WIS

PROJECT ID: 6290-05-61

COUNTY: WAUPACA

APRIL 2026

ORDER OF SHEETS

TOTAL SHEETS = 122

20

DESIGN DESIGNATION

A.A.D.T.	2028	=	21,340
A.A.D.T.	2048	=	24,117
D.H.V.		=	3,135
D.D.		=	59/41
T.		=	19.9%
DESIGN SPEED		=	70 M.P.H.
ESALS		=	18,000,000

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

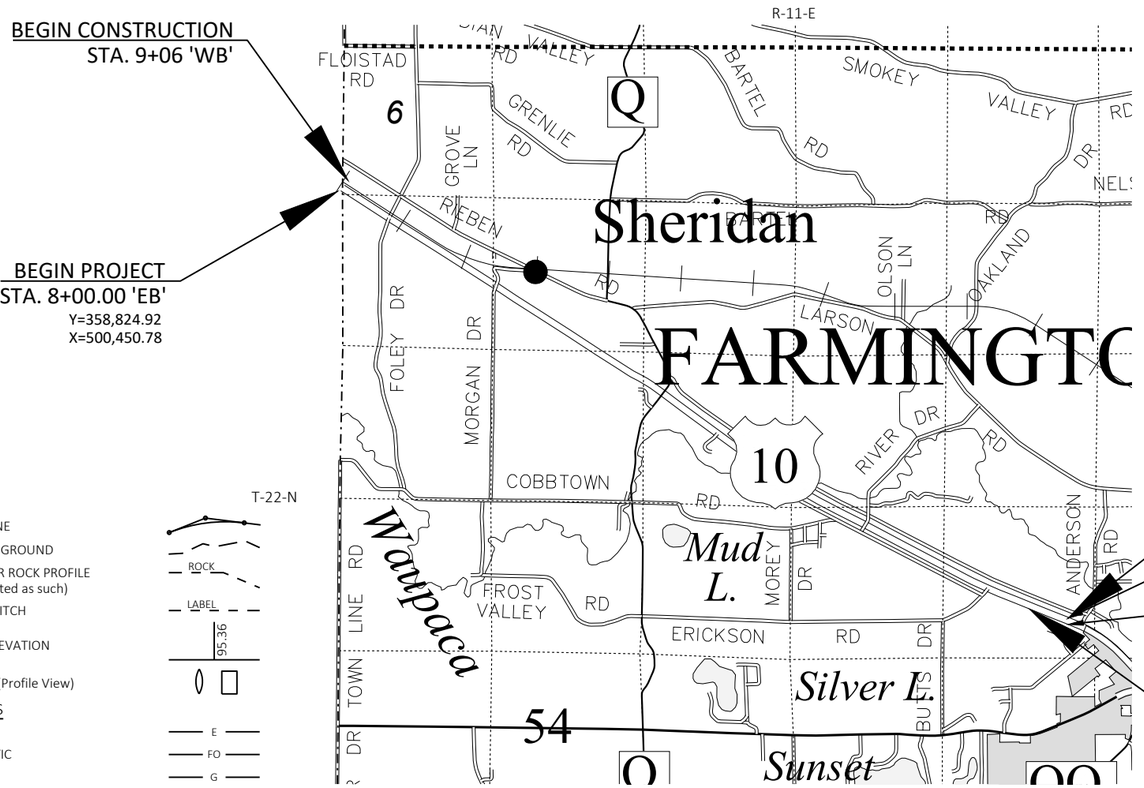
STEVENS POINT - WAUPACA

PORTAGE CO LINE TO ANDERSON ROAD

USH 10
WAUPACA

STATE PROJECT NUMBER
6290-05-61

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6290-05-61		



TOTAL NET LENGTH OF CENTERLINE = 5.348 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WAUPACA 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 G12A-WI

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

ORIGINAL PLANS PREPARED BY

KL Engineering [A] Better Experience

WISCONSIN PROFESSIONAL ENGINEER
BRADLEY J. CUNNINGHAM
PE 37935-006
MT. HOREB, WI

DATE: 7/16/25 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT/KL ENGINEERING
Designer	BRAD CUNNINGHAM
Project Manager	KOREY BOEHM
Regional Examiner	FRED SCHUNKE
Regional Supervisor	KEVIN KUJAWA

APPROVED FOR THE DEPARTMENT

DATE: 7-30-25 Korey Boehm (Signature)

E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\010101_TI.DWG PLOT DATE : 7/16/2025 7:04 AM PLOT BY : KL ENGINEERING PLOT NAME :

UTILITIES CONTACTS

ALLIANT ENERGY
ELECTRICITY
STEVEN CYCHOSZ
PO BOX 127
AMHERST JUNCTION, WI 54407
PHONE: 920.290.4102
EMAIL: stevencychosz@alliantenergy.com

AMHERST TELEPHONE COMPANY
COMMUNICATIONS
JACOB VAN DE VOORT
120 MILL STREET PO BOX 279
AMHERST, WI 54406
PHONE: 608.450.3050
EMAIL: jvandevoort@amherstcomm.net

AT&T
COMMUNICATIONS
CHARLES BARTELT
70 E DIVISION ST
FOND DU LAC, WI 54935
PHONE: 920.929.1013
EMAIL: Cb1461@att.com

ATC
ELECTRICITY-TRANSMISSION
DOUG VOSBERG
2489 RINDEN ROAD
COTTAGE GROOVE, WI 53527
PHONE: 608.877.7650
EMAIL: dvosberg@atcllc.com

EVERSTREAM
COMMUNICATIONS
ABBY STEIN
324 E WISCONSIN AVE SUITE 730
MILWAUKEE, WI 53202
PHONE: 262.442.9427
EMAIL: astein@everstream.net

WICONSIN PUBLIC SERVICE CORP
ELECTRICITY
JARROD WURZ
1700 SHERMAN ST PO BOX 1166
WAUSAU, WI 54402
PHONE: 715.370.1825
EMAIL: jarrod.wurz@wisconsinpublicservice.com

WE ENERGIES
GAS/PETROLEUM
LARRY KOCH
1921 8TH STREET S
WISCONSIN RAPIDS, WI 54494
PHONE: 715.421.9293
EMAIL: Larry.Koch@we-energies.com

ORDER OF SECTION 2 DETAIL SHEETS

WISCONSIN DNR LIAISON

MARTY DILLENBURG
OSHKOSH SERVICE CENTER
625 E COUNTY ROAD Y, SUITE 70
OSHKOSH, WI 54901
PHONE: 920.410.7428
EMAIL: marty.dillenburg@wisconsin.gov

GENERAL NOTES

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

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

CONCRETE REPAIRS ITEMS IN THIS PLAN ARE BASED ON A CRACK SURVEY COMPLETED IN 2025. THE TYPES OF REPAIRS AND LIMITS OF PAVEMENT REMOVAL ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 66 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.2 ACRES

2

2

BEGIN CONSTRUCTION
STA 9+06 'WB'

BEGIN PROJECT
STA 8+00 'EB'
Y=358,824.92
X=500,450.78

0'WB' 0'EB' 10'WB' 10'EB' 20'WB' 20'EB' 30'WB' 30'EB' 40'WB' 40'EB' 50'WB' 50'EB' 60'WB' 60'EB' 70'WB' 70'EB' 80'WB' 80'EB' 90'WB' 90'EB' 100'WB' 100'EB' 110'WB' 110'EB' 120'WB' 120'EB' 130'WB' 130'EB' 140'WB' 140'EB' 150'WB' 150'EB' 160'WB' 160'EB' 170'WB' 170'EB' 180'WB' 180'EB' 190'WB' 190'EB' 200'WB' 200'EB' 210'WB' 210'EB' 220'WB' 220'EB' 230'WB' 230'EB' 240'WB' 240'EB' 250'WB' 250'EB' 260'WB' 260'EB' 270'WB' 270'EB' 280'WB' 280'EB' 290'WB' 290'EB' 300'WB' 300'EB' 310'WB' 310'EB' 320'WB' 320'EB'

STRUCTURE
B-68-0102 'WB'
B-68-0103 'EB'

USH 10 WB RL

USH 10 EB RL

LUPINE AREA

END CONSTRUCTION
STA 305+50 'WB'

END PROJECT
STA 290+35 'EB'

STA 305+50 'WB' BK. =
STA 295+50 'WB' AH.
EQUATION

EQUATION
STA 304+50 'EB' BK. =
STA 294+50 'EB' AH.

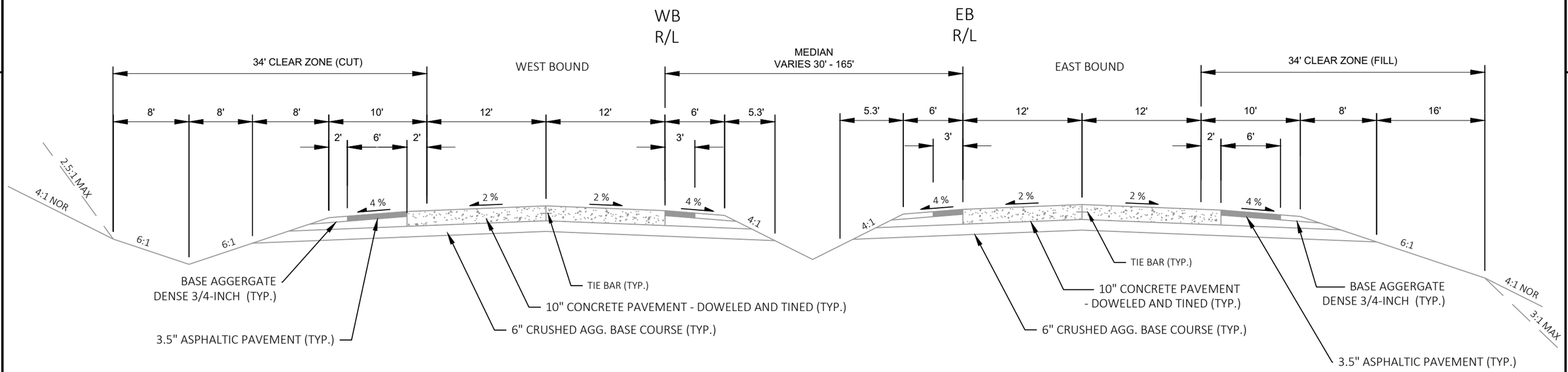
WAUPACA COUNTY LINE
RIEBEN ROAD
HAASE ROAD
NELSON ROAD
CTH Q
OAKLAND DRIVE
CANADIAN NATIONAL
LARSON ROAD
FOLEY ROAD
MORGAN ROAD
LONE PINE ROAD
MANNEY CT
RIVER DRIVER
LARSON ROAD
COBBTOWN ROAD
FRONTAGE ROAD
ANDERSON ROAD
CITY OF WAUPACA
ERICKSON ROAD

N

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - Plan 1 IN 2000 FT
PLOT DATE : 5/22/2025 9:30 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:2000 FT

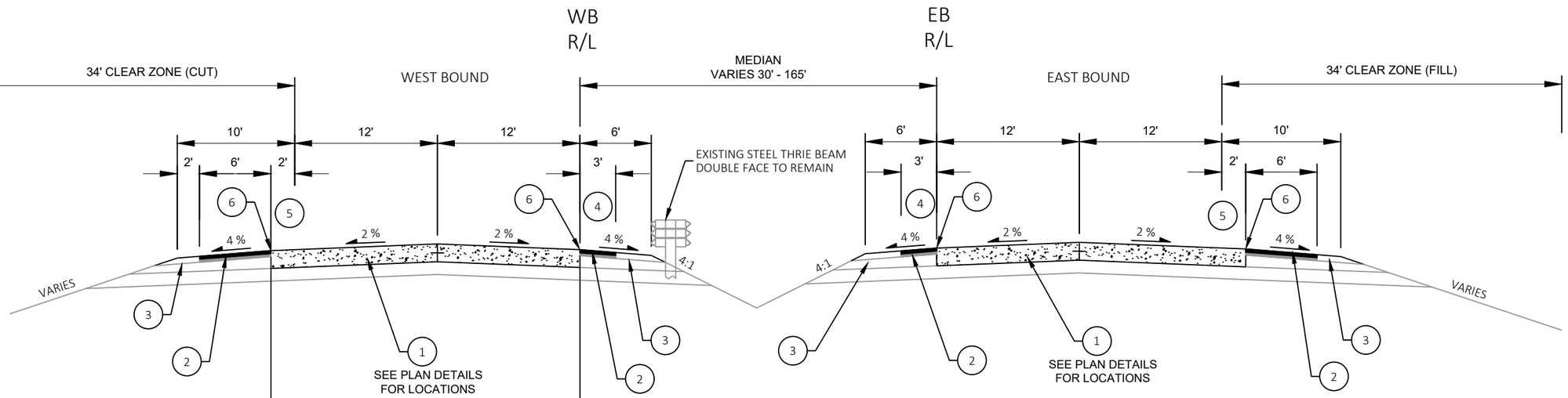
2



EXISTING TYPICAL SECTION - USH 10

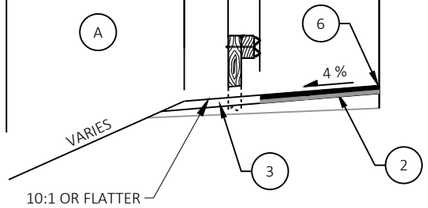
STA 8+00 'EB' - STA 290+35 'EB'
STA 9+06 'WB' - STA 305+50 'WB'

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	EXISTING TYPICAL SECTIONS	SHEET 4	E



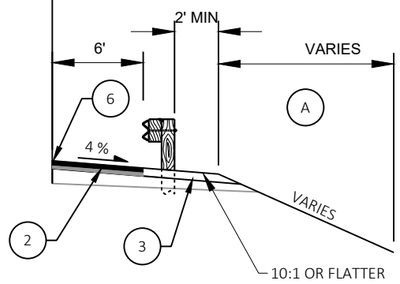
PROPOSED TYPICAL SECTION - USH 10

STA 8+00 'EB' - STA 290+35 'EB'
STA 9+06 'WB' - STA 305+50 'WB'



PARTIAL TYPICAL SECTION

BEAM GUARD
STA 179+97 'EB' - 182+64 'EB' (MIRROR)
STA 185+43 'WB' - 188+11 'WB'



PARTIAL TYPICAL SECTION

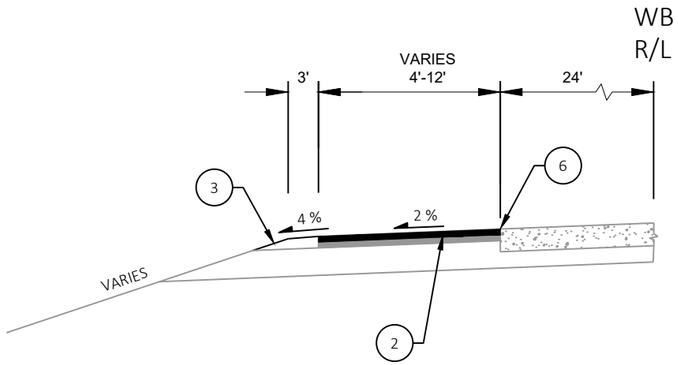
BEAM GUARD
STA 179+94 'EB' - 182+87 'EB' (MIRROR)
STA 185+43 'WB' - 188+35 'WB'

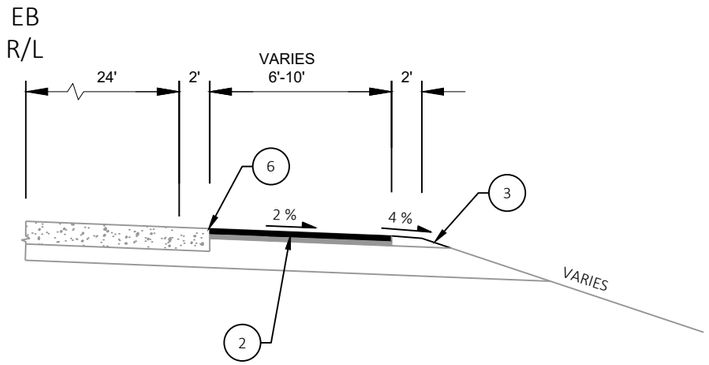
(A) SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, AND EROSION MAT URBAN CLASS I TYPE B

LEGEND

1. CONCRETE PAVEMENT REPAIR/REPLACEMENT
2. 1.75-INCH REMOVING ASPHALTIC SURFACE MILLING HMA PAVEMENT - 1.75-INCH 4 LT 58-28 S
3. BASE AGGREGATE DENSE 3/4-INCH
4. ASPHALTIC SHOULDER RUMBLE STRIPS
5. CONCRETE SHOULDER RUMBLE STRIPS
6. ROUTE AND SEAL

2





PARTIAL TYPICAL SECTION - LEFT TURN LANE

MANNEY COURT

PARTIAL TYPICAL SECTION - RIGHT TURN LANE

MANNEY COURT

LEGEND

1. CONCRETE PAVEMENT REPAIR/REPLACEMENT
2. 1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
   HMA PAVEMENT - 1.75-INCH 4 LT 58-28 S
3. BASE AGGREGATE DENSE 3/4-INCH
4. ASPHALTIC SHOULDER RUMBLE STRIPS
5. CONCRETE SHOULDER RUMBLE STRIPS
6. ROUTE AND SEAL

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PROPOSED TYPICAL SECTIONS	SHEET 6	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\020301-TS_PROP.DWG
LAYOUT NAME - 02
PLOT DATE : 7/7/2025 8:23 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

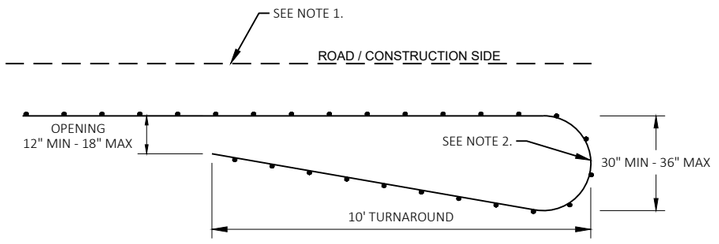
GENERAL NOTES:

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

SECURELY FASTEN THE CAP TO PREVENT IT FROM BEING DISLODGED.

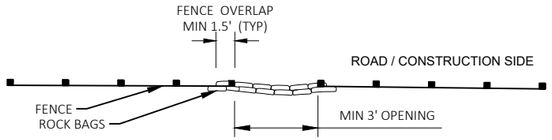
FENCE CAP AND STEEL WIRE FENCING IS INCIDENTAL TO CLIMBING TURTLE EXCLUSION FENCE BID ITEM.

ROCK BAGS WILL BE PAID FOR SEPARATELY UNDER BID ITEM

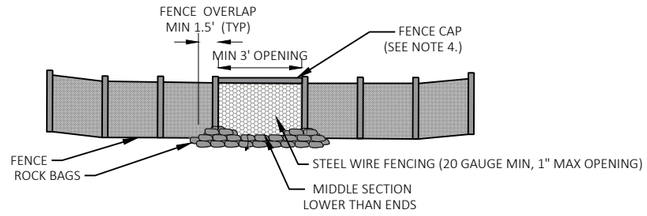


PLAN VIEW

CLIMBING TURTLE EXCLUSION FENCE DETAIL

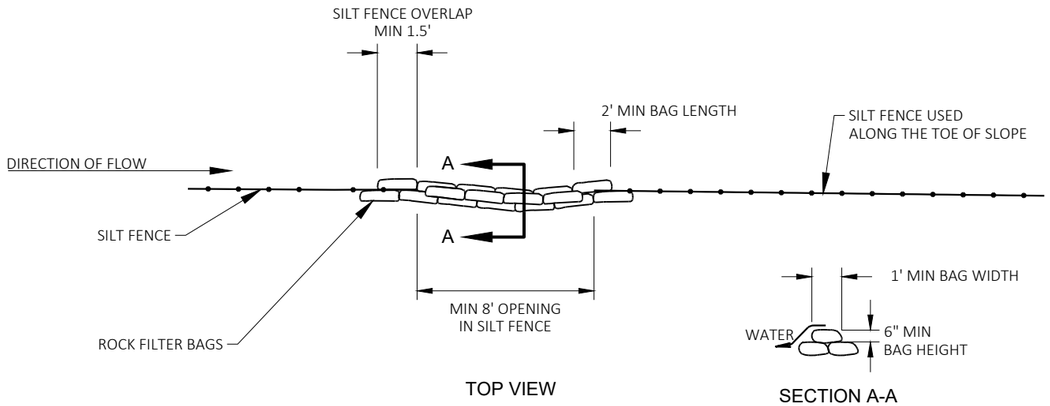


PLAN VIEW



FRONT VIEW

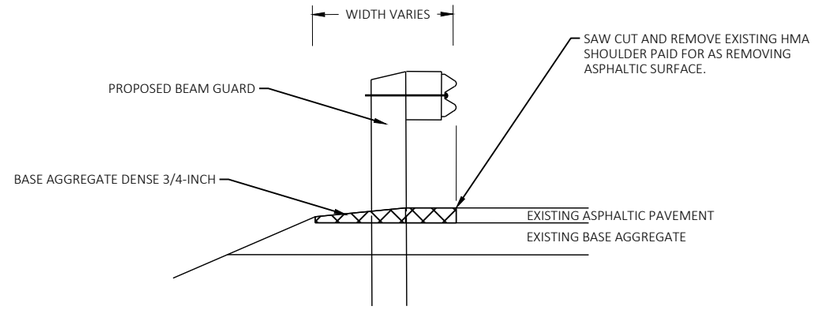
CLIMBING TURTLE FENCE RELIEF DETAIL



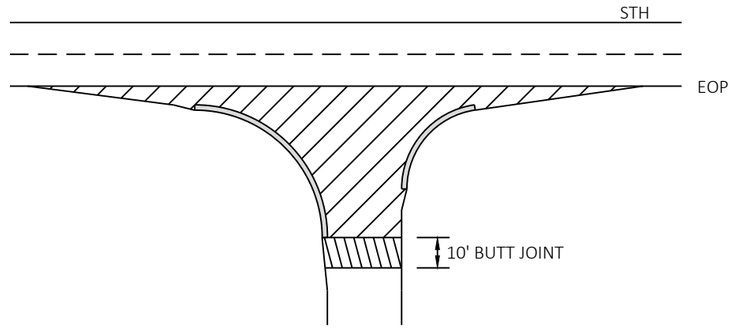
TOP VIEW

SECTION A-A

ROCK BAGS USED FOR SILT FENCE RELIEF



ASPHALTIC SHOULDER AT GUARD RAIL



REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

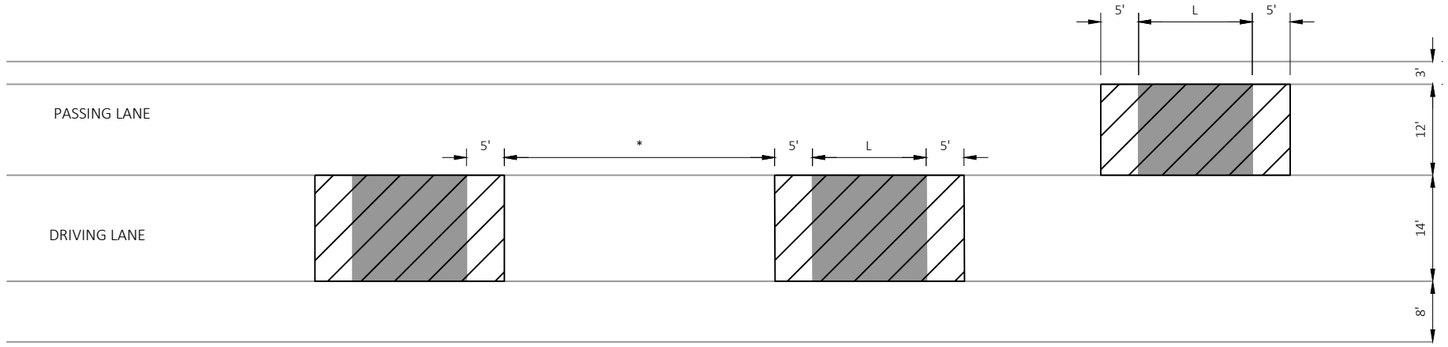
NOTE: WHEN MATCHING TO AN UNPAVED SURFACE BUTT JOINT IS NOT REQUIRED

SIDE ROADS

WITH CURB AND GUTTER

MANNEY COURT

2



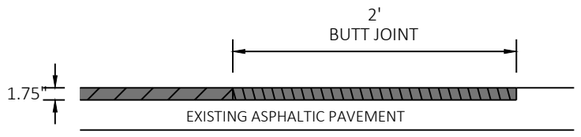
CONCRETE PAVEMENT REPAIR OR REPLACEMENT AREA
(MEASURED BY THE SQUARE YARD)

CONTINUOUS DIAMOND GRINDING CONCRETE PAVEMENT
(MEASURED BY THE SQUARE YARD)

L = LENGTH OR REPAIR OR REPLACEMENT SHOWN ELSEWHERE IN PLANS

* NOTE: CONNECT DIAMOND GRINDING OPERATIONS AT LOCATIONS WHERE CONSECUTIVE JOINTS ARE BEING REPAIRED AND THE DISTANCE IS LESS THAN OR EQUAL TO 10 FEET.

DETAIL FOR LIMITS OF DIAMOND GRINDING - USH 10



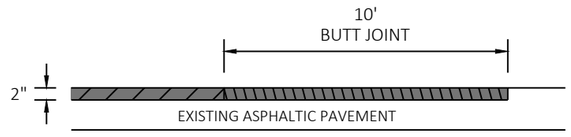
HMA PAVEMENT

REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

BUTT JOINT

PAVED SHOULDERS



HMA PAVEMENT

REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

BUTT JOINT

SIDE ROADS

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	CONSTRUCTION DETAILS	SHEET 8	E

2

2

INSTALL NEW MGS GUARDRAIL

MGS GUARDRAIL THRIE BEAM TRANSITION: STA 185+43.2 'WB' - STA 185+82.6 'WB' LT
MGS GUARDRAIL 3: STA 185+82.6 'WB' - STA 187+57.6 'WB' LT
MGS GUARDRAIL TERMINAL EAT: STA 187+57.6 'WB' - STA 188+10.9 'WB' LT
BARRIER SYSTEM GRADING SHAPING FINISHING

EVERSTREAM FIBER OPTIC

REMOVING ASPHALTIC SURFACE SEE CONSTRUCTION DETAIL (TYP)

REMOVE EXISTING GUARDRAIL STA 185+42.9 - STA 188+03.5 'WB' LT

EAT POS STA 187+60.8 'WB' 34.2 LT

EAT POST #5 STA 187+85.8 'WB' 35.5 LT

EAT POST #1 STA 188+10.9 'WB' 36.8 LT

SLOPE INTERCEPT

B-68-102

USH 10 WB

ALLIANT ENERGY OVERHEAD ELECTRIC

185'WB' 186'WB' 187'WB' 188'WB' 189'WB' 190'WB'

REMOVE EXISTING GUARDRAIL STA 185+42.9 - 188+40.4 'WB' RT

SLOPE INTERCEPT

EAT POST #9 STA 187+85.6 'WB'

EAT POST #5 STA 188+10.4 'WB' 6.8 RT

EAT POST #1 STA 188+35.3 'WB' 7.8 RT

WAUPACA RIVER

INSTALL NEW MGS GUARDRAIL

MGS GUARDRAIL THRIE BEAM TRANSITION: STA 185+42.9 'EB' - STA 185+82.3 'WB' RT
MGS GUARDRAIL 3: STA 185+82.3 'WB' - STA 187+82.3 'WB' RT
MGS GUARDRAIL TERMINAL EAT: STA 187+82.3 'WB' - STA 188+35.3 'EB' RT
BARRIER SYSTEM GRADING SHAPING FINISHING

184'EB' 185'EB' 186'EB' 187'EB' 188'EB' 189'EB'

USH 10 EB

INSTALL NEW MGS GUARDRAIL

MGS GUARDRAIL TERMINAL EAT: STA 179+94.3 'EB' - STA 180+47.4 'EB' LT
MGS GUARDRAIL 3: STA 180+47.4 'EB' LT - STA 182+47.4 'EB' LT
MGS GUARDRAIL THRIE BEAM TRANSITION: STA 182+47.4 'EB' - STA 182+86.9 'EB' LT
BARRIER SYSTEM GRADING SHAPING FINISHING

EAT POST #1 STA 179+94.3 'EB' 8.0 LT

EAT POST #5 STA 180+19.4 'EB' 7.1 LT

EAT POST #9 STA 180+44.4 'EB' 6.1 LT

REMOVING ASPHALTIC SURFACE SEE CONSTRUCTION DETAIL (TYP)

REMOVE EXISTING GUARDRAIL STA 179+91 'EB' - 182+87 'EB' LT

WAUPACA RIVER

SLOPE INTERCEPT

179'EB' 180'EB' 181'EB' 182'EB' 183'EB' 184'EB'

ALLIANT ENERGY OVERHEAD ELECTRIC

USH 10 EB

B-68-103

CONCRETE PAVEMENT 6-INCH

EAT POST #9 STA 180+49.9 'EB'

EAT POST #5 STA 180+23.4 'EB' 35.0 RT

REMOVE EXISTING GUARDRAIL STA 180+06 'EB' - 182+64 'EB' RT

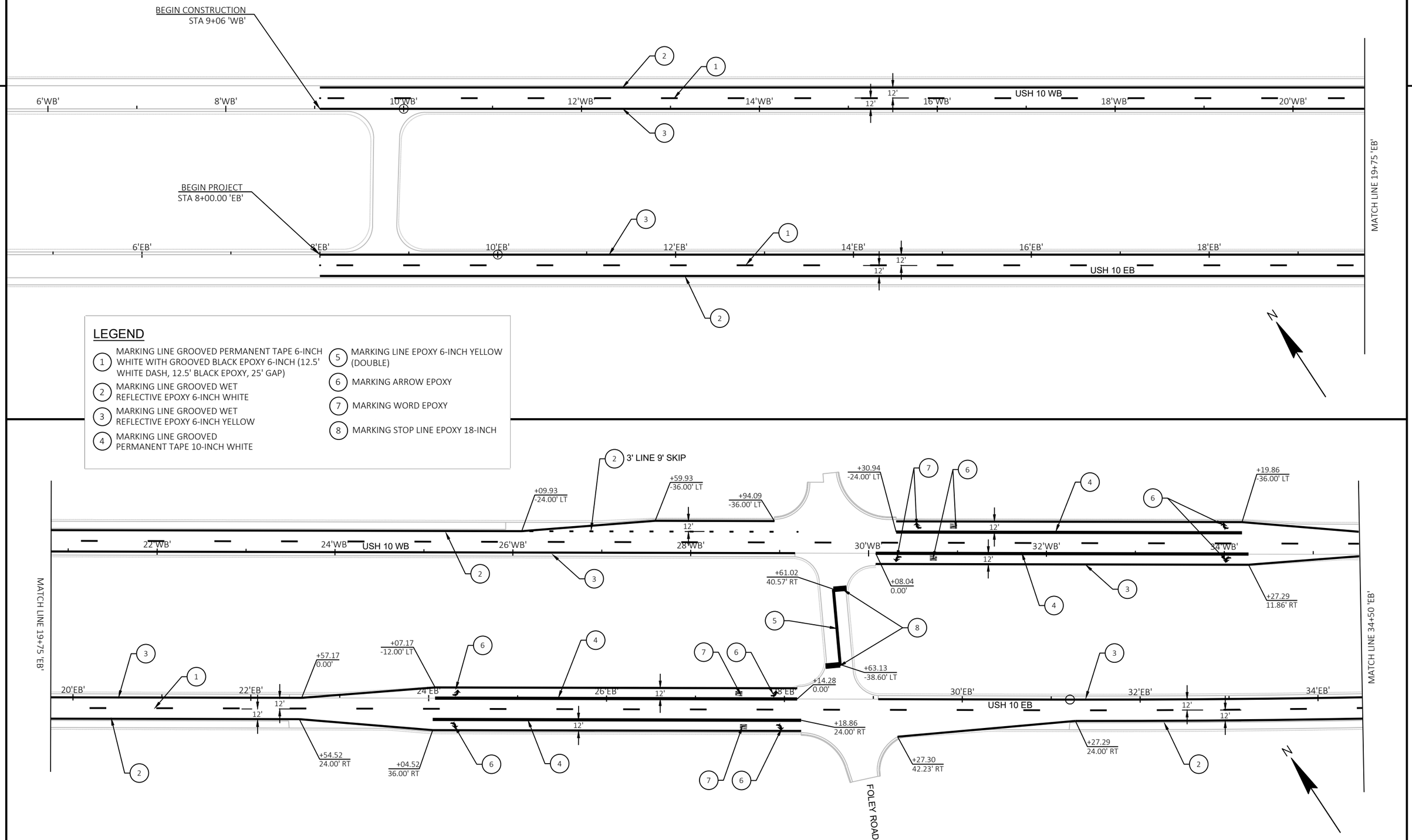
SLOPE INTERCEPT

EAT POST #1 STA 179+96.9 'EB' 36.0 RT

INSTALL NEW MGS GUARDRAIL

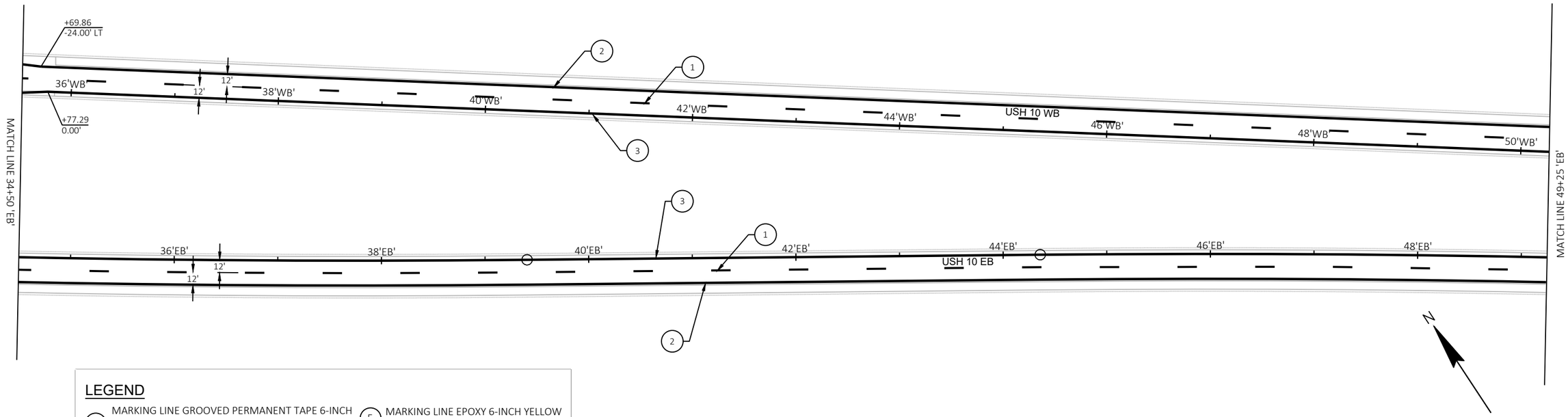
MGS GUARDRAIL TERMINAL EAT: STA 179+96.9 'EB' - STA 180+49.9 'EB' RT
MGS GUARDRAIL 3: STA 180+49.9 'EB' - STA 182+24.6 'EB' RT
MGS GUARDRAIL THRIE BEAM TRANSITION: STA 182+24.6 'EB' - STA 182+64.0 'EB' RT
BARRIER SYSTEM GRADING SHAPING FINISHING

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	GUARDRAIL LAYOUT DETAILS	SHEET 9	E



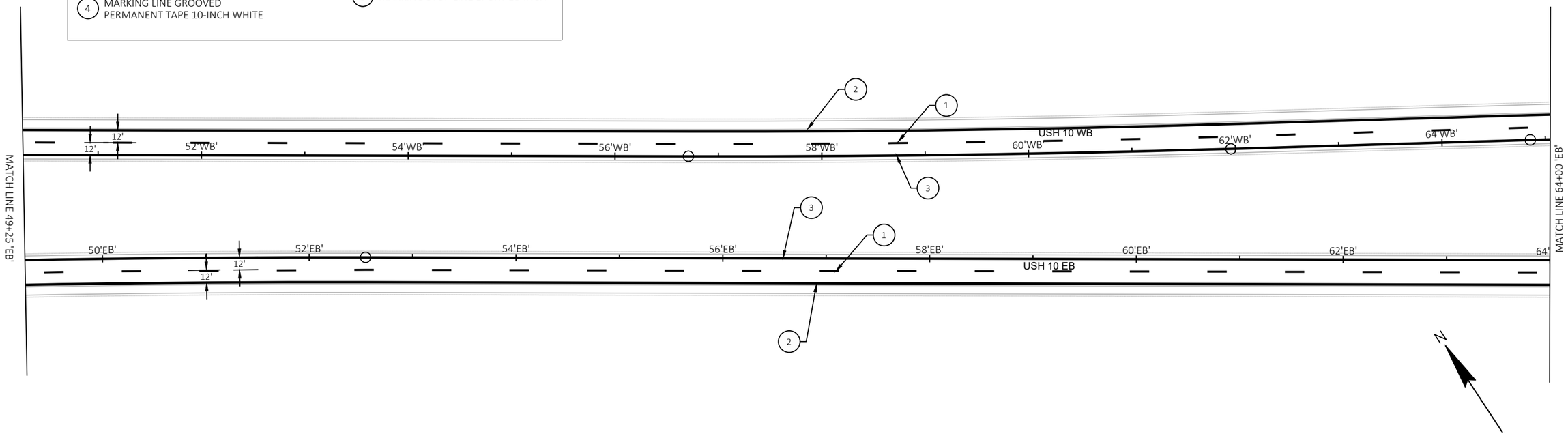
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PAVEMENT MARKING	SHEET 10	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 01
PLOT DATE : 10/15/2025 1:05 PM
PLOT BY : BRAD CUNNINGHAM
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



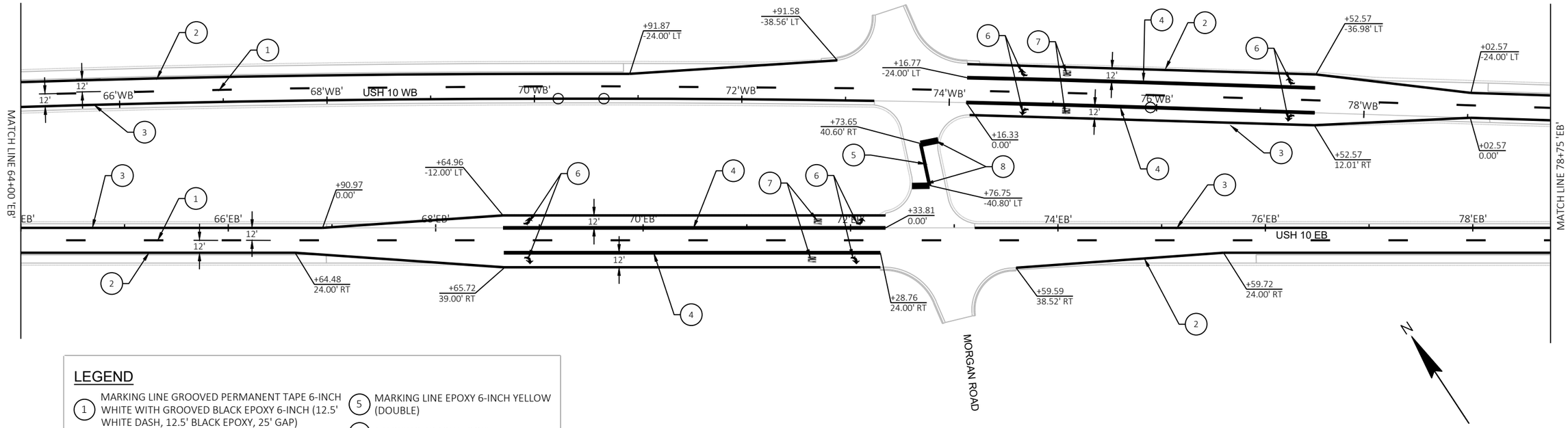
LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH



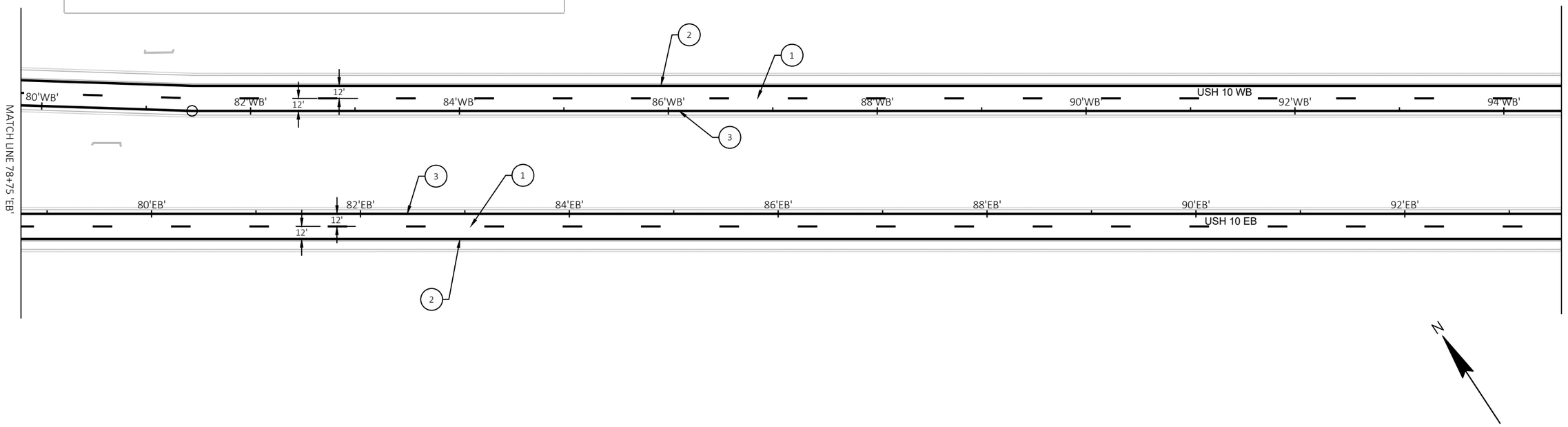
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PAVEMENT MARKING	SHEET 11	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 02
PLOT DATE : 10/15/2025 1:05 PM
PLOT BY : BRAD CUNNINGHAM
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

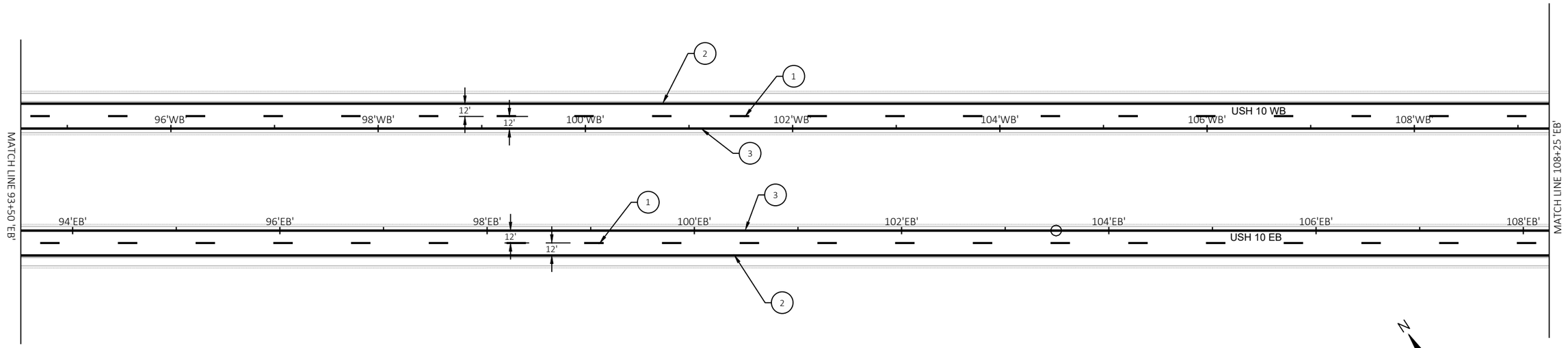


LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH

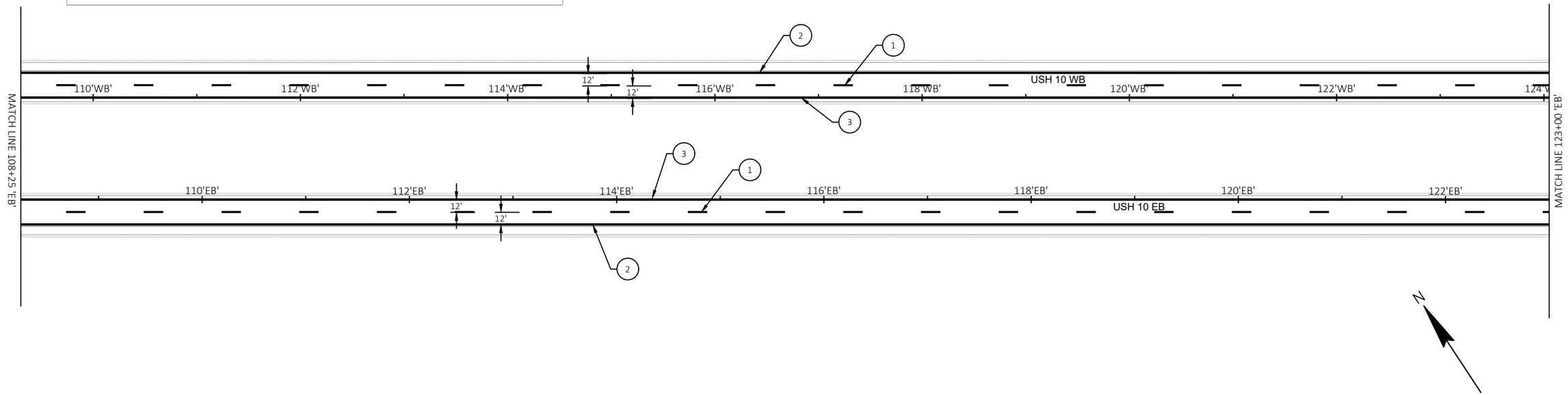


PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PAVEMENT MARKING	SHEET 12	E



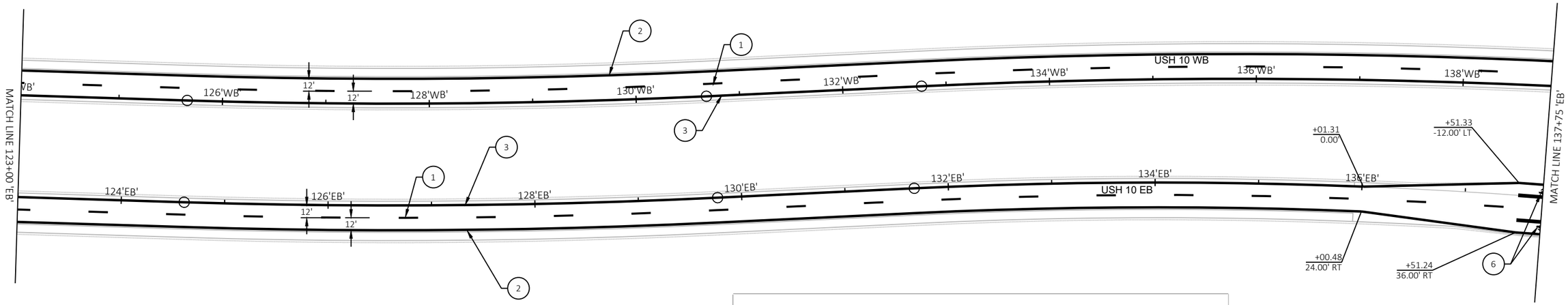
LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH



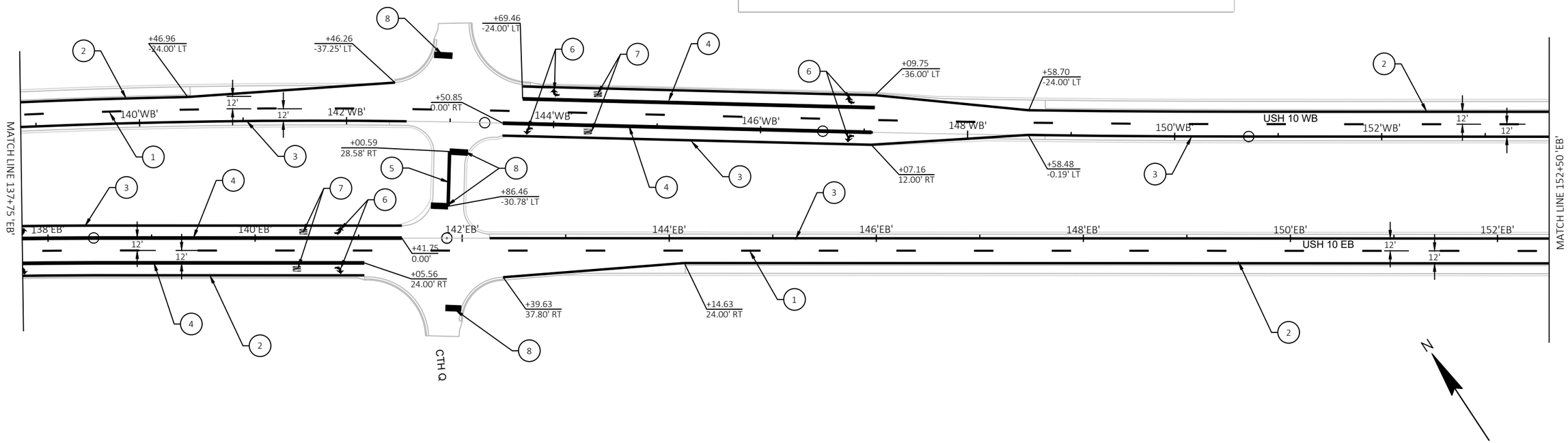
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PAVEMENT MARKING	SHEET 13	E

2

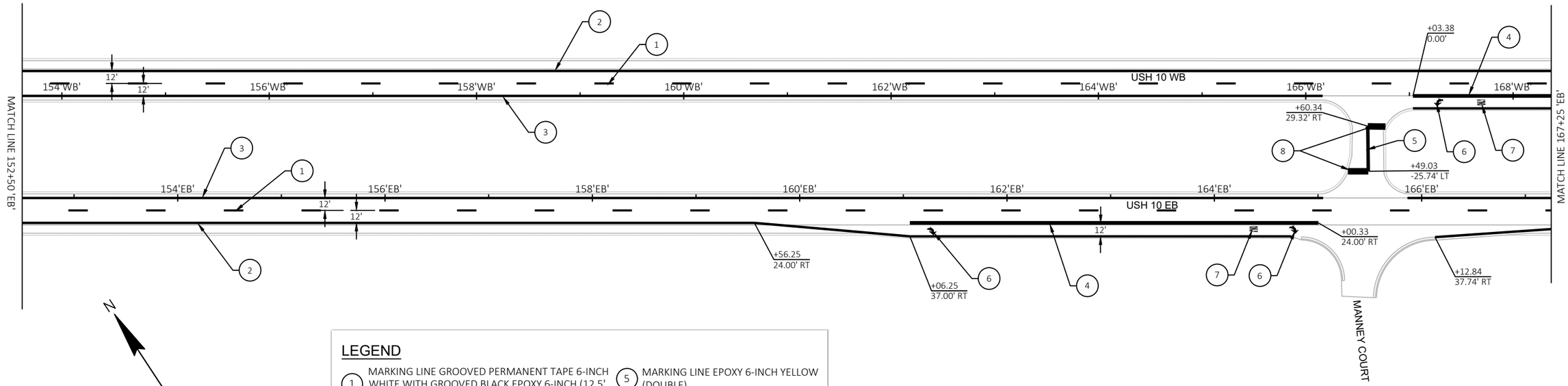


LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH

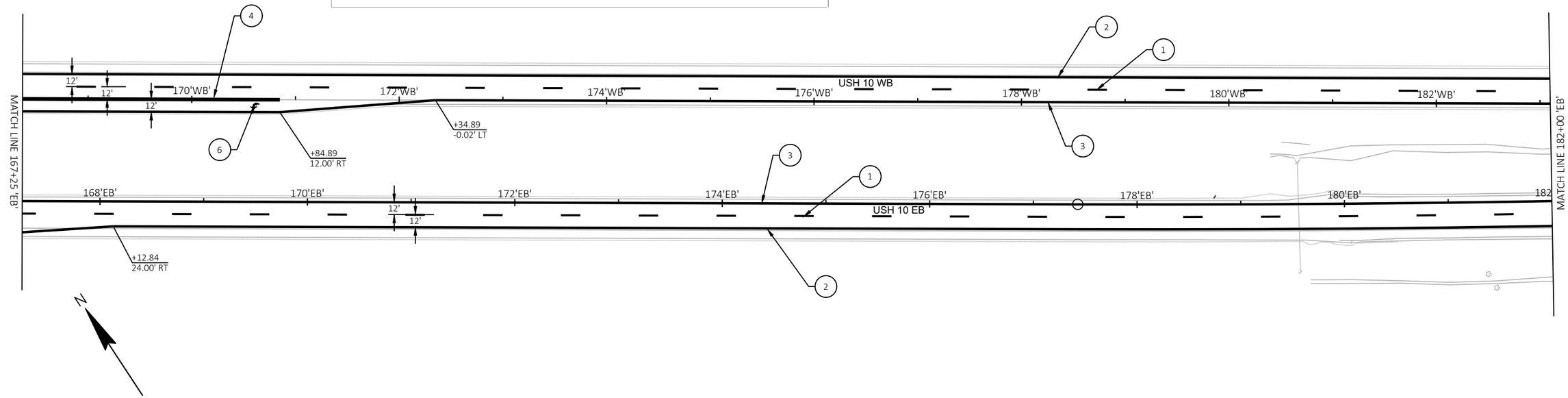


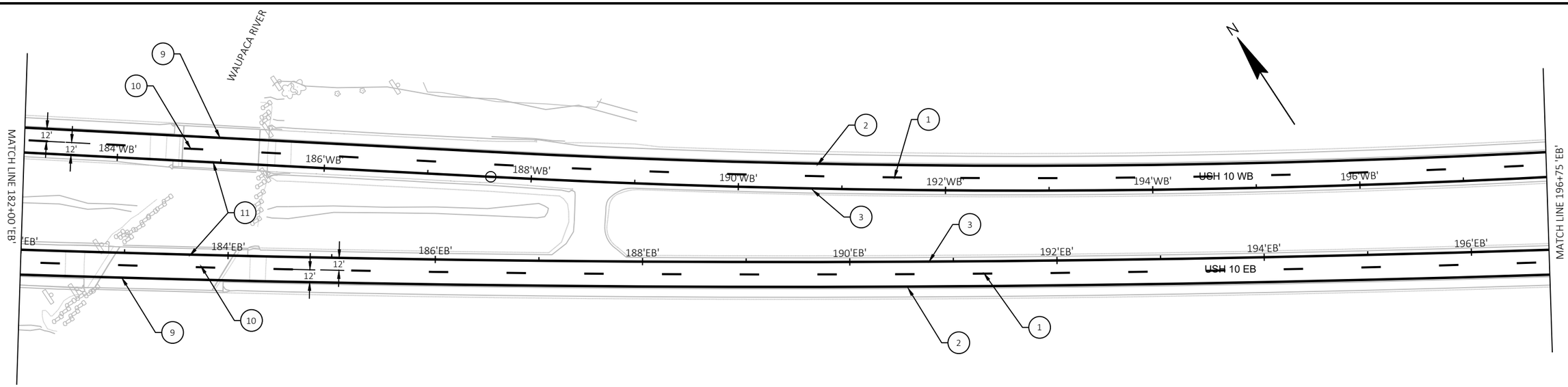
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PAVEMENT MARKING	SHEET 14	E



LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH

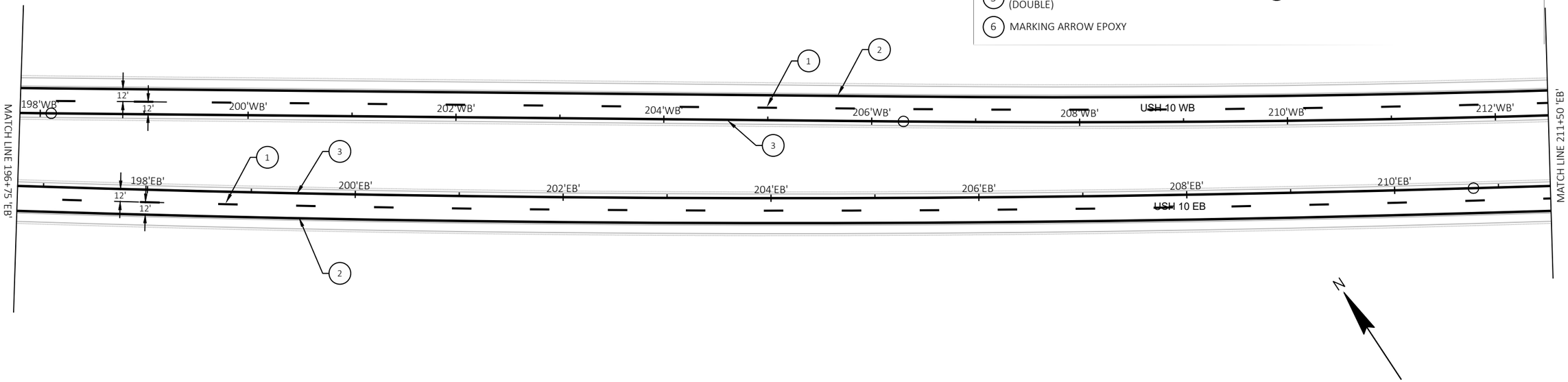




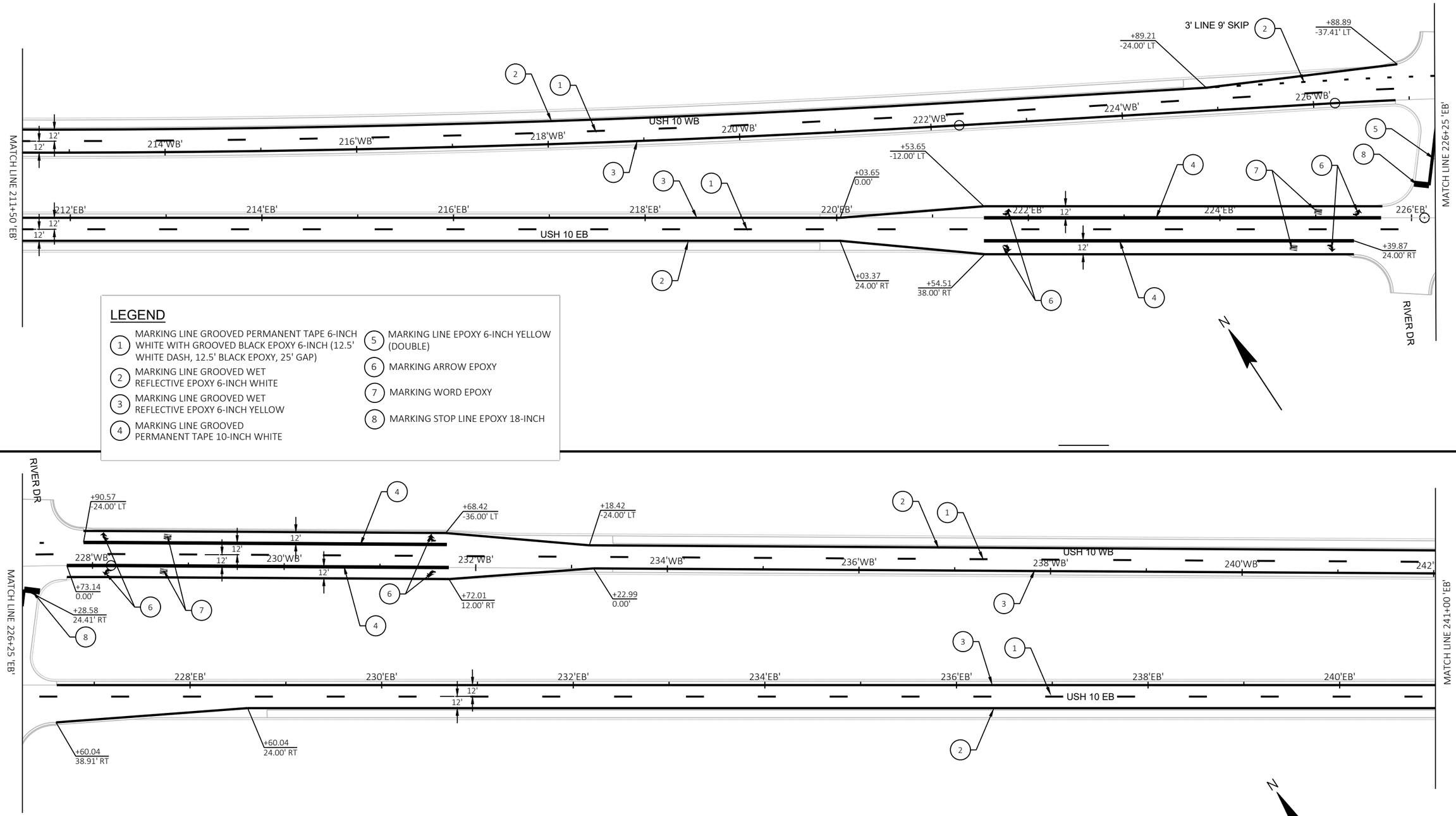
NOTE: USE MARKING LINE EPOXY 6-INCH ON POLYMER OVERLAY DECKS

LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH
9. MARKING LINE EPOXY 6-INCH WHITE
10. MARKING LINE EPOXY 6-INCH (12.5' WHITE DASH, 12.5 BLACK EPOXY, 25' GAP)
11. MARKING LINE EPOXY 6-INCH YELLOW



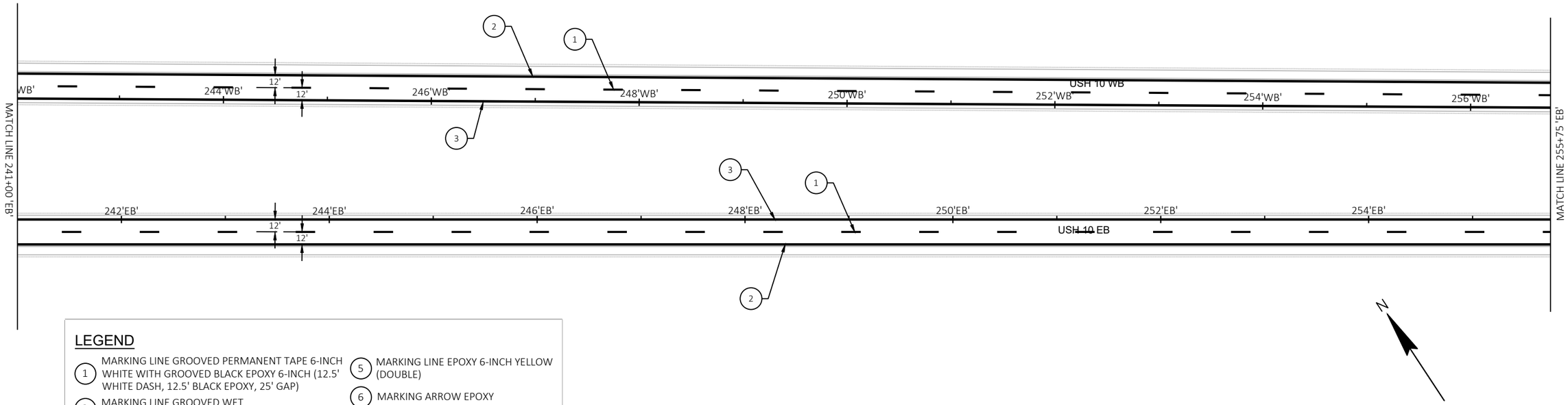
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PAVEMENT MARKING	SHEET 16	E



LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PAVEMENT MARKING	SHEET 17	E



LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
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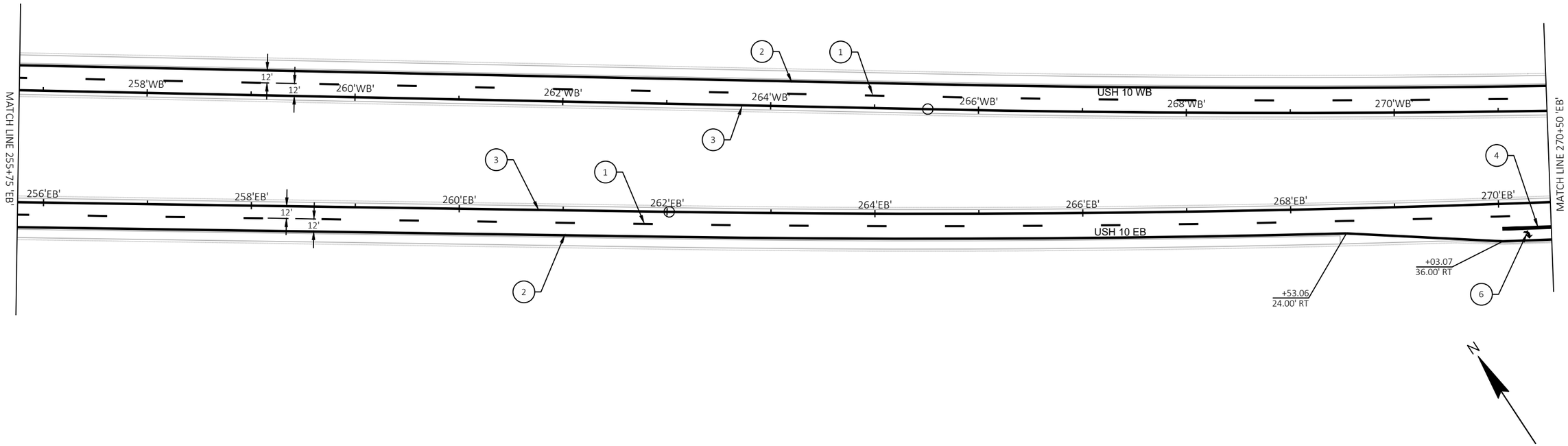
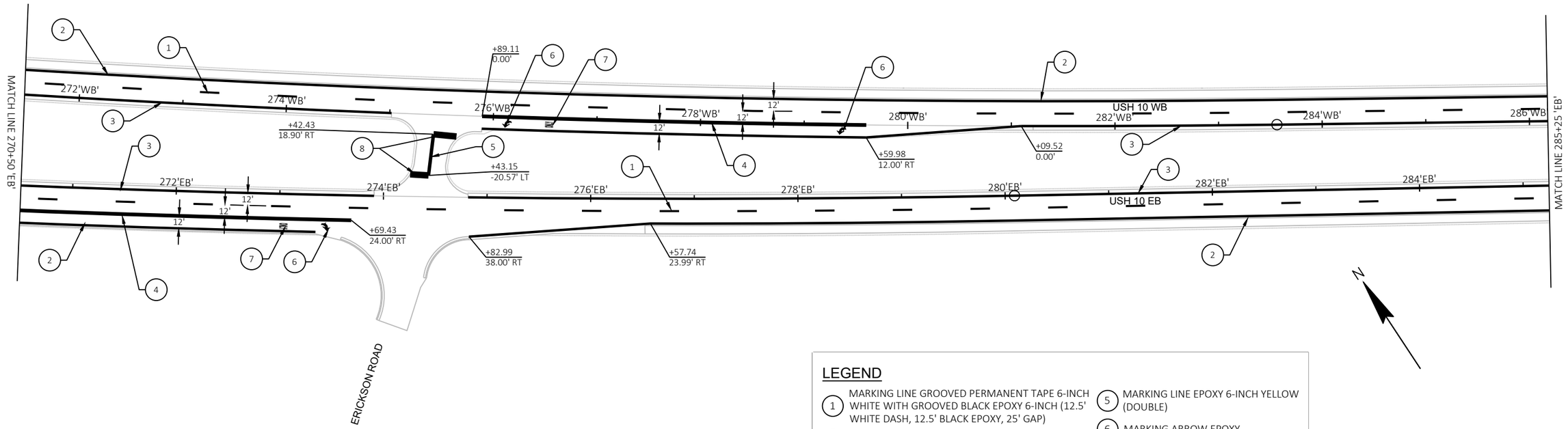
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH



PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PAVEMENT MARKING	SHEET 18	E



LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
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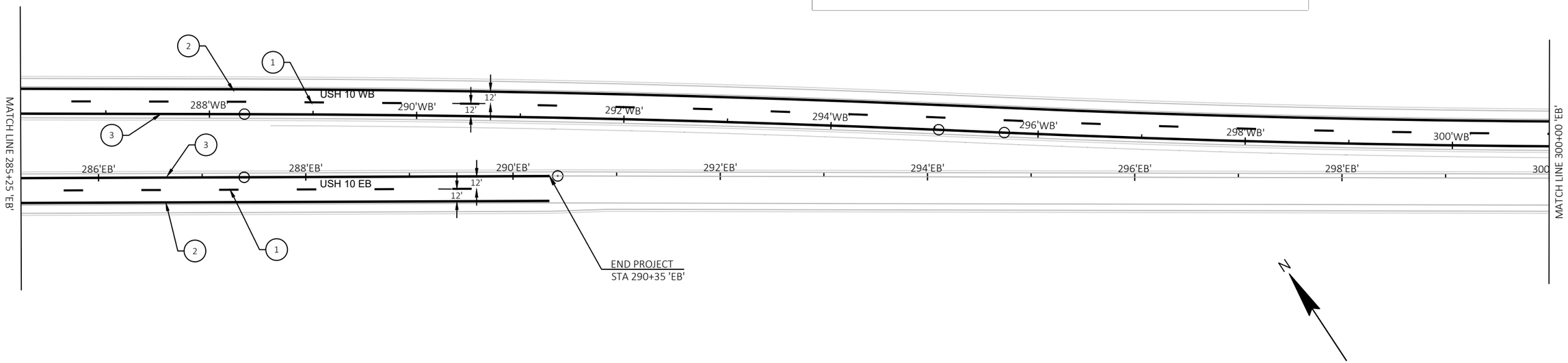
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH



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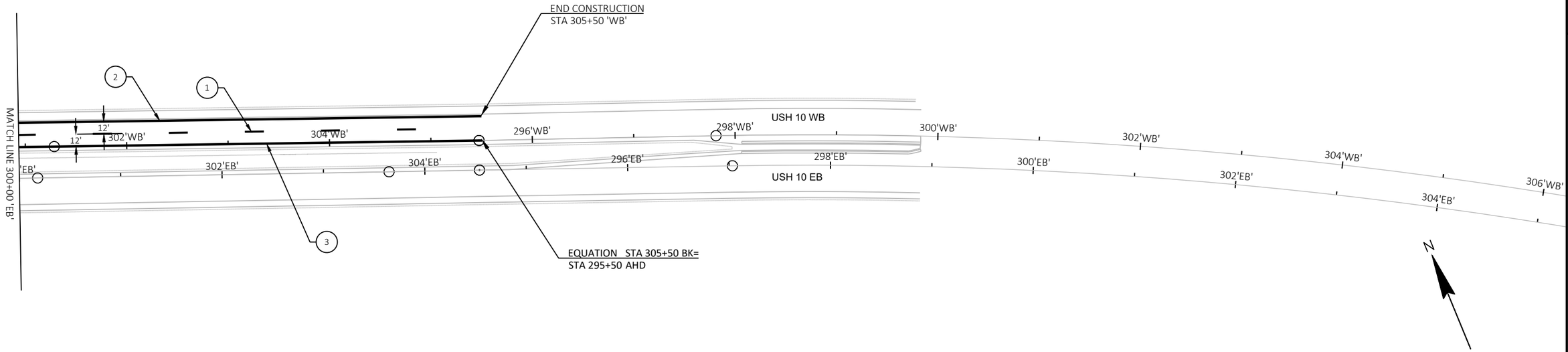

LEGEND

1. MARKING LINE GROOVED PERMANENT TAPE 6-INCH WHITE WITH GROOVED BLACK EPOXY 6-INCH (12.5' WHITE DASH, 12.5' BLACK EPOXY, 25' GAP)
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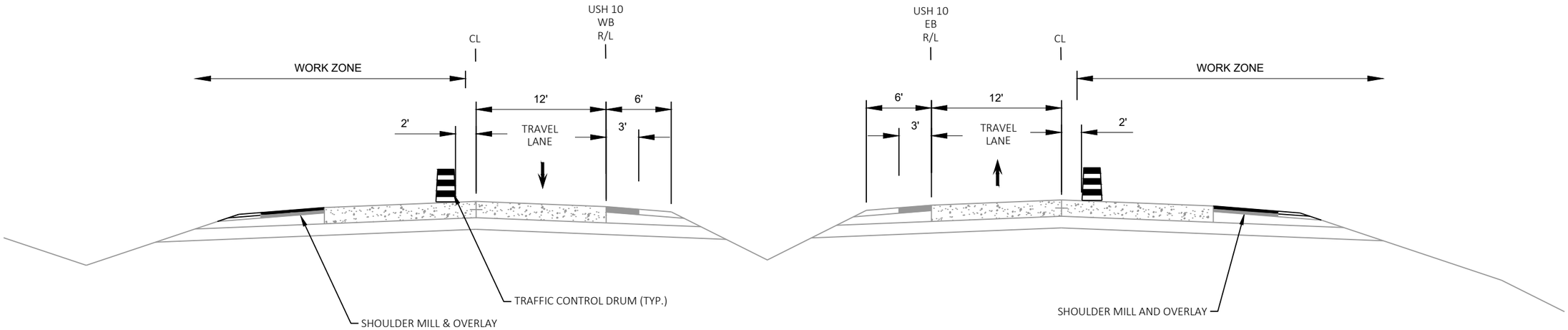
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH WHITE
5. MARKING LINE EPOXY 6-INCH YELLOW (DOUBLE)
6. MARKING ARROW EPOXY
7. MARKING WORD EPOXY
8. MARKING STOP LINE EPOXY 18-INCH

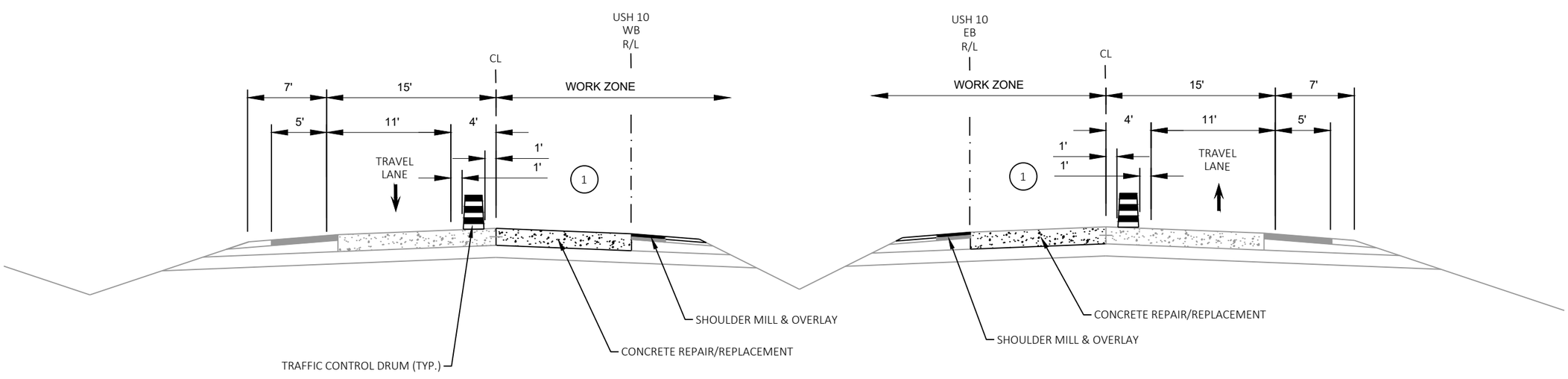
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PAVEMENT MARKING	SHEET 20	E

2



STAGE 1 TYPICAL SECTION USH 10

WORK ON USH 10 OUTSIDE SHOULDERS

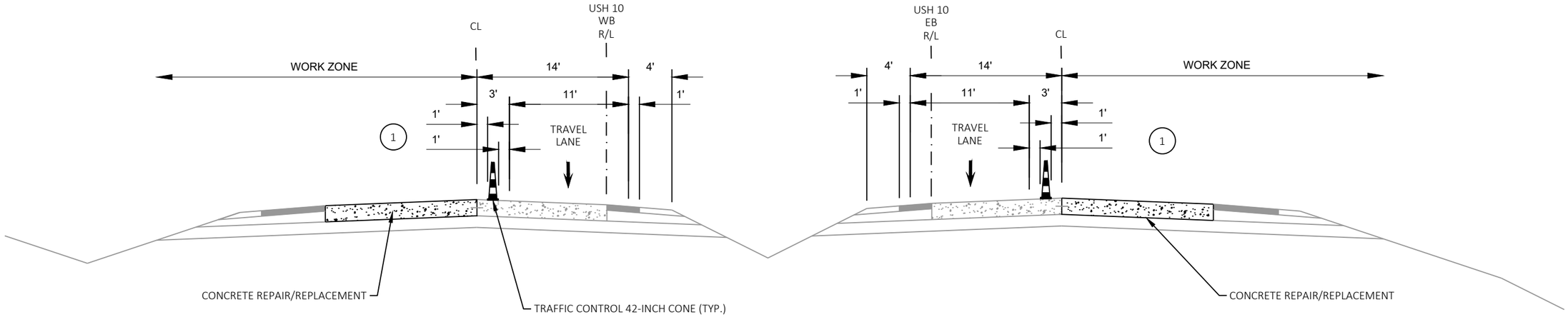


STAGE 2 TYPICAL SECTION USH 10

WORK ON USH 10 INSIDE LANES AND SHOULDERS

(1) WHEN WORK ACTIVITIES ARE NOT BEING CONDUCTED, MOVE THE TRAFFIC CONTROL DRUM OR CONE INTO THE WORK ZONE ON THE OTHERS SIDE OF THE CENTERLINE.

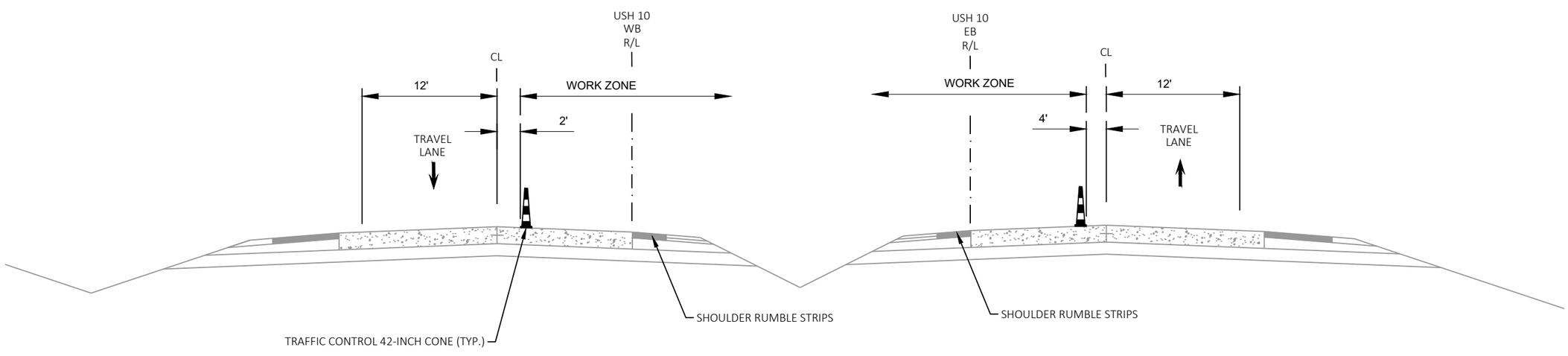
NOTE:
12' MAX WIDTH SIGNS REQUIRED



STAGE 3 TYPICAL SECTION USH 10

WORK ON USH 10 OUTSIDE LANES

(1) WHEN WORK ACTIVITIES ARE NOT BEING CONDUCTED, MOVE THE TRAFFIC CONTROL DRUM OR CONE INTO THE WORK ZONE ON THE OTHERS SIDE OF THE CENTERLINE.



STAGE 4 TYPICAL SECTION USH 10

WORK ON USH 10 INSIDE SHOULDER

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL - TYPICAL SECTION	SHEET 22	E

MAINTENANCE OF TRAFFIC

USH 10
USH 10 EB AND WB WILL REMAIN OPEN TO ONE LANE OF TRAFFIC AT ALL TIMES UTILIZING A LONG TERM LANE CLOSURE .

SIDEROADS
- ALL SIDEROADS WILL REMAIN OPEN TO ALL LANES AT ALL TIMES.

STAGE 1 WORK

USH 10 EB & WB - OUTSIDE SHOULDER
- COMPLETE HMA SHOULDER
- COMPLETE GUARDRAIL

2

N

BEGIN CONSTRUCTION
STA 9+06 'WB'

BEGIN PROJECT
STA 8+00 'EB'

DIGITAL SPEED LIMIT TRAILER (DSLT)

SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

DIGITAL SPEED LIMIT TRAILER (DSLT)

COVER SIGN

SPEED LIMIT 65

CTH Q

DIGITAL SPEED LIMIT TRAILER (DSLT)

DIGITAL SPEED LIMIT TRAILER (DSLT)

SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

-10'WB' 0'WB' 10'WB' 20'WB' 30'WB' 40'WB' 50'WB' 60'WB' 70'WB' 80'WB' 90'WB' 100'WB' USH 10 110'WB' 120'WB' 130'WB' 140'WB' 150'WB' 160'WB' 170'WB' 180'WB' 190'WB' 200'

MATCHLINE 200+00

NOTE: PLACE SIGN SEVEN DAYS PRIOR TO AND REMOVE WHEN CONSTRUCTION BEGINS

DIGITAL SPEED LIMIT TRAILER (DSLT)

MORGAN RD

DIGITAL SPEED LIMIT TRAILER (DSLT)

CTH Q

RIGHT LANE CLOSURE
SEE SDD TRAFFIC CONTROL, LANE CLOSURE BASIC TRAFFIC QUEUE WARNING SYSTEM AND DIGITAL SPEED REDUCTION SYSTEM

HWY XX
ROAD WORK
BEGINS XXX-XX

G20-57
96"X48"

SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

FOLEY RD

COVER SIGN

DIGITAL SPEED LIMIT TRAILER (DSLT)

COVER SIGN ~1500' WEST OF BEGINNING OF PROJECT

SPEED LIMIT 65

HWY XX
ROAD WORK
BEGINS XXX-XX

G20-57
96"X48"

ANDERSON RD

SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

RIVER RD

DIGITAL SPEED LIMIT TRAILER (DSLT)

NOTE: PLACE SIGN SEVEN DAYS PRIOR TO AND REMOVE WHEN CONSTRUCTION BEGINS

DIGITAL SPEED LIMIT TRAILER (DSLT)

COVER SIGN

SPEED LIMIT 65

SEE SDD TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

DIGITAL SPEED LIMIT TRAILER (DSLT)

N

MATCHLINE 200+00

WB' 210'WB' 220'WB' 230'WB' 240'WB' 250'WB' 260'WB' 270'WB' 280'WB' 290'WB 300'WB' 300'WB' 310'WB' 320'WB' 330'WB' 340'WB' 350'WB' 360'WB' 370'WB' 380'WB' 390'WB' 400'WB' 410'WB' 420'WB'

USH 10

STH 49

LEFT LANE CLOSURE
SEE SDD TRAFFIC CONTROL, LANE CLOSURE BASIC TRAFFIC QUEUE WARNING SYSTEM AND DIGITAL SPEED REDUCTION SYSTEM

DIGITAL SPEED LIMIT TRAILER (DSLT)

END CONSTRUCTION
STA 305+50 'WB'

END PROJECT
STA 290+35 'EB'

DIGITAL SPEED LIMIT TRAILER (DSLT)

SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

LANE SHIFT
SEE SDD TRAFFIC CONTROL, FULL LANE SHIFT, MULTI-LANE DIVIDED 50 MPH AND OVER

ERICKSON RD

STH 22

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL - STAGE 1 OVERVIEW	SHEET 23	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\025100-TC-STAGE 1 OVERVIEW.DWG
LAYOUT NAME - Plan Dbl 1 IN 500 FT

PLOT DATE : 5/22/2025 10:04 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 in :1500

WISDOT/CADDS SHEET 44

2

MAINTENANCE OF TRAFFIC

USH 10
USH 10 EB AND WB WILL REMAIN OPEN TO ONE LANE OF TRAFFIC AT ALL TIMES UTILIZING A LONG TERM LANE CLOSURE .

SIDEROADS
- ALL SIDEROADS WILL REMAIN OPEN TO ALL LANES AT ALL TIMES.

STAGE 2 WORK

USH 10 EB & WB - LEFT LANE
- COMPLETE CONCRETE PAVEMENT REPAIRS/REPLACEMENT
- COMPLETE HMA SHOULDER
- COMPLETE ROUT AND SEAL AND RUMBLE STRIPS

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL - STAGE 2 OVERVIEW	SHEET 24	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\025100-TC-STAGE 2 OVERVIEW.DWG
LAYOUT NAME - Plan Dbl 1 IN 500 FT
PLOT DATE : 5/22/2025 10:01 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 in :1500

2

MAINTENANCE OF TRAFFIC

USH 10
USH 10 EB AND WB WILL REMAIN OPEN TO ONE LANE OF TRAFFIC AT ALL TIMES UTILIZING A LONG TERM LANE CLOSURE .

SIDEROADS
- ALL SIDEROADS WILL REMAIN OPEN TO ALL LANES AT ALL TIMES.

STAGE 3 WORK

USH 10 EB & WB - RIGHT LANE
- COMPLETE CONCRETE PAVEMENT REPAIRS/REPLACEMENT
- COMPLETE ROUT AND SEAL AND RUMBLE STRIPS

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL - STAGE 3 OVERVIEW	SHEET 25	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\025100-TC-STAGE 3 OVERVIEW.DWG
LAYOUT NAME - Plan Dbl 1 IN 500 FT
PLOT DATE : 5/22/2025 10:23 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 in :1500

2

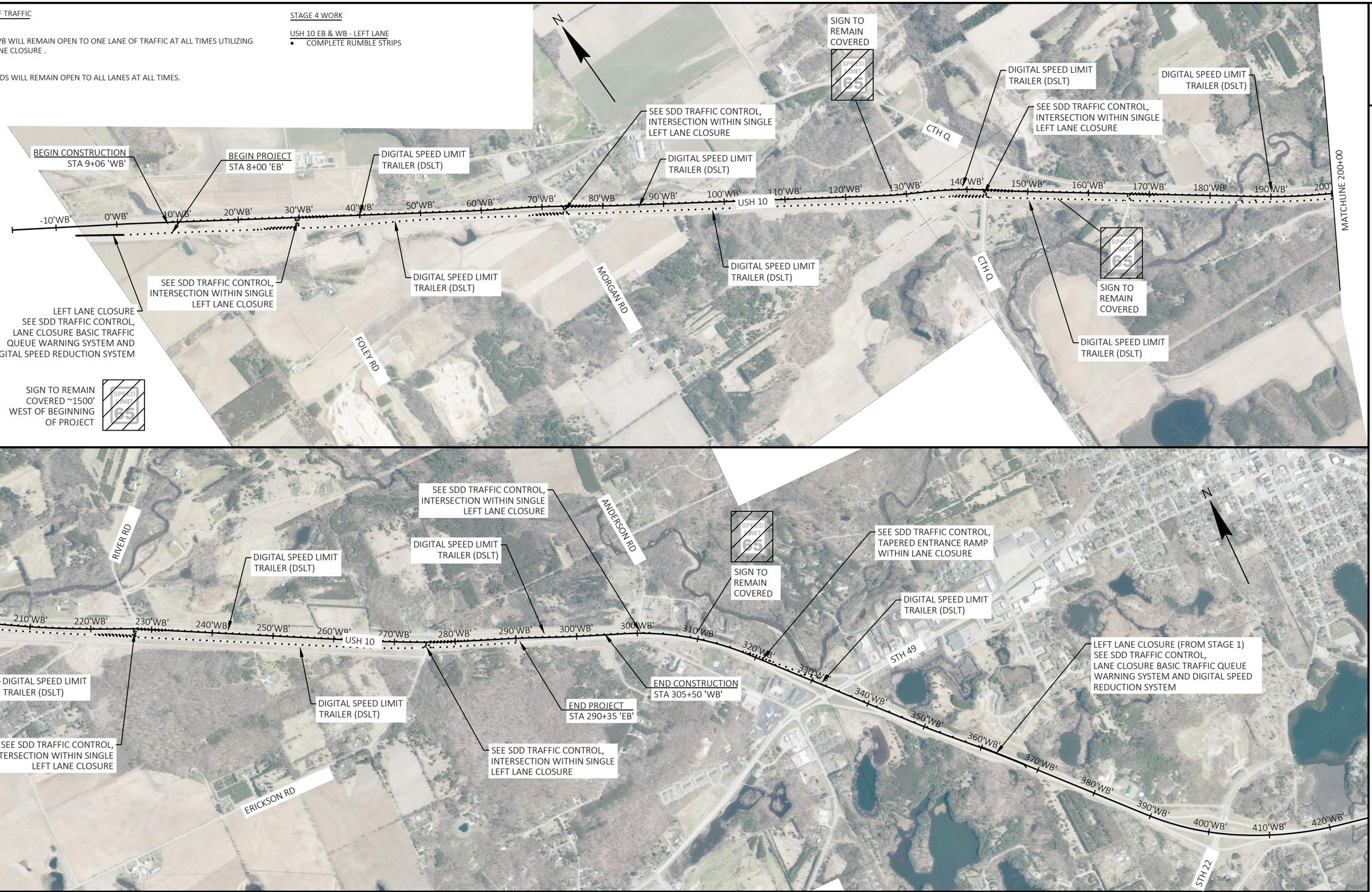
MAINTENANCE OF TRAFFIC

USH 10
USH 10 EB AND WB WILL REMAIN OPEN TO ONE LANE OF TRAFFIC AT ALL TIMES UTILIZING A LONG TERM LANE CLOSURE .

SIDEROADS
- ALL SIDEROADS WILL REMAIN OPEN TO ALL LANES AT ALL TIMES.

STAGE 4 WORK

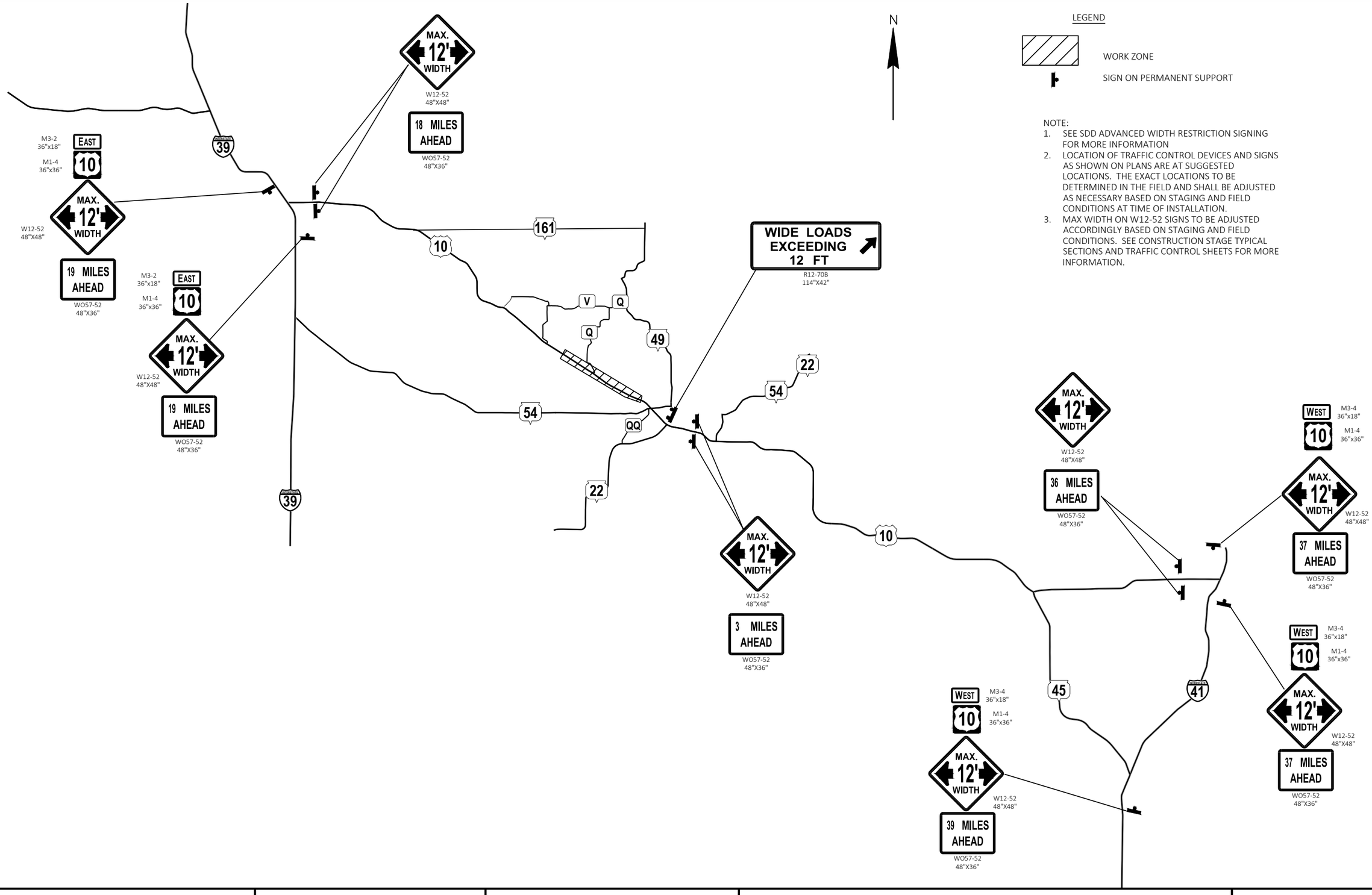
USH 10 EB & WB - LEFT LANE
- COMPLETE RUMBLE STRIPS



PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL - STAGE 4 OVERVIEW	SHEET 26	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\025100-TC-STAGE 4 OVERVIEW.DWG
LAYOUT NAME - Plan Dbl 1 IN 500 FT
PLOT DATE : 5/22/2025 10:13 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 in :1500

WISDOT/CADDS SHEET 44



LEGEND

WORK ZONE

SIGN ON PERMANENT SUPPORT

NOTE:

1. SEE SDD ADVANCED WIDTH RESTRICTION SIGNING FOR MORE INFORMATION
2. LOCATION OF TRAFFIC CONTROL DEVICES AND SIGNS AS SHOWN ON PLANS ARE AT SUGGESTED LOCATIONS. THE EXACT LOCATIONS TO BE DETERMINED IN THE FIELD AND SHALL BE ADJUSTED AS NECESSARY BASED ON STAGING AND FIELD CONDITIONS AT TIME OF INSTALLATION.
3. MAX WIDTH ON W12-52 SIGNS TO BE ADJUSTED ACCORDINGLY BASED ON STAGING AND FIELD CONDITIONS. SEE CONSTRUCTION STAGE TYPICAL SECTIONS AND TRAFFIC CONTROL SHEETS FOR MORE INFORMATION.

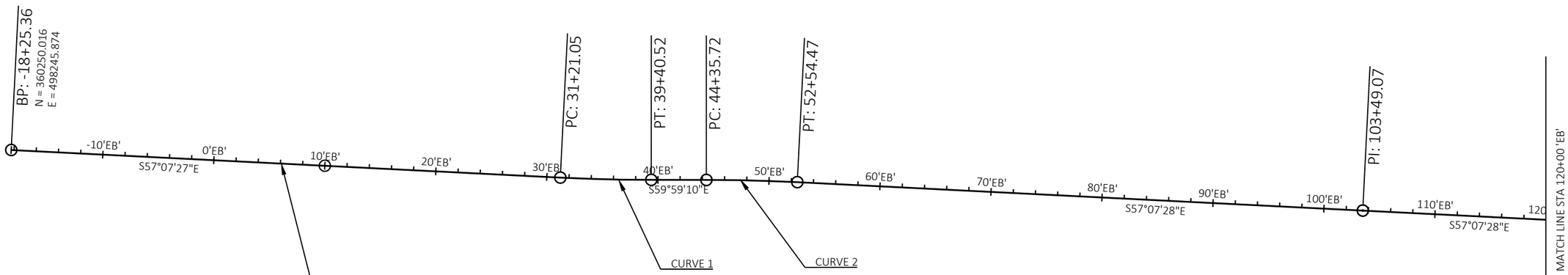
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	ADVANCED WIDTH RESTRICTION SIGNING OVERVIEW	SHEET 27	E

2

N

CURVE 2

PI STA = 48+45.18
Y = 356685.041
X = 503882.514
DELTA = 2°51'42" RT
D = 0°20'58"
T = 409.46'
L = 818.75'
R = 16393.46'
PC STA = 44+35.72
Y = 356889.858
X = 503527.961
PT STA = 52+54.47
Y = 356462.779
X = 504226.400
DB = S59°59'10"E
DA = S57°07'28"E



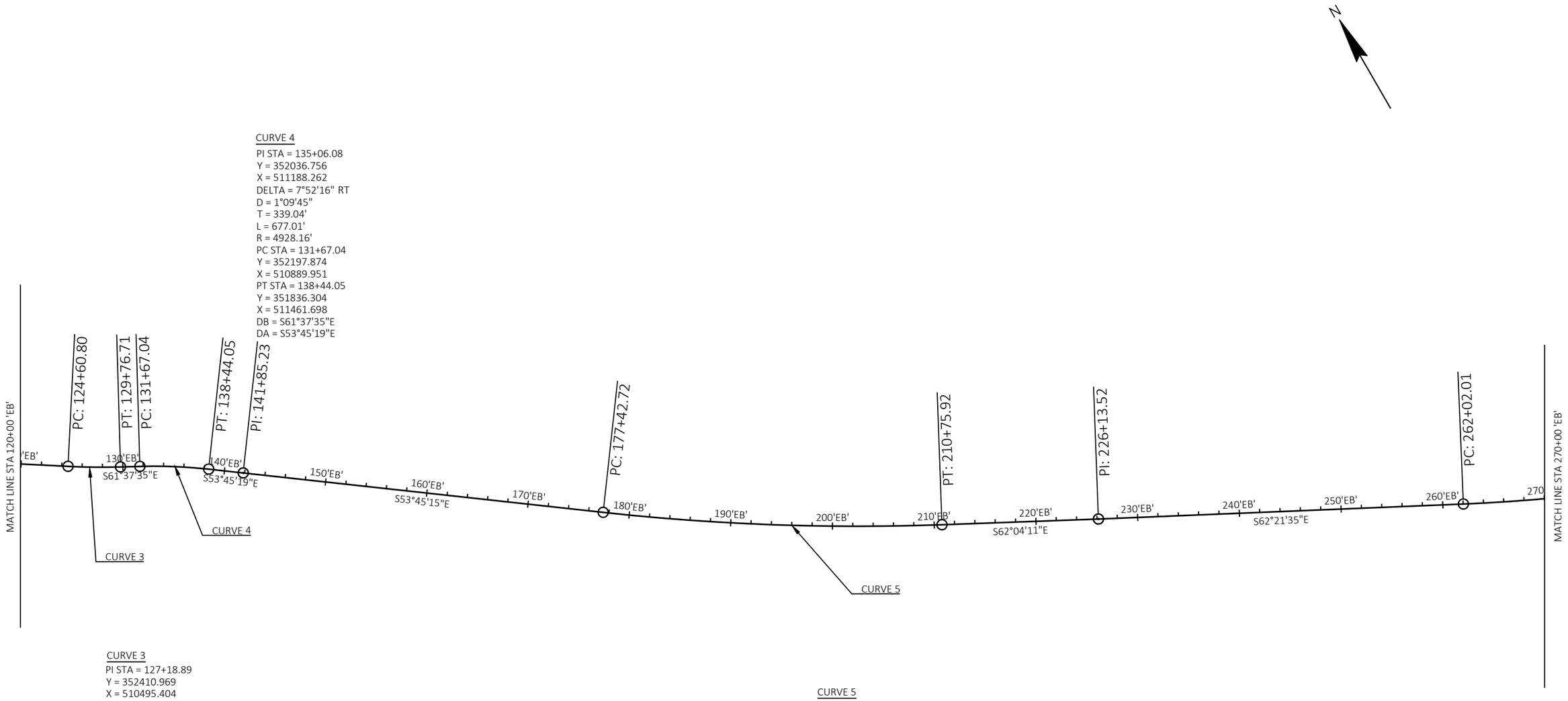
BEGIN PROJECT
STA 8+00 'EB'
Y=358,824.92
X=500,450.78

CURVE 1

PI STA = 35+30.87
Y = 357342.557
X = 502744.304
DELTA = 2°51'42" LT
D = 0°20'57"
T = 409.82'
L = 819.47'
R = 16406.98'
PC STA = 31+21.05
Y = 357565.015
X = 502400.115
PT STA = 39+40.52
Y = 357137.560
X = 503099.169
DB = S57°07'27"E
DA = S59°59'10"E

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	ALIGNMENT DETAILS	SHEET 28	E

2



CURVE 4

PI STA = 135+06.08
Y = 352036.756
X = 511188.262
DELTA = 7°52'16" RT
D = 1°09'45"
T = 339.04'
L = 677.01'
R = 4928.16'
PC STA = 131+67.04
Y = 352197.874
X = 510889.951
PT STA = 138+44.05
Y = 351836.304
X = 511461.698
DB = S61°37'35"E
DA = S53°45'19"E

CURVE 3

PI STA = 127+18.89
Y = 352410.969
X = 510495.404
DELTA = 4°30'08" LT
D = 0°52'22"
T = 258.09'
L = 515.91'
R = 6565.66'
PC STA = 124+60.80
Y = 352551.063
X = 510278.650
PT STA = 129+76.71
Y = 352288.322
X = 510722.486
DB = S57°07'28"E
DA = S61°37'35"E

CURVE 5

PI STA = 194+12.25
Y = 348544.095
X = 515952.380
DELTA = 8°18'57" LT
D = 0°14'58"
T = 1669.53'
L = 3333.19'
R = 22965.84'
PC STA = 177+42.72
Y = 349531.209
X = 514605.928
PT STA = 210+75.92
Y = 347762.095
X = 517427.439
DB = S53°45'15"E
DA = S62°04'11"E

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	ALIGNMENT DETAILS	SHEET 29	E

2

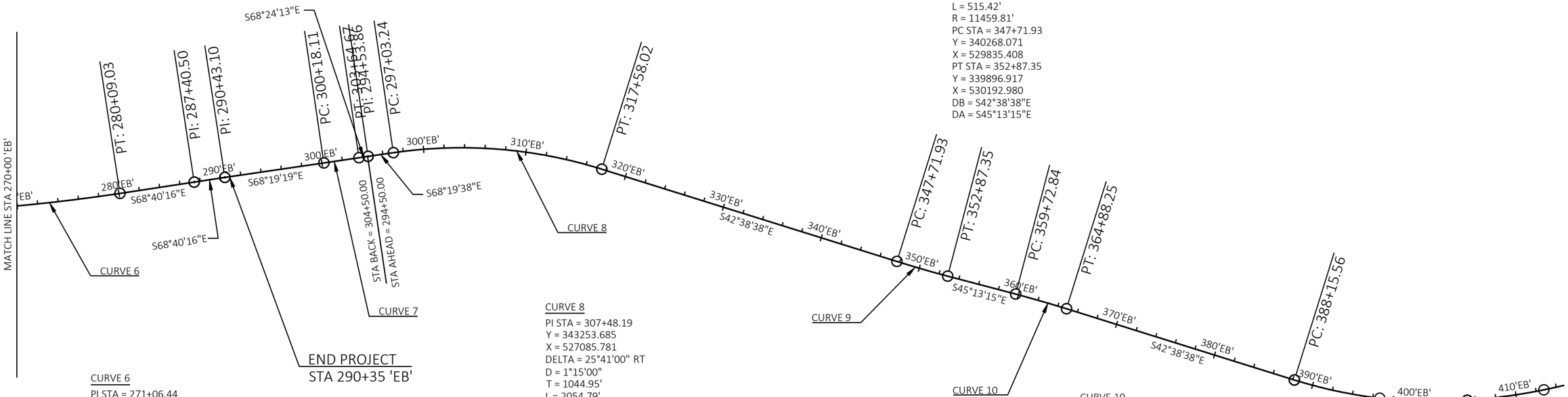
N

CURVE 7

PI STA = 301+91.39
Y = 343828.295
X = 525638.909
DELTA = 0°04'54" LT
D = 0°01'25"
T = 173.28'
L = 346.55'
R = 243161.75'
PC STA = 300+18.11
Y = 343892.302
X = 525477.887
PT STA = 303+64.67
Y = 343764.518
X = 525800.022
DB = S68°19'19"E
DA = S68°24'13"E

CURVE 9

PI STA = 350+29.69
Y = 340078.473
X = 530010.020
DELTA = 2°34'37" LT
D = 0°30'00"
T = 257.75'
L = 515.42'
R = 11459.81'
PC STA = 347+71.93
Y = 340268.071
X = 529835.408
PT STA = 352+87.35
Y = 339896.917
X = 530192.980
DB = S42°38'38"E
DA = S45°13'15"E



CURVE 6

PI STA = 271+06.44
Y = 344957.533
X = 522766.114
DELTA = 6°18'41" LT
D = 0°20'57"
T = 904.42'
L = 1807.02'
R = 16404.21'
PC STA = 262+02.01
Y = 345377.113
X = 521964.906
PT STA = 280+09.03
Y = 344628.575
X = 523608.593
DB = S62°21'35"E
DA = S68°40'16"E

CURVE 8

PI STA = 307+48.19
Y = 343253.685
X = 527085.781
DELTA = 25°41'00" RT
D = 1°15'00"
T = 1044.95'
L = 2054.79'
R = 4583.93'
PC STA = 297+03.24
Y = 343639.592
X = 526114.701
PT STA = 317+58.02
Y = 342485.041
X = 527793.671
DB = S68°19'38"E
DA = S42°38'38"E

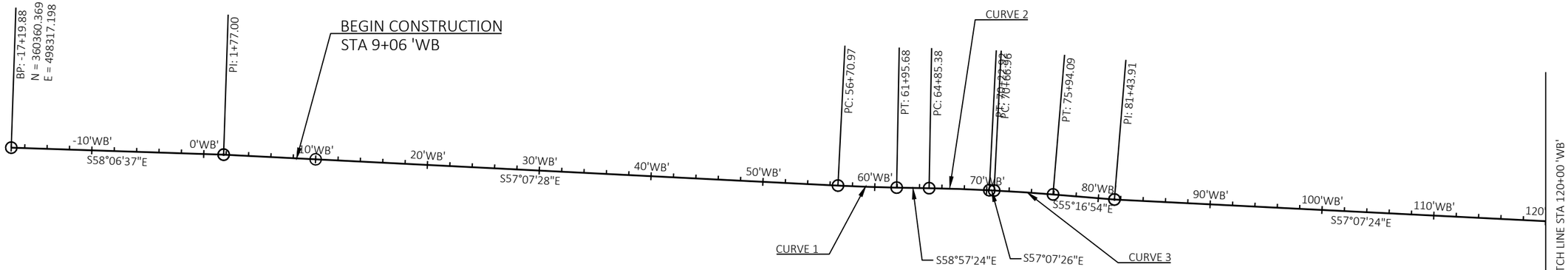
CURVE 10

PI STA = 362+30.59
Y = 339232.522
X = 530862.514
DELTA = 2°34'37" RT
D = 0°30'00"
T = 257.75'
L = 515.41'
R = 11459.80'
PC STA = 359+72.84
Y = 339414.072
X = 530679.559
PT STA = 364+88.25
Y = 339042.929
X = 531037.122
DB = S45°13'15"E
DA = S42°38'38"E

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	ALIGNMENT DETAILS	SHEET 30	E

2

CURVE 2
PI STA = 67+54.17
Y = 355810.325
X = 505465.557
DELTA = 1°49'58" RT
D = 0°20'28"
T = 268.79'
L = 537.53'
R = 16803.34'
PC STA = 64+85.38
Y = 355948.935
X = 505235.264
PT STA = 70+22.92
Y = 355664.419
X = 505691.299
DB = S58°57'24"E
DA = S57°07'26"E



CURVE 1
PI STA = 59+33.35
Y = 356233.637
X = 504762.250
DELTA = 1°49'56" LT
D = 0°20'57"
T = 262.38'
L = 524.71'
R = 16407.26'
PC STA = 56+70.97
Y = 356376.058
X = 504541.894
PT STA = 61+95.68
Y = 356098.334
X = 504987.047
DB = S57°07'28"E
DA = S58°57'24"E

CURVE 3

PI STA = 73+30.55
Y = 355497.429
X = 505949.662
DELTA = 1°50'32" RT
D = 0°20'58"
T = 263.59'
L = 527.13'
R = 16395.66'
PC STA = 70+66.96
Y = 355640.512
X = 505728.288
PT STA = 75+94.09
Y = 355347.305
X = 506166.322
DB = S57°07'26"E
DA = S55°16'54"E

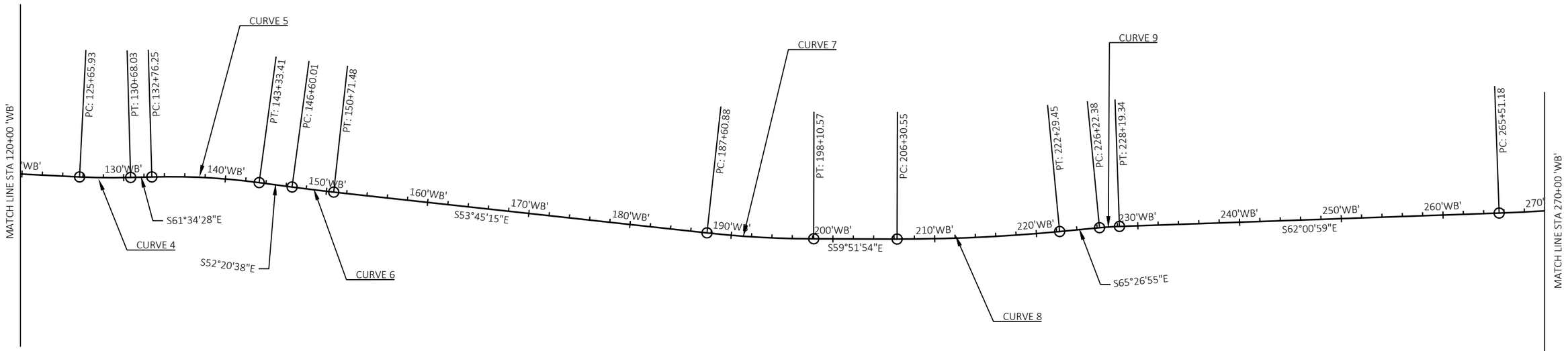
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	ALIGNMENT DETAILS	SHEET 31	E

2

CURVE 5
PI STA = 138+05.97
Y = 352026.562
X = 511412.859
DELTA = 9°13'50" RT
D = 0°52'23"
T = 529.73'
L = 1057.16'
R = 6562.00'
PC STA = 132+76.25
Y = 352278.719
X = 510946.999
PT STA = 143+33.41
Y = 351702.942
X = 511832.240
DB = S61°34'28"E
DA = S52°20'38"E

CURVE 7
PI STA = 192+86.22
Y = 348764.095
X = 515818.764
DELTA = 6°06'40" LT
D = 0°34'56"
T = 525.34'
L = 1049.69'
R = 9841.73'
PC STA = 187+60.88
Y = 349074.705
X = 515395.082
PT STA = 198+10.57
Y = 348500.353
X = 516273.104
DB = S53°45'15"E
DA = S59°51'54"E

CURVE 9
PI STA = 227+20.89
Y = 347150.382
X = 518848.963
DELTA = 3°25'56" RT
D = 1°44'33"
T = 98.51'
L = 196.97'
R = 3288.00'
PC STA = 226+22.38
Y = 347191.315
X = 518759.357
PT STA = 228+19.34
Y = 347104.158
X = 518935.958
DB = S65°26'55"E
DA = S62°00'59"E



CURVE 4
PI STA = 128+17.11
Y = 352497.398
X = 510542.992
DELTA = 4°27'04" LT
D = 0°53'11"
T = 251.18'
L = 502.10'
R = 6463.00'
PC STA = 125+65.93
Y = 352633.744
X = 510332.045
PT STA = 130+68.03
Y = 352377.834
X = 510763.885
DB = S57°07'24"E
DA = S61°34'28"E

CURVE 6
PI STA = 148+65.76
Y = 351377.717
X = 512253.699
DELTA = 1°24'36" LT
D = 0°20'34"
T = 205.74'
L = 411.47'
R = 16718.69'
PC STA = 146+60.01
Y = 351503.411
X = 512090.812
PT STA = 150+71.48
Y = 351256.071
X = 512419.629
DB = S52°20'38"E
DA = S53°45'15"E

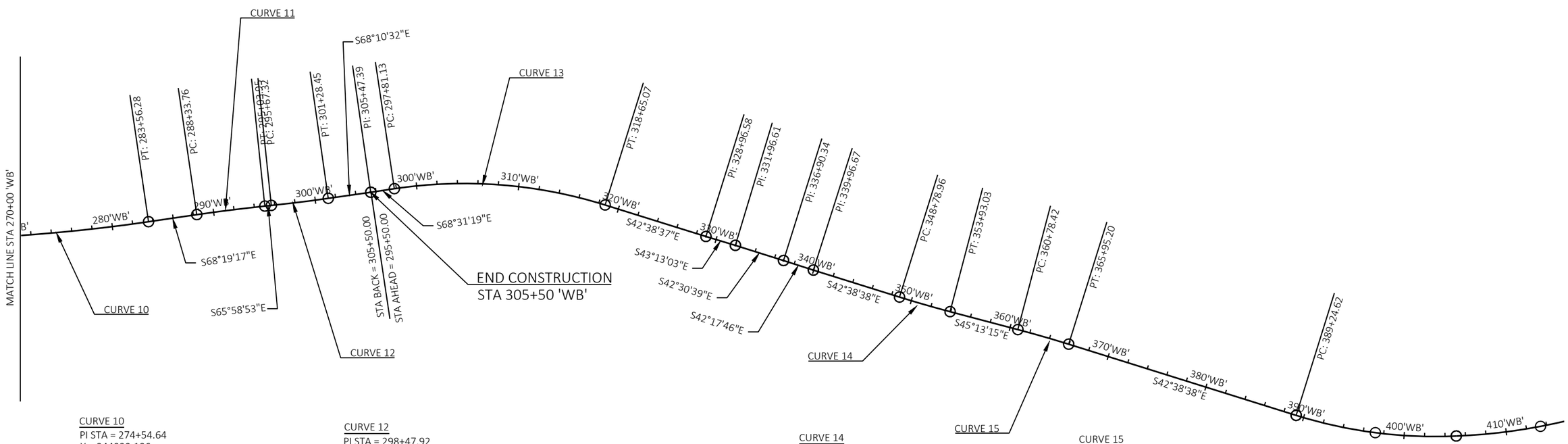
CURVE 8
PI STA = 214+30.63
Y = 347687.022
X = 517674.204
DELTA = 5°35'01" LT
D = 0°20'57"
T = 800.08'
L = 1598.90'
R = 16407.12'
PC STA = 206+30.55
Y = 348088.694
X = 516982.256
PT STA = 222+29.45
Y = 347354.581
X = 518401.951
DB = S59°51'54"E
DA = S65°26'55"E

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	ALIGNMENT DETAILS	SHEET 32	E

2

CURVE 11
PI STA = 291+68.90
Y = 344295.263
X = 524624.011
DELTA = 2°20'24" RT
D = 0°20'57"
T = 335.14'
L = 670.20'
R = 16410.84'
PC STA = 288+33.76
Y = 344419.065
X = 524312.572
PT STA = 295+03.95
Y = 344158.848
X = 524930.137
DB = S68°19'17"E
DA = S65°58'53"E

CURVE 13
PI STA = 308+41.18
Y = 343285.066
X = 527097.672
DELTA = 25°52'42" RT
D = 1°14'30"
T = 1060.05'
L = 2083.94'
R = 4613.93'
PC STA = 297+81.13
Y = 343673.198
X = 526111.231
PT STA = 318+65.07
Y = 342505.310
X = 527815.790
DB = S68°31'19"E
DA = S42°38'37"E



CURVE 10
PI STA = 274+54.64
Y = 344929.186
X = 523029.304
DELTA = 6°18'18" LT
D = 0°20'57"
T = 903.47'
L = 1805.11'
R = 16403.66'
PC STA = 265+51.18
Y = 345353.109
X = 522231.470
PT STA = 283+56.28
Y = 344595.445
X = 523868.867
DB = S62°00'59"E
DA = S68°19'17"E

CURVE 12
PI STA = 298+47.92
Y = 344018.843
X = 525244.320
DELTA = 2°11'39" LT
D = 0°23'28"
T = 280.60'
L = 561.14'
R = 14652.75'
PC STA = 295+67.32
Y = 344133.058
X = 524988.014
PT STA = 301+28.45
Y = 343914.526
X = 525504.812
DB = S65°58'53"E
DA = S68°10'32"E

CURVE 14
PI STA = 351+36.04
Y = 340099.270
X = 530031.654
DELTA = 2°34'37" LT
D = 0°30'05"
T = 257.08'
L = 514.07'
R = 11429.80'
PC STA = 348+78.96
Y = 340288.371
X = 529857.499
PT STA = 353+93.03
Y = 339918.191
X = 530214.135
DB = S42°38'38"E
DA = S45°13'15"E

CURVE 15
PI STA = 363+36.85
Y = 339253.385
X = 530884.087
DELTA = 2°34'37" RT
D = 0°29'55"
T = 258.44'
L = 516.79'
R = 11489.79'
PC STA = 360+78.42
Y = 339435.421
X = 530700.641
PT STA = 365+95.20
Y = 339063.284
X = 531059.162
DB = S45°13'15"E
DA = S42°38'38"E

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	ALIGNMENT DETAILS	SHEET 33	E

Estimate Of Quantities

6290-05-61

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Concrete Pavement	SY	12.000	12.000
0004	204.0110	Removing Asphaltic Surface	SY	310.000	310.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	78.000	78.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	69,690.000	69,690.000
0010	204.0165	Removing Guardrail	LF	1,111.000	1,111.000
0012	204.0180	Removing Delineators and Markers	EACH	35.000	35.000
0014	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 6290-05-61	EACH	1.000	1.000
0016	213.0100	Finishing Roadway (project) 01. 6290-05-61	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,706.000	1,706.000
0020	415.0060	Concrete Pavement 6-Inch	SY	12.000	12.000
0022	415.6000.S	Rout and Seal	LF	101,210.000	101,210.000
0024	416.0610	Drilled Tie Bars	EACH	1,500.000	1,500.000
0026	416.0620	Drilled Dowel Bars	EACH	3,900.000	3,900.000
0028	416.1710	Concrete Pavement Repair	SY	1,700.000	1,700.000
0030	416.1720	Concrete Pavement Replacement	SY	5,700.000	5,700.000
0032	420.1000	Continuous Diamond Grinding Concrete Pavement	SY	11,300.000	11,300.000
0034	455.0605	Tack Coat	GAL	4,877.000	4,877.000
0036	460.2000	Incentive Density HMA Pavement	DOL	4,380.000	4,380.000
0038	460.5224	HMA Pavement 4 LT 58-28 S	TON	6,831.000	6,831.000
0040	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	50,525.000	50,525.000
0042	602.3210	Concrete Rumble Strips, Shoulder Divided Roadway	LF	48,625.000	48,625.000
0044	614.0010	Barrier System Grading Shaping Finishing	EACH	4.000	4.000
0046	614.2300	MGS Guardrail 3	LF	750.000	750.000
0048	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0050	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0052	618.0100	Maintenance and Repair of Haul Roads (project) 01. 6290-05-61	EACH	1.000	1.000
0054	619.1000	Mobilization	EACH	1.000	1.000
0056	624.0100	Water	MGAL	33.000	33.000
0058	628.1504	Silt Fence	LF	1,000.000	1,000.000
0060	628.1520	Silt Fence Maintenance	LF	2,000.000	2,000.000
0062	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0064	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0066	628.7570	Rock Bags	EACH	50.000	50.000
0068	633.0100	Delineator Posts Steel	EACH	70.000	70.000
0070	633.0500	Delineator Reflectors	EACH	70.000	70.000
0072	642.5201	Field Office Type C	EACH	1.000	1.000
0074	643.0300	Traffic Control Drums	DAY	90,000.000	90,000.000
0076	643.0370.S	Digital Speed Reduction System (DSRS)	DAY	170.000	170.000
0078	643.0420	Traffic Control Barricades Type III	DAY	1,500.000	1,500.000
0080	643.0705	Traffic Control Warning Lights Type A	DAY	3,000.000	3,000.000
0082	643.0715	Traffic Control Warning Lights Type C	DAY	5,500.000	5,500.000
0084	643.0810	Traffic Control Connected Arrow Boards	DAY	170.000	170.000
0086	643.0900	Traffic Control Signs	DAY	8,000.000	8,000.000
0088	643.0920	Traffic Control Covering Signs Type II	EACH	4.000	4.000
0090	643.1000	Traffic Control Signs Fixed Message	SF	97.250	97.250
0092	643.1070	Traffic Control Cones 42-Inch	DAY	50,500.000	50,500.000
0094	643.1205.S	Basic Traffic Queue Warning System	DAY	170.000	170.000
0096	643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY	170.000	170.000
0098	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	7,380.000	7,380.000

6290-05-61

Line	Item	Item Description	Unit	Total	Qty
0100	643.3280	Temporary Marking Line Removable Tape 10-Inch	LF	1,200.000	1,200.000
0102	643.3960	Temporary Marking Removable Mask Out Tape 6-Inch	LF	586.000	586.000
0104	643.5000	Traffic Control	EACH	1.000	1.000
0106	646.2020	Marking Line Epoxy 6-Inch	LF	1,257.000	1,257.000
0108	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	14,474.000	14,474.000
0110	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	106,670.000	106,670.000
0112	646.2050	Marking Line Grooved Permanent Tape 6-Inch	LF	14,410.000	14,410.000
0114	646.4050	Marking Line Grooved Permanent Tape 10-Inch	LF	7,575.000	7,575.000
0116	646.5020	Marking Arrow Epoxy	EACH	40.000	40.000
0118	646.5120	Marking Word Epoxy	EACH	20.000	20.000
0120	646.6120	Marking Stop Line Epoxy 18-Inch	LF	190.000	190.000
0122	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	3,250.000	3,250.000
0124	646.6470	Cold Weather Marking Epoxy 10-Inch	LF	100.000	100.000
0126	646.9055	Marking Removal Line Grooved Contrast Permanent Tape 4-Inch	LF	14,474.000	14,474.000
0128	650.8000	Construction Staking Resurfacing Reference	LF	57,880.000	57,880.000
0130	650.9911	Construction Staking Supplemental Control (project) 01. 6290-05-61	EACH	1.000	1.000
0132	690.0150	Sawing Asphalt	LF	1,123.000	1,123.000
0134	690.0250	Sawing Concrete	LF	11,900.000	11,900.000
0136	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0138	999.2100.S	Installing and Maintaining Climbing Turtle Exclusion Fence	LF	750.000	750.000
0140	SPV.0060	Special 01. Removing Raised Pavement Markers and Filling Void	EACH	254.000	254.000
0142	SPV.0060	Special 02. Digital Speed Limit Trailer Pad	EACH	11.000	11.000

3

REMOVING CONCRETE PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	REMARKS
0010	182+60	-	182+75	USH 10 EB	12	B-68-103 CONCRETE SHOULDER
				TOTAL 0010	12	

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0165 REMOVING GUARDRAIL LF	REMARKS
0010	170+06	-	172+64	USH 10 EB RT	74	258	
0010	169+91	-	172+87	USH 10 EB LT	72	296	
0010	175+43	-	178+40	USH 10 WB RT	87	297	
0010	175+43	-	178+03	USH 10 WB LT	77	260	
				TOTAL 0010	310	1,111	

BASE AGGREGATE DENSE

CATEGORY	STATION	TO	STATION		LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	624.0100 WATER MGAL	REMARKS
0010	8+00	-	72+00	USH 10 EB	OUTSIDE SHOULDER	75	2	
0010	72+00	-	142+00	USH 10 EB	OUTSIDE SHOULDER	80	2	
0010	142+00	-	226+00	USH 10 EB	OUTSIDE SHOULDER	94	2	
0010	226+00	-	290+35	USH 10 EB	OUTSIDE SHOULDER	73	1	
0010	8+00	-	72+00	USH 10 EB	INSIDE SHOULDER	121	2	
0010	72+00	-	142+00	USH 10 EB	INSIDE SHOULDER	124	2	
0010	142+00	-	226+00	USH 10 EB	INSIDE SHOULDER	151	3	
0010	226+00	-	290+35	USH 10 EB	INSIDE SHOULDER	115	2	
0010	9+05	-	73+50	USH 10 WB	OUTSIDE SHOULDER	74	1	
0010	73+50	-	143+00	USH 10 WB	OUTSIDE SHOULDER	81	2	
0010	143+00	-	227+00	USH 10 WB	OUTSIDE SHOULDER	97	2	
0010	227+00	-	305+50	USH 10 WB	OUTSIDE SHOULDER	92	2	
0010	9+05	-	73+50	USH 10 WB	INSIDE SHOULDER	117	2	
0010	73+50	-	143+00	USH 10 WB	INSIDE SHOULDER	124	2	
0010	143+00	-	227+00	USH 10 WB	INSIDE SHOULDER	148	3	
0010	227+00	-	305+50	USH 10 WB	INSIDE SHOULDER	140	3	
					TOTAL 0010	1,706	33	

3

CONCRETE PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	415.0060 CONCRETE PAVEMENT 6-INCH SY	REMARKS
0010	182+60	-	182+75	USH 10 EB	12	B-68-103 CONCRETE SHOULDER
				TOTAL 0010	12	

PREPARE FOUNDATION FOR ASPHALTIC PAVING

CATEGORY	LOCATION	211.0101.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 6290-05-61) EACH	REMARKS
0010	PROJECT	1	HMA SHOULDERS
	TOTAL 0010	1	

3

CONCRETE PAVEMENT REPAIR/REPLACEMENT

CATEGORY	STATION	TO	STATION		LOCATION	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1710 CONCRETE PAVEMENT REPAIR SY	416.1720 CONCRETE PAVEMENT REPLACEMENT SY	420.1000 CONTINUOUS DIAMOND GRINDING CONCRETE PAVEMENT SY	690.0250 SAWING CONCRETE LF	REMARKS
	STAGE 2											
0010	8+00	-	72+00	EB	LEFT LANE	0	0	0	0	0	0	
0010	72+00	-	142+00	EB	LEFT LANE	11	112	35	81	210	266	
0010	142+00	-	226+00	EB	LEFT LANE	0	48	33	0	71	91	
0010	226+00	-	290+35	EB	LEFT LANE	23	32	16	77	118	128	
					STAGE 2 USH EB SUBTOTAL	34	192	84	158	399	485	
	STAGE 2											
0010	9+05	-	73+50	WB	LEFT LANE	0	16	9	0	22	30	
0010	73+50	-	143+00	WB	LEFT LANE	13	48	33	0	51	66	
0010	143+00	-	227+00	WB	LEFT LANE	0	32	12	44	80	89	
0010	227+00	-	305+50	WB	LEFT LANE	0	0	26	0	67	85	
					STAGE 2 USH WB SUBTOTAL	13	96	80	44	220	270	
	STAGE 3											
0010	8+00	-	72+00	EB	RIGHT LANE	187	416	134	727	1,307	1,371	
0010	72+00	-	142+00	EB	RIGHT LANE	356	912	433	1,398	2,794	2,806	
0010	142+00	-	226+00	EB	RIGHT LANE	280	896	430	1,082	2,455	2,639	
0010	226+00	-	290+35	EB	RIGHT LANE	162	368	143	629	1,118	1,237	
					STAGE 3 USH EB SUBTOTAL	985	2,592	1,140	3,836	7,674	8,053	
	STAGE 3											
0010	9+05	-	73+50	WB	RIGHT LANE	34	32	0	133	164	141	
0010	73+50	-	143+00	WB	RIGHT LANE	98	176	56	376	604	587	
0010	143+00	-	227+00	WB	RIGHT LANE	178	400	113	688	1,197	1,274	
0010	227+00	-	305+50	WB	RIGHT LANE	25	96	51	94	237	270	
					STAGE 3 USH WB SUBTOTAL	335	704	220	1,291	2,202	2,272	
					UNDISTRIBUTED	133	316	176	371	805	820	
					TOTAL 0010	1,500	3,900	1,700	5,700	11,300	11,900	

3

ASPHALTIC ITEMS

CATEGORY	STATION	TO	STATION		LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	415.6000.S ROUT AND SEAL LF	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0510 ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF	602.3210 CONCRETE RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF	REMARKS
0010	8+00	-	72+00	EB	OUTSIDE SHOULDER	8	4,460	4,730	312	437	--	4,720	
0010	72+00	-	142+00	EB	OUTSIDE SHOULDER	4	5,330	6,000	373	523	--	6,005	
0010	142+00	-	226+00	EB	OUTSIDE SHOULDER	6	7,190	7,380	503	704	--	6,525	
0010	226+00	-	290+35	EB	OUTSIDE SHOULDER	8	4,760	5,360	333	466	--	5,355	
		-			SUBTOTAL	26	21,740	23,470	1,521	2,130	0	22,605	
		-											
0010	9+05	-	73+50	WB	OUTSIDE SHOULDER	8	4,610	5,200	323	452	--	5,190	
0010	73+50	-	143+00	WB	OUTSIDE SHOULDER	4	5,450	6,130	381	534	--	6,130	
0010	143+00	-	227+00	WB	OUTSIDE SHOULDER	8	6,600	7,460	462	647	--	7,495	
0010	227+00	-	305+50	WB	OUTSIDE SHOULDER	4	6,400	7,210	448	628	--	7,205	
		-			SUBTOTAL	24	23,060	26,000	1,614	2,261	0	26,020	
0010	8+00	-	72+00	EB	MEDIAN SHOULDER	4	2,610	5,240	183	256	5,090	--	
0010	72+00	-	142+00	EB	MEDIAN SHOULDER	2	2,790	6,280	195	273	6,260	--	
0010	142+00	-	226+00	EB	MEDIAN SHOULDER	4	3,910	7,570	274	383	7,365	--	
0010	226+00	-	290+35	EB	MEDIAN SHOULDER	4	2,790	6,290	195	274	6,285	--	
		-			SUBTOTAL	14	12,100	25,380	847	1,186	25,000	0	
0010	9+05	-	73+50	WB	MEDIAN SHOULDER	4	2,820	5,770	197	277	5,595	--	
0010	73+50	-	143+00	WB	MEDIAN SHOULDER	2	2,810	6,320	197	275	6,320	--	
0010	143+00	-	227+00	WB	MEDIAN SHOULDER	4	4,230	7,680	296	415	7,020	--	
0010	227+00	-	305+50	WB	MEDIAN SHOULDER	4	2,930	6,590	205	287	6,590	--	
					SUBTOTAL	14	12,790	26,360	895	1,254	25,525	0	
					TOTAL 0010	78	69,690	101,210	4,877	6,831	50,525	48,625	

3

EROSION CONTROL MOBILIZATION

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	REMARKS
0010	PROJECT	2	1	
	TOTAL 0010	2	1	

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION		628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7570 ROCK BAGS EACH	999.2100.S. INSTALLING AND MAINTAINING TURTLE EXCLUSION FENCE LF	REMARKS
0010	179+94	-	182+87	US 10 WB	LT	390	780	--	215	
0010	179+97	-	182+64	US 10 WB	RT	--	--	20	75	
0010	185+43	-	188+11	US 10 EB	LT	--	--	20	100	
0010	185+43	-	188+35	US 10 EB	RT	405	810	--	215	
				UNDISTRIBUTED		205	410	10	145	
				TOTAL 00		1,000	2,000	50	750	

3

BARRIER GRADING SHAPING FINISHING (FOR INFORMATION ONLY)

CATEGORY	STATION	TO	STATION	LOCATION		BORROW CY	TOPSOIL SY	EROSION MAT URBAN CLASS I TYPE B SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 30 LB	SEED WATER MGAL	REMARKS
0010	179+94	-	182+87	US 10 WB	LT	20	140	140	0.1	7	4	
0010	179+97	-	182+64	US 10 WB	RT	20	230	230	0.2	11	6	
0010	185+43	-	188+11	US 10 EB	LT	15	310	310	0.2	14	7	
0010	185+43	-	188+35	US 10 EB	RT	25	190	190	0.2	9	5	
				TOTAL 0010		80	870	870	0.7	41	22	

GUARDRAIL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	REMARKS
0010	179+94	-	182+87	USH 10 EB LT	1	200	39.4	1	
0010	179+97	-	182+64	USH 10 EB RT	1	175	39.4	1	
0010	185+43	-	188+11	USH 10 WB LT	1	175	39.4	1	
0010	185+43	-	188+35	USH 10 WB RT	1	200	39.4	1	
				TOTAL 0010	4	750	157.6	4	

DELINEATOR

CATEGORY	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS EACH	REMARKS
0010	UNDISTRIBUTED	35	70	70	
	TOTAL 0010	35	70	70	

3

BASIC TRAFFIC QUEUE WARNING SYSTEM SUMMARY

CATEGORY	STAGE	LOCATION	FLASHING BEACON SIGNS (FBS)	PORTABLE TRAFFIC SENSORS (PTS)	643.1205.S BASIC TRAFFIC QUEUE WARNING SYSTEM DAY	REMARKS
0010	1	USH 10 EB	3	3	10	
0010	1	USH 10 WB	3	3	10	
0010	2	USH 10 EB	3	3	30	
0010	2	USH 10 WB	3	3	30	
0010	3	USH 10 EB	3	3	40	
0010	3	USH 10 WB	3	3	40	
0010	4	USH 10 EB	3	3	5	
0010	4	USH 10 WB	3	3	5	
				TOTAL 0010	170	

THESE ITEMS ARE PART OF THE QWS AND ARE PAID FOR ONE COMPLETE SYSTEM PER ROADWAY

TRAFFIC CONTROL SIGNS FIXED MESSAGE

CATEGORY		W (IN)	SIGN SIZE X	H (IN)	LOCATION	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	REMARKS
0010	G20-57	96	-	48	USH 10 EB	32.00	IN PLACE FOR 7 DAYS PRIOR TO CONSTRUCTION
0010	G20-57	96	-	48	USH 10 WB	32.00	IN PLACE FOR 7 DAYS PRIOR TO CONSTRUCTION
0010	R12-70B	114	-	42	USH 10 WB	33.25	IN PLACE FOR DURATION OF STAGE 3
					TOTAL 0010	97.25	

3

COVERING SIGNS

CATEGORY	LOCATION	SIGNS	CYCLES	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	REMARKS
0010	USH 10 WB	2	1	2	
0010	USH 10 EB	2	1	2	
			TOTAL 0010	4	

DIGITAL SPEED REDUCTION SYSTEM

CATEGORY	LOCATION	STAGE	DAYS	DIGITAL SPEED LIMIT TRAILERS (DSLT)	SYSTEM	643.0370.S DIGITAL SPEED REDUCTION SYSTEM (DSRS) DAY	REMARKS
0010	USH 10 EB	1	10	6	1	10	
0010	USH 10 WB	1	10	7	1	10	
		STAGE 1 TOTAL				20	
0010	USH 10 EB	2	30	6	1	30	
0010	USH 10 WB	2	30	7	1	30	
		STAGE 2 TOTAL				60	
0010	USH 10 EB	3	40	6	1	40	
0010	USH 10 WB	3	40	7	1	40	
		STAGE 3 TOTAL				80	
0010	USH 10 EB	4	5	6	1	5	
0010	USH 10 WB	4	5	7	1	5	
		STAGE 4 TOTAL				10	
				TOTAL 0010		170	

CONNECTED ARROW BOARD

CATEGORY	LOCATION	STAGE	DAYS	TRAFFIC CONTROL CONNECTED ARROW BOARDS EACH	643.0810 TRAFFIC CONTROL CONNECTED ARROW BOARDS DAY	TRAFFIC CONTROL CONNECTED WORK ZONE START AND END LOCATION MARKERS SYSTEM	643.1220 TRAFFIC CONTROL CONNECTED WORK ZONE START AND END LOCATION MARKERS DAY	REMARKS
0010	USH 10 EB	1	10	1	10	1	10	
0010	USH 10 WB	1	10	1	10	1	10	
		STAGE 1 TOTAL			20		20	
0010	USH 10 EB	2	30	1	30	1	30	
0010	USH 10 WB	2	30	1	30	1	30	
		STAGE 2 TOTAL			60		60	
0010	USH 10 EB	3	40	1	40	1	40	
0010	USH 10 WB	3	40	1	40	1	40	
		STAGE 3 TOTAL			80		80	
0010	USH 10 EB	4	5	1	5	1	5	
0010	USH 10 WB	4	5	1	5	1	5	
		STAGE 4 TOTAL			10		10	
				TOTAL 0010	170		170	

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	LOCATION	DAYS	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	643.1070 TRAFFIC CONTROL CONES 42-INCH DAY	REMARKS
0010	STAGE 1	USH 10 EB	10	7,030	70	140	156	350	--	
0010	STAGE 1	USH 10 WB	10	3,910	90	180	486	400	--	
			STAGE 1 TOTAL	10,940	160	320	642	750	0	
0010	STAGE 2	USH 10 EB	30	18,480	210	420	468	810	--	
0010	STAGE 2	USH 10 WB	30	25,260	270	540	1,008	990	--	
			STAGE 2 TOTAL	43,740	480	960	1,476	1,800	0	
0010	STAGE 3	USH 10 EB	40	18,240	280	560	624	1,400	19,720	
0010	STAGE 3	USH 10 WB	40	4,800	360	720	1,944	1,600	21,680	
0010	STAGE 3	USH 10 WB	40	--	--	--	--	1,240	--	MAX WIDTH SIGNING
			STAGE 3 TOTAL	23,040	640	1,280	2,568	4,240	41,400	
0010	STAGE 4	USH 10 EB	5	1,780	35	70	78	135	2,595	
0010	STAGE 4	USH 10 WB	5	2,925	45	90	168	165	2,570	
			STAGE 4 TOTAL	4,705	80	160	246	300	5,165	
			UNDISTRIBUTED	7,575	140	280	568	910	3,935	
		TOTAL 0010		90,000	1,500	3,000	5,500	8,000	50,500	

TEMPORARY PAVEMENT MARKING

CATEGORY	STAGE	LOCATION	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH WHITE LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW	643.3280 TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH WHITE LF	643.3960 TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH LF	REMARKS
0010	STAGE 1	USH 10 EB	780	--	--	195	LANE TAPER
0010	STAGE 1	USH 10 WB	630	720	600		RAMP MERGE
0010	STAGE 1	USH 10 WB	390	390	--	98	LANE SHIFT
0010	STAGE 1	USH 10 WB	780	--	--	195	LANE TAPER
		STAGE 1 TOTAL	2,580	1,110	600	488	
			3,690				
0010	STAGE 2	USH 10 EB	--	780	--	--	LANE TAPER
		STAGE 2 TOTAL	0	780	0	0	
			780				
0010	STAGE 1	USH 10 EB	780	--	--	--	LANE TAPER
0010	STAGE 1	USH 10 WB	630	720	600	--	RAMP MERGE
0010	STAGE 1	USH 10 WB	390	390	--	98	LANE SHIFT
		STAGE 3 TOTAL	1,800	1,110	600	98	
			2,910				
0010							
		TOTAL 0010	7,380		1,200	586	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	REMARKS
0010	9+05	-	305+50	USH 10 WB	29,645	
0010	8+00	-	290+35	USH 10 EB	28,235	
				TOTAL 0010	57,880	

SAWING ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	REMARKS
0010	179+95	-	182+62	USH 10 EB RT	273	
0010	179+95	-	182+85	USH 10 EB LT	290	
0010	185+45	-	188+40	USH 10 WB RT	295	
0010	185+45	-	188+12	USH 10 WB LT	265	
				TOTAL 0010	1,123	

3

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH WHITE LF	646.2020 MARKING LINE EPOXY 6-INCH YELLOW LF	646.2025 MARKING LINE GROOVED BLACK EPOXY 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH WHITE LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH YELLOW LF	646.2050 MARKING LINE GROOVED PERMANENT TAPE 6-INCH LF	646.4050 MARKING LINE GROOVED PERMANENT TAPE 10-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.9055 MARKING REMOVAL LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH LF	REMARKS
0010	9+05	-	73+50	USH 10 WB	--	170	1,619	`	6,425	1,619	1,555	8	4	30	1,619	
0010	73+50	-	143+00	USH 10 WB	--	80	1,728	6,745	6,825	1,728	745	4	2	16	1,728	
0010	143+00	-	227+00	USH 10 WB	132	305	2,108	8,205	8,160	2,080	1,175	6	3	32	2,108	
0010	227+00	-	305+50	USH 10 WB	--	210	1,607	6,235	6,285	1,607	335	2	1	16	1,607	
0010	8+00	-	72+00	USH 10 EB	--	--	1,612	6,240	6,330	1,612	825	4	2	16	1,612	
0010	72+00	-	142+00	USH 10 EB	--	--	1,738	6,835	6,840	1,738	685	4	2	16	1,738	
0010	142+00	-	226+00	USH 10 EB	200	160	2,105	8,005	8,090	2,069	1,090	6	3	32	2,105	
0010	226+00	-	290+35	USH 10 EB	--	--	1,957	7,760	7,690	1,957	1,165	6	3	32	1,957	
				TOTAL	332	925	14,474	50,025	56,645	14,410	7,575	40	20	190	14,474	
					1,257			106,670								
				TOTAL 0010	1,257		14,474	106,670		14,410	7,575	40	20	190	14,474	

REMOVING RAISED PAVEMENT MARKERS AND FILLING VOID

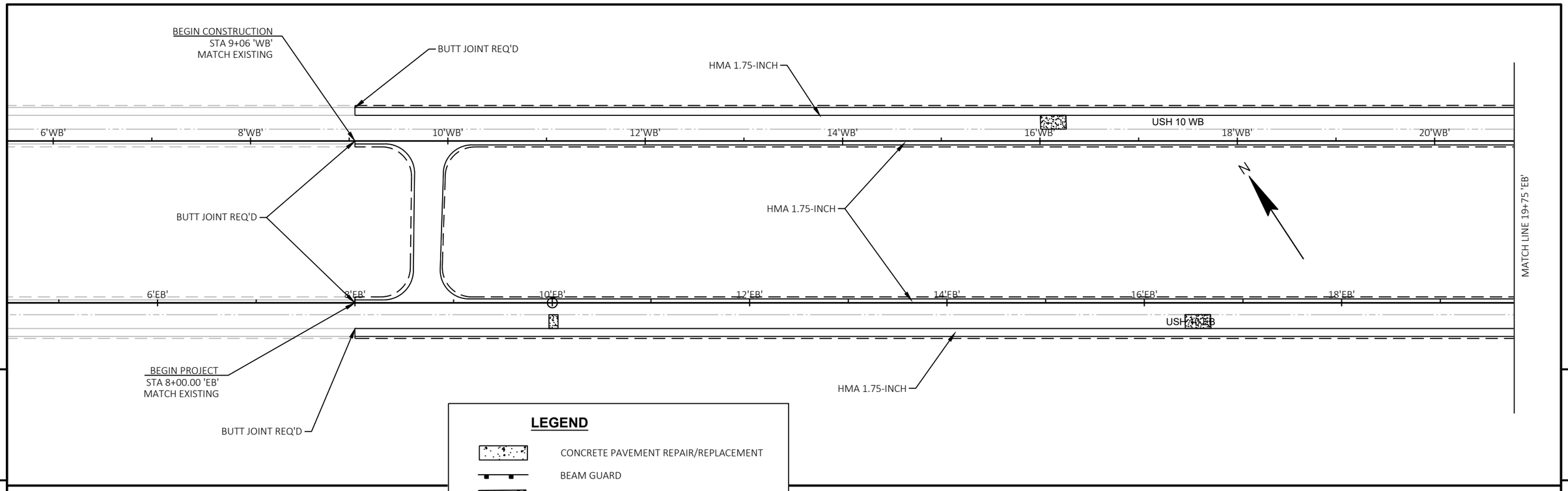
CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060.01 SPECIAL (01. REMOVING RAISED PAVEMENT MARKERS AND FILLING VOID) EACH	REMARKS
0010	9+05	-	73+50	USH 10 WB	27	
0010	73+50	-	143+00	USH 10 WB	22	
0010	143+00	-	227+00	USH 10 WB	36	
0010	227+00	-	305+50	USH 10 WB	39	
0010	8+00	-	72+00	USH 10 EB	52	
0010	72+00	-	142+00	USH 10 EB	26	
0010	142+00	-	226+00	USH 10 EB	39	
0010	226+00	-	290+35	USH 10 EB	13	
				TOTAL 0010	254	

COLD WEATHER MARKING

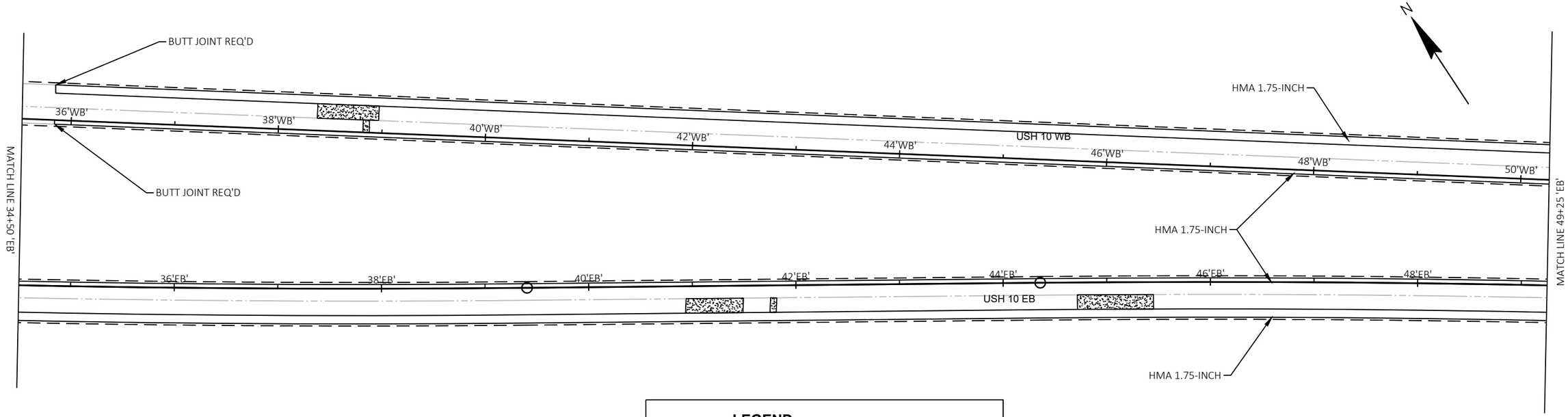
CATEGORY	LOCATION	646.6466 COLD WEATHER MARKING EPOXY 6-INCH WHITE LF	646.6466 COLD WEATHER MARKING EPOXY 6-INCH YELLOW	646.6470 COLD WEATHER MARKING EPOXY 10-INCH LF	REMARKS
0010	UNDISTRIBUTED	2,750	500	100	
	TOTAL 0010	3,250		100	

DIGITAL SPEED LIMIT TRAILER PAD

CATEGORY	LOCATION	SPV.0060.02 SPECIAL (02. DIGITAL SPEED LIMIT TRAILER PAD) EACH	REMARKS
0010	UNDISTRIBUTED	11	
	TOTAL 0010	11	

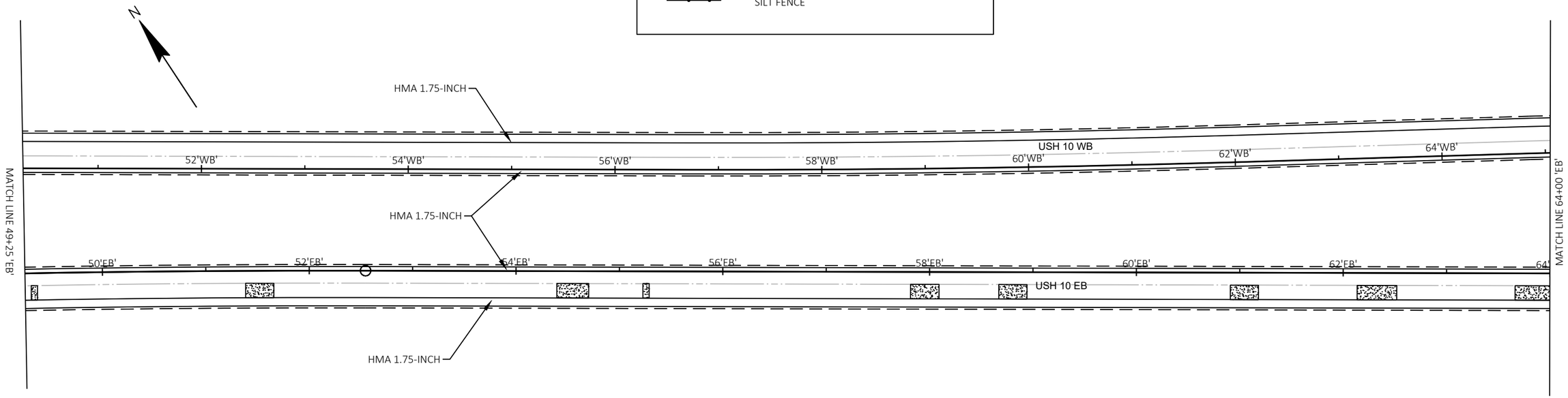


PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 43	E



LEGEND

- CONCRETE PAVEMENT REPAIR/REPLACEMENT
- BEAM GUARD
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE

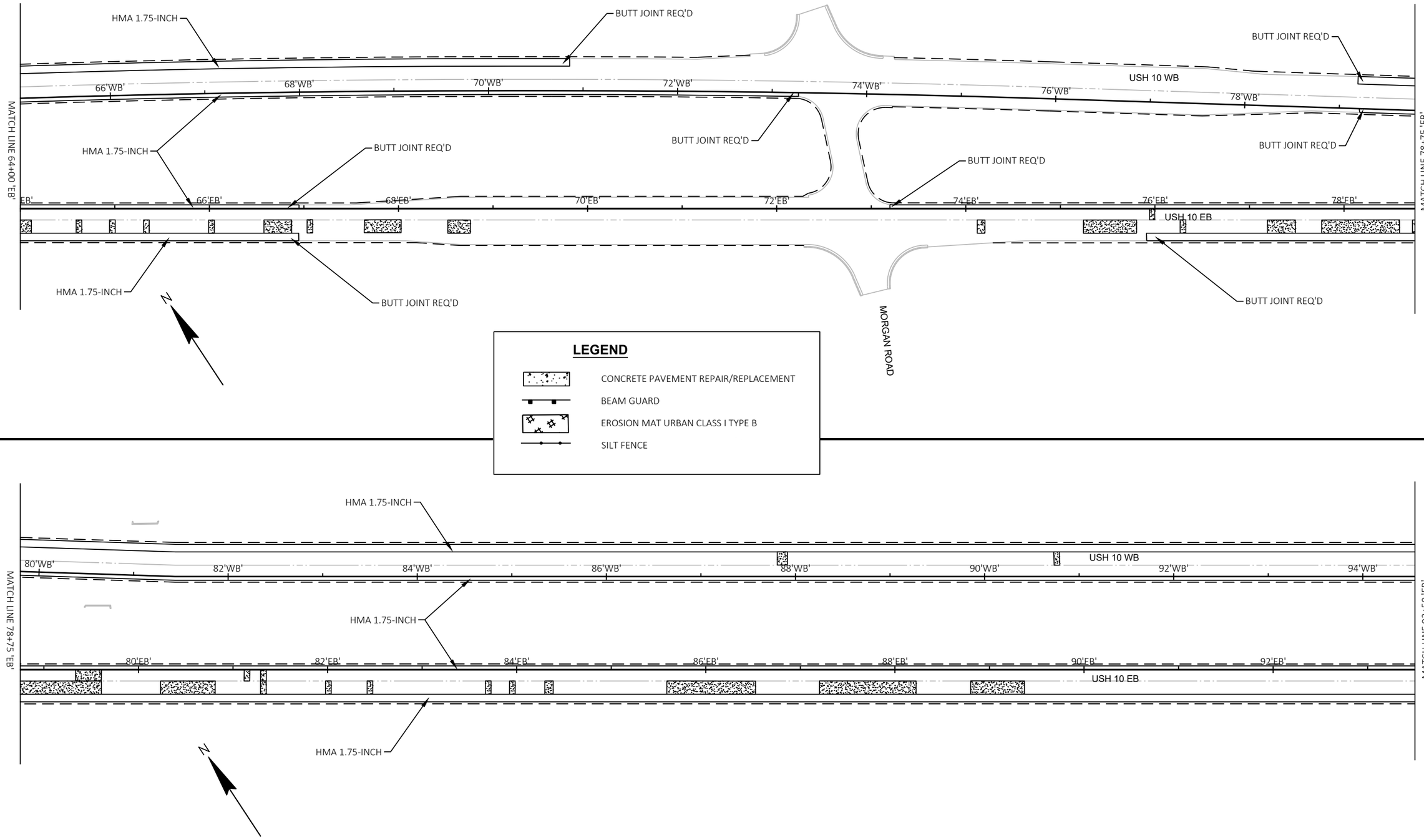


PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 44	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2025 7:44 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME : PLOT SCALE : 1 IN:100 FT

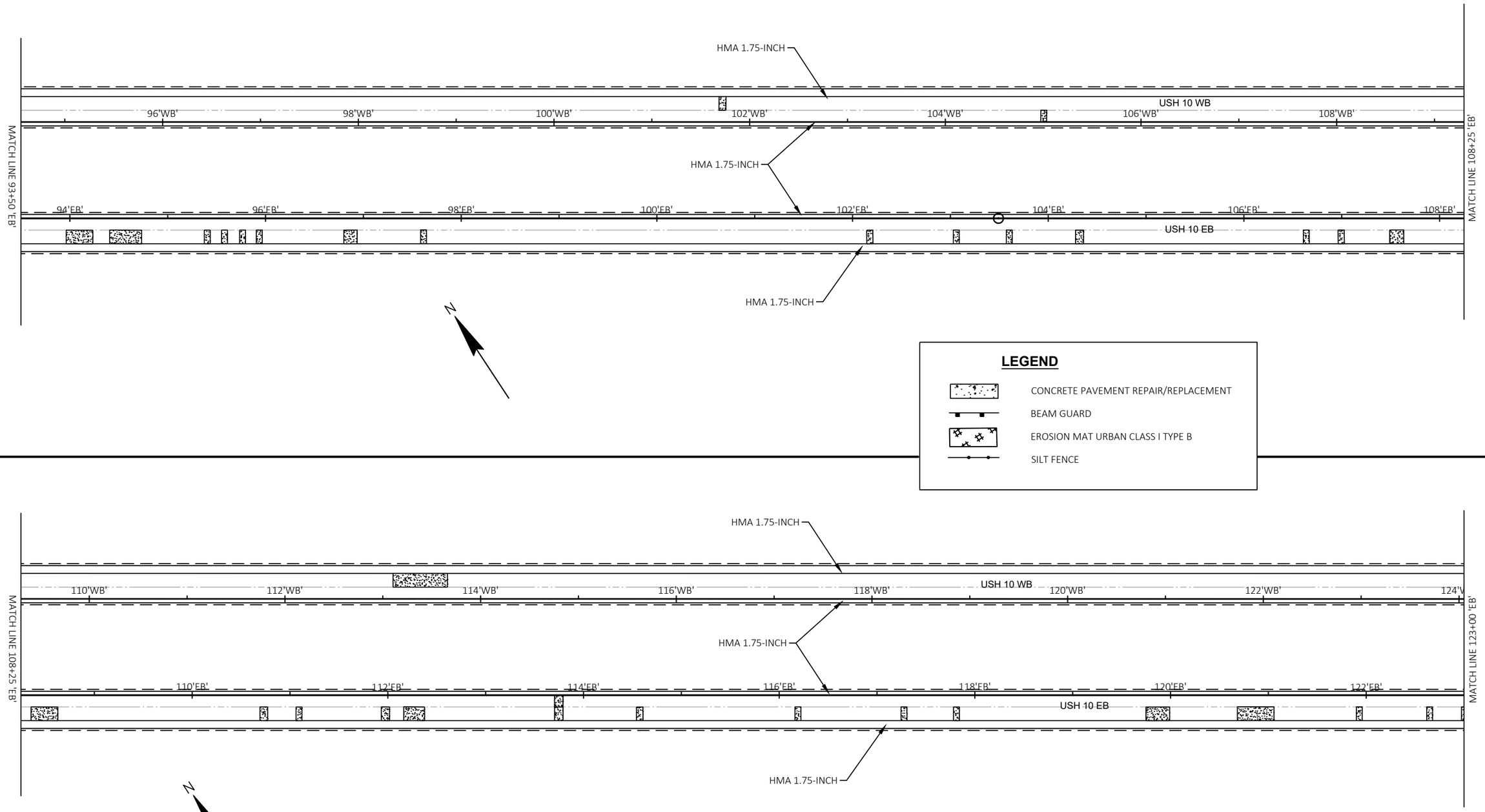
WISDOT/CADDS SHEET 44



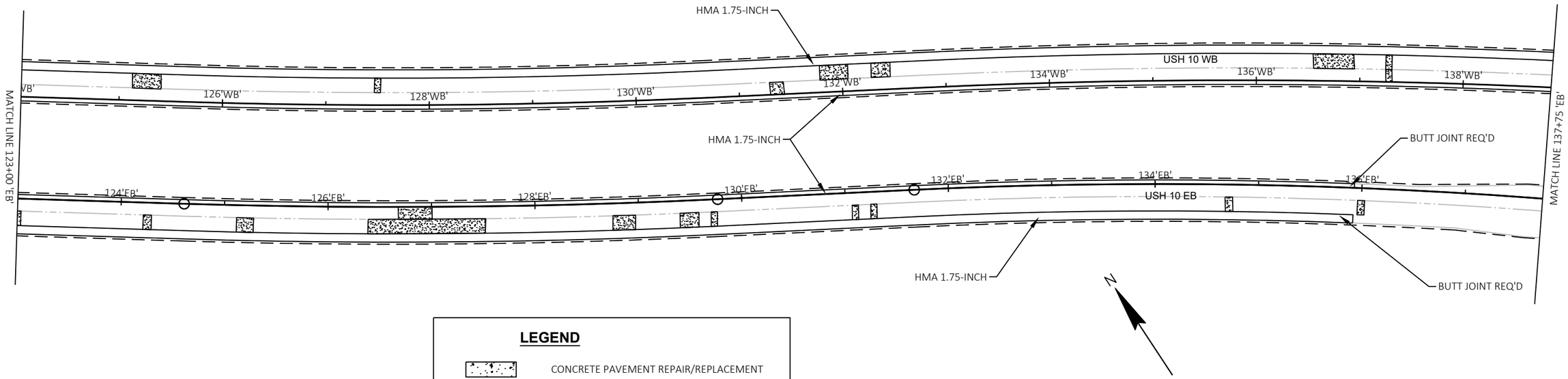
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 45	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 03

PLOT DATE : 7/31/2025 7:45 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME : PLOT SCALE : 1 IN:100 FT

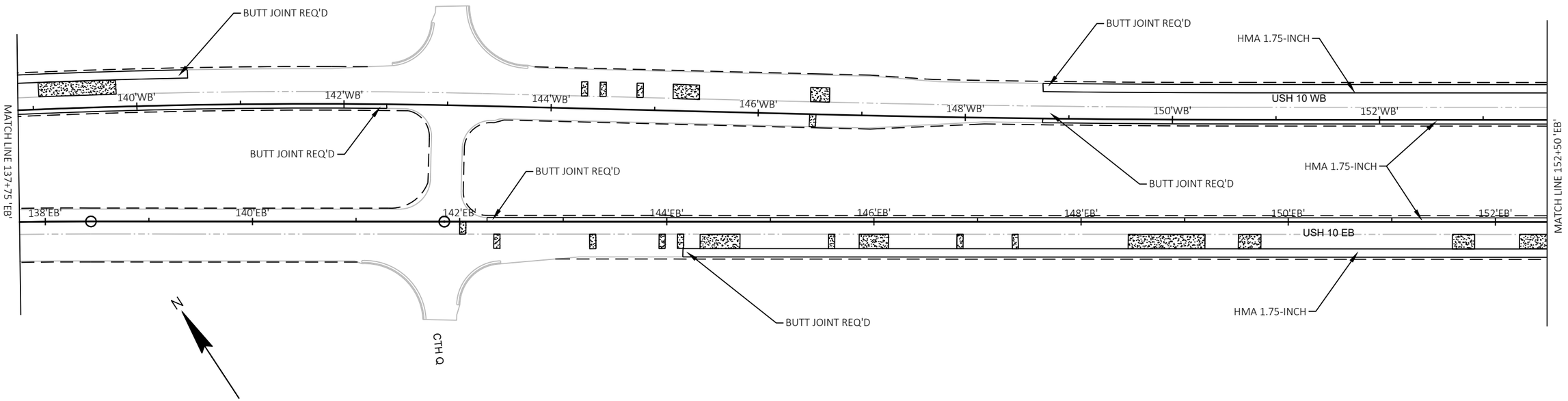


PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 46	E



LEGEND

- CONCRETE PAVEMENT REPAIR/REPLACEMENT
- BEAM GUARD
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE

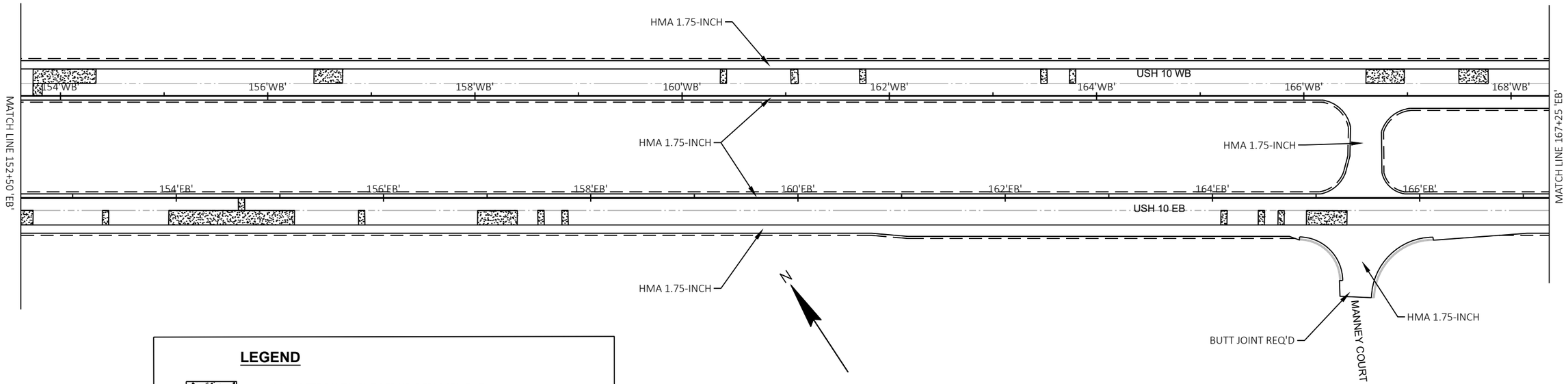


PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 47	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 05

PLOT DATE : 7/31/2025 7:45 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME : PLOT SCALE : 1 IN:100 FT

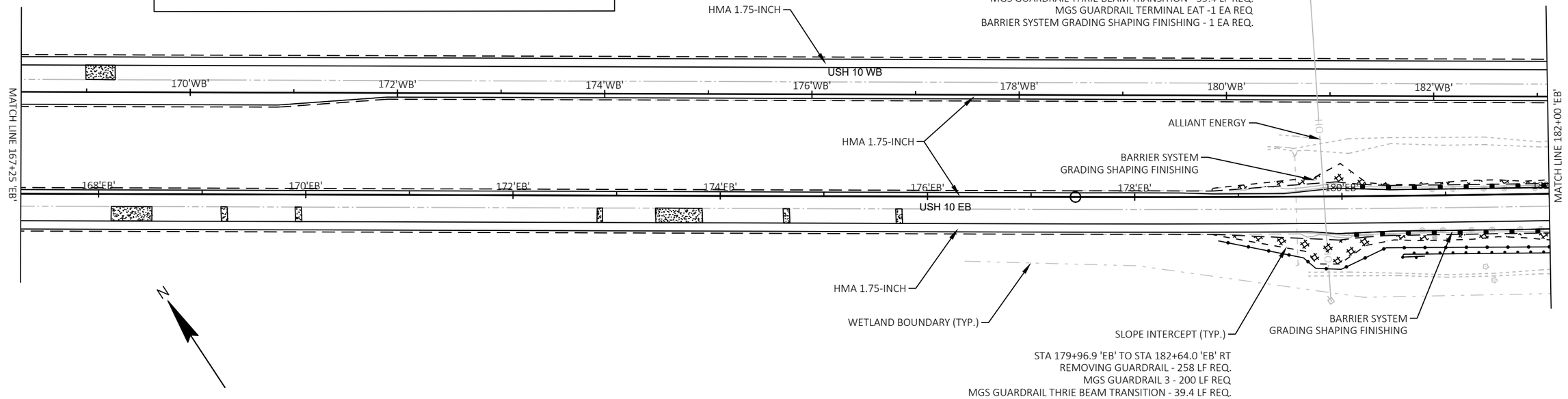
WISDOT/CADDS SHEET 44



LEGEND

- CONCRETE PAVEMENT REPAIR/REPLACEMENT
- BEAM GUARD
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE

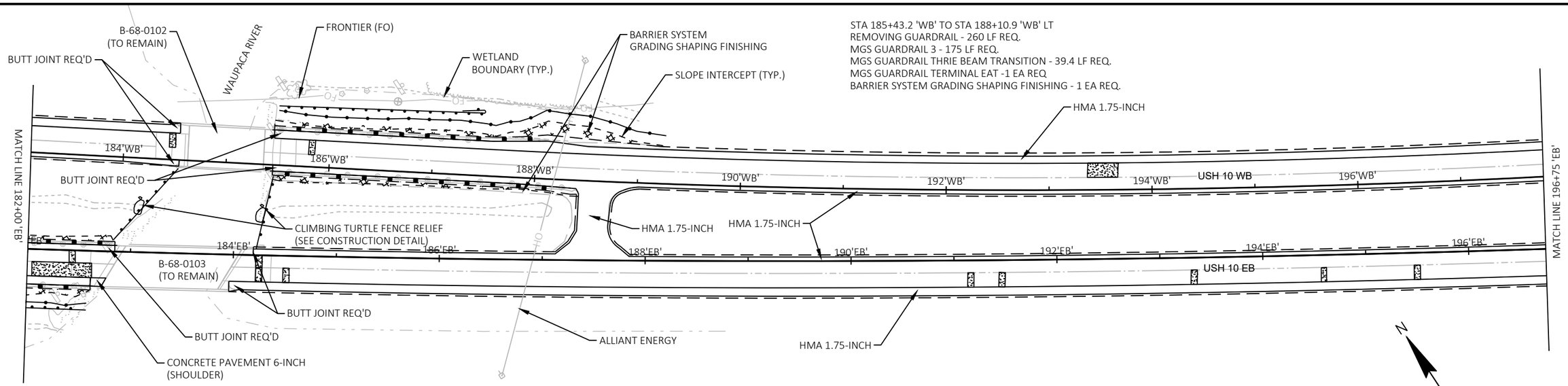
STA 179+94.3 'EB' TO STA 182+86.9 'EB' LT
REMOVING GUARDRAIL - 296 LF REQ.
MGS GUARDRAIL 3 - 200 LF REQ.
MGS GUARDRAIL THRIE BEAM TRANSITION - 39.4 LF REQ.
MGS GUARDRAIL TERMINAL EAT -1 EA REQ
BARRIER SYSTEM GRADING SHAPING FINISHING - 1 EA REQ.



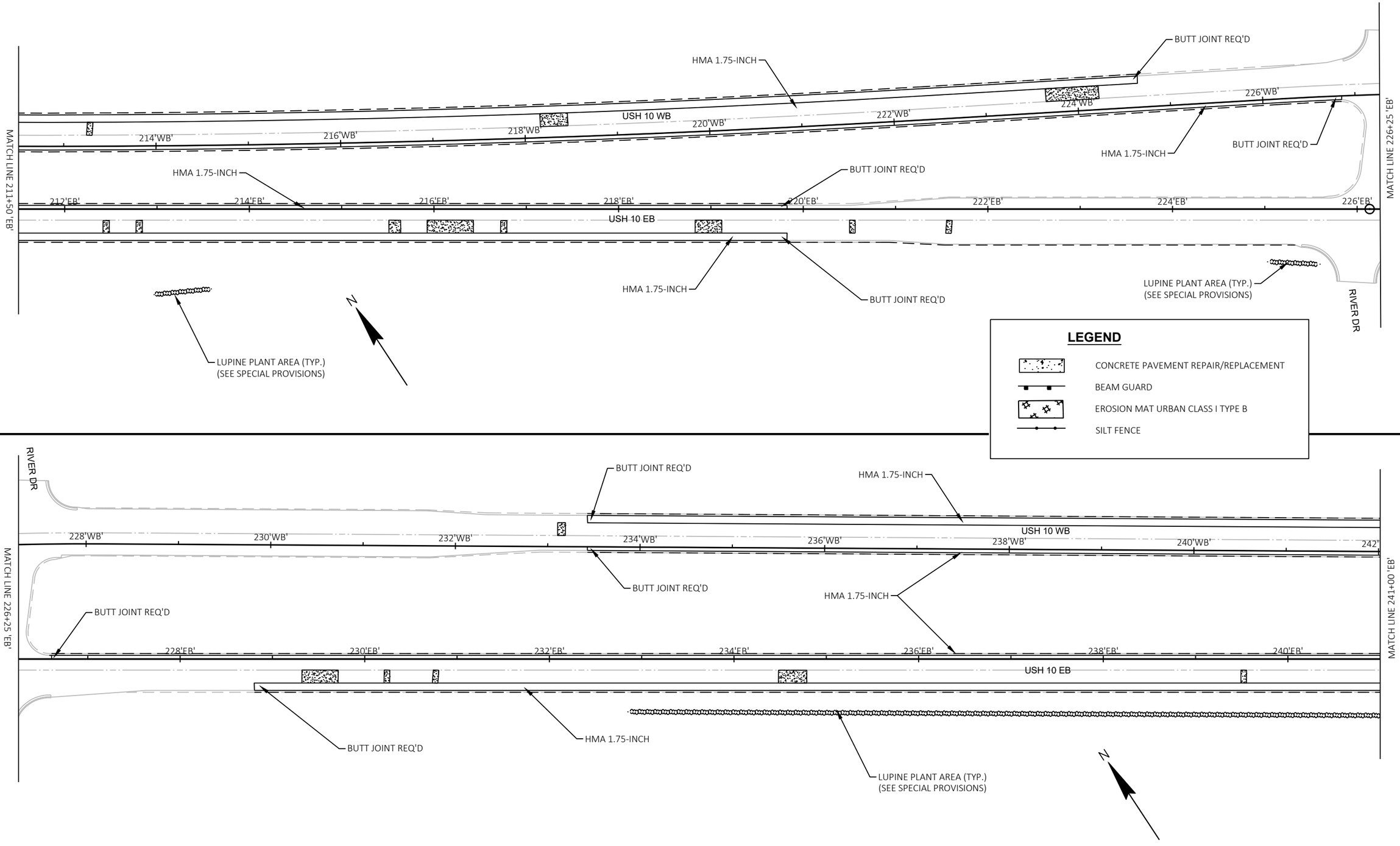
STA 179+96.9 'EB' TO STA 182+64.0 'EB' RT
REMOVING GUARDRAIL - 258 LF REQ.
MGS GUARDRAIL 3 - 200 LF REQ
MGS GUARDRAIL THRIE BEAM TRANSITION - 39.4 LF REQ.
MGS GUARDRAIL TERMINAL EAT - 1 EA REQ
BARRIER SYSTEM GRADING SHAPING FINISHING - 1 EA REQ.

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 48	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 06
PLOT DATE : 7/31/2025 7:45 AM
PLOT BY : BRAD CUNNINGHAM
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



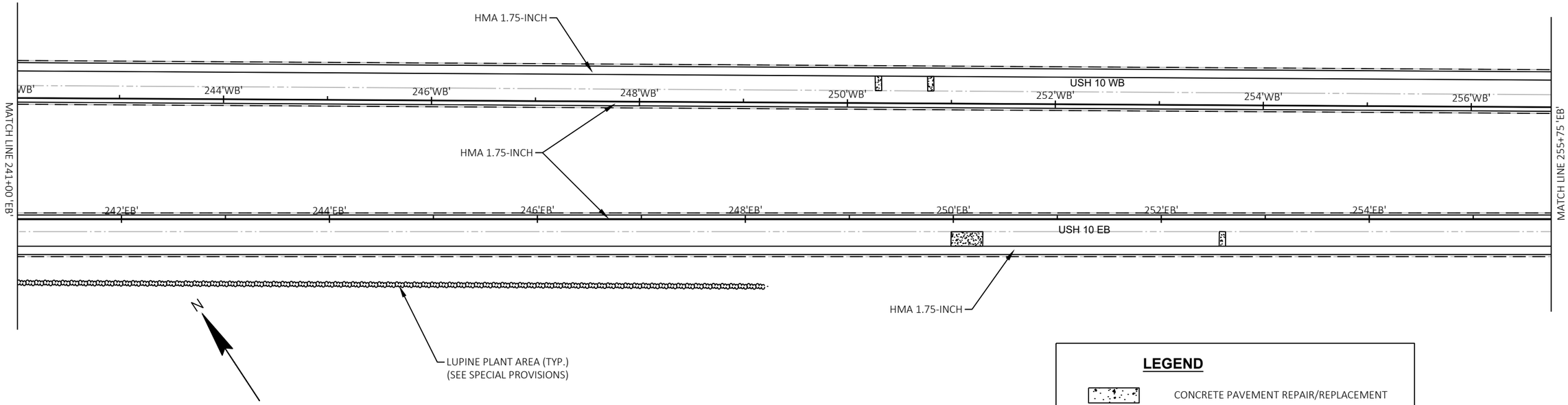
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 49	E



LEGEND

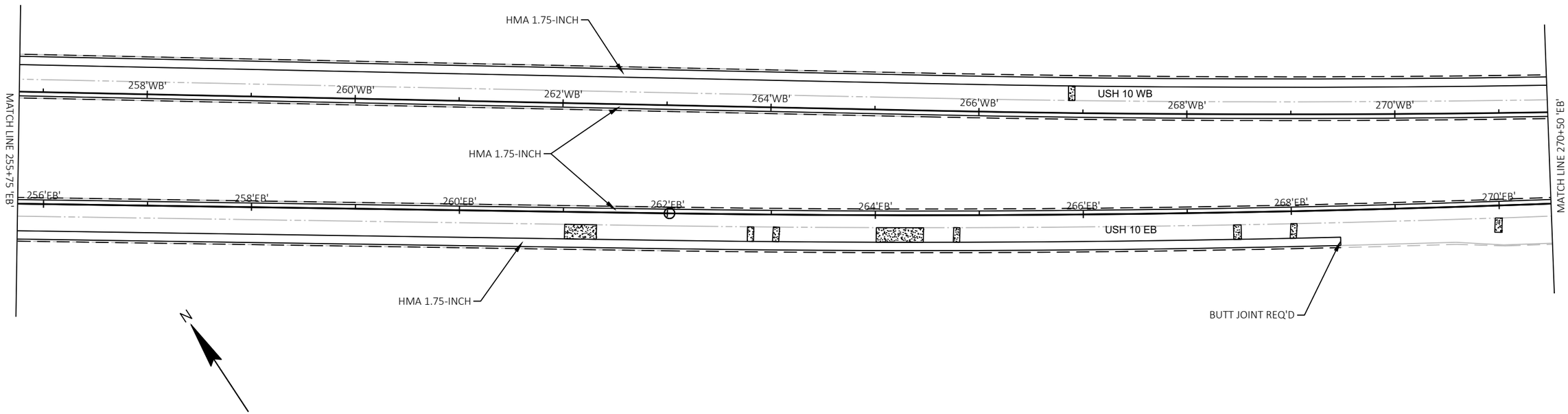
- CONCRETE PAVEMENT REPAIR/REPLACEMENT
- BEAM GUARD
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 50	E

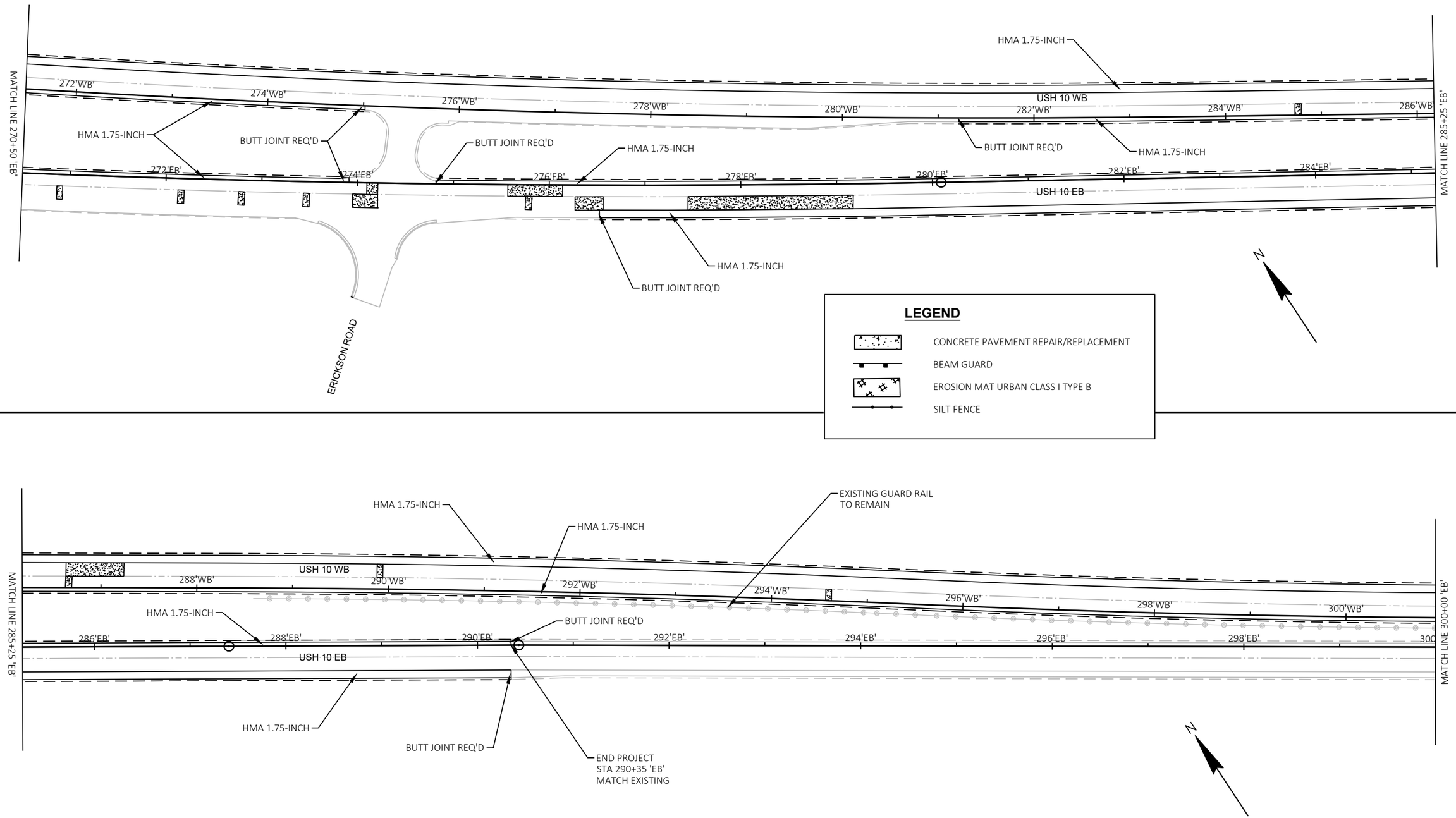


LEGEND

- CONCRETE PAVEMENT REPAIR/REPLACEMENT
- BEAM GUARD
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE

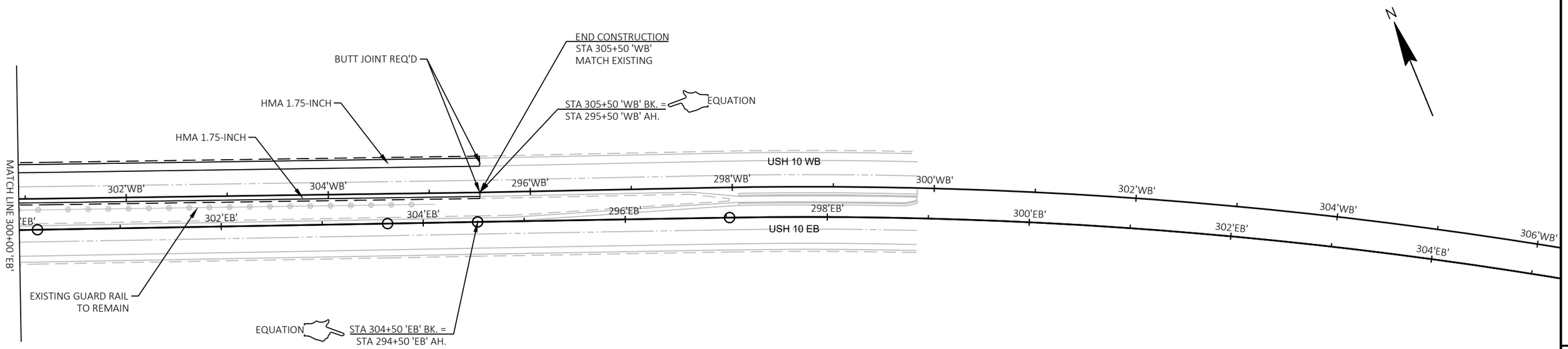


PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 51	E



PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 52	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 10
PLOT DATE : 7/31/2025 7:45 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



5

5

LEGEND

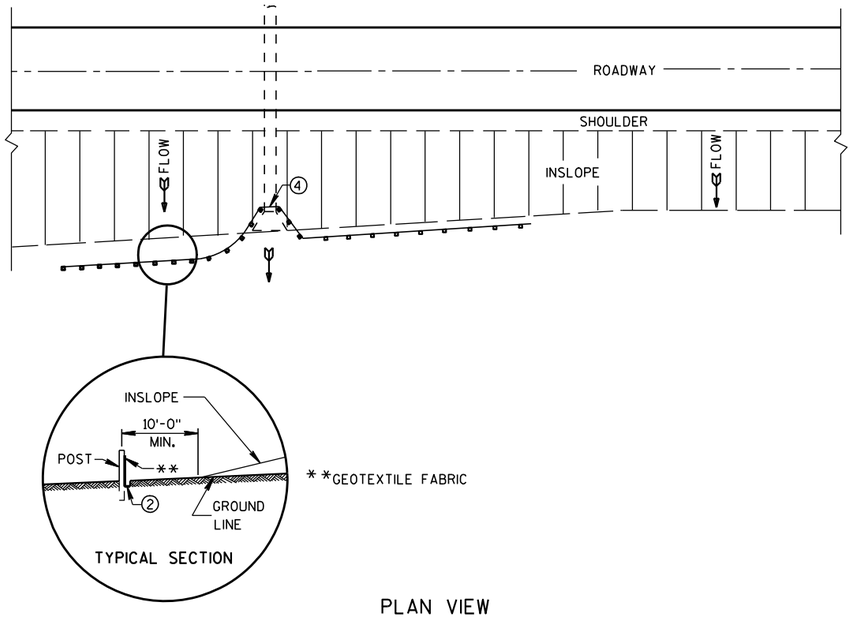
- CONCRETE PAVEMENT REPAIR/REPLACEMENT
- BEAM GUARD
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS AND EROSION CONTROL	SHEET 53	E

Standard Detail Drawing List

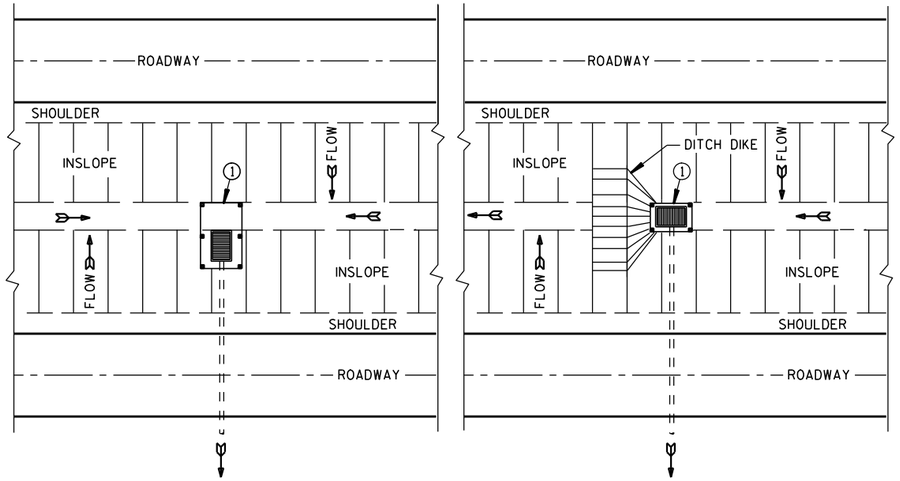
08E09-06	SILT FENCE
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-17A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C11-14A	RURAL DOWELED CONCRETE PAVEMENT
13C11-14B	RURAL DOWELED CONCRETE PAVEMENT
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)
15A04-08C	DELINEATOR POST WITH REFLECTIVE SHEETING
15A04-08D	CHANNELIZING DEVICES, PERMANENT FLEXIBLE TUBULAR MARKER POST
15A04-08E	DELINEATOR POST WITH REFLECTIVE SHEETING
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24C	PAVEMENT MARKING (TURN LANES)
15C08-24D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C19-10C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D12-15D	TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
15D12-15G	TRAFFIC CONTROL, LANE CLOSURE , DIGITAL SPEED REDUCTION SYSTEM
15D15-08C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-08D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-08E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D40-06B	TRAFFIC CONTROL, FULL LANE SHIFT MULTILANE DIVIDED 50 MPH AND OVER
15D43-02	TRAFFIC CONTROL, SHORT DURATION MOBILE OPERATIONS

6



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



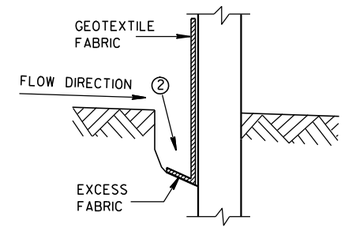
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

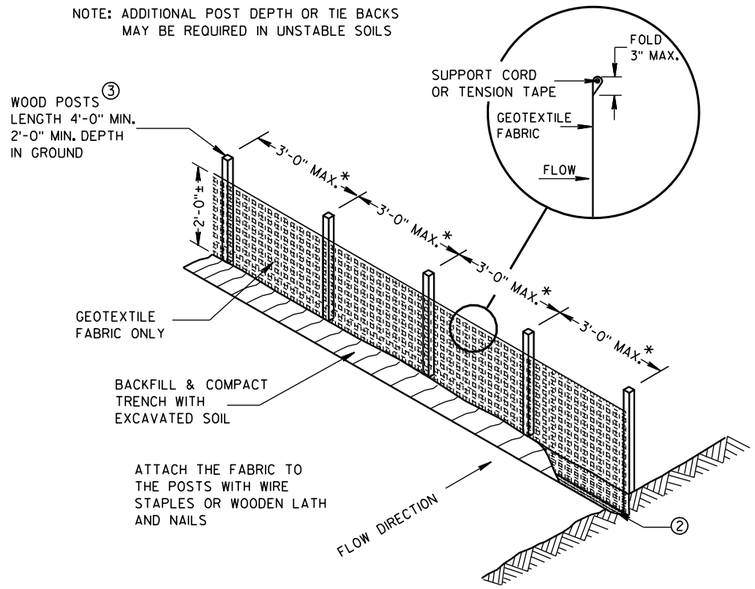
GENERAL NOTES

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

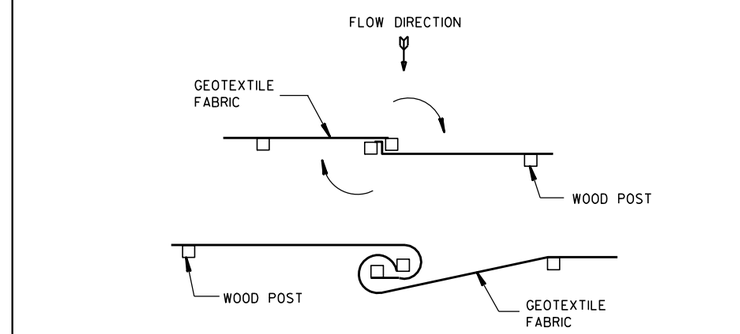
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



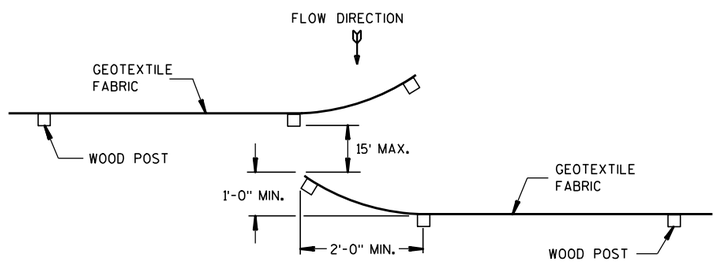
TRENCH DETAIL



SILT FENCE

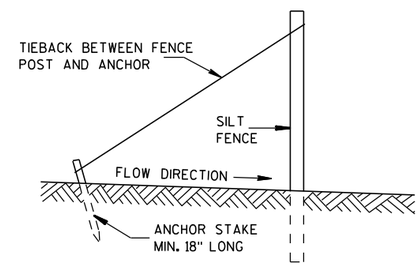


TWIST METHOD



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

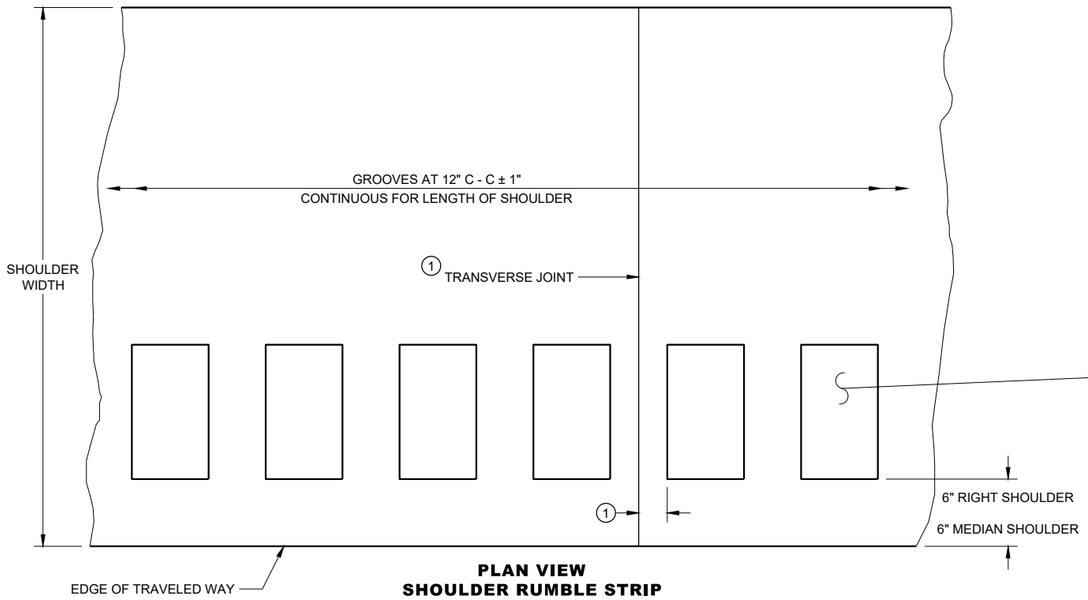
S.D.D. 8 E 9-6

GENERAL NOTES

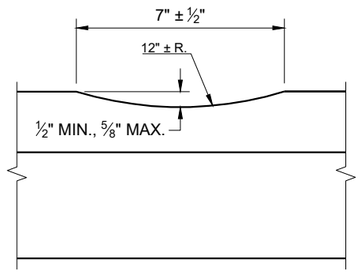
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

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.

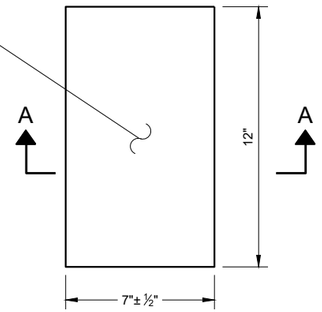
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



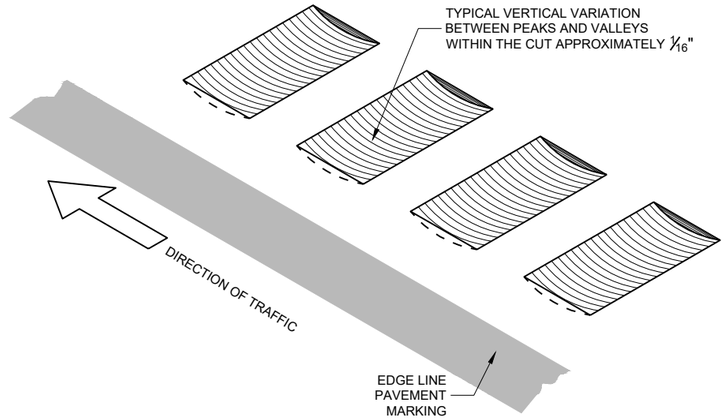
PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A

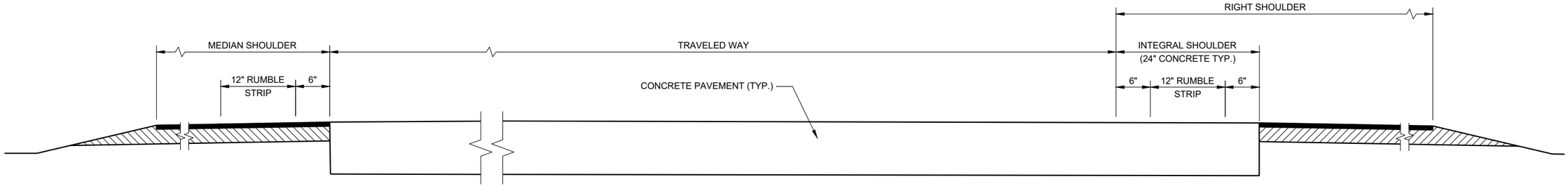


PLAN VIEW
(SINGLE GROOVE)



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP



SECTION VIEW

TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

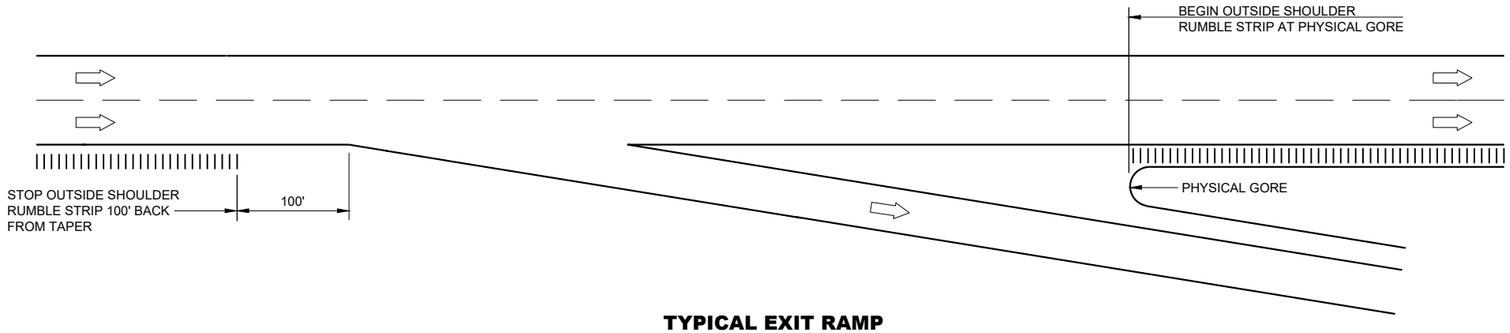
SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

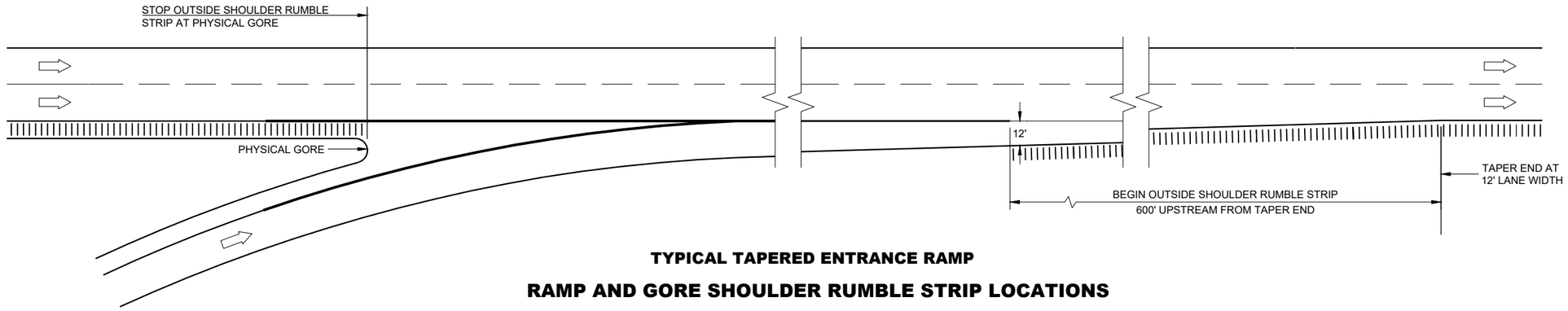
6

SDD 13A05-06a

SDD 13A05-06a

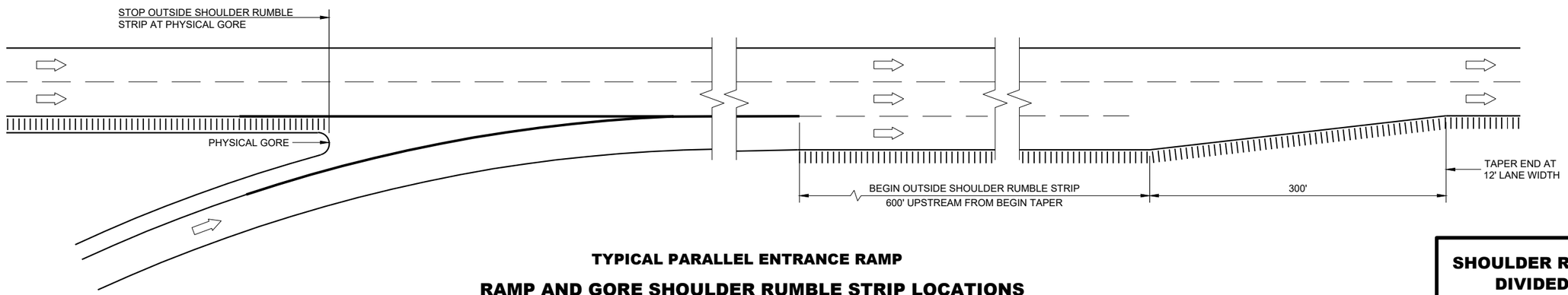


TYPICAL EXIT RAMP



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL 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

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

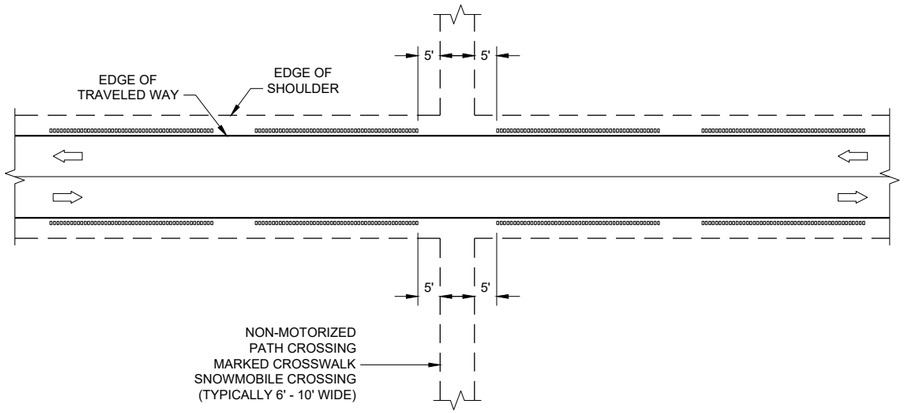
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY DESIGN STANDARDS UNIT SUPERVISOR

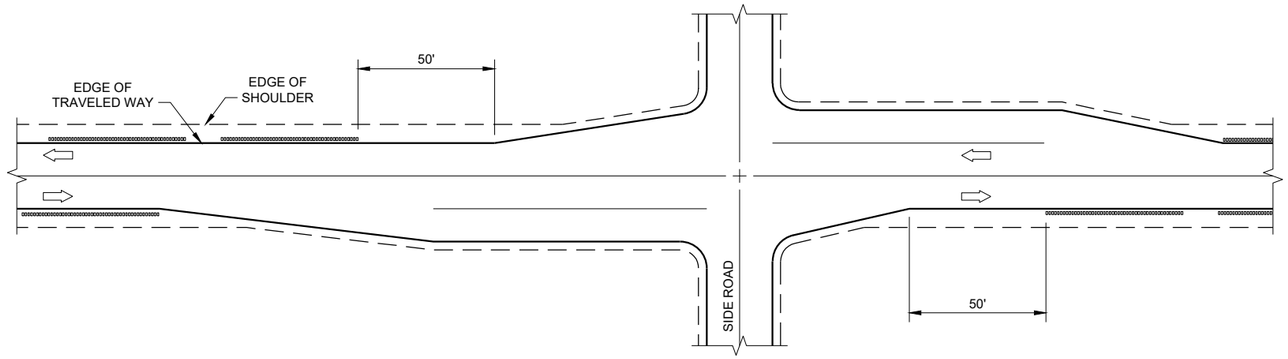
FHWA

6

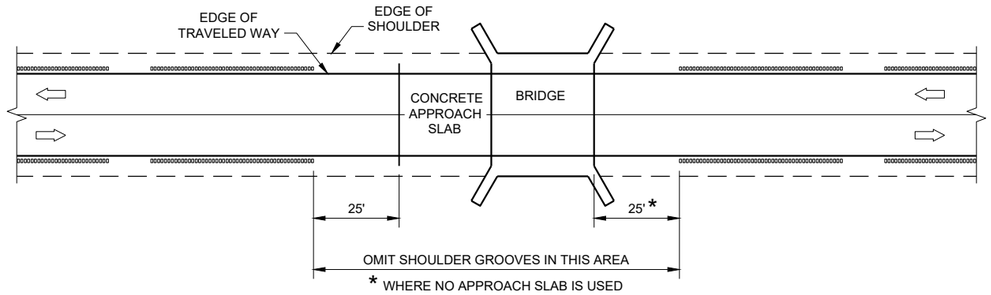
SDD 13A05-06b



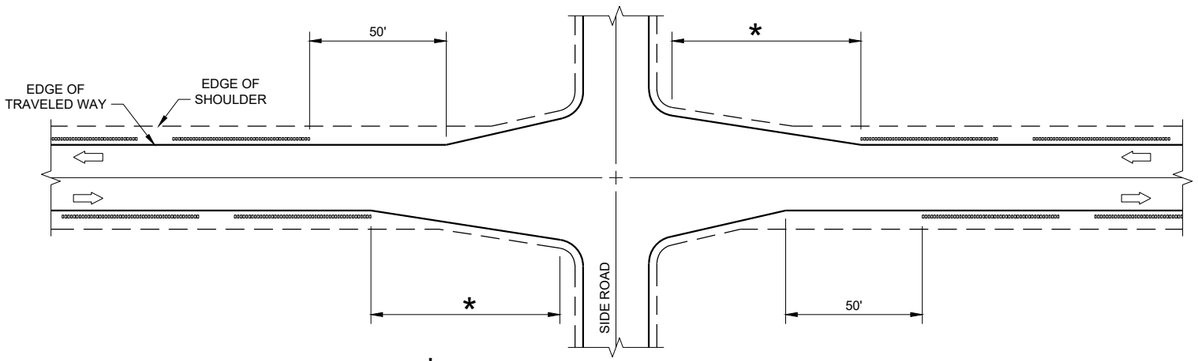
GROOVES AT MISCELLANEOUS CROSSINGS



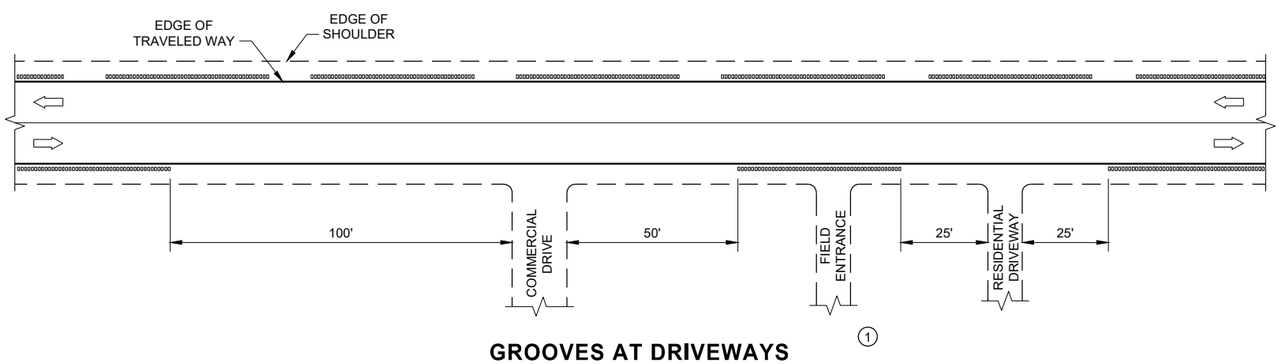
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



GROOVES AT DRIVEWAYS ①

GENERAL NOTES

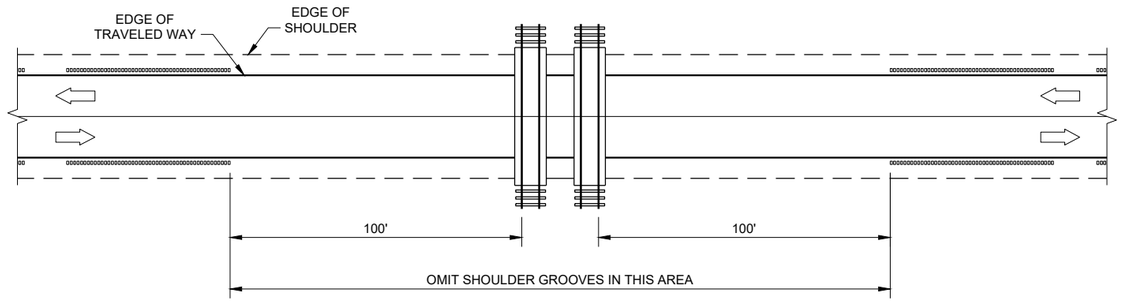
① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

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

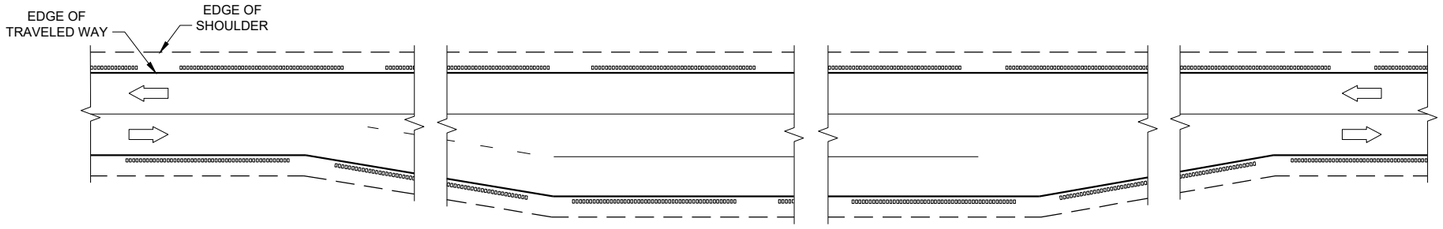
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

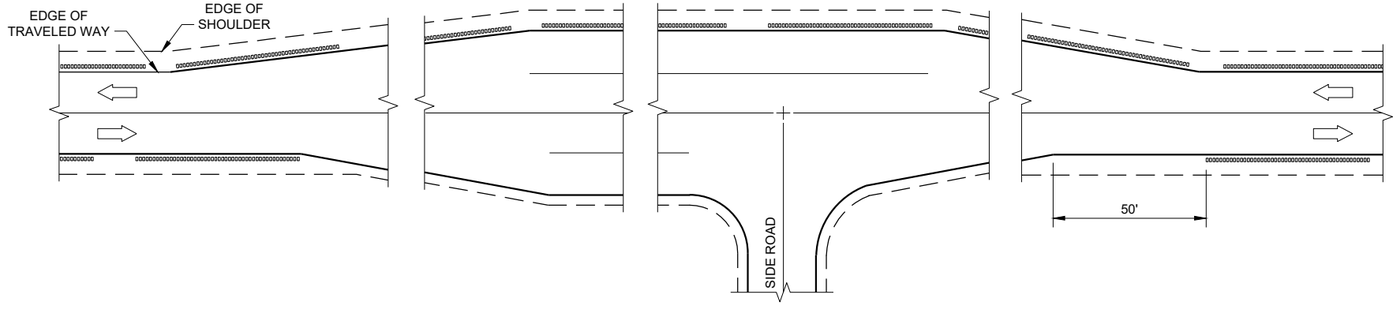
SDD 13A10 - 03g
SDD 13A10 - 03g



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

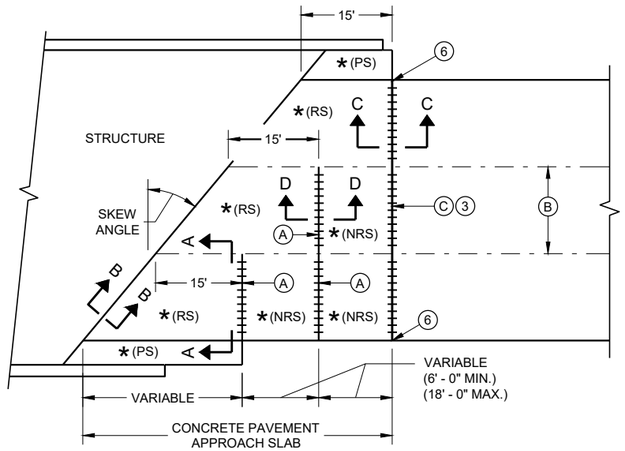
May 2023
DATE

/S/ John Jenkins
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 13A10 - 03h



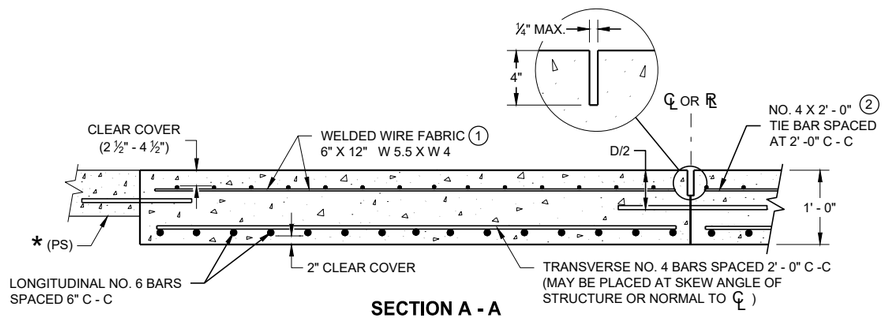
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

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

* (NRS) - NON - REINFORCED CONCRETE SLAB

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



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

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

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

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

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

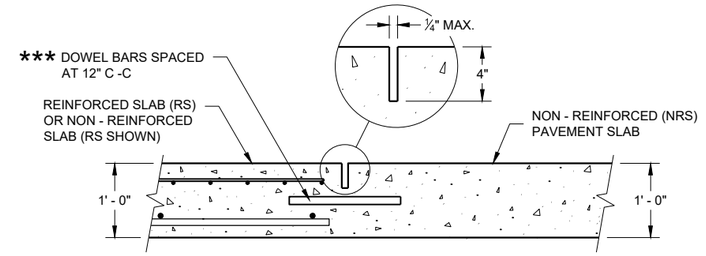
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

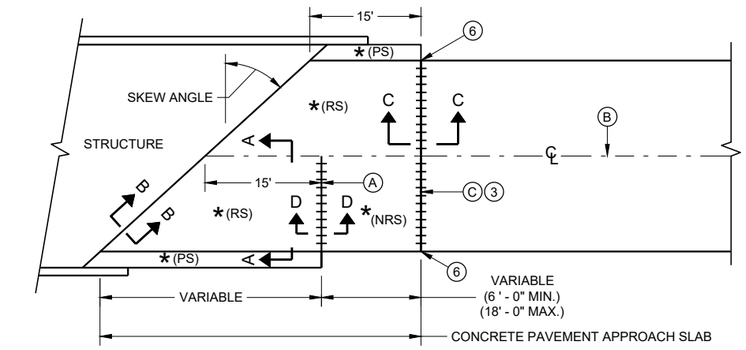
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

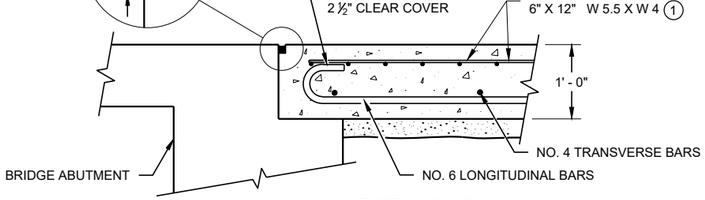
(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



SECTION D - D
CONTRACTION JOINT

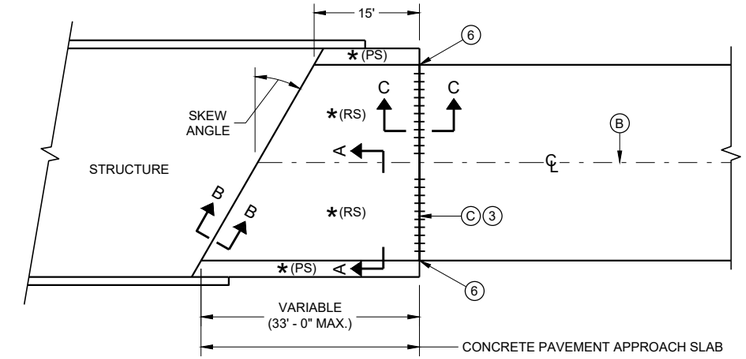


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



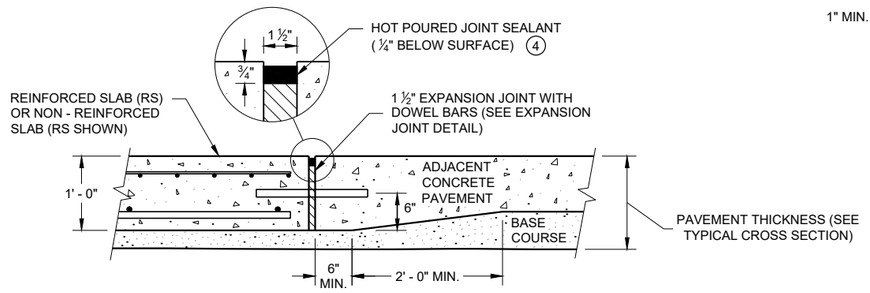
SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

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

FHWA

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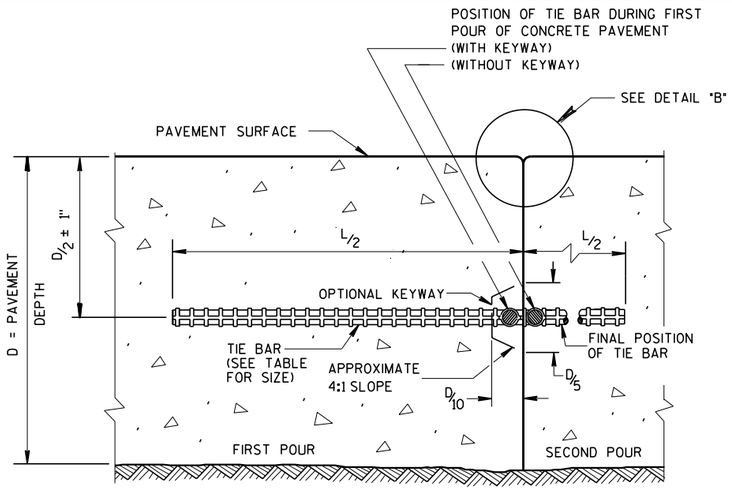
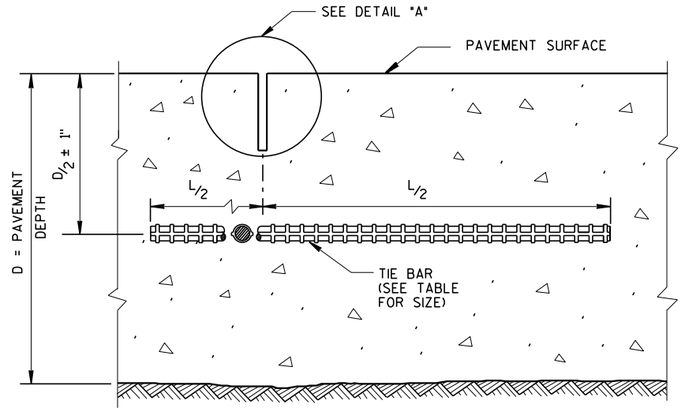
SDD 13B02 - 09a



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

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

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

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

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kerr, P.E. — PAVEMENT SUPE
FHWA

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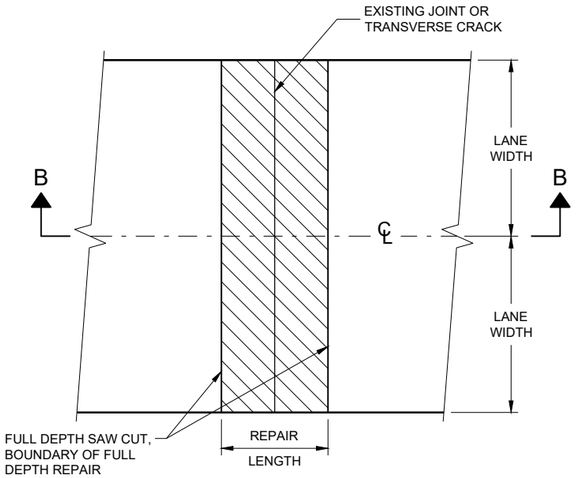
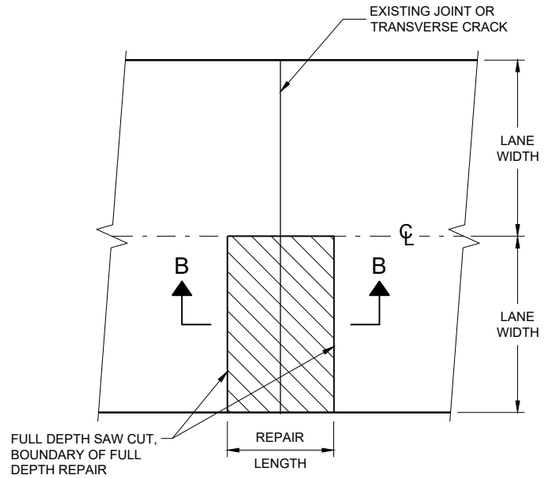


PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

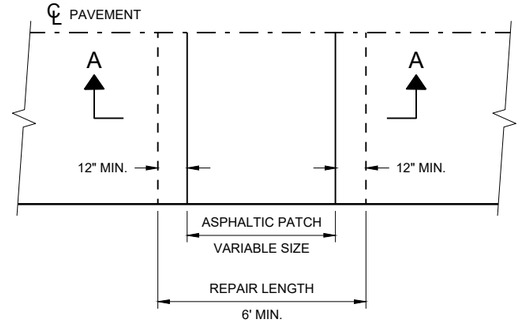
GENERAL NOTES

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

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

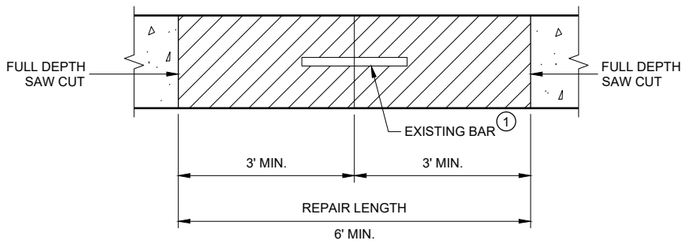
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.



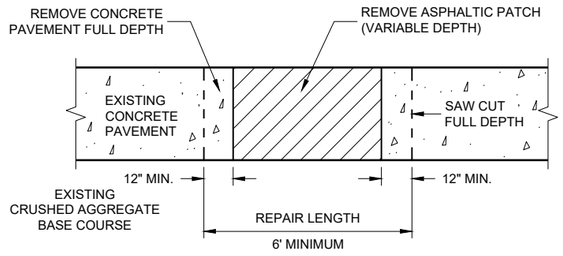
PLAN VIEW

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B

CONCRETE REMOVAL



SECTION A - A

HMA PATCH REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

SDD13C09 - 17a

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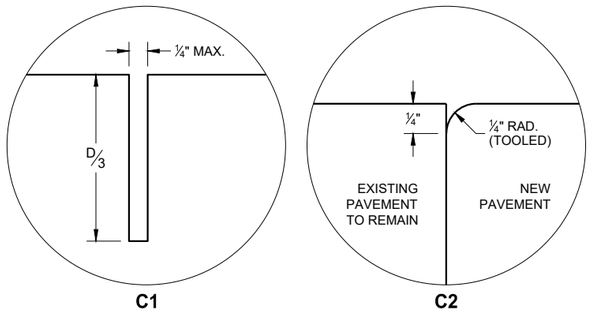
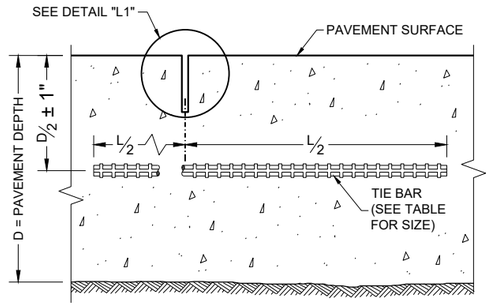
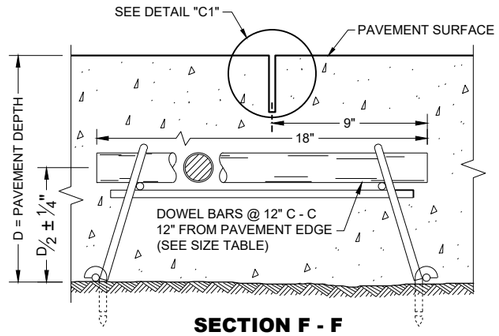


TRANSVERSE JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

DOWELED CONTRACTION JOINT

GENERAL NOTES

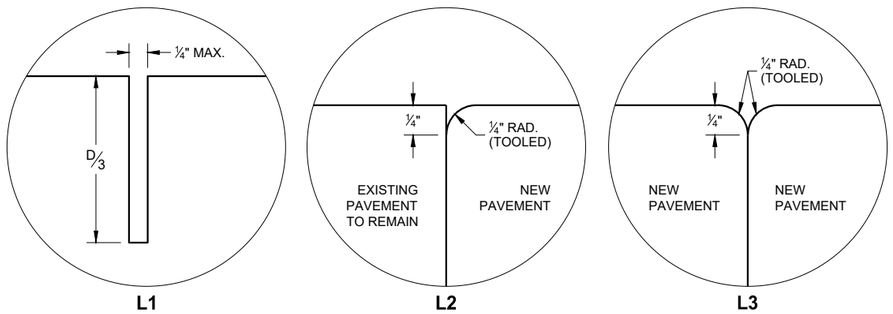
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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

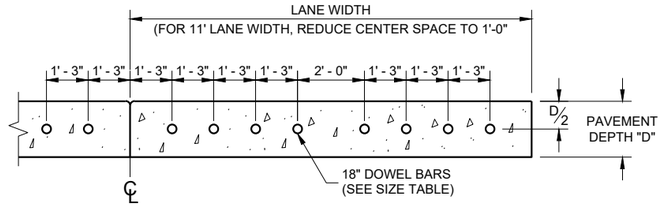
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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

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

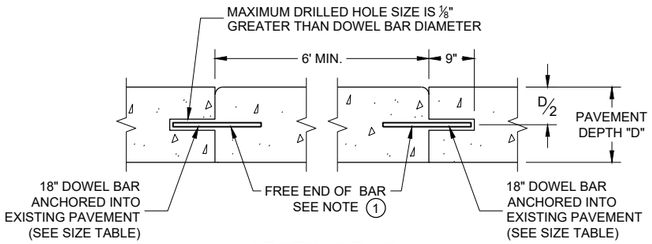


LONGITUDINAL JOINTS



SECTION E - E

DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

TIE BAR TABLE

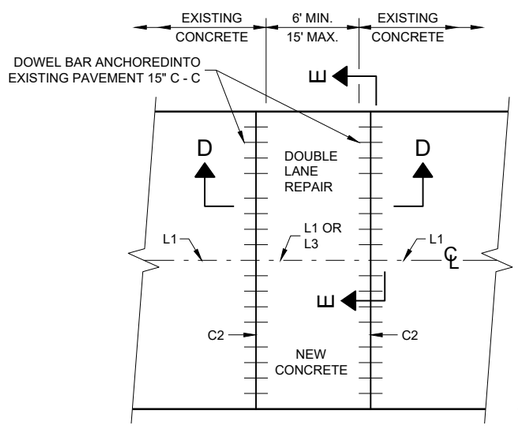
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

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

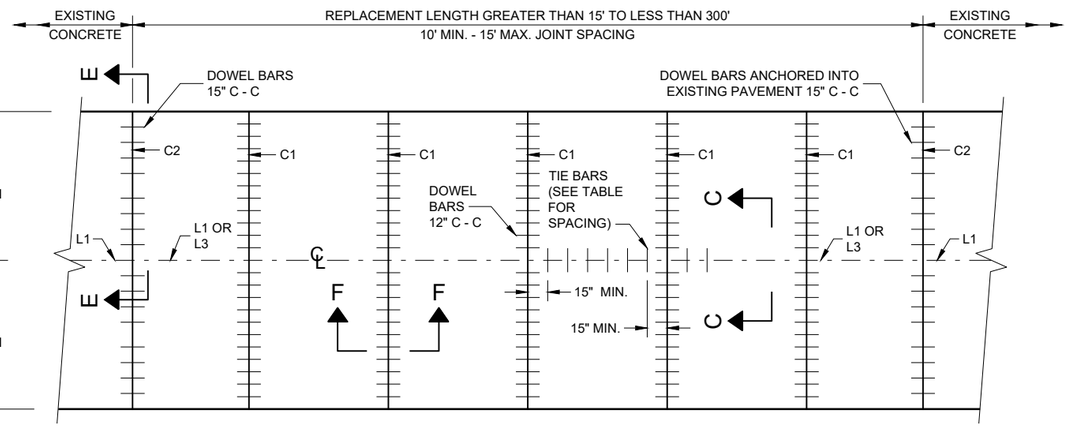
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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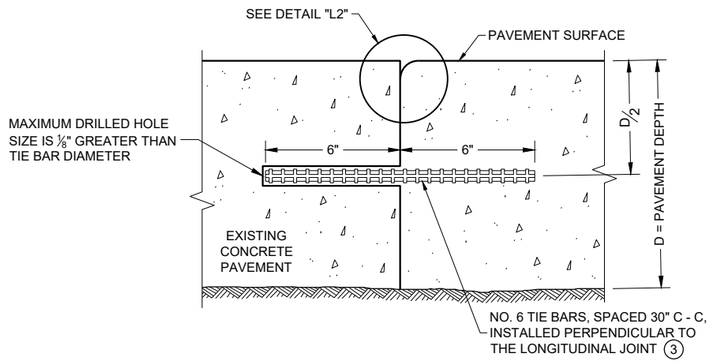
SDD 13C09 - 17b
SDD 13C09 - 17b

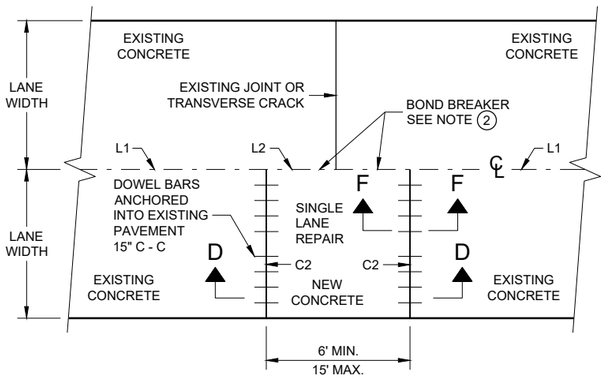


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

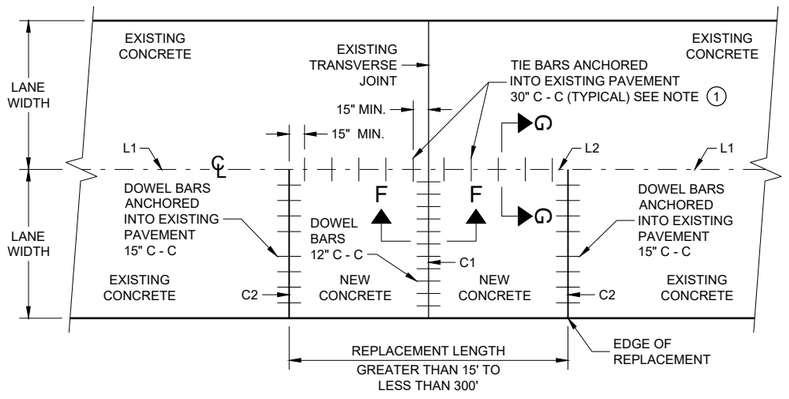
GENERAL NOTES

1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
2. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
3. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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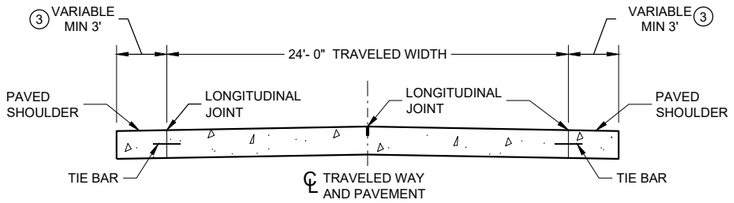
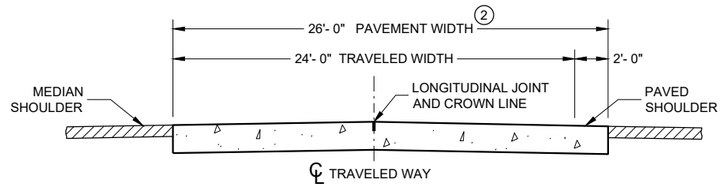
SDD 13C09 - 17c

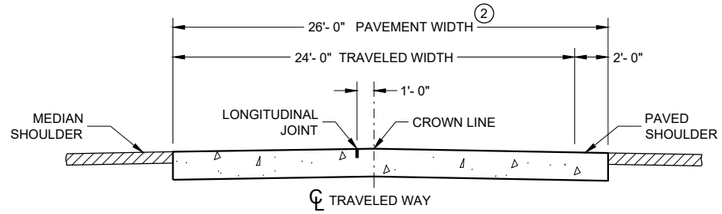


SECTION A - A

TWO-LANE TWO-WAY HIGHWAY (1)



SECTION B - B



ALTERNATIVE SECTION B - B

DIVIDED HIGHWAY (1)

GENERAL NOTES

CONTRACTION JOINTS

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

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

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

CONSTRUCTION JOINTS

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

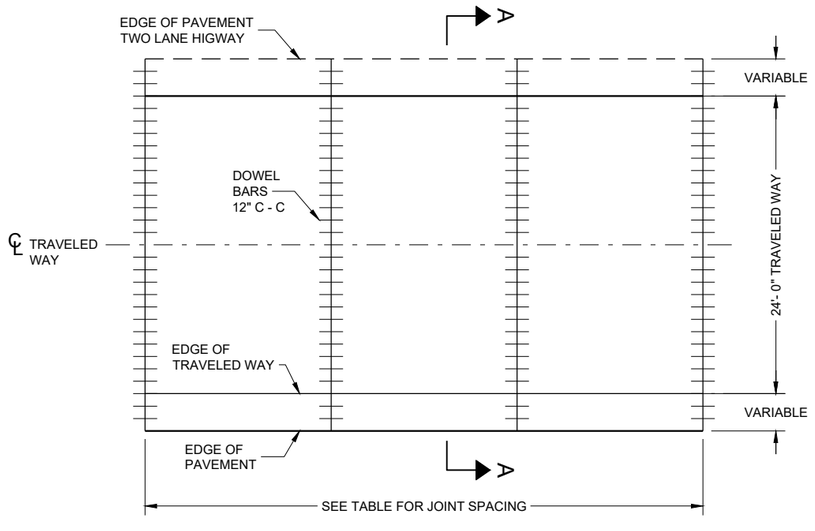
(1) REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

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

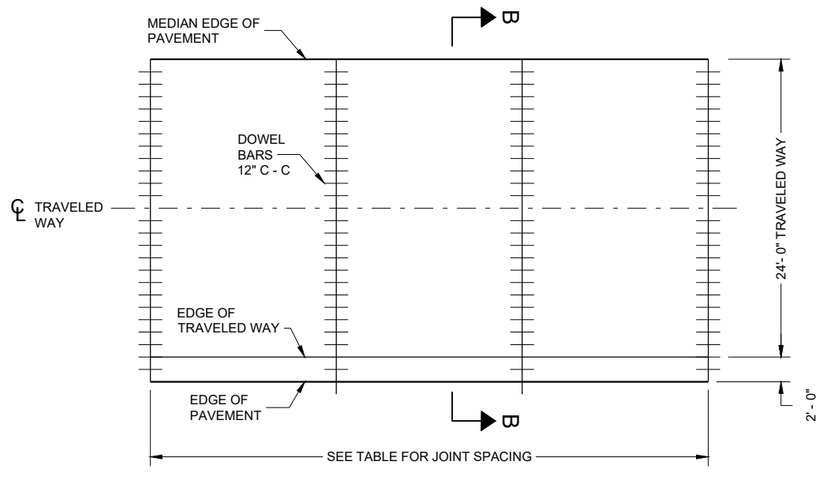
(3) SHOULDER WIDTHS LESS THAN 3 FEET SHALL BE PAVED INTEGRAL TO THE MAINLINE CONCRETE PAVEMENT, SEE SECTION B-B.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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



CONTRACTION JOINT LAYOUT FOR TWO-LANE TWO-WAY HIGHWAY



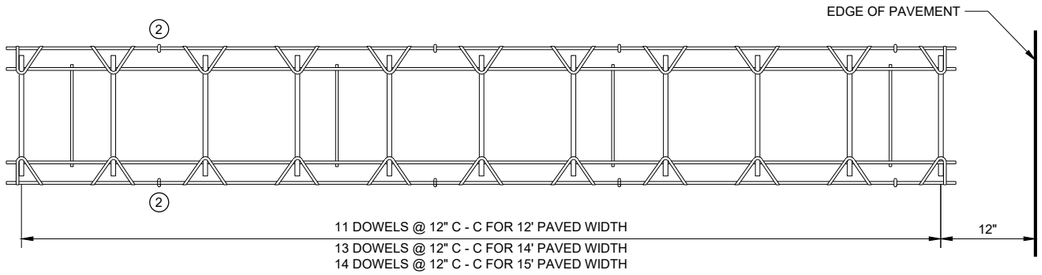
CONTRACTION JOINT LAYOUT FOR DIVIDED HIGHWAY

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 13C11 - 14a

SDD13C11 - 14a



PLAN VIEW

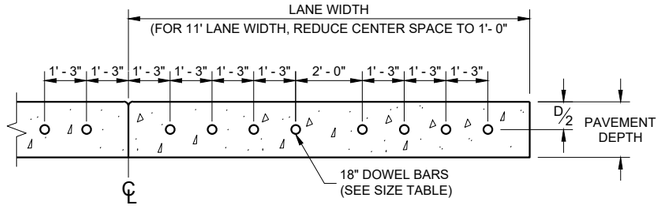
SIDE VIEW

(NORMAL TO CENTERLINE)

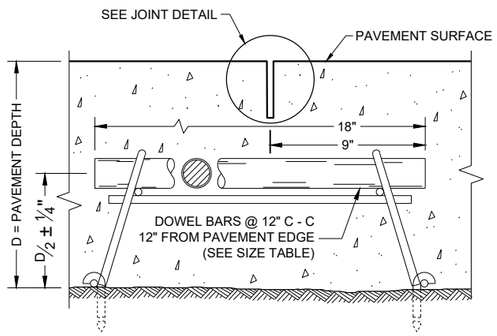
CONTRACTION JOINT DOWEL ASSEMBLY (1)

GENERAL NOTES

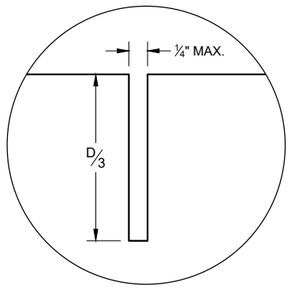
1. OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.
2. SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
3. FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼" RADIUS AT FORMED JOINTS.
4. PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
5. INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.
6. APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
7. ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



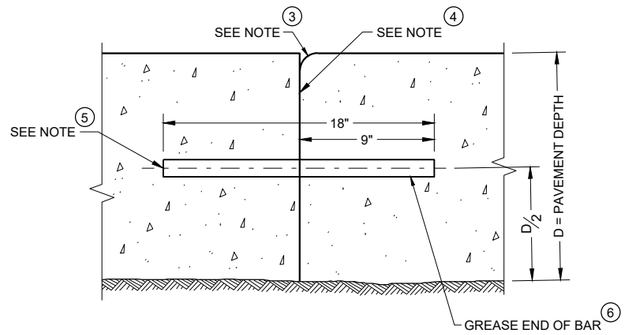
DRILLED DOWEL BAR CONSTRUCTION JOINT (7)



DOWELED CONTRACTION JOINT



JOINT DETAIL



TRANSVERSE CONSTRUCTION JOINT

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISOR

FHWA

6

SDD 13C11 - 14b

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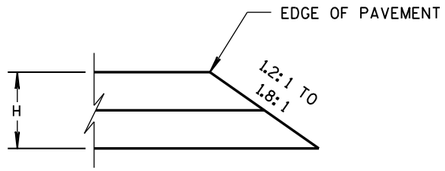
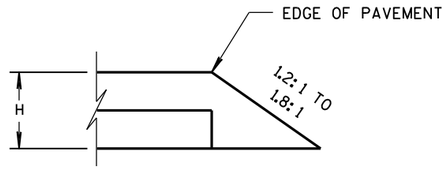
SDD 13C11 - 14b



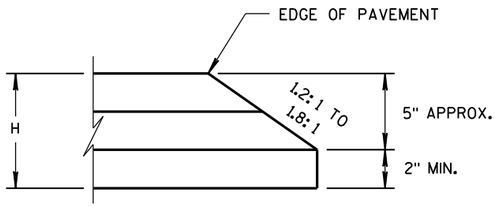
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



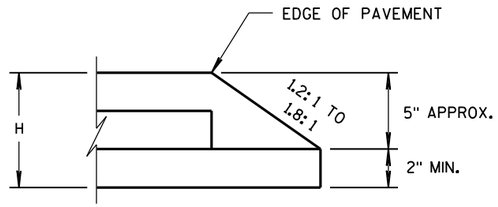
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

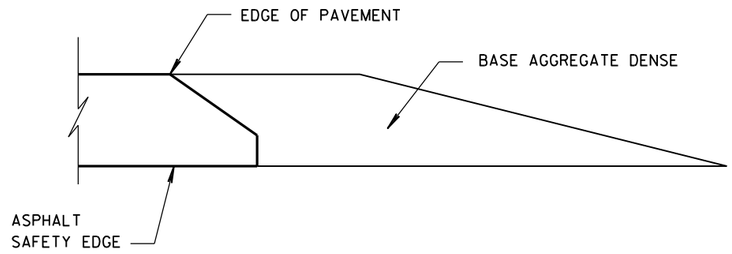
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

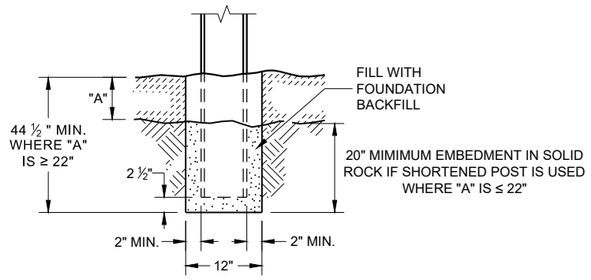
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

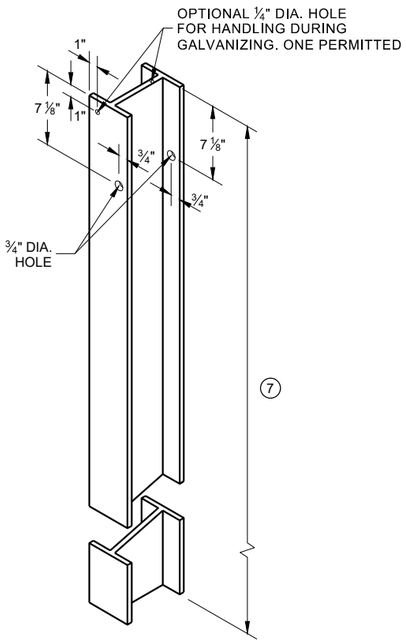
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

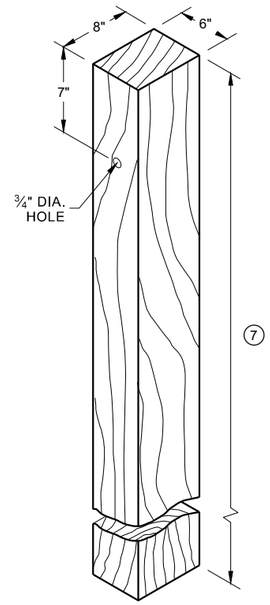
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



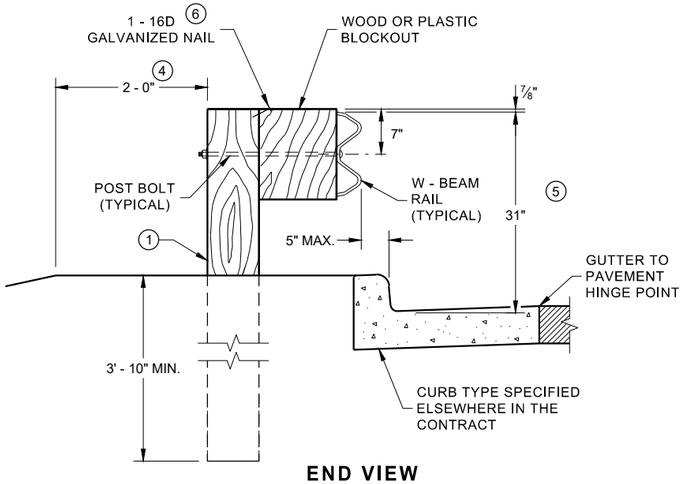
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



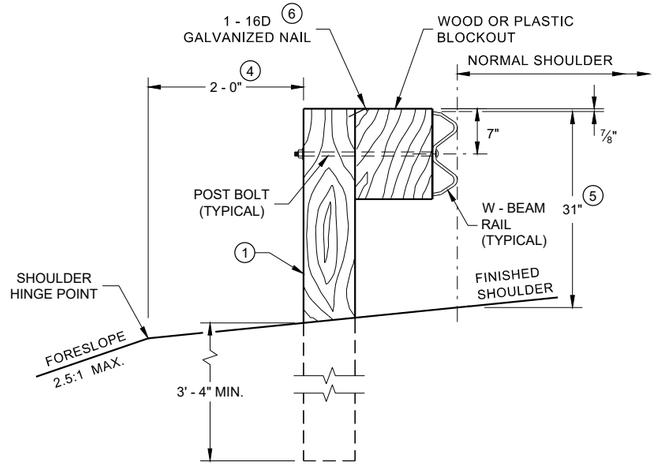
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



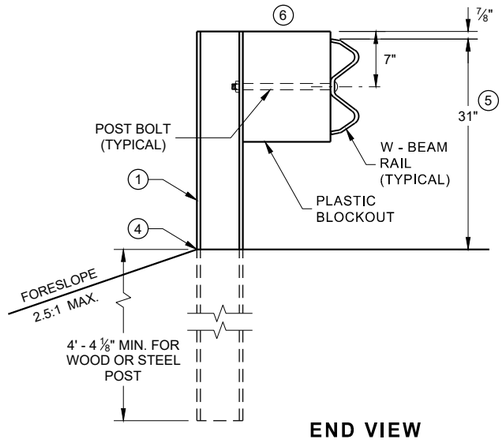
WOOD POST (6" X 8") NOMINAL (1)



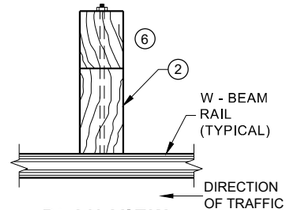
END VIEW
LOCATED ALONG A CURBED ROADWAY



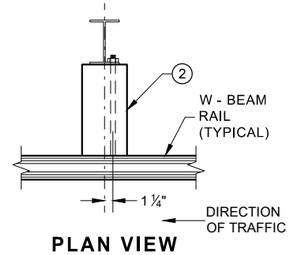
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



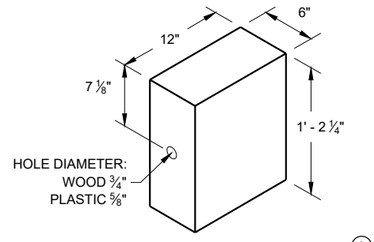
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 07a

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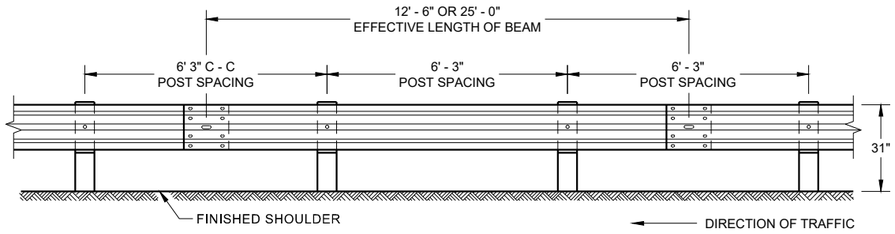
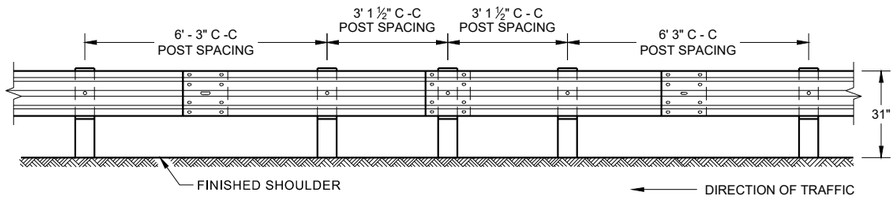
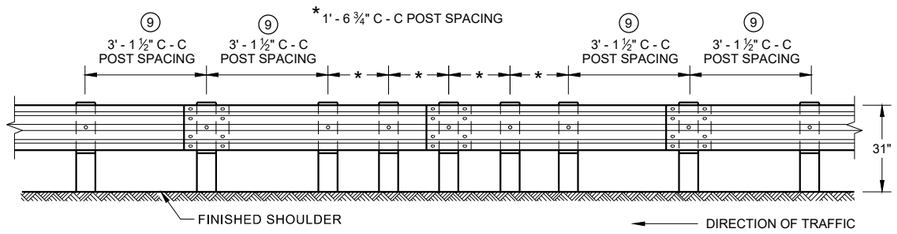


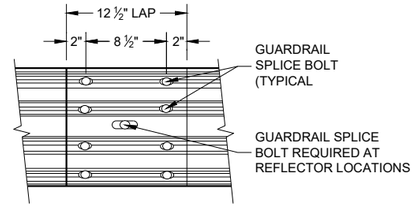
FRONT VIEW
POST SPACING STANDARD INSTALLATION



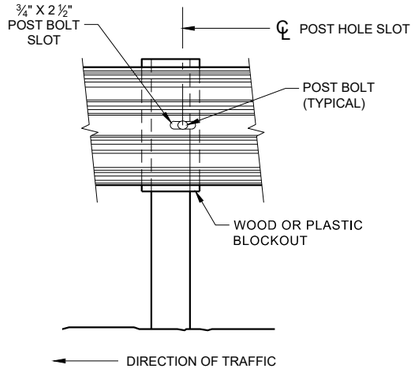
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



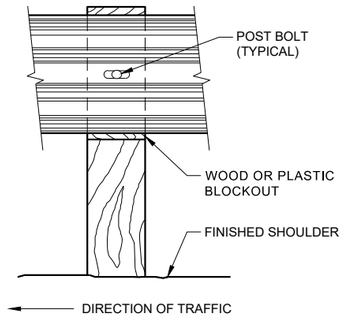
FRONT VIEW
QUARTER POST SPACING (QS)



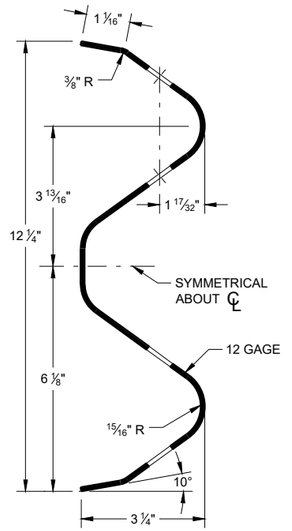
FRONT VIEW
MID-SPAN BEAM SPLICE



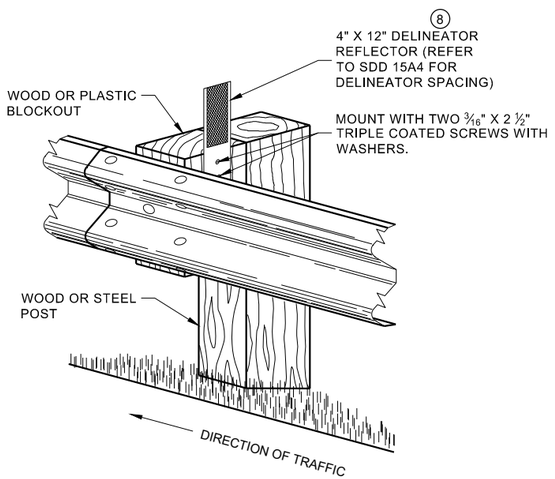
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

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

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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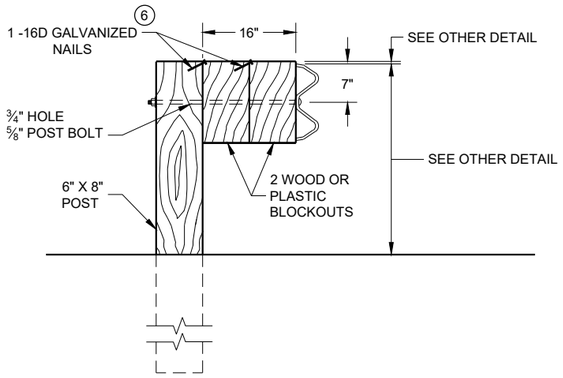
SDD 14B42 - 07b
SDD 14B42 - 07b

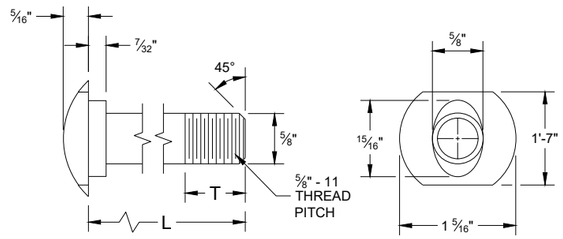


DETAIL FOR 16" BLOCKOUT DEPTH

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.

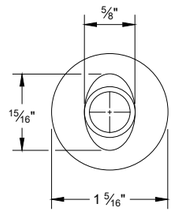
NOTE:

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.

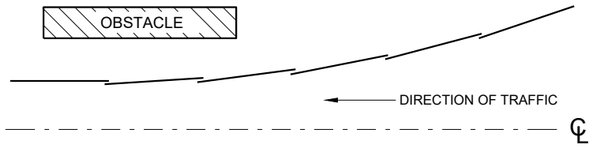


POST BOLT TABLE

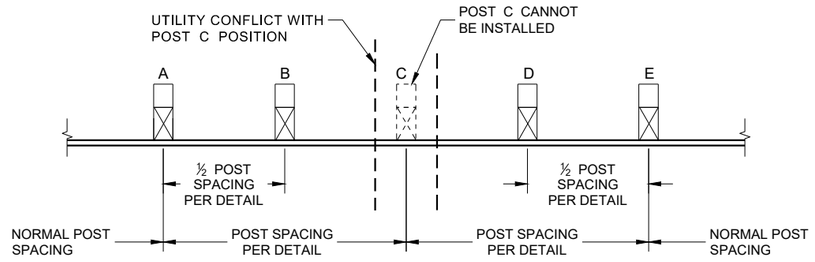
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



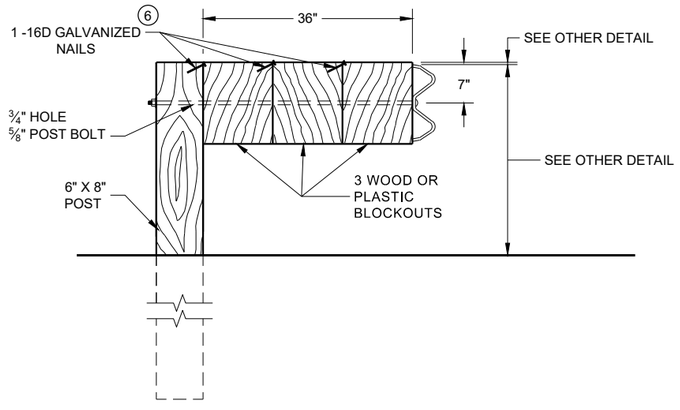
ALTERNATE BOLT HEAD



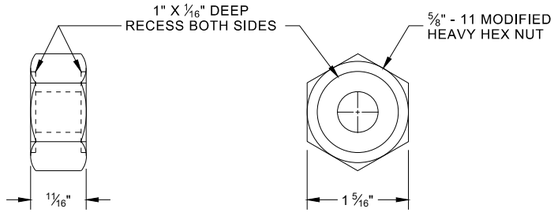
PLAN VIEW
BEAM LAPPING DETAIL



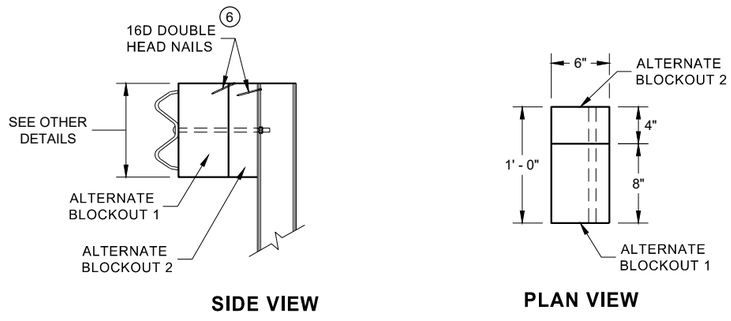
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

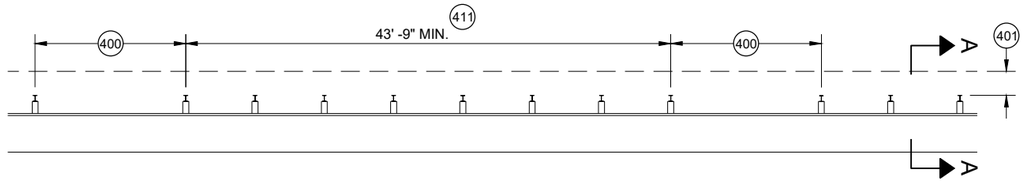
ALTERNATE WOOD BLOCKOUT DETAIL

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.

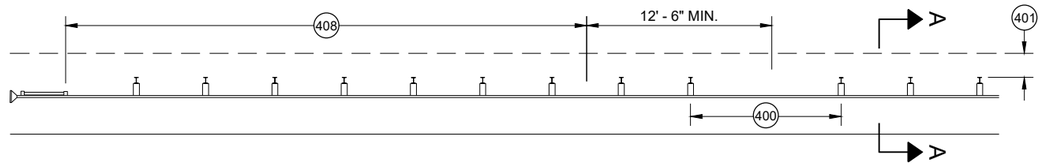
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

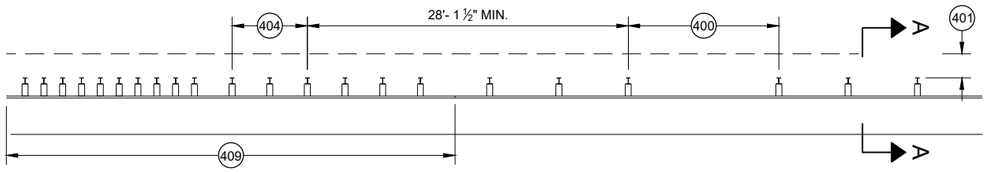
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



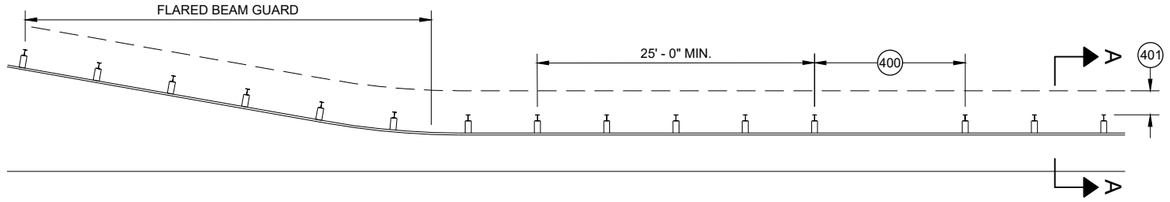
MISSING POST IN MGS GUARDRAIL



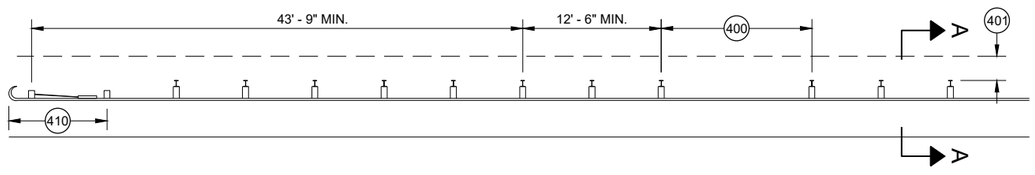
MISSING POST IN MGS GUARDRAIL NEAR EAT



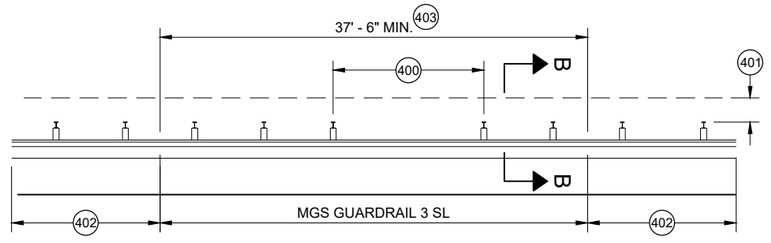
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

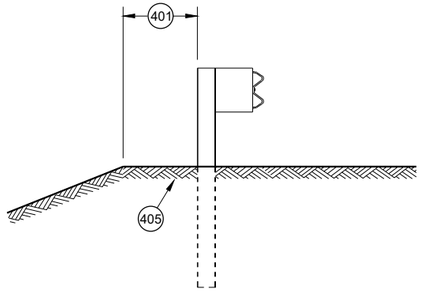


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

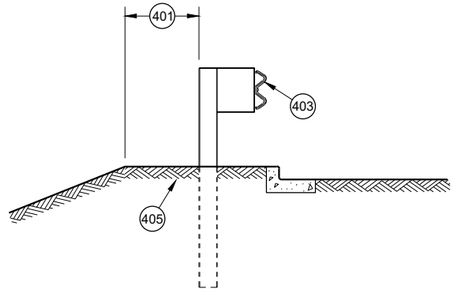


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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

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.

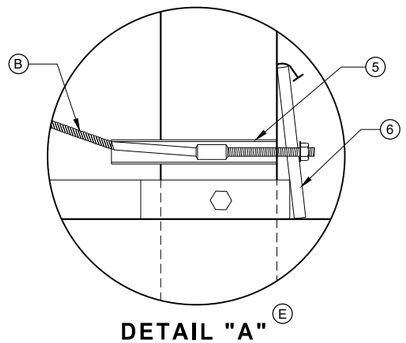
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

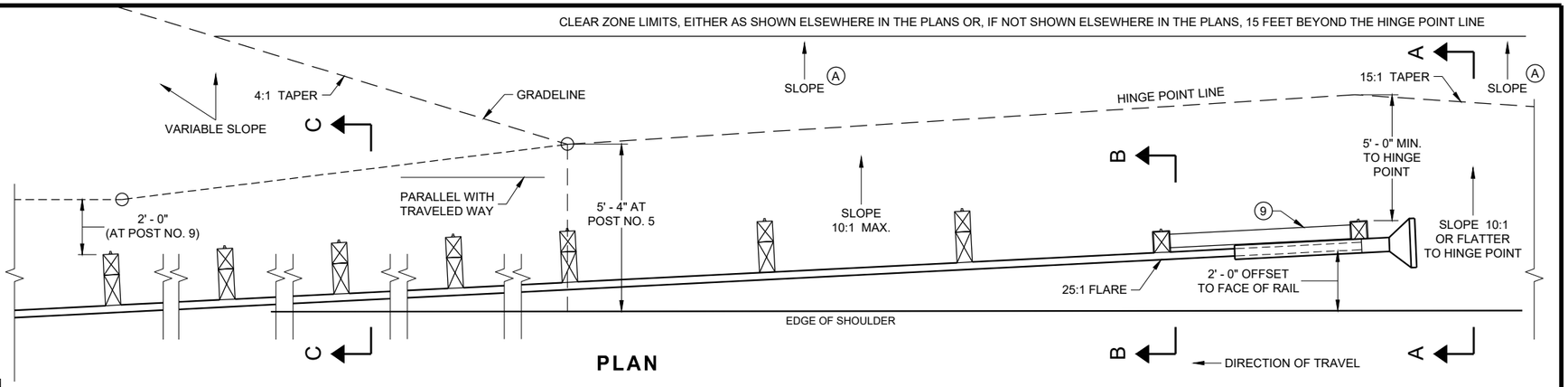
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

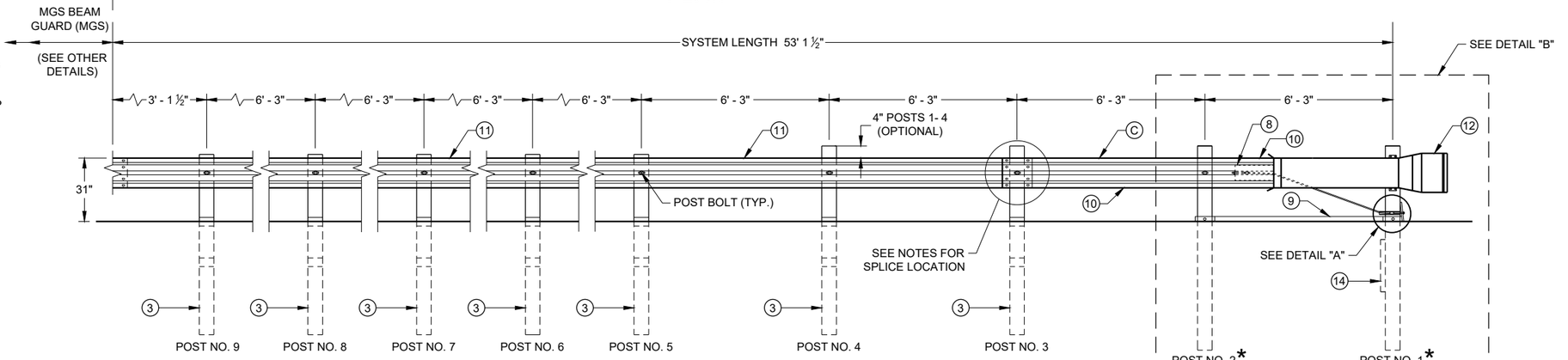
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



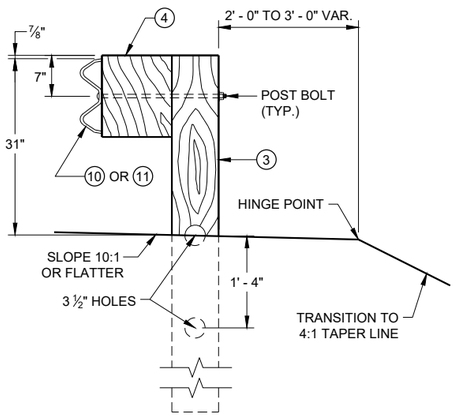
DETAIL "A" (E)



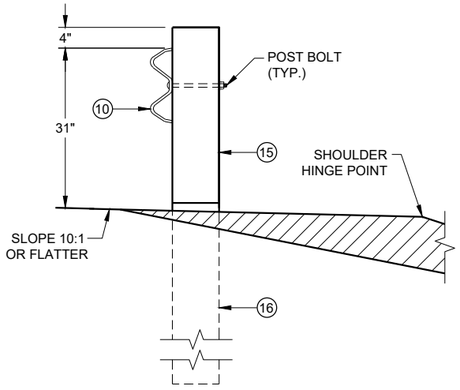
PLAN



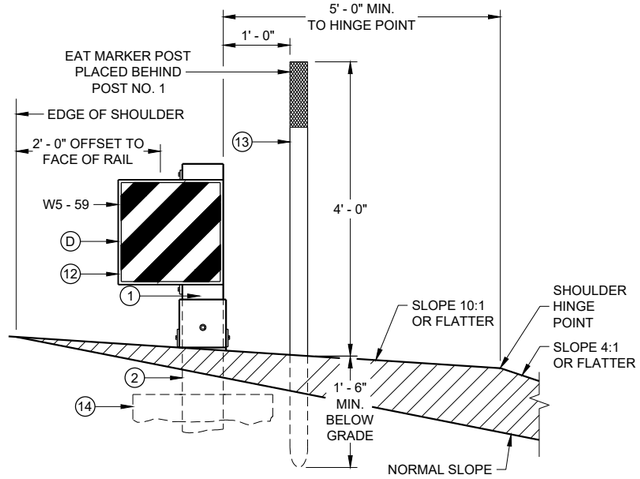
ELEVATION



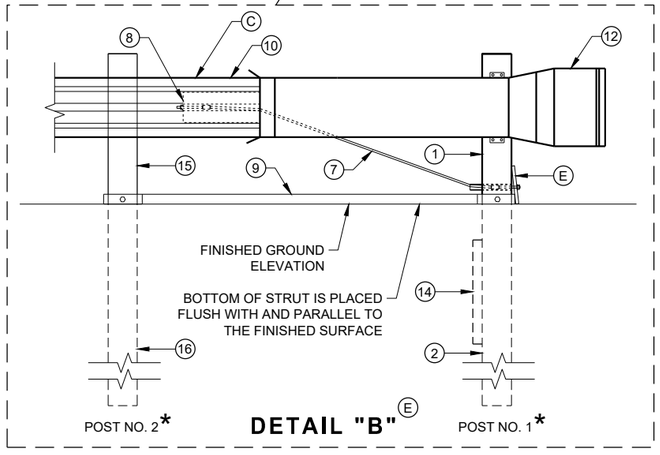
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



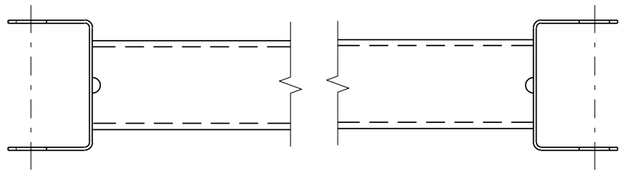
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

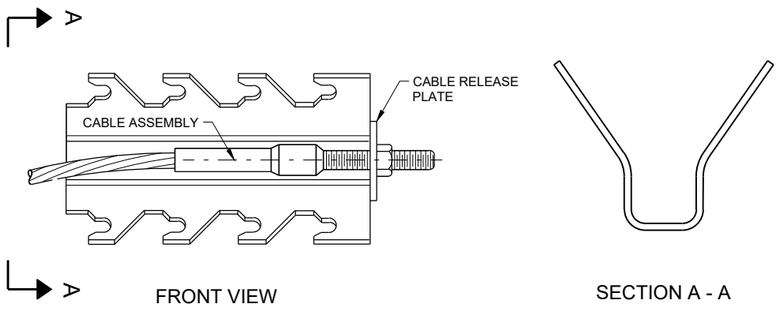
SDD 14B44 - 04a



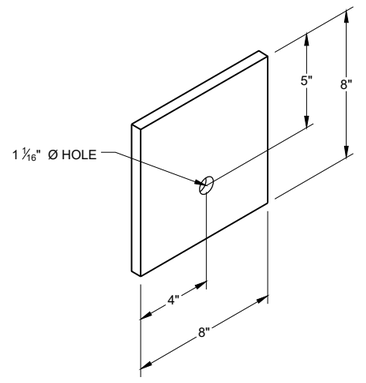
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

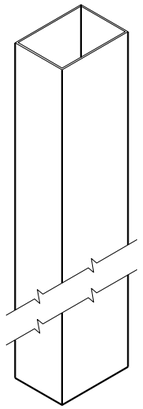
6

SDD 14B44 - 04b

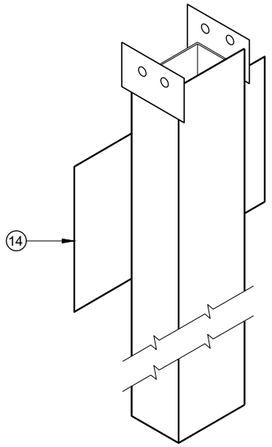
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

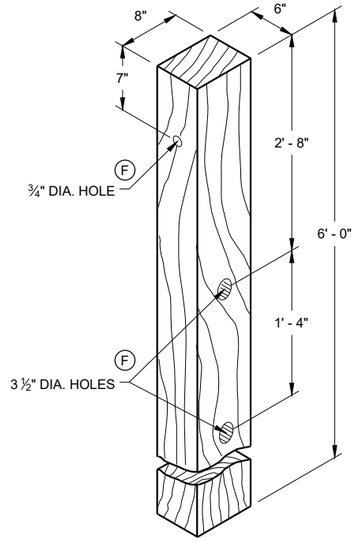
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



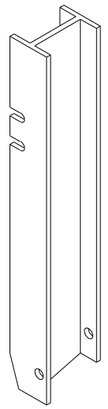
UPPER POST NO. 1 (1) (E)



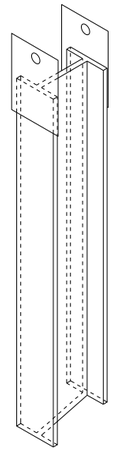
LOWER POST NO. 1 (2) (E)



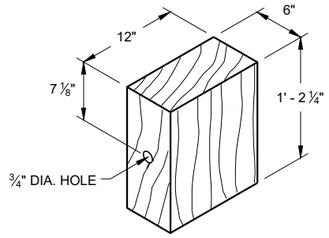
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



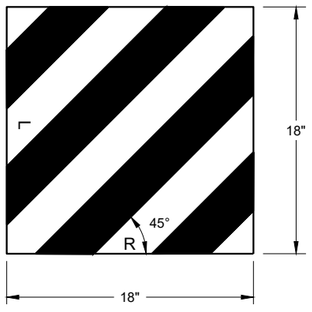
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

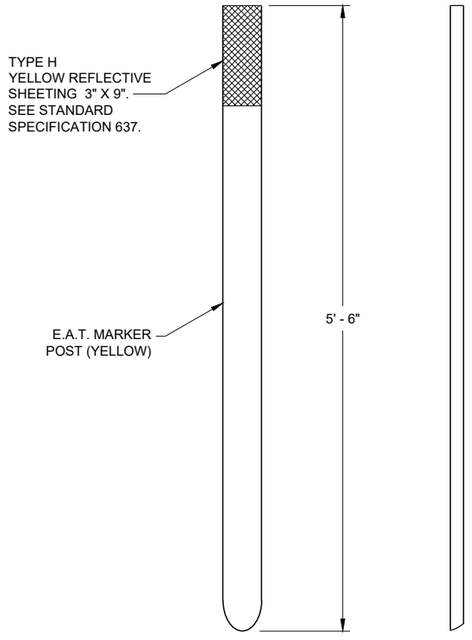


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



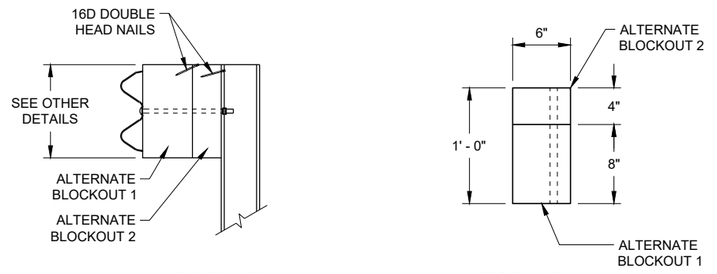
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

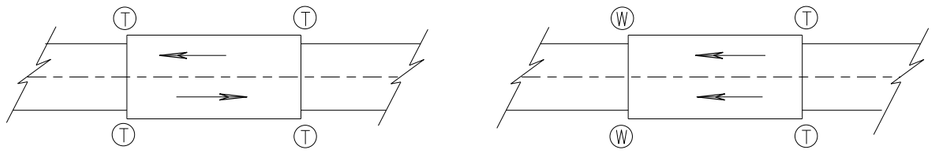
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

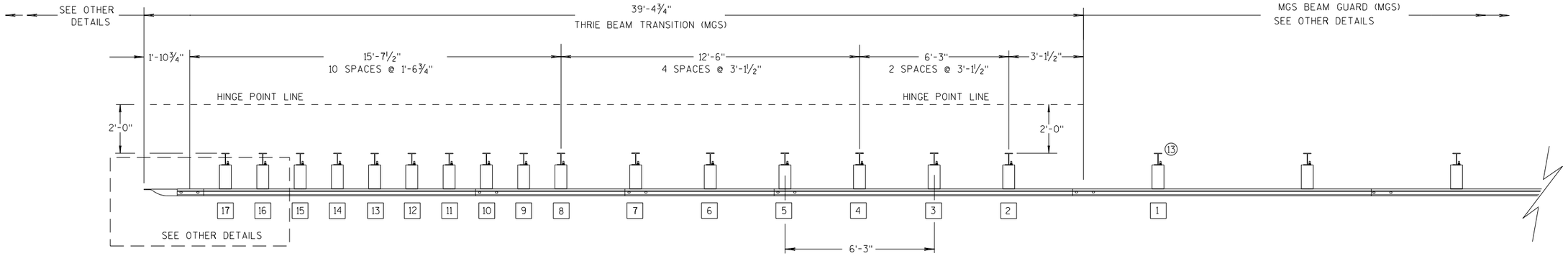
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

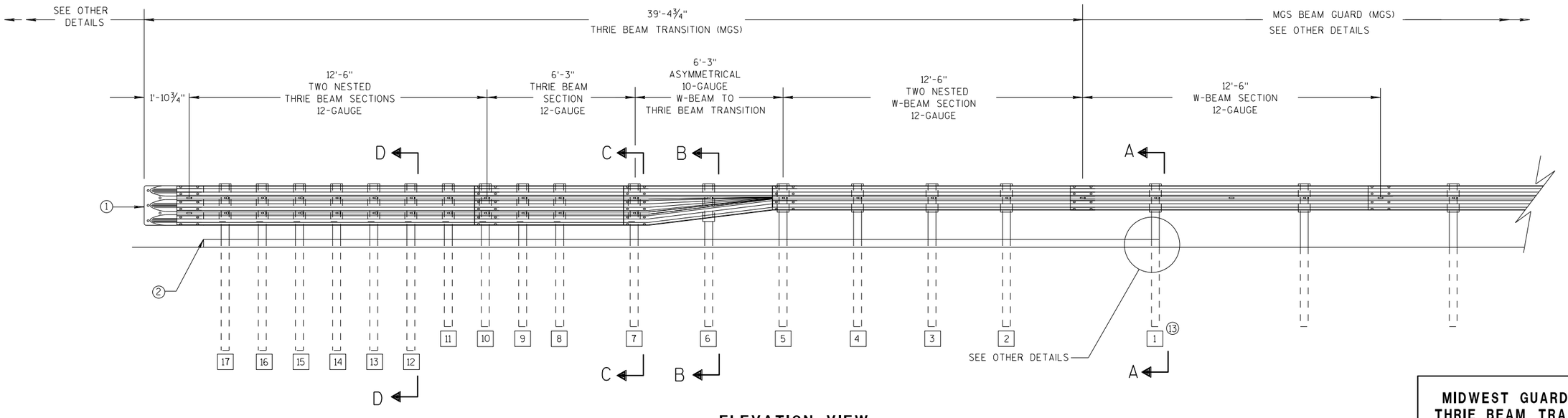
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 75

6

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

6

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

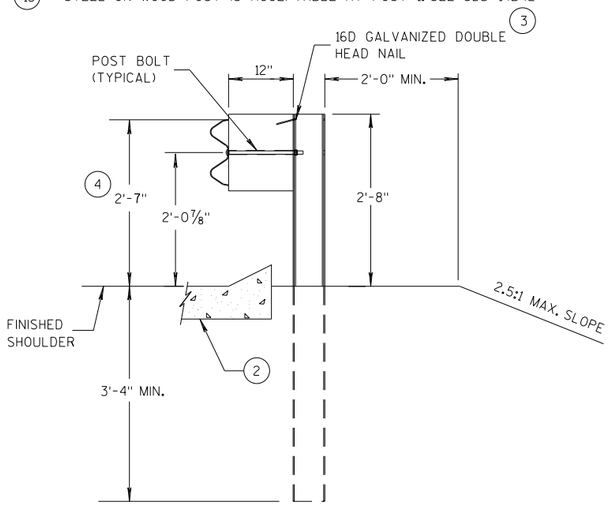
GENERAL NOTES

(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.

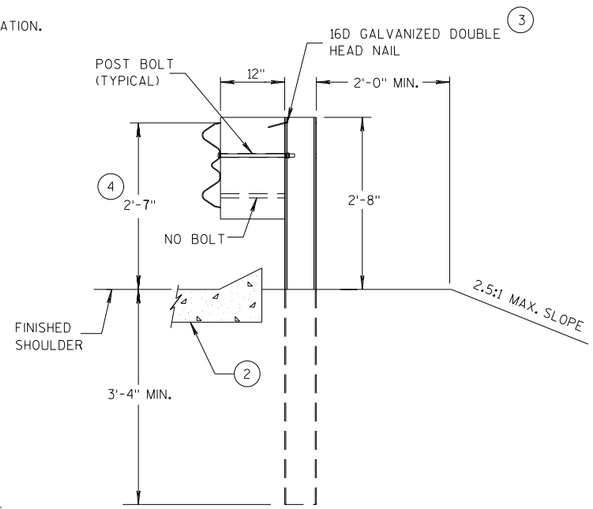
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



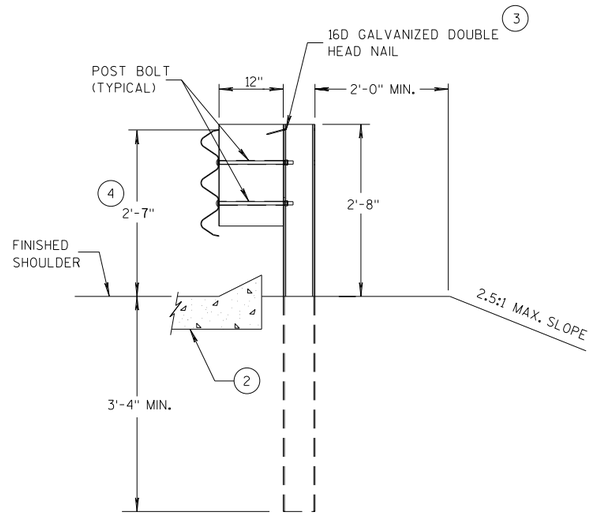
SECTION A-A (13)

POSTS 1-5



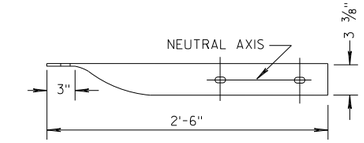
SECTION B-B

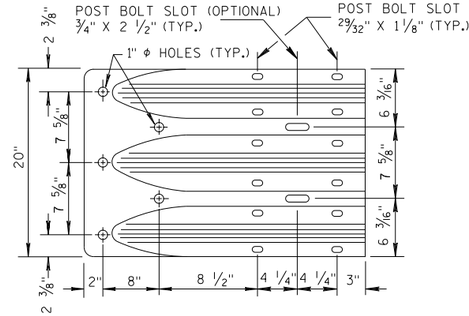
POST 6



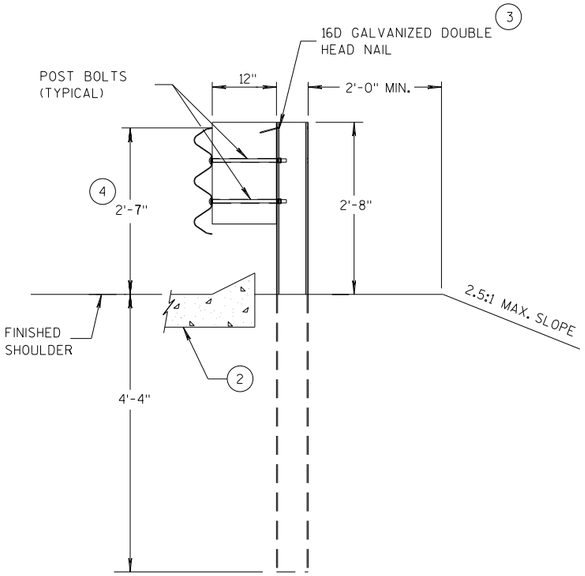
SECTION C-C

POSTS 7-11



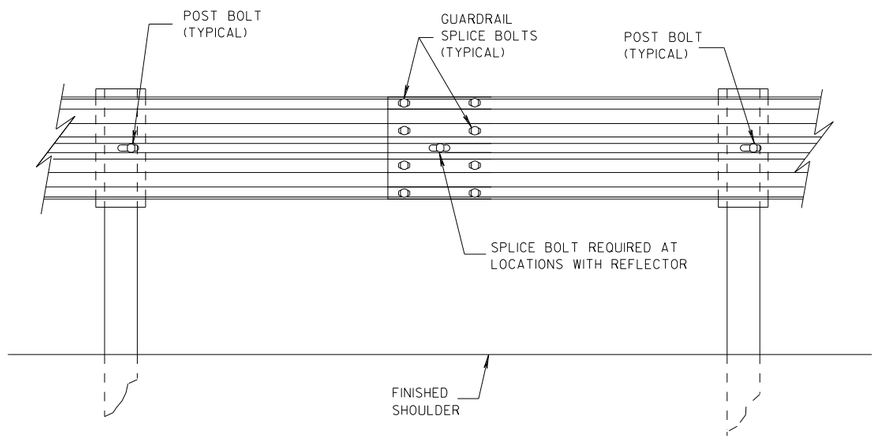


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

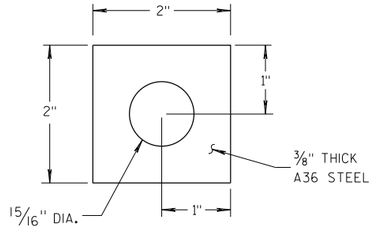
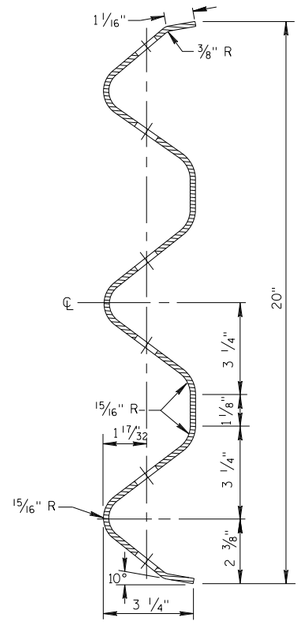


PLATE WASHER DETAIL



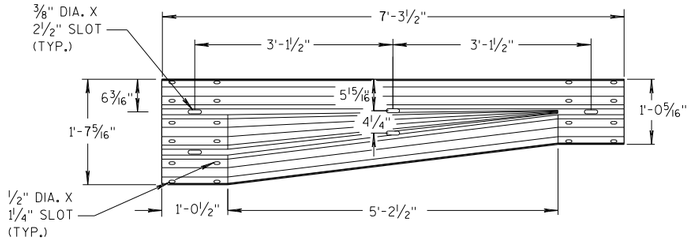
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

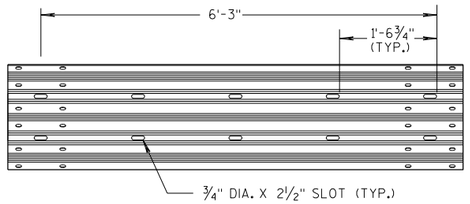
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

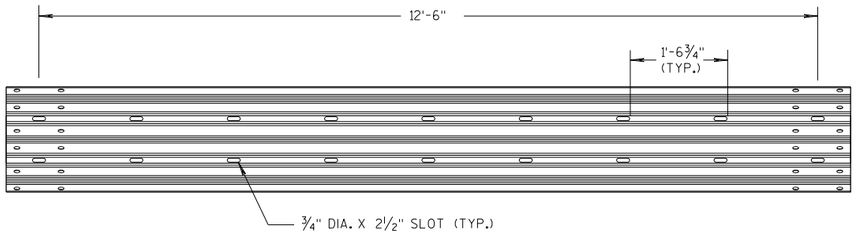
S.D.D. 14 B 45-5b



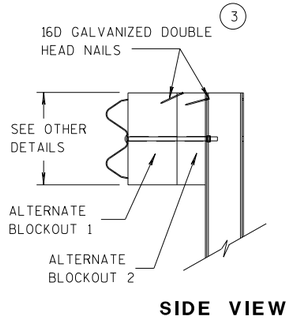
W-BEAM TO THRIE BEAM TRANSITION SECTION



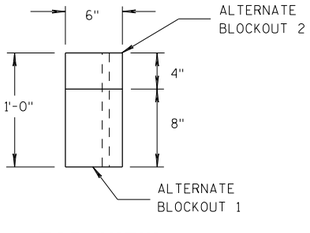
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

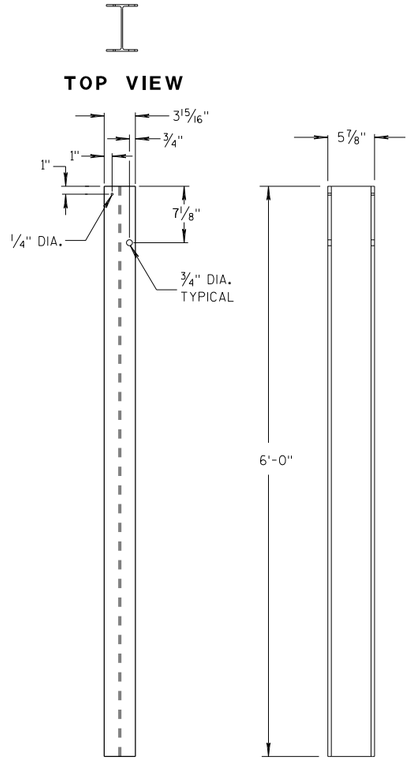


SIDE VIEW



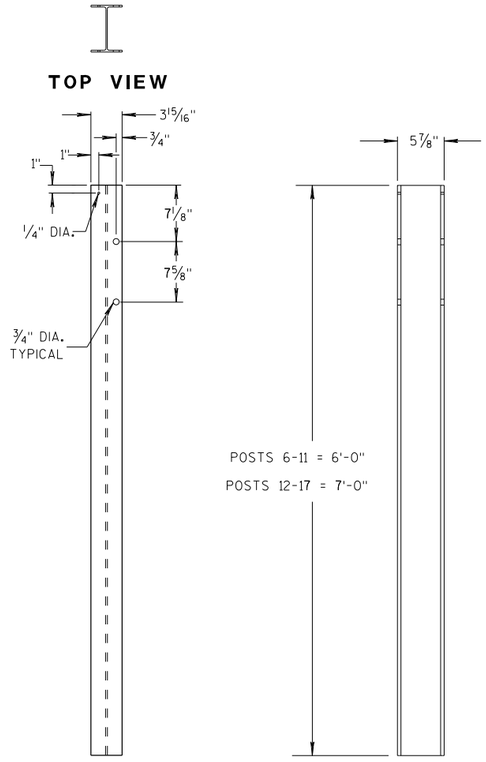
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



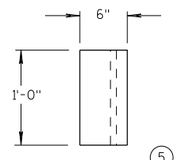
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

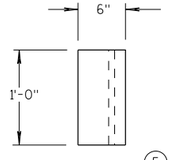


FRONT VIEW SIDE VIEW

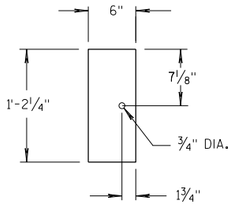
STEEL POSTS 6-17



TOP VIEW (5)

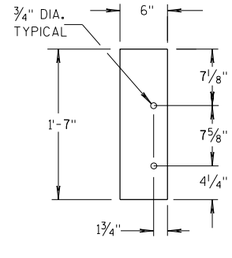


TOP VIEW (5)



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.

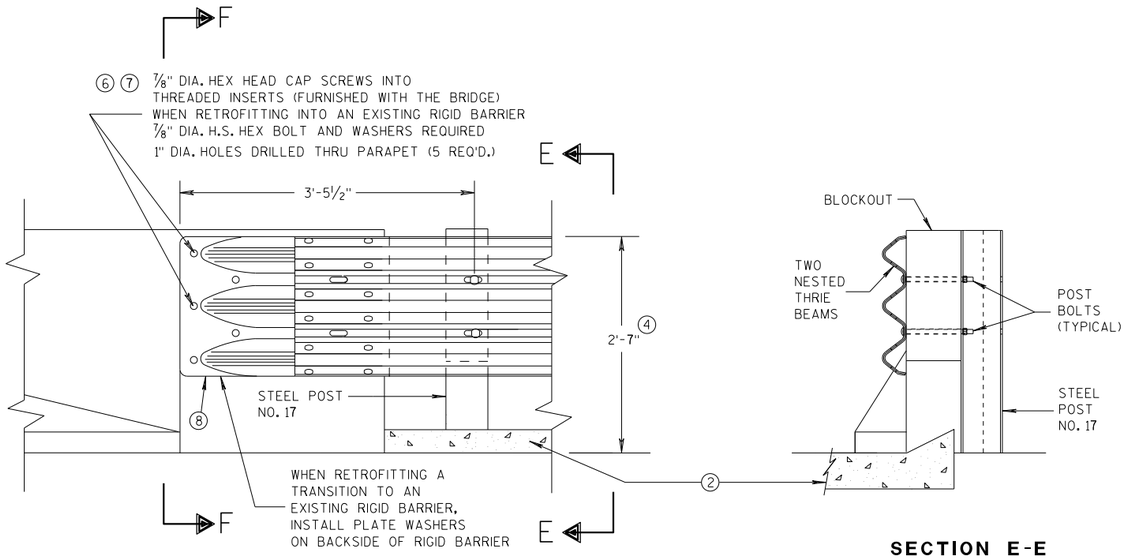
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(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 77

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

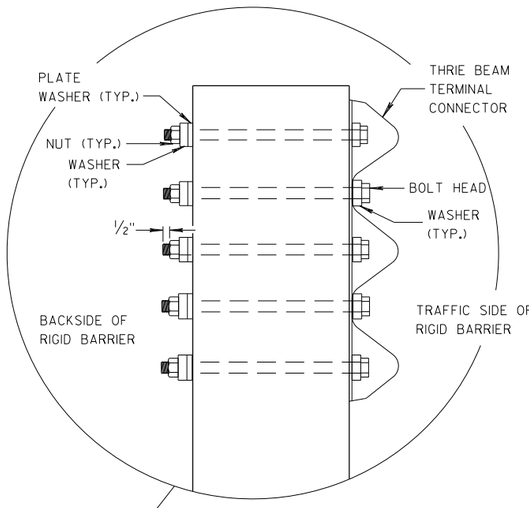
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

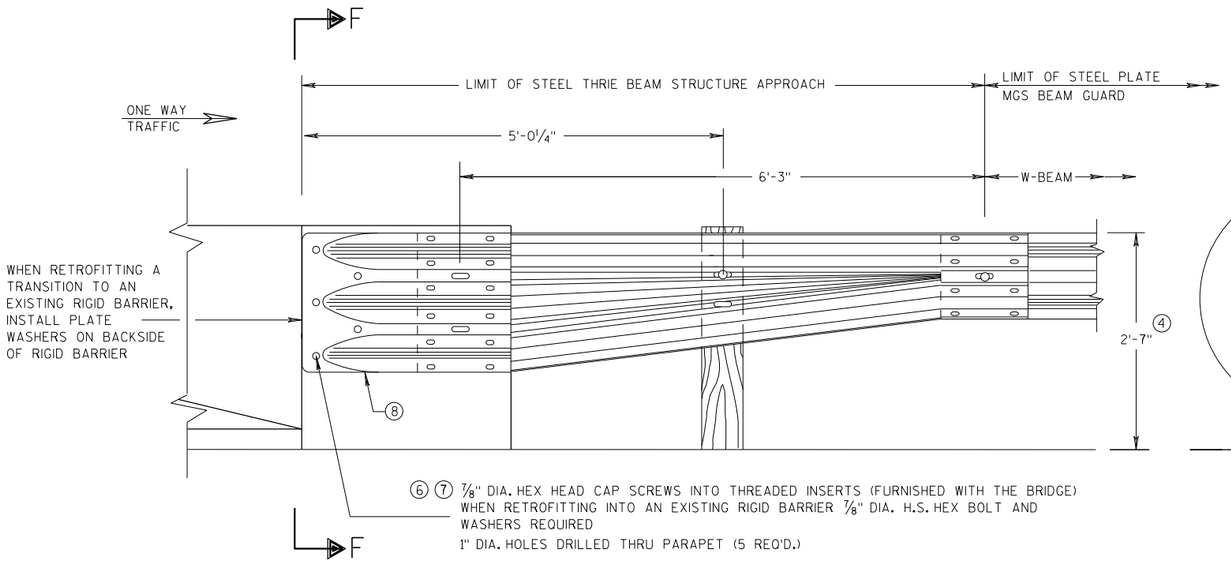
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

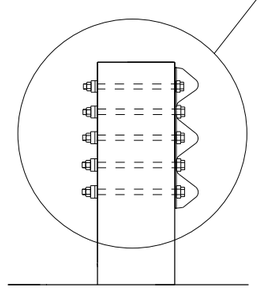
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

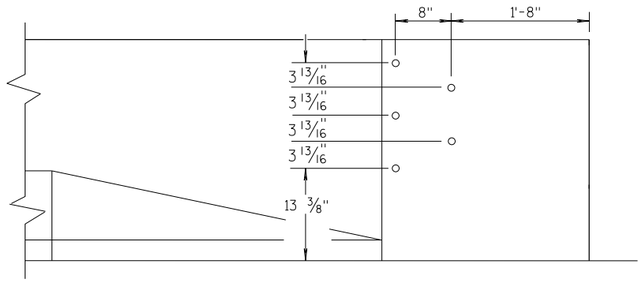




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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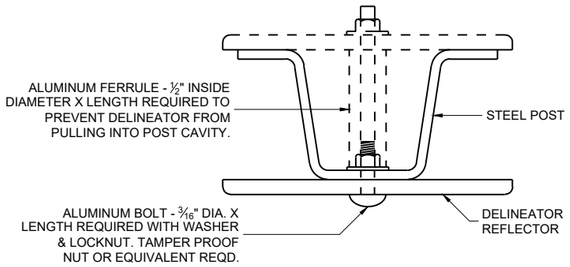
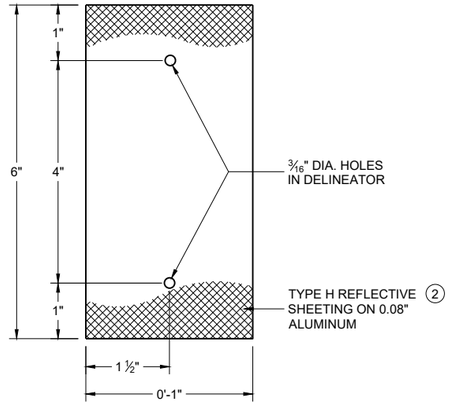
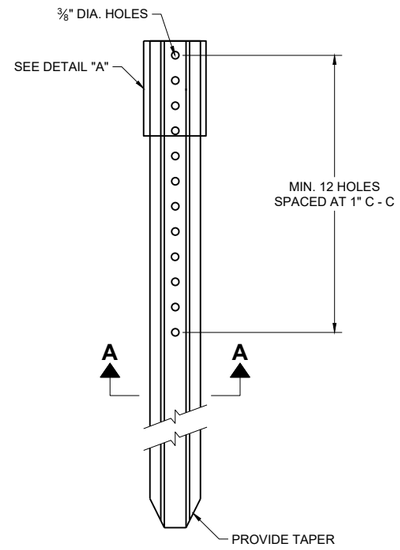
S.D.D. 14 B 45-5d



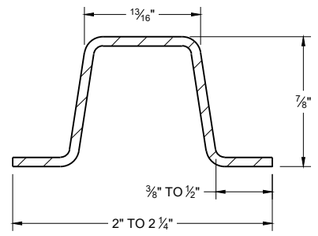
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



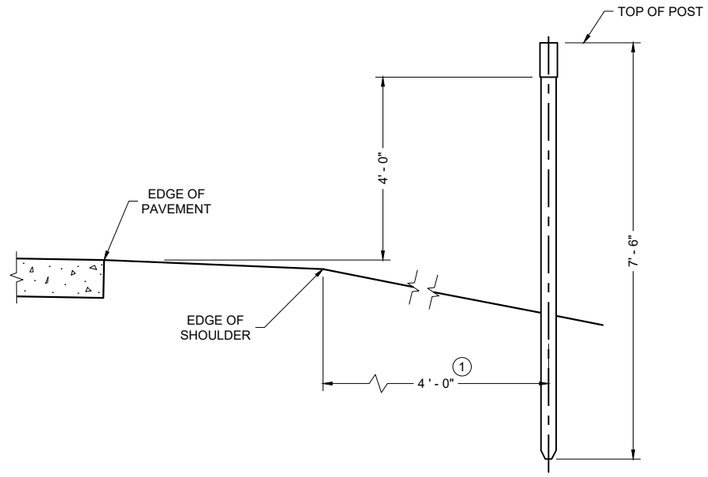
SECTION A - A

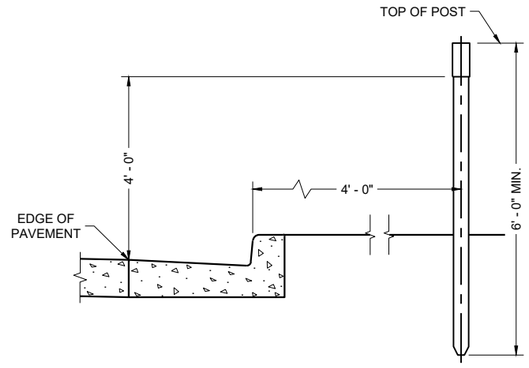
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

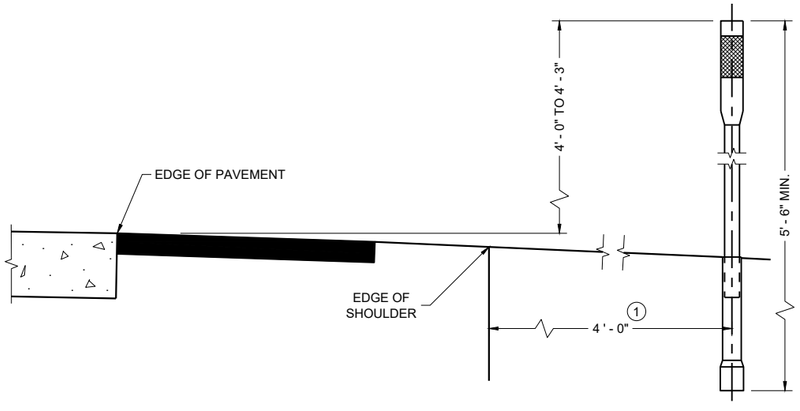
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

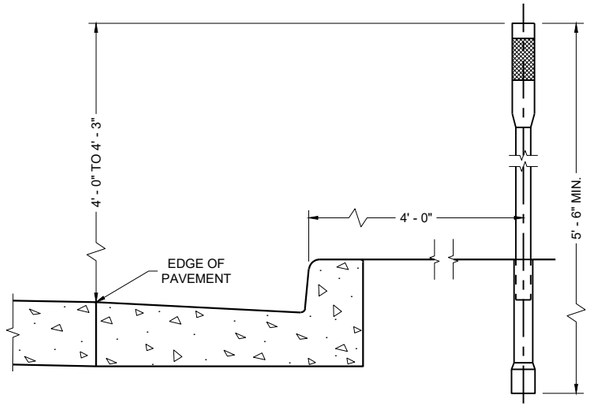
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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

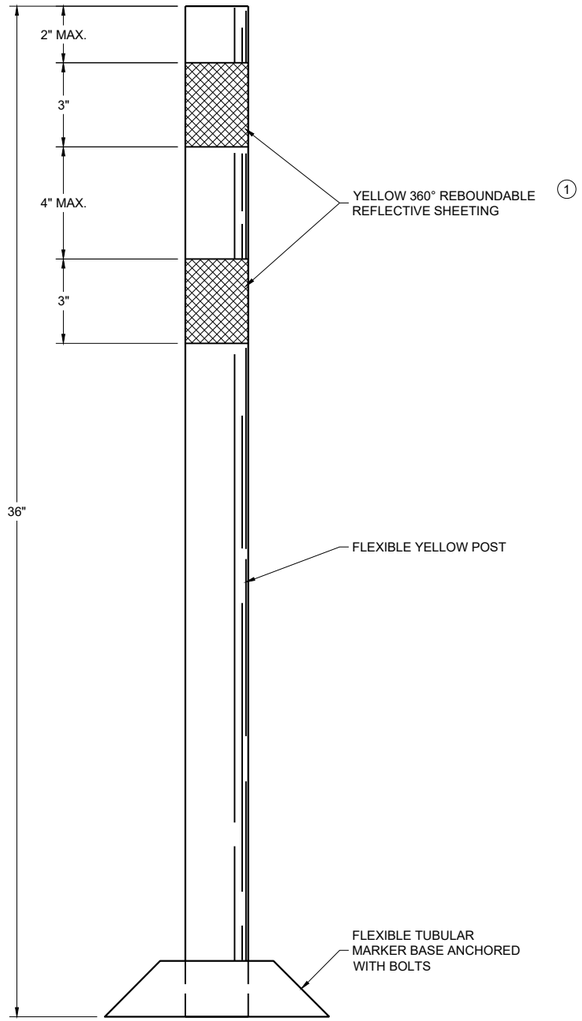
(1) DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.

(2) FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

DELINEATOR POST WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA



PERMANENT FLEXIBLE TUBULAR MARKER POST

GENERAL NOTES

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

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

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

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

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SDD 15A04-08d

CHANNELIZING DEVICES
PERMANENT FLEXIBLE
TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

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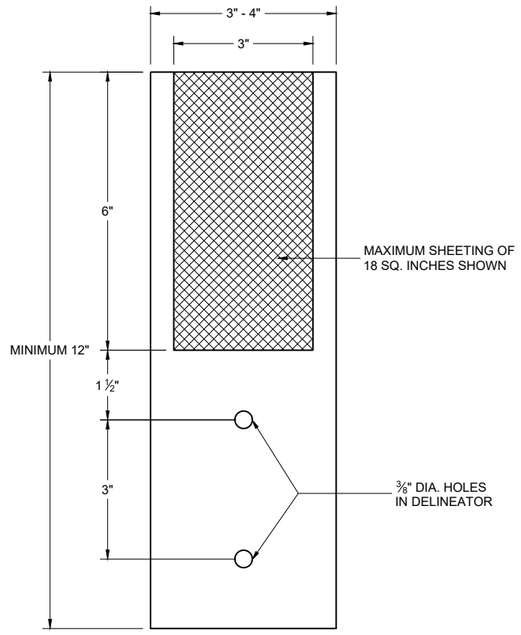
SDD 15A04-08d



4" x 12" DELINEATOR
WITH REFLECTIVE SHEETING

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

DELINEATOR POST
WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

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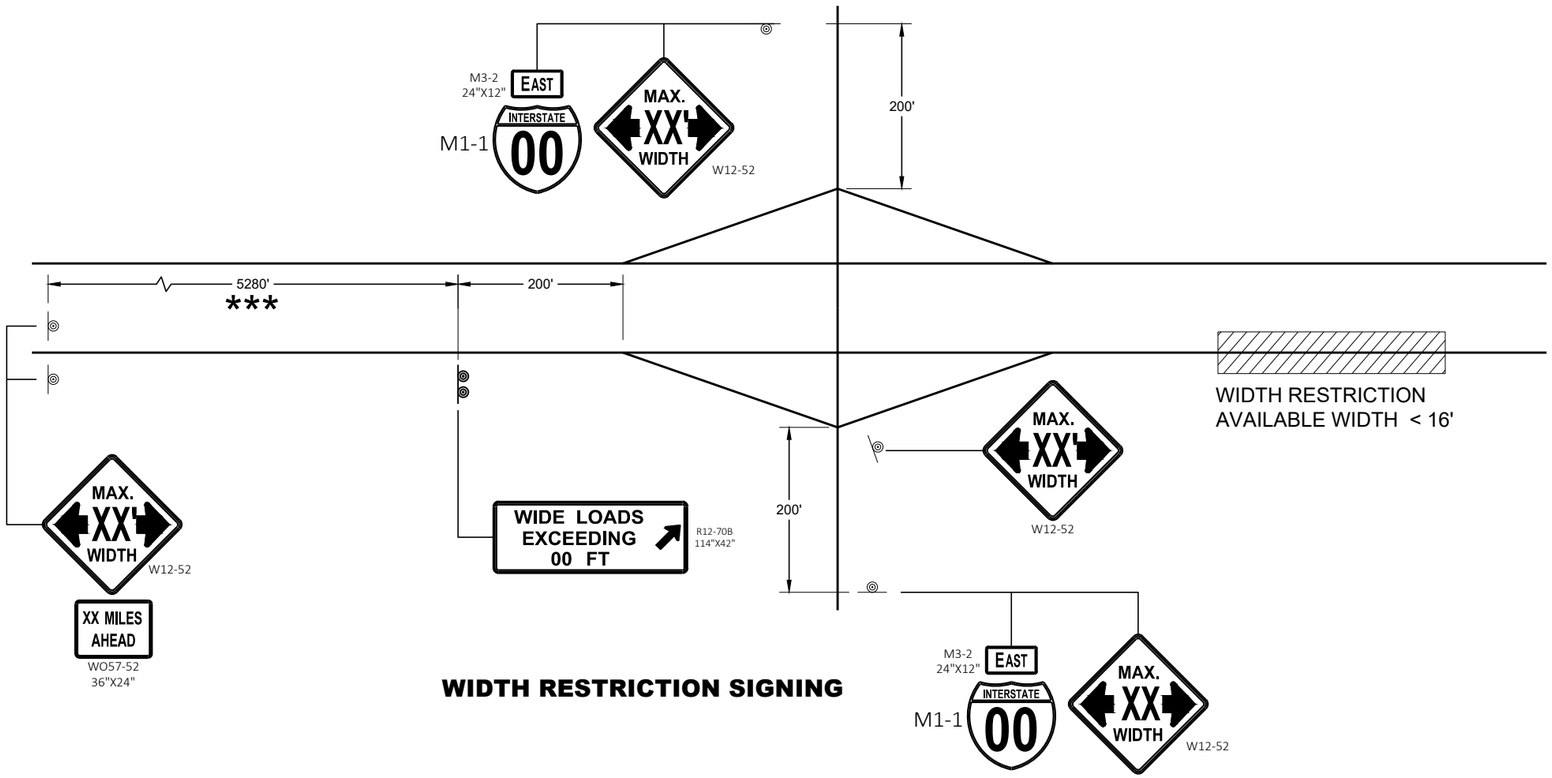
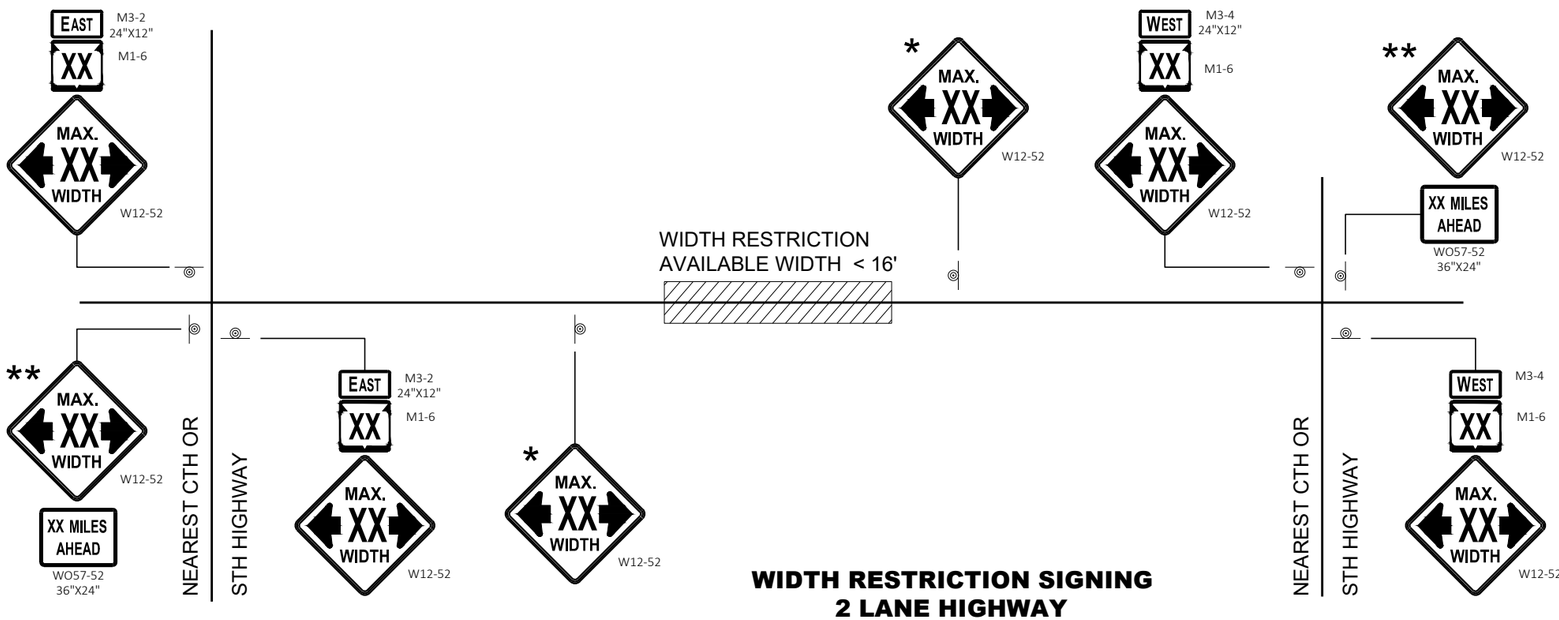
SDD 15A04-08e



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS 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 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.

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

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SDD 15C02 - 09f

6

SDD 15C02 - 09f

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.

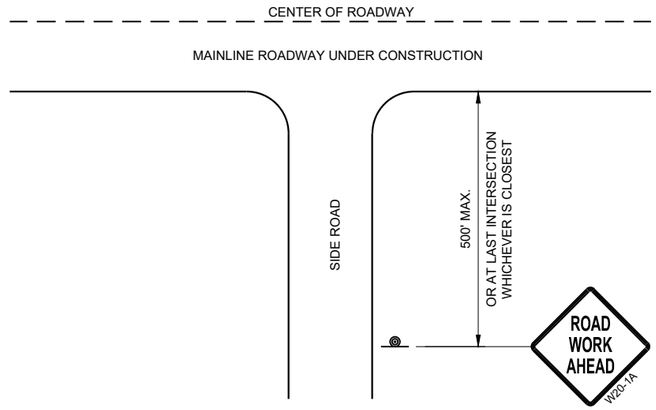
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



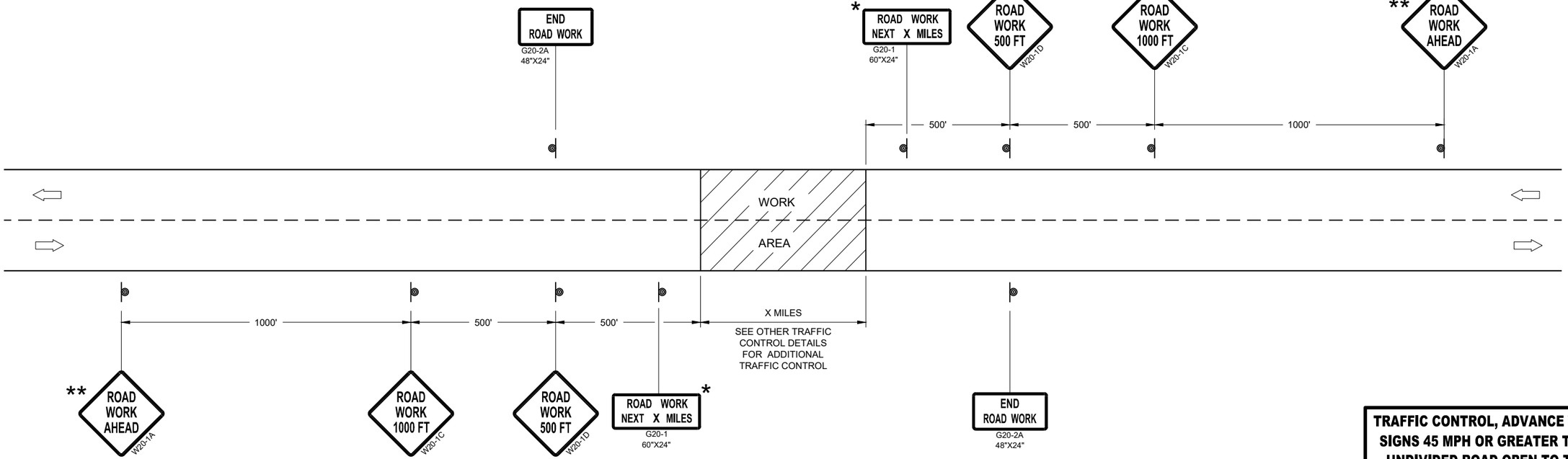
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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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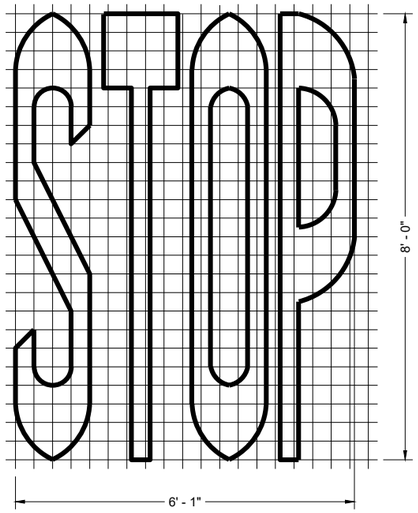
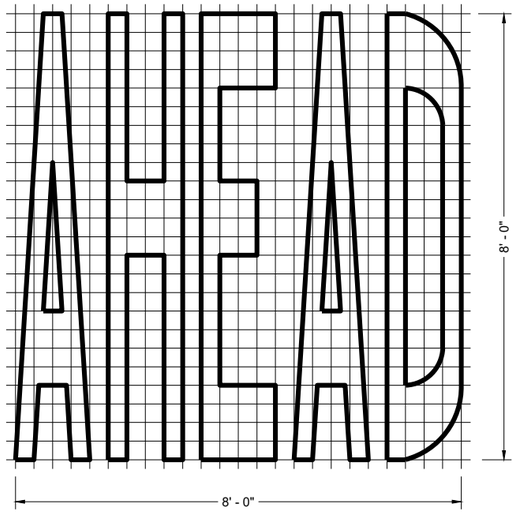
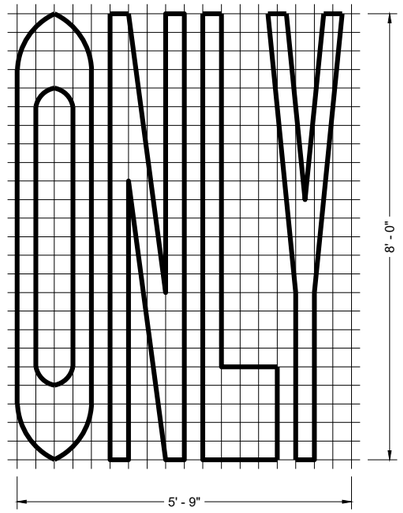
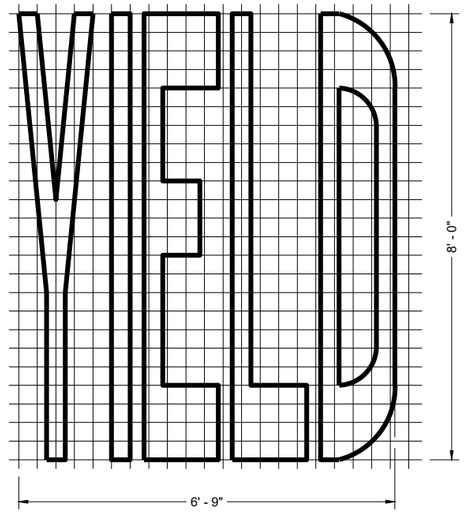
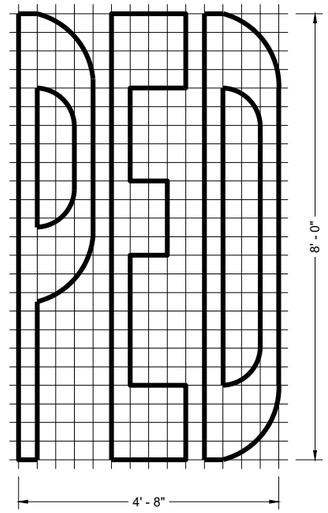
SDD 15C04 - 05

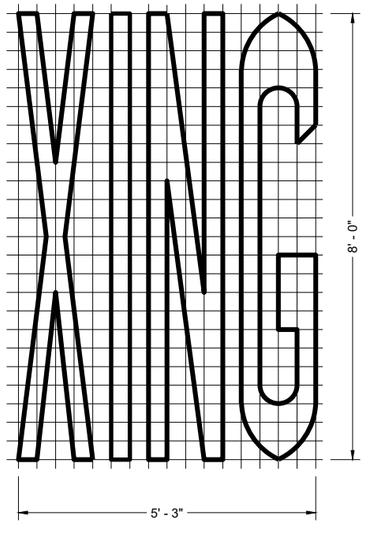


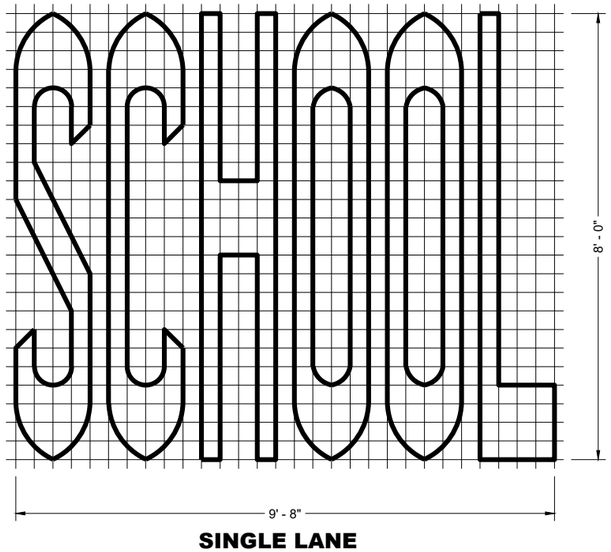




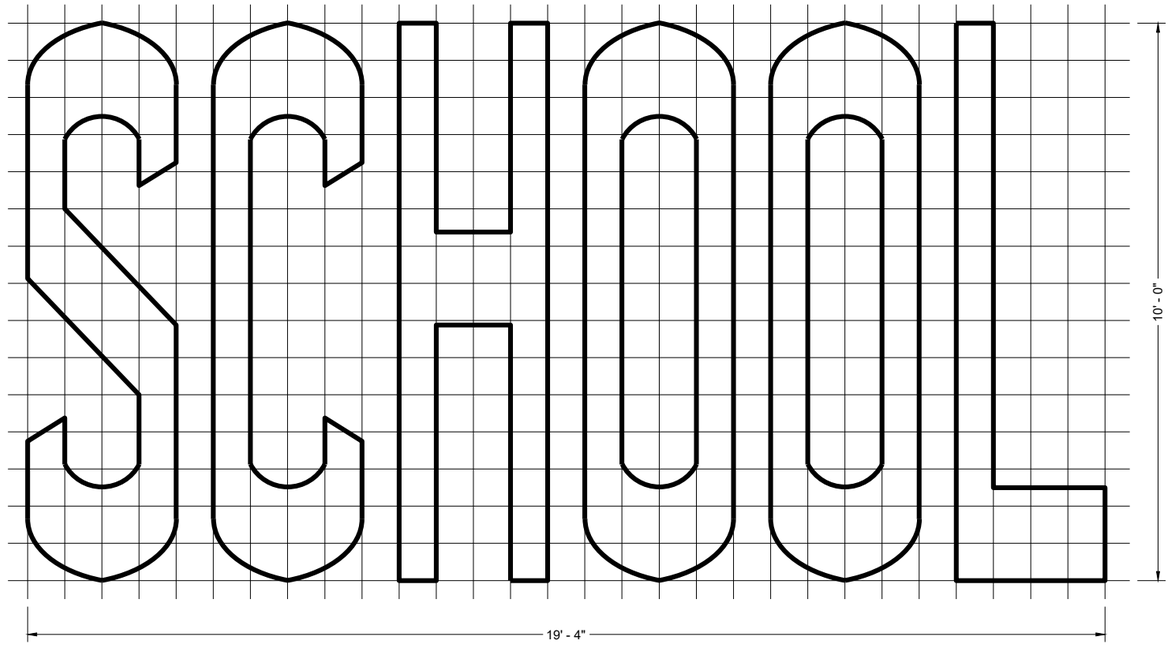








SINGLE LANE



TWO - LANE

GENERAL NOTES

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

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

FHWA

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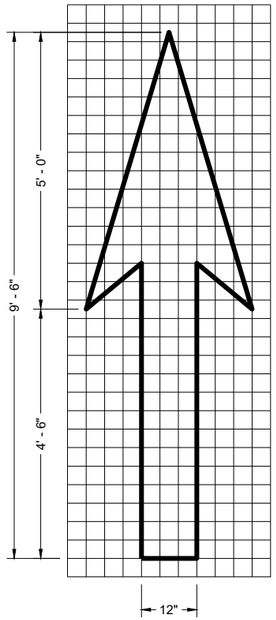
SDD 15C07-16b

6

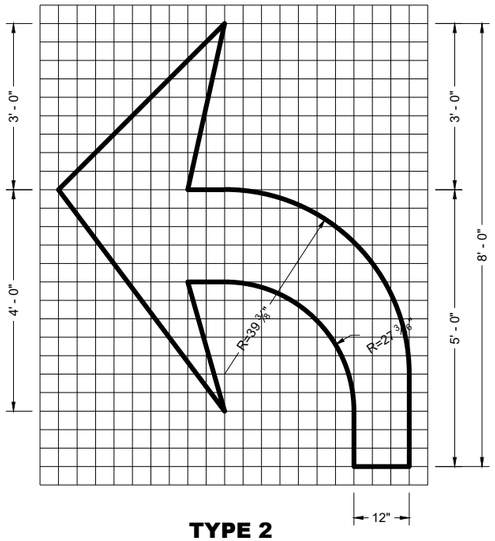
SDD 15C07-16b

GENERAL NOTES

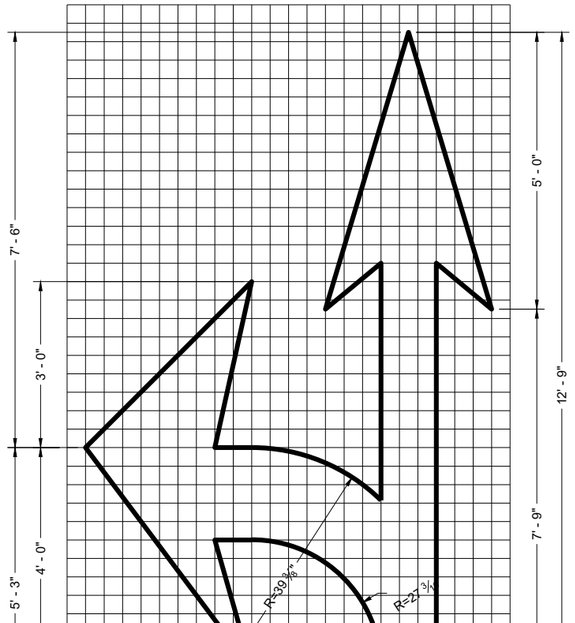
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



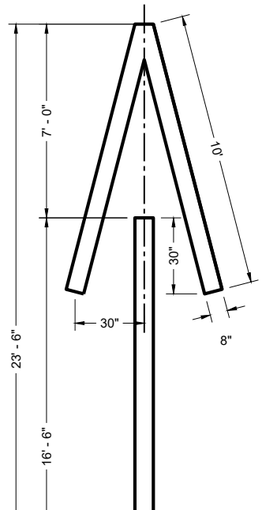
TYPE 1



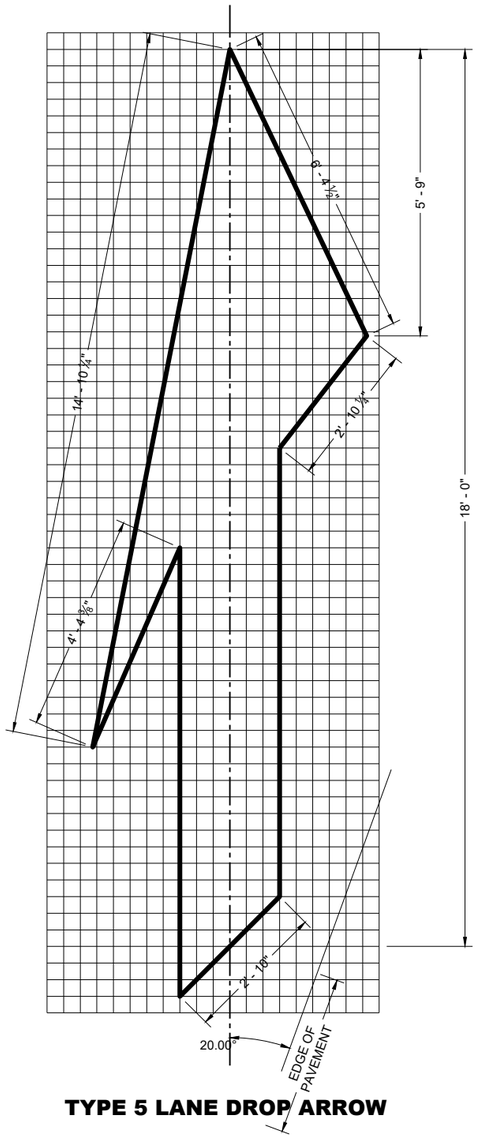
TYPE 2



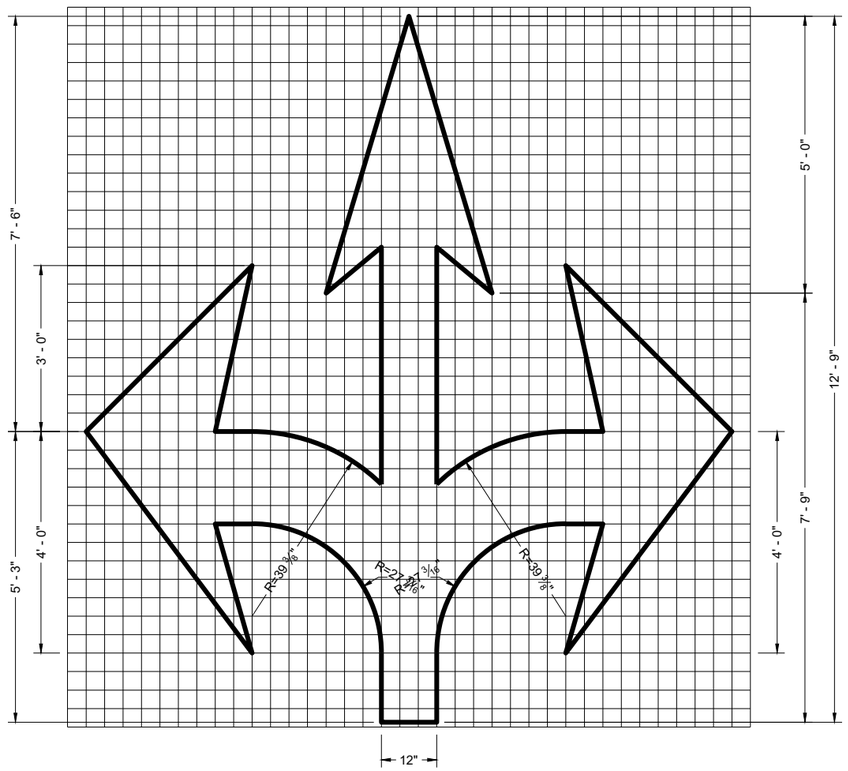
TYPE 3



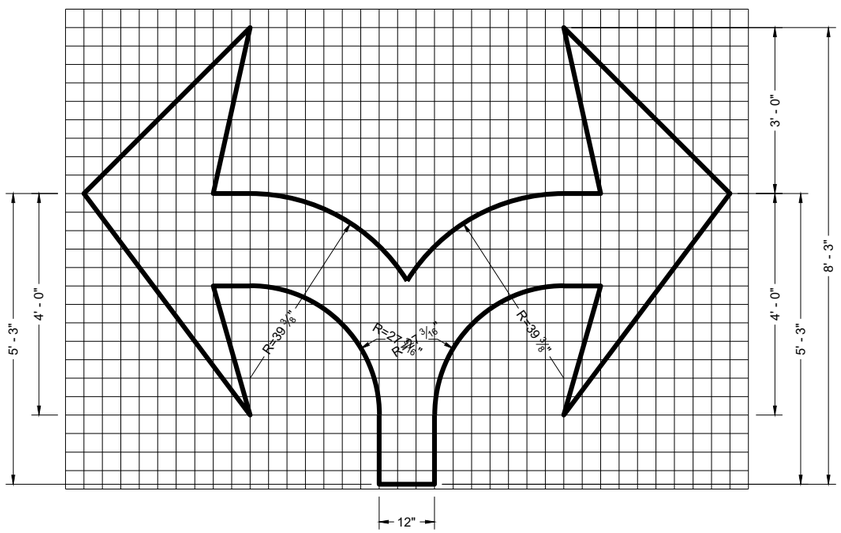
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

FHWA

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SDD 15C07-16c

GENERAL NOTES

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

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

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

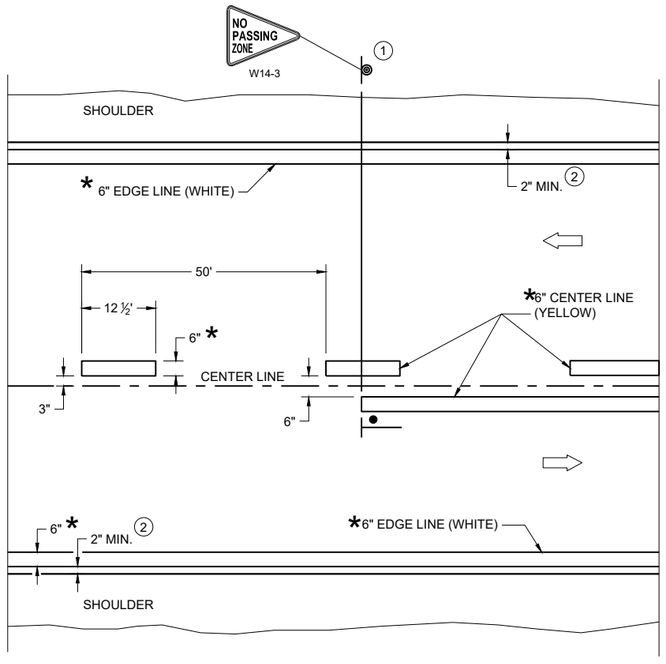
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

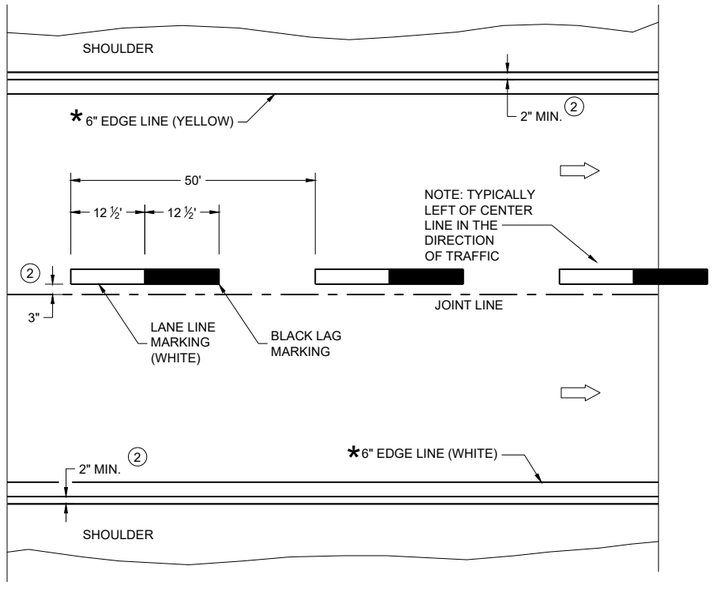
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

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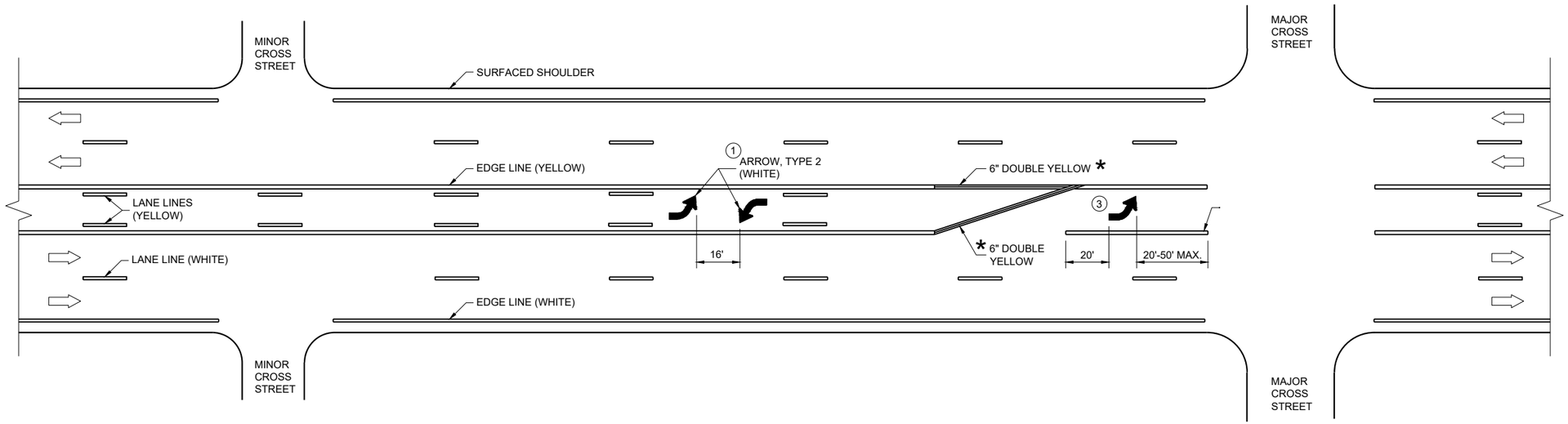
SDD 15C08-24a

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



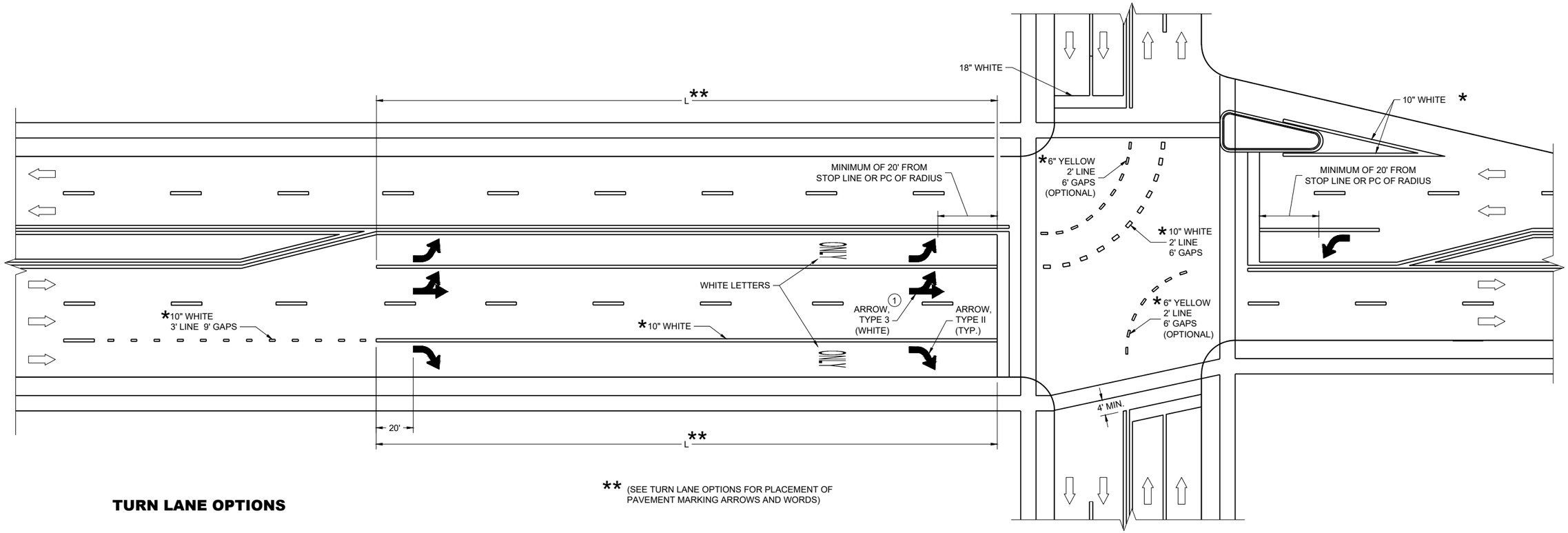
TWO WAY LEFT TURN LANE

6

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

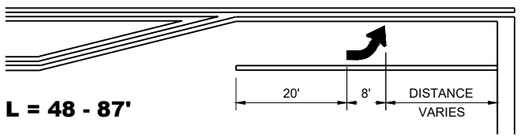
SDD 15C08-24c



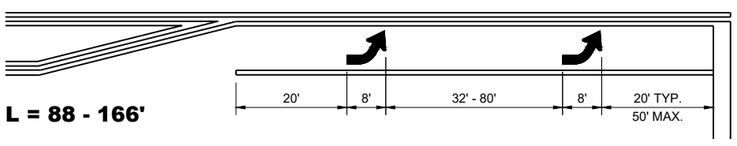
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

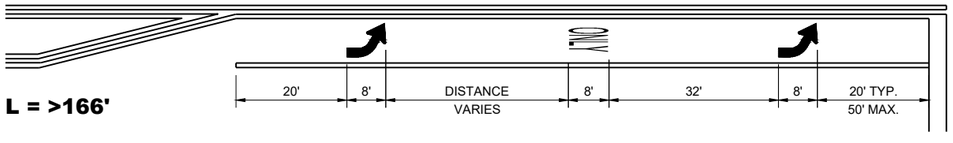
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT
REQUIRE PAVEMENT MARKING ARROWS OR WORDS



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

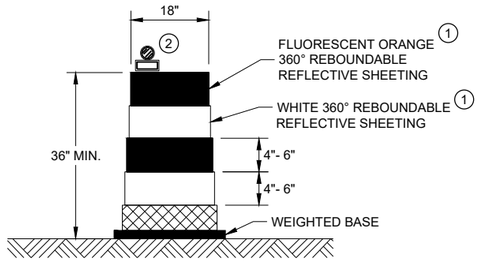
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

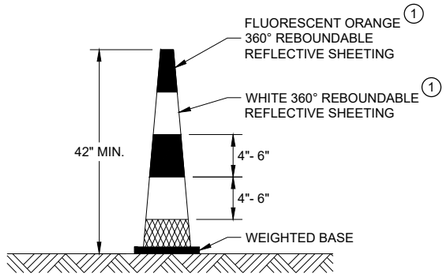
GENERAL NOTES

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



DRUM

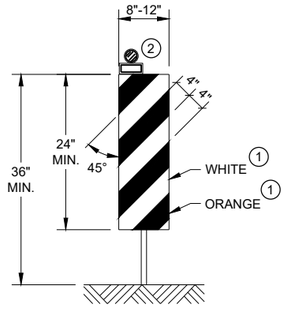
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

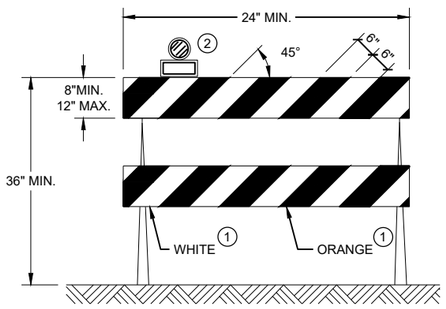
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



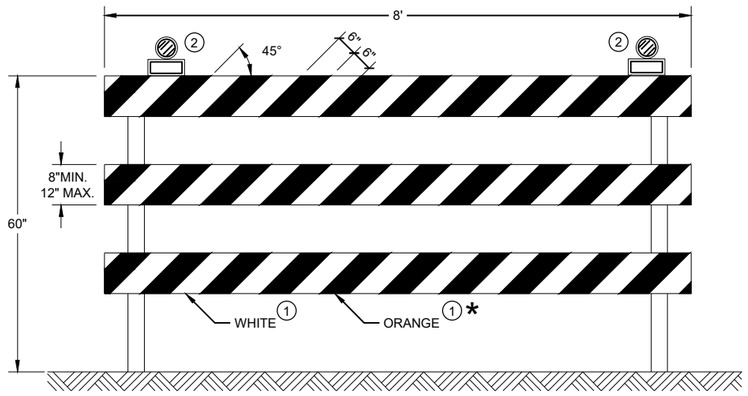
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b

6

SDD 15C11 - 10b

LEGEND

V1 MARKING VEHICLE

V2 SHADOW VEHICLE

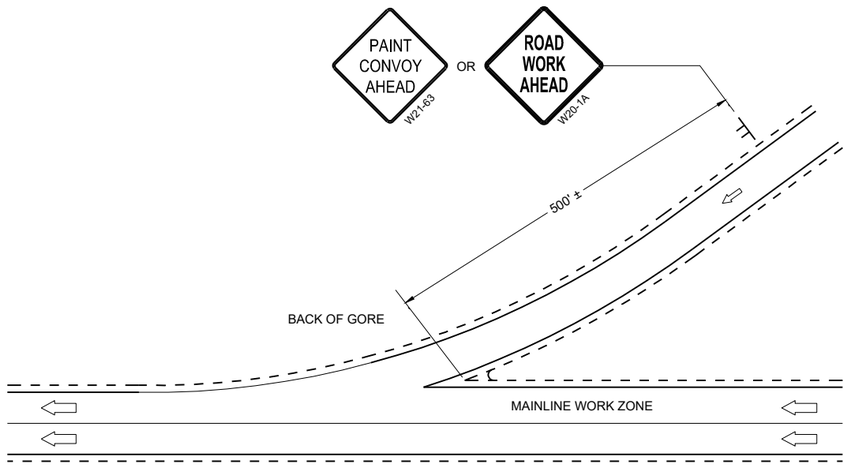
V3 TRAIL VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

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. 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.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

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

IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

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

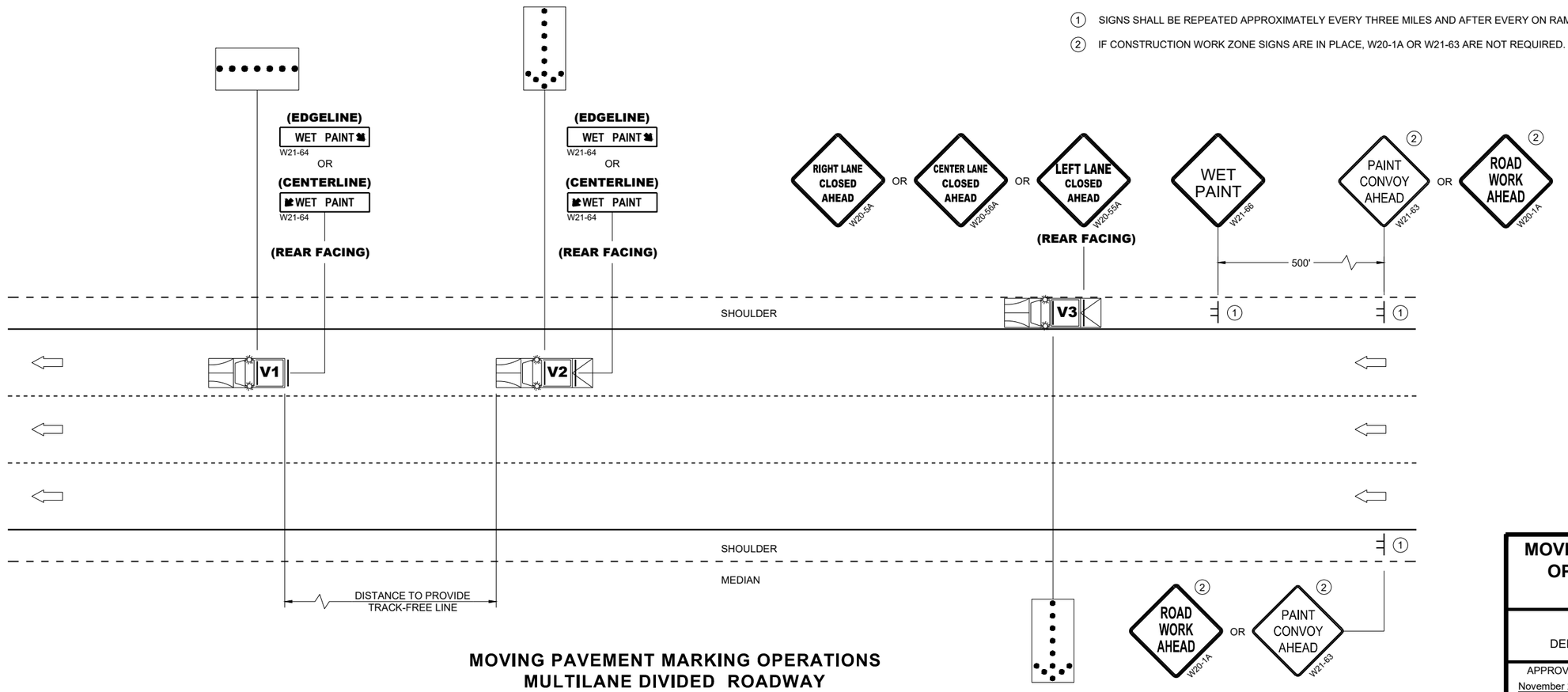
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

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

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.

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



MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025
DATE

/S/ Andrew Heidtke
STATE ELECTRICAL ENGINEER

FHWA

6

SDD 15C19-11c

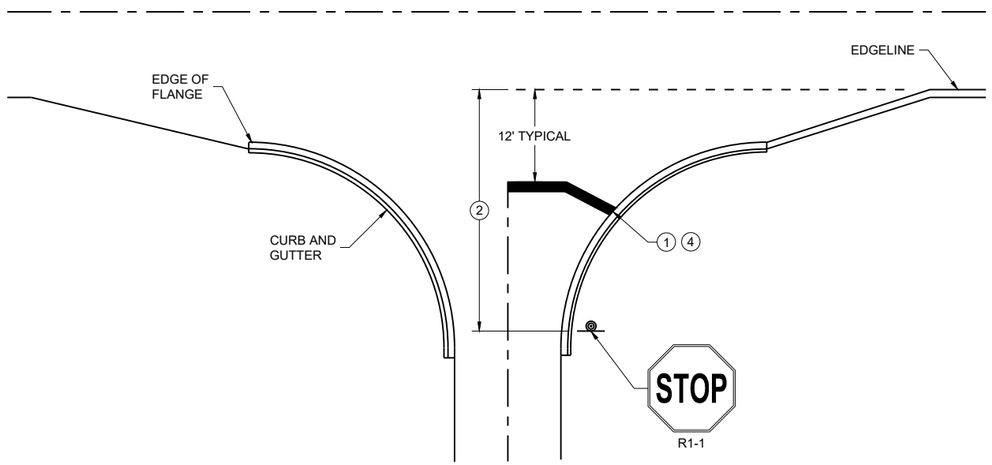
6

SDD 15C19-11c

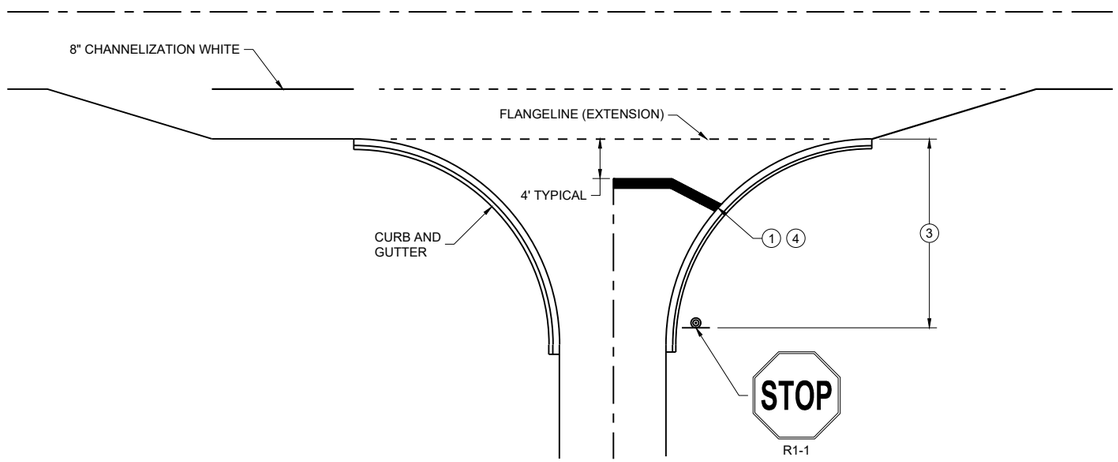
GENERAL NOTES

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

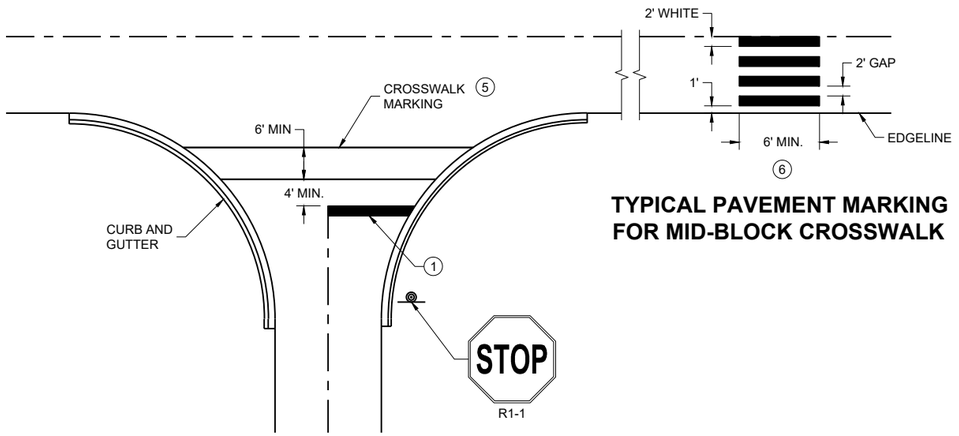
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE 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.
6. POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

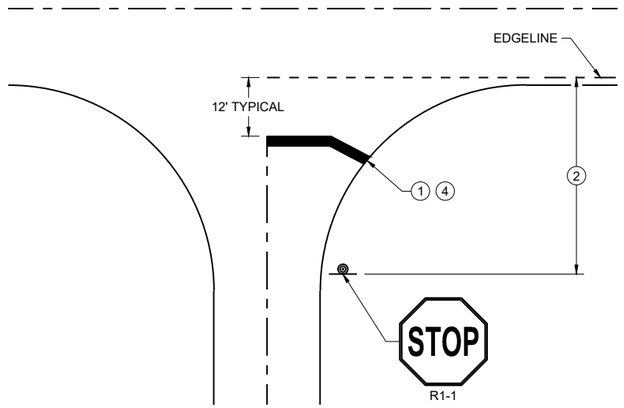


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

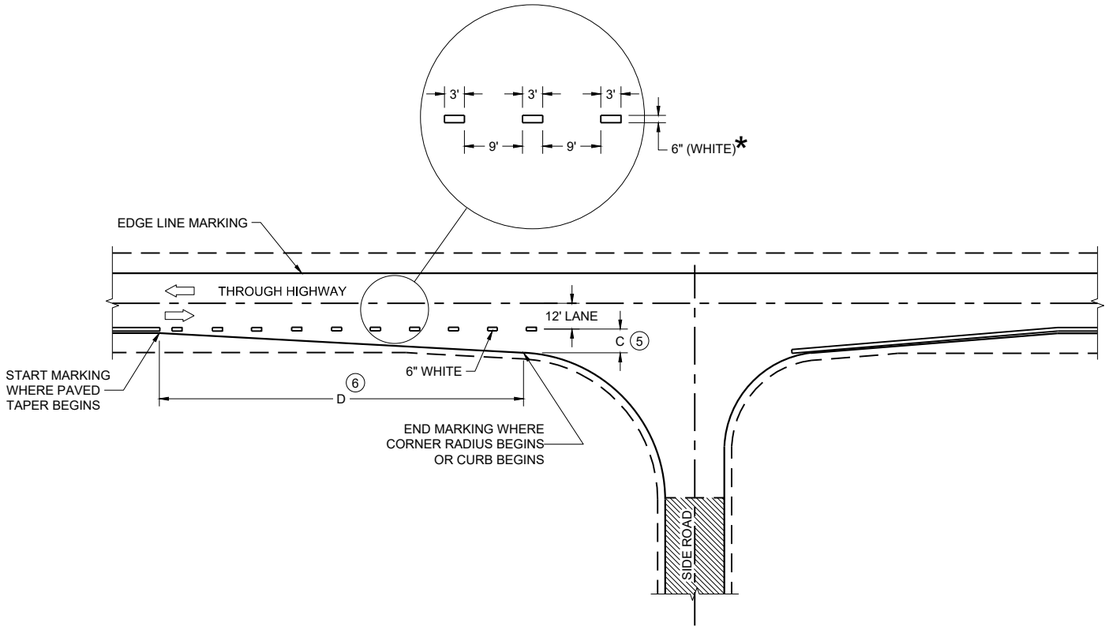
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

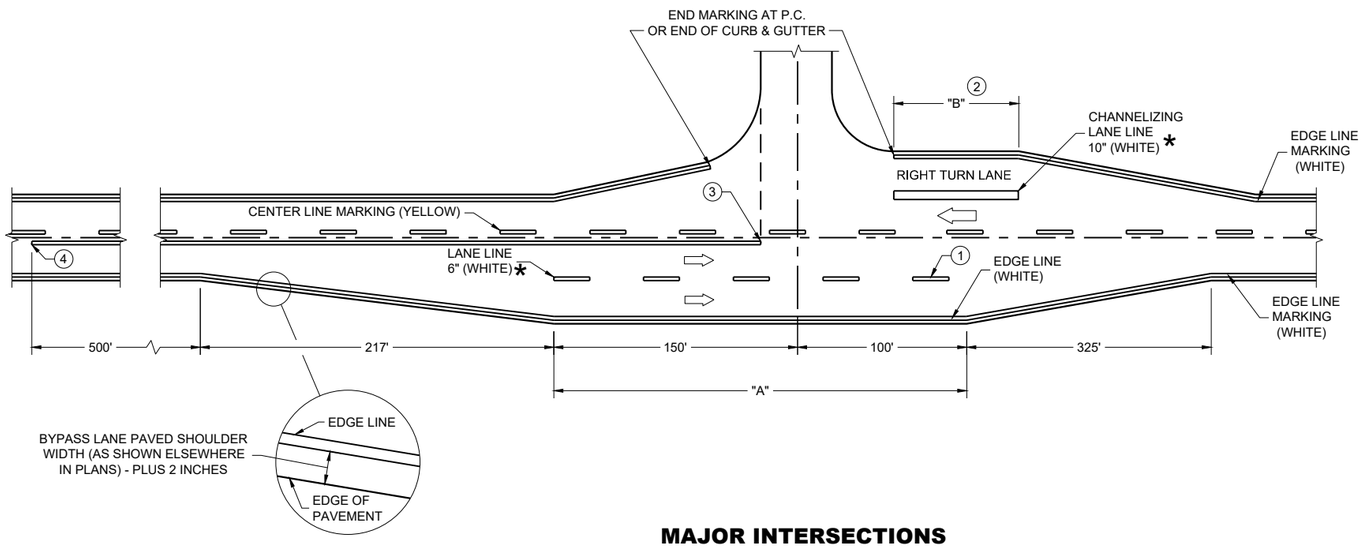
March 2024 — DATE

/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

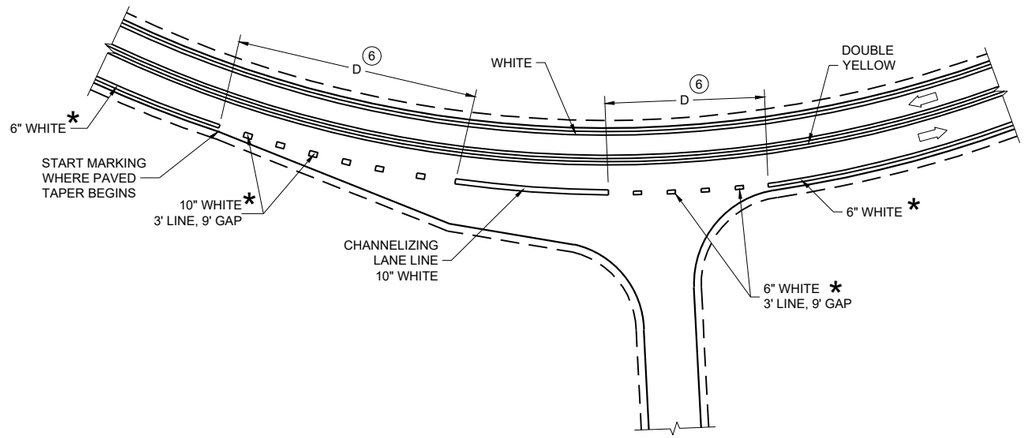
GENERAL NOTES

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

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

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35-06a

SDD 15C35-06a

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
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER
- CONNECTED ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (S) — PORTABLE TRAFFIC SENSOR (PTS)
- FBS — FLASHING BEACON SIGNS

STOPPED OR SLOW TRAFFIC WHEN FLASHING
WO8-76
96" x 48"

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, INCLUDING FBS 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" SIGNS ARE THE SAME AS "W" SIGNS 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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED SIGNS.

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

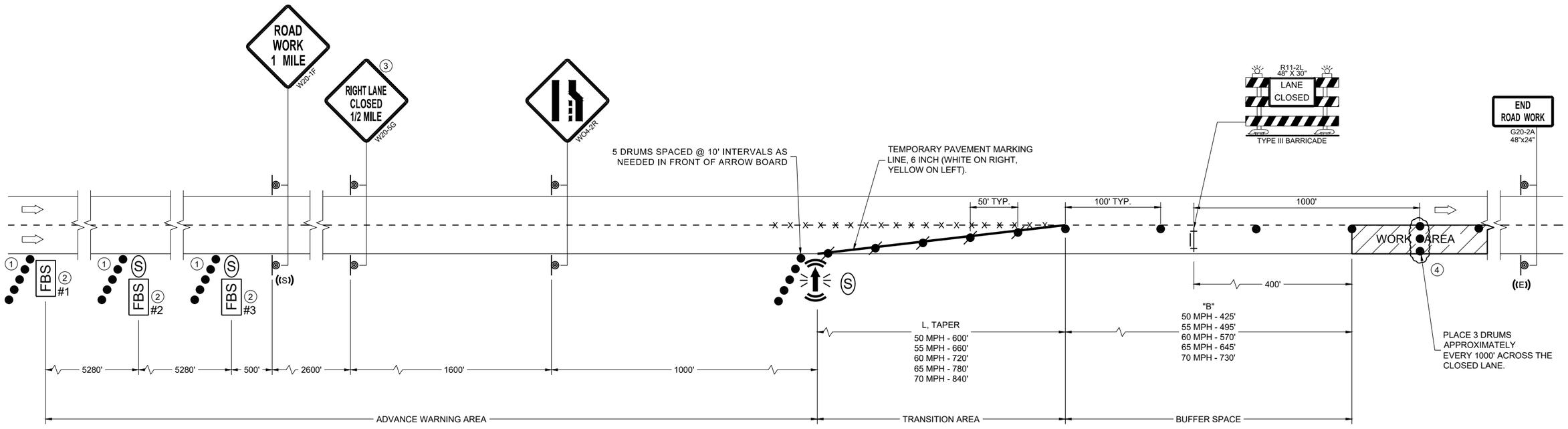
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE 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.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON THE FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

1. 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.
2. IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDES OF THE ROADWAY.
3. IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN
4. DRUMS 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.



TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Erin Schwark — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6 SDD 15D12-16d

6 SDD 15D12-16d

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" SIGNS ARE THE SAME AS "W" SIGNS 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.

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

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

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

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

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE 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.

IF THE SPEED LIMIT WILL CHANGE BASED ON THE PRESENCE OF WORKERS, USE THE TAPER LENGTH THAT MATCHES THE HIGHER OF THE TWO SPEEDS FOR A CONTINUOUS LANE CLOSURE.

EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.

(1) POST NON-CONSTRUCTION SPEED LIMIT.

(2) IF THE LANE CLOSURE MOVES DOWNSTREAM, LEAVE DSLT IN PLACE.

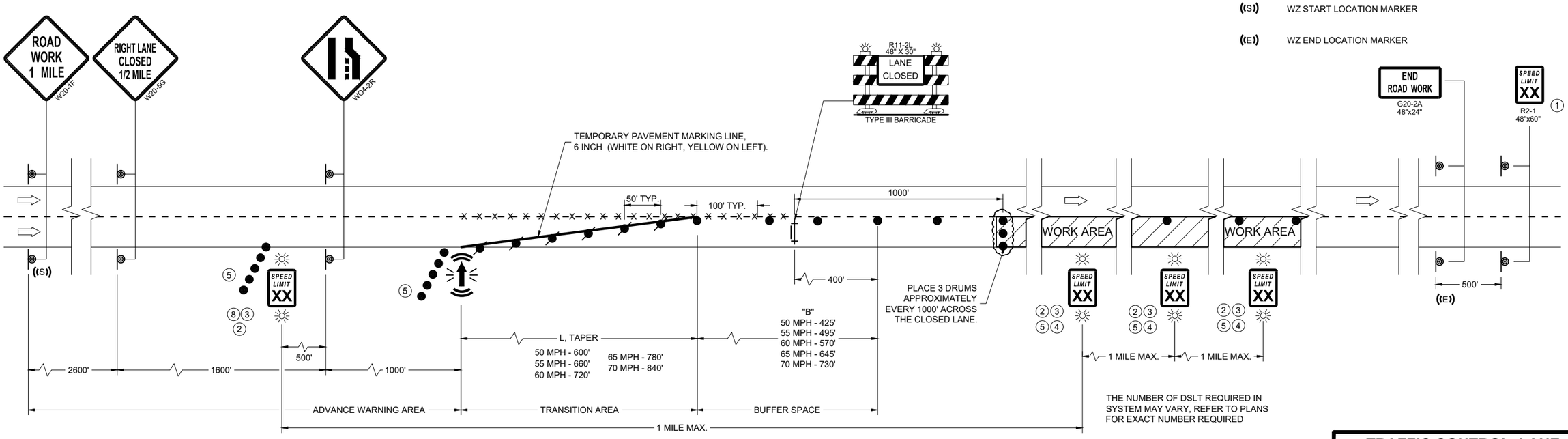
(3) PLACE DSLT AT EXISTING POST MOUNTED SPEED LIMIT SIGN AFTER THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. IF THERE IS NOT AN EXISTING SIGN, PLACE 1,500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP

(4) FOR LEFT LANE CLOSURES, DSLT REMAINS ON RIGHT SHOULDER.

(5) 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.

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
- CONNECTED ARROW BOARD
- DIGITAL SPEED LIMIT TRAILER (DSLT)
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER



TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6 SDD 15D12-16g

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

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

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

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

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

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

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

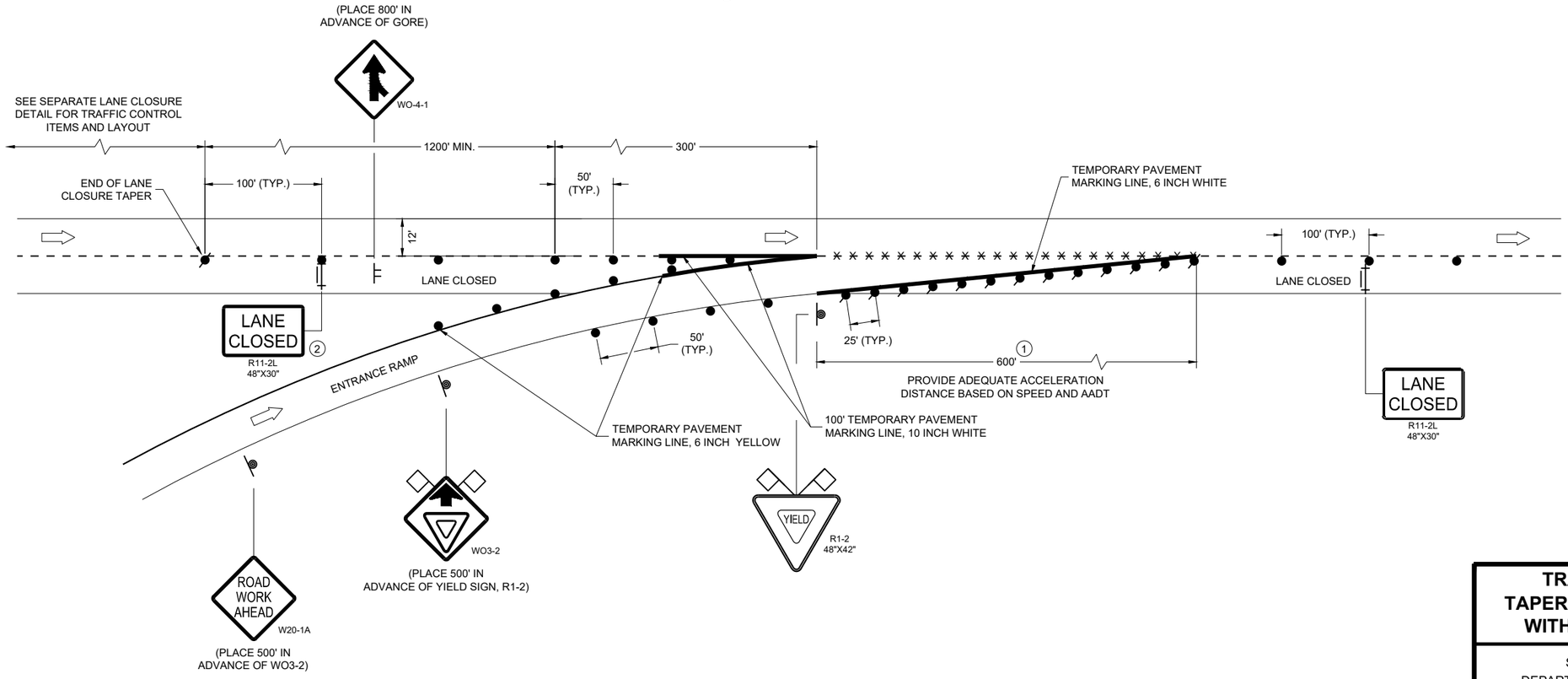
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

(2) IF LOCATED AFTER INITIAL LANE CLOSURE BARRICADE AND "LANE CLOSED" SIGN, USE 3 DRUMS IN PLACE OF BARRICADE AND SIGN.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — <position>
FHWA

6

SDD 15D15-08c

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

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

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

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

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

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

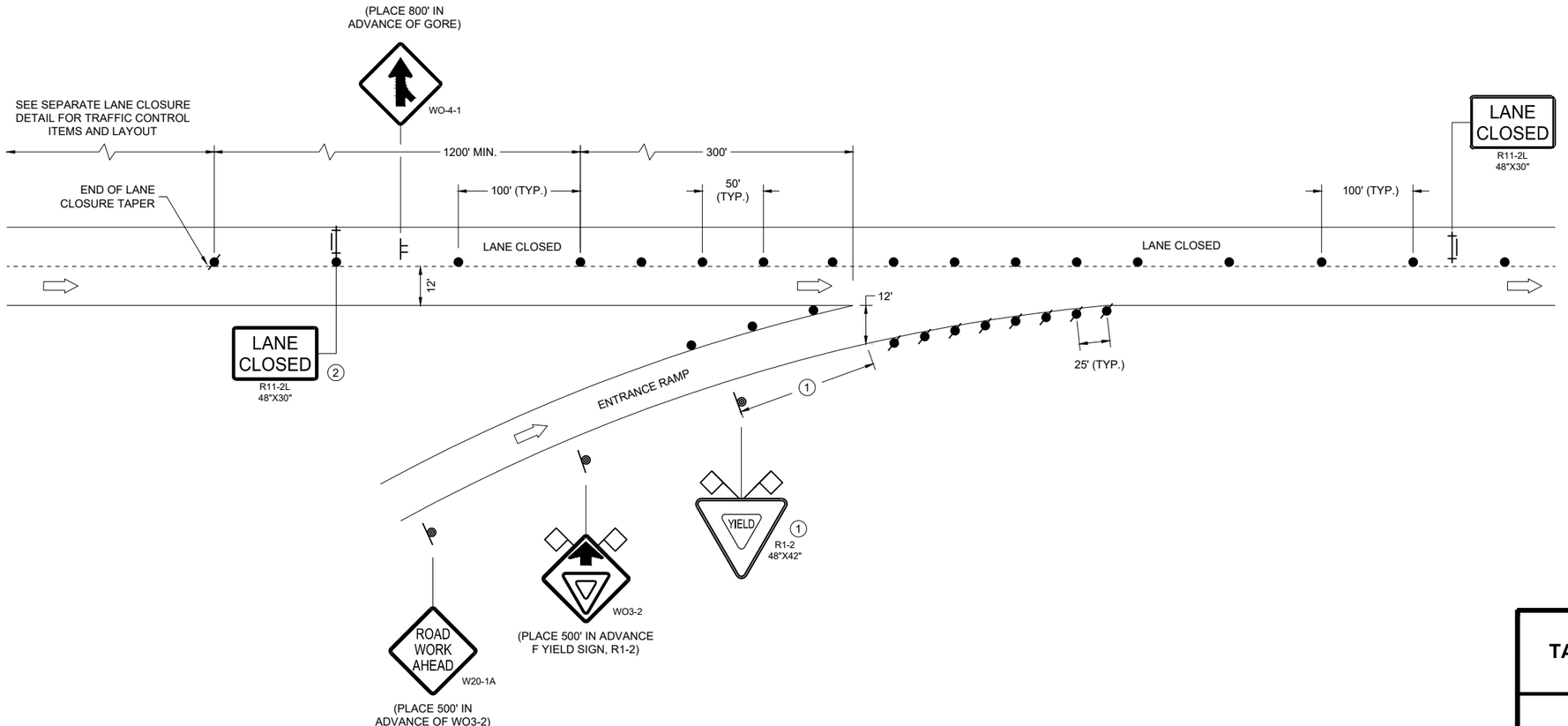
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

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

(1) PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.

(2) IF LOCATED AFTER INITIAL LANE CLOSURE BARRICADE AND "LANE CLOSED" SIGN, USE 3 DRUMS IN PLACE OF BARRICADE AND SIGN.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15D15-08d

6

SDD 15D15-08d

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

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

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

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

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

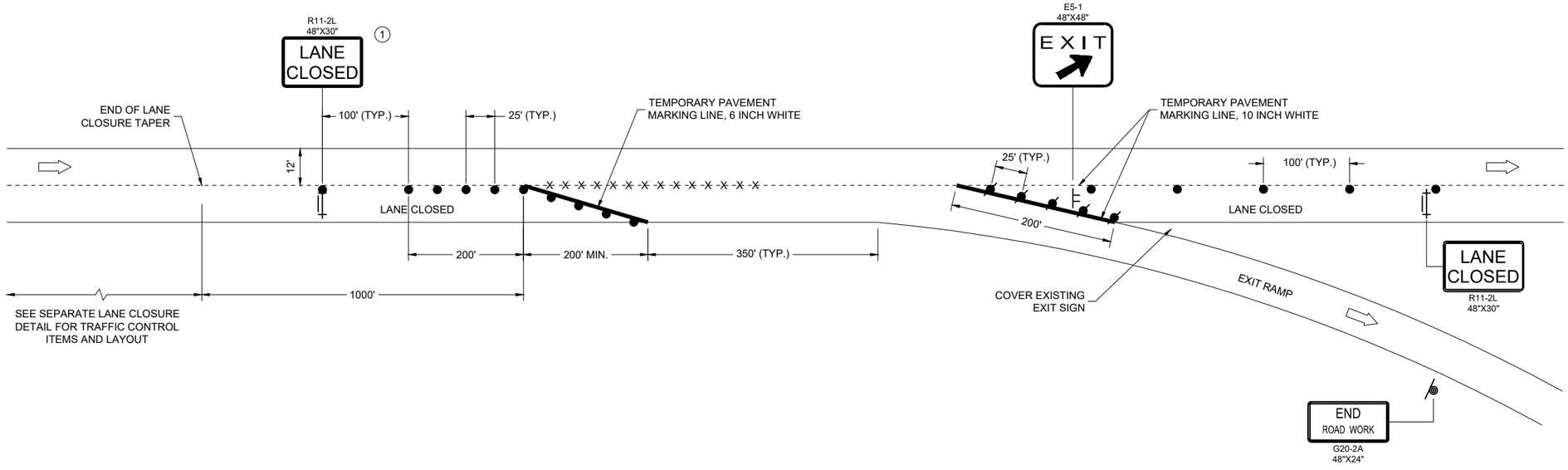
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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

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

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

(1) IF LOCATED AFTER INITIAL LANE CLOSURE BARRICADE AND "LANE CLOSED" SIGN, USE 3 DRUMS IN PLACE OF BARRICADE AND SIGN.



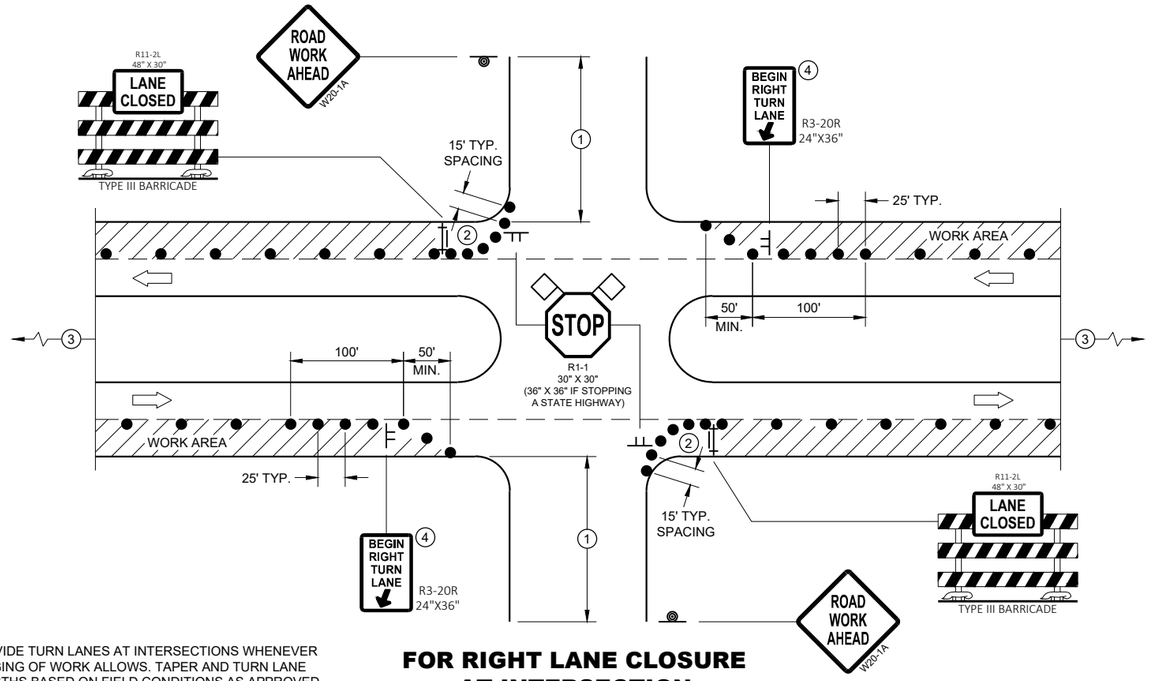
TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6
SDD 15D15-08e



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

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

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

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.

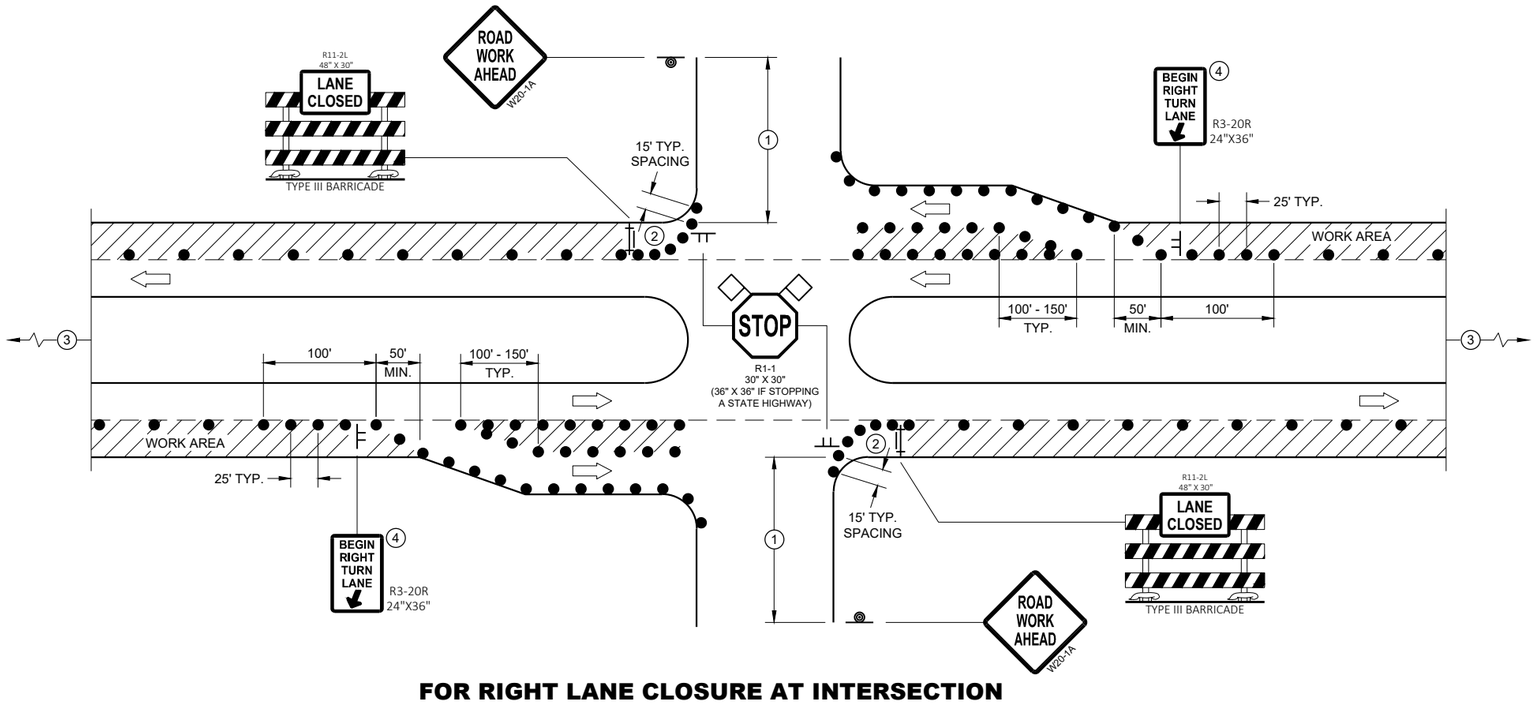
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

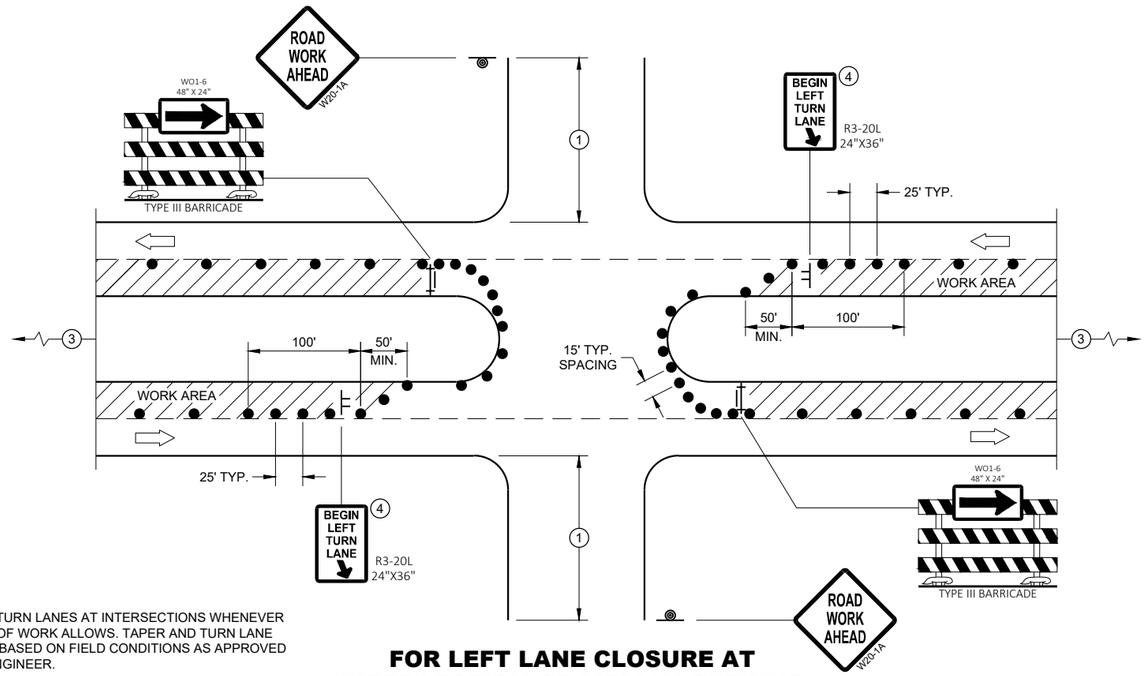


FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

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

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

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

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

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.

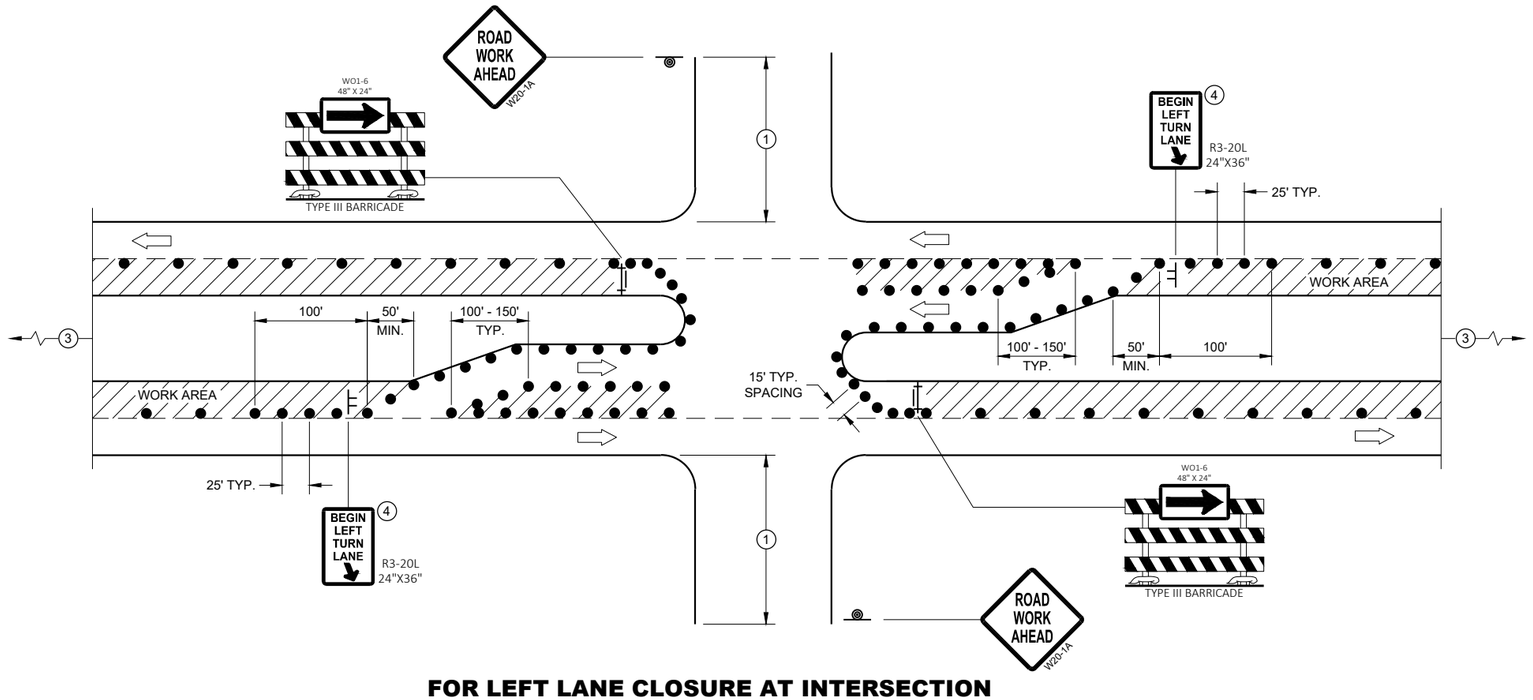
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D21 - 07b

6

SDD 15D21 - 07b

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- CONCRETE BARRIER TEMPORARY PRECAST

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)					BUFFER SPACE (B) FEET
	10	11	12	13	14	
50	250	275	300	325	350	425
55	275	303	330	358	385	495
60	300	330	360	390	420	570
65	325	358	390	423	455	645
70	350	385	420	455	490	730

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" 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 AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

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

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

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

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

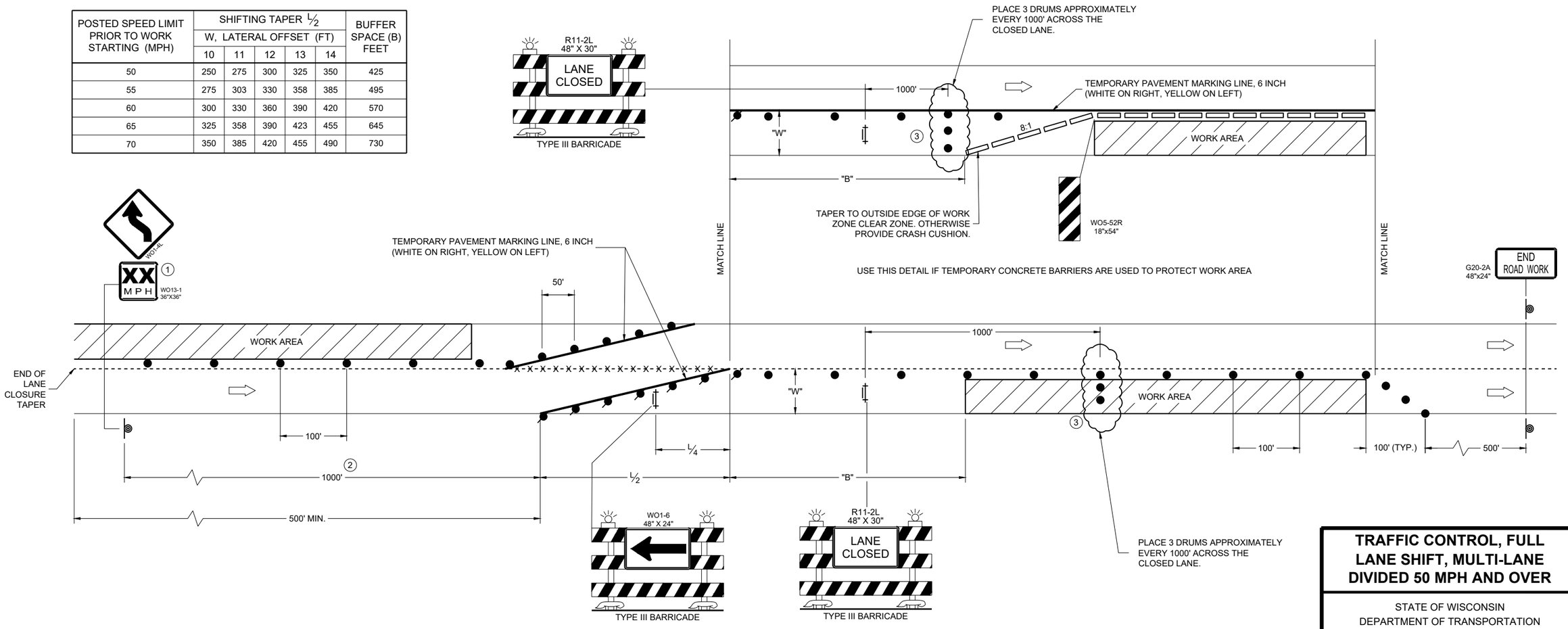
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE THE LENGTH OF ½ THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

(1) USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

(2) IF BEGINNING OF LANE SHIFT IS 1200' OF LESS FROM THE END OF THE LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.

(3) DRUMS 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.



TRAFFIC CONTROL, FULL LANE SHIFT, MULTI-LANE DIVIDED 50 MPH AND OVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

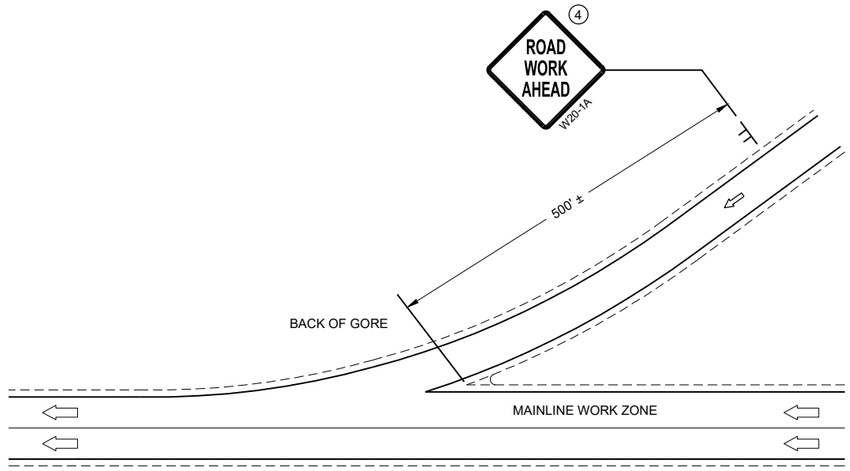
APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6
SDD 15D40-07b

LEGEND

- V1 SHADOW VEHICLE 1
- V2 SHADOW VEHICLE 2
- V3 ADVANCE WARNING TRUCK
- ● TRAFFIC CONTROL DRUM
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING ARROW PANEL (CAUTION)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- WORK AREA



GENERAL NOTES

SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

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. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

WHEN WORK ACTIVITY BLOCKS THE RIGHT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

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

(1) DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO 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 AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) DRUMS ARE TO BE USED FOR BRIDGE DECK SEALING AND OTHER PROJECTS THAT REQUIRE DELINEATION.

(3) WITHIN 5 MILES, RELOCATE SIGNS AS WORK PROGRESSES AND NECESSARY OR AS DIRECTED BY THE ENGINEER.

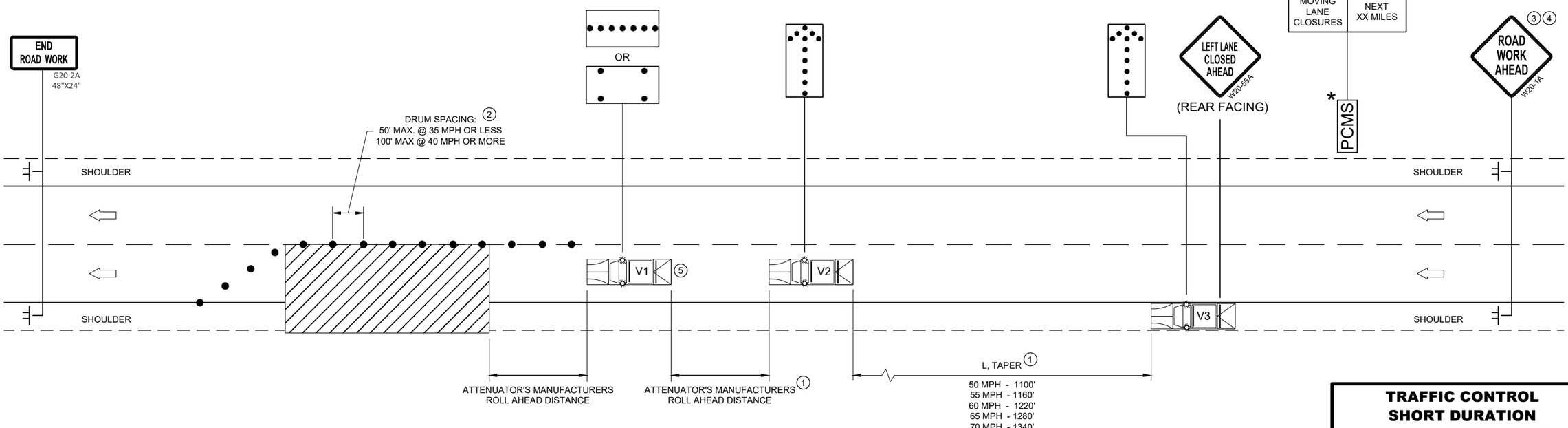
(4) SIGN NOT REQUIRED IF MOVING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(5) SHADOW VEHICLE 1 (V1) IS OPTIONAL

* PCMS OPTIONAL

PCMS MESSAGING

FRAME 1	FRAME 2
MOVING LANE CLOSURES	NEXT XX MILES



TRAFFIC CONTROL SHORT DURATION MOBILE OPERATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

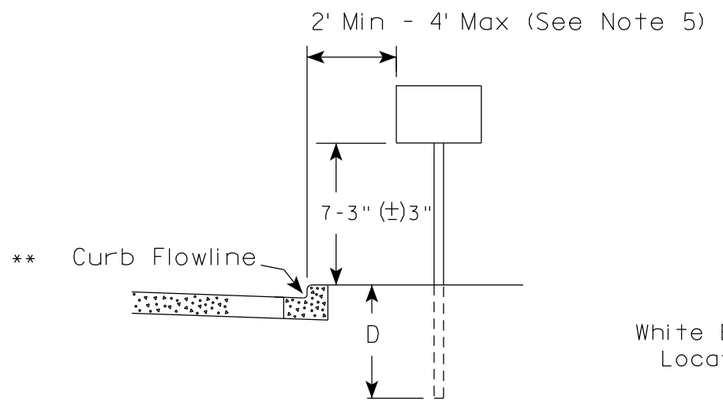
6

SDD 15D43 - 02

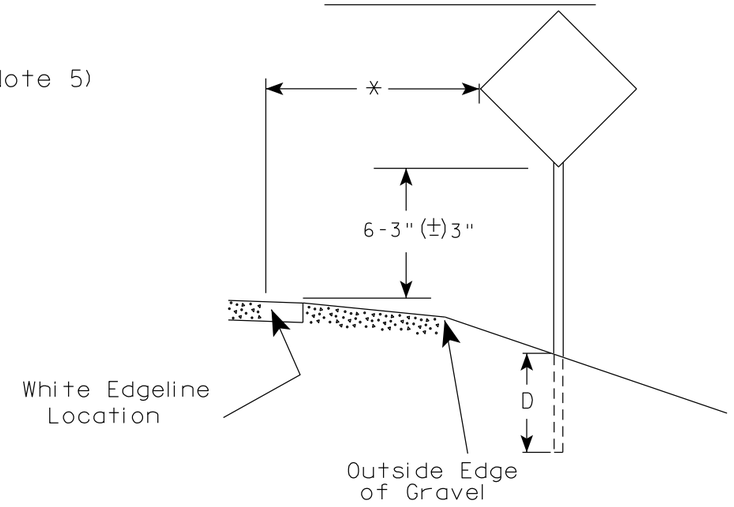
6

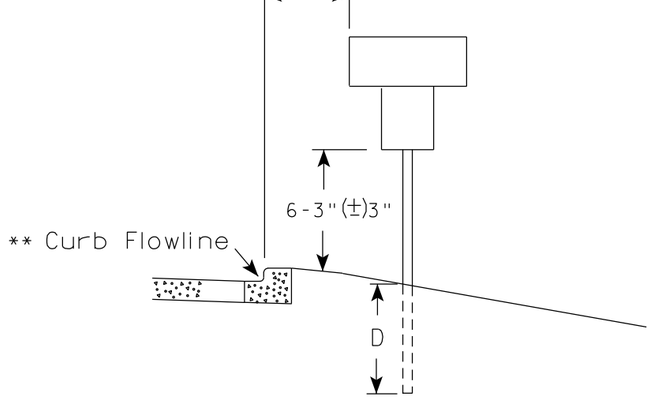
SDD 15D43 - 02

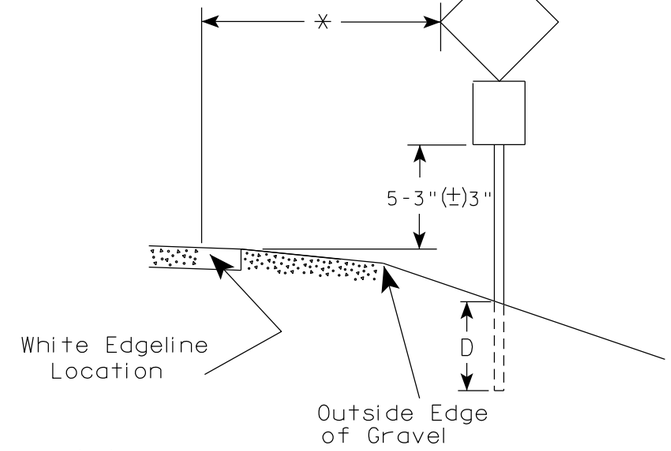
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

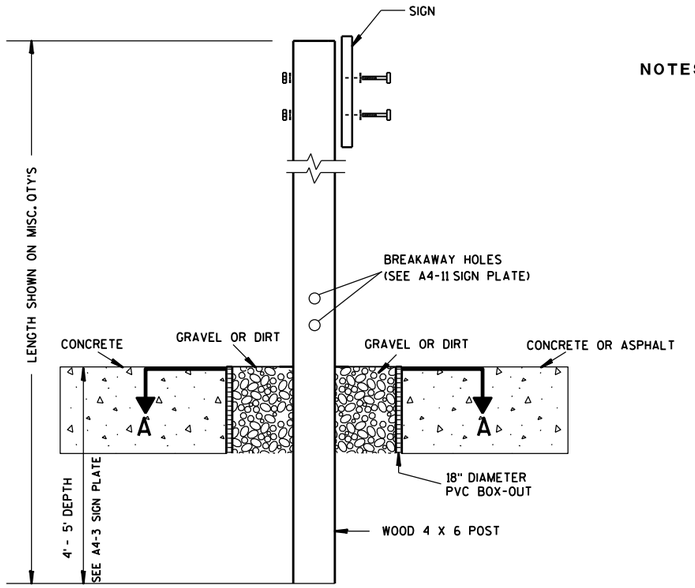
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

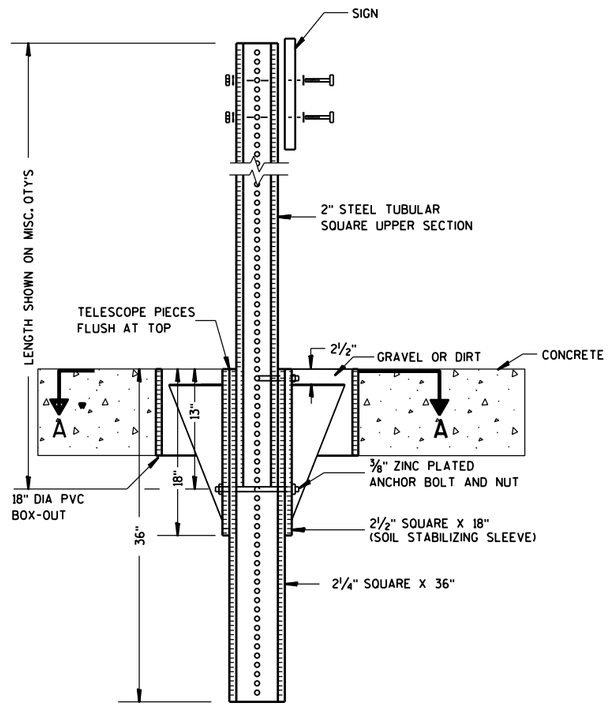
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 102	E



ELEVATION VIEW

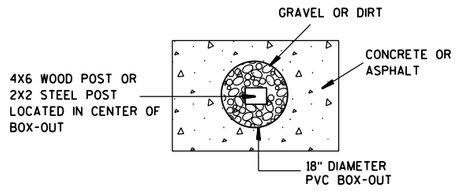
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

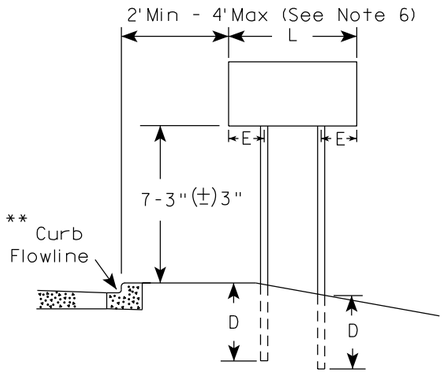
APPROVED Matthew R Rauch
for State Traffic Engineer

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

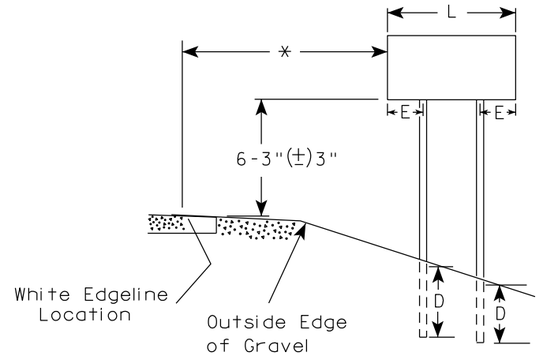
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

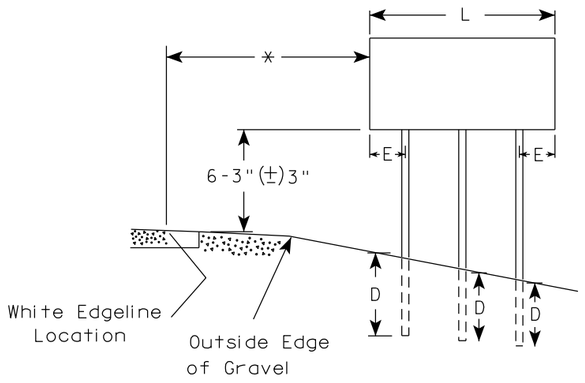
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

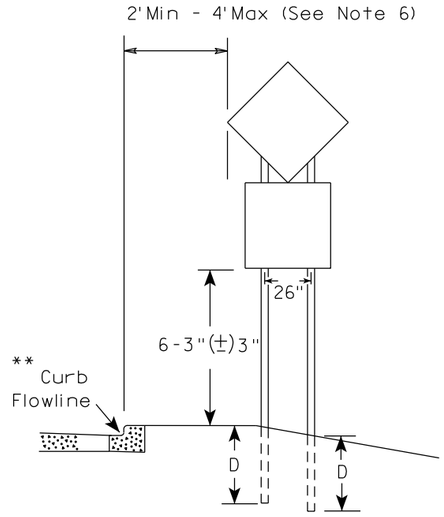
URBAN AREA



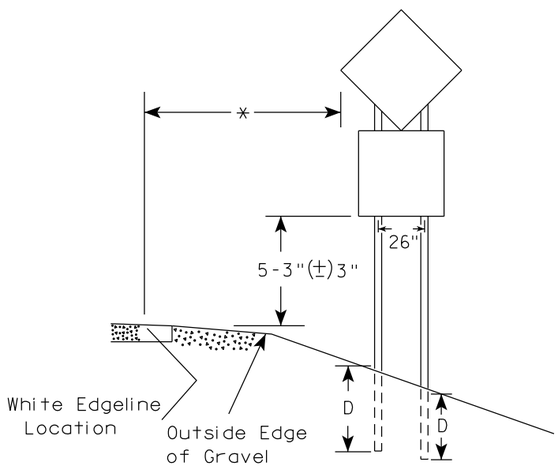
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

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

POST EMBEDMENT DEPTH

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

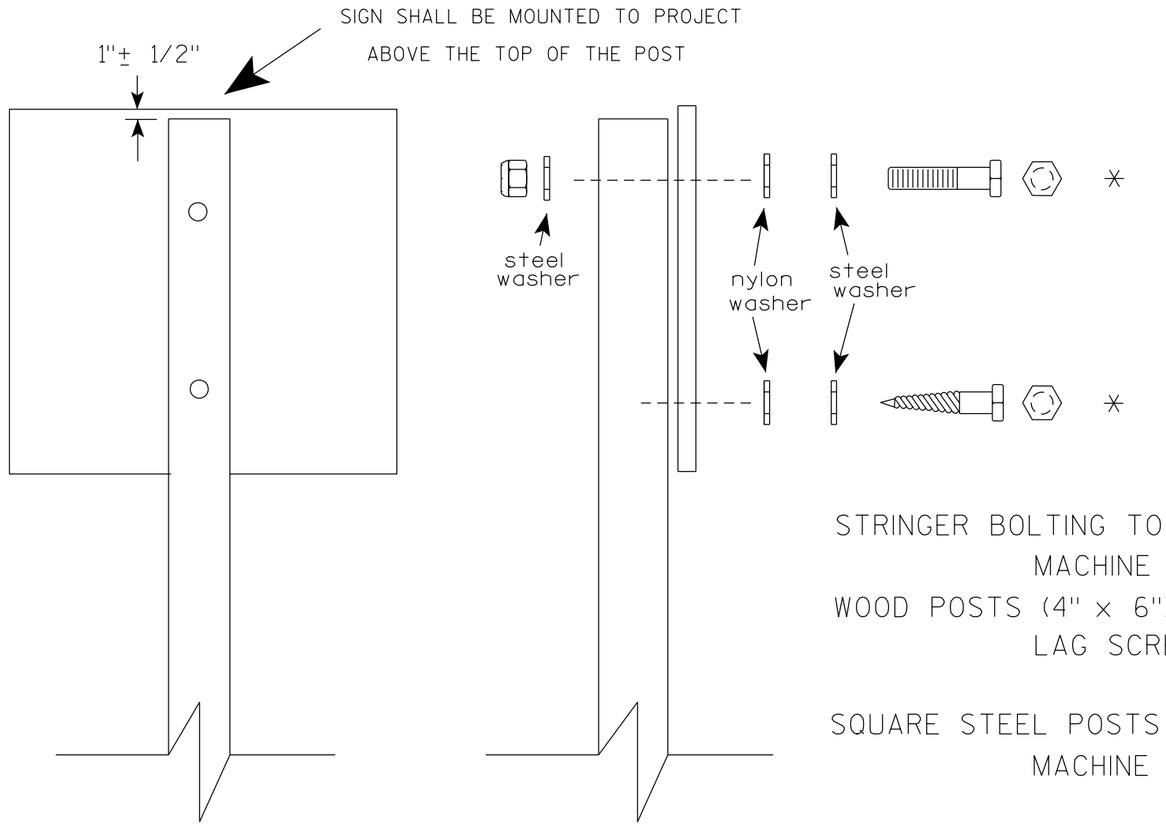
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 104	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

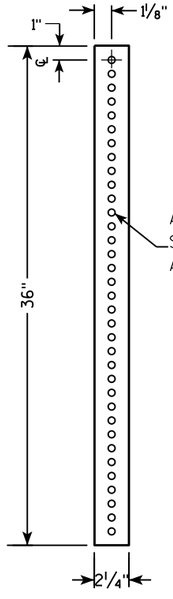
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

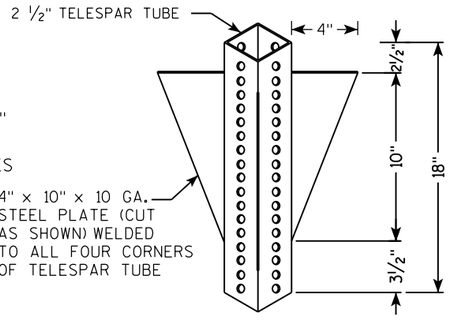
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

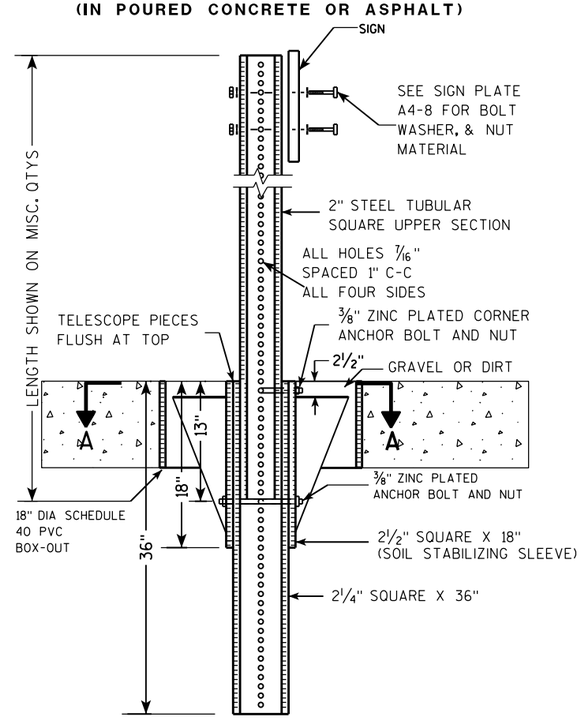
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



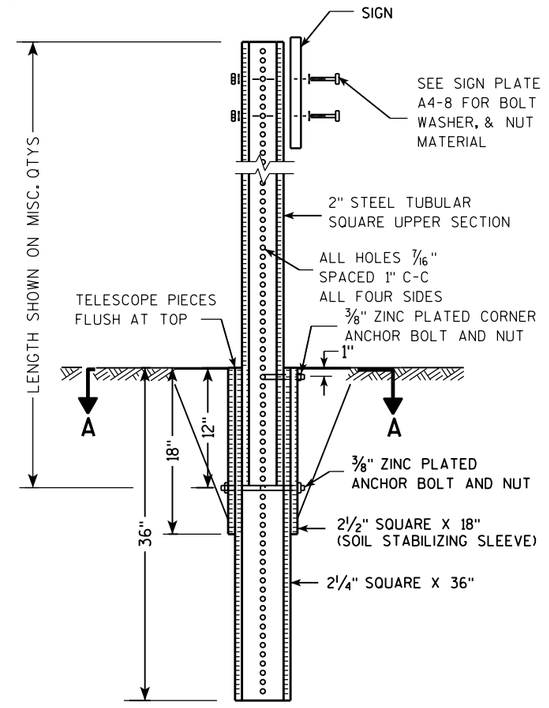
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

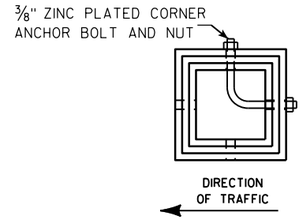


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

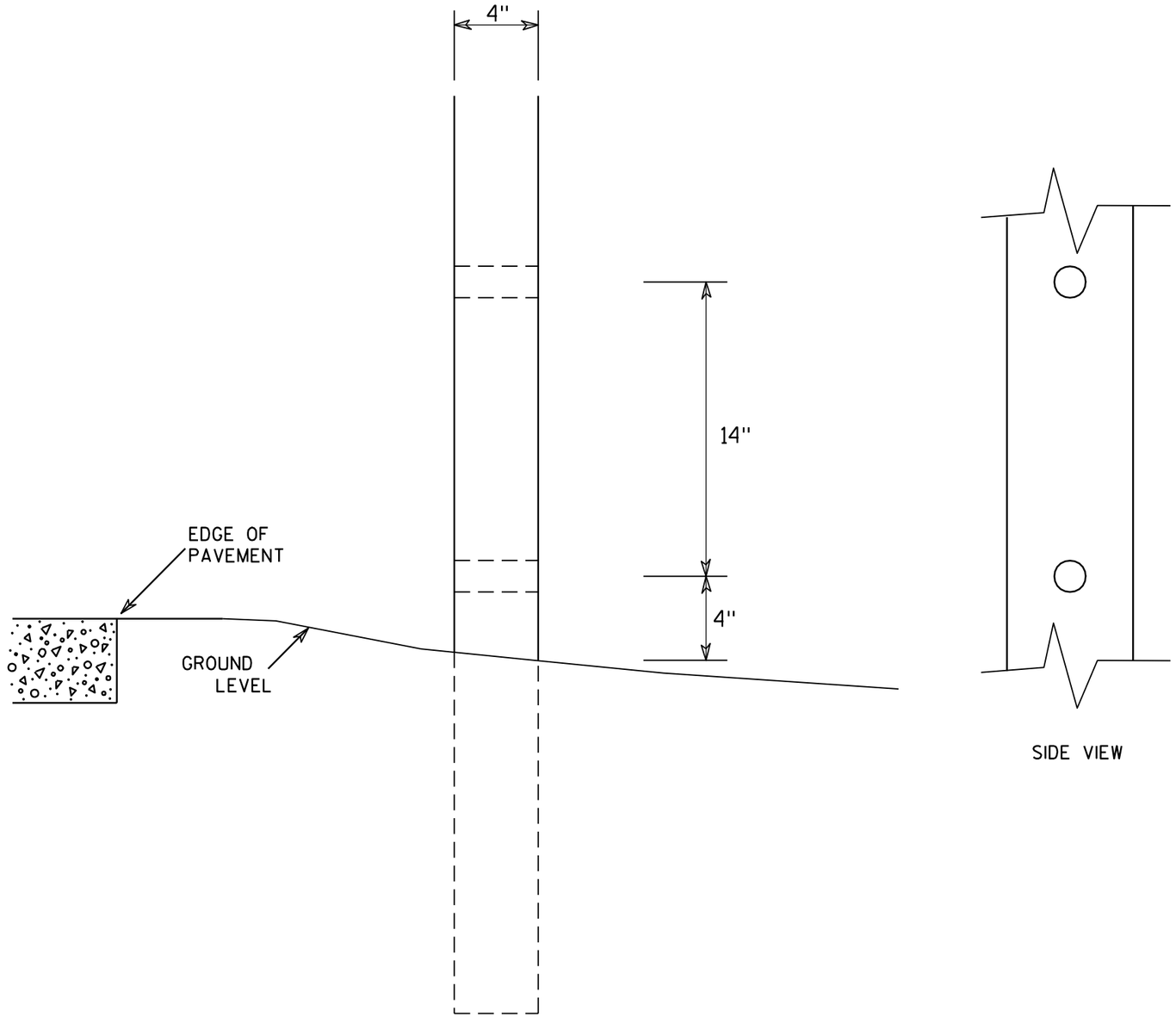
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

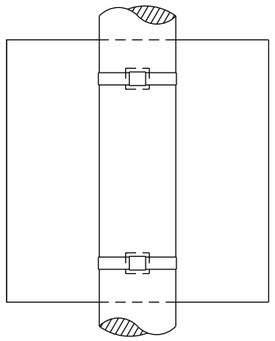
APPROVED Chester J Spang for State Traffic Engineer

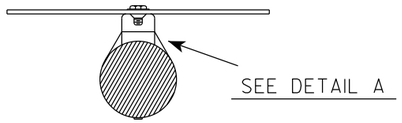
DATE 3/27/97 PLATE NO. A4-11.2

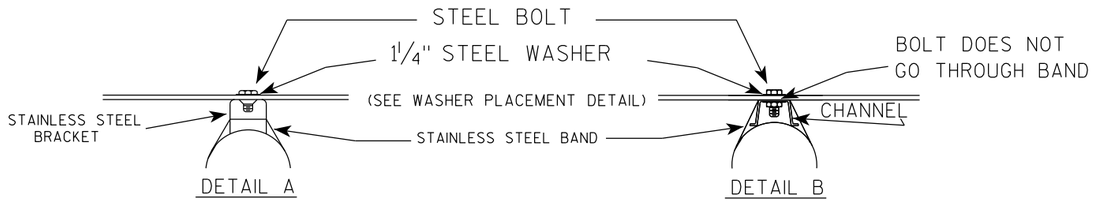
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 107	E

BANDING

SINGLE SIGN



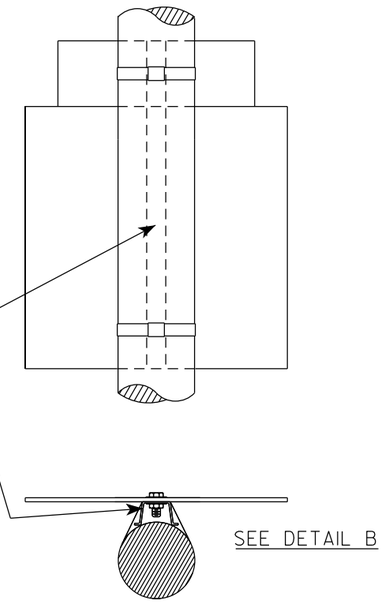




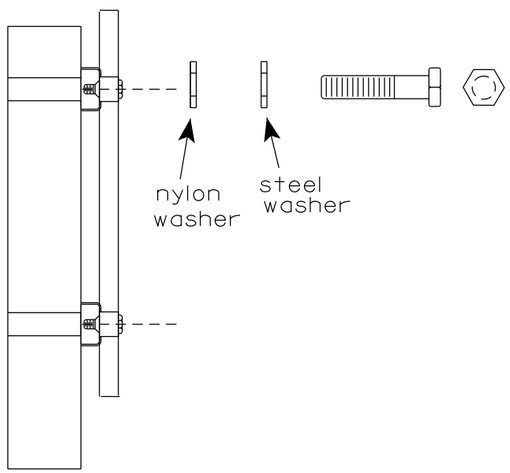
GENERAL NOTES

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

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

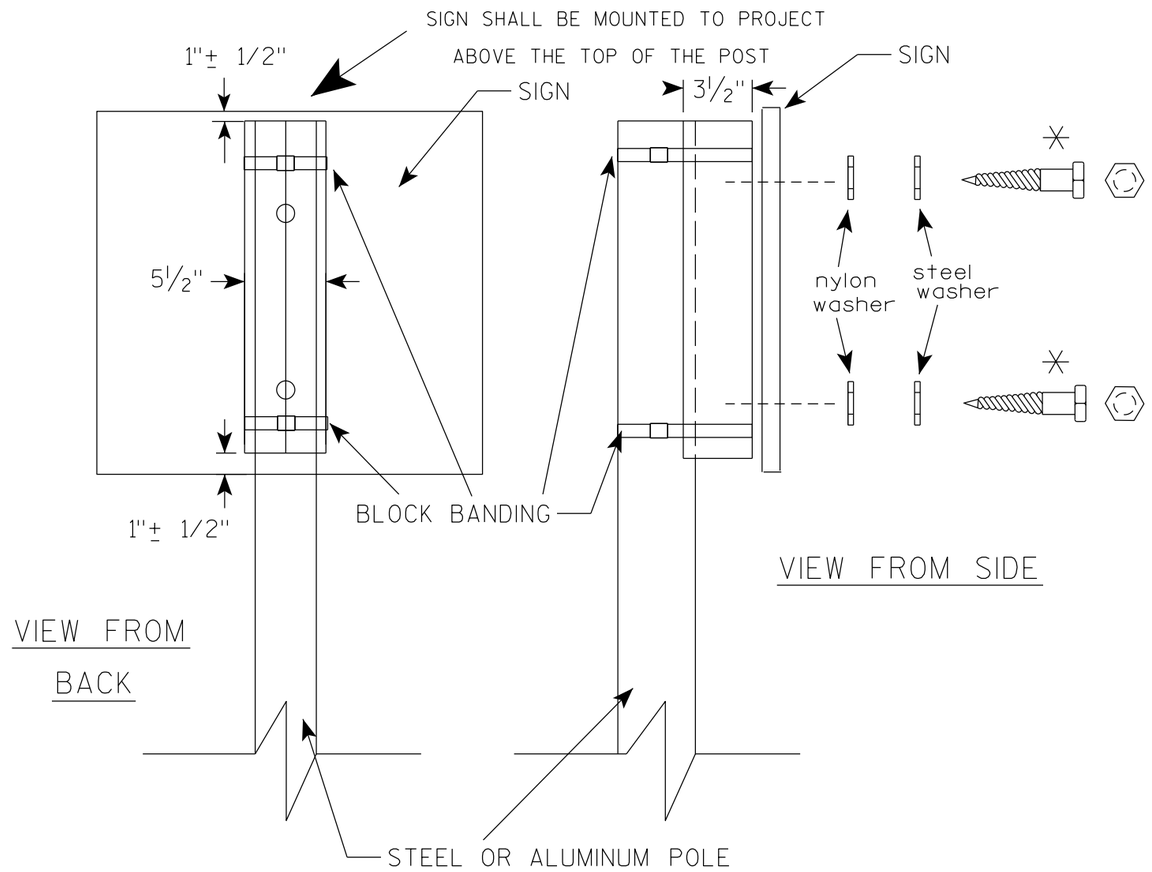
DATE 6/10/19 PLATE NO. A5-9.4

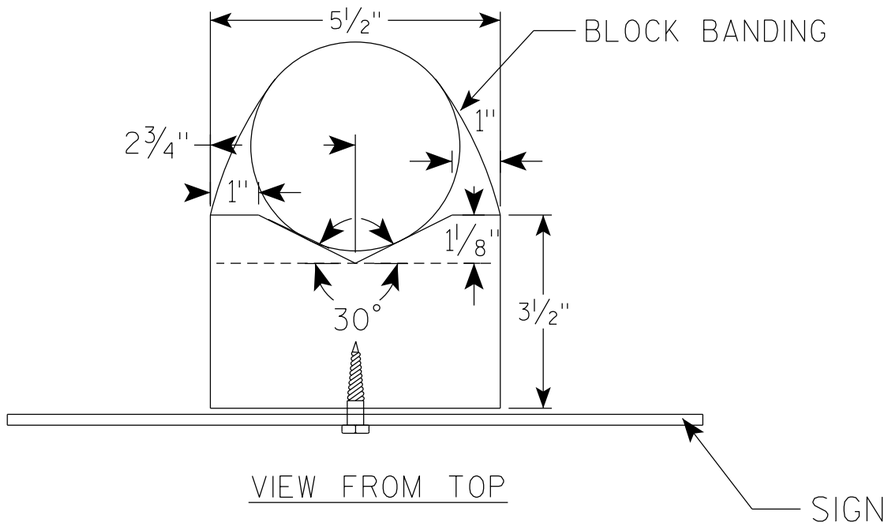
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 108	E

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

7

7





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

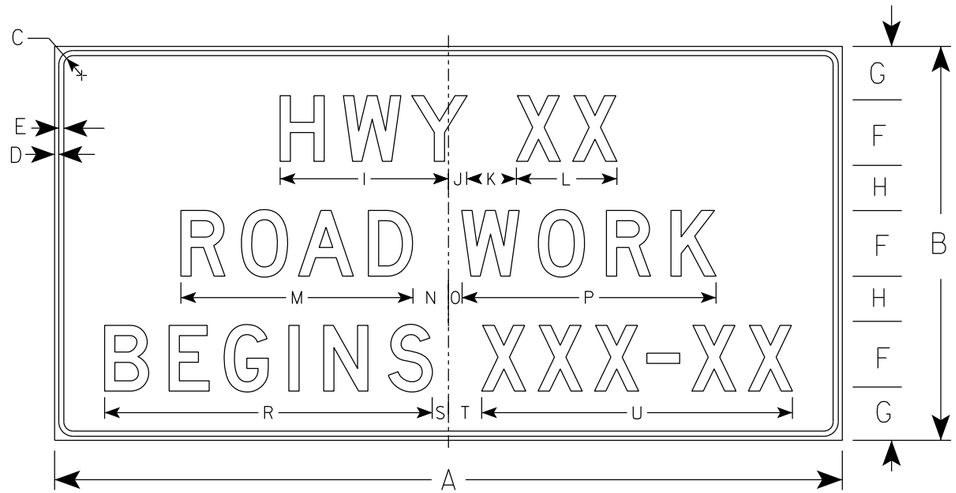
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 109 E

NOTES

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



G20-57

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

STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

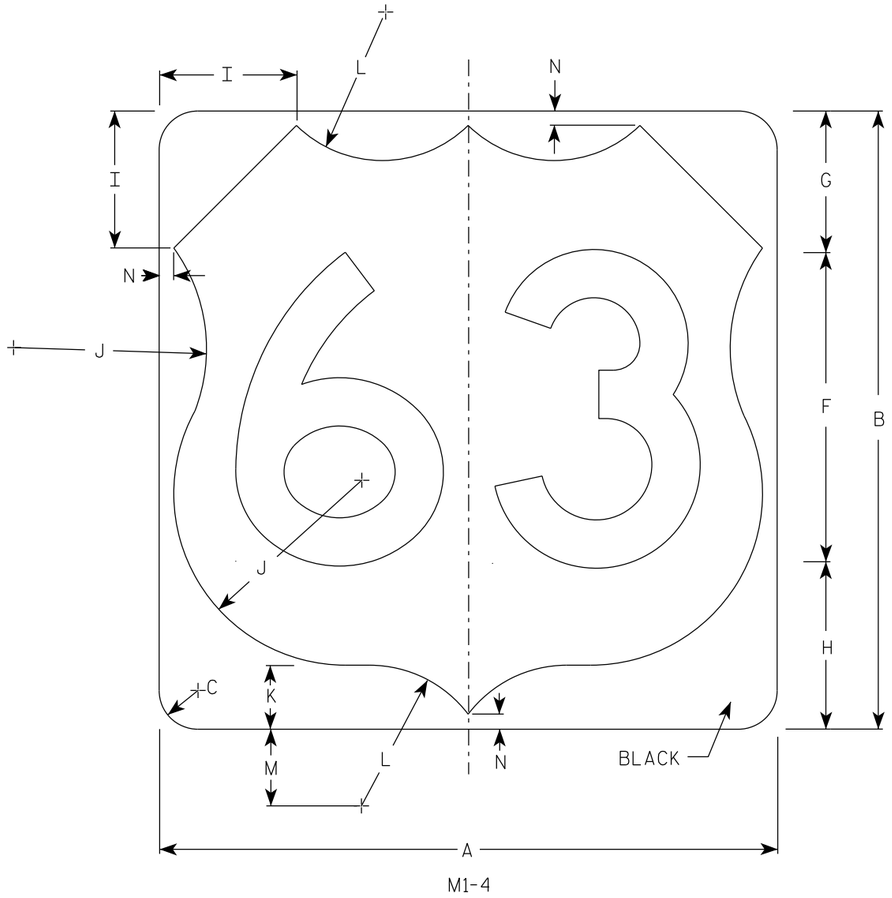
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 110 | E

7

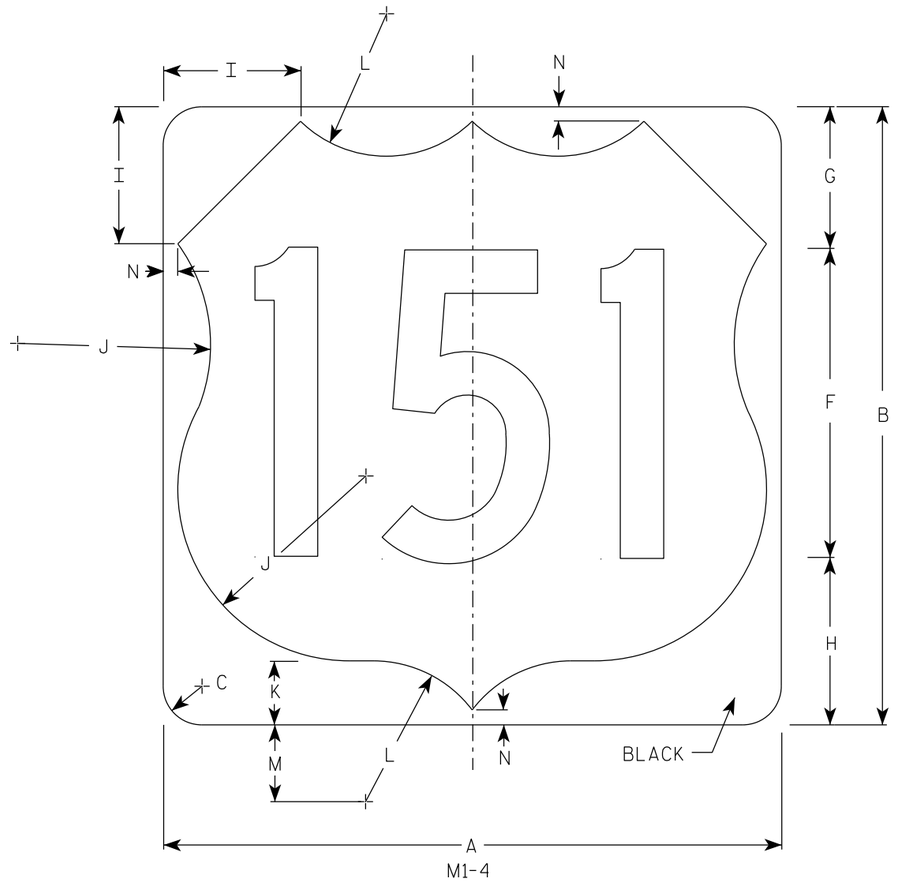
7

NOTES

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



M1-4



M1-4

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

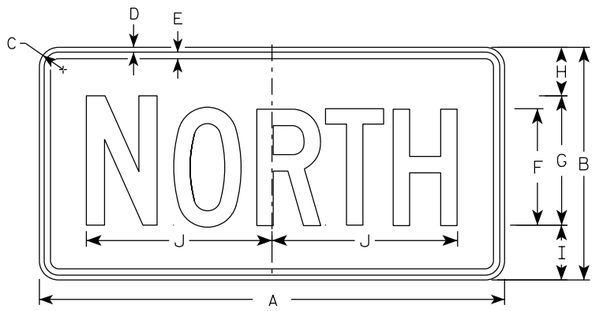
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

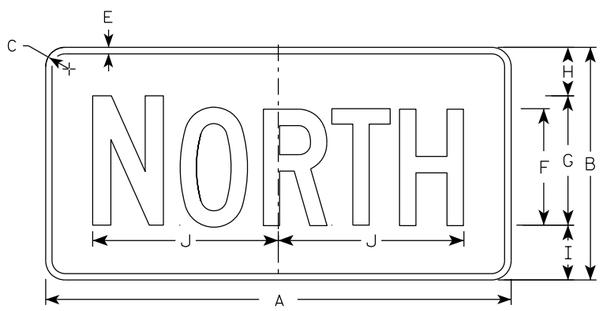
APPROVED Matthew R Rauch
for State Traffic Engineer

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

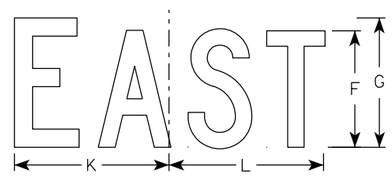
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 111 E



M3-1
MM3-1
MP3-1

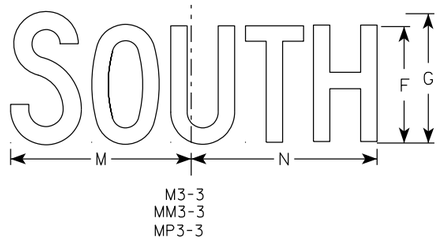


MB3-1
MK3-1
MN3-1

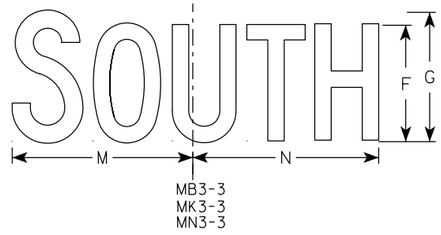


M3-2
MM3-2
MP3-2

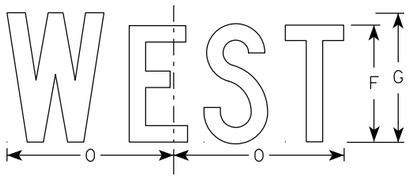
MB3-2
MK3-2
MN3-2



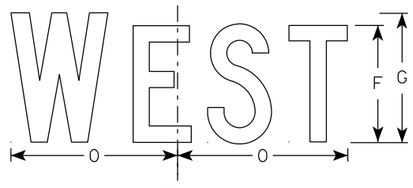
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

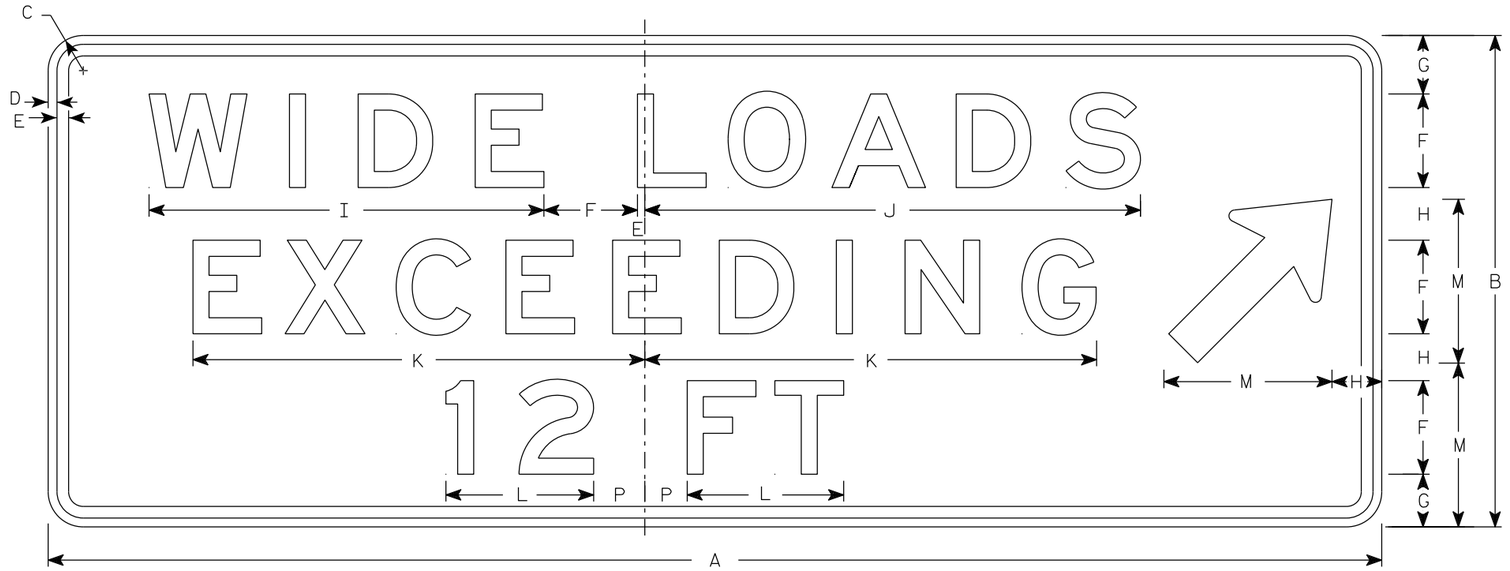
DATE 2/8/2023 PLATE NO. M3-1.15

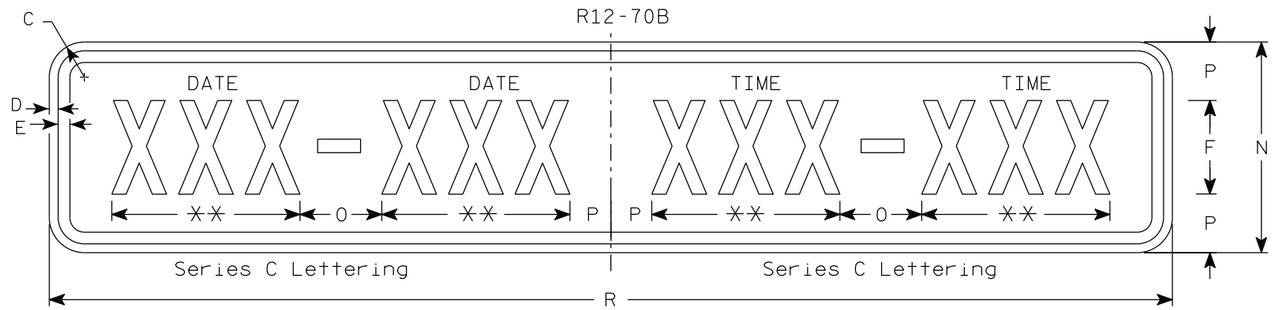
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 112 | E

NOTES

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

** Substitute appropriate message, optically center message





R12-70C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	R12-70 Area sq. ft.	R12-70C Area sq. ft.
1																												
2S	90	36	3	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
2M	90	36	3	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
3	90	36	3	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
4	114	42	3	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0
5	114	42	3	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0

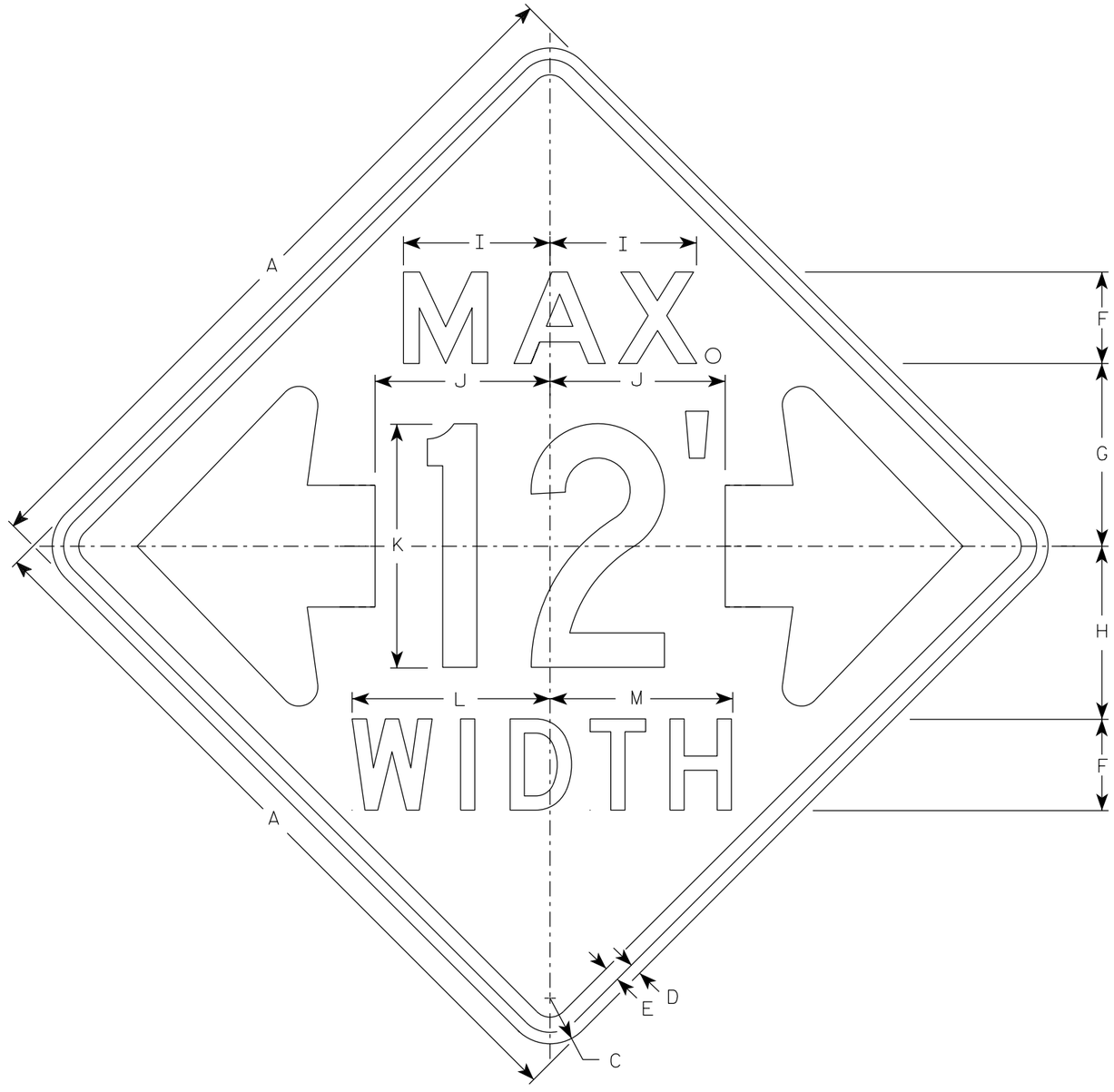
TYPICAL SIGN
R12-70B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/24 PLATE NO. R12-70B.4

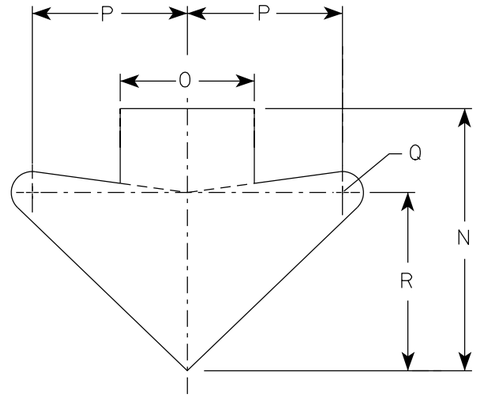
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 113	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. The top line is series E, the numerals are series C, and the bottom line is series D.
5. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
2M	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
3																											
4																											
5																											

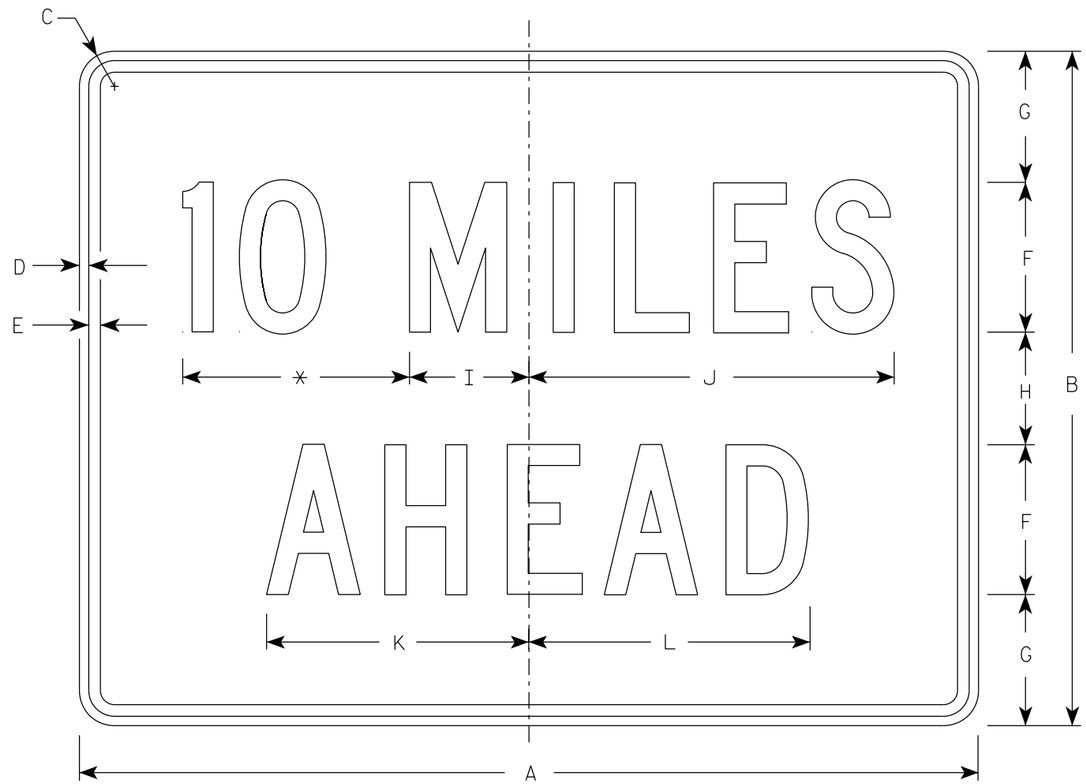
STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

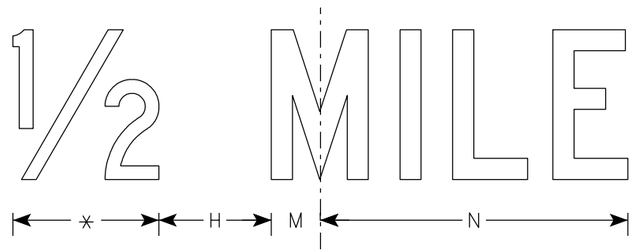
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/2024 PLATE NO. W12-52.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 114 | E



W057-52



NOTES

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

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/2	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

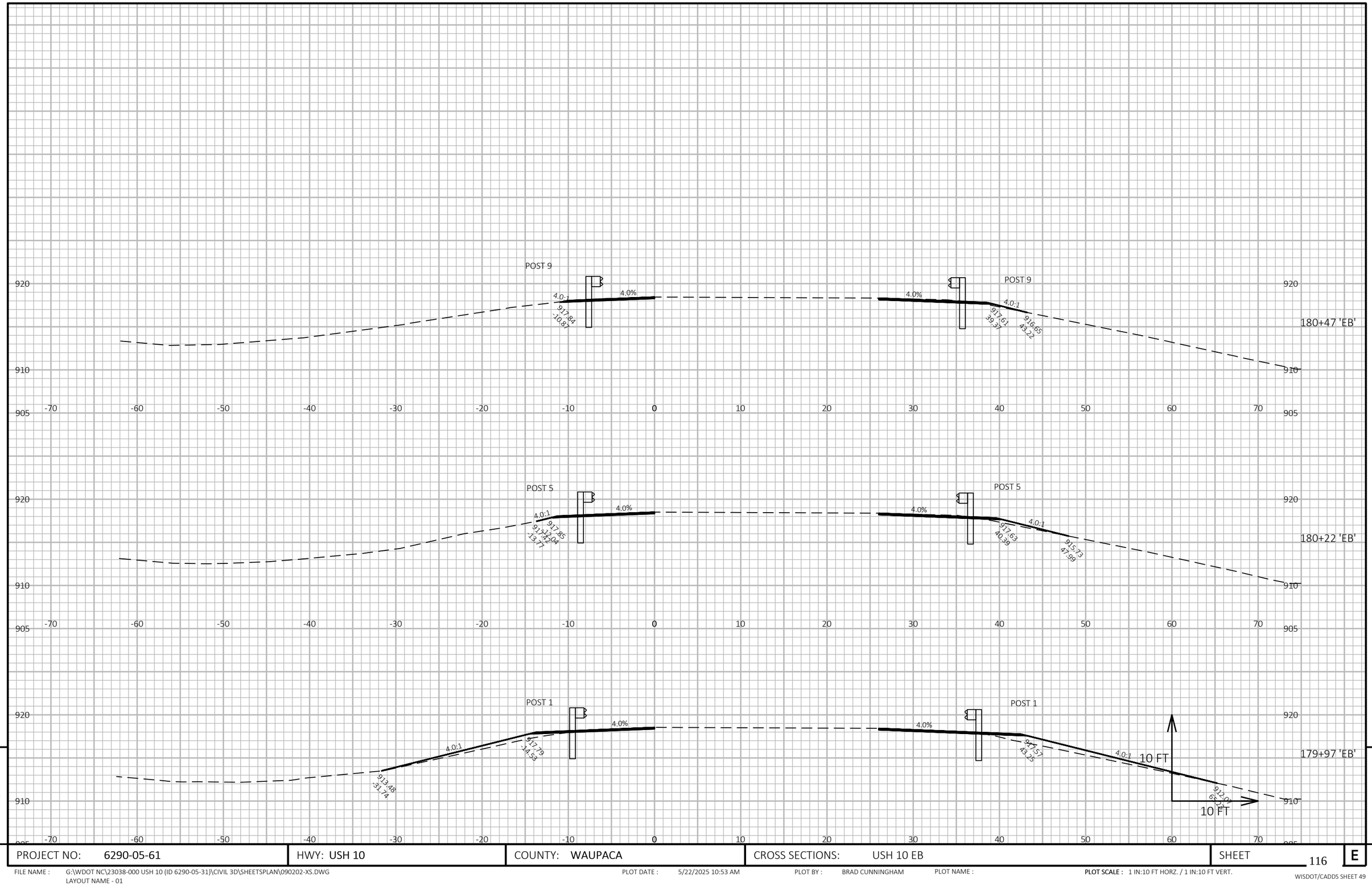
STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W057-52.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 115 E



9

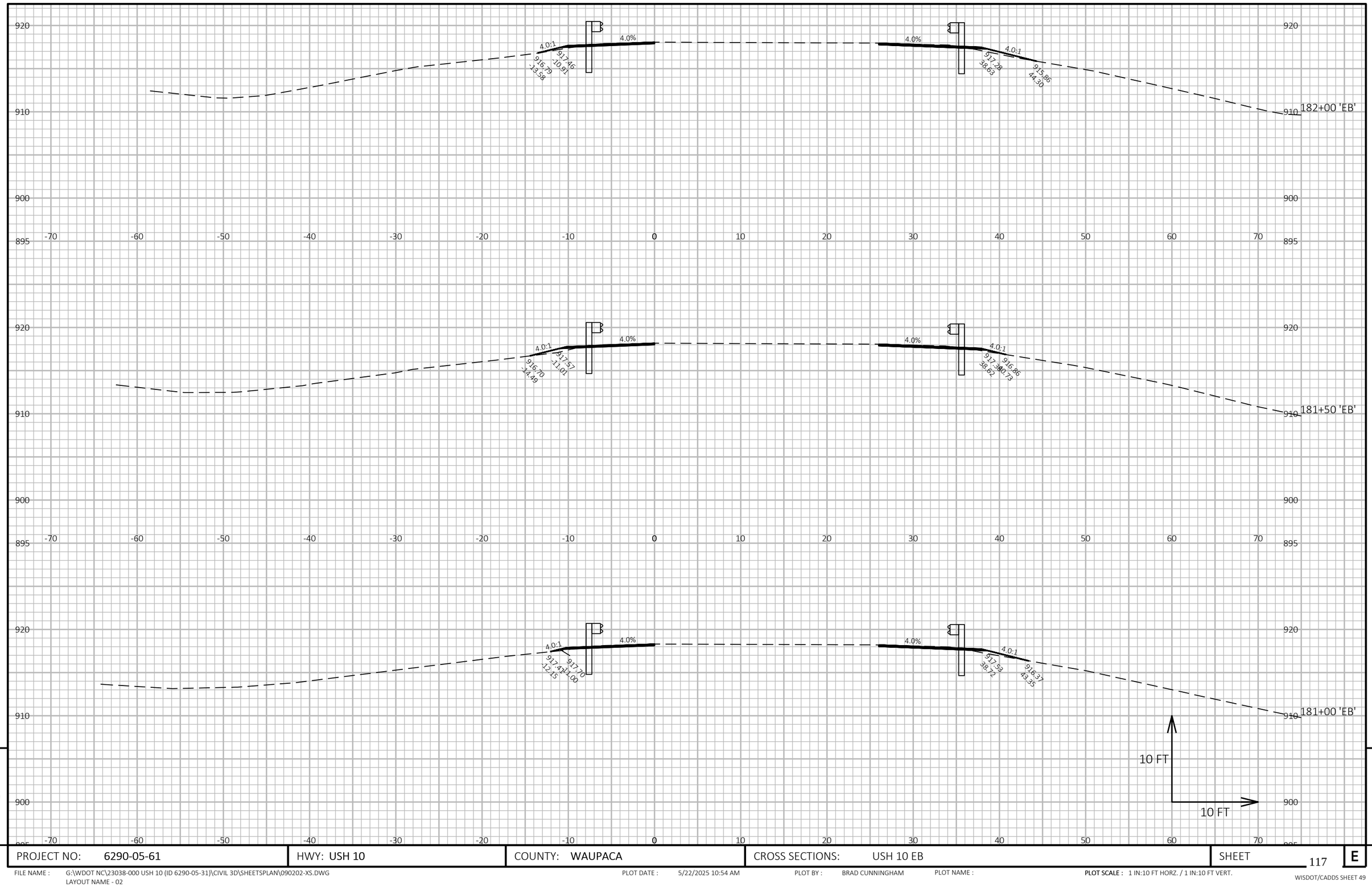
9

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: USH 10 EB	SHEET 116	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 01

PLOT DATE : 5/22/2025 10:53 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

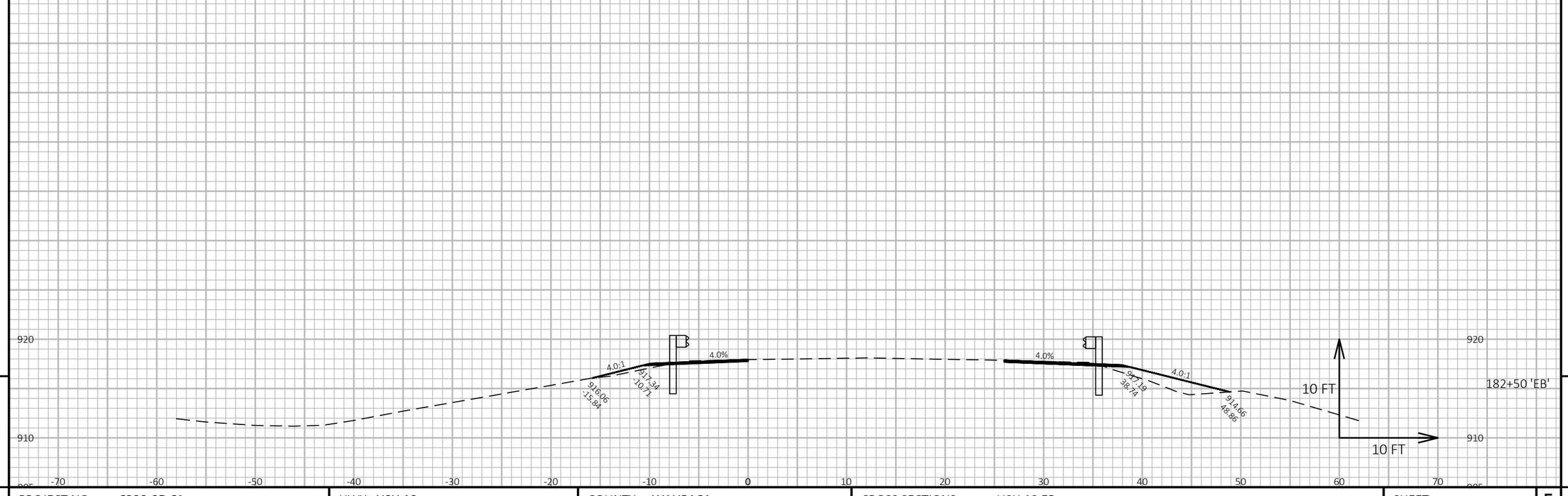


PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: USH 10 EB	SHEET 117	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 02

PLOT DATE : 5/22/2025 10:54 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

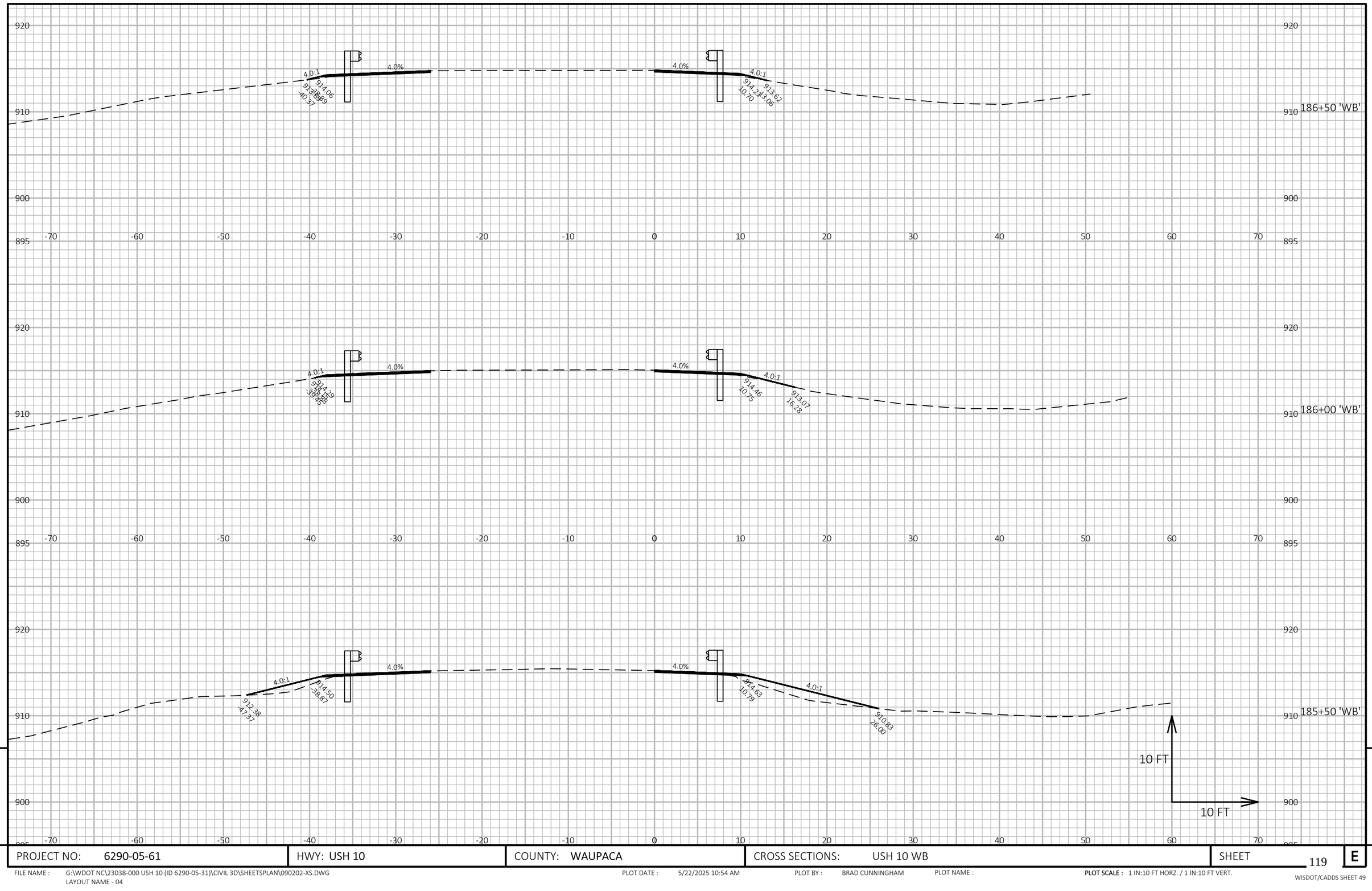
PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: USH 10 EB	SHEET 118	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 03

PLOT DATE : 5/22/2025 10:54 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

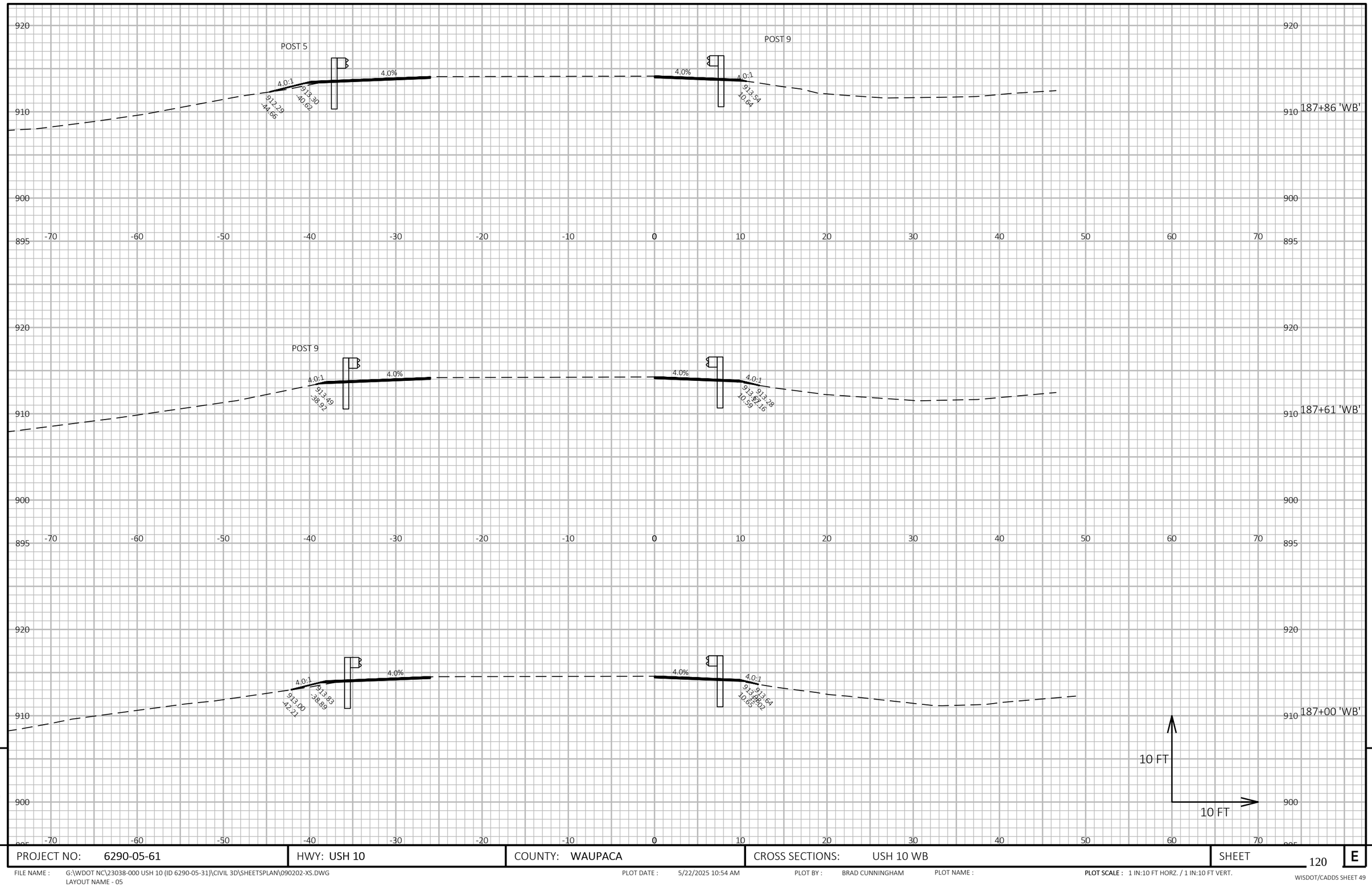
9

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: USH 10 WB	SHEET 119	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 04

PLOT DATE : 5/22/2025 10:54 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

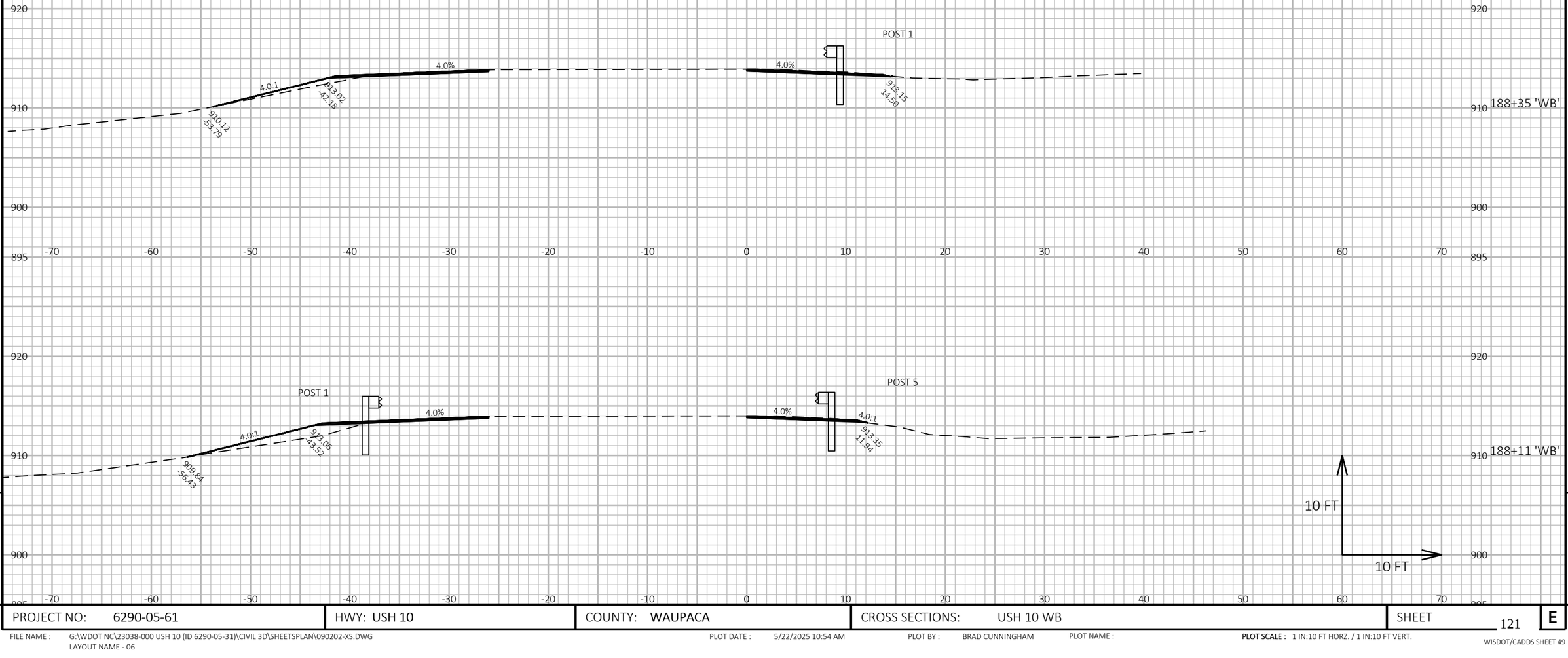
9

PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: USH 10 WB	SHEET 120	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 05

PLOT DATE : 5/22/2025 10:54 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME :

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



PROJECT NO: 6290-05-61	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: USH 10 WB	SHEET 121	E

FILE NAME : G:\WDOT NC\23038-000 USH 10 (ID 6290-05-31)\CIVIL 3D\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 06

PLOT DATE : 5/22/2025 10:54 AM PLOT BY : BRAD CUNNINGHAM PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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