LAX

DECEMBER 2023

PROJECT ID: 5100-01-60

WITH: N/A

COUNTY: VERNON

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 = 256

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5100-01-60	WISC 2024057	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

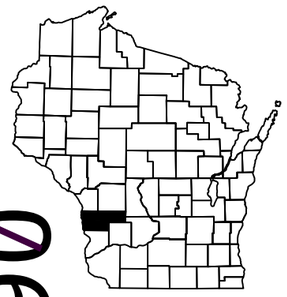
PLAN OF PROPOSED IMPROVEMENT

CASHTON - HILLSBORO

KICKAPOO R BR TO C HILLSBORO LIMIT

STH 33
VERNON COUNTY

STATE PROJECT NUMBER
5100-01-60





NET EXCEPTION TO C/L LENGTH
B-62-63
STA 502+65 - STA 503+14

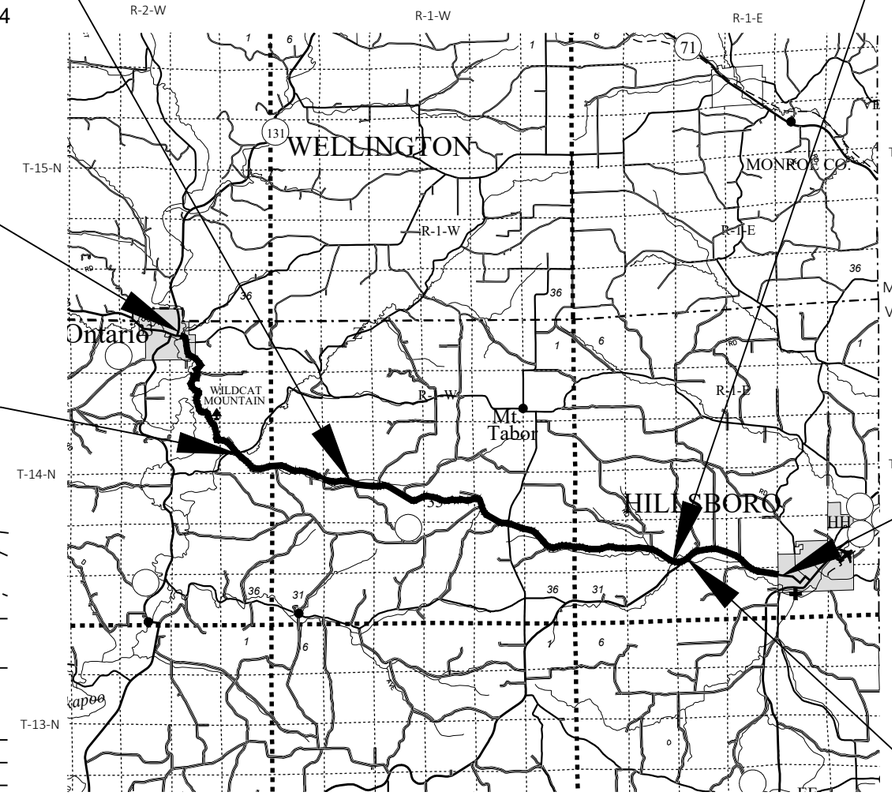
BEGIN PROJECT
STA 203+11
Y:209451.3041
X:781704.4472

NET EXCEPTION TO C/L LENGTH
B-62-198
STA 375+59 - STA 376+24

NET EXCEPTION TO C/L LENGTH
B-62-32
STA 875+21 - STA 876+02

END PROJECT
STA 997+50

NET EXCEPTION TO C/L LENGTH
B-62-33
STA 890+08 - STA 890+89



LAYOUT

SCALE 0 3 MI

TOTAL NET LENGTH OF CENTERLINE = 15.045 MI

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

DESIGN DESIGNATION N/A

A.A.D.T.	2025	=	1820
A.A.D.T.	2045	=	1820
D.H.V.		=	
D.D.		=	60/40
T.		=	18.5%
DESIGN SPEED		=	35MPH - 60 MPH
ESALS		=	440,000

CONVENTIONAL SYMBOLS

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	BRYTON MEYER
Project Manager	PAUL VALENTI
Regional Examiner	SW REGION
Regional Supervisor	JOHN BAINTER

APPROVED FOR THE DEPARTMENT

DATE: 09/25/2023 Paul M Valenti (Signature)

E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\010101_TI.DWG PLOT DATE : 7/31/2023 5:47 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

GENERAL NOTES

MISCELLANEOUS

THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

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

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

R/W APPROXIMATED ON PLAN SHEETS BASED ON AS-BUILTS/GIS DATA.

REMOVALS

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

GRADING AND EROSION CONTROL

DO NOT STORE EQUIPMENT OR MATERIALS IN, NOR IMPACT ANY WETLANDS OR WATERWAYS OUTSIDE THE SLOPE INTERCEPTS SHOWN.

DISTURBED AREAS AT BARRIER SYSTEM END TREATMENTS ARE TO BE FERTILIZED, TOPSOILED, PERMANENT SEEDED, TEMPORARILY SEEDED, AND MULCH OR EMAT PLACED AS DIRECTED BY THE ENGINEER AND ARE INCIDENTAL TO THE BARRIER SYSTEM GRADING SHAPING AND FINISHING ITEM.

PAVING

HMA WEIGHT CALCULATIONS BASED ON 112 LBS/SY/IN.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

WISCONSIN DNR LIAISON

KAREN KALVELAGE
DNR SOUTHWEST CENTRAL
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 406-7880
KAREN.KALVELAGE@WISCONSIN.GOV

WISDOT PROJECT MANAGER

PAUL VALENTI
WISDOT SW REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 785-9053
PAUL.VALENTI@DOT.WI.GOV

WISDOT DESIGN CONTACT

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WISDOT SW REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 789-7966
BRYTON.MEYER@DOT.WI.GOV

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

UTILITIES

ALLIANT ENERGY
ELECTRICITY
338 E. STATE STREET
MAUSTON, WI 53948
ATTN: TYLER DONOVAN
PHONE: (608) 963-9585
EMAIL: TYLERDONOVAN@ALLIANTENERGY.COM

BRIGHTSPEED
COMMUNICATION LINE
1905 WARD AVE
LA CROSSE, WI 54601
ATTN: TOM MURRAY
PHONE: (608) 780-0895
EMAIL: TOM.L.MURRAY@BRIGHTSPEED.COM

DAIRYLAND POWER COPPERATIVE
ELECTRICITY
3200 EAST AVE S
PO BOX 817
LA CROSSE, WI 54602-0817
ATTN: MIKE LYDON
PHONE: (608) 787-1381
EMAIL: MICHAEL.LYDON@DAIRYLANDPOWER.COM

HILLSBORO TELEPHONE COMPANY INC.
COMMUNICATION LINE
121 MILL STREET
PO BOX 427
HILLSBORO, WI 54634
ATTN: CHAD SCHMIDT
PHONE: (608) 489-4415
EMAIL: CSCHMIDT@HILLSBOROTEL.COM

VERNON ELECTRIC COOPERATIVE
ELECTRICITY
110 SAUGSTAD ROAD
WESTBY, WI 54667-1199
ATTN: COLE CARY
PHONE: (608) 634-7472
EMAIL: CCARY@VERNONELECTRIC.ORG

VILLAGE OF ONTARIO
WATER & SEWER
205 STATE STREET
PO BOX 66
ONTARIO, WI 54651
aATTN: PAUL GIBSON
PHONE: (608) 639-0623
EMAIL: VILLAGEOFONTARIO@CENTURYTEL.NET

ORDER OF TYPICAL SECTION & DETAIL SHEETS

1. GENERAL NOTES
2. PROJECT OVERVIEW
3. TYPICAL SECTIONS
4. CONSTRUCTION DETAILS
5. INTERSECTION DETAILS
6. PAVEMENT MARKING DETAILS
7. EROSION CONTROL
8. TRAFFIC CONTROL

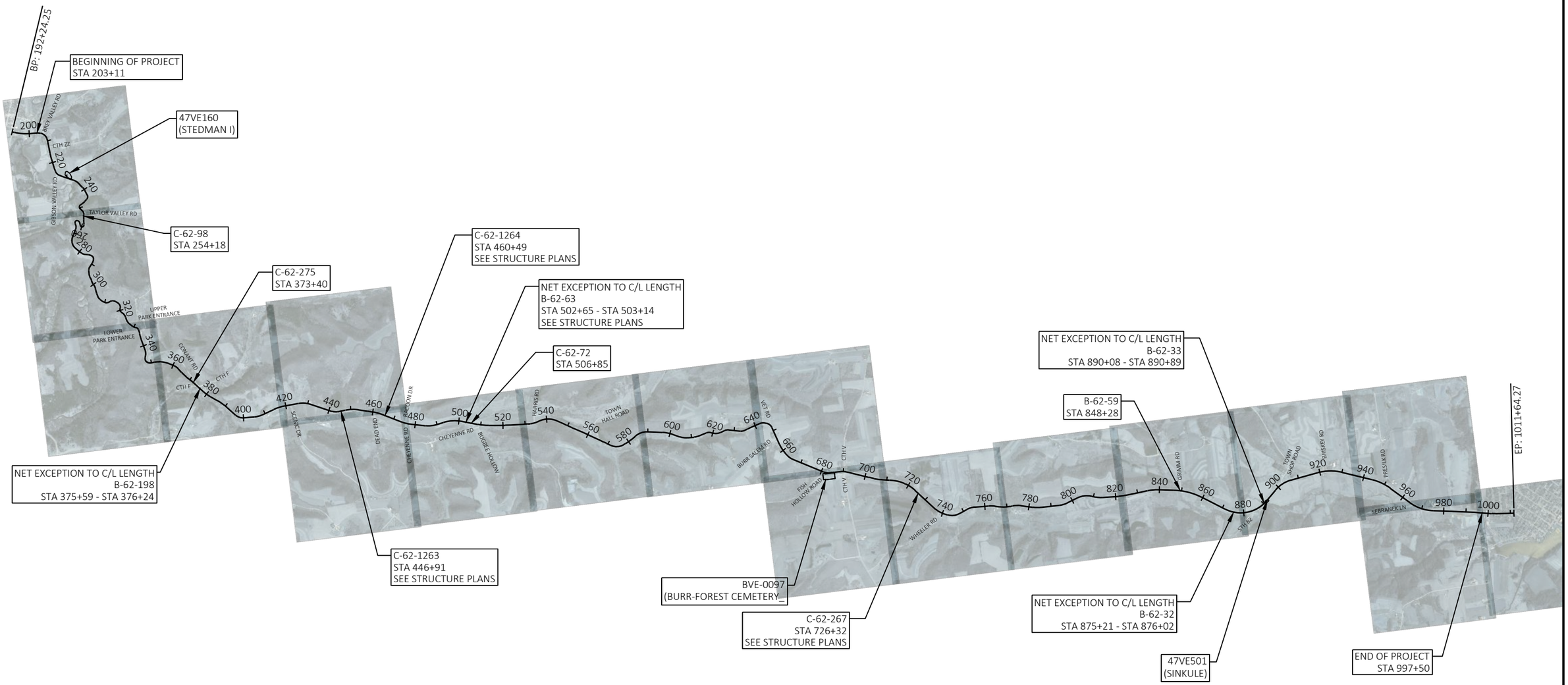
2

STANDARD ABBREVIATIONS

AC	ACRE	EXC.	EXCAVATION	R	RADIUS OR RANGE
AGG	AGGREGATE	EXIST	EXISTING	R/L	REFERENCE LINE
<	ANGLE	F.F.	FACE TO FACE	R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
AE, AEW	APRON ENDWALL	FERT.	FERTILIZER	REQ'D	REQUIRED
ASPH.	ASPHALTIC	F.E.	FIELD ENTRANCE	RT	RIGHT
A.D.T.	AVERAGE DAILY TRAFFIC	F/L, F.L.	FLOW LINE	R.H.D.	RIGHT HAND FORWARD
A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC	GALV.	GALVANIZE	R/W	RIGHT OF WAY
B.F.	BACK FACE	H.S.	HIGH STRENGTH	RD.	ROAD
BM	BENCHMARK	CWT	HUNDRED WEIGHT	SHLD.	SHOULDER(S)
BTWN	BETWEEN	INL	INLET	SHR.	SHRINKAGE
CTR.	CENTER	INTER.	INTERSECTION	S	SOUTH
C/L	CENTERLINE	IG	INTERSTATE HIGHWAY	SB	SOUTHBOUND
Δ	CENTRAL ANGLE OR DELTA	JT.	JOINT	S.F.	SQUARE FOOT (FEET)
C.E.	COMMERCIAL ENTRANCE	LT	LEFT	SDD	STANDARD DETAIL DRAWINGS
CONST.	CONSTRUCTION	L.H.F.	LEFT HAND FORWARD	STH	STATE TRUNK HIGHWAY
CMCP	CORRUGATED METAL CULVERT PIPE	L.	LENGTH OF CURVE	STA.	STATION
CMP	CORRUGATED METAL PIPE	L.F.	LINEAR FOOT (FEET)	S.E.	SUPERELEVATION
CO.	COUNTY	LC.	LONG COMPOUND	S/L	SURVEY LINE
CTH	COUNTY TRUNK HIGHWAY	LS	LUMP SUM	SYM	SYMMETRICAL
CR.	CREEK	M.P.	MARKER POST	T.	PERCENT TRUCKS
CABC	CRUSHED AGGREGATE BASE COURSE	MGAL	1000 GALLONS	TEL.	TELEPHONE
CY	CUBIC YARD	N.C.	NORMAL CROWN	TEMP.	TEMPORARY
CP	CONTROL POINT OR CULVERT PIPE	N	NORTH	T.L.A.	TEMPORARY LIMITED EASEMENT
C&G	CURB AND GUTTER	NB	NORTHBOUND	T.O.C.	TOP OF CURB
D	DEGREE OF CURVE	NOR	NORMAL	TYP	TYPICAL
D.H.V.	DESIGN HOURLY VOLUME	NO.	NUMBER	UNCL.	UNCLASSIFIED
DIA.	DIAMTETER	PAV'T	PAVEMENT	U.G.	UNDERGROUND (CABLE)
D.D.	DIRECTIONAL DISTRIBUTION	P.L.E.	PERMANENT LIMITED EASMENT	VAR.	VARIABLE
DISCH.	DISCHARGE	P.C.	POINT OF CURVATURE	V.C.	VERTICAL CURVE
DMS	DYNAMIC MESSAGE SIGN	P.I.	POINT OF INTERSECTION	V.P.C.	VERTICAL POINT OF CURVATURE
EA	EACH	P.T.	POINT OF TANGENCY	V.P.I.	VERTICAL POINT OF INTERSECTION
E	EAST	PCC	PORTLAND CEMENT CONCRETE	V.P.T.	VERTICAL POINT OF TANGENCY
EB	EASTBOUND	P.E.	PRIVATE ENTRANCE	Wt.	Weight
ELEC.	ELECTRIC(AL), ELEC. CABLE	PGL	PROFILE GRADE LINE	W	West
EL., ELEV.	ELEVATION	P.L.	PROPERTY LINE	WB	Westbound
ESALS	EQUIVALENT SINGLE AXLE LOADS				

2

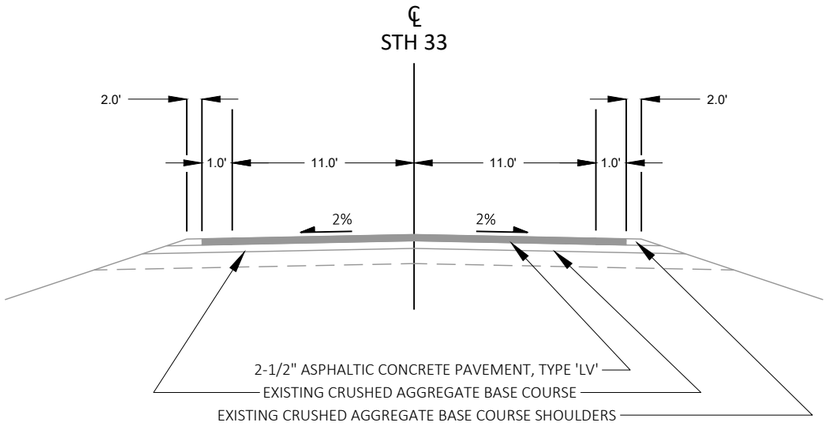
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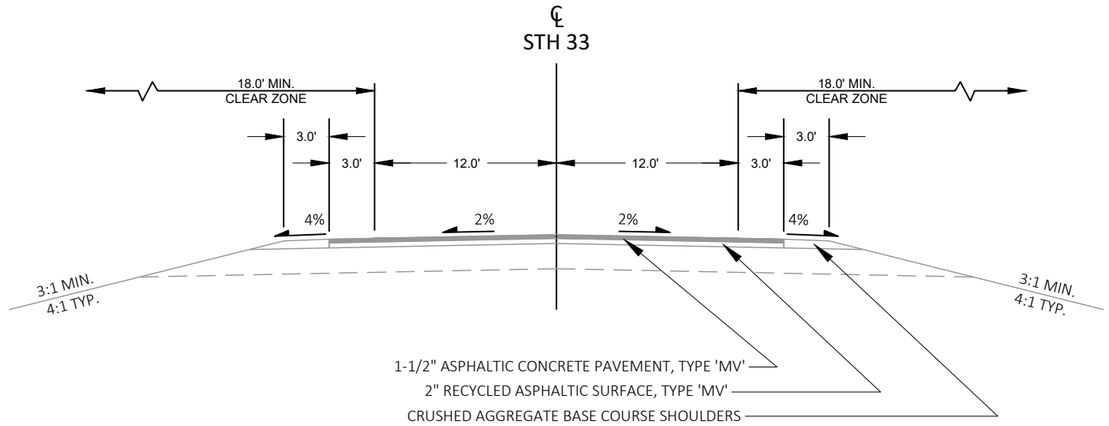
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LAYOUT NAME - 01

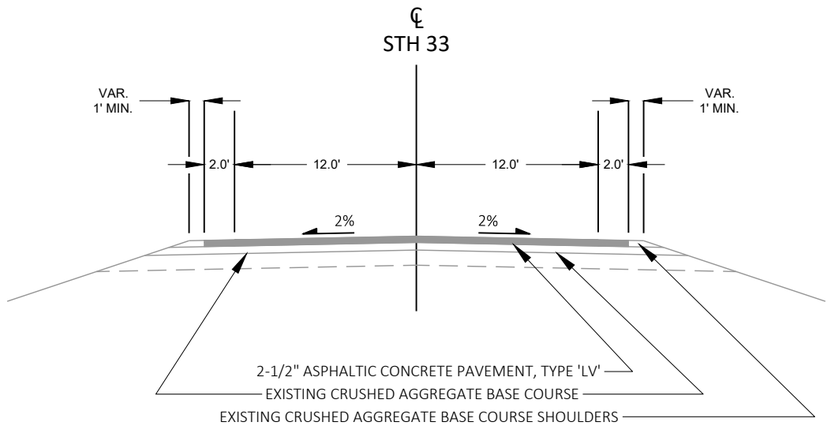
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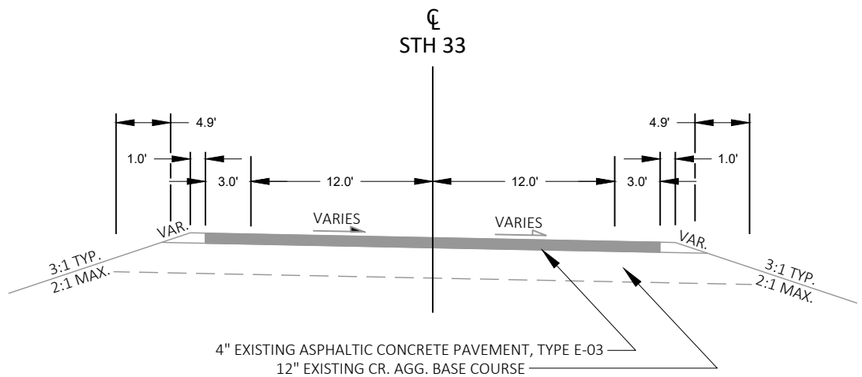
TYPICAL EXISTING SECTION
STH 33
STA 374+25 - 849+65



TYPICAL EXISTING SECTION
STH 33
STA 849+65 - 869+15



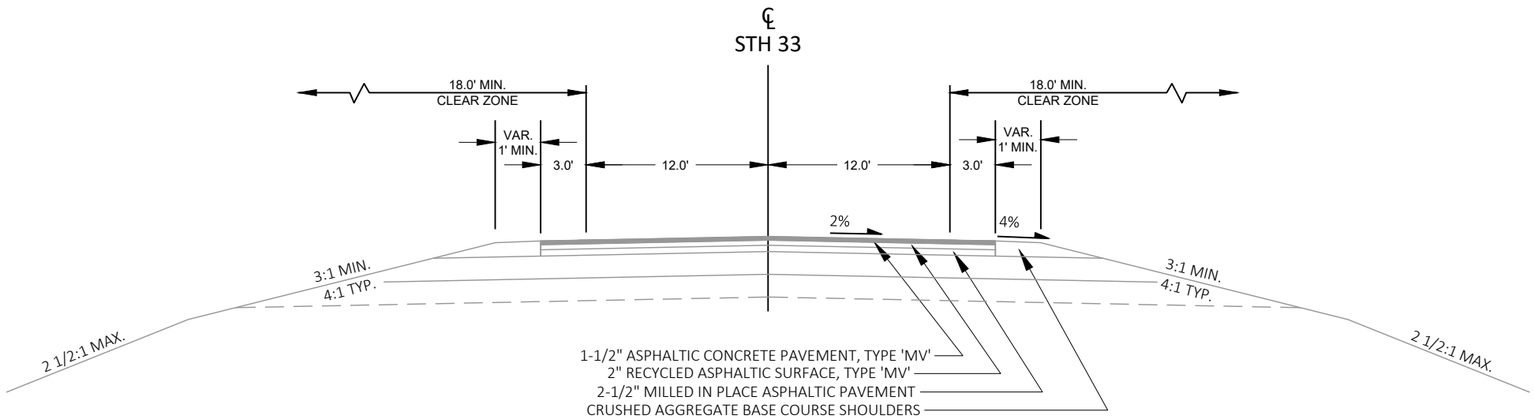
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STH 33
STA 203+03 - 374+25



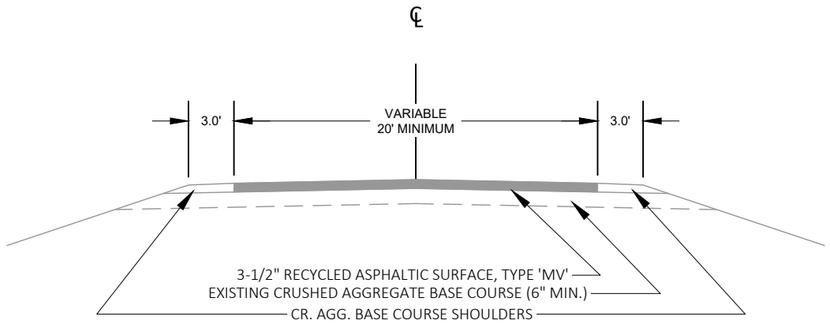
TYPICAL EXISTING SUPERELEVATED SECTION
STH 33

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	TYPICAL SECTIONS	SHEET 4	E

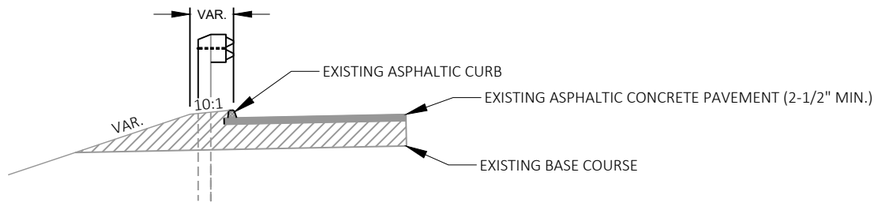
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PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



TYPICAL EXISTING SECTION
STH 33
STA 869+15 - 997+50



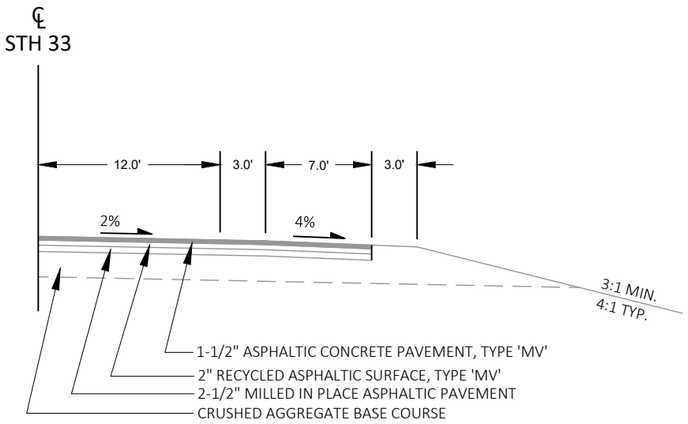
TYPICAL EXISTING SIDE ROAD SECTION



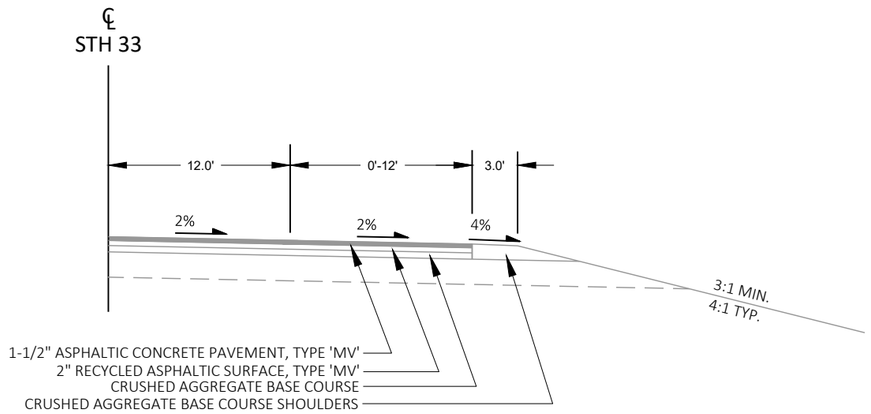
EXISTING SHOULDER DETAIL AT GUARD RAIL
STH 33

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	TYPICAL SECTIONS	SHEET 5	E

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PLOT DATE : 9/21/2023 5:30 PM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



TYPICAL EXISTING FULL WIDTH PAVED SHOULDER SECTION

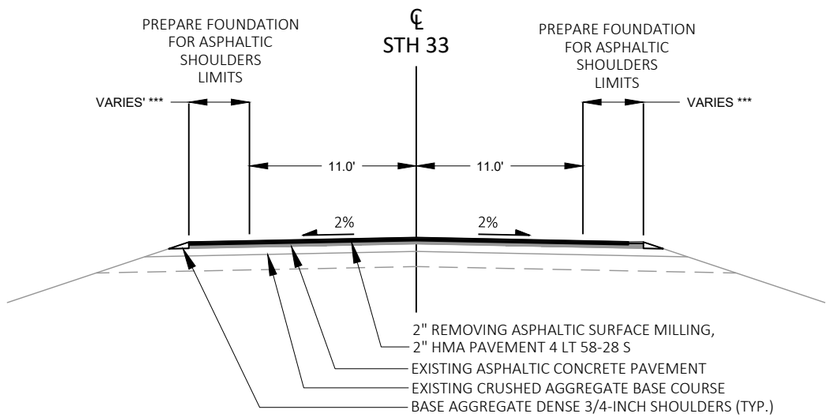


TYPICAL EXISTING PASSING LANE SECTION

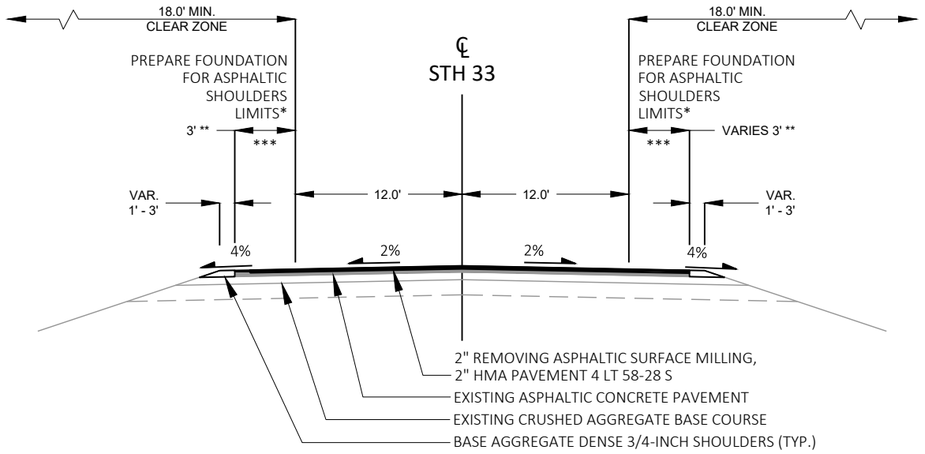
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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	TYPICAL SECTIONS	SHEET 6	E

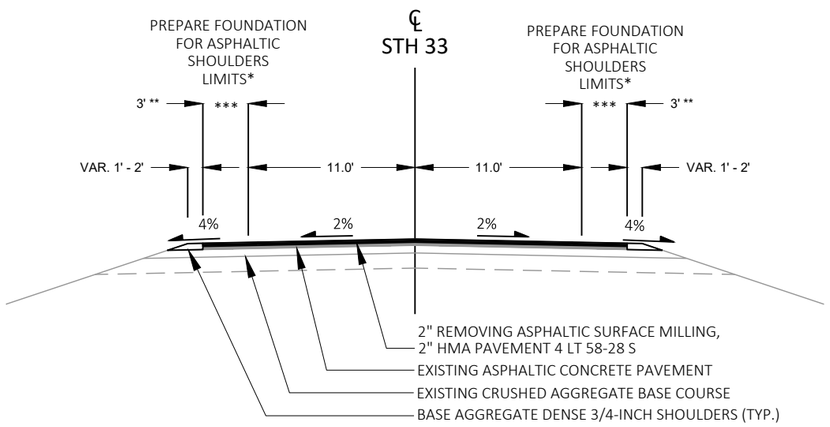
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PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



TYPICAL FINISHED SECTION
STH 33
STA 641+77 - 649+99



TYPICAL FINISHED SECTION
STH 33
STA 844+74 - 997+50

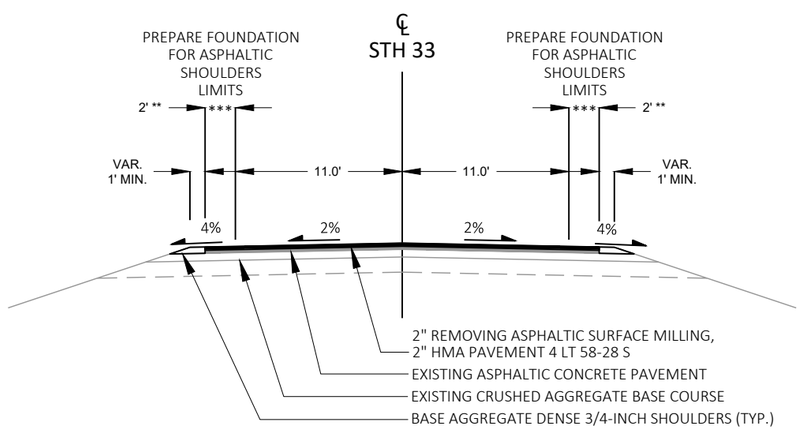


TYPICAL FINISHED SECTION
STH 33
STA 203+03 - 377+51

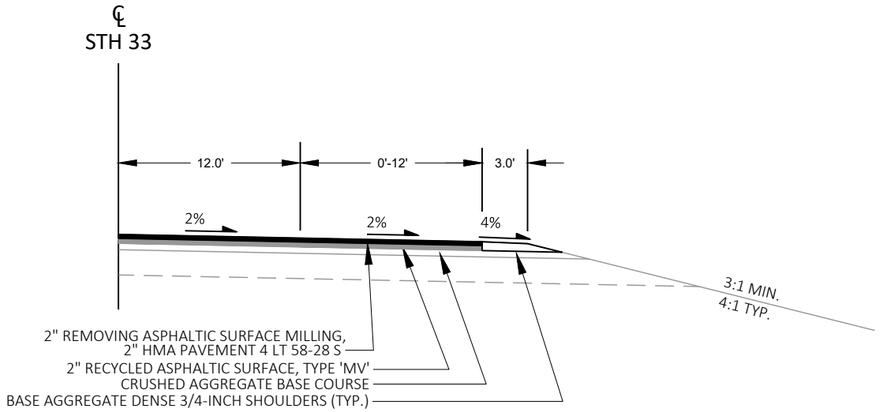
*PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS REQUIRED AT SELECT LOCATIONS, SEE MISCELLANEOUS QUANTITIES FOR MORE INFORMATION.

**SHOULDER WIDTHS VARY ALONG CURVES, SEE PLAN DETAILS FOR MORE INFORMATION.

***SAFETY EDGE REQUIRED WITH PAVED SHOULDER WIDTHS OF 3' OR LESS.

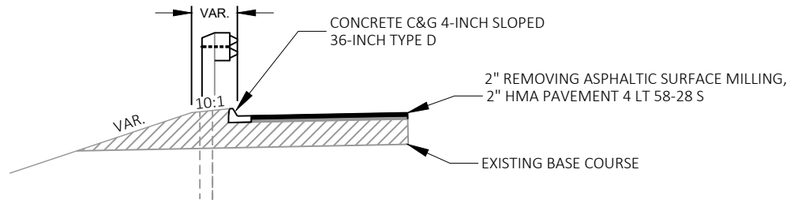


TYPICAL FINISHED SECTION
STH 33
STA 377+51 - 641+77
STA 649+99 - 844+74



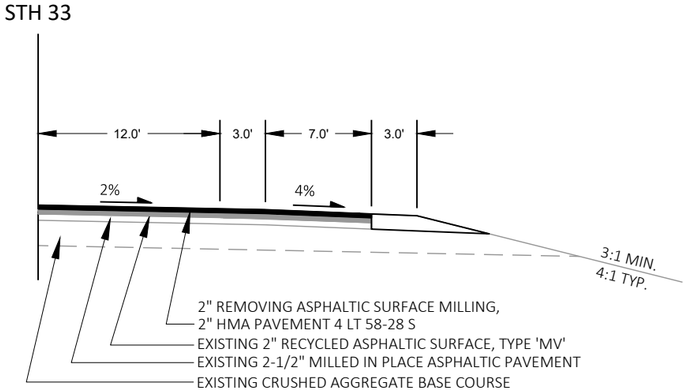
TYPICAL PASSING LANE SECTION

STH 33
STA 880+50 - 887+36
STA 989+27 - 996+07



EXISTING SHOULDER DETAIL AT GUARD RAIL

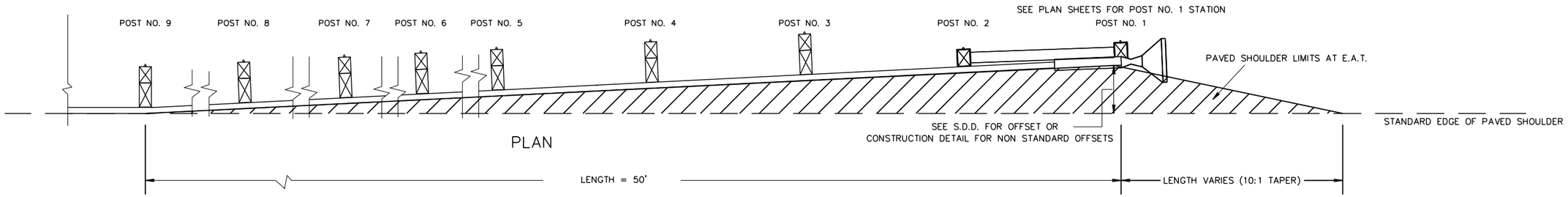
STH 33



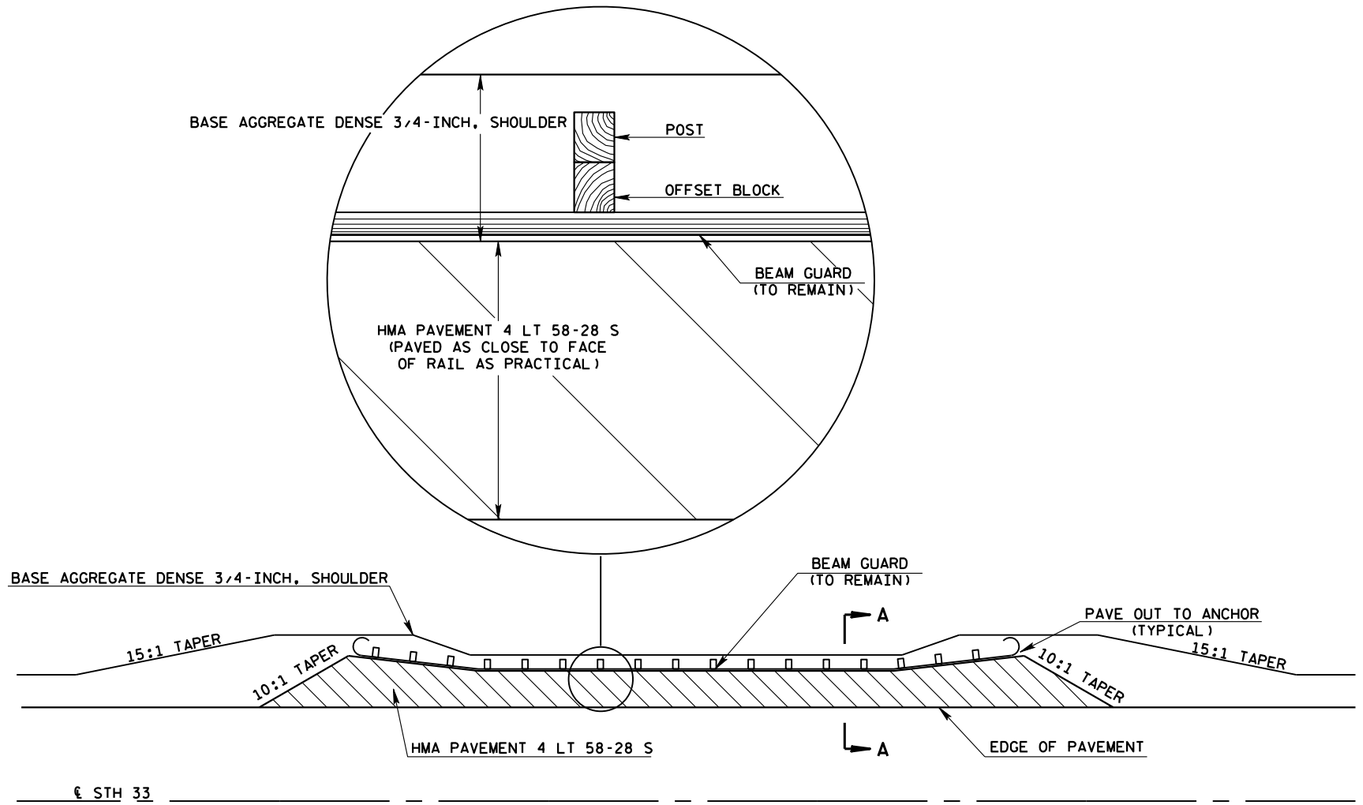
TYPICAL FULL WIDTH PAVED SHOULDER SECTION

STH 33
STA 996+07 - 997+50

2

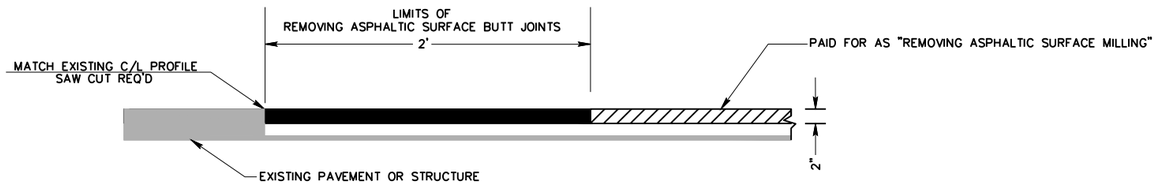


SHOULDER PAVING DETAIL AT E.A.T. (NEW INSTALLATIONS)

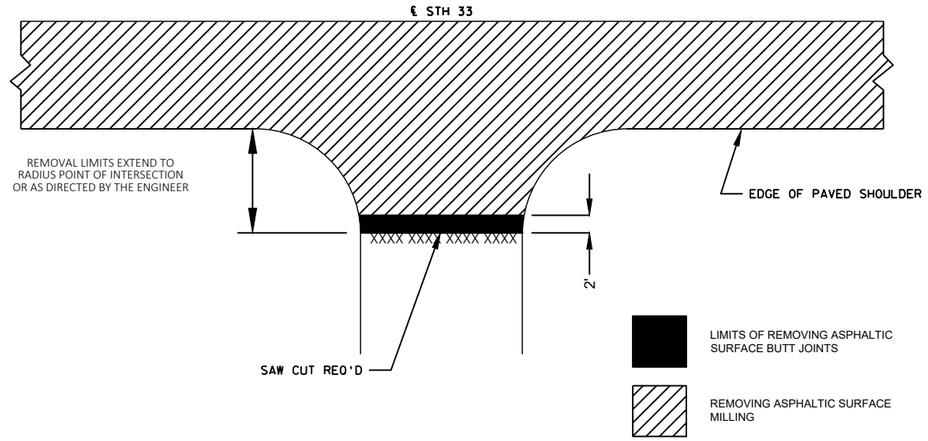


SHOULDER PAVING DETAIL AT BEAMGUARD (EXISTING LOCATIONS)

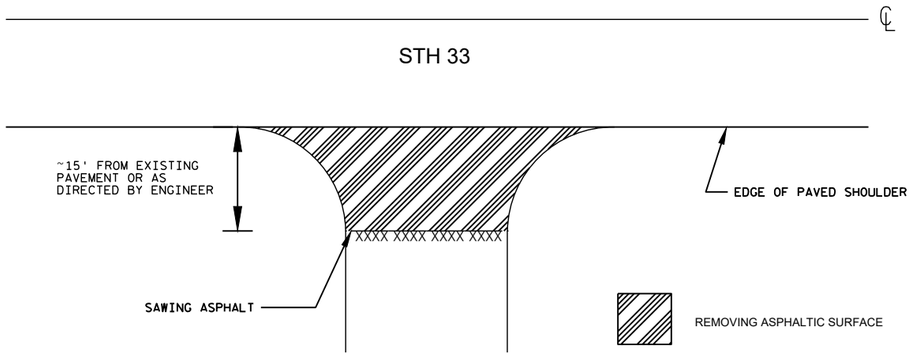
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CONSTRUCTION DETAILS	SHEET 9	E



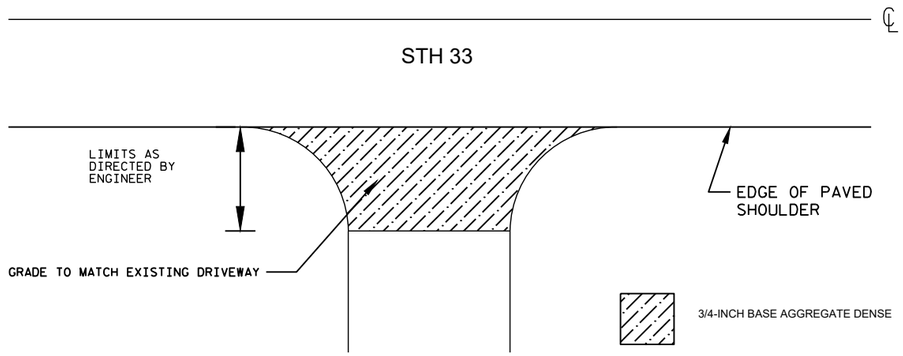
MAINLINE REMOVING ASPHALTIC SURFACE BUTT JOINT DETAIL



SIDE ROAD REMOVING ASPHALTIC SURFACE BUTT JOINT DETAIL

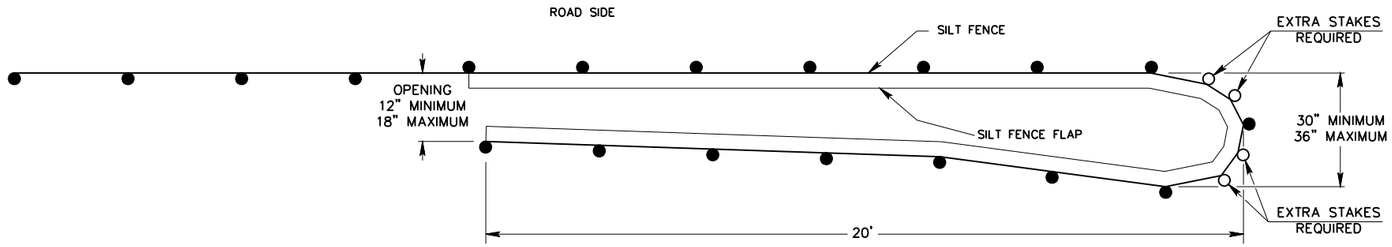


RURAL ASPHALT DRIVEWAY DETAIL



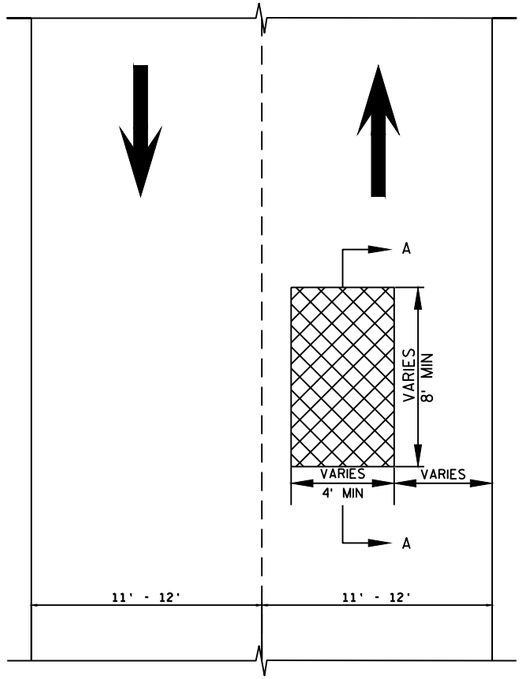
RURAL GRAVEL DRIVEWAY DETAIL

NOTES:
SILT FENCE POSTS FOR THE TURN–AROUND SHALL BE ON THE OUTSIDE OF THE TURN–AROUND.
TO BE PAID FOR AS SILT FENCE.



PLAN VIEW

TEMPORARY SMALL ANIMAL TURN–AROUND



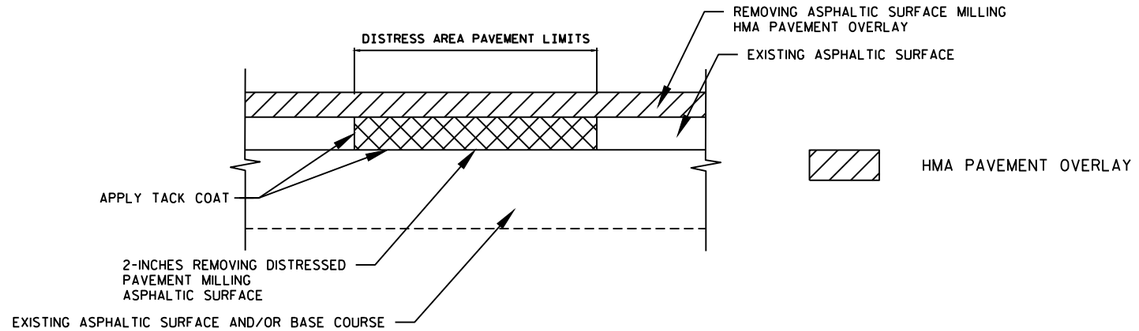
DISTRESS AREA PAVEMENT LIMITS

PLAN VIEW

REMOVING DISTRESSED PAVEMENT MILLING

TRAVEL DIRECTION

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



REMOVING DISTRESS PAVEMENT MILLING
SECTION A-A

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CONSTRUCTION DETAILS	SHEET 11	E

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 12	E



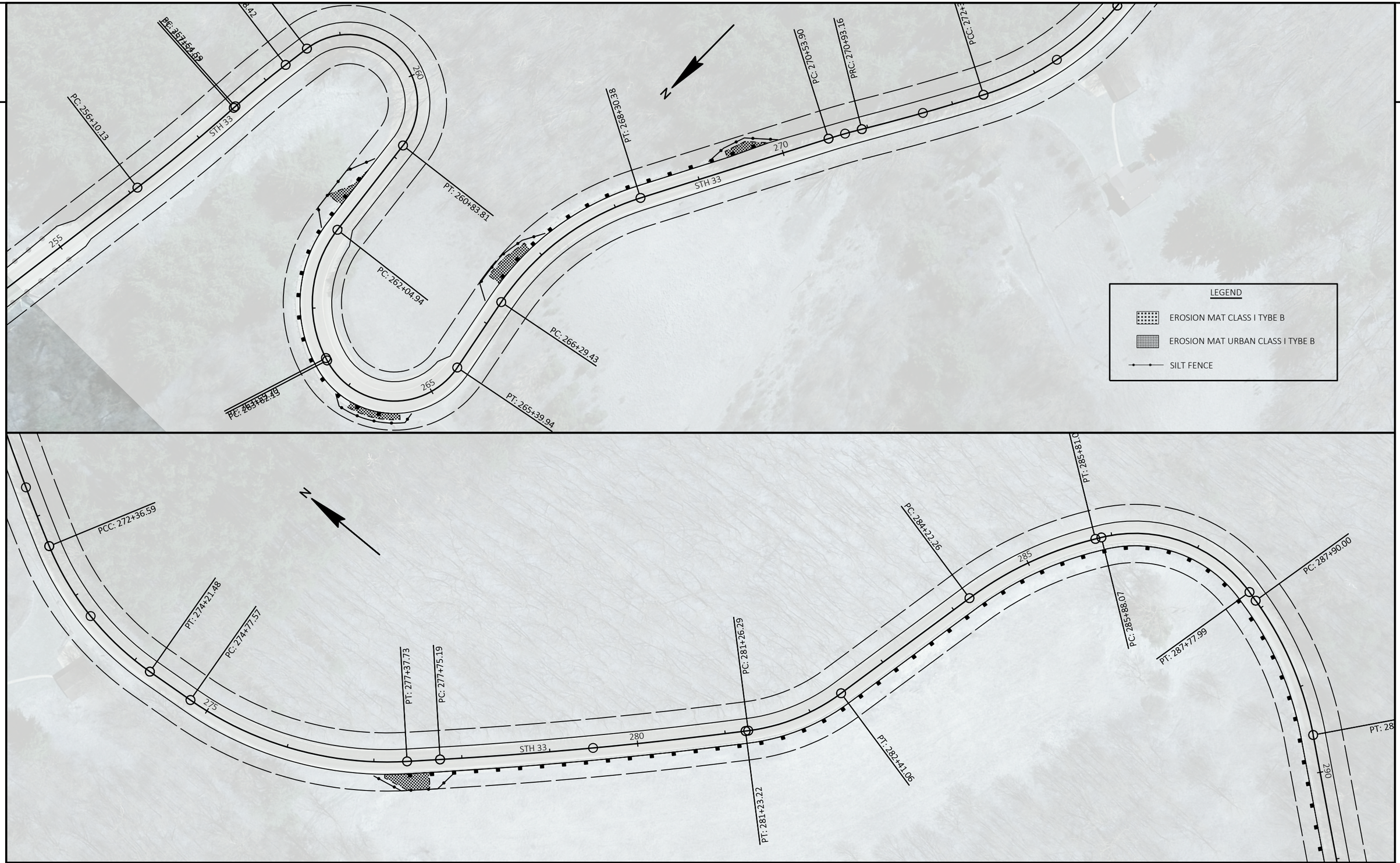
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 13	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 02

PLOT DATE : 10/18/2023 12:08 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 14	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 03

PLOT DATE : 10/18/2023 12:09 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

PC: 287+9

PT: 287+77.99

PT: 289+57.06

290

PC: 291+72.40

PT: 293+10.64

PC: 294+72.41

PT: 295+06.39

PC: 296+08.69

STH 33

295

PT: 298+16.67

PT: 299+65.13

PC: 298+89.61

300

PC: 300+48.91

PT: 301+95.51

PC: 302+63.71

PT: 304+

LEGEND

EROSION MAT CLASS I TYBE B

EROSION MAT URBAN CLASS I TYBE B

SILT FENCE

PT: 301

PC: 302+63.71

N

PT: 304+31.39

PC: 305+78.15

305

STH 33

PT: 307+43.19

PC: 308+60.51

PT: 310+34.23

310

PC: 310+35.18

PC: 312+54.50

PC: 313+44.55

PT: 313+85.45

PT: 313+31.88

PT: 311+89.53

315

PCC: 315

PCC: 316+

PT: 318+8

PC:

320

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 15	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 04

PLOT DATE : 10/18/2023 12:10 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

PT: 318+83.81

PC: 319+47.00

320

PT: 320+74.51

PC: 321+72.90

PT: 323+98.06

325

PC: B25+40.11

PT: 327+39.61

STH 33

PARK ENTRANCE

PC: 329+30.68

330

PT: 330+38.15

PC: 330+93.52

PT: 332+33.20

PC: 332+47.26

PARK E

N

LEGEND

EROSION MAT CLASS I TYBE B

EROSION MAT URBAN CLASS I TYBE B

SILT FENCE

PC: 332+47.26

PARK ENRANCE

PT: 334+10.06

PC: 335+34.29

PT: 336+85.13

335

340

STH 33

PC: 342+27.06

345

PT: 344+55.71

PC: 345+64.39

PC: 347+53.22

PT: 347+

PT: 332+33.20

N

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 16	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 05

PLOT DATE : 10/18/2023 12:12 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

PT: 347+52.31

PC: 347+53.22

350

PT: 349+71.56

PC: 351+44.46

PT: 353+38.44

PC: 353+40.58

355

PCC: 358+01.31

STH 33

360

PCC: 360+66.16

N

PT: 362+83.48

PC: 365+08.28

365

PCC: 367+95.81

STH 33

370

PRC: 370+70.17

PT: 372+89.78

CONANT RD

CTH F

375

PC: 375+47.59

CTH F

N

STA 373+40
STRUCTURE C-62-0275

STA 375+59 - STA 376+24
STRUCTURE B-62-198

LEGEND

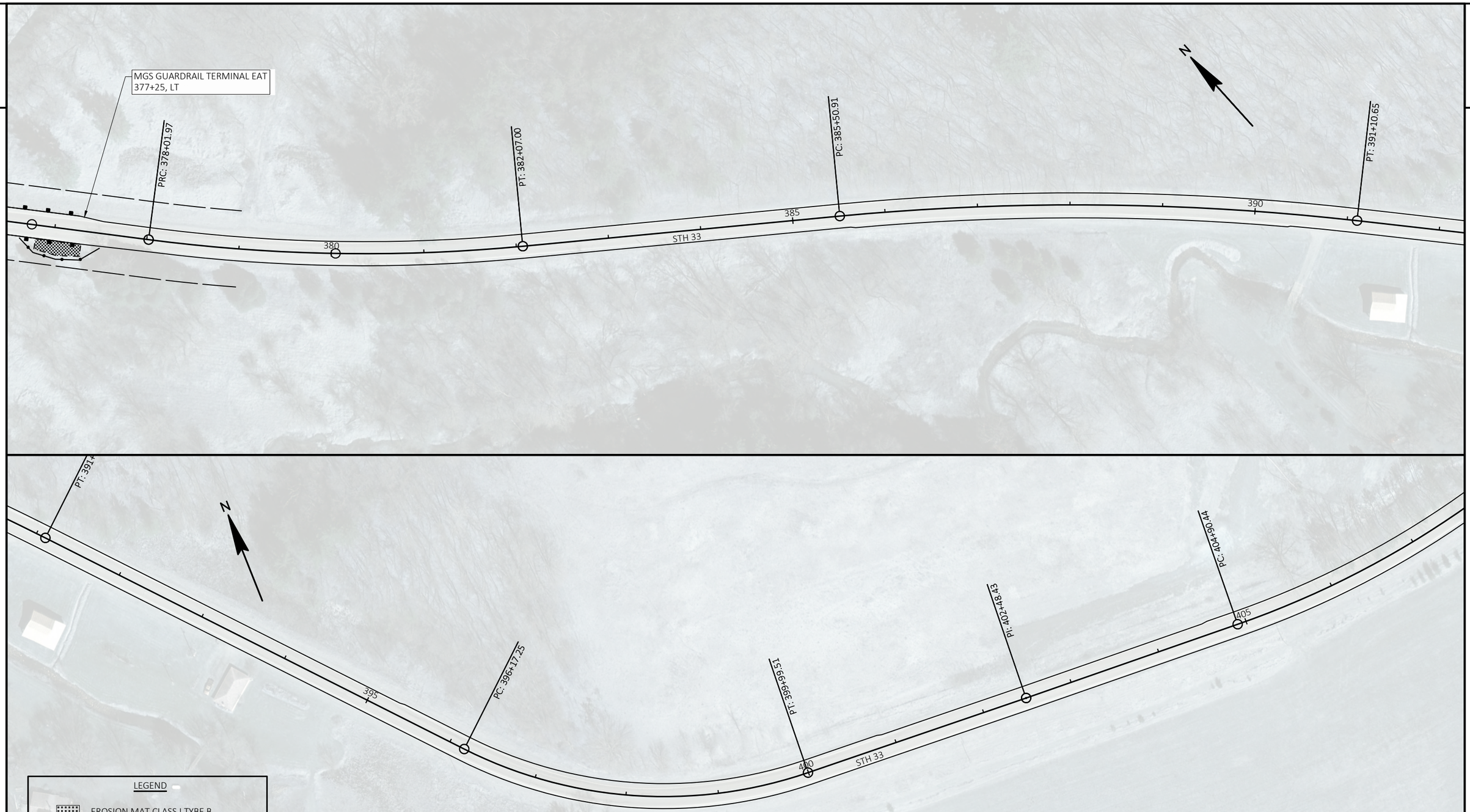
- EROSION MAT CLASS I TYBE B
- EROSION MAT URBAN CLASS I TYBE B
- SILT FENCE

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 17	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 06

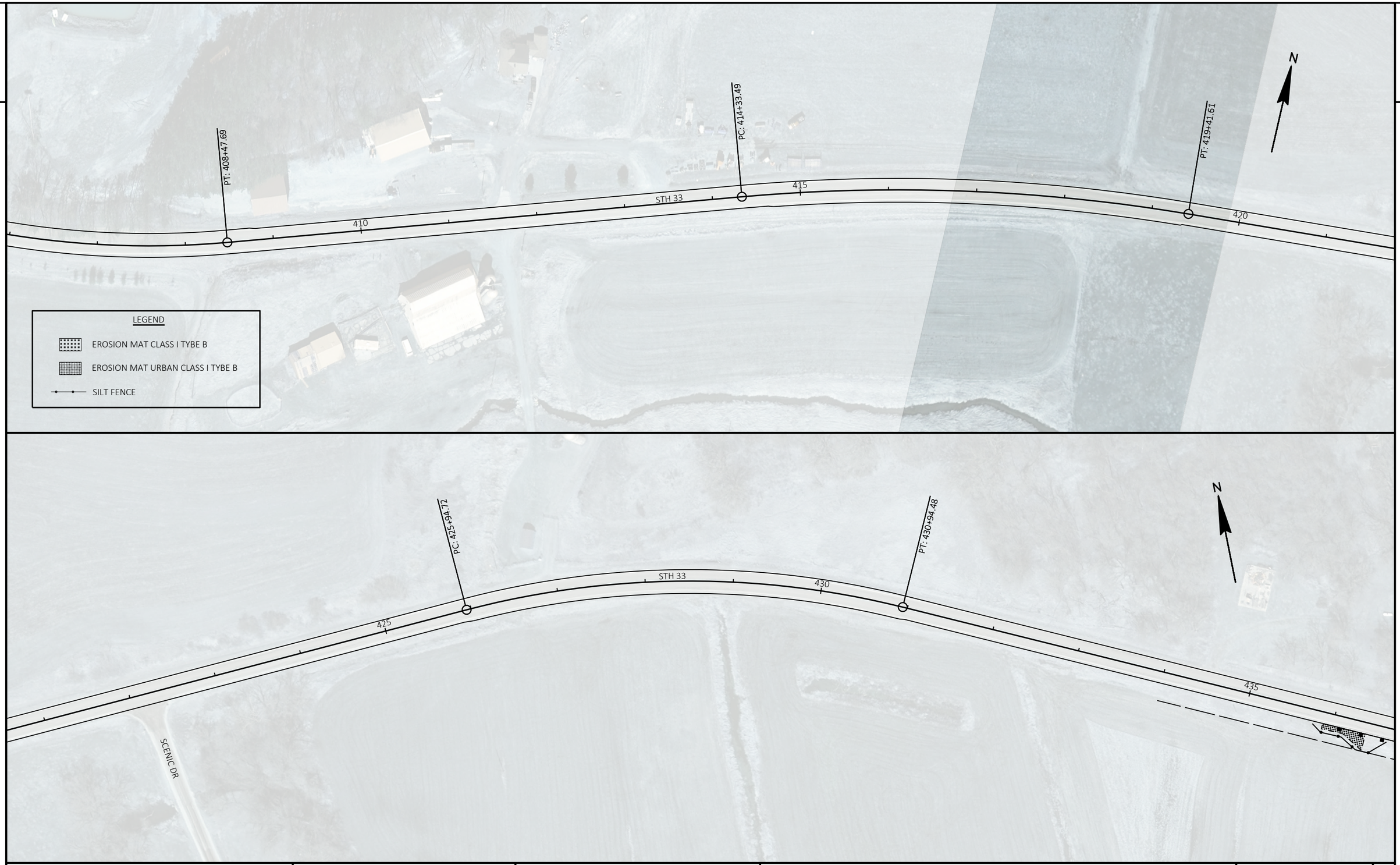
PLOT DATE : 10/18/2023 12:13 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 18	E

2



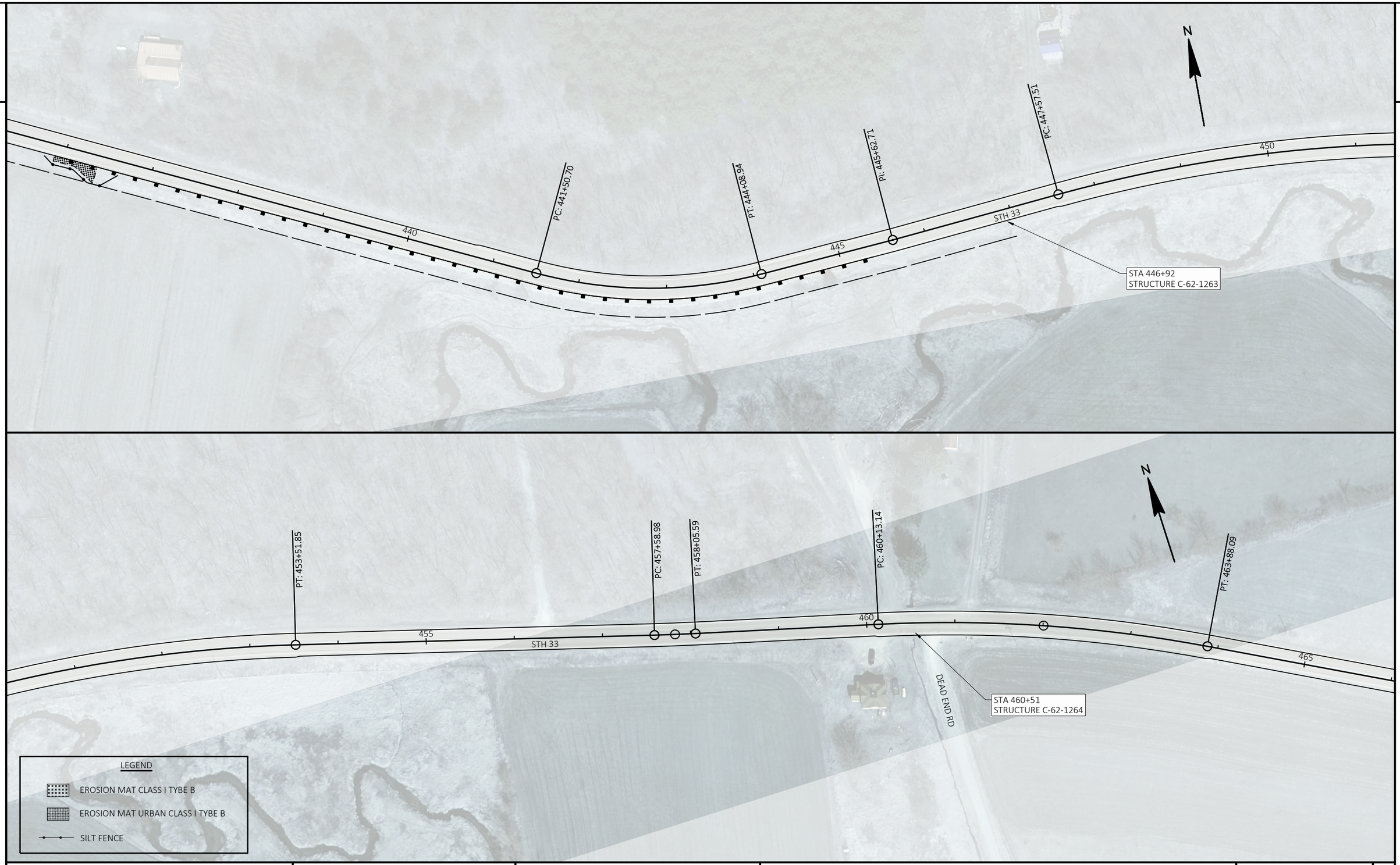
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 19	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 08

PLOT DATE : 10/18/2023 12:15 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

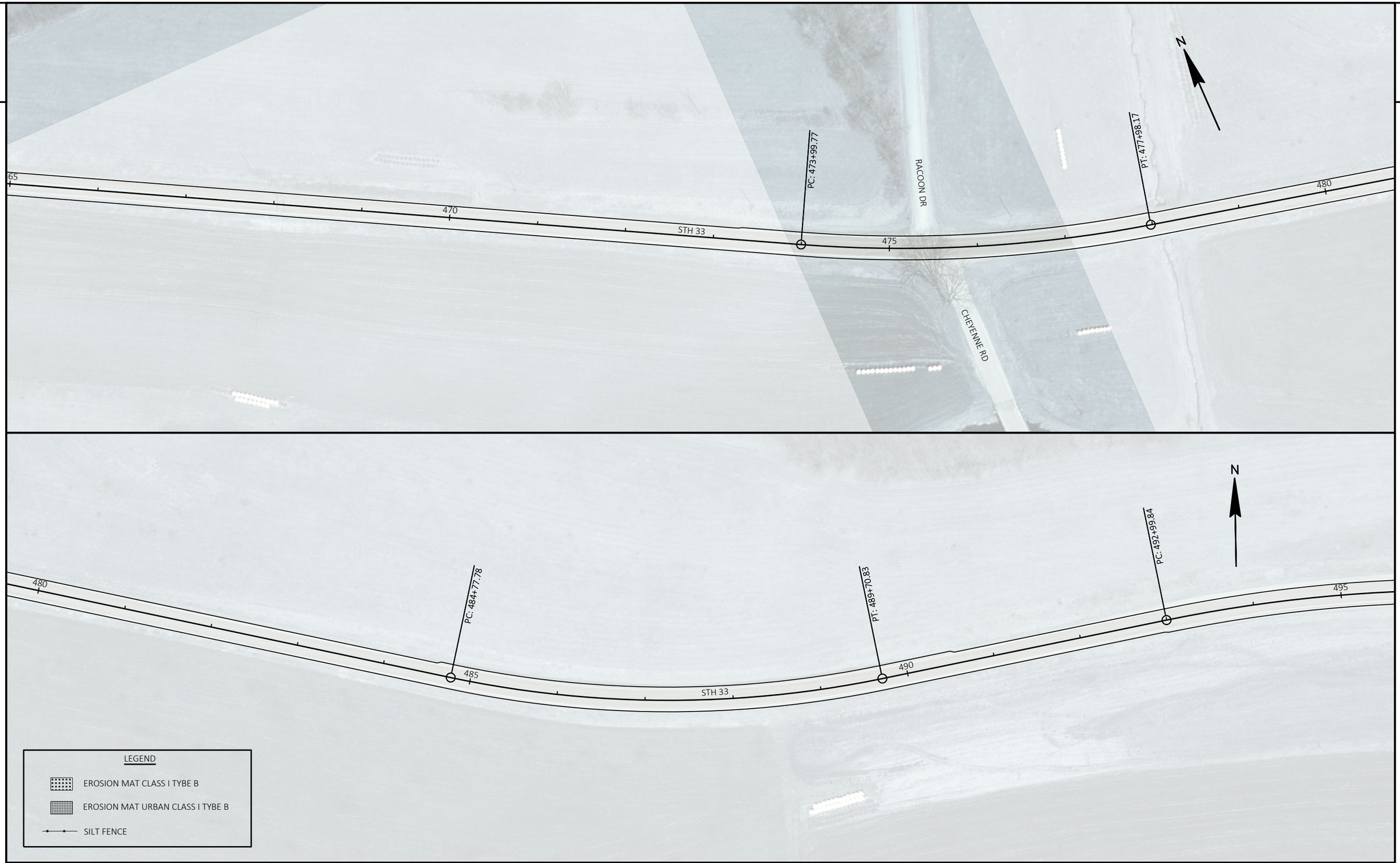
2

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 20	E

2

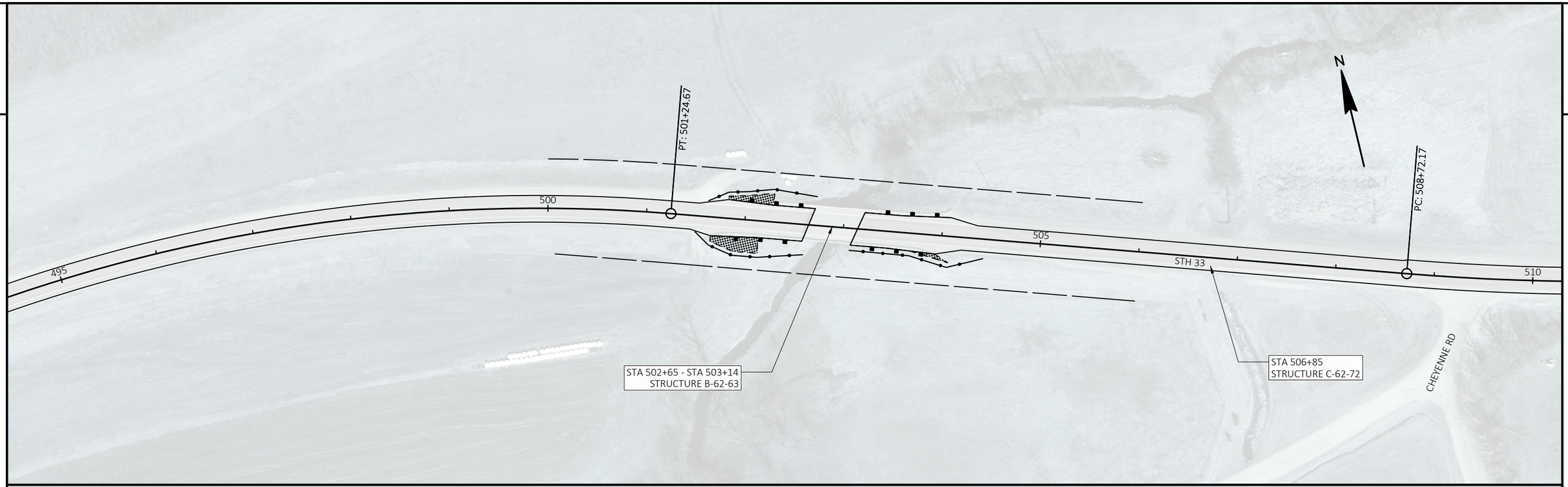


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 21	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 10

PLOT DATE : 10/18/2023 12:17 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



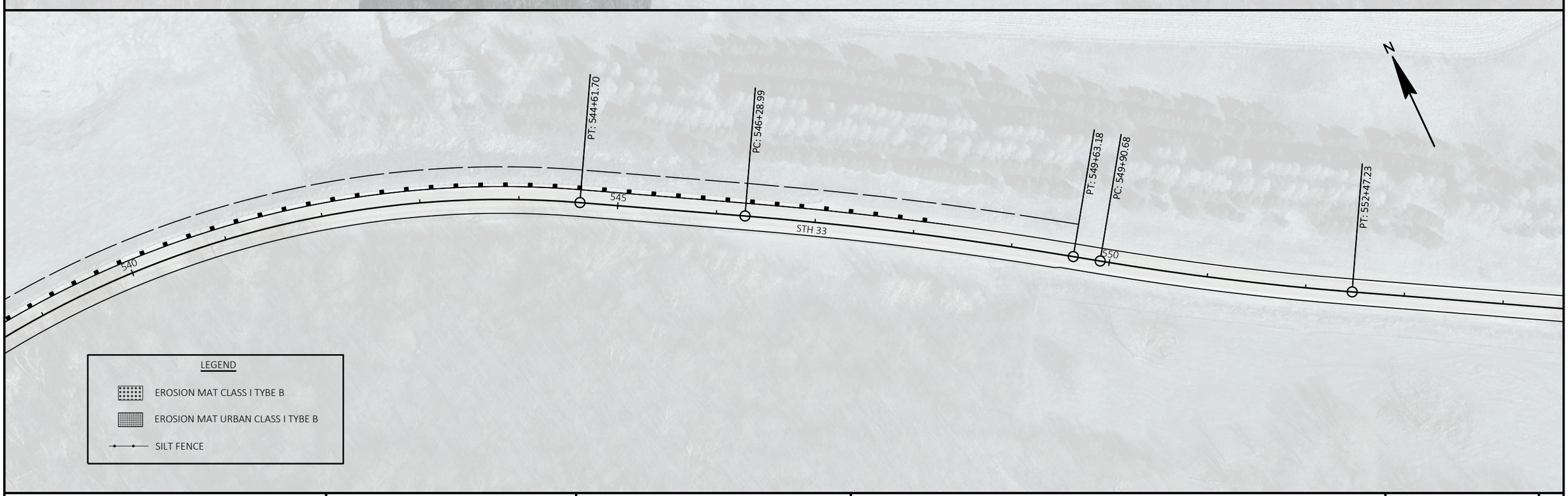


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 22	E

2

2





PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 23	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 12

PLOT DATE : 10/18/2023 12:18 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

PC: 554+70.74

555

PT: 560+13.58

560

STH 33

565

TOWN HALL RD

PI: 566+07.41

PC: 567+93.33

N

PT: 569+21.11

570

PC: 571+46.52

575

PT: 577+37.44

PC: 578+25.87

580

STH 33

283+60.83

N

LEGEND

EROSION MAT CLASS I TYBE B

EROSION MAT URBAN CLASS I TYBE B

SILT FENCE

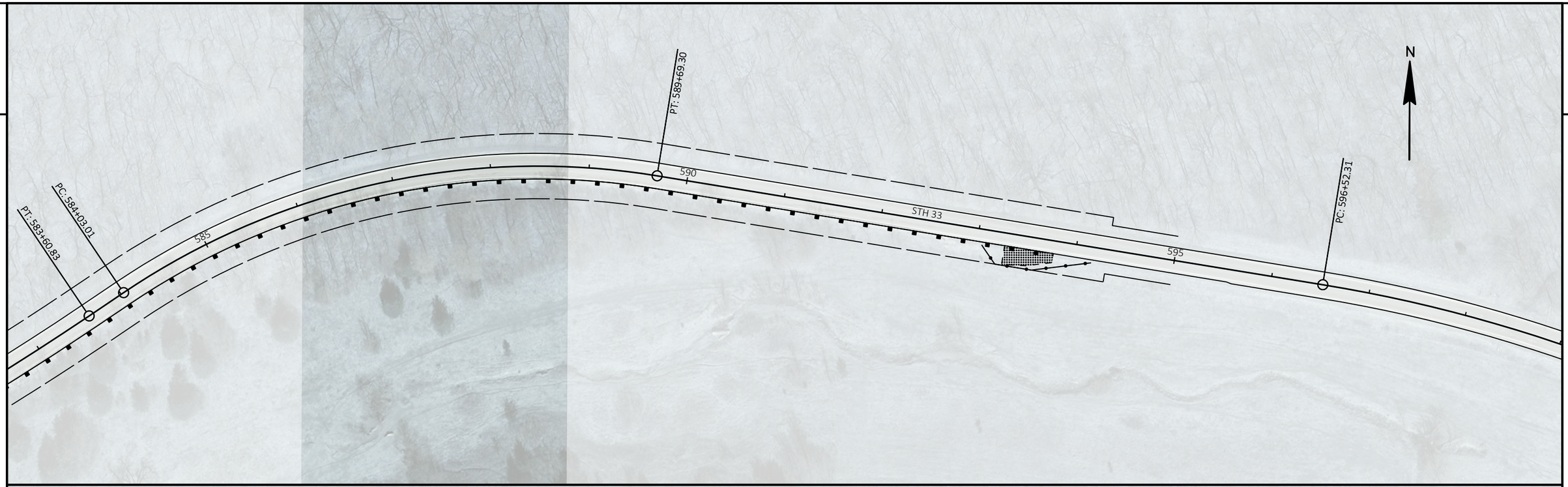
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 24	E

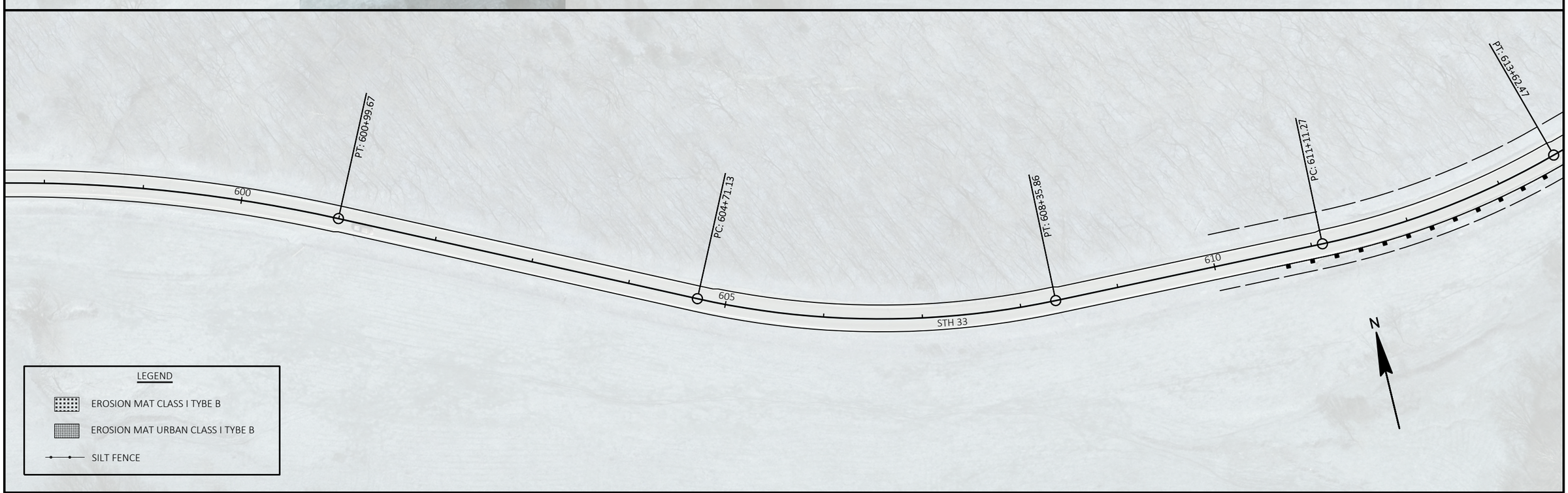
FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 13

PLOT DATE : 10/18/2023 12:20 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2



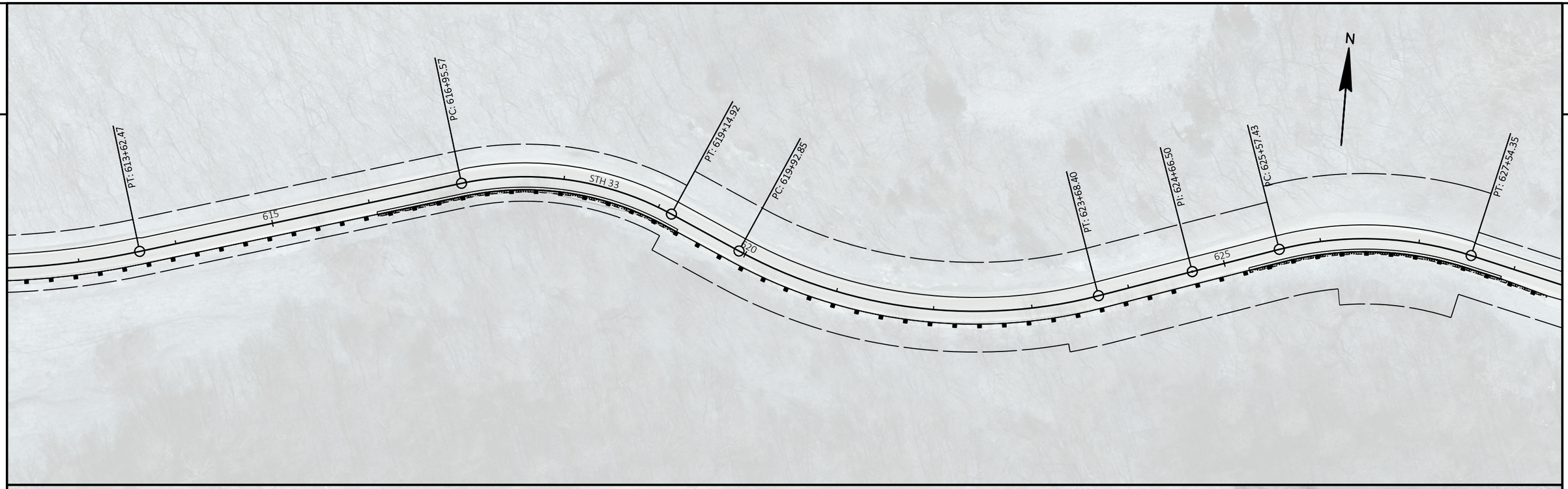


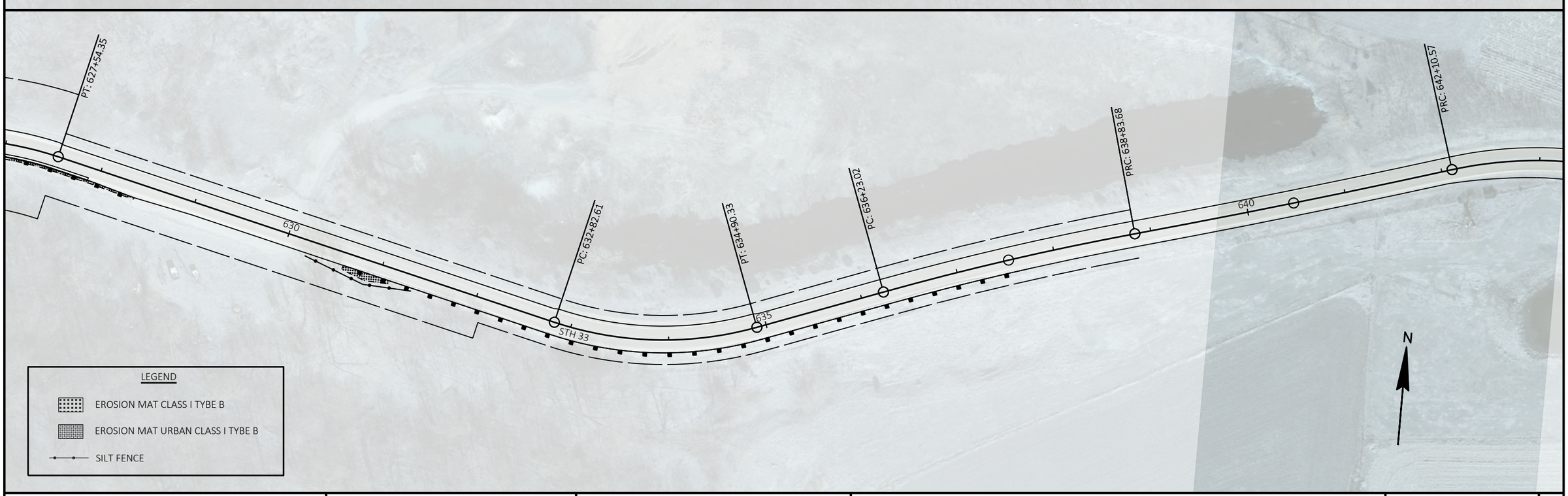
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 25	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 14

PLOT DATE : 10/18/2023 12:20 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



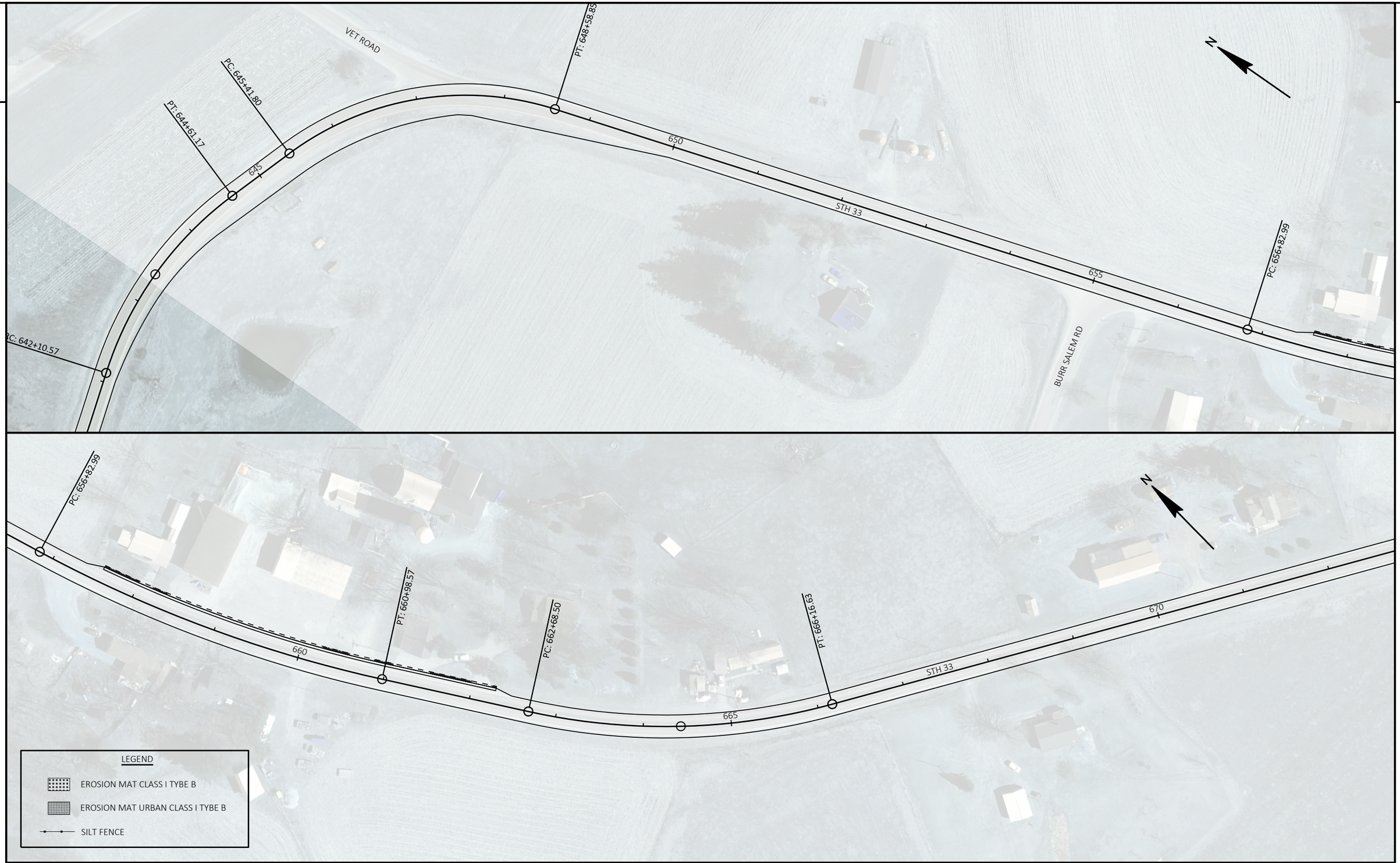


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 26	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 15

PLOT DATE : 10/18/2023 12:21 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



2

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 27	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 16

PLOT DATE : 10/18/2023 12:23 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

675

STH 33

680

PC: 680+92.58

PCC: 684+08.06

PT: 684+85.74

685

PC: 685+99.05

FISH HOLLOW RD

BVE-0097
(BURR-FOREST CEMETERY ARCH SITE)

N

PCC: 688+87.86

CTH V

PCC: 691+29.55

PT: 694+21.34

690

695

STH 33

700

PC: 701+82.12

CTH V

LEGEND

EROSION MAT CLASS I TYBE B

EROSION MAT URBAN CLASS I TYBE B

SILT FENCE

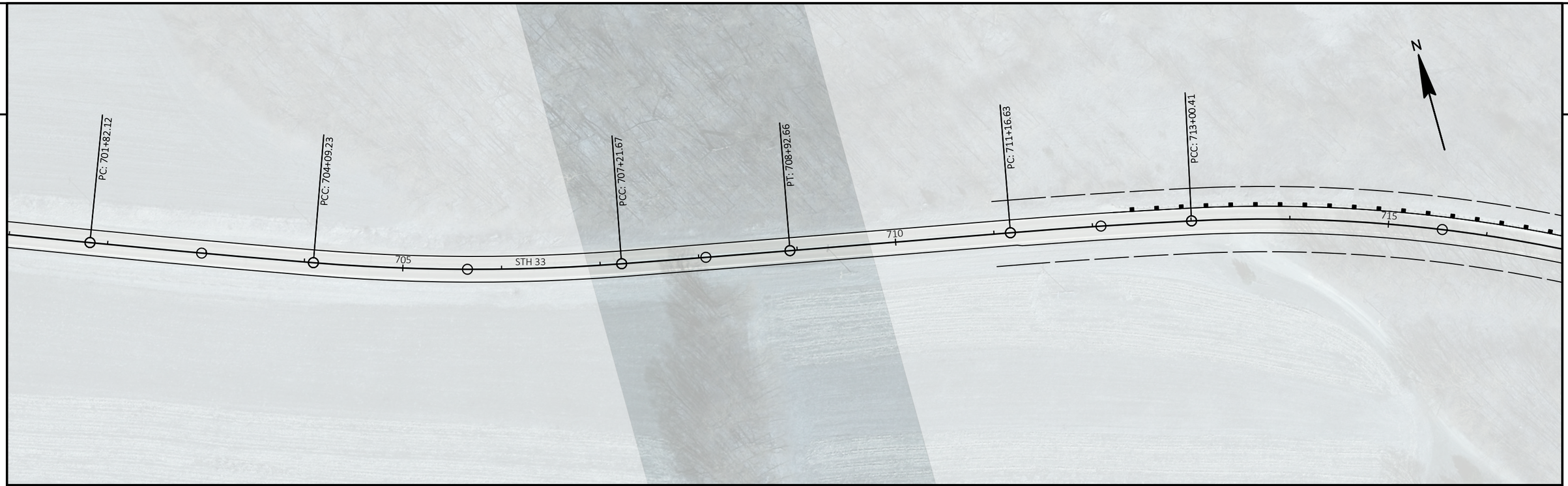
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 28	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 17

PLOT DATE : 10/18/2023 12:23 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2





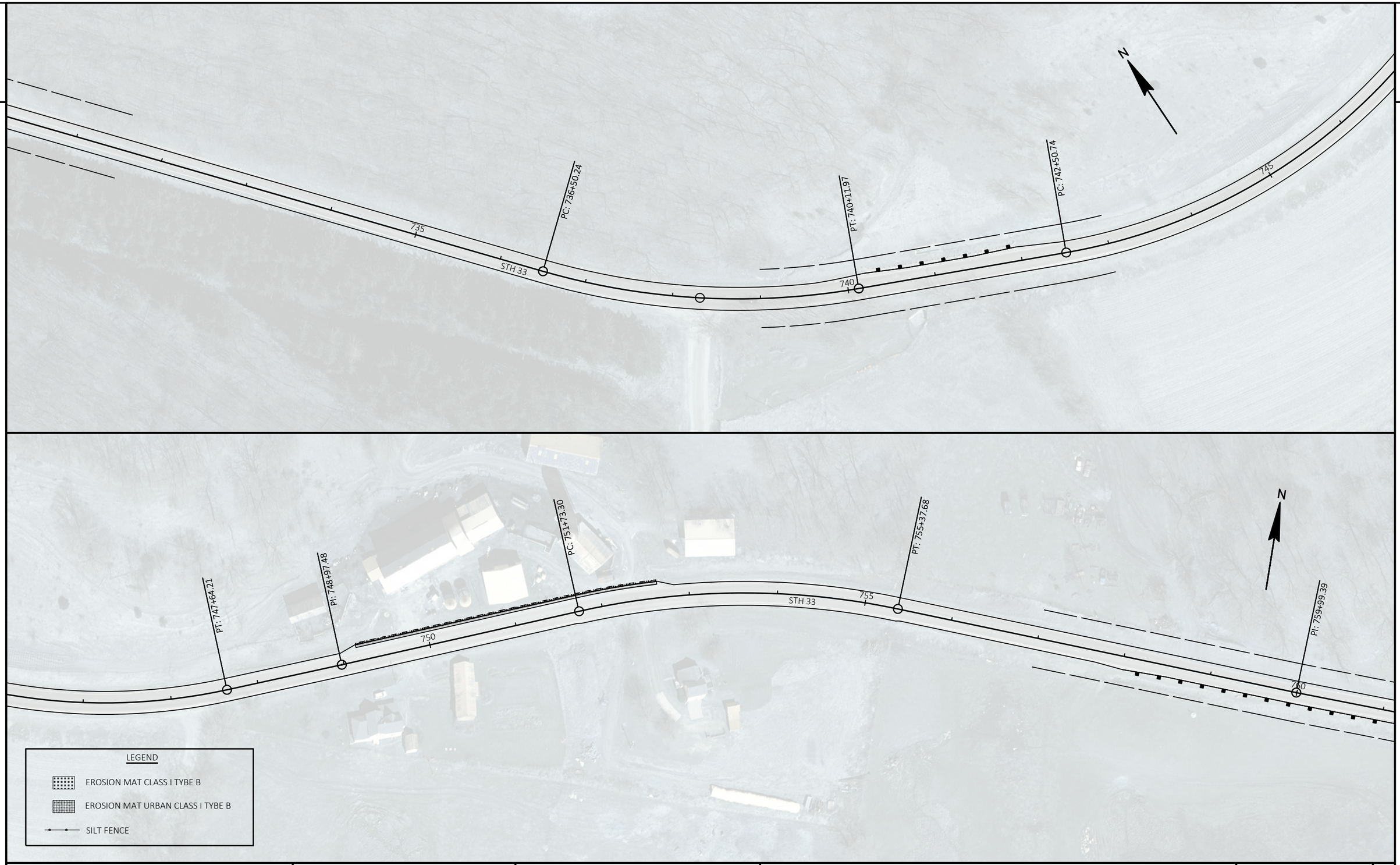
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 29	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 18

PLOT DATE : 10/18/2023 12:25 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2



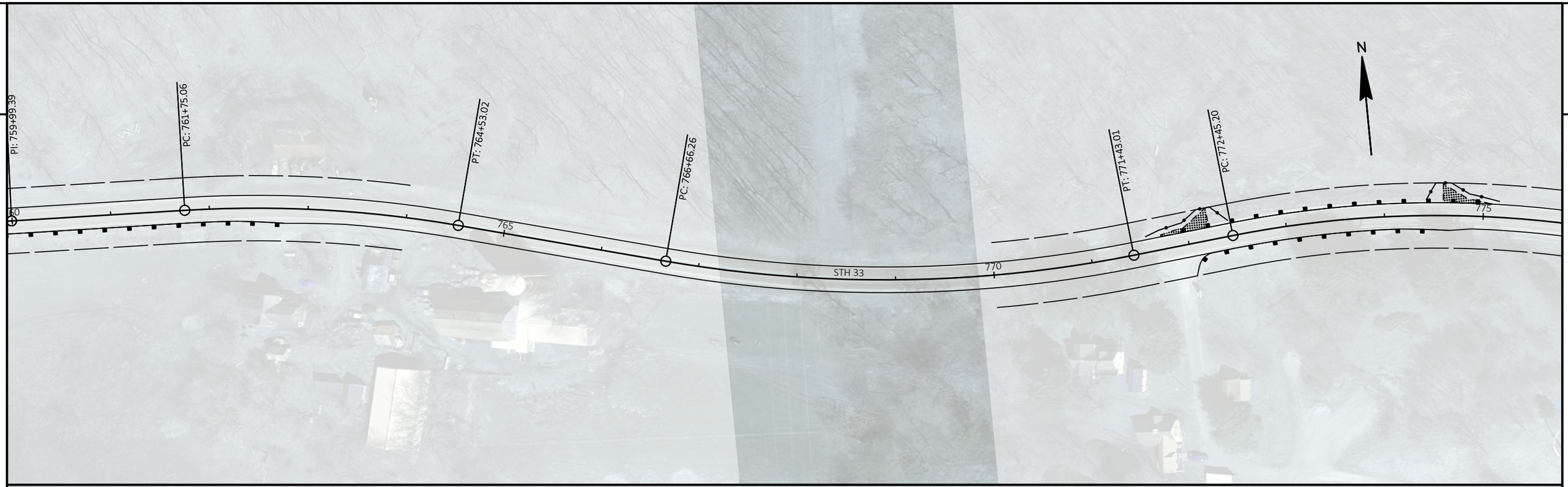
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 30	E

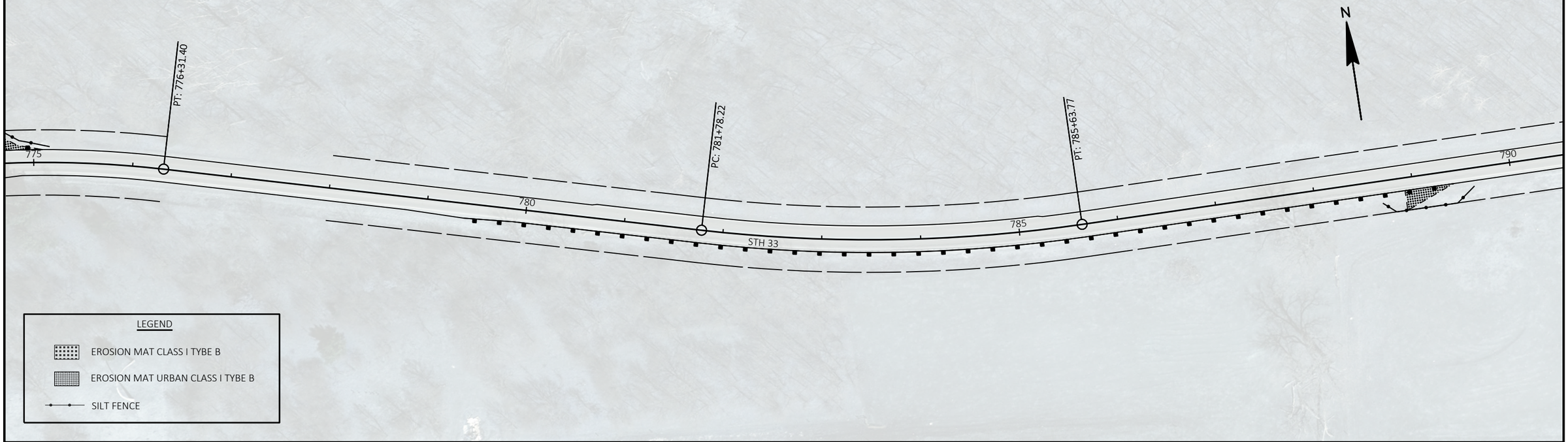
FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 19

PLOT DATE : 10/18/2023 12:26 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2





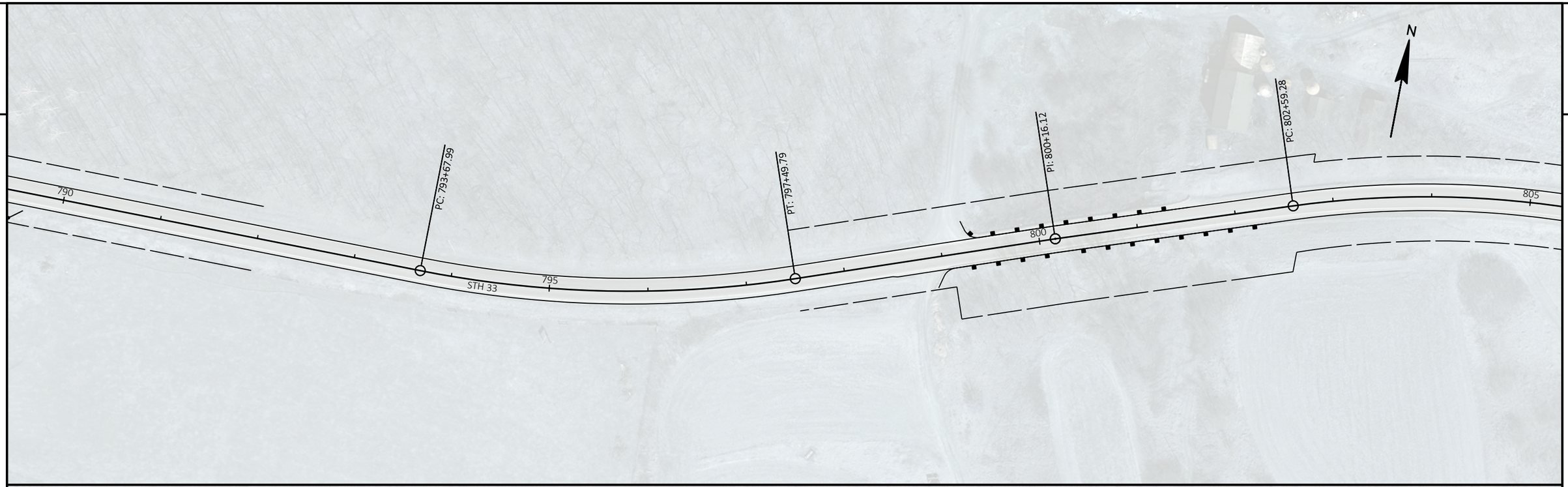
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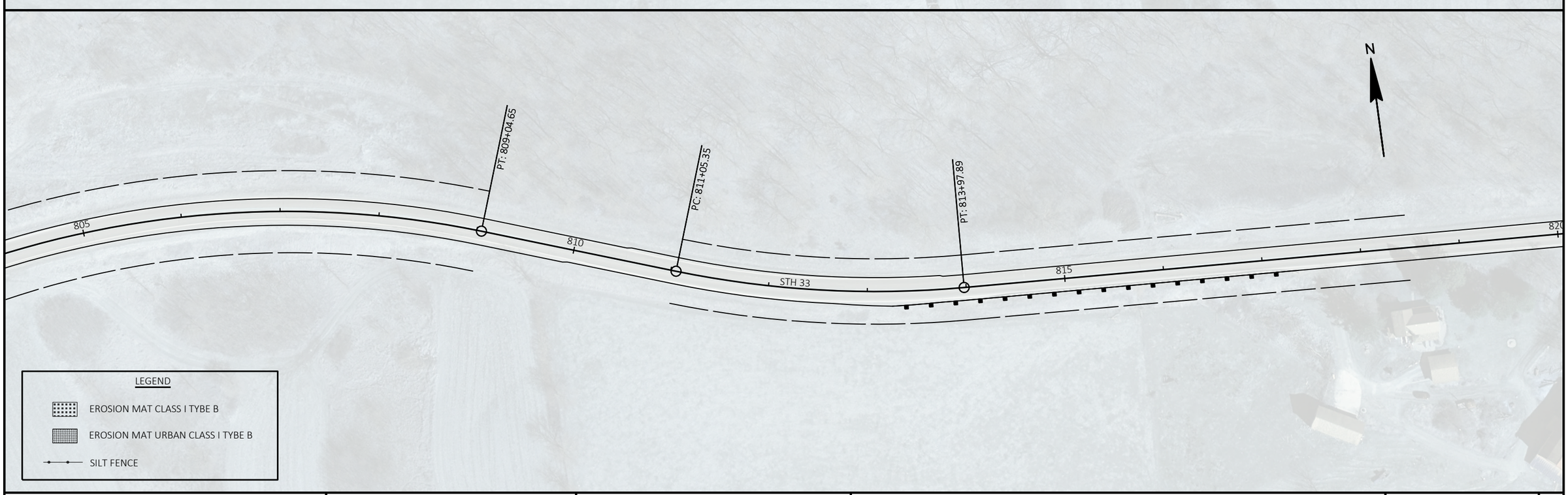
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 31	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 20

PLOT DATE : 10/18/2023 12:27 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2





2

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 32	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 21

PLOT DATE : 10/18/2023 12:27 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

PC: 821+39.70

PT: 824+44.35

PI: 829+22.41

PC: 834+58.92

820

825

830

STH 33

N

PC: 834+58.92

PT: 839+43.43

PC: 846+61.75

835

840

845

STH 33

GRIMM RD

N

STA 848+28
STRUCTURE B-62-59

LEGEND

EROSION MAT CLASS I TYBE B

EROSION MAT URBAN CLASS I TYBE B

SILT FENCE

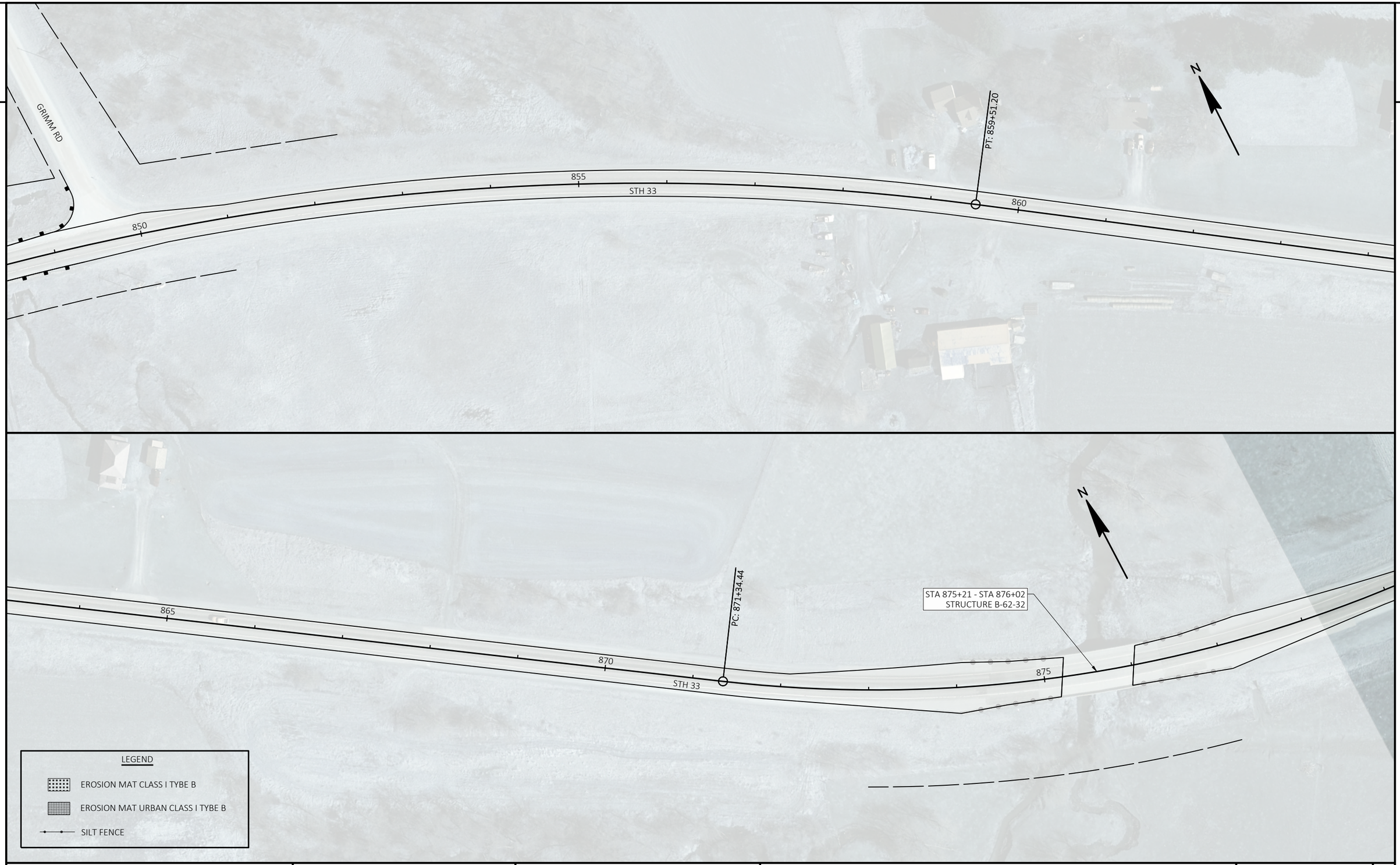
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 33	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 22

PLOT DATE : 10/18/2023 12:29 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

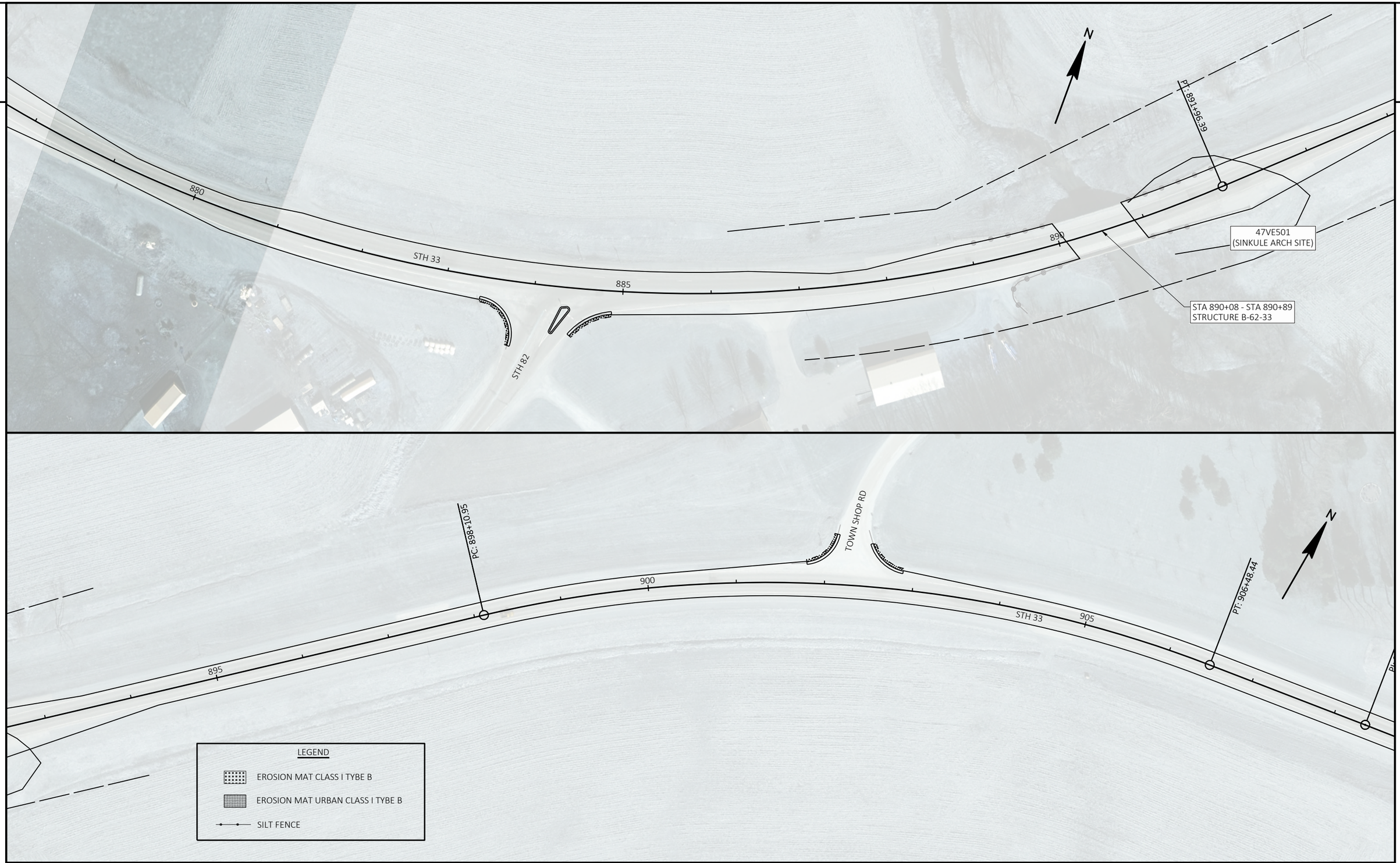


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 34	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 23

PLOT DATE : 10/18/2023 12:30 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

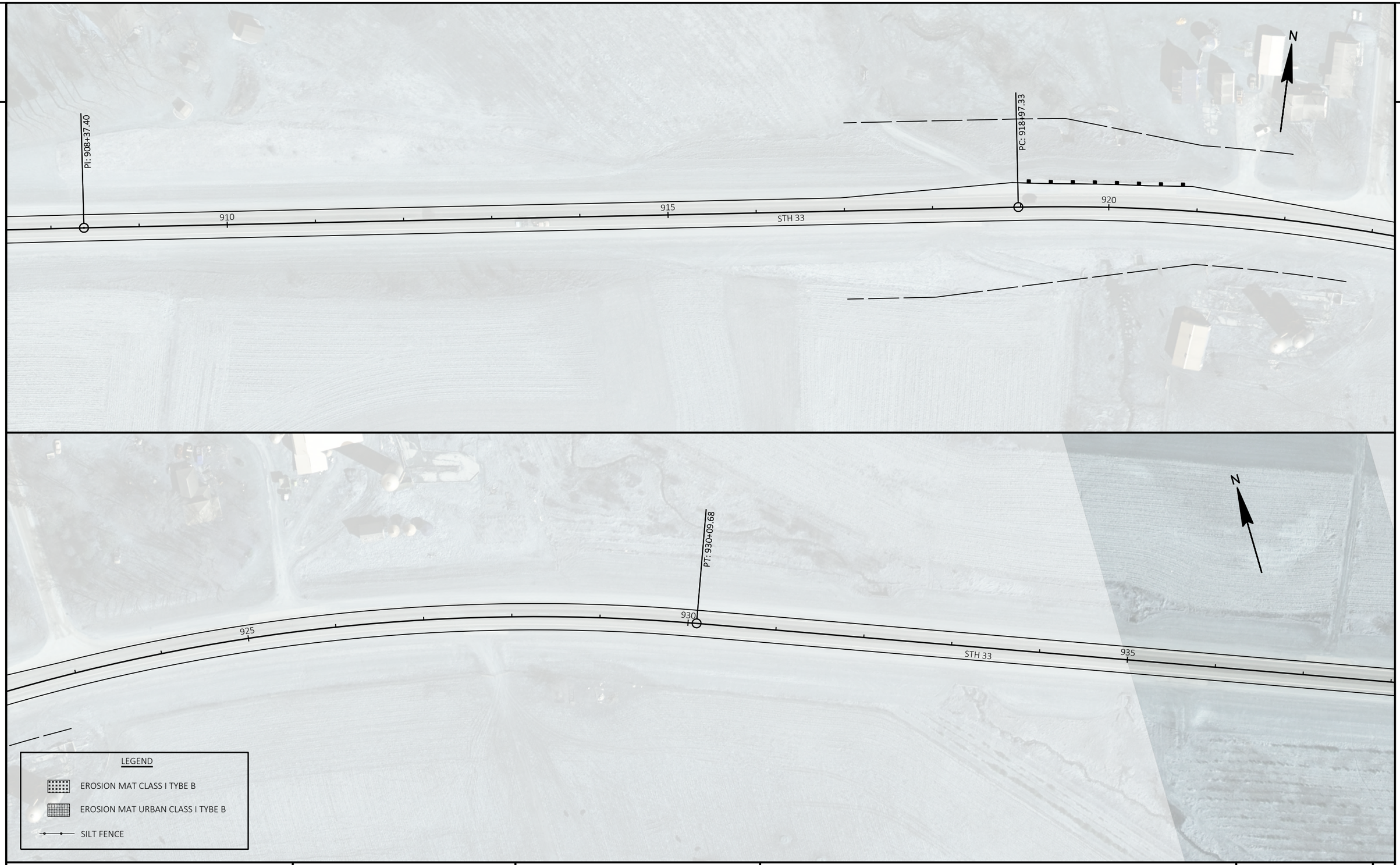


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 35	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 24

PLOT DATE : 10/18/2023 12:31 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 36	E

2

2

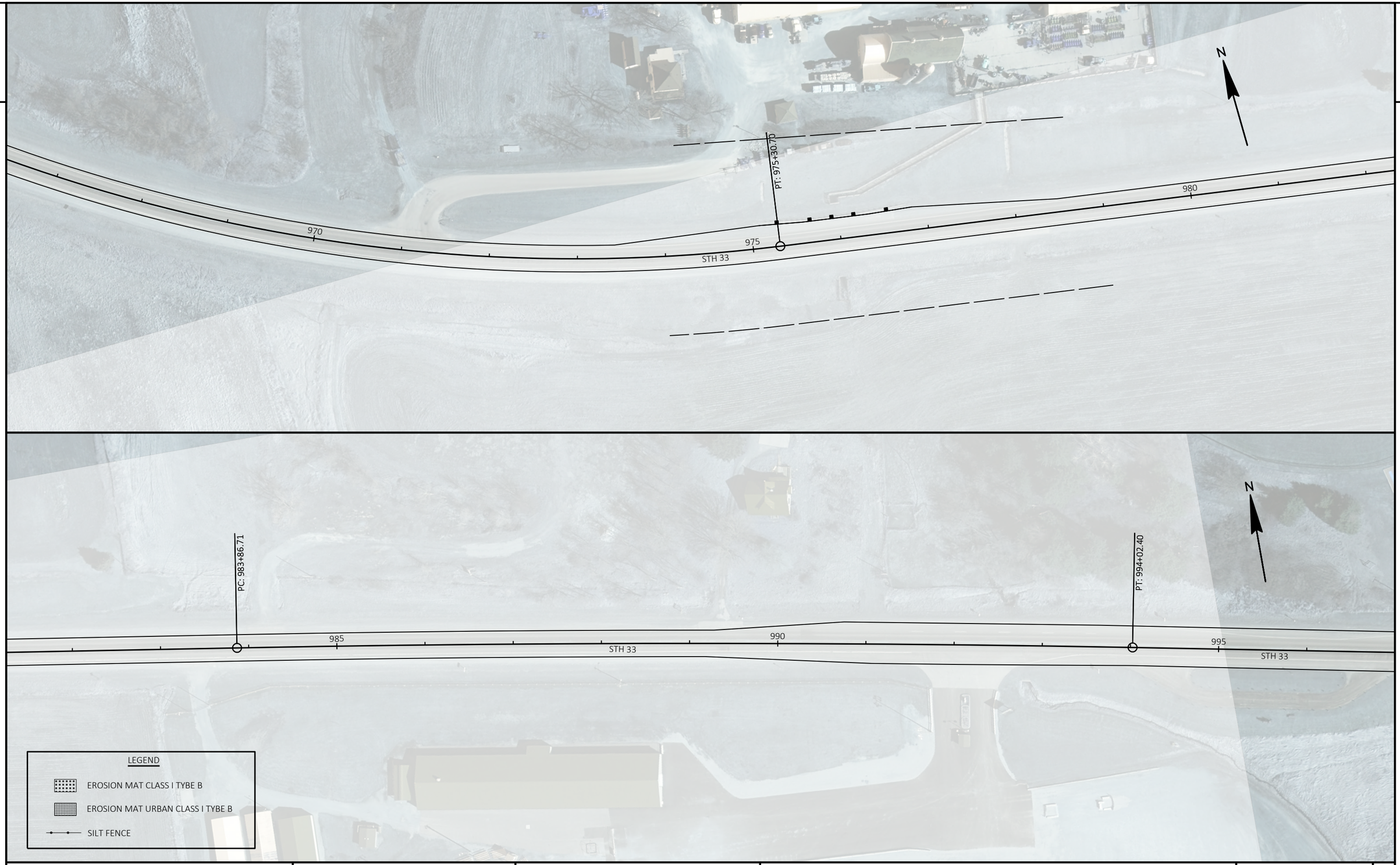


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 37	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 26

PLOT DATE : 10/18/2023 12:34 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



2

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 38	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 27

PLOT DATE : 10/18/2023 12:35 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

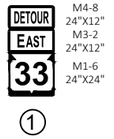


2

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	EROSION CONTROL	SHEET 39	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSOTHER\022001_EC COPY.DWG
LAYOUT NAME - 28

PLOT DATE : 10/18/2023 12:36 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT



LEGEND

PCMS — PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)*

WORK ZONE

DETOUR ROUTE

TRAFFIC CONTROL DETOUR SIGN (TEMPORARY SUPPORT)

EXISTING SIGN

COVERING SIGNS

STAGE	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		
	EA	# CYCLES	# SIGNS
STAGE 1	15	1	15
TOTAL	15	1	15

TRAFFIC CONTROL GENERAL NOTES:

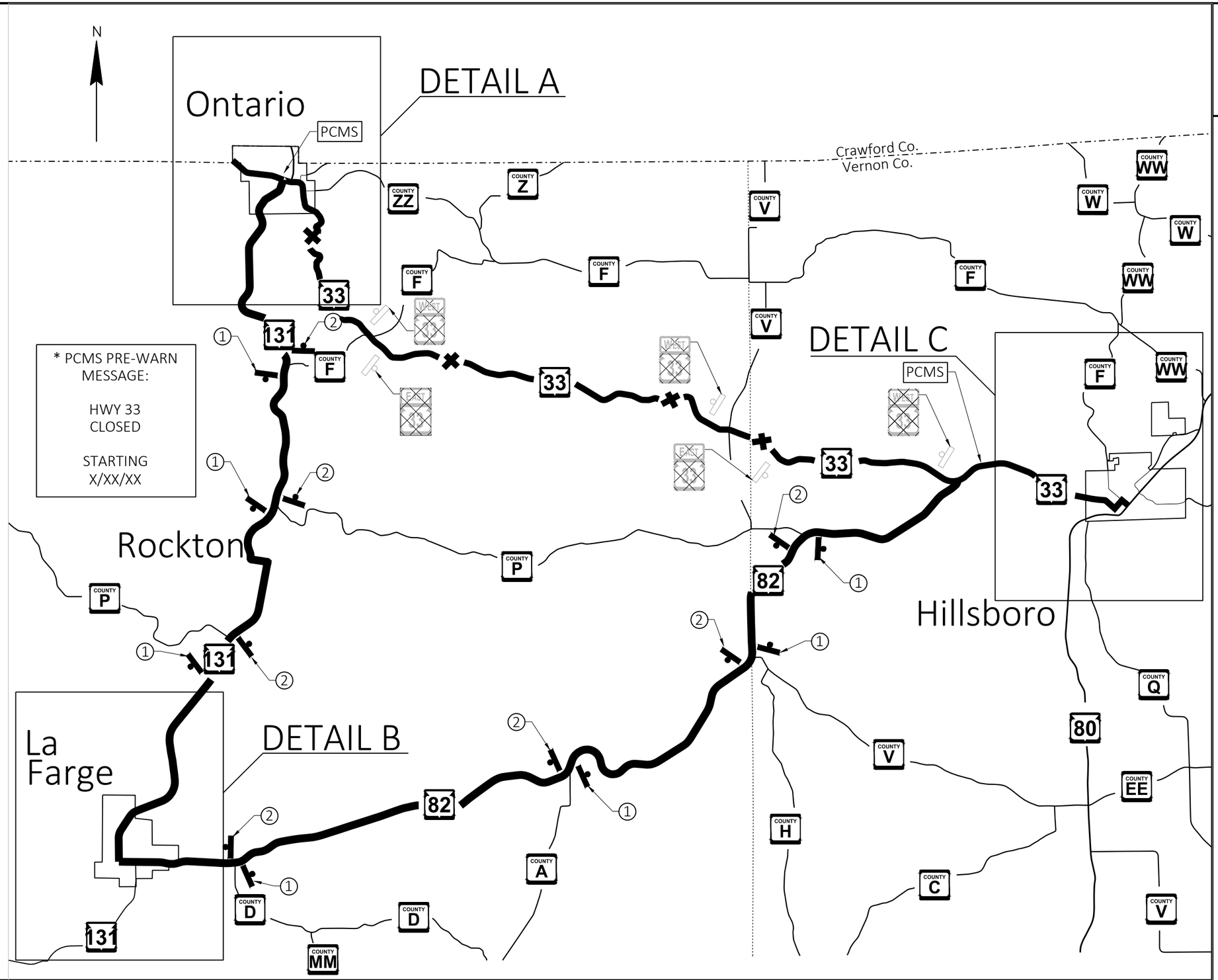
DRAWING IS NOT TO SCALE

ALL TRAFFIC CONTROL SIGNS AND DEVICES AND THEIR LOCATIONS SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE PLANS, STANDARD SPECIFICATIONS, AND APPLICABLE STANDARD DETAIL DRAWINGS.

ALL SIGNS INAPPROPRIATE TO THE WORK ZONE, INCLUDING PRE-EXISTING SIGNS, SHALL BE COVERED, REMOVED, OR ALTERED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

COVER DIRECTIONAL ARROWS ON DESTINATION SIGNS IN PLANS PER SIGN PLATE A4-12.

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

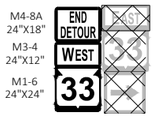


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	DETOUR	SHEET 40	E



M3-2 24"X12"
M1-6 24"X24"

①



M4-8A 24"X18"
M3-4 24"X12"
M1-6 24"X24"

⑧



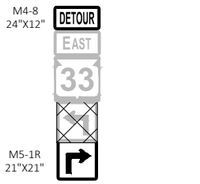
G20-51 60"X24"

⑨



R11-4 60"X30"

⑩

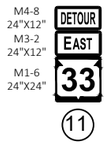


M4-8 24"X12"
M5-1R 21"X21"

②



③



M4-8 24"X12"
M3-2 24"X12"
M1-6 24"X24"

⑪



M4-8 24"X12"
M6-1 21"X21"

④



M4-8 24"X12"
M3-2 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

⑤



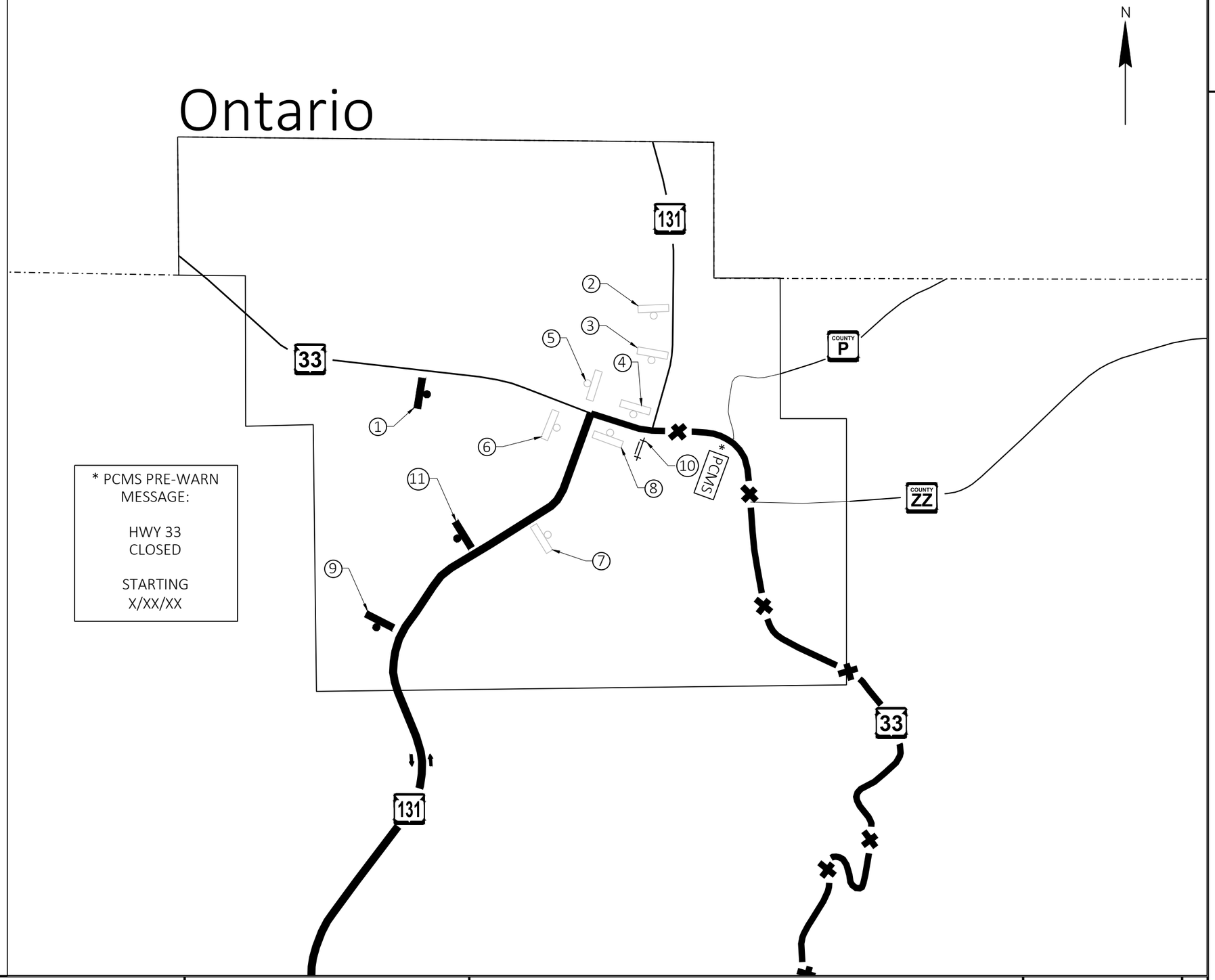
M4-8 24"X12"
M6-1 21"X21"

⑥



⑦

Ontario



* PCMS PRE-WARN MESSAGE:

HWY 33
CLOSED

STARTING
X/XX/XX

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	DETOUR - ONTARIO	SHEET 41	E

2

La Farge

N

131

82

82

131

COUNTY D

12 — DETOUR / EAST / 33 — M4-8 24"X12", M3-2 24"X12", M1-6 24"X24", MO6-1 21"X21"

13 — DETOUR / WEST / 33 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24", MO6-1 21"X21"

14 — DETOUR / WEST / 33 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24"

15 — DETOUR / EAST / 33 — M4-8 24"X12", M3-2 24"X12", M1-6 24"X24", MO6-1 21"X21"

12 — DETOUR / WEST / 33 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24", MO6-1 21"X21"

12 — DETOUR / EAST / 33 — M4-8 24"X12", M3-2 24"X12", M1-6 24"X24", M5-1L 21"X21"

17 — DETOUR / WEST / 33 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24", M5-1R 21"X21"

18 — DETOUR / EAST / 33 — M4-8 24"X12", M3-2 24"X12", M1-6 24"X24"

17, 14, 12, 13, 18, 14, 16, 18, 15, 18, 14, 18

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	DETOUR - LA FARGE	SHEET 42	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - La Farge

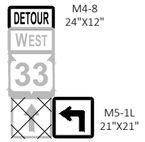
PLOT DATE : 9/21/2023 6:16 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42

2



19



M4-8
24"X12"

M5-1L
21"X21"

20



M4-8
24"X12"

MO6-1
21"X21"

21

R11-4
60"X30"



22



M4-8
24"X12"
M3-4
24"X12"
M1-6
24"X24"

23



G20-51
60"X24"

24



M4-8A
24"X18"
M3-2
24"X12"
M1-6
24"X24"

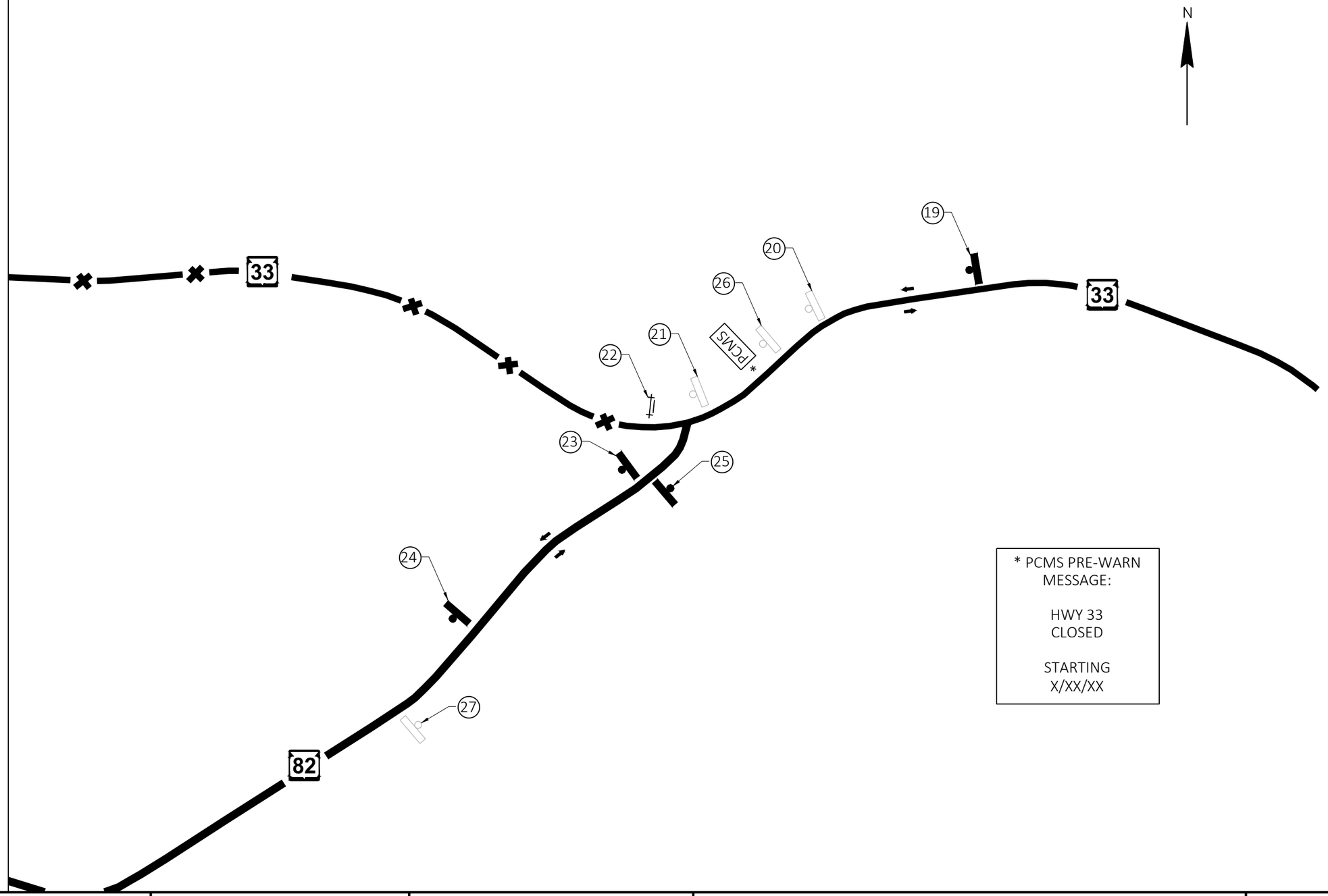
25



26



27



* PCMS PRE-WARN MESSAGE:

HWY 33
CLOSED

STARTING
X/XX/XX

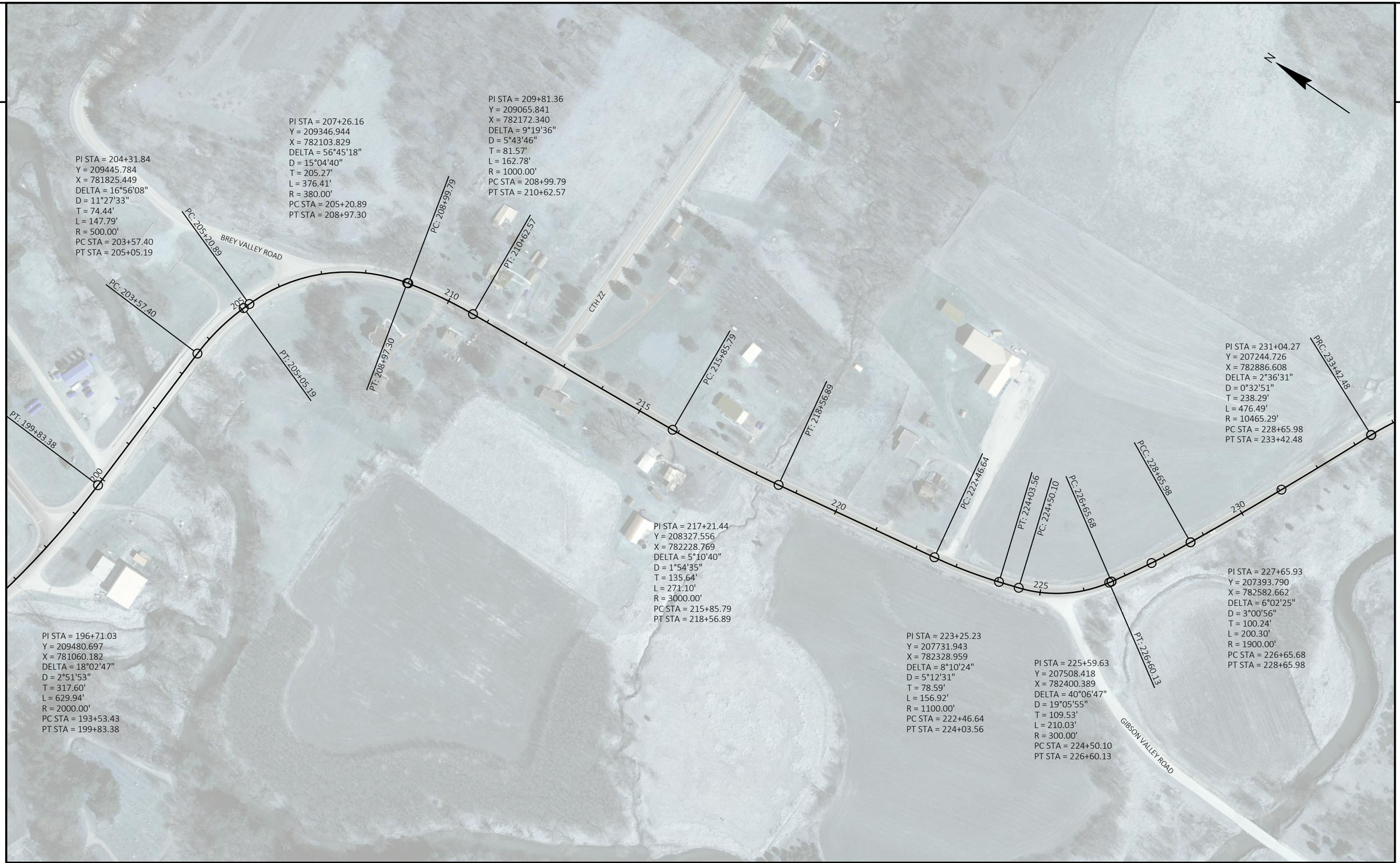
2

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	DETOUR - STH 33/STH 82 INTERSECTION	SHEET 43	E

FILE NAME : N:\PDS\C3D\510000130\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - Hillsboro

PLOT DATE : 9/21/2023 6:16 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : ############

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 44	E

2

2

N

PI STA = 239+65.99
Y = 206707.974
X = 783533.262
DELTA = 24°47'14"
D = 15°55'01"
T = 79.10'
L = 155.73'
R = 359.97'
PC STA = 238+86.88
PT STA = 240+42.61

PI STA = 243+96.84
Y = 206300.304
X = 783680.174
DELTA = 64°54'58"
D = 32°32'32"
T = 111.99'
L = 199.48'
R = 176.07'
PC STA = 242+84.86
PT STA = 244+84.34

PI STA = 245+64.23
Y = 206164.859
X = 783544.263
DELTA = 7°56'19"
D = 7°09'43"
T = 55.51'
L = 110.84'
R = 800.00'
PC STA = 245+08.72
PT STA = 246+19.57

PI STA = 252+96.50
Y = 205650.507
X = 783393.636
DELTA = 48°16'44"
D = 25°27'53"
T = 100.83'
L = 189.59'
R = 225.00'
PC STA = 251+95.67
PT STA = 253+85.26

PI STA = 256+81.11
Y = 205257.537
X = 783339.507
DELTA = 4°03'54"
D = 2°51'53"
T = 70.98'
L = 141.90'
R = 2000.00'
PC STA = 256+10.13
PT STA = 257+52.02

PI STA = 257+91.52
Y = 205147.305
X = 783332.228
DELTA = 4°13'49"
D = 5°43'46"
T = 36.93'
L = 73.83'
R = 1000.00'
PC STA = 257+54.59
PT STA = 258+28.42

PI STA = 264+63.06
Y = 204482.282
X = 783238.670
DELTA = 165°17'22"
D = 73°27'22"
T = 604.26'
L = 225.02'
R = 78.00'
PC STA = 258+58.79
PT STA = 260+83.81

PI STA = 231+04.27
Y = 207244.726
X = 782886.608
DELTA = 2°36'31"
D = 0°32'51"
T = 238.29'
L = 476.49'
R = 10465.29'
PC STA = 228+65.98
PT STA = 233+42.48

PI STA = 234+98.61
Y = 207087.348
X = 783248.275
DELTA = 32°46'28"
D = 10°47'29"
T = 156.14'
L = 303.71'
R = 530.95'
PC STA = 233+42.48
PT STA = 236+46.19

PI STA = 238+26.01
Y = 206807.880
X = 783434.725
DELTA = 10°53'43"
D = 9°32'57"
T = 57.22'
L = 114.10'
R = 600.00'
PC STA = 237+68.79
PT STA = 238+82.88

PI STA = 247+39.29
Y = 206059.492
X = 783404.249
DELTA = 11°27'00"
D = 11°27'33"
T = 50.13'
L = 99.92'
R = 500.00'
PC STA = 246+89.16
PT STA = 247+89.08

PI STA = 249+93.68
Y = 205949.777
X = 783174.360
DELTA = 97°15'33"
D = 47°44'47"
T = 136.26'
L = 203.70'
R = 120.00'
PC STA = 248+57.43
PT STA = 250+61.13

PI STA = 251+28.89
Y = 205778.235
X = 783284.794
DELTA = 7°39'50"
D = 5°43'46"
T = 66.98'
L = 133.76'
R = 1000.00'
PC STA = 250+61.91
PT STA = 251+95.67

PI STA = 262+91.73
Y = 205288.908
X = 783143.878
DELTA = 65°28'11"
D = 42°26'29"
T = 86.78'
L = 154.26'
R = 135.00'
PC STA = 262+04.94
PT STA = 263+59.20

PI STA = 265+06.58
Y = 205360.597
X = 782920.964
DELTA = 118°27'50"
D = 66°37'23"
T = 144.45'
L = 177.81'
R = 86.00'
PC STA = 263+62.13
PT STA = 265+39.94

PI STA = 267+33.88
Y = 205028.020
X = 782983.421
DELTA = 38°33'52"
D = 19°11'30"
T = 104.45'
L = 200.94'
R = 298.55'
PC STA = 266+29.43
PT STA = 268+30.38

PI STA = 270+73.54
Y = 204720.899
X = 782820.613
DELTA = 3°23'30"
D = 8°38'21"
T = 19.64'
L = 39.26'
R = 663.22'
PC STA = 270+53.90
PT STA = 270+93.16

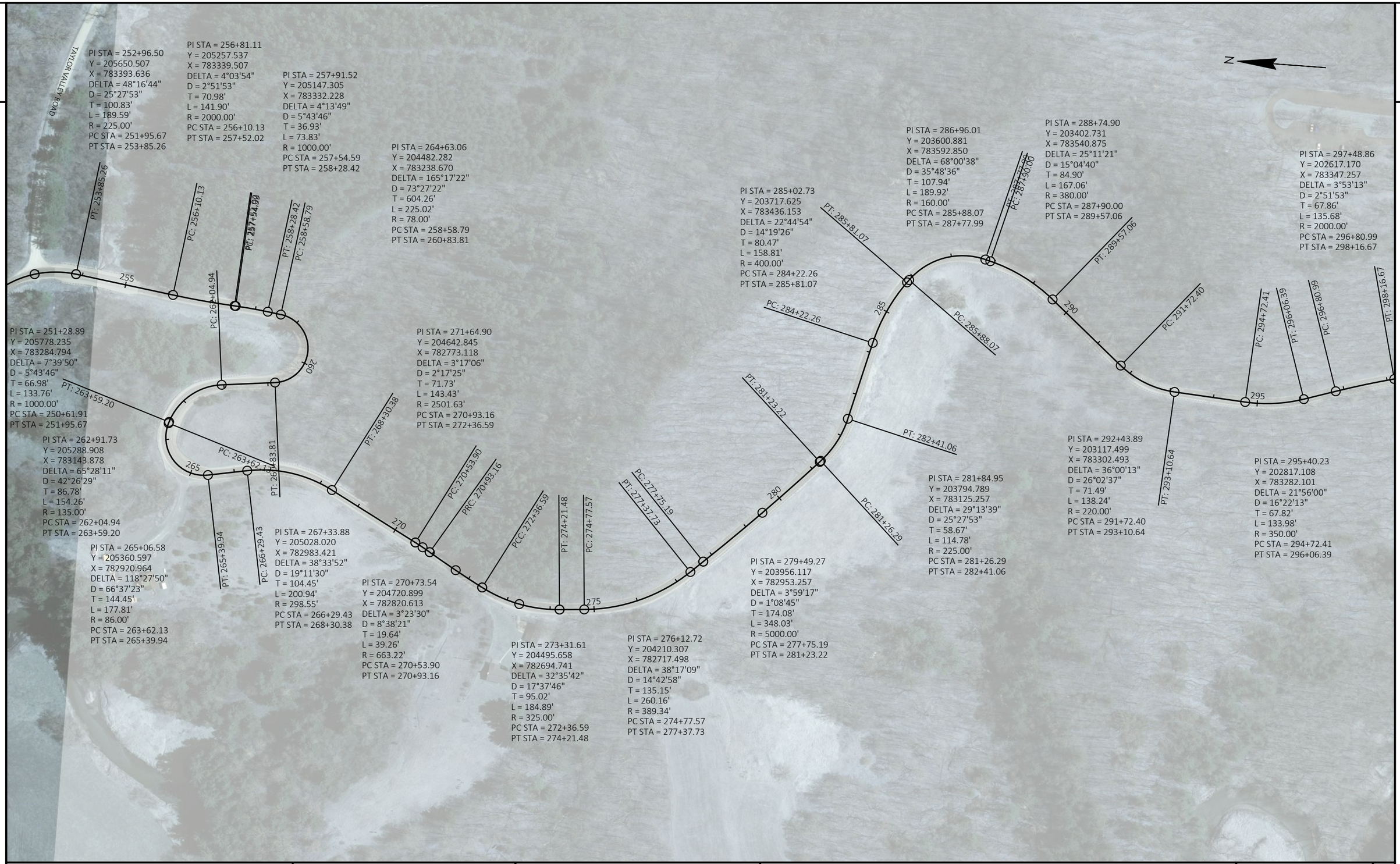
PI STA = 271+64.90
Y = 204642.845
X = 782773.118
DELTA = 3°17'06"
D = 2°17'25"
T = 71.73'
L = 143.43'
R = 2501.63'
PC STA = 270+93.16
PT STA = 272+36.59

PI STA = 227+65.93
Y = 207393.790
X = 782582.662
DELTA = 6°02'25"
D = 3°00'56"
T = 100.24'
L = 200.30'
R = 1900.00'
PC STA = 226+65.68
PT STA = 228+65.98

TAYLOR VALLEY ROAD

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 45 E

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 46	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 03

PLOT DATE : 2/14/2023 11:30 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

PI STA = 288+74.90
Y = 203402.731
X = 783540.875
DELTA = 25°11'21"
D = 15°04'40"
T = 84.90'
L = 167.06'
R = 380.00'
PC STA = 287+90.00
PT STA = 289+57.06

PT: 289+57.06

PI STA = 297+48.86
Y = 202617.170
X = 783347.257
DELTA = 3°53'13"
D = 2°51'53"
T = 67.86'
L = 135.68'
R = 2000.00'
PC STA = 296+80.99
PT STA = 298+16.67

PI STA = 301+23.30
Y = 202271.617
X = 783484.840
DELTA = 23°59'57"
D = 16°22'13"
T = 74.39'
L = 146.60'
R = 350.00'
PC STA = 300+48.91
PT STA = 301+95.51

PI STA = 313+62.81
Y = 201542.047
X = 784183.984
DELTA = 13°52'52"
D = 38°11'50"
T = 18.26'
L = 36.34'
R = 150.00'
PC STA = 313+44.55
PT STA = 313+80.89

PI STA = 315+97.05
Y = 201443.828
X = 784395.545
DELTA = 19°10'56"
D = 11°20'45"
T = 85.33'
L = 169.07'
R = 505.00'
PC STA = 315+11.72
PT STA = 316+80.78

PI STA = 317+91.50
Y = 201294.413
X = 784522.467
DELTA = 56°44'36"
D = 27°56'57"
T = 110.71'
L = 203.02'
R = 205.00'
PC STA = 316+80.78
PT STA = 318+83.81

PI STA = 322+88.29
Y = 200857.094
X = 784652.669
DELTA = 30°53'04"
D = 13°42'58"
T = 115.39'
L = 225.17'
R = 417.72'
PC STA = 321+72.90
PT STA = 323+98.06

PI STA = 312+93.68
Y = 201543.858
X = 784113.902
DELTA = 22°10'02"
D = 28°38'52"
T = 39.18'
L = 77.38'
R = 200.00'
PC STA = 312+54.50
PT STA = 313+31.88

PI STA = 314+49.45
Y = 201519.048
X = 784267.701
DELTA = 15°06'35"
D = 12°03'44"
T = 63.00'
L = 125.26'
R = 475.00'
PC STA = 313+86.45
PT STA = 315+11.72

PI STA = 320+17.52
Y = 201059.933
X = 784453.470
DELTA = 60°52'41"
D = 47°44'47"
T = 70.51'
L = 127.50'
R = 120.00'
PC STA = 319+47.00
PT STA = 320+74.51

PI STA = 326+42.28
Y = 200507.566
X = 784737.209
DELTA = 30°28'49"
D = 15°16'44"
T = 102.17'
L = 199.49'
R = 375.00'
PC STA = 325+40.11
PT STA = 327+39.61

PI STA = 295+40.23
Y = 202817.108
X = 783282.101
DELTA = 21°56'00"
D = 16°22'13"
T = 67.82'
L = 133.98'
R = 350.00'
PC STA = 294+72.41
PT STA = 296+06.39

PI STA = 299+27.57
Y = 202443.838
X = 783390.998
DELTA = 14°25'21"
D = 19°05'55"
T = 37.96'
L = 75.52'
R = 300.00'
PC STA = 298+89.61
PT STA = 299+65.13

PI STA = 303+47.71
Y = 202045.748
X = 783502.959
DELTA = 8°44'01"
D = 5°12'31"
T = 84.00'
L = 167.67'
R = 1100.00'
PC STA = 302+63.71
PT STA = 304+31.39

PI STA = 306+62.81
Y = 201738.806
X = 783575.630
DELTA = 31°31'15"
D = 19°05'55"
T = 84.67'
L = 165.04'
R = 300.00'
PC STA = 305+78.15
PT STA = 307+43.19

PI STA = 309+48.95
Y = 201532.870
X = 783780.425
DELTA = 26°32'32"
D = 15°16'44"
T = 88.45'
L = 173.72'
R = 375.00'
PC STA = 308+60.51
PT STA = 310+34.23

PI STA = 311+15.53
Y = 201478.679
X = 783941.291
DELTA = 39°18'14"
D = 25°27'53"
T = 80.35'
L = 154.35'
R = 225.00'
PC STA = 310+35.18
PT STA = 311+89.53

PC: 291+72.40
PC: 294+72.41
PT: 296+06.39
PC: 296+80.99
PT: 298+16.67
PT: 299+65.13
PC: 300+48.91
PT: 301+95.51
PC: 302+63.71
PT: 304+31.39
PC: 305+78.15
PT: 307+43.19
PC: 308+60.51
PC: 310+35.18
PT: 310+34.23
PT: 311+89.53
PC: 312+54.50
PC: 313+44.55
PT: 313+31.88
PC: 315+11.72
PC: 316+80.78
PT: 318+83.81
PC: 319+47.00
PT: 320+74.51
PC: 321+72.90
PT: 323+98.06
PC: 325+40.11
PT: 327+39.61
PC: 298+89.61

295
300
305
310
320
325

N

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 47	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 04

PLOT DATE : 2/14/2023 11:30 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

= 322+88.29
0857.094
4652.669
= 30°53'04"
°42'58"
5.39'
6.17'
7.72'
= 321+72.90
= 323+98.06

PT: 323+98.06

PC: 325+40.11

PT: 327+39.61

PI STA = 326+42.28
Y = 200507.566
X = 784737.209
DELTA = 30°28'49"
D = 15°16'44"
T = 102.17'
L = 199.49'
R = 375.00'
PC STA = 325+40.11
PT STA = 327+39.61

PT: 330+38.15

PC: 330+93.52

PI STA = 331+67.86
Y = 200190.769
X = 785150.867
DELTA = 48°30'13"
D = 34°43'29"
T = 74.33'
L = 139.68'
R = 165.00'
PC STA = 330+93.52
PT STA = 332+33.20

PC: 329+30.68

PI STA = 329+85.26
Y = 200257.691
X = 784979.162
DELTA = 24°37'45"
D = 22°55'06"
T = 54.58'
L = 107.47'
R = 250.00'
PC STA = 329+30.68
PT STA = 330+38.15

PT: 332+33.20

PC: 332+47.26

PI STA = 333+29.17
Y = 200030.952
X = 785209.677
DELTA = 15°32'46"
D = 9°32'57"
T = 81.90'
L = 162.80'
R = 600.00'
PC STA = 332+47.26
PT STA = 334+10.06

PT: 334+10.06

PC: 335+34.29

PT: 336+85.13

PI STA = 336+09.85
Y = 199750.191
X = 785232.547
DELTA = 8°38'33"
D = 5°43'46"
T = 75.56'
L = 150.84'
R = 1000.00'
PC STA = 335+34.29
PT STA = 336+85.13

PC: 342+27.06

PI STA = 343+44.55
Y = 199034.919
X = 785401.620
DELTA = 32°28'30"
D = 14°12'09"
T = 117.49'
L = 228.66'
R = 403.42'
PC STA = 342+27.06
PT STA = 344+55.71

PT: 344+55.71

PC: 345+64.39

PI STA = 346+67.58
Y = 198723.830
X = 785293.435
DELTA = 58°50'39"
D = 31°18'48"
T = 103.19'
L = 187.92'
R = 182.98'
PC STA = 345+64.39
PT STA = 347+52.31

PC: 347+53.22

PT: 347+52.31

PI STA = 348+71.70
Y = 198552.494
X = 785435.520
DELTA = 55°12'04"
D = 25°16'57"
T = 118.48'
L = 218.34'
R = 226.62'
PC STA = 347+53.22
PT STA = 349+71.56

PT: 349+71.56

PC: 351+44.46

PI STA = 352+41.93
Y = 198585.501
X = 785822.960
DELTA = 13°53'33"
D = 7°09'43"
T = 97.47'
L = 193.97'
R = 800.00'
PC STA = 351+44.46
PT STA = 353+38.44

PT: 353+38.44

PC: 353+40.58

PI STA = 355+72.82
Y = 198533.457
X = 786150.701
DELTA = 17°48'13"
D = 3°51'51"
T = 232.23'
L = 460.72'
R = 1482.71'
PC STA = 353+40.58
PT STA = 358+01.31

PCC: 358+01.31

PI STA = 359+33.79
Y = 198368.864
X = 786476.162
DELTA = 3°59'38"
D = 1°30'29"
T = 132.48'
L = 264.85'
R = 3799.40'
PC STA = 358+01.31
PT STA = 360+66.16

PCC: 360+66.16

N

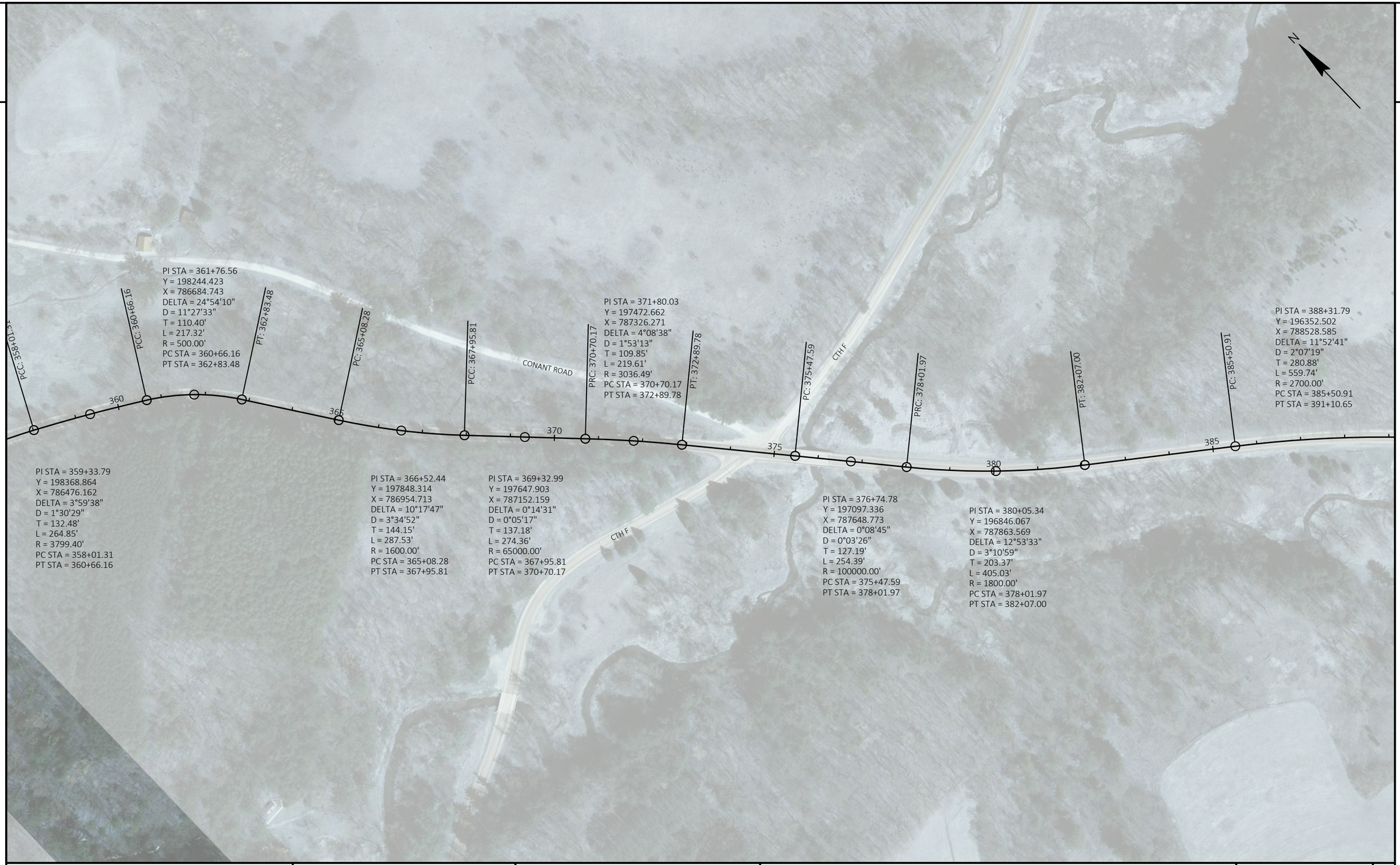
325 330 335 340 345 350 355 360

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 48	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 05

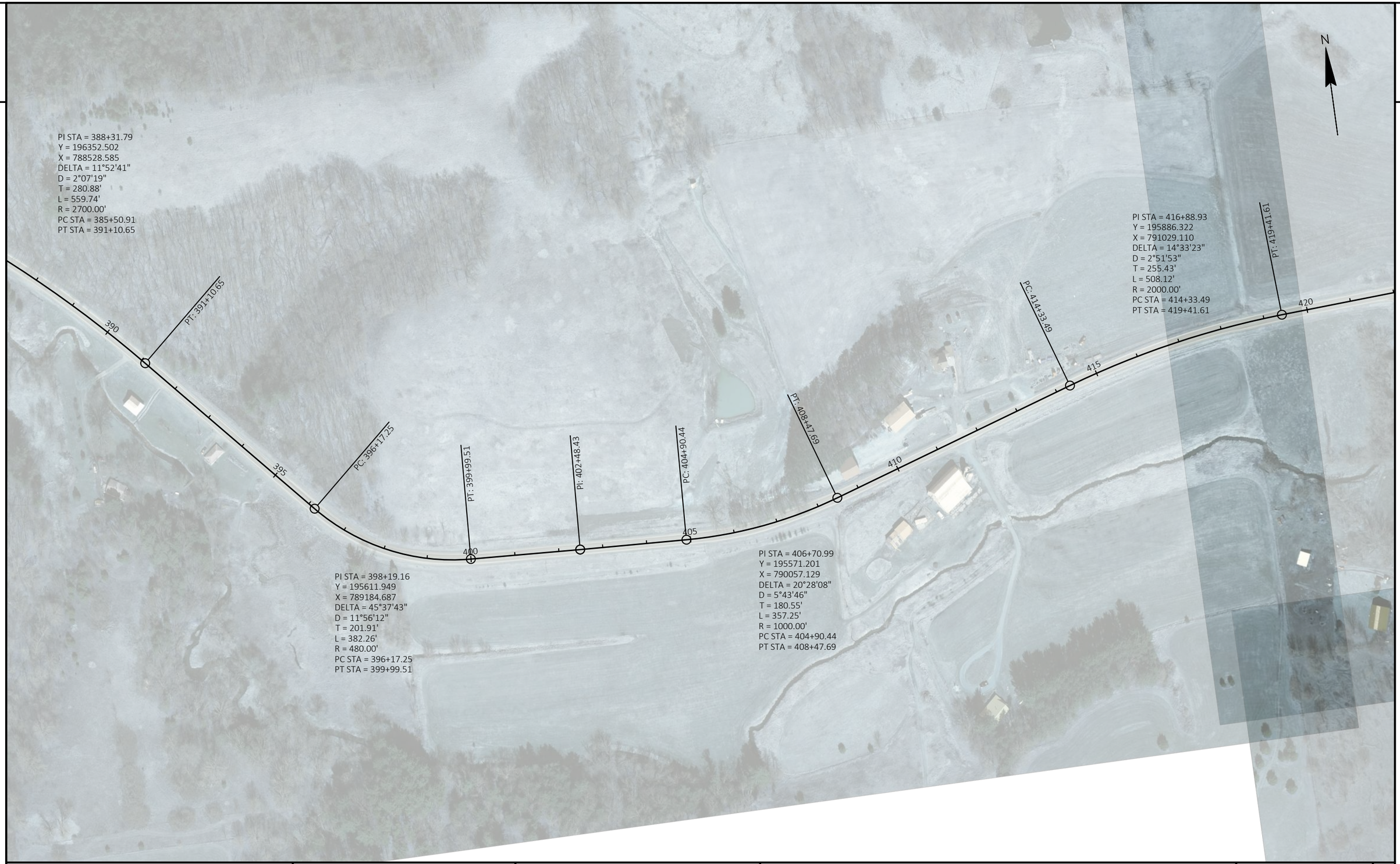
PLOT DATE : 2/14/2023 11:31 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 49	E

2

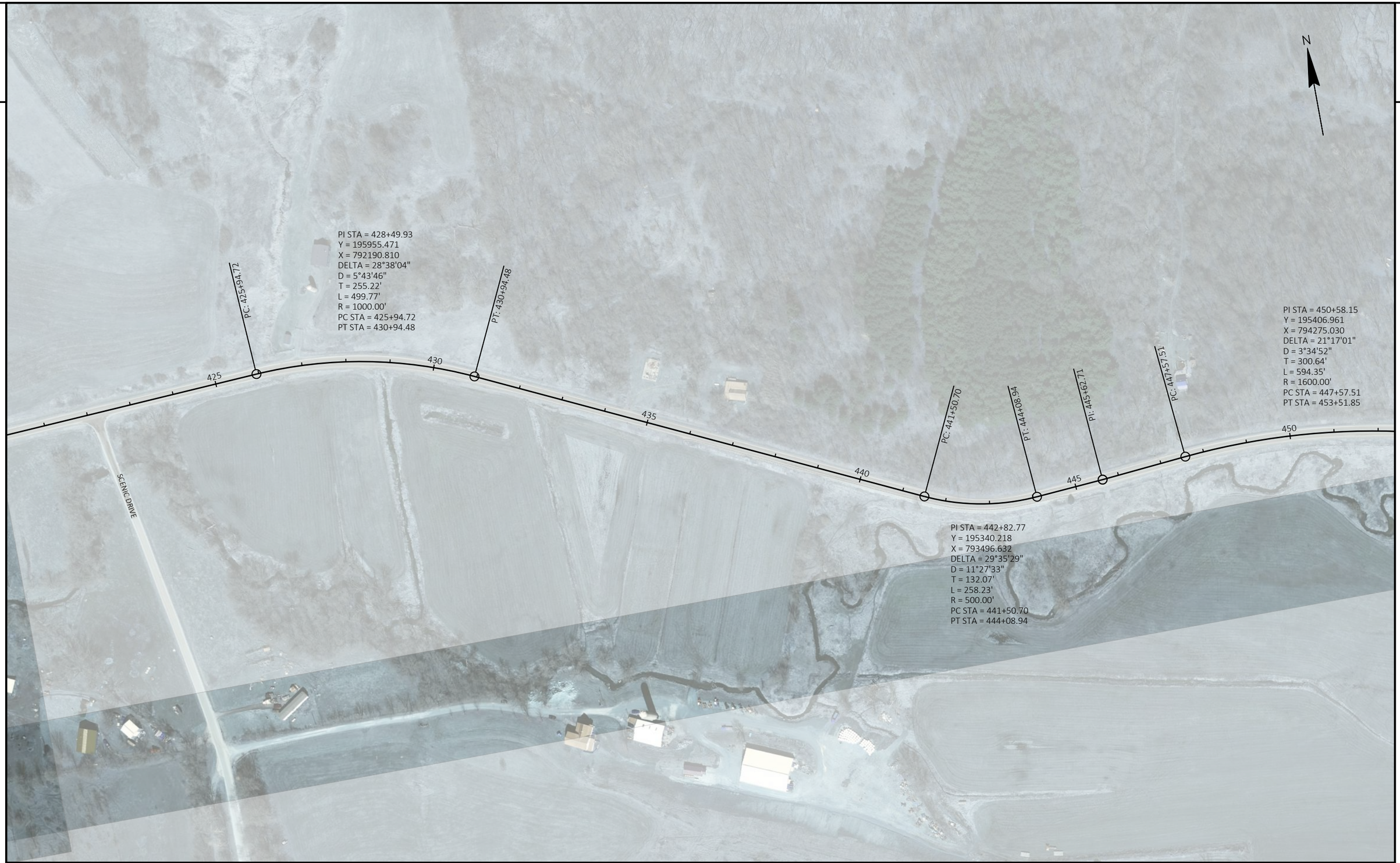


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 50	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 07

PLOT DATE : 2/14/2023 11:31 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

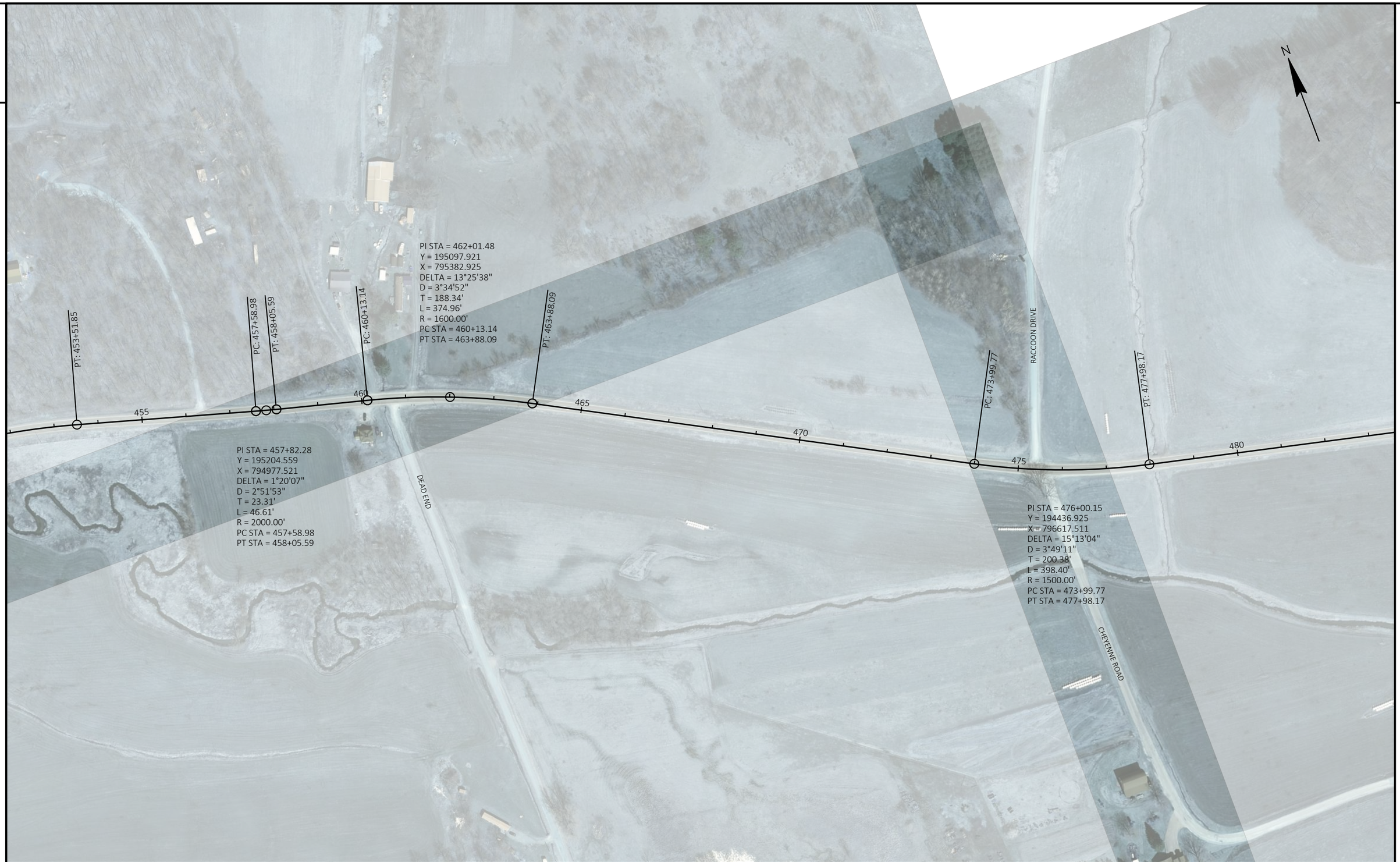


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 51	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 08

PLOT DATE : 2/14/2023 11:31 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 52	E

2

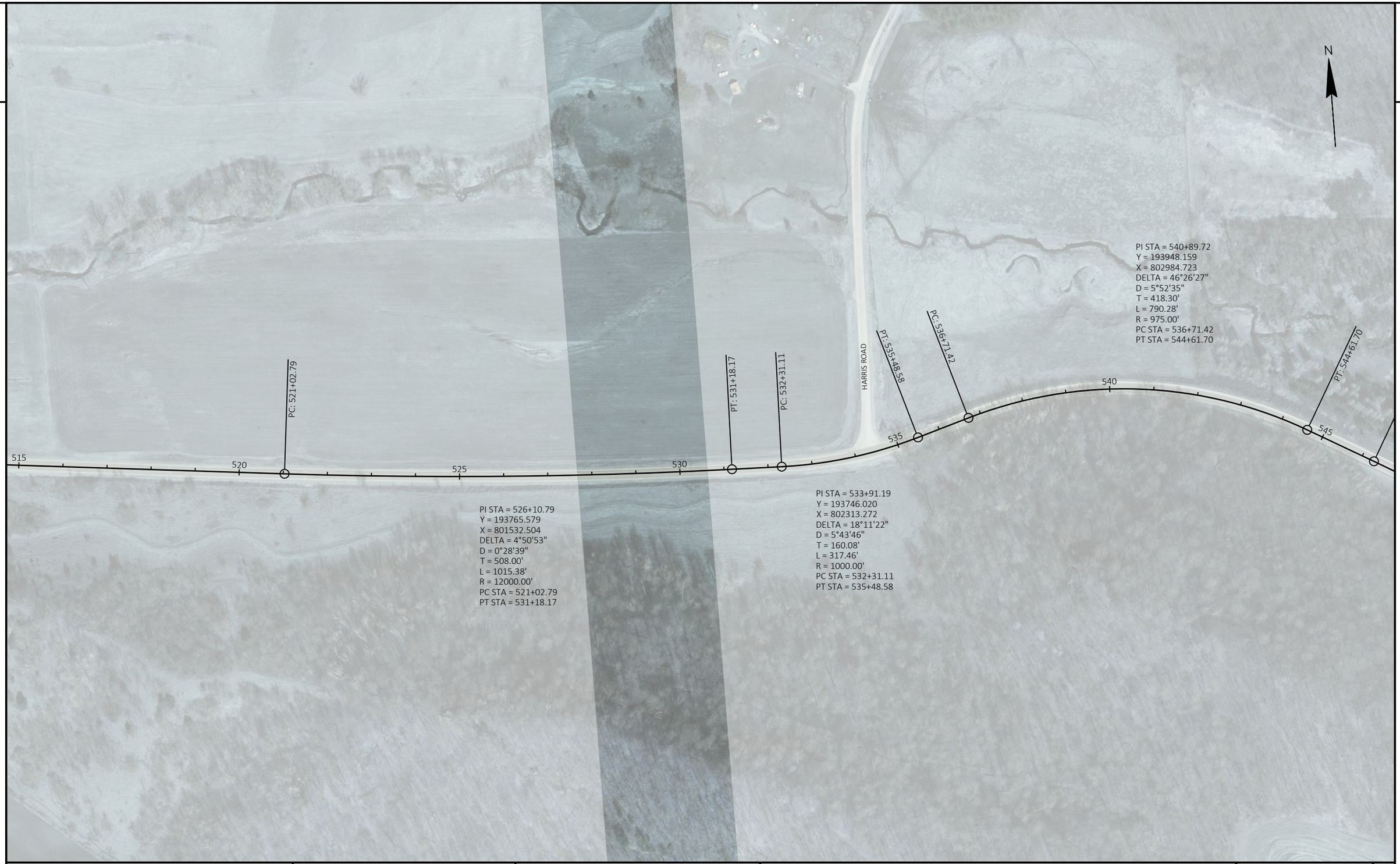


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 53	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 10

PLOT DATE : 2/14/2023 11:31 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 54	E

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 55	E

2

N

PI STA = 587+00.42
Y = 192788.908
X = 807031.785
DELTA = 43°15'40"
D = 7°38'22"
T = 297.41'
L = 566.29'
R = 750.00'
PC STA = 584+03.01
PT STA = 589+69.30

PI STA = 598+77.66
Y = 192599.998
X = 808222.667
DELTA = 17°05'17"
D = 3°49'11"
T = 225.35'
L = 447.36'
R = 1500.00'
PC STA = 596+52.31
PT STA = 600+99.67

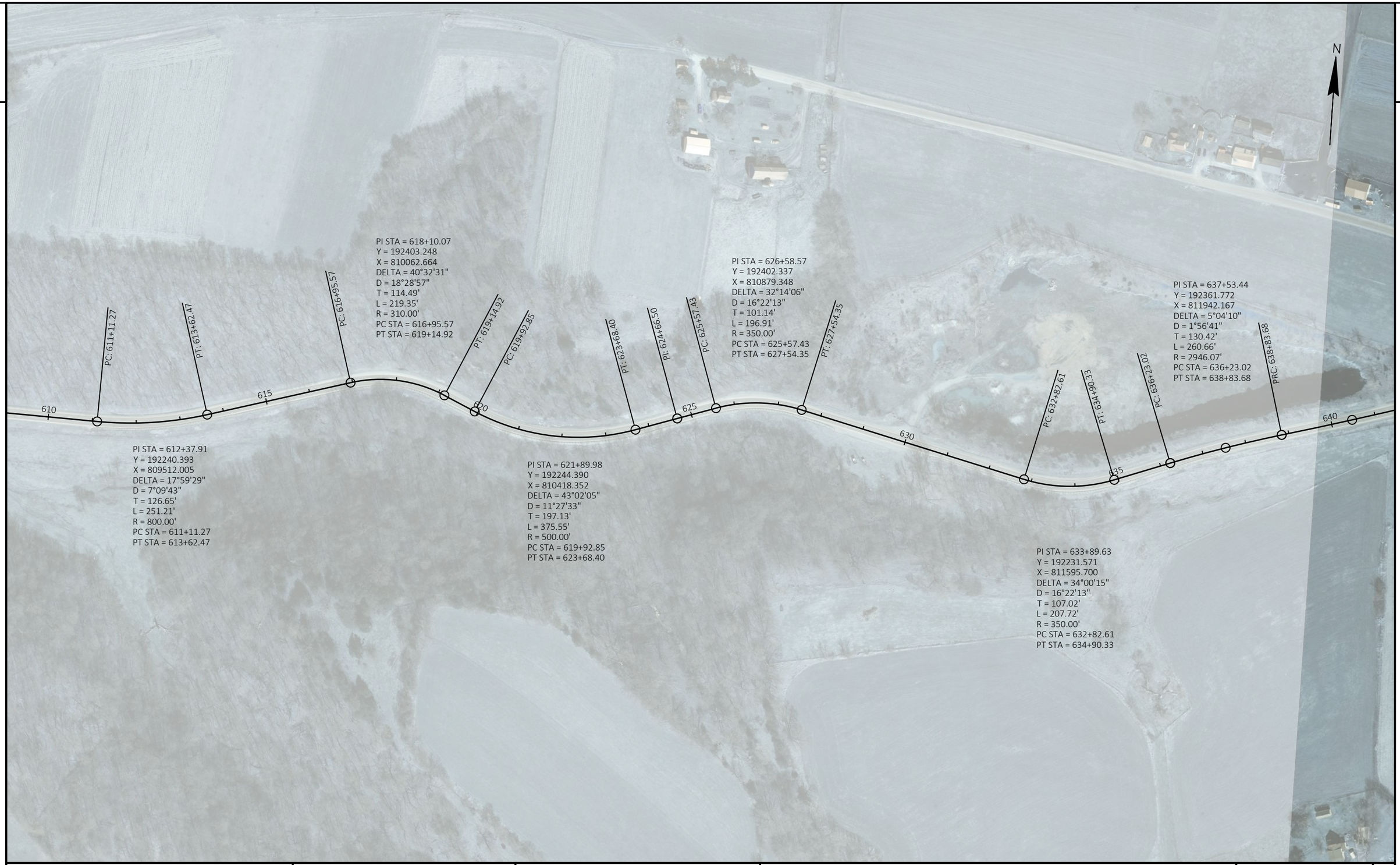
PI STA = 580+94.06
Y = 192446.869
X = 806529.384
DELTA = 10°13'01"
D = 1°54'35"
T = 268.19'
L = 534.95'
R = 3000.00'
PC STA = 578+25.87
PT STA = 583+60.83

PI STA = 606+56.34
Y = 192255.931
X = 808924.941
DELTA = 24°35'08"
D = 6°44'26"
T = 185.22'
L = 364.73'
R = 850.00'
PC STA = 604+71.13
PT STA = 608+35.86

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 56	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 13
PLOT DATE : 2/14/2023 11:32 AM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 57	E

2

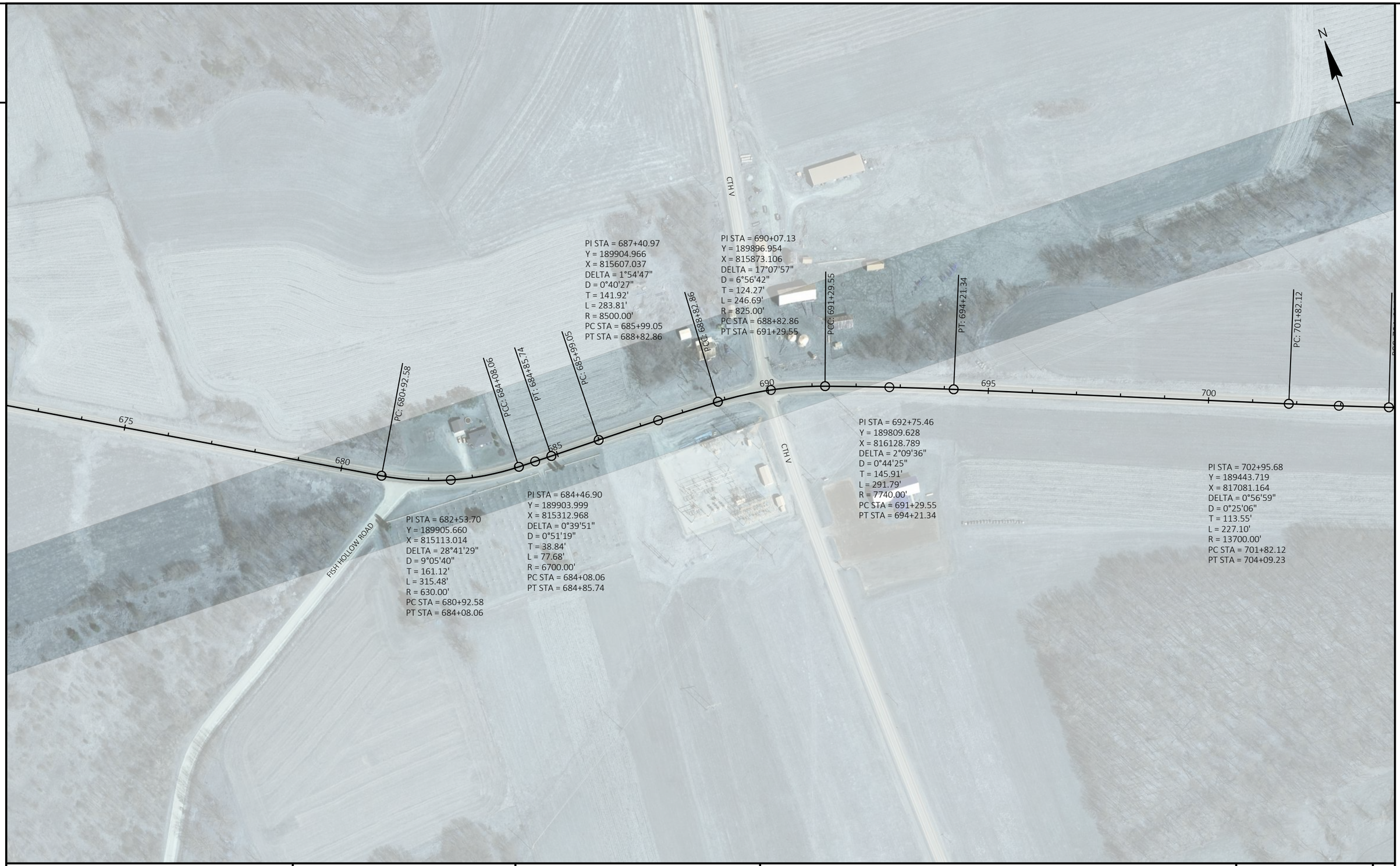


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 58	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 15

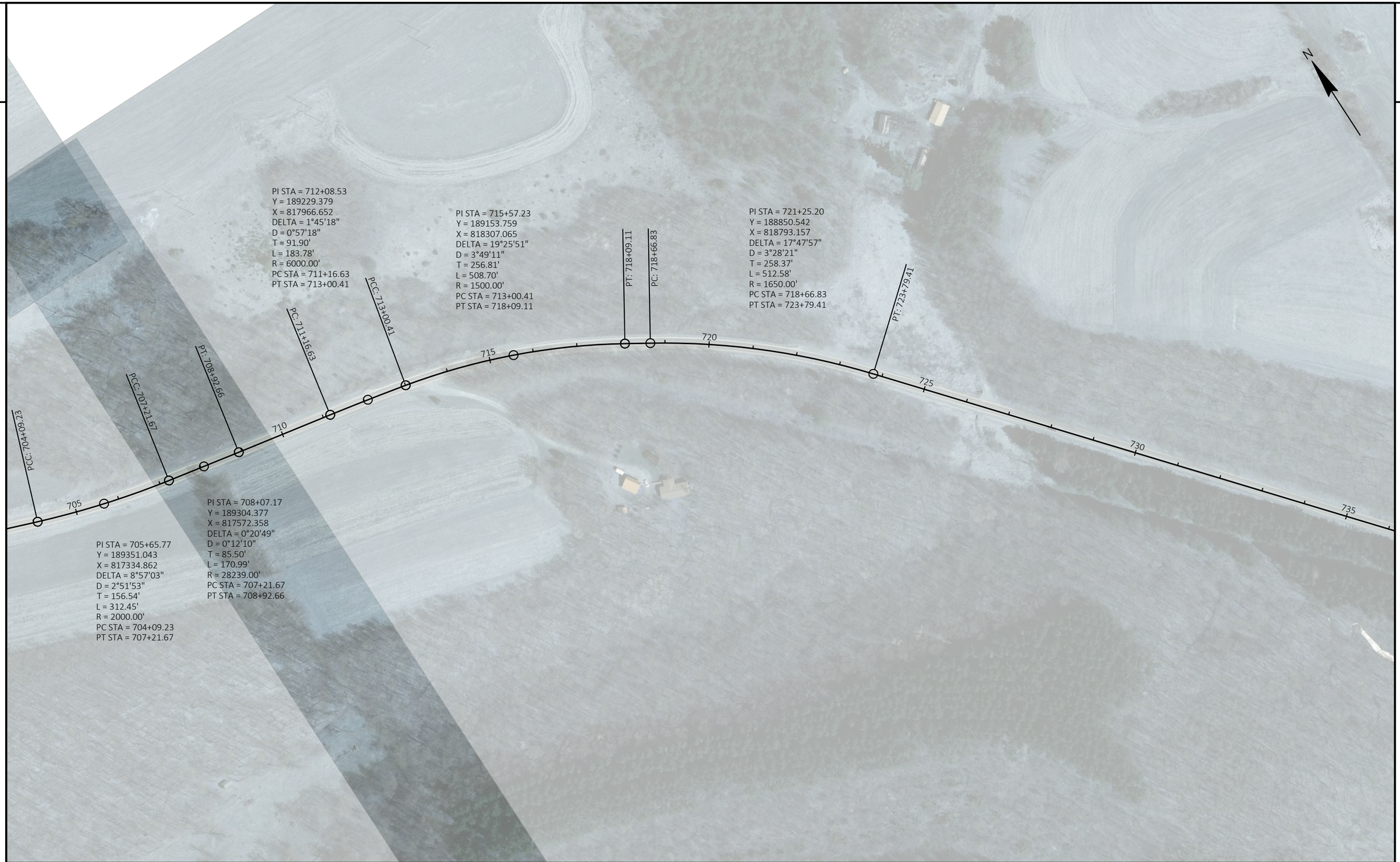
PLOT DATE : 2/14/2023 11:32 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 59	E

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 60	E

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 61	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 18
PLOT DATE : 2/14/2023 11:33 AM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

2

N

PC: 766+66.26

PT: 771+43.01

PC: 772+45.20

PT: 776+31.40

PC: 781+78.22

PT: 785+63.77

PC: 793+67.99

PT: 797+49.79

770

775

780

785

790

795

PI STA = 774+40.47
Y = 187438.132
X = 823408.621
DELTA = 20°52'30"
D = 5°24'19"
T = 195.26'
L = 386.20'
R = 1060.00'
PC STA = 772+45.20
PT STA = 776+31.40

PI STA = 769+07.34
Y = 187383.870
X = 822872.823
DELTA = 21°00'44"
D = 4°24'27"
T = 241.08'
L = 476.75'
R = 1300.00'
PC STA = 766+66.26
PT STA = 771+43.01

PI STA = 783+72.06
Y = 187194.440
X = 824312.268
DELTA = 14°43'37"
D = 3°49'11"
T = 193.84'
L = 385.55'
R = 1500.00'
PC STA = 781+78.22
PT STA = 785+63.77

PI STA = 795+60.83
Y = 187186.847
X = 825503.144
DELTA = 19°53'12"
D = 5°12'31"
T = 192.84'
L = 381.80'
R = 1100.00'
PC STA = 793+67.99
PT STA = 797+49.79

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 62	E

2

N

PI STA = 805+94.29
Y = 187525.516
X = 826483.612
DELTA = 37°55'32"
D = 5°52'35"
T = 335.01'
L = 645.38'
R = 975.00'
PC STA = 802+59.28
PT STA = 809+04.65

PI STA = 812+52.67
Y = 187300.445
X = 827128.495
DELTA = 16°45'40"
D = 5°43'46"
T = 147.32'
L = 292.54'
R = 1000.00'
PC STA = 811+05.35
PT STA = 813+97.89

PI STA = 822+92.21
Y = 187255.398
X = 828169.163
DELTA = 6°58'55"
D = 2°17'31"
T = 152.51'
L = 304.65'
R = 2500.00'
PC STA = 821+39.70
PT STA = 824+44.35

PI: 800+16.72
PC: 802+59.28
PT: 809+04.65
PC: 811+05.35
PT: 813+97.89
PC: 821+39.70
PT: 824+44.35
PI: 829+22.41

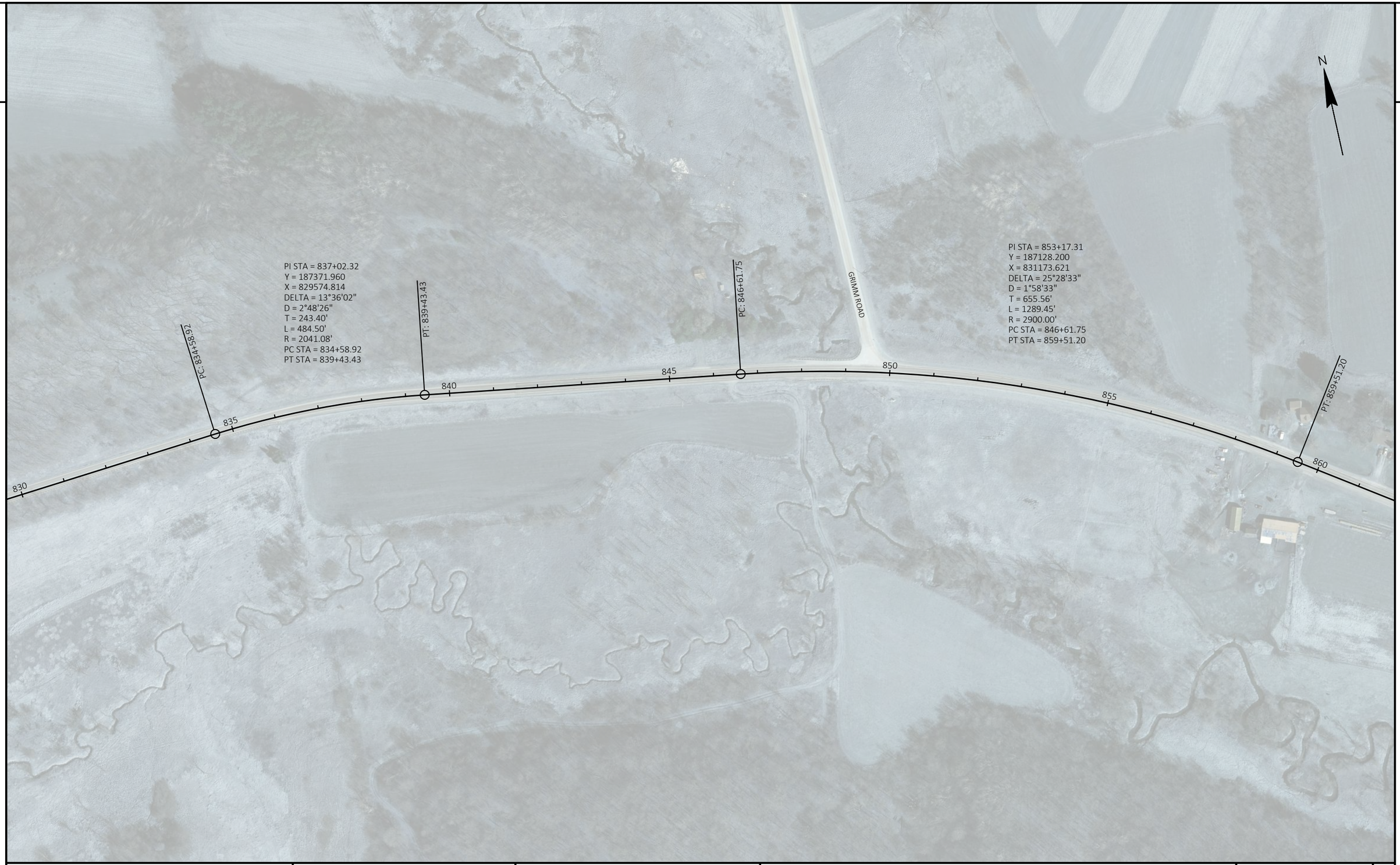
800 805 810 815 820 825 830

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 63	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 20

PLOT DATE : 2/14/2023 11:33 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 64	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 21
PLOT DATE : 2/14/2023 11:33 AM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

2

PT: 859+51.20

860

865

870

PC: 871+34.44

875

880

885

890

PT: 891+96.39

895

N

PC:

PI STA = 883+56.18
Y = 185410.367
X = 833706.597
DELTA = 77°12'59"
D = 3°44'41"
T = 1221.74'
L = 2061.95'
R = 1530.00'
PC STA = 871+34.44
PT STA = 891+96.39

STH 82

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 65	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 22

PLOT DATE : 2/14/2023 11:33 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 66	E

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 67	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 24
PLOT DATE : 2/14/2023 11:34 AM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 68	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 25

PLOT DATE : 2/14/2023 11:34 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 69	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 26

PLOT DATE : 2/14/2023 11:34 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

CORING SUMMARY

NOTES:
DATE BORINGS TAKEN: 8/13/2019
ALL DEPTHS ARE IN INCHES
FOR REFERENCE PURPOSES ONLY
ALL OFFSETS ARE FROM EXISTING CENTERLINE

Coring Number	Log Mile	Station	Offset	Curve or Tangent	Bituminous Surface Thickness	Comment
	0.00	197+94	-	-	-	STH 131/STH 33 INT.
C-1	0.21	209+03	6.0' RT	CURVE	2.5"	FILL
C-2	0.42	220+12	3.0' RT	TANGENT	2.5"	FILL
	0.52	225+40	-	-	-	GIBSON VALLEY RD
C-3	0.72	235+96	9.0' RT	CURVE	2.25"	CUT
C-4	0.92	246+52	3.0' RT	CURVE	2.25"	CUT/FILL
C-5	1.11	256+55	6.0' RT	TANGENT	2.5"	CUT
C-6	1.35	269+22	12.0' RT	TANGENT	2"	CUT
C-7	1.58	281+37	3.0' RT	CURVE	3"	CUT
C-8	1.86	296+15	6.0' RT	TANGENT	2"	CUT
C-9	2.18	313+05	9.0' RT	CURVE	2"	CUT
C-10	2.42	325+72	12.0' RT	CURVE	2.5"	CUT/FILL
C-11	2.66	338+39	3.0' RT	TANGENT	2.5"	CUT/FILL
C-12	2.91	351+59	6.0' RT	CURVE	3"	CUT
C-13	3.21	367+43	12.0' RT	TANGENT	2.5"	CUT
	3.31	372+71	-	-	-	CTH F
AVERAGE THICKNESS					2.4"	-

PWL MIXTURE USE TABLE

Location	Station	Mixture Use:	Underlying Surface	Bid Item	Tons	Thickness	Quality Management Program to be used for:	
							Mixture Acceptance	*Density Acceptance*
12' Driving Lane	203+11 to 375+59 376+24 to 502+65 503+14 to 875+21 576+02 to 890+08 890+89 to 997+50	Lower Layer	Recycled HMA	4 LT 58-28S	23,726	2"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
Variable width shoulder	203+11 to 375+59 376+24 to 502+65 503+14 to 875+21 576+02 to 890+08 890+89 to 997+50	Lower Layer	Recycled HMA	4 LT 58-28S	4,226	2"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the department; Not eligible for incentive
Side Roads	203+11 to 997+50	Lower Layer	Varies	4 LT 58-28S	626	2"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the department; Not eligible for incentive
Driveways/Field Entrance	203+11 to 997+50	Lower Layer	Varies	Asphaltic Surface Driveways and Field Entrances	307	2	QMP as per SS 465.	Acceptance by ordinary compaction

Estimate Of Quantities

5100-01-60

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	8.000	8.000
0004	201.0205	Grubbing	STA	8.000	8.000
0006	203.0335	Debris Containment Over Waterway (structure) 01. B-62-63	EACH	1.000	1.000
0008	204.0110	Removing Asphaltic Surface	SY	1,369.000	1,369.000
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	216.000	216.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	248,893.000	248,893.000
0014	204.0150	Removing Curb & Gutter	LF	4,245.000	4,245.000
0016	204.0165	Removing Guardrail	LF	23,767.000	23,767.000
0018	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	951.000	951.000
0020	213.0100	Finishing Roadway (project) 01. 5100-01-60	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,408.000	3,408.000
0024	455.0605	Tack Coat	GAL	12,792.000	12,792.000
0026	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0028	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0030	460.2005	Incentive Density PWL HMA Pavement	DOL	18,340.000	18,340.000
0032	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	39,720.000	39,720.000
0034	460.2010	Incentive Air Voids HMA Pavement	DOL	28,650.000	28,650.000
0036	460.5224	HMA Pavement 4 LT 58-28 S	TON	28,578.000	28,578.000
0038	465.0105	Asphaltic Surface	TON	310.000	310.000
0040	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	307.000	307.000
0042	465.0560	Asphaltic Rumble Strips, Centerline	LF	11,066.000	11,066.000
0044	502.3200	Protective Surface Treatment	SY	25.000	25.000
0046	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	1,242.000	1,242.000
0048	509.1500	Concrete Surface Repair	SF	660.000	660.000
0050	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	4,169.000	4,169.000
0052	601.0576	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type J	LF	76.000	76.000
0054	602.0405	Concrete Sidewalk 4-Inch	SF	124.000	124.000
0056	602.3010	Concrete Surface Drains	CY	3.000	3.000
0058	614.0010	Barrier System Grading Shaping Finishing	EACH	23.000	23.000
0060	614.0400	Adjusting Steel Plate Beam Guard	LF	1,281.000	1,281.000
0062	614.2300	MGS Guardrail 3	LF	18,151.000	18,151.000
0064	614.2330	MGS Guardrail 3 K	LF	3,976.000	3,976.000
0066	614.2350	MGS Guardrail Short Radius	LF	1,089.000	1,089.000
0068	614.2500	MGS Thrie Beam Transition	LF	312.000	312.000
0070	614.2610	MGS Guardrail Terminal EAT	EACH	53.000	53.000
0072	614.2620	MGS Guardrail Terminal Type 2	EACH	6.000	6.000
0074	614.2630	MGS Guardrail Short Radius Terminal	EACH	5.000	5.000
0076	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5100-01-60	EACH	1.000	1.000
0078	619.1000	Mobilization	EACH	1.000	1.000
0080	624.0100	Water	MGAL	56.000	56.000
0082	628.1504	Silt Fence	LF	2,603.000	2,603.000
0084	628.1520	Silt Fence Maintenance	LF	2,603.000	2,603.000
0086	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0088	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0090	628.2004	Erosion Mat Class I Type B	SY	1,294.000	1,294.000
0092	628.2008	Erosion Mat Urban Class I Type B	SY	37.000	37.000
0094	629.0210	Fertilizer Type B	CWT	2.000	2.000
0096	630.0120	Seeding Mixture No. 20	LB	39.000	39.000
0098	630.0200	Seeding Temporary	LB	39.000	39.000
0100	630.0500	Seed Water	MGAL	80.000	80.000

5100-01-60

Line	Item	Item Description	Unit	Total	Qty
0102	638.2102	Moving Signs Type II	EACH	75.000	75.000
0104	642.5201	Field Office Type C	EACH	1.000	1.000
0106	643.0300	Traffic Control Drums	DAY	19,003.000	19,003.000
0108	643.0420	Traffic Control Barricades Type III	DAY	255.000	255.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	510.000	510.000
0112	643.0715	Traffic Control Warning Lights Type C	DAY	6,750.000	6,750.000
0114	643.0900	Traffic Control Signs	DAY	1,980.000	1,980.000
0116	643.0920	Traffic Control Covering Signs Type II	EACH	15.000	15.000
0118	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0120	643.3165	Temporary Marking Line Paint 6-Inch	LF	129,394.000	129,394.000
0122	643.3170	Temporary Marking Line Epoxy 6-Inch	LF	8,057.000	8,057.000
0124	643.5000	Traffic Control	EACH	1.000	1.000
0126	646.2020	Marking Line Epoxy 6-Inch	LF	400.000	400.000
0128	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	161,938.000	161,938.000
0130	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	75.000	75.000
0132	646.4720	Marking Line Same Day Epoxy 6-Inch	LF	121,337.000	121,337.000
0134	646.6120	Marking Stop Line Epoxy 18-Inch	LF	72.000	72.000
0136	648.0100	Locating No-Passing Zones	MI	15.000	15.000
0138	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	4,245.000	4,245.000
0140	650.8000	Construction Staking Resurfacing Reference	LF	79,439.000	79,439.000
0142	650.9911	Construction Staking Supplemental Control (project) 01. 5100-01-60	EACH	1.000	1.000
0144	690.0150	Sawing Asphalt	LF	1,599.000	1,599.000
0146	740.0440	Incentive IRI Ride	DOL	30,090.000	30,090.000
0148	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	800.000	800.000
0150	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	475.000	475.000
0152	SPV.0060	Special 01. Safety Grate for Concrete Box Culvert C-62-267	EACH	1.000	1.000
0154	SPV.0060	Special 02. Cleaning Box Culvert, 4' X 5', STA 726+32	EACH	1.000	1.000
0156	SPV.0060	Special 03. Cleaning Box Culvert, 6' X 6', STA 446+90	EACH	1.000	1.000
0158	SPV.0060	Special 04. Cleaning Box Culvert, 5' X 8', STA 460+49	EACH	1.000	1.000
0160	SPV.0060	Special 05. Rail Post Anchorage Repair	EACH	2.000	2.000
0162	SPV.0070	Special 01. Sprayed Asphaltic Shoulder Treatment	GAL	490.000	490.000
0164	SPV.0090	Special 01. Flashing Stainless Steel	LF	102.000	102.000
0166	SPV.0180	Special 01. Removing Distressed Pavement Milling	SY	12,445.000	12,445.000

CURB AND GUTTER REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	REMARKS
0010	344+18	-	348+87	LT	448	Mainline
0010	351+77	-	372+84	RT	2103	Mainline
0010	616+06	-	619+28	RT	313	Mainline
0010	625+23	-	627+90	RT	260	Mainline
0010	657+57	-	662+27	LT	470	Mainline
0010	749+18	-	752+65	LT	349	Mainline
0010	883+40	-	883+80	RT	70	STH 82 Intersection
0010	884+20	-	884+42	RT	76	STH 82 Intersection
0010	884+41	-	884+89	RT	56	STH 82 Intersection
0010	901+79	-	902+15	LT	51	Town Shop Road Radius
0010	902+49	-	902+87	LT	49	Town Shop Road Radius
				TOTAL 0010	4,245	

CLEARING & GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA	REMARKS
0010	243+05	-	244+05	RT	2	2	
0010	266+20	-	267+20	LT	2	2	
0010	341+81	-	342+81	LT	2	2	
0010	774+34	-	775+34	LT	2	2	
				TOTAL 0010	8	8	

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

CATEGORY	STATION	TO	STATION	LOCATION	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	REMARKS
0010	374+25	-	377+51	LT & RT	7	
0010	377+51	-	642+10	LT & RT	529	
0010	642+10	-	648+59	LT & RT	13	
0010	648+59	-	844+74	LT & RT	392	
0010	844+74	-	849+65	LT & RT	10	
				TOTAL 0010	951	

CONCRETE SURFACE DRAINS

CATEGORY	STATION	LOCATION	602.3010 CONCRETE SURFACE DRAINS CY	REMARKS
0010	364+12	RT	3	
		TOTAL 0010	3	

CONCRETE SIDEWALK

CATEGORY	STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH SF	REMARKS
0010	884+32	RT	124	STH 82 ISLAND
		TOTAL 0010	124	

MAINTENANCE & REPAIR OF HAUL ROADS

CATEGORY	LOCATION	618.0100.01 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) (01. 5100-01-60) EACH	REMARKS
0010	Project 5100-01-60	1	
	TOTAL 0010	1	

ASPHALT REMOVALS

CATEGORY	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
0010	203+11 - 203+13	CL	-	9	-	MAINLINE
0010	203+13 - 375+57	CL	-	-	54476	MAINLINE
0010	205+91 - 206+91	LT	-	6	-	BREY VALLEY ROAD
0010	209+82	RT	42		-	DRIVEWAY
0010	212+30 - 213+30	LT	-	6	-	CTH 'ZZ'
0010	213+03	RT	58	-	-	DRIVEWAY
0010	215+85	RT	25	-	-	DRIVEWAY
0010	217+52	LT	30	-	-	DRIVEWAY
0010	221+21	LT	30	-	-	DRIVEWAY
0010	225+02 - 226+02	RT	-	6	-	GIBSON VALLEY ROAD
0010	252+43 - 253+43	LT	-	6	-	TAYLOR VALLEY ROAD
0010	324+21	RT	-	-	-	LOWER PARK ENTRANCE
0010	334+34	LT	-	-	-	UPPER PARK ENTRANCE
0010	374+00 - 375+00	LT & RT	-	19	-	CONANT ROAD & CTH 'F'
0010	375+57 - 375+59	CL	-	6	-	MAINLINE
0010	376+24 - 377+24	CL	-	6	-	MAINLINE
0010	377+24 - 501+65	CL	-	-	37363	MAINLINE
0010	411+65	LT	33	-	-	DRIVEWAY
0010	421+70 - 422+70	RT	-	5	-	SCENIC DRIVE
0010	475+15 - 476+15	LT & RT	-	11	-	RACCOON DRIVE & CHEYENNE ROAD
0010	501+65 - 502+65	CL	-	5	-	MAINLINE
0010	503+14 - 504+14	CL	-	5	-	MAINLINE
0010	504+14 - 874+21	CL	-	-	111443	MAINLINE
0010	508+83 - 509+83	RT	-	5	-	CHEYENNE ROAD
0010	533+79 - 534+79	LT	-	5	-	HARRIS ROAD
0010	564+45 - 565+45	LT	-	5	-	TOWN HALL ROAD
0010	646+89 - 647+89	LT	-	5	-	VET ROAD
0010	654+59 - 655+59	RT	-	5	-	BURR SALEM ROAD
0010	658+09	LT	37	-	-	DRIVEWAY
0010	659+37	LT	25	-	-	DRIVEWAY
0010	660+71	LT	308	-	-	DRIVEWAY
0010	661+32	LT	68	-	-	DRIVEWAY
0010	662+10	LT	37	-	-	DRIVEWAY
0010	664+94	LT	37	-	-	DRIVEWAY
0010	670+50	LT	63	-	-	DRIVEWAY
0010	680+86 - 681+86	RT	-	5	-	FISH HOLLOW ROAD
0010	689+50 - 690+50	LT & RT	-	11	-	CTH 'V'
0010	737+83 - 738+83	RT	-	5	-	WHEELER ROAD
0010	849+15 - 850+15	LT	-	7	-	GRIMM ROAD
0010	874+21 - 875+21	CL	-	7	-	MAINLINE
0010	876+02 - 877+02	CL	-	7	-	MAINLINE
0010	877+02 - 889+08	CL	-	-	7,033	MAINLINE
0010	883+76 - 884+76	RT	-	7	-	STH 82
0010	886+72	RT	75	-	-	DRIVEWAY
0010	889+08 - 890+08	CL		7		MAINLINE
		SUBTOTAL 0010	868	171	210,315	

ASPHALT REMOVALS (CONT'D)

CATEGORY	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
0010	890+89 - 891+89	CL		7		MAINLINE
0010	891+89 - 996+50	CL	-	-	38,578	MAINLINE
0010	901+74 - 902+74	LT	-	7	-	TOWN SHOP ROAD
0010	922+47 - 923+47	LT	-	7	-	BRISKEY ROAD
0010	950+44 - 951+44	LT	-	7	-	PRESLIK ROAD
0010	964+54 - 965+54	RT	-	7	-	SEBRANEK LANE
0010	989+32	LT	42	-		DRIVEWAY
0010	991+12	LT	175	-	-	COMMERCIAL ENTRANCE
0010	994+41	RT	162	-	-	HISTORICAL MARKER ENTRANCE
0010	996+50 - 997+50	CL	-	10	-	MAINLINE
0010	996+65	RT	122	-	-	HISTORICAL MARKER ENTRANCE
		SUBTOTAL 0010	501	45	38,578	
		TOTAL 0010	**1,369**	**216**	**248,893**	

CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF	601.0576 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J LF	REMARKS
0010	344+18	-	348+87	LT	448	-	Mainline
0010	351+77	-	372+84	RT	2,103	-	Mainline
0010	616+06	-	619+28	RT	313	-	Mainline
0010	625+23	-	627+90	RT	260	-	Mainline
0010	657+57	-	662+27	LT	470	-	Mainline
0010	749+18	-	752+65	LT	349	-	Mainline
0010	883+40	-	883+80	RT	70	-	STH 82 Intersection Radius
0010	884+20	-	884+42	RT	-	76	STH 82 Intersection Island
0010	884+41	-	884+89	RT	56	-	STH 82 Intersection Radius
0010	901+79	-	902+15	LT	51	-	Town Shop Road Radius
0010	902+49	-	902+87	LT	49	-	Town Shop Road Radius
				TOTAL 0010	4,169	76	

BARRIER SYSTEM GRADING, SHAPING, AND FINISHING

					614.0010	FOR INFORMATIONAL PURPOSES ONLY								
CATEGORY	STATION	TO	STATION	LOCATION	BARRIER SYSTEM GRADING SHAPING FINISHING EACH	CONSTRUCTION STAKING SLOPE STAKES LF	BORROW CY	TOPSOIL SF	EROSION MAT CLASS I TYPE B SY	MULCH SY	FERTILIZER CWT	SEEDING MIXTURE NO. 20 LB	SEEDING TEMPORARY LB	SEED WATER MGAL
0010	243+05	-	244+05	RT	1	100	13	645	72	-	0.1	1.9	1.9	6
0010	252+13	-	252+96	RT	1	100	52	129	104		0.1	2.8	2.8	9
0010	261+05	-	262+05	RT	1	100	-	475	53	-	0.1	1.4	1.4	5
0010	263+86	-	264+86	RT	1	100	-	413	-	46	0.1	1.2	1.2	4
0010	266+20	-	267+20	LT	1	100	-	894	-	99	0.1	2.7	2.7	9
0010	269+13	-	270+13	LT	1	100	-	442	-	49	0.1	1.3	1.3	4
0010	276+87	-	277+87	RT	1	100	29	937	104	-	0.1	2.8	2.8	9
0010	341+81	-	342+81	LT	1	100	13	647	-	72	0.1	1.9	1.9	6
0010	349+36	-	350+36	LT	1	100	-	535	-	59	0.1	1.6	1.6	5
0010	374+32	-	375+32	RT	1	100	-	545	-	61	0.1	1.6	1.6	5
0010	376+55	-	377+55	RT	1	100	-	833	-	93	0.1	2.5	2.5	8
0010	435+64	-	436+64	RT	1	100	6	532	-	59	0.1	1.6	1.6	5
0010	501+41	-	502+41	RT	1	100	44	2067	-	230	0.1	6.2	6.2	20
0010	501+57	-	502+57	LT	1	100	7	408	-	45	0.1	1.2	1.2	4
0010	503+19	-	504+19	RT	1	100	-	492	-	55	0.1	1.5	1.5	5
0010	535+54	-	536+54	LT	1	100	-	205	-	23	0.1	0.6	0.6	2
0010	593+03	-	594+03	RT	1	100	5	1258	-	140	0.1	3.8	3.8	12
0010	630+37	-	631+37	RT	1	100	-	235	-	26	0.1	0.7	0.7	2
0010	771+48	-	772+48	LT	1	100	14	523	58	-	0.1	1.6	1.6	5
0010	774+34	-	775+34	LT	1	100	-	496	-	55	0.1	1.5	1.5	5
0010	788+67	-	789+67	RT	1	100	7	441	49	-	0.1	1.3	1.3	4
0010	846+77	-	847+77	LT	1	100	-	302	-	34	0.1	0.9	0.9	3
0010	846+79	-	847+79	RT	1	100	7	440	-	49	0.1	1.3	1.3	4
				TOTAL 0010	23	2300	197	13894	440	1194	2.3	44	44	143

RESTORATION ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	628.2004 EROSION MAT CLASS I TYPE B SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	REMARKS
0010	344+18	-	348+87	LT	149	-	0.1	4	4	8	Curb and Gutter
0010	351+77	-	372+94	RT	701	-	0.4	19	19	40	Curb and Gutter
0010	616+06	-	619+28	RT	104	-	0.1	3	3	6	Curb and Gutter
0010	625+23	-	627+90	RT	87	-	0.1	3	3	6	Curb and Gutter
0010	657+57	-	662+27	LT	-	37	0.1	1	1	2	Curb and Gutter
0010	749+18	-	752+65	LT	116	-	0.1	3	3	6	Curb and Gutter
0010	883+40	-	883+80	RT	23	-	0.1	1	1	2	Curb and Gutter
0010	884+41	-	884+89	RT	19	-	0.1	1	1	2	Curb and Gutter
0010	901+79	-	902+15	LT	17	-	0.1	1	1	2	Curb and Gutter
0010	902+49	-	902+87	LT	16	-	0.1	1	1	2	Curb and Gutter
0010	UNIDSTRIBUTED			LT & RT	62	2.0	0.7	2	2	4	
				TOTAL 0010	1,294	37.0	2.0	39	39	80	

SAWING

CATEGORY	STATION	TO	STATION	690.0150 SAWING ASPHALT LF	REMARKS
0010	203+10.74, LT	-	203+10.74, RT	43	Beginning of Project
0010	206+03.81, LT	-	206+81.91, LT	84	Brey Valley Road
0010	212+58.95, LT	-	212+94.38, LT	36	CTH 'ZZ'
0010	225+17.60, RT	-	225+73.39, RT	60	Gibson Valley Road
0010	252+80.62, LT	-	253+14.63, LT	38	Taylor Valley Road
0010	323+96.34, RT	-	324+39.27, RT	43	Lower Park Entrance
0010	334+02.00, LT	-	334+76.22, RT	75	Upper Park Entrance
0010	373+84.68, RT	-	374+44.99, RT	60	CTH 'F'
0010	374+27.82, LT	-	375+09.70, LT	82	CTH 'F'/Conant Road
0010	422+04.58, RT	-	422+31.56, RT	27	Scenic Drive
0010	475+52.72, RT	-	475+82.41, RT	30	Cheyenne Road
0010	509+09.98, RT	-	509+55.99, RT	46	Cheyenne Road
0010	534+05.59, LT	-	534+61.53, LT	55	Harris Road
0010	564+65.15, LT	-	565+35.54, LT	70	Town Hall Road
0010	646+86.81, LT	-	647+35.80, LT	53	Vet Road
0010	654+75.80, RT	-	655+41.27, RT	65	Burr Salem Road
0010	681+05.72, RT	-	681+58.22, RT	55	Fish Hollow Road
0010	689+74.46, LT	-	690+18.17, LT	45	CTH 'V'
0010	689+67.62, RT	-	690+24.30, RT	55	CTH 'V'
0010	738+14.65, RT	-	738+51.98, RT	38	Wheeler Road
0010	849+16.78, LT	-	849+97.10, RT	81	Wheeler Road
0010	883+77.12, RT	-	884+19.79, RT	48	STH 82
0010	902+11.72, LT	-	902+51.62, LT	42	Town Shop Road
0010	922+63.72, LT	-	923+30.36, LT	68	Briskey Road
0010	950+59.51, LT	-	951+40.03, LT	82	Preslik Road
0010	964+45.66, RT	-	965+68.21, RT	124	Sebranek Lane
0010	991+65.36, RT	-	992+59.84, RT	94	Driveway
			TOTAL 0010	1,599	

SPRAYED ASPHALTIC SHOULDER TREATMENT

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0070.01 SPECIAL (01. SPRAYED ASPHALTIC SHOULDER TREATMENT) GAL	REMARKS
0010	277+12	-	283+12	RT	70	
0010	291+12	-	300+12	RT	105	
0010	304+12	-	313+45	RT	109	
0010	320+37	-	323+69	RT	39	
0010	435+88	-	445+38	RT	111	
0010	758+01	-	762+78	RT	56	
				TOTAL 0010	490	

HMA SUMMARY

CATEGORY	STATION	LOCATION	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0105 ASPHALTIC SURFACE TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF	REMARKS
0010	203+11 - 375+59	LT & RT	2725	6103	-	-	-	MAINLINE & SHOULDERS
0010	205+82 - 207+33	LT	17	39	-	-	-	BREY VALLEY ROAD
0010	209+82	RT	-	-	-	9	-	DRIVEWAY
0010	212+33 - 213+13	LT	6	14	-	-	-	CTH 'ZZ'
0010	213+03	RT	-	-	-	13	-	DRIVEWAY
0010	215+85	RT	-	-	-	6	-	DRIVEWAY
0010	217+52	LT	-	-	-	7	-	DRIVEWAY
0010	221+21	LT	-	-	-	7	-	DRIVEWAY
0010	224+77 - 225+95	RT	10	23	-	-	-	GIBSON VALLEY ROAD
0010	252+56 - 253+88	LT	7	16	-	-	-	TAYLOR VALLEY ROAD
0010	273+42	RT	-	-	-	7	-	DRIVEWAY
0010	373+60 - 374+78	RT	13	29	-	-	-	CTH 'F'
0010	373+68 - 375+18	LT	20	44	-	-	-	CONANT ROAD/CTH 'F'
0010	376+24 - 502+65	LT & RT	1869	4186	-	-	-	MAINLINE & SHOULDERS
0010	411+65	LT	-	-	-	6	-	DRIVEWAY
0010	475+20 - 476+02	RT	7	16	-	-	-	CHEYENNE ROAD
0010	503+14 - 875+21	LT & RT	5573	12483	-	-	-	MAINLINE & SHOULDERS
0010	508+82 - 510+10	RT	13	28	-	-	-	CHEYENNE ROAD
0010	532+31 - 534+84	LT	13	29	-	-	-	HARRIS ROAD
0010	564+21 - 565+85	LT	14	31	-	-	-	TOWN HALL ROAD
0010	646+36 - 648+02	LT	13	28	-	-	-	VET ROAD
0010	654+25 - 655+94	RT	12	27	-	-	-	BURR SALEM ROAD
0010	658+09	LT	-	-	-	4	-	DRIVEWAY
0010	659+37	LT	-	-	-	6	-	DRIVEWAY
0010	660+71	LT	-	-	-	69	-	DRIVEWAY
0010	661+32	LT	-	-	-	15	-	DRIVEWAY
0010	662+10	LT	-	-	-	8	-	DRIVEWAY
0010	664+94	LT	-	-	-	8	-	DRIVEWAY
0010	670+50	LT	-	-	-	14	-	DRIVEWAY
0010	680+77 - 682+00	RT	12	28	-	-	-	FISH HOLLOW ROAD
0010	689+31 - 690+44	LT & RT	19	42	-	-	-	CTH 'V'
0010	737+48 - 738+94	RT	11	25	-	-	-	WHELLER ROAD
0010	849+02 - 850+10	LT	9	19	-	-	-	GRIMM ROAD
0010	876+02 - 890+08	LT & RT	374	838	-	-	-	MAINLINE & SHOULDERS
0010	882+81 - 885+91	RT	33	4	-	-	-	STH 82
0010	884+74 - 997+50	CL	-	-	-	-	11,066	SHOULDER & CENTERLINE
0010	886+72	RT	-	-	-	17	-	DRIVEWAY
0010	890+89 - 997+50	LT & RT	1,939	4,342	-	-	-	MAINLINE & SHOULDERS
0010	900+94 - 903+91	LT	19	42	-	-	-	TOWN SHOP ROAD
0010	921+83 - 924+52	LT	20	46	-	-	-	BRISKEY ROAD
0010	950+44 - 952+72	LT	21	47	-	-	-	PRESLIK ROAD
0010	963+83 - 966+47	RT	22	49	-	-	-	SEBRANEK LANE
0010	989+32	LT	-	-	-	9	-	DRIVEWAY
0010	991+12	LT	-	-	-	39	-	COMMERCIAL ENTRANCE
0010	994+41	RT	-	-	-	36	-	HISTORICAL MARKER ENTRANCE
0010	996+65	RT	-	-	-	27	-	HISTORICAL MARKER ENTRANCE
0010	UNDISTRIBUTED	LT & RT	1	-	310	-	-	REMOVING DISTRESSED PAV'T
		TOTAL 0010	12,792	28,578	310	307	11,066	

AGGREGATE SUMMARY

CATEGORY	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	REMARKS
0010	203+03 - 374+25	LT & RT	678	GRVL SHLDRS
0010	210+91	RT	3	DRIVEWAY
0010	211+38	LT	4	DRIVEWAY
0010	222+73	LT	6	DRIVEWAY
0010	273+40	RT	4	DRIVEWAY
0010	276+93	RT	4	FIELD ENTRANCE
0010	343+60	LT	4	DRIVEWAY
0010	374+25 - 377+51	LT & RT	9	GRVL SHLDRS
0010	377+51 - 844+74	LT & RT	1,233	GRVL SHLDRS
0010	390+69	RT	4	DRIVEWAY
0010	393+43	RT	6	DRIVEWAY
0010	410+37	RT	3	DRIVEWAY
0010	411+49	RT	6	DRIVEWAY
0010	413+34	LT	8	DRIVEWAY
0010	418+59	LT	4	DRIVEWAY
0010	426+90	LT	3	DRIVEWAY
0010	434+50	LT	3	DRIVEWAY
0010	447+30	LT	5	DRIVEWAY
0010	456+33	LT	4	DRIVEWAY
0010	459+99	RT	9	DRIVEWAY
0010	460+16	LT	4	DRIVEWAY
0010	461+14	LT	4	DRIVEWAY
0010	470+33	LT	2	DRIVEWAY
0010	501+54	RT	2	FIELD ENTRANCE
0010	501+56	LT	5	FIELD ENTRANCE
0010	503+33	LT	2	DRIVEWAY
0010	507+13	LT	2	DRIVEWAY
0010	629+22	RT	32	DRIVEWAY
0010	630+00	LT	4	DRIVEWAY
0010	652+04	RT	3	DRIVEWAY
0010	652+30	LT	6	FIELD ENTRANCE
0010	655+66	RT	4	DRIVEWAY
0010	657+25	RT	9	DRIVEWAY
0010	660+10	RT	4	DRIVEWAY
0010	667+72	RT	3	DRIVEWAY
0010	681+75	RT	3	DRIVEWAY
0010	682+90	LT	4	DRIVEWAY
0010	684+53	RT	2	DRIVEWAY
0010	687+30	RT	7	DRIVEWAY
0010	695+75	LT	3	FIELD ENTRANCE
0010	713+60	RT	6	DRIVEWAY
0010	726+46	LT	8	DRIVEWAY
0010	747+20	RT	5	DRIVEWAY
0010	749+74	RT	6	DRIVEWAY
0010	749+82	LT	6	DRIVEWAY
		SUBTOTAL 0010	2,136	

AGGREGATE SUMMARY (CONT'D)

CATEGORY	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	REMARKS
0010	751+87	LT	7	DRIVEWAY
0010	752+19	RT	4	DRIVEWAY
0010	752+36	LT	6	DRIVEWAY
0010	752+49	RT	3	DRIVEWAY
0010	758+65	LT	3	DRIVEWAY
0010	763+39	RT	4	DRIVEWAY
0010	764+08	RT	4	DRIVEWAY
0010	771+91	RT	7	DRIVEWAY
0010	798+81	RT	4	DRIVEWAY
0010	799+07	LT	6	DRIVEWAY
0010	817+68	RT	5	DRIVEWAY
0010	827+00	RT	6	DRIVEWAY
0010	844+74 - 997+50	LT & RT	806	GRVL SHLDRS
0010	845+77	LT	4	DRIVEWAY
0010	846+40	RT	4	FIELD ENTRANCE
0010	858+22	RT	3	DRIVEWAY
0010	859+11	LT	3	DRIVEWAY
0010	859+75	RT	5	DRIVEWAY
0010	861+29	RT	5	DRIVEWAY
0010	864+61	RT	5	DRIVEWAY
0010	868+15	LT	5	FIELD ENTRANCE
0010	881+19	LT	4	DRIVEWAY
0010	889+16	RT	9	DRIVEWAY
0010	892+69	RT	4	FIELD ENTRANCE
0010	918+49	LT	2	FIELD ENTRANCE
0010	921+51	LT	9	DRIVEWAY
0010	922+25	RT	2	DRIVEWAY
0010	925+48	LT	5	DRIVEWAY
0010	927+70	RT	8	DRIVEWAY
0010	937+31	LT	4	FIELD ENTRANCE
0010	942+60	LT	4	DRIVEWAY
0010	963+05	LT	4	DRIVEWAY
0010	978+01	RT	3	FIELD ENTRANCE
0010	983+43	RT	5	DRIVEWAY
0010	984+22	LT	4	FIELD ENTRANCE
0010	991+07	LT	6	FIELD ENTRANCE
0010	UNDISTRIBUTED	LT & RT	300	
		SUBTOTAL 0010	1,272	
		TOTAL 0010	**3,408**	

BEAM GUARD SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.0400 ADJUSTING STEEL PLATE BEAM GUARD LF	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2350 MGS GUARDRAIL SHORT RADIUS LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	614.2630 MGS GUARDRAIL SHORT RADIUS TERMINAL EACH	REMARKS
0010	203+18	-	204+61	LT	-	147	-	-	-	-	-	-	-	
0010	203+03	-	204+01	RT	-	96	-	-	-	-	-	-	-	
0010	233+95	-	240+11	LT	455	-	510	-	-	-	2	-	-	
0010	243+28	-	252+87	RT	972	-	645	-	227	-	2		-	227' @ 134' Rad
0010	253+59	-	255+11	LT	-	154	-	-	-	-	-	-	-	
0010	253+41	-	255+23	RT	-	179	-	-	-	-	-	-	-	
0010	261+30	-	264+61	RT	337	-	25	-	285	-	1	1	-	170' @ 149' Rad & 115' @ 105' Rad
0010	266+45	-	269+88	LT	323	-	245	-	-	-	2	-	-	
0010	277+12	-	319+93	RT	4,273	-	-	-	-	-	-	-	-	
0010	320+50	-	323+81	RT	327	-	-	-	-	-	-	-	-	
0010	277+12	-	283+12	RT	-	-	-	556	-	-	1	-	-	
0010	283+12	-	285+88	RT	-	-	271	-	-	-	-	-	-	
0010	285+88		287+78	RT	-	-	-	-	173	-	-	-	-	173' @ 146' Rad
0010	287+78		291+12	RT	-	-	328			-	-	-	-	
0010	291+12	-	300+12	RT	-	-	-	917	-	-	-	-	-	
0010	300+12	-	304+12	RT	-	-	396	-	-	-	-	-	-	
0010	304+12	-	313+45	RT	-	-	-	951	-	-	-	-	-	
0010	313+45	-	313+81	RT	-	-	-	-	33	-	-	-	-	33' @ 136' Rad
0010	313+81		319+85	RT	-	-	587	-	-	-	-	-	-	
0010	319+85		320+37	RT	-	-	-	-	64	-	-	-	-	64' @ 60' Rad
0010	320+37	-	323+69	RT	-	-	-	332	-	-	-	-	-	
0010	323+69		324+01	RT	-	-	-	-	36	-	-	-	-	36' @ 33' Rad
0010	324+01	-	324+17	RT	-	-	-	-	-	-	-	-	1	
0010	324+87	-	334+66	RT	942	-	973	-	65	-	1	-	1	65' @ 23' Rad
0010	334+41	-	342+57	LT	760	-	717	-	36	-	1	-	1	36' @ 60' Rad
0010	343+81	-	350+11	LT	527	-	499	-	-	-	2	-	-	
0010	354+90	-	373+96	LT	1,824	-	1,894	-	26	-	1	1	-	5' @ 41' Rad & 21' @ 8' Rad
0010	375+28	-	375+57	LT	100	-	-	-	30	39	-	-	1	30' @ 14' Rad
0010	374+57	-	375+61	RT	104	-	12	-	-	39	1	-	-	
0010	376+26	-	377+30	LT	104	-	56	-	-	39	1	-	-	
0010	376+26	-	377+30	RT	104	-	51	-	-	39	1	-	-	
0010	435+88	-	445+38	RT	901	-	-	850	-	-	2	-	-	
0010	501+82	-	502+70	LT	88	-	35	-	-	39	1	-	-	
0010	501+66		502+59	RT	93	-	40	-	-	39	1	-	-	
0010	503+21		504+08	LT	87	-	34	-	-	39	1	-	-	
0010	503+08		503+94	RT	86	-	33	-	-	39	1	-	-	
0010	535+79	-	548+35	LT	1,136	-	1,161	-	-	-	2	-	-	
0010	568+15	-	593+78	RT	2,438	-	2,461	-	-	-	2	-	-	
0010	610+50	-	628+40	RT	1,736	-	1,681	-	-	-	2	-	-	
0010	630+62	-	637+75	RT	674	-	614	-	-	-	2	-	-	
0010	712+21	-	726+11	LT	1,116	-	1,292	-	-	-	2	-	-	
0010	740+20	-	741+95	LT	175	-	69	-	-	-	2	-	-	
0010	758+01	-	762+78	RT	302	-	-	370	-	-	2	-	-	
0010	771+73	-	775+09	LT	340	-	233	-	-	-	2	-	-	
0010	772+02	-	774+66	RT	277	-	199	-	20	-	1	1	-	20' @ 17.5' Rad
SUBTOTAL 0010					20,601	576	15,061	3,976	995	312	39	3	4	

BEAM GUARD SUMMARY (CONT'D)

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.0400 ADJUSTING STEEL PLATE BEAM GUARD LF	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2350 MGS GUARDRAIL SHORT RADIUS LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	614.2630 MGS GUARDRAIL SHORT RADIUS TERMINAL EACH	REMARKS
0010	779+38	-	789+41	RT	876	-	900	-	-	-	2	-	-	
0010	799+23	-	801+55	LT	240	-	172	-	18	-	1	1	-	18' @ 14.5' Rad
0010	798+92	-	802+36	RT	276	-	284	-	15	-	1	1	-	15' @ 15' Rad
0010	813+25	-	817+36	RT	326	-	306	-	-	-	2	-	-	
0010	827+20	-	837+38	RT	906	-	965	-	3	-	1	1	-	3' @ 5' Rad
0010	847+02	-	849+25	LT	189	-	177	-	58	-	1	-	1	58' @ 32' Rad
0010	847+04	-	849+30	RT	-	-	118	-	-	-	2	-	-	
0010	874+07	-	875+25	LT	-	116	-	-	-	-	-	-	-	
0010	874+03	-	875+16	RT	-	115	-	-	-	-	-	-	-	
0010	875+97	-	877+10	RT	-	115	-	-	-	-	-	-	-	
0010	888+83	-	889+98	LT	-	113	-	-	-	-	-	-	-	
0010	889+46	-	890+18	RT	-	118	-	-	-	-	-	-	-	
0010	890+81	-	892+11	LT	-	128	-	-	-	-	-	-	-	
0010	918+90	-	920+93	LT	175	-	99	-	-	-	2	-	-	
0010	975+09	-	976+84	LT	178	-	69	-	-	-	2	-	-	
				SUBTOTAL 0010	3,166	705	3,090	0	94	0	14	3	1	
				TOTAL 0010	**23,767**	**1,281**	**18,151**	**3,976**	**1,089**	**312**	**53**	**6**	**5**	

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WATER

CATEGORY	STATION	LOCATION	624.0100 WATER MGAL	REMARKS
0010	203+03 - 374+25	LT & RT	14	GRVL SHOULDERS
0010	374+25 - 377+51	LT & RT	1	GRVL SHOULDERS
0010	377+51 - 844+74	LT & RT	25	GRVL SHOULDERS
0010	844+74 - 997+50	LT & RT	16	GRVL SHOULDERS
		TOTAL 0010	56	

MOVING SIGNS

CATEGORY	LOCATION	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
0010	UNDISTRIBUTED	75	
	TOTAL 0010	75	

TRAFFIC CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.5000 TRAFFIC CONTROL EACH	REMARKS
0010	203+10	-	997+50	Project (5100-01-60)	-	-	-	-	-	-	14	1	Project
0010	203+10	-	997+50	Project (5100-01-60)	-	75	150	-	405	15	-	-	Detour
0010	203+10	-	997+50	Project (5100-01-60)	-	180	360	-	1,575	-	-	-	Advance Warning
0010	203+29	-	204+61	LT	176	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	203+14	-	204+01	RT	167	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	235+45	-	239+96	LT	240	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	243+15	-	252+85	RT	344	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	253+59	-	255+11	LT	180	-	-	150	-	-	-	-	Adjust Beam Guard
0010	253+54	-	255+11	RT	181	-	-	150	-	-	-	-	Adjust Beam Guard
0010	261+50	-	264+61	RT	212	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	266+62	-	269+88	LT	215	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	277+12	-	283+12	RT	270	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	320+50	-	324+18	RT	224	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	324+87	-	334+66	RT	346	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	334+41	-	342+33	LT	308	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	343+81	-	350+11	LT	276	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	355+00	-	373+96	LT	529	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	375+28	-	375+57	LT	312	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	374+57	-	375+61	RT	342	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	376+21	-	377+25	LT	342	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	376+26	-	377+30	RT	342	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	435+88	-	445+38	RT	680	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	501+82	-	504+10	LT	420	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	501+66	-	503+96	RT	420	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	535+79	-	548+35	LT	802	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	568+36	-	592+68	RT	1,273	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	611+00	-	628+40	RT	996	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	630+62	-	637+29	RT	567	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	712+21	-	726+11	LT	856	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	740+20	-	741+95	LT	370	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	758+01	-	762+33	RT	473	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	771+73	-	775+09	LT	434	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	772+02	-	774+66	RT	406	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	779+38	-	789+41	RT	701	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	799+23	-	801+55	LT	393	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	798+92	-	802+36	RT	438	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	813+25	-	817+36	RT	464	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	827+04	-	837+36	RT	713	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	847+02	-	849+25	LT	389	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	847+04	-	849+30	RT	390	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	874+08	-	875+24	LT	346	-	-	150	-	-	-	-	Adjust Beam Guard
0010	874+03	-	875+11	RT	343	-	-	150	-	-	-	-	Adjust Beam Guard
0010	875+97	-	877+09	RT	345	-	-	150	-	-	-	-	Adjust Beam Guard
0010	888+83	-	889+98	LT	346	-	-	150	-	-	-	-	Adjust Beam Guard
0010	889+46	-	890+18	RT	329	-	-	150	-	-	-	-	Adjust Beam Guard
0010	890+81	-	892+11	LT	352	-	-	150	-	-	-	-	Adjust Beam Guard
0010	918+90	-	920+93	LT	381	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
0010	975+09	-	976+84	LT	370	-	-	150	-	-	-	-	Beam Guard Removal & Replacement
				TOTAL 0010	19,003	255	510	6,750	1,980	15* ONE CYCLE	14	1	

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3170 TEMPORARY MARKING LINE EPOXY 6-INCH LF	646.2020 MARKING LINE EPOXY 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF WHITE	646.2040 YELLOW	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH LF	646.4720 MARKING LINE SAME DAY EPOXY 6-INCH LF	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	REMARKS
0010	203+11	-	406+55	CL	40689	-	-	39849	-	-	40689	-	DOUBLE YELLOW
0010	206+10	-	206+22	LT	-	-	50	-	-	-	-	12	BREY VALLEY ROAD
0010	212+66	-	212+78	LT	-	-	50	-	-	-	-	12	COUNTY 'ZZ'
0010	374+25	-	374+37	RT	-	-	50	-	-	-	-	-	COUNTY 'F'
0010	374+99	-	375+11	LT	-	-	50	-	-	-	-	-	COUNTY 'F'
0010	406+55	-	415+48	CL	1118	-	-	1785	-	-	1118	-	WB NO PASSING
0010	415+48	-	416+43	CL	13	-	-	192	-	-	13	-	SINGLE SKIP
0010	416+43	-	427+81	CL	1160	-	-	2201	-	-	1160	-	EB NO PASSING
0010	427+81	-	493+31	CL	13100	-	-	12956	-	-	13100	-	DOUBLE YELLOW
0010	493+31	-	504+59	CL	288	-	-	2254	-	-	288	-	SINGLE SKIP
0010	504+59	-	514+61	CL	1252	-	-	1915	-	-	1252	-	EB NO PASSING
0010	514+61	-	523+52	CL	1779	-	-	1782	-	-	1779	-	WB NO PASSING
0010	523+52	-	529+08	CL	550	-	-	1110	-	-	550	-	SINGLE SKIP
0010	529+08	-	538+35	CL	1853	-	-	1753	-	-	1853	-	EB NO PASSING
0010	538+35	-	834+79	CL	59286	-	-	56250	-	-	59286	-	DOUBLE YELLOW
0010	689+82	-	689+94	LT	-	-	50	-	-	-	-	12	COUNTY 'V'
0010	689+82	-	689+94	RT	-	-	50	-	-	-	-	12	COUNTY 'V'
0010	834+79	-	871+63	CL	921	672	-	7226	672	-	249	-	SINGLE SKIP
0010	871+63	-	880+66	CL	1,128	1,128	-	1,806	1,128	-	-	-	EB NO PASSING
0010	880+66	-	886+84	CL	1,106	1,106	-	1,086	1,106	-	-	-	DOUBLE YELLOW
0010	880+41	-	883+40	RT	-	-	-	-	-	75	-	-	RT TURN LANE
0010	881+23	-	886+43	LT	-	-	-	125	-	-	-	-	BYPASS LANE - SINGLE SKIPS
0010	886+84	-	894+77	CL	993	993	-	1,569	993	-	-	-	WB NO PASSING
0010	884+14	-	884+26	RT	-	-	50	-	-	-	-	12	STH 82
0010	884+38	-	884+50	RT	-	-	50	-	-	-	-	12	STH 82
0010	894+77	-	988+40	CL	2,338	2,338	-	18,469	2,338	-	-	-	SINGLE SKIP
0010	975+09	-	976+84	LT	-	-	-	50	-	-	-	-	BYPASS LANE - SINGLE SKIPS
0010	988+40	-	997+50	CL	1,820	1,820	-	1,503	1,820	-	-	-	DOUBLE YELLOW
				TOTAL 0010	129,394	8,057	400	161,938		75	121,337	72	

REMOVING DISTRESSED PAVEMENT MILLING

CATEGORY	LOCATION	SPV.0180.01 SPECIAL (01. REMOVING DISTRESSED PAVEMENT MILLING) SY	REMARKS
0010	UNDSTRIBUTED	12,445	
	TOTAL 0010	12,445	

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	REMARKS
0010	203+11	-	997+50	PROJECT	-	-	2	2	PROJECT
0010	243+05	-	244+05	RT	121	121	-	-	GUARDRAIL GRADING
0010	261+05	-	262+05	RT	111	111	-	-	GUARDRAIL GRADING
0010	263+86	-	264+86	RT	106	106	-	-	GUARDRAIL GRADING
0010	266+20	-	267+20	LT	117	117	-	-	GUARDRAIL GRADING
0010	269+13	-	270+13	LT	87	87	-	-	GUARDRAIL GRADING
0010	276+87	-	277+87	RT	103	103	-	-	GUARDRAIL GRADING
0010	341+81	-	342+81	LT	126	126	-	-	GUARDRAIL GRADING
0010	349+36	-	350+36	LT	123	123	-	-	GUARDRAIL GRADING
0010	374+32	-	375+32	RT	87	87	-	-	GUARDRAIL GRADING
0010	376+55	-	377+55	RT	99	99	-	-	GUARDRAIL GRADING
0010	435+64	-	436+64	RT	98	98	-	-	GUARDRAIL GRADING
0010	501+41	-	502+41	RT	118	118	-	-	GUARDRAIL GRADING
0010	501+57	-	502+57	LT	113	113	-	-	GUARDRAIL GRADING
0010	503+19	-	504+19	RT	139	139	-	-	GUARDRAIL GRADING
0010	535+54	-	536+54	LT	94	94	-	-	GUARDRAIL GRADING
0010	593+03	-	594+03	RT	122	122	-	-	GUARDRAIL GRADING
0010	630+37	-	631+37	RT	115	115	-	-	GUARDRAIL GRADING
0010	771+48	-	772+48	LT	96	96	-	-	GUARDRAIL GRADING
0010	774+34	-	775+34	LT	89	89	-	-	GUARDRAIL GRADING
0010	788+67	-	789+67	RT	103	103	-	-	GUARDRAIL GRADING
0010	846+77	-	847+77	LT	102	102	-	-	GUARDRAIL GRADING
0010	846+79	-	847+79	RT	98	98	-	-	GUARDRAIL GRADING
0010	UNDISTRIBUTED			LT & RT	236	236	-	-	
				TOTAL 0010	2,603	2,603	2	2	

STAKING ITEMS

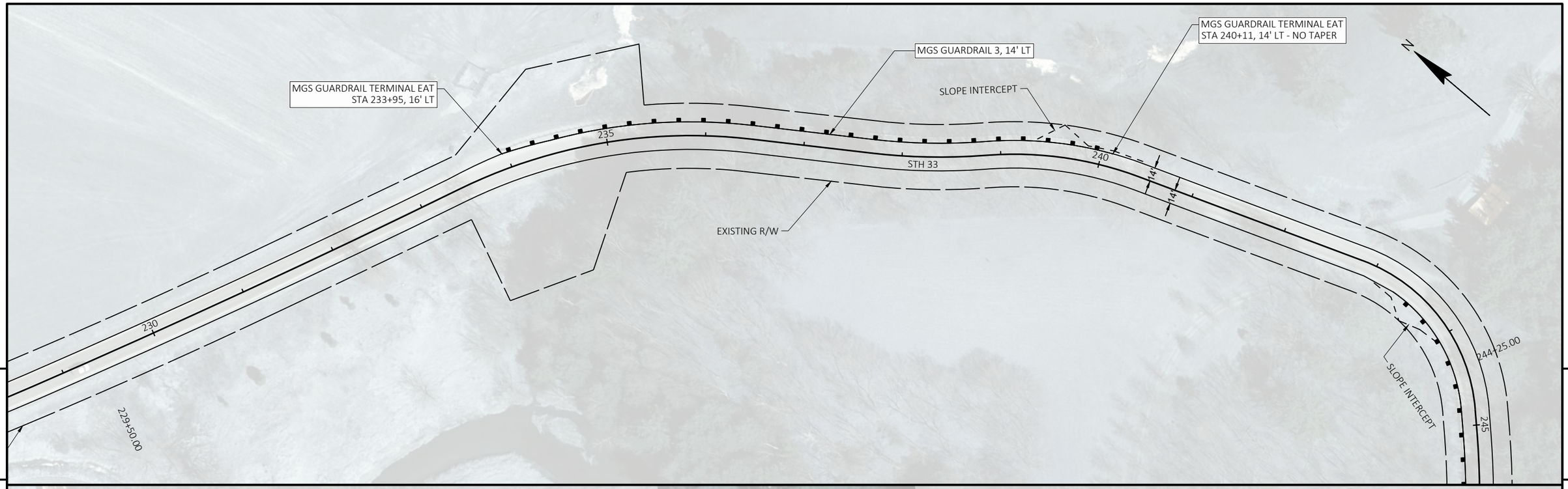
CATEGORY	STATION	TO	STATION	LOCATION	648.0100 LOCATING NO-PASSING ZONES MI	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 5100-01-60) EACH	REMARKS
0010	132+70	-	927+09	PROJECT	14.993	-	79,439	1	
0010	344+18	-	348+87	LT	-	448	-	-	
0010	351+77	-	372+84	RT	-	2,103	-	-	
0010	616+06	-	619+28	RT	-	313	-	-	
0010	625+23	-	627+90	RT	-	260	-	-	
0010	657+57	-	662+27	LT	-	470	-	-	
0010	749+18	-	752+65	LT	-	349	-	-	
0010	883+40	-	883+80	RT	-	70	-	-	STH 82 Intersection Radius
0010	884+20	-	884+42	RT	-	76	-	-	STH 82 Intersection Island
0010	884+41	-	884+89	RT	-	56	-	-	STH 82 Intersection Radius
0010	901+79	-	902+15	LT	-	51	-	-	Town Shop Road Intersection
0010	902+49	-	902+87	LT	-	49	-	-	Town Shop Road Intersection
				TOTAL 0010	15	4,245	79,439	1	

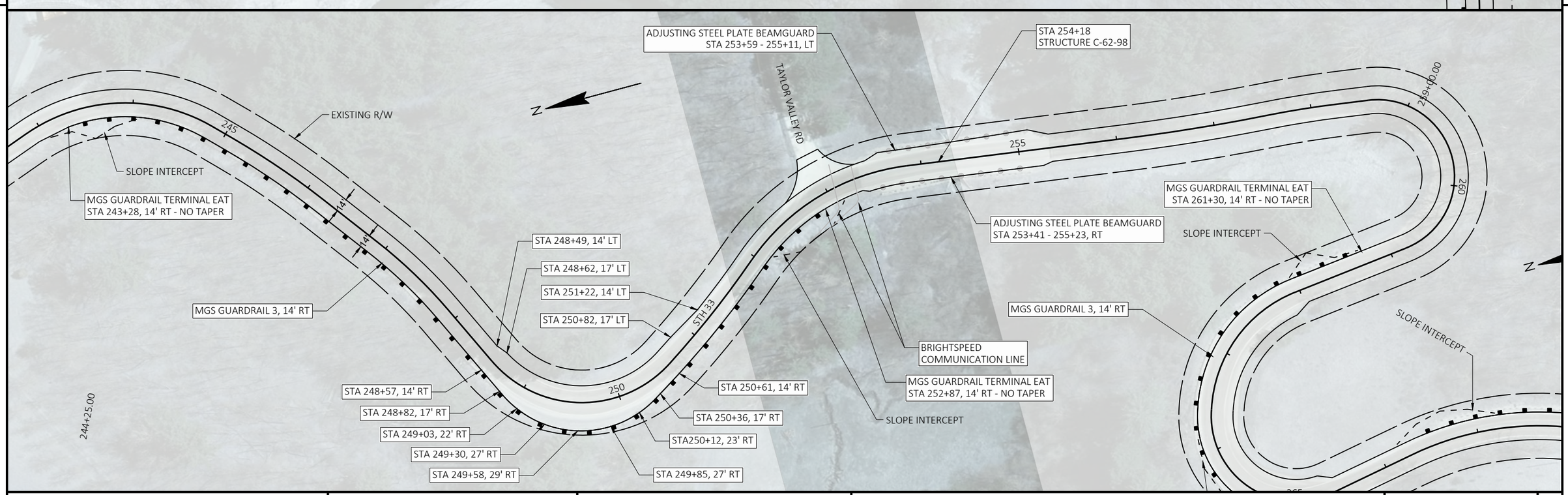


5

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 84	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 01
PLOT DATE : 9/21/2023 5:52 PM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

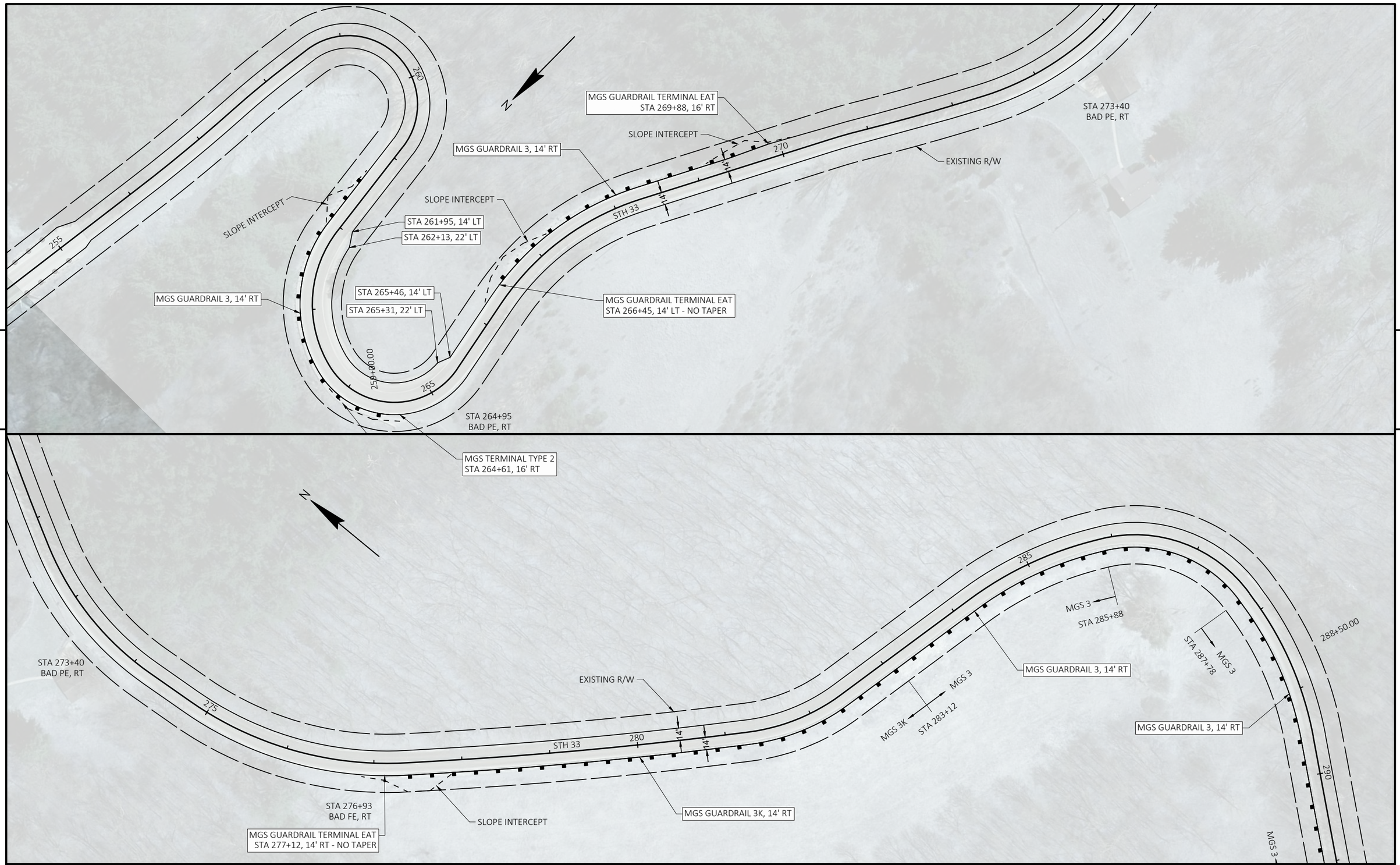




PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 85	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 02

PLOT DATE : 9/21/2023 5:52 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : Custom

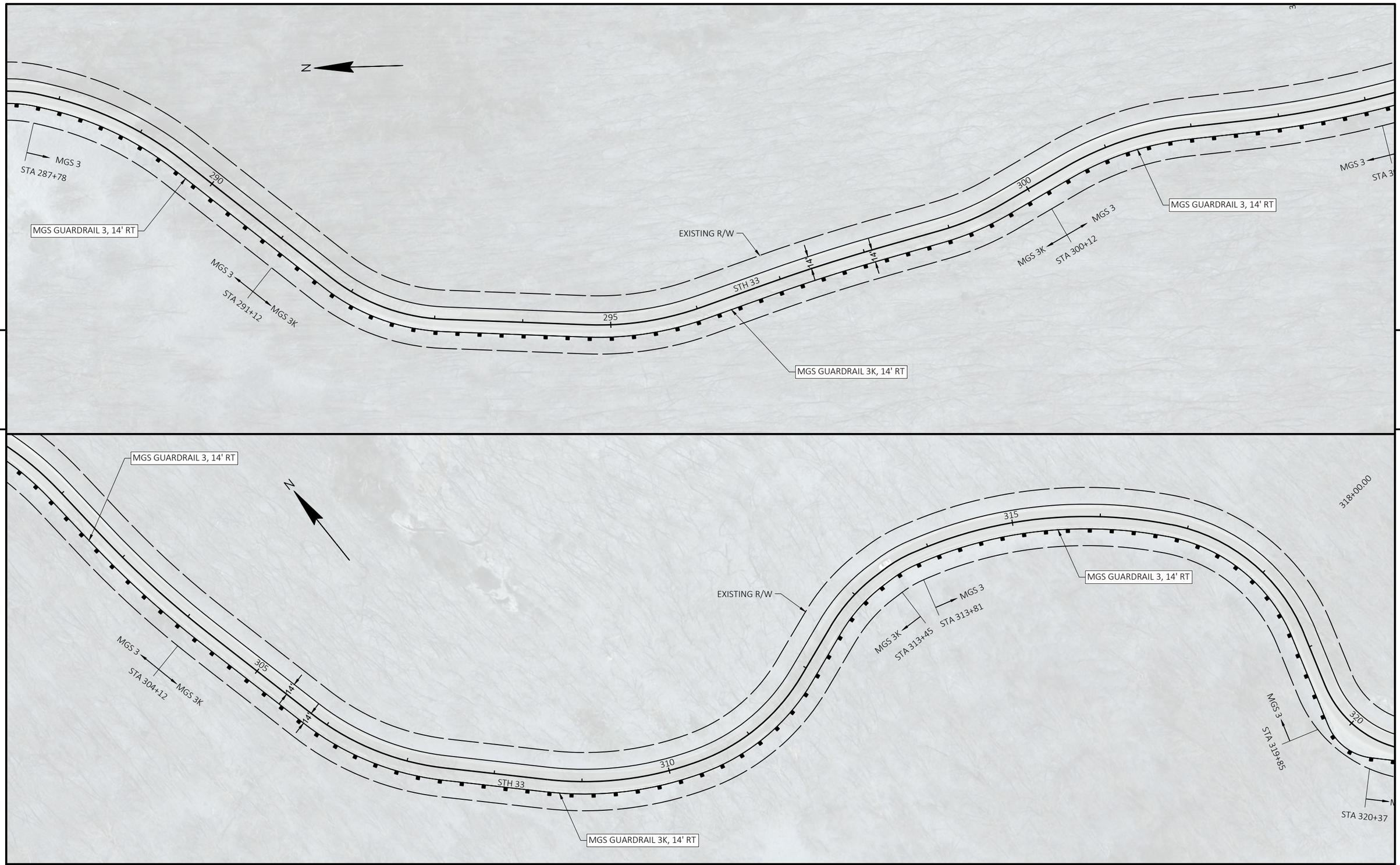


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 86	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 03

PLOT DATE : 9/21/2023 5:53 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

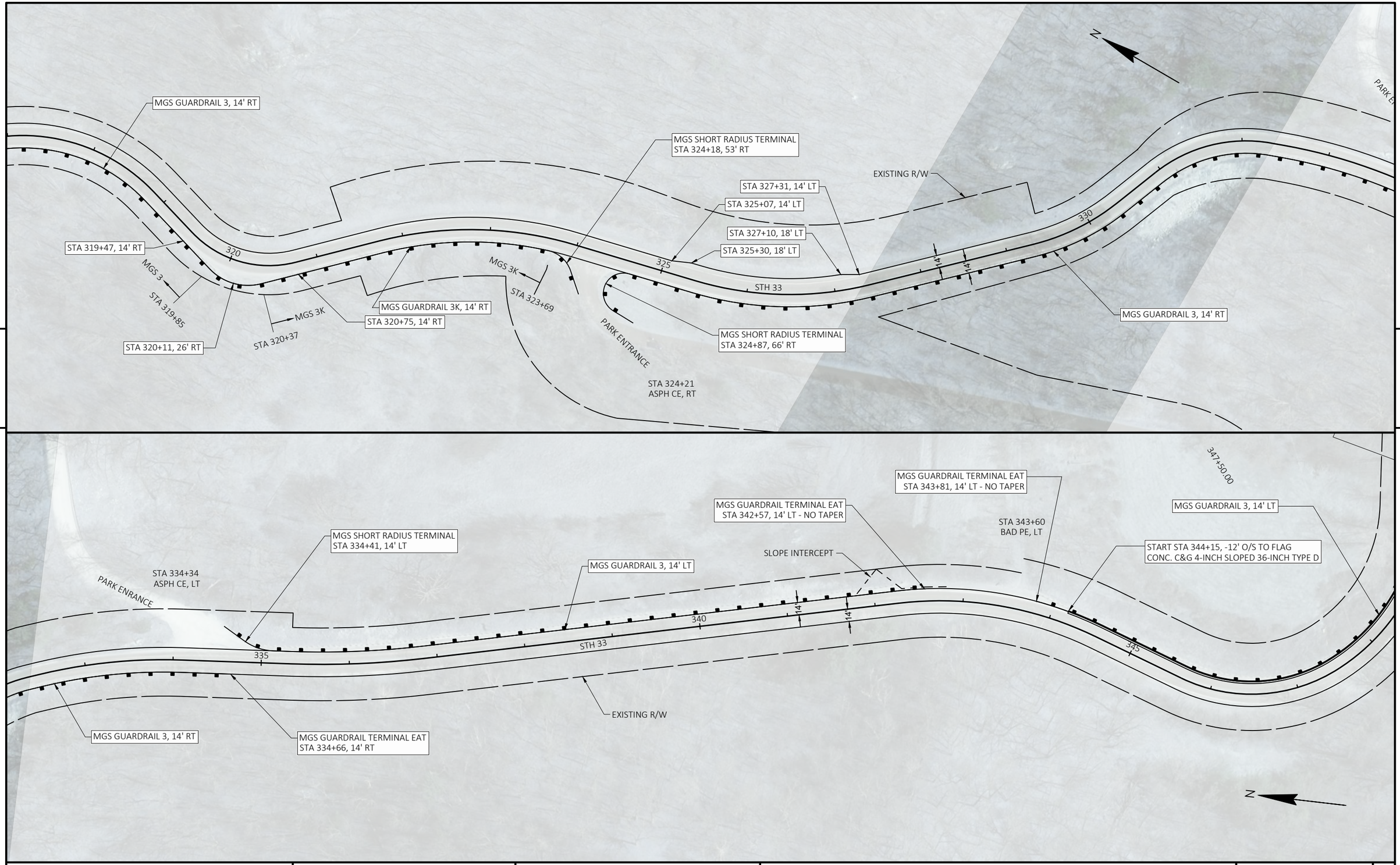
5

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 87	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 04

PLOT DATE : 9/21/2023 5:53 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

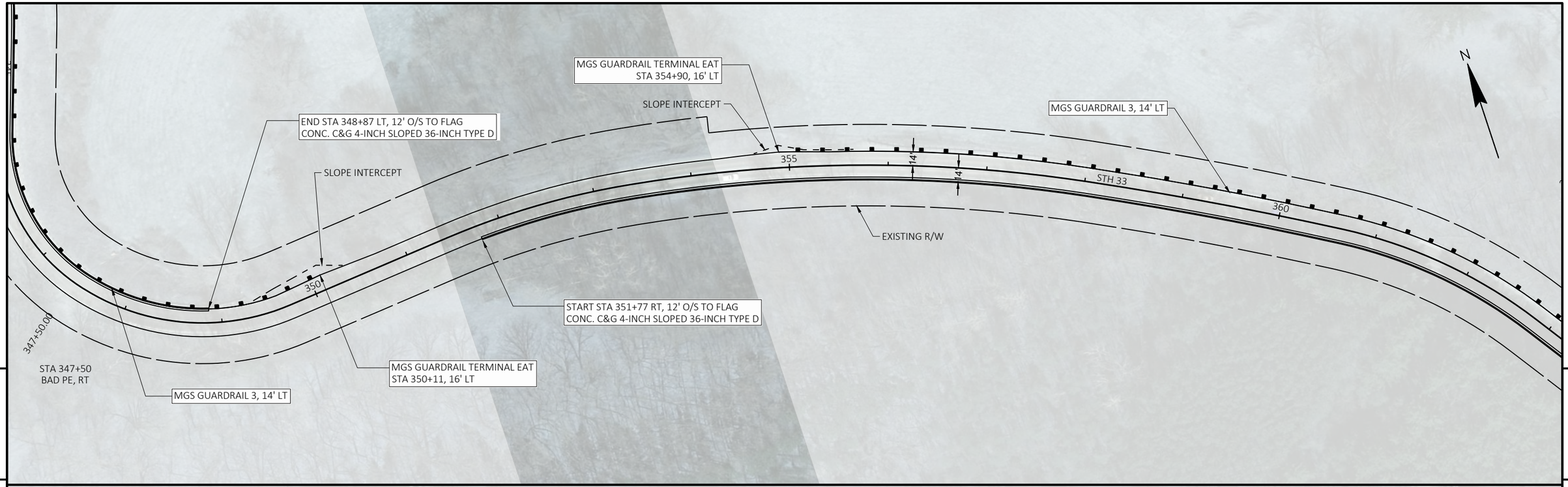
WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 88	E



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 89	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 06

PLOT DATE : 9/21/2023 5:54 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

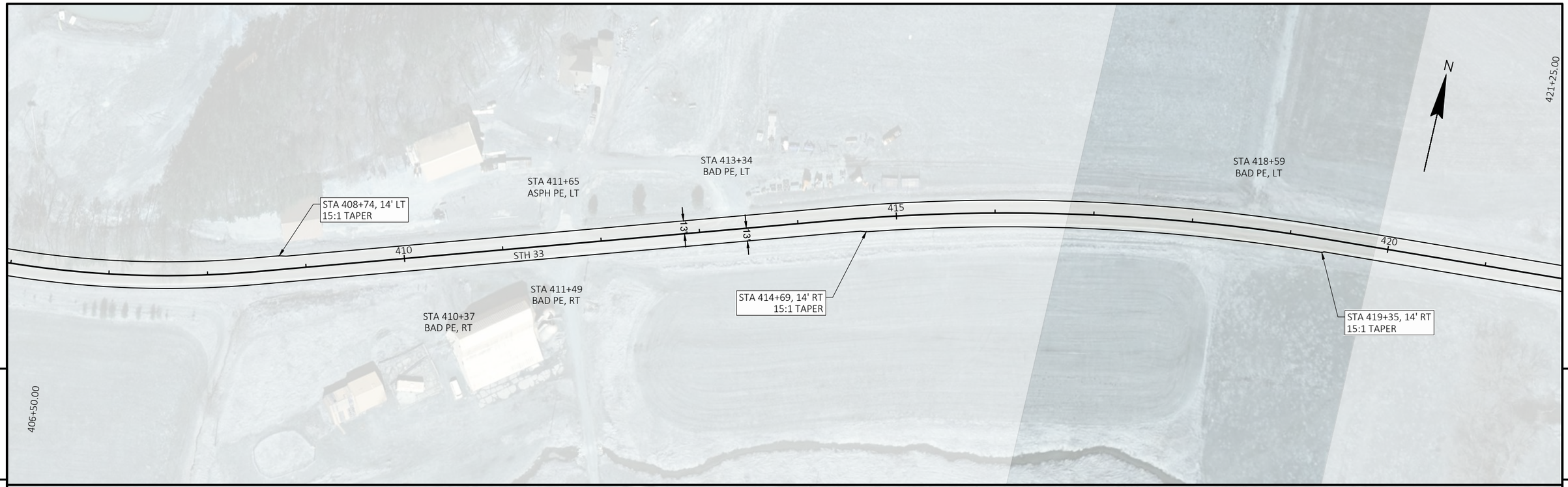


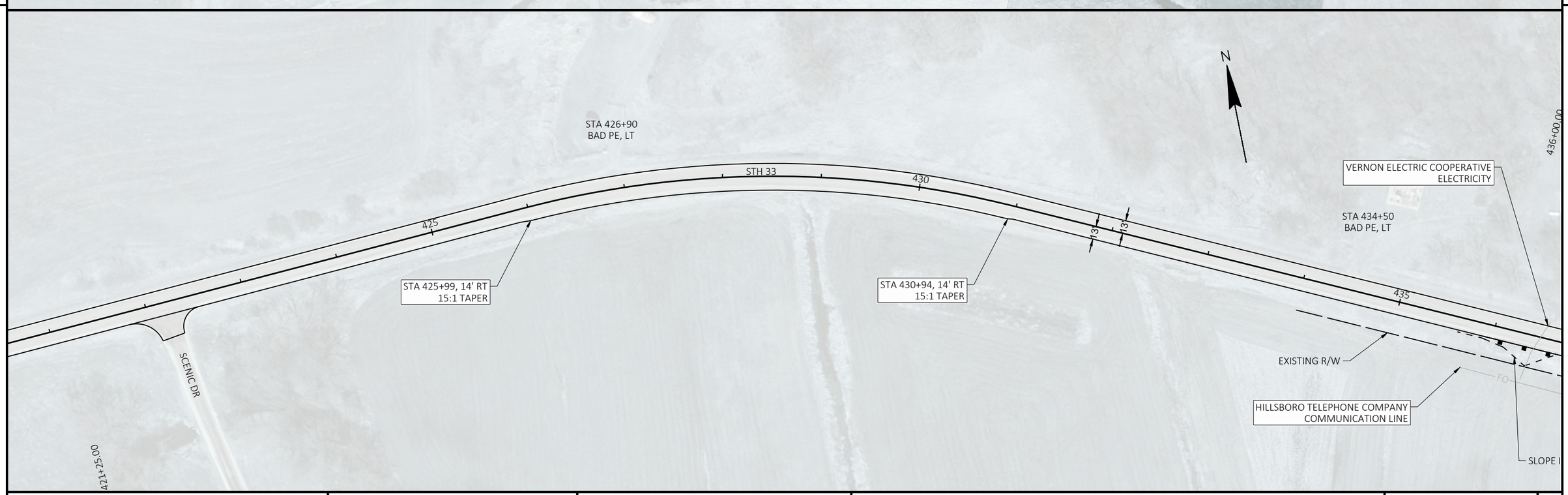
5 5

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 90 E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 07

PLOT DATE : 9/21/2023 5:54 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT



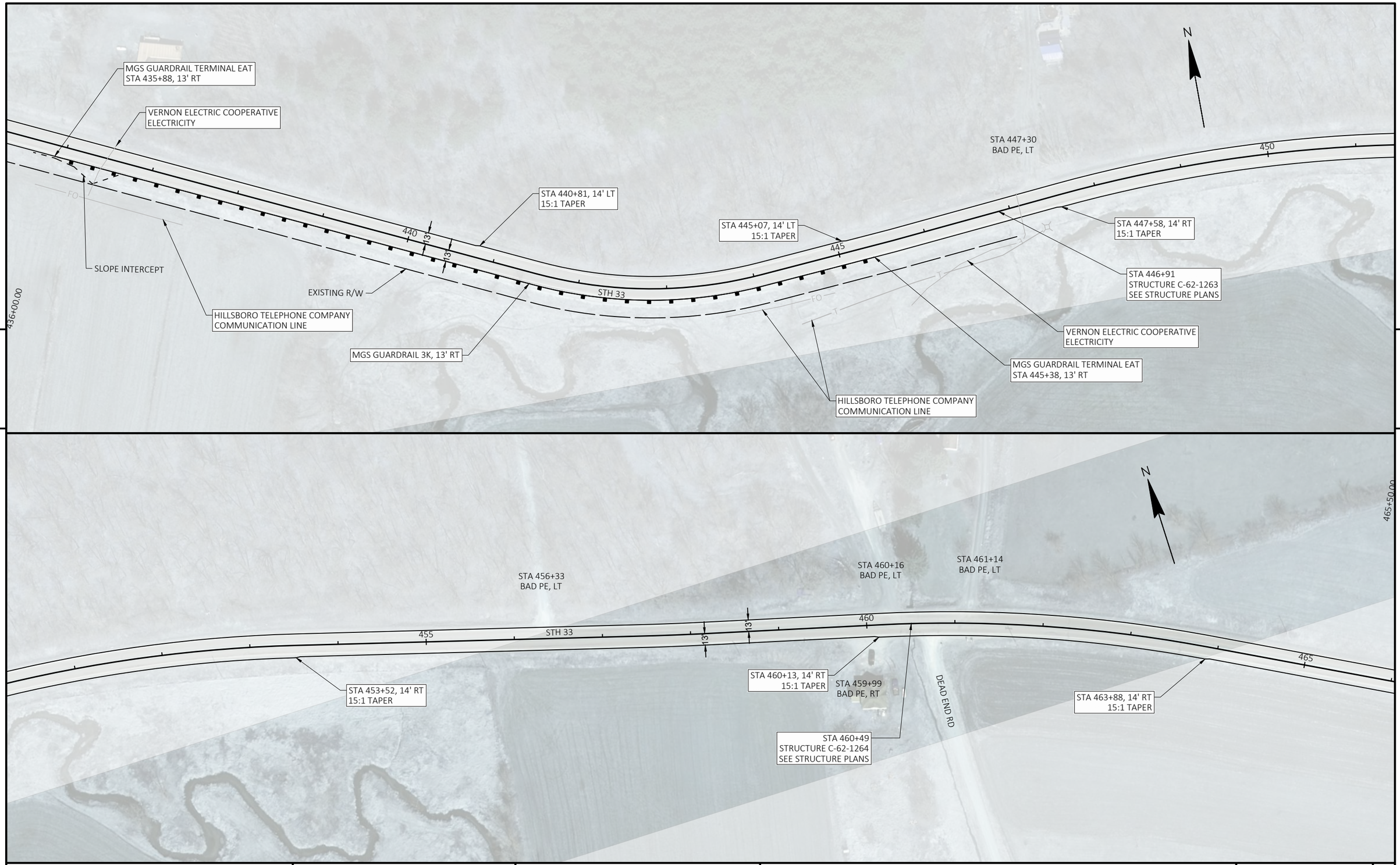


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 91	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 08

PLOT DATE : 9/21/2023 5:54 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



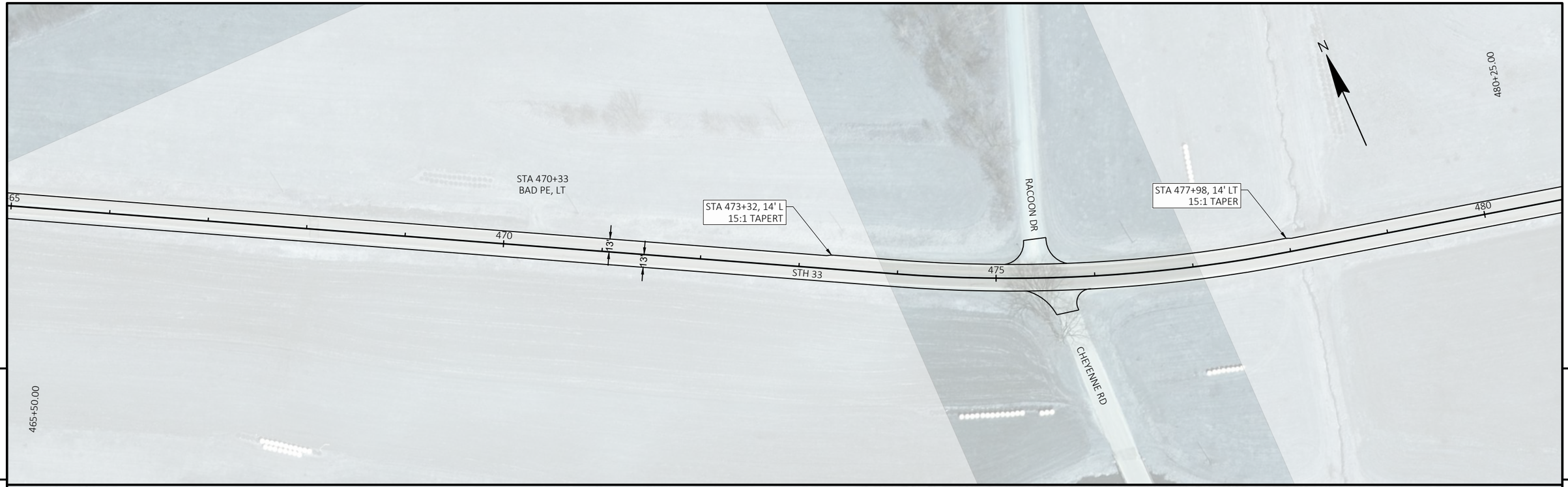
5 5

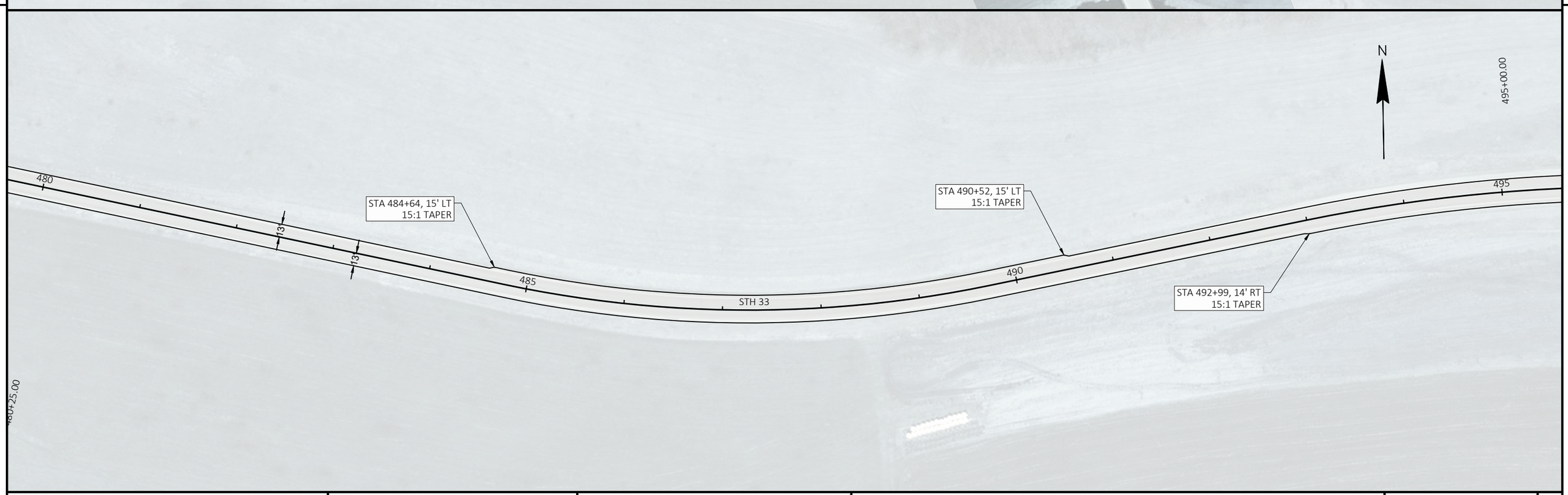
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 92	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 09

PLOT DATE : 9/21/2023 5:55 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 93 E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 10

PLOT DATE : 9/21/2023 5:55 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

MGS GUARDRAIL TERMINAL EAT
STA 501+82, 19' LT

HILLSBORO TELEPHONE COMPANY
COMMUNICATION LINE

MGS GUARDRAIL TERMINAL EAT
STA 504+08, 19' LT

VERNON ELECTRIC COOPERATIVE
ELECTRICITY

EXISTING R/W

SLOPE INTERCEPT

STA 501+56
BAD FE, LT

STA 508+72, 14' LT
15:1 TAPER

STA 503+38
BAD PE, LT

STA 507+13
BAD PE, LT

N

509+75.00

495

500

505

510

14'

13'

13'

13'

STH 33

SLOPE INTERCEPT

EXISTING R/W

STA 501+54
BAD FE, RT

MGS GAURDRAIL TERMINAL EAT
STA 501+66, 19' RT

STA 502+65 - STA 503+14
STRUCTURE B-62-63
SEE STRUCTURE PLANS

SLOPE INTERCEPT

MGS GUARDRAIL TERMINAL EAT
STA 503+94, 19' RT

STA 506+85
STRUCTURE C-62-72
SEE STRUCTURE PLANS

CHEYENNE RD

5

5

N

524+50.00

STA 513+65, 14' LT
15:1 TAPER

510

515

520

13'

13'

STH 33

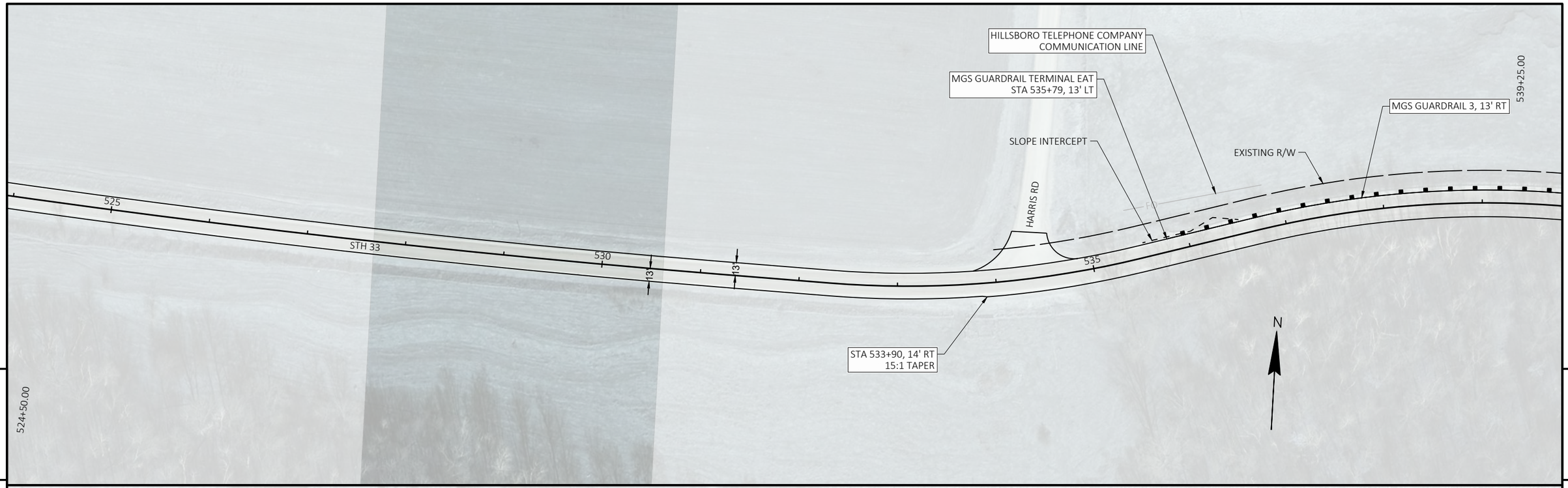
509+75.00

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 94	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 11

PLOT DATE : 9/21/2023 5:55 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

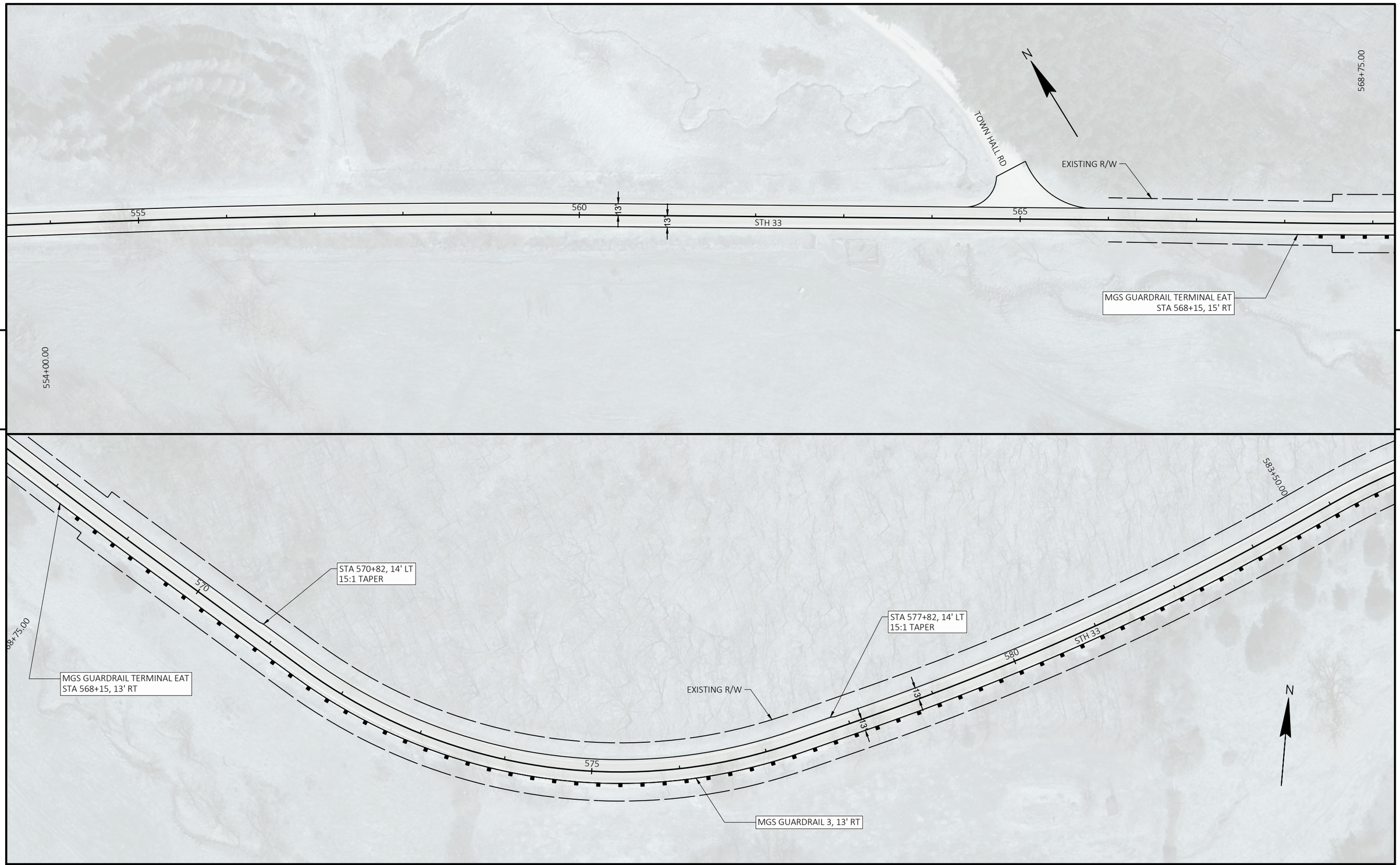
WISDOT/CADDS SHEET 44



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 95	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 12

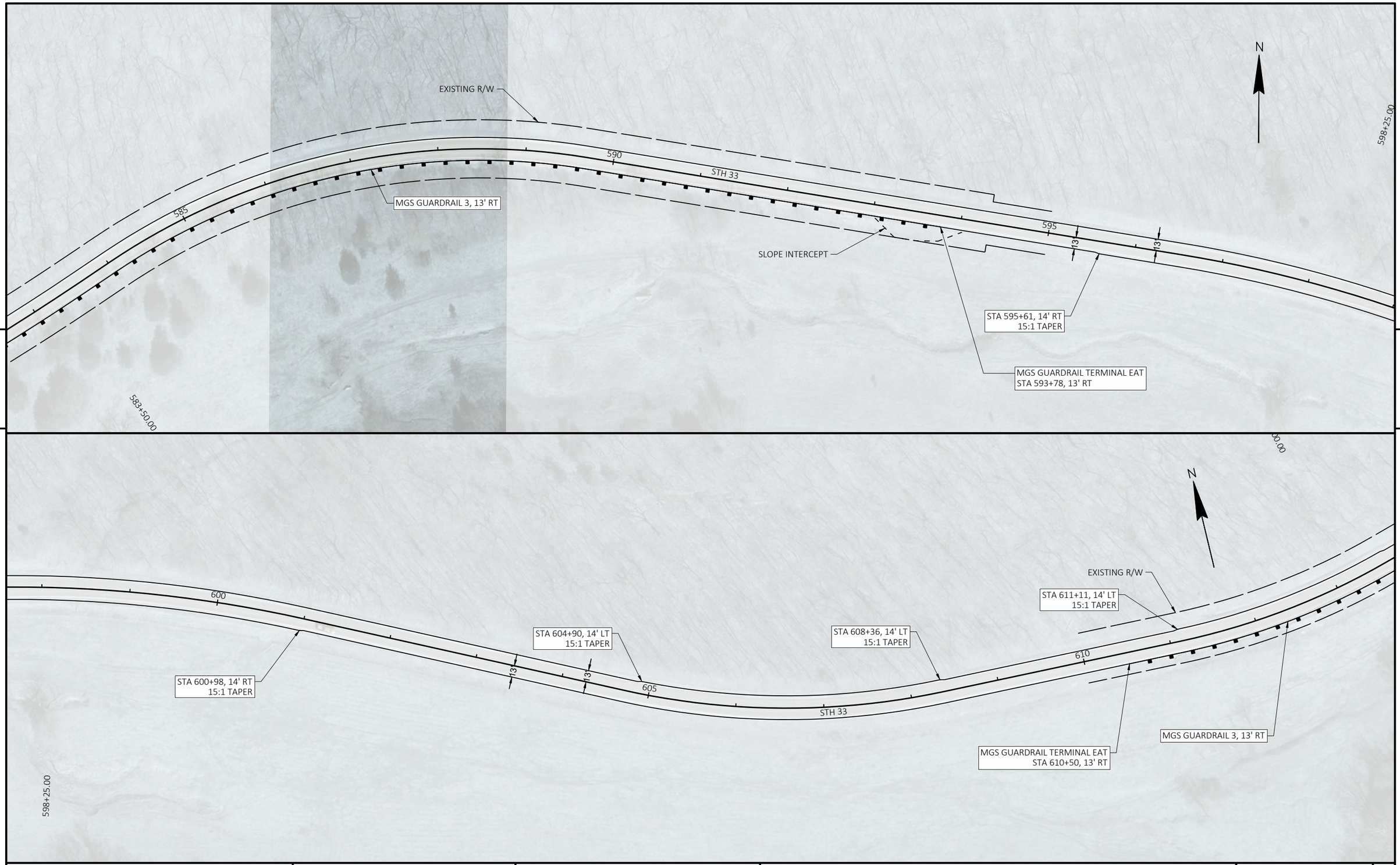
PLOT DATE : 9/21/2023 5:55 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 96	E

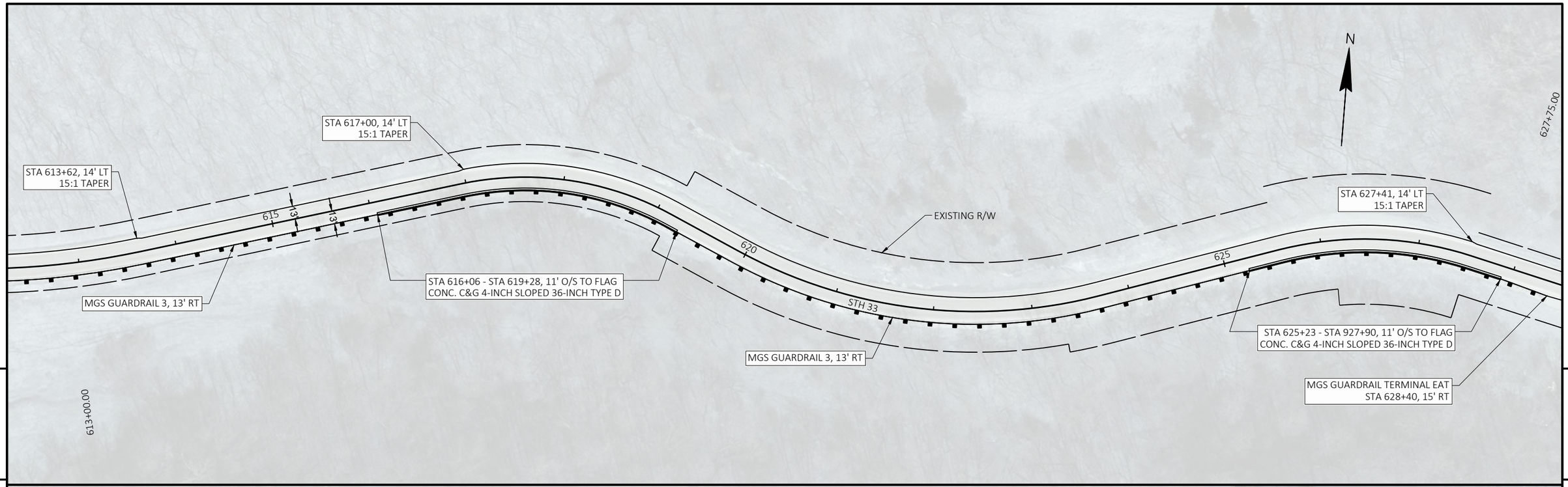
FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 13

PLOT DATE : 9/21/2023 5:56 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT



5 5

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 97	E



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 98	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 15

PLOT DATE : 9/21/2023 5:56 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

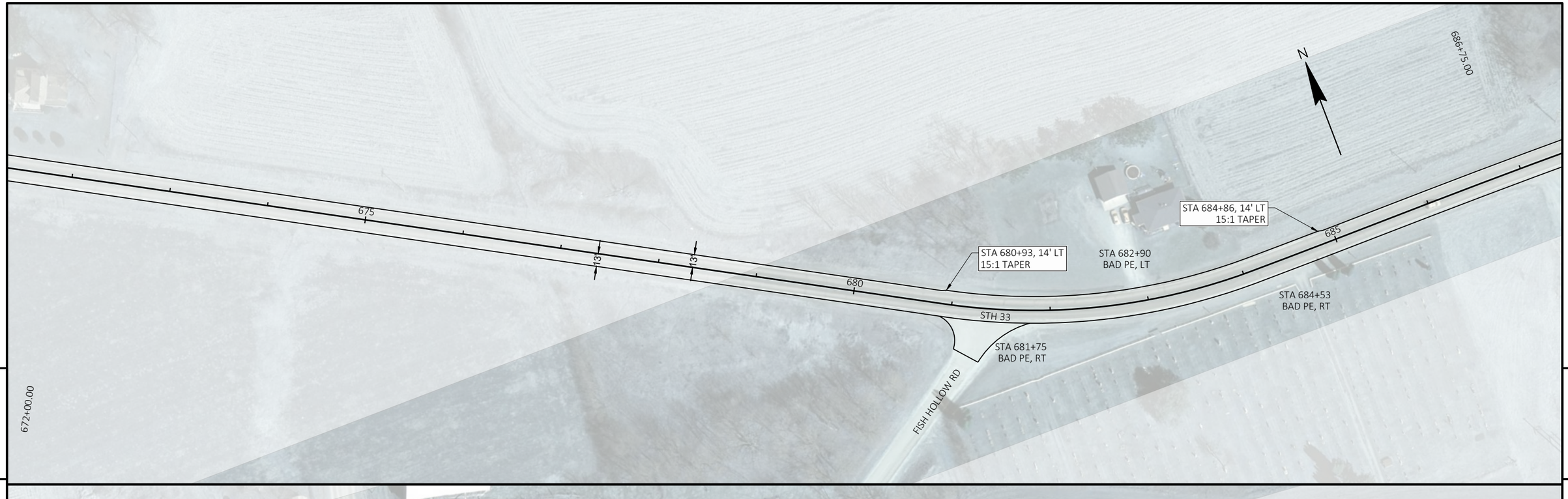
5

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 99	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 16

PLOT DATE : 9/21/2023 5:56 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



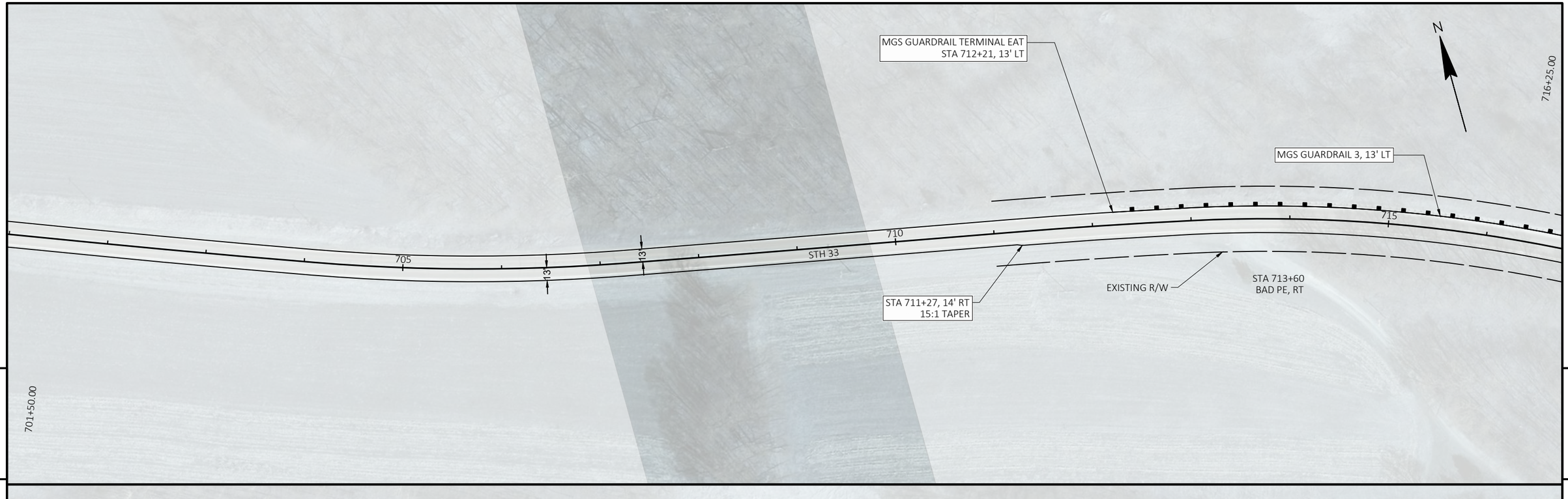


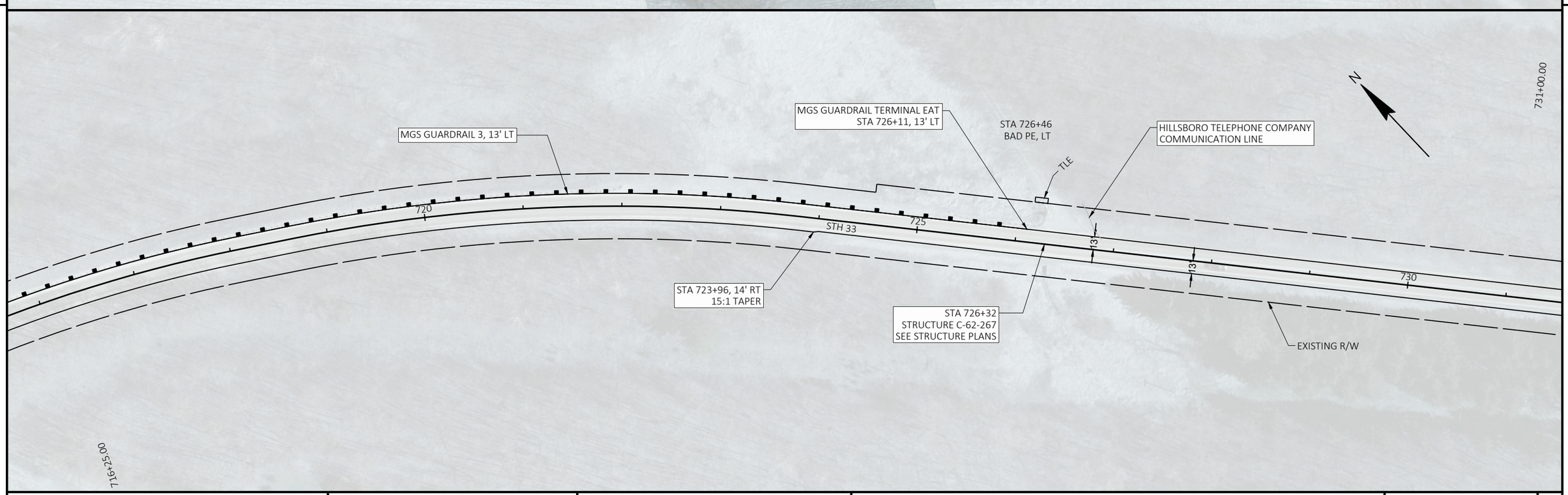
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 100	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 17

PLOT DATE : 9/21/2023 5:57 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



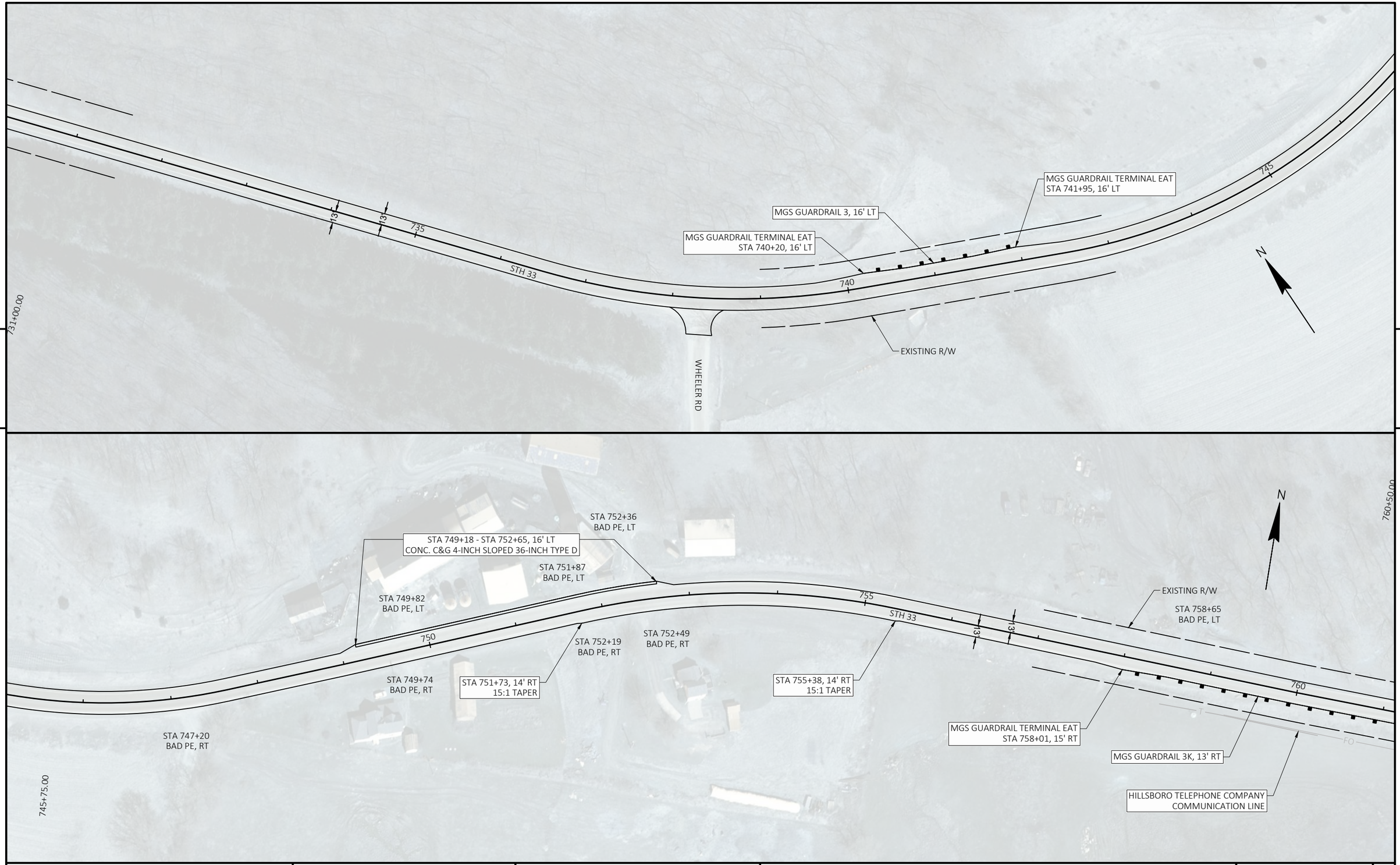


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 101	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 18

PLOT DATE : 9/21/2023 5:57 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 102	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 19

PLOT DATE : 9/21/2023 5:57 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

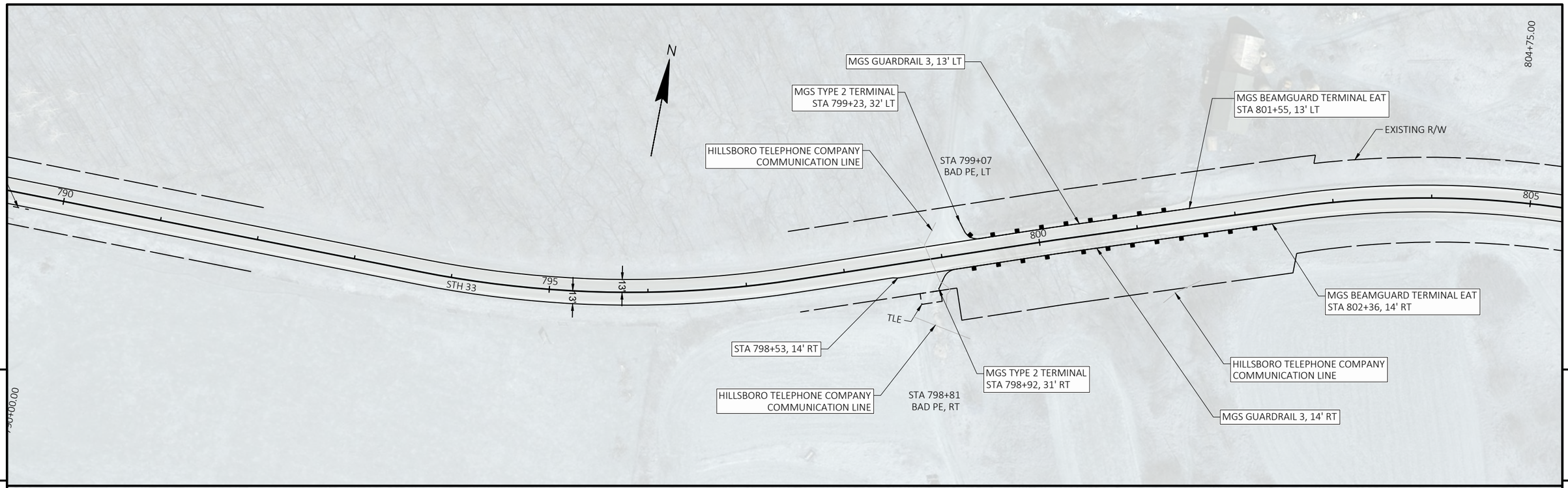
WISDOT/CADDS SHEET 44

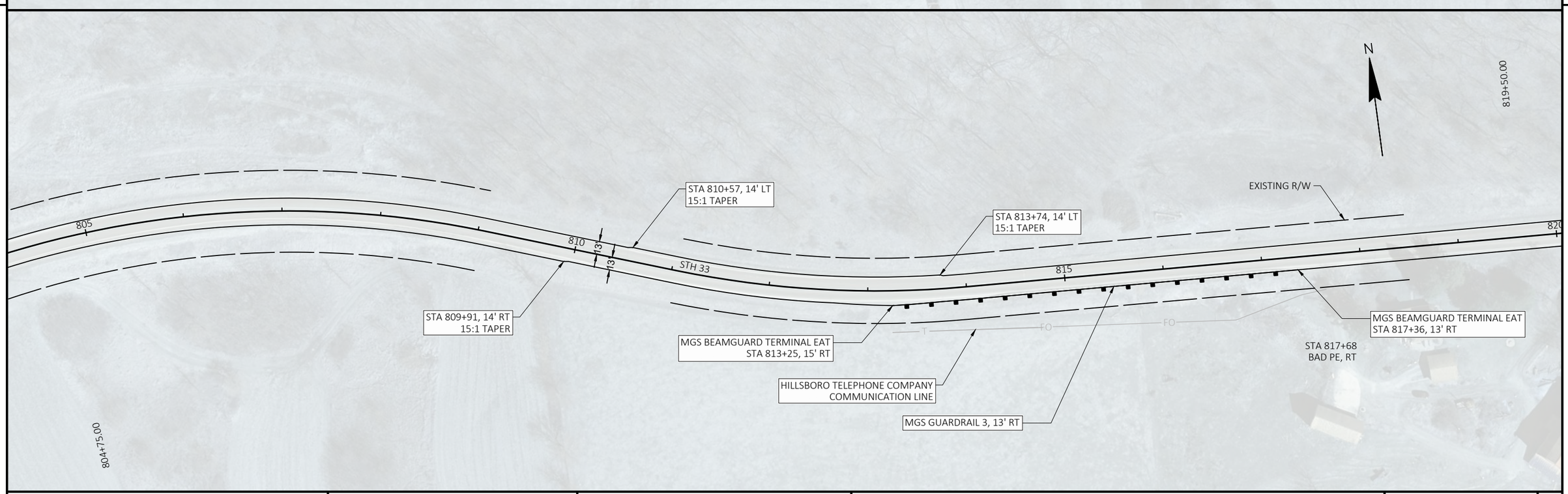


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 103	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 20

PLOT DATE : 9/21/2023 5:58 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT





PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 104	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 21
PLOT DATE : 9/21/2023 5:58 PM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

5

5

819+50.00

STA 820+12, 14' LT
15:1 TAPER

820

STH 33

825

13'

13'

STA 826+05, 14' LT
15:1 TAPER

STA 827+00
BAD PE, RT

MGS TYPE 2 TERMINAL
STA 827+20, 28' RT

HILLSBORO TELEPHONE COMPANY
COMMUNICATION LINE

VERNON ELECTRIC COOPERATIVE
ELECTRICITY

830

MGS GUARDRAIL 3, 13' RT

EXISTING R/W

N

834+25.00

MGS SHORT RADIUS TERMINAL
STA 849+25, 90' LT

MGS GUARDRAIL 3, 23' LT

STA 848+28
STRUCTURE B-62-59

849+00.00

GRIMM RD

EXISTING R/W

MGS GUARDRAIL TERMINAL EAT
STA 847+02, 18' LT

STA 845+77
BAD PE, LT

STA 845+50, 13' LT

SLOPE INTERCEPT

840

835

13'

13'

STH 33

845

STA 846+10, 13' RT

STA 846+40
BAD FE, RT

MGS GUARDRAIL TERMINAL EAT
STA 847+04, 18' RT

HILLSBORO TELEPHONE COMPANY
COMMUNICATION LINE

SLOPE INTERCEPT

MGS GUARDRAIL 3, 18' RT

MGS GUARDRAIL TERMINAL EAT
STA 849+30, 18' RT

MGS GUARDRAIL 3, 13' RT

MGS BEAMGUARD TERMINAL EAT
STA 837+38, 13' RT

VERNON ELECTRIC COOPERATIVE
ELECTRICITY

HILLSBORO TELEPHONE COMPANY
COMMUNICATION LINE

834+25.00

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 105	E

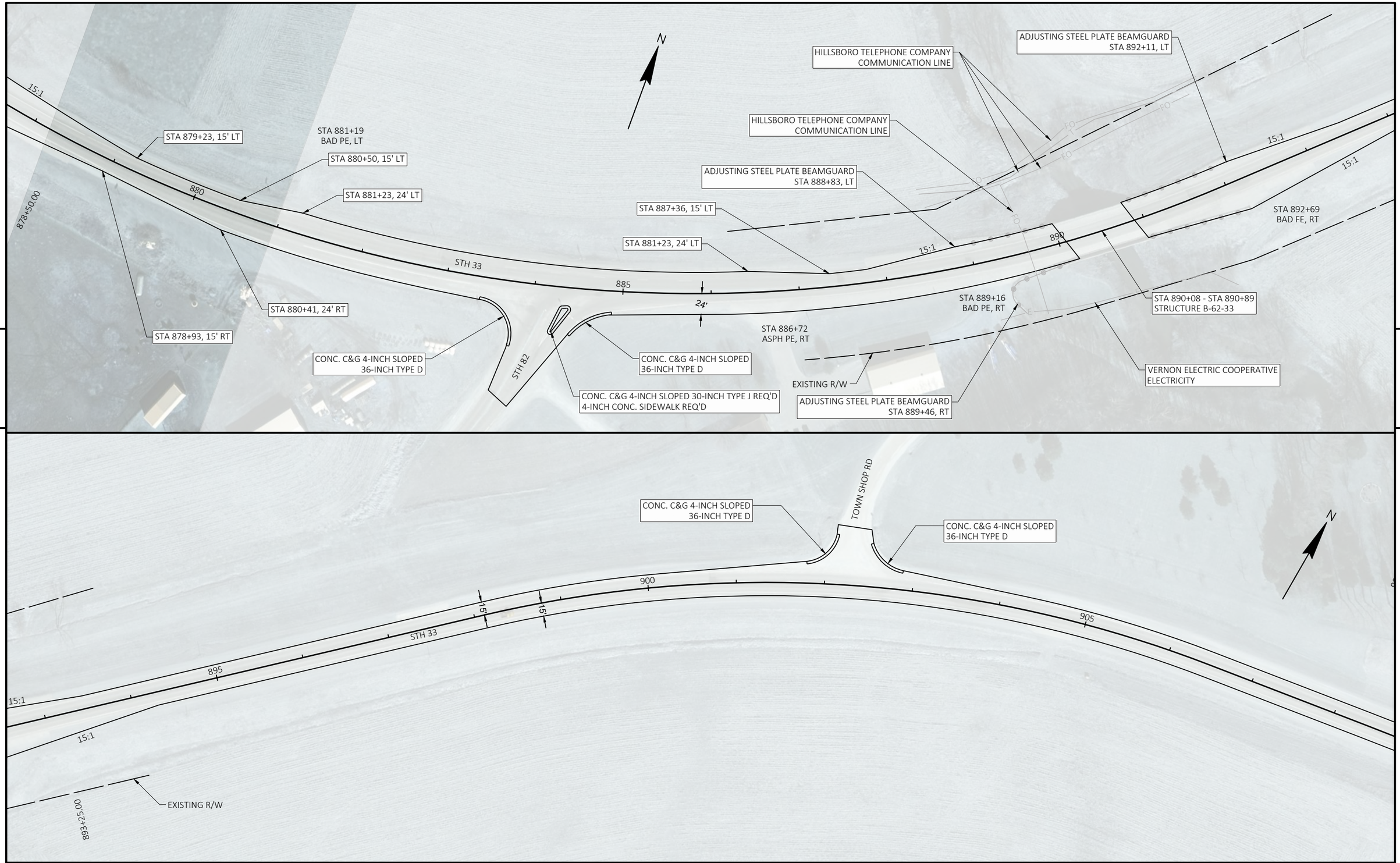
FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 22

PLOT DATE : 9/21/2023 5:58 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 106	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 23
PLOT DATE : 9/21/2023 5:58 PM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



5

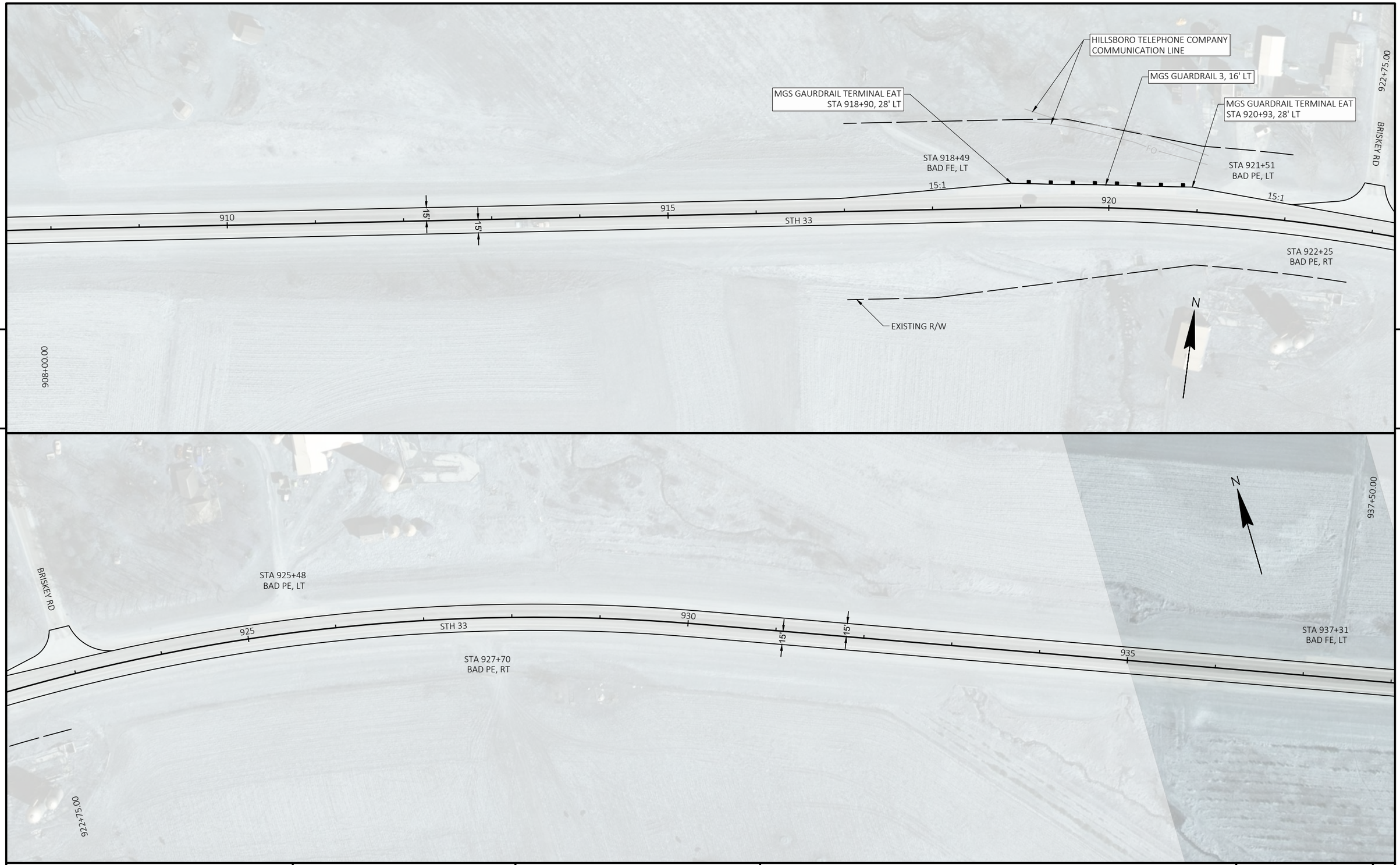
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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 107	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 24

PLOT DATE : 9/21/2023 5:59 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

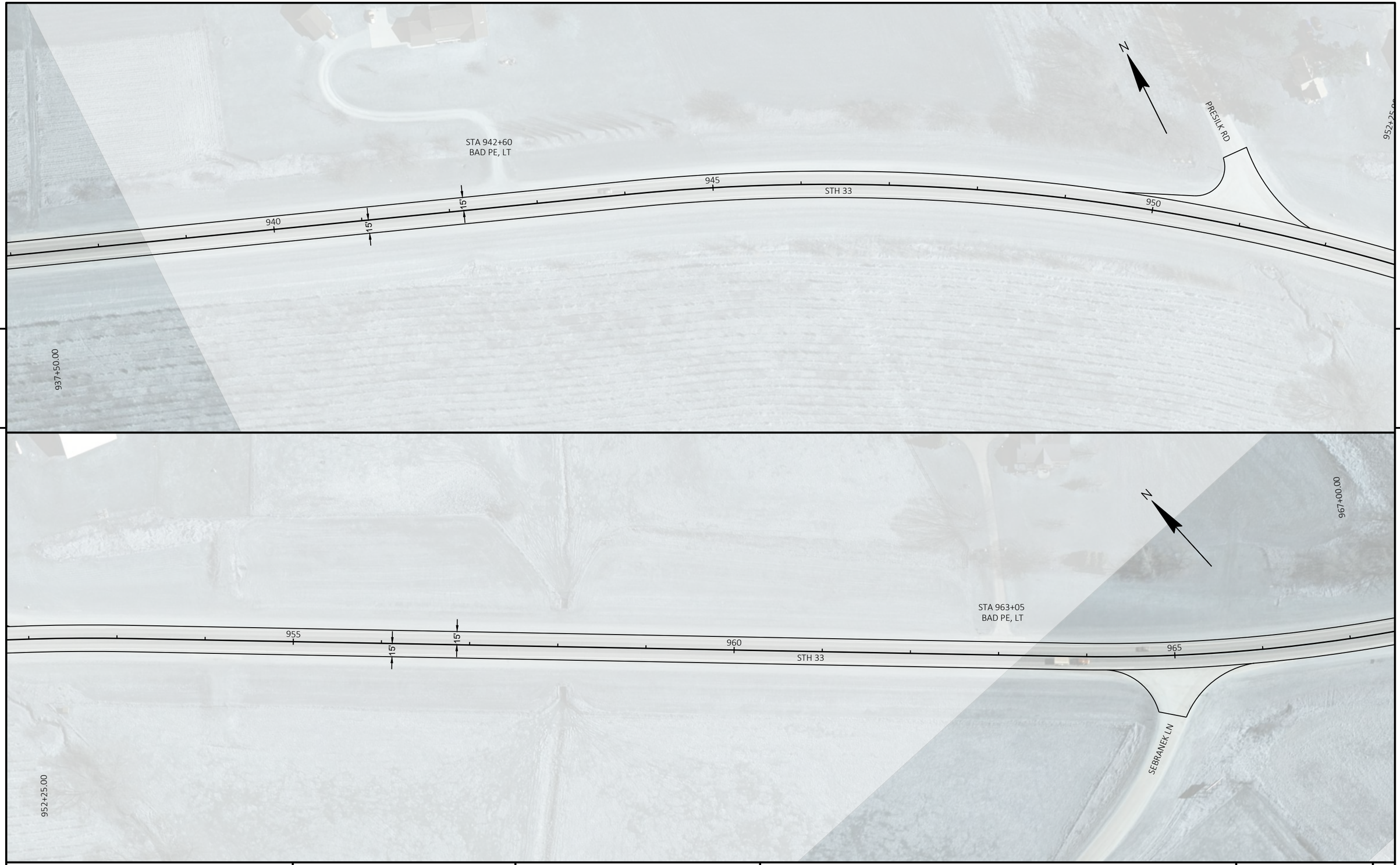


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 108	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 25

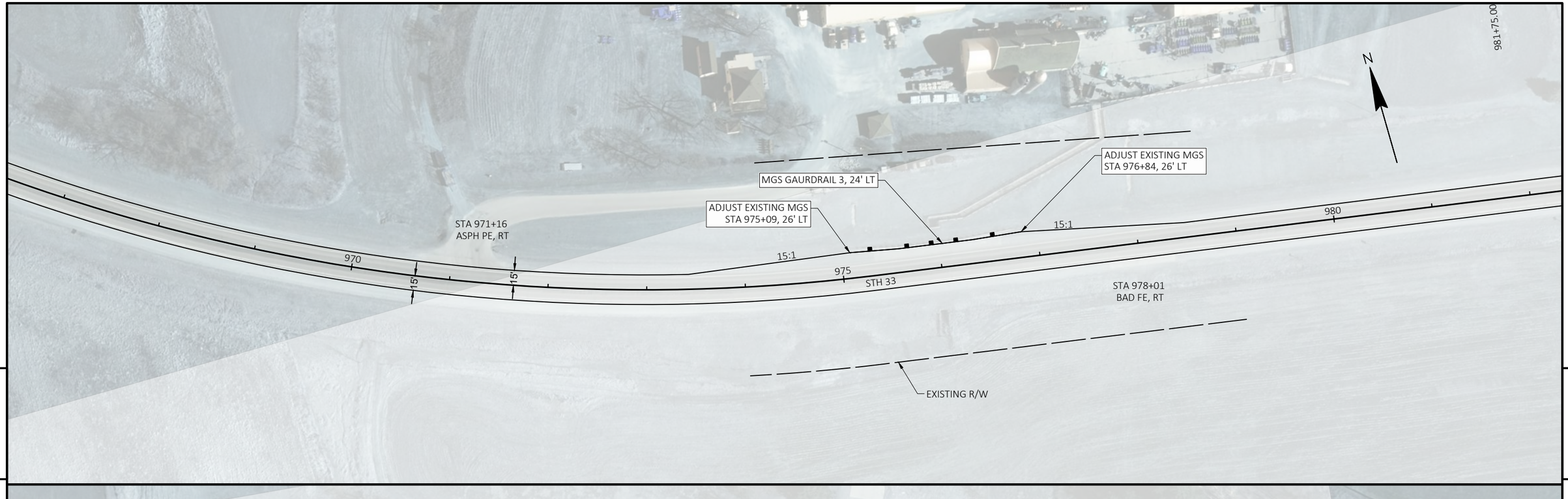
PLOT DATE : 9/21/2023 5:59 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

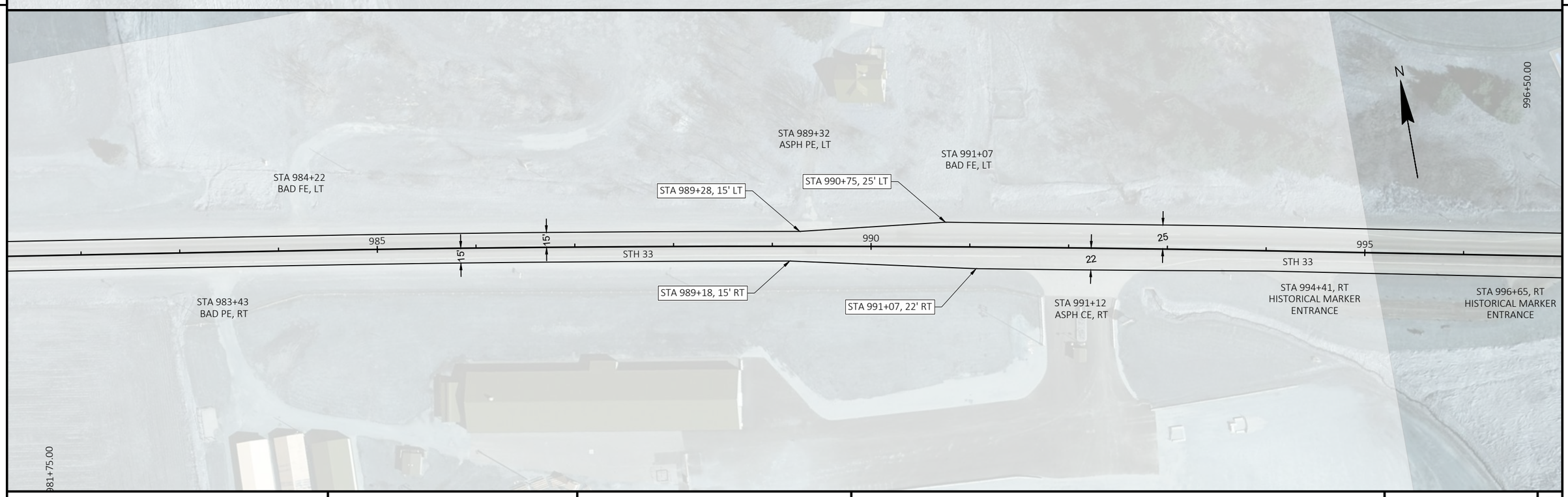
WISDOT/CADDS SHEET 44



5 5

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 109	E

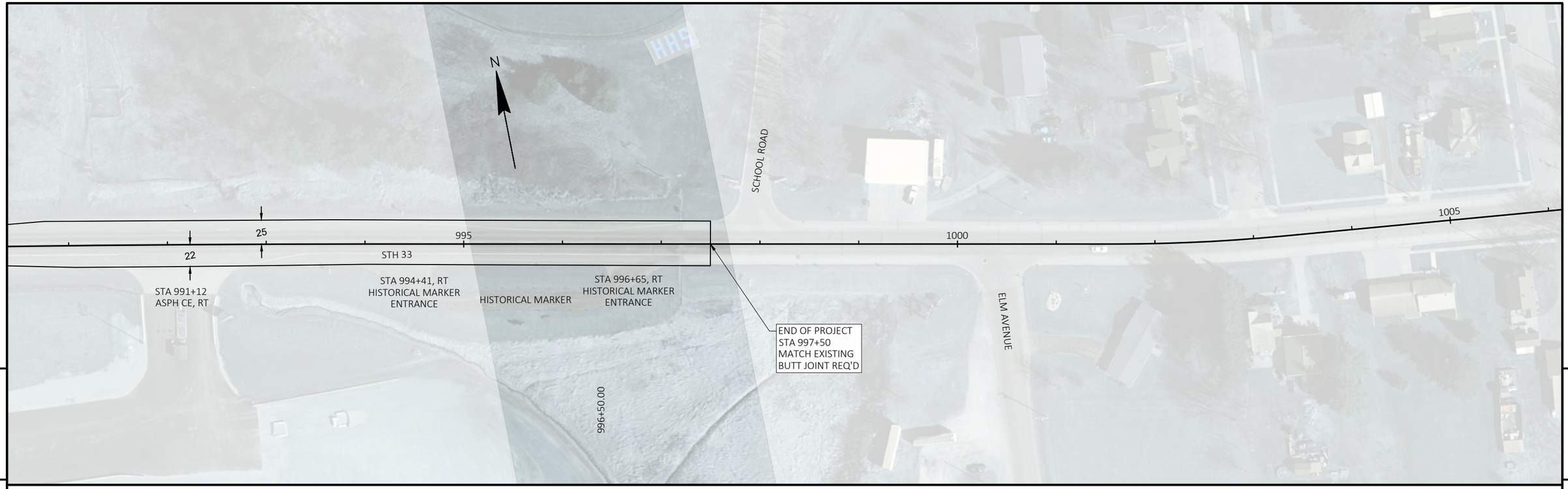




PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 110 E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 27

PLOT DATE : 9/21/2023 6:00 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT



5

5

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	PLAN	SHEET 111	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 28

PLOT DATE : 9/21/2023 6:00 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

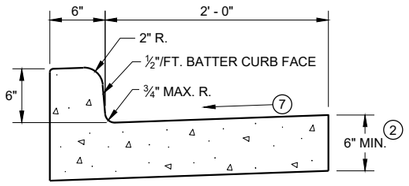
08D01-23A	CONCRETE CURB & GUTTER
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A08-02	TRANSVERSE RUMBLE STRIPS, ASPHALTIC
13A10-03A	SHOULDER RUMBLE STRIPS - ASPHALT
13A10-03C	SHOULDER RUMBLE STRIPS - ASPHALT SINUSOIDAL
13A10-03E	EDGE LINE RUMBLE STRIPS - ASPHALT
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
14B20-12A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-12B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-12C	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS
14B20-12D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-12E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B20-12F	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"
14B20-12G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-12H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-05A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B53-02A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

6

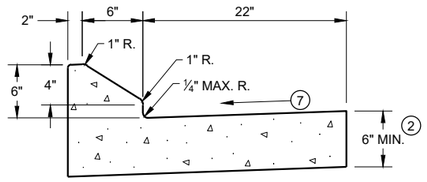
Standard Detail Drawing List

15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15C35-06B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-06C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D06-06	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D12-11A	TRAFFIC CONTROL, LANE CLOSURE
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

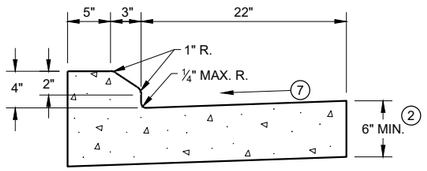
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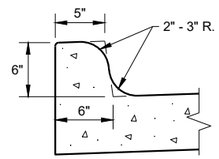
TYPES A (1) & D



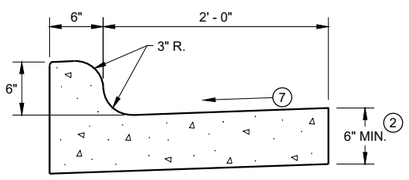
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

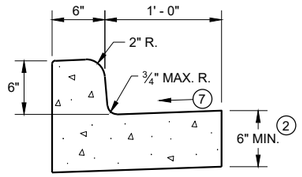


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



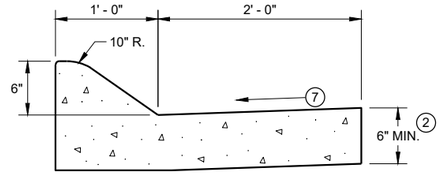
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

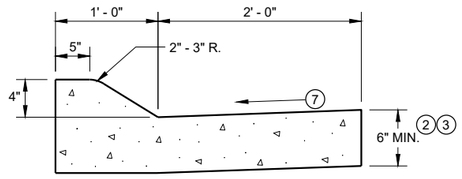


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

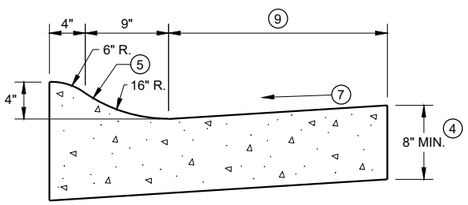


6" SLOPED CURB TYPES A (1) & D



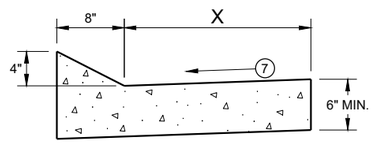
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

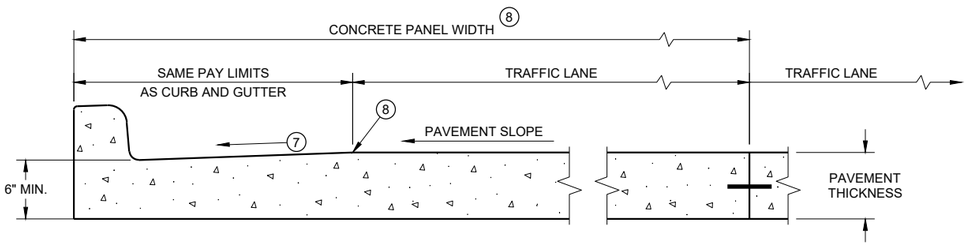


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

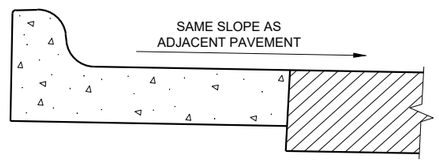
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

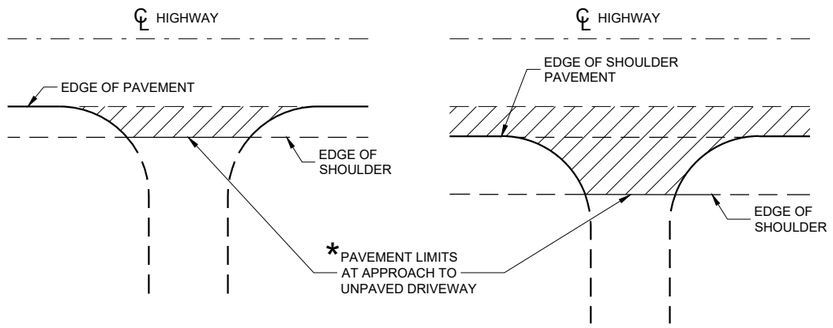
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 23a

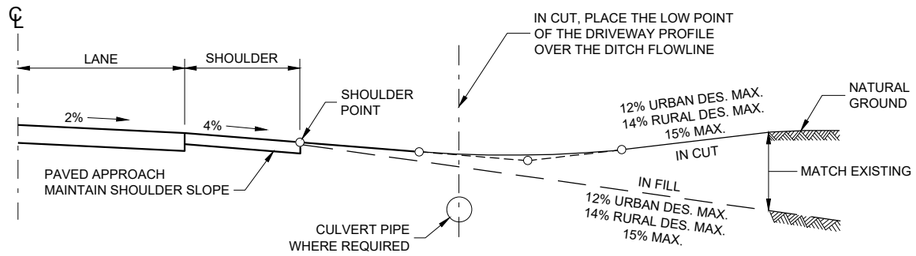
SDD 08D01 - 23a



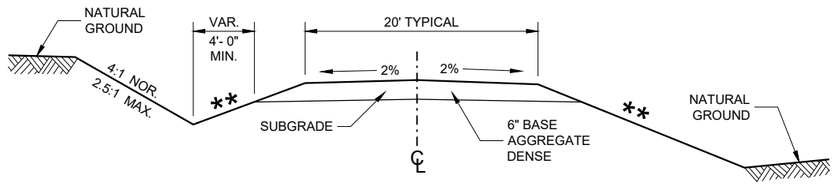
PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)



TYPICAL DRIVEWAY PROFILES

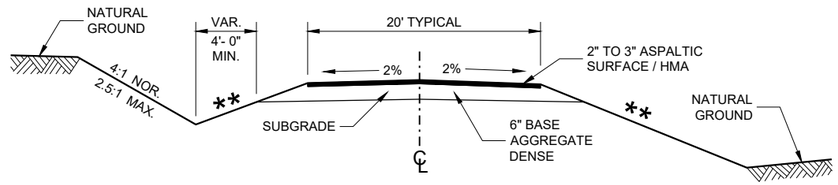


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

6

SDD 08D21 - 01

DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

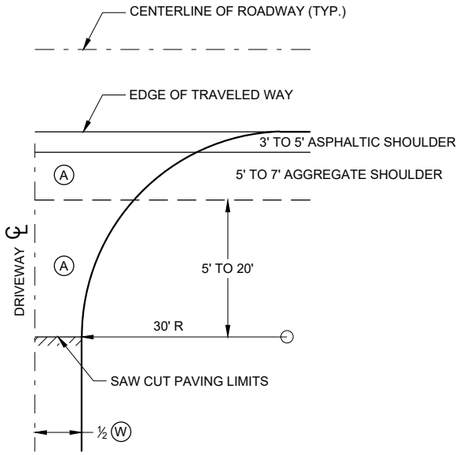
FHWA

6

SDD 08D21 - 01

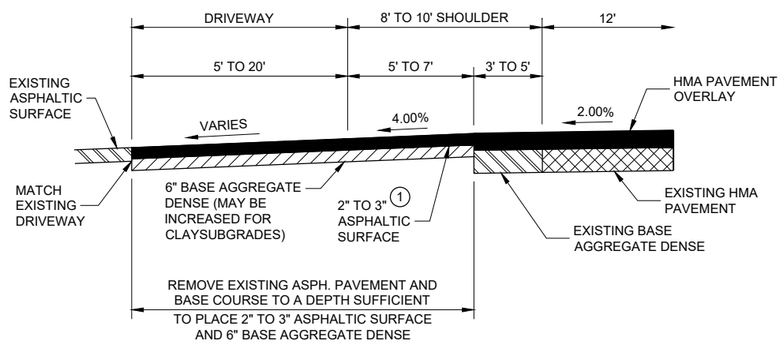
GENERAL NOTES

(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PLAN VIEW

HALF SECTION



PROFILE VIEW

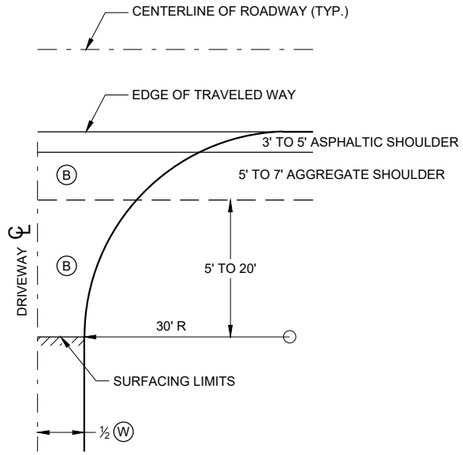
RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS

(A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)

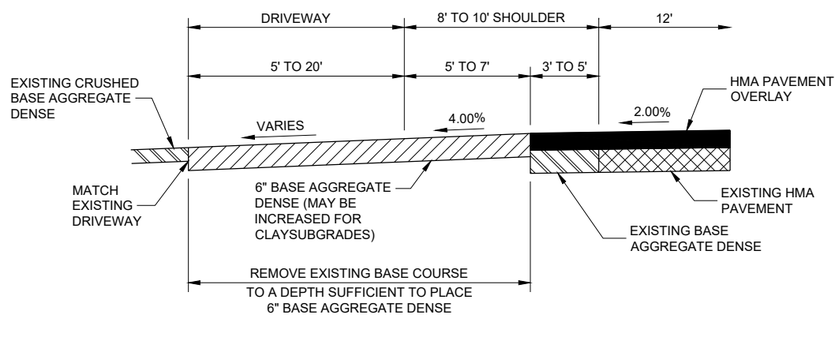
(B) : PAID FOR AS BASE AGGREGATE DENSE 1 ¼" (TON)

(W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



PLAN VIEW

HALF SECTION



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE

RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB AND GUTTER RESURFACING PROJECTS RURAL

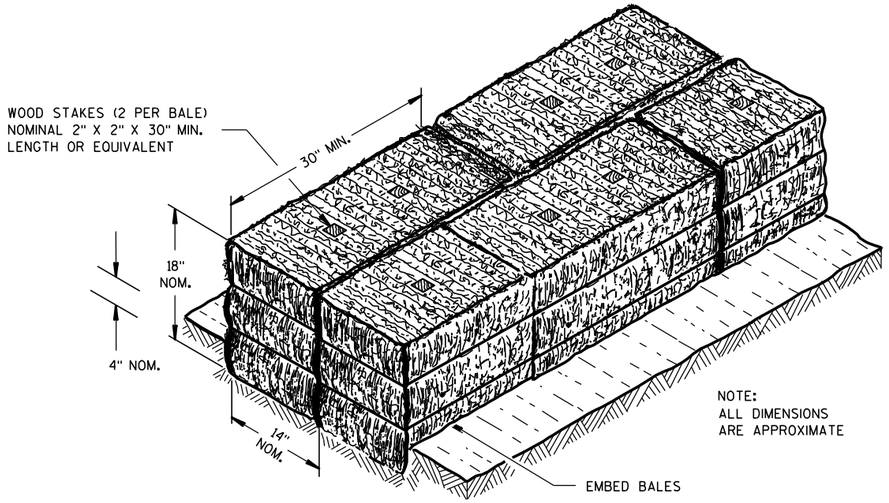
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

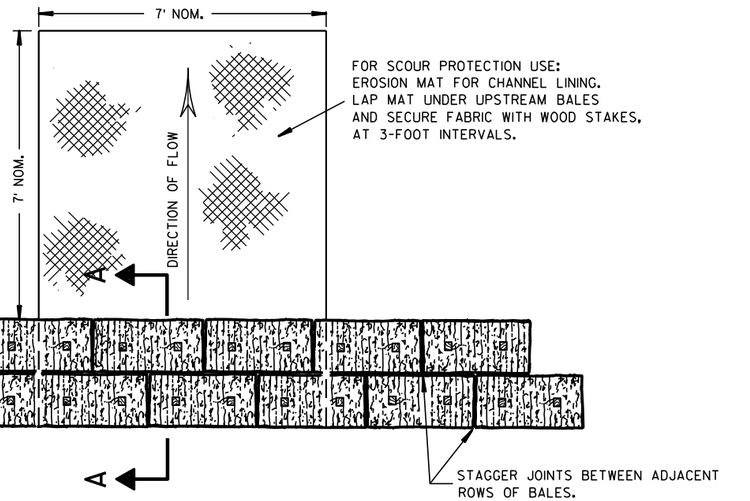
FHWA

6

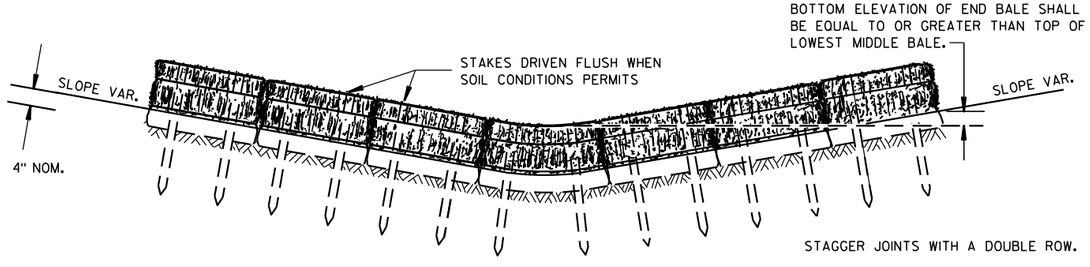
SDD 08D22 - 01



SECTION A-A



PLAN VIEW



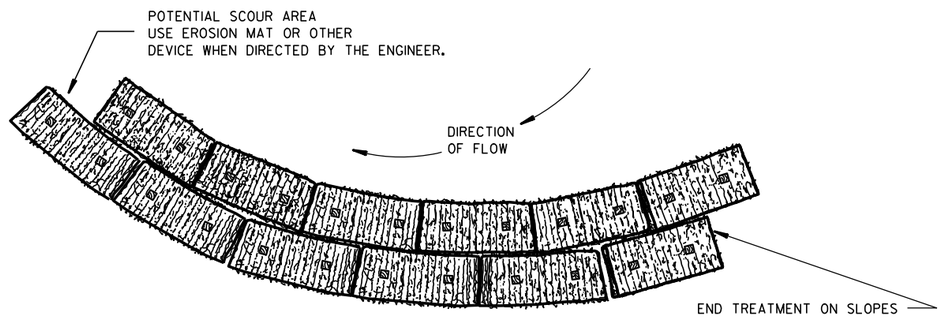
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

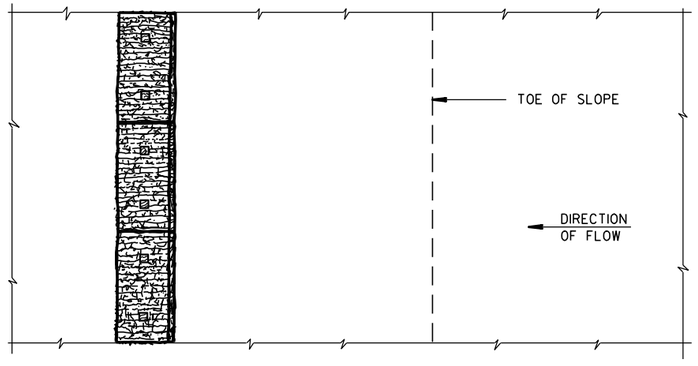
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

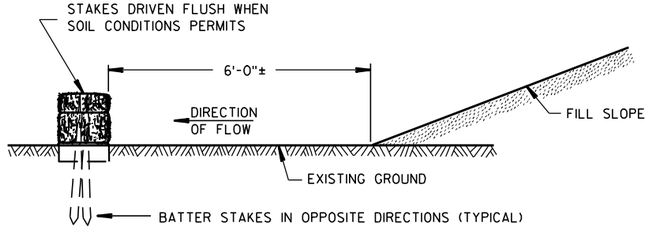


PLAN VIEW

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

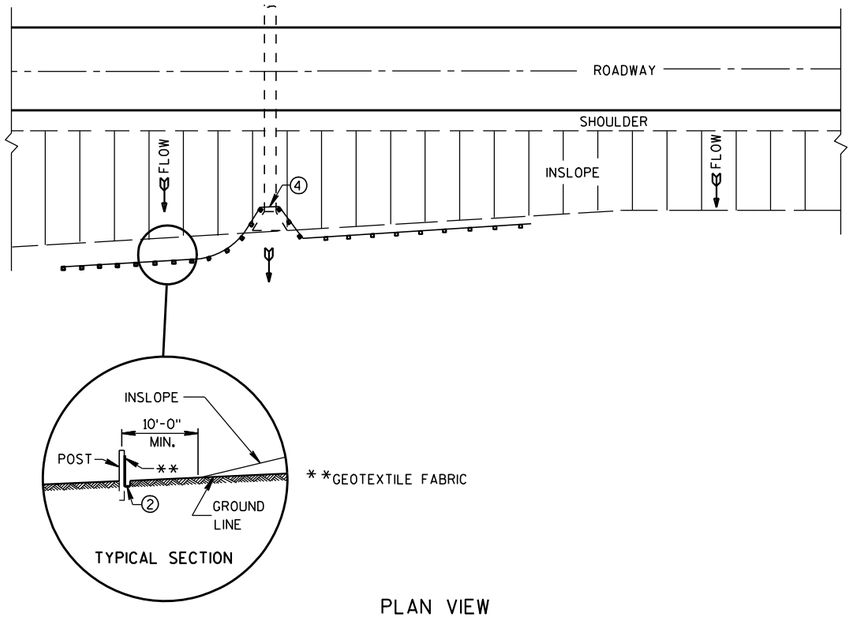
APPROVED
6/04/02 DATE
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

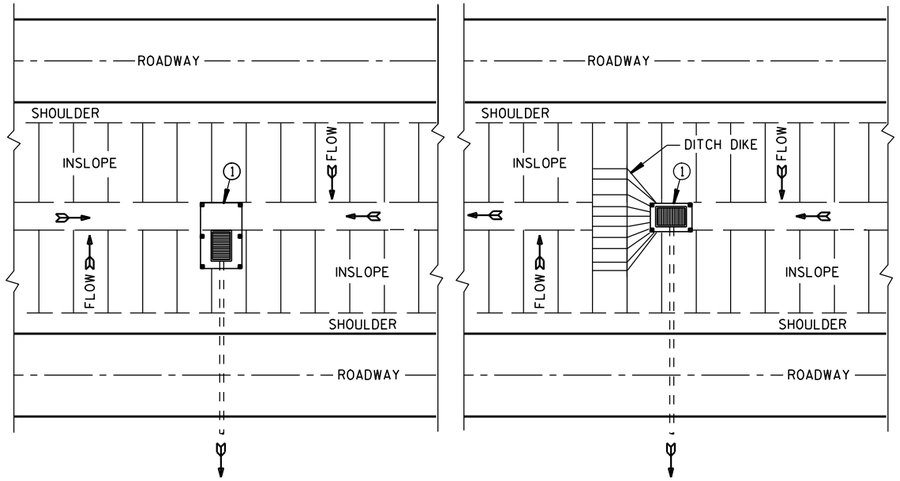
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



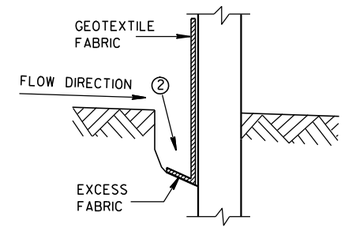
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

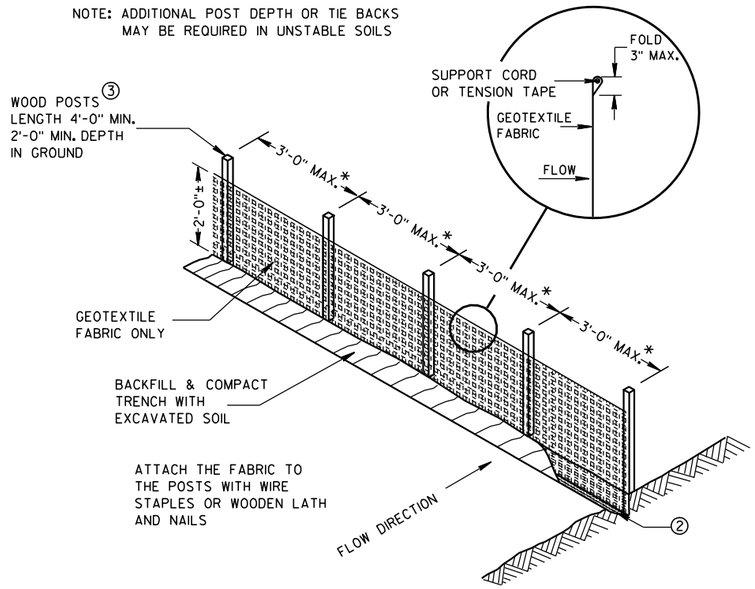
GENERAL NOTES

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

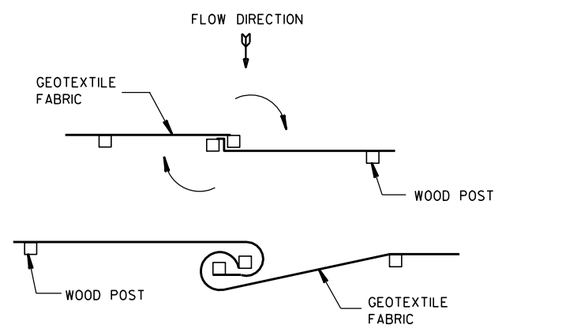
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



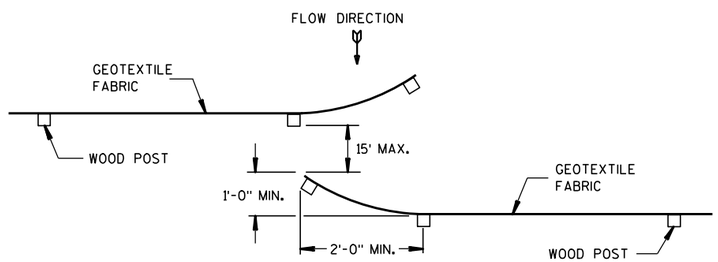
TRENCH DETAIL



SILT FENCE

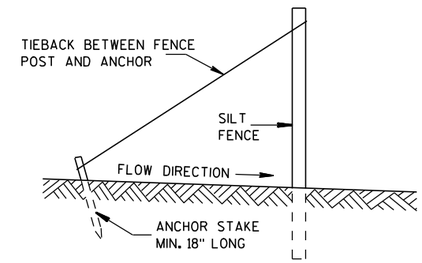


TWIST METHOD



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

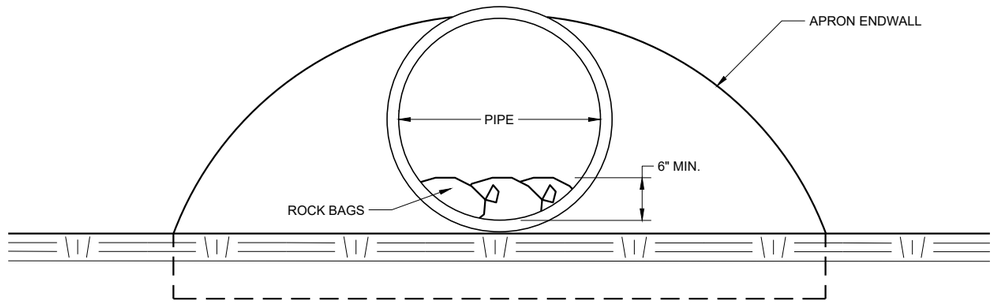
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

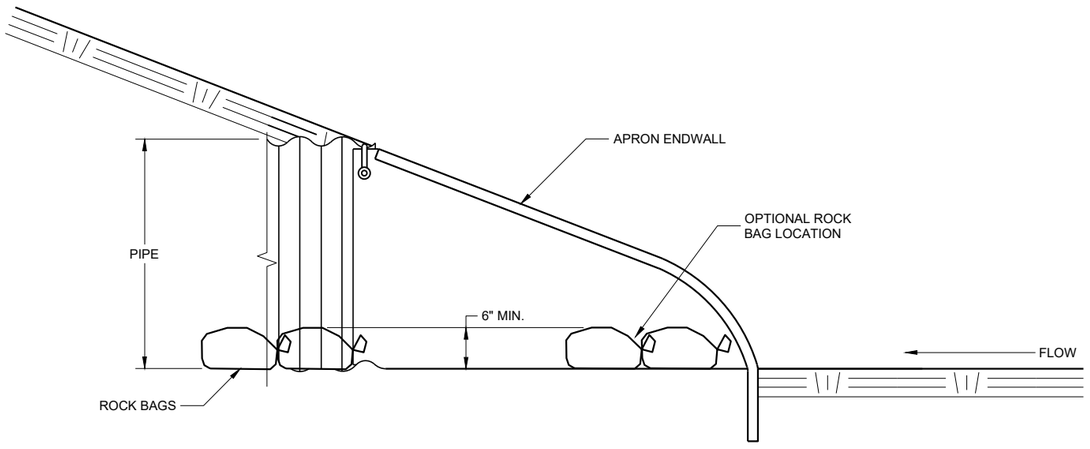
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



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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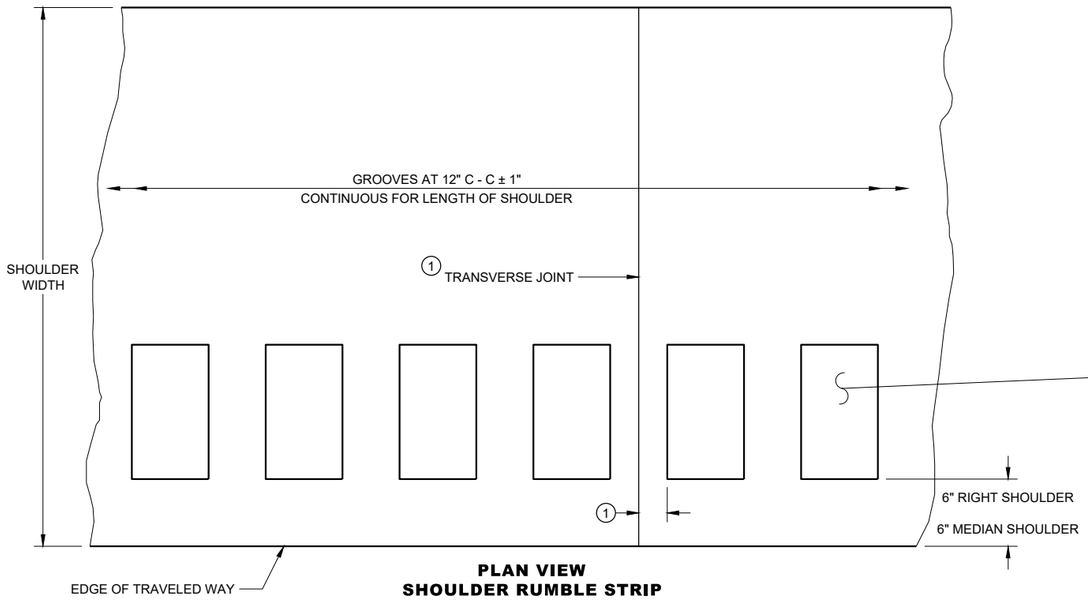
SDD 08E15 - 01

GENERAL NOTES

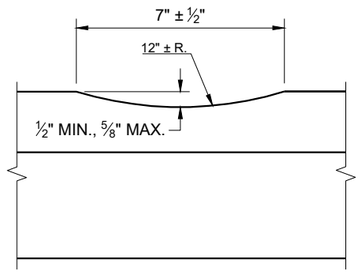
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

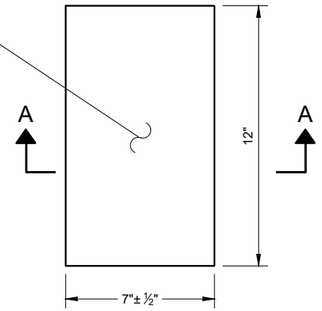
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



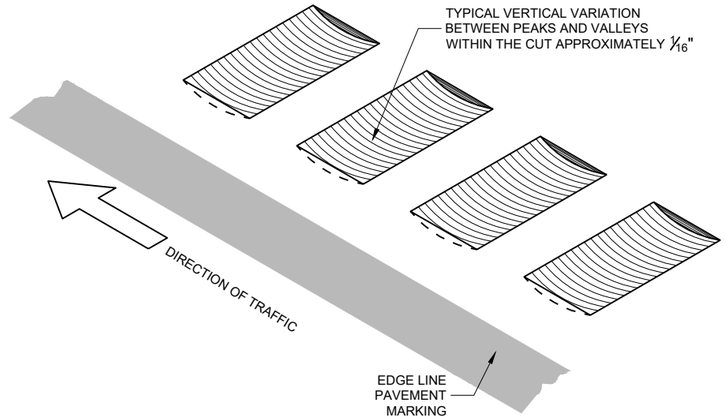
PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A

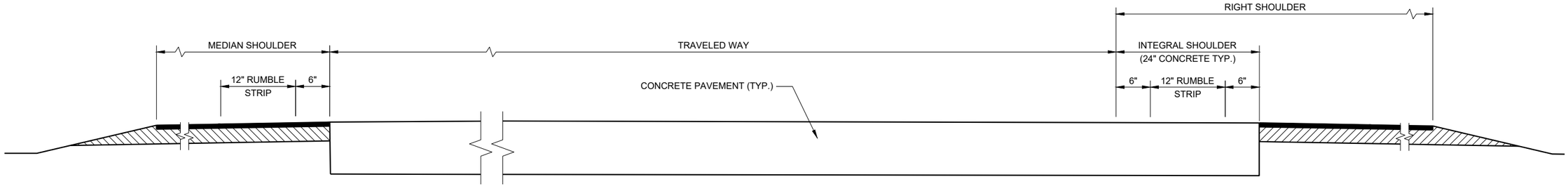


PLAN VIEW
(SINGLE GROOVE)



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP



SECTION VIEW

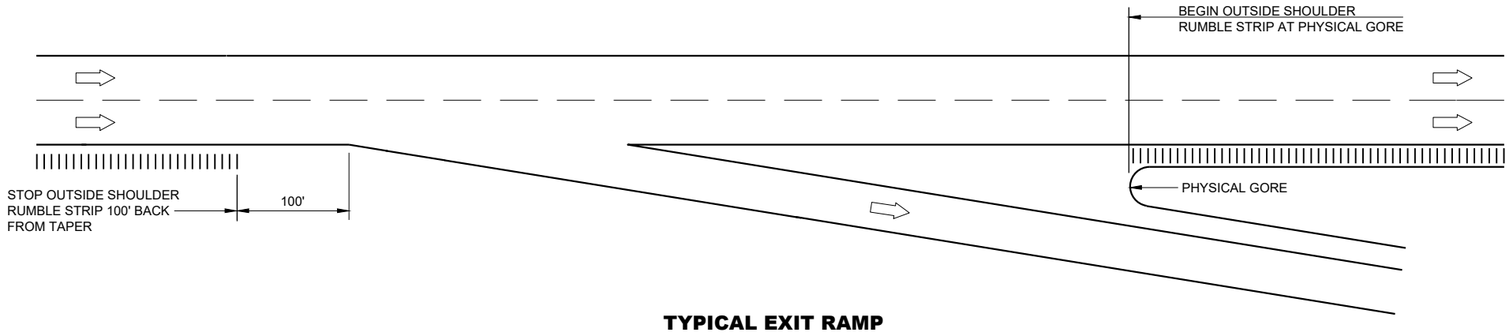
TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

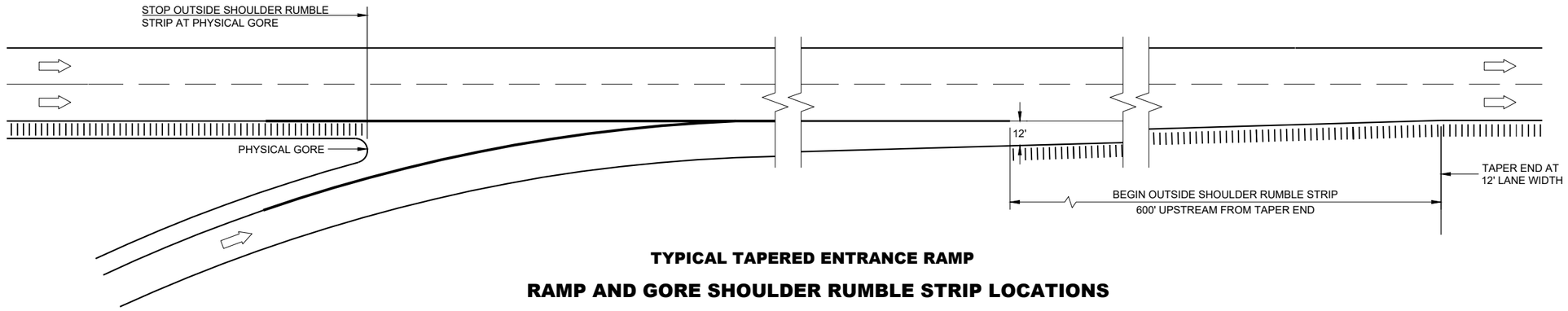
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13A05-06a



TYPICAL EXIT RAMP



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

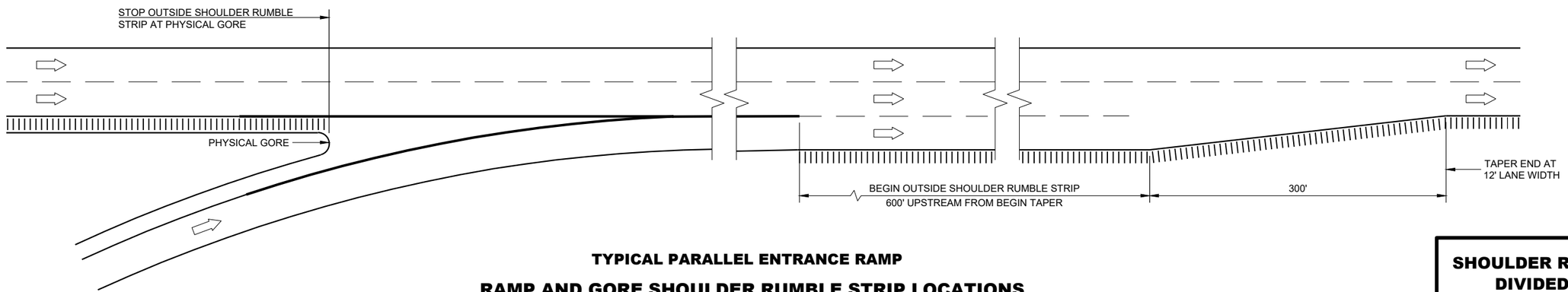
GENERAL NOTES

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

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIALAND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

LEGEND

DIRECTION OF TRAFFIC



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY DESIGN STANI
UNIT SUPERVISOR

FHWA

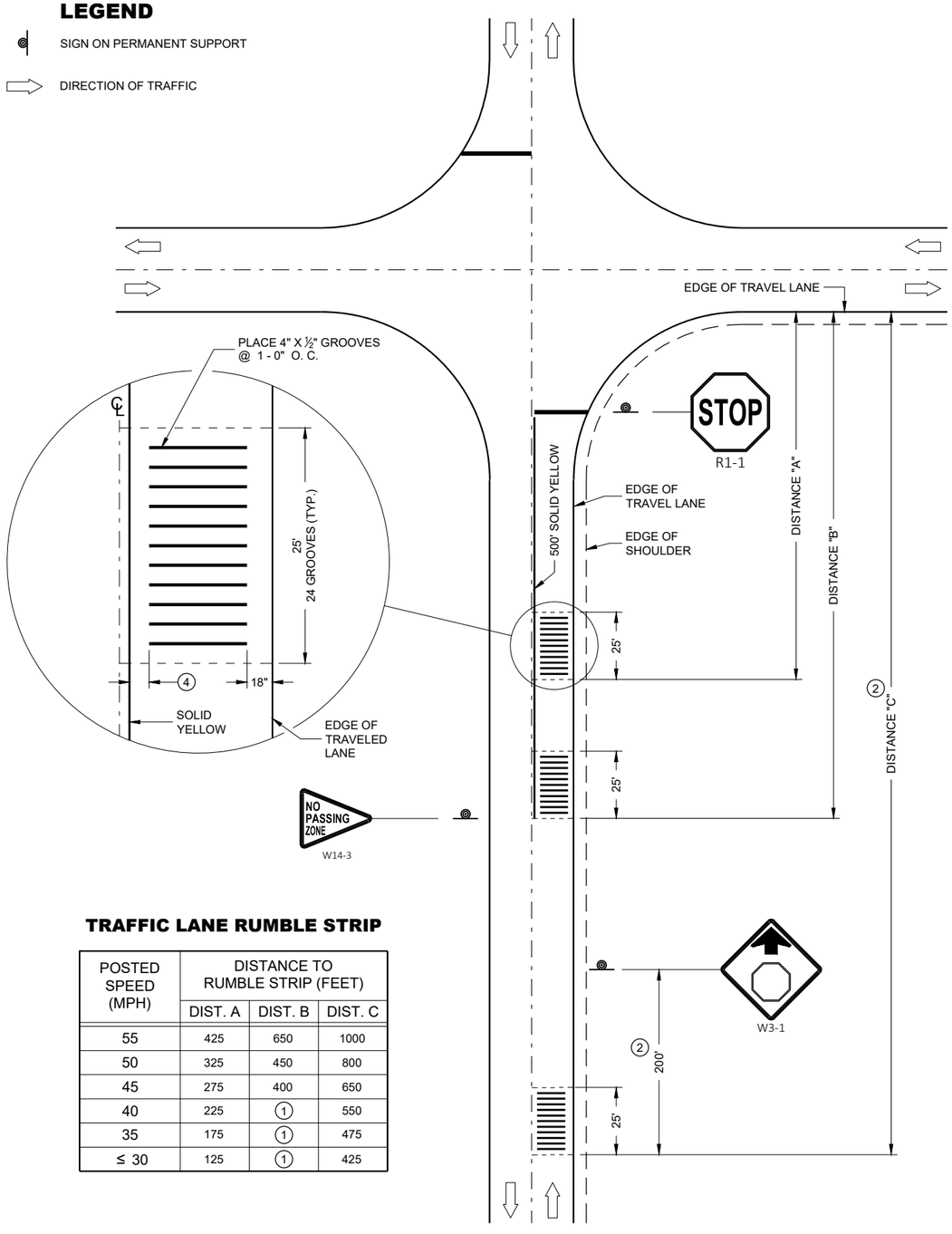
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SDD 13A05-06b

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



RUMBLE STRIP LOCATION

TRAFFIC LANE RUMBLE STRIP

POSTED SPEED (MPH)	DISTANCE TO RUMBLE STRIP (FEET)		
	DIST. A	DIST. B	DIST. C
55	425	650	1000
50	325	450	800
45	275	400	650
40	225	(1)	550
35	175	(1)	475
≤ 30	125	(1)	425

GENERAL NOTES

CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.

WHEN ASPHALTIC PAVEMENT IS NEW IN THE RUMBLE AREA, THE CONTRACTOR SHALL ALLOW THE PAVEMENT TO CURE A MINIMUM OF 7 DAYS PRIOR TO RUMBLE INSTALLATION.

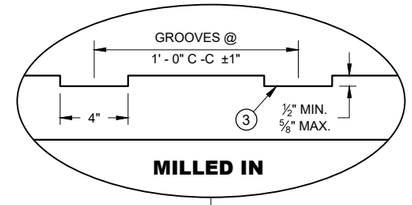
PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDE ELSEWHERE IN THE CONTRACT.

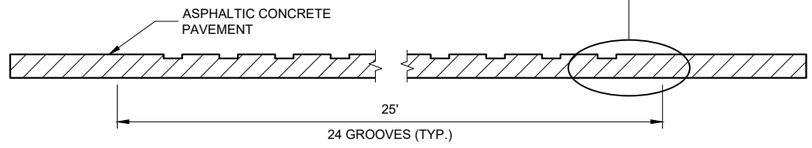
(1) ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.

(2) LOCATE RUMBLE STRIP 200 FEET IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE "C".

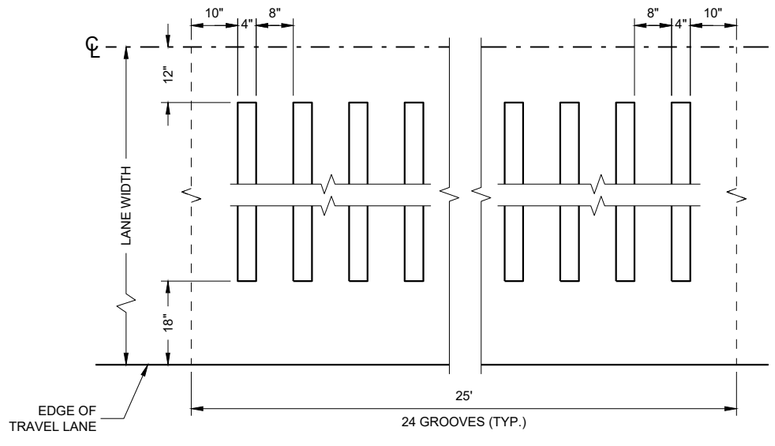
(3) TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY 1/16".

(4) 12 INCH CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE.





ELEVATION VIEW



PLAN VIEW

ASPHALTIC PAVEMENT MILLED IN

TRANSVERSE RUMBLE STRIPS, ASPHALTIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY DESIGN STANDARDS
UNIT SUPERVISOR

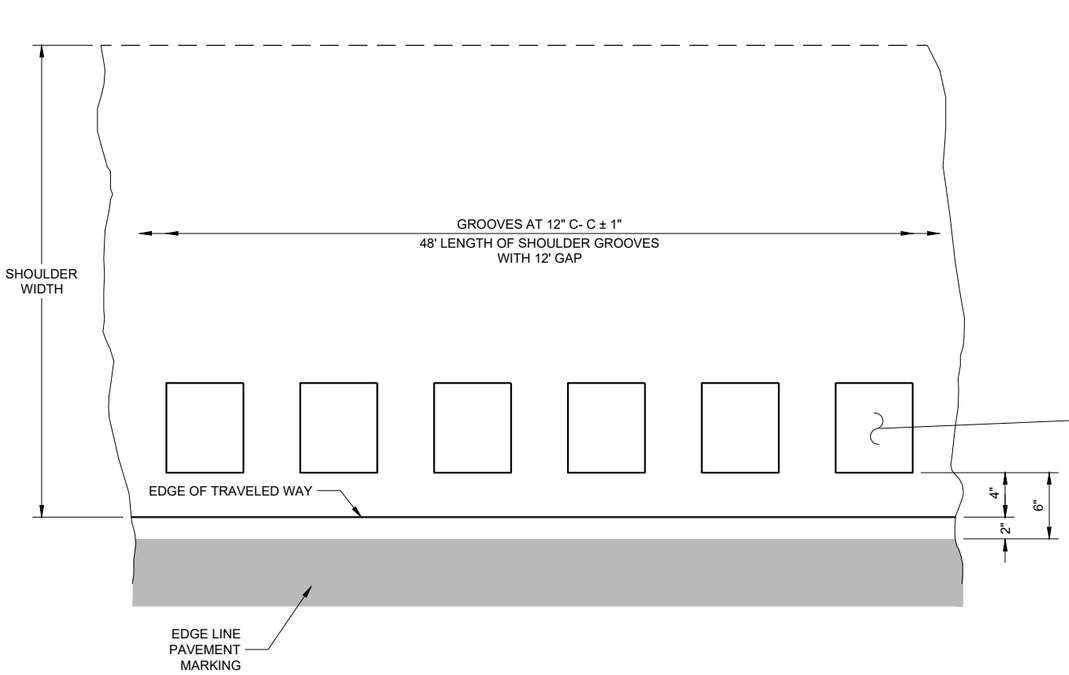
FHWA

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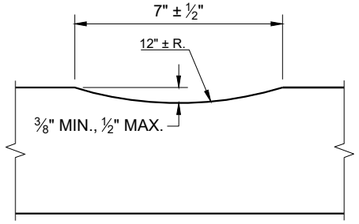
SDD 13A08 - 02

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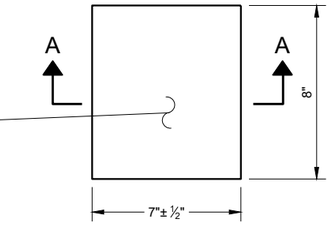
SDD 13A08 - 02



PLAN DETAIL VIEW
SHOULDER WITH GROOVES



SECTION A - A

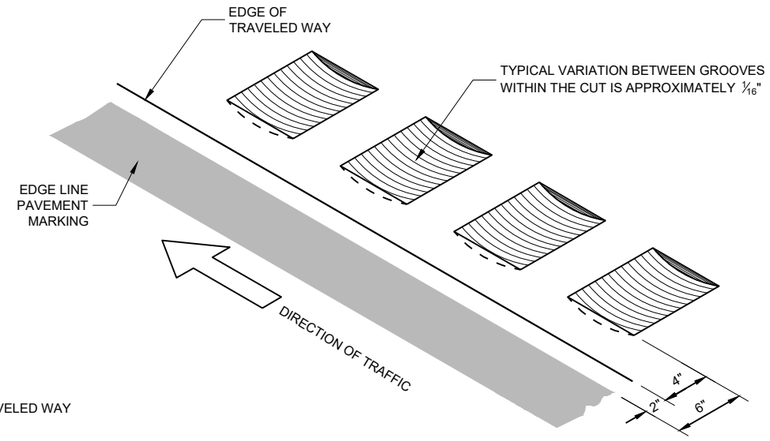


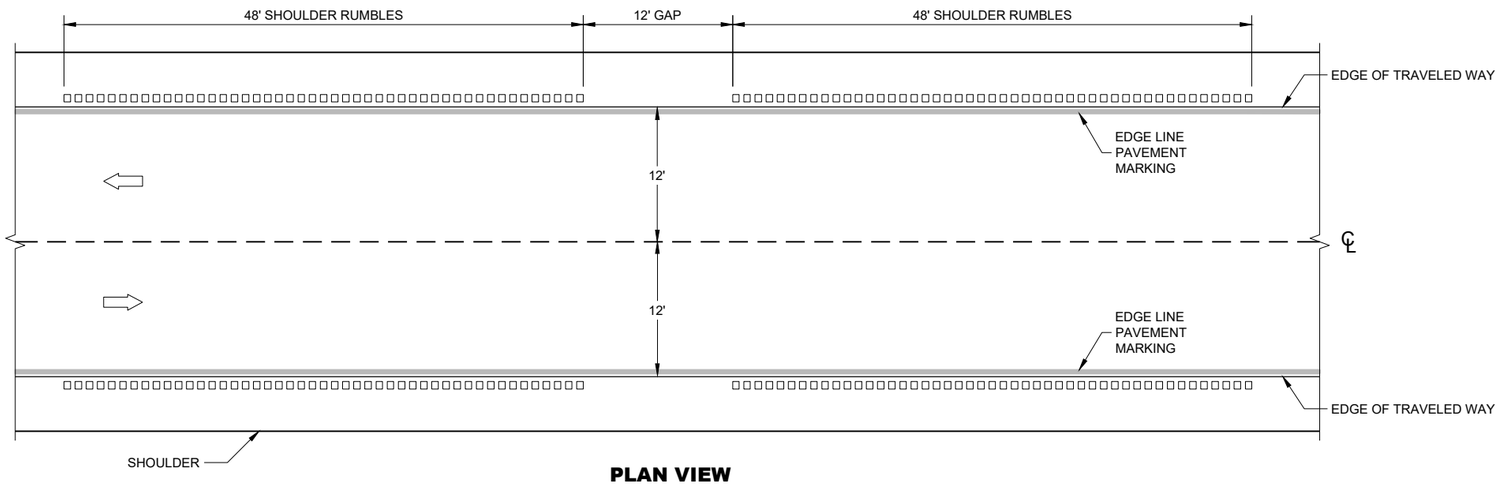
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

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





PLAN VIEW

SHOULDER RUMBLE STRIPS - ASPHALT

SHOULDER RUMBLE STRIPS ASPHALT

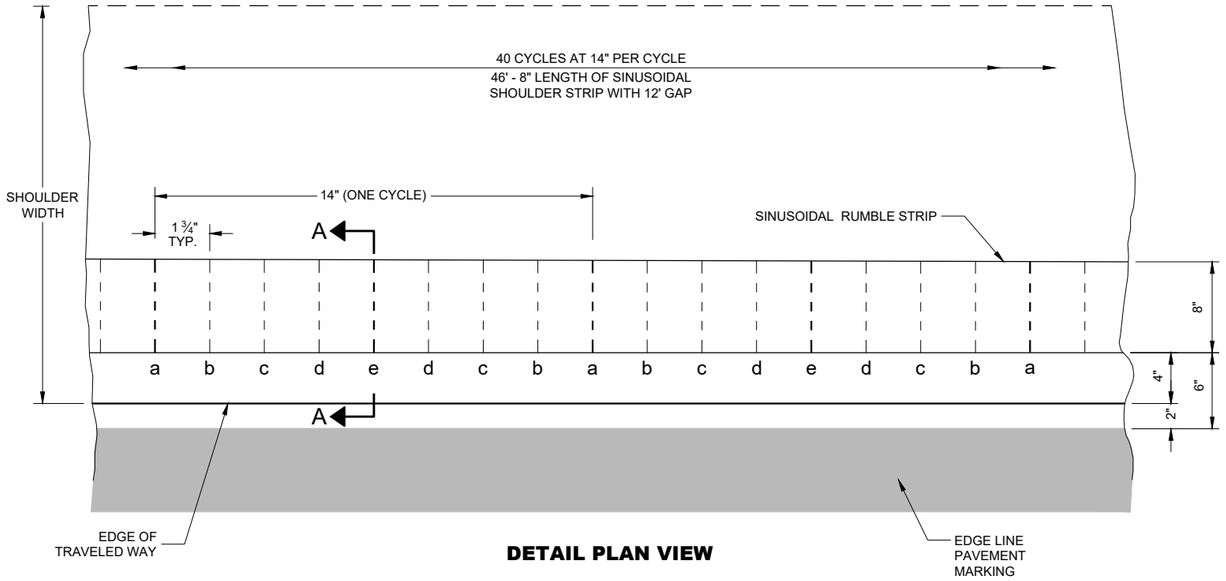
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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SDD 13A10 - 03a

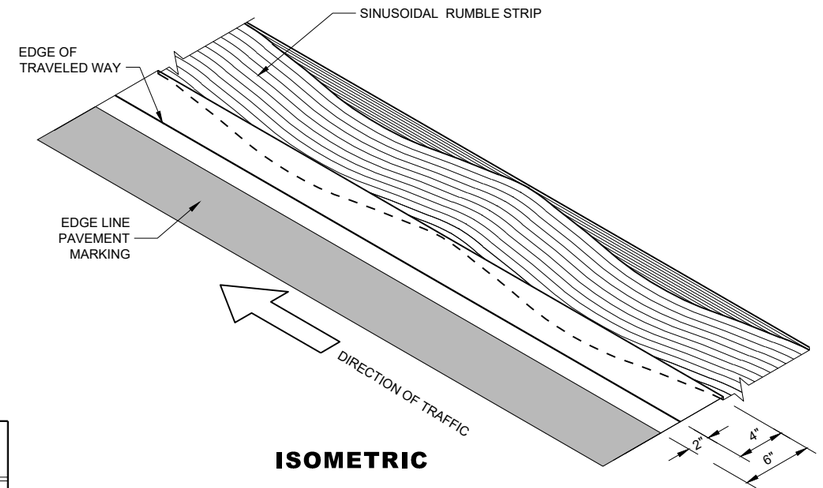
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

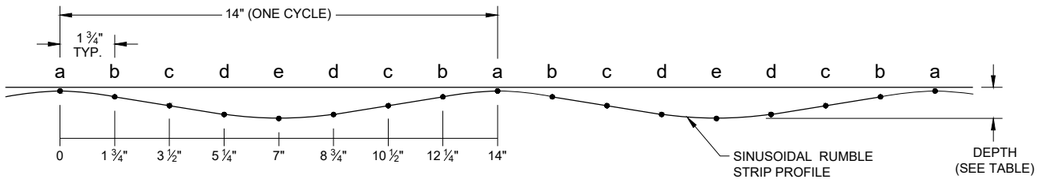
SHOULDER RUMBLE STRIPS MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



DETAIL PLAN VIEW

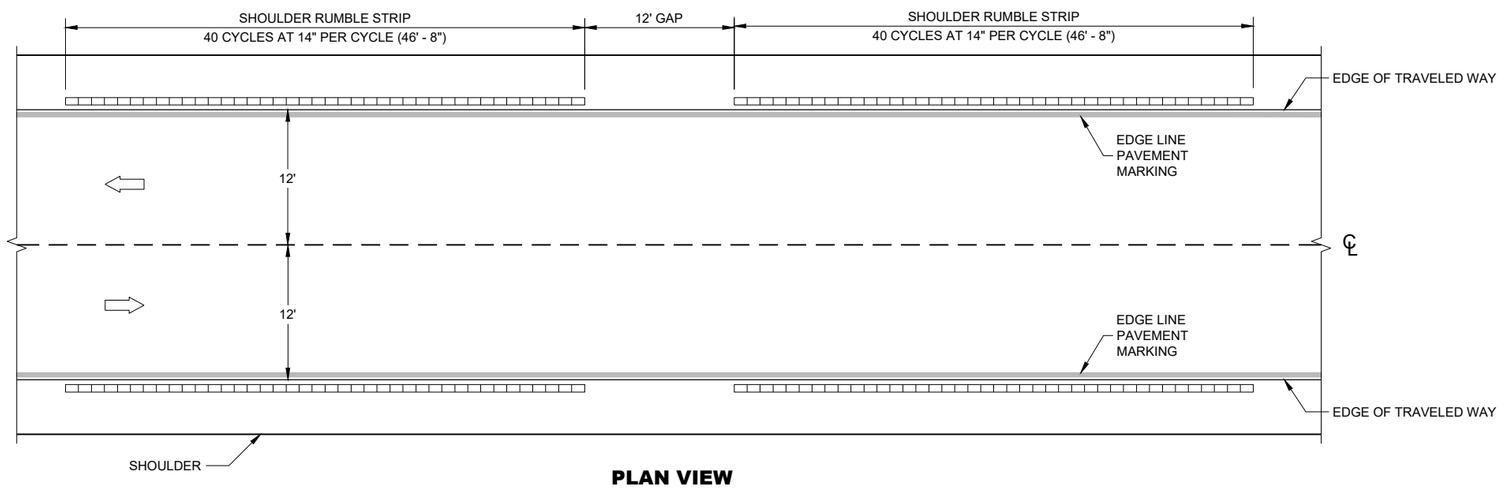


ISOMETRIC

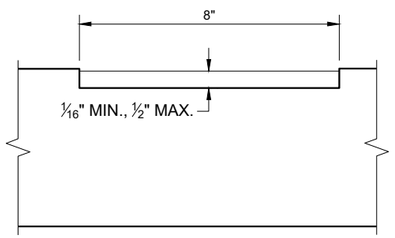


PROFILE VIEW

LOCATION	DEPTH (INCHES)
a	1/16"
b	5/32"
c	9/32"
d	7/16"
e	1/2"



PLAN VIEW



SECTION A - A

SHOULDER RUMBLE STRIPS - ASPHALT, SINUSOIDAL

SHOULDER RUMBLE STRIPS - ASPHALT, SINUSOIDAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

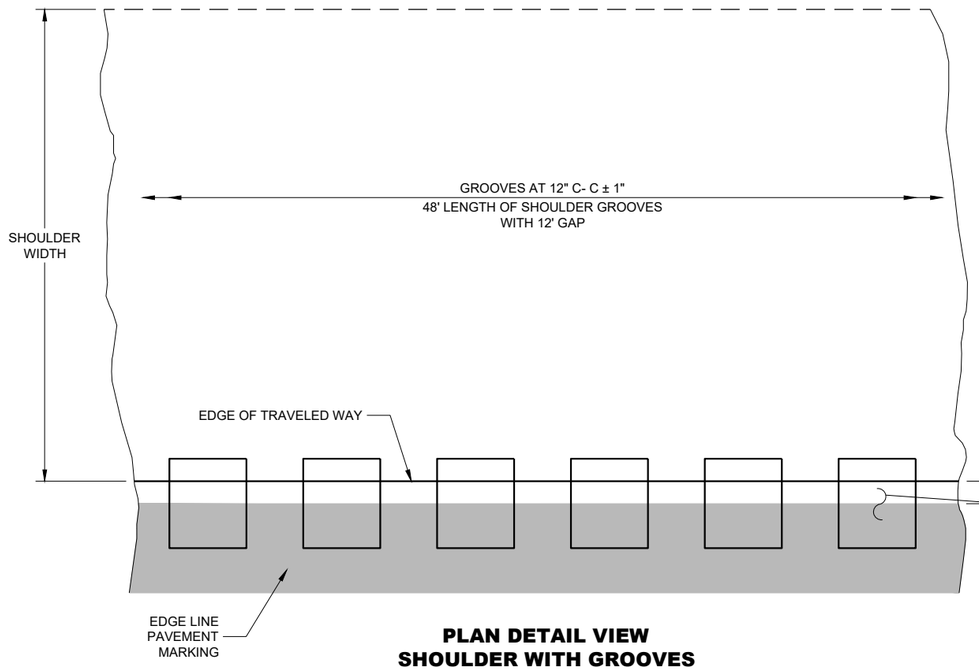
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SDD 13A10 - 03c

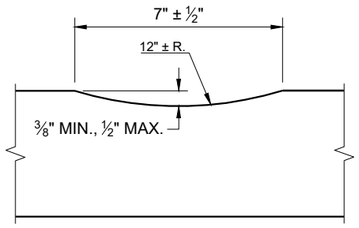
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

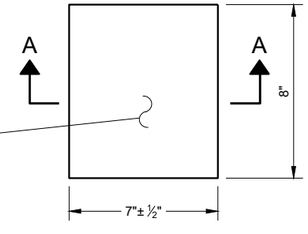
SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



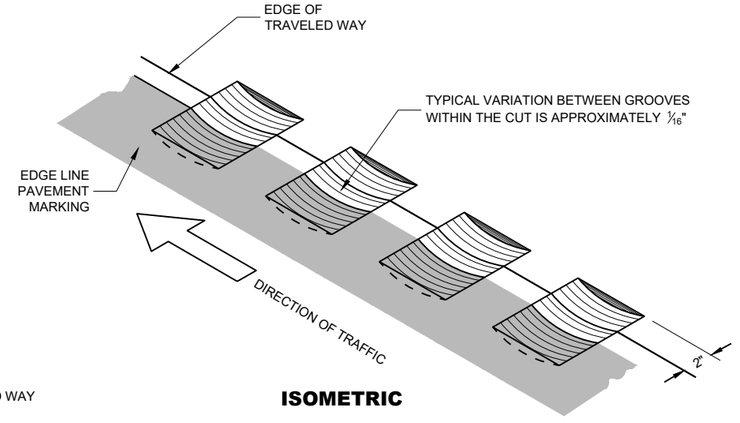
PLAN DETAIL VIEW
SHOULDER WITH GROOVES



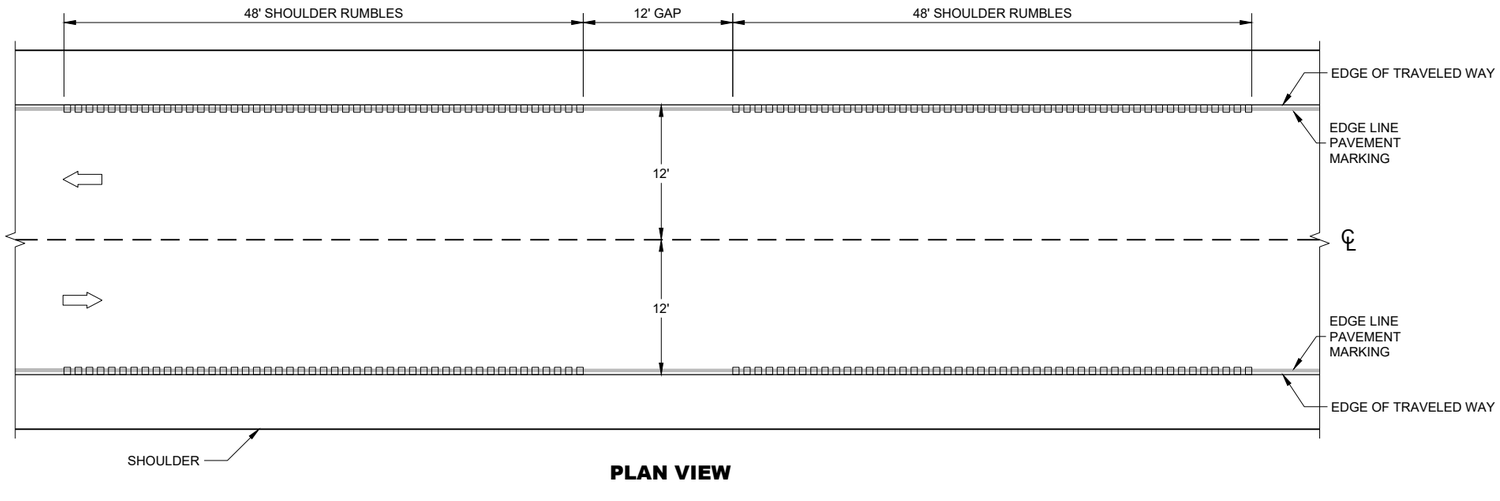
SECTION A - A



PLAN VIEW
(SINGLE GROOVE)



ISOMETRIC



PLAN VIEW

EDGE LINE RUMBLE STRIPS - ASPHALT

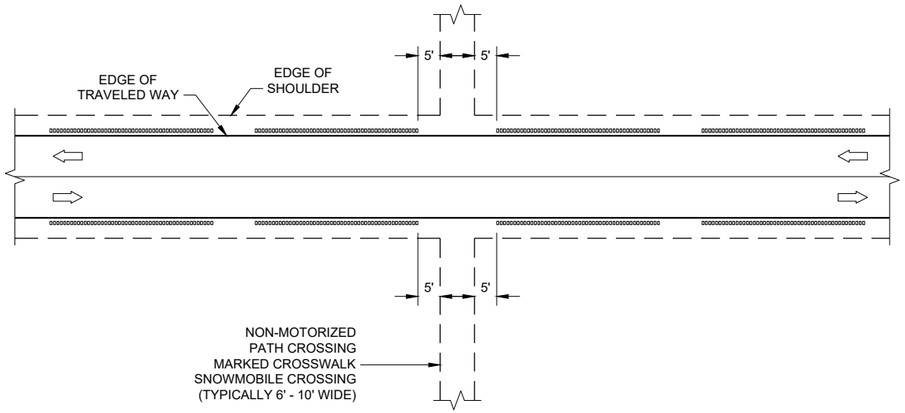
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SDD 13A10 - 03e

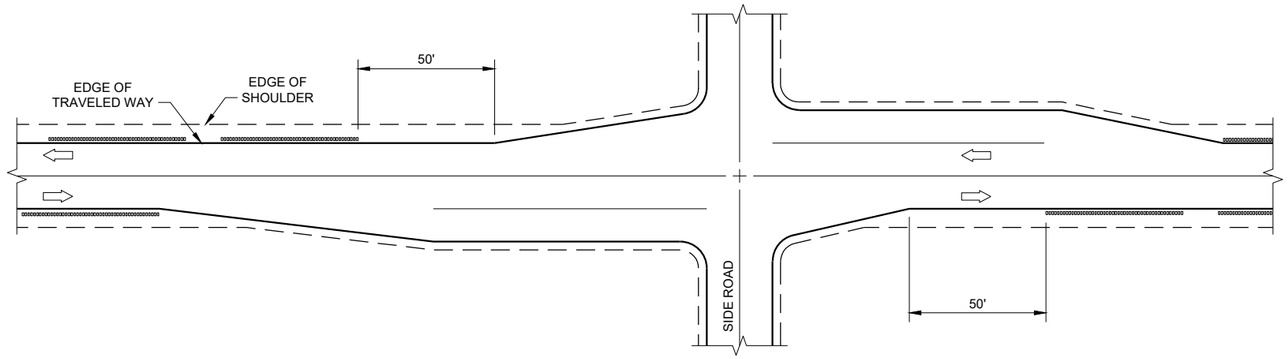
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SDD13A10 - 03e

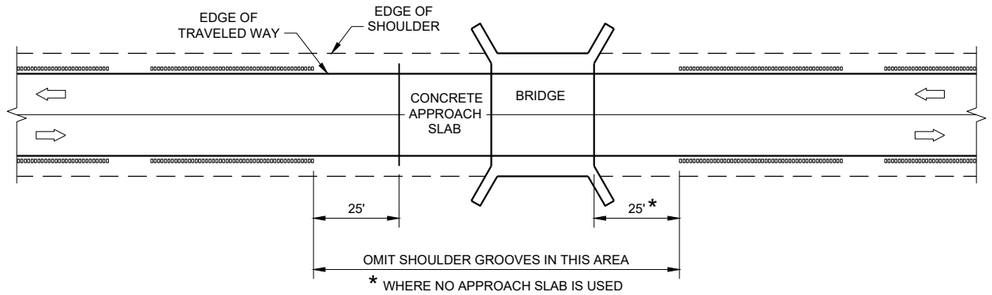
EDGE LINE RUMBLE STRIPS - ASPHALT



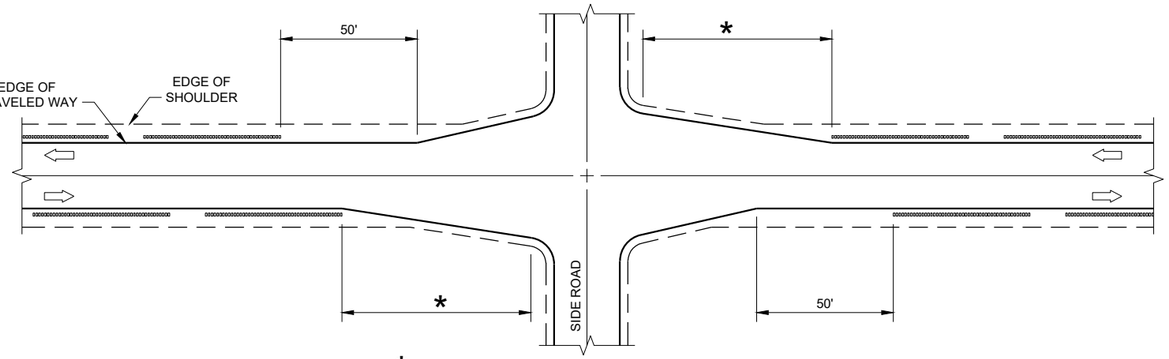
GROOVES AT MISCELLANEOUS CROSSINGS



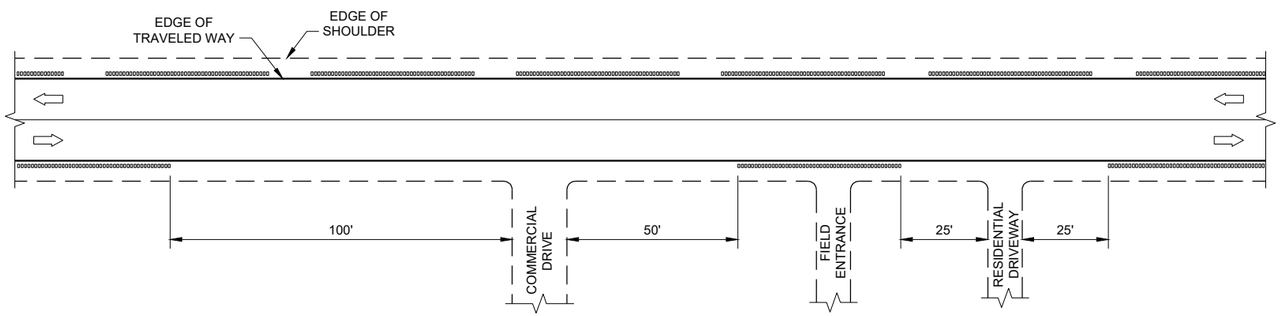
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



GROOVES AT DRIVEWAYS ①

GENERAL NOTES

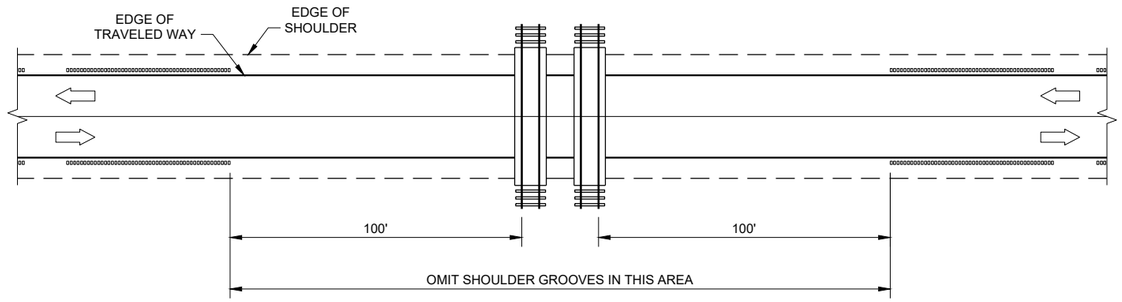
① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

SHOULDER AND EDGE LINE RUMBLE STRIPS CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS

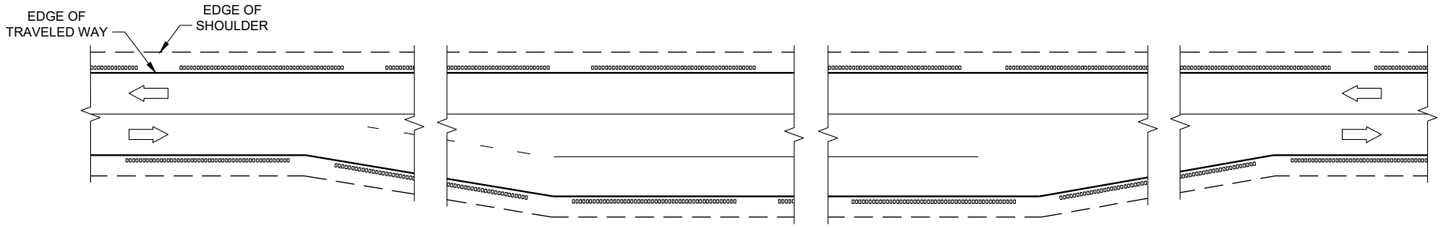
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

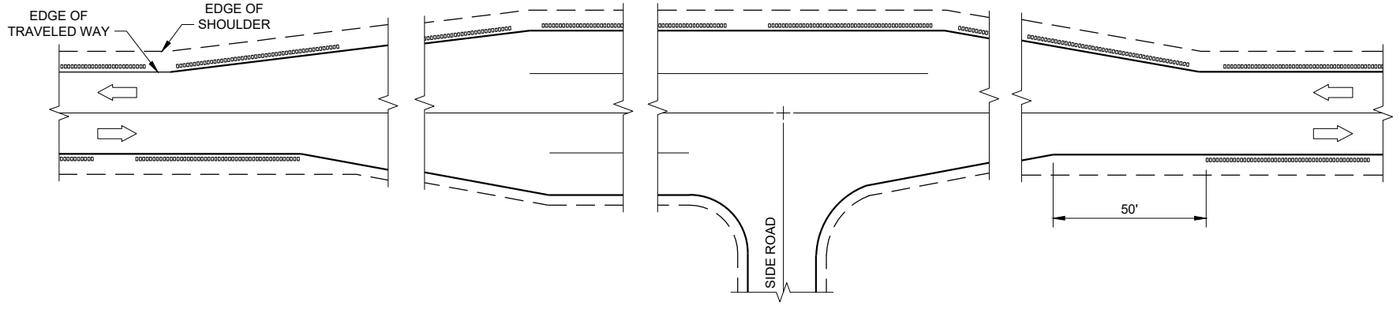
SDD 13A10 - 03g



GROOVES AT RAILROADS



GROOVES AT PASSING AND CLIMBING LANES



GROOVES AT BYPASS LANES

6

SDD 13A10 - 03h

SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ John Jenkins
ROADWAY STANDARDS DEVE ENGINEER

FHWA

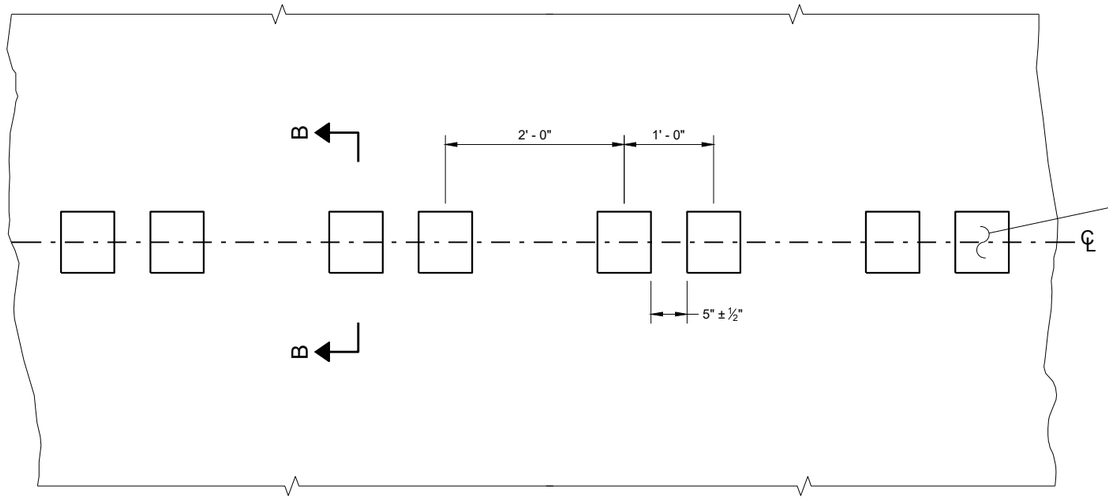
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SDD 13A10 - 03h

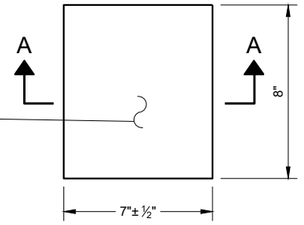
GENERAL NOTES

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

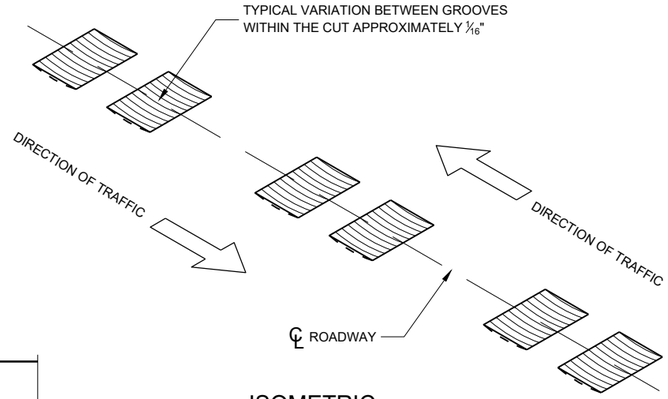
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



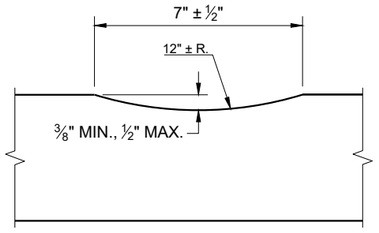
PLAN DETAIL VIEW



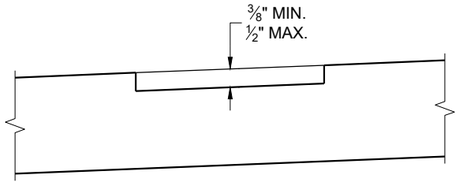
PLAN VIEW
(SINGLE GROOVE)



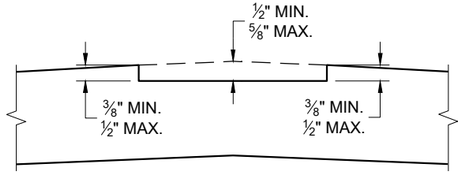
ISOMETRIC



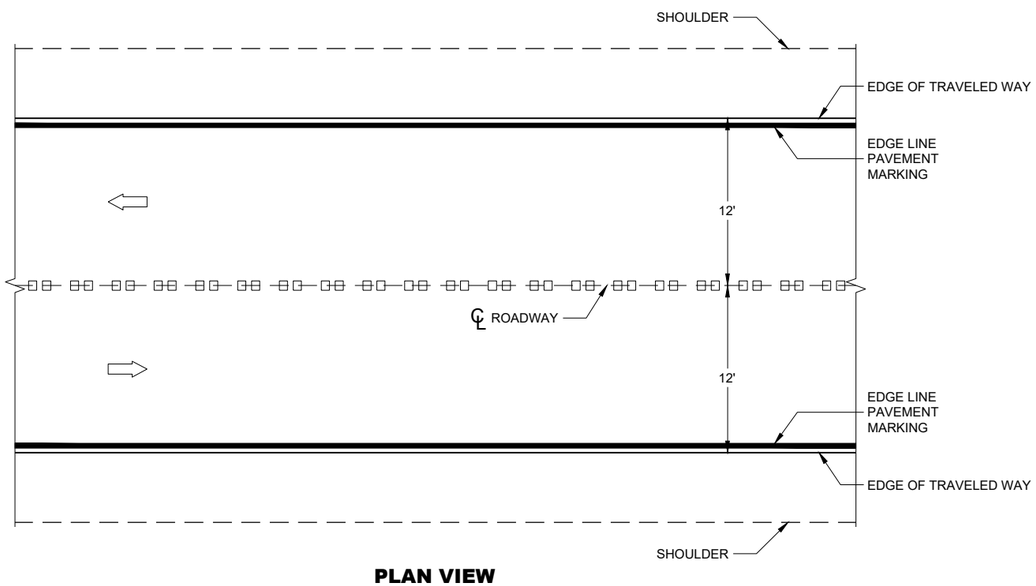
SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



PLAN VIEW

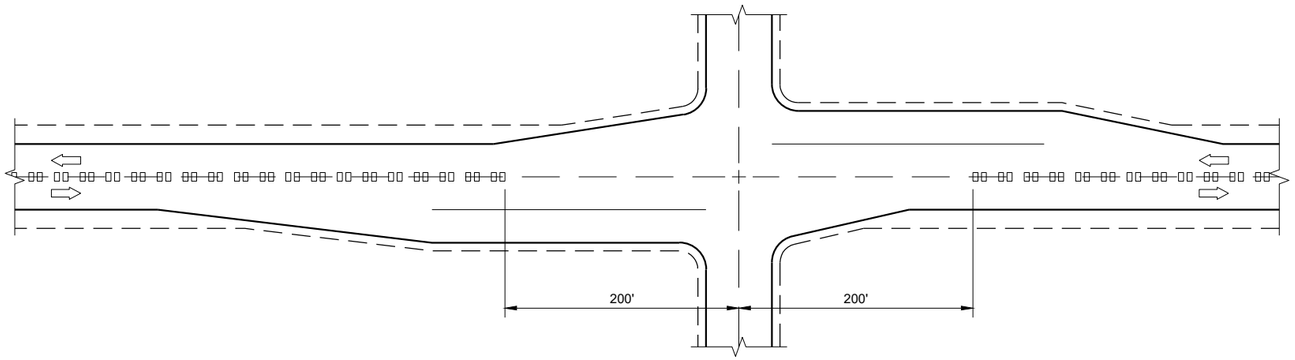
CENTERLINE RUMBLE STRIPS - ASPHALT

CENTERLINE RUMBLE STRIPS - ASPHALT

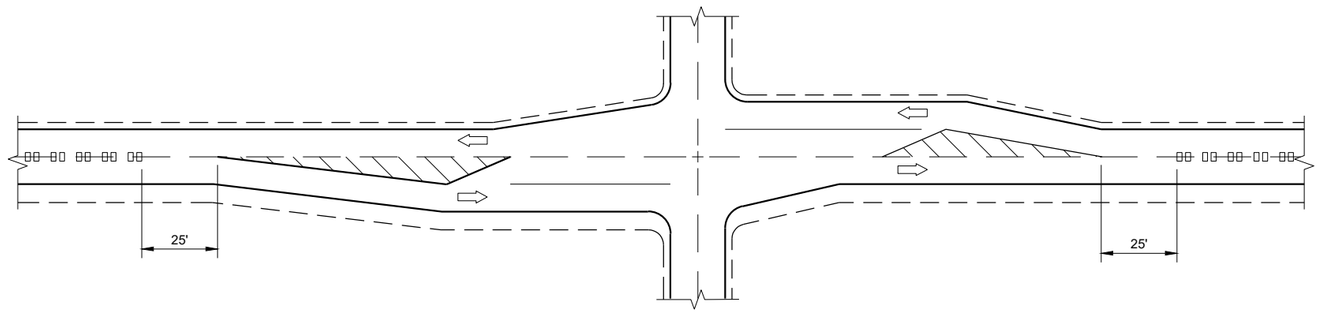
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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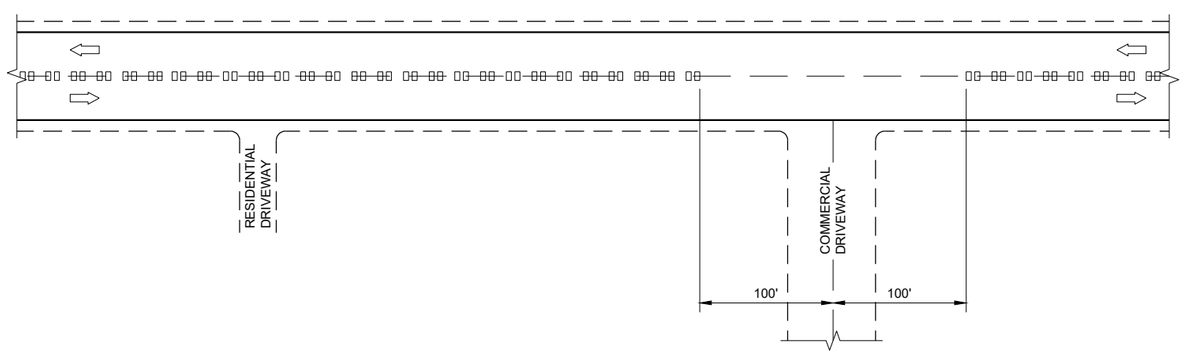
SDD 13A11 - 04a



CENTERLINE GROOVES AT INTERSECTIONS



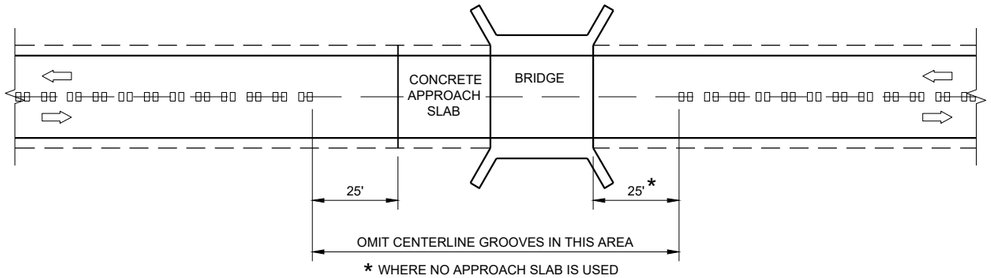
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



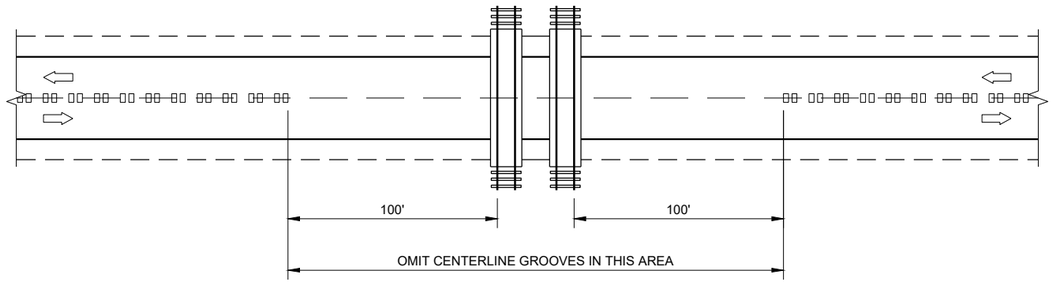
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ John Jenkins — ROADWAY STANDARDS DEVE ENGINEER

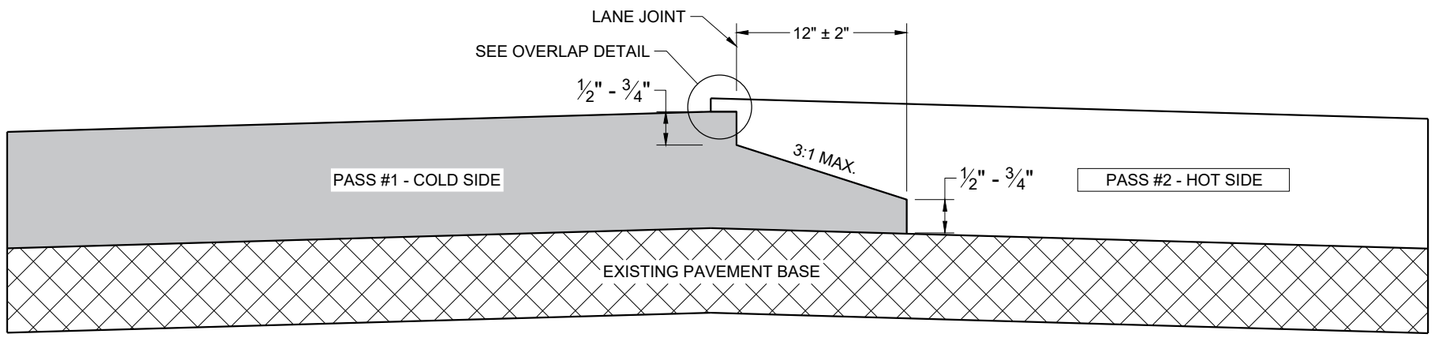
FHWA

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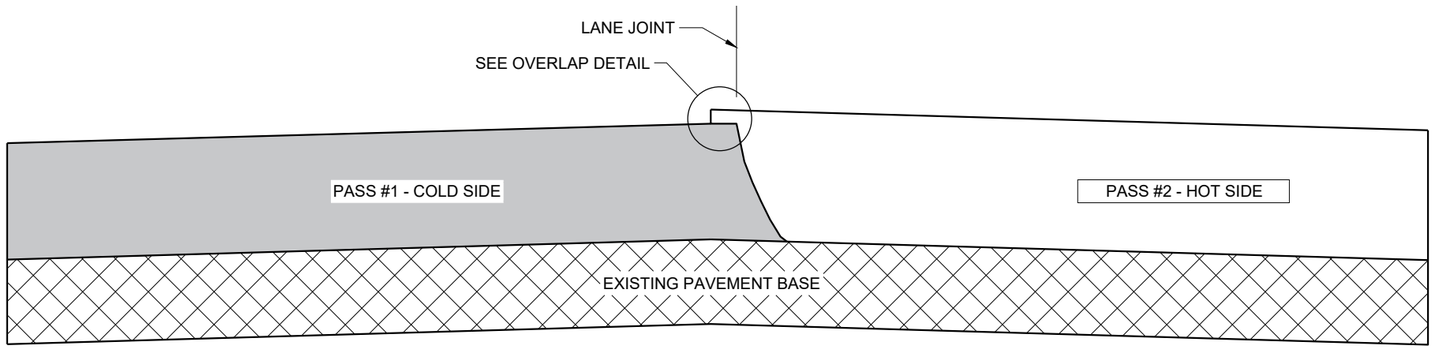
SDD 13A11 - 04d

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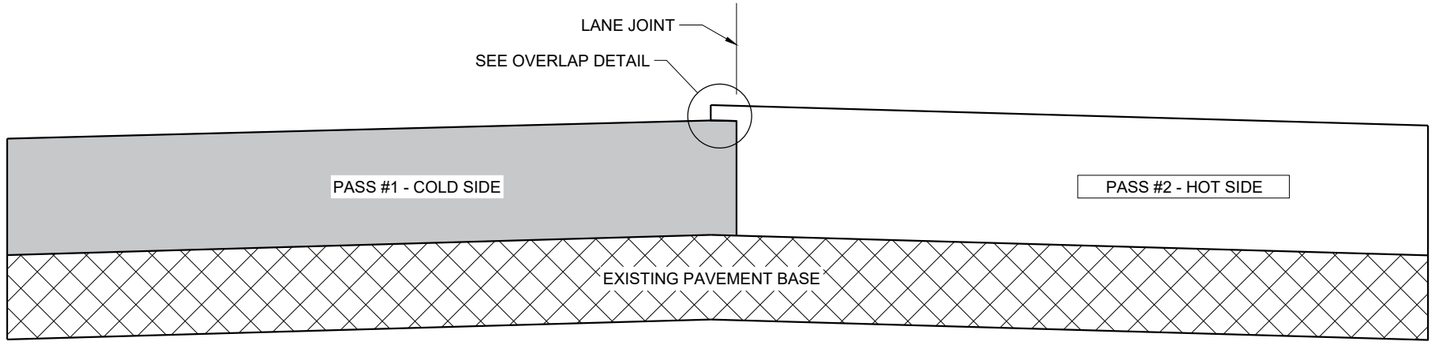
SDD 13A11 - 04d



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

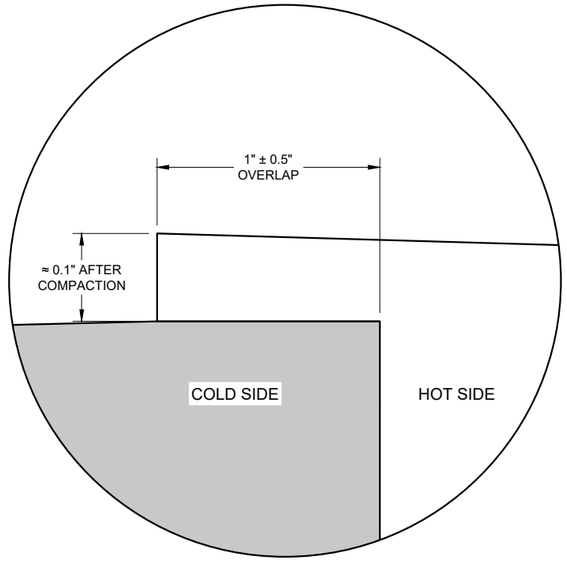
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

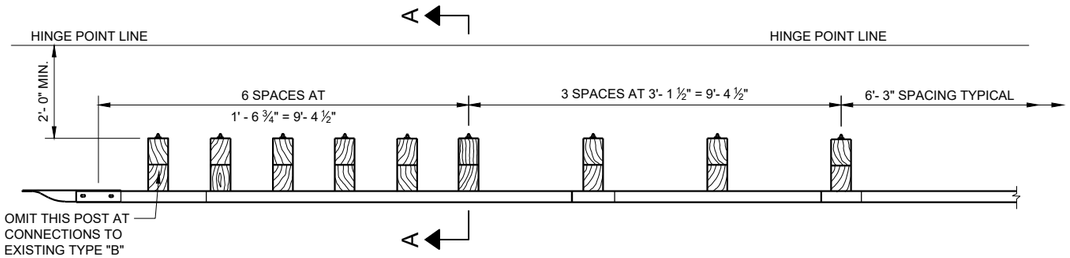
APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

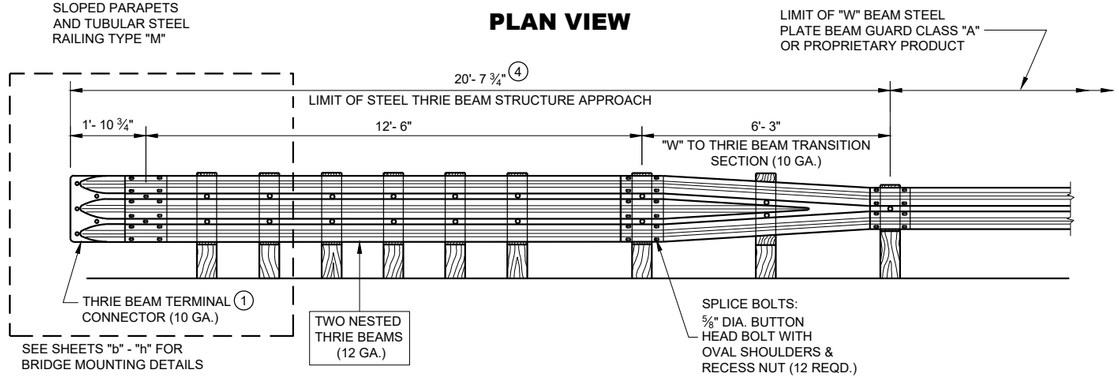
FHWA

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SDD 13C19 - 03



PLAN VIEW



FRONT VIEW

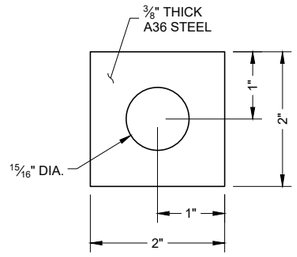


PLATE WASHER DETAIL

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.

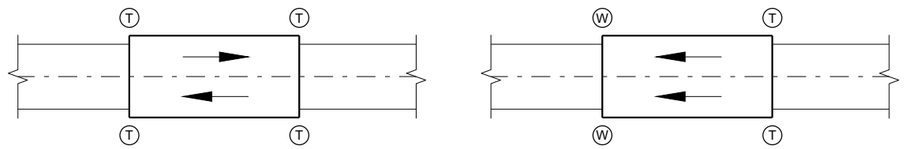
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

(2) MINIMUM EMBEDMENT SHALL BE 4'- 0".

(3) POST BOLTS ARE ⅝" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A ⅝" 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.

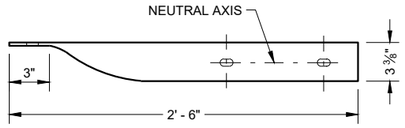


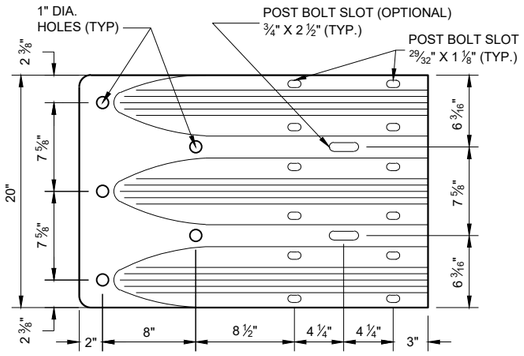
TWO WAY TRAFFIC **ONE WAY TRAFFIC**

(T) THRIE BEAM CONNECTION

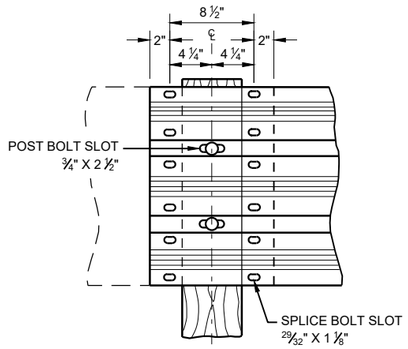
(W) W-BEAM CONNECTION WHEN REQUIRED

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

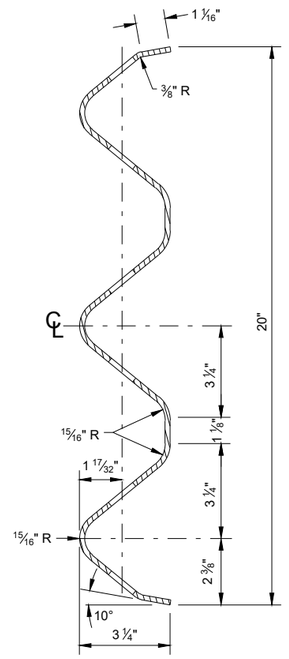




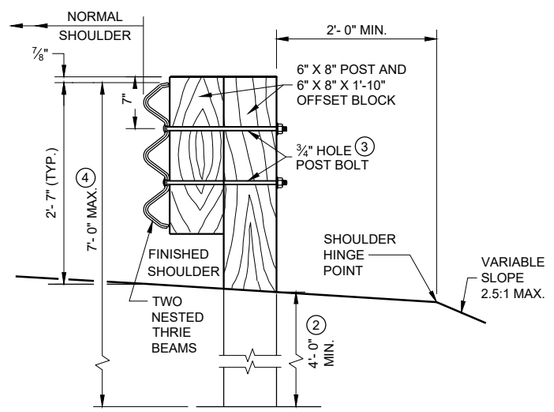
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU BEAM RAIL ELEMENT



SECTION A-A

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

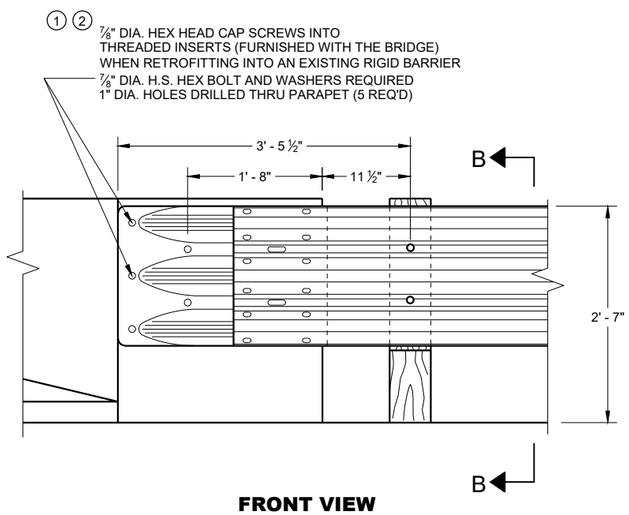
APPROVED
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FHWA

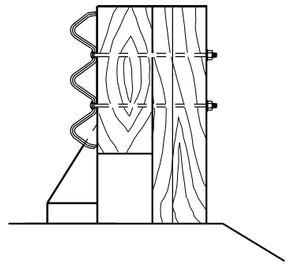
SDD 14B20 - 12a

6

SDD 14B20 - 12a



FRONT VIEW



SECTION B - B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION 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.

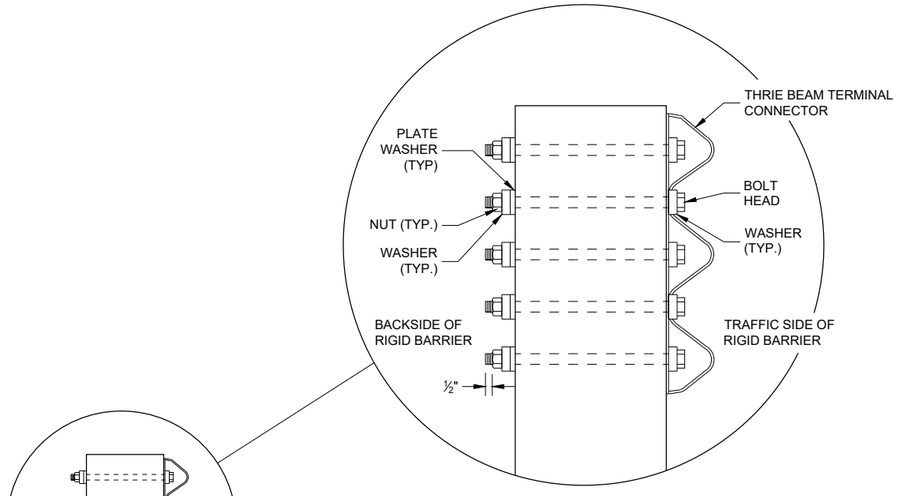
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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.

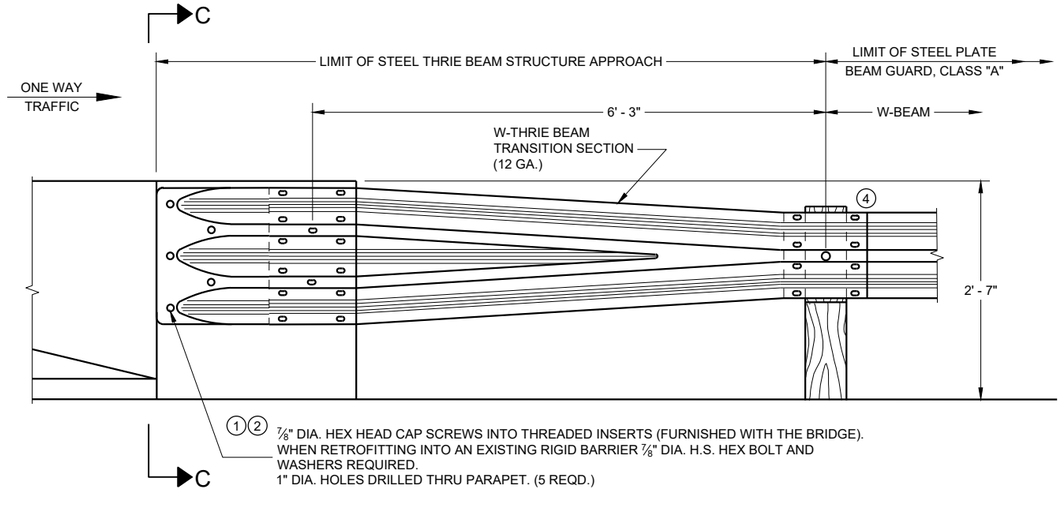
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

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



①② 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 REQD.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD 14B20 - 12b

6

SDD 14B20 - 12b

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION 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.

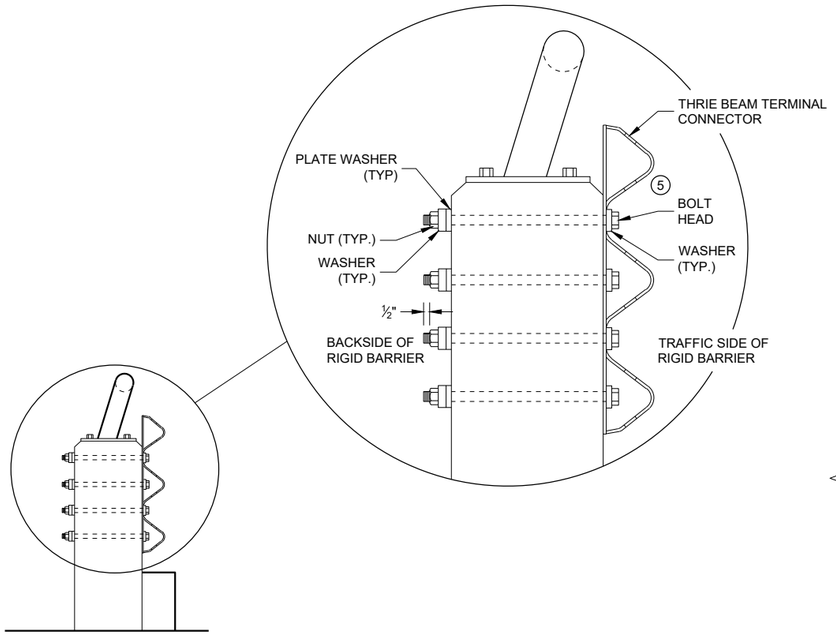
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(3) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

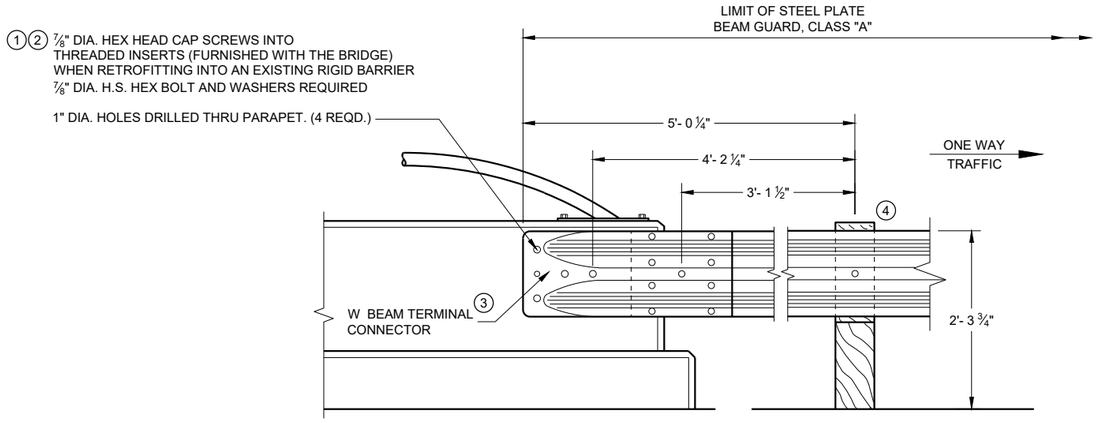
(4) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

(5) BOLT, NUT AND WASHERS NO REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PARAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE 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.

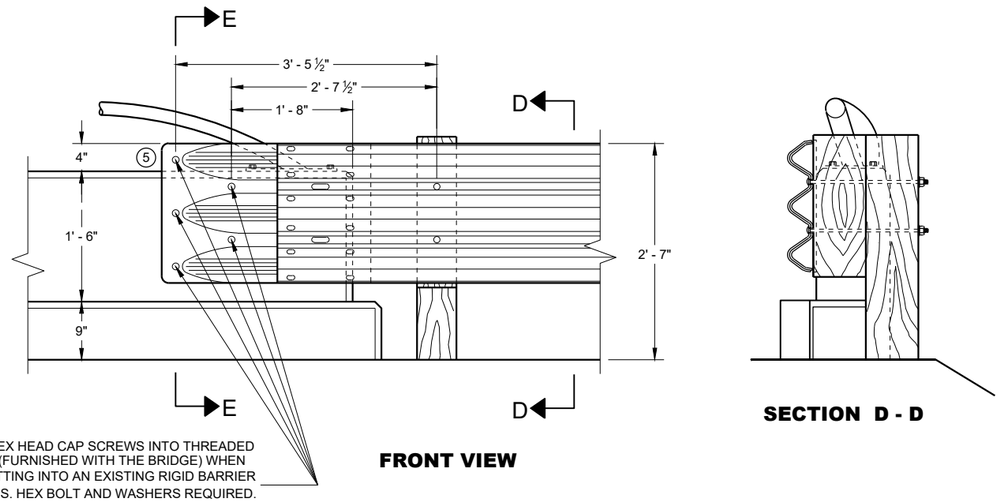


SECTION E - E



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

SECTION D - D

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS

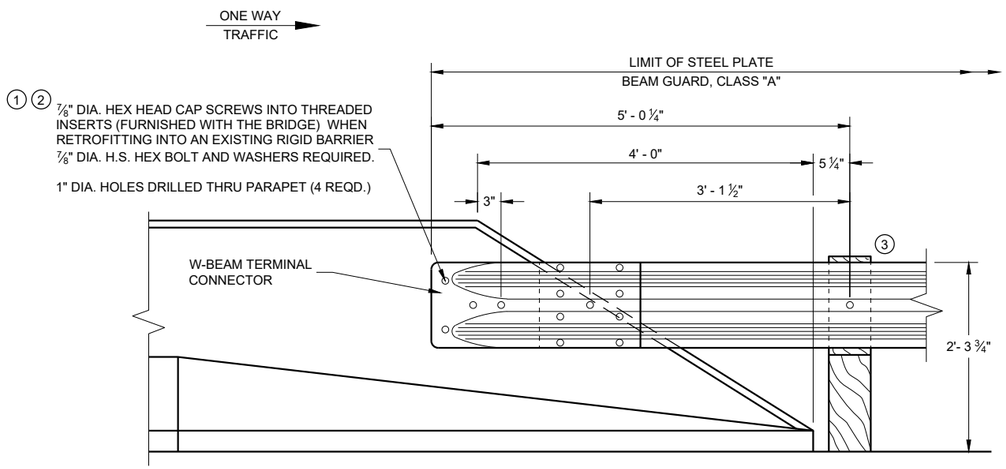
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DEPARTMENT OF TRANSPORTATION

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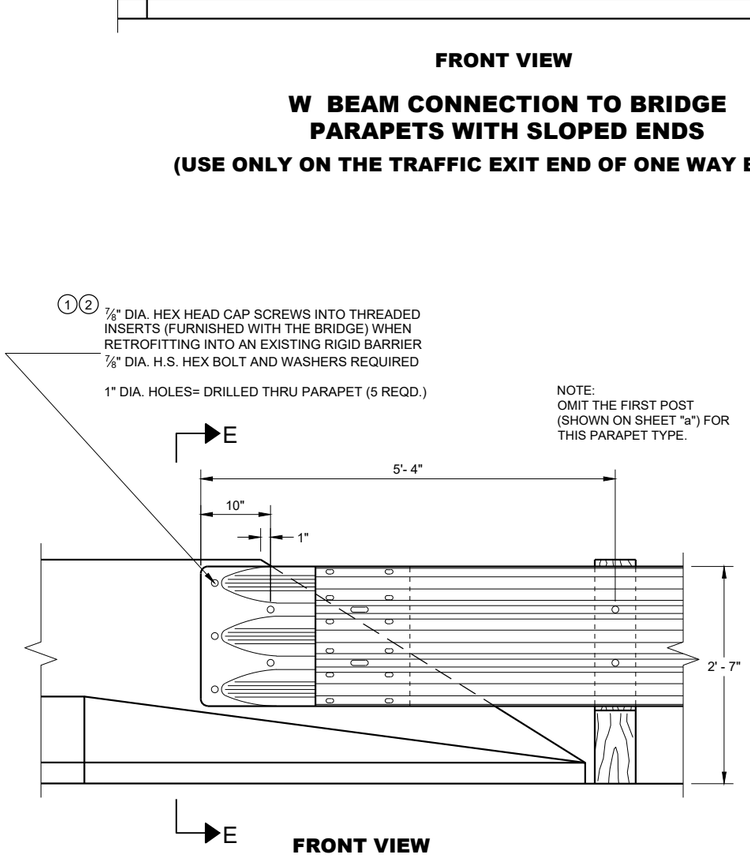
SDD 14B20 - 12c



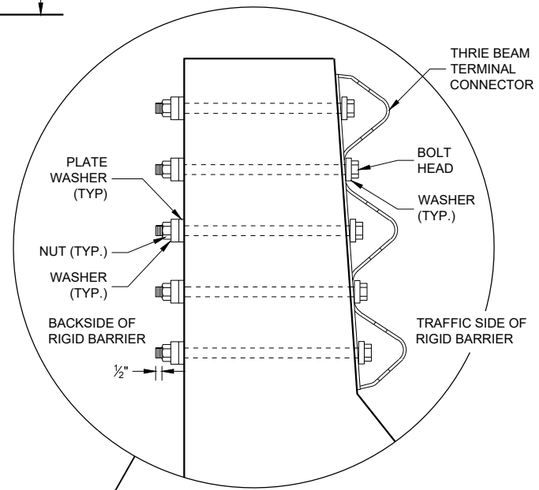
FRONT VIEW

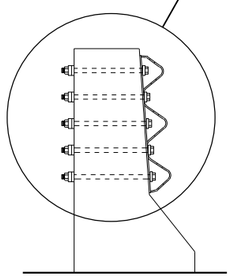
W BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

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



FRONT VIEW





SECTION E - E

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

GENERAL NOTES

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

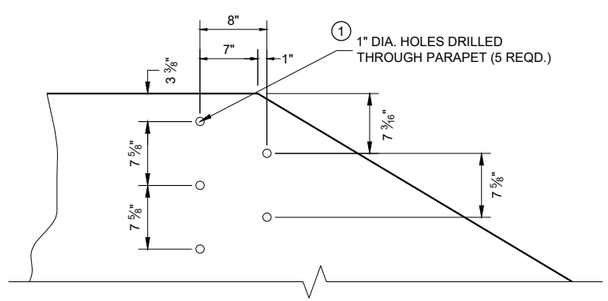
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

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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

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS

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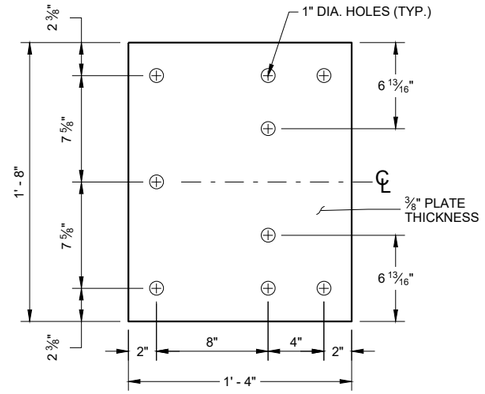
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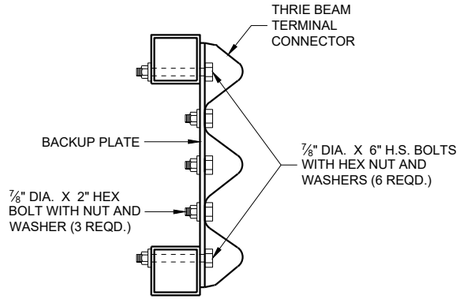
SDD 14B20 - 12d

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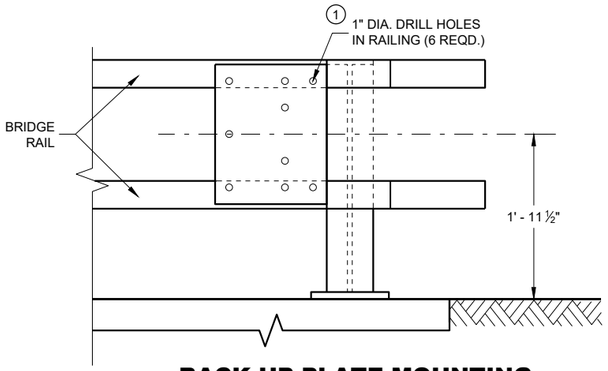
SDD 14B20 - 12d



BACK-UP PLATE DETAIL



SECTION G - G



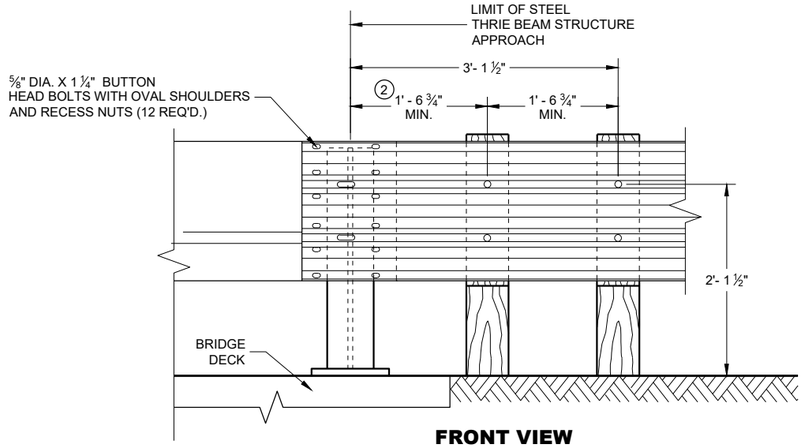
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

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.

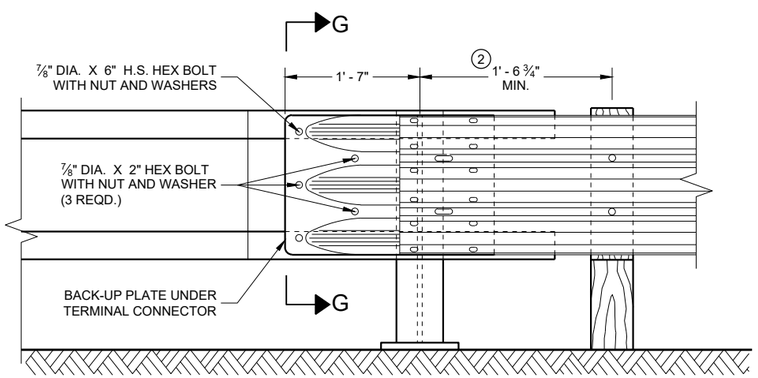
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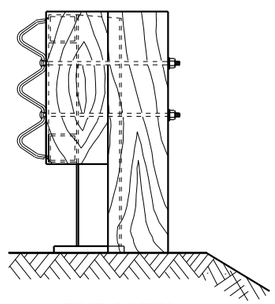


FRONT VIEW

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" & "W"

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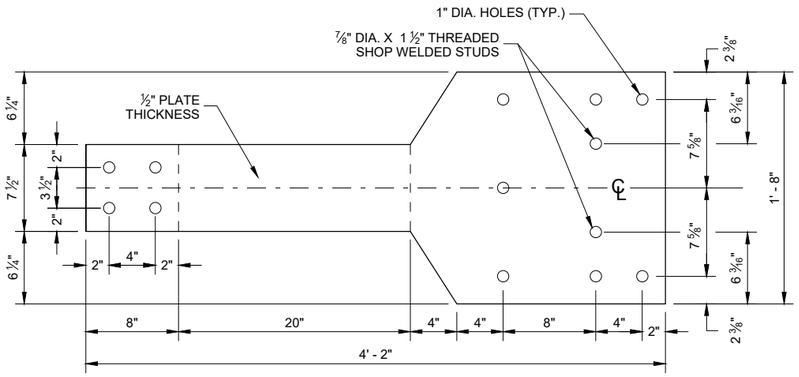
SDD 14B20 - 12e

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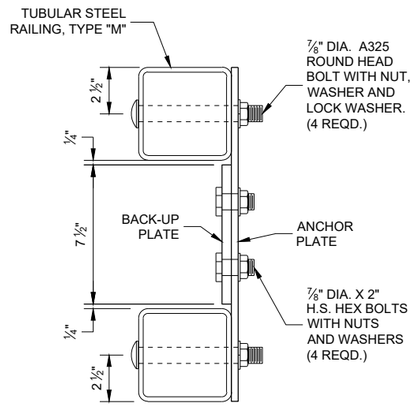
SDD 14B20 - 12e

GENERAL NOTES

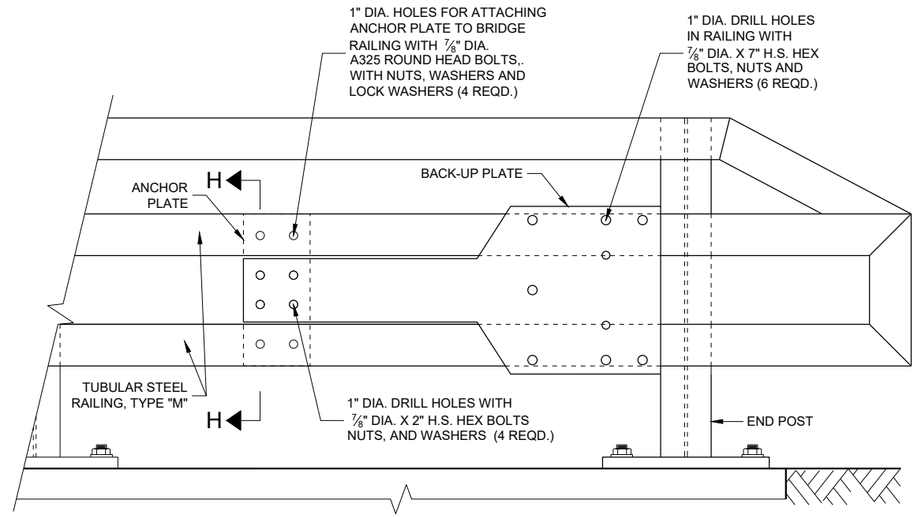
(1) VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AN ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.



FRONT VIEW

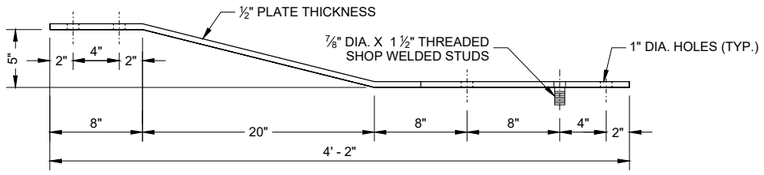


SECTION H - H



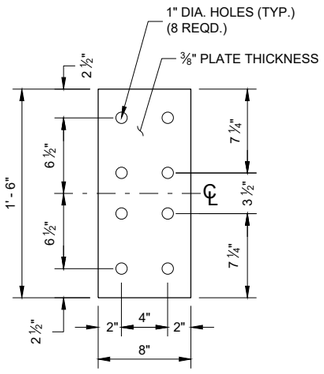
FRONT VIEW

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



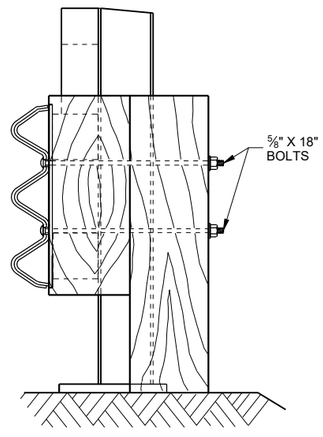
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

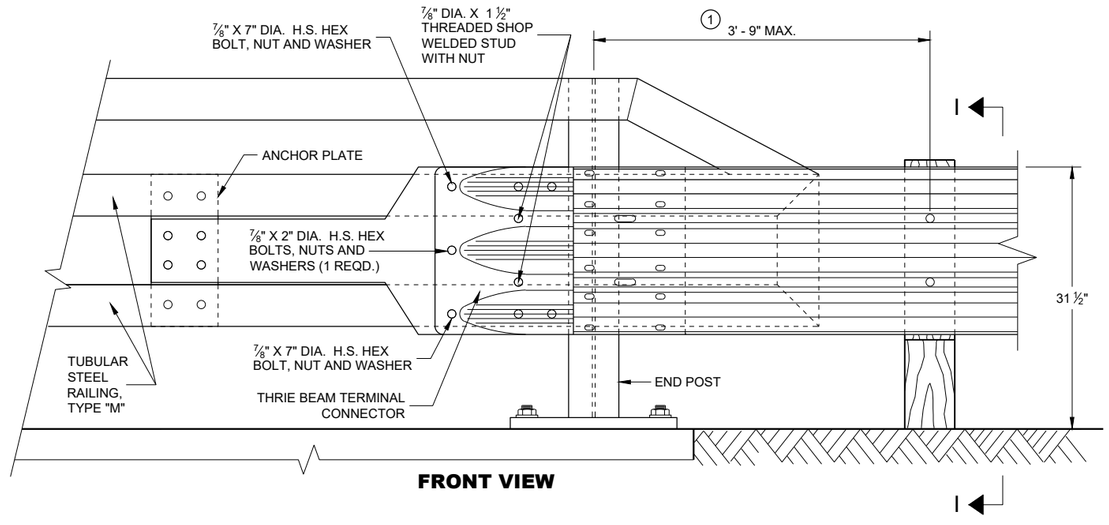


PLAN VIEW

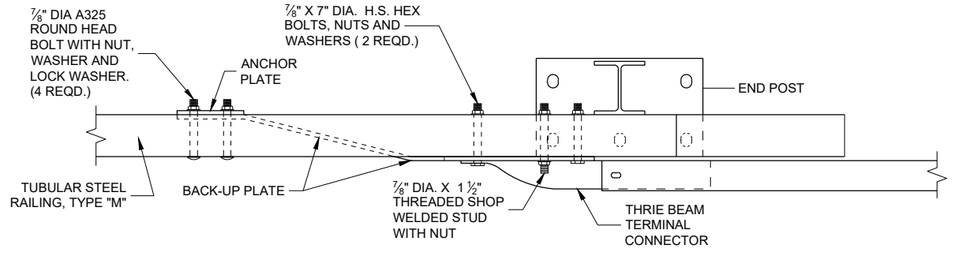
ANCHOR PLATE DETAIL, TYPE "M"



SECTION I - I



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

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

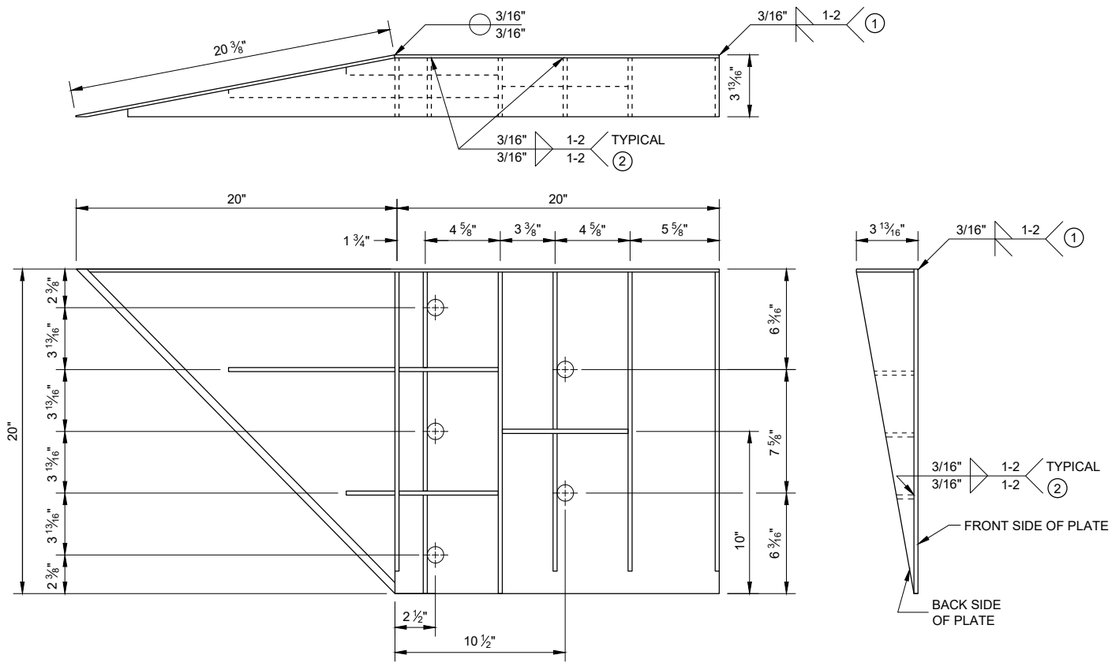
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WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

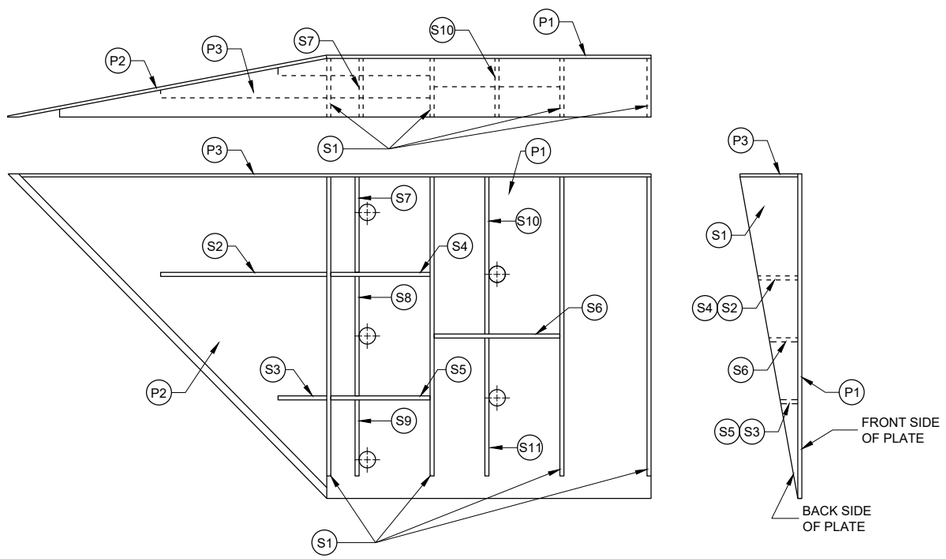


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

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".

CONNECTOR PLATED 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 1/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

STEEL THRIE BEAM STRUCTURE APPROACH

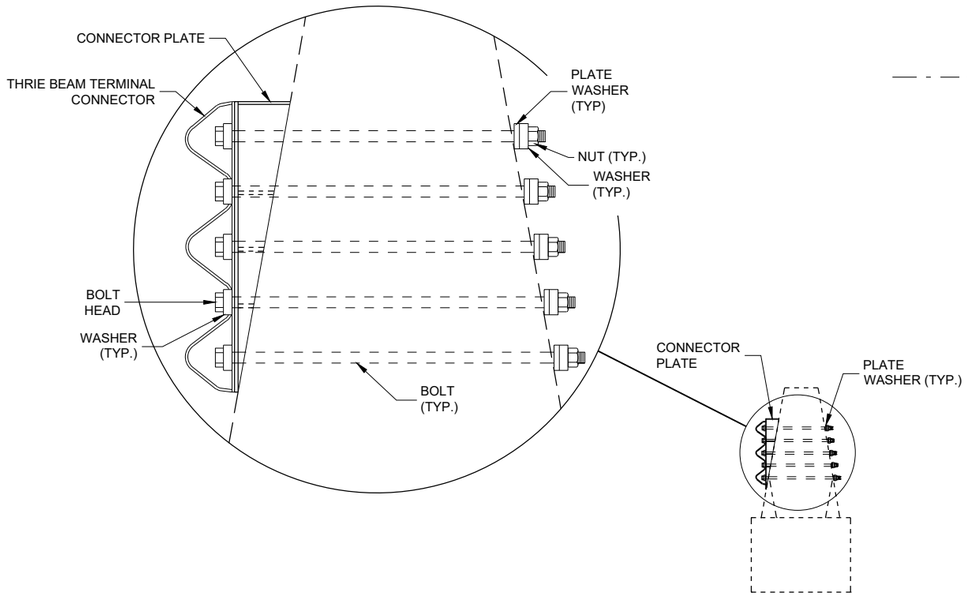
STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

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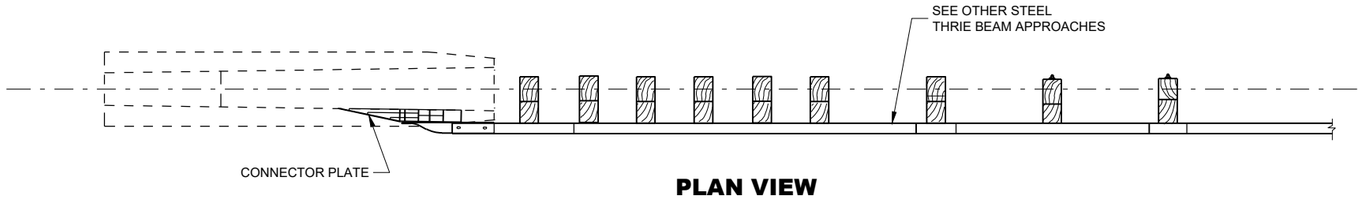
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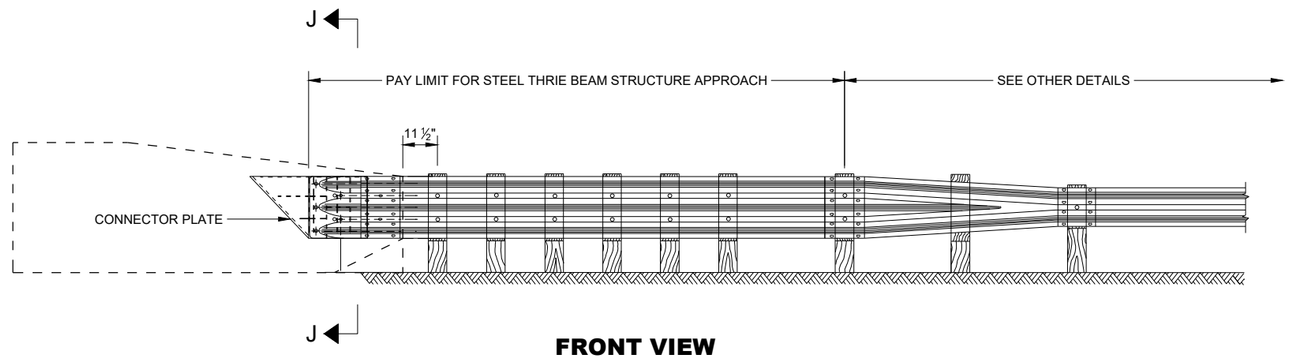
SDD 14B20 - 12g



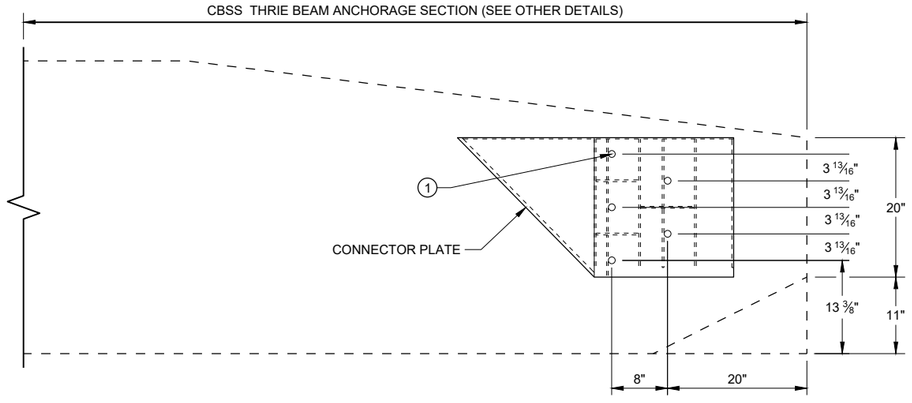
SECTION J - J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE PLACEMENT

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE 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 ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

STEEL THRIE BEAM STRUCTURE APPROACH

MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION

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BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

(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.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

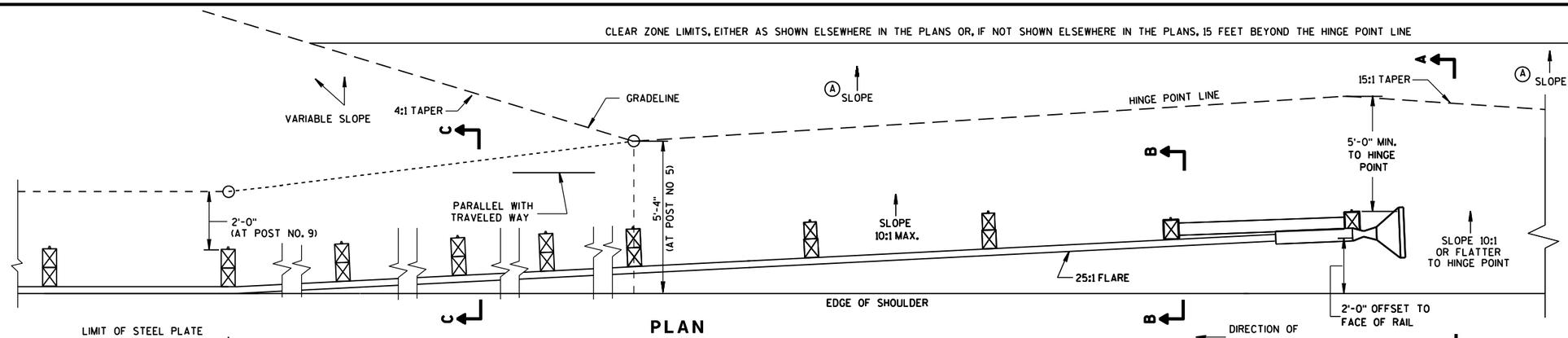
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

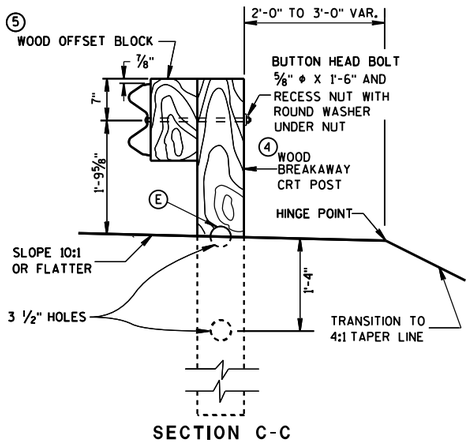
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

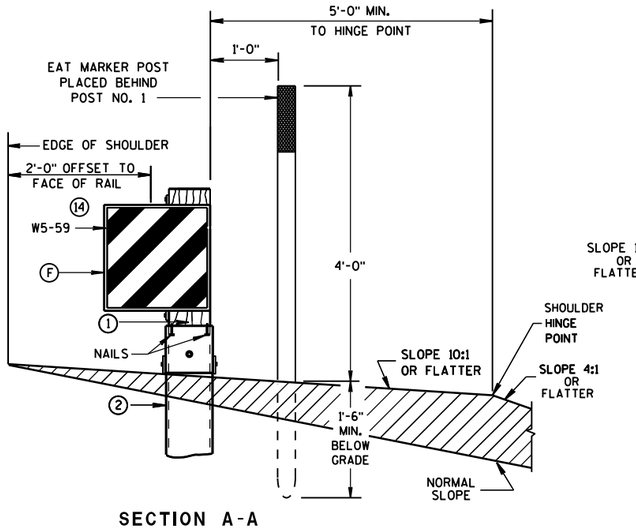
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

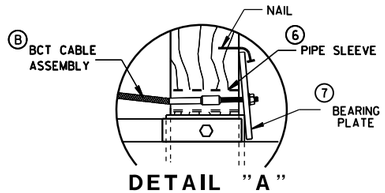
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

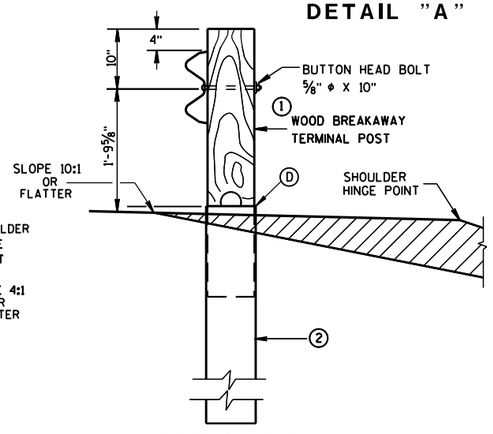
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

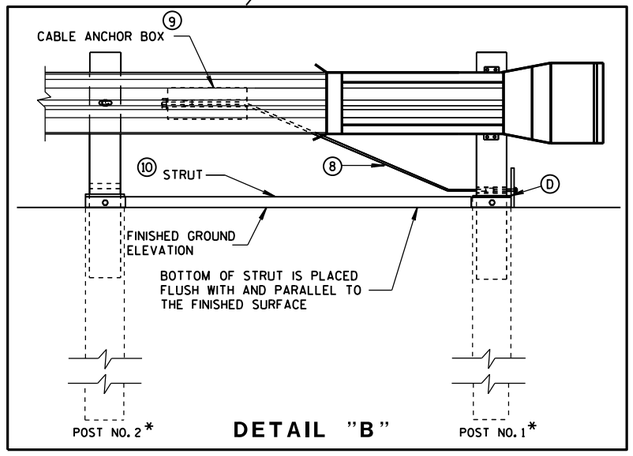










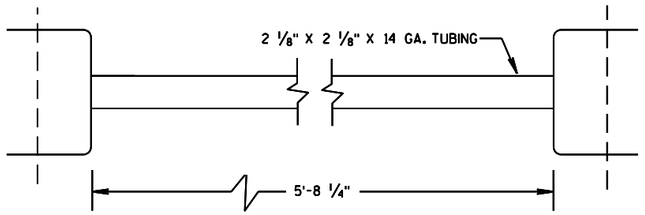


STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

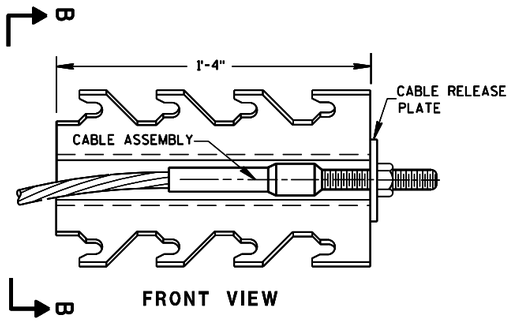
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

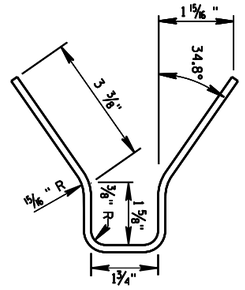
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL

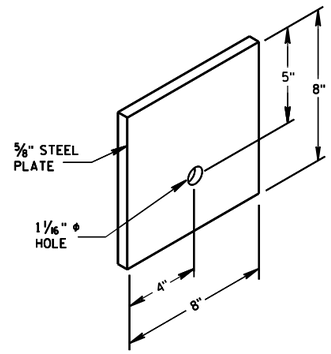


FRONT VIEW



SECTION B-B

⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

6

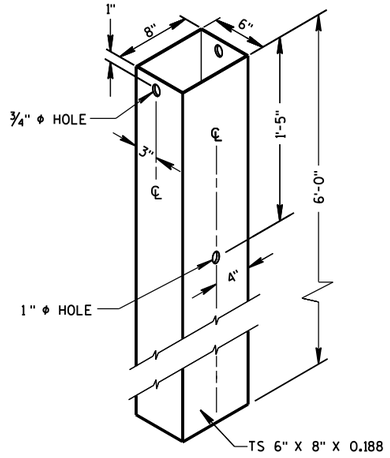
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S.D.D. 14 B 24-9b

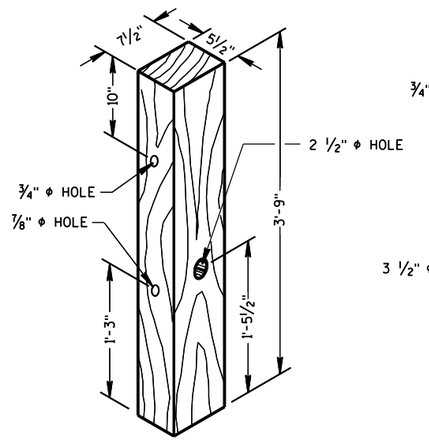
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

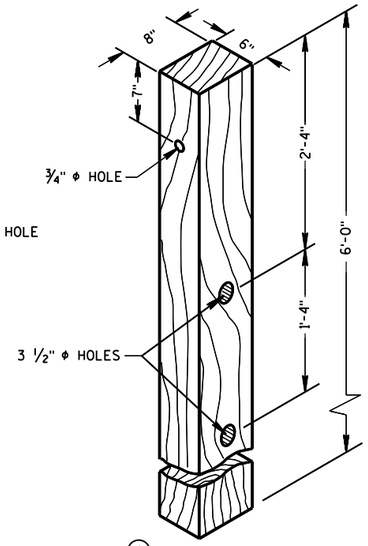
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-2



① TERMINAL POST

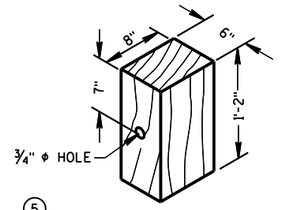


④ CRT POST
(POSTS NO'S 5-8

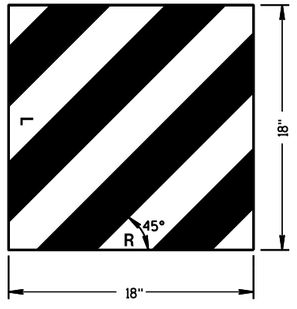
WOOD BREAKAWAY POSTS

GENERAL NOTES

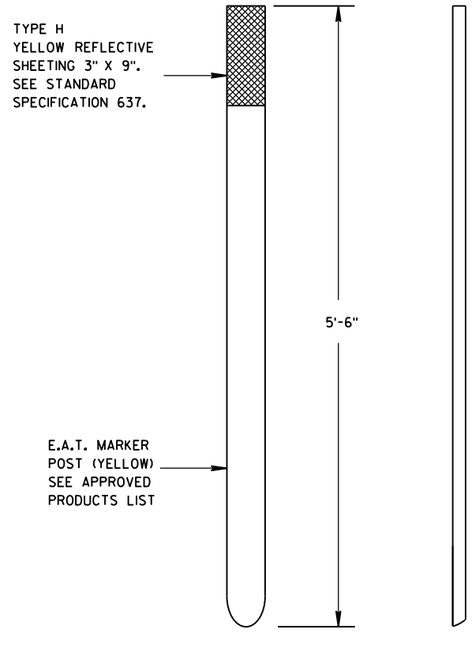
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS



E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

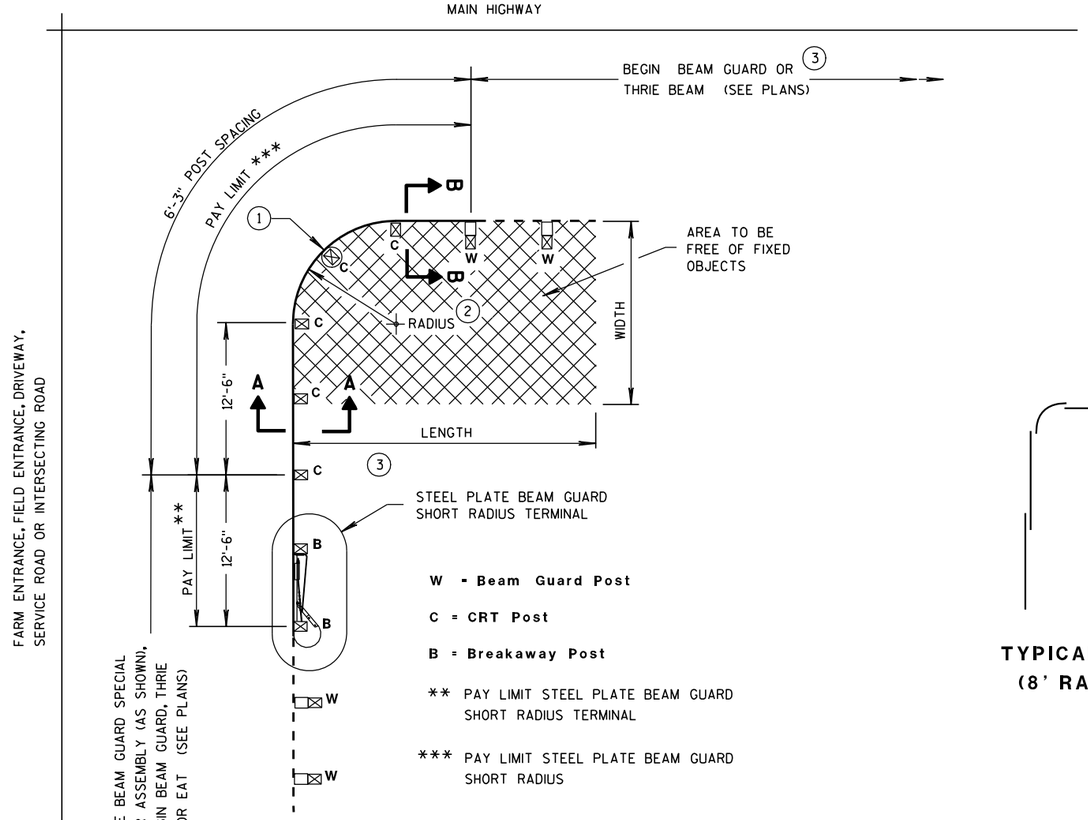
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV.
ENT

6

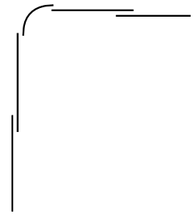
S.D.D. 14 B 24-9c

6

S.D.D. 14 B 24-9c



TYPICAL LAYOUT
(8' RADIUS SHOWN)



TYPICAL LAP SPLICES
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2. UNLESS NOTED OTHERWISE.

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

(1) ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.

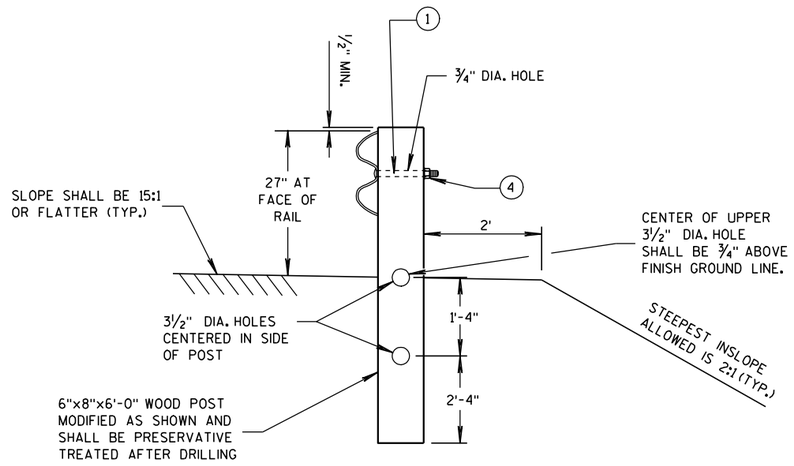
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

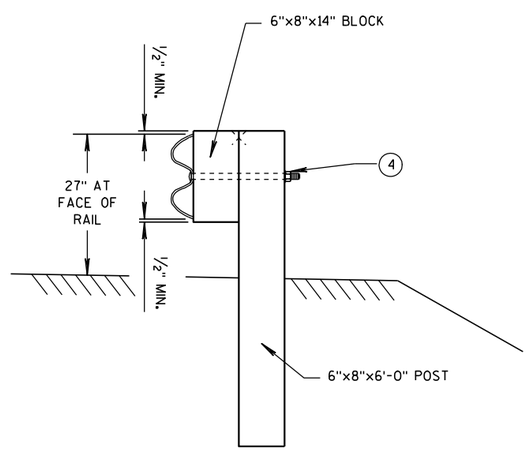
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



SECTION A-A
(CRT POST)



SECTION B-B
(BEAM GUARD POST)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

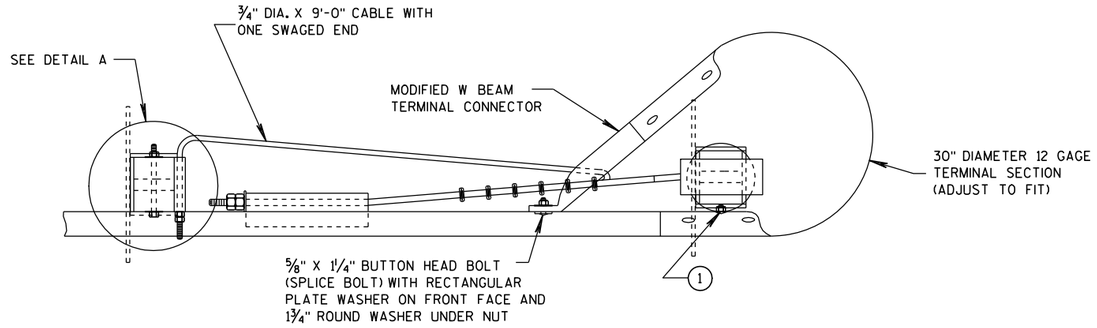
STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	

6

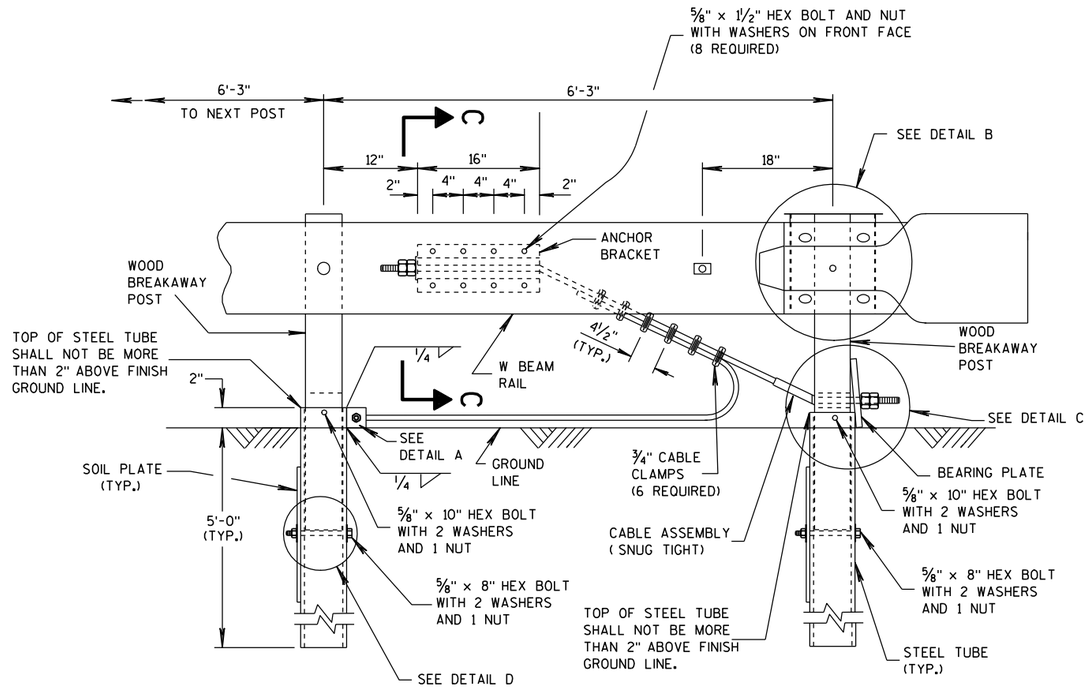
S.D.D. 14 B 27-1a

6

S.D.D. 14 B 27-1a



PLAN VIEW



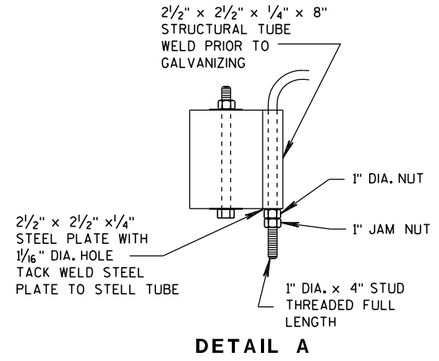
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

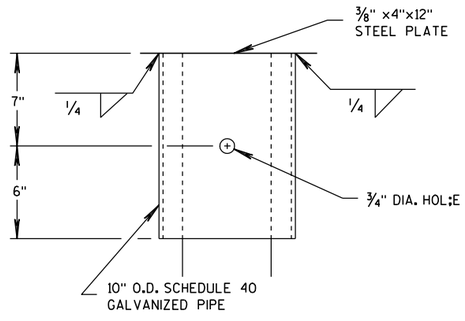
GENERAL NOTES

(1) ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A ⅝" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.

INSTALL GALVANIZED ¾" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



DETAIL A



DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

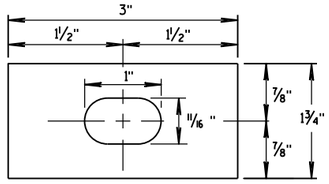
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

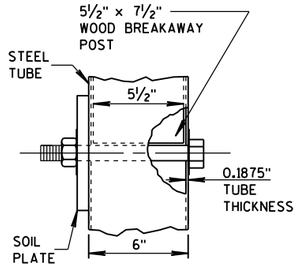
S.D.D. 14 B 27-1b

6

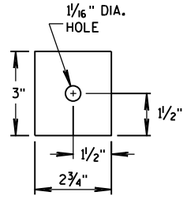
S.D.D. 14 B 27-1b



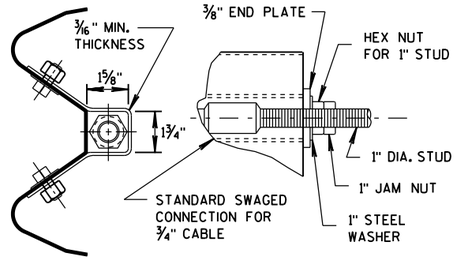
RECTANGULAR PLATE WASHER



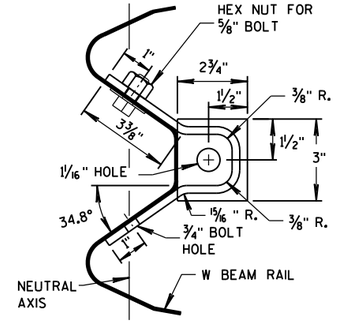
DETAIL D



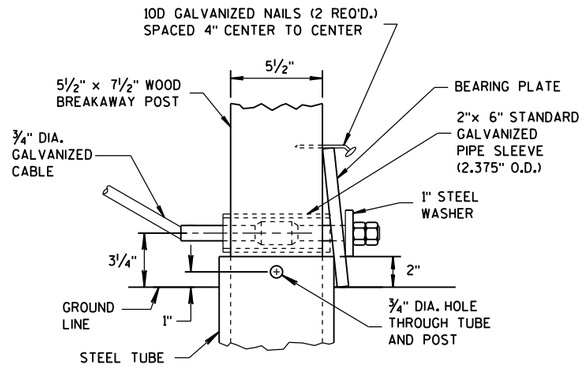
END PLATE



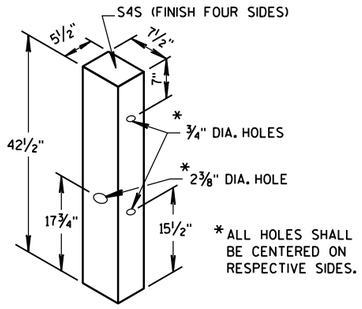
SECTION C-C
(END PLATE REMOVED)



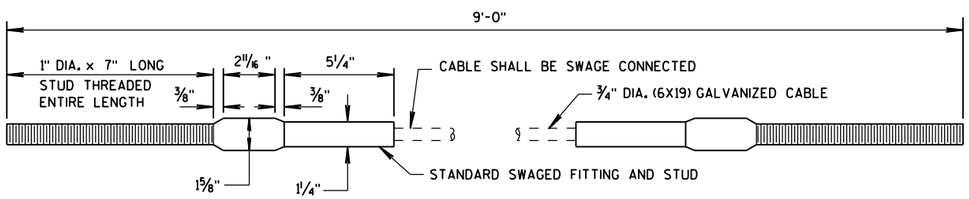
ANCHOR BRACKET



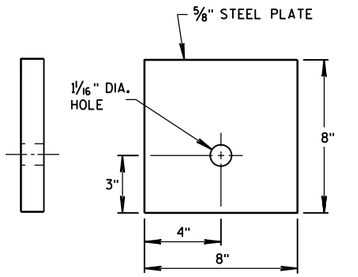
DETAIL C



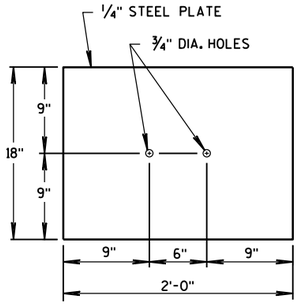
WOOD BREAKAWAY POST



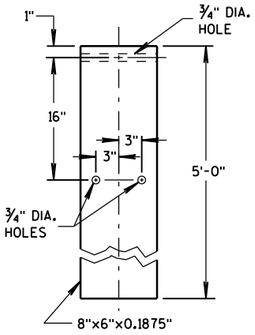
CABLE ASSEMBLY



BEARING PLATE



SOIL PLATE



STEEL TUBE

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

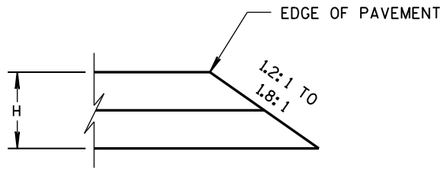
APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 27-1c

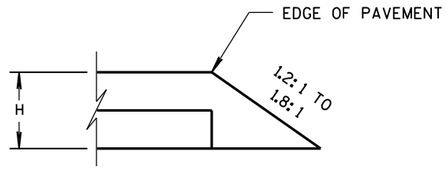
6

S.D.D. 14 B 27-1c



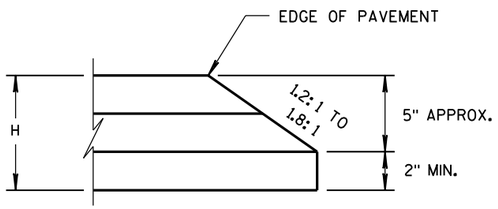
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



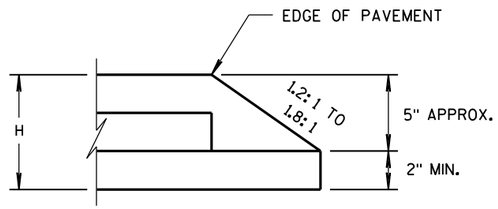
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

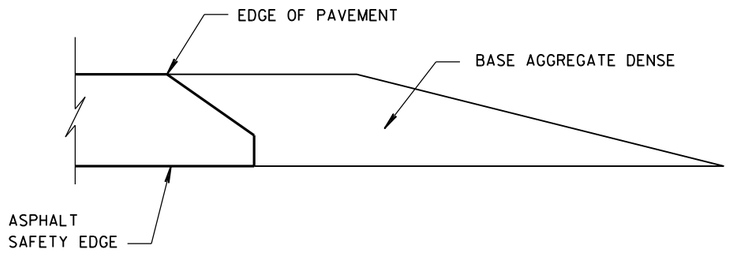
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

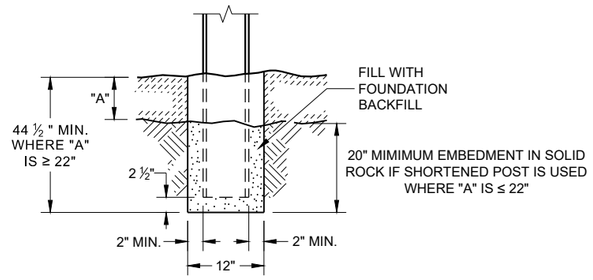
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

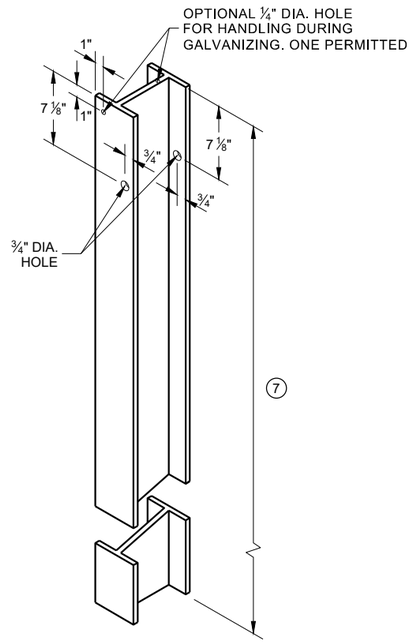
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

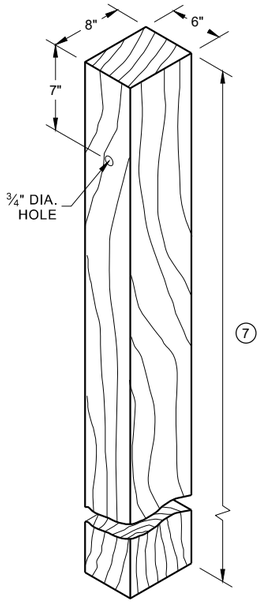
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



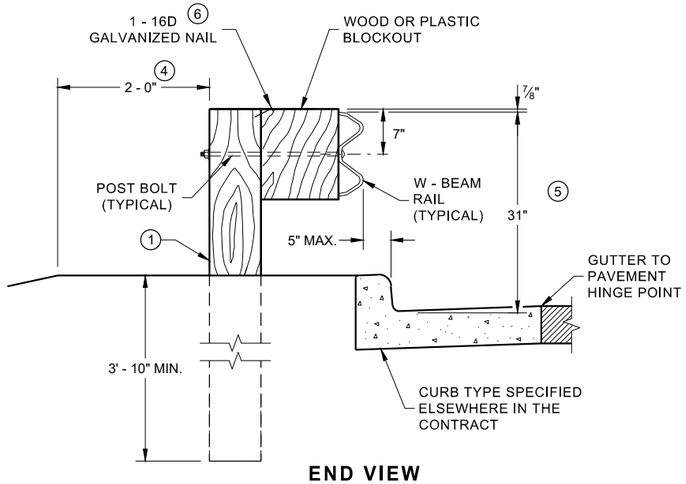
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



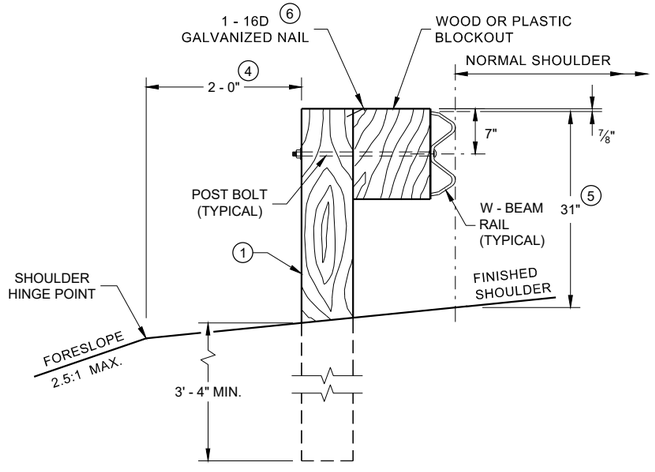
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



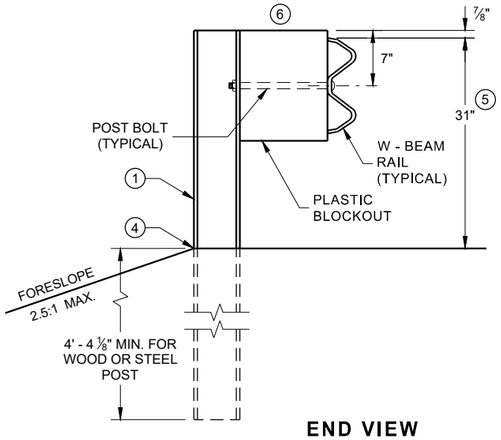
WOOD POST (6" X 8") NOMINAL (1)



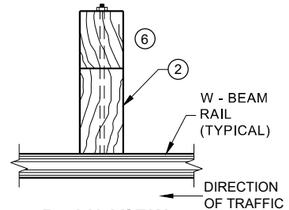
END VIEW
LOCATED ALONG A CURBED ROADWAY



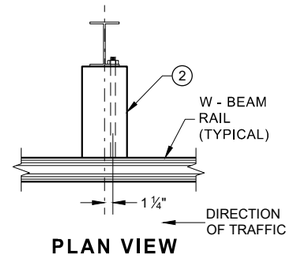
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



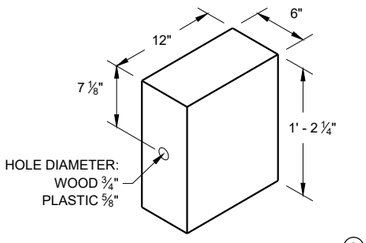
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



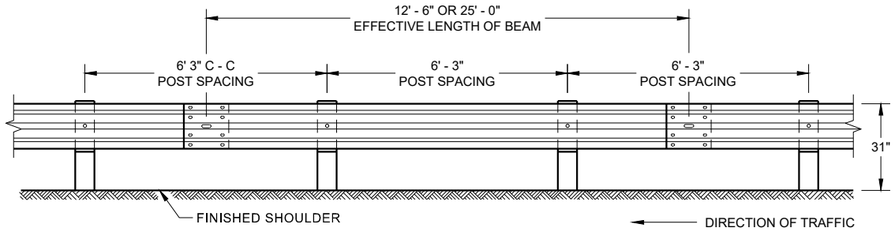
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

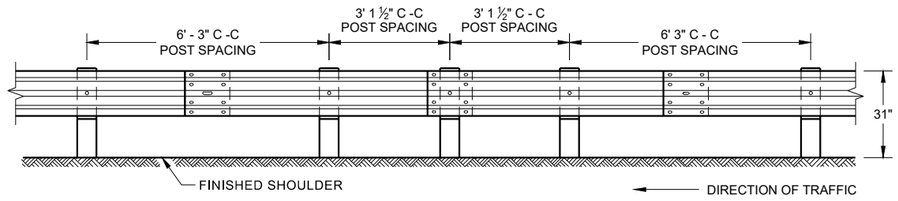
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 07a

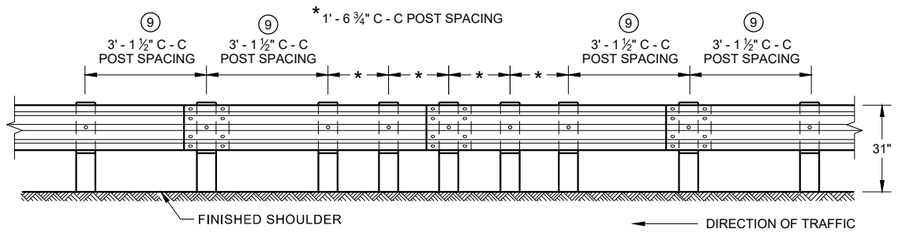
SDD 14B42 - 07a



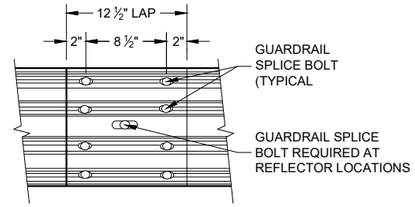
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

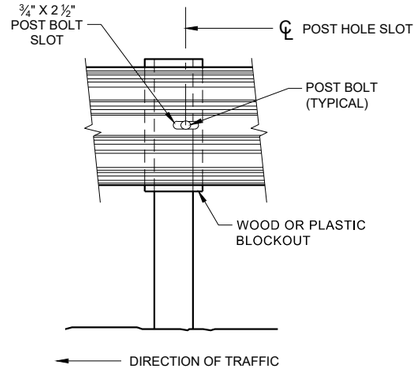
GENERAL NOTES

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

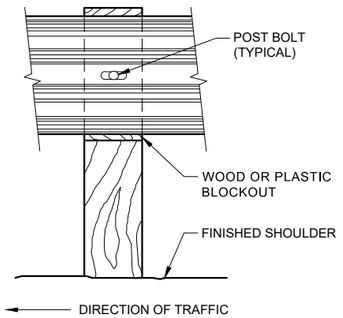
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.

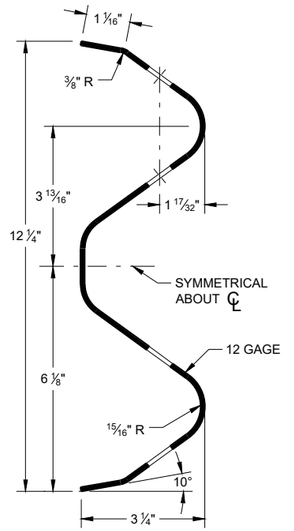
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



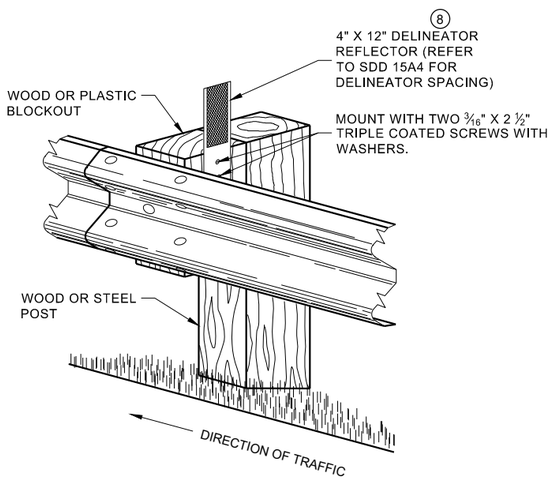
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



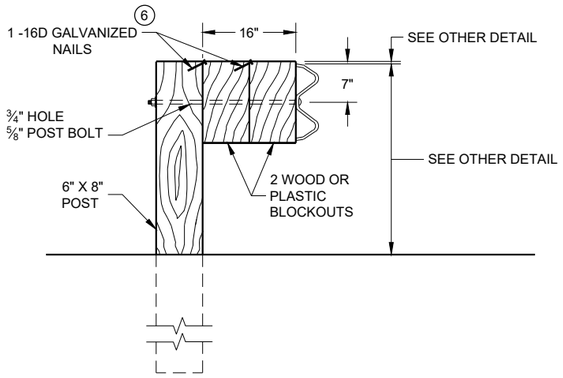
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B42 - 07b

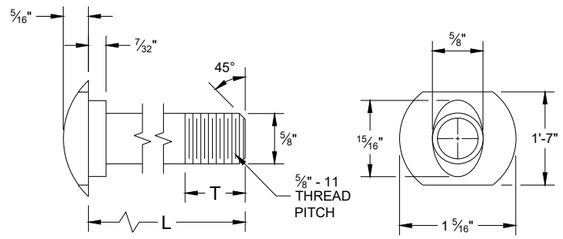


DETAIL FOR 16" BLOCKOUT DEPTH

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

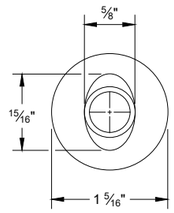
NOTE:

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

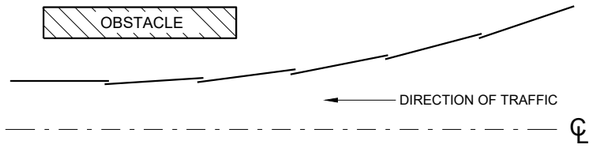


POST BOLT TABLE

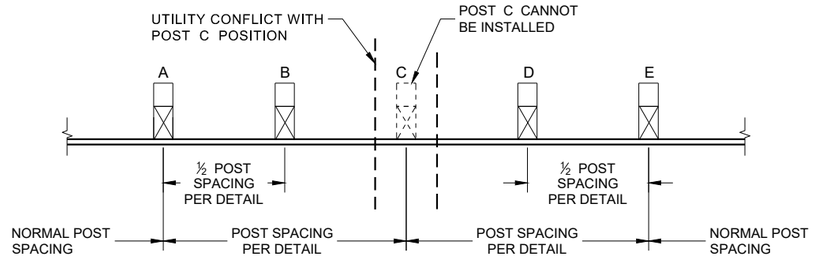
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



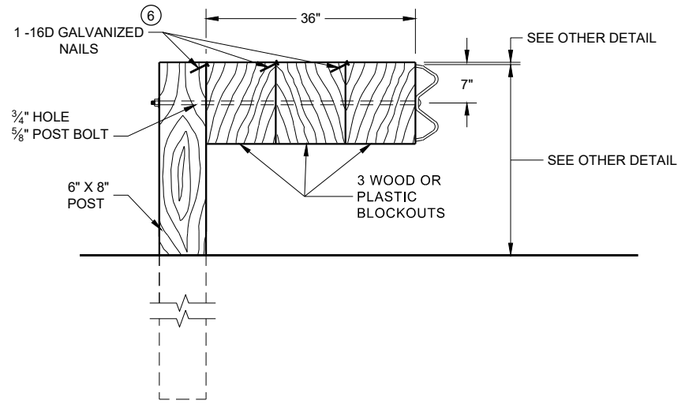
ALTERNATE BOLT HEAD



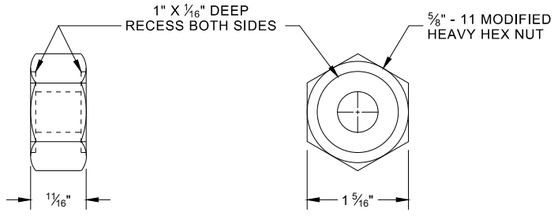
PLAN VIEW
BEAM LAPPING DETAIL



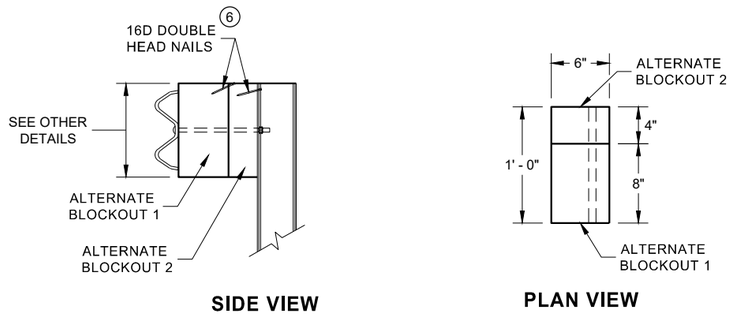
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

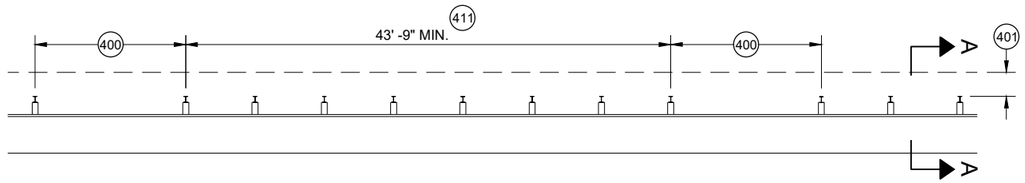
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

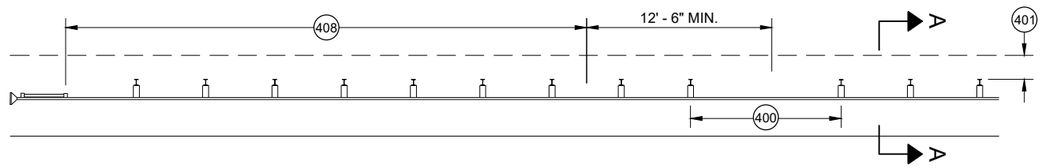
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

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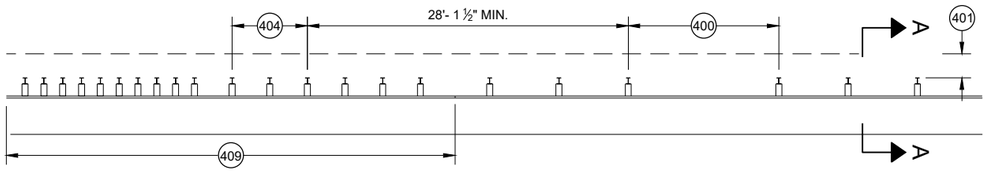
SDD 14B42 - 07c



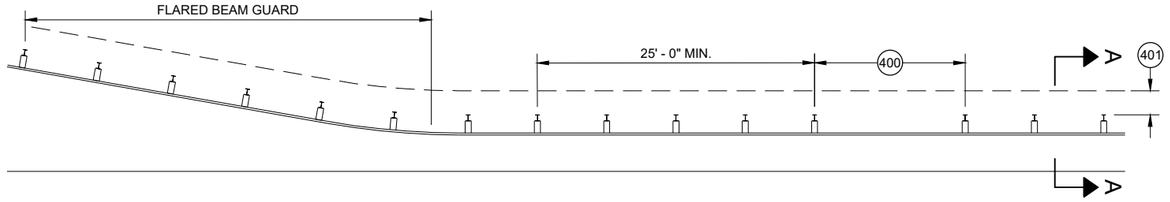
MISSING POST IN MGS GUARDRAIL



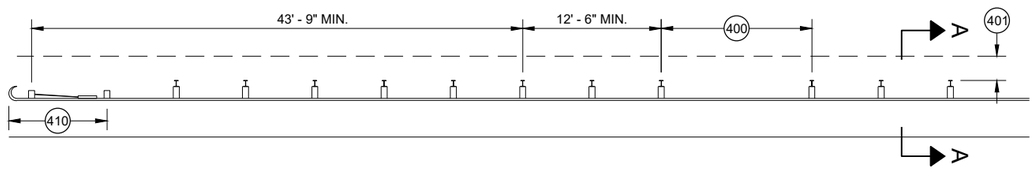
MISSING POST IN MGS GUARDRAIL NEAR EAT



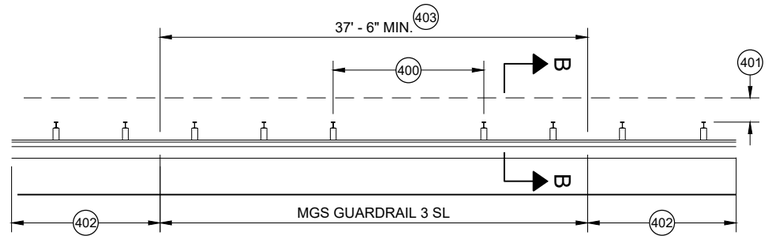
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

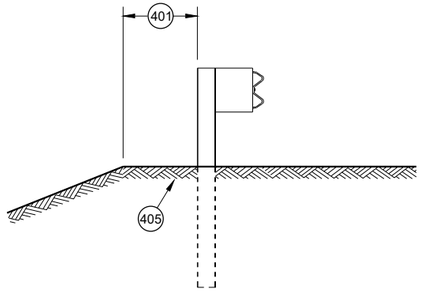


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

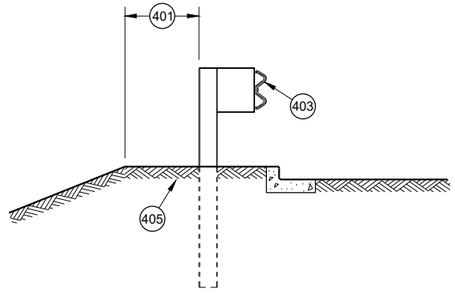


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

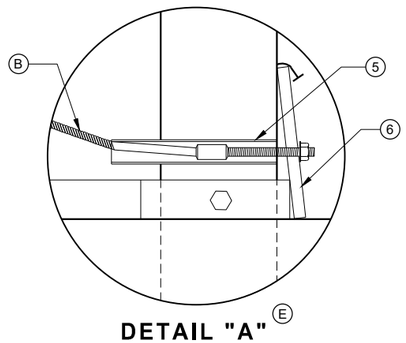
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

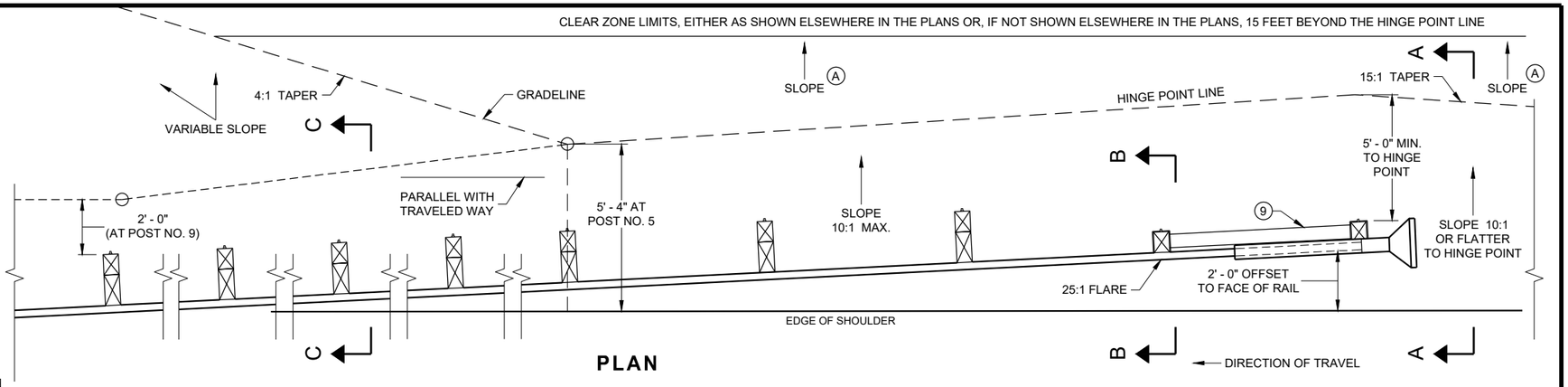
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

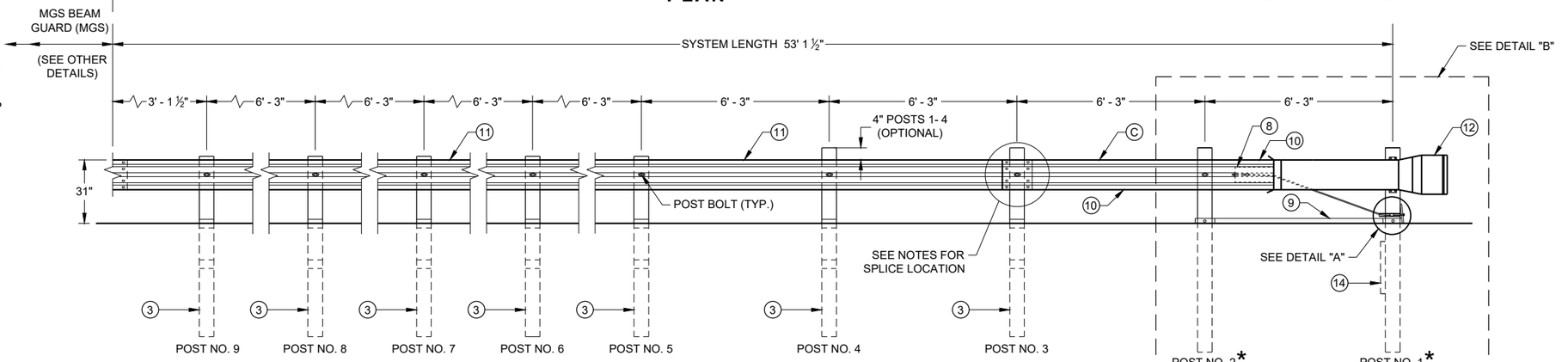
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

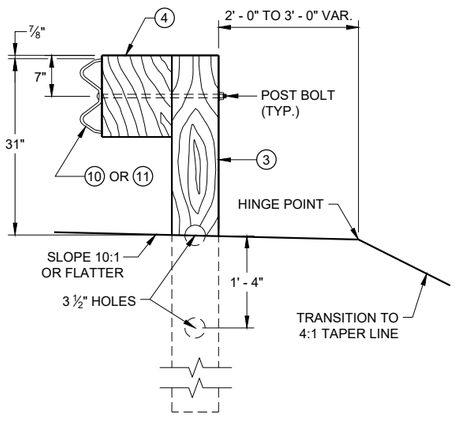
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



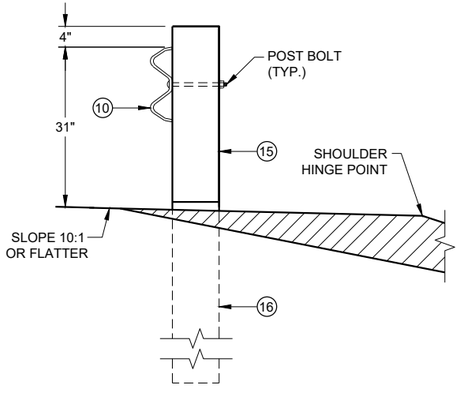
DETAIL "A" (E)



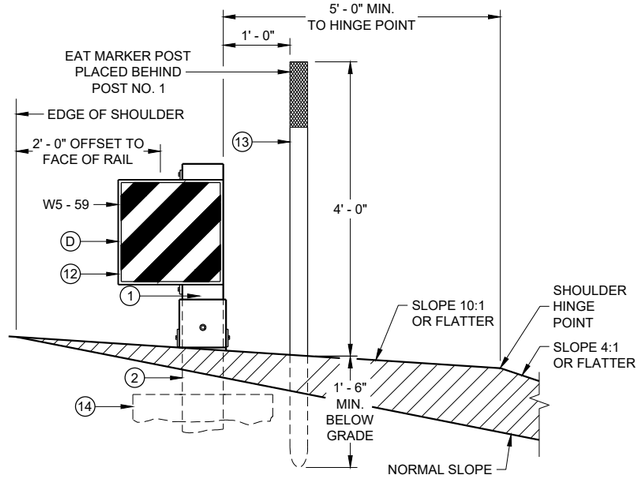




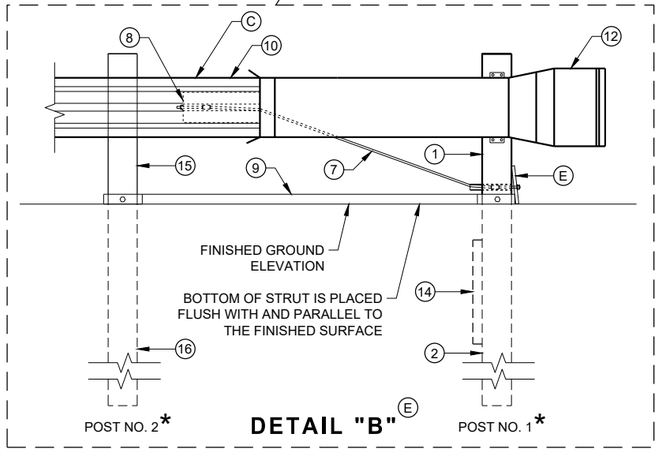
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*

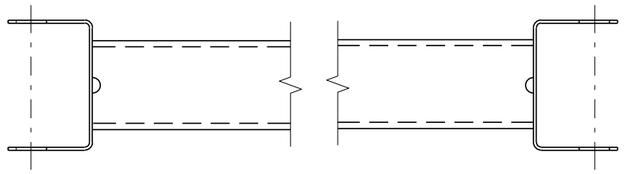


MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

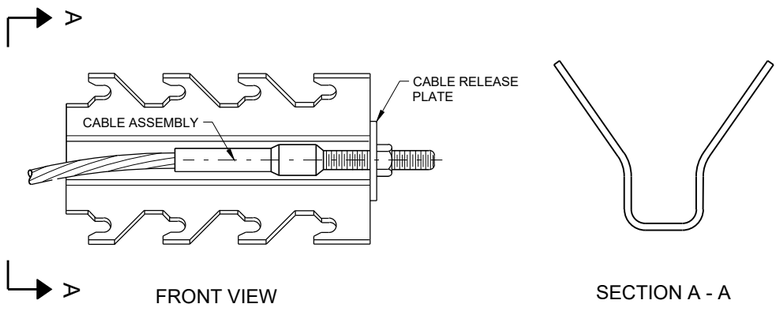
SDD 14B44 - 04a



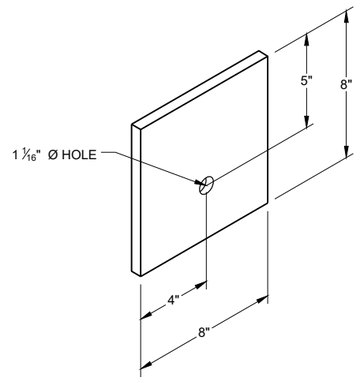
GENERIC GROUND STRUT (9) (E)

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX (9) (E)



BEARING PLATE (6) (E)

6

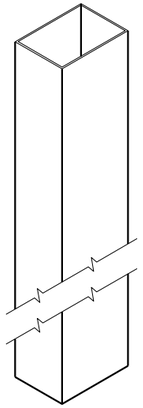
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SDD 14B44 - 04b

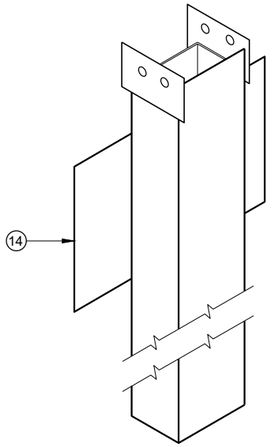
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

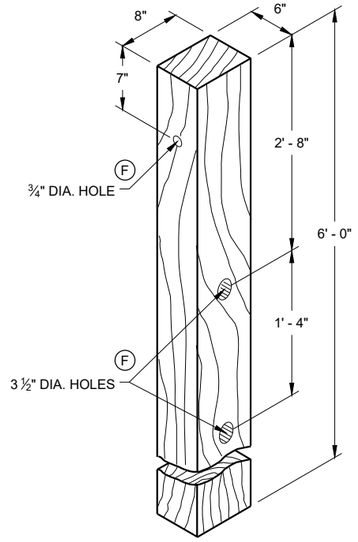
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



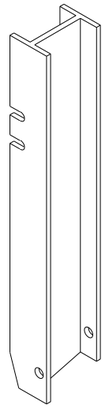
UPPER POST NO. 1 (1) (E)



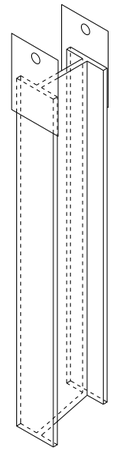
LOWER POST NO. 1 (2) (E)



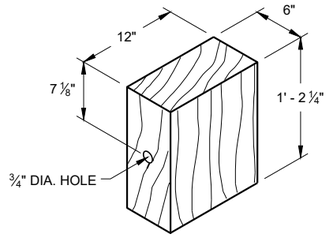
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



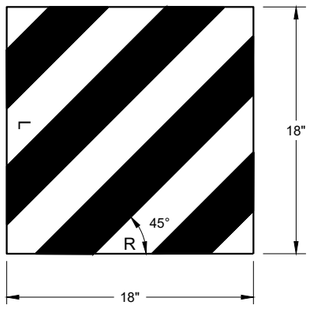
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

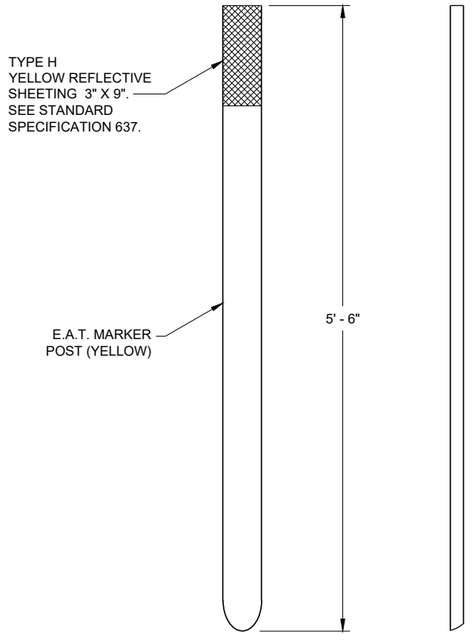


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



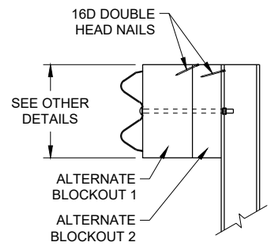
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

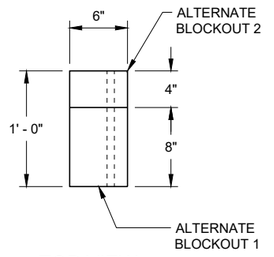


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

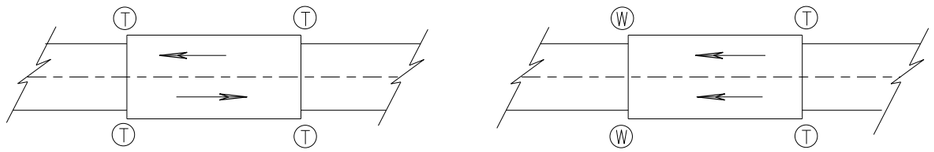
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

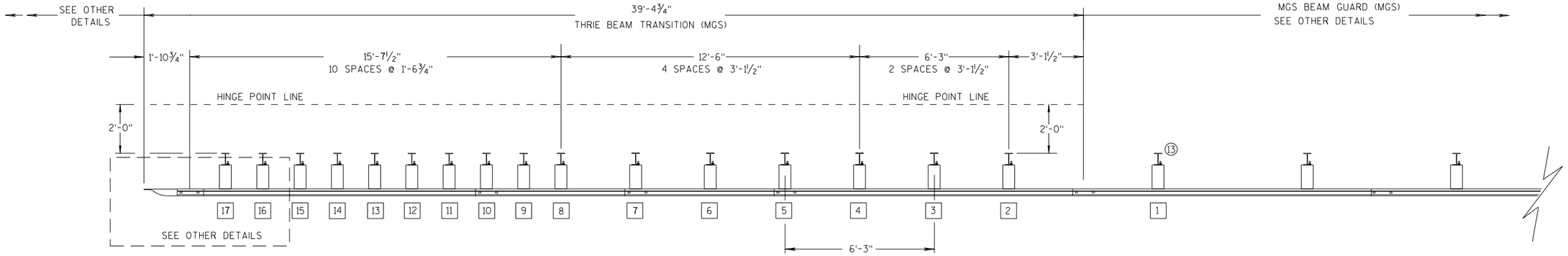
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

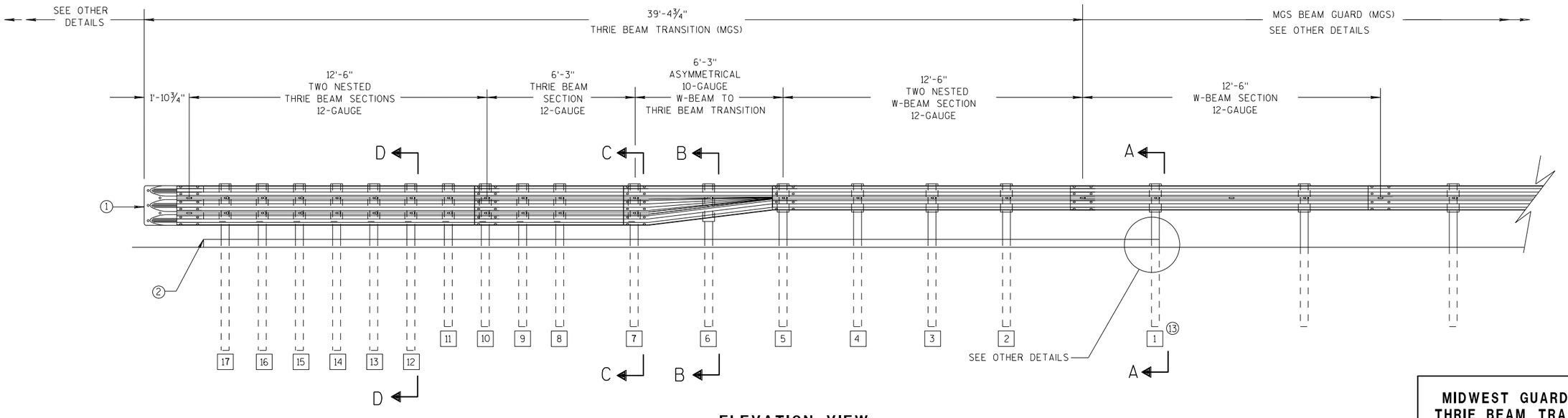
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

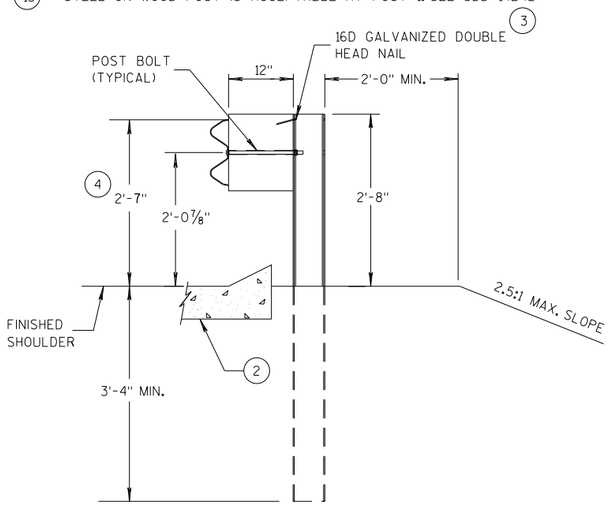
GENERAL NOTES

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

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

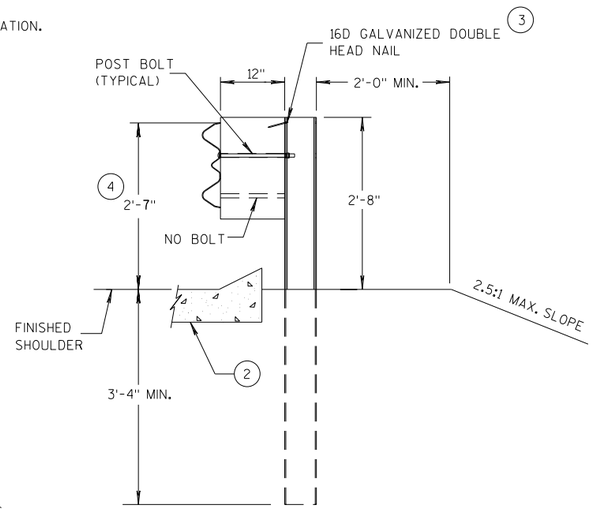
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



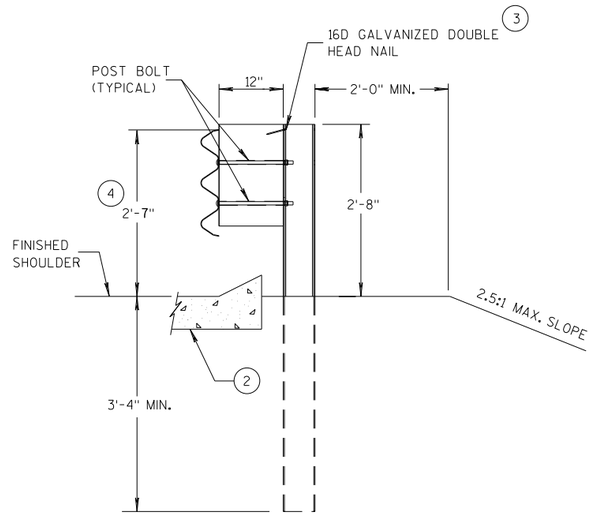
SECTION A-A (13)

POSTS 1-5



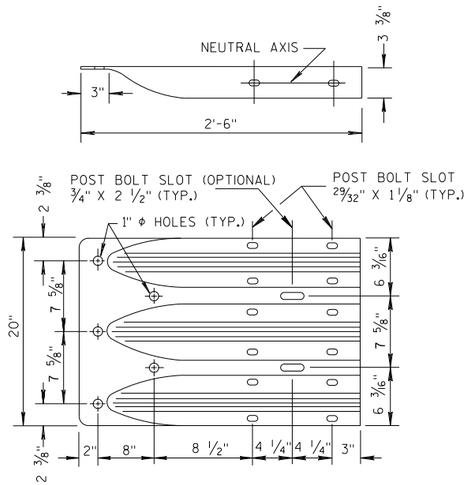
SECTION B-B

POST 6

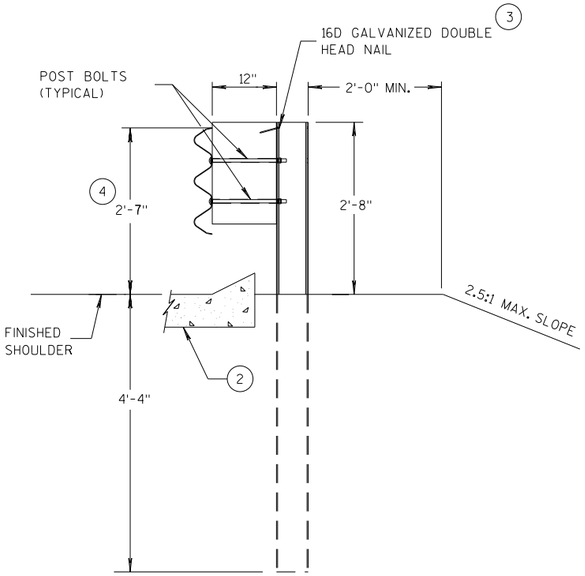


SECTION C-C

POSTS 7-11

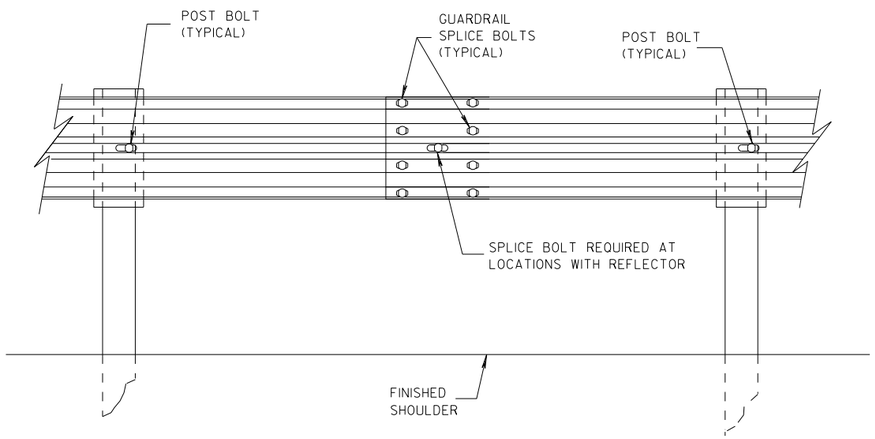


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

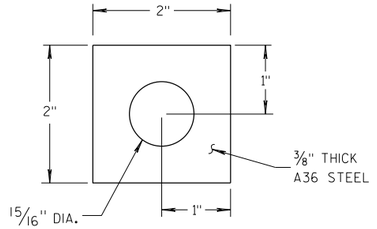
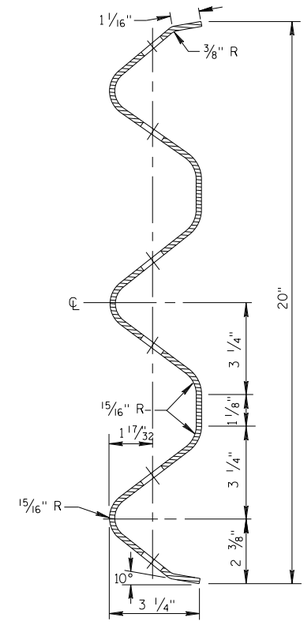


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

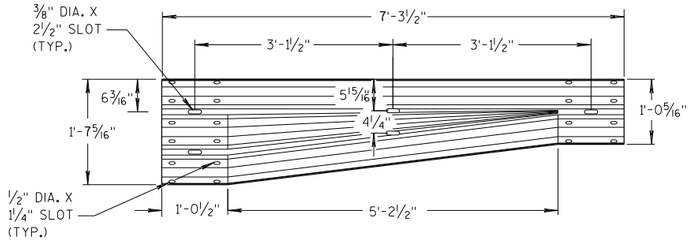
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 154

6

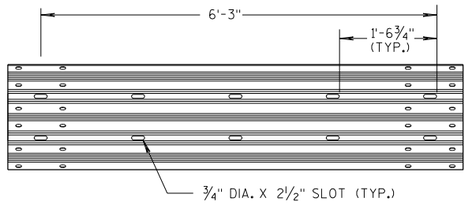
S.D.D. 14 B 45-5b

6

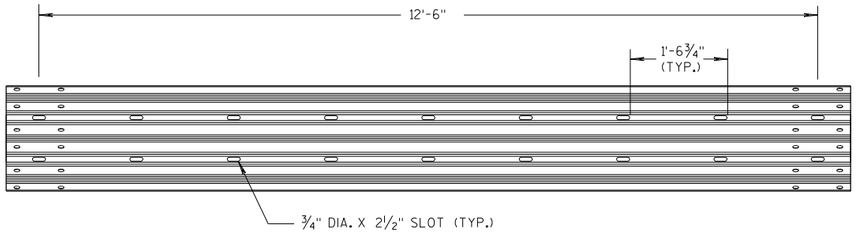
S.D.D. 14 B 45-5b



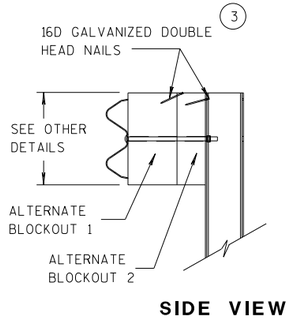
W-BEAM TO THRIE BEAM TRANSITION SECTION



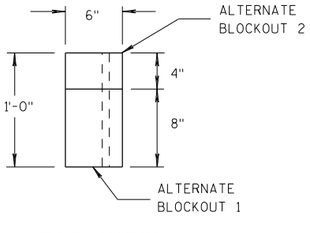
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

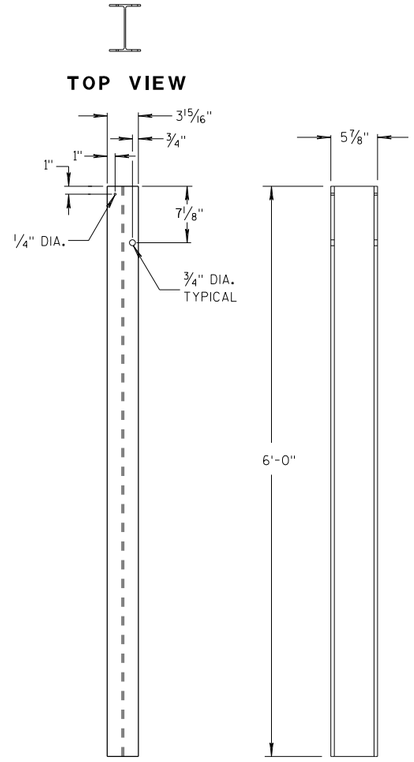


SIDE VIEW



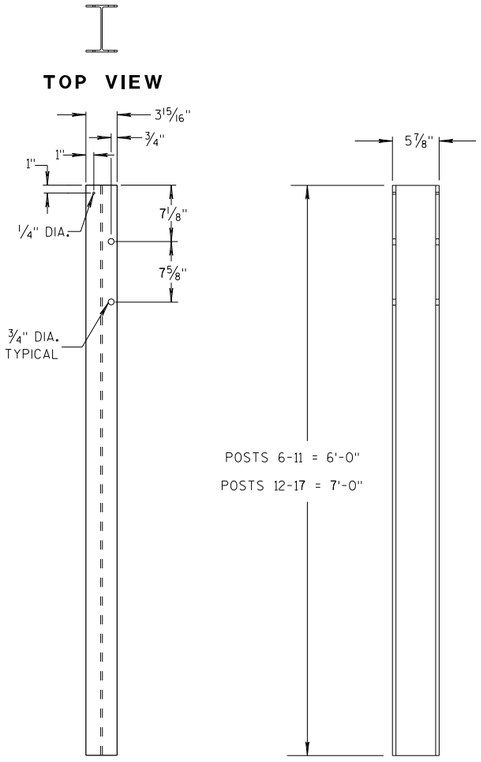
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



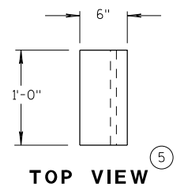
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

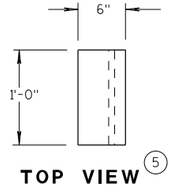


FRONT VIEW SIDE VIEW

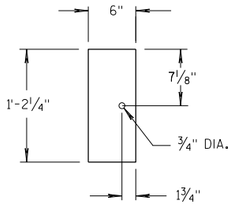
STEEL POSTS 6-17



TOP VIEW (5)

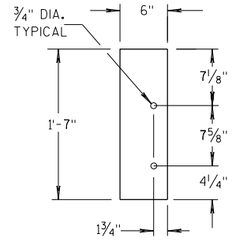


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

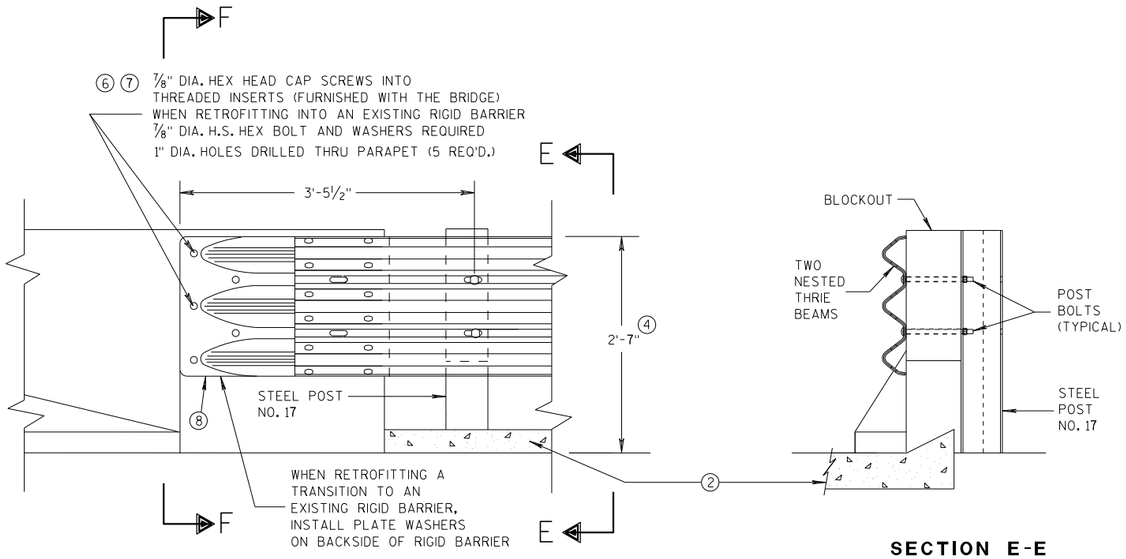
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

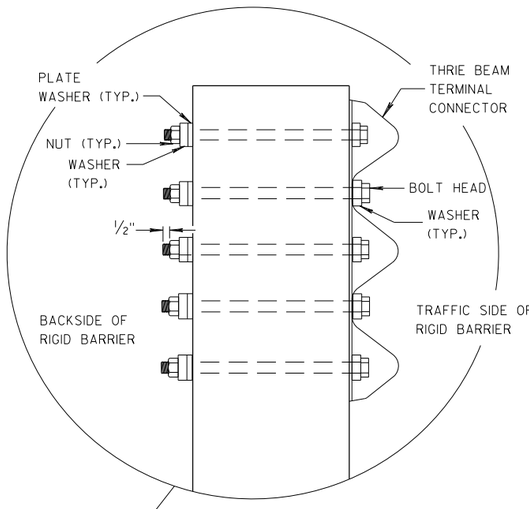
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

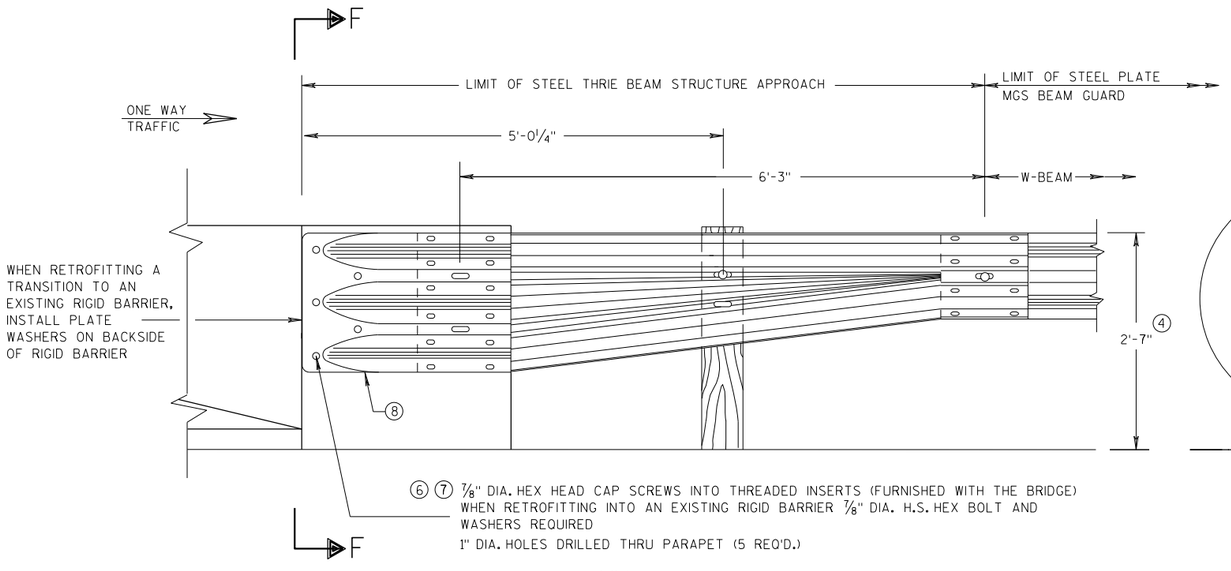
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

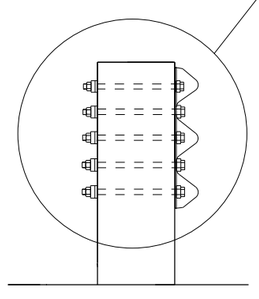
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

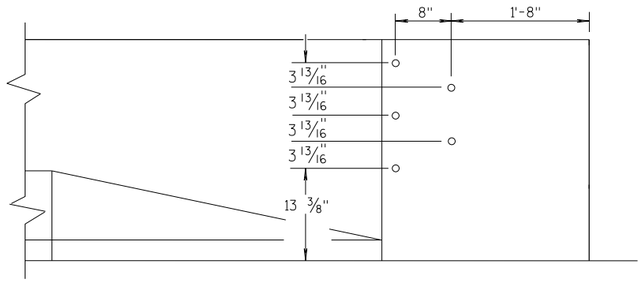




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

6

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

GENERAL NOTES

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

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

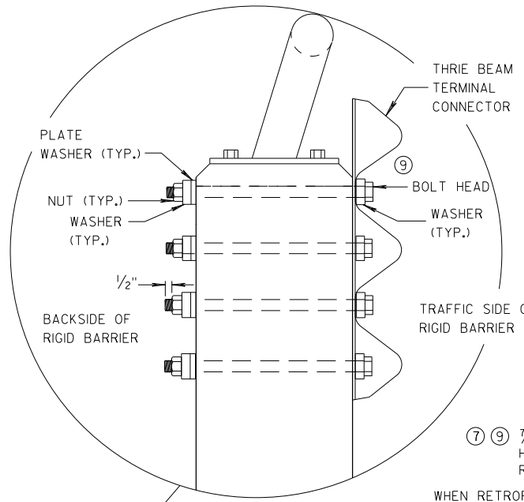
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

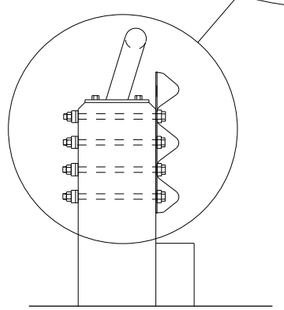
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

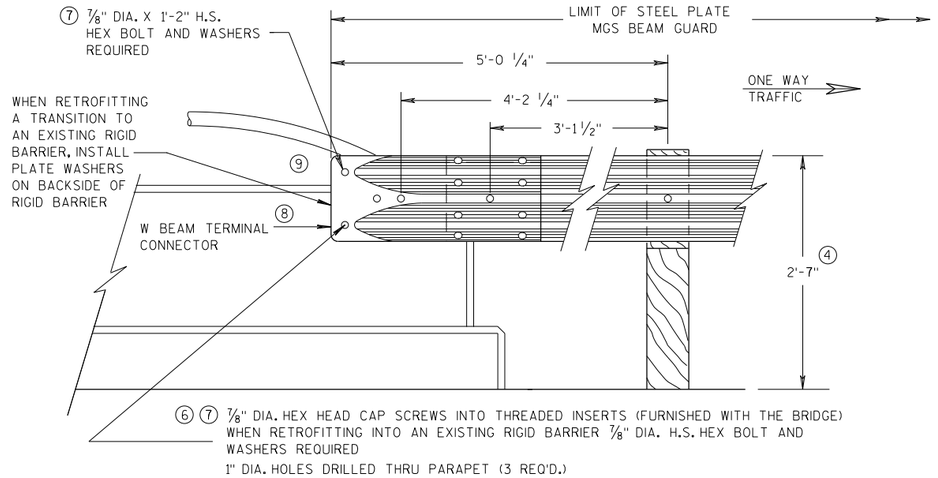
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

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





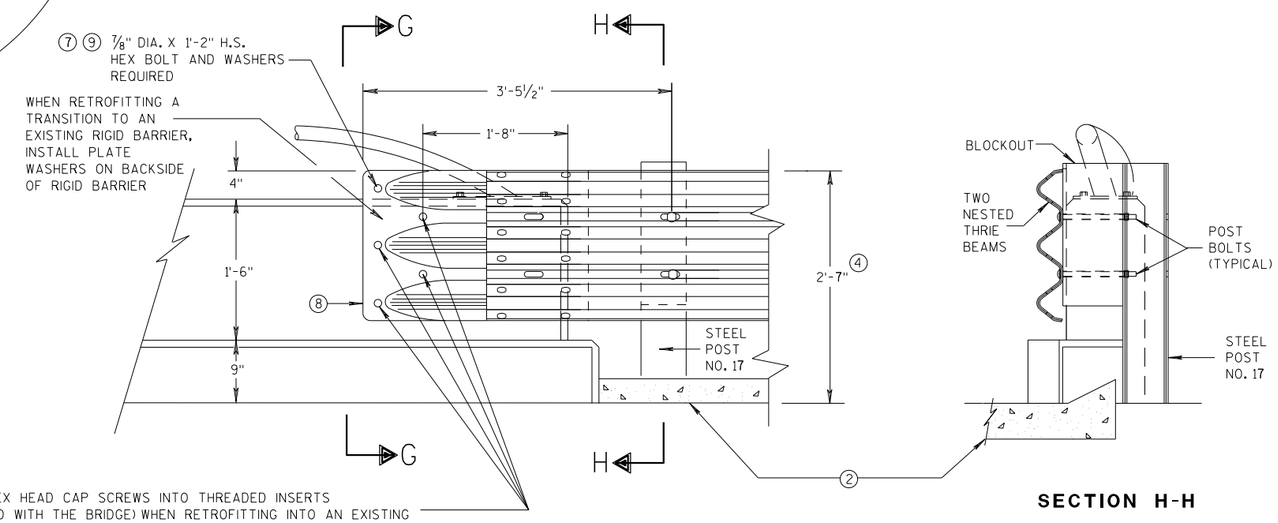
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

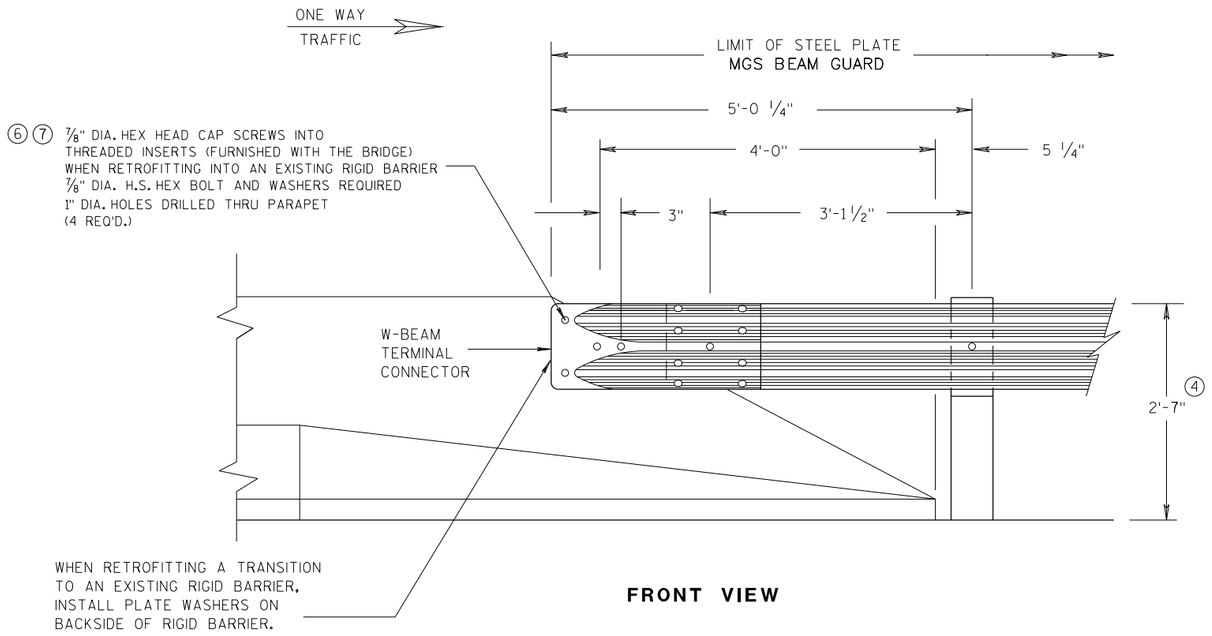
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S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

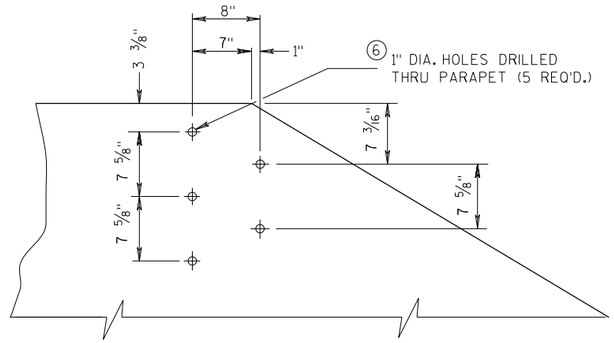
GENERAL NOTES

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

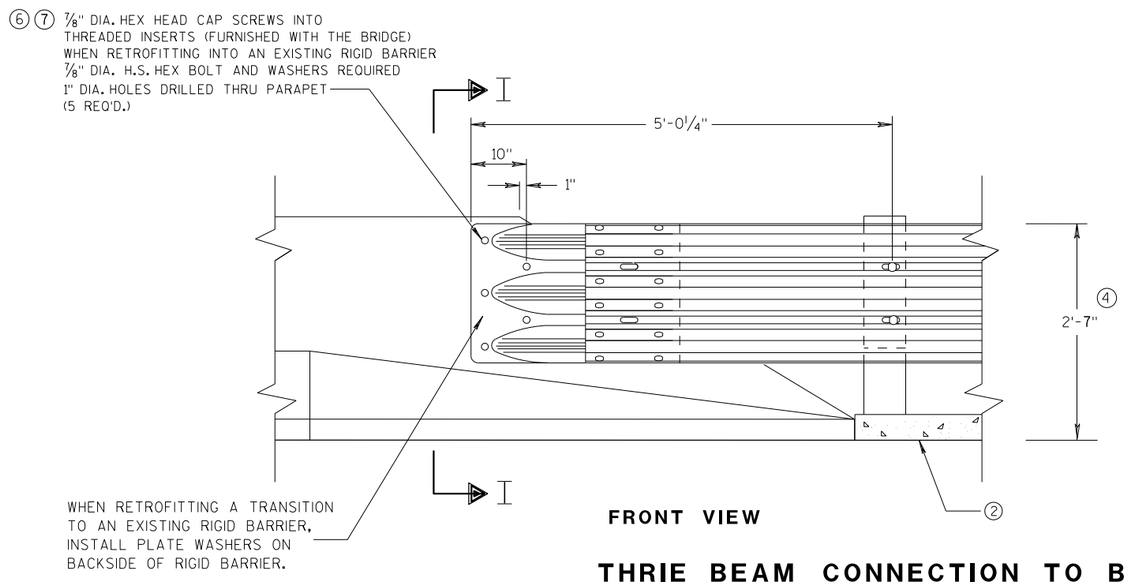
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

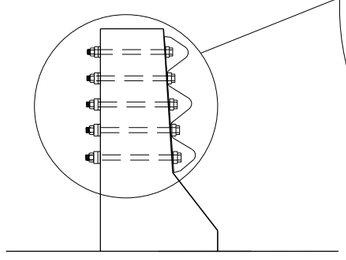
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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



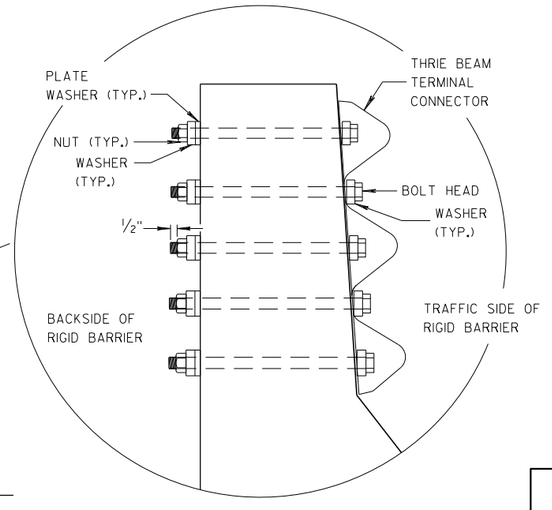
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

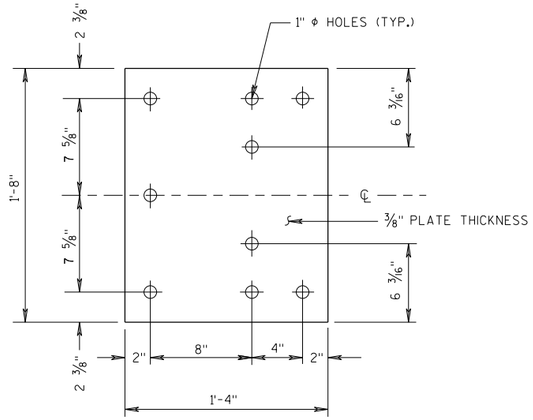
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

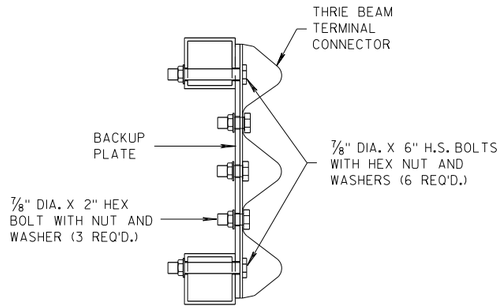
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FHWA

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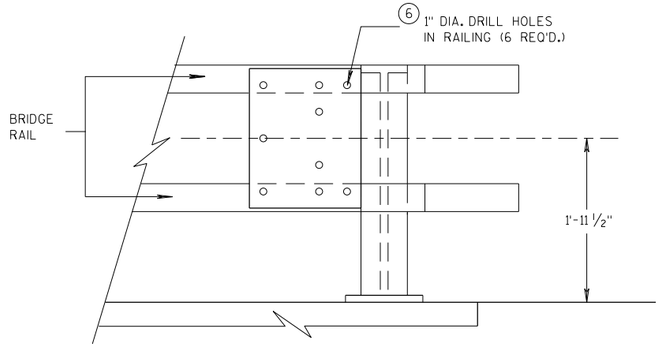
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

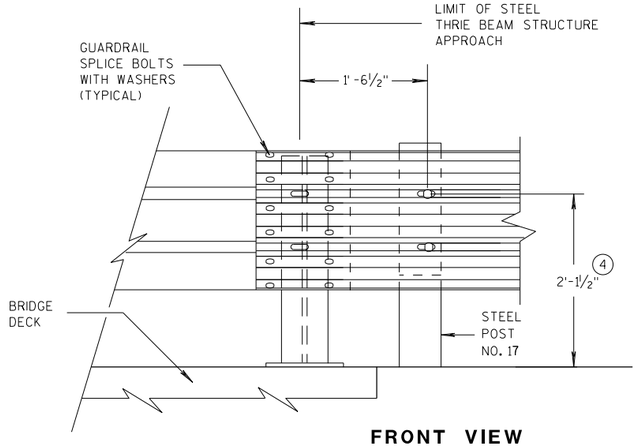


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

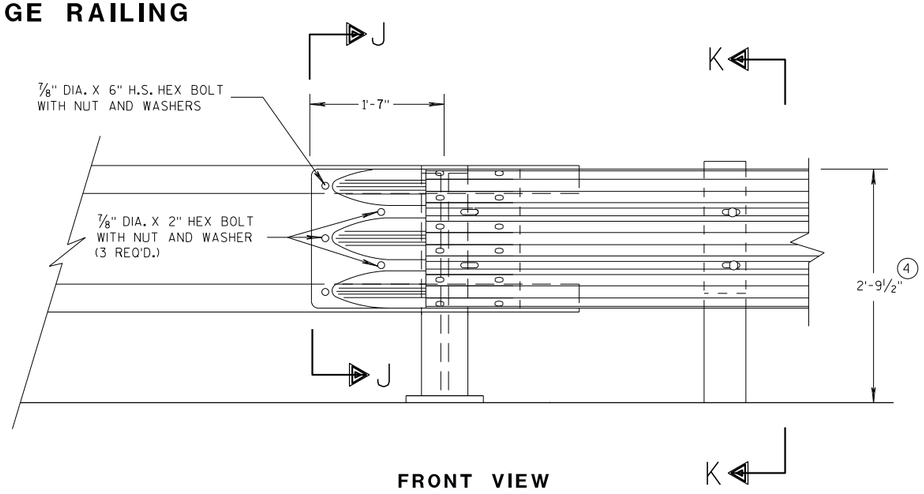
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

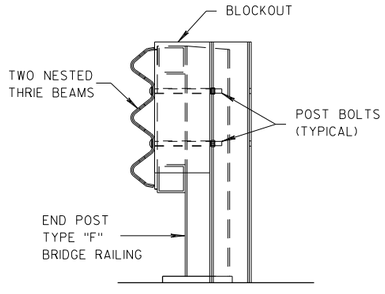


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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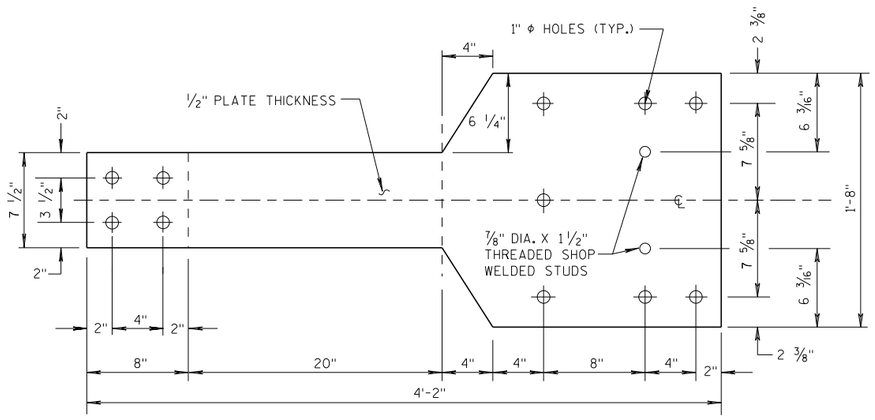
S.D.D. 14 B 45-5g

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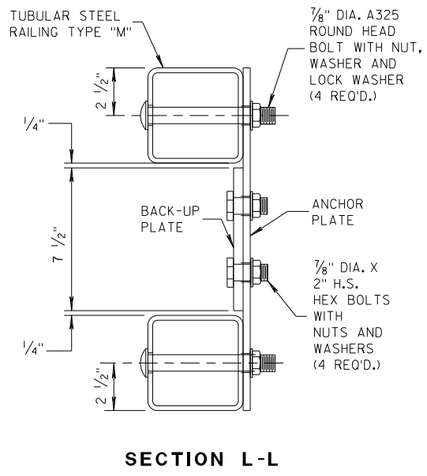
S.D.D. 14 B 45-5g

GENERAL NOTES

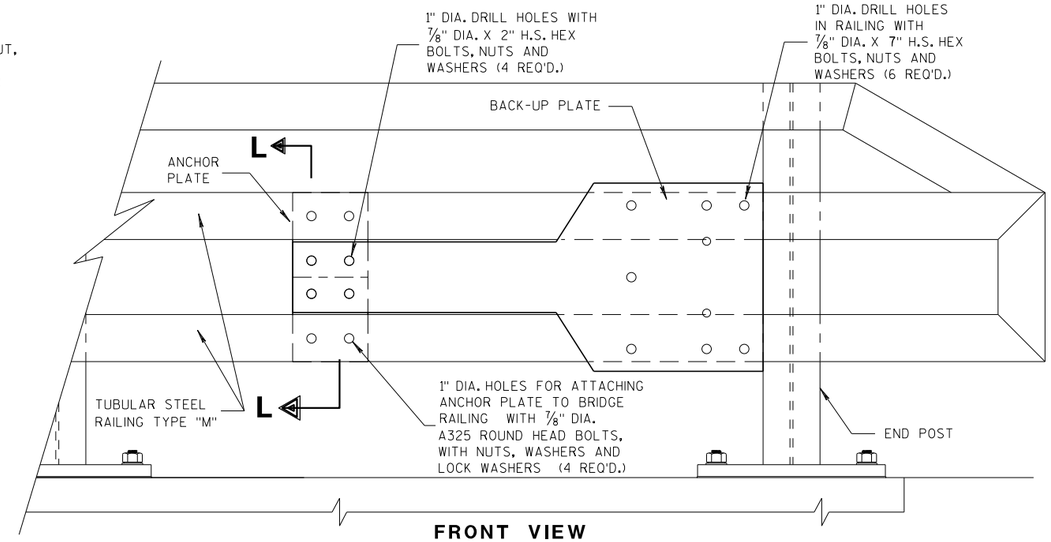
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

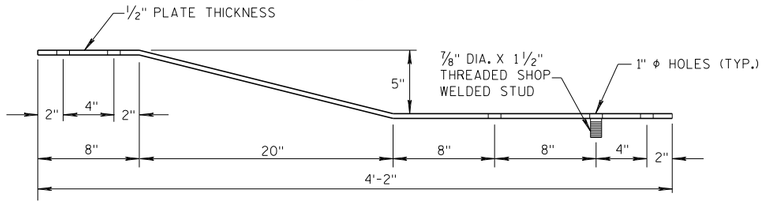


SECTION L-L



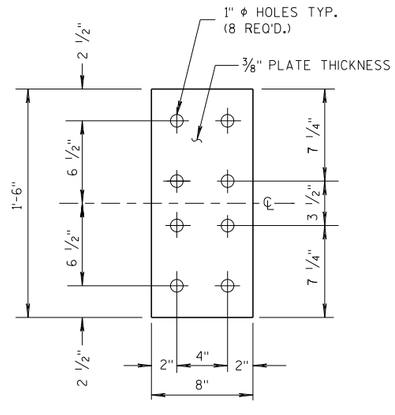
FRONT VIEW

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



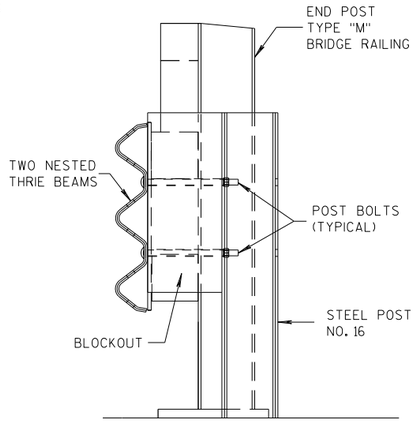
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

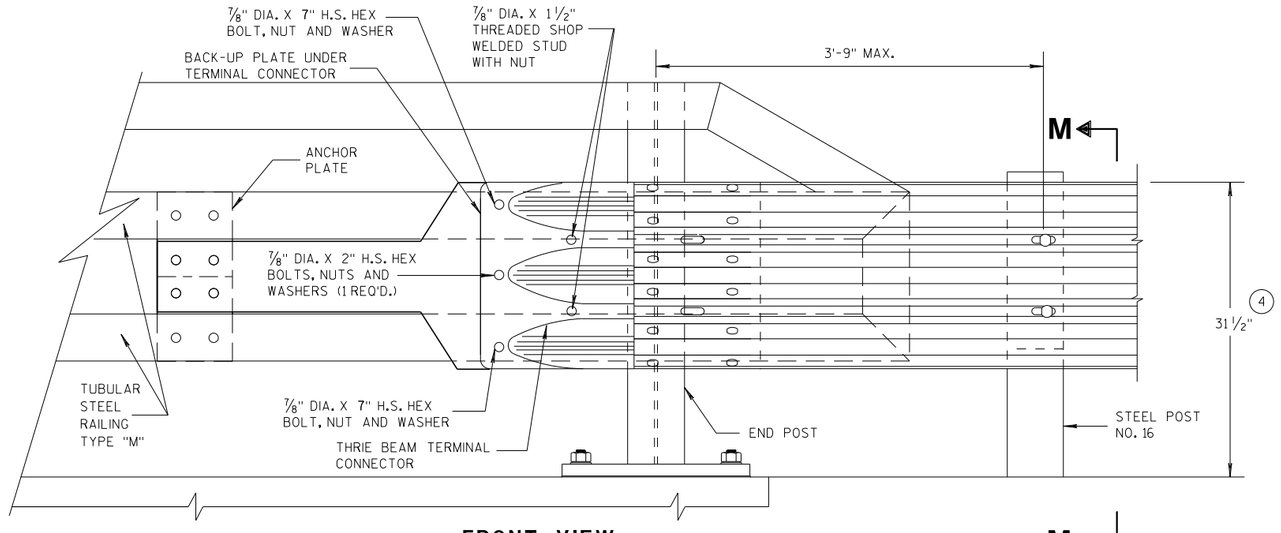


FRONT VIEW

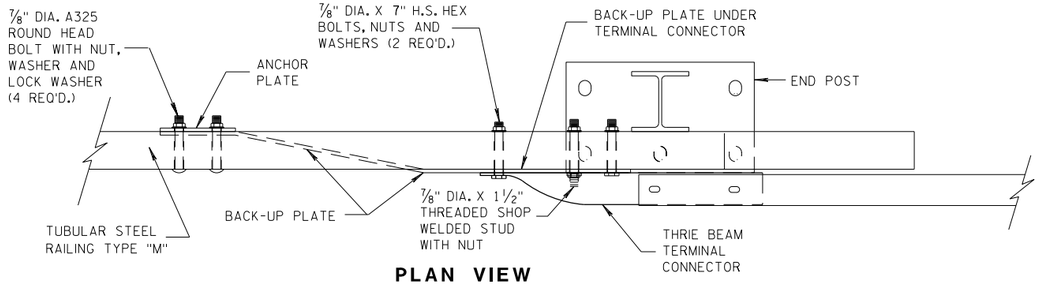
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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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.

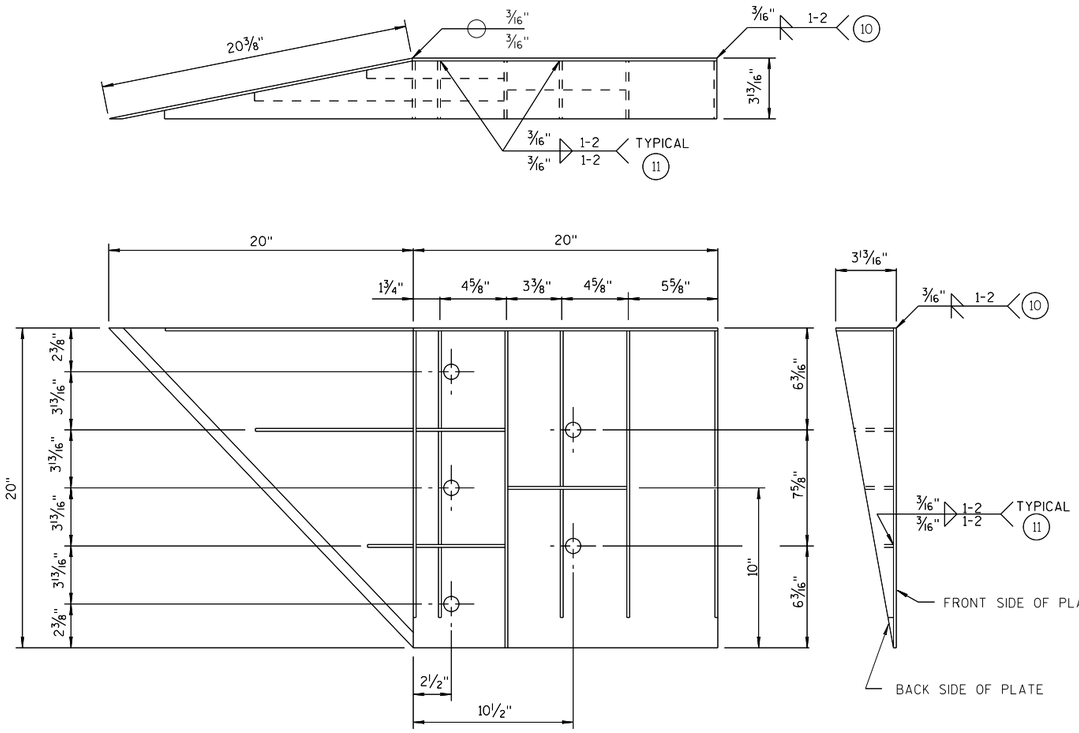
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

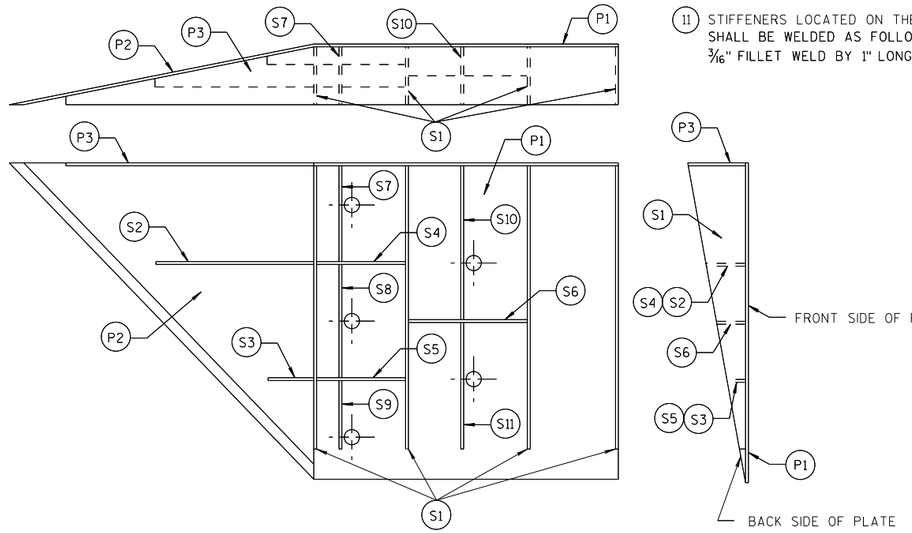


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

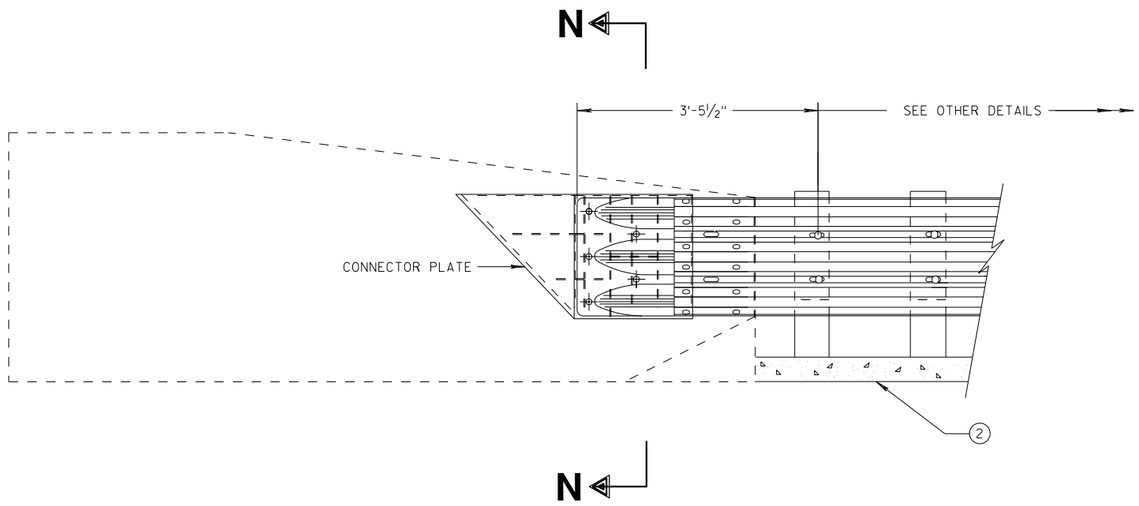
STATE OF WISCONSIN
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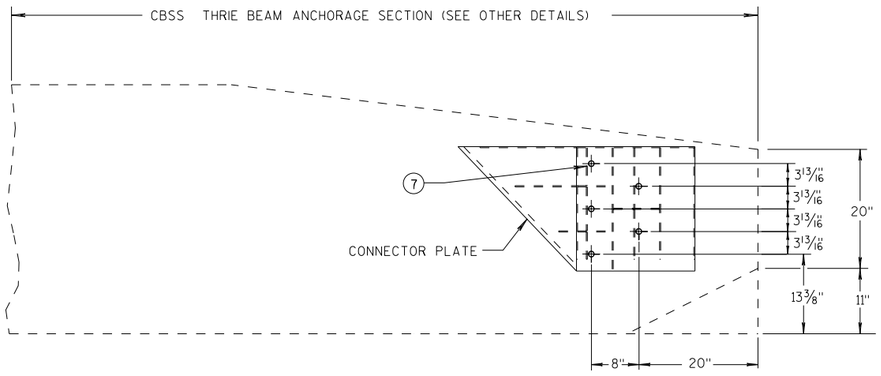
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S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



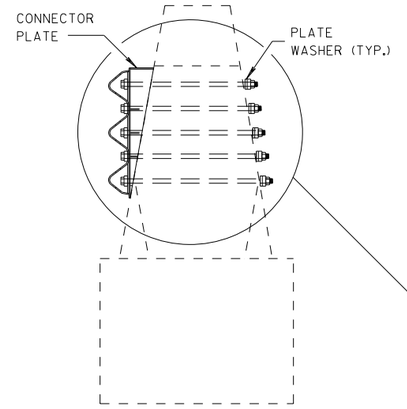
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

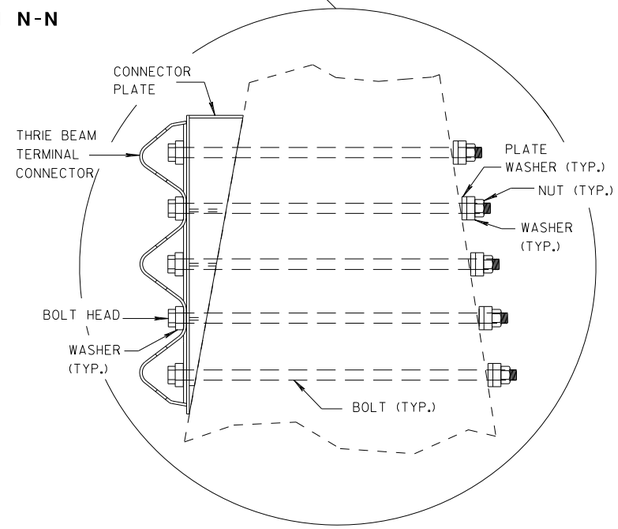
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

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



SECTION N-N



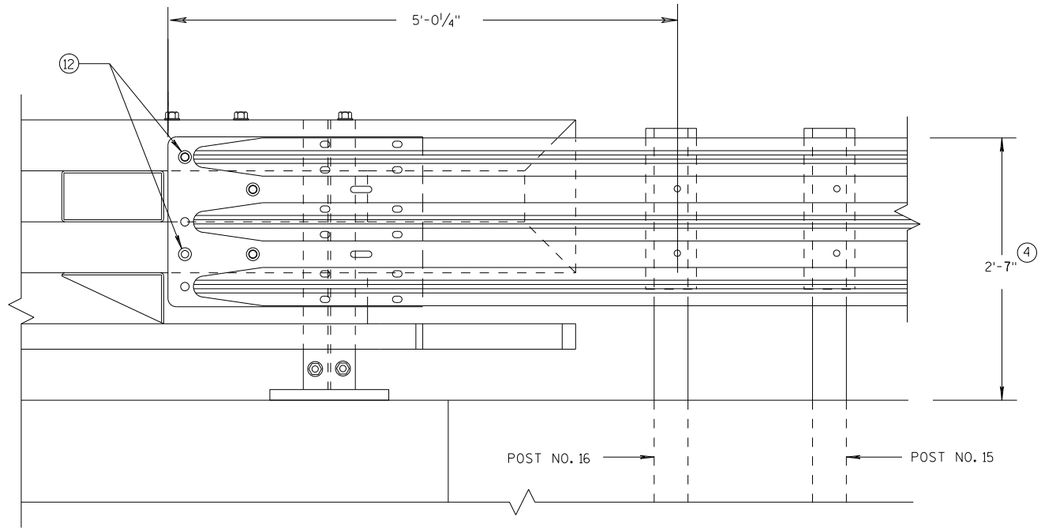
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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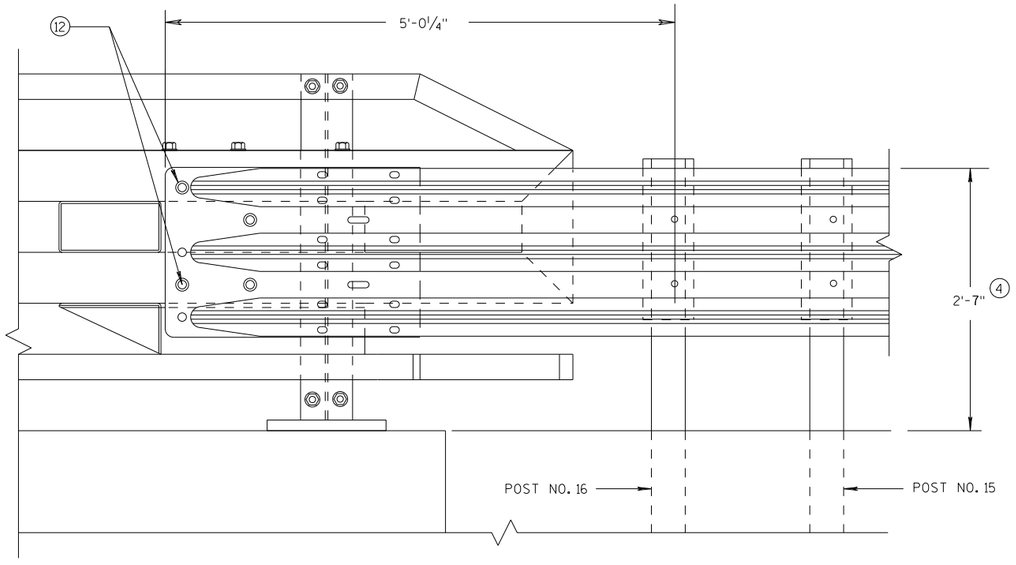
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S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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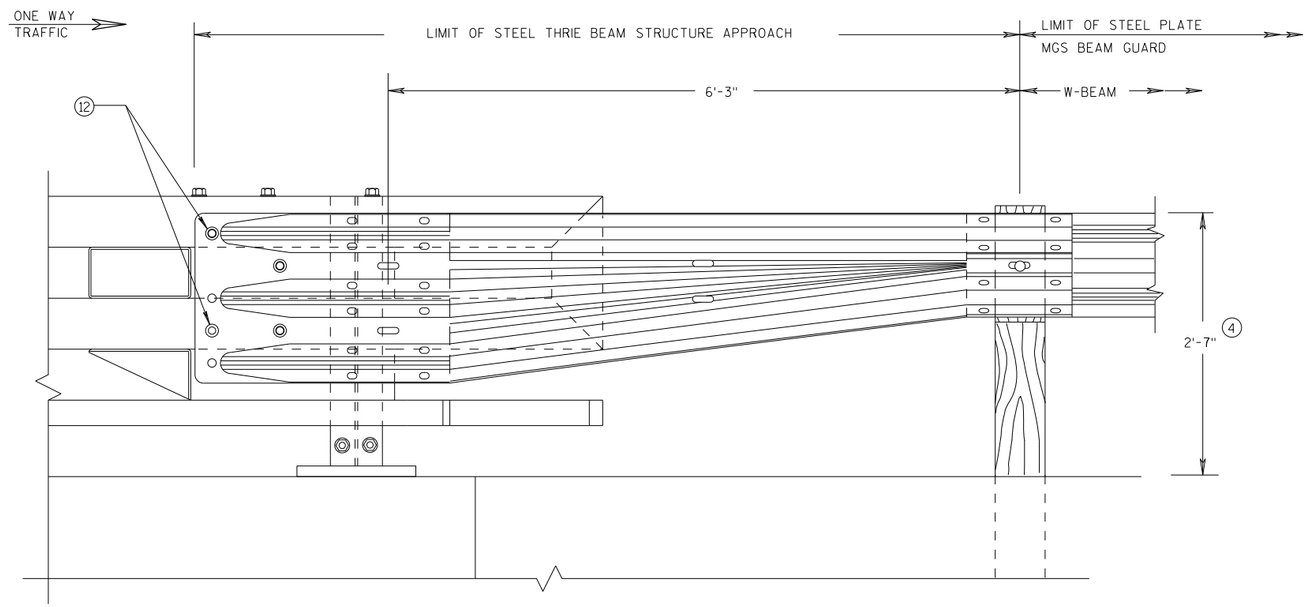
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S.D.D. 14 B 45-5k



FRONT VIEW

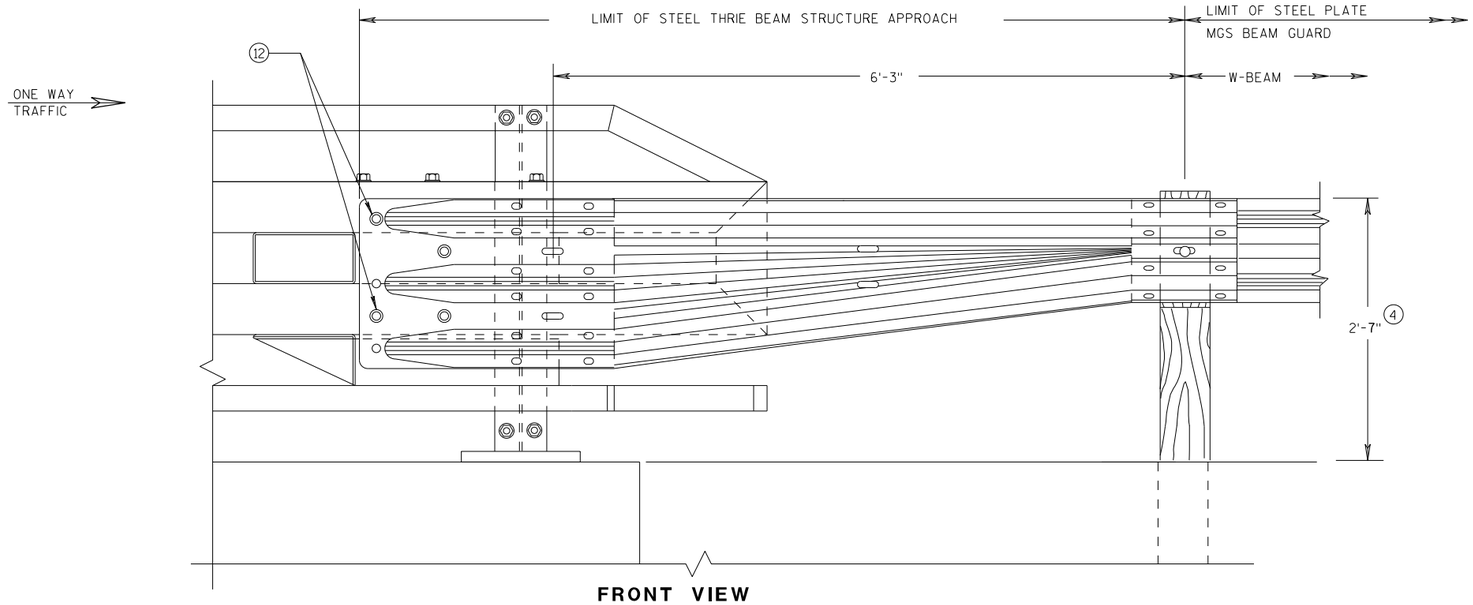
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

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FRONT VIEW

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

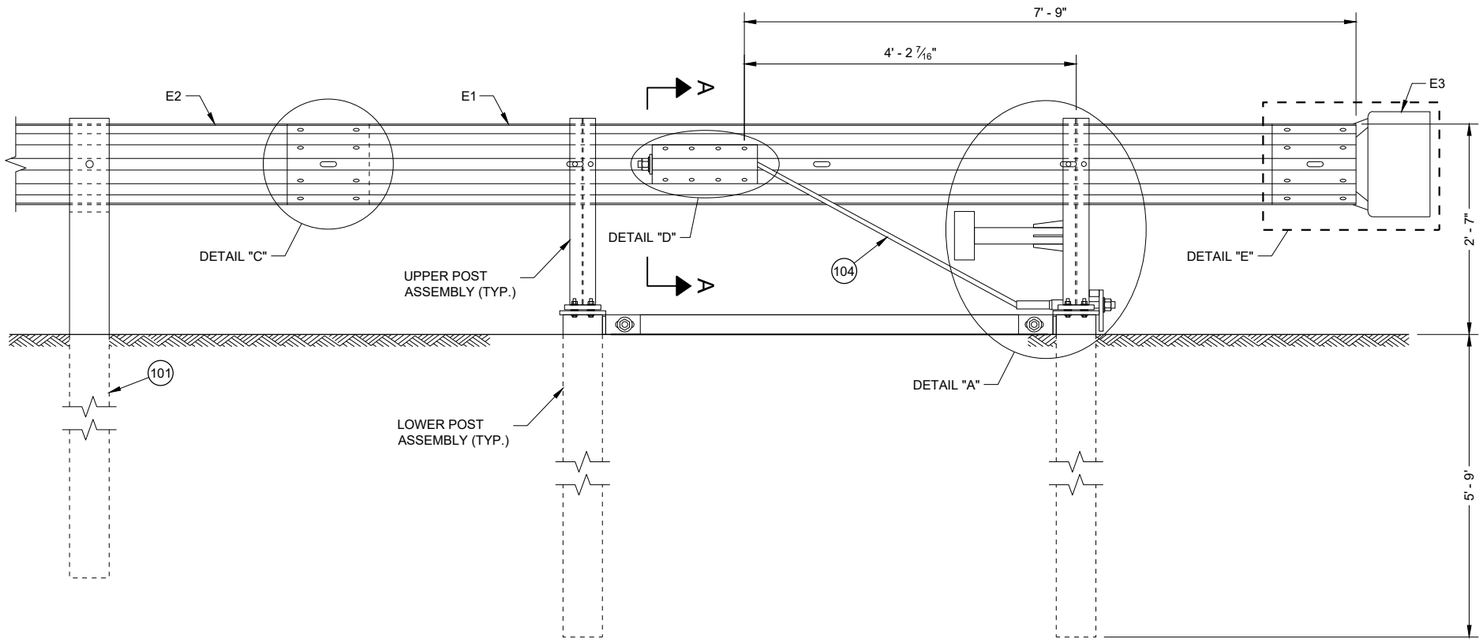
APPROVED
7/2018 DATE
/S/ Rodney Taylor
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FHWA

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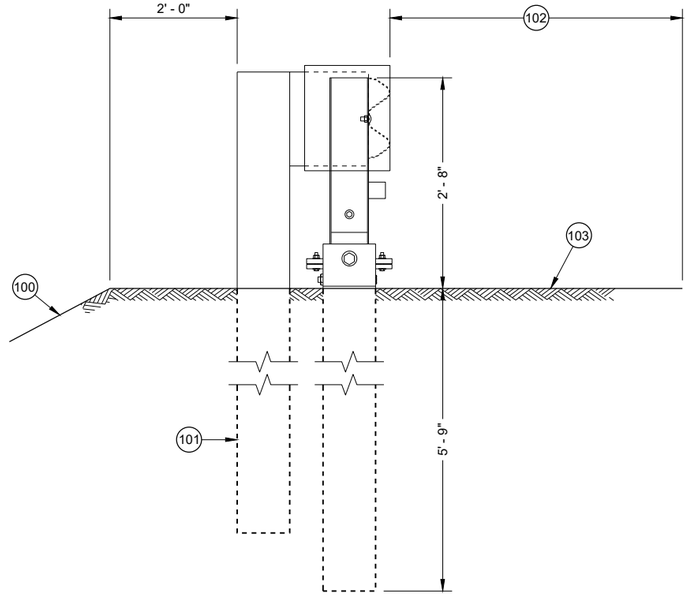
S.D.D. 14 B 45-5L

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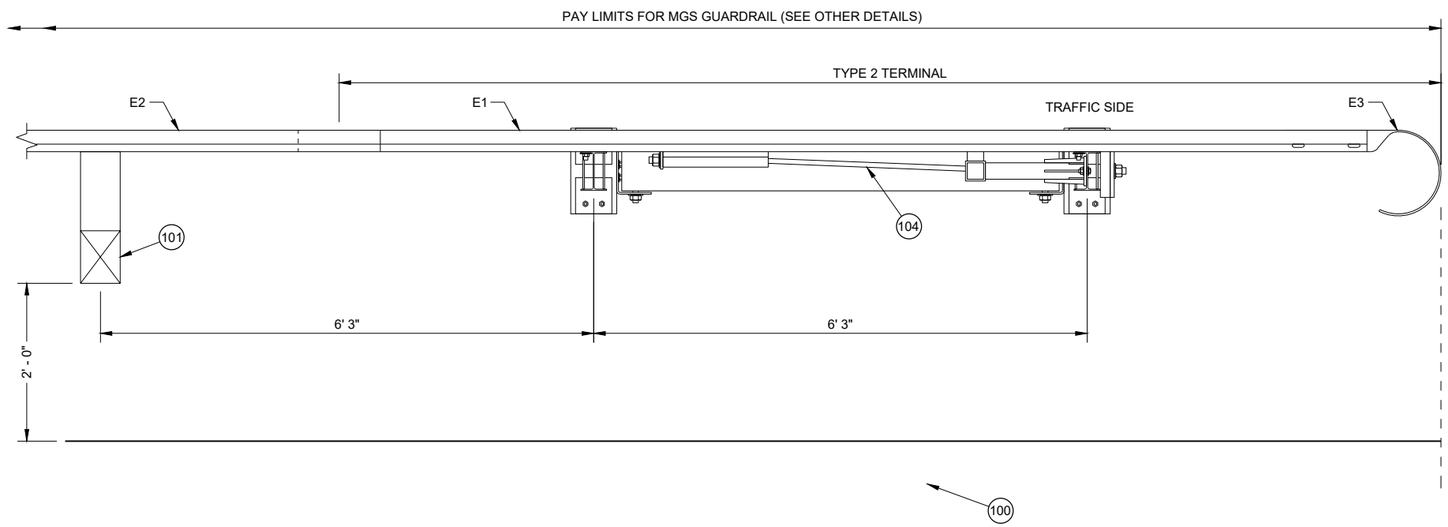
S.D.D. 14 B 45-5L



BACK VIEW
TYPE 2 TERMINAL



SIDE VIEW
TYPE 2 TERMINAL



TOP VIEW
TYPE 2 TERMINAL

GENERAL NOTES

(100) MAXIMUM SLOPE IS 2.5:1.

(101) SEE SDD 14B42 FOR MORE INFORMATION.

(102) SHOULDER

(103) MAXIMUM SLOPE IS 10:1.

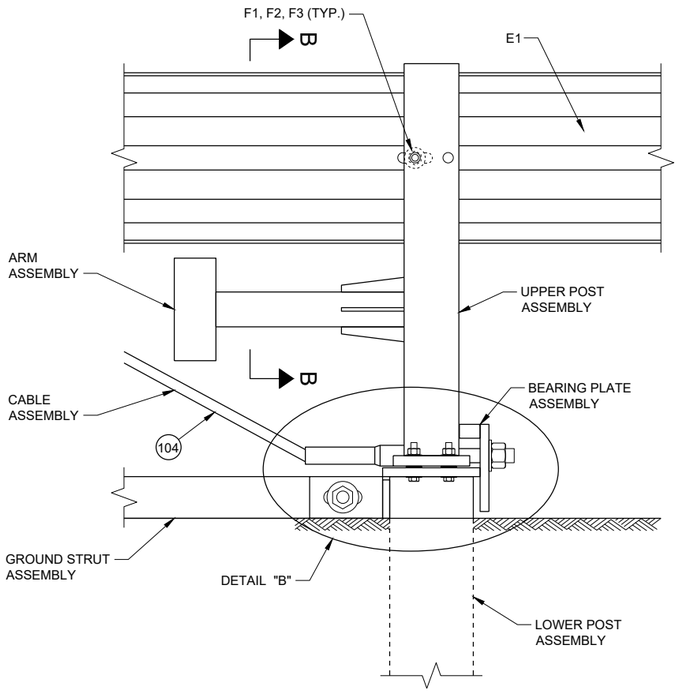
(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

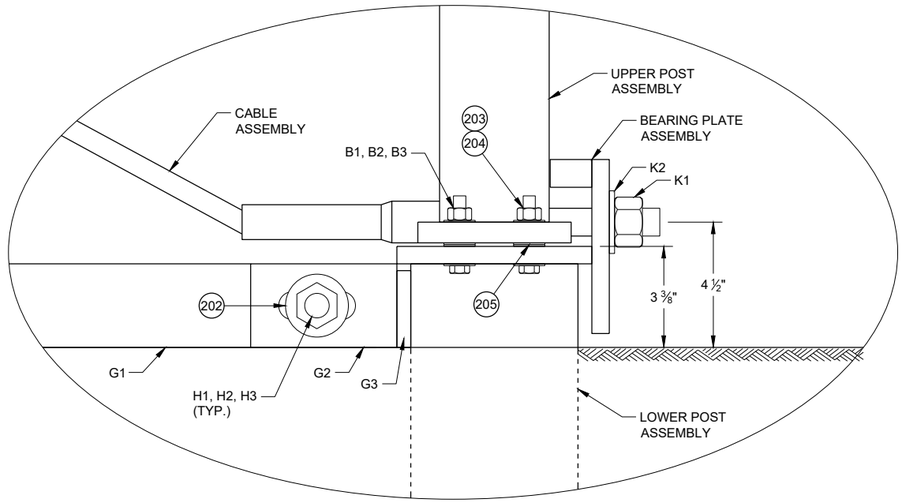
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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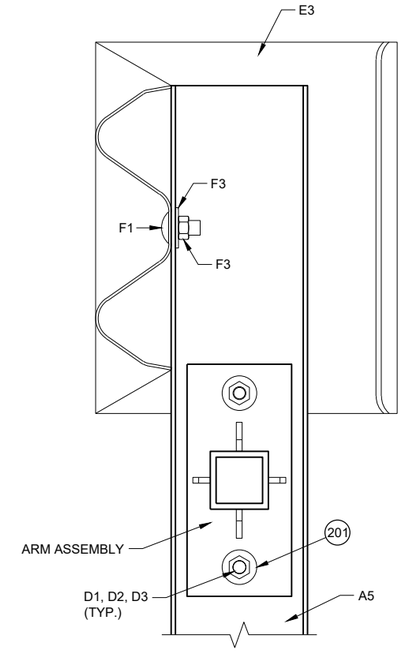
SDD 14B47 - 05a



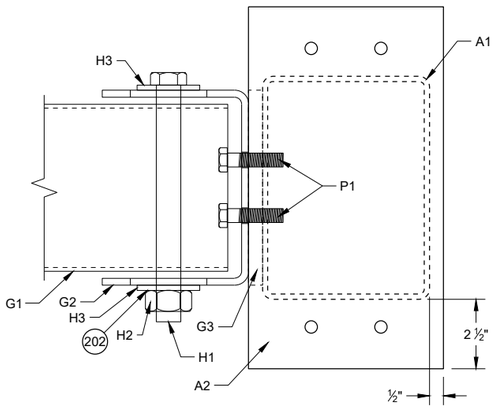
DETAIL "A"



DETAIL "B"

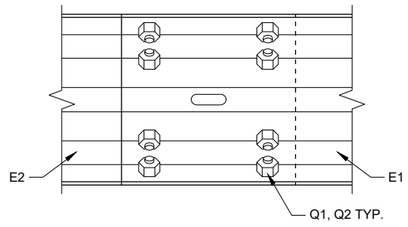


SECTION B - B



TOP VIEW

GROUND STRUT CONNECTION DETAIL



DETAIL "C"

GENERAL NOTES

200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.

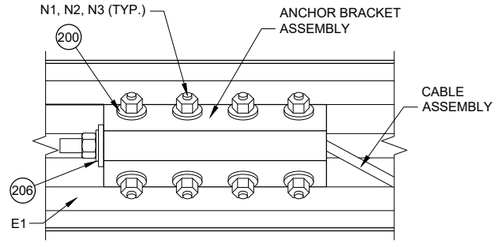
202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

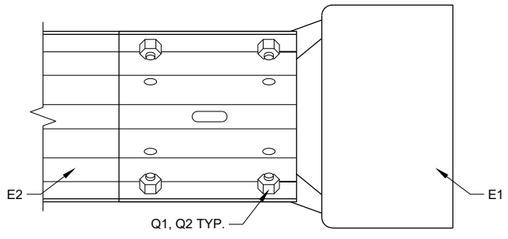
204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.



DETAIL "D"



DETAIL "E"

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

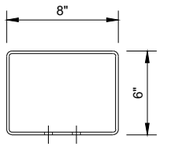
STATE OF WISCONSIN
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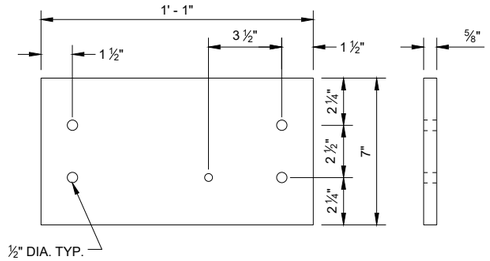
SDD 14B47 - 05b

GENERAL NOTES

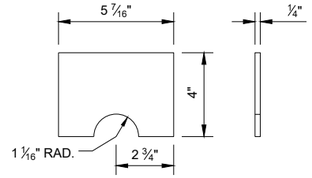
(300) TAP FOR 1/2" AFTER GALVANIZATION



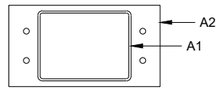
TOP VIEW



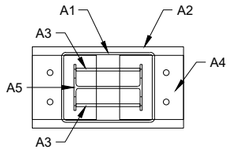
LOWER PLATE (A2)

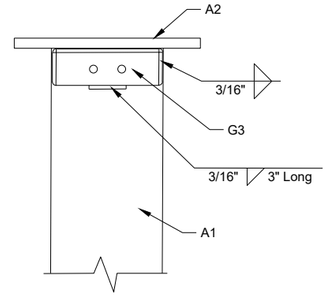


POST GUSSET (A3)

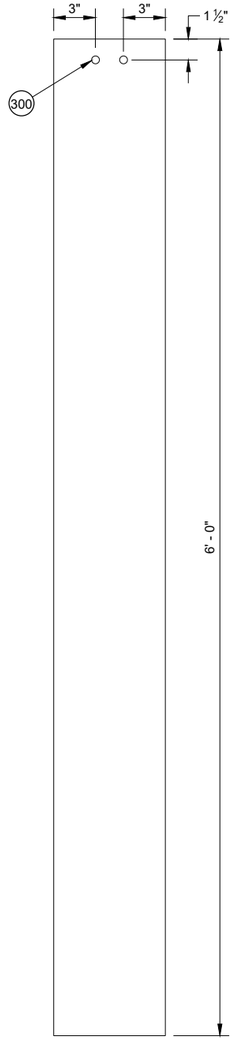


PLAN VIEW



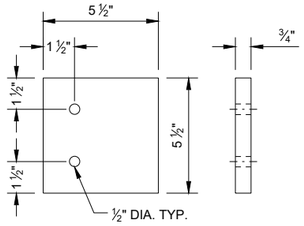


WELDING DETAIL
G3 AND A1

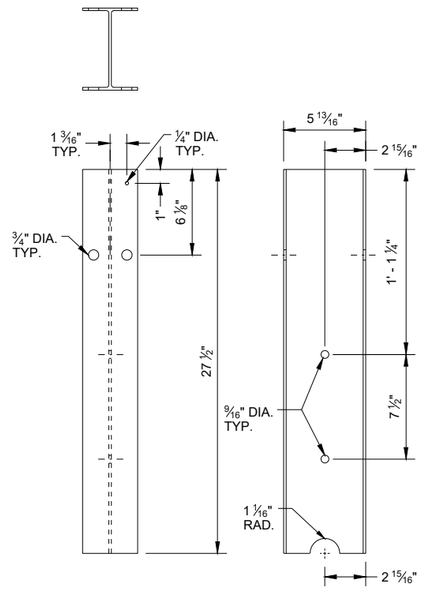


SIDE VIEW

FOUNDATION TUBE (A1)

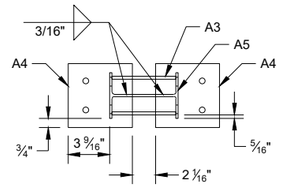


UPPER PLATE (A4)

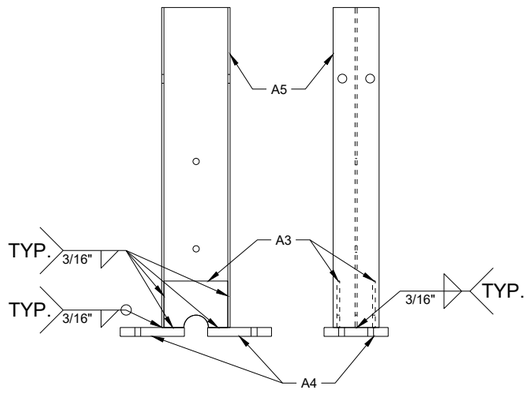


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

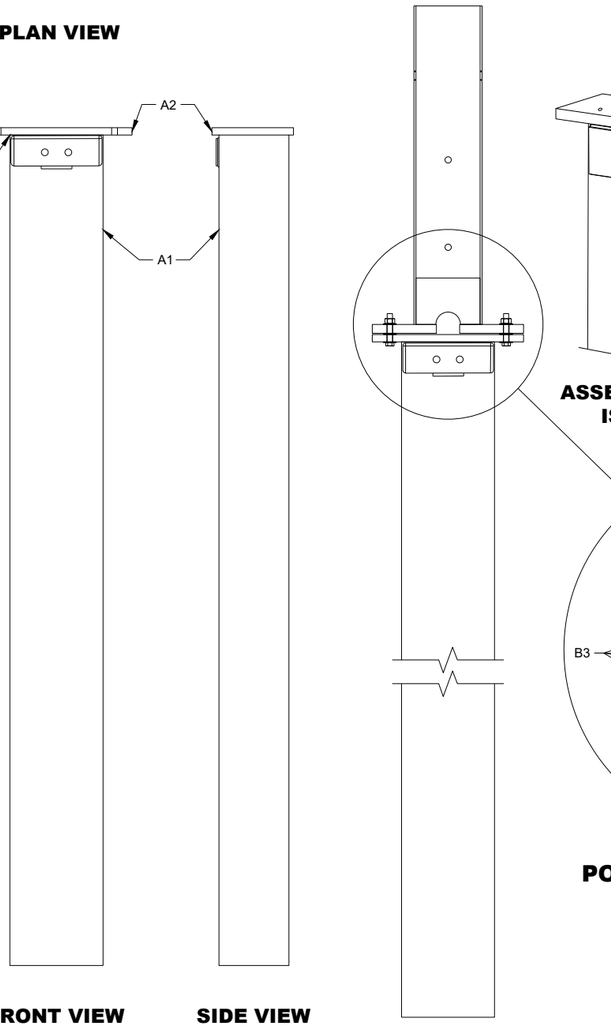


PLAN VIEW



SIDE VIEW FRONT VIEW

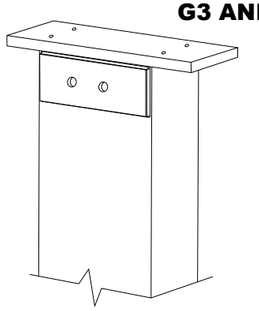
UPPER POST ASSEMBLY



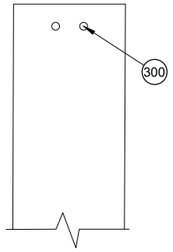
FRONT VIEW SIDE VIEW

LOWER POST ASSEMBLY

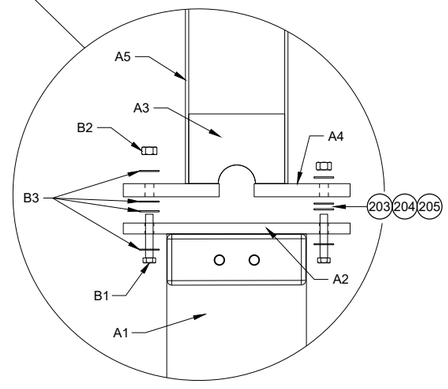
ASSEMBLED POST



ASSEMBLY DETAIL
ISOMETRIC



A1



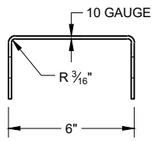
POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

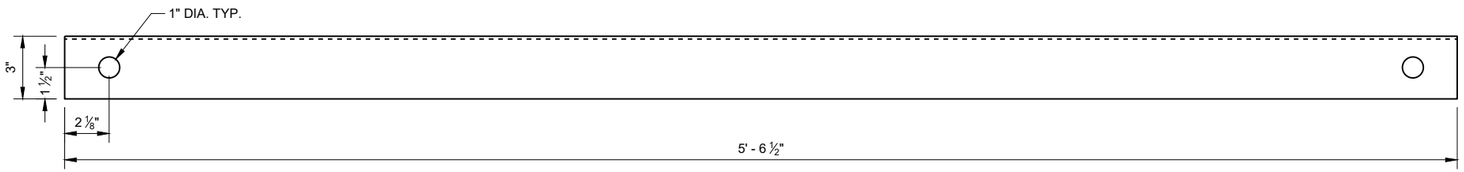
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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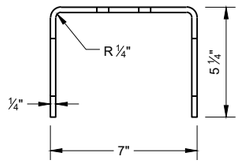


SIDE VIEW

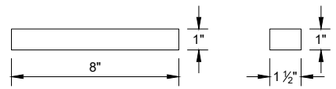


FRONT VIEW

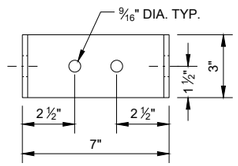
GROUND STRUT CHANNEL (G1)



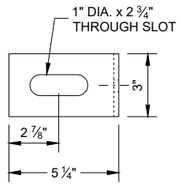
TOP VIEW



BEARING PLATE FLANGE (L2)

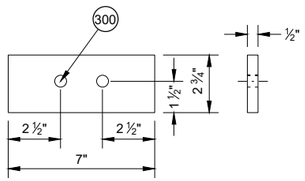


FRONT VIEW

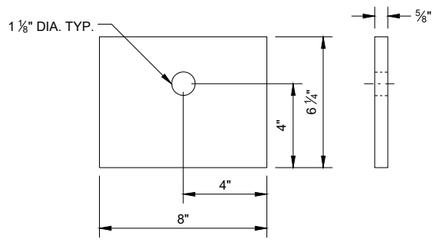


SIDE VIEW

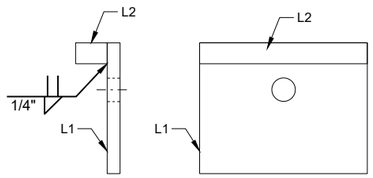
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)

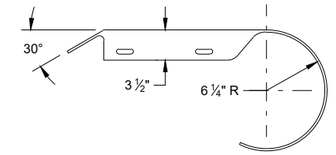


BEARING PLATE (L1)

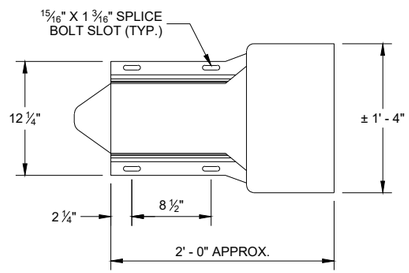


SIDE VIEW FRONT VIEW

BEARING PLATE ASSEMBLY

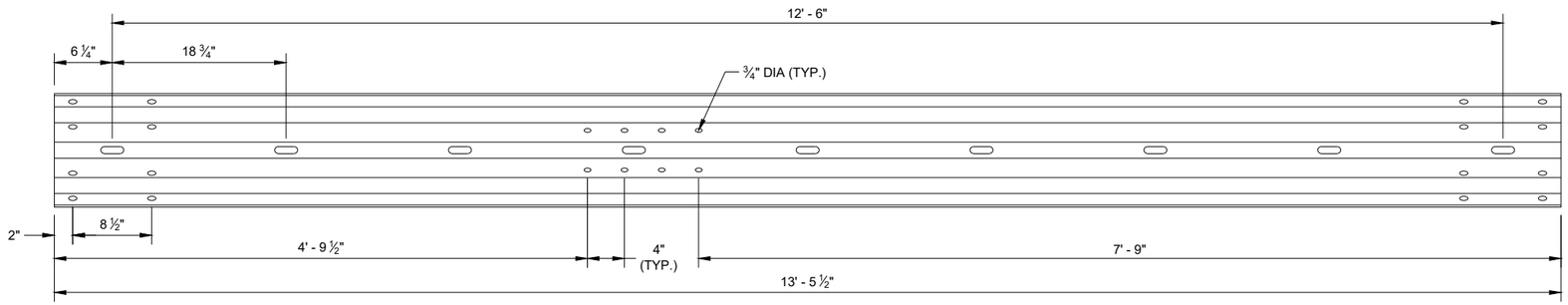


PLAN VIEW

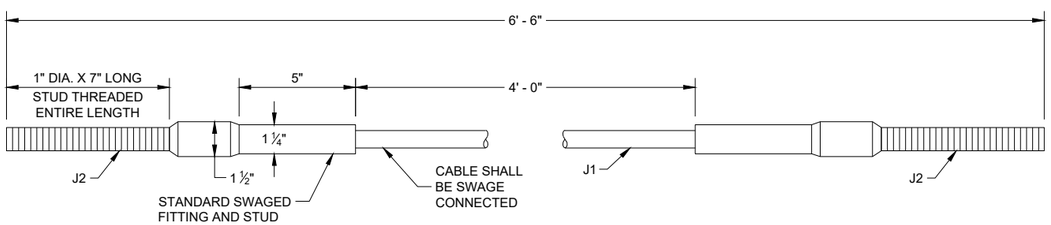


ELEVATION VIEW

ROUNDED BUFFER END (E3)



TYPE 2 GUARDRAIL (E1)



CABLE ASSEMBLY

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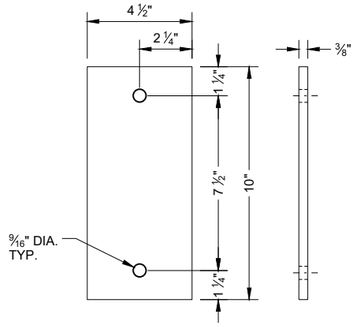
SDD 14B47 - 05d

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

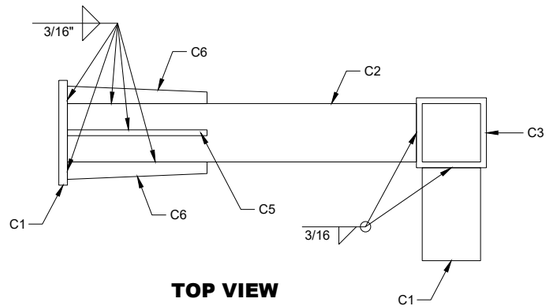
STATE OF WISCONSIN
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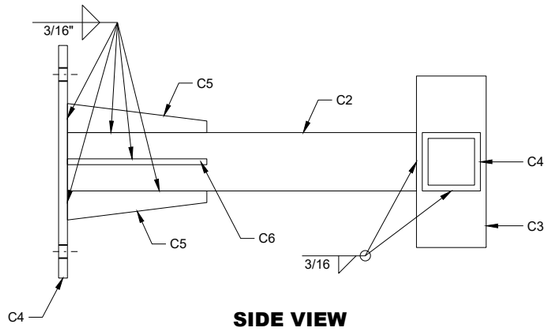
SDD 14B47 - 05d



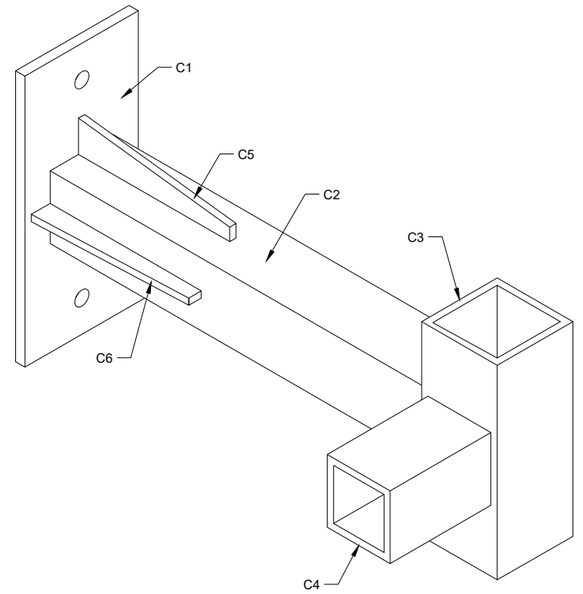
ARM PLATE (C1)



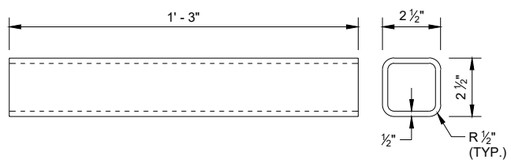
TOP VIEW
ARM ASSEMBLY



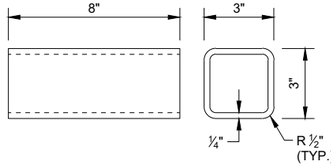
SIDE VIEW
ARM ASSEMBLY



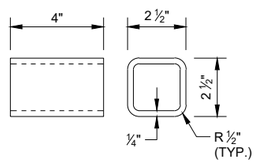
ISOMETRIC VIEW
ARM ASSEMBLY



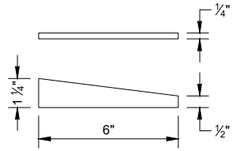
ARM TUBE 1 (C2)



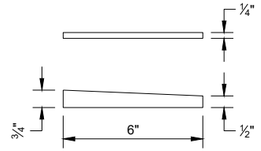
ARM TUBE 2 (C3)



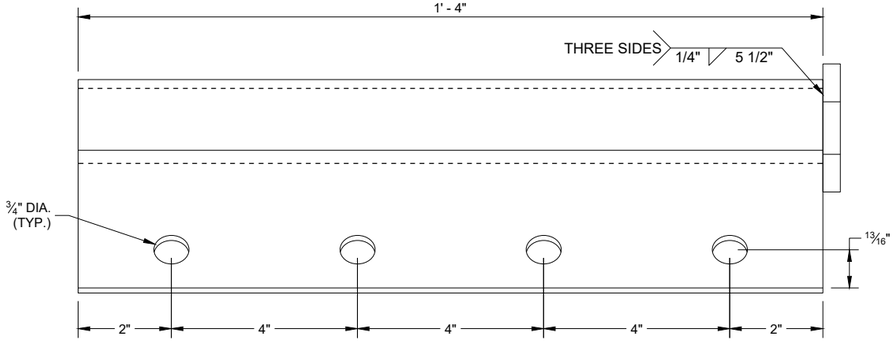
ARM TUBE 3 (C4)

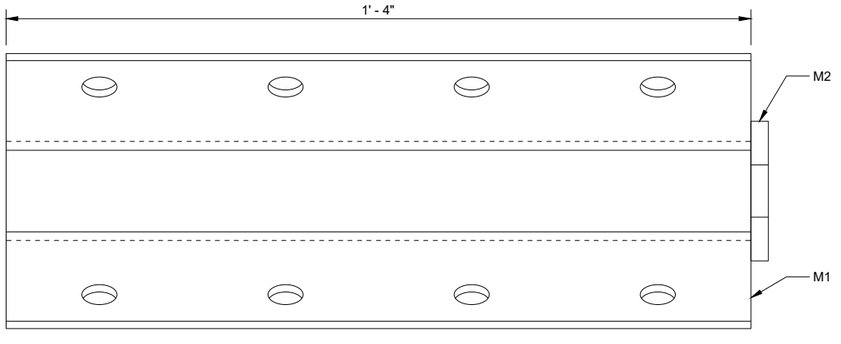


ARM GUSSET PLATE 1 (C5)

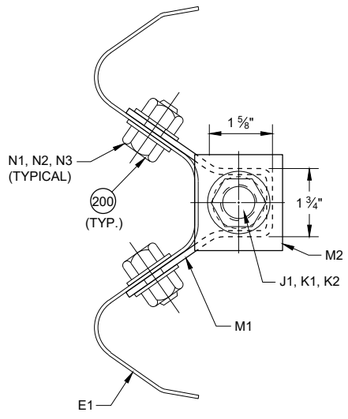


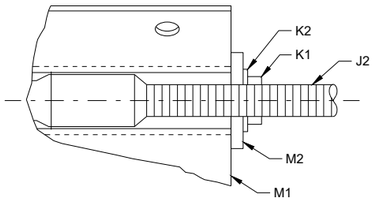
ARM GUSSET PLATE 2 (C6)



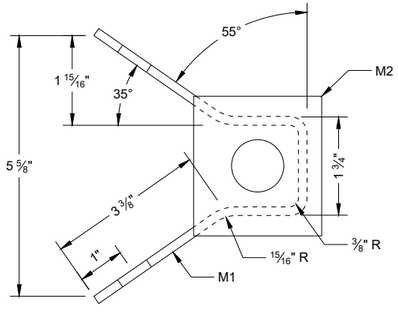


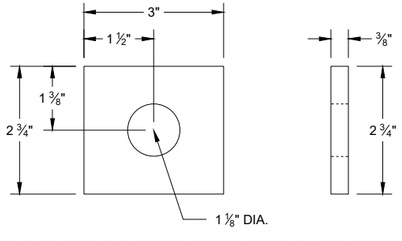
ANCHOR BRACKET (M1, M2)





SECTION A - A





ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
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BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER 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	5/8" THICKNESS
A3	POST GUSSET	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	1/4" THICKNESS
A4	UPPER 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	3/4" THICKNESS
A5	TYPE 2 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, w6x9 or w6x8.5	
B1	BREAKAWAY 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 F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	7/16" DIA.
B2	BREAKAWAY 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)	7/16" DIA.
B3	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 / 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	
C1	ARM 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	3/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET PLATE 1	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	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET PLATE 2	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	1/4" THICKNESS
D1	ARM ASSEMBLY 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	1/2" DIA.
D2	ARM ASSEMBLY 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)	1/2" DIA.
D3	ARM ASSEMBLY 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	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	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 UNC UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	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 ONLY)	5/8" DIA.
F3	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	
G1	GROUND STRUT CHANNEL	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	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	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	1/4" THICKNESS
G3	GROUND STRUT 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	1/2" THICKNESS

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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SDD 14B47 - 05f

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT 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	7/8" DIA.
H2	GROUND STRUT 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)	7/8" DIA.
H3	GROUND STRUT 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 HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	**3/4" DIA.**
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. 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."	
K1	CABLE ASSEMBLY 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	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	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	5/8" THICKNESS
L2	BEARING PLATE FLANGE	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	1" THICKNESS
M1	BEAM GUARD 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	
M2	BEAM GUARD ANCHOR END 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	3/8" THICKNESS
N1	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 AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	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)	5/8" DIA.
N3	ANCHOR BRACKET 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	
P1	FOUNDATION 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 ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
Q1	SPLICE 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	
Q2	SPLICE 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	5/8" DIA.

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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

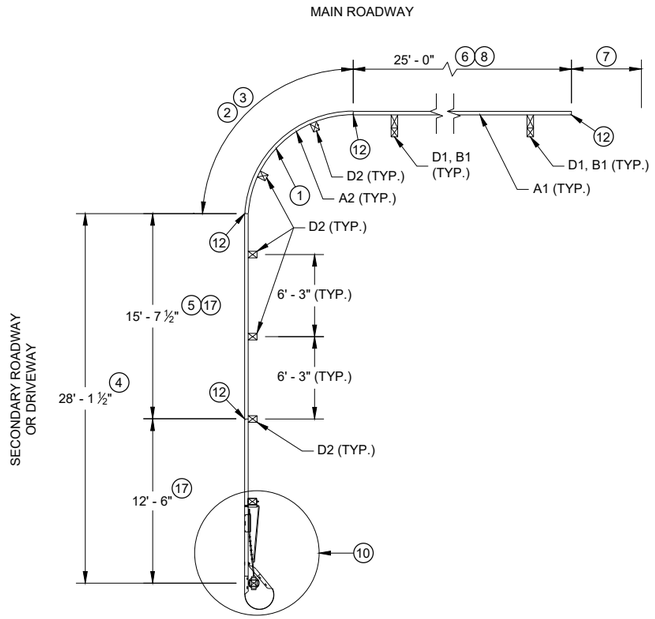
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

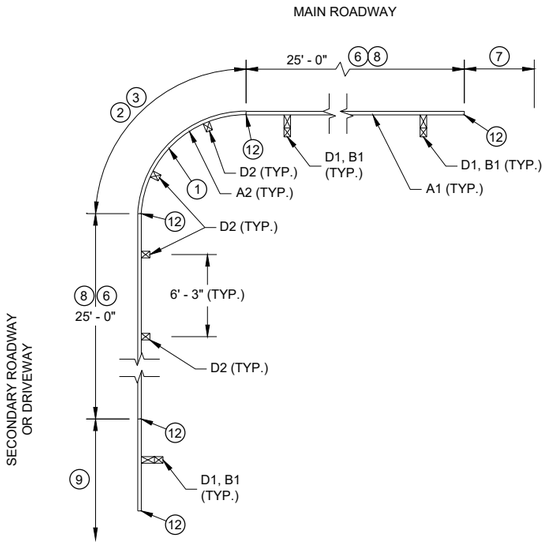
FHWA

SDD 14B47 - 05g



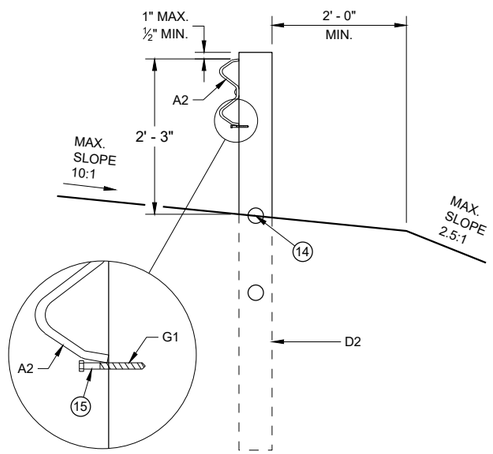
PLAN VIEW

SHORT RADIUS BEAM GUARD WITH SHORT RADIUS TERMINAL ON SECONDARY ROAD OR DRIVEWAY

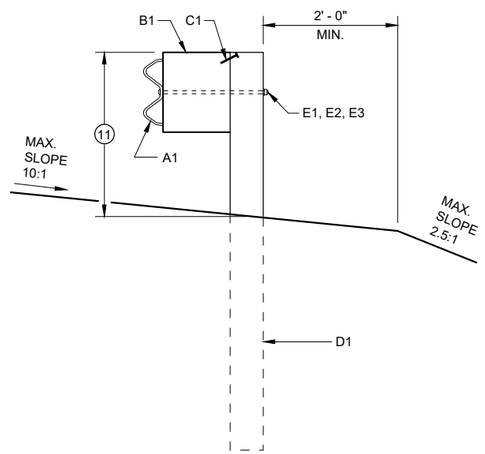


PLAN VIEW

SHORT RADIUS BEAM GUARD WITH EAT, ADDITIONAL BEAM GUARD OR TRANSITION TO RIGID BARRIER ON SECONDARY ROAD OR DRIVEWAY



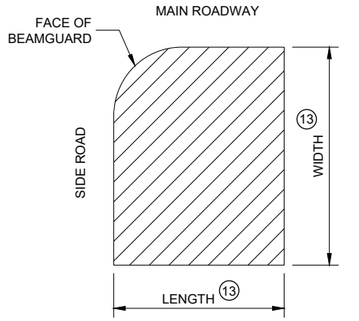
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



BEAM GUARD POSTS IN HEIGHT TRANSITION

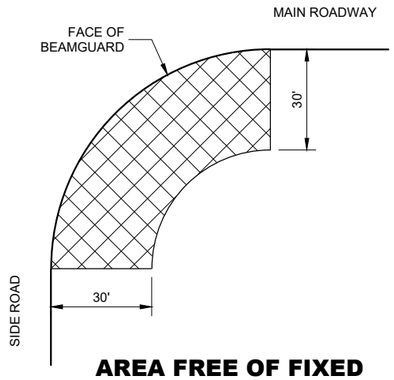
TABLE FOR RADIUS OF 32' AND LESS

RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30

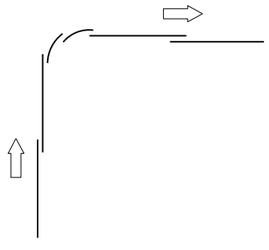


AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS

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AREA FREE OF FIXED OBJECTS FOR RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

GENERAL NOTES

SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.

SEE SDD 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.

GALVANIZE PARTS AFTER FABRICATION.

WELDING TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI / AWS D1.1.

UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.

UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERTICAL.

ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUT.

UNLESS NOTED OTHERWISE, CUT OR PROVIDE BOLTS THAT ARE ¼" TO ½" BEYOND THE NUT.

DRAWINGS ARE NOT TO SCALE.

1. RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.
2. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6' - 3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE (CRT) POSTS.
3. WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAIL IS RESTED ON TOP OF LAG SCREW.
4. MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID WITH BEAM GUARD ITEM.
5. ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.
6. MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TO TRANSITION TO RIGID BARRIER. ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.
7. BEAM GUARD, EAT, OR TRANSITION TO RIGID BARRIER. SEE PLAN.
8. TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.
9. ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.
10. SHORT RADIUS TERMINAL (SEE OTHER DETAILS).
11. HEIGHT VARIES. SEE NOTE 8 AND 8 .
12. BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRES PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.
13. SEE TABLE FOR VALUES.
14. MAXIMUM HEIGHT FOR CENTER OF HOLE IS ¾" ABOVE FINISHED GROUND ±1".
15. DRILL POST $^{15}/_{64}$" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.
16. SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.
17. TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL (CRT).

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

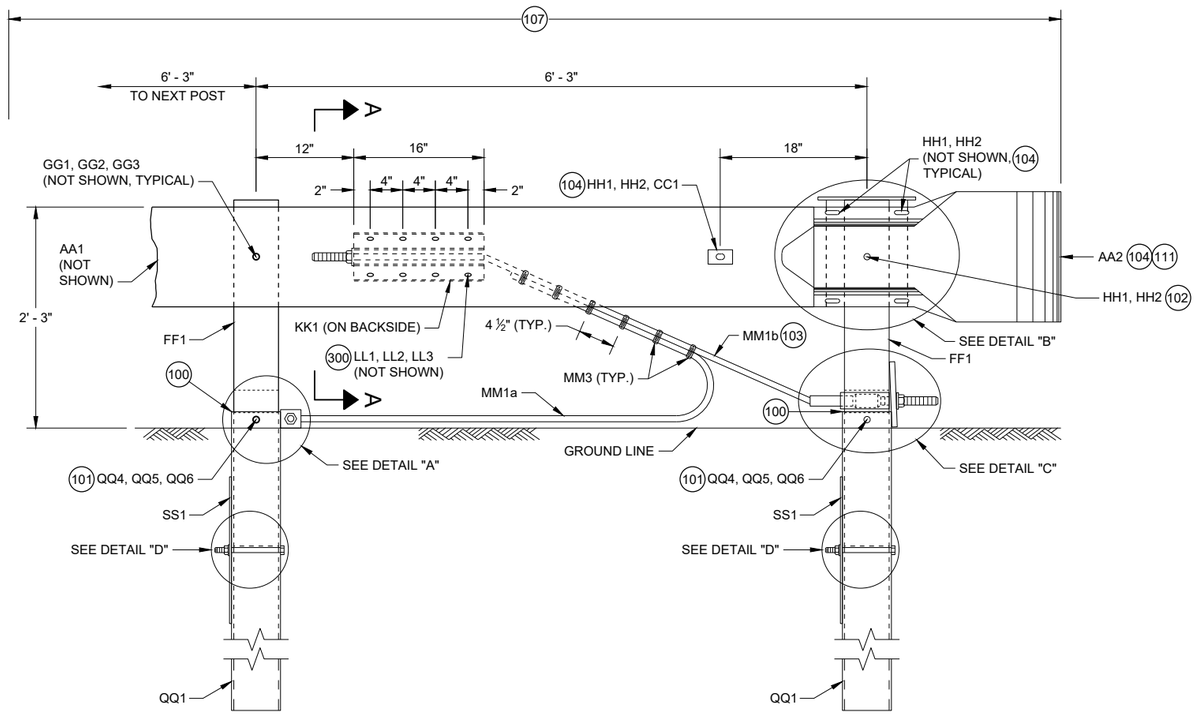
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SDD 14B53 - 02a

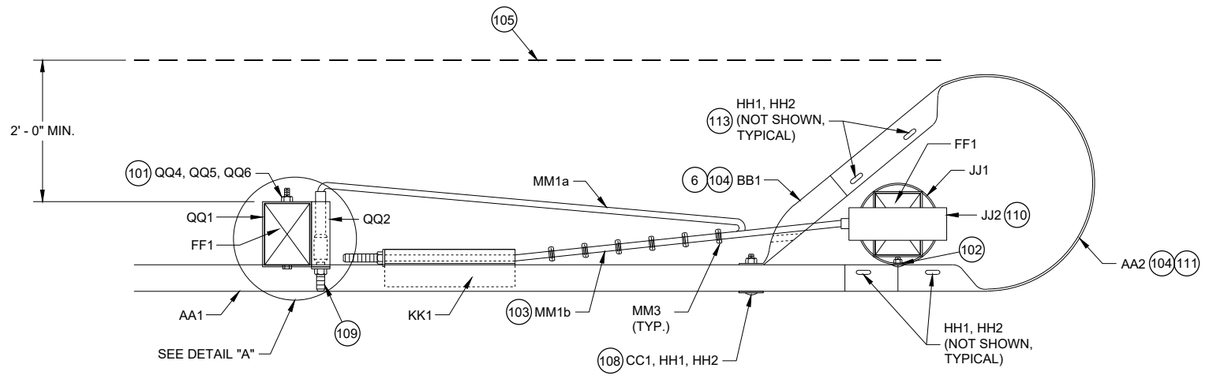
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SDD 14B53 - 02a



PROFILE VIEW

SHORT RADIUS TERMINAL



TOP VIEW

SHORT RADIUS TERMINAL

GENERAL NOTES

100 TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.

101 WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

102 SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL "B".

103 CABLE IS TAUT.

104 ADJUST AA2 AND BB1 TO FIT.

105 BREAK POINT OF SHOULDER.

106 TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL "A" PROFILE VIEW.

107 PAY LIMIT FOR BEAM GUARD.

108 SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.

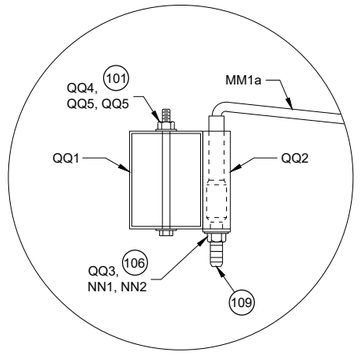
109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

110 SEE STEEL PIPE ASSEMBLY DETAILS.

111 ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.

112 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.

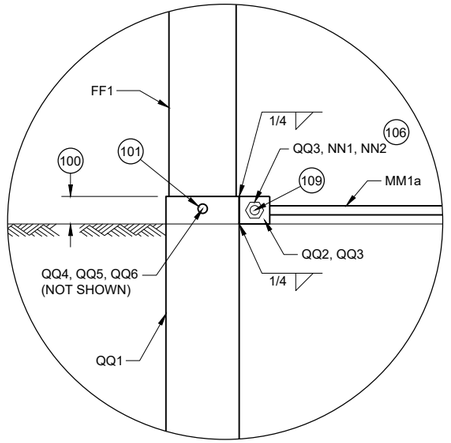
113 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



TOP VIEW

DETAIL "A"

(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)



PROFILE VIEW

DETAIL "A"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
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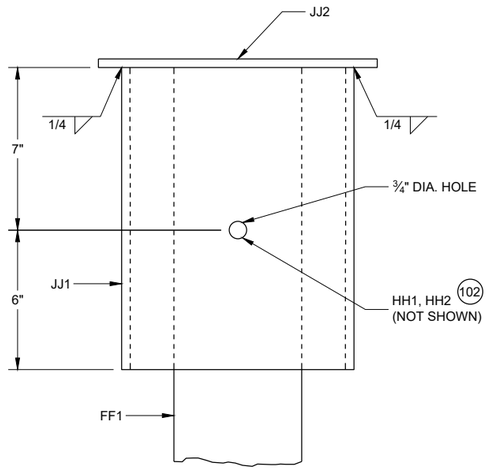
SDD 14B53 - 02b

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SDD 14B53 - 02b

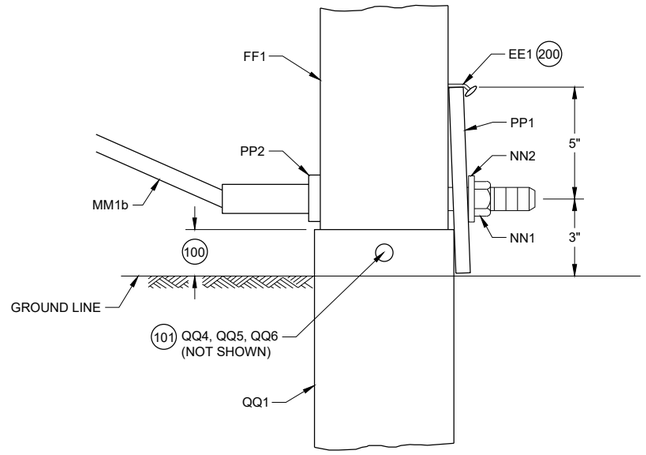
GENERAL NOTES

(200) TWO (2) NAILS SPACED 4 INCHES CENTER TO CENTER.



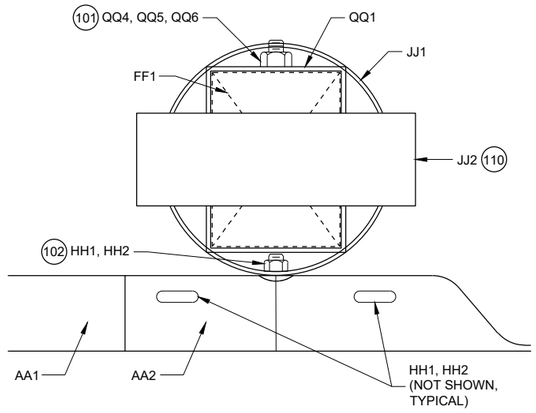
PROFILE VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY
(BEAM GUARD AND W BEAM END SECTION NOT SHOWN)



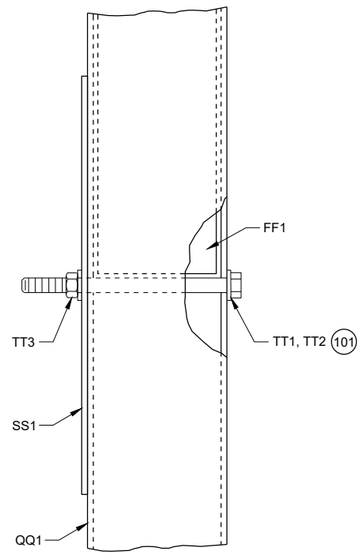
PROFILE VIEW

DETAIL "C"



PLAN VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY



PROFILE VIEW

DETAIL "D"

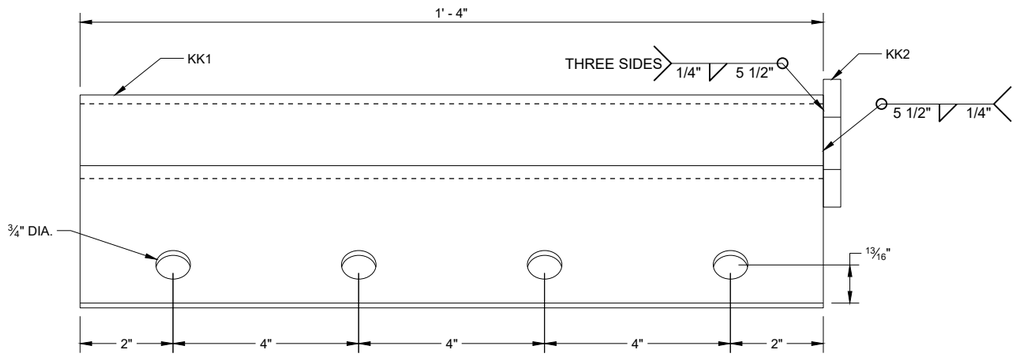
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

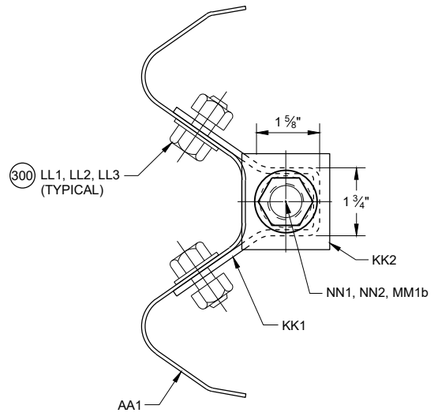
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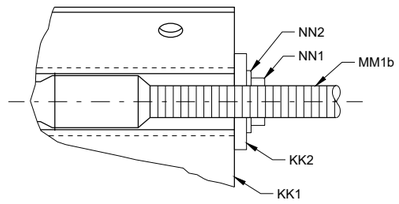
SDD 14B53 - 02c

GENERAL NOTES

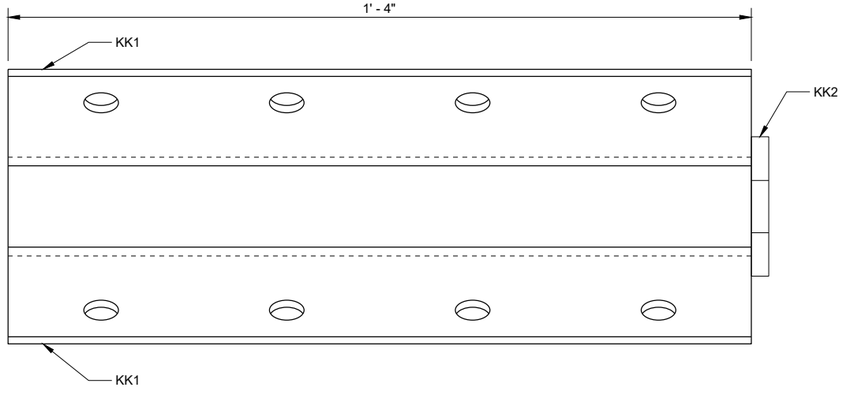
(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.

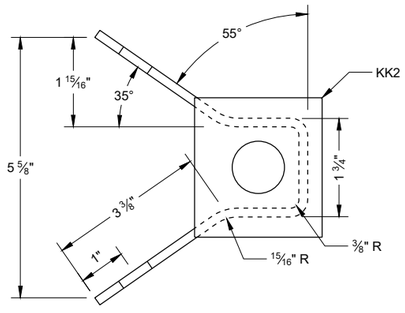




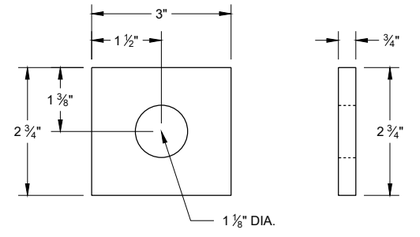


SECTION A - A





ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
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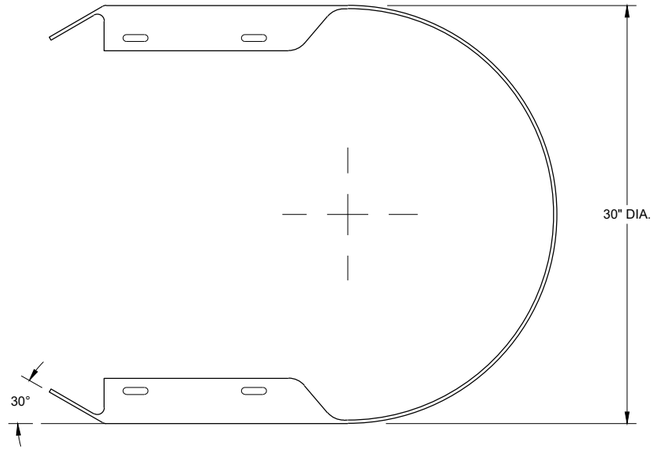
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SDD 14B53 - 02d

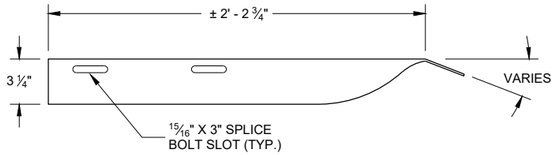
GENERAL NOTES

(400) CROSS SECTION OF PART IS TO FIT OVER AA1 .

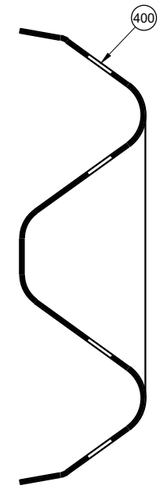
(401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



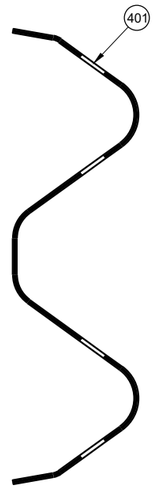
TOP VIEW



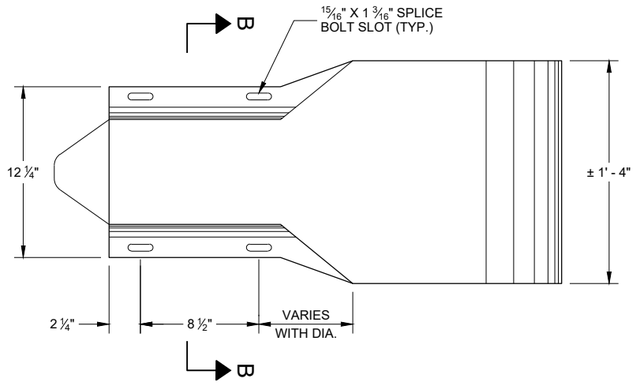
TOP VIEW



SECTION B -B

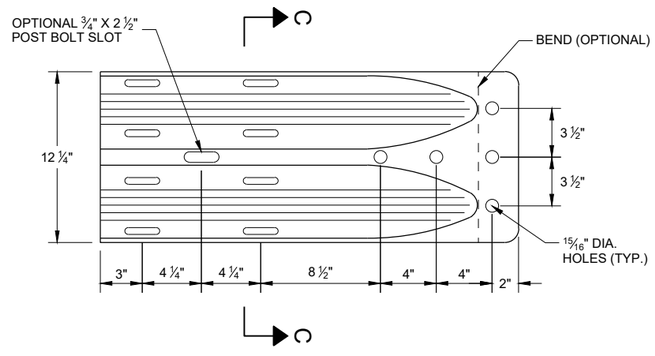


SECTION C -C



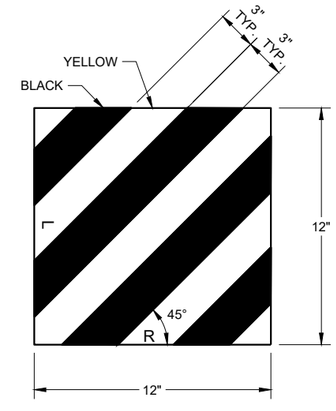
PROFILE VIEW

W BEAM
END SECTION BUFFER (AA2)



PROFILE VIEW

W BEAM
TERMINAL CONNECTOR (BB1)

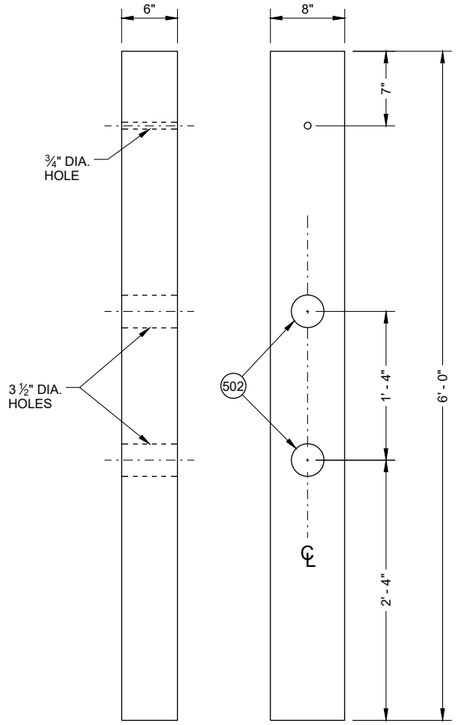


REFLECTIVE SHEETING (UU1, UU2)

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

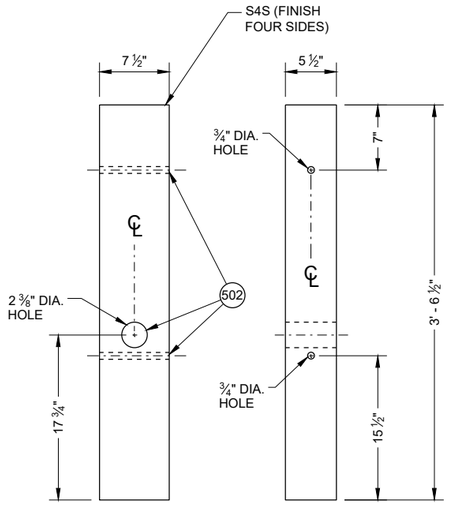
SDD 14B53 - 02e

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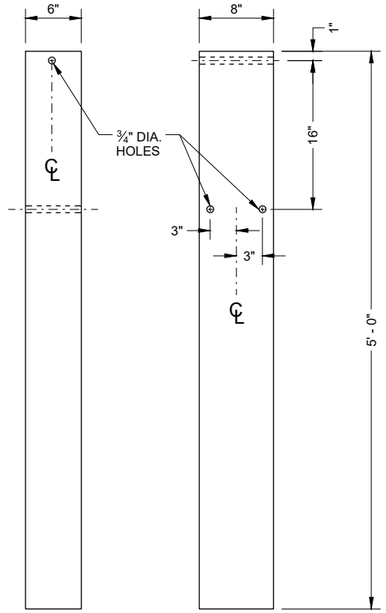
FRONT VIEW SIDE VIEW

CONTROLLED RELEASE POST (CRT) (DD2)



FRONT VIEW SIDE VIEW

WOOD BREAKAWAY POST (FF1)



FRONT VIEW SIDE VIEW

FOUNDATION TUBE (QQ1) 500

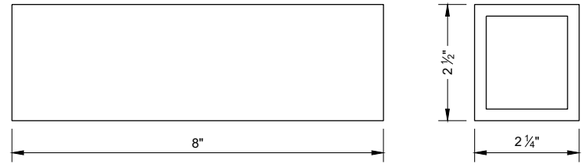
GENERAL NOTES

500 SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.

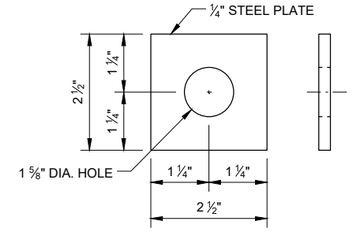
501 FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

502 LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.

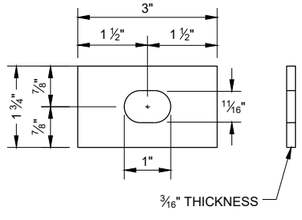
503 MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE 109.



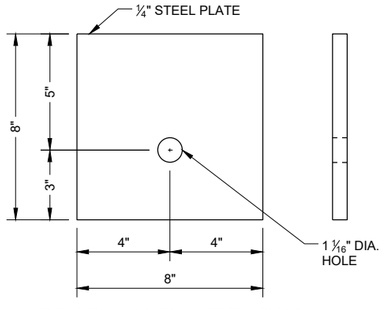
FOUNDATION TUBE - ANCHOR CABLE TUBE (QQ2)



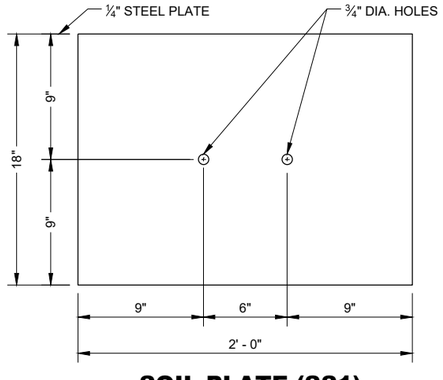
ANCHOR CABLE TUBE END PLATE (QQ3)



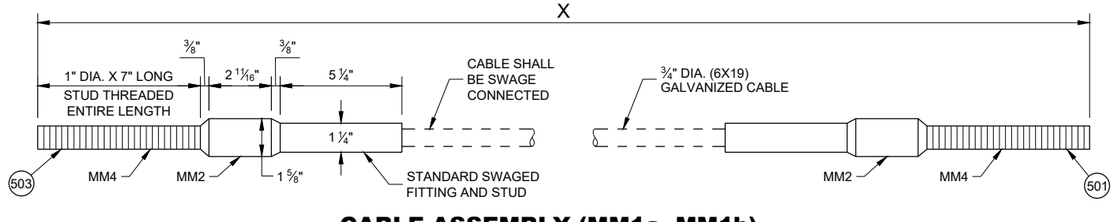
RECTANGULAR PLATE WASHER (CC1)



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

MM1b	9' - 0"
MM1b	6' - 8"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B53 - 02f

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BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL THE RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
E3	POST BOLT - NUT	AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	1/2" DIA. 6" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	3/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329	

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SDD 14B53 - 02g

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
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BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	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	DIMENSIONS ⅜" X 4" X 1' - 0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	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	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	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	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	¾"
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
NN2	ANCHOR CABLE - NUT - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	1" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
PP1	BEARING PLATE AT POST	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	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/16"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	
QQ3	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	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	DIMENSIONS 2 1/2" X 2 1/2" X 1/4"
		GALV. AASHTO M111 / ASTM A123	
QQ4	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
QQ5	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
QQ6	GROUND STRUT AND YOKE - NUT	HEAVY HEX	5/8 DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
SS1	SOIL PLATE	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	
		GALV. AASHTO M111 / A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8 DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING. SHEETING TYPE FOR MARKER.
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

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SDD 14B53 - 02i

SDD 14B53 - 02i

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

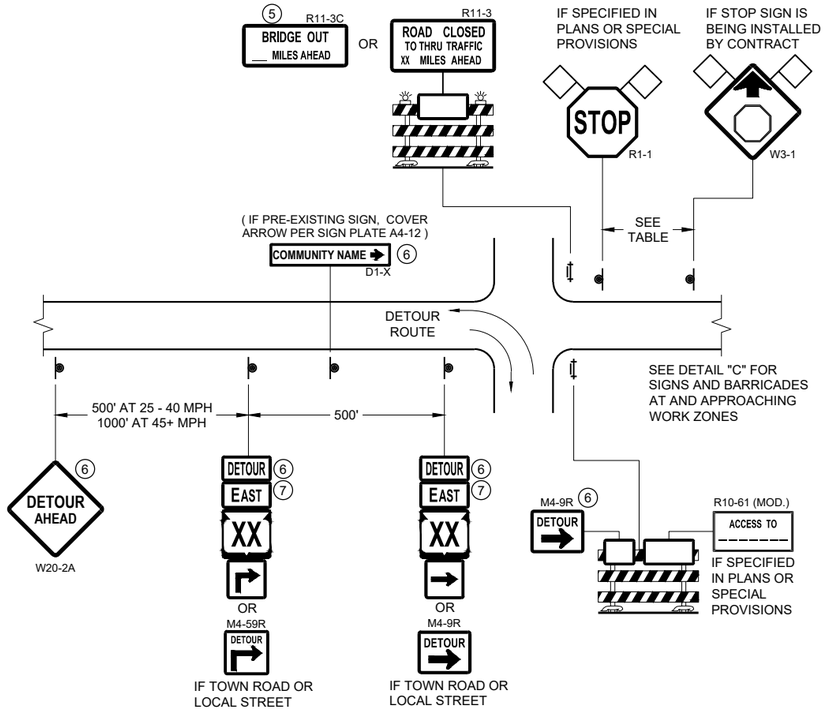
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DEPARTMENT OF TRANSPORTATION

APPROVED

May 2022
DATE

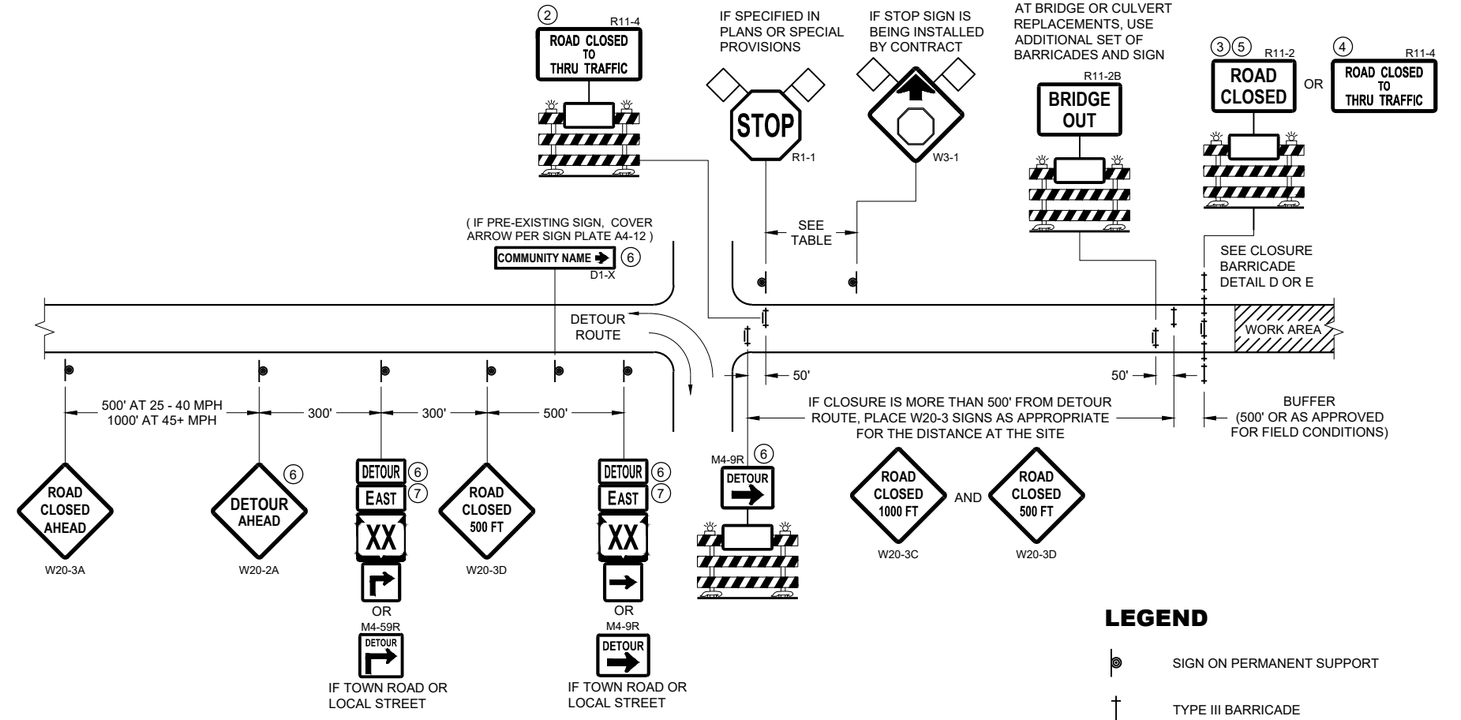
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA



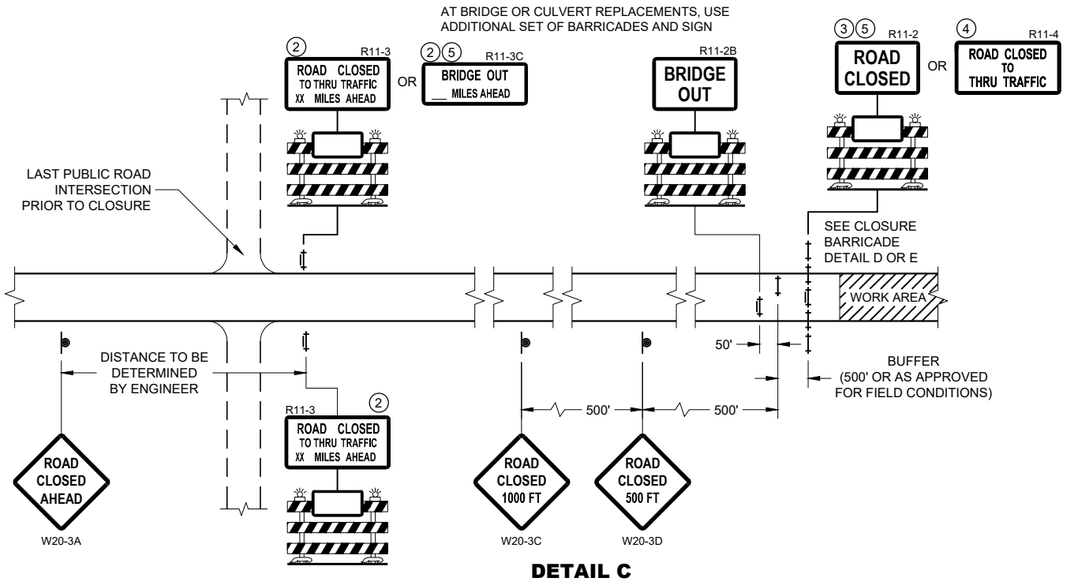
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

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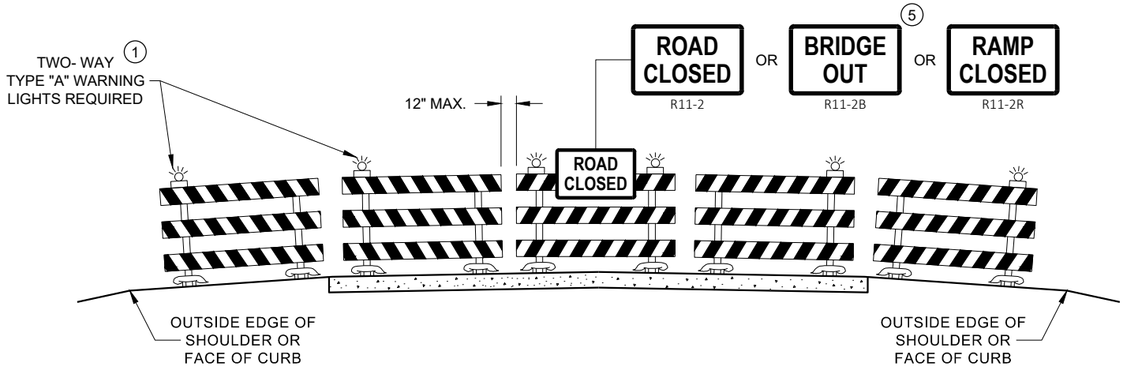
APPROVED
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/S/ Andrew Heidtke
WORK ZONE ENGINEER

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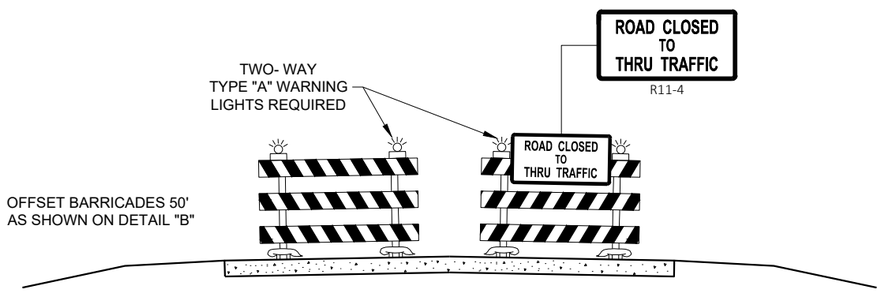
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SDD 15C02 - 09a

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
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SDD 15C02 - 09b

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

LEGEND

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

GENERAL NOTES

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

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

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

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

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

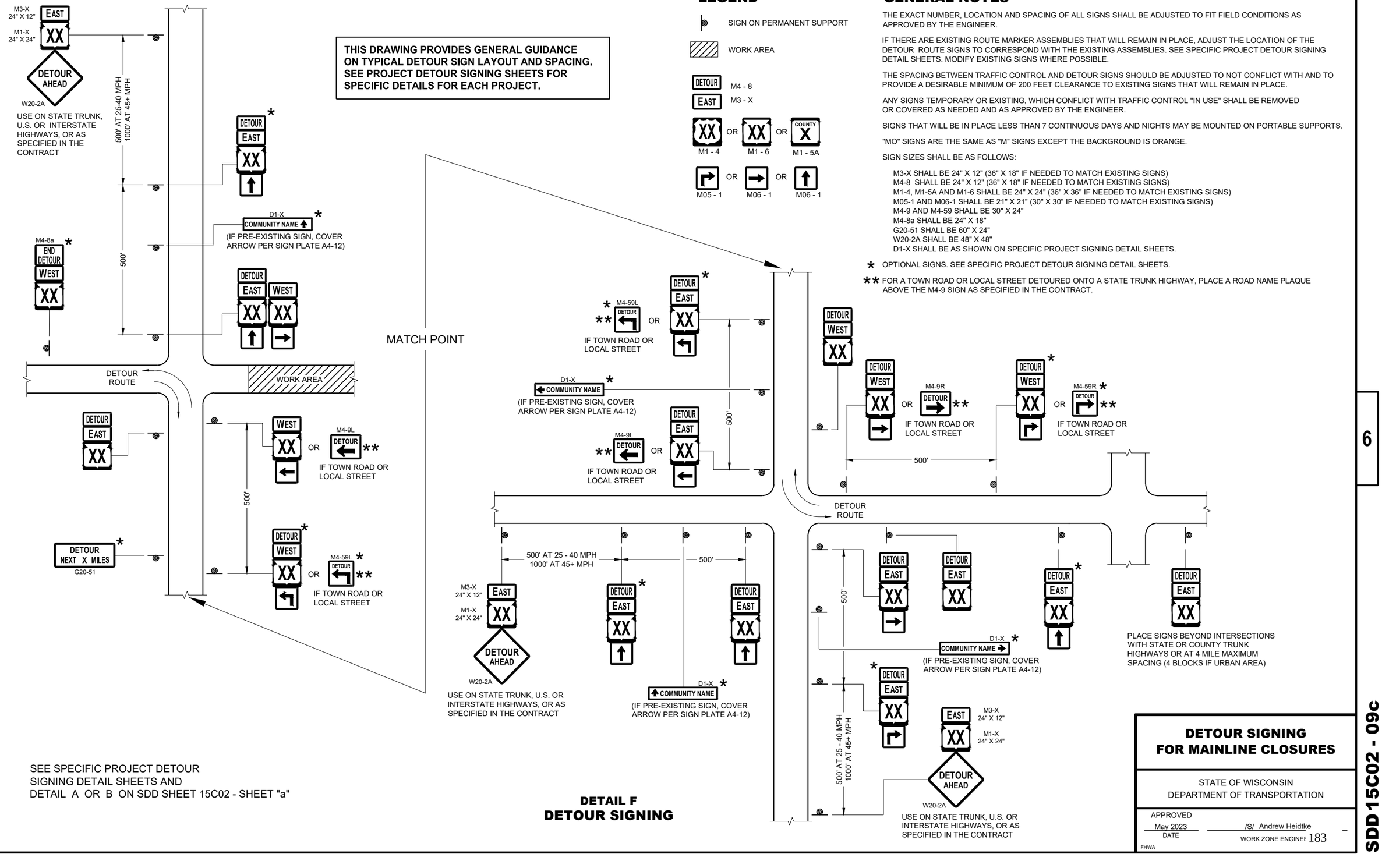
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

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

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

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



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

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15C02 - 09c

SDD 15C02 - 09c

GENERAL NOTES

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

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

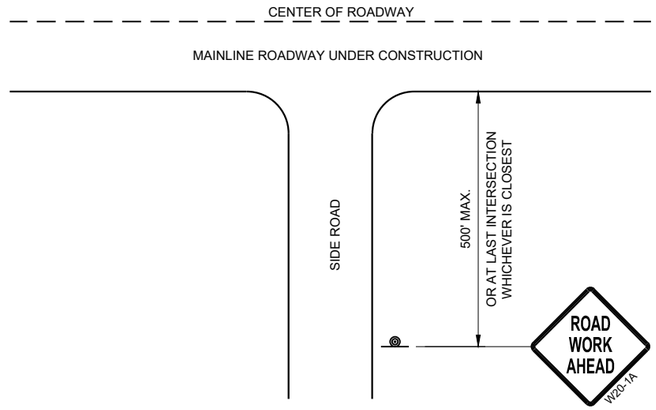
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



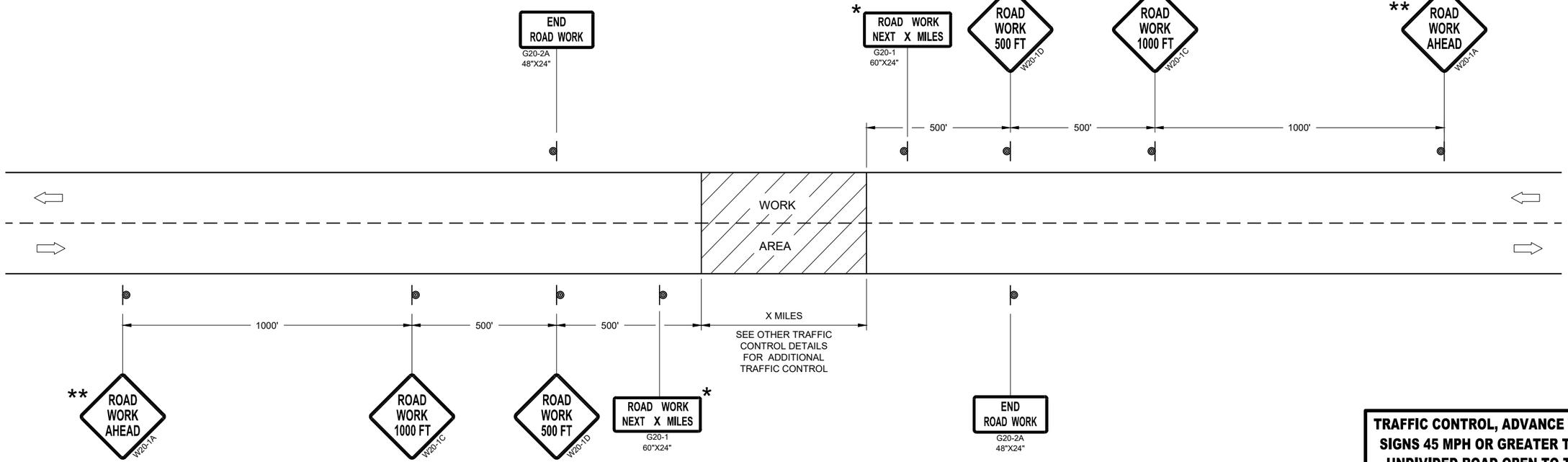
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C04 - 05

GENERAL NOTES

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

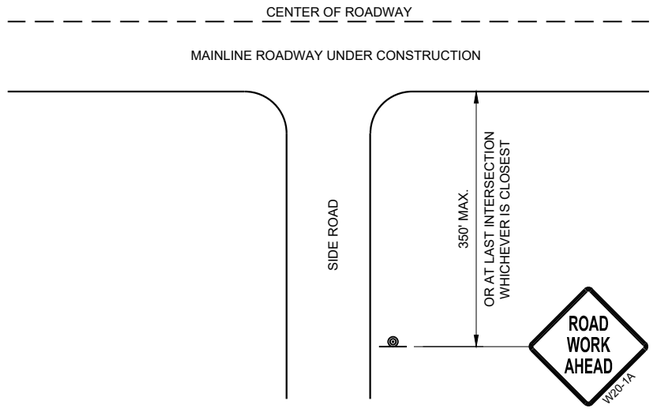
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

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



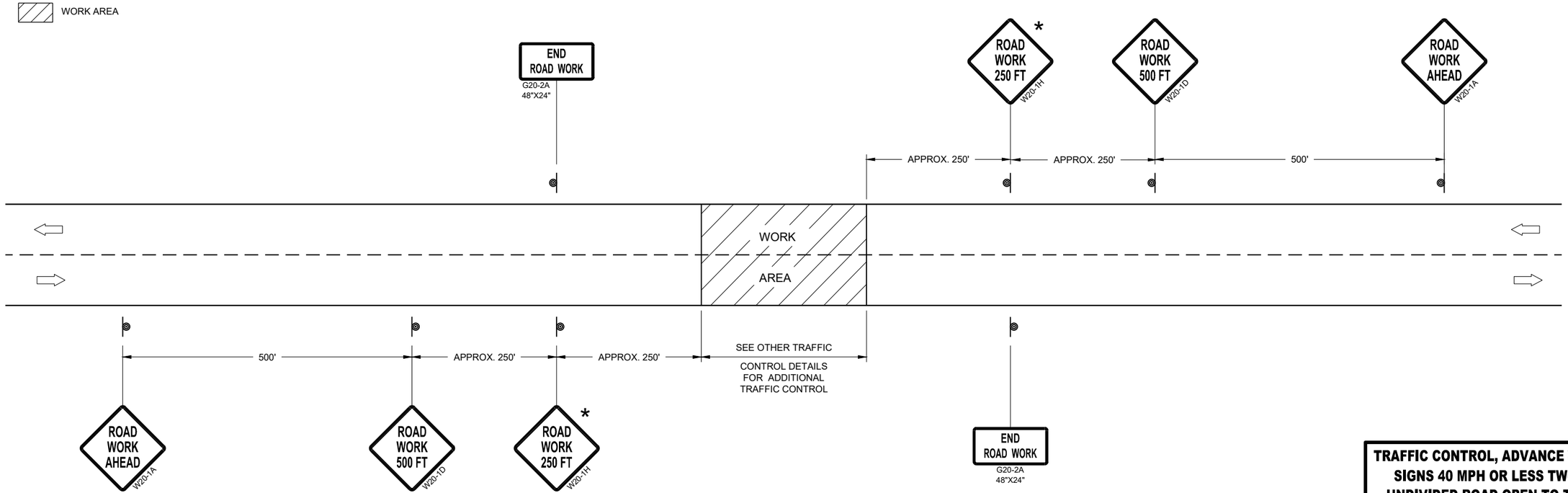
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

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SDD 15C05 - 05

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

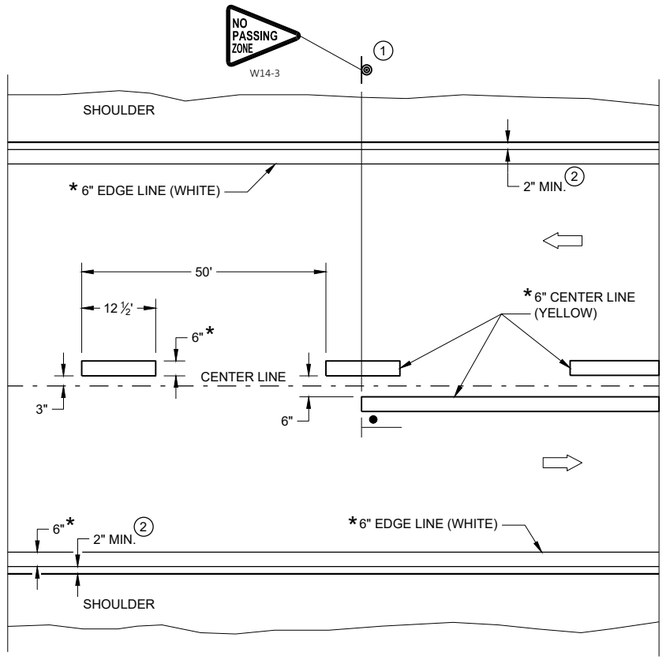
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

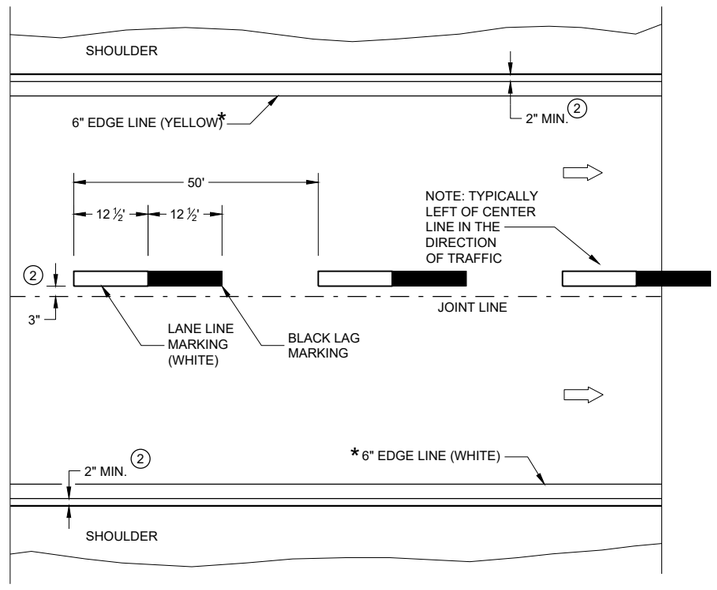
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

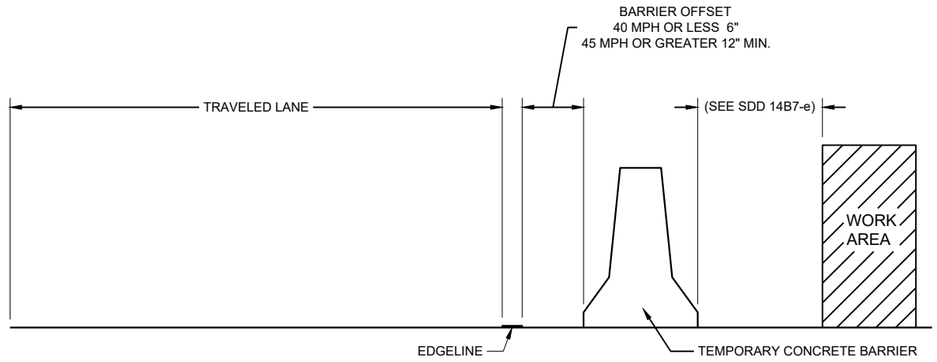
PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
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/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER
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SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

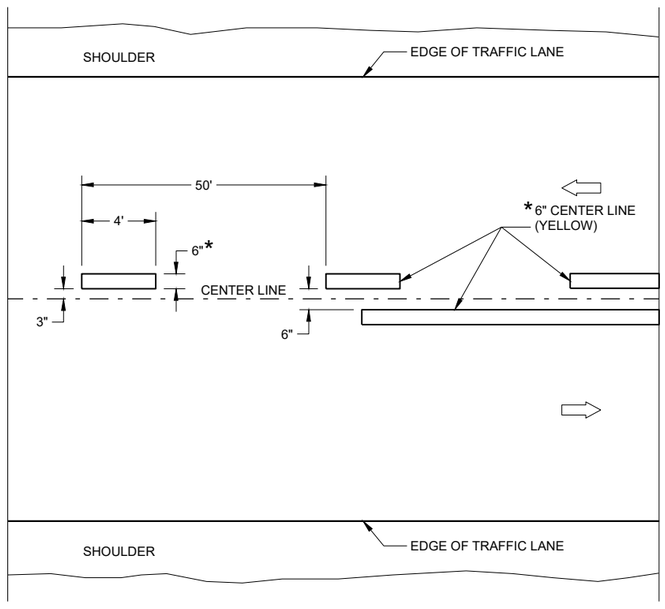
GENERAL NOTES

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

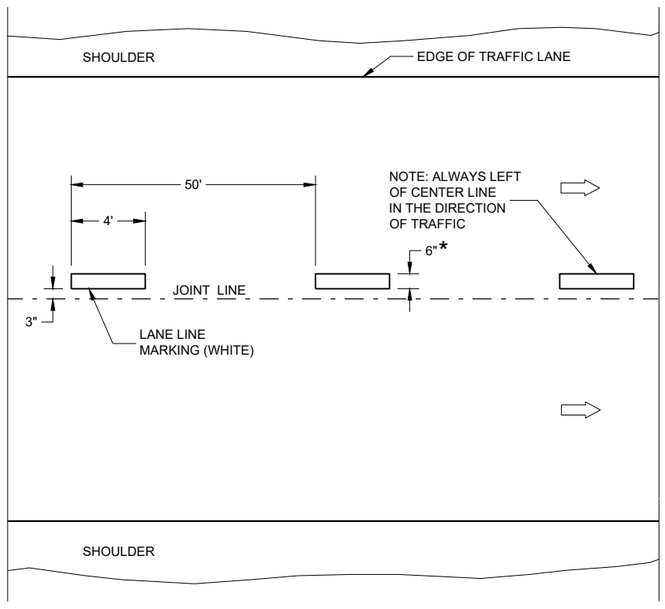
LEGEND

⇨ DIRECTION OF TRAFFIC

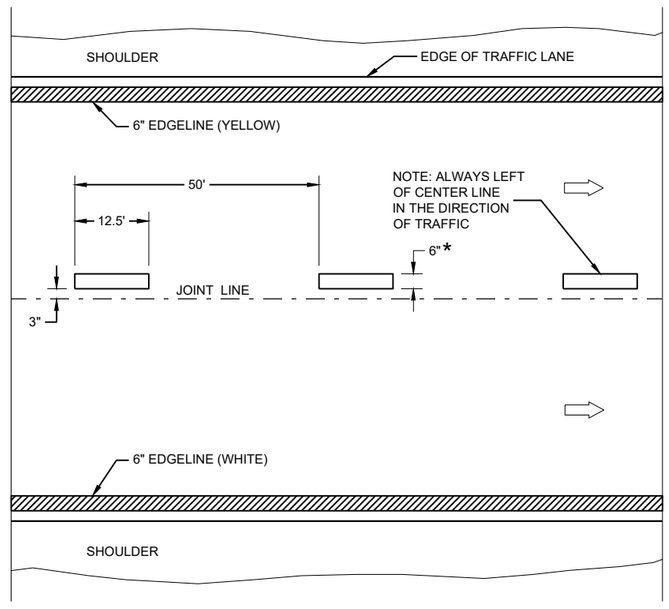
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

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SDD 15C08-23b

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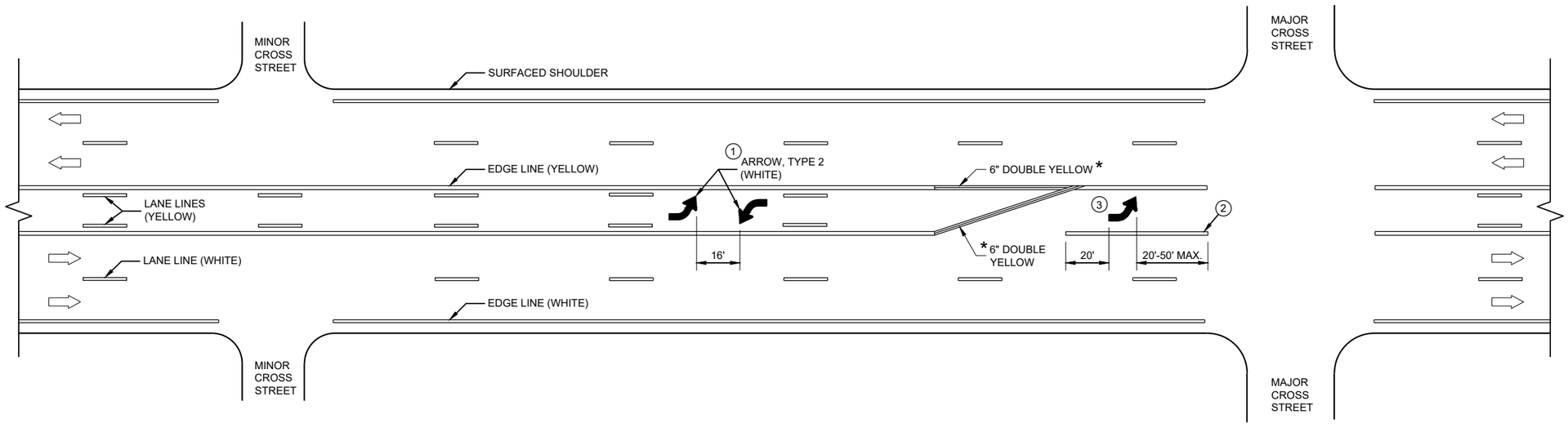
SDD 15C08-23b

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 10" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



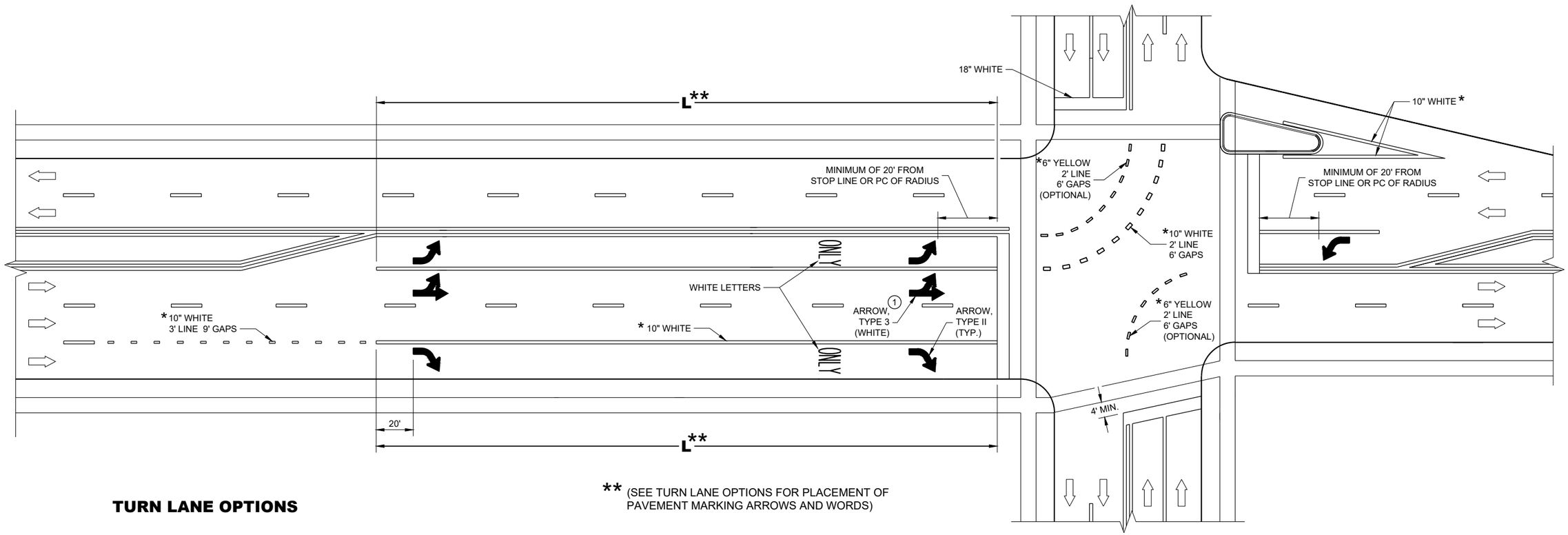
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA· 188

SDD 15C08-23c

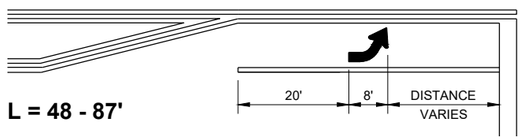
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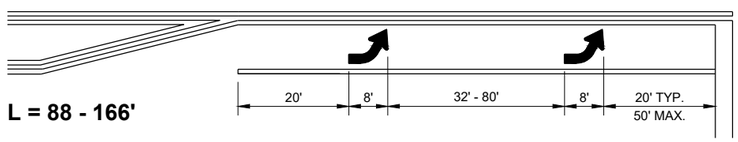
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

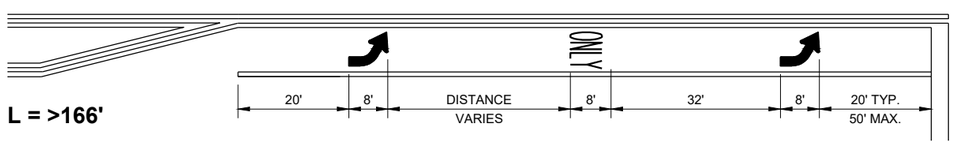
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

(1) QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C08-23d

SDD 15C08-23d

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

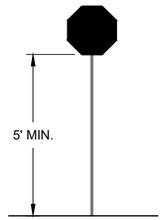
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



STOP/SLOW PADDLE ON SUPPORT STAFF

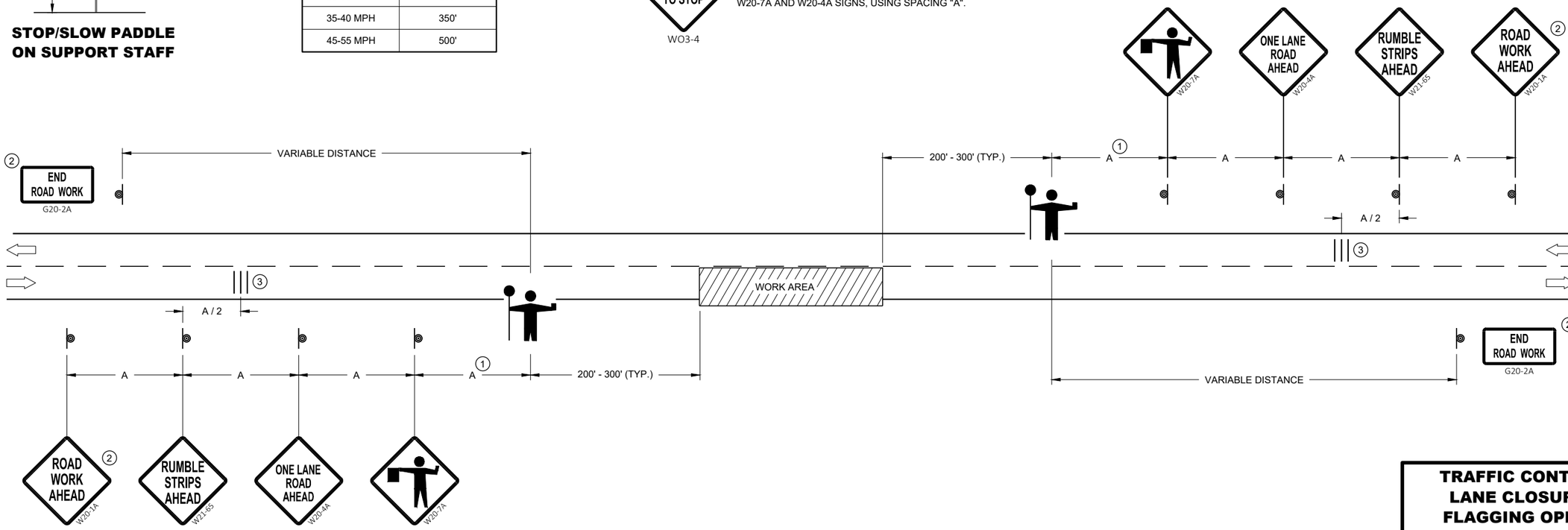
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C12 - 09a

6

SDD 15C12 - 09a

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

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

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

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

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

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

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

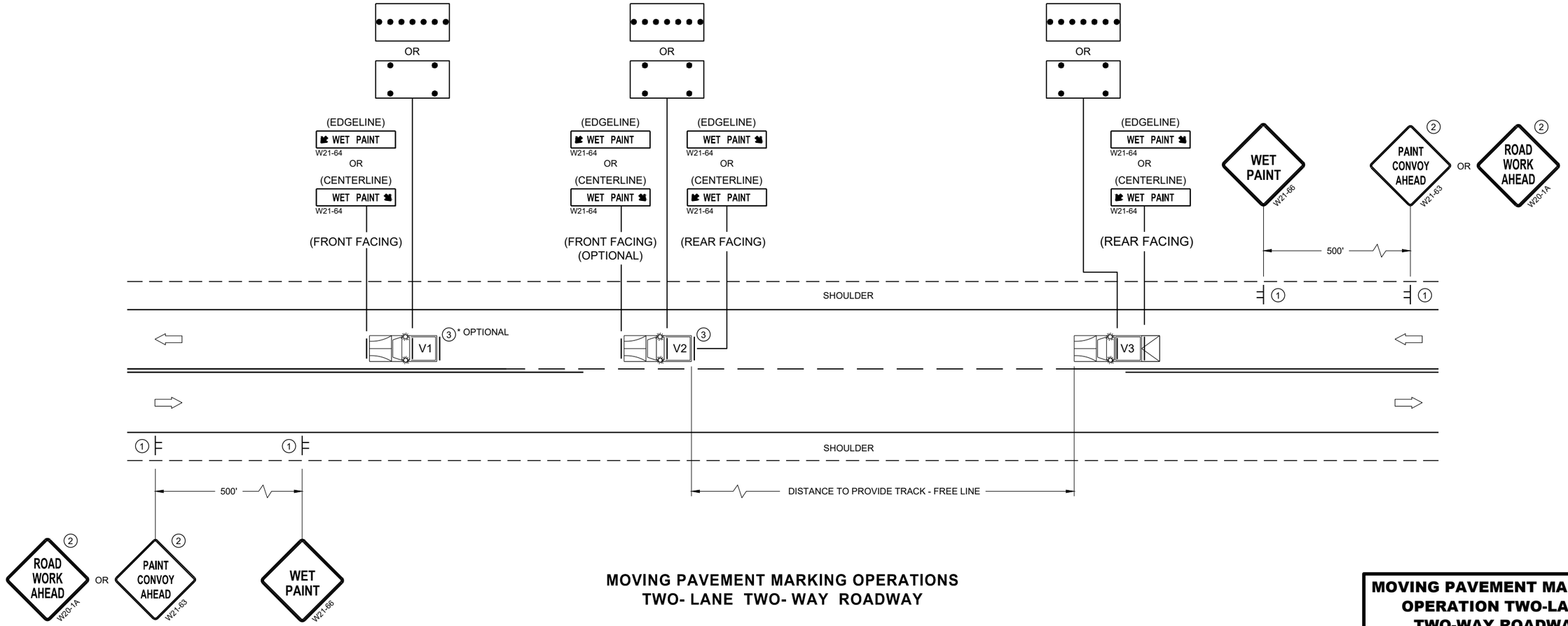
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

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



MOVING PAVEMENT MARKING OPERATIONS
TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE

/S/ Andrew I...
WORK ZONE EN

FHWA

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SDD 15C19-08a

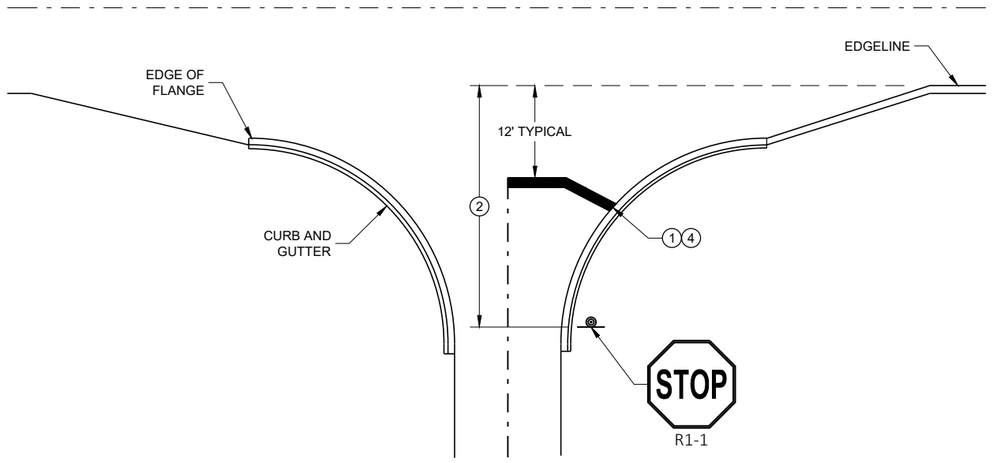
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SDD 15C19-08a

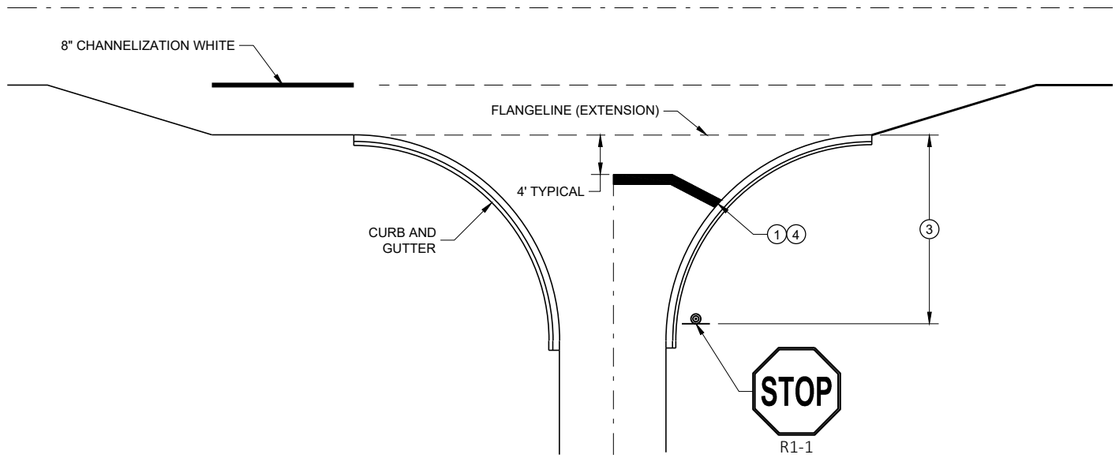
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

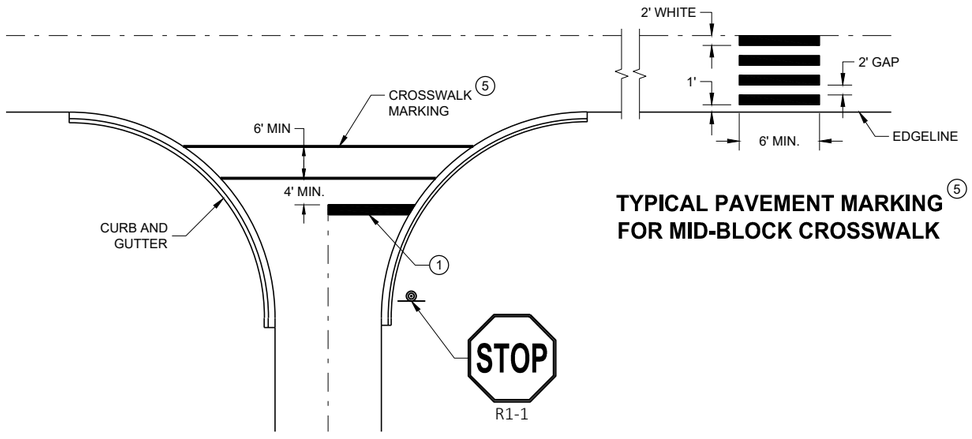
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

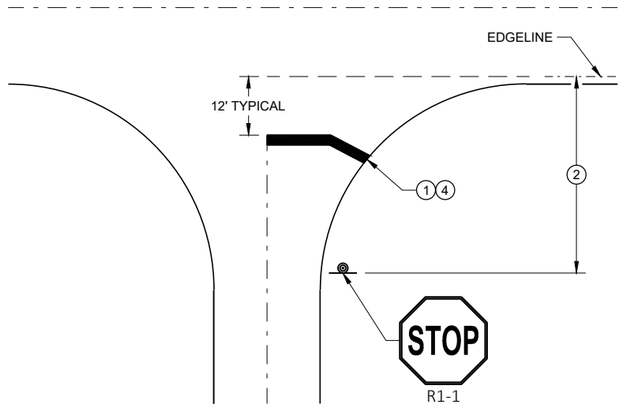


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

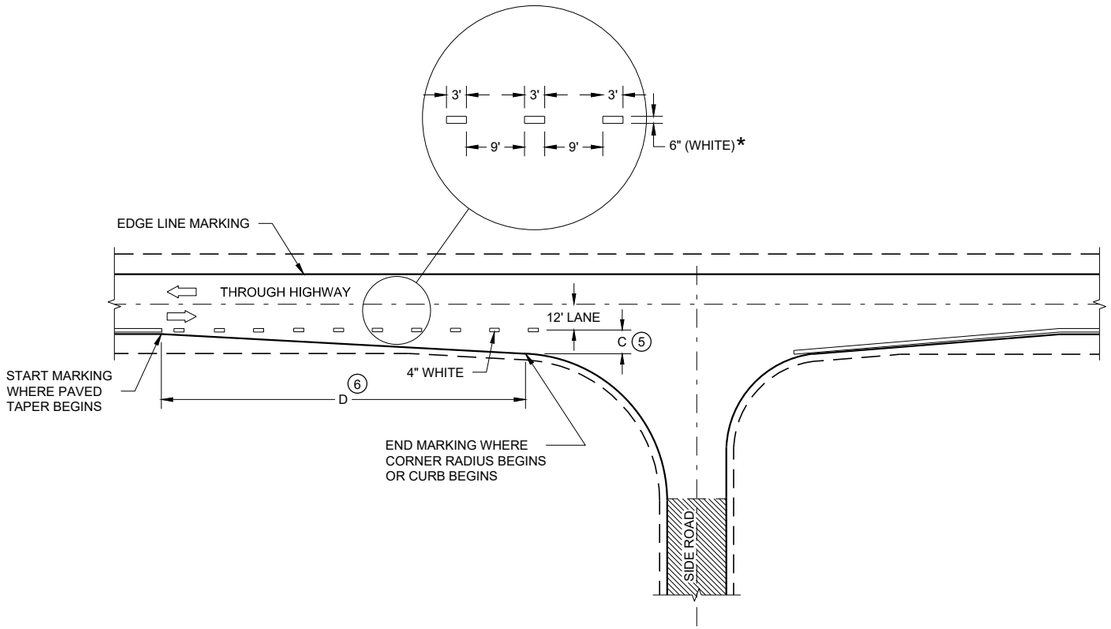
FHWA

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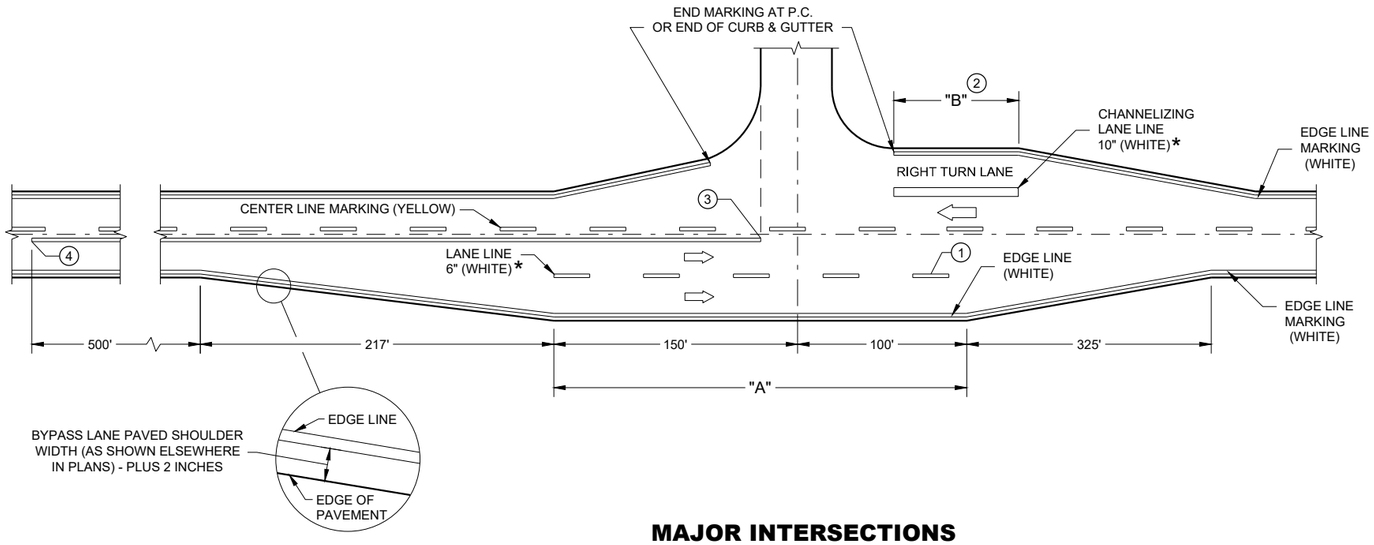
SDD 15C33 - 04

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SDD 15C33 - 04



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

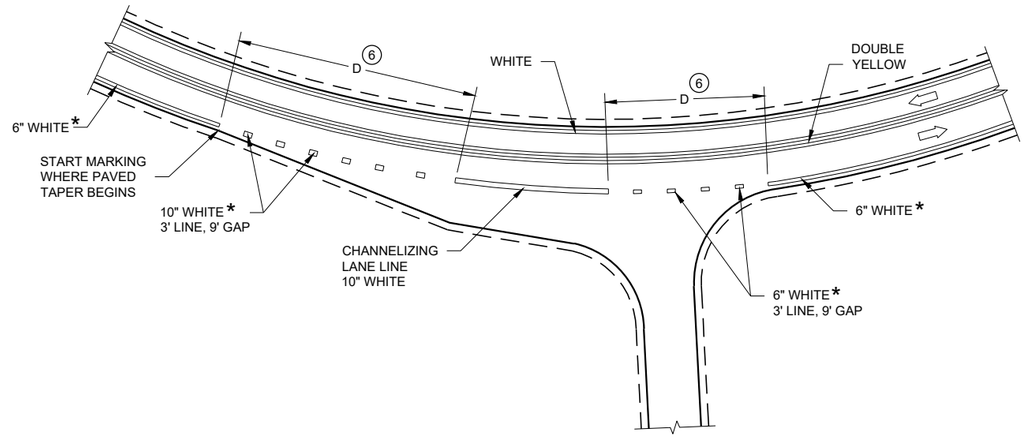
GENERAL NOTES

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

1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL

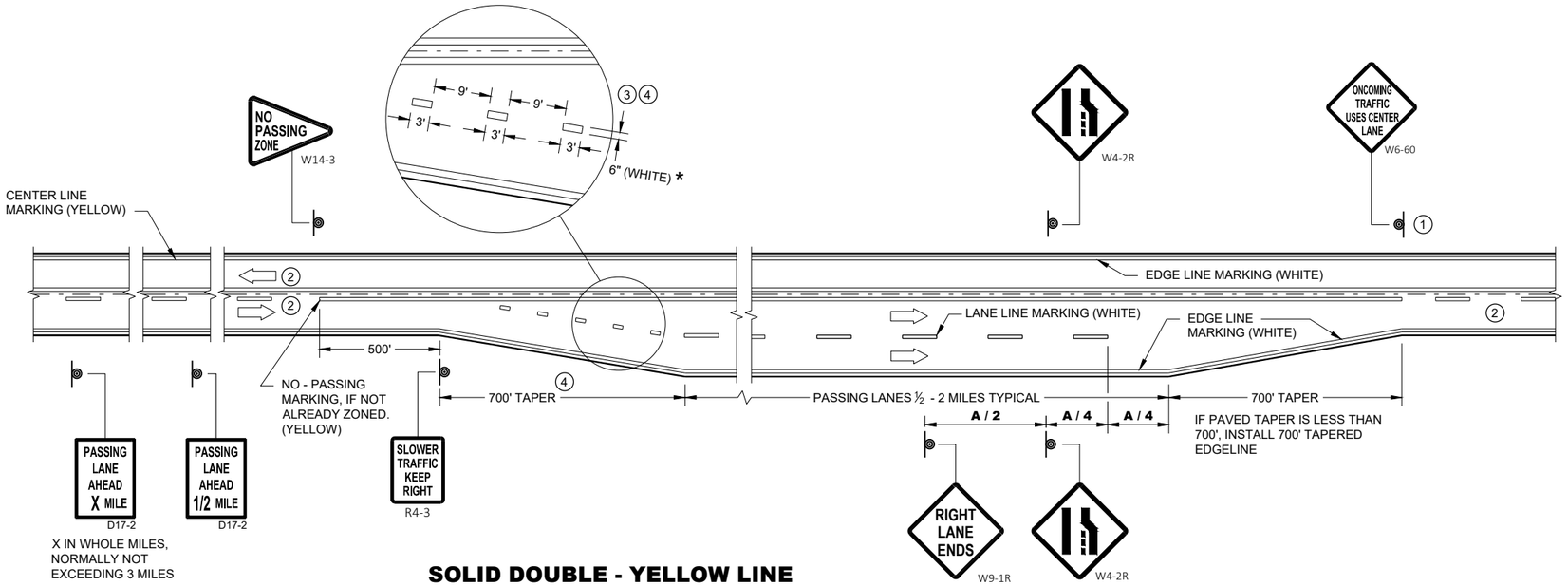


INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

SDD 15C35-06a

6



SOLID DOUBLE - YELLOW LINE
(THROUGHOUT ENTIRE PASSING / CLIMBING LANE)

GENERAL NOTES

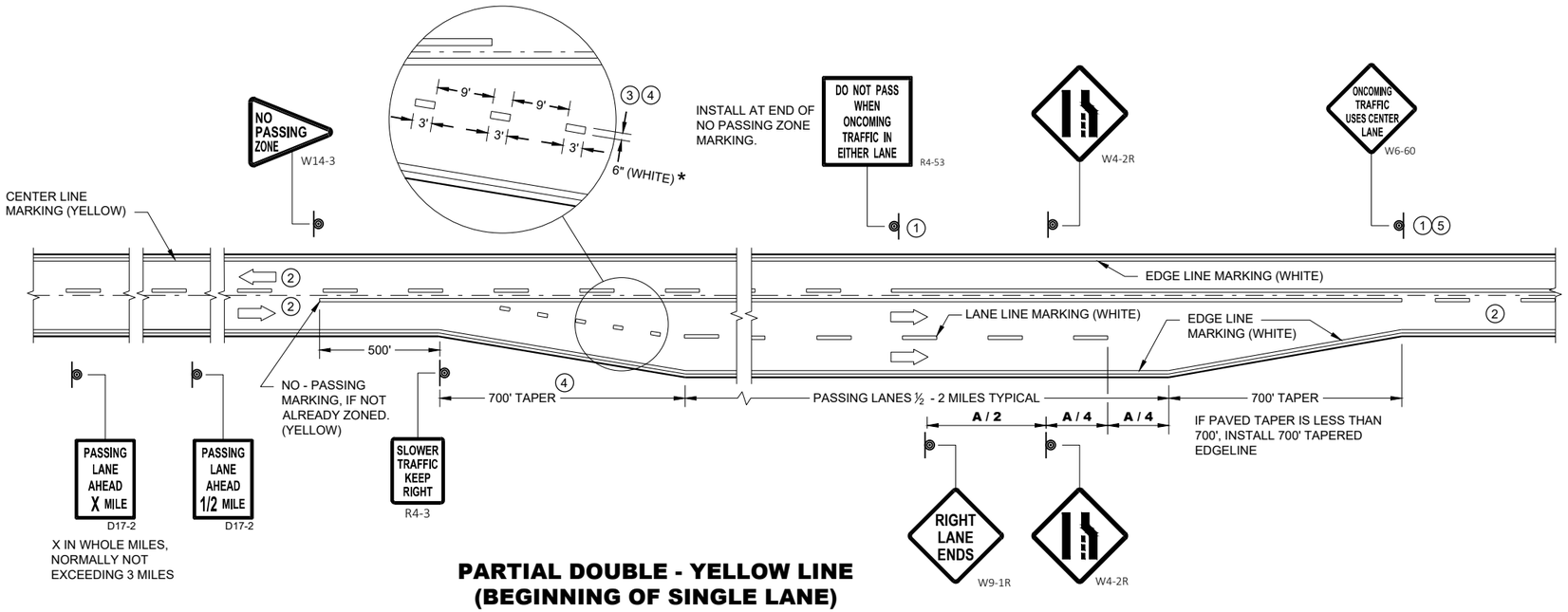
1. SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
4. WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
5. REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

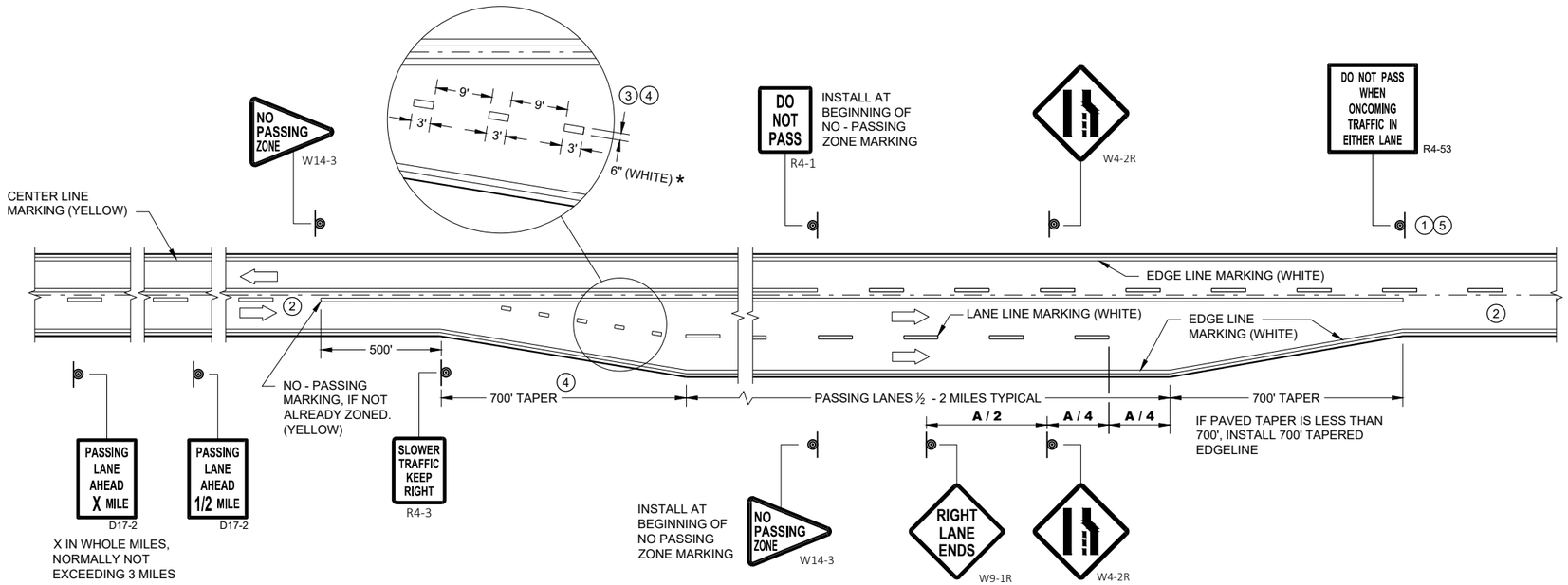
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PARTIAL DOUBLE - YELLOW LINE
(BEGINNING OF SINGLE LANE)

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)



SOLID DOUBLE - YELLOW LINE
(END OF SINGLE LANE)

GENERAL NOTES

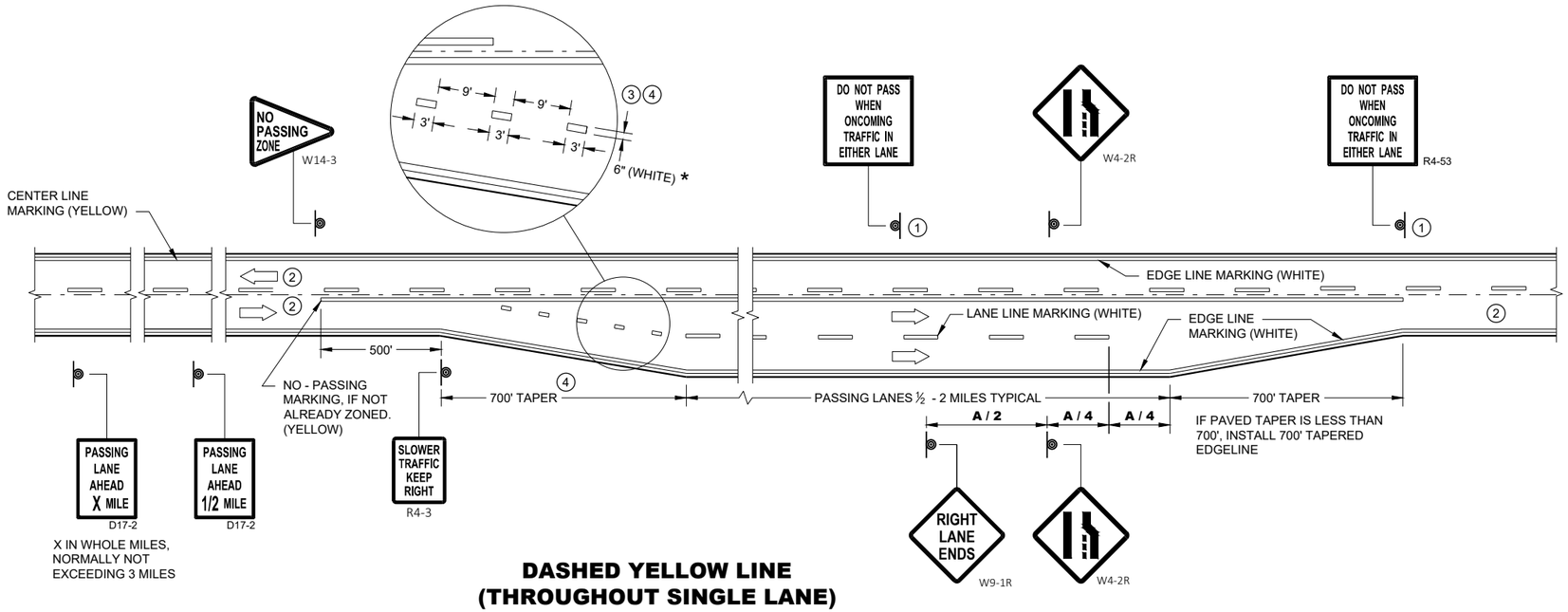
1. SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
4. WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
5. REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



DASHED YELLOW LINE
(THROUGHOUT SINGLE LANE)

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MAI ENGINEER
FHWA

6

SDD 15C35-06c

6

SDD 15C35-06c

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR, FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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' DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50 FOOT SPACING.

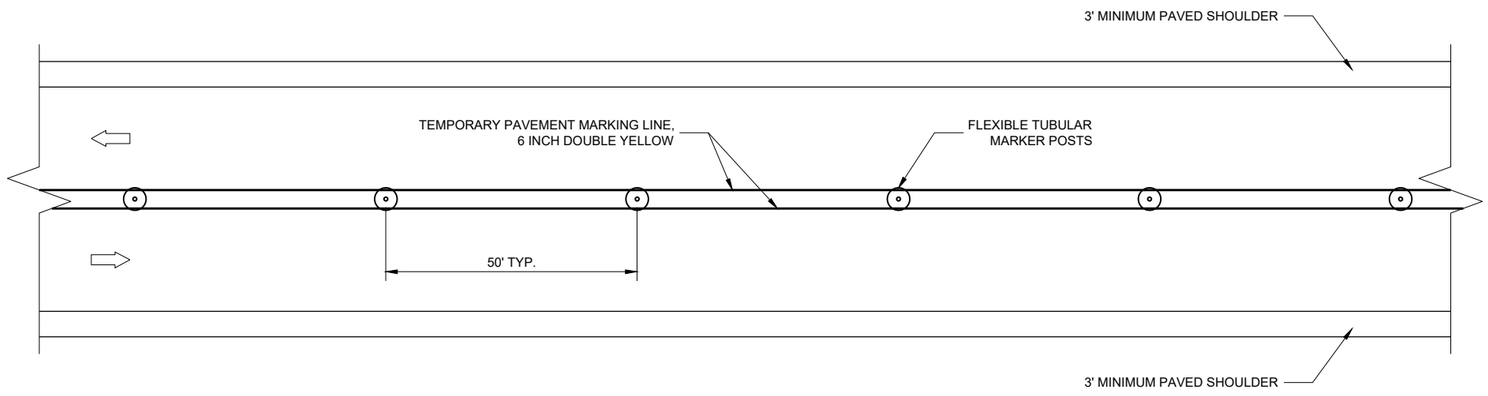
COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW.



(1) THE WO6-3 AND WO57-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND / OR 500 FEET BEYOND ANY SIDE ROAD. THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE WO6-3 AND THE WO57-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN THE SIGNS.



(2) CONVENTIONAL: 24" X 30"
FREEWAY AND EXPRESSWAY: 36" X 48"



TWO LANE, TWO WAY OPERATION

6

SDD 15D06-06

TRAFFIC CONTROL
TWO LANE TWO WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D06-06

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 AND PLACE TEMPORARY PAVEMENT MARKING LINE 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.

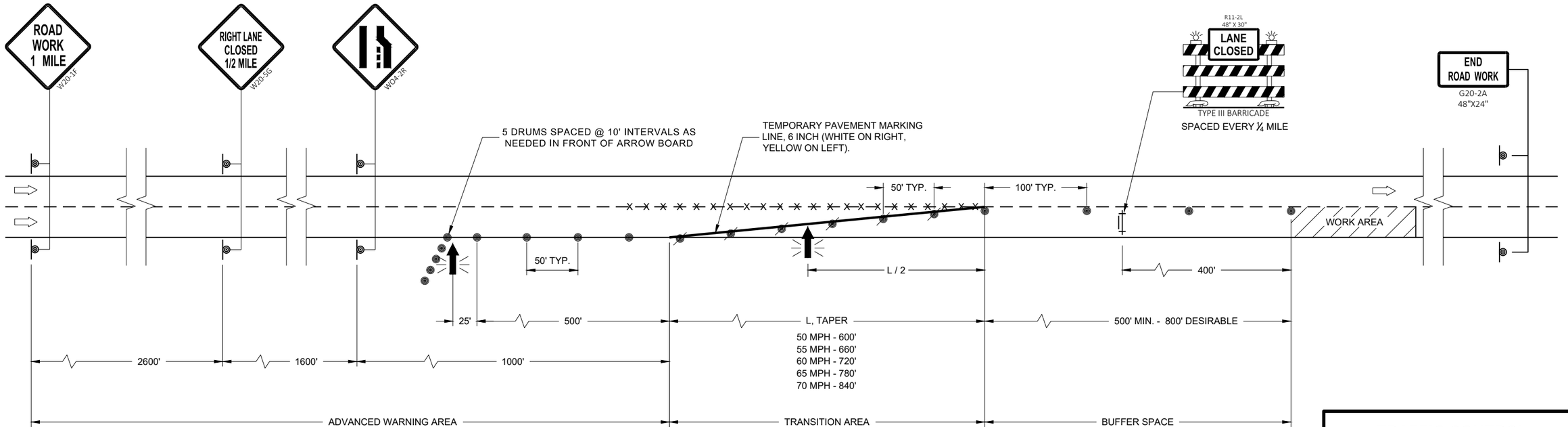
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D12 - 11a

6

SDD 15D12 - 11a

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)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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 TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

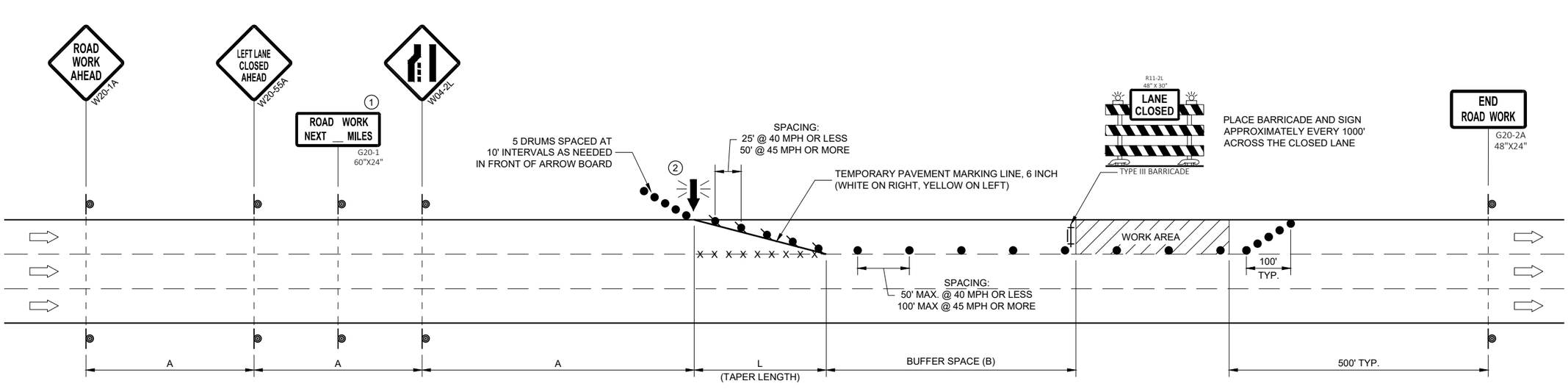
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D20-07a
SDD 15D20-07a

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

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

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

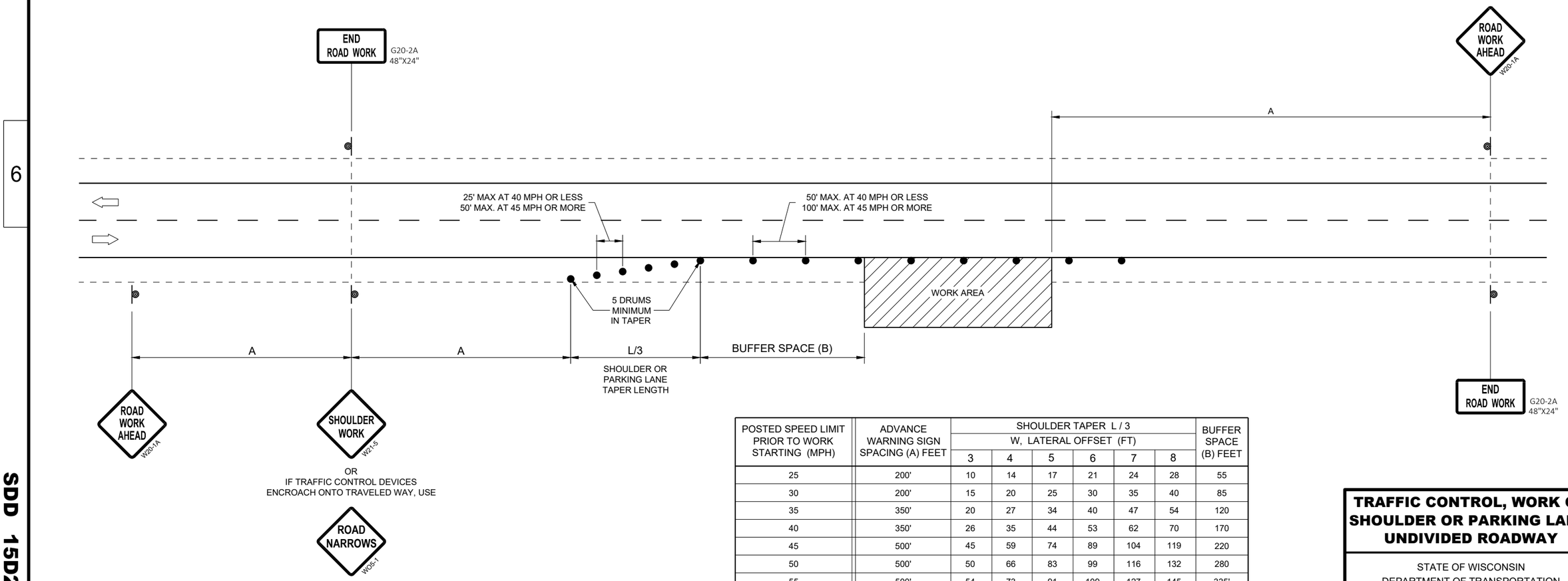
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

SDD 15D28 - 04

SDD 15D28 - 04

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

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

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

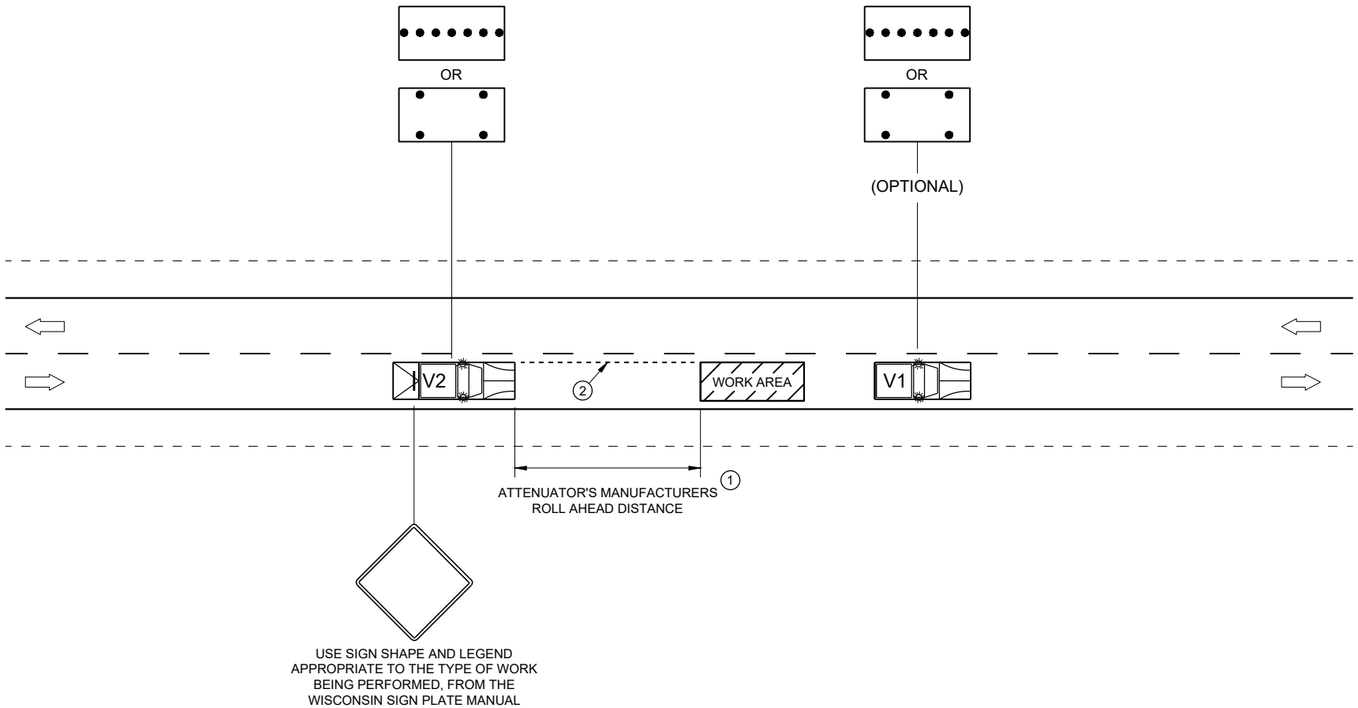
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

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

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

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

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



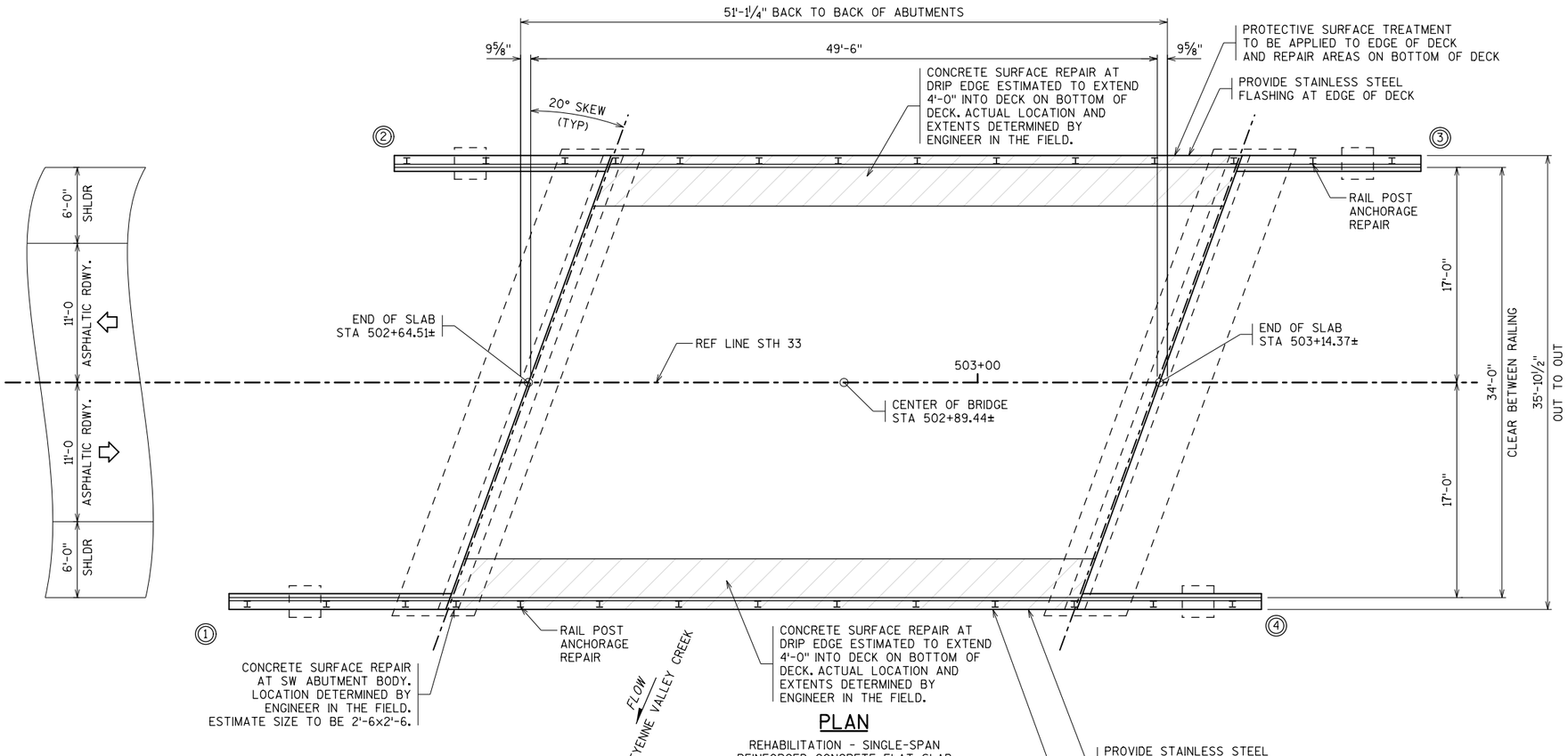
TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

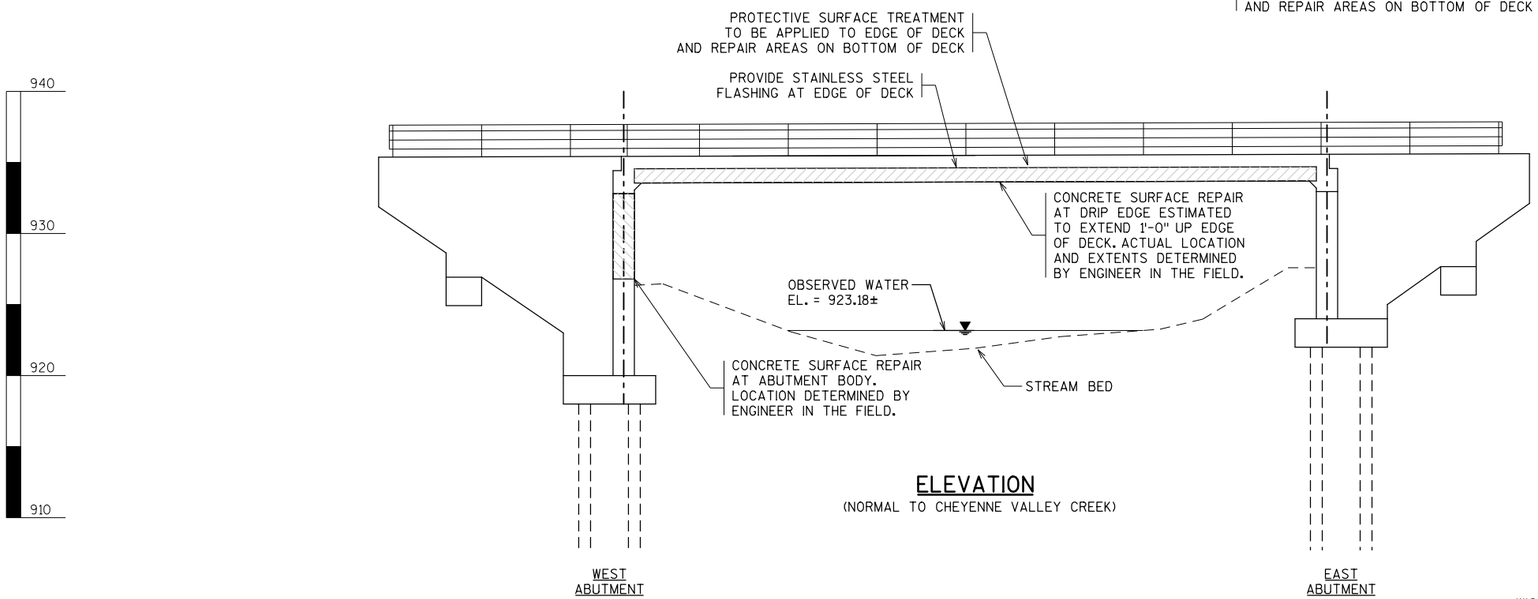
STATE PROJECT NUMBER
5100-01-60

◎ INDICATES WING NUMBER.



PLAN

REHABILITATION - SINGLE-SPAN
REINFORCED CONCRETE FLAT SLAB



ELEVATION

(NORMAL TO CHEYENNE VALLEY CREEK)

DESIGN DATA

LIVE LOAD:
TAKEN FROM HSI, 3/24/2022

DESIGN LOADING	=	HS20
INVENTORY RATING	=	HS22
OPERATING RATING	=	HS37

MATERIAL PROPERTIES:

CONCRETE MASONRY - SUPERSTRUCTURE	f'c = 4.0 ksi
- ALL OTHER	f'c = 3.5 ksi
HIGH STRENGTH BAR STEEL REINFORCEMENT AASHTO GRADE 60	fy = 60 ksi

TRAFFIC DATA

ADT (2025)	=	1820
ADT (2045)	=	1820
DHV	=	-
DD	=	60/40
T	=	18.5%
DESIGN SPEED	=	35-60 MPH
ESALS	=	440,000

LIST OF DRAWINGS

1 BRIDGE REHABILITATION & CONCRETE REPAIR
2 CROSS SECTION, NOTES & QUANTITIES
3 RAIL POST ANCHOR REPAIR DETAIL

WISCONSIN
MATTHEW J. GUNDRY
36517
EAU CLAIRE
WI
5-1-23
PROFESSIONAL ENGINEER

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: AARON BONK, PE, 608.261.0261

NO.	DATE	REVISION	BY

SEH
SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 09/14/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-62-63

STH 33 OVER CHEYENNE VALLEY CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
VERNON	FOREST

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	NCK	DESIGN CK'D.	MJG	DRAWN BY	RAD	PLANS CK'D.	CJB

BRIDGE REHABILITATION & CONCRETE REPAIR

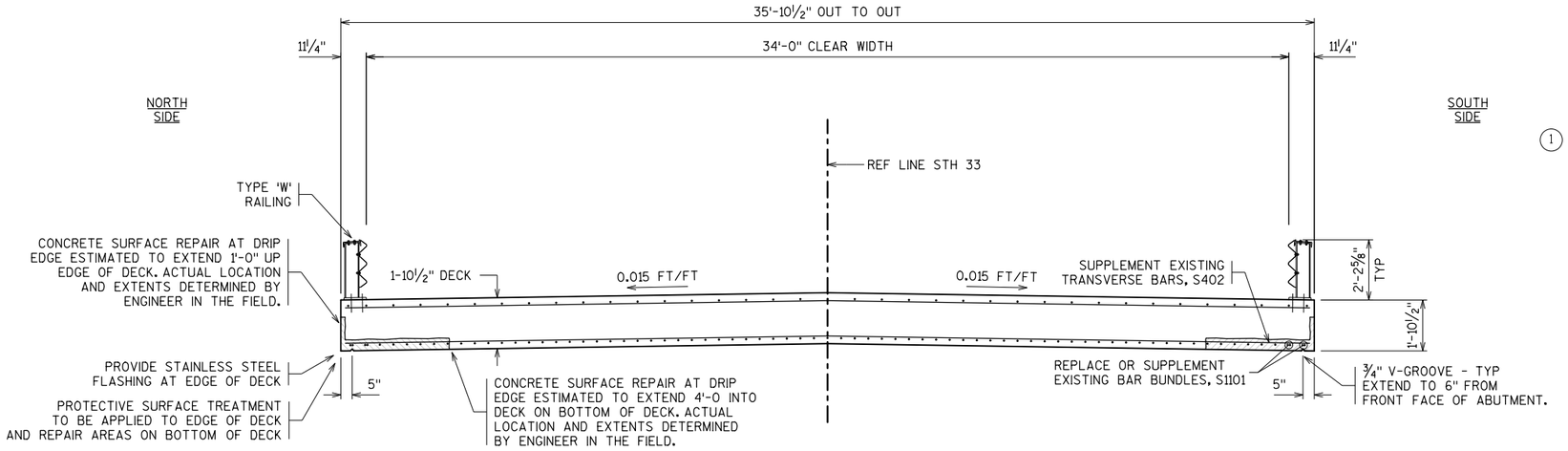
SHEET 1 OF 3
201

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STATE PROJECT NUMBER
5100-01-60



CROSS SECTION THRU BRIDGE
(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES - B-62-63

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
(1)	203.0335	DEBRIS CONTAINMENT OVER WATERWAY (B-62-63)	EACH	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	25
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,242
	509.1500	CONCRETE SURFACE REPAIR	SF	550
	SPV.0060.05	RAIL POST ANCHORAGE REPAIR	EACH	2
	SPV.0090.01	FLASHING STAINLESS STEEL	LF	102

(1) APPLIES TO PARTIAL REMOVAL OF DECK AND ABUTMENT AS NEEDED FOR CONCRETE SURFACE REPAIR ITEM.

BILL OF BARS — SUPERSTRUCTURE

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
S1101	X	4	50 - 8			BOTTOM LONGITUDINAL
S402	X	74	3 - 4			BOTTOM TRANSVERSE

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND INSPECTION REPORTS. EXISTING BRIDGE PLANS AVAILABLE AT WISDOT.

STATIONING MAY VARY BASED ON EXACT LOCATION OF BRIDGE TO PROPOSED ALIGNMENT.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

CONCRETE SURFACE REPAIR AS DETERMINED, LOCATED, MARKED AND MEASURED BY THE FIELD ENGINEER.

UTILIZE EXISTING BAR STEEL REINFORCEMENT IN AREAS OF CONCRETE SURFACE REPAIR. SUPPLEMENT EXISTING BAR STEEL WITH NEW BAR STEEL REINFORCEMENT AS PROVIDED ON THE PLAN AND AS DIRECTED BY THE ENGINEER.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A ½-INCH DEEP SAW CUT.

THESE STRUCTURE PLANS ARE ONLY THE STRUCTURE REPAIR WORK. ANY ADDITIONAL REMOVAL REQUIRED, OUTSIDE OF THE LIMITS SHOWN IN THESE PLANS MUST BE COORDINATED WITH THE FIELD ENGINEER. FIELD ENGINEER SHOULD BE CONTACTED FOR APPROVAL OF ADDITIONAL REMOVAL.

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

SEE ROADWAY PLAN FOR LANE STAGING AND TRAFFIC SHIFT. COORDINATE THESE STRUCTURE PLANS WITH THE ROADWAY STAGING.

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK AND 3/16" AND ¼" CONCRETE SCREWS.

FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

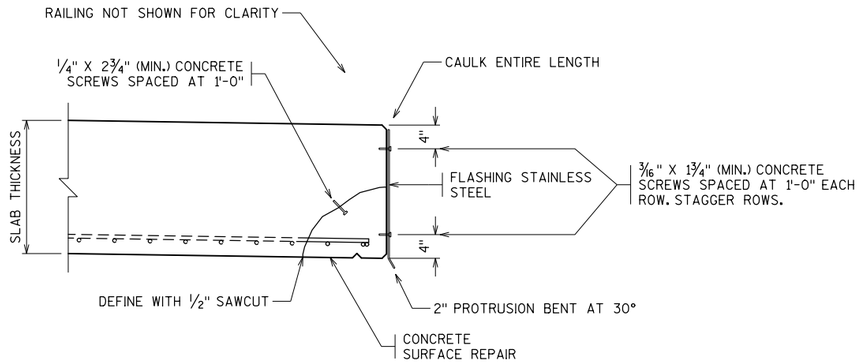
EXTEND FLASHING TO B.F. OF ABUTMENT DIAPHRAGM.

TOP OF FLASHING TO BEGIN APPROX. 1-INCH BELOW TOP OF DECK/SLAB SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST SLAB DEPTH OVER THE BRIDGE LENGTH.

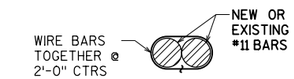
PROVIDE 2" MINIMUM FLASHING OVERLAP, FASTEN WITH 3/16" X 2" (MIN.) CONCRETE SCREWS.

CAULK SHALL BE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER.



REHABILITATION FLASHING DETAIL

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, CAULK, 3/16" AND ¼" CONCRETE SCREWS, AND CLEANING THE EDGE OF THE DECK PRIOR TO ATTACHMENT OF THE FLASHING.



BUNDLING DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-63

DRAWN BY RAD | PLANS CK'D. CJB

CROSS SECTION, NOTES AND QUANTITIES

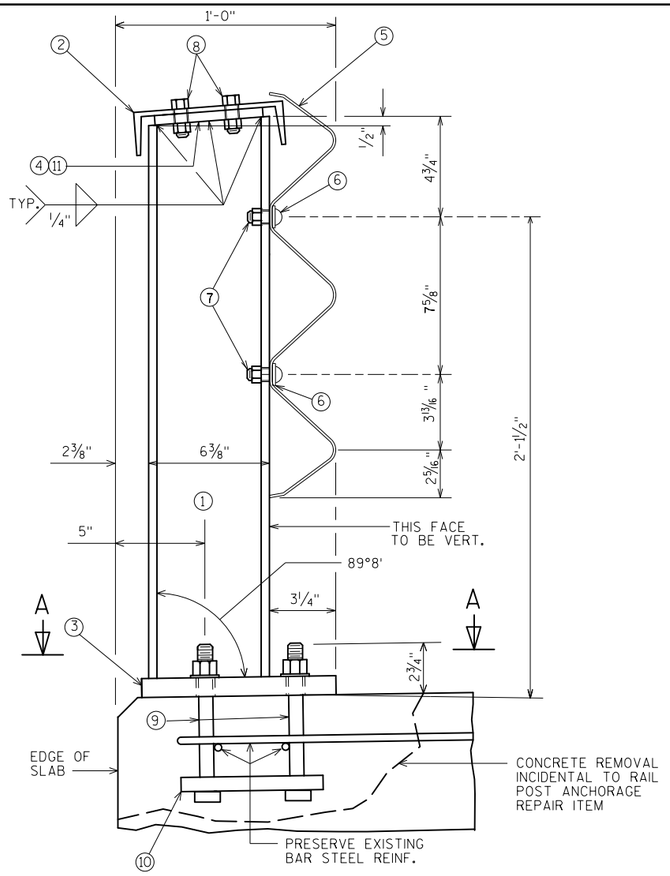
SHEET 2 OF 3

202

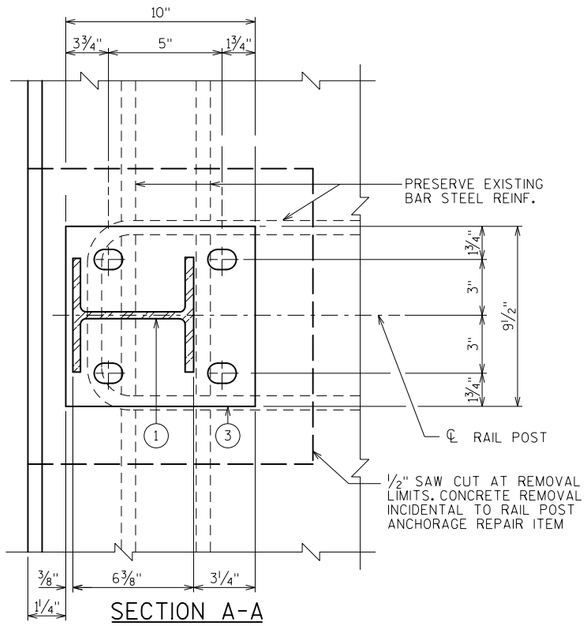
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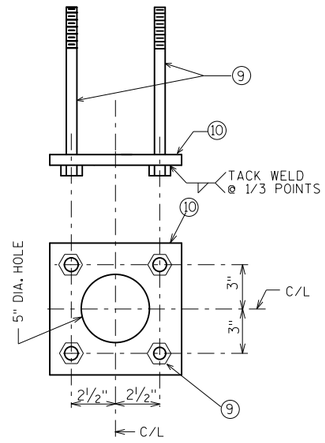


SECTION THRU RAILING



SECTION A-A

FOR INFORMATION ONLY - BASED ON ORIGINAL PLANS



ANCHORAGE DETAIL

STATE PROJECT NUMBER

5100-01-60

LEGEND

(1) W6x25 WITH 2 - 3/4" x 2 1/2" VERT. SLOTS ON ONE SIDE OF POST FLANGE FOR BOLT NO. 7. CUT BOTTOM OF POST TO ANGLE SHOWN. SET POST NORMAL TO GRADE.

(2) C8x11.5 WITH 13/16 " DIA. HOLES. ATTACH TO NO. 4 WITH BOLTS NO. 8. ATTACH CONTINUOUSLY TO A MIN. OF FOUR POSTS AND A MAX. OF EIGHT POSTS.

(3) PLATE 1" X 9 1/2" x 10" WITH 1 1/16" x 1 1/2" SLOTTED HOLES FOR BOLTS NO. 9. WELD TO NO. 1 AS SHOWN.

(4) PLATE 1/2" x 5 3/4" x 6" WITH 1 1/4" DIA. HOLE FOR BOLTS NO. 8. WELD TO NO. 1. AS SHOWN.

(5) CORRUGATED SHEET BEAM, CONFORMING TO A.A.S.H.T.O. DESIGNATION M180-CLASS A, TYPE 2.
'THRIE' GUARDRAIL, OR EQUAL, MAY BE USED IN LIEU OF THE DOUBLE UNIT PLATE BEAM SHOWN. ATTACH TO NO. 1 WITH BOLTS NO. 7.

(6) 1 3/4" x 3" MOUNTING BOLT WASHER EIGHT GAUGE GALVANIZED. 2 PER POST REQ'D.

(7) 5/8" DIA. BUTTON HEAD RAIL MOUNTING BOLT WITH ROUND WASHER AND NUT. 2 PER POST REQ'D.

(8) 5/8" DIA. x 2" HEX BOLTS WITH NUT AND TWO WASHERS EACH. 4 REQ'D PER POST CONNECTION, 8 REQ'D PER SPLICE.

(9) A325 - 7/8" DIA. HEX BOLTS (GALVANIZED) WITH A325 NUT AND WASHER. 14" LONG AT END POSTS AND AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 15". USE 8" LONG AT ALL OTHER LOCATIONS. 4 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 3. CHAMFER TOP OF BOLTS BEFORE THREADING.

(10) 1/4" x 8" x 8" FLAT BAR WITH 15/16 " DIA. HOLES FOR ANCHOR BOLTS NO. 4.

(11) PLATE 1/2" x 5 3/4" x 11 1/2" WITH 1 1/4" DIA. HOLES FOR BOLTS NO. 8. WELD THE SAME AS NO. 4. USE AT CHANNEL FIELD SPLICE ONLY.

ITEMS 1 - 8 & 11 ARE EXISTING TO REMAIN OR BE SALVAGED AND REINSTALLED. ITEMS 9 & 10 ARE NEW, INCIDENTAL TO RAIL POST ANCHORAGE REPAIR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-63

DRAWN BY RAD | PLANS CK'D. CJB

RAIL POST ANCHOR REPAIR DETAIL

SHEET 3 OF 3

203

8

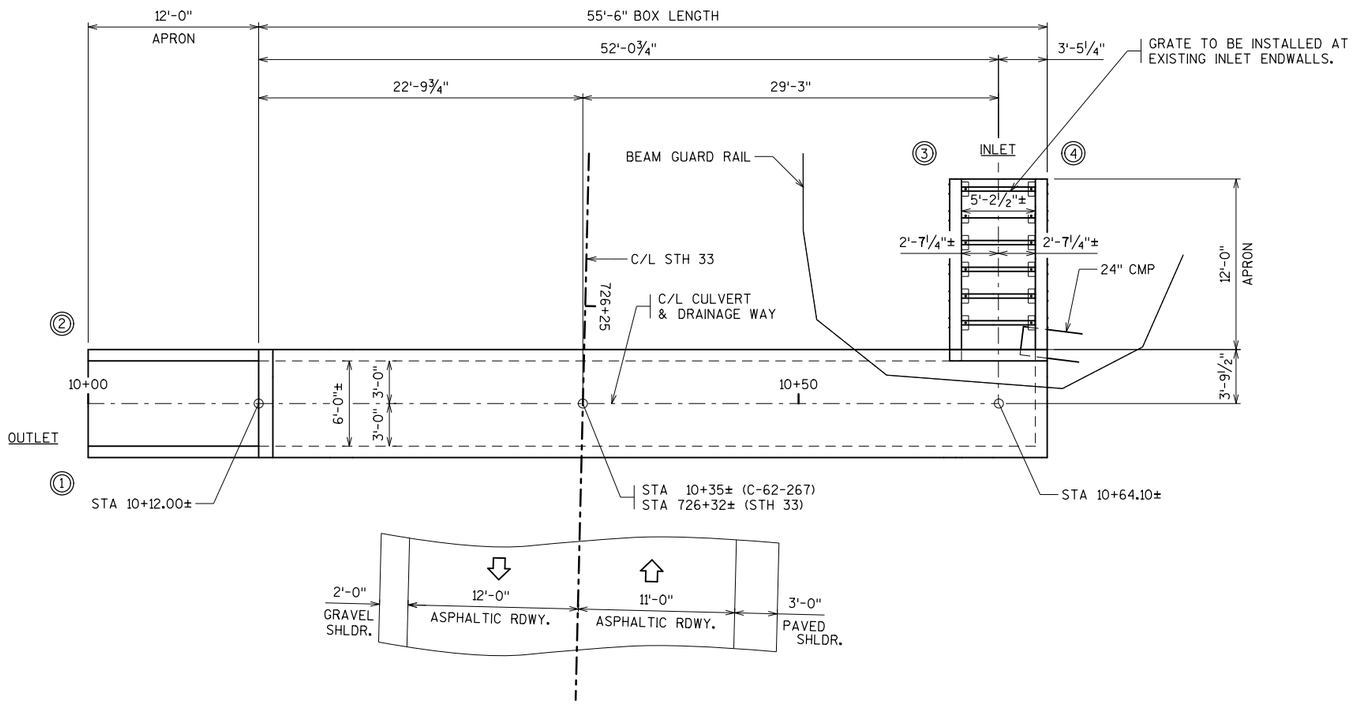
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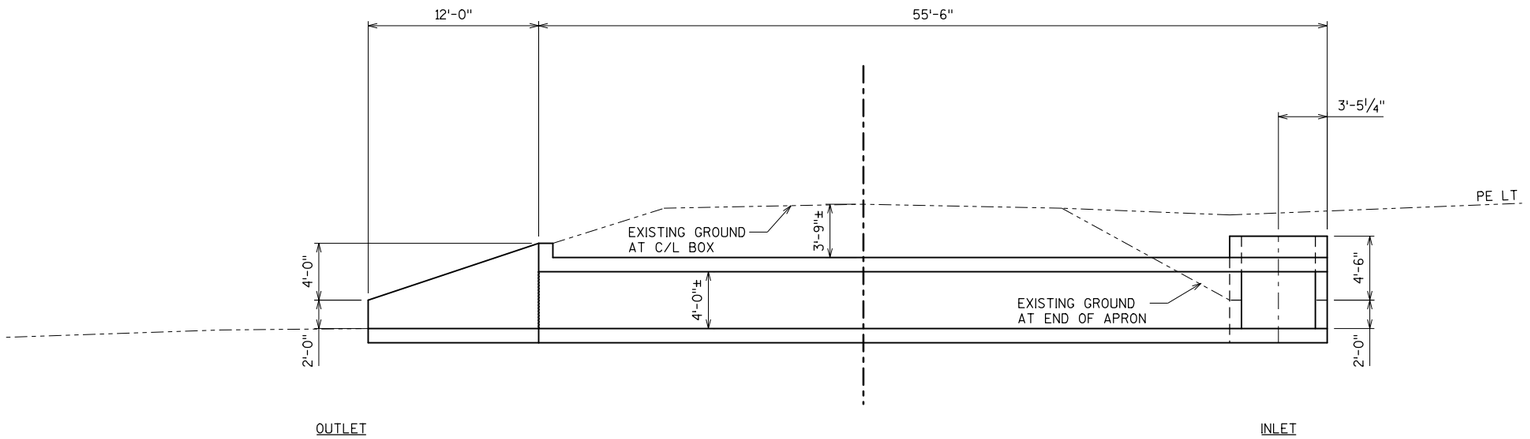
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◎ INDICATES WING NUMBER.

STATE PROJECT NUMBER
5100-01-60



PLAN
(SINGLE CELL CONCRETE CAST-IN-PLACE BOX CULVERT)



ELEVATION
LOOKING NORTH

DESIGN DATA

MATERIAL PROPERTIES:

STRUCTURAL STEEL ANGLE & PLATE (ASTM A36).....Fy = 36,000 psi
STRUCTURAL STEEL PIPE (ASTM A53, GR. B).....Fy = 45,000 psi

CARBON STEEL NUTS & BOLTS (A307A).....Fu = 60,000psi

TRAFFIC DATA

ADT (2025)	=	1820
ADT (2045)	=	1820
DHV	=	-
DD	=	60/40
T	=	18.5%
DESIGN SPEED	=	35-60 MPH
ESALS	=	440,000

LIST OF DRAWINGS

1 CULVERT GRATE INSTALLATION
2 CROSS SECTION, NOTES & QUANTITIES



SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: AARON BONK, PE, 608.261.0261

NO.	DATE	REVISION	BY

SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/22/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-62-267

STH 33 OVER DRAINAGE WAY

COUNTY	TOWN/~~CITY~~/~~VILLAGE~~
VERNON	FOREST

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	NCK	DESIGN CK'D.	MJG	DRAWN BY	RAD	PLANS CK'D.	CJB

CULVERT GRATE INSTALLATION

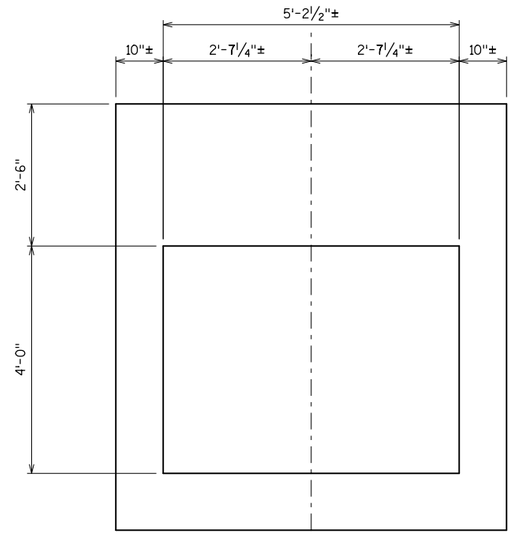
SHEET 1 OF 2
204

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STATE PROJECT NUMBER
5100-01-60



CROSS SECTION THRU BOX
AT INLET

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON SURVEY AND FIELD MEASUREMENTS.

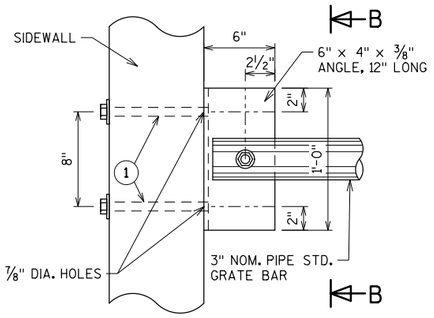
STATIONING MAY VARY BASED ON EXACT LOCATION OF CULVERT TO PROPOSED ALIGNMENT.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

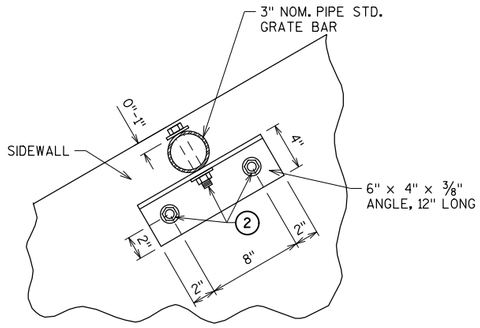
THESE STRUCTURE PLANS ARE ONLY THE STRUCTURE REPAIR WORK. ANY ADDITIONAL WORK OR REMOVAL REQUIRED, OUTSIDE OF THE GRATE INSTALLATION MUST BE COORDINATED WITH THE FIELD ENGINEER. FIELD ENGINEER SHOULD BE CONTACTED FOR APPROVAL OF ADDITIONAL WORK OR REMOVAL.

TOTAL ESTIMATED QUANTITIES - C-62-267

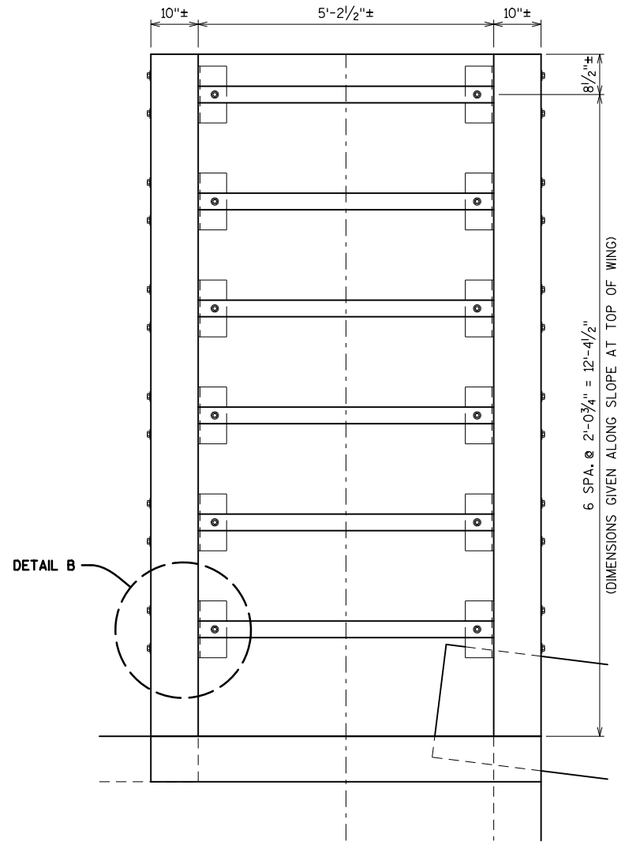
BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
SPV.0060.01	SAFETY GRATE FOR CONCRETE BOX CULVERT C-62-267	EACH	1
SPV.0060.02	CLEANING BOX CULVERT, 4' x 5', STA 726+32	EACH	1



DETAIL 'B'
TOP VIEW



SECTION B-B



INLET APRON PLAN

① HOLES ARE TO BE MADE WITH EQUIPMENT DESIGNED TO CUT THROUGH CONCRETE AND REINFORCING STEEL. ALL HOLES 7/8 INCH DIAMETER

② 3/4 INCH BOLT, LOCK NUT, AND WASHERS. ALL HOLES 7/8 INCH DIAMETER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-62-267

DRAWN BY RAD | PLANS CK'D. CJB

CROSS SECTION, NOTES AND QUANTITIES

SHEET 2 OF 2

205

8

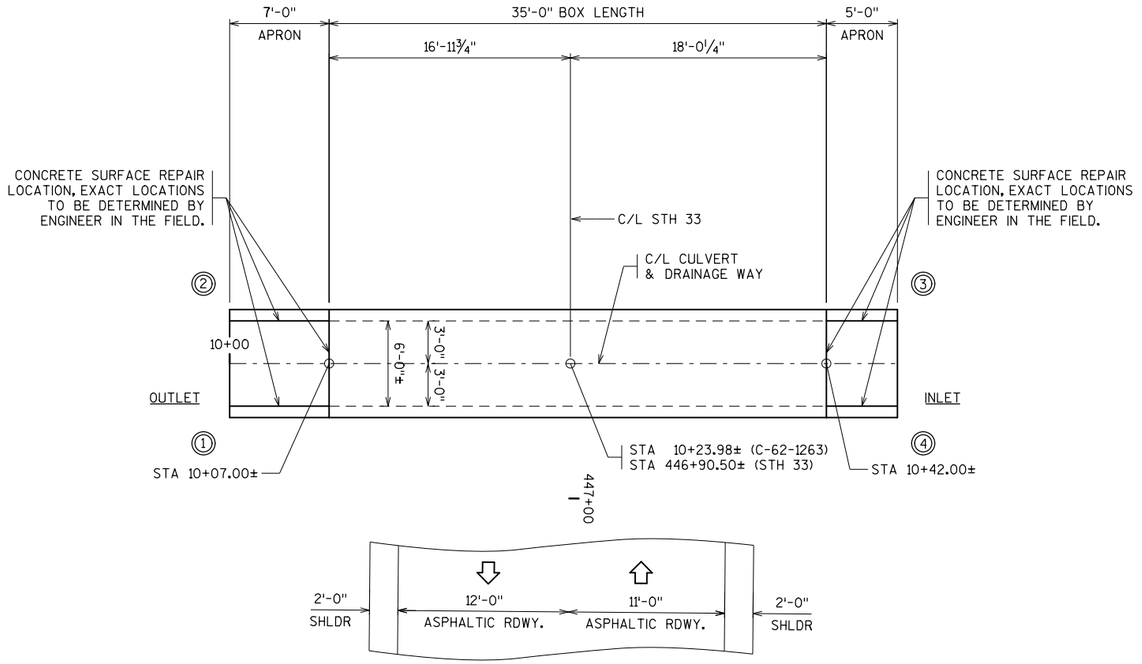
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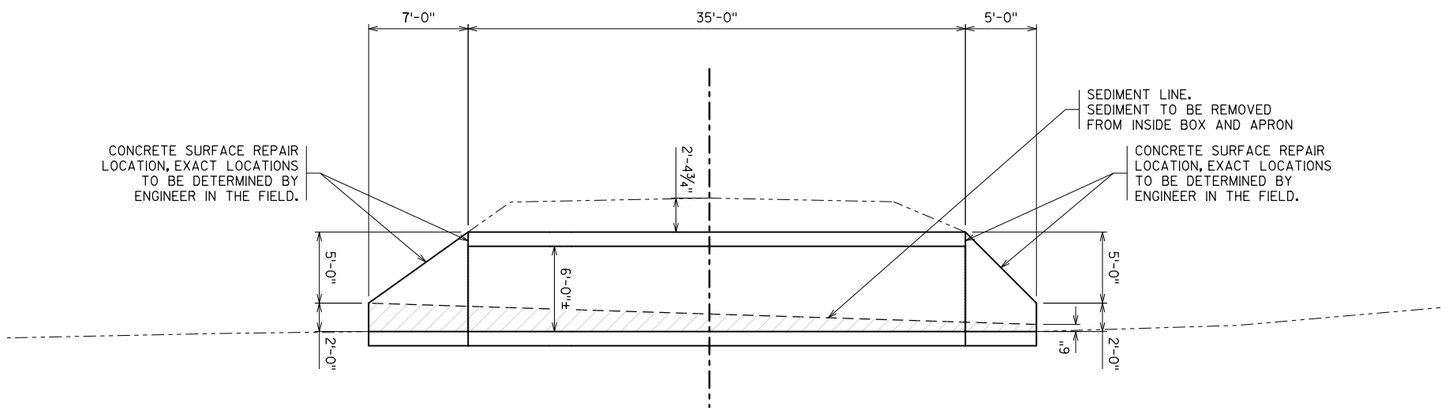
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◎ INDICATES WING NUMBER.

STATE PROJECT NUMBER
5100-01-60



PLAN
(SINGLE CELL CONCRETE CAST-IN-PLACE BOX CULVERT)



ELEVATION

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY _____ f'c = 3.5 ksi

TRAFFIC DATA

ADT (2025)	=	1820
ADT (2045)	=	1820
DHV	=	-
DD	=	60/40
T	=	18.5%
DESIGN SPEED	=	35-60 MPH
ESALS	=	440,000

LIST OF DRAWINGS

1 CULVERT REHABILITATION & CONCRETE REPAIR
2 CROSS SECTION, NOTES & QUANTITIES

WISCONSIN PROFESSIONAL ENGINEER
MATTHEW J. GUNDRY
36517
EAU CLAIRE
WI
5-1-23

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: AARON BONK, PE, 608.261.0261

NO.	DATE	REVISION	BY

SEH
SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ SDR 08/22/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-62-1263

STH 33 OVER DRAINAGE WAY

COUNTY	TOWN/~~CITY/VILLAGE~~
VERNON	FOREST

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
NCK	MJG	RAD	CJB

CULVERT REHABILITATION & CONCRETE REPAIR

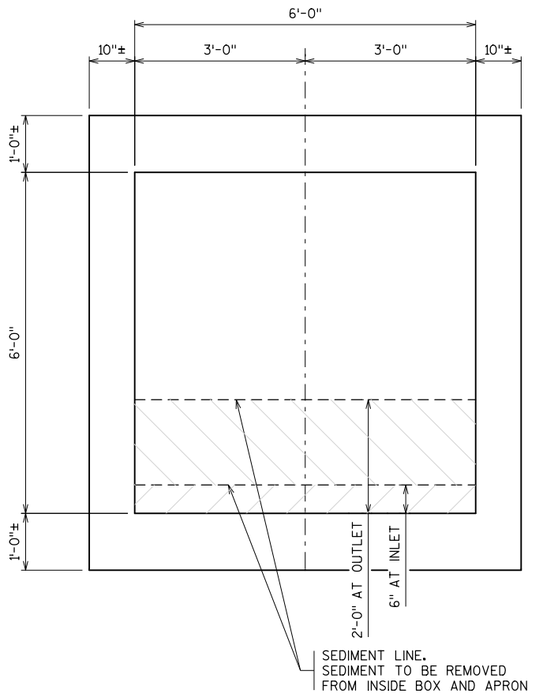
SHEET 1 OF 2
206

8

8

PLOT DATE: 4/28/2023 PLOT TIME: 3:21:58 PM
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STATE PROJECT NUMBER
5100-01-60



CROSS SECTION THRU BOX

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON FIELD SURVEY AND INSPECTION REPORTS.

STATIONING MAY VARY BASED ON EXACT LOCATION OF CULVERT TO PROPOSED ALIGNMENT.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A ½-INCH DEEP SAW CUT.

THESE STRUCTURE PLANS ARE ONLY THE STRUCTURE REPAIR WORK. ANY ADDITIONAL REMOVAL REQUIRED, OUTSIDE OF THE LIMITS SHOWN IN THESE PLANS MUST BE COORDINATED WITH THE FIELD ENGINEER. FIELD ENGINEER SHOULD BE CONTACTED FOR APPROVAL OF ADDITIONAL REMOVAL.

CONCRETE SURFACE REPAIR AS DETERMINED, LOCATED, MARKED AND MEASURED BY THE FIELD ENGINEER.

UTILIZE EXISTING BAR STEEL REINFORCEMENT IN AREAS OF CONCRETE SURFACE REPAIR.

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

SEE ROADWAY PLAN FOR LANE STAGING AND TRAFFIC SHIFT. COORDINATE THESE STRUCTURE PLANS WITH THE ROADWAY STAGING.

TOTAL ESTIMATED QUANTITIES - C-62-1263

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.1500	CONCRETE SURFACE REPAIR	SF	40
SPV.0060.03	CLEANING BOX CULVERT, 6'X6', STA 446+90	EACH	1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-62-1263

DRAWN BY RAD | PLANS CK'D. CJB

CROSS SECTION, NOTES AND QUANTITIES

SHEET 2 OF 2

207

8

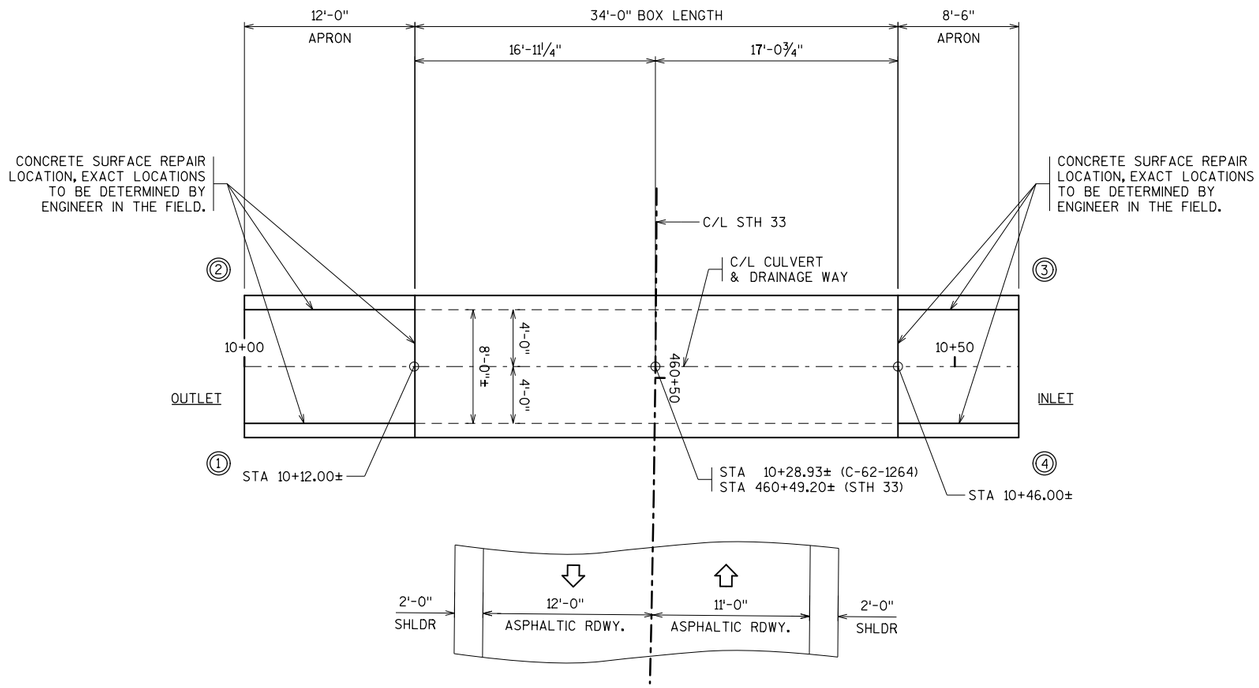
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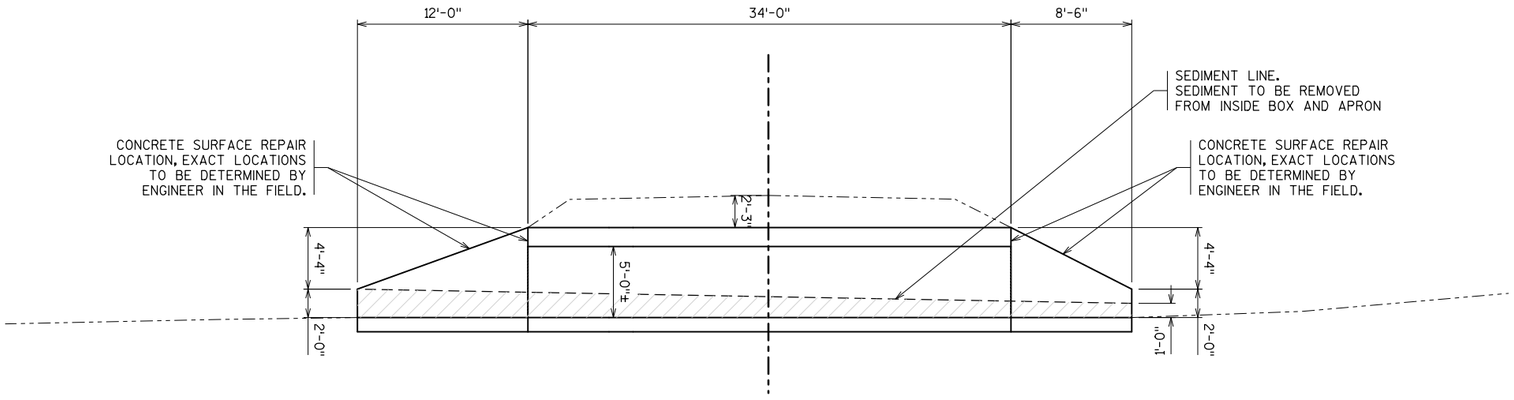
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◎ INDICATES WING NUMBER.

STATE PROJECT NUMBER
5100-01-60



PLAN
(SINGLE CELL CONCRETE CAST-IN-PLACE BOX CULVERT)



ELEVATION

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY _____ f'c = 3.5 ksi

TRAFFIC DATA

ADT (2025)	=	1820
ADT (2045)	=	1820
DHV	=	-
DD	=	60/40
T	=	18.5%
DESIGN SPEED	=	35-60 MPH
ESALS	=	440,000

LIST OF DRAWINGS

1 CULVERT REHABILITATION & CONCRETE REPAIR
2 CROSS SECTION, NOTES & QUANTITIES

WISCONSIN
MATTHEW J. GUNDRY
36517
EAU CLAIRE
WI
5-1-23
PROFESSIONAL ENGINEER

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: AARON BONK, PE, 608.261.0261

NO.	DATE	REVISION	BY

SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ SDR 08/22/23
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE C-62-1264

STH 33 OVER DRAINAGE WAY

COUNTY	TOWN/~~CITY~~/~~VILLAGE~~
VERNON	FOREST

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	NCK	DESIGN CK'D.	MJG	DRAWN BY	RAD	PLANS CK'D.	CJB

CULVERT REHABILITATION & CONCRETE REPAIR

SHEET 1 OF 2
208

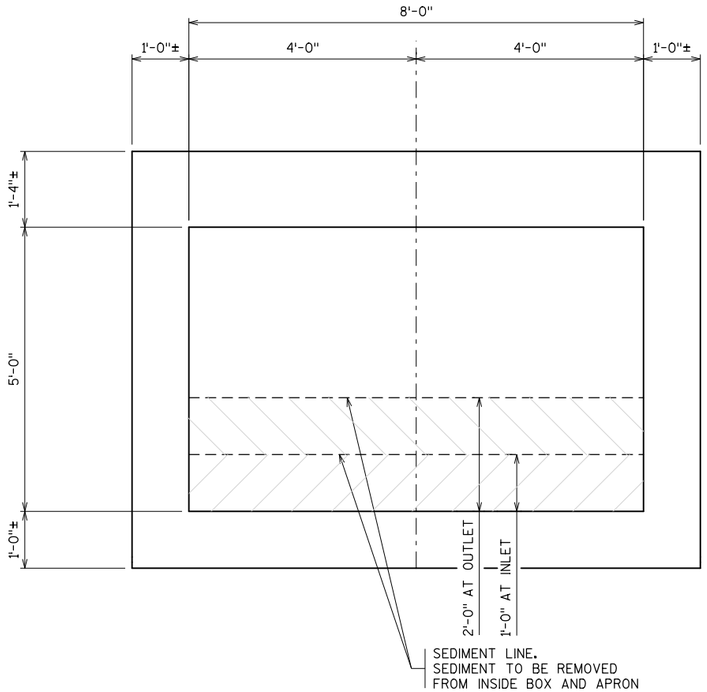
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STATE PROJECT NUMBER
5100-01-60



CROSS SECTION THRU BOX

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON FIELD SURVEY AND INSPECTION REPORTS.

STATIONING MAY VARY BASED ON EXACT LOCATION OF CULVERT TO PROPOSED ALIGNMENT.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A ½-INCH DEEP SAW CUT.

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CONCRETE SURFACE REPAIR AS DETERMINED, LOCATED, MARKED AND MEASURED BY THE FIELD ENGINEER.

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BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

SEE ROADWAY PLAN FOR LANE STAGING AND TRAFFIC SHIFT. COORDINATE THESE STRUCTURE PLANS WITH THE ROADWAY STAGING.

TOTAL ESTIMATED QUANTITIES - C-62-1264

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.1500	CONCRETE SURFACE REPAIR	SF	70
SPV.0060.04	CLEANING BOX CULVERT, 5'X8', STA 460+49	EACH	1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-62-1264

DRAWN BY RAD | PLANS CK'D. CJB

CROSS SECTION, NOTES AND QUANTITIES

SHEET 2 OF 2

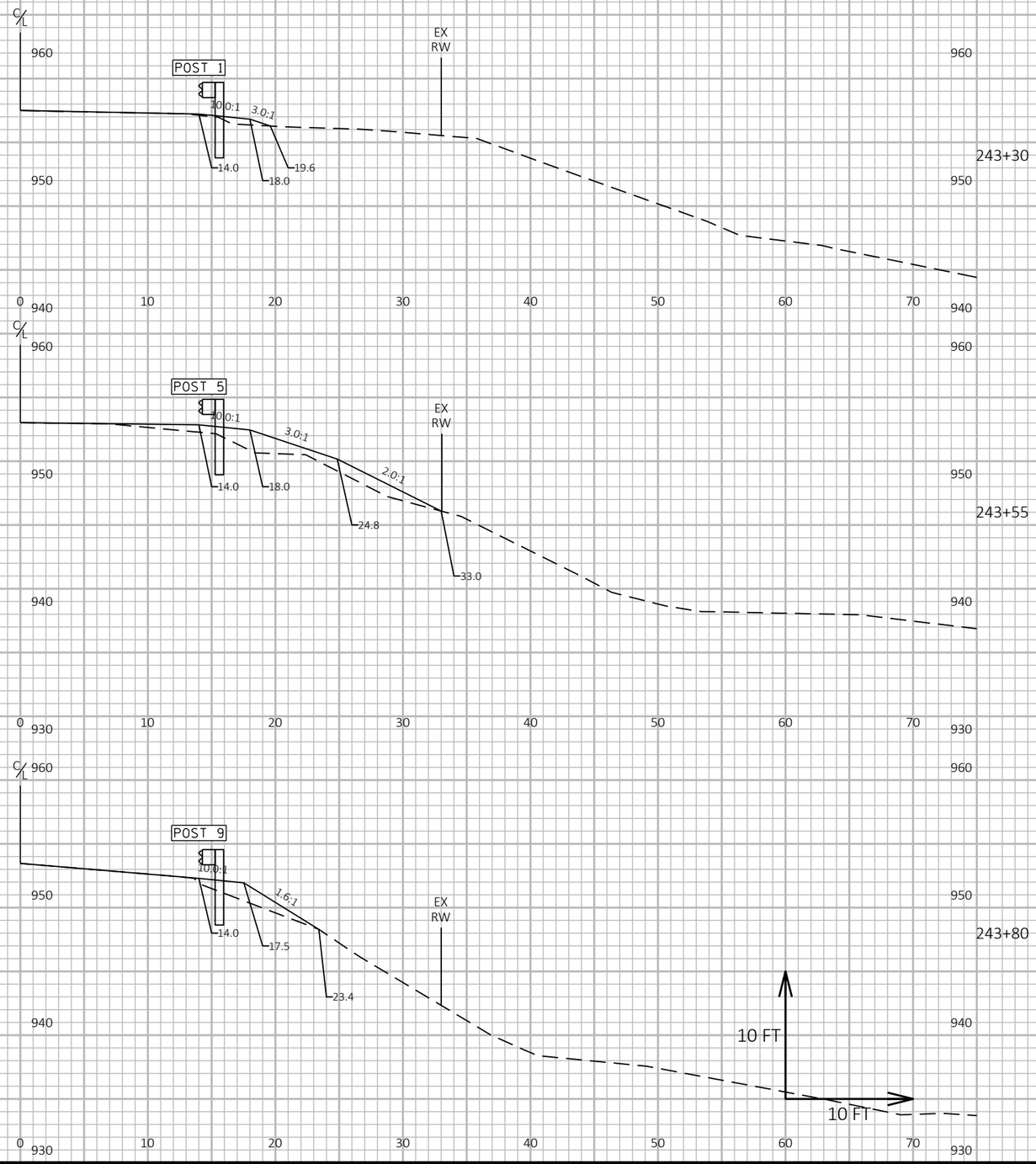
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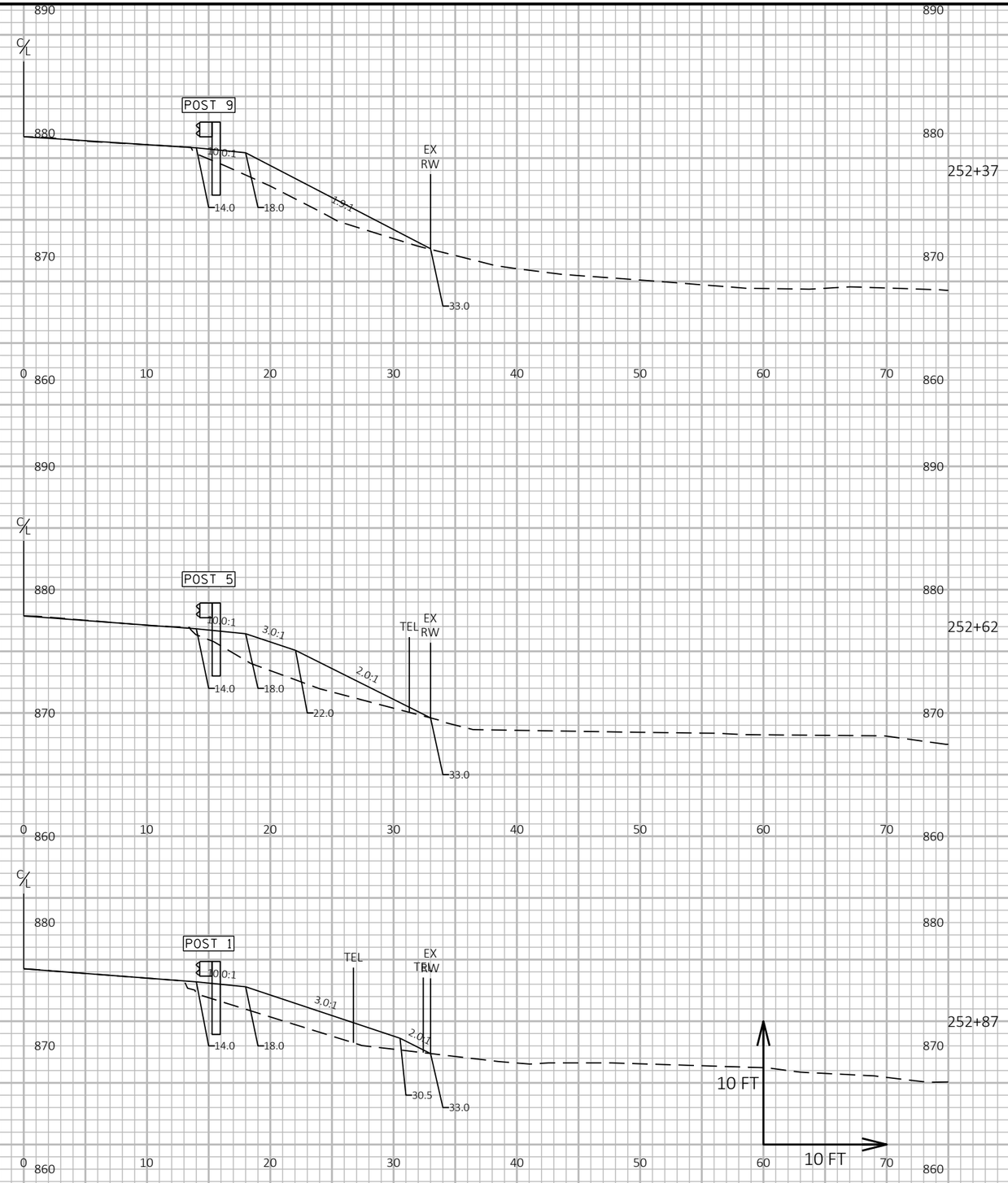
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FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\243+30 - 252+87 RT.DWG
LAYOUT NAME - 03

PLOT DATE : 7/16/2023 4:15 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

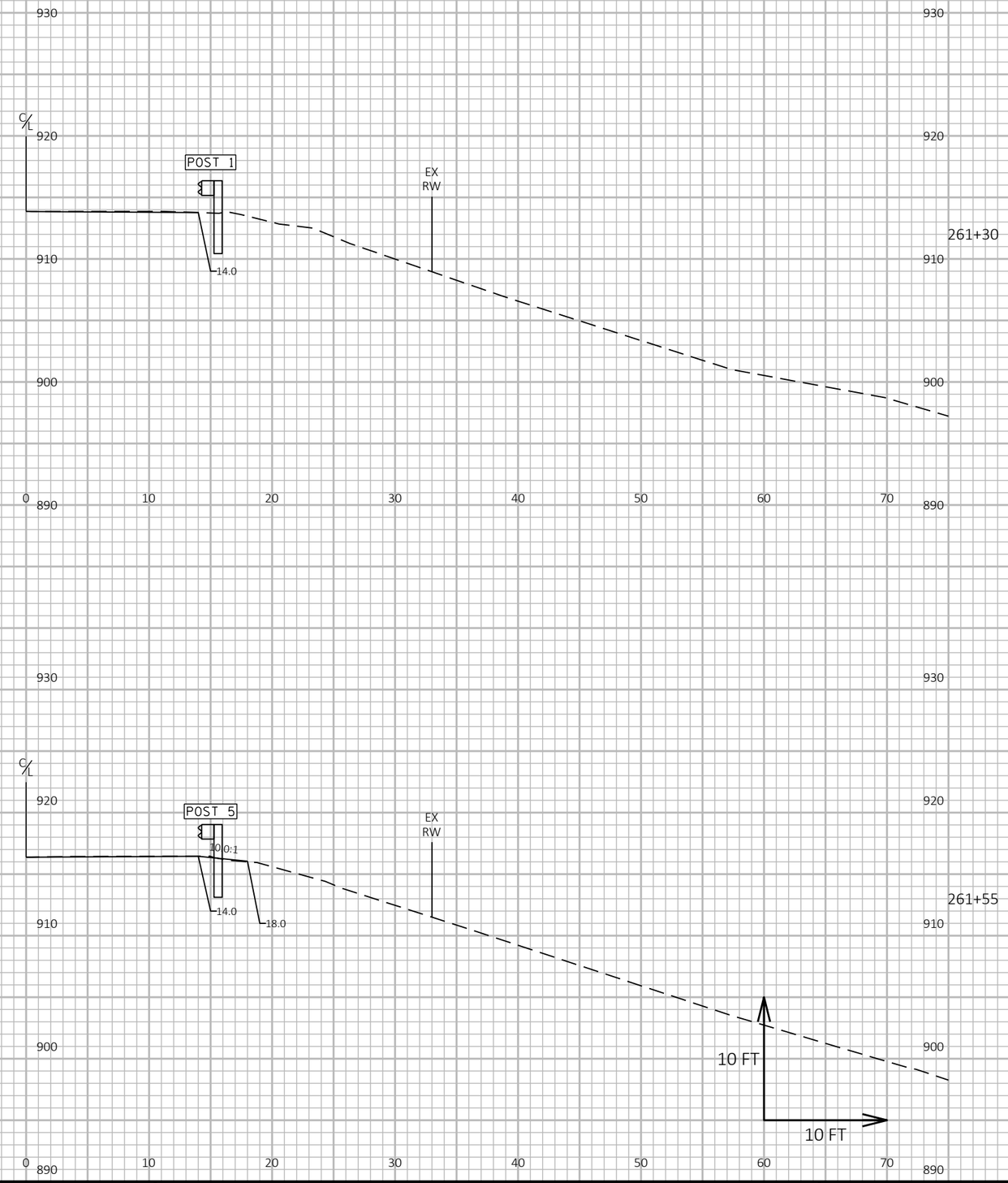
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FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\243+30 - 252+87 RT.DWG
LAYOUT NAME - 04

PLOT DATE : 7/16/2023 4:15 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 212	E

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LAYOUT NAME - 05

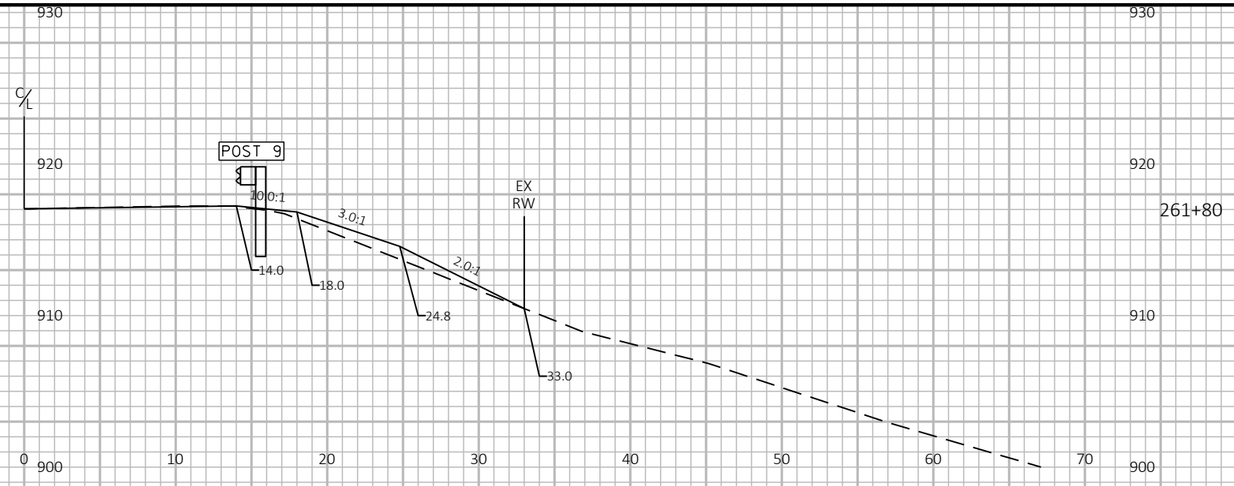
PLOT DATE : 2/1/2023 8:13 AM

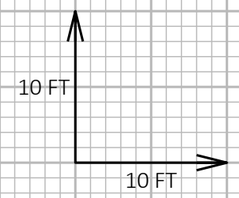
PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49





9

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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 213	E

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LAYOUT NAME - 06

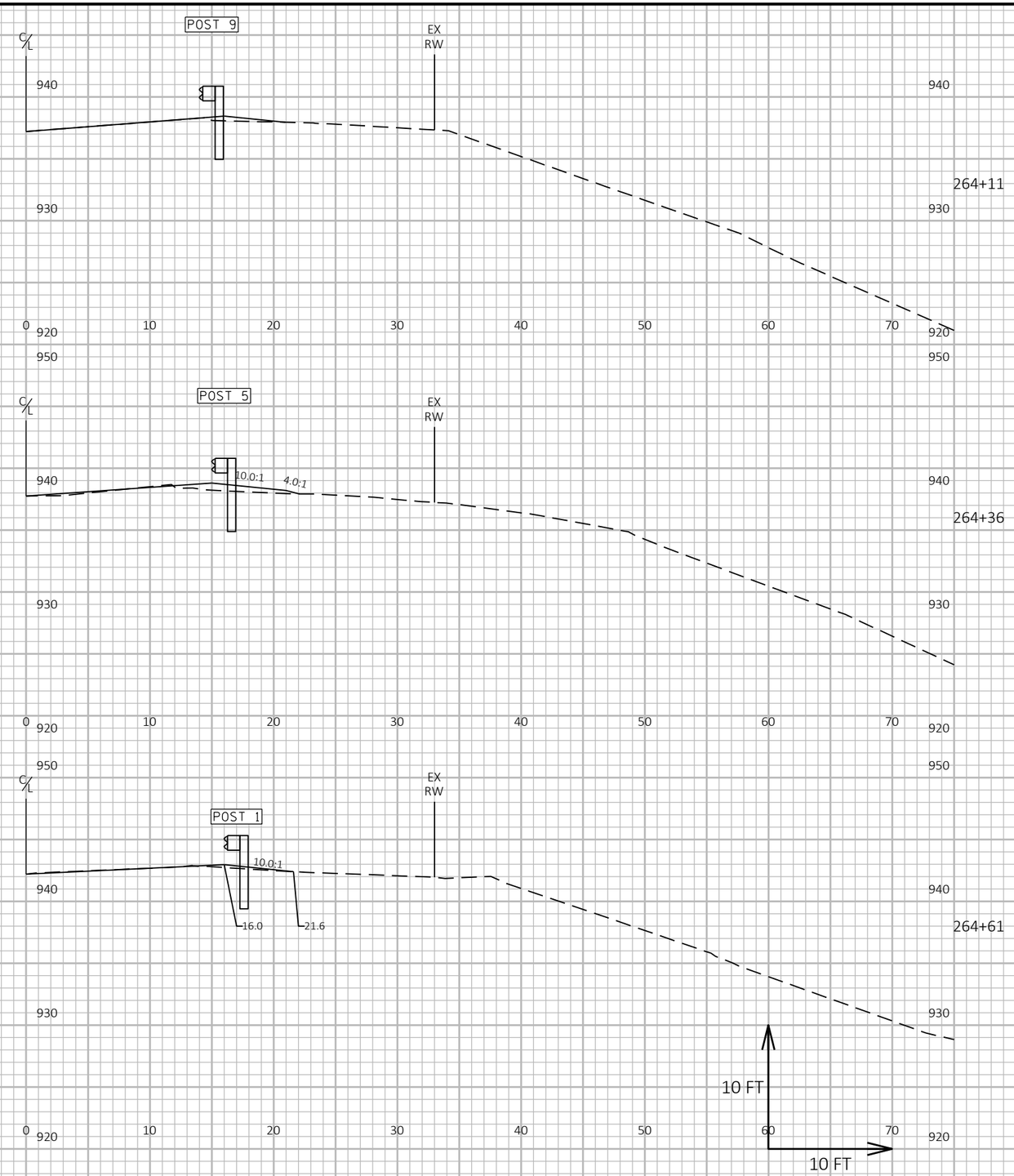
PLOT DATE : 2/1/2023 8:13 AM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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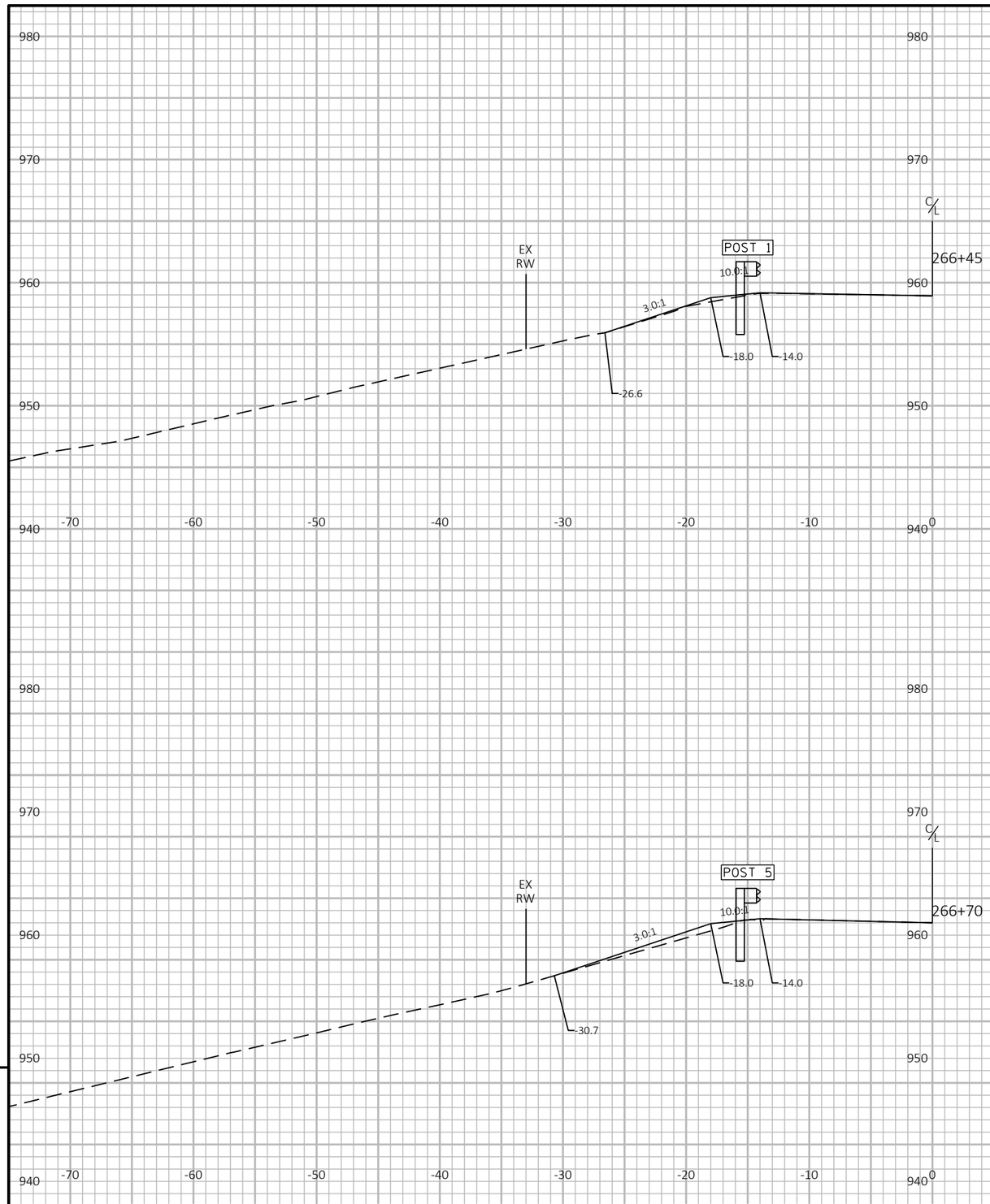
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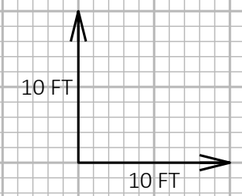
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LAYOUT NAME - 06

PLOT DATE : 2/1/2023 8:19 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49





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9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 215	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\266+62 - 269+88 LT.DWG
LAYOUT NAME - 08

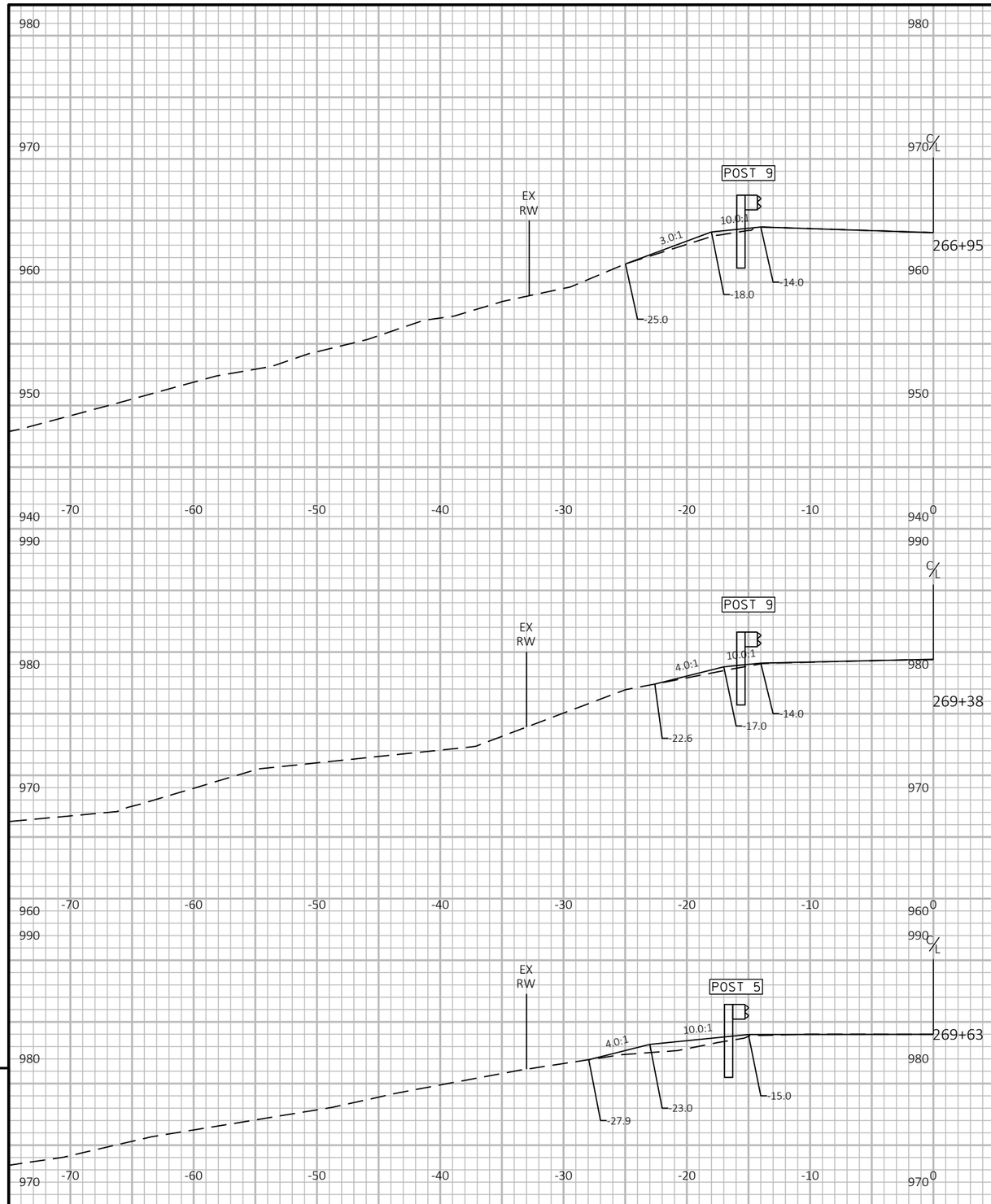
PLOT DATE : 7/16/2023 3:58 PM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

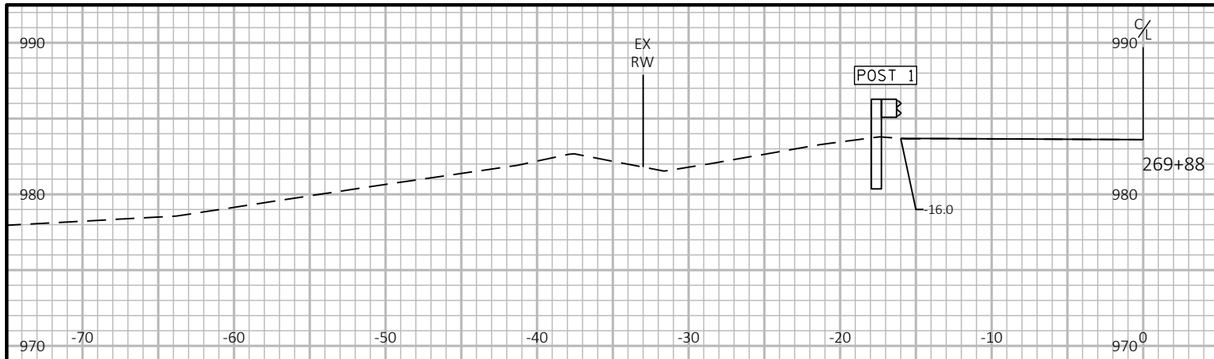
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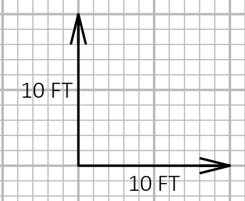
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 216	E

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LAYOUT NAME - 09

PLOT DATE : 7/16/2023 3:58 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 217	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\266+62 - 269+88 LT.DWG
LAYOUT NAME - 10

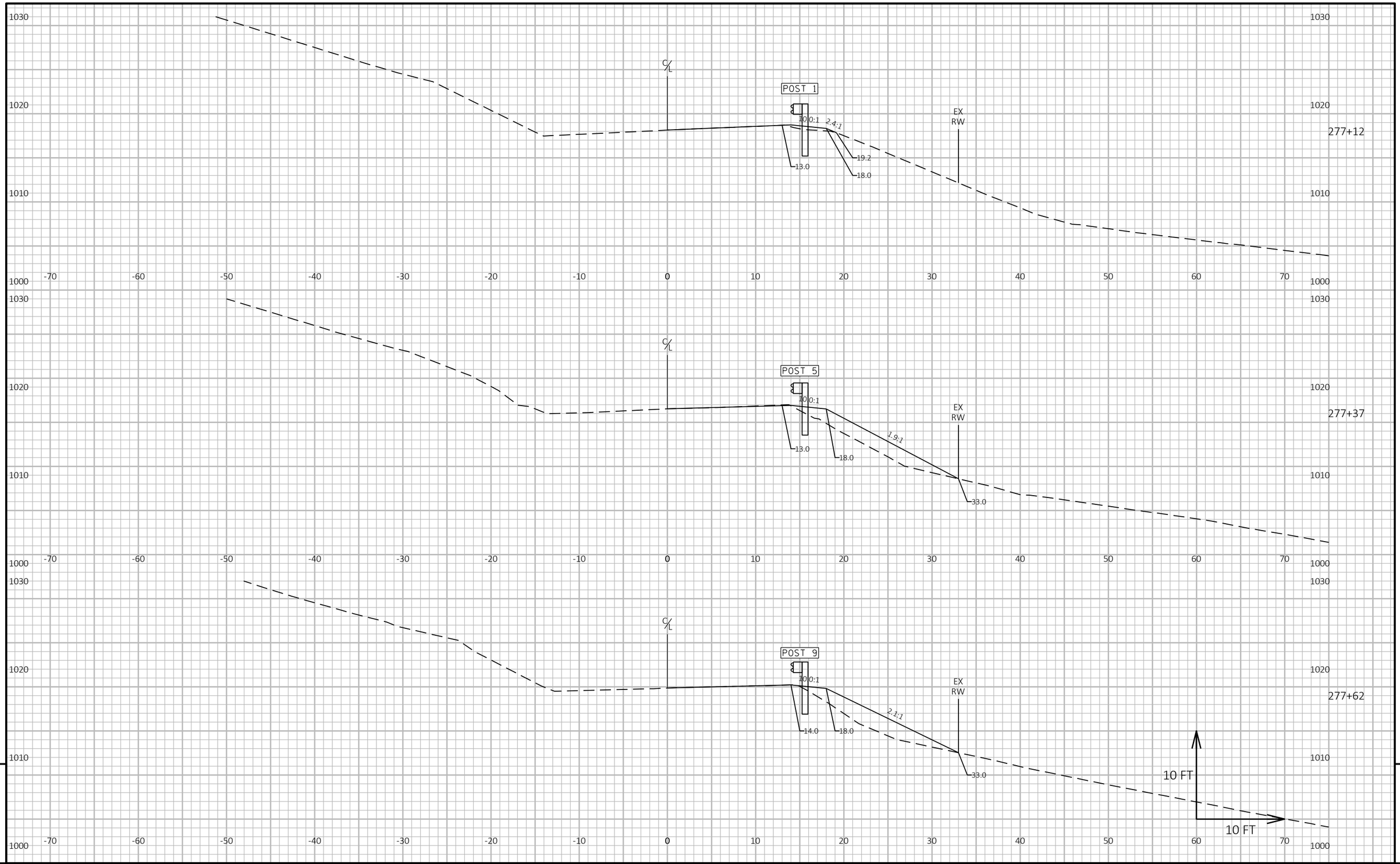
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PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

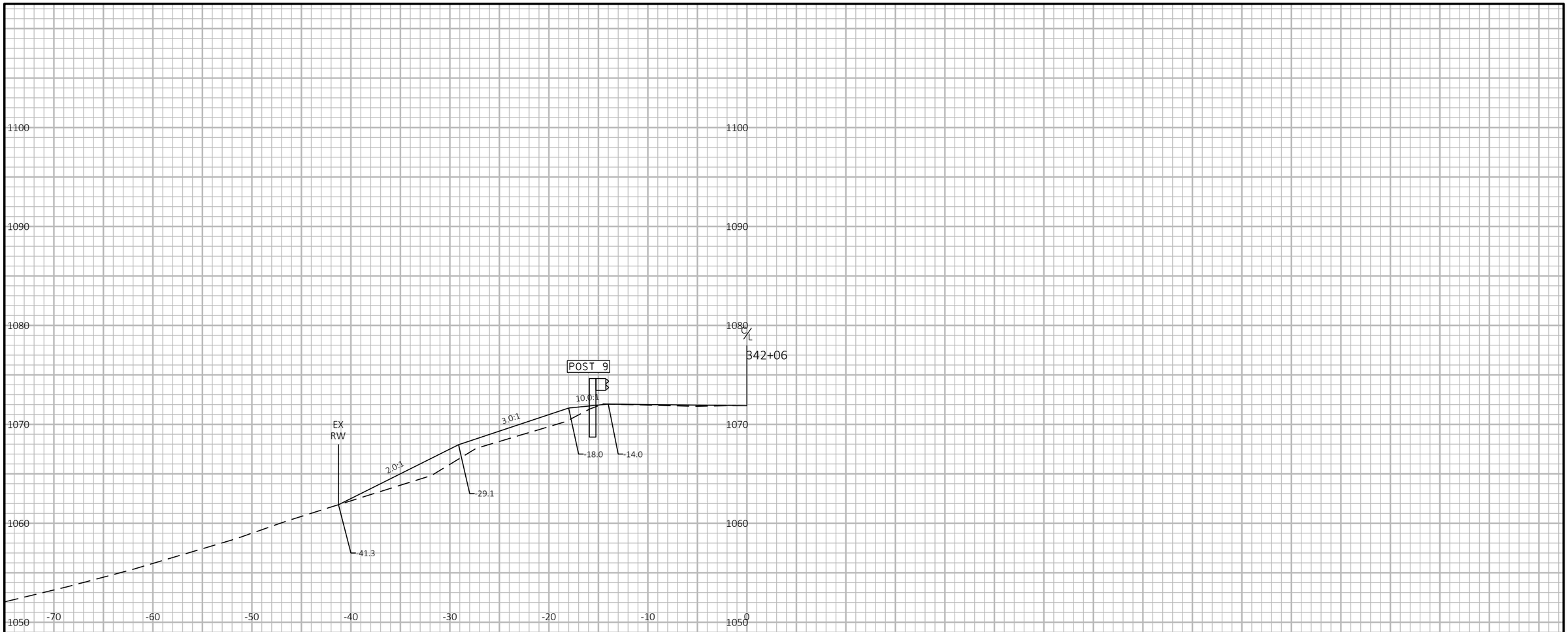
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LAYOUT NAME - 11

PLOT DATE : 2/1/2023 8:26 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 219	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\334+16 - 344+31 LT & RT.DWG
LAYOUT NAME - 20

PLOT DATE : 2/1/2023 8:28 AM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49

342+32

C/L

EX
RW

POST 5

2.7:1

-14.0

1110
1100
1090
1080
1070
1060
1050

-70 -60 -50 -40 -30 -20 -10 0

10 FT

10 FT

9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 220	E

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LAYOUT NAME - 21

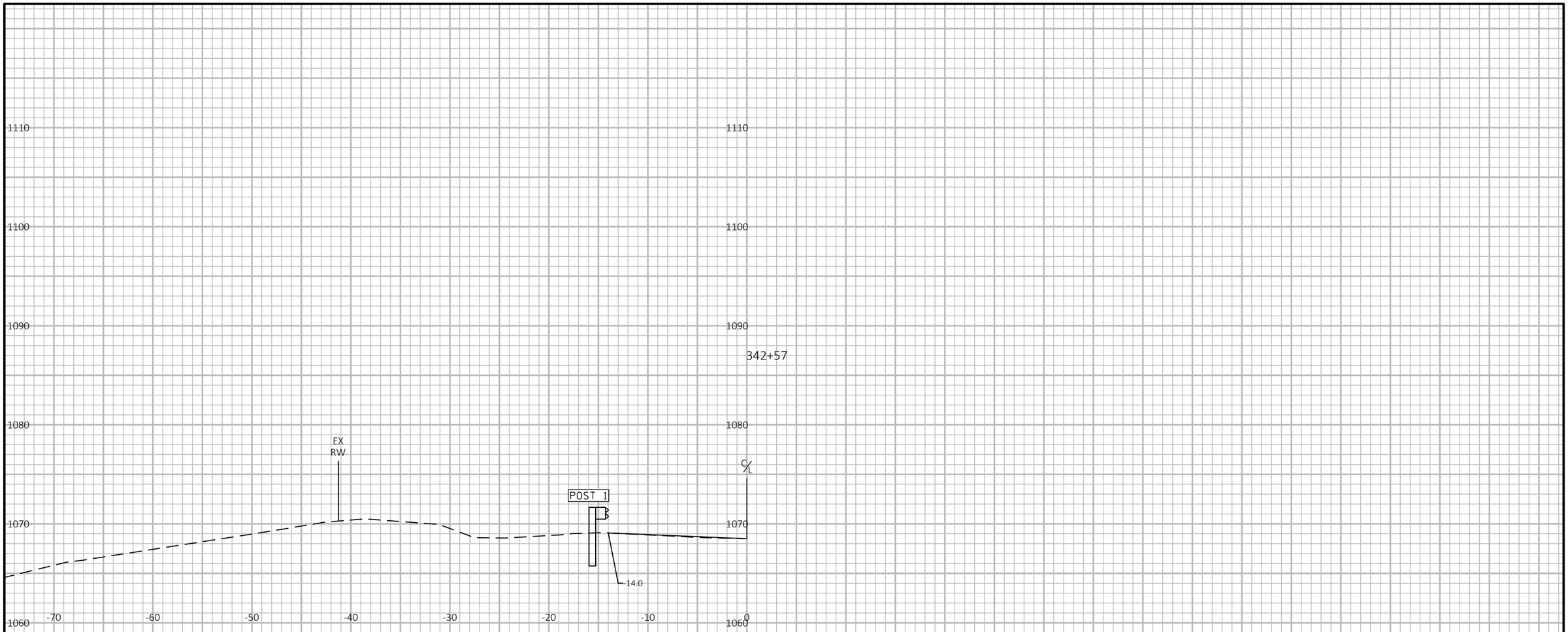
PLOT DATE : 2/1/2023 8:28 AM

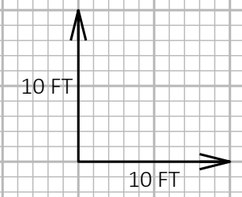
PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49





9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 221	E

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LAYOUT NAME - 22

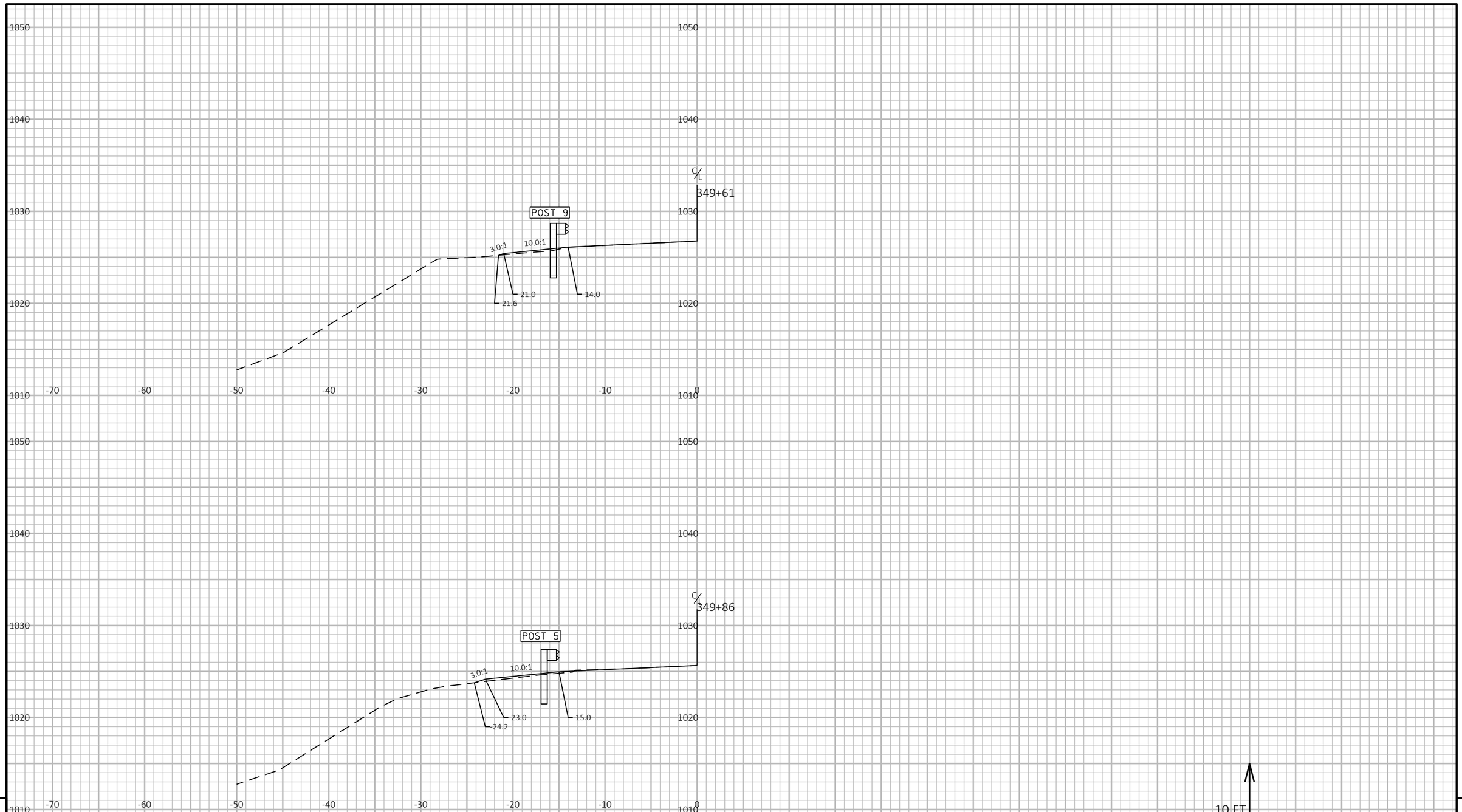
PLOT DATE : 2/1/2023 8:28 AM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 222	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\349+61 - 350+11 LT.DWG
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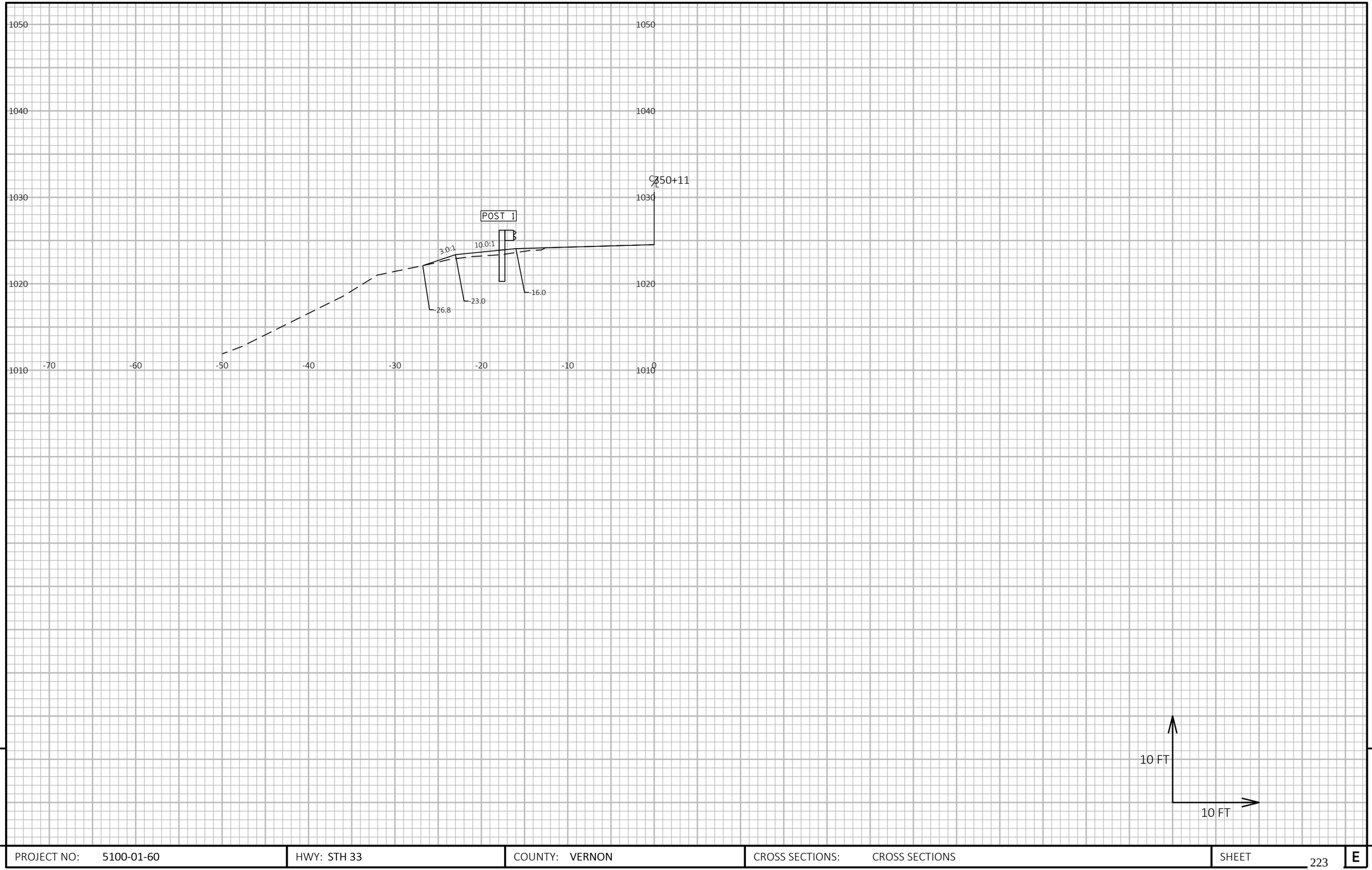
PLOT DATE : 2/1/2023 8:29 AM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 223	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\349+61 - 350+11 LT.DWG
LAYOUT NAME - 27

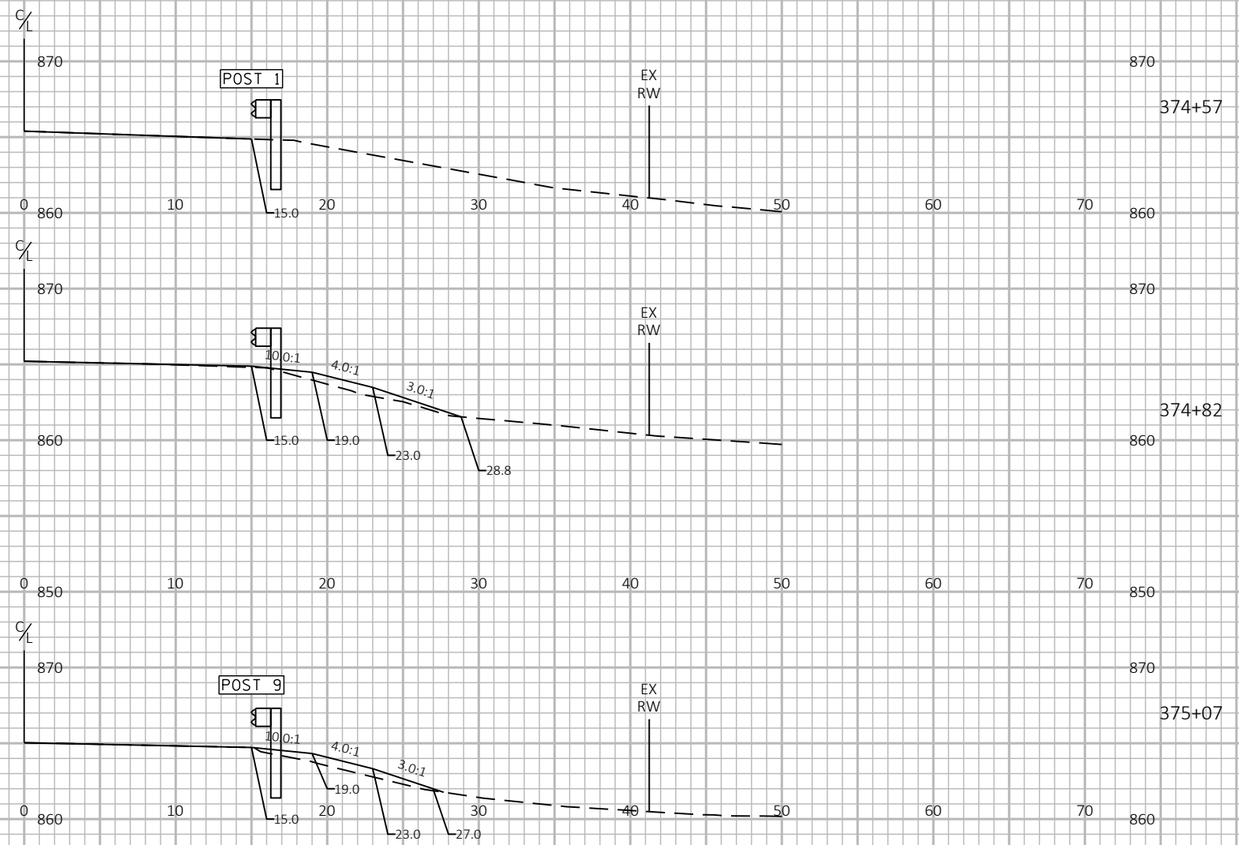
PLOT DATE : 2/1/2023 8:30 AM

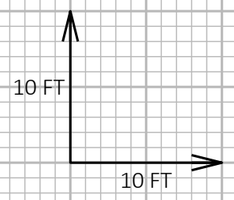
PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



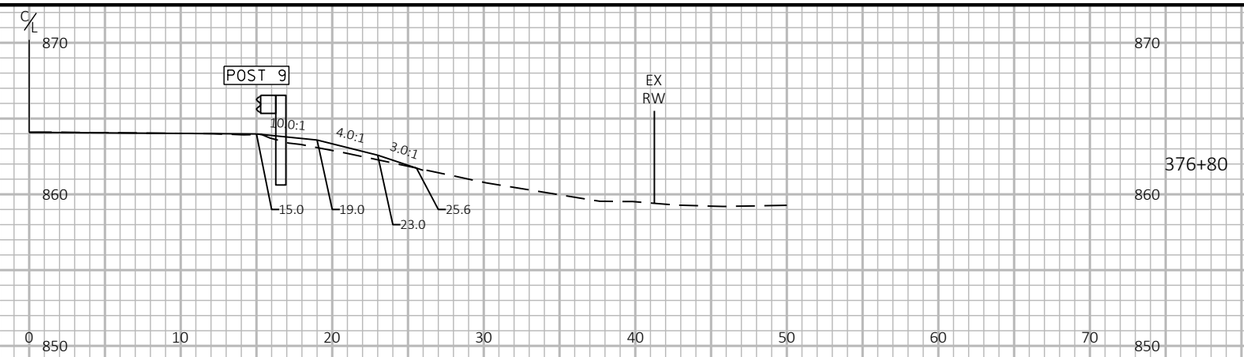


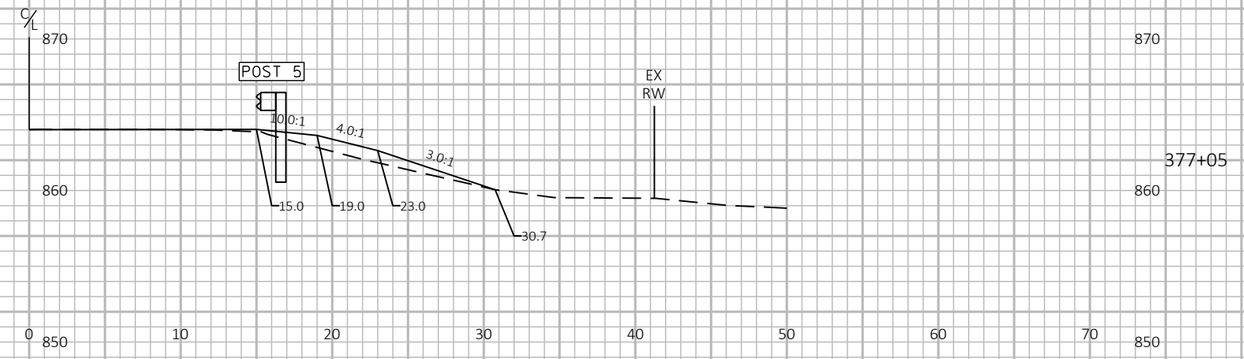
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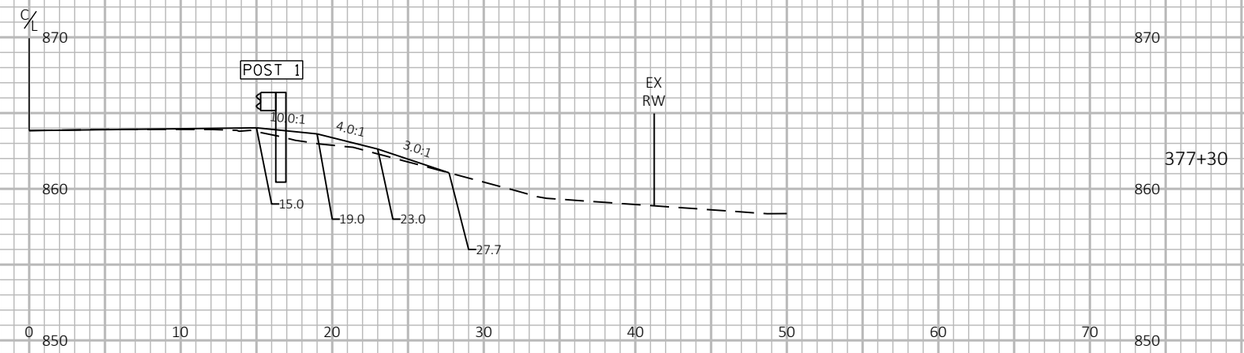
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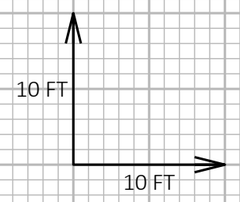
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 224	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\374+57 - 377+30 LT & RT.DWG
LAYOUT NAME - 29
PLOT DATE : 2/1/2023 8:34 AM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49









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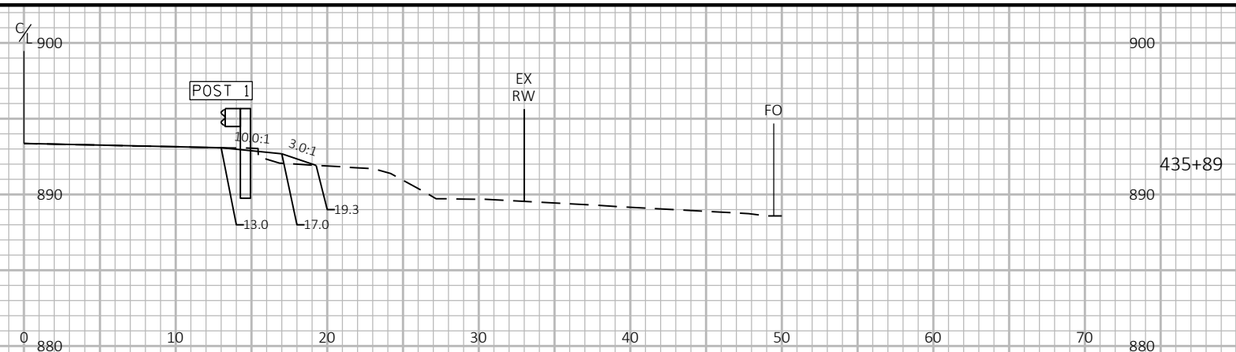
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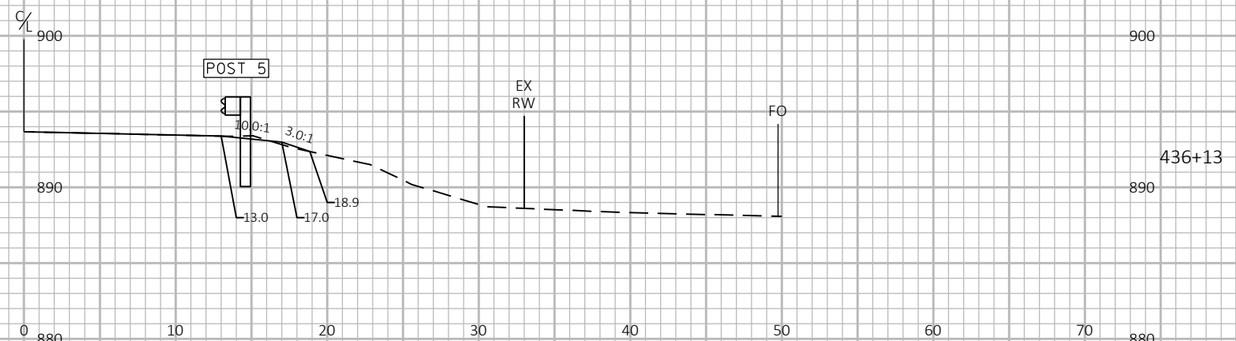
FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\374+57 - 377+30 LT & RT.DWG
LAYOUT NAME - 30

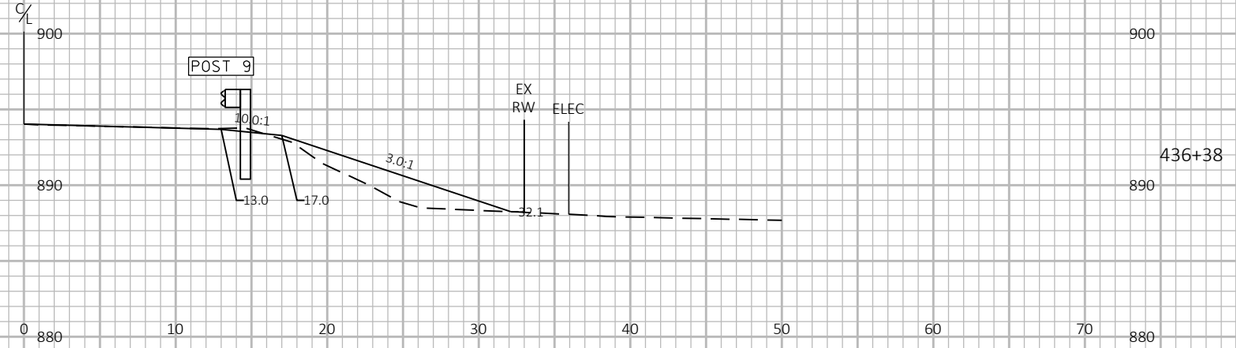
PLOT DATE : 2/1/2023 8:34 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

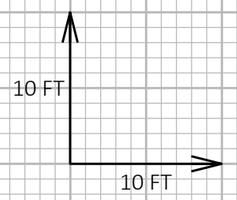
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









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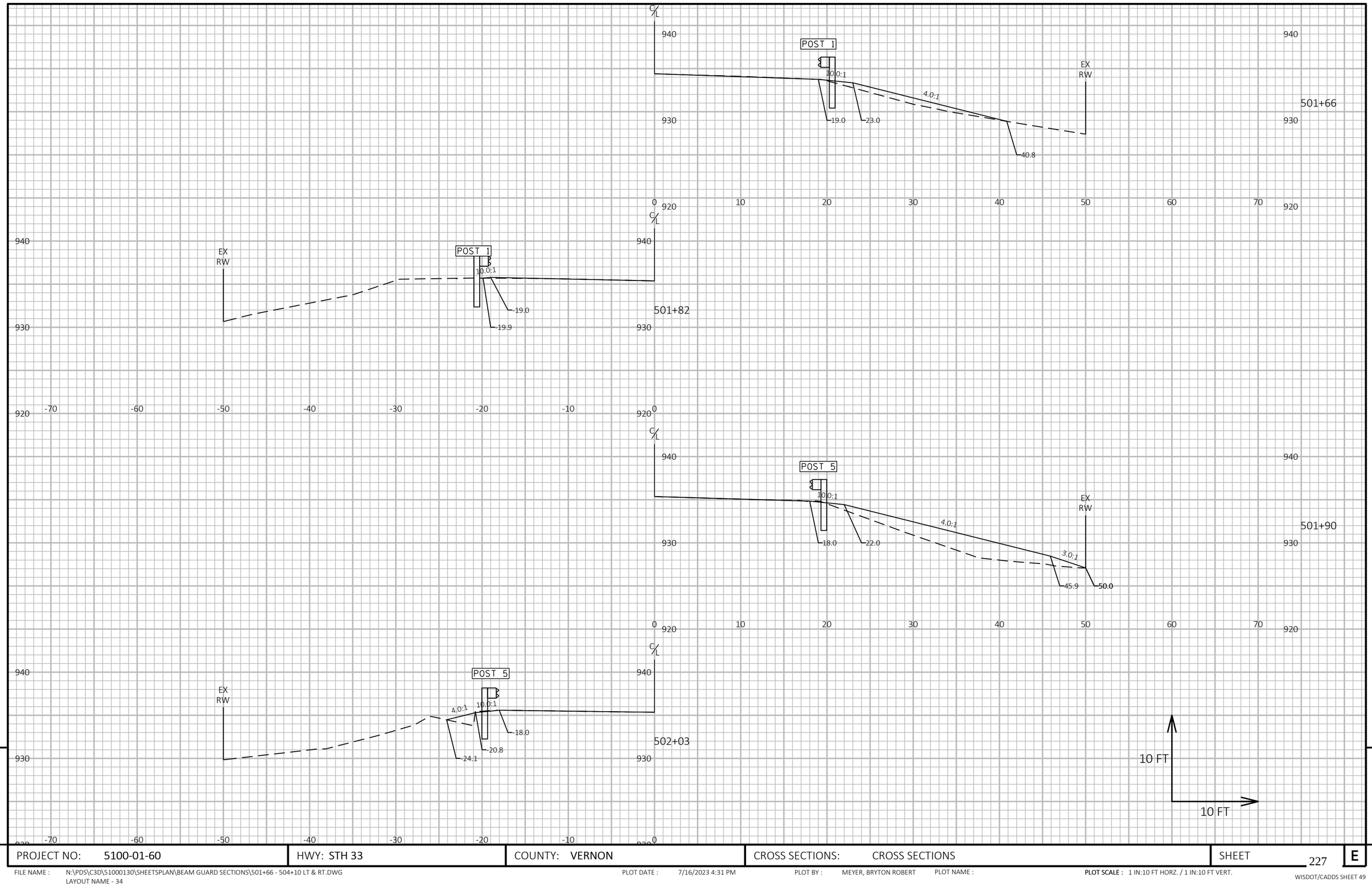
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 226	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\435+88 - 445+38 RT.DWG
LAYOUT NAME - 32

PLOT DATE : 7/16/2023 4:27 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 227	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\501+66 - 504+10 LT & RT.DWG
LAYOUT NAME - 34

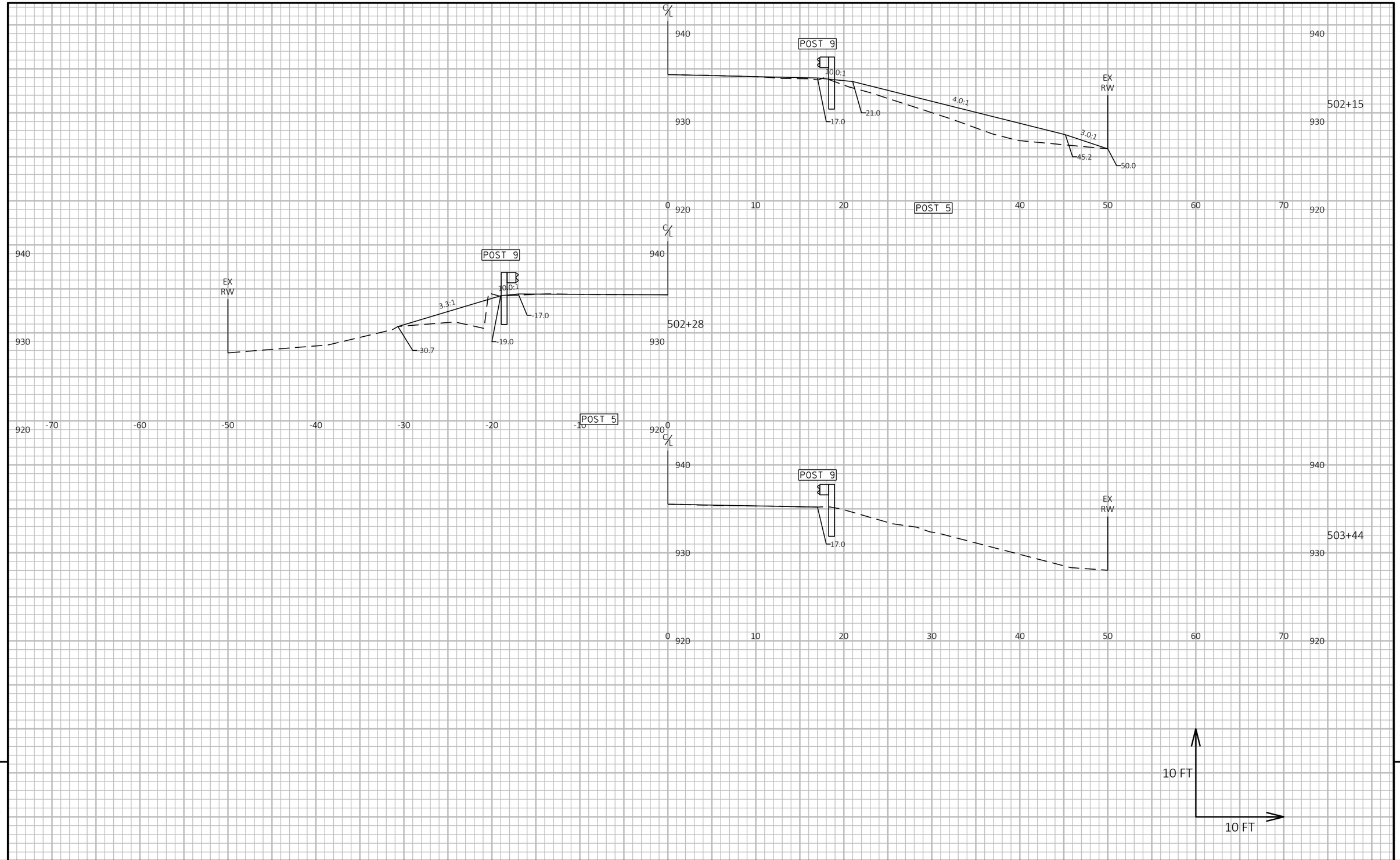
PLOT DATE : 7/16/2023 4:31 PM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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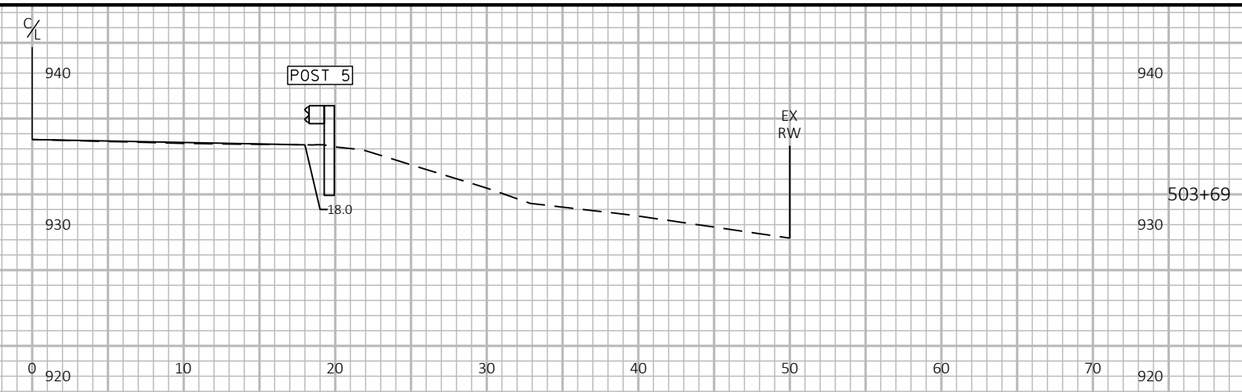
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 228	E

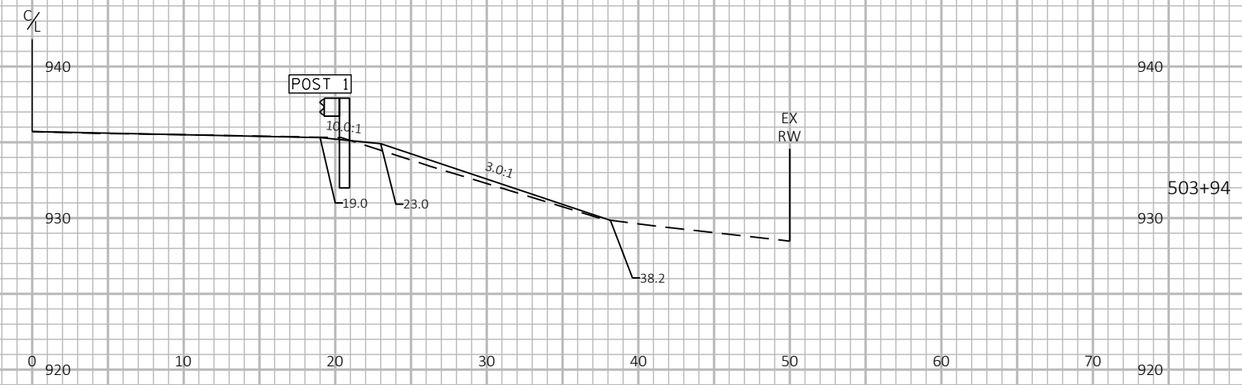
FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\501+66 - 504+10 LT & RT.DWG
LAYOUT NAME - 35

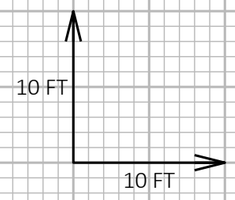
PLOT DATE : 7/16/2023 4:31 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49







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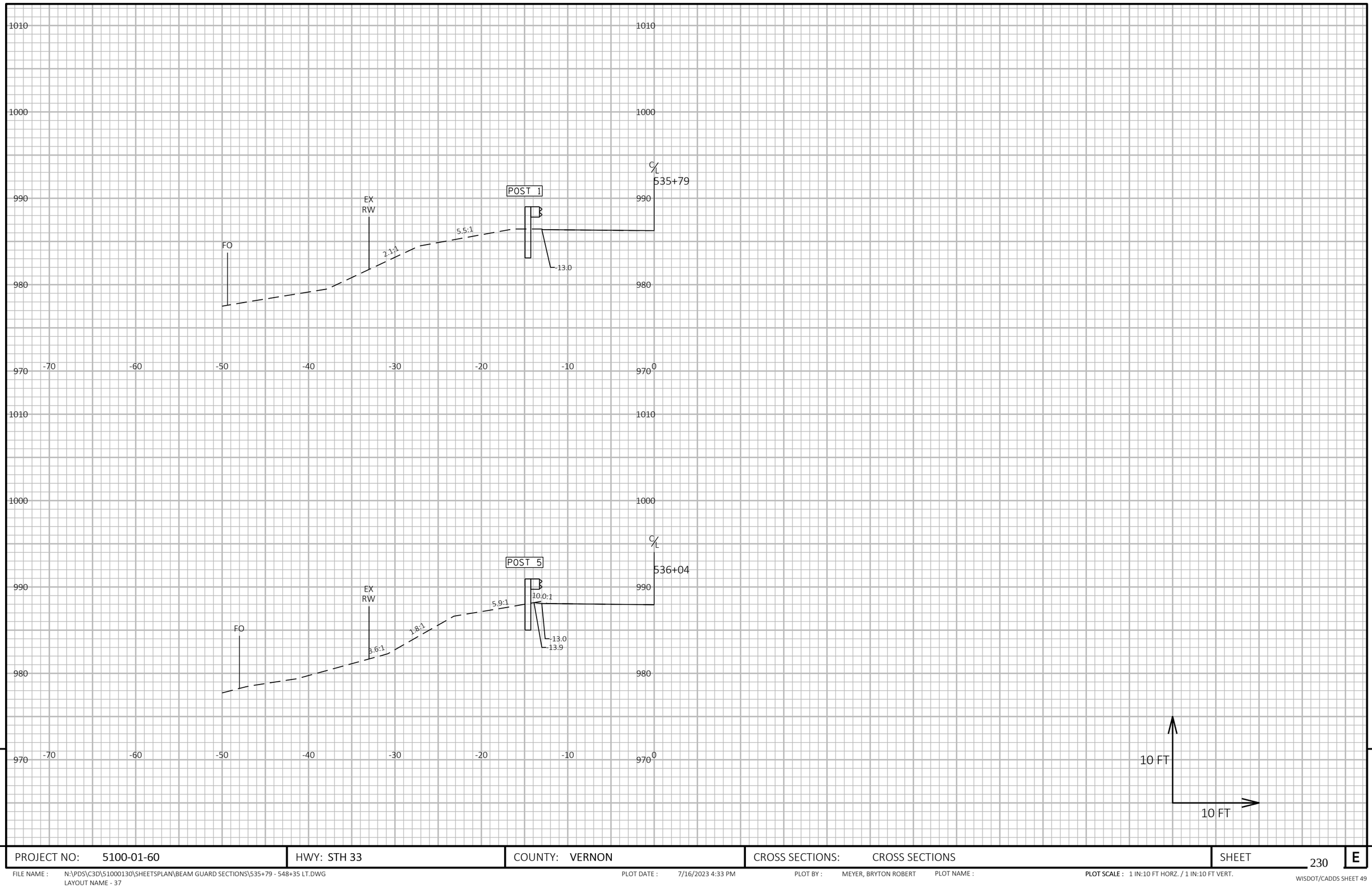
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 229	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\501+66 - 504+10 LT & RT.DWG
LAYOUT NAME - 36

PLOT DATE : 7/16/2023 4:31 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 230	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\535+79 - 548+35 LT.DWG
LAYOUT NAME - 37

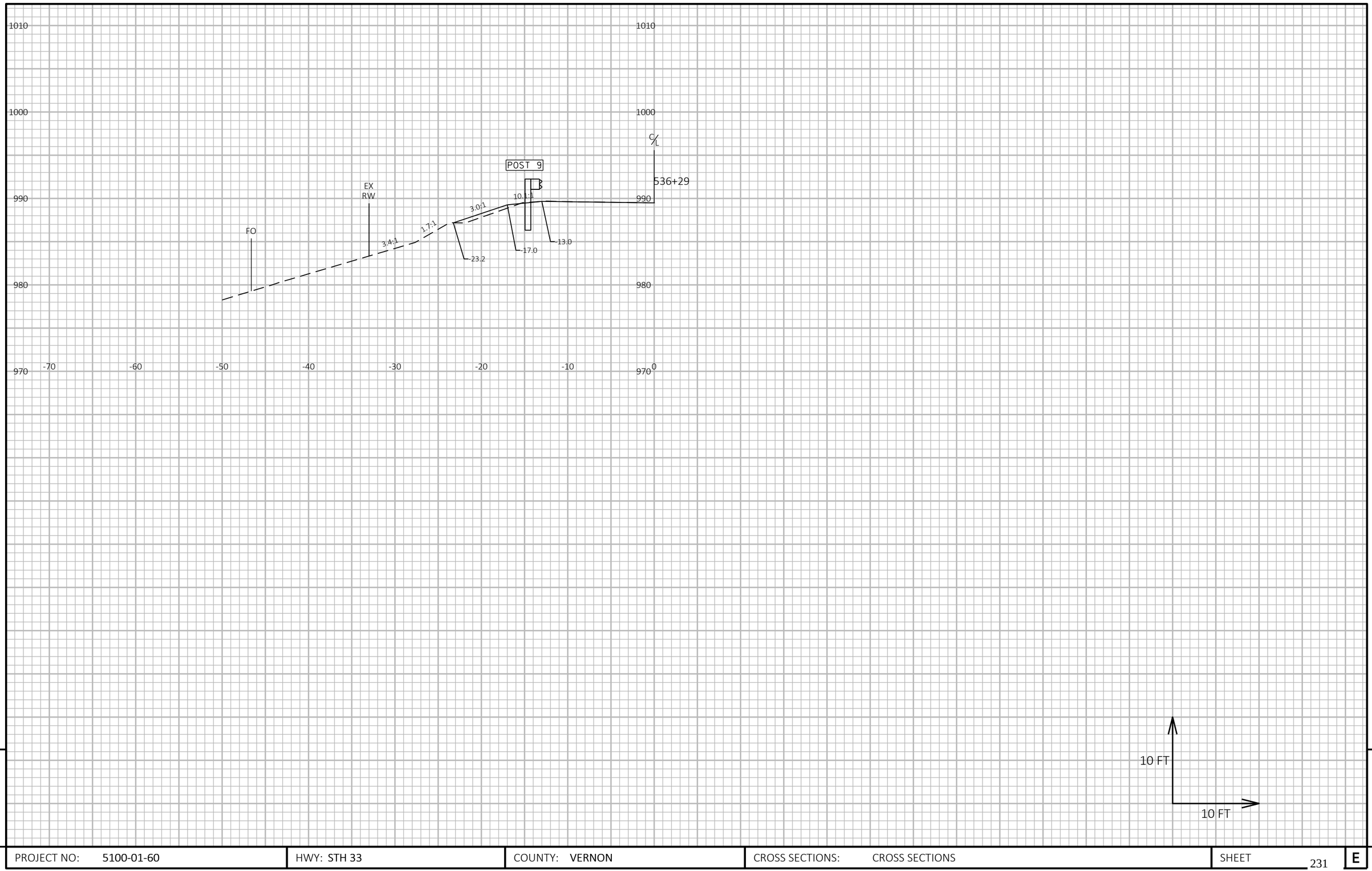
PLOT DATE : 7/16/2023 4:33 PM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 231	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\535+79 - 548+35 LT.DWG
LAYOUT NAME - 38

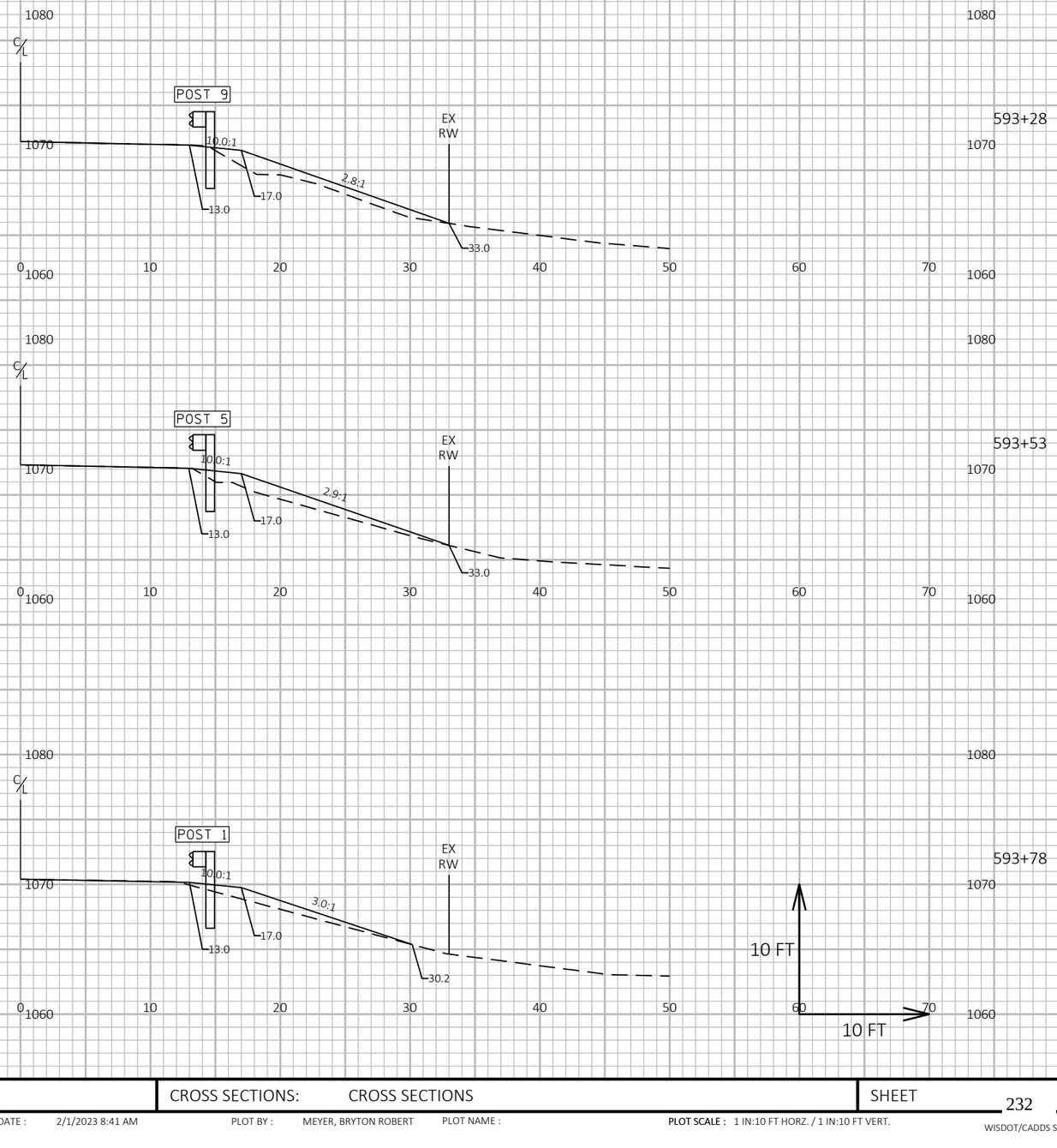
PLOT DATE : 7/16/2023 4:33 PM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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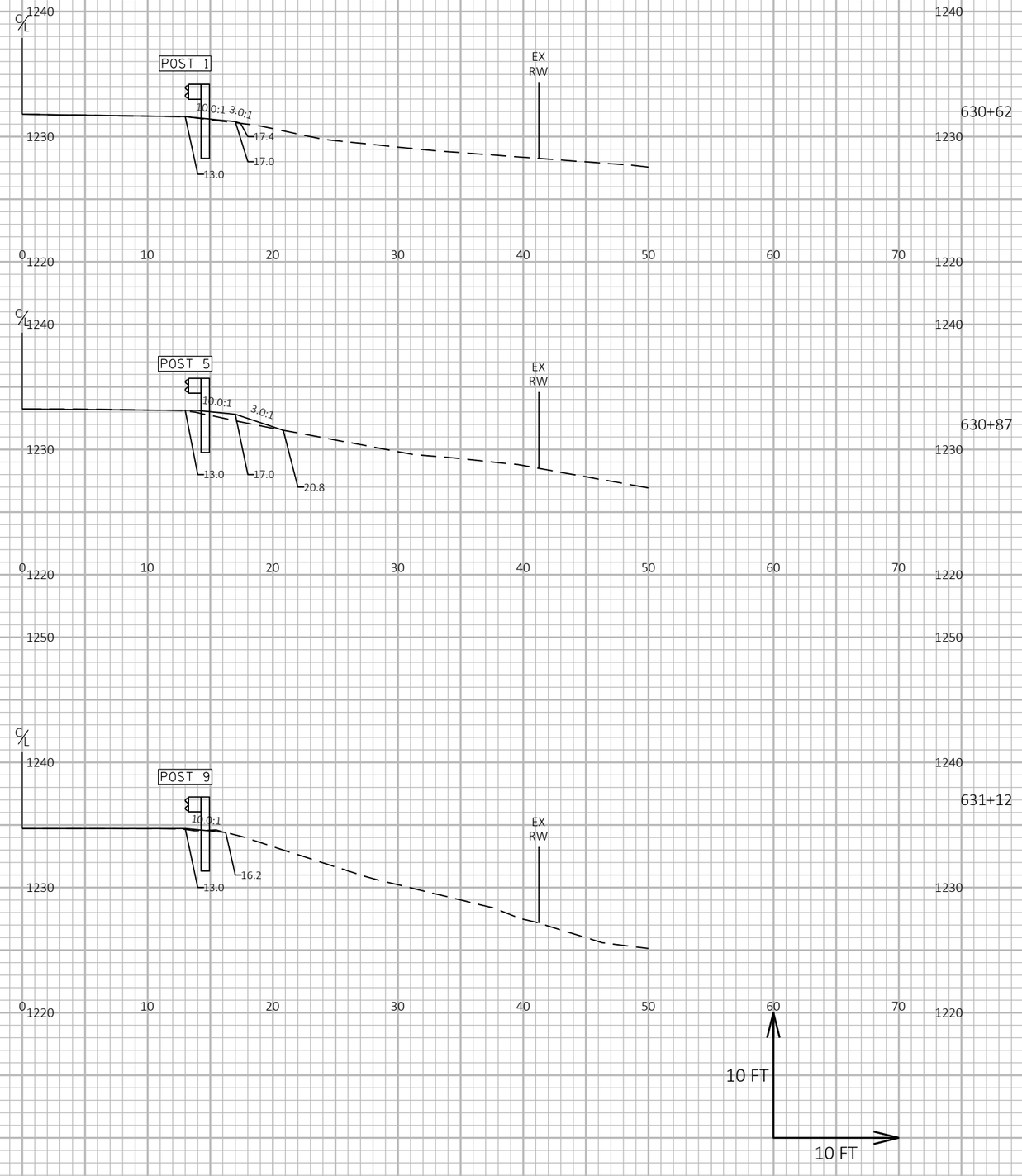
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 232	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\568+36 - 592+68 RT.DWG
LAYOUT NAME - 42

PLOT DATE : 2/1/2023 8:41 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49



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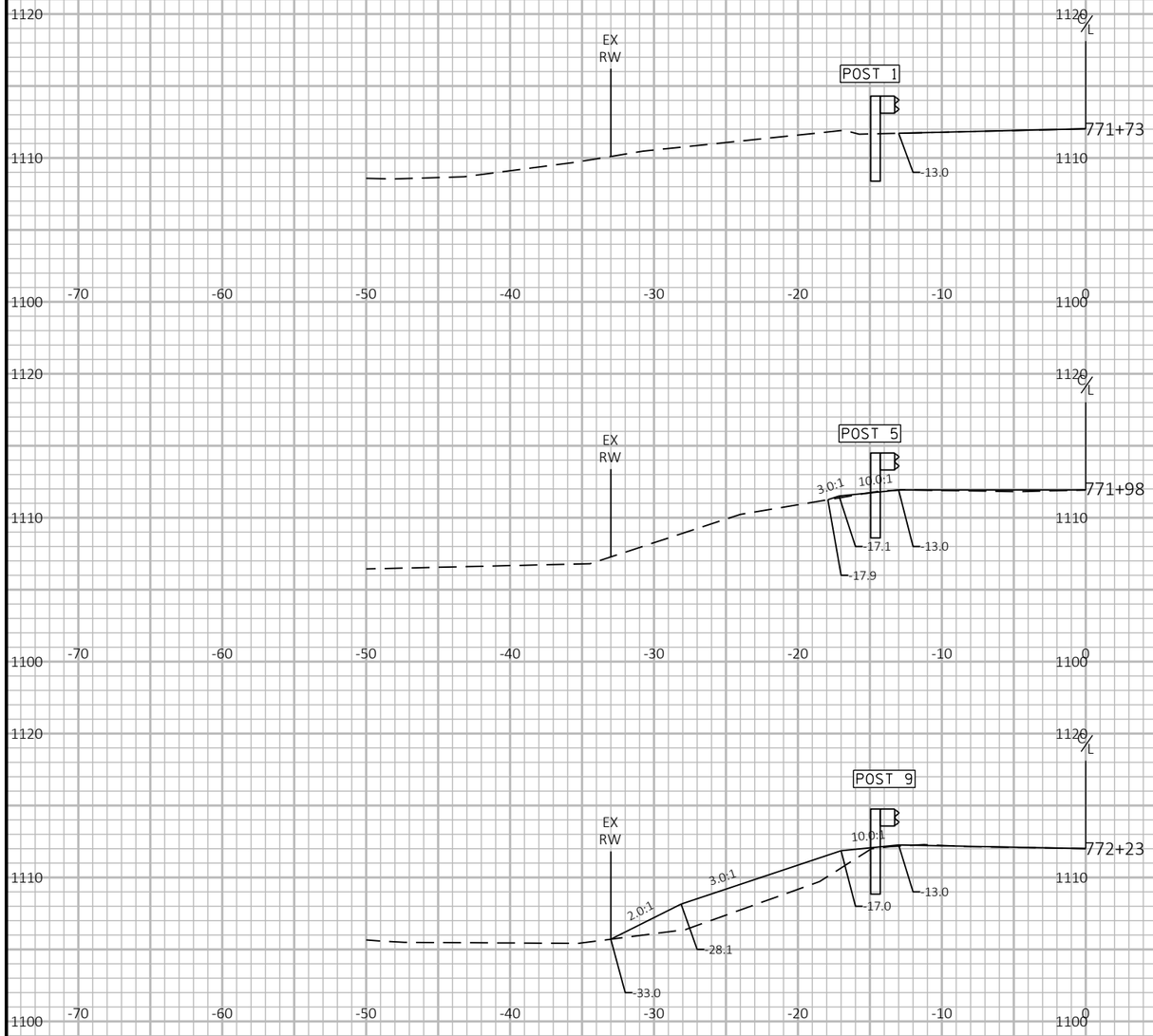
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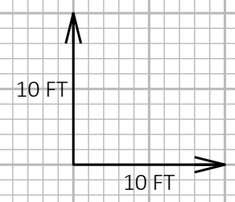
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 233	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\630+62 - 637+29 RT.DWG
LAYOUT NAME - 46

PLOT DATE : 2/1/2023 8:42 AM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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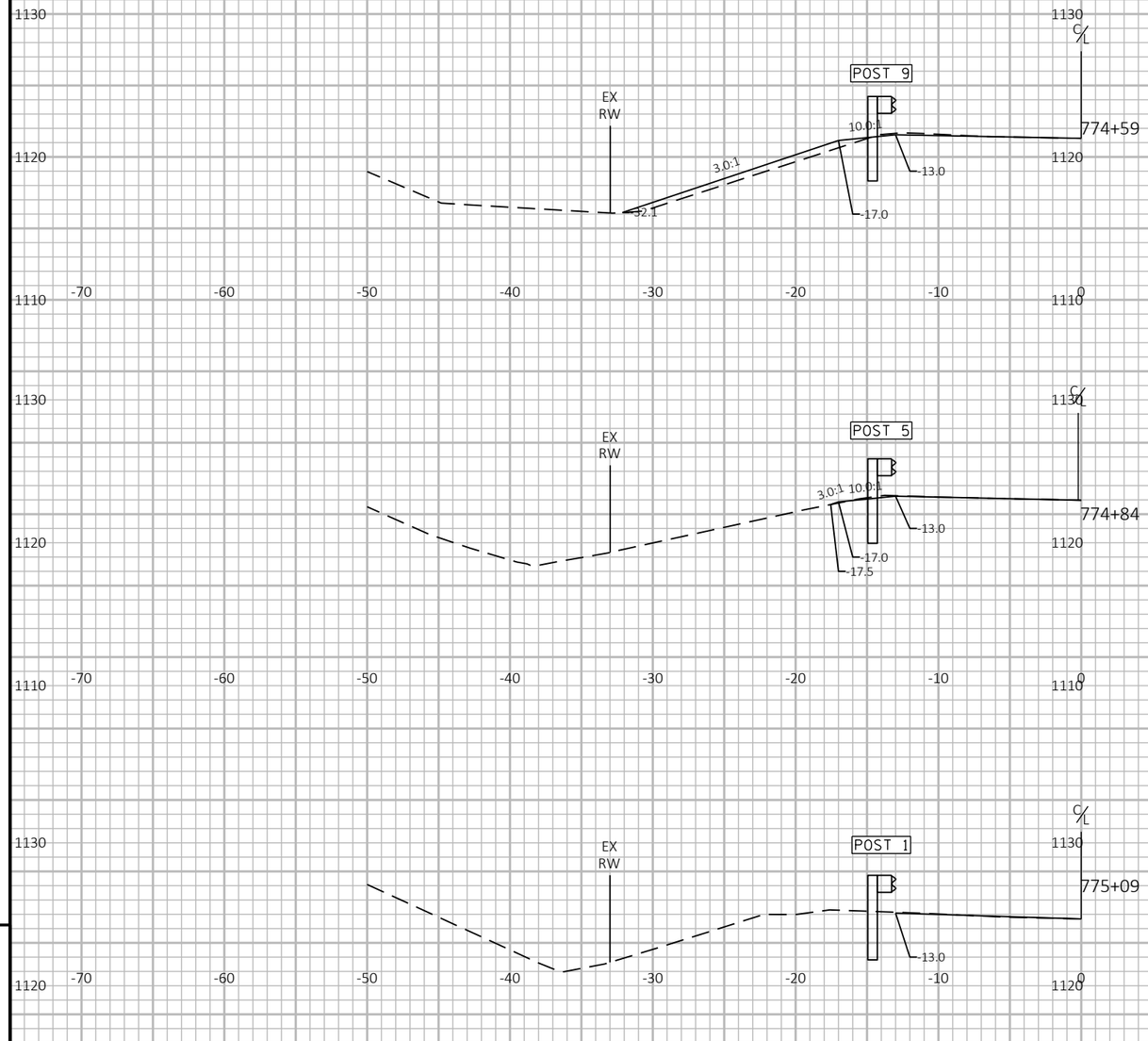
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 234	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\771+73 - 775+09 LT & RT.DWG
LAYOUT NAME - 54

PLOT DATE : 7/16/2023 4:38 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49



10 FT

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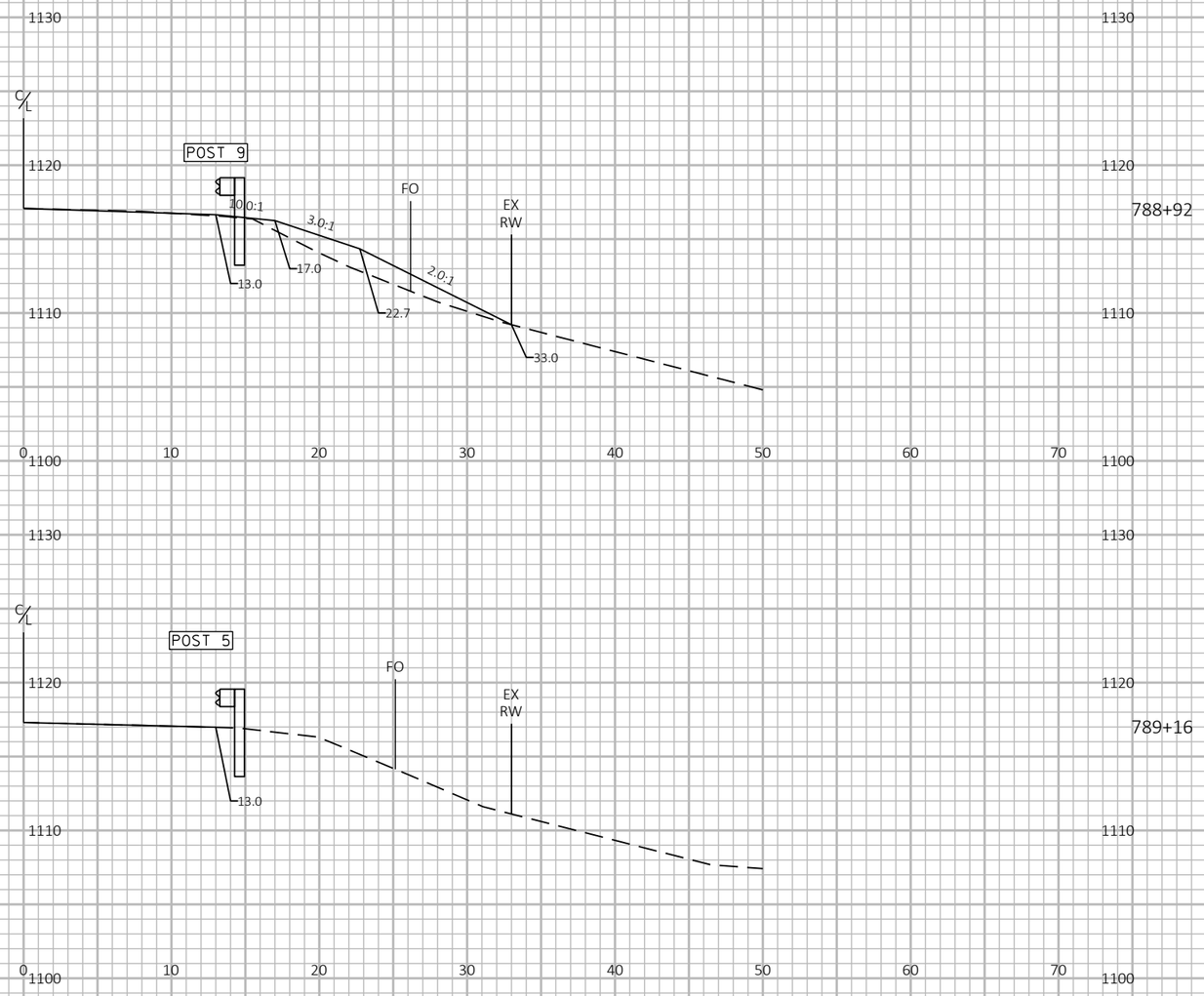
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 235	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\771+73 - 775+09 LT & RT.DWG
LAYOUT NAME - 56

PLOT DATE : 7/16/2023 4:38 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49



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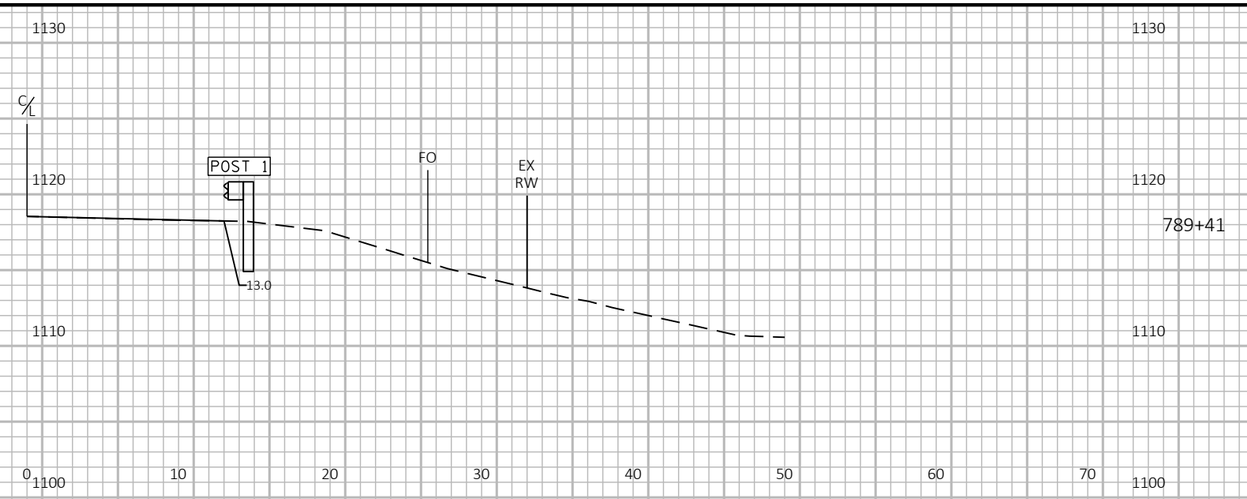
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 236	E

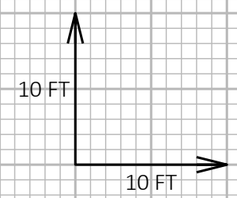
FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\779+38 - 789+41 RT.DWG
LAYOUT NAME - 58

PLOT DATE : 7/16/2023 4:41 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

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

WISDOT/CADDS SHEET 49





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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 237	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\779+38 - 789+41 RT.DWG
LAYOUT NAME - 59

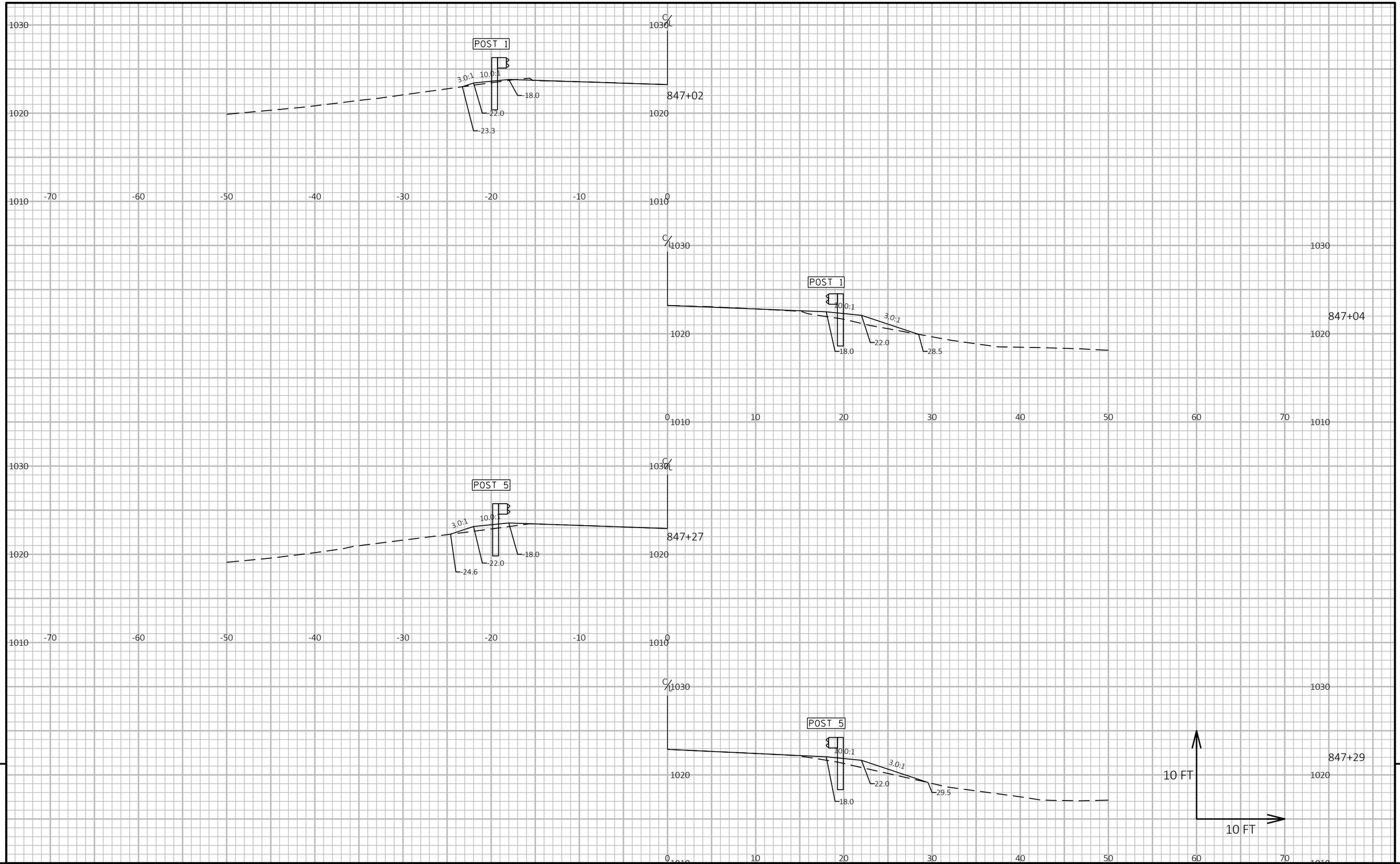
PLOT DATE : 7/16/2023 4:41 PM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 238	E

FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\847+02 - 849+30 LT & RT.DWG
LAYOUT NAME - 68

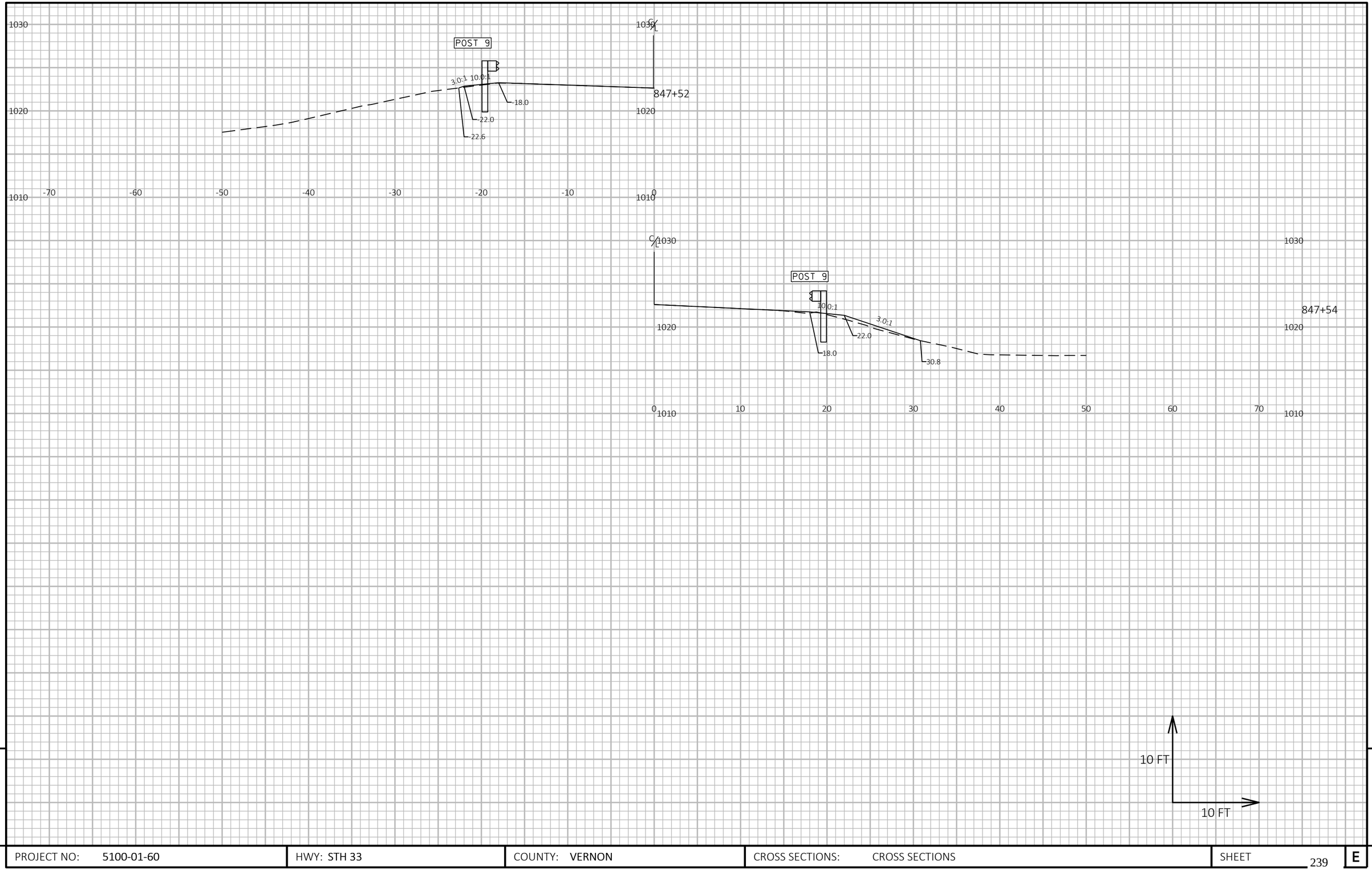
PLOT DATE : 7/16/2023 4:43 PM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



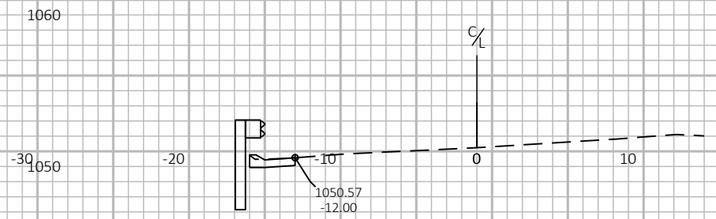
PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS	SHEET 239	E

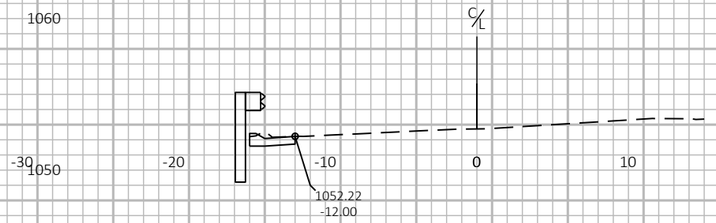
FILE NAME : N:\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\847+02 - 849+30 LT & RT.DWG
LAYOUT NAME - 69

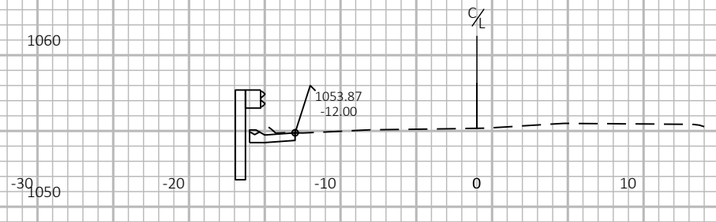
PLOT DATE : 7/16/2023 4:43 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME :

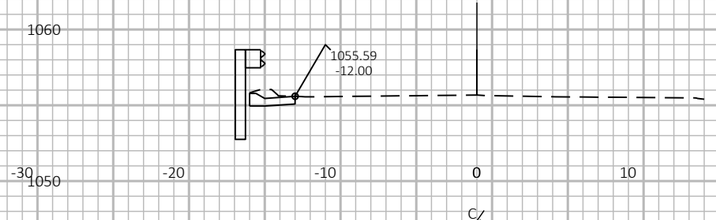
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

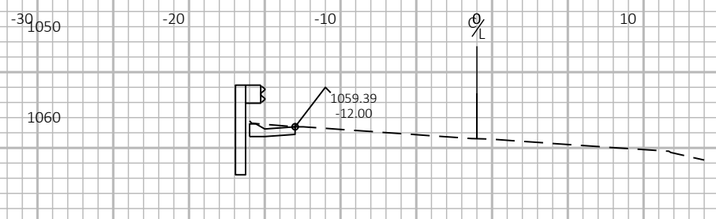


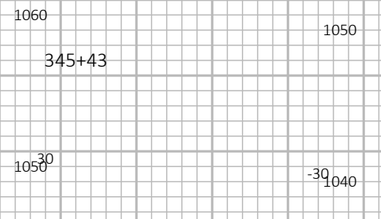


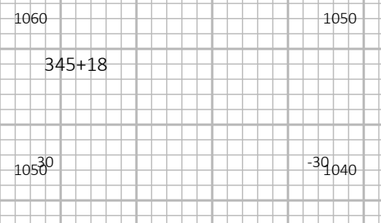


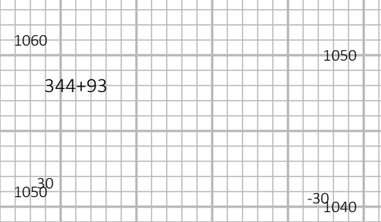


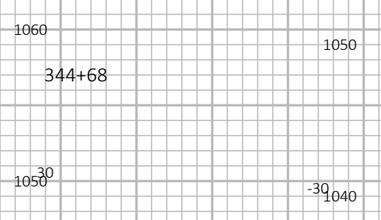


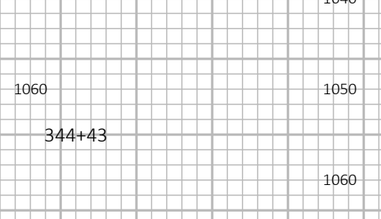


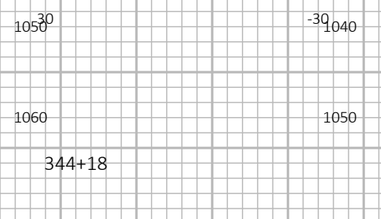


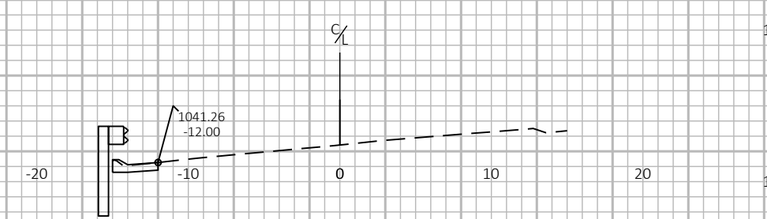


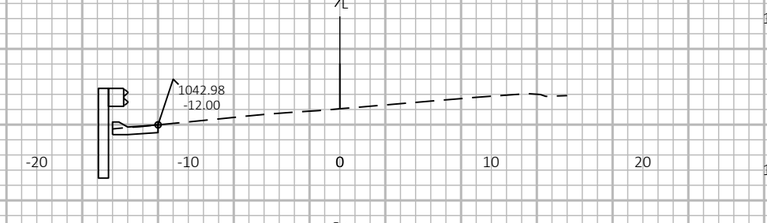


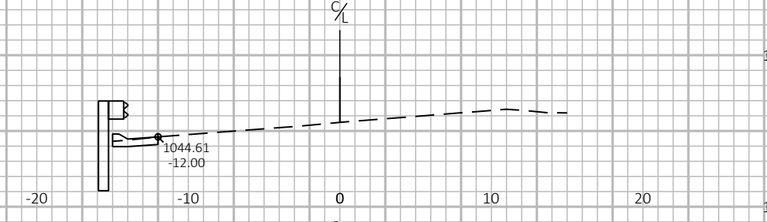


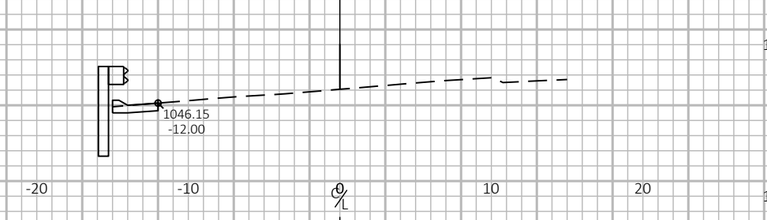


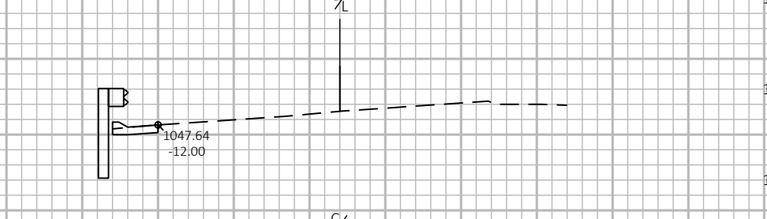


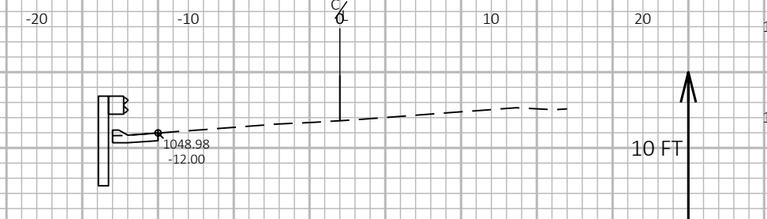


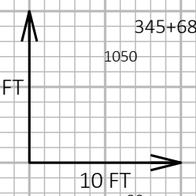












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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 240	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 01

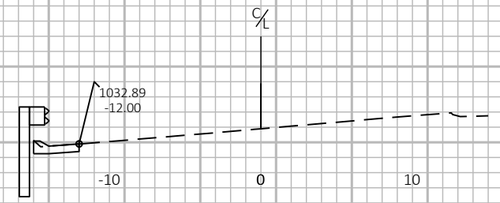
PLOT DATE : 7/24/2023 9:04 PM

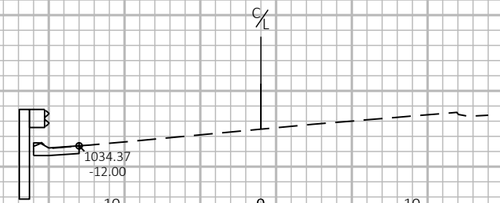
PLOT BY : MEYER, BRYTON ROBERT

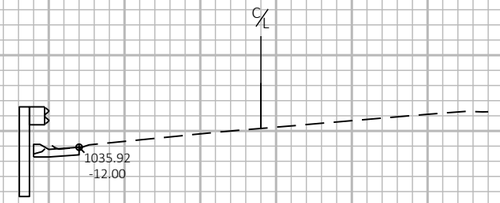
PLOT NAME :

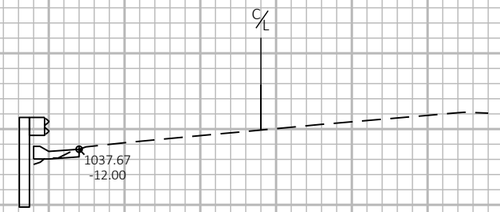
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

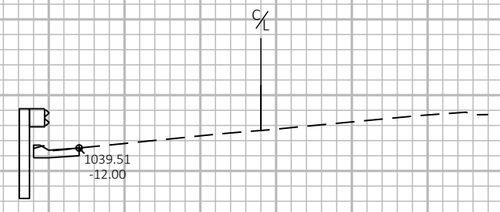
WISDOT/CADDS SHEET 49

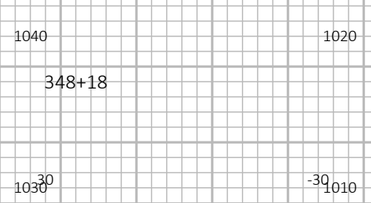


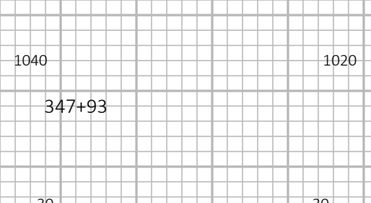


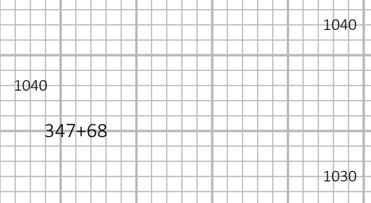


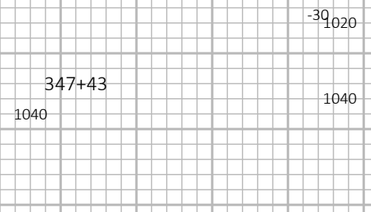


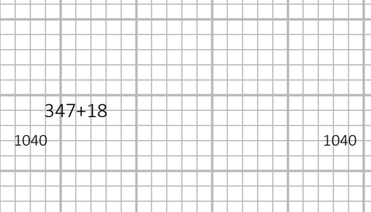


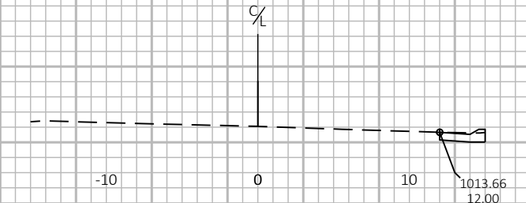


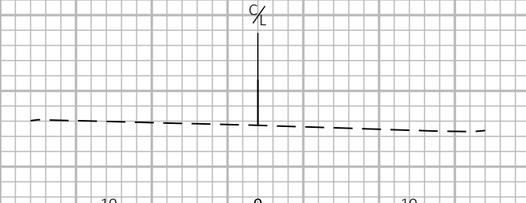


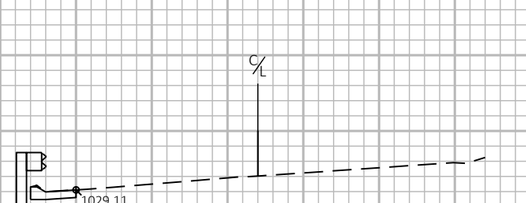


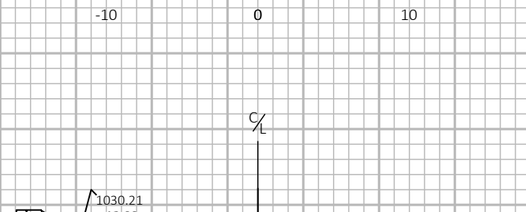


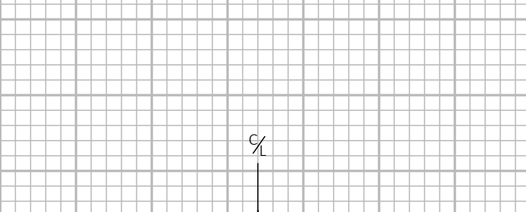












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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 241	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 02

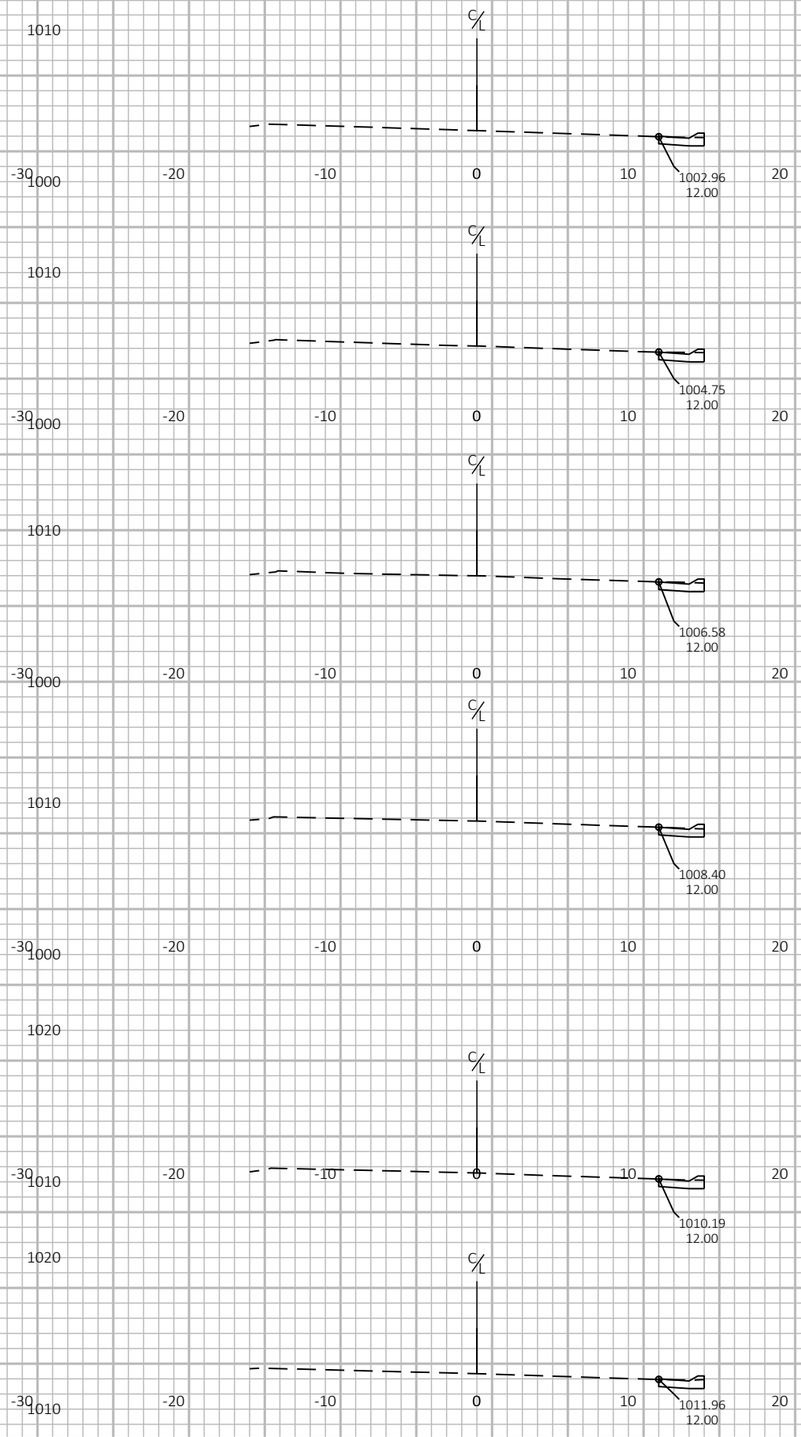
PLOT DATE : 7/24/2023 9:04 PM

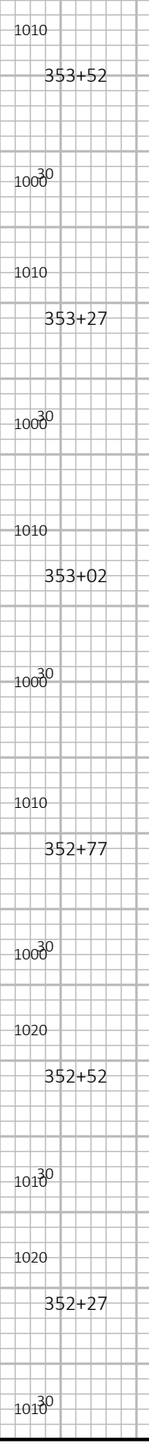
PLOT BY : MEYER, BRYTON ROBERT

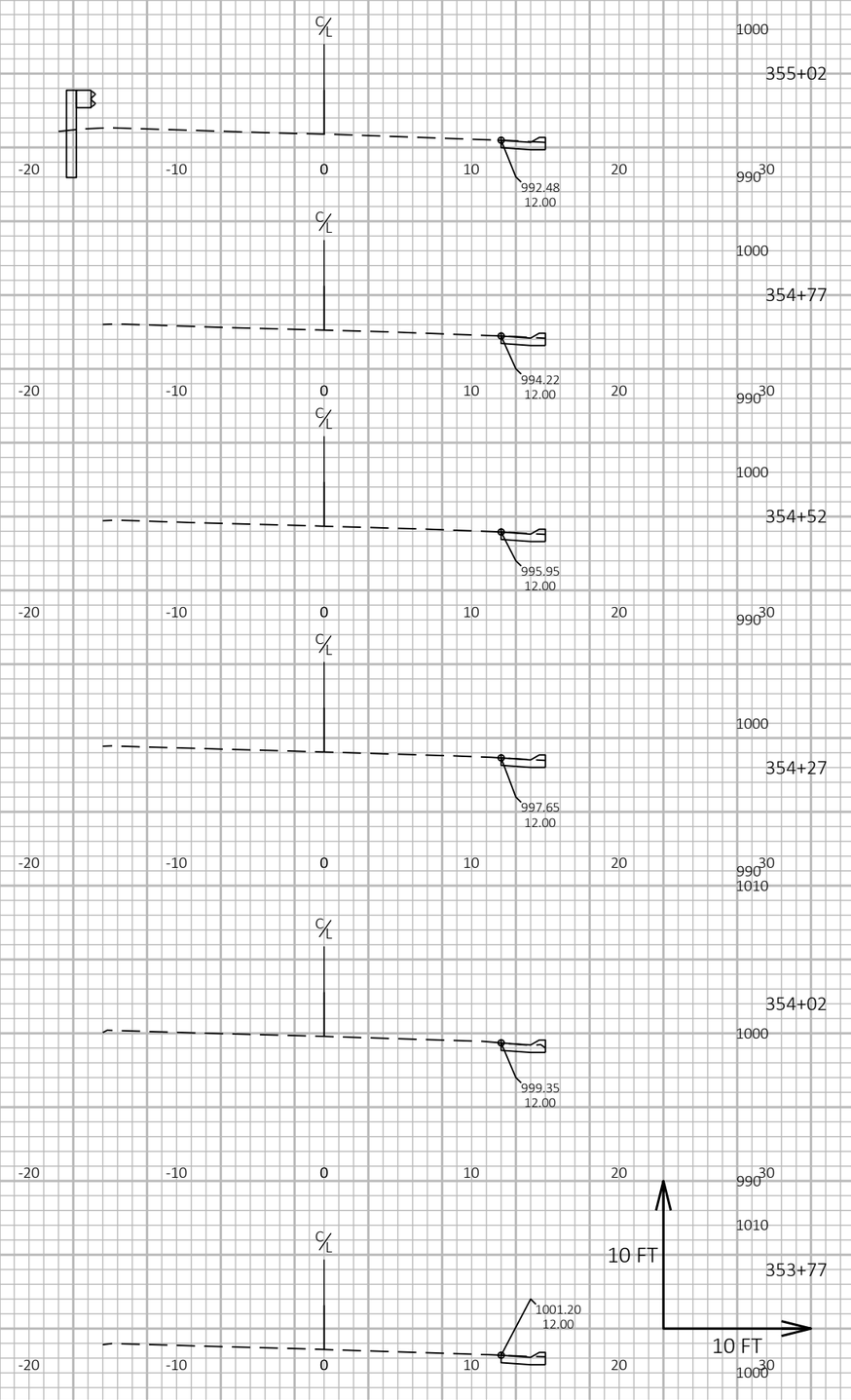
PLOT NAME :

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

WISDOT/CADDS SHEET 49







9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 242	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 03

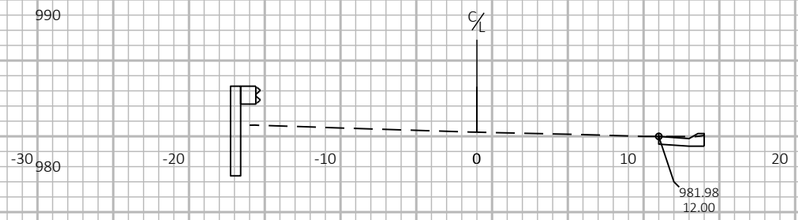
PLOT DATE : 7/24/2023 9:04 PM

PLOT BY : MEYER, BRYTON ROBERT

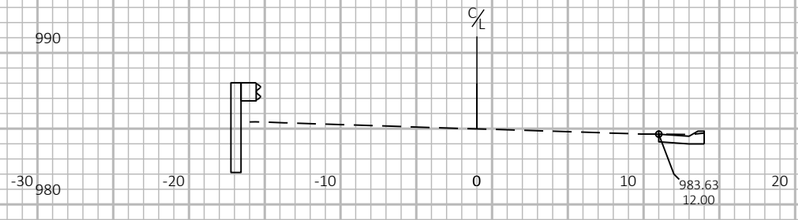
PLOT NAME :

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

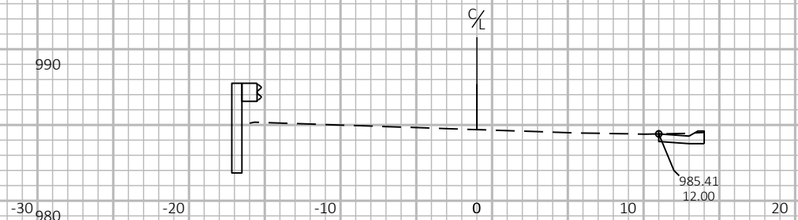
WISDOT/CADDS SHEET 49



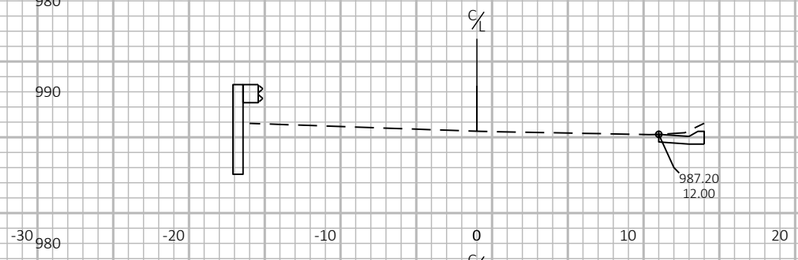
356+52



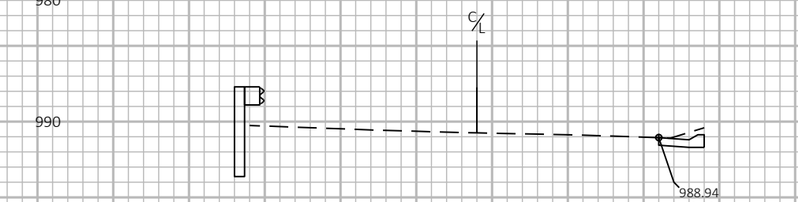
356+27



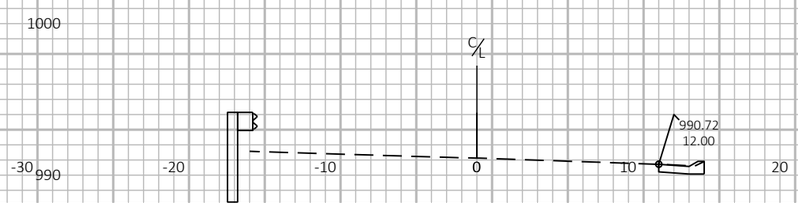
356+02



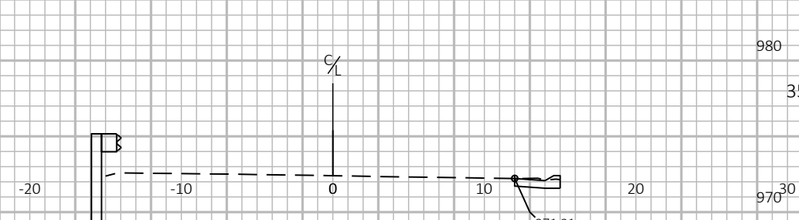
355+77



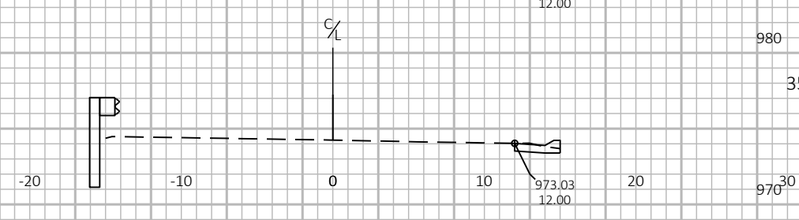
355+52



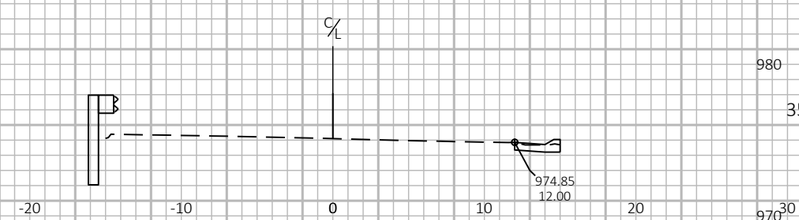
355+27



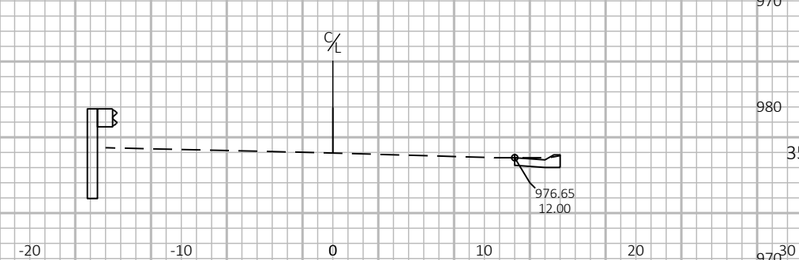
356+52



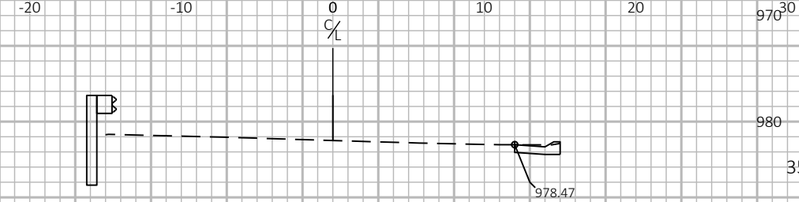
356+27



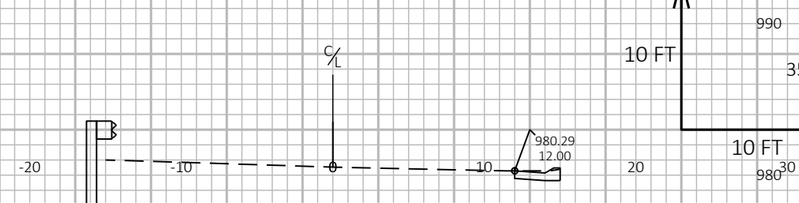
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355+77



355+52



355+27

358+02

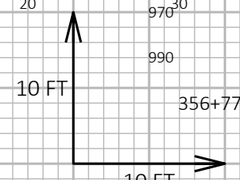
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357+52

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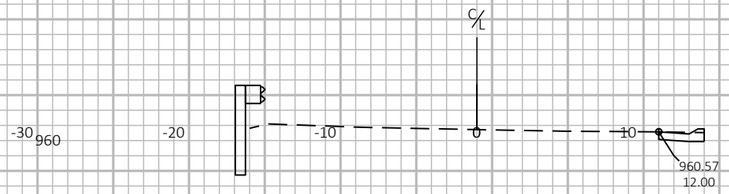


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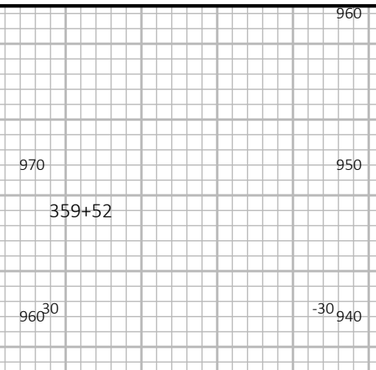
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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 243	E

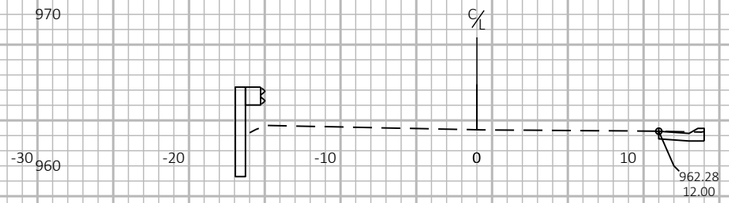
FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 04
PLOT DATE : 7/24/2023 9:05 PM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



359+52



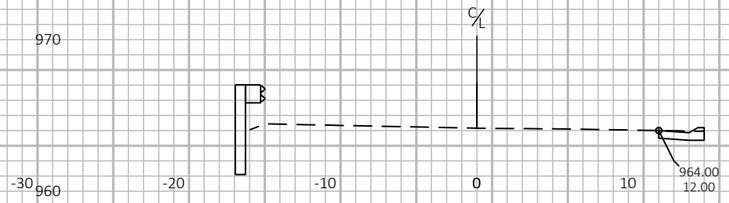
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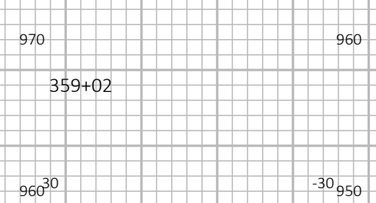
359+27



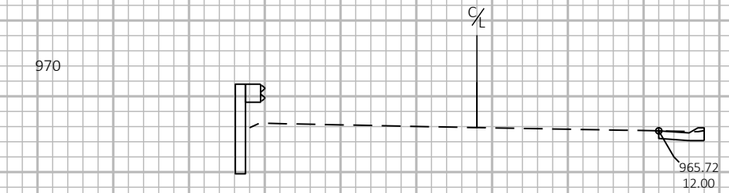
360+77



359+02



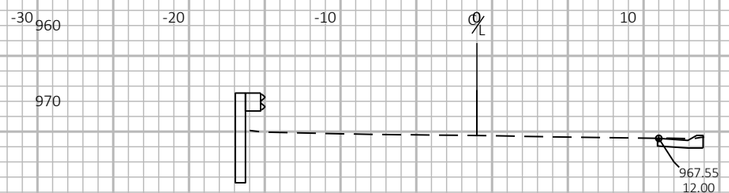
360+52



358+77



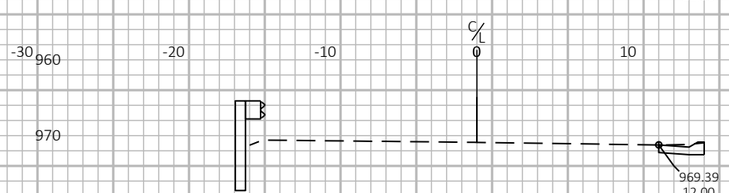
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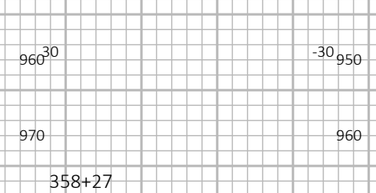
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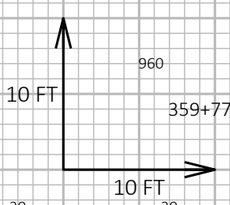
360+02



358+27



359+77



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9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 244	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 05

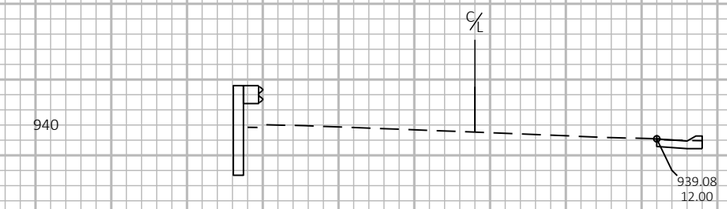
PLOT DATE : 7/24/2023 9:05 PM

PLOT BY : MEYER, BRYTON ROBERT

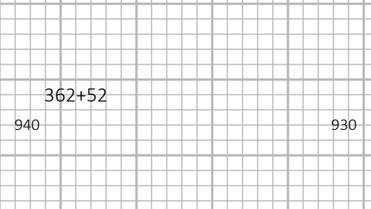
PLOT NAME :

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

WISDOT/CADDS SHEET 49

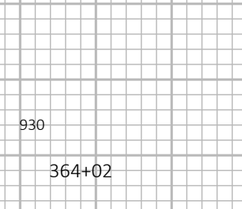


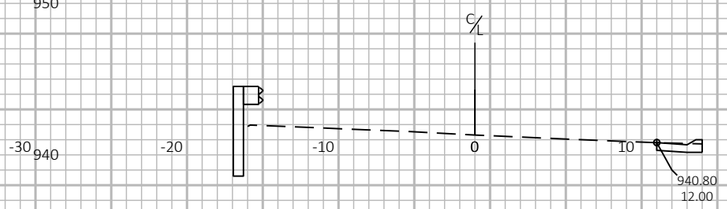
362+52



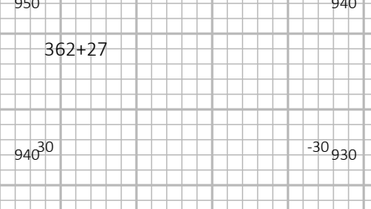


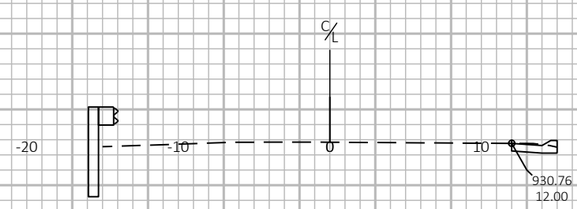
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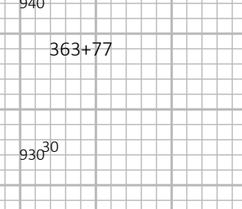


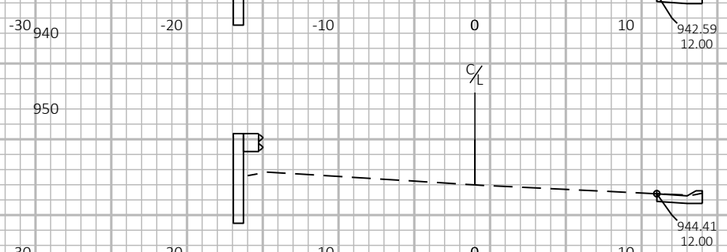
362+27



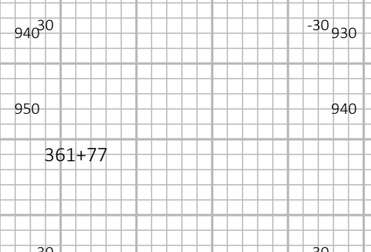


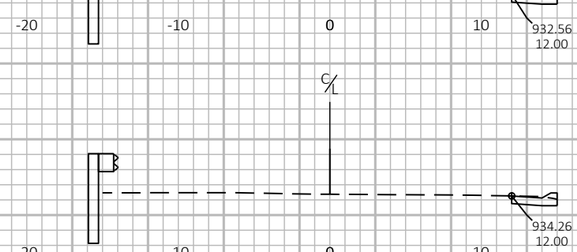
363+77



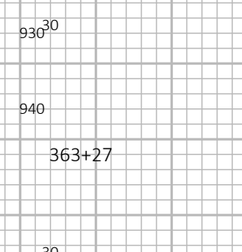


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363+52

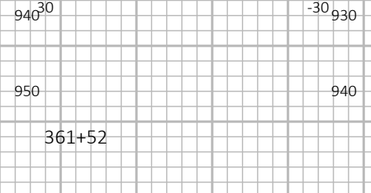


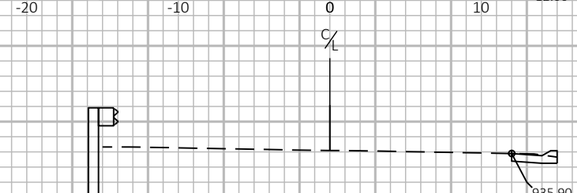
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363+27

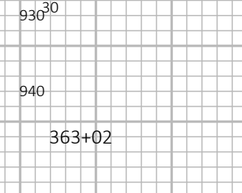


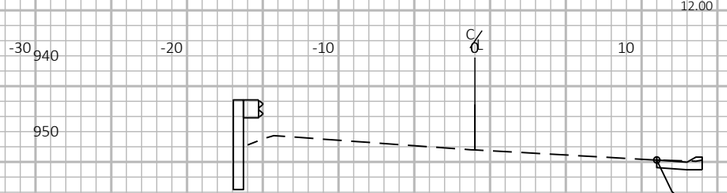
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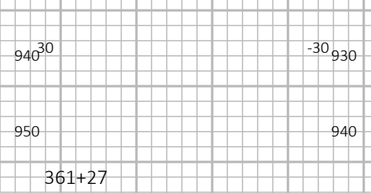


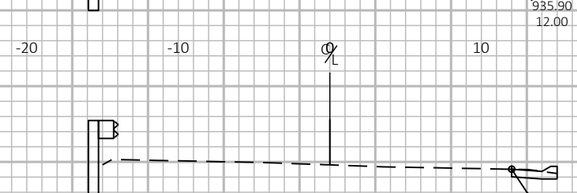
363+02



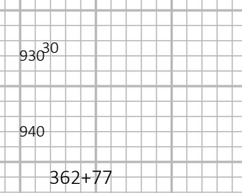


361+27





362+77

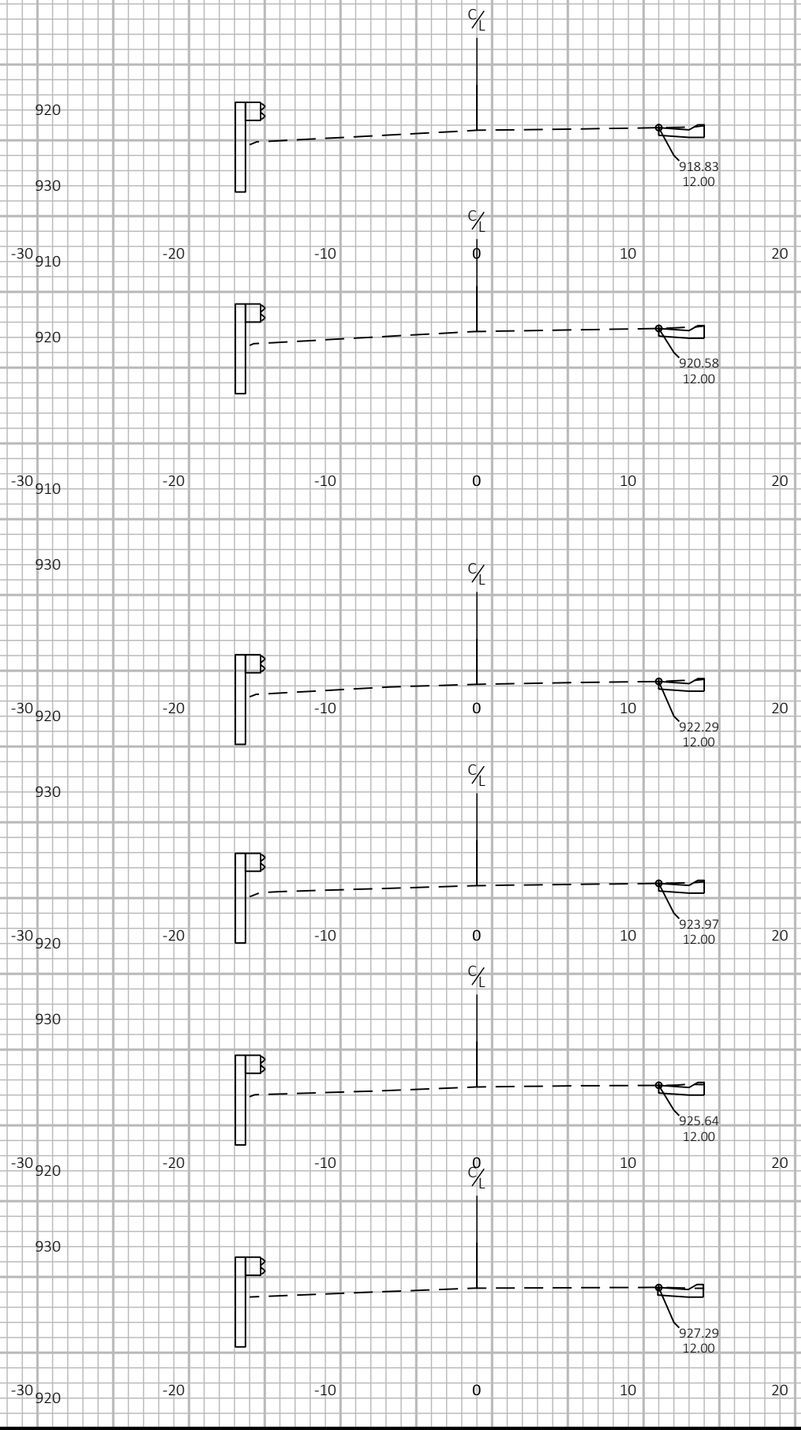


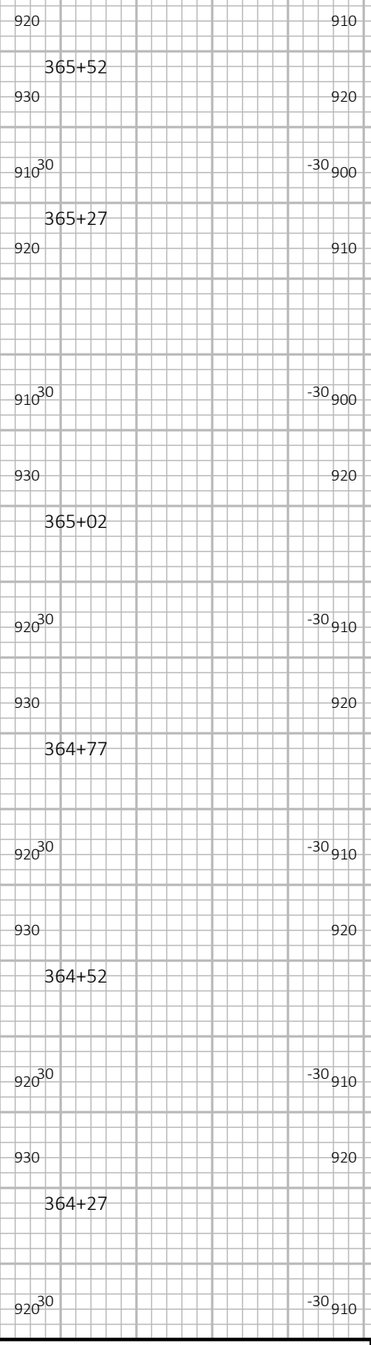
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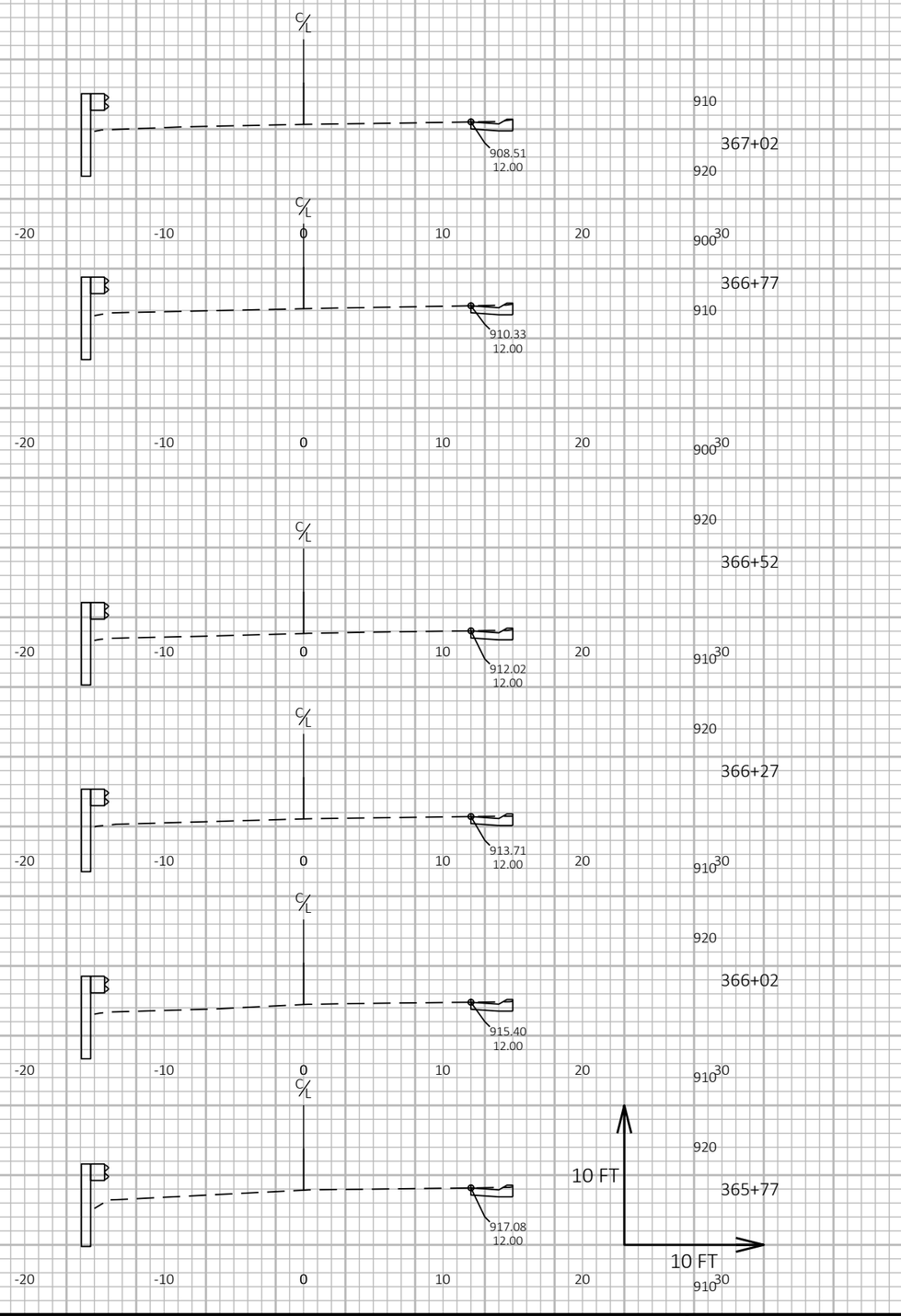
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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 245	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 06
PLOT DATE : 7/24/2023 9:05 PM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49







9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 246	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 07

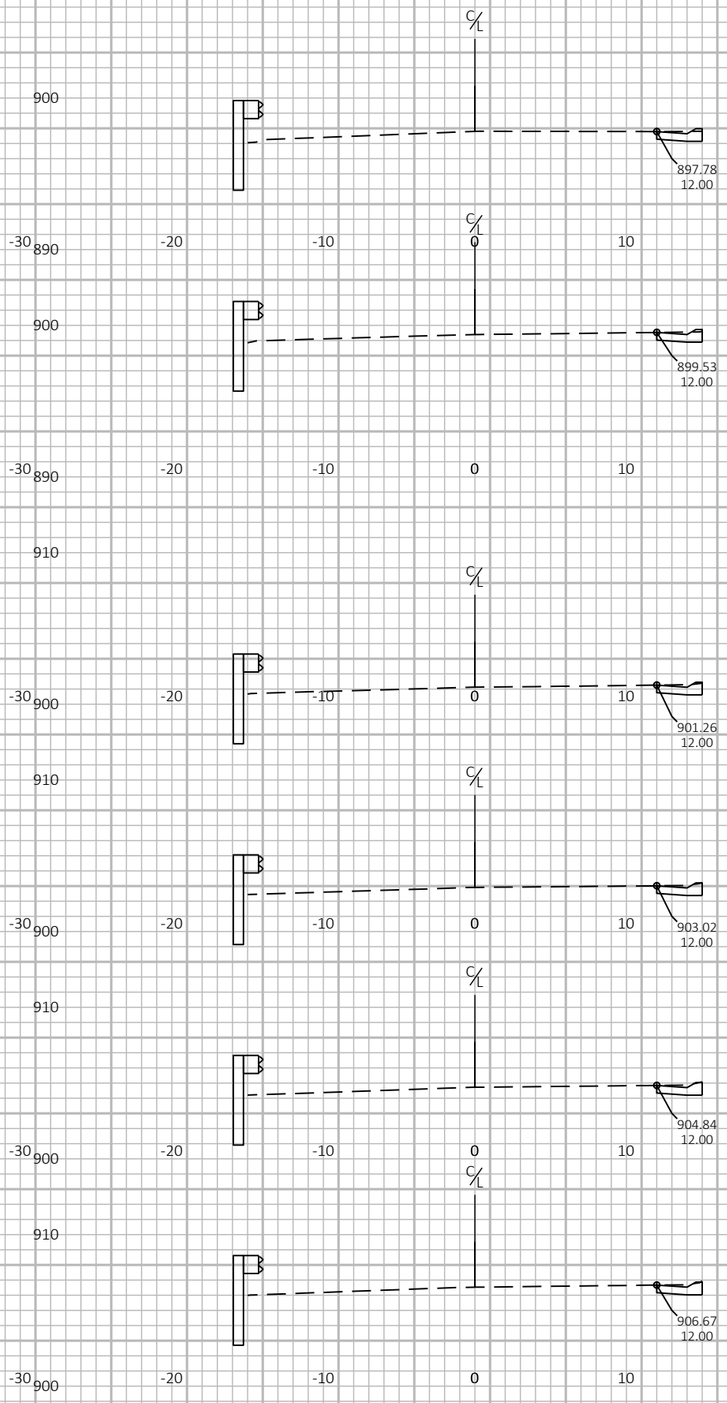
PLOT DATE : 7/24/2023 9:05 PM

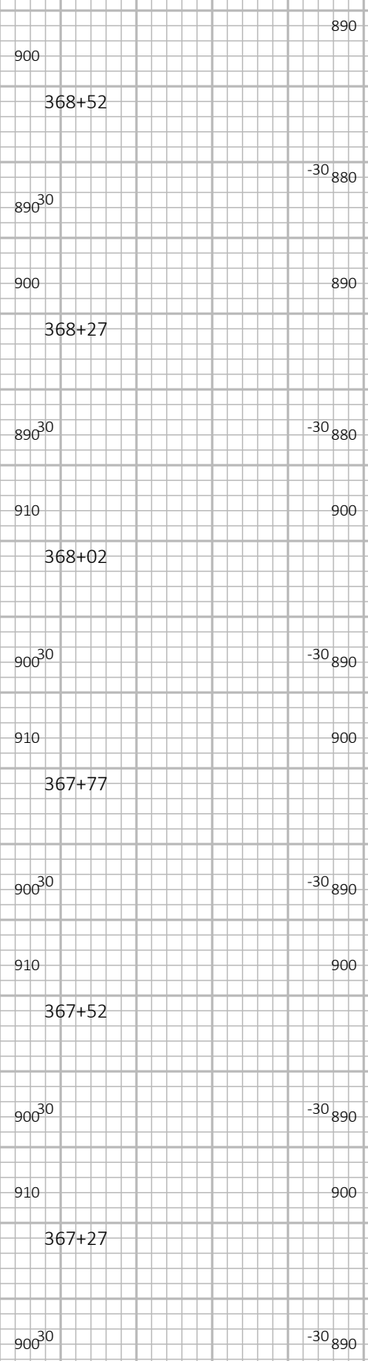
PLOT BY : MEYER, BRYTON ROBERT

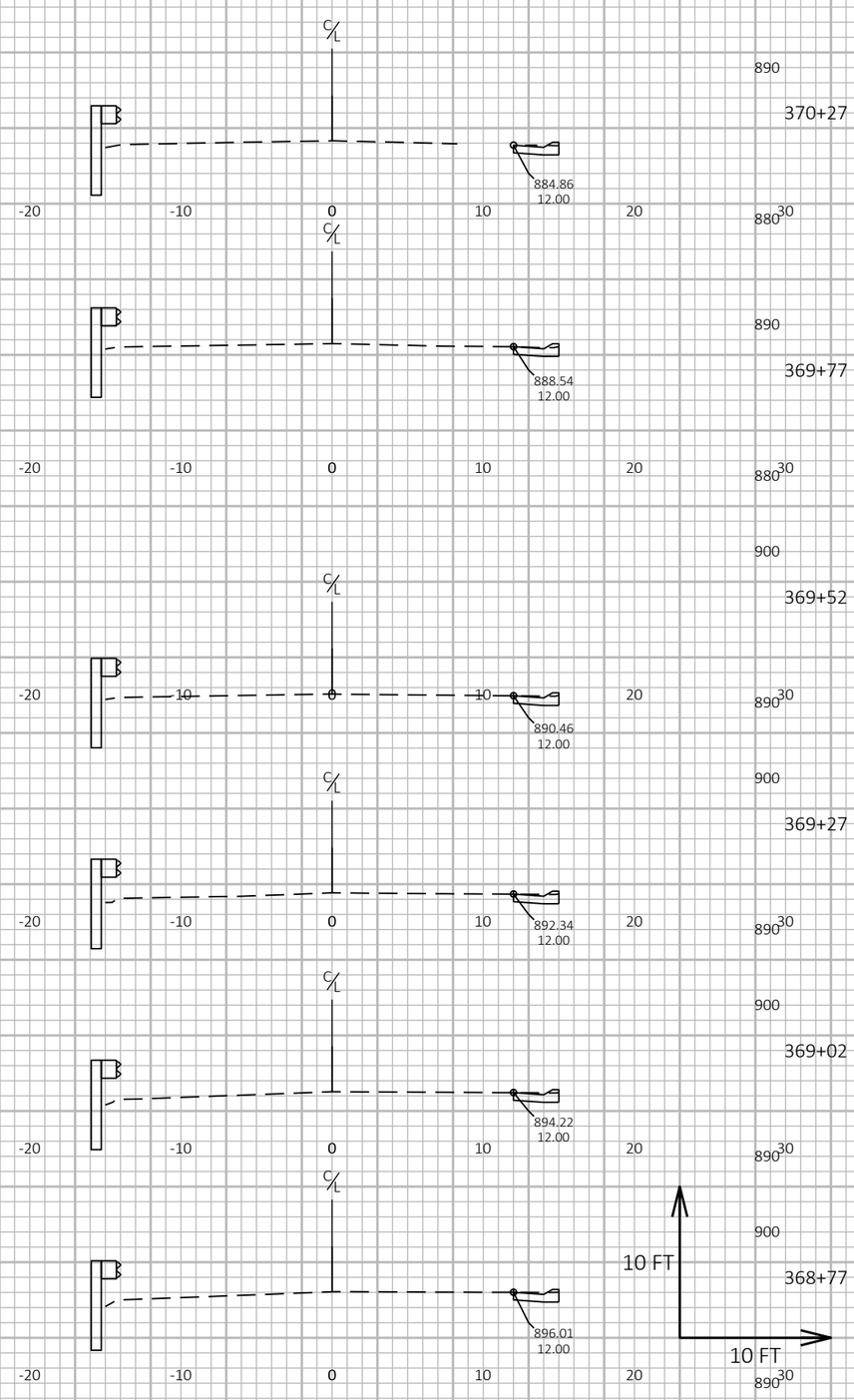
PLOT NAME :

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

WISDOT/CADDS SHEET 49







9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 247	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 08

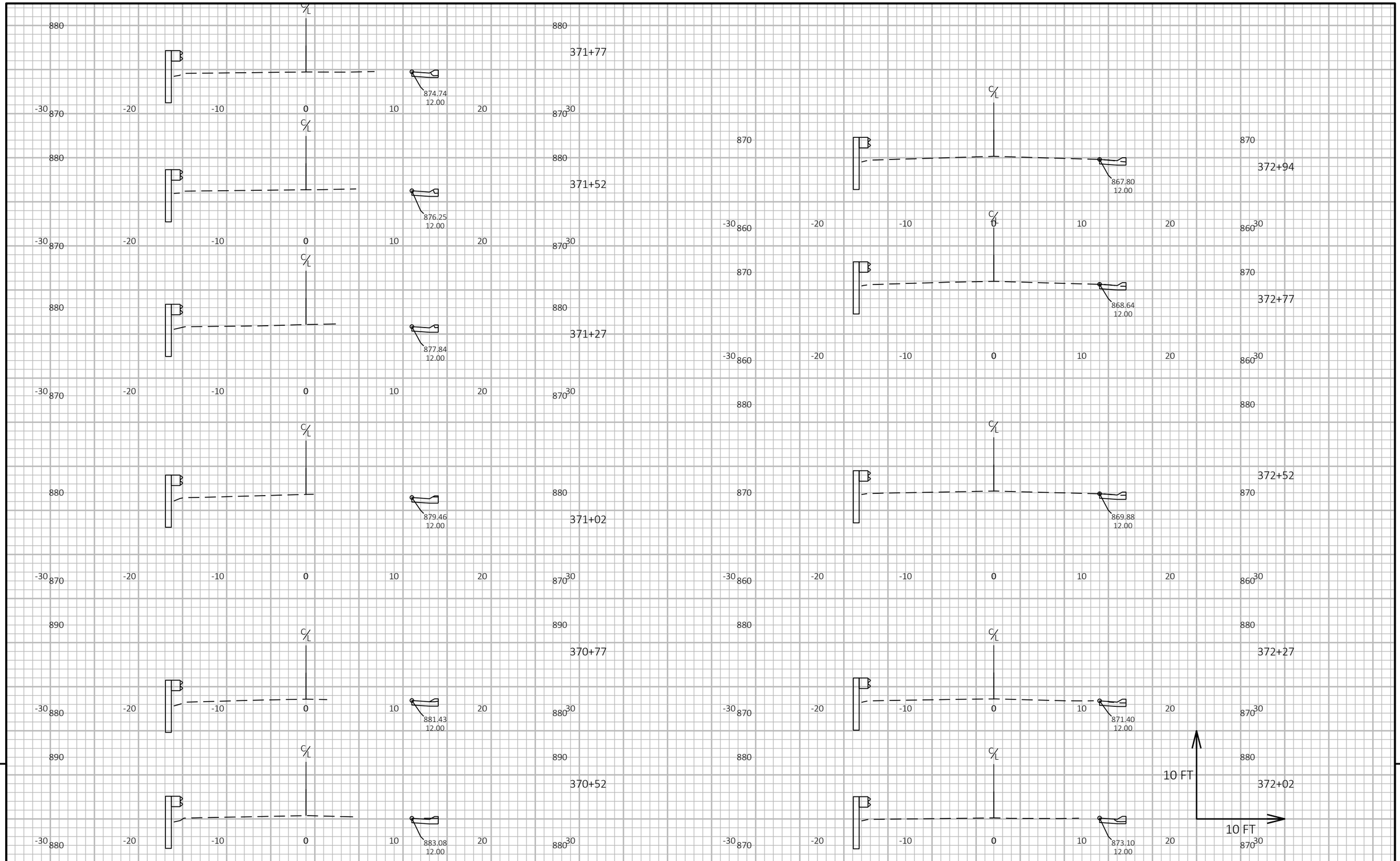
PLOT DATE : 7/24/2023 9:05 PM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 248	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 09

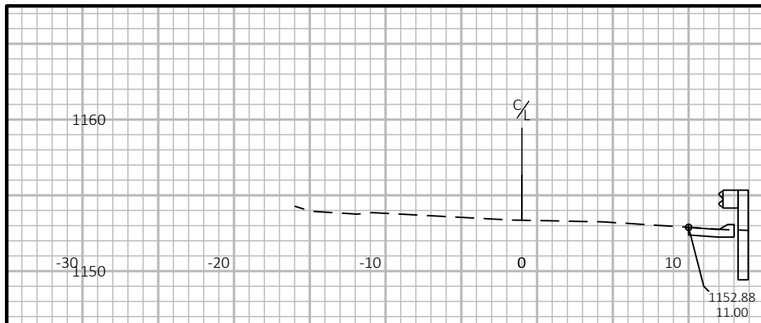
PLOT DATE : 7/24/2023 9:05 PM

PLOT BY : MEYER, BRYTON ROBERT

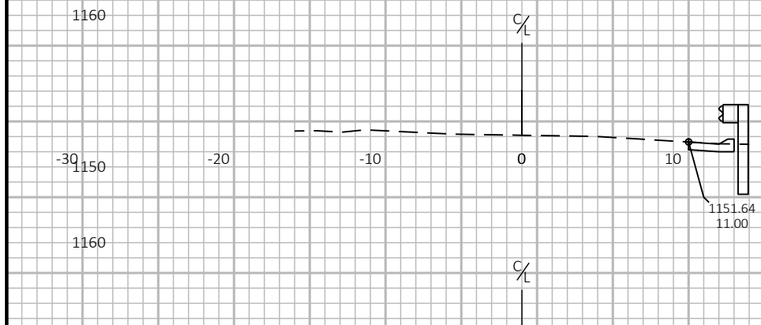
PLOT NAME :

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

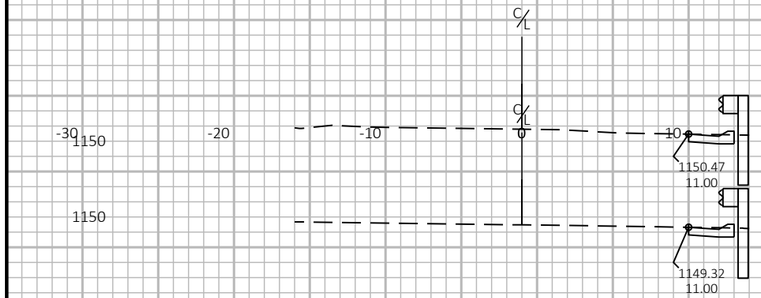
WISDOT/CADDS SHEET 49



617+31

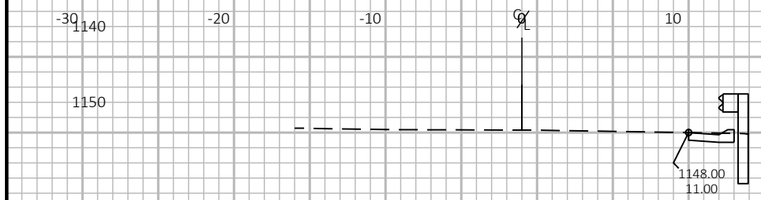


617+06

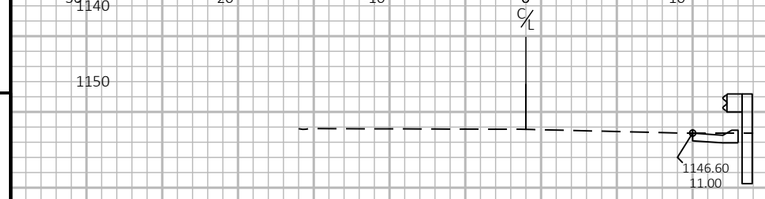


616+81

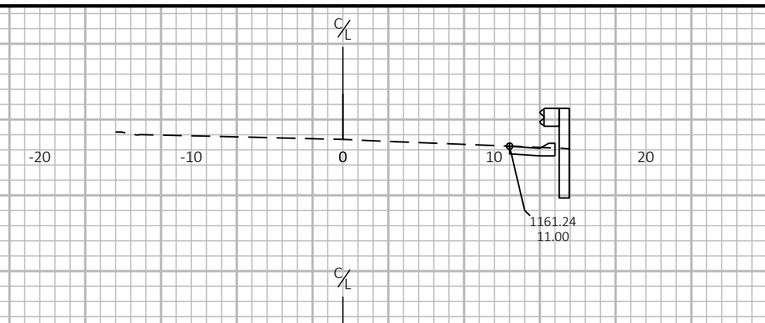
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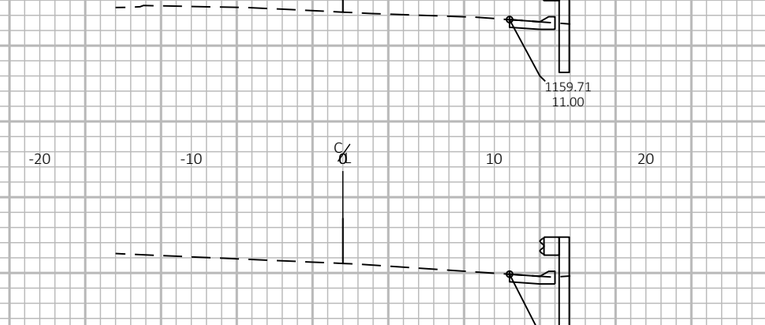
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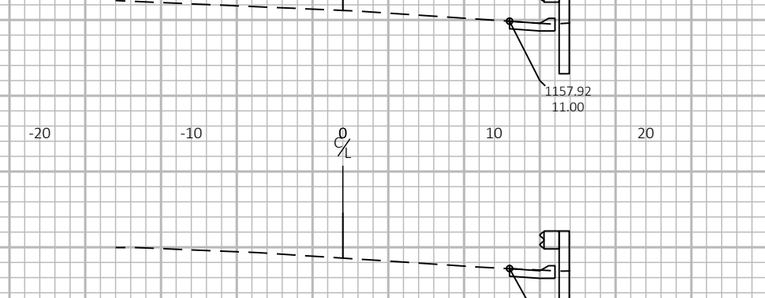
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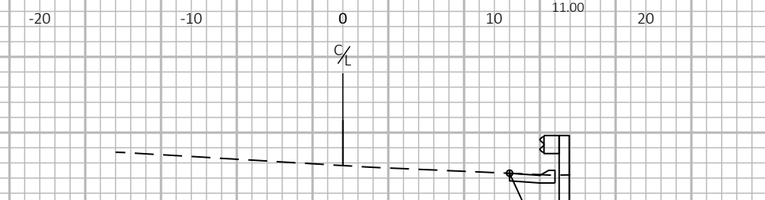


618+56

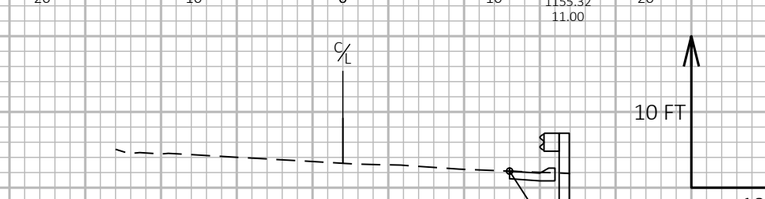


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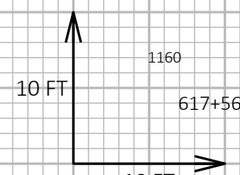
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617+81



617+56



9

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PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 249	E

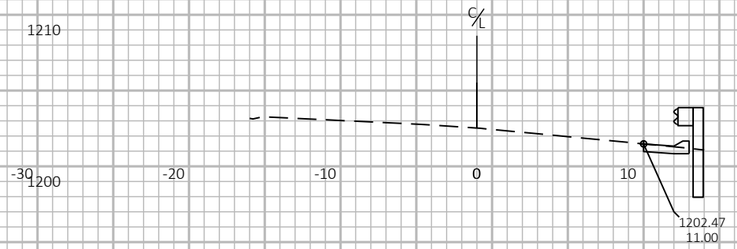
FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 10

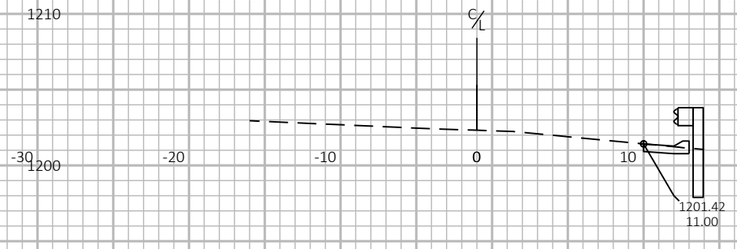
PLOT DATE : 7/24/2023 9:05 PM

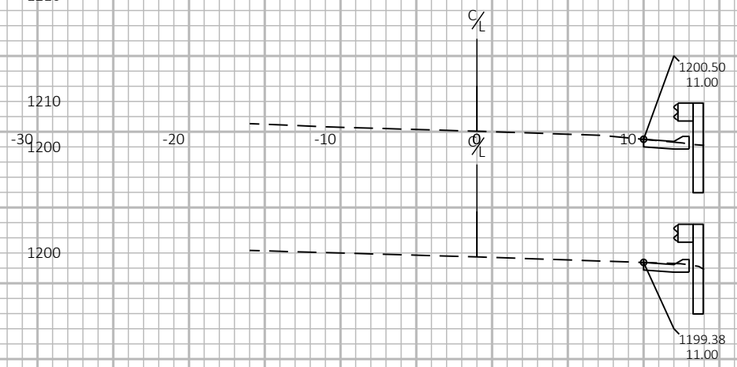
PLOT BY : MEYER, BRYTON ROBERT

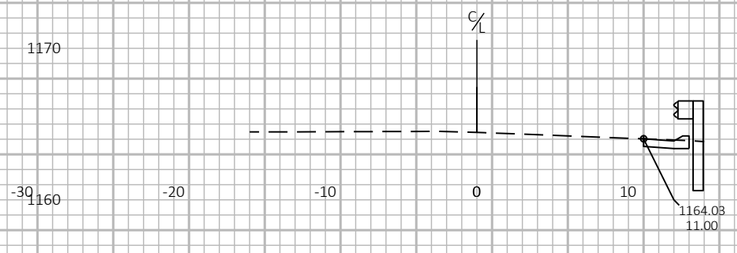
PLOT NAME :

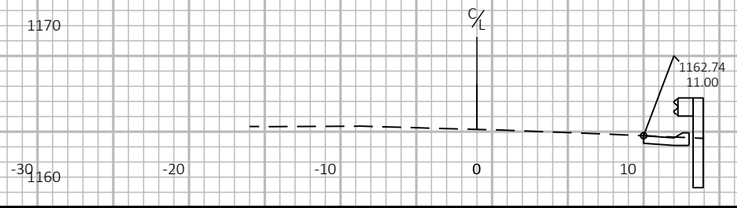
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.











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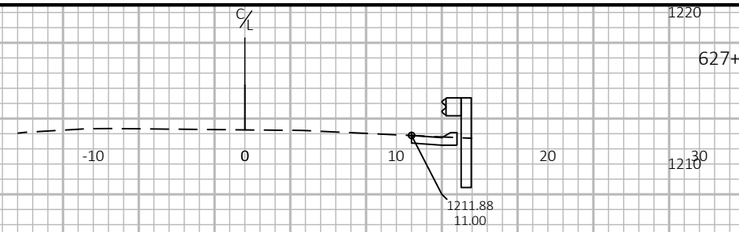
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625+48

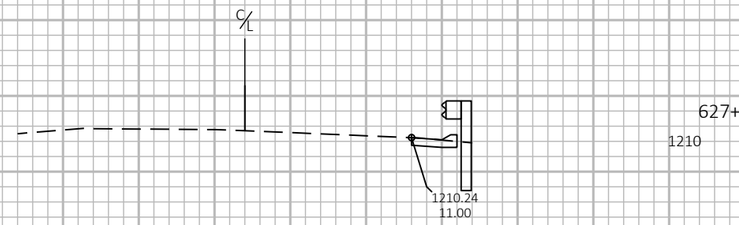
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619+28

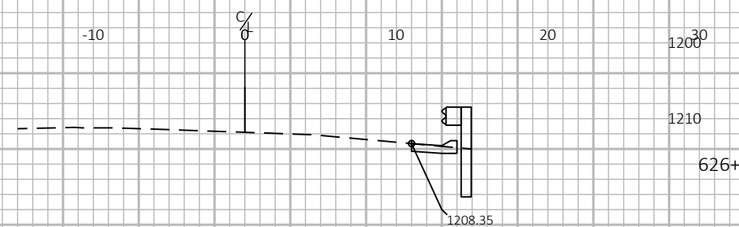
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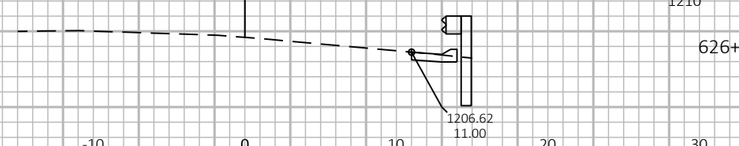
627+48



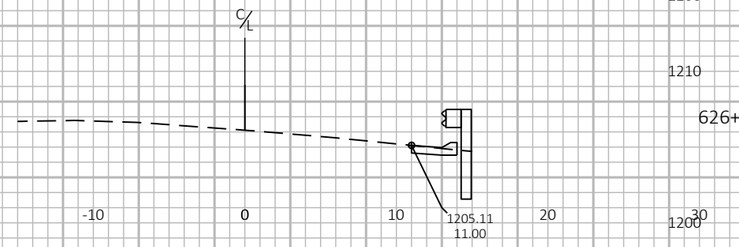
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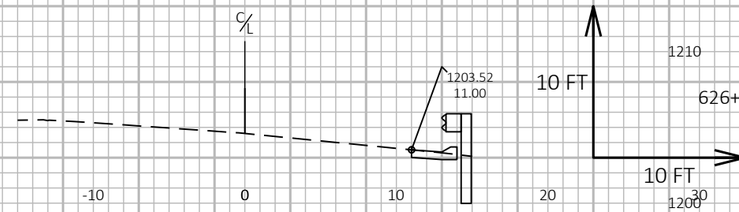
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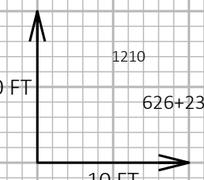
626+73



626+48



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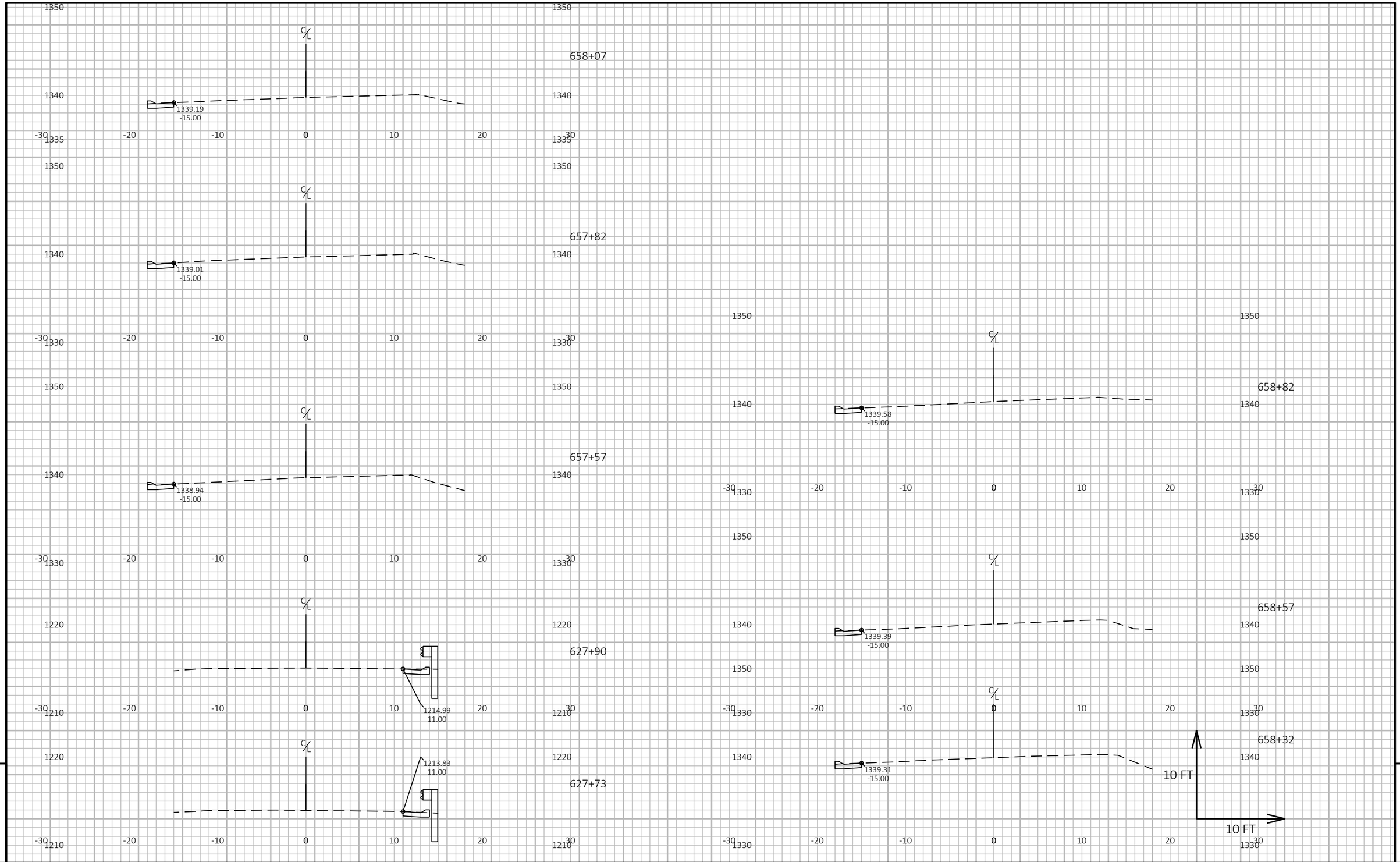


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9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 250	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 11
PLOT DATE : 7/24/2023 9:05 PM
PLOT BY : MEYER, BRYTON ROBERT
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

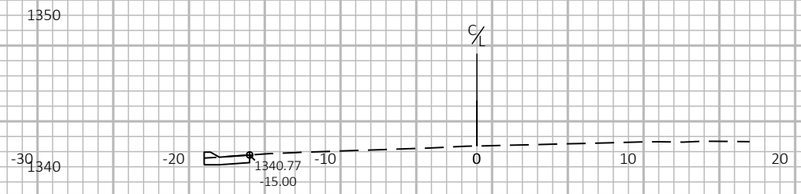


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 251	E

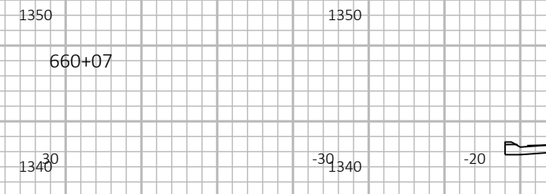
FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 12

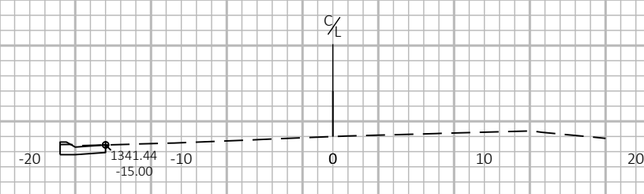
PLOT DATE : 7/24/2023 9:05 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

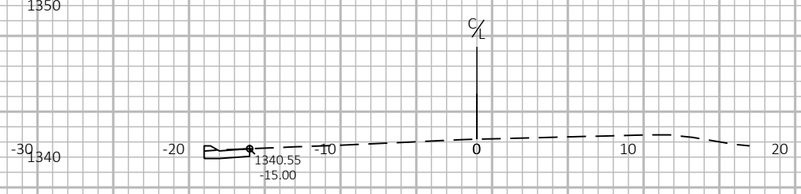


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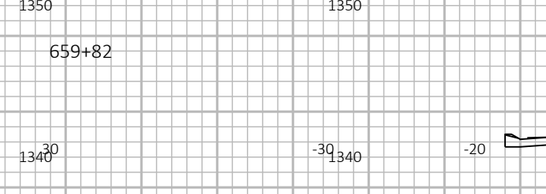


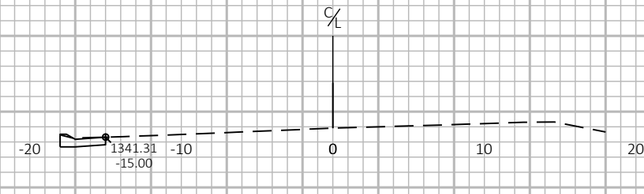


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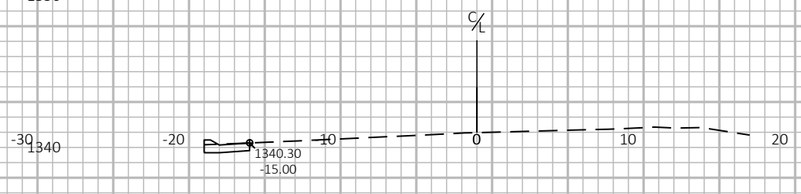


659+82

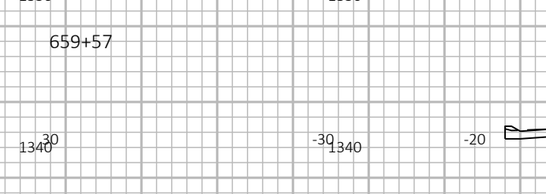


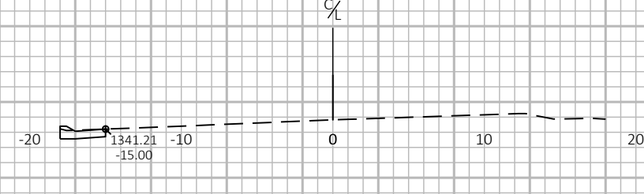


661+07



659+57

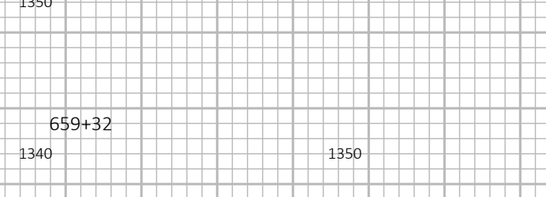


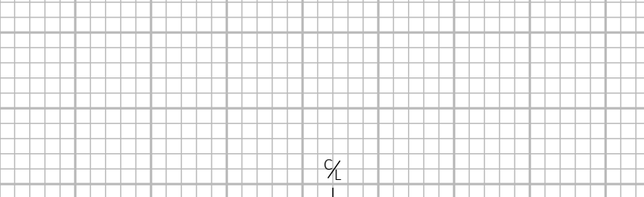


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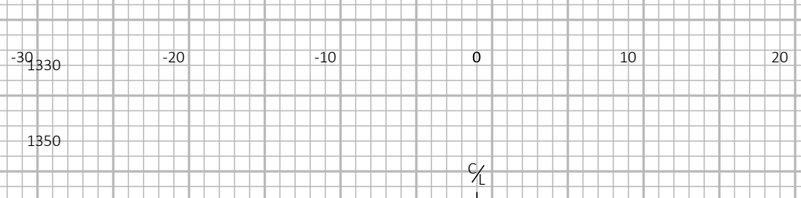


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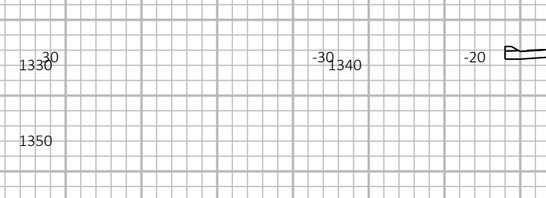


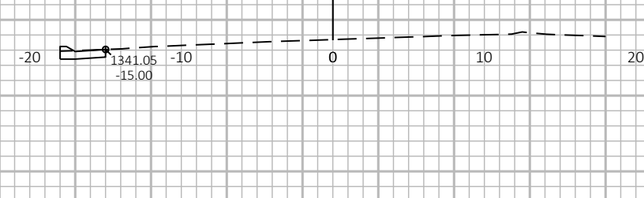


660+57



659+07





660+32

9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 252	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 13

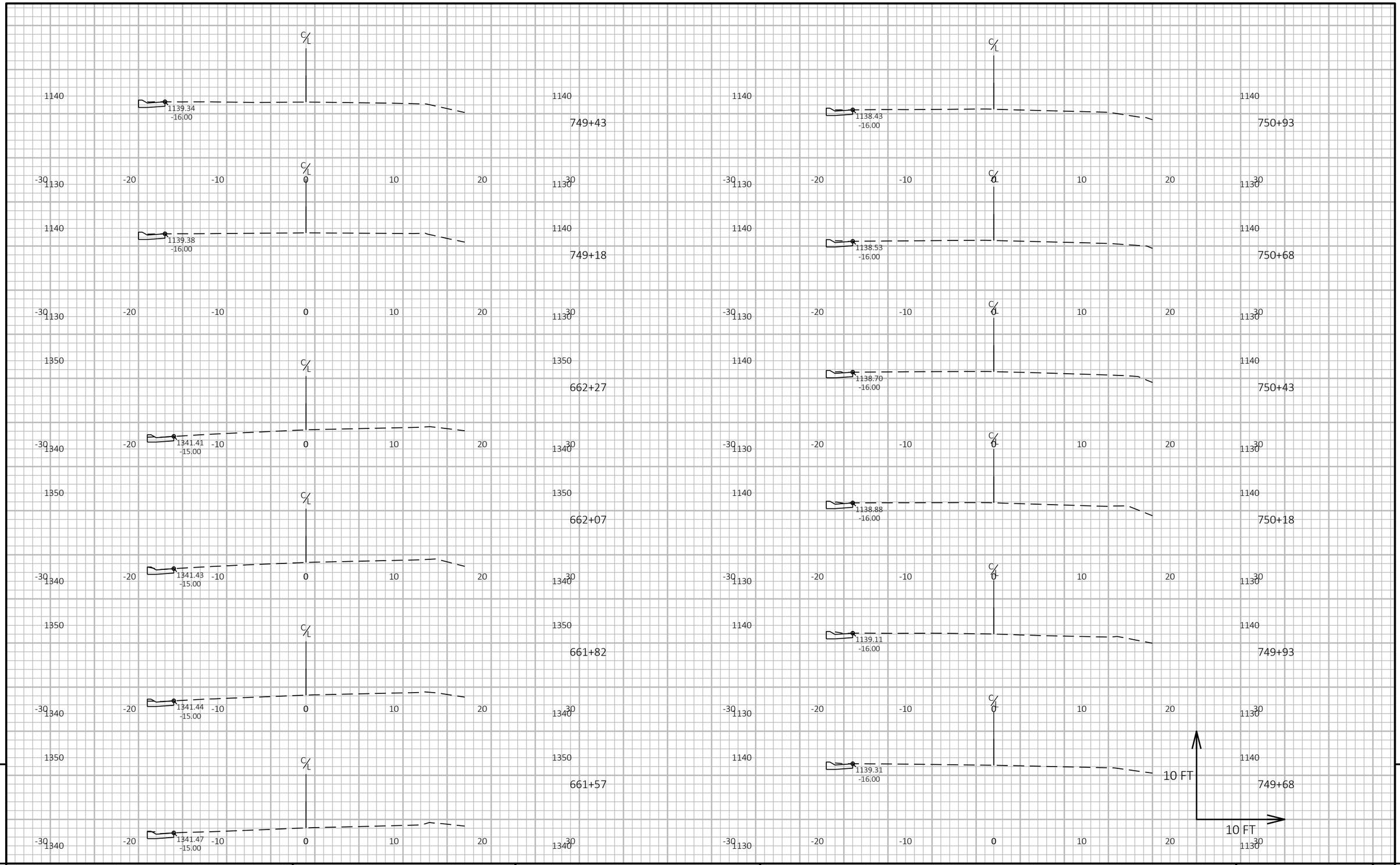
PLOT DATE : 7/24/2023 9:05 PM

PLOT BY : MEYER, BRYTON ROBERT

PLOT NAME :

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

WISDOT/CADDS SHEET 49

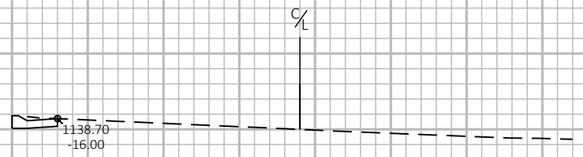


PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 253	E

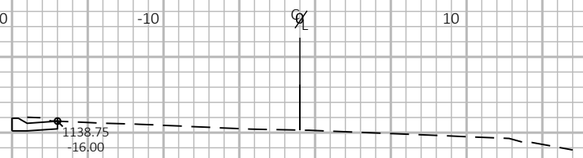
FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 14

PLOT DATE : 7/24/2023 9:05 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

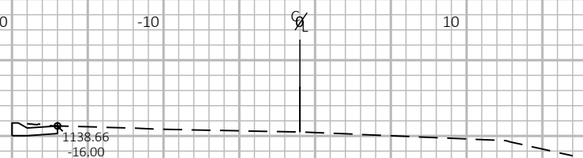
WISDOT/CADDS SHEET 49



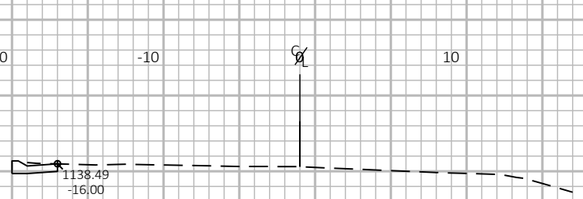
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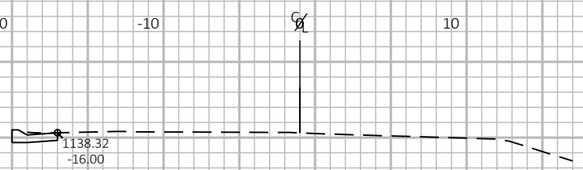
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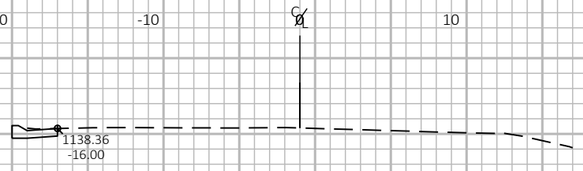
751+93



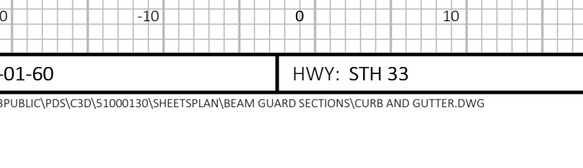
751+68



751+43



751+18



752+65

9

9

PROJECT NO: 5100-01-60	HWY: STH 33	COUNTY: VERNON	CROSS SECTIONS: CROSS SECTIONS - CURB & GUTTER	SHEET 254	E

FILE NAME : \\LAXRTOPFLPPI01\N3PUBLIC\PDS\C3D\51000130\SHEETSPLAN\BEAM GUARD SECTIONS\CURB AND GUTTER.DWG
LAYOUT NAME - 15

PLOT DATE : 7/24/2023 9:05 PM PLOT BY : MEYER, BRYTON ROBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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