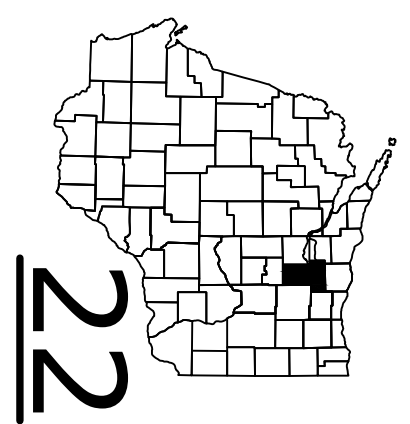


GRE APRIL 2022
 PROJECT ID: 4050-23-71
 WITH: N/A
 COUNTY: FOND DU LAC

ORDER OF SHEETS

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

TOTAL SHEETS = 70



DESIGN DESIGNATION 4050-23-00

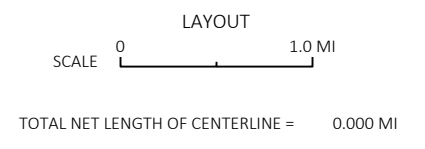
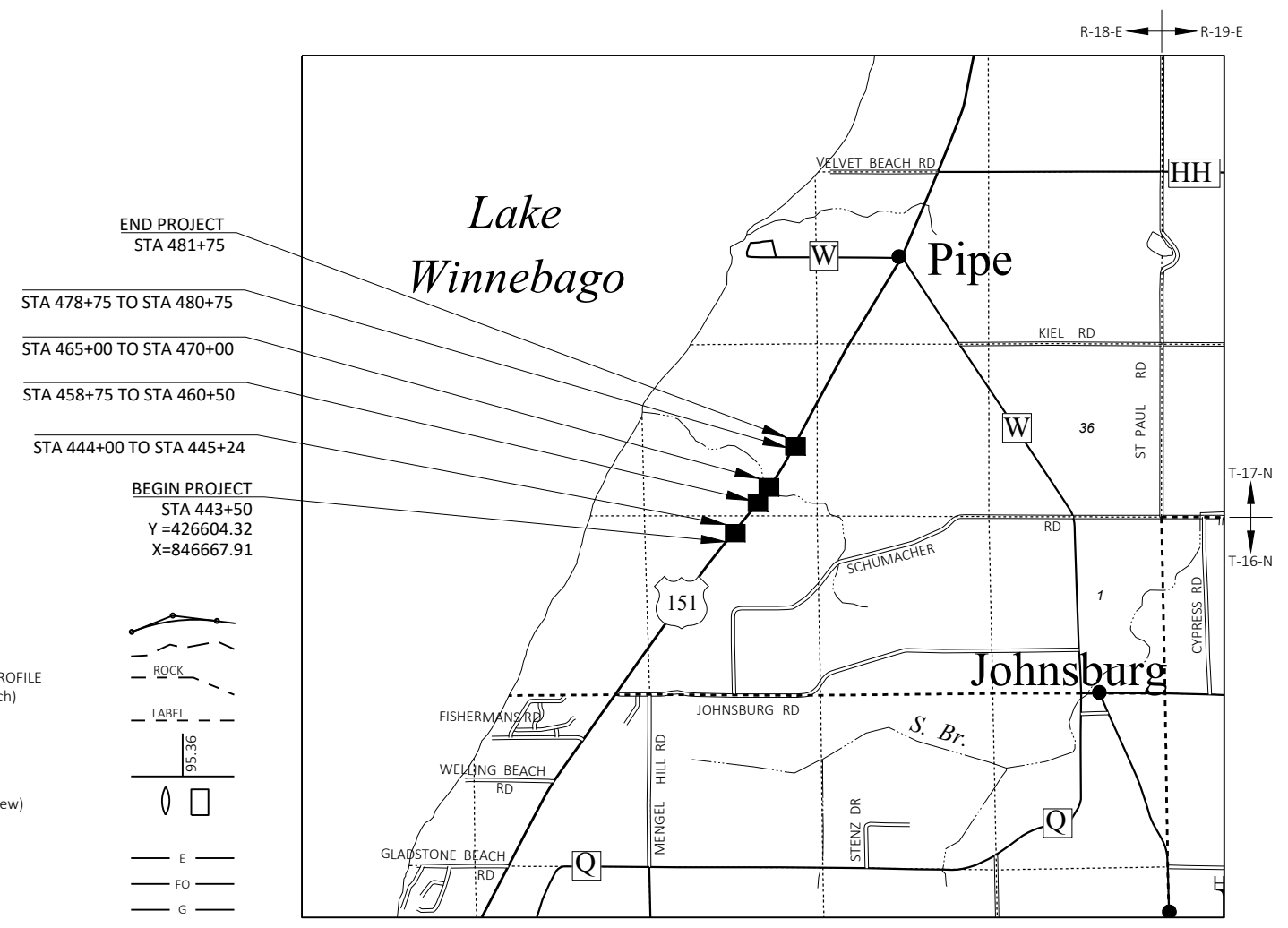
A.A.D.T.	2023	=	5500
A.A.D.T.	2043	=	6200
D.H.V.		=	675 (K30)
D.D.		=	60/40
T.		=	15.7%
DESIGN SPEED		=	60 MPH
ESALS		=	N/A

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 PLAN OF PROPOSED IMPROVEMENT
FOND DU LAC-CHILTON
 DRAINAGE WAY CULVERT REPLACEMENT
 USH 151
 FOND DU LAC COUNTY

STATE PROJECT NUMBER
4050-23-71



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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4050-23-71	WISC 2022303	1

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

PREPARED BY	NE REGION
Surveyor	ERIK BRATTLUND
Designer	BRYAN LEARST
Project Manager	ROBERT WAGNER
Regional Examiner	
Regional Supervisor	

APPROVED FOR THE DEPARTMENT
 DATE: 10/25/2021
 (Signature)

GENERAL NOTES

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

UTILITIES CONTACTS

COMMUNICATIONS

CALVIN KLADE (PRIMARY CONTACT)
FRONTIER COMMUNICATIONS OF WI LLC-
COMMUNICATION LINE
521 4TH ST.
WAUSAU, WI 54401
(920) 573-2110
CALVIN.KLADE@FTR.COM

TODD HILDEBRANDT (PRIMARY CONTACT)
CHARTER COMMUNICATIONS-COMMUNICATION LINE
165 KNIGHTS WAY
FOND DU LAC, WI 54935
(920) 907-7724
TODD.HILDEBRANDT@CHARTER.COM

ELECTRICAL

ALLYSA DUCAT (PRIMARY CONTACT)
ALLIANT ENERGY-ELECTRICITY
883 W. SCOTT ST
FOND DU LAC, WI 54937
(920) 322-6772
ALLYSADUCAT@ALLIANTENERGY.COM

DNR LIASION

JAY SCHIEFELBEIN (NORTHEAST-GREEN
LAKE, FOND DU LAC, SHEBOYGAN,
WINNEBAGO)
2984 SHAWANO AVE.
GREEN BAY, WI 54313
(920) 360-3784
jeremiah.schiefelbein@wisconsin.gov

COUNTY HIGHWAY COMMISSIONER

TOM JANKE
301 DIXIE ST
PO BOX 1234
FOND DU LAC, WI 54936-1234
920-929-3489
tom.janke@fdco.wi.gov

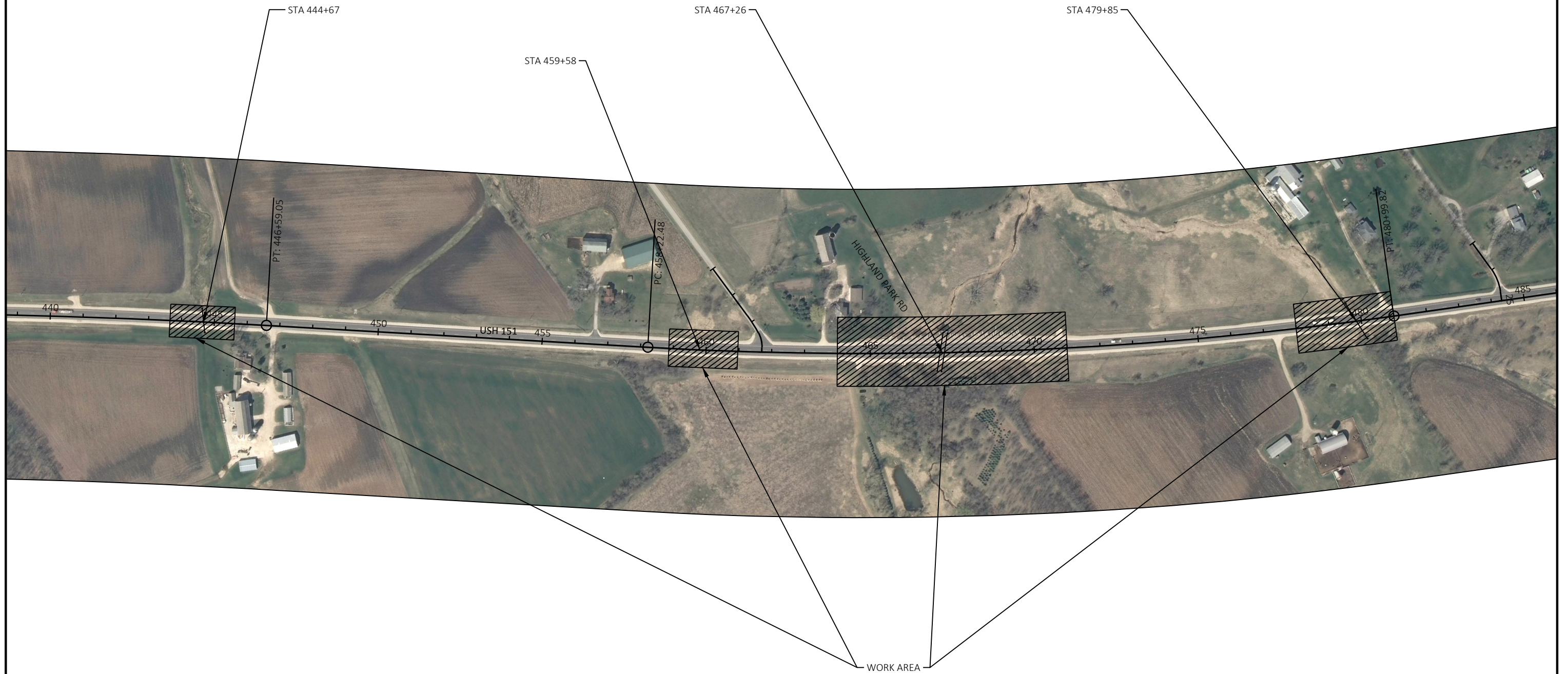
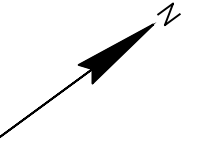
NE REGION SURVEY COORDINATOR

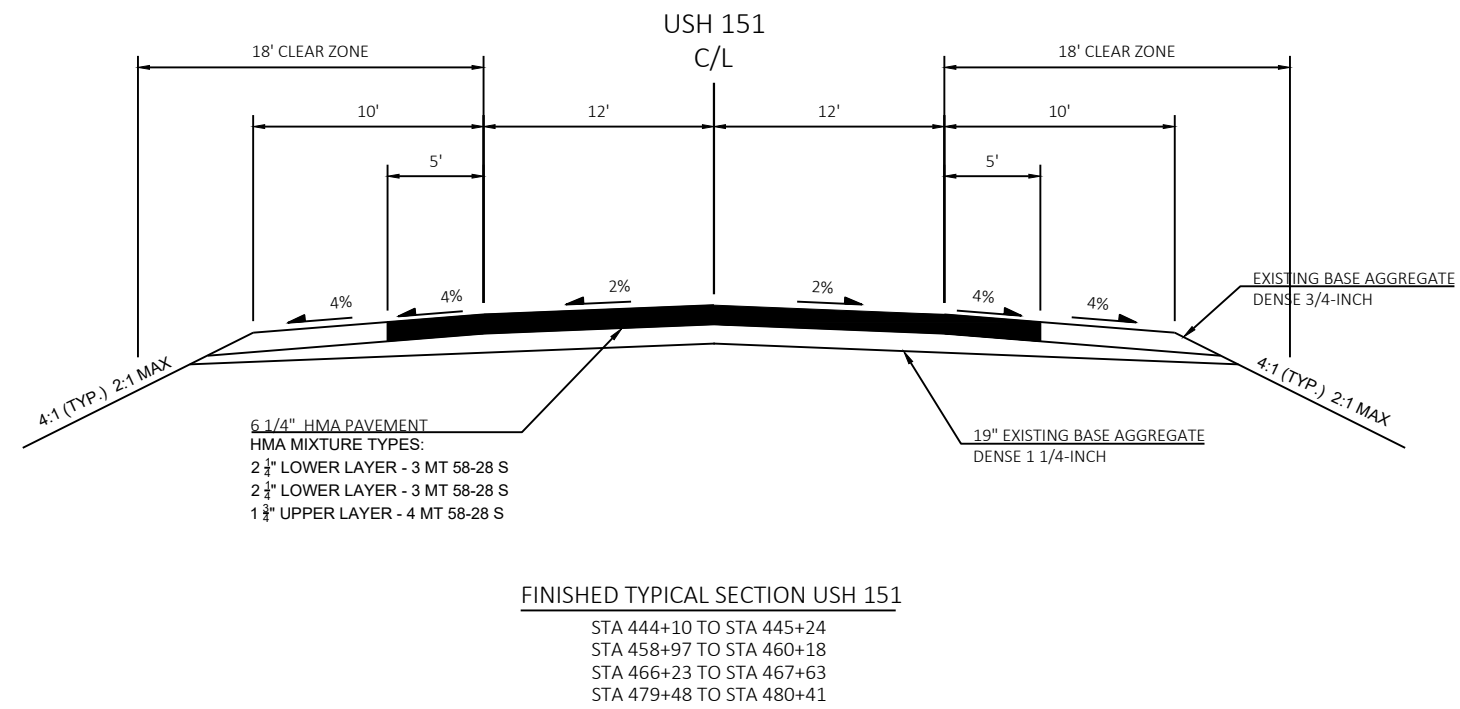
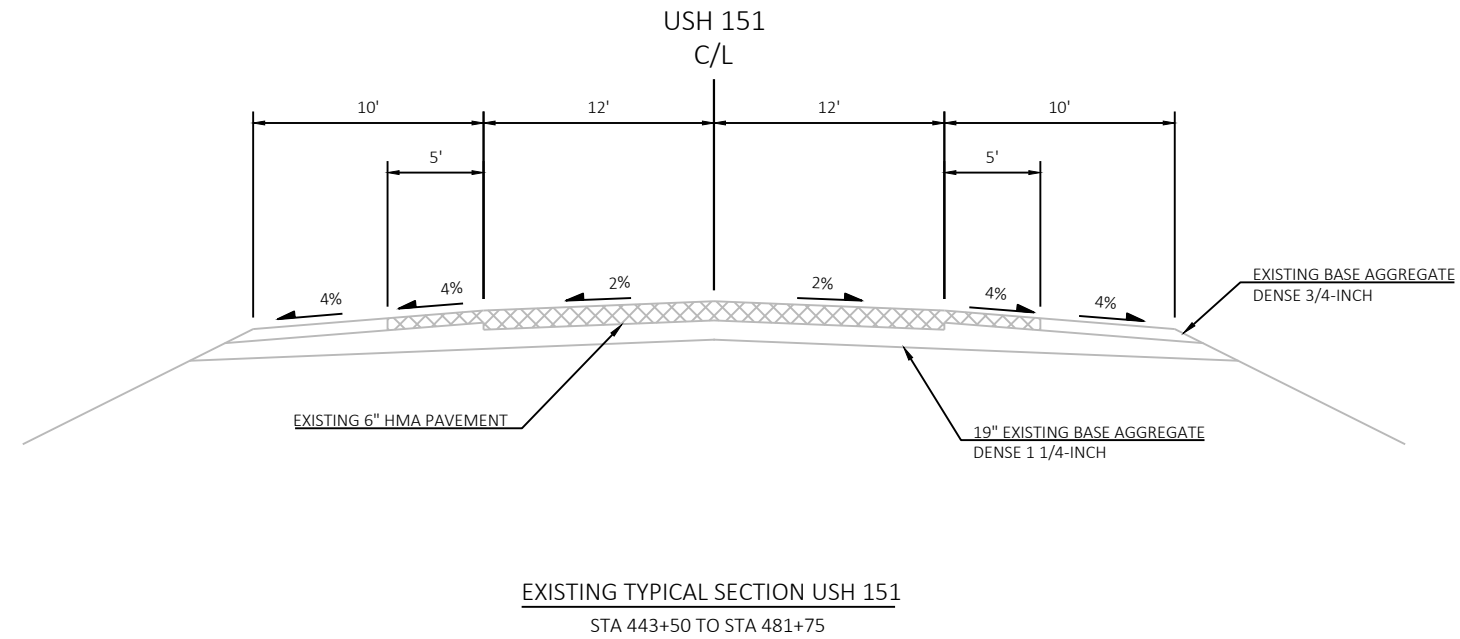
CORMAC MCINNIS, RLS
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920)492-5638
cormac.mcinnis@dot.wi.gov

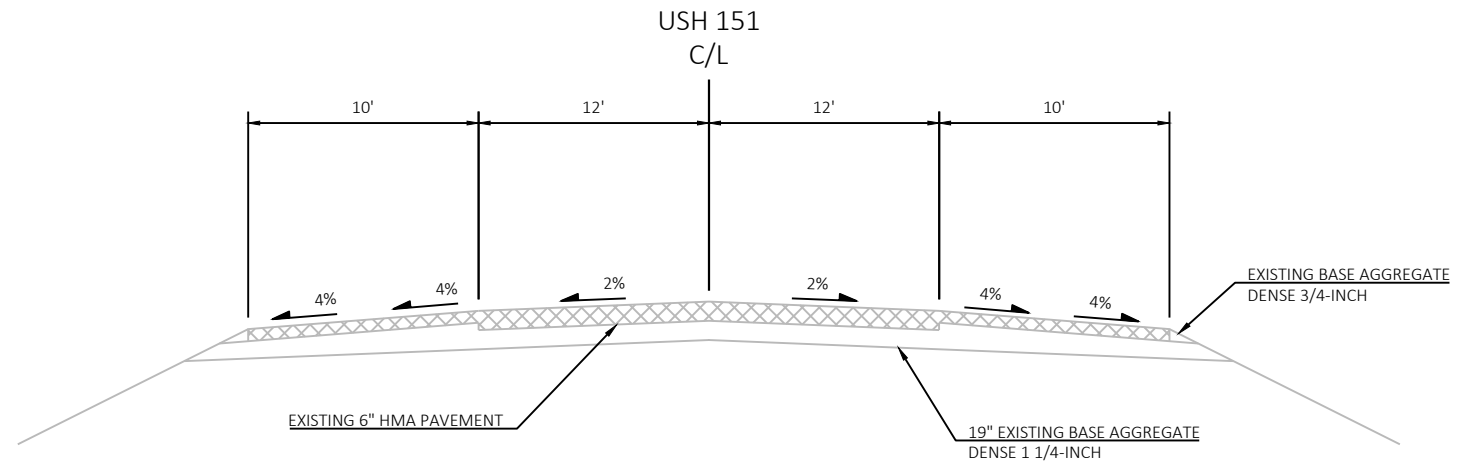


ORDER OF SECTION 2 DETAIL SHEETS

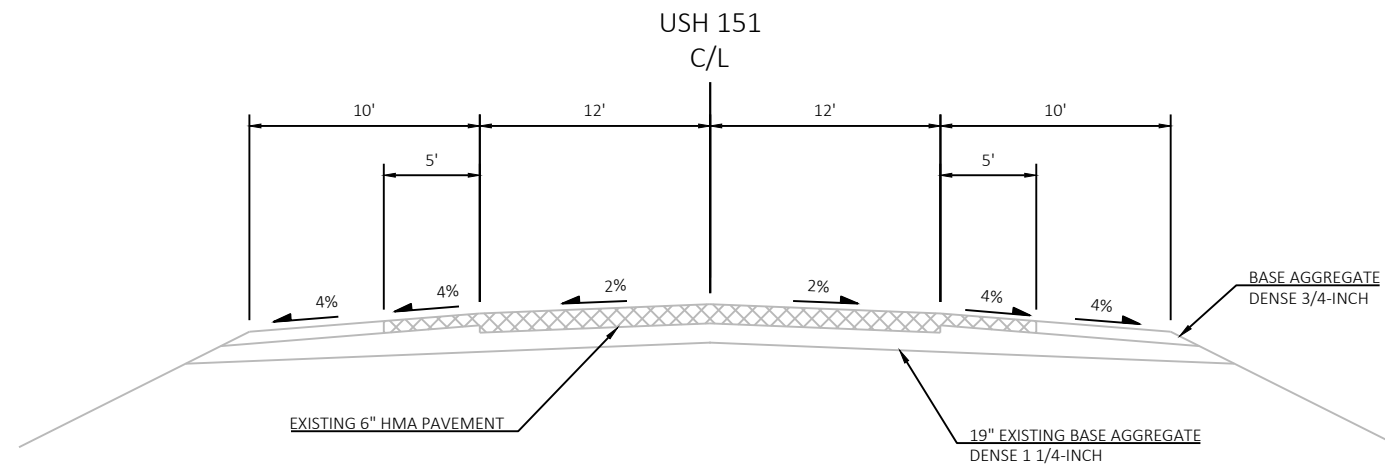
- GENERAL NOTES
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- TRAFFIC CONTROL
- DETOUR PLAN
- ALIGNMENT PLAN



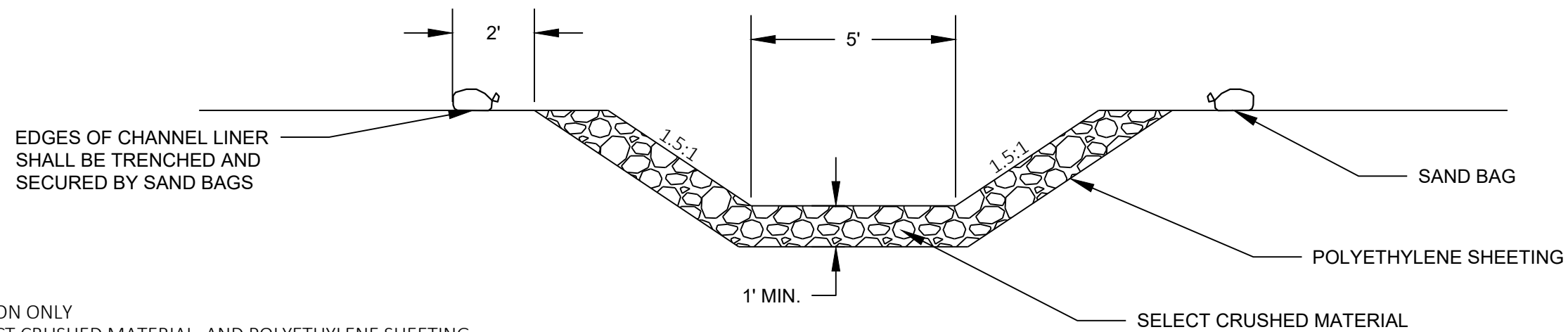
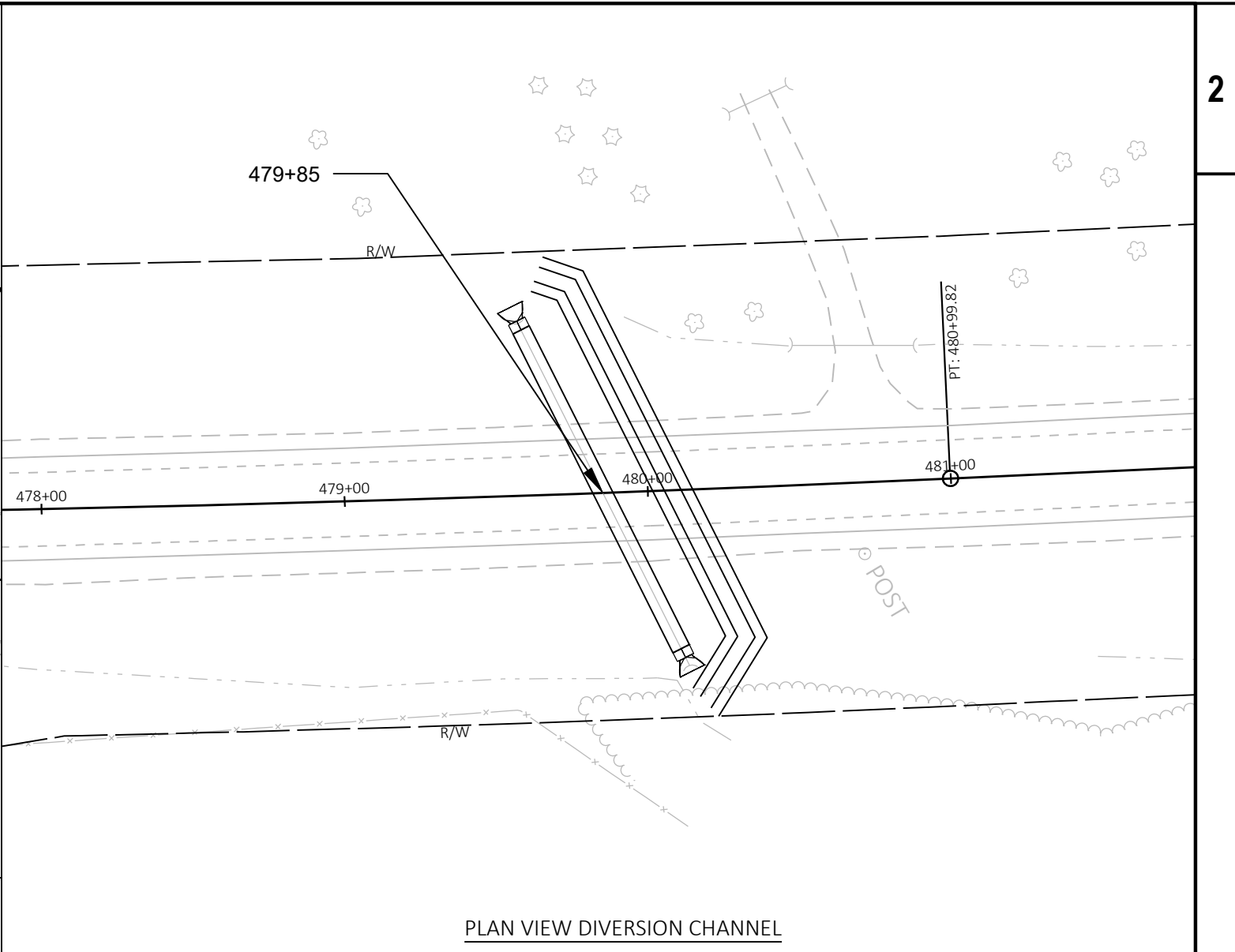
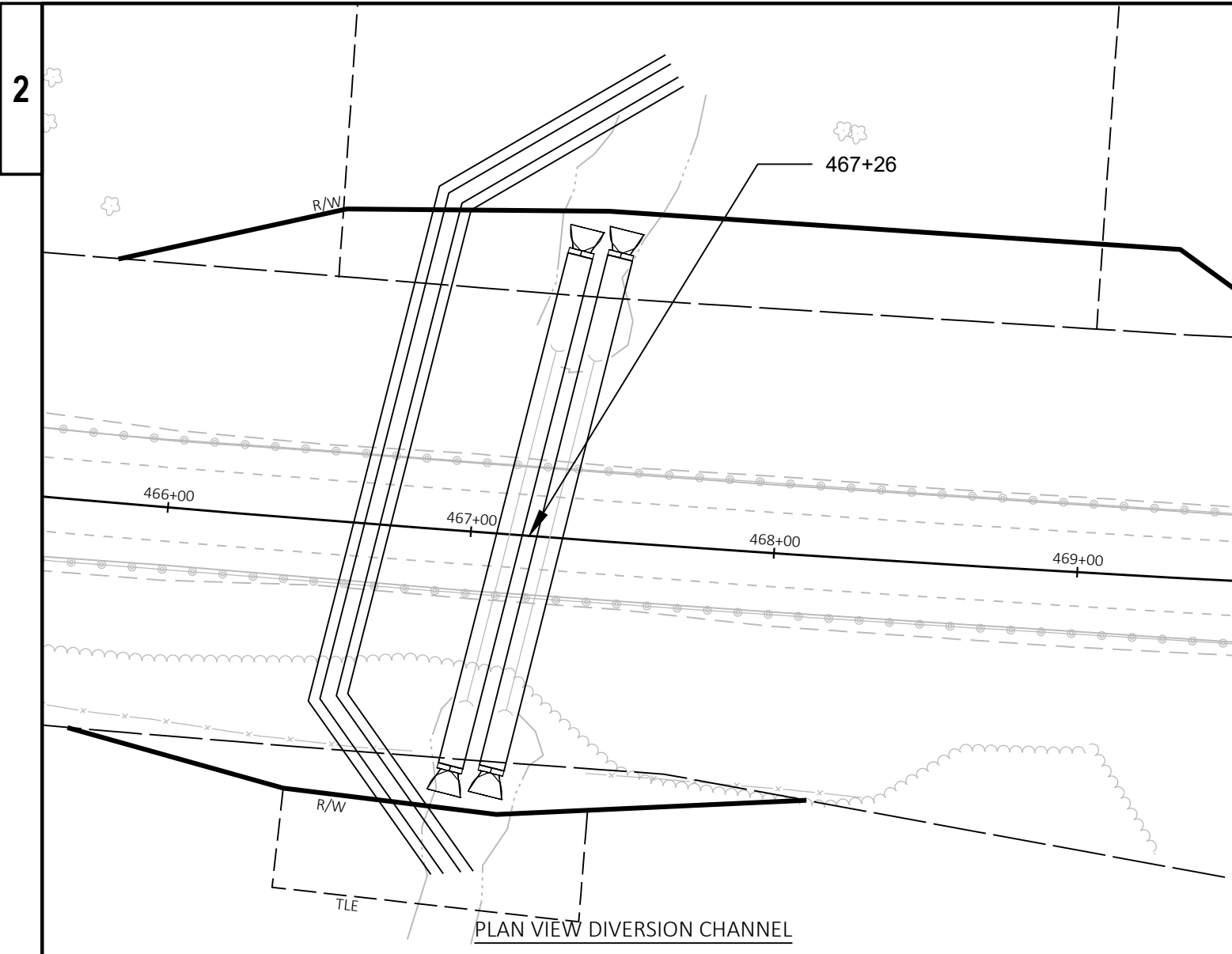




EXISTING TYPICAL SECTION USH 151
STA 464+00 TO STA 470+50

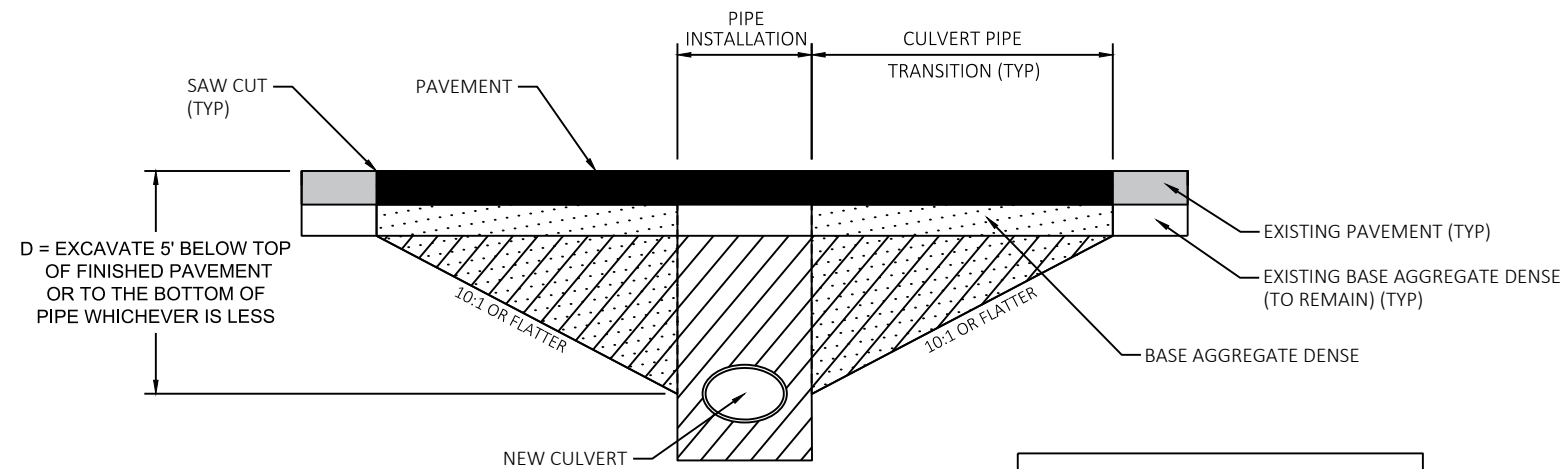
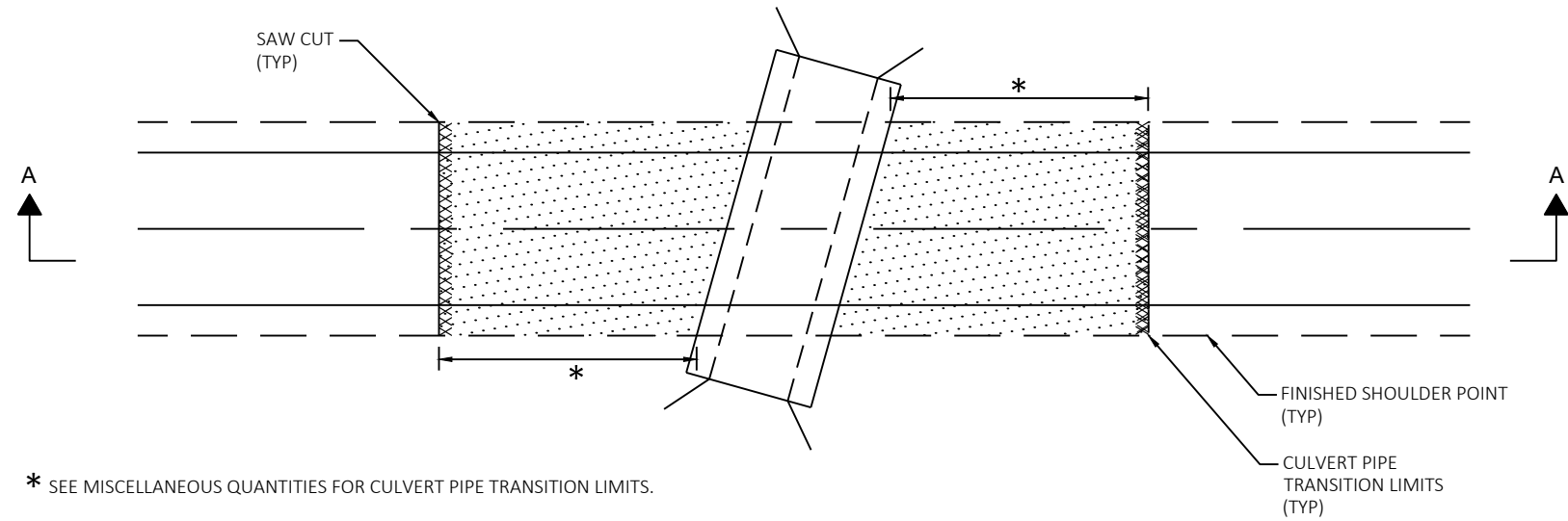


FINISHED TYPICAL SECTION USH 151
STA 464+00 to STA 466+23
STA 467+63 TO STA 470+50

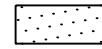
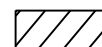


*FOR INFORMATION ONLY
 SAND BAGS, SELECT CRUSHED MATERIAL, AND POLYETHYLENE SHEETING
 SHALL BE CONSIDERED INCIDENTAL TO ROADWAY ITEM "TEMPORARY
 WATER DIVERSION"

TYPICAL SECTION DIVERSION CHANNEL



SECTION A-A

-  COMMON EXCAVATION
-  FOUNDATION BACKFILL

PIPE INSTALLATION AREA WILL FOLLOW SECTION 520 FOR INSTALLATION, WIDTHS AND PAYMENT.

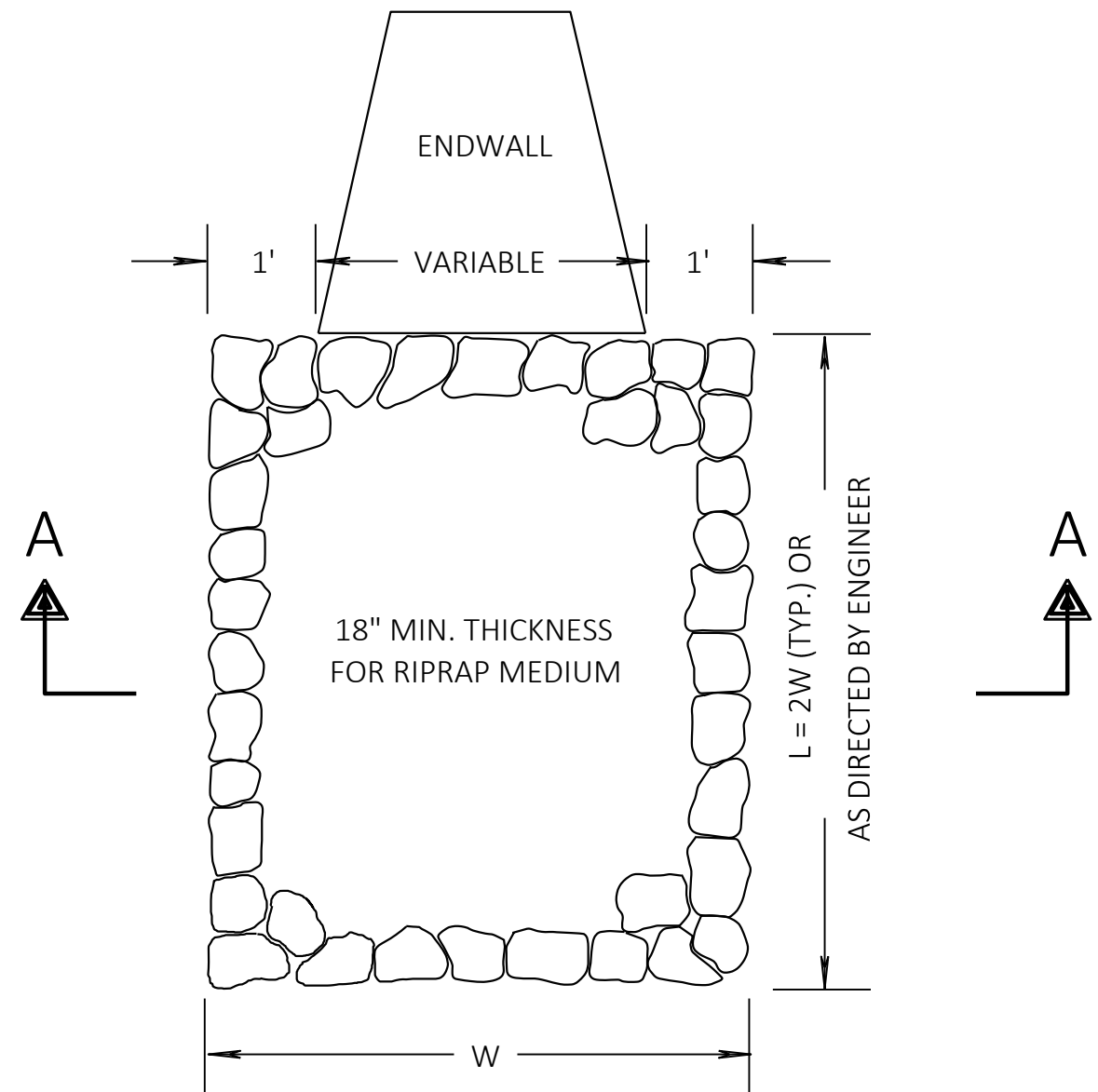
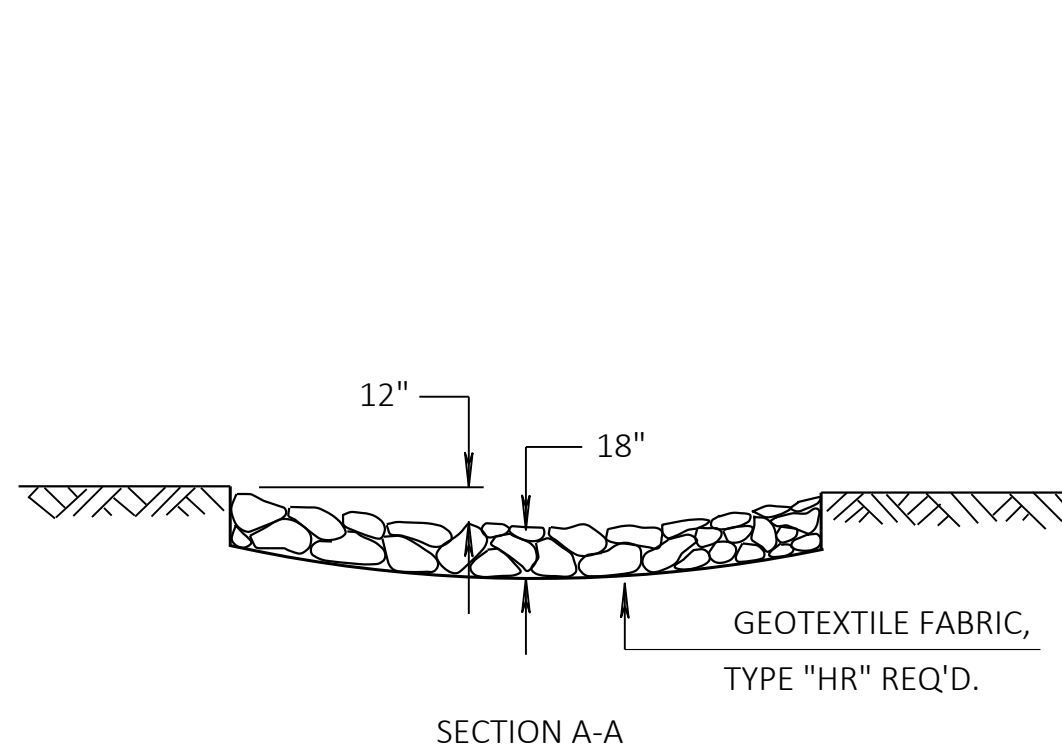
CONSTRUCT TRANSITION PERPENDICULAR TO CULVERT PIPE.

CULVERT PIPE TRANSITION AREAS WILL BE PAID BY COMMON EXCAVATION & SPV FOUNDATION BACKFILL.

PAVEMENT SAW CUT TO BE PERPENDICULAR TO ROADWAY ALIGNMENT.

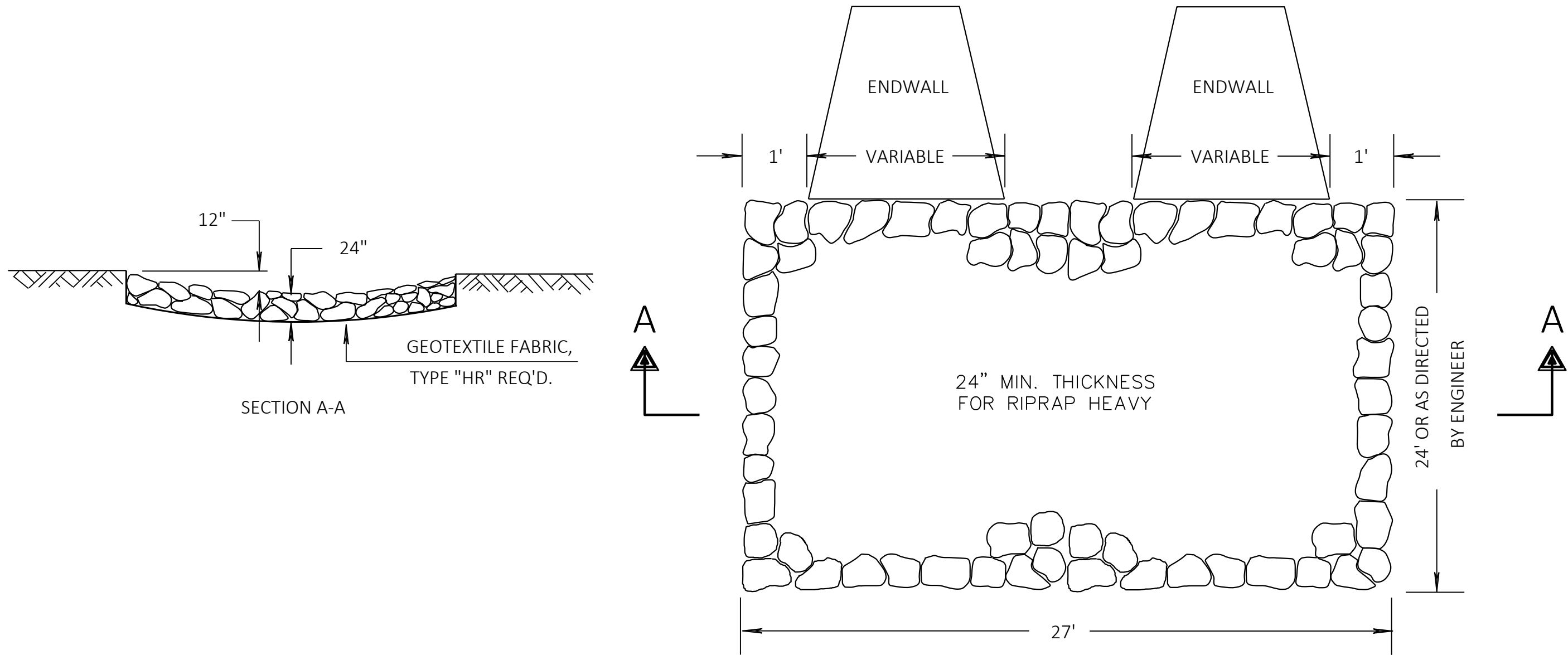
NEW CULVERT PIPES WITH TRANSITION

STA 444+67
STA 459+58



RIPRAP MEDIUM TREATMENT AT CULVERTS

STA 444+61 LT
 STA 459+64 LT
 STA 459+53 RT
 STA 479+60 LT



RIPRAP HEAVY TREATMENT AT CULVERTS

STA 467+29 LT

Estimate Of Quantities

4050-23-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	5.000	5.000
0004	201.0205	Grubbing	STA	5.000	5.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	203.0220	Removing Structure (structure) 01. C-20-147	EACH	1.000	1.000
0010	203.0220	Removing Structure (structure) 02. C-20-148	EACH	1.000	1.000
0012	203.0220	Removing Structure (structure) 03. C-20-149	EACH	1.000	1.000
0014	204.0110	Removing Asphaltic Surface	SY	381.000	381.000
0016	204.0165	Removing Guardrail	LF	1,023.000	1,023.000
0018	204.0180	Removing Delineators and Markers	EACH	10.000	10.000
0020	204.0185	Removing Masonry	CY	10.000	10.000
0022	205.0100	Excavation Common	CY	2,489.000	2,489.000
0024	208.0100	Borrow	CY	6,602.000	6,602.000
0026	213.0100	Finishing Roadway (project) 01. 4050-23-71	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	327.000	327.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	3,208.000	3,208.000
0032	455.0605	Tack Coat	GAL	190.000	190.000
0034	460.2000	Incentive Density HMA Pavement	DOL	440.000	440.000
0036	460.6223	HMA Pavement 3 MT 58-28 S	TON	473.000	473.000
0038	460.6224	HMA Pavement 4 MT 58-28 S	TON	204.000	204.000
0040	522.0160	Culvert Pipe Reinforced Concrete Class III 60-Inch	LF	118.000	118.000
0042	522.0472	Culvert Pipe Reinforced Concrete Class IV 72-Inch	LF	73.000	73.000
0044	522.0484	Culvert Pipe Reinforced Concrete Class IV 84-Inch	LF	346.000	346.000
0046	522.1060	Apron Endwalls for Culvert Pipe Reinforced Concrete 60-Inch	EACH	2.000	2.000
0048	522.1072	Apron Endwalls for Culvert Pipe Reinforced Concrete 72-Inch	EACH	2.000	2.000
0050	522.1084	Apron Endwalls for Culvert Pipe Reinforced Concrete 84-Inch	EACH	4.000	4.000
0052	522.2334	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	LF	56.000	56.000
0054	522.2634	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 34x53-Inch	EACH	2.000	2.000
0056	606.0200	Riprap Medium	CY	44.000	44.000
0058	606.0300	Riprap Heavy	CY	48.000	48.000
0060	618.0100	Maintenance And Repair of Haul Roads (project) 01. 4050-23-71	EACH	1.000	1.000
0062	619.1000	Mobilization	EACH	1.000	1.000
0064	624.0100	Water	MGAL	35.000	35.000
0066	625.0500	Salvaged Topsoil	SY	9,483.000	9,483.000
0068	628.1504	Silt Fence	LF	1,800.000	1,800.000
0070	628.1520	Silt Fence Maintenance	LF	900.000	900.000
0072	628.1905	Mobilizations Erosion Control	EACH	12.000	12.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0076	628.2008	Erosion Mat Urban Class I Type B	SY	9,483.000	9,483.000
0078	629.0210	Fertilizer Type B	CWT	5.970	5.970
0080	630.0120	Seeding Mixture No. 20	LB	260.000	260.000
0082	630.0500	Seed Water	MGAL	212.000	212.000
0084	633.5200	Markers Culvert End	EACH	10.000	10.000
0086	642.5001	Field Office Type B	EACH	1.000	1.000
0088	643.0420	Traffic Control Barricades Type III	DAY	1,365.000	1,365.000
0090	643.0705	Traffic Control Warning Lights Type A	DAY	2,730.000	2,730.000
0092	643.0900	Traffic Control Signs	DAY	3,360.000	3,360.000
0094	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000
0096	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0098	643.5000	Traffic Control	EACH	1.000	1.000

Estimate Of Quantities

4050-23-71

Line	Item	Item Description	Unit	Total	Qty
0100	645.0120	Geotextile Type HR	SY	220.000	220.000
0102	646.1020	Marking Line Epoxy 4-Inch	LF	1,193.000	1,193.000
0104	650.5000	Construction Staking Base	LF	432.000	432.000
0106	650.6000	Construction Staking Pipe Culverts	EACH	5.000	5.000
0108	650.9910	Construction Staking Supplemental Control (project) 01. 4050-23-71	LS	1.000	1.000
0110	650.9920	Construction Staking Slope Stakes	LF	999.000	999.000
0112	690.0150	Sawing Asphalt	LF	1,321.000	1,321.000
0114	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0116	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0118	SPV.0035	Special 01. Foundation Backfill	CY	321.000	321.000
0120	SPV.0060	Special 01. Temporary Water Diversion C-20-0148 467+26	EACH	1.000	1.000
0122	SPV.0060	Special 02. Temporary Water Diversion C-20-0148 479+85	EACH	1.000	1.000

3

CLEARING & GRUBBING

STATION	LOCATION	201.0105 CLEARING STATIONS	201.0205 GRUBBING STATIONS
465+00 - 469+50	USH 151	4.5	4.5
479+50 - 480+00	USH 151	0.5	0.5
PROJECT TOTAL		5	5

REMOVING MASONRY

STATION	LOCATION	204.0185 REMOVING MASONRY CY
467+26	USH 151	10
PROJECT TOTAL		10

3

REMOVALS

STATION - STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.0165 REMOVING GUARDRAIL LF	204.0180 REMOVING DELINEATORS AND MARKERS EACH	204.0110 REMOVING ASPHALTIC SURFACE SY	REMARKS
465+32 - 470+50	USH 151	---	518	---	---	---
464+90 - 469+93	USH 151	---	505	---	---	---
464+75 - 468+34	USH 151	---	---	---	---	USH 151 RT
444+67 - ---	USH 151	---	---	2	---	---
459+58 - ---	USH 151	1	---	2	---	42" CPCS
464+00 - 466+24	USH 151	---	---	---	73	USH 151 LT SHOULDER
464+46 - 466+24	USH 151	---	---	---	53	USH 151 RT SHOULDER
467+26 - ---	USH 151	---	---	4	---	---
467+64 - 471+25	USH 151	---	---	---	151	USH 151 LT SHOULDER
467+64 - 470+50	USH 151	---	---	---	104	USH 151 RT SHOULDER
479+85 - ---	USH 151	---	---	2	---	---
PROJECT TOTAL		1	1023	10	381	

REMOVING OLD STRUCTURE

STATION	LOCATION	203.0220 REMOVING OLD STRUCTURE (C-20-147) EA
444+22	USH 151	1
		1

REMOVING OLD STRUCTURE

STATION	LOCATION	203.0220 REMOVING OLD STRUCTURE (C-20-148) EA
466+66	USH 151	1
		1

REMOVING OLD STRUCTURE

STATION	LOCATION	203.0220 REMOVING OLD STRUCTURE (C-20-149) EA
479+33	USH 151	1
		1

BASE AGGREGATE

STATION - STATION	LOCATION	305.0110	305.0120	624.0100
		BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	
444+10 - 445+24	USH 151	53.00	776	8.3
458+97 - 460+19	USH 151	52.00	779	8.3
464+00 - 466+24	USH 151	30.00	---	0.3
464+46 - 466+24	USH 151	30.00	---	0.3
466+23 - 467+47	USH 151	60.00	1009	10.7
467+64 - 471+25	USH 151	31.00	---	0.3
467+64 - 470+50	USH 151	31.00	---	0.3
479+48 - 480+20	USH 151	40.00	644	6.8
PROJECT TOTAL		327	3,208	35

HMA PAVEMENT

STATION - STATION	LOCATION	460.6223	460.6224	455.0605
		HMA PAVEMENT 3 MT 58-28 S TON	HMA PAVEMENT 4 MT 58-28 S TON	TACK COAT GAL
444+10 - 445+24	USH 151	106	46	43
458+97 - 460+19	USH 151	117	50	47
466+23 - 467+47	USH 151	163	70	66
479+48 - 480+20	USH 151	87	38	35
TOTALS		473	204	190

EARTHWORK

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (CY)	SALVAGED/UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL (2)	UNEXPANDED FILL	EXPANDED FILL (3)	MASS ORDINATE +/- (4)	WASTE	208.0100 BORROW	SPV.0035.01 FOUNDATION BACKFILL (CY)
			CUT (1)				FACTOR 1.15				
DIVISION 1											
	444+00 TO 445+24	72" PIPE USH 151	612	77	535	18	21	514	514	0	160
DIVISION 1 SUBTOTAL			612	77	535	18	21	514	514	0	
DIVISION 2											
	458+75 TO 460+50	34" x 53" ELLIPTICAL PIPE USH 151	804	109	695	6	7	688	688	0	161
DIVISION 2 SUBTOTAL			804	109	695	6	7	688	688	0	
DIVISION 3											
	465+25 TO 470+00	DUAL 84" PIPE USH 151	675	295	380	6,071	6,982	-6,602	0	6,602	0
DIVISION 3 SUBTOTAL			675	295	380	6,071	6,982	-6,602	0	6,602	
DIVISION 4											
	478+75 TO 480+75	60" PIPE USH 151	398	125	273	188	216	57	57	0	0
DIVISION 4 SUBTOTAL			398	125	273	188	216	57	57	0	
GRAND TOTAL			2,489	606	1,883	6,283	7,225	-5,342	1,259	6,602	321
TOTAL COMMON EXC			2,489								

NOTES:

(1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(2) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL

(3) EXPANDED FILL FACTOR = 1.15

EXPANDED FILL = (UNEXPANDED FILL) * FILL FACTOR

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

MO = Cut – Salvaged Pavement – (Unexp Fill) * Fill Factor

CULVERT PIPE SUMMARY

STATION	INLET END		STATION	OUTLET END		LOCATION	522.0160	522.0472	522.0484	522.1060	522.1072	522.1084	522.2334	522.2634	633.5200
	OFFSET	ELEVATION		OFFSET	ELEVATION		CULVERT PIPE REINFORCED CONCRETE CLASS III 60-INCH LF	CULVERT PIPE REINFORCED CONCRETE CLASS IV 72-INCH LF	CULVERT PIPE REINFORCED CONCRETE CLASS IV 84-INCH LF	APRON ENDWALLS FOR CUVLERT PIPE REINFORCED CONCRETE 60-INCH EACH	APRON ENDWALLS FOR CUVLERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CUVLERT PIPE REINFORCED CONCRETE 84-INCH EACH	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 34x53- INCH LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 34x53-INCH EACH	MARKERS CULVERT END EACH
444+72	29.9' RT	842.48	444+61	42.2' LT	839.16	USH 151	---	73	---	2	---	---	---	2	
459+53	28.5' RT	843.72'	459+64	28.5' LT	843.41'	USH 151	---	---	---	---	---	56	2	2	
466+99	77.3' RT	823.21'	467+29	93.2' LT	819.36'	USH 151	---	173	---	---	2	---	---	2	
467+13	77' RT	823.23'	467+43	93.5' LT	819.36'	USH 151	---	173	---	---	2	---	---	2	
480+09	52.3' RT	828.34'	479+60	54.7' LT	827.36'	USH 151	118	---	2	---	---	---	---	2	
PROJECT TOTAL							118	73	346	2	2	4	56	2	10

RIPRAP AND GEOTEXTILE FABRIC

STATION	LOCATION	606.0200	606.0300	645.0120
		RIPRAP MEDIUM CY	RIPRAP HEAVY CY	GEOTEXTILE TYPE HR SY
444+61	LT	14	---	39
459+64	LT	9	---	26
459+53	RT	9	---	26
467+29	LT	---	48	96
479+60	LT	12	---	33
TOTALS		44	48	220

SILT FENCE

STATION TO	STATION	LOCATION	628.1504	628.1520
			SILT FENCE LF	SILT FENCE MAINTENANCE LF
444+01	-	445+40	109	55
443+89	-	445+40	129	65
458+71	-	460+52	165	83
458+74	-	460+56	169	85
464+92	-	469+14	379	190
465+34	-	470+15	515	258
478+54	-	480+48	174	87
478+86	-	480+95	160	80
TOTALS			1800	900

EROSION CONTROL

STATION	LOCATION	628.2008	629.0210	630.0120	625.0500	630.0500
		EROSION MAT URBAN CLASS I TYPE B SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 20 LB	SALVAGED TOPSOIL SY	SEED WATER MGAL
444+00 - 445+24	LT USH-151	263	0.17	8	263	6
444+11 - 445+24	RT USH-151	170	0.11	5	170	4
458+75 - 460+50	LT USH-151	240	0.15	7	240	5
458+75 - 460+50	RT USH-151	193	0.12	6	193	4
465+00 - 469+00	RT USH-151	2,252	1.42	61	2252	50
465+50 - 470+00	LT USH-151	3407	2.15	92	3407	76
478+74 - 480+62	LT USH-151	552	0.35	15	552	12
479+00 - 480+75	RT USH-151	509	0.32	14	509	11
UNDISTRIBUTED	USH 151	1897	1.19	52	1897	42
TOTALS		9,483	5.97	260	9,483	212

TRAFFIC CONTROL

Location	NUMBER IN SERVICE	*643.0420	NUMBER IN SERVICE	*643.0705	NUMBER *643.0900	REMARKS	
		BARRICADES TYPE III DAYS		WARNING LIGHTS TYPE A DAYS			SIGNS DAYS
SYLVAN BAY RD	3	105	6	210	4	140	SDD 15C3 DETAIL 4
GLADSTONE BEACH RD	3	105	6	210	4	140	SDD 15C3 DETAIL 4
WELLING BEACH RD	3	105	6	210	4	140	SDD 15C3 DETAIL 4
FISHERMANS RD	3	105	6	210	4	140	SDD 15C3 DETAIL 4
JOHNSBURG RD	3	105	6	210	4	140	SDD 15C3 DETAIL 4
ELM BEACH RD	3	105	6	210	4	140	SDD 15C3 DETAIL 4
WINNEBAGO PARK RD	3	105	6	210	4	140	SDD 15C3 DETAIL 4
HIGHLAND PARK RD	3	105	6	210	4	140	SDD 15C3 DETAIL 4
WINNEBAGO HEIGHTS RD	3	105	6	210	4	140	SDD 15C3 DETAIL 4
USH 151	---	0	---	0	8	280	SDD 15C4
AT OPEN EXCAVATION	10	350	20	700	2	70	SDD 15C2-B
TOTALS		1295		2590		1610	

*ADDITIONAL QUANTITIES SHOWN ELSEWARE

PAVEMENT MARKING EPOXY

		646.1020 MARKING LINE EPOXY 4-INCH		
		WHITE	YELLOW	
STATION - STATION	LOCATION	SOLID LF	DASHED LF	
444+10 - 445+24	USH 151	228	63	
458+97 - 460+19	USH 151	244	63	
466+23 - 467+64	USH 151	282	75	
479+48 - 480+42	USH 151	188	50	
SUB TOTALS		942	251	
PROJECT TOTAL		1193		

CONSTRUCTION STAKING

STATION - STATION	650.5000 BASE LF	650.6000 PIPE CULVERT EACH	650.9910 SUPPLEMENTAL CONTROL (4050-23-00) LS	650.9920 SLOPE STAKES LF
444+67 - ---	---	1	---	---
459+58 - ---	---	1	---	---
467+14 - ---	---	1	---	---
467+27 - ---	---	1	---	---
479+85 - ---	---	1	---	---
444+00 - 445+24	---	---	---	124
458+75 - 460+50	---	---	---	175
465+00 - 470+00	---	---	---	500
478+75 - 480+75	---	---	---	200
444+10 - 445+24	114	---	---	---
458+97 - 460+19	122	---	---	---
466+23 - 467+47	124	---	---	---
479+48 - 480+20	72	---	---	---
444+67 - 480+24	---	---	1	---
TOTALS	432	5	1	999

SAWING ASPHALT

STATION	LOCATION	690.0150 SAWING ASPHALT LF
444+10	USH 151	34
445+24	USH 151	34
458+98	USH 151	34
460+19	USH 151	34
466+23	USH 151	34
464+00-466+24	USH 151 LT	224
464+46-466+24	USH 151 RT	178
467+64-471+25	USH 151 LT	361
467+64-470+50	USH 151 RT	286
467+64	USH 151	34
479+48	USH 151	34
480+42	USH 151	34
PROJECT TOTAL		1321

TEMPORARY WATER DIVERSION CHANNELS

STATION	LOCATION	SPV.0060.01 TEMPORARY WATER DIVERSION CHANNEL EA	REMARKS
467+20	USH 151	1	C-20-148
479+85	USH 151	1	C-20-149
TOTALS		2	

TRAFFIC CONTROL DETOUR SIGNING SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 35 DAYS	*643.0900 SIGNS DAYS	*643.0420 BARRICADES TYPE III DAYS	*643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	USH 151, N. OF CTH W, PLACE 1500' N. OF CTH W INTERSECTION	M 3-3	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	W 20-2A	48"x48"	1	35	35						
2	USH 151, N. OF CTH W, PLACE 750' N. OF CTH W INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-3	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	MO 5-1L	21"x21"	1	35	35						
3	USH 151, N. OF CTH W, PLACE 150' N. OF CTH W INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-3	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	MO 6-1	21"x21"	1	35	35						
4	USH 151, AT CTH W, PLACE ON RIGHT SHOULDER OF CTH W INTERSECTION IN SW QUADRANT	R 11-3B	60"x30"	1	35	35	35	70				1 1/2 MILES AHEAD
	"	M 4-9L	30"x24"	1	35	35						
5	USH 151, S. OF CTH W, COVER EXISTING J4-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
6	CTH W, E. OF USH 151, PLACE 150' E. OF USH 151 INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-3	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
7	CTH W, E. OF USH 151, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"x18"	1	35	35						
8	CTH W, N. OF CTH Q, PLACE 150' N. OF CTH Q INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-3	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	MO 6-1	21"x21"	1	35	35						AHEAD
9	CTH W, S. OF CTH Q, PLACE 150' S. OF CTH Q INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-1	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	MO 6-1	21"x21"	1	35	35						AHEAD
10	CTH Q, N. OF CTH QQ, PLACE 150' N. OF CTH QQ INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-3	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	MO 6-1	21"x21"	1	35	35						AHEAD
11	CTH Q, S. OF CTH QQ, PLACE 150' S. OF CTH QQ INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-1	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	MO 6-1	21"x21"	1	35	35						AHEAD
12	CTH Q, N. OF USH 151, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"x18"	1	35	35						
13	CTH Q, N. OF USH 151, PLACE 150' N. OF USH 151 INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-1	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						
14	USH 151, N. OF CTH Q, COVER EXISTING J4-1 AS SHOWN									1	1	COVER ENTIRE SIGN
15	USH 151, N. OF CTH Q, PLACE ON RIGHT SHOULDER IN NE QUADRANT OF INTERSECTION	R 11-3B	60"x30"	1	35	35	35	70				3 1/4 MILES AHEAD
	"	M 4-9R	30"x24"	1	35	35						
16	USH 151, S. OF CTH Q, PLACE 150' S. OF CTH Q INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-1	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	MO 6-1	21"x21"	1	35	35						RIGHT
17	USH 151, S. OF CTH Q, PLACE 750' S. OF CTH Q INTERSECTION	MO 4-8	24"x12"	1	35	35						
	"	M 3-1	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	MO 6-1	21"x21"	1	35	35						RIGHT
18	USH 151, S. OF CTH Q, PLACE 1500' S. OF CTH Q INTERSECTION	M 3-1	24"x12"	1	35	35						
	"	M 1-4	24"x24"	1	35	35						151
	"	W 20-2A	48"x48"	1	35	35						
19	USH 151, S. OF WINNEBAGO HEIGHTS RD, PLACE ON RIGHT SHOULDER, FIELD DETERMINED	PCMS		1					7			PLACED PRIOR TO FULL CLOSURE
20	USH 151, N. OF HIGHLAND PARK RD, PLACE ON RIGHT SHOULDER, FIELD DETERMINED	PCMS		1					7			PLACED PRIOR TO FULL CLOSURE

TOTALS

52

1,750

70

140

14

2

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

*ADDITIONAL QUANTITIES SHOWN ELSEWARE

TRANSPORTATION PROJECT PLAT NO: 4050-23-21-4.01

BEING PART OF THE FRACTIONAL NE 1/4 OF THE NW 1/4 OF SECTION 3, T16N-R18E, TOWN OF CALUMET, FOND DU LAC COUNTY, WISCONSIN.

RELOCATION ORDER USH 151 FOND DU LAC COUNTY
FOND DU LAC - CHILTON

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

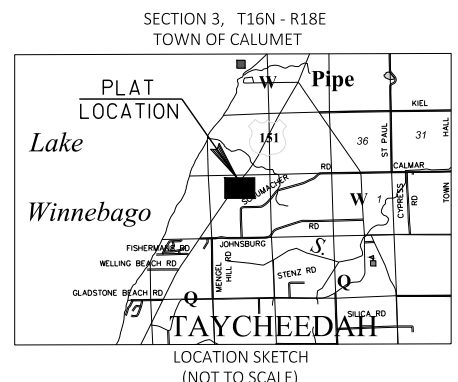
TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTIONS 84.02 (3), 84.09 and 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

- THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
- THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

CONVENTIONAL SYMBOLS	
SECTION LINE	---
QUARTER LINE	---
SIXTEENTH LINE	---
NEW REFERENCE LINE	---
NEW R/W LINE	---
EXISTING R/W LINE	---
PROPERTY LINE	---
LOT, TIE, AND OTHER MINOR LINES	---
SLOPE INTERCEPT	---
CORPORATE LIMITS	---
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	---
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)	---
TEMP. LIMITED EASEMENT AREA	---
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)	---
TRANSMISSION STRUCTURES	---
BUILDING	---
BUILDING (TO BE REMOVED)	---
BRIDGE	---

CONVENTIONAL ABBREVIATIONS	
ACCESS POINT/ DRIVEWAY CONNECTION	AP
ACCESS RIGHTS	AR
ACRES	AC.
AND OTHERS	ET.AL.
CENTERLINE	C/L
CERTIFIED SURVEY MAP	CSM
CORNER	COR.
DOCUMENT	DOC.
EASEMENT	EASE.
HIGHWAY EASEMENT	H.E.
LAND CONTRACT	LC
MONUMENT	MON.
PAGE	P.
PERMANENT LIMITED EASEMENT	PLE
PROPERTY LINE	PL
RECORDED AS	(100')
REFERENCE LINE	R/L

CONVENTIONAL UTILITY SYMBOLS	
WATER	---
GAS	---
TELEPHONE	---
OVERHEAD TRANSMISSION LINES	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
SANITARY SEWER	---
STORM SEWER	---
NON COMPENSABLE POWER POLE	---
COMPENSABLE POWER POLE	---
TELEPHONE POLE	---
TELEPHONE PEDESTAL	---
ELECTRIC TOWER	---

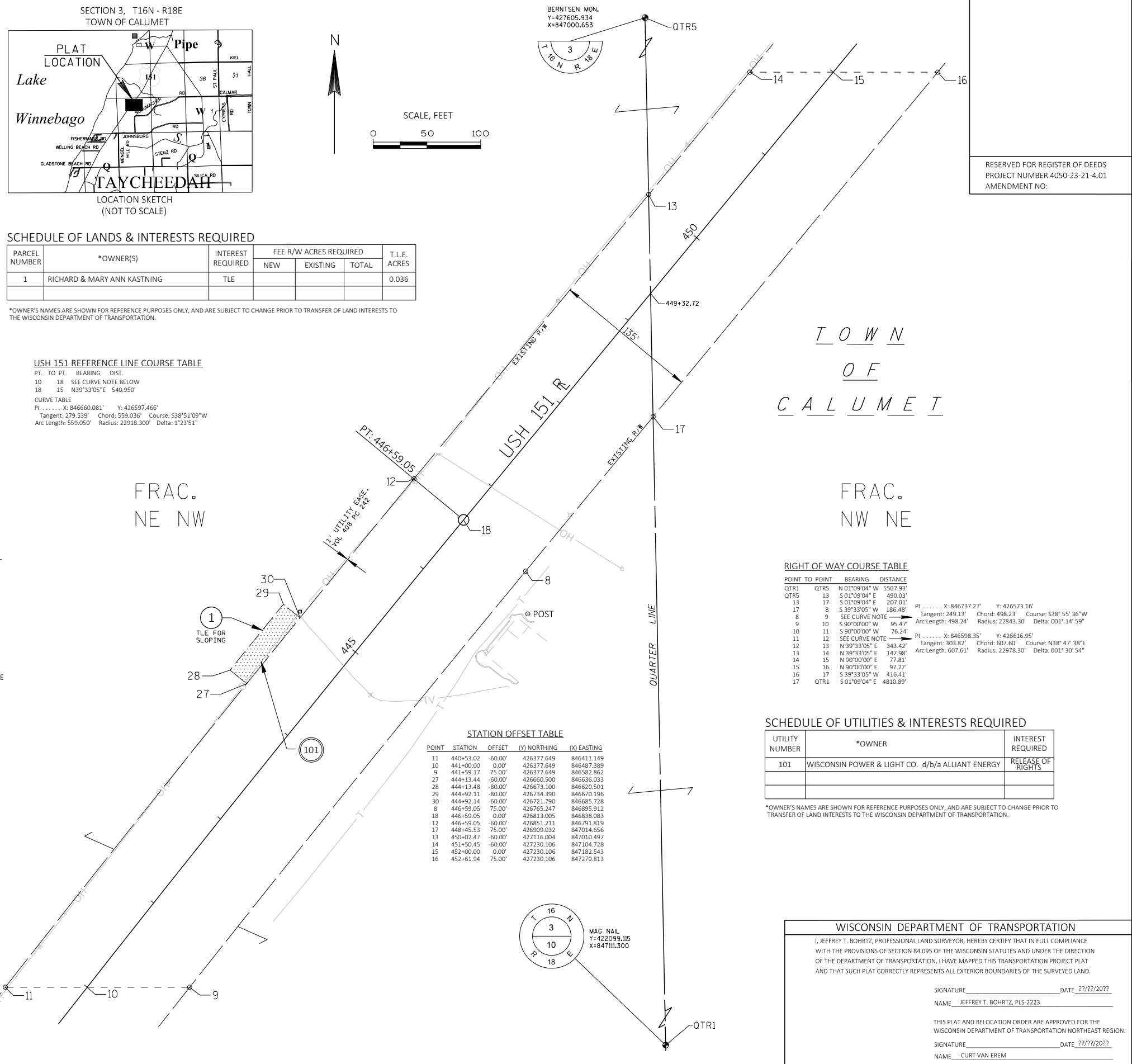


PARCEL NUMBER	*OWNER(S)	INTEREST REQUIRED	FEE R/W ACRES REQUIRED			T.L.E. ACRES
			NEW	EXISTING	TOTAL	
1	RICHARD & MARY ANN KASTNING	TLE				0.036

*OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

USH 151 REFERENCE LINE COURSE TABLE			
PT. TO PT.	BEARING	DIST.	
10	18	SEE CURVE NOTE BELOW	
18	15	N39°33'05"E 540.950'	
CURVE TABLE			
PI X: 846660.081' Y: 426597.466'		
	Tangent:	279.539'	Chord: 559.036'
	Arc Length:	559.050'	Radius: 22918.300'
		Delta:	1°23'51"

FRAC. NE NW



RIGHT OF WAY COURSE TABLE			
POINT TO POINT	BEARING	DISTANCE	
QTR1	QTR5	N 01°09'04" W	5507.93'
13	17	S 01°09'04" E	450.03'
17	8	S 39°33'05" W	186.48'
8	9	SEE CURVE NOTE	Tangent: 249.13' Chord: 498.23' Course: S38°55'36"W Arc Length: 498.24' Radius: 22843.30' Delta: 001°14'59"
9	10	S 90°00'00" W	95.47'
10	11	S 90°00'00" W	76.24'
11	12	SEE CURVE NOTE	PI X: 846598.35' Y: 426616.95' Tangent: 303.82' Chord: 607.60' Course: N38°47'38"E Arc Length: 607.61' Radius: 22978.30' Delta: 001°30'54"
12	13	N 39°33'05" E	343.42'
13	14	N 39°33'05" E	147.98'
14	15	N 90°00'00" E	77.81'
15	16	N 90°00'00" E	97.27'
16	17	S 39°33'05" W	416.41'
17	QTR1	S 01°09'04" E	4810.89'

SCHEDULE OF UTILITIES & INTERESTS REQUIRED		
UTILITY NUMBER	*OWNER	INTEREST REQUIRED
101	WISCONSIN POWER & LIGHT CO. d/b/a ALLIANT ENERGY	RELEASE OF RIGHTS

*OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, FOND DU LAC COUNTY, NAD83 (97) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 1" X 24" IRON PIPE) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR USH 151 ESTABLISHED UNDER PROJECT T 035-2(8).

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.
THE REFERENCE LINE SHOWN ON THIS PLAT MAY NOT BE THE SAME AS THE REFERENCE LINE SHOWN ON THE CONSTRUCTION PLAN.

A **TEMPORARY LIMITED EASEMENT (TLE)** IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

WISCONSIN DEPARTMENT OF TRANSPORTATION

I, JEFFREY T. BOHRITZ, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE _____ DATE ??/??/20??
NAME JEFFREY T. BOHRITZ, PLS-2223

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHEAST REGION.

SIGNATURE _____ DATE ??/??/20??
NAME CURT VAN EREM

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4050-23-21-4.01
AMENDMENT NO:

TRANSPORTATION PROJECT PLAT NO: 4050-23-21-4.02

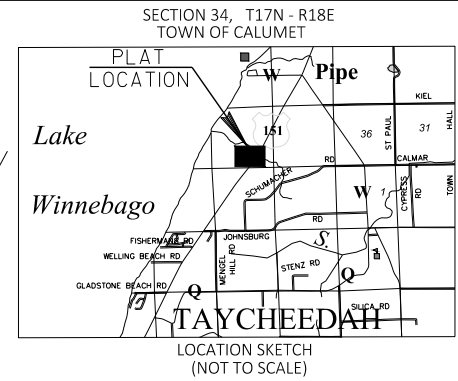
BEING PART OF LOT 1 OF CERTIFIED SURVEY MAP NO. 4283 RECORDED AS DOCUMENT NO. 518340, AND UNPLATTED LANDS OF THE SW 1/4 OF THE SE 1/4 OF SECTION 34, T17N-R18E, TOWN OF CALUMET, FOND DU LAC COUNTY, WISCONSIN.

FOND DU LAC - CHILTON

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTIONS 84.02 (3), 84.09 and 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

- THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4050-23-21-4.02
AMENDMENT NO:

CONVENTIONAL SYMBOLS	
SECTION LINE	--- ---
QUARTER LINE	-----
SIXTEENTH LINE	-----
NEW REFERENCE LINE	-----
NEW R/W LINE	-----
EXISTING R/W LINE	-----
PROPERTY LINE	-----
LOT, TIE, AND OTHER MINOR LINES	-----
SLOPE INTERCEPT	-----
CORPORATE LIMITS	-----
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	-----
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)	-----
TEMP. LIMITED EASEMENT AREA	-----
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)	-----
TRANSMISSION STRUCTURES	-----
BUILDING	-----
BUILDING (TO BE REMOVED)	-----
BRIDGE	-----

CONVENTIONAL ABBREVIATIONS		CONVENTIONAL UTILITY SYMBOLS	
ACCESS POINT/ DRIVEWAY CONNECTION	AP	WATER	W
ACCESS RIGHTS	AR	GAS	G
ACRES	AC.	TELEPHONE OVERHEAD	OH
AND OTHERS	ET.AL.	TELEPHONE LINES	TL
CENTERLINE	C/L	ELECTRIC	E
CERTIFIED SURVEY MAP CORNER	CSM	CABLE TELEVISION	TV
DOCUMENT	DOC.	FIBER OPTIC	FO
EASEMENT	EASE.	SANITARY SEWER	SAN
HIGHWAY EASEMENT	H.E.	STORM SEWER	SS
LAND CONTRACT	LC	NON COMPENSABLE	NC
MONUMENT	MON.	COMPENSABLE	CO
PAGE	P.	POWER POLE	PP
PERMANENT LIMITED EASEMENT	PLE	TELEPHONE POLE	TP
PROPERTY LINE	PL	TELEPHONE PEDESTAL	TPD
RECORDED AS (100')	(100')	ELECTRIC TOWER	ET
REFERENCE LINE	R/L		

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	*OWNER	INTEREST REQUIRED
100	FRONTIER COM OF WI	RELEASE OF RIGHTS

*OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	*OWNER(S)	INTEREST REQUIRED	FEE R/W ACRES REQUIRED			T.L.E. ACRES
			NEW	EXISTING	TOTAL	
2	NORMAN & THERESA BANGART	FEE	0.022			
3	WELDON, JR & SUSAN PETERSON	FEE	0.185			
4	MICHAEL SCHUMACHER	FEE, TLE	0.060			0.077

*OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

RIGHT OF WAY COURSE TABLE

POINT TO POINT	BEARING	DISTANCE
QTR4	S 89°24'20" E	17.83'
QTR5	S 89°39'49" E	735.55'
40	N 00°20'11" E	403.46'
21	SEE CURVE NOTE	
22	SEE CURVE NOTE	
23	N 55°42'28" W	20.01'
23	SEE CURVE NOTE	
31	N 18°25'03" E	76.97'
32	N 31°22'02" E	86.37'
33	N 34°39'56" E	188.38'
34	S 66°43'27" E	51.58'
35	SEE CURVE NOTE	
24	S 79°13'28" E	135.07'
20	S 79°13'28" E	135.07'
25	S 41°15'25" W	340.84'
39	S 28°14'42" W	72.09'
48	S 28°14'42" W	30.02'
38	S 37°53'07" W	70.69'
37	S 46°30'25" W	73.74'
36	SEE CURVE NOTE	
26	S 90°00'00" W	94.56'
19	S 90°00'00" W	75.91'
21	S 00°20'11" W	403.46'
40	S 89°39'49" E	170.47'
41	N 00°20'11" E	404.46'
26	S 00°20'11" W	404.46'
41	SEC6	S 89°39'49" E
SEC6	SEC7	S 89°50'25" E
SEC7	SEC6	S 89°50'25" W
QTR5	N 89°39'49" W	2624.68'

STATION OFFSET TABLE

POINT	STATION	OFFSET	(Y) NORTHING	(X) EASTING
21	461+53.37	-60.00'	428005.067	847738.562
19	462+00.00	0.00'	428005.067	847814.476
26	462+57.40	75.00'	428005.067	847905.037
23	465+45.17	-80.00'	428328.396	847956.466
22	465+45.75	-60.00'	428317.123	847972.997
36	465+73.32	75.00'	428260.382	848098.560
31	465+76.65	-80.00'	428353.730	847974.778
46	466+44.18	121.77'	428291.242	848178.203
37	466+45.22	88.93'	428311.138	848152.059
32	466+50.78	-102.73'	428426.761	847999.096
38	467+15.28	92.17'	428366.930	848195.469
33	467+37.76	-108.50'	428500.509	848044.055
47	467+44.56	125.45'	428372.038	848239.689
48	467+44.86	88.63'	428393.376	848209.676
39	468+15.96	80.45'	428456.882	848243.791
34	469+27.94	-107.95'	428655.448	848151.202
35	469+71.65	-80.00'	428675.831	848198.585
24	470+66.79	-80.00'	428754.554	848250.825
20	471+00.00	0.00'	428738.368	848335.871
25	471+50.89	125.00'	428713.115	848468.556

USH 151 REFERENCE LINE COURSE TABLE

POINT TO POINT	BEARING	DISTANCE
19	20	SEE CURVE NOTE BELOW

NOTES:

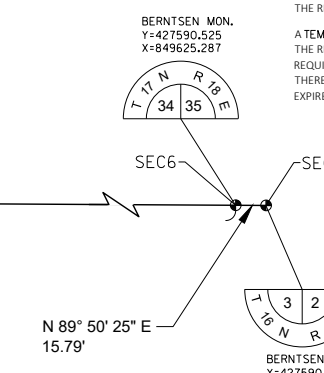
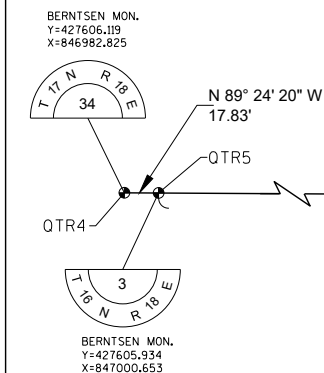
- POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, FOND DU LAC COUNTY, NAD83 (97) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.
- RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 1" X 24" IRON PIPE) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
- RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".
- PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.
- EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR USH 151 ESTABLISHED UNDER PROJECT T 035-2(8).
- DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.
- THE REFERENCE LINE SHOWN ON THIS PLAT MAY NOT BE THE SAME AS THE REFERENCE LINE SHOWN ON THE CONSTRUCTION PLAN.
- A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

WISCONSIN DEPARTMENT OF TRANSPORTATION

I, JEFFREY T. BOHRTZ, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE _____ DATE ??/??/20??
NAME JEFFREY T. BOHRTZ, PLS-2223

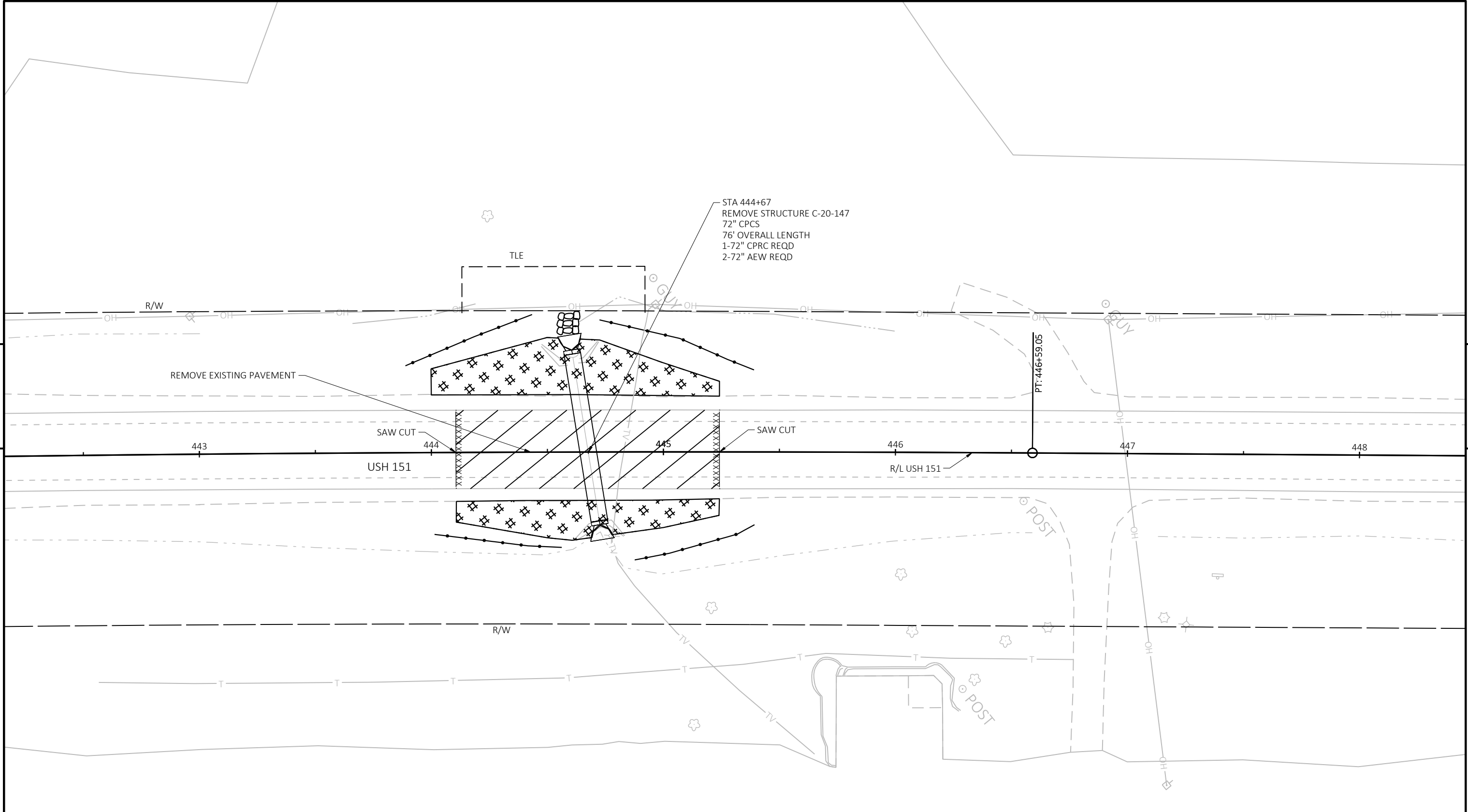
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHEAST REGION.
SIGNATURE _____ DATE ??/??/20??
NAME CURT VAN EREM



WISCONSIN DEPARTMENT OF TRANSPORTATION
I, JEFFREY T. BOHRTZ, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.
SIGNATURE _____ DATE ??/??/20??
NAME JEFFREY T. BOHRTZ, PLS-2223
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHEAST REGION.
SIGNATURE _____ DATE ??/??/20??
NAME CURT VAN EREM

5

5



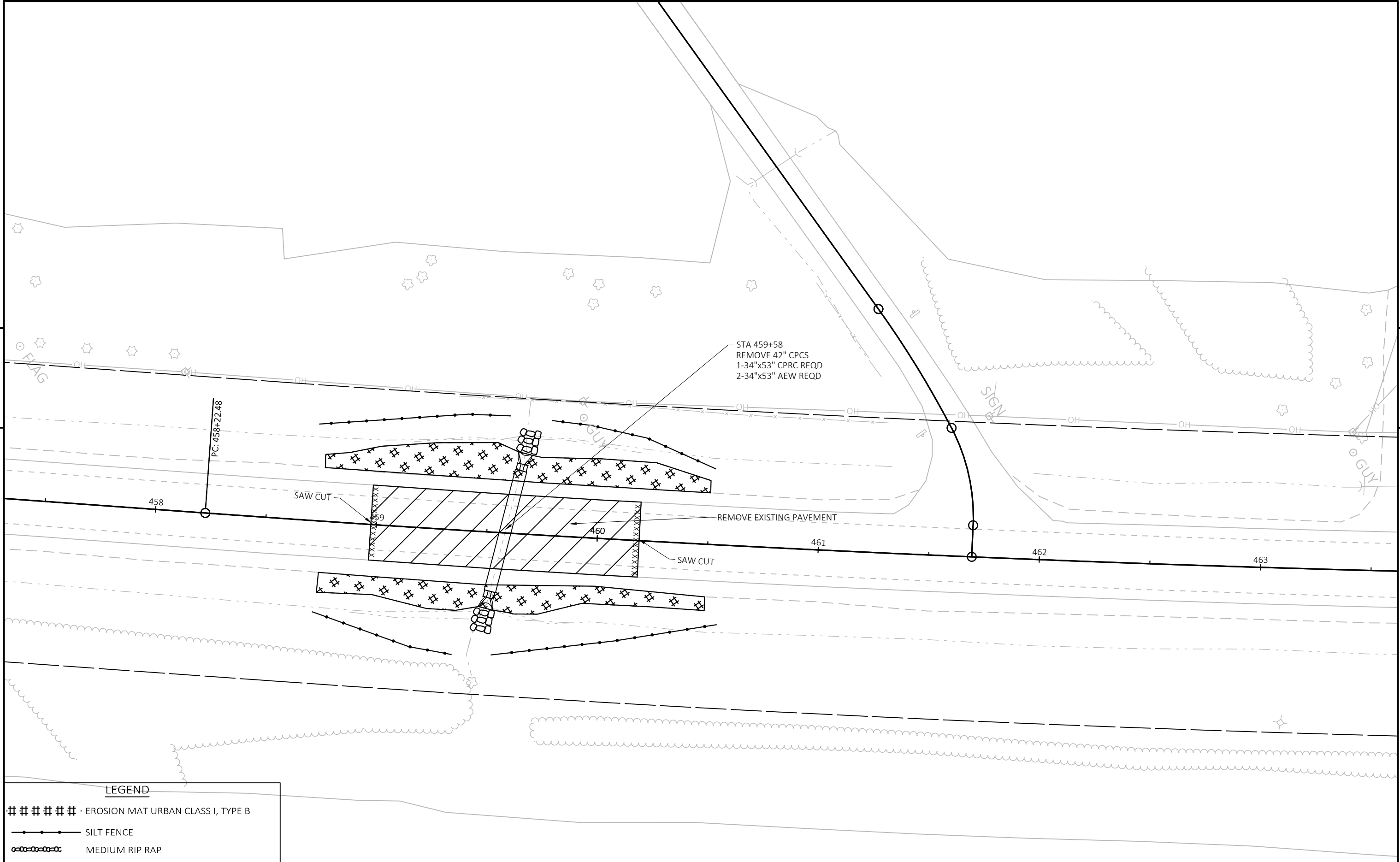
LEGEND

- ##### EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- MEDIUM RIP RAP

PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	PLAN DETAILS	SHEET	E
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5

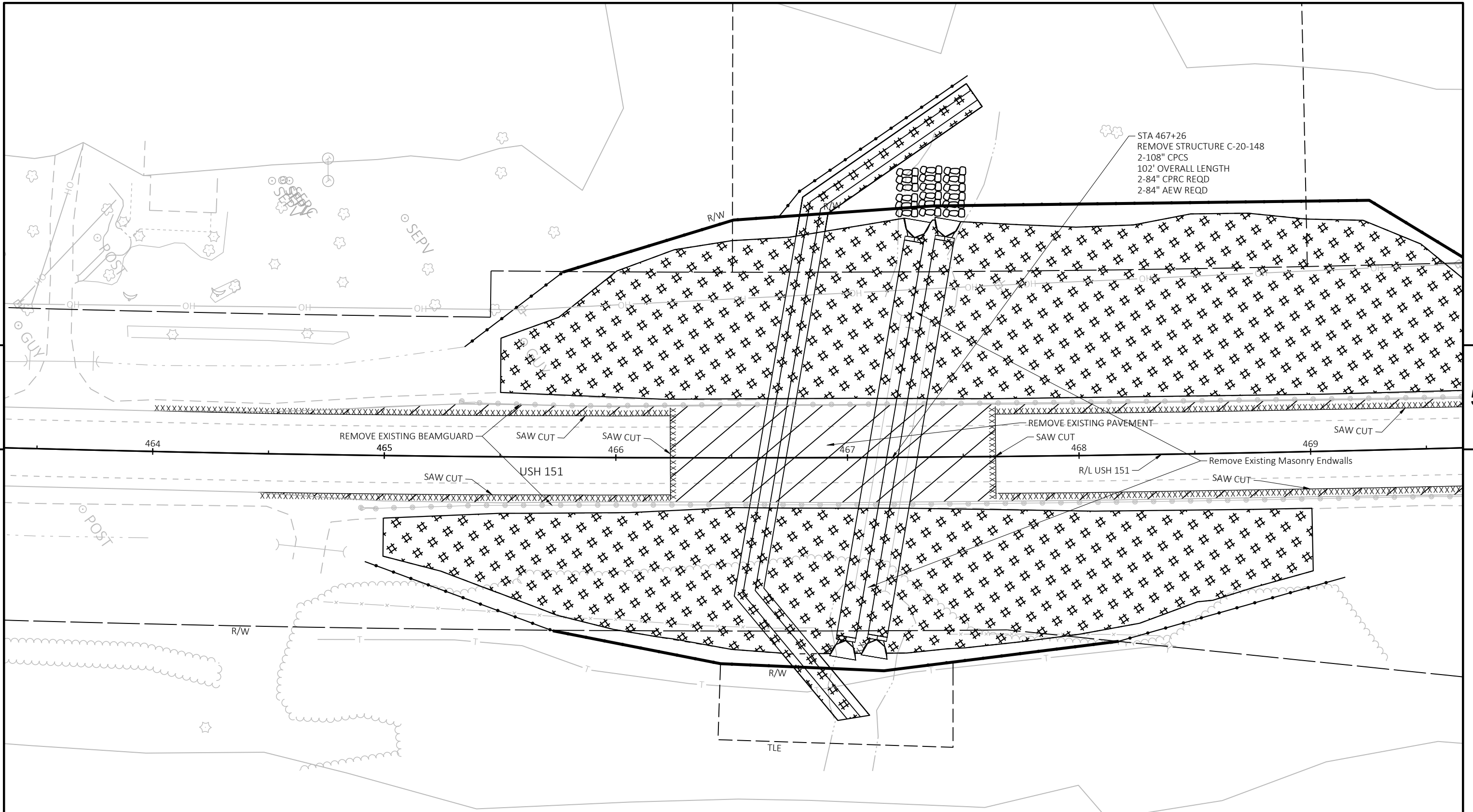
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LEGEND

- ##### · EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- MEDIUM RIP RAP

PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	PLAN DETAILS	SHEET	E
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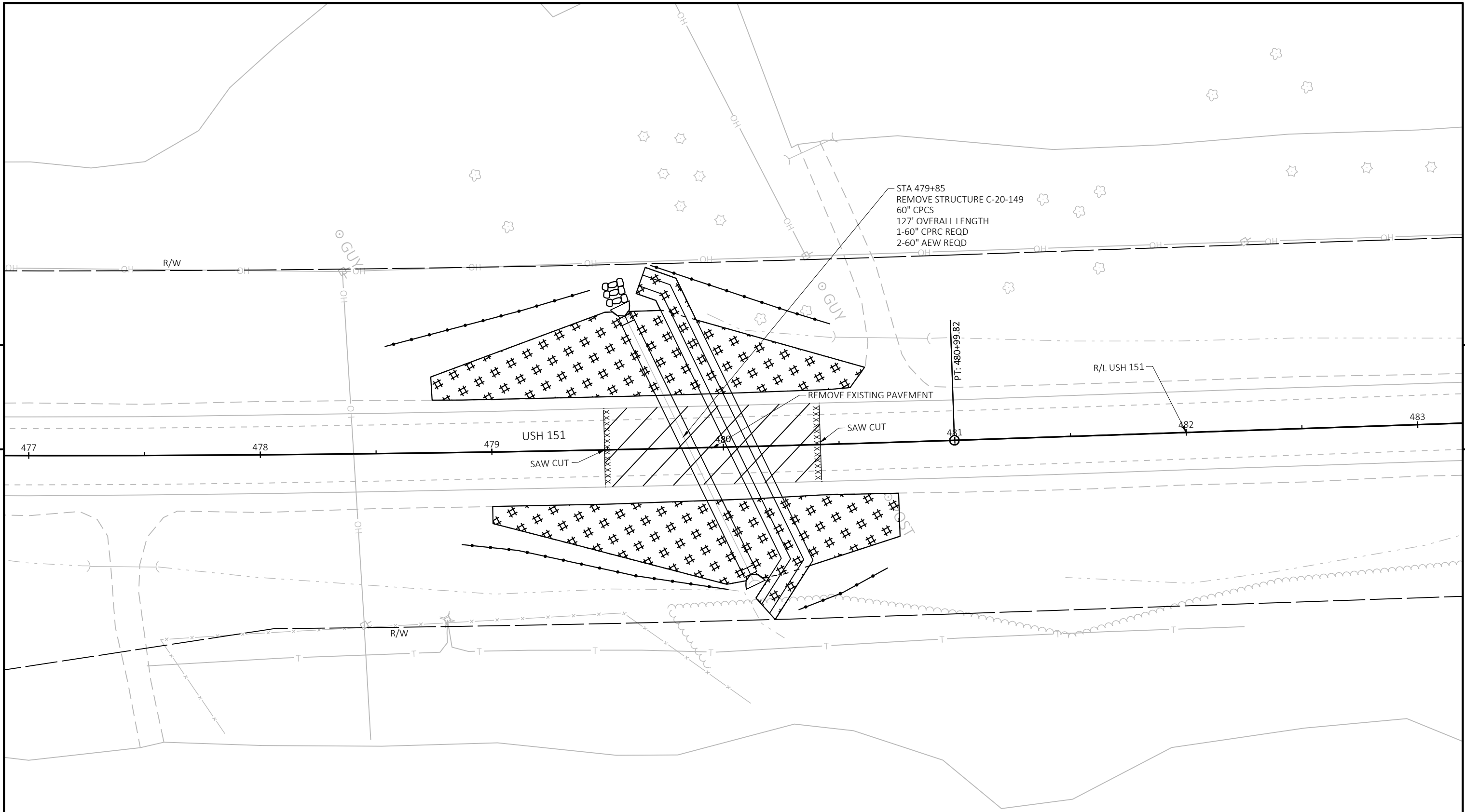


STA 467+26
 REMOVE STRUCTURE C-20-148
 2-108" CPCS
 102' OVERALL LENGTH
 2-84" CPCS REQD
 2-84" AEW REQD

LEGEND

- ##### EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- x—x—x— MEDIUM RIP RAP

PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	PLAN DETAILS	SHEET	E
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5

5

LEGEND

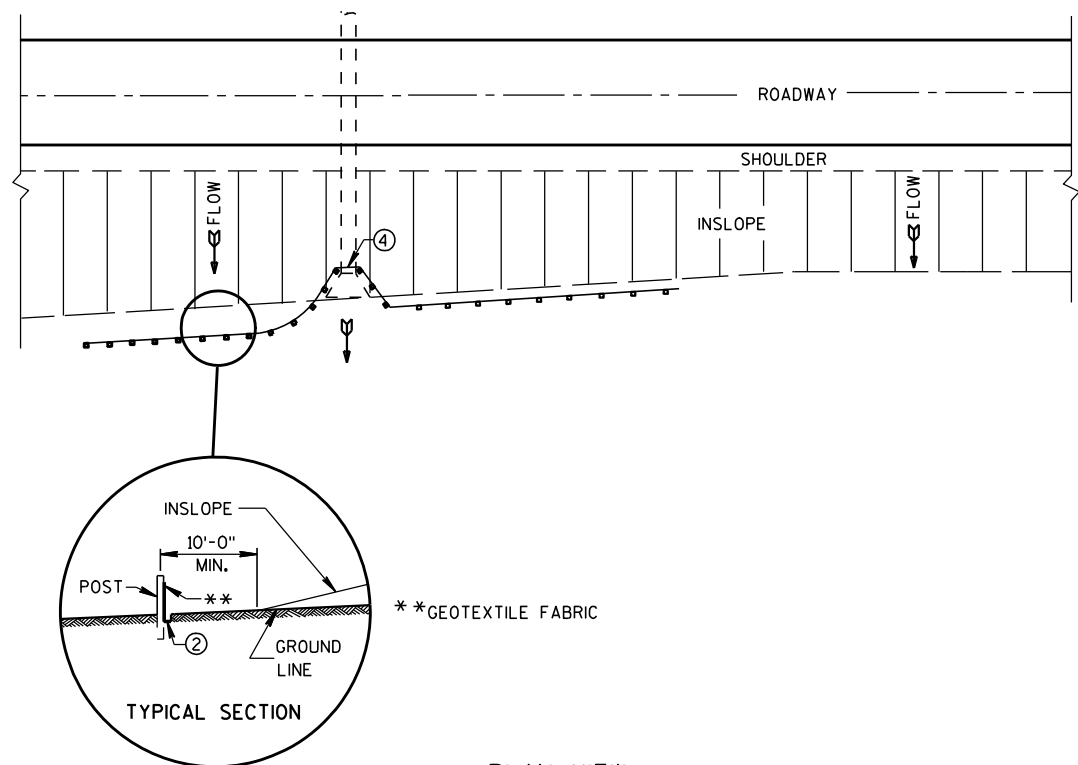
- ##### · EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- MEDIUM RIP RAP

PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	PLAN DETAILS
			SHEET

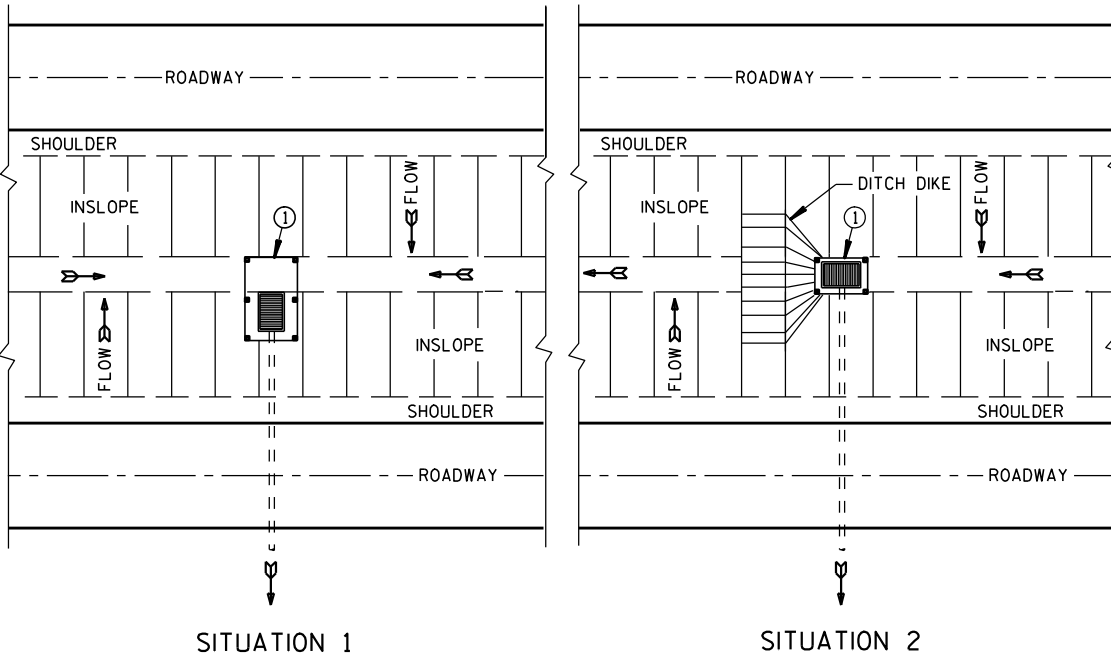
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Standard Detail Drawing List

08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13C19-03	HMA LONGITUDINAL JOINTS
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

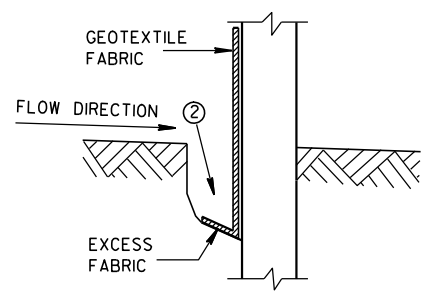


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

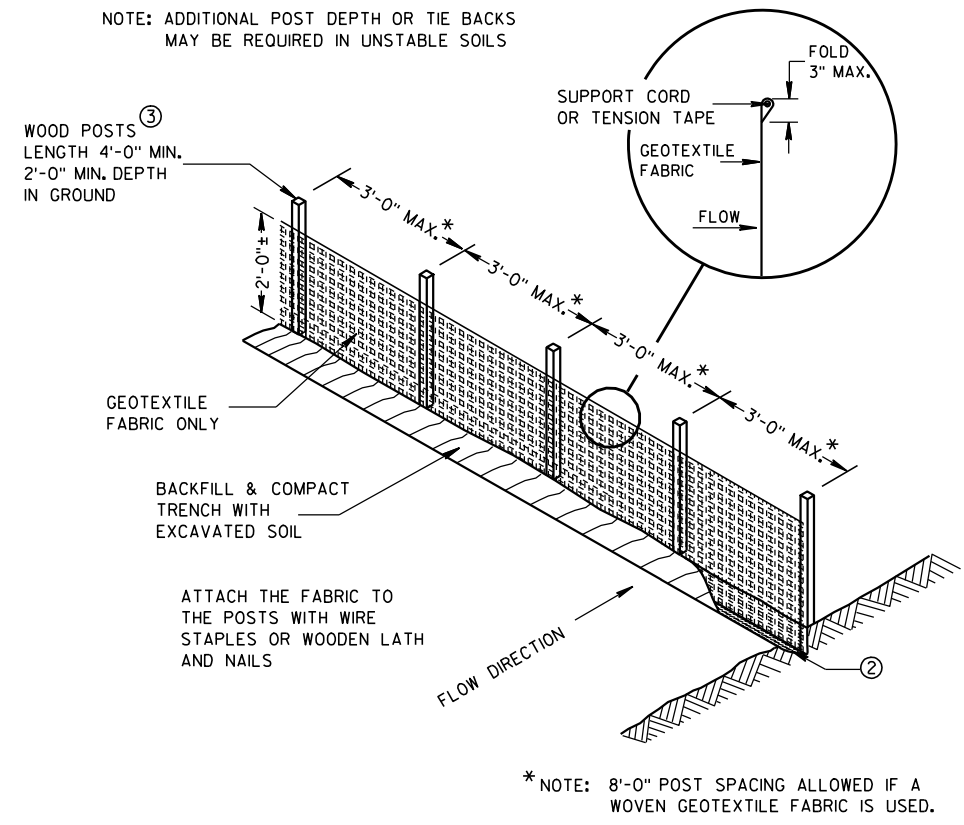
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" 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.

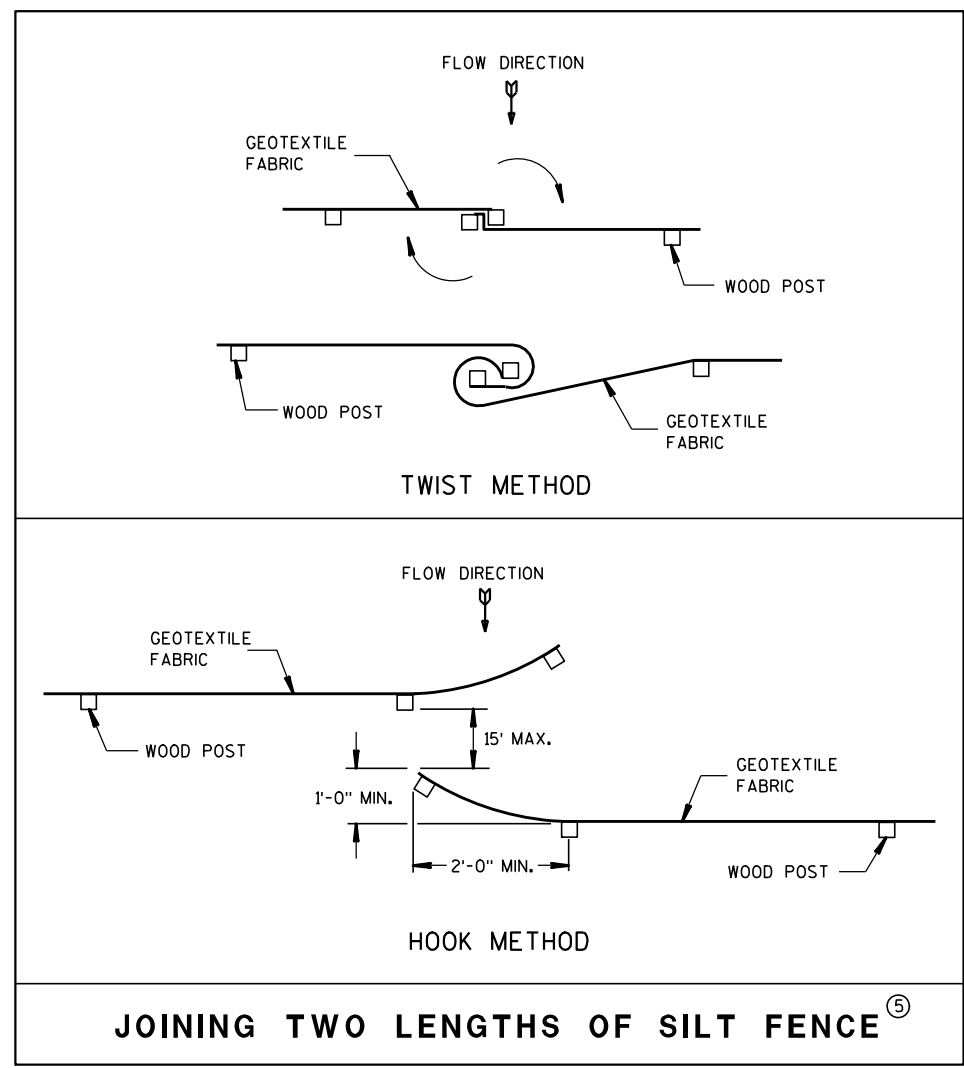


TRENCH DETAIL

6

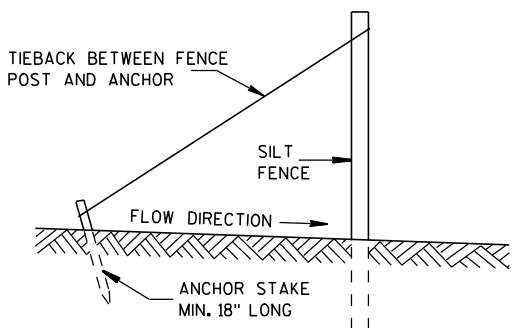


SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤

6



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

S.D.D. 8 E 9-6

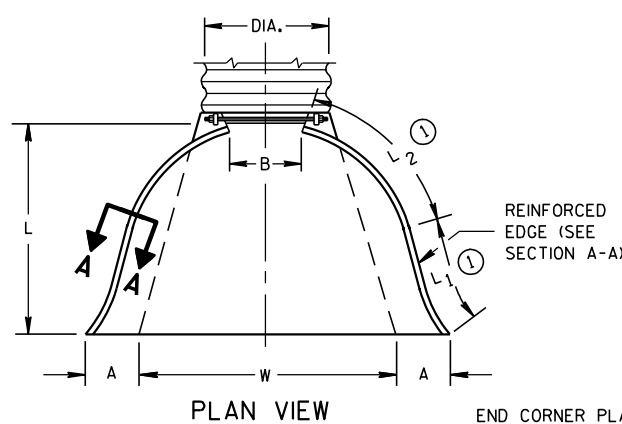
S.D.D. 8 E 9-6

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

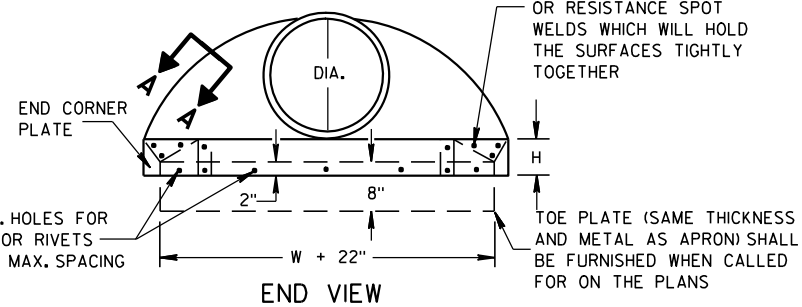
* EXCEPT CENTER PANEL SEE GENERAL NOTES

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

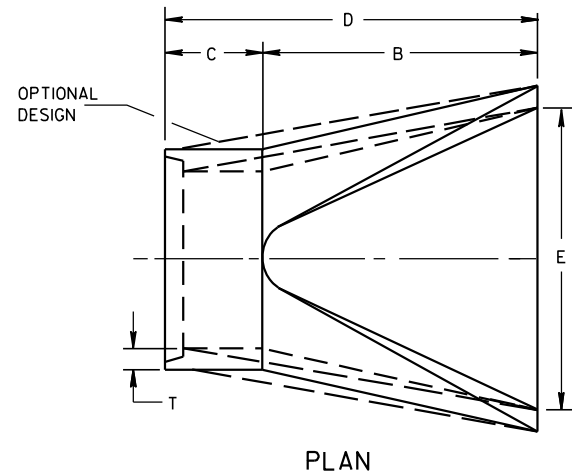
* MINIMUM
** MAXIMUM



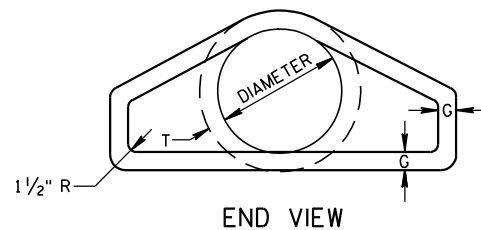
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



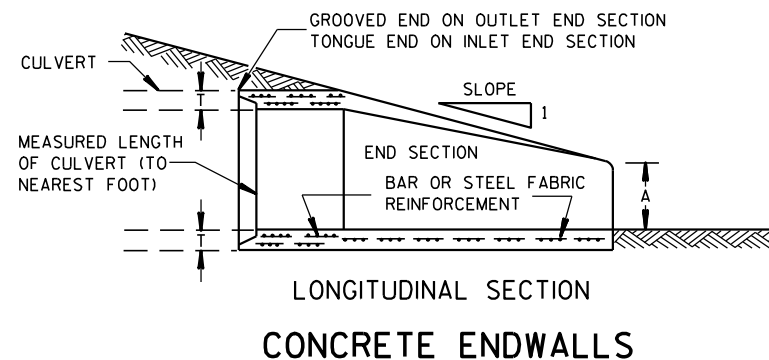
SIDE ELEVATION
METAL ENDWALLS



PLAN

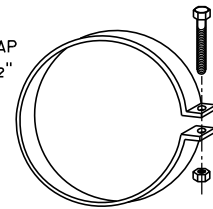


END VIEW

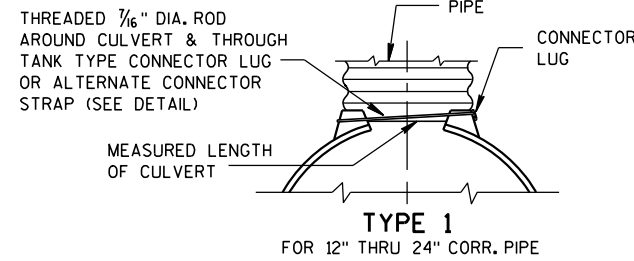


LONGITUDINAL SECTION
CONCRETE ENDWALLS

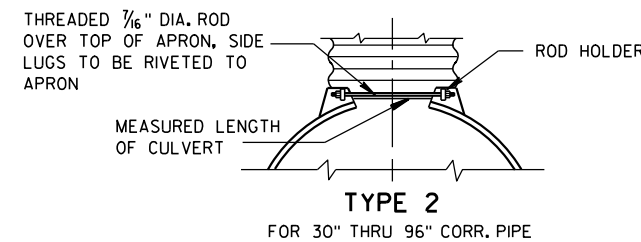
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



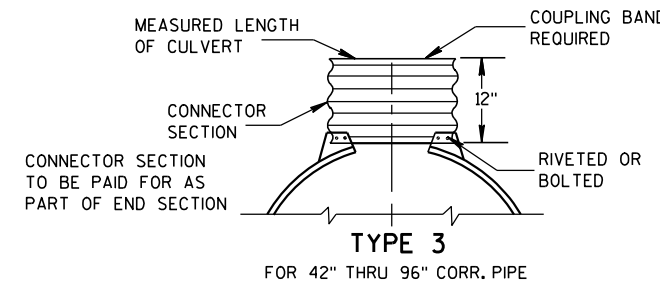
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



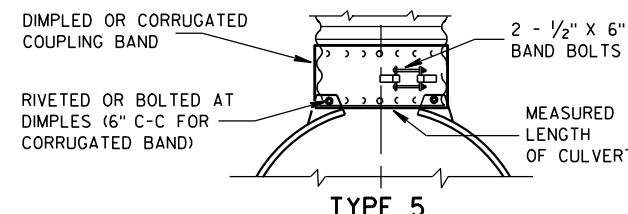
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

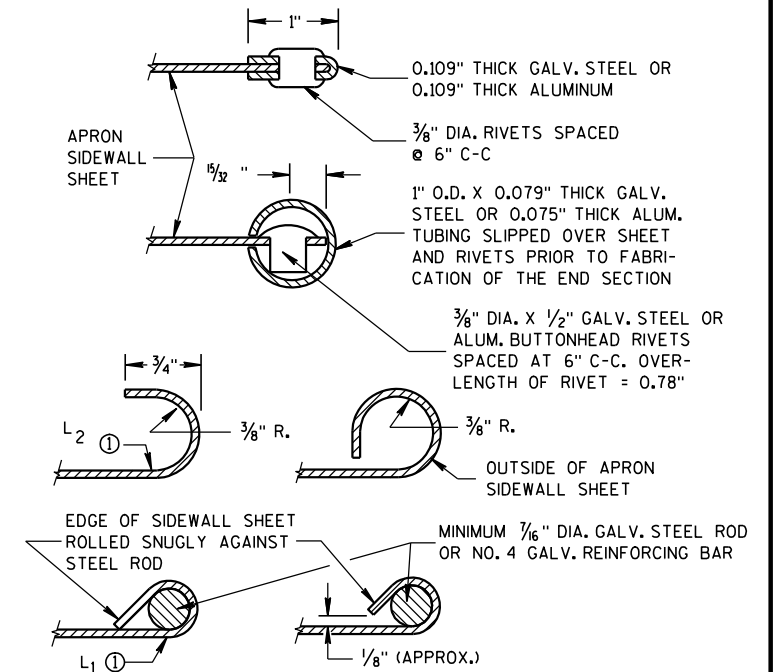
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

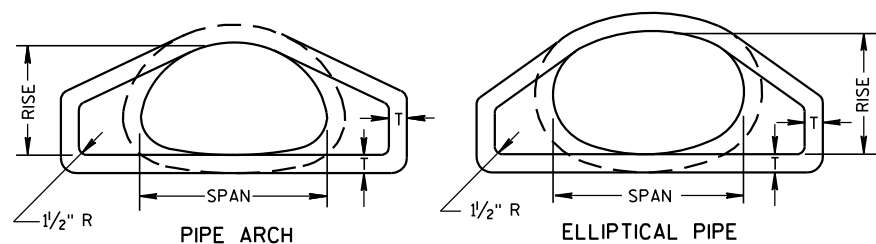
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

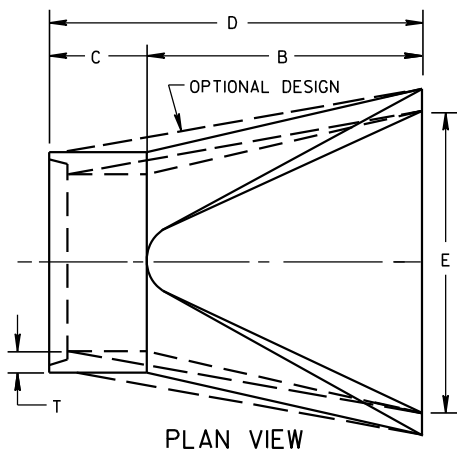
APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

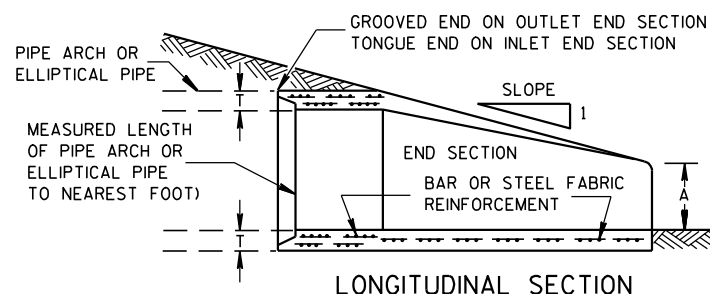
APPROVED
11/30/94 DATE /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



END VIEW

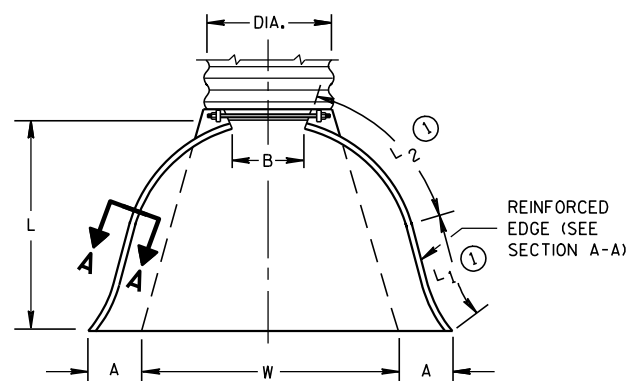


PLAN VIEW



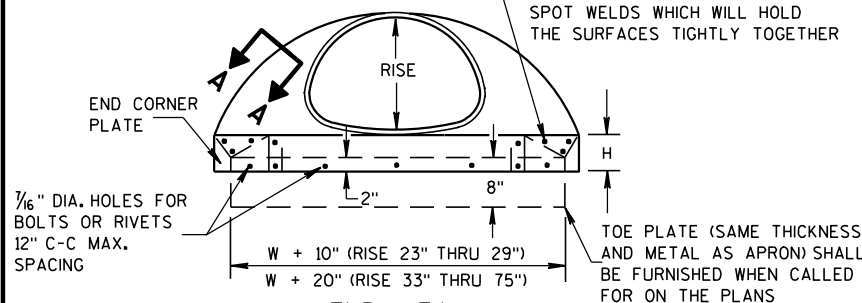
LONGITUDINAL SECTION

CONCRETE ENDWALLS

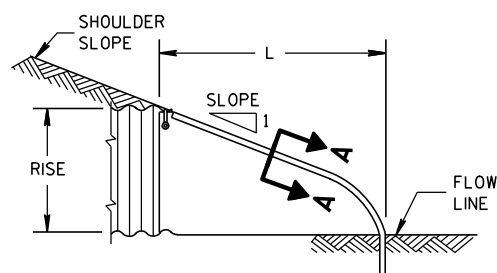


PLAN VIEW

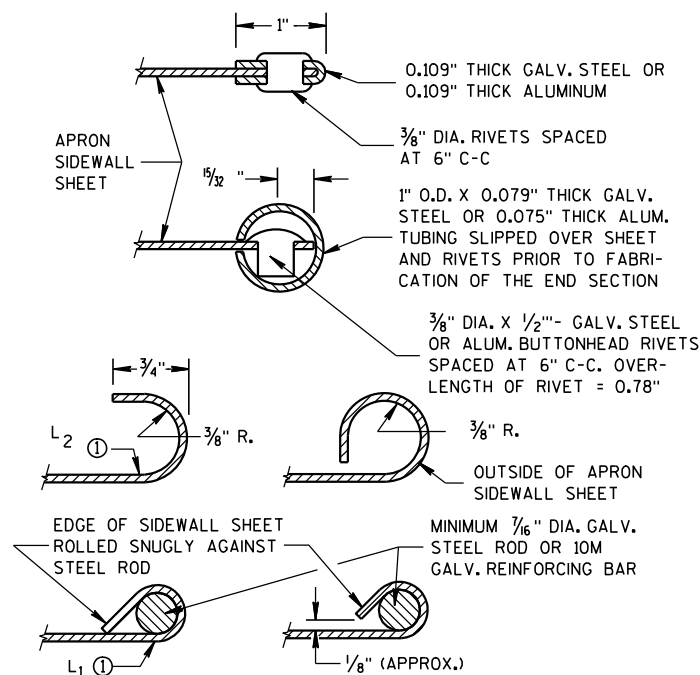
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



END VIEW



SIDE ELEVATION
METAL ENDWALLS



SECTION A-A

2- 2 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⊙)	L2 (⊙)	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 1/2 to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2 1/2 to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 3/4	42	2 1/2 to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 1/2	48	2 1/2 to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 5/8	60	2 1/2 to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2 1/2 to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 3/4	85	2 1/2 to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 1/2 to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 3/4	102	2 1/4 to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 1/4	114	2 1/4 to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⊙)	L2 (⊙)	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72 3/4	90	2 1/2 to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82 1/4	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1 1/2 to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1 1/2 to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1 1/2 to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1 1/2 to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1 1/2 to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1 1/2 to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED. * EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	29	18	3	8 1/2	39	33	72	48	3 to 1
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1
36	44	27	4	11 1/8	60	36	96	72	3 to 1
42	51	31	4 1/2	15 5/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28 1/2	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1
42	53	34	5	15 3/4	60	36	96	78	2 1/2 to 1
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1

**NOMINAL SIZE

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

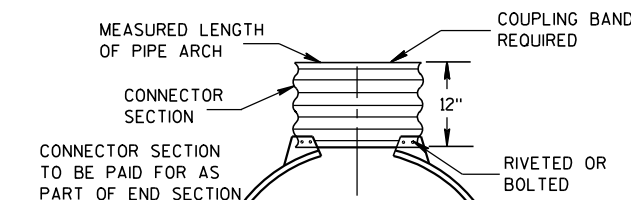
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

Ⓛ FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.



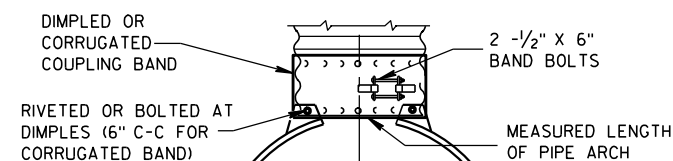
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:
ALL SIZES CORRUGATED PIPE ARCHES

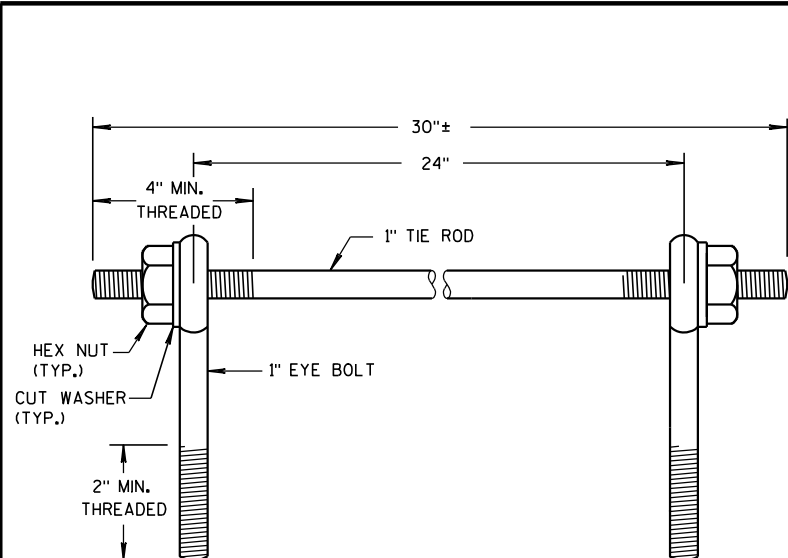
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

APRON ENDWALLS FOR
PIPE ARCH AND
ELLIPTICAL PIPE

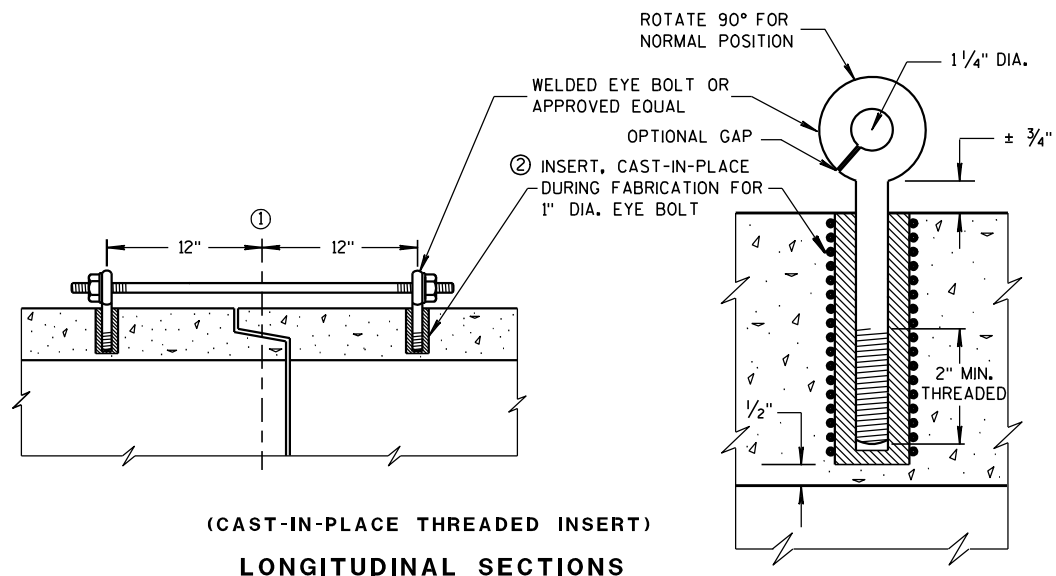
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST-IN-PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

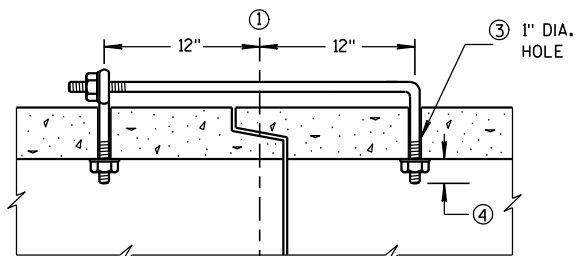
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

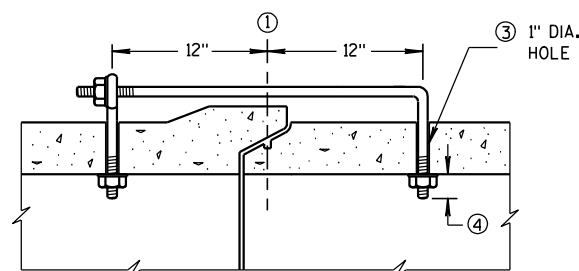
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

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

- ① ϕ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ϕ OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)
LONGITUDINAL SECTION

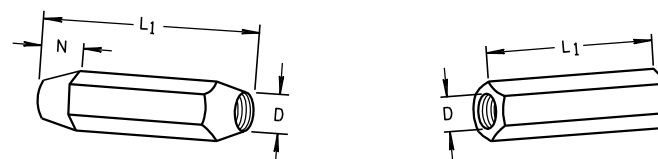
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	

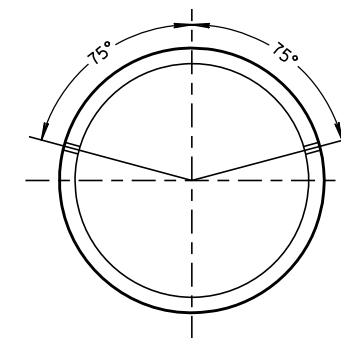
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/6

DIMENSIONS SHOWN ARE IN INCHES

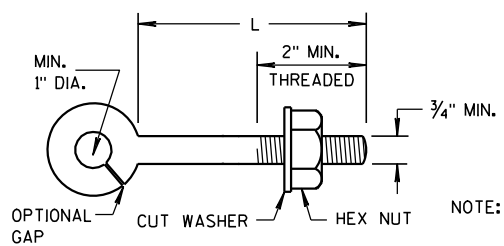


TAPERED PLAIN
RIGHT AND LEFT THREADS
SLEEVE NUTS



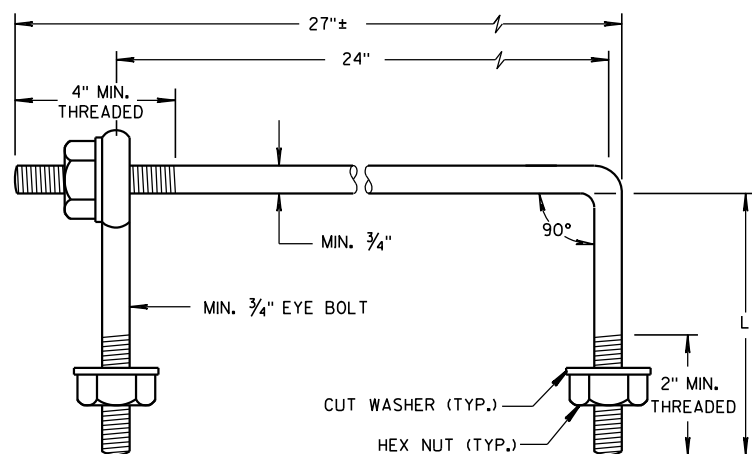
PLACEMENT OF (2) CAST-IN-PLACE
INSERTS OR HOLES DURING FABRICATION
FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



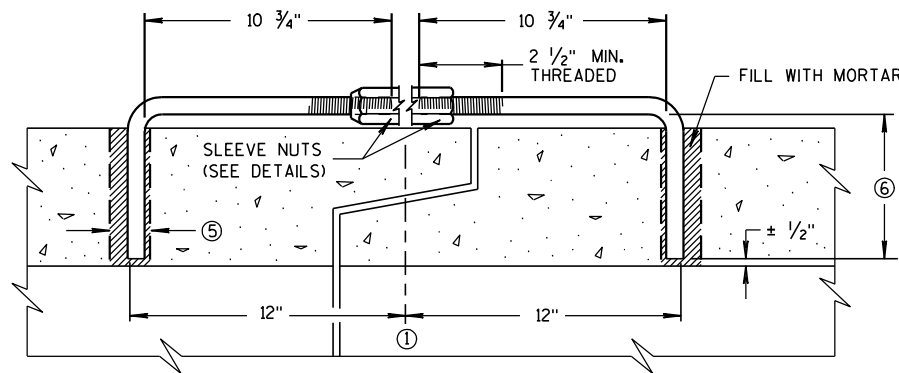
EYE BOLT

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

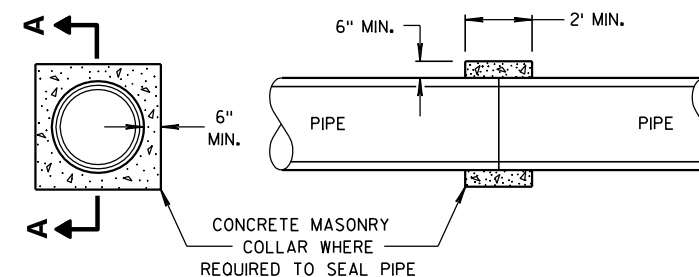


EYE BOLT AND TIE ROD

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)
EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)



LONGITUDINAL SECTION
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)
ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

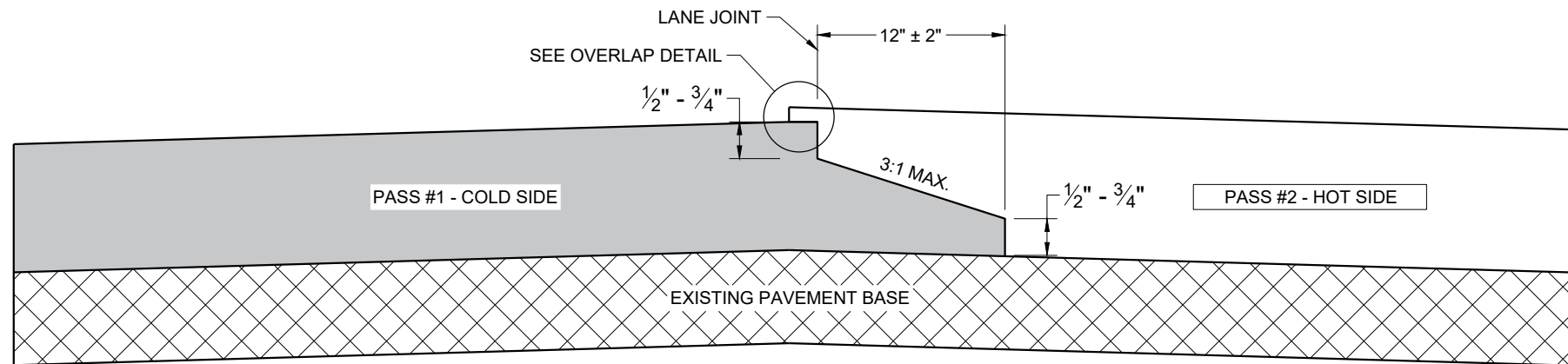


SECTION A-A
CONCRETE COLLAR DETAIL

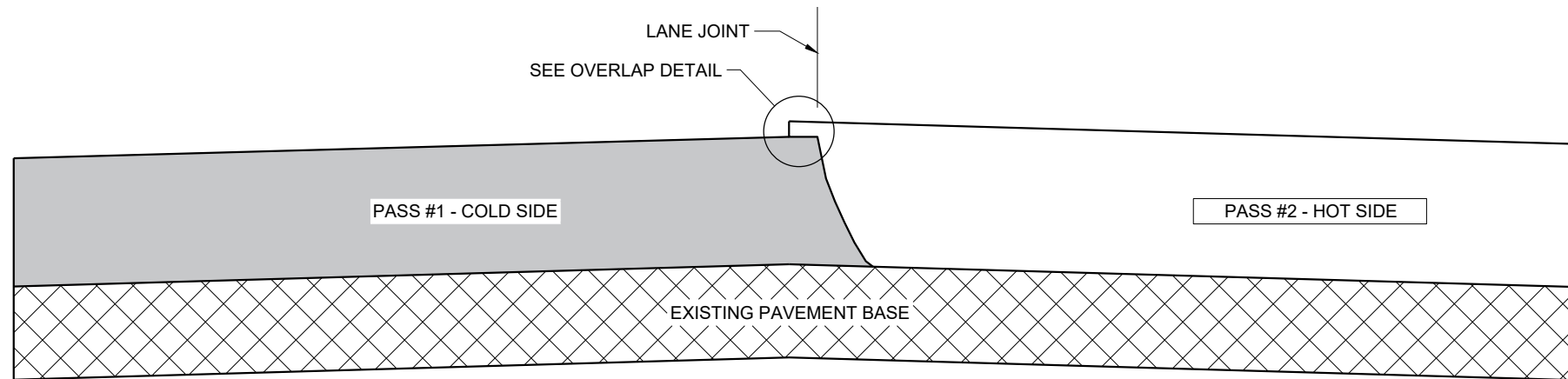
JOINT TIES FOR CONCRETE
PIPE AND CONCRETE
COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

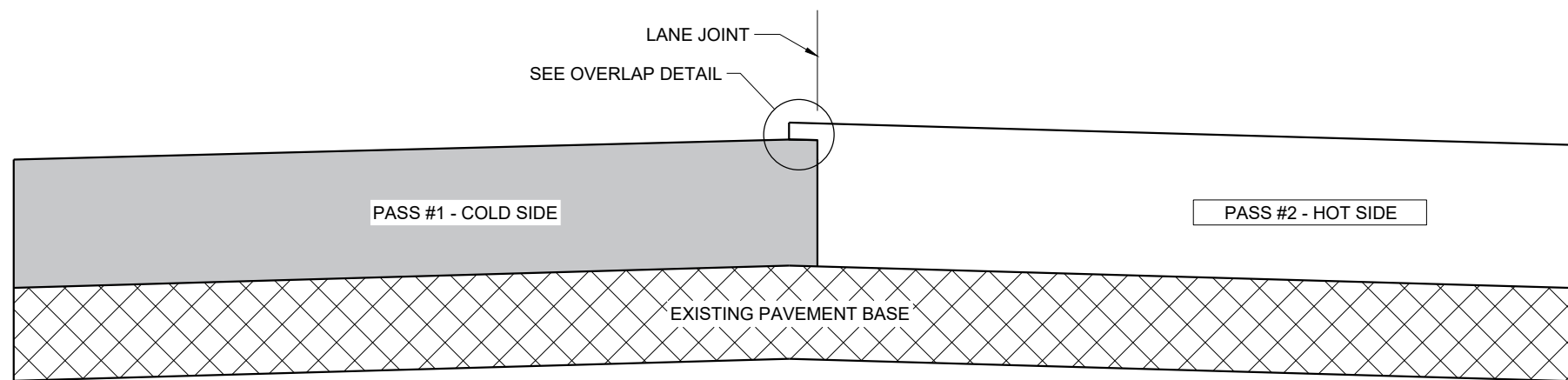
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

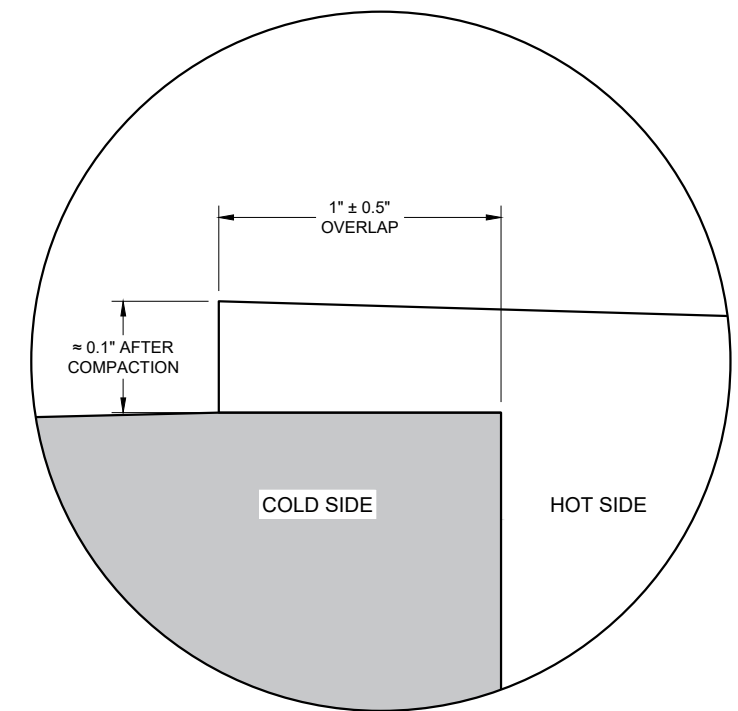
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

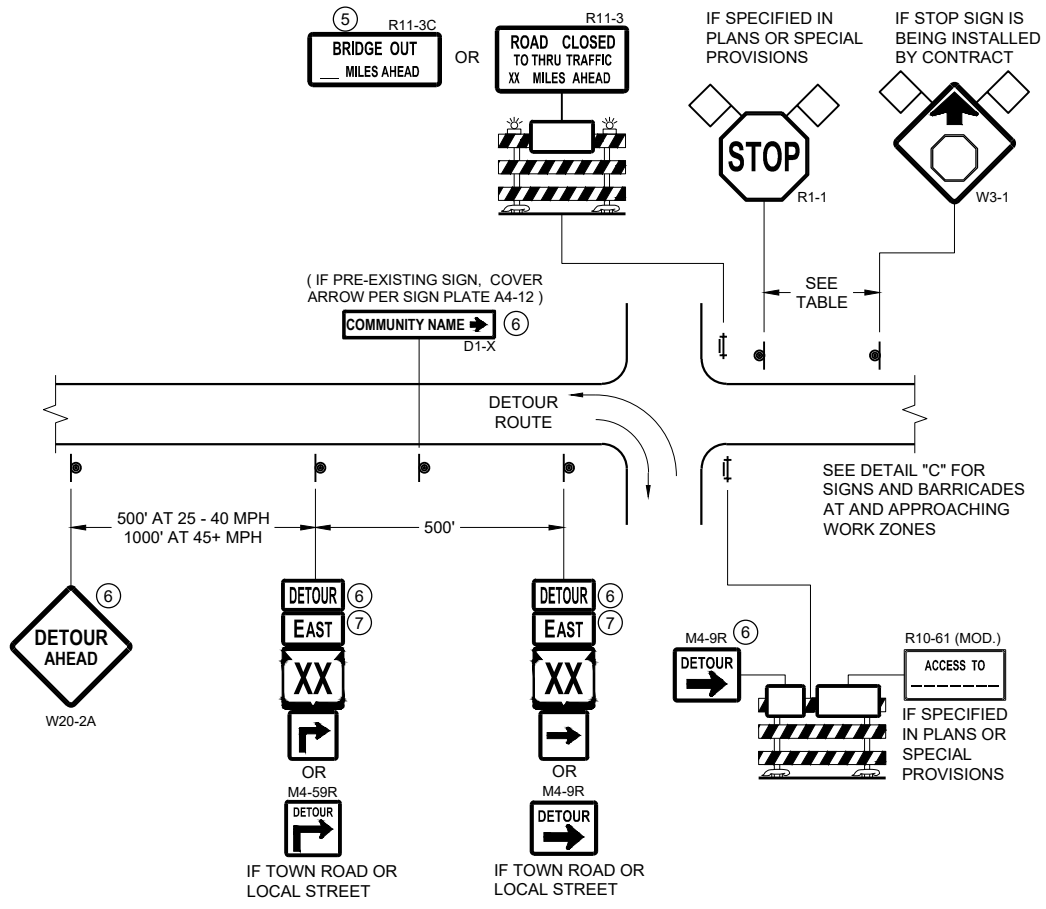
SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

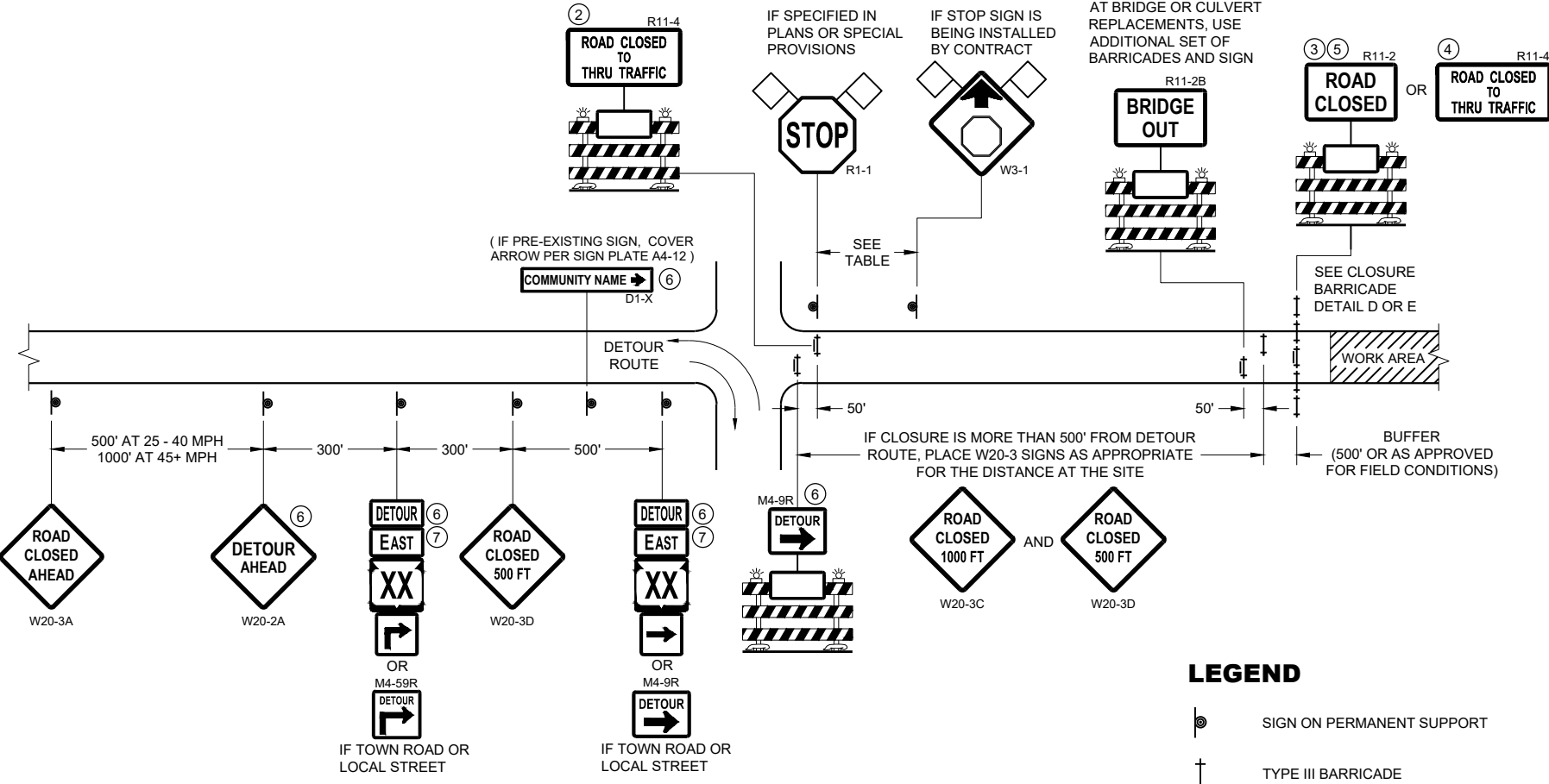
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 DATE /S/ Steven Hefel
HMA PAVEMENT ENGINEER
FHWA



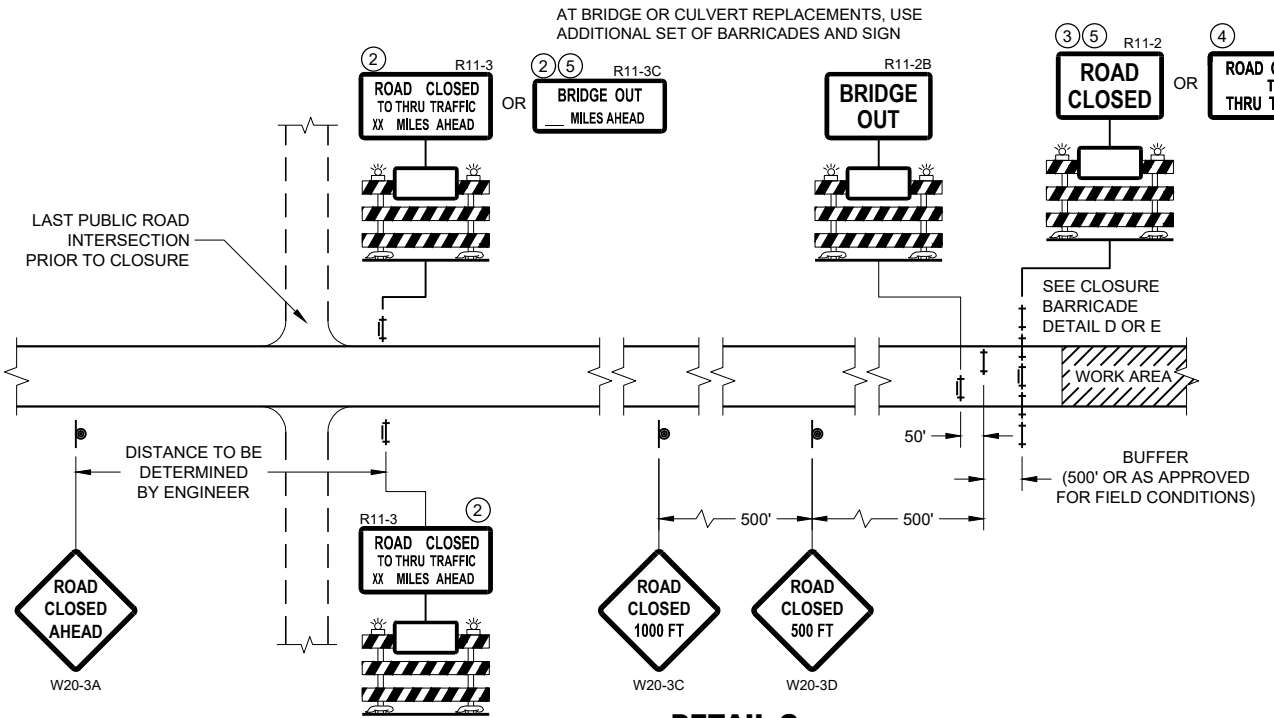
**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

LEGEND

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

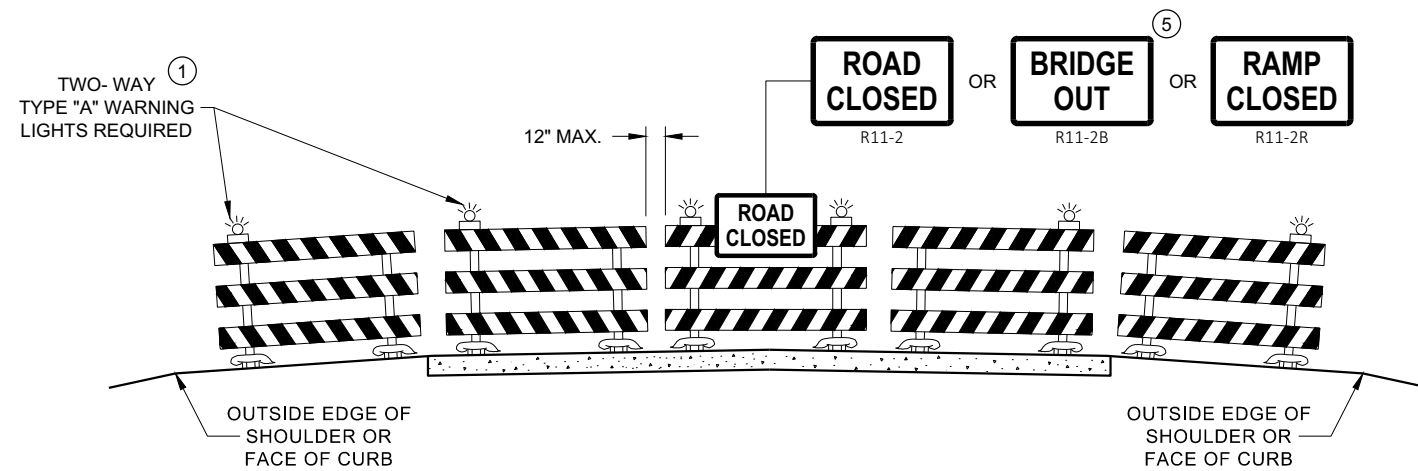
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

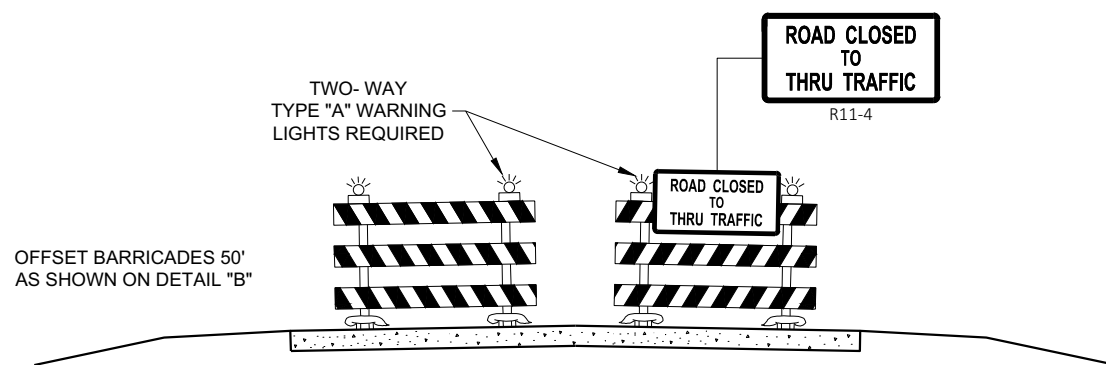
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER
FHWA



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

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

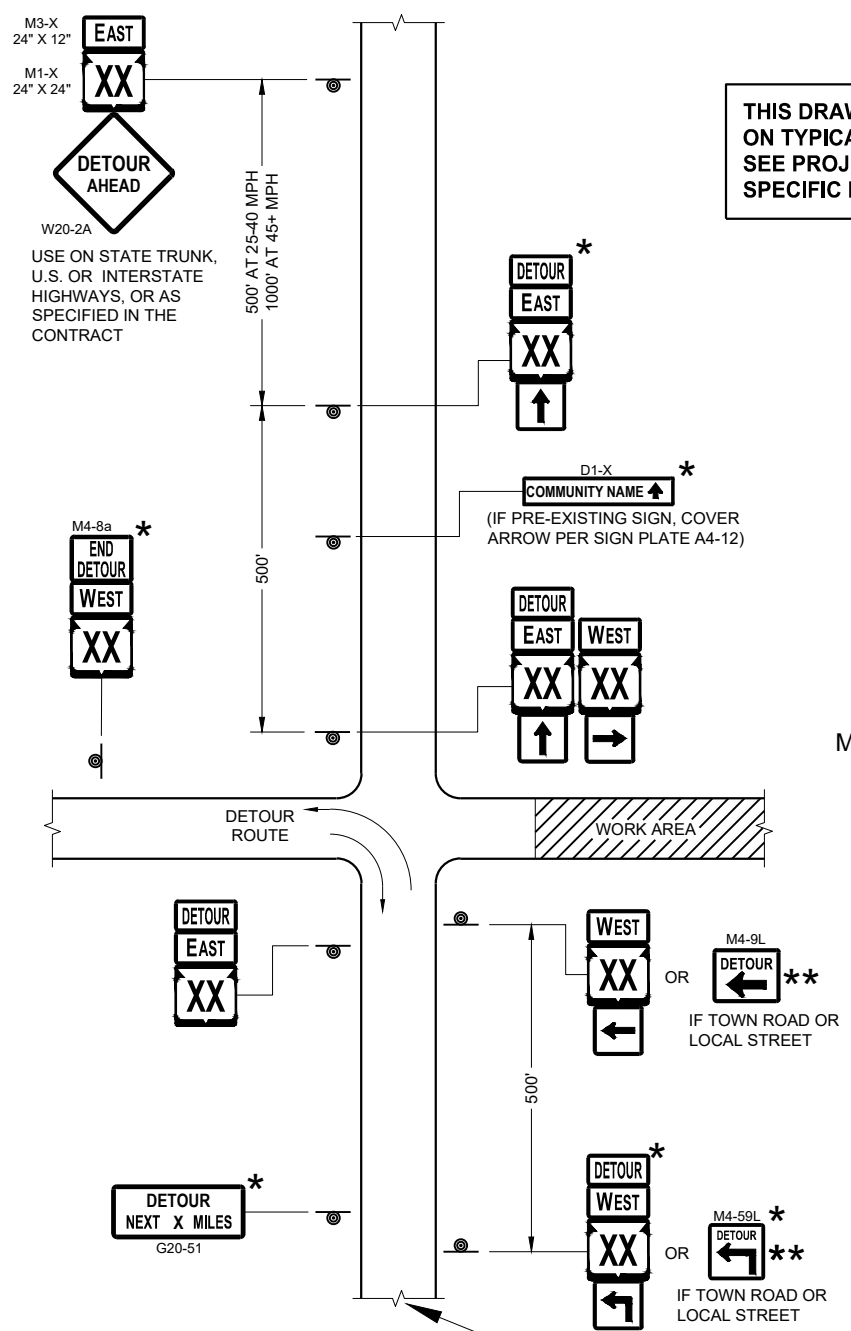
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

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

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

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

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

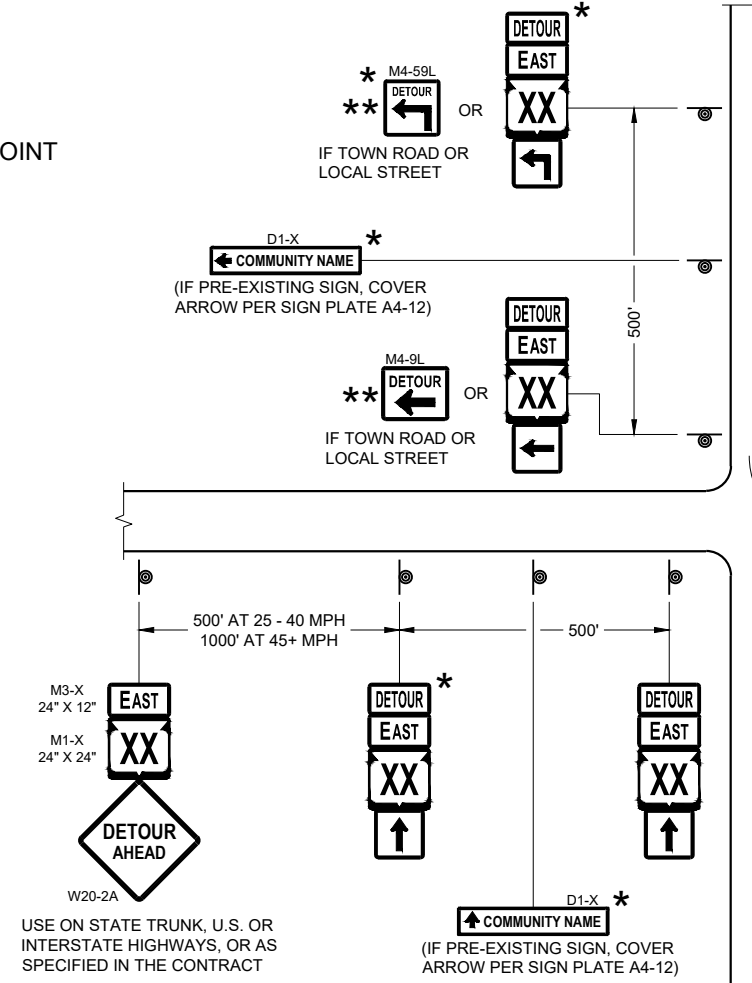
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

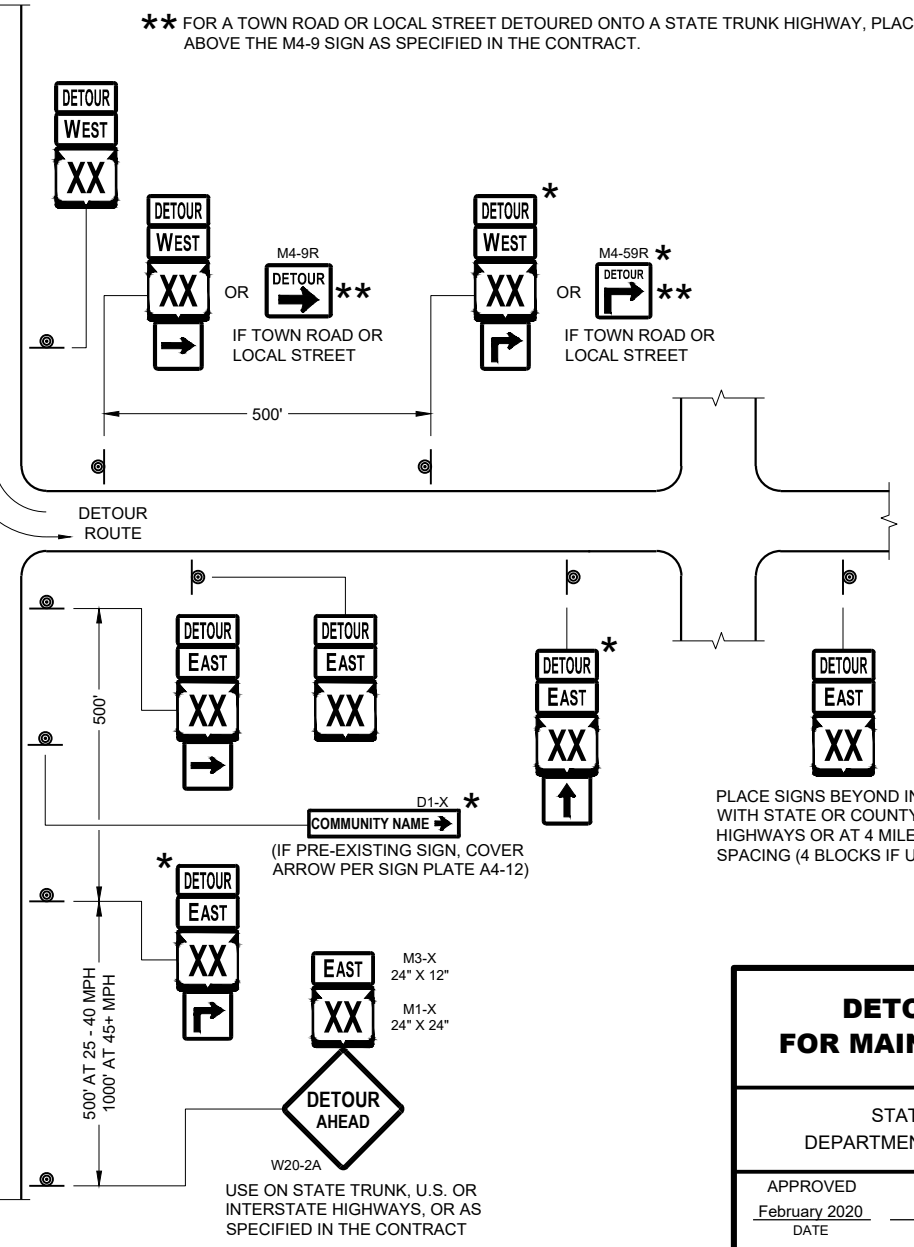
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING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

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

MATCH POINT



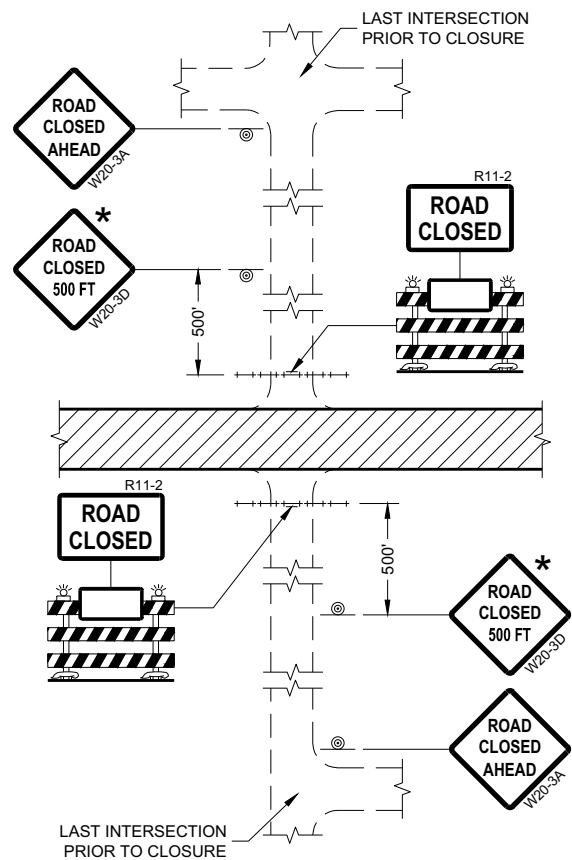
**DETAIL F
DETOUR SIGNING**



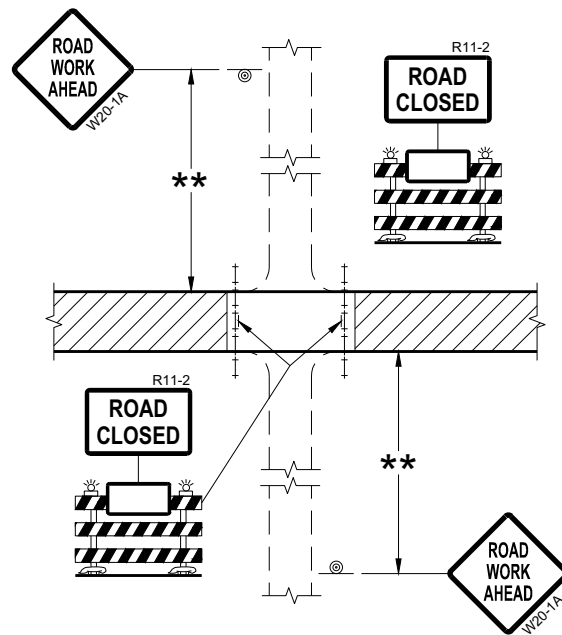
PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

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

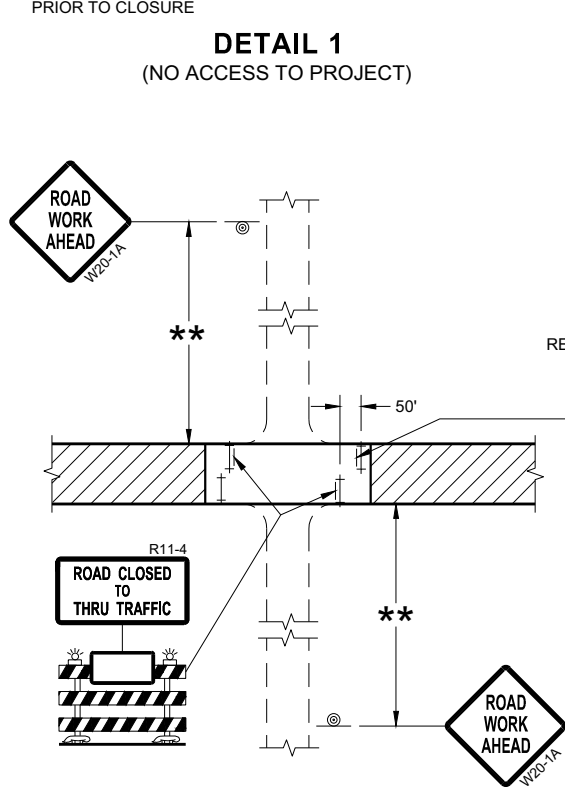
DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2020 DATE	/s/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



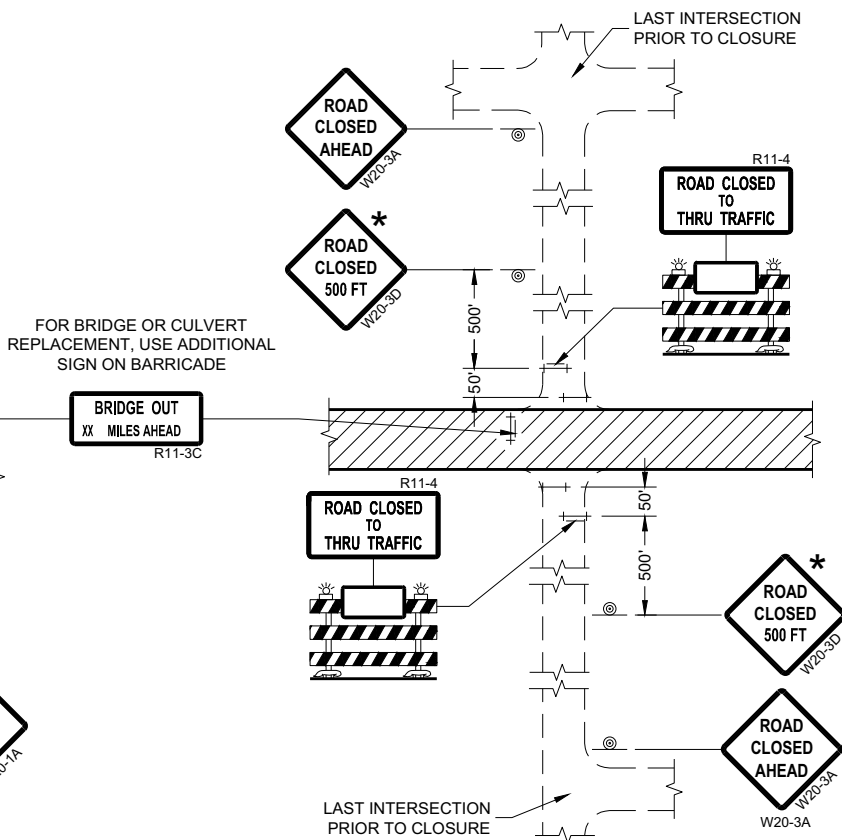
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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.

BARRICADES 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.

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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.

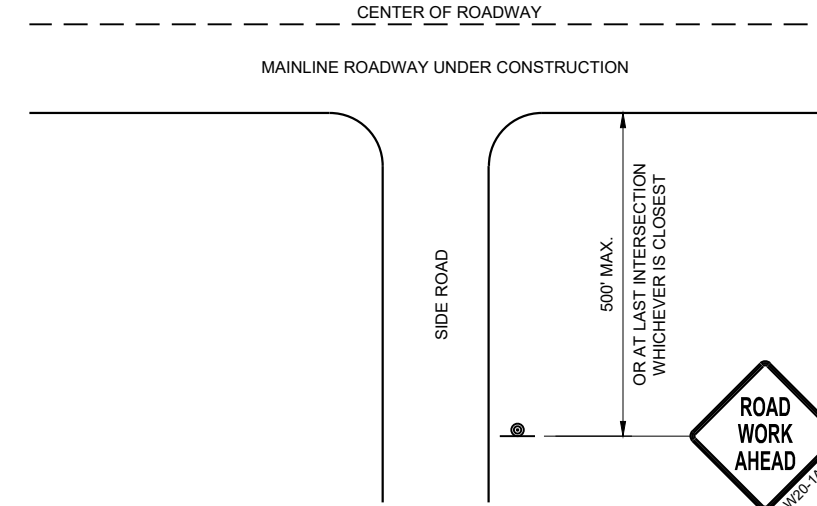
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

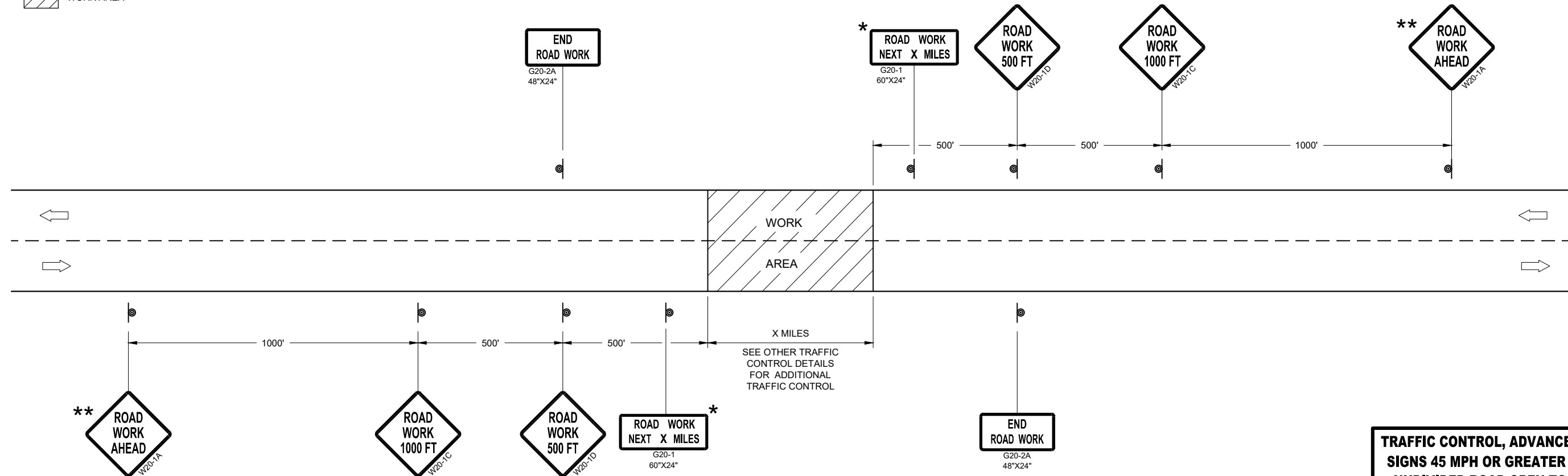
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



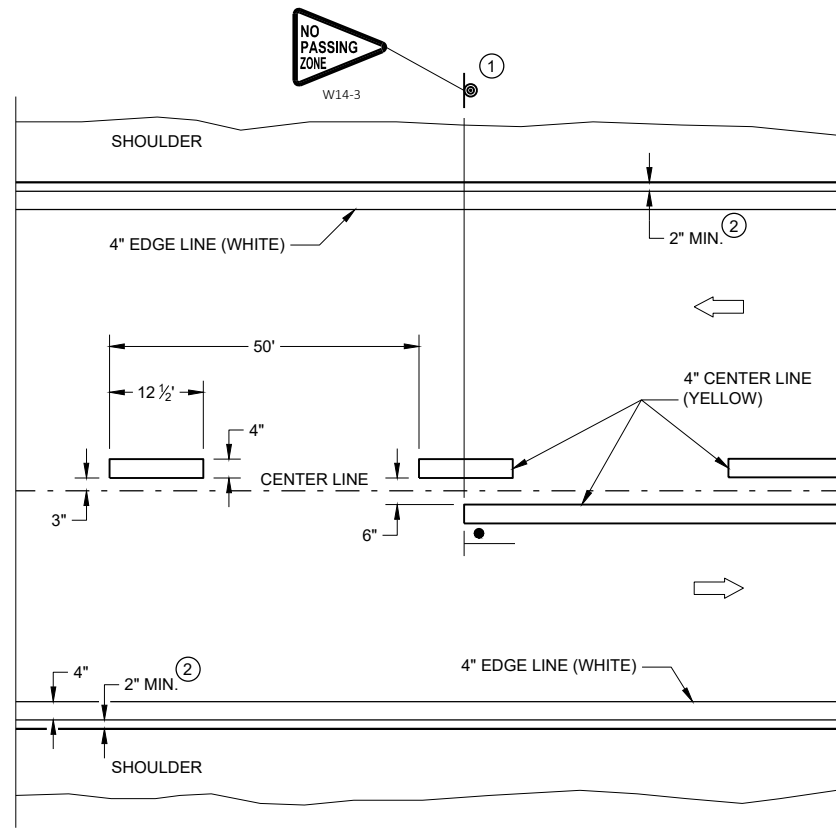
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

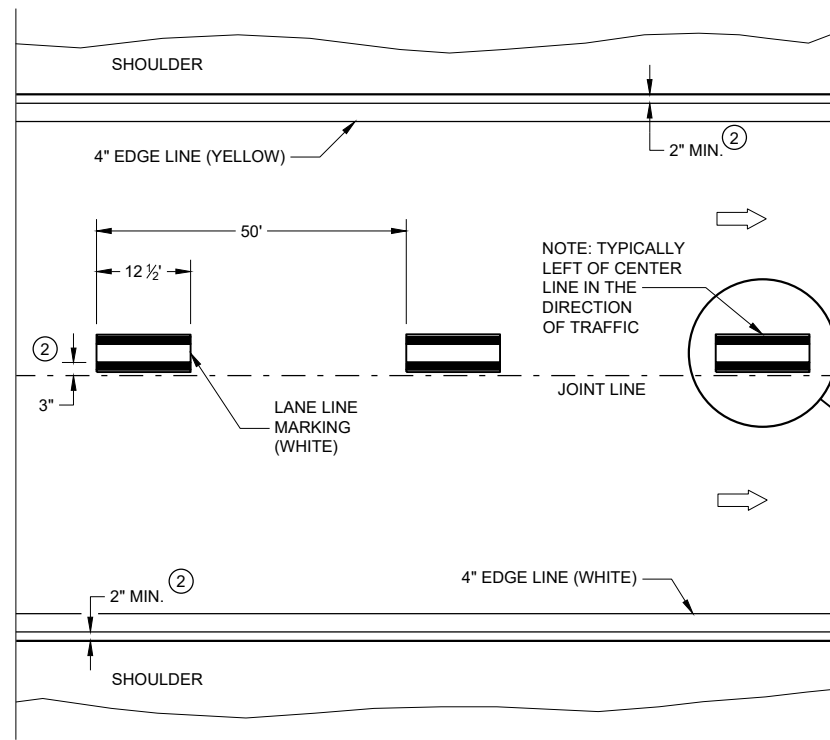
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

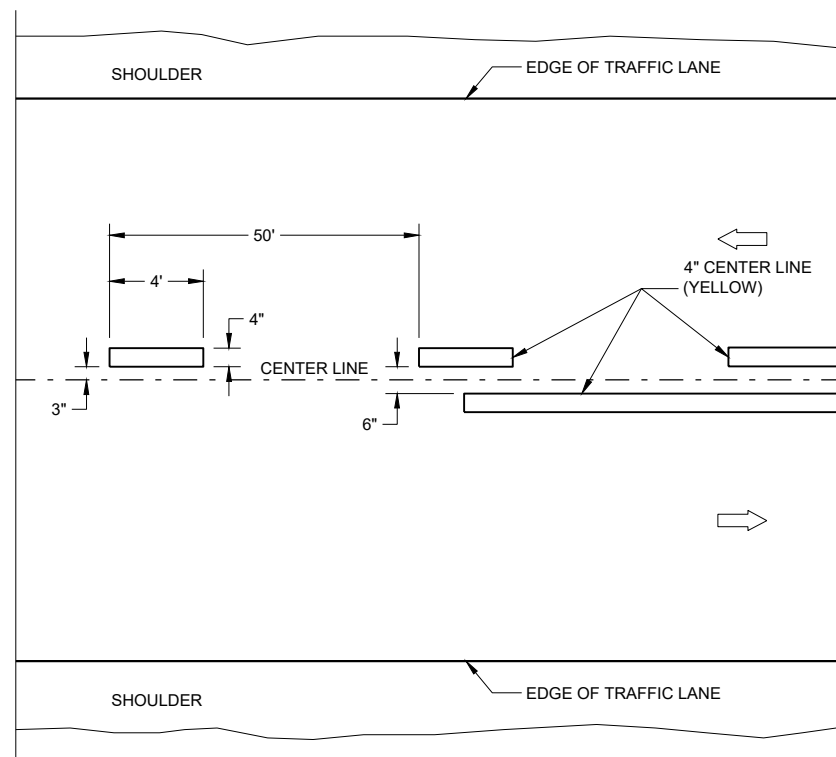


TWO WAY TRAFFIC

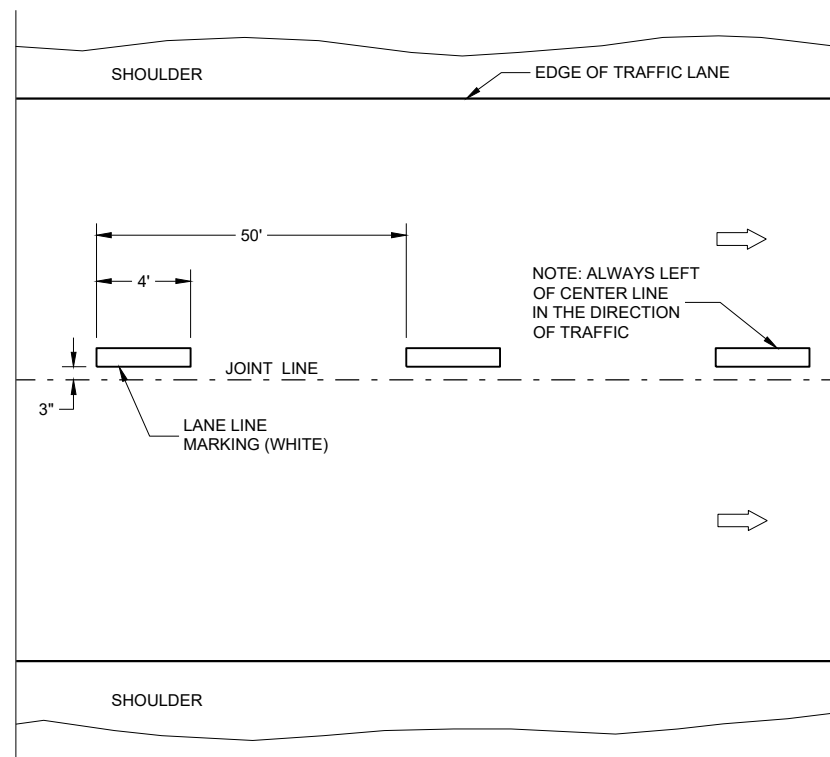


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

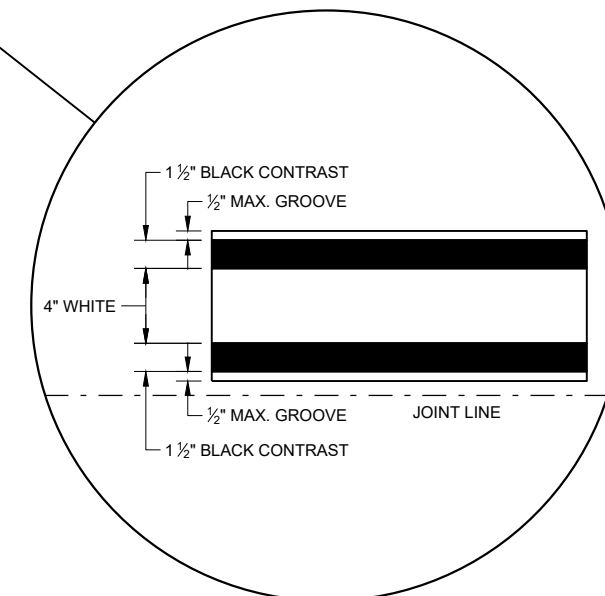
GENERAL NOTES

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

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

LEGEND

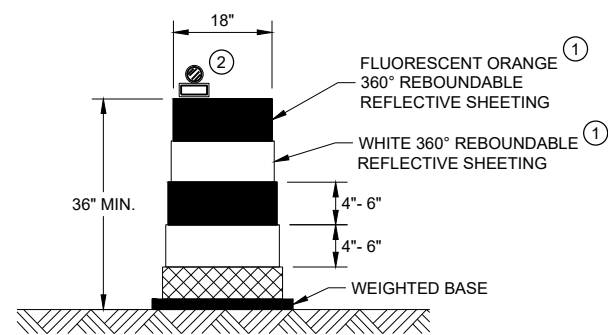
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC



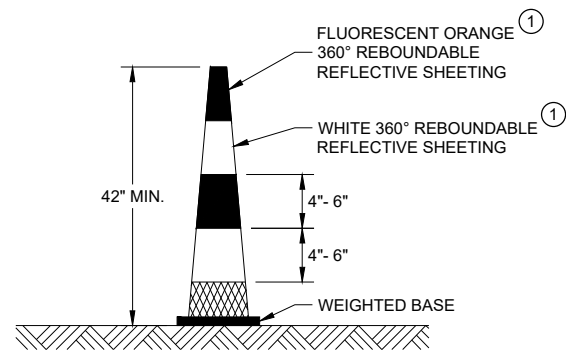
**LONGITUDINAL MARKING
(MAINLINE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

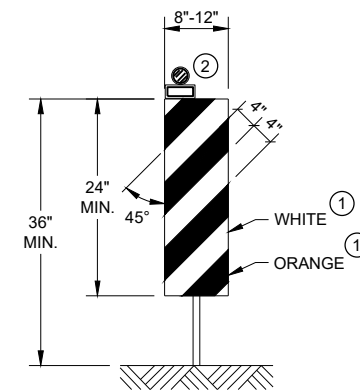


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

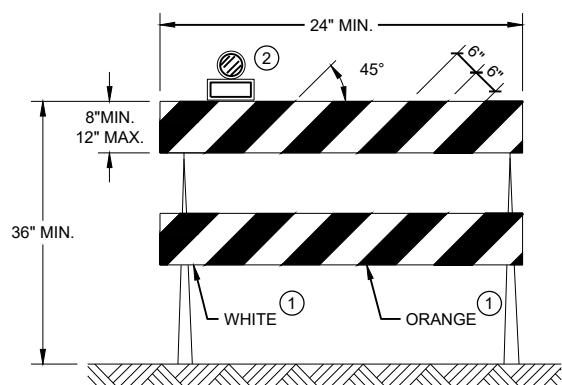


VERTICAL PANEL

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

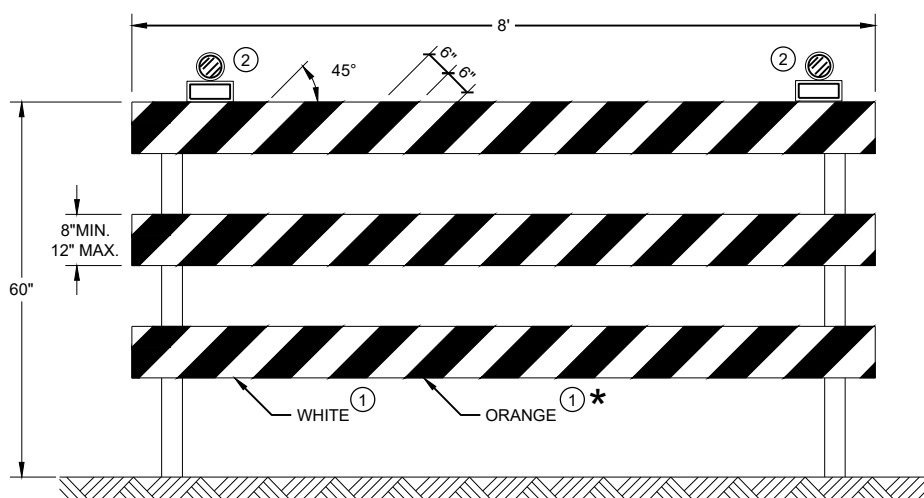
GENERAL NOTES

- 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.



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.

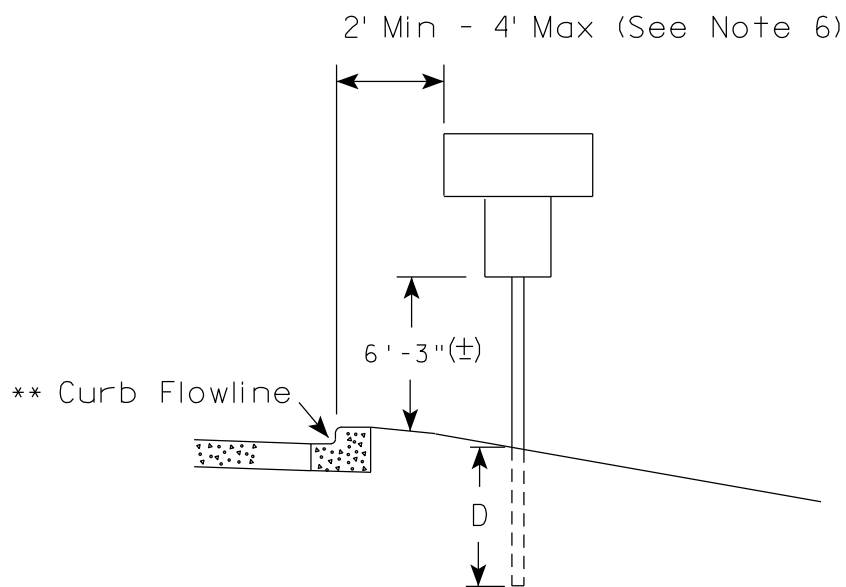
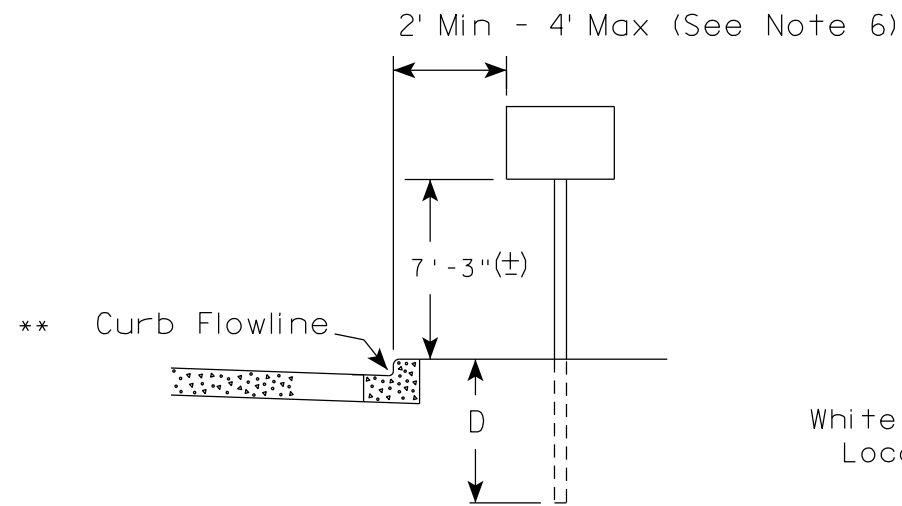
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES
 DRUMS, CONES, BARRICADES
 AND VERTICAL PANELS**

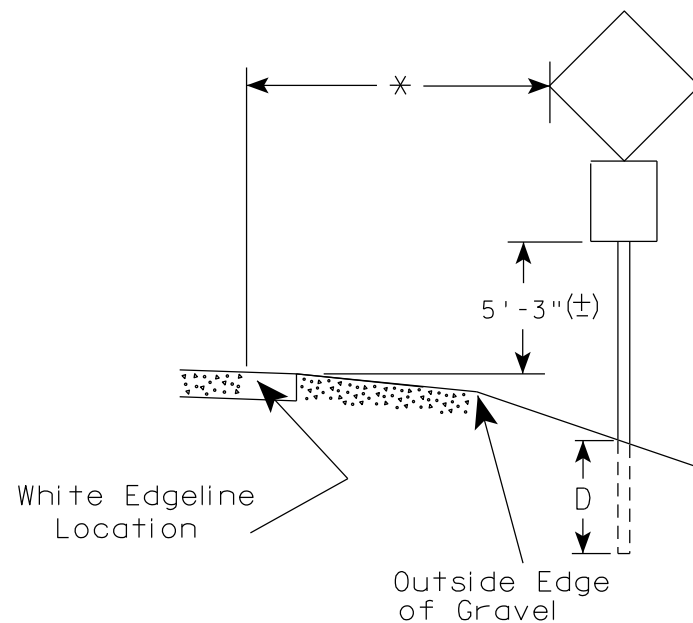
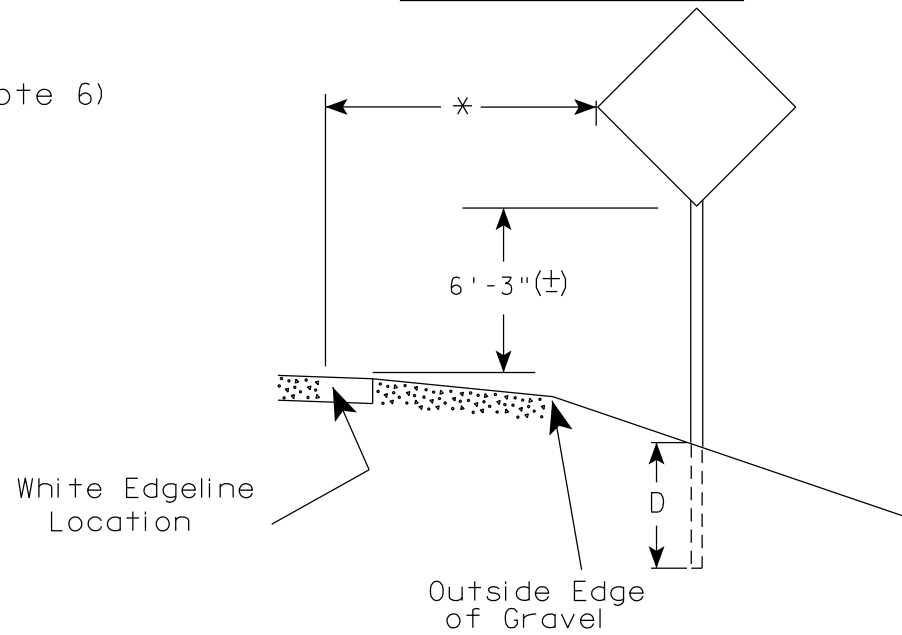
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2021 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER

URBAN AREA



RURAL AREA (See Note 2)



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" (±). 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. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

POST EMBEDMENT DEPTH

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

* * 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.

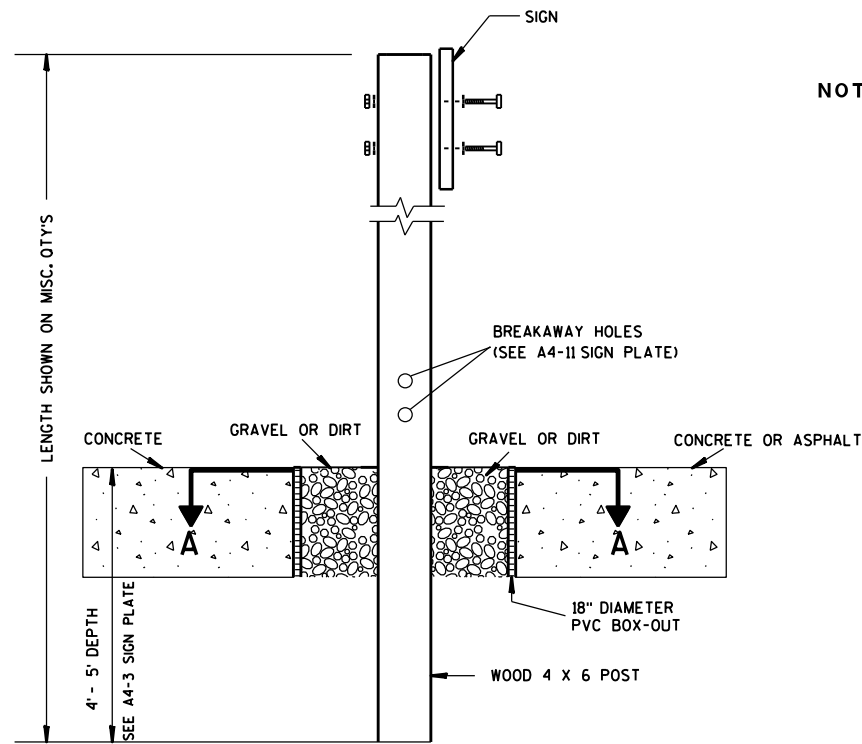
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

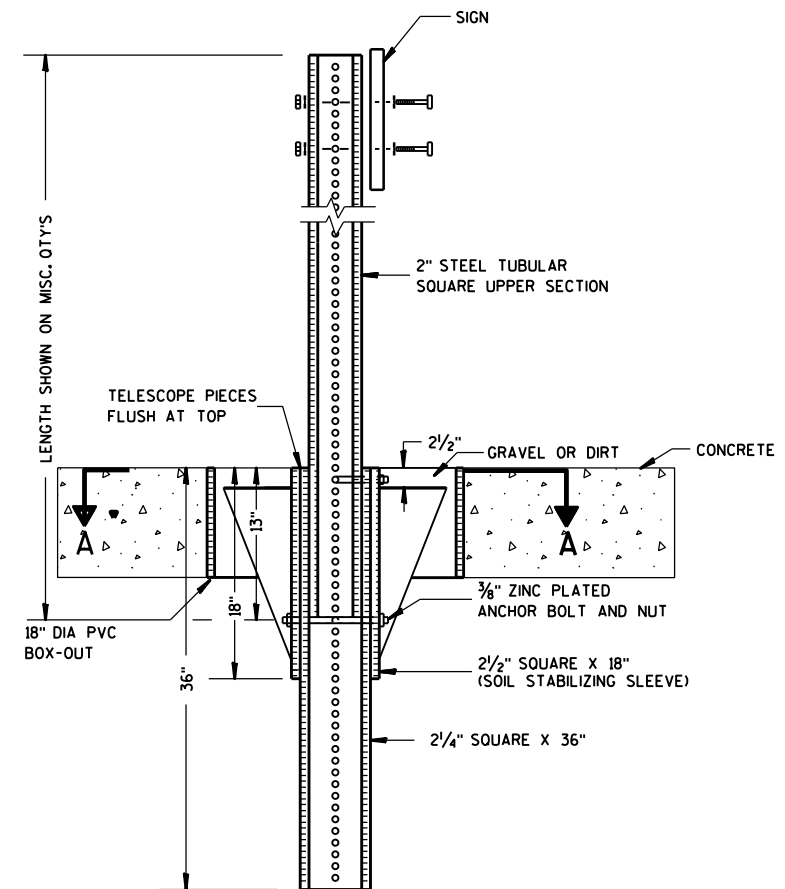
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

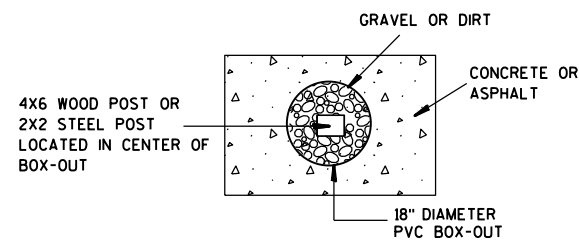
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

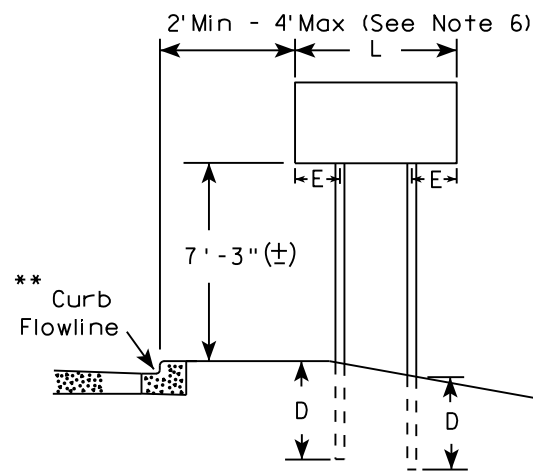
7

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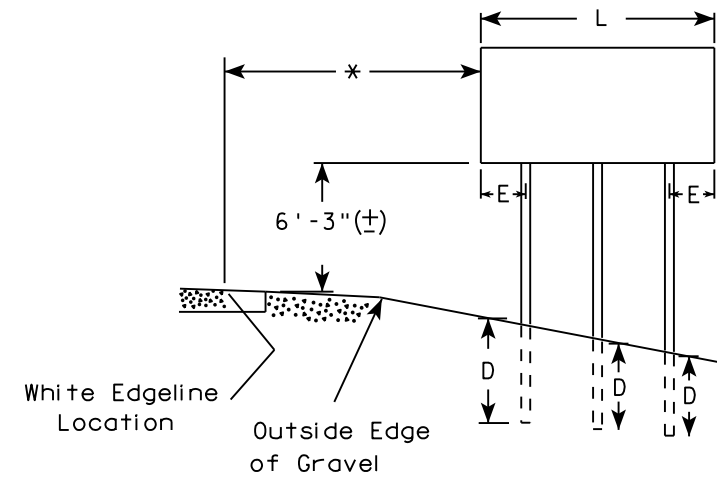
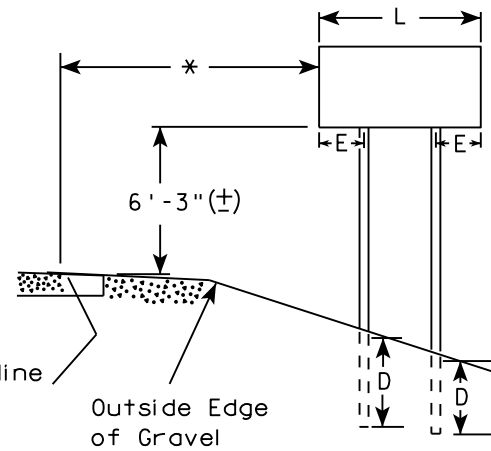
GENERAL NOTES

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" (±) or 6'-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" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-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" (±).

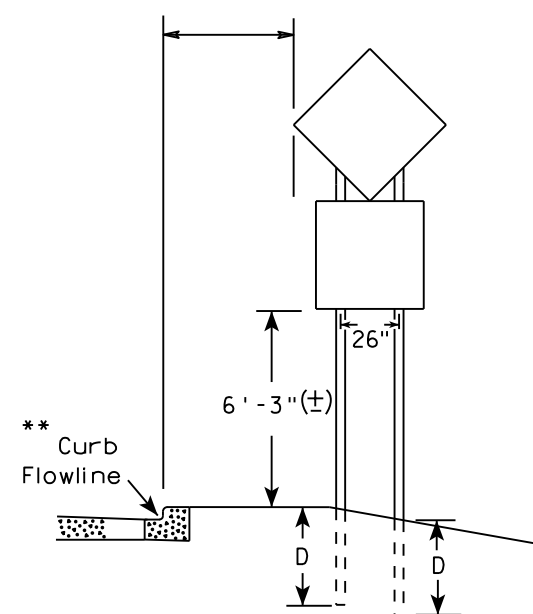
URBAN AREA



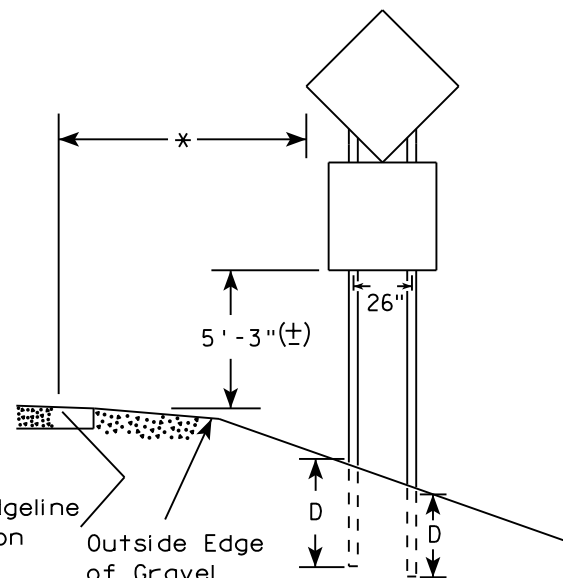
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

* 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.

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

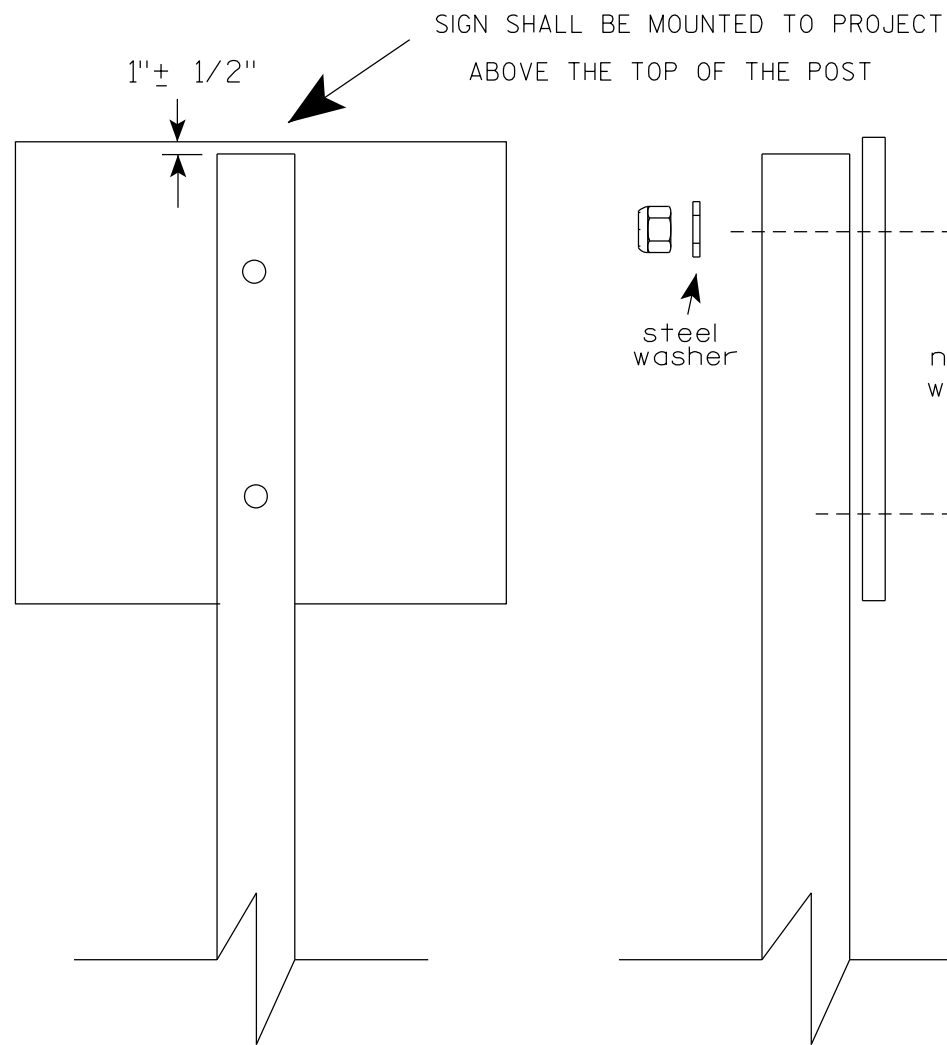
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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 8/21/17 PLATE NO. A4-4.15



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

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS
TO POSTS

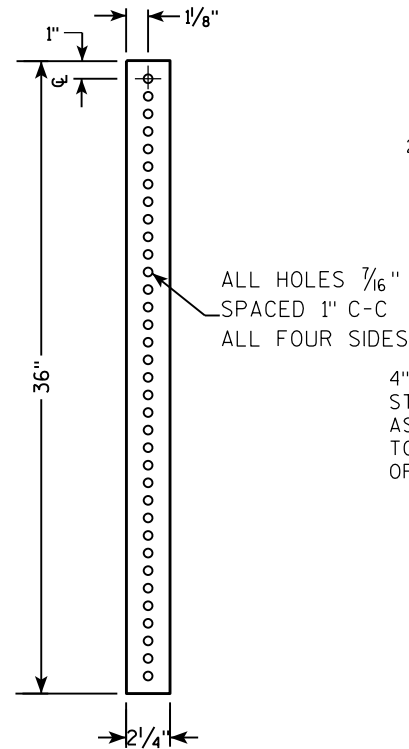
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

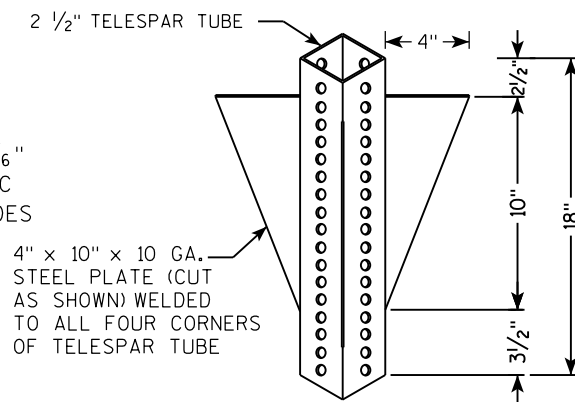
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

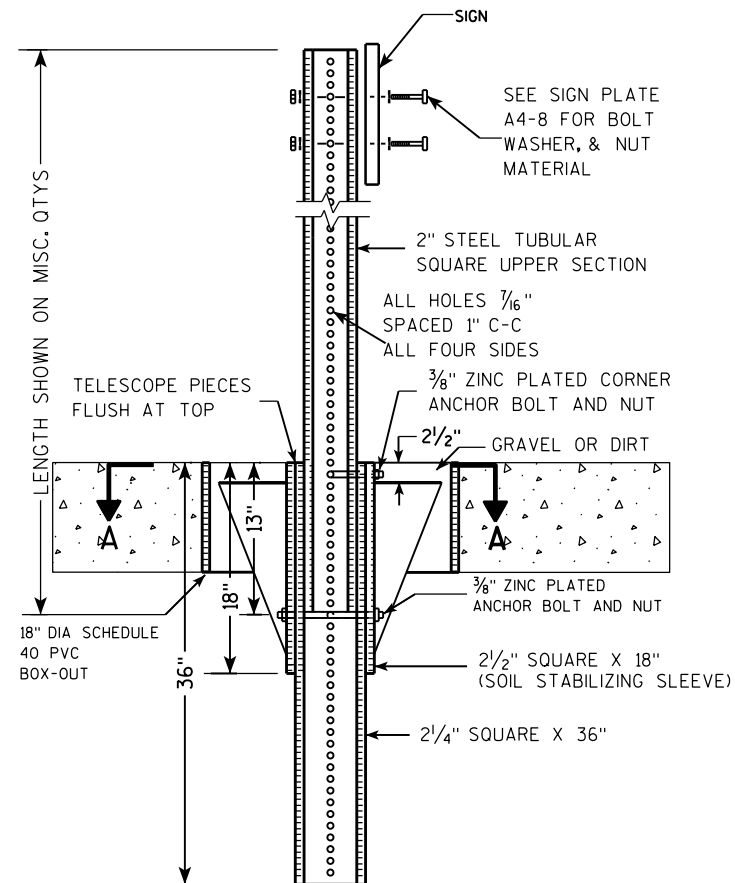
**2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



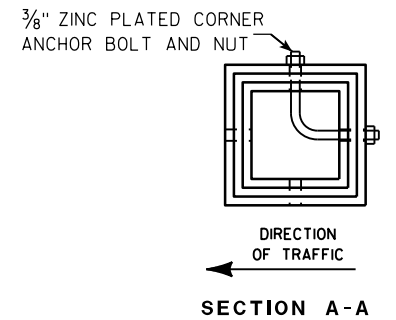
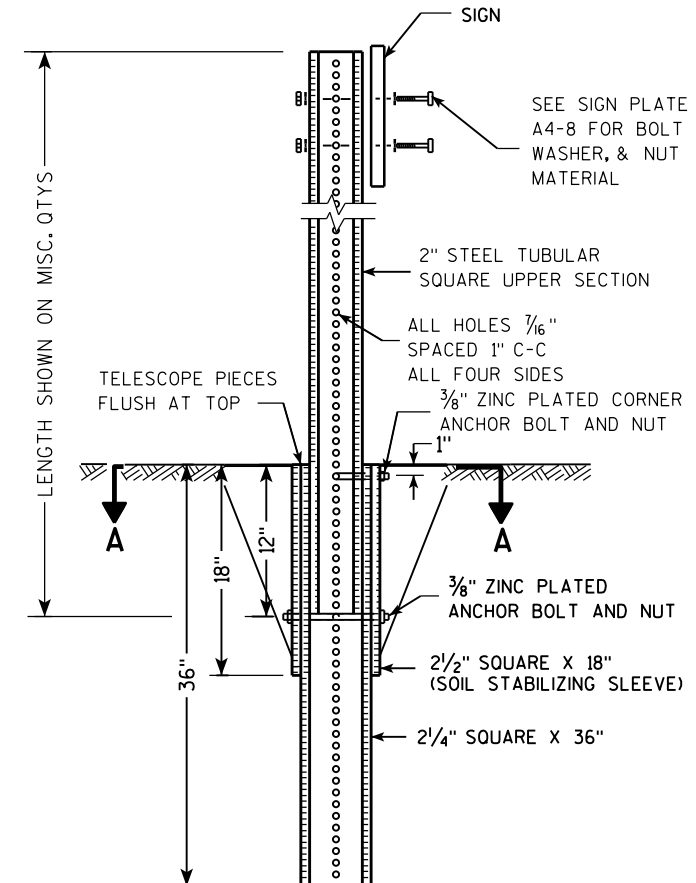
**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**



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



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



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

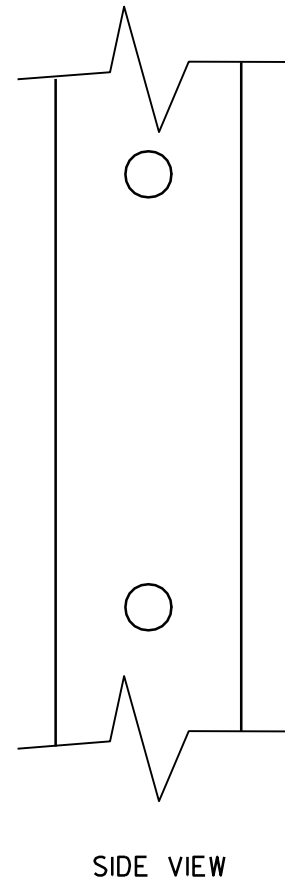
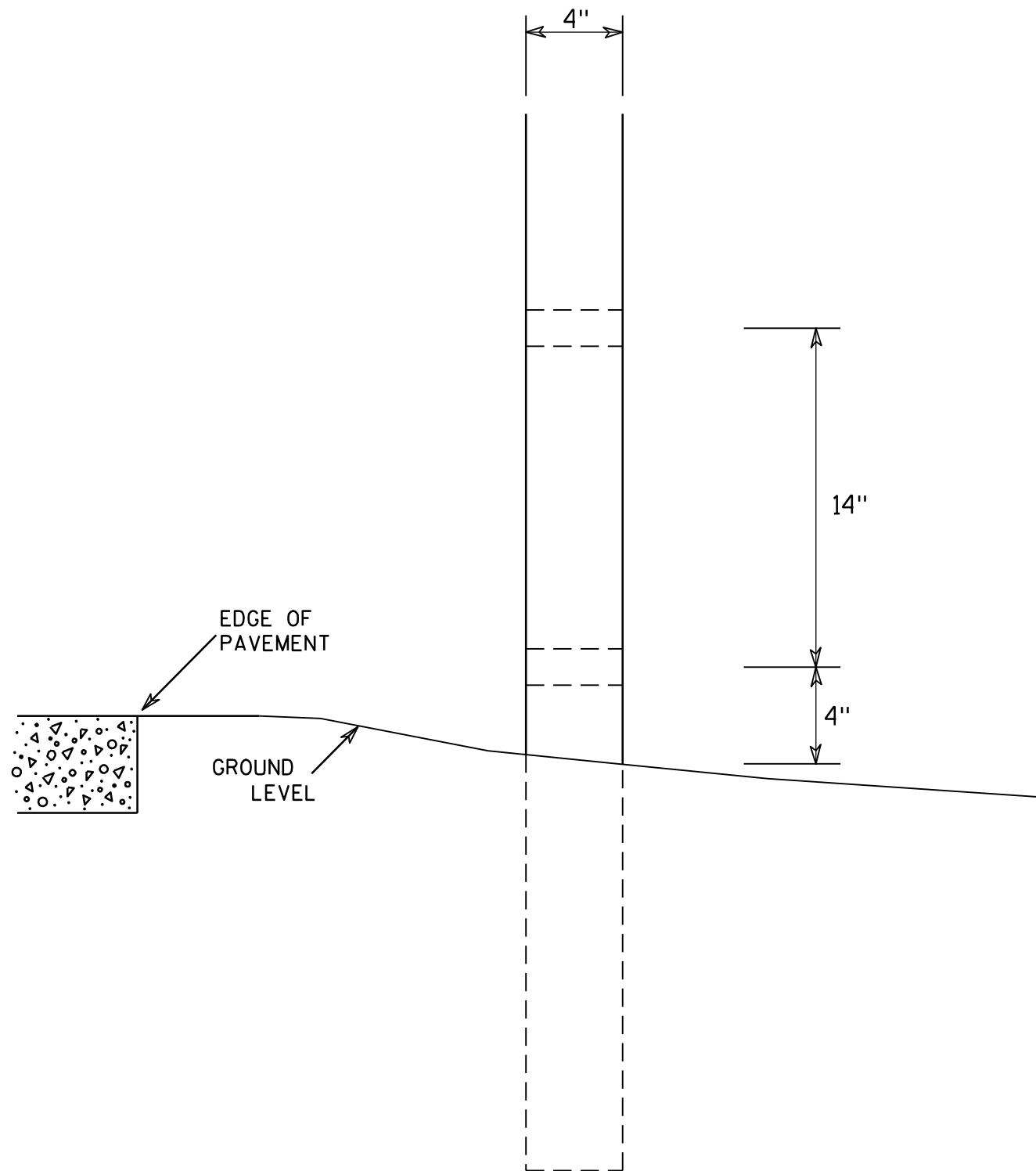
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

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

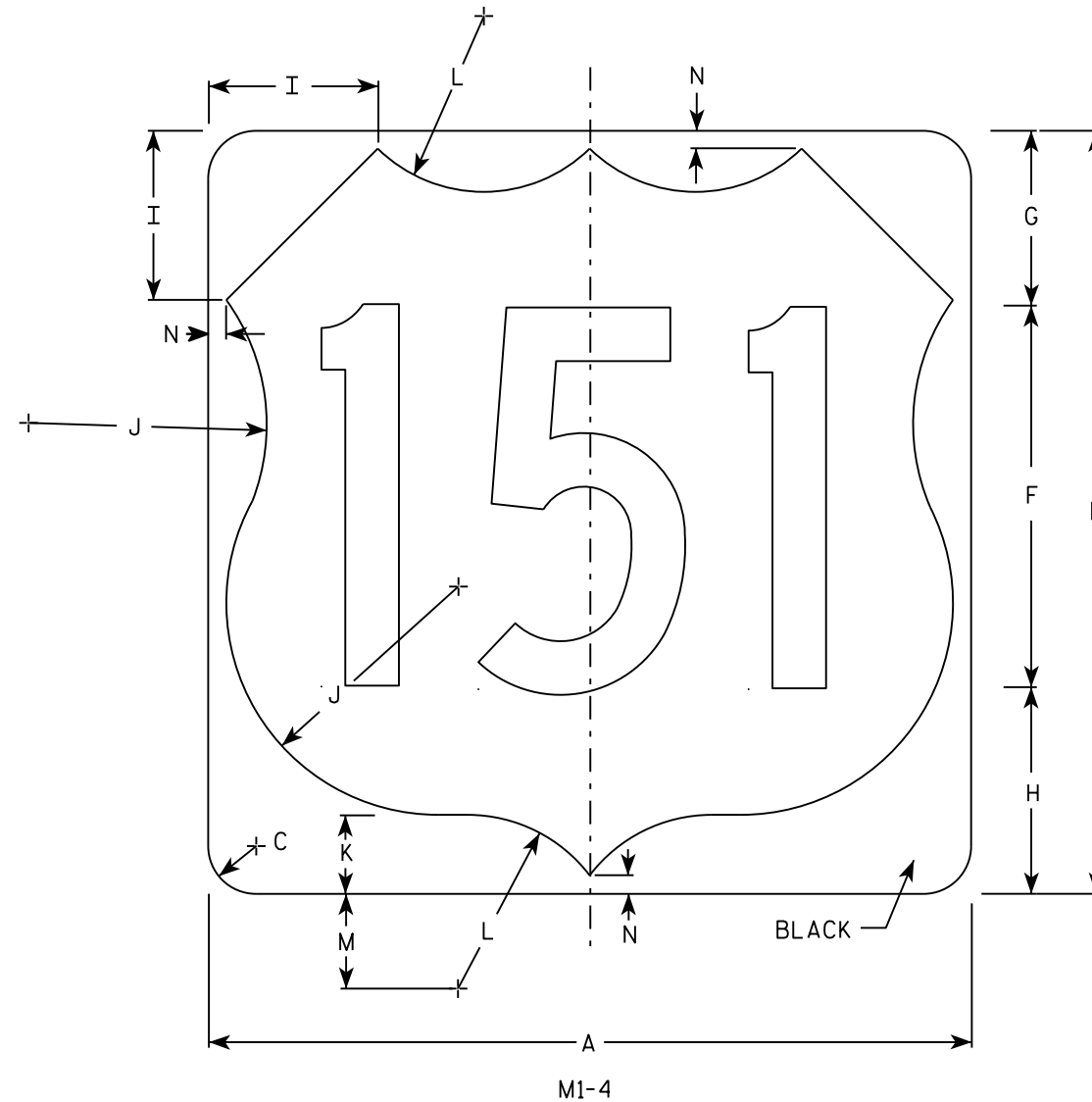
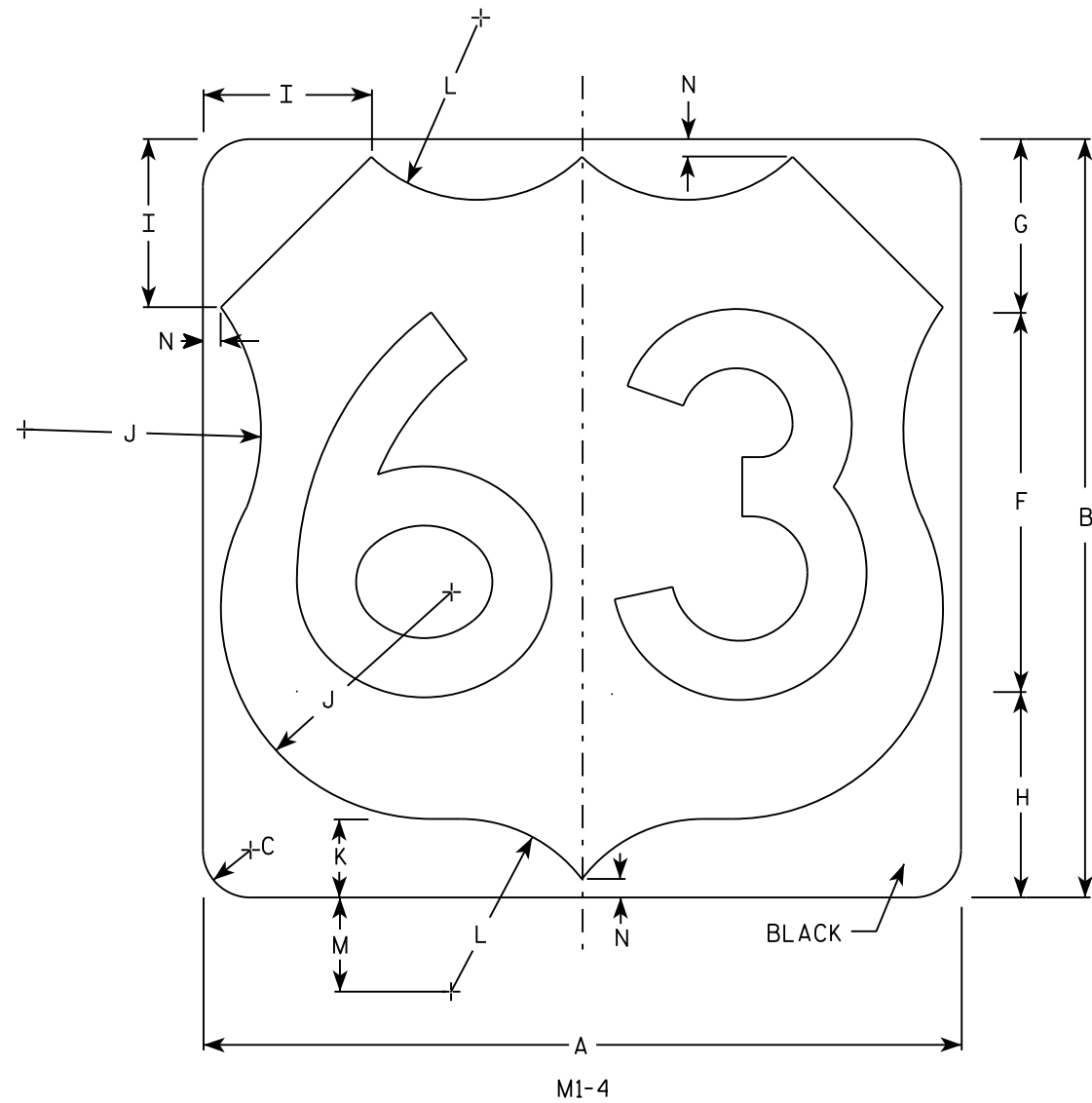
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4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

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
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.



7

7

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
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

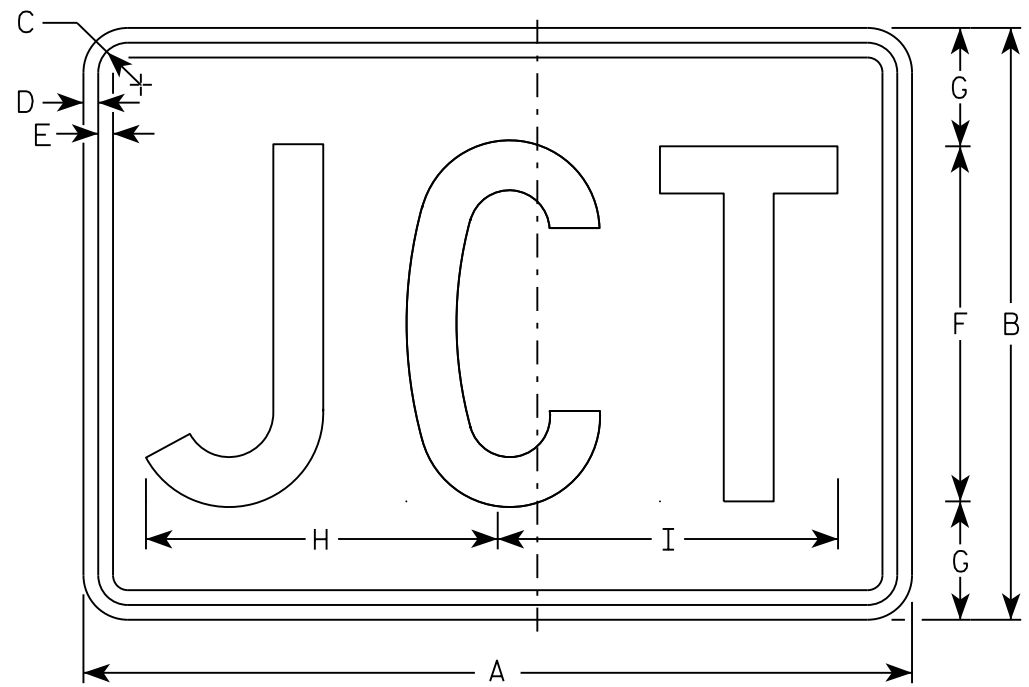
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

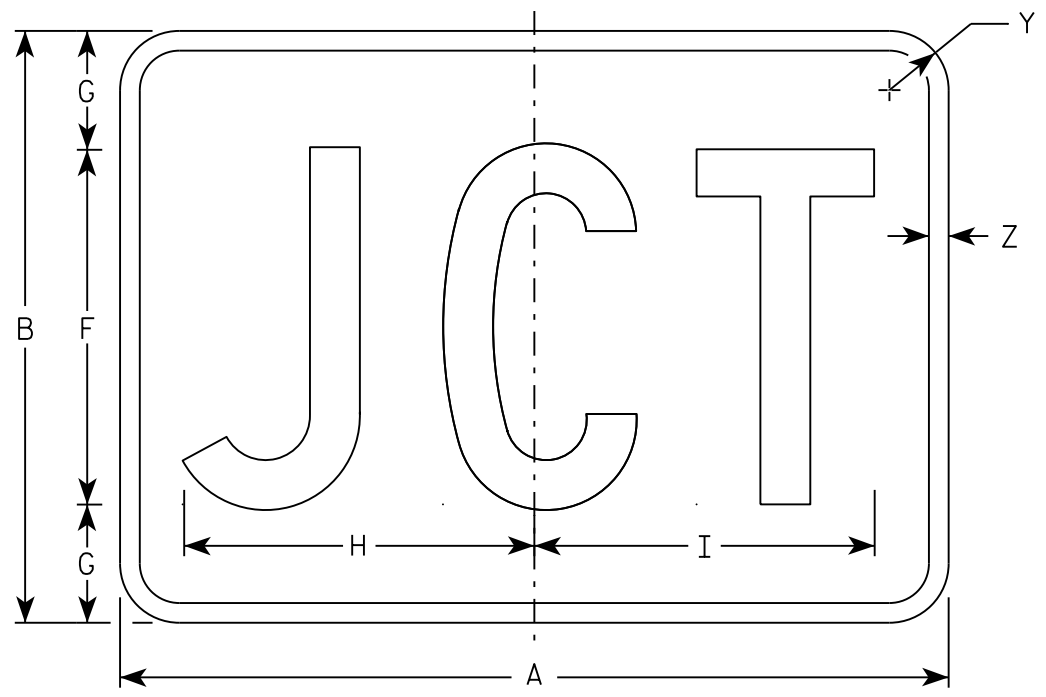
DATE 3/16/18 PLATE NO. M1-4.10

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

7



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
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. M2-1 Background - White
Message - Black
MB2-1 Background - Blue
Message - White
MK2-1 Background - Green
Message - White
MM2-1 Background - White
Message - Green
MN2-1 Background - Brown
Message - White
MP2-1 Background - White
Message - Blue
MR2-1 Background - Brown
Message - Yellow

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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN
M2-1

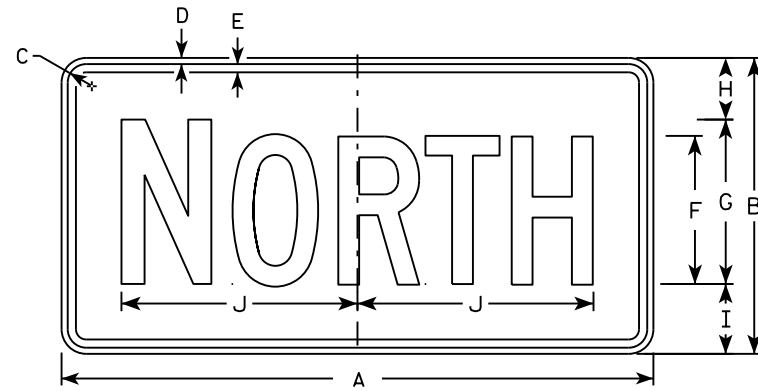
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

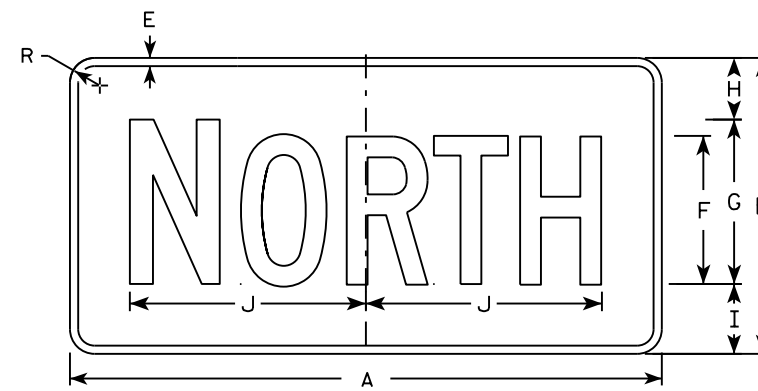
DATE 10/15/15 PLATE NO. M2-1.12

NOTES

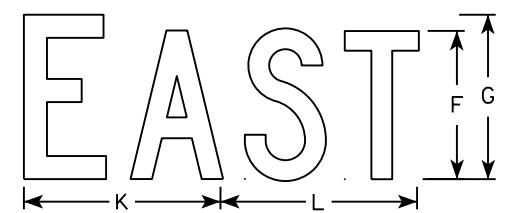
- All Signs Type II - Type H
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 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
- Note the first letter of each direction is larger than the remainder of the message.



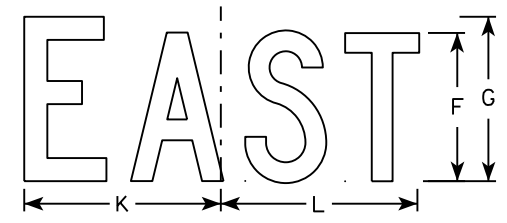
M3-1
MM3-1
MP3-1



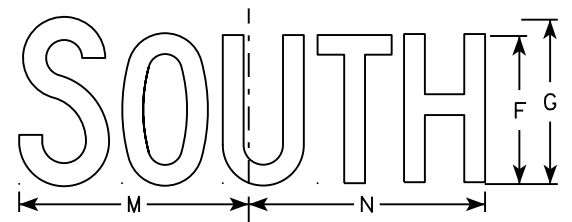
MB3-1
MK3-1
MN3-1



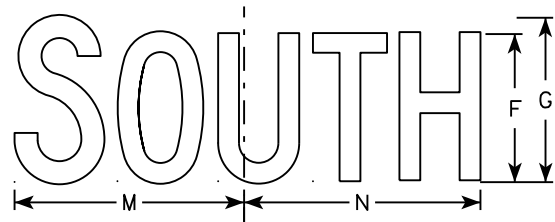
M3-2
MM3-2
MP3-2



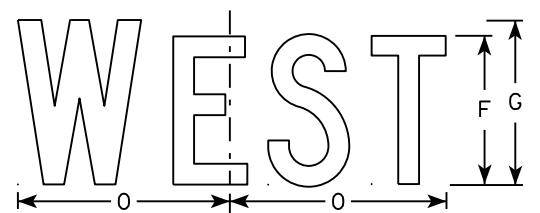
MB3-2
MK3-2
MN3-2



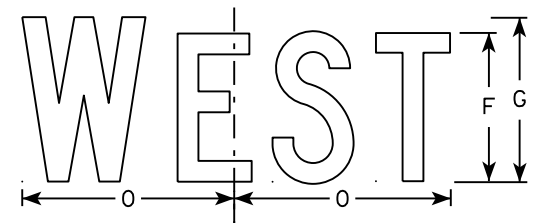
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

7

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	12	1 1/8	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			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

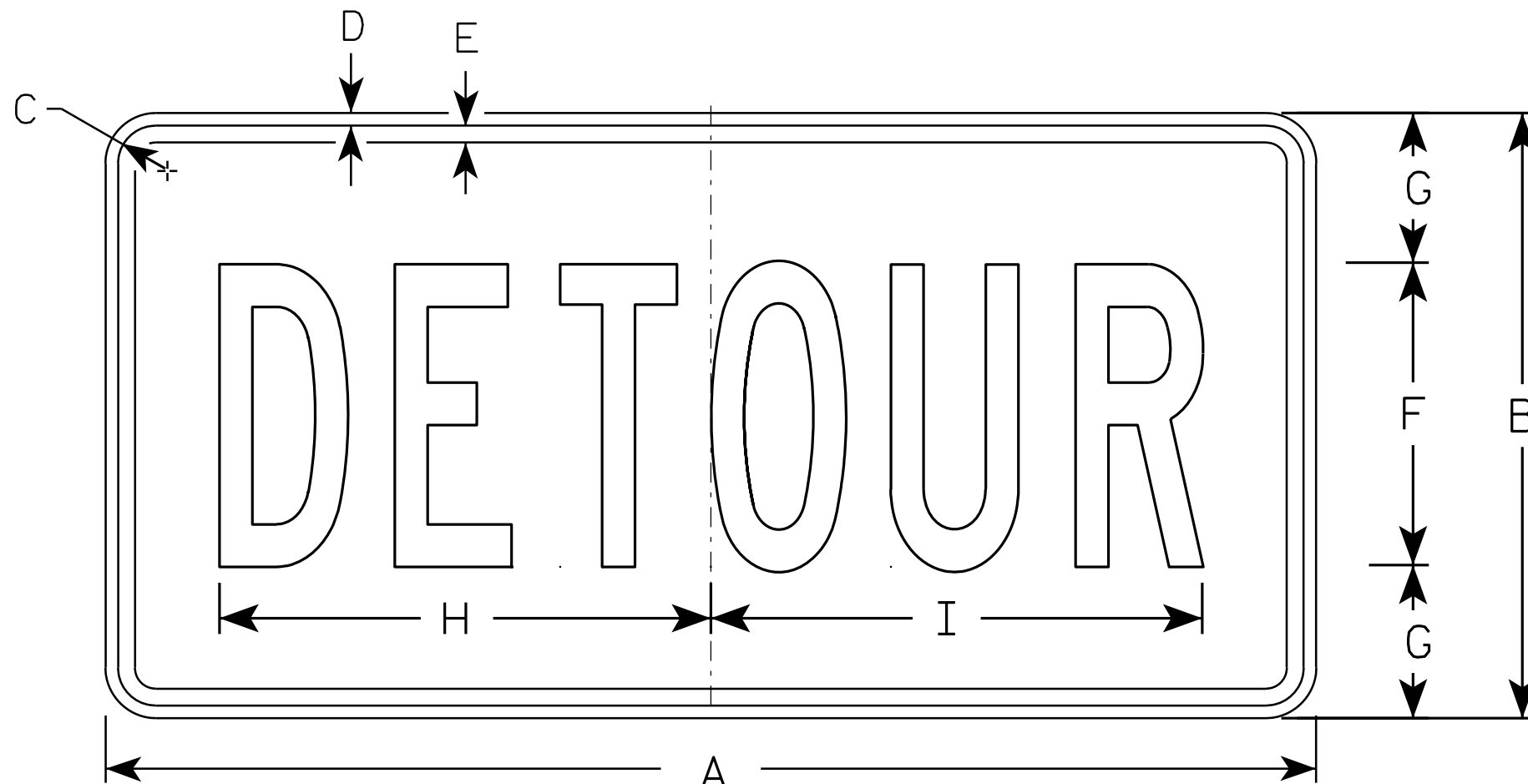
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
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.



M4-8

7

7

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	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

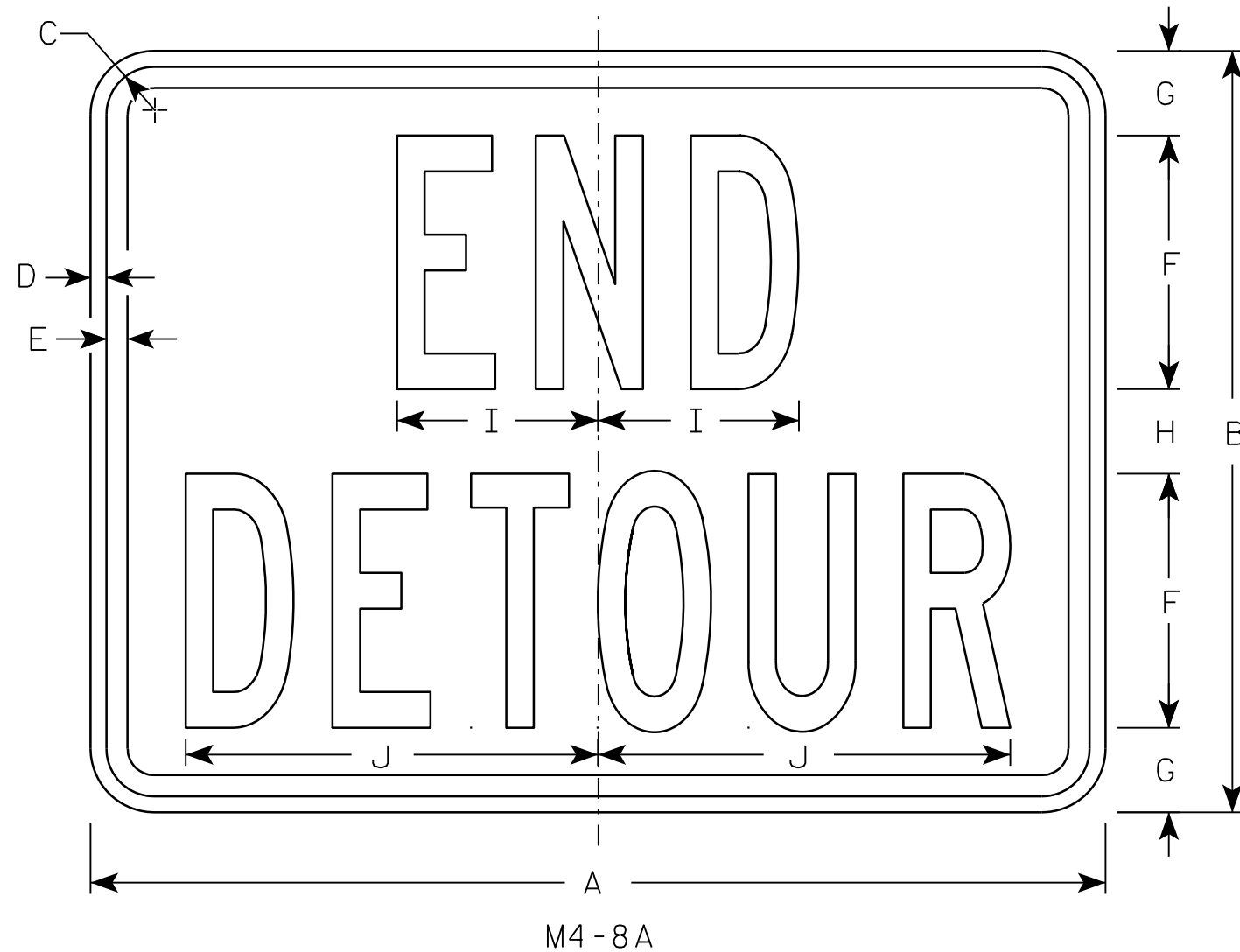
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
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.



7

7

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	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

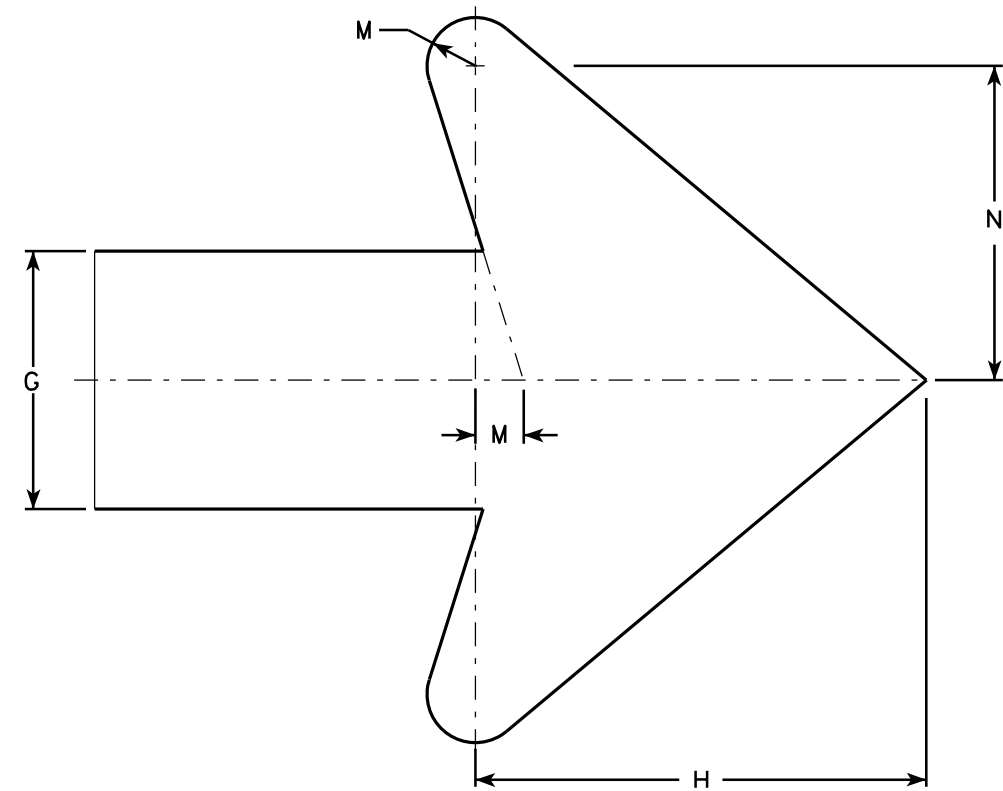
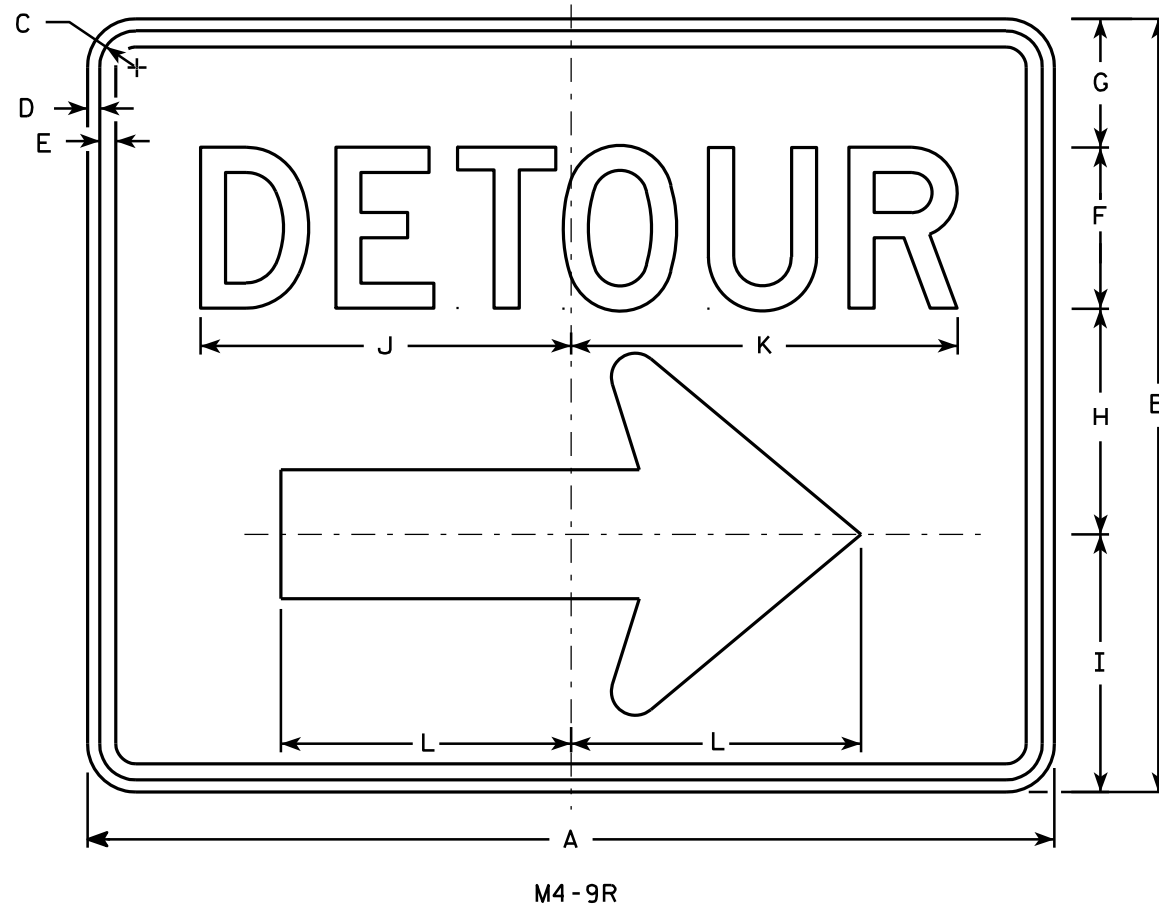
APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - D
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. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

7

7

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	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

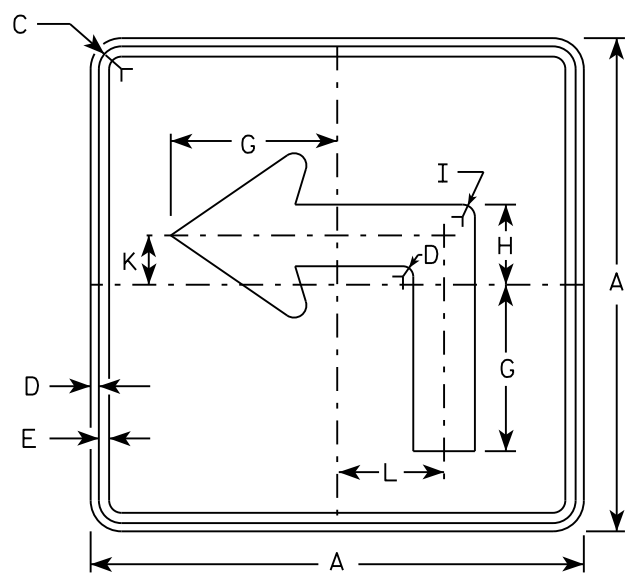
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

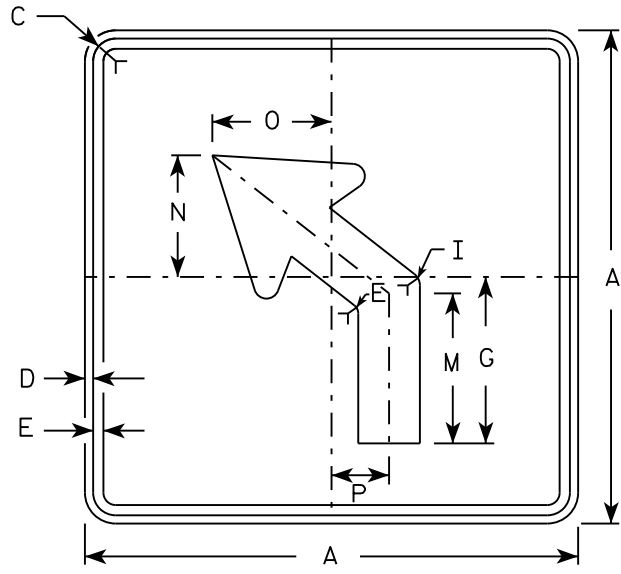
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

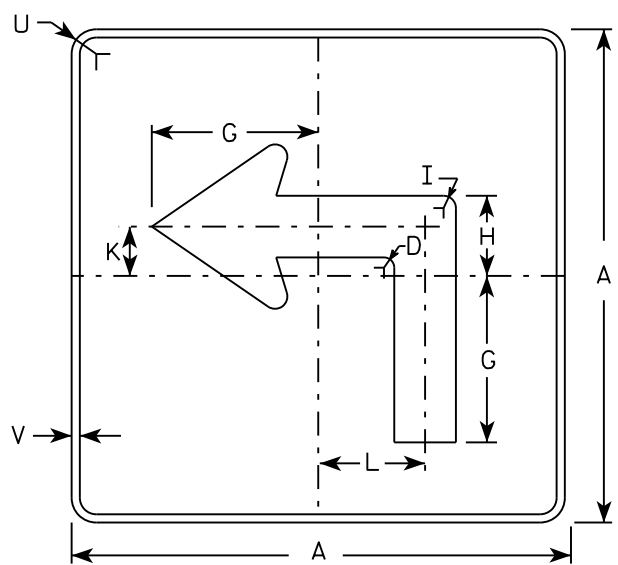
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



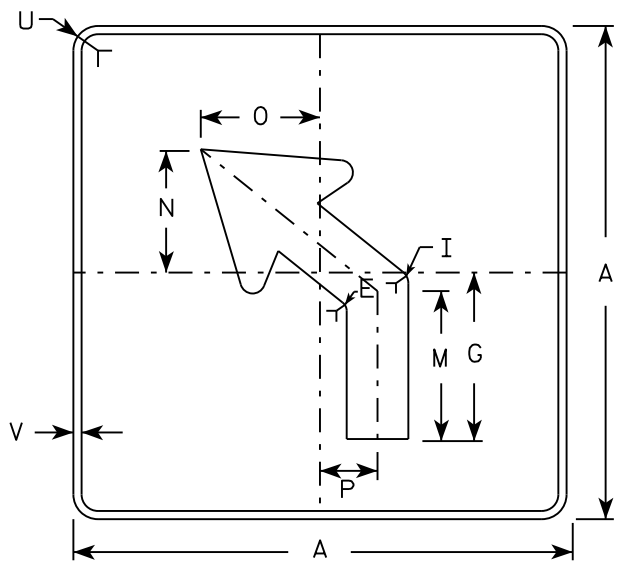
M5-1L
MM5-1L
M05-1L
MP5-1L



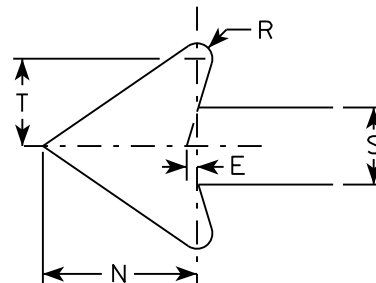
M5-2L
MM5-2L
M05-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
 - Background - See note 4
 - Message - See note 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.
- | | |
|-----------------|---|
| M5-1 and M5-2 | Background - White |
| | Message - Black |
| MB5-1 and MB5-2 | Background - Blue |
| | Message - White |
| MK5-1 and MK5-2 | Background - Green |
| | Message - White |
| MM5-1 and MM5-2 | Background - White |
| | Message - Green |
| MN5-1 and MN5-2 | Background - Brown |
| | Message - White |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
| | Message - Black |
| MP5-1 and MP5-2 | Background - White - Type H Reflective |
| | Message - Blue |
| MR5-1 and MR5-2 | Background - Brown |
| | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

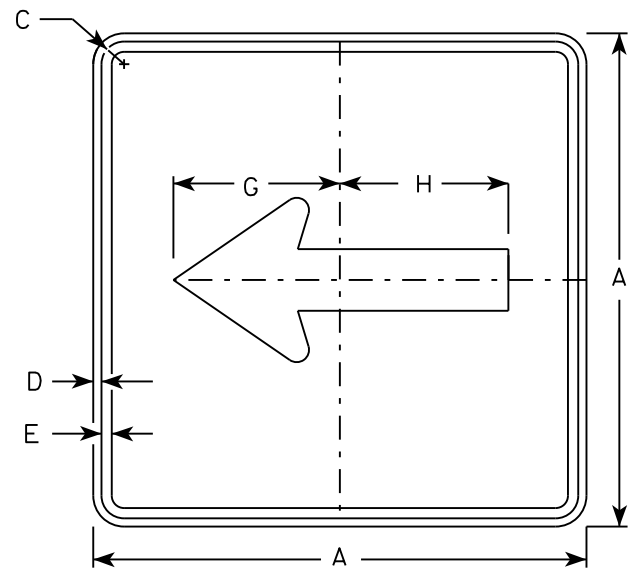
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

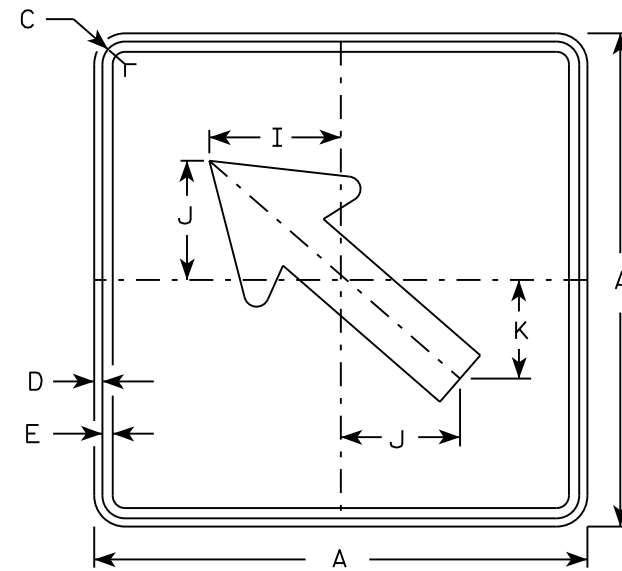
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

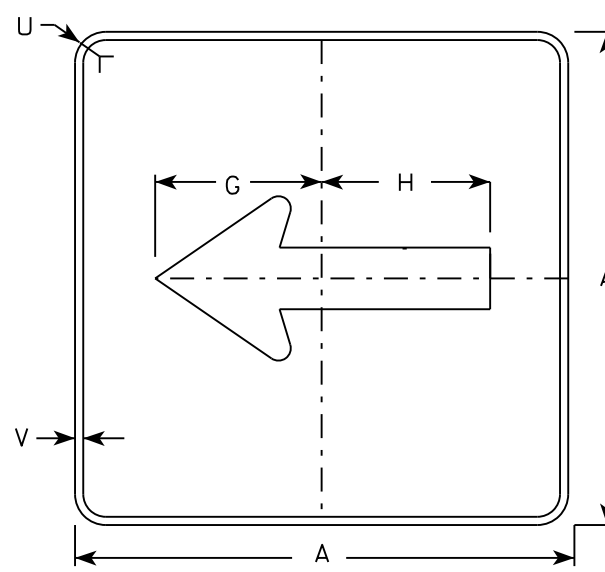
DATE 10/15/15 PLATE NO. M5-1.13



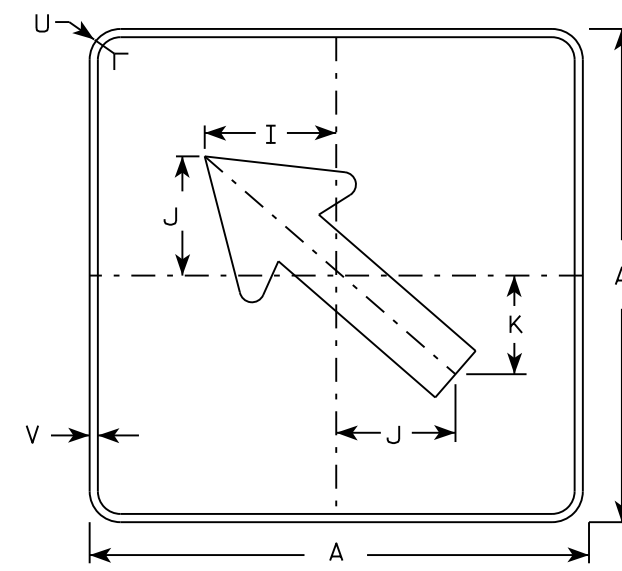
M6-1
MM6-1
M06-1
MP6-1



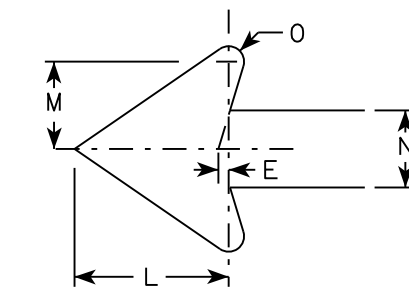
M6-2
MM6-2
M06-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 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.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

7

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	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

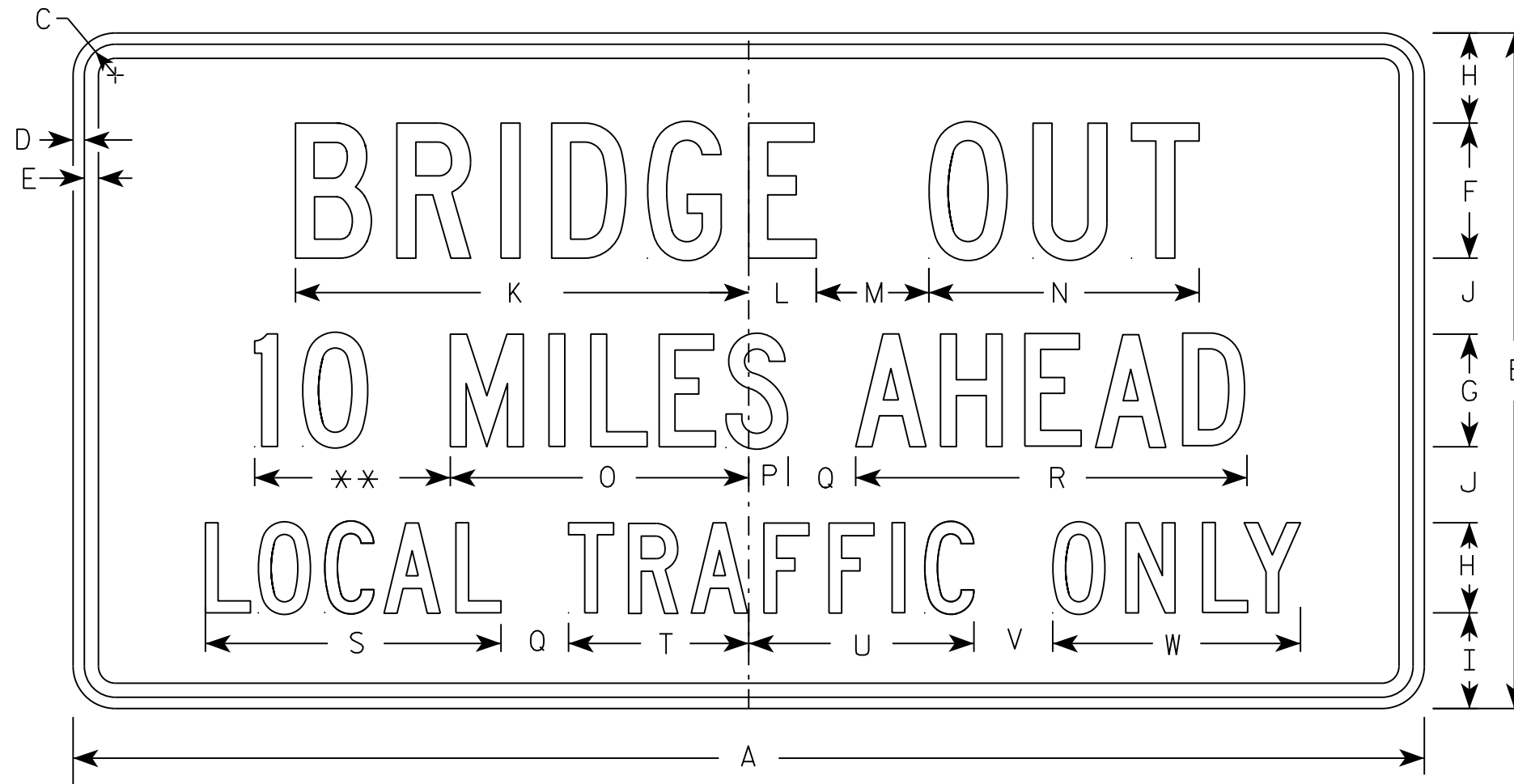
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

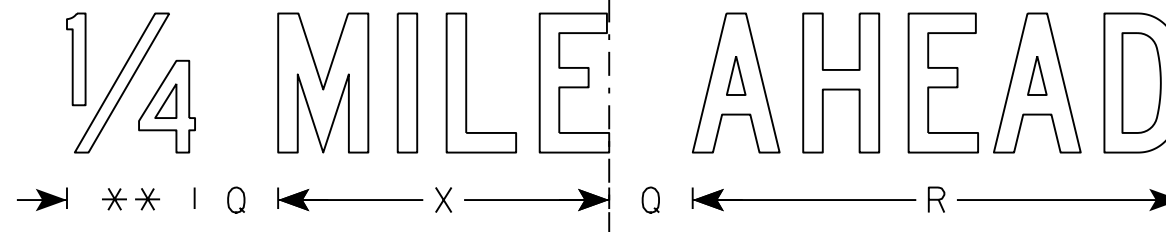
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
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 nearest quarter mile and optically adjust spacing to achieve proper balance.



** See Note 5

R11-3B



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8		4.5	
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8		12.5	
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8		12.5	
3																											
4																											
5																											

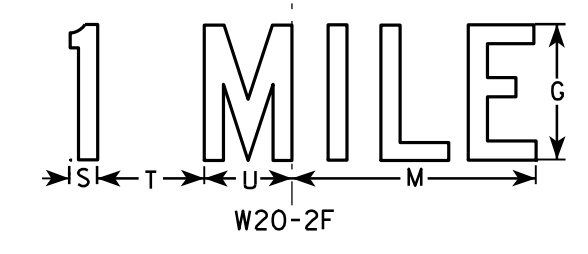
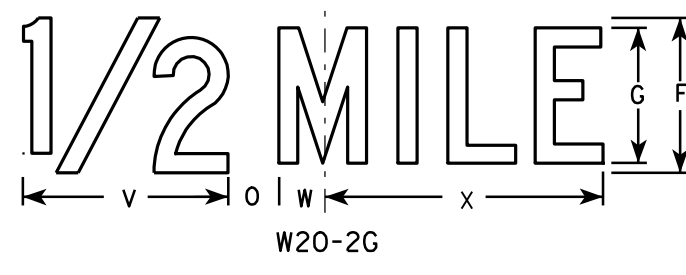
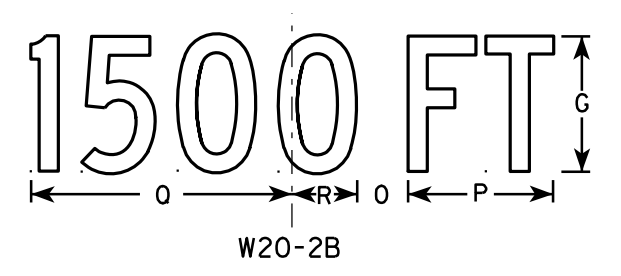
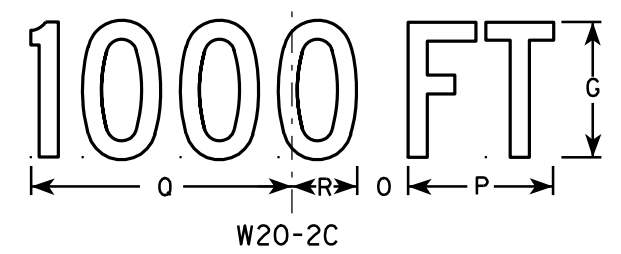
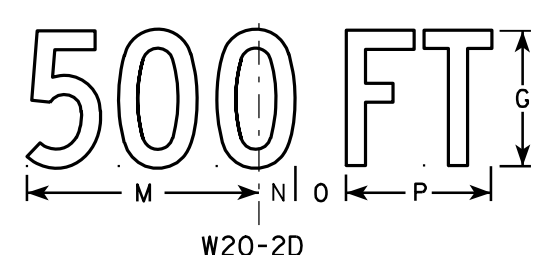
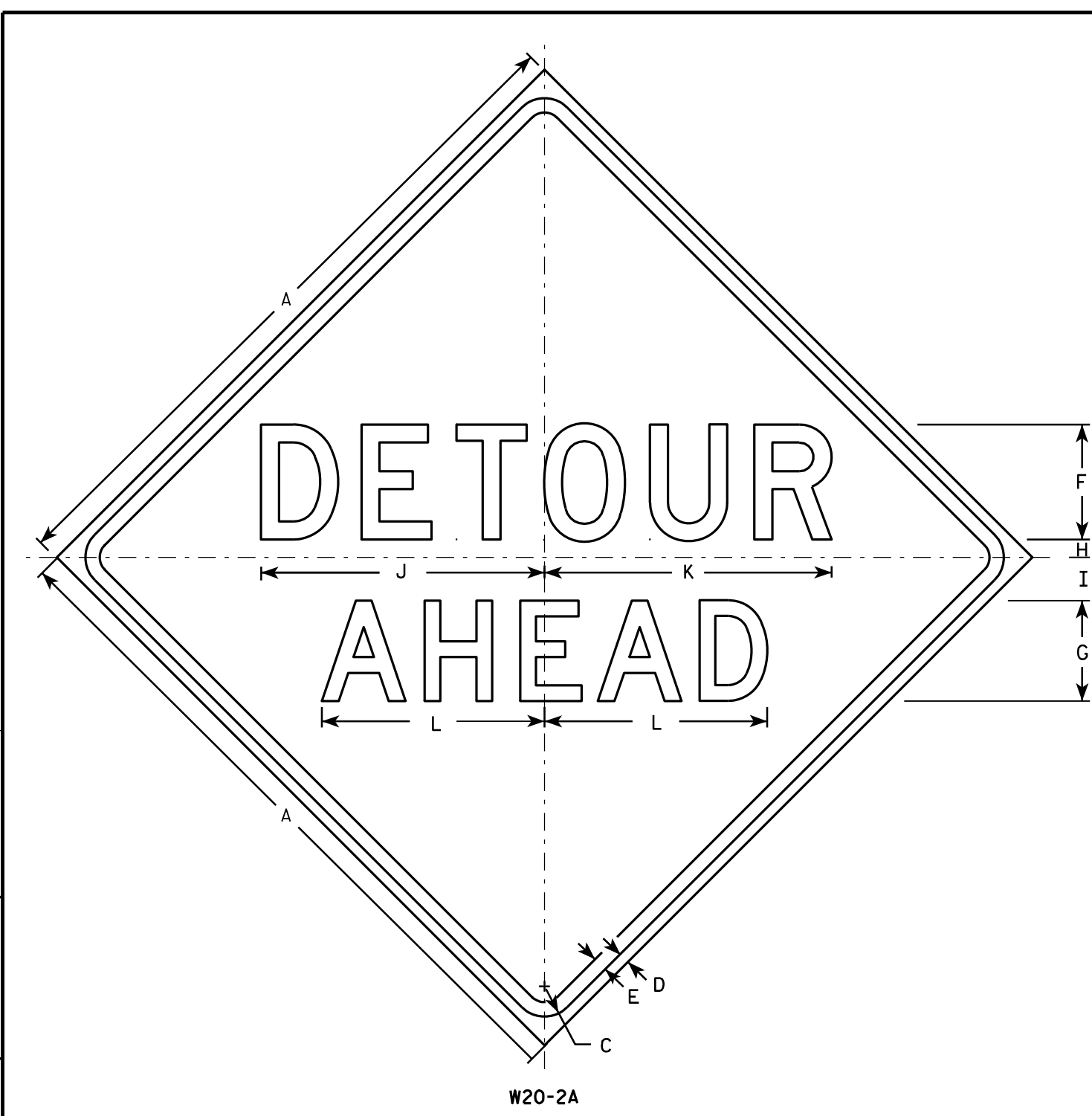
STANDARD SIGN
R11-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/21/17 PLATE NO. R11-3B.3

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
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. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

7

7

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		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

DIVISION 1 - USH-151

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
444+00	44400.00	0.00	1.61	17.00	0.00	0	0	0	0	0	0
444+50	44450.00	50.00	188.00	17.00	9.15	176	31	8	176	9	136
445+00	44500.00	50.00	189.23	17.00	0.38	349	31	9	525	20	443
445+24.145	44524.15	24.15	4.82	17.00	0.77	87	15	1	612	21	514

DIVISION 2 - USH-151

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
458+75	45875.00	0.00	1.64	17.00	2.22	0	0	0	0	0	0
459+00	45900.00	25.00	157.05	17.00	0.30	73	16	1	73	1	56
459+50	45950.00	50.00	158.11	17.00	2.03	292	31	2	365	3	315
460+00	46000.00	50.00	157.25	17.00	0.14	292	31	2	657	6	573
460+50	46050.00	50.00	1.50	17.00	0.52	147	31	1	804	7	688

DIVISION 3 - USH-151

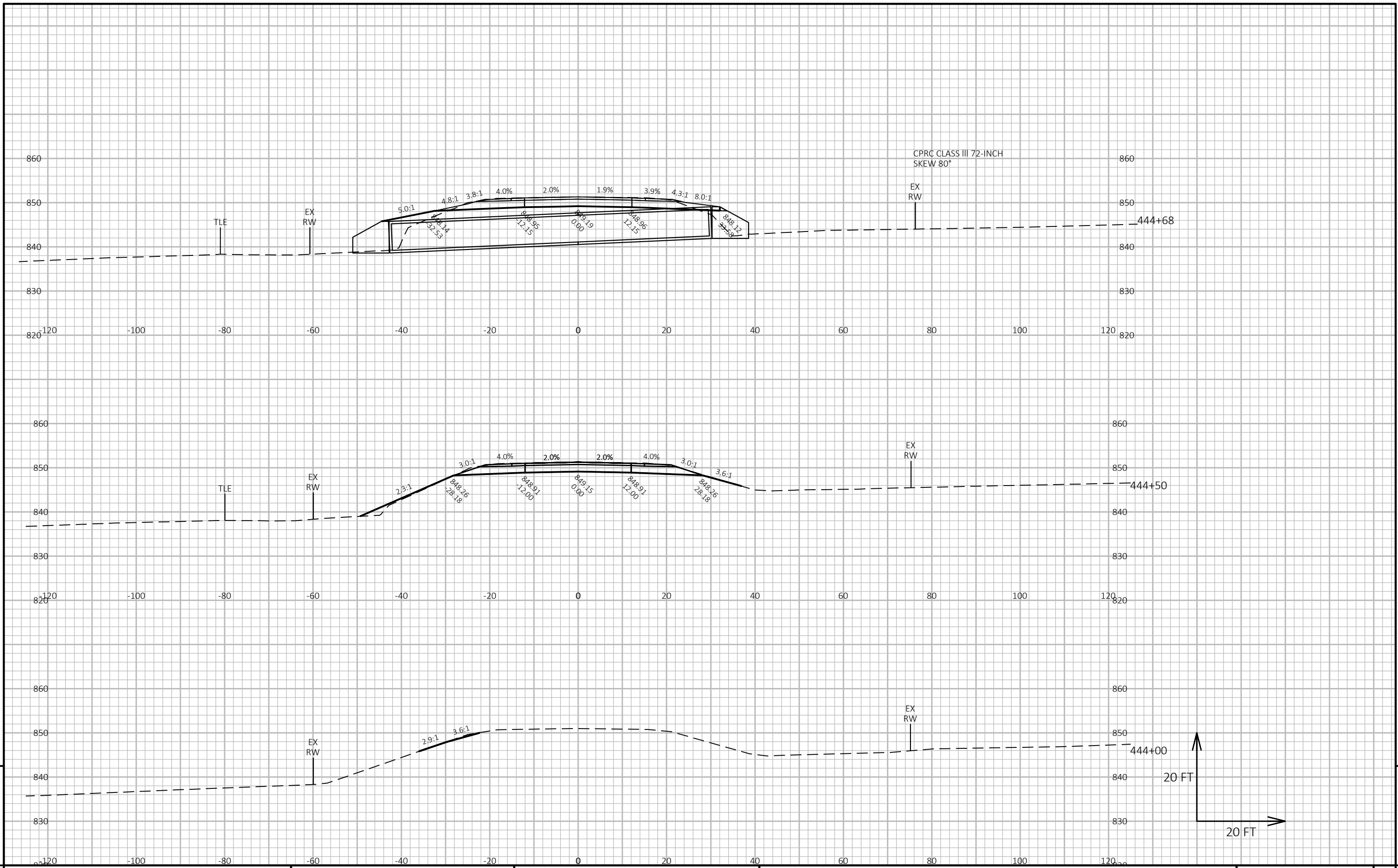
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
465+25	46525.00	0.00	9.83	17.00	0.24	0	0	0	0	0	0
465+50	46550.00	25.00	16.30	17.00	33.95	12	16	16	12	18	-22
466+00	46600.00	50.00	4.55	17.00	262.67	19	31	275	31	335	-351
466+50	46650.00	50.00	107.15	17.00	426.58	103	31	638	134	1,068	-1,012
467+00	46700.00	50.00	104.86	17.00	707.07	196	31	1,050	330	2,276	-2,055
467+50	46750.00	50.00	111.90	17.00	672.36	201	31	1,277	531	3,744	-3,353
468+00	46800.00	50.00	5.70	17.00	389.22	109	31	983	640	4,875	-4,406
468+50	46850.00	50.00	6.23	17.00	358.75	11	31	693	651	5,672	-5,223
469+00	46900.00	50.00	7.11	17.00	290.83	12	31	601	663	6,363	-5,933
469+50	46950.00	50.00	3.02	17.00	145.17	9	31	404	672	6,828	-6,420
470+00	47000.00	50.00	0.00	17.00	0.00	3	31	134	675	6,982	-6,602

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. MO = Cut – Salvaged Pavement – (Unexp Fill) * Fill Factor

DIVISION 4 - USH-151

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
478+75	47875.00	0.00	0.51	17.00	1.50	0	0	0	0	0	0
479+00	47900.00	25.00	0.76	17.00	11.08	1	16	6	1	7	-22
479+50	47950.00	50.00	105.18	17.00	31.20	98	31	39	99	52	0
480+00	48000.00	50.00	106.39	17.00	48.81	196	31	74	295	137	80
480+50	48050.00	50.00	3.16	17.00	13.45	101	31	58	396	204	83
480+75	48075.00	25.00	0.24	17.00	9.81	2	16	11	398	216	57

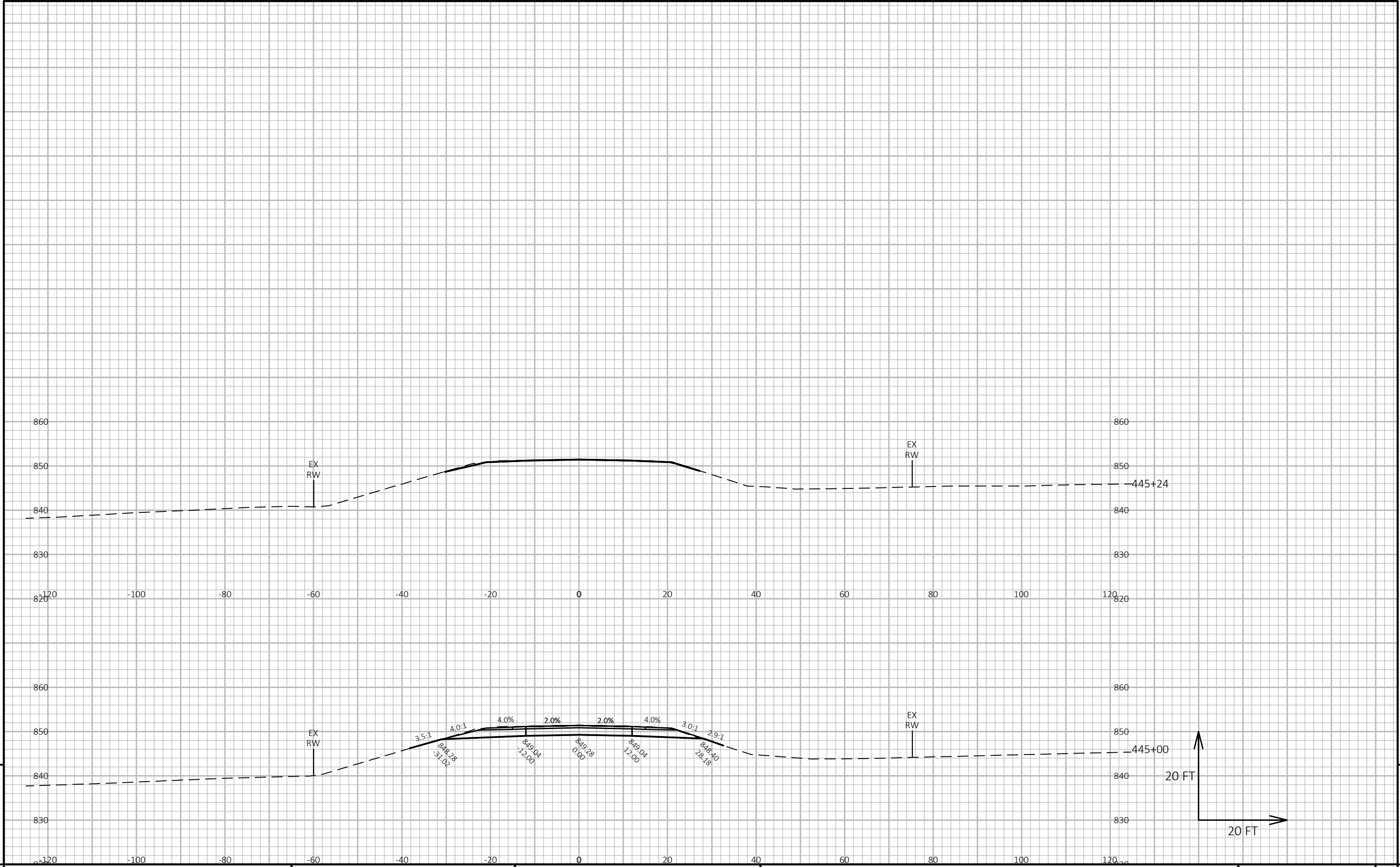
Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. MO = Cut - Salvaged Pavement - (Unexp Fill) * Fill Factor



PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTIONS	SHEET
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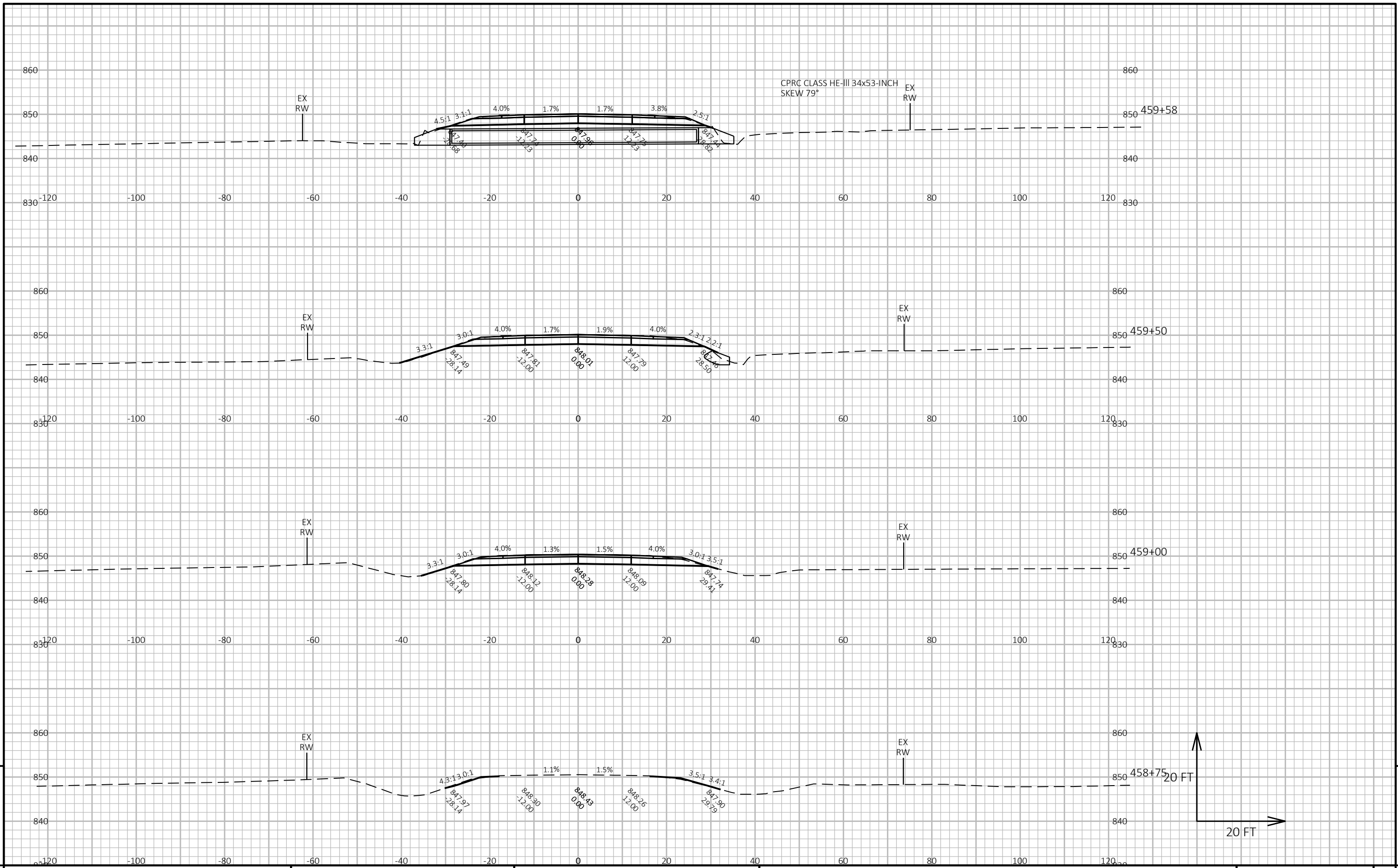


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PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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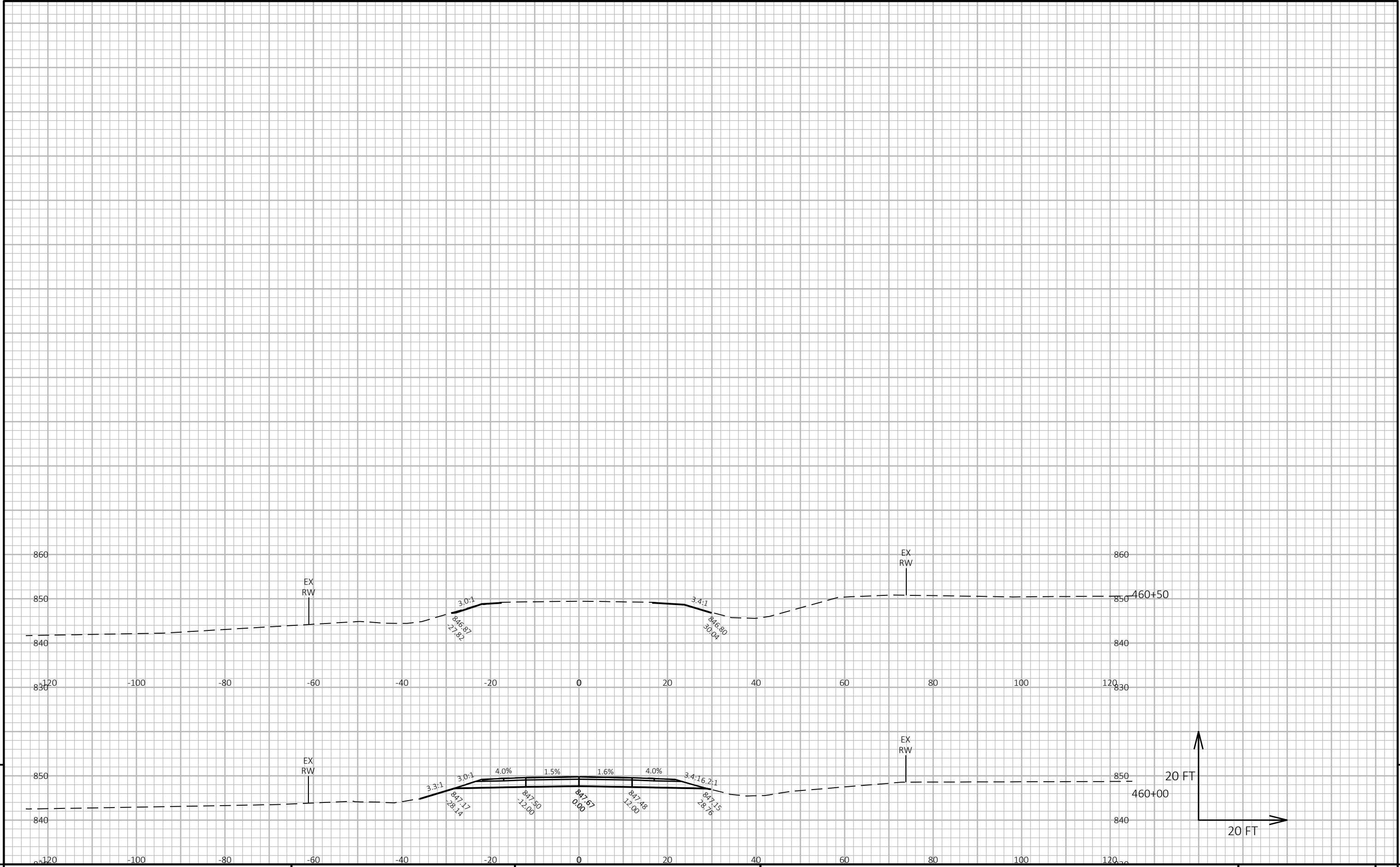
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 PLOT BY : BRATTLUND, ERIK JOHN
 PLOT NAME :
 PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
 WISDOT/CADD SHEET 49



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PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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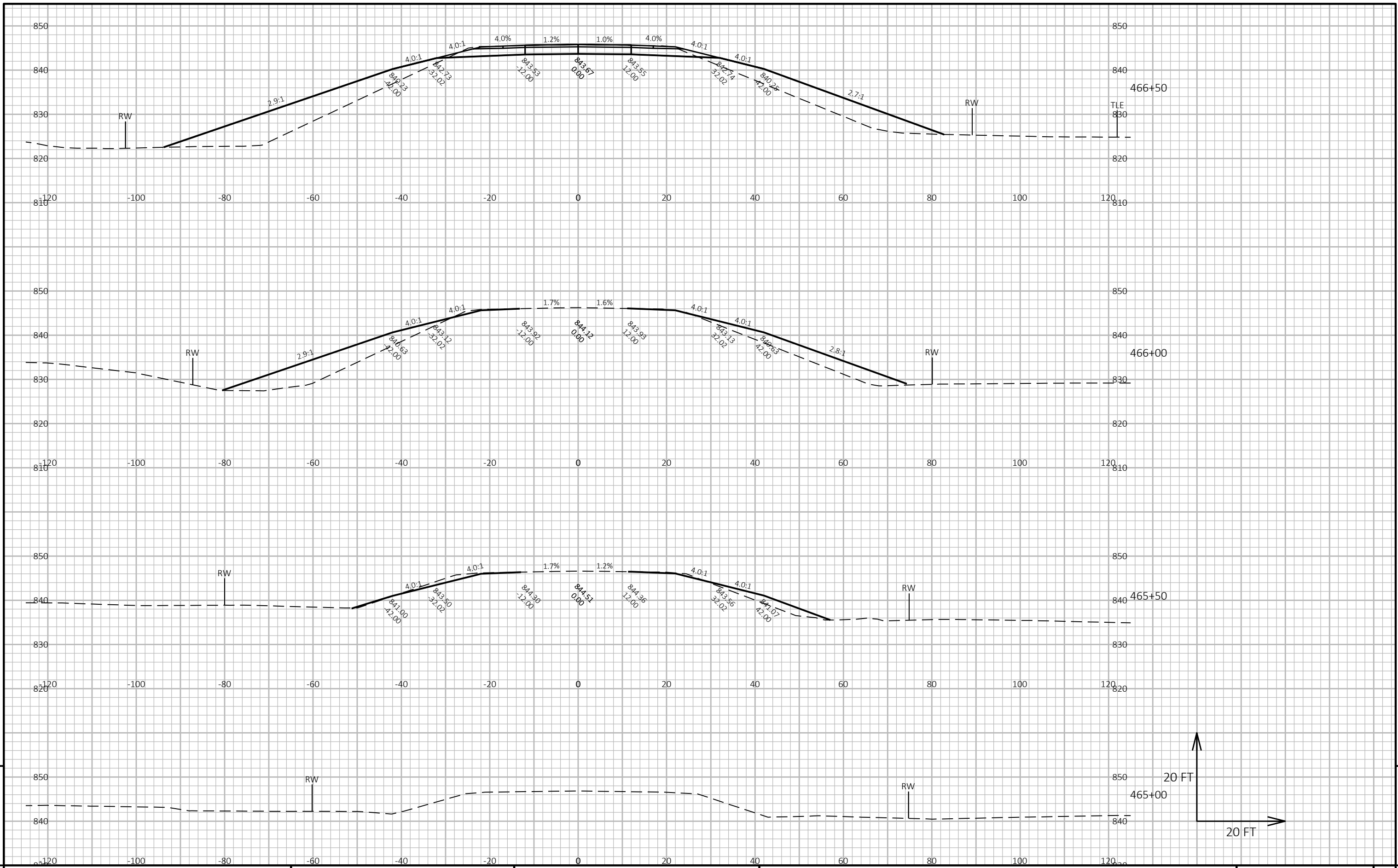


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PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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LAYOUT NAME - 05

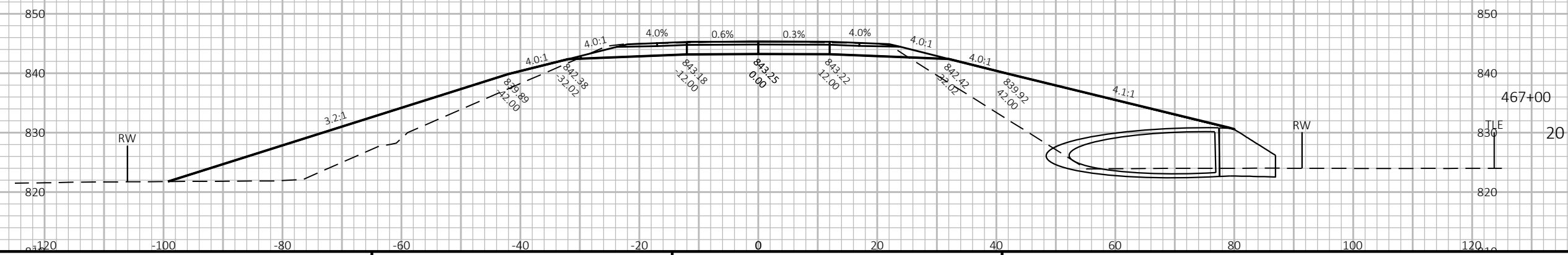
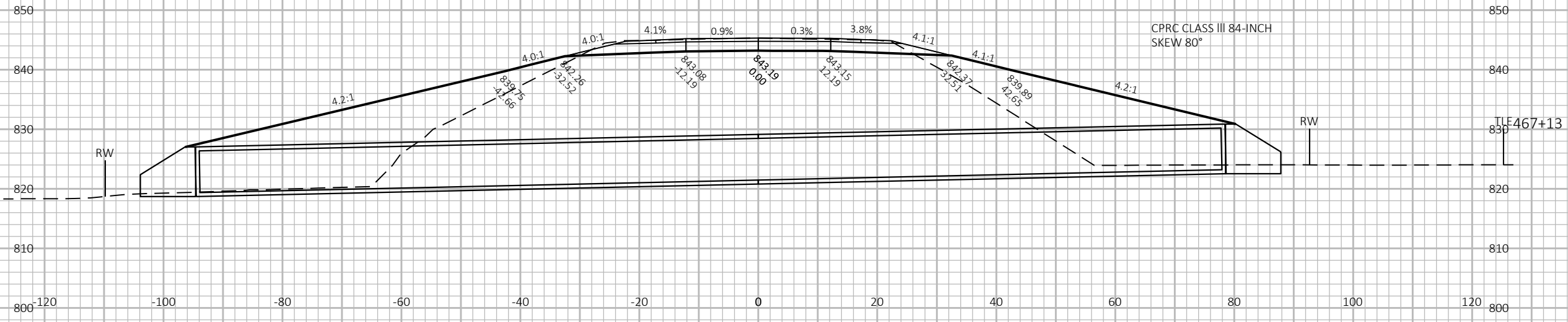
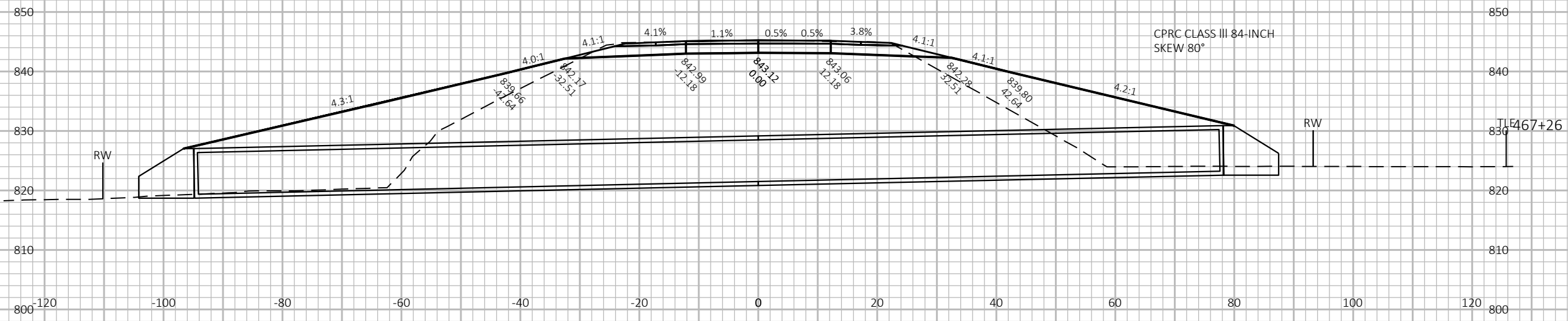
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PLOT BY : BRATTLUND, ERIK JOHN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADD SHEET 49



PROJECT NO: 4050-23-71

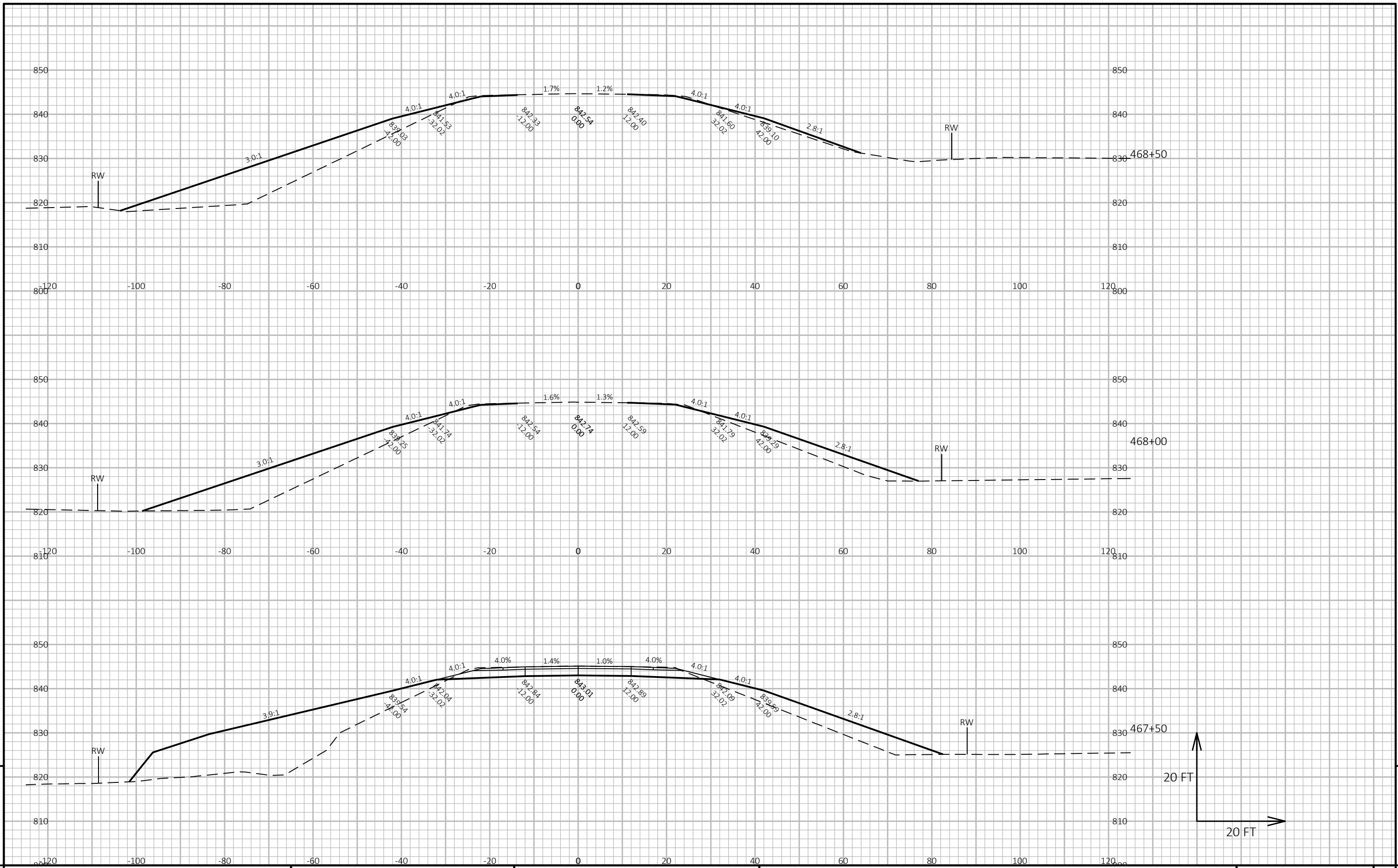
HWY: USH 151

COUNTY: FOND DU LAC

CROSS SECTIONS: CROSS SECTIONS

SHEET

E

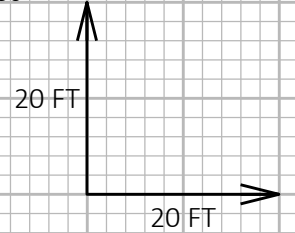


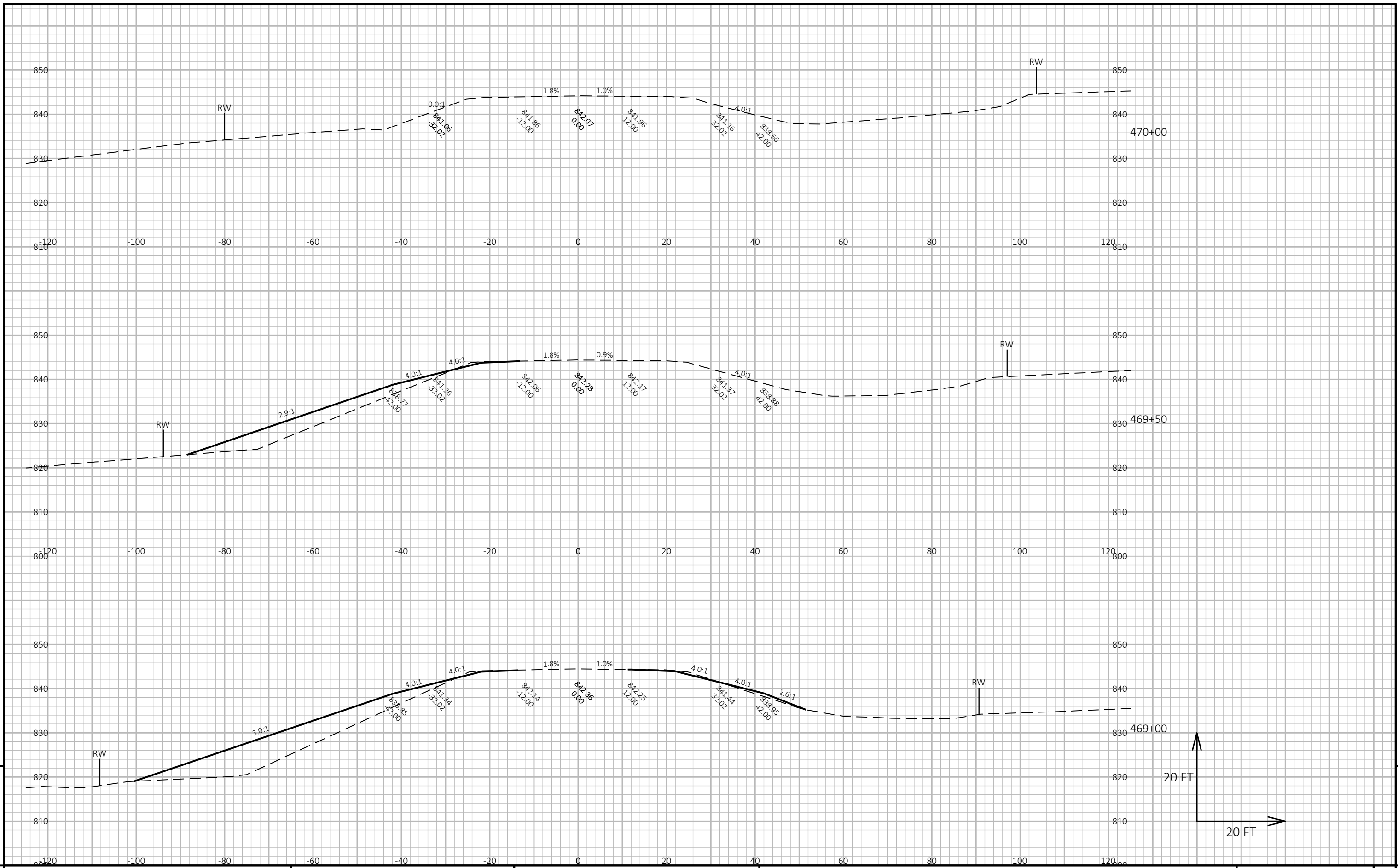
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PROJECT NO: 4050-23-71 HWY: USH 151 COUNTY: FOND DU LAC CROSS SECTIONS: CROSS SECTIONS SHEET E

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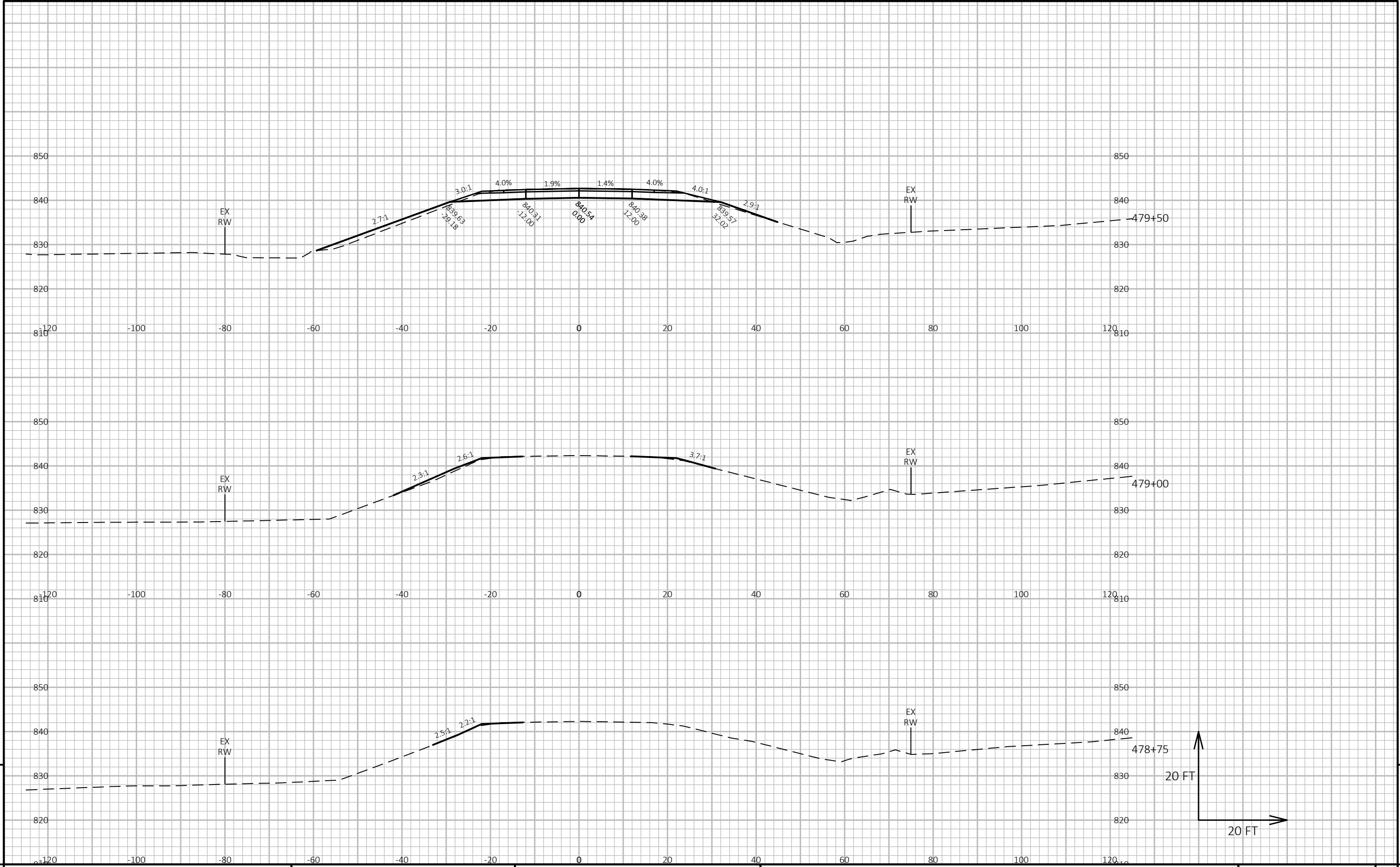


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PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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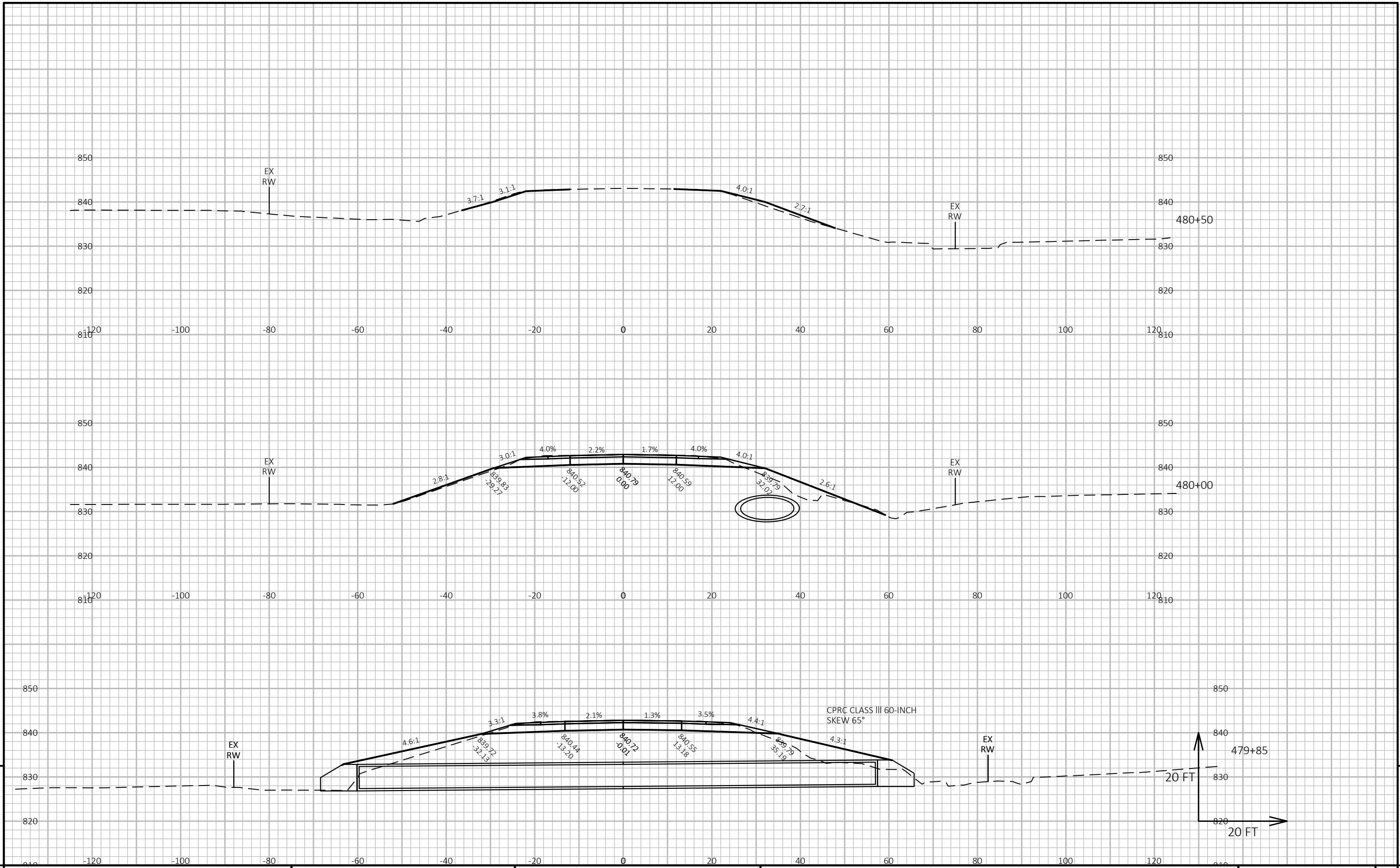


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PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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LAYOUT NAME - 10

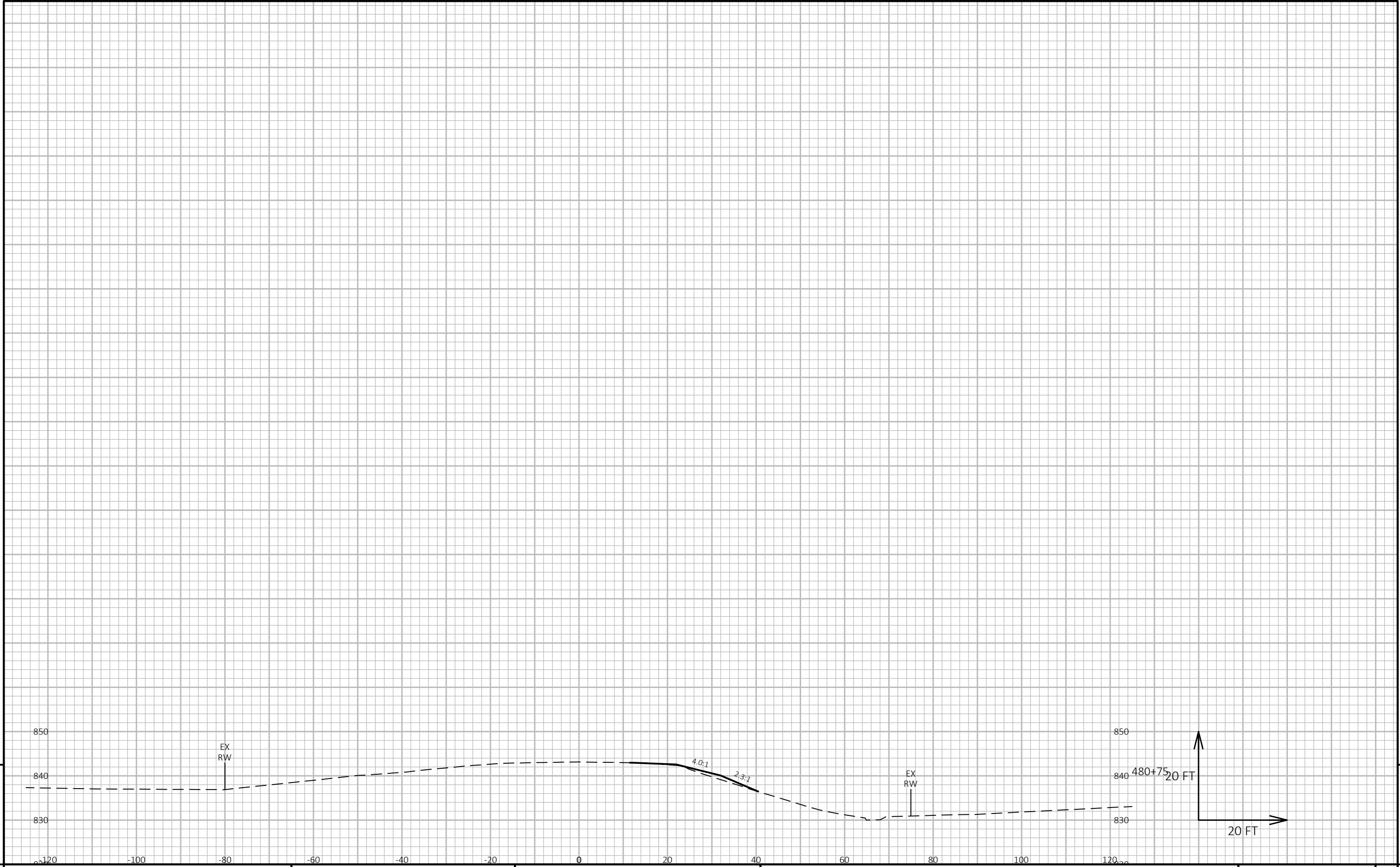
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PLOT BY : BRATTLUND, ERIK JOHN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADD SHEET 49



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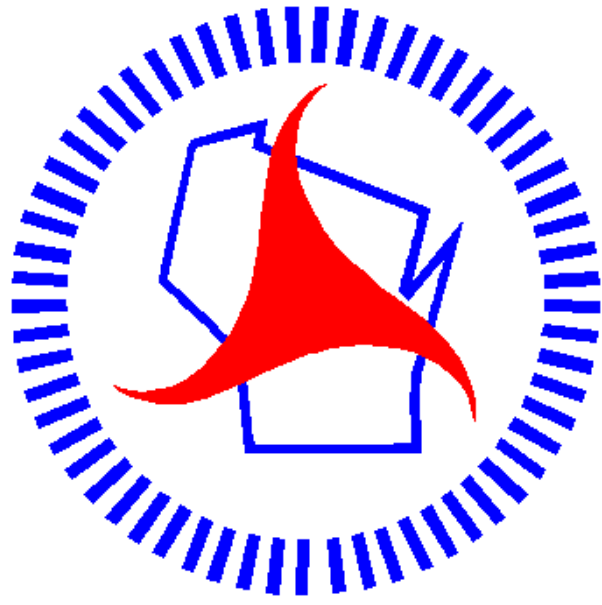
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PROJECT NO: 4050-23-71	HWY: USH 151	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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FILE NAME : C:\CIVIL 3D PROJECTS\40502300\SHEETSPLAN\90201-XS.DWG PLOT DATE : 5/3/2021 3:49 PM PLOT BY : BRATTLUND, ERIK JOHN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 11

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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