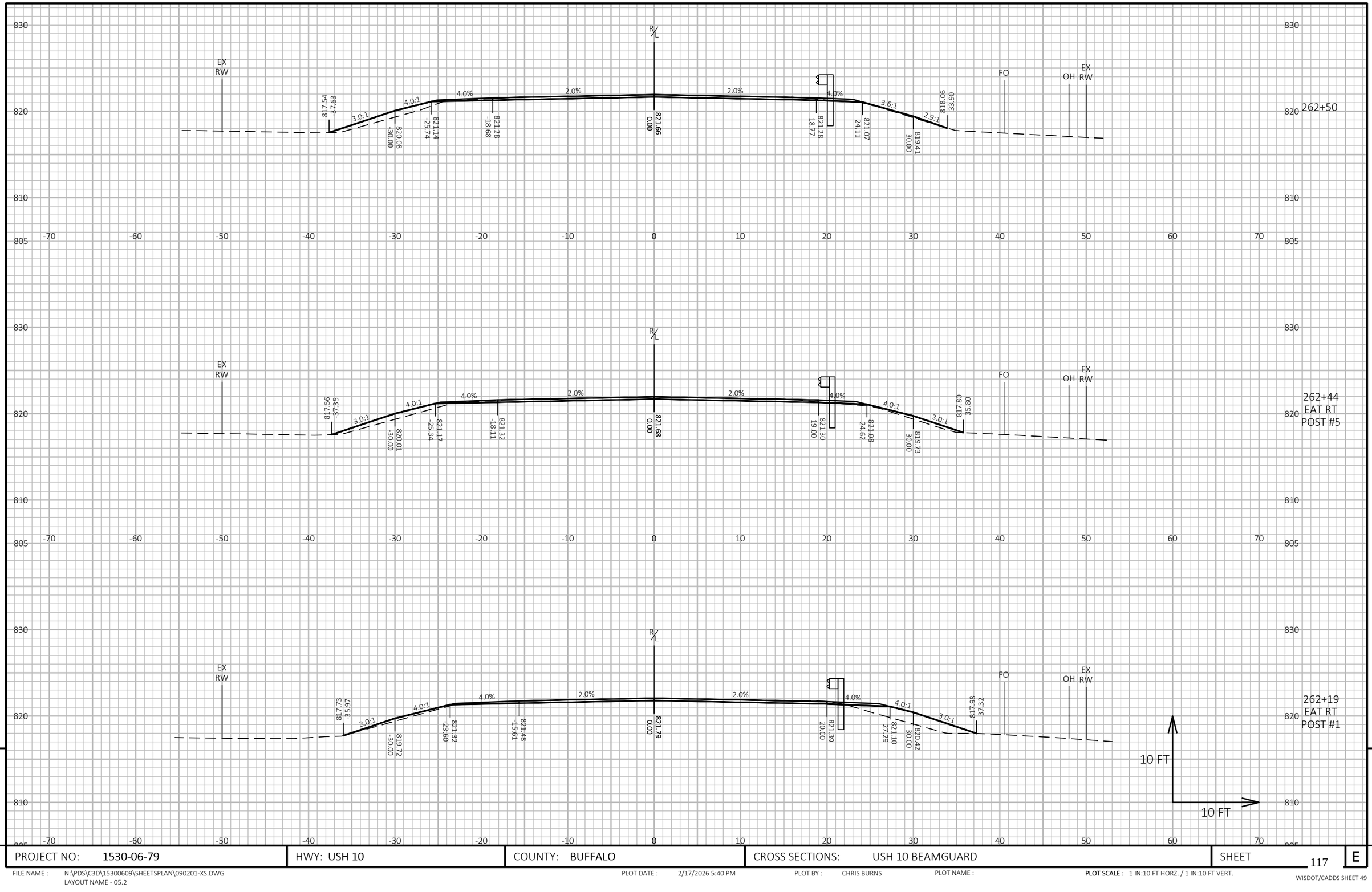
PLOT NAME :

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

WISDOT/CADDS SHEET 49



PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 116	E

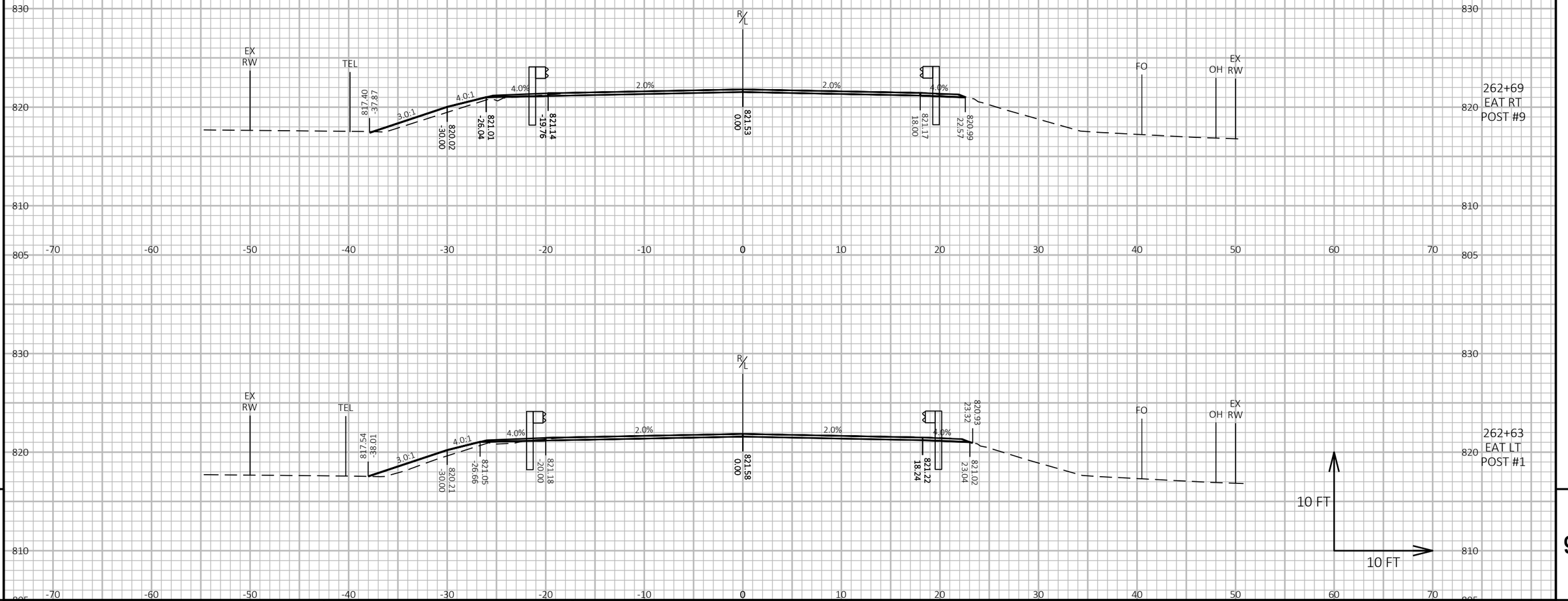


PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 117	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05.2

PLOT DATE : 2/17/2026 5:40 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 118	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05.3

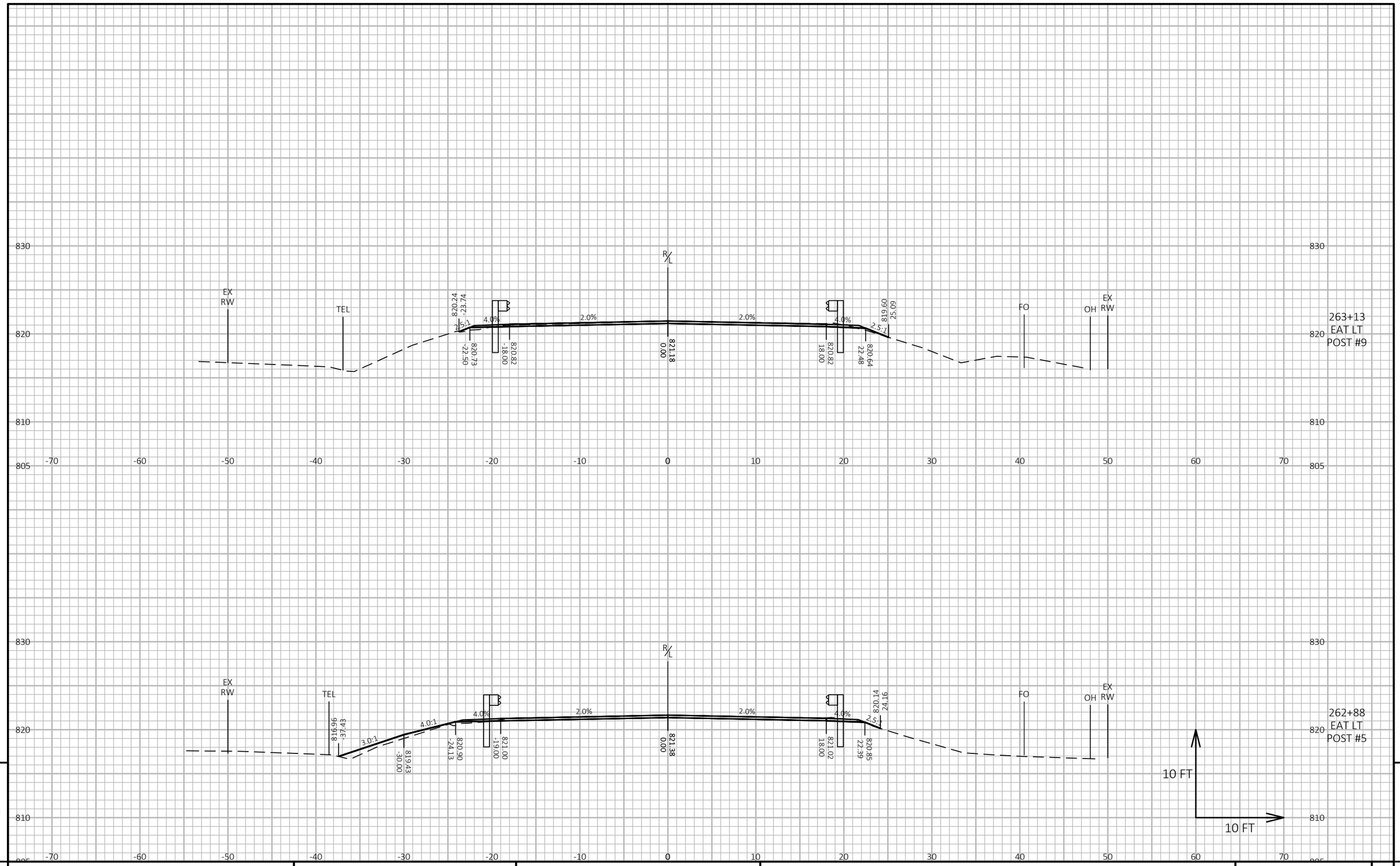
PLOT DATE : 2/17/2026 5:40 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 119	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05.4

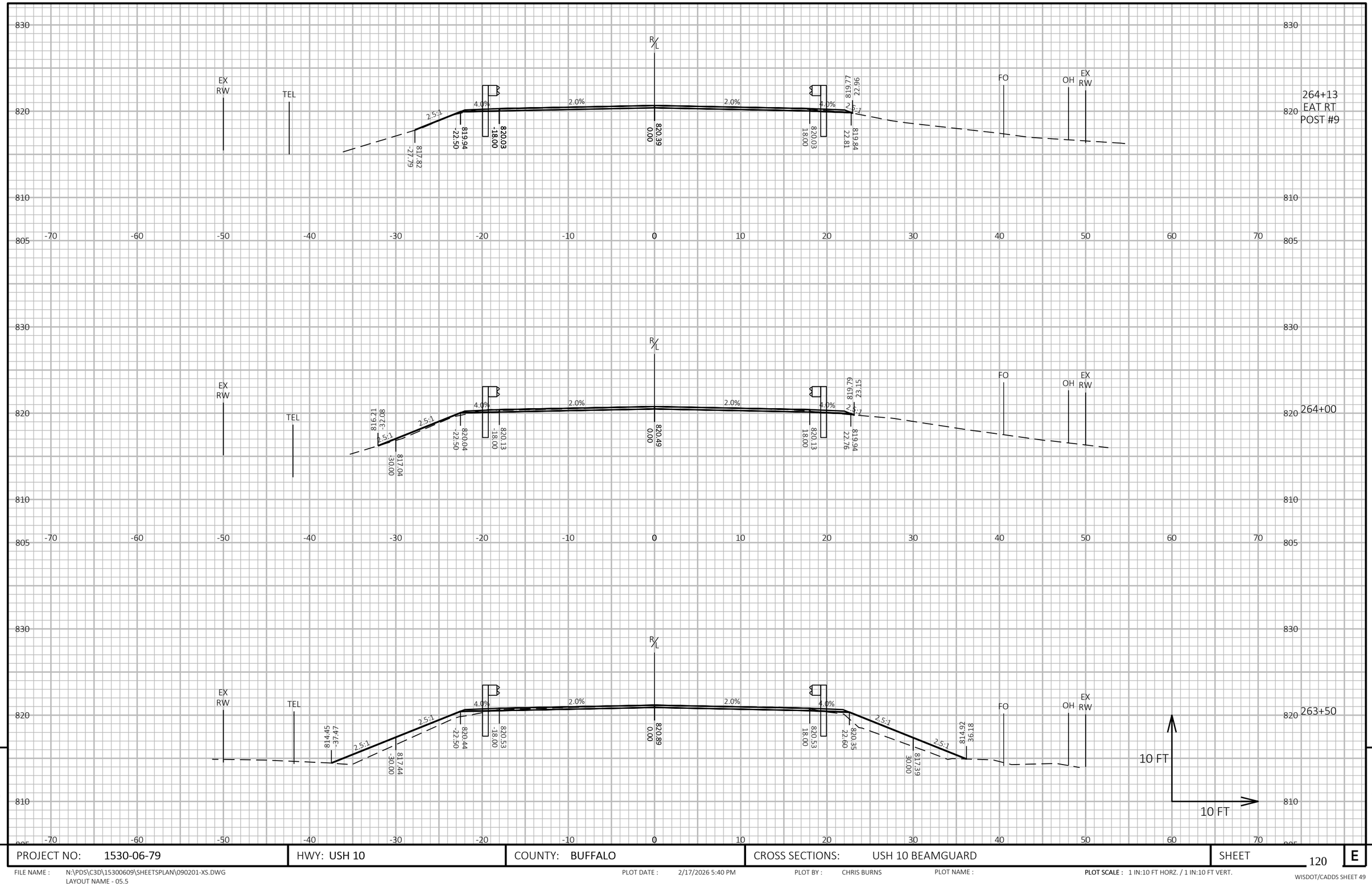
PLOT DATE : 2/17/2026 5:40 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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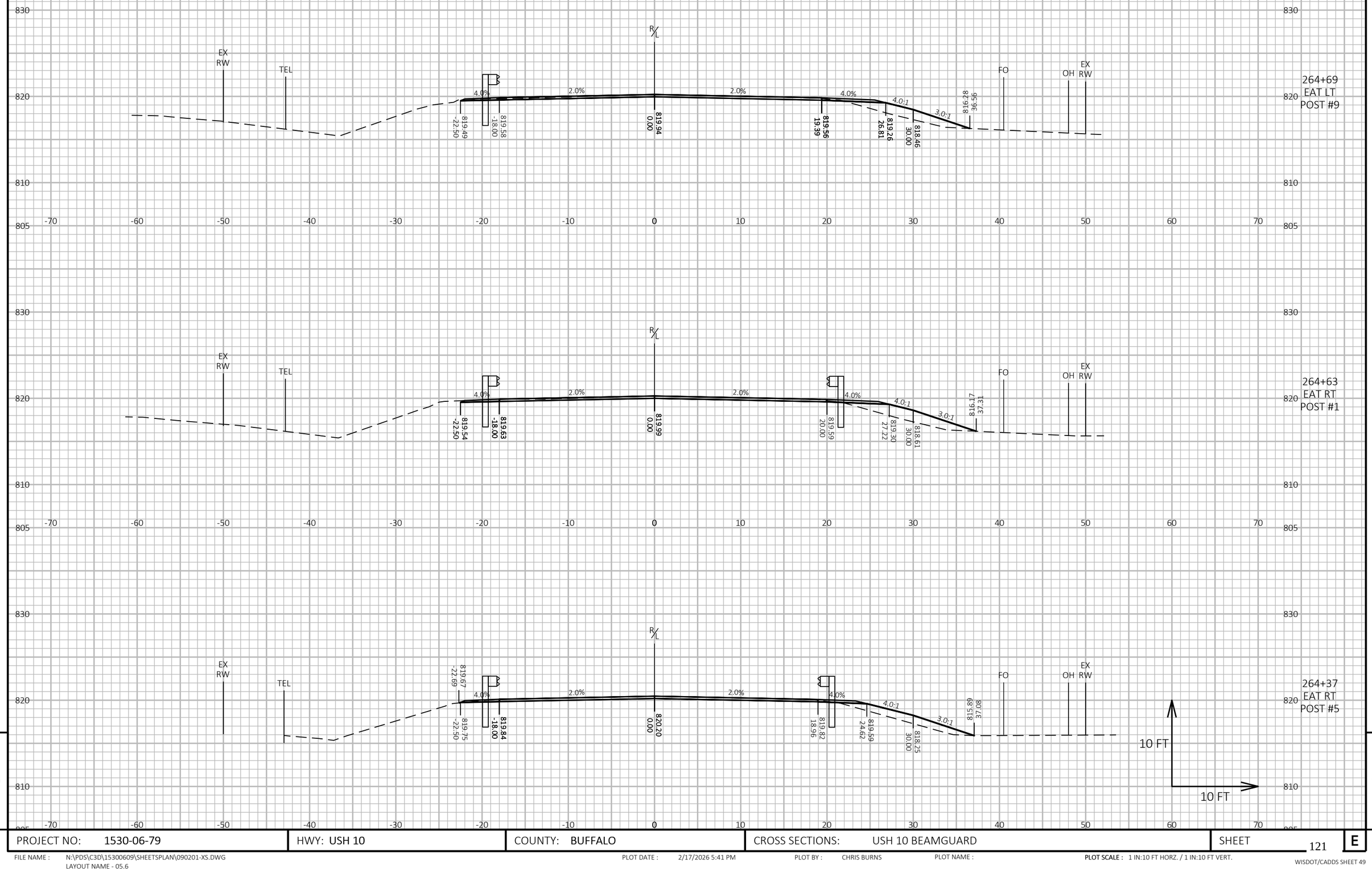
PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 120	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05.5

PLOT DATE : 2/17/2026 5:40 PM PLOT BY : CHRIS BURNS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 121	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05.6

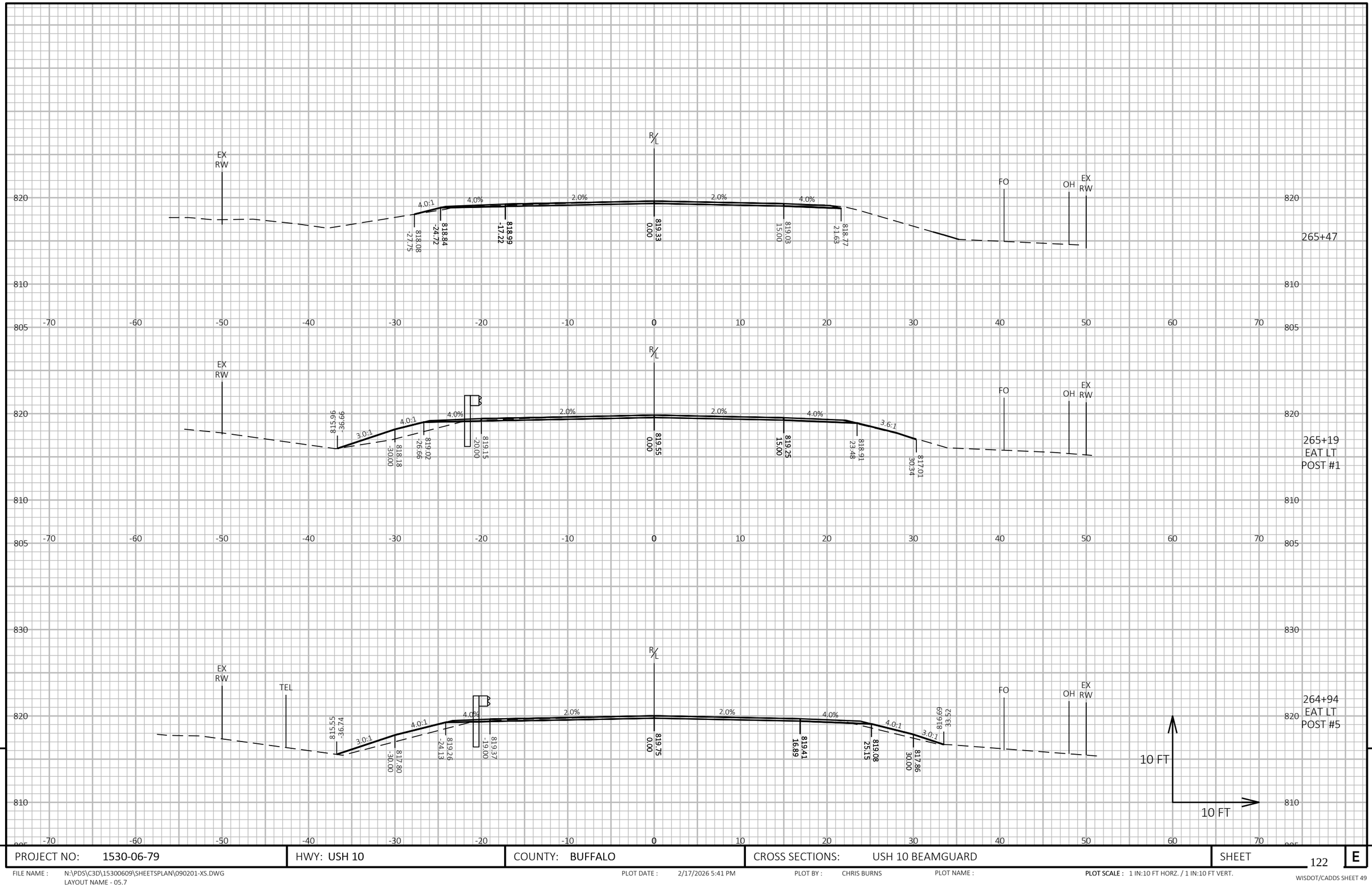
PLOT DATE : 2/17/2026 5:41 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 122	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05.7

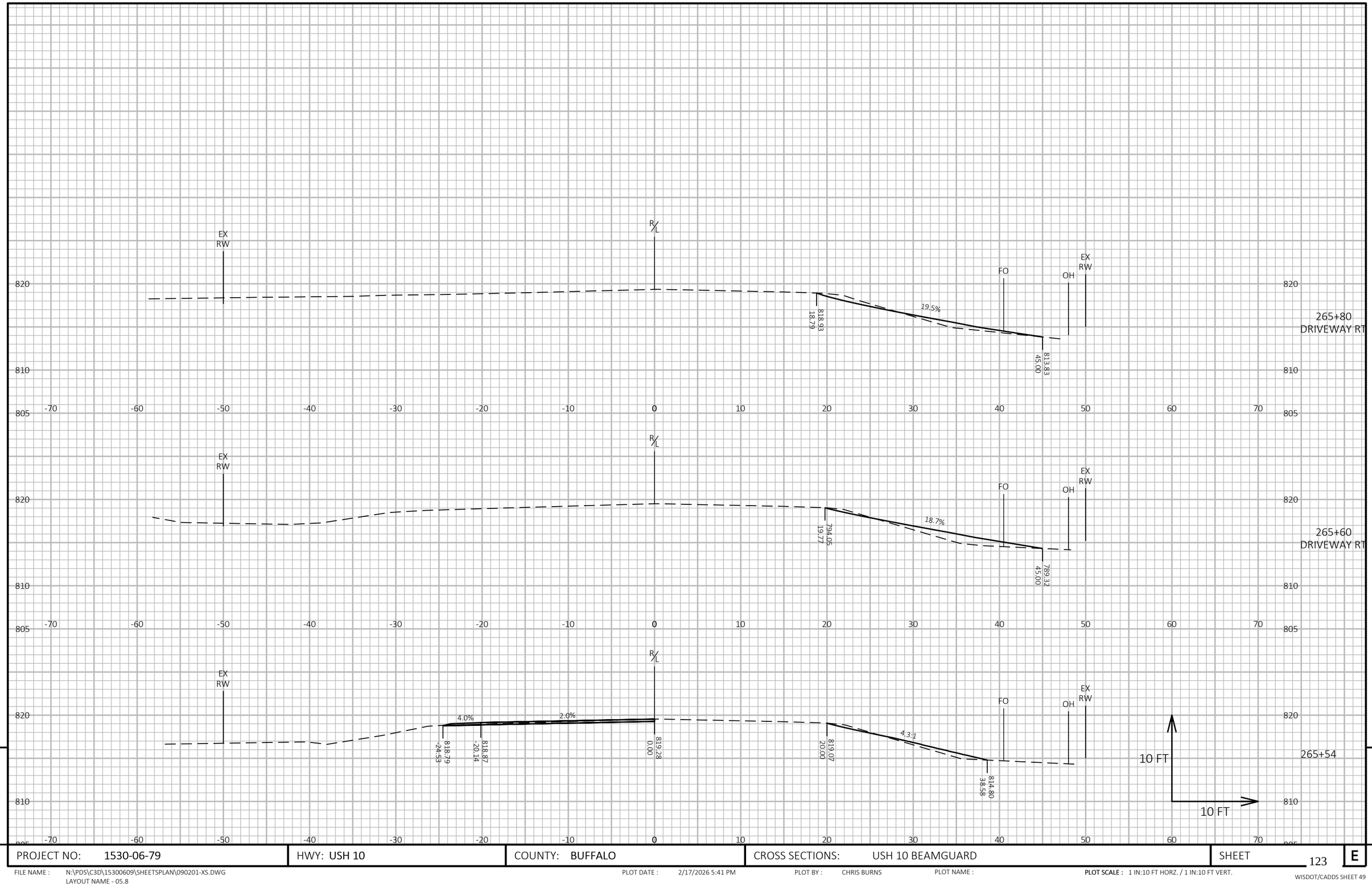
PLOT DATE : 2/17/2026 5:41 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 123	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05.8

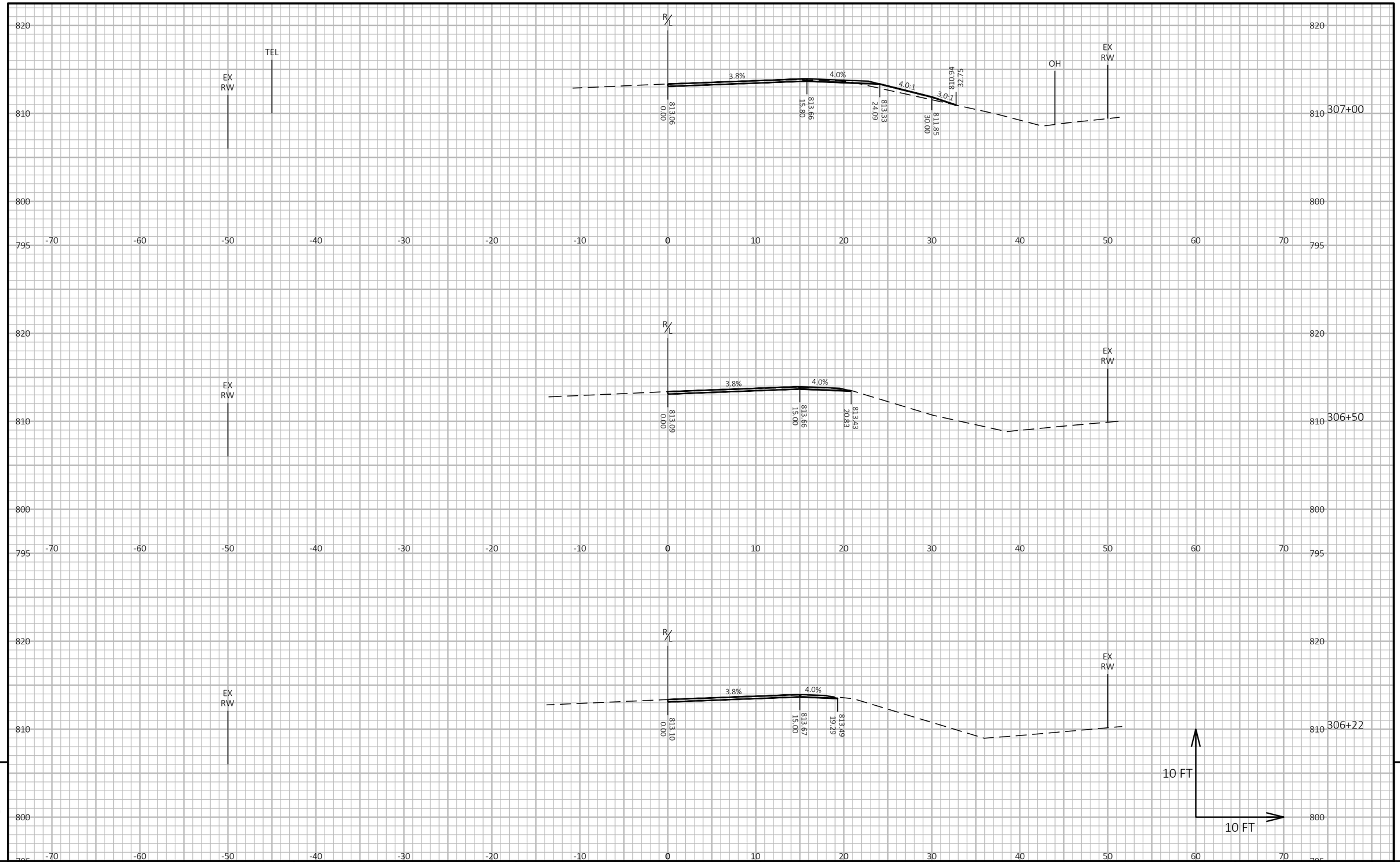
PLOT DATE : 2/17/2026 5:41 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 124	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 06.1

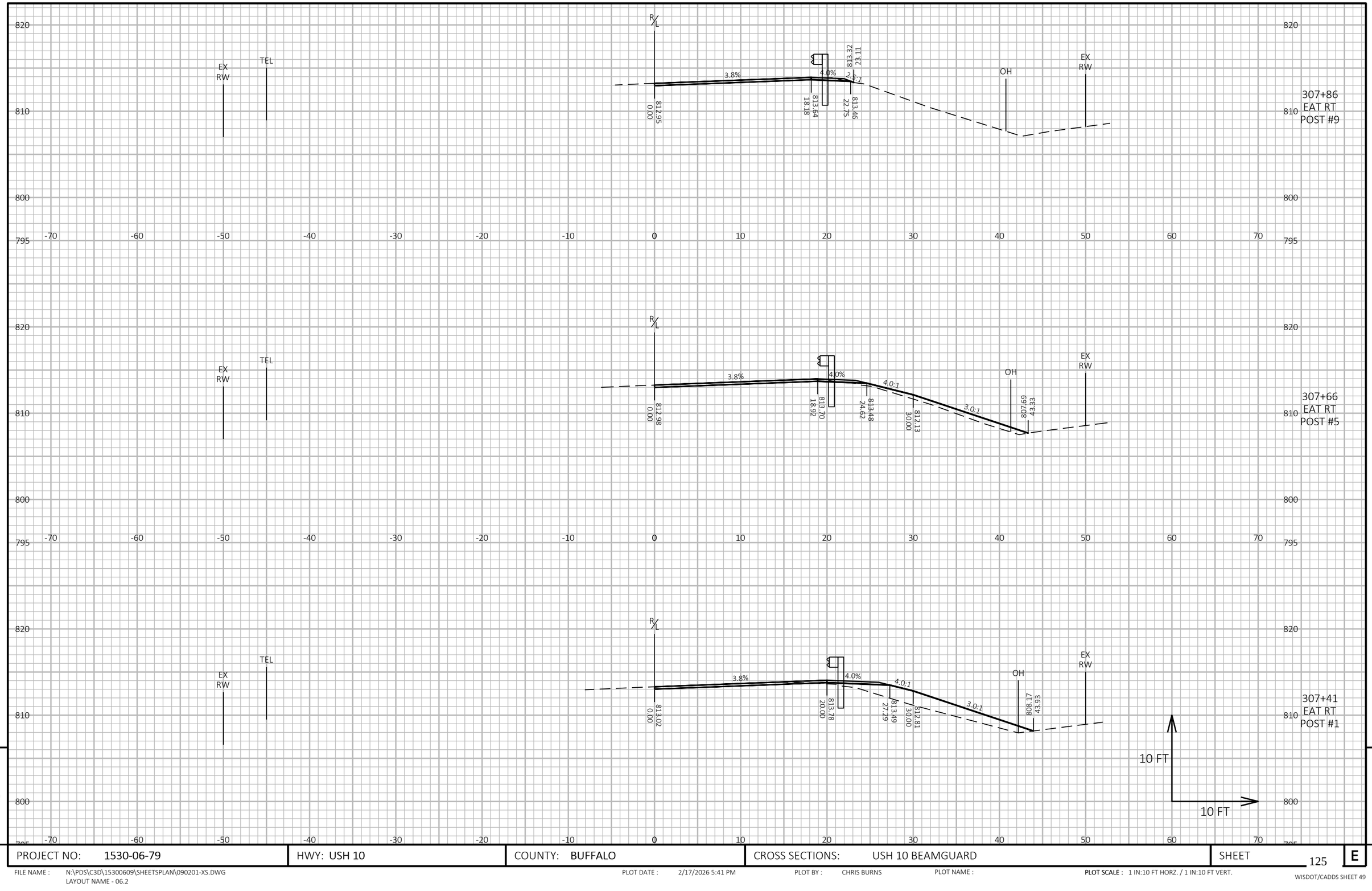
PLOT DATE : 2/17/2026 5:41 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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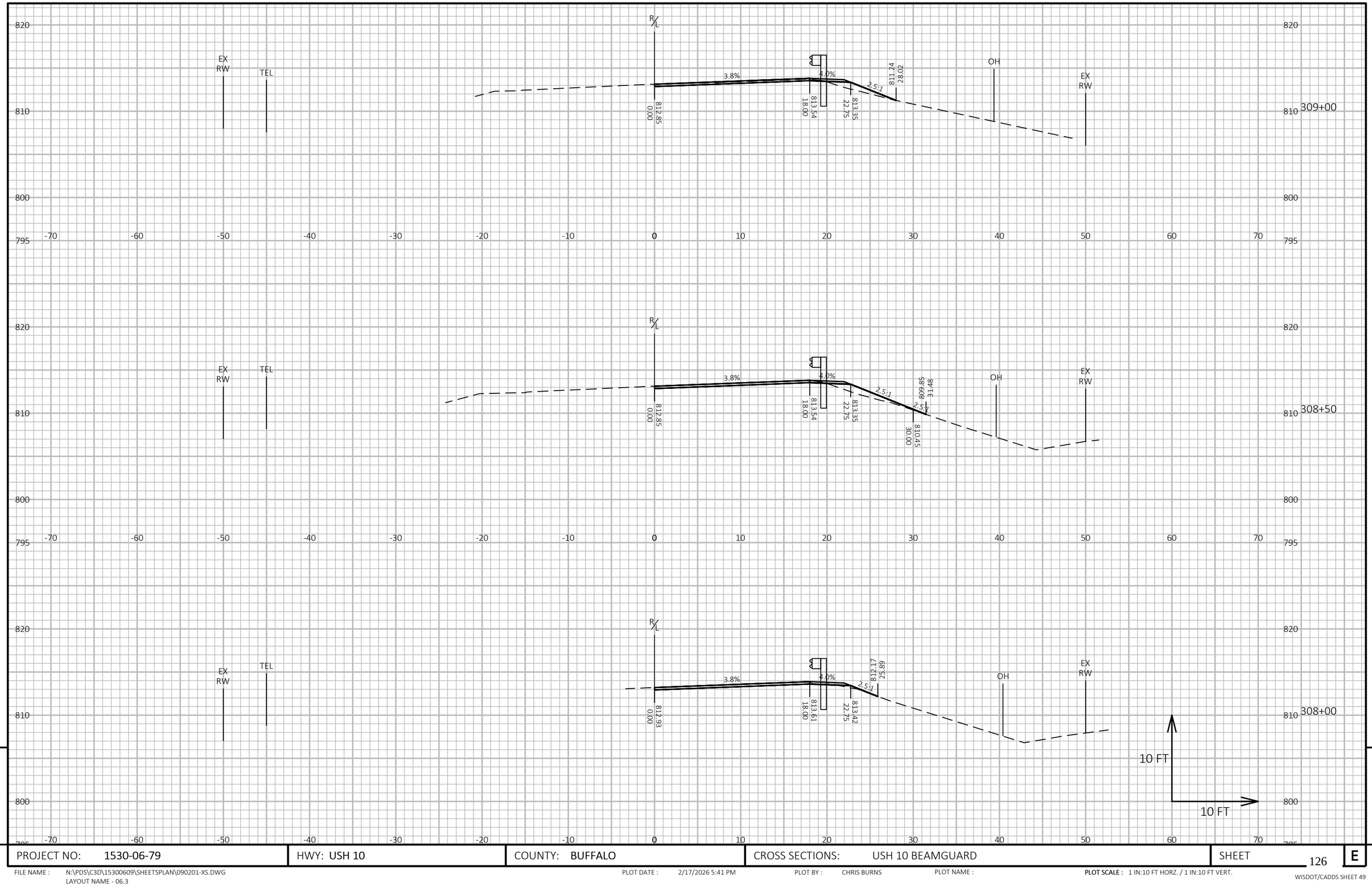
PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 125	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 06.2

PLOT DATE : 2/17/2026 5:41 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 126	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 06.3

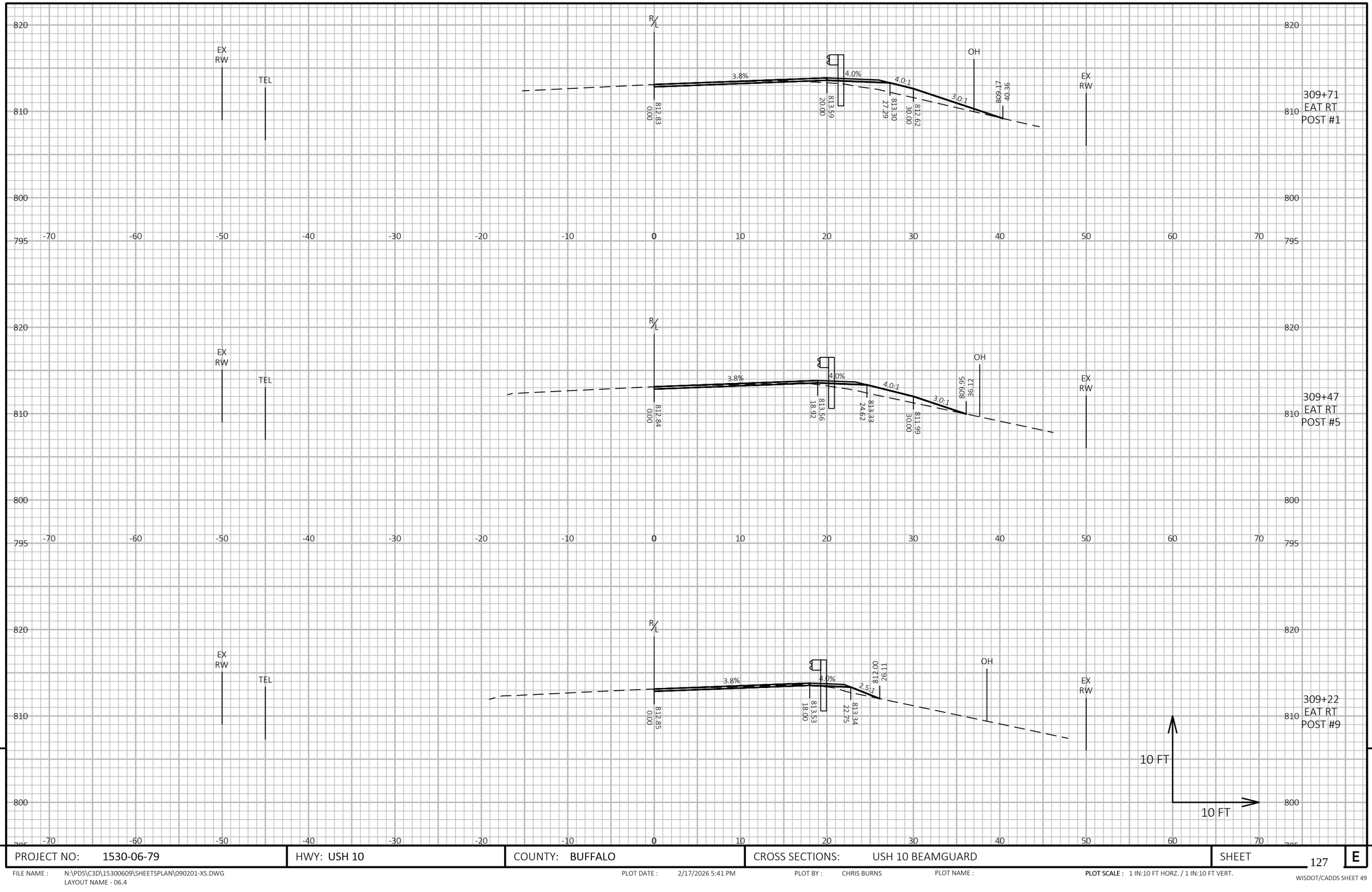
PLOT DATE : 2/17/2026 5:41 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 127	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 06.4

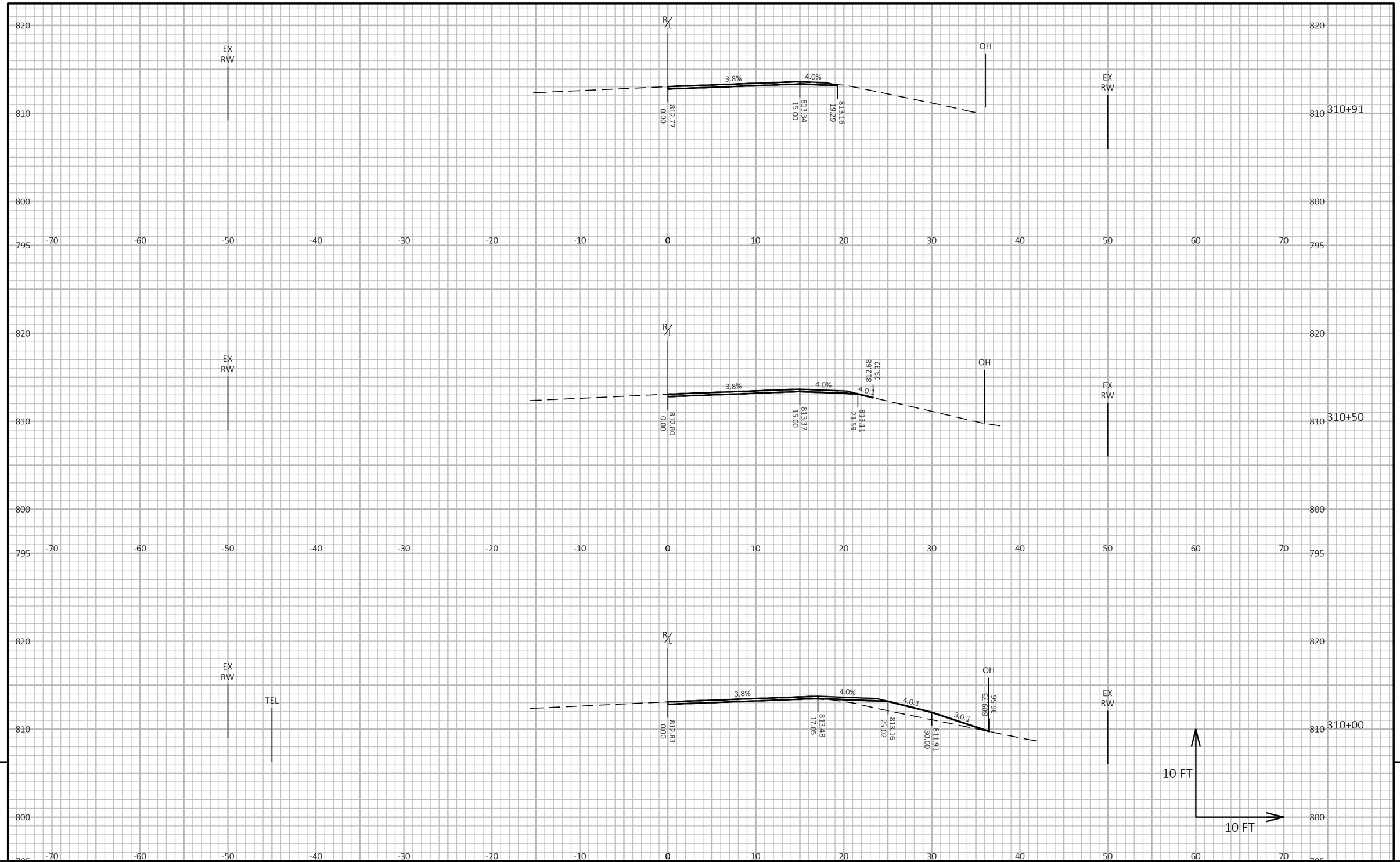
PLOT DATE : 2/17/2026 5:41 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1530-06-79	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10 BEAMGUARD	SHEET 128	E

FILE NAME : N:\PDS\C3D\15300609\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 06.5

PLOT DATE : 2/17/2026 5:41 PM

PLOT BY : CHRIS BURNS

PLOT NAME :

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

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov