MAD MAY 2021

PROJECT ID: 1161-00-67

WITH: 1161-02-67

COUNTY: COLUMBIA

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right-of-Way Plat~~
~~Section No.~~	~~5~~	~~Plan and Profile~~
Section No.	6	Standard Detail Drawings
~~Section No.~~	~~7~~	~~Sign Plates~~
Section No.	8	Structure Plans
~~Section No.~~	~~9~~	~~Computer Earthwork Data~~
~~Section No.~~	~~9~~	~~Cross Sections~~

TOTAL SHEETS = 38

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

PORTAGE - PACKWAUKEE

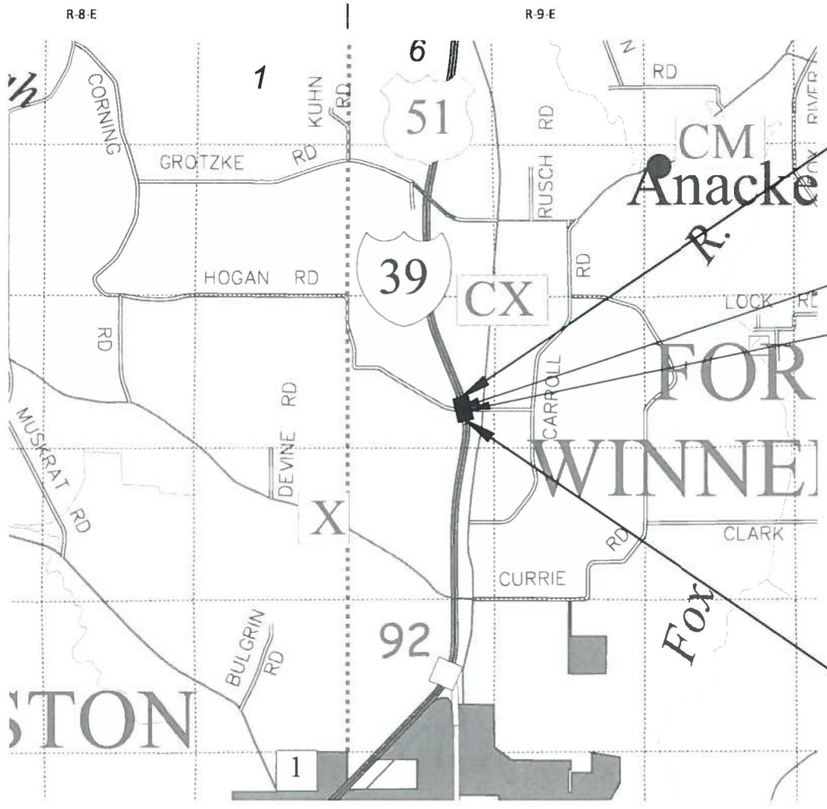
HOGAN ROAD BRGS B-11-68 & B-11-69

IH 39

COLUMBIA COUNTY

STATE PROJECT NUMBER
1161-00-67

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1161-00-67	WISC 2021299	1



END PROJECT
STA 472+35.46 RL IH 39 SB

STRUCTURE B-11-0068
STA 470+39.52 - STA 471+47.85

STRUCTURE B-11-0069
STA 470+41.18 - STA 471+55.49

BEGIN PROJECT
STA 469+25.78 RL IH 39 NB
Y = 416845.66
X = 535458.23

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.059

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), COLUMBIA 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 18.

DESIGN DESIGNATION

A.A.D.T.	2021	=	15,540
A.A.D.T.	2041	=	15,540
D.H.V.		=	10.7
D.D.		=	58/42
T.		=	16.7%
DESIGN SPEED		=	75 MPH
ESALS		=	N/A

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'FB')
- 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

ORIGINAL PLANS PREPARED BY

benesch

Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1316 Job No. 20278.00

WISCONSIN TIMOTHY A. WATT E-43069 BIG BEND, WI PROFESSIONAL ENGINEER

DATE 01/15/2021 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

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

APPROVED FOR THE DEPARTMENT

DATE: Gregory Payne Digitally signed by Gregory Payne Date: 2021.01.19 11:16:48 -06'00' (Signature)

E

FILE NAME : Y:\MILWAUKEE\202005\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610067 HOGAN RD BRIDGES\010101-TI.DWG PLOT DATE : 1/12/2021 9:55 AM PLOT BY : WATT, TIMOTHY PLOT NAME :

GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPALITY OR PUBLIC AGENCY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
2. ALL ELEVATIONS AND OFFSETS SHOWN IN THE PLAN SHALL BE VERIFIED IN THE FIELD.
3. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

OTHER AGENCIES

WISDOT

SOUTHWEST REGION
GREGORY PAYNE
2101 WRIGHT STREET
MADISON, WI 53704
PHONE: (608) 242-8058
EMAIL: GREGORY.PAYNE@DOT.WI.GOV

DESIGN CONTACT

ALFRED BENESCH
AMANDA ZACHARIAS
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
PHONE: (414) 308-1310
EMAIL: AZACHARIAS@BENESCH.COM

DNR CONTACT

DNR SOUTHERN REGION
ERIC HEGGELUND
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: (608) 228-7927
EMAIL: ERIC.HEGGELUND@WISCONSIN.GOV

UTILITIES

COMMUNICATIONS

FRONTIER COMMUNICATIONS OF WI LLC
JERRY MOORE
2222 WEST WISCONSIN ST
PORTAGE, WI 53901
PHONE: (608) 742-9507
EMAIL: JERALD.R.MOORE@FTR.COM

COMMUNICATIONS

CHARTER COMMUNICATIONS
LUKAS LACROSSE
2701 DANIELS ST
MADISON, WI 53718
PHONE: (608) 709-1562 X41562
EMAIL: LUKAS.LACROSSE@CHARTER.COM

LIST OF STANDARD ABBREVIATIONS

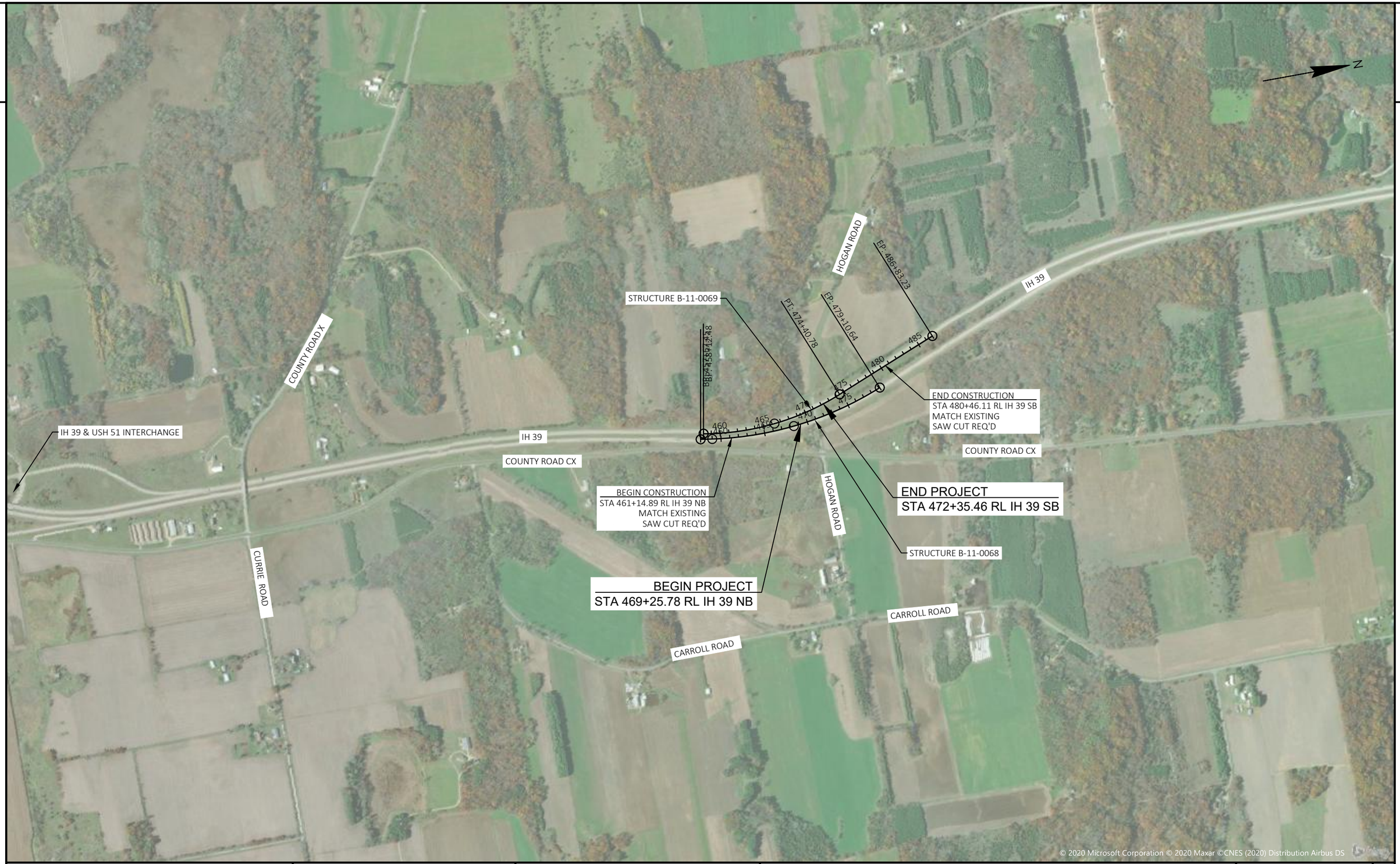
ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ASPH	ASPHALT
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BF	BACK FACE
BL	BASE LINE
BM	BENCH MARK
CB	CATCH BASIN
C/L	CENTERLINE
CC	CENTER TO CENTER
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
C&G	CURB AND GUTTER
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
ELEV	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FF	FACE TO FACE
FE	FIELD ENTRANCE
FG	FINISHED GRADE
FL	FLOW LINE
FT	FOOT
FTMS	FREEWAY TRAFFIC MANAGEMENT SYSTEM
HES	HIGH EARLY STRENGTH
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE
JT	JOINT
JCT	JUNCTION
LT	LEFT
L	LENGTH OF CURVE
LHF	LEFT-HAND FORWARD
LF	LINEAR FOOT
L	LITER
LS	LUMP SUM
MH	MANHOLE
MB	MESSAGE BOARD
MLB	MAILBOX
ML	MATCH LINE
NC	NORMAL CROWN
N	NORTH
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
NO	NUMBER
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PERM	PERMANENT
PLE	PERMANENT LIMITED EASEMENT
PT	POINT
PVC	POLYVINYL CHLORIDE
PCC	PORTLAND CEMENT CONCRETE
PE	PRIVATE ENTRANCE
PROJ	PROJECT
PL	PROPERTY LINE
R	RADIUS
R/L	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQD	REQUIRED
RT	RIGHT
RHF	RIGHT HAND FORWARD
R/W	RIGHT-OF-WAY
RD	ROAD
RDWY	ROADWAY
SALV	SALVAGED
SSS	SANITARY AND STORM SEWER
SAN S	SANITARY SEWER
SEC	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SP	SPECIAL
SPECS	SPECIFICATIONS
SQ	SQUARE
SF	SQUARE FEET
SY	SQUARE YARD
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
STR	STRUCTURE OR STRUCTURAL
SL	SURVEY LINE
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
UG	UNDERGROUND
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
W	WATER
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
PLAN DETAILS
TRAFFIC CONTROL

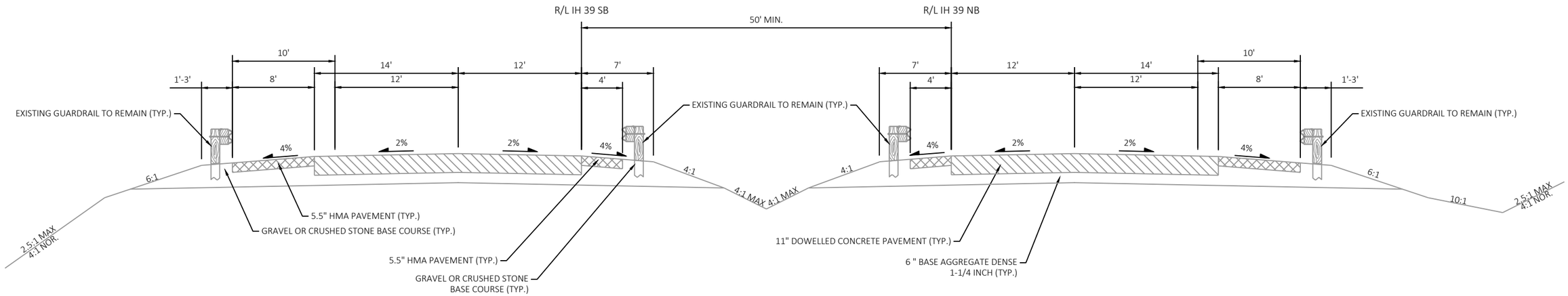
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

2



PROJECT NO: 1161-00-67	HWY: IH 39	COUNTY: COLUMBIA	PROJECT OVERVIEW	SHEET 3	E

2



EXISTING TYPICAL SECTION

IH 39

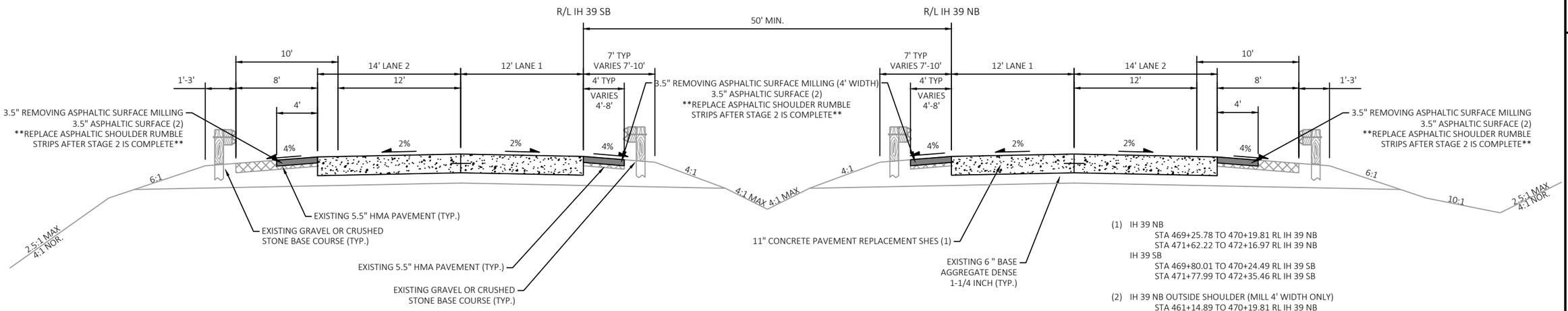
LEGEND

- CONCRETE PAVEMENT
- HMA PAVEMENT

PROJECT NO: 1161-00-67	HWY: IH 39	COUNTY: COLUMBIA	TYPICAL SECTION	SHEET 4	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610067-HOGAN RD BRIDGES\020301_TS.DWG
LAYOUT NAME - 01
PLOT DATE : 2/1/2021 1:51 PM
PLOT BY : WATT, TIMOTHY
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

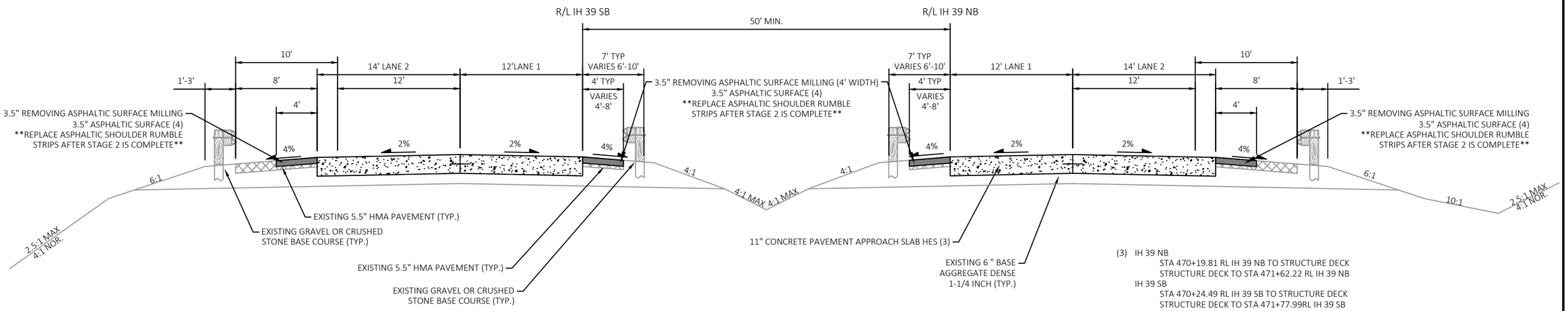
2



FINISHED TYPICAL SECTION
IH 39

(1) IH 39 NB
STA 469+25.78 TO 470+19.81 RL IH 39 NB
STA 471+62.22 TO 472+16.97 RL IH 39 NB
IH 39 SB
STA 469+80.01 TO 470+24.49 RL IH 39 SB
STA 471+77.99 TO 472+35.46 RL IH 39 SB

(2) IH 39 NB OUTSIDE SHOULDER (MILL 4' WIDTH ONLY)
STA 461+14.89 TO 470+19.81 RL IH 39 NB
STA 471+62.22 TO 475+27.09 RL IH 39 NB
IH 39 NB INSIDE SHOULDER (MILL 4' WIDTH ONLY)
STA 461+14.89 TO 470+19.81 RL IH 39 NB
STA 471+68.03 TO 475+27.09 RL IH 39 NB
IH 39 SB OUTSIDE SHOULDER (MILL 4' WIDTH ONLY)
STA 466+69.45 TO 470+24.49 RL IH 39 SB
STA 471+84.33 TO 480+46.11 RL IH 39 SB
IH 39 SB INSIDE SHOULDER (MILL 4' WIDTH ONLY)
STA 466+69.45 TO 470+24.49 RL IH 39 SB
STA 471+77.99 TO 480+46.11 RL IH 39 SB



FINISHED TYPICAL SECTION
IH 39

(3) IH 39 NB
STA 470+19.81 RL IH 39 NB TO STRUCTURE DECK
STRUCTURE DECK TO STA 471+62.22 RL IH 39 NB
IH 39 SB
STA 470+24.49 RL IH 39 SB TO STRUCTURE DECK
STRUCTURE DECK TO STA 471+77.99RL IH 39 SB

(4) IH 39 NB OUTSIDE SHOULDER (MILL 4' WIDTH ONLY)
STA 470+19.81 TO 470+24.07 RL IH 39 NB
STA 471+50.48 TO 471+62.22 RL IH 39 NB
IH 39 NB INSIDE SHOULDER (MILL 4' WIDTH ONLY)
STA 470+19.81 TO 470+30.01 RL IH 39 NB
IH 39 SB OUTSIDE SHOULDER (MILL 4' WIDTH ONLY)
STA 470+24.49 TO 470+38.67 RL IH 39 SB
IH 39 SB INSIDE SHOULDER (MILL 4' WIDTH ONLY)
STA 470+24.49 TO 470+28.77 RL IH 39 SB
STA 471+62.83 TO 471+77.99 RL IH 39 SB

PROJECT NO: 1161-00-67	HWY: IH 39	COUNTY: COLUMBIA	TYPICAL SECTION	SHEET 5	E

2

2

N

MATCH LINE 463+97.45

IH 39 SB

IH 39 SB

459+00

460+00

461+00

462+00

463+00

IH 39 NB

PM1

459+00

460+00

461+00

462+00

463+00

4'

26'

4'

IH 39 NB

A-1

PM3

BEGIN CONSTRUCTION
STA 461+14.89 RL IH 39 NB
MATCH EXISTING
SAW CUT REQ'D

COUNTY ROAD CX

A-1	3.5" REMOVING ASPHALTIC SURFACE MILLING, PLACE 3.5" ASPHALTIC SURFACE
C-1	11" CONCRETE PAVEMENT REPLACEMENT SHES
C-2	11" CONCRETE PAVEMENT APPROACH SLAB HES
PM1	MARKING LINE EPOXY 4-INCH (YELLOW)
PM2	MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE SKIPS)
PM3	MARKING LINE EPOXY 4-INCH (WHITE)

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2

N

MATCH LINE 469+75

MATCH LINE 463+97.45

STA 466+69.45 RL IH 39 SB
MATCH EXISTING
SAW CUT REQ'D

BEGIN PROJECT
STA 469+25.78 RL IH 39 NB
MATCH EXISTING
SAW CUT REQ'D

IH 39 SB

IH 39 NB

4+00
465+00
466+00
467+00
468+00
469+00

A-1
PM1
PM2
PM3
C-1

4'
26'
12'
2'

A-1	3.5" REMOVING ASPHALTIC SURFACE MILLING, PLACE 3.5" ASPHALTIC SURFACE	PM1	MARKING LINE EPOXY 4-INCH (YELLOW)
C-1	11" CONCRETE PAVEMENT REPLACEMENT SHES	PM2	MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE SKIPS)
C-2	11" CONCRETE PAVEMENT APPROACH SLAB HES	PM3	MARKING LINE EPOXY 4-INCH (WHITE)

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PROJECT NO: 1161-00-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - IH 39 AT HOGAN ROAD	SHEET 7	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610067-HOGAN RD BRIDGES\021201-PD.DWG
LAYOUT NAME - 02
PLOT DATE : 2/1/2021 1:53 PM
PLOT BY : WATT, TIMOTHY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

END PROJECT
STA 472+35.46 RL IH 39 SB
MATCH EXISTING
SAW CUT REQ'D

STA 469+80.01 RL IH 39 SB
MATCH EXISTING
SAW CUT REQ'D

HOGAN ROAD

B-11-0069

MATCH STRUCTURE B-11-0069

FRONTIER
UG TEL

MATCH STRUCTURE B-11-0068

B-11-0068

STA 472+19.81 RL IH 39 NB
MATCH EXISTING
SAW CUT REQ'D

STA 475+27.09 RL IH 39 NB
MATCH EXISTING
SAW CUT REQ'D

IH 39 SB

IH 39 NB

PT: 474+40.78

MATCH LINE 475+75

MATCH LINE 469+75

N

A-1	3.5" REMOVING ASPHALTIC SURFACE MILLING, PLACE 3.5" ASPHALTIC SURFACE
C-1	11" CONCRETE PAVEMENT REPLACEMENT SHES
C-2	11" CONCRETE PAVEMENT APPROACH SLAB HES
PM1	MARKING LINE EPOXY 4-INCH (YELLOW)
PM2	MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE SKIPS)
PM3	MARKING LINE EPOXY 4-INCH (WHITE)

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PROJECT NO: 1161-00-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - IH 39 AT HOGAN ROAD	SHEET 8	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610067-HOGAN RD BRIDGES\021201-PD.DWG
LAYOUT NAME - 03
PLOT DATE : 2/1/2021 1:53 PM
PLOT BY : WATT, TIMOTHY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

PM3

4'

26'

4'

IH 39 SB

476+00

477+00

478+00

479+00

480+00

481+00

A-1

PM1

END CONSTRUCTION
STA 480+46.11 RL IH 39 SB
MATCH EXISTING
SAW CUT REQ'D

IH 39 SB

IH 39 NB

EP: 479+10.64

476+00

477+00

478+00

479+00

IH 39 NB

MATCH LINE 475+75

A-1	3.5" REMOVING ASPHALTIC SURFACE MILLING, PLACE 3.5" ASPHALTIC SURFACE
C-1	11" CONCRETE PAVEMENT REPLACEMENT SHES
C-2	11" CONCRETE PAVEMENT APPROACH SLAB HES
PM1	MARKING LINE EPOXY 4-INCH (YELLOW)
PM2	MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE SKIPS)
PM3	MARKING LINE EPOXY 4-INCH (WHITE)

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PROJECT NO: 1161-00-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - IH 39 AT HOGAN ROAD	SHEET 9	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610067-HOGAN RD BRIDGES\021201-PD.DWG
LAYOUT NAME - 04
PLOT DATE : 2/1/2021 1:53 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

PRE-CONSTRUCTION NOTES:

PCMS SIGNS SHALL BE INSTALLED 1/2 MILES IN ADVANCE OF THE HOGAN ROADWAY BRIDGES TO NOTIFY TRAFFIC OF UPCOMING CONSTRUCTION.

PCMS MESSAGE:

FRAME 1: ROAD
WORK
BEGINS

FRAME 2: XXXDAY (DAY OF THE WEEK)
DATE

INSTALL 7 DAYS PRIOR TO CONSTRUCTION START DATE

WORK:

1) COMPLETE ASPHALTIC SURFACE MILLING AND PLACE ASPHALTIC SURFACE IN VOID TO REMOVE RUMBLE STRIPS ON SHOULDERS BEFORE SHIFTING TRAFFIC FOR CONCRETE PAVEMENT REPLACEMENT, CONCRETE PAVEMENT APPROACH, OR ANY STRUCTURE WORK. UTILIZE SDD TRAFFIC CONTROL LANE CLOSURE AND TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H. FOR THIS WORK.
2) REPLACE ASPHALTIC SHOULDER RUMBLE STRIPS IN KIND AFTER ALL WORK IS COMPLETED THAT MAY UTILIZE SHOULDERS FOR TRAFFIC LANES. UTILIZE TRAFFIC CONTROL LANE CLOSURE AND TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H. FOR THIS WORK.
3) ALL OTHER WORK SHOULD BE STAGED USING SDD TRAFFIC CONTROL LANE CLOSURE AND TRAFFIC CONTROL PLAN DETAIL TRAFFIC CONTROL - PARTIAL LANE SHIFT TO SHIFT TRAFFIC ONTO EXISTING SHOULDER TO PROVIDE BUFFER TO WORK ZONE.

SEE STANDARD DETAILS:

TRAFFIC CONTROL LANE CLOSURE

TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

SEE TRAFFIC CONTROL PLAN DETAIL :

TRAFFIC CONTROL - PARTIAL LANE SHIFT

FOR SETUP OF TRAFFIC CONTROL AND MORE INFORMATION.

LEGEND

WORK AREA

MB — PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)

PROJECT NO: 1161-00-67	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL	SHEET 10	E

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVE PAVEMENT MARKING

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT LEFT - REVERSE FOR SHIFTING RIGHT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

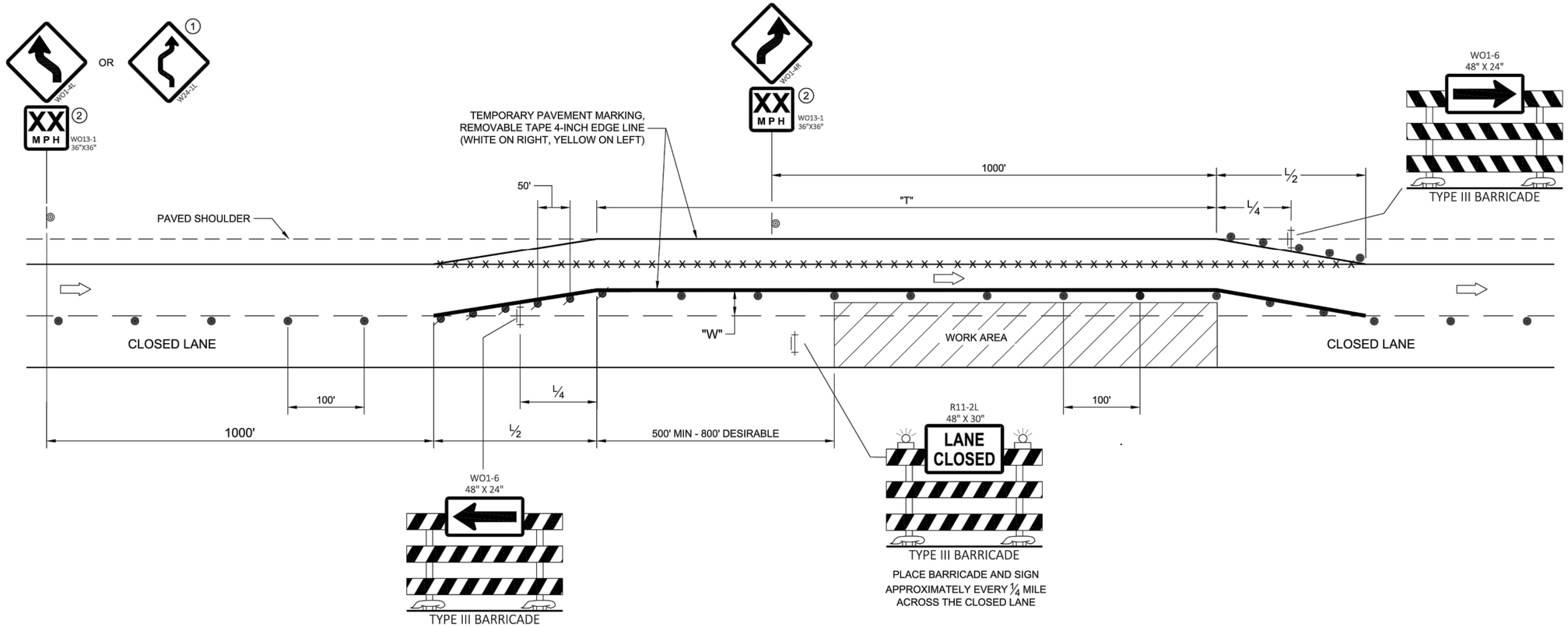
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

(1) USE ONLY WHEN T<600', OMIT WO1-4R.

(2) IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)								
	1	2	3	4	5	6	7	8	9
50	25	50	75	100	125	150	175	200	225
55	28	55	83	110	138	165	193	220	248
60	30	60	90	120	150	180	210	240	270
65	33	65	98	130	163	195	228	260	293
70	35	70	105	140	175	210	245	280	315



WO1-6

2

PROJECT NO: 1161-00-67	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL - PARTIAL LANE SHIFT	SHEET 11	E

1161-00-67

Line	Item	Item Description	Unit	Total	Qty
0004	204.0100	Removing Concrete Pavement	SY	213.000	213.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	2,300.000	2,300.000
0018	213.0100	Finishing Roadway (project) 01. 1161-00-67	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	120.000	120.000
0026	305.0500	Shaping Shoulders	STA	24.000	24.000
0028	415.1410	Concrete Pavement Approach Slab HES	SY	213.000	213.000
0030	416.0610	Drilled Tie Bars	EACH	130.000	130.000
0032	416.0620	Drilled Dowel Bars	EACH	100.000	100.000
0034	416.1725	Concrete Pavement Replacement SHES	SY	750.000	750.000
0036	455.0605	Tack Coat	GAL	165.000	165.000
0042	465.0105	Asphaltic Surface	TON	460.000	460.000
0044	465.0400	Asphaltic Shoulder Rumble Strips	LF	4,950.000	4,950.000
0046	509.0301	Preparation Decks Type 1	SY	26.000	26.000
0048	509.0302	Preparation Decks Type 2	SY	13.000	13.000
0050	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	300.000	300.000
0052	509.1500	Concrete Surface Repair	SF	25.000	25.000
0054	509.5100.S	Polymer Overlay	SY	991.000	991.000
0088	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1161-00-67	EACH	1.000	1.000
0092	619.1000	Mobilization	EACH	0.500	0.500
0094	624.0100	Water	MGAL	4.000	4.000
0134	642.5001	Field Office Type B	EACH	0.500	0.500
0136	643.0300	Traffic Control Drums	DAY	1,866.000	1,866.000
0138	643.0420	Traffic Control Barricades Type III	DAY	68.000	68.000
0140	643.0705	Traffic Control Warning Lights Type A	DAY	136.000	136.000
0142	643.0715	Traffic Control Warning Lights Type C	DAY	716.000	716.000
0144	643.0800	Traffic Control Arrow Boards	DAY	83.000	83.000
0146	643.0900	Traffic Control Signs	DAY	606.000	606.000
0148	643.1050	Traffic Control Signs PCMS	DAY	15.000	15.000
0150	643.5000	Traffic Control	EACH	0.500	0.500
0152	646.1020	Marking Line Epoxy 4-Inch	LF	5,578.000	5,578.000
0154	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	162.500	162.500
0158	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	7,660.000	7,660.000
0160	649.0960	Temporary Marking Removable Mask Out Tape 6-Inch	LF	4,670.000	4,670.000
0170	690.0150	Sawing Asphalt	LF	40.000	40.000
0172	690.0250	Sawing Concrete	LF	1,500.000	1,500.000
0174	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0176	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
0178	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,320.000	1,320.000
0180	SPV.0035	Special 01. Rapid Set Deck Repair	CY	2.000	2.000

1161-00-67

Line	Item	Item Description	Unit	Total	Qty
0182	SPV.0060	Special 01. Strapping B-11-68	EACH	4.000	4.000
0184	SPV.0060	Special 02. Strapping B-11-69	EACH	2.000	2.000

3

3

BASE AGGREGATE DENSE

LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0500 SHAPING SHOULDERS (STA)	624.0100 WATER (MGAL)
B-11-068 SHOULDERS	56	11	1.4
B-11-069 SHOULDERS	56	11	1.4
Undistributed	8	2	0.8
TOTALS	**120**	**24**	**4**

REMOVALS

LOCATION	204.0100 REMOVING PAVEMENT (SY)
B-11-0068 (APPROACH SLAB)	101
B-11-0069 (APPROACH SLAB)	112
TOTALS	**213**

PAVEMENT

LOCATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)	415.1410 CONCRETE PAVEMENT APPROACH SLAB HES (SY)	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES (SY)	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS (LF)
B-11-068 SHOULDERS	1142	-	-	80	224	2431
B-11-069 SHOULDERS	1109	-	-	78	218	2447
B-11-068	-	101	434	-	-	-
B-11-069	-	112	295	-	-	-
Undistributed	49	-	21	7	18	72
TOTALS	**2300**	**213**	**750**	**165**	**460**	**4950**

DRILLED BARS

LOCATION	416.0610 DRILLED TIE BARS (EACH)	416.0620 DRILLED DOWEL BARS (EACH)
STA 469+25.78 TO 470+19.81 IH 39 NB	42	22
STA 471+62.22 TO 472+16.97 IH 39 NB	26	22
STA 469+80.01 TO 470+24.49 IH 39 SB	22	22
STA 471+77.99 TO 472+35.46 IH 39 SB	28	22
UNDISTIBUTED	12	12
TOTALS	**130**	**100**

PAVEMENT MARKING

LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (EDGELINES) *YELLOW* (LF)	646.1020 MARKING LINE EPOXY 4-INCH (EDGELINES) *WHITE* (LF)	646.1545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (SKIPS) *WHITE* (LF)
IH 39 NB	1412	1412	87.5
IH 39 SB	1377	1377	75
TOTALS	**5578**		**162.5**

TRAFFIC CONTROL

STAGE	DURATION CALANDAR DAYS	#	643.0300 TC DRUMS (DAY)	#	643.0420 TC BARRICADES TYPE III (DAY)	#	643.0705 TC WARNING LIGHTS TYPE A (DAY)	#	643.0715 TC WARNING LIGHTS TYPE C (DAY)	#	643.0800 TC ARROW BOARDS (DAY)	#	643.0900 TC SIGNS (DAY)	#	643.1050 TC SIGNS PCMS (DAY)
PRIOR TO CONSTRUCTION	7		-		-	-	-	-	-	-	-		-	*2*	14
SHOULDER MILLING AND HMA PLACEMENT	6	*48*	288	*2*	12	*4*	24	*17*	102	*2*	12	*10*	60		
B-11-68 POLYMER OVERLAY & CONCRETE	12	*52*	624	*2*	24	*4*	48	*25*	300	*2*	24	*16*	192	-	-
B-11-69 POLYMER OVERLAY & CONCRETE	12	*52*	624	*2*	24	*4*	48	*25*	300	*2*	24	*16*	192	-	-
STRAPING	18	*15*	270	-	-	-	-	-	-	*1*	18	*8*	144	-	-
UNDISTRIBUTED		-	60	-	8	-	16	-	14	-	5	-	18	-	1
TOTALS			**1,866**		**68**		**136**		**716**		**83**		**606**		**15**

SAWING

LOCATION	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)
STA 461+14.89 NB RT & LT	8	-
STA 466+69.45 SB RT & LT	8	-
STA 469+25.78 NB	-	494
STA 469+80.01 SB	-	286
STA 472+19.81 NB	-	328
STA 472+35.46 SB	-	343
STA 475+27.09 NB RT & LT	8	-
STA 480+46.11 SB RT & LT	8	-
UNDISTIBUTED	8	48
TOTALS	**40**	**1500**

* SAWING CONCRETE FOR CONCRETE PAVEMENT REPLACEMENT INCLUDES 26 FEET AT EACH END OF REPLACEMENT AREA, LONGITUINAL SAW CUT BETWEEN LANE 1 & 2 AND ALONG ASPHALT SHOULDERS, AND EACH LANE TRANSVERSE SAW CUTS EVERY 10 FEET.

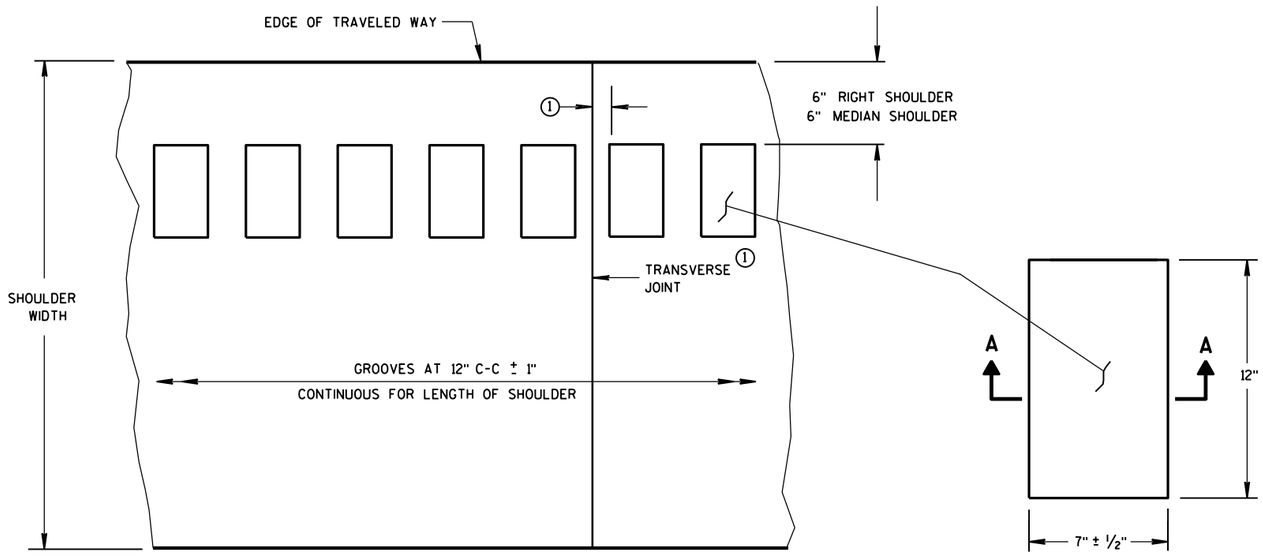
TEMPROARY PAVEMENT MARKING

LOCATION	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH *YELLOW* (LF)	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH *WHITE* (LF)	649.0960 TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH (LF)
Stage 1 - OUTSIDE LANES CLOSED	1395	2435	2335
Stage 2 - INSIDE LANES CLOSED	1395	2435	2335
TOTALS	**7660**		**4670**

Standard Detail Drawing List

13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C09-15A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C11-12A	RURAL DOWELED CONCRETE PAVEMENT
13C11-12B	RURAL DOWELED CONCRETE PAVEMENT
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D12-09A	TRAFFIC CONTROL, LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

6



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

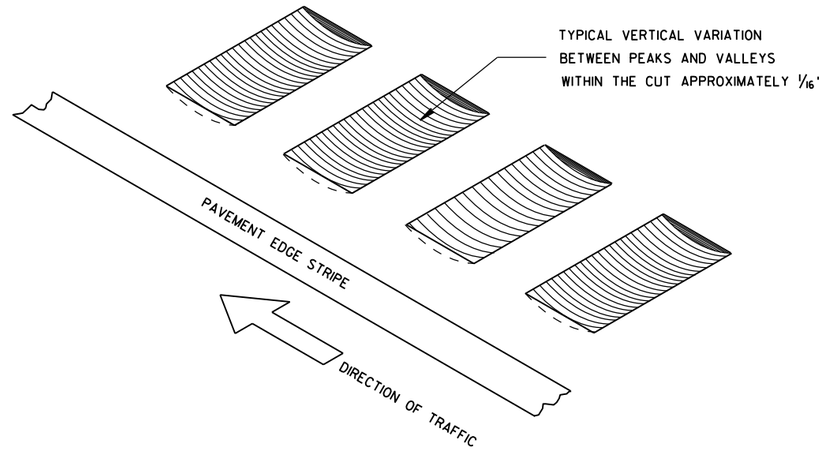
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

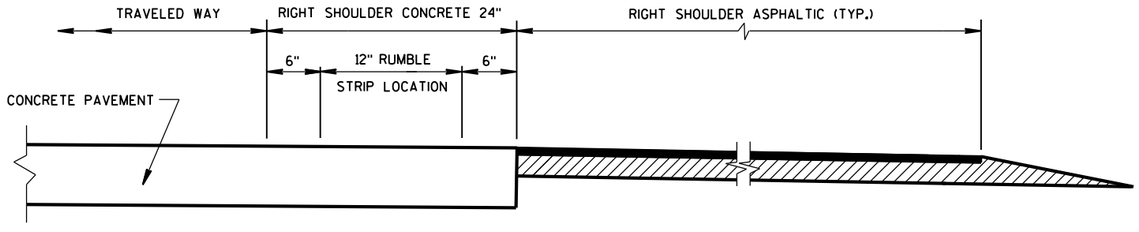
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

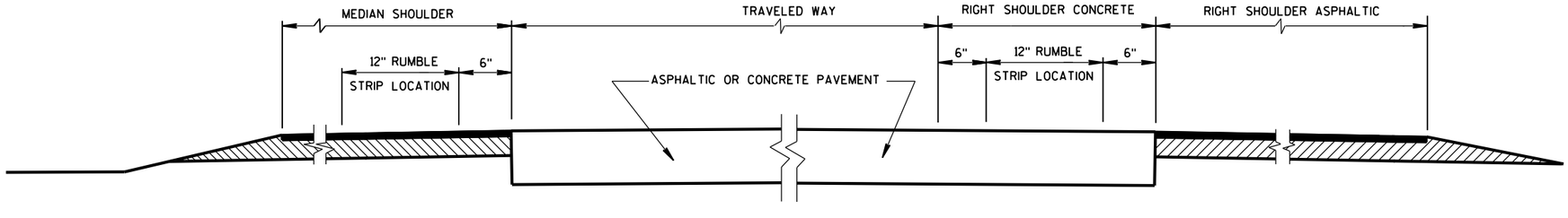
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



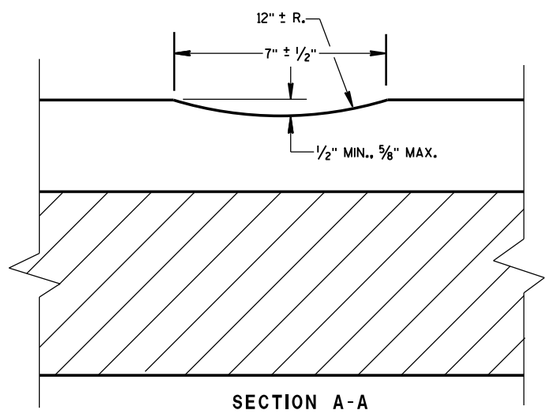
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 A 5-5a

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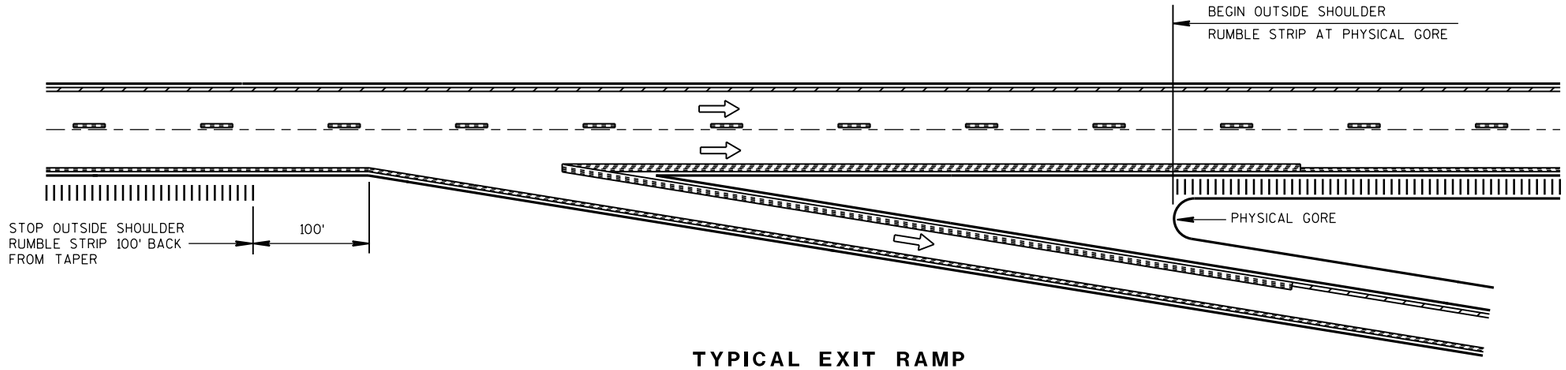
S.D.D. 13 A 5-5a



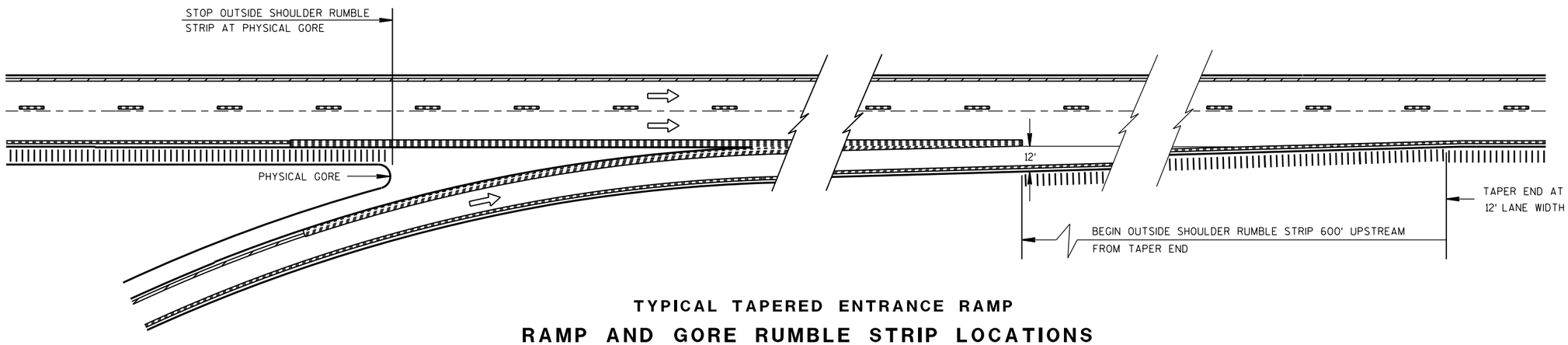
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

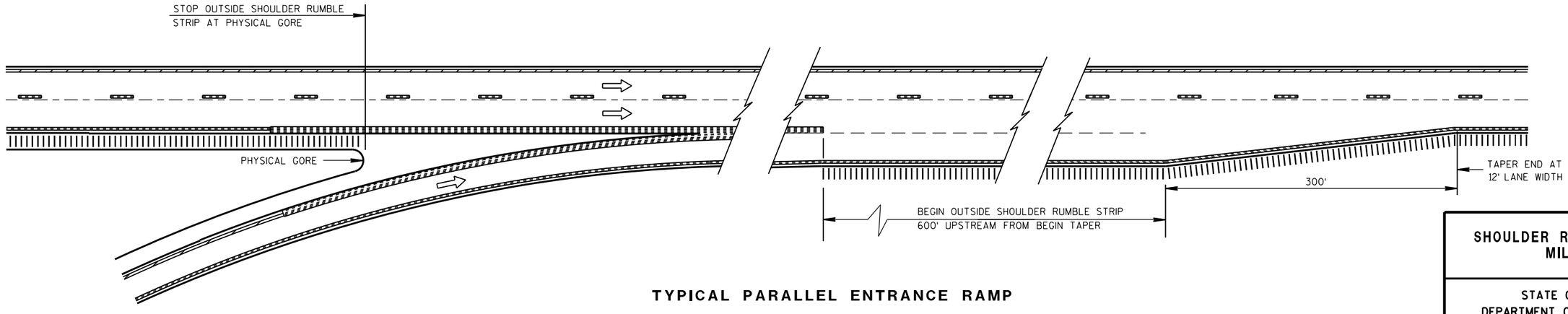
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

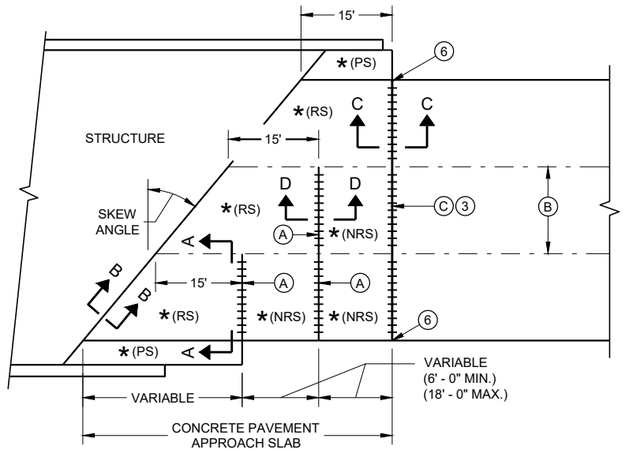
FHWA

6

S.D.D. 13 A 5-5b

6

S.D.D. 13 A 5-5b



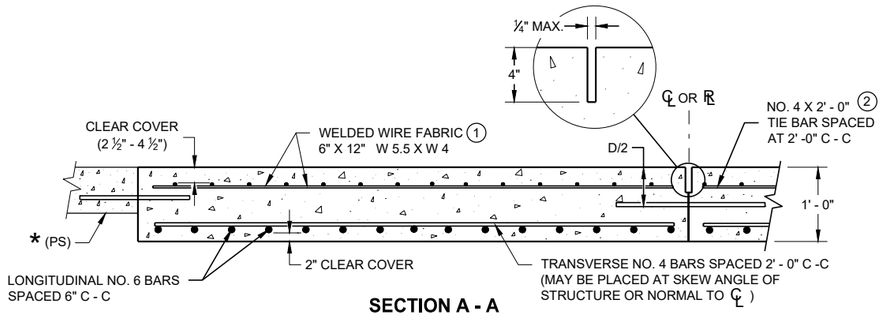
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

(RS) = REINFORCED CONCRETE SLAB

(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

(NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

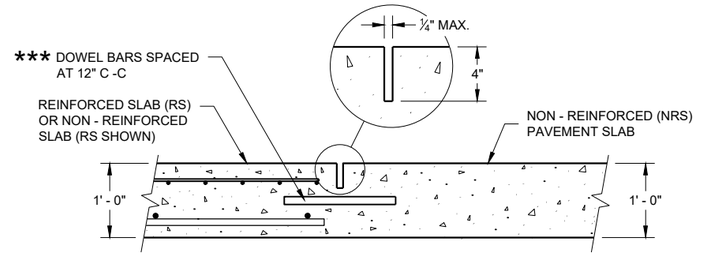
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

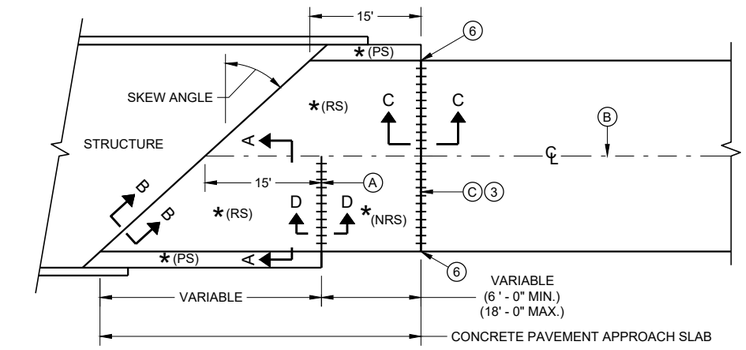
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .

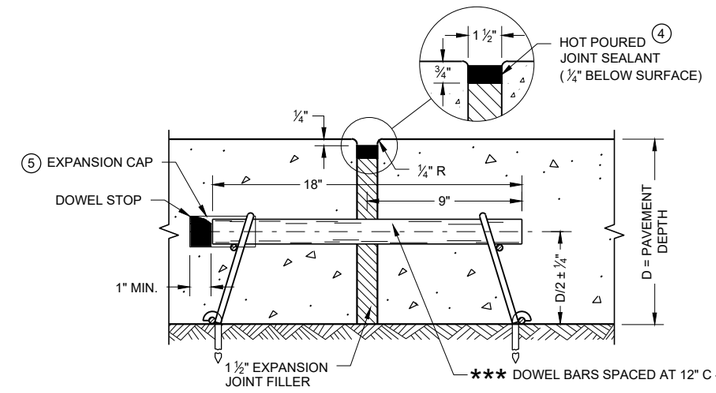


SECTION D - D
CONTRACTION JOINT



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

APPROACH SLAB AND ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

FHWA

6

SDD 13B02 - 09a

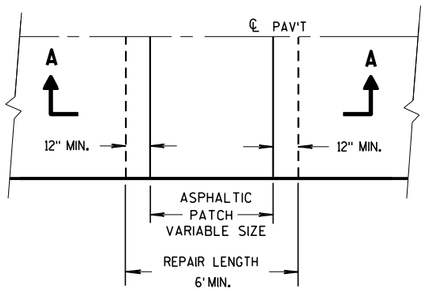
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

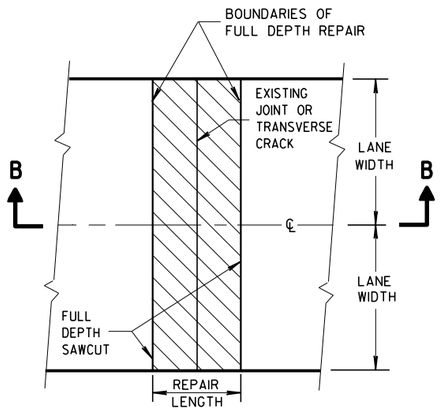
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

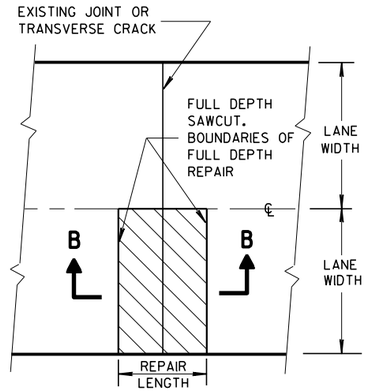
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



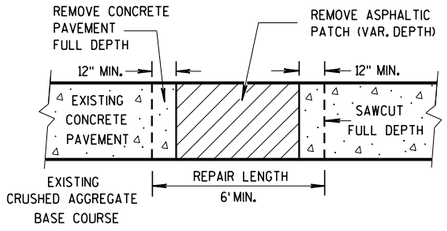
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

SECTION B-B

CONCRETE REMOVAL



SECTION A-A

HMA PATCH REMOVAL

FULL DEPTH CONCRETE PAVEMENT REMOVAL

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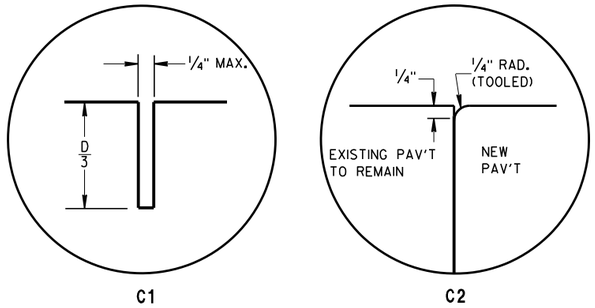
S.D.D. 13 C 9-15a

6

S.D.D. 13 C 9-15a

CONCRETE PAVEMENT REPAIR AND REPLACEMENT



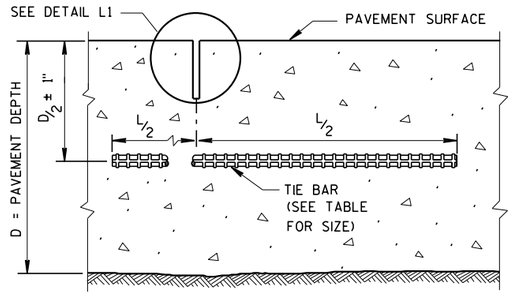
TRANSVERSE JOINTS

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

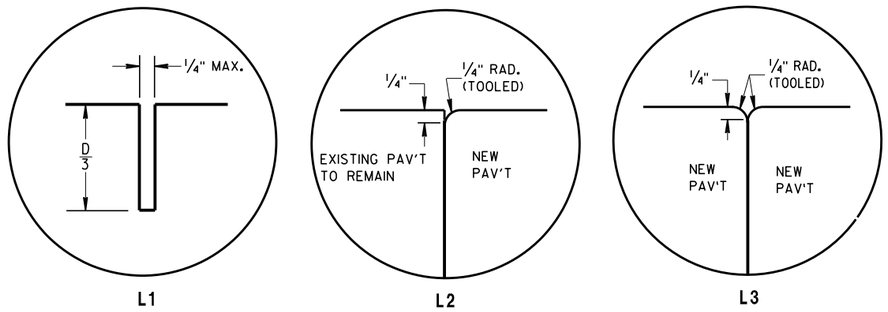
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

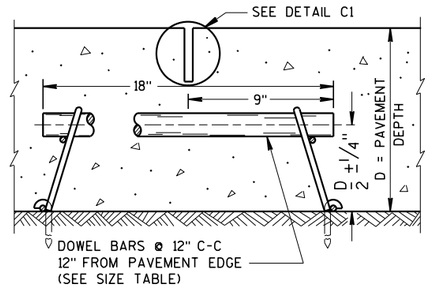
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

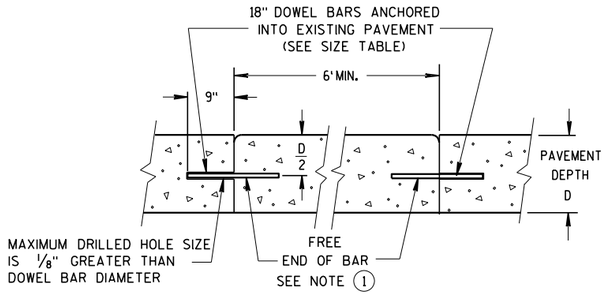


LONGITUDINAL JOINTS

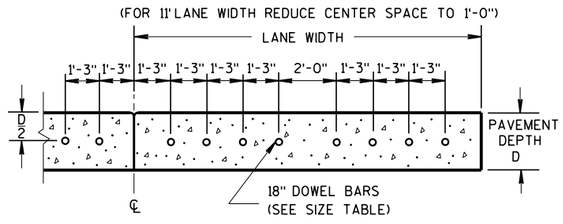


SECTION F-F

CONTRACTION JOINT



SECTION D-D

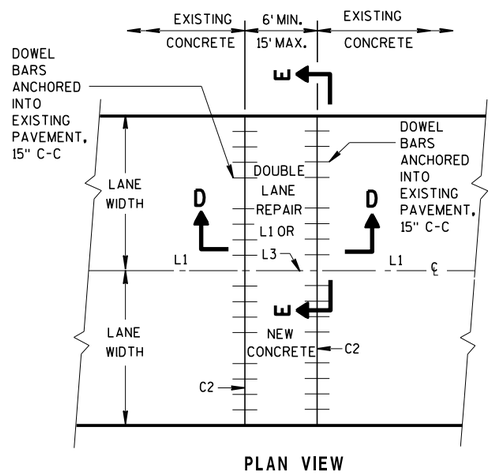


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

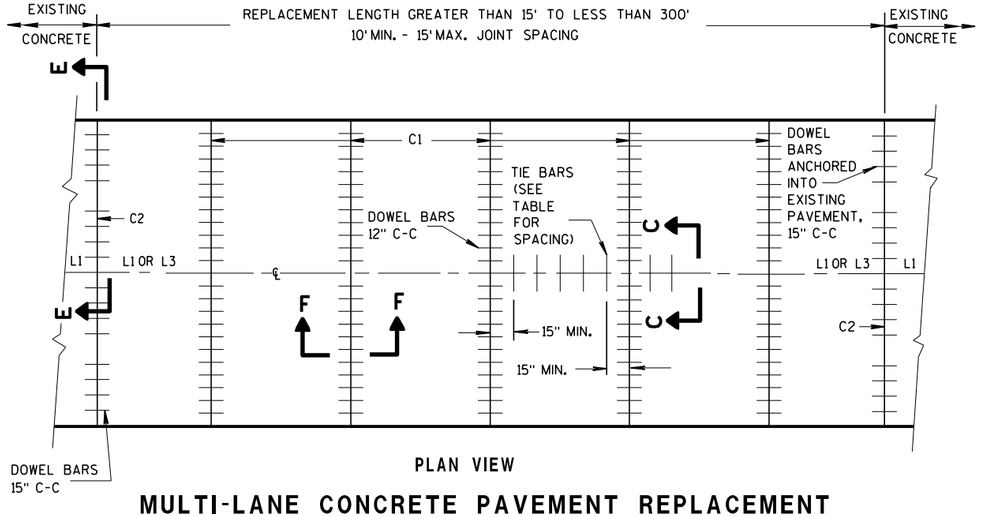
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8", 8 1/2"	1 1/4"	1 1/4"	15'
9", 9 1/2"	1 1/4"	1 1/4"	15'
10" & ABOVE	1 1/2"	1 1/4"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR

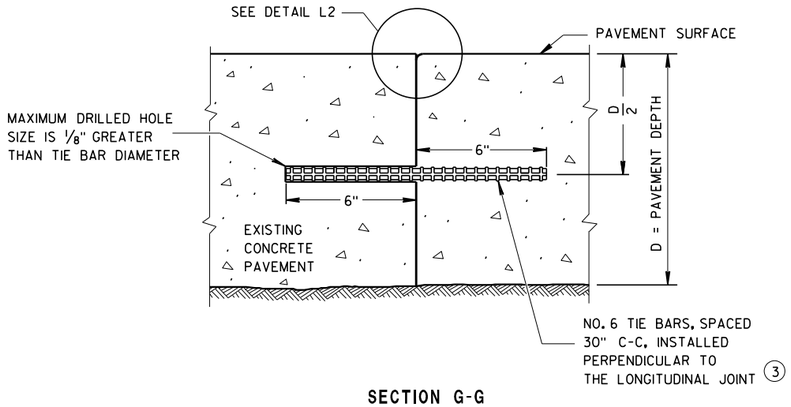


PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

6
S.D.D. 13 C 9-15b



SECTION G-G

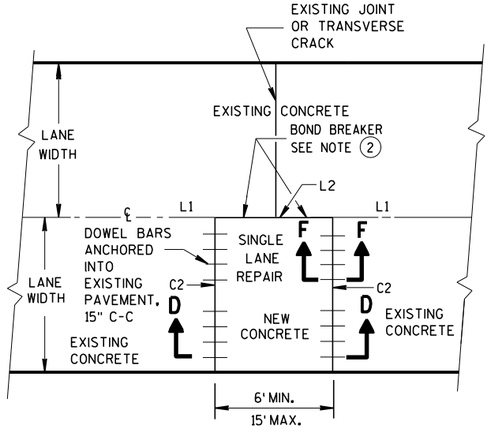
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

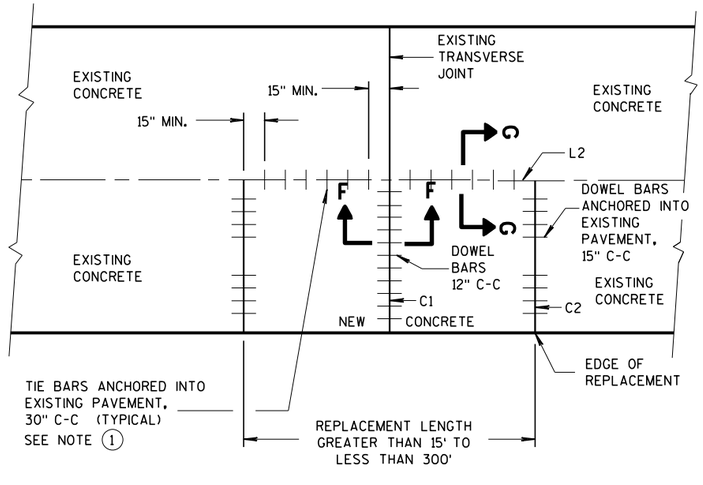
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

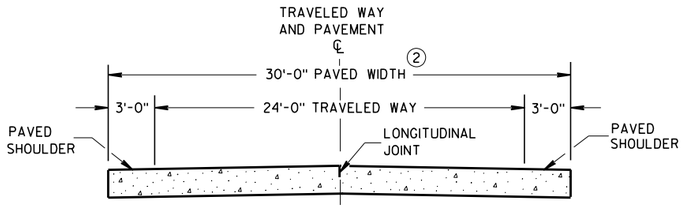
SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

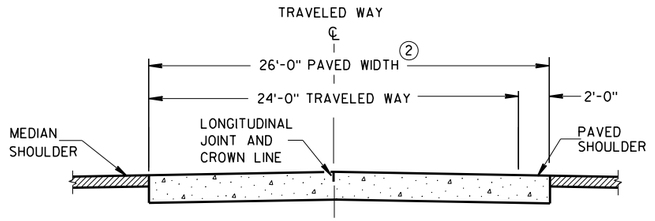
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Ken... — PAVEMENT SUPE...
FHWA

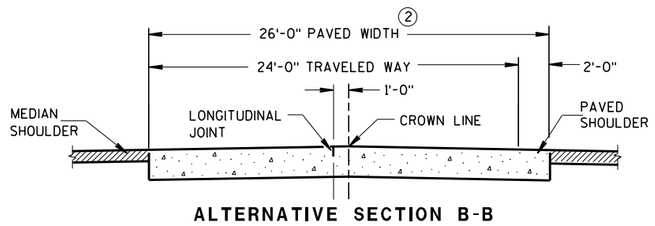
6
S.D.D. 13 C 9-15c



SECTION A-A ①
TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B
①
DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

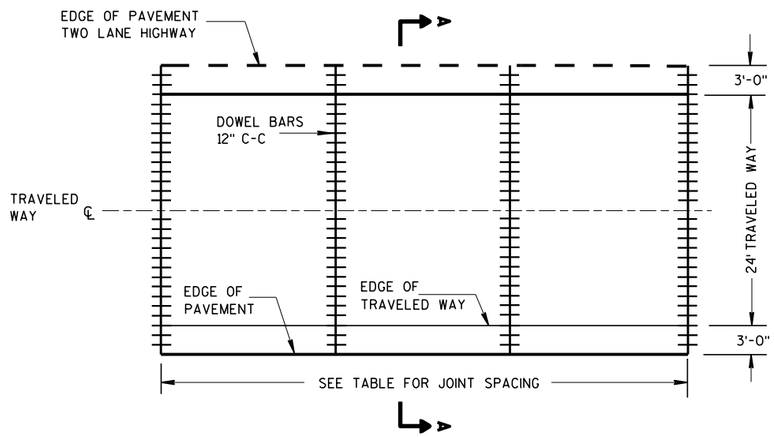
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

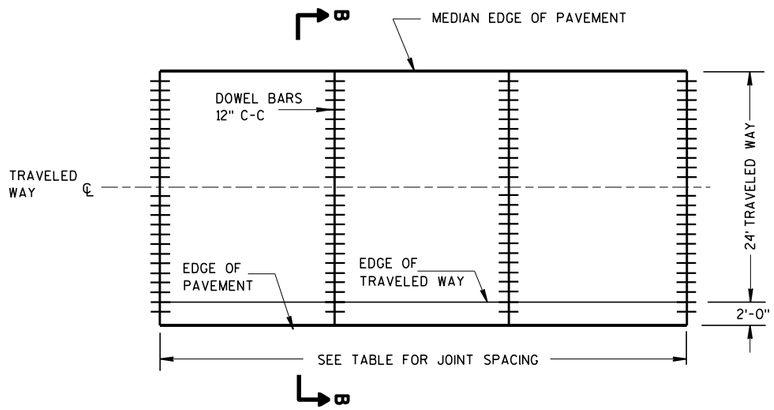
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



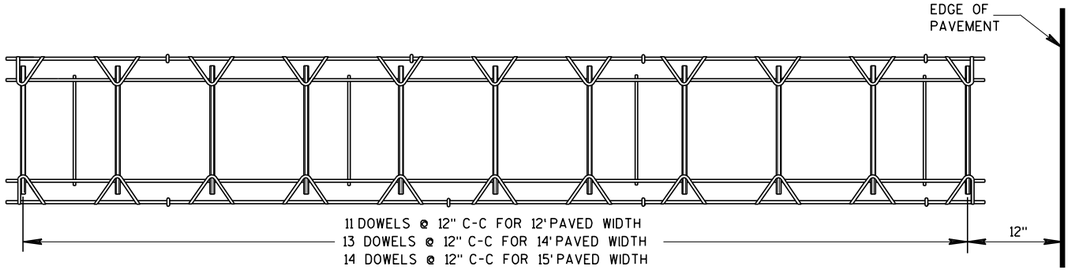
CONTRACTION JOINT LAYOUT FOR TWO-LANE TWO-WAY HIGHWAY



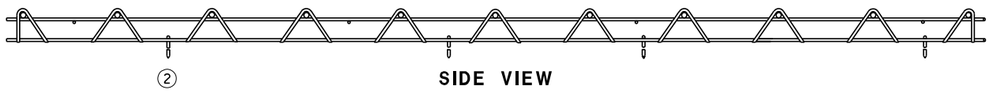
CONTRACTION JOINT LAYOUT FOR DIVIDED HIGHWAY

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



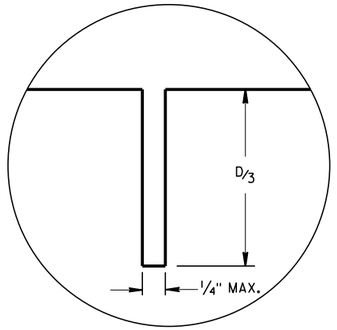
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

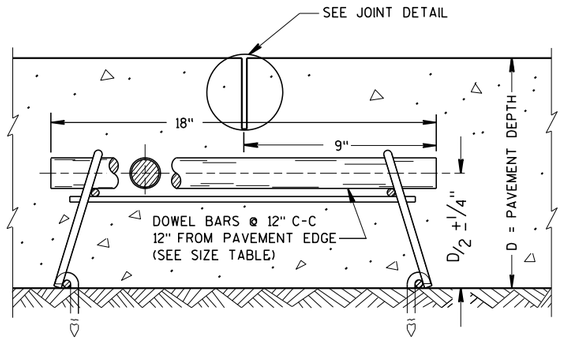
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

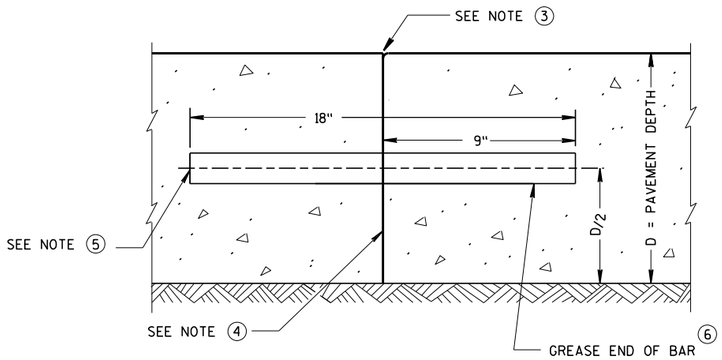
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

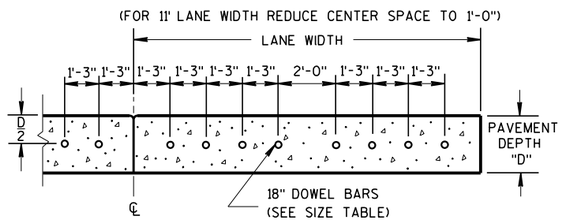
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUP

FHWA

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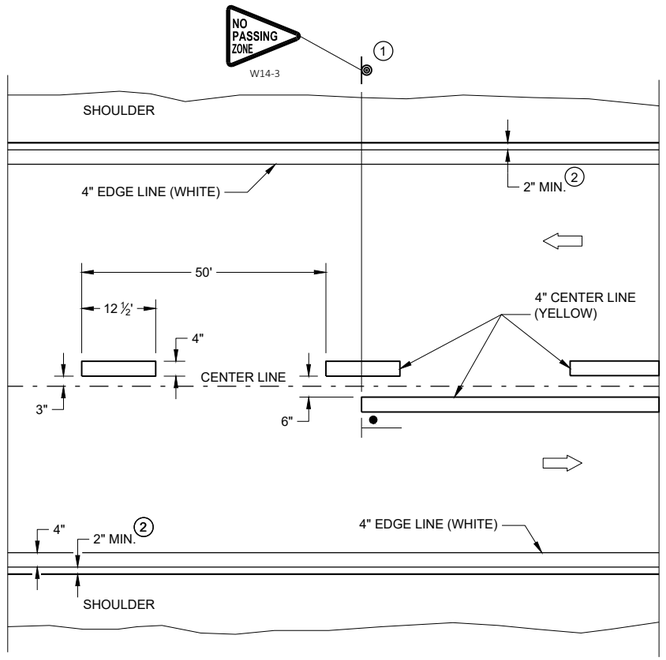
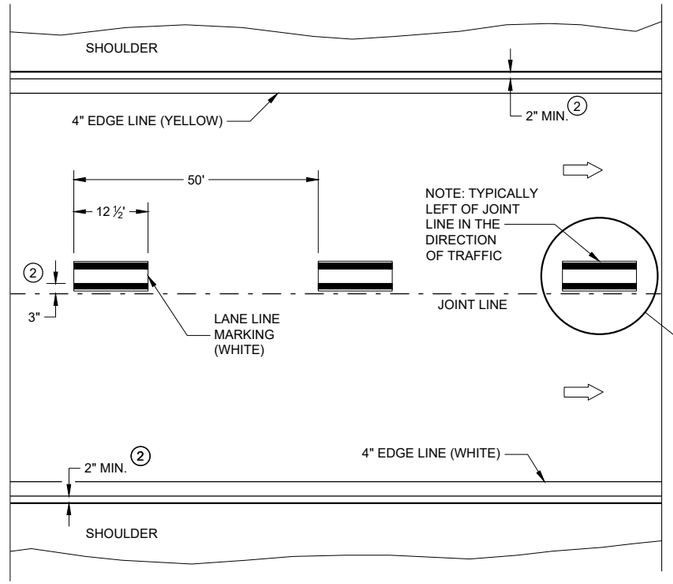
S.D.D. 13 C 11-12b

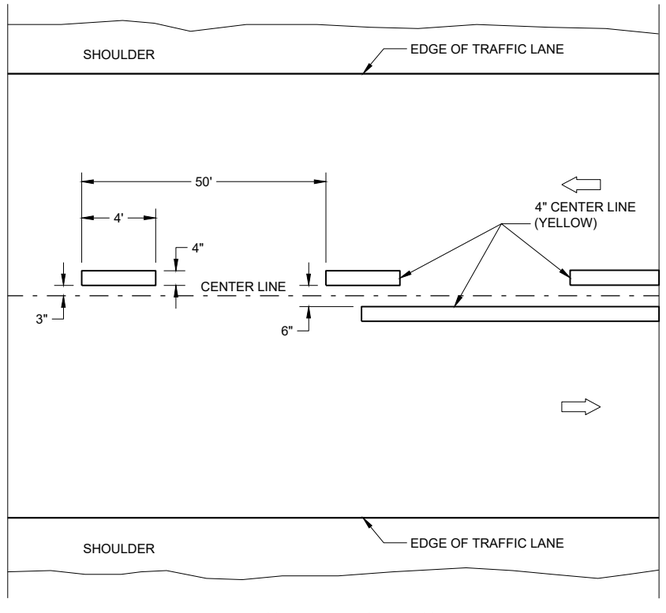


TWO WAY TRAFFIC

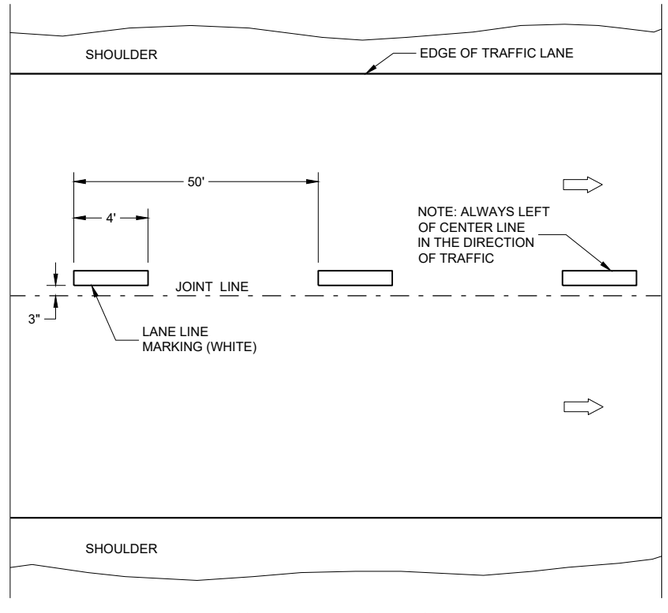


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

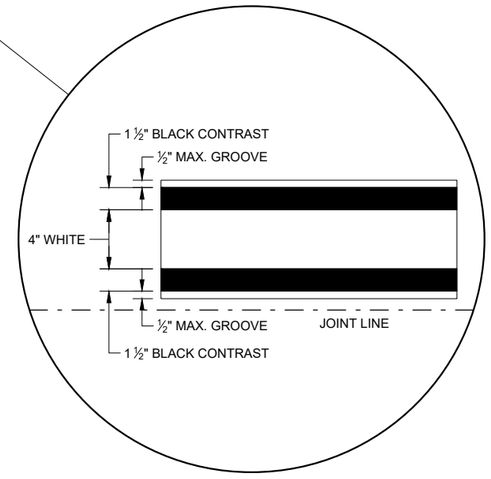
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Matthew Rauch — STATEWIDE SIGNING AND M ENGINEER

FHWA

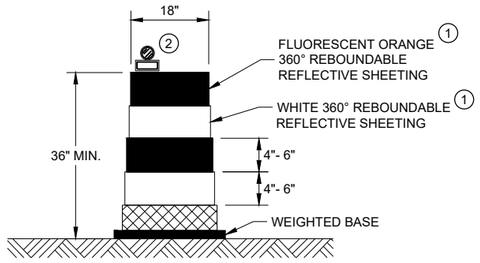
SDD 15C08 - 20a

6

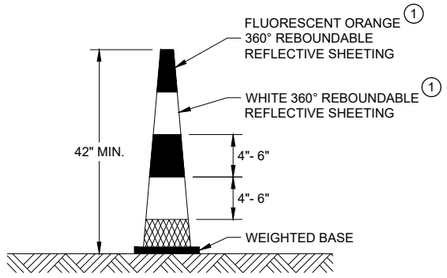
SDD 15C08 - 20a

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

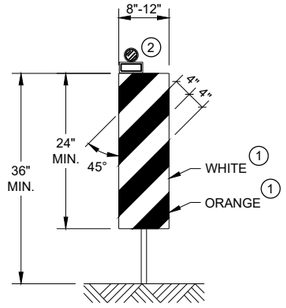


DRUM



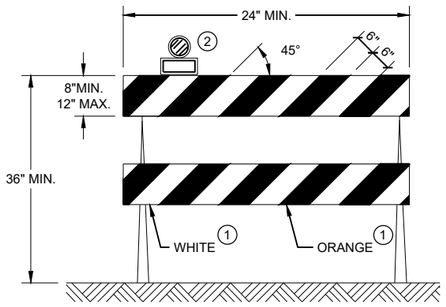
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



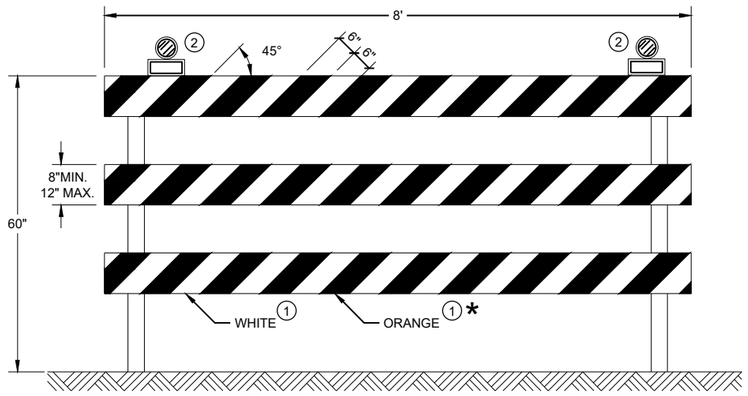
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 08b
SDD 15C11 - 08b

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

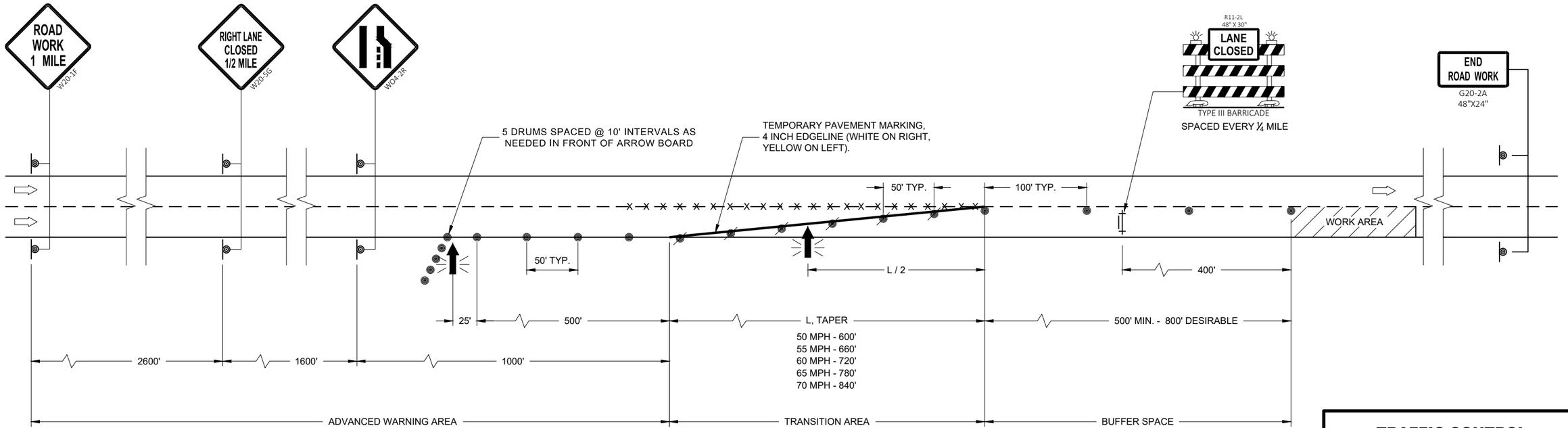
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



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SDD 15D12 - 09a

TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D12 - 09a

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

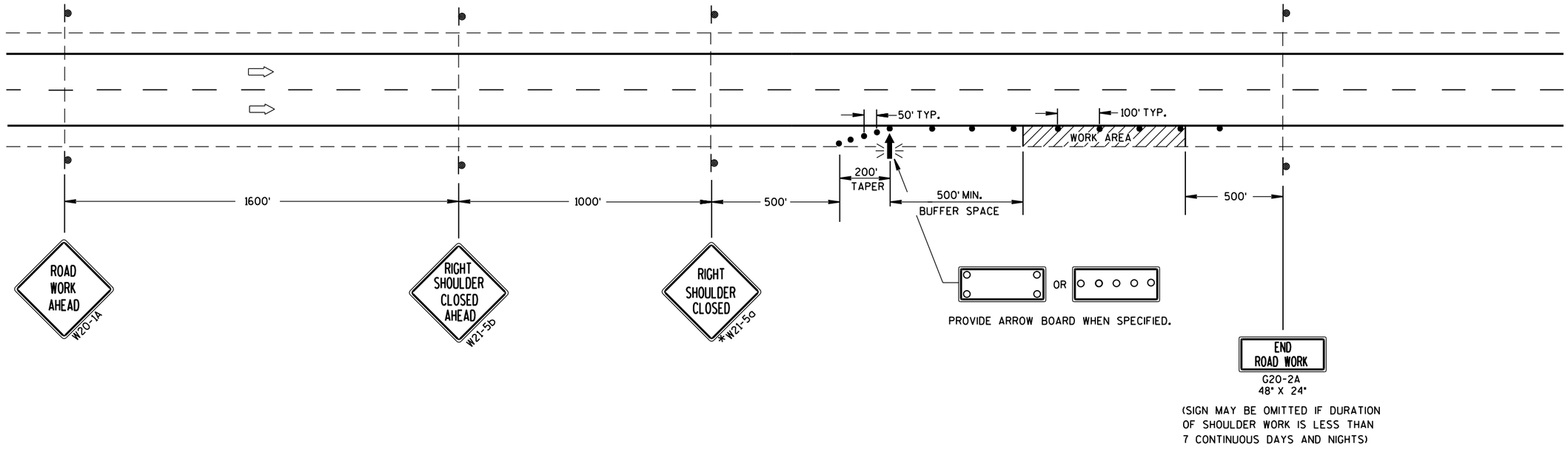
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

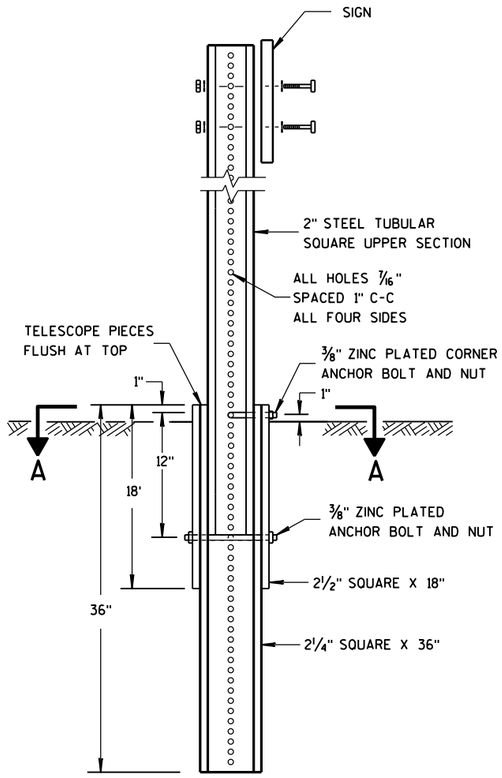
June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

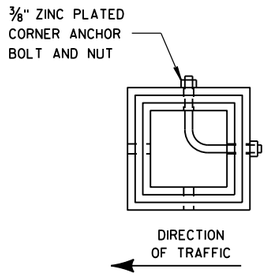
FHWA

6

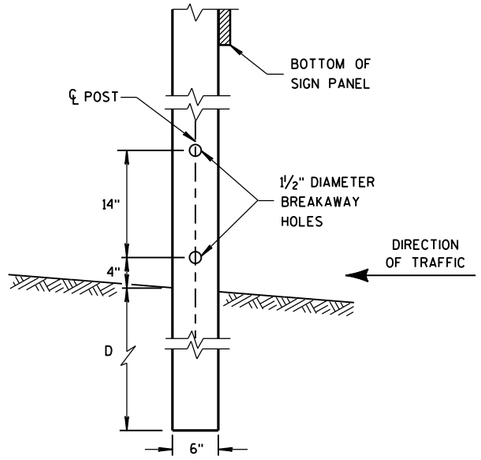
S.D.D. 15 D 27-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



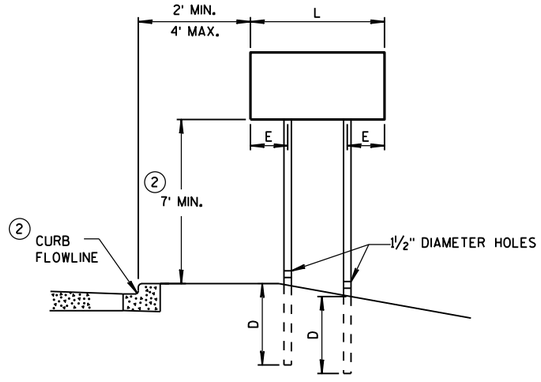
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

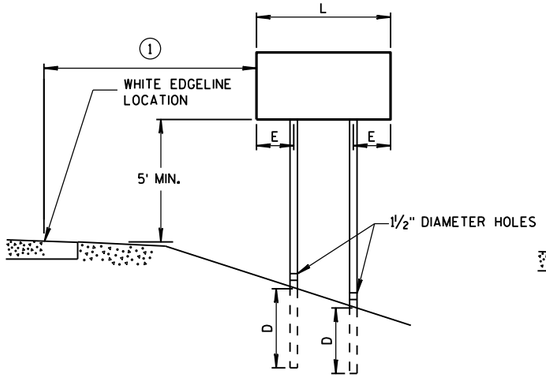
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

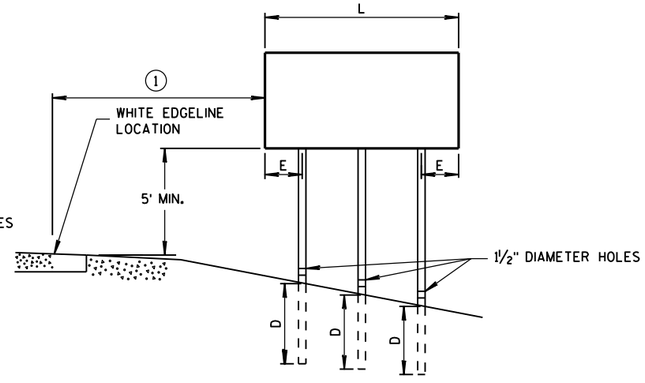
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

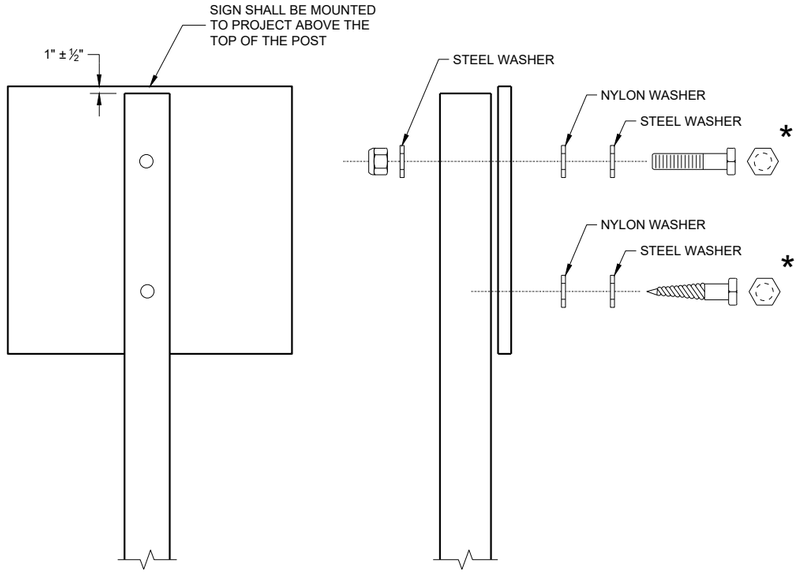
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



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

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

SDD15D38 - 02b

SDD15D38 - 02b

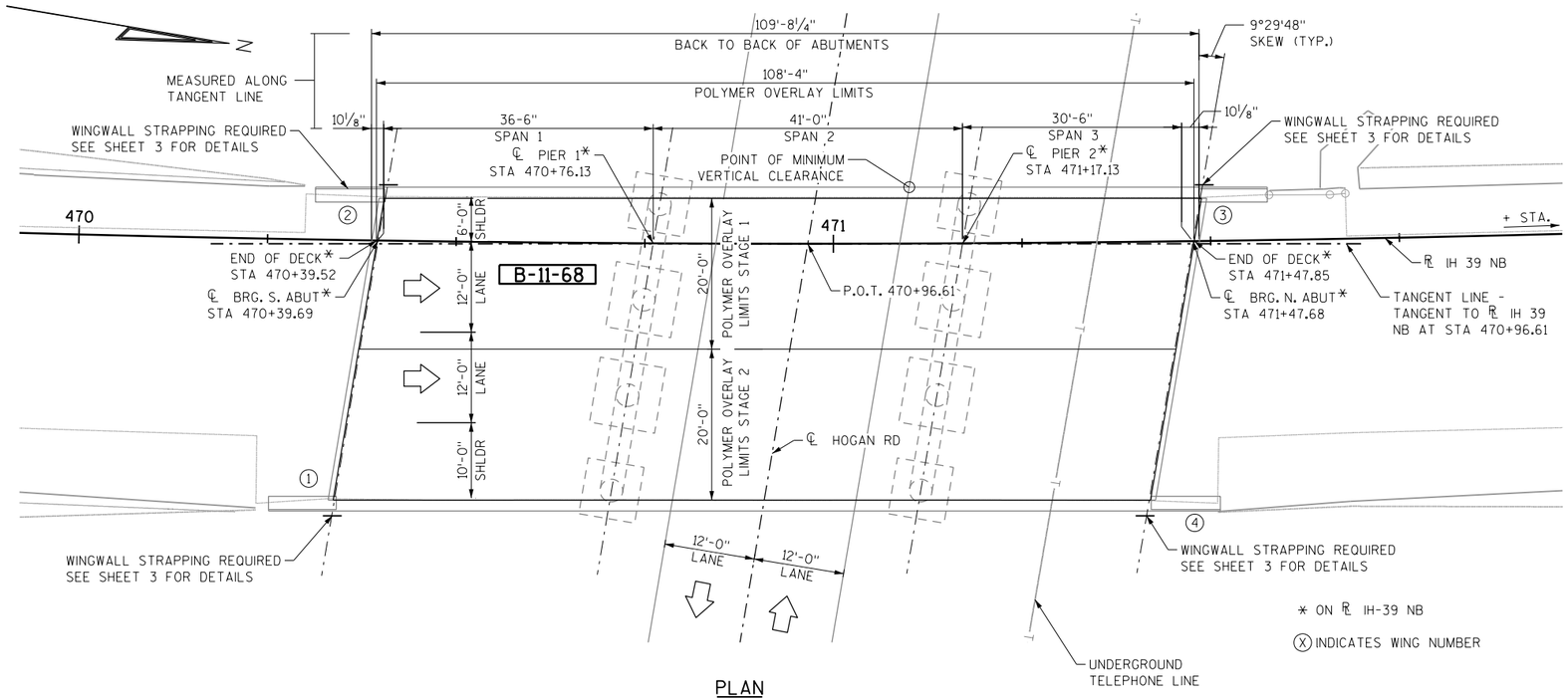
ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

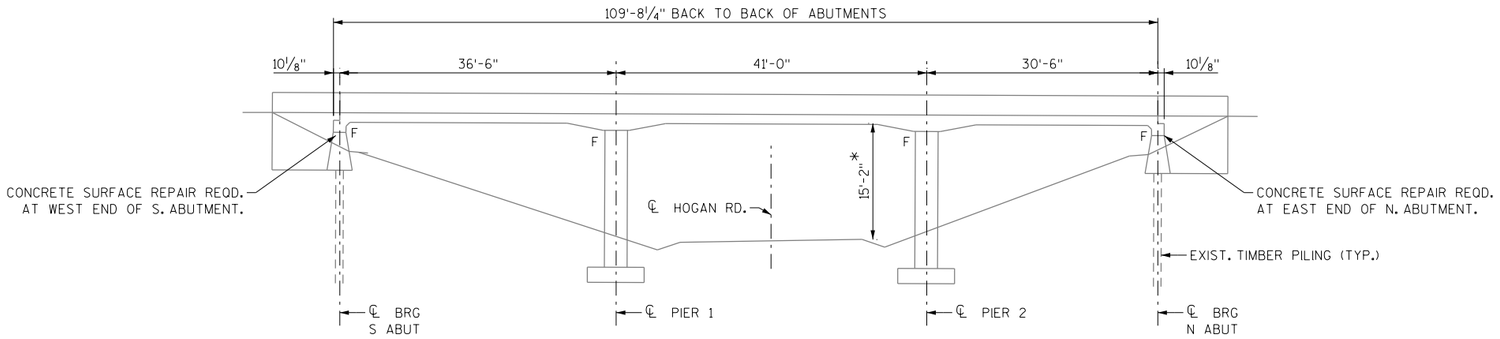
STATE PROJECT NUMBER

1161-00-67



PLAN

THREE SPAN CONCRETE HAUNCHED SLAB
POLYMER OVERLAY



ELEVATION
(LOOKING WEST)

* VERTICAL CLEARANCE IS TAKEN FROM THE MOST RECENT ROUTINE INSPECTION REPORT DATED 8/5/2020.

GENERAL NOTES:

DRAWINGS SHALL NOT BE SCALED.

EXISTING STRUCTURE DIMENSIONS ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY"

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING HS20
INVENTORY RATING HS23
OPERATING RATING HS38
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) = 250 KIPS

TRAFFIC DATA

A.A.D.T. = 7,770 (2021)
A.A.D.T. = 7,770 (2041)

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTION & STAGING PLAN
3. WING STRAPPING

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK, PE
(608) 261-0261

CONSULTANT:
WILLIAM J. ZIPPEL, PE, SE
ALFRED BENESCH & CO
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
(414) 308-1321

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S ABUT	N ABUT	SUPER	TOTAL
509.0301	PREPARATION DECKS TYPE 1	SY			8	8
509.0302	PREPARATION DECKS TYPE 2	SY			4	4
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF			100	100
509.1500	CONCRETE SURFACE REPAIR	SF	5	5		10
509.5100.S	POLYMER OVERLAY	SY			482	482
SPV.0035.01	RAPID SET DECK REPAIR	CY			1	1
SPV.0060.01	STRAPPING B-11-68	EA	2	2		4

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20278.01

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/09/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-11-68

IH-39 NB OVER HOGAN RD

COUNTY	TOWN/~~CITY/VILLAGE~~
COLUMBIA	FORT WINNEBAGO

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	JAP	DESIGN CK'D.	WJZ	DRAWN BY	BGS	PLANS CK'D.	WJZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 3

31

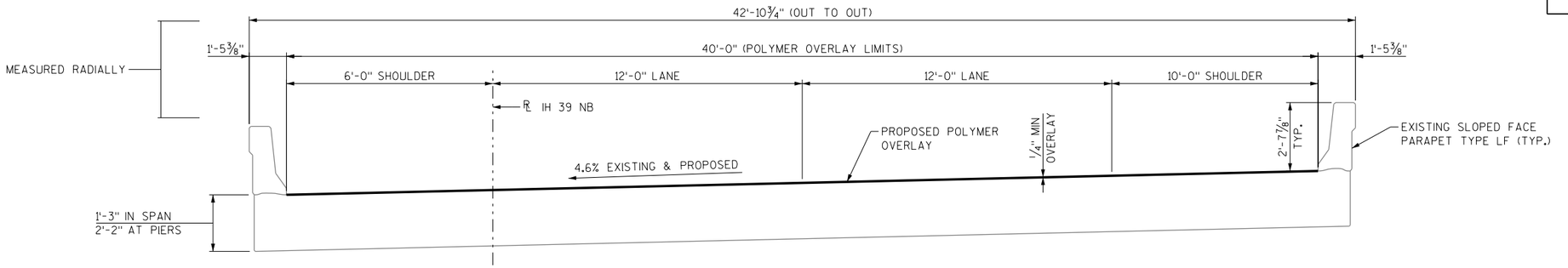
FILE= 10_GP&E_B1168.DGN
SCALE = 1:20

8

8

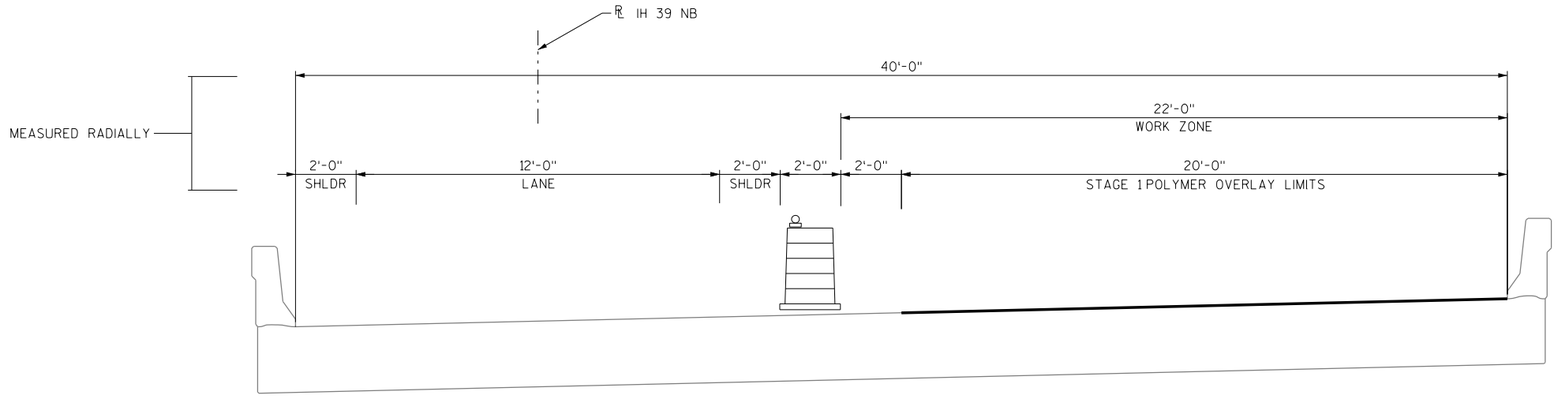
STATE PROJECT NUMBER

1161-00-67



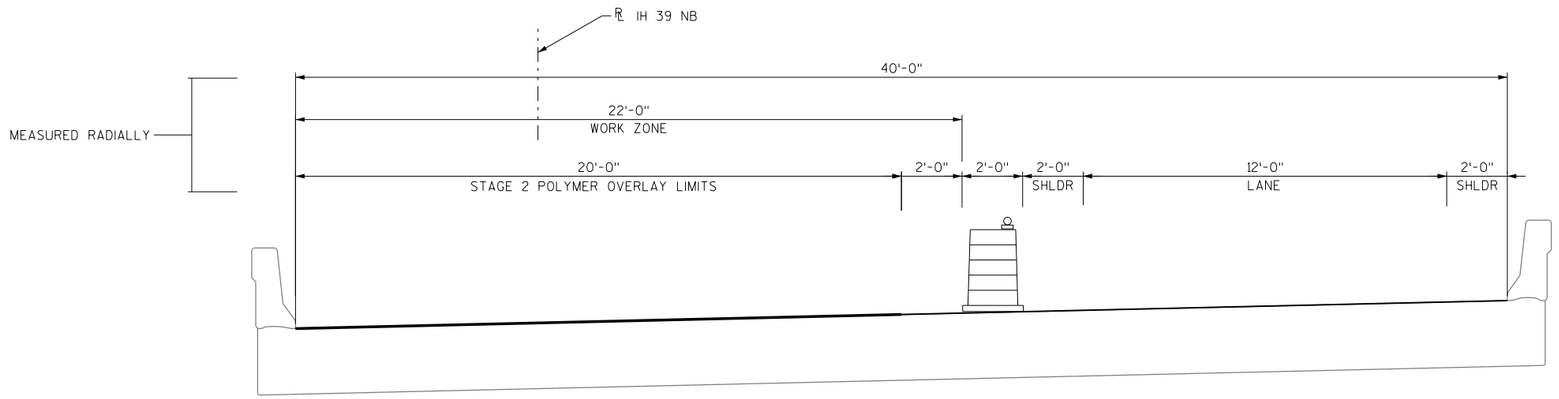
TYPICAL SECTION

LOOKING NORTH



STAGE 1

LOOKING NORTH



STAGE 2

LOOKING NORTH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-68

DRAWN BY BGS | PLANS CK'D. WJZ

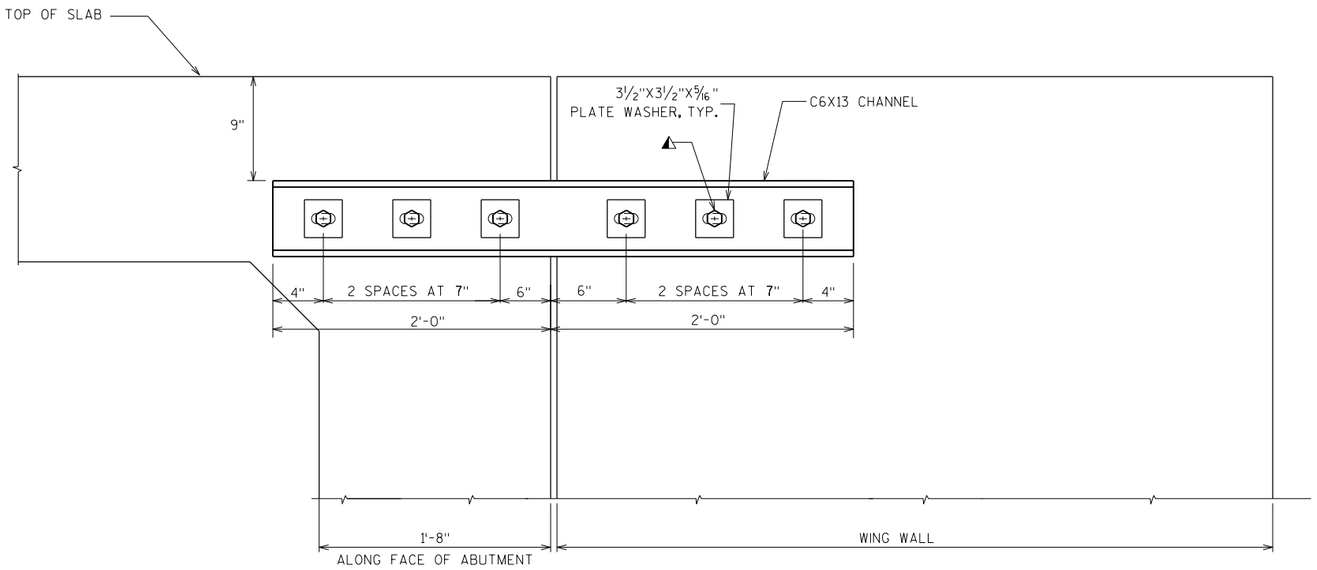
TYPICAL SECTION & STAGING PLAN

SHEET 2 OF 3

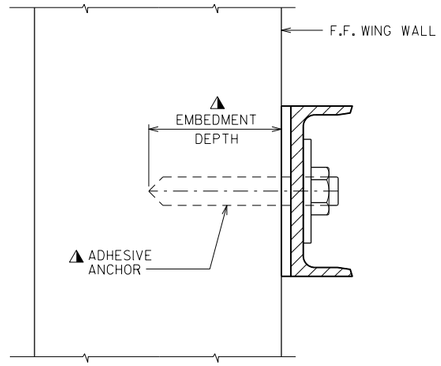
32

FILE= 20_STAGING_B1168.DGN
SCALE = 1:10

STATE PROJECT NUMBER
1161-00-67



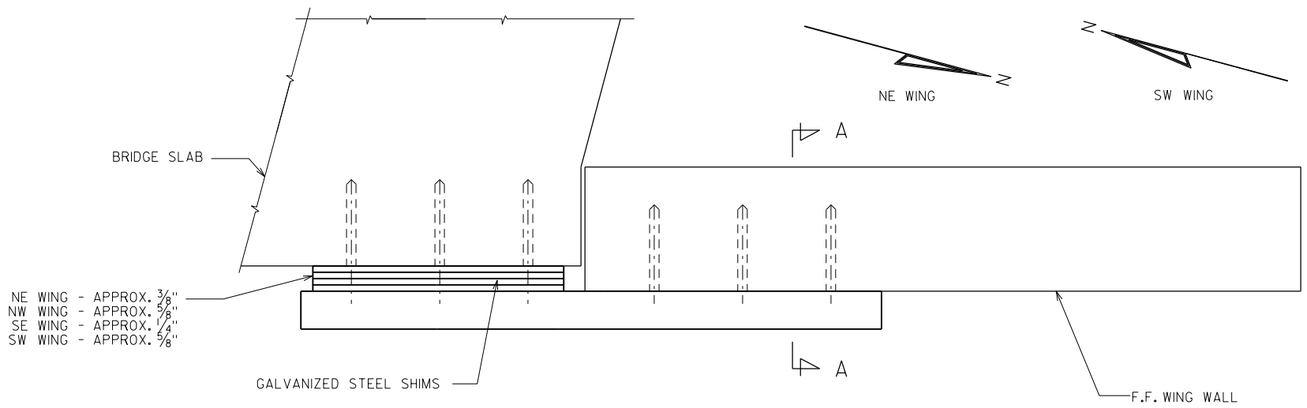
WING ELEVATION



SECTION A-A

▲ ADHESIVE ANCHOR 1-INCH. EMBED 10" IN CONCRETE. SEE SECTION A-A

USE 1⁄16" X 2½" LONG SLOTTED HOLES



PLAN

NE WING SHOWN
SW WING SIMILAR
SE & NW WINGS OPPOSITE HAND

NOTES

BID ITEM "STRAPPING B-11-68" INCLUDES ALL ITEMS SHOWN.

ALL PROVIDED STEEL MATERIAL SHALL CONFORM TO ASTM A36.

ALL STRUCTURAL STEEL SHOWN SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123. THREADED RODS, MASONRY ANCHORS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C.

CUTTING AND DRILLING OF CHANNEL SHALL BE DONE IN FABRICATION SHOP, PRIOR TO GALVANIZING.

CAULK AROUND PERIMETER OF CHANNEL AND FILL PORTION OF HOLE AROUND ANCHOR BOLT AND SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-68

DRAWN BY BGS | PLANS CK'D. WJZ

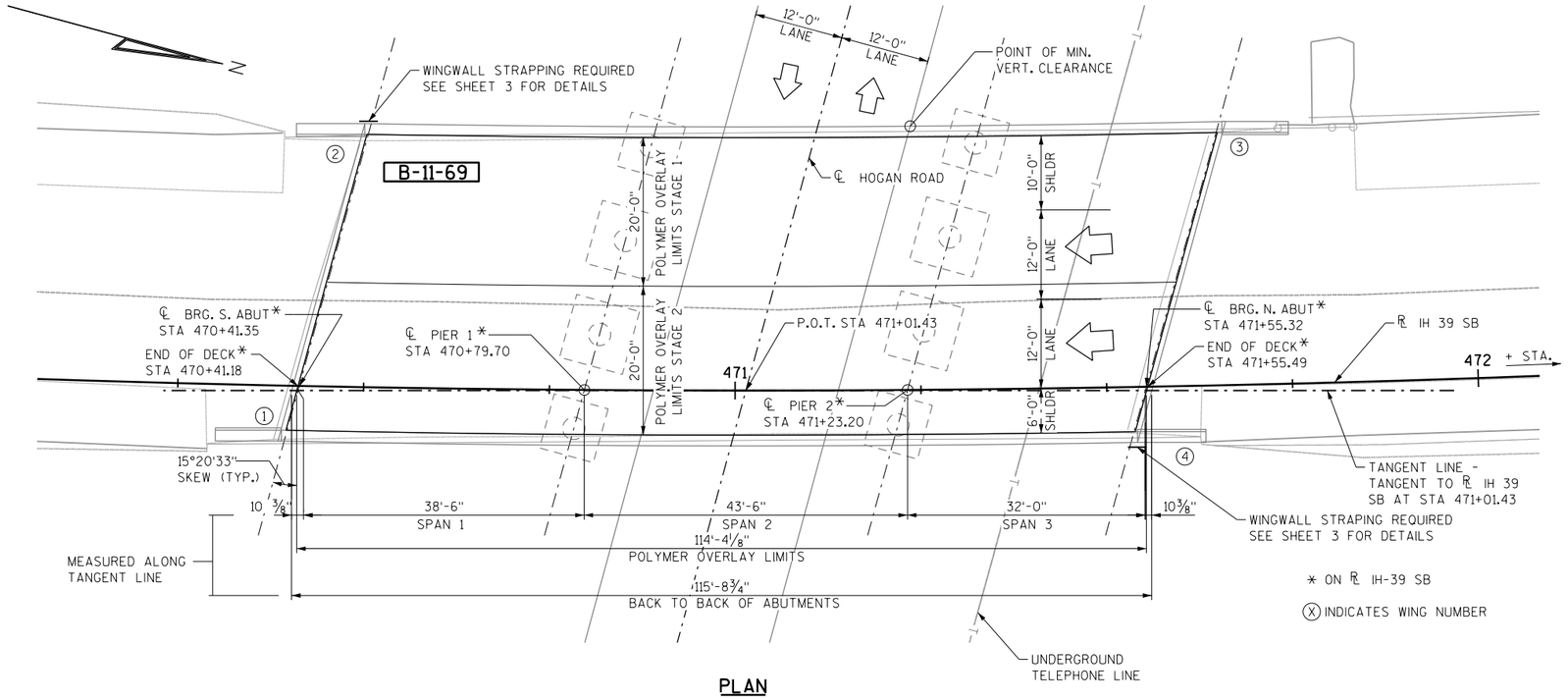
WING STRAPPING

SHEET 3 OF 3

33

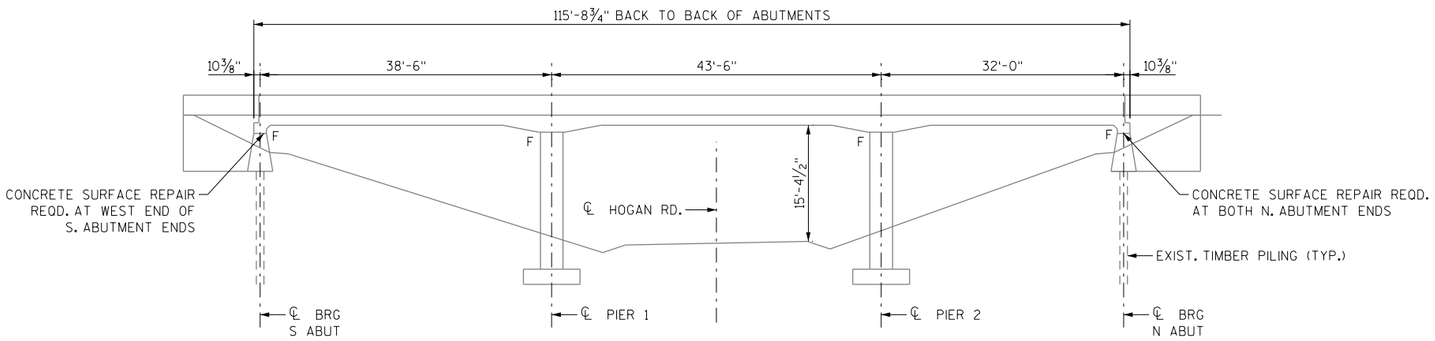
FILE= 30_STRAPING_B1168.DGN
SCALE = 1:1

STATE PROJECT NUMBER
1161-00-67



PLAN

THREE SPAN CONCRETE HAUNCHED SLAB
POLYMER OVERLAY



ELEVATION

(LOOKING WEST)

* VERTICAL CLEARANCE IS TAKEN FROM THE MOST RECENT ROUTINE INSPECTION REPORT DATED 9/1/2020.

TOTAL ESTIMATED QUANTITY

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S ABUT	N ABUT	SUPER	TOTAL
509.0301	PREPARATION DECKS TYPE 1	SY			18	18
509.0302	PREPARATION DECKS TYPE 2	SY			9	9
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF			200	200
509.1500	CONCRETE SURFACE REPAIR	SF	5	10		15
509.5100.S	POLYMER OVERLAY	SY			509	509
SPV.0035.01	RAPID SET DECK REPAIR	CY			1	1
SPV.0060.02	STRAPPING B-11-69	EA	1	1		2

GENERAL NOTES:

DRAWINGS SHALL NOT BE SCALED.

EXISTING STRUCTURE DIMENSIONS ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY"

CONCRETE SURFACE REPAIR LOCATIONS ARE TO BE IDENTIFIED AND COORDINATED WITH THE ENGINEER.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING HS20
INVENTORY RATING HS27
OPERATING RATING HS45
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) = 250 KIPS

TRAFFIC DATA

A.A.D.T. = 7,770 (2021)
A.A.D.T. = 7,770 (2041)

LIST OF DRAWINGS:

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BRIDGE OFFICE:
AARON BONK, PE
(608) 261-2061

CONSULTANT:
WILLIAM J. ZIPPEL, PE, SE
ALFRED BENESCH & CO
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
(414) 308-1321

WISCONSIN
WILLIAM J. ZIPPEL
38868-006
MILWAUKEE, WI
12/8/2020
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20278.01

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ SDR 02/09/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-11-69

IH-39 SB OVER HOGAN RD

COUNTY	TOWN/~~CITY/VILLAGE~~
COLUMBIA	FORT WINNEBAGO

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JAP	WJZ	BGS	WJZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 3

34

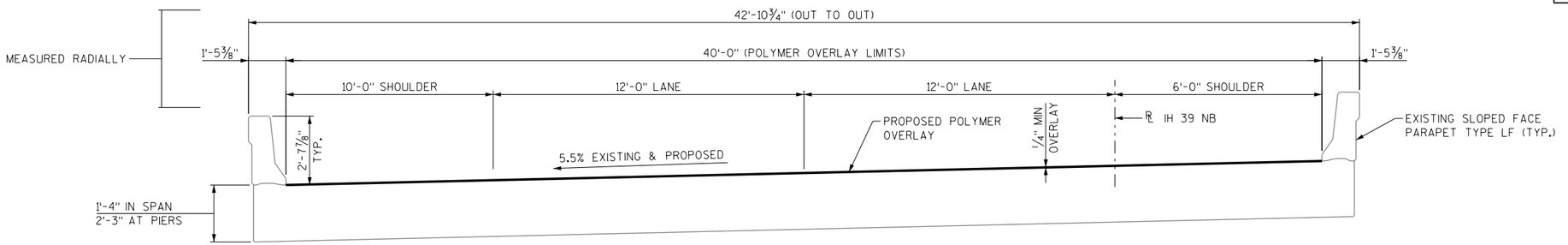
FILE= 10_GP&E_B1169.DGN
SCALE = 1:20

8

8

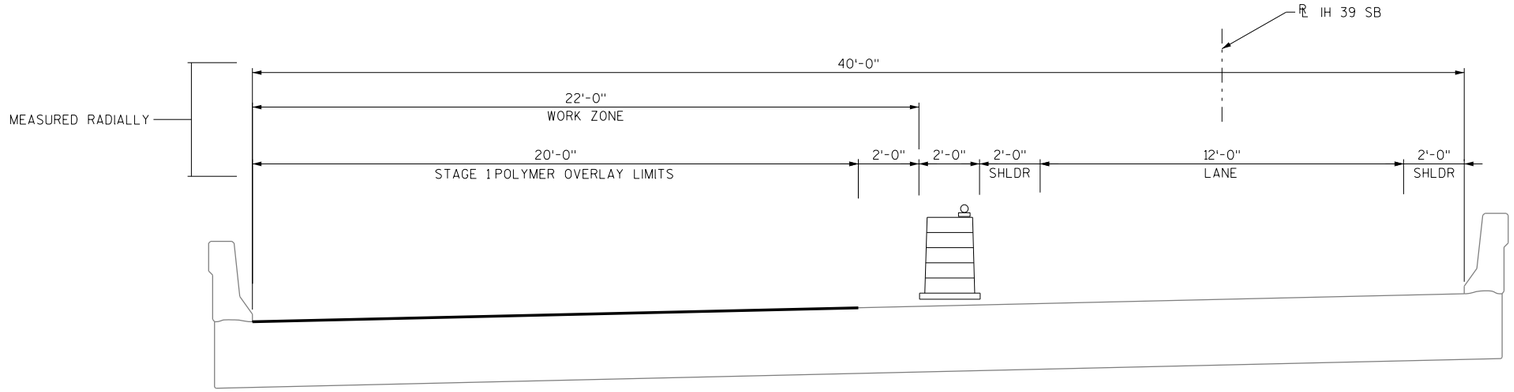
STATE PROJECT NUMBER

1161-00-67



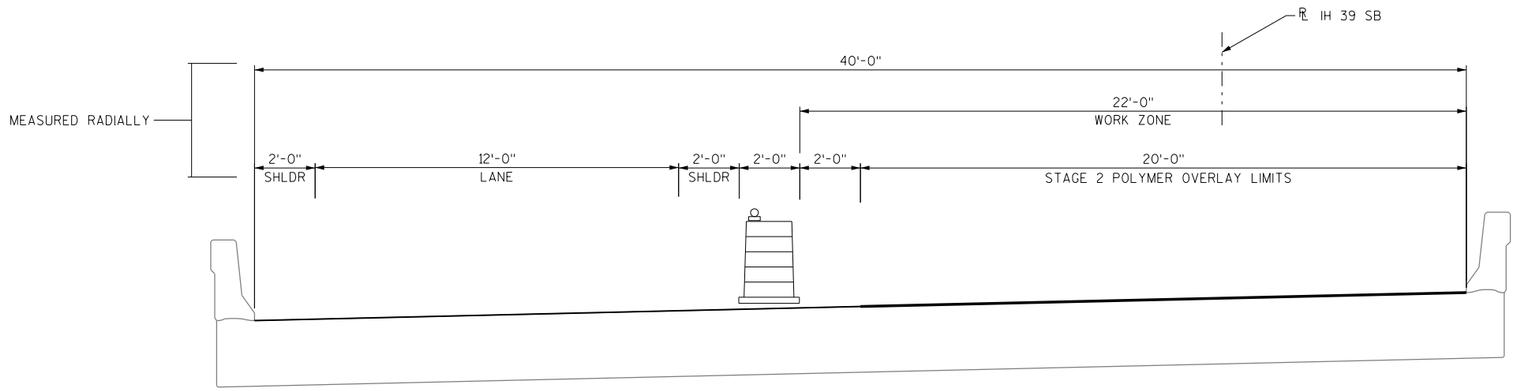
TYPICAL SECTION

LOOKING NORTH



STAGE 1

LOOKING NORTH



STAGE 2

LOOKING NORTH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-69

DRAWN BY BGS | PLANS CK'D. WJZ

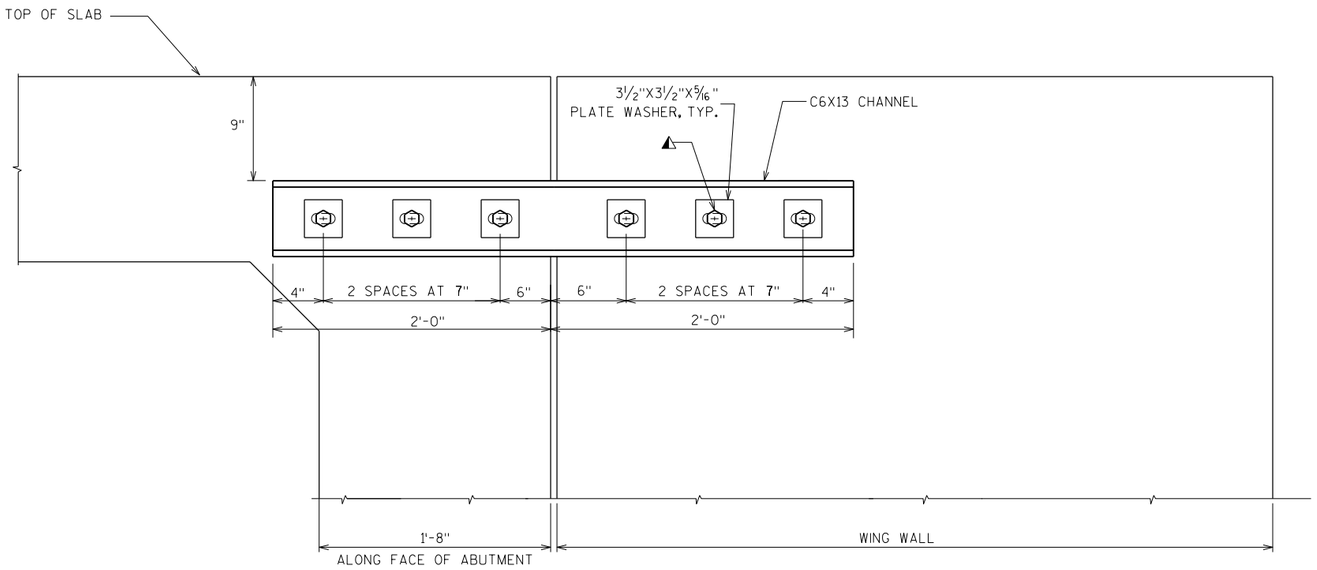
TYPICAL SECTION & STAGING PLAN

SHEET 2 OF 3

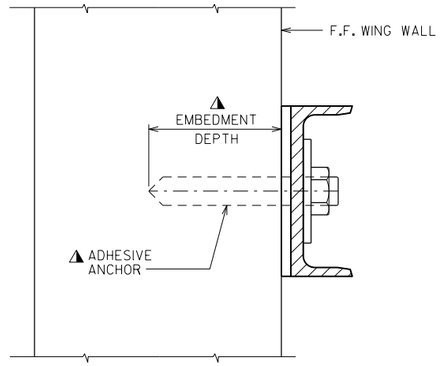
35

FILE= 20_STAGING_B1169.DGN
SCALE = 1:10

STATE PROJECT NUMBER
1161-00-67



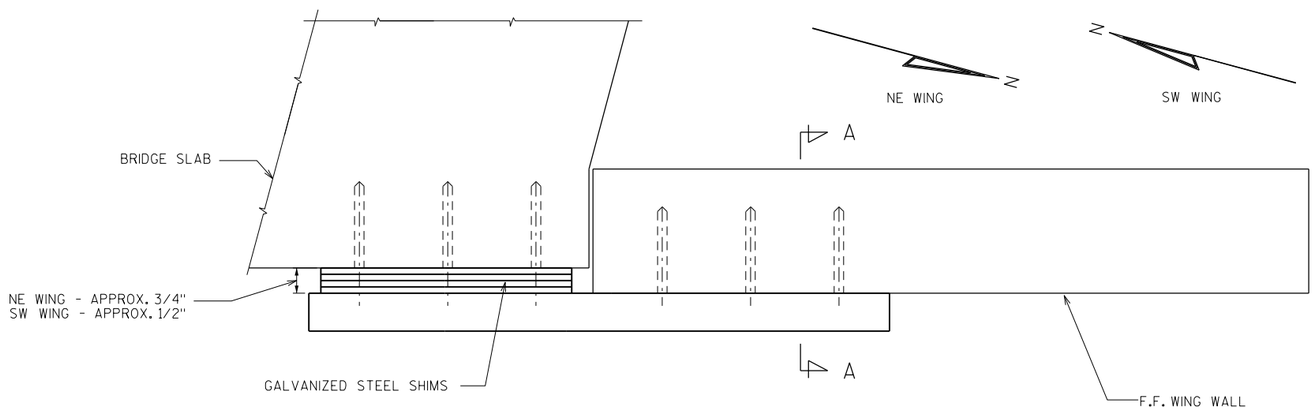
WING ELEVATION



SECTION A-A

▲ ADHESIVE ANCHOR 1-INCH. EMBED 10" IN CONCRETE. SEE SECTION A-A

USE 1⁄16" X 2½" LONG SLOTTED HORIZONTAL HOLES IN C6X13 CHANNEL.



PLAN

NOTES

BID ITEM "STRAPPING B-11-69" INCLUDES ALL ITEMS SHOWN.

ALL PROVIDED STEEL MATERIAL SHALL CONFORM TO ASTM A36.

ALL STRUCTURAL STEEL SHOWN SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123. THREADED RODS, MASONRY ANCHORS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C.

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CAULK AROUND PERIMETER OF CHANNEL AND FILL PORTION OF HOLE AROUND ANCHOR BOLT AND SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

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8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-69

DRAWN BY BGS | PLANS CK'D. WJZ

WING STRAPPING

SHEET 3 OF 3

36

FILE= 30_STRAPING_B1169.DGN
SCALE = 1:1

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

MAD MAY 2021

PROJECT ID: 1161-02-67

WITH: 1161-00-67

COUNTY: COLUMBIA

03

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right-of-Way Plat~~
~~Section No.~~	~~5~~	~~Plan and Profile~~
Section No.	6	Standard Detail Drawings
~~Section No.~~	~~7~~	~~Sign Plates~~
~~Section No.~~	~~8~~	~~Structure Plans~~
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 248

N

DESIGN DESIGNATION

A.A.D.T.	2021	=	16,540
A.A.D.T.	2041	=	16,840
D.H.V.		=	15.5
D.D.		=	60/40
T.		=	18.4%
DESIGN SPEED		=	75 MPH
ESALS		=	N/A

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
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS
- MARSH AREA
- WOODED OR SHRUB AREA

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

UTILITIES
- ELECTRIC
- FIBER OPTIC
- GAS
- SANITARY SEWER
- STORM SEWER
- TELEPHONE
- WATER
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MADISON - PORTAGE

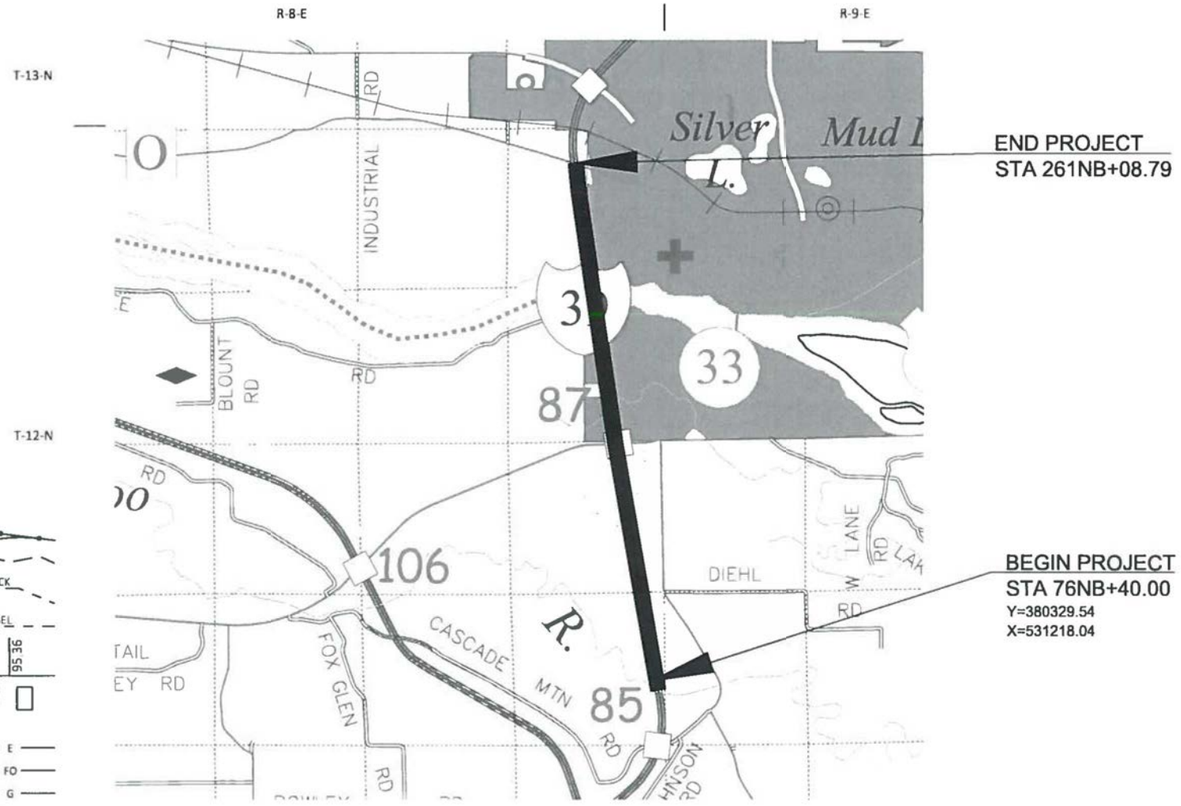
BARABOO RIVER TO CTH O

IH 39

COLUMBIA COUNTY

STATE PROJECT NUMBER
1161-02-67

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1161-02-67	WISC 2021300	1



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 3.498 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), COLUMBIA 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 18.

ORIGINAL PLANS PREPARED BY

benesch

Alfred Benesch & Company

1300 West Canal Street, Suite 150

Milwaukee, Wisconsin 53233

WISCONSIN TIMOTHY A. WATT E-43069 BIG BEND, WI PROFESSIONAL ENGINEER

DATE: 01/15/2021 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	M SQUARED
Designer	ALFRED BENESCH & CO
Project Manager	GREGORY PAYNE
Regional Examiner	SW REGION
Regional Supervisor	WILLIAM STROBEL

APPROVED FOR THE DEPARTMENT

DATE: Gregory Payne Digitally signed by Gregory Payne Date: 2021.01.19 11:17:48 -06'00' (Signature)

E

FILE NAME : Y:\MILWAUKEE\202005\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267 CABLE GUARD\010102-TI.DWG PLOT DATE : 1/12/2021 4:42 PM PLOT BY : WATT, TIMOTHY PLOT NAME :

GENERAL NOTES

1. THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.
2. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPALITY OR PUBLIC AGENCY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
3. ALL ELEVATIONS AND OFFSETS SHOWN IN THE PLAN SHALL BE VERIFIED IN THE FIELD.
4. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
5. THE COST OF GRADING, CONSTRUCTING, MAINTAINING, AND REMOVING TEMPORARY ACCESS IS INCIDENTAL TO THE CONTRACT.
6. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY-IN
7. ALL STATION, OFFSETS AND CROSS SECTIONS ARE BASED OFF NORTHBOUND ALIGNMENT AND STATIONING.
8. CONTRACTOR SHALL TAKE MEASURES TO AVOID IMPACTING OR FILLING IN ANY EXISTING UNDERDRAIN PIPES OR ASSOCIATED OUTFALLS THAT ARE NOT SHOWN AS BEING ADJUSTED OR REPLACED.
9. CONTRACTOR SHALL TAKE MEASURES TO AVOID UNDERDRAIN OUTFALL PIPES, CULVERTS AND OTHER DRAINAGE INFRASTRUCTURE IN THE MEDIAN WHEN INSTALLING GUARDRAIL POSTS. GUARDRAIL POST LOCATIONS SHALL BE ADJUSTED AS-NECESSARY TO AVOID ADVERSE IMPACTS TO THE EXISTING DRAINAGE FACILITIES.
10. REMOVAL OF ANY NECESSARY EXISTING UNDERDRAIN UNPERFORATED OUTFALL PIPES AND ANY ASSOCIATED APRON ENDWALLS OR OTHER OUTFALL STRUCTURES FOR UNDERDRAINS NECESSARY TO EXTEND UNDERDRAIN OUTFALLS TO TIE IN WITH THE NEW MEDIAN GRADING SHALL BE INCLUDED IN THE PAY ITEM FOR REMOVING PIPE AND APRON ENDWALL FOR UNDERDRAIN.

EROSION CONTROL GENERAL NOTES

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

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ASPH	ASPHALT
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BF	BACK FACE
BL	BASE LINE
BM	BENCH MARK
CB	CATCH BASIN
C/L	CENTERLINE
CC	CENTER TO CENTER
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
C&G	CURB AND GUTTER
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
ELEV	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FF	FACE TO FACE
FE	FIELD ENTRANCE
FG	FINISHED GRADE
FL	FLOW LINE
FT	FOOT
FTMS	FREEWAY TRAFFIC MANAGEMENT SYSTEM
HES	HIGH EARLY STRENGTH
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE
JT	JOINT
JCT	JUNCTION
LT	LEFT
L	LENGTH OF CURVE
LHF	LEFT-HAND FORWARD
LF	LINEAR FOOT
L	LITER
LS	LUMP SUM
MH	MANHOLE
MB	MESSAGE BOARD
MLB	MAILBOX
ML	MATCH LINE
NC	NORMAL CROWN
N	NORTH
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
NO	NUMBER
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PERM	PERMANENT
PLE	PERMANENT LIMITED EASEMENT
PT	POINT
PVC	POLYVINYL CHLORIDE
PCC	PORTLAND CEMENT CONCRETE
PE	PRIVATE ENTRANCE
PROJ	PROJECT
PL	PROPERTY LINE
R	RADIUS
R/L	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQD	REQUIRED
RT	RIGHT
RHF	RIGHT HAND FORWARD
R/W	RIGHT-OF-WAY
RD	ROAD
RDWY	ROADWAY
SALV	SALVAGED
SSS	SANITARY AND STORM SEWER
SAN S	SANITARY SEWER
SEC	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SP	SPECIAL
SPECS	SPECIFICATIONS
SQ	SQUARE
SF	SQUARE FEET
SY	SQUARE YARD
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
STR	STRUCTURE OR STRUCTURAL
SL	SURVEY LINE
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
UG	UNDERGROUND
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
W	WATER
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
BEAM GUARD PLAN DETAILS
DRAINAGE PLAN DETAILS
TRAFFIC CONTROL
ALIGNMENT PLAN

OTHER AGENCIES

WISCONSIN ITSNET

WISDOT
JEFF MADSON
433 W ST PAUL AVE, STE 300
MILWAUKEE, WI 53203-3007
PHONE: (414) 225-3723
EMAIL: JEFFREY.MADSON@DOT.WI.GOV

WISDOT

SOUTHWEST REGION
GREGORY PAYNE
2101 WRIGHT STREET
MADISON, WI 53074
PHONE: (608) 242-8058
EMAIL: GREGORY.PAYNE@DOT.WI.GOV

DESIGN CONTACT

ALFRED BENESCH
AMANDA ZACHARIAS
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
PHONE: (414) 308-1310
EMAIL: AZACHARIAS@BENESCH.COM

DNR CONTACT

DNR SOUTHERN REGION
ERIC HEGGELUND
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: (608) 228-7927
EMAIL: ERIC.HEGGELUND@WISCONSIN.GOV

UTILITIES

ELECTRICITY

ALLIANT ENERGY
STEVE KOHLHAGEN
2777 COLUMBIA DR
PORTAGE, WI 53901
PHONE: (608) 742-0830
EMAIL: STEVEKOHLHAGEN@ALLIANTENERGY.COM

GAS/PETROLEUM

ALLIANT ENERGY
STEVE KOHLHAGEN
2777 COLUMBIA DR
PORTAGE, WI 53901
PHONE: (608) 742-0830
EMAIL: STEVEKOHLHAGEN@ALLIANTENERGY.COM

ELECTRICTY

ATC MANAGEMENT, INC
TRANS 220 MAILBOX (DOUG VOSBERG)
801 O'KEEFE RD
DEPERE, WI 54115
PHONE: (920) 338-6582
EMAIL: DL-ATCDOTNOTIFICATIONS@ATCLLC.COM

COMMUNICATIONS

CHARTER COMMUNICATIONS
JERRY BLAKE
2701 DANIELS ST
MADISON, WI 53718
PHONE: (608) 576-9208
EMAIL: JERRY.BLAKE@CHARTER.COM

COMMUNICATIONS

FRONTIER COMMUNICATIONS OF WI LLC
JERALD MOORE
2222 W WISCONSIN ST
PORTAGE, WI 53901
PHONE: (608) 742-9507
EMAIL: JERALD.R.MOORE@FTR.COM

COMMUNICATIONS

MADISON COLLEGE
WESLEY MARQUARDT
1701 WRIGHT ST
MADISON, WI 53704
PHONE: (608) 243-4040
EMAIL: WMARQUARDT@MADISONCOLLEGE.EDU

GAS/PETROLEUM

NORTHERN NATRUAL GAS COMPANY
LENNY KLAAS
5557 COUNTY HIGHWAY D
PLATTEVILLE, WI 53818
PHONE: (402) 530-2026 MOBILE: (608) 778-8514
EMAIL: LEONARD.KLAAS@NNGCO.COM

PAVEMENT LOCATION	TOTAL PAVEMENT THICKNESS	LAYER	TYPE
IH 39 INSIDE SHOULDERS	3 1/2-INCHES	3 1/2" UPPER	4-LT 58-28 S

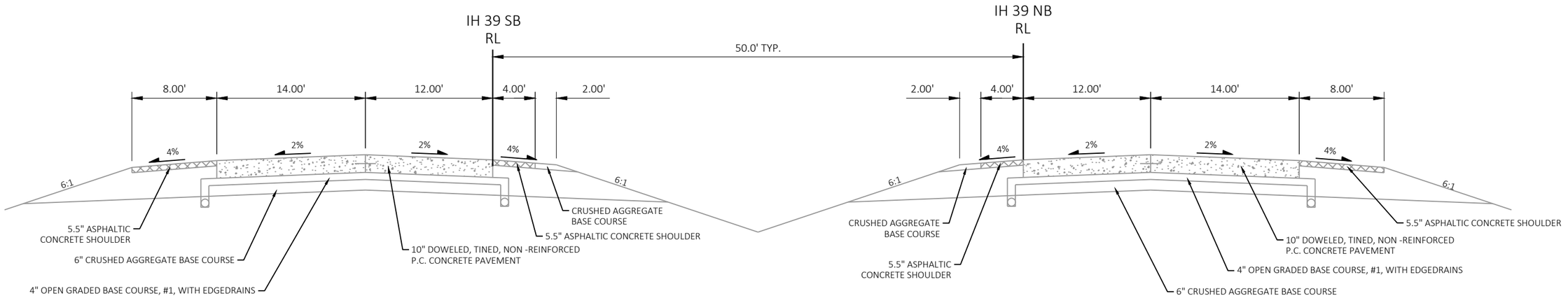
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\020202-PO.DWG
LAYOUT NAME - 01

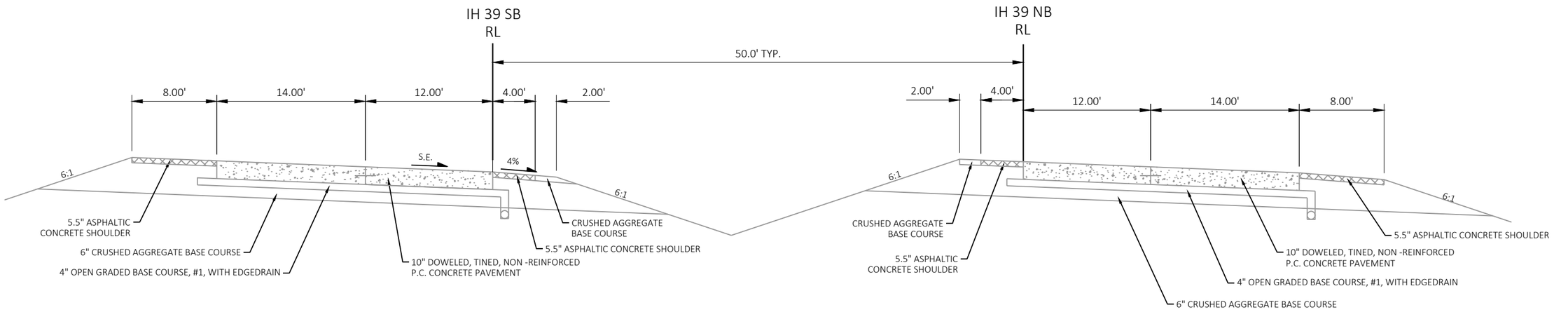
PLOT DATE : 1/12/2021 4:43 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 44



EXISTING TYPICAL SECTION

STA 75NB+00 TO 254NB+00



EXISTING TYPICAL SECTION

STA 254NB+00 TO 261NB+08

NB R/L FOR STATIONING AND OFFSET INFORMATION
SB R/L FOR REFERNCE ONLY

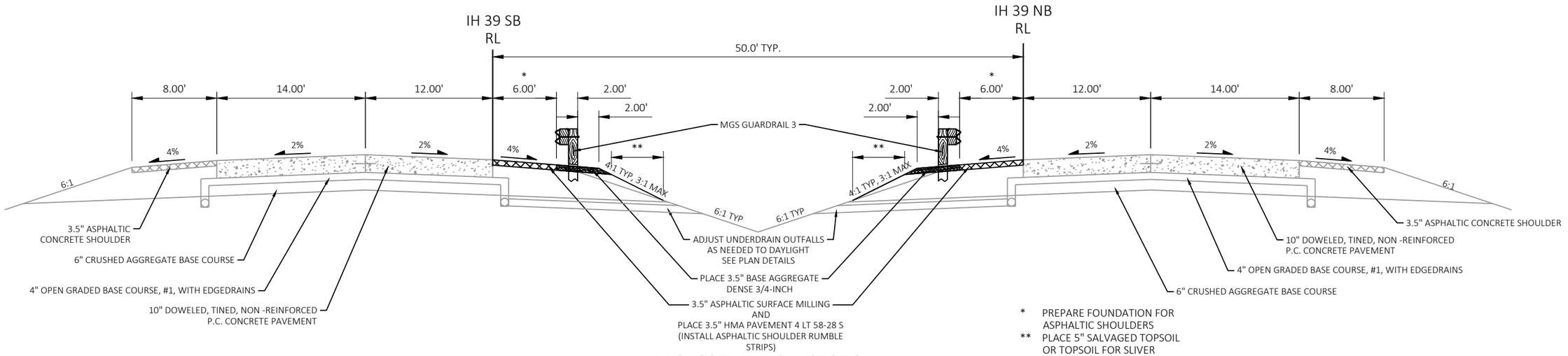
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	TYPICAL SECTIONS	SHEET 4	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\020302-TS.DWG
LAYOUT NAME - 020301-ts 1in-10ft

PLOT DATE : 1/12/2021 4:43 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2

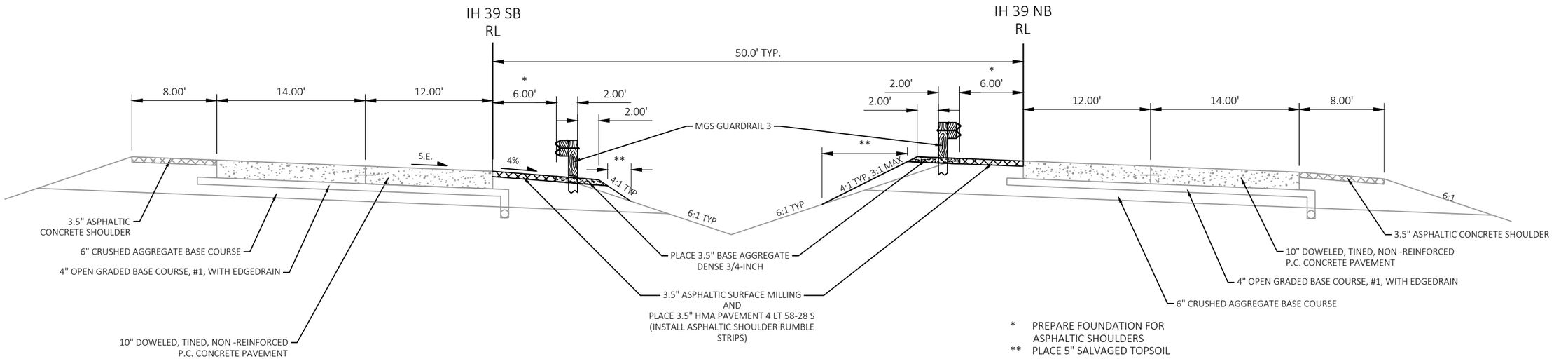


PROPOSED TYPICAL SECTION

STA 75NB+00 TO 254NB+00

* PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

** PLACE 5" SALVAGED TOPSOIL OR TOPSOIL FOR SLIVER GRADING AT THE DIRECTION OF THE ENGINEER, EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B AND SEEDING MIXTURE NO. 70A FOR RESTORATION



PROPOSED TYPICAL SECTION

STA 254NB+00 TO 261NB+08

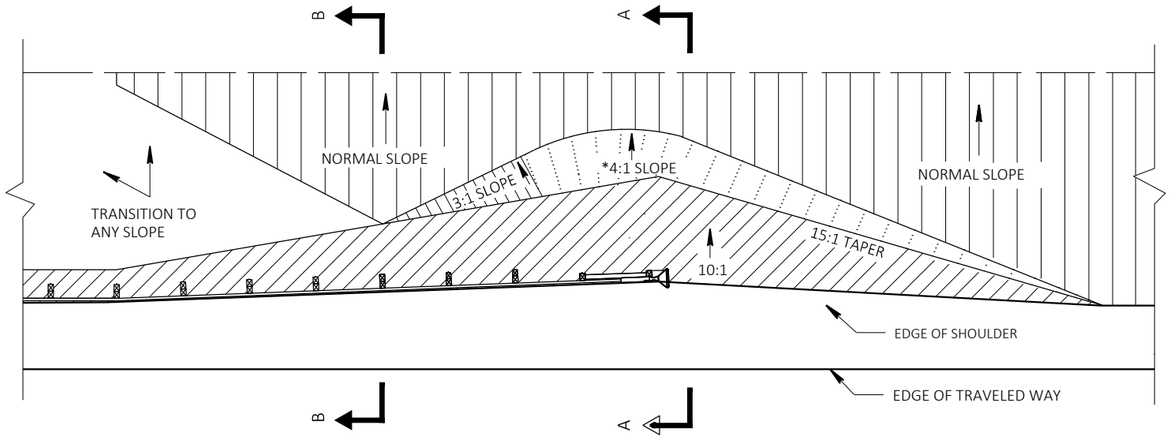
* PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

** PLACE 5" SALVAGED TOPSOIL OR TOPSOIL FOR SLIVER GRADING AT THE DIRECTION OF THE ENGINEER, EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B AND SEEDING MIXTURE NO. 70A FOR RESTORATION

NB R/L FOR STATIONING AND OFFSET INFORMATION
SB R/L FOR REFERNCE ONLY

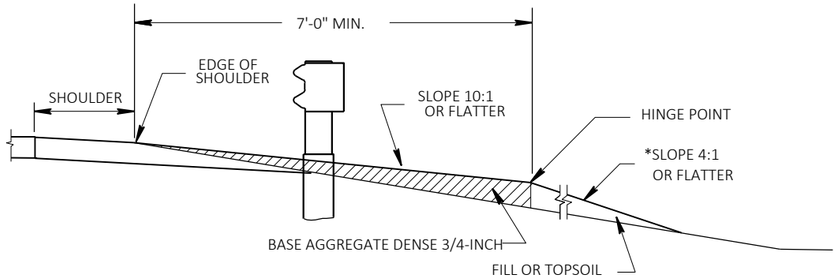
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\020302-TS.DWG
LAYOUT NAME - 020302-ts 1in-10ft
PLOT DATE : 1/25/2021 1:35 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

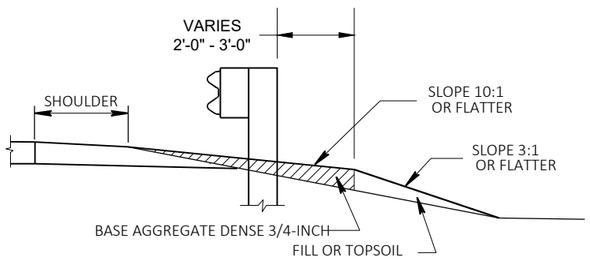


PLAN VIEW

*A 3:1 MAXIMUM SLOPE MAY BE USED FOR INSTALLATIONS ON EXISTING HIGHWAYS.

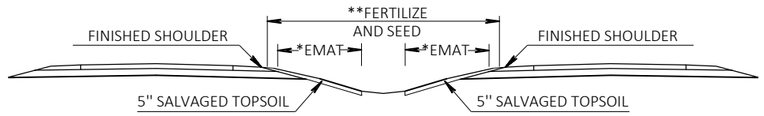


SECTION A-A



SECTION B-B

FILL AREA AT BEAM GUARD



* EMAT USED ON DISTURBED SIDE SLOPE AREAS OF DITCH SHALL BE EROSION MAT URBAN CLASS I TYPE B

** DISTURBED AREAS TO BE FERTILIZED & SEEDED

DETAIL FOR FINISHING ITEMS

NOTE: ANY DISTURBED AREAS WITHIN 1 FOOT OF DITCH BOTTOM VERTICALLY SHALL USE EROSION MAT CLASS II TYPE C FOR CHANNEL RESTORATION AT DITCH BOTTOM. SIDE SLOPES CAN STILL USE EROSION MAT URBAN CLASS I TYPE B

2

2

N

IH 39 SB RL

IH 39 SB

79SB+00

80SB+00

Alignment=39NB
Station=79+92.52NB
Offset=-30.197
Northing=380673.2750
Easting=531132.7794

SAWCUT & REMOVE
EXISTING HMA PAVEMENT

Alignment=39NB
Station=80+16.93NB
Offset=-30.058
Northing=380697.4023
Easting=531129.0816

24'

5'

5'

EXISTING CULVERT TO BE
REMOVED, PLACE PROPOSED
STORM SEWER PIPE. SEE STORM
SEWER PLANS FOR DETAILS

REPLACE EXISTING AGGREGATE
TO MATCH EXISTING CONDITIONS
WITH BASE AGGREGATE DENSE 3/4-INCH

REPLACE EXISTING AGGREGATE
TO MATCH EXISTING CONDITIONS
WITH BASE AGGREGATE DENSE 3/4-INCH

Alignment=39NB
Station=79+92.18NB
Offset=-20.199
Northing=380674.5071
Easting=531142.7073

Alignment=39NB
Station=80+17.24NB
Offset=-20.056
Northing=380699.2872
Easting=531138.9095

SAWCUT & REMOVE
EXISTING HMA PAVEMENT

80NB+00

IH 39 NB RL

IH 39 NB

REMOVE EXISTING HMA PAVEMENT
AND EXISTING CULVERT PIPE. INSTALL
PROPOSED STORM SEWER PER STORM
SEWER PLANS. FILL IN TRENCH TO AN
ELEVATION ALLOWING FOR 4"
ASPHALTIC SURFACE OVER 10" BASE
AGGREGATE DENSE 1 1/4-INCH TO
REPLACE MAINTENANCE CROSSOVER
PAVEMENT.

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CONSTRUCTION DETAILS - MAINTENANCE CROSSOVER REMOVE AND REPLACE	SHEET 7	E

2

80+75.00

N

BARABOO RIVER

SI

WETLAND BOUNDARY

STA 80NB+29
44.0' LT
SAW CUT & MATCH HMA PAVEMENT
TO EXISTING MAINTENANCE CROSSOVER

WETLAND
BOUNDARY

PLACE STEEL THRIE BEAM

STEEL THRIE BEAM STRUCTURE
APPROACH TO REMAIN - 20'-7 ¾"

STA 78+80 TO79NB+33
PLACE STEEL THRIE BEAM
BULLNOSE TERMINAL
BULLNOSE BEGIN = 79NB+33
POST 1 = 79NB+29
POST 5 = 79NB+16

IH 39 SB RL

IH 39 SB

WETLAND IMPACT
AREA

74SB+00 75SB+00 76SB+00 77SB+00 78SB+00 79SB+00 80SB+00

74NB+00 75NB+00 76NB+00 77NB+00 78NB+00 79NB+00 80NB+00

IH 39 NB

MOVE EXISTING AND REPLACE
AFTER CONSTRUCTION

REMOVE EXISTING BULLNOSE AND
THRIE BEAM

STA 80NB+00
SAW CUT & REMOVE EXISTING
MAINTENANCE CROSSOVER TO INSTALL
PROPOSED STORM SEWER PIPE.
SEE CONSTRUCTION DETAIL
FOR MORE INFORMATION.

WETLAND IMPACT
AREA

STEEL THRIE BEAM STRUCTURE
APPROACH TO REMAIN - 20'-7 ¾"

IH 39 NB RL

WETLAND
BOUNDARY

BEGIN PROJECT
STA 76NB+40.00

STA 80NB+30
6.0' LT
SAW CUT & MATCH HMA PAVEMENT
TO EXISTING MAINTENANCE CROSSOVER

MOVE EXISTING AND REPLACE
AFTER CONSTRUCTION

MGS GUARDRAIL
TERMINAL EAT
STA 80NB+56
8.0' LT
POST 1 = 80NB+56, 8.0' LT
POST 3 = 80NB+69, 7.5' LT
POST 5 = 80NB+81, 7.0' LT
POST 9 = 81NB+06, 6.0' LT

SI

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

WETLAND IMPACTS ON
THIS PAGE = 0.060 ACRES

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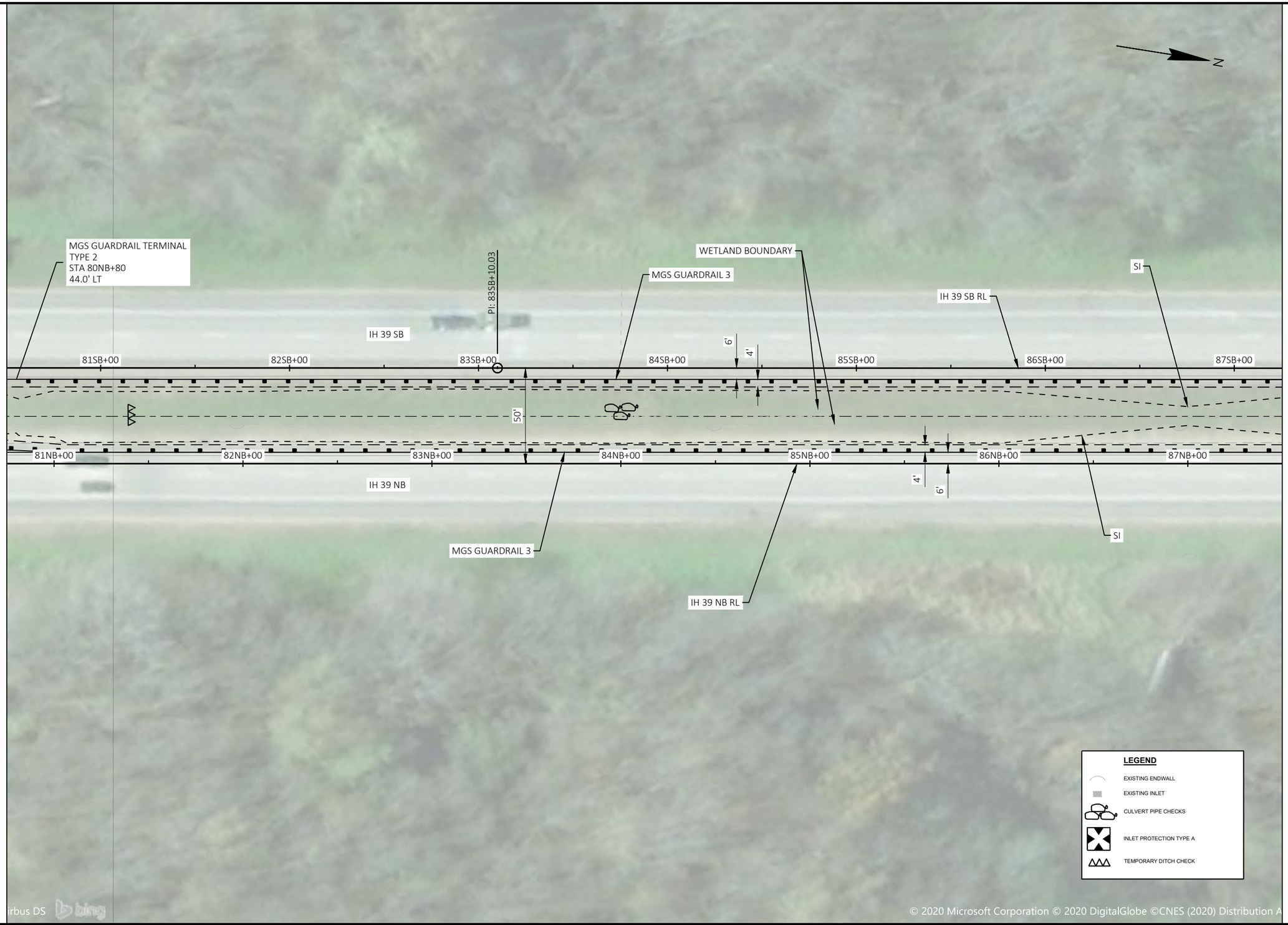
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 8	E

2

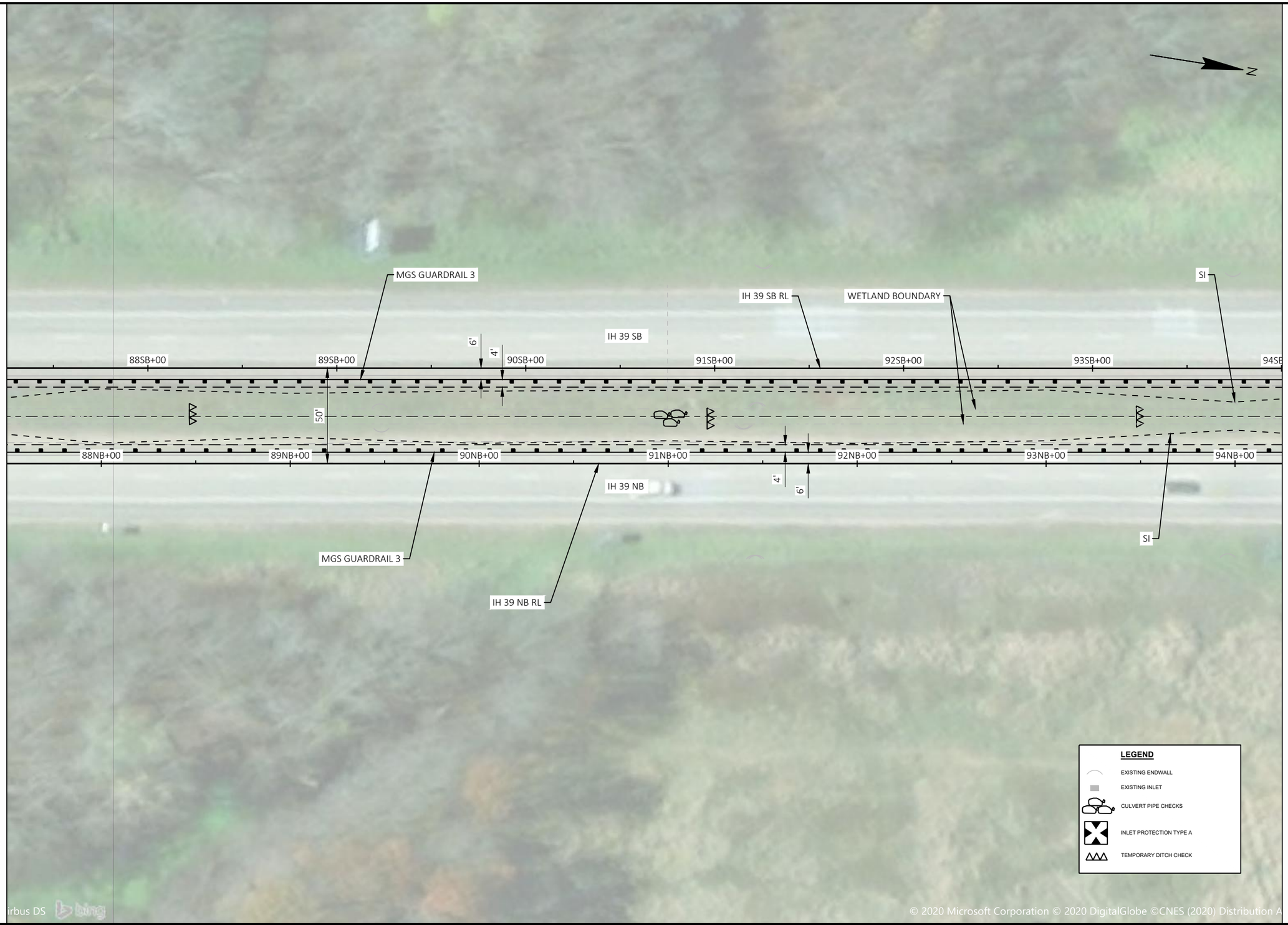


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 9	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 02

PLOT DATE : 1/12/2021 4:46 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 10	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 03

PLOT DATE : 1/12/2021 4:46 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

101+00.00

94+25.00

N

WETLAND BOUNDARY

MGS GUARDRAIL 3

IH 39 SB RL

SI

IH 39 SB

6'

4'

+00

95SB+00

96SB+00

97SB+00

98SB+00

99SB+00

100SB+00

50'

95NB+00

96NB+00

97NB+00

98NB+00

99NB+00

100NB+00

101N

IH 39 NB

4'

6'

IH 39 NB RL

MGS GUARDRAIL 3

SI

LEGEND

EXISTING ENDWALL

EXISTING INLET

CULVERT PIPE CHECKS

INLET PROTECTION TYPE A

TEMPORARY DITCH CHECK

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 11	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 04

PLOT DATE : 1/12/2021 4:46 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

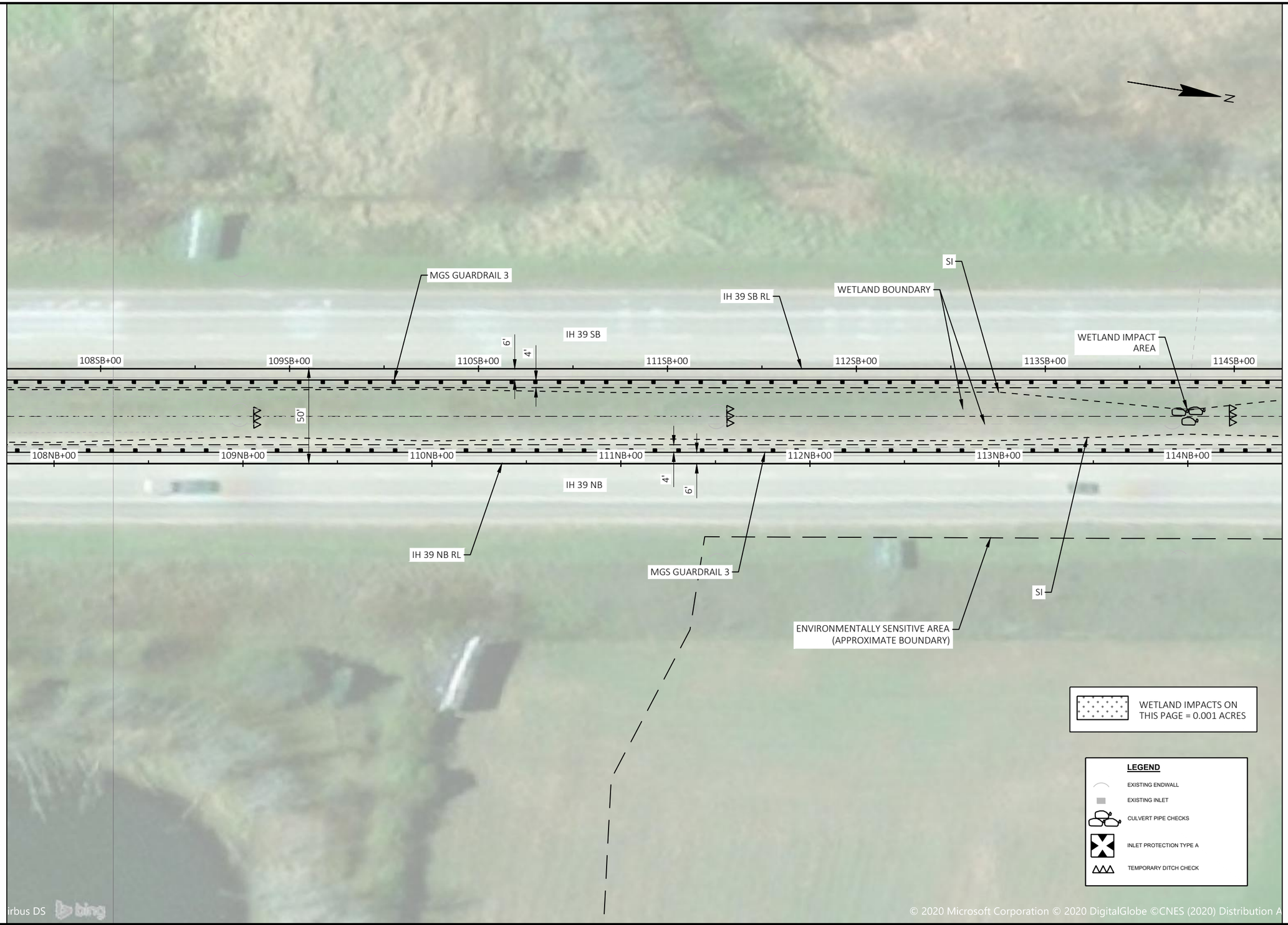
WISDOT/CADDS SHEET 42

2

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 12	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 05

PLOT DATE : 1/12/2021 4:47 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT



PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 13	E

2

N

121+25.00

WETLAND BOUNDARY

IH 39 SB RL

MGS GUARDRAIL 3

SI

IH 39 SB

115SB+00 116SB+00 117SB+00 118SB+00 119SB+00 120SB+00 121S

6'

4'

50'

115NB+00 116NB+00 117NB+00 118NB+00 119NB+00 120NB+00 121NB+00

IH 39 NB

4'

6'

IH 39 NB RL

MGS GUARDRAIL 3

SI

ENVIRONMENTALLY SENSITIVE AREA
(APPROXIMATE BOUNDARY)

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

114+50.00

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 14	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 07

PLOT DATE : 1/12/2021 4:47 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 15	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 08

PLOT DATE : 1/12/2021 4:48 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

134+75.00

N

MGS GUARDRAIL 3

IH 39 SB RL

WETLAND BOUNDARY

SI

IH 39 SB

6'

4'

128SB+00 129SB+00 130SB+00 131SB+00 132SB+00 133SB+00 134SB+00

50'

B+00 129NB+00 130NB+00 131NB+00 132NB+00 133NB+00 134NB+00

IH 39 NB

4'

6'

IH 39 NB RL

MGS GUARDRAIL 3

SI

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

128+00.00

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 16	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 09

PLOT DATE : 1/12/2021 4:48 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 17	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 10

PLOT DATE : 1/12/2021 4:48 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

148+25.00

141+50.00

N

STA 144NB+75
44.0' LT
SAW CUT & MATCH HMA PAVEMENT
TO EXISTING MAINTENANCE CROSSOVER

MOVE EXISTING AND REPLACE
AFTER CONSTRUCTION

MGS GUARDRAIL
TERMINAL EAT
STA 144NB+54
42.0' LT
POST 1 = 144NB+54, 42.0' LT
POST 3 = 144NB+42, 42.5' LT
POST 5 = 144NB+29, 43.0' LT
POST 9 = 144NB+04, 44.0' LT

IH 39 SB RL

MGS GUARDRAIL 3

WETLAND BOUNDARY

SI

IH 39 SB

142SB+00 143SB+00 144SB+00 145SB+00 146SB+00 147SB+00 148S

6' 4' 50' 4' 6'

142NB+00 143NB+00 144NB+00 145NB+00 146NB+00 147NB+00 148NB+00

IH 39 NB

CAUTION

IH 39 NB RL

MGS GUARDRAIL 3

SI

MGS GUARDRAIL
TERMINAL TYPE 2
STA 144NB+25
6.0' LT

WETLAND IMPACT
AREA

STA 144NB+70
6.0' LT
SAW CUT & MATCH HMA PAVEMENT
TO EXISTING MAINTENANCE CROSSOVER

NORTHERN NATURAL GAS
(UG GAS)

STA 145NB+25
44.0' LT
SAW CUT & MATCH HMA PAVEMENT
TO EXISTING MAINTENANCE CROSSOVER

MGS GUARDRAIL
TERMINAL TYPE 2
STA 145NB+75
44.0' LT

SI

MGS GUARDRAIL 3

WETLAND BOUNDARY

WETLAND IMPACT
AREA

MGS GUARDRAIL
TERMINAL EAT
STA 145NB+52
8.0' LT
POST 1 = 145NB+52, 8.0' LT
POST 3 = 145NB+64, 7.5' LT
POST 5 = 145NB+77, 7.0' LT
POST 9 = 146NB+02, 6.0' LT

MOVE EXISTING AND REPLACE
AFTER CONSTRUCTION

STA 145NB+25
6.0' LT
SAW CUT & MATCH HMA PAVEMENT
TO EXISTING MAINTENANCE CROSSOVER

SI

MGS GUARDRAIL 3

WETLAND IMPACTS ON
THIS PAGE = 0.005 ACRES

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

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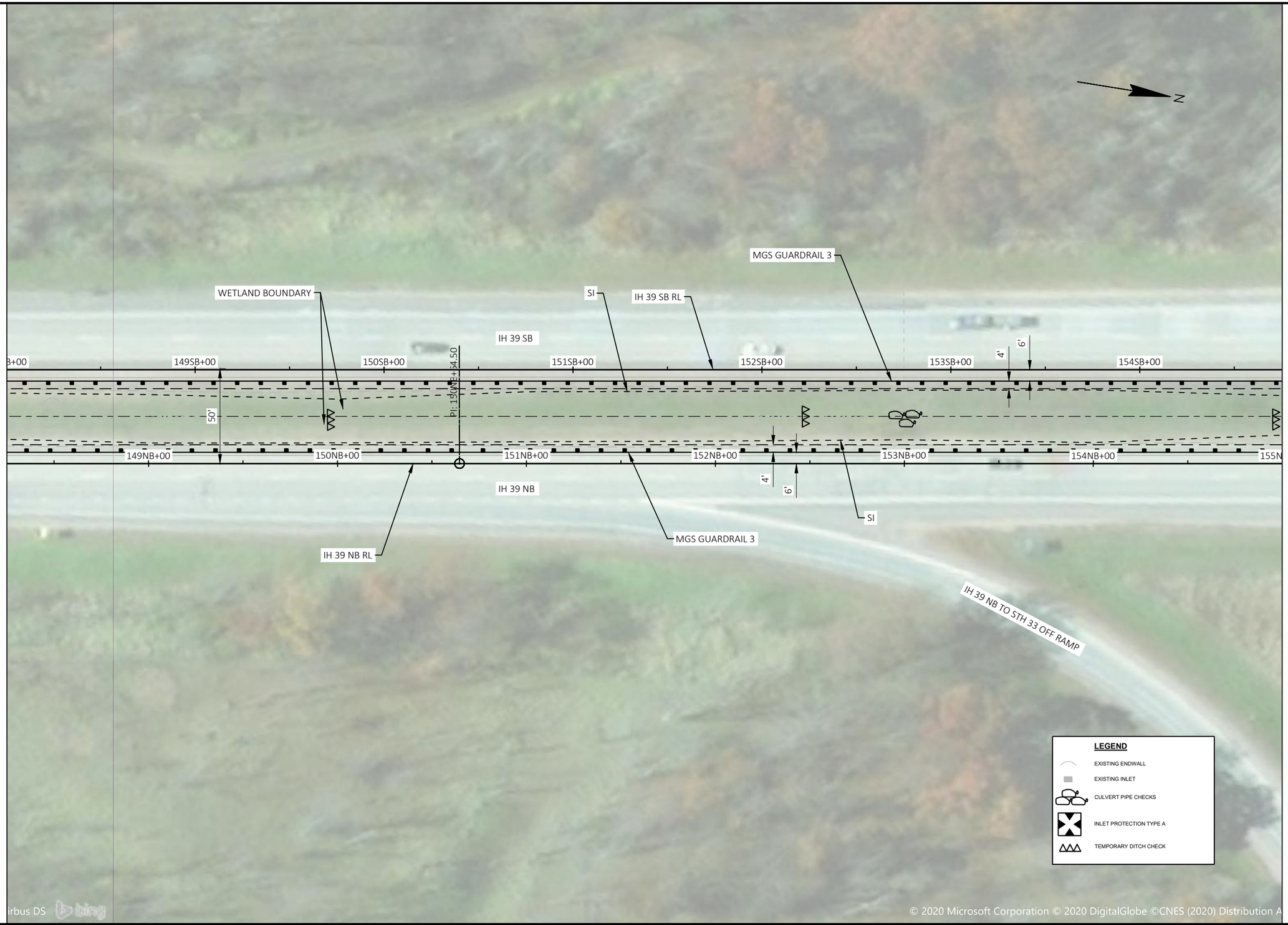
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 18	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 11

PLOT DATE : 1/12/2021 4:48 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 19	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 12

PLOT DATE : 1/12/2021 4:49 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

161+75.00

155+00.00

MGS GUARDRAIL
TERMINAL EAT
STA 161NB+47
42.0' LT
POST 1 = 161NB+47, 42.0' LT
POST 3 = 161NB+35, 42.5' LT
POST 5 = 161NB+22, 43.0' LT
POST 9 = 160NB+97, 44.0' LT

SI

MGS GUARDRAIL 3

WETLAND
BOUNDARY

IH 39 SB RL

IH 39 SB

155SB+00 156SB+00 157SB+00 158SB+00 159SB+00 160SB+00 161SB+00

4' 6'

50'

B+00 156NB+00 157NB+00 158NB+00 159NB+00 160NB+00 161NB+00

4' 6'

IH 39 NB

SI

IH 39 NB RL

MGS GUARDRAIL 3

WETLAND IMPACT
AREA

MGS GUARDRAIL TERMINAL
TYPE 2
STA 161NB+23
6.0' LT

STH 33 TO IH 39 NB ON RAMP

CHARTER COMMUNICATIONS - TEL
(ON ALLIANT ENERGY POLES)

CHARTER COMMUNICATIONS - TV
(ON ALLIANT ENERGY POLES)

ALLIANT ENERGY - OH ELEC

FRONTIER COMMUNICATIONS - FO
(ON ALLIANT ENERGY POLES)

WETLAND IMPACTS ON
THIS PAGE = 0.002 ACRES

LEGEND

EXISTING ENDWALL

EXISTING INLET

CULVERT PIPE CHECKS

INLET PROTECTION TYPE A

TEMPORARY DITCH CHECK

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 20	E

2

CHARTER COMMUNICATIONS - TEL
(ON ALLIANT ENERGY POLES)

CHARTER COMMUNICATIONS - TV
(ON ALLIANT ENERGY POLES)

ALLIANT ENERGY - OH ELEC

FRONTIER COMMUNICATIONS - FO
(ON ALLIANT ENERGY POLES)

ATC TRANSMISSION - OH ELEC

FRONTIER COMMUNICATIONS - UG FO

WISDOT ITS CAMERA - ABOVE GROUND

MGS GUARDRAIL TERMINAL
TYPE 2
STA 163NB+90
44.0' LT

STH 33

STH 33 TO IH 39 SB ON RAMP

WETLAND BOUNDARY

MGS GUARDRAIL 3

IH 39 SB RL

SI

IH 39 SB

CAUTION

6'

4'

168+50.00

N

162SB+00 163SB+00 164SB+00 165SB+00 166SB+00 167SB+00 168SB+00

50'

162NB+00 163NB+00 164NB+00 165NB+00 166NB+00 167NB+00 168NB+00

4'

6'

IH 39 NB

MGS GUARDRAIL
TERMINAL EAT
STA 163NB+65
8.0' LT
POST 1 = 163NB+65, 8.0' LT
POST 3 = 163NB+78, 7.5' LT
POST 5 = 163NB+90, 7.0' LT
POST 9 = 164NB+15, 6.0' LT

IH 39 NB RL

SI

MGS GUARDRAIL 3

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

161+75.00

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2

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 21	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 14
PLOT DATE : 1/12/2021 4:49 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

N

MADISON COLLEGE COMMUNICATIONS - UG FO

IH 39 SB TO STH 33 OFF RAMP

MGS GUARDRAIL 3

SI

IH 39 SB RL

IH 39 SB

6'

4'

50'

169SB+00 170SB+00 171SB+00 172SB+00 173SB+00 174SB+00 175S

169NB+00 170NB+00 171NB+00 172NB+00 173NB+00 174NB+00 175NB+00

4'

6'

IH 39 NB

CAUTION

WETLAND BOUNDARY

IH 39 NB RL

SI

MGS GUARDRAIL 3

ATC TRANSMISSION - OH ELEC

OH

175+25.00

168+50.00

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

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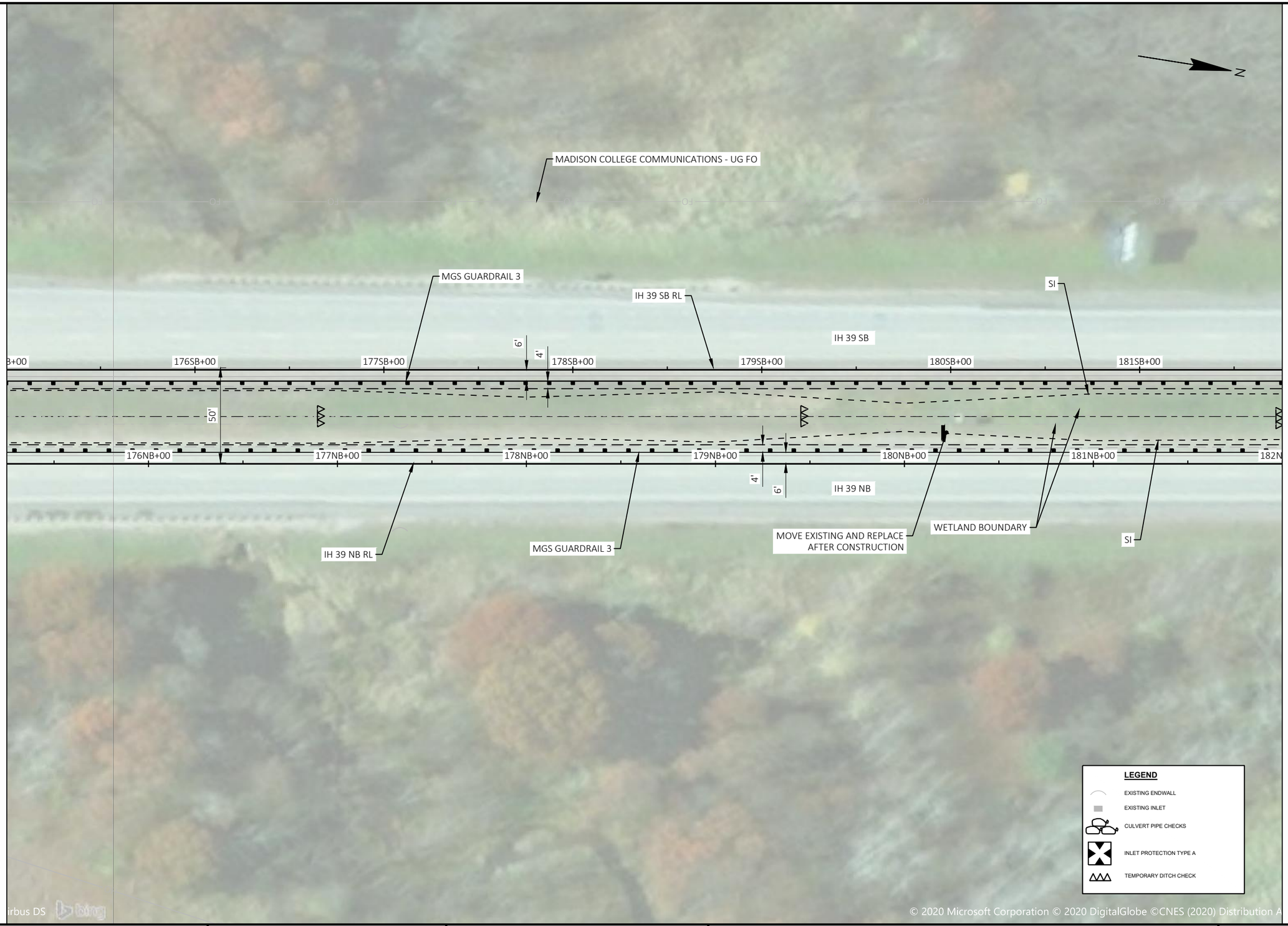
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 22	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 15
PLOT DATE : 1/12/2021 4:49 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 23	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 16

PLOT DATE : 1/12/2021 4:50 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

188+75.00

182+00.00

N

STA 186NB+11
44.0' LT
SAW CUT & MATCH
HMA PAVEMENT
TO EXISTING CROSSOVER

MADISON COLLEGE COMMUNICATIONS - UG FO

MGS GUARDRAIL
TERMINAL EAT
STA 185NB+88
42.0' LT
POST 1 = 185NB+88, 42.0' LT
POST 3 = 185NB+76, 42.5' LT
POST 5 = 185NB+63, 43.0' LT
POST 9 = 185NB+38, 44.0' LT

WETLAND BOUNDARY

MGS GUARDRAIL 3

SI

IH 39 SB RL

IH 39 SB

6'

4'

50'

182SB+00 183SB+00 184SB+00 185SB+00 186SB+00 187SB+00 188SB+00

B+00 183NB+00 184NB+00 185NB+00 186NB+00 187NB+00 188NB+00

IH 39 NB

4'

6'

IH 39 NB RL

SI

MGS GUARDRAIL 3

MGS GUARDRAIL
TERMINAL TYPE 2
STA 185NB+63
6.0' LT

STA 187NB+50
6.0' LT
SAW CUT & MATCH
HMA PAVEMENT
TO EXISTING CROSSOVER

PREVIOUSLY CONSTRUCTED
CROSSOVER PAVEMENT TO
REMAIN IN PLACE

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

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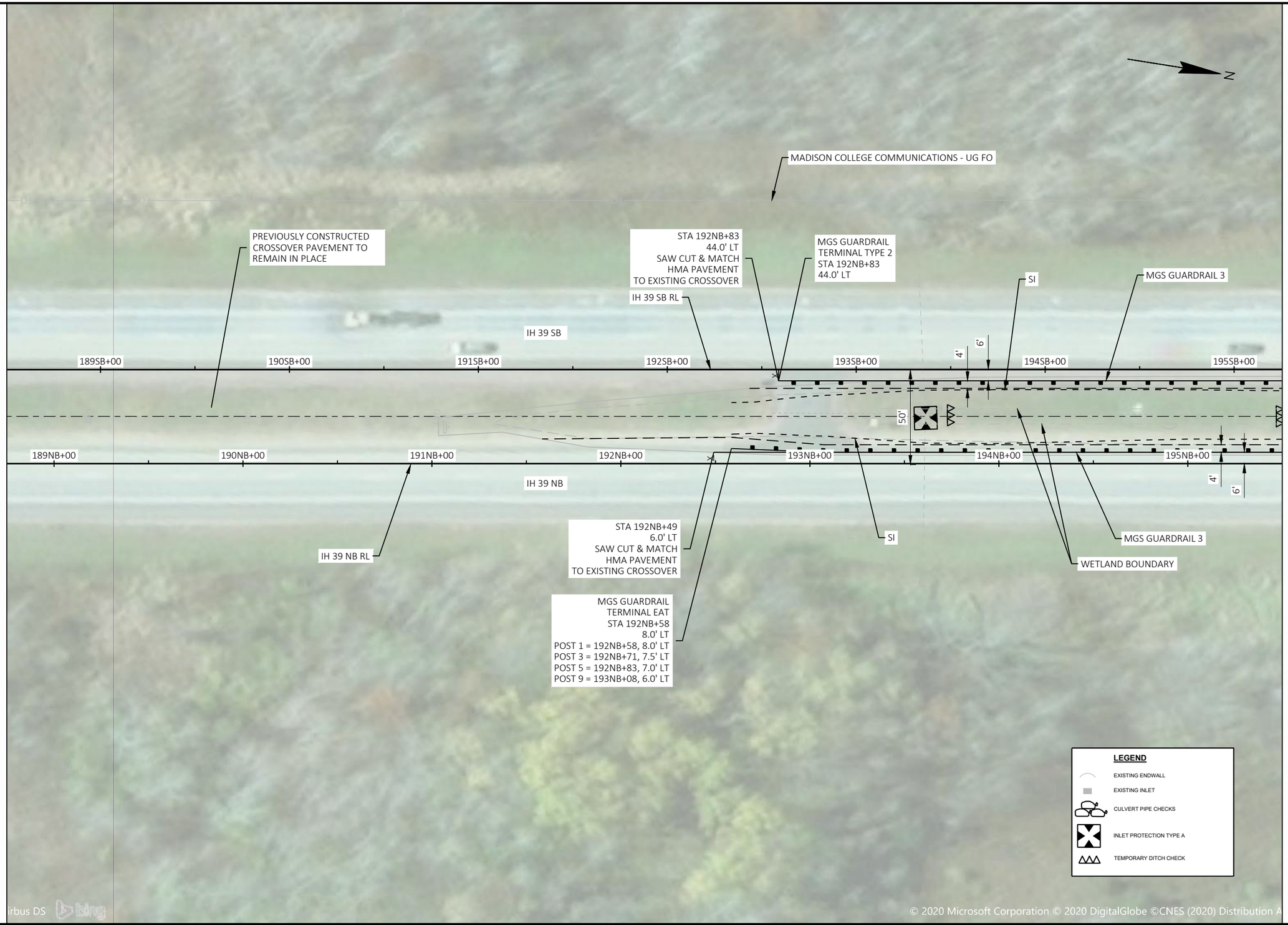
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 24	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 17
PLOT DATE : 1/12/2021 4:50 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

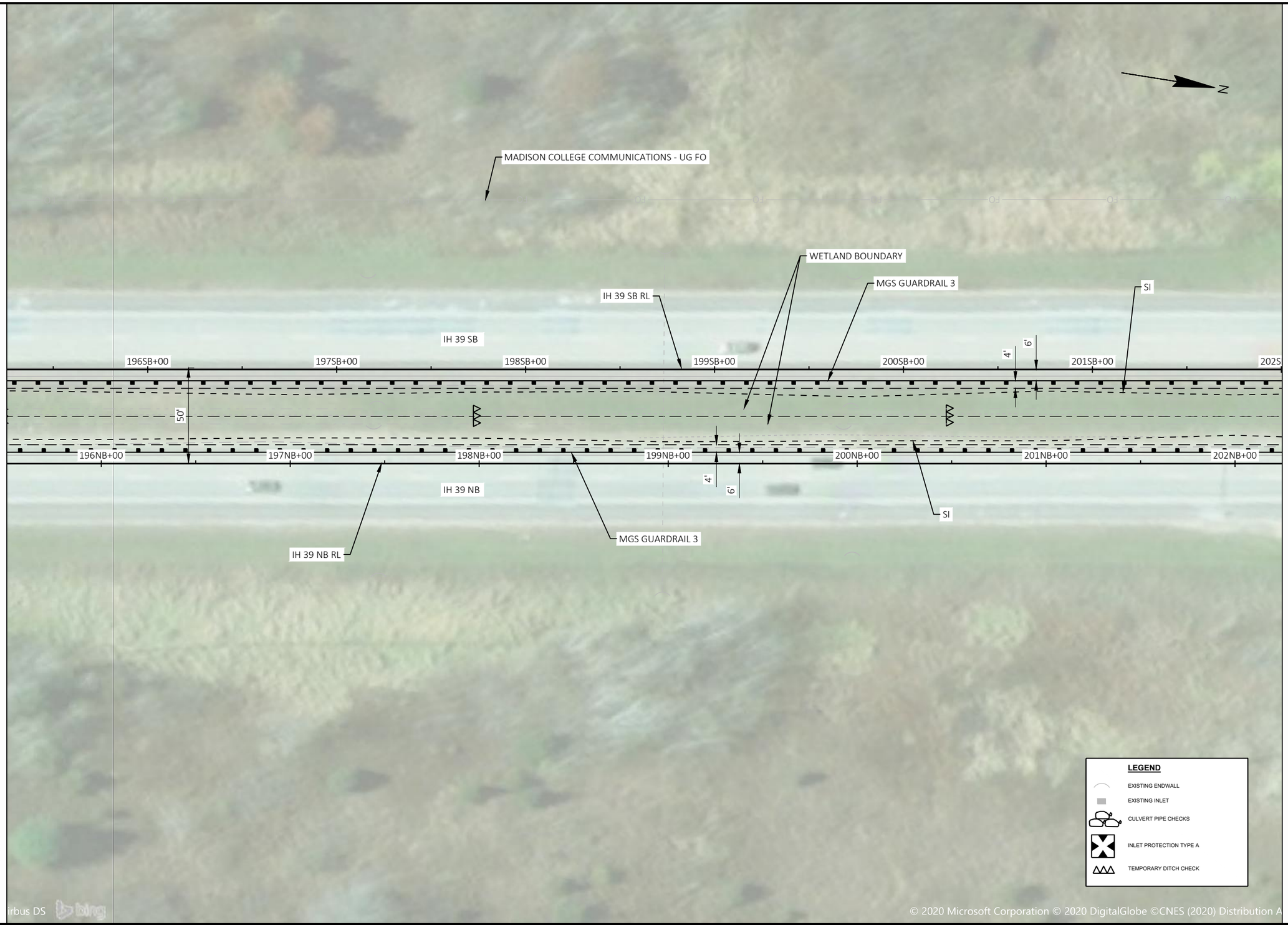
2



PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 25	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 18
PLOT DATE : 1/12/2021 4:50 PM
PLOT BY : WATT, TIMOTHY
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



2

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 26	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 19

PLOT DATE : 1/12/2021 4:51 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

209+00.00

202+25.00

N

REMOVE EXISTING GUARDRAIL EAT
CONNECT PROPOSED MGS GUARDRAIL 3
TO EXISTING MGS GUARDRAIL 3
SAW CUT & END PROPOSED HMA SHOULDER
STA 204NB+91
44.0' LT

REMOVE EXISTING GUARDRAIL EAT
CONNECT PROPOSED MGS GUARDRAIL 3
TO EXISTING MGS GUARDRAIL 3
SAW CUT & END PROPOSED HMA SHOULDER
STA 204NB+00
6.0' LT

MADISON COLLEGE COMMUNICATIONS - UG FO

LEVEE RD/RIVER RD/FAIRFIELD ST

ALLIANT ENERGY - UG GAS

MADISON COLLEGE COMMUNICATIONS - UG FO

SI

IH 39 SB RL

MGS GUARDRAIL 3

IH 39 SB

4'

6'

B+00 203SB+00 204SB+00 205SB+00 206SB+00 207SB+00 208SB+00

50'

203NB+00 204NB+00 205NB+00 206NB+00 207NB+00 208NB+00 209N

4'

6'

IH 39 NB

MGS GUARDRAIL 3

SI

IH 39 NB RL

WETLAND BOUNDARY

ALLIANT ENERGY - UG GAS

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 27	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 20
PLOT DATE : 1/12/2021 4:51 PM
PLOT BY : WATT, TIMOTHY
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

215+75.00

N

ALLIANT ENERGY - UG GAS

MADISON COLLEGE COMMUNICATIONS - UG FO

WISCONSIN RIVER

IH 39 SB RL

IH 39 SB

209SB+00 210SB+00 211SB+00 212SB+00 213SB+00 214SB+00 215SB+00

50'

B+00 210NB+00 211NB+00 212NB+00 213NB+00 214NB+00 215NB+00

IH 39 NB

IH 39 NB RL

WISCONSIN RIVER

209+00.00

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 28	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 21
PLOT DATE : 1/12/2021 4:51 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

222+50.00

WISCONSIN RIVER

ALLIANT ENERGY - UG GAS

MADISON COLLEGE COMMUNICATIONS - UG FO

IH 39 SB RL

IH 39 SB

216SB+00 217SB+00 218SB+00 219SB+00 220SB+00 221SB+00 222SB+00

216NB+00 217NB+00 218NB+00 219NB+00 220NB+00 221NB+00 222NB+00

IH 39 NB

IH 39 NB RL

WISCONSIN RIVER

215+75.00

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

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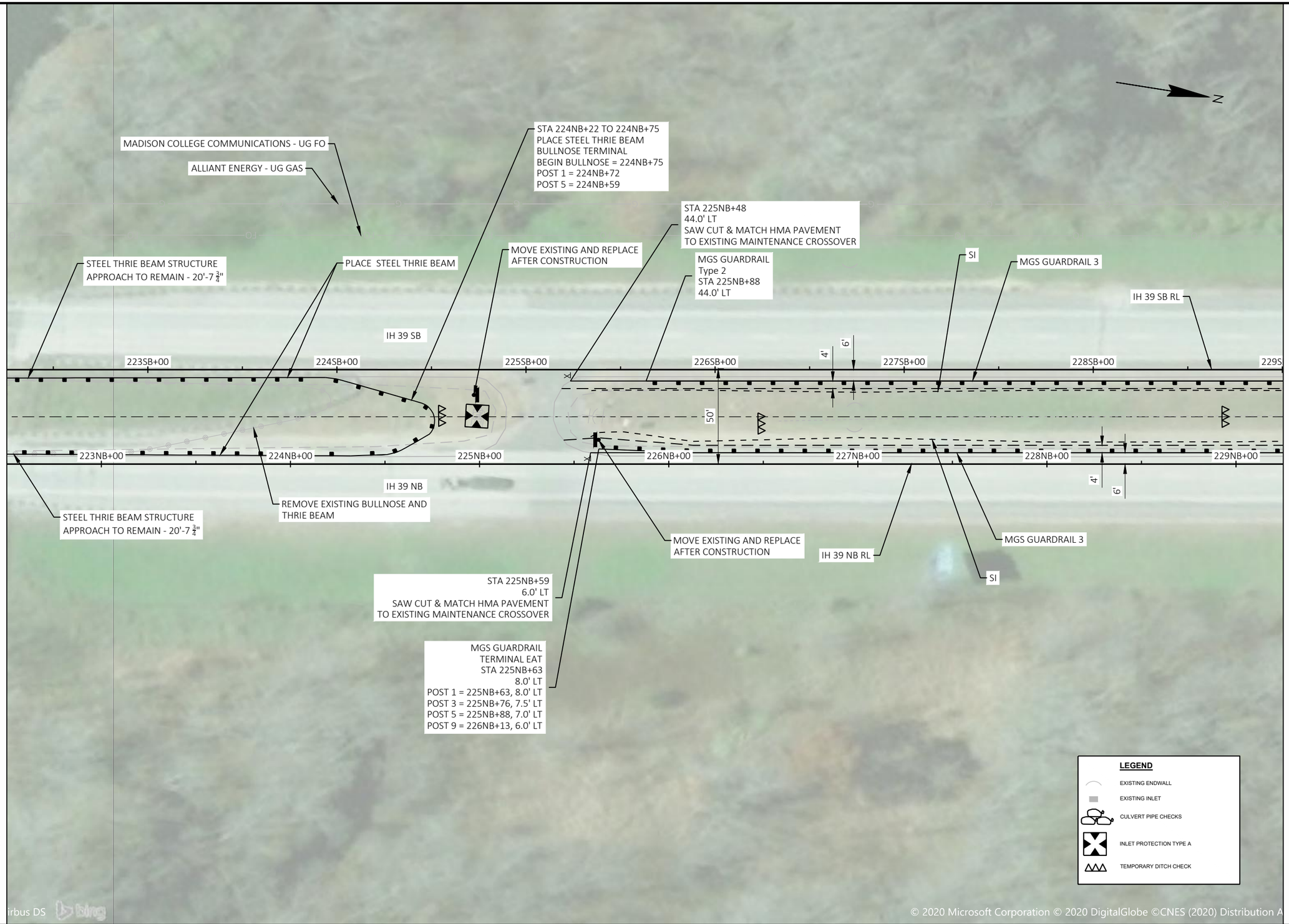
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 29	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 22

PLOT DATE : 1/12/2021 4:51 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 30	E

2

2

236+00.00

229+25.00

N

ALLIANT ENERGY - UG GAS

MADISON COLLEGE COMMUNICATIONS - UG FO

MGS GUARDRAIL 3

IH 39 SB RL

SI

IH 39 SB

4'

6'

B+00

230SB+00

231SB+00

232SB+00

233SB+00

234SB+00

235SB+00

50'

230NB+00

231NB+00

232NB+00

233NB+00

234NB+00

235NB+00

236N

4'

6'

IH 39 NB

SI

IH 39 NB RL

MGS GUARDRAIL 3

LEGEND

EXISTING ENDWALL

EXISTING INLET

CULVERT PIPE CHECKS

INLET PROTECTION TYPE A

TEMPORARY DITCH CHECK

irbus DS

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 31	E

2

242+75.00

236+00.00

N

ALLIANT ENERGY - UG GAS

MADISON COLLEGE COMMUNICATIONS - UG FO

MGS GUARDRAIL 3

SI

IH 39 SB RL

IH 39 SB

236SB+00 237SB+00 238SB+00 239SB+00 240SB+00 241SB+00 242SB+00

4' 6'

50'

B+00 237NB+00 238NB+00 239NB+00 240NB+00 241NB+00 242NB+00

4' 6'

IH 39 NB

MGS GUARDRAIL 3

IH 39 NB RL

SI

LEGEND

EXISTING ENDWALL

EXISTING INLET

CULVERT PIPE CHECKS

INLET PROTECTION TYPE A

TEMPORARY DITCH CHECK

irbus DS bing

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 32	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 25

PLOT DATE : 1/12/2021 4:52 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

249+50.00

N

ALLIANT ENERGY - UG GAS

MADISON COLLEGE COMMUNICATIONS - UG FO

SI

MGS GUARDRAIL 3

IH 39 SB RL

IH 39 SB

243SB+00 244SB+00 245SB+00 246SB+00 247SB+00 248SB+00 249SB+00

4'

6'

50'

243NB+00 244NB+00 245NB+00 246NB+00 247NB+00 248NB+00 249NB+00

4'

6'

IH 39 NB

SI

IH 39 NB RL

MGS GUARDRAIL 3

242+75.00

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

irbus DS

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 33	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 26

PLOT DATE : 1/12/2021 4:52 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

256+25.00

N

ALLIANT ENERGY - UG GAS

MADISON COLLEGE COMMUNICATIONS - UG FO

MGS GUARDRAIL 3

SI

IH 39 SB RL

IH 39 SB

250SB+00 | 251SB+00 | 252SB+00 | 253SB+00 | 254SB+00 | 255SB+00 | 256S

4' 6'

50'

250NB+00 | 251NB+00 | 252NB+00 | 253NB+00 | 254NB+00 | 255NB+00 | 256NB+00

4' 6'

IH 39 NB

MGS GUARDRAIL 3

IH 39 NB RL

SI

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

249+50.00

irbus DS bing

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 34	E

2

2

N

ALLIANT ENERGY - UG GAS

MADISON COLLEGE COMMUNICATIONS - UG FO

STA 260NB+52
44.0' LT
SAW CUT & MATCH HMA PAVEMENT
TO EXISTING SHOULDER

MGS GUARDRAIL
TERMINAL EAT
STA 260NB+27
42.0' LT
POST 1 = 260NB+27, 42.0' LT
POST 3 = 260NB+14, 42.5' LT
POST 5 = 260NB+02, 43.0' LT
POST 9 = 259NB+77, 44.0' LT

EXISTING BULLNOSE
TO REMAIN

END BASE AGGREGATE
DENSE 3/4-INCH SHOULDERING
MATCH EXISTING AGGREGATE SHOULDER
STA 261NB+08.79

CTH O - CEMETERY RD

ALLIANT ENERGY - OH ELEC

FRONTIER COMMUNICATIONS - FO
(ON ALLIANT ENERGY POLES)

SI

IH 39 SB RL

CAUTION

PC: 261SB+64.09

PC: 261NB+89.18

IH 39 SB

256SB+00 257SB+00 258SB+00 259SB+00 260SB+00 261SB+00 262SB+00 263SB+00

4' 6' 50'

257NB+00 258NB+00 259NB+00 260NB+00 261NB+00 262NB+00 263NB+00

4' 6'

IH 39 NB

SI

IH 39 NB RL

MGS GUARDRAIL 3

MGS GUARDRAIL TERMINAL
TYPE 2
STA 260NB+01
6.0' LT

STA 260NB+01
6.0' LT
SAW CUT & MATCH HMA PAVEMENT
TO EXISTING SHOULDER

END PROJECT
STA 261NB+08.79

ALLIANT ENERGY - UG GAS

256+25.00

LEGEND

- EXISTING ENDWALL
- EXISTING INLET
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK

irbus DS bing

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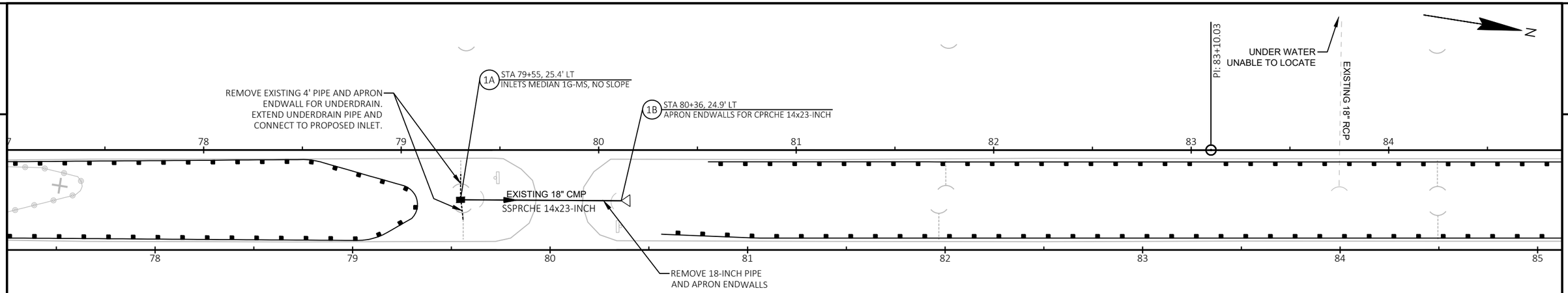
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAILS - MGS GUARDRAIL	SHEET 35	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\021201-PD.DWG
LAYOUT NAME - 28

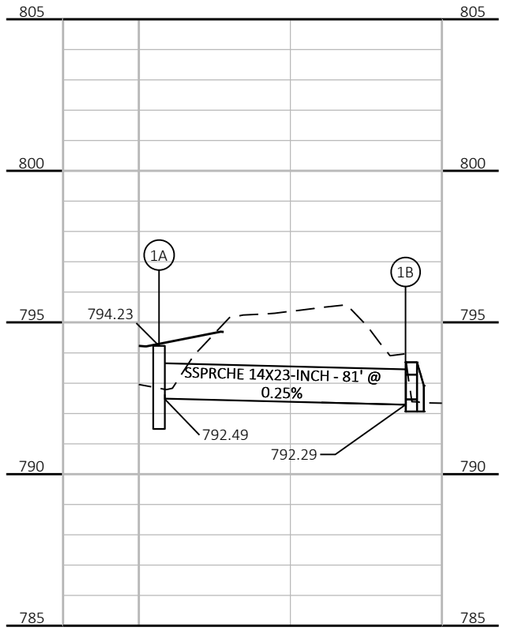
PLOT DATE : 1/12/2021 4:53 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



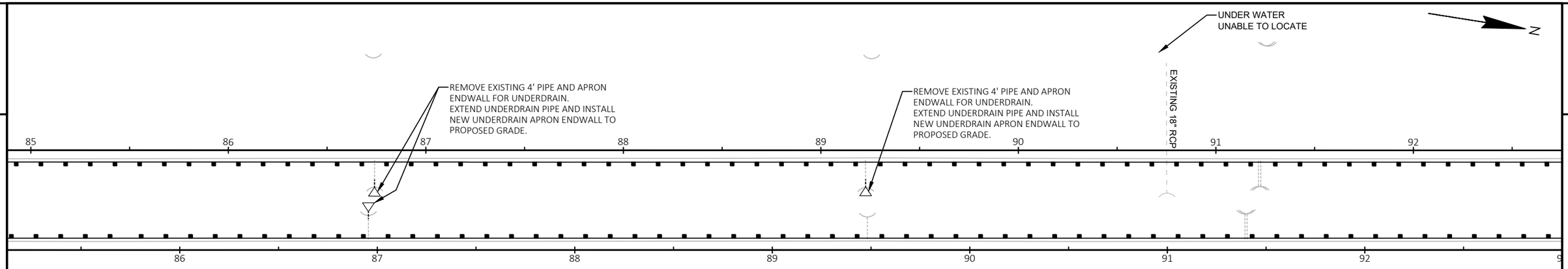
LEGEND

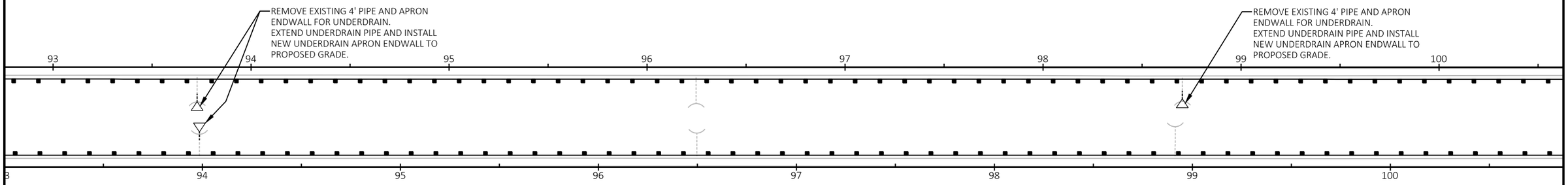
- EXISTING ENDWALL
- PROPOSED ENDWALL
- EXISTING INLET
- PROPOSED INLET
- EXISTING UNPERFORATED PIPE 6"
- PROPOSED UNPERFORATED PIPE 6"
- EXISTING PIPE



PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 36	E

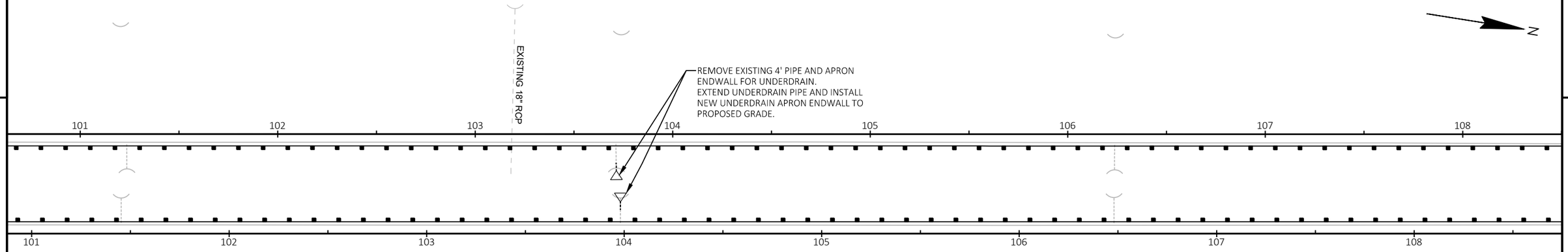
2





PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 37	E

2



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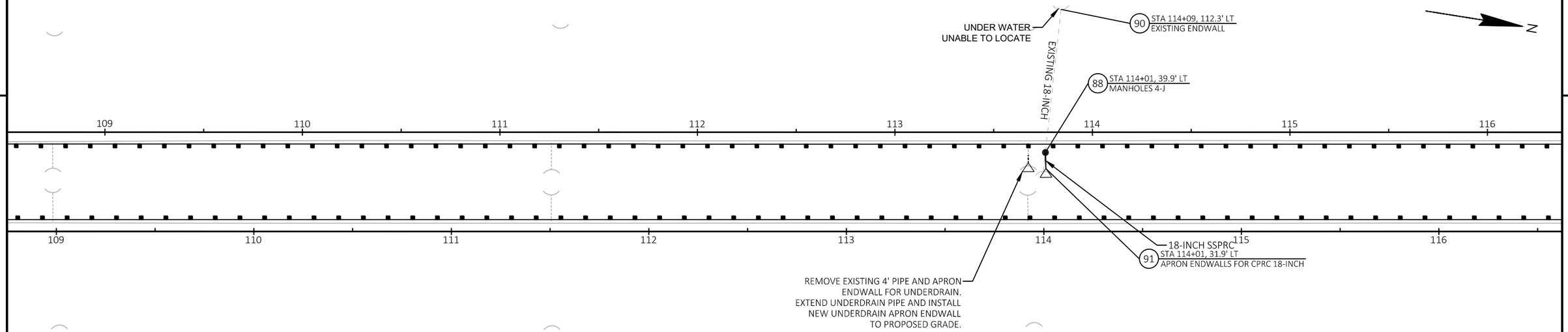
PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 38	E



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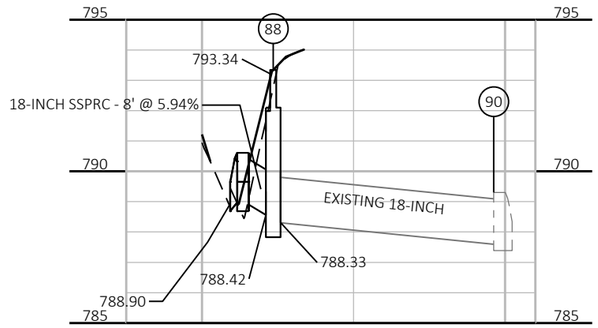


PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 39	E

2

N

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

117 118 119 120 121 122 123 124

117 118 119 120 121 122 123 124

UNABLE TO LOCATE
LOCATION APPROXIMATE

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

125 126 127 128 129 130 131 132

125 126 127 128 129 130 131 132

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

EXISTING 18" RCP

PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 40	E

2

N

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

EXISTING 18" RCP

133 134 135 136 137 138 139 140

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

0 141 142 143 144 145 146 147

EXISTING 18" CMP

141 142 143 144 145 146 147 148

CAUTION

PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 41	E

FILE NAME : F:\PROJECTS\20-703-061 WISDOT I-39 BARABOO RIVER TO CTH O\CAD\DESIGN\I-39 BARBOO RIVER DESIGN.DWG
LAYOUT NAME - SHEET - (14)
PLOT DATE : 12/14/2020 3:27 PM PLOT BY : DAVE BACHHUBER PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 41

2

N

PI: 150+64.50

EXISTING 18" RCP

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

148 149 150 151 152 153 154 155

149 150 151 152 153 154 155

EXISTING 18" RCP

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

156 157 158 159 160 161 162 163

6 157 158 159 160 161 162 163

UT FO

PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 42	E

2

2

N

EXISTING 29"X45" HE

EXISTING 29"X45" HE

E: 239+26.10

PT: 239+11.79

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

CAUTION

245

PC: 247+92.02

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

UNABLE TO LOCATE LOCATION APPROXIMATE

UNABLE TO LOCATE LOCATION APPROXIMATE

OH

PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 43	E

FILE NAME : F:\PROJECTS\20-703-061 WISDOT I-39 BARABOO RIVER TO CTH O\CAD\DESIGN\I-39 BARBOO RIVER DESIGN.DWG
LAYOUT NAME - SHEET - (18)

PLOT DATE : 12/14/2020 3:28 PM PLOT BY : DAVE BACHHUBER PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

EXISTING 36" RCP

ADJUST EXISTING INLET TO MEET PROPOSED ELEVATION.
EXISTING RIM 789.67
PROPOSED RIM 789.72
CONTRACTOR SHALL MATCH GRATE TO PROPOSED GRADE.

180 181 182 183 184 185 186 187

BP: 242+21.16

180 181 182 183 184 185 186 187

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

EXISTING 36" RCP

EXISTING CULVERT TO REMAIN
DO NOT DISTURB

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

EXISTING 36" RCP

188 189 190 191 192 193 194 195

GRT GRT GRT GRT GRT

188 189 190 191 192 193 194 195

EXISTING SLOTTED DRAIN TO REMAIN
DO NOT DISTURB

EXISTING 36" RCP

PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 44	E

2

2

N

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

196 197 198 199 200 201 202

196 197 198 199 200 201 202 203

EXISTING 36" RCP

UNABLE TO LOCATE
LOCATION APPROXIMATE

FO FO FO FO FO FO FO FO FO FO FO FO FO FO

ADJUST EXISTING INLET TO MEET PROPOSED ELEVATION.
EXISTING RIM 805.03
PROPOSED RIM 805.00
CONTRACTOR SHALL MATCH GRATE TO PROPOSED GRADE.

219 220 221 222 223 224 225 226

9 220 221 222 223 224 225 226

EXISTING 18" CMP

EXISTING CULVERT TO REMAIN
DO NOT DISTURB

PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 45	E

FILE NAME : F:\PROJECTS\20-703-061 WISDOT I-39 BARABOO RIVER TO CTH O\CAD\DESIGN\I-39 BARBOO RIVER DESIGN.DWG
LAYOUT NAME - SHEET - (22)

PLOT DATE : 12/14/2020 3:28 PM PLOT BY : DAVE BACHHUBER PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

UNABLE TO LOCATE
LOCATION APPROXIMATE

UNABLE TO LOCATE
LOCATION APPROXIMATE

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

UNABLE TO LOCATE
LOCATION APPROXIMATE

N

227 228 229 230 231 232 233 234

227 228 229 230 231 232 233 234

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

UNABLE TO LOCATE
LOCATION APPROXIMATE

EXISTING 18" RCP

UNABLE TO LOCATE
LOCATION APPROXIMATE

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

REMOVE EXISTING 4' PIPE AND APRON ENDWALL FOR UNDERDRAIN. EXTEND UNDERDRAIN PIPE AND INSTALL NEW UNDERDRAIN APRON ENDWALL TO PROPOSED GRADE.

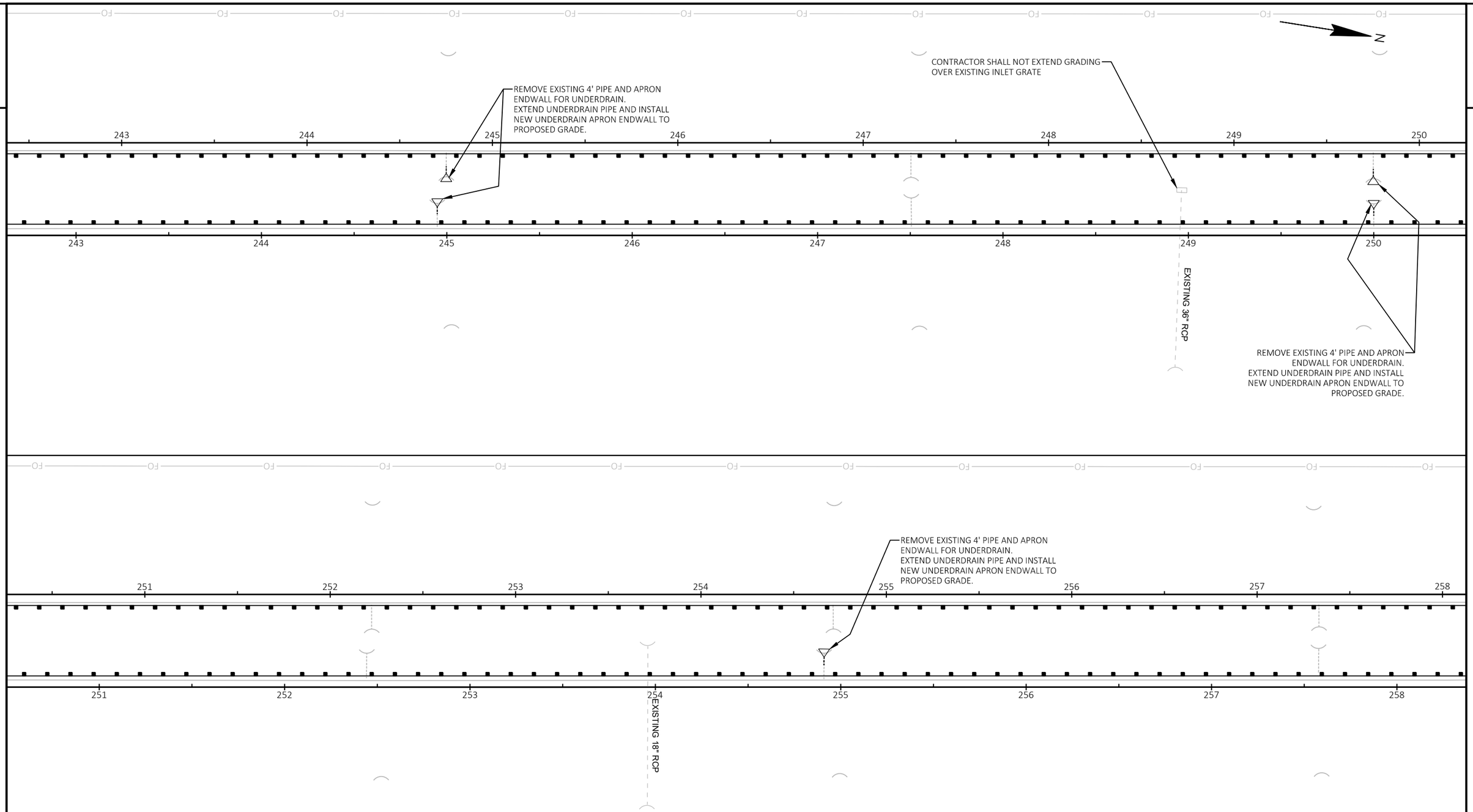
235 236 237 238 239 240 241 242

235 236 237 238 239 240 241 242

EXISTING 30" RCP

PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET 46	E

2



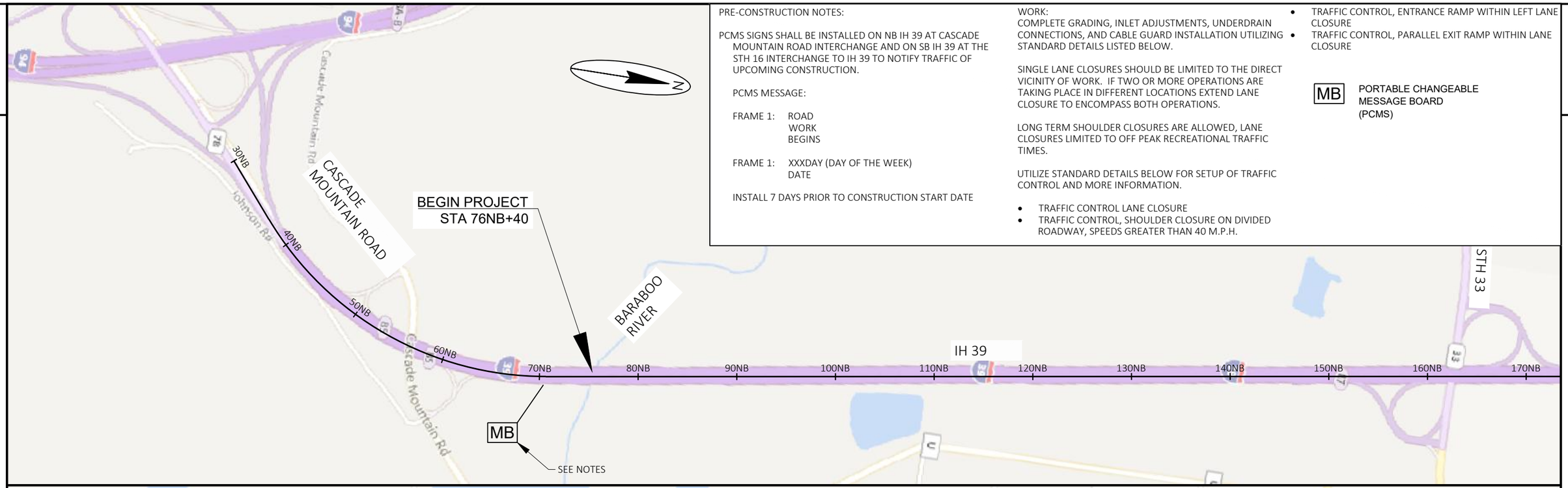
2

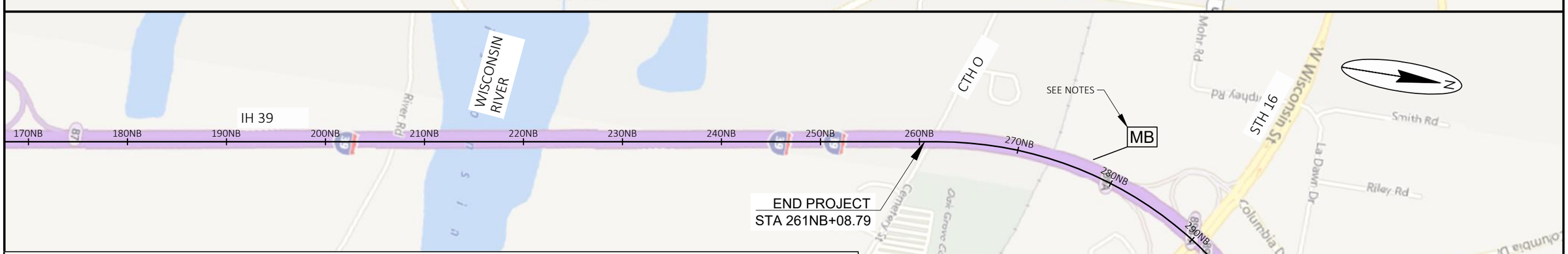
PROJECT NO: 1161-02-37	HWY: I-39	COUNTY: COLUMBIA COUNTY	STORM SEWER	SHEET	E

FILE NAME : F:\PROJECTS\20-703-061 WISDOT I-39 BARABOO RIVER TO CTH O\CAD\DESIGN\I-39 BARBOO RIVER DESIGN.DWG
LAYOUT NAME - SHEET - (27)

PLOT DATE : 12/14/2020 3:29 PM PLOT BY : DAVE BACHHUBER PLOT NAME : PLOT SCALE : ##########

2





PRE-CONSTRUCTION NOTES:

PCMS SIGNS SHALL BE INSTALLED ON NB IH 39 AT CASCADE MOUNTAIN ROAD INTERCHANGE AND ON SB IH 39 AT THE STH 16 INTERCHANGE TO IH 39 TO NOTIFY TRAFFIC OF UPCOMING CONSTRUCTION.

PCMS MESSAGE:

FRAME 1: ROAD
WORK
BEGINS

FRAME 1: XXXDAY (DAY OF THE WEEK)
DATE

INSTALL 7 DAYS PRIOR TO CONSTRUCTION START DATE

WORK:
COMPLETE GRADING, INLET ADJUSTMENTS, UNDERDRAIN CONNECTIONS, AND CABLE GUARD INSTALLATION UTILIZING STANDARD DETAILS LISTED BELOW.

SINGLE LANE CLOSURES SHOULD BE LIMITED TO THE DIRECT VICINITY OF WORK. IF TWO OR MORE OPERATIONS ARE TAKING PLACE IN DIFFERENT LOCATIONS EXTEND LANE CLOSURE TO ENCOMPASS BOTH OPERATIONS.

LONG TERM SHOULDER CLOSURES ARE ALLOWED, LANE CLOSURES LIMITED TO OFF PEAK RECREATIONAL TRAFFIC TIMES.

UTILIZE STANDARD DETAILS BELOW FOR SETUP OF TRAFFIC CONTROL AND MORE INFORMATION.

- TRAFFIC CONTROL LANE CLOSURE
- TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LEFT LANE CLOSURE
- TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

MB PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)

PRE-CONSTRUCTION NOTES:

PCMS SIGNS SHALL BE INSTALLED ON NB IH 39 AT CASCADE MOUNTAIN ROAD INTERCHANGE AND ON SB IH 39 AT THE STH 16 INTERCHANGE TO IH 39 TO NOTIFY TRAFFIC OF UPCOMING CONSTRUCTION.

PCMS MESSAGE:

FRAME 1: ROAD
WORK
BEGINS

FRAME 1: XXXDAY (DAY OF THE WEEK)
DATE

INSTALL 7 DAYS PRIOR TO CONSTRUCTION START DATE

WORK:
COMPLETE GRADING, INLET ADJUSTMENTS, UNDERDRAIN CONNECTIONS, AND CABLE GUARD INSTALLATION UTILIZING STANDARD DETAILS LISTED BELOW.

SINGLE LANE CLOSURES SHOULD BE LIMITED TO THE DIRECT VICINITY OF WORK. IF TWO OR MORE OPERATIONS ARE TAKING PLACE IN DIFFERENT LOCATIONS EXTEND LANE CLOSURE TO ENCOMPASS BOTH OPERATIONS.

LONG TERM SHOULDER CLOSURES ARE ALLOWED, LANE CLOSURES LIMITED TO OFF PEAK RECREATIONAL TRAFFIC TIMES.

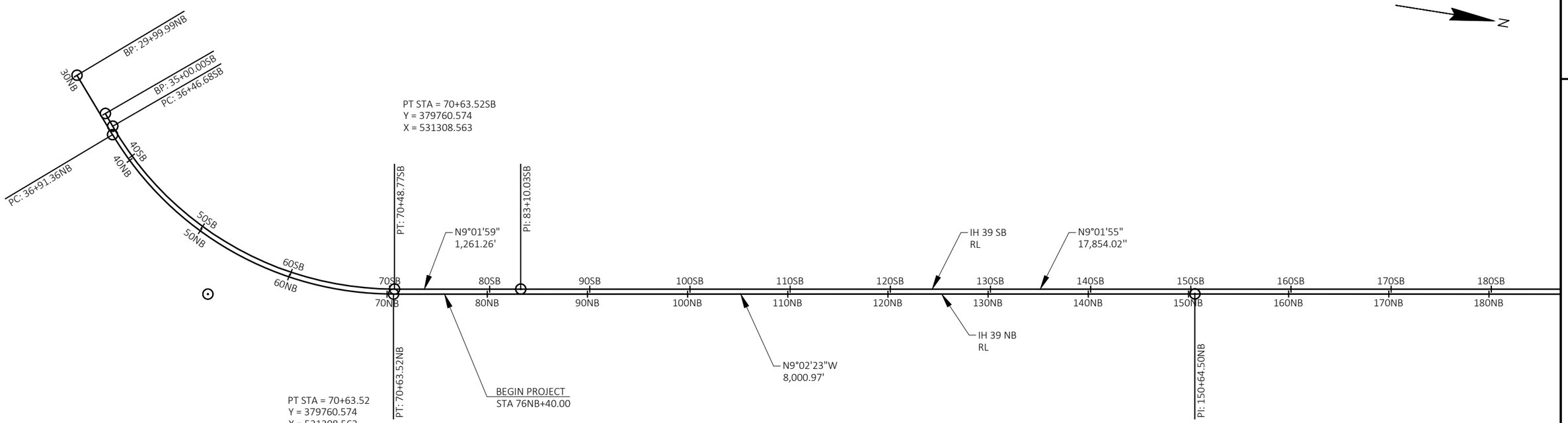
UTILIZE STANDARD DETAILS BELOW FOR SETUP OF TRAFFIC CONTROL AND MORE INFORMATION.

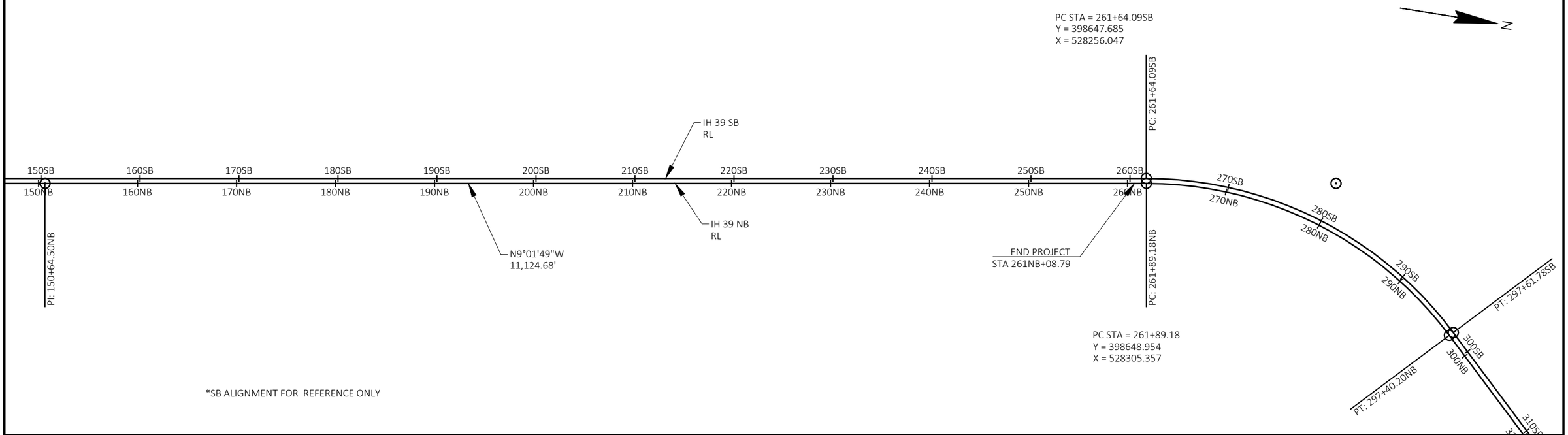
- TRAFFIC CONTROL LANE CLOSURE
- TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LEFT LANE CLOSURE
- TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

MB PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL	SHEET 48	E

2





PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	ALIGNMENT PLAN	SHEET 49	E

1161-02-67

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	13,450.000	13,450.000
0008	204.0165	Removing Guardrail	LF	661.000	661.000
0010	204.9060.S	Removing (item description) 01. Pipe and Apron Endwall for Underdrain	EACH	47.000	47.000
0012	205.0100	Excavation Common	CY	2,531.000	2,531.000
0014	208.0100	Borrow	CY	1,299.000	1,299.000
0016	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	305.000	305.000
0020	213.0100	Finishing Roadway (project) 02. 1161-02-67	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,910.000	2,910.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	14.000	14.000
0026	305.0500	Shaping Shoulders	STA	314.000	314.000
0036	455.0605	Tack Coat	GAL	1,410.000	1,410.000
0038	460.2000	Incentive Density HMA Pavement	DOL	2,520.000	2,520.000
0040	460.5224	HMA Pavement 4 LT 58-28 S	TON	3,935.000	3,935.000
0042	465.0105	Asphaltic Surface	TON	10.000	10.000
0044	465.0400	Asphaltic Shoulder Rumble Strips	LF	30,265.000	30,265.000
0056	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0058	522.2614	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 14x23-Inch	EACH	1.000	1.000
0060	608.2414	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 14x23-Inch	LF	81.000	81.000
0062	608.3018	Storm Sewer Pipe Class III-A 18-Inch	LF	8.000	8.000
0064	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0066	611.0642	Inlet Covers Type MS	EACH	1.000	1.000
0068	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0070	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
0072	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0074	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	180.000	180.000
0076	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	45.000	45.000
0078	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	2.000	2.000
0080	614.0230	Steel Thrie Beam	LF	780.000	780.000
0082	614.2300	MGS Guardrail 3	LF	29,030.000	29,030.000
0084	614.2610	MGS Guardrail Terminal EAT	EACH	9.000	9.000
0086	614.2620	MGS Guardrail Terminal Type 2	EACH	9.000	9.000
0090	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1161-02-67	EACH	1.000	1.000
0092	619.1000	Mobilization	EACH	0.500	0.500
0094	624.0100	Water	MGAL	54.000	54.000

1161-02-67

Line	Item	Item Description	Unit	Total	Qty
0096	625.0100	Topsoil	SY	7,450.000	7,450.000
0098	625.0500	Salvaged Topsoil	SY	14,120.000	14,120.000
0100	628.1504	Silt Fence	LF	300.000	300.000
0102	628.1520	Silt Fence Maintenance	LF	300.000	300.000
0104	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0106	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0108	628.2008	Erosion Mat Urban Class I Type B	SY	14,420.000	14,420.000
0110	628.2027	Erosion Mat Class II Type C	SY	1,855.000	1,855.000
0112	628.7005	Inlet Protection Type A	EACH	8.000	8.000
0114	628.7504	Temporary Ditch Checks	LF	800.000	800.000
0116	628.7555	Culvert Pipe Checks	EACH	40.000	40.000
0118	629.0210	Fertilizer Type B	CWT	15.000	15.000
0120	630.0171	Seeding Mixture No. 70A	LB	350.000	350.000
0122	630.0200	Seeding Temporary	LB	400.000	400.000
0124	630.0500	Seed Water	MGAL	320.000	320.000
0126	633.5200	Markers Culvert End	EACH	13.000	13.000
0128	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	8.000	8.000
0130	638.2102	Moving Signs Type II	EACH	7.000	7.000
0132	638.4000	Moving Small Sign Supports	EACH	8.000	8.000
0134	642.5001	Field Office Type B	EACH	0.500	0.500
0136	643.0300	Traffic Control Drums	DAY	35,600.000	35,600.000
0138	643.0420	Traffic Control Barricades Type III	DAY	1,180.000	1,180.000
0140	643.0705	Traffic Control Warning Lights Type A	DAY	2,260.000	2,260.000
0142	643.0715	Traffic Control Warning Lights Type C	DAY	3,260.000	3,260.000
0144	643.0800	Traffic Control Arrow Boards	DAY	580.000	580.000
0146	643.0900	Traffic Control Signs	DAY	4,060.000	4,060.000
0148	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0150	643.5000	Traffic Control	EACH	0.500	0.500
0152	646.1020	Marking Line Epoxy 4-Inch	LF	31,680.000	31,680.000
0156	646.5520	Marking Outfall Epoxy	EACH	150.000	150.000
0162	650.4000	Construction Staking Storm Sewer	EACH	6.000	6.000
0164	650.5000	Construction Staking Base	LF	31,700.000	31,700.000
0166	650.9910	Construction Staking Supplemental Control (project) 01. 1161-02-67	LS	1.000	1.000
0168	650.9920	Construction Staking Slope Stakes	LF	31,700.000	31,700.000
0170	690.0150	Sawing Asphalt	LF	140.000	140.000
0186	SPV.0060	Special 03. Locate Existing Underdrain Endwalls	EACH	150.000	150.000

3

IH 39 EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
DIVISION 1												
QR-IH39-DBLBG	76+47.016/260+50		2,531	0	2,531	0	1,039	1,299	-1,299	0	1,299	
DIVISION 1 SUBTOTAL			2,531	0	2,531	0	1,039	1,299	-1,299	0	1,299	
GRAND TOTAL			2,531	0	2,531	0	1,039	1,299	-1,299	0	1,299	
TOTAL COMMON EXC			2,531									

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = UNEXPANDED FILL * FILL FACTOR

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STORM SEWER REMOVALS

STATION	OFFSET	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS (EACH)	204.9060.S REMOVING PIPE AND APRON ENDWALL FOR UNDERDRAIN (EACH)	SPV.0060.03 LOCATE EXISTING UNDERDRAIN ENDWALLS (EACH)	COMMENTS
79+55	-25'	I-39 NORTHBOUND	1	-	-	REMOVE 1-18" CMCP, 65' TOTAL LENGTH
114+01	-40'	I-39 NORTHBOUND	1	-	-	REMOVE 1-18" RCCP, 8' OF THE 85' TOTAL
79+56	-18.8	I-39 NORTHBOUND	-	1	-	
79+56	-33.4	I-39 NORTHBOUND	-	1	-	
86+96	-19.4'	I-39 NORTHBOUND	-	1	-	
86+99	-31.8'	I-39 NORTHBOUND	-	1	-	
89+47	-32.0'	I-39 NORTHBOUND	-	1	-	
93+97	-33.1'	I-39 NORTHBOUND	-	1	-	
93+99	-17.7'	I-39 NORTHBOUND	-	1	-	
98+95	-34.5'	I-39 NORTHBOUND	-	1	-	
103+96	-31.8'	I-39 NORTHBOUND	-	1	-	
103+98	-16.0'	I-39 NORTHBOUND	-	1	-	
113+92	-34.8'	I-39 NORTHBOUND	-	1	-	
119+98	-15.4'	I-39 NORTHBOUND	-	1	-	
119+99	-35.3'	I-39 NORTHBOUND	-	1	-	
124+94	-33.1'	I-39 NORTHBOUND	-	1	-	
127+54	-34.2'	I-39 NORTHBOUND	-	1	-	
129+91	-16.5'	I-39 NORTHBOUND	-	1	-	
129+96	-33.2'	I-39 NORTHBOUND	-	1	-	
134+96	-32.0'	I-39 NORTHBOUND	-	1	-	
134+96	-17.7'	I-39 NORTHBOUND	-	1	-	
137+56	-15.9'	I-39 NORTHBOUND	-	1	-	
139+88	-17.5'	I-39 NORTHBOUND	-	1	-	
139+89	-34.0'	I-39 NORTHBOUND	-	1	-	
155+42	-16.1'	I-39 NORTHBOUND	-	1	-	
157+96	-33.2'	I-39 NORTHBOUND	-	1	-	
168+25	-15.0'	I-39 NORTHBOUND	-	1	-	
168+26	-34.2'	I-39 NORTHBOUND	-	1	-	
168+28	-14.7'	I-39 NORTHBOUND	-	1	-	
168+29	-34.6'	I-39 NORTHBOUND	-	1	-	

STORM SEWER REMOVALS CONTINUED

STATION	OFFSET	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS (EACH)	204.9060.S REMOVING PIPE AND APRON ENDWALL FOR UNDERDRAIN (EACH)	SPV.0060.03 LOCATE EXISTING UNDERDRAIN ENDWALLS (EACH)
171+37	-36.0'	I-39 NORTHBOUND	-	1	-
177+35	-38.2'	I-39 NORTHBOUND	-	1	-
179+94	-17.0'	I-39 NORTHBOUND	-	1	-
179+98	-32.9'	I-39 NORTHBOUND	-	1	-
182+42	-32.6'	I-39 NORTHBOUND	-	1	-
194+90	-16.4'	I-39 NORTHBOUND	-	1	-
197+44	-17.4'	I-39 NORTHBOUND	-	1	-
199+97	-33.9'	I-39 NORTHBOUND	-	1	-
202+46	-17.8'	I-39 NORTHBOUND	-	1	-
226+98	-14.0'	I-39 NORTHBOUND	-	1	-
231+99	-13.4'	I-39 NORTHBOUND	-	1	-
232+00	-36.5'	I-39 NORTHBOUND	-	1	-
236+49	-15.1'	I-39 NORTHBOUND	-	1	-
238+97	-14.8'	I-39 NORTHBOUND	-	1	-
244+95	-15.2'	I-39 NORTHBOUND	-	1	-
245+00	-33.5'	I-39 NORTHBOUND	-	1	-
250+00	-31.9'	I-39 NORTHBOUND	-	1	-
250+00	-14.4'	I-39 NORTHBOUND	-	1	-
254+91	-16.1'	I-39 NORTHBOUND	-	1	-
		PROJECT LIMITS	-	-	150
		TOTALS	**2**	**47**	**150**

NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

BASE AGGREGATE DENSE

LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	305.0500 SHAPING SHOULDERS (STA)
MAINTENANCE CROSSOVER STA 80NB+00	10	14	-
SHOULDERS	2900	-	314
TOTALS	**2910**	**14**	**314**

PAVEMENT

LOCATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS (STA)	455.0605 TACK COAT * (GAL)	460.5224 HMA PAVEMENT 4 LT 58-28 S (TON)	465.0105 ASPHALTIC SURFACE (TON)	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS (LF)
IH 39 MEDIAN (BEGIN PROJECT TO STA 205NB+50)	10236	231	1075	3010	-	23030
IH 39 MEDIAN (STA 222NB+50 TO END PROJECT)	3112	70	327	915	-	7000
MAINTENANCE CROSSOVER STA 80NB+00	-	-	-	-	6	-
Undistributed	102	4	8	10	4	235
TOTALS	**13450**	**305**	**1410**	**3935**	**10**	**30265**

* ASSUMES 0.070 GAL/SY

NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STORM SEWER STRUCTURES

CATEGORY	STRUCTURE ID NUMBER	STATION	OFFSET (Negative=LT)	LOCATION	522.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	522.2614 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 14X23-INCH EACH	611.0530 MANHOLE COVERS TYPE J	611.0642 INLET COVERS TYPE MS EACH	611.2004 MANHOLE 4-FT DIAMETER	611.3901 INLETS MEDIAN 1 GRATE EACH	611.8115 ADJUSTING INLET COVERS EACH	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH	633.5200 MARKERS CULVERT END EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
0010	1A	79+55	-25.4'	I-39 NORTHBOUND	-	-	-	1	-	1	-	-	-	1
	1B	80+36	-24.9'	I-39 NORTHBOUND	-	1	-	-	-	-	-	-	1	1
	88	114+01	-39.9'	I-39 NORTHBOUND	-	-	1	-	1	-	-	-	-	1
	91	114+01	-31.9'	I-39 NORTHBOUND	1	-	-	-	-	-	-	-	-	1
	115(1)	183+98	-25.9'	I-39 NORTHBOUND	-	-	-	-	-	-	1	-	-	1
	116(1)	225+00	-23.8'	I-39 NORTHBOUND	-	-	-	-	-	-	1	-	-	1
		84+00	-32.1'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		91+00	-29.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		114+00	-30.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		128+00	-23.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		140+00	-31.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		144+75	-25.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		145+25	-25.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		153+00	-30.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		157+00	-29.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		225+55	-25.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		234+20	-23.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		254+00	-24.1'	I-39 NORTHBOUND	-	-	-	-	-	-	-	-	1	-
		103+96	-31.8'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		103+98	-16.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		113+92	-34.8'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		119+98	-15.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		119+99	-35.3'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		124+94	-33.1'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		127+54	-34.2'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		129+91	-16.5'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		129+96	-33.2'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		134+96	-32.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		134+96	-17.7'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		137+56	-15.9'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		139+88	-17.5'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		139+89	-34.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		155+42	-16.1'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		157+96	-33.2'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		168+25	-15.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		168+26	-34.2'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		168+28	-14.7'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		168+29	-34.6'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		171+37	-36.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		177+35	-38.2'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		179+94	-17.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		179+98	-32.9'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		182+42	-32.6'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		194+90	-16.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		197+44	-17.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		199+97	-33.9'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		202+46	-17.8'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		226+98	-14.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		231+99	-13.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		232+00	-36.5'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		236+49	-15.1'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		238+97	-14.8'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		244+95	-15.2'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		245+00	-33.5'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		250+00	-31.9'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		250+00	-14.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		254+91	-16.1'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		86+96	-19.4'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		86+99	-31.8'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		89+47	-32.0'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		93+97	-33.1'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		93+99	-17.7'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
		98+95	-34.5'	I-39 NORTHBOUND	-	-	-	-	-	-	-	1	-	-
Totals					**1**	**1**	**1**	**1**	**1**	**1**	**2**	**45**	**13**	**6**

Notes:
1. STATION AND OFFSET FOR APRON ENDWALLS IS TO THE BACK OF THE APRON ENDWALL, THE POINT WHERE THE UNDERDRAIN PIPE CONNECTS TO THE APRON ENDWALL.

STORM SEWER PIPES

CATEGORY	LOCATION	FROM STRUCTURE	TO STRUCTURE	STATION	INLET ELEVATION	DISCHARGE ELEVATION	% SLOPE	608.2414 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 14X23-INCH LF	608.3018 STORM SEWER PIPE CLASS III-A 18 INCH LF	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF
0010	I-39 NORTHBOUND	1A	1B	80+00	792.49	792.29	0.25%	81	-	-
	I-39 NORTHBOUND	91	88.0	114+00	788.90	788.42	5.94%	-	8	-
	I-39 NORTHBOUND			89+47.3			1.00%	-	-	4
	I-39 NORTHBOUND			86+98.6			1.00%	-	-	4
	I-39 NORTHBOUND			86+95.5			1.00%	-	-	4
	I-39 NORTHBOUND			93+97.4			1.00%	-	-	4
	I-39 NORTHBOUND			93+98.5			1.00%	-	-	4
	I-39 NORTHBOUND			98+95.0			1.00%	-	-	4
	I-39 NORTHBOUND			103+96.0			1.00%	-	-	4
	I-39 NORTHBOUND			103+98.1			1.00%	-	-	4
	I-39 NORTHBOUND			113+92.1			1.00%	-	-	4
	I-39 NORTHBOUND			119+98.0			1.00%	-	-	4
	I-39 NORTHBOUND			119+98.8			1.00%	-	-	4
	I-39 NORTHBOUND			124+94.4			1.00%	-	-	4
	I-39 NORTHBOUND			127+54.4			1.00%	-	-	4
	I-39 NORTHBOUND			129+90.8			1.00%	-	-	4
	I-39 NORTHBOUND			129+96.2			1.00%	-	-	4
	I-39 NORTHBOUND			134+96.1			1.00%	-	-	4
	I-39 NORTHBOUND			134+96.2			1.00%	-	-	4
	I-39 NORTHBOUND			137+55.8			1.00%	-	-	4
	I-39 NORTHBOUND			139+87.5			1.00%	-	-	4
	I-39 NORTHBOUND			139+88.6			1.00%	-	-	4
	I-39 NORTHBOUND			155+41.9			1.00%	-	-	4
	I-39 NORTHBOUND			157+96.1			1.00%	-	-	4
	I-39 NORTHBOUND			168+24.8			1.00%	-	-	4
	I-39 NORTHBOUND			168+25.5			1.00%	-	-	4
	I-39 NORTHBOUND			168+27.9			1.00%	-	-	4
	I-39 NORTHBOUND			168+29.3			1.00%	-	-	4
	I-39 NORTHBOUND			171+36.9			1.00%	-	-	4
	I-39 NORTHBOUND			177+35.4			1.00%	-	-	4
	I-39 NORTHBOUND			179+94.4			1.00%	-	-	4
	I-39 NORTHBOUND			179+97.5			1.00%	-	-	4
	I-39 NORTHBOUND			182+42.5			1.00%	-	-	4
	I-39 NORTHBOUND			194+90.1			1.00%	-	-	4
	I-39 NORTHBOUND			197+44.1			1.00%	-	-	4
	I-39 NORTHBOUND			199+96.6			1.00%	-	-	4
	I-39 NORTHBOUND			202+46.1			1.00%	-	-	4
	I-39 NORTHBOUND			226+98.3			1.00%	-	-	4
	I-39 NORTHBOUND			231+99.3			1.00%	-	-	4
	I-39 NORTHBOUND			232+00.4			1.00%	-	-	4
	I-39 NORTHBOUND			236+48.6			1.00%	-	-	4
	I-39 NORTHBOUND			238+96.6			1.00%	-	-	4
	I-39 NORTHBOUND			244+94.9			1.00%	-	-	4
	I-39 NORTHBOUND			244+99.7			1.00%	-	-	4
	I-39 NORTHBOUND			249+99.8			1.00%	-	-	4
	I-39 NORTHBOUND			250+00.0			1.00%	-	-	4
	I-39 NORTHBOUND			254+91.0			1.00%	-	-	4
TOTAL								**81**	**8**	**180**

MGS GUARDRAIL

LOCATION	204.0165 REMOVING GUARDRAIL (LF)	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL (EACH)	614.0230 STEEL THRIE BEAM (LF)	614.2300 MGS GUARDRAIL 3 (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 (EACH)
STA 76NB+40 BULLNOSE AT BARABOO RIVER (NORTH)	208			-	-	-
STA 222NB+32 BULLNOSE AT WISCONSIN RIVER (NORTH)	328			-	-	-
STA 76NB+40 TO STA 79+47 NB IH 39	-	1	440	-	-	-
STA 222NB+32 TO STA 224NB+85 NB IH 39	-	1	340	-	-	-
IH 39 MEDIAN (BEGIN PROJECT TO STA 205NB+50)	125	-	-	22230.0	7	7
IH 39 MEDIAN (STA 222NB+50 TO END PROJECT)	-	-	-	6800.0	2	2
	661	**2**	**780**	**29,030.0**	**9**	**9**

EROSION CONTROL

LOCATION	624.0100 WATER (MGAL)	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)	628.7005 INLET PROTECTION TYPE A (EACH)	628.7504 TEMPORARY DITCH CHECKS (LF)	628.7555 CULVERT PIPE CHECKS (EACH)
IH 39 MEDIAN (BEGIN PROJECT TO STA 205NB+50)	-	-	-	-	-	4	520	30
IH 39 MEDIAN (STA 222NB+50 TO END PROJECT)	-	-	-	-	-	2	160	6
UNDISTRIBUTED	54	300	300	2	4	2	120	4
TOTALS	**54**	**300**	**300**	**2**	**4**	**8**	**800**	**40**

NOTES: SILT FENCE AND SILT FENCE MAINENANCE ARE UNDISTRIBUTED AND TO BE USED AT THE DESCRESION OF THE ENGINEER IN THE FIELD. TEMPORARY DITCH CHECKS ARE ASSUMED TO BE PLACED APPROXIMATELY EVERY 250 FEET IN THE MEDIAN BUT CAN BE ADJUSTED TO FIT FIELD CONDITIONS AT THE DIRECTION OF THE ENGINEER. CULVERT PIPE CHECKS ASSUME THREE BAGS FOR AN 18-INCH CULVERT PIPE.

RESTORATION

LOCATION	625.0100 TOPSOIL * (SY)	625.0500 SALVAGED TOPSOIL (SY)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	628.2027 EROSION MAT CLASS II TYPE C (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0171 SEEDING MIXTURE NO. 70A (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0500 SEED WATER (MGAL)
IH 39 MEDIAN (BEGIN PROJECT TO STA 205NB+50)	-	10750	10750	-	9	258	-	241
IH 39 MEDIAN (STA 222NB+50 TO END PROJECT)	-	3167	3167	-	3	76	-	71
UNDISTRIBUTED	7450	203	503	1855	3	16	400	7
TOTALS	**7450**	**14120**	**14420**	**1855**	**15**	**350**	**400**	**320**

* CAN BE USED IN LIEU OF SALVAGED TOPSOIL, AT THE DISCRETION OF THE ENGINEER, FOR SLIVER GRADING LOCATIONS IN MEDIAN

NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

PERMANENT SIGNING

SIGN NO.	STATION	SIGN CODE	SIGN TYPE	TYPE II SIGN SIZE W [IN.]	TYPE II SIGN SIZE H [IN.]	634.0616 POSTS WOOD 4X6-INCH X 16-FT (EACH)	638.2102 MOVING SIGNS TYPE II (EACH)	638.4000 MOVING SMALL SIGN SUPPORTS (EACH)
1	79NB+75 SB	R3-4B	II	36	48	1	1	1
2	80NB+30 NB	R3-4B	II	36	48	1	1	1
3	144NB+75 SB	R3-4B	II	36	48	1	1	1
4	145NB+32 NB	R3-4B	II	36	48	1	1	1
5	180NB+20 NB	R4-3	II	48	60	2	1	2
6	225NB+00 SB	R3-4B	II	36	48	1	1	1
7	225NB+55 NB	R3-4B	II	36	48	1	1	1
					TOTALS	**8**	**7**	**8**

PAVEMENT MARKING

LOCATION	646.1020 MARKING LINE EPOXY 4-INCH *YELLOW* (LF)	646.5520 MARKING OUTFALL EPOXY * (EACH)
IH 39 NB & SB (INSIDE EDGE LINE)	31680	-
PROJECT LIMITS	-	150
TOTALS	**31680**	**150**

* FOR UNDERDRAIN ENDWALLS

CONSTRUCTION STAKING

LOCATION	650.5000 CONSTRUCTION STAKING BASE (LF)	650.9910 SUPPLEMENTAL CONTROL (1161-02-67) (LS)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)
PROJECT	-	1	-
STA 80NB+00 TO 204NB+00 NORTHBOUND	12400	-	12400
STA 80NB+00 TO 204NB+00 SOUTHBOUND	12400	-	12400
STA 225NB+50 TO 260NB+00 NORTHBOUND	3450	-	3450
STA 225NB+50 TO 260NB+00 SOUTHBOUND	3450	-	3450
TOTALS	**31700**	**1**	**31700**

SAWING

LOCATION	690.0150 SAWING ASPHALT (LF)
STA 80NB+30 NB	4
STA 80NB+29 SB	4
STA 144NB+70 NB	4
STA 144NB+75 SB	4
STA 145NB+25 NB	4
STA 145NB+25 SB	4
STA 187NB+50 NB	4
STA 186NB+11 SB	4
STA 192NB+49 NB	4
STA 192NB+83 SB	4
STA 204NB+00 NB	4
STA 204NB+91 SB	4
STA 225NB+59 NB	4
STA 225NB+48 SB	4
STA 260NB+01 NB	4
STA 260NB+52 SB	4
MAINTENANCE CROSSOVER STA 80NB+00	50
UNDISTRIBUTED	26
TOTALS	**140**

TRAFFIC CONTROL

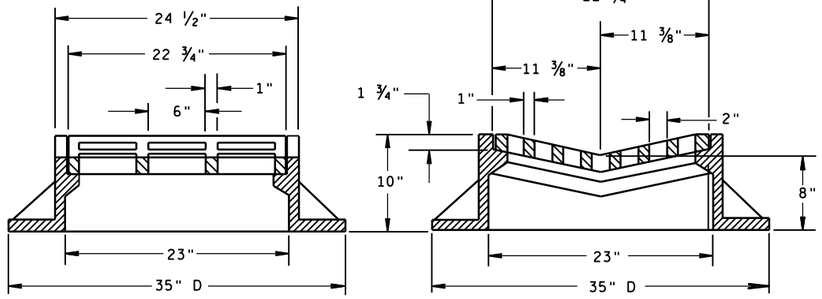
STAGE	DURATION CALANDAR DAYS	643.0300 TC DRUMS #	643.0300 TC DRUMS (DAY)	643.0420 TC BARRICADES TYPE III #	643.0420 TC BARRICADES TYPE III (DAY)	643.0705 TC WARNING LIGHTS TYPE A #	643.0705 TC WARNING LIGHTS TYPE A (DAY)	643.0715 TC WARNING LIGHTS TYPE C #	643.0715 TC WARNING LIGHTS TYPE C (DAY)	643.0800 TC ARROW BOARDS #	643.0800 TC ARROW BOARDS (DAY)	643.0900 TC SIGNS #	643.0900 TC SIGNS (DAY)	643.1050 TC SIGNS PCMS #	643.1050 TC SIGNS PCMS (DAY)
PRIOR TO CONSTRUCTION	7		-		-	-	-	-	-	-	-		-	2	14
NB IH 39	90	*195*	17550	*6*	540	*12*	1080	*17*	1530	*3*	270	*22*	1980	-	-
SB IH 39	90	*195*	17550	*6*	540	*12*	1080	*17*	1530	*3*	270	*22*	1980	-	-
UNDISTRIBUTED		-	500	-	100	-	100	-	200	-	40	-	100	-	-
	TOTALS		**35,600**		**1,180**		**2,260**		**3,260**		**580**		**4,060**		**14**

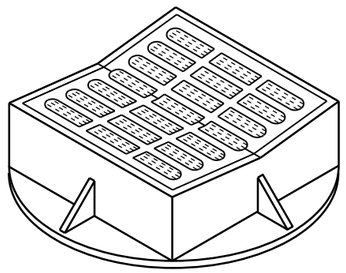
NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

Standard Detail Drawing List

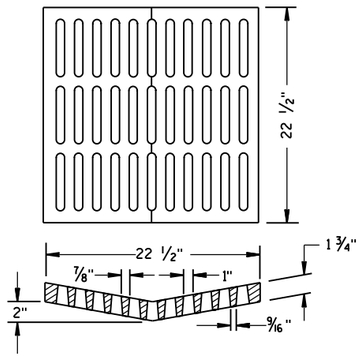
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11C	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS
14B20-11D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-11E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B20-11F	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B26-04A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04F	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04G	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04H	STEEL THRIE BEAM BULLNOSE TERMINAL
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
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)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D12-09A	TRAFFIC CONTROL, LANE CLOSURE
15D15-05B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-05C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-05D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-05E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING

6



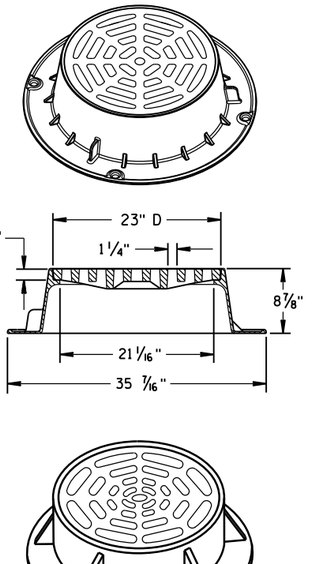


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

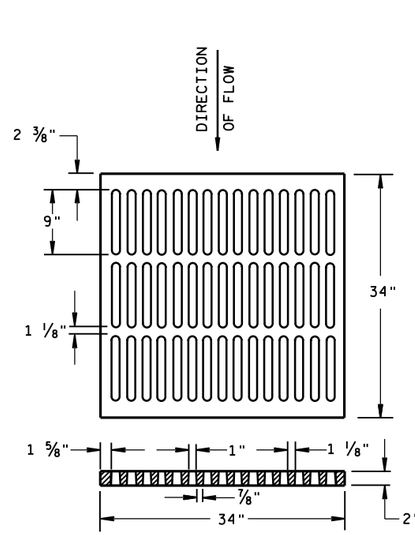
NOTE: EITHER CASTING IS ACCEPTABLE

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.

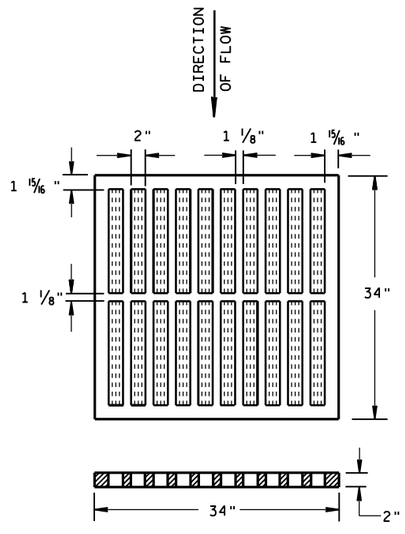
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



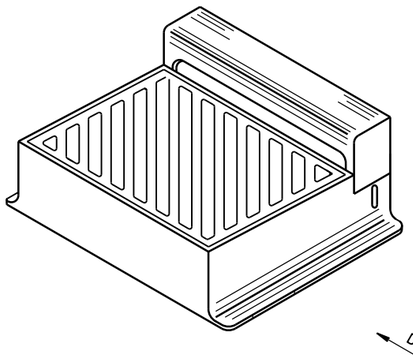
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



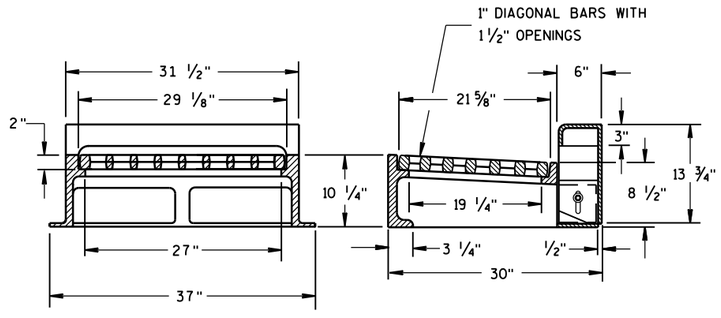
TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIRECTION OF FLOW

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

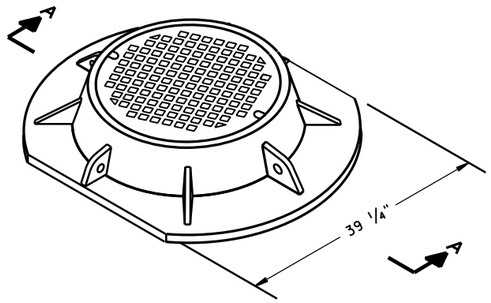
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

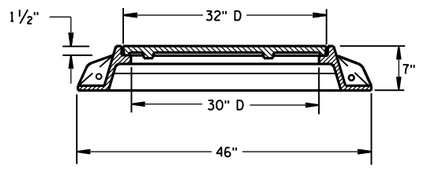
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

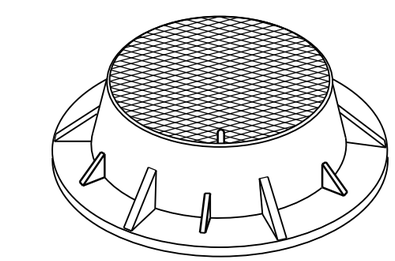
6

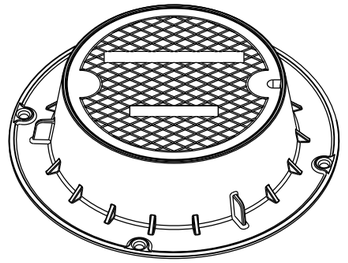
S.D.D. 8 A 5-19b

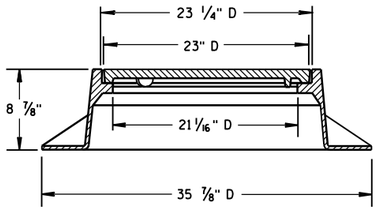


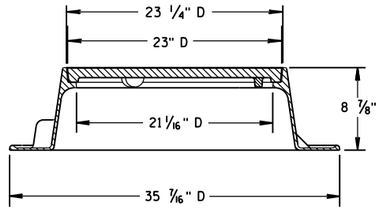


SECTION A-A
TYPE "K"









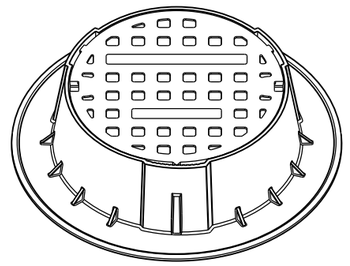
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

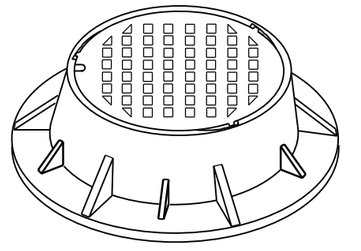
GENERAL NOTES

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.

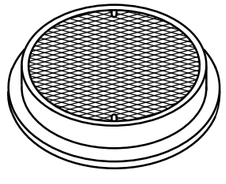
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

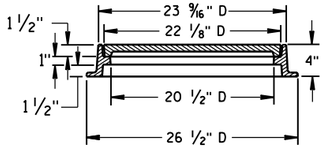
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



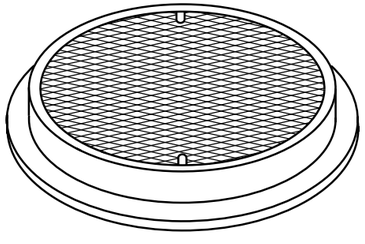


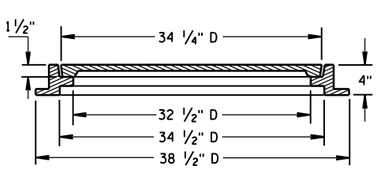
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



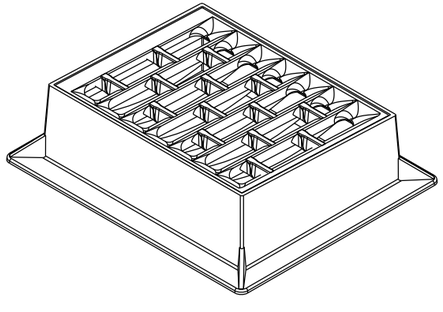


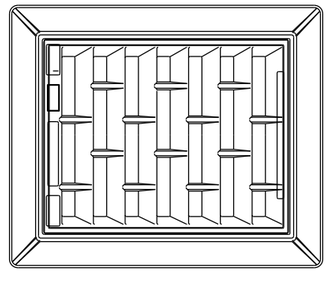
TYPE "L"

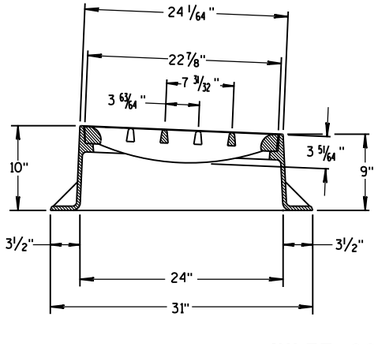


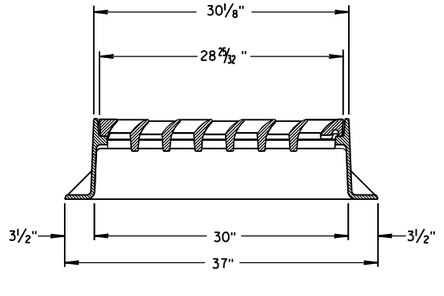


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

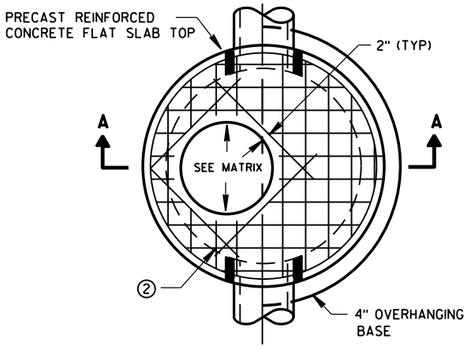
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

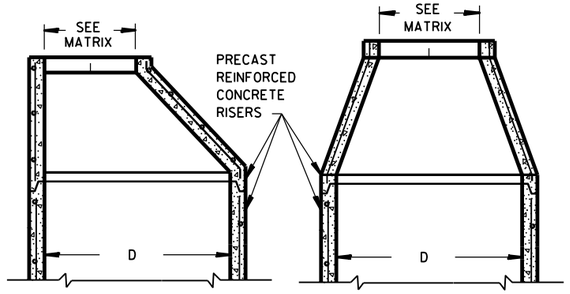
S.D.D. 8 A 5-19d

6

S.D.D. 8 A 5-19d

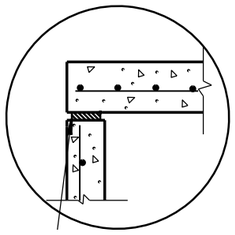


PLAN VIEW CIRCULAR OPENING

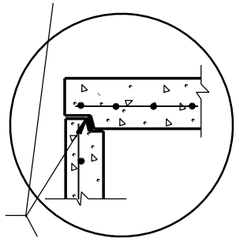


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

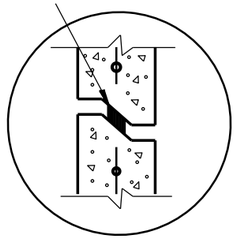


TOP WITH PLAIN END JOINT



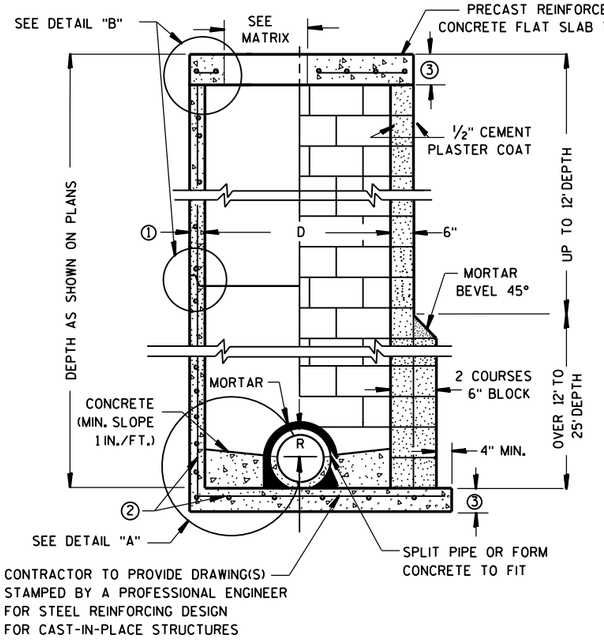
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



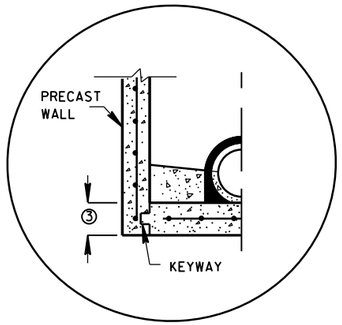
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

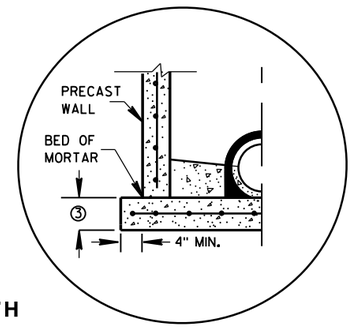


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

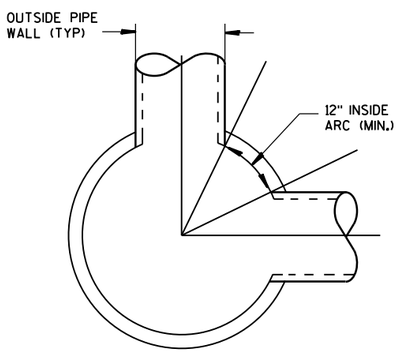


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

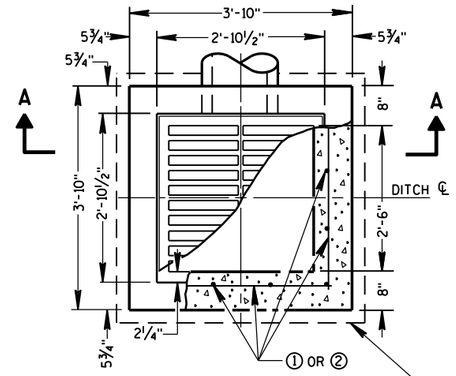
APPROVED

Sept., 2016
DATE

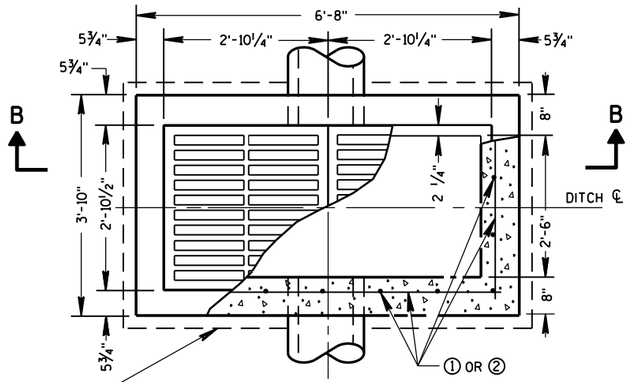
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

FHWA

6
S.D.D. 8 B 9-2

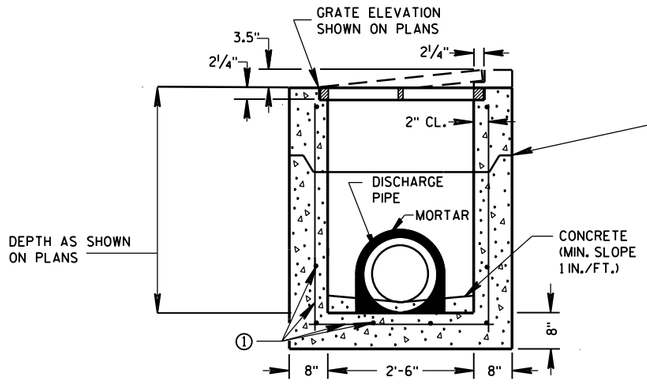


PLAN VIEW

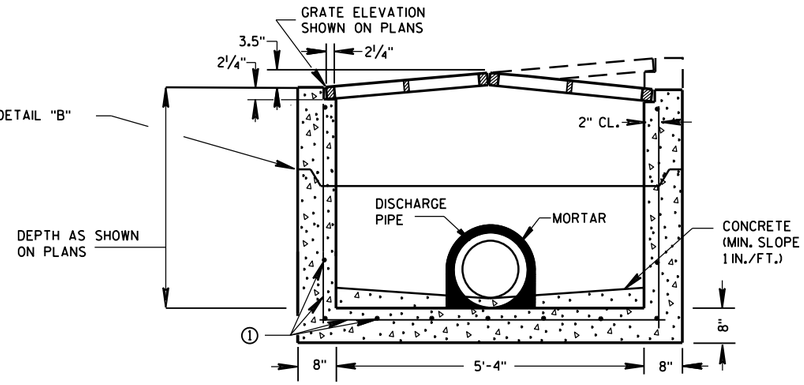


PLAN VIEW

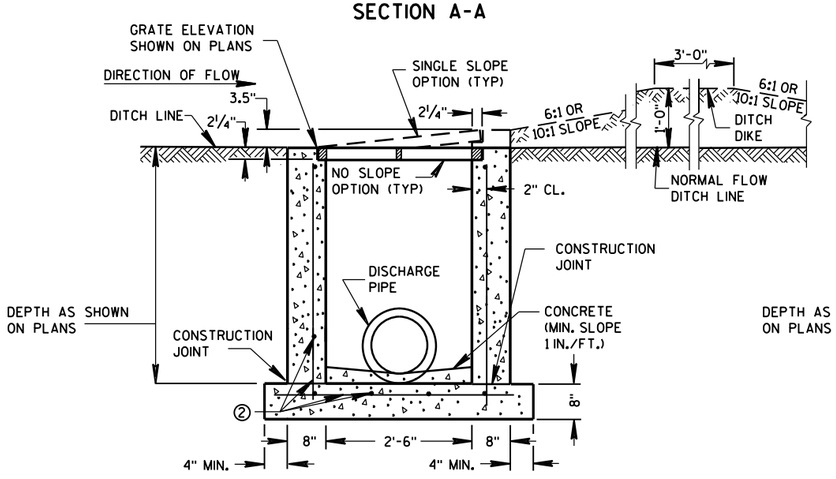
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



PRECAST REINFORCED CONCRETE SECTION A-A

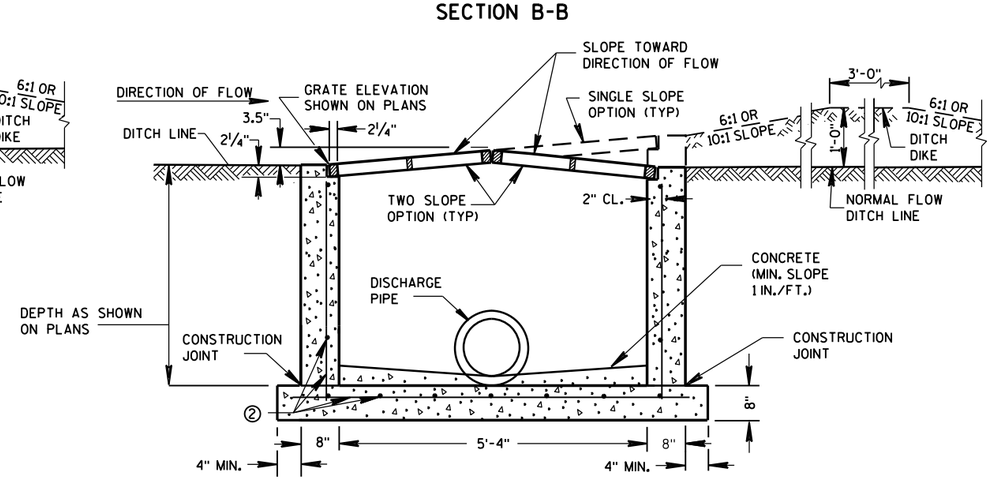


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

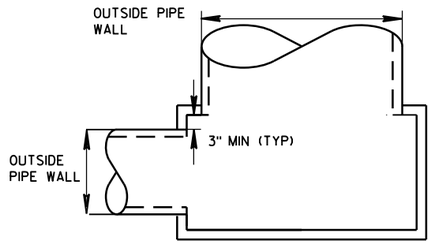
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

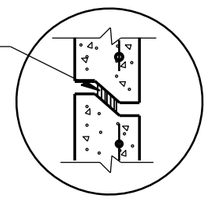
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

6
S.D.D. 8 C 8-2

GENERAL NOTES

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

(1) UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

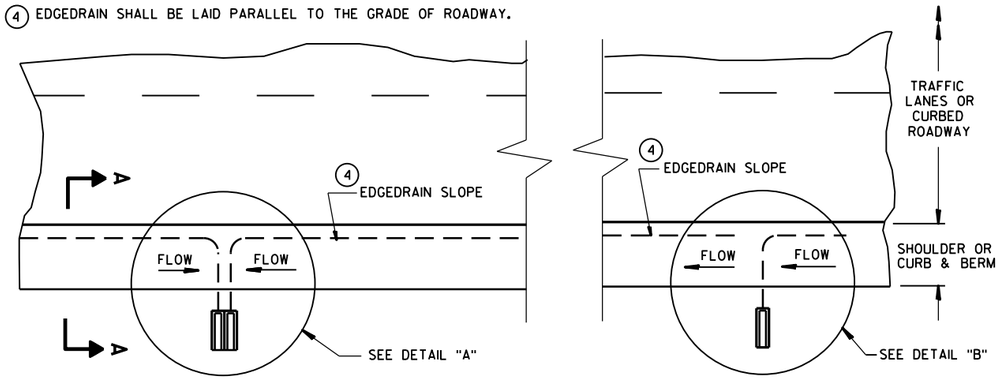
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

(2) MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

(3) EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

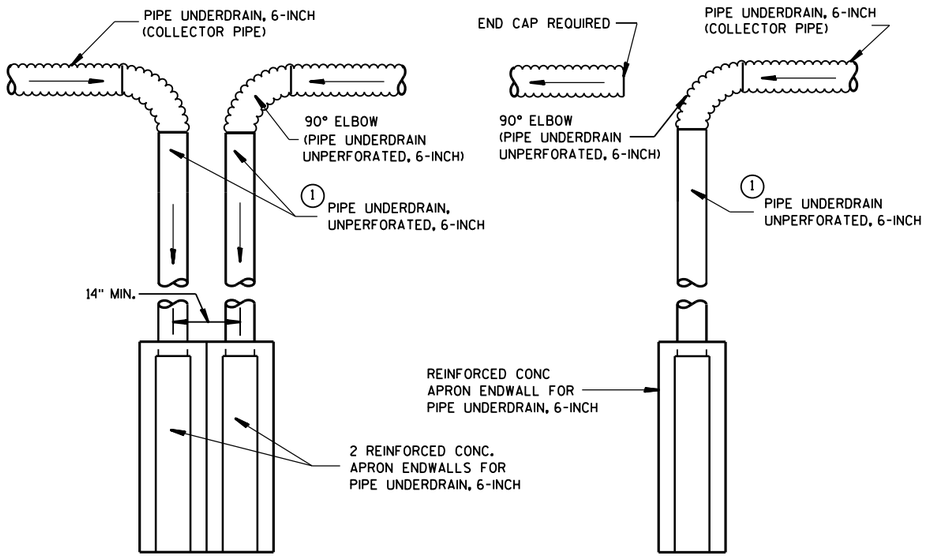
(4) EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



PLAN VIEW

ROADWAY WITH SHOULDERS OR CURBS

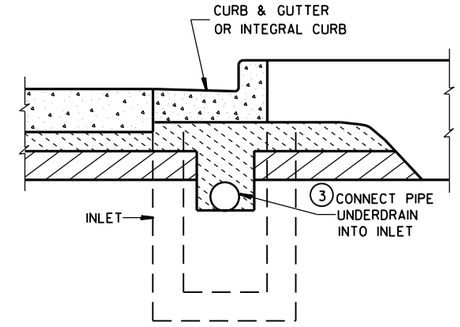
(EDGEDRAIN OUTLETS TO ROADSIDE)(2)



DETAIL "A"
TO BE USED AT LOW POINT LOCATIONS

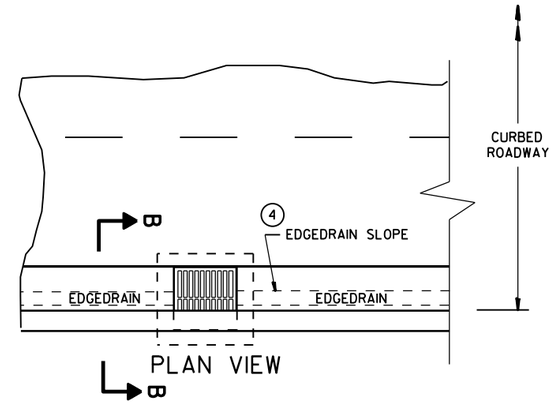
DETAIL "B"
TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



SECTION B-B

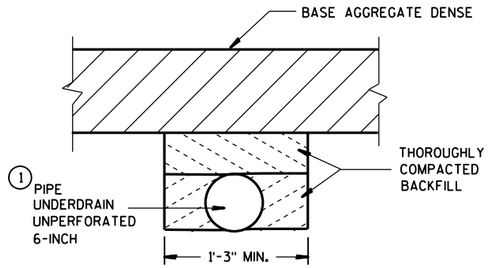
URBAN CROSS SECTION



PLAN VIEW

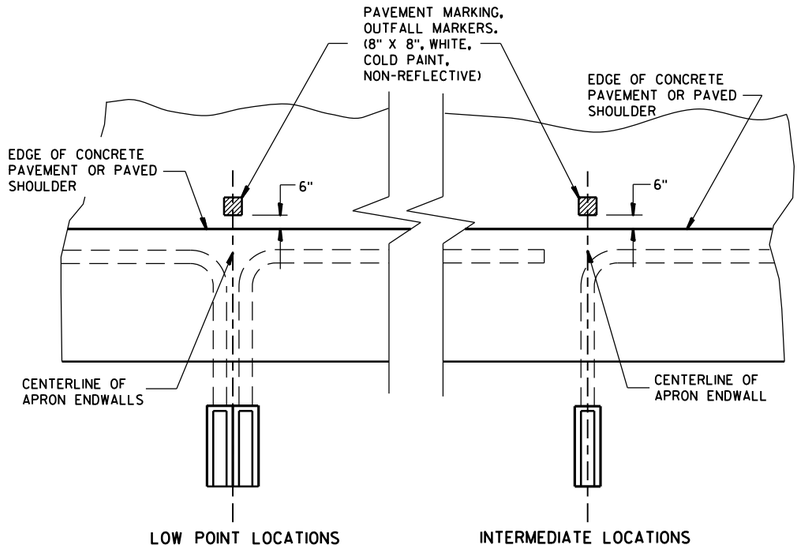
ROADWAY WITH CURBS

(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



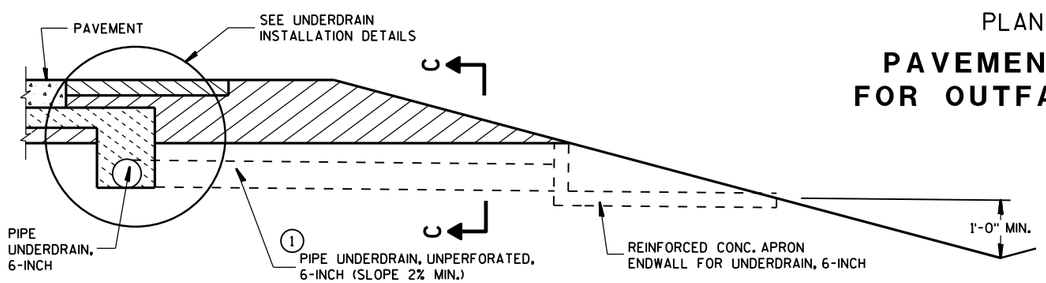
SECTION C-C

(TRENCH FOR OUTFALL PIPE)



PLAN VIEW

PAVEMENT MARKING FOR OUTFALL MARKERS



SECTION A-A

RURAL CROSS SECTION

EDGEDRAIN OUTLET AND OUTFALL MARKERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 15-5a

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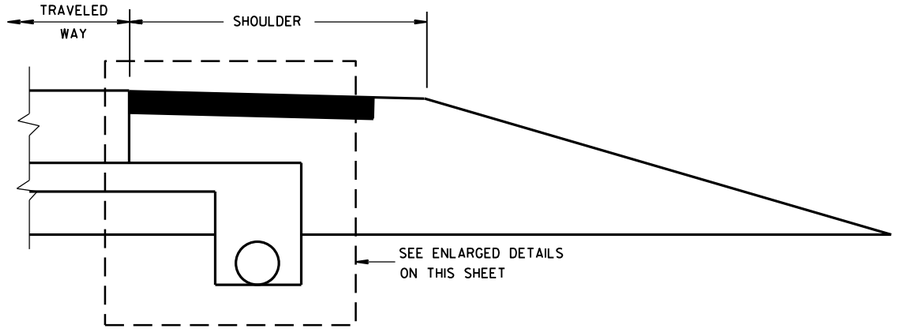
S.D.D. 8 D 15-5a



RURAL CROSS SECTION

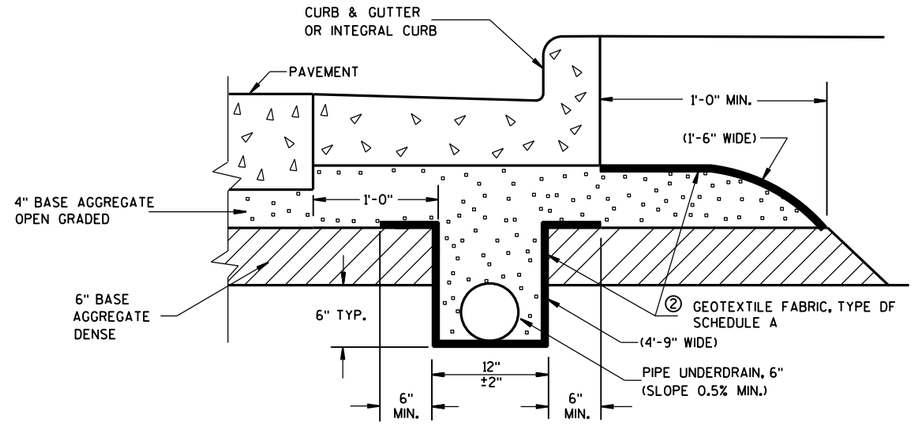
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

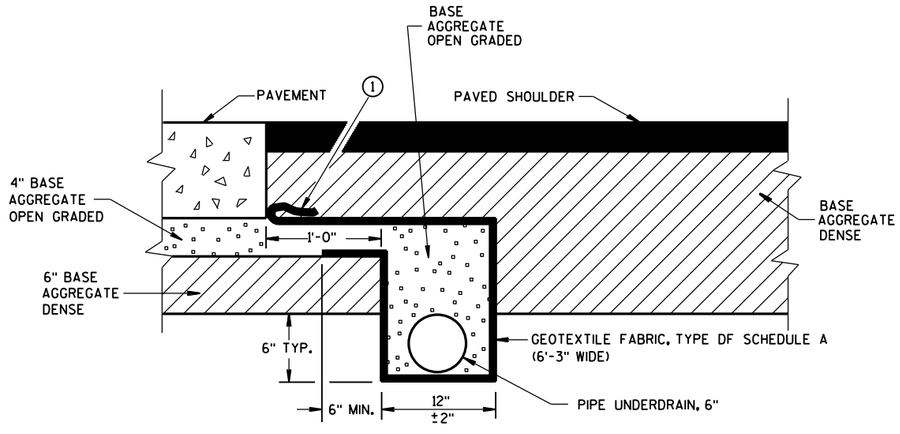
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

① FOLD OVER EXCESS GEOTEXTILE FABRIC AT THIS LOCATION.

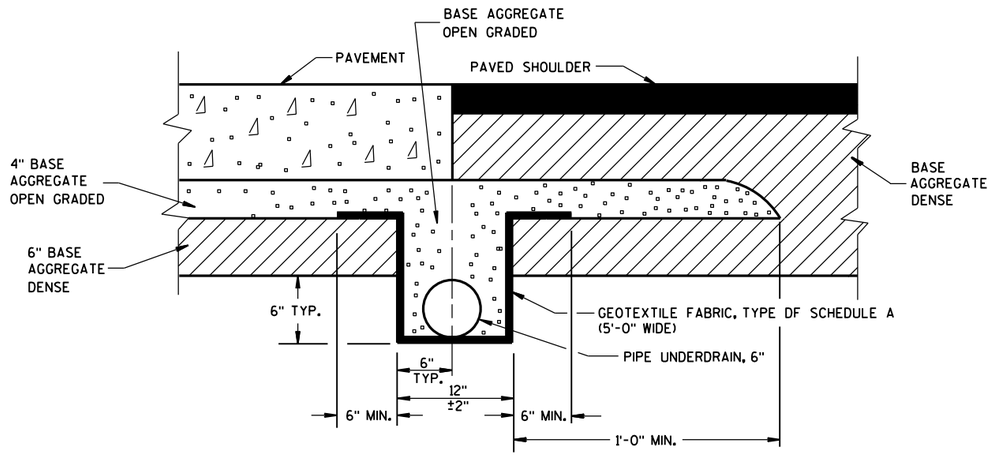
② TOTAL FABRIC WIDTH IS 6'-3" FOR PAYMENT.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATE

EDGEDRAIN IN RURAL ROADWAY

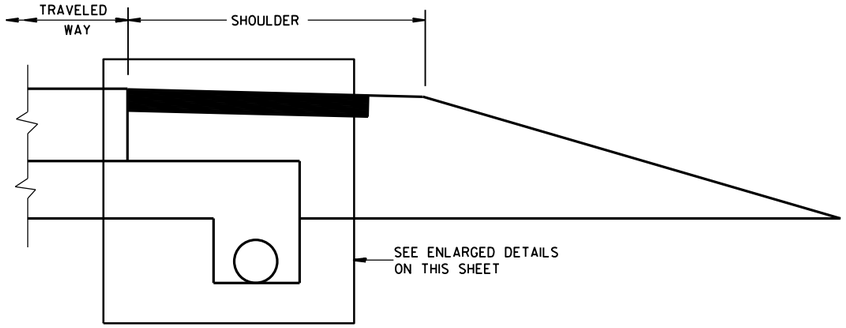
EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPE
FHWA

6

S.D.D. 8 D 15-5b

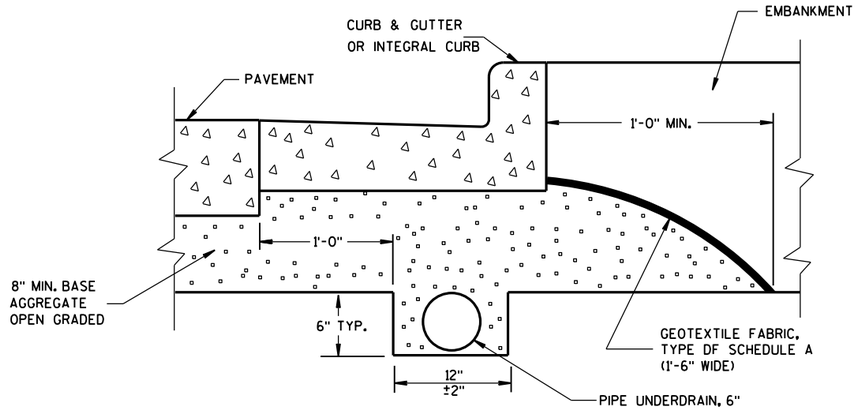


RURAL CROSS SECTION

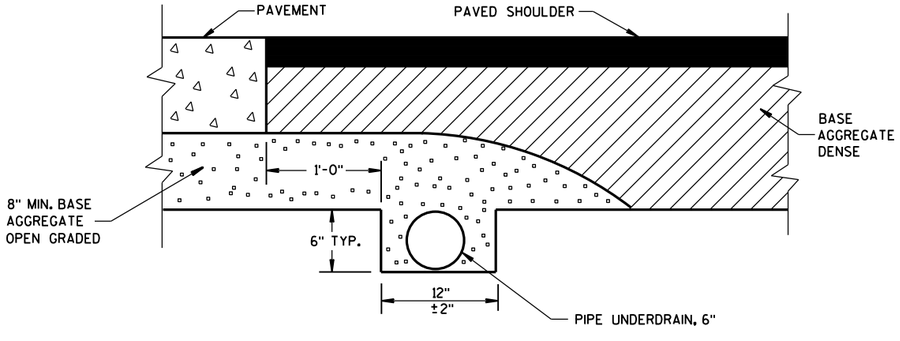
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

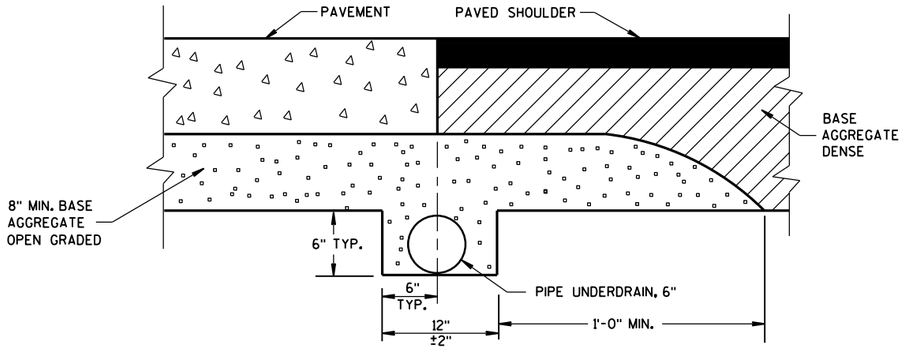
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



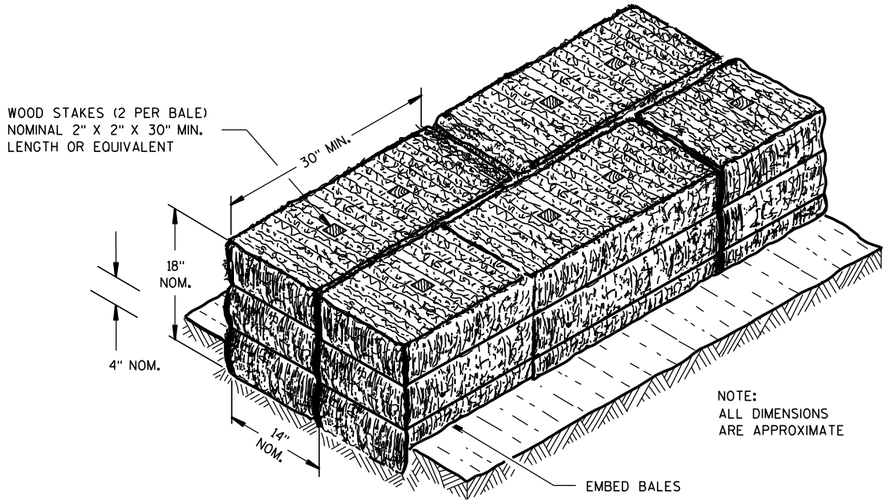
PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

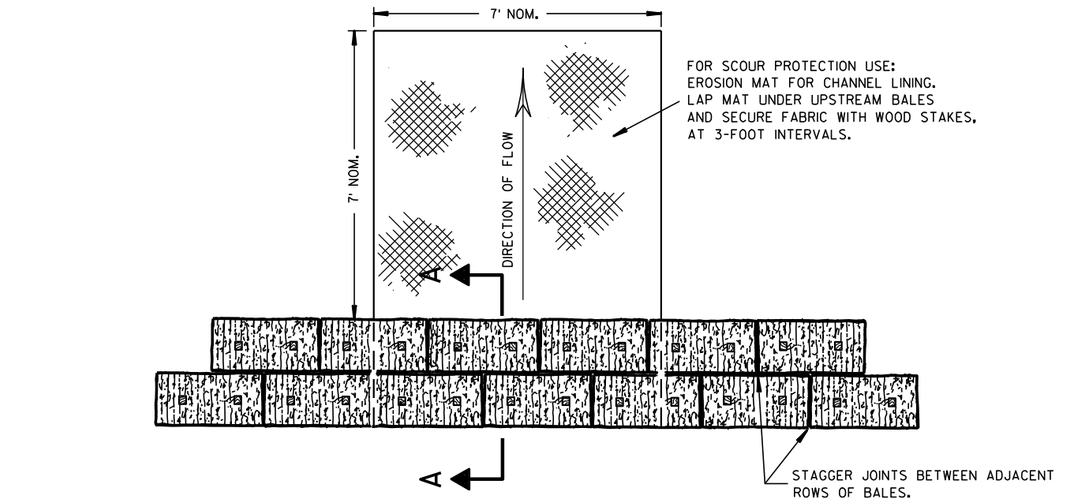
EDGEDRAIN AND BASE AGGREGATE OPEN GRADED	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept. 2015 DATE	/S/ Peter Kemp, P.E. PAVEMENT SUPE
FHWA	

6

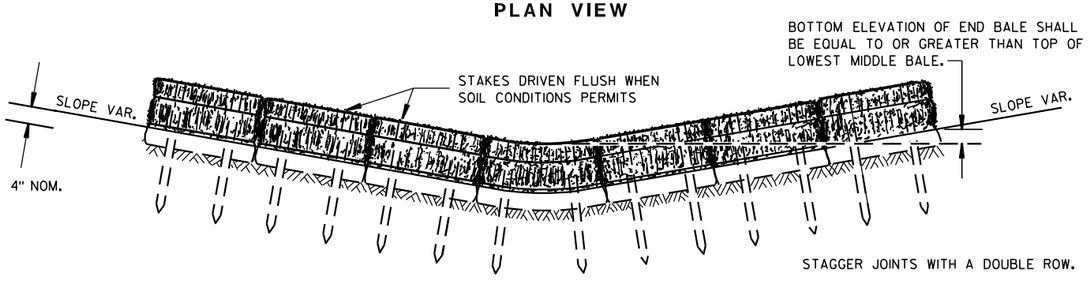
S.D.D. 8 D 15-5c



SECTION A-A



PLAN VIEW



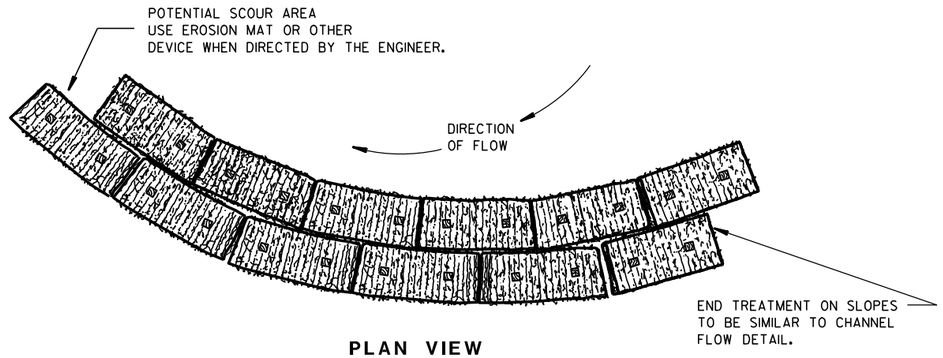
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

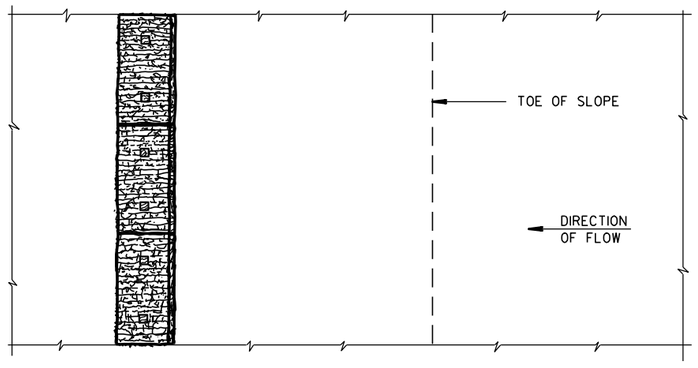
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

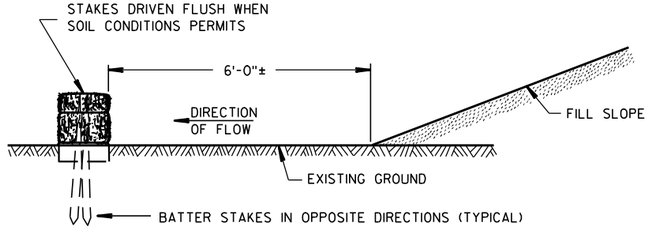


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

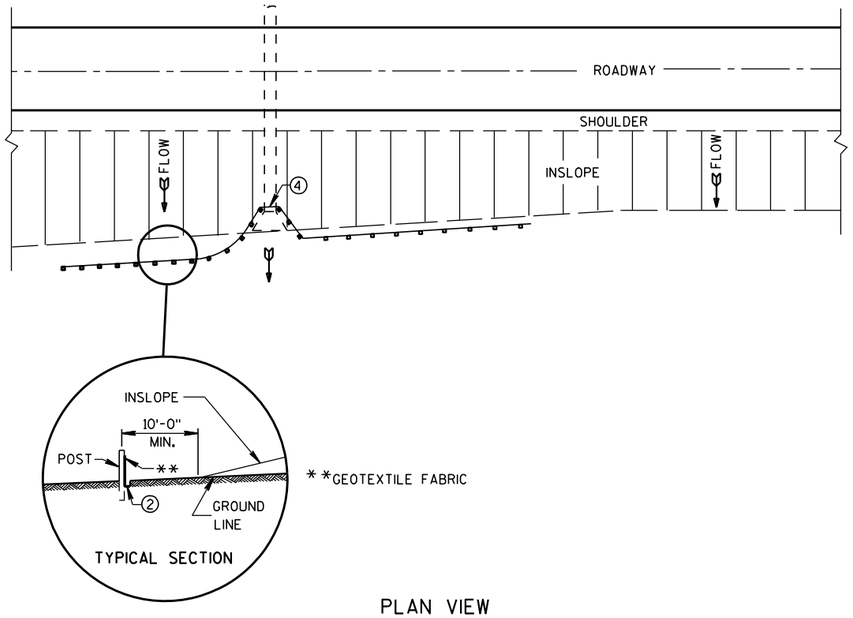
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

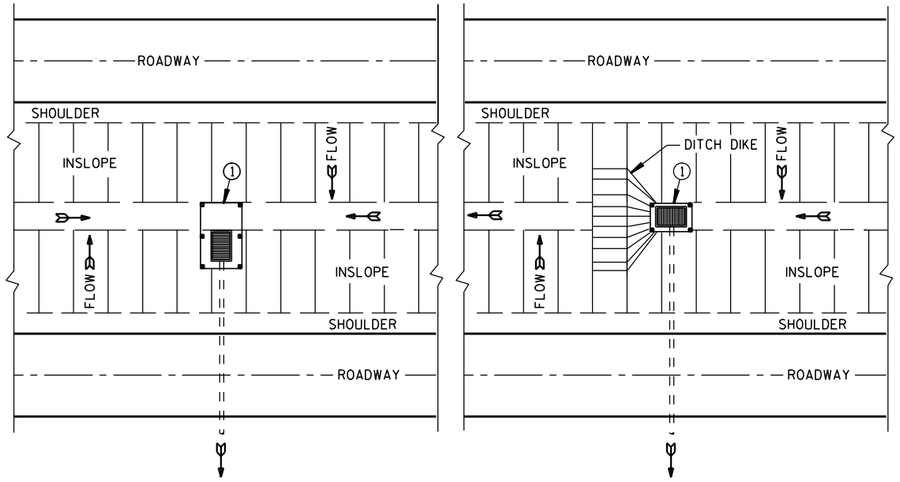
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



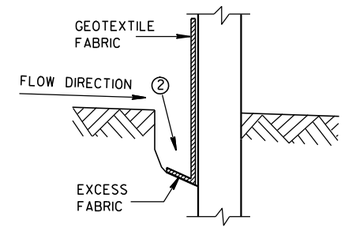
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

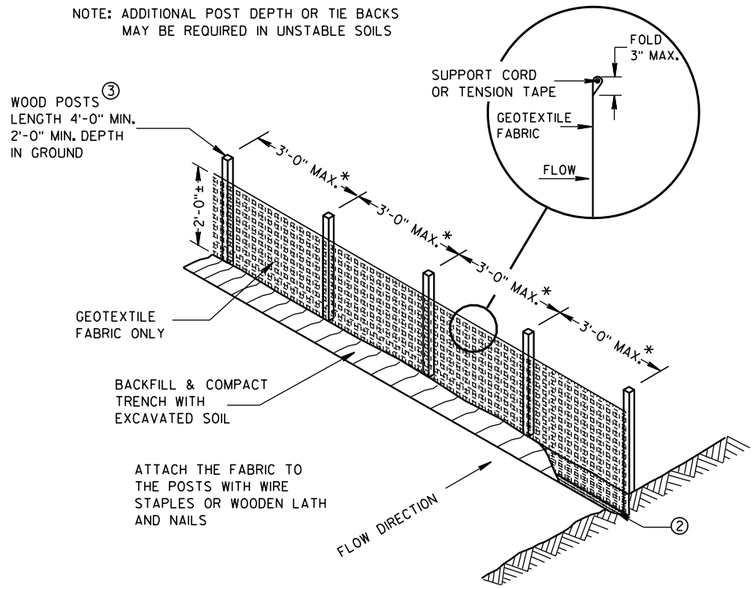
GENERAL NOTES

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

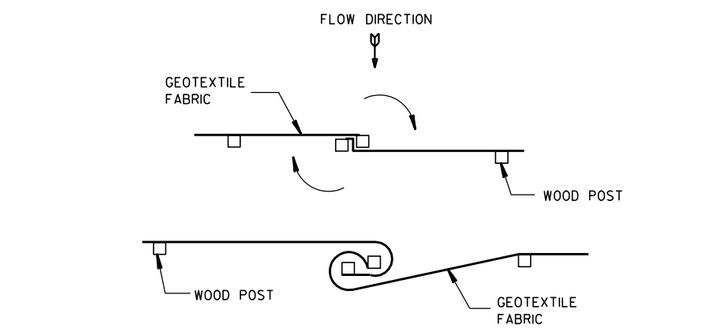
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



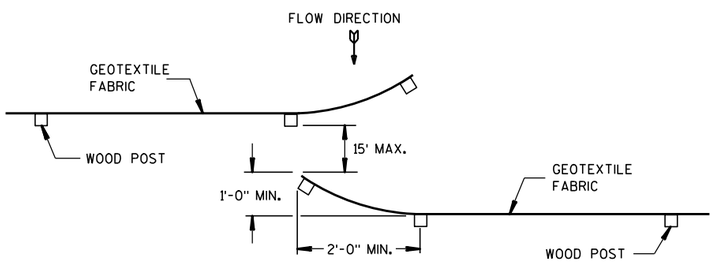
TRENCH DETAIL



SILT FENCE

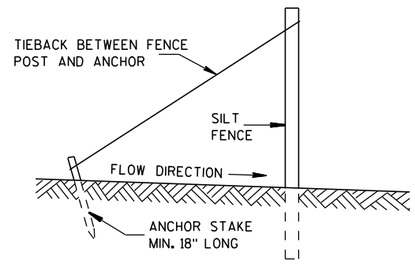


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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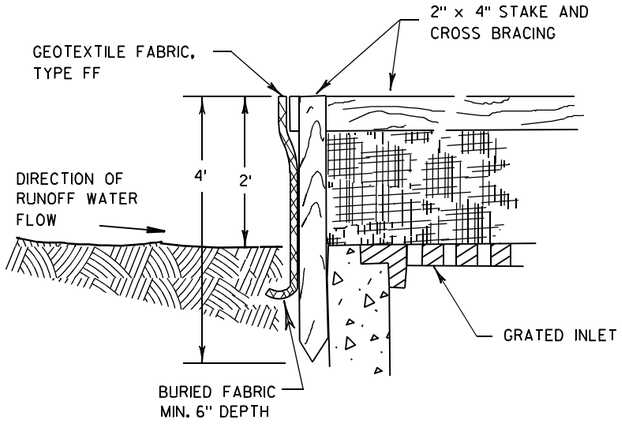
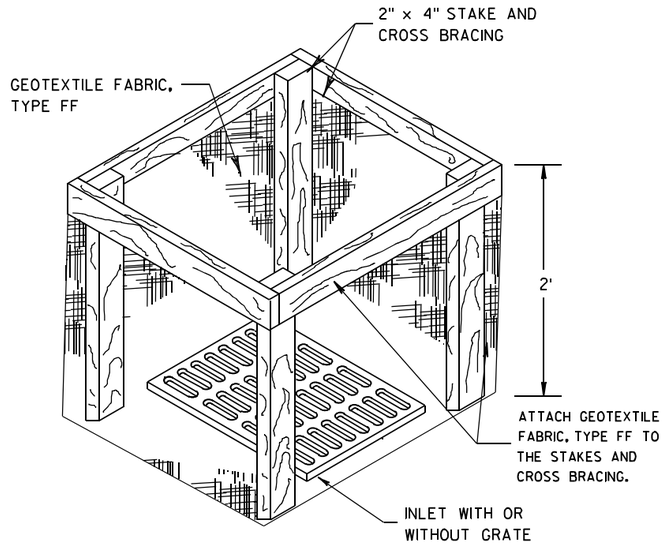
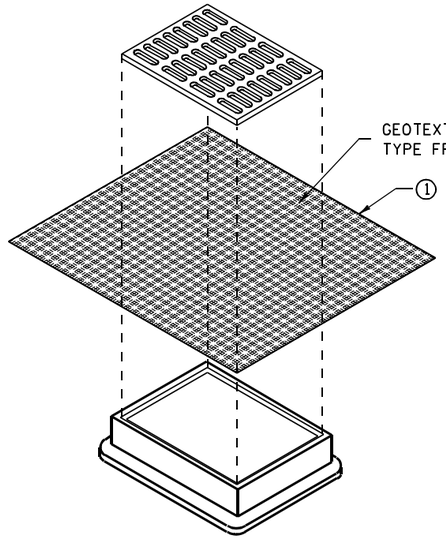
S.D.D. 8 E 9-6



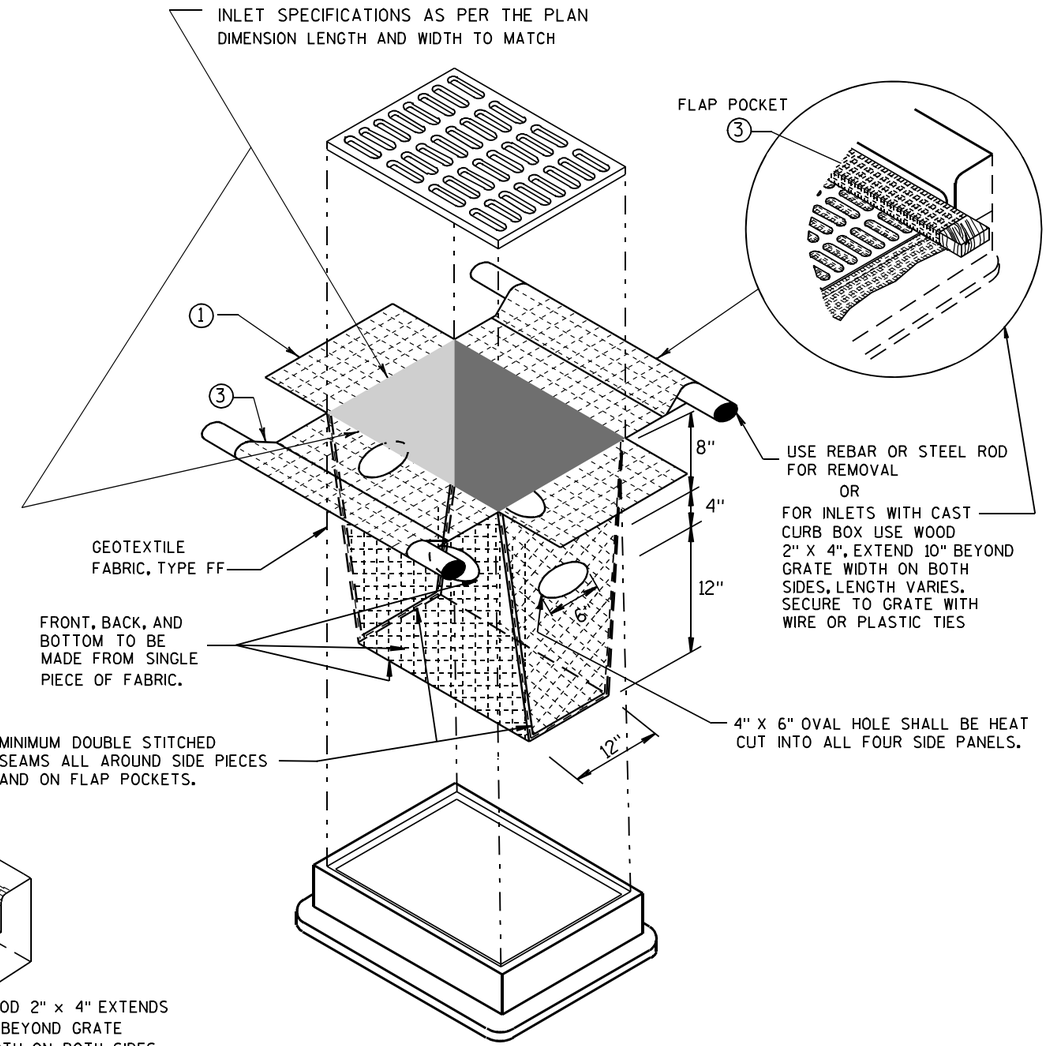


INLET PROTECTION, TYPE A



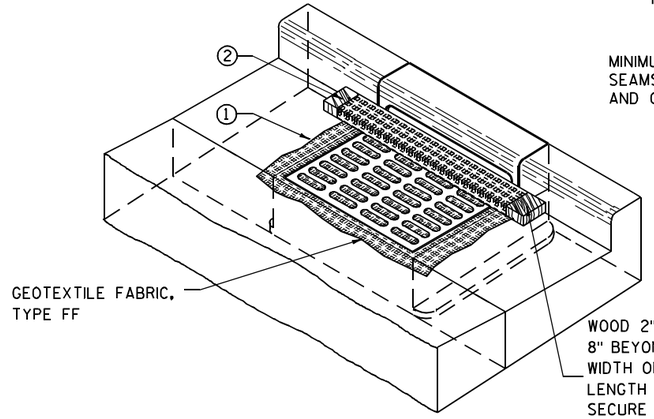
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

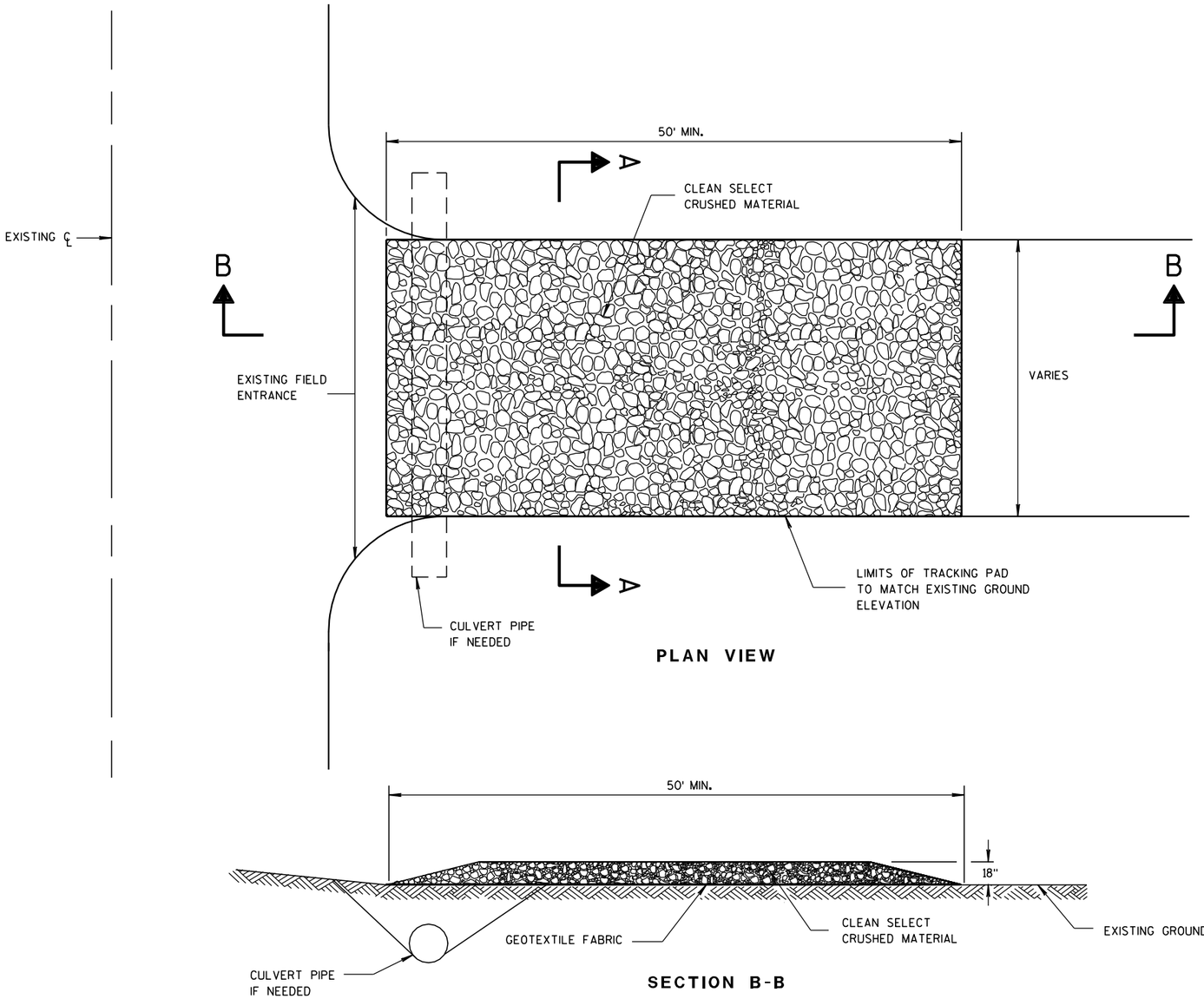
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2



PLAN VIEW

SECTION B-B

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

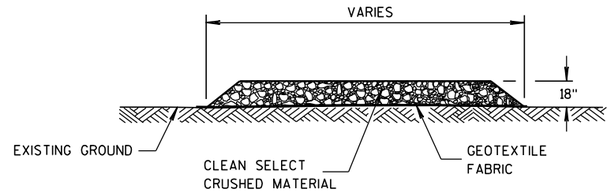
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER

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S.D.D. 8 E 14-1

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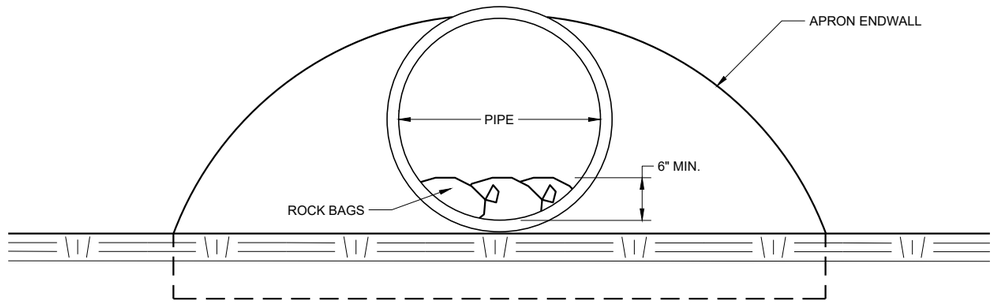
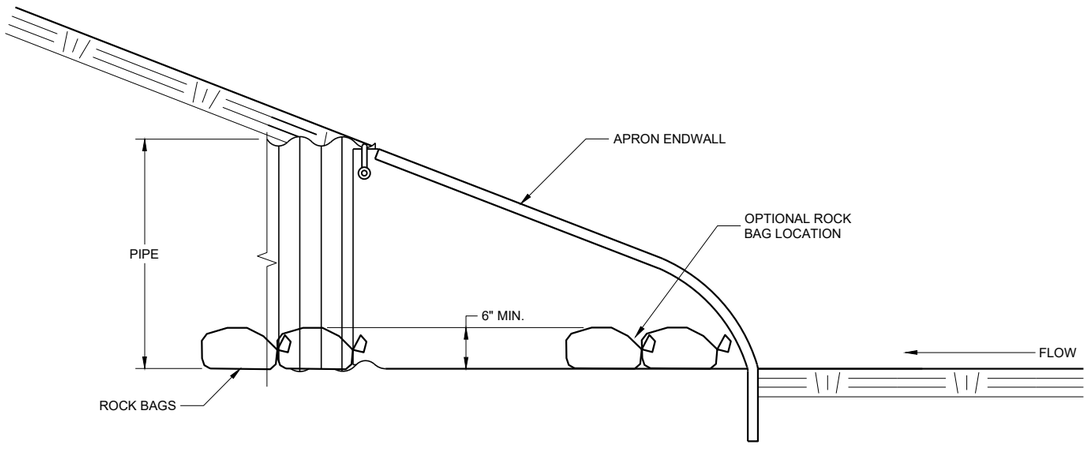


END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Daniel Schave — EROSION CONTROL ENGI
FHWA

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SDD 08E15 - 01

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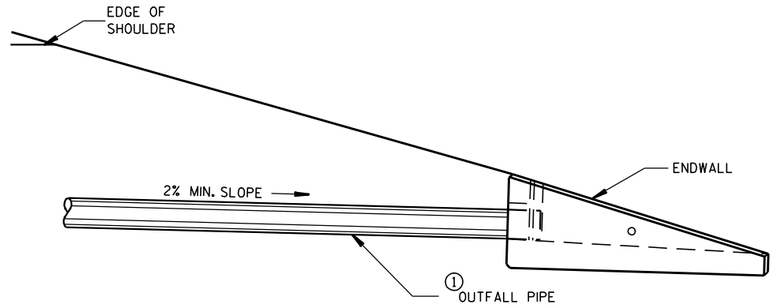
SDD 08E15 - 01

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

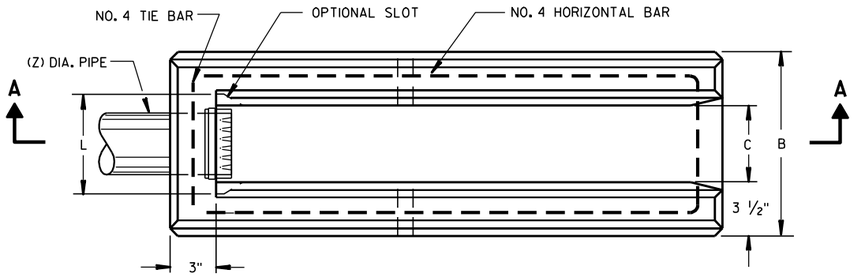
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

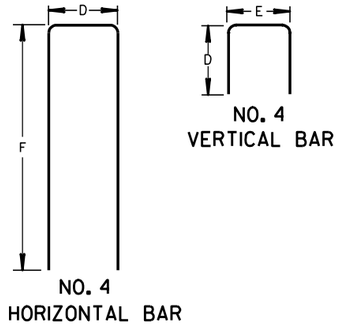
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

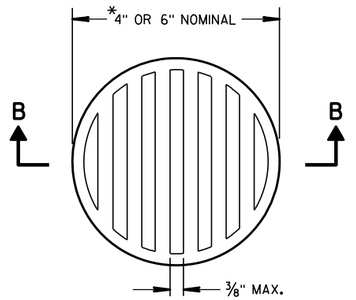
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

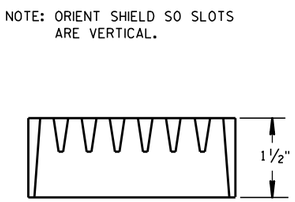


PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS

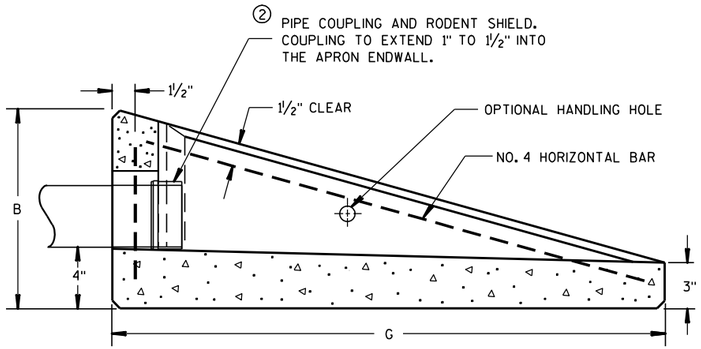




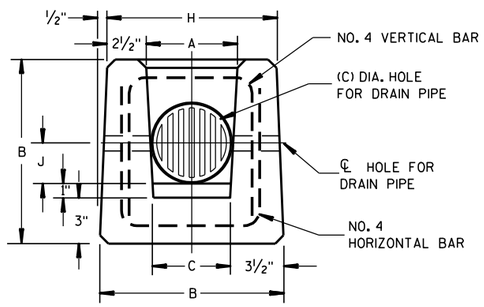
SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A



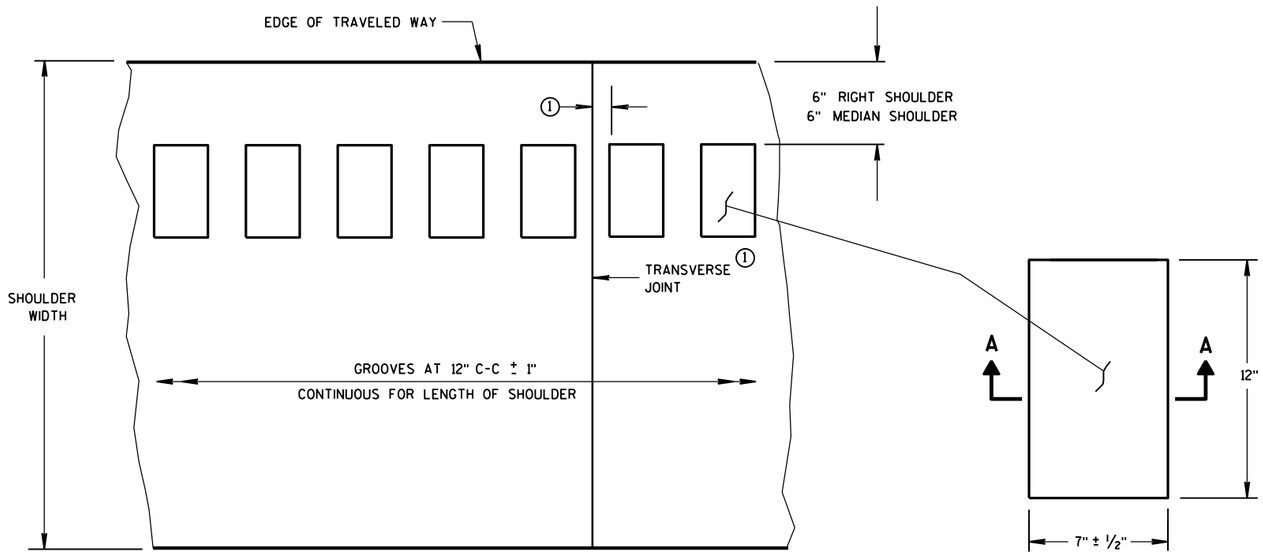
END VIEW

CONCRETE APRON ENDWALL FOR UNDERDRAIN

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

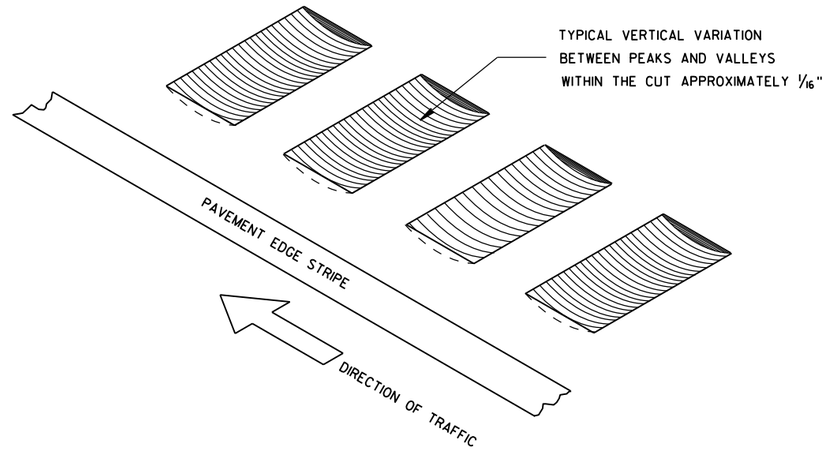
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



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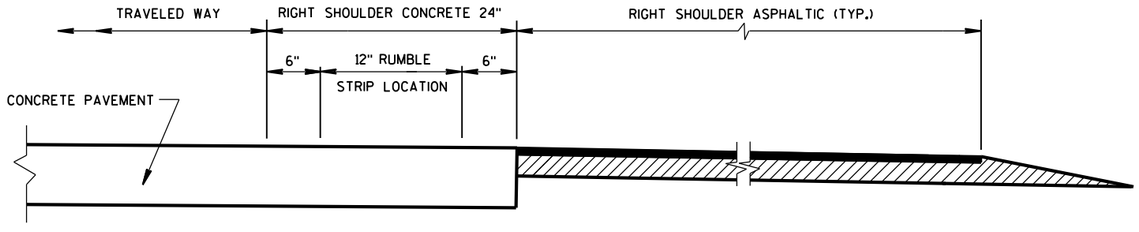
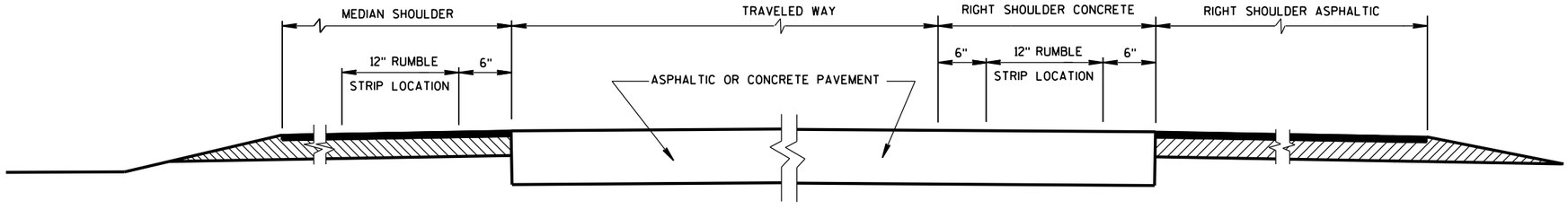


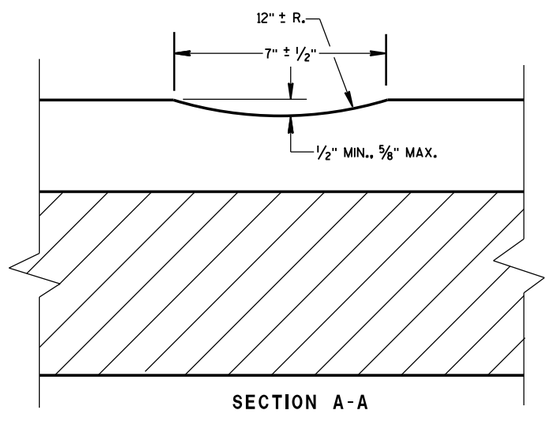
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 13 A 5-5a

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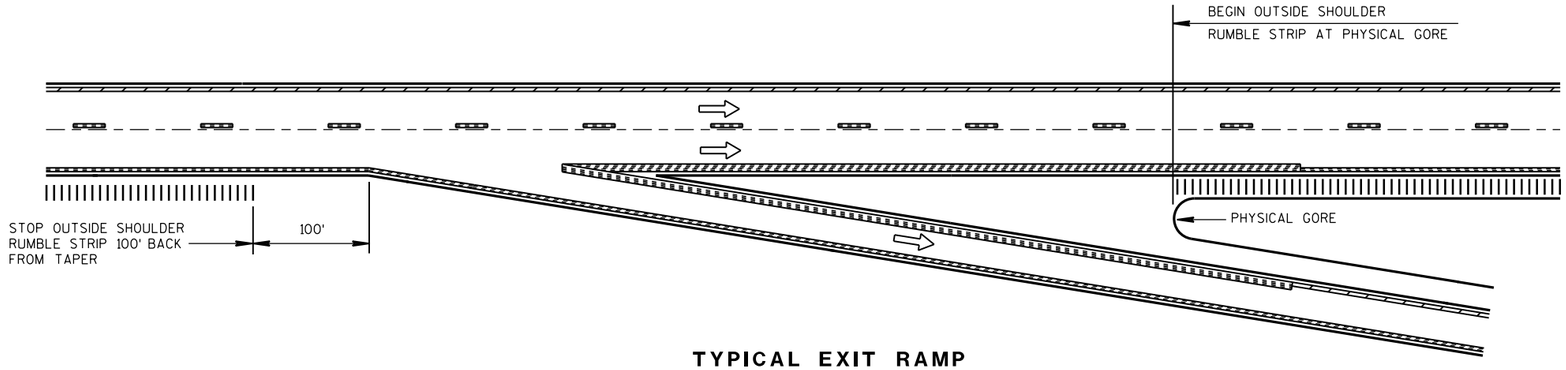
S.D.D. 13 A 5-5a



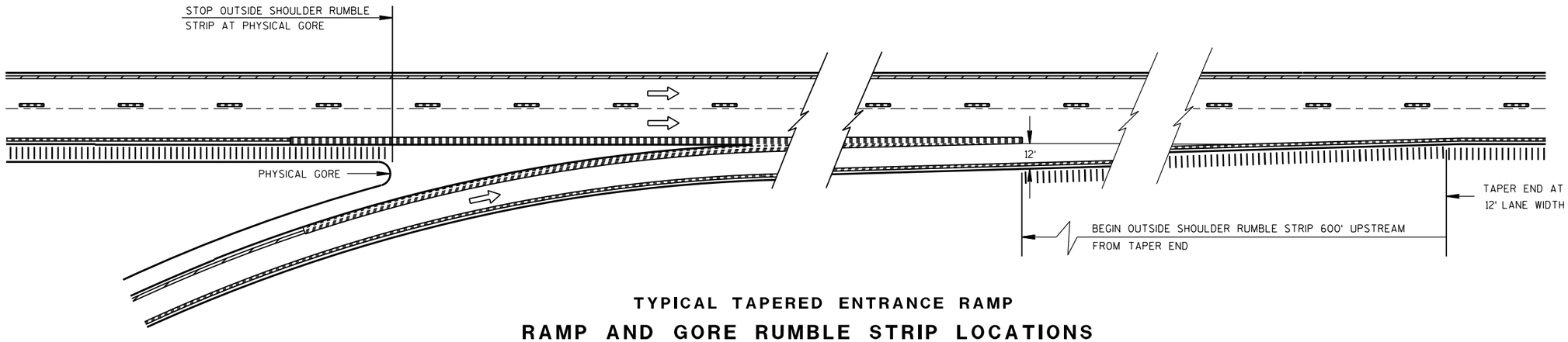
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

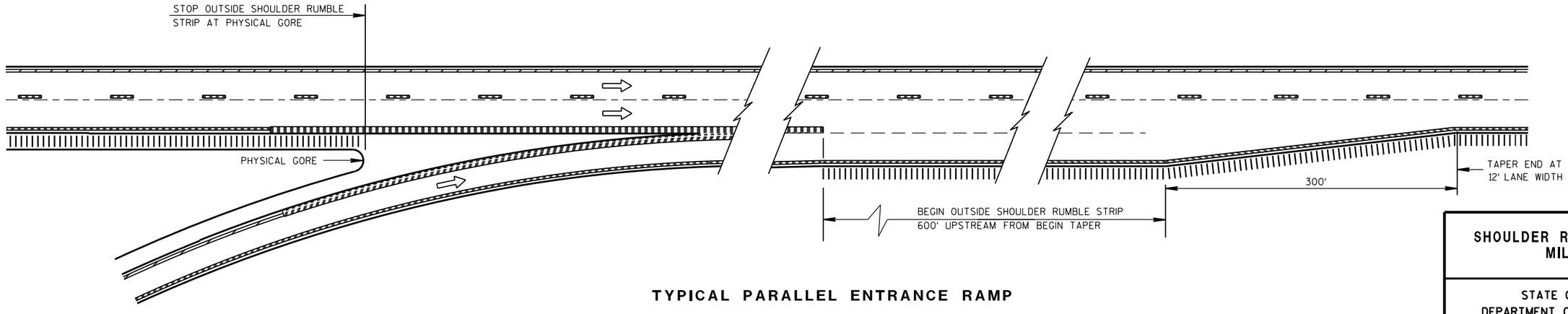
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

FHWA

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S.D.D. 13 A 5-5b

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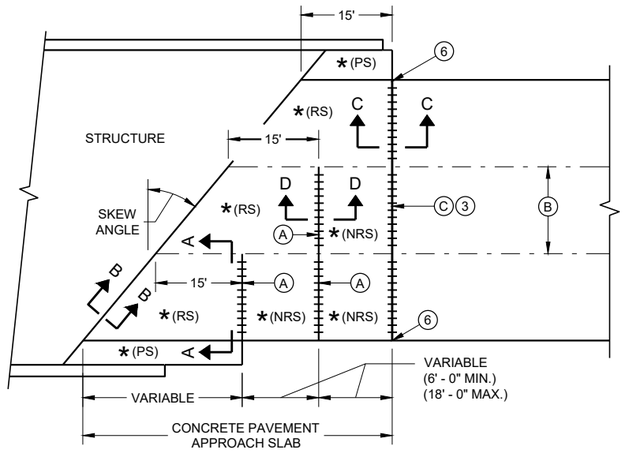
S.D.D. 13 A 5-5b



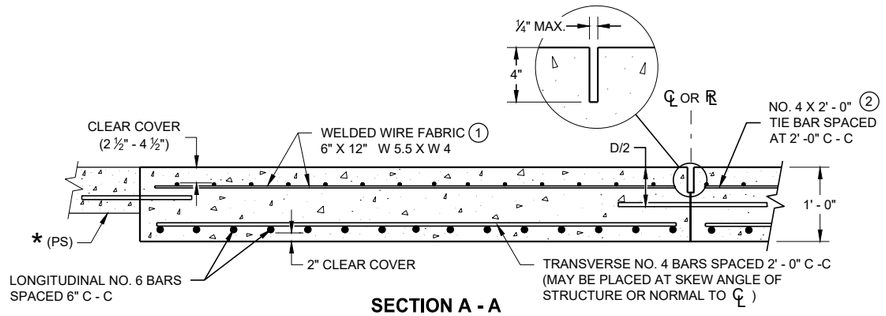
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

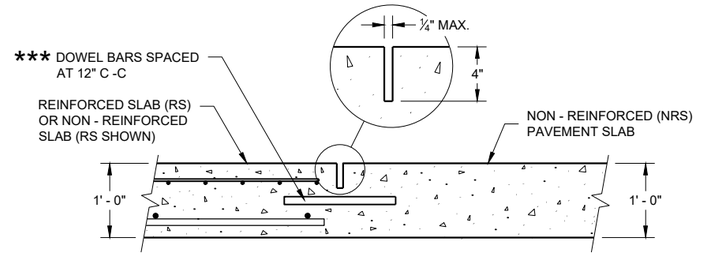
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

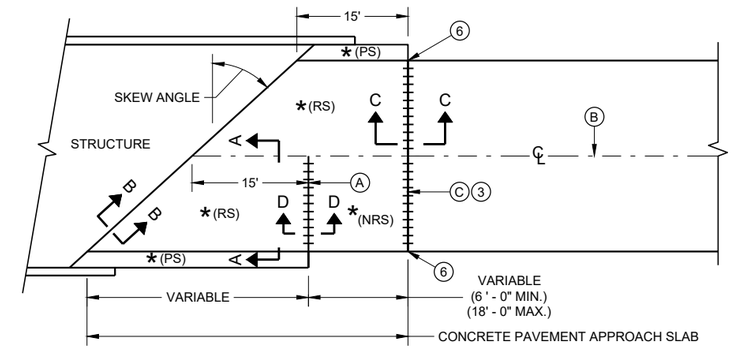
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .

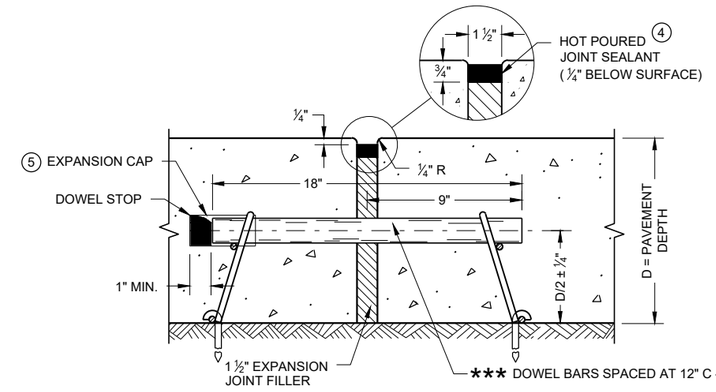


SECTION D - D
CONTRACTION JOINT

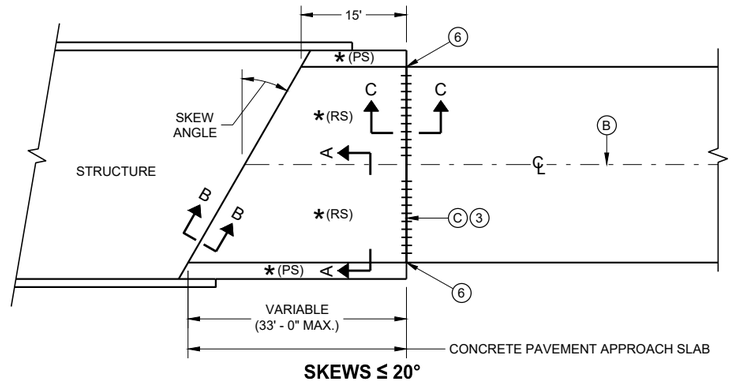


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

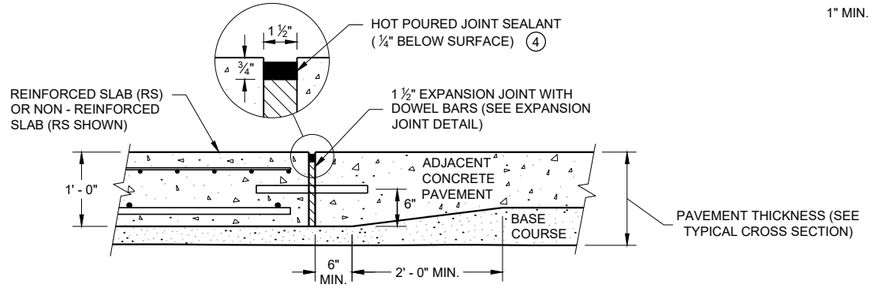


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR

FHWA

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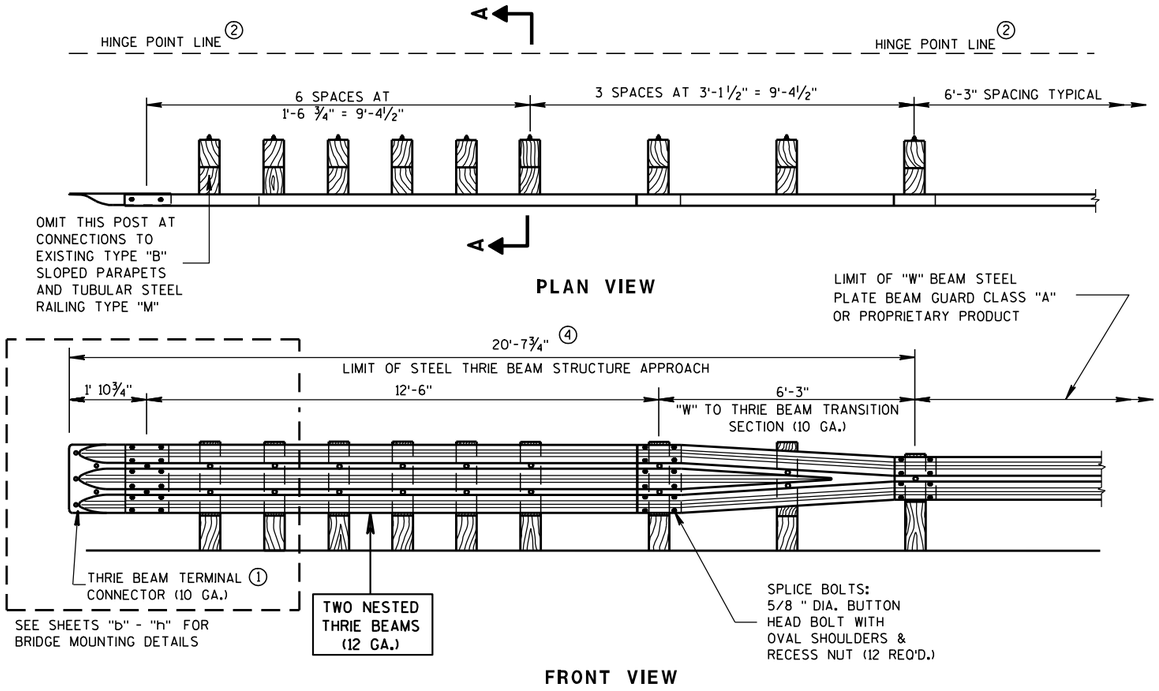
SDD 13B02 - 09a



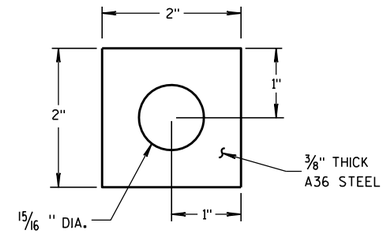


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

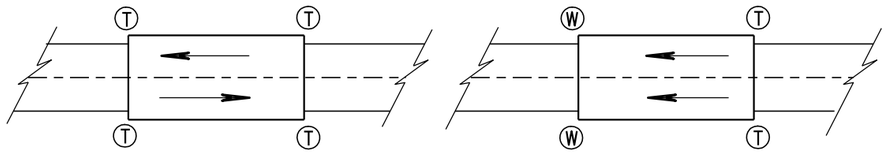
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



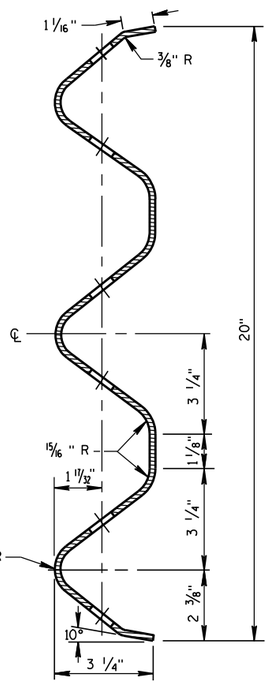
TWO WAY TRAFFIC

ONE WAY TRAFFIC

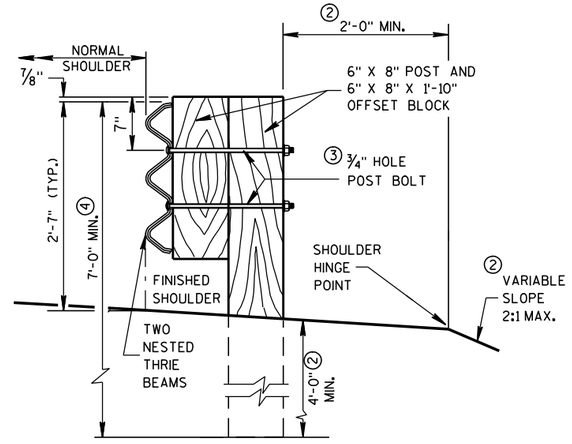
T THRIE BEAM CONNECTION

W W-BEAM CONNECTION WHEN REQUIRED

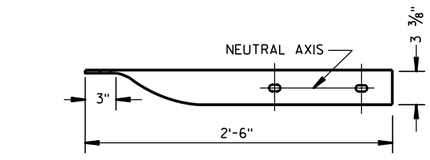
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

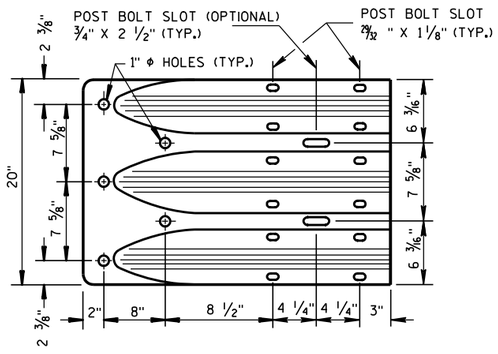


SECTION THRU THRIE BEAM RAIL ELEMENT

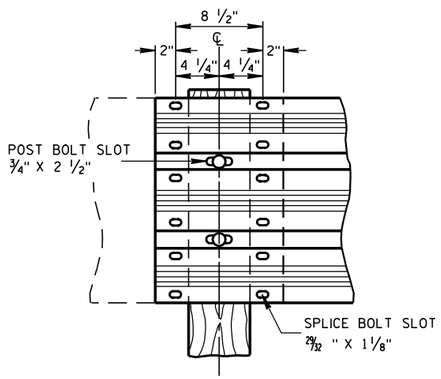


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

FHWA

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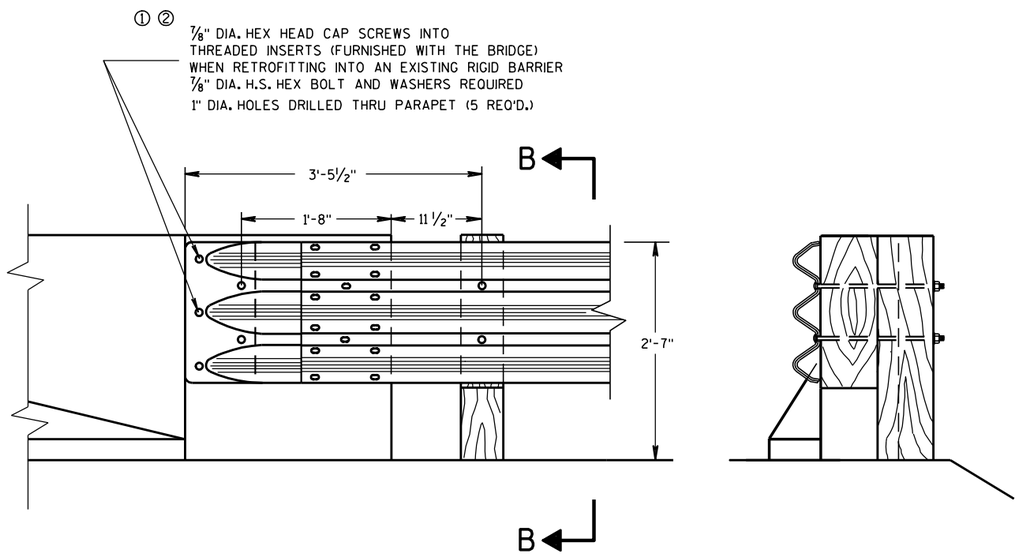
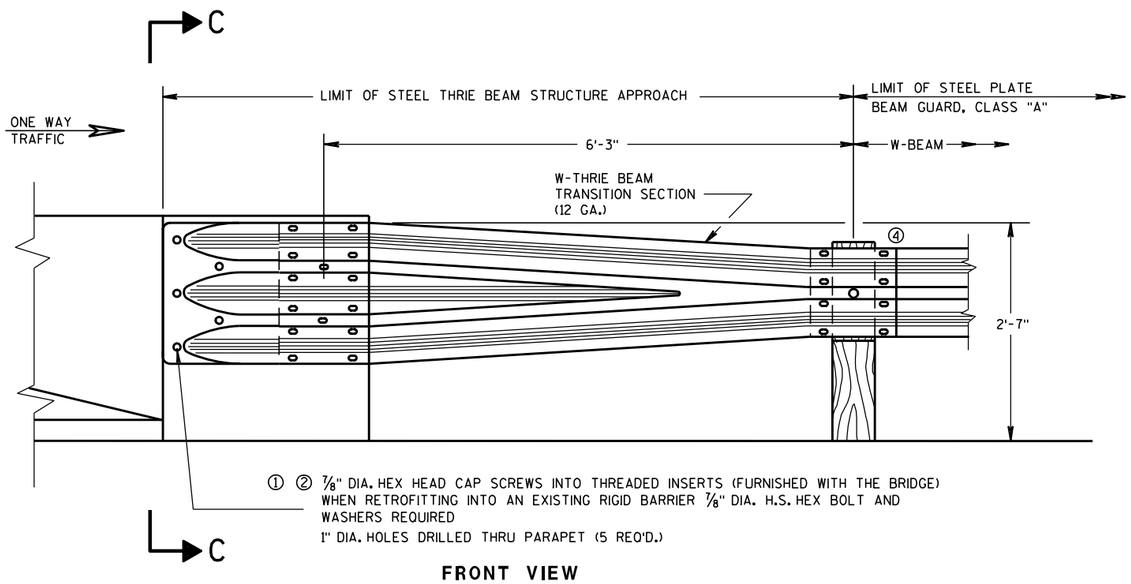
S.D.D. 14 B 20-11a



FRONT VIEW

SECTION B-B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

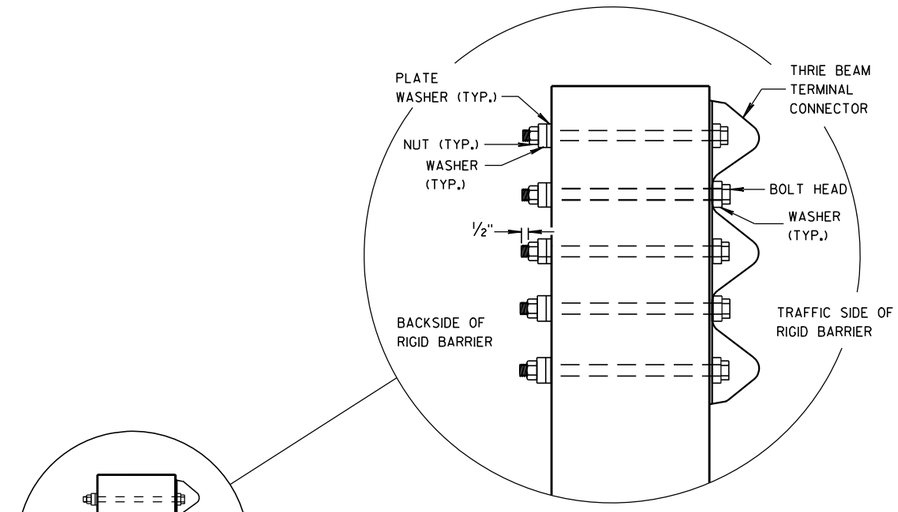
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

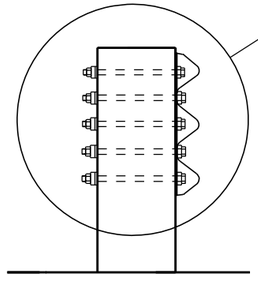
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ 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".

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.





SECTION C-C

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS [illegible] ENGINEER
FHWA

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S.D.D. 14 B 20-11b

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S.D.D. 14 B 20-11b

GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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③ 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".

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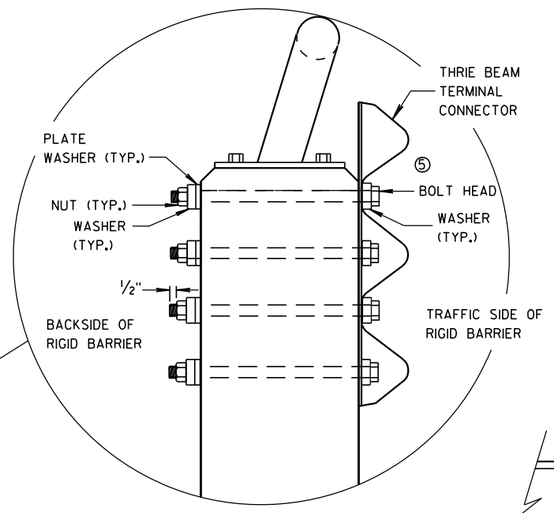
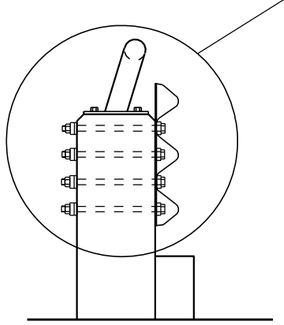
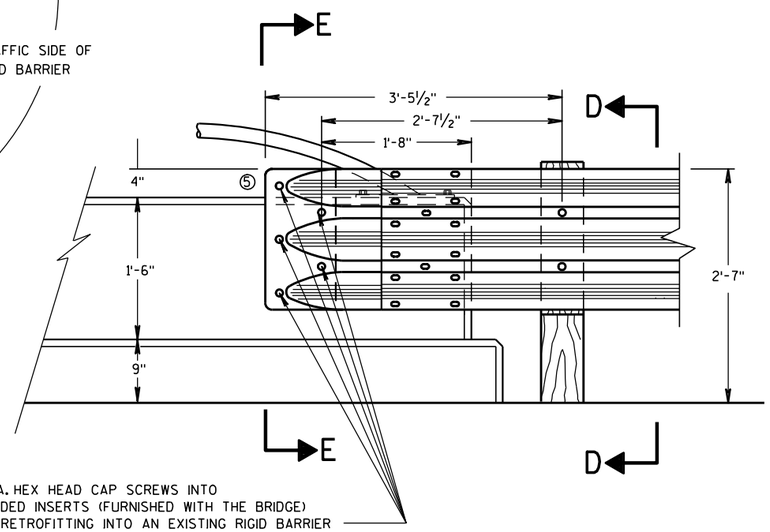
⑤ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.





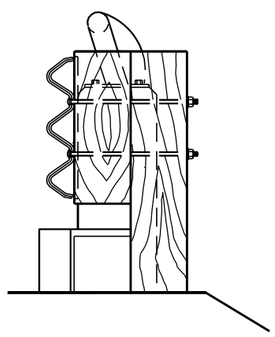
SECTION E-E



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED

1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)

FRONT VIEW

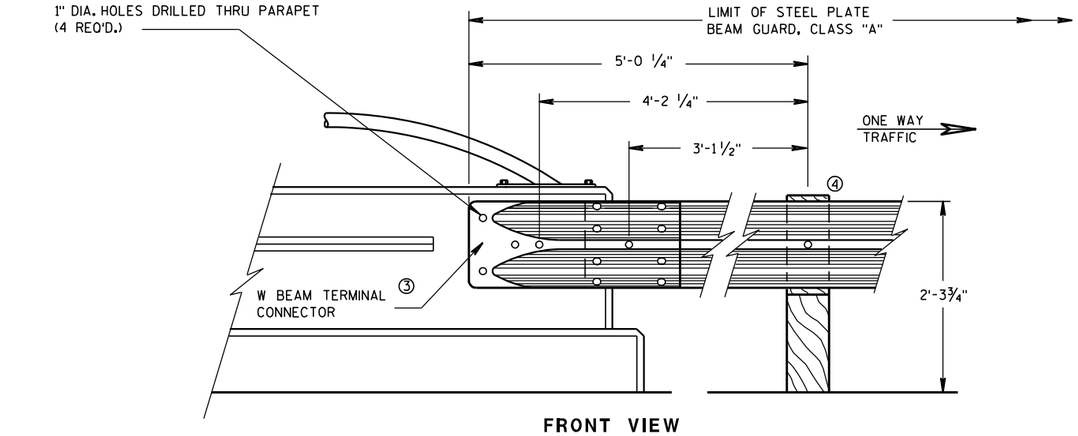


SECTION D-D

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED

1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
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8/31/2012 DATE	/S/ Jerry H. Zaa ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

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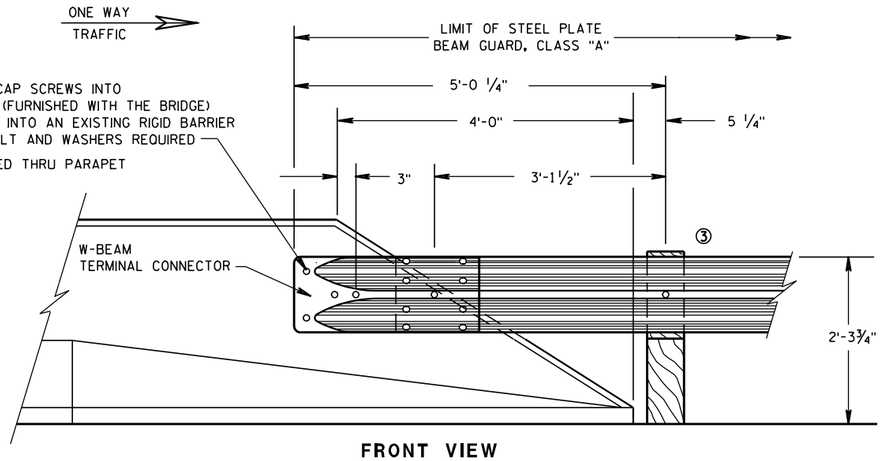


FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

GENERAL NOTES

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

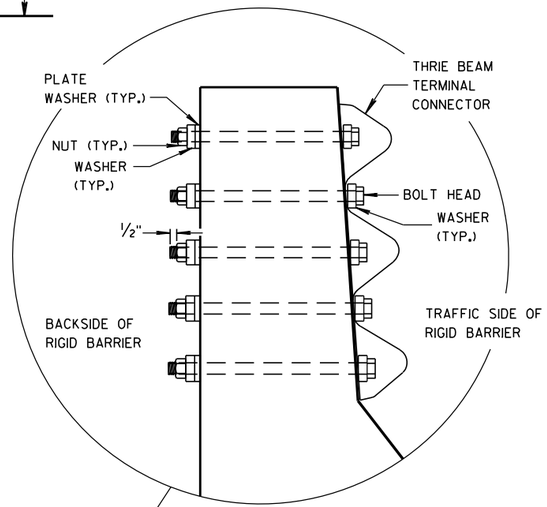
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

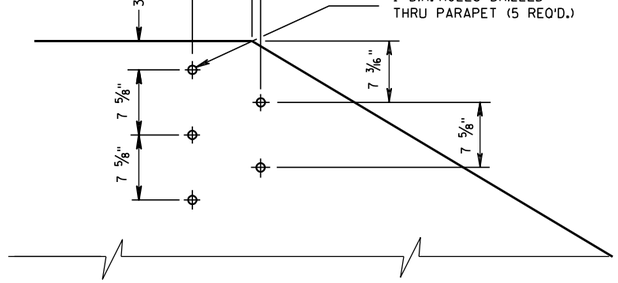
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② 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 TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

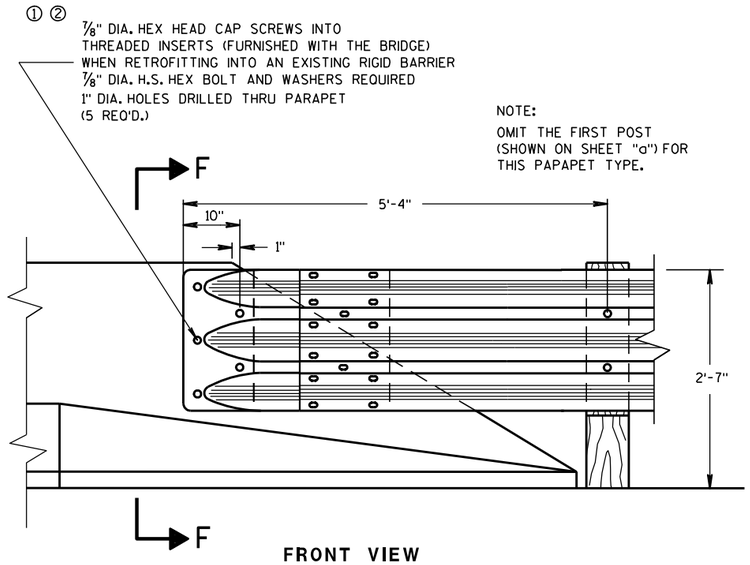
③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

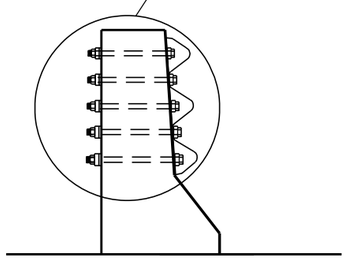




DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION F-F

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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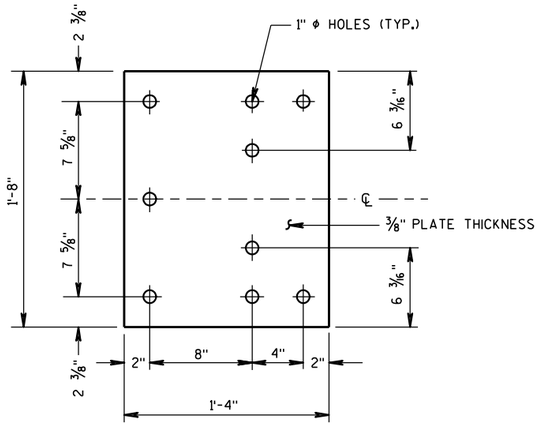
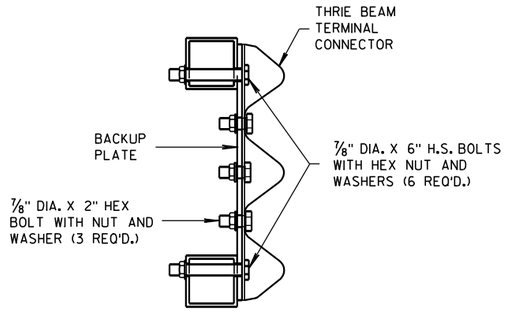


BACK-UP PLATE DETAIL



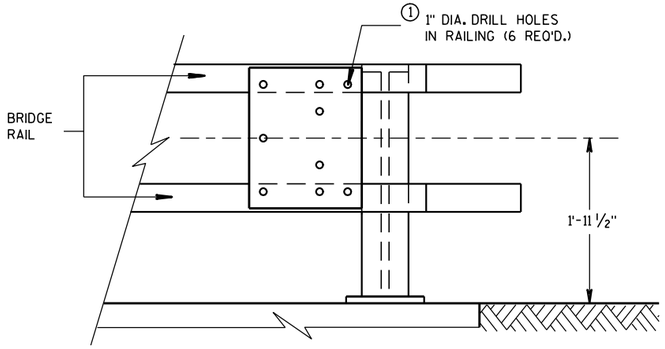
SECTION G-G

GENERAL NOTES

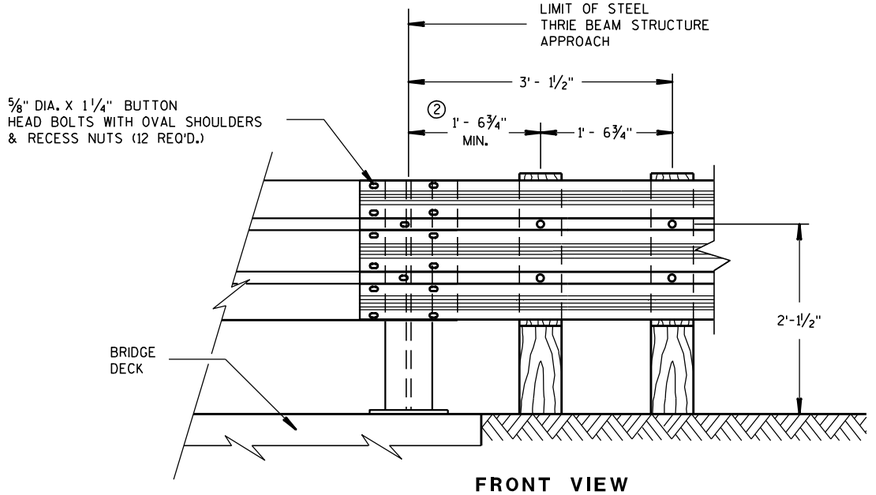
BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.

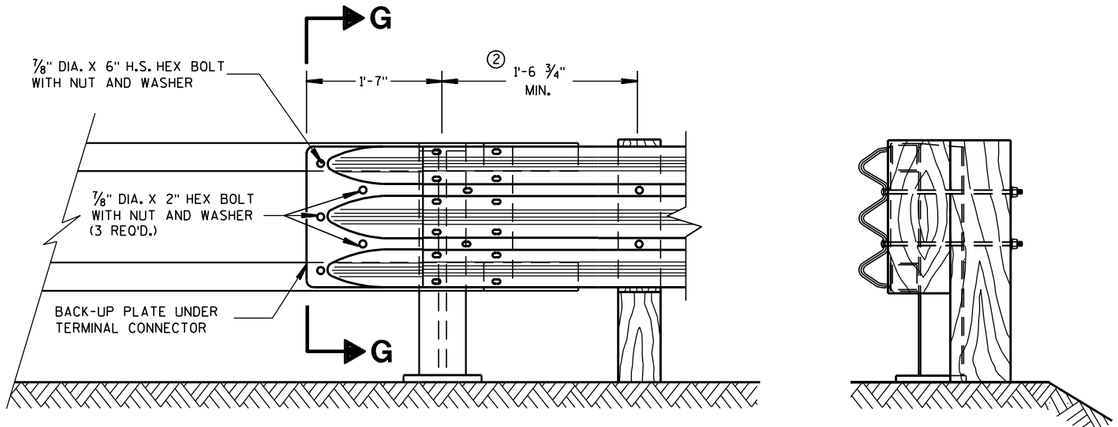


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW

END VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"

STATE OF WISCONSIN
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/S/ Jerry H
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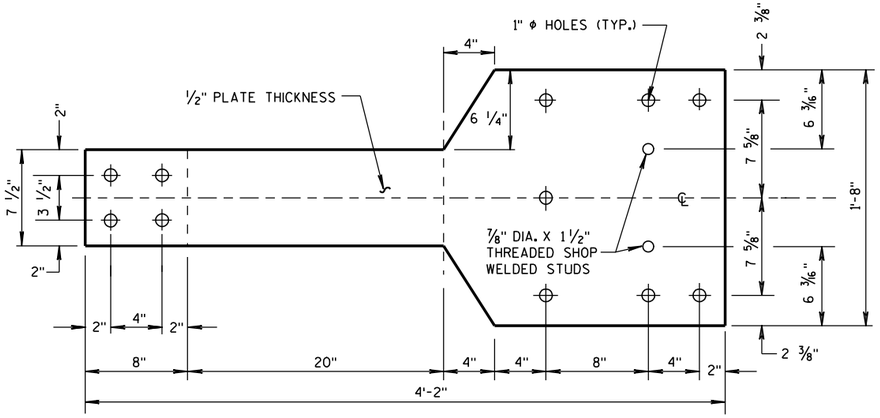
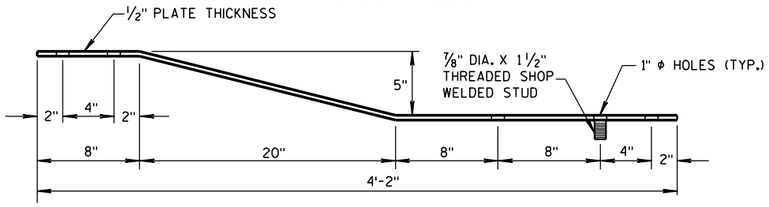
GENERAL NOTES

(1) VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.

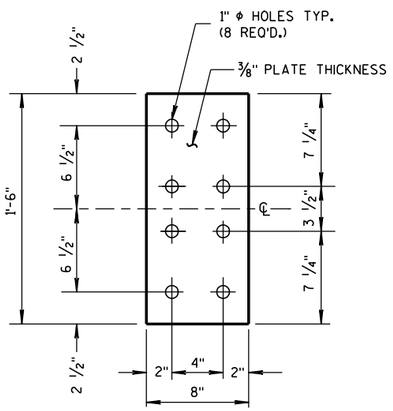


FRONT VIEW



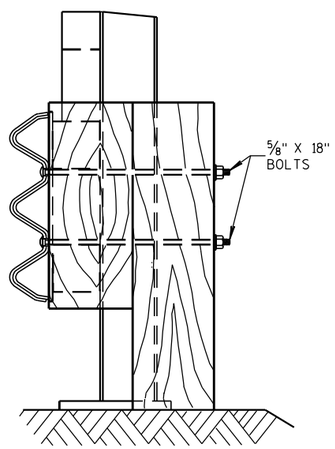
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

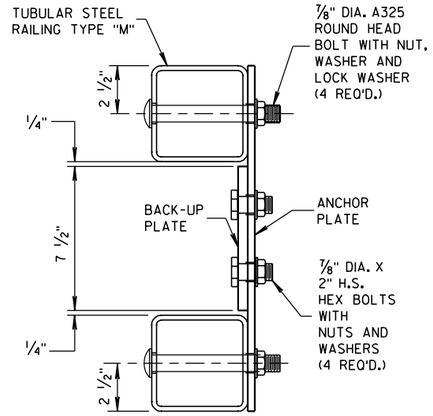


FRONT VIEW

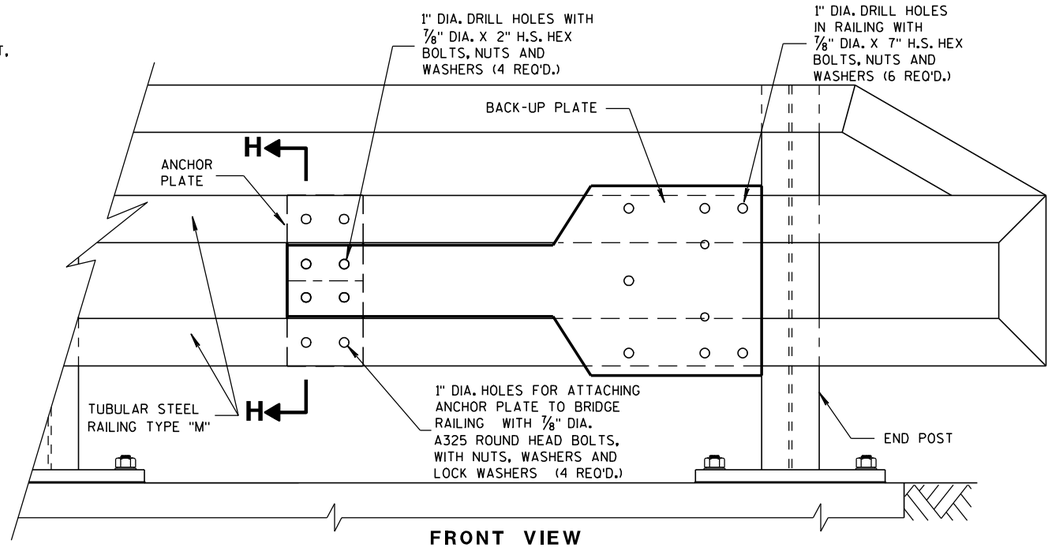
ANCHOR PLATE DETAIL, TYPE "M"



SECTION I-I

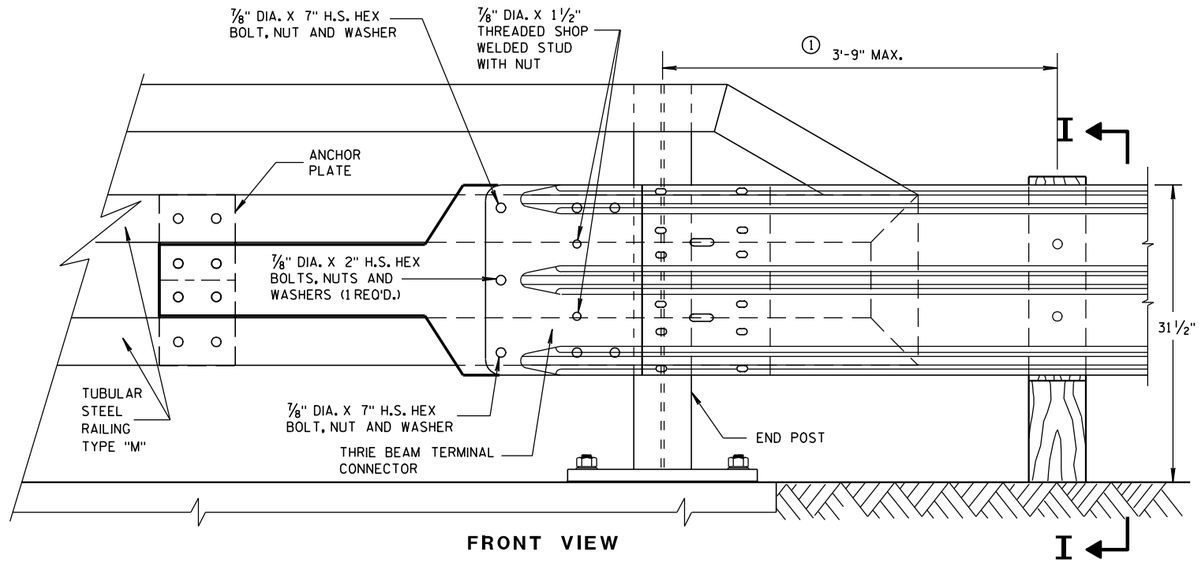


SECTION H-H

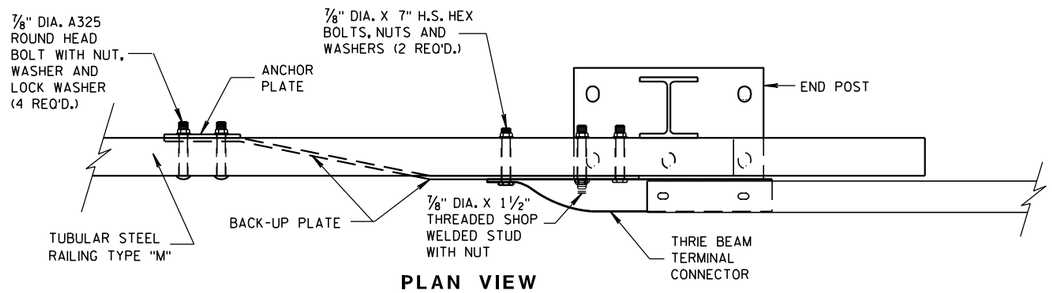


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"

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8/31/2012 DATE
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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.

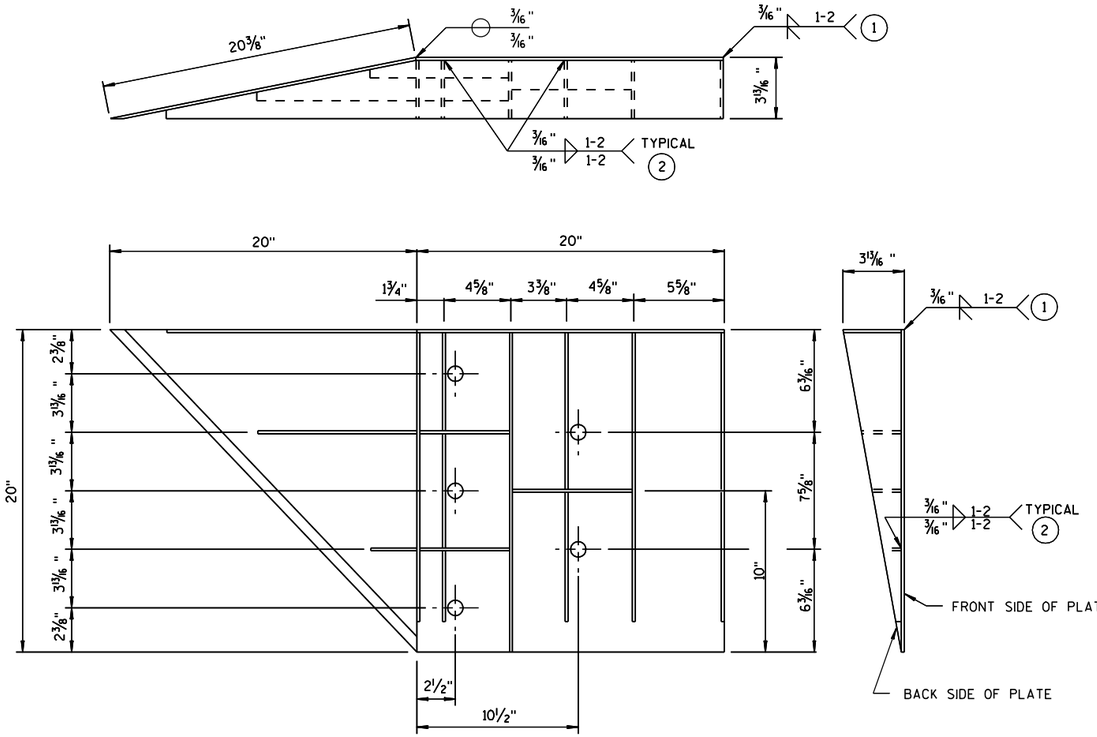
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) 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.

(2) 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)

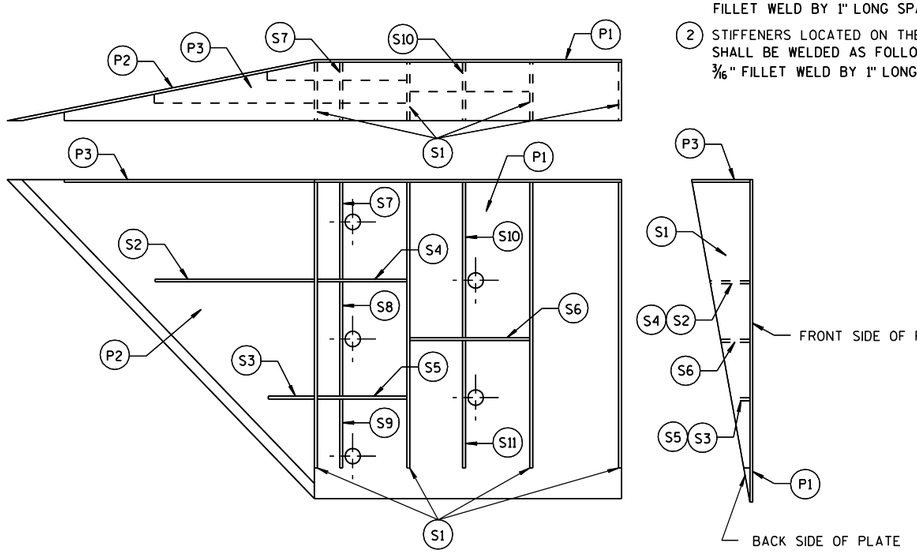


PLATE AND STIFFENER IDENTIFICATION

(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"

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
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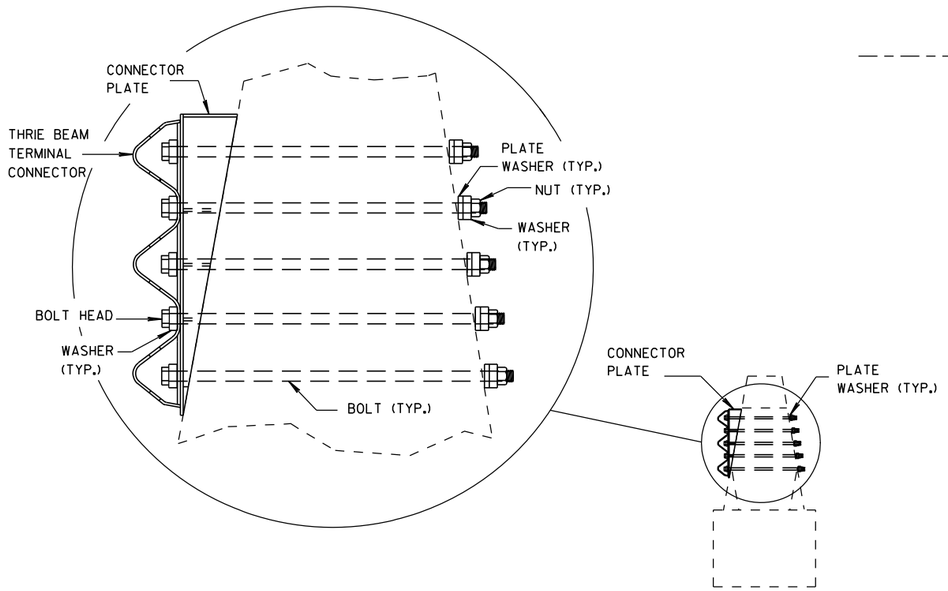
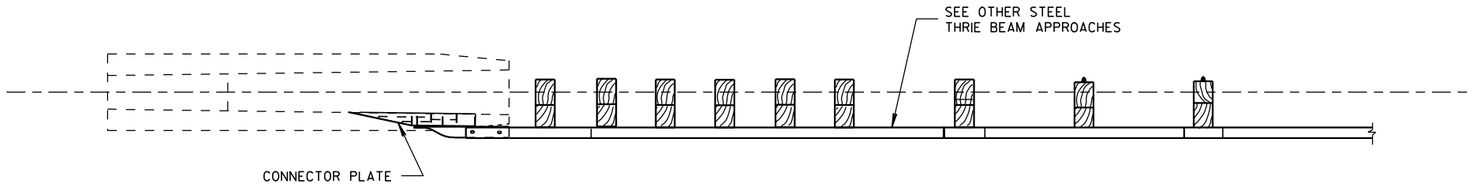
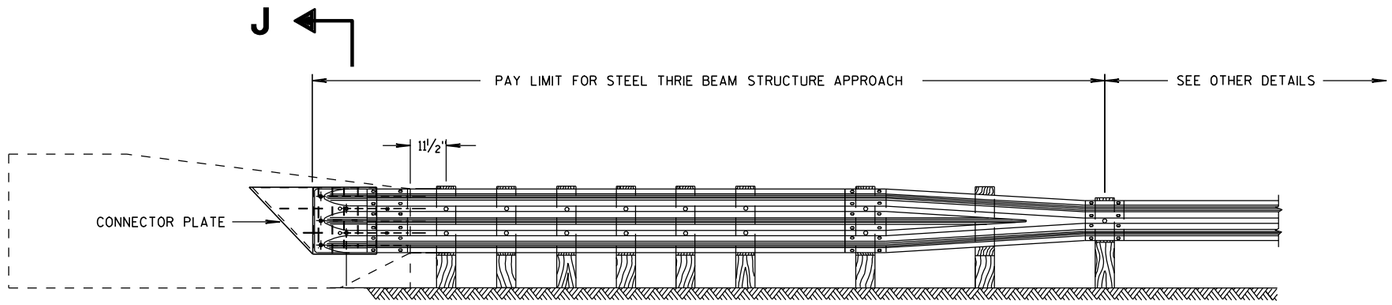


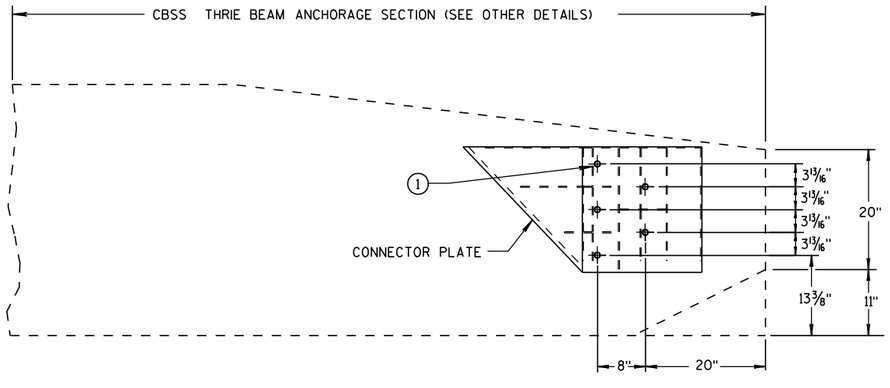
SECTION J-J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE LOCATION

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

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

(1) 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 TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

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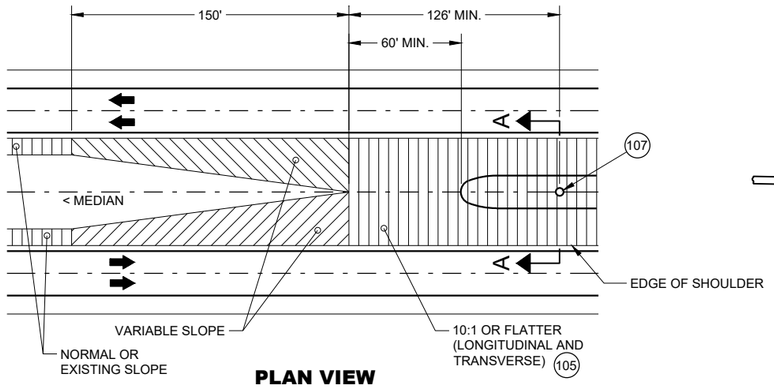
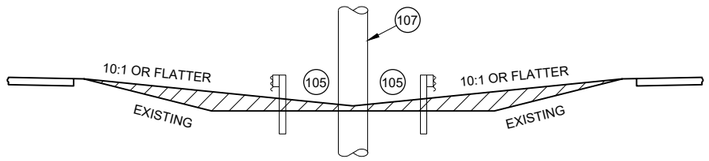


PLAN VIEW
GRADING AT BULLNOSE
(ALL INSTALLATIONS)



SECTION A -A
MEDIAN GRADING
(ALL INSTALLATIONS)

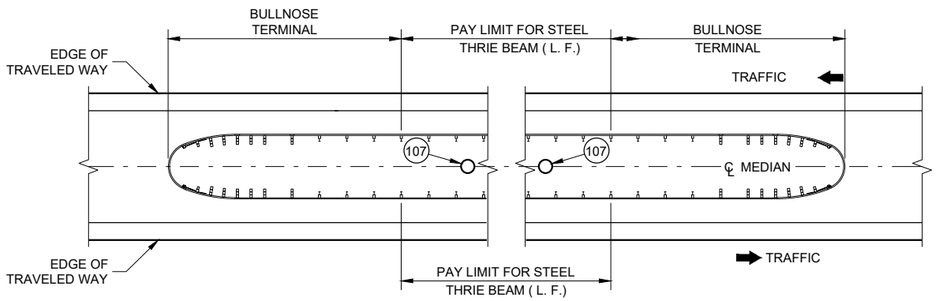
GENERAL NOTES

THRIE BEAM RAILS MAY NEED TO BE FIELD BENT TO FIT THE LOCATION.

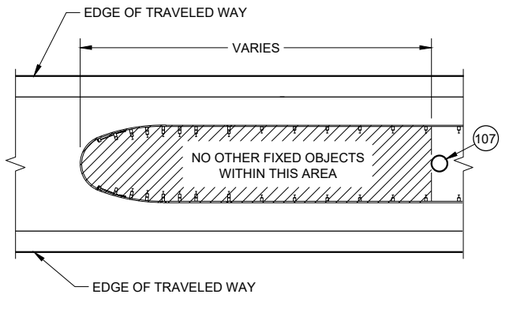
SEE STANDARD DETAIL DRAWINGS 14B26 SHEETS a-h.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½". MINIMUM DIAMETER OF THE ROCK REMOVAL IS 12" DIAMETER

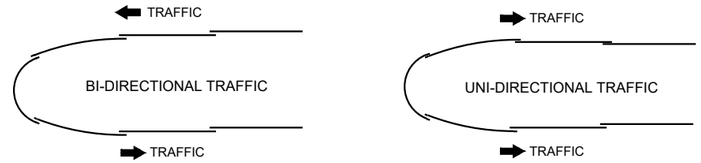
- E1 UNBENT STANDARD THRIE BEAM RAIL B1 (POST 8 TO POST 10 AND POST 10 TO POST 12)
- E2 SLOTTED THRIE BEAM RAIL E1 (POST 1 TO POST 1)
- E3 SLOTTED THRIE BEAM RAIL B3 (POST 5 TO POST 8)
- E4 SLOTTED THRIE BEAM RAIL E4 (POST 1 TO POST 5)
- 5 BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.
- (100) DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.
- (101) U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.
- (102) NOSE CABLE WITH SWAGGED END BUTTONS.
- (103) NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).
- (104) THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.
- (105) MINIMUM WORKING WIDTH 4' - 2".
- (106) MAX. WIDTH OF SYSTEM IS 14' - 2 ½" MEASURED FROM THE BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.
- (107) FIXED OBJECT OR OTHER HAZARD.
- (108) PLAN IS TO PROVIDE STATION OFFSET TO CENTER OF POST 5 IN PLANS.



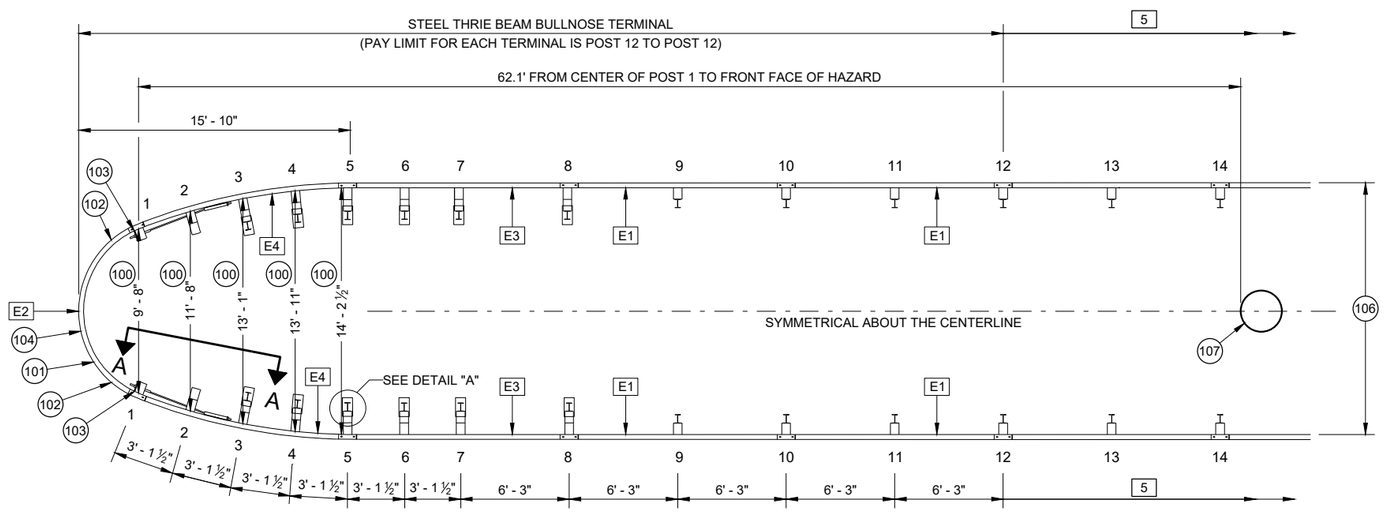
MEDIAN HAZARD PROTECTION PAY LIMITS



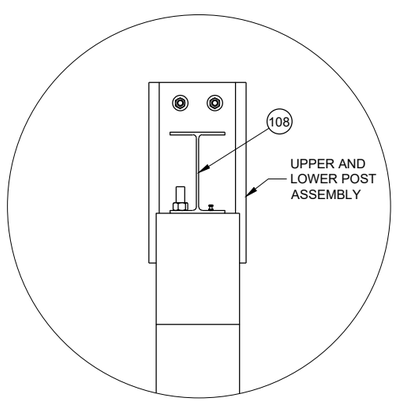
HAZARD FREE AREA
INSIDE BULLNOSE



LAPPING DETAIL



PLAN VIEW
TYPICAL BULLNOSE LAYOUT



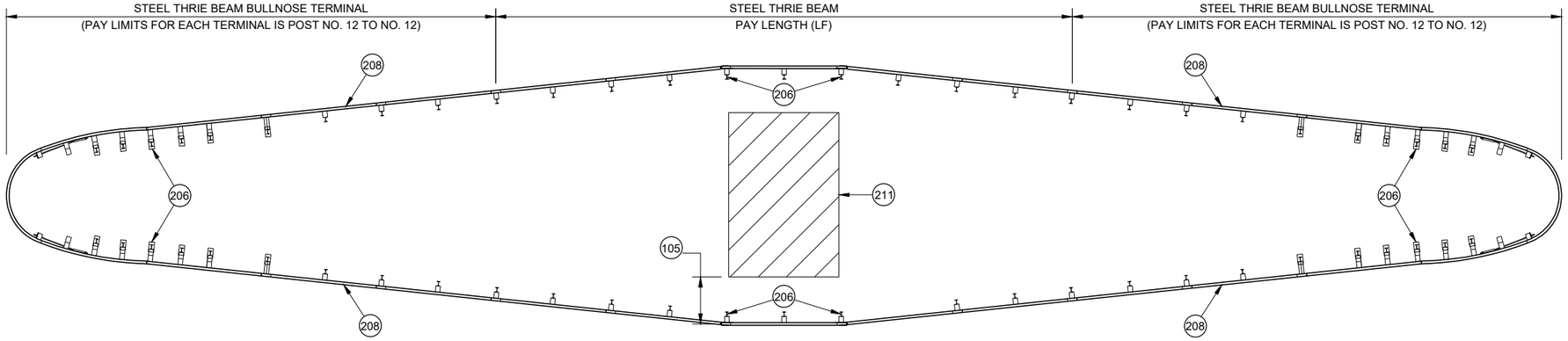
DETAIL "A"

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B26 - 04a

SDD 14B26 - 04a



VARIABLE WIDTH BULLNOSE

GENERAL NOTES

200 6' - 3" ASYMMETRICAL 10-GAUGE W-BEAM TO THRIE BEAM GUARD TRANSITION. SEE SDD 14B45 FOR MORE INFORMATION.

201 W-BEAM RAIL. SEE SDD 14B42 FOR MORE INFORMATION.

202 SEE POST NO. 9 AND ALL STEEL THRIE BEAM POST BEYOND DETAIL.

203 SEE SDD 14B42 FOR INSTALLATION INFORMATION.

204 SEE SDD 14B45 FOR INSTALLATION DETAILS. REPLACE ASYMMETRICAL W-BEAM TO THRIE BEAM TRANSITION AND W-BEAM RAIL WITH E1. PAY FOR MODIFIED THRIE BEAM TRANSITION.

205 CONCRETE BARRIER OR BRIDGE RAIL.

206 SEE PLAN FOR STATION AND OFFSET TO CENTER OF POST.

207 SEE PLAN FOR STATION AND OFFSET TO CENTER OF SPLICE.

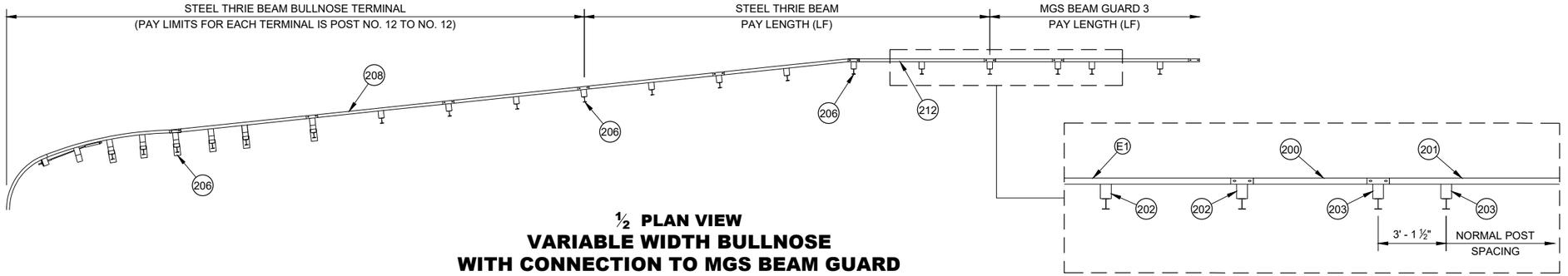
208 SEE PLAN FOR FLARE RATE.

209 A MINIMUM OF 25 FT OF THRIE BEAM TANGENT BEFORE TRANSITIONING TO BEAM GUARD OR THRIE BEAM TRANSITION.

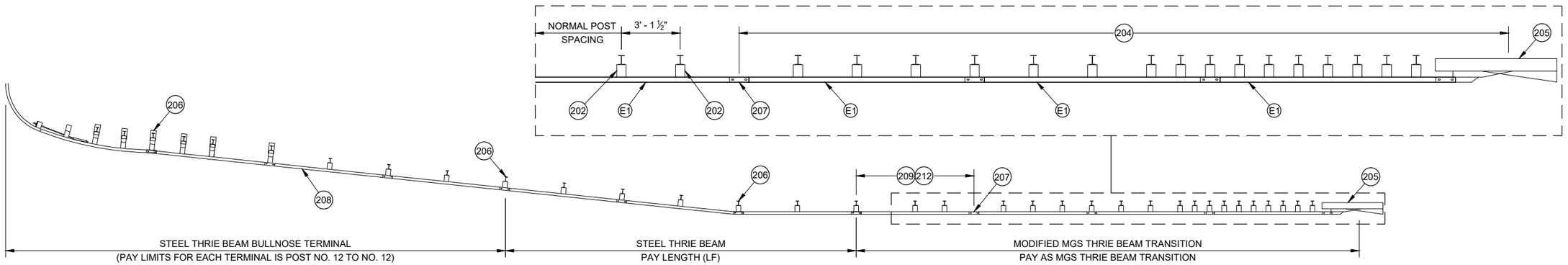
210 NOT ALL BULLNOSE HARDWARE SHOWN. SEE OTHER SHEETS IN 14B26.

211 WIDER HAZARD TO BE SHIELDED.

212 TRANSITION RAIL HEIGHT TO 31" OVER THE LENGTH OF A 12' - 6" BEAM SECTION.



½ PLAN VIEW
VARIABLE WIDTH BULLNOSE
WITH CONNECTION TO MGS BEAM GUARD



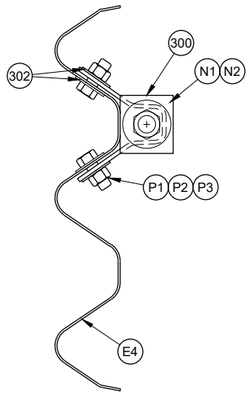
½ PLAN VIEW
VARIABLE WIDTH BULLNOSE
WITH CONNECTION TO RIGID BARRIER

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

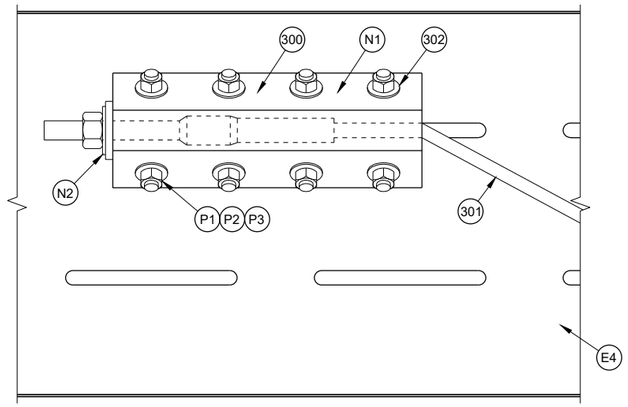
6

SDD 14B26 - 04b

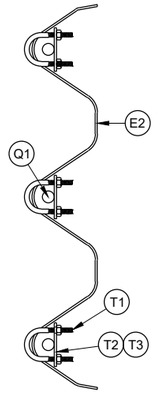


PROFILE VIEW

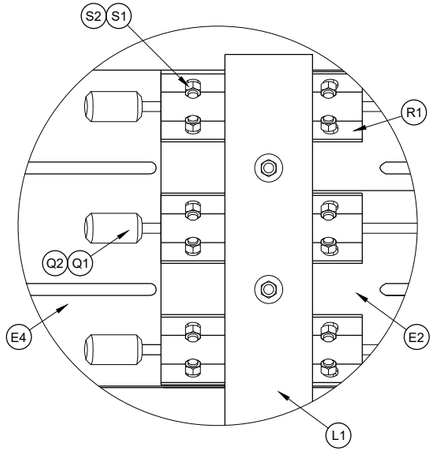
CABLE ANCHOR ASSEMBLY CONNECTION



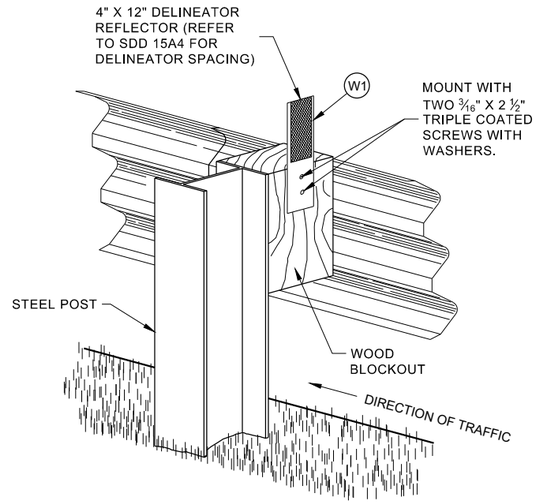
CABLE ANCHOR ASSEMBLY



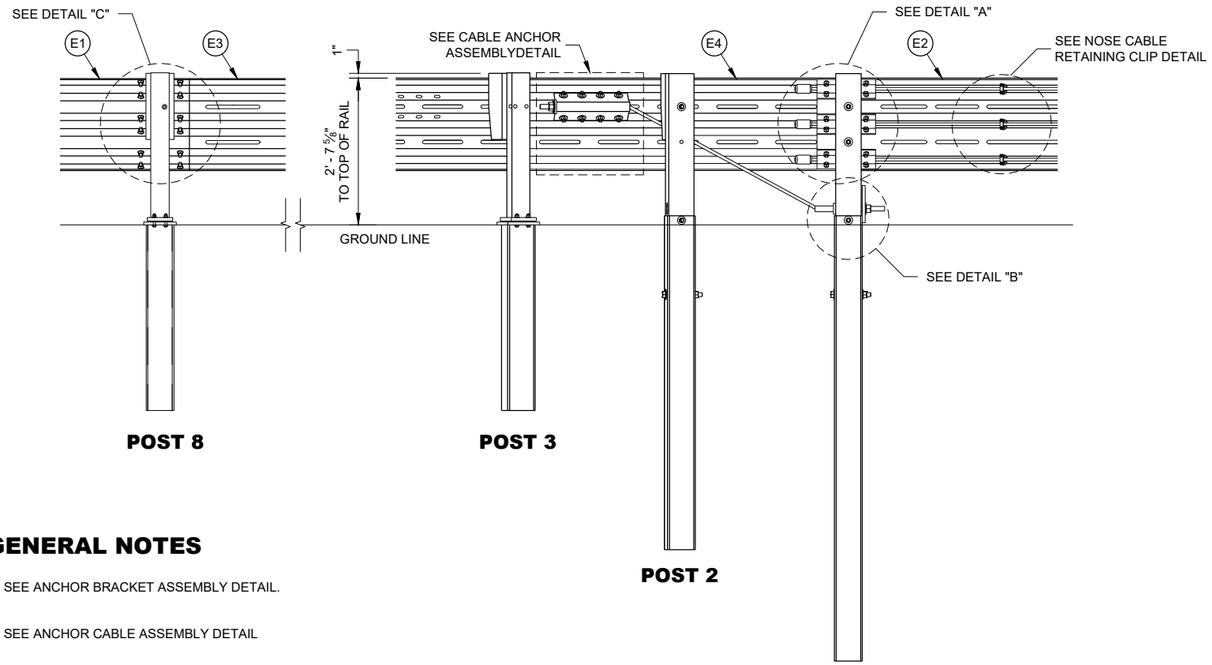
NOSE CABLE RETAINING CLIP



DETAIL "A"

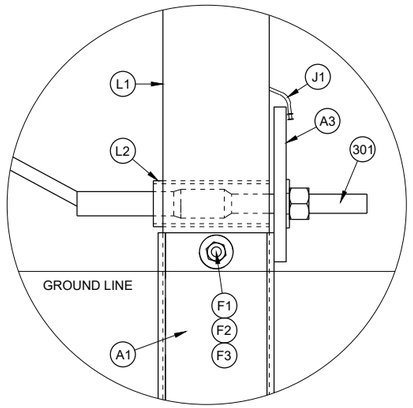


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

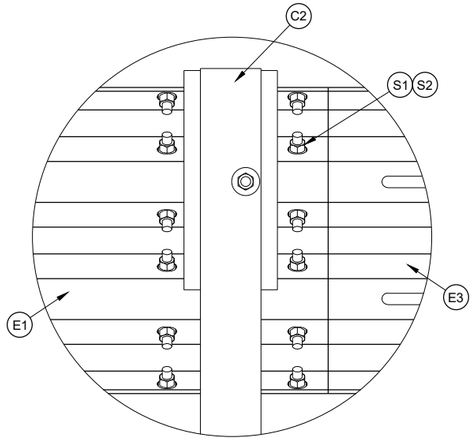


POST 8 **POST 3** **POST 2** **POST 1**

CROSS SECTION A - A



DETAIL "B"



DETAIL "C" THRIE BEAM SPLICE

GENERAL NOTES

(300) SEE ANCHOR BRACKET ASSEMBLY DETAIL.

(301) SEE ANCHOR CABLE ASSEMBLY DETAIL

(302) ONE WASHER BETWEEN BOLT HEAD AND RAIL AND BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

(303) ONE WASHER BETWEEN BOLD HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

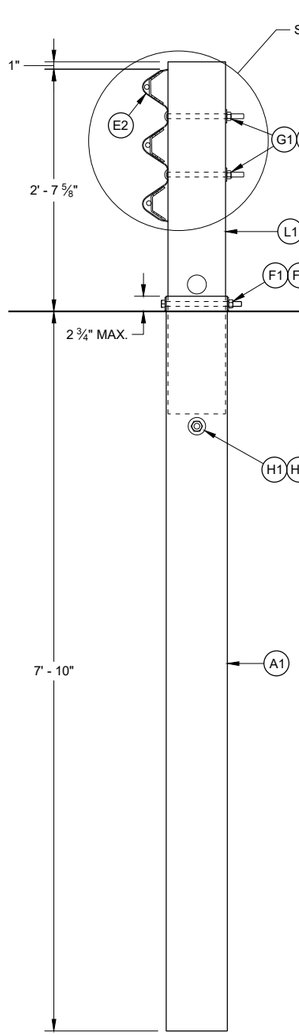
STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

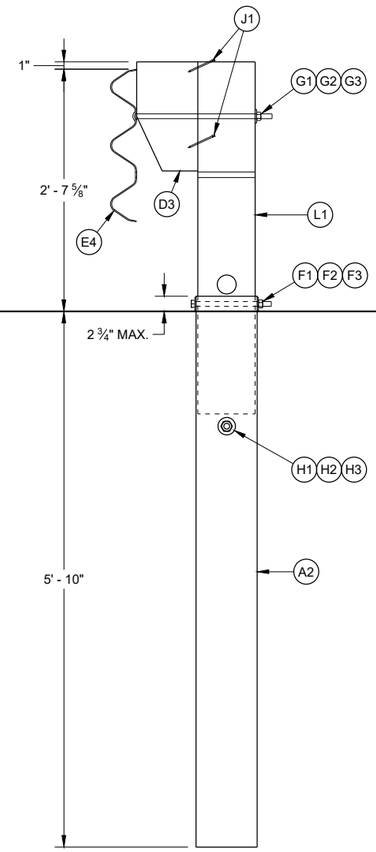
6

SDD 14B26 - 04c

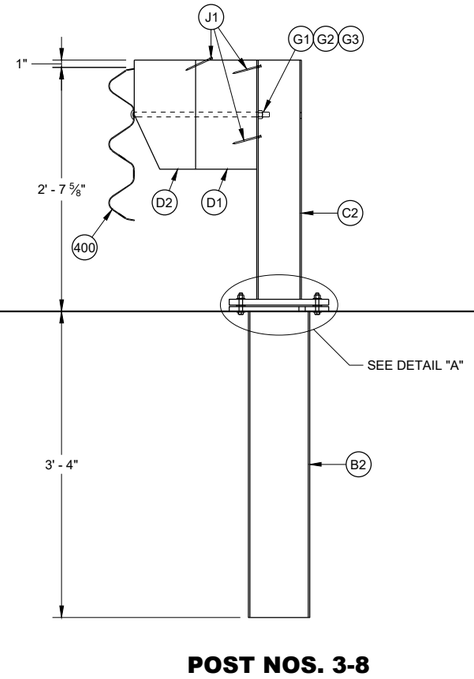
SDD 14B26 - 04c



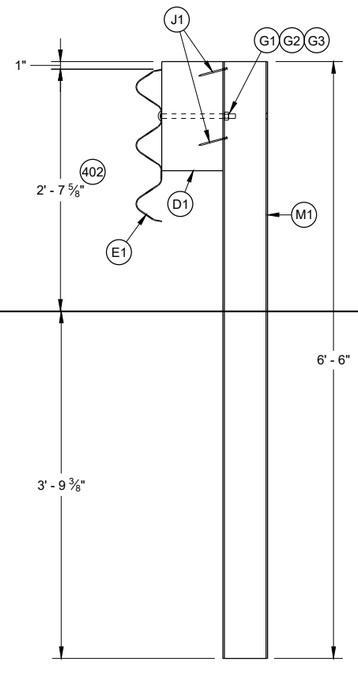
POST NO. 1



POST NO. 2



POST NOS. 3-8



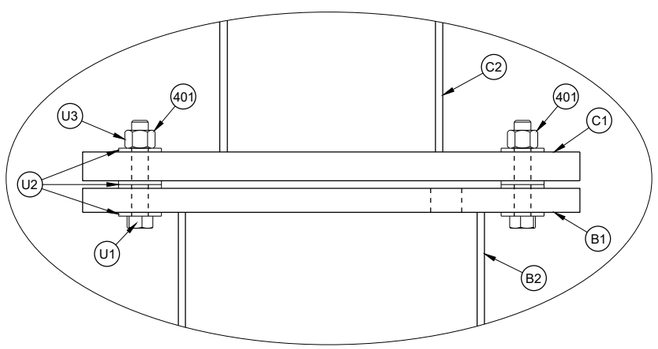
POST NOS. 9 AND ALL STEEL THRIE BEAM POSTS BEYOND

GENERAL NOTES

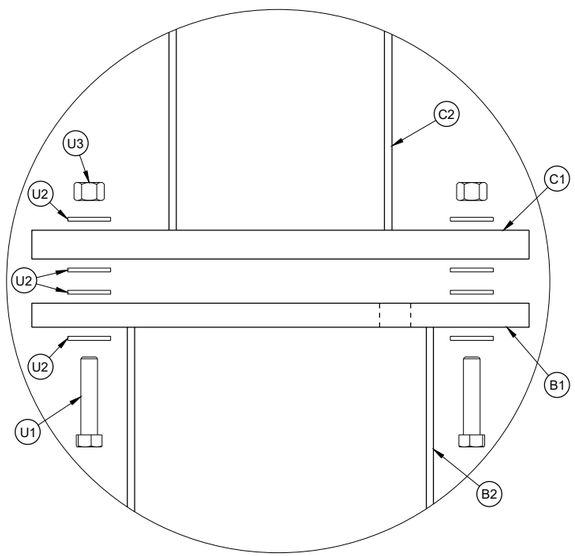
400 RAIL CAN BE E3 OR E4 DEPENDING ON POST LOCATION.

401 TORQUE BOLD BETWEEN 60-75 FT-LB

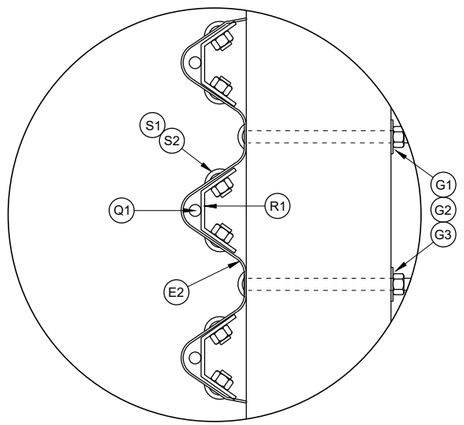
402 HEIGHT WILL VARY WITHIN HEIGHT TRANSITION TO OTHER HARDWARE. SEE NOTE 213, SHEET "b".



DETAIL "A"



EXPLODED VIEW
DETAIL "A"



DETAIL "B"

STEEL THRIE BEAM BULLNOSE TERMINAL

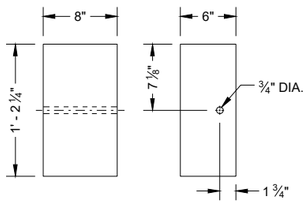
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B26 - 04d

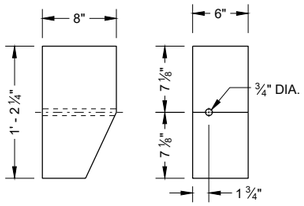
6

SDD 14B26 - 04d



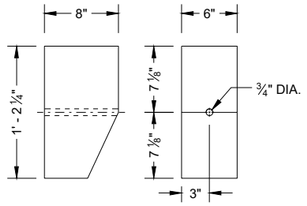
ELEVATION PROFILE

BLOCKOUT (D1)



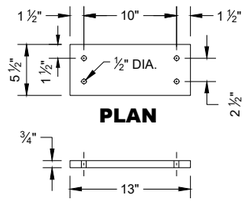
ELEVATION PROFILE

BLOCKOUT (D2)



ELEVATION PROFILE

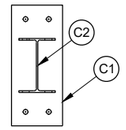
BLOCKOUT (D3)



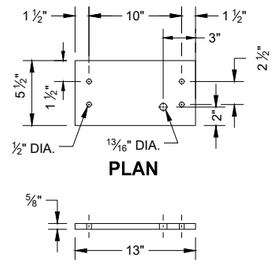
PLAN

PROFILE

UPPER SHEAR PLATE (C1)



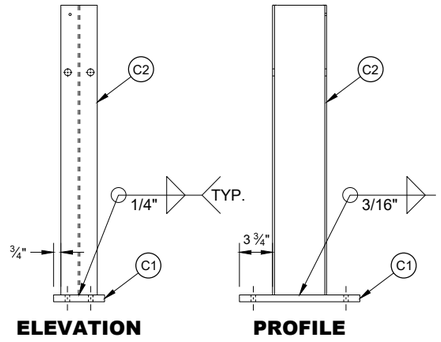
PLAN



PLAN

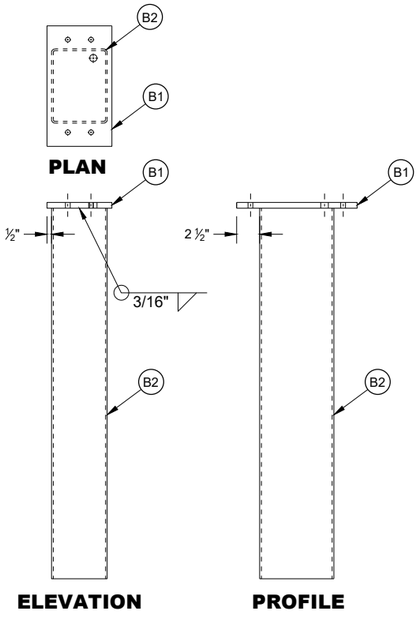
PROFILE

LOWER SHEAR PLATE (B1)



ELEVATION PROFILE

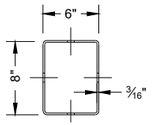
UPPER POST ASSEMBLY



PLAN

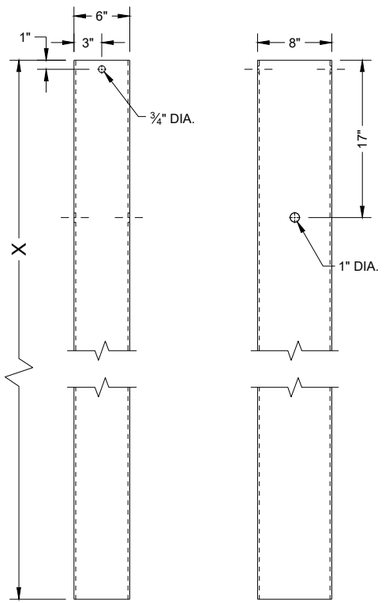
ELEVATION PROFILE

LOWER POST ASSEMBLY



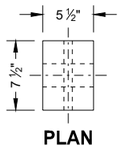
PLAN

PART	LENGTH "X"
A1	8' - 0"
A2	6' - 0"
B2	3' - 6"

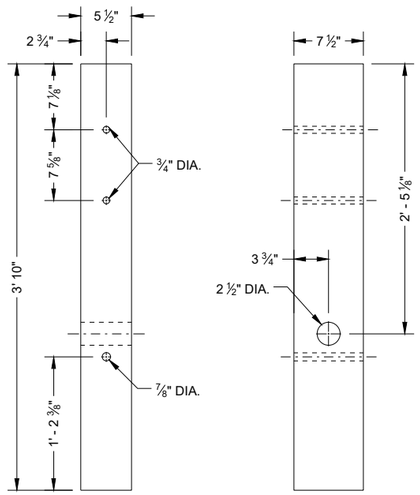


ELEVATION PROFILE

FOUNDATION TUBE

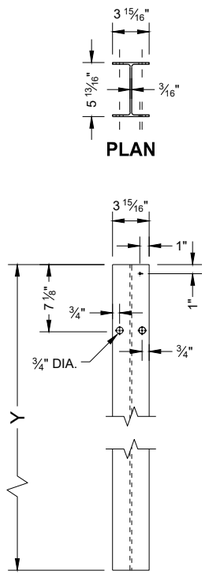


PLAN



ELEVATION PROFILE

BCT POST (L1)



PLAN

ELEVATION

POST

PART	LENGTH "Y"
M1	6' - 6"
M2	5' - 8 5/8"
C2	2' - 8 5/8"

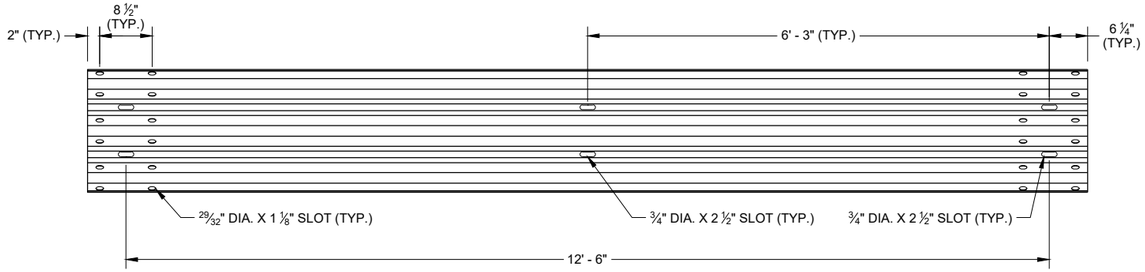
STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

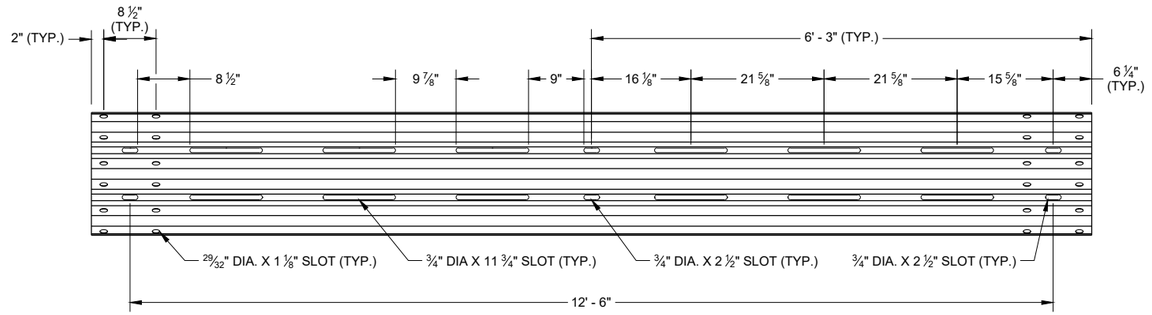
6

SDD 14B26 - 04e

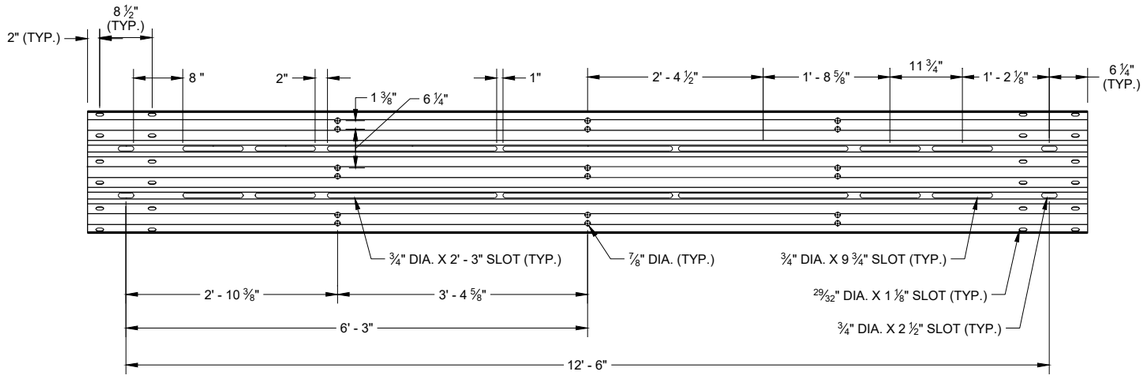
SDD 14B26 - 04e



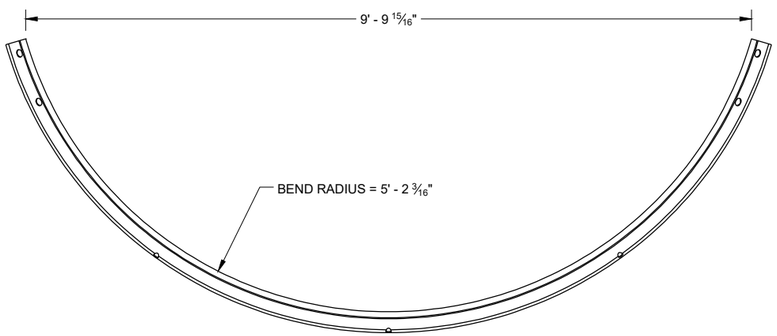
SLOTTED THRIE BEAM RAIL E1



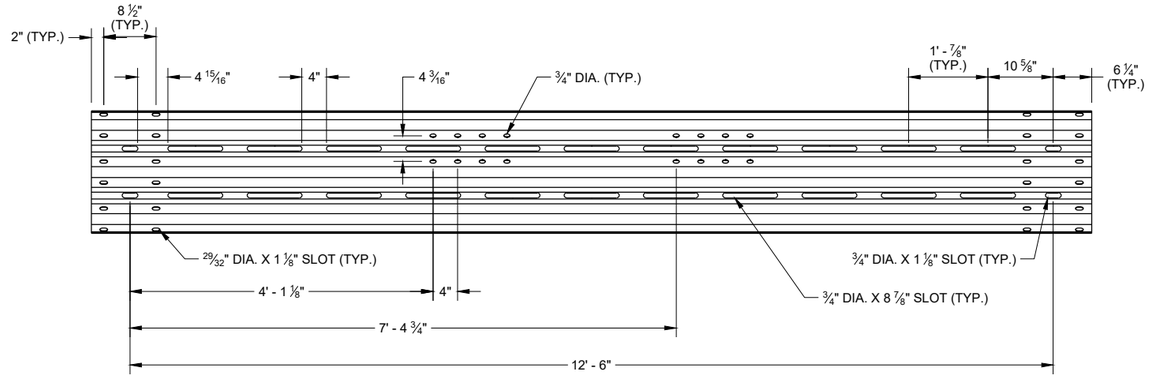
SLOTTED THRIE BEAM RAIL E3



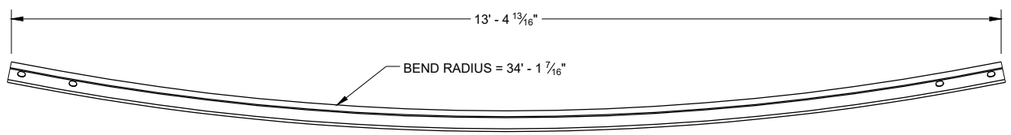
ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E2



PLAN VIEW
SLOTTED THRIE BEAM RAIL E2



ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E4



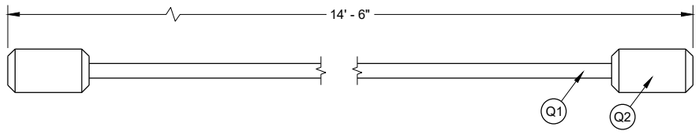
PLAN VIEW
SLOTTED THRIE BEAM RAIL E4

STEEL THRIE BEAM BULLNOSE TERMINAL

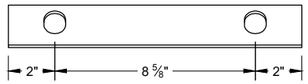
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

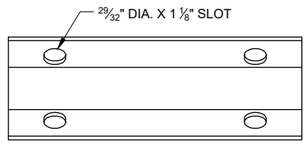
SDD 14B26 - 04f



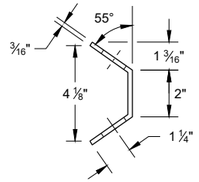
NOSE CABLE AND SWAGE BUTTON



PLAN VIEW

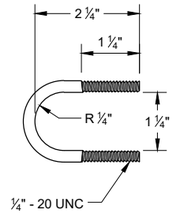


ELEVATION VIEW

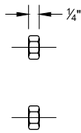


PROFILE VIEW

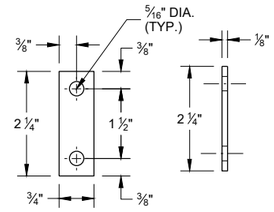
NOSE CABLE ANCHOR (R1)



U - BOLT (T1)

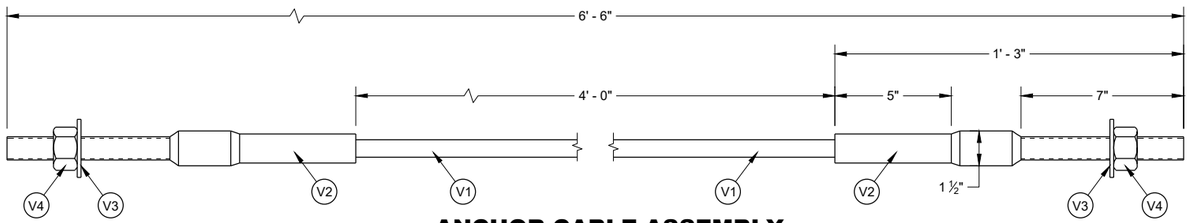


U - BOLT NUT (T3)

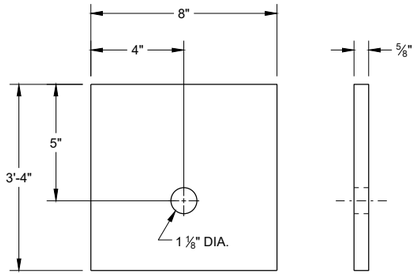


ELEVATION VIEW **PROFILE VIEW**

U - BOLT PLATE WASHER (T2)

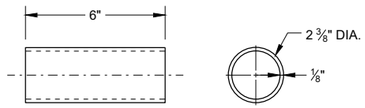


ANCHOR CABLE ASSEMBLY



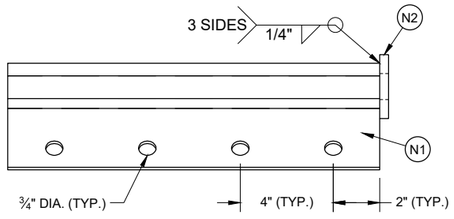
ELEVATION VIEW **PROFILE VIEW**

BCT BEARING PLATE (A3)

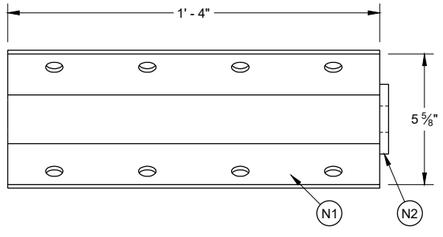


ELEVATION VIEW **PROFILE VIEW**

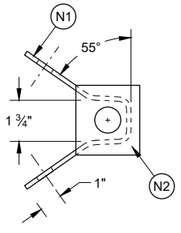
BCT POST SLEEVE (L2)



PLAN VIEW

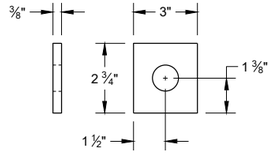


ELEVATION VIEW



PROFILE VIEW

ANCHOR BRACKET ASSEMBLY (N1)



ANCHOR BRACKET END PLATE (N2)

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B26 - 04g

BILL OF MATERIALS LIST

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
A1	LONG FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A2	FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A3	BEARING PLATE AT POST	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
B1	LOWER SLIP POST ASSEMBLY - PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
B2	LOWER SLIP POST ASSEMBLY - TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
C1	UPPER SLIP POST ASSEMBLY - PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
C2	UPPER SLIP POST ASSEMBLY - POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
D1	BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D2	TAPERED BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D3	TAPERED BLOCK FOR BCT POST - WOOD	WISDOT SPEC. 614
E1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E2	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
E3	THRIE BEAM RAIL - PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E4	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
F1	5/8" DIA. HEX HEAD GROUND STRUT AND YOKE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
F2	5/8" DIA. GROUND STRUT AND YOKE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
F3	GROUND STRUT AND YOKE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
G1	5/8 " DIA. POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G2	POST BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G3	POST BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
H1	7/8" DIA. SOIL TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5
H2	SOIL TUBE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 7/8" ASTM F844 TYPE 1 (HARDEN WASHER ONLY)
H3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5
J1	16D DOUBLE HEAD NAIL	ASTM A153 HOT DIPPED CLASS D DOUBLE HEAD ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)
L1	BCT TIMBER POST	WISDOT SPEC. 614 S4S FINISH ON 4 SIDE
L2	BCT POST SLEEVE	AASHTO M111/ASTM A123 2 3/8" OD ASTM 53 GRADE B
M1	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
M2	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
N1	ANCHOR BRACKET	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
N2	ANCHOR BRACKET - BEARING PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
P1	5/8" DIA. ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
P2	ANCHOR BRACKET BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
P3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
Q1	5/8" DIA. NOSE CABLE	6X19 AASTHO M30 / ASTM A741 XIPS INDEPENDENT WIRE CORE (IWRC) PR 6X25 XIPS, IWRC NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
Q2	NOSE CABLE-SWAGE BUTTON	COLD TUFF BUTTON, S-409 SIZE NO. 12 STOCK NUMBER 1040395 OR ANY OTHER SIMILAR SIZED WAGED-GRIP-BUTTON FERRULES. ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FIELD SWAGED PER MANUFACTURERS RECOMMENDATION. NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
R1	NOSE CABLE ANCHOR BRACKET	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
S1	5/8" DIA. SPLICE BOLT - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
S2	SPLICE - BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD 5/8" ASTM A563DH OR SAE J995 GRADE 5
T1	1/4" DIA. NOSE CABLE - U BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
T2	U-BOLT - PLATE WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
T3	U-BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
U1	7/16" DIA. SLIP POST ASSEMBLY - BREAKAWAY BOLT	ASTM A153 OR B695 CLASS 55 OR F2329 UNC FULLY THREADED HEX HEAD TAP BOLT ASTM A449 OR SAE J429 GRADE 5
U2	7/16" DIA. SLIP POST ASSEBLY - BREAKAWAY BOLT - WASHER	ASTM F436 TYPE I (HARDEN TYPICALLY USED WITH STEEL) GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO POST BOLT CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 55, F2329
U3	SLIP POST ASSEBLY - BREAKAWAY BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / STM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
V1	U-BOLT - PLATE WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
V2	ANCHOR CABLE-SWAGE FITTING	UNC ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FACTORY SWAGED. MIN. BREAKING STRENGTH OF 42.7 KIPS. ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."
V3	1" DIA. ANCHOR CABLE-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
V4	1" DIA. ANCHOR CABLE-NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
W1	REFLECTOR	SEE SDD 15A4

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

SDD 14B26 - 04h

SDD 14B26 - 04h

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

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

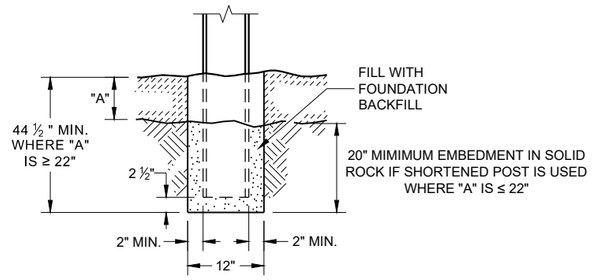
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

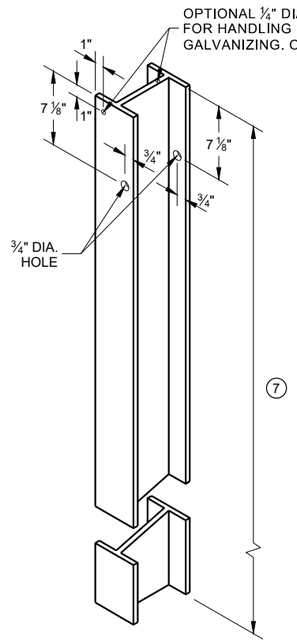
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

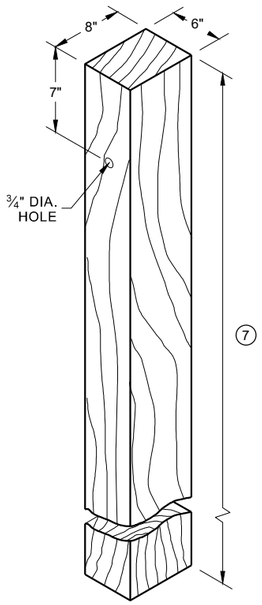
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



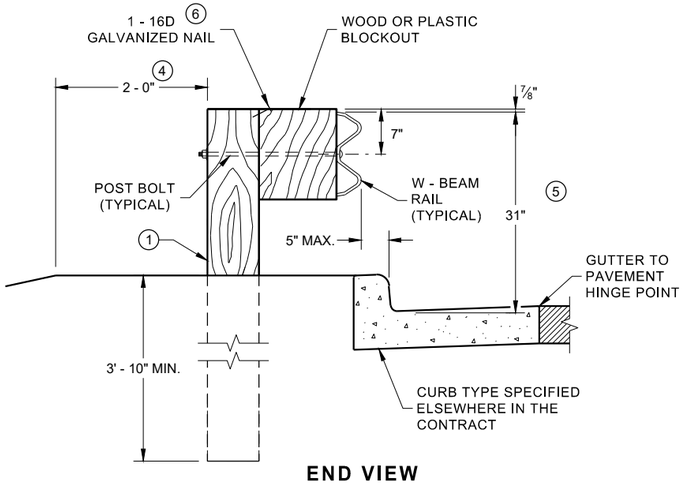
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



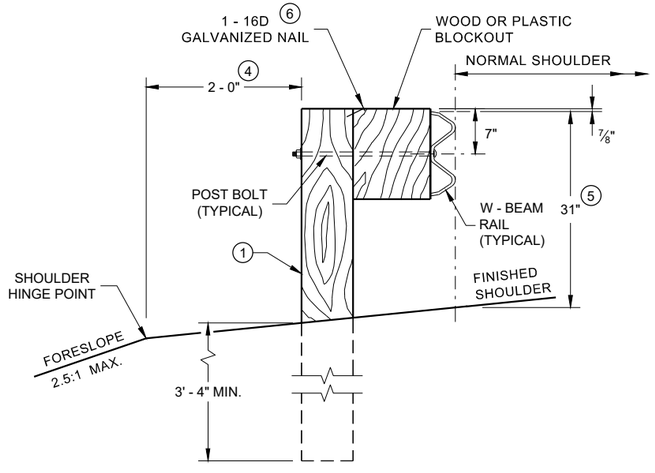
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



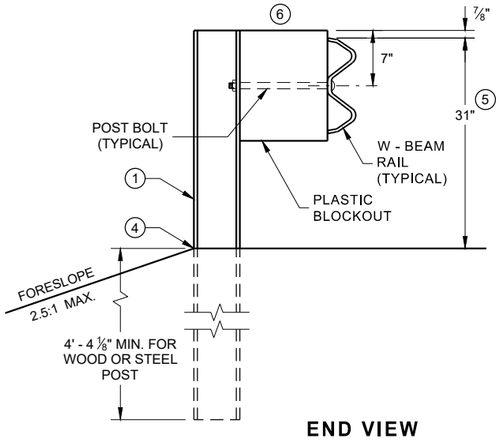
WOOD POST (6" X 8") NOMINAL (1)



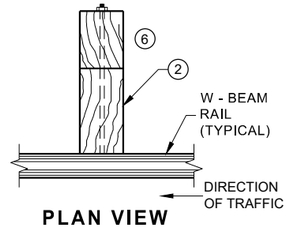
END VIEW
LOCATED ALONG A CURBED ROADWAY



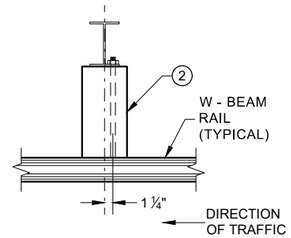
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



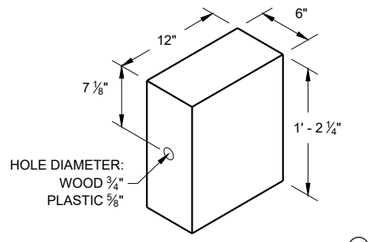
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

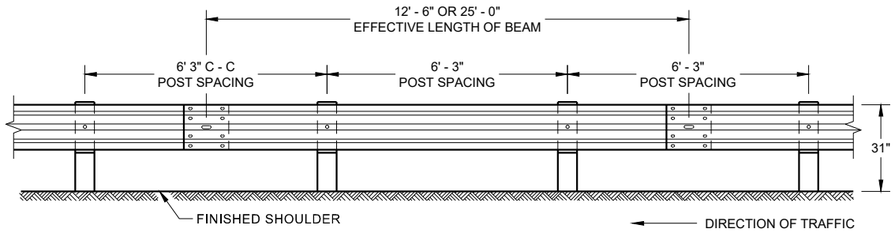
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

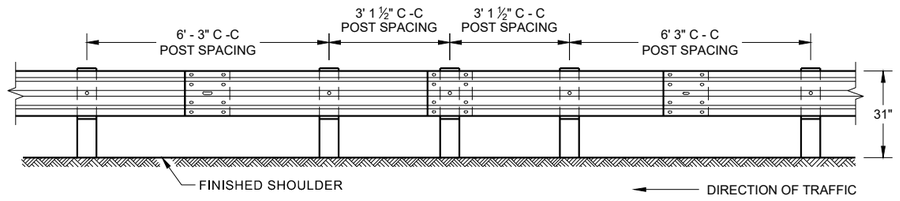
SDD 14B42 - 06a

6

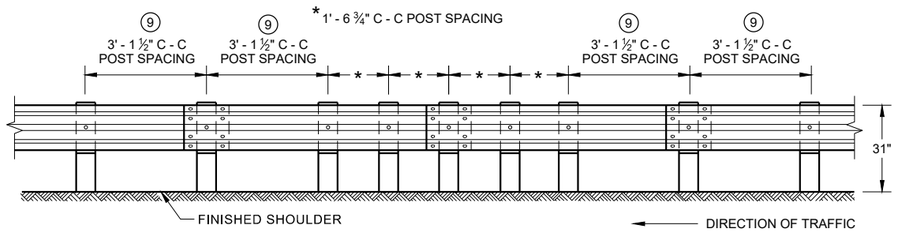
SDD 14B42 - 06a



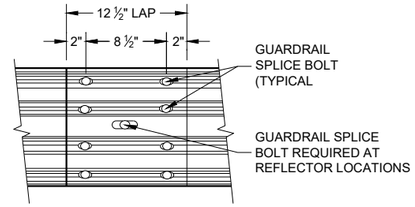
FRONT VIEW
POST SPACING STANDARD INSTALLATION



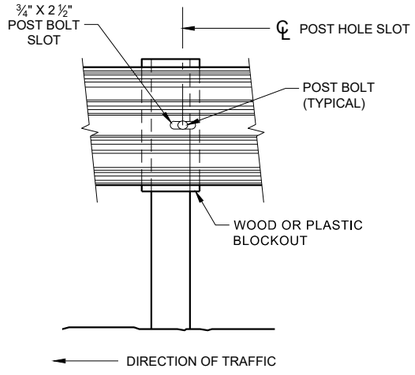
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



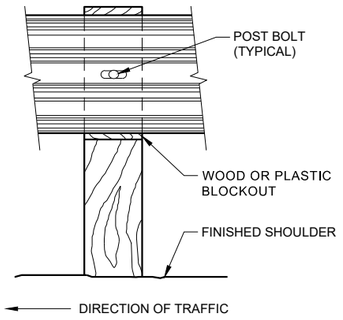
FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST

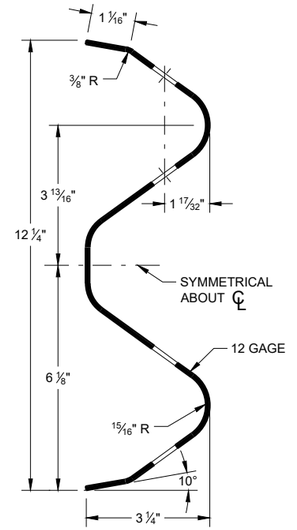
GENERAL NOTES

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

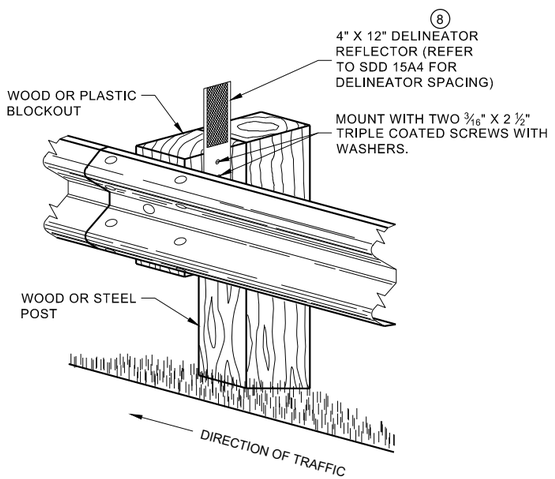
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.



SECTION THRU W-BEAM RAIL

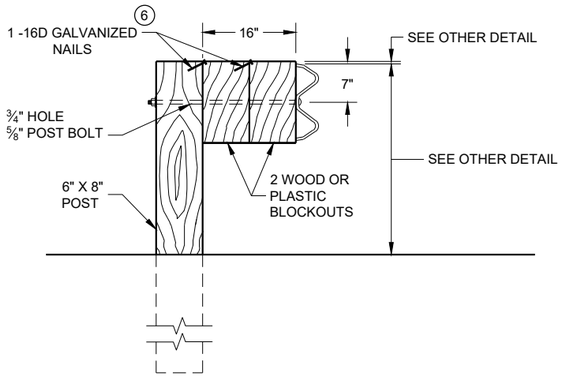


ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

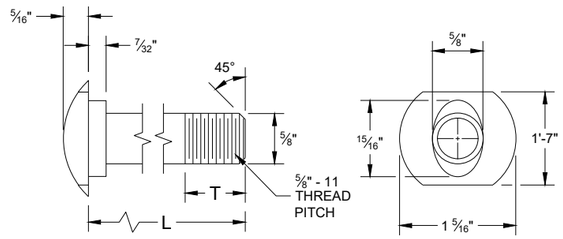


DETAIL FOR 16" BLOCKOUT DEPTH

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

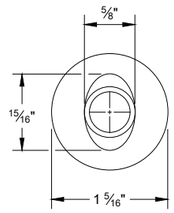
NOTE:

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

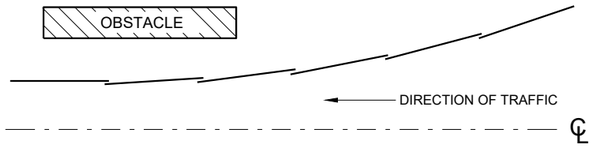


POST BOLT TABLE

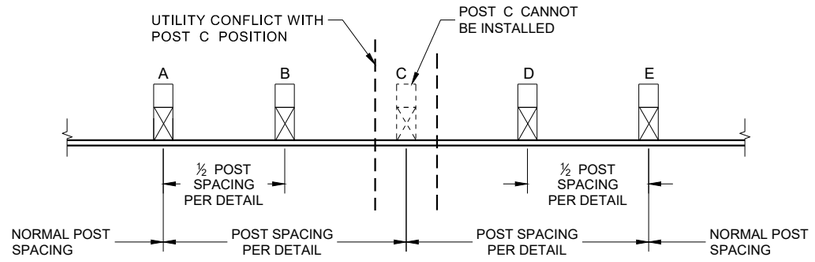
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



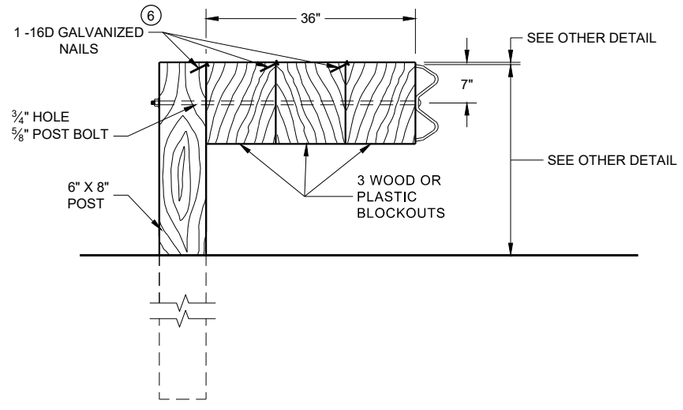
ALTERNATE BOLT HEAD



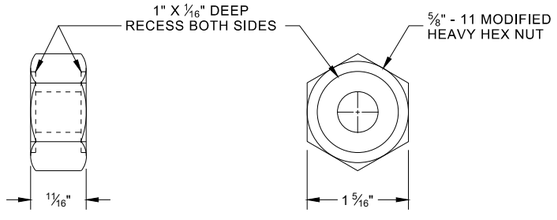
PLAN VIEW
BEAM LAPPING DETAIL



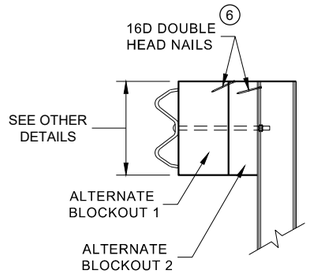
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



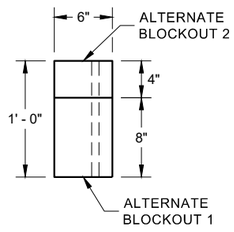
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

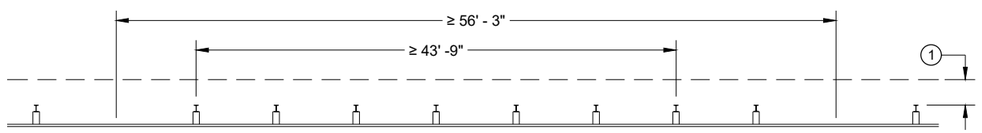
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

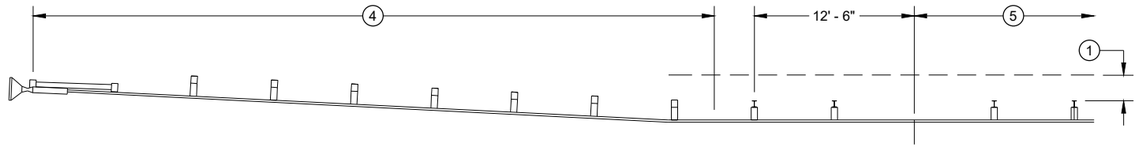
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

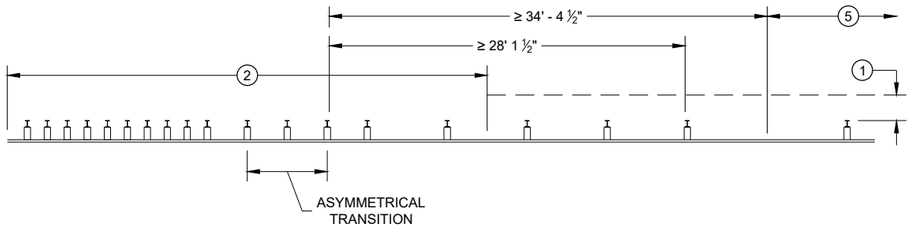
SDD 14B42 - 06c



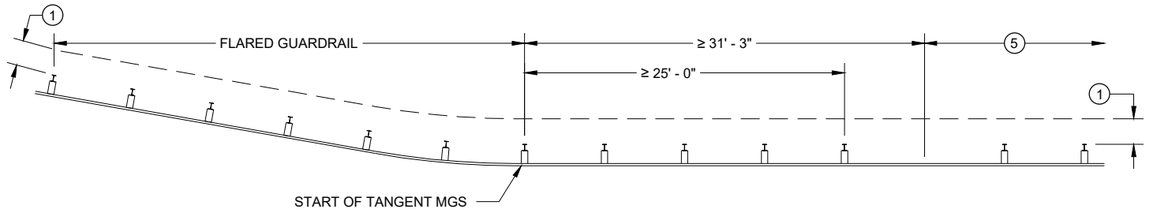
MISSING POST IN NORMAL BEAM GUARD RUN



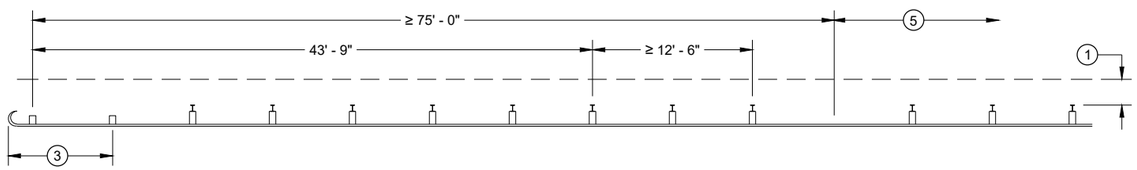
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



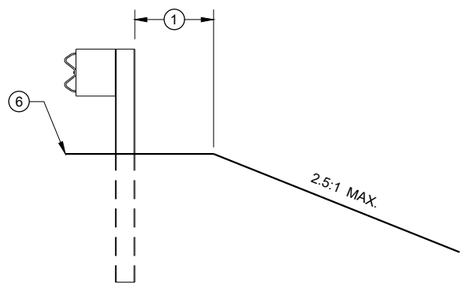
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

SDD 14B42 - 06d

SDD 14B42 - 06d

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.

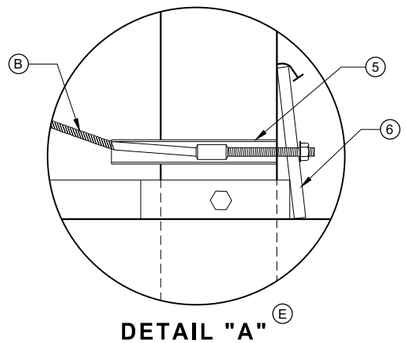
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

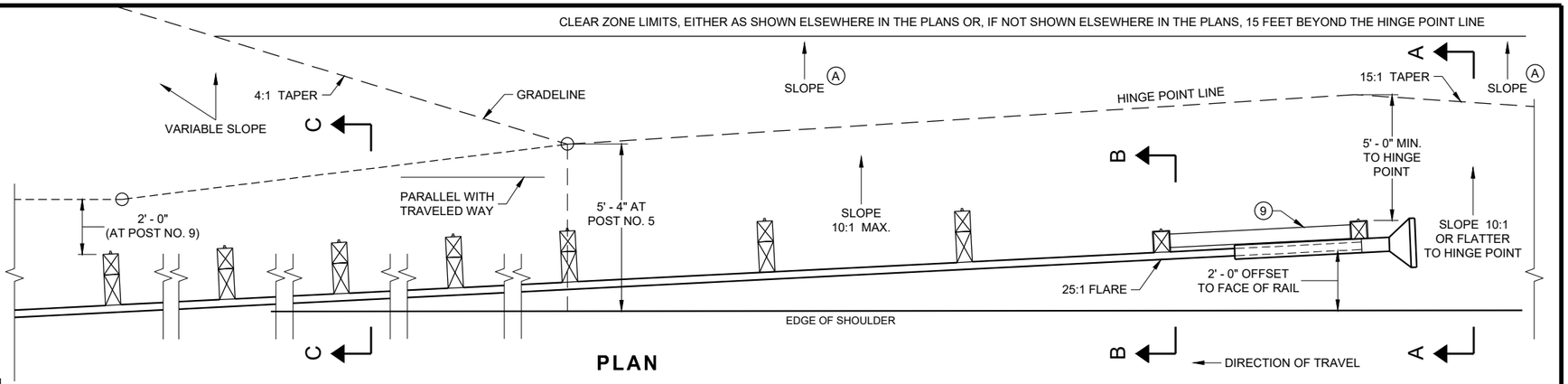
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

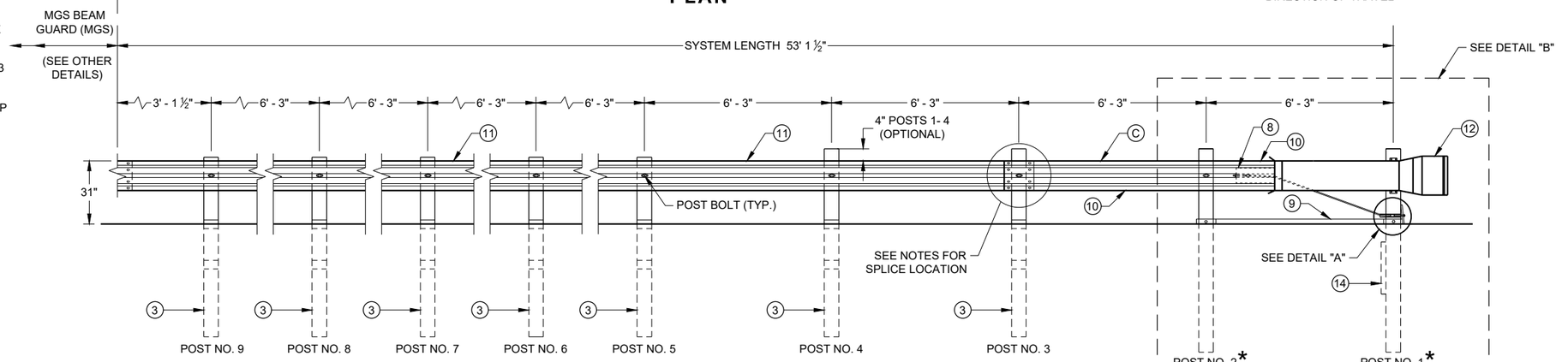
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



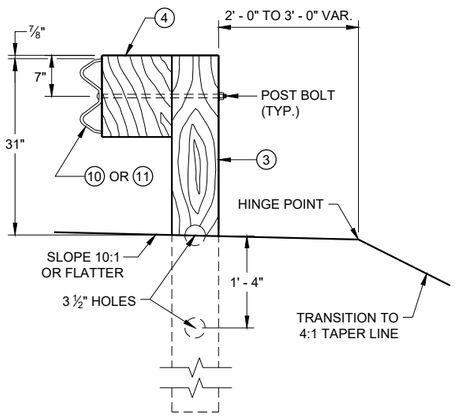
DETAIL "A" (E)



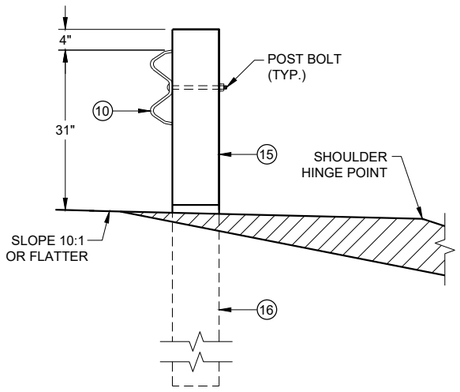
PLAN



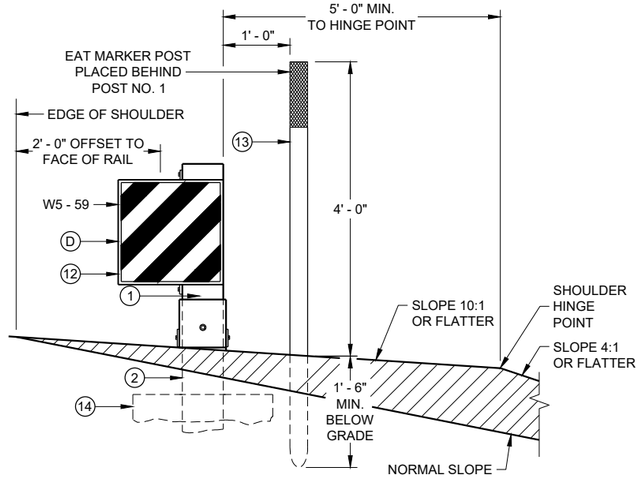
ELEVATION



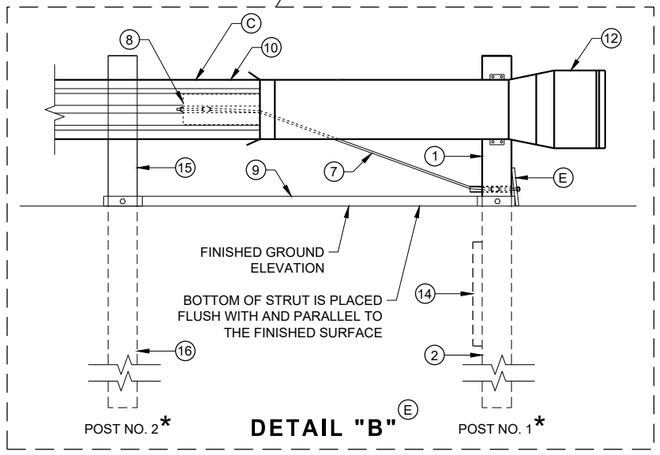
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



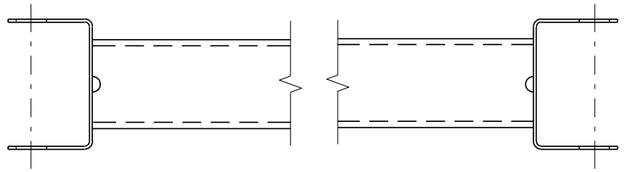
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

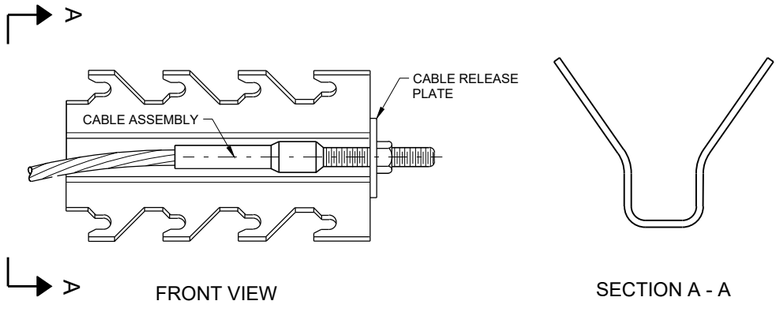
SDD 14B44 - 04a



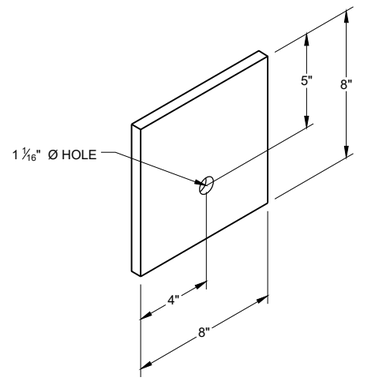
GENERIC GROUND STRUT ⑨ Ⓔ

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 ⑧ Ⓔ



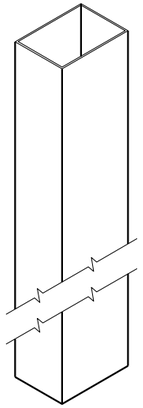
BEARING PLATE ⑥ Ⓔ

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

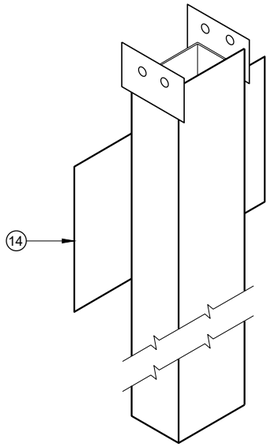
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

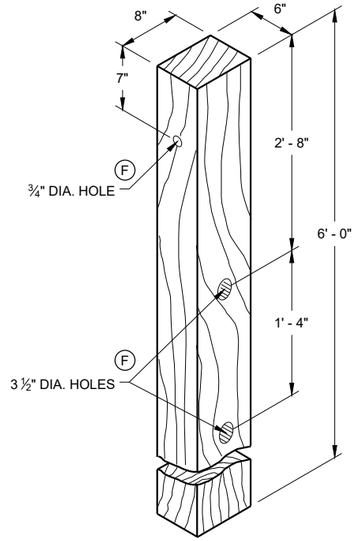
SDD 14B44 - 04b



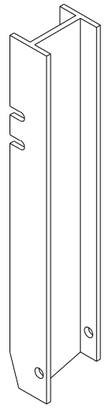
UPPER POST NO. 1 ① Ⓔ



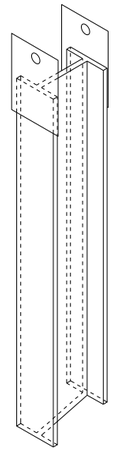
LOWER POST NO. 1 ② Ⓔ



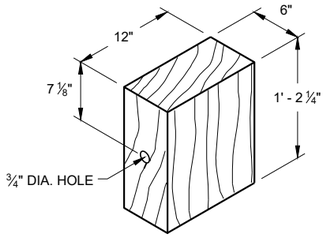
WOOD CRT POST ③ Ⓔ
POSTS NUMBER 3-9



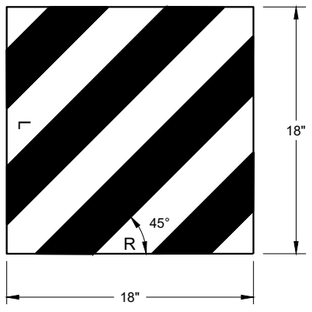
UPPER POST NO. 2 ⑮ Ⓔ



LOWER POST NO. 2 ⑯ Ⓔ

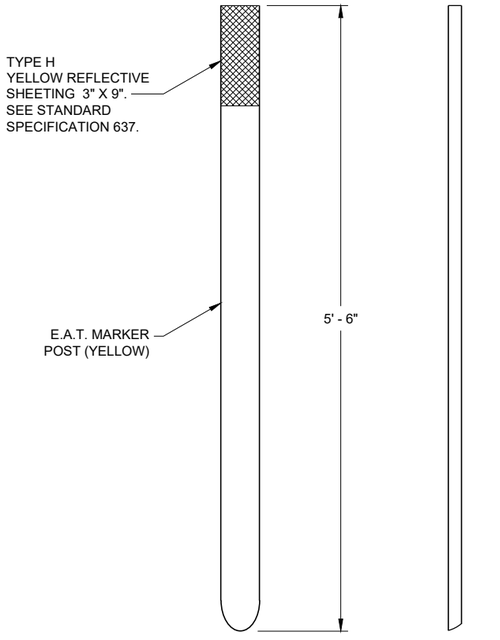


WOOD BLOCKOUT ④
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



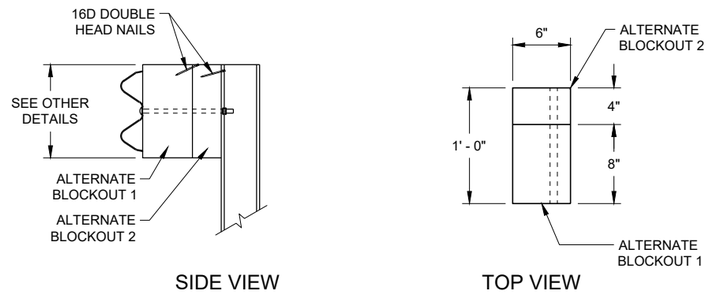
W5 - 59

REFLECTIVE SHEETING DETAIL Ⓔ



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)

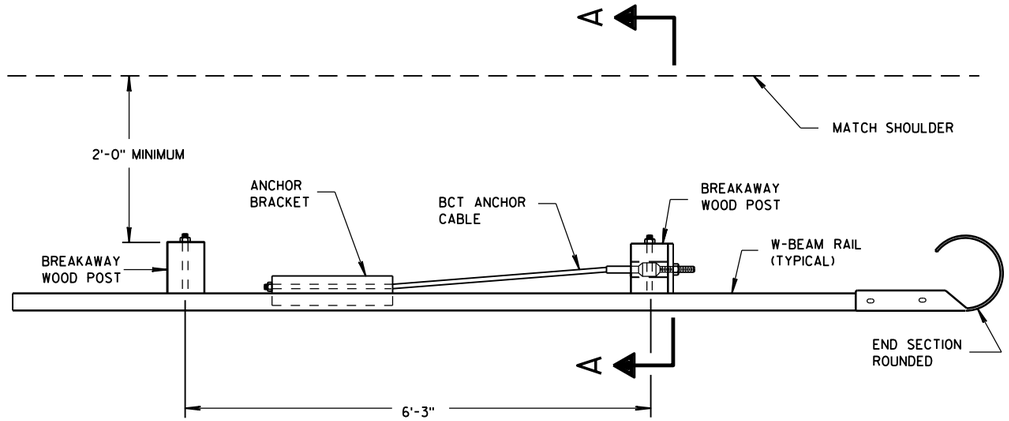
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

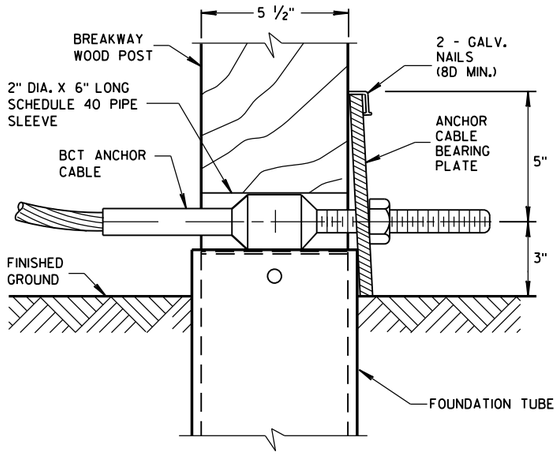
FHWA

6

SDD 14B44 - 04c



PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

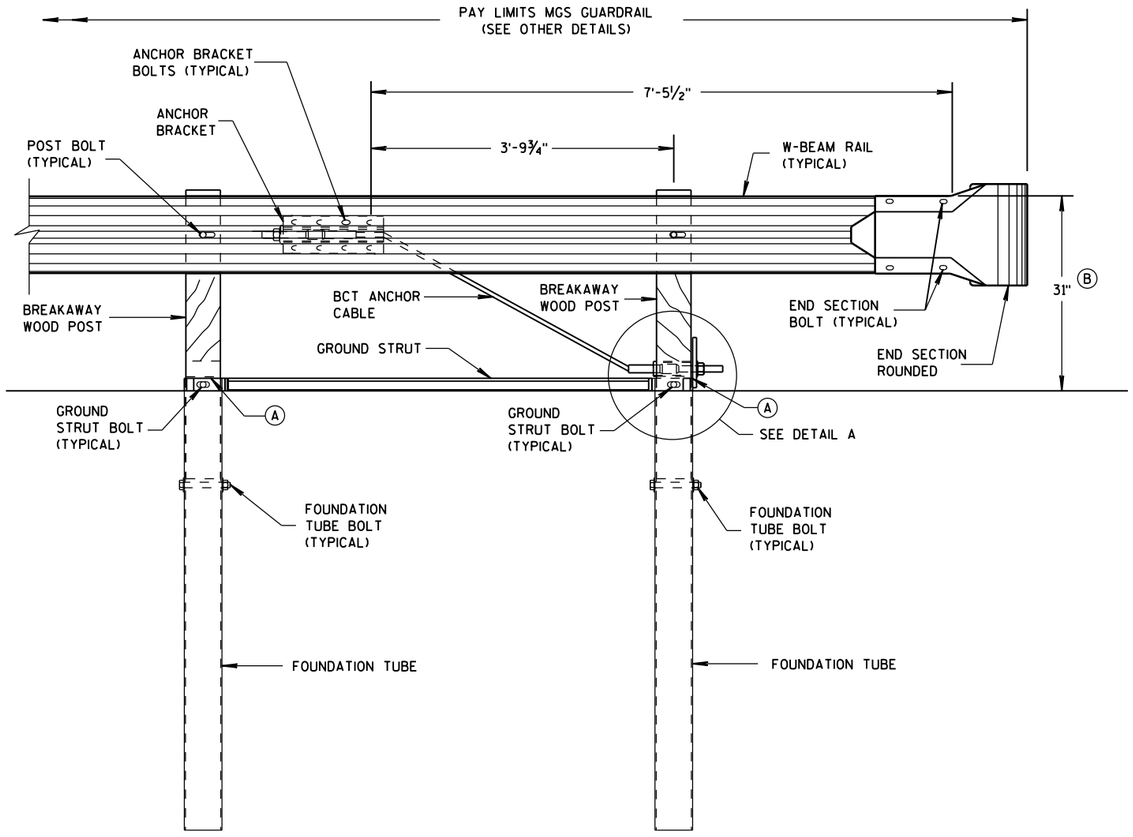
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

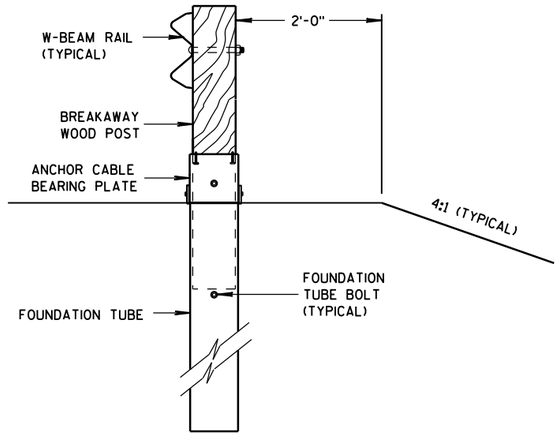
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

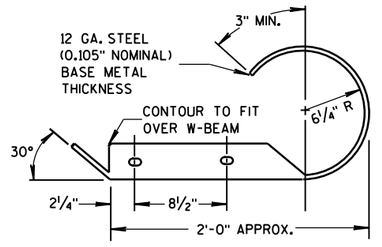


FRONT VIEW

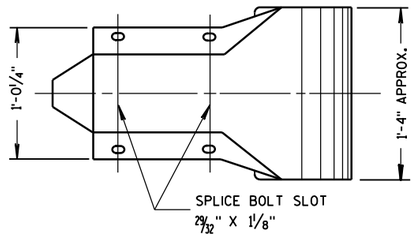
END RAIL DETAIL



SECTION A-A



PLAN VIEW



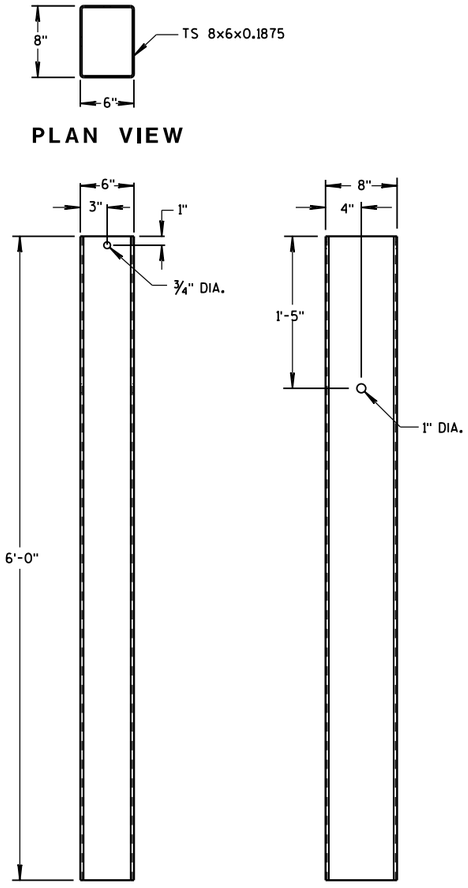
FRONT VIEW

W BEAM END SECTION ROUNDED

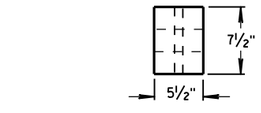
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

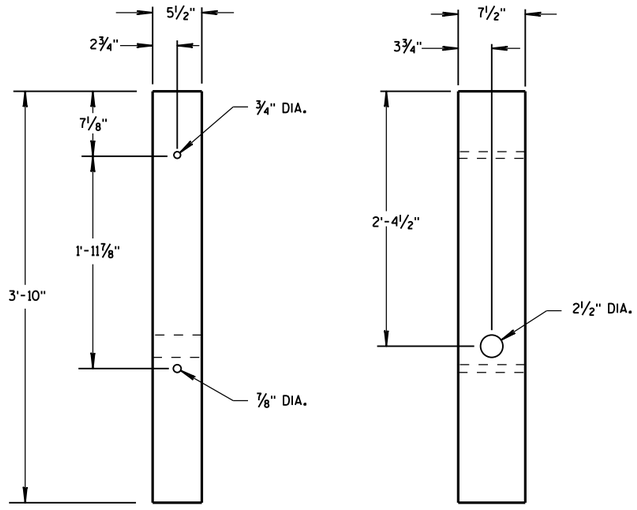
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a



FOUNDATION TUBE



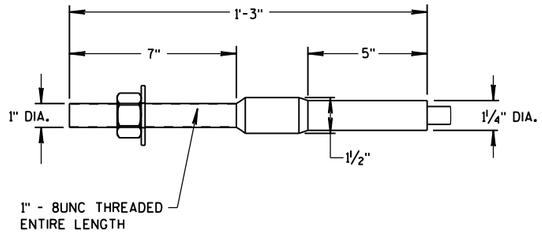


BREAKAWAY WOOD POST

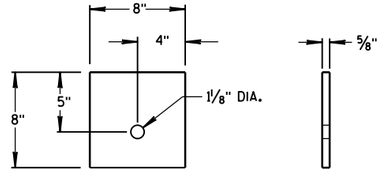
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



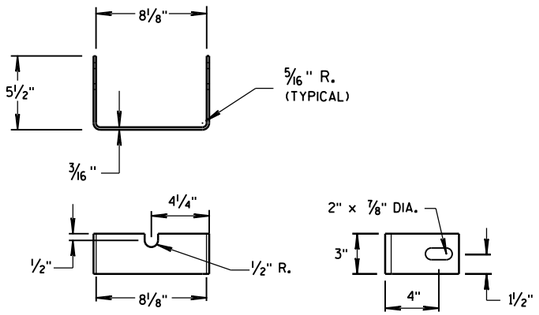
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

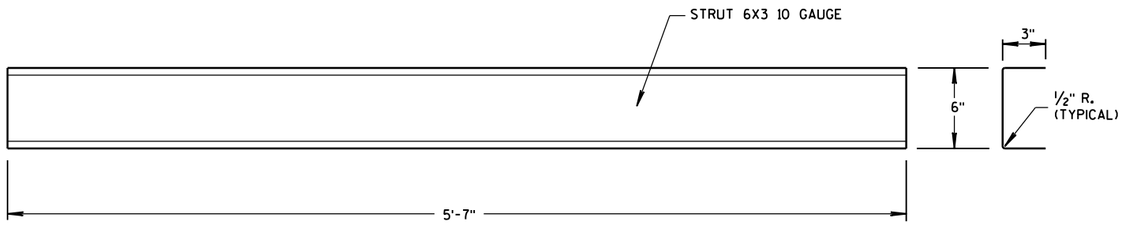
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

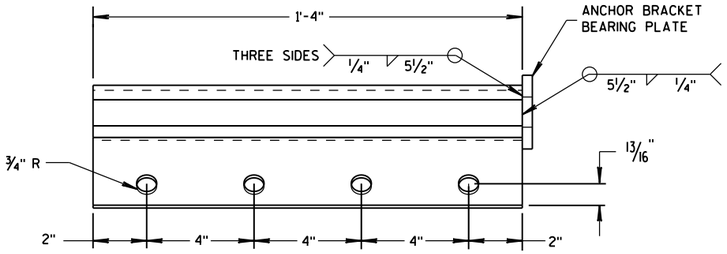
S.D.D. 14 B 47-2b

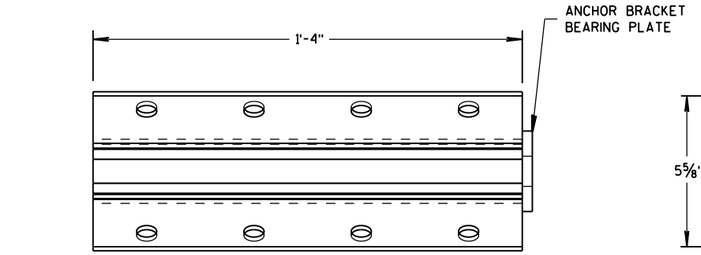


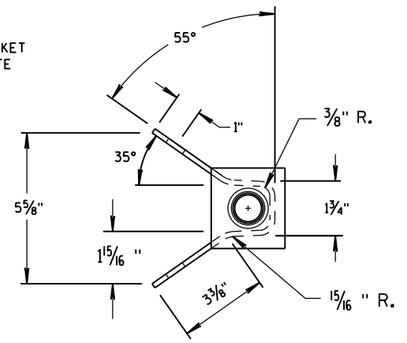
YOKE DETAIL



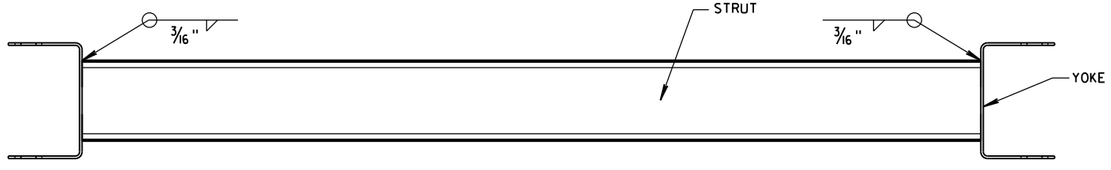
STRUT DETAIL



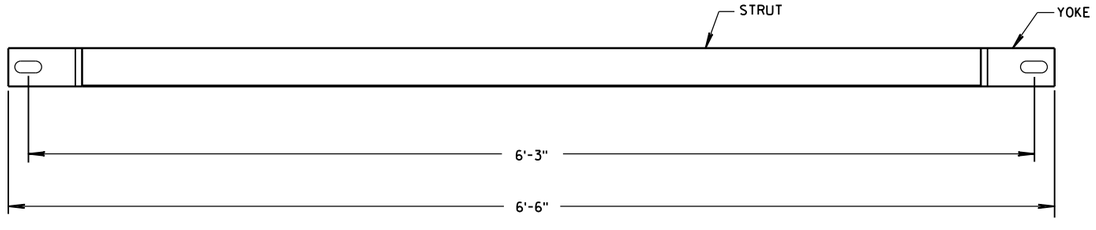




ANCHOR BRACKET

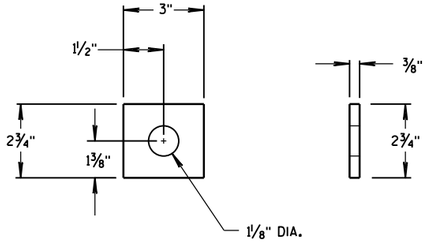


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

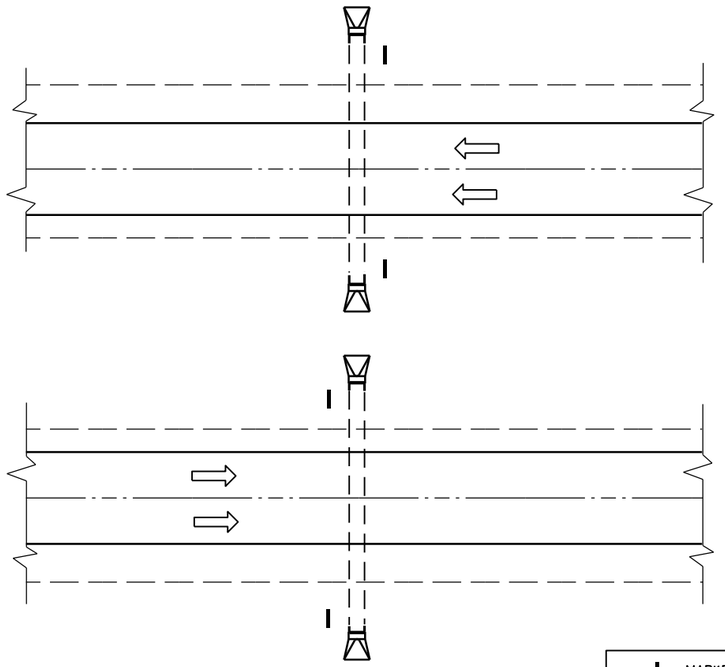
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

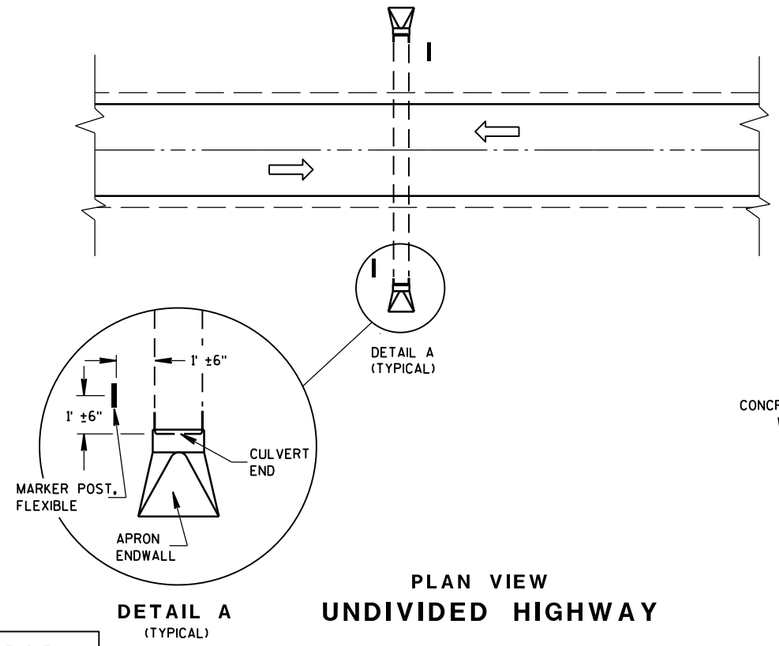
6

S.D.D. 14 B 47-2c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

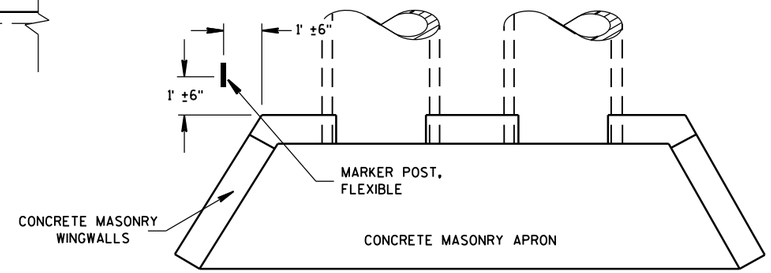
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

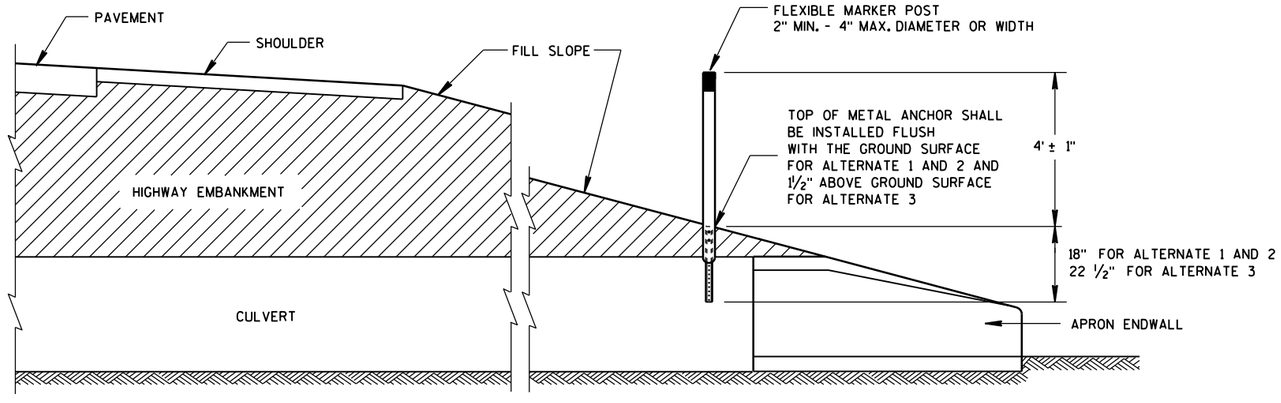
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 A 3-2a

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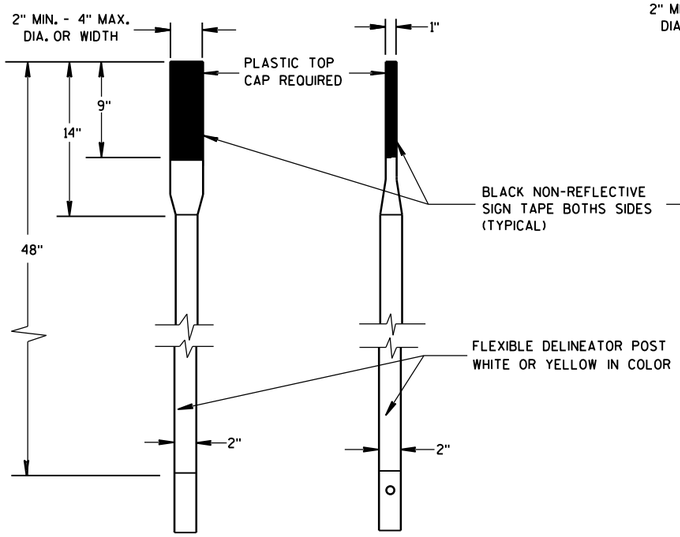
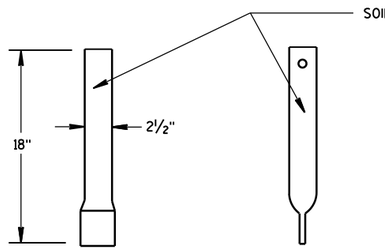
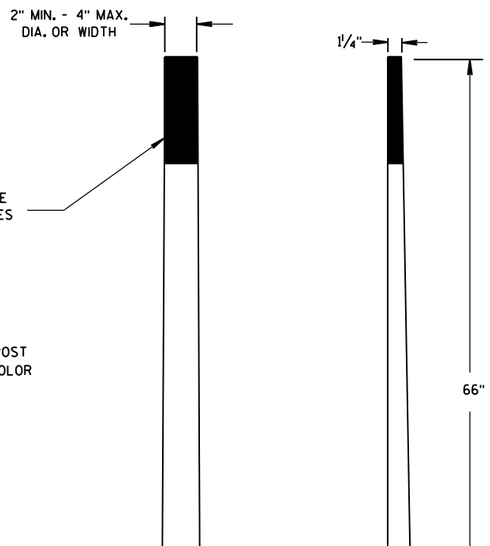
S.D.D. 15 A 3-2a





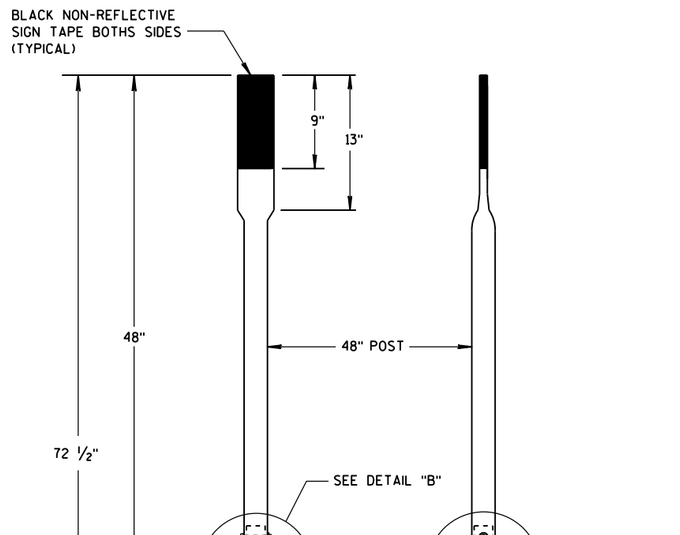
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

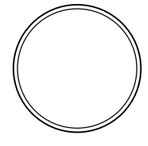
ALTERNATE 2



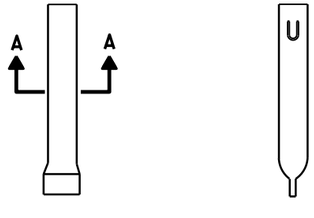
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

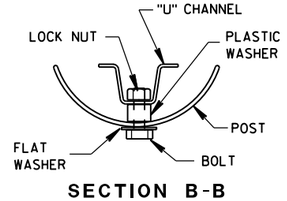


SECTION A-A

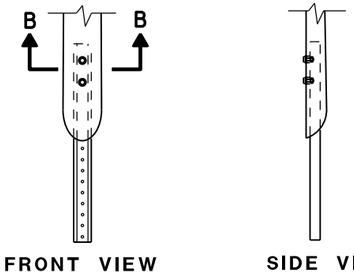


FRONT VIEW SIDE VIEW

ALTERNATE 1

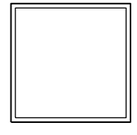


SECTION B-B

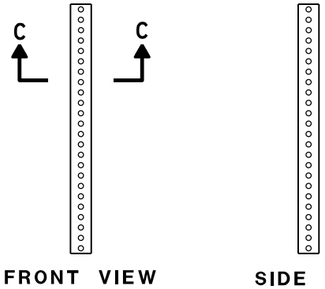


FRONT VIEW SIDE VIEW

ALTERNATE 2



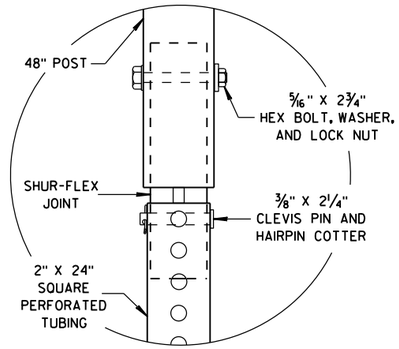
SECTION C-C



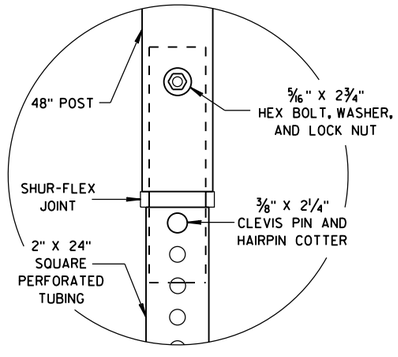
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

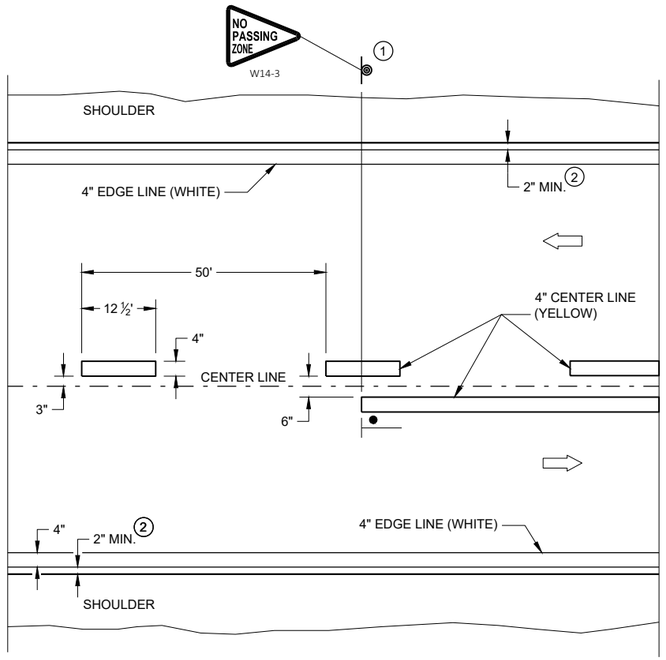
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

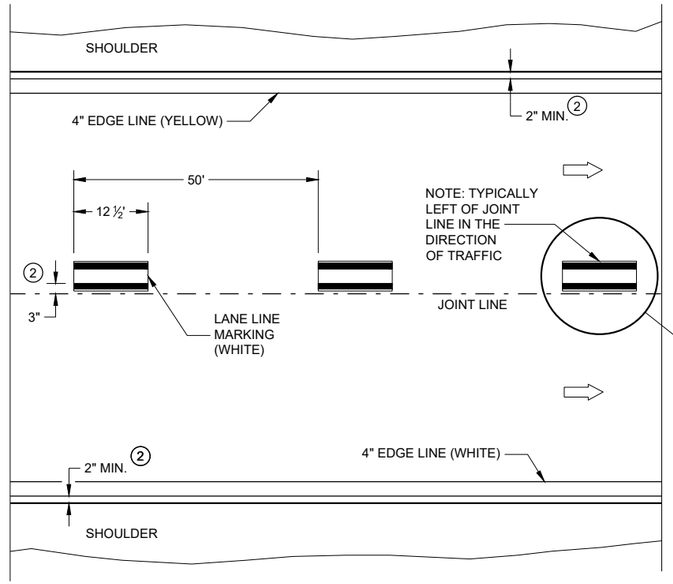
S.D.D. 15 A 3-2b

6

S.D.D. 15 A 3-2b

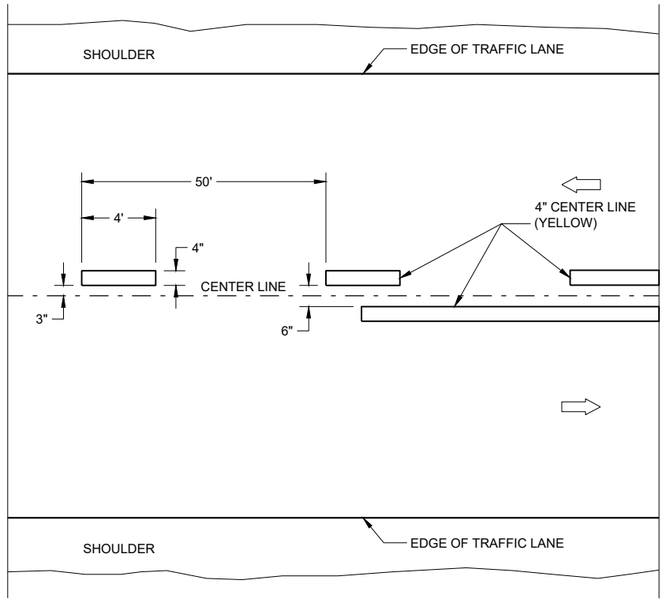


TWO WAY TRAFFIC

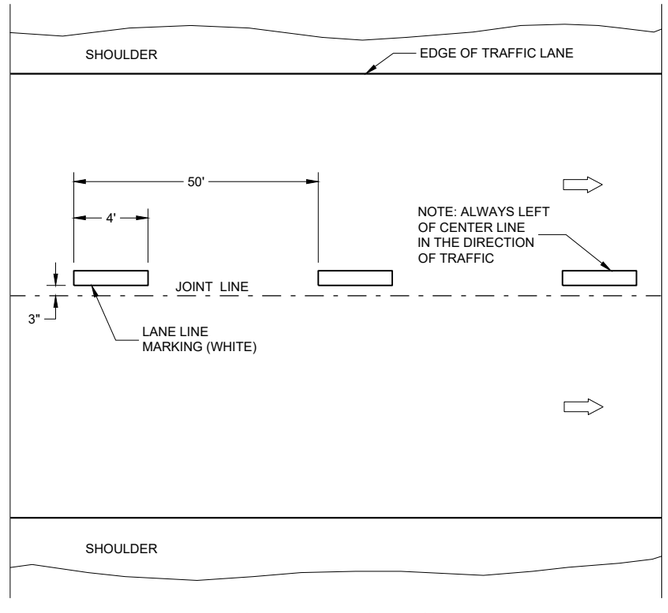


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

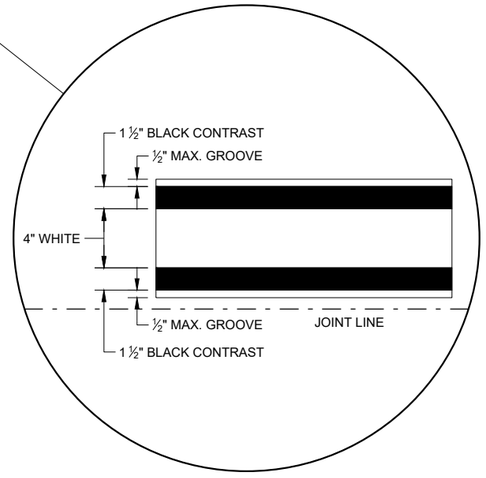
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Matthew Rauch
STATEWIDE SIGNING AND M ENGINEER

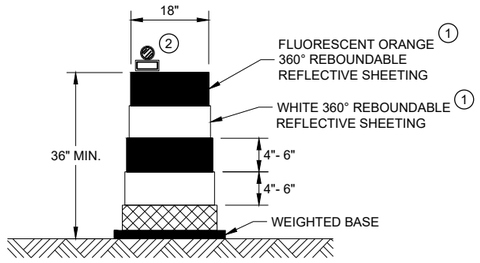
FHWA

SDD 15C08 - 20a

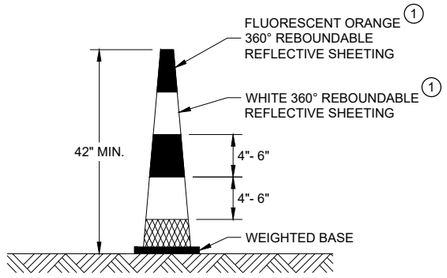
SDD 15C08 - 20a

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

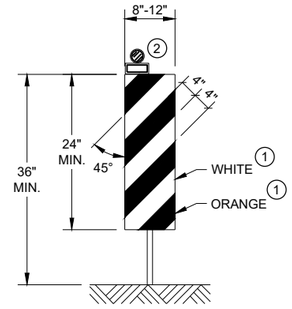


DRUM



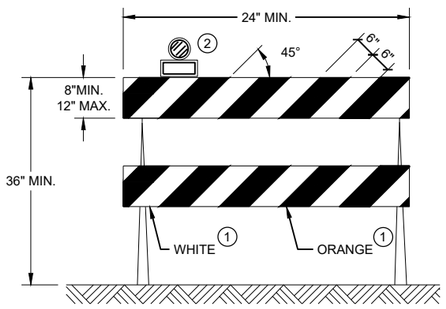
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



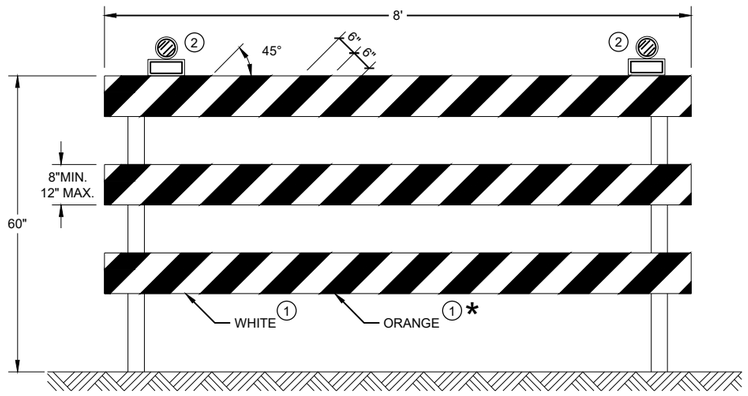
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

SDD 15C11 - 08b

6

SDD 15C11 - 08b

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

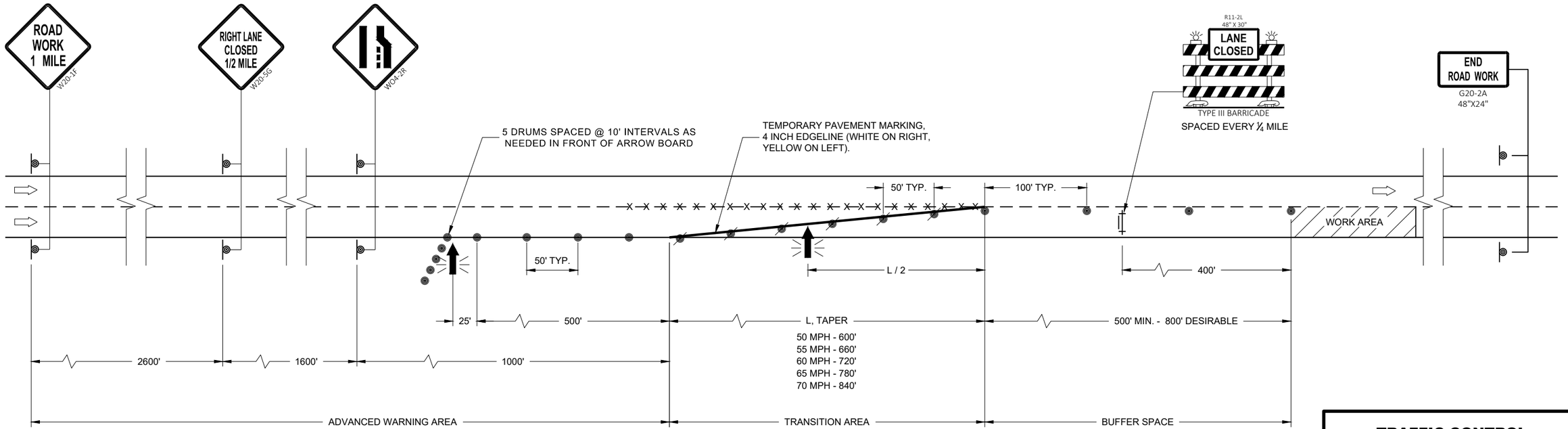
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15D12 - 09a

SDD 15D12 - 09a

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS /OR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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

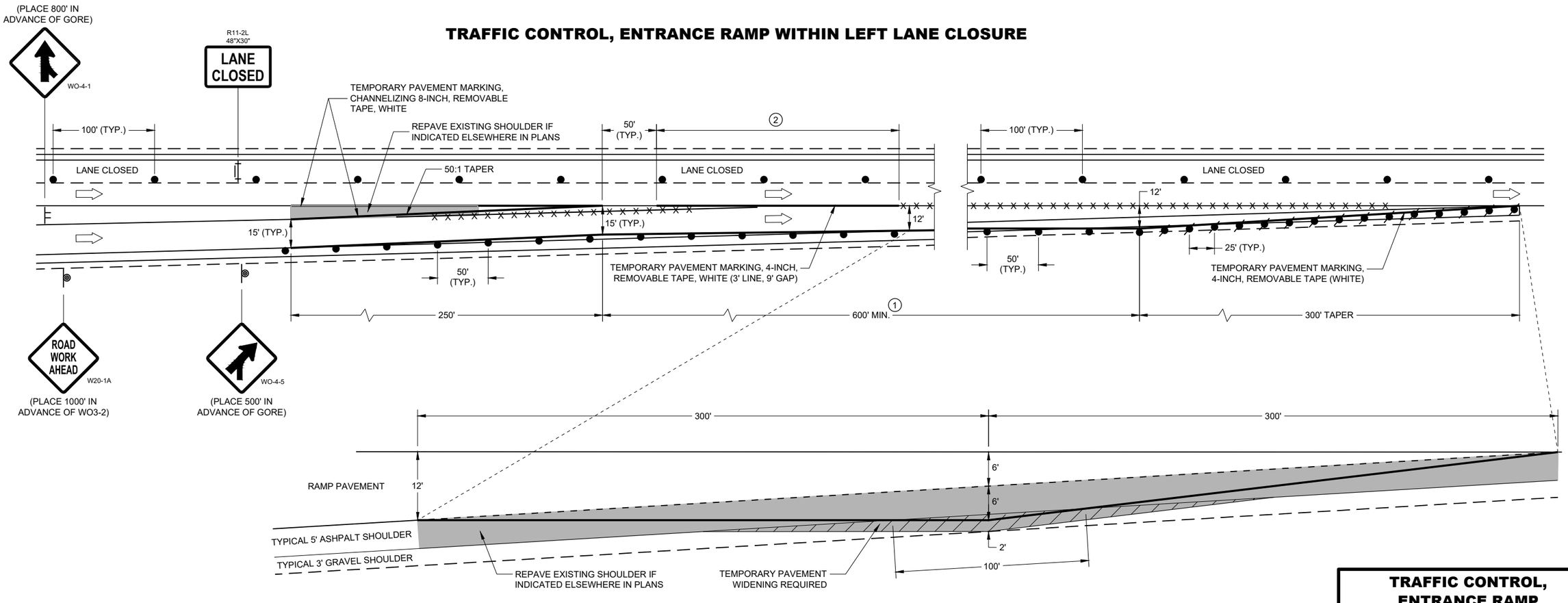
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

(1) EXTEND THE LENGTH OF THE MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY MARKING AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LEFT LANE CLOSURE



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY, ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15D15 - 05b

SDD15D15 - 05b

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

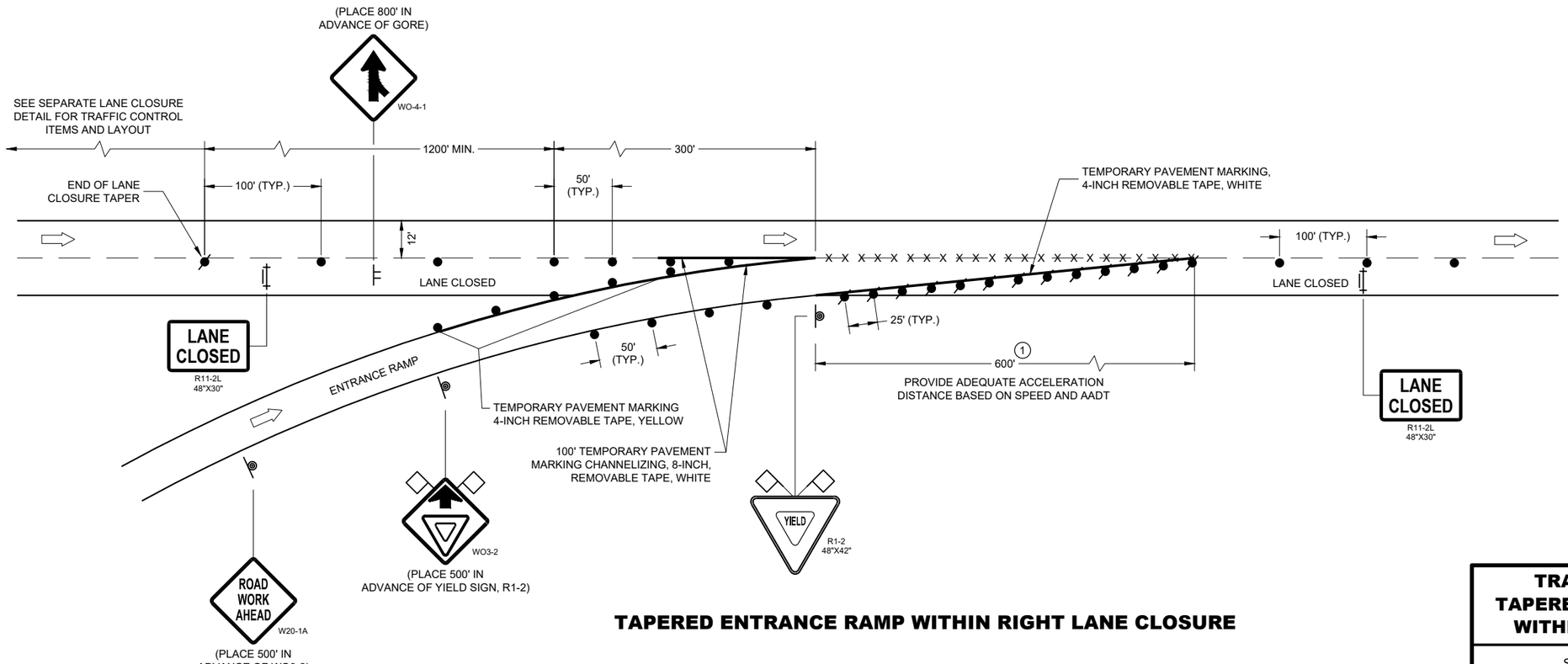
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

(1) CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



TAPERED ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE

TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D15 - 05c

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SDD 15D15 - 05c

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

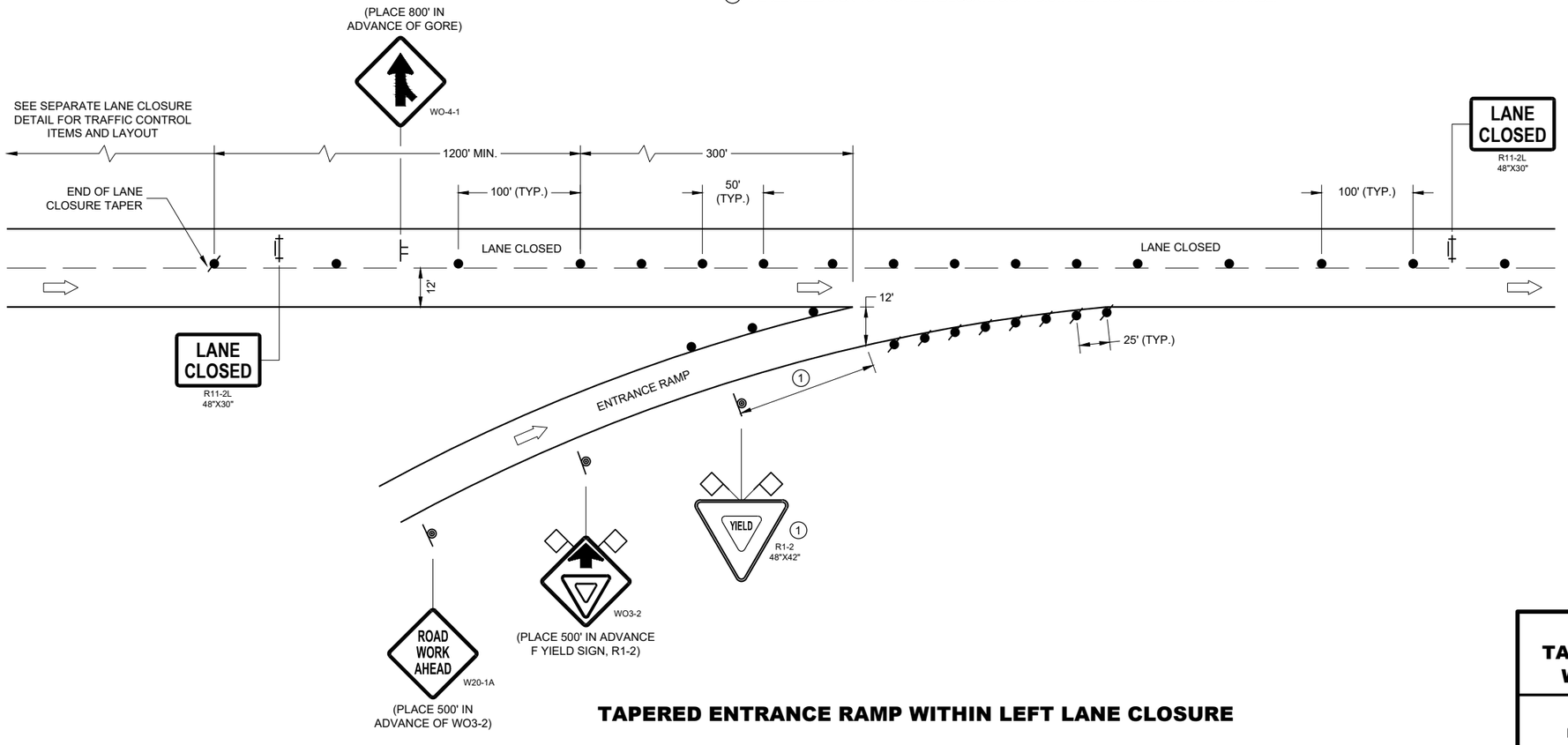
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

(1) PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.



TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE

TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D15 - 05d

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SDD 15D15 - 05d

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

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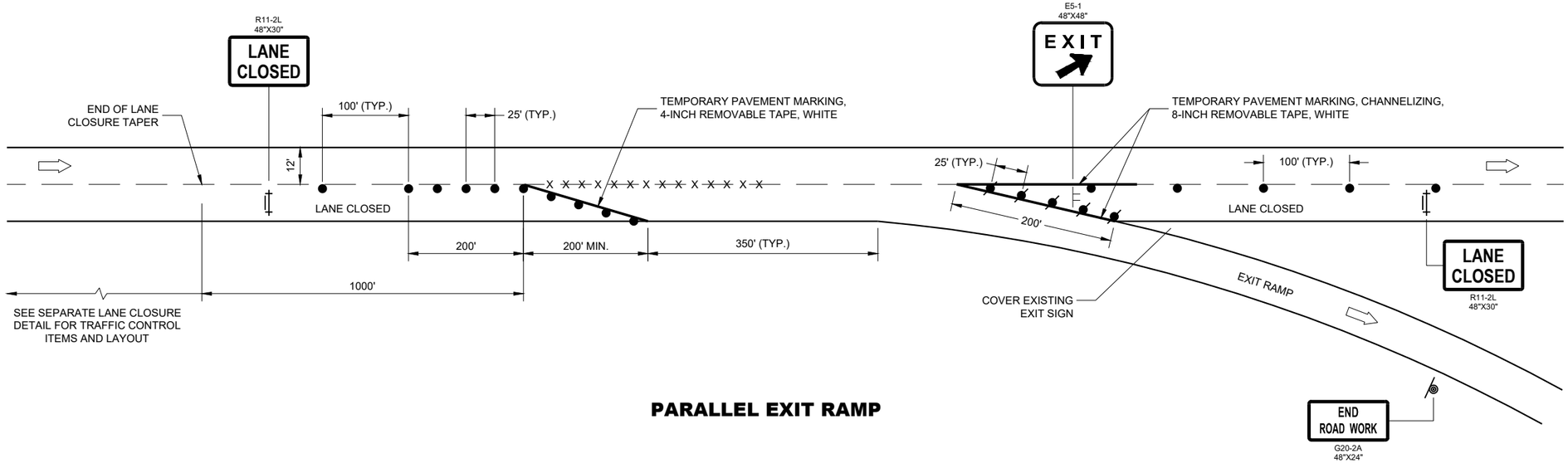
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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



PARALLEL EXIT RAMP

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE

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SDD 15D15 - 05e

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SDD15D15 - 05e

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

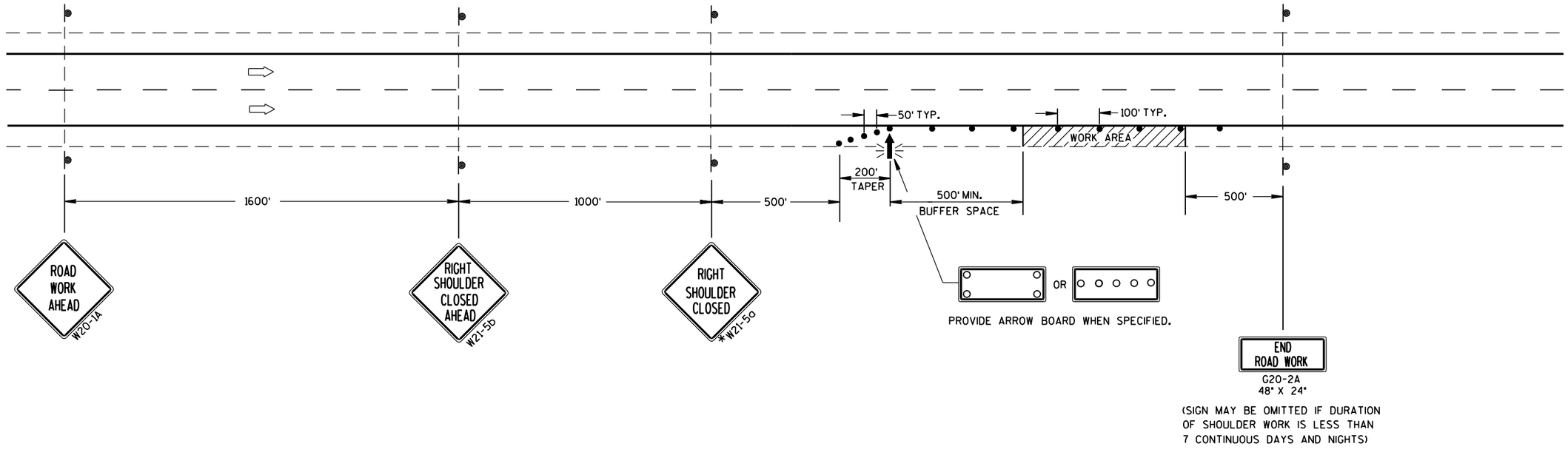
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

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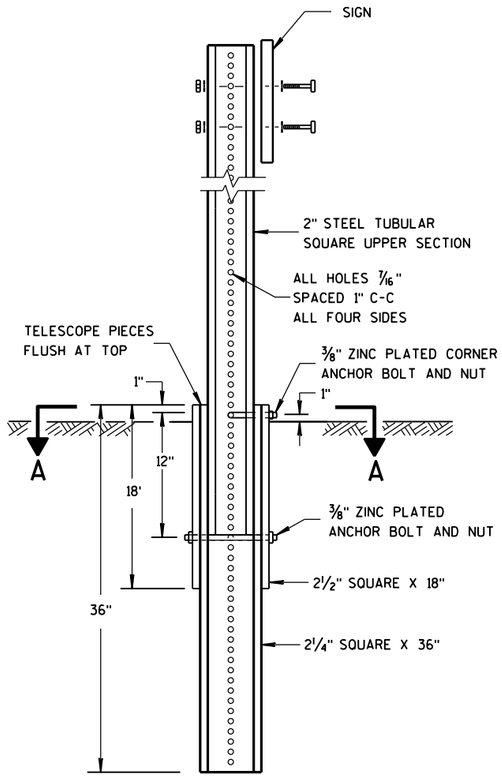
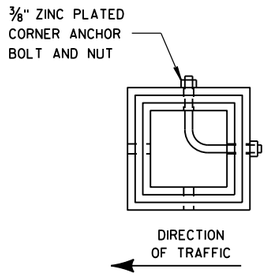
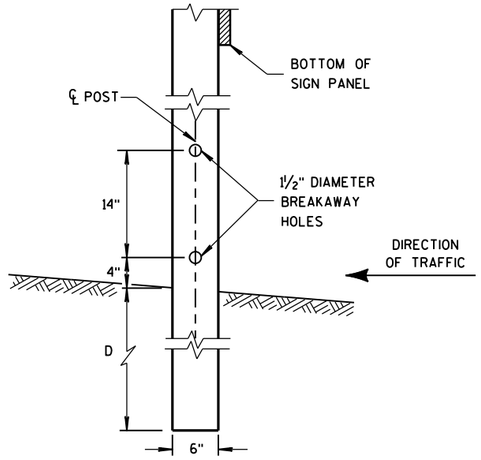


DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



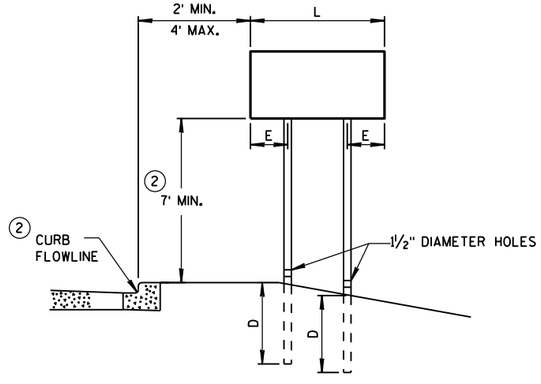
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

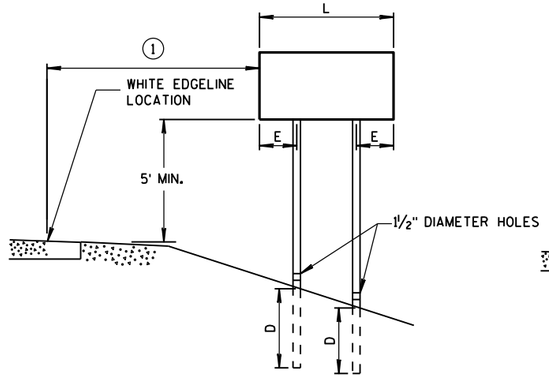
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

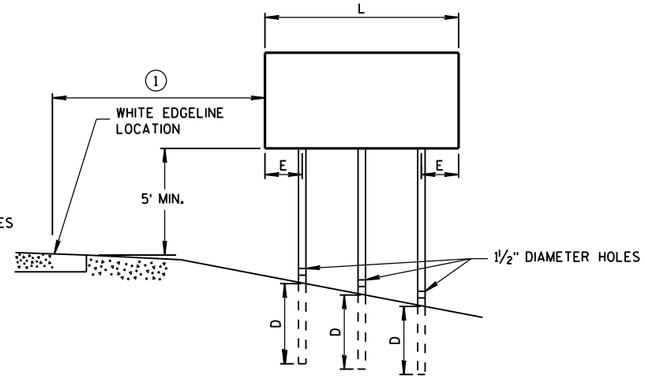
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

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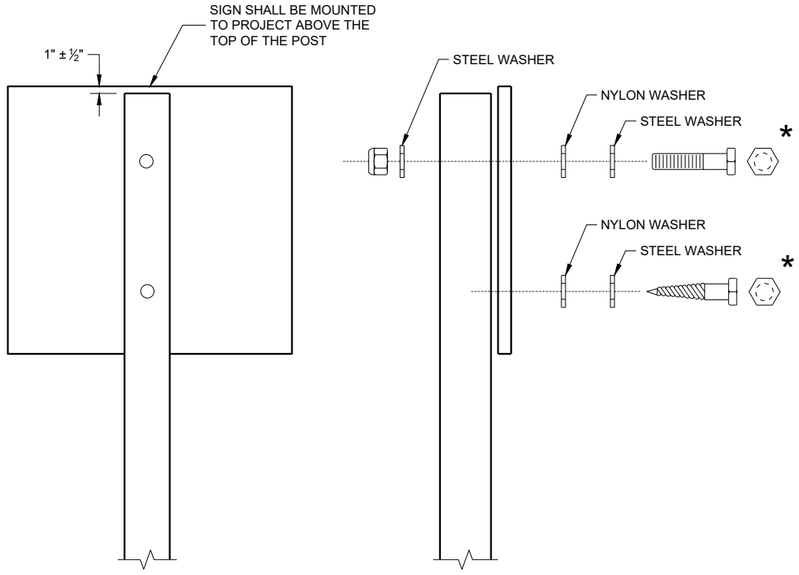
S.D.D. 15 D 38-2a



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

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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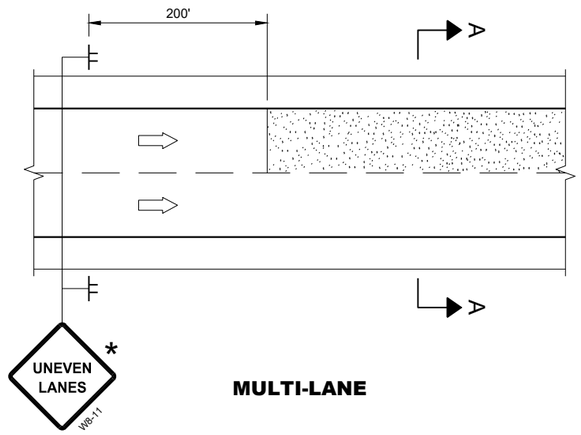
SDD 15D38 - 02b

SDD15D38 - 02b

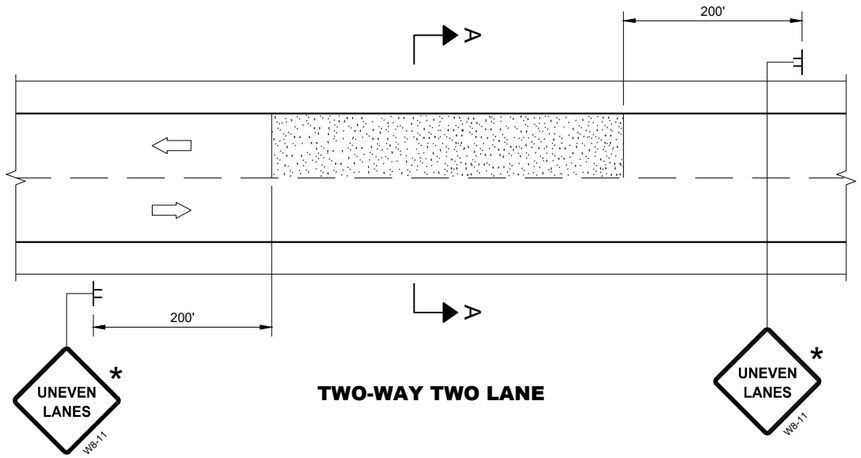
ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA



MULTI-LANE



TWO-WAY TWO LANE

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

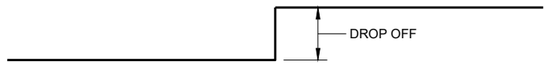
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

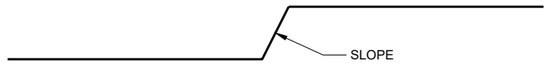
LEGEND

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

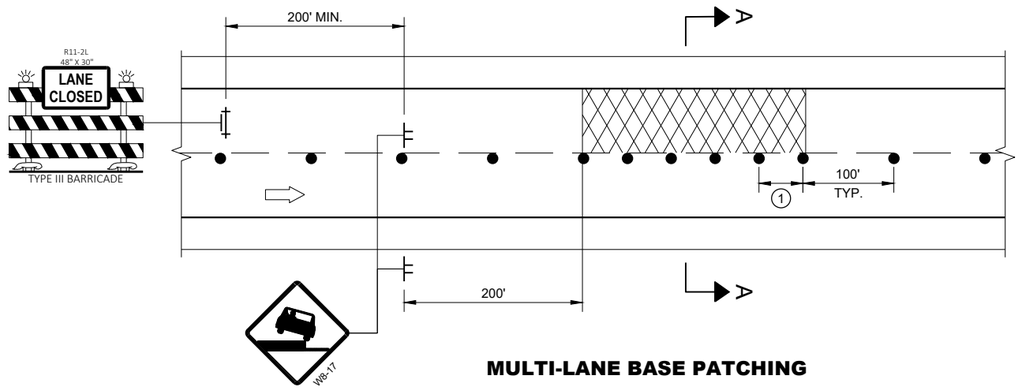


SECTION A - A

OR

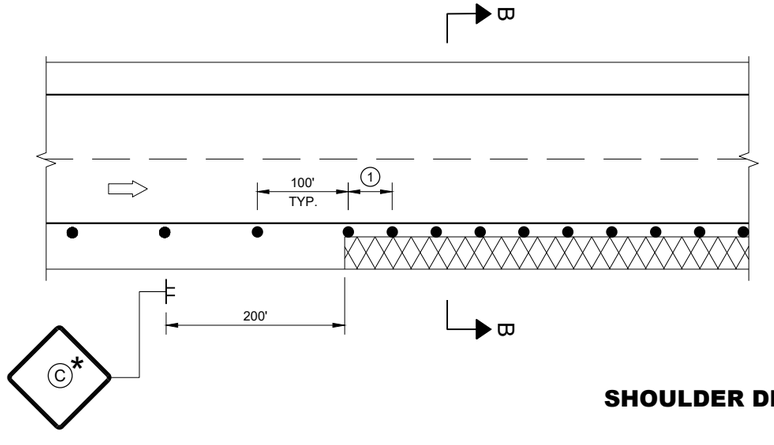


SECTION A - A

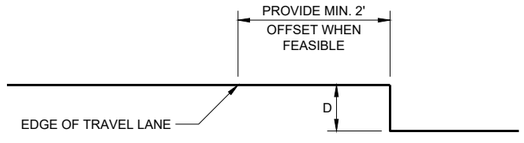


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

IH 39 - EARTHWORK SOUTH OF WISCONSIN RIVER

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	
76+47.016	7647.02	0.00	10.67	10.67	15.82	0	0	0	0	0	0
76+50	7650.00	2.98	5.00	5.00	7.95	1	1	1	1	1	-1
77+00	7700.00	50.00	15.18	15.18	0.14	19	19	7	20	10	-10
77+50	7750.00	50.00	0.60	0.60	1.92	15	15	2	35	13	-13
78+00	7800.00	50.00	0.50	0.50	12.83	1	1	14	36	30	-30
78+50	7850.00	50.00	0.18	0.18	15.12	1	1	26	37	63	-63
79+00	7900.00	50.00	0.46	0.46	18.33	1	1	31	38	101	-101
79+50	7950.00	50.00	1.24	1.24	31.04	2	2	46	40	159	-159
80+00	8000.00	50.00	0.00	0.00	0.00	1	1	29	41	195	-195
80+50	8050.00	50.00	4.47	4.47	0.16	4	4	0	45	195	-195
81+00	8100.00	50.00	4.28	4.28	0.12	8	8	0	53	195	-195
81+50	8150.00	50.00	3.95	3.95	0.64	8	8	1	61	196	-196
82+00	8200.00	50.00	4.42	4.42	0.28	8	8	1	69	198	-198
82+50	8250.00	50.00	5.11	5.11	0.08	9	9	0	78	198	-198
83+00	8300.00	50.00	4.48	4.48	0.03	9	9	0	87	198	-198
83+50	8350.00	50.00	3.90	3.90	0.08	8	8	0	95	198	-198
84+00	8400.00	50.00	4.77	4.77	0.00	8	8	0	103	198	-198
84+50	8450.00	50.00	4.74	4.74	0.00	9	9	0	112	198	-198
85+00	8500.00	50.00	5.23	5.23	0.00	9	9	0	121	198	-198
85+50	8550.00	50.00	4.78	4.78	0.00	9	9	0	130	198	-198
86+00	8600.00	50.00	4.50	4.50	0.00	9	9	0	139	198	-198
86+50	8650.00	50.00	4.80	4.80	0.15	9	9	0	148	198	-198
87+00	8700.00	50.00	4.20	4.20	3.64	8	8	4	156	203	-203
87+50	8750.00	50.00	4.51	4.51	0.28	8	8	4	164	208	-208
88+00	8800.00	50.00	4.71	4.71	0.02	9	9	0	173	208	-208
88+50	8850.00	50.00	4.83	4.83	0.07	9	9	0	182	208	-208
89+00	8900.00	50.00	4.95	4.95	0.58	9	9	1	191	209	-209
89+50	8950.00	50.00	4.61	4.61	0.36	9	9	1	200	210	-210
90+00	9000.00	50.00	4.64	4.64	0.09	9	9	0	209	210	-210
90+50	9050.00	50.00	4.30	4.30	0.07	8	8	0	217	210	-210
91+00	9100.00	50.00	4.56	4.56	0.09	8	8	0	225	210	-210
91+50	9150.00	50.00	4.20	4.20	0.40	8	8	0	233	210	-210
92+00	9200.00	50.00	4.53	4.53	0.23	8	8	1	241	211	-211
92+50	9250.00	50.00	4.63	4.63	0.26	8	8	0	249	211	-211
93+00	9300.00	50.00	5.05	5.05	0.08	9	9	0	258	211	-211
93+50	9350.00	50.00	4.96	4.96	0.62	9	9	1	267	213	-213
94+00	9400.00	50.00	4.32	4.32	2.84	9	9	3	276	216	-216
94+50	9450.00	50.00	4.59	4.59	0.94	8	8	4	284	221	-221
95+00	9500.00	50.00	4.32	4.32	0.15	8	8	1	292	223	-223
95+50	9550.00	50.00	4.71	4.71	0.11	8	8	0	300	223	-223
96+00	9600.00	50.00	4.34	4.34	0.90	8	8	1	308	224	-224
96+50	9650.00	50.00	4.20	4.20	1.00	8	8	2	316	226	-226
97+00	9700.00	50.00	4.53	4.53	0.14	8	8	1	324	228	-228
97+50	9750.00	50.00	4.89	4.89	0.05	9	9	0	333	228	-228
98+00	9800.00	50.00	4.89	4.89	0.04	9	9	0	342	228	-228
98+50	9850.00	50.00	5.21	5.21	0.04	9	9	0	351	228	-228
99+00	9900.00	50.00	4.26	4.26	0.61	9	9	1	360	229	-229
99+50	9950.00	50.00	4.18	4.18	0.73	8	8	1	368	230	-230

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

IH 39 - EARTHWORK SOUTH OF WISCONSIN RIVER - CONTINUED

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	
100+00	10000.00	50.00	4.35	4.35	0.26	8	8	1	376	231	-231
100+50	10050.00	50.00	4.84	4.84	0.01	9	9	0	385	231	-231
101+00	10100.00	50.00	4.93	4.93	0.21	9	9	0	394	231	-231
101+50	10150.00	50.00	5.15	5.15	0.62	9	9	1	403	233	-233
102+00	10200.00	50.00	5.11	5.11	0.27	9	9	1	412	234	-234
102+50	10250.00	50.00	4.68	4.68	0.22	9	9	0	421	234	-234
103+00	10300.00	50.00	4.23	4.23	0.31	8	8	0	429	234	-234
103+50	10350.00	50.00	5.20	5.20	0.48	9	9	1	438	235	-235
104+00	10400.00	50.00	4.12	4.12	3.94	9	9	4	447	240	-240
104+50	10450.00	50.00	4.07	4.07	1.05	8	8	5	455	246	-246
105+00	10500.00	50.00	4.08	4.08	0.09	8	8	1	463	248	-248
105+50	10550.00	50.00	4.48	4.48	0.07	8	8	0	471	248	-248
106+00	10600.00	50.00	4.82	4.82	0.03	9	9	0	480	248	-248
106+50	10650.00	50.00	4.73	4.73	0.00	9	9	0	489	248	-248
107+00	10700.00	50.00	4.83	4.83	0.00	9	9	0	498	248	-248
107+50	10750.00	50.00	4.83	4.83	0.01	9	9	0	507	248	-248
108+00	10800.00	50.00	4.66	4.66	0.10	9	9	0	516	248	-248
108+50	10850.00	50.00	4.54	4.54	0.16	9	9	0	525	248	-248
109+00	10900.00	50.00	4.29	4.29	0.91	8	8	1	533	249	-249
109+50	10950.00	50.00	4.65	4.65	1.09	8	8	2	541	251	-251
110+00	11000.00	50.00	4.81	4.81	0.43	9	9	1	550	253	-253
110+50	11050.00	50.00	4.56	4.56	0.45	9	9	1	559	254	-254
111+00	11100.00	50.00	4.32	4.32	1.56	8	8	2	567	256	-256
111+50	11150.00	50.00	4.51	4.51	1.46	8	8	3	575	260	-260
112+00	11200.00	50.00	4.65	4.65	0.69	8	8	2	583	263	-263
112+50	11250.00	50.00	4.59	4.59	0.54	9	9	1	592	264	-264
113+00	11300.00	50.00	4.48	4.48	0.64	8	8	1	600	265	-265
113+50	11350.00	50.00	6.09	6.09	1.04	10	10	2	610	268	-268
114+00	11400.00	50.00	4.17	4.17	12.97	10	10	13	620	284	-284
114+50	11450.00	50.00	4.32	4.32	4.35	8	8	16	628	304	-304
115+00	11500.00	50.00	4.27	4.27	0.80	8	8	5	636	310	-310
115+50	11550.00	50.00	4.87	4.87	0.59	8	8	1	644	311	-311
116+00	11600.00	50.00	4.86	4.86	0.39	9	9	1	653	313	-313
116+50	11650.00	50.00	4.76	4.76	0.66	9	9	1	662	314	-314
117+00	11700.00	50.00	4.52	4.52	2.29	9	9	3	671	318	-318
117+50	11750.00	50.00	4.35	4.35	1.88	8	8	4	679	323	-323
118+00	11800.00	50.00	4.55	4.55	0.63	8	8	2	687	325	-325
118+50	11850.00	50.00	4.66	4.66	0.78	9	9	1	696	326	-326
119+00	11900.00	50.00	4.70	4.70	0.54	9	9	1	705	328	-328
119+50	11950.00	50.00	5.79	5.79	0.48	10	10	1	715	329	-329
120+00	12000.00	50.00	4.34	4.34	2.80	9	9	3	724	333	-333
120+50	12050.00	50.00	4.70	4.70	0.56	8	8	3	732	336	-336
121+00	12100.00	50.00	4.31	4.31	0.28	8	8	1	740	338	-338
121+50	12150.00	50.00	4.18	4.18	0.17	8	8	0	748	338	-338
122+00	12200.00	50.00	4.39	4.39	0.13	8	8	0	756	338	-338
122+50	12250.00	50.00	4.49	4.49	1.00	8	8	1	764	339	-339
123+00	12300.00	50.00	4.81	4.81	0.64	9	9	2	773	341	-341
123+50	12350.00	50.00	5.20	5.20	0.58	9	9	1	782	343	-343

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

IH 39 - EARTHWORK SOUTH OF WISCONSIN RIVER - CONTINUED

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	
124+00	12400.00	50.00	5.31	5.31	0.73	10	10	1	792	344	-344
124+50	12450.00	50.00	4.77	4.77	1.78	9	9	2	801	346	-346
125+00	12500.00	50.00	4.48	4.48	1.65	9	9	3	810	350	-350
125+50	12550.00	50.00	4.71	4.71	0.68	9	9	2	819	353	-353
126+00	12600.00	50.00	4.67	4.67	0.73	9	9	1	828	354	-354
126+50	12650.00	50.00	4.41	4.41	0.69	8	8	1	836	355	-355
127+00	12700.00	50.00	4.25	4.25	1.77	8	8	2	844	358	-358
127+50	12750.00	50.00	4.26	4.26	4.62	8	8	6	852	365	-365
128+00	12800.00	50.00	4.18	4.18	1.82	8	8	6	860	373	-373
128+50	12850.00	50.00	4.28	4.28	0.89	8	8	3	868	376	-376
129+00	12900.00	50.00	4.47	4.47	0.21	8	8	1	876	378	-378
129+50	12950.00	50.00	4.53	4.53	0.52	8	8	1	884	379	-379
130+00	13000.00	50.00	4.64	4.64	1.49	8	8	2	892	381	-381
130+50	13050.00	50.00	5.20	5.20	0.28	9	9	2	901	384	-384
131+00	13100.00	50.00	4.81	4.81	0.42	9	9	1	910	385	-385
131+50	13150.00	50.00	4.66	4.66	0.30	9	9	1	919	386	-386
132+00	13200.00	50.00	4.56	4.56	0.39	9	9	1	928	388	-388
132+50	13250.00	50.00	4.26	4.26	1.47	8	8	2	936	390	-390
133+00	13300.00	50.00	4.02	4.02	1.23	8	8	3	944	394	-394
133+50	13350.00	50.00	3.81	3.81	0.70	7	7	2	951	396	-396
134+00	13400.00	50.00	3.87	3.87	1.17	7	7	2	958	399	-399
134+50	13450.00	50.00	4.10	4.10	3.69	7	7	4	965	404	-404
135+00	13500.00	50.00	4.16	4.16	5.19	8	8	8	973	414	-414
135+50	13550.00	50.00	5.03	5.03	1.13	9	9	6	982	421	-421
136+00	13600.00	50.00	4.05	4.05	1.20	8	8	2	990	424	-424
136+50	13650.00	50.00	3.79	3.79	1.20	7	7	2	997	426	-426
137+00	13700.00	50.00	3.87	3.87	1.03	7	7	2	1,004	429	-429
137+50	13750.00	50.00	4.04	4.04	4.63	7	7	5	1,011	435	-435
138+00	13800.00	50.00	3.91	3.91	4.24	7	7	8	1,018	445	-445
138+50	13850.00	50.00	3.97	3.97	1.90	7	7	6	1,025	453	-453
139+00	13900.00	50.00	3.90	3.90	1.46	7	7	3	1,032	456	-456
139+50	13950.00	50.00	3.83	3.83	3.36	7	7	4	1,039	461	-461
140+00	14000.00	50.00	3.84	3.84	5.11	7	7	8	1,046	471	-471
140+50	14050.00	50.00	4.57	4.57	0.70	8	8	5	1,054	478	-478
141+00	14100.00	50.00	3.98	3.98	0.62	8	8	1	1,062	479	-479
141+50	14150.00	50.00	4.22	4.22	0.56	8	8	1	1,070	480	-480
142+00	14200.00	50.00	4.10	4.10	1.17	8	8	2	1,078	483	-483
142+50	14250.00	50.00	4.46	4.46	1.19	8	8	2	1,086	485	-485
143+00	14300.00	50.00	4.12	4.12	1.94	8	8	3	1,094	489	-489
143+50	14350.00	50.00	4.22	4.22	0.88	8	8	3	1,102	493	-493
144+00	14400.00	50.00	4.59	4.59	0.10	8	8	1	1,110	494	-494
144+50	14450.00	50.00	5.44	5.44	6.36	9	9	6	1,119	501	-501
145+00	14500.00	50.00	0.00	0.00	0.00	5	5	6	1,124	509	-509
145+50	14550.00	50.00	4.42	4.42	7.75	4	4	7	1,128	518	-518
146+00	14600.00	50.00	4.20	4.20	0.39	8	8	8	1,136	528	-528
146+50	14650.00	50.00	4.08	4.08	0.26	8	8	1	1,144	529	-529
147+00	14700.00	50.00	4.49	4.49	0.06	8	8	0	1,152	529	-529
147+50	14750.00	50.00	5.09	5.09	0.06	9	9	0	1,161	529	-529

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

IH 39 - EARTHWORK SOUTH OF WISCONSIN RIVER - CONTINUED

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	
148+00	14800.00	50.00	4.73	4.73	0.42	9	9	0	1,170	529	-529
148+50	14850.00	50.00	4.78	4.78	0.45	9	9	1	1,179	530	-530
149+00	14900.00	50.00	5.82	5.82	0.03	10	10	0	1,189	530	-530
149+50	14950.00	50.00	7.84	7.84	0.00	13	13	0	1,202	530	-530
150+00	15000.00	50.00	5.80	5.80	0.03	13	13	0	1,215	530	-530
150+50	15050.00	50.00	5.05	5.05	0.10	10	10	0	1,225	530	-530
151+00	15100.00	50.00	4.29	4.29	0.20	9	9	0	1,234	530	-530
151+50	15150.00	50.00	3.98	3.98	0.41	8	8	1	1,242	531	-531
152+00	15200.00	50.00	3.95	3.95	0.42	7	7	1	1,249	533	-533
152+50	15250.00	50.00	3.58	3.58	0.44	7	7	1	1,256	534	-534
153+00	15300.00	50.00	4.30	4.30	0.34	7	7	1	1,263	535	-535
153+50	15350.00	50.00	4.72	4.72	0.10	8	8	0	1,271	535	-535
154+00	15400.00	50.00	4.47	4.47	0.02	9	9	0	1,280	535	-535
154+50	15450.00	50.00	4.46	4.46	0.17	8	8	0	1,288	535	-535
155+00	15500.00	50.00	4.48	4.48	1.20	8	8	1	1,296	536	-536
155+50	15550.00	50.00	4.75	4.75	1.02	9	9	2	1,305	539	-539
156+00	15600.00	50.00	4.43	4.43	0.18	8	8	1	1,313	540	-540
156+50	15650.00	50.00	4.40	4.40	0.48	8	8	1	1,321	541	-541
157+00	15700.00	50.00	4.39	4.39	0.87	8	8	1	1,329	543	-543
157+50	15750.00	50.00	4.72	4.72	2.64	8	8	3	1,337	546	-546
158+00	15800.00	50.00	4.55	4.55	2.47	9	9	5	1,346	553	-553
158+50	15850.00	50.00	5.16	5.16	0.37	9	9	3	1,355	556	-556
159+00	15900.00	50.00	5.09	5.09	0.00	9	9	0	1,364	556	-556
159+50	15950.00	50.00	4.85	4.85	0.02	9	9	0	1,373	556	-556
160+00	16000.00	50.00	5.54	5.54	0.00	10	10	0	1,383	556	-556
160+50	16050.00	50.00	6.30	6.30	0.21	11	11	0	1,394	556	-556
161+00	16100.00	50.00	7.69	7.69	0.00	13	13	0	1,407	556	-556
161+50	16150.00	50.00	7.99	7.99	0.01	15	15	0	1,422	556	-556
162+00	16200.00	50.00	0.00	0.00	0.00	7	7	0	1,429	556	-556
162+50	16250.00	50.00	0.00	0.00	0.00	0	0	0	1,429	556	-556
163+00	16300.00	50.00	0.00	0.00	0.00	0	0	0	1,429	556	-556
163+50	16350.00	50.00	7.30	7.30	0.00	7	7	0	1,436	556	-556
164+00	16400.00	50.00	4.79	4.79	0.00	11	11	0	1,447	556	-556
164+50	16450.00	50.00	4.13	4.13	0.39	8	8	0	1,455	556	-556
165+00	16500.00	50.00	4.10	4.10	2.94	8	8	3	1,463	560	-560
165+50	16550.00	50.00	5.17	5.17	3.94	9	9	6	1,472	568	-568
166+00	16600.00	50.00	4.33	4.33	4.59	9	9	8	1,481	578	-578
166+50	16650.00	50.00	5.28	5.28	1.77	9	9	6	1,490	585	-585
167+00	16700.00	50.00	3.84	3.84	0.64	8	8	2	1,498	588	-588
167+50	16750.00	50.00	3.69	3.69	1.88	7	7	2	1,505	590	-590
168+00	16800.00	50.00	3.89	3.89	4.19	7	7	6	1,512	598	-598
168+50	16850.00	50.00	4.37	4.37	0.65	8	8	4	1,520	603	-603
169+00	16900.00	50.00	4.43	4.43	0.23	8	8	1	1,528	604	-604
169+50	16950.00	50.00	4.76	4.76	0.06	9	9	0	1,537	604	-604
170+00	17000.00	50.00	4.10	4.10	0.17	8	8	0	1,545	604	-604
170+50	17050.00	50.00	3.94	3.94	0.37	7	7	0	1,552	604	-604
171+00	17100.00	50.00	4.46	4.46	1.18	8	8	1	1,560	605	-605
171+50	17150.00	50.00	4.50	4.50	1.15	8	8	2	1,568	608	-608

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

IH 39 - EARTHWORK SOUTH OF WISCONSIN RIVER - CONTINUED

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	
172+00	17200.00	50.00	4.39	4.39	0.92	8	8	2	1,576	610	-610
172+50	17250.00	50.00	4.68	4.68	0.45	8	8	1	1,584	611	-611
173+00	17300.00	50.00	4.28	4.28	0.48	8	8	1	1,592	613	-613
173+50	17350.00	50.00	4.32	4.32	0.75	8	8	1	1,600	614	-614
174+00	17400.00	50.00	4.69	4.69	0.59	8	8	1	1,608	615	-615
174+50	17450.00	50.00	5.27	5.27	0.01	9	9	1	1,617	616	-616
175+00	17500.00	50.00	4.66	4.66	0.12	9	9	0	1,626	616	-616
175+50	17550.00	50.00	4.66	4.66	0.14	9	9	0	1,635	616	-616
176+00	17600.00	50.00	4.58	4.58	0.08	9	9	0	1,644	616	-616
176+50	17650.00	50.00	4.22	4.22	0.06	8	8	0	1,652	616	-616
177+00	17700.00	50.00	4.16	4.16	0.05	8	8	0	1,660	616	-616
177+50	17750.00	50.00	4.19	4.19	2.36	8	8	2	1,668	619	-619
178+00	17800.00	50.00	3.99	3.99	2.51	8	8	5	1,676	625	-625
178+50	17850.00	50.00	3.89	3.89	0.59	7	7	3	1,683	629	-629
179+00	17900.00	50.00	4.01	4.01	0.33	7	7	1	1,690	630	-630
179+50	17950.00	50.00	4.17	4.17	1.11	8	8	1	1,698	631	-631
180+00	18000.00	50.00	3.73	3.73	4.89	7	7	6	1,705	639	-639
180+50	18050.00	50.00	4.73	4.73	0.84	8	8	5	1,713	645	-645
181+00	18100.00	50.00	3.67	3.67	0.91	8	8	2	1,721	648	-648
181+50	18150.00	50.00	3.88	3.88	1.09	7	7	2	1,728	650	-650
182+00	18200.00	50.00	4.23	4.23	0.95	8	8	2	1,736	653	-653
182+50	18250.00	50.00	4.03	4.03	3.45	8	8	4	1,744	658	-658
183+00	18300.00	50.00	3.76	3.76	3.61	7	7	7	1,751	666	-666
183+50	18350.00	50.00	3.44	3.44	4.70	7	7	8	1,758	676	-676
184+00	18400.00	50.00	3.31	3.31	4.66	6	6	9	1,764	688	-688
184+50	18450.00	50.00	3.85	3.85	0.84	7	7	5	1,771	694	-694
185+00	18500.00	50.00	4.45	4.45	0.12	8	8	1	1,779	695	-695
185+50	18550.00	50.00	4.88	4.88	0.22	9	9	0	1,788	695	-695
186+00	18600.00	50.00	5.34	5.34	0.42	9	9	1	1,797	696	-696
186+50	18650.00	50.00	0.00	0.00	0.00	5	5	0	1,802	696	-696
187+00	18700.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
187+50	18750.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
188+00	18800.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
188+50	18850.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
189+00	18900.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
189+50	18950.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
190+00	19000.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
190+50	19050.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
191+00	19100.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
191+50	19150.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
192+00	19200.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
192+50	19250.00	50.00	0.00	0.00	0.00	0	0	0	1,802	696	-696
193+00	19300.00	50.00	7.23	7.23	0.00	7	7	0	1,809	696	-696
193+50	19350.00	50.00	6.52	6.52	0.00	13	13	0	1,822	696	-696
194+00	19400.00	50.00	5.39	5.39	0.00	11	11	0	1,833	696	-696
194+50	19450.00	50.00	5.57	5.57	0.00	10	10	0	1,843	696	-696
195+00	19500.00	50.00	5.32	5.32	0.18	10	10	0	1,853	696	-696
195+50	19550.00	50.00	4.02	4.02	0.78	9	9	1	1,862	698	-698

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

IH 39 - EARTHWORK SOUTH OF WISCONSIN RIVER - CONTINUED												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	
196+00	19600.00	50.00	3.71	3.71	0.80	7	7	1	1,869	699	-699
196+50	19650.00	50.00	3.37	3.37	0.96	7	7	2	1,876	701	-701
197+00	19700.00	50.00	3.49	3.49	1.45	6	6	2	1,882	704	-704
197+50	19750.00	50.00	3.58	3.58	2.63	7	7	4	1,889	709	-709
198+00	19800.00	50.00	3.88	3.88	1.28	7	7	4	1,896	714	-714
198+50	19850.00	50.00	3.84	3.84	0.60	7	7	2	1,903	716	-716
199+00	19900.00	50.00	3.92	3.92	0.40	7	7	1	1,910	718	-718
199+50	19950.00	50.00	4.01	4.01	0.40	7	7	1	1,917	719	-719
200+00	20000.00	50.00	3.95	3.95	0.64	7	7	1	1,924	720	-720
200+50	20050.00	50.00	3.76	3.76	0.93	7	7	1	1,931	721	-721
201+00	20100.00	50.00	3.72	3.72	0.63	7	7	1	1,938	723	-723
201+50	20150.00	50.00	3.93	3.93	0.88	7	7	1	1,945	724	-724
202+00	20200.00	50.00	3.98	3.98	2.87	7	7	3	1,952	728	-728
202+50	20250.00	50.00	4.07	4.07	2.45	7	7	5	1,959	734	-734
203+00	20300.00	50.00	4.23	4.23	0.33	8	8	3	1,967	738	-738
203+50	20350.00	50.00	4.42	4.42	41.85	8	8	39	1,975	786	-786
204+00	20400.00	50.00	4.71	4.71	38.65	8	8	75	1,983	880	-880
204+50	20450.00	50.00	3.08	3.08	0.00	7	7	36	1,990	925	-925

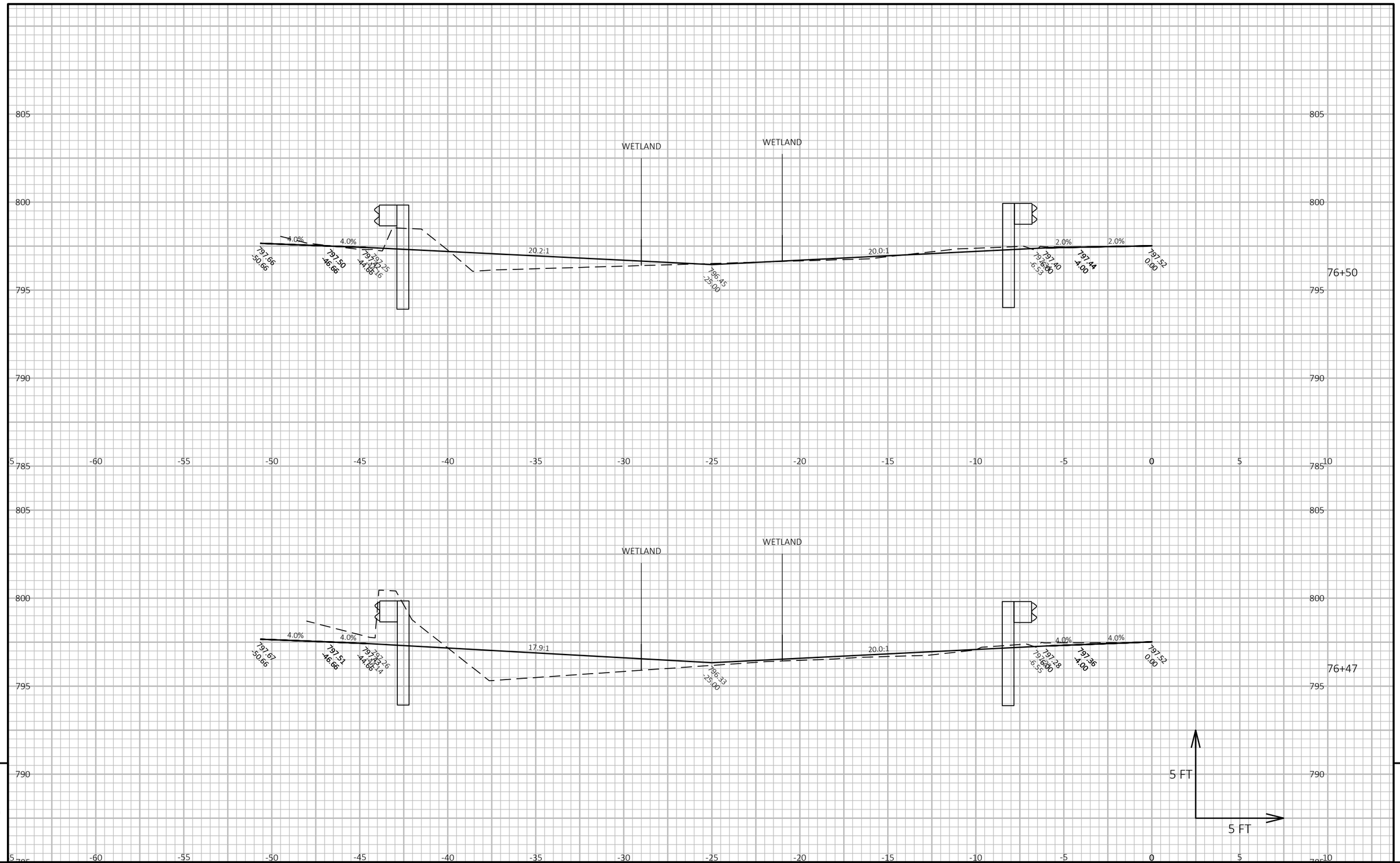
Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

IH 39 - EARTHWORK NORTH OF WISCONSIN RIVER												
			AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
STATION	REAL STATION	DISTANCE	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE
222+46.794	22246.79	0.00	7.76	7.76	18.43	0	0	0	1,990	925	-925
222+50	22250.00	3.21	7.30	7.30	5.28	1	1	1	1,991	926	-926
223+00	22300.00	50.00	20.06	20.06	0.29	25	25	5	2,016	933	-933
223+50	22350.00	50.00	14.57	14.57	0.22	32	32	0	2,048	933	-933
224+00	22400.00	50.00	9.38	9.38	0.56	22	22	1	2,070	934	-934
224+50	22450.00	50.00	1.23	1.23	2.86	10	10	3	2,080	938	-938
225+00	22500.00	50.00	2.61	2.61	3.00	4	4	5	2,084	944	-944
225+50	22550.00	50.00	0.00	0.00	0.00	2	2	3	2,086	948	-948
226+00	22600.00	50.00	4.25	4.25	0.37	4	4	0	2,090	948	-948
226+50	22650.00	50.00	4.29	4.29	0.22	8	8	1	2,098	949	-949
227+00	22700.00	50.00	4.55	4.55	0.91	8	8	1	2,106	950	-950
227+50	22750.00	50.00	4.63	4.63	0.25	8	8	1	2,114	951	-951
228+00	22800.00	50.00	4.10	4.10	0.39	8	8	1	2,122	953	-953
228+50	22850.00	50.00	3.74	3.74	0.55	7	7	1	2,129	954	-954
229+00	22900.00	50.00	3.83	3.83	0.39	7	7	1	2,136	955	-955
229+50	22950.00	50.00	3.83	3.83	1.04	7	7	1	2,143	956	-956
230+00	23000.00	50.00	3.90	3.90	0.94	7	7	2	2,150	959	-959
230+50	23050.00	50.00	3.32	3.32	0.71	7	7	2	2,157	961	-961
231+00	23100.00	50.00	3.27	3.27	1.93	6	6	2	2,163	964	-964
231+50	23150.00	50.00	3.11	3.11	4.57	6	6	6	2,169	971	-971
232+00	23200.00	50.00	3.53	3.53	3.13	6	6	7	2,175	980	-980
232+50	23250.00	50.00	3.95	3.95	1.50	7	7	4	2,182	985	-985
233+00	23300.00	50.00	3.18	3.18	2.65	7	7	4	2,189	990	-990
233+50	23350.00	50.00	3.15	3.15	3.02	6	6	5	2,195	996	-996
234+00	23400.00	50.00	3.23	3.23	2.97	6	6	6	2,201	1,004	-1,004
234+50	23450.00	50.00	3.46	3.46	2.54	6	6	5	2,207	1,010	-1,010
235+00	23500.00	50.00	3.64	3.64	1.72	7	7	4	2,214	1,015	-1,015
235+50	23550.00	50.00	3.39	3.39	1.60	7	7	3	2,221	1,019	-1,019
236+00	23600.00	50.00	3.52	3.52	2.43	6	6	4	2,227	1,024	-1,024
236+50	23650.00	50.00	3.25	3.25	4.19	6	6	6	2,233	1,031	-1,031
237+00	23700.00	50.00	3.13	3.13	2.58	6	6	6	2,239	1,039	-1,039
237+50	23750.00	50.00	3.35	3.35	1.95	6	6	4	2,245	1,044	-1,044
238+00	23800.00	50.00	3.59	3.59	1.07	6	6	3	2,251	1,048	-1,048
238+50	23850.00	50.00	3.96	3.96	1.00	7	7	2	2,258	1,050	-1,050
239+00	23900.00	50.00	3.44	3.44	2.69	7	7	3	2,265	1,054	-1,054
239+50	23950.00	50.00	3.12	3.12	2.96	6	6	5	2,271	1,060	-1,060
240+00	24000.00	50.00	3.28	3.28	1.99	6	6	5	2,277	1,066	-1,066
240+50	24050.00	50.00	3.14	3.14	2.27	6	6	4	2,283	1,071	-1,071
241+00	24100.00	50.00	3.47	3.47	1.66	6	6	4	2,289	1,076	-1,076
241+50	24150.00	50.00	2.99	2.99	1.43	6	6	3	2,295	1,080	-1,080
242+00	24200.00	50.00	3.62	3.62	0.52	6	6	2	2,301	1,083	-1,083
242+50	24250.00	50.00	4.33	4.33	0.56	7	7	1	2,308	1,084	-1,084
243+00	24300.00	50.00	3.58	3.58	1.33	7	7	2	2,315	1,086	-1,086
243+50	24350.00	50.00	3.52	3.52	0.96	7	7	2	2,322	1,089	-1,089
244+00	24400.00	50.00	3.59	3.59	0.85	7	7	2	2,329	1,091	-1,091
244+50	24450.00	50.00	3.81	3.81	2.08	7	7	3	2,336	1,095	-1,095
245+00	24500.00	50.00	3.56	3.56	3.02	7	7	5	2,343	1,101	-1,101
245+50	24550.00	50.00	3.96	3.96	1.38	7	7	4	2,350	1,106	-1,106

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

IH 39 - EARTHWORK NORTH OF WISCONSIN RIVER - CONTINUED												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	
246+00	24600.00	50.00	3.72	3.72	1.62	7	7	3	2,357	1,110	-1,110
246+50	24650.00	50.00	3.74	3.74	2.06	7	7	3	2,364	1,114	-1,114
247+00	24700.00	50.00	3.58	3.58	2.47	7	7	4	2,371	1,119	-1,119
247+50	24750.00	50.00	3.46	3.46	5.68	7	7	8	2,378	1,129	-1,129
248+00	24800.00	50.00	3.25	3.25	4.23	6	6	9	2,384	1,140	-1,140
248+50	24850.00	50.00	3.82	3.82	3.71	7	7	7	2,391	1,149	-1,149
249+00	24900.00	50.00	3.52	3.52	4.96	7	7	8	2,398	1,159	-1,159
249+50	24950.00	50.00	3.48	3.48	4.68	6	6	9	2,404	1,170	-1,170
250+00	25000.00	50.00	3.46	3.46	3.98	6	6	8	2,410	1,180	-1,180
250+50	25050.00	50.00	3.29	3.29	3.24	6	6	7	2,416	1,189	-1,189
251+00	25100.00	50.00	3.73	3.73	1.24	6	6	4	2,422	1,194	-1,194
251+50	25150.00	50.00	2.05	2.05	2.41	5	5	3	2,427	1,198	-1,198
252+00	25200.00	50.00	3.53	3.53	1.02	5	5	3	2,432	1,201	-1,201
252+50	25250.00	50.00	2.03	2.03	2.79	5	5	4	2,437	1,206	-1,206
253+00	25300.00	50.00	3.66	3.66	2.15	5	5	5	2,442	1,213	-1,213
253+50	25350.00	50.00	2.32	2.32	1.57	6	6	3	2,448	1,216	-1,216
254+00	25400.00	50.00	3.48	3.48	1.15	5	5	3	2,453	1,220	-1,220
254+50	25450.00	50.00	2.02	2.02	3.73	5	5	5	2,458	1,226	-1,226
255+00	25500.00	50.00	3.58	3.58	3.91	5	5	7	2,463	1,235	-1,235
255+50	25550.00	50.00	2.63	2.63	3.17	6	6	7	2,469	1,244	-1,244
256+00	25600.00	50.00	3.84	3.84	2.01	6	6	5	2,475	1,250	-1,250
256+50	25650.00	50.00	3.03	3.03	2.18	6	6	4	2,481	1,255	-1,255
257+00	25700.00	50.00	3.79	3.79	1.84	6	6	4	2,487	1,260	-1,260
257+50	25750.00	50.00	2.84	2.84	5.18	6	6	6	2,493	1,268	-1,268
258+00	25800.00	50.00	3.49	3.49	4.91	6	6	9	2,499	1,279	-1,279
258+50	25850.00	50.00	3.27	3.27	2.34	6	6	7	2,505	1,288	-1,288
259+00	25900.00	50.00	3.70	3.70	1.42	6	6	3	2,511	1,291	-1,291
259+50	25950.00	50.00	4.03	4.03	1.28	7	7	3	2,518	1,295	-1,295
260+00	26000.00	50.00	4.97	4.97	0.86	8	8	2	2,526	1,298	-1,298
260+50	26050.00	50.00	0.63	0.63	0.00	5	5	1	2,531	1,299	-1,299

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

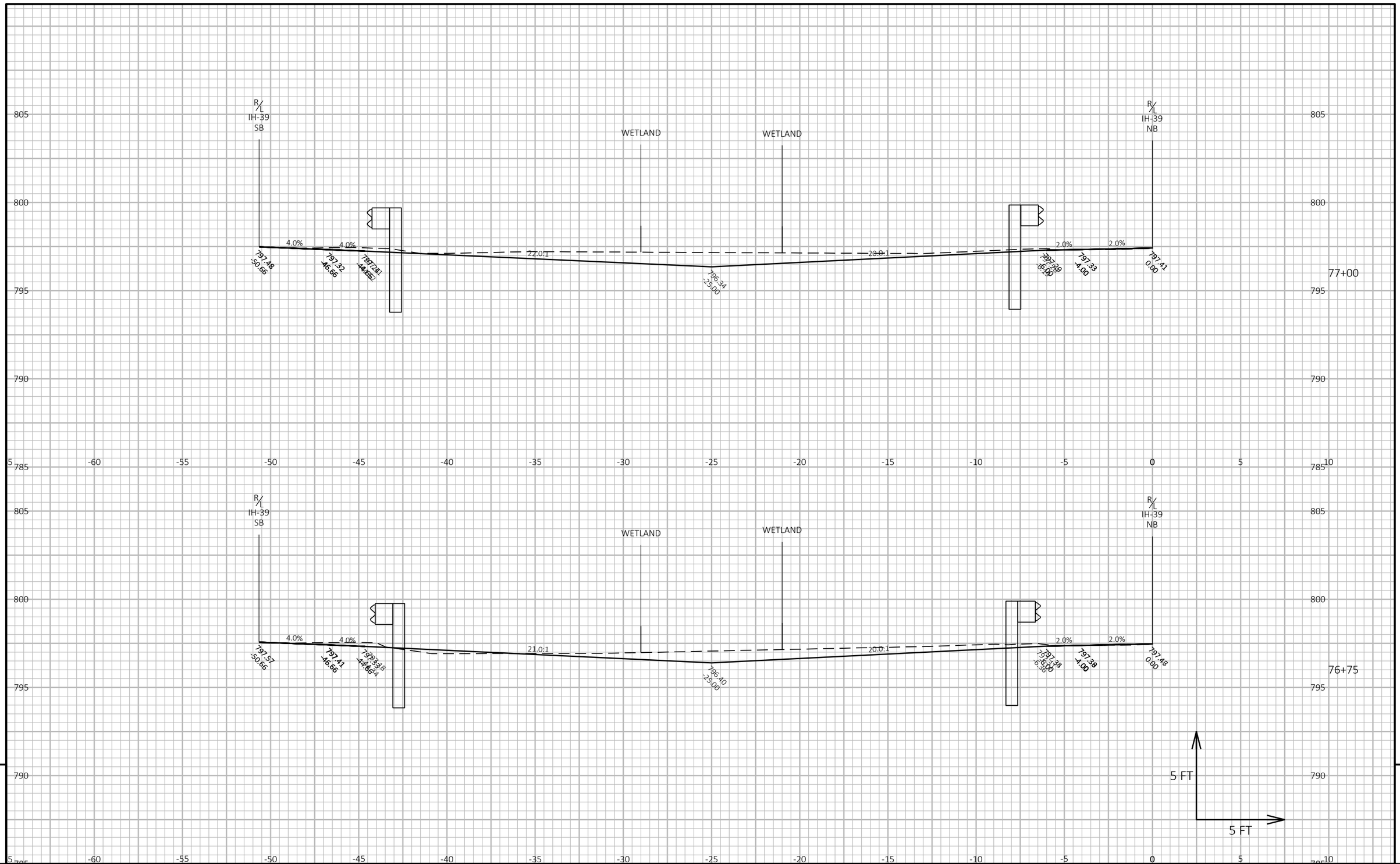


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF BARABOO RIVER	SHEET 123 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 200

PLOT DATE : 1/12/2021 4:54 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

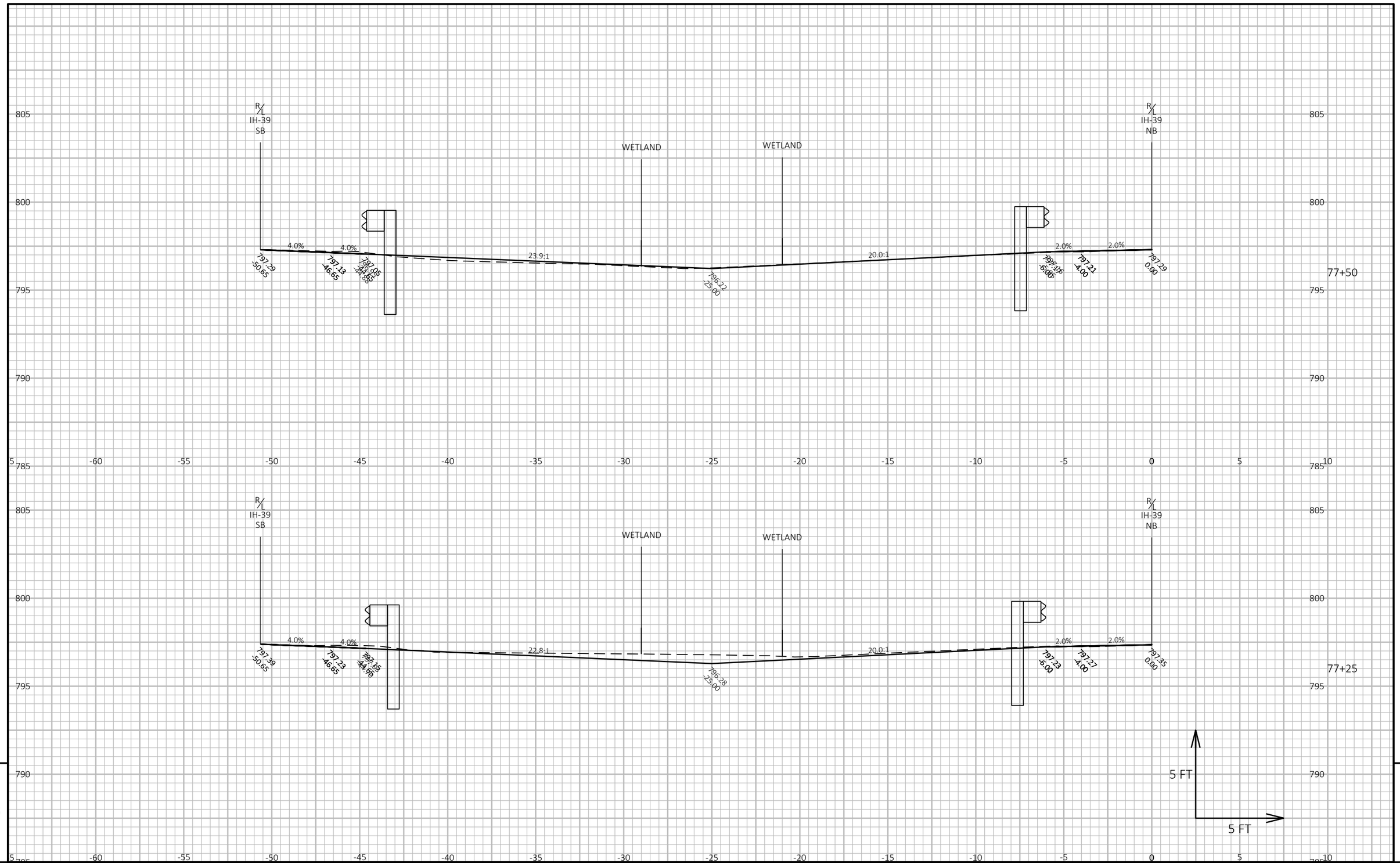


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF BARABOO RIVER	SHEET 124	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 201

PLOT DATE : 1/12/2021 4:55 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

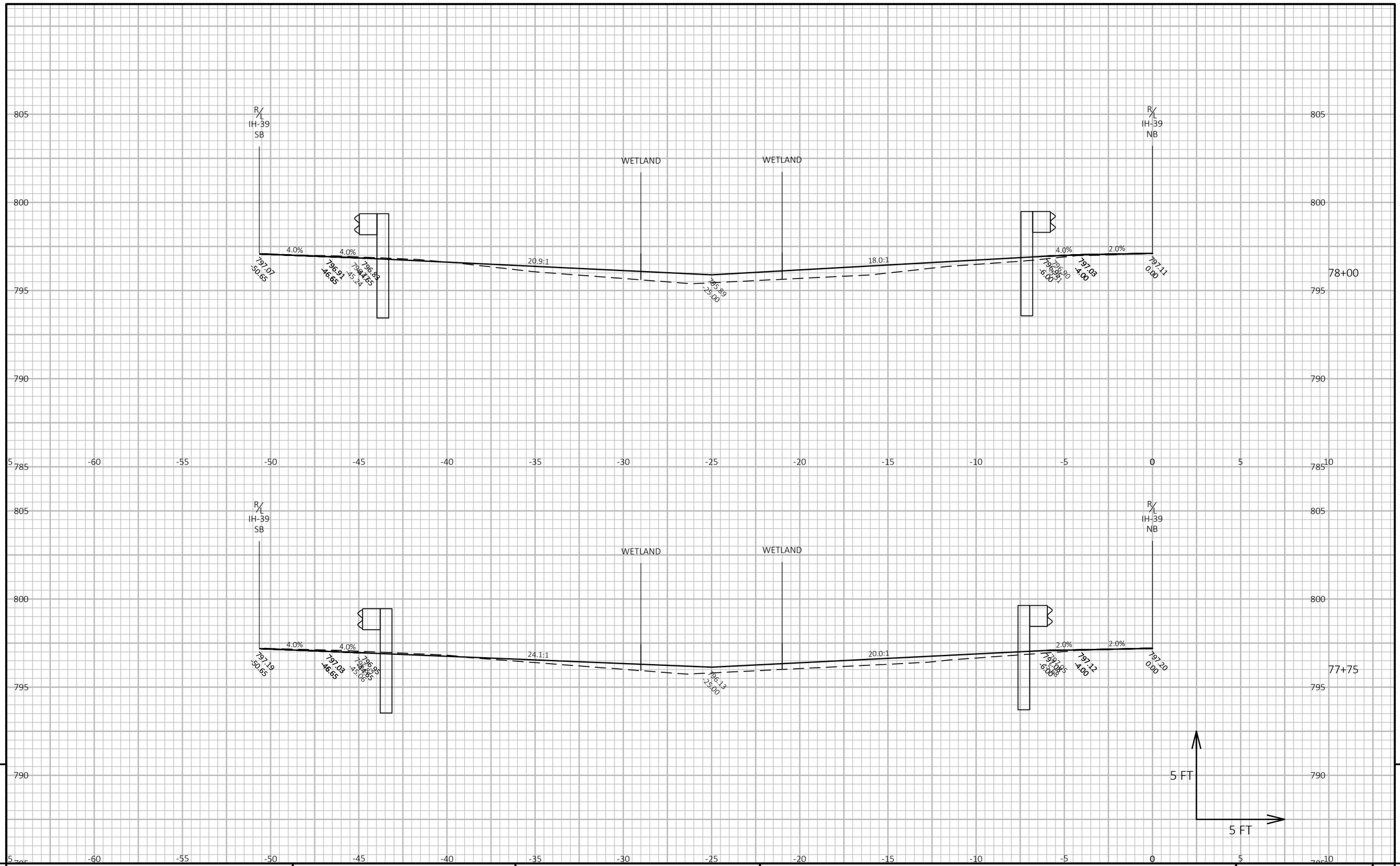


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF BARABOO RIVER	SHEET 125	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 202

PLOT DATE : 1/12/2021 4:56 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

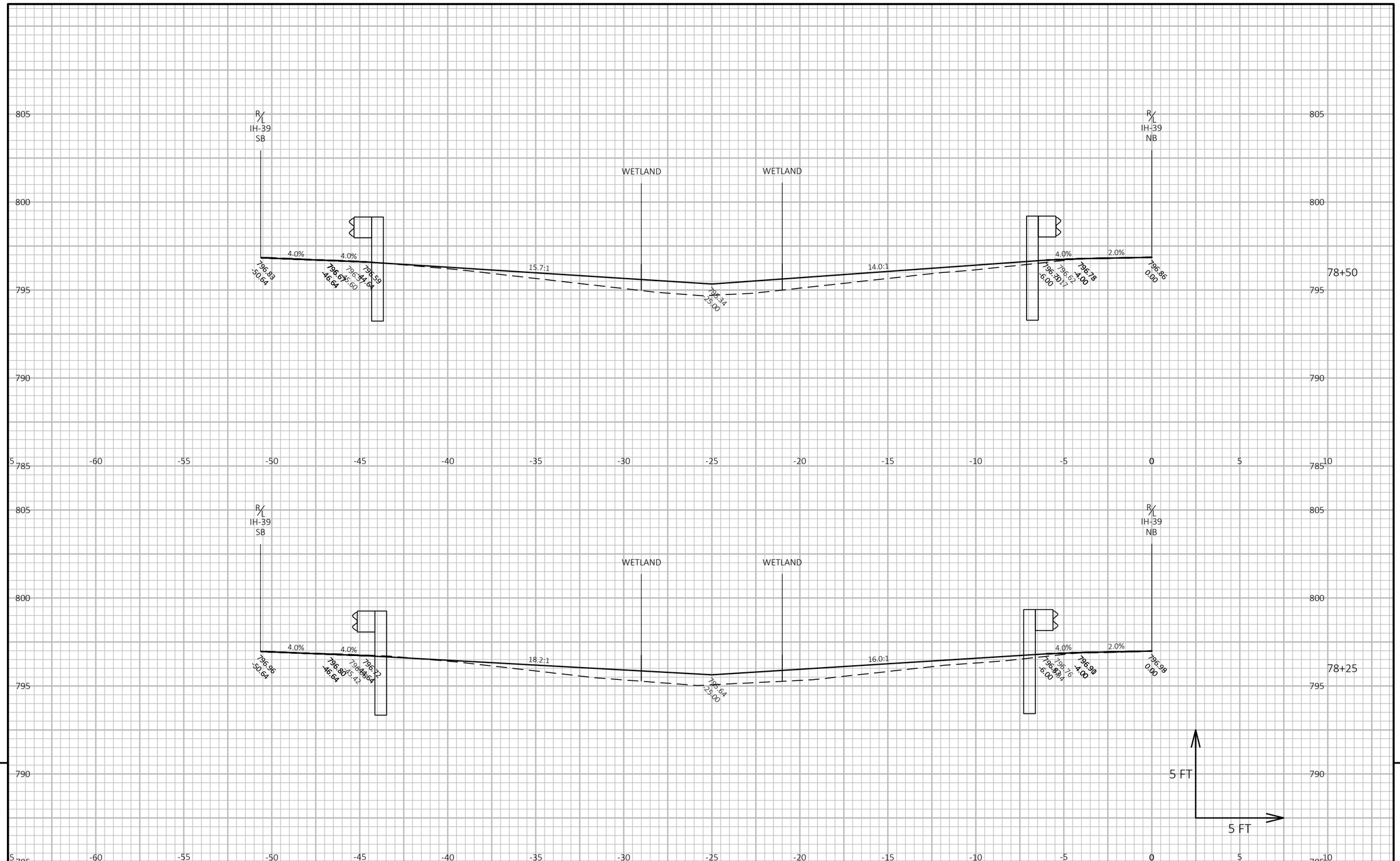


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF BARABOO RIVER	SHEET 126	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 203

PLOT DATE : 1/12/2021 4:56 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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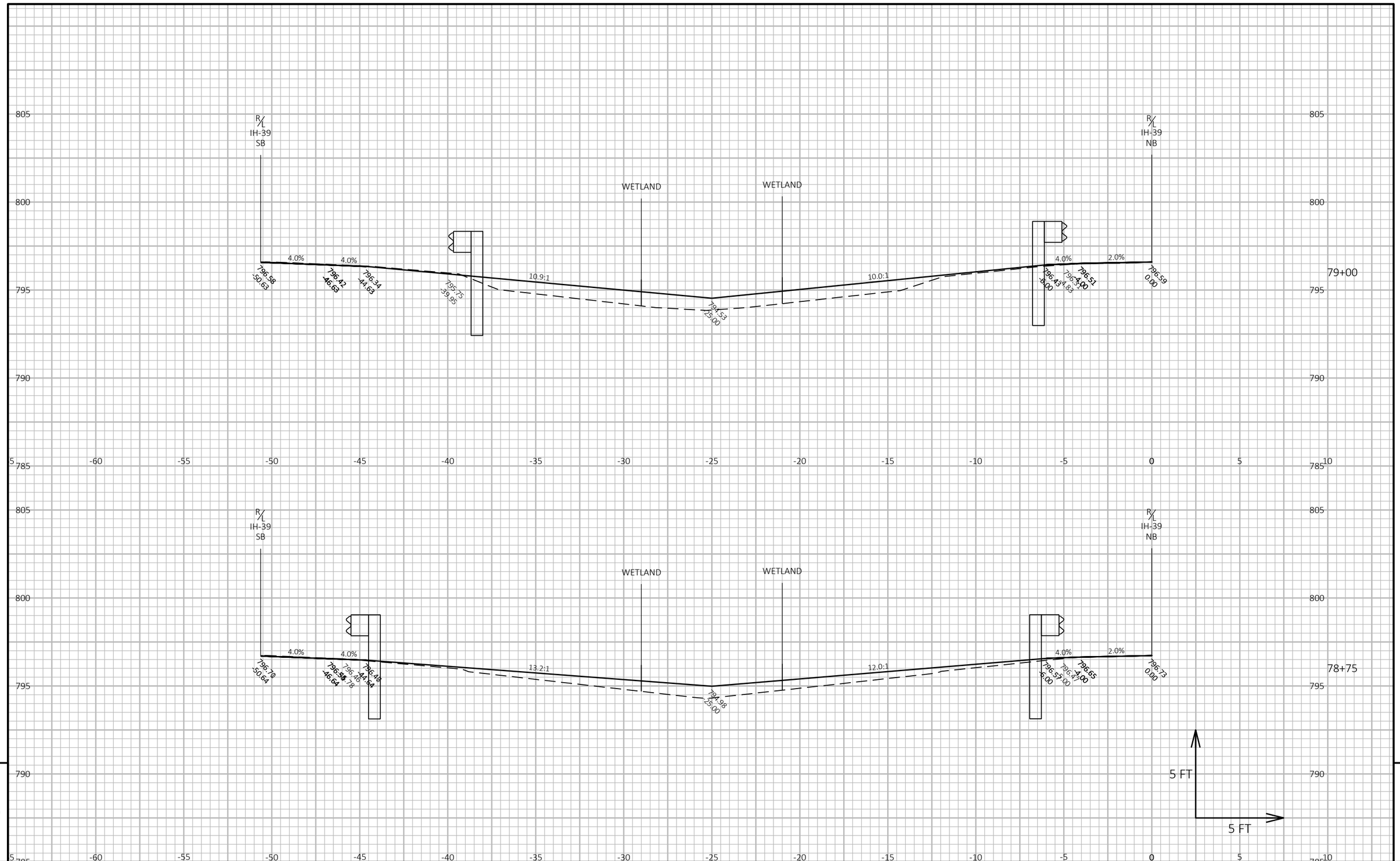
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF BARABOO RIVER	SHEET 127	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 204

PLOT DATE : 1/12/2021 4:57 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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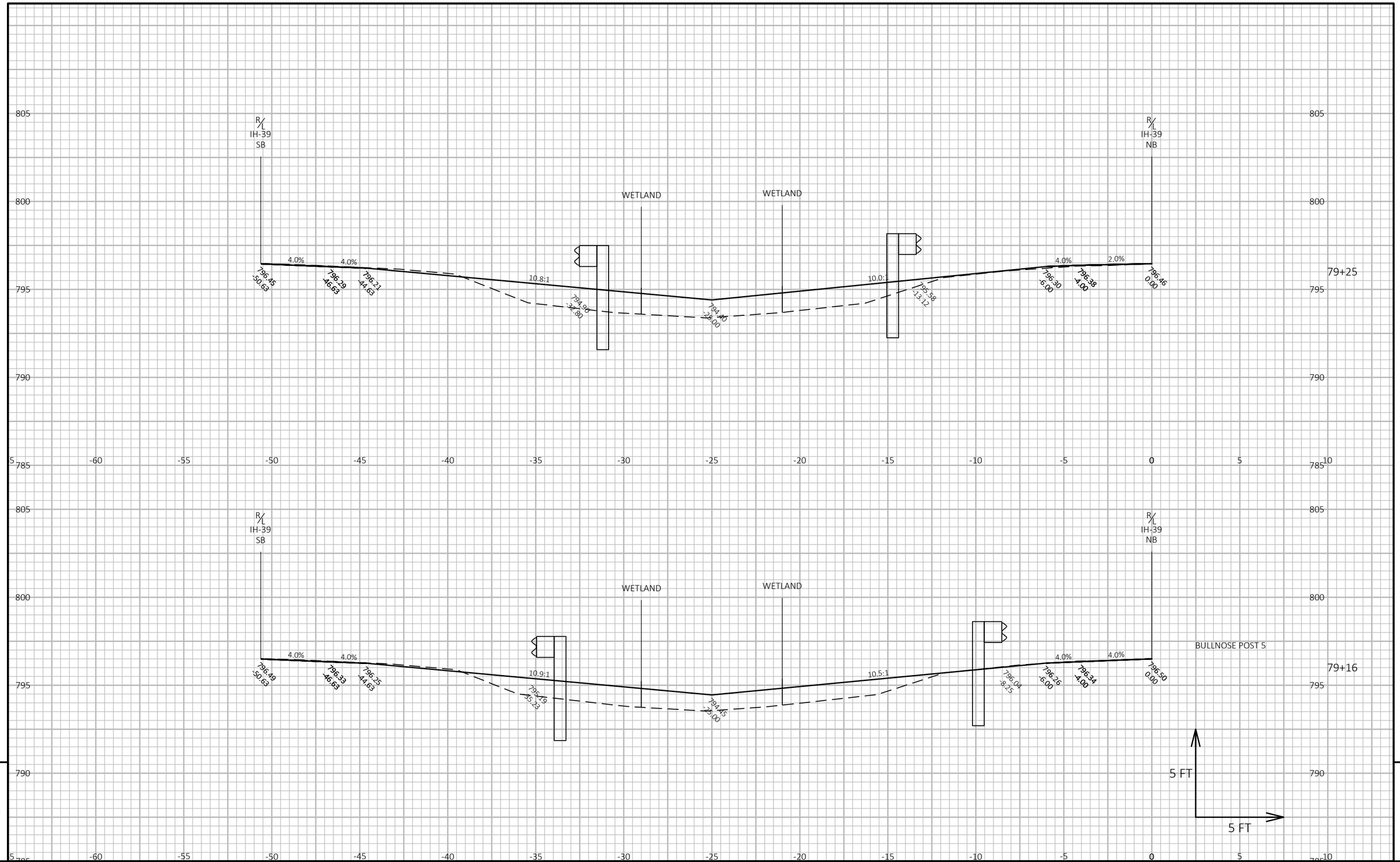
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF BARABOO RIVER	SHEET 128	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 205

PLOT DATE : 1/12/2021 4:58 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

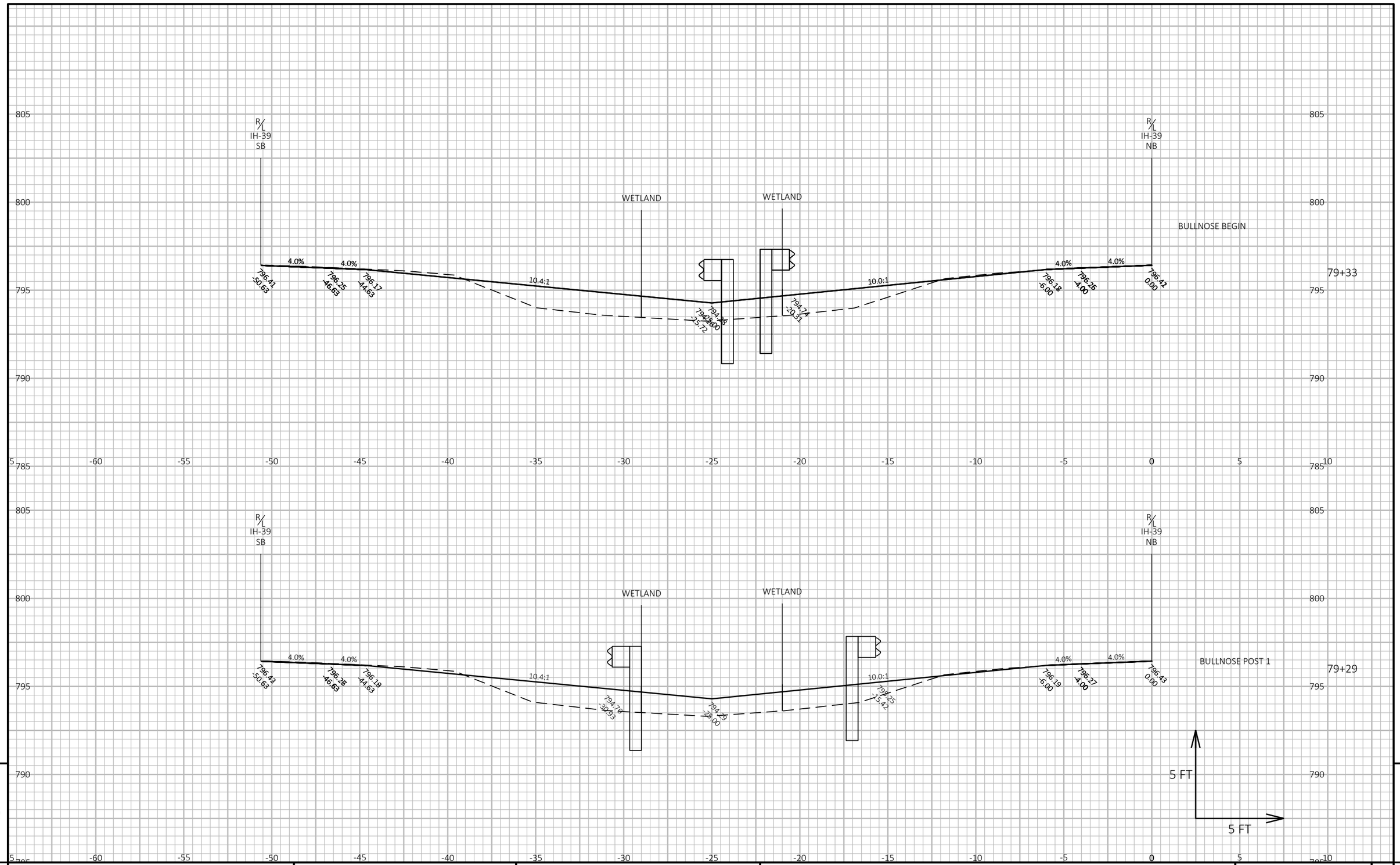


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF BARABOO RIVER	SHEET 129	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 206

PLOT DATE : 1/12/2021 4:59 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

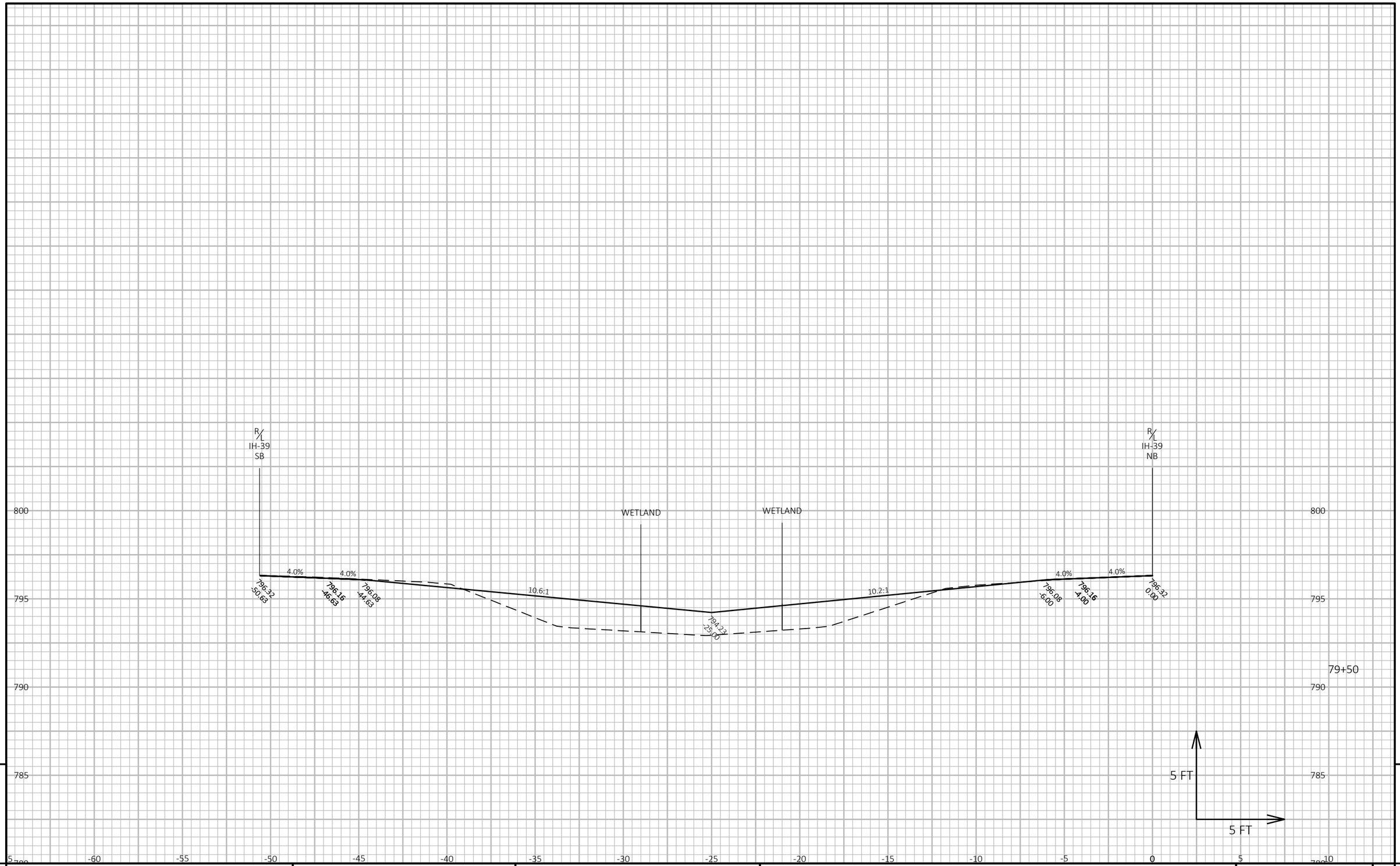


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF BARABOO RIVER	SHEET 130 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 207

PLOT DATE : 1/12/2021 5:00 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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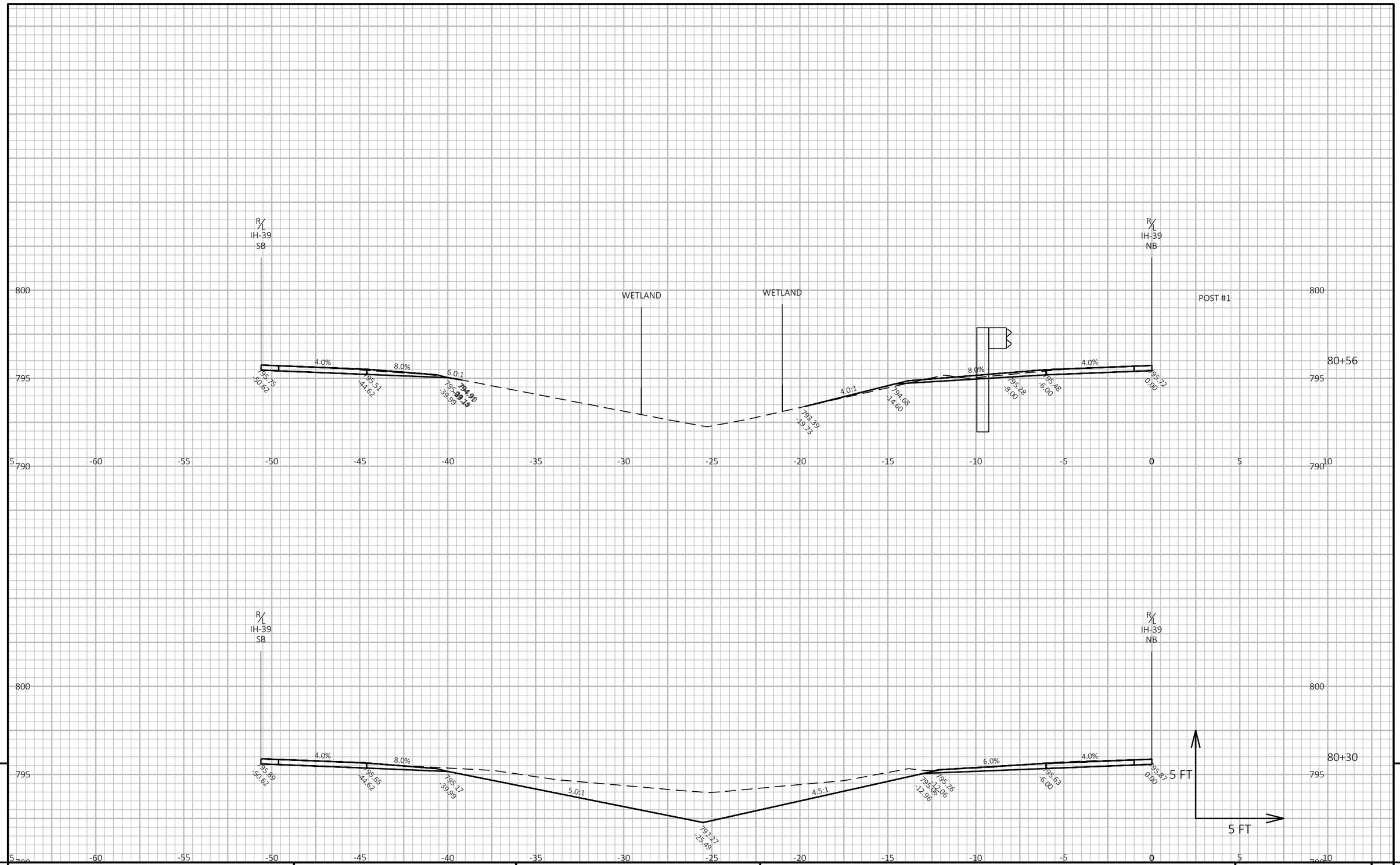
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF BARABOO RIVER	SHEET 131	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 208

PLOT DATE : 1/12/2021 5:00 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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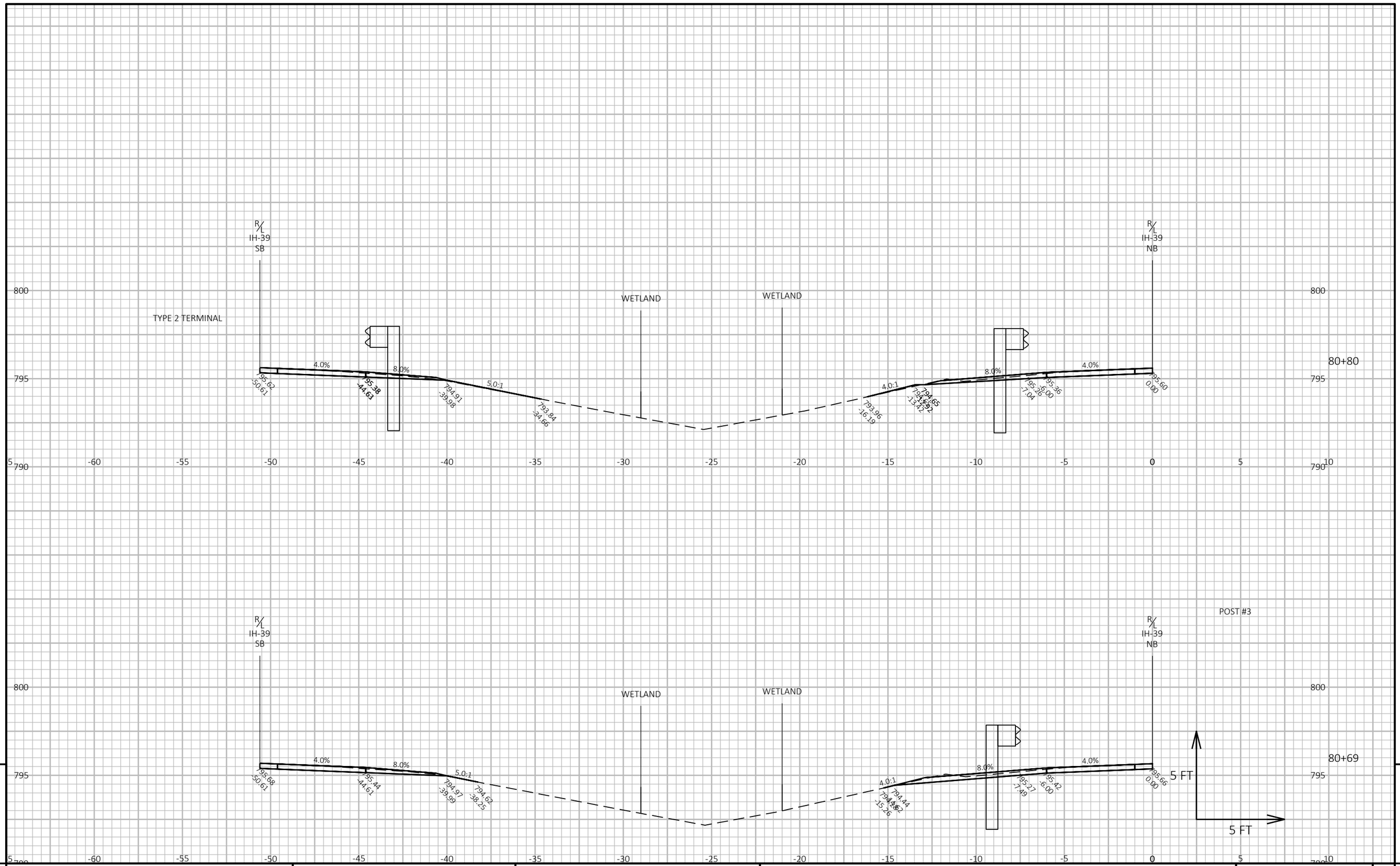
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 132	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 001

PLOT DATE : 1/12/2021 5:01 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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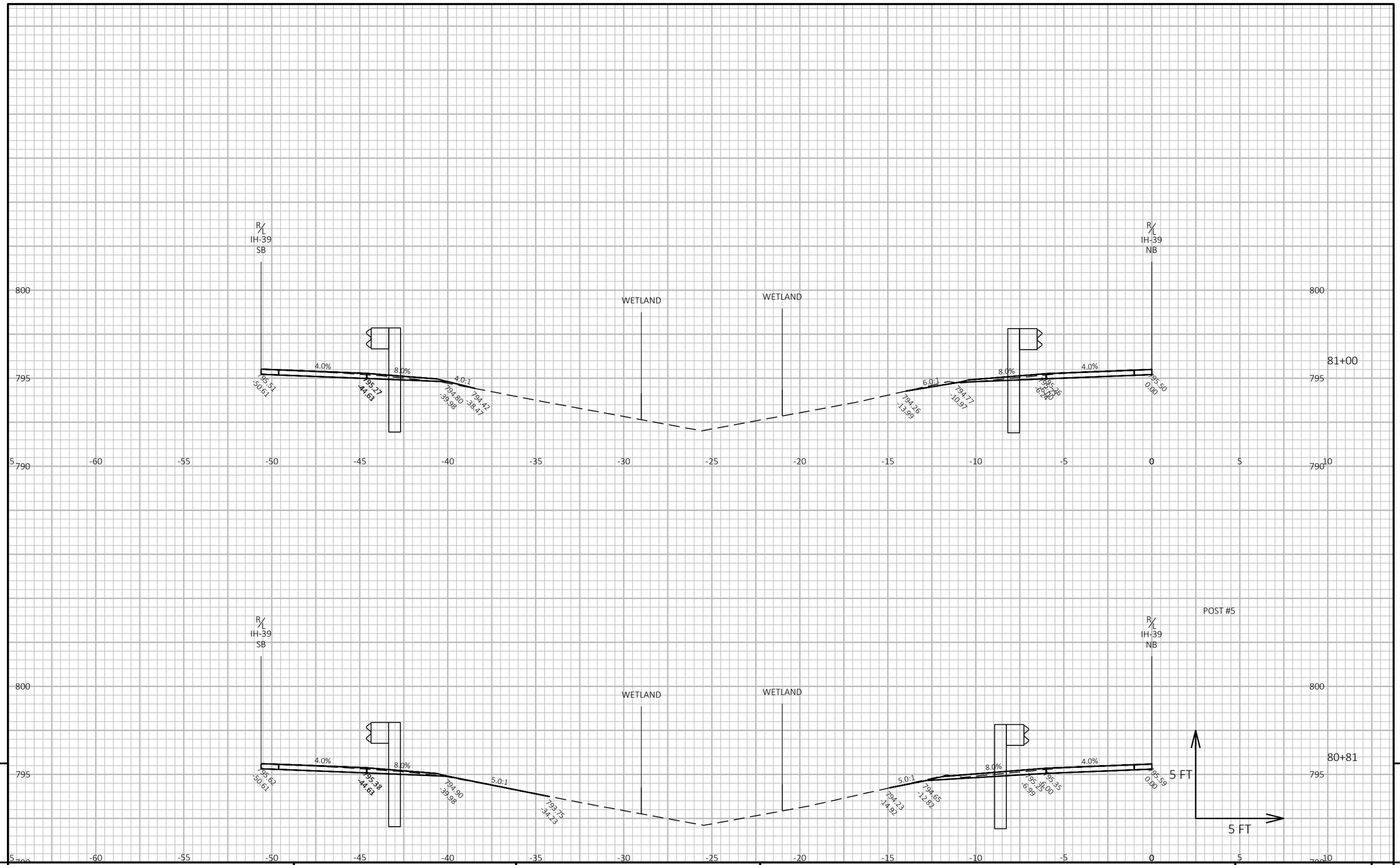
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 133	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 002

PLOT DATE : 1/12/2021 5:02 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

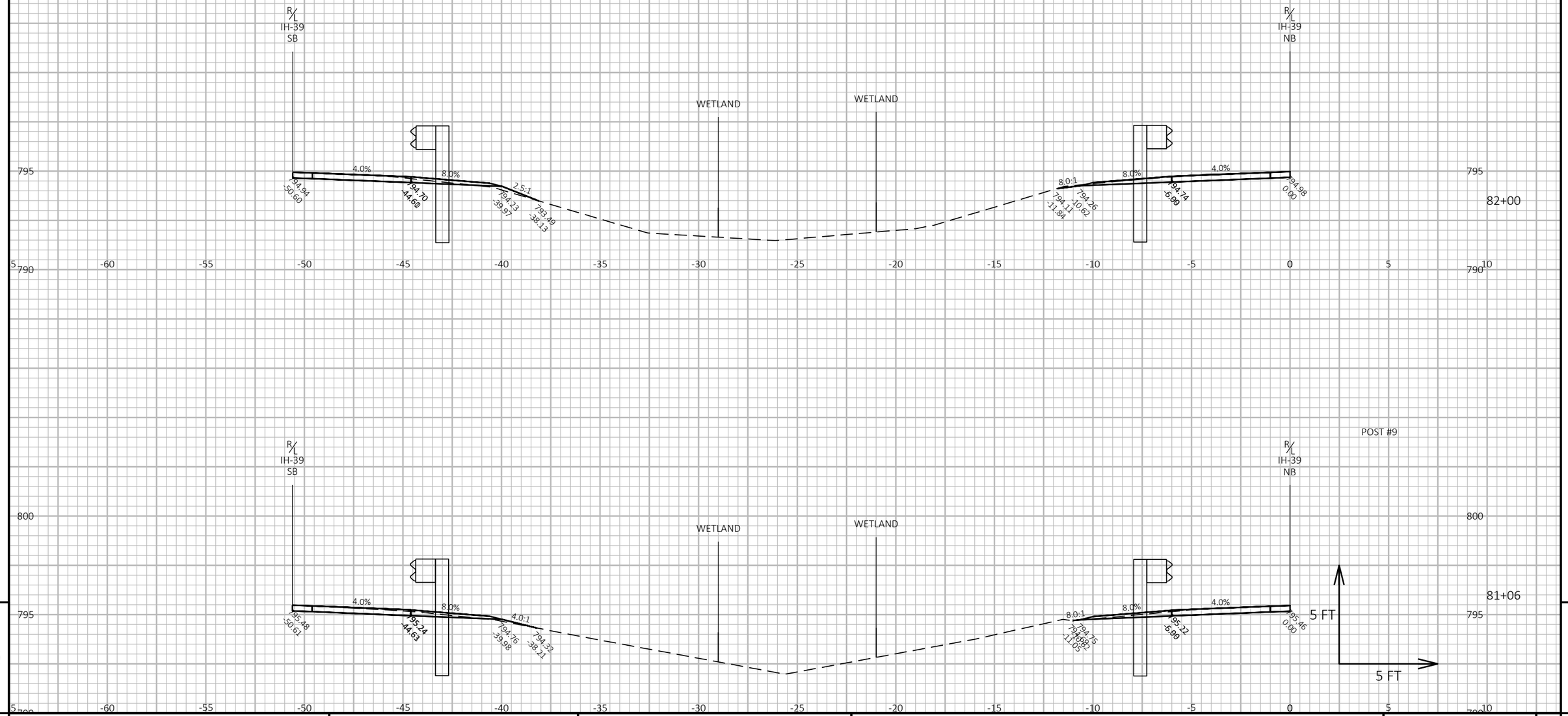


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 134	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 003

PLOT DATE : 1/12/2021 5:03 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



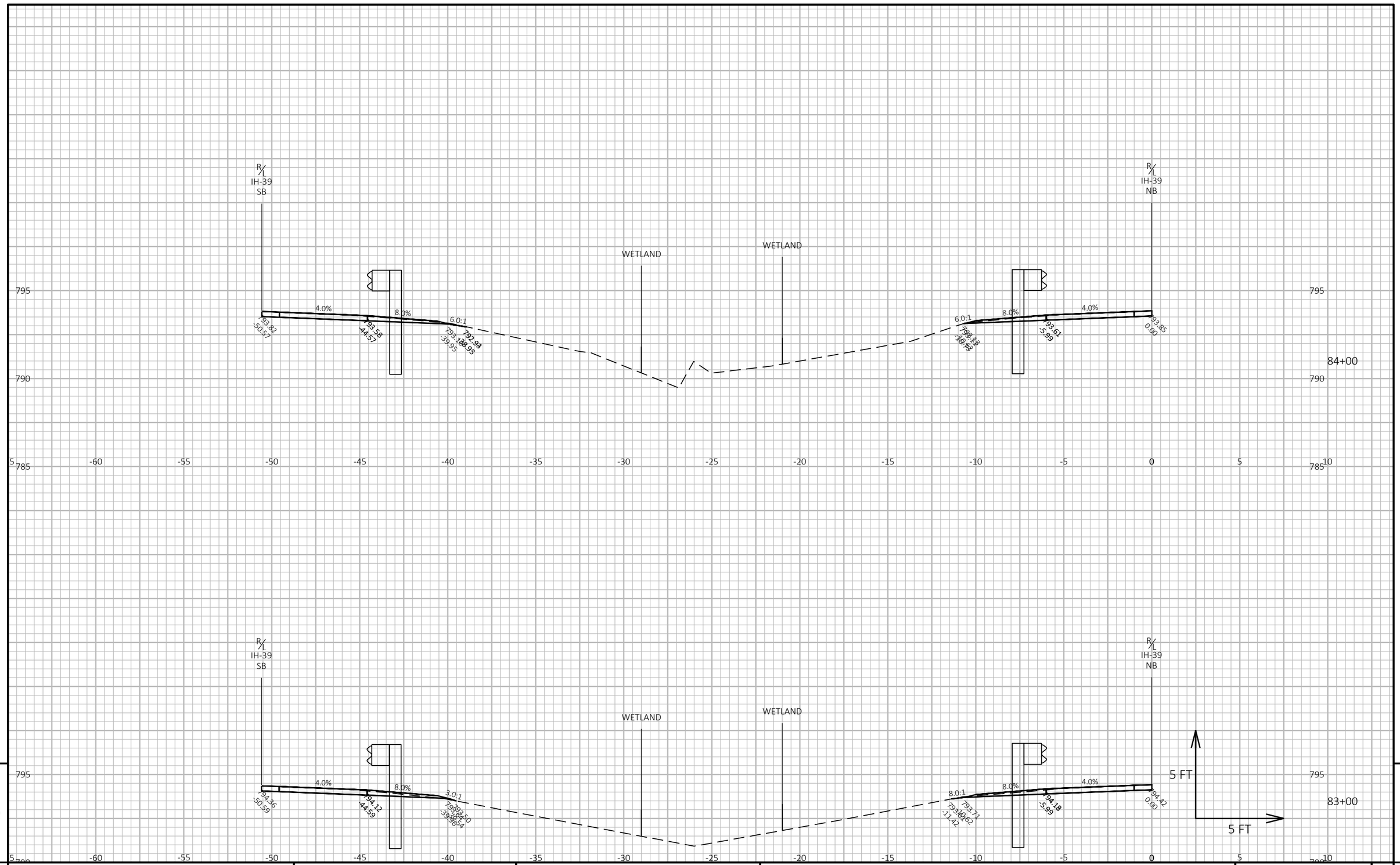
9 9

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 135	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 004

PLOT DATE : 1/12/2021 5:04 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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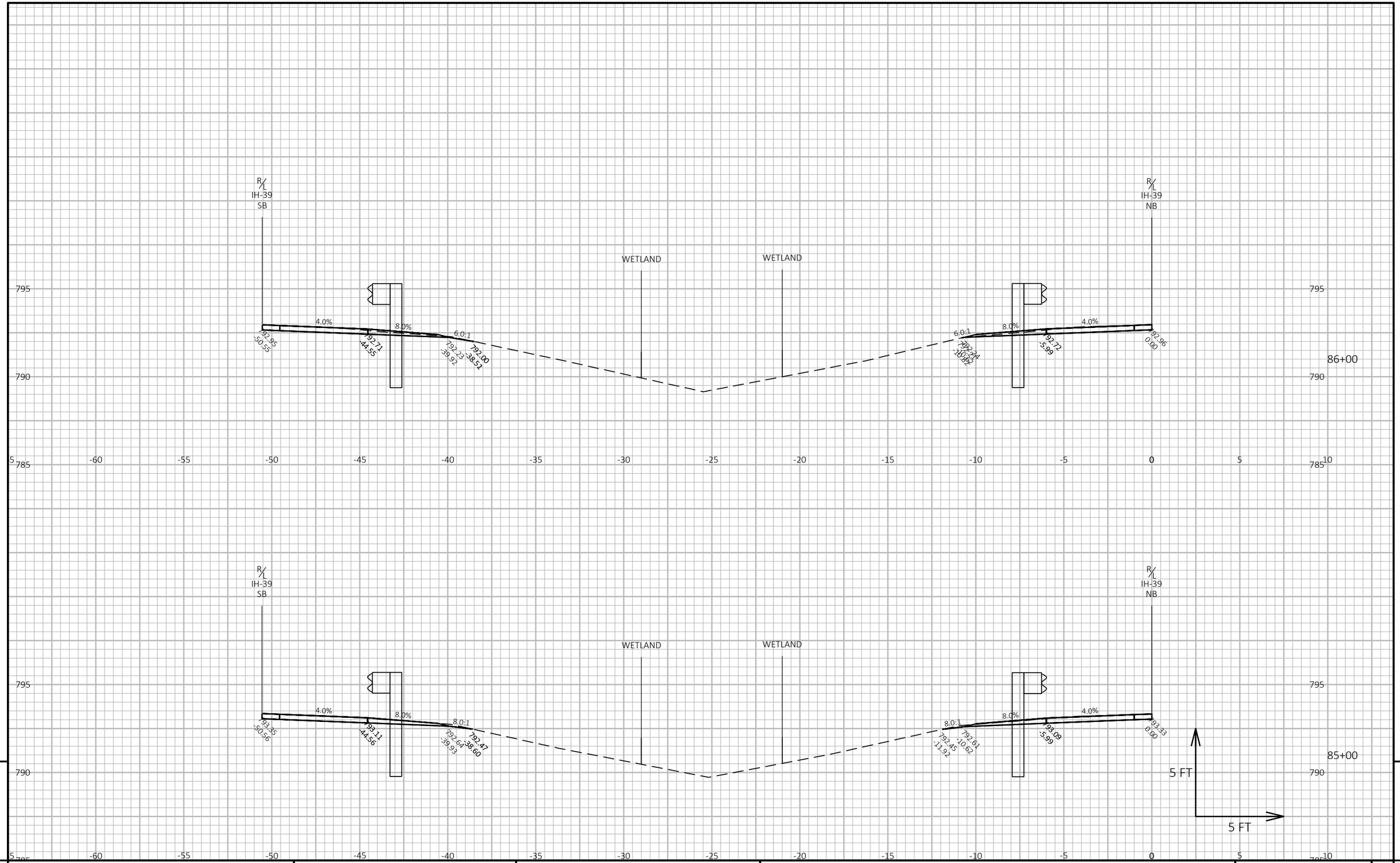
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 136	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 005

PLOT DATE : 1/12/2021 5:04 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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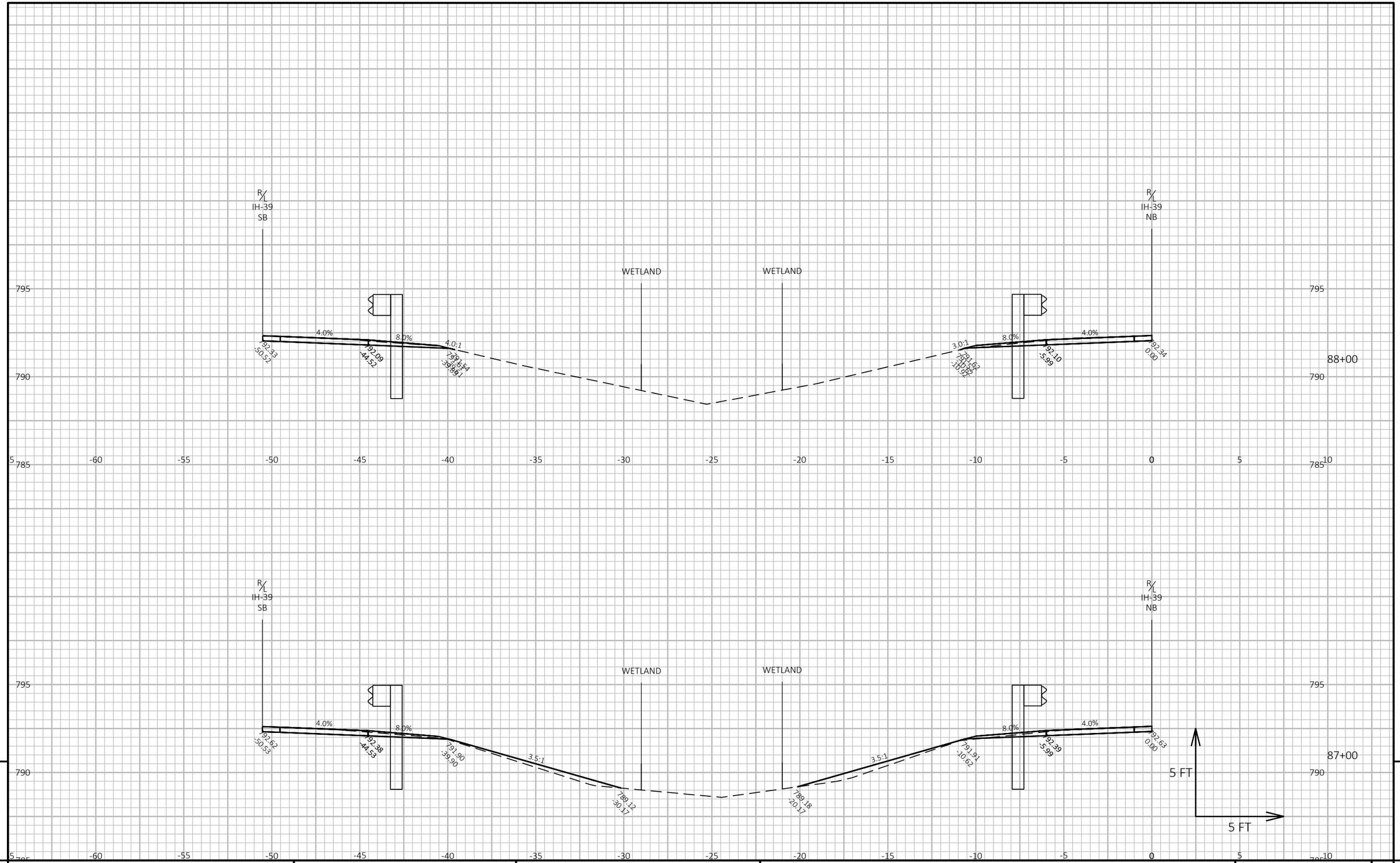
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 137	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 006

PLOT DATE : 1/12/2021 5:05 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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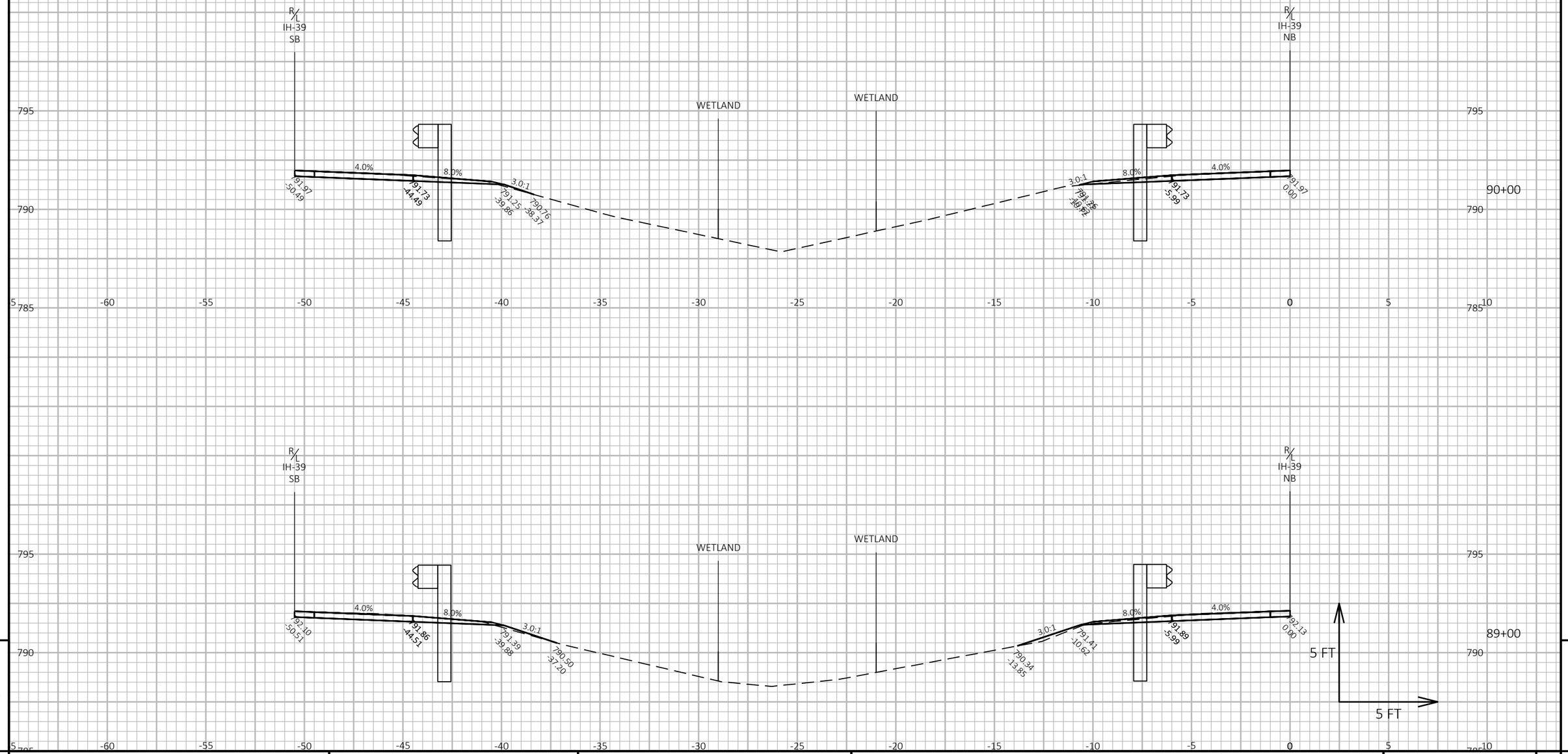
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 138	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 007

PLOT DATE : 1/12/2021 5:06 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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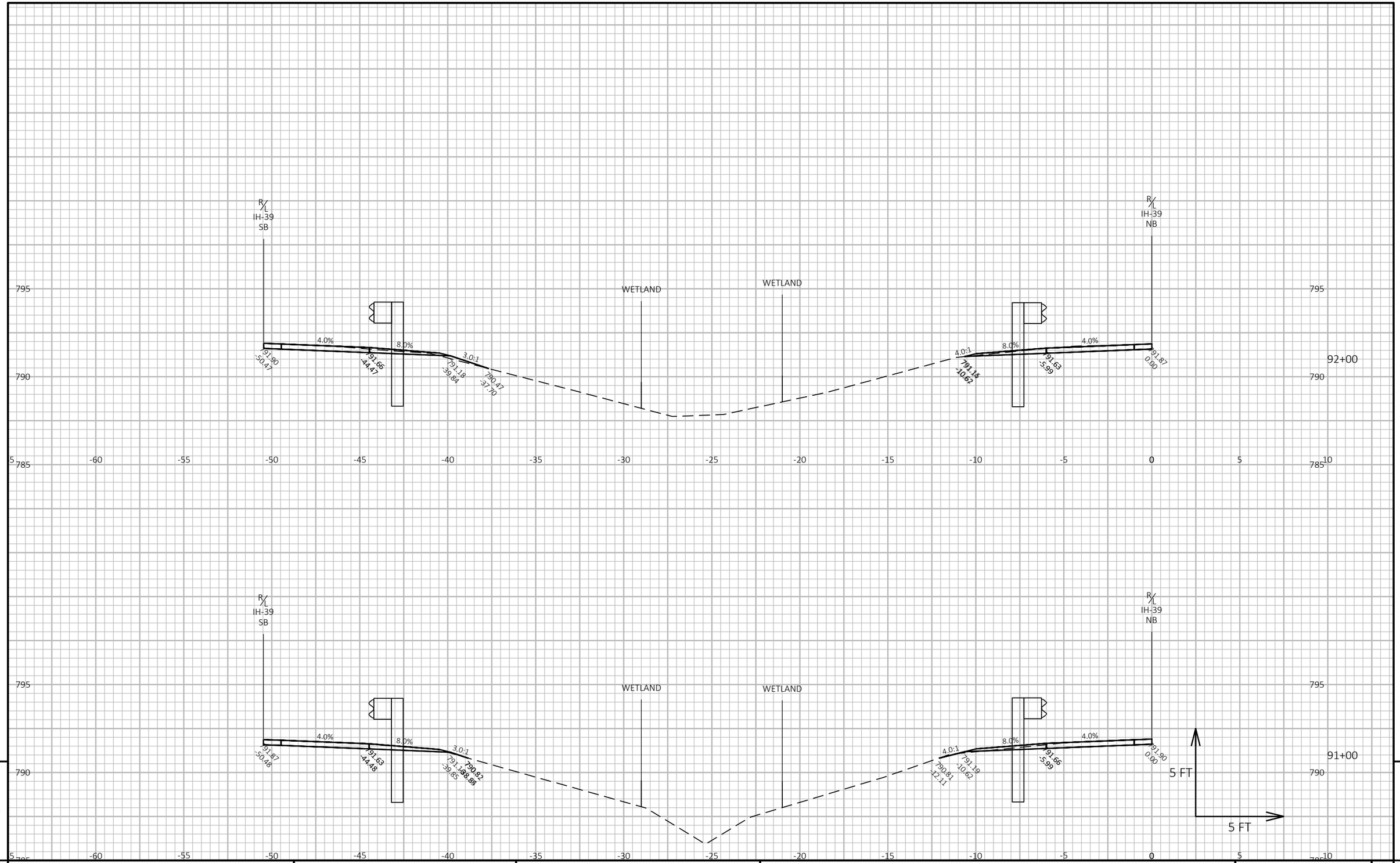
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 139	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 008

PLOT DATE : 1/12/2021 5:07 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

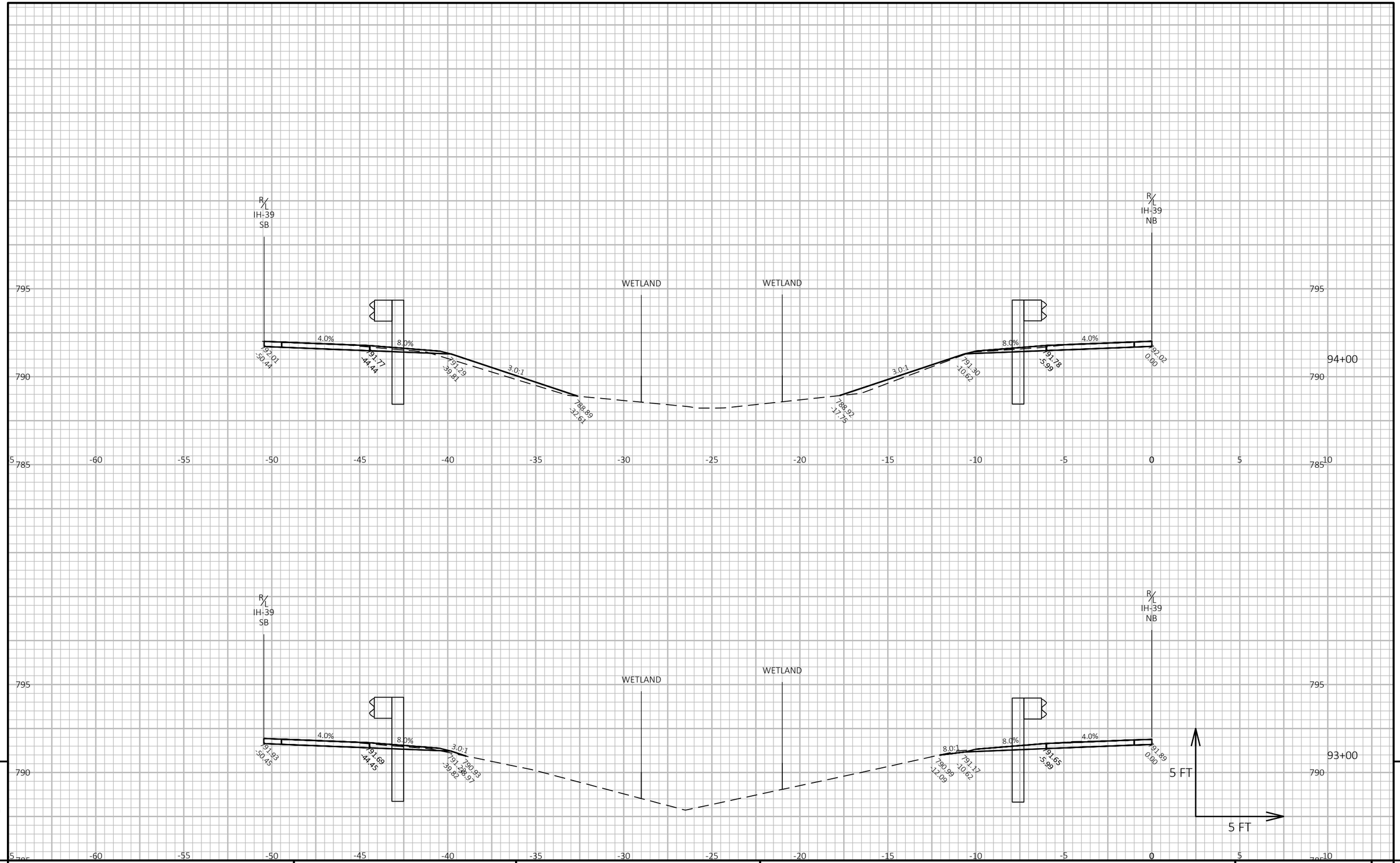


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 140	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 009

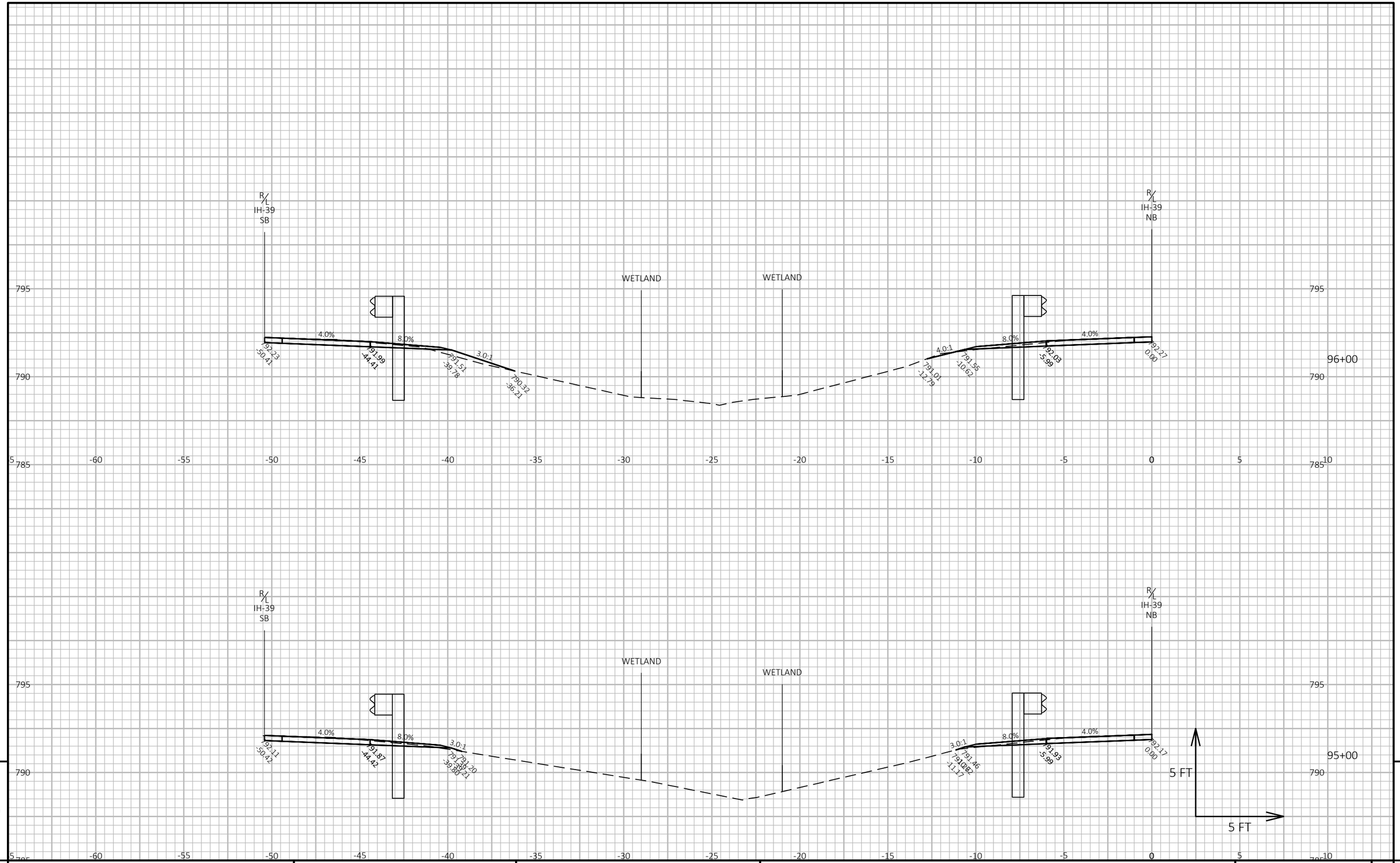
PLOT DATE : 1/12/2021 5:08 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 141	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 010
PLOT DATE : 1/12/2021 5:08 PM
PLOT BY : WATT, TIMOTHY
PLOT NAME :
PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.
WISDOT/CADDS SHEET 49



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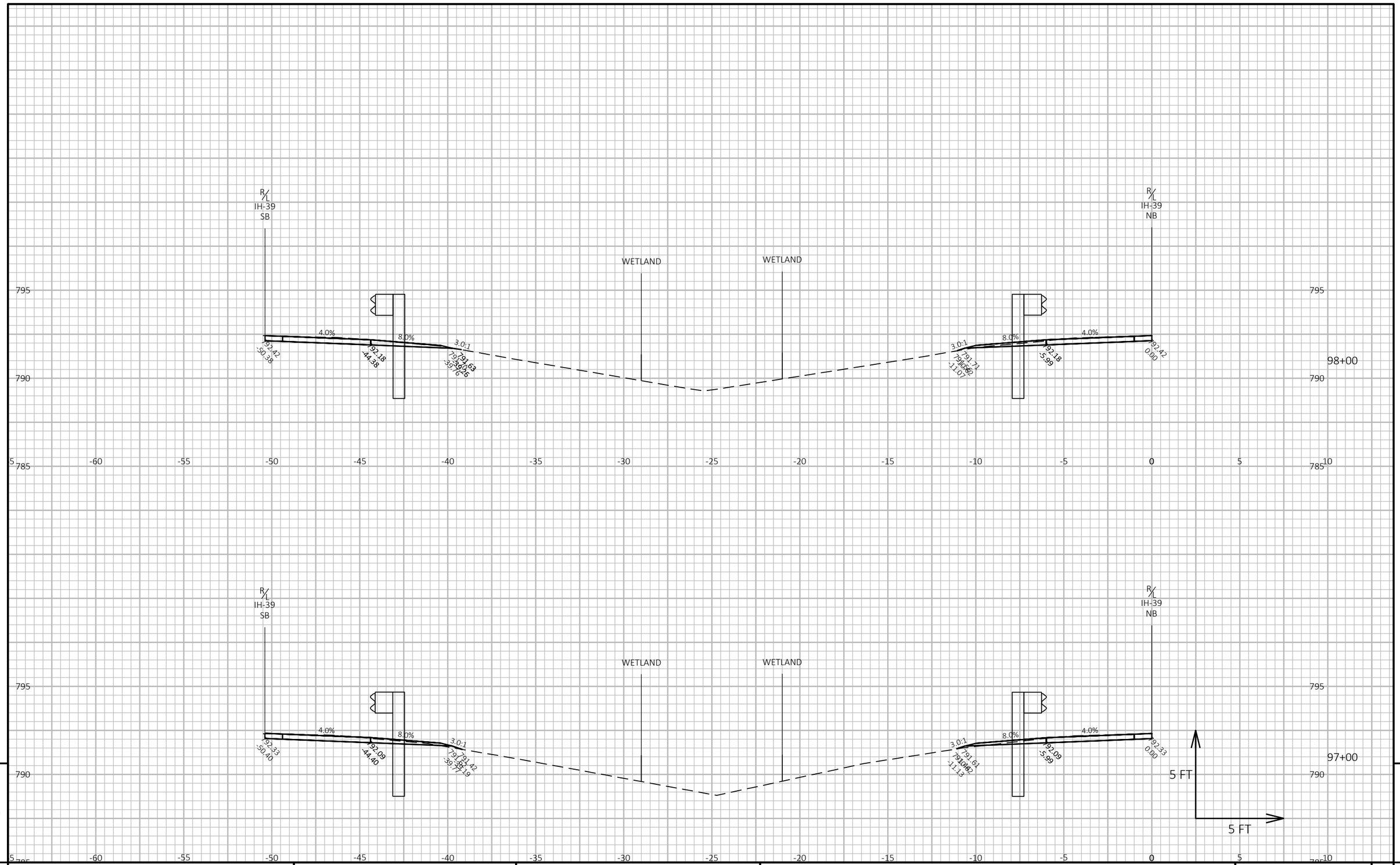
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 142	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 011

PLOT DATE : 1/12/2021 5:09 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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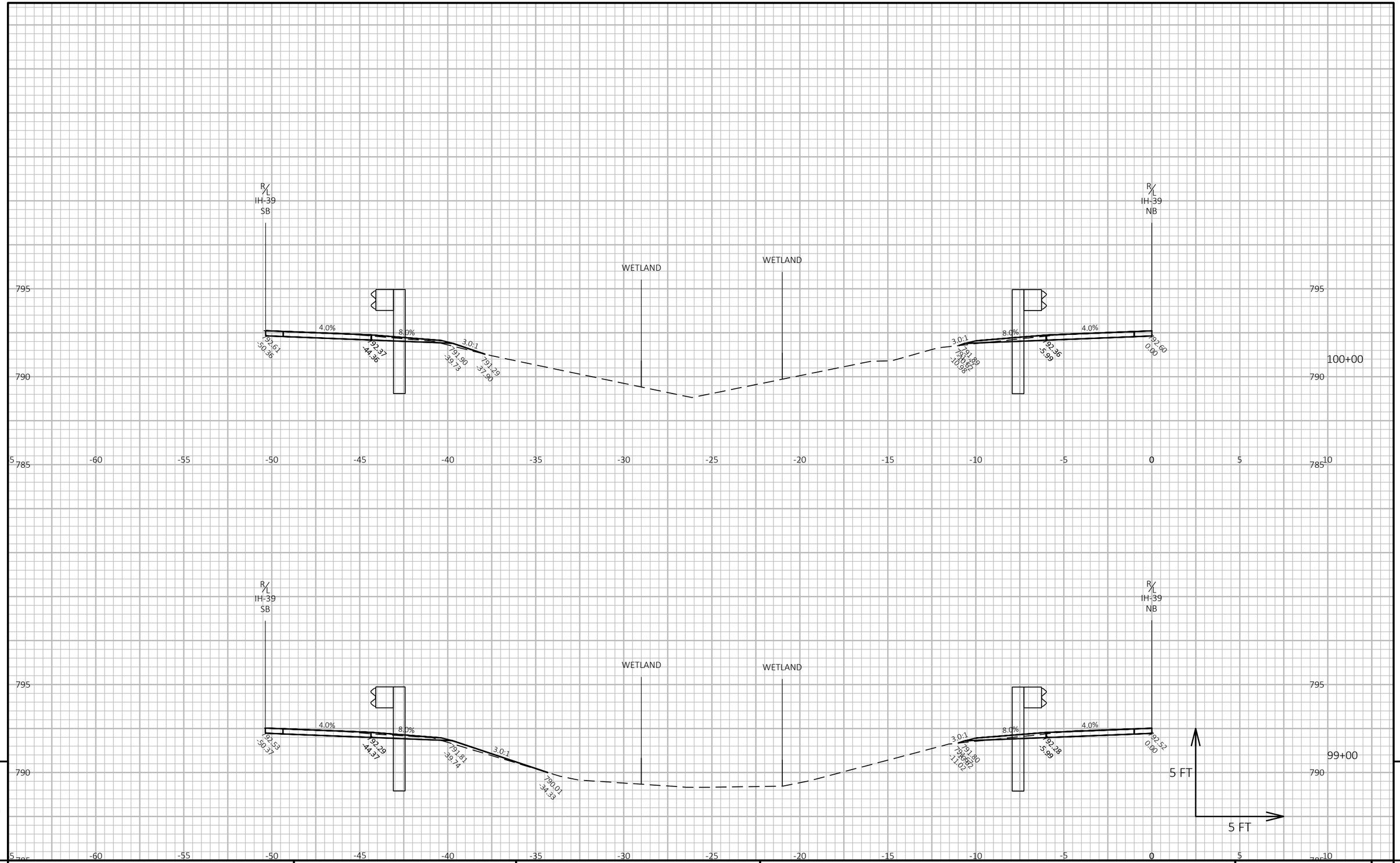
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 143	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 012

PLOT DATE : 1/12/2021 5:10 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

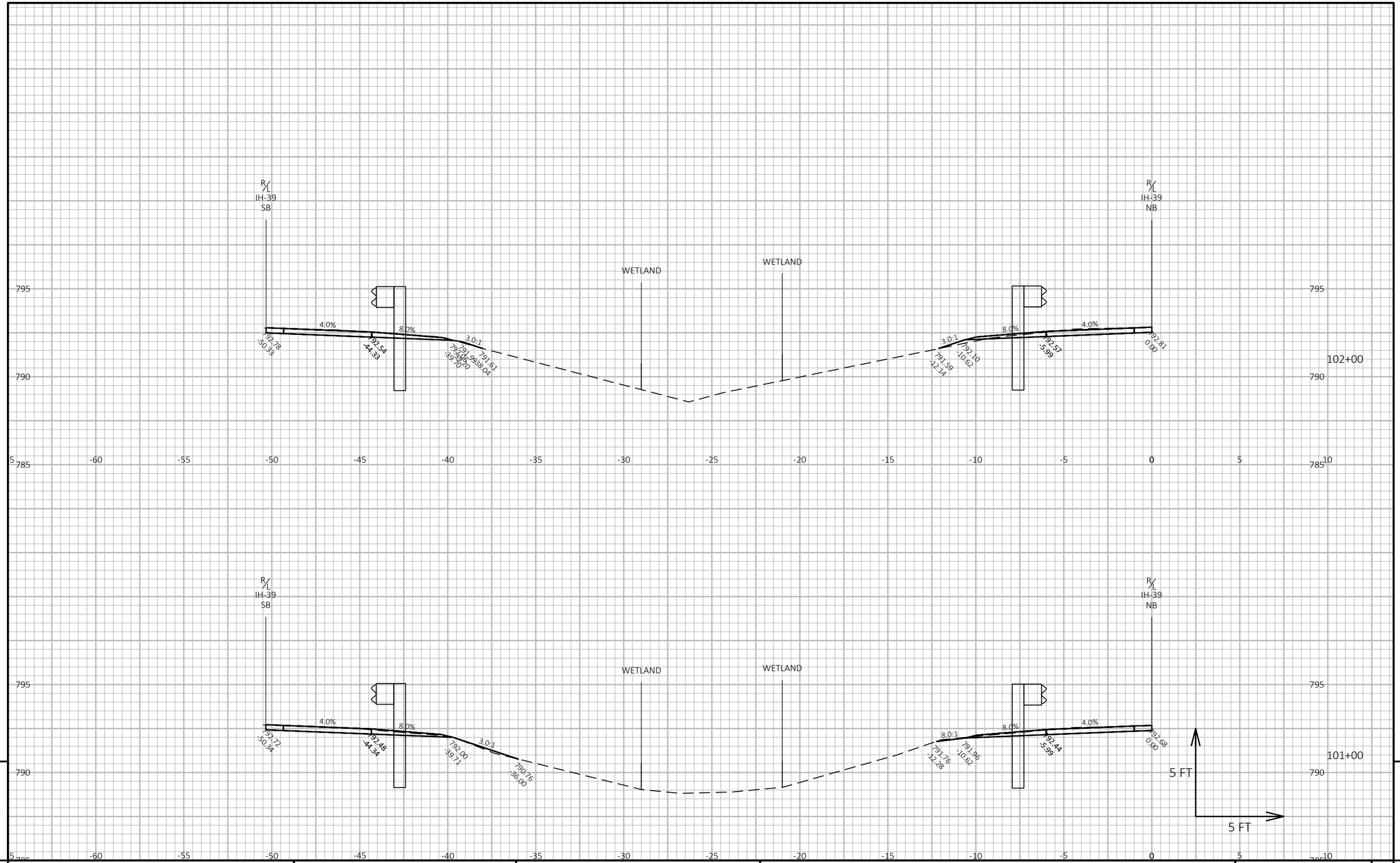


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 144 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 013

PLOT DATE : 1/12/2021 5:11 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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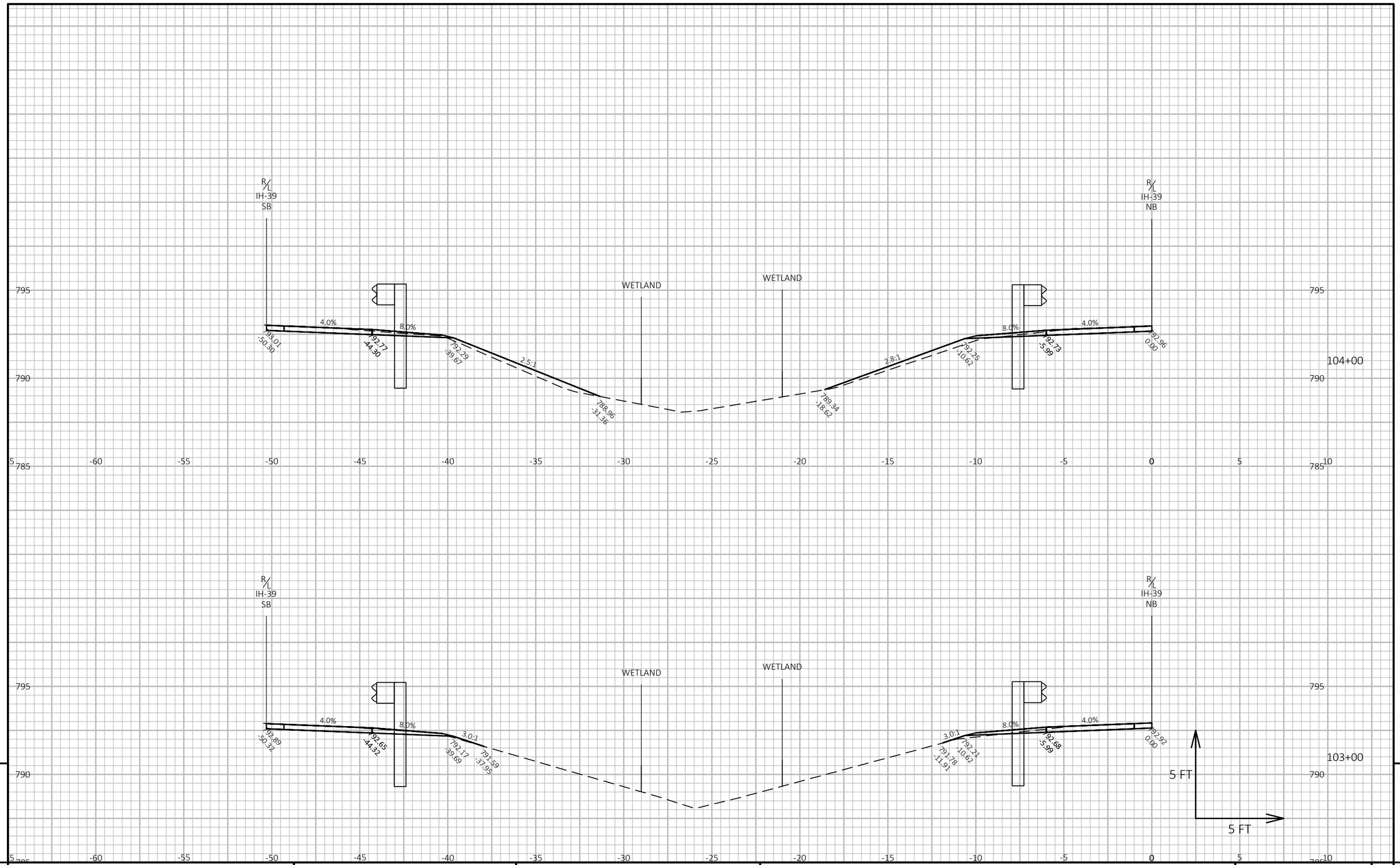
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 145	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 014

PLOT DATE : 1/12/2021 5:12 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

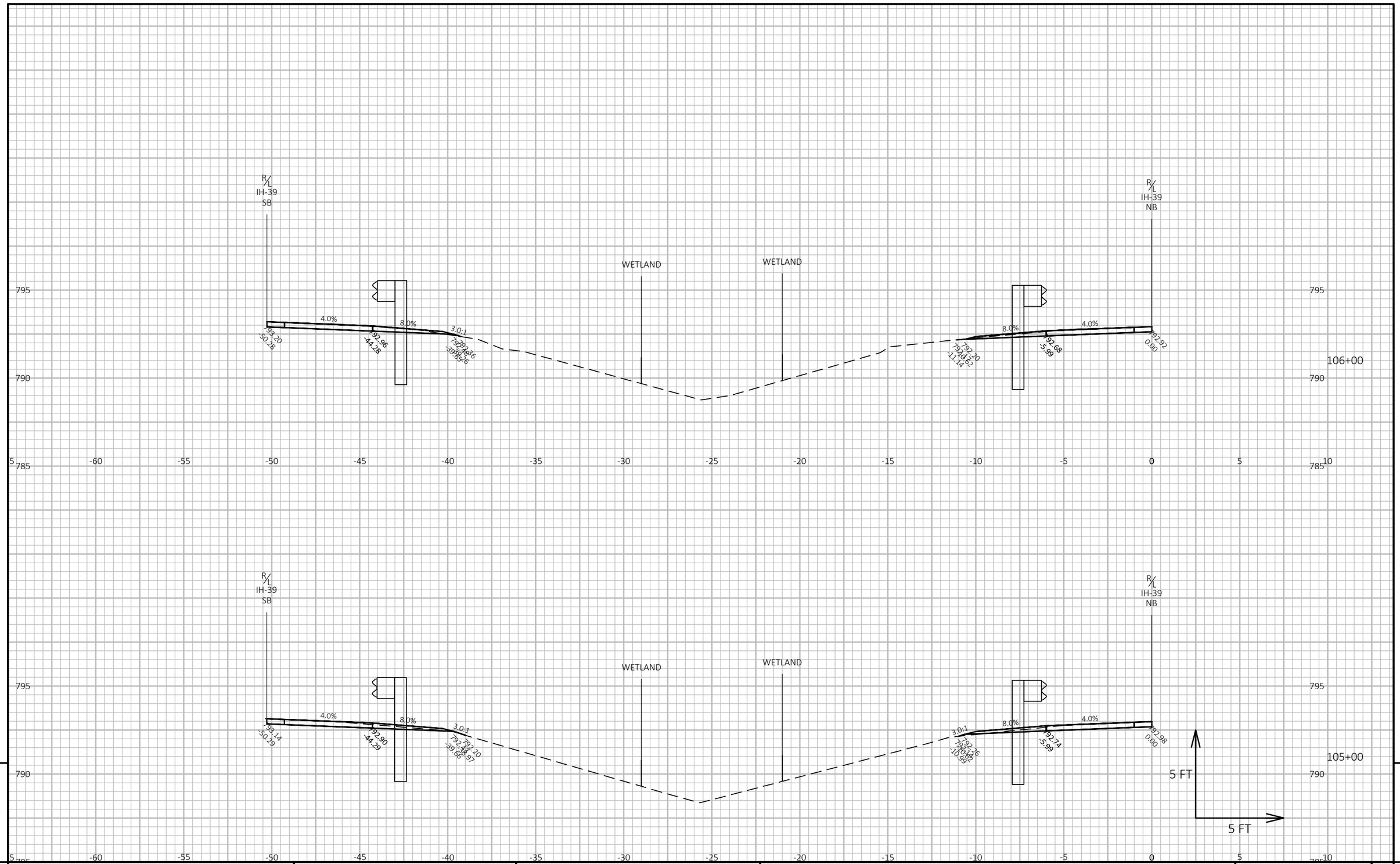


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 146 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 015

PLOT DATE : 1/12/2021 5:12 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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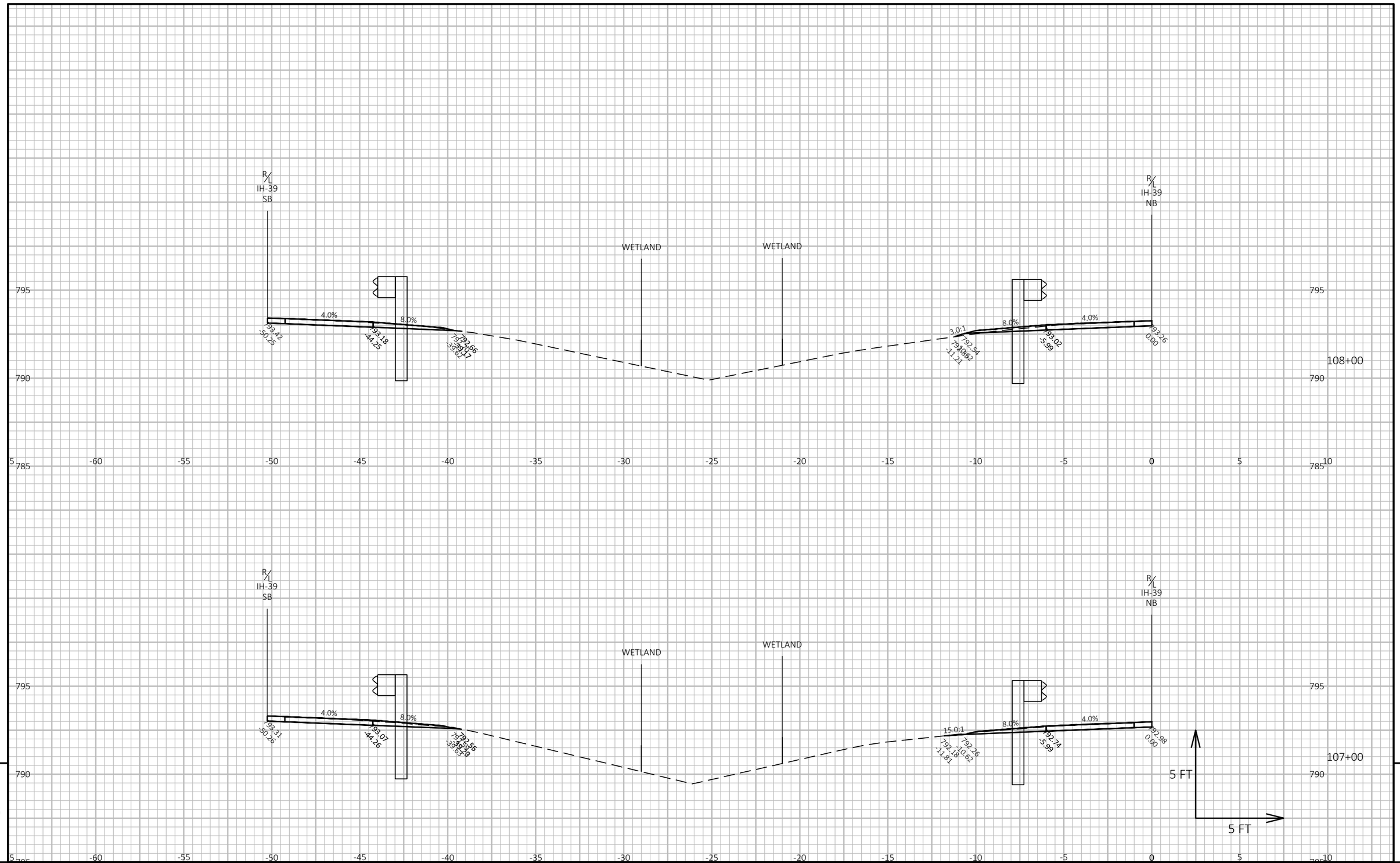
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 147	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 016

PLOT DATE : 1/12/2021 5:13 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

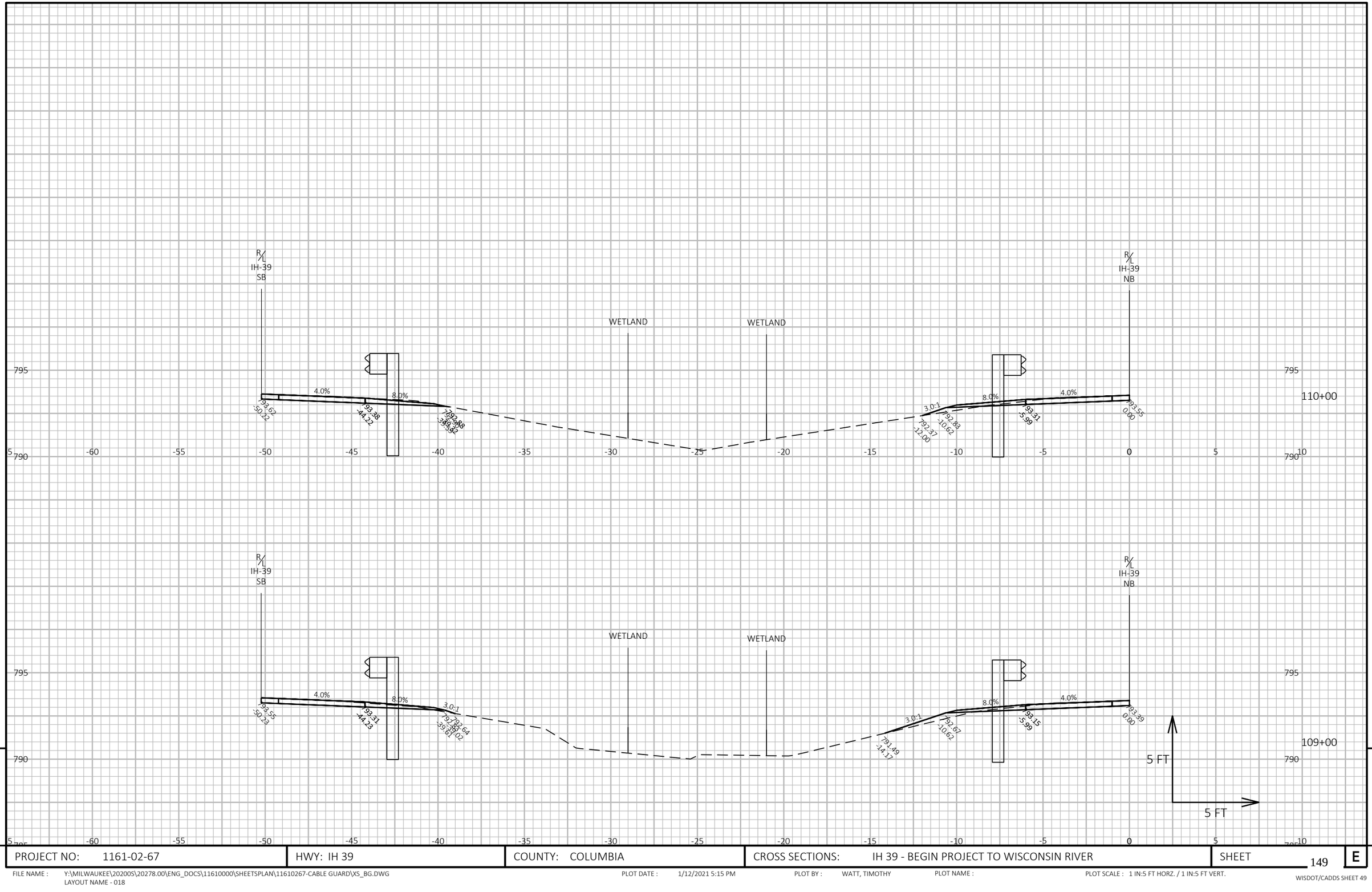


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 148 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 017

PLOT DATE : 1/12/2021 5:14 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

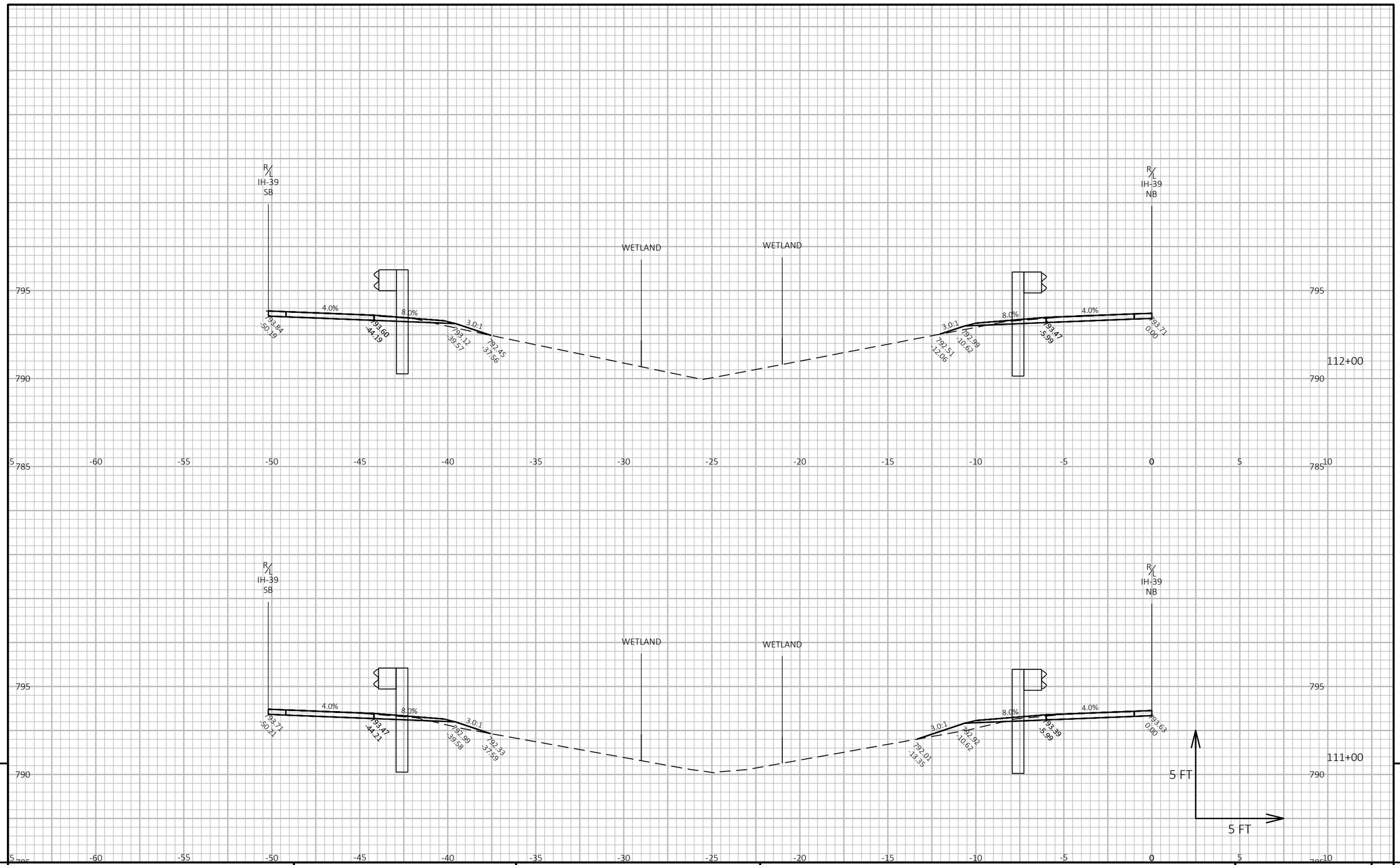


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 149	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 018

PLOT DATE : 1/12/2021 5:15 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

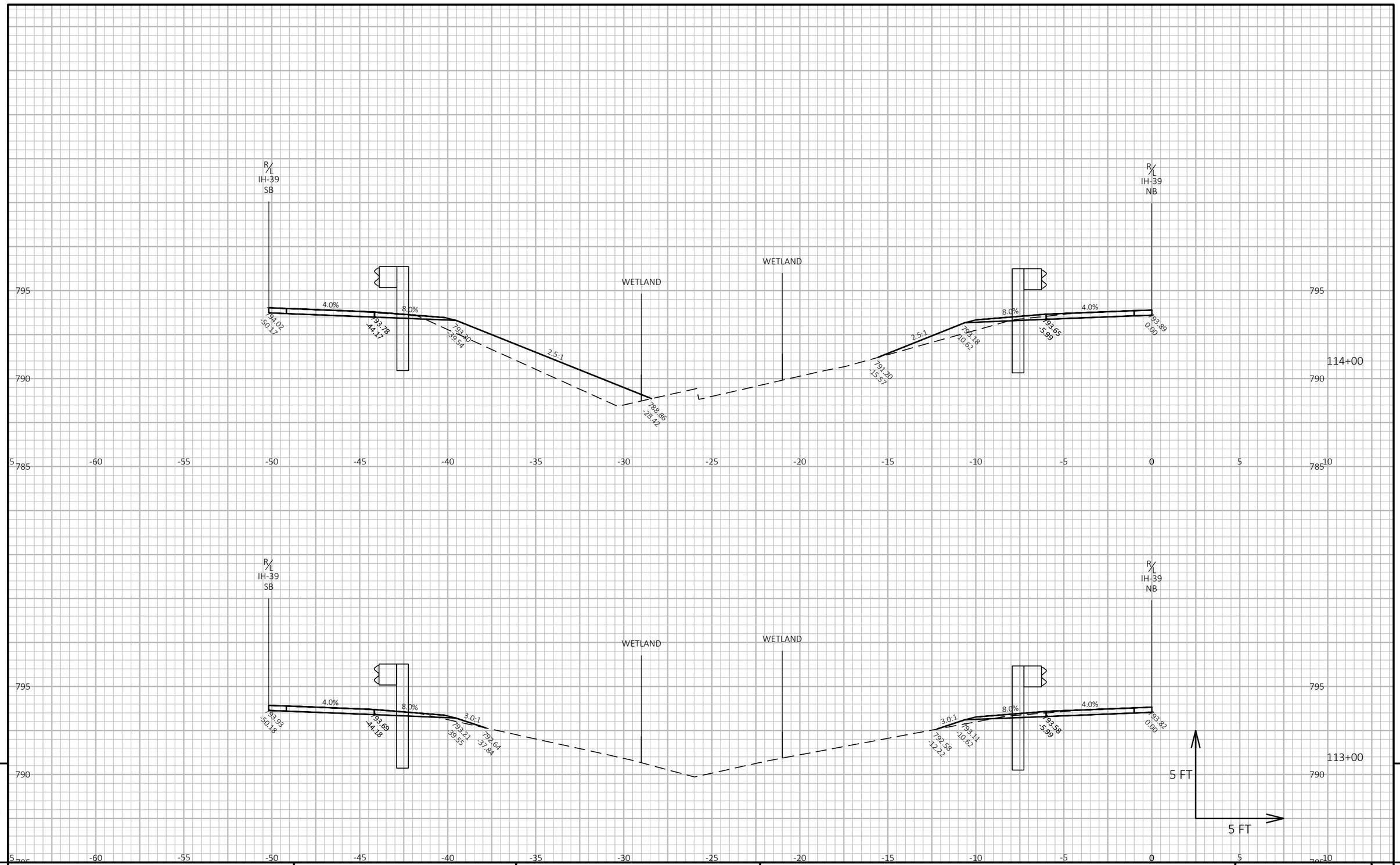


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 150 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 019

PLOT DATE : 1/12/2021 5:16 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

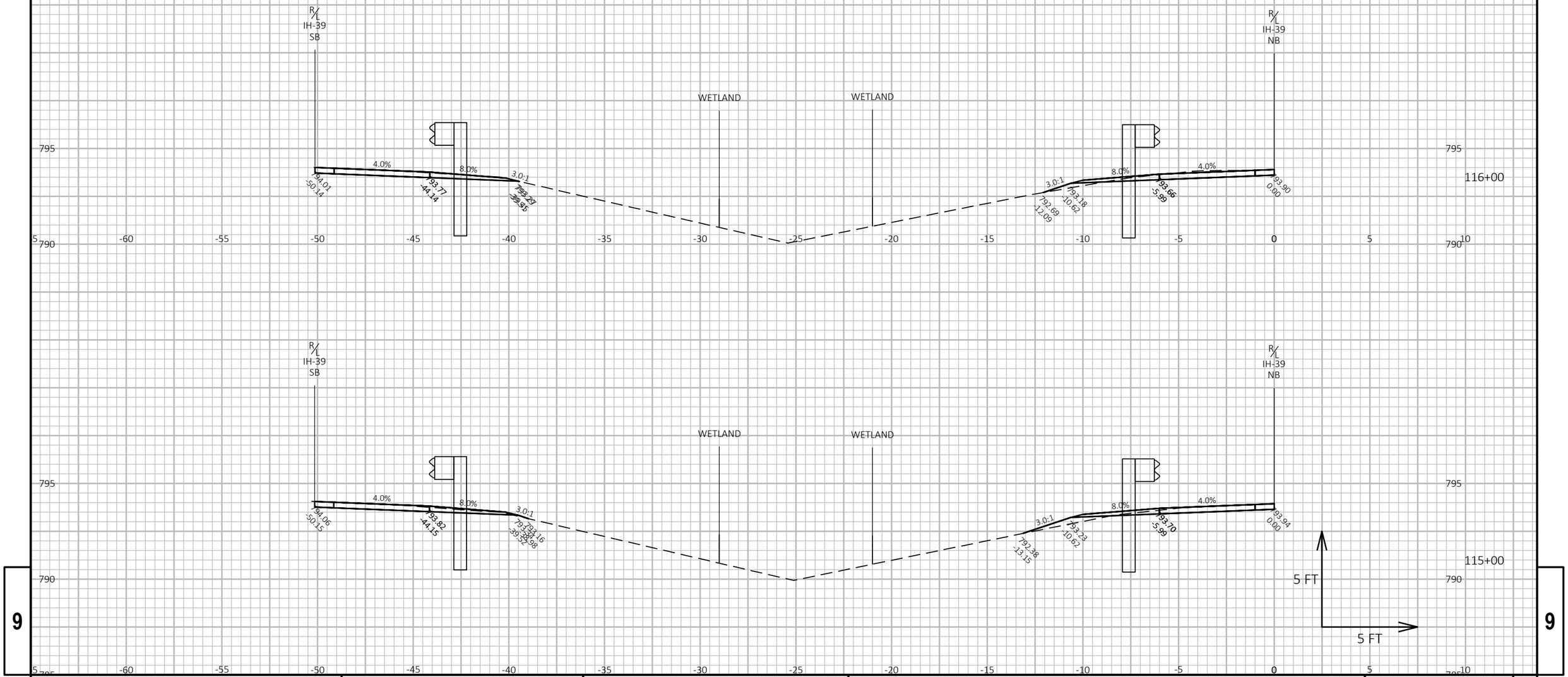


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 151 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 020

PLOT DATE : 1/12/2021 5:16 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

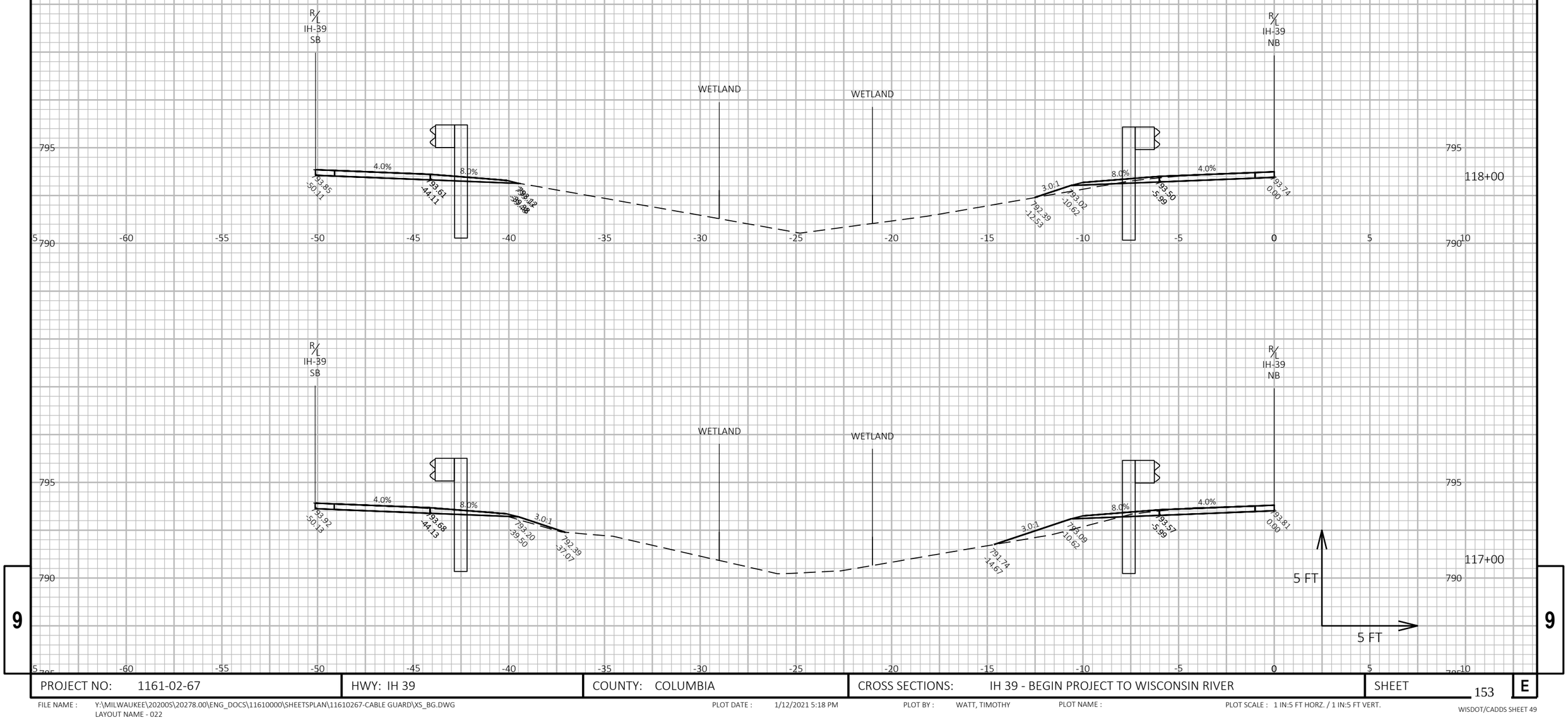


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 152	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 021

PLOT DATE : 1/12/2021 5:17 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

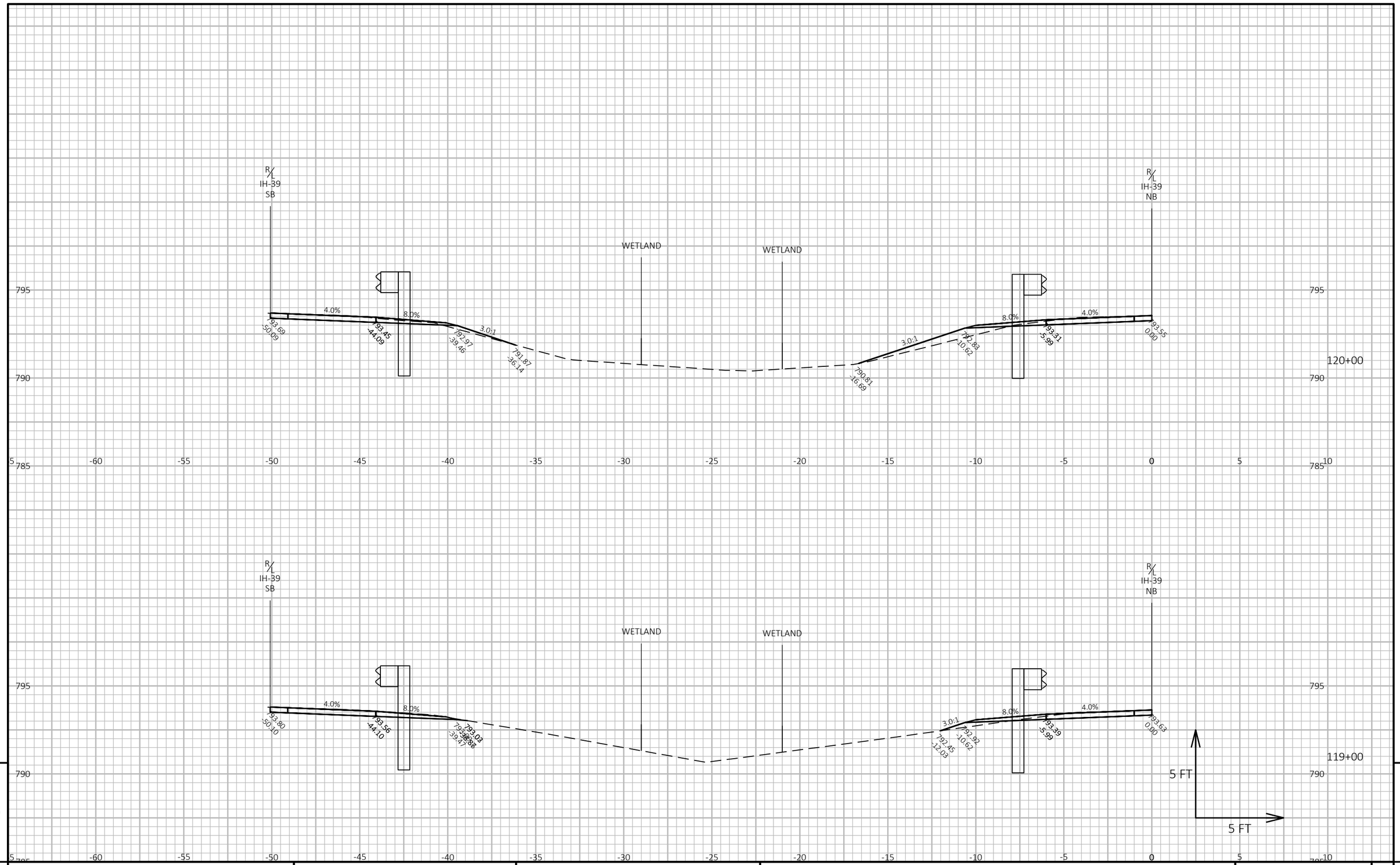


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 153	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 022

PLOT DATE : 1/12/2021 5:18 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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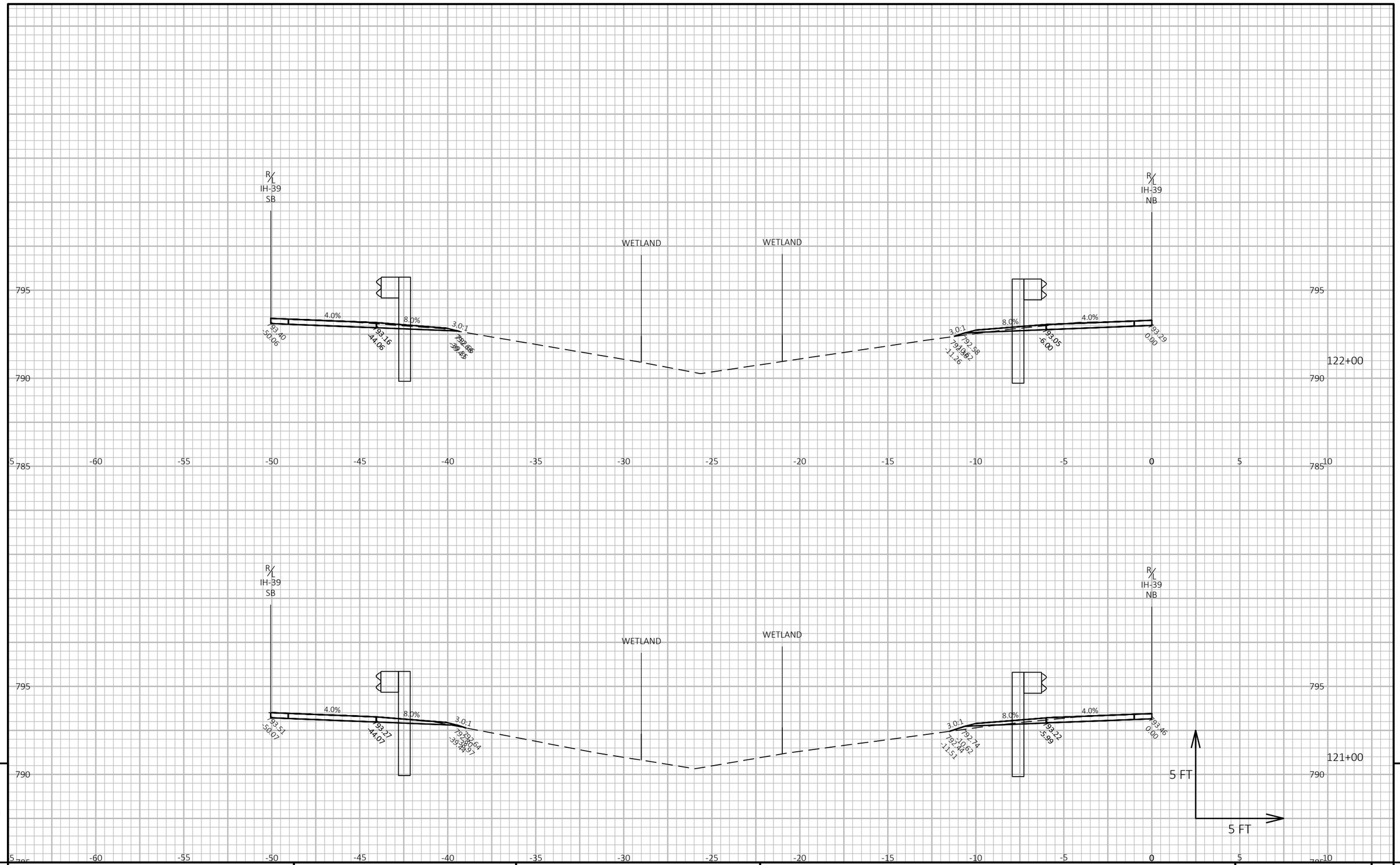
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 154	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 023

PLOT DATE : 1/12/2021 5:19 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

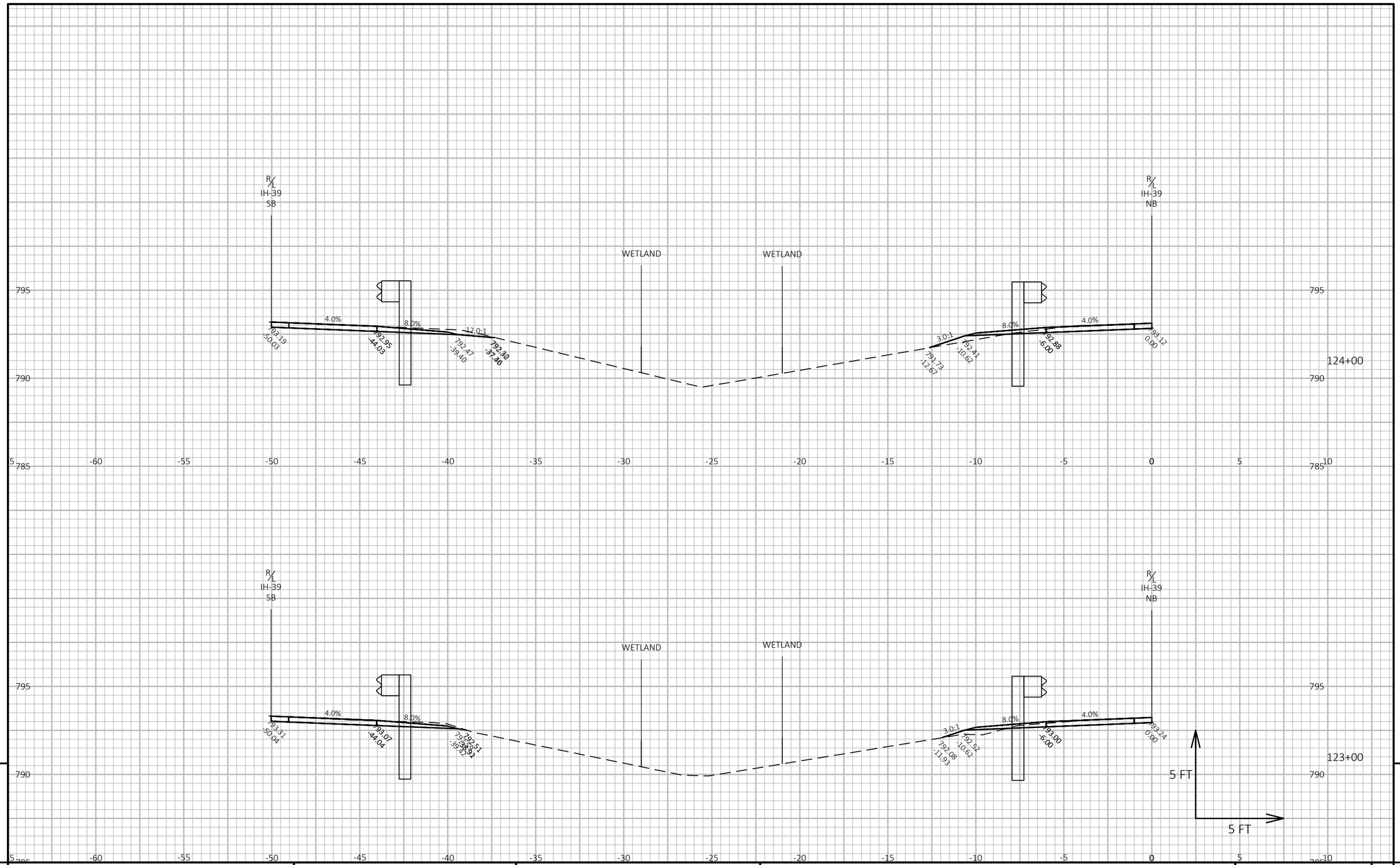


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 155 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 024

PLOT DATE : 1/12/2021 5:20 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

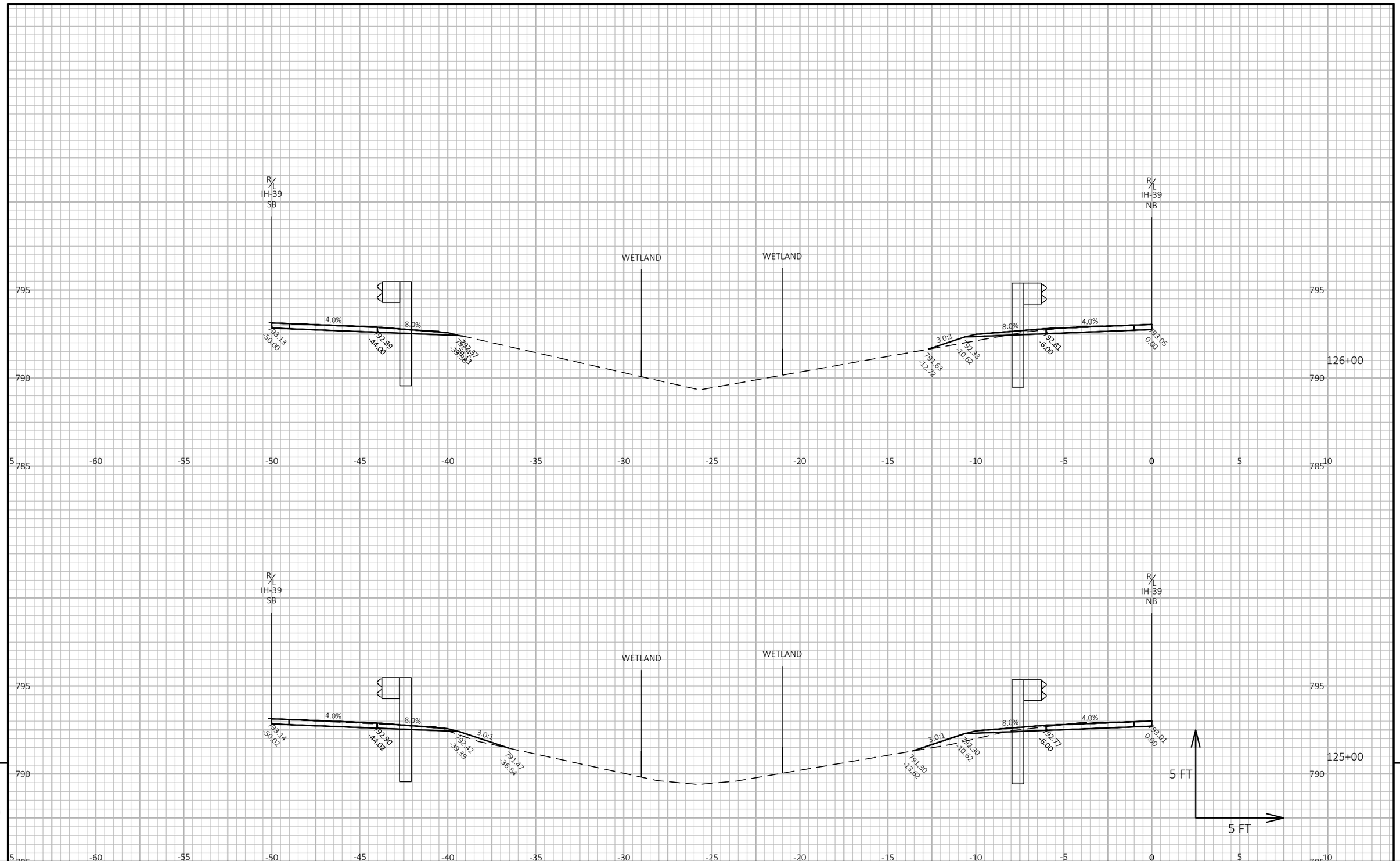


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 156	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 025

PLOT DATE : 1/12/2021 5:20 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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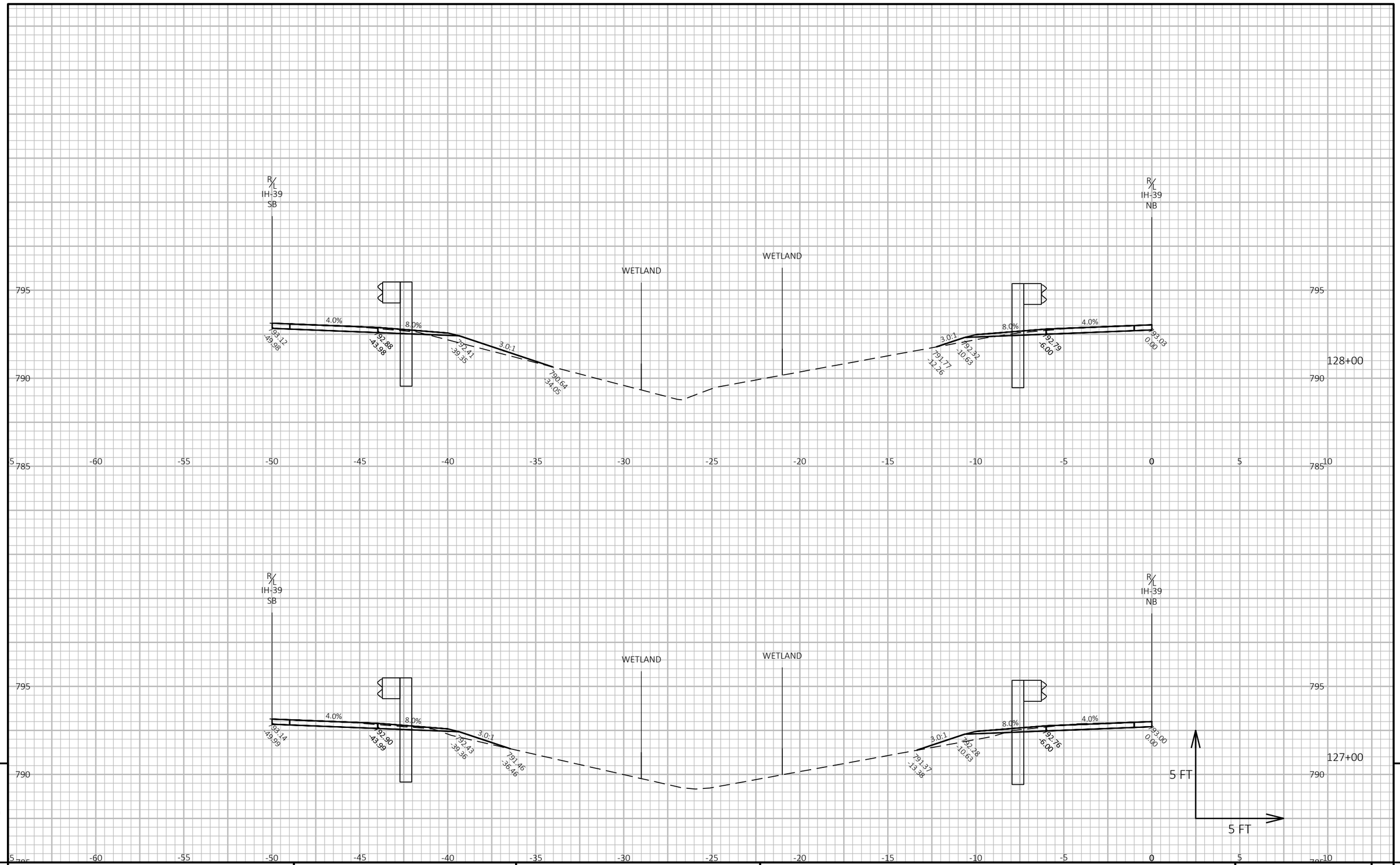
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 157	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 026

PLOT DATE : 1/12/2021 5:21 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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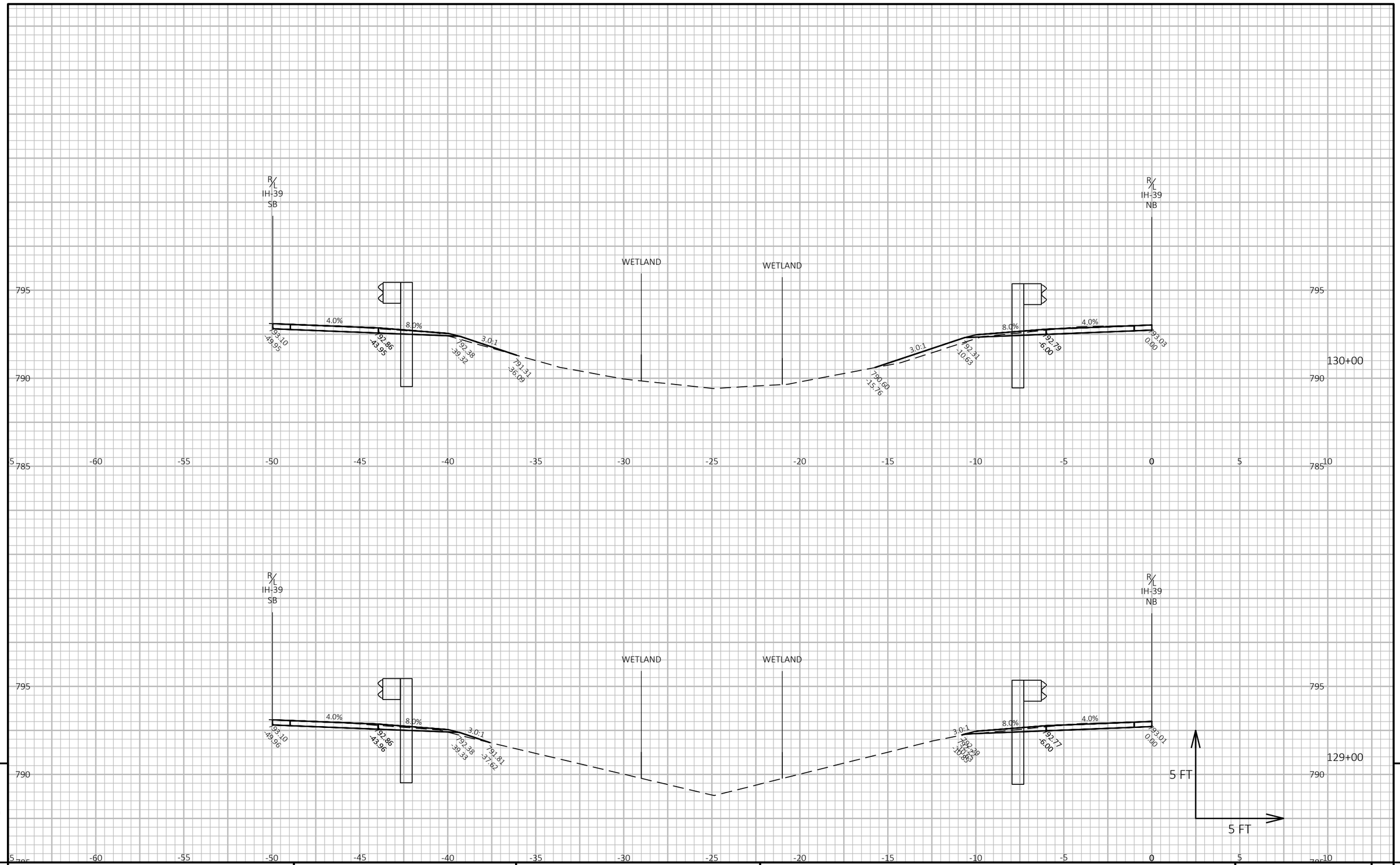
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 158	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 027

PLOT DATE : 1/12/2021 5:22 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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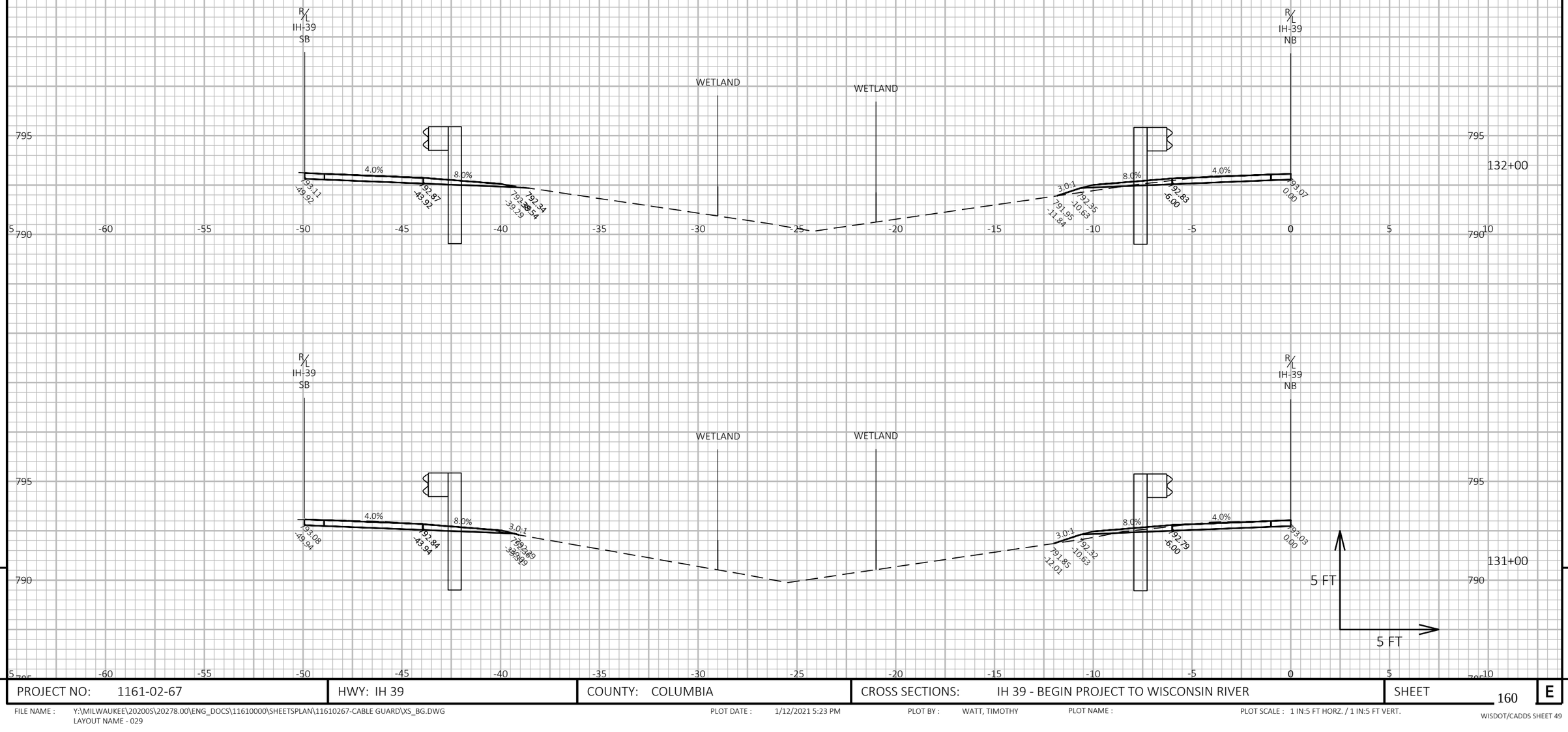
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 159	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 028

PLOT DATE : 1/12/2021 5:23 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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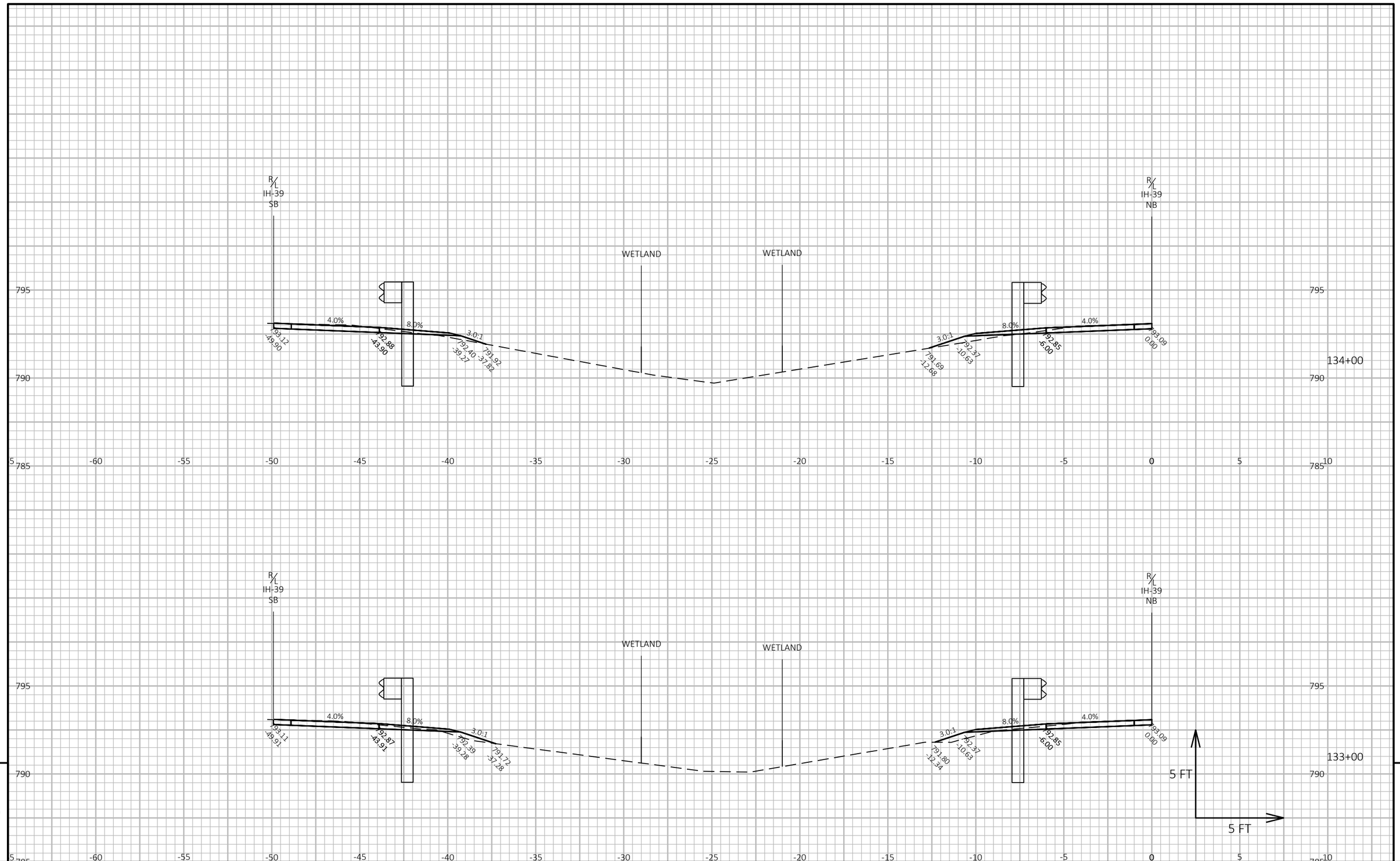
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 160	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 029

PLOT DATE : 1/12/2021 5:23 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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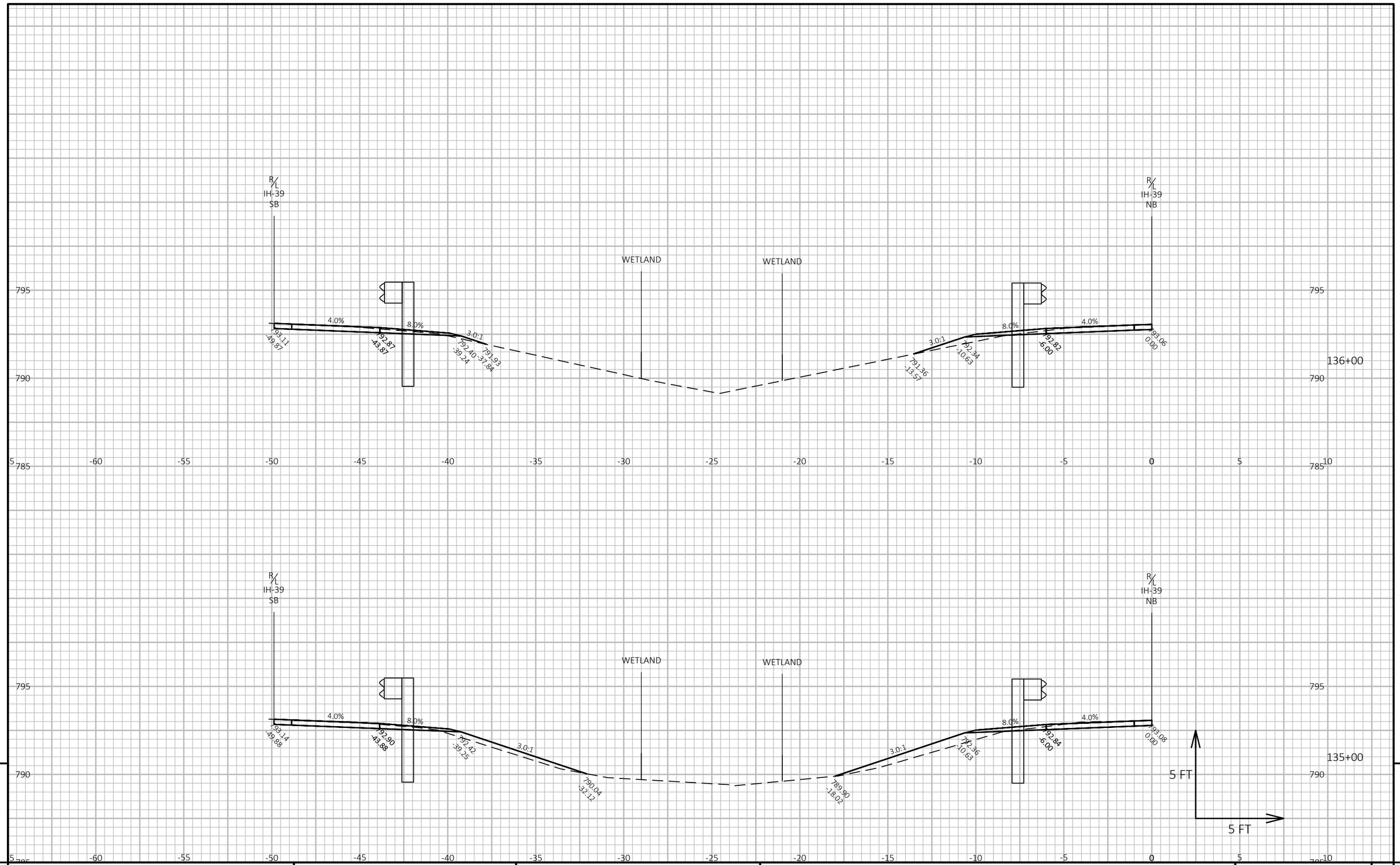
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 161	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 030

PLOT DATE : 1/12/2021 5:24 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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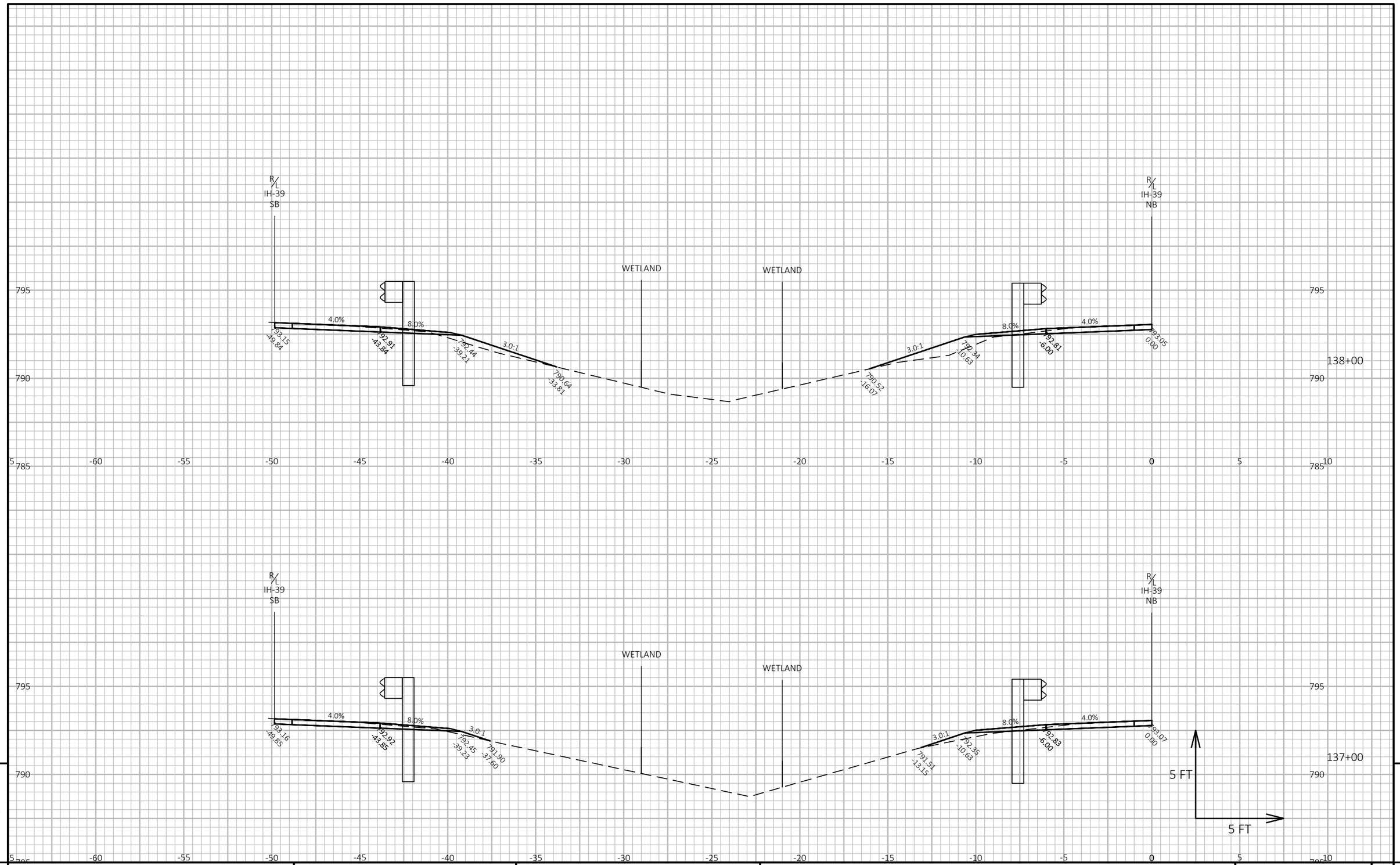
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 162	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 031

PLOT DATE : 1/12/2021 5:25 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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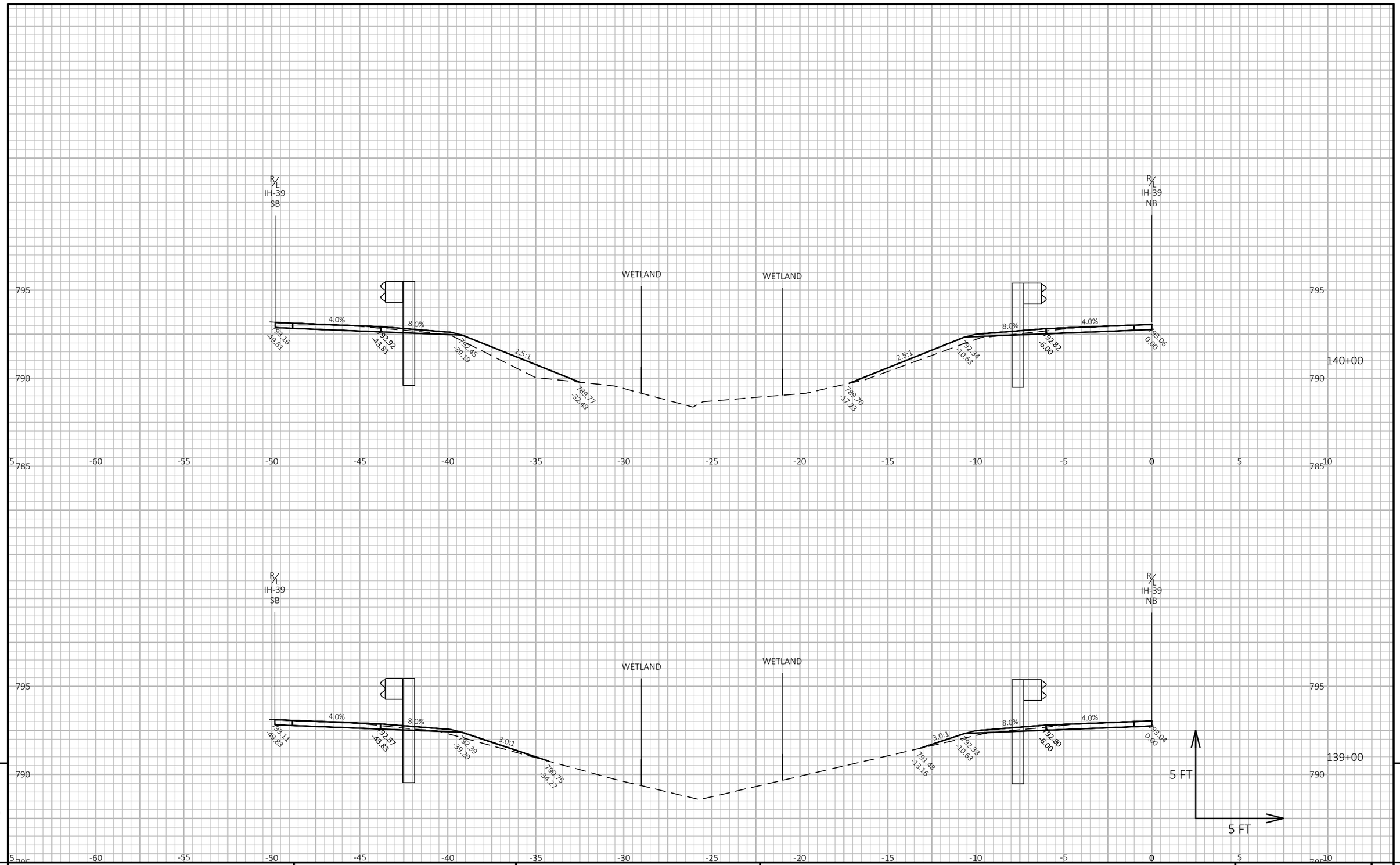
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 163	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 032

PLOT DATE : 1/12/2021 5:26 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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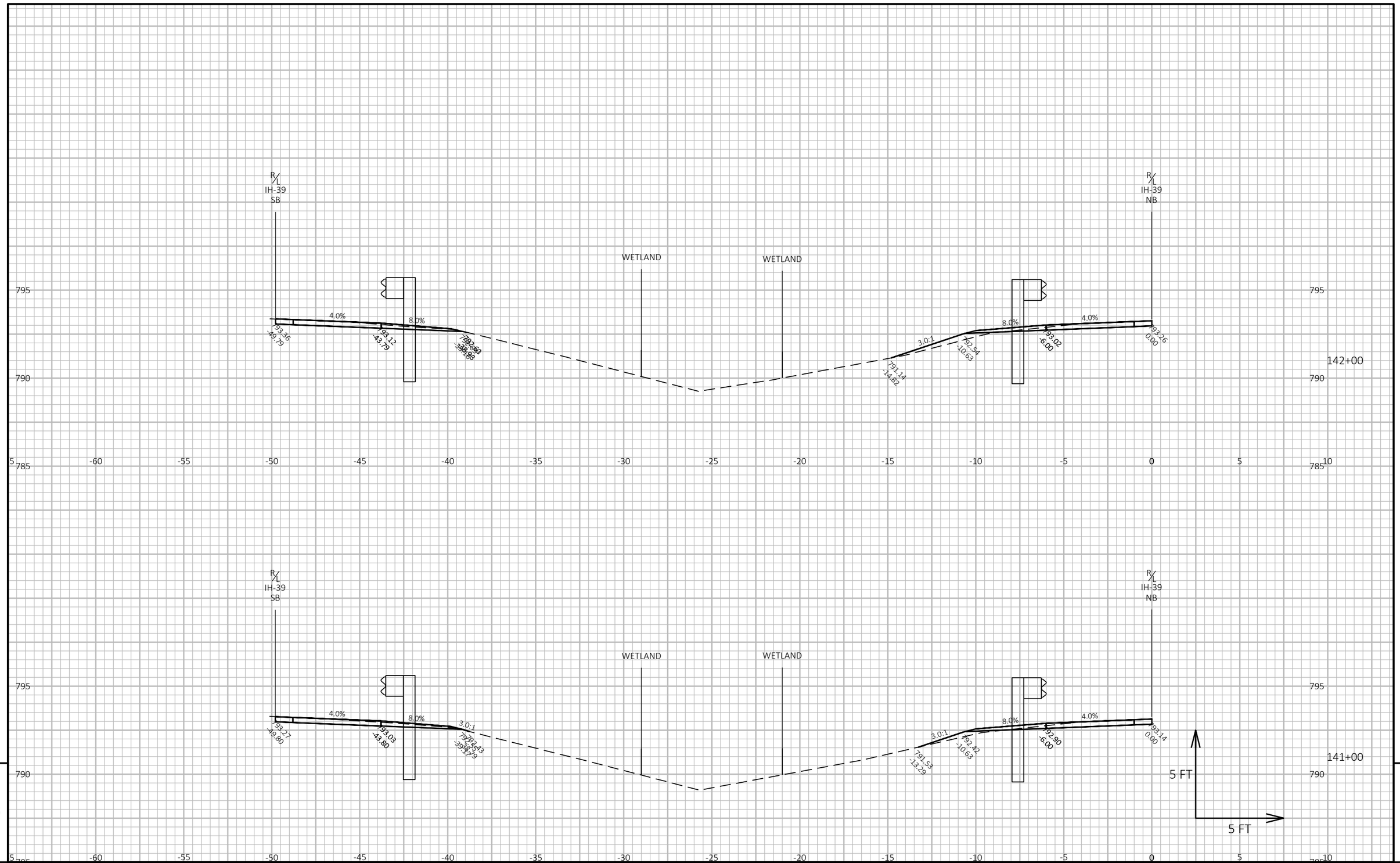
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 164	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 033

PLOT DATE : 1/12/2021 5:26 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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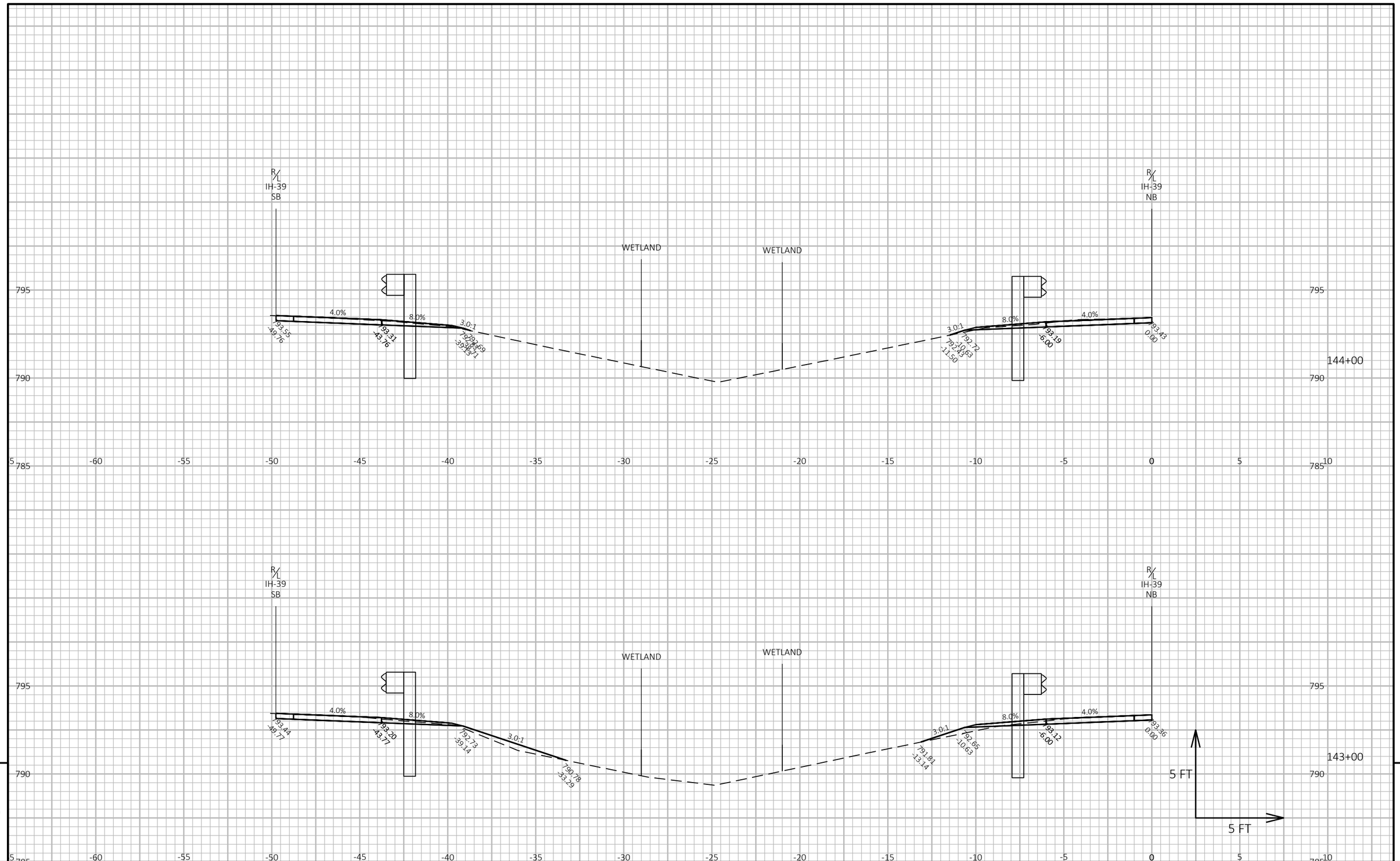
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 165	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 034

PLOT DATE : 1/12/2021 5:27 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

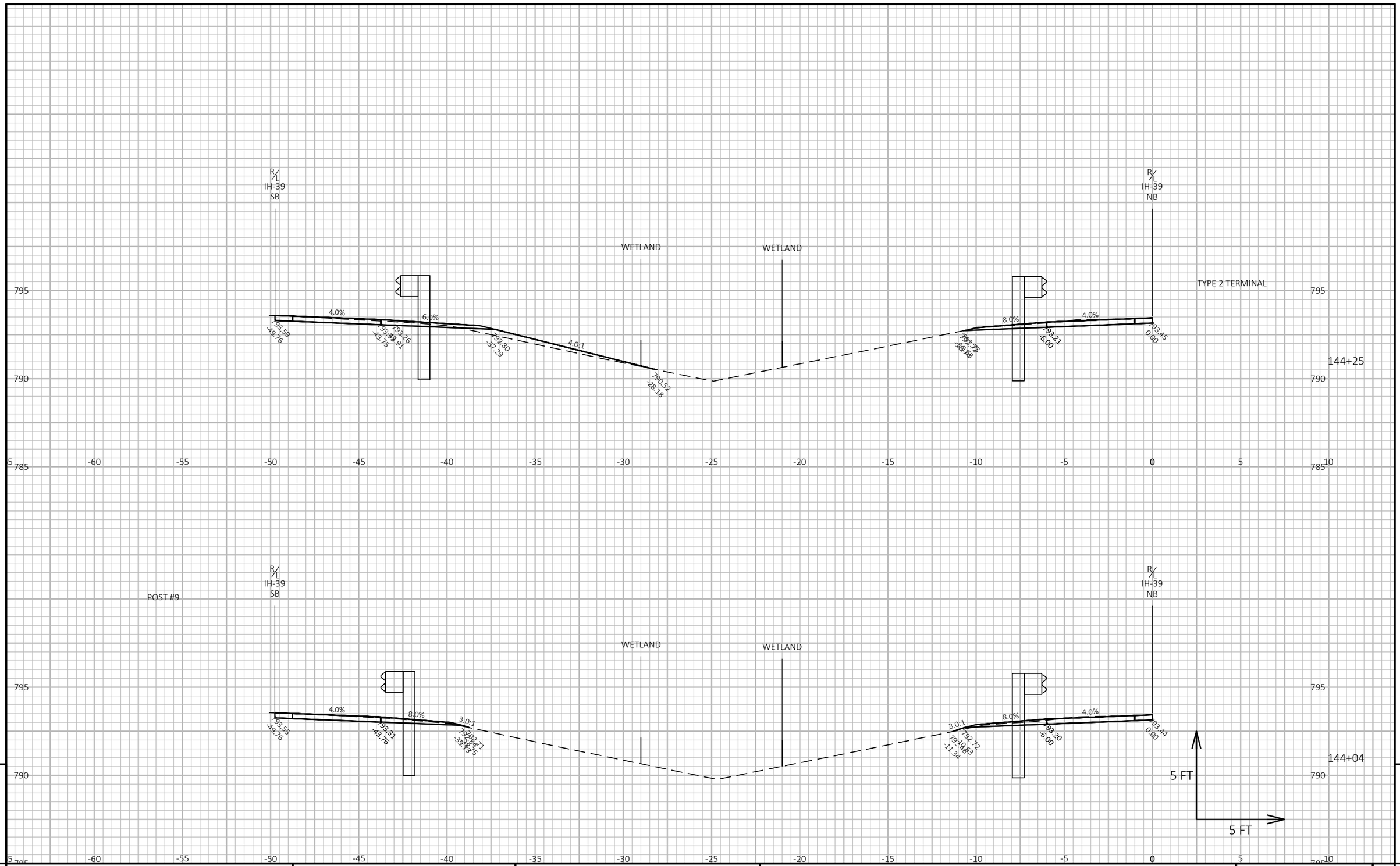


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 166	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 035

PLOT DATE : 1/12/2021 5:28 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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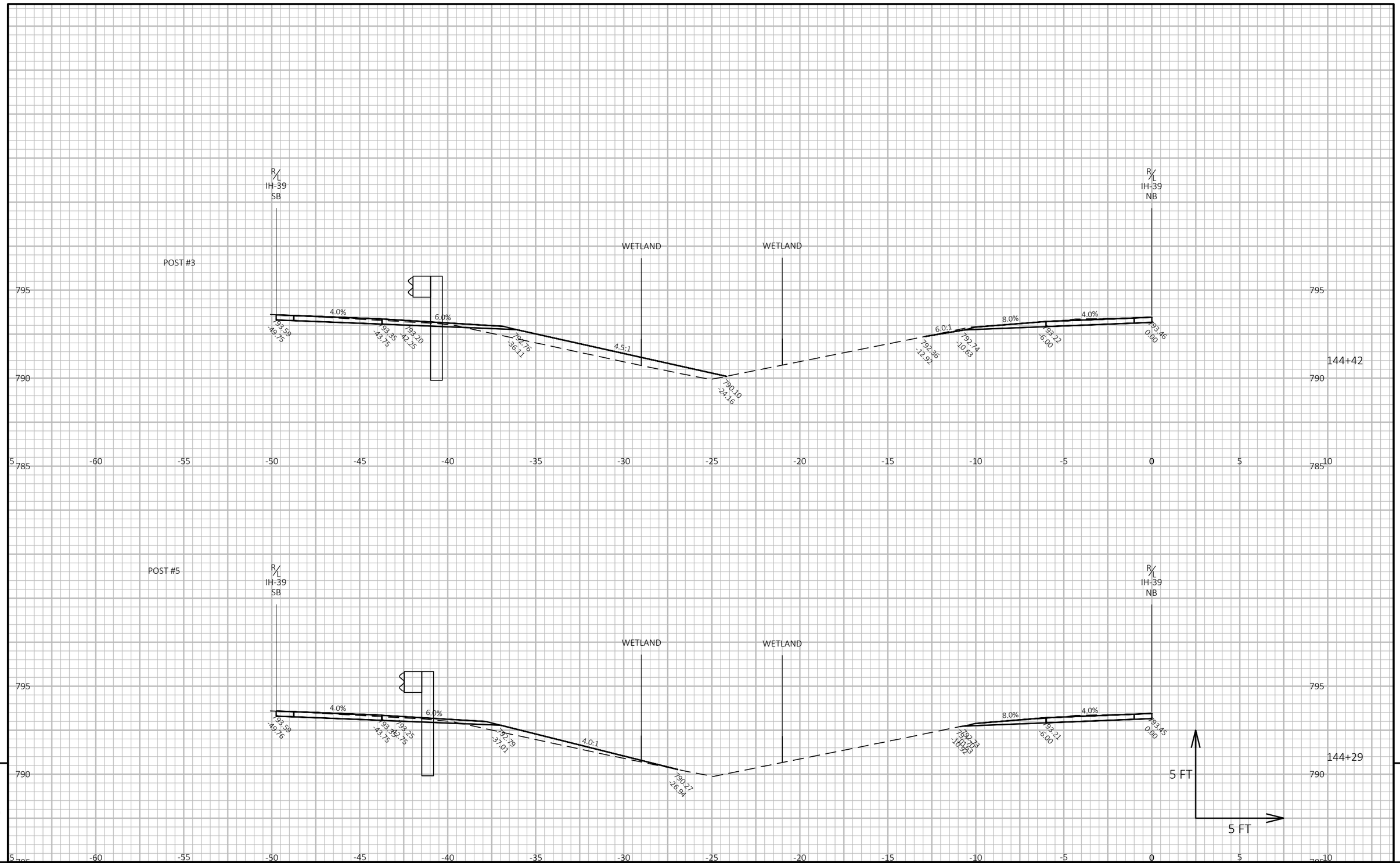
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 167	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 036

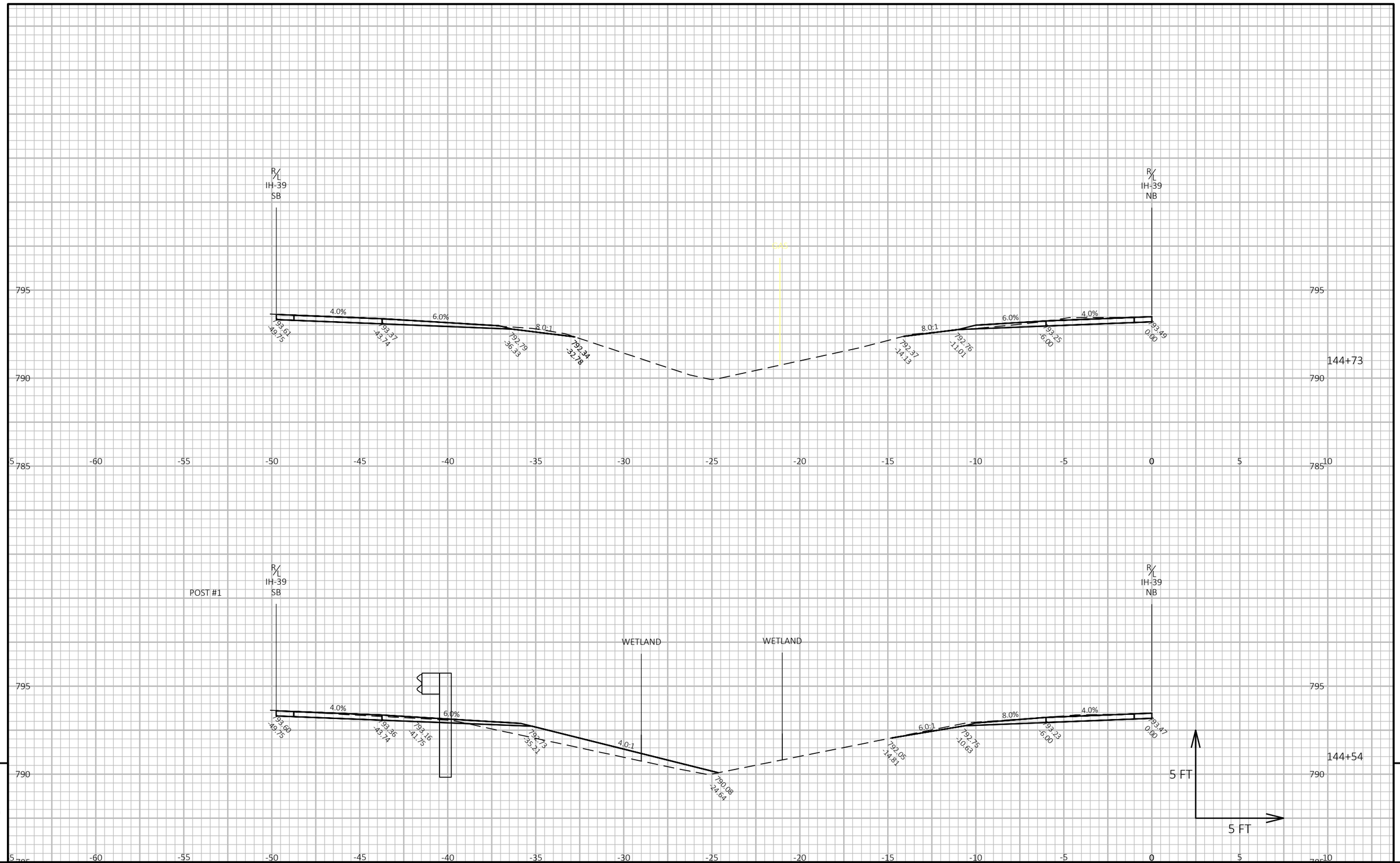
PLOT DATE : 1/12/2021 5:29 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 168	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 037
PLOT DATE : 1/12/2021 5:30 PM
PLOT BY : WATT, TIMOTHY
PLOT NAME :
PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.
WISDOT/CADDS SHEET 49



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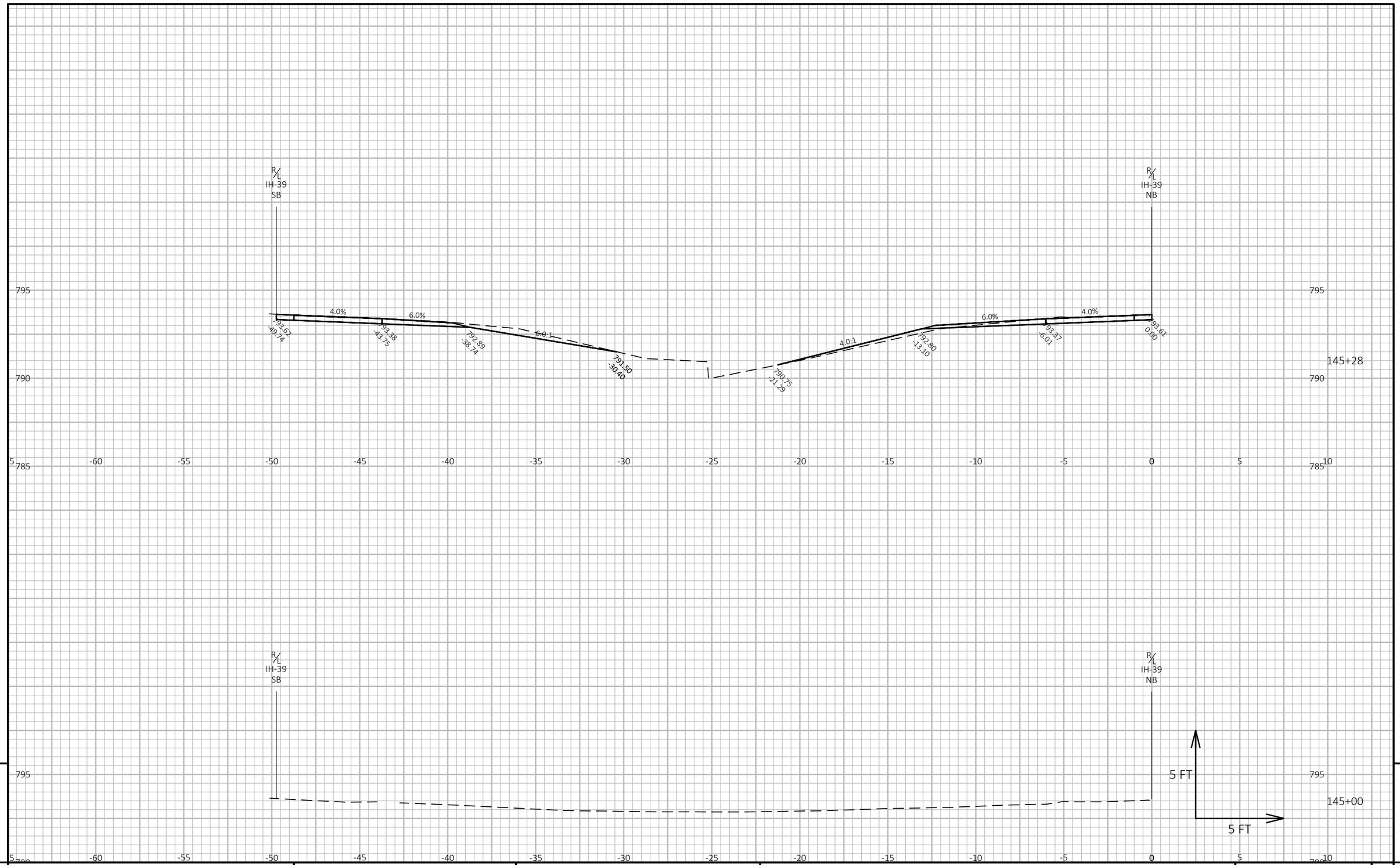
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 169	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 038

PLOT DATE : 1/12/2021 5:30 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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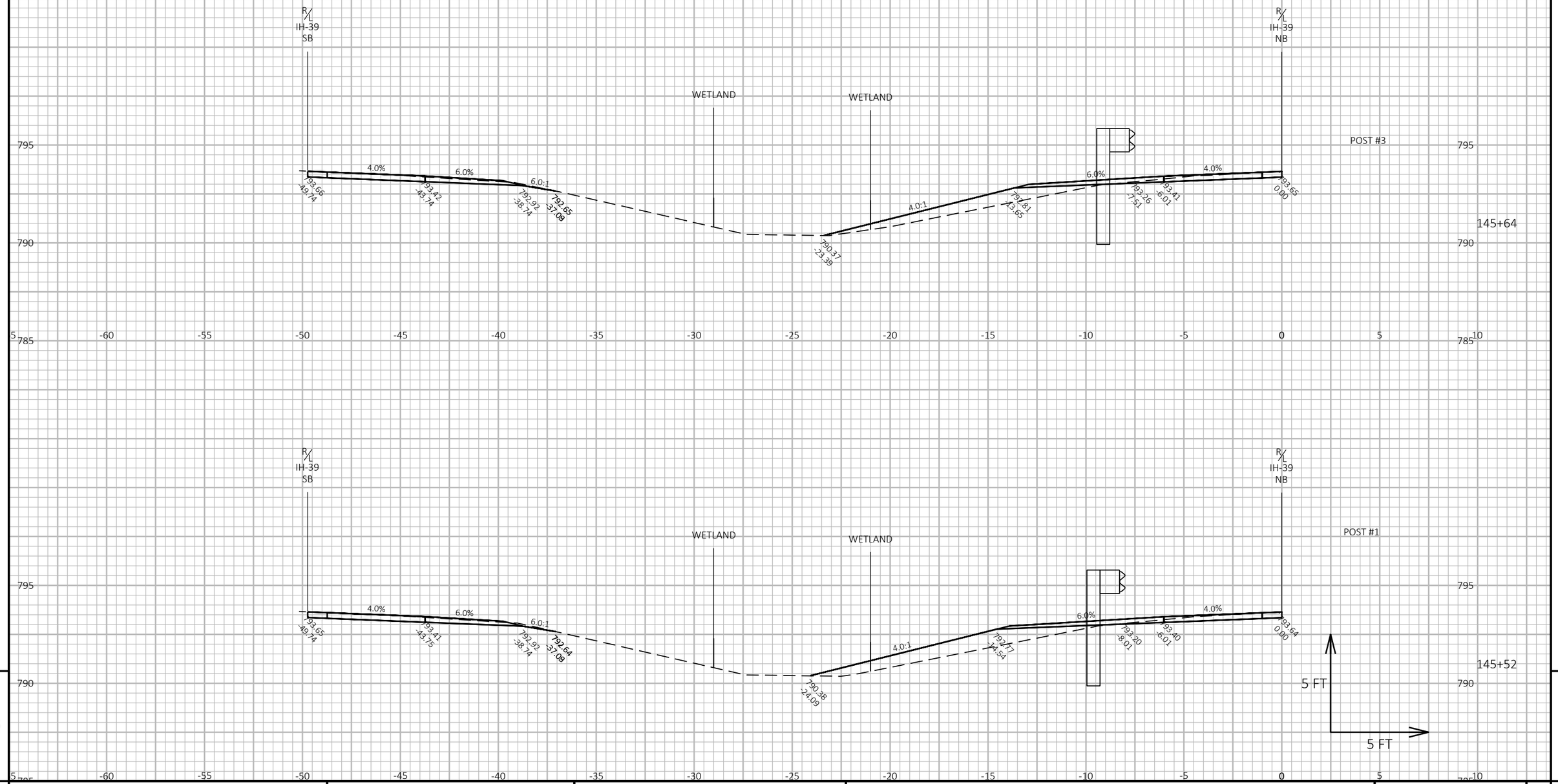
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 170	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 039

PLOT DATE : 1/12/2021 5:31 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

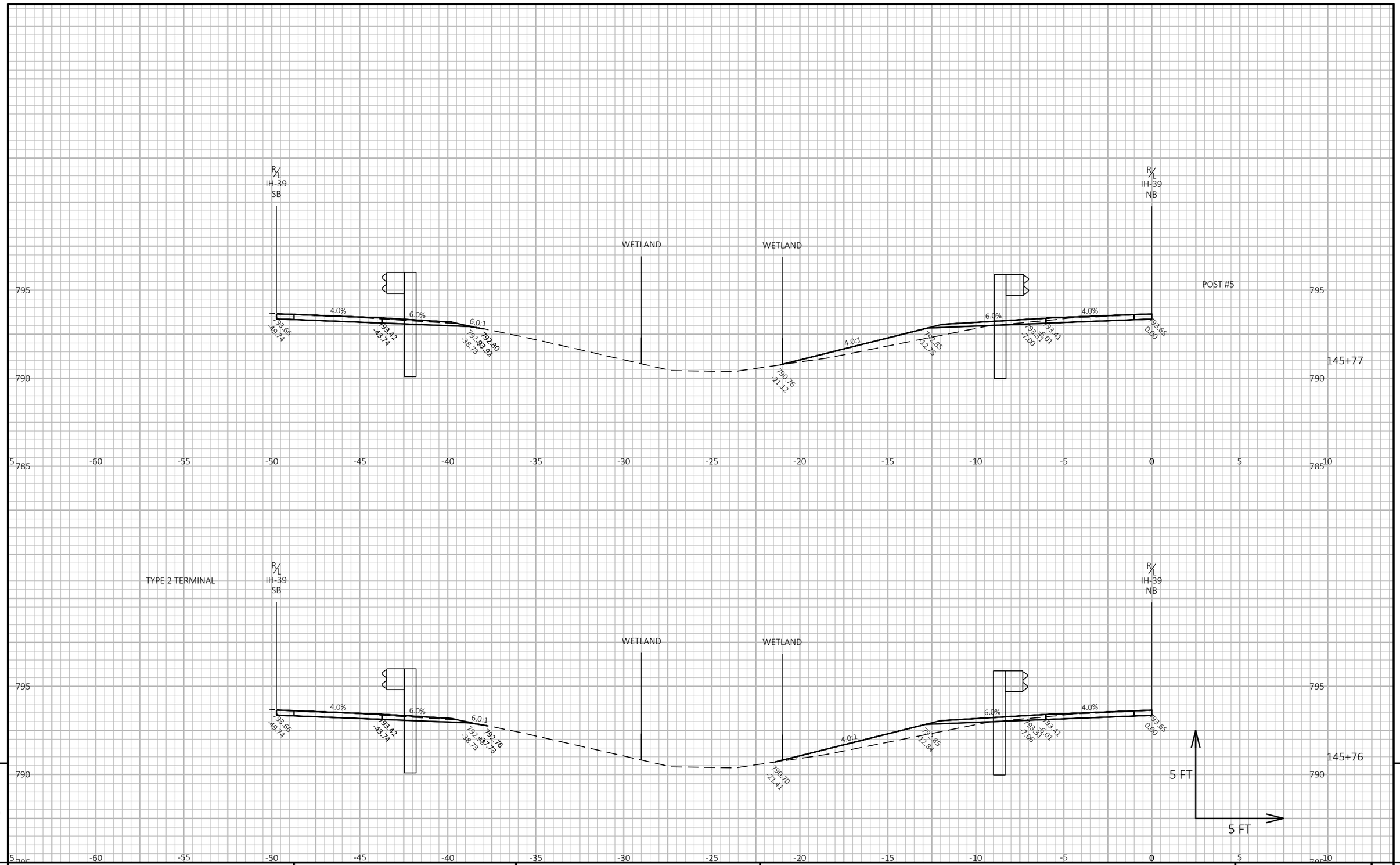


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 171	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 040

PLOT DATE : 1/12/2021 5:32 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

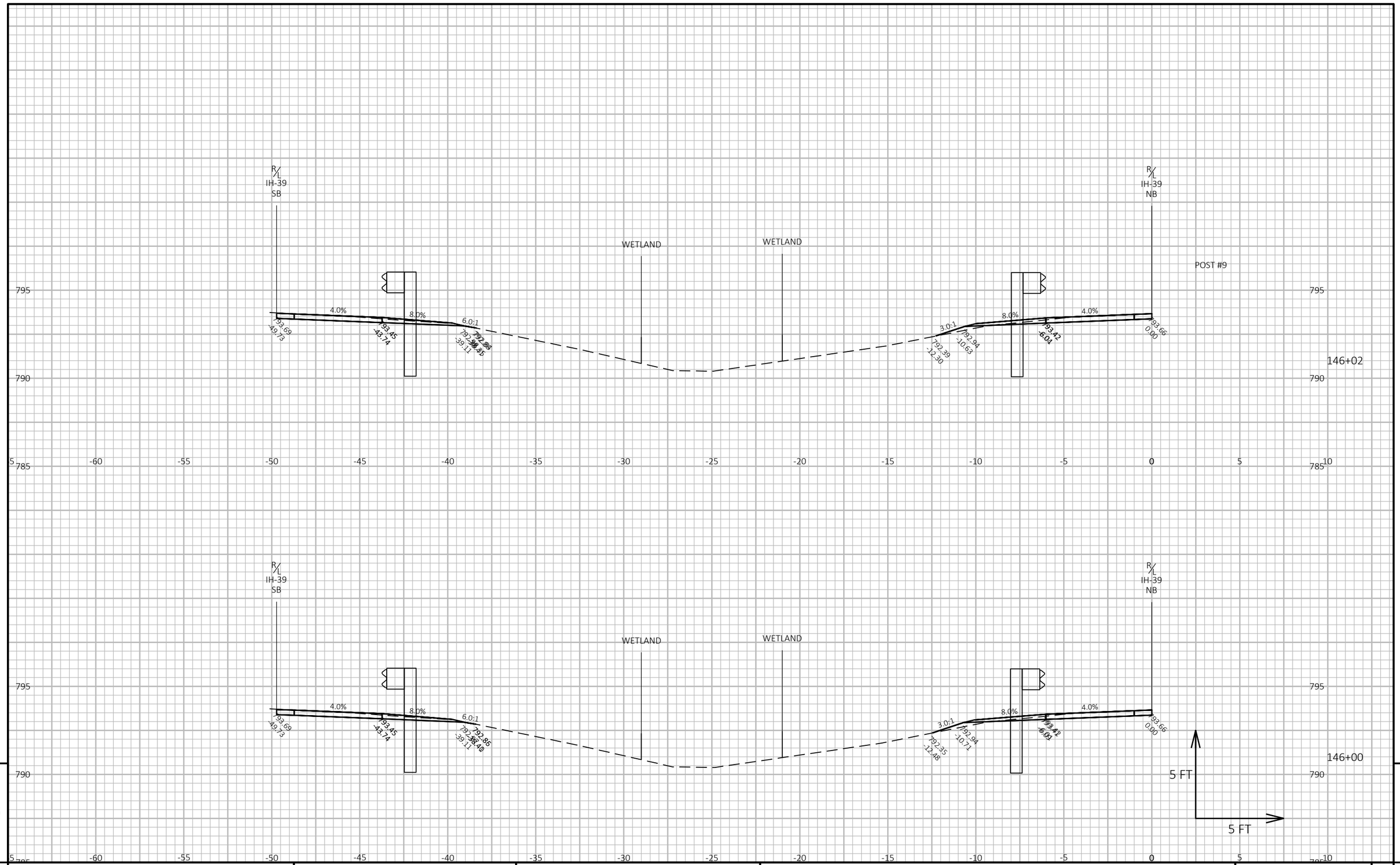


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 172 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 041

PLOT DATE : 1/12/2021 5:33 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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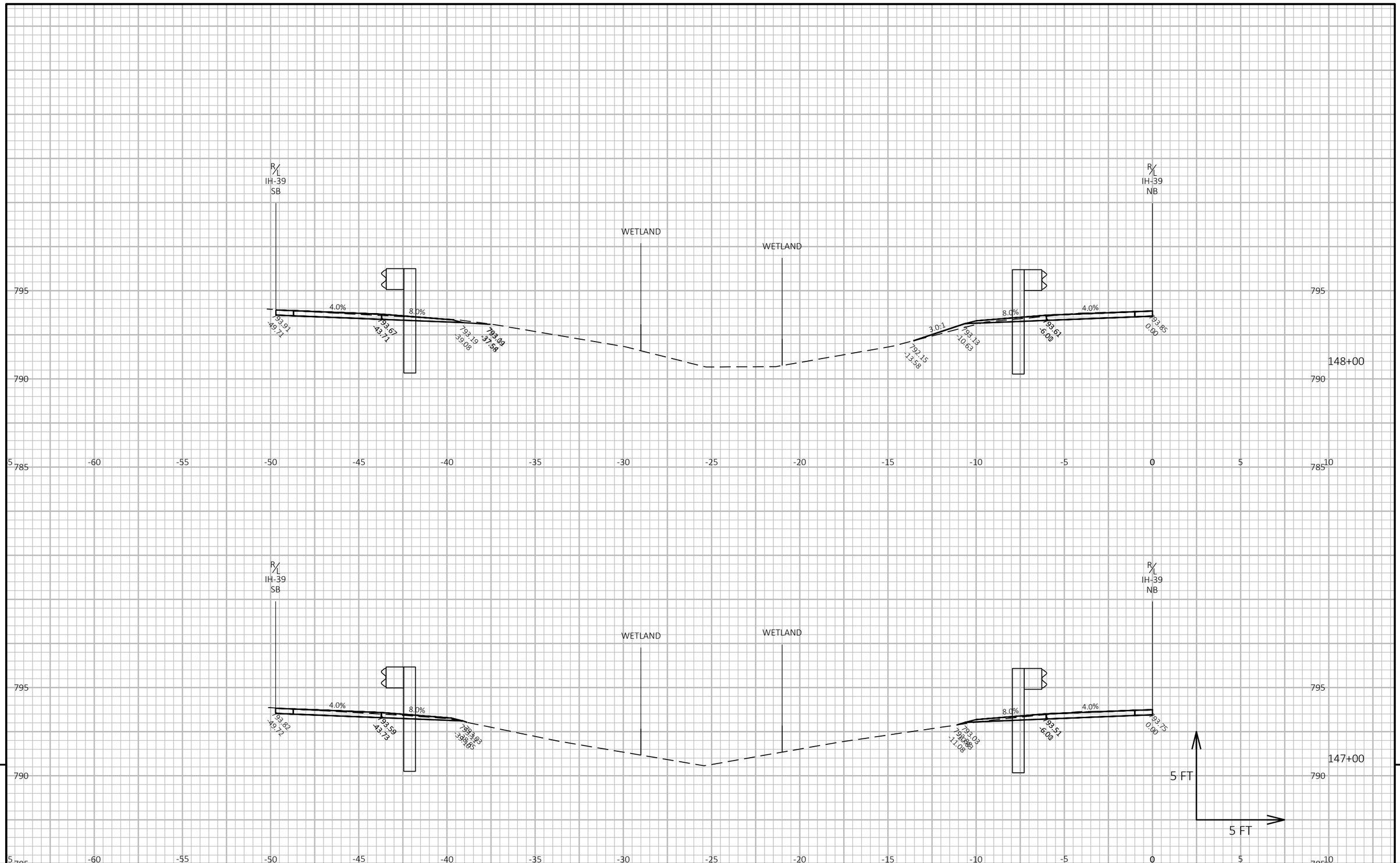
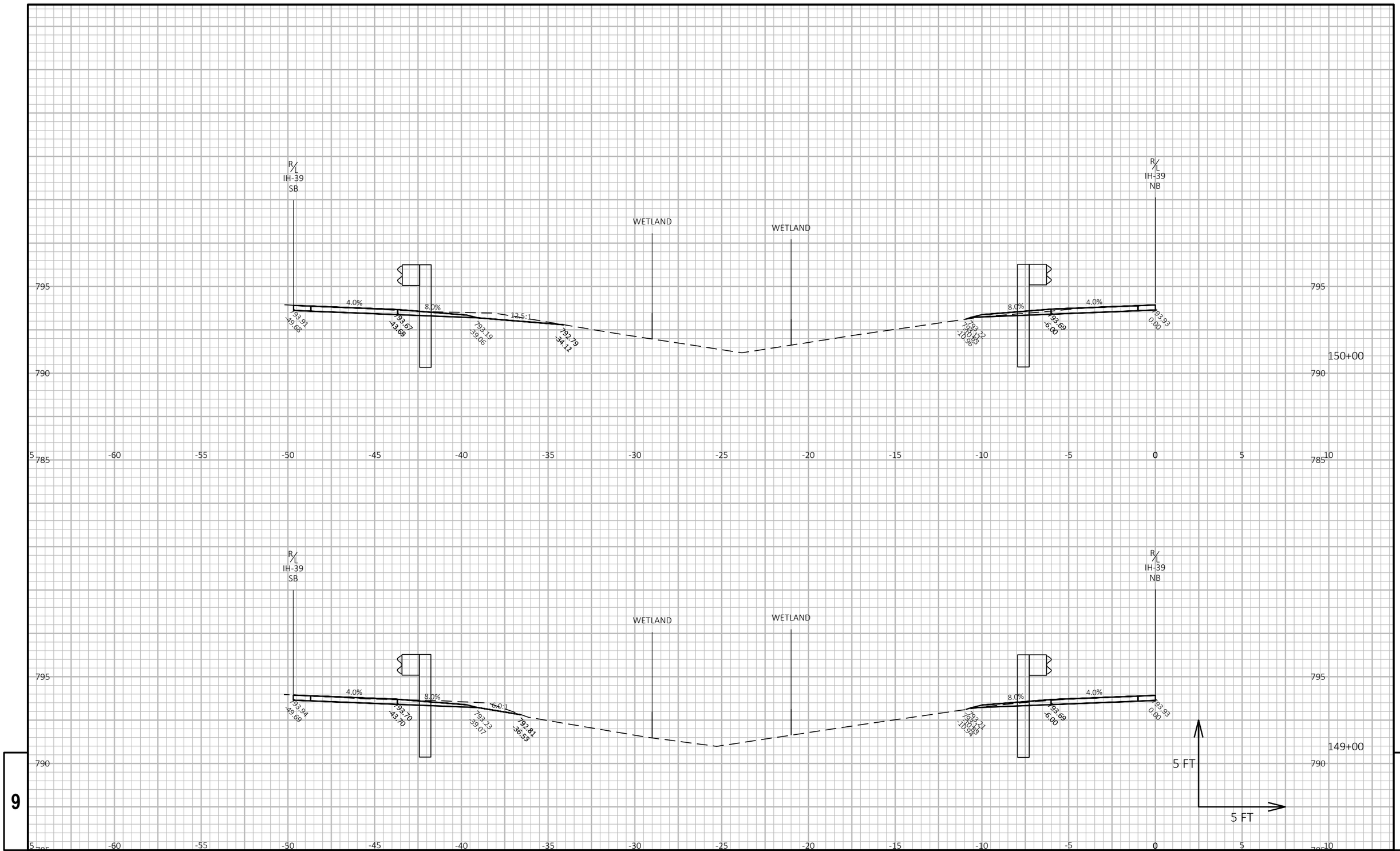
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 173	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 042

PLOT DATE : 1/12/2021 5:33 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49


R/L IH-39 SB
WETLAND
WETLAND
R/L IH-39 NB
795
790
785
-60
-55
-50
-45
-40
-35
-30
-25
-20
-15
-10
-5
0
5
10
4.0%
8.0%
793.91
-49.71
793.67
-43.71
793.19
-39.08
793.03
-37.54
792.15
-13.58
3.0:1
793.13
-10.63
8.0%
4.0%
793.61
-6.00
793.85
0.00
148+00
147+00
5 FT
5 FT
9
PROJECT NO: 1161-02-67
HWY: IH 39
COUNTY: COLUMBIA
CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER
SHEET 174
E
FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 043
PLOT DATE : 1/12/2021 5:34 PM
PLOT BY : WATT, TIMOTHY
PLOT NAME :
PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.
WISDOT/CADDS SHEET 49



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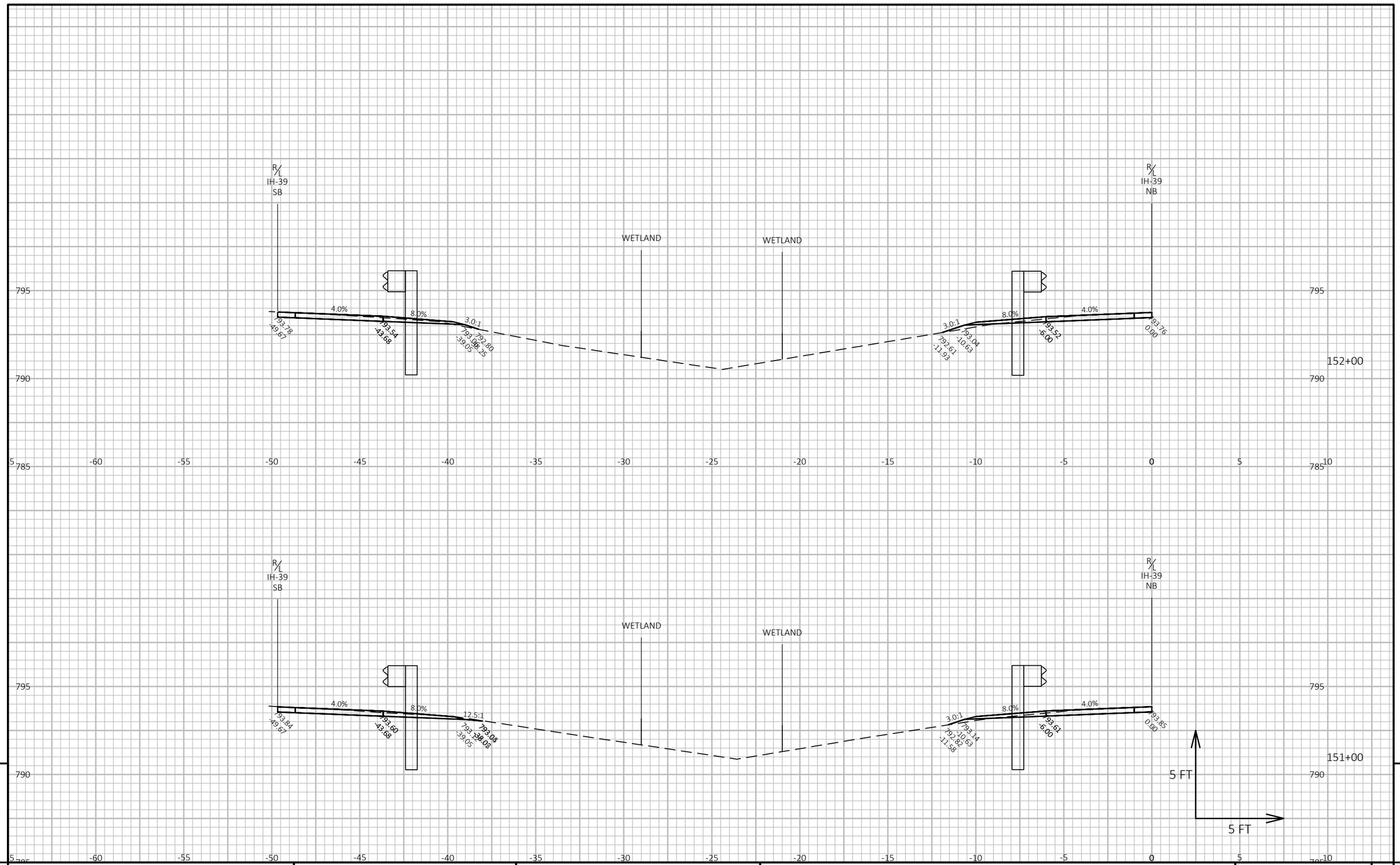
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 175	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 044

PLOT DATE : 1/12/2021 5:35 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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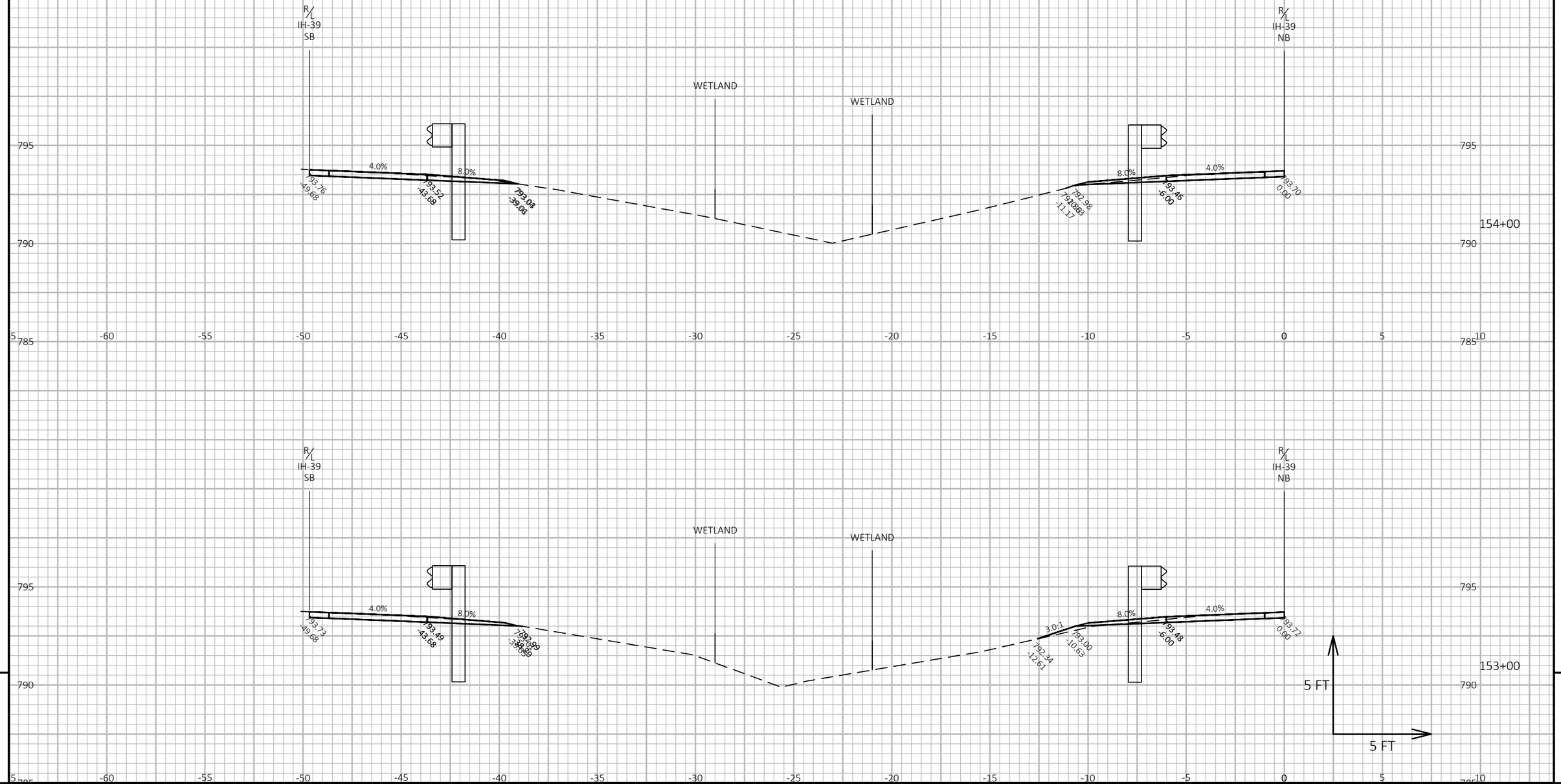
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 176	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 045

PLOT DATE : 1/12/2021 5:36 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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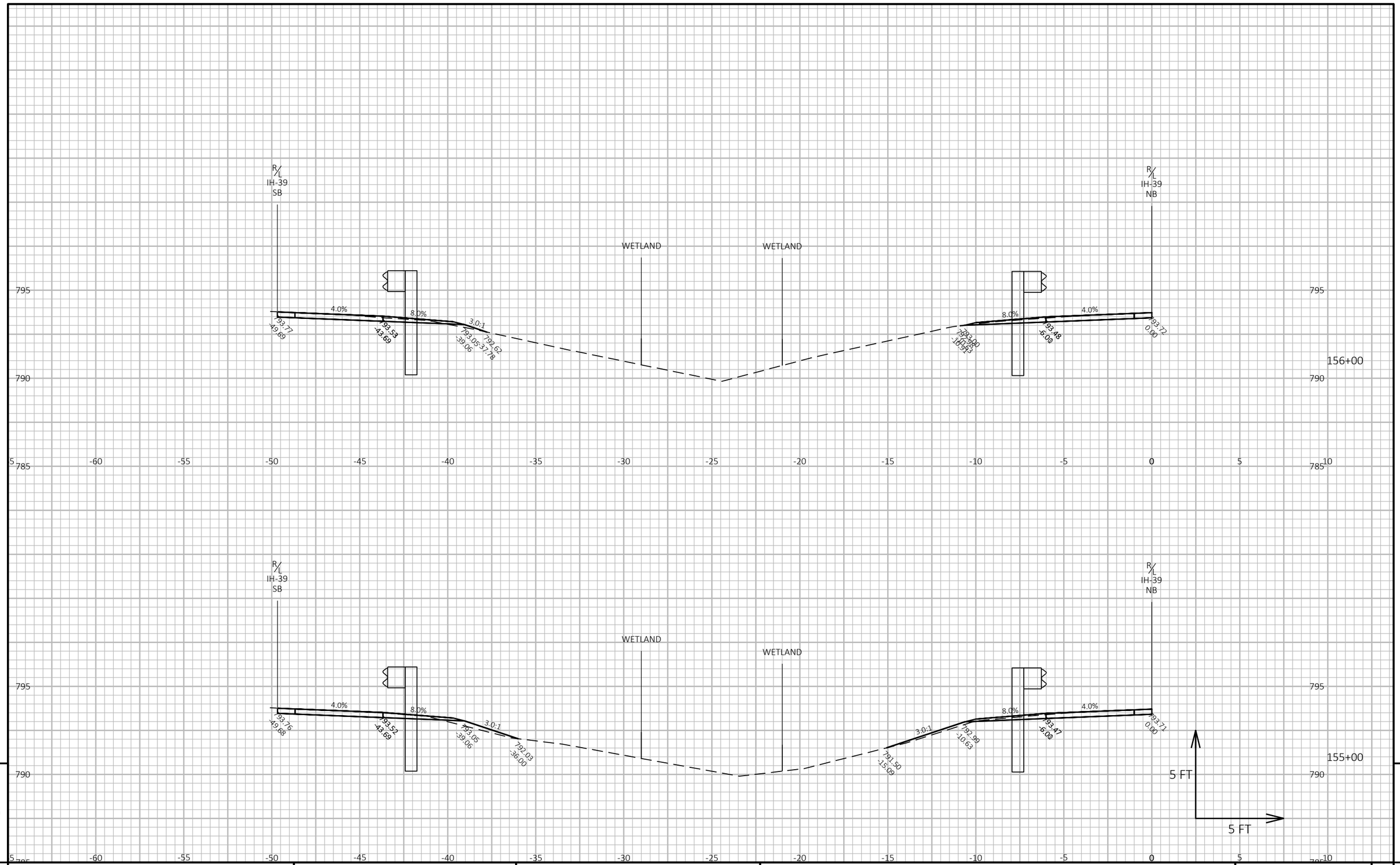
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 177	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 046

PLOT DATE : 1/12/2021 5:36 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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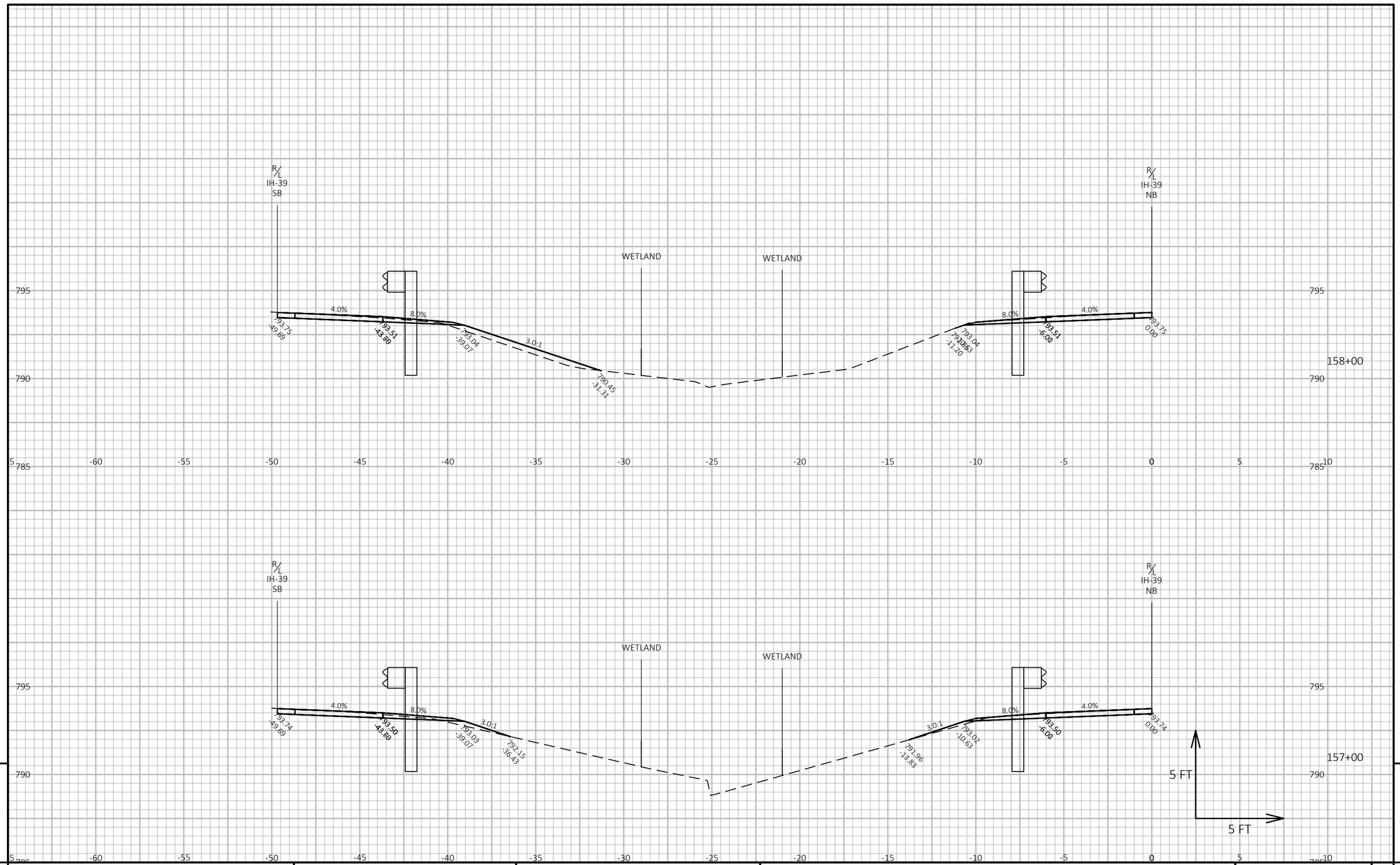
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 178	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 047

PLOT DATE : 1/12/2021 5:37 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

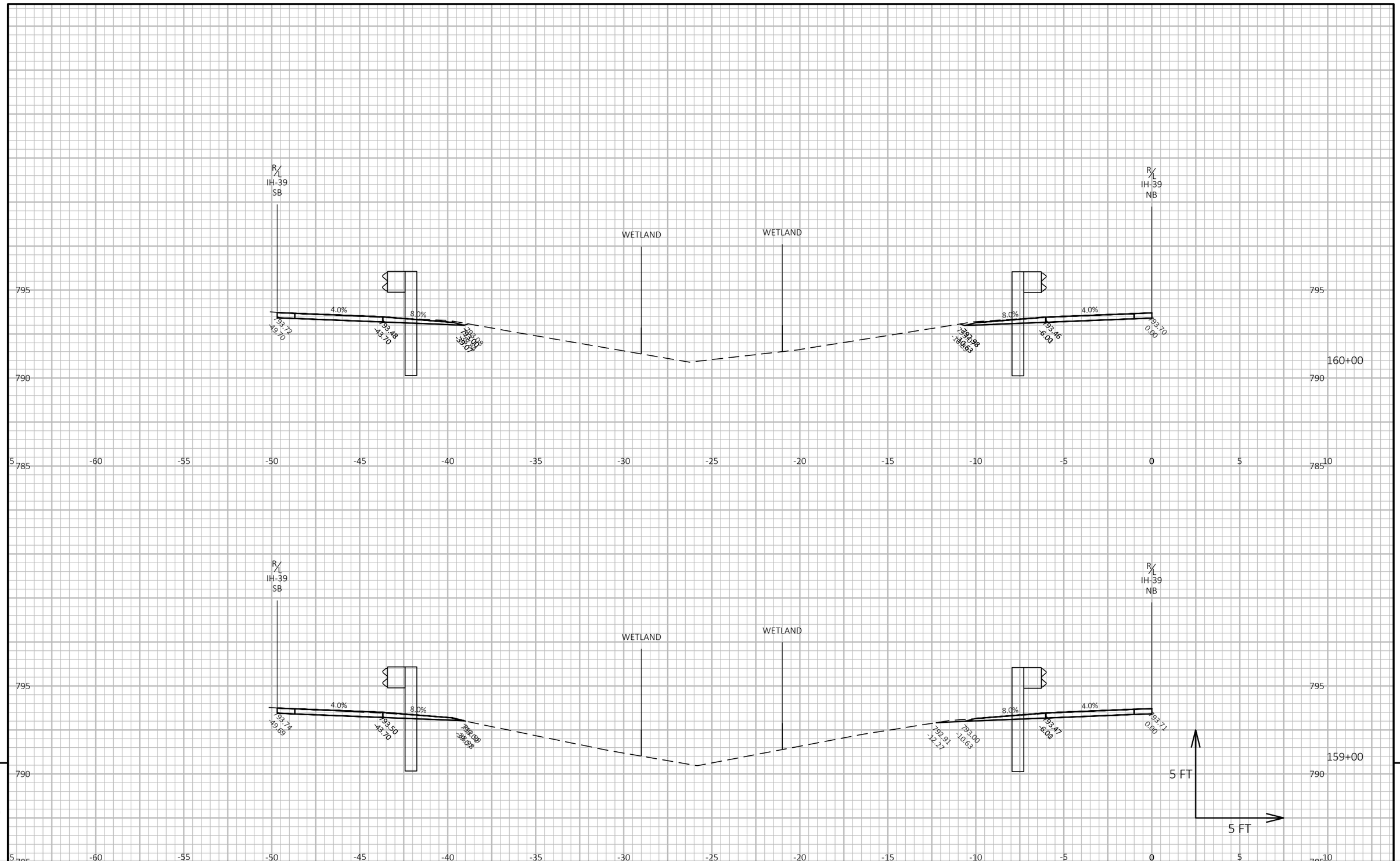


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 179	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 048

PLOT DATE : 1/12/2021 5:38 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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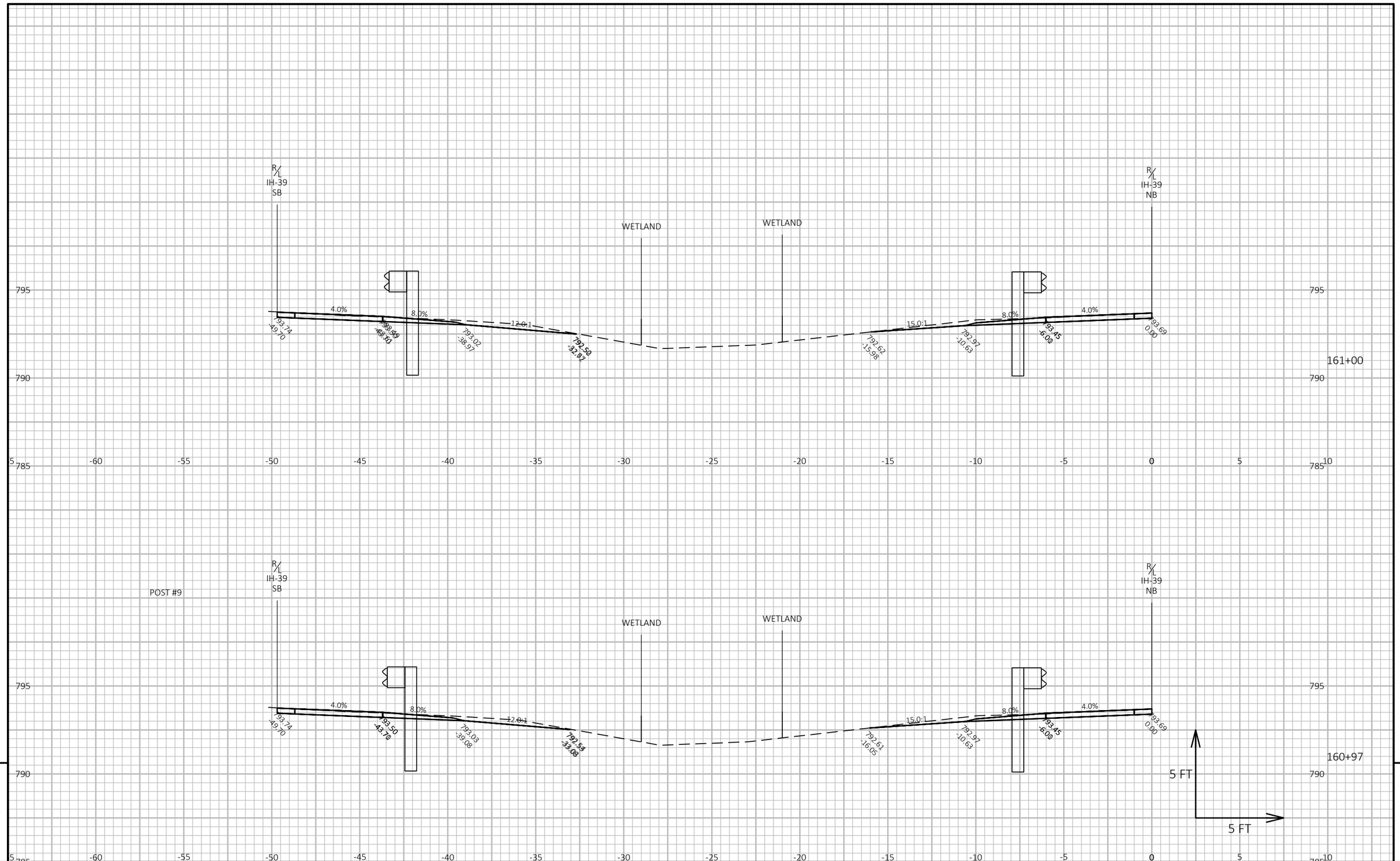
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 180	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 049

PLOT DATE : 1/12/2021 5:39 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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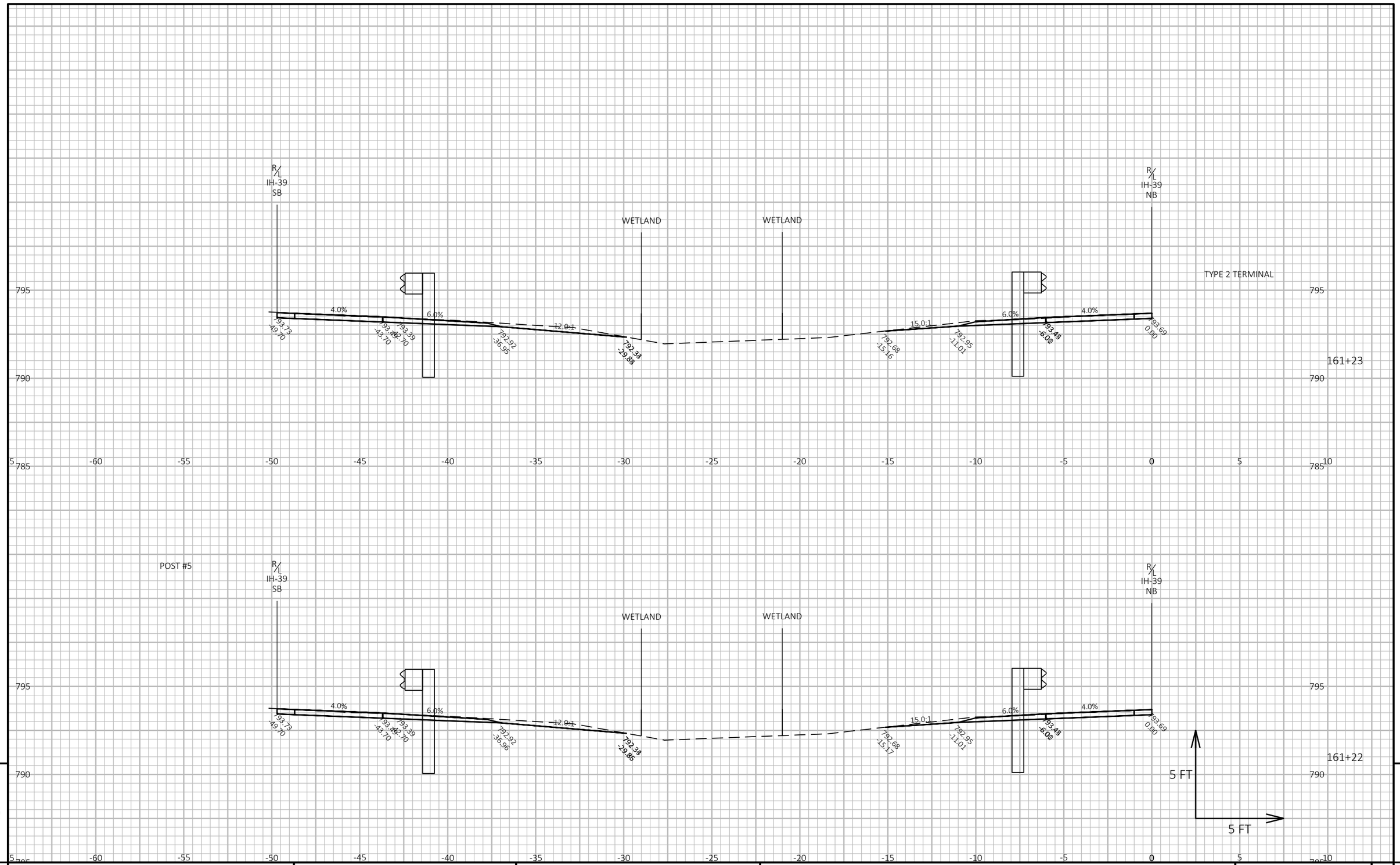
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 181	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 050

PLOT DATE : 1/12/2021 5:39 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

9

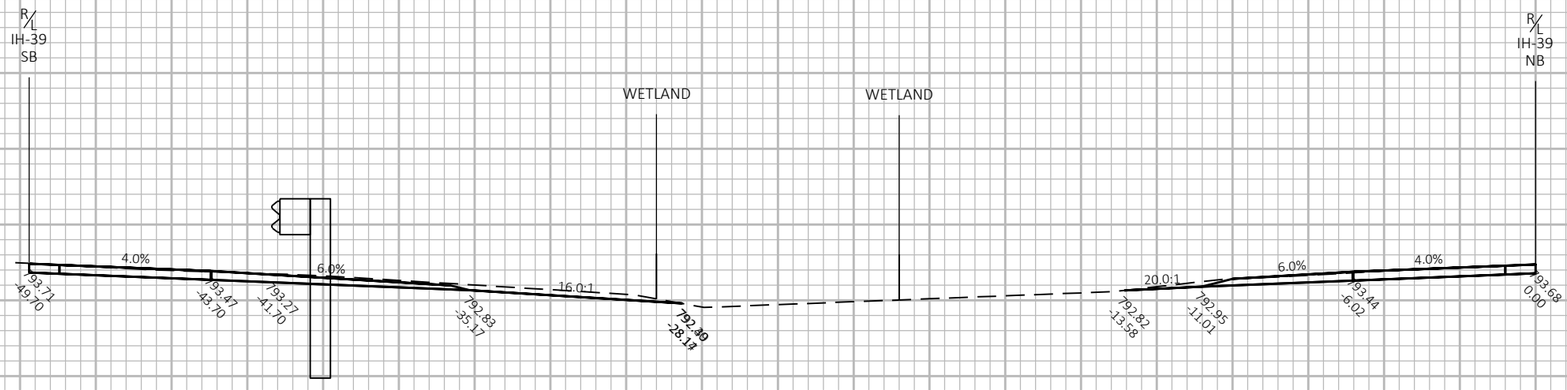
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 182	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 051

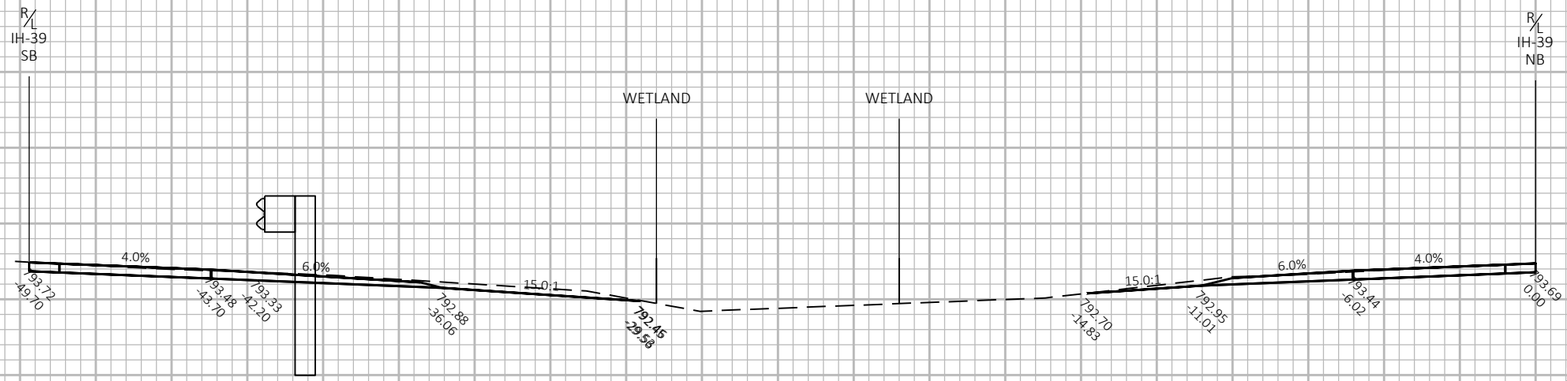
PLOT DATE : 1/12/2021 5:40 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

POST #1



POST #3



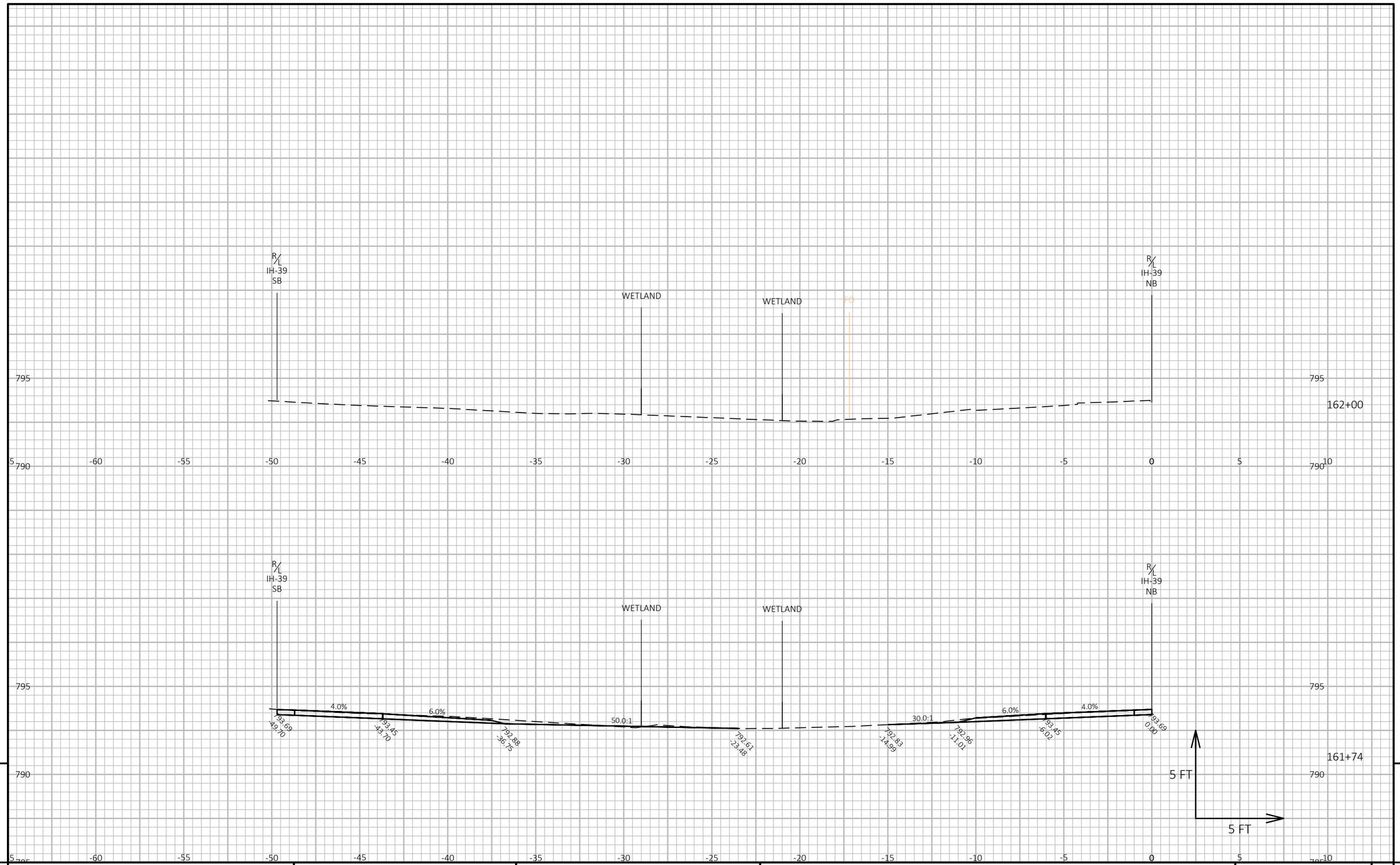
9 9

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 183	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 052

PLOT DATE : 1/12/2021 5:41 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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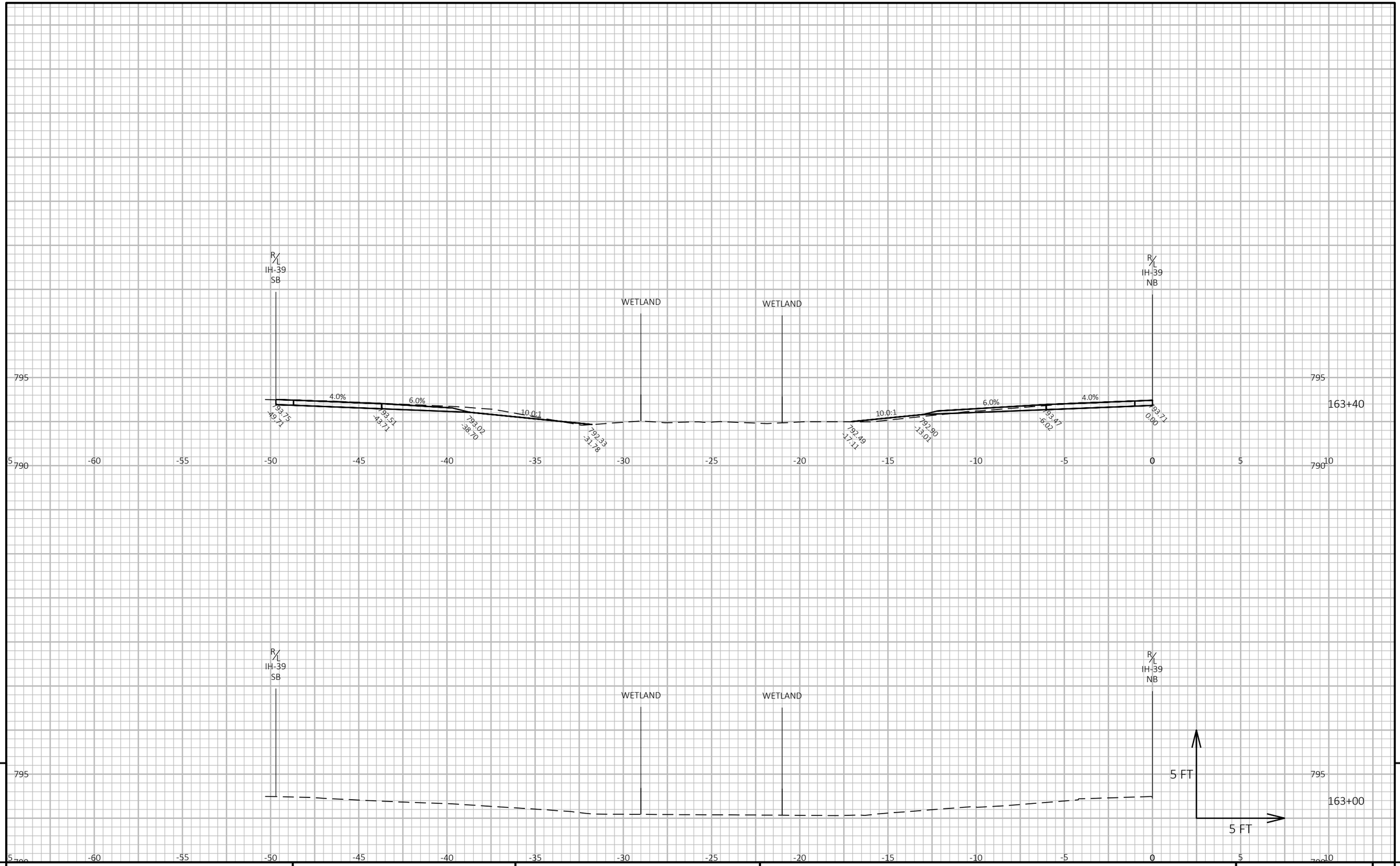
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 184	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 053

PLOT DATE : 1/12/2021 5:42 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.



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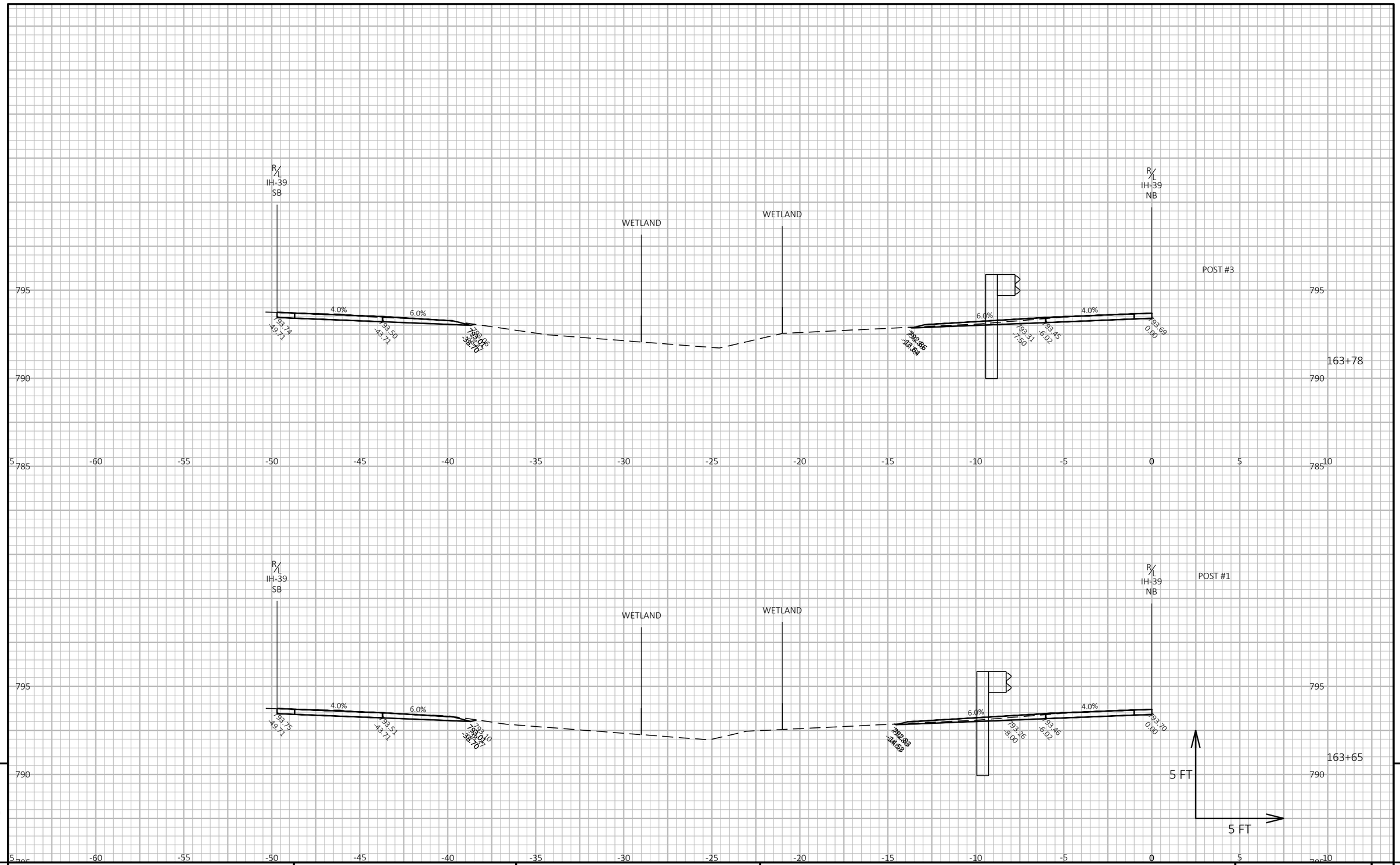
9

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 185	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 054

PLOT DATE : 1/12/2021 5:42 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

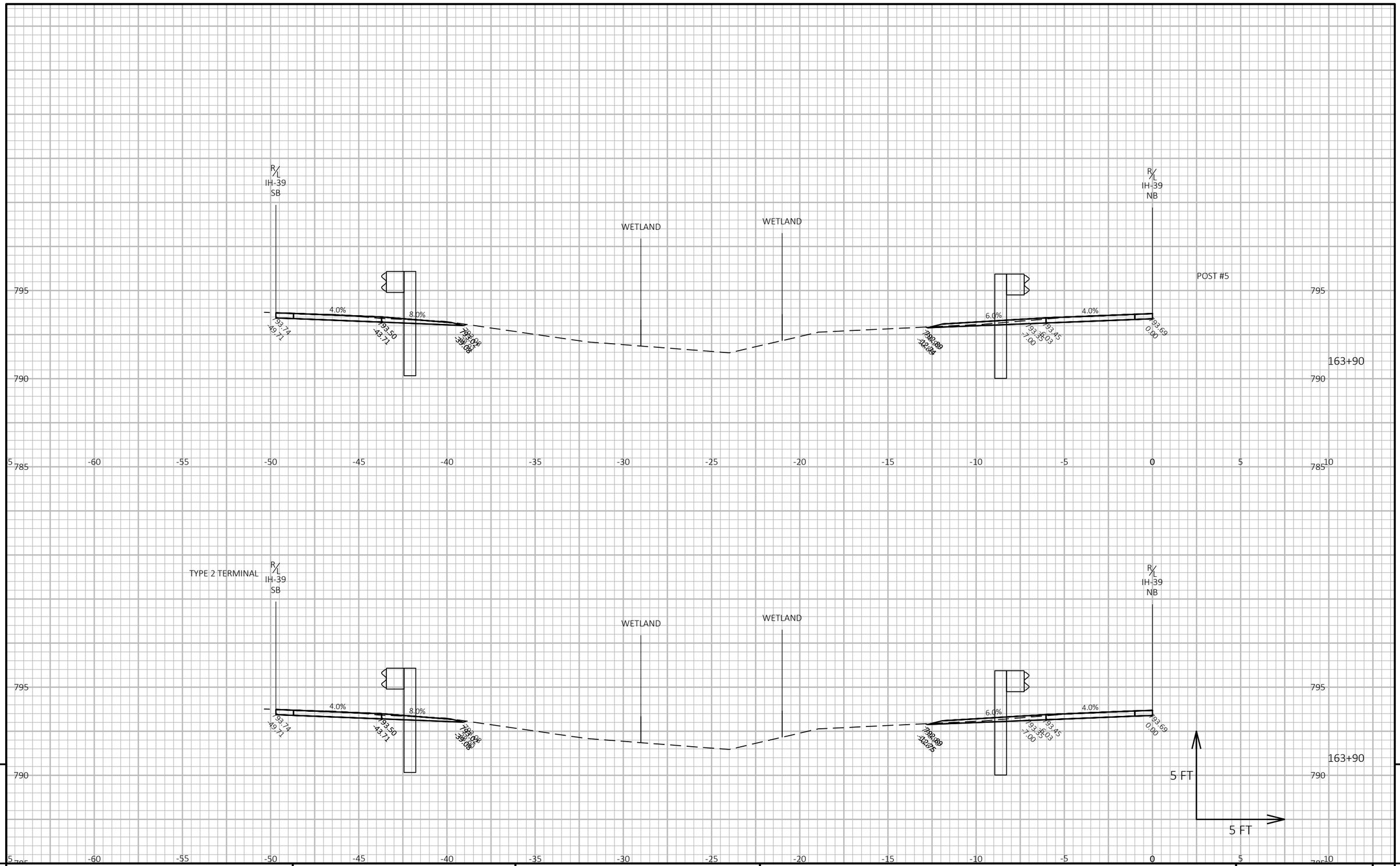
9

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 186	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 055

PLOT DATE : 1/12/2021 5:43 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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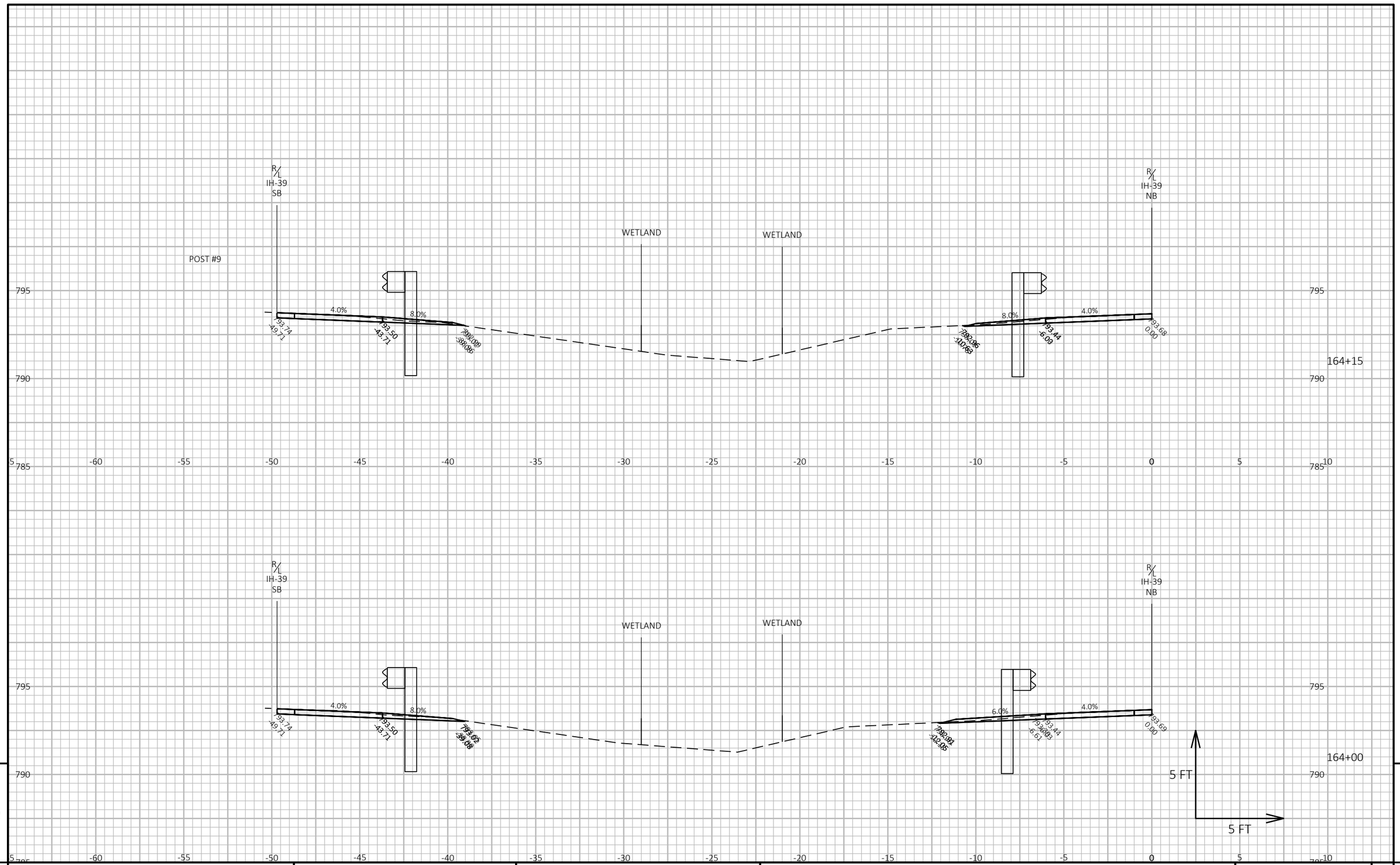
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 187	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 056

PLOT DATE : 1/12/2021 5:44 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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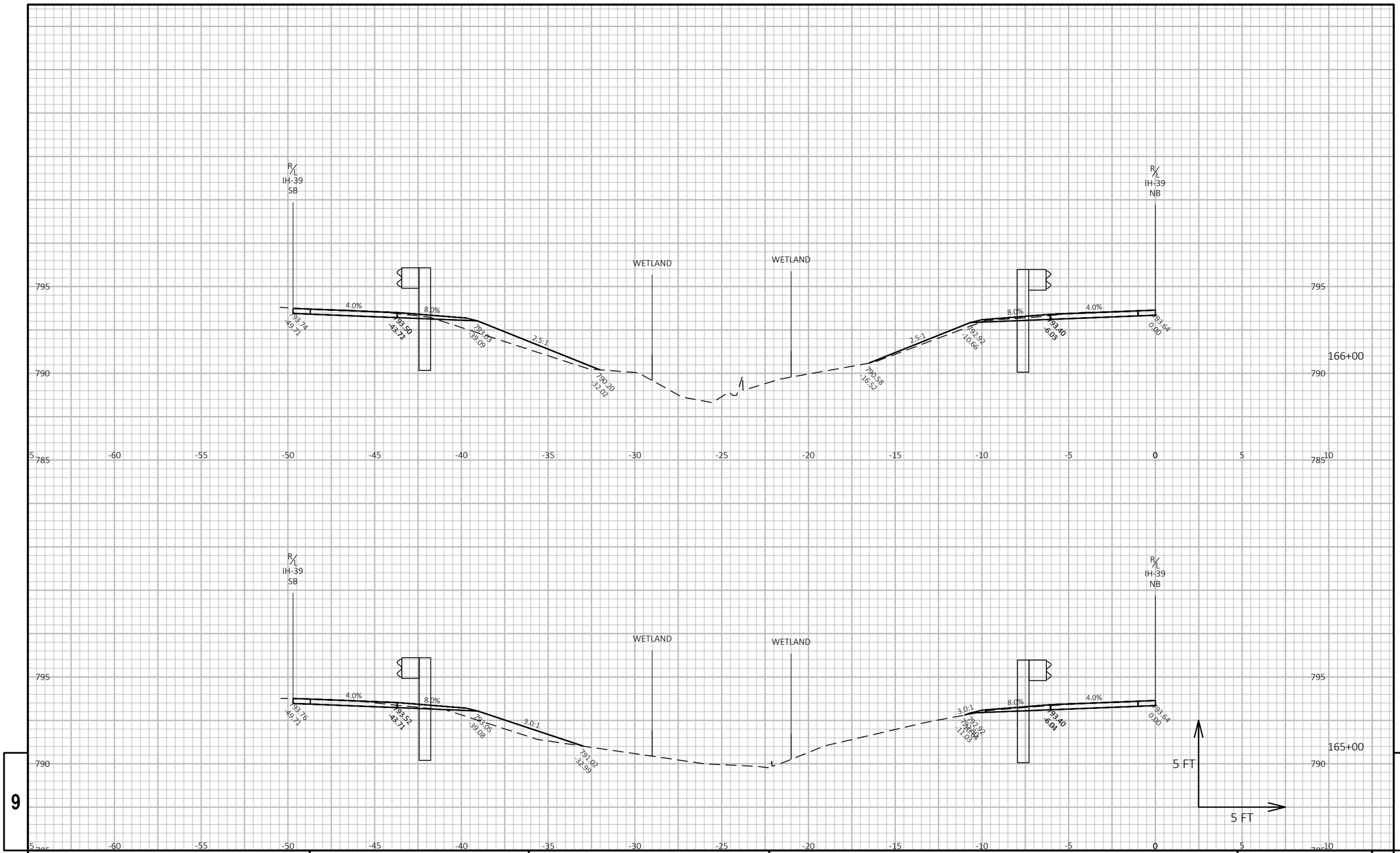
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 188	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 057

PLOT DATE : 1/12/2021 5:44 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

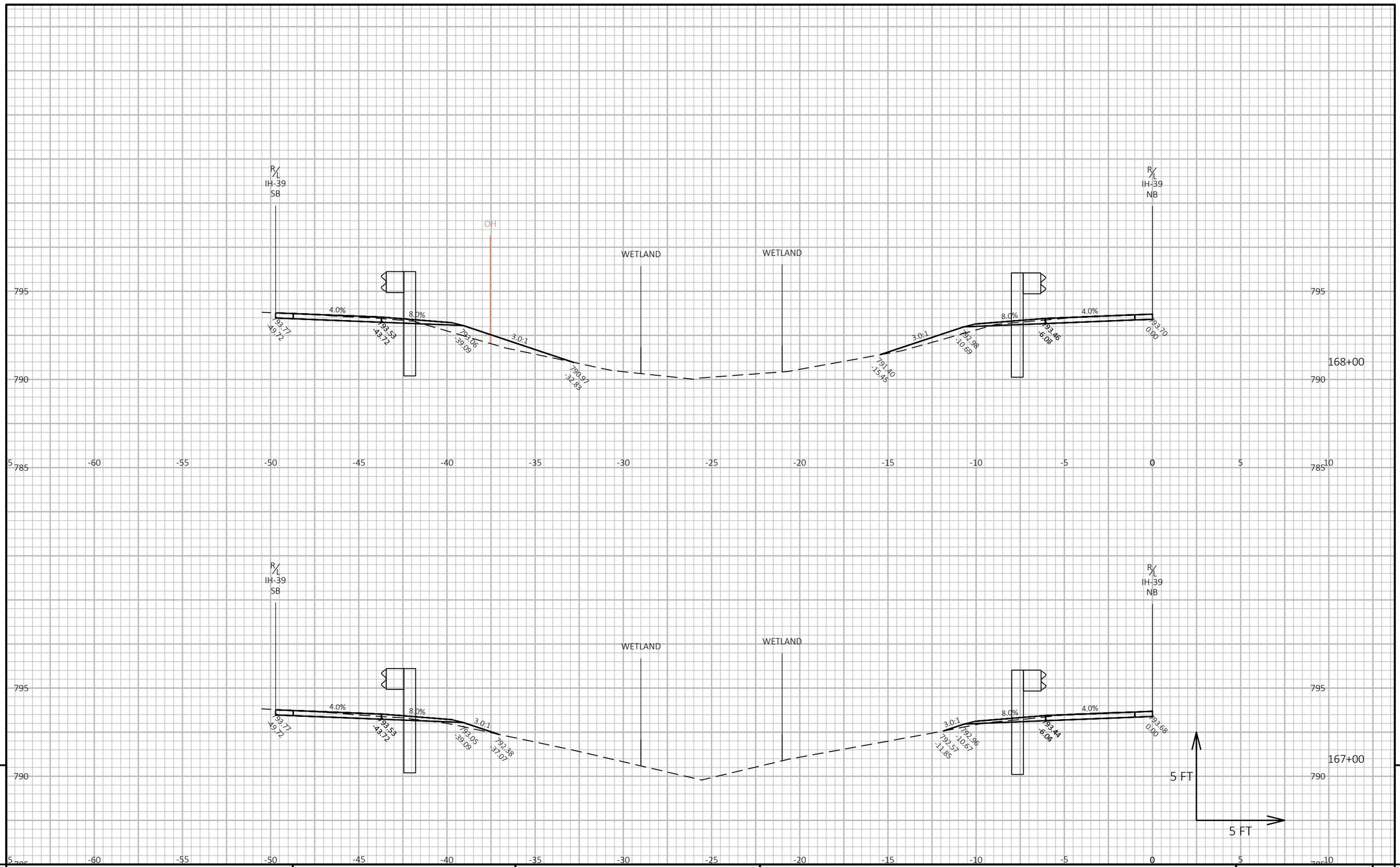


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 189 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 058

PLOT DATE : 1/12/2021 5:45 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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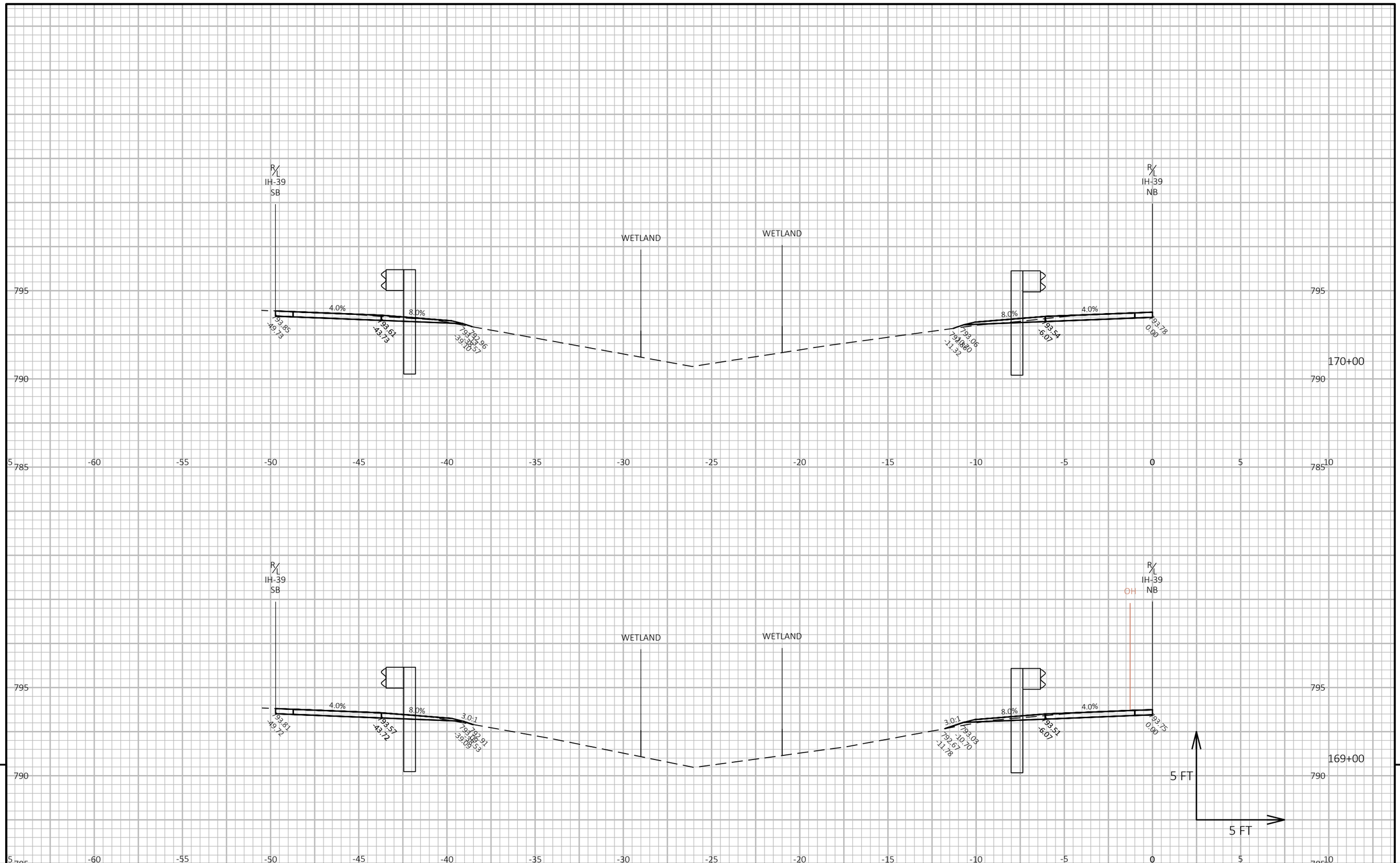
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 190	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 059

PLOT DATE : 1/12/2021 5:46 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.



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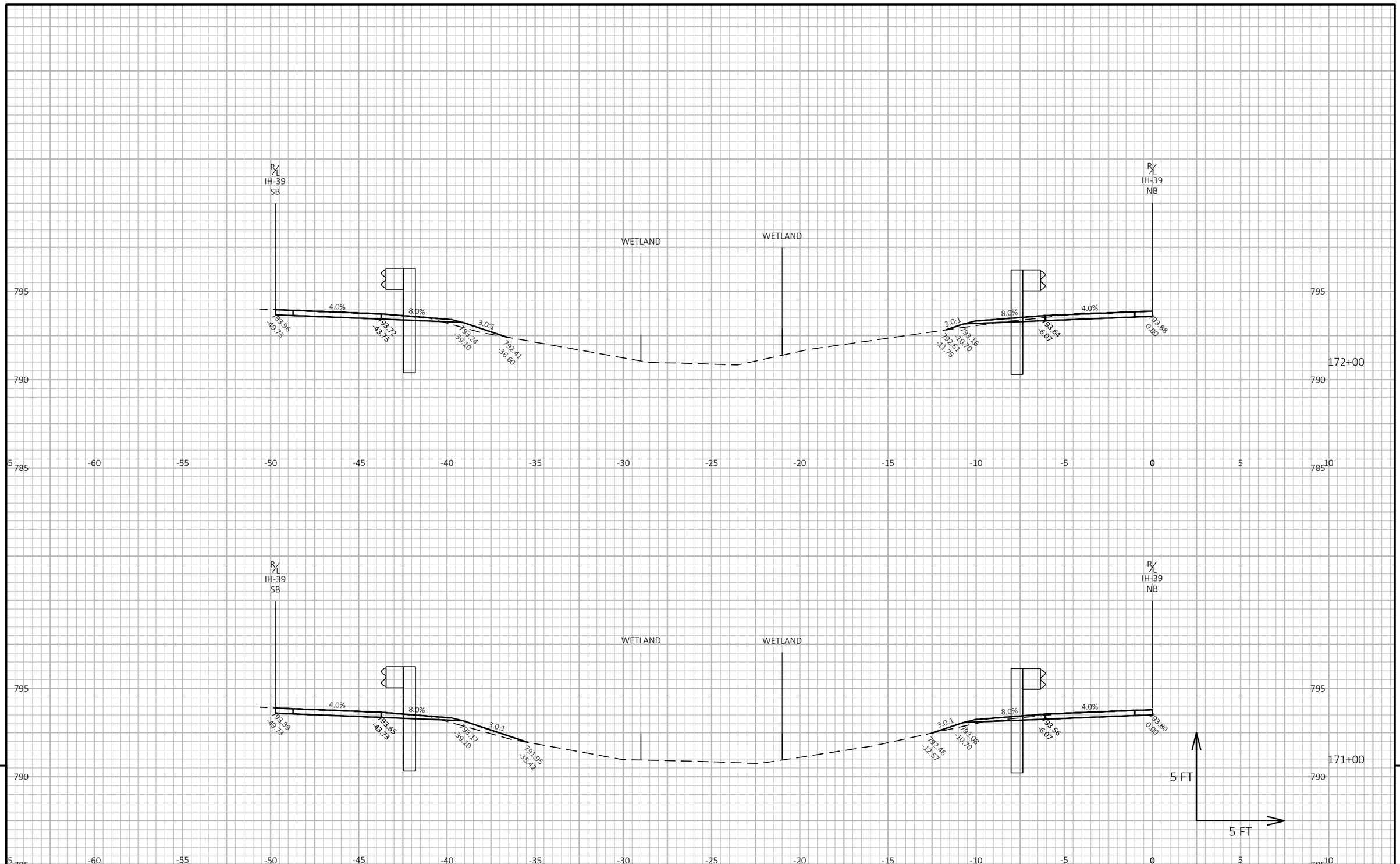
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 191	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 060

PLOT DATE : 1/12/2021 5:47 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

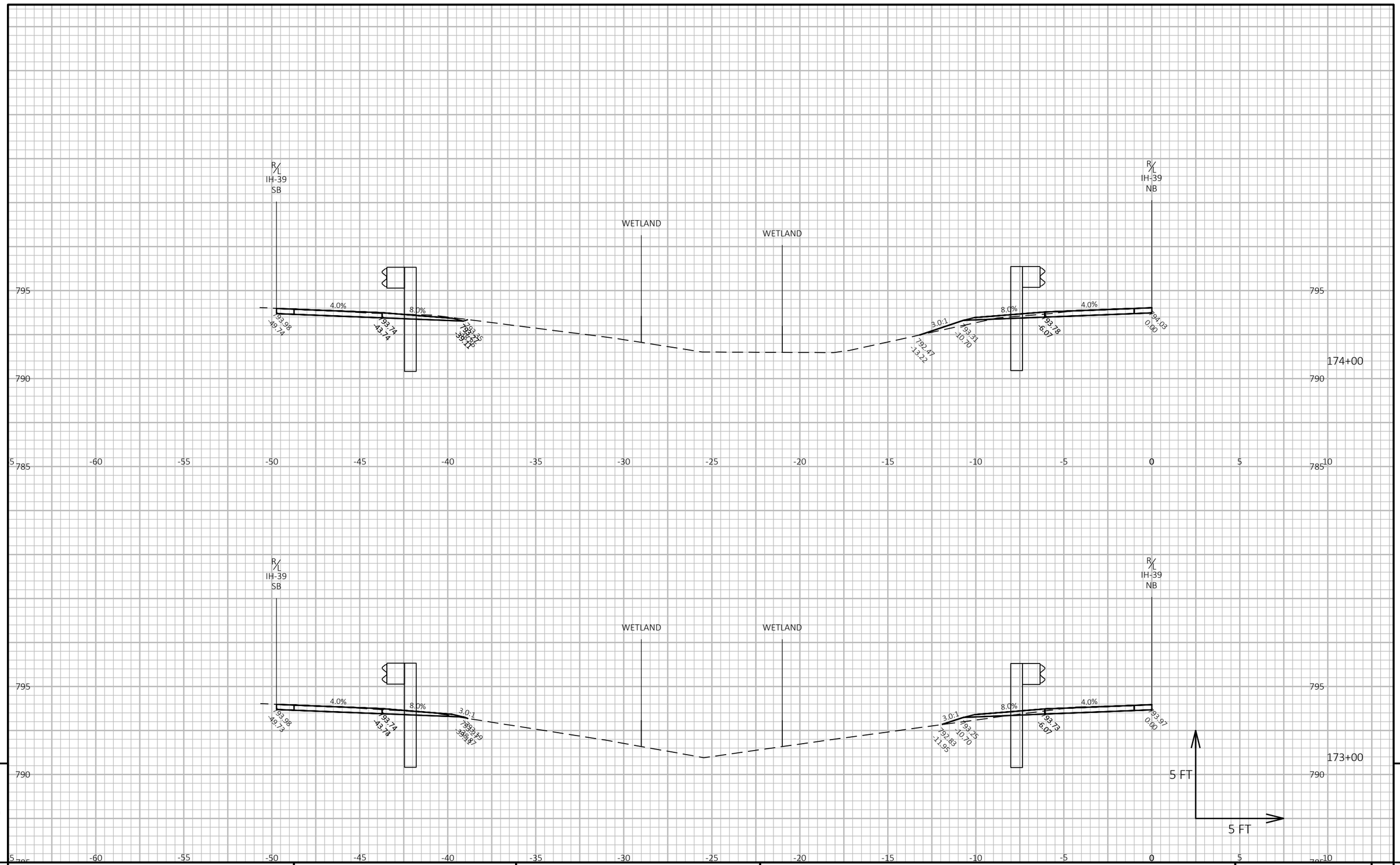


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 192 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 061

PLOT DATE : 1/12/2021 5:47 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

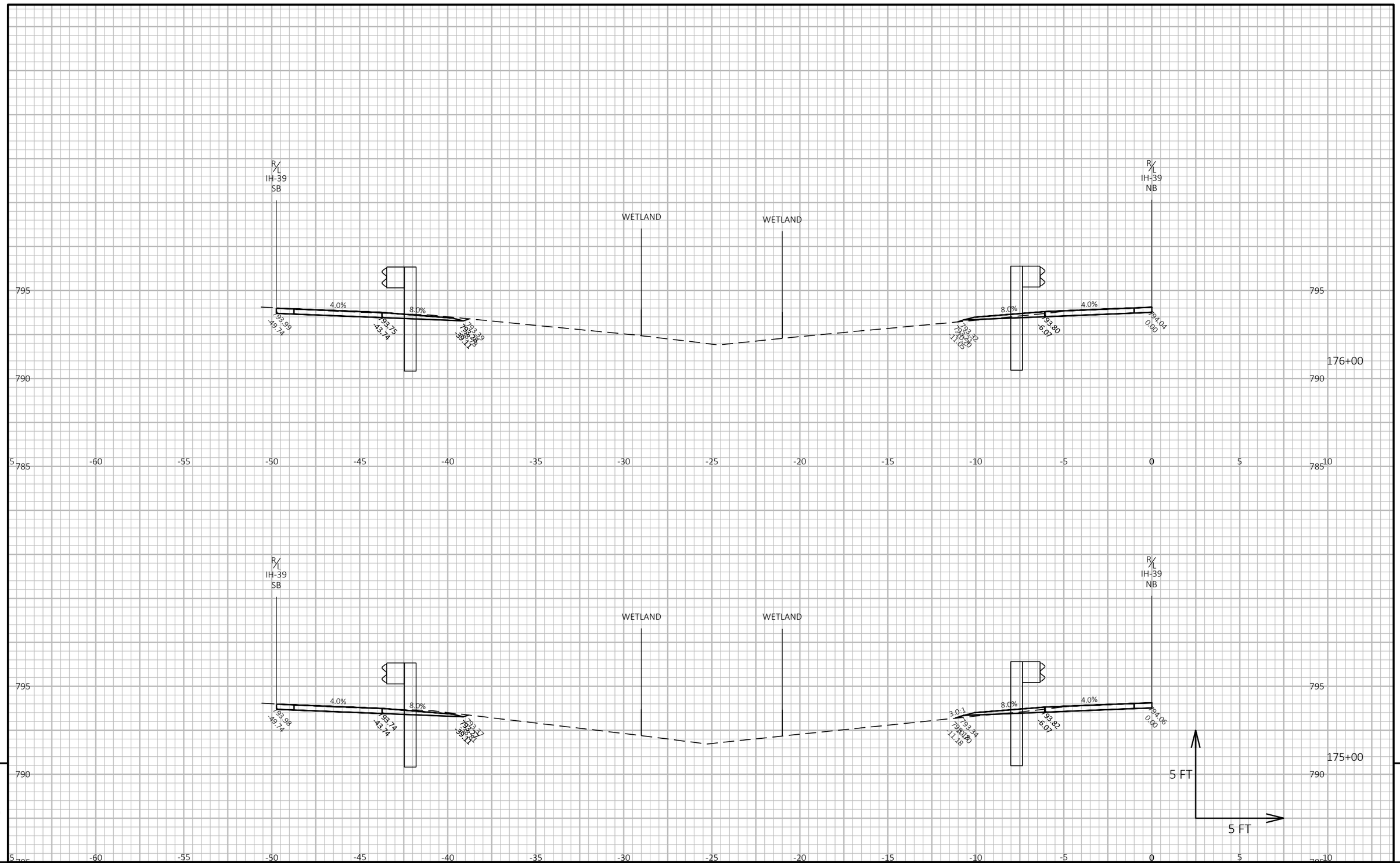


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 193 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 062

PLOT DATE : 1/12/2021 5:48 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

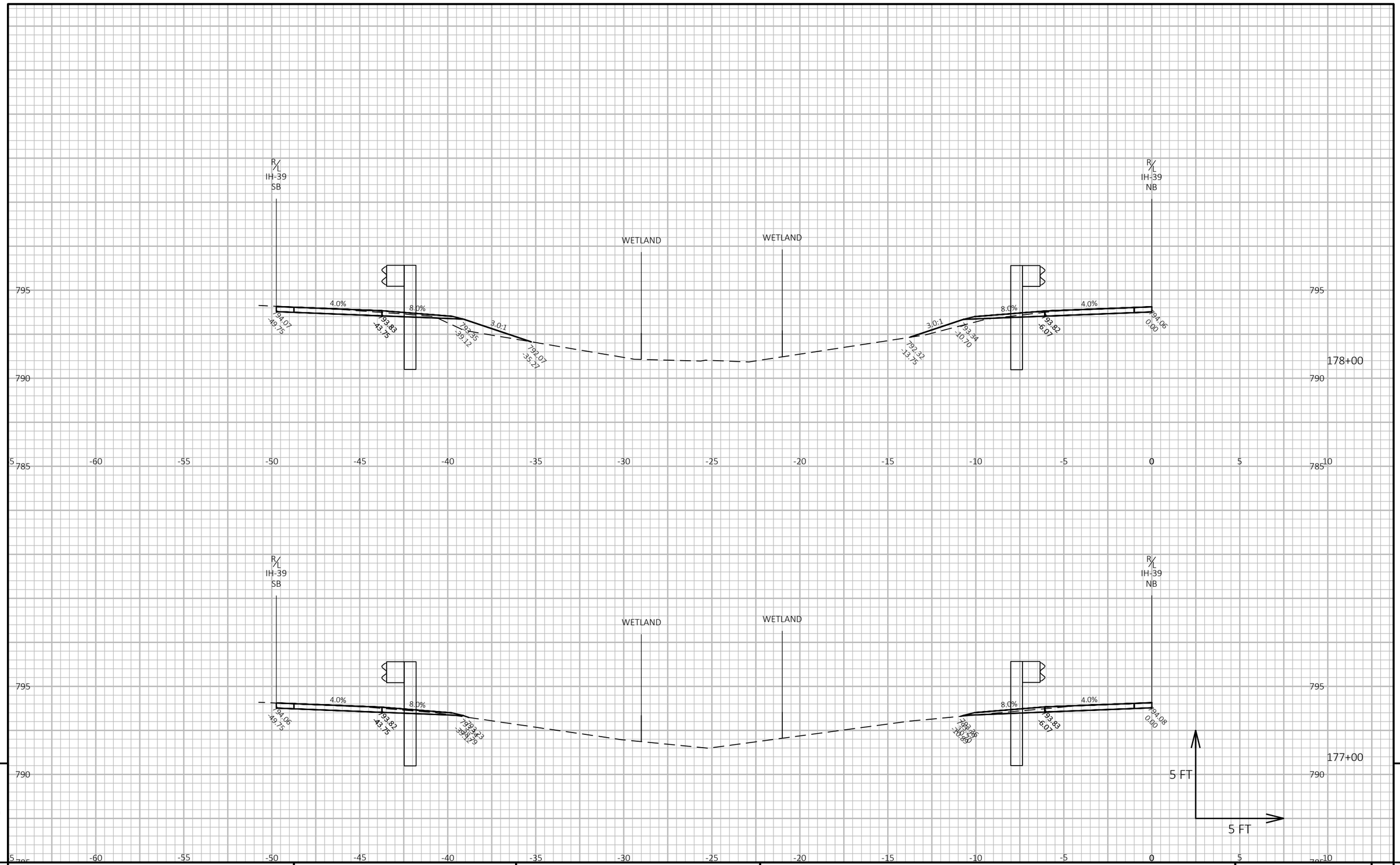


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 194 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 063

PLOT DATE : 1/12/2021 5:49 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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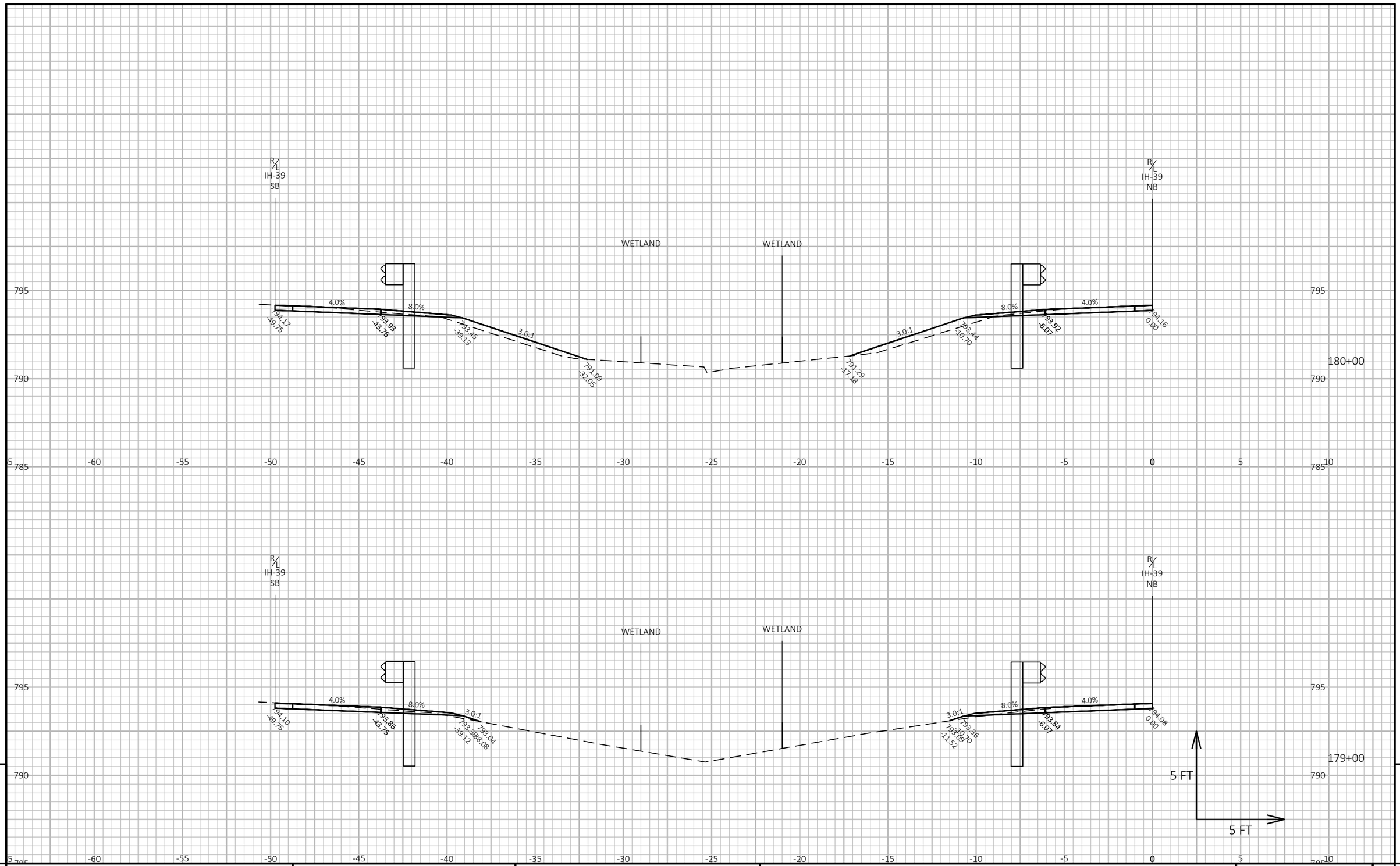
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 195	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 064

PLOT DATE : 1/12/2021 5:50 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

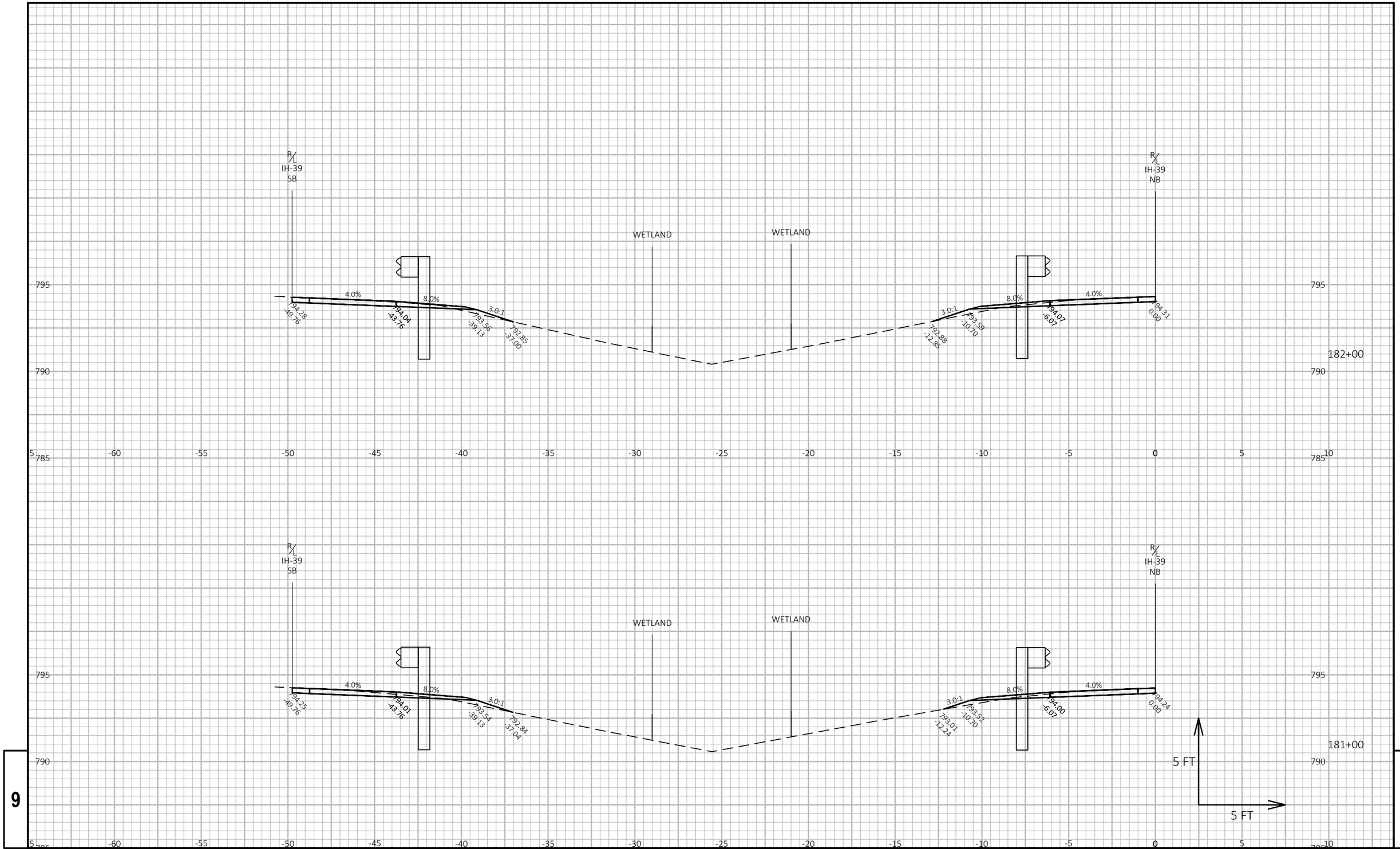


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 196 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 065

PLOT DATE : 1/12/2021 5:50 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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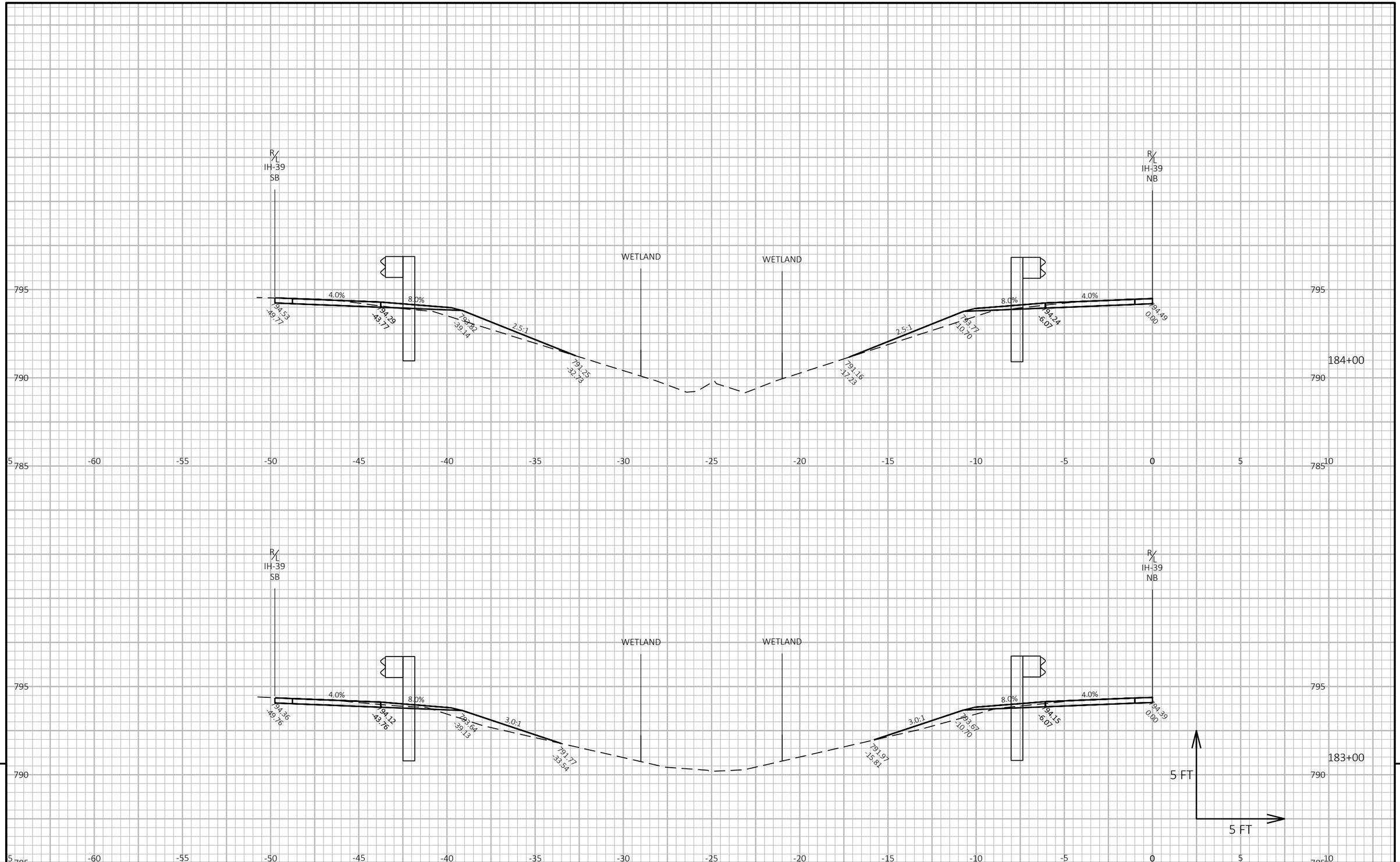
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 197	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 066

PLOT DATE : 1/12/2021 5:51 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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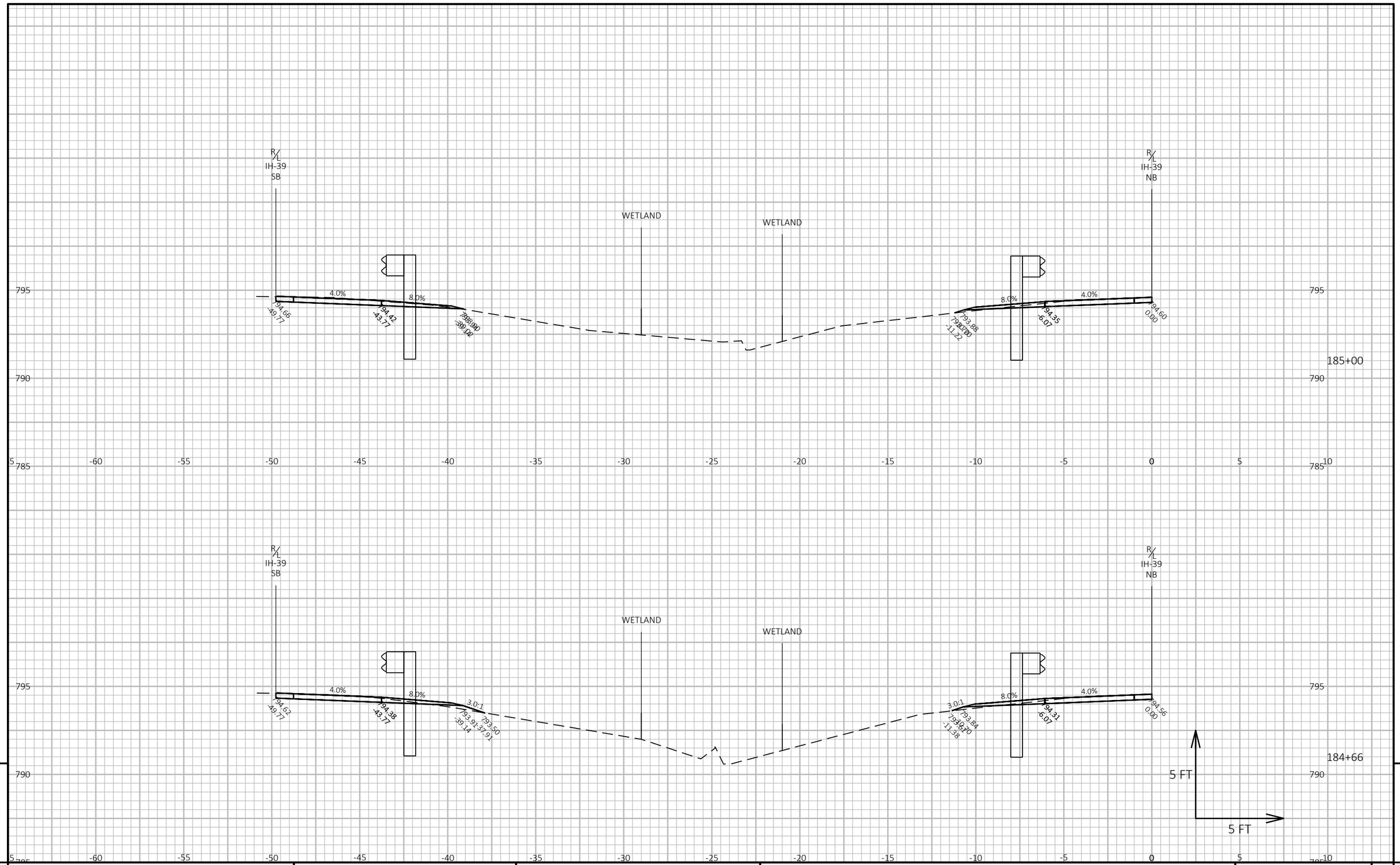
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 198	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 067

PLOT DATE : 1/12/2021 5:52 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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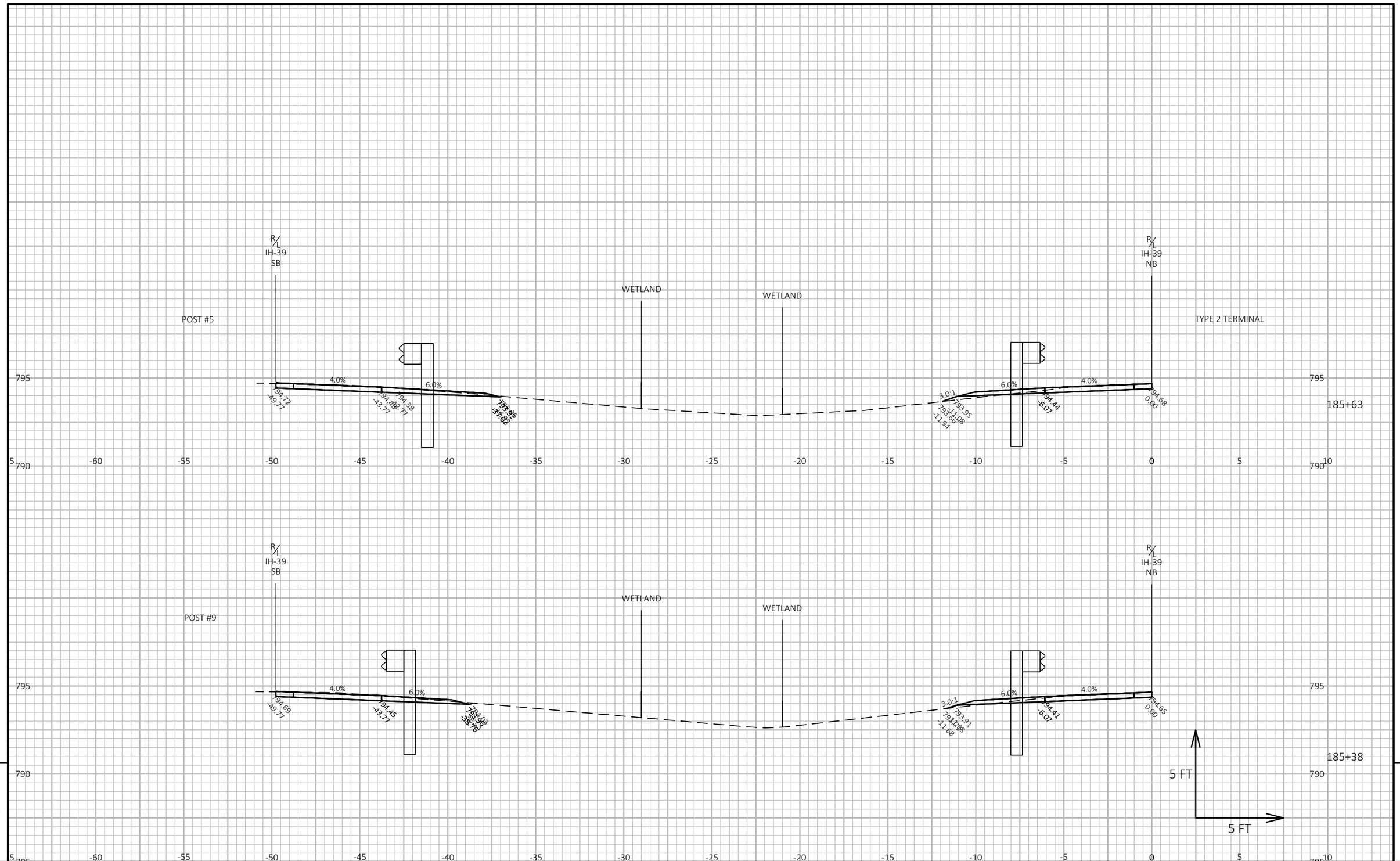
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 199	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 068

PLOT DATE : 1/12/2021 5:53 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

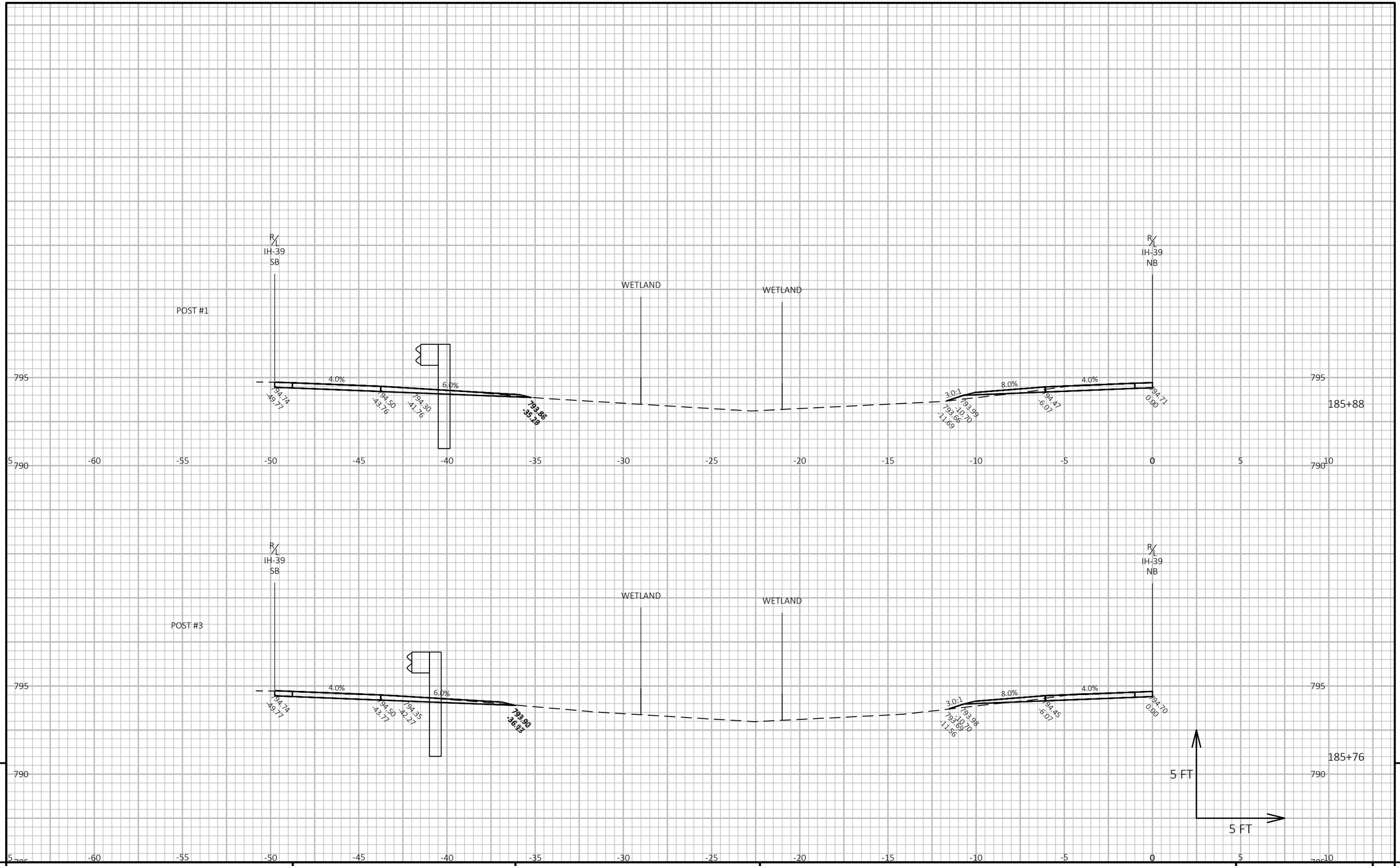


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 200	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 069

PLOT DATE : 1/12/2021 5:53 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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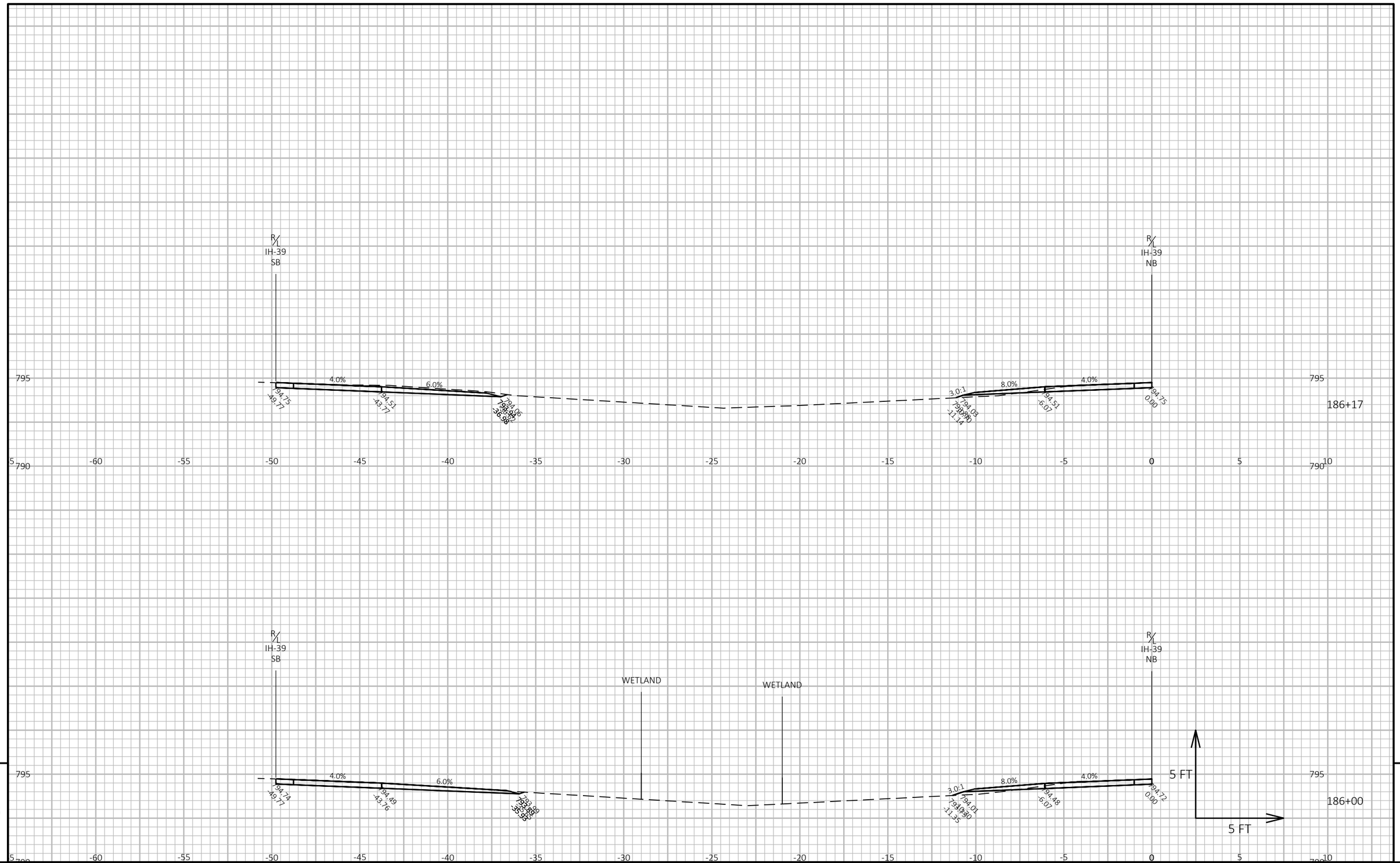
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 201	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 070
PLOT DATE : 1/12/2021 5:54 PM
PLOT BY : WATT, TIMOTHY
PLOT NAME :
PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.
WISDOT/CADDS SHEET 49



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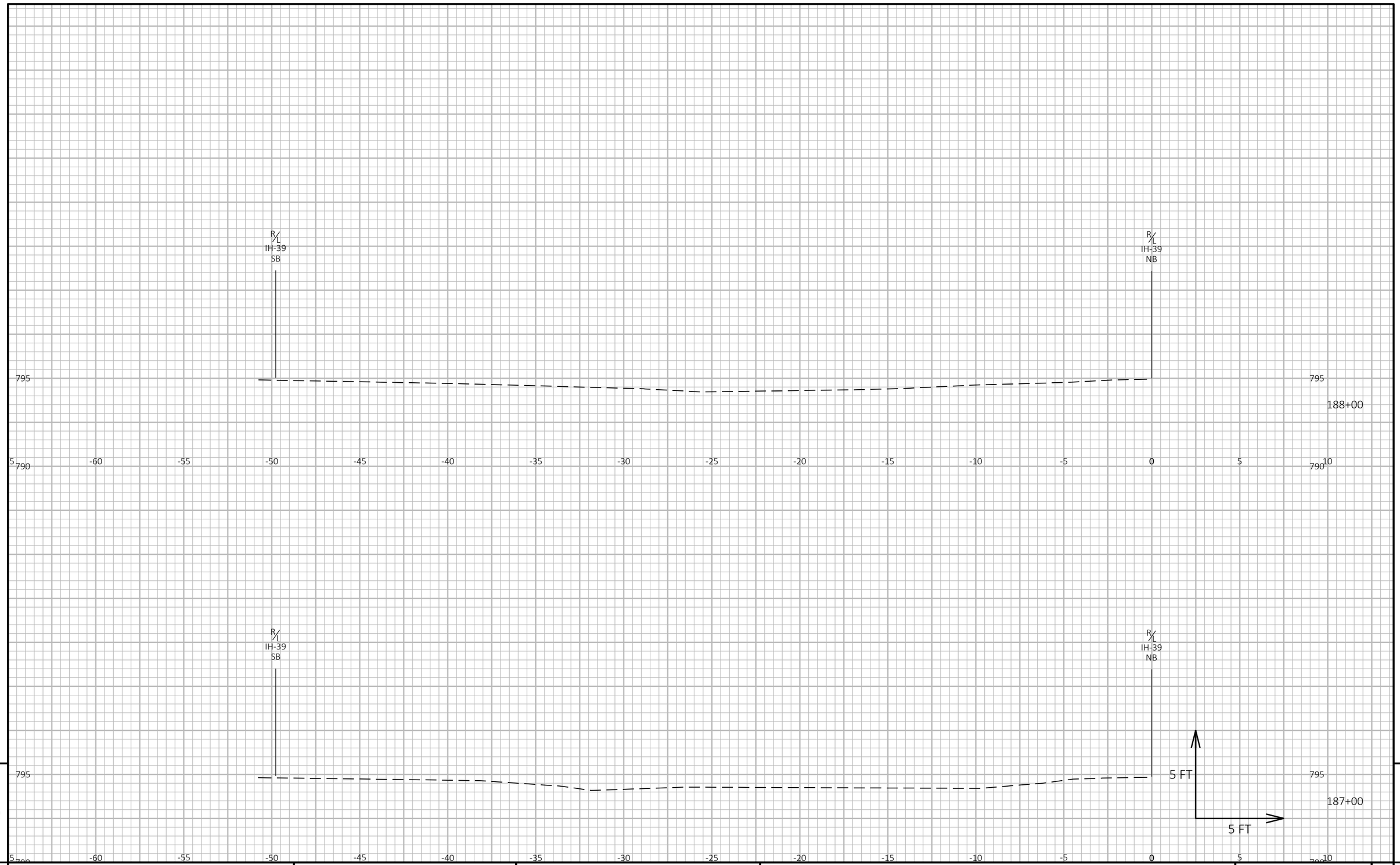
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 202	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 071

PLOT DATE : 1/12/2021 5:55 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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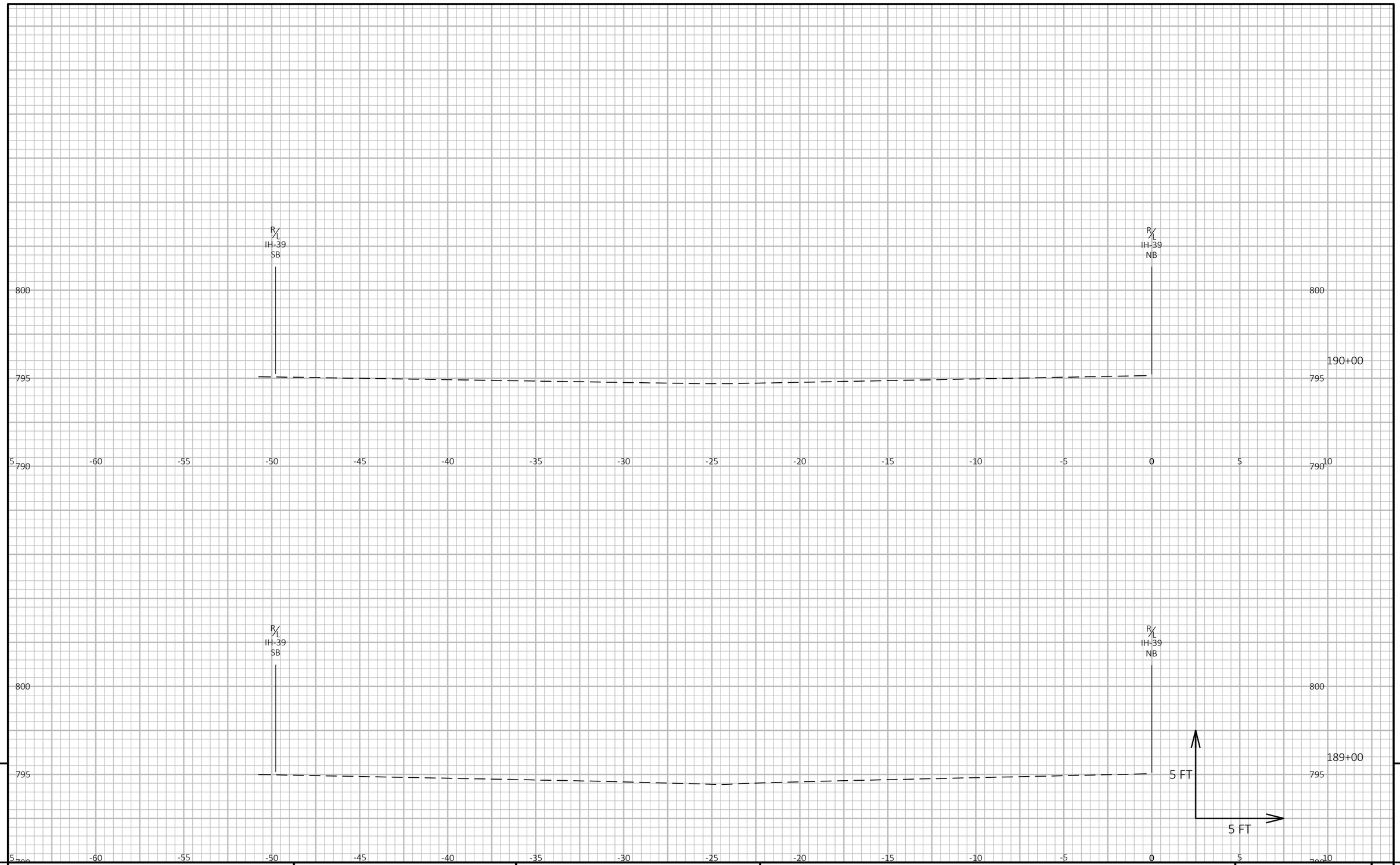
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 203	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 072

PLOT DATE : 1/12/2021 5:56 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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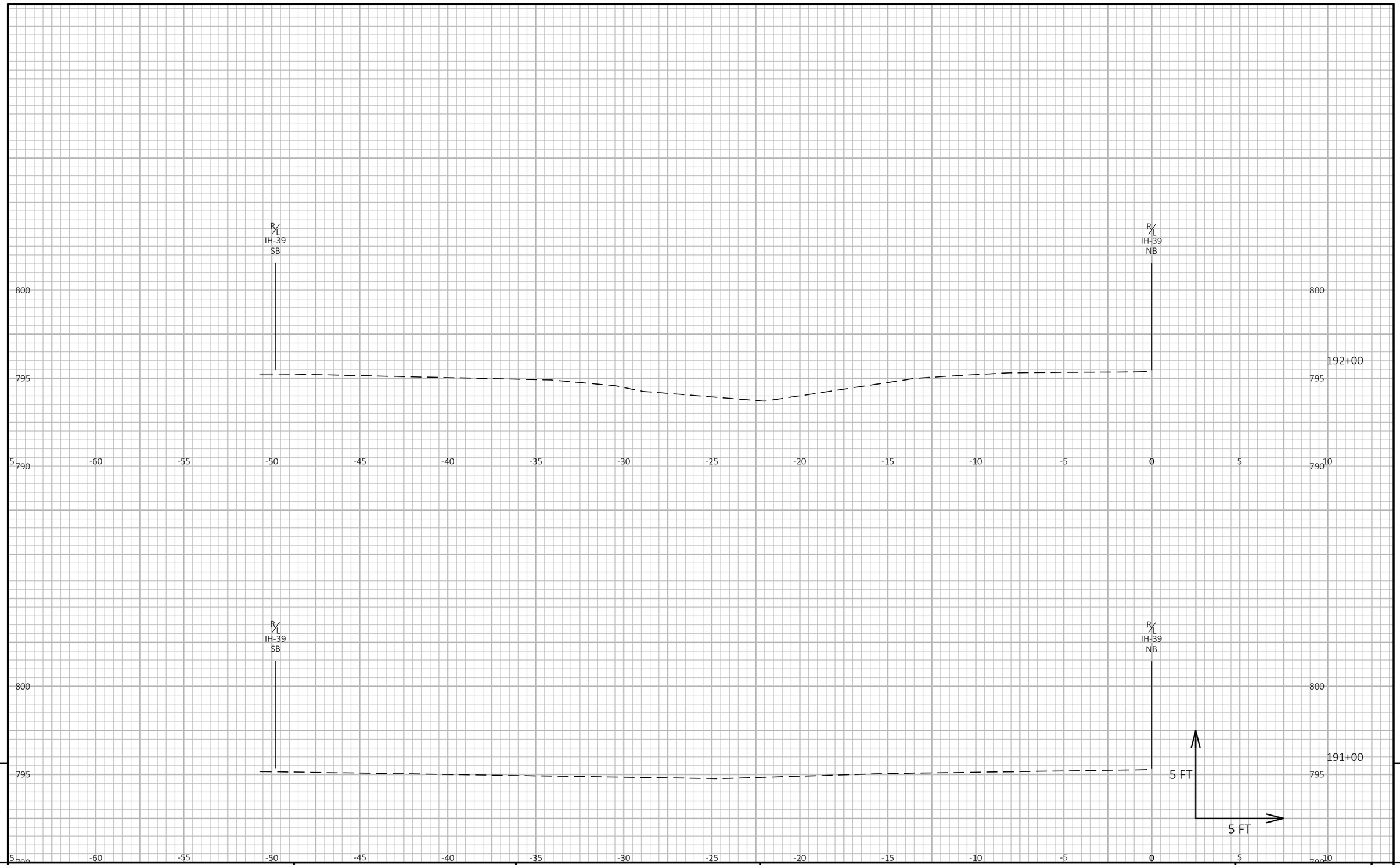
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 204	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 073

PLOT DATE : 1/12/2021 5:57 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.



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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 205	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 074

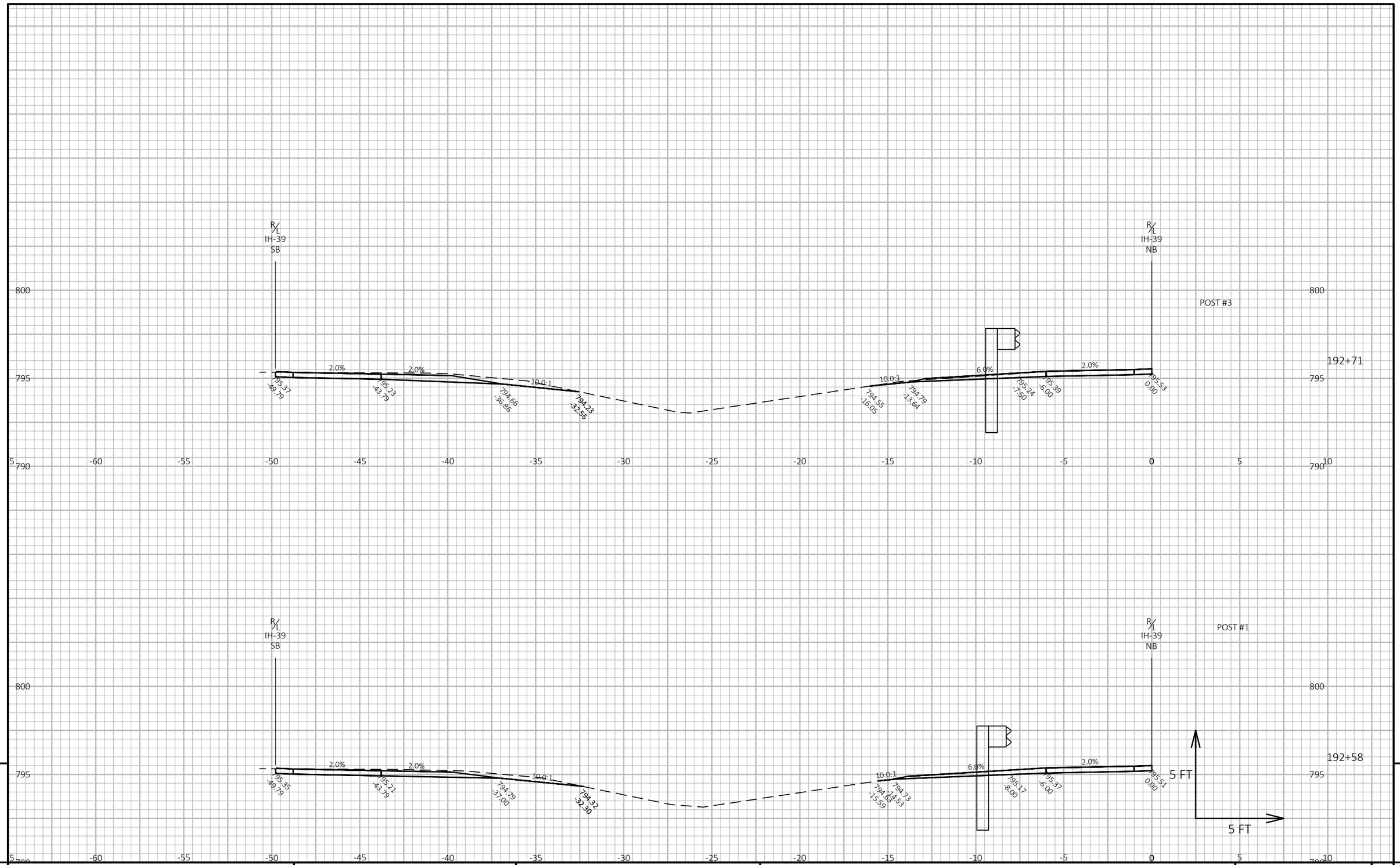
PLOT DATE : 1/12/2021 5:57 PM

PLOT BY : WATT, TIMOTHY

PLOT NAME :

PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

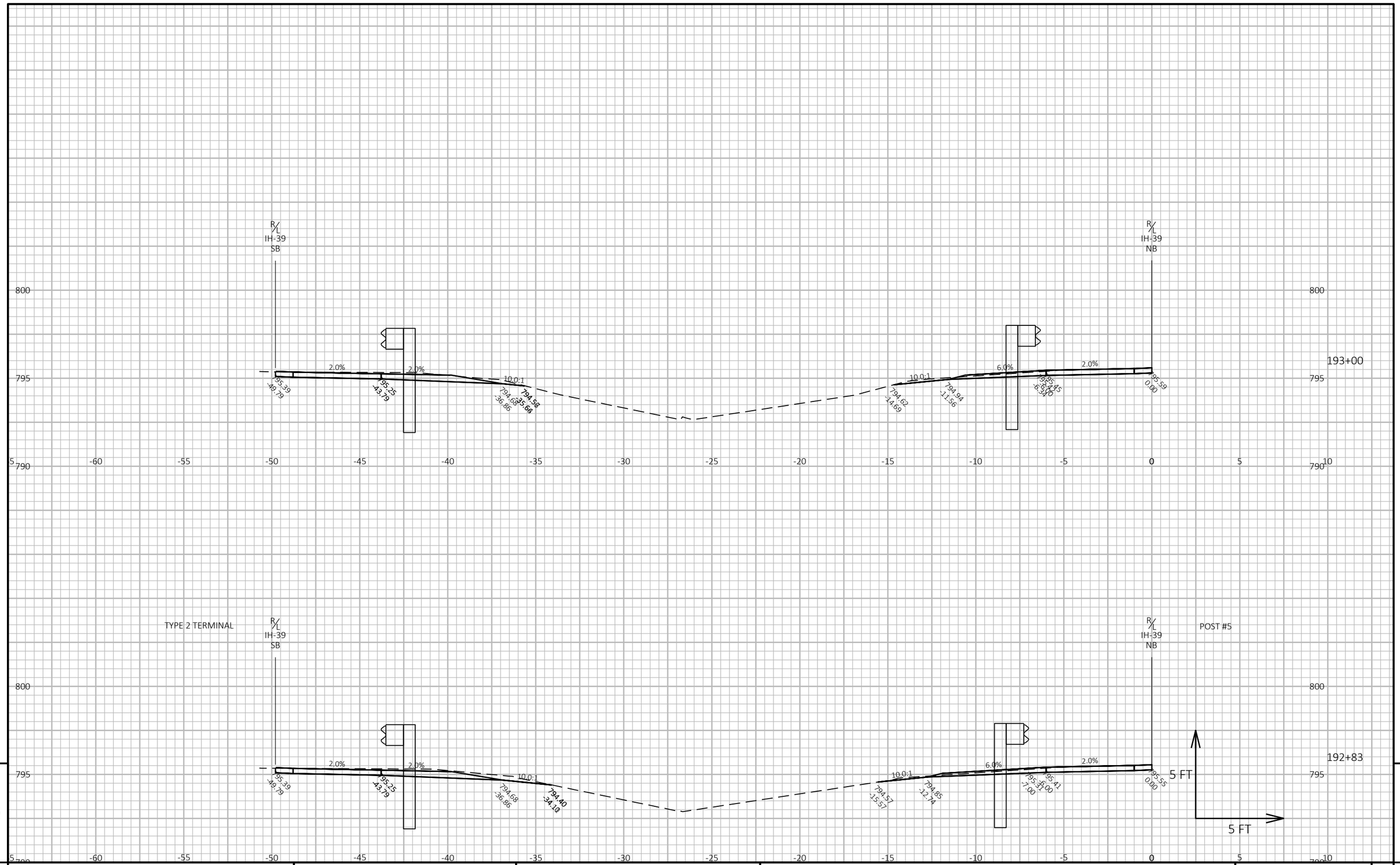


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 206 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 075

PLOT DATE : 1/12/2021 5:58 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

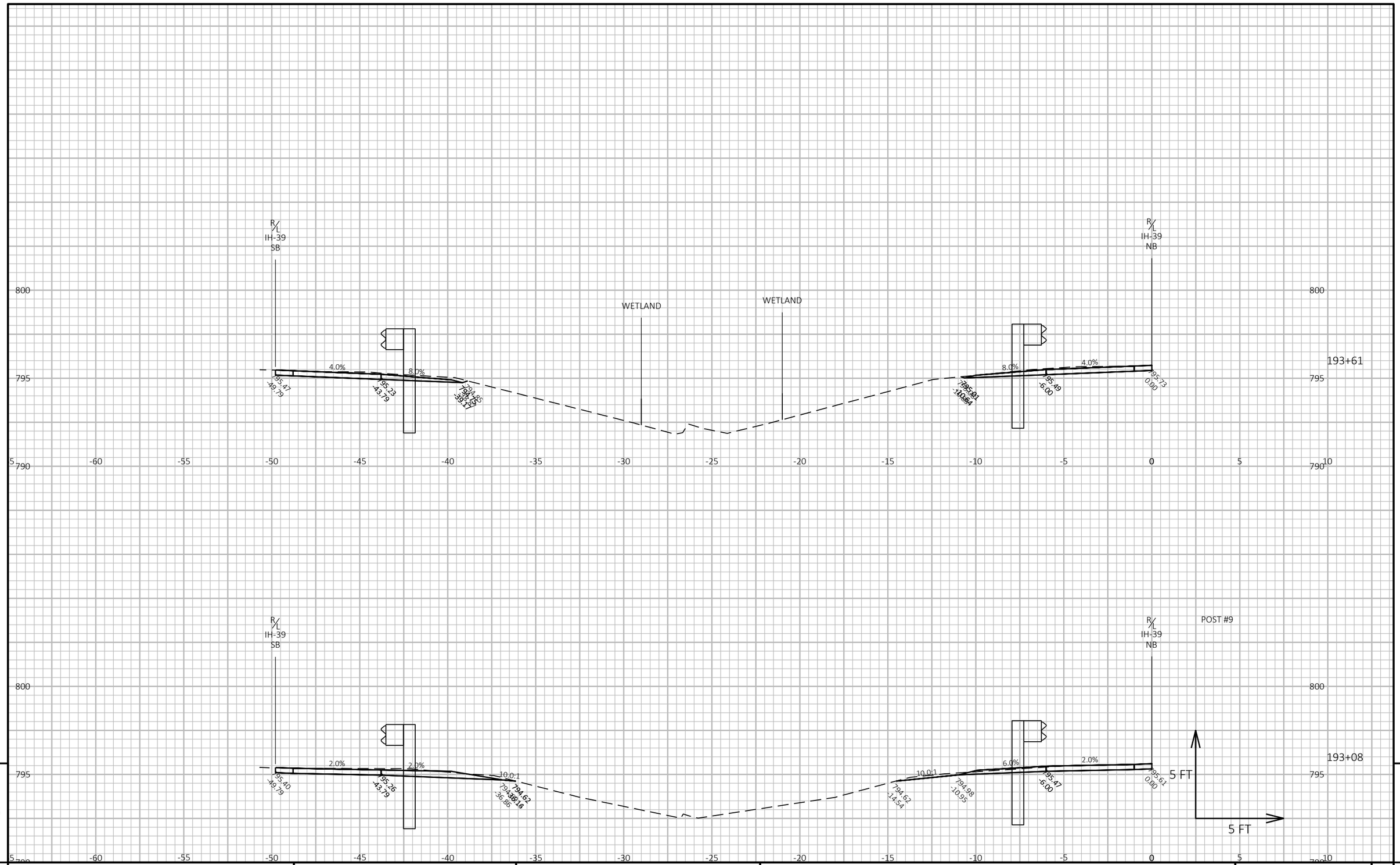


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 207	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 076

PLOT DATE : 1/12/2021 5:59 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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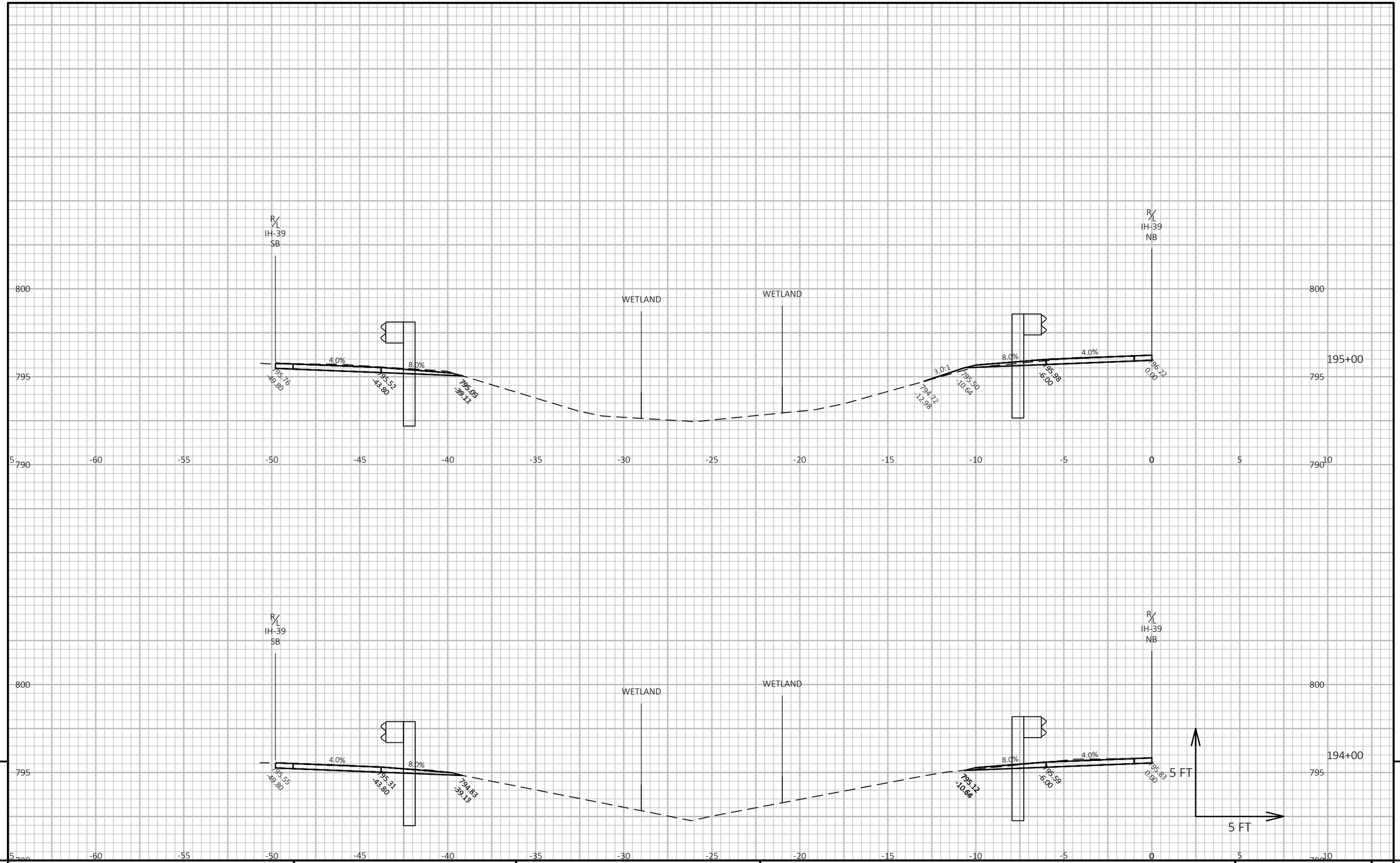
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 208	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 077

PLOT DATE : 1/12/2021 6:00 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 209	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 078

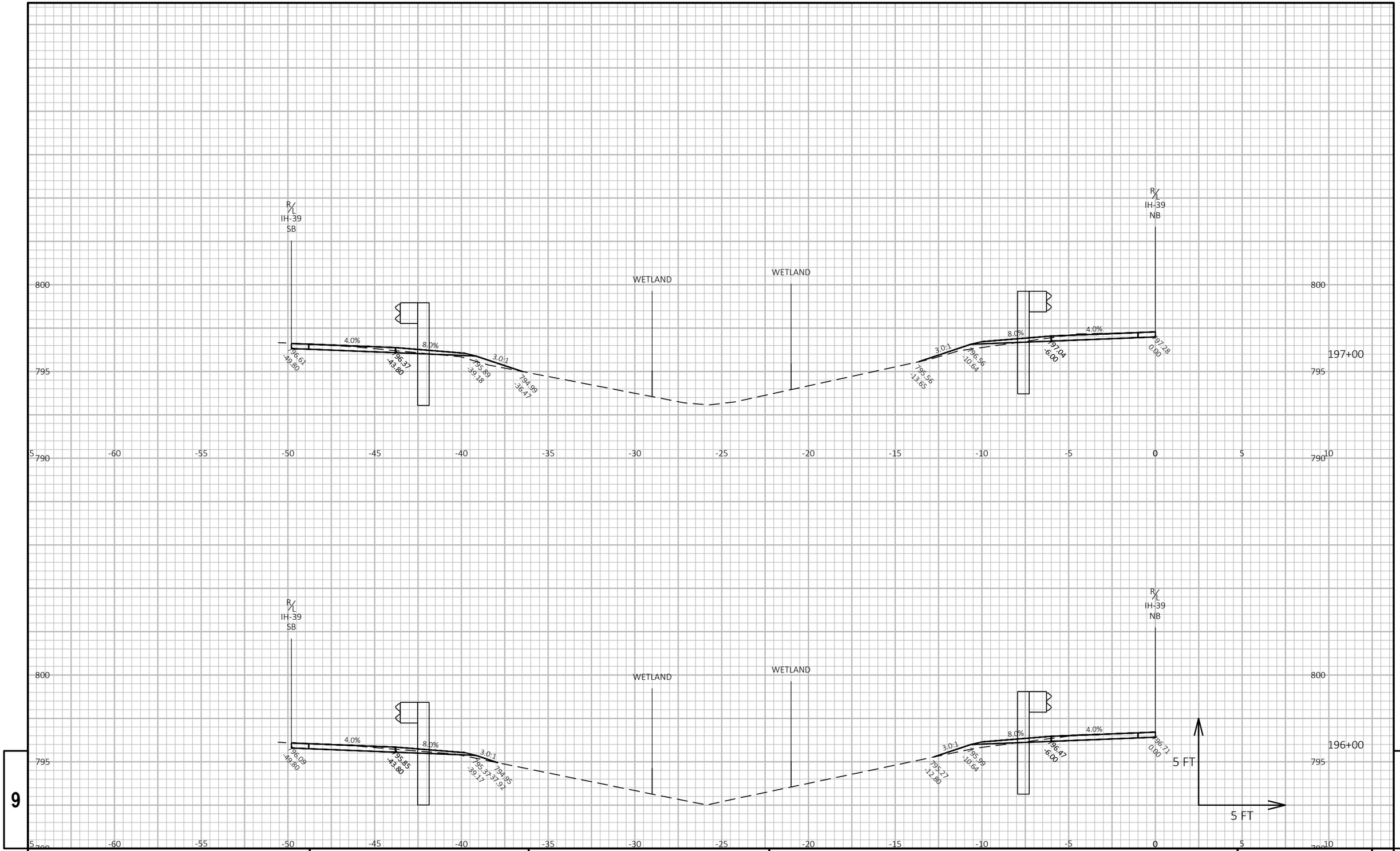
PLOT DATE : 1/12/2021 6:00 PM

PLOT BY : WATT, TIMOTHY

PLOT NAME :

PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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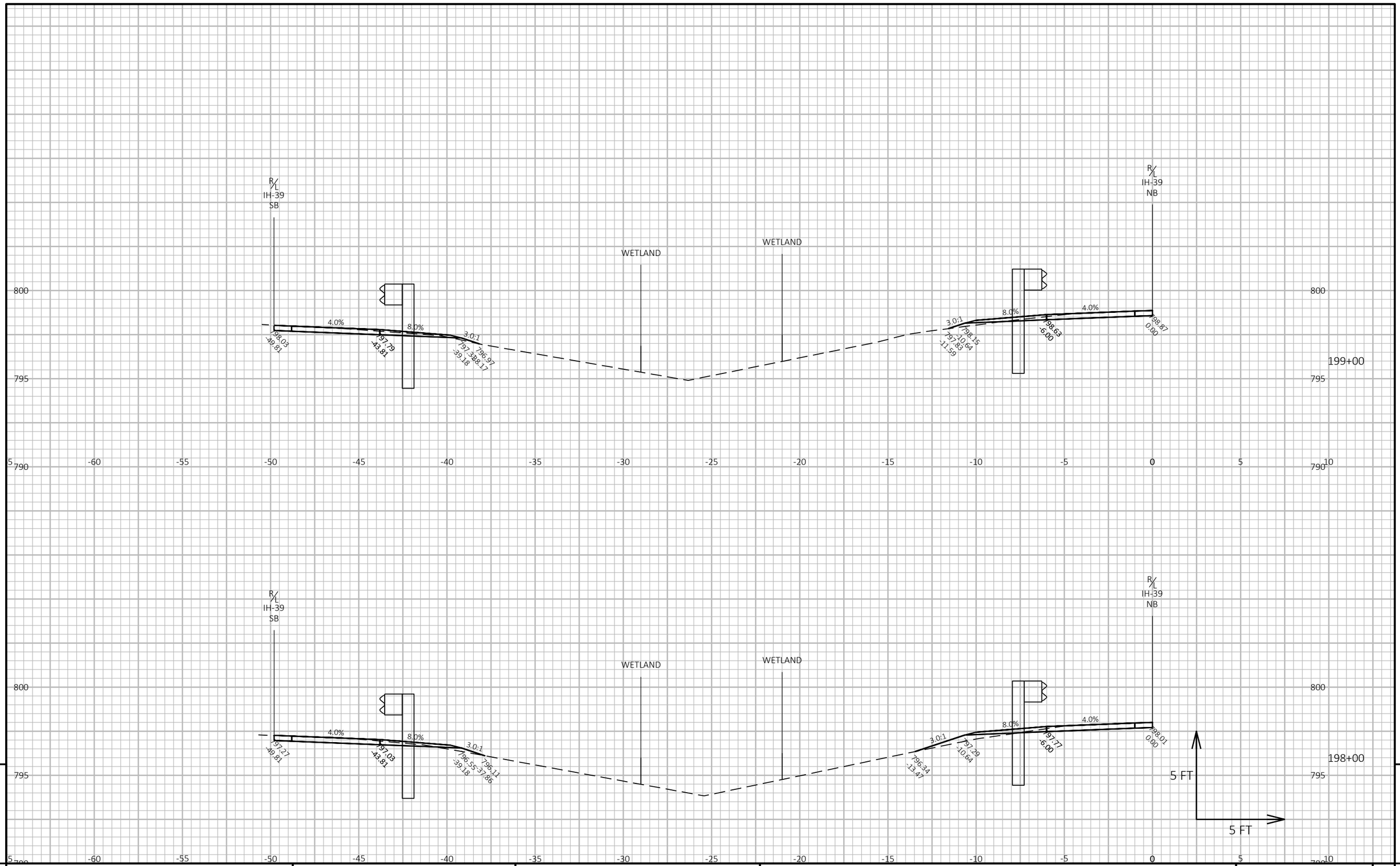
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 210	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 079

PLOT DATE : 1/12/2021 6:01 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

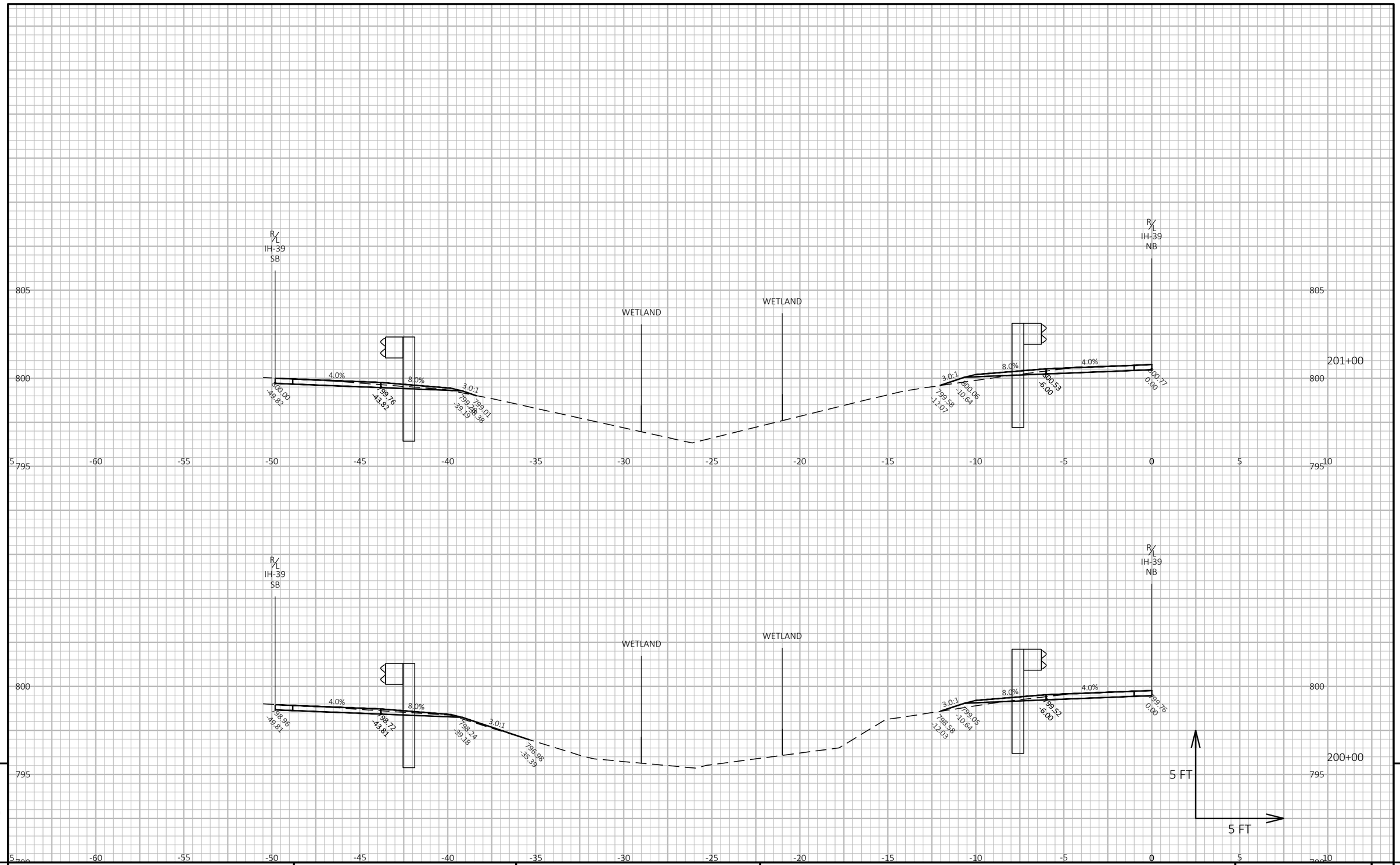


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 211	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 080

PLOT DATE : 1/12/2021 6:02 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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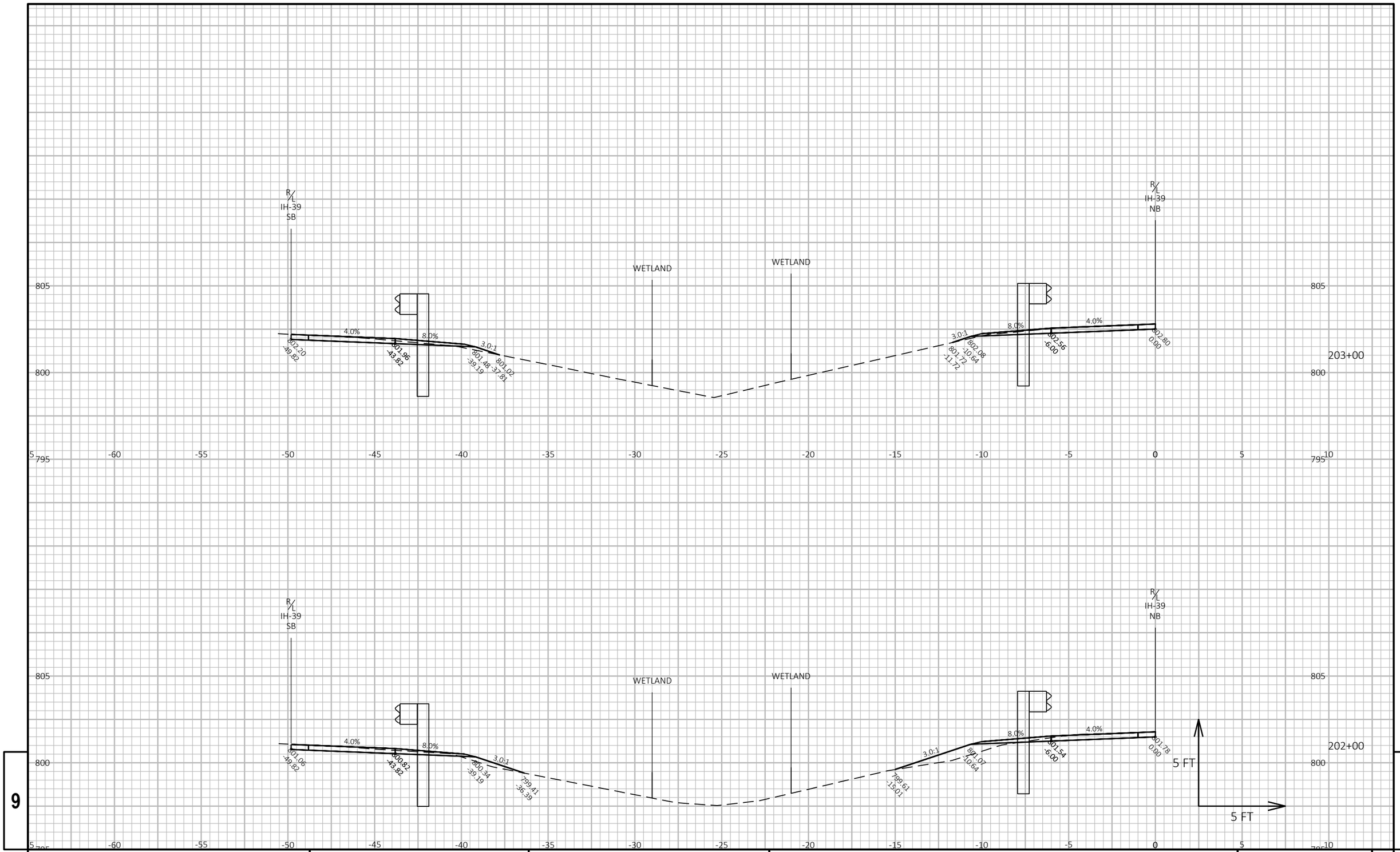
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 212	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 081

PLOT DATE : 1/12/2021 6:03 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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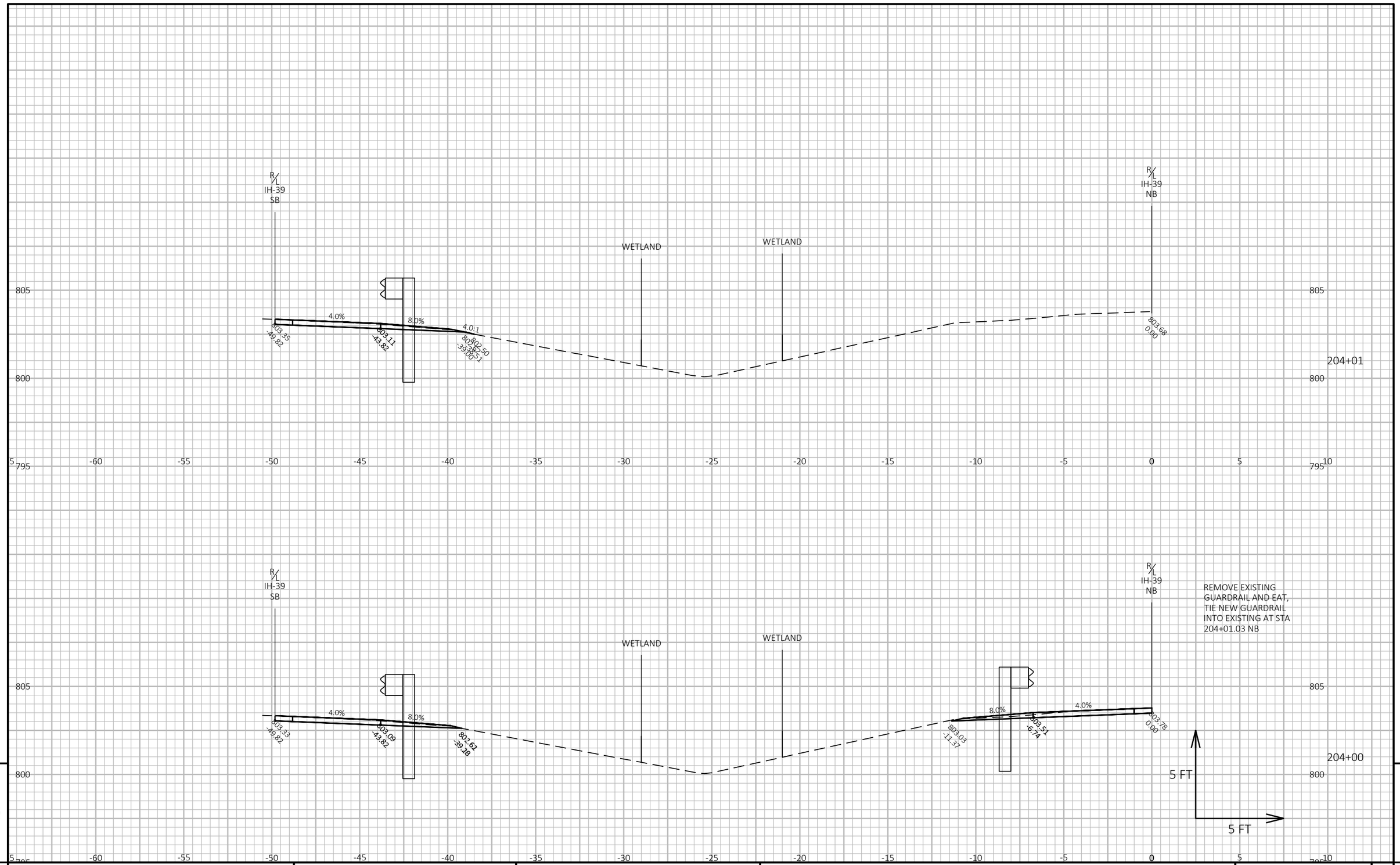
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 213	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 082

PLOT DATE : 1/12/2021 6:03 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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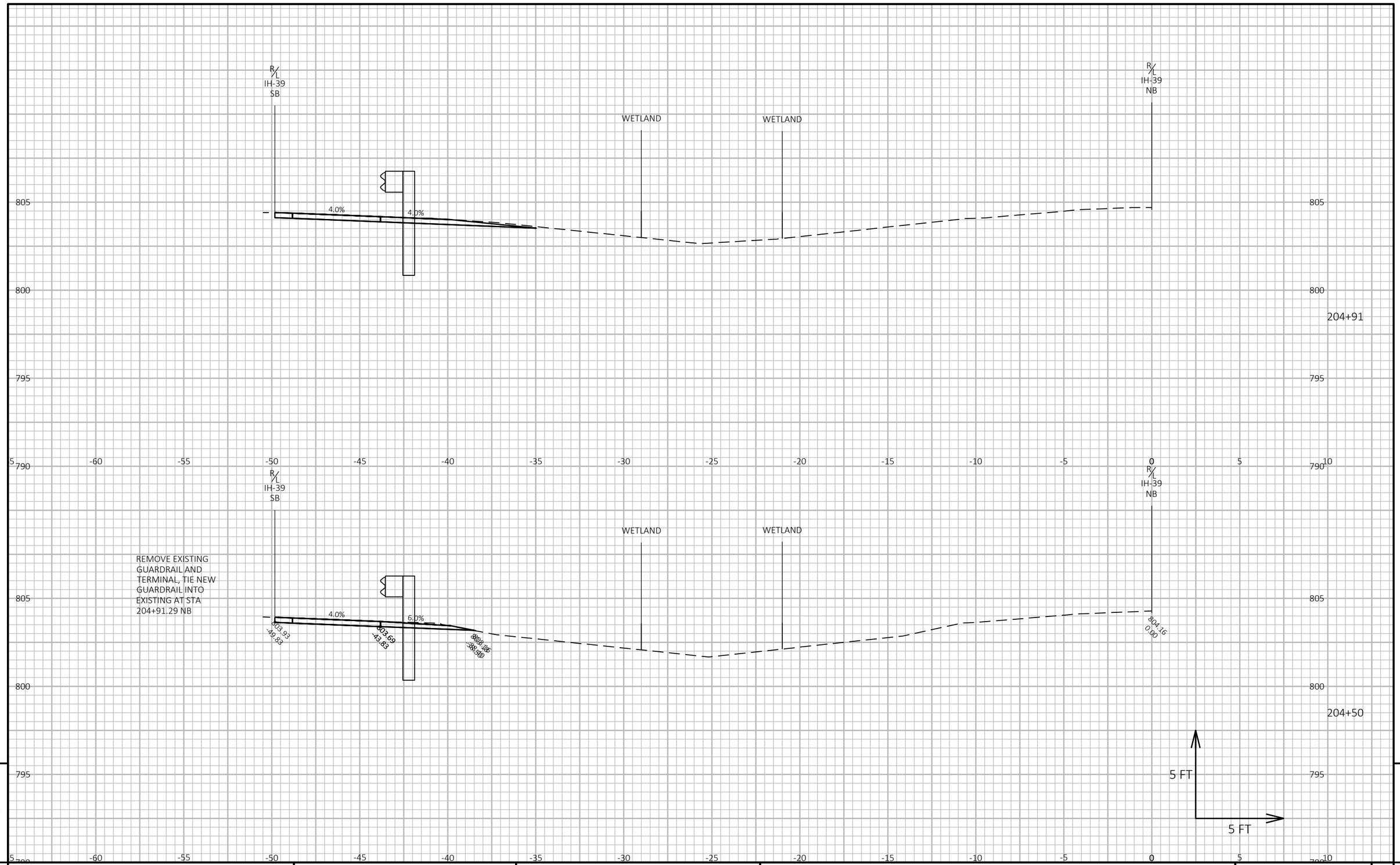
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 214	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 083

PLOT DATE : 1/12/2021 6:04 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

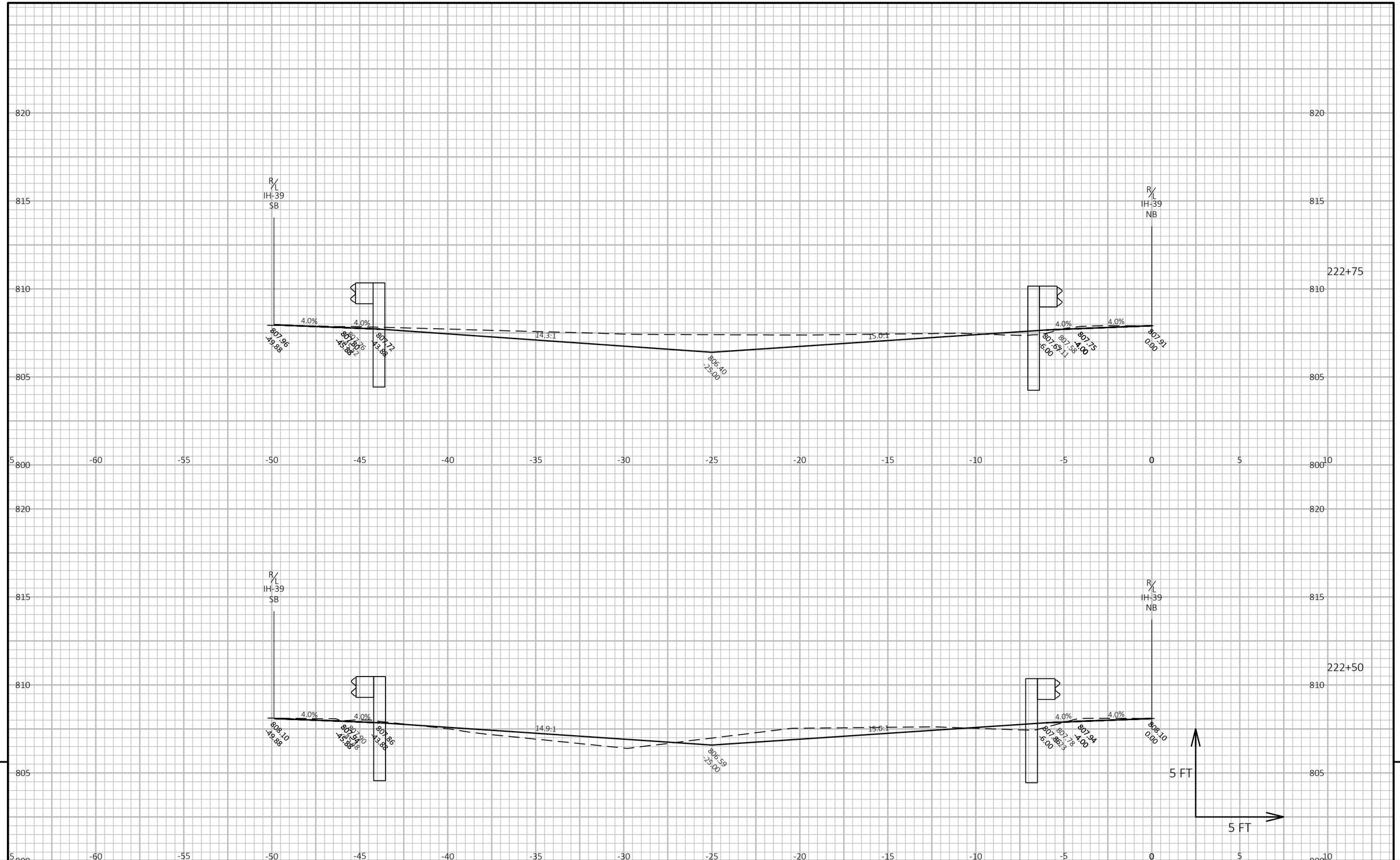


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BEGIN PROJECT TO WISCONSIN RIVER	SHEET 215	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 084

PLOT DATE : 1/12/2021 6:05 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

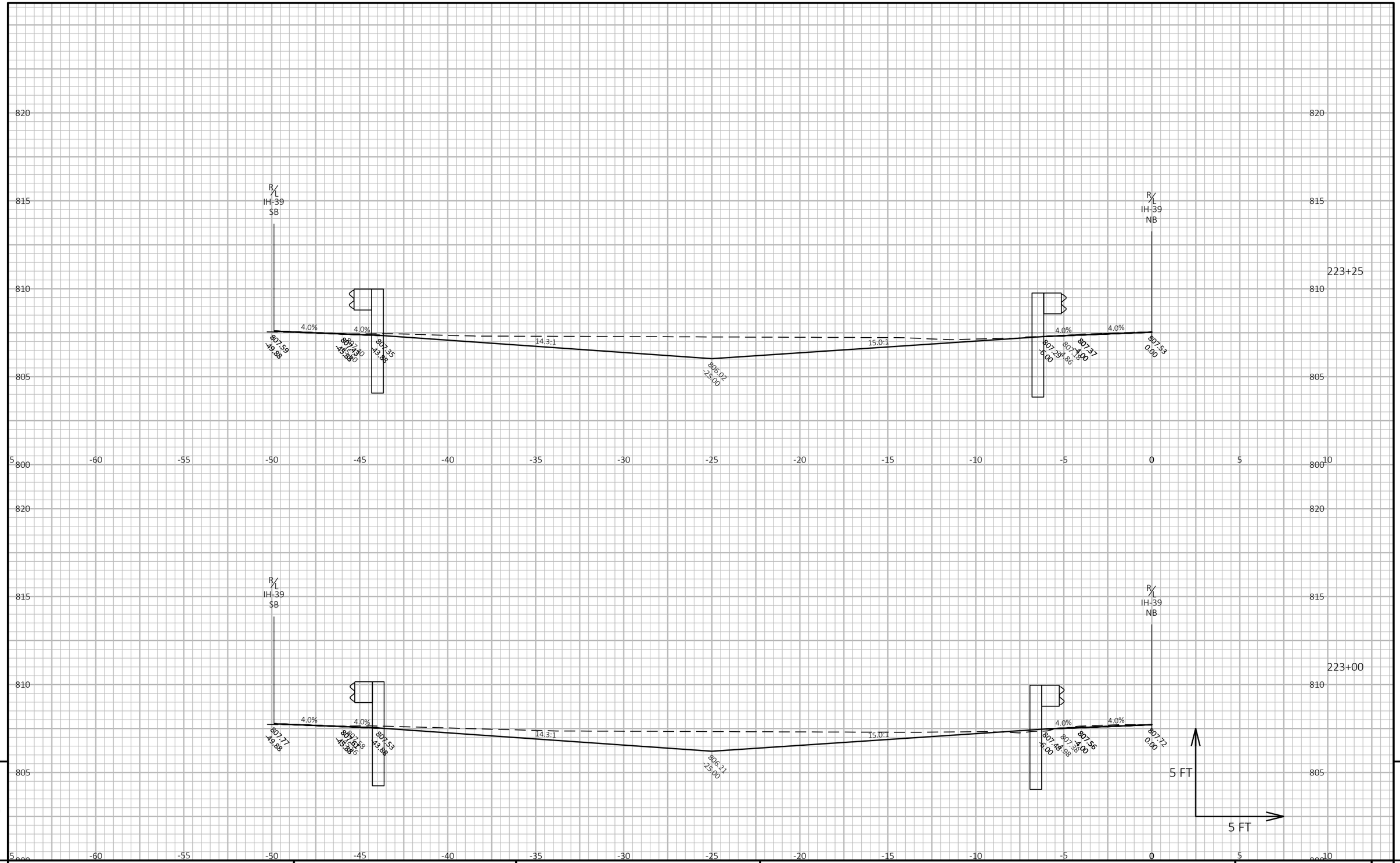


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF WISCONSIN RIVER	SHEET 216	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 300

PLOT DATE : 1/12/2021 6:06 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF WISCONSIN RIVER	SHEET 217	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 301

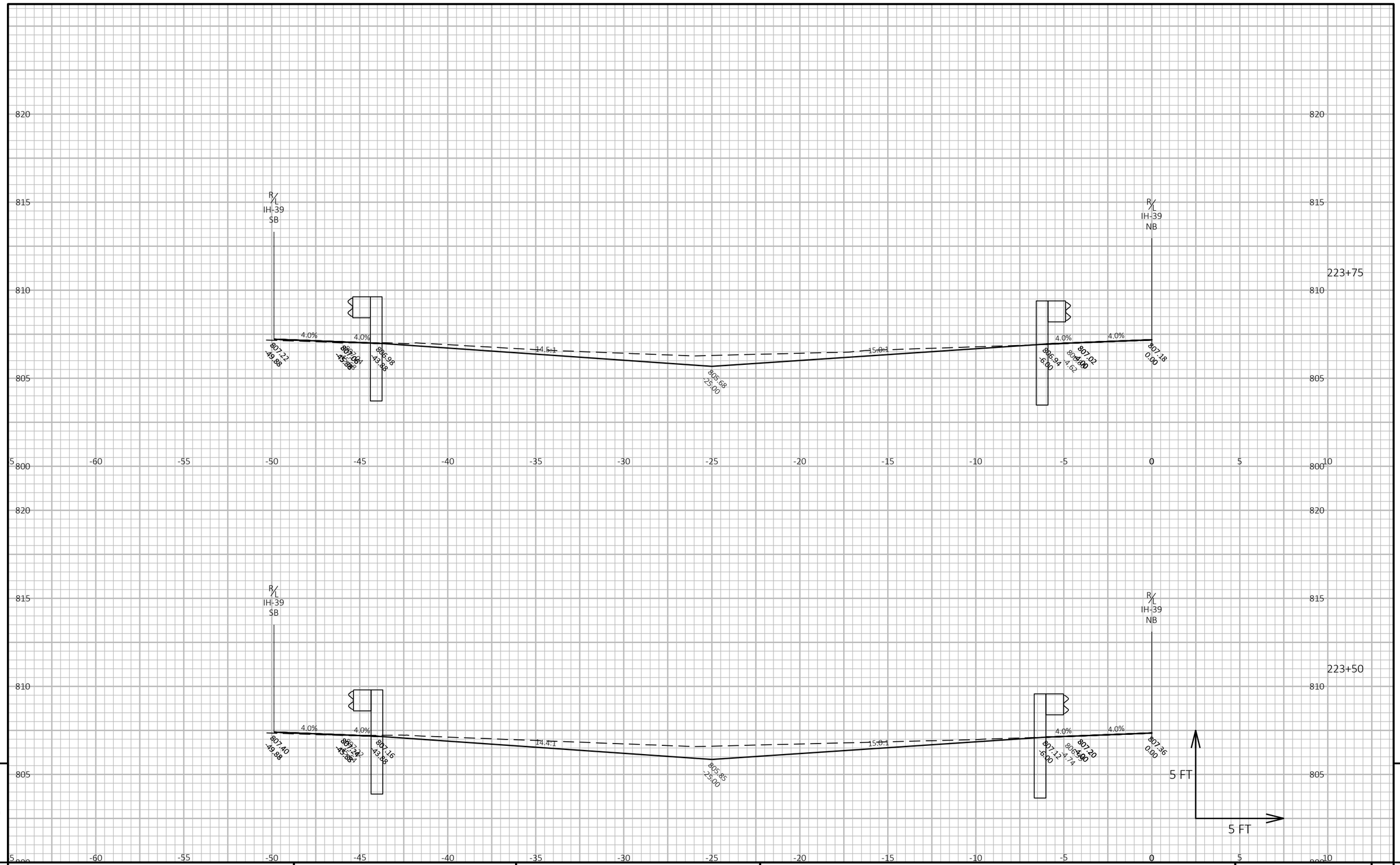
PLOT DATE : 1/12/2021 6:06 PM

PLOT BY : WATT, TIMOTHY

PLOT NAME :

PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

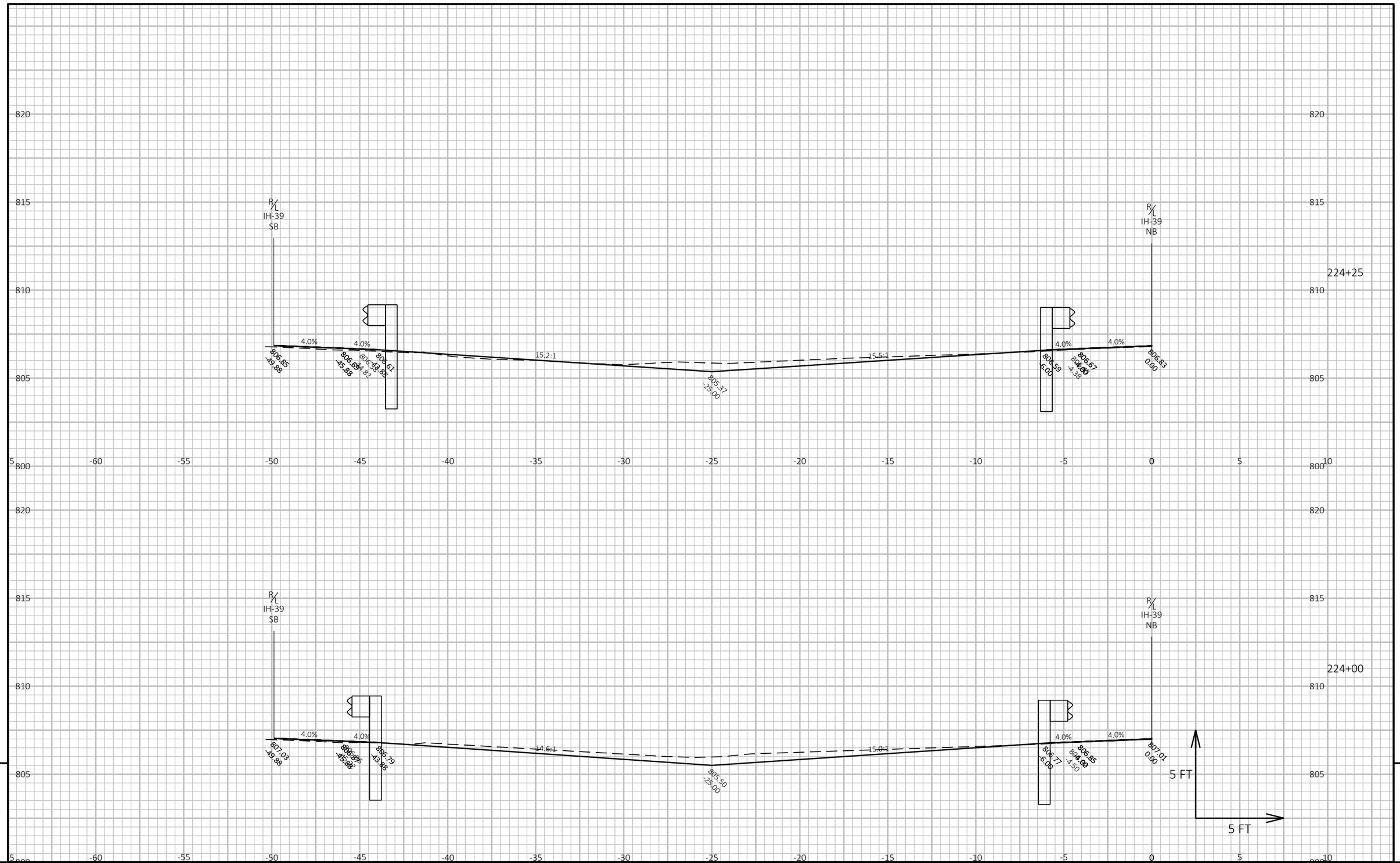


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF WISCONSIN RIVER	SHEET 218	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 302

PLOT DATE : 1/12/2021 6:07 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

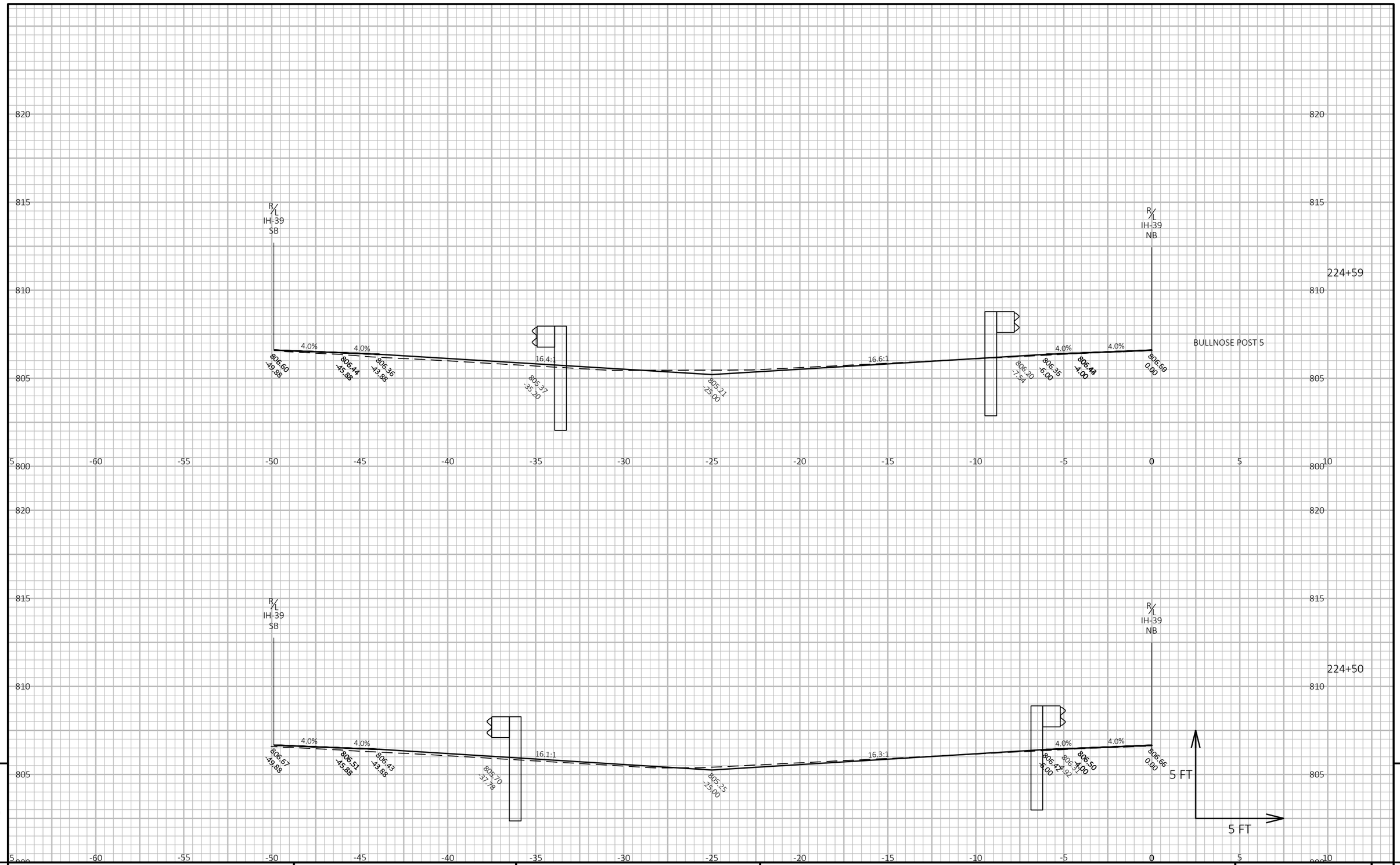


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF WISCONSIN RIVER	SHEET 219 E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 303

PLOT DATE : 1/12/2021 6:08 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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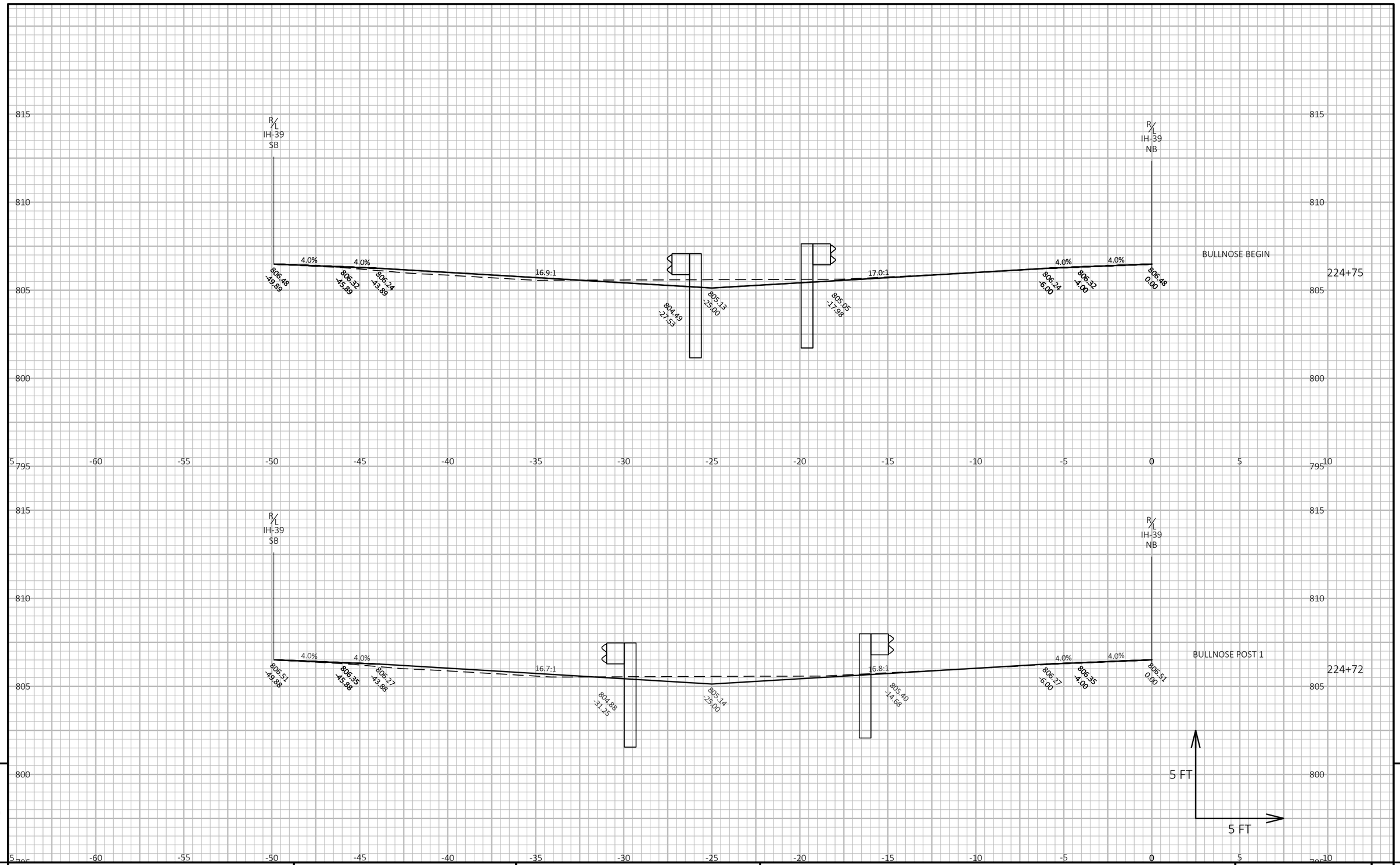
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF WISCONSIN RIVER	SHEET 220	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 304

PLOT DATE : 1/12/2021 6:09 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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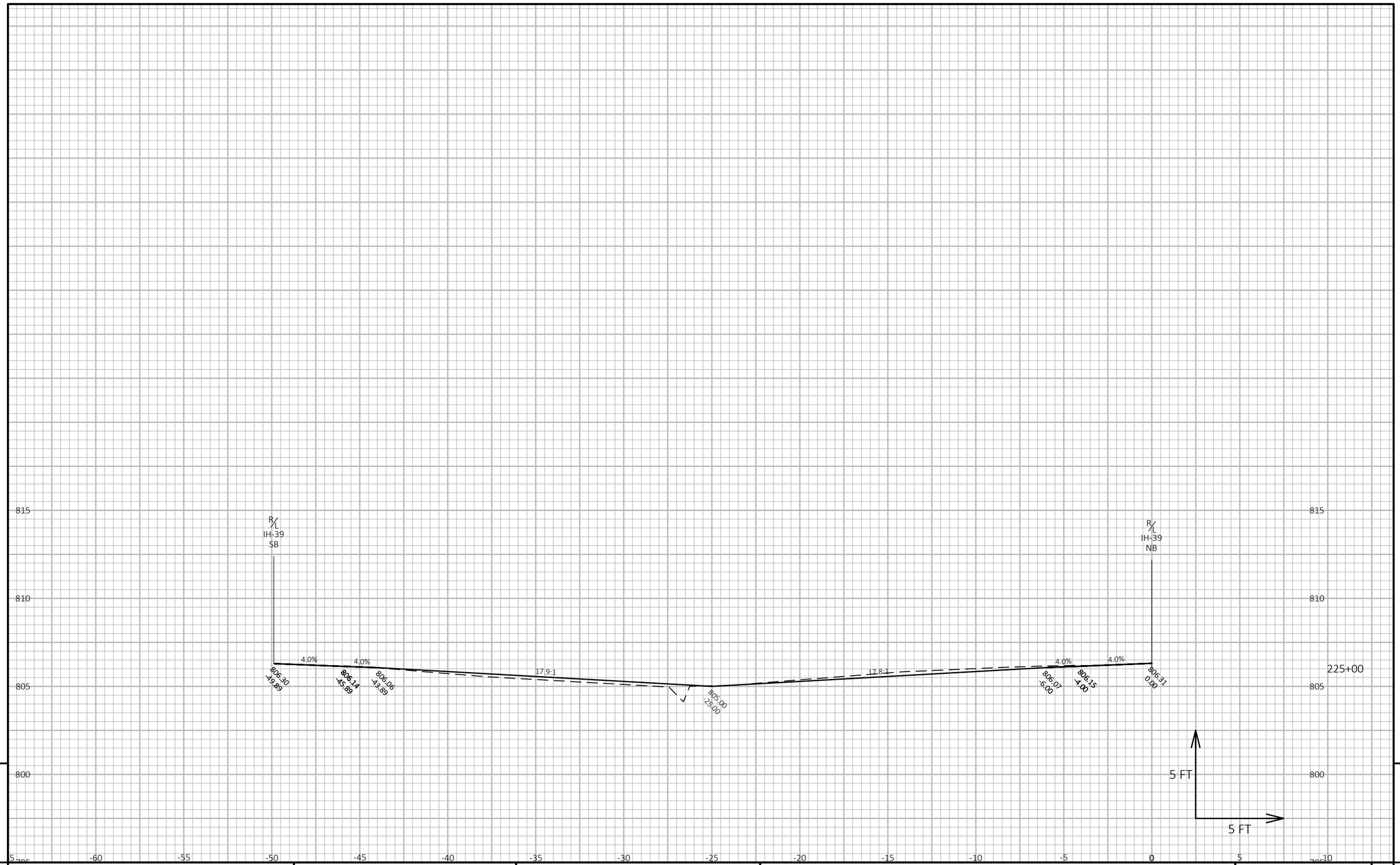
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF WISCONSIN RIVER	SHEET 221	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 305

PLOT DATE : 1/12/2021 6:10 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - BULLNOSE REPLACEMENT - N OF WISCONSIN RIVER	SHEET 222	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 306

PLOT DATE : 1/12/2021 6:10 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

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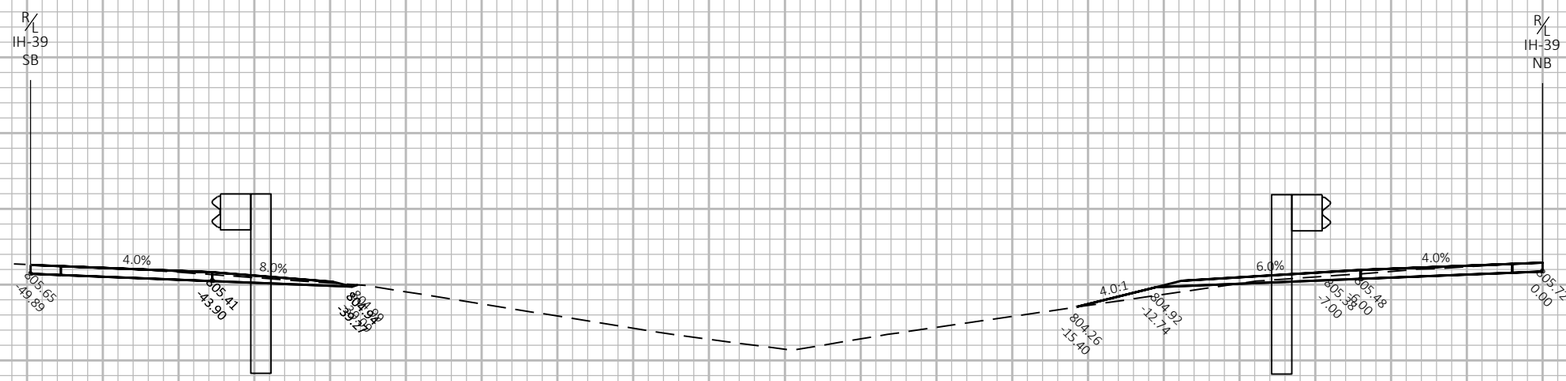
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 223	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 085

PLOT DATE : 1/12/2021 6:11 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

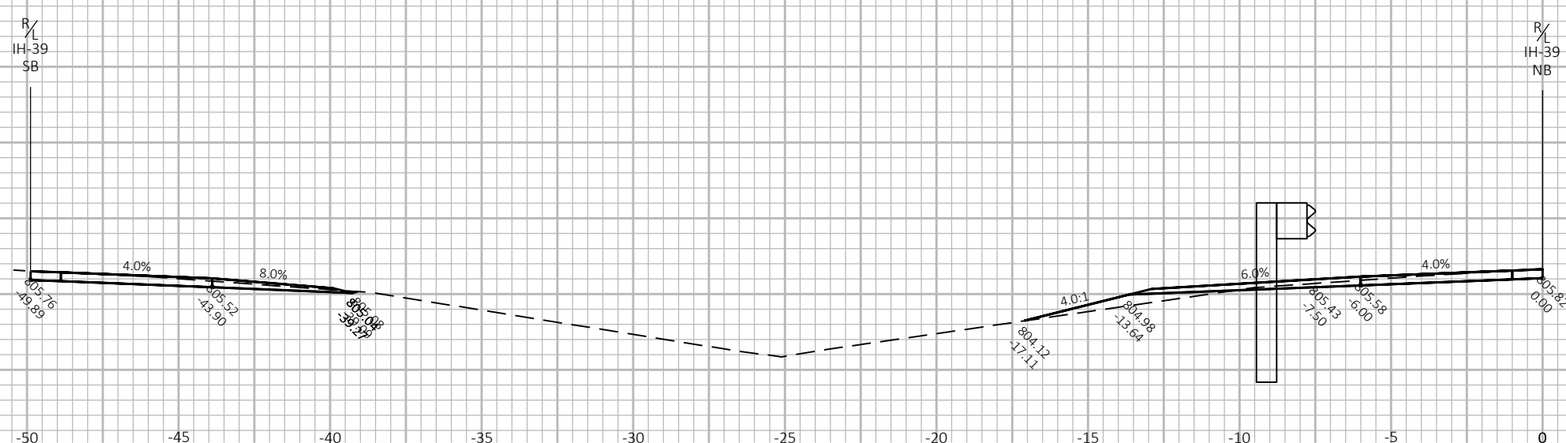
WISDOT/CADDS SHEET 49

TYPE 2 TERMINAL



POST #5

225+88



225+76

POST #3

9

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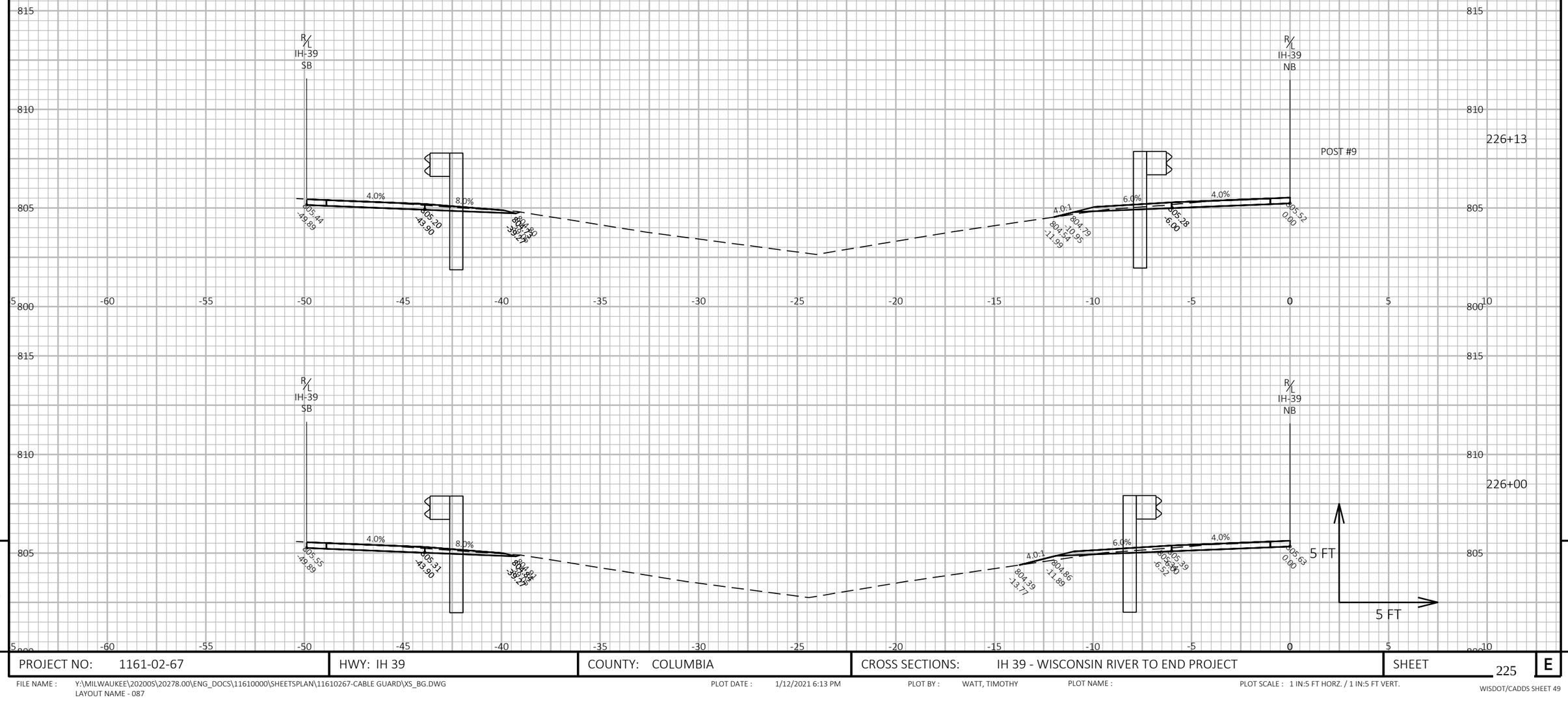
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 224	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 086

PLOT DATE : 1/12/2021 6:12 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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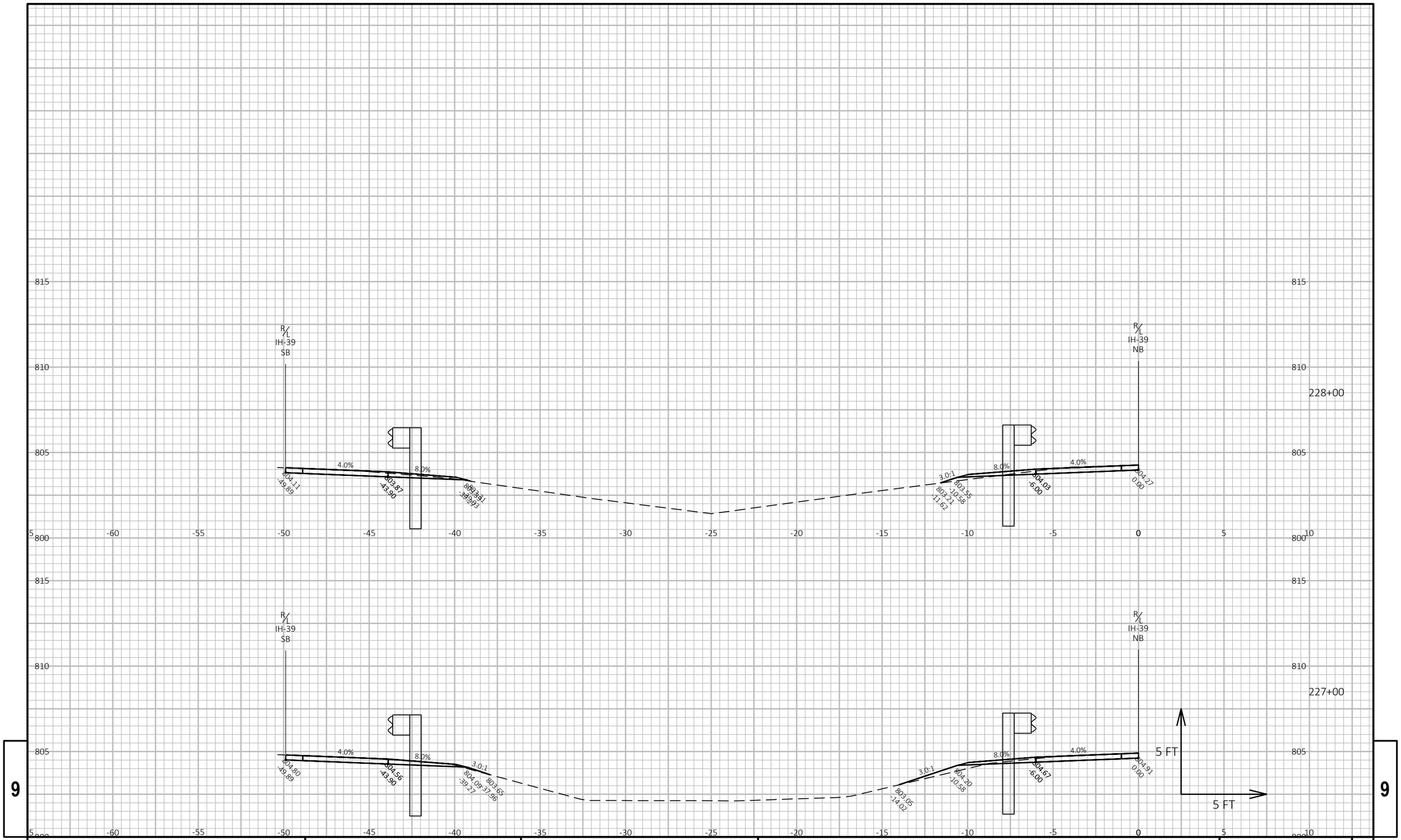
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 225	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 087

PLOT DATE : 1/12/2021 6:13 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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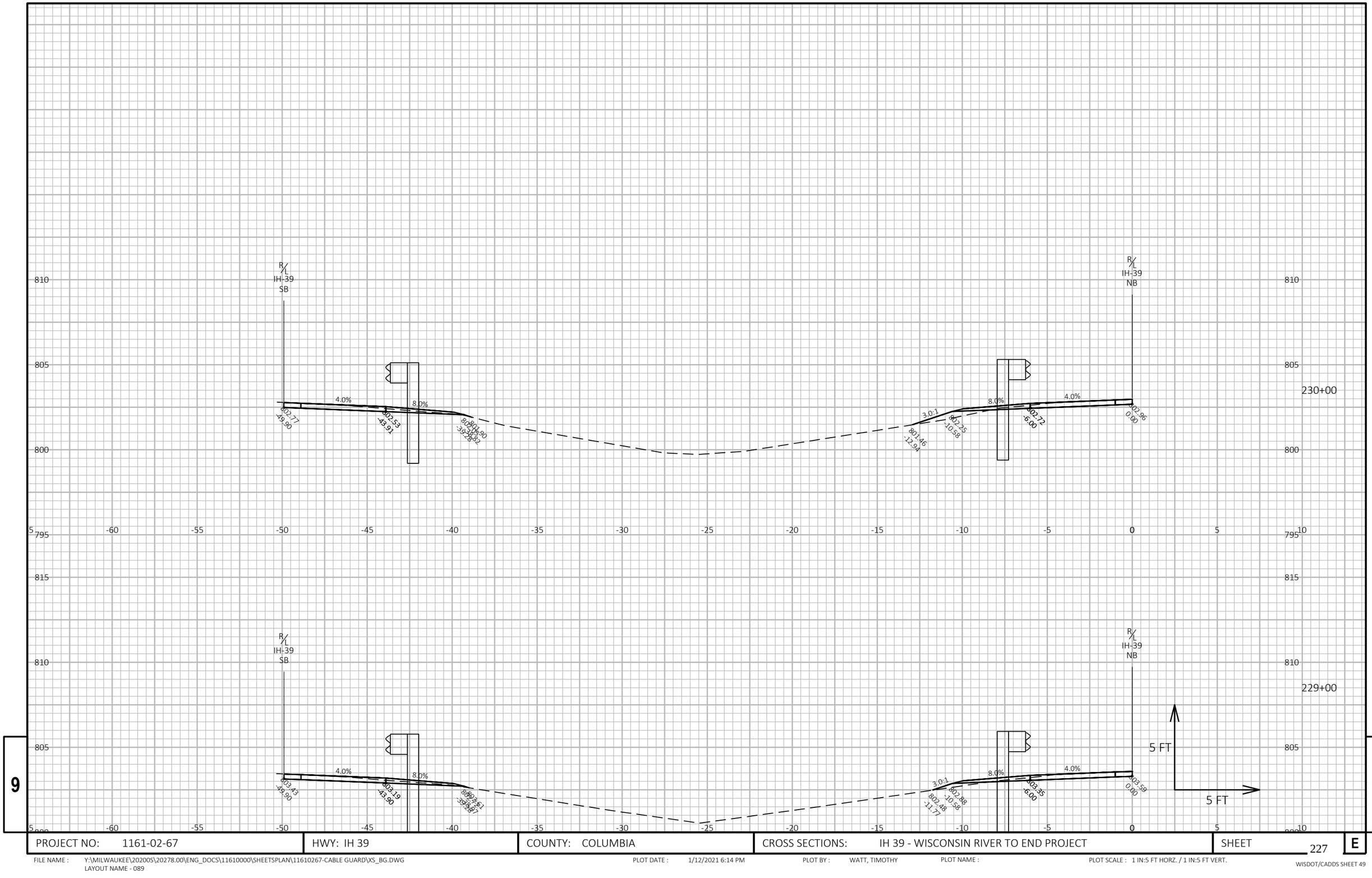
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 226	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 088

PLOT DATE : 1/12/2021 6:14 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

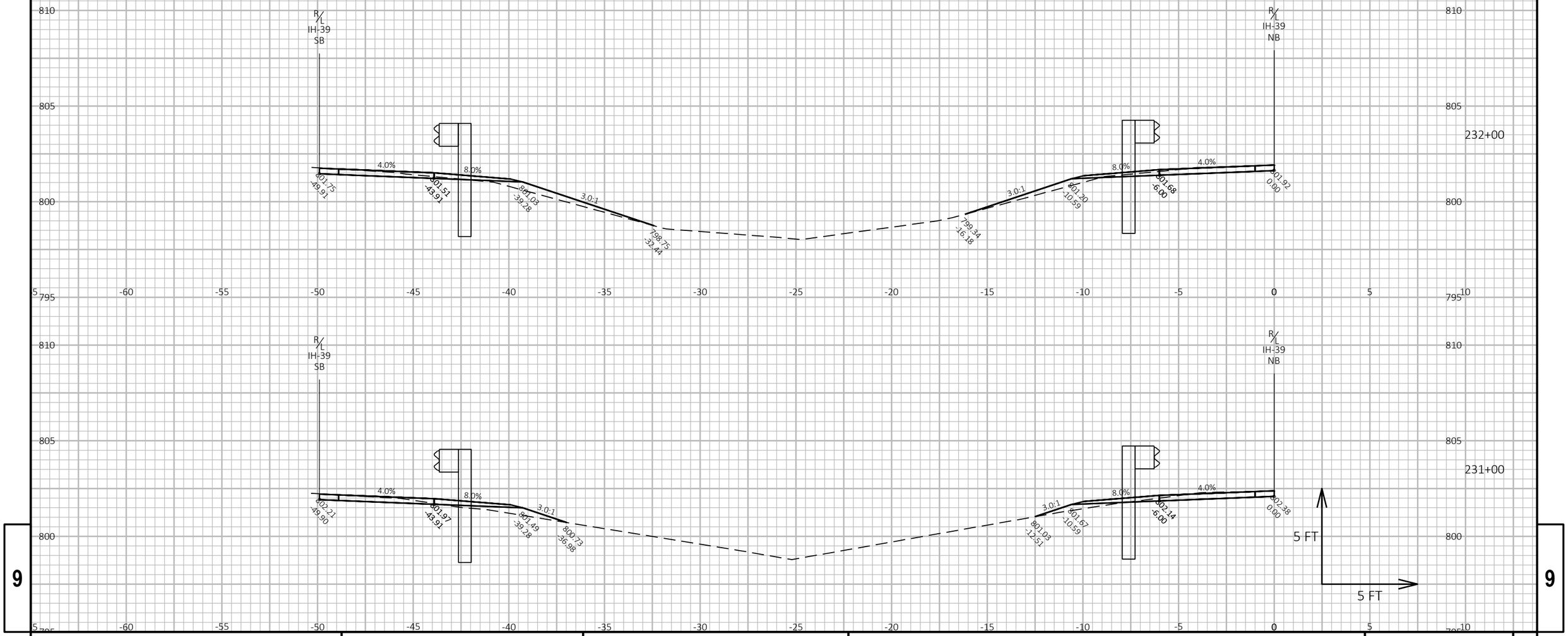


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 227	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 089

PLOT DATE : 1/12/2021 6:14 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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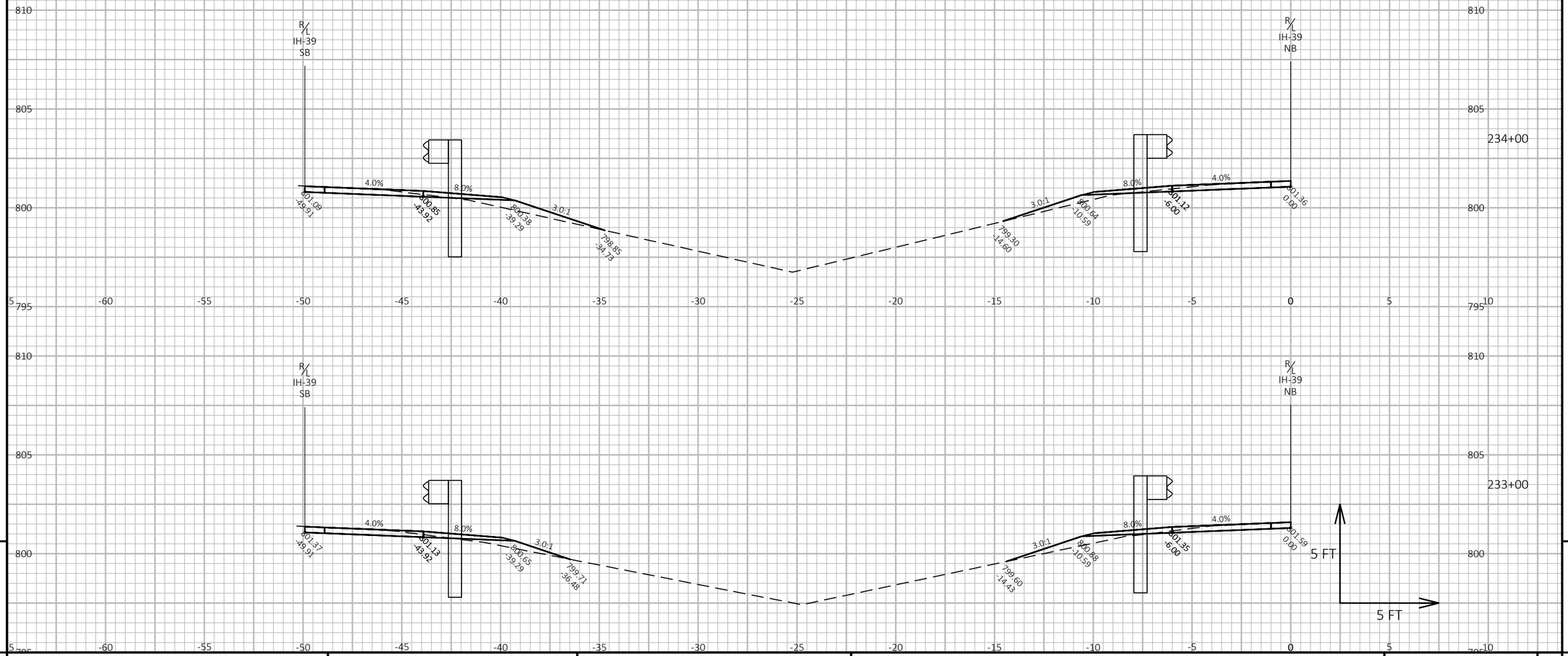
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 228	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 090

PLOT DATE : 1/12/2021 6:15 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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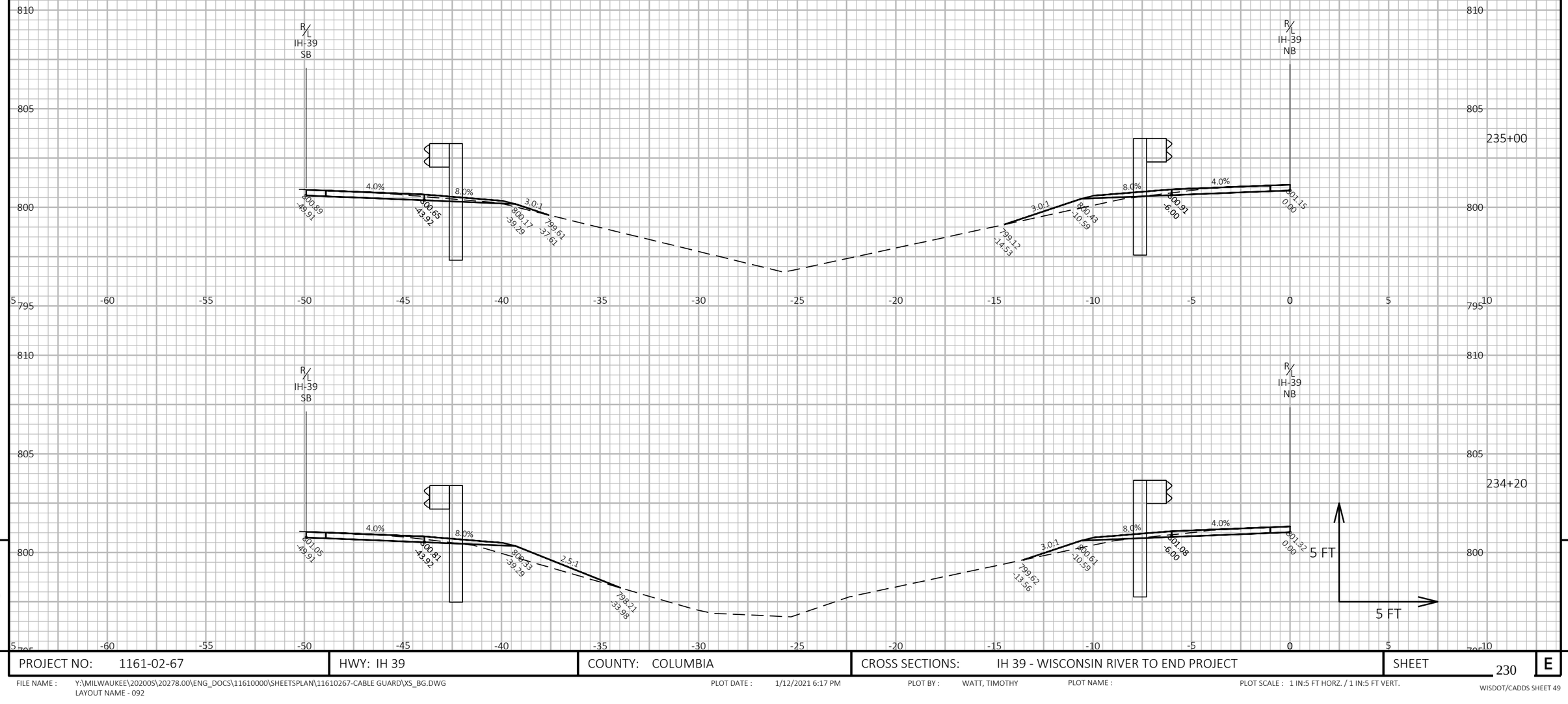
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 229	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 091

PLOT DATE : 1/12/2021 6:16 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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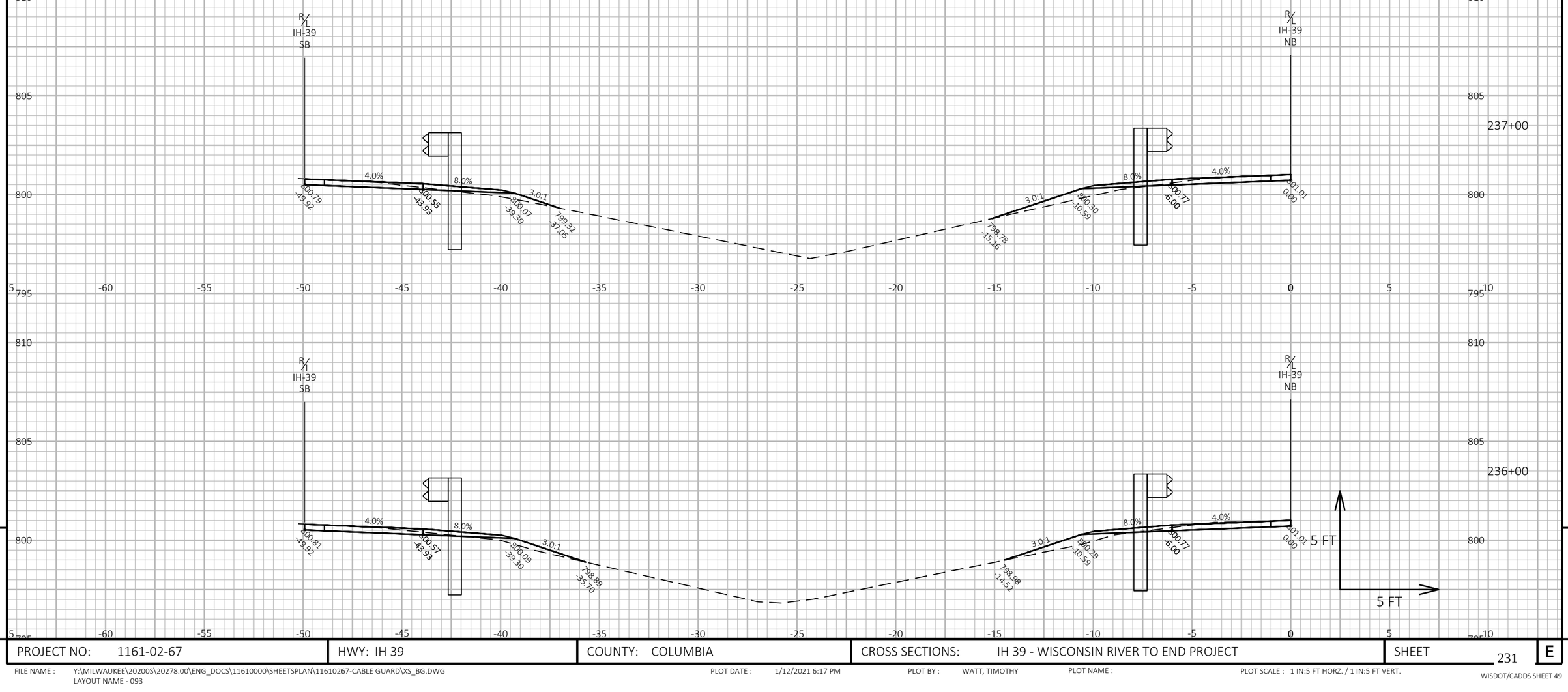
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 230	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 092

PLOT DATE : 1/12/2021 6:17 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

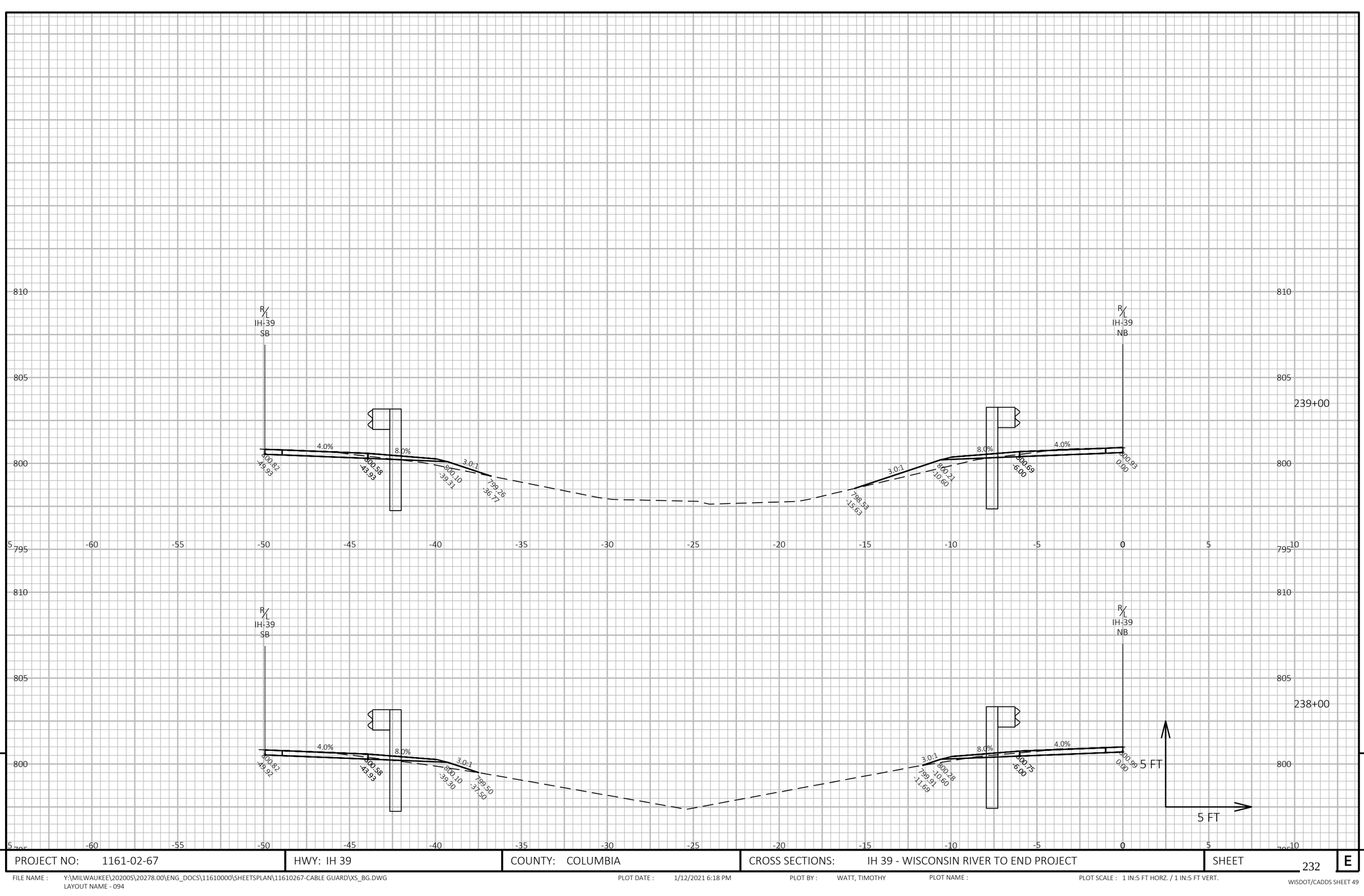


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 231	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 093

PLOT DATE : 1/12/2021 6:17 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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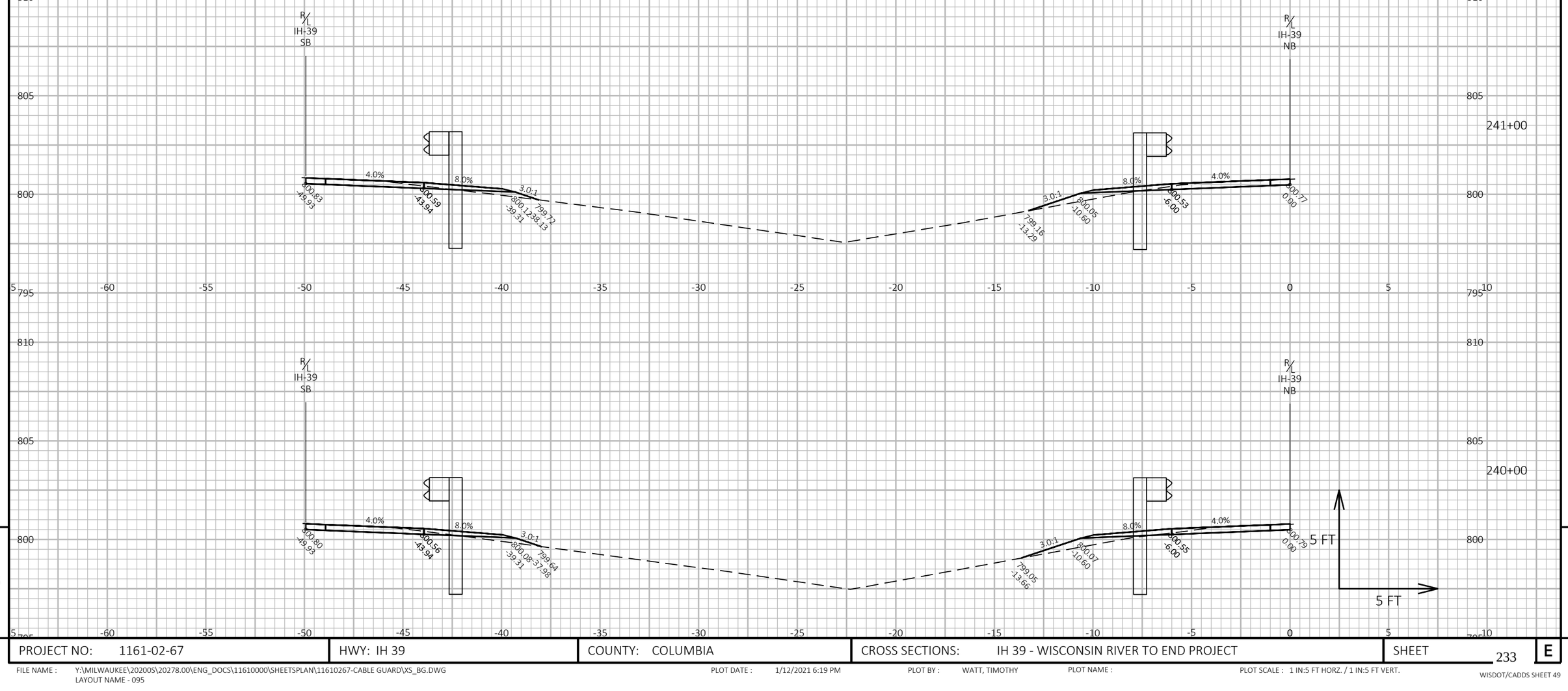
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 232	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 094

PLOT DATE : 1/12/2021 6:18 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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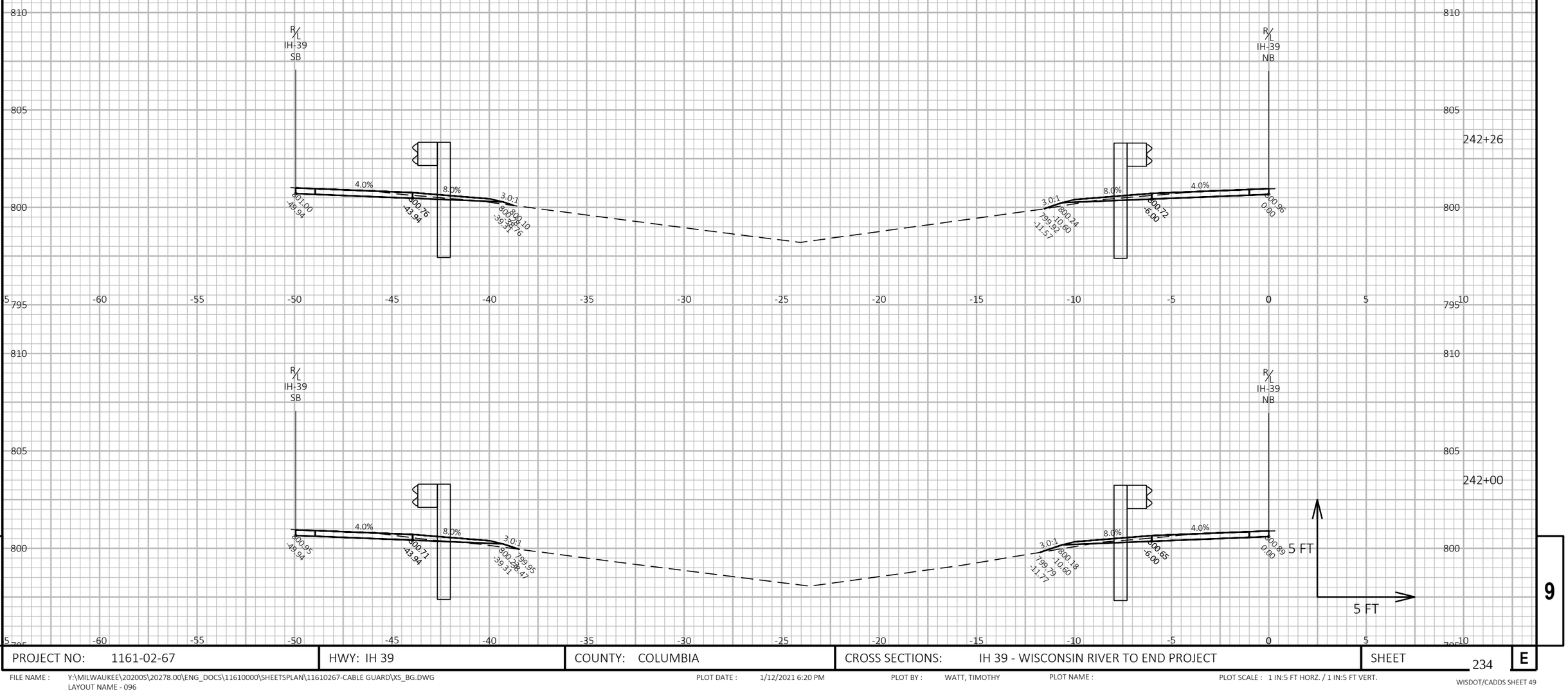
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 233	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 095

PLOT DATE : 1/12/2021 6:19 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

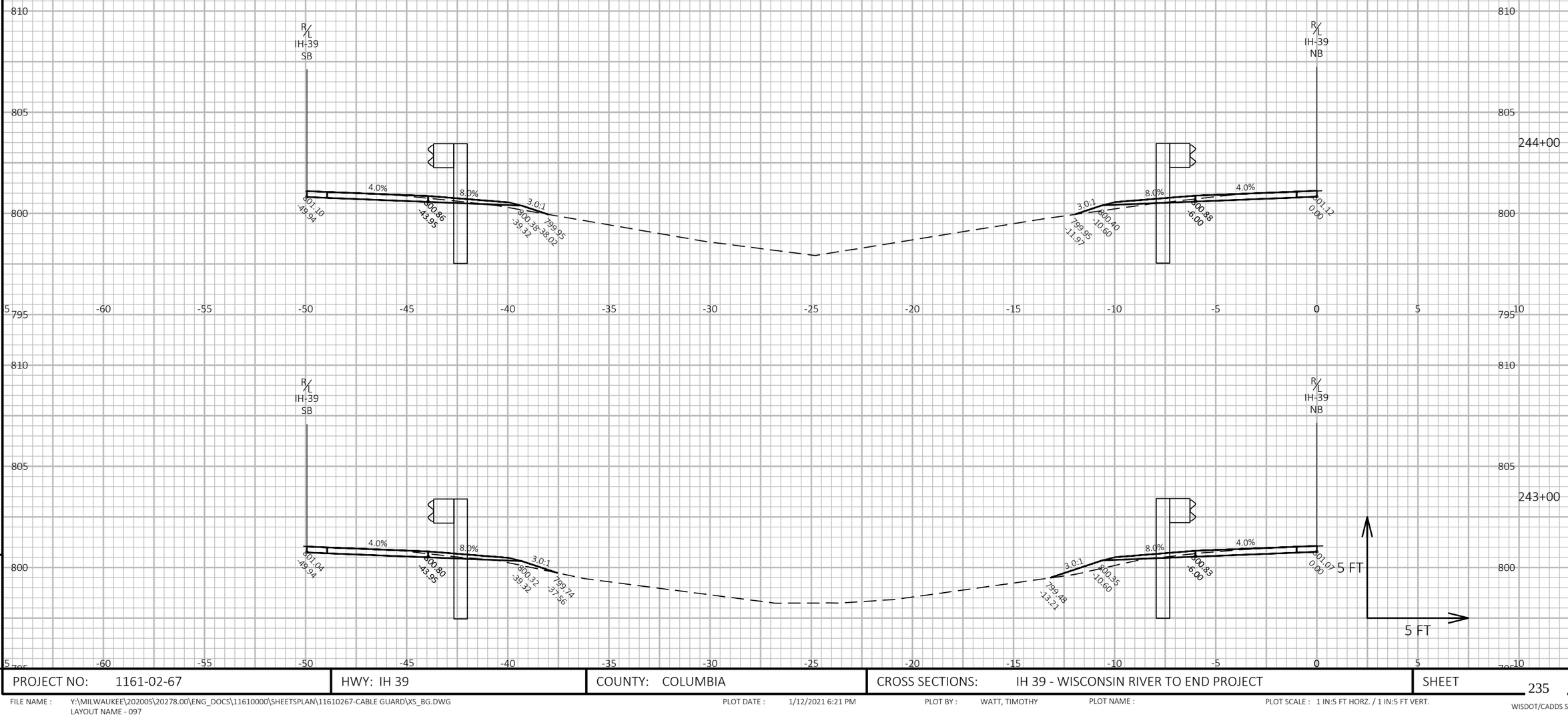


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 234	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 096

PLOT DATE : 1/12/2021 6:20 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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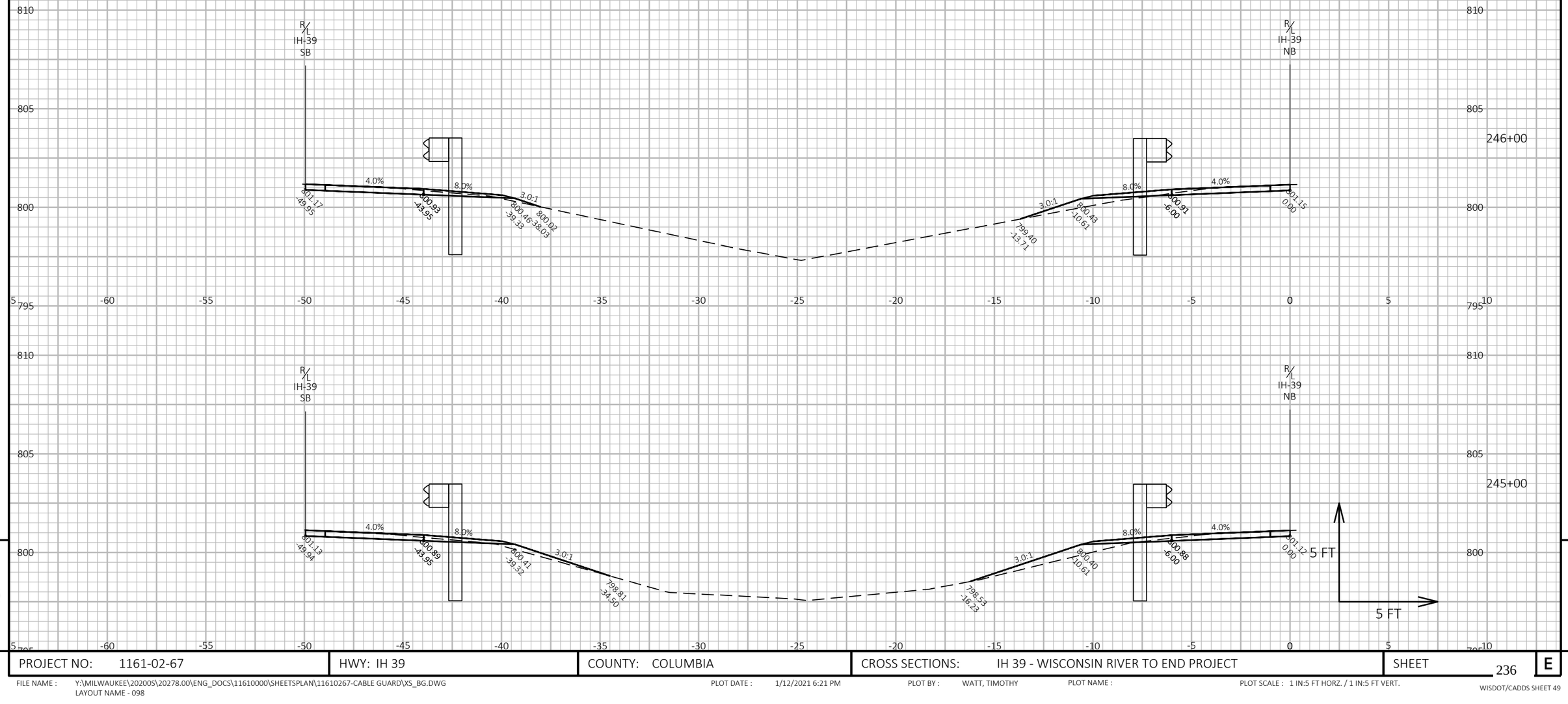
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 235	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 097

PLOT DATE : 1/12/2021 6:21 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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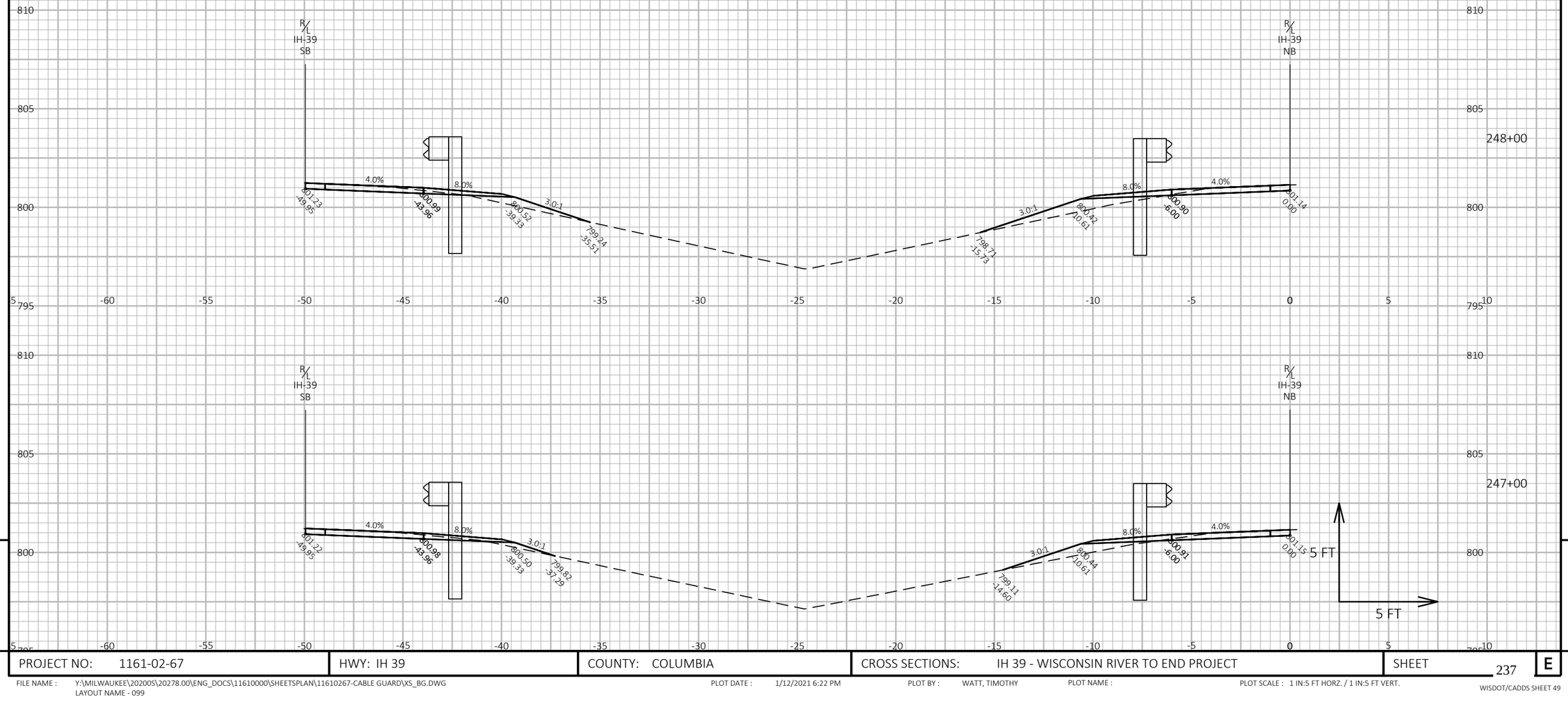
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 236	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 098

PLOT DATE : 1/12/2021 6:21 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 237	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 099

PLOT DATE : 1/12/2021 6:22 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

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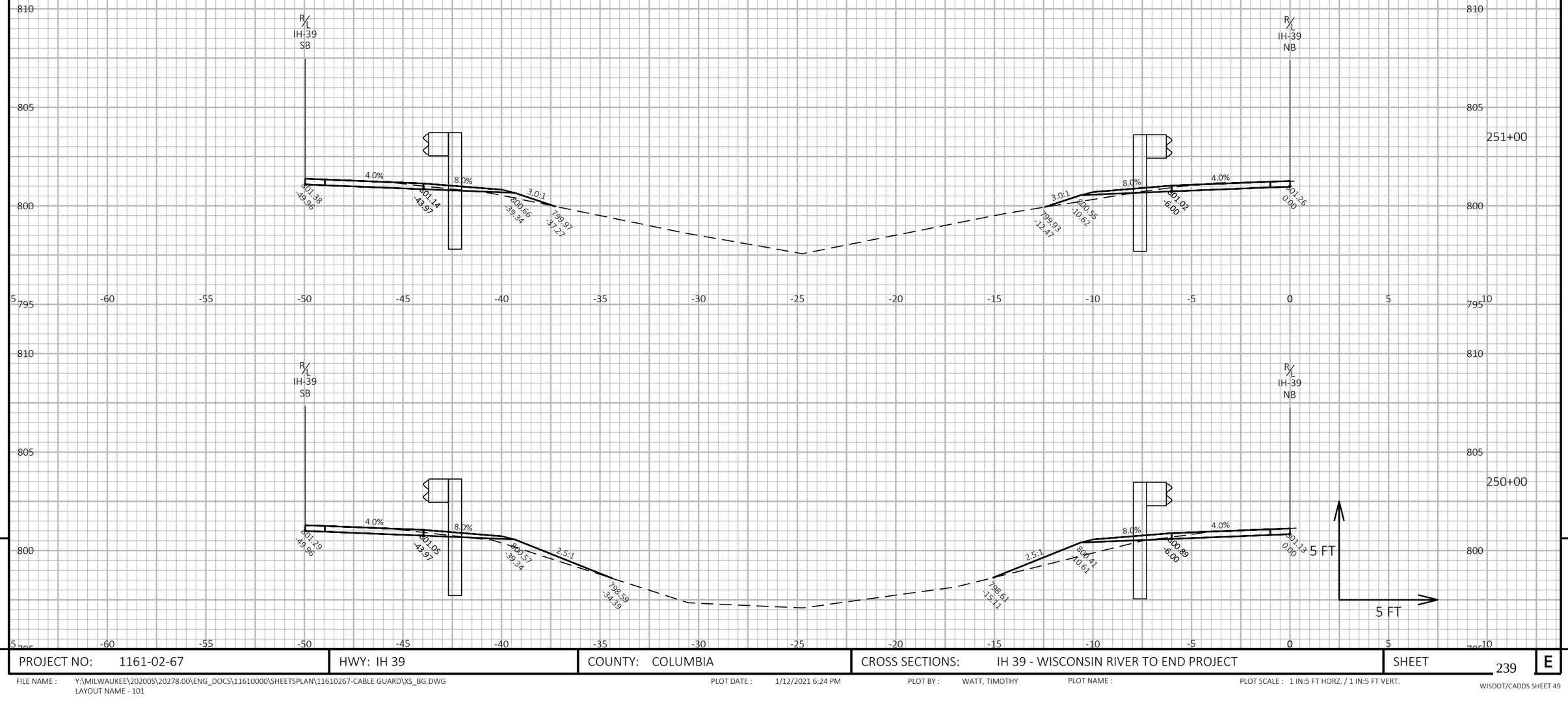
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 238	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 100

PLOT DATE : 1/12/2021 6:23 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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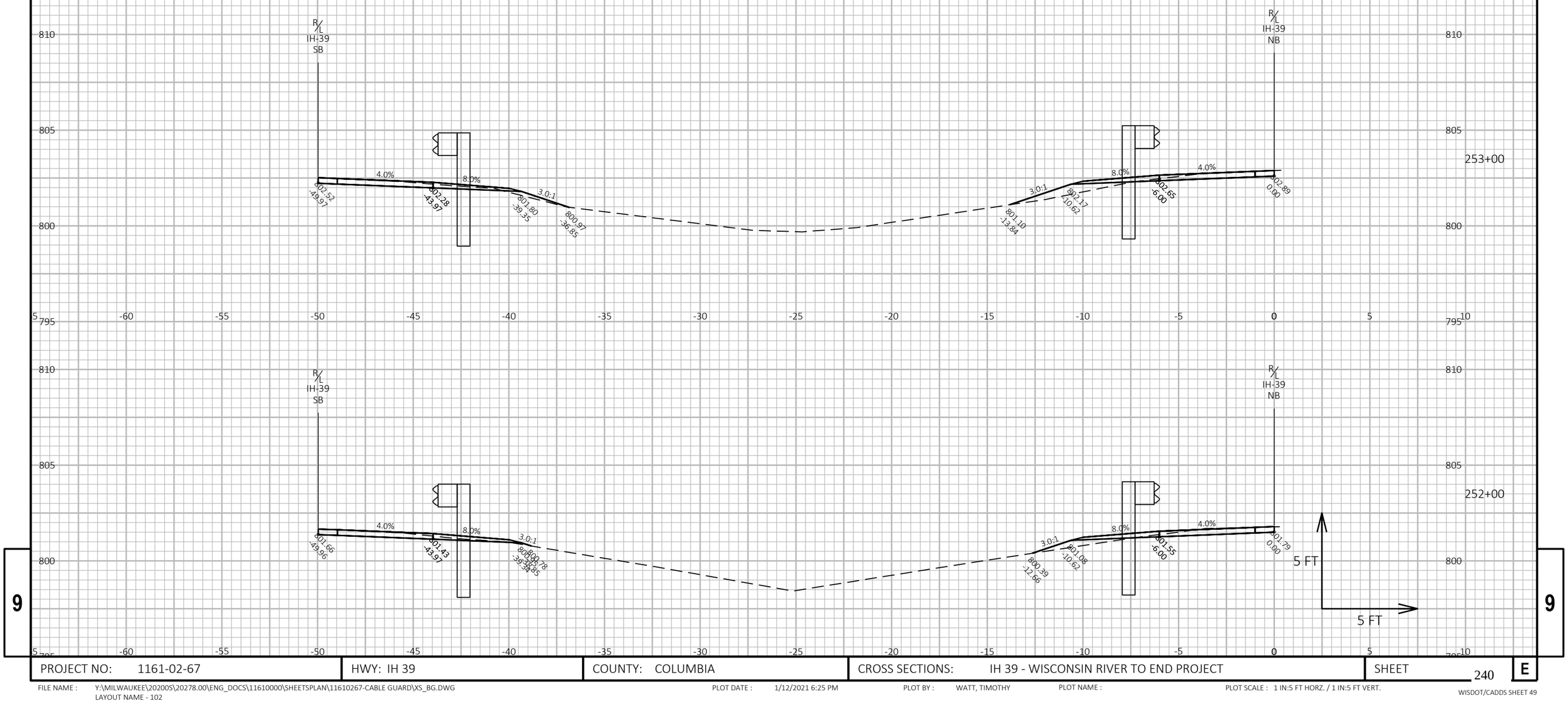
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 239	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 101

PLOT DATE : 1/12/2021 6:24 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

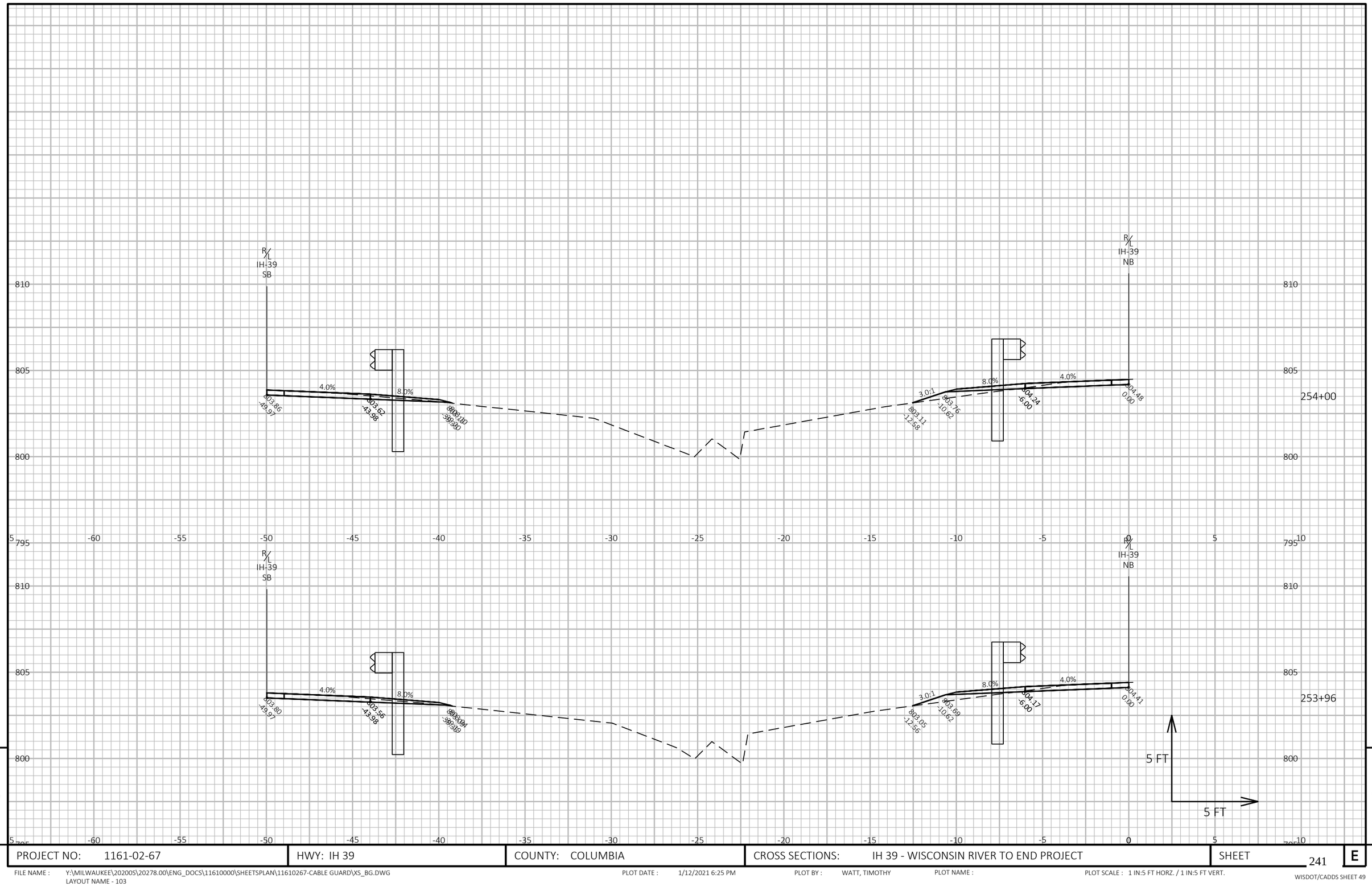


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 240	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 102

PLOT DATE : 1/12/2021 6:25 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

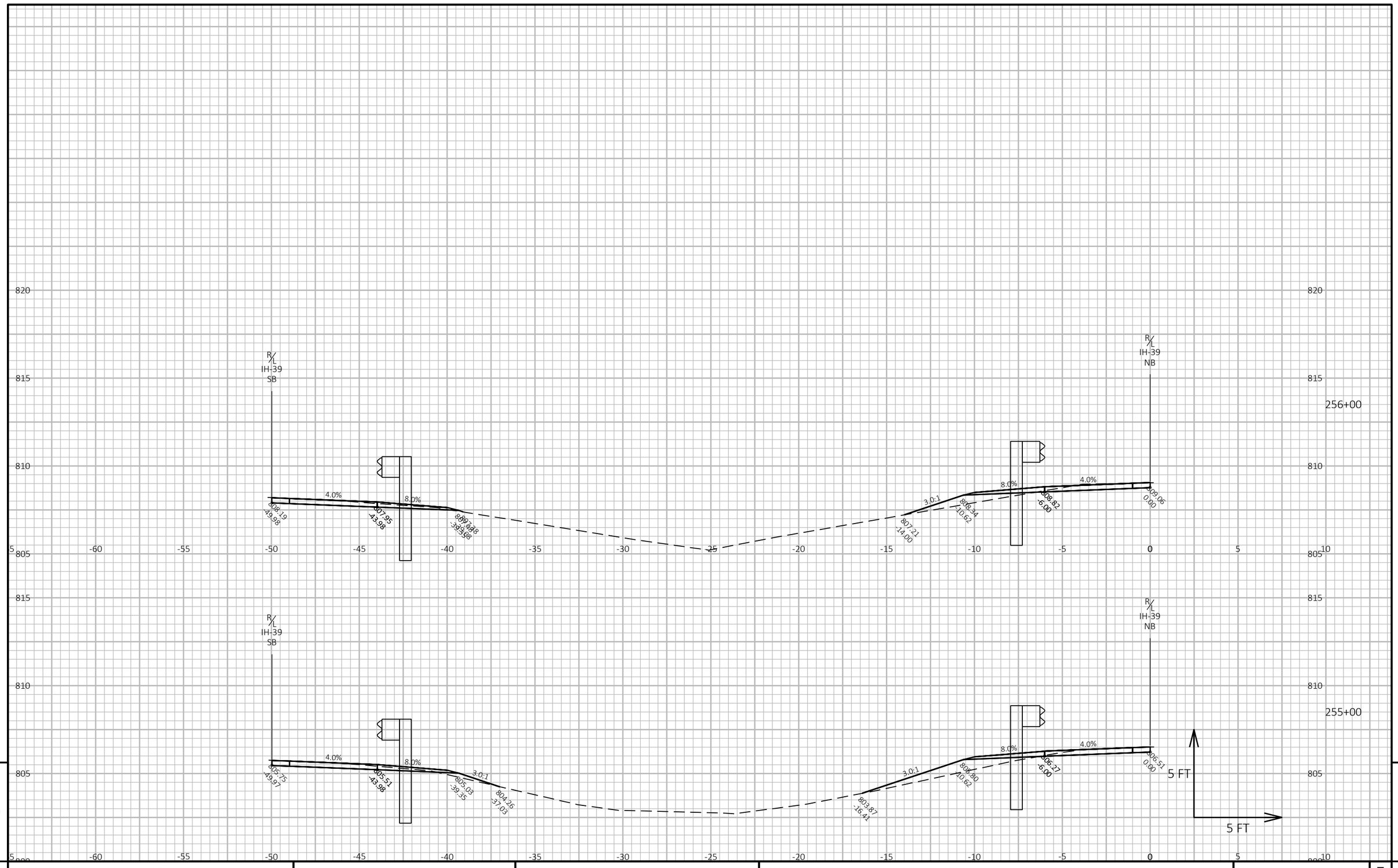


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 241	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 103

PLOT DATE : 1/12/2021 6:25 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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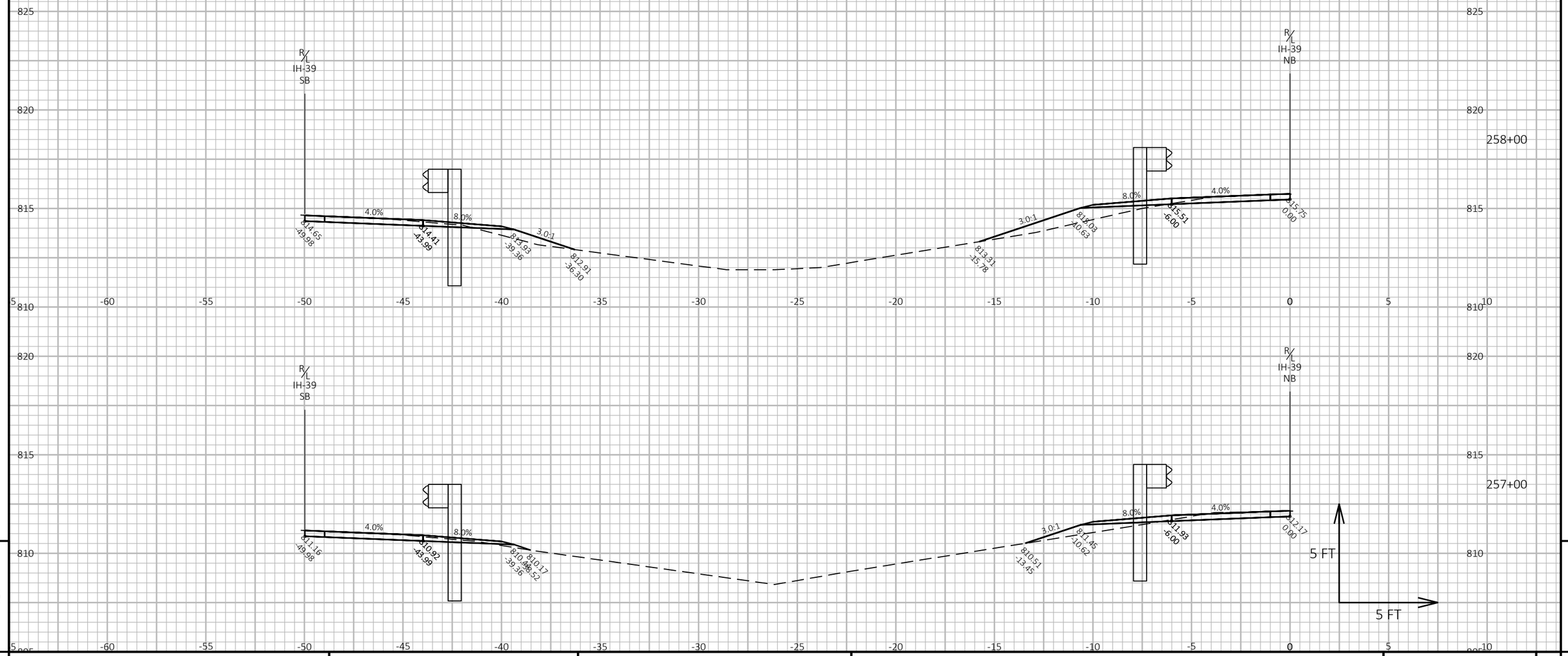
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 242	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 104

PLOT DATE : 1/12/2021 6:26 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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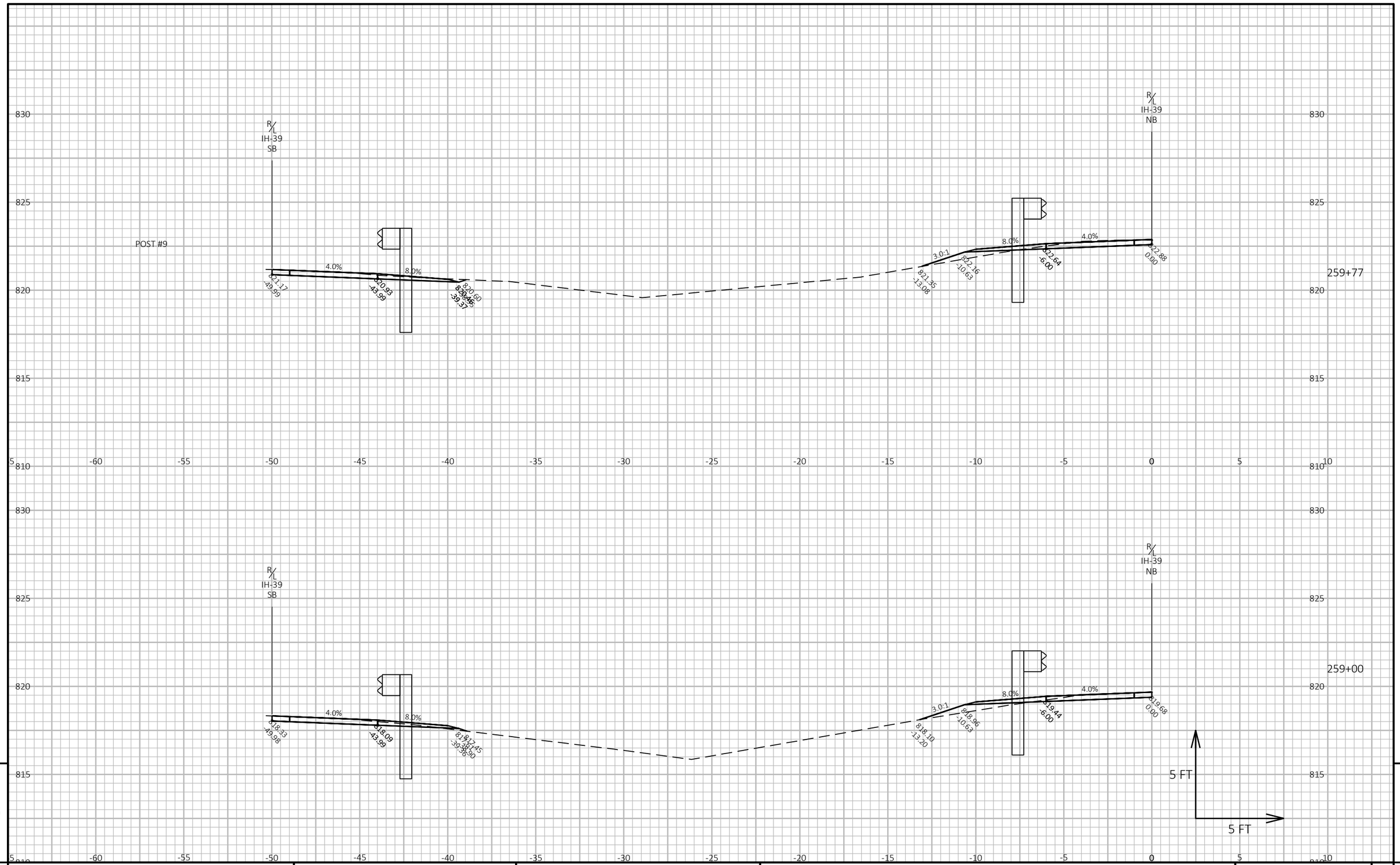
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 243	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 105

PLOT DATE : 1/12/2021 6:27 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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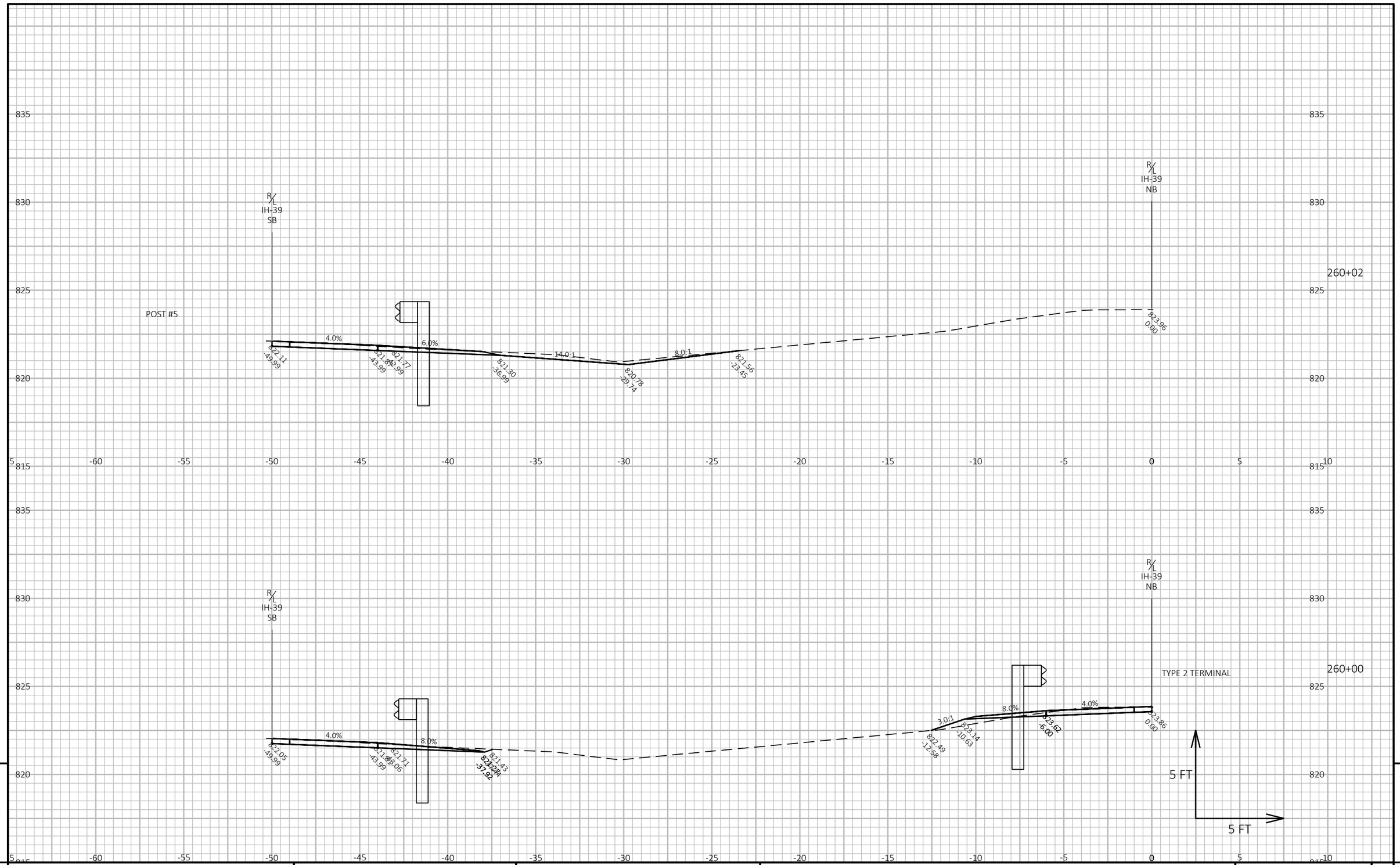
PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 244	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 106

PLOT DATE : 1/12/2021 6:28 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

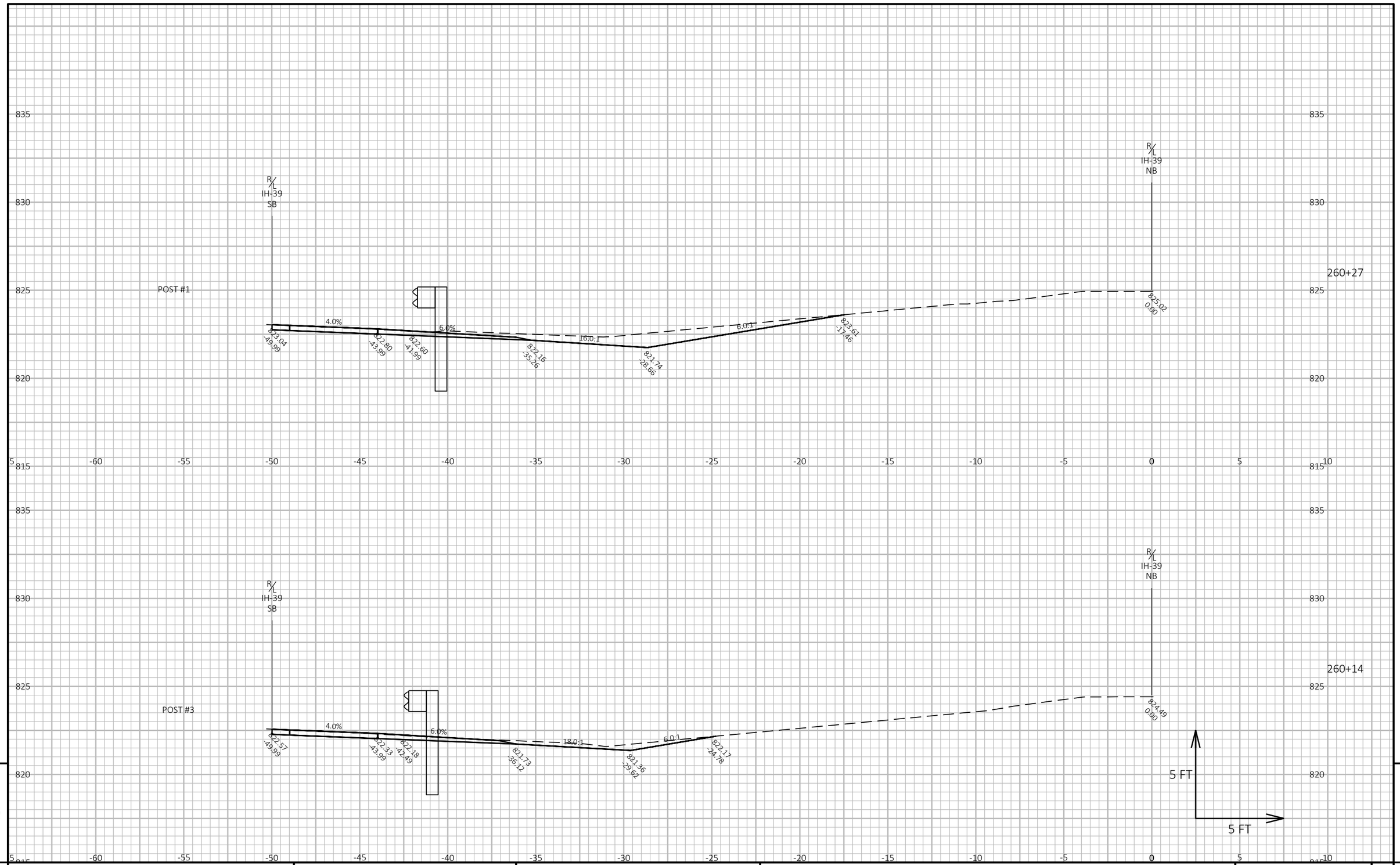


PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 245	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 107

PLOT DATE : 1/12/2021 6:28 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

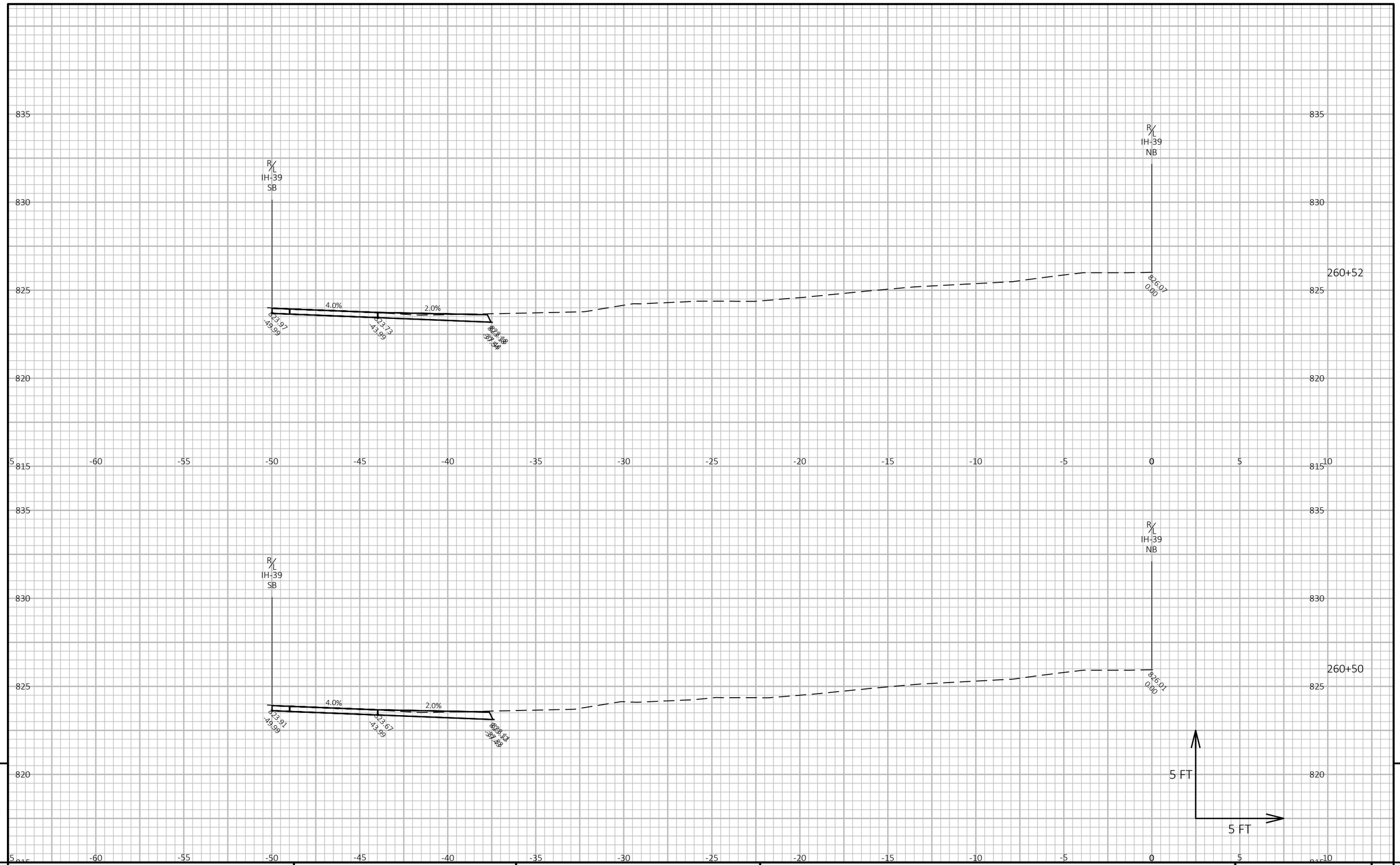
9

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 246	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 108

PLOT DATE : 1/12/2021 6:29 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1161-02-67	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 - WISCONSIN RIVER TO END PROJECT	SHEET 247	E

FILE NAME : Y:\MILWAUKEE\20200S\20278.00\ENG_DOCS\11610000\SHEETSPLAN\11610267-CABLE GUARD\XS_BG.DWG
LAYOUT NAME - 109

PLOT DATE : 1/12/2021 6:30 PM PLOT BY : WATT, TIMOTHY PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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