GRE

MAY 2024

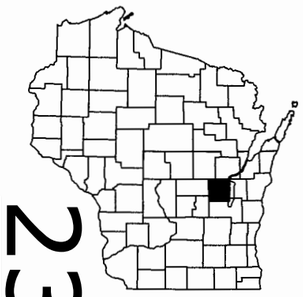
PROJECT ID: 6540-08-72

WITH: 6540-10-71 / 6540-11-71

COUNTY: WINNEBAGO

ORDER OF SHEETS

TOTAL SHEETS = 36



DESIGN DESIGNATION

A.A.D.T.	2024	=	4710
A.A.D.T.	2044	=	5410
D.H.V.		=	476
D.D.		=	62/38
T.		=	11.0%
DESIGN SPEED		=	55 MPH
ESALS		=	1,200,000 HMA

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

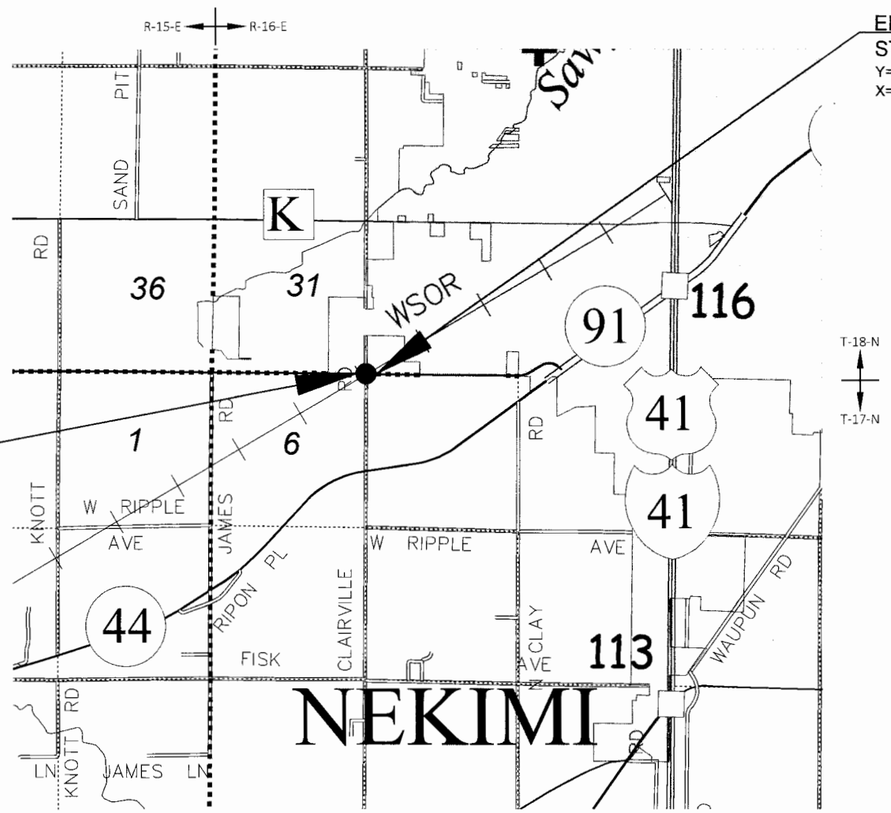
BERLIN - OSHKOSH

STH 91 & CLAIRVILLE RD RR387462L

STH 91
WINNEBAGO COUNTY

STATE PROJECT NUMBER
6540-08-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6540-08-72		



BEGIN PROJECT
STA 807+09.65
Y=460,232.453
X=770,321.723

END PROJECT
STA 810+35.88
Y=460,227.860
X=770,647.922

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.058 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WINNEBAGO COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

ORIGINAL PLANS PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
85 South Pioneer Road, Suite 300 • Fond du Lac, WI 54935
(920) 924-5720 • fax (920) 924-5725

WISCONSIN
JEFFREY A. CHVOSTA
E-39047
SLINGER, WI
PROFESSIONAL ENGINEER

DATE: 01/11/24

JEFFREY A. CHVOSTA, PE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NE REGION
Designer	GREMMER & ASSOCIATES, INC.
Project Manager	W. BERTRAND
Regional Examiner	
Regional Supervisor	T. RABE

APPROVED FOR THE DEPARTMENT

DATE: 1/12/24 Bill Bertrand, P.E. {Signature}

E

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.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

PAVEMENT LIMITS AT INTERSECTIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALIGNMENT SHOWN IN PLAN IS FOR REFERENCE ONLY. THE CENTERLINE OF ROADWAY TO BE DETERMINED IN THE FIELD BASED ON THE EXISTING ROADWAY.

RIGHT-OF-WAY SHOWN FROM WINNEBAGO COUNTY GIS FOR REFERENCE ONLY.

PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH SDD "LONGITUDINAL MARKING (MAINLINE)", SDD "STOP LINE AND CROSSWALK PAVEMENT MARKING", SDD "PAVEMENT MARKING (INTERSECTIONS)."

BASE AGGREGATE DENSE ¾-INCH WEIGHT CALCULATIONS ARE BASED ON 2.1 TONS/CY.
BASE AGGREGATE DENSE 1¼-INCH WEIGHT CALCULATIONS ARE BASED ON 2.0 TONS/CY.

HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LBS/SY/INCH.

TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION RATE OF 0.05 GAL/SY FOR FULL DEPTH HMA PAVEMENT SECTIONS (SHALL BE APPLIED BETWEEN ALL LAYERS OF ASPHALTIC PAVEMENT). 0.07 GAL/SY USED TO ESTIMATE HMA LAYERS OVER EXISTING PAVEMENTS.

ABBREVIATIONS

AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALT
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
CC	CENTER OF CURVATURE
CE	COMMERCIAL ENTRANCE
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
E	EXTERNAL DISTANCE FROM MIDPOINT OF CIRCULAR CURVE FROM ANGLE INTERSECTION
ELEV	ELEVATION
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
L	LENGTH OF CURVE
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
M/L	MATCHLINE
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
REQ'D	REQUIRED
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SEG	SEGMENT
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TYP	TYPICAL
V	VELOCITY OR DESIGN SPEED

UTILITIES

COMMUNICATIONS

AT&T WISCONSIN
70 E. DIVISION STREET
FOND DU LAC, WI 54935
ATTN: CHUCK BARTELT
PHONE: (920) 929-1013
EMAIL: cb1461@att.com

COMMUNICATIONS

ATC MANAGEMENT, INC.
P.O. BOX 47
WAUKESHA, WI 53187
ATTN: CHRIS DAILEY
PHONE: (262) 506-6884
EMAIL: cdailey@atcllc.com

SEWER

FOX RIVER VALLEY ETHANOL, LLC
4995 STATE ROAD 91
OSHKOSH, WI 54904
ATTN: JANELL TATRO
PHONE: (920) 230-7488
EMAIL: jtatro@frvethanol.com

COMMUNICATIONS

SPECTRUM
1520 E DESTINATION DR
APPLETON, WI 54915
ATTN: JASON ORR
PHONE: (920) 378-0352
EMAIL: jason.orr@charter.com

GAS

UNITED COOPERATIVE
N7160 RACEWAY ROAD
BEAVER DAM, WI 53916
ATTN: KARL BETH
PHONE: (920) 887-1756
EMAIL: karlb@unitedcooperative.com

ELECTRIC

WISCONSIN PUBLIC SERVICE CORPORATION
2850 S ASHLAND AVENUE
GREEN BAY, WI 54304
ATTN: SCOTT ZELLNER
PHONE: (920) 617-5068
EMAIL: scott.zellner@wisconsinpublicservice.com

GAS

WISCONSIN PUBLIC SERVICE CORPORATION
3300 N MAIN STREET
OSHKOSH, WI 54901
ATTN: ADAM VANDENHOUTEN
PHONE: (920) 617-2736
EMAIL: adam.vandenhouten@wisconsinpublicservice.com

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

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 1.143 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.000 ACRES

NE REGION SURVEY COORDINATOR

WISCONSIN DEPARTMENT OF TRANSPORTATION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
ATTN: MICHAEL ANDRASCHKO
PHONE: (920) 492-4166
EMAIL: michael.andraschko@dot.wi.gov

DNR AREA LIAISON

WISCONSIN DEPT. OF NATURAL RESOURCES
WDNR NORTHEAST REGIONAL HQ
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
ATTN: JAY SCHIEFELBEIN
PHONE: (920) 360-3784
EMAIL: jeremiah.schiefelbein@wiscosnsin.gov

NE REGION PROJECT MANAGER

WISCONSIN DEPARTMENT OF TRANSPORTATION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
ATTN: WILLIAM BERTRAND, PE
PHONE: (920) 360-3124
EMAIL: william.bertrand@dot.wi.gov

DESIGN CONTACT

GREMMER & ASSOCIATES, INC.
93 SOUTH PIONEER ROAD, SUITE 300
FOND DU LAC, WI 54935
ATTN: JEFFREY A. CHVOSTA, PE
PHONE: (920) 924-5720
EMAIL: j.chvosta@gremmerassociates.com

WINNEBAGO COUNTY CONTACT

ROBERT DOEMEL
HIGHWAY COMMISSIONER
901 W COUNTY ROAD Y
OSHKOSH, WI 54901
PHONE: (920) 232-1700
EMAIL: rdoemel@co.winnebago.wi.us

ORDER OF SECTION 2 SHEETS

2

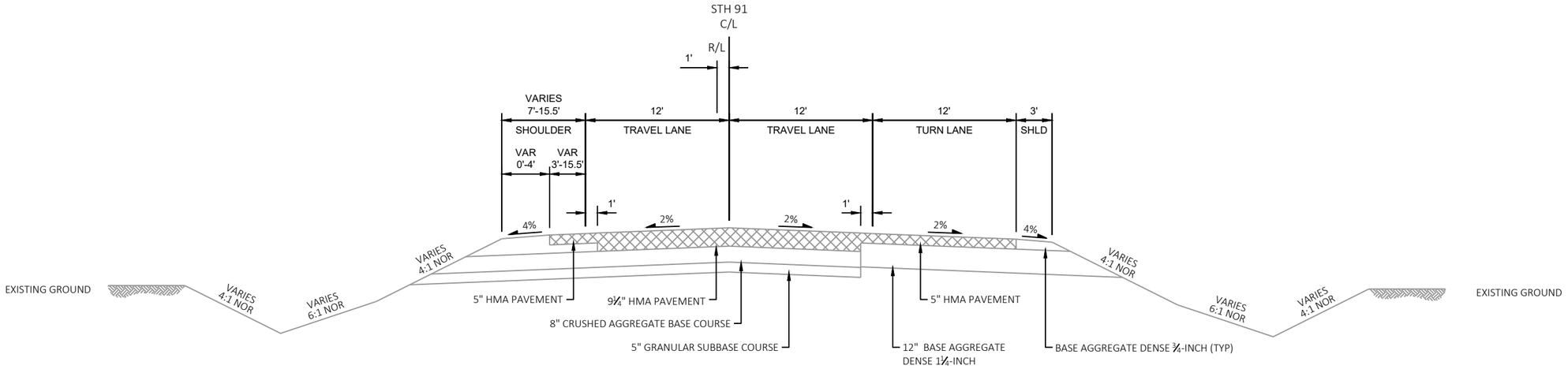
SURVEY CONTROL TABLE

POINT #	POINT NAME	Y	X	ELEVATION
902	NGS DF6032	465796.085	762445.034	826.80
903	NGS AI9575	461236.013	778585.570	838.51
904	NGS AI9529	447898.464	755769.052	846.24
2000	NGS OM0126	460327.380	770606.044	837.40
6230	NGS AI9576	460324.948	777157.010	840.43

PROJECT NO: 6540-08-72	HWY: STH 91	COUNTY: WINNEBAGO	PROJECT OVERVIEW	SHEET 3	E

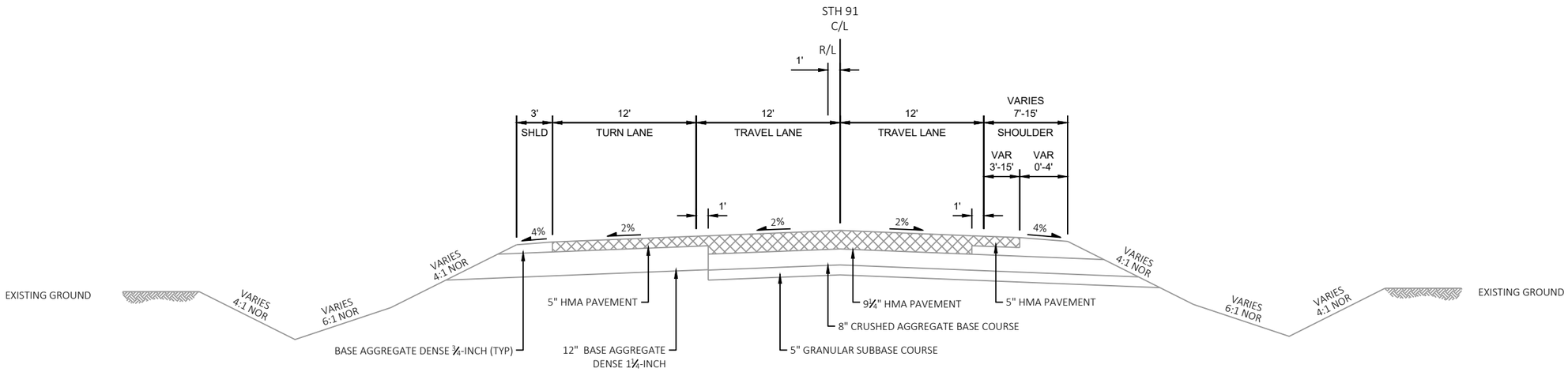
FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65400850\SHEETSPLAN\65400872-020201-PO.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 1/26/2024 9:19 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:400 FT



EXISTING TYPICAL SECTION STH 91

STA 807+09.65 TO STA 808+79.34

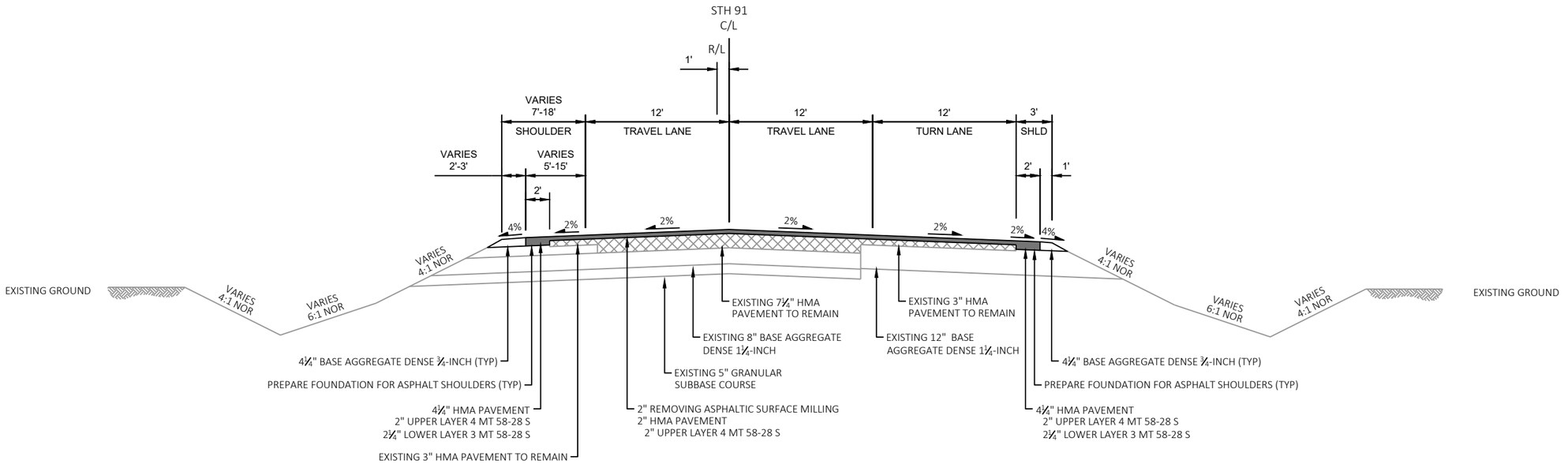


EXISTING TYPICAL SECTION STH 91

STA 808+79.34 TO STA 810+35.88

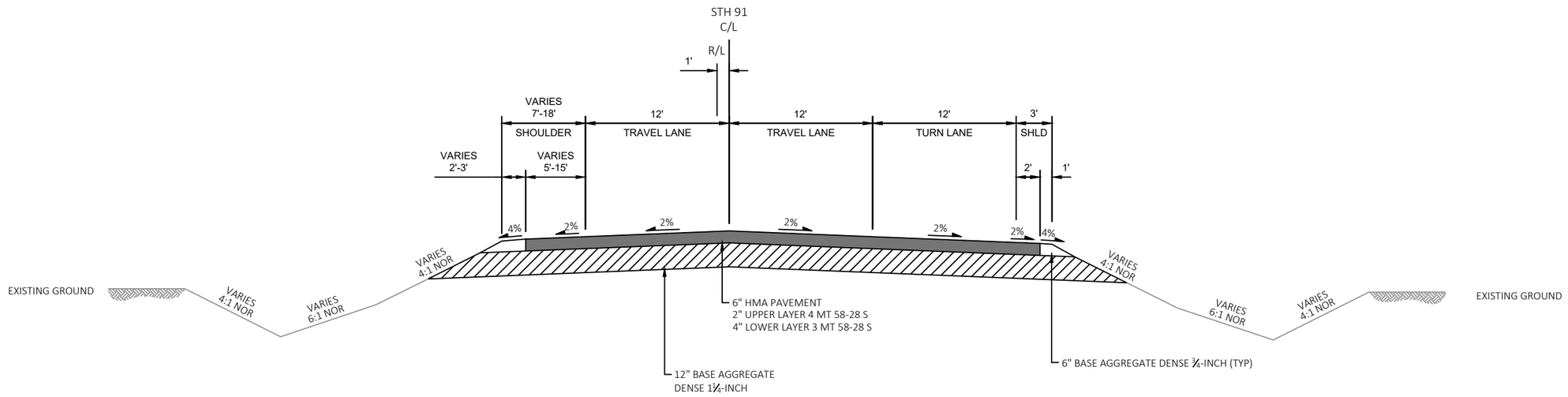
PROJECT NO: 6540-08-72	HWY: STH 91	COUNTY: WINNEBAGO	TYPICAL SECTIONS	SHEET 4	E

2



FINISHED TYPICAL SECTION STH 91

STA 807+09.65 TO STA 808+44.05



FINISHED TYPICAL SECTION STH 91

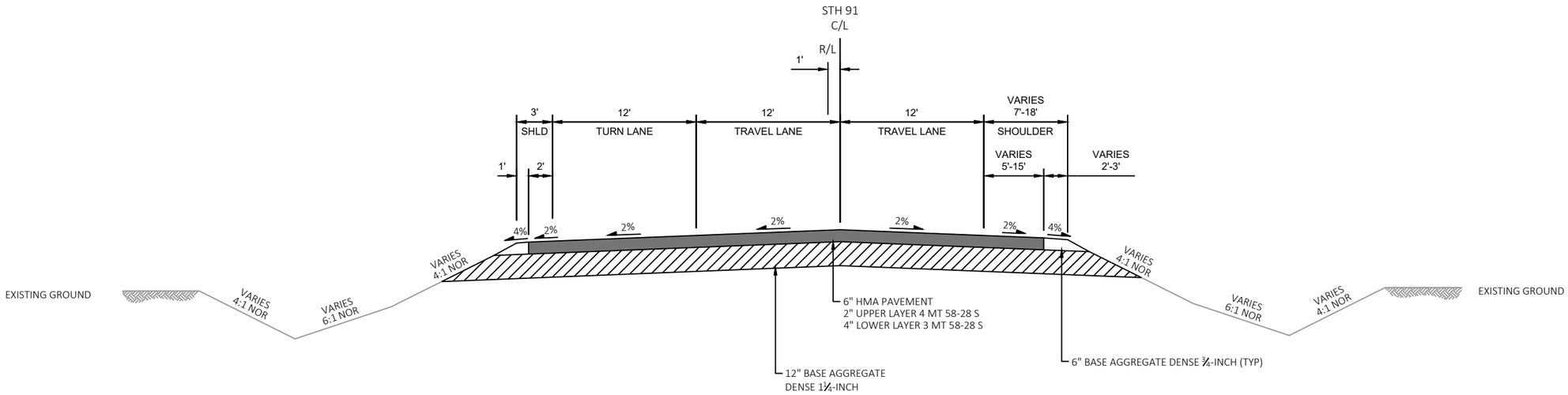
STA 808+44.05 TO STA 808+79.34

PROJECT NO: 6540-08-72	HWY: STH 91	COUNTY: WINNEBAGO	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65400850\SHEETSPLAN\65400872-020301-TS.DWG
LAYOUT NAME - Sheet-02

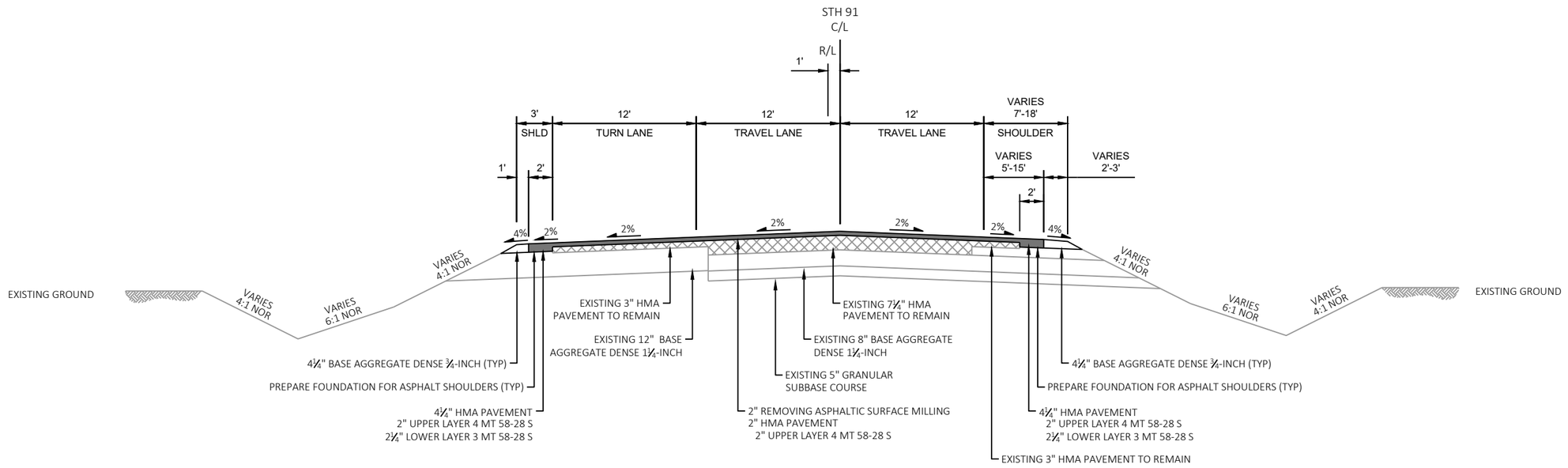
PLOT DATE : 1/26/2024 9:19 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



FINISHED TYPICAL SECTION STH 91

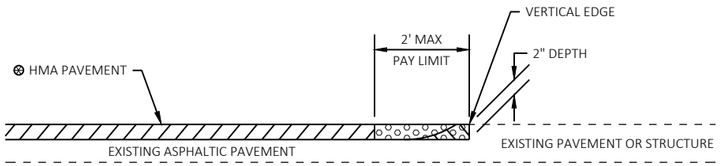
STA 808+79.34 TO STA 809+40.62



FINISHED TYPICAL SECTION STH 91

STA 809+40.62 TO STA 810+35.88

PROJECT NO: 6540-08-72	HWY: STH 91	COUNTY: WINNEBAGO	TYPICAL SECTIONS	SHEET 6	E



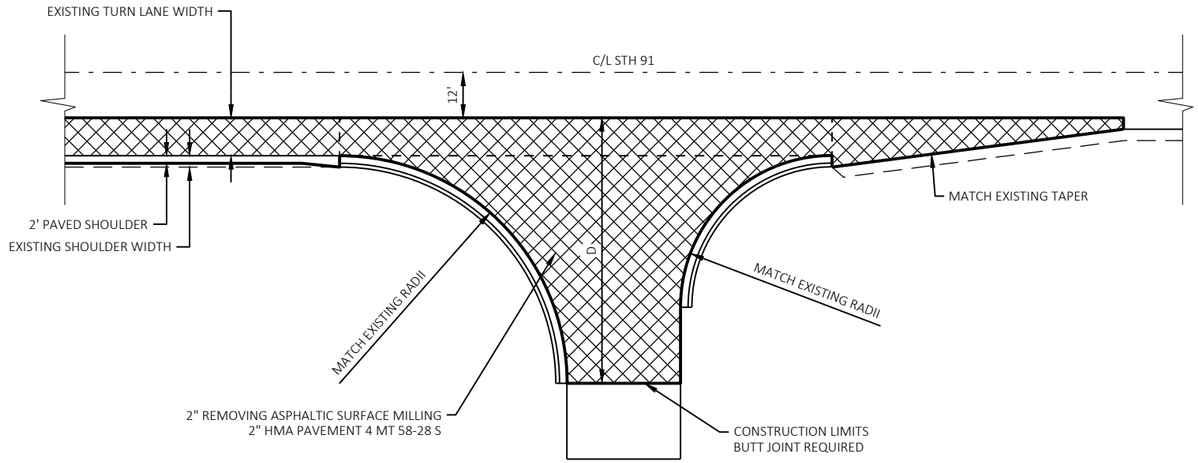
⊛ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

REMOVING ASPHALTIC SURFACE, MILLING

REMOVING ASPHALTIC SURFACE, BUTT JOINTS

REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



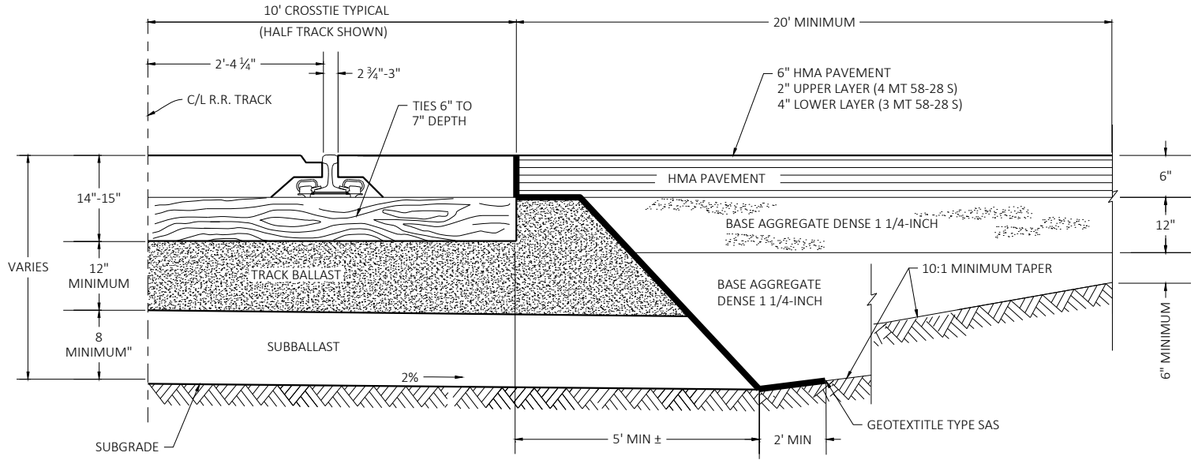
D = FARTHEST CURB RETURN FROM STH 91 OR AS DIRECTED BY THE ENGINEER

PLAN VIEW

TYPICAL SIDE ROAD DETAIL

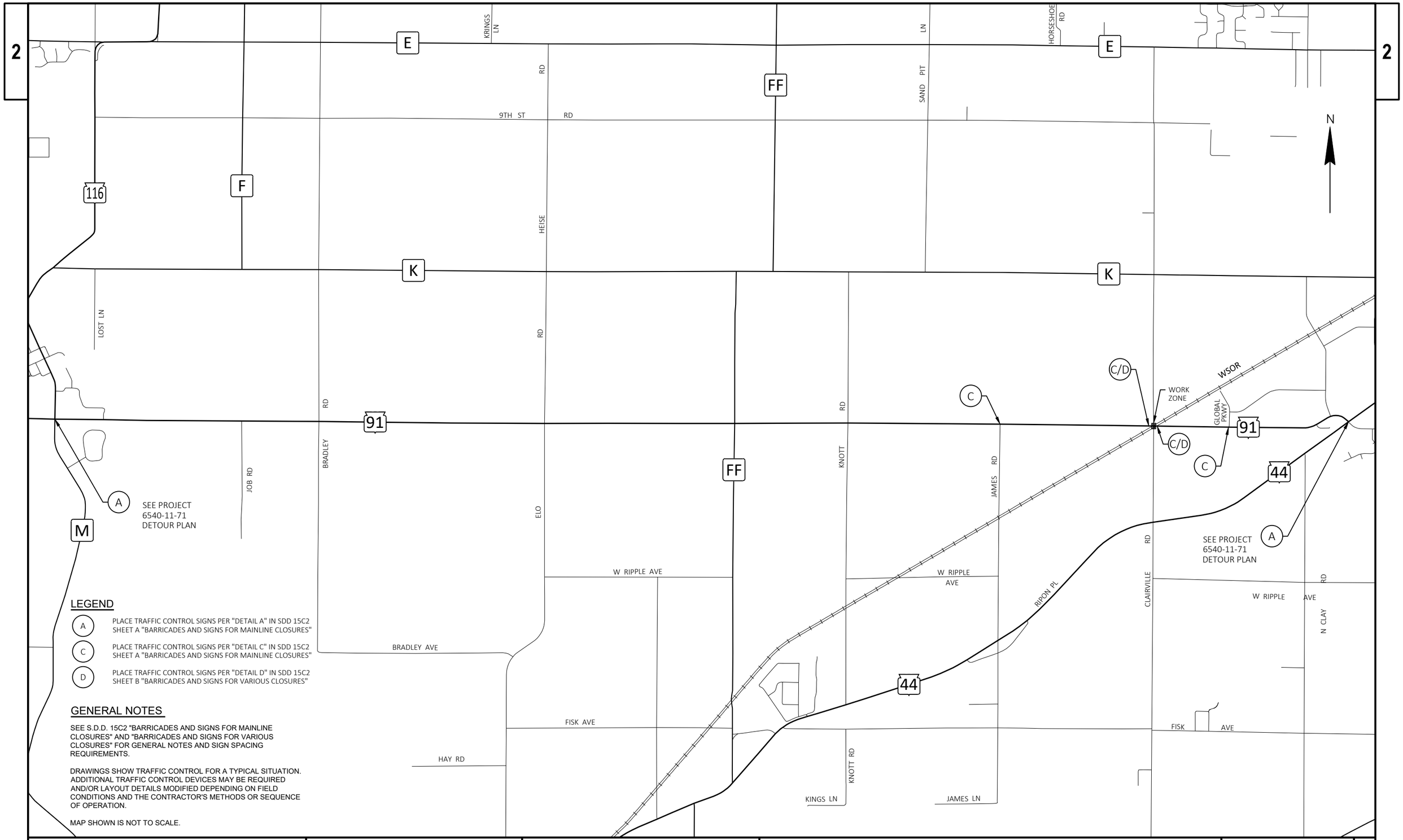
NOTES:

SEE SDD "TYPICAL SECTIONS FOR RAILWAY APPROACH" FOR ALL OTHER PERTINENT INFORMATION.



MODIFIED DETAIL D
ROADWAY PROJECT AT RAILROAD
CROSSING WITH SUBGRADE IMPROVEMENT
TYPICAL SECTION

TYPICAL SECTION FOR RAILROAD APPROACH



LEGEND

- (A) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL A" IN SDD 15C2 SHEET A "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- (C) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL C" IN SDD 15C2 SHEET A "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- (D) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL D" IN SDD 15C2 SHEET B "BARRICADES AND SIGNS FOR VARIOUS CLOSURES"

GENERAL NOTES

SEE S.D.D. 15C2 "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" AND "BARRICADES AND SIGNS FOR VARIOUS CLOSURES" FOR GENERAL NOTES AND SIGN SPACING REQUIREMENTS.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON FIELD CONDITIONS AND THE CONTRACTOR'S METHODS OR SEQUENCE OF OPERATION.

MAP SHOWN IS NOT TO SCALE.

PROJECT NO: 6540-08-72	HWY: STH 91	COUNTY: WINNEBAGO	TRAFFIC CONTROL - OVERVIEW	SHEET 9 E

6540-08-72

Line	Item	Item Description	Unit	Total	Qty
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	35.000	35.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	1,575.000	1,575.000
0014	204.9060.S	Removing (item description) 01. Apron Endwall	EACH	2.000	2.000
0016	205.0100	Excavation Common	CY	607.000	607.000
0024	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 6540-08-72	EACH	1.000	1.000
0026	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	4.000	4.000
0028	213.0100	Finishing Roadway (project) 01. 6540-08-72	EACH	1.000	1.000
0034	305.0110	Base Aggregate Dense 3/4-Inch	TON	95.000	95.000
0036	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	990.000	990.000
0040	450.4000	HMA Cold Weather Paving	TON	100.000	100.000
0042	455.0605	Tack Coat	GAL	160.000	160.000
0044	460.2000	Incentive Density HMA Pavement	DOL	260.000	260.000
0046	460.6223	HMA Pavement 3 MT 58-28 S	TON	140.000	140.000
0048	460.6224	HMA Pavement 4 MT 58-28 S	TON	260.000	260.000
0076	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	1.000	1.000
0088	618.0100	Maintenance and Repair of Haul Roads (project) 01. 6540-08-72	EACH	1.000	1.000
0094	619.1000	Mobilization	EACH	0.140	0.140
0096	624.0100	Water	MGAL	15.000	15.000
0106	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0108	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0112	628.7504	Temporary Ditch Checks	LF	60.000	60.000
0114	628.7555	Culvert Pipe Checks	EACH	6.000	6.000
0134	642.5201	Field Office Type C	EACH	0.330	0.330
0136	643.0420	Traffic Control Barricades Type III	DAY	900.000	900.000
0138	643.0705	Traffic Control Warning Lights Type A	DAY	1,400.000	1,400.000
0140	643.0900	Traffic Control Signs	DAY	700.000	700.000
0146	643.5000	Traffic Control	EACH	0.140	0.140
0152	645.0140	Geotextile Type SAS	SY	320.000	320.000
0154	646.1020	Marking Line Epoxy 4-Inch	LF	807.000	807.000
0156	646.3020	Marking Line Epoxy 8-Inch	LF	206.000	206.000
0158	646.5320	Marking Railroad Crossing Epoxy	EACH	2.000	2.000
0160	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	807.000	807.000
0162	646.6468	Cold Weather Marking Epoxy 8-Inch	LF	206.000	206.000
0170	650.8000	Construction Staking Resurfacing Reference	LF	307.000	307.000
0172	650.9911	Construction Staking Supplemental Control (project) 01. 6540-08-72	EACH	1.000	1.000
0180	690.0150	Sawing Asphalt	LF	275.000	275.000
0188	SPV.0060	Special 01. Apron Endwalls for Pipe Arch Steel 29x18-Inch	EACH	1.000	1.000

3

REMOVING ITEMS

STATION - STATION	LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
CATEGORY CODE 0010			
807+10 - 808+83	LT & RT	17	913
808+44 - 808+83	LT & RT	--	--
809+02 - 809+41	LT & RT	--	--
809+41 - 810+36	LT & RT	18	662
TOTALS		**35**	**1,575**

PREPARE FOUNDATION FOR ASPHALTIC PAVING

PROJECT	LOCATION	211.0101 EACH
CATEGORY CODE 0010		
01. 6540-08-72		1
	807+10 - 808+83	
	809+02 - 810+36	
TOTAL		**1**

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION - STATION	LOCATION	211.0400 STA
CATEGORY CODE 0010		
807+10 - 807+47	LT	1
807+10 - 807+99	RT	1
809+82 - 810+36	LT	1
810+02 - 810+36	RT	1
TOTAL		**4**

BASE AGGREGATE DENSE AND WATER ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
CATEGORY CODE 0010				
807+10 - 808+44	LT & RT	32	--	0.4
808+44 - 808+83	LT & RT	18	481	6.9
809+02 - 809+41	LT & RT	17	509	7.3
809+41 - 810+36	LT & RT	28	--	0.4
TOTALS		**95**	**990**	**15.0**

3

ASPHALTIC ITEMS

STATION - STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON
CATEGORY CODE 0010					
807+10 - 808+44	LT & RT	28	68	4	111
808+44 - 808+83	LT & RT	24	20	64	32
809+02 - 809+41	LT & RT	27	22	70	36
809+41 - 810+36	LT & RT	21	50	2	81
TOTALS		**100**	**160**	**140**	**260**

APRON ENDWALL ITEMS

STATION	LOCATION	204.9060.S REMOVING (01. APRON ENDWALL) EACH	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH	SPV.0060.01 APRON ENDWALLS FOR PIPE ARCH STEEL 29X18-INCH EACH
CATEGORY CODE 0010				
807+81	RT	1	1	--
808+25	LT	1	--	1
TOTALS		**2**	**1**	**1**

TRAFFIC CONTROL ITEMS

LOCATION	NUMBER OF DAYS IN SERVICE	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. REQ'D	643.0420 TRAFFIC CONTROL BARRICADES TYPE III TOTAL DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. REQ'D	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A TOTAL DAY	643.0900 TRAFFIC CONTROL SIGNS NO. REQ'D	643.0900 TRAFFIC CONTROL SIGNS TOTAL DAY	643.5000 TRAFFIC CONTROL EACH
CATEGORY CODE 0010								
PROJECT 6540-08-72	--	--	--	--	--	--	--	0.14
STH 91 / JAMES ROAD	50	*2*	100	*4*	200	*3*	150	--
WEST PROJECT LIMITS	50	*7*	350	*10*	500	*4*	200	--
EAST PROJECT LIMITS	50	*7*	350	*10*	500	*4*	200	--
STH 91 / GLOBAL PARKWAY	50	*2*	100	*4*	200	*3*	150	--
TOTALS		**900**		**1,400**		**700**		**0.14**

PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.3020 MARKING LINE EPOXY 8-INCH WHITE LF	646.5320 MARKING RAILROAD CROSSING EPOXY WHITE EACH	646.6464 COLD WEATHER MARKING EPOXY 4-INCH WHITE LF	646.6464 COLD WEATHER MARKING EPOXY 4-INCH YELLOW LF	646.6468 COLD WEATHER MARKING EPOXY 8-INCH WHITE LF
CATEGORY CODE 0010								
807+10 - 808+21	LT & RT	207	223	112	1	207	223	112
809+42 - 810+36	LT & RT	189	188	94	1	189	188	94
		396	411			396	411	
TOTALS		**807**		**206**	**2**	**807**		**206**

EROSION CONTROL ITEMS

STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH
CATEGORY CODE 0010					
PROJECT 6540-08-72		3	2	--	--
807+80	RT	--	--	12	--
808+15	RT	--	--	12	--
808+25	LT	--	--	--	4
810+36	RT	--	--	12	--
89+26	RT	--	--	12	--
90+80	RT	--	--	--	2
UNDISTRIBUTED		--	--	12	--
TOTALS		**3**	**2**	**60**	**6**

GEOTEXTILE TYPE SAS

STATION	LOCATION	645.0140 SY
CATEGORY CODE 0010		
808+44 - 808+83	LT & RT	155
809+02 - 809+41	LT & RT	165
TOTAL		**320**

CONSTRUCTION STAKING RESURFACING REFERENCE

PROJECT	650.8000 LF
CATEGORY CODE 0010	
807+10 - 810+36	307
TOTALS	**307**

SAWING ASPHALT

STATION	LOCATION	690.0150 LF
CATEGORY CODE 0010		
808+44	LT & RT	129
809+41	LT & RT	146
TOTAL		**275**

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5) FACTOR 1.25	MASS ORDINATE +/- (6)
DIVISION 1								
RR SUBGRADE IMP.	808+44/808+83	STH 91	295	46	249	0	0	249
RR SUBGRADE IMP.	809+02/809+41	STH 91	312	49	263	0	0	263
DIVISION 1 SUBTOTAL			607	95	512	0	0	512
GRAND TOTAL			607	95	512	0	0	512
TOTAL COMMON EXC			607					

NOTES:

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

(2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT

(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL = LENGTH * TYPICAL WIDTH * TYPICAL DEPTH

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

(5) EXPANDED FILL. FACTOR = 1.25; EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR.

(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS INDICATES AN EXCESS OF MATERIAL.

N

CITY OF OSHKOSH

UNITED COOPERATIVE

KIENBAUM PROPERTIES LLC

WISCONSIN & SOUTHERN RAILROAD (WSOR)

EXISTING R/W

CLAIRVILLE RD

N1°26'17"W

92

91

89

88

N0°19'45"E

MATCH EXISTING
BUTT JOINT REQ'D

RAILROAD APPROACH
SUBGRADE IMPROVEMENT

CULVERT PIPE
DITCH CHECK

CURB & GUTTER
TO REMAIN

REMOVE AND
INSTALL APRON
ENDWALL

RAILROAD CROSSING TO
BE REPLACED BY OTHERS

UNITED COOPERATIVE
(ABANDONED)

SPECTRUM

AT&T

FOX RIVER VALLEY
ETHANOL

PIPL

SAN

WPS

G

OH

FO

TV

T

GUY

UT

HO

ATC

808+82.69

809+01.98

PI: 808+79.34

PI: 90+01.54

EXISTING 29"X18" PACM

EXISTING 24" CPCM

805

806

807

808

809

810

811

812

STH 91

S89°11'36"E

T 18 N R 16 E
31 32

T 17 N R 16 E
6 5

STEPHEN L SCHUTZBANK
KELLY L SCHUTZBANK

BREY REAL ESTATE
INVESTMENTS LLC

BRITTNEY L PHILLIPS
REV TST

TEMPORARY
DITCH CHECK

STA 808+79.34 R/L STH 91 =
STA 90+01.54 R/L Clairville Rd.
Y=460,230.064
X=770,491.394

BEGIN PROJECT
STA 807+09.65
Y=460232.453
X=770321.723
MATCH EXISTING
BUTT JOINT REQUIRED

END PROJECT
STA 810+35.88
Y=460227.860
X=770647.922
MATCH EXISTING
BUTT JOINT REQUIRED

5

5

PROJECT NO: 6540-08-72	HWY: STH 91	COUNTY: WINNEBAGO	PLAN: STH 91	SHEET 13	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65400850\SHEETSPLAN\65400872-050201-PN.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 1/26/2024 9:19 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

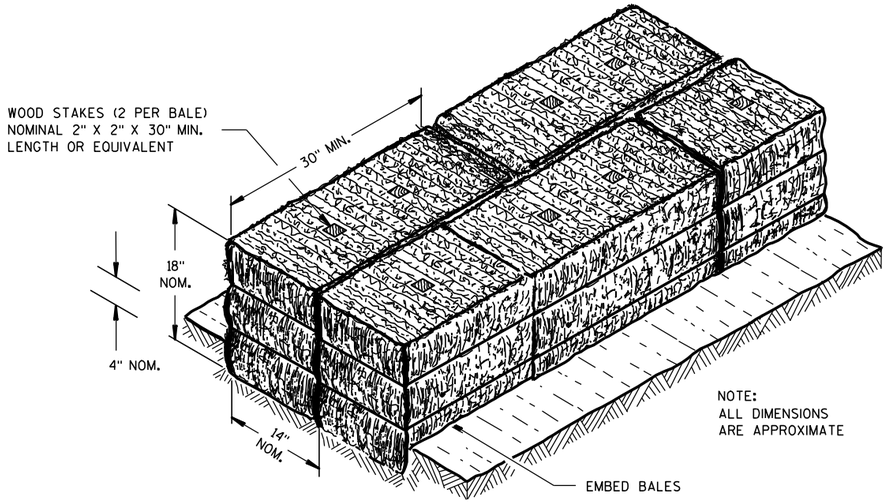
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

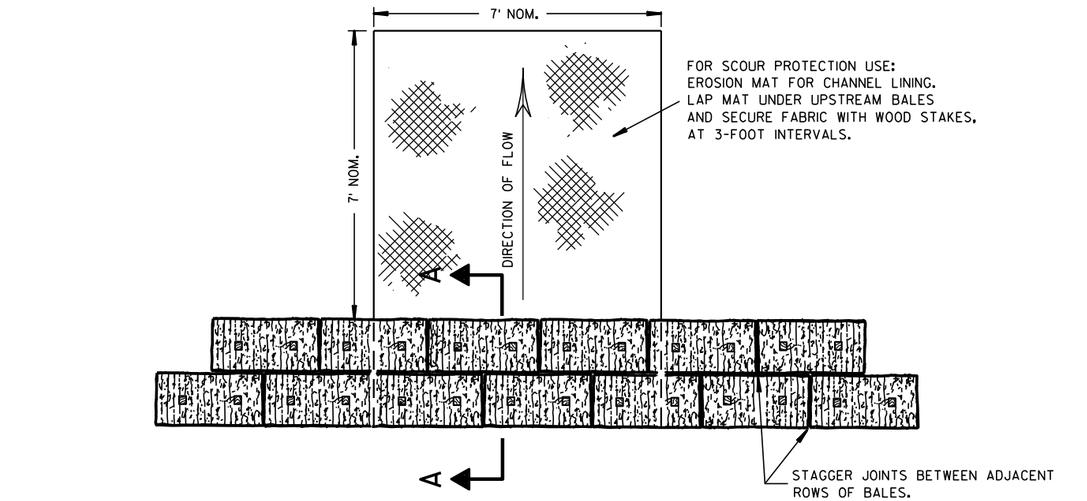
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E15-01	CULVERT PIPE CHECK
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
13B01-11A	PAVEMENT DETAILS FOR RAILROAD APPROACH
13B01-11B	TYPICAL SECTIONS FOR RAILWAY APPROACH
13C19-03	HMA LONGITUDINAL JOINTS
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C09-13A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)

6

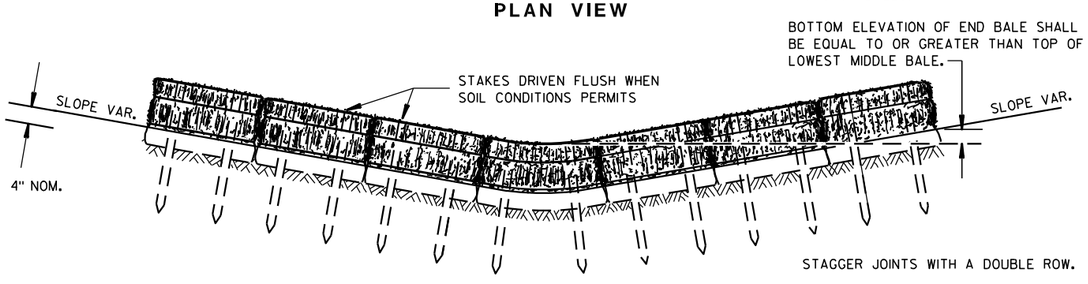
6



SECTION A-A



PLAN VIEW



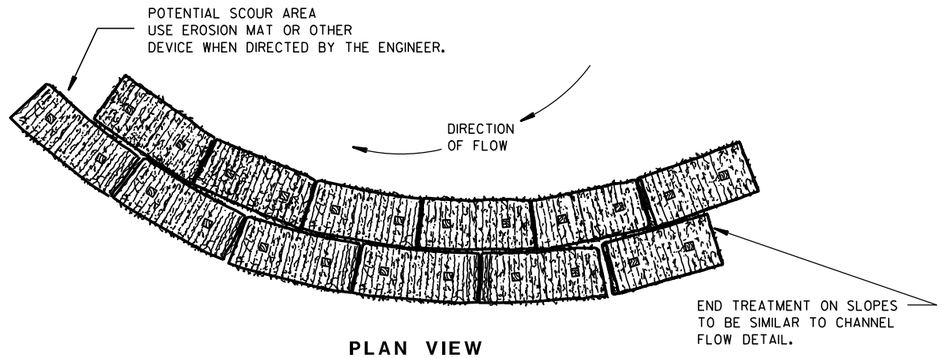
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

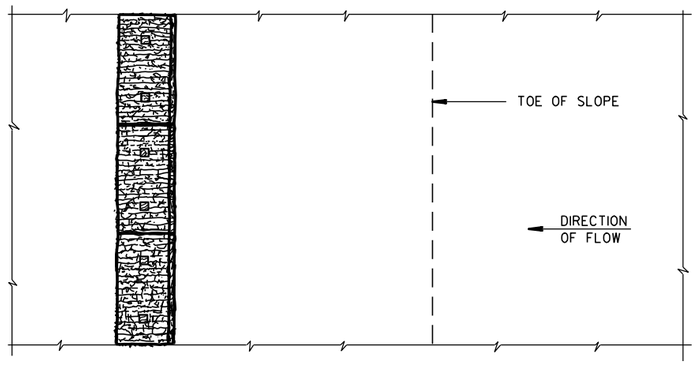
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

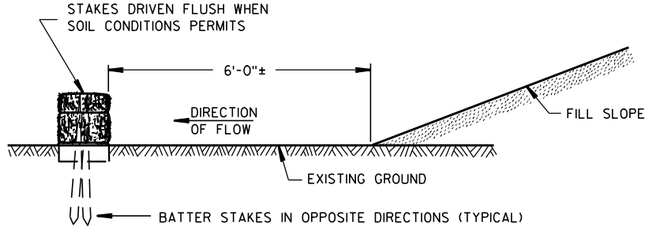


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

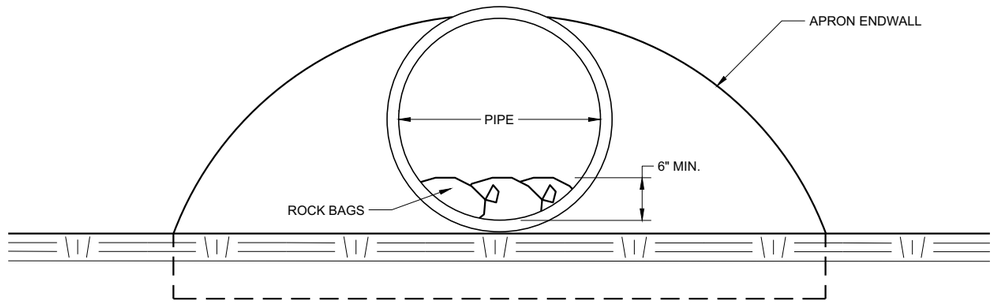
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

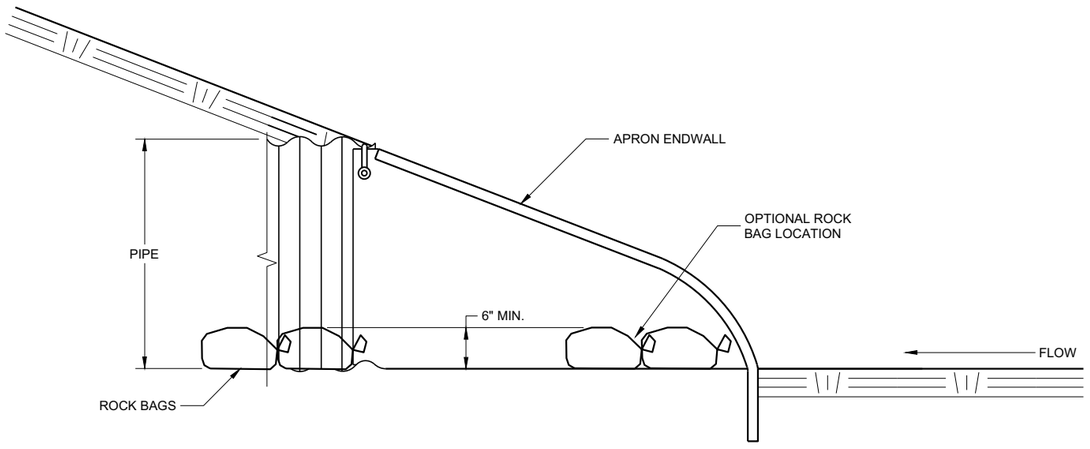
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 E 8-3



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

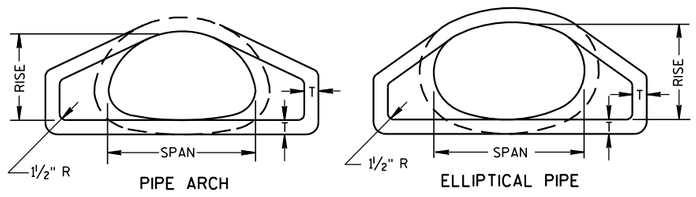
FHWA

6

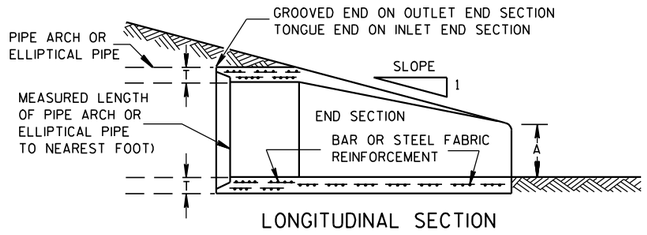
SDD 08E15 - 01

6

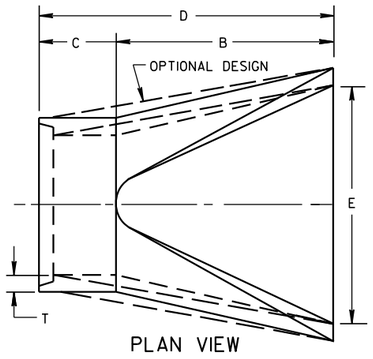
SDD 08E15 - 01



END VIEW

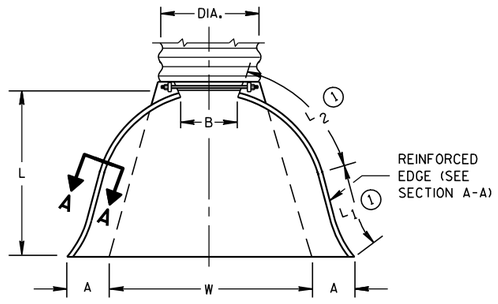


LONGITUDINAL SECTION



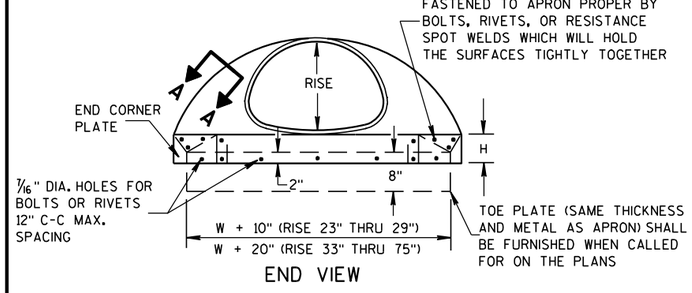
PLAN VIEW

CONCRETE ENDWALLS



REINFORCED EDGE (SEE SECTION A-A)

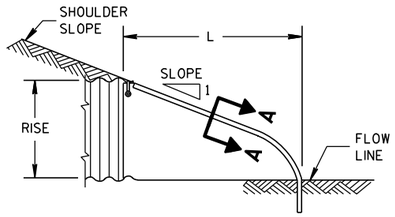
PLAN VIEW



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

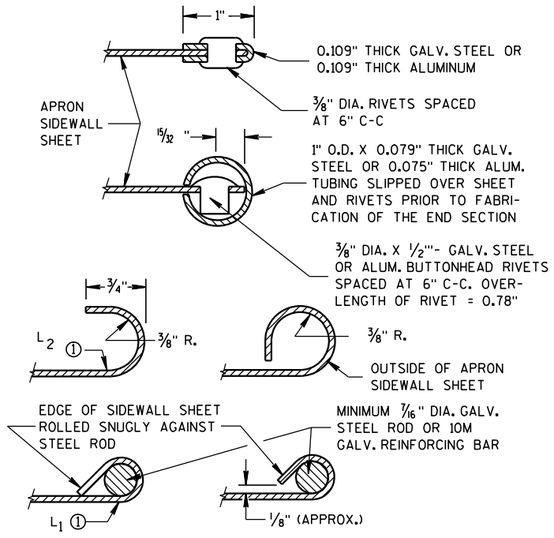
TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

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

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ 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) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ 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	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

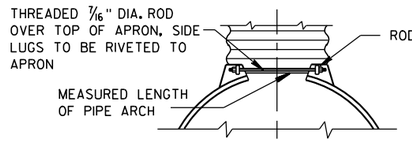
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	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	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

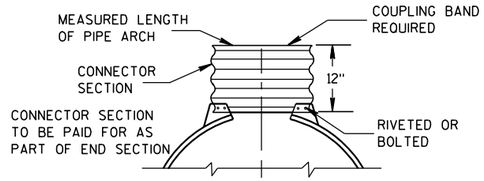
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



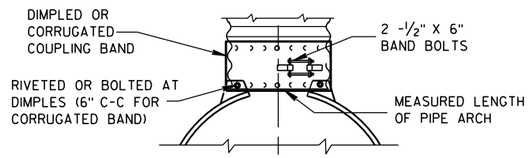
TYPE 2

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

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.

① 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.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

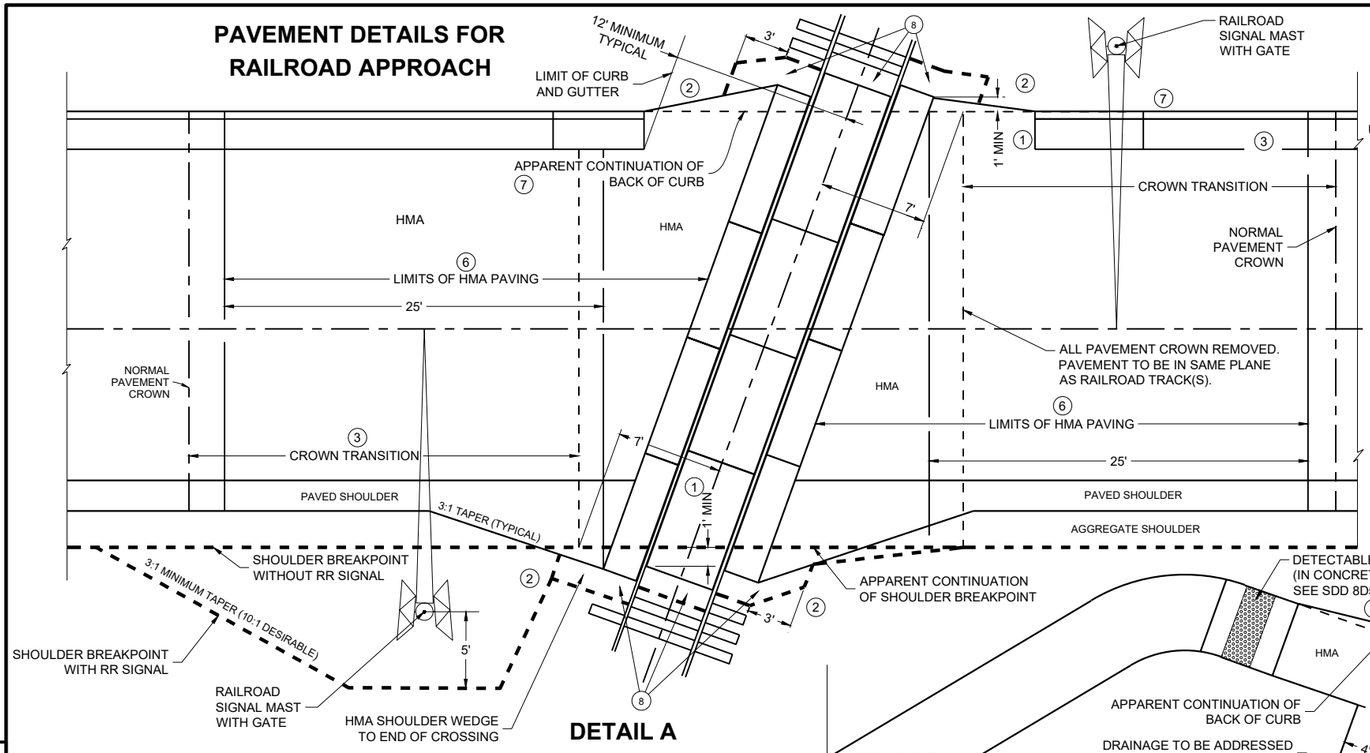
APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

PAVEMENT DETAILS FOR RAILROAD APPROACH



DETAIL A
RAILROAD APPROACH

GENERAL NOTES CONTINUED

(1) 1' MINIMUM CROSSING SURFACE COVERAGE PAST THE APPARENT CONTINUATION OF SHOULDER BREAKPOINT, BACK OF CURB, OR OUTSIDE EDGE OF SIDEWALK/PATH. INDIVIDUAL RAILROADS MAY HAVE DIFFERENT MINIMUM STANDARDS.

(2) HMA FLARE FROM OUTSIDE EDGE OF SIDEWALK/PATH, BACK OF CURB, OR AGGREGATE SHOULDER BREAKPOINT TO THE END OF CROSSING SURFACE MATERIAL.

(3) CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.

(4) NEAR EDGE OF PATH TO THE CENTER OF SIGNAL OR GATE MAST SHOULD BE A MINIMUM OF 5'-0". FOR SIDEWALK, THE NEAR EDGE SHOULD BE A MINIMUM OF 3'-0" TO THE CENTER OF SIGNAL OR GATE. NEAR EDGE OF SIDEWALK TO A NON-GATED MAST OR CANTILEVER SHOULD BE A MINIMUM OF 2'-6". SEE PLAN FOR RAILROAD SIGNAL AND GATE LOCATION IF THEY ARE NOT ALREADY INSTALLED.

(5) TERRACE WIDTH VARIES. SEE PLAN FOR RAILROAD SIGNAL AND GATE LOCATIONS. PER PLAN OR PROJECT ENGINEER THE TERRACE AND SIDEWALK/PATH GRADES SHALL BE TRANSITIONED TO MATCH THE GRADE OF THE TRACK. FIELD FIT TO AVOID PONDING.

(6) 25' MINIMUM HMA PAVING MEASURED PARALLEL TO THE ROAD OR 10' MINIMUM MEASURED PERPENDICULAR TO THE TRACK FROM THE EDGE OF THE CROSSING SURFACE, WHICHEVER IS GREATER.

(7) REFERENCE SDD 8-D-01 END SECTION CURB AND GUTTER. MEDIAN END NEAR THE TRACK SHOULD BE PARALLEL TO THE TRACK. 6'-0" TAPER FOR A MEDIAN SHOULD BE REDUCED TO GET FULL HEIGHT CURB WHERE THE GATE COMES DOWN. DESIGN OPTION TO POUR MEDIAN TAPER IN ONE PIECE. BUILD PER PLAN UNLESS OTHERWISE APPROVED BY THE RAILROAD ENGINEER AND THE PROJECT ENGINEER.

(8) IF METAL END PLATES ARE NOT INSTALLED BY THE RAILROAD THEN HMA PAVEMENT WEDGE SHALL BE PLACED AT THE END OF THE LAST PANEL TAPERED TO BACK EDGE OF NEXT TIE AND THOROUGHLY COMPACTED. SEE DETAIL G.

GENERAL NOTES

PLANS AND SECTIONS ARE TYPICAL. DIMENSIONS VARY PER PROJECT.

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

CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS DIRECTED OTHERWISE. IF THE FINAL GRADES DON'T MATCH TO THE PLAN GRADES THEN GRADE ADJUSTMENTS WILL BE NECESSARY. CONFIRM NEW GRADES WITH PROJECT ENGINEER.

HMA PAVEMENT APPROACHES, HMA PAVEMENT CROSSING SURFACES, AND HMA FLANGEWAY/FIELD FILLERS TO BE REPLACED BY ROADWAY CONTRACTOR UNLESS DIRECTED OTHERWISE BY THE PLANS, SPECIAL PROVISIONS, RAILROAD ENGINEER, OR PROJECT ENGINEER.

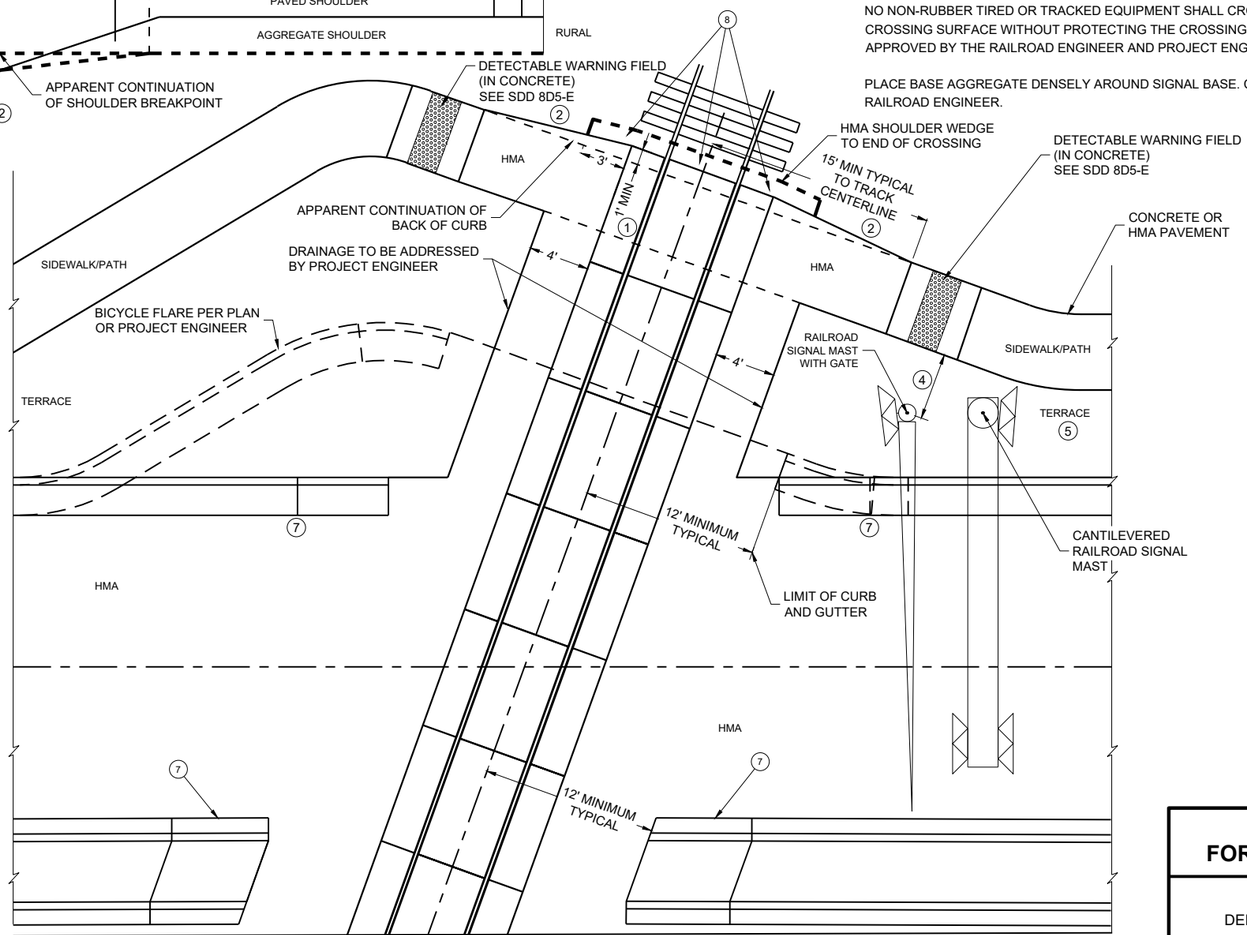
HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

WHEN THERE IS A SIDEWALK OR SHARED-USE PATH, ADD DETECTABLE WARNING FIELDS PER CURRENT STANDARD DETAIL DRAWING 8D5-E.

THE CROSSING SHALL NOT BE OPENED TO ANY TYPE OF TRAFFIC UNTIL IT IS FULLY PAVED AND COOLED SUFFICIENTLY UNLESS OTHERWISE APPROVED BY THE RAILROAD ENGINEER AND THE PROJECT ENGINEER.

NO NON-RUBBER TIRED OR TRACKED EQUIPMENT SHALL CROSS OR SIT ON THE CROSSING SURFACE WITHOUT PROTECTING THE CROSSING SURFACE WITH A METHOD APPROVED BY THE RAILROAD ENGINEER AND PROJECT ENGINEER.

PLACE BASE AGGREGATE Ddensely AROUND SIGNAL BASE. COORDINATE WITH THE RAILROAD ENGINEER.



DETAIL B
MEDIAN AND SIDEWALK/SHARED-USE PATH APPROACH

PAVEMENT DETAILS FOR RAILROAD APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

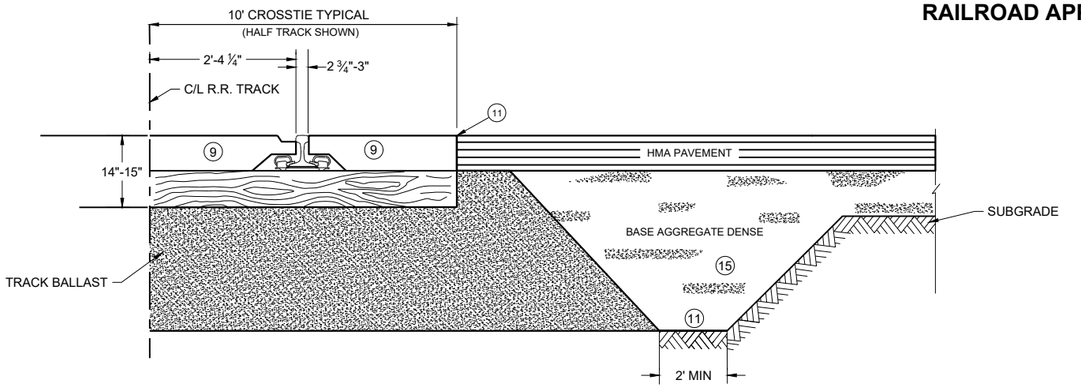
/S/ Kristen Sommers
STATE RAILROAD ENGINEERING AND SAFETY SUPERVISOR

FHWA

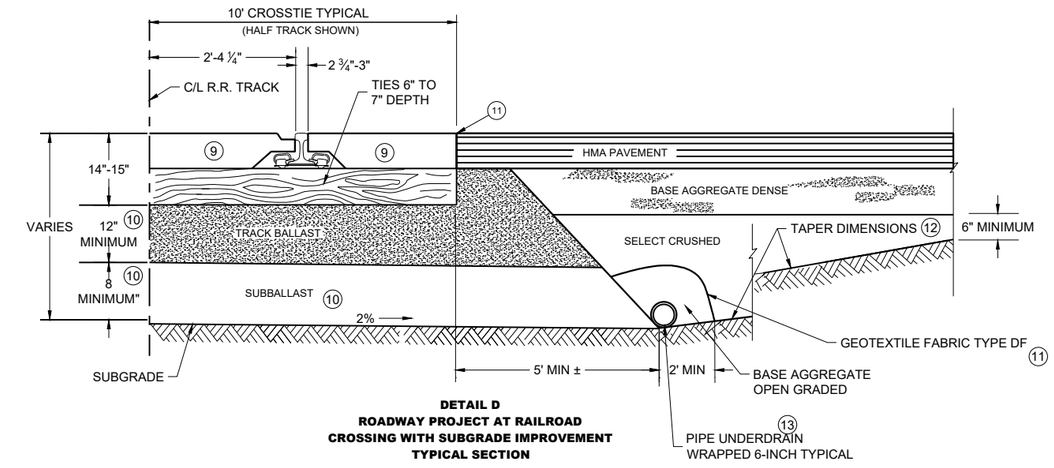
6

SDD 13B01-11a

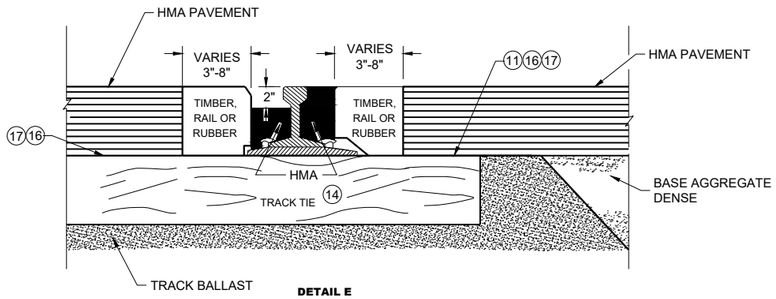
TYPICAL SECTIONS FOR RAILROAD APPROACH



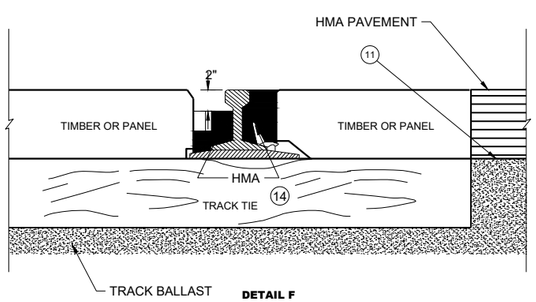
DETAIL C
ROADWAY PROJECT AT RAILROAD
CROSSING WITHOUT SUBGRADE IMPROVEMENT
TYPICAL SECTION



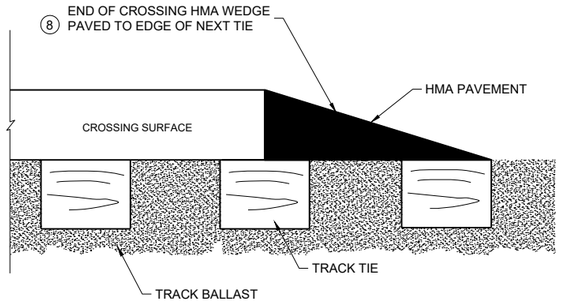
DETAIL D
ROADWAY PROJECT AT RAILROAD
CROSSING WITH SUBGRADE IMPROVEMENT
TYPICAL SECTION



DETAIL E
TIMBER, RAIL OR RUBBER SECTION
HMA FLANGEWAY AND FIELD FILLERS



DETAIL F
PANEL SECTION
HMA FLANGEWAY AND FIELD FILLERS



DETAIL G
END OF CROSSING HMA WEDGE

GENERAL NOTES

(8) IF METAL END PLATES ARE NOT INSTALLED BY THE RAILROAD THEN HMA PAVEMENT WEDGE SHALL BE PLACED AT THE END OF THE LAST PANEL TAPERED TO BACK EDGE OF NEXT TIE AND THOROUGHLY COMPACTED. SEE DETAIL A AND B.

(9) MATCH THE CROSSING TYPE THAT IS INSTALLED UNLESS OTHERWISE DIRECTED BY PROJECT ENGINEER.

(10) TRACK BALLAST AND SUBBALLAST REQUIRED 12" AND 8" MINIMUM DEPTHS RESPECTIVELY. DIMENSION FROM BOTTOM OF TRACK TIE TO HIGH SIDE OF 2% SLOPE. THE 2% SLOPE IS REQUIRED ON RAILROAD SUBBALLAST. SEE PLAN FOR CROWN, MATERIAL THICKNESS, AND SLOPE DIRECTION. SUBBALLAST CAN BE HMA, 1 1/2" BASE AGGREGATE DENSE, SELECT CRUSHED, OR A COMBINATION OF THEM.

(11) GEOTEXTILE FABRIC TYPE SAS PLACED IN ORDER TO PROVIDE STABILIZATION AND SEPARATION ON TOP OF THE TRACK BALLAST WHERE IT IS UNDER HMA PAVEMENT, BASE AGGREGATE DENSE OR SELECT CRUSHED MATERIAL AND THE FIELD SIDE BALLAST CRIBS. GEOTEXTILE FABRIC TYPE DF PLACED IN ORDER TO PROVIDE STABILIZATION AND SEPARATION UNDER AND AROUND THE PIPE UNDERDRAIN. PLACING GEOTEXTILE FABRIC OR GEOGRID UNDER THE SUBBALLAST IS OPTIONAL.

(12) TAPER DIMENSIONS PROVIDED BY PLAN OR BY PROJECT ENGINEER.

(13) IF SHOWN ON THE PLAN, TYPICAL 6-INCH PERFORATED PVC SCHEDULE 80 PIPE UNDERDRAIN TO BE PLACED ALONG THE TOE OF SLOPE, GRADED TO DRAIN AND DAYLIGHT OR INTO STORM SEWER. BASE AGGREGATE OPEN GRADED OVER PIPE UNDERDRAIN AND THEN WRAPPED IN GEOTEXTILE FABRIC TYPE DF SCHEDULE A IN ORDER TO STABILIZE AND SEPARATE FROM SELECT CRUSHED.

(14) HMA FLANGEWAY AND FIELD FILLERS ARE TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR, WHEN NOT PROVIDED BY OTHERS AS PART OF THE CROSSING SURFACE MATERIAL. IF THE CROSSING SURFACE IS NOT BEING REPLACED, THEN REMOVE AND REPLACE THE HMA FLANGEWAY AND FIELD FILLERS AS DIRECTED BY THE RAILROAD OR PROJECT ENGINEER.

(15) GRADE TO MATCH EXISTING OR PROPOSED TYPICAL SECTION OF ROADWAY. SEE PLAN OR PROJECT ENGINEER FOR MORE DETAIL. IF NOT NOTED OTHERWISE IN THE PLAN, BACKFILL ANY REMOVED BASE AND SUBGRADE WITH BASE AGGREGATE DENSE.

(16) IF THE CROSSING IS NOT BEING REPLACED, REMOVE AND REPLACE HMA AS DIRECTED BY RAILROAD AND PROJECT ENGINEER. CARE MUST BE TAKEN TO NOT DAMAGE CROSSING PANELS, TIES, RAIL, PLATES AND SPIKES.

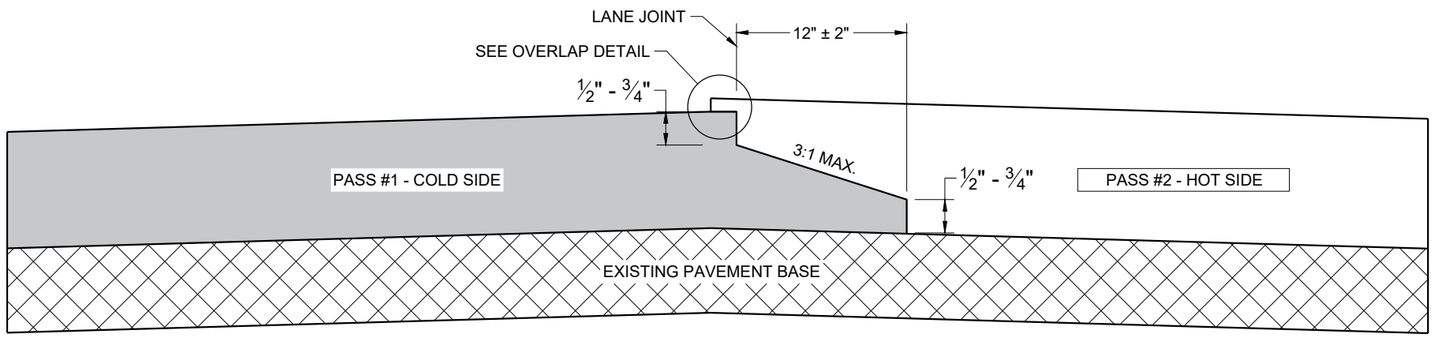
(17) PLACE HMA FULL DEPTH. AGGREGATE IS NOT TO BE PLACED BETWEEN THE RAILROAD TIES AND THE HMA PAVEMENT.

TYPICAL SECTIONS FOR RAILWAY APPROACH

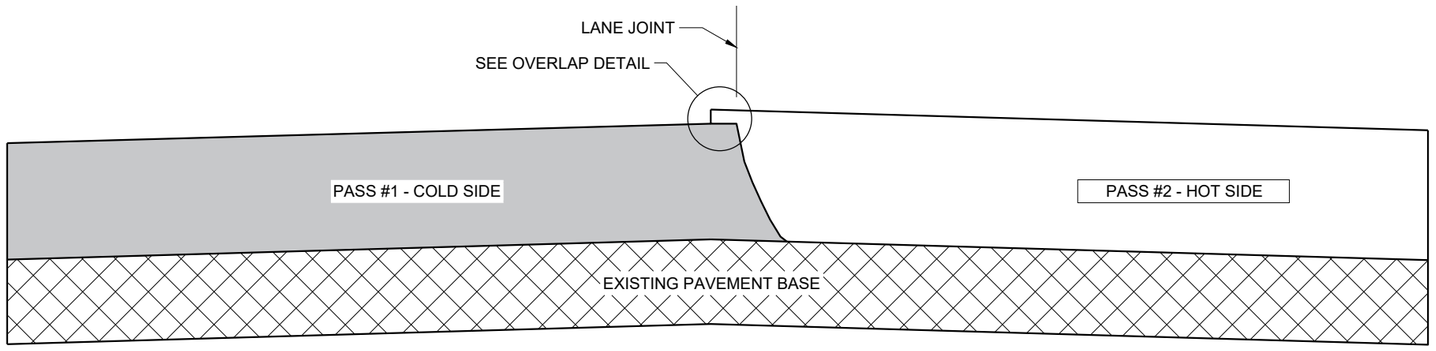
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Kristen Sommers — STATE RAILROAD ENGINEERING AND SAFETY SUPERVISOR
FHWA

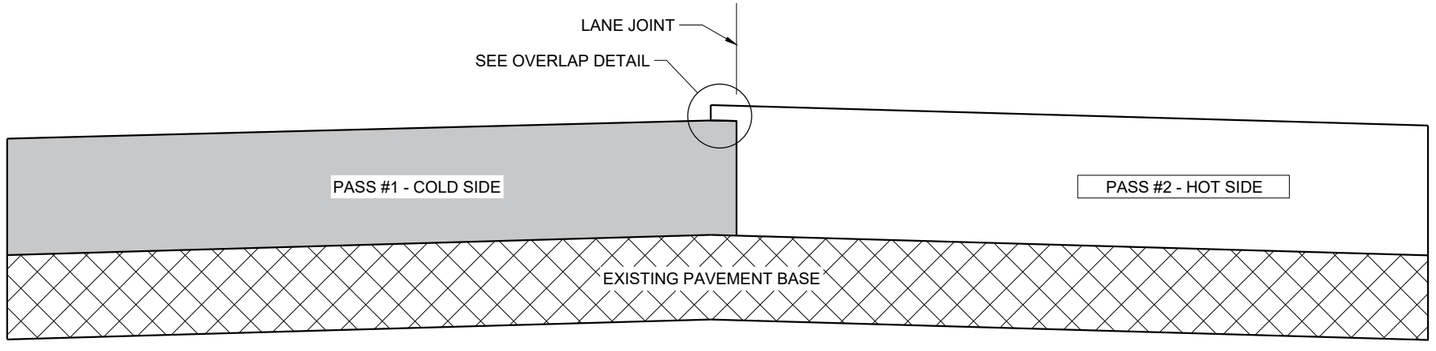
6
SDD 13B01-11b



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

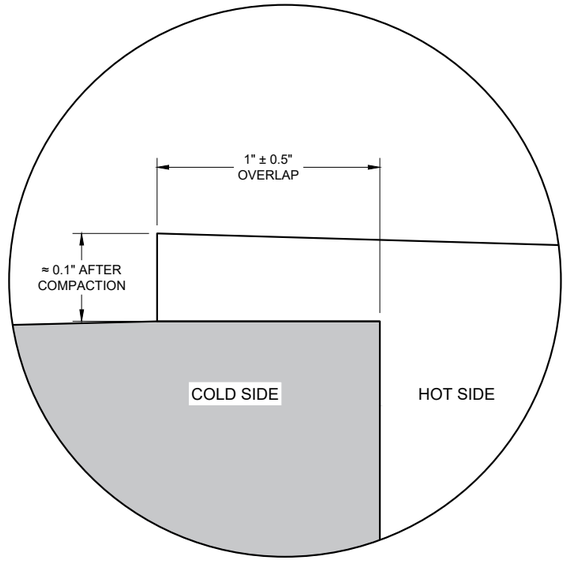
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

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SDD 13C19 - 03

SDD 13C19 - 03

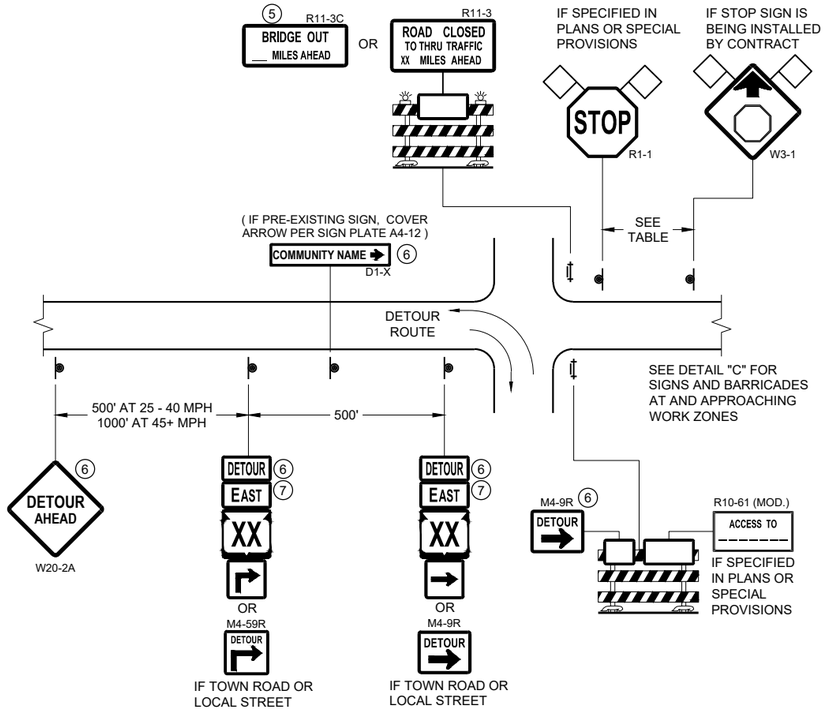
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

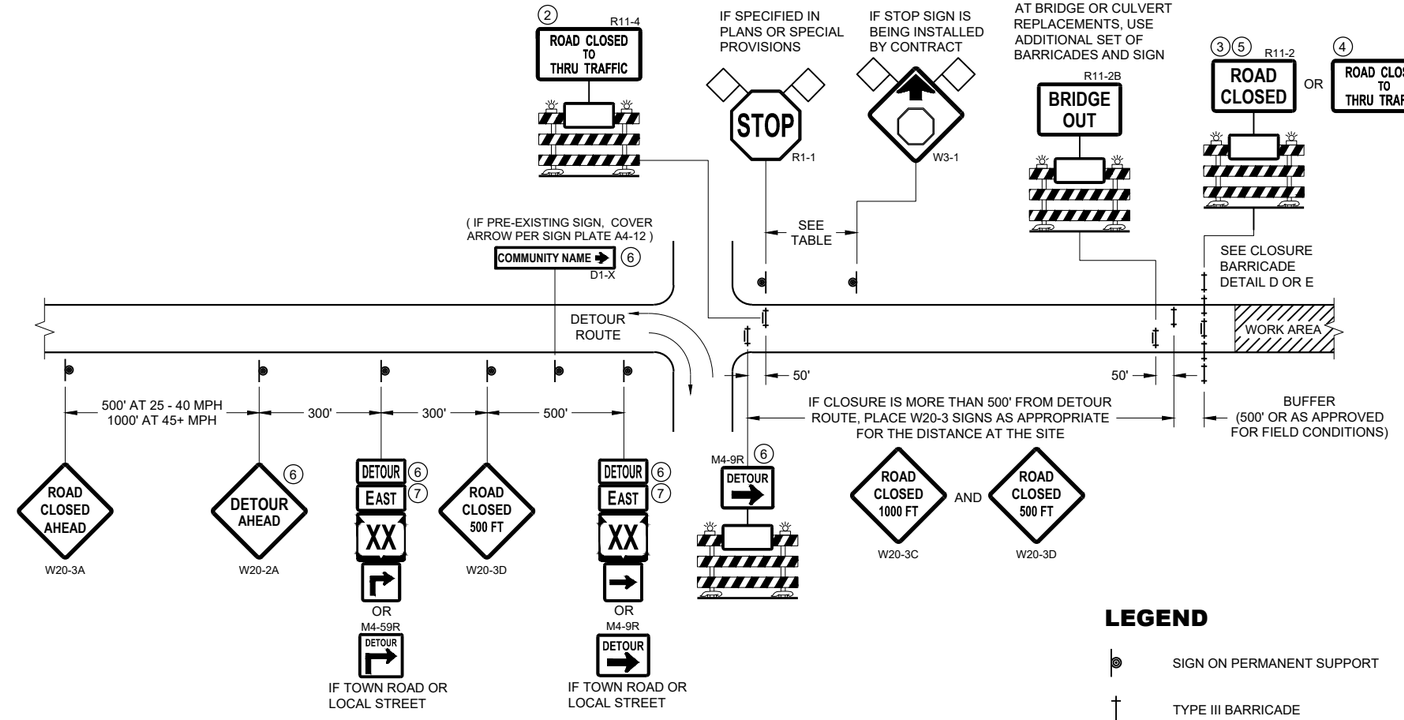
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



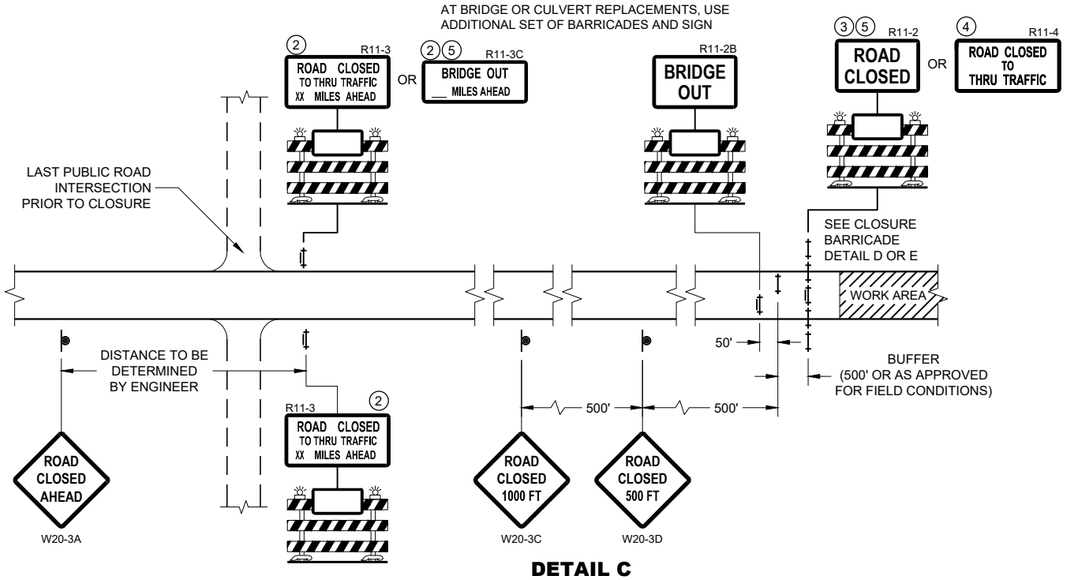
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

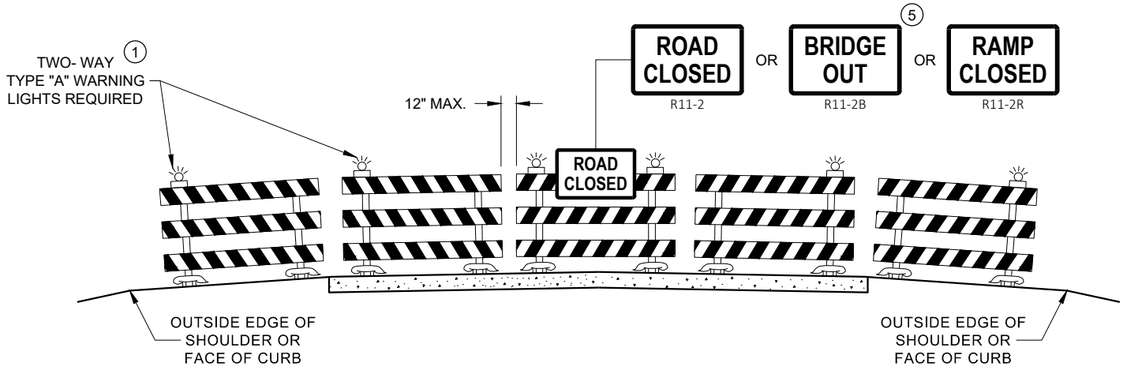
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

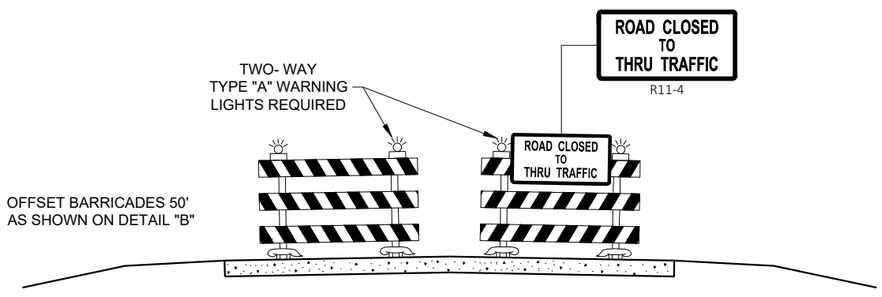
FHWA

6

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 09b

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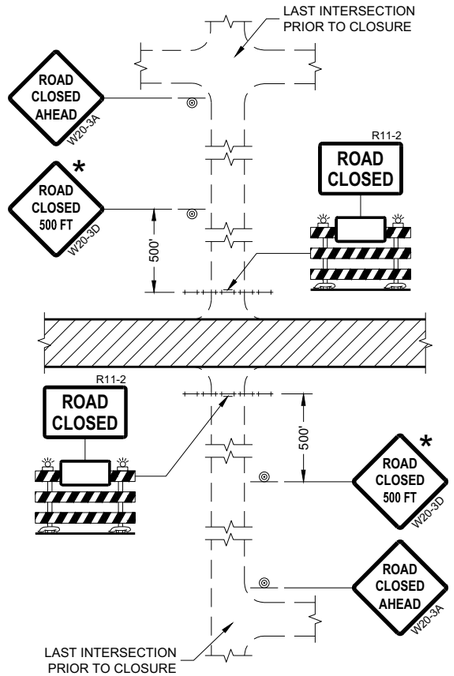
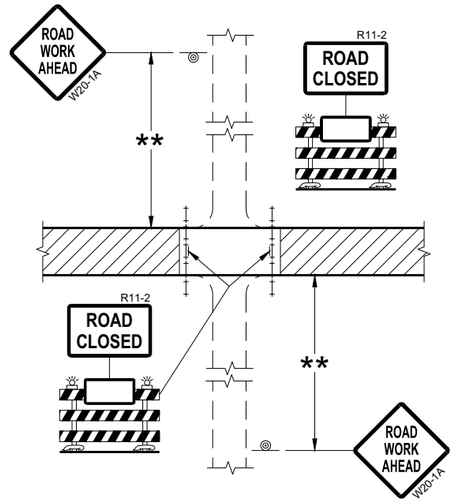
SDD 15C02 - 09b



DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO 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.

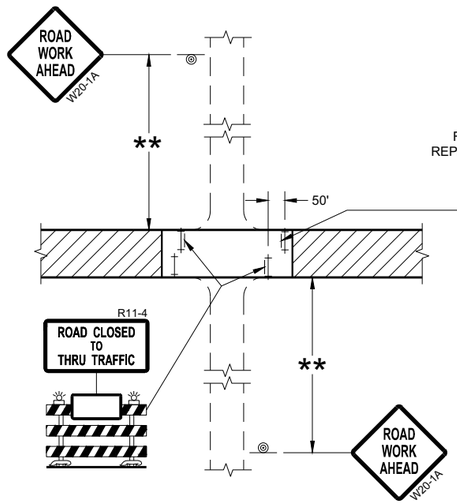
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

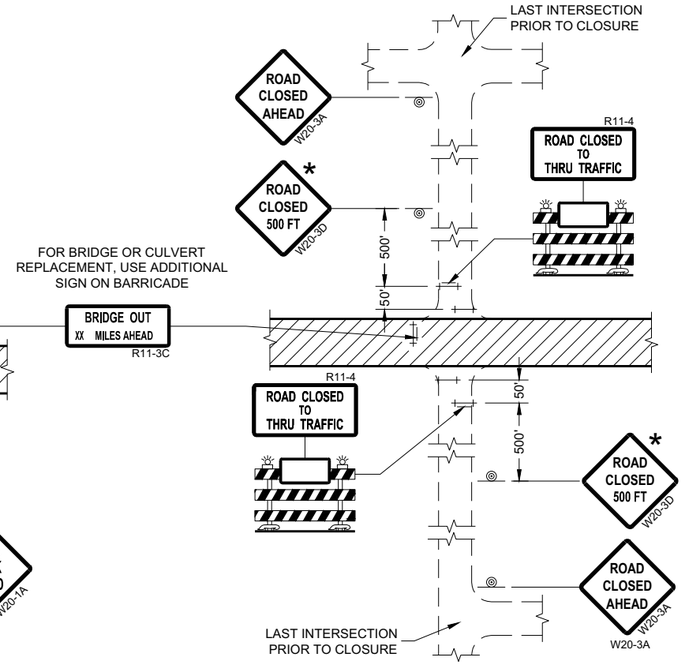
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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.





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

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

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
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15C03 - 05

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

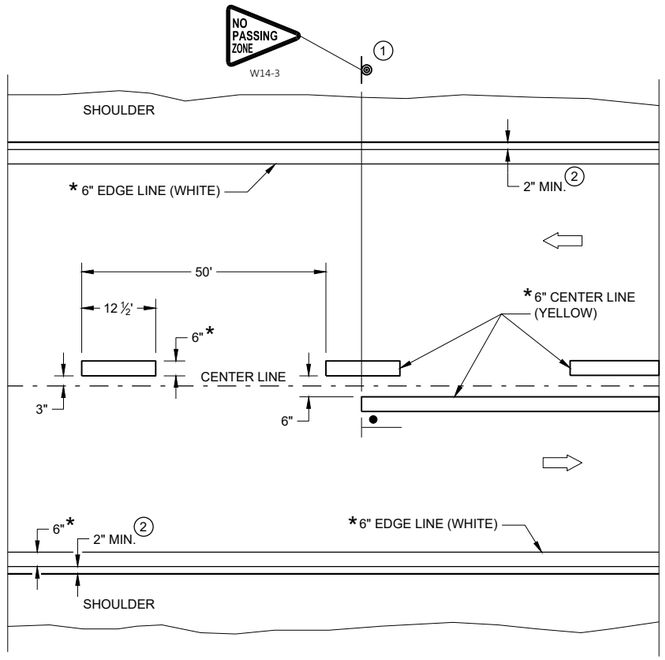
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

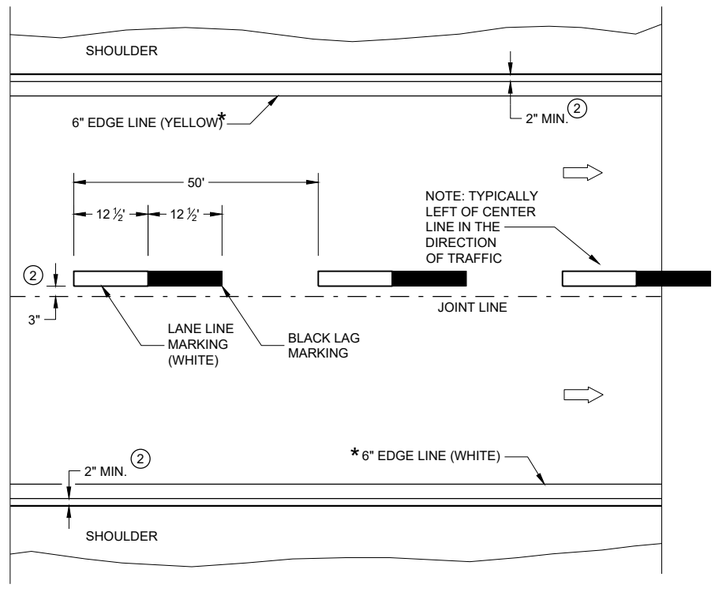
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

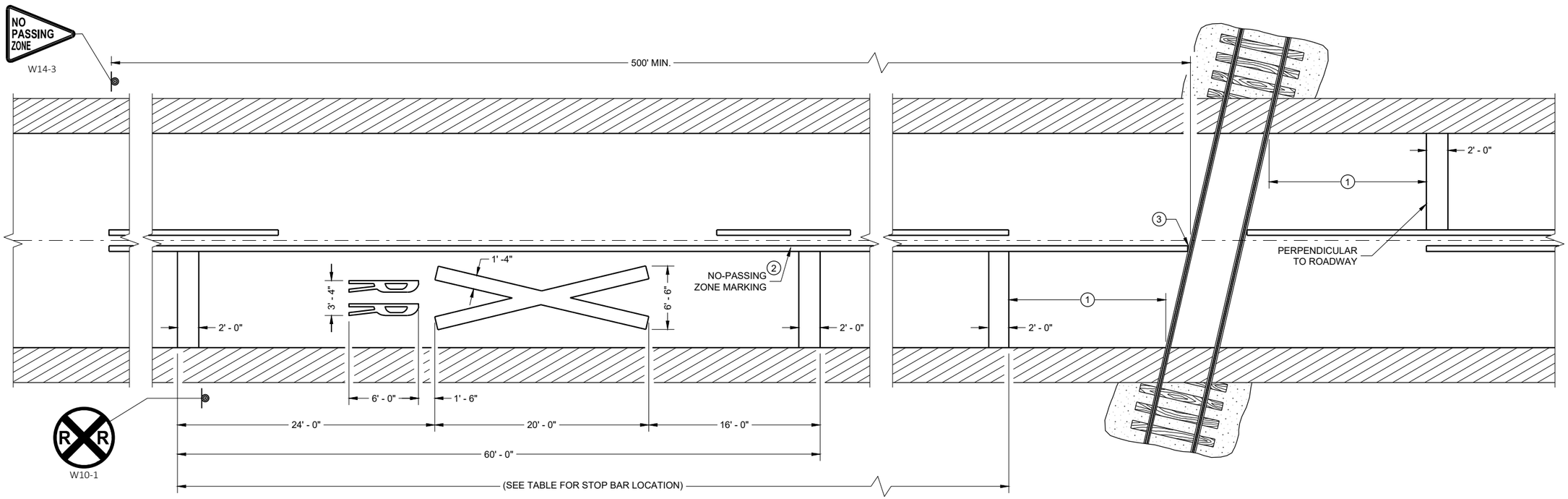
May 2023
DATE

/S/ Jeannie Silver
STATEWIDE SIGNING AND M ENGINEER

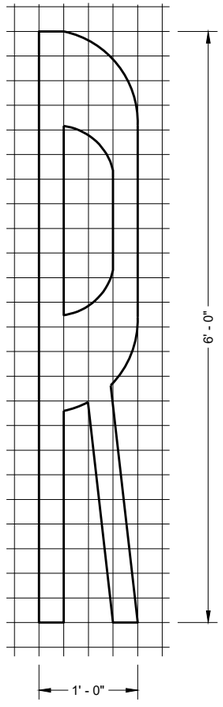
FHWA

6

SDD 15C08-23a



PAVEMENT MARKING



LEGEND

SIGN ON PERMANENT SUPPORT

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.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

TRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

(1) PLACE STOP BAR APPROXIMATELY 8 FEET IN ADVANCE OF THE GATE (IF PRESENT), BUT NO CLOSER THAN 15 FEET IN ADVANCE OF THE NEAREST RAIL. FIELD-FIT STOP BAR TO MAXIMIZE VIEW OF APPROACHING TRAIN.

(2) 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.

(3) FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

DISTANCE TABLE

TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

POSTED SPEED (M.P.H.)	DIMENSION RANGE (FEET)
25	150* - 250'
30	200* - 300'
35	250* - 450'
40	300* - 500'
45	400* - 650'
50	550* - 800'
55	750* - 1000'
60	1000* - 1250'
65	1000* - 1250'

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSED PROXIMITY OF DRIVEWAYS, BRIDGES, SIDE ROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD - HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

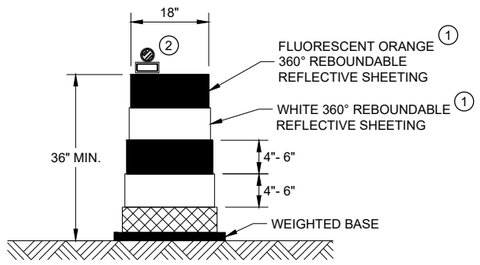
FHWA

6

SDD 15C09-13a

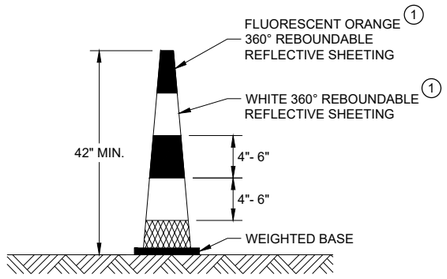
GENERAL NOTES

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



DRUM

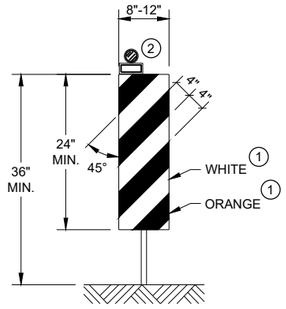
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

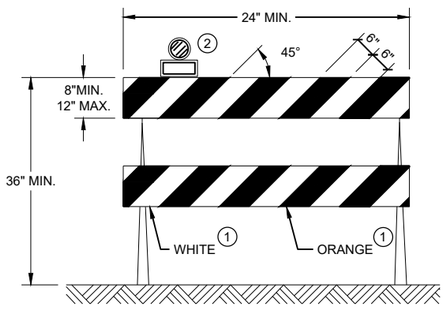
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



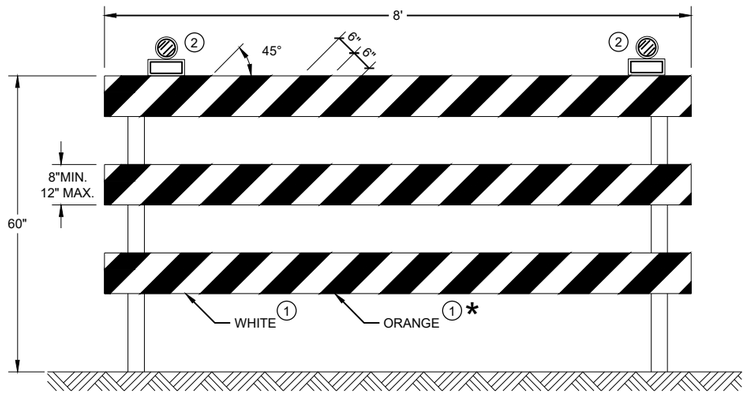
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b
SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

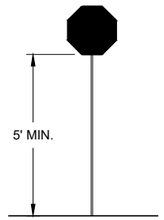
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



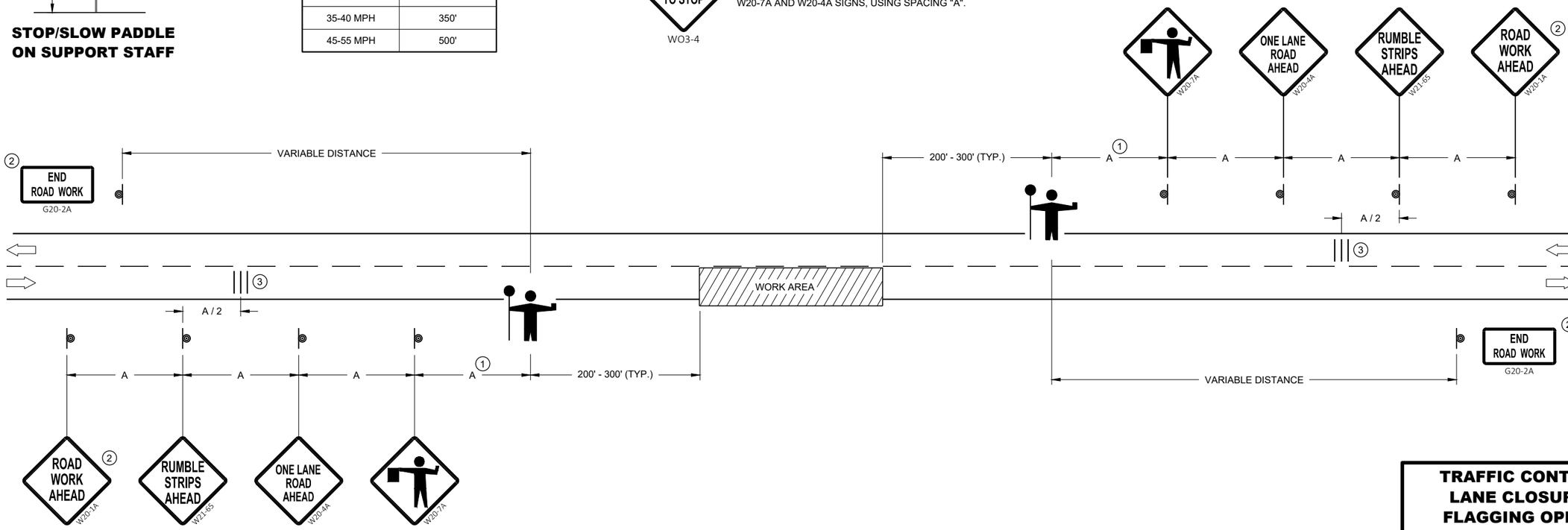
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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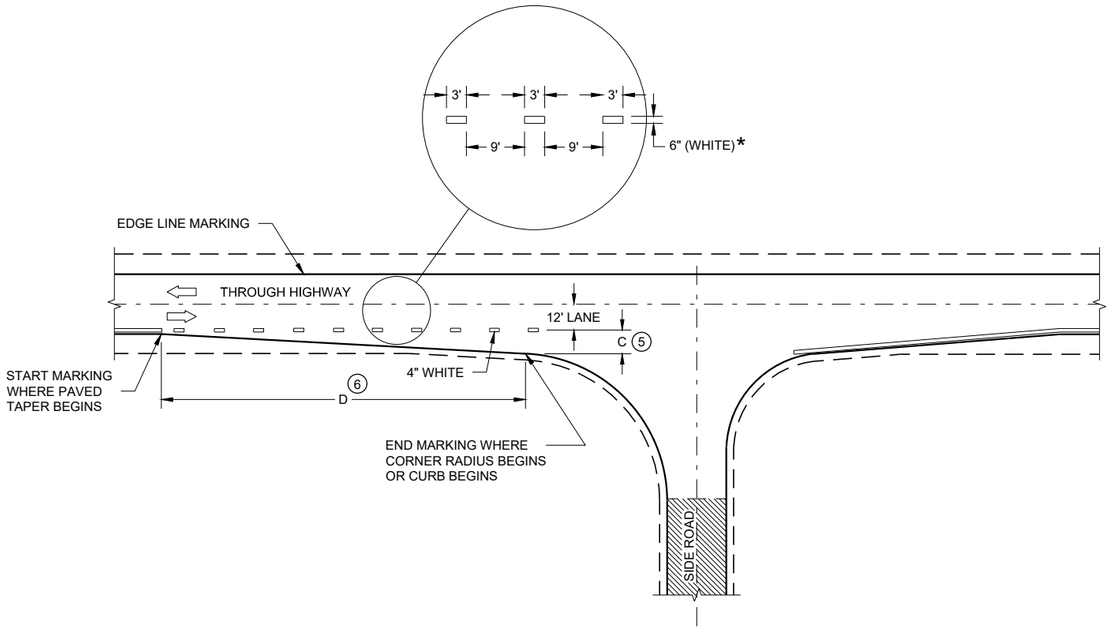
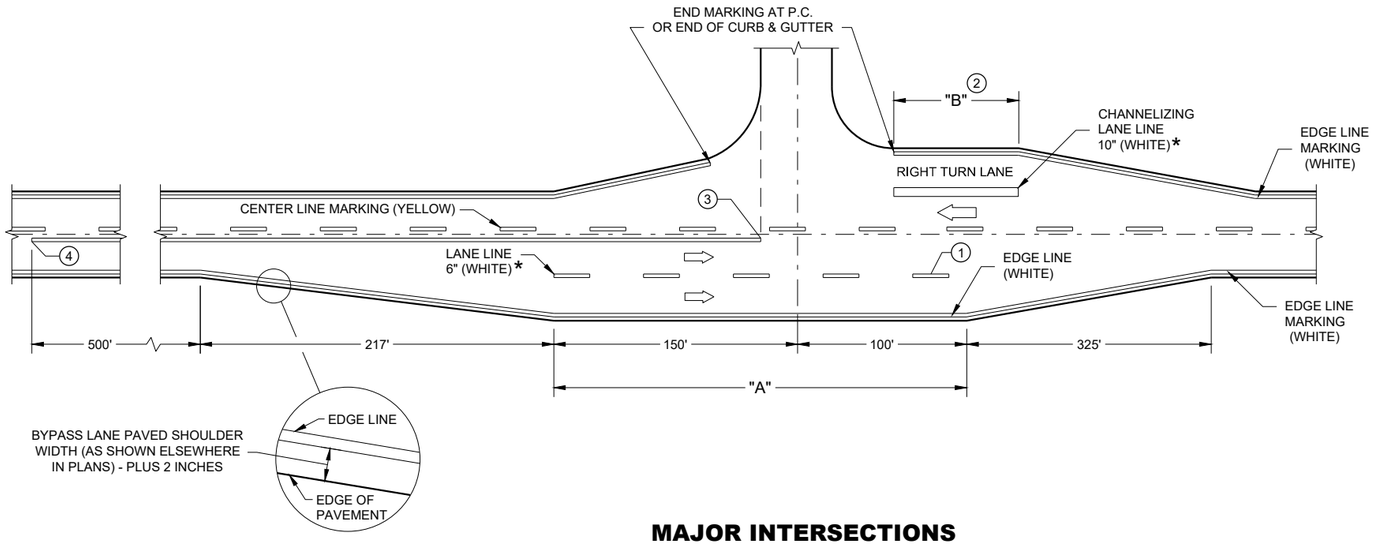
SDD 15C12 - 09a



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

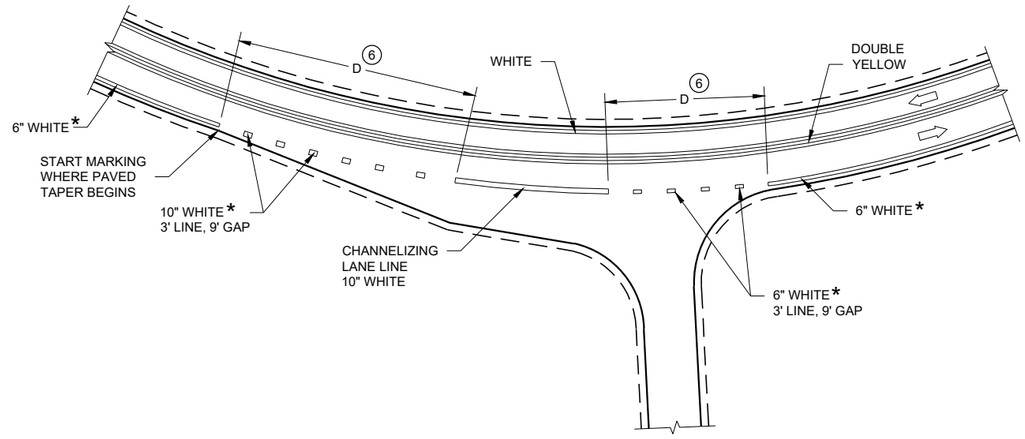
GENERAL NOTES

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

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

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

SDD 15C35-06a

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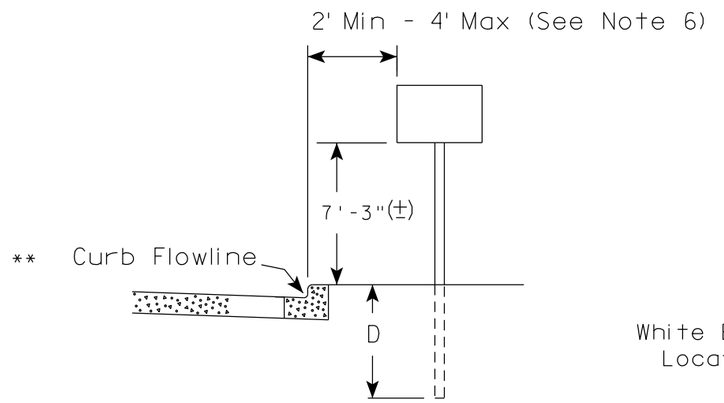
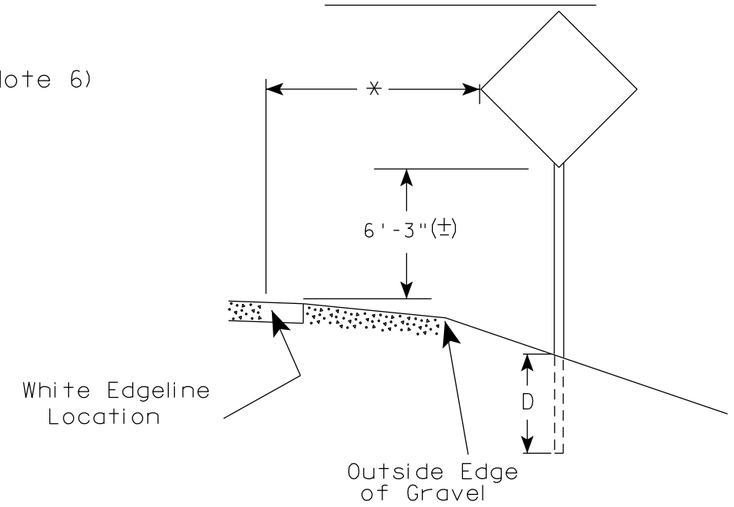
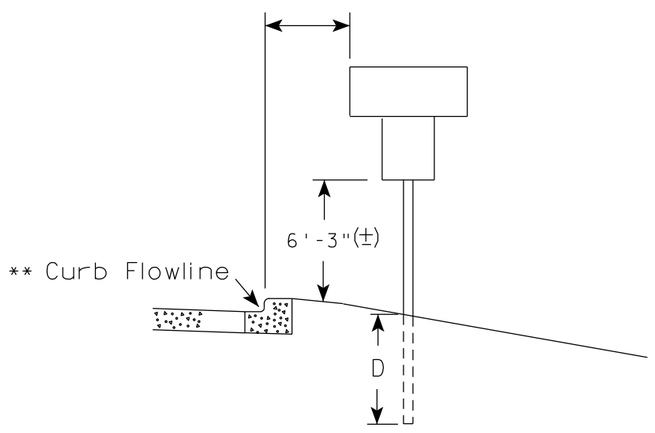
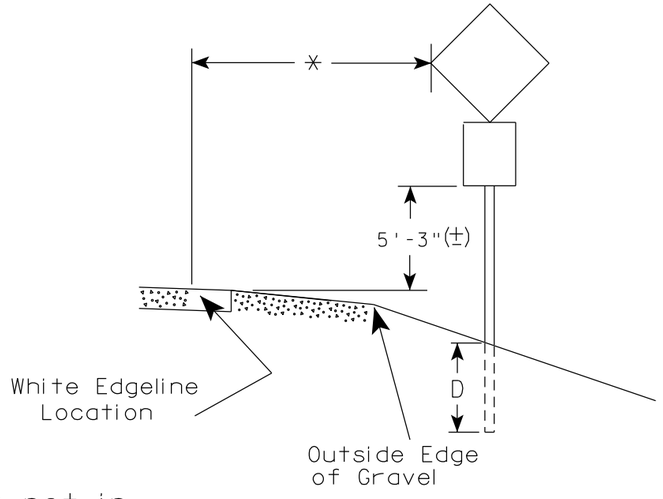
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). 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 directd by the Engineer.

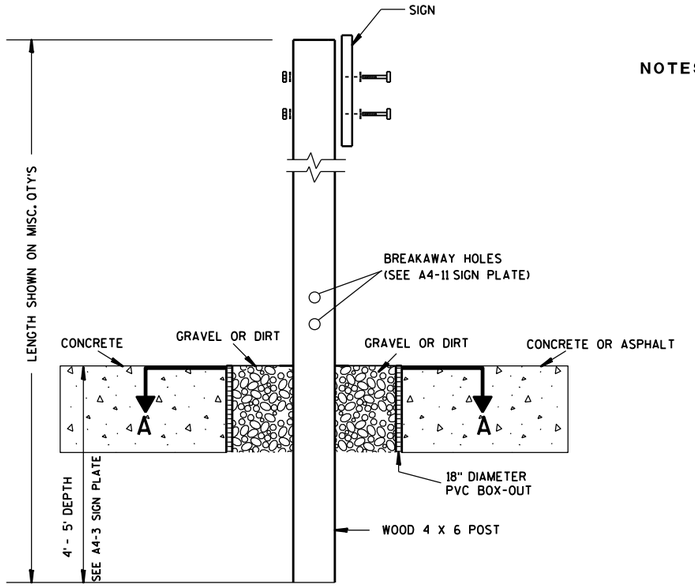
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

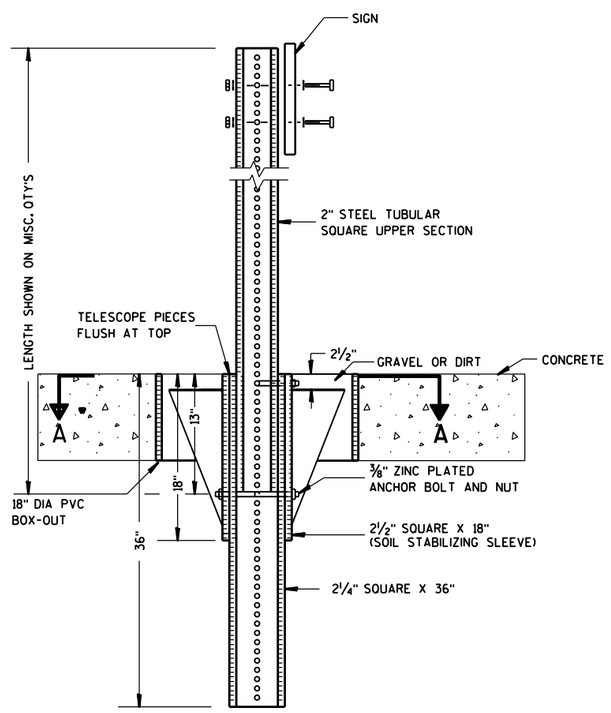
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 29	E



ELEVATION VIEW

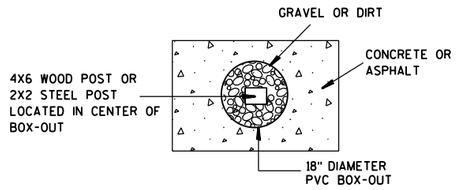
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

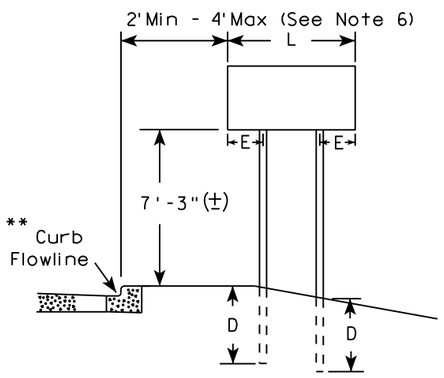
APPROVED Matthew R Rauch
for State Traffic Engineer

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

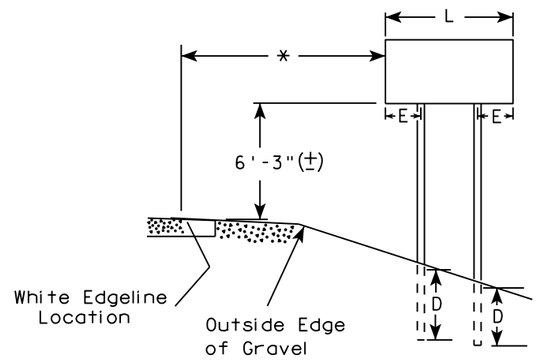
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

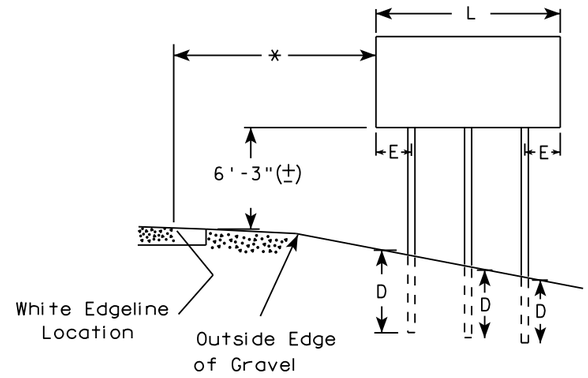
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

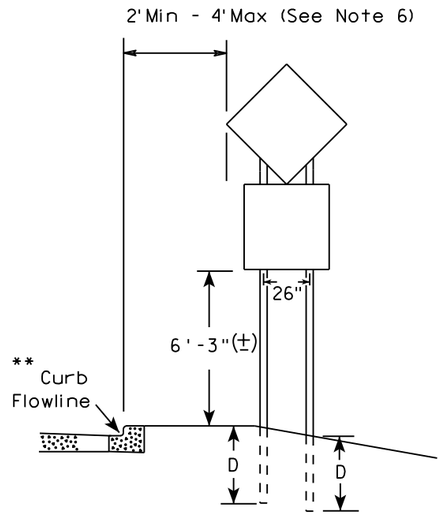
URBAN AREA



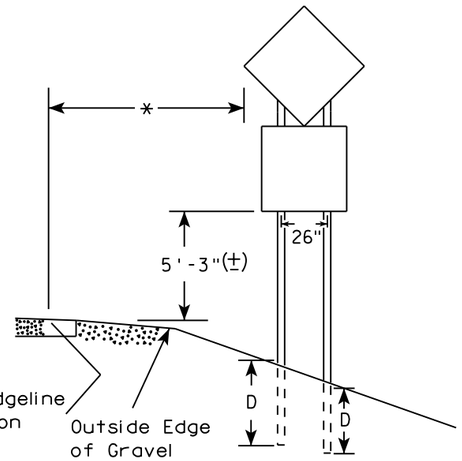
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 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" (±).

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

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

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

POST EMBEDMENT DEPTH

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

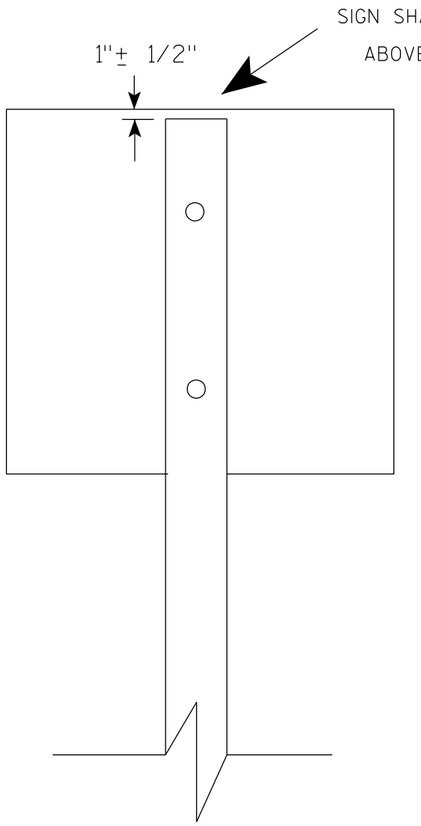
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

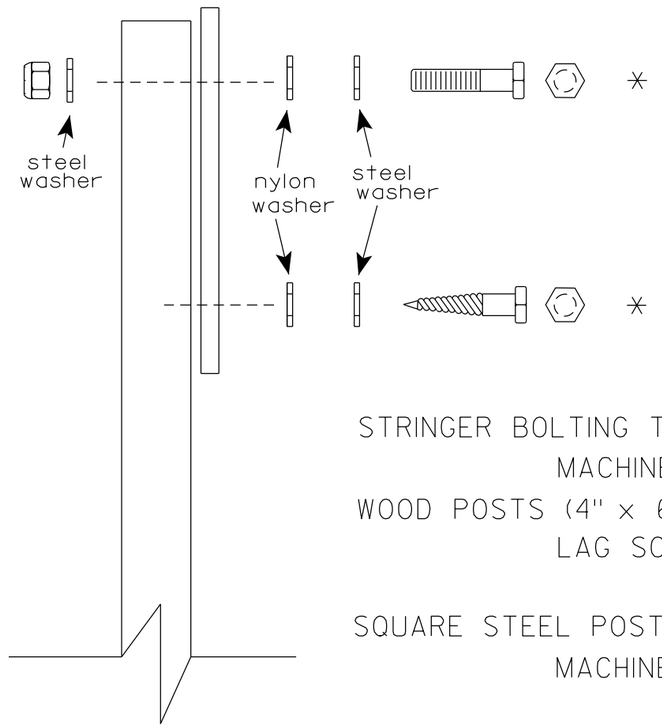
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 31	E





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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

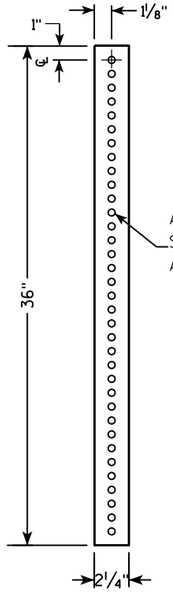
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

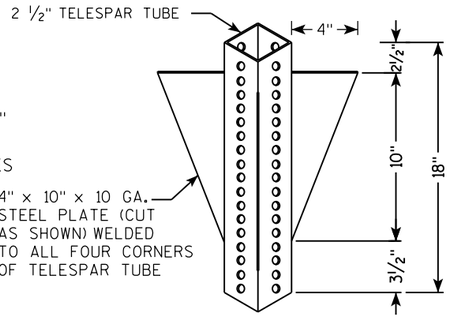
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

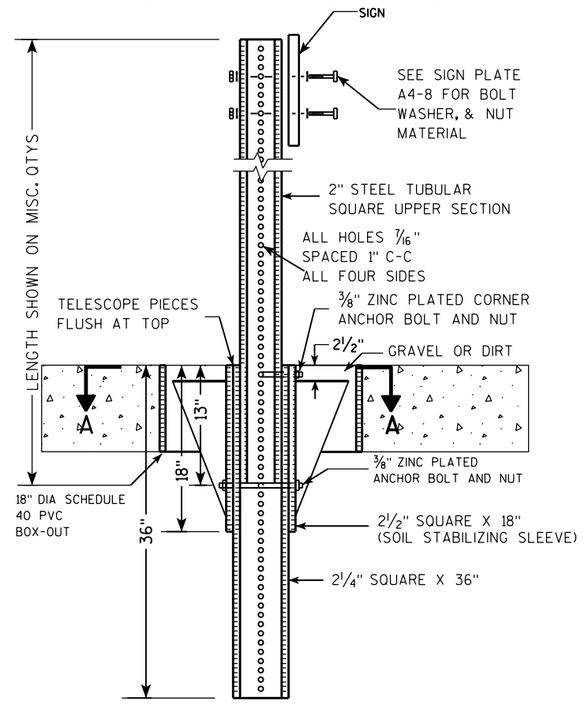
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



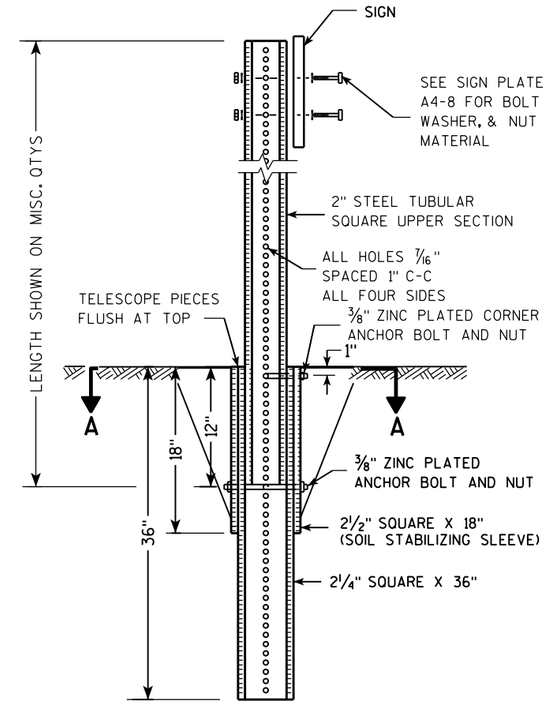
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

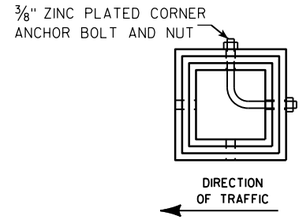


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

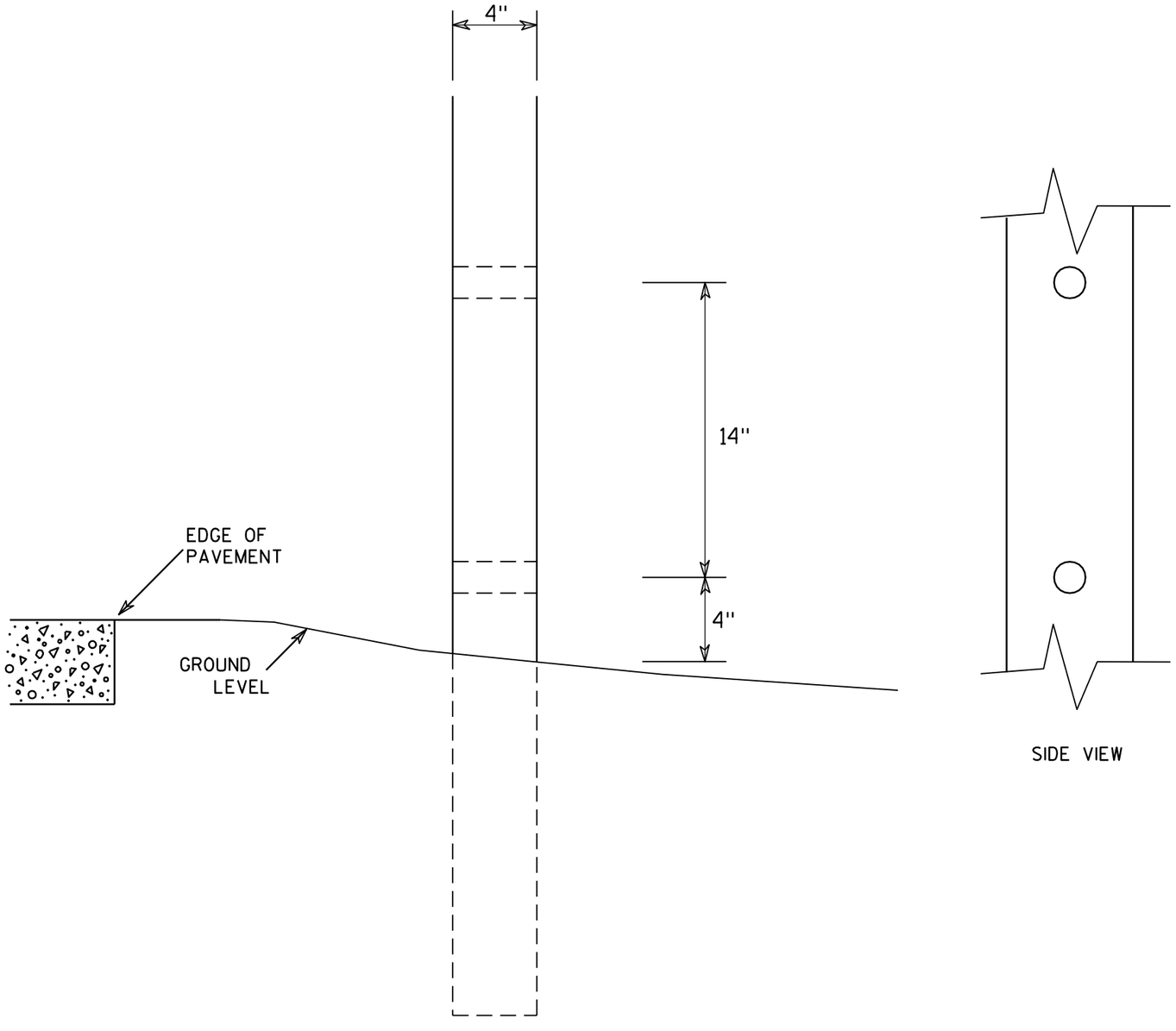
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 34	E

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

GRE MAY 2024

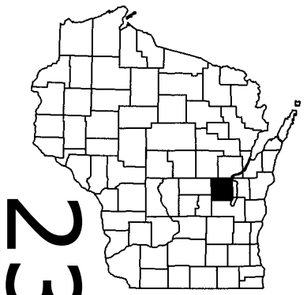
PROJECT ID: 6540-10-71

WITH: 6540-08-72 / 6540-11-71

COUNTY: WINNEBAGO

ORDER OF SHEETS

TOTAL SHEETS = 50



23

18

N

DESIGN DESIGNATION

A.A.D.T.	2024	=	4710
A.A.D.T.	2044	=	5410
D.H.V.		=	476
D.D.		=	62/38
T.		=	11.0%
DESIGN SPEED		=	55 MPH
ESALS		=	1,200,000 HMA

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (30'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

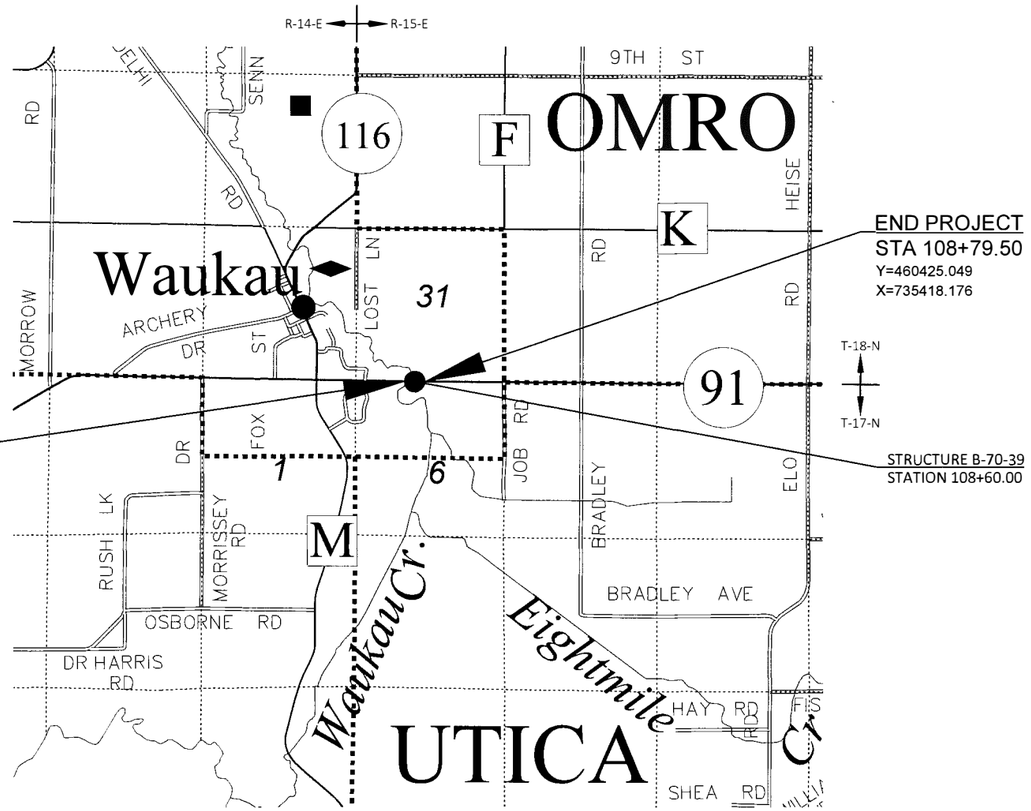
BERLIN - OSHKOSH

WAUKAU CREEK STRUCTURE

STH 91

WINNEBAGO

STATE PROJECT NUMBER
6540-10-71



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.007 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WINNEBAGO 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
6540-10-71		

ORIGINAL PLANS PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
85 South Pioneer Road, Suite 300 • Fond du Lac, WI 54935
(920) 924-5720 • fax (920) 924-5725

WISCONSIN JEFFREY A. CHVOSTA E-39047 SLINGER, WI PROFESSIONAL ENGINEER

DATE 01/11/24 JEFFREY A. CHVOSTA, PE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NE REGION
Designer	GREMMER & ASSOCIATES, INC.
Project Manager	W. BERT RAND
Regional Examiner	
Regional Supervisor	T. RABE

APPROVED FOR THE DEPARTMENT

DATE: 1/12/24 Bill Bertrand, P.E. (Signature)

E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAM\65401071-010101-TI.DWG PLOT DATE : 1/11/2024 12:30 PM PLOT BY : AARON SARAUER PLOT NAME :

GENERAL NOTES

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

SAWCUT LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD.

PRIOR TO THE PLACEMENT OF GUARDRAIL, THE SHOULDERS SHALL BE PLACED, SHAPED, AND COMPACTED.

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

TOPSOIL, FERTILIZER, SEED AND MULCH OR EROSION MAT AS SHOWN IN PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE PLACED ON ALL DISTURBED AREAS, EXCLUSIVE OF THE AREA OCCUPIED BY THE NEW PAVEMENTS, ENTRANCES, AND RELATED STRUCTURES.

NO FERTILIZER SHALL BE APPLIED WITHIN 20 FEET OF A BODY OF WATER OR WETLAND.

SECTIONS AS SHOWN ON THE CROSS-SECTIONS INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED.

EROSION CONTROL ITEMS SHOWN ARE APPROXIMATE, THE EXACT LOCATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THAT THE MEASURE IS NO LONGER NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EROSION CONTROL MEASURE AS DIRECTED BY THE ENGINEER.

PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH SDD "LONGITUDINAL MARKING (MAINLINE)."

SIGNING SHALL BE INSTALLED IN ACCORDANCE WITH SDD "SIGNING AND MARKING FOR TWO LANE BRIDGES" SITUATION 2.

BASE AGGREGATE DENSE ¾-INCH WEIGHT CALCULATIONS ARE BASED ON 2.1 TONS/CY. BASE AGGREGATE DENSE 1¼-INCH WEIGHT CALCULATIONS ARE BASED ON 2.0 TONS/CY.

HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LBS/SY/INCH.

TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION RATE OF 0.05 GAL/SY FOR FULL DEPTH HMA PAVEMENT SECTIONS (SHALL BE APPLIED BETWEEN ALL LAYERS OF ASPHALTIC PAVEMENT).

ABBREVIATIONS

AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALT
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
CC	CENTER OF CURVATURE
CE	COMMERCIAL ENTRANCE
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
E	EXTERNAL DISTANCE FROM MIDPOINT OF CIRCULAR CURVE FROM ANGLE INTERSECTION
ELEV	ELEVATION
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
L	LENGTH OF CURVE
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
M/L	MATCHLINE
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
REQ'D	REQUIRED
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SEG	SEGMENT
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TYP	TYPICAL
V	VELOCITY OR DESIGN SPEED

UTILITIES

COMMUNICATIONS

AT&T WISCONSIN
70 EAST DIVISION STREET
FOND DU LAC, WI 54935
ATTN: CHARLES BARTELT
PHONE: (920) 410-5104
EMAIL: cb1461@att.com

COMMUNICATIONS

SPECTRUM
1520 E DESTINATION DR
APPLETON, WI 54915
ATTN: JASON ORR
PHONE: (920) 378-0352
EMAIL: jason.orr@charter.com

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

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 1.068 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.249 ACRES

ORDER OF SECTION 2 SHEETS

NE REGION SURVEY COORDINATOR

WISCONSIN DEPARTMENT OF TRANSPORTATION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
ATTN: MICHAEL ANDRASCHKO
PHONE: (920) 492-4166
EMAIL: michael.andraschko@dot.wi.gov

DNR AREA LIAISON

WISCONSIN DEPT. OF NATURAL RESOURCES
WDNR NORTHEAST REGIONAL HQ
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
ATTN: JAY SCHIEFELBEIN
PHONE: (920) 360-3784
EMAIL: jeremiah.schiefelbein@wiscosnsin.gov

NE REGION PROJECT MANAGER

WISCONSIN DEPARTMENT OF TRANSPORTATION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
ATTN: WILLIAM BERTRAND, PE
PHONE: (920) 360-3124
EMAIL: william.bertrand@dot.wi.gov

DESIGN CONTACT

GREMMER & ASSOCIATES, INC.
93 SOUTH PIONEER ROAD, SUITE 300
FOND DU LAC, WI 54935
ATTN: JEFFREY A. CHVOSTA, PE
PHONE: (920) 924-5720
EMAIL: j.chvosta@gremmerassociates.com

WINNEBAGO COUNTY CONTACT

ROBERT DOEMEL
HIGHWAY COMMISSIONER
901 W COUNTY ROAD Y
OSHKOSH, WI 54901
PHONE: (920) 232-1700
EMAIL: rdoemel@co.winnebago.wi.us

2

BENCH MARKS

BM	DESCRIPTION	STATION	OFFSET	ELEVATION
1000	SET RAILROAD SPIKE IN POWER POLE ON SOUTH SIDE OF WIS 91, 685' EAST OF STRUCTURE B-70-39	115+49.4	43.3' RT	824.88
1001	CHISELED SQUARE ON SOUTHEAST WINGWALL OF STRUCTURE B-70-39	108+78.7	17.1' RT	818.16
1002	SET RAILROAD SPIKE IN 36" MAPLE TREE ON NORTH SIDE OF WIS 91, 600' WEST OF STRUCTURE B-70-39	102+62.7	39.8' LT	816.59

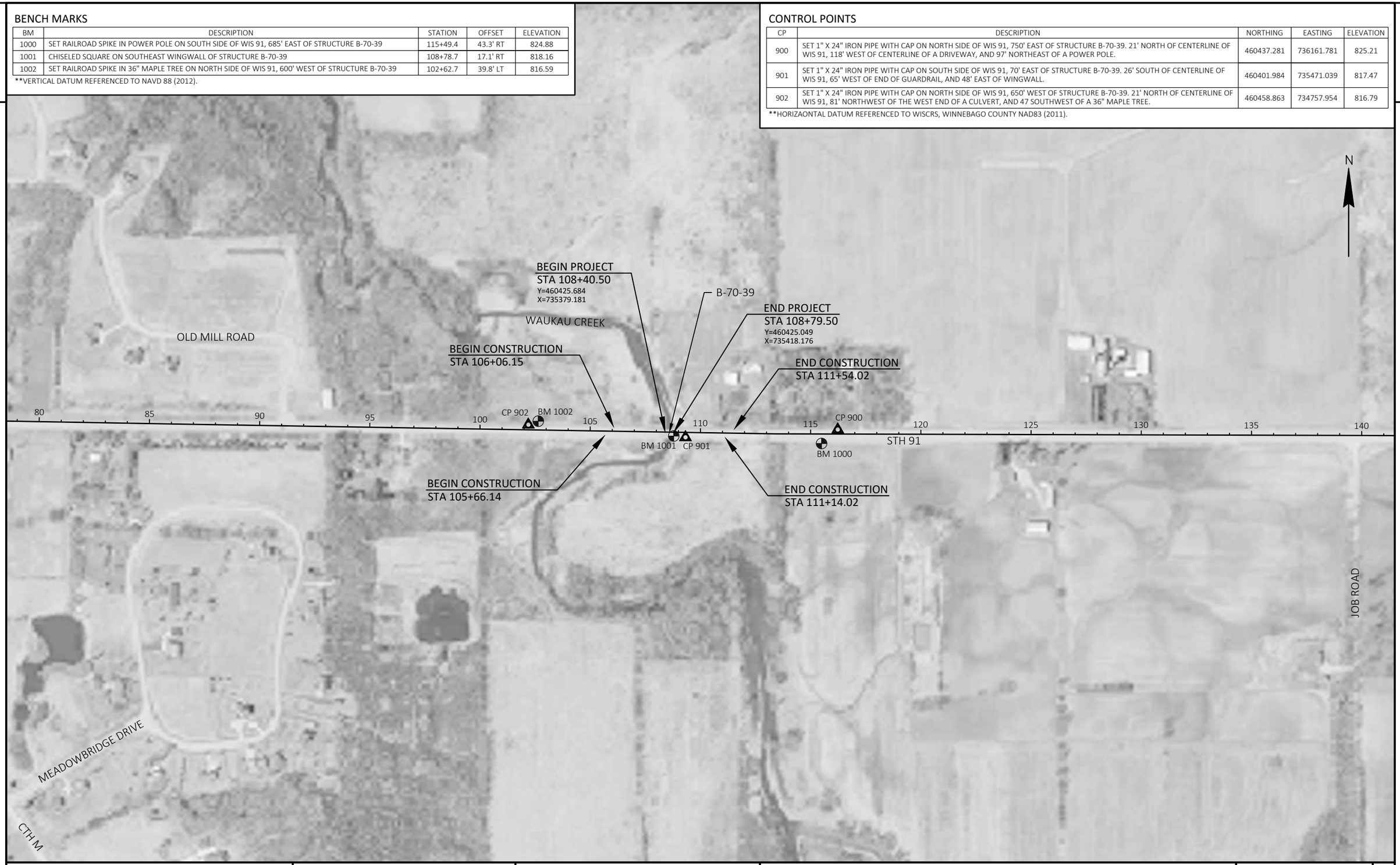
**VERTICAL DATUM REFERENCED TO NAVD 88 (2012).

CONTROL POINTS

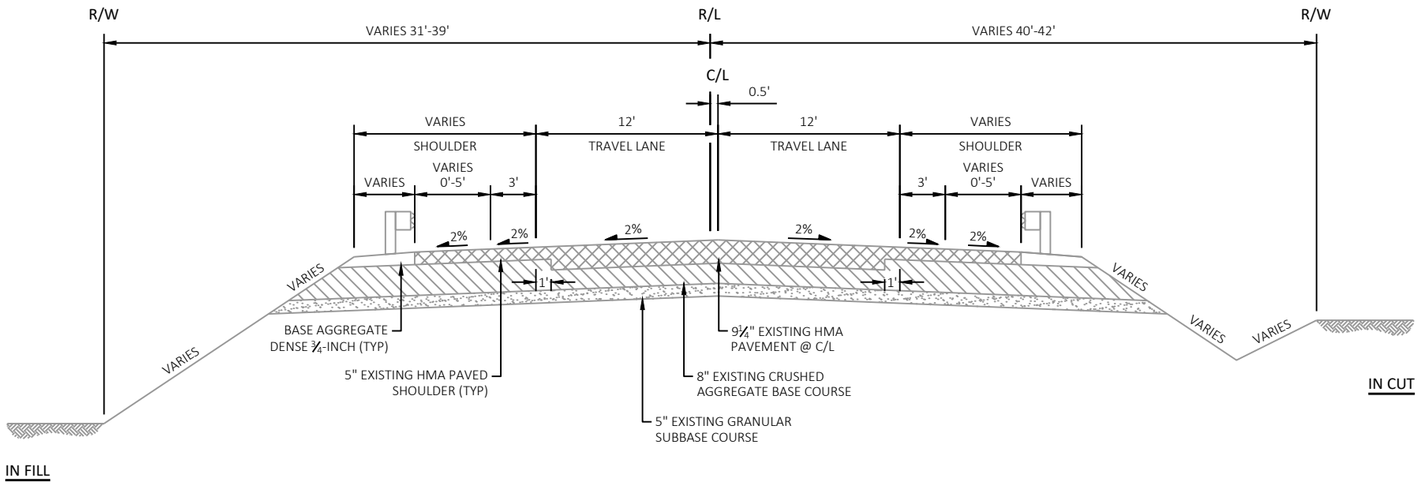
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
900	SET 1" X 24" IRON PIPE WITH CAP ON NORTH SIDE OF WIS 91, 750' EAST OF STRUCTURE B-70-39. 21' NORTH OF CENTERLINE OF WIS 91, 118' WEST OF CENTERLINE OF A DRIVEWAY, AND 97' NORTHEAST OF A POWER POLE.	460437.281	736161.781	825.21
901	SET 1" X 24" IRON PIPE WITH CAP ON SOUTH SIDE OF WIS 91, 70' EAST OF STRUCTURE B-70-39. 26' SOUTH OF CENTERLINE OF WIS 91, 65' WEST OF END OF GUARDRAIL, AND 48' EAST OF WINGWALL.	460401.984	735471.039	817.47
902	SET 1" X 24" IRON PIPE WITH CAP ON NORTH SIDE OF WIS 91, 650' WEST OF STRUCTURE B-70-39. 21' NORTH OF CENTERLINE OF WIS 91, 81' NORTHWEST OF THE WEST END OF A CULVERT, AND 47 SOUTHWEST OF A 36" MAPLE TREE.	460458.863	734757.954	816.79

**HORIZAONTAL DATUM REFERENCED TO WISCRS, WINNEBAGO COUNTY NAD83 (2011).

2

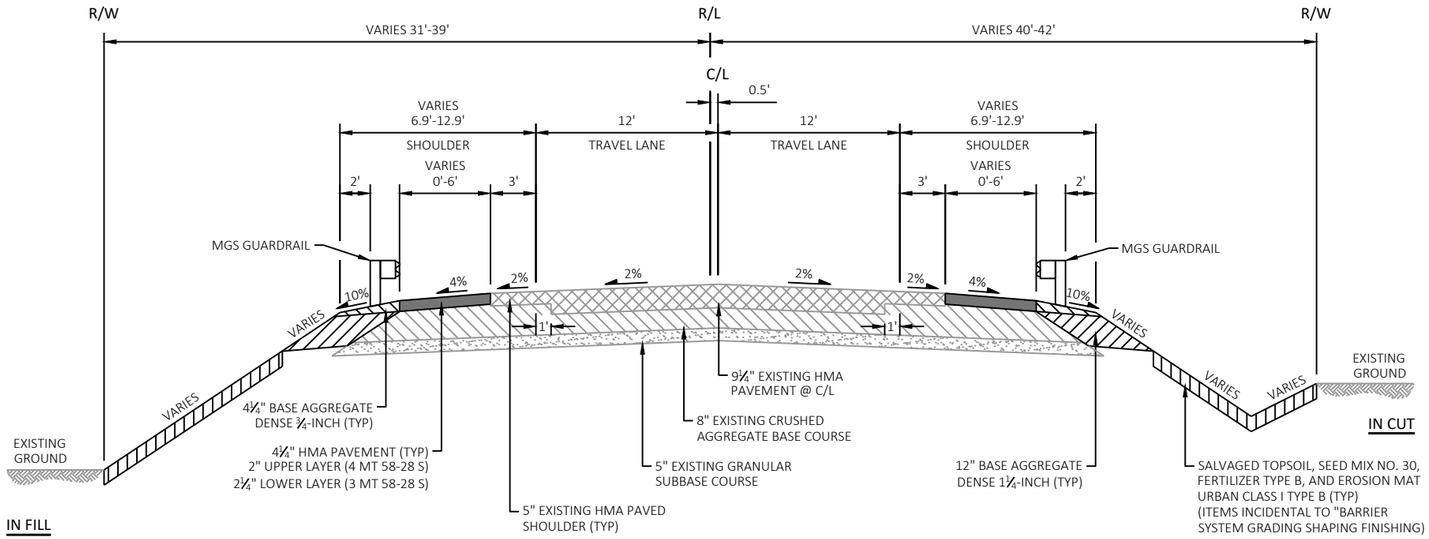


PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION

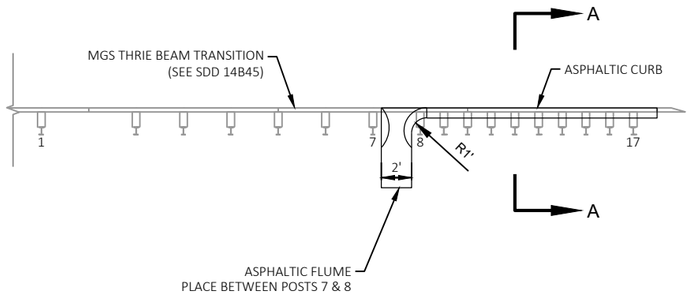
STH 91
STA 105+66 - STA 108+41
STA 108+80 - STA 111+54

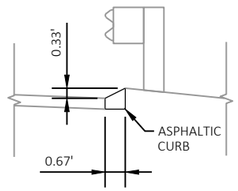


TYPICAL FINISHED SECTION

STH 91
STA 105+66 - STA 108+41
STA 108+80 - STA 111+54

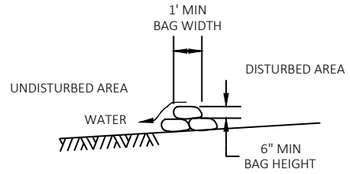
PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	TYPICAL SECTIONS	SHEET 4	E



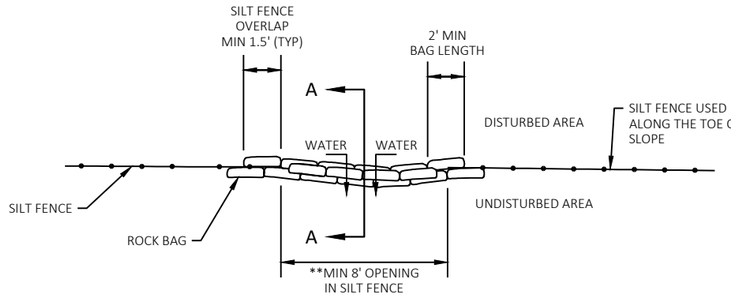


SECTION A-A

ASPHALTIC FLUME AT STRUCTURE DETAIL



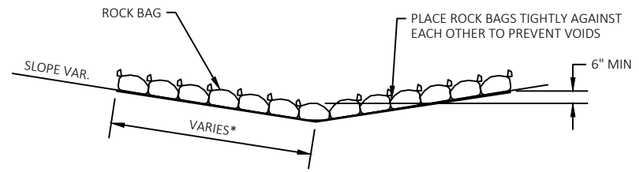
SECTION A-A



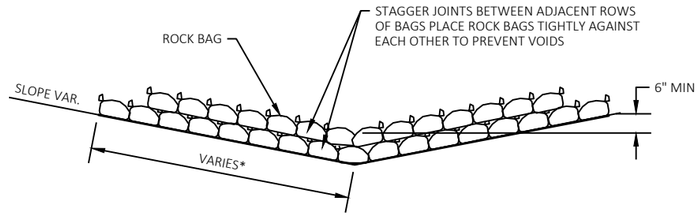
** 17 ROCK BAGS MINIMUM PER 8' OPENING.

PLAN VIEW

ROCK BAGS USED FOR SILT FENCE RELIEF POINT DETAIL



SIDE VIEW (SINGLE LAYER)



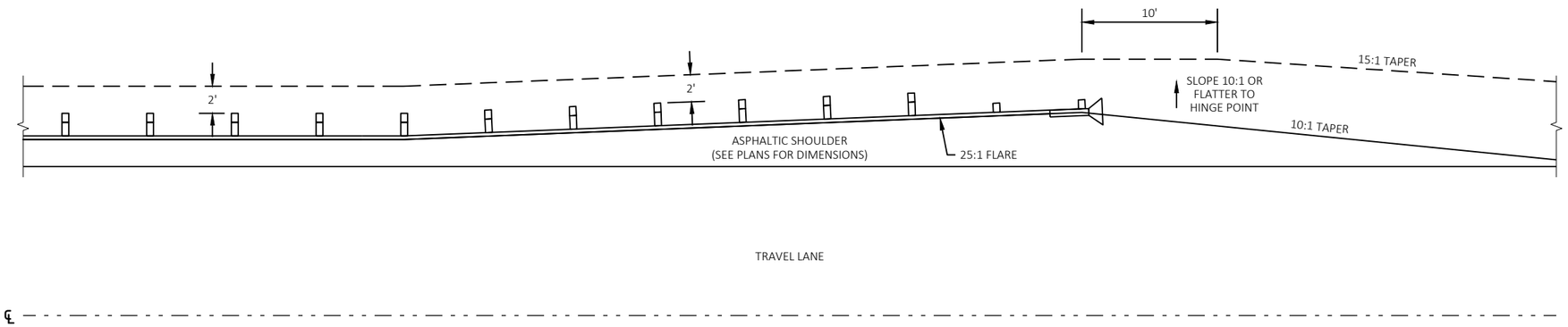
* LENGTH AND NUMBER OF BAGS MAY VARY DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)

ROCK BAGS USED FOR DITCH CHECKS DETAIL

2

SEE SDD "MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)"
FOR ALL OTHER PERTINENT INFORMATION



DETAIL FOR SHOULDER ALTERNATE GRADING AT MGS ENERGY ABSORBING TERMINAL

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	CONSTRUCTION DETAILS	SHEET 5	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-021001-CD.DWG
LAYOUT NAME - 01
PLOT DATE : 2/26/2024 10:41 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

N

EXISTING R/W

SLOPE INTERCEPT, TYP

106+06.15
20.50' LT

15:1 TAPER

10'

106+75.20
20.50' LT

MGS GUARDRAIL TERMINAL EAT

107+28.29
18.50' LT

MGS GUARDRAIL 3

MGS THRIE BEAM TRANSITION

107+90.66
14.50' LT

ASPHALTIC FLUME
(SEE DETAIL)

WAUKAU CREEK

10:1 TAPER

106+15.20
14.50' LT

B-70-39

106

107

108

STH 91

105+90.20
15.50' RT

10:1 TAPER

105+66.14
20.50' RT

15:1 TAPER

10'

106+50.20
21.50' RT

MGS GUARDRAIL TERMINAL EAT

107+03.29
19.50' RT

107+28.29
19.50' RT

MGS GUARDRAIL 3

107+90.66
15.50' RT

ASPHALTIC FLUME
(SEE DETAIL)

MGS THRIE BEAM TRANSITION

EXISTING R/W

N

AT&T

EXISTING R/W

WAUKAU CREEK

MGS THRIE BEAM TRANSITION

ASPHALTIC FLUME
(SEE DETAIL)

109+29.50
14.50' LT

MGS GUARDRAIL 3

SLOPE INTERCEPT, TYP

109+91.87
18.50' LT

110+16.87
18.50' LT

MGS GUARDRAIL TERMINAL EAT

110+69.96
20.50' LT

10'

15:1 TAPER

111+54.02
19.50' LT

10:1 TAPER

111+29.96
14.50' LT

B-70-39

109

110

111

111+04.96
15.50' RT

10:1 TAPER

ASPHALTIC FLUME
(SEE DETAIL)

109+29.50
15.50' RT

15:1 TAPER

111+14.02
21.50' RT

MGS THRIE BEAM TRANSITION

MGS GUARDRAIL 3

109+91.87
19.50' RT

MGS GUARDRAIL TERMINAL EAT

10'

110+44.96
21.50' RT

EXISTING R/W

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	MGS GUARDRAIL DETAILS	SHEET 6	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-021011-CD.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 1/26/2024 9:21 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 44

2

N

EXISTING LIMITED HIGHWAY EASEMENT

WAUKAU CREEK

EXISTING LIMITED HIGHWAY EASEMENT

WETLAND LIMITS

WETLAND LIMITS

B-70-39

SLOPE INTERCEPT, TYP

EXISTING R/W

EXISTING R/W

AT&T

ALLIANT ENERGY

105 106 107 108 109 110 111 112

STH 91

EXISTING R/W

EXISTING R/W

WETLAND LIMITS

WETLAND LIMITS

EXISTING LIMITED HIGHWAY EASEMENT

LEGEND

- SLOPE INTERCEPT
- SILT FENCE
- ROCK BAGS FOR DITCH CHECK
- ROCK BAGS FOR SILT FENCE RELIEF POINT
- SURFACE WATER FLOW EXISTING
- SURFACE WATER FLOW PROPOSED

NOTES

FINISHING ITEMS FOR SALVAGED TOPSOIL, SEED, FERTILIZER AND EROSION MAT ARE SHOWN ON THE TYPICAL SECTIONS AND MISCELLANEOUS QUANTITIES.

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	EROSION CONTROL PLAN	SHEET 7	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-022001-EC.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 1/26/2024 9:21 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

WAUKAU CREEK

101
W5-52L
12"X36"

104
W5-52R
12"X36"

B-70-39

EXISTING R/W

EXISTING R/W

POST

POST

GUY

105 106 107 108 109 110 111 112

STH 91

EXISTING R/W

EXISTING R/W

102
W5-52R
12"X36"

103
W5-52L
12"X36"

LEGEND

XXX SIGN - MOVE EXISTING

EXISTING SIGN

PROPOSED SIGN MOUNTED ON POST

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	SIGNING PLAN	SHEET 8	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-023201-PS.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 1/26/2024 9:21 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

E

KRINGS LN

RD

FF

SAND PIT LN

HORSESHOE RD

E

9TH ST RD

N

116

F

HEISE RD

K

K

LOST LN

RD

C

WORK ZONE

C

OLD MILL RD

C/D

C/D

91

BRADLEY RD

JOB RD

FF

KNOTT RD

JAMES RD

WSOR

GLOBAL PKWY

91

44

A

SEE PROJECT 6540-11-71 DETOUR PLAN

M

ELO RD

W RIPPLE AVE

W RIPPLE AVE

RIPON PL

CLAIRVILLE RD

A

SEE PROJECT 6540-11-71 DETOUR PLAN

W RIPPLE AVE

N CLAY RD

BRADLEY AVE

44

FISK AVE

FISK AVE

HAY RD

KNOTT RD

KINGS LN

JAMES LN

LEGEND

- (A) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL A" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- (C) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL C" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- (D) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL D" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

GENERAL NOTES

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" AND "BARRICADES AND SIGNS FOR VARIOUS CLOSURES" FOR GENERAL NOTES AND SIGN SPACING REQUIREMENTS.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON FIELD CONDITIONS AND THE CONTRACTOR'S METHODS OR SEQUENCE OF OPERATION.

MAP SHOWN IS NOT TO SCALE.

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	TRAFFIC CONTROL - OVERVIEW	SHEET 9	E

6540-10-71

Line	Item	Item Description	Unit	Total	Qty
0006	204.0110	Removing Asphaltic Surface	SY	210.000	210.000
0012	204.0165	Removing Guardrail	LF	607.000	607.000
0026	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	8.000	8.000
0030	213.0100	Finishing Roadway (project) 02. 6540-10-71	EACH	1.000	1.000
0034	305.0110	Base Aggregate Dense 3/4-Inch	TON	140.000	140.000
0036	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	380.000	380.000
0040	450.4000	HMA Cold Weather Paving	TON	18.000	18.000
0042	455.0605	Tack Coat	GAL	14.000	14.000
0044	460.2000	Incentive Density HMA Pavement	DOL	50.000	50.000
0046	460.6223	HMA Pavement 3 MT 58-28 S	TON	36.000	36.000
0048	460.6224	HMA Pavement 4 MT 58-28 S	TON	32.000	32.000
0050	465.0310	Asphaltic Curb	LF	60.000	60.000
0052	465.0315	Asphaltic Flumes	SY	4.000	4.000
0060	509.0301	Preparation Decks Type 1	SY	31.000	31.000
0062	509.0302	Preparation Decks Type 2	SY	13.000	13.000
0064	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	310.000	310.000
0066	509.1500	Concrete Surface Repair	SF	21.000	21.000
0068	509.2100.S	Concrete Masonry Deck Repair	CY	3.000	3.000
0070	509.3500.S	HMA Overlay Polymer-Modified	TON	24.000	24.000
0072	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 01. B-70-39	SY	122.000	122.000
0080	614.0010	Barrier System Grading Shaping Finishing	EACH	4.000	4.000
0082	614.2300	MGS Guardrail 3	LF	350.000	350.000
0084	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0086	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0090	618.0100	Maintenance and Repair of Haul Roads (project) 02. 6540-10-71	EACH	1.000	1.000
0094	619.1000	Mobilization	EACH	0.170	0.170
0096	624.0100	Water	MGAL	8.000	8.000
0102	628.1504	Silt Fence	LF	550.000	550.000
0104	628.1520	Silt Fence Maintenance	LF	550.000	550.000
0106	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0108	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0116	628.7570	Rock Bags	EACH	160.000	160.000
0128	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0130	638.2102	Moving Signs Type II	EACH	4.000	4.000
0132	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0134	642.5201	Field Office Type C	EACH	0.330	0.330
0136	643.0420	Traffic Control Barricades Type III	DAY	900.000	900.000
0138	643.0705	Traffic Control Warning Lights Type A	DAY	1,400.000	1,400.000
0140	643.0900	Traffic Control Signs	DAY	700.000	700.000
0146	643.5000	Traffic Control	EACH	0.170	0.170
0154	646.1020	Marking Line Epoxy 4-Inch	LF	91.000	91.000
0160	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	91.000	91.000
0174	650.9911	Construction Staking Supplemental Control (project) 02. 6540-10-71	EACH	1.000	1.000
0180	690.0150	Sawing Asphalt	LF	1,012.000	1,012.000

3

REMOVING ASPHALTIC SURFACE

STATION - STATION	LOCATION	204.0110 SY
CATEGORY CODE 0010		
106+32 - 107+90	RT	66
106+97 - 107+90	LT	32
109+29 - 110+25	RT	47
109+29 - 110+89	LT	65
	TOTAL	210

REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 LF
CATEGORY CODE 0010		
106+57 - 108+40	RT	183
107+20 - 108+40	LT	121
108+79 - 109+99	RT	120
108+79 - 110+61	LT	183
	TOTAL	607

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION - STATION	LOCATION	211.0400 STA
CATEGORY CODE 0010		
105+90 - 107+90	RT	2
106+15 - 107+90	LT	2
109+29 - 111+04	RT	2
109+29 - 111+29	LT	2
	TOTAL	8

3

BASE AGGREGATE DENSE AND WATER ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
CATEGORY CODE 0010				
105+46 - 108+40	LT & RT	70	190	4
108+77 - 111+73	LT & RT	70	190	4
	TOTALS	140	380	8

ASPHALTIC ITEMS

STATION - STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON
CATEGORY CODE 0010					
105+90 - 107+90	RT	5	4	10	9
106+15 - 107+90	LT	4	3	8	7
109+29 - 111+04	RT	4	3	8	7
109+29 - 111+29	LT	5	4	10	9
	TOTALS	18	14	36	32

ASPHALTIC CURB & FLUMES

STATION	LOCATION	465.0310 ASPHALTIC CURB LF	465.0315 ASPHALTIC FLUMES SY
CATEGRORY CODE 0010			
108+22 - 108+40	RT	15	1
108+22 - 108+40	LT	15	1
108+79 - 108+97	RT	15	1
108+79 - 108+97	LT	15	1
	TOTAL	60	4

GRADING SHAPING FINISHING ITEMS

STATION - STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	* CUT CY	* UNEXPANDED FILL CY	* BORROW CY	* SALVAGED TOPSOIL SY	* EROSION MAT URBAN CLASS I TYPE B SY	* FERTILIZER TYPE B CWT	* SEED MIX NO. 30 LB	* SEED WATER MGAL
CATEGORY CODE 0010										
105+46 - 108+40	RT	1	1	23	30	252	252	0.15	4	6
105+86 - 108+40	LT	1	2	65	85	258	258	0.15	5	6
108+79 - 111+33	RT	1	--	1	1	129	129	0.10	2	3
108+79 - 111+73	LT	1	--	6	8	216	216	0.15	4	5
	TOTALS	4	3	95	124	855	855	0.55	15	20

* NON-BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY, ITEMS INCIDENTAL TO "BARRIER SYSTEM GRADING SHAPING FINISHING"

MGS GUARDRAIL ITEMS

STATION - STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
CATEGORY CODE 0010				
106+50 - 108+42	RT	100.0	39.4	1.0
106+75 - 108+72	LT	75.0	39.4	1.0
108+77 - 110+44	RT	75.0	39.4	1.0
108+77 - 110+69	LT	100.0	39.4	1.0
	TOTALS	350.0	157.6	4.0

EROSION CONTROL ITEMS

LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7570 ROCK BAGS EACH
CATEGORY CODE 0010					
PROJECT 6540-10-71	--	--	3	2	--
107+00 - 108+34, RT	137	137	--	--	32
107+25 - 108+34, LT	113	113	--	--	32
108+85 - 109+94, RT	112	112	--	--	32
108+85 - 109+60, LT	79	79	--	--	32
UNDISTRIBUTED	109	109	--	--	32
TOTALS	**550**	**550**	**3**	**2**	**160**

SIGNING ITEMS

SIGN NUMBER	EXISTING STATION	EXISTING LOCATION	PROPOSED STATION	PROPOSED LOCATION	ROADWAY	SIGN CODE	634.0612 POSTS WOOD 4X6X12 EACH	638.2102 MOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
CATEGORY CODE 0010									
101	108+29	LT	108+40	LT	STH 91	W5-52L	1	1	1
102	108+29	RT	108+40	RT	STH 91	W5-52R	1	1	1
103	108+90	RT	108+79	RT	STH 91	W5-52L	1	1	1
104	108+91	LT	108+79	LT	STH 91	W5-52R	1	1	1
						TOTALS	**4**	**4**	**4**

TRAFFIC CONTROL ITEMS

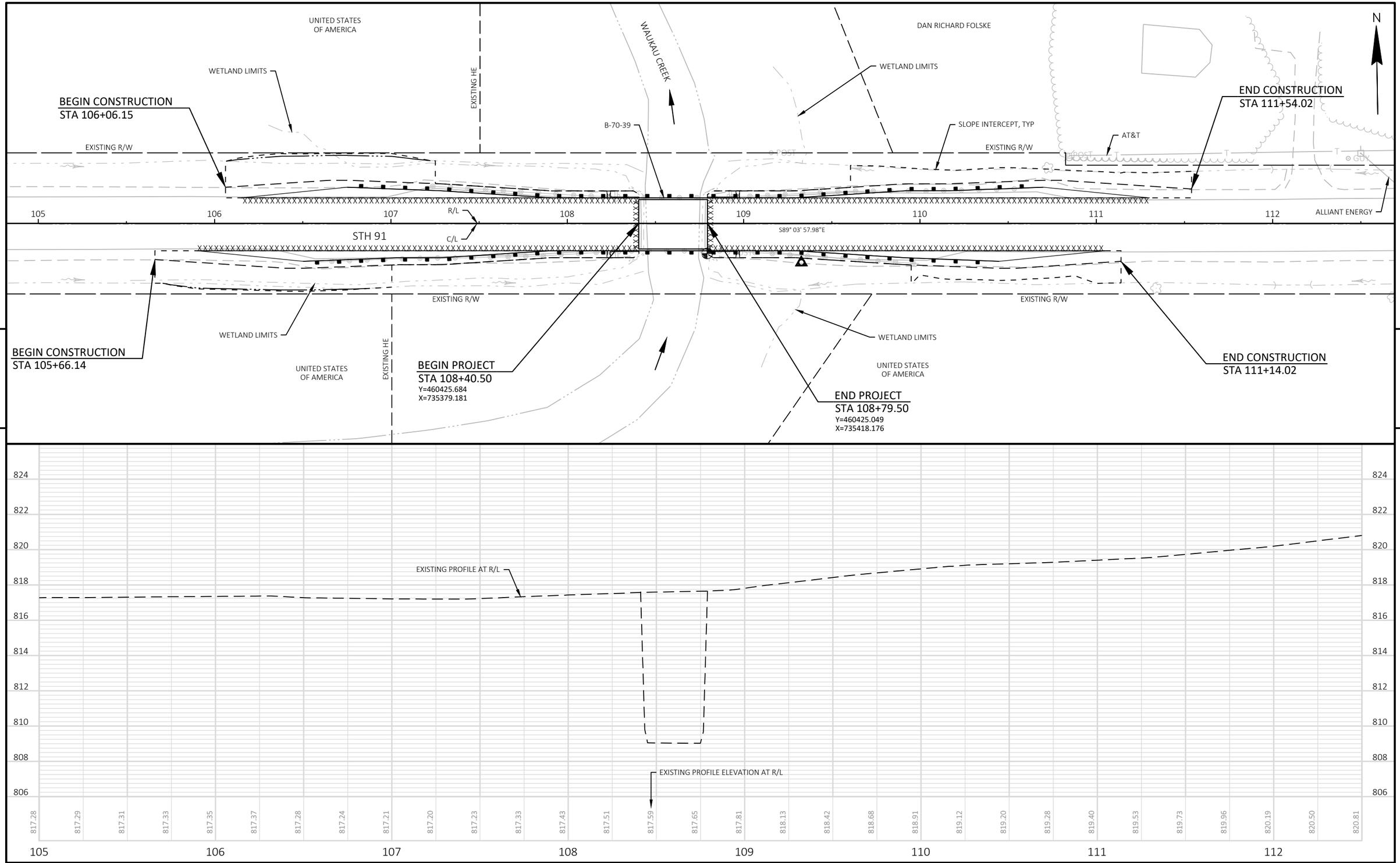
LOCATION	NUMBER OF DAYS IN SERVICE	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. REQ'D	643.0420 TRAFFIC CONTROL BARRICADES TYPE III TOTAL DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. REQ'D	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A TOTAL DAY	643.0900 TRAFFIC CONTROL SIGNS NO. REQ'D	643.0900 TRAFFIC CONTROL SIGNS TOTAL DAY	643.5000 TRAFFIC CONTROL EACH
CATEGORY CODE 0010								
PROJECT 6540-10-71	--	--	--	--	--	--	--	0.17
STH 91 / OLD MILL ROAD	50	*2*	100	*4*	200	*3*	150	--
WEST PROJECT LIMITS	50	*7*	350	*10*	500	*4*	200	--
EAST PROJECT LIMITS	50	*7*	350	*10*	500	*4*	200	--
STH 91 / JOB ROAD	50	*2*	100	*4*	200	*3*	150	--
TOTALS		**900**		**1,400**		**700**		**0.17**

PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.6464 COLD WEATHER MARKING EPOXY 4-INCH WHITE LF	646.6464 COLD WEATHER MARKING EPOXY 4-INCH YELLOW LF
CATEGORY CODE 0010					
108+40 - 108+79	LT & RT	78	13	78	13
		78	13	78	13
	TOTALS	**91**		**91**	

SAWING ASPHALT

STATION - STATION	LOCATION	690.0150 LF
CATEGORY CODE 0010		
105+90 - 108+40	LT & RT	506
108+79 - 111+29	LT & RT	506
	TOTAL	**1,012**



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5

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	PLAN AND PROFILE: STH 91	SHEET 13	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-050101-PP.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 1/26/2024 9:22 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

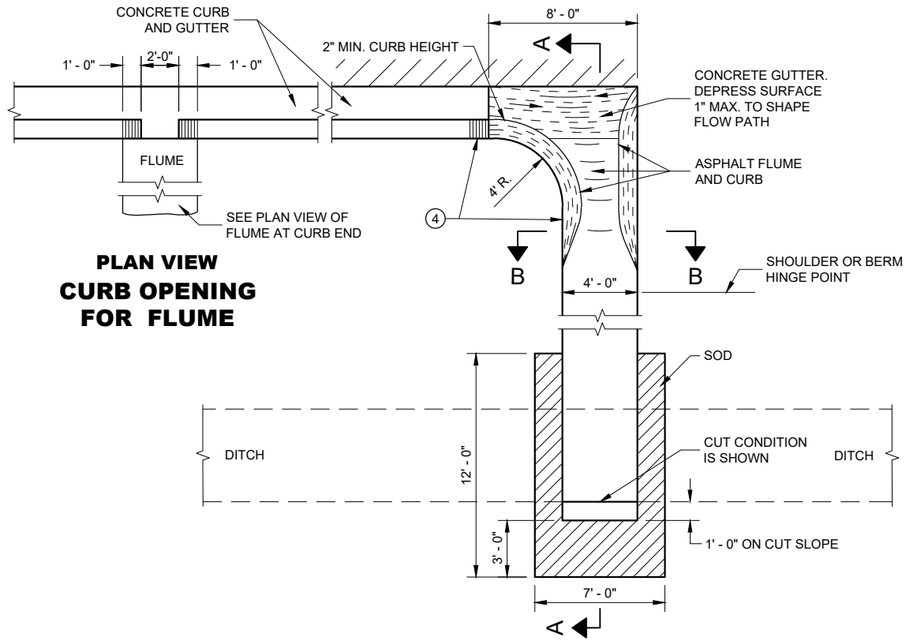
Standard Detail Drawing List

08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

6

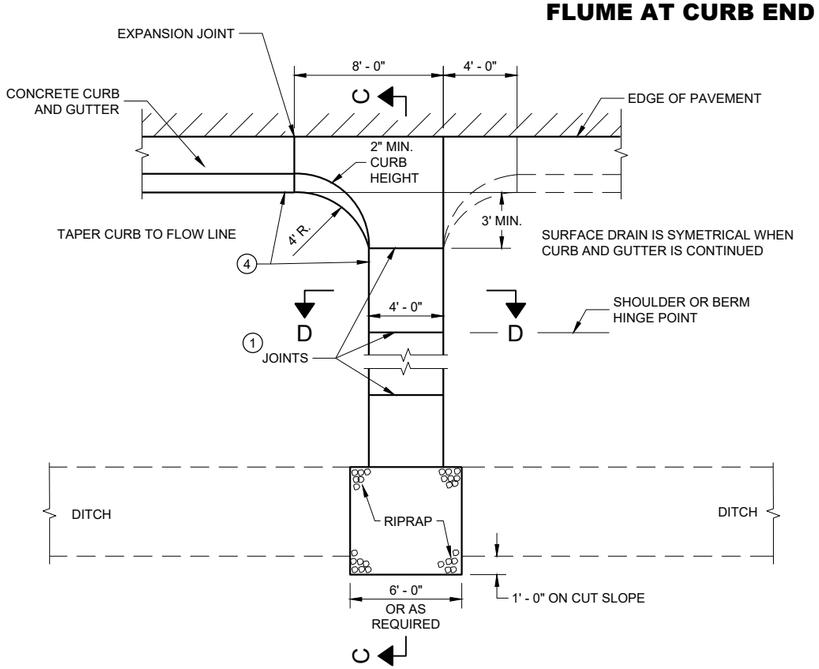
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



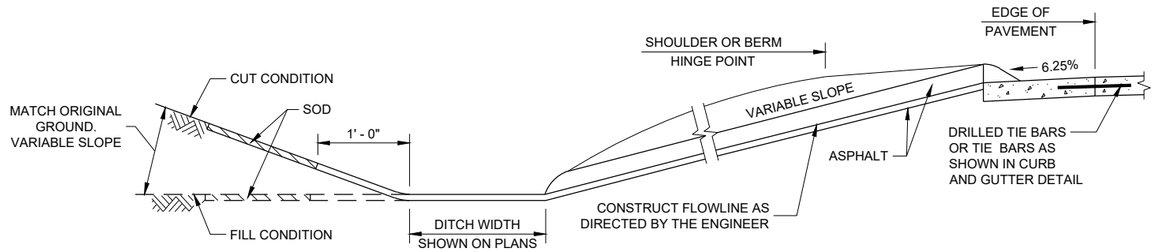
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

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

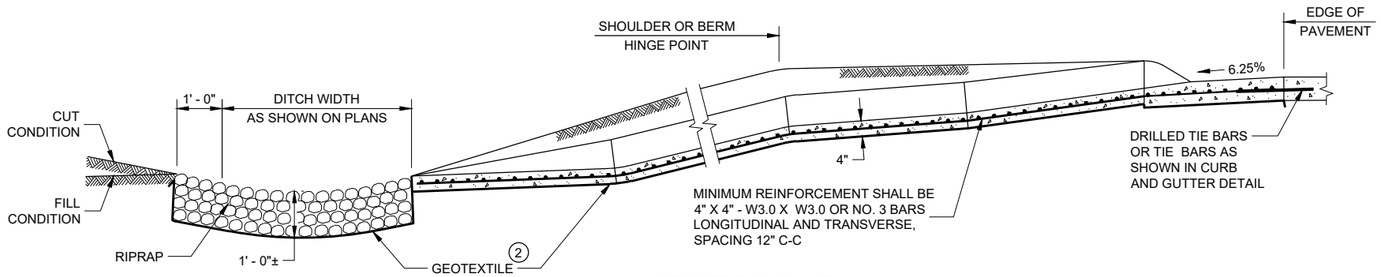
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.

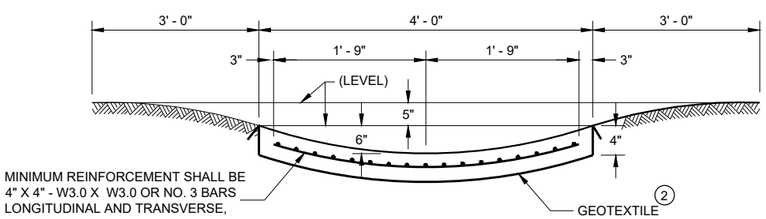


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

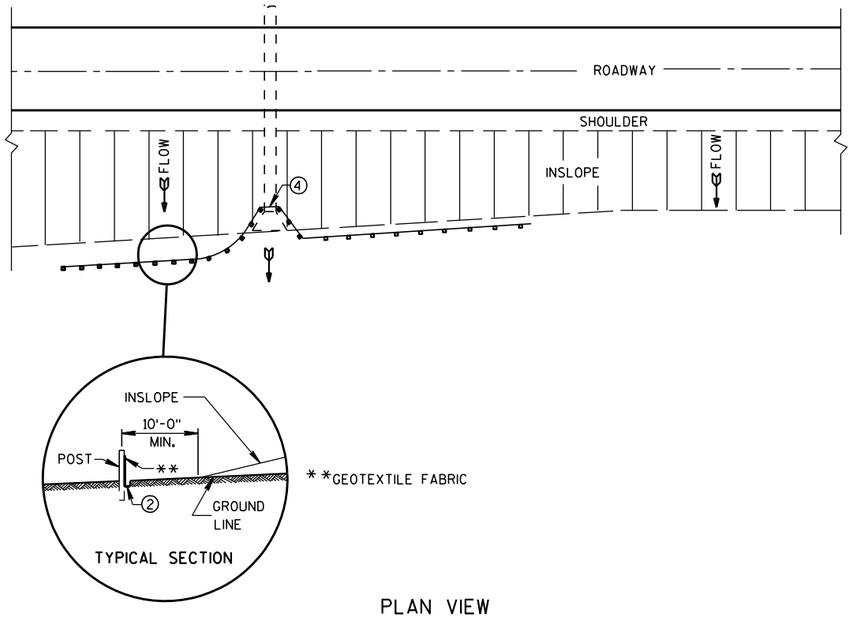
FHWA

6

SDD 08D04 - 07

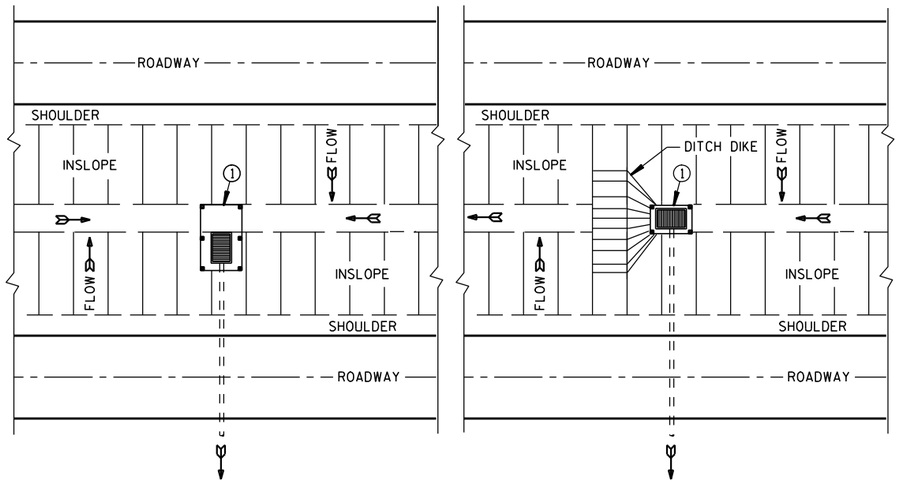
6

SDD 08D04 - 07



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



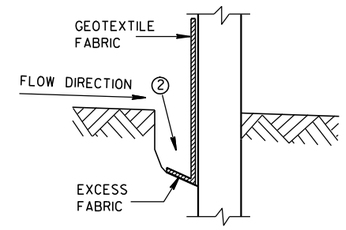
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

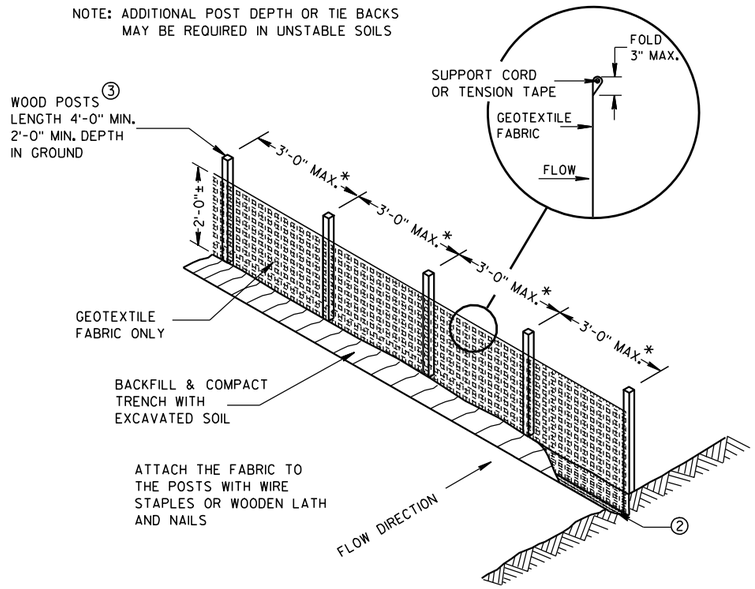
GENERAL NOTES

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

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

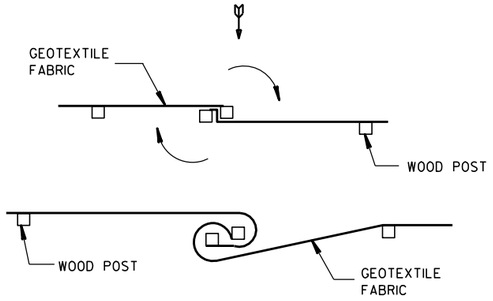


TRENCH DETAIL

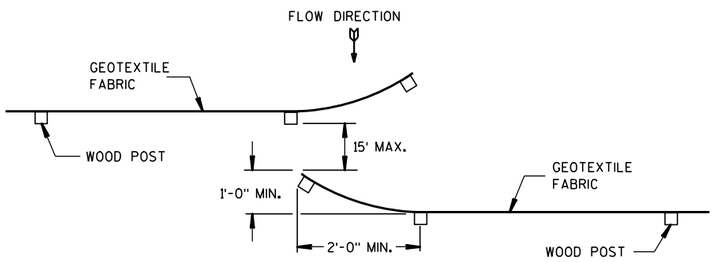


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

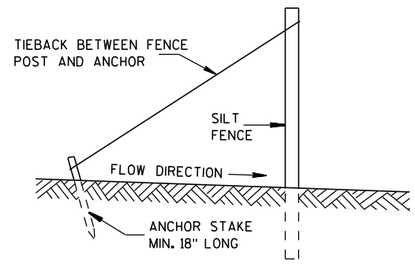


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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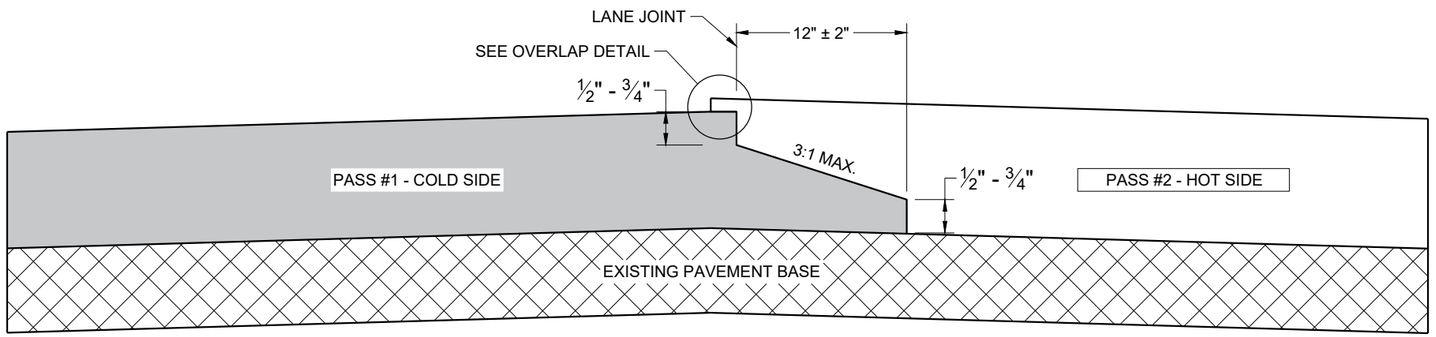
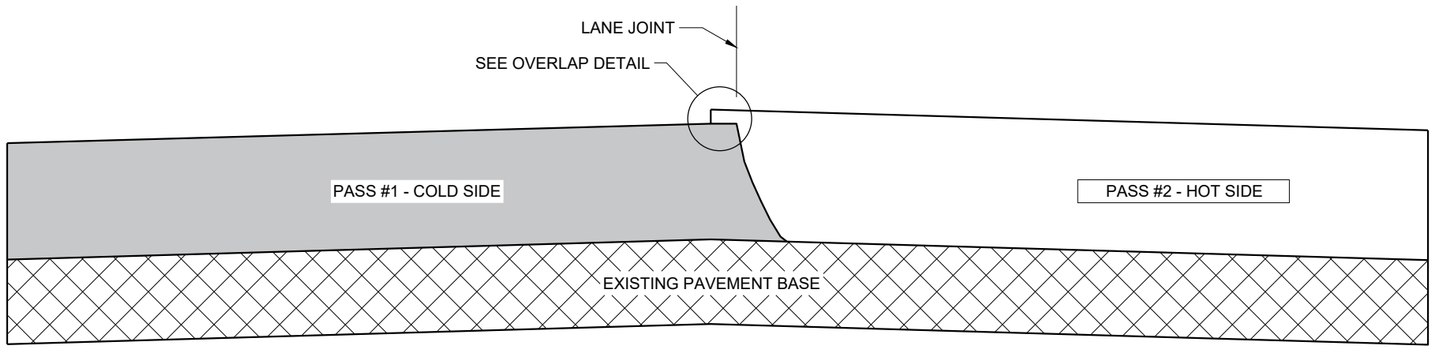
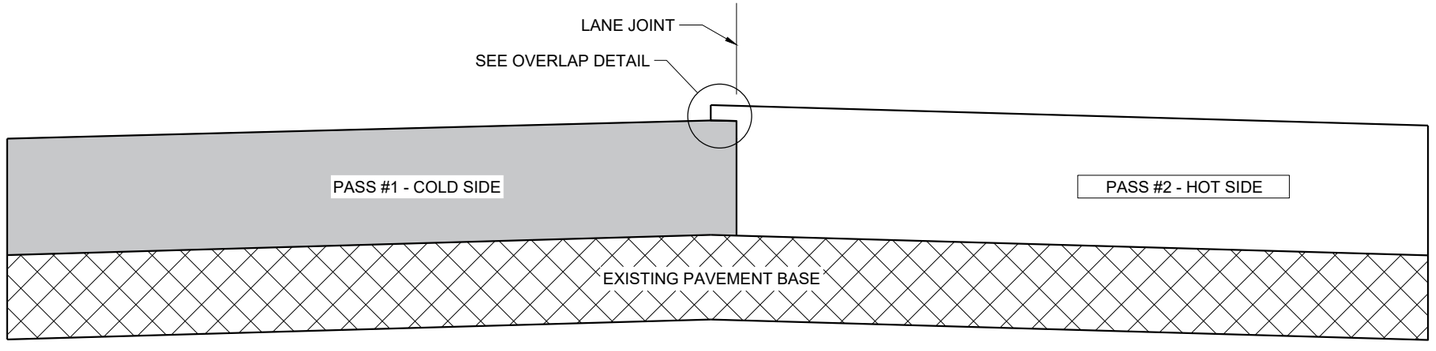
S.D.D. 8 E 9-6



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

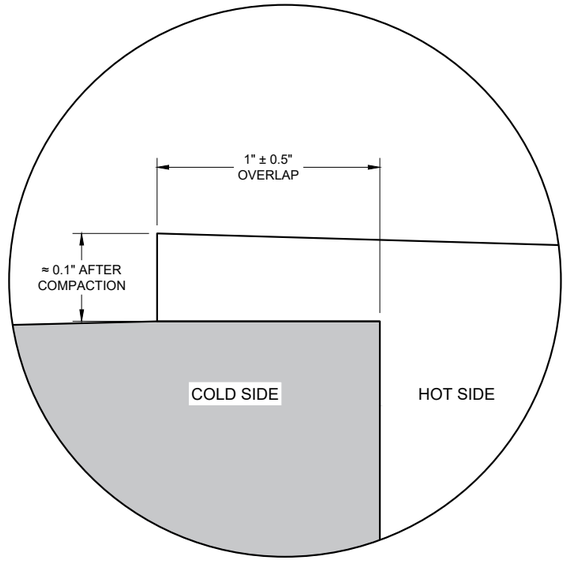
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

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SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

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

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

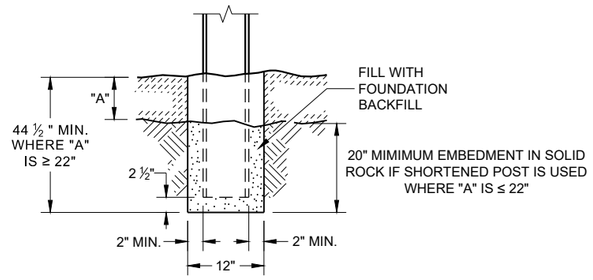
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

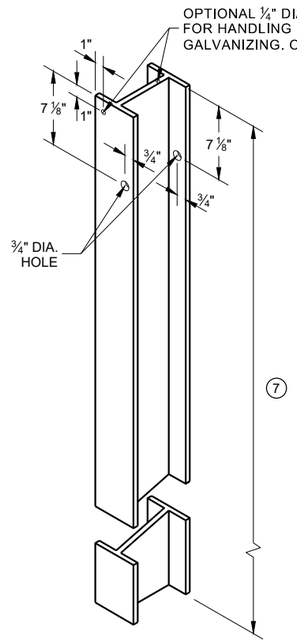
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

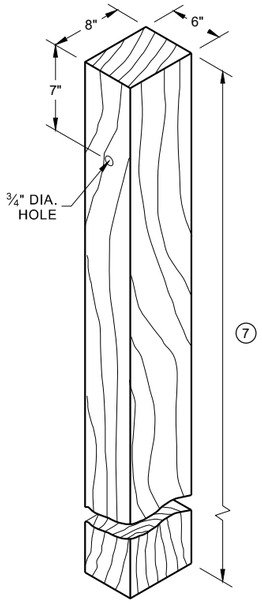
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



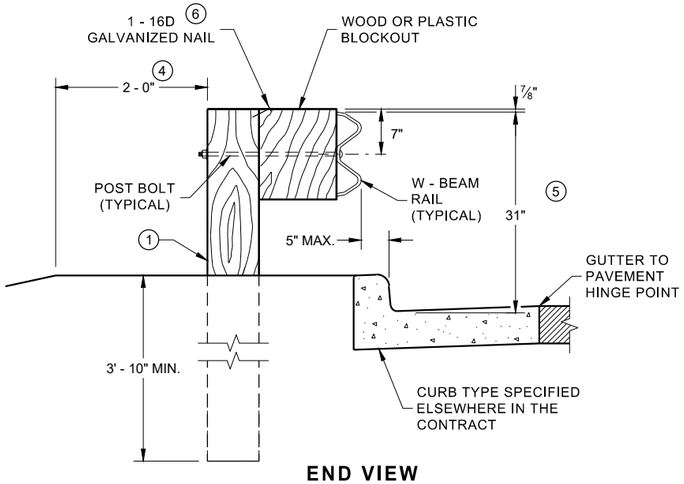
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



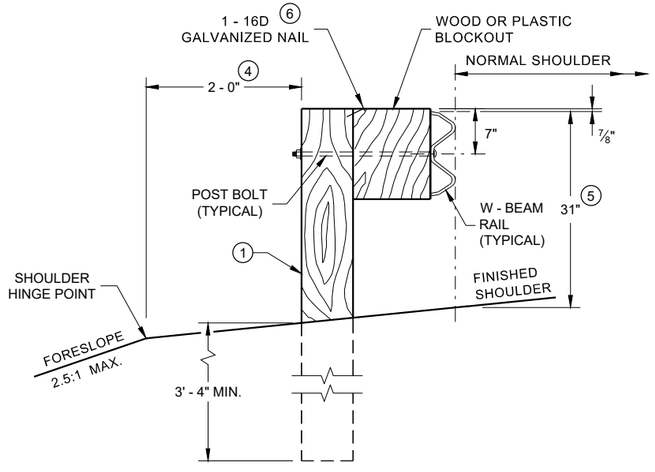
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



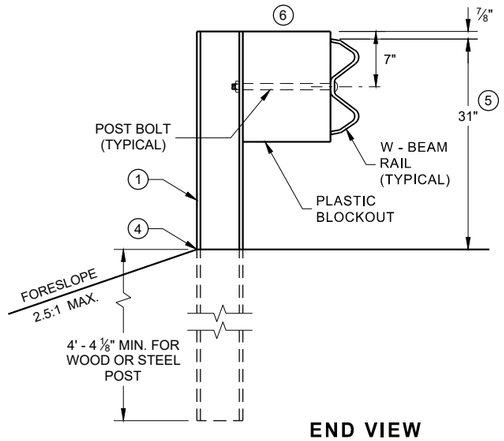
WOOD POST (6" X 8") NOMINAL (1)



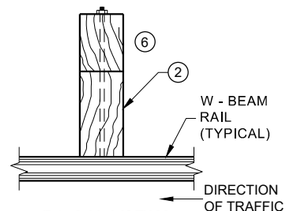
END VIEW
LOCATED ALONG A CURBED ROADWAY



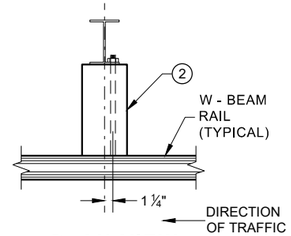
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



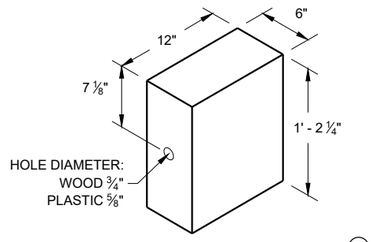
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

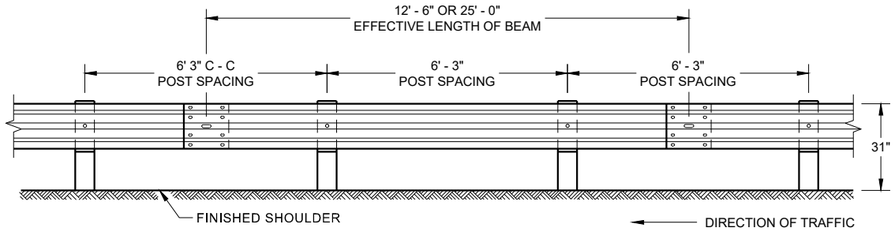
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

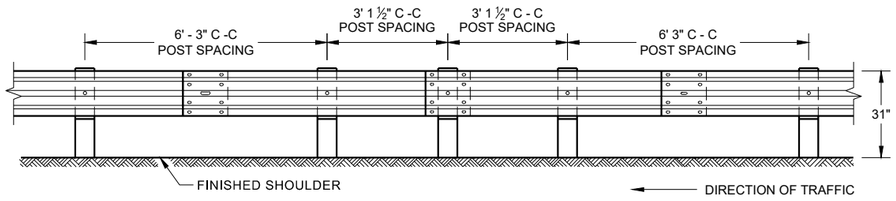
6

SDD 14B42 - 07a

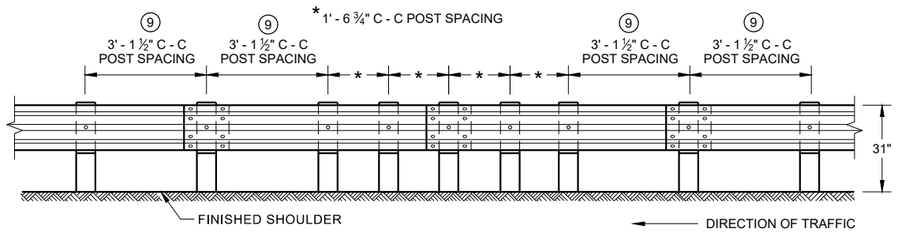
SDD 14B42 - 07a



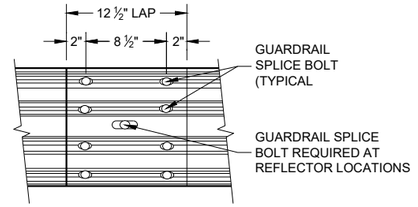
FRONT VIEW
POST SPACING STANDARD INSTALLATION



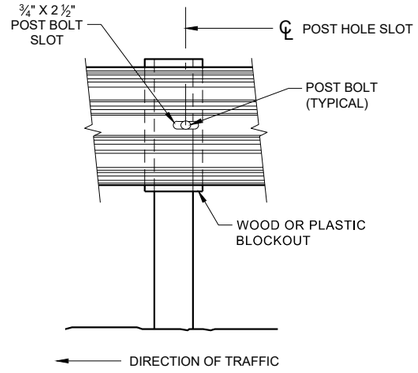
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



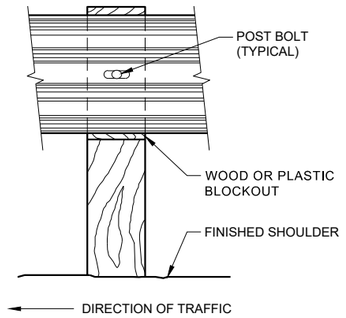
FRONT VIEW
QUARTER POST SPACING (QS)



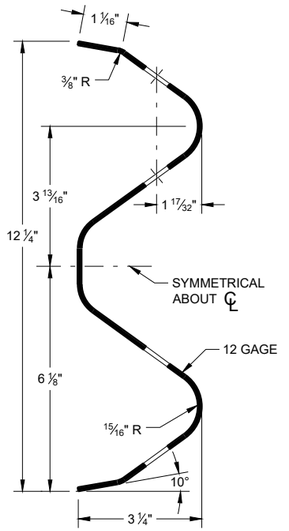
FRONT VIEW
MID-SPAN BEAM SPLICE



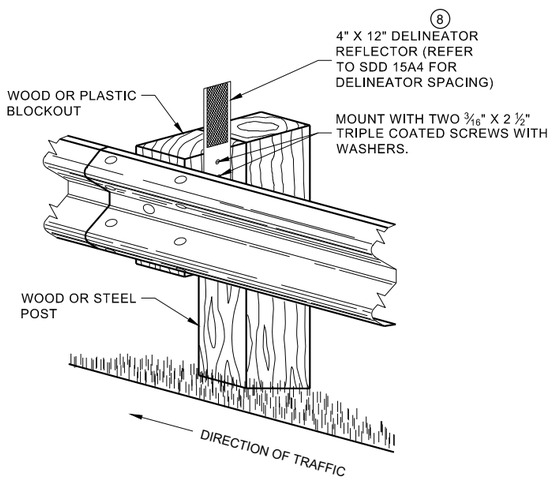
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

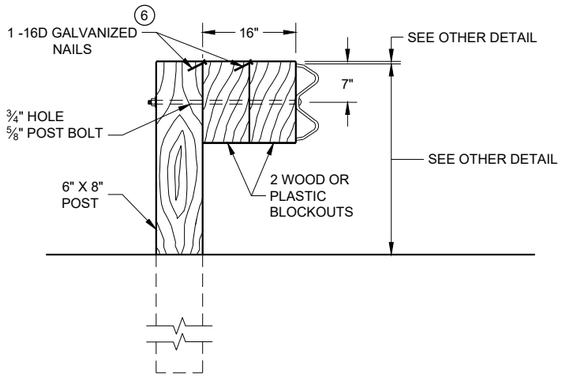
GENERAL NOTES

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

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

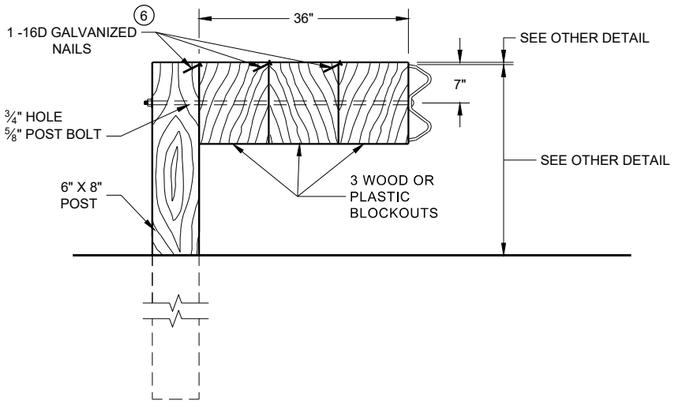
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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



DETAIL FOR 16" BLOCKOUT DEPTH

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



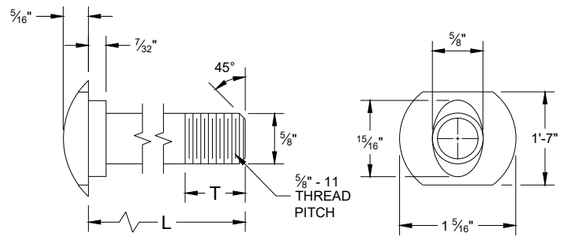
DETAIL FOR 36" BLOCKOUT DEPTH

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

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

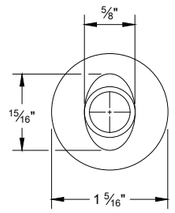
NOTE:

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

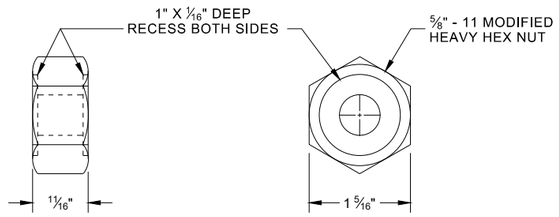


POST BOLT TABLE

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

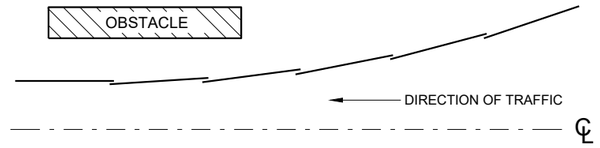


ALTERNATE BOLT HEAD

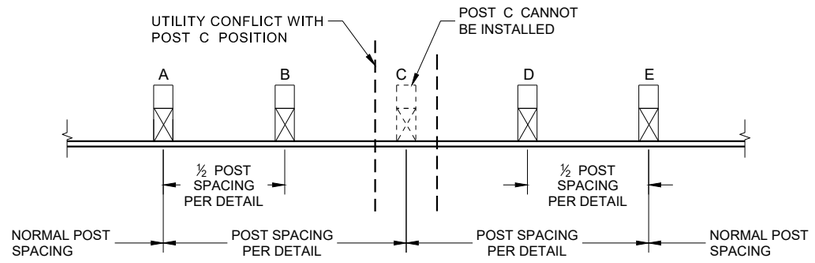


POST BOLT, SPLICE BOLT AND RECESS NUT

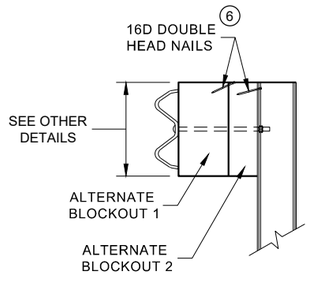
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



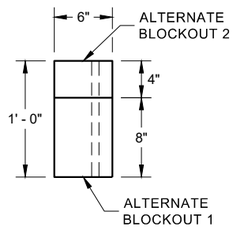
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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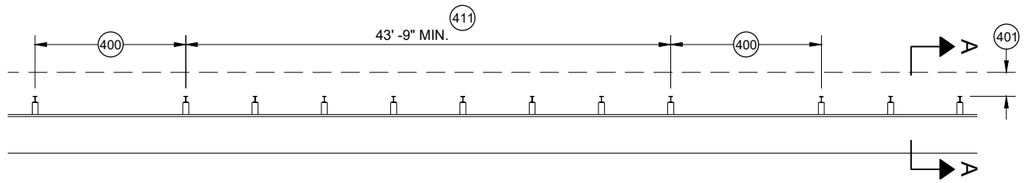
SDD 14B42 - 07c

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

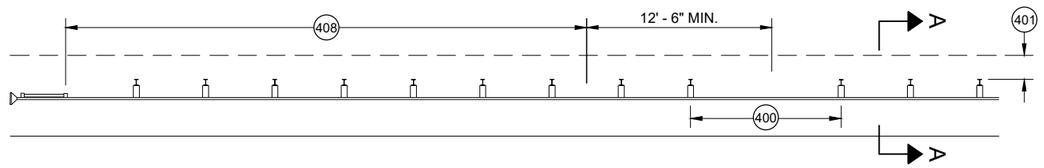
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

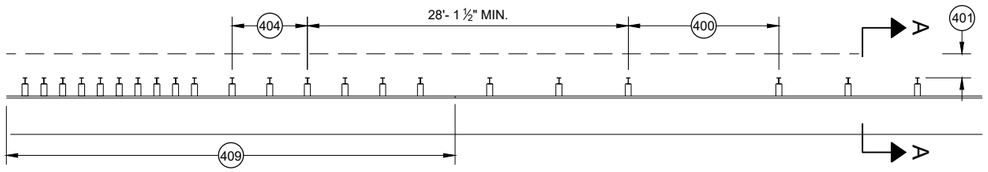
SDD 14B42 - 07c



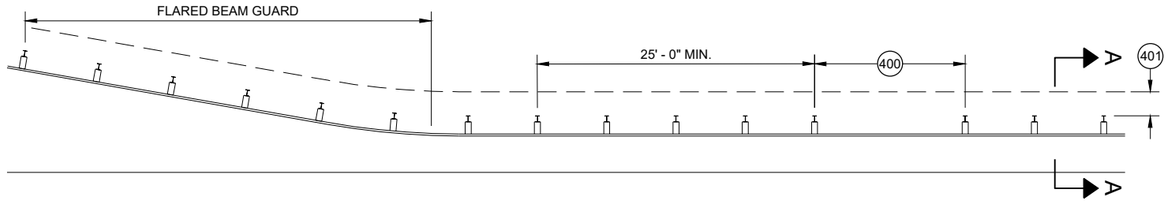
MISSING POST IN MGS GUARDRAIL



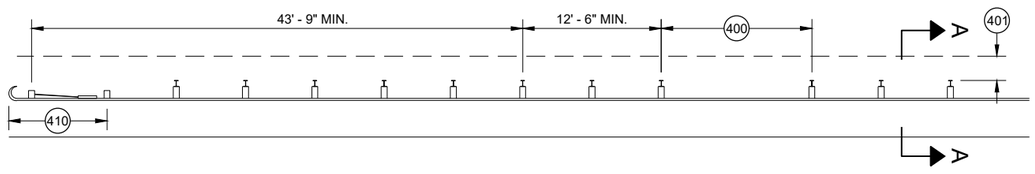
MISSING POST IN MGS GUARDRAIL NEAR EAT



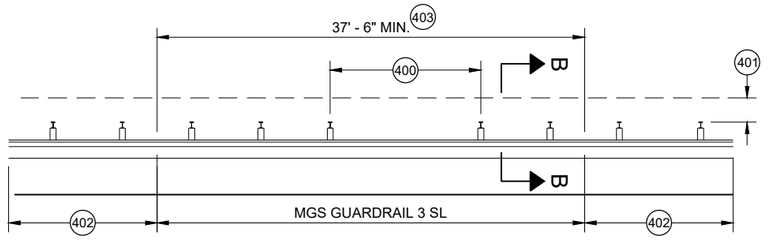
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

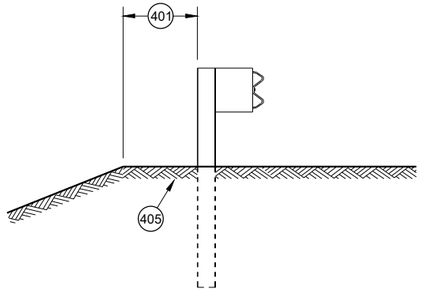


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

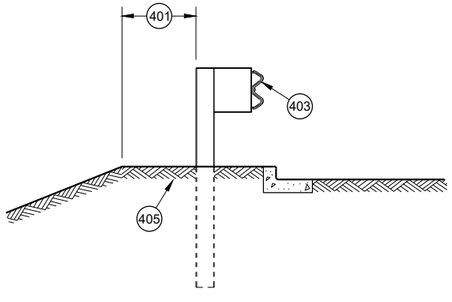


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

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SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

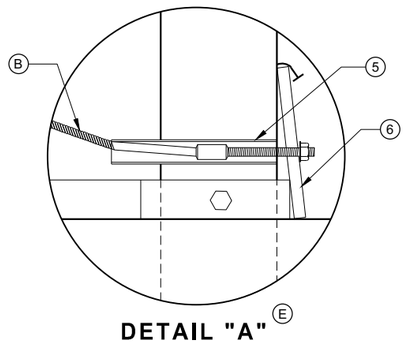
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

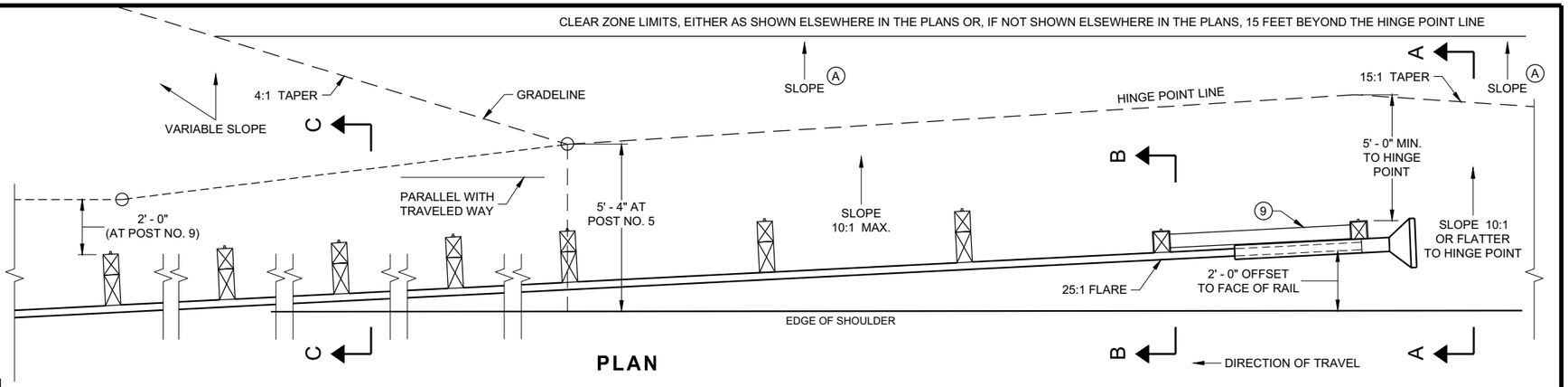
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

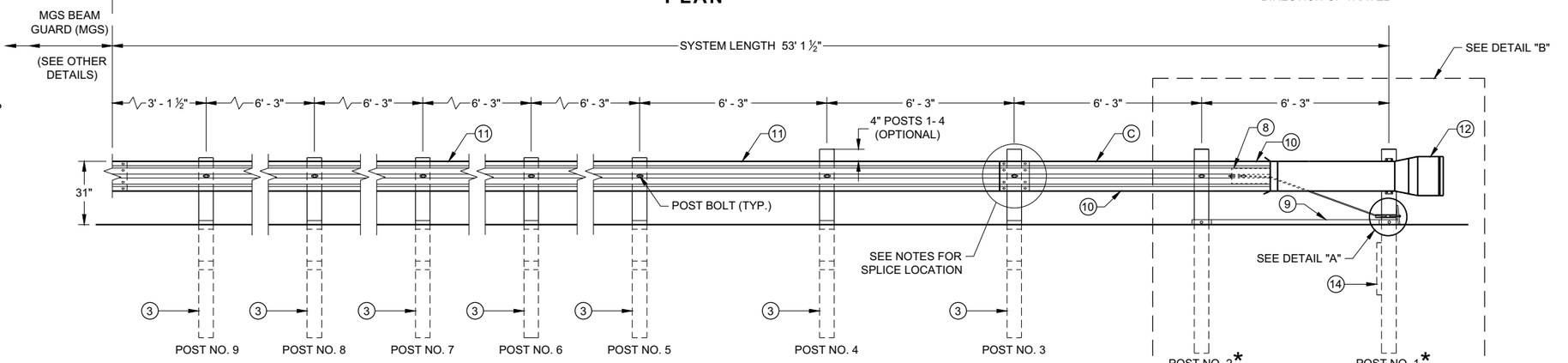
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

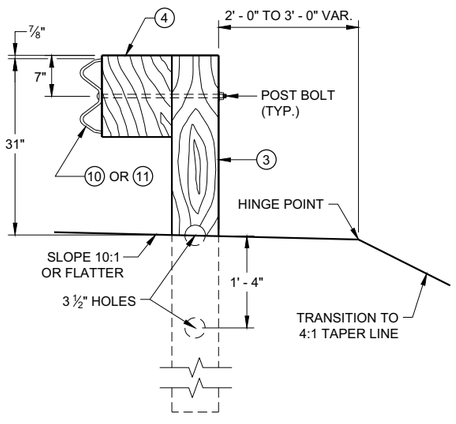
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



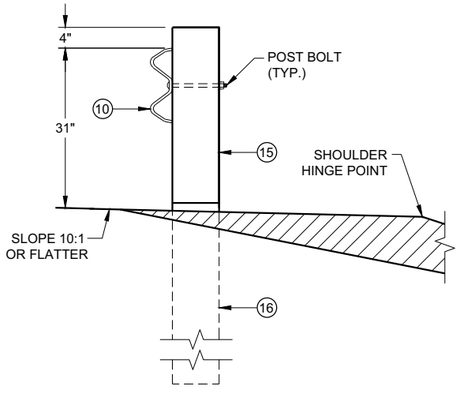
DETAIL "A" (E)



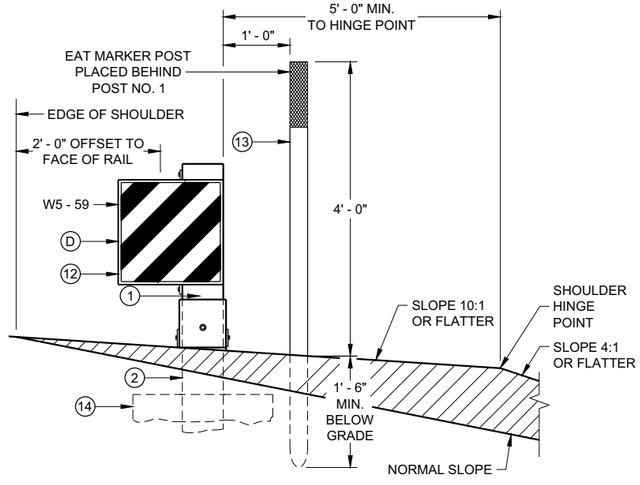




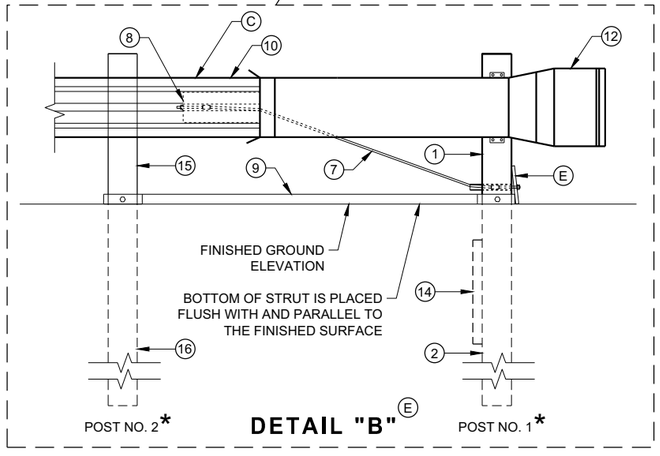
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



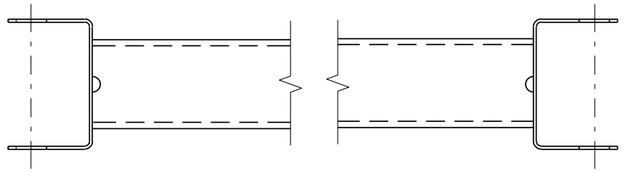
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

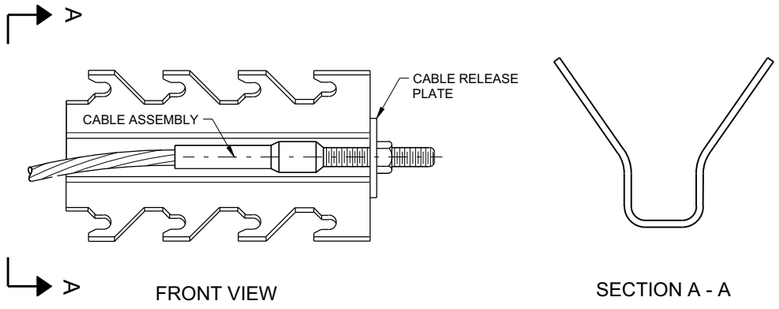
SDD 14B44 - 04a



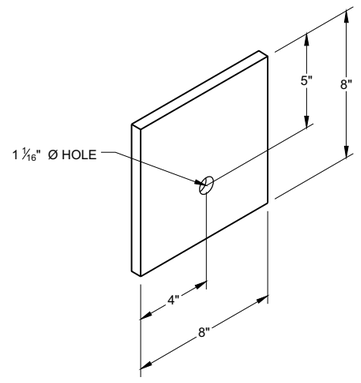
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

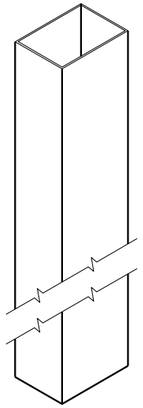
6

SDD 14B44 - 04b

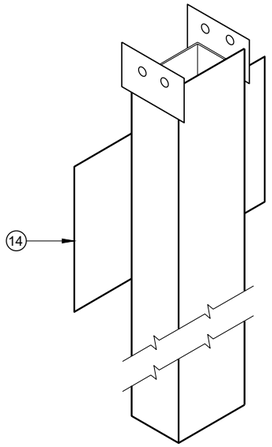
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

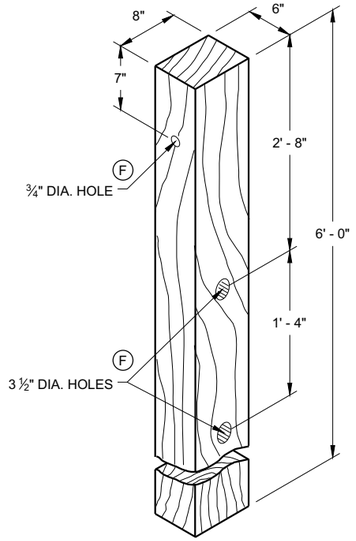
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



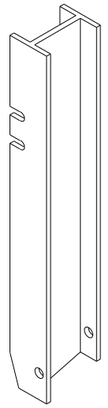
UPPER POST NO. 1 (1) (E)



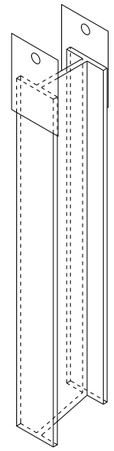
LOWER POST NO. 1 (2) (E)



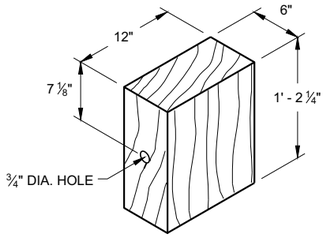
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



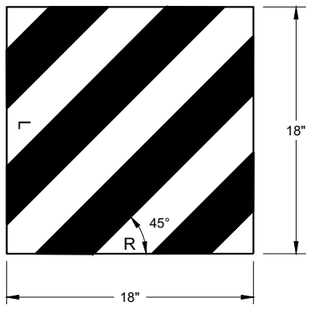
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

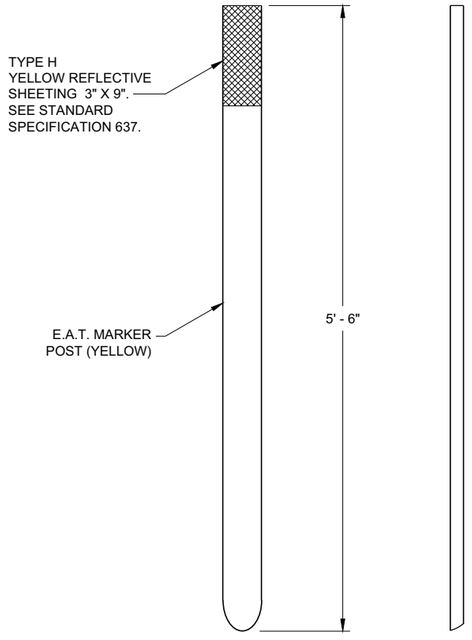


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



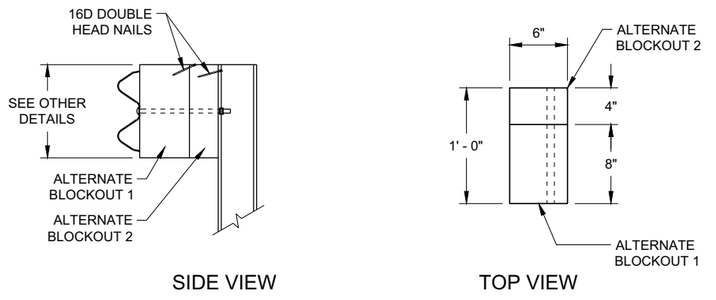
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

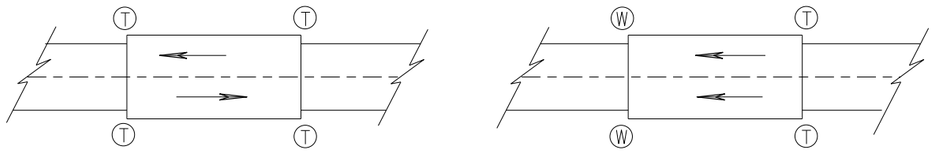
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

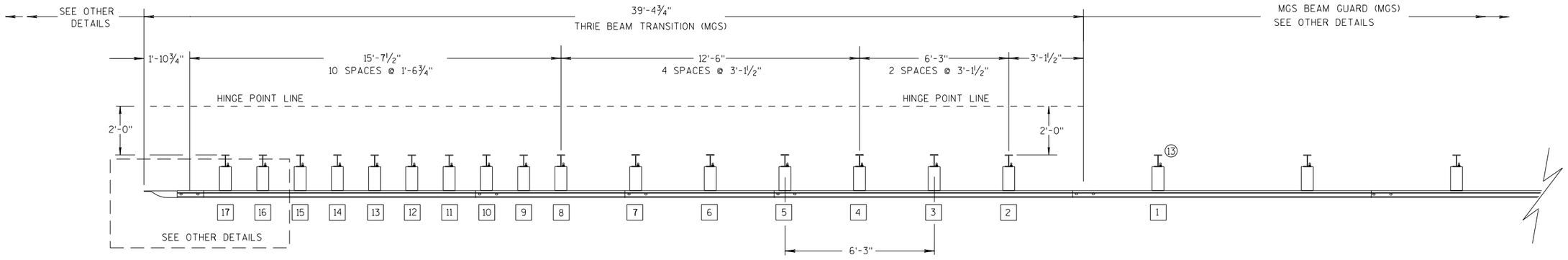
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

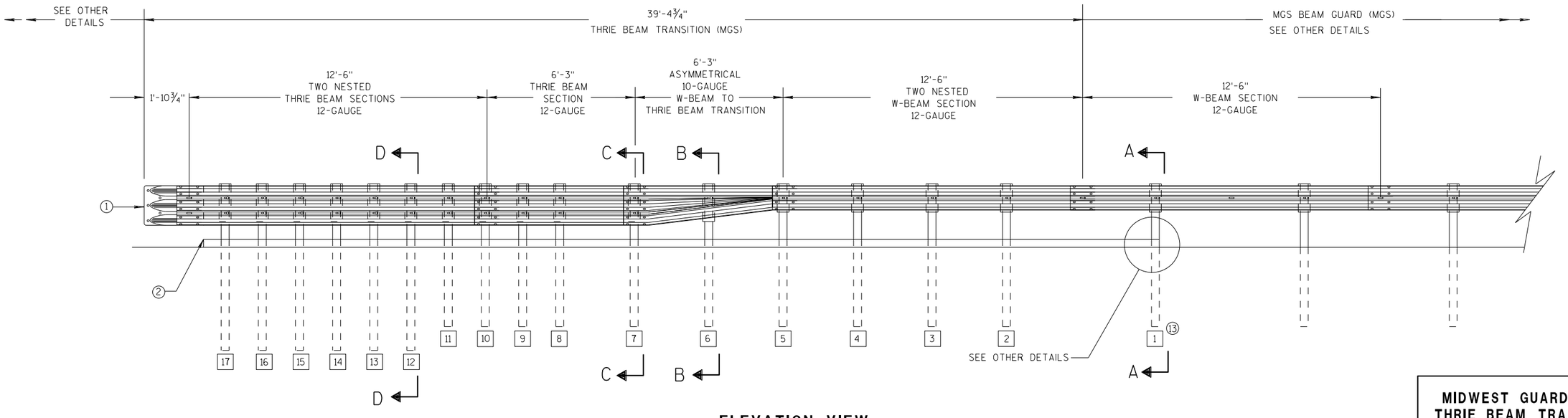
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 25

6

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

6

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

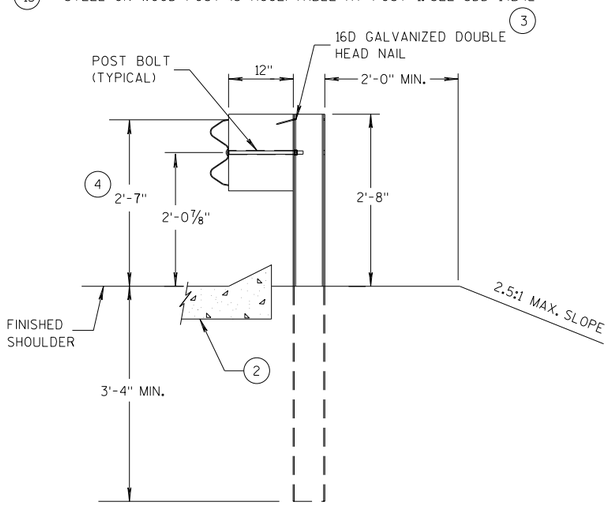
GENERAL NOTES

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

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

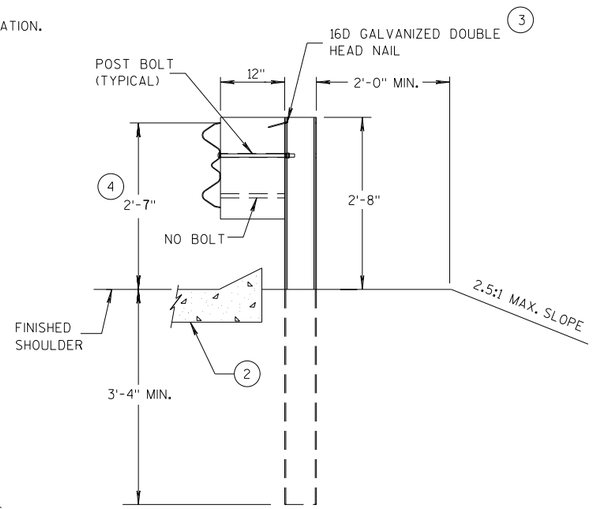
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



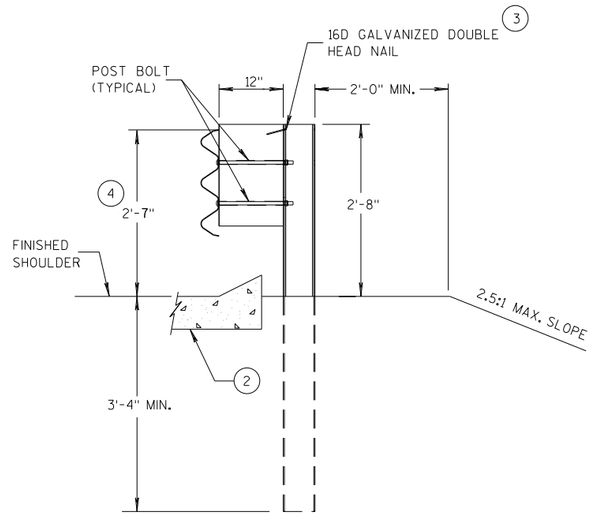
SECTION A-A (13)

POSTS 1-5



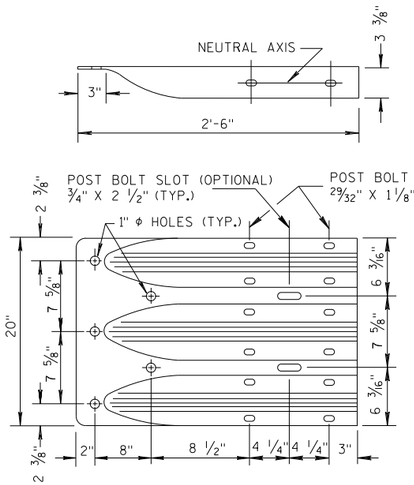
SECTION B-B

POST 6

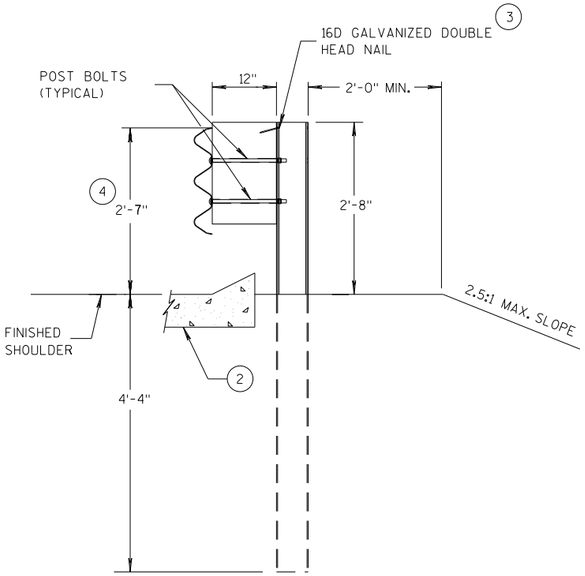


SECTION C-C

POSTS 7-11

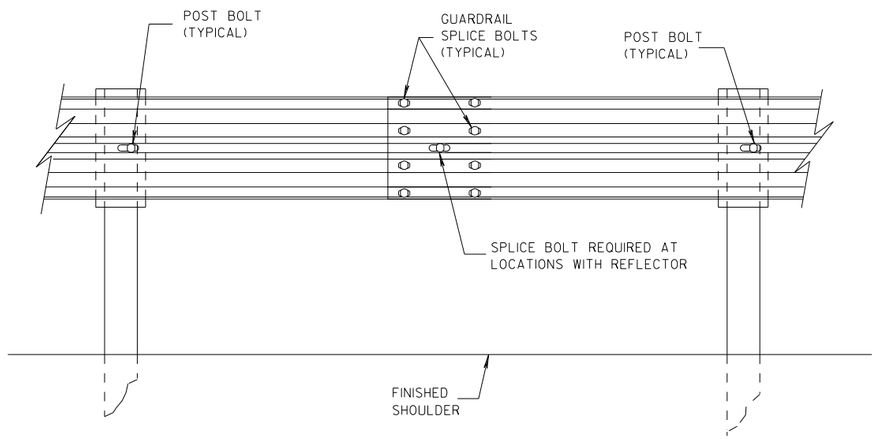


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

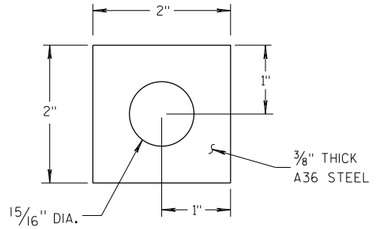
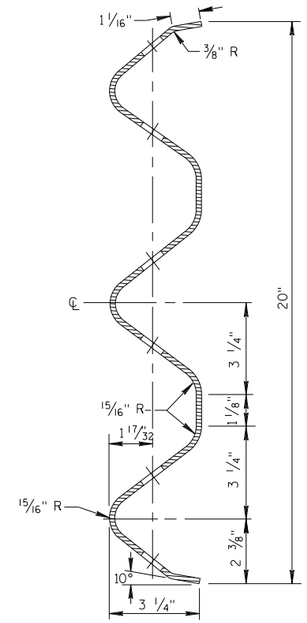


PLATE WASHER DETAIL



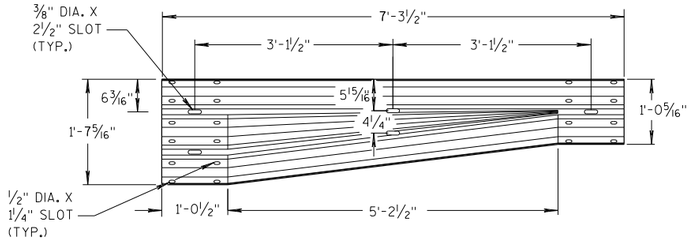
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

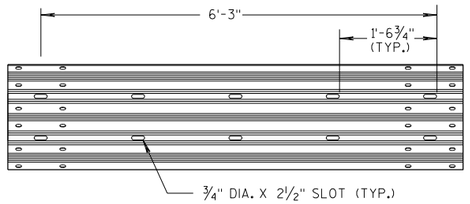
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

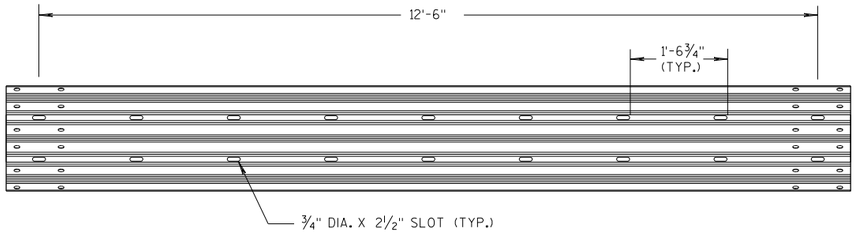
S.D.D. 14 B 45-5b



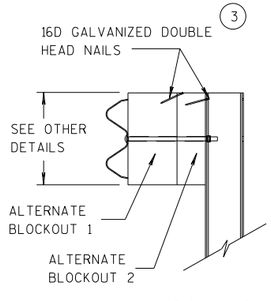
W-BEAM TO THRIE BEAM TRANSITION SECTION



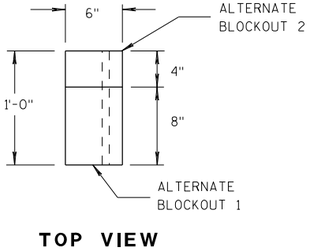
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

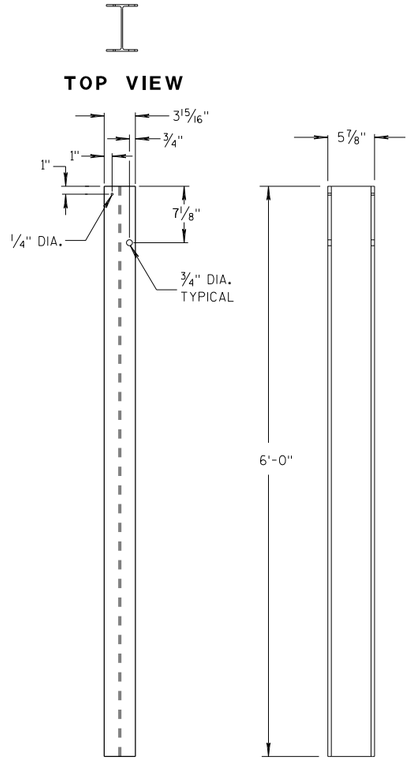


SIDE VIEW



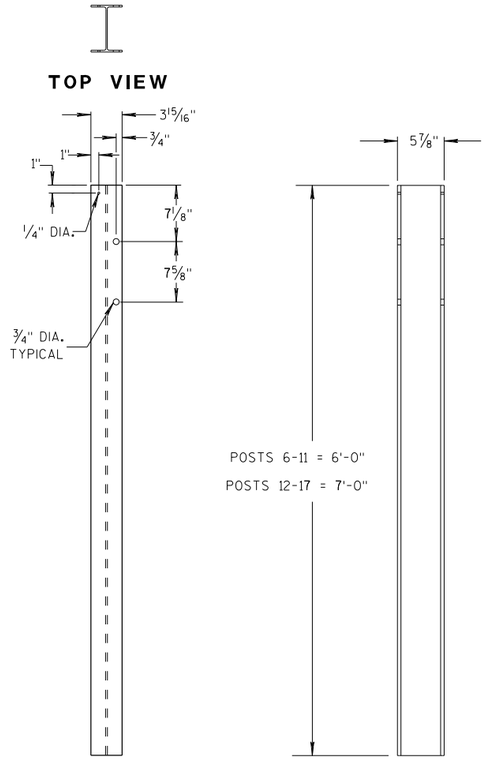
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



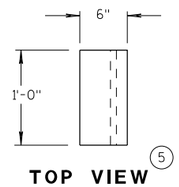
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

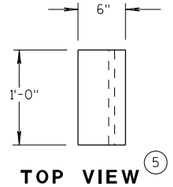


FRONT VIEW SIDE VIEW

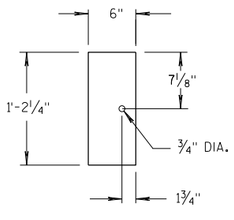
STEEL POSTS 6-17



TOP VIEW (5)

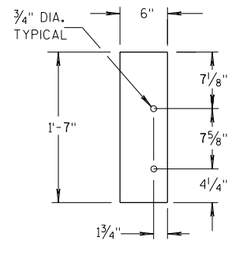


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

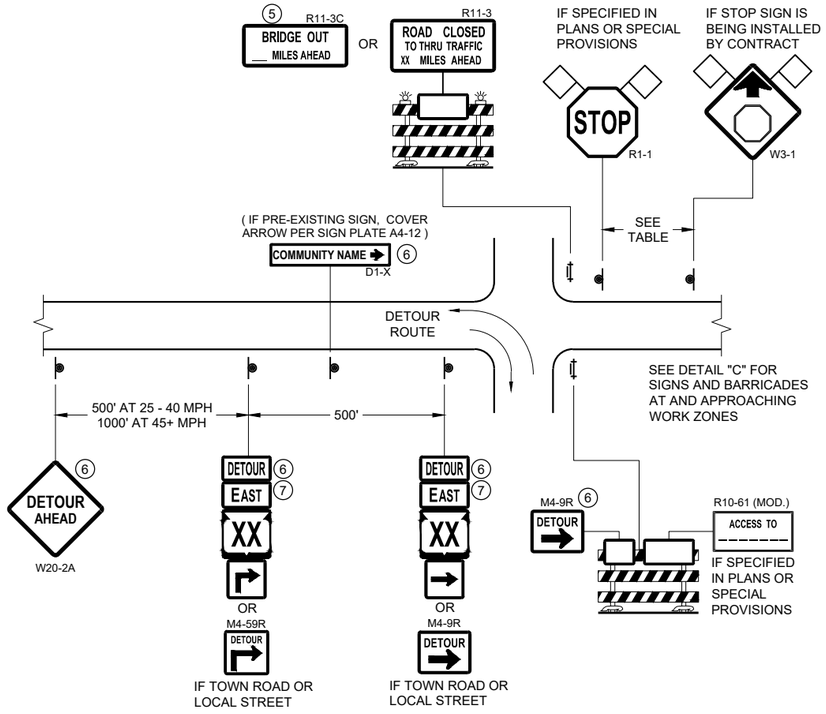
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 27

6

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

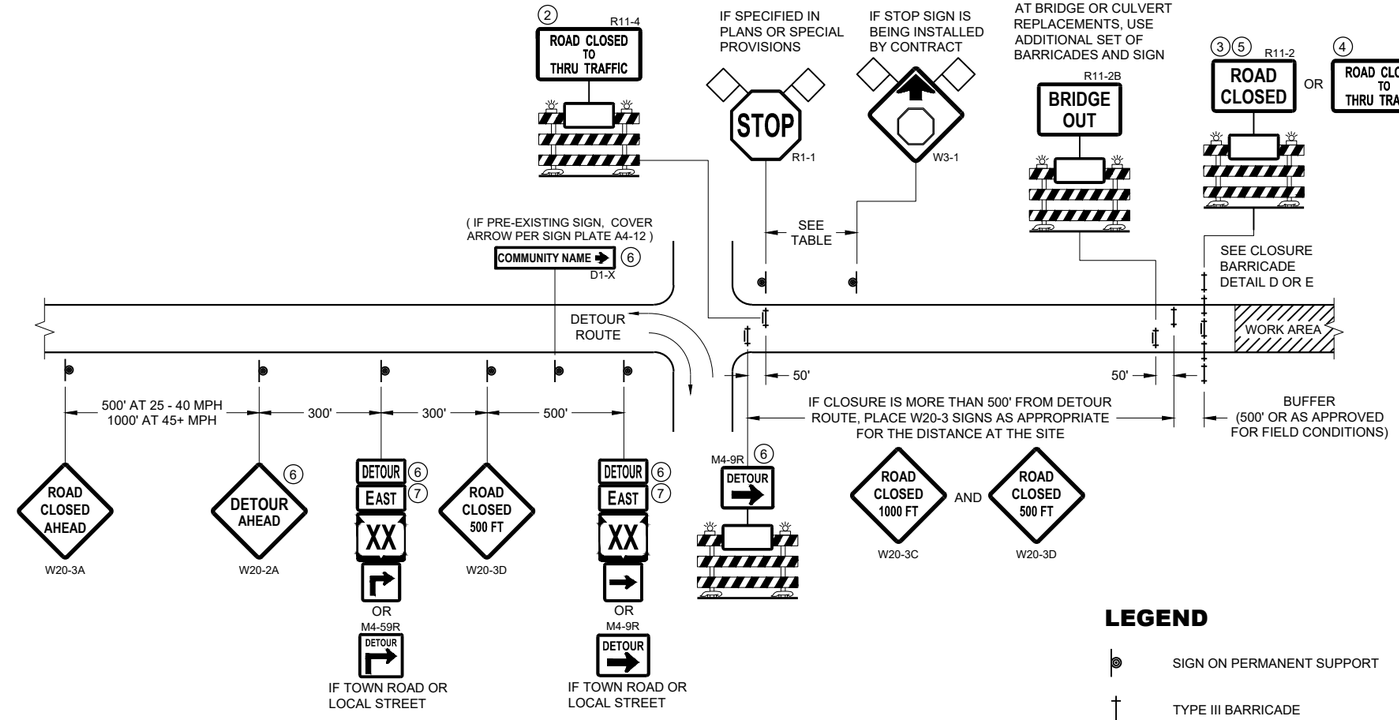
6

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



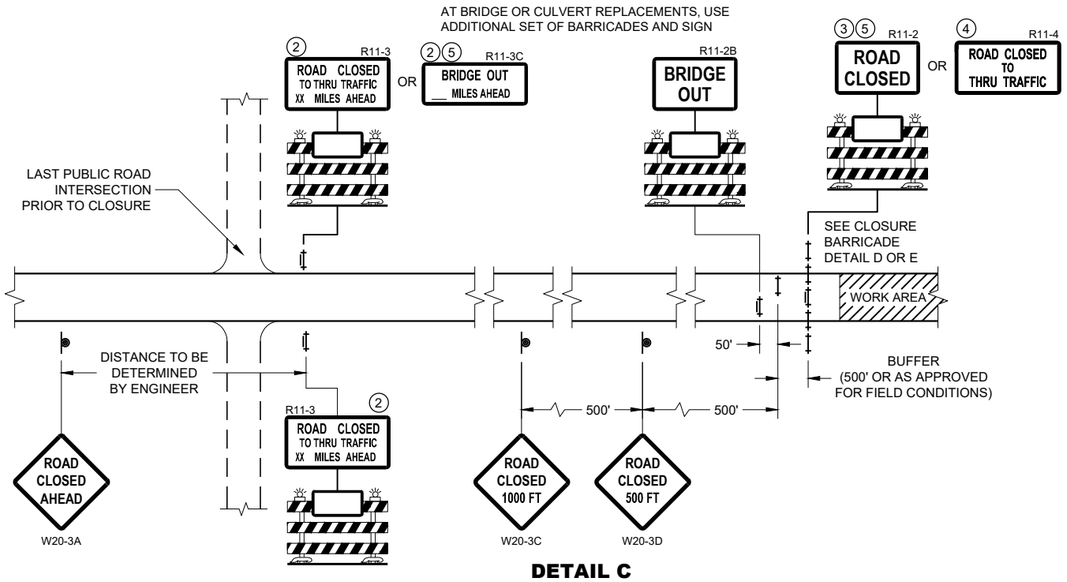
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

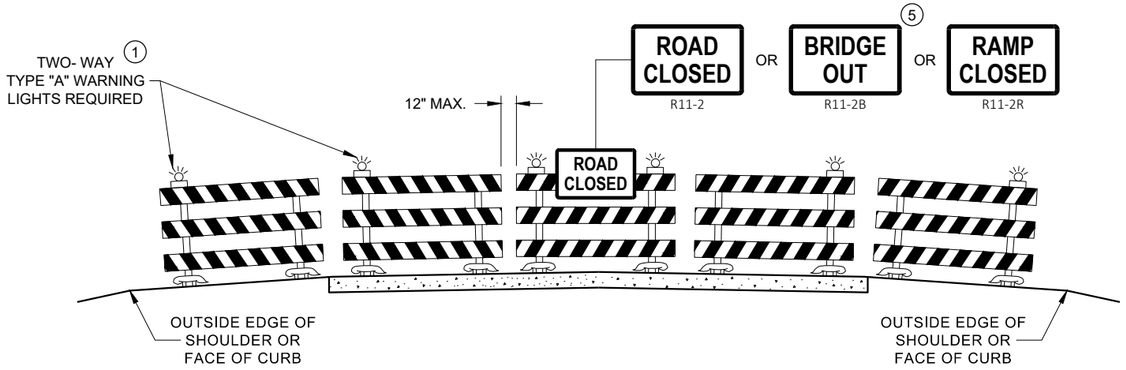
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

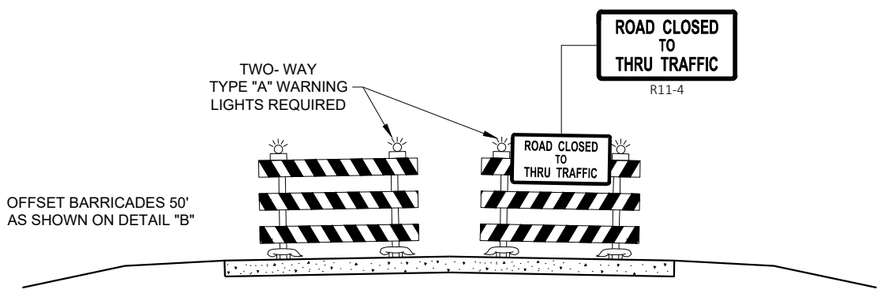
6

SDD 15C02 - 09a

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 09b

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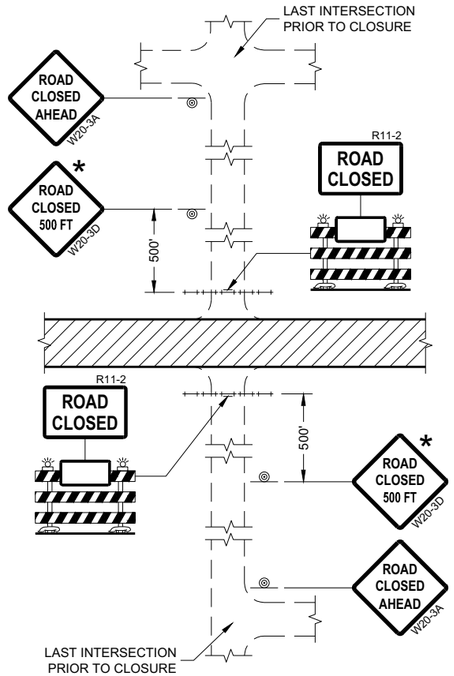
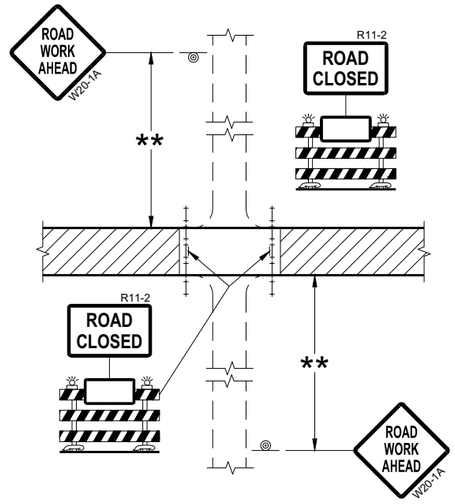
SDD 15C02 - 09b



DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO 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.

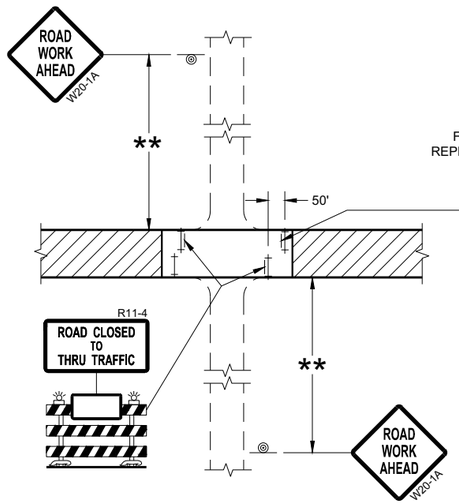
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

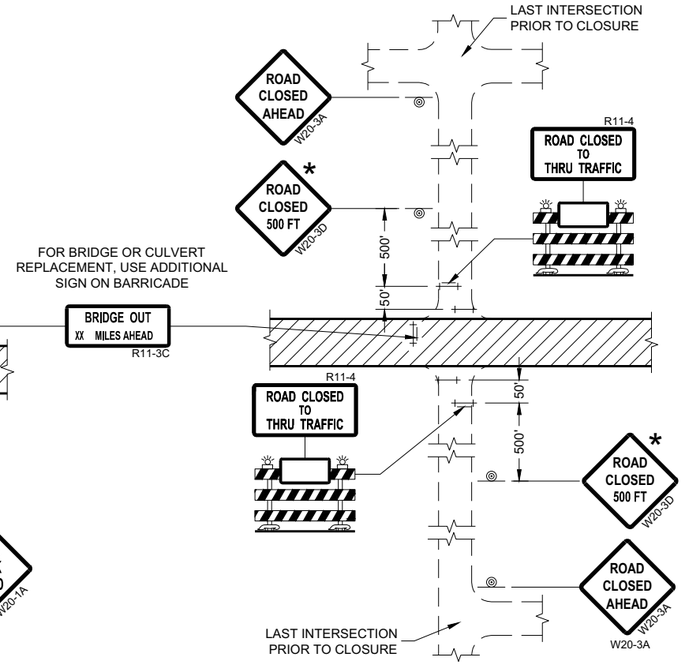
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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.





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

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

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
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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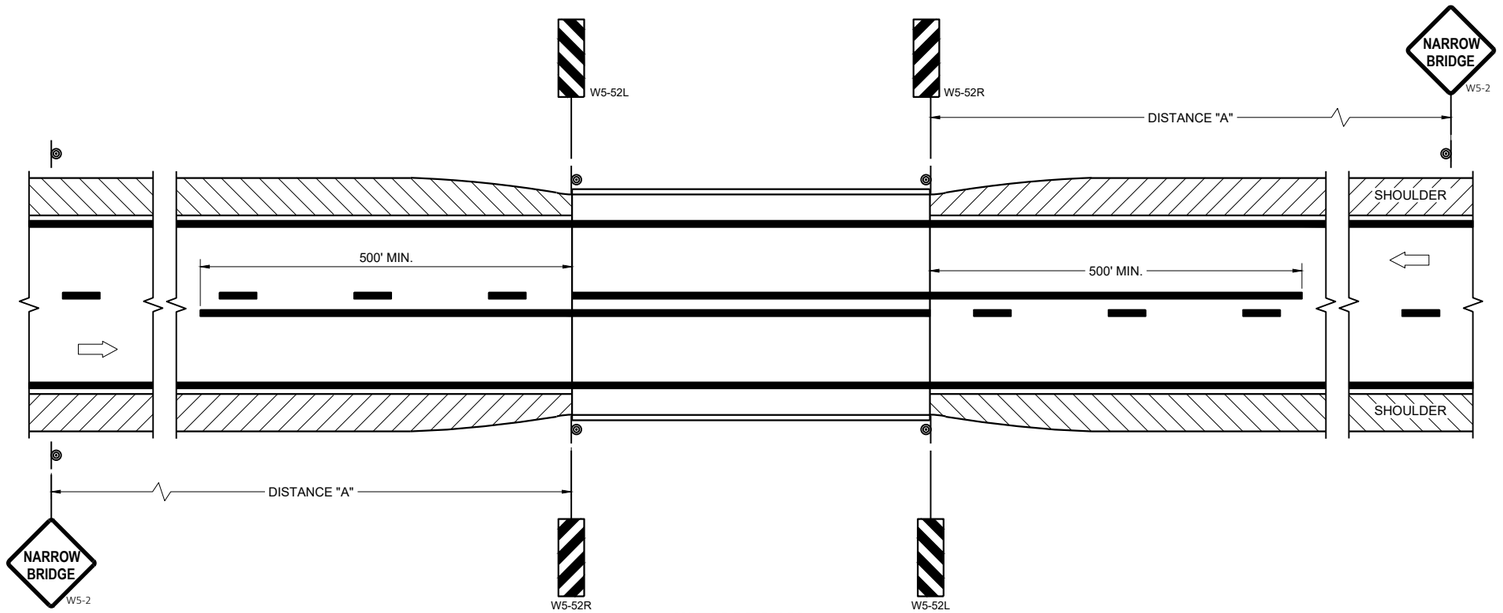
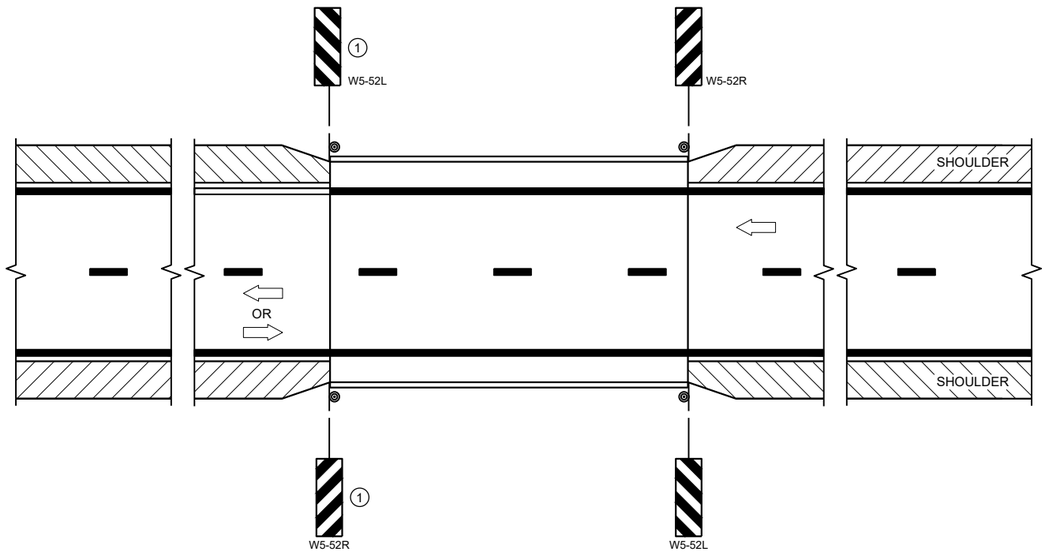
SDD 15C03 - 05



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



SITUATION 2

WARRANTING CRITERIA:
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET

GENERAL NOTES

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

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 15C06-12

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

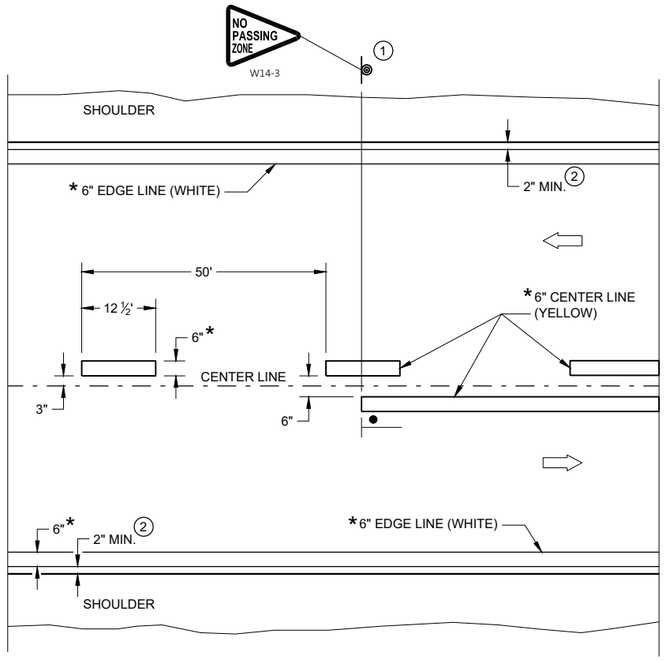
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

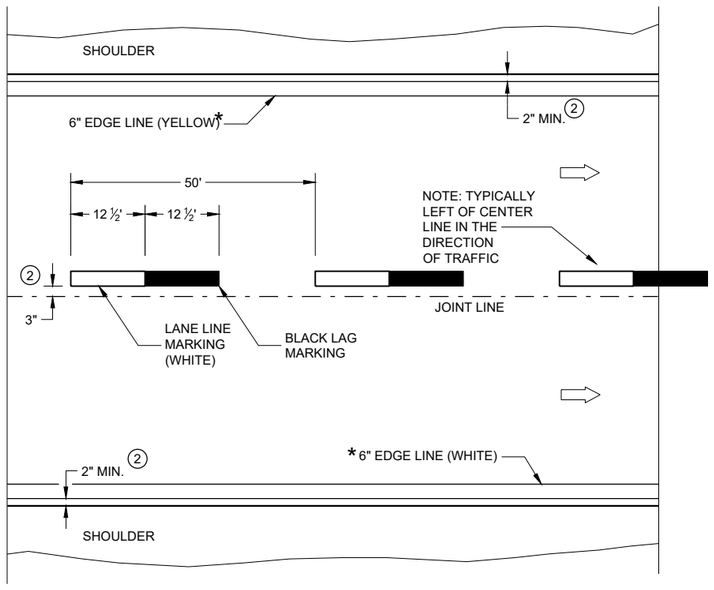
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023 — DATE

/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

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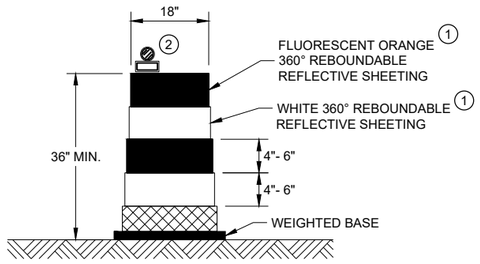
SDD 15C08-23a

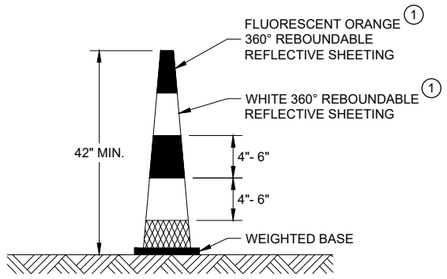
GENERAL NOTES

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



DRUM

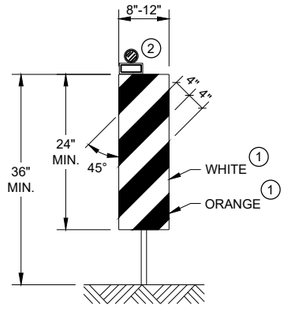
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

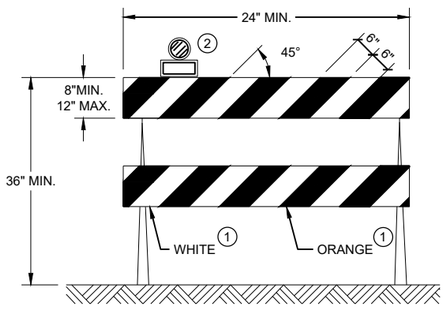
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



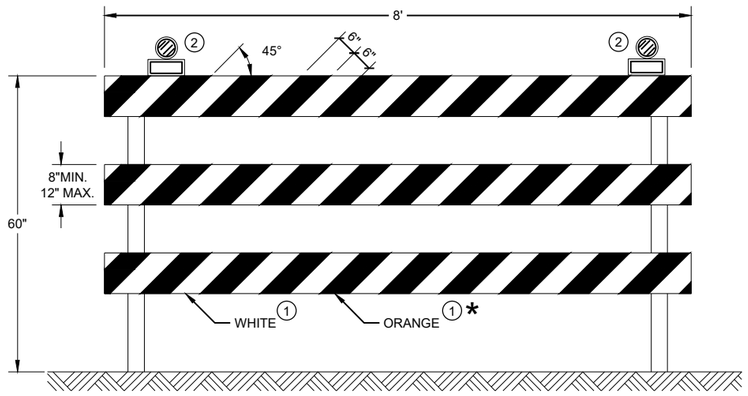
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 10b

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SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

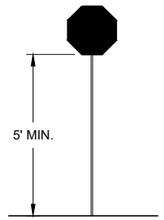
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



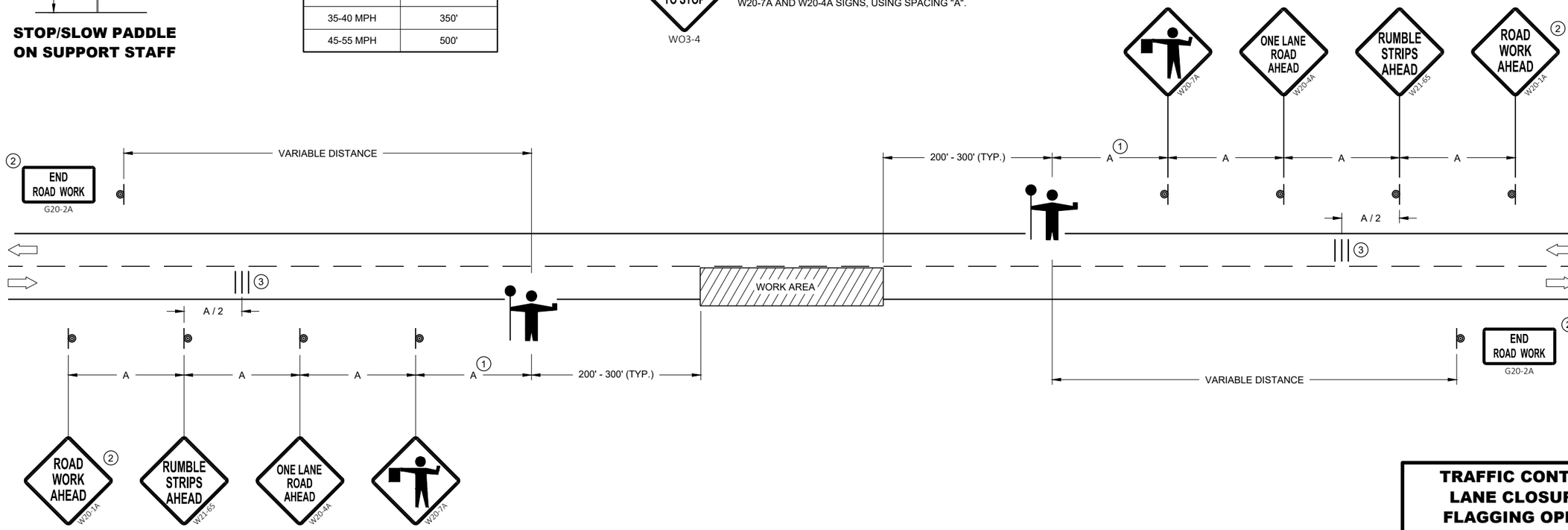
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15C12 - 09a

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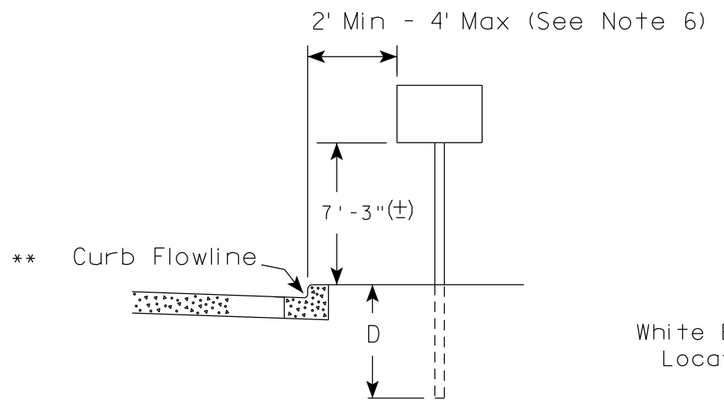
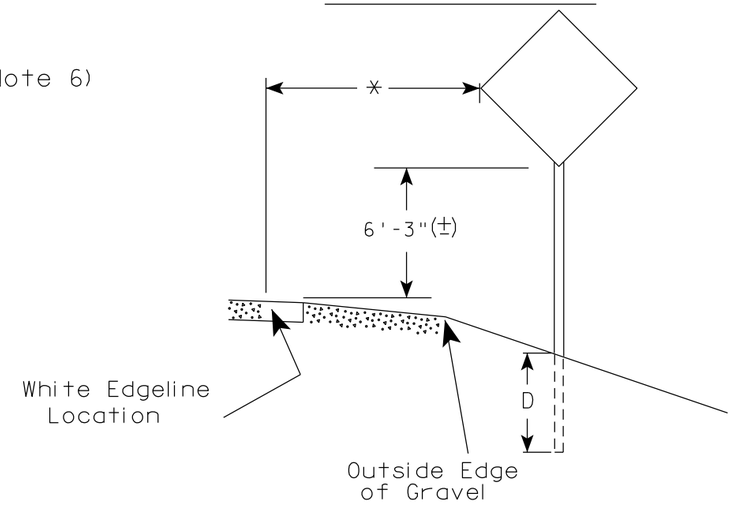
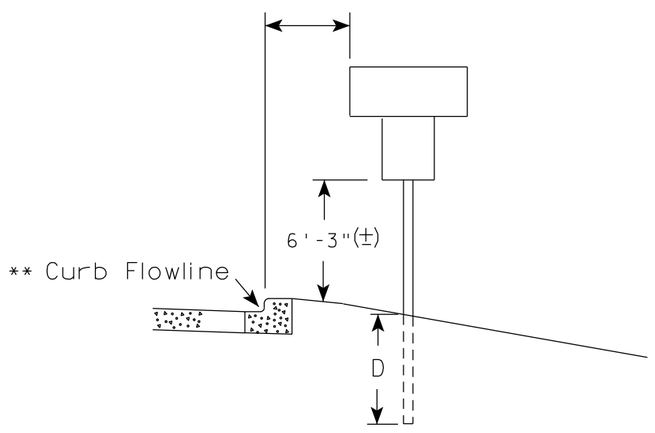
SDD 15C12 - 09a

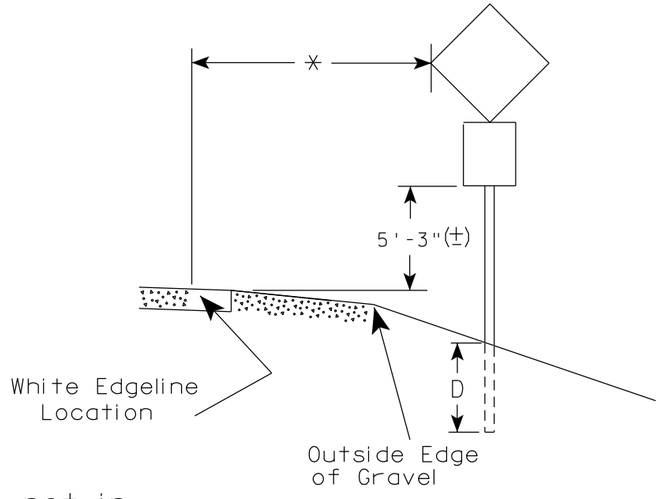
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). 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 directd by the Engineer.

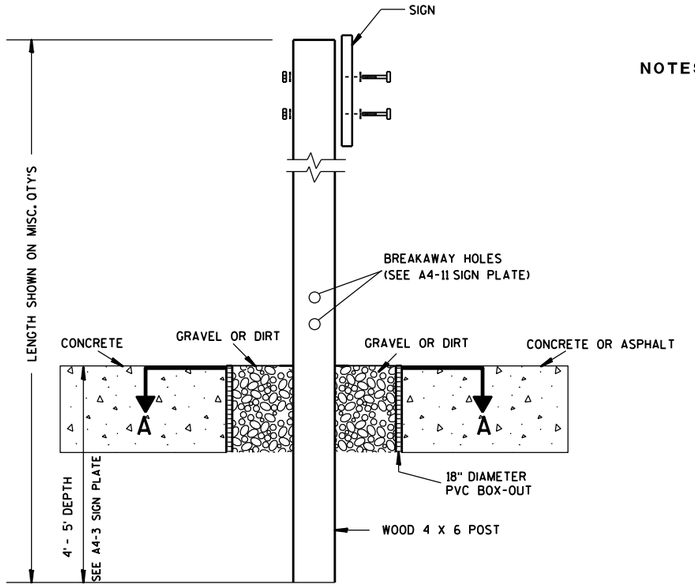
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

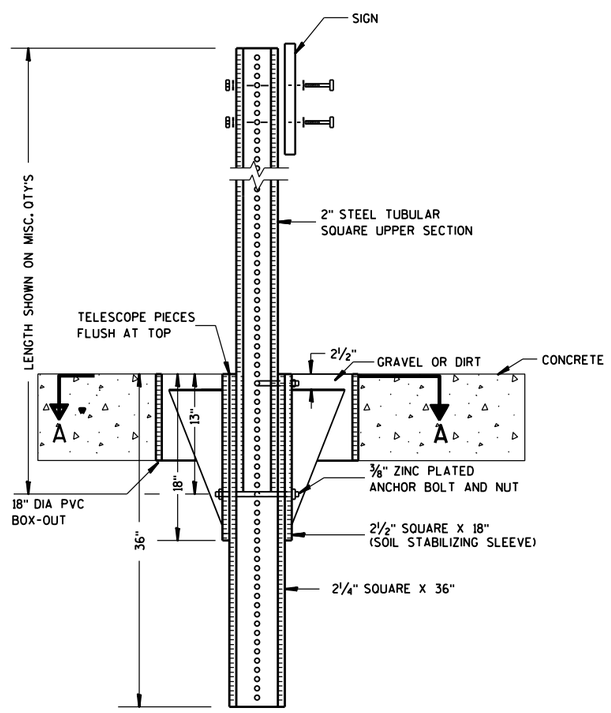
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 35	E



ELEVATION VIEW

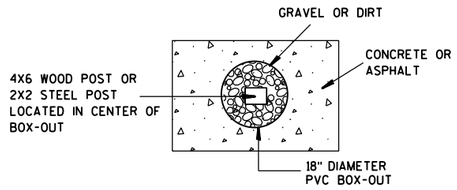
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

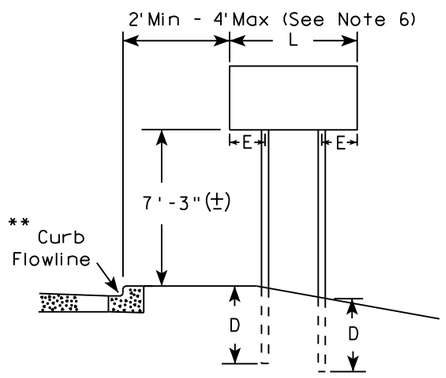
APPROVED Matthew R Rauch
for State Traffic Engineer

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

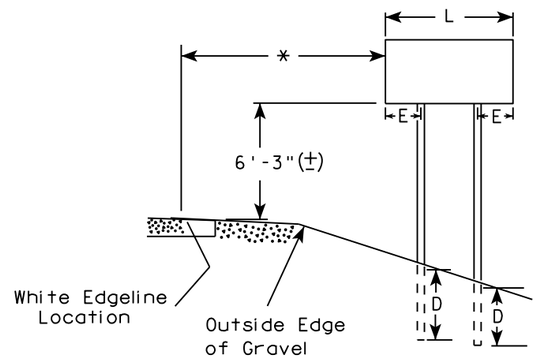
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

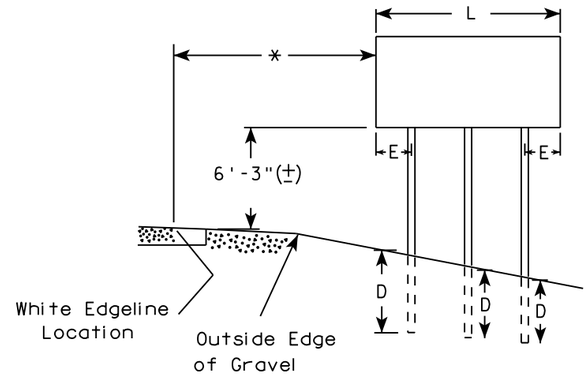
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

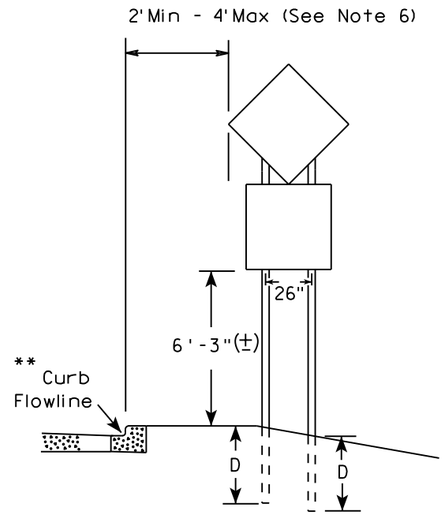
URBAN AREA



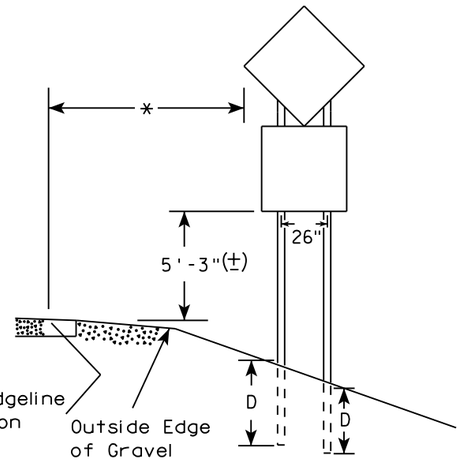
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 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" (±).

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

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

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

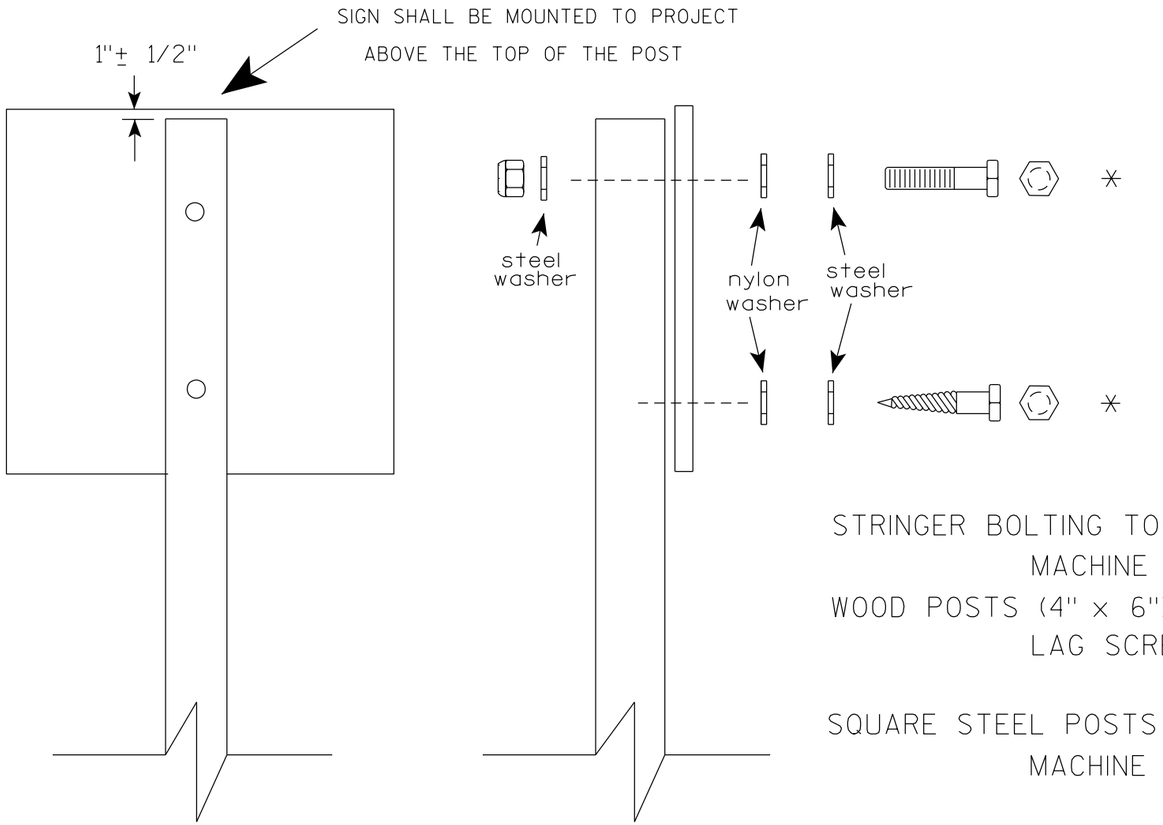
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

7

7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 37 | E



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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

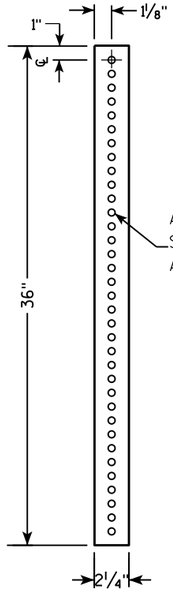
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

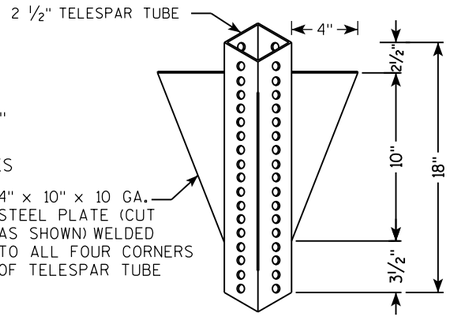
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

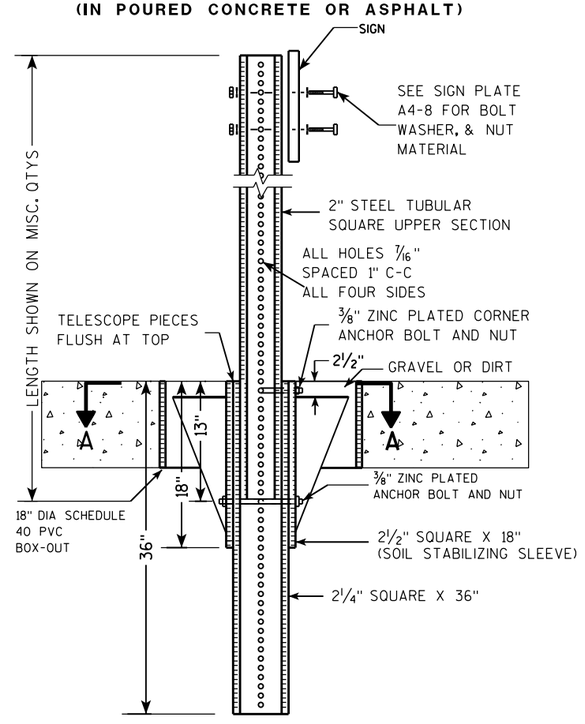
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



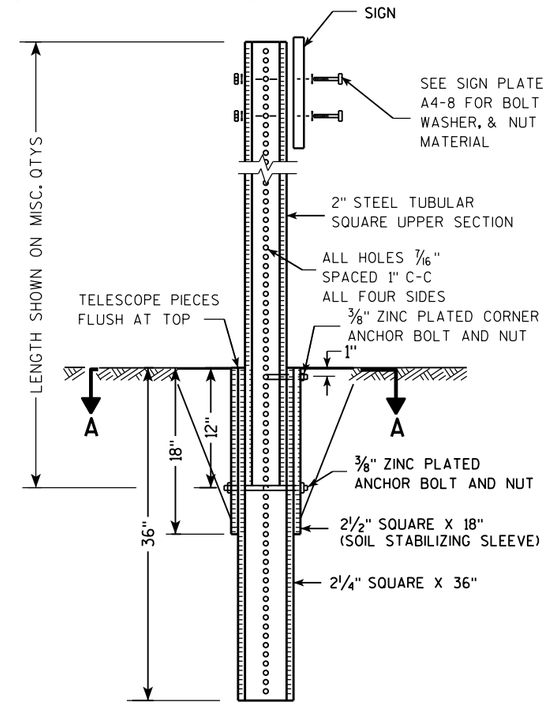
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

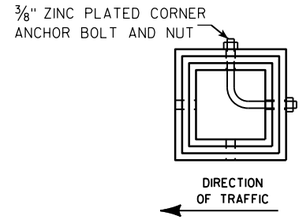


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

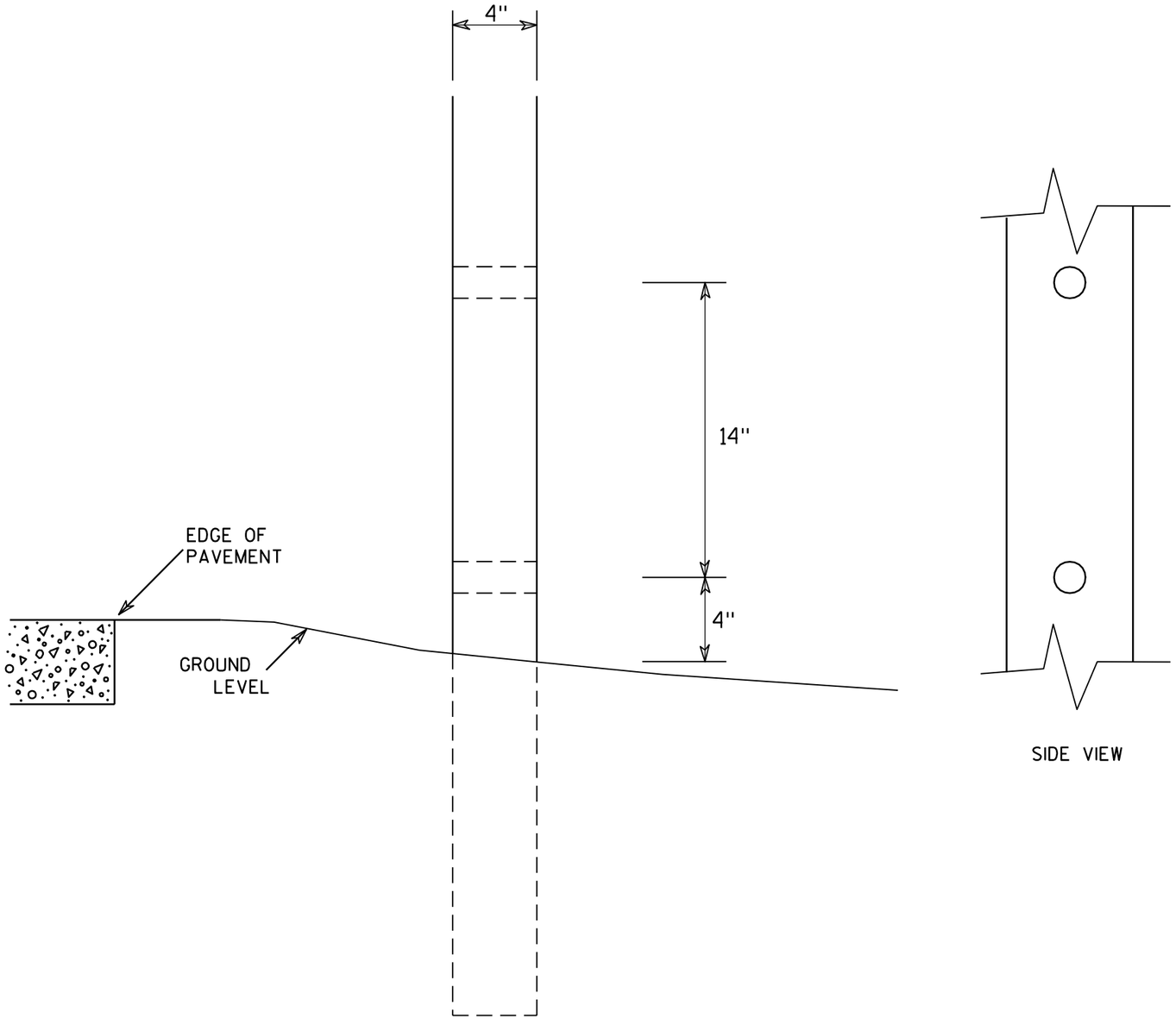
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

7

7

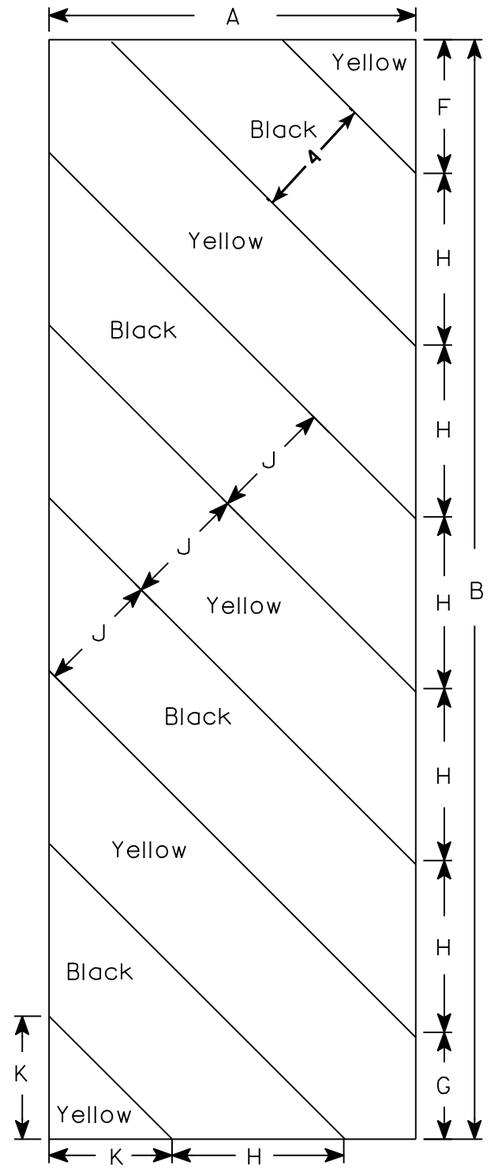
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

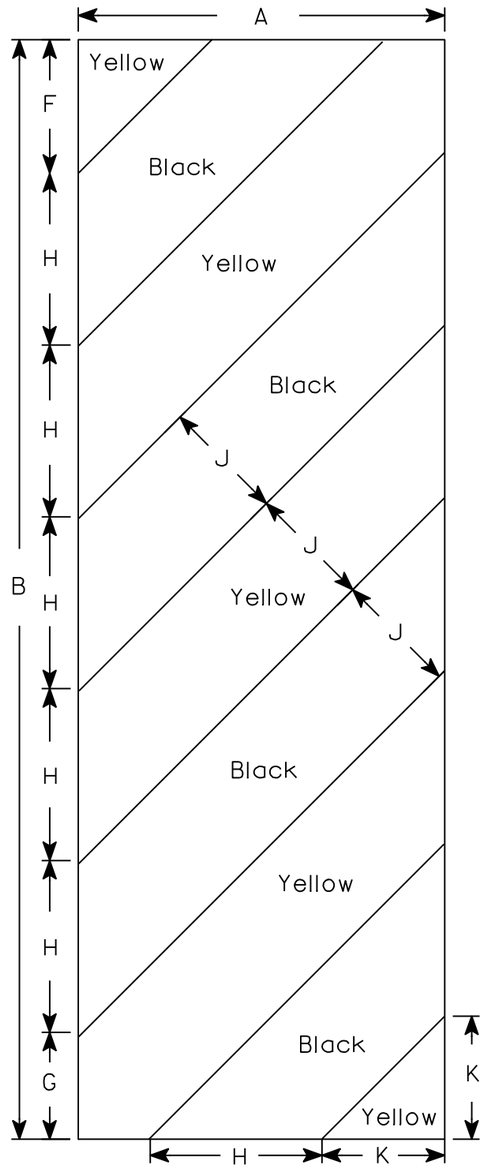
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 40	E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. 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.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

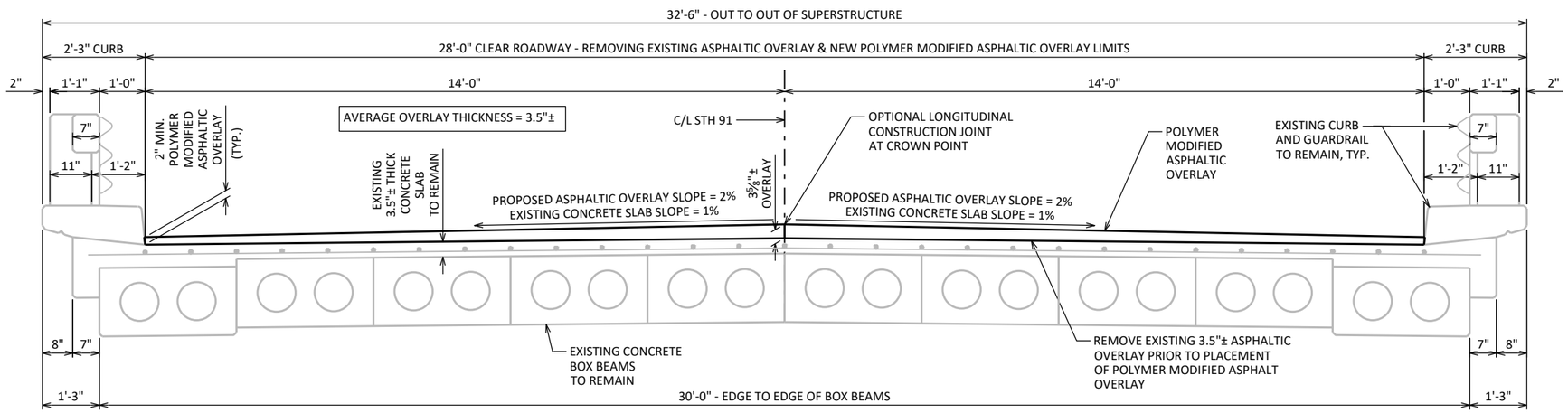
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

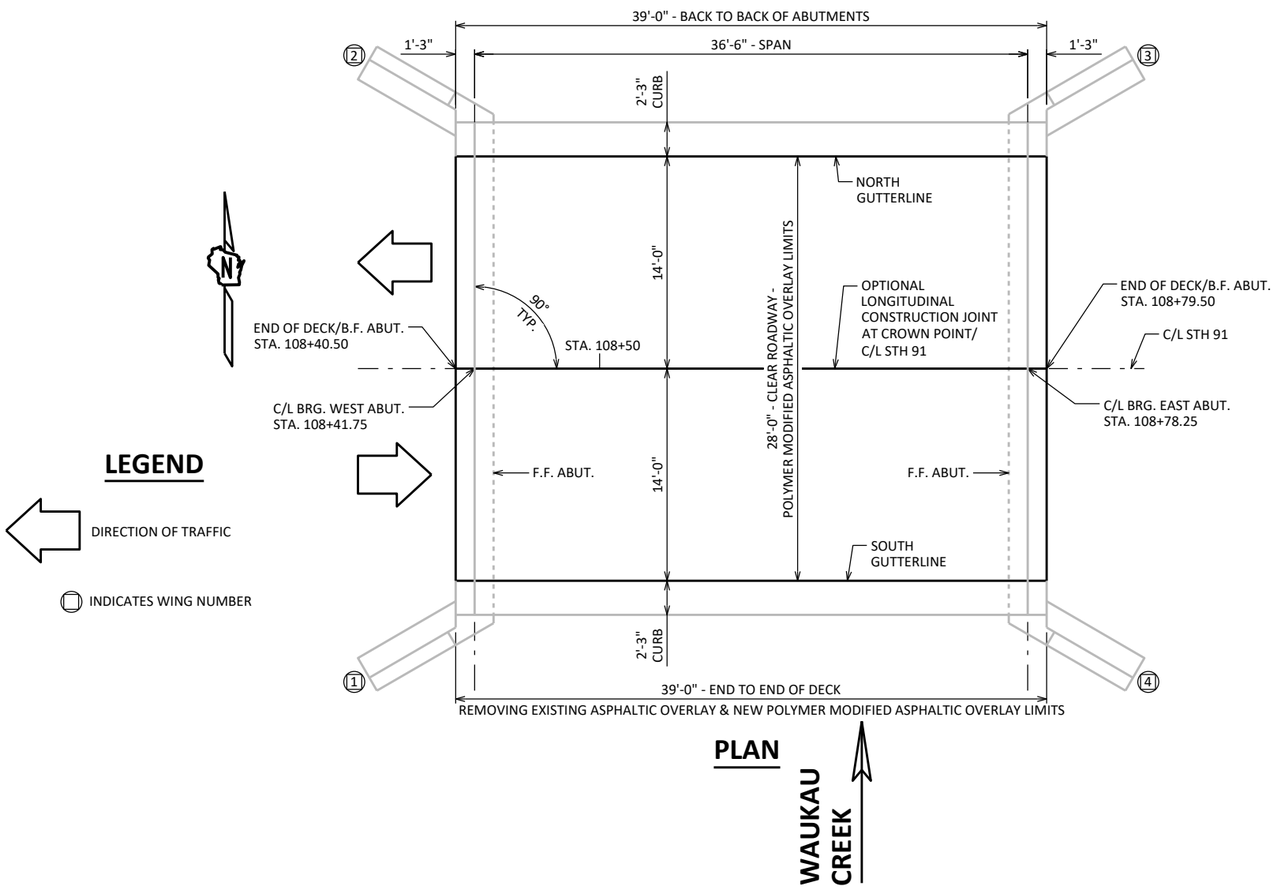
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 41	E



CROSS SECTION THRU BRIDGE LOOKING EAST



PLAN

LEGEND

DIRECTION OF TRAFFIC

INDICATES WING NUMBER

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-20
OPERATING RATING: HS-34
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 180 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY:
CONCRETE MASONRY DECK REPAIR — f'_c = 4,000 PSI
CONCRETE SURFACE REPAIR — f'_c = 3,500 PSI

STATE PROJECT NUMBER

6540-10-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

◭ PREPARATION DECKS TYPE 1 AND PREPARATION DECKS TYPE 2 AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AREAS SHALL BE FILLED WITH "CONCRETE MASONRY DECK REPAIR".

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY AT THE ABUTMENTS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "HMA OVERLAY POLYMER-MODIFIED".

THE EXISTING OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-70-39)".

THE PLAN QUANTITY FOR THE BID ITEM "HMA OVERLAY POLYMER-MODIFIED" IS BASED ON THE AVERAGE OVERLAY THICKNESS.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 2" PLACED ABOVE THE DECK SURFACE. EXPECTED AVERAGE OVERLAY THICKNESS IS 3.5". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

★ "CONCRETE SURFACE REPAIR" REQUIRED AT BOTH ABUTMENTS. 9 SF OF CONCRETE SURFACE REPAIR IS ESTIMATED AT THE SOUTH CORNER OF WEST ABUTMENT AND WING 1. 12 SF OF CONCRETE SURFACE IS ESTIMATED AT THE NORTH CORNER OF EAST ABUTMENT. QUANTITIES SHOWN ARE APPROXIMATE. FIELD ENGINEER TO DETERMINE FINAL CONCRETE SURFACE REPAIR AREAS. WORK SHALL BE COMPLETED ONLY AS DIRECTED BY THE FIELD ENGINEER.

TRAFFIC DATA

STH 91:
ADT = 7,600 (2045)
R.D.S. = 55 MPH

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
◭	509.0301	PREPARATION DECKS TYPE 1	SY	31
◭	509.0302	PREPARATION DECKS TYPE 2	SY	13
	509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	310
★	509.1500	CONCRETE SURFACE REPAIR	SF	21
	509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	3
	509.3500.S	HMA OVERLAY POLYMER-MODIFIED	TON	24
	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-70-39)	SY	122

LIST OF DRAWINGS:

1 POLYMER MODIFIED ASPHALTIC OVERLAY
2 DECK CONDITION SURVEY

STRUCTURE DESIGN CONTACTS:
JOHN SENDOR 608-266-5163
DOMINIQUE BECHLE 608-261-8205

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

ACCEPTED DMB 02/01/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-70-39

STH 91 OVER WAUKAU CREEK

COUNTY	TOWN
WINNEBAGO	RUSHFORD

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
JJS	AWP	JPH	JJS

POLYMER MODIFIED ASPHALTIC OVERLAY

SHEET 1 OF 2
42

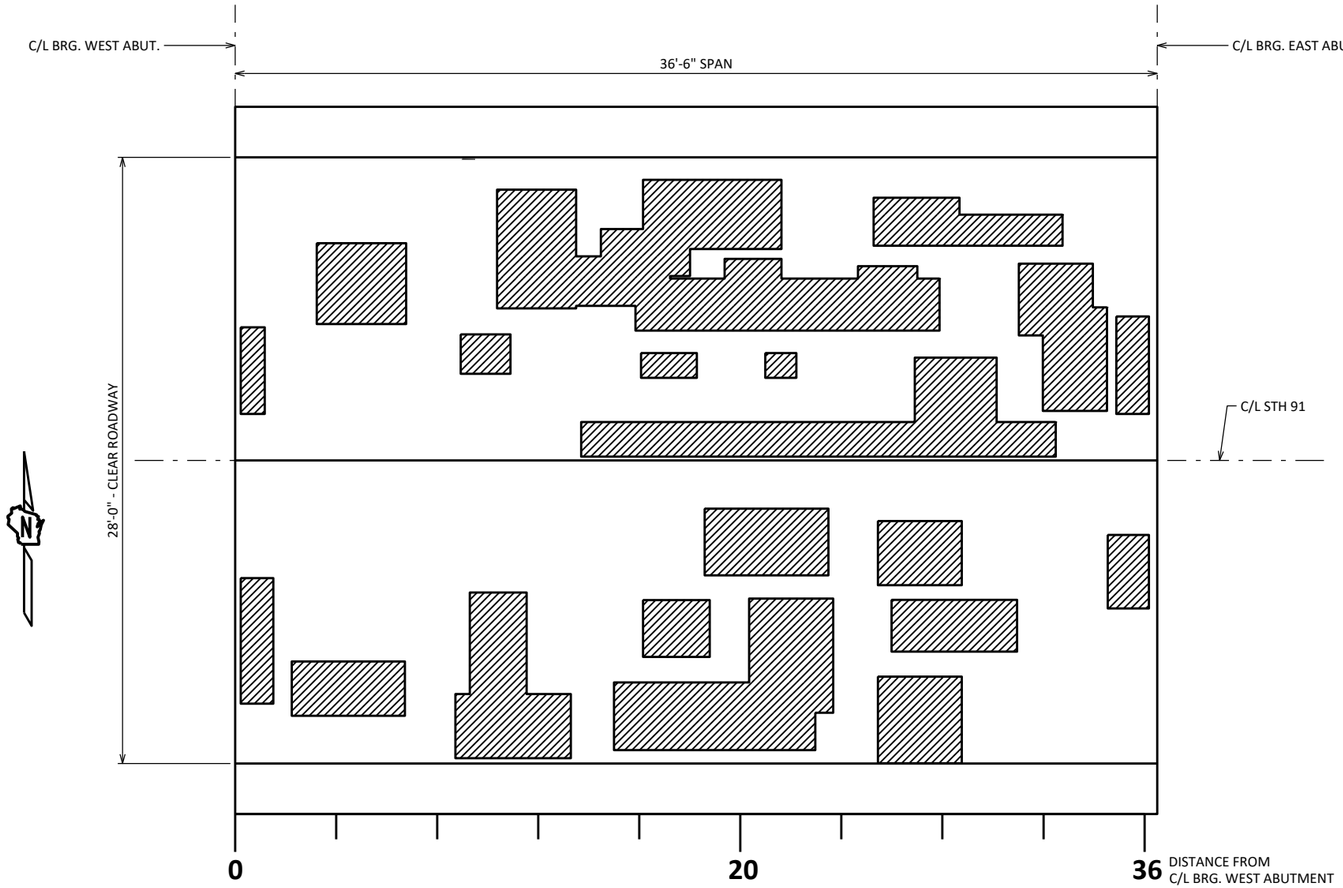
SCALE = 4

I.D. 6540-10-00A DATE: SEPT. 2022

8

8

STATE PROJECT NUMBER
6540-10-71



PLAN

(DECK SURVEY RESULTS)

CONDITIONS LEGEND	QUANTITY SUMMARY		
DELAMINATION DETECTED BY IR	CONDITION	SQ. FT.	%
	DELAMINATION (IR)	277.9	27.2
	DETERIORATION (GPR)	553.3	54.1
	TOTAL	645.6	63.2

LEVEL 2 GPR AND IR DECK SCAN COMPLETED ON 11/16/2021 BY INFRASENSE

ANALYZED BY: SB
REVIEWED BY: AJC
COMPLETED: 11/16/2021

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

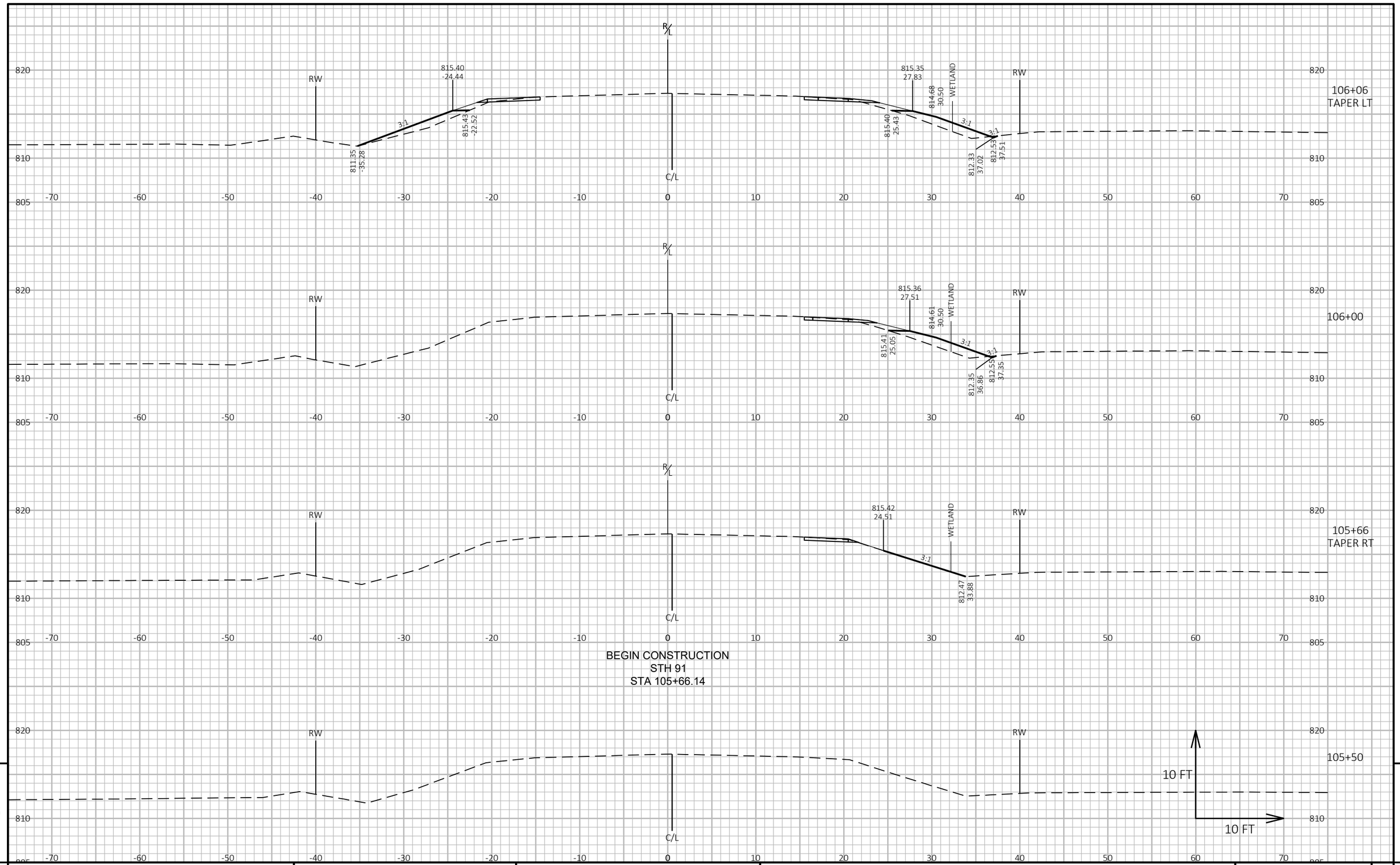
STRUCTURE B-70-39

DRAWN BY JPH | PLANS CK'D JJS

DECK CONDITION SURVEY

SHEET 2
43

SCALE = 6



BEGIN CONSTRUCTION
STH 91
STA 105+66.14

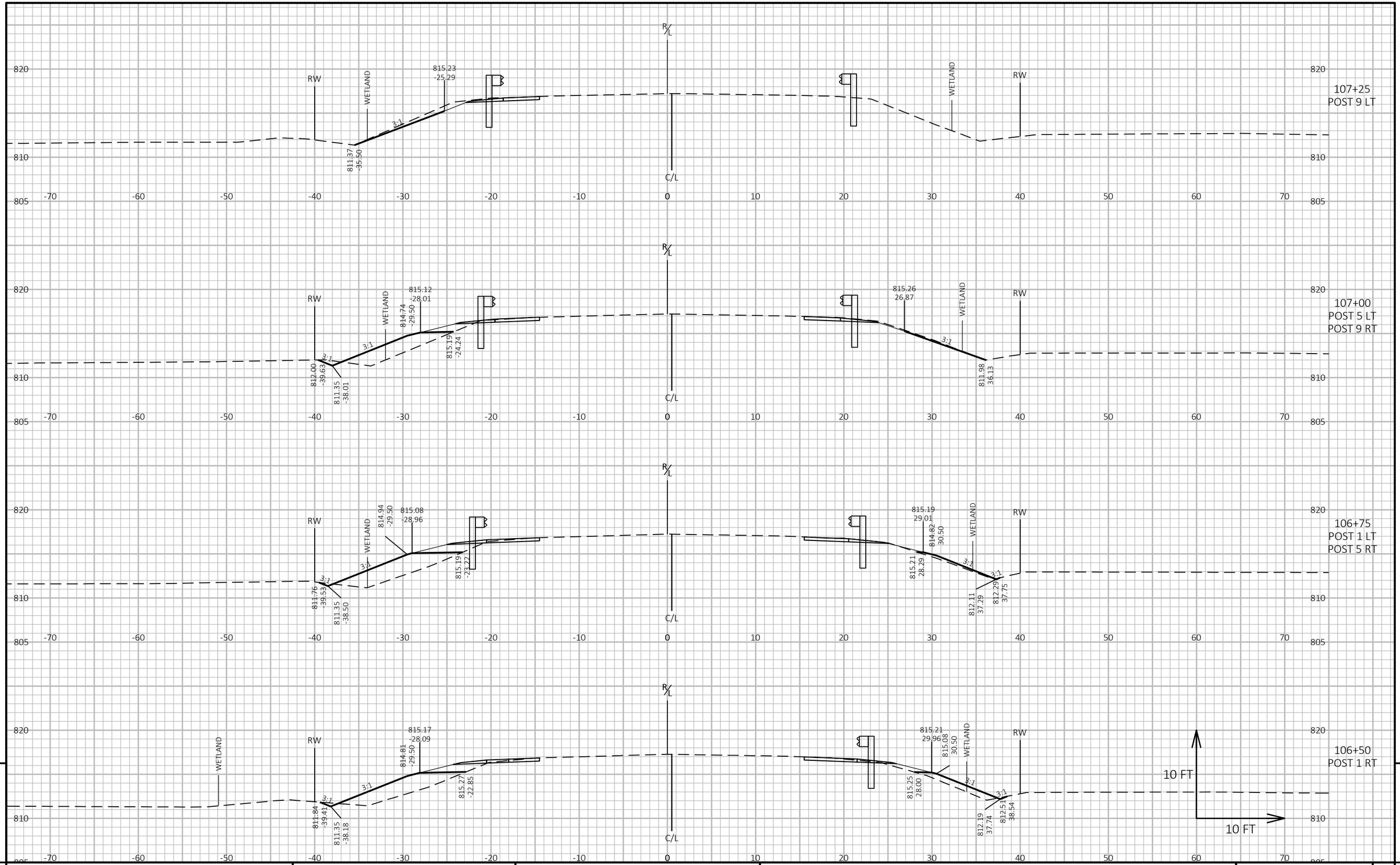
9 9

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: STH 91	SHEET 44	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-090201-XS.DWG
LAYOUT NAME - 100-WIS 91

PLOT DATE : 1/26/2024 9:22 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

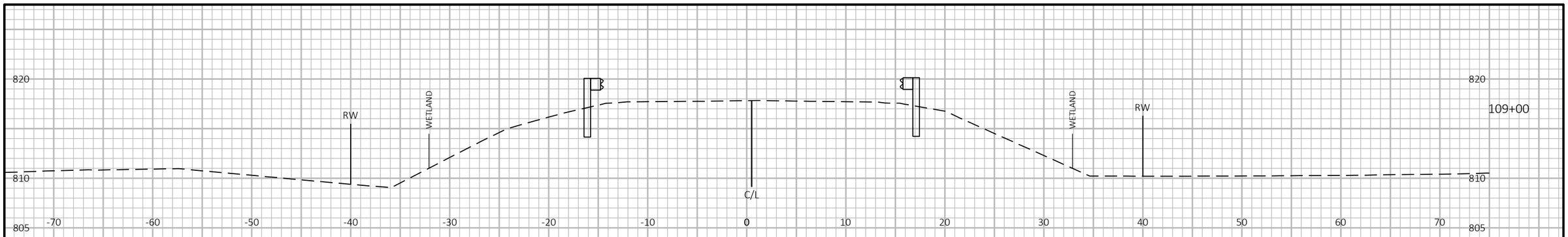
9

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: STH 91	SHEET 45	E

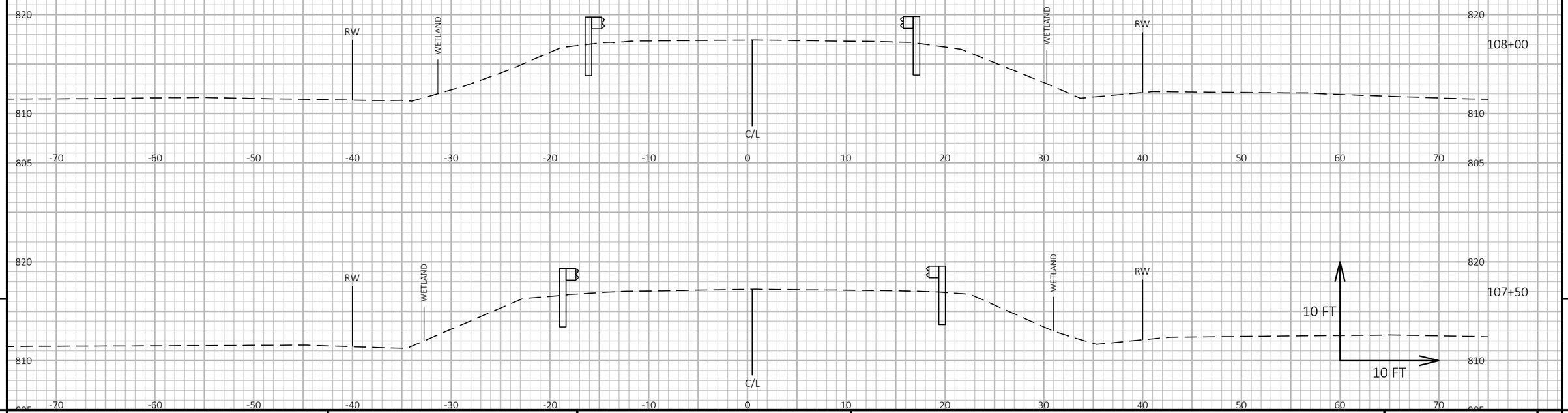
FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-090201-XS.DWG
LAYOUT NAME - 101-WIS 91

PLOT DATE : 1/26/2024 9:22 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



STRUCTURE B-70-39
STA 108+40.50 - STA 108+79.50



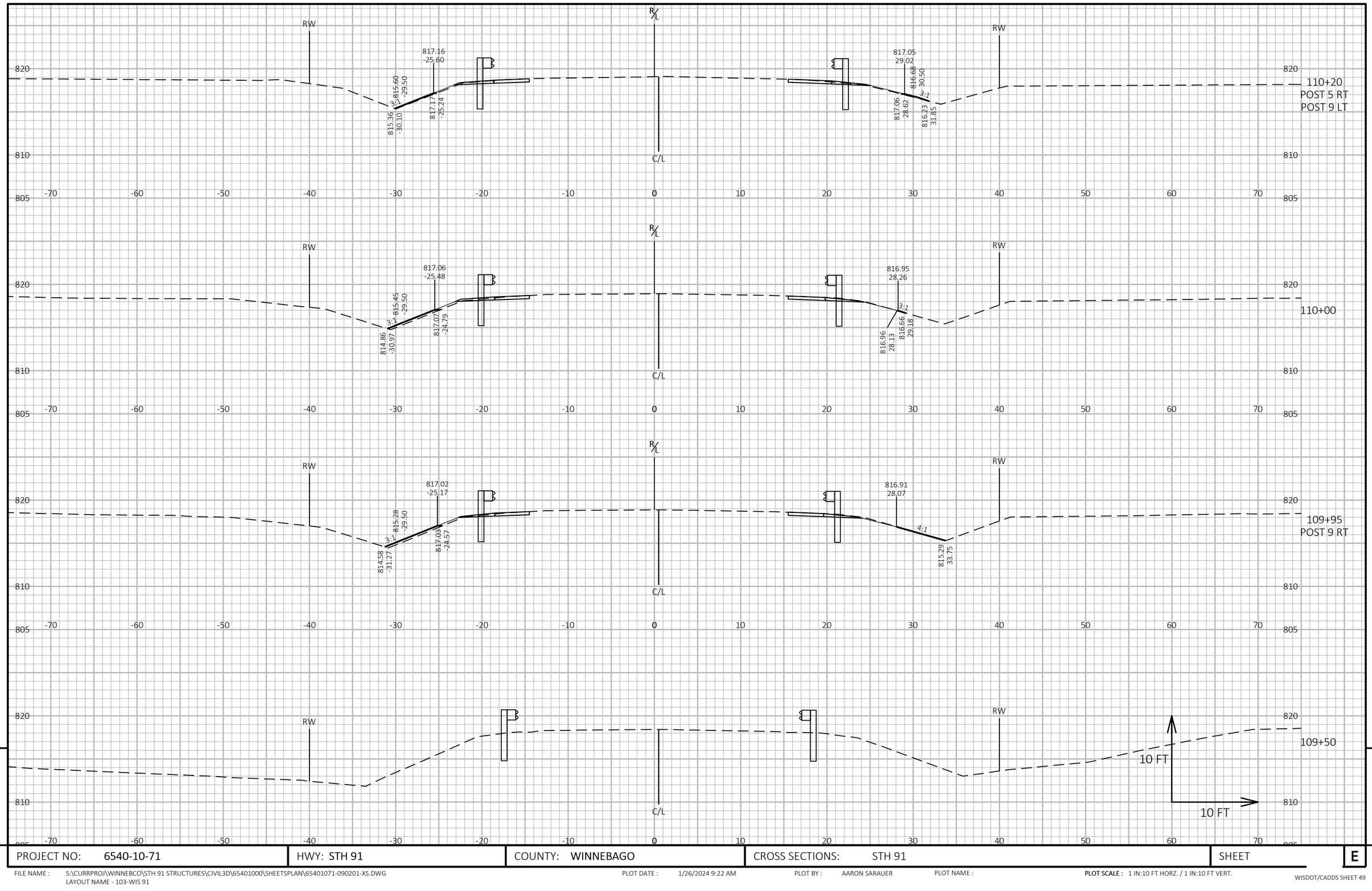
9

9

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: STH 91	SHEET 46	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-090201-XS.DWG
LAYOUT NAME - 102-WIS 91

PLOT DATE : 1/26/2024 9:22 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



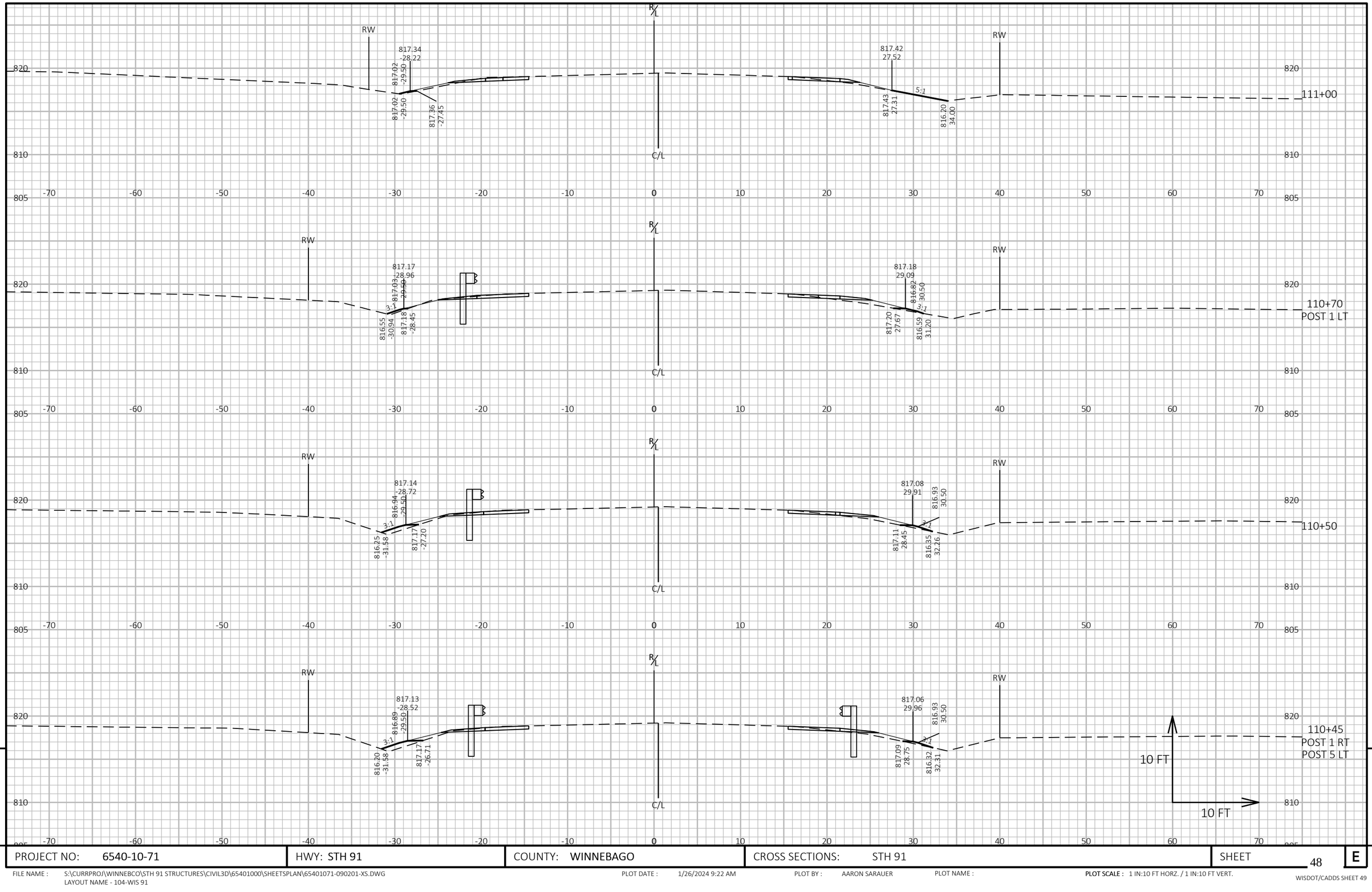
9

9

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: STH 91	SHEET E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-090201-XS.DWG
LAYOUT NAME - 103-WIS 91

PLOT DATE : 1/26/2024 9:22 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: STH 91	SHEET 48	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-090201-XS.DWG
LAYOUT NAME - 104-WIS 91

PLOT DATE : 1/26/2024 9:22 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

RW
RW
820
820
112+00
810
810
C/L
END CONSTRUCTION
STH 91
STA 111+54.02
805
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70
805
R/L
RW
RW
817.78
-28.03
820
820
7:1
111+54
TAPER LT
817.59
-29.47
810
810
C/L
805
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70
805
R/L
RW
RW
817.74
-27.93
820
820
8:1
111+50
817.56
-29.34
810
810
C/L
805
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70
805
R/L
RW
RW
817.44
-27.92
817.52
26.87
820
820
4:1
6:1
111+14
TAPER RT
817.28
-28.54
817.44
-27.68
816.30
33.71
10 FT
10 FT
810
810
C/L
805
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70
805

9

9

PROJECT NO: 6540-10-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: STH 91	SHEET 49	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401000\SHEETSPLAN\65401071-090201-XS.DWG
LAYOUT NAME - 105-WIS 91

PLOT DATE : 1/26/2024 9:22 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

GRE MAY 2024

PROJECT ID: **6540-11-71**

WITH: 6540-08-72 / 6540-10-71

COUNTY: **WINNEBAGO**

ORDER OF SHEETS

TOTAL SHEETS = 62

N

DESIGN DESIGNATION

A.A.D.T.	2024	=	4710
A.A.D.T.	2044	=	5410
D.H.V.		=	476
D.D.		=	62/38
T.		=	11.0%
DESIGN SPEED		=	55 MPH
ESALS		=	1,200,000 HMA

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

BERLIN - OSHKOSH

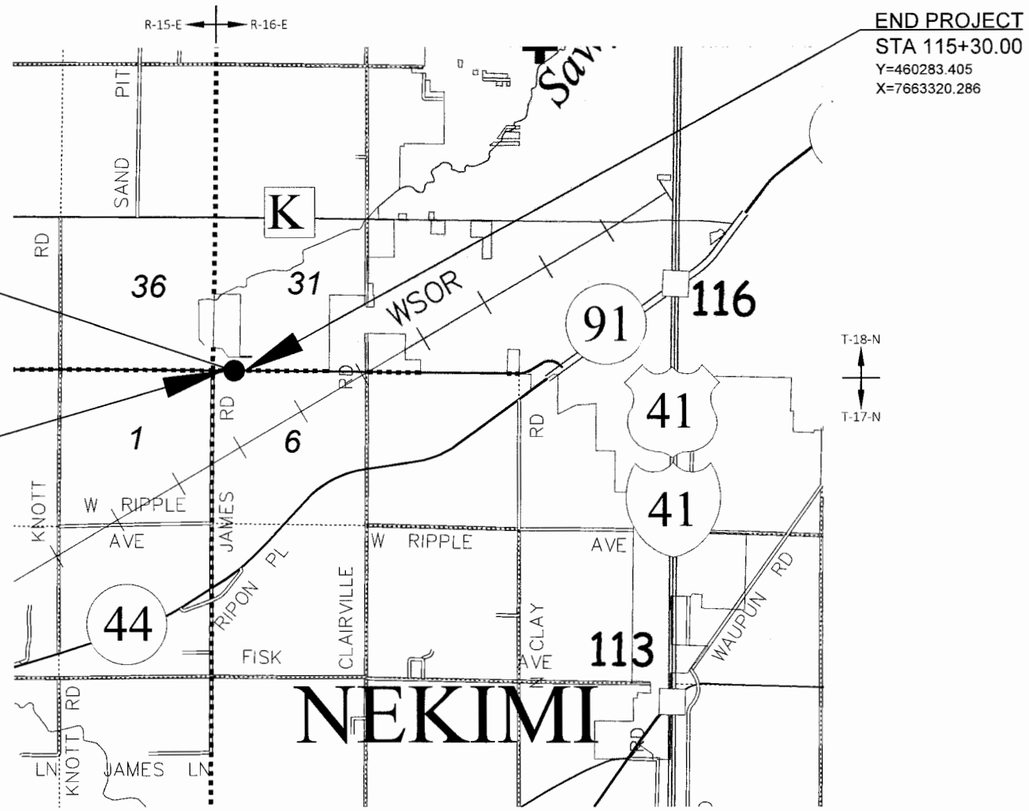
JAMES ROAD - CLAIRVILLE ROAD

STH 91

WINNEBAGO

STATE PROJECT NUMBER
6540-11-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6540-11-71	WISC 2024329	1



STRUCTURE B-70-326
STATION 114+27

BEGIN PROJECT
STA 113+65.00
Y=460285.354
X=766155.297

END PROJECT
STA 115+30.00
Y=460283.405
X=7663320.286

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.031 MI

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

ORIGINAL PLANS PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
85 South Pioneer Road, Suite 300 • Fond du Lac, WI 54935
(920) 924-5720 • fax (920) 924-5725

WISCONSIN
JEFFREY A. CHVOSTA
E-39047
SLINGER, WI
PROFESSIONAL ENGINEER

DATE: 01/11/24 JEFFREY A. CHVOSTA, PE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NE REGION
Designer	GREMMER & ASSOCIATES, INC.
Project Manager	W. BERTRAND
Regional Examiner	
Regional Supervisor	T. RABE

APPROVED FOR THE DEPARTMENT

DATE: 1/12/24 Bill Bertrand, P.E. (Signature)

E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-010101-TI.DWG PLOT DATE : 1/11/2024 12:33 PM PLOT BY : AARON SARAUER PLOT NAME :

GENERAL NOTES

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

SAWCUT LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD.

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

SALVAGED TOPSOIL, FERTILIZER, SEED AND EROSION MAT AS SHOWN IN PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE PLACED ON ALL DISTURBED AREAS, EXCLUSIVE OF THE AREA OCCUPIED BY THE NEW PAVEMENTS, ENTRANCES, AND RELATED STRUCTURES.

NO FERTILIZER SHALL BE APPLIED WITHIN 20 FEET OF A BODY OF WATER OR WETLAND.

SECTIONS AS SHOWN ON THE CROSS-SECTIONS INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED.

EROSION CONTROL ITEMS SHOWN ARE APPROXIMATE, THE EXACT LOCATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THAT THE MEASURE IS NO LONGER NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EROSION CONTROL MEASURE AS DIRECTED BY THE ENGINEER.

PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH SDD "LONGITUDINAL MARKING (MAINLINE)."

BASE AGGREGATE DENSE ¾-INCH WEIGHT CALCULATIONS ARE BASED ON 2.1 TONS/CY. BASE AGGREGATE DENSE 1¼-INCH WEIGHT CALCULATIONS ARE BASED ON 2.0 TONS/CY.

HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LBS/SY/INCH.

TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION RATE OF 0.05 GAL/SY FOR FULL DEPTH HMA PAVEMENT SECTIONS (SHALL BE APPLIED BETWEEN ALL LAYERS OF ASPHALTIC PAVEMENT).

ABBREVIATIONS

AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALT
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
CC	CENTER OF CURVATURE
CE	COMMERCIAL ENTRANCE
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
E	EXTERNAL DISTANCE FROM MIDPOINT OF CIRCULAR CURVE FROM ANGLE INTERSECTION
ELEV	ELEVATION
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
L	LENGTH OF CURVE
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
M/L	MATCHLINE
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
REQ'D	REQUIRED
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SEG	SEGMENT
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TYP	TYPICAL
V	VELOCITY OR DESIGN SPEED

UTILITIES

ELECTRIC

ALLIANT ENERGY
880 NORTH WISCONSIN STREET
BERLIN, WI 54923
ATTN: JOSEPH DUCAT
PHONE: (920) 979-1089
EMAIL: josephducat@alliantenergy.com

COMMUNICATIONS

AT&T WISCONSIN
70 EAST DIVISION STREET
FOND DU LAC, WI 54935
ATTN: CHARLES BARTELT
PHONE: (920) 410-5104
EMAIL: cb1461@att.com

SEWER

FOX RIVER VALLEY ETHANOL, LLC
4995 STATE ROAD 91
OSHKOSH, WI 54904
ATTN: JANELL TATRO
PHONE: (920) 230-7488
EMAIL: jtatro@frvethanol.com

COMMUNICATIONS

SPECTRUM
1520 E DESTINATION DR
APPLETON, WI 54915
ATTN: JASON ORR
PHONE: (920) 378-0352
EMAIL: jason.orr@charter.com

ETHANOL

UNITED COOPERATIVE
N7160 RACEWAY ROAD
BEAVER DAM, WI 53916
ATTN: KARL BETH
PHONE: (920) 887-1756
EMAIL: karlb@unitedcooperative.com

ELECTRIC

WISCONSIN PUBLIC SERVICE CORPORATION
2850 S ASHLAND AVENUE
GREEN BAY, WI 54304
ATTN: SCOTT ZELLNER
PHONE: (920) 617-5068
EMAIL: scott.zellner@wisconsinpublicservice.com

GAS

WISCONSIN PUBLIC SERVICE CORPORATION
3300 N MAIN STREET
OSHKOSH, WI 54901
ATTN: ADAM VANDENHOUTEN
PHONE: (920) 617-2736
EMAIL: adam.vandenhouten@wisconsinpublicservice.com

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

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.623 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.607 ACRES

ORDER OF SECTION 2 SHEETS

NE REGION SURVEY COORDINATOR

WISCONSIN DEPARTMENT OF TRANSPORTATION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
ATTN: MICHAEL ANDRASCHKO
PHONE: (920) 492-4166
EMAIL: michael.andraschko@dot.wi.gov

DNR AREA LIAISON

WISCONSIN DEPT. OF NATURAL RESOURCES
WDNR NORTHEAST REGIONAL HQ
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
ATTN: JAY SCHIEFELBEIN
PHONE: (920) 360-3784
EMAIL: jeremiah.schiefelbein@wiscosnsin.gov

NE REGION PROJECT MANAGER

WISCONSIN DEPARTMENT OF TRANSPORTATION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
ATTN: WILLIAM BERTRAND, PE
PHONE: (920) 360-3124
EMAIL: william.bertrand@dot.wi.gov

DESIGN CONTACT

GREMMER & ASSOCIATES, INC.
93 SOUTH PIONEER ROAD, SUITE 300
FOND DU LAC, WI 54935
ATTN: JEFFREY A. CHVOSTA, PE
PHONE: (920) 924-5720
EMAIL: j.chvosta@gremmerassociates.com

WINNEBAGO COUNTY CONTACT

ROBERT DOEMEL
HIGHWAY COMMISSIONER
901 W COUNTY ROAD Y
OSHKOSH, WI 54901
PHONE: (920) 232-1700
EMAIL: rdoemel@co.winnebago.wi.us

2

BENCH MARKS

BM	DESCRIPTION	STATION	OFFSET	ELEVATION
1000	NAIL IN POWER POLE	118+50	43.5' LT	822.16
1001	RAILROAD SPIKE IN POWER POLE 1816-31L2	116+13	46.3' LT	820.72
1002	SPIKE 14" SOUTH OF WHITE LINE	109+80	13.2' RT	820.08

**VERTICAL DATUM REFERENCED TO NAVD 88 (2012).

CONTROL POINTS

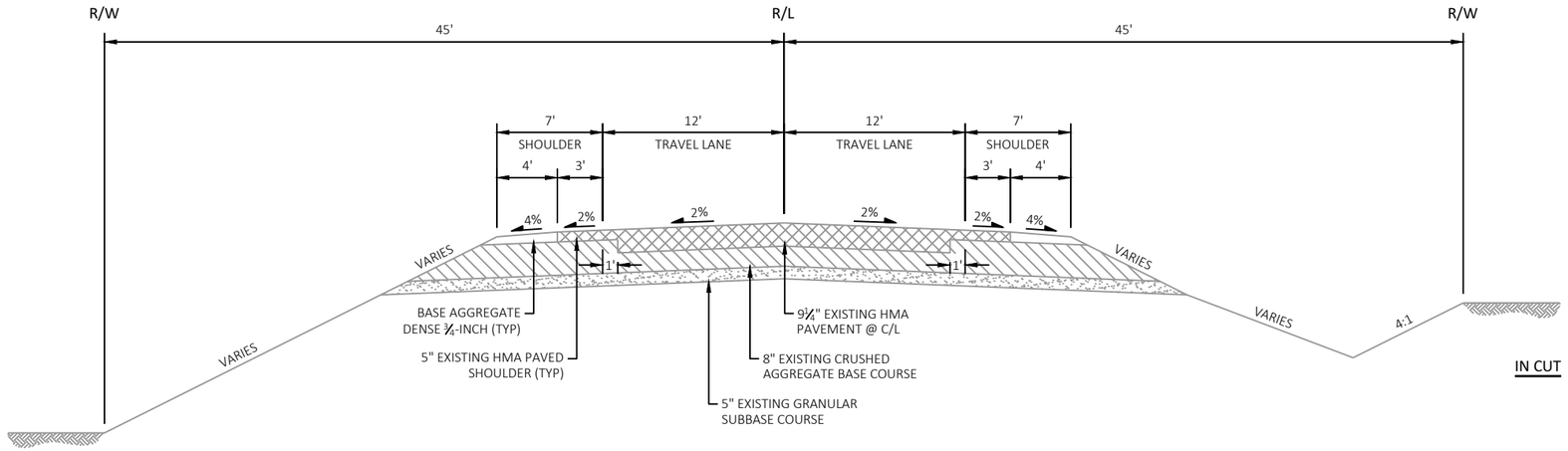
BM	DESCRIPTION	NORTHING	EASTING	ELEVATION
900	1" IP W CAP	460256.289	766669.317	821.164
901	1" IP W CAP	460260.766	766218.226	819.728
902	1" IP W CAP	460266.709	765749.099	819.204

**HORIZONTAL DATUM REFERENCED TO NAD83 (2011).

2

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	PROJECT OVERVIEW	SHEET 3	E

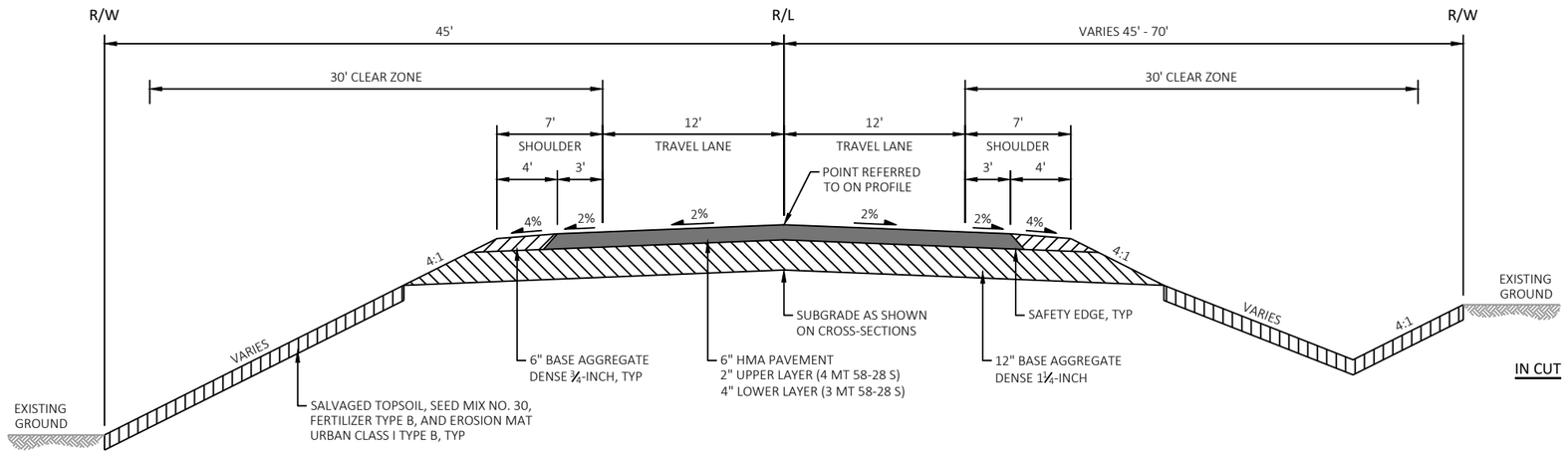
2



TYPICAL EXISTING SECTION

STH 91

STA 113+65 - STA 115+30

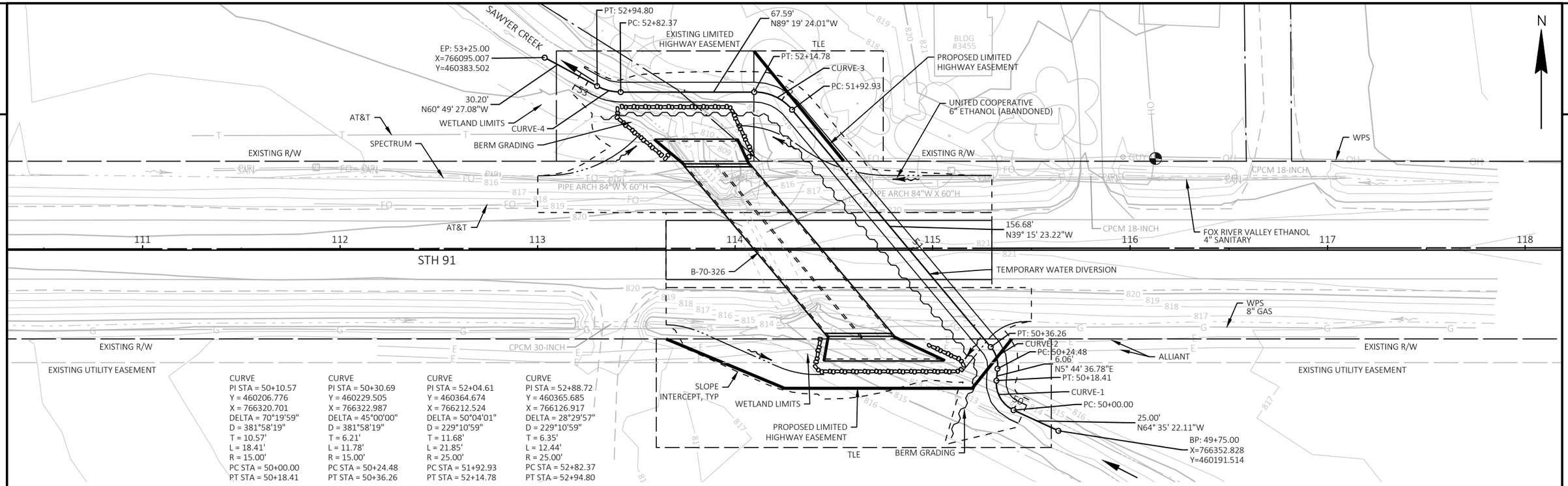


TYPICAL FINISHED SECTION

STH 91

STA 113+65 - STA 115+30

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	TYPICAL SECTIONS	SHEET 4	E



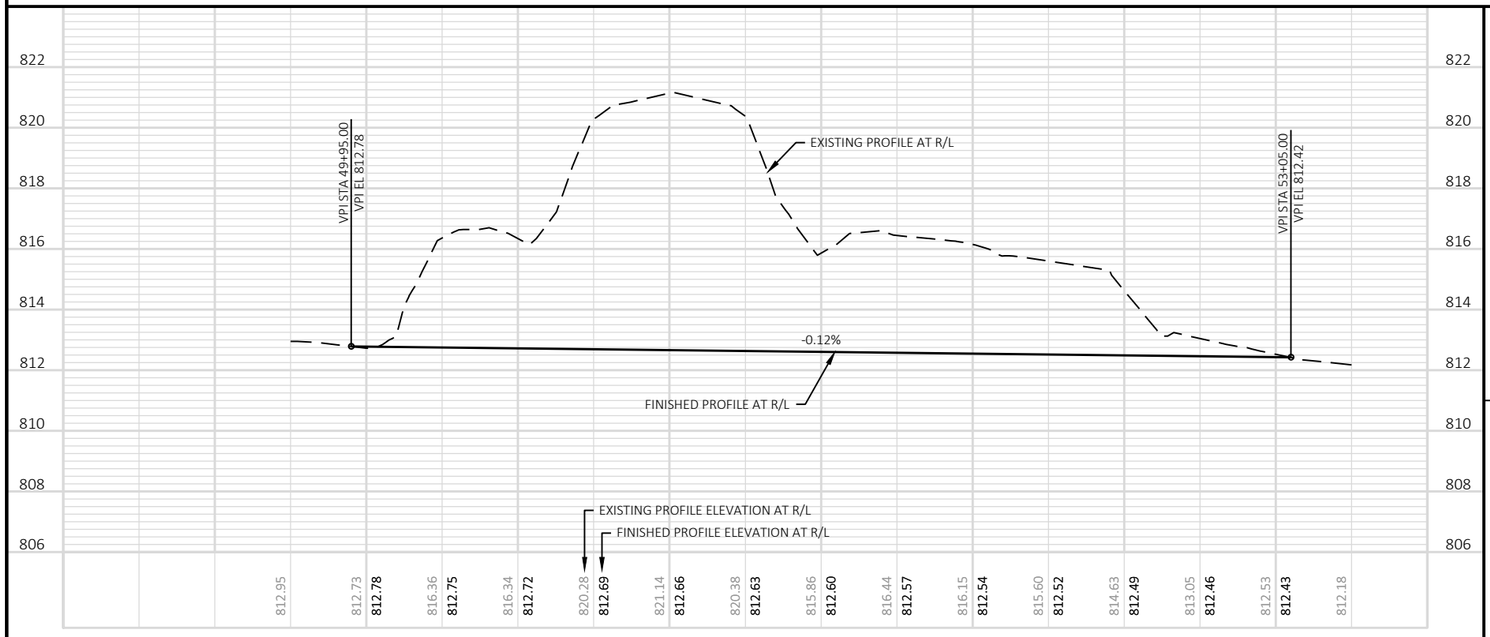
CURVE
PI STA = 50+10.57
Y = 460206.776
X = 766320.701
DELTA = 70°19'59"
D = 381°58'19"
T = 10.57'
L = 18.41'
R = 15.00'
PC STA = 50+00.00
PT STA = 50+18.41

CURVE
PI STA = 50+30.69
Y = 460229.505
X = 766322.987
DELTA = 45°00'00"
D = 381°58'19"
T = 6.21'
L = 11.78'
R = 15.00'
PC STA = 50+24.48
PT STA = 50+36.26

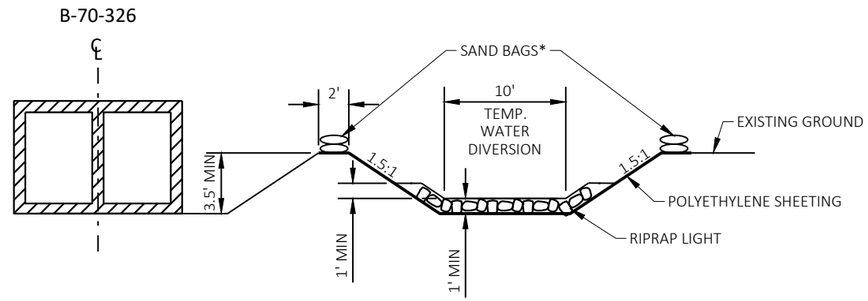
CURVE
PI STA = 52+04.61
Y = 460364.674
X = 766212.524
DELTA = 50°04'01"
D = 229°10'59"
T = 11.68'
L = 21.85'
R = 25.00'
PC STA = 51+92.93
PT STA = 52+14.78

CURVE
PI STA = 52+88.72
Y = 460365.685
X = 766126.917
DELTA = 28°29'57"
D = 229°10'59"
T = 6.35'
L = 12.44'
R = 25.00'
PC STA = 52+82.37
PT STA = 52+94.80

PLAN VIEW TEMPORARY WATER DIVERSION



PROFILE VIEW TEMPORARY WATER DIVERSION



TYPICAL SECTION TEMPORARY WATER DIVERSION

NOTES

THE TEMPORARY WATER DIVERSION CHANNEL MUST BE CAPABLE OF DIVERTING THE 2-YEAR RAINFALL EVENT STREAM FLOW, FISH AND AQUATIC SPECIES THAT BECOME STRANDED IN DEWATERED AREA OR TEMPORARY CHANNELS SHOULD BE CAPTURED AND RETURNED TO THE ACTIVE CHANNEL IMMEDIATELY, SEE STRUCTURE PLANS FOR HYDRAULIC INFORMATION.

BERM GRADING REQUIRED ON UPSTREAM AND DOWNSTREAM ENDS OF NEW BOX CULVERT WORK AREA TO ISOLATE THE WORK AREA FROM ACTIVE FLOW. BOX CULVERT WORK AREA TO BE DEWATERED AND CONSTRUCTED UNDER DRY CONDITIONS.

SUBMIT A WATER DIVERSION PLAN TO THE ENGINEER IF CONTRACTOR CHOOSES A DIFFERENT METHOD THAN WHAT IS SHOWN IN THE SCHEMATIC.

*EDGES OF CHANNEL LINER SHALL BE TRENCHED AND SECURED BY SAND BAG.

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	CONSTRUCTION DETAILS	SHEET 5	E

2

N

TOPSOIL, SEED MIX NO. 40, FERTILIZER TYPE B,
AND EROSION MAT URBAN CLASS I TYPE B

SAWYER CREEK

BERM GRADING

PROPOSED LIMITED
HIGHWAY EASEMENT

EXISTING LIMITED
HIGHWAY EASEMENT

TLE

SLOPE INTERCEPT, TYP

GARAGE

BLDG
#3455

WETLAND LIMITS

AT&T

SPECTRUM

EXISTING R/W

UNITED COOPERATIVE
6" ETHANOL (ABANDONED)

WPS

CPCM 18-INCH

PIPE ARCH 84"W X 60"H

FOX RIVER VALLEY ETHANOL
4" SANITARY

111 112 113 114 115 116 117 118

STH 91

B-70-326

TEMPORARY WATER DIVERSION
(SEE DETAIL)

WPS
8" GAS

EXISTING R/W

EXISTING UTILITY EASEMENT

CPCM 30-INCH

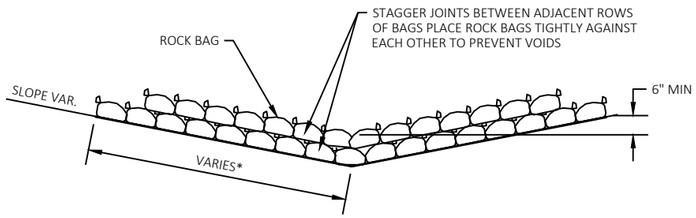
ALLIANT

WETLAND LIMITS

PROPOSED LIMITED
HIGHWAY EASEMENT

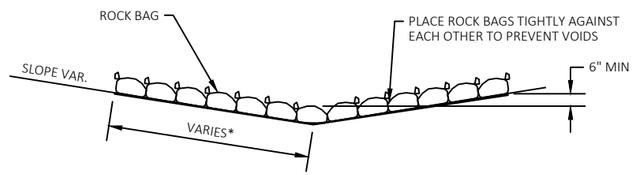
TLE

BERM GRADING



* LENGTH AND NUMBER OF BAGS MAY VARY DEPENDING
ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)



SIDE VIEW (SINGLE LAYER)

ROCK BAGS USED FOR DITCH CHECKS DETAIL

LEGEND

- SLOPE INTERCEPT
- BERM GRADING
- ROCK BAGS FOR DITCH CHECK
- RIPRAP
- SURFACE WATER FLOW EXISTING
- SURFACE WATER FLOW PROPOSED

NOTES

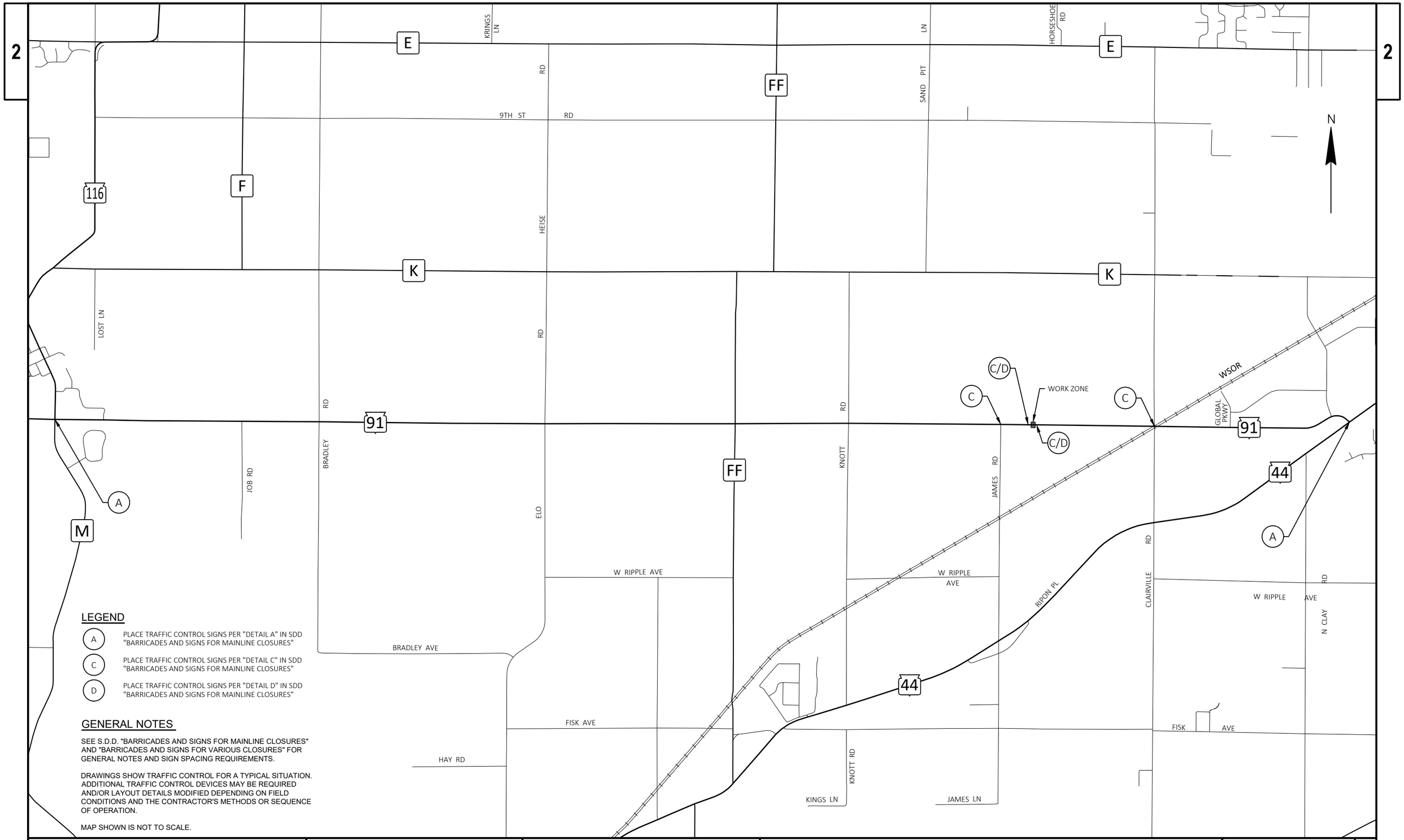
ALL DISTURBED AREAS SHALL RECEIVE SALVAGED TOPSOIL, SEED MIX NO. 30, FERTILIZER TYPE B, AND EROSION MAT URBAN CLASS I TYPE B UNLESS OTHERWISE SHOWN ON PLANS.

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	EROSION CONTROL PLAN	SHEET 6	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-022001-EC.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 2/26/2024 10:46 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



LEGEND

- (A) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL A" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- (C) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL C" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- (D) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL D" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

GENERAL NOTES

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" AND "BARRICADES AND SIGNS FOR VARIOUS CLOSURES" FOR GENERAL NOTES AND SIGN SPACING REQUIREMENTS.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON FIELD CONDITIONS AND THE CONTRACTOR'S METHODS OR SEQUENCE OF OPERATION.

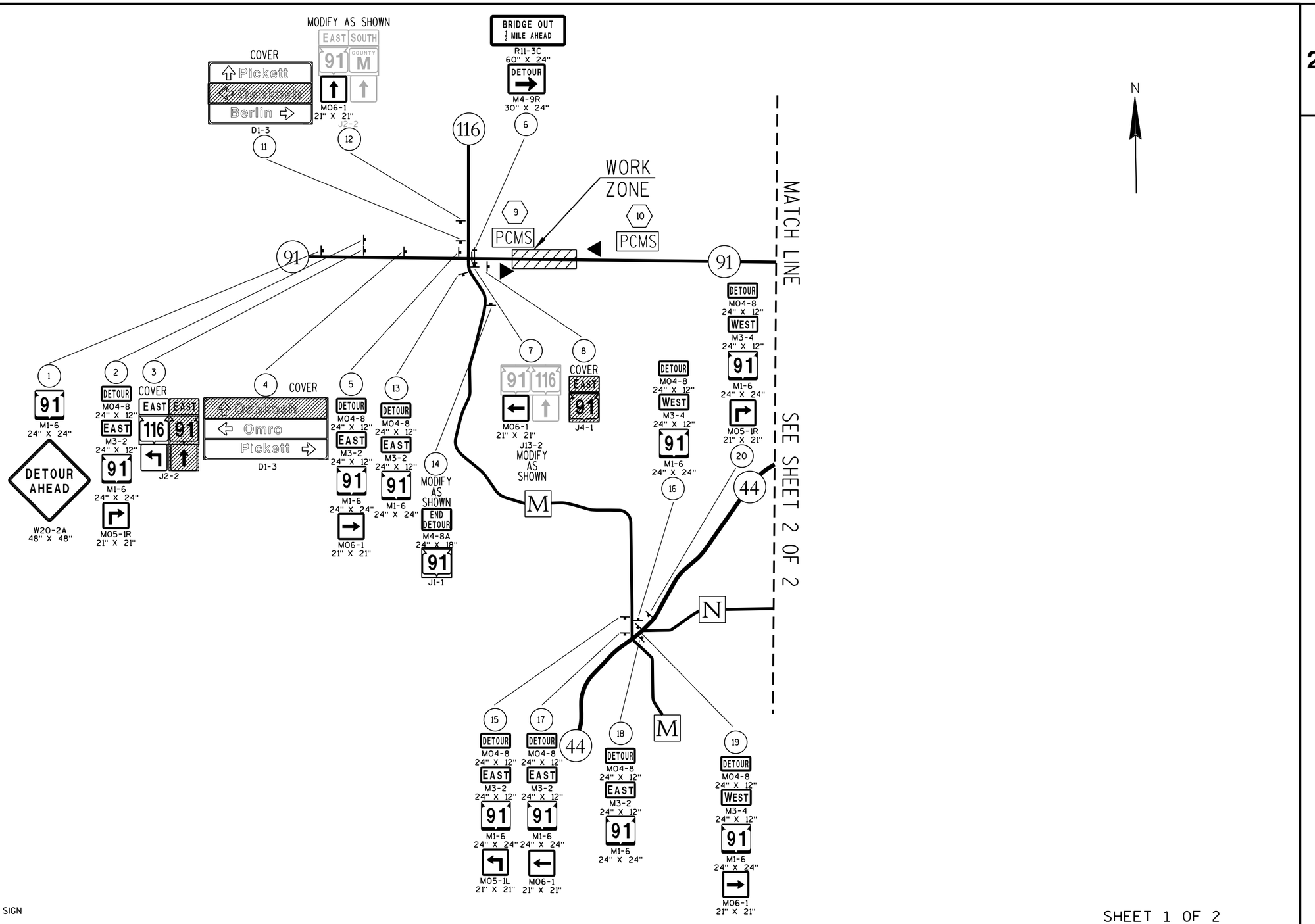
MAP SHOWN IS NOT TO SCALE.

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	TRAFFIC CONTROL - OVERVIEW	SHEET 7	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-025100-TC.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 1/26/2024 9:29 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : NTS

WISDOT/CADDS SHEET 42



LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

SHEET 1 OF 2

PLAN SHEET PRODUCED BY WisDOT-NE REGION

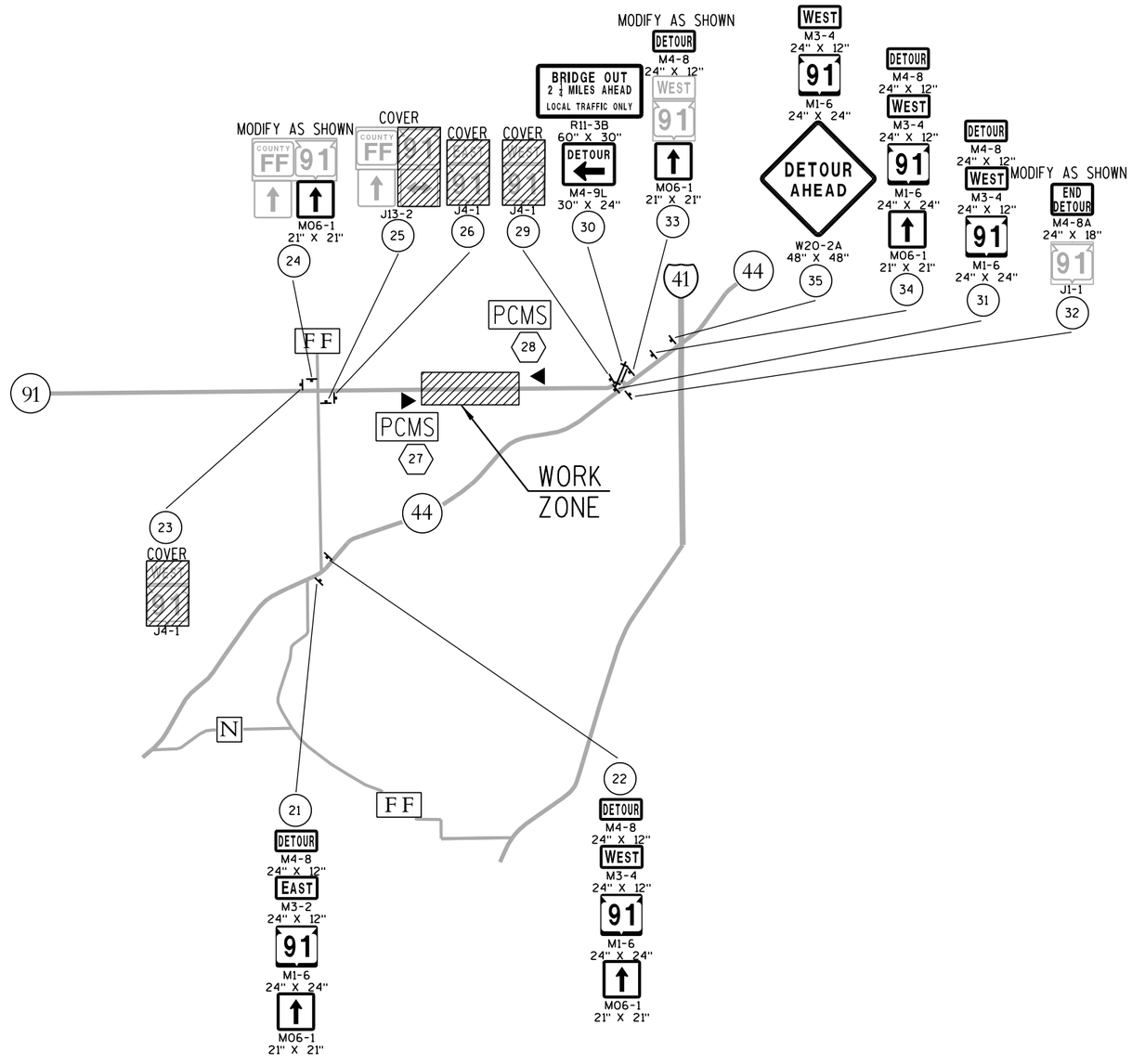
PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	DETOUR SIGNING DETAIL	SHEET 8	E

2

LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

N



SHEET 2 OF 2

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	DETOUR SIGNING DETAIL	SHEET 9	E

6540-11-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	1.000	1.000
0004	203.0220	Removing Structure (structure) 01. C-70-125	EACH	1.000	1.000
0016	205.0100	Excavation Common	CY	758.000	758.000
0018	206.2001	Excavation for Structures Culverts (structure) 01. B-70-326	EACH	1.000	1.000
0020	208.0100	Borrow	CY	126.000	126.000
0022	210.2500	Backfill Structure Type B	TON	1,744.000	1,744.000
0032	213.0100	Finishing Roadway (project) 03. 6540-11-71	EACH	1.000	1.000
0034	305.0110	Base Aggregate Dense 3/4-Inch	TON	70.000	70.000
0036	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	580.000	580.000
0038	311.0115	Breaker Run	CY	181.000	181.000
0040	450.4000	HMA Cold Weather Paving	TON	50.000	50.000
0042	455.0605	Tack Coat	GAL	29.000	29.000
0044	460.2000	Incentive Density HMA Pavement	DOL	130.000	130.000
0046	460.6223	HMA Pavement 3 MT 58-28 S	TON	135.000	135.000
0048	460.6224	HMA Pavement 4 MT 58-28 S	TON	65.000	65.000
0054	504.0100	Concrete Masonry Culverts	CY	319.000	319.000
0056	505.0400	Bar Steel Reinforcement HS Structures	LB	48,990.000	48,990.000
0058	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	1,640.000	1,640.000
0074	516.0500	Rubberized Membrane Waterproofing	SY	37.000	37.000
0078	606.0300	Riprap Heavy	CY	104.000	104.000
0092	618.0100	Maintenance and Repair of Haul Roads (project) 03. 6540-11-71	EACH	1.000	1.000
0094	619.1000	Mobilization	EACH	0.690	0.690
0096	624.0100	Water	MGAL	9.000	9.000
0098	625.0100	Topsoil	SY	705.000	705.000
0100	625.0500	Salvaged Topsoil	SY	1,735.000	1,735.000
0106	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0108	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0110	628.2008	Erosion Mat Urban Class I Type B	SY	2,440.000	2,440.000
0116	628.7570	Rock Bags	EACH	75.000	75.000
0118	629.0210	Fertilizer Type B	CWT	0.600	0.600
0120	630.0130	Seeding Mixture No. 30	LB	31.000	31.000
0122	630.0140	Seeding Mixture No. 40	LB	13.000	13.000
0124	630.0500	Seed Water	MGAL	55.000	55.000
0126	633.5200	Markers Culvert End	EACH	2.000	2.000
0134	642.5201	Field Office Type C	EACH	0.340	0.340
0136	643.0420	Traffic Control Barricades Type III	DAY	1,000.000	1,000.000
0138	643.0705	Traffic Control Warning Lights Type A	DAY	1,600.000	1,600.000
0140	643.0900	Traffic Control Signs	DAY	3,900.000	3,900.000
0142	643.0920	Traffic Control Covering Signs Type II	EACH	7.000	7.000
0144	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0146	643.5000	Traffic Control	EACH	0.690	0.690
0148	645.0105	Geotextile Type C	SY	574.000	574.000
0150	645.0120	Geotextile Type HR	SY	229.000	229.000
0154	646.1020	Marking Line Epoxy 4-Inch	LF	380.000	380.000
0160	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	380.000	380.000
0164	650.4500	Construction Staking Subgrade	LF	165.000	165.000
0166	650.5000	Construction Staking Base	LF	165.000	165.000
0168	650.6501	Construction Staking Structure Layout (structure) 01. B-70-326	EACH	1.000	1.000
0176	650.9911	Construction Staking Supplemental Control (project) 03. 6540-11-71	EACH	1.000	1.000
0178	650.9920	Construction Staking Slope Stakes	LF	165.000	165.000

6540-11-71

Line	Item	Item Description	Unit	Total	Qty
0180	690.0150	Sawing Asphalt	LF	60.000	60.000
0182	715.0502	Incentive Strength Concrete Structures	DOL	1,911.600	1,911.600
0184	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0186	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0190	SPV.0060	Special 02. Temporary Water Diversion B-70-326 Station 114+27	EACH	1.000	1.000

3

GRUBBING

STATION - STATION	LOCATION	201.0205 STA
CATEGORY CODE 0010		
114+00 - 115+00	LT	1
	TOTAL	**1**

BASE AGGREGATE DENSE AND WATER ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
CATEGORY CODE 0010				
113+65 - 115+30	LT & RT	70	580	9
	TOTALS	**70**	**580**	**9**

ASPHALTIC ITEMS

STATION - STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON
CATEGORY CODE 0010					
113+65 - 115+30	LT & RT	50	29	135	65
	TOTALS	**50**	**29**	**135**	**65**

3

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5) FACTOR 1.25	MASS ORDINATE +/- (6)	208.0100 BORROW
DIVISION 1									
STH 91	113+00/115+50	STH 91	758	136	622	598	748	-126	126
DIVISION 1 SUBTOTAL			758	136	622	598	748	-126	126
GRAND TOTAL			758	136	622	598	748	-126	126
TOTAL COMMON EXC			758						

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT. ITEM NUMBER 205.0100
(2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL = LENGTH * TYPICAL WIDTH * TYPICAL DEPTH
(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) EXPANDED FILL. FACTOR = 1.25; EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR.
(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS INDICATES AN EXCESS OF MATERIAL.

RESTORATION ITEMS

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEED MIX NO. 30 LB	630.0140 SEED MIX NO. 40 LB	630.0500 SEED WATER MGAL
CATEGORY CODE 0010								
113+65 - 115+30	LT	563	473	1,036	0.4	9	10	23
113+65 - 115+30	RT	--	915	915	0.1	17	--	21
UNDISTRIBUTED		142	347	489	0.1	5	3	11
	TOTALS	**705**	**1,735**	**2,440**	**0.6**	**31**	**13**	**55**

NOTE: DO NOT APPLY FERTILIZER WITHIN 20 FEET OF A BODY OF WATER OR WETLAND

EROSION CONTROL ITEMS

STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7570 ROCK BAGS EACH
CATEGORY CODE 0010				
PROJECT 6540-11-71		4	2	--
113+60	LT	--	--	15
114+15	LT	--	--	15
114+35	RT	--	--	15
115+00	RT	--	--	15
UNDISTRIBUTED		--	--	15
	TOTALS	**4**	**2**	**75**

MARKERS CULVERT END

LOCATION	633.5200 EACH
CATEGORY CODE 0010	
B-70-326	2
TOTAL	**2**

TRAFFIC CONTROL ITEMS

LOCATION	NUMBER OF DAYS IN SERVICE	643.0420* TRAFFIC CONTROL BARRICADES TYPE III NO. REQ'D	643.0420* TRAFFIC CONTROL BARRICADES TYPE III TOTAL DAY	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. REQ'D	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A TOTAL DAY	643.0900* TRAFFIC CONTROL SIGNS NO. REQ'D	643.0900* TRAFFIC CONTROL SIGNS TOTAL DAY	643.5000 TRAFFIC CONTROL EACH
CATEGORY CODE 0010								
PROJECT 6540-11-71	--	--	--	--	--	--	--	0.69
STH 91 / JAMES ROAD	50	*2*	100	*4*	200	*3*	150	--
WEST PROJECT LIMITS	50	*7*	350	*10*	500	*4*	200	--
EAST PROJECT LIMITS	50	*7*	350	*10*	500	*4*	200	--
STH 91 / CLAIRVILLE ROAD	50	*2*	100	*4*	200	*3*	150	--
	TOTALS		**900**		**1,400**		**700**	**0.69**

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.6464 COLD WEATHER MARKING EPOXY 4-INCH WHITE LF	646.6464 COLD WEATHER MARKING EPOXY 4-INCH YELLOW LF
CATEGORY CODE 0010					
113+65 - 115+30	LT & RT	330	50	330	50
		330	50	330	50
	TOTALS	**380**		**380**	

CONSTRUCTION STAKING ITEMS

LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6501 STRUCTURE LAYOUT EACH	650.9911 SUPPLEMENTAL CONTROL EACH	650.9920 SLOPE STAKES LF
CATEGORY CODE 0010					
03. 6540-11-71	--	--	--	1	--
113+65 - 115+30	165	165	--	--	165
CATEGORY CODE 0010 SUBTOTALS	165	165	--	1	165
CATEGORY CODE 0020					
01. B-70-326	--	--	1	--	--
CATEGORY CODE 0020 SUBTOTALS	--	--	1	--	--
TOTALS	**165**	**165**	**1**	**1**	**165**

SAWING ASPHALT

STATION	LOCATION	690.0150 LF
CATEGORY CODE 0010		
113+65	LT & RT	30
115+30	LT & RT	30
	TOTAL	**60**

TEMPORARY WATER DIVERSION

STRUCTURE	STATION	SPV.0060.02 EACH
CATEGORY CODE 0020		
B-70-326	114+27	1
	TOTAL	**1**

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 50 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	STH 91, W. OF STH 116, PLACE 1500' W. OF STH 116 INTERSECTION	M 1-6	24"X24"	1	50	50						91
	"	W 20-2A	48"X48"	1	50	50						
2	STH 91, W. OF STH 116, PLACE LEFT OF EXISTING J2-2 SIGN	MO 4-8	24"X12"	1	50	50						
	"	M 3-2	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	MO 5-1R	21"X21"	1	50	50						
3	STH 91, W. OF STH 116, COVER EXISTING J2-2 SIGN AS SHOWN									1	1	COVER "EAST 91 AHEAD"
4	STH 91, W. OF STH 116, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "OSHKOSH"
5	STH 91, AT STH 116 INTERSECTION, PLACE RIGHT OF EXISTING J13-2 SIGN	MO 4-8	24"X12"	1	50	50						
	"	M 3-2	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	MO 6-1	21"X21"	1	50	50						RIGHT
6	STH 91, AT STH 116 INTERSECTION, PLACE ON RIGHT SHOULDER IN SE QUADRANT OF INTERSECTION	R 11-3C	60"X24"	1	50	50	50	100				1/2 MILE AHEAD
	"	MO 4-9R	30"X24"	1	50	50						
7	CTH M, AT STH 91, MODIFY EXISTING J13-2 SIGN AS SHOWN	MO 6-1	21"X21"	1	50	50						LEFT
8	STH 91, E. OF STH 116, COVER EXISTING J4-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
9	STH 91, E. OF STH 116, PLACE ON RIGHT SHOULDER, FIELD LOCATION TO BE DETERMINED	PCMS		1					7			PLACE IN ADVANCE OF CLOSURE
10	STH 91, E. OF STH 116, PLACE ON RIGHT SHOULDER, FIELD LOCATION TO BE DETERMINED	PCMS		1					7			PLACE IN ADVANCE OF CLOSURE
11	STH 116, N. OF STH 91, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "OSHKOSH"
12	STH 116, N. OF STH 91, MODIFY EXISTING J2-2 SIGN AS SHOWN	MO 6-1	21"X21"	1	50	50						AHEAD
13	CTH M, S. OF STH 91, PLACE RIGHT OF EXISTING M1-51A SIGN	MO 4-8	24"X12"	1	50	50						
	"	M 3-2	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
14	CTH M, S. OF STH 91, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	50	50						
15	CTH M, N. OF STH 44, PLACE 750' S. OF STH 44 INTERSECTION	MO 4-8	24"X12"	1	50	50						
	"	M 3-2	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	MO 5-2R	21"X21"	1	50	50						
16	CTH M, N. OF STH 44, PLACE RIGHT OF EXISTING M1-51A SIGN	MO 4-8	24"X12"	1	50	50						
	"	M 3-4	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
17	CTH M, AT STH 44, PLACE RIGHT OF EXISTING J13-1 SIGN	MO 4-8	24"X12"	1	50	50						
	"	M 3-2	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	MO 6-1	21"X21"	1	50	50						LEFT
18	STH 44, N. OF CTH M, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"X12"	1	50	50						
	"	M 3-2	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
19	STH 44, N. OF CTH M, PLACE RIGHT OF EXISTING J13-1 SIGN	MO 4-8	24"X12"	1	50	50						
	"	M 3-4	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	MO 6-1	21"X21"	1	50	50						RIGHT
20	STH 44, N. OF CTH M, PLACE 750' N. OF CTH M INTERSECTION	MO 4-8	24"X12"	1	50	50						
	"	M 3-4	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	MO 5-1R	21"X21"	1	50	50						
	PAGE SUBTOTALS			42		2,000	50	100	14		4	

PLAN SHEET PRODUCED BY WisDOT - NE REGION

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 50 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
21	STH 44, S. OF CTH FF, PLACE 150' S. OF CTH FF INTERSECTION	MO 4-8	24"X12"	1	50	50						
	"	M 3-2	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	MO 6-1	21"X21"	1	50	50						AHEAD
22	STH 44, N. OF CTH FF, PLACE 150' N. OF CTH FF INTERSECTION	MO 4-8	24"X12"	1	50	50						
	"	M 3-4	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	MO 6-1	21"X21"	1	50	50						AHEAD
23	STH 91, W. OF CTH FF, COVER EXISTING J4-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
24	CTH FF, N. OF STH 91, MODIFY EXISTING J13-2 SIGN AS SHOWN	MO 6-1	21"X21"	1	50	50						AHEAD
25	CTH FF, AT STH 91 INTERSECTION, COVER EXISTING J13-2 SIGN AS SHOWN									1	1	COVER "91 LT-RT"
26	STH 91, E. OF CTH FF INTERSECTION, COVER EXISTING J4-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
27	STH 91, W. OF STH 44, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					7			PLACE IN ADVANCE OF CLOSURE
28	STH 91, W. OF STH 44, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					7			PLACE IN ADVANCE OF CLOSURE
29	STH 91, W. OF STH 44, COVER EXISTING J4-1 SIGN AS SHOWN											COVER ENTIRE SIGN
30	STH 91, AT STH 44, PLACE ON RIGHT SHOULDER IN NW QUADRANT OF INTERSECTION	R 11-3B	60"X30"	1	50	50	50	100				2 1/4 MILES AHEAD
	"	M 4-9L	30"X24"	1	50	50						
31	STH 44, S. OF STH 91, PLACE RIGHT OF EXISTING J4-1 SIGN	M 4-8	24"X12"	1	50	50						
	"	M 3-4	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
32	STH 44, S. OF STH 91, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	50	50						
33	STH 44, N. OF STH 91, MODIFY EXISTING J3-1 SIGN AS SHOWN	M 4-8	24"X12"	1	50	50						
	"	MO 6-1	21"X21"	1	50	50						AHEAD
34	STH 44, N. OF STH 91, PLACE 1000' N. OF STH 91 INTERSECTION	M 4-8	24"X12"	1	50	50						
	"	M 3-4	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	MO 6-1	21"X21"	1	50	50						AHEAD
35	STH 44, N. OF STH 91, PLACE 1500' N. OF STH 91 INTERSECTION	M 3-4	24"X12"	1	50	50						
	"	M 1-6	24"X24"	1	50	50						91
	"	W 20-2A	48"X48"	1	50	50						
	PAGE SUBTOTALS			26		1,200	50	100	14		3	
	PROJECT TOTALS			**68**		**3,200**	**100**	**200**	**28**		**7**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

TRANSPORTATION PROJECT PLAT NO: 6540-11-21 - 4.01

THAT PART OF LOT 1, AND LOT 2, WINNEBAGO COUNTY CERTIFIED SURVEY MAP NO. 4255, LOCATED IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER, SECTION 31, T18N, R16E, TOWN OF ALGOMA AND PART OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER, SECTION 6, T17N, R16E, TOWN OF NEKIMI, WINNEBAGO COUNTY, WISCONSIN

RELOCATION ORDER STH 91 BERLIN - OSHKOSH JAMES ROAD TO CLAIRVILLE ROAD, WINNEBAGO COUNTY.

TO PROPERTY 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 NAMED PROJECT.

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

1. 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 NAMED PROJECT.
2. 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 SUBSECTION 84.09 (1) OR (2). WISCONSIN STATUTES.

RIGHT OF WAY TABLE

PT#	Y	X	STA	OFFSET
4	460286.431	766130.308	113+40.00	0.79'
5	460330.640	766130.830	113+40.00	45.00'
6	460329.821	766200.299	114+09.47	45.00'
7	460385.658	766200.915	114+09.43	100.84'
9	460329.285	766245.822	114+55.00	45.00'
11	460328.047	766350.816	115+60.00	45.00'
12	460284.004	766350.296	115+60.00	0.95'
13	460283.051	766350.284	115+60.00	0.00'
14	460238.053	766349.753	115+60.00	45.00'
15	460238.290	766329.753	115+40.00	45.00'
16	460213.528	766309.460	115+20.00	70.00'
17	460214.646	766214.468	114+25.00	70.00'
18	460240.352	766154.767	113+65.00	45.00'
20	460240.647	766129.767	113+40.00	45.00'
21	460285.649	766130.299	113+40.00	0.00'

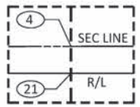
TLE STATION / OFFSET TABLE

PT#	STATION	OFFSET
10	114+75.00	45.00'
19	113+60.00	45.00'
23	114+75.00	100.84'
24	115+60.00	100.00'
25	113+60.00	100.00'

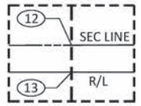
LINE TABLE

LINE	BEARING	DISTANCE
4-5	N00°40'36"E	44.21'
5-6	S89°19'28"E	69.47'
6-7	N00°37'56"E	55.84'
7-9	S38°32'28"E	72.07'
9-11	S89°19'28"E	105.00'
11-12	S00°40'36"W	44.05'
12-13	S00°40'36"W	0.95'
13-14	S00°40'36"W	45.00'
14-15	N89°19'28"W	20.00'
15-16	S39°20'07"W	32.02'
16-17	N89°19'28"W	95.00'
17-18	N66°42'17"W	65.00'
18-20	N89°19'28"W	25.00'
20-21	N00°40'36"E	45.01'
21-4	N00°40'36"E	0.78'

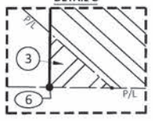
DETAIL A



DETAIL B



DETAIL C



CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING TO BE REMOVED
BRIDGE
SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)
ELECTRIC POLE
TELEPHONE POLE
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)
COMPENSABLE
NON COMPENSABLE
ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER (25)
UTILITY NUMBER (40)
PARALLEL OFFSETS
(25) R/W POINT NUMBER
(30) TLE POINT NUMBER

CONVENTIONAL ABBREVIATIONS

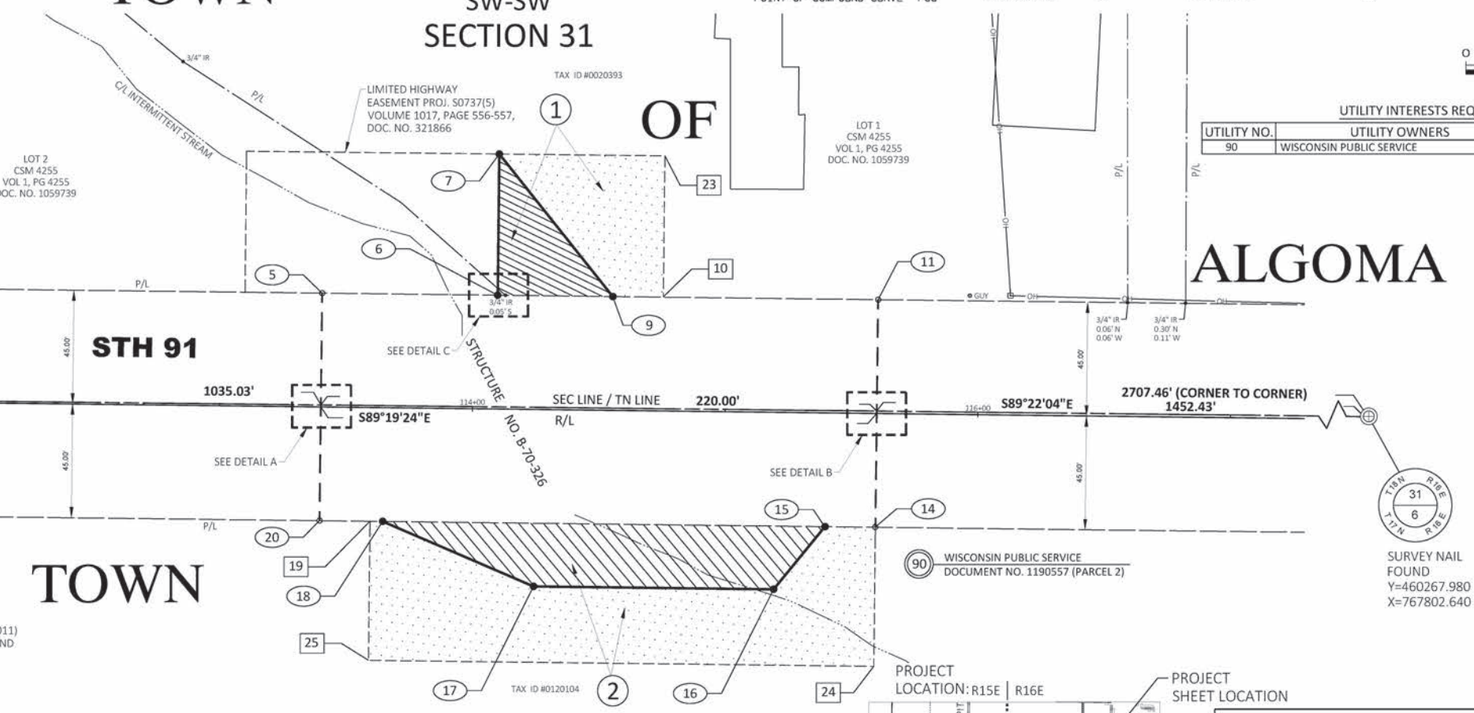
ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	CONC	SECTION	SEC
COUNTY	CO	SEPTIC VENT	SEPV
COUNTY TRUNK HIGHWAY	CTH	SQUARE FEET	SF
DISTANCE	DIST	STATE TRUNK HIGHWAY	STH
CORNER	COR	STATION	STA
DOCUMENT NUMBER	DOC	TELEPHONE PEDESTAL	TP
EASEMENT	EASE	TEMPORARY LIMITED EASEMENT	TLE
EXISTING	EX	TRANSPORTATION PROJECT PLAT	TPP
GAS VALVE	GV	UNITED STATES HIGHWAY	USH
GRID NORTH	GN	VOLUME	V
HIGHWAY EASEMENT	HE		
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY NUMBER	NGS NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

WATER (W)
GAS (G)
TELEPHONE (T)
OVERHEAD TRANSMISSION LINES (OH)
ELECTRIC (E)
CABLE TELEVISION (TV)
FIBER OPTIC (FO)
SANITARY SEWER (SAN)
STORM SEWER (SS)
ELECTRIC TOWER



GN

SCALE, FEET
0 30 60

UTILITY INTERESTS REQUIRED

UTILITY NO.	UTILITY OWNERS	INTEREST REQUIRED
90	WISCONSIN PUBLIC SERVICE	RELEASE OF RIGHTS

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN IS BASED UPON THE FOLLOWING POINTS OF REFERENCE:
EXISTING RIGHT-OF-WAY OF STH 91 ESTABLISHED FROM: WISDOT RIGHT-OF-WAY PROJECT S0737(5) AND PROJECT 6496-02-21 WINNEBAGO COUNTY CERTIFIED SURVEY MAP NO. 4255, DATED 3-3-1999

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WINNEBAGO COUNTY, NAD 83 (2011) 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-INCH BY 24-INCH 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 OR OTHER SURVEYS OF RECORD.

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

DIMENSIONS FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

AN EASEMENT FOR HIGHWAY PURPOSE (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

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 TLE'S EXPIRE AT THE COMPLETION OF THE PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

SCHEDULE OF LANDS AND INTERESTS REQUIRED

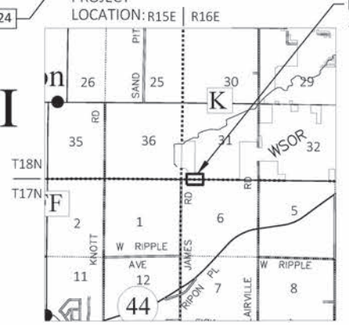
OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE DEPARTMENT

PARCEL NO.	OWNER	INTEREST REQUIRED	HE AREA	TLE AREA
1	ROGER E. MAGNUSON AND JENNIFER M. MAGNUSON	HE TLE	0.03 AC	0.05 AC
2	DENNIS RADLOFF	HE TLE	0.08 AC	0.18 AC
3	WESLEY A. RADLOFF AND SHIRLEY A. RADLOFF	HE	4 SF	

TLE NOTE: ALL TEMPORARY LIMITED EASEMENTS ON THIS TRANSPORTATION PROJECT PLAT ARE FOR SLOPING AND CONSTRUCTION PURPOSES

PROJECT LOCATION: R15E | R16E

PROJECT SHEET LOCATION



Westwood

Phone (920) 735-6900 Fax (920) 830-6100 Toll Free (800) 571-6677
One Systems Drive Appleton, WI 54914-1654 westwoodps.com
Westwood Infrastructure, Inc.

I, PAUL D.NORDWIG 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. I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 6540-11-21-4.01 AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: Paul D. Nordwig DATE: 5-11-2021
PRINT NAME: PAUL D. NORDWIG
REGISTRATION NUMBER: 2784

PAUL D. NORDWIG 2784 WRIGHTSTOWN WI LAND SURVEYOR

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

SIGNATURE: Curt Van Erem DATE: 5-26-2021
PRINT NAME: CURT VAN EREM

DOC# 1852852
NATALIE STROHMEYER
REGISTER OF DEEDS
WINNEBAGO COUNTY, WI
RECORDED ON:
05/27/2021 12:40 PM
RECORDING FEE: 25.00
PAGES: 1

****The above recording information verifies that this document has been electronically recorded and returned to the submitter****

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER: 6540-11-21 - 4.01
AMENDMENT NO:___

WESLEY A RADLOFF
SHIRLEY A RADLOFF

ROGER E MAGNUSON
JENNIFER M MAGNUSON
BLDG #3455

WESLEY A RADLOFF IRREV TST
SHIRLEY A RADLOFF IRREV TST

N

EXISTING LIMITED HIGHWAY EASEMENT

TLE

PROPOSED LIMITED HIGHWAY EASEMENT

SLOPE INTERCEPT, TYP

UNITED COOPERATIVE
6" ETHANOL (ABANDONED)

BEGIN CONSTRUCTION
STA 113+00.00

WETLAND LIMITS

AT&T

SPECTRUM

EXISTING R/W

WPS

CPCM 18-INCH

PIPE ARCH 84"W X 60"H

FOX RIVER VALLEY ETHANOL
4" SANITARY

111 112 113 114 115 116 117 118

STH 91

S89° 19' 24.01"E

B-70-326

CPCM 30-INCH

WPS
8" GAS

EXISTING UTILITY EASEMENT

ALLIANT

BEGIN PROJECT
STA 113+65.00
Y=460285.354
X=766155.297
MATCH EXISTING
SAWCUT REQUIRED

END CONSTRUCTION
STA 115+50.00

END PROJECT
STA 115+30.00
Y=460283.405
X=766320.286
MATCH EXISTING
SAWCUT REQUIRED

WETLAND LIMITS

PROPOSED LIMITED HIGHWAY EASEMENT

TLE

SAWYER CREEK

DENNIS RADLOFF

5

5

828 826 824 822 820 818 816 814 812 810

VPI STA 113+65.00
VPI EL 820.84

VPI STA 115+30.00
VPI EL 821.04

EXISTING PROFILE AT R/L

0.12%

FINISHED PROFILE AT R/L

STATION 114+15
REMOVE STRUCTURE C-70-125
2- 84"W X 60"H X 64'L CORRUGATED
STEEL PIPE ARCH CULVERTS
19' APPROX OVERALL LENGTH

STATION 114+27
STRUCTURE B-70-326, REQ'D
TWIN CELL 12'X6' RCB
114 FT LENGTH
40° RHF SKEW

EXISTING PROFILE ELEVATION AT R/L

FINISHED PROFILE ELEVATION AT R/L

820.16 820.16 820.18 820.22 820.24 820.25 820.26 820.29 820.31 820.34 820.47 820.60 820.75 820.91 **820.86** 820.95 **820.89** 820.97 **820.92** 821.12 **820.94** 821.21 **820.97** 821.09 **821.00** 821.03 **821.03** 821.06 821.11 821.17 821.24 821.32 821.43 821.58 821.73 821.89 822.04 822.13

111 112 113 114 115 116 117 118

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	PLAN AND PROFILE: STH 91	SHEET 17	E

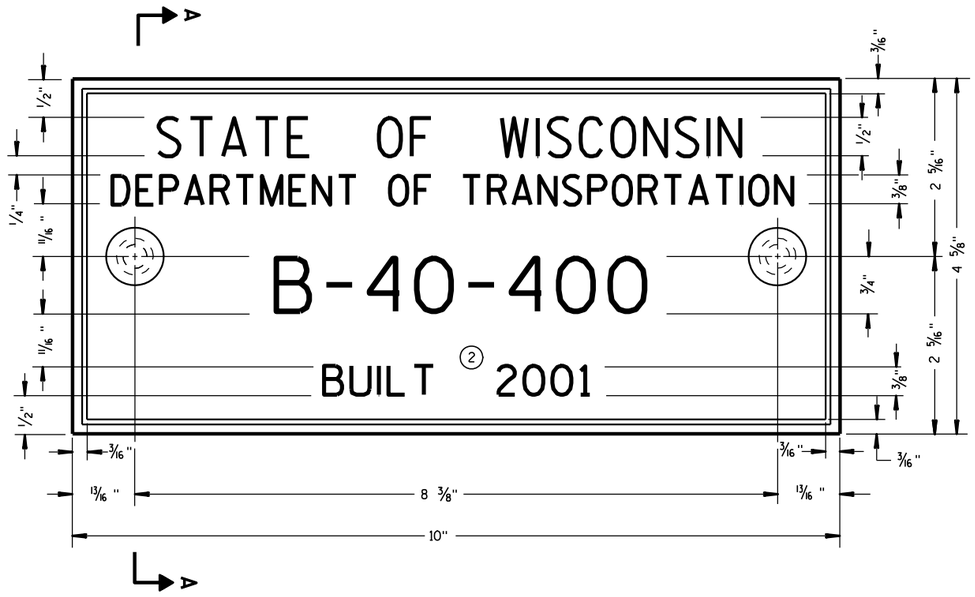
FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-050101-PP.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 1/26/2024 9:29 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

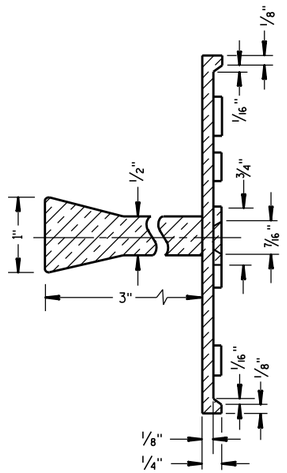
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

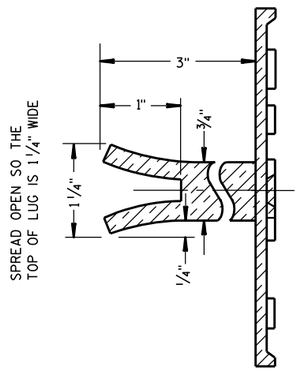
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

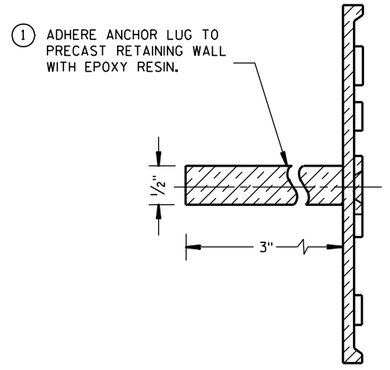
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

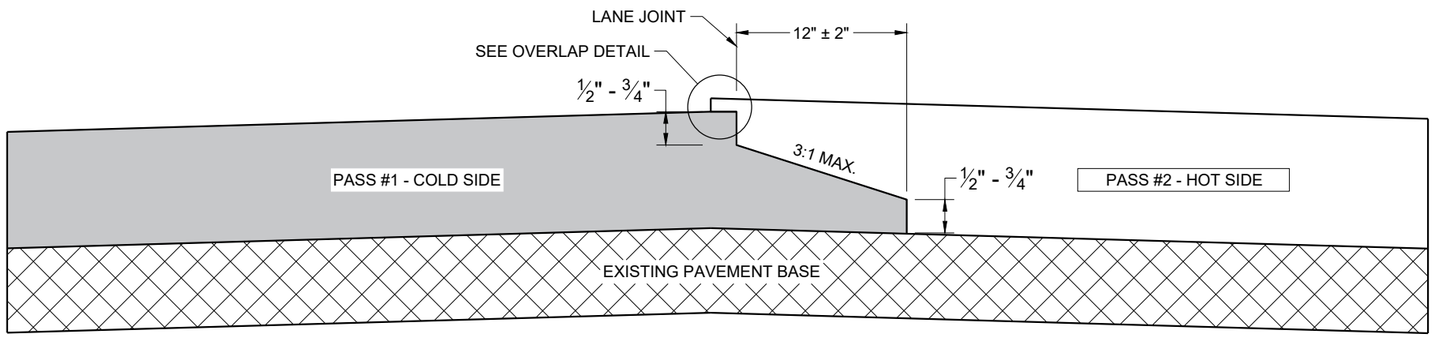
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

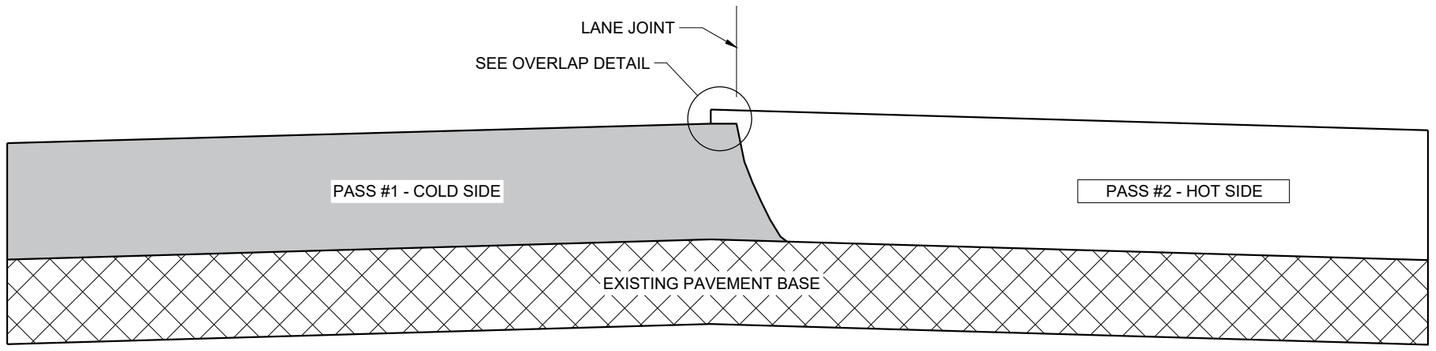
FHWA

6

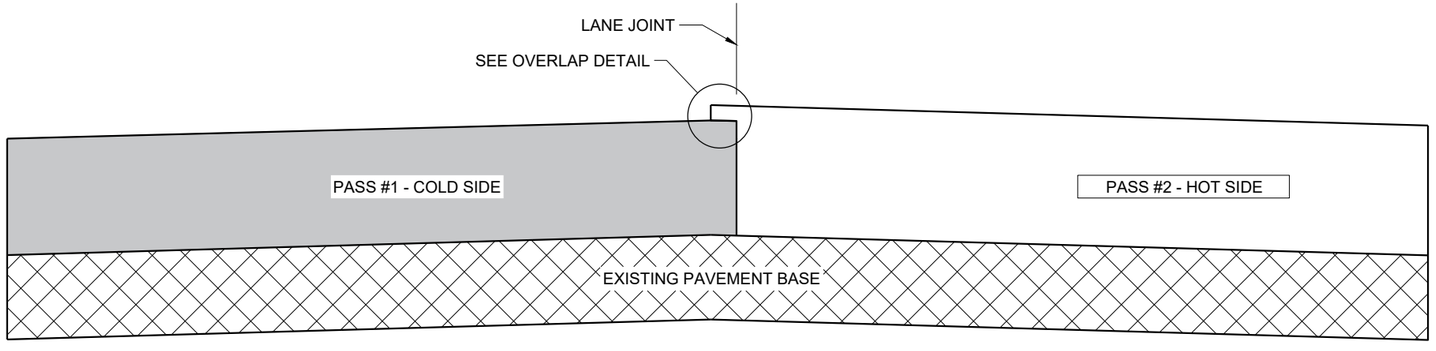
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

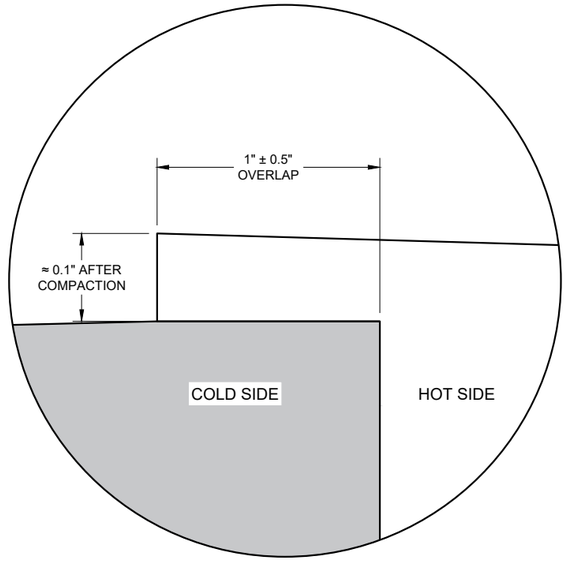
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

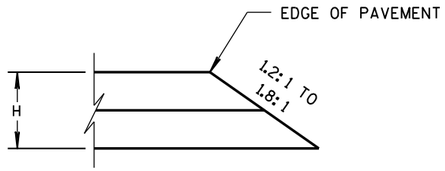
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

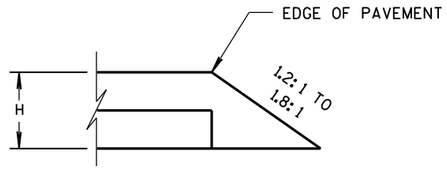
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



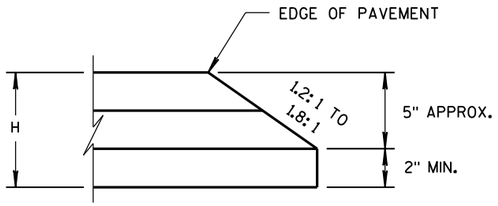
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



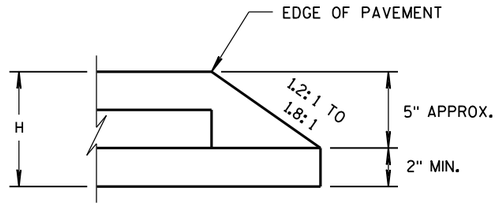
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

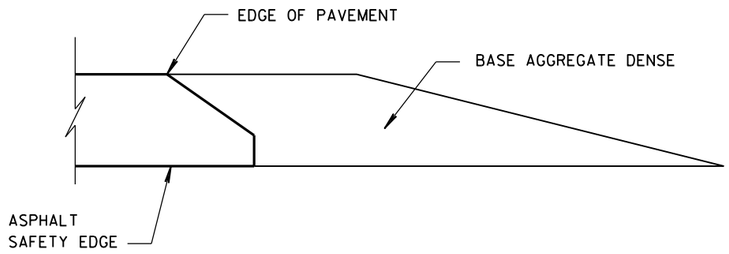
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

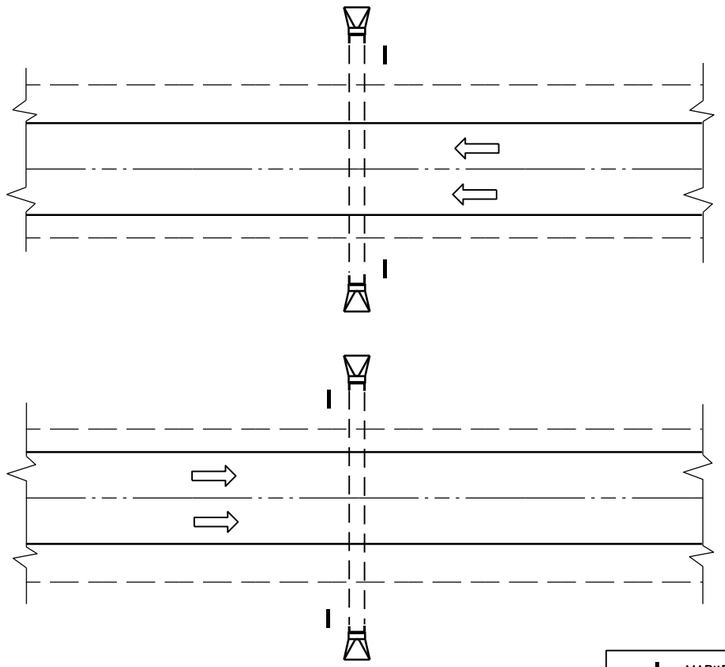
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

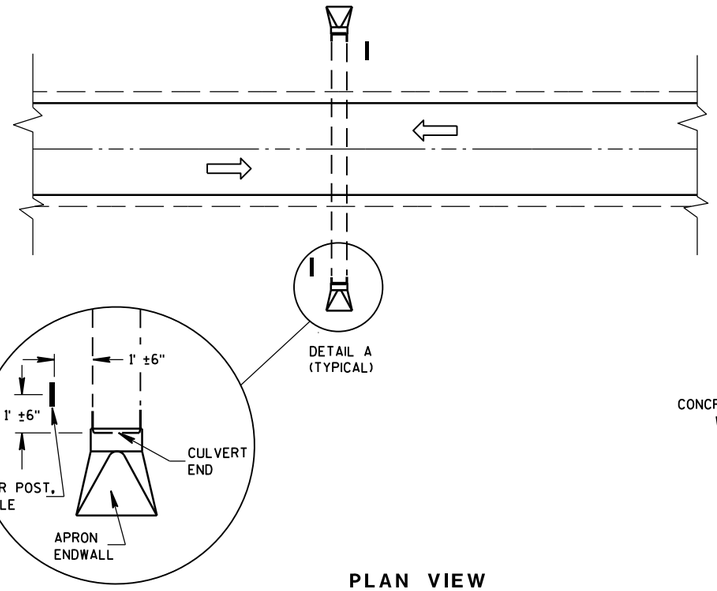
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

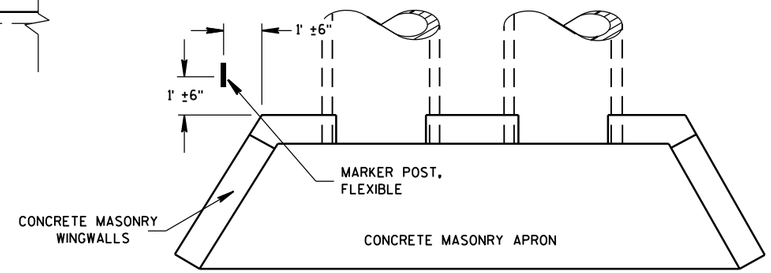
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

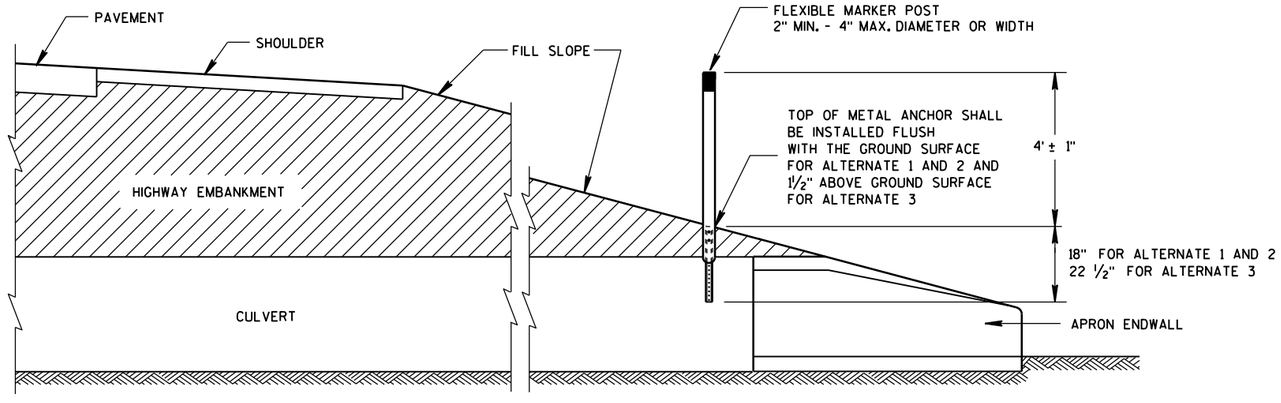
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

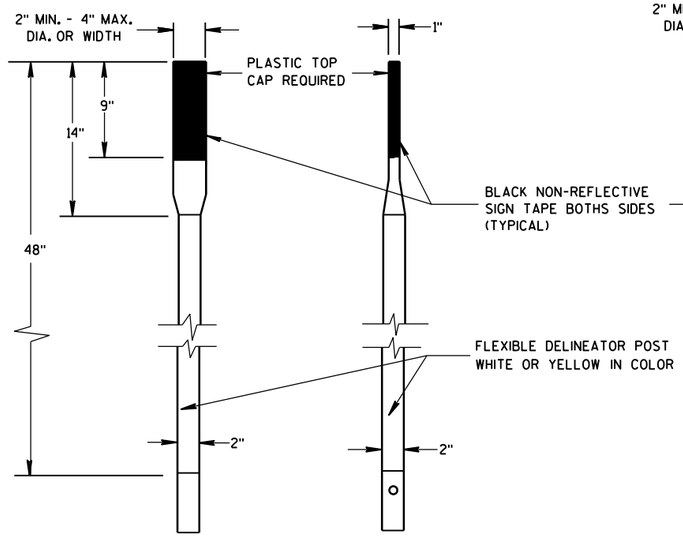
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

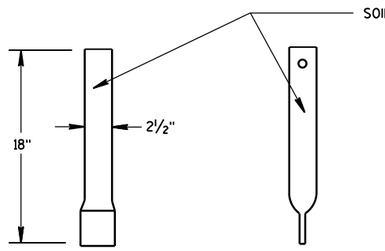
6

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

6

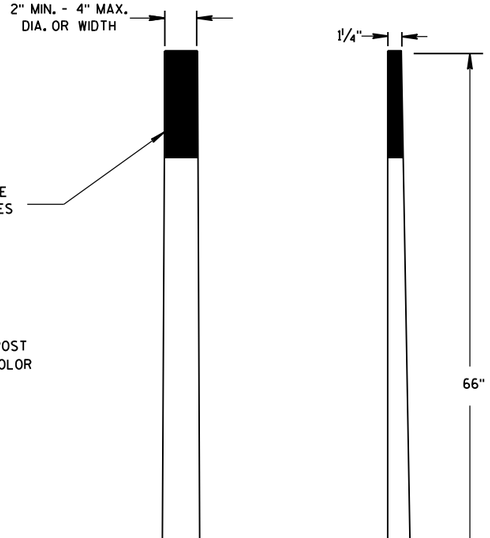
S.D.D. 15 A 3-2a





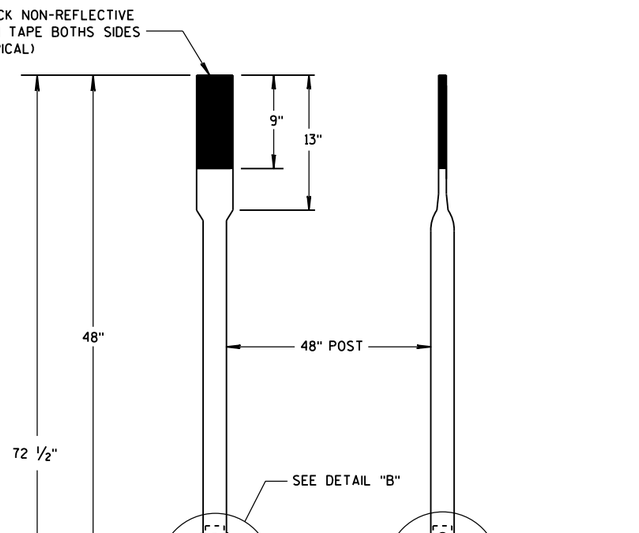
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

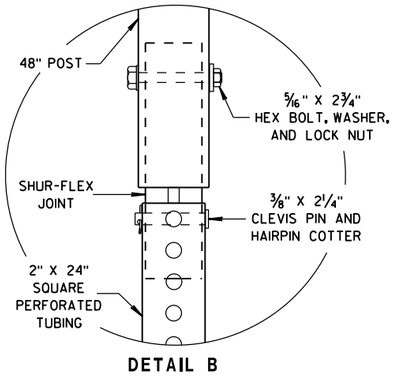
ALTERNATE 2



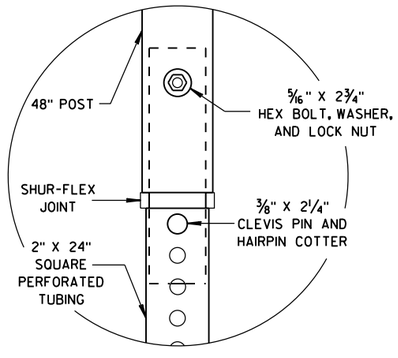
FRONT VIEW SIDE VIEW

ALTERNATE 3

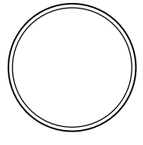
FLEXIBLE MARKER POSTS



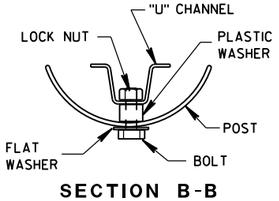
DETAIL B



DETAIL C



SECTION A-A



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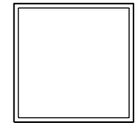

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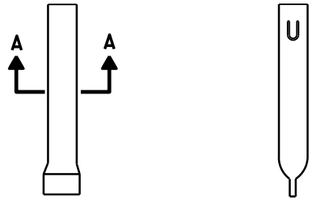
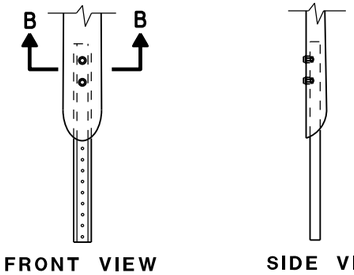


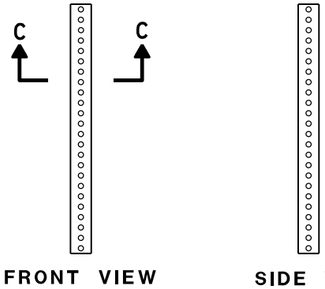
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER
FHWA	IGN

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

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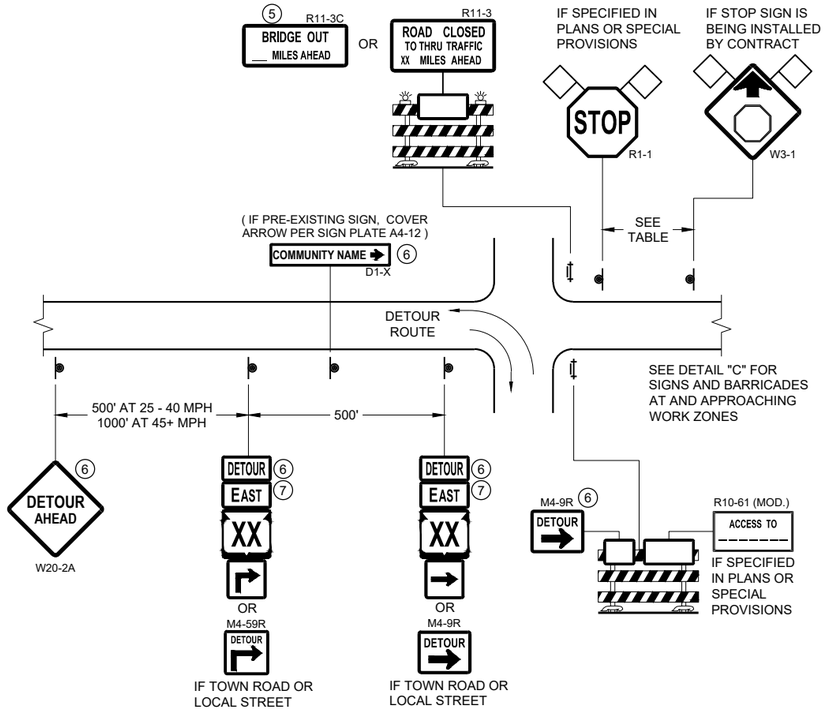
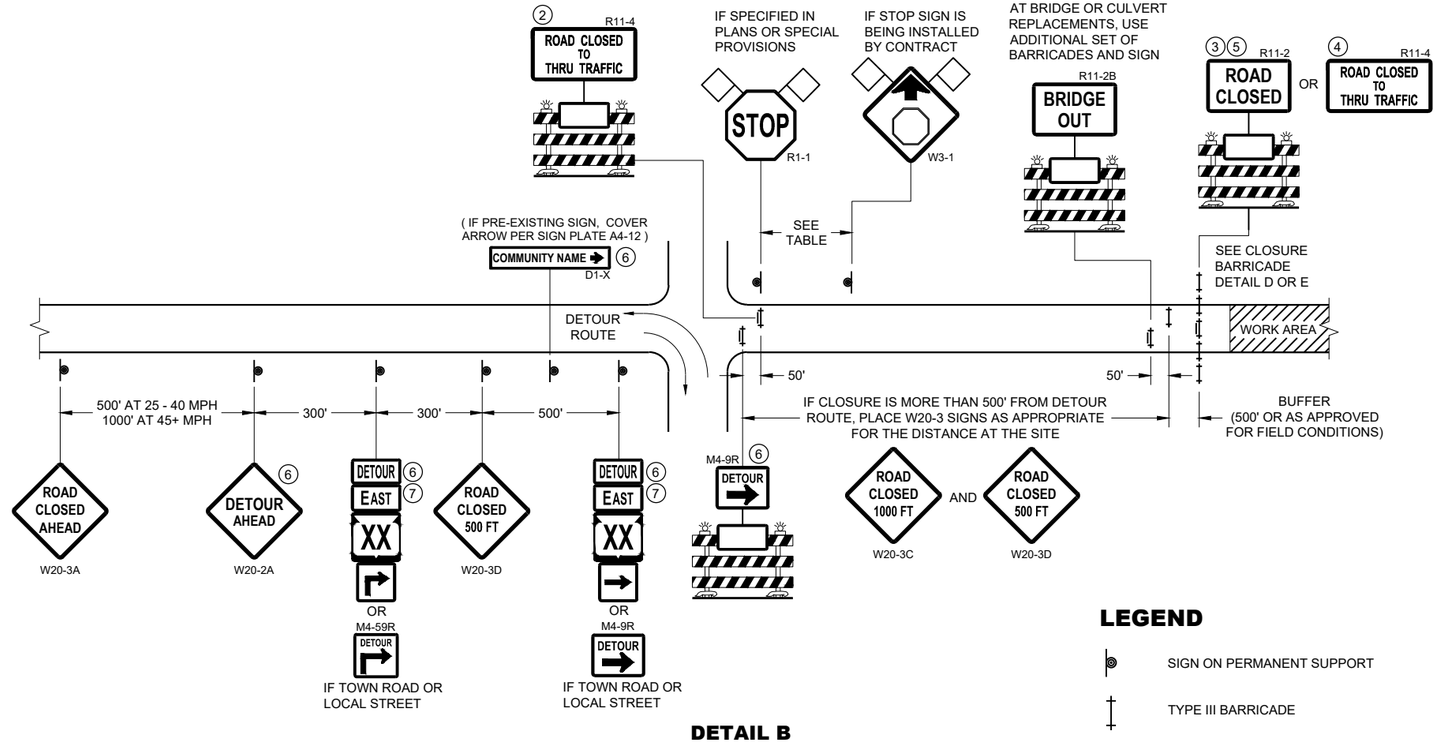
S.D.D. 15 A 3-2b



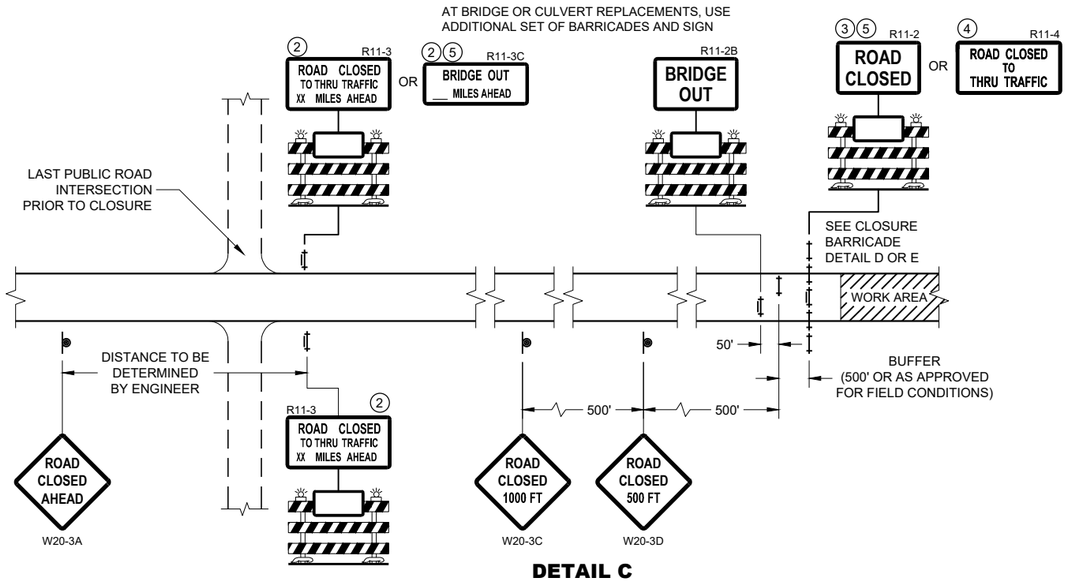
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 15C02 - 09a

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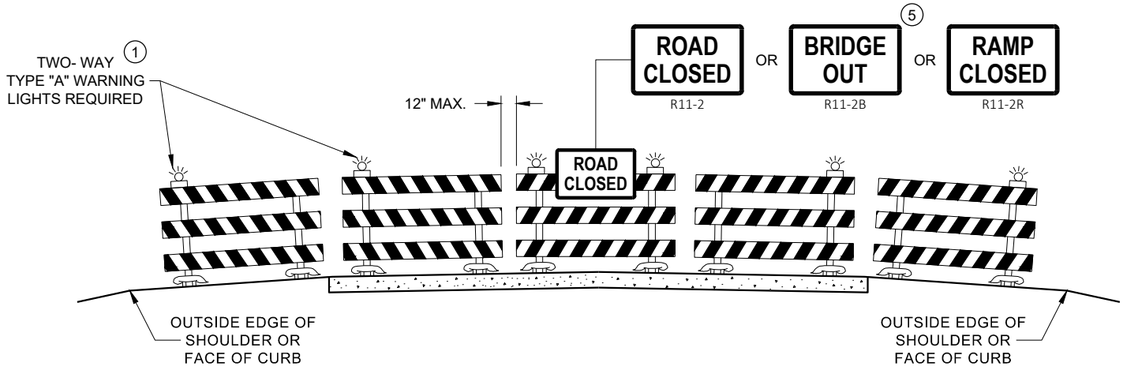
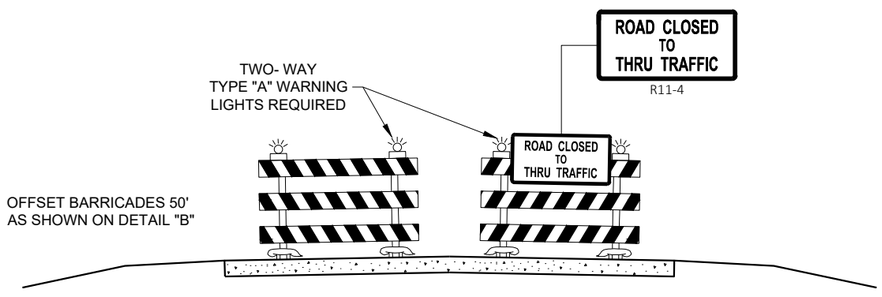
SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 09b

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SDD 15C02 - 09b

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

LEGEND

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

GENERAL NOTES

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

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

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

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

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

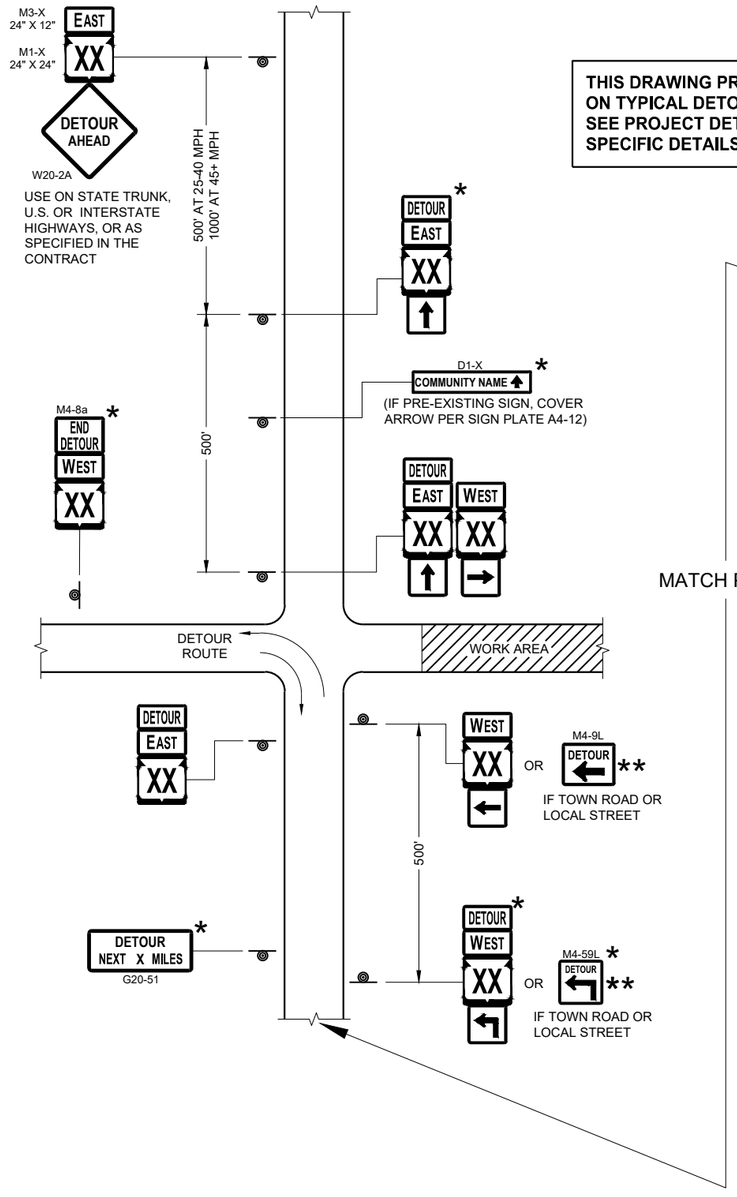
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

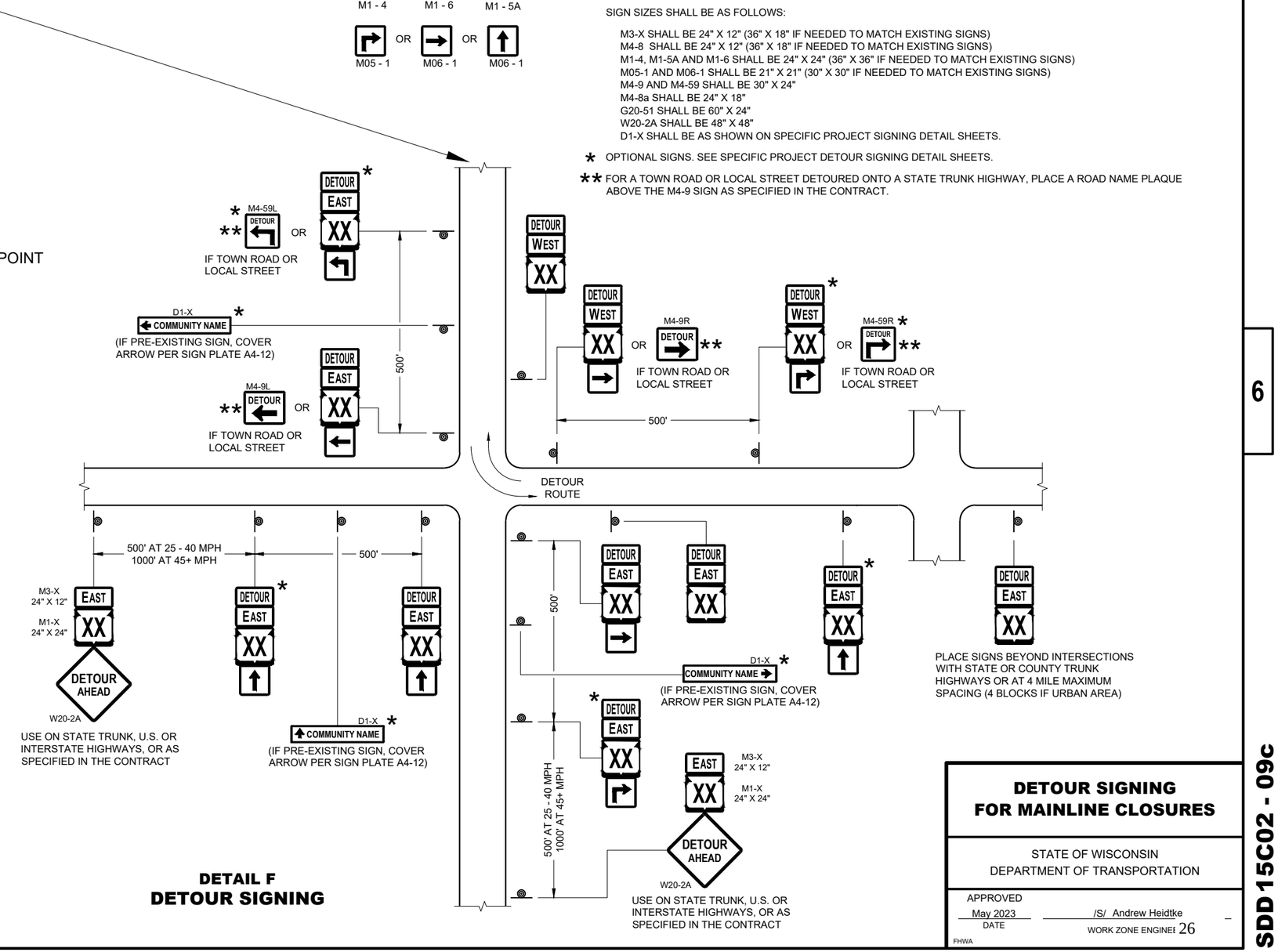
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING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

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

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



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



DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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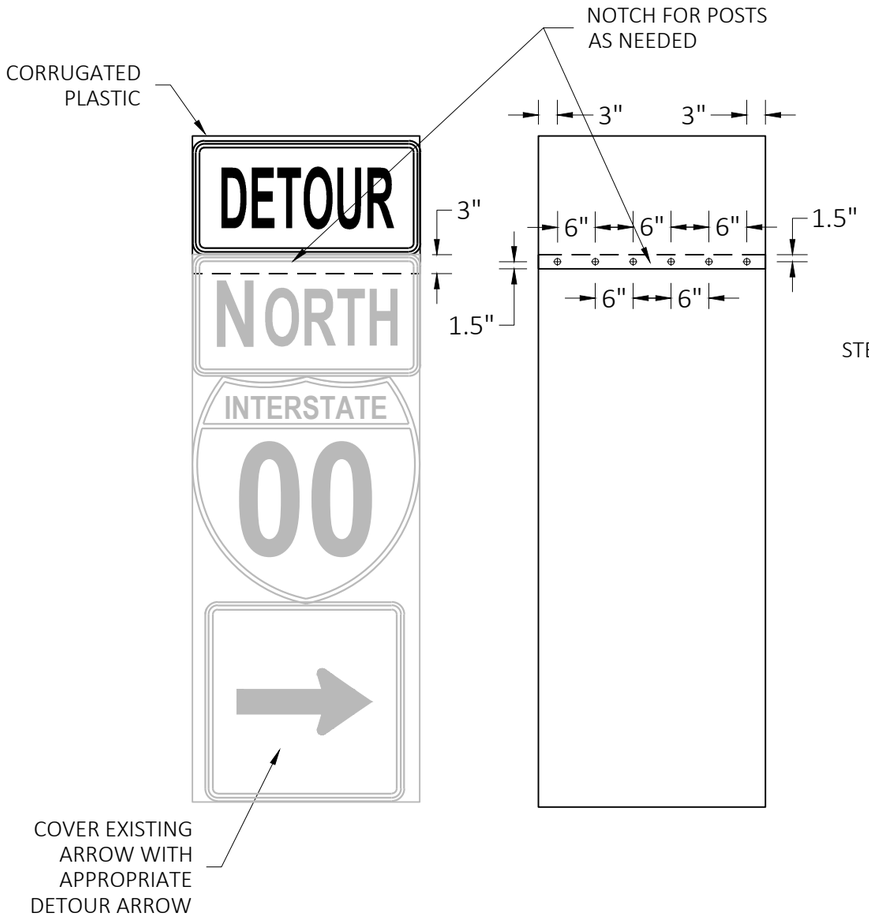
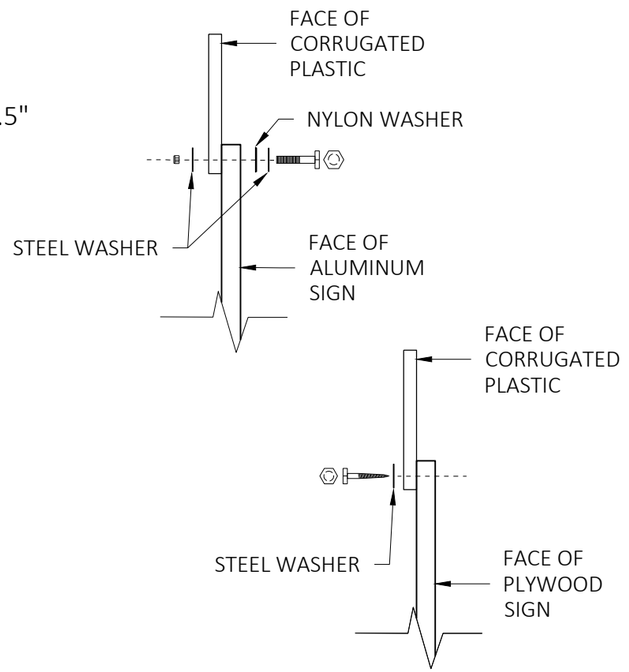
SDD 15C02 - 09c

FRONT SIDE

BACK SIDE

SIDE VIEW





GENERAL NOTES

CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.

PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.

FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.

FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.

METAL WASHERS, NUTS, BOLTS AND LAGS 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, SC3

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.

PLYWOOD SIGNS:
LAG SCREWS - 5/16" x 1"
ALUMINUM SIGNS:
MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS
WASHERS:
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

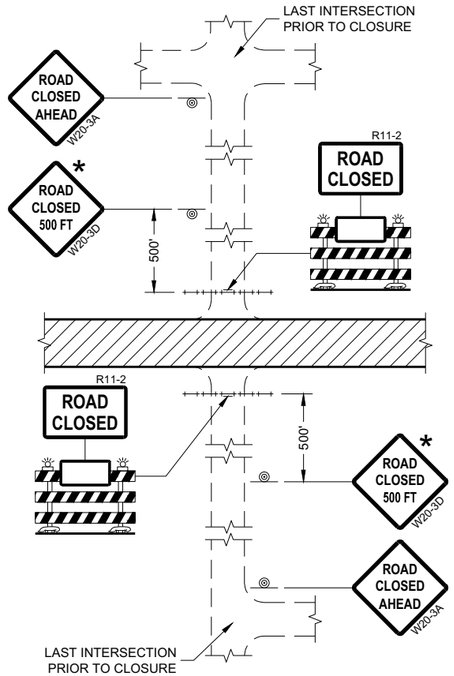
MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

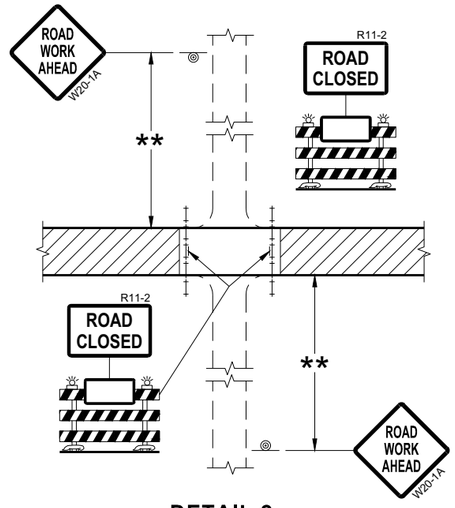
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVEL ENGINEER
FHWA

6
SDD 15C02-09h



DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO 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.

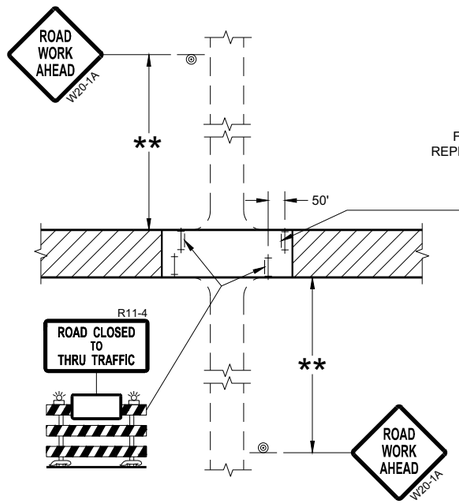
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

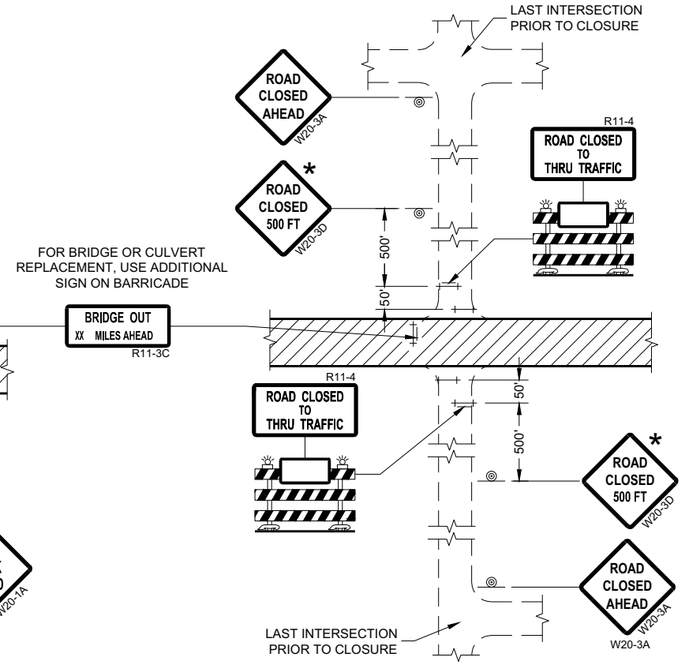
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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.





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

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

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
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C03 - 05

6

SDD 15C03 - 05

GENERAL NOTES

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

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

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

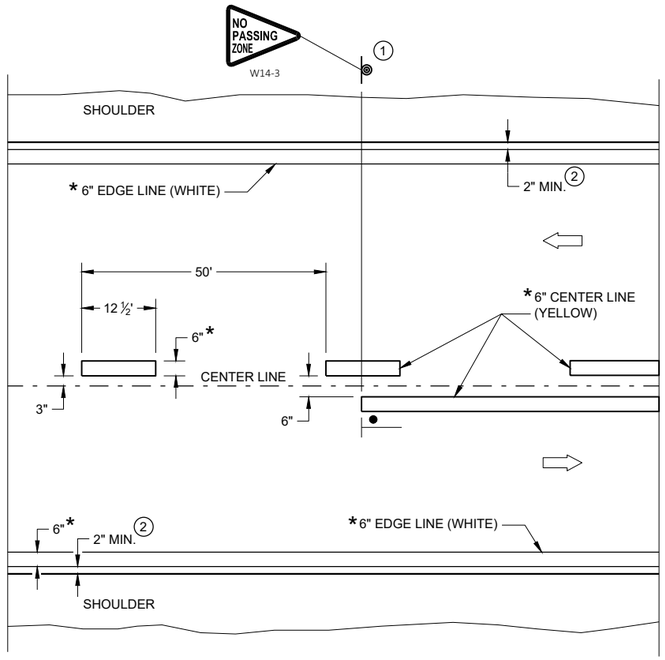
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

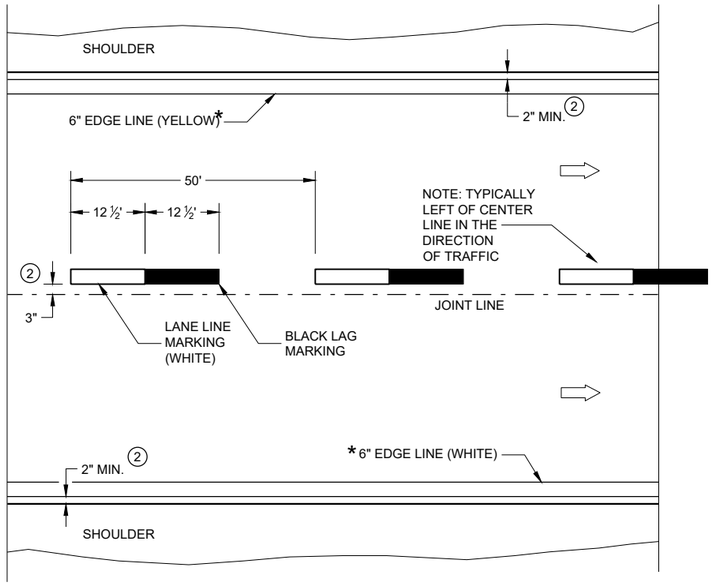
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

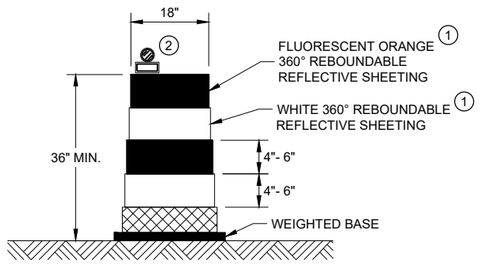
6

SDD 15C08-23a

SDD 15C08-23a

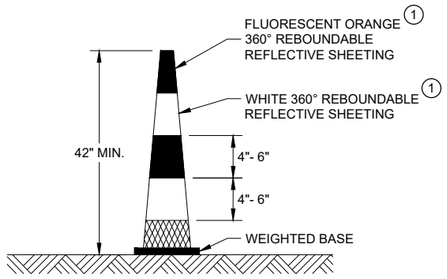
GENERAL NOTES

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



DRUM

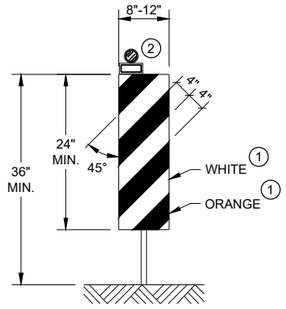
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

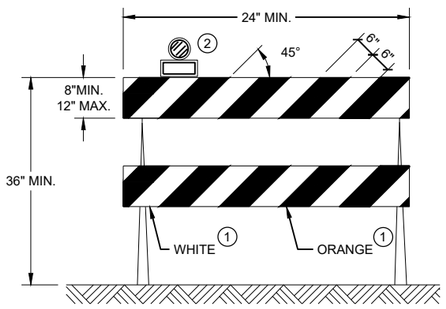
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



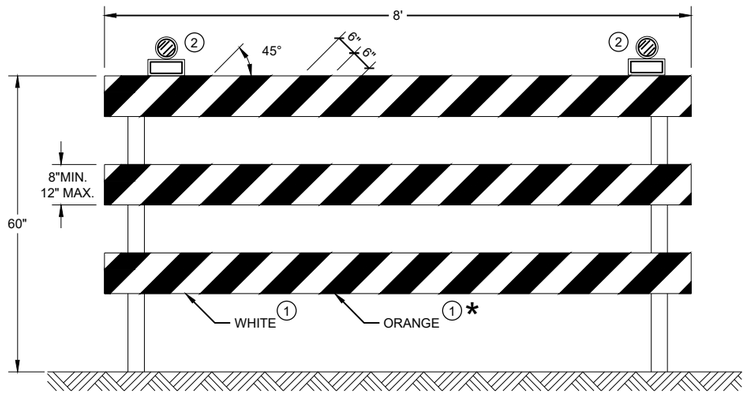
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C11 - 10b
SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

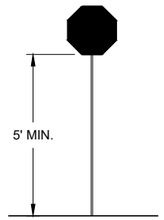
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



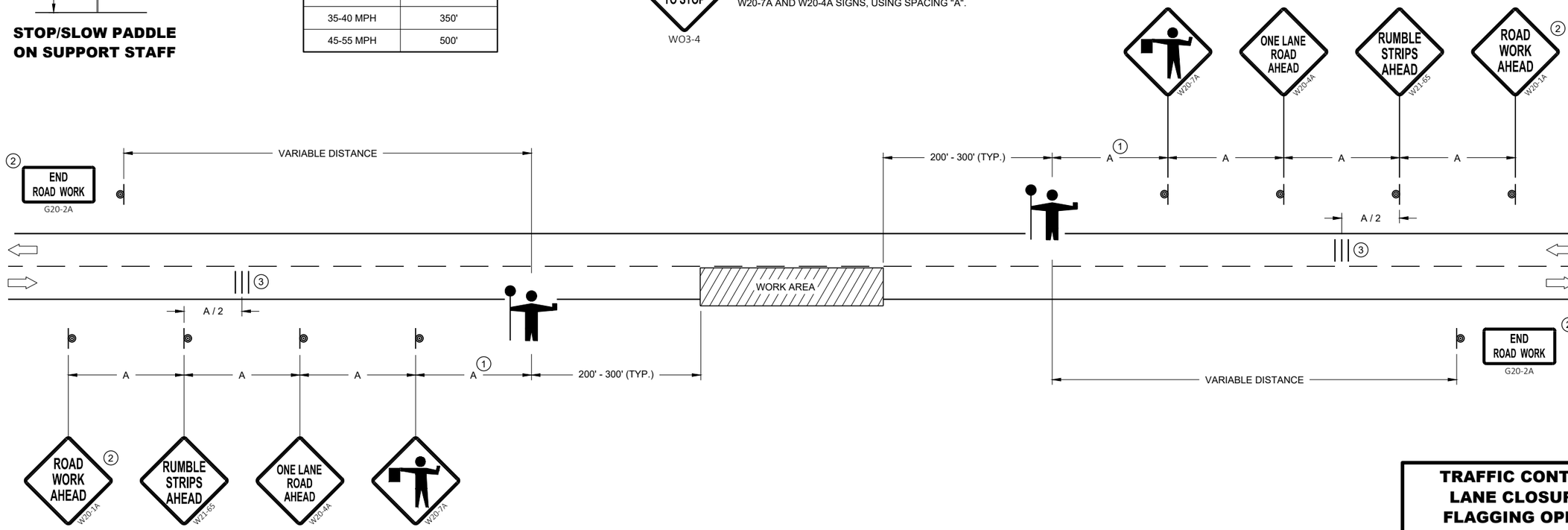
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

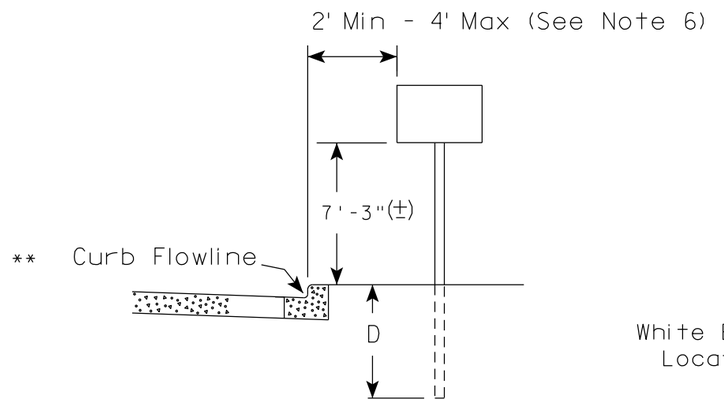
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

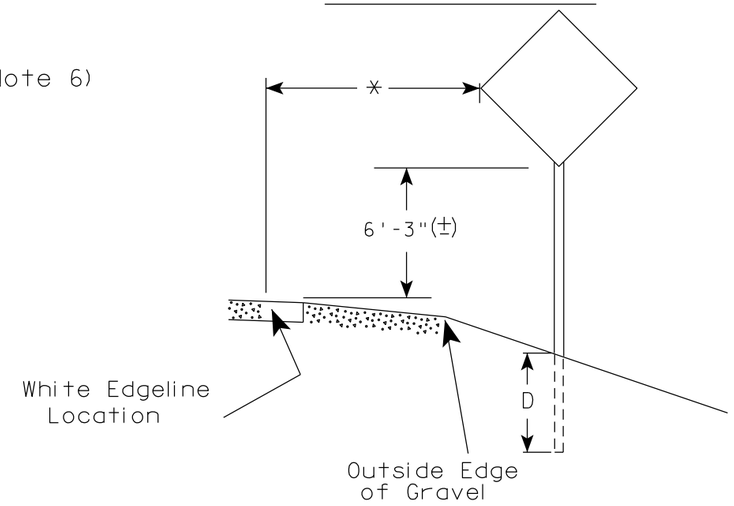
6

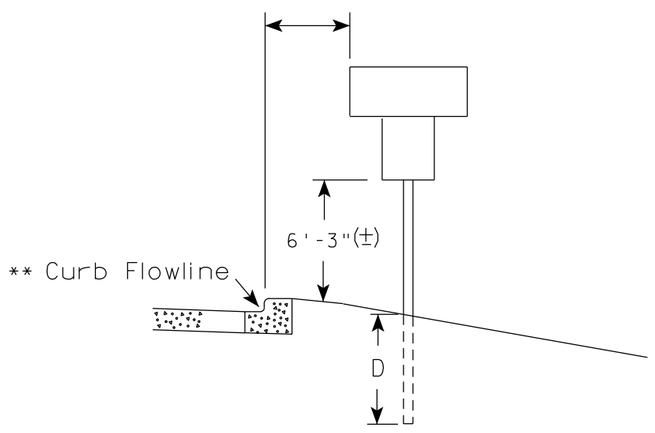
SDD 15C12 - 09a

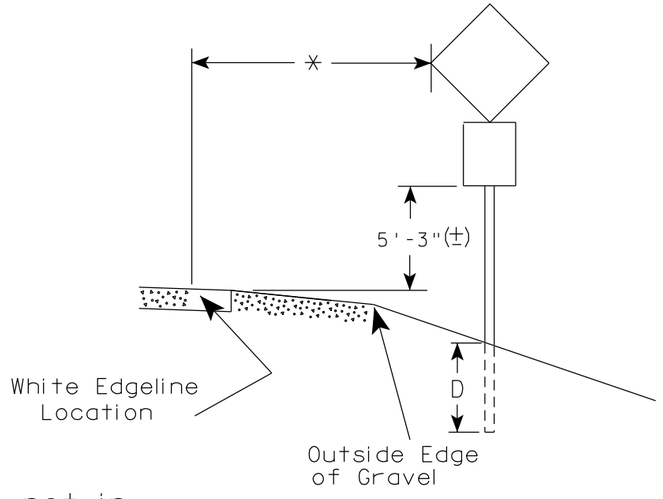
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). 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 directd by the Engineer.

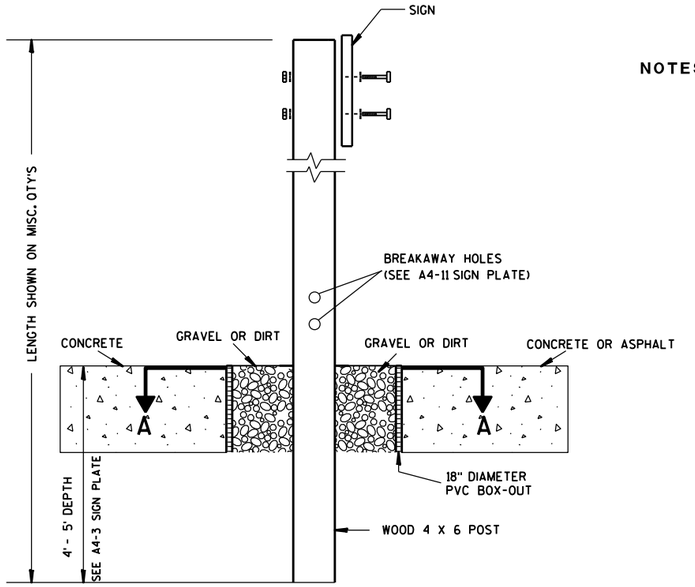
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

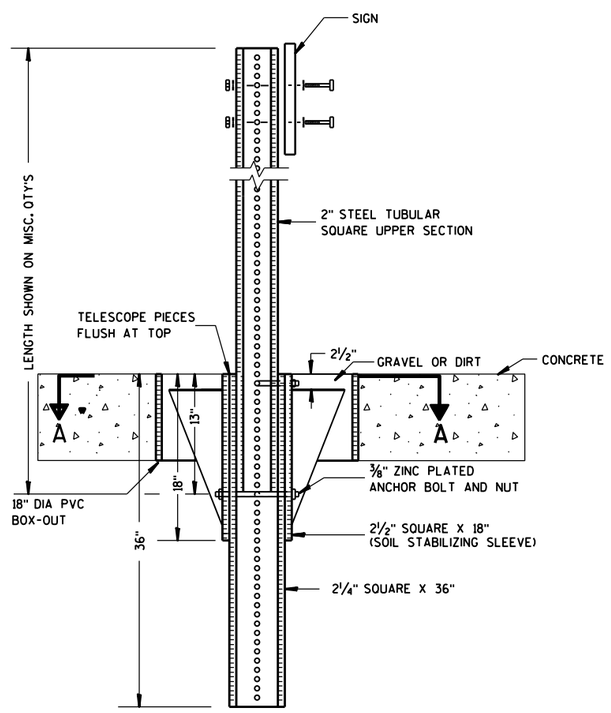
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 32	E



ELEVATION VIEW

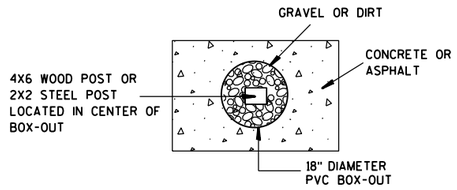
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

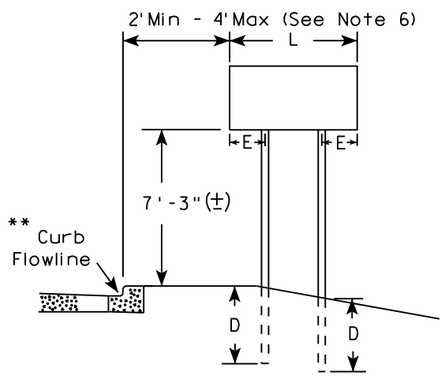
APPROVED Matthew R Rauch
for State Traffic Engineer

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

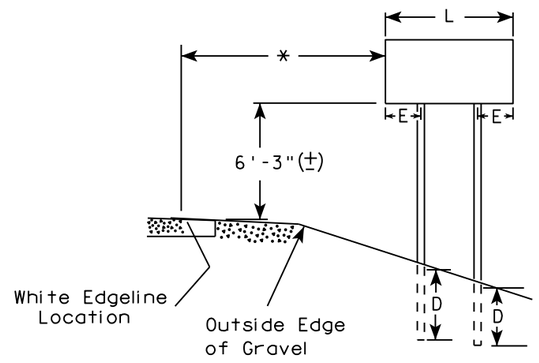
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

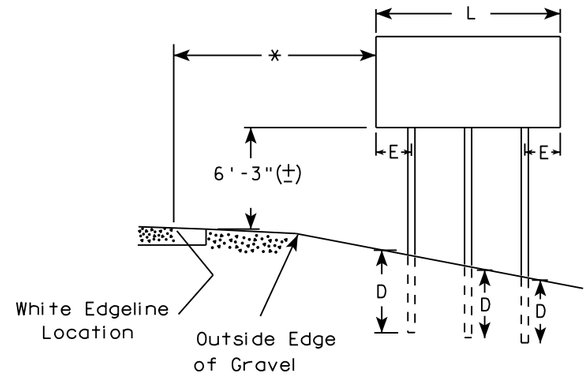
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

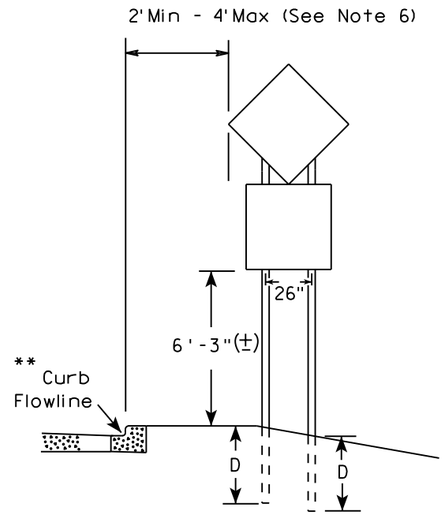
URBAN AREA



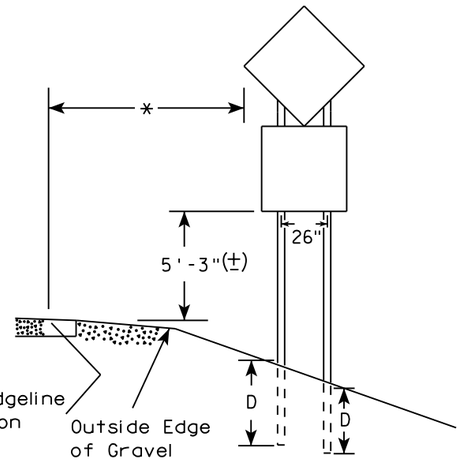
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 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" (±).

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

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

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

POST EMBEDMENT DEPTH

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

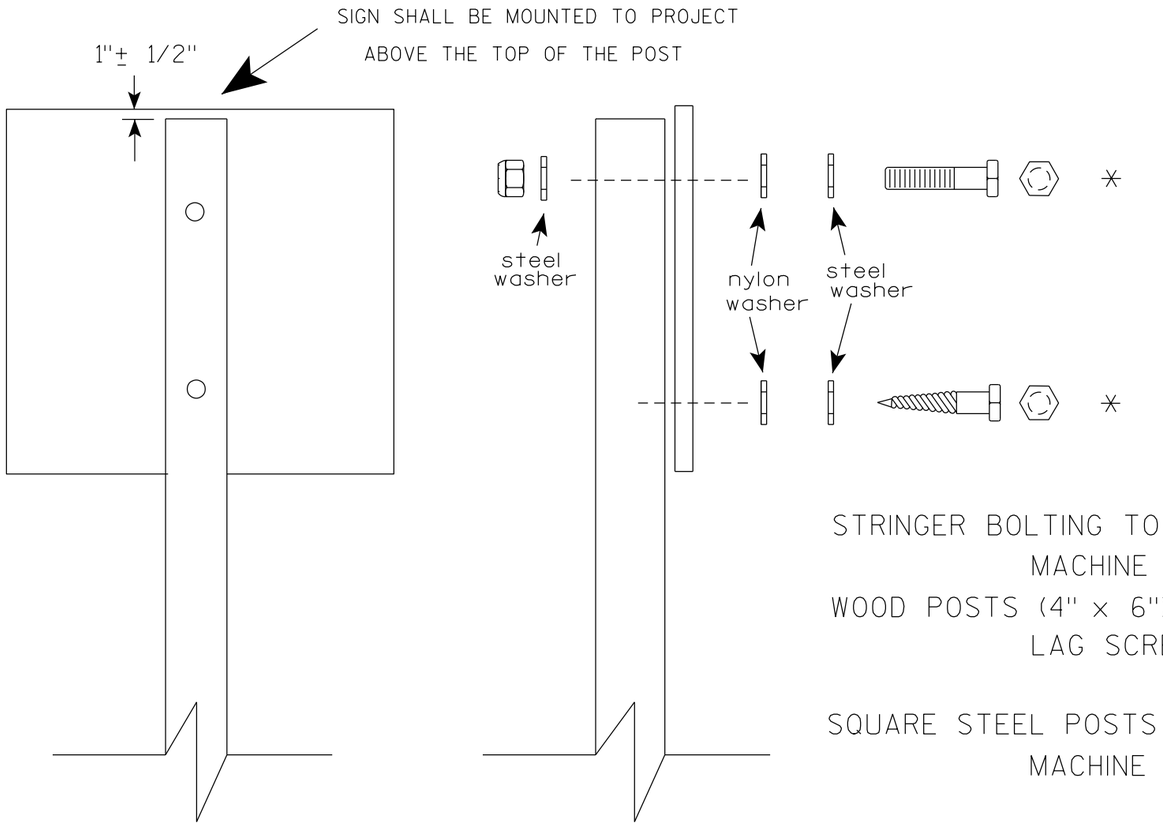
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 34	E



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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

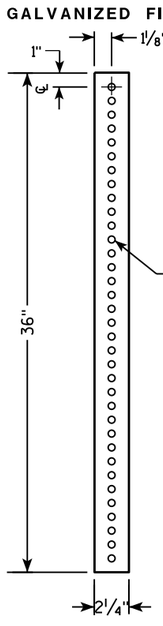
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

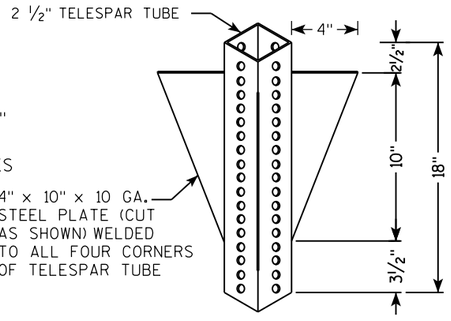
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

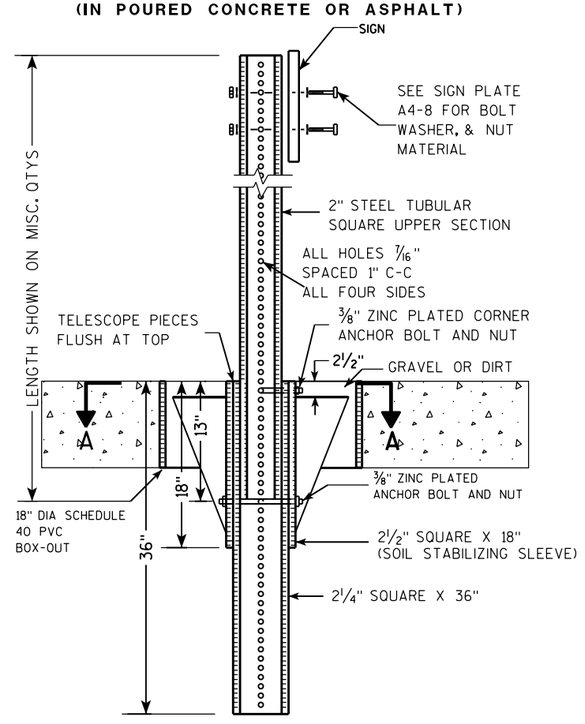
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



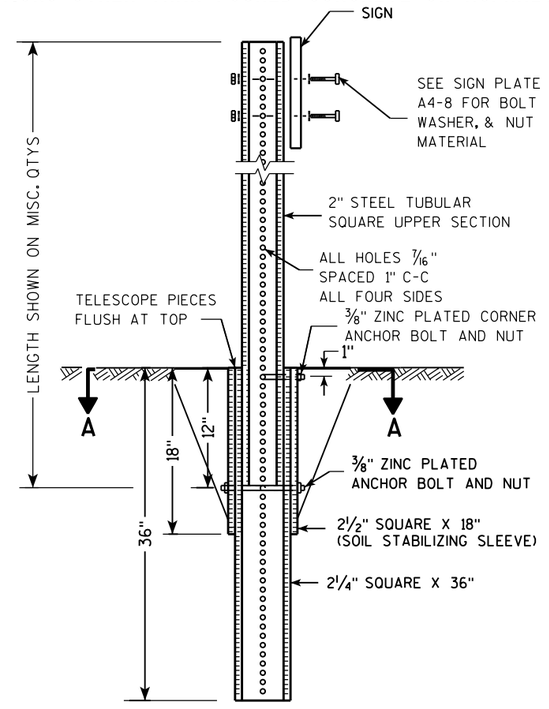
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

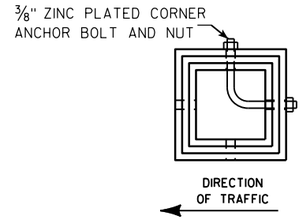


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

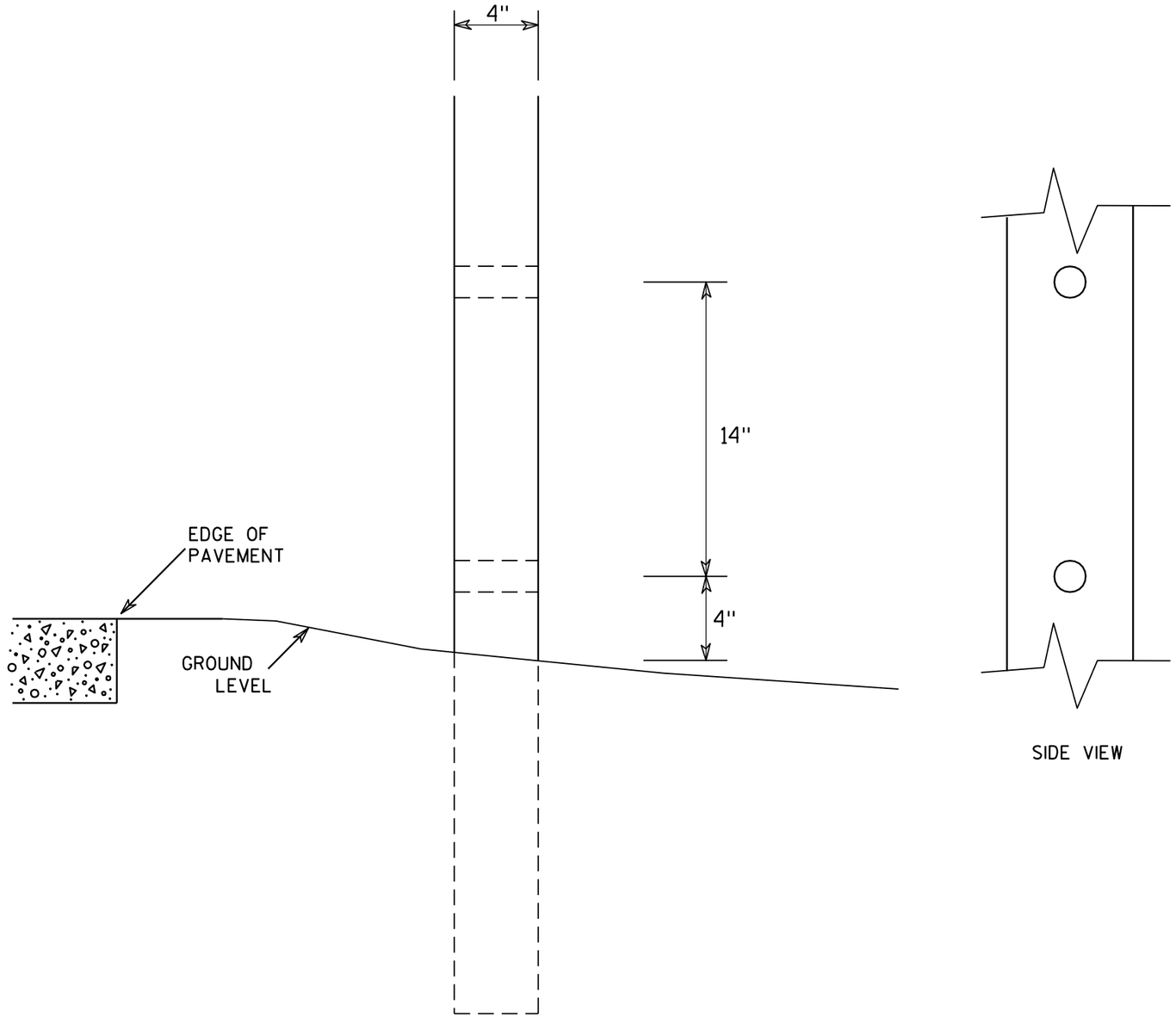
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 36 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

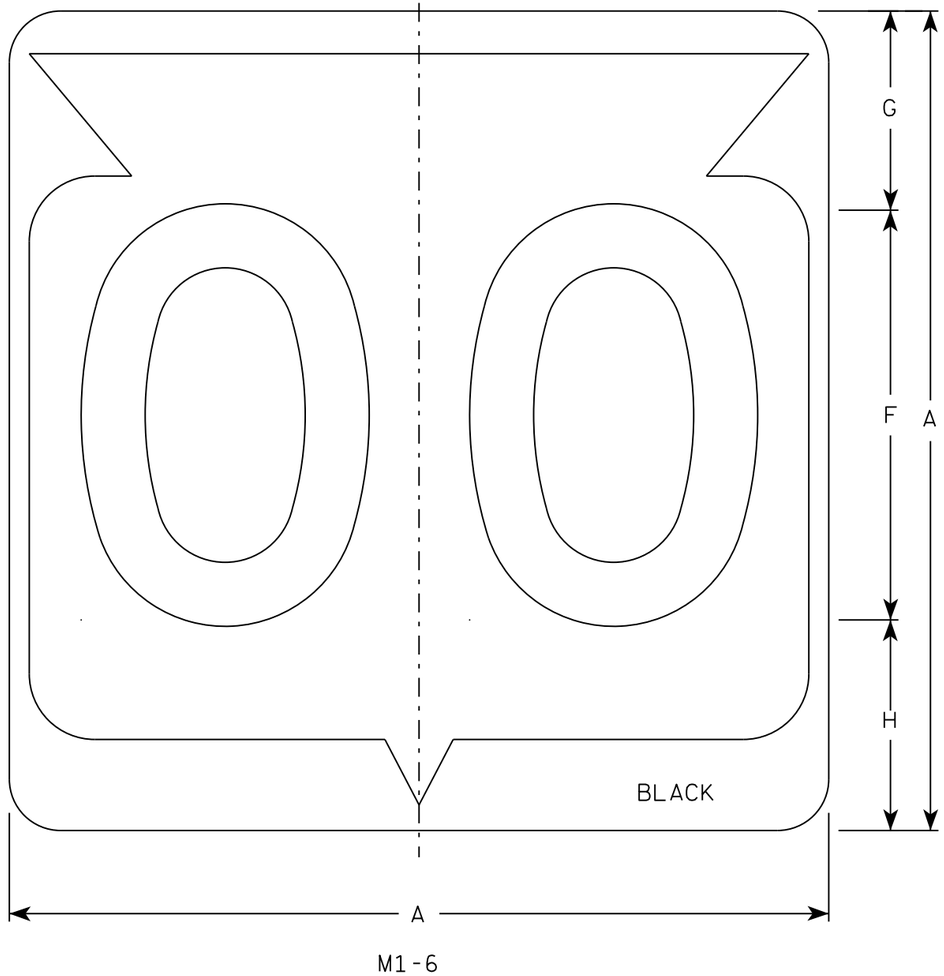
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

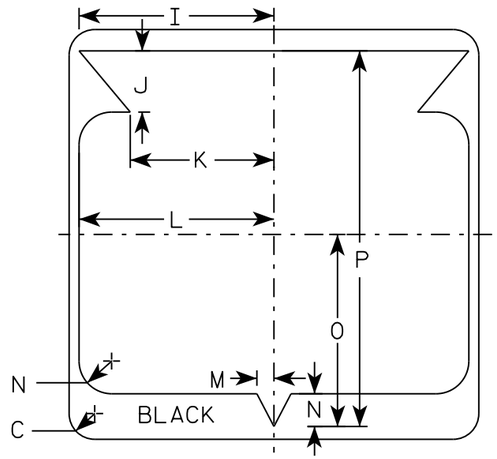
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 37	E



M1-6

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.



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		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

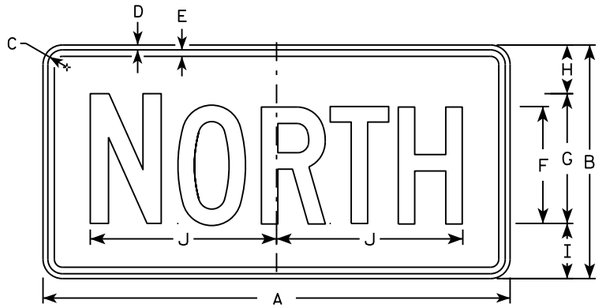
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

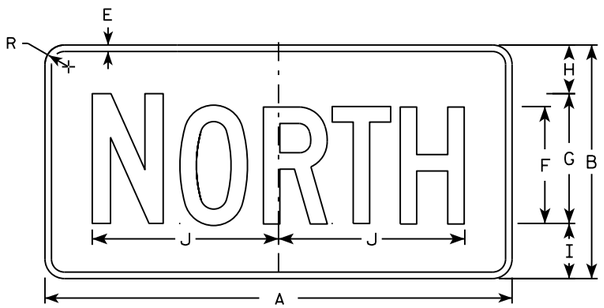
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 38	E



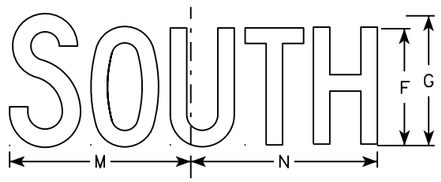
M3-1
MM3-1
MP3-1



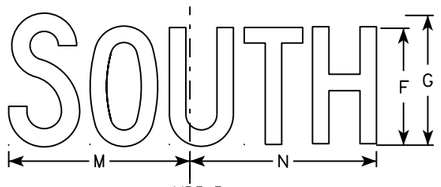
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

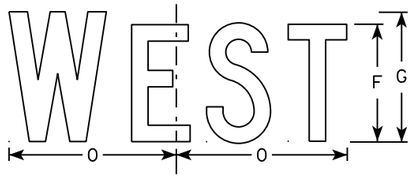
MB3-2
MK3-2
MN3-2



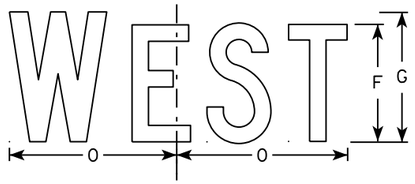
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
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 thur M3-4
SERIES

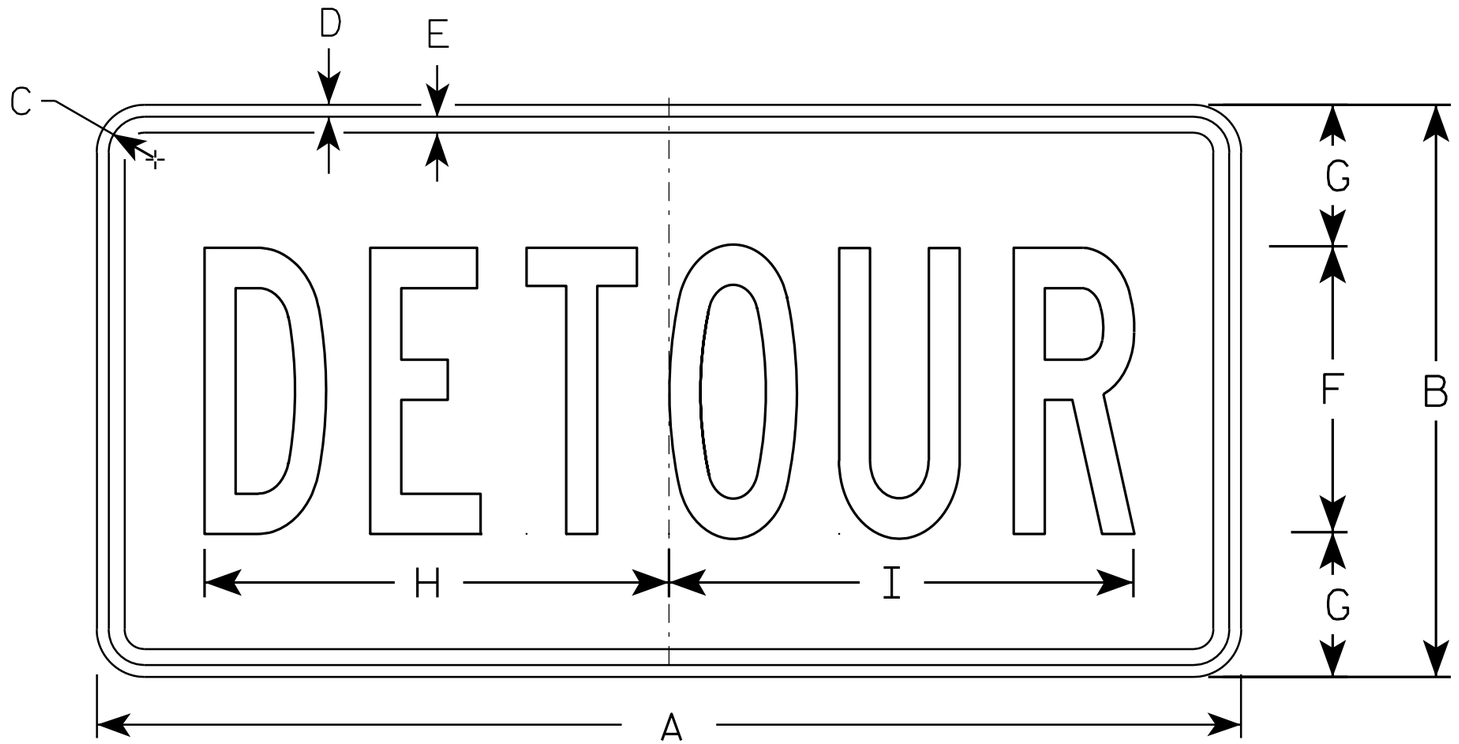
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-8

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.

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																											

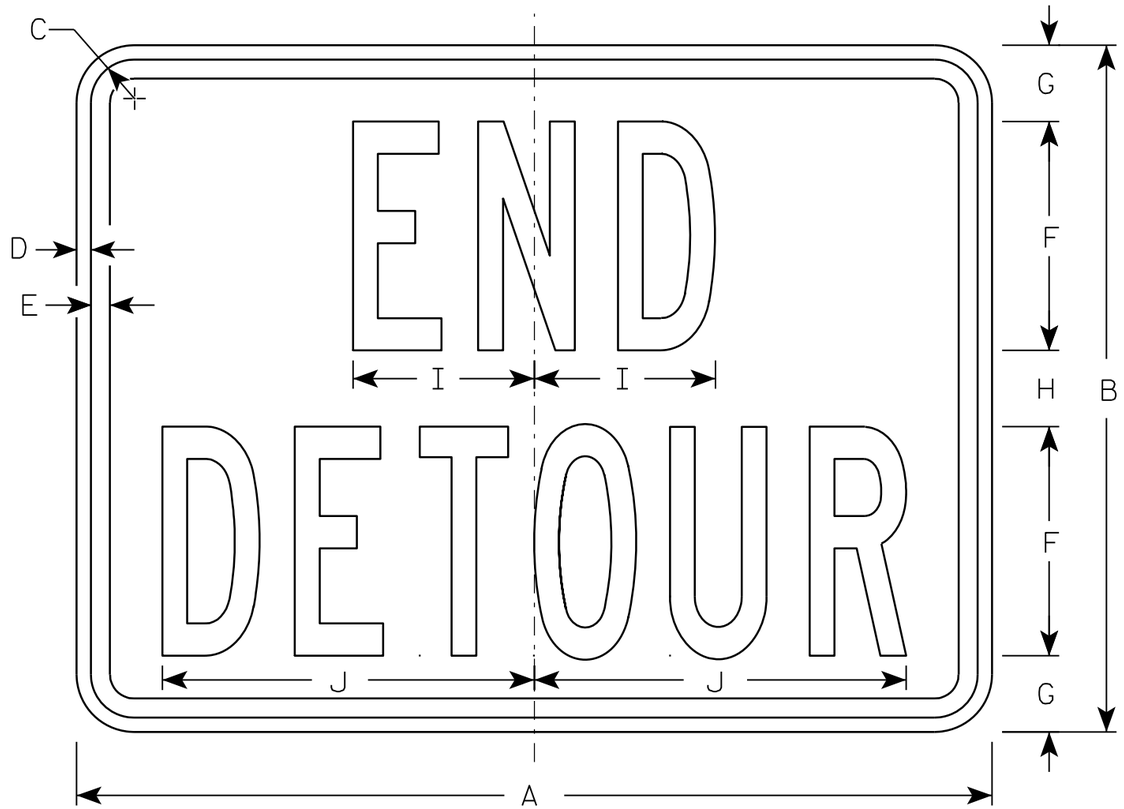
STANDARD SIGN
M4-8

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: 40	E



M4-8A

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.

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																											

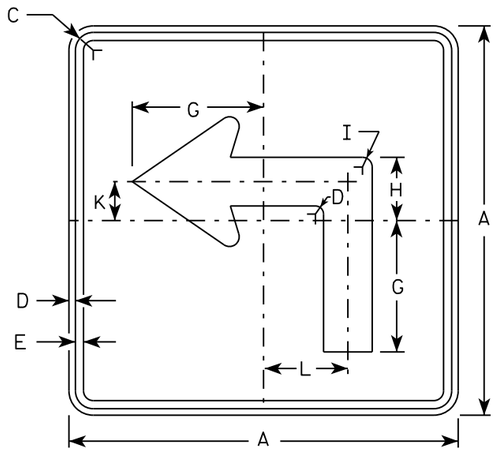
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

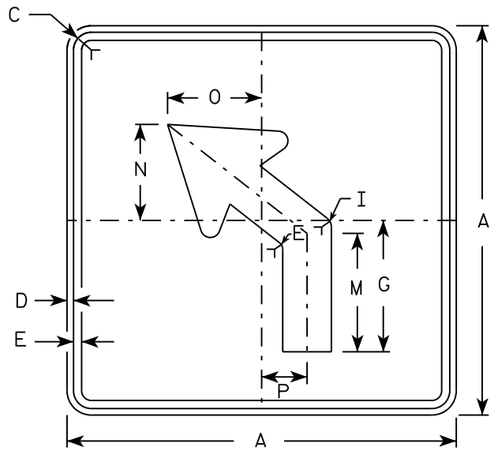
APPROVED Matthew R Rauch
for State Traffic Engineer

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

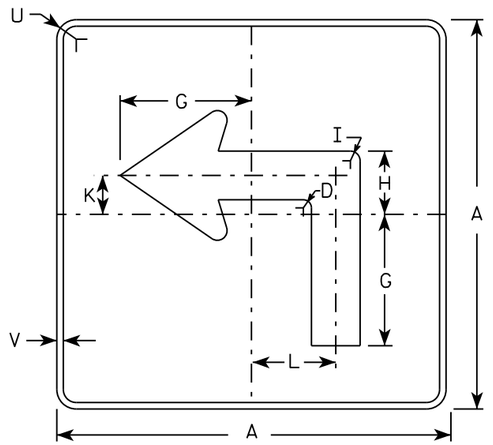
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 41	E



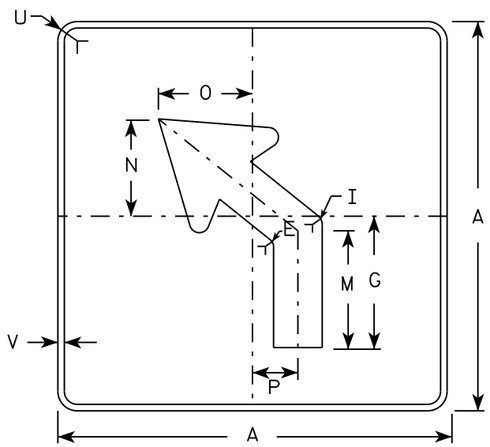
M5-1L
MM5-1L
MO5-1L
MP5-1L



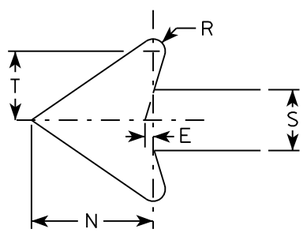
M5-2L
MM5-2L
MO5-2L
MP5-2L



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



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



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. 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.
4. 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
   MO5-1 and MO5-2 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
5. M5-1R same as M5-1L except arrow points right.
6. 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

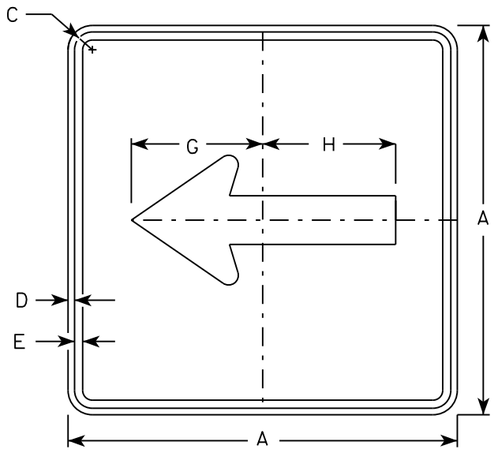
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

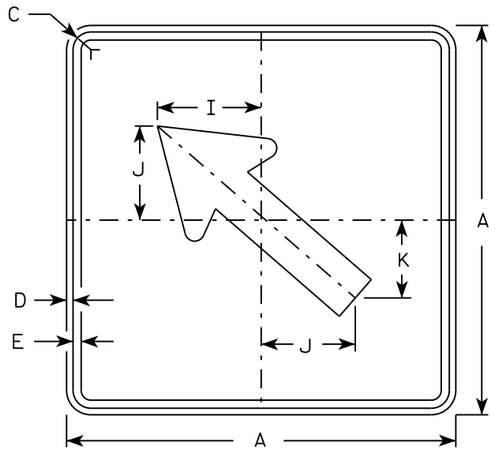
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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



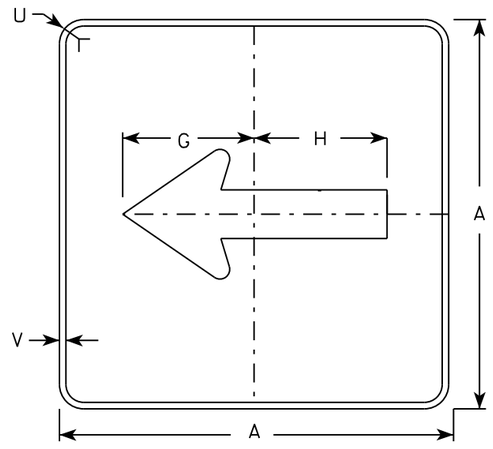
M6-1
MM6-1
MO6-1
MP6-1



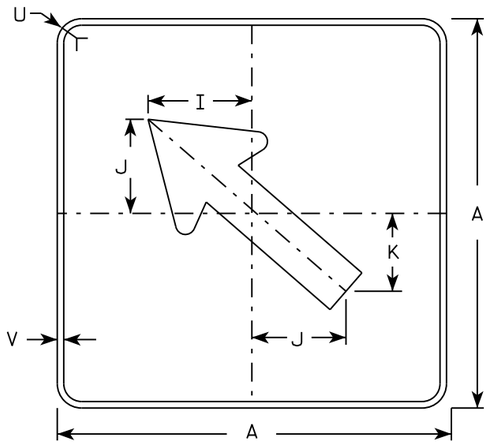
M6-2
MM6-2
MO6-2
MP6-2

NOTES

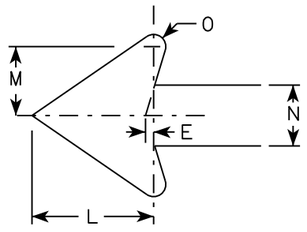
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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
   MO6-1 and MO6-2 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



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



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



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

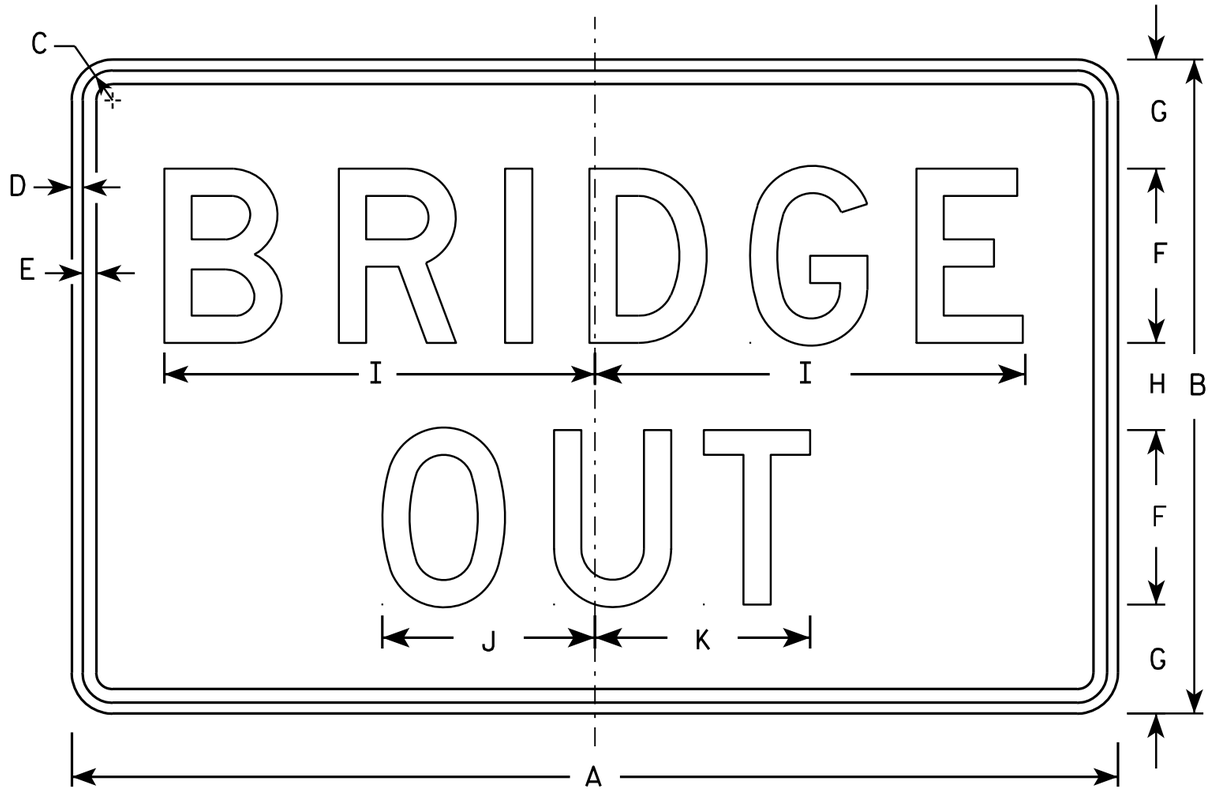
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 43 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 44 E

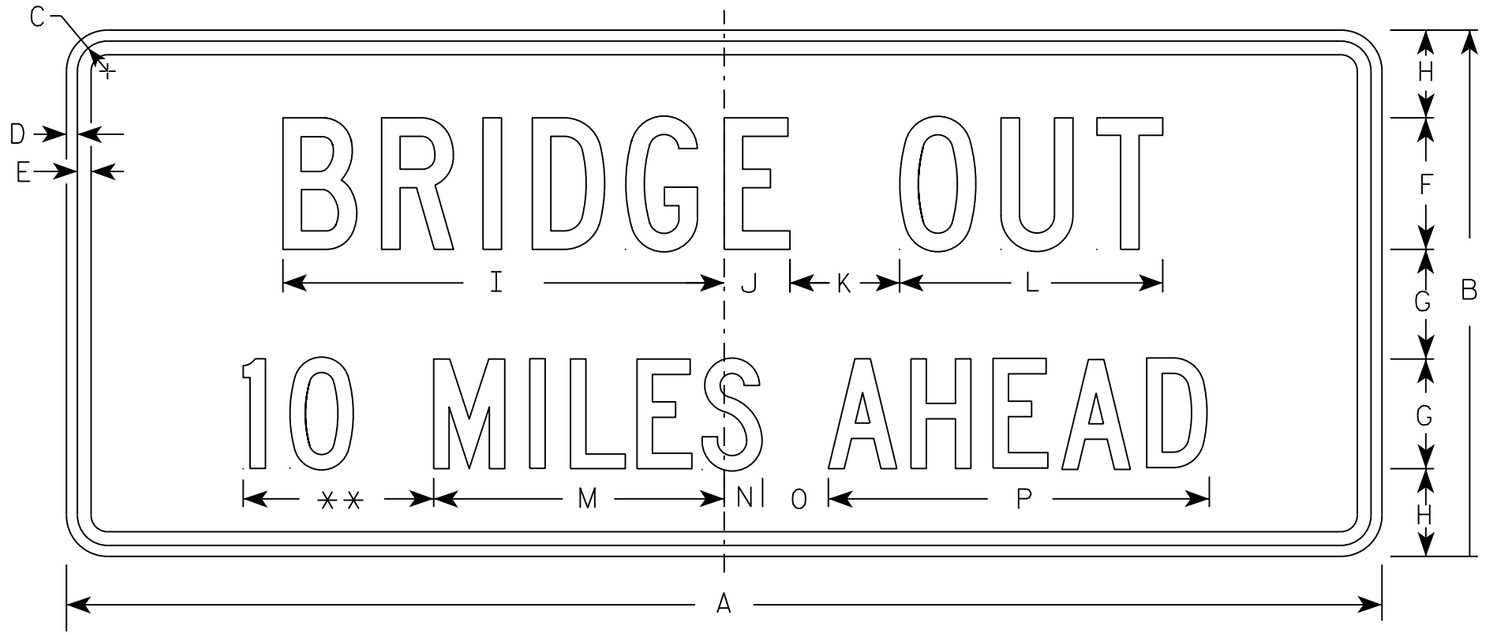
7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112B.DGN PLOT DATE : 01-APR-2011 14:23 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

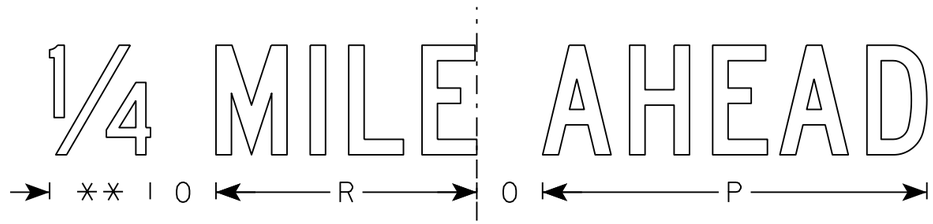
NOTES

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.



R11-3C

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 3/8	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE NO. R11-3C.3

PROJECT NO:

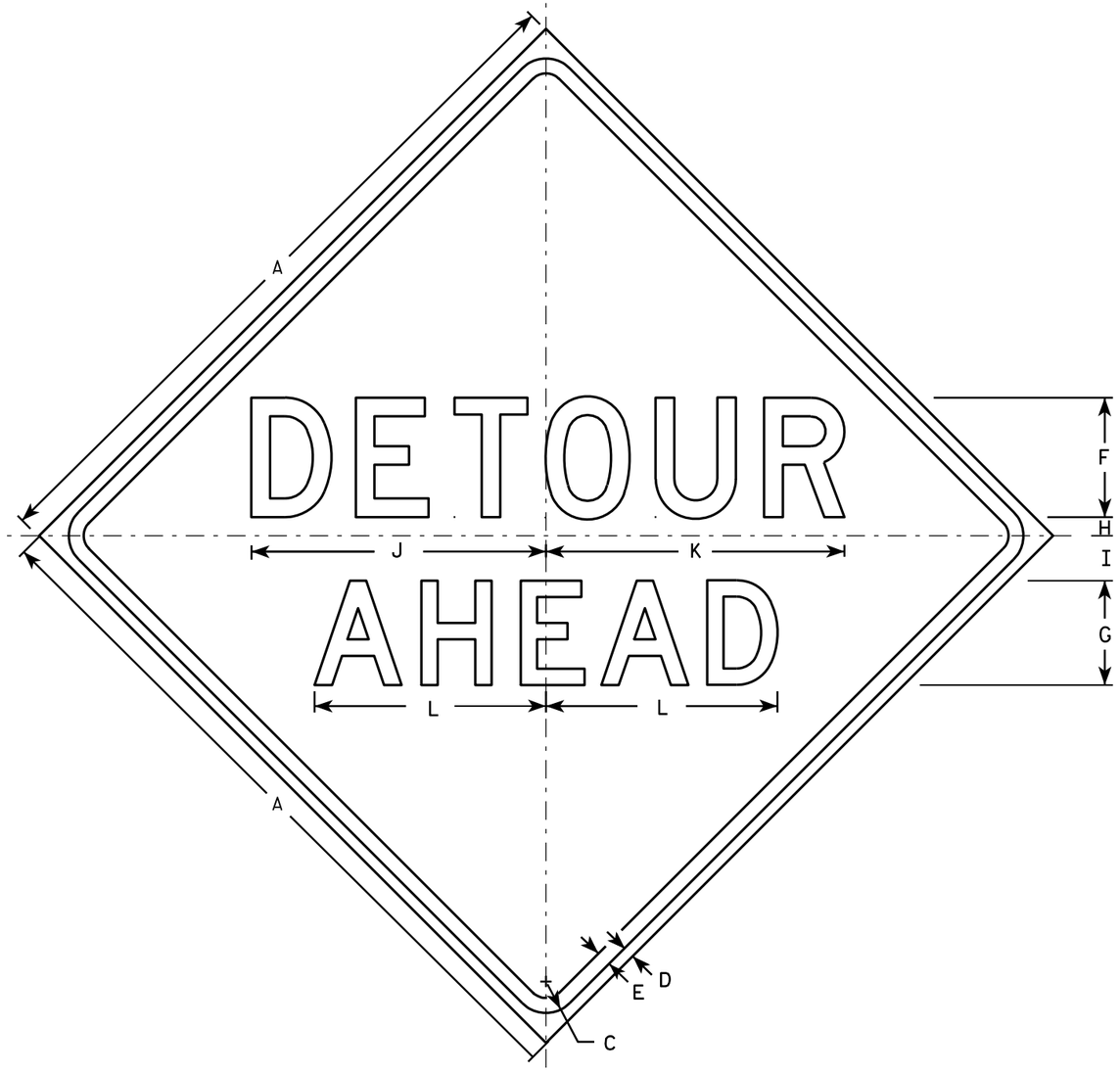
SHEET NO: 45 E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R113C.DGN PLOT DATE : 15-MAR-2017 15:33 PLOT BY : $$...plotuser...$$

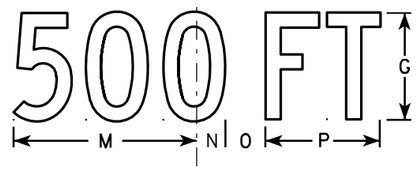
WISDOT/CADDS SHEET 42

7

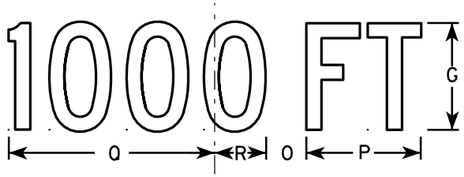
7



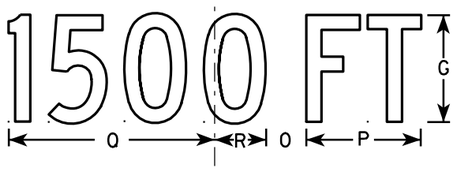
W20-2A



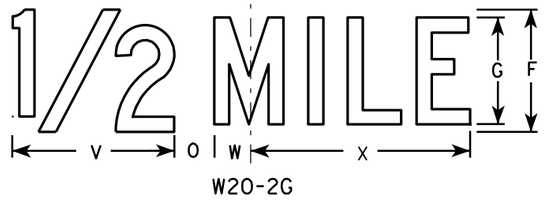
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

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.

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

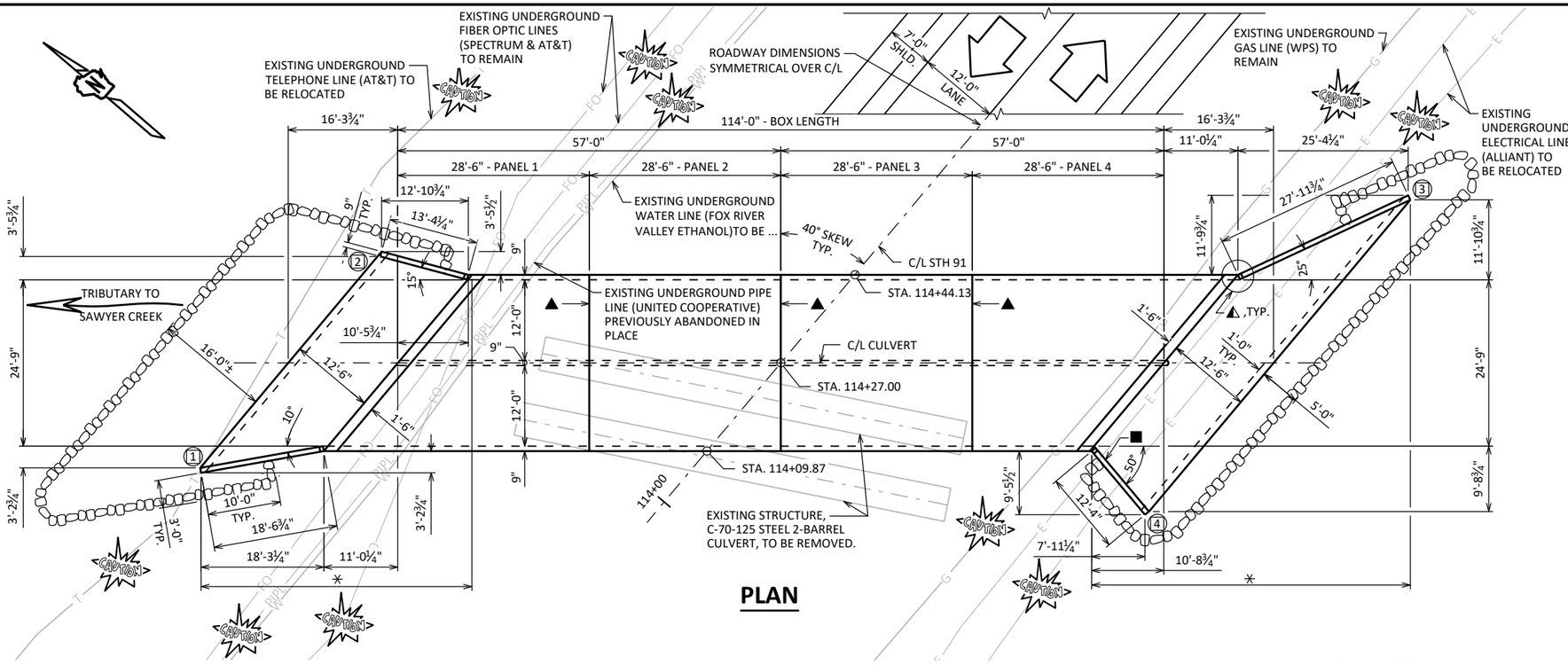
APPROVED Matthew R Rauch
for State Traffic Engineer

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

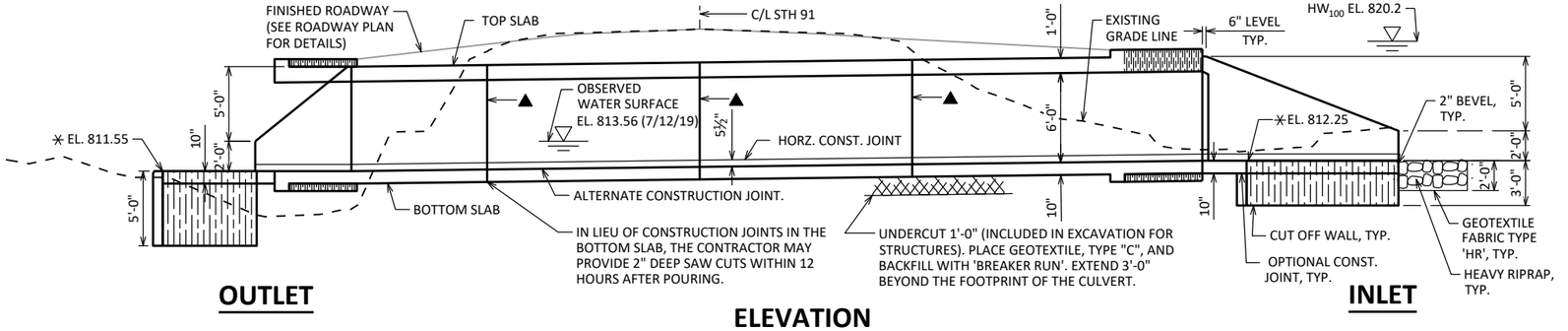
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 46	E

STATE PROJECT NUMBER

6540-11-71



PLAN



OUTLET

ELEVATION

INLET

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.04
OPERATING RATING: RF = 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 255 (KIPS)

EARTH LOAD:

DESIGNED FOR 1.0 TO 2.0 FT. OF FILL.

MATERIAL PROPERTIES:

CONCRETE MASONRY: f'_c = 3,500 PSI
BAR STEEL REINFORCEMENT: f_y = 60,000 PSI

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 1340 C.F.S.
V_{100}= 12.2 F.P.S.
HW_{100}= EL. 820.2
WATERWAY AREA = 120 SQ. FT.
DRAINAGE AREA = 4.0 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2-YEAR FREQUENCY:

Q_2= 320 C.F.S.
V_2= 3.3 F.P.S.
HW_2= EL. 816.2

TRAFFIC DATA

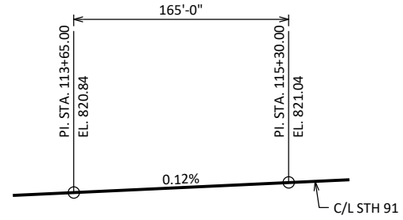
STH 91:

ADT = 8,000 (2045)
R.D.S. = 55 MPH

LIST OF DRAWINGS:

▲ SEE CORNER DETAILS ON SHEET 5
■ NAME PLATE LOCATION (SEE "DETAILS" SHEET)
⚹ BUILD APRON AND END OF BOX LEVEL
⬡ INDICATES WING NUMBER
▲ VERT. CONST. JOINT

NOTE: STRUCTURE BACKFILL REQUIRED BEHIND ALL WING WALLS.



PROFILE GRADE LINE - STH 91

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾"UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS B-70-326" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

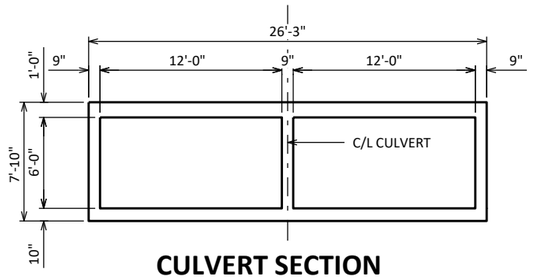
THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

PLACE 18" (MIN.) WIDE SHEET OF "RUBBERIZED MEMBRANE WATERPROOFING" ON TOP SLAB OVER ALL CONSTRUCTION JOINTS AND EXTEND DOWN TO 6" BELLOW TOP OF BOTTOM SLAB.

THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0220	REMOVING STRUCTURE C-70-125	EACH	1
206.2001	EXCAVATION FOR STRCUTURES CULVERTS B-70-326	EACH	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	1,744
311.0115	BREAKER RUN	CY	181
504.0100	CONCRETE MASONRY CULVERTS	CY	319
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	48,990
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,640
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	37
606.0300	RIPRAP HEAVY	CY	104
645.0105	GEOTEXTILE TYPE C	SY	574
645.0120	GEOTECTILE TYPE HR	SY	229
	NON-BID ITEMS		
	FILLER	SIZE	3/4"



CULVERT SECTION

STRUCTURE DESIGN CONTACTS:

VISTA SHAHRIARI (608) 266-7086
DOMINIQUE BECHLE (608) 261-8205

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

ACCEPTED DMB 02/06/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-70-326

STH 91 OVER TRIBUTARY TO SAWYER CREEK

COUNTY	TOWN
WINNEBAGO	ALGOMA

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
VS	SEH	VS	SEH

LAYOUT

SHEET 1 OF 6

SCALE = 20.00

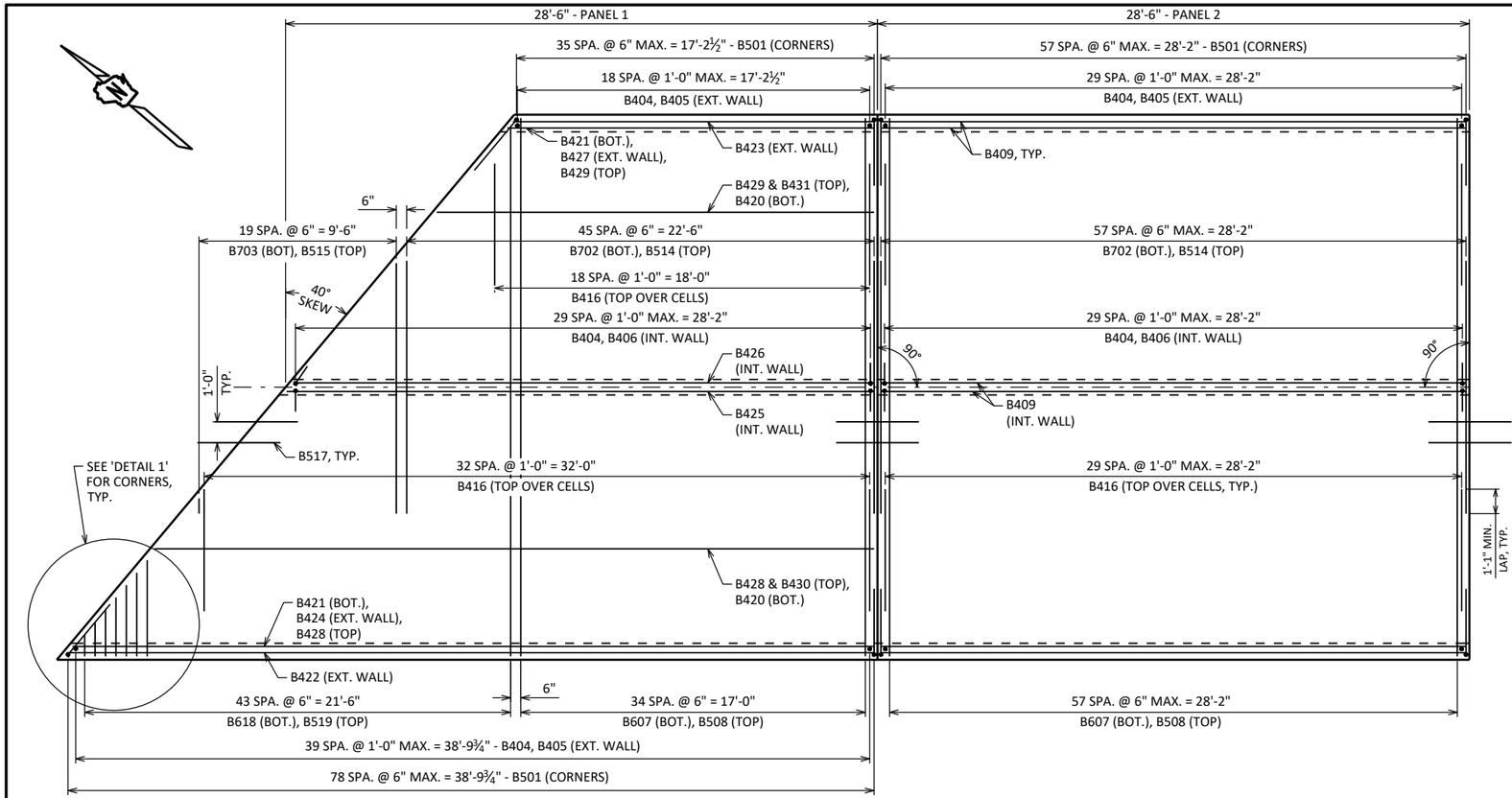
I.D. 6540-11-00A DATE: FEB. 2024

8

8

STATE PROJECT NUMBER

6540-11-71

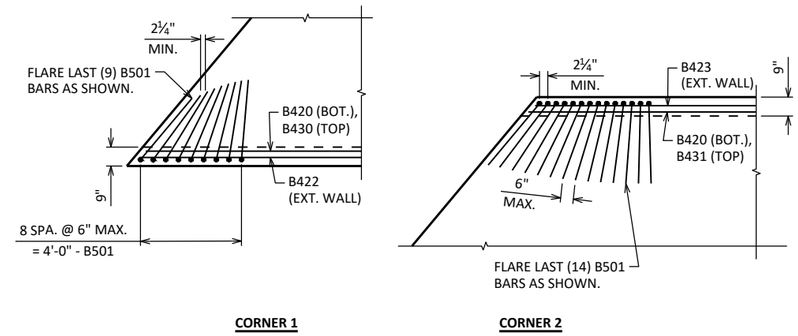


PLAN VIEW OF PANEL 1

PANEL 4 IS SIMILAR
APRON AND HEADER ARE NOT SHOWN FOR CLARITY

PLAN VIEW OF PANEL 2

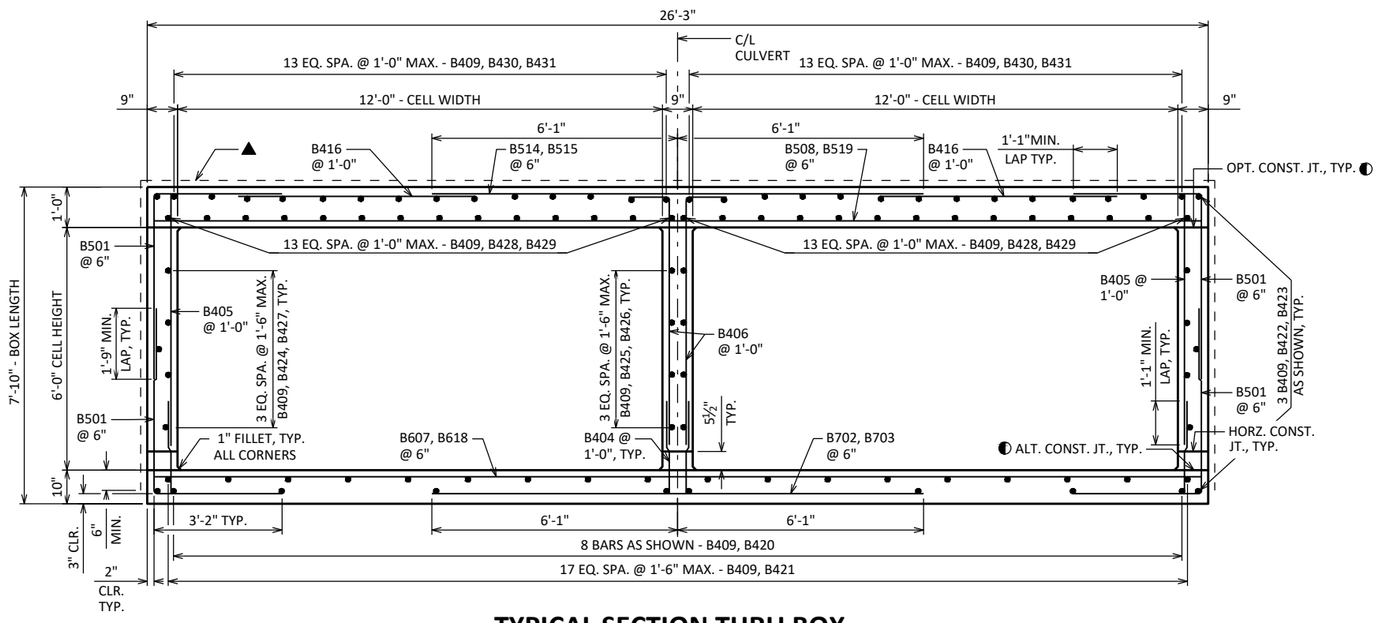
PANEL 3 IS SIMILAR



CORNER 1 **CORNER 2**

DETAIL 1

PANEL 1 SHOWN, PANEL 4 SIMILAR



TYPICAL SECTION THRU BOX

▲ 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS AND ACROSS TOP SLAB AT VERTICAL CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF THE BOTTOM SLAB.

◐ OMIT 1" FILLET IF OPTIONAL/ALT. CONST. JT. IS USED, TYP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-326

DRAWN BY VS | PLANS CK'D SEH

BOX DETAILS 1

SHEET 2
48

SCALE =

8

8

STATE PROJECT NUMBER

6540-11-71

BILL OF BARS

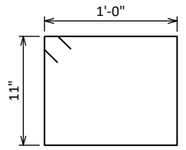
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501		924	7'-8"	X		CORNERS - VERT.
B702		208	12'-2"			BOTTOM SLAB - HORIZ. - TRANS.
B703		40	6'-5"		⚠	BOTTOM SLAB - HORIZ. - TRANS. - PANELS 1 & 4
B404		478	2'-4"			ALL WALLS - VERT. - DOWELS
B405		238	6'-3"			EXTERIOR WALLS - VERT.
B406		240	7'-1"	X		INTERIOR WALLS - VERT.
B607		186	25'-11"			BOTTOM SLAB - HORIZ. - TRANS.
B508		186	25'-11"			TOP SLAB - HORIZ. - TRANS.
B409		208	28'-2"			ALL SLABS AND WALLS - LONGIT. - PANELS 2 & 3
B910		24	33'-11"			ALL HEADERS - HORIZ.
B311		92	4'-3"	X		BOTTOM HEADERS - STIRRUP
B312		46	4'-10"	X		TOP INLET HEADER - STIRRUP
B313		46	5'-1"	X		TOP OUTLET HEADER - STIRRUP
B514		208	12'-2"			TOP SLAB - HORIZ. - TRANS.
B515		40	6'-5"		⚠	TOP SLAB - HORIZ. - TRANS. - PANELS 1 & 4
B416		224	5'-11"			TOP SLAB - HORIZ. - OVER CELLS
B517		264	4'-0"			VERT. CONST. JT. & APRON CONNECTION
B618		88	13'-3"		⚠	BOTTOM SLAB - HORIZ. - TRANS. - PANELS 1 & 4
B519		88	13'-3"		⚠	TOP SLAB - HORIZ. - TRANS. - PANELS 1 & 4
B420		16	28'-1"		⚠	BOTTOM SLAB - LONGIT. - PANELS 1 & 4
B421		36	28'-2"		⚠	BOTTOM SLAB - LONGIT. - PANELS 1 & 4
B422		6	38'-11"			EXT. WALL - LONGIT. - PANELS 1 & 4
B423		6	17'-3"			EXT. WALL - LONGIT. - PANELS 1 & 4
B424		8	38'-8"			EXT. WALL - LONGIT. - PANELS 1 & 4
B425		8	28'-3"			INT. WALL - LONGIT. - PANELS 1 & 4
B426		8	27'-11"			INT. WALL - LONGIT. - PANELS 1 & 4
B427		8	17'-6"			EXT. WALL - LONGIT. - PANELS 1 & 4
B428		28	33'-5"		⚠	TOP SLAB - LONGIT. - PANELS 1 & 4
B429		28	22'-9"		⚠	TOP SLAB - LONGIT. - PANELS 1 & 4
B430		28	33'-6"		⚠	TOP SLAB - LONGIT. - PANELS 1 & 4
B431		28	22'-9"		⚠	TOP SLAB - LONGIT. - PANELS 1 & 4

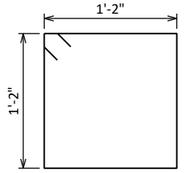
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

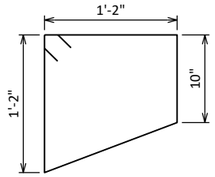
BAR MARK	NO. REQ'D	LENGTH
B703	2 SERIES OF 20	0'-9" TO 12'-1"
B515	2 SERIES OF 20	0'-9" TO 12'-1"
B618	2 SERIES OF 44	1'-0" TO 25'-5"
B519	2 SERIES OF 44	1'-0" TO 25'-5"
B420	2 SERIES OF 8	17'-7" TO 38'-7"
B421	2 SERIES OF 18	17'-7" TO 38'-8"
B428	2 SERIES OF 14	28'-2" TO 38'-8"
B429	2 SERIES OF 14	17'-6" TO 28'-0"
B430	2 SERIES OF 14	28'-4" TO 38'-7"
B431	2 SERIES OF 14	17'-7" TO 27'-10"



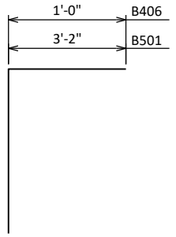
B311



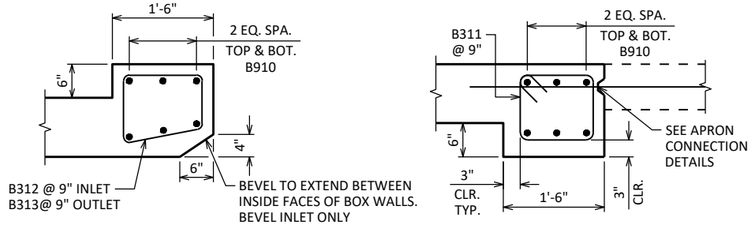
B313



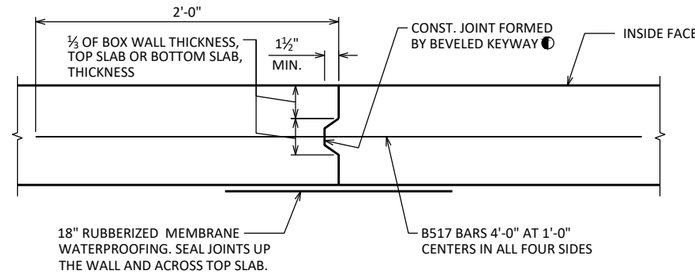
B312



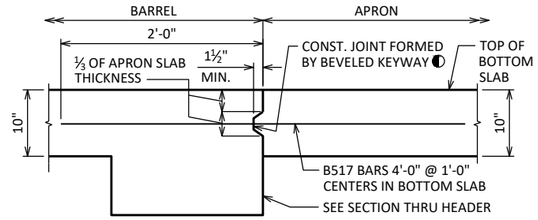
B501, B406



SECTION THRU HEADER



VERTICAL CONSTRUCTION JOINT



APRON CONNECTION DETAIL

◐ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING. #5 BARS 4'-0" AT 1'-0" CENTERS REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-326

DRAWN BY VS | PLANS CK'D SEH

BOX DETAILS 2

SHEET 3
49

SCALE =

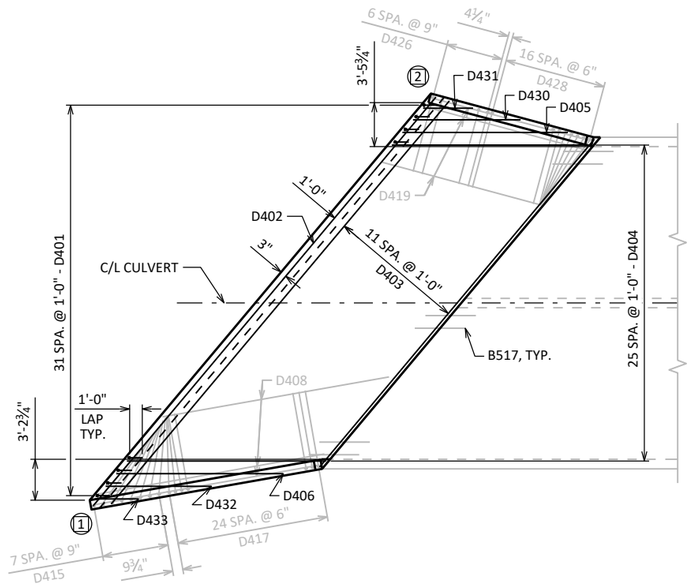
8

8

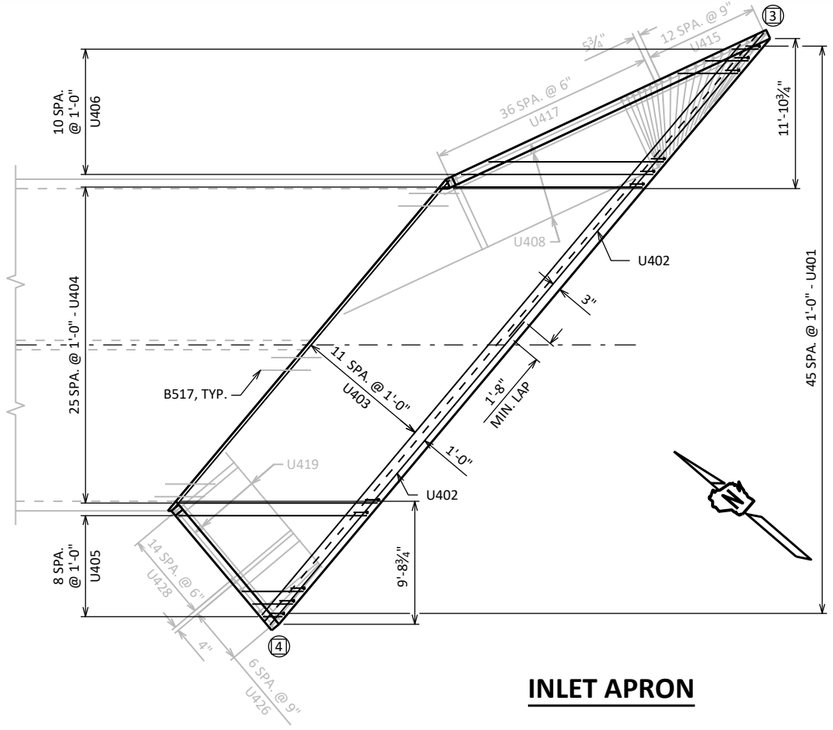
INDICATES WING NUMBER

STATE PROJECT NUMBER

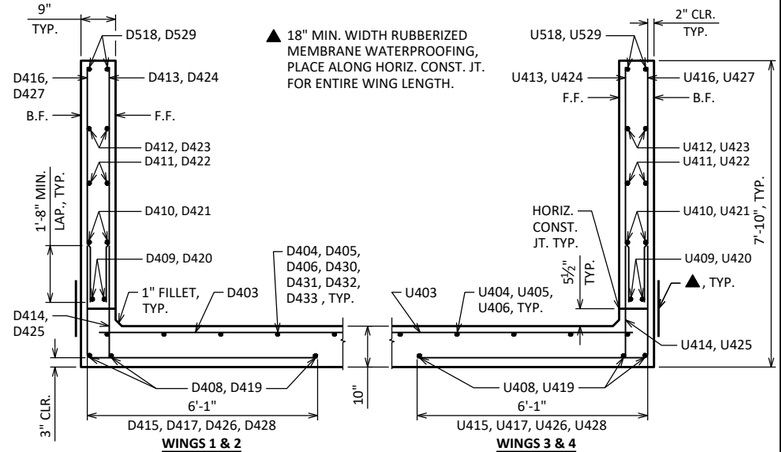
6540-11-71



OUTLET APRON



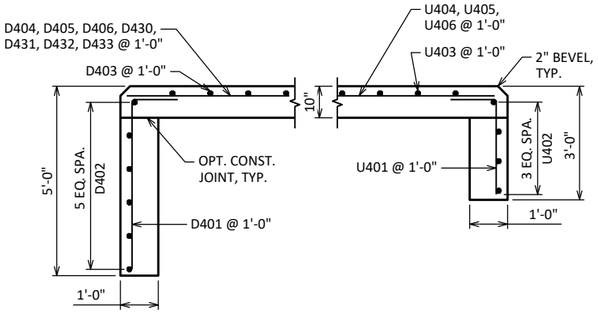
INLET APRON

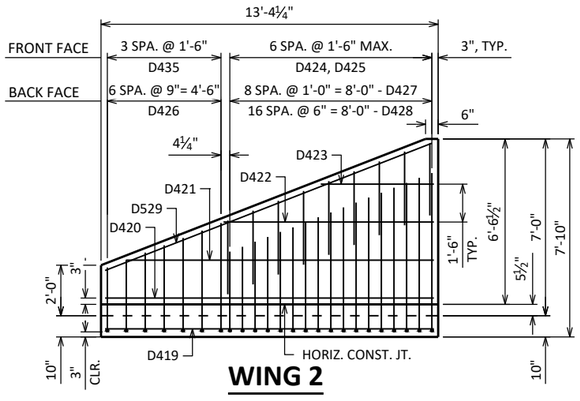


WINGS 1 & 2 | WINGS 3 & 4

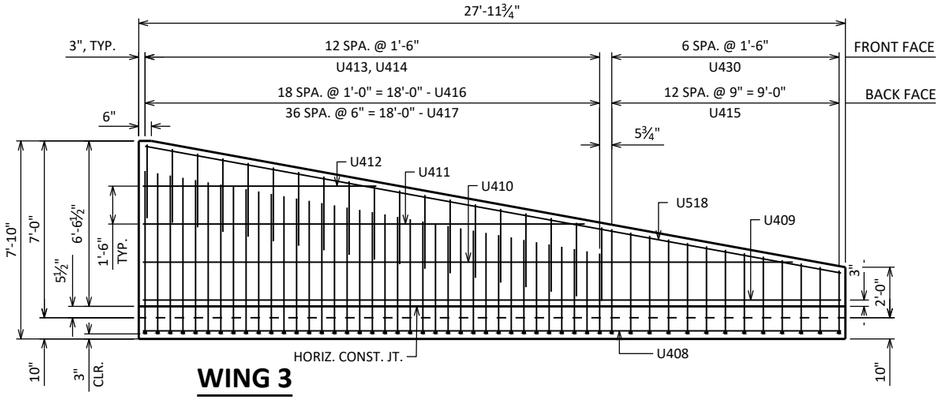
SECTION THRU WINGS

AT RIGHT ANGLES TO WING WALLS

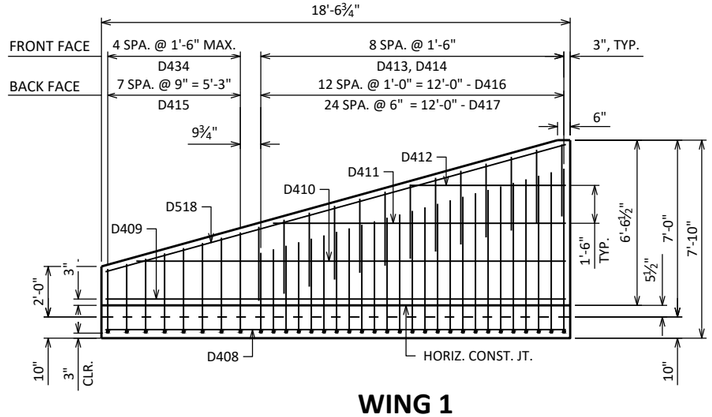




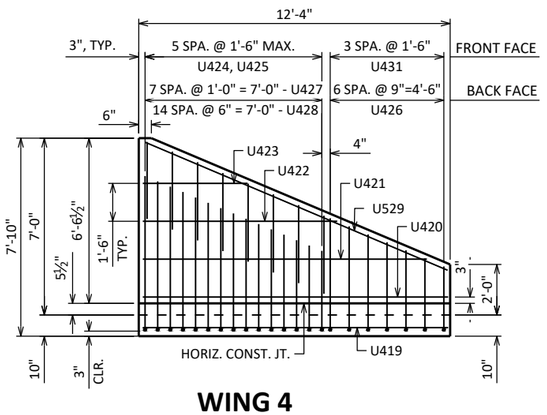
WING 2



WING 3



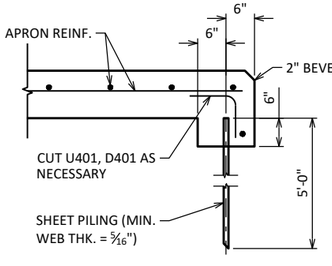
WING 1



WING 4

CUT-OFF WALLS

INLET



ALTERNATE CUT-OFF WALLS

THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-326

DRAWN BY VS | PLANS CK'D SEH

APRON DETAILS

SHEET 4
50

SCALE =

8

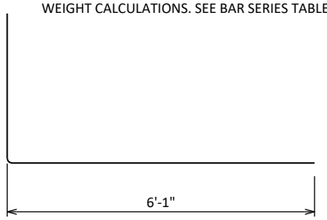
8

BILL OF BARS

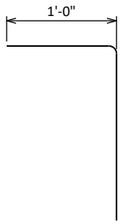
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
U401		46	3'-7"	X		INLET APRON - CUT OFF WALL - VERT.
U402		4	31'-4"			INLET APRON - CUT OFF WALL - HORIZ.
U403		12	46'-10"		⚠	INLET APRON - TRANS. - HORIZ.
U404		26	15'-10"			INLET APRON - LONGIT. - HORIZ.
U405		9	8'-3"		⚠	INLET APRON - LONGIT. - HORIZ.
U406		11	8'-8"		⚠	INLET APRON - LONGIT. - HORIZ.
NOT USED						
U408		3	27'-6"			WING 3 - HORIZ. - IN APRON
U409	X	2	27'-6"			WING 3 - HORIZ.
U410	X	2	25'-8"			WING 3 - HORIZ.
U411	X	2	17'-5"			WING 3 - HORIZ.
U412	X	2	9'-2"			WING 3 - HORIZ.
U413	X	13	4'-9"		⚠	WING 3 - VERT. - F.F.
U414	X	13	2'-9"			WING 3 - VERT. - F.F. - DOWEL
U415	X	13	9'-3"	X	⚠	WING 3 - VERT. - B.F.
U416	X	19	2'-11"			WING 3 - VERT. - B.F.
U417	X	37	10'-10"	X	⚠	WING 3 - VERT. - B.F.
U518	X	2	27'-11"			WING 3 - HORIZ. - TOP
U419		3	11'-10"			WING 4 - HORIZ. - IN APRON
U420	X	2	11'-10"			WING 4 - HORIZ.
U421	X	2	11'-2"			WING 4 - HORIZ.
U422	X	2	7'-7"			WING 4 - HORIZ.
U423	X	2	4'-1"			WING 4 - HORIZ.
U424	X	6	4'-11"		⚠	WING 4 - VERT. - F.F.
U425	X	6	2'-9"			WING 4 - VERT. - F.F. - DOWEL
U426	X	7	9'-6"	X	⚠	WING 4 - VERT. - B.F.
U427	X	8	3'-1"			WING 4 - VERT. - B.F.
U428	X	15	10'-8"	X	⚠	WING 4 - VERT. - B.F.
U529	X	2	12'-10"			WING 4 - HORIZ. - TOP
U430	X	7	3'-3"		⚠	WING 3 - VERT. - F.F.
U431	X	4	3'-6"		⚠	WING 4 - VERT. - F.F.
D401		32	5'-7"	X		OUTLET APRON - CUT OFF WALL - VERT.
D402		6	41'-11"			OUTLET APRON - CUT OFF WALL - HORIZ.
D403		12	37'-10"		⚠	OUTLET APRON - TRANS. - HORIZ.
D404		26	15'-9"			OUTLET APRON - LONGIT. - HORIZ.
D405		1	13'-1"			OUTLET APRON - LONGIT. - HORIZ.
D406		1	13'-2"			OUTLET APRON - LONGIT. - HORIZ.
NOT USED						
D408		3	18'-1"			WING 1 - HORIZ. - IN APRON
D409	X	2	18'-1"			WING 1 - HORIZ.
D410	X	2	16'-11"			WING 1 - HORIZ.
D411	X	2	11'-6"			WING 1 - HORIZ.
D412	X	2	6'-1"			WING 1 - HORIZ.
D413	X	9	4'-9"		⚠	WING 1 - VERT. - F.F.
D414	X	9	2'-9"			WING 1 - VERT. - F.F. - DOWEL
D415	X	8	9'-2"	X	⚠	WING 1 - VERT. - B.F.
D416	X	13	2'-11"			WING 1 - VERT. - B.F.
D417	X	25	10'-10"	X	⚠	WING 1 - VERT. - B.F.
D518	X	2	18'-9"			WING 1 - HORIZ. - TOP
D419		3	12'-11"			WING 2 - HORIZ. - IN APRON
D420	X	2	12'-11"			WING 2 - HORIZ.
D421	X	2	12'-1"			WING 2 - HORIZ.
D422	X	2	8'-3"			WING 2 - HORIZ.
D423	X	2	4'-5"			WING 2 - HORIZ.
D424	X	7	4'-10"		⚠	WING 2 - VERT. - F.F.
D425	X	7	2'-9"			WING 2 - VERT. - F.F. - DOWEL
D426	X	7	9'-5"	X	⚠	WING 2 - VERT. - B.F.
D427	X	9	2'-11"			WING 2 - VERT. - B.F.
D428	X	17	10'-9"	X	⚠	WING 2 - VERT. - B.F.
D529	X	2	13'-10"			WING 2 - HORIZ. - TOP
D430		1	8'-6"			OUTLET APRON - LONGIT. - HORIZ.
D431		1	3'-11"			OUTLET APRON - LONGIT. - HORIZ.
D432		1	8'-4"			OUTLET APRON - LONGIT. - HORIZ.
D433		1	3'-6"			OUTLET APRON - LONGIT. - HORIZ.
D434	X	5	3'-2"		⚠	WING 1 - VERT. - F.F.
D435	X	4	3'-5"		⚠	WING 2 - VERT. - F.F.

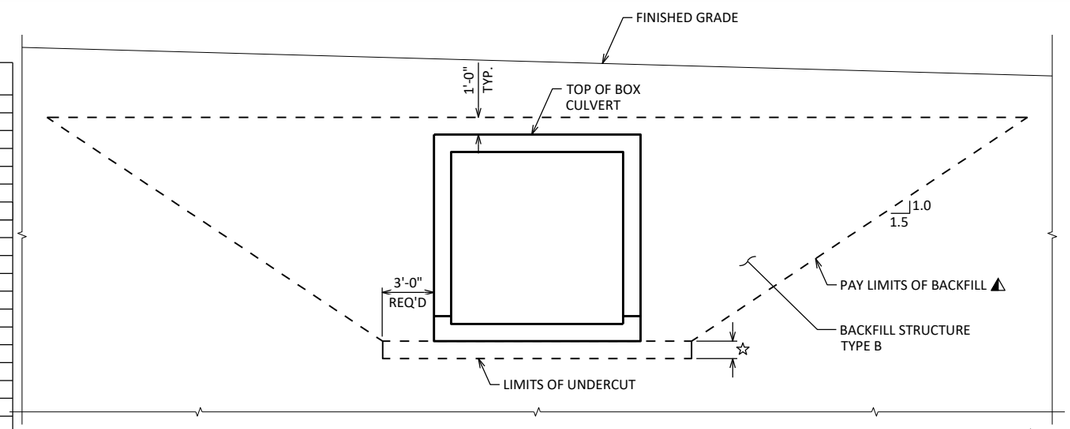
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



U415, U417, U426, U428
D415, D417, D426, D428



U401, D401



BAR SERIES TABLE

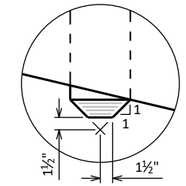
BAR MARK	NO. REQ'D	LENGTH
U403	1 SERIES OF 12	34'-0" TO 59'-7"
U405	1 SERIES OF 9	1'-6" TO 14'-11"
U406	1 SERIES OF 11	2'-2" TO 15'-2"
U413	1 SERIES OF 13	3'-1" TO 6'-4"
U415	1 SERIES OF 13	8'-5" TO 10'-1"
U417	1 SERIES OF 37	9'-2" TO 12'-5"
U424	1 SERIES OF 6	3'-5" TO 6'-4"
U426	1 SERIES OF 7	8'-6" TO 10'-5"
U428	1 SERIES OF 15	9'-2" TO 12'-1"
U430	1 SERIES OF 7	2'-5" TO 4'-1"
U431	1 SERIES OF 4	2'-6" TO 4'-5"
D403	1 SERIES OF 12	33'-10" TO 41'-10"
D413	1 SERIES OF 9	3'-1" TO 6'-4"
D415	1 SERIES OF 8	8'-5" TO 9'-11"
D417	1 SERIES OF 25	9'-2" TO 12'-6"
D424	1 SERIES OF 7	3'-3" TO 6'-4"
D426	1 SERIES OF 7	8'-6" TO 10'-3"
D428	1 SERIES OF 17	9'-2" TO 12'-3"
D434	1 SERIES OF 5	2'-5" TO 3'-11"
D435	1 SERIES OF 4	2'-6" TO 4'-3"

TYPICAL SECTION THRU BOX CULVERT

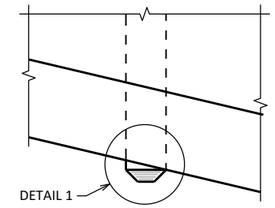
⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT 1'-0". EXCAVATION FOR UNDER CUT IS TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE FABRIC TYPE C" AND BACKFILL WITH "BREAKER RUN".

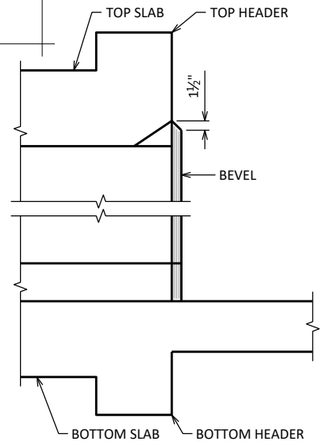
IN LIEU OF USING BREAKER RUN FOR THE BOX CONSTRUCTION PLATFORM, THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE BASE STABILITY WITH ANY SUBSTITUTED MATERIAL. THE REGION GEOTECHNICAL ENGINEER MAY BE CONTACTED TO DETERMINE IF "OTHER GRANULAR MATERIAL" IS ACCEPTABLE.



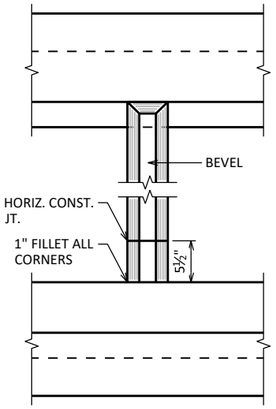
DETAIL 1



PLAN

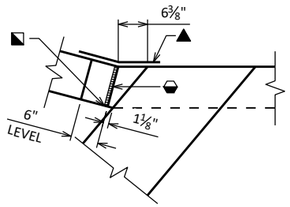


SECTION

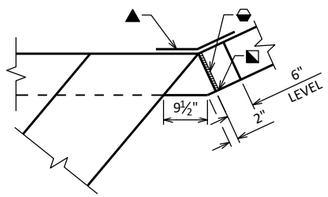


ELEVATION

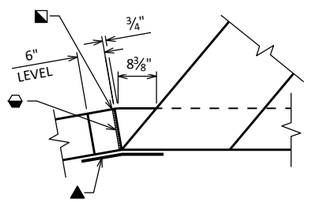
INLET NOSE DETAILS



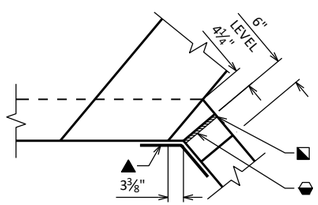
CORNER 2



CORNER 3



CORNER 1



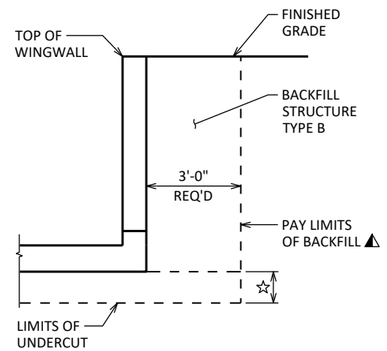
CORNER 4

◒ ¾" FILLER, TYP. EXTEND FROM HORIZ. CONST. JOINT TO TOP OF WING.

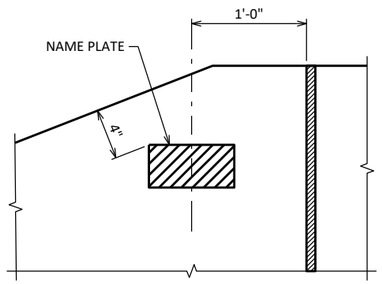
◪ 1" BEVEL, TYP.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL (FLUSH WITH FACE OF CONCRETE).

CORNER DETAILS



TYPICAL SECTION THRU BOX CULVERT WINGWALL



NAME PLATE DETAIL

WING 4

STATE PROJECT NUMBER

6540-11-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-326

DRAWN BY VS | PLANS CK'D SEH

DETAILS

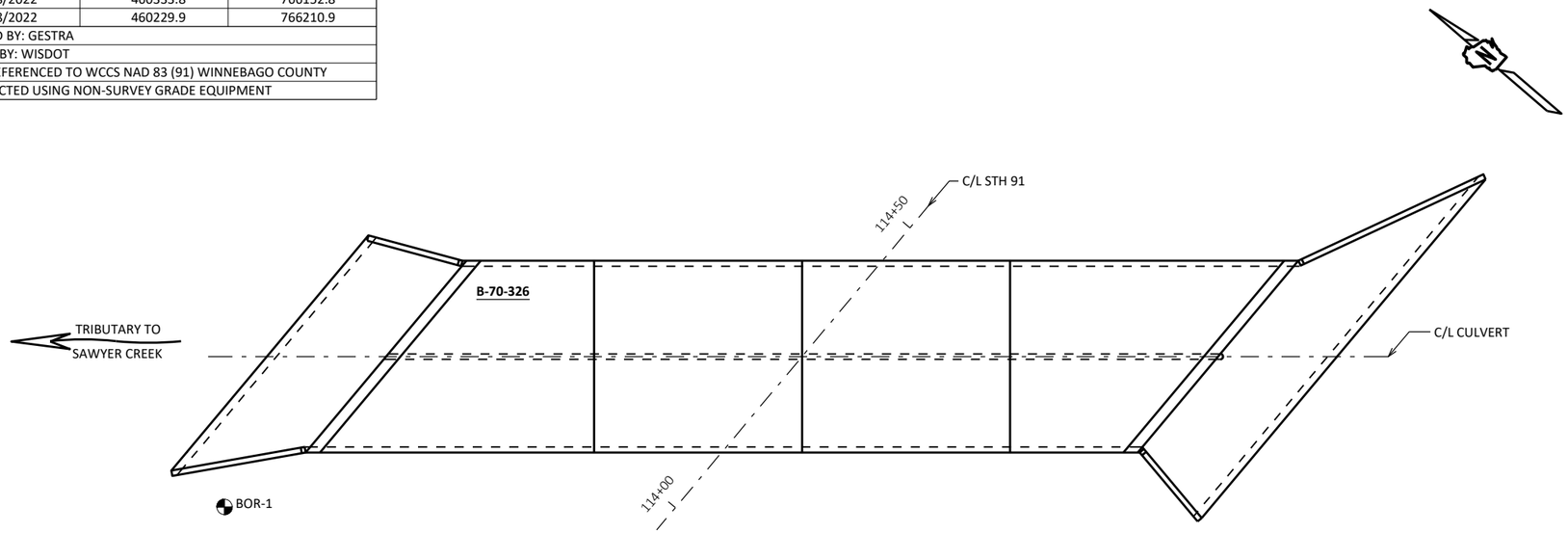
SHEET 5
51

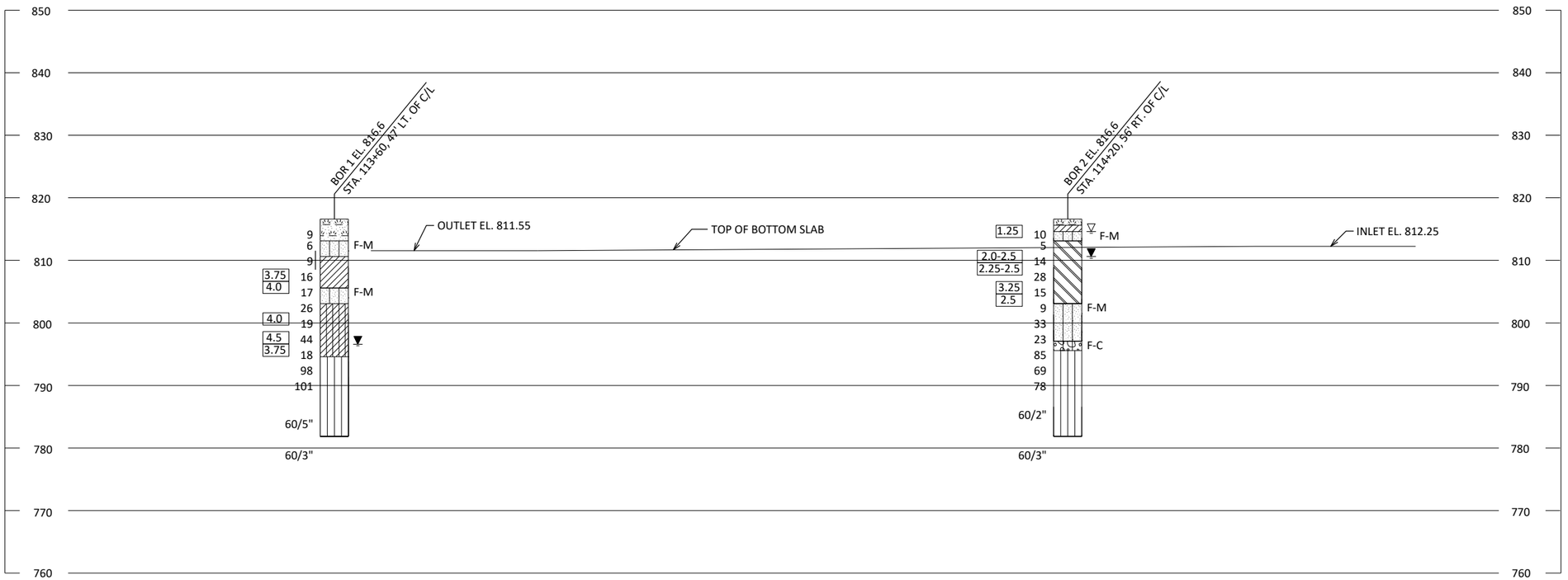
SCALE =

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	03/28/2022	460333.8	766152.8
2	03/28/2022	460229.9	766210.9
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83 (91) WINNEBAGO COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





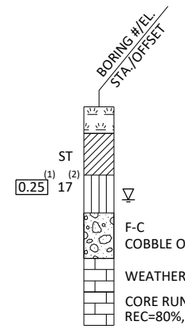
STATE PROJECT NUMBER

6540-11-71

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-326

DRAWN BY JJ/VS | PLANS CK'D SEH

SUBSURFACE EXPLORATION

SHEET 6
52

SCALE = 20.00

8

8

DIVISION 1 - STH 91

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						1.00	1.25	
				NOTE 1	NOTE 2	NOTE 1		NOTE 3
113+00	0.00	0.74	0.00	0	0	0	0	0
113+25	25.00	1.74	6.85	1	3	1	4	-3
113+50	25.00	74.75	35.51	35	20	36	29	7
113+65	15.00	107.27	61.89	51	27	87	63	25
113+75	10.00	88.66	73.98	36	25	123	94	29
114+00	25.00	141.09	178.51	106	117	229	240	-11
114+25	25.00	111.92	105.43	117	131	346	404	-58
114+50	25.00	128.27	101.78	111	96	457	524	-67
114+75	25.00	101.20	77.19	106	83	563	628	-65
115+00	25.00	86.40	47.84	87	58	650	700	-50
115+25	25.00	69.19	18.28	72	31	722	739	-17
115+30	5.00	65.43	9.54	12	3	734	743	-9
115+50	20.00	0.71	0.00	24	4	758	748	11
				758	598			

DIVISION 1 - TEMPORARY BYPASS CHANNEL (FOR INFORMATIONAL PURPOSES ONLY)

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						1.00	1.25	
				NOTE 1	NOTE 2	NOTE 1		NOTE 3
49+95	0.00	7.07	0.00	0	0	0	0	0
50+00	5.00	6.57	0.06	1	0	1	0	1
50+25	25.00	55.34	1.01	29	0	30	0	30
50+50	25.00	57.86	0.00	52	0	82	0	82
50+75	25.00	150.22	0.00	96	0	178	0	178
51+00	25.00	197.03	0.00	161	0	339	0	339
51+25	25.00	161.92	0.00	166	0	505	0	505
51+50	25.00	57.84	0.00	102	0	607	0	607
51+75	25.00	61.58	0.28	55	0	662	0	662
52+00	25.00	54.86	1.46	54	1	716	1	715
52+25	25.00	44.01	7.20	46	4	762	6	756
52+50	25.00	27.19	33.31	33	19	795	30	765
52+75	25.00	8.58	11.59	17	21	812	56	756
53+00	25.00	6.71	0.00	7	5	819	63	757
53+05	5.00	4.43	0.00	1	0	820	63	758
				812	45			

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE MATERIAL. ASSUMED TO BE REUSED AS FILL OUTISDE THE 1:1 SLOPE.
2 - FILL	VOLUME NEEDED TO BE FILLED.
3 - MASS ORDINATE	CUT - (FILL * 1.25)

9

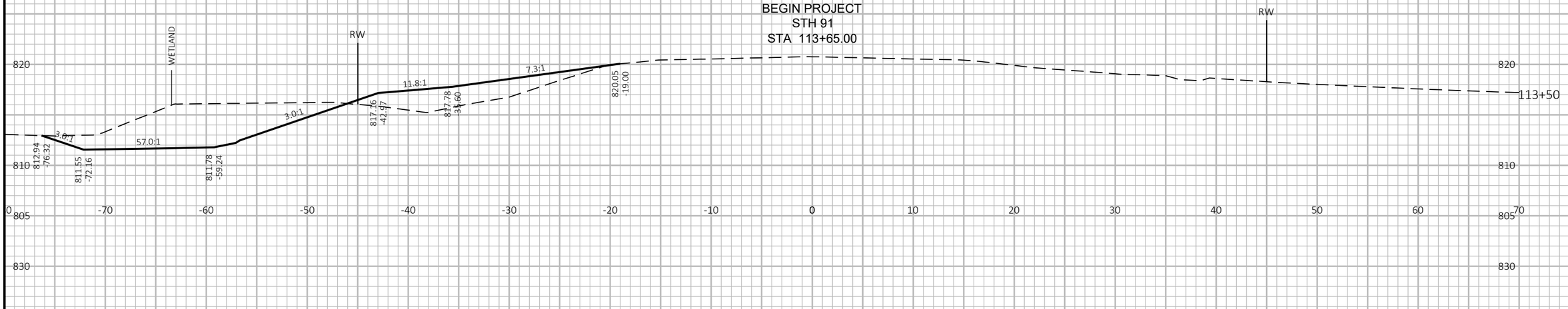
9

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	EARTHWORK DATA	SHEET 53	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-090101-EW.DWG
LAYOUT NAME - 01

PLOT DATE : 1/26/2024 9:29 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1" = 1'

BEGIN PROJECT
STH 91
STA 113+65.00



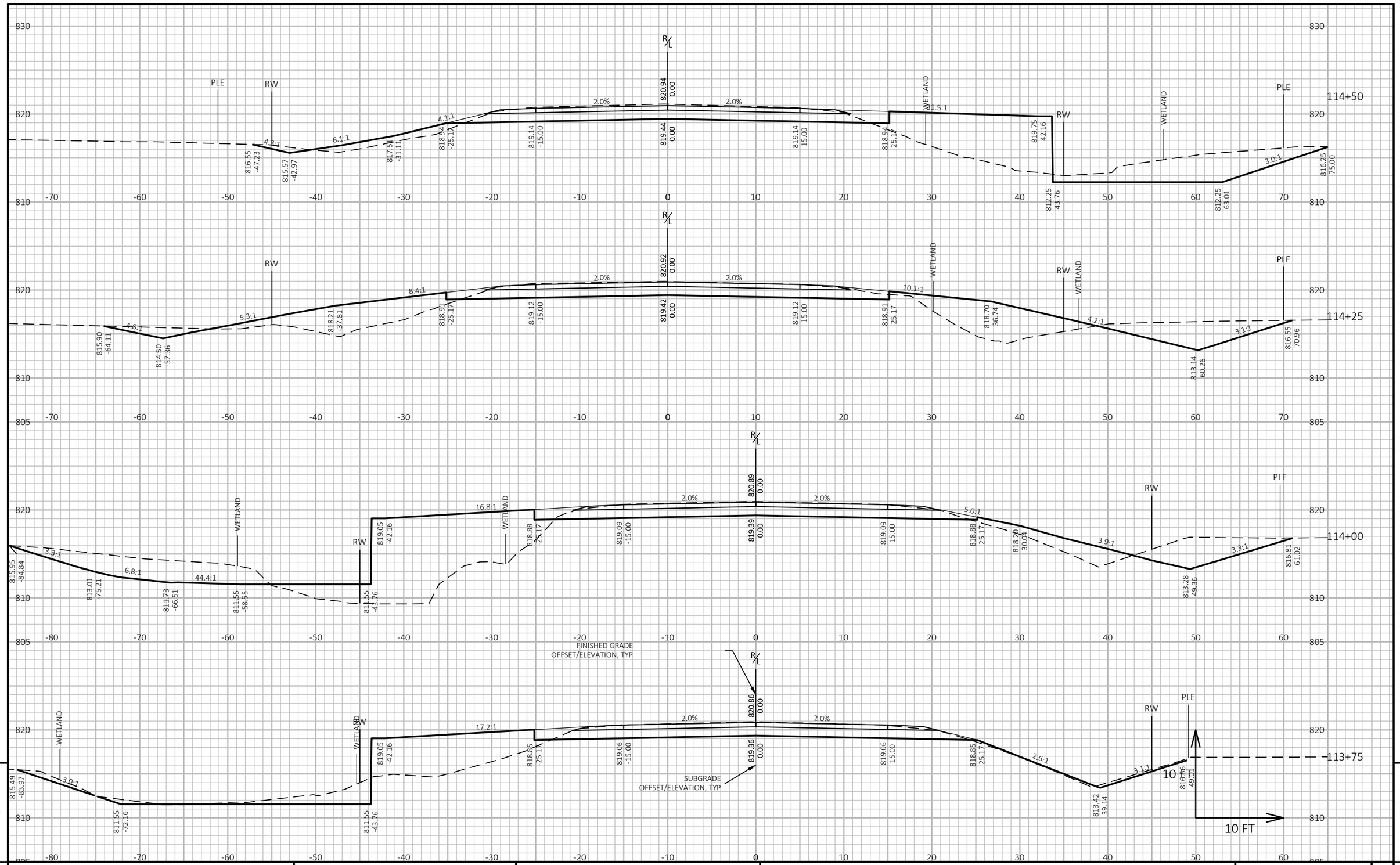
BEGIN CONSTRUCTION
STH 91
STA 113+00.00

9 9

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: STH 91	SHEET 54	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-090201-XS.DWG
LAYOUT NAME - 100-WIS 91

PLOT DATE : 1/26/2024 9:29 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



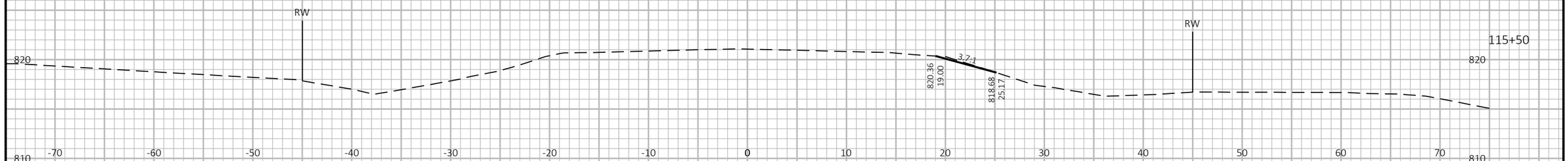
PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: STH 91	SHEET 55	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-090201-XS.DWG
LAYOUT NAME - 101-WIS 91

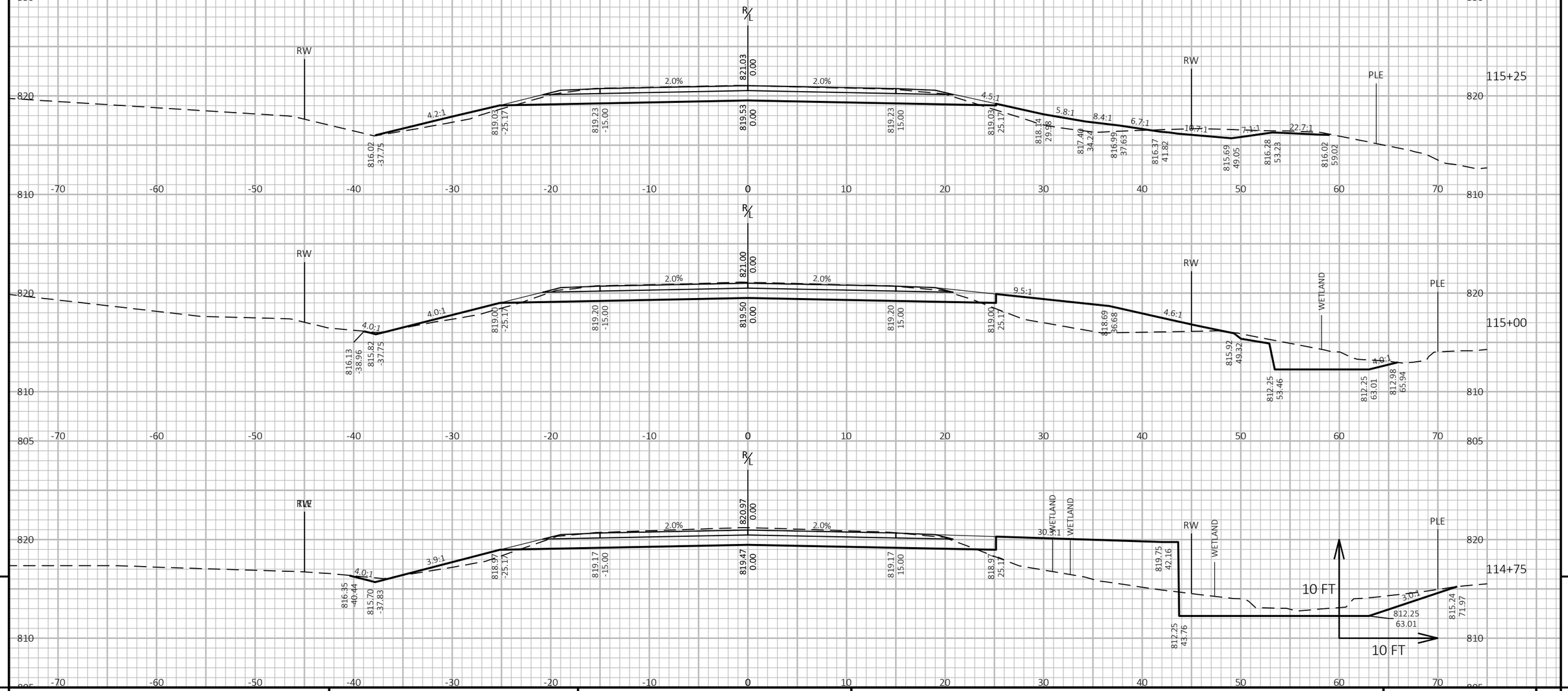
PLOT DATE : 1/26/2024 9:29 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STH 91
STA 115+50.00



END PROJECT
STH 91
STA 115+30.00

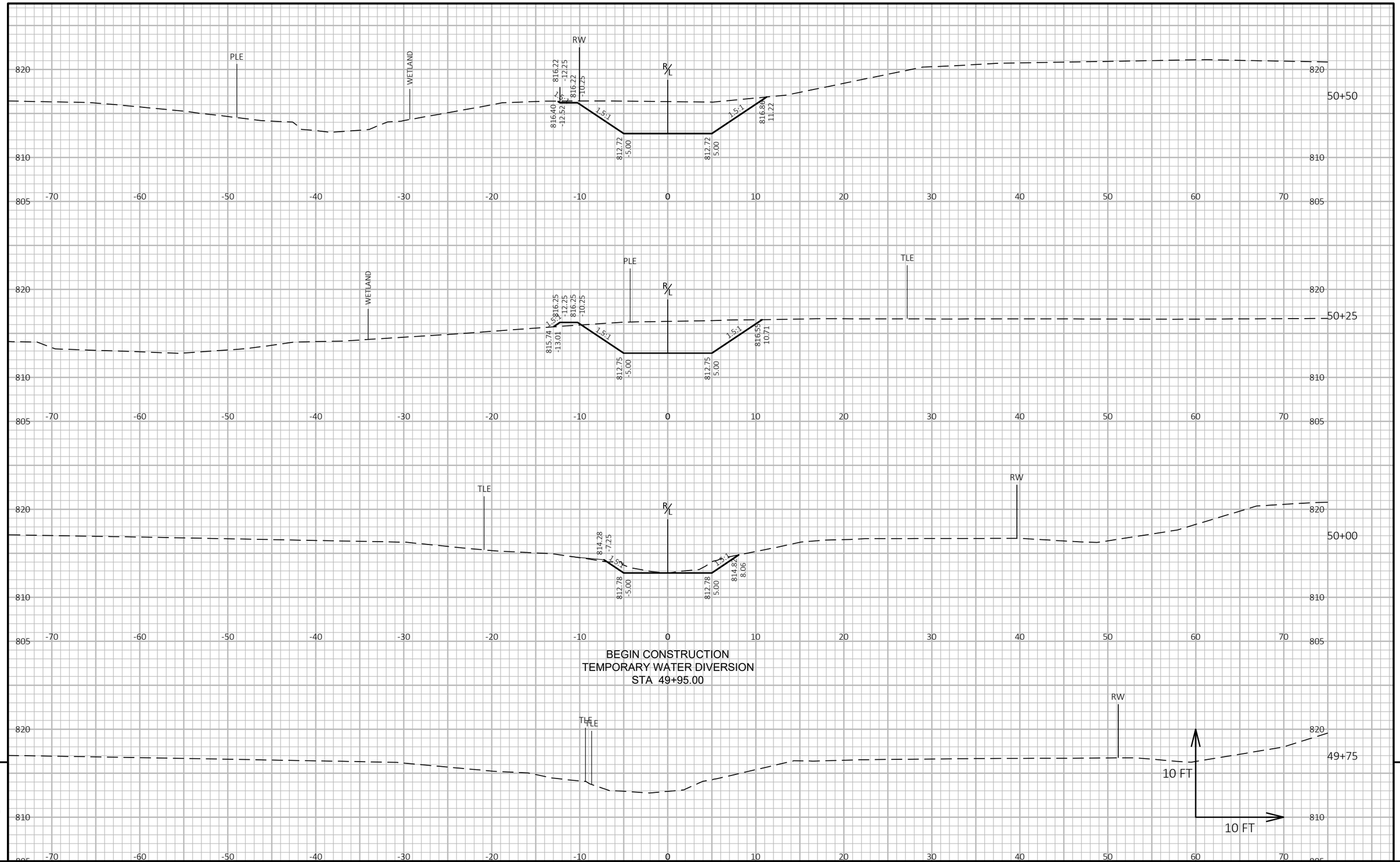


PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: STH 91	SHEET 56	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-090201-XS.DWG
LAYOUT NAME - 102-WIS 91

PLOT DATE : 1/26/2024 9:29 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: TEMPORARY WATER DIVERSION	SHEET 57	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-090202-XS.DWG
LAYOUT NAME - 100-Diversion

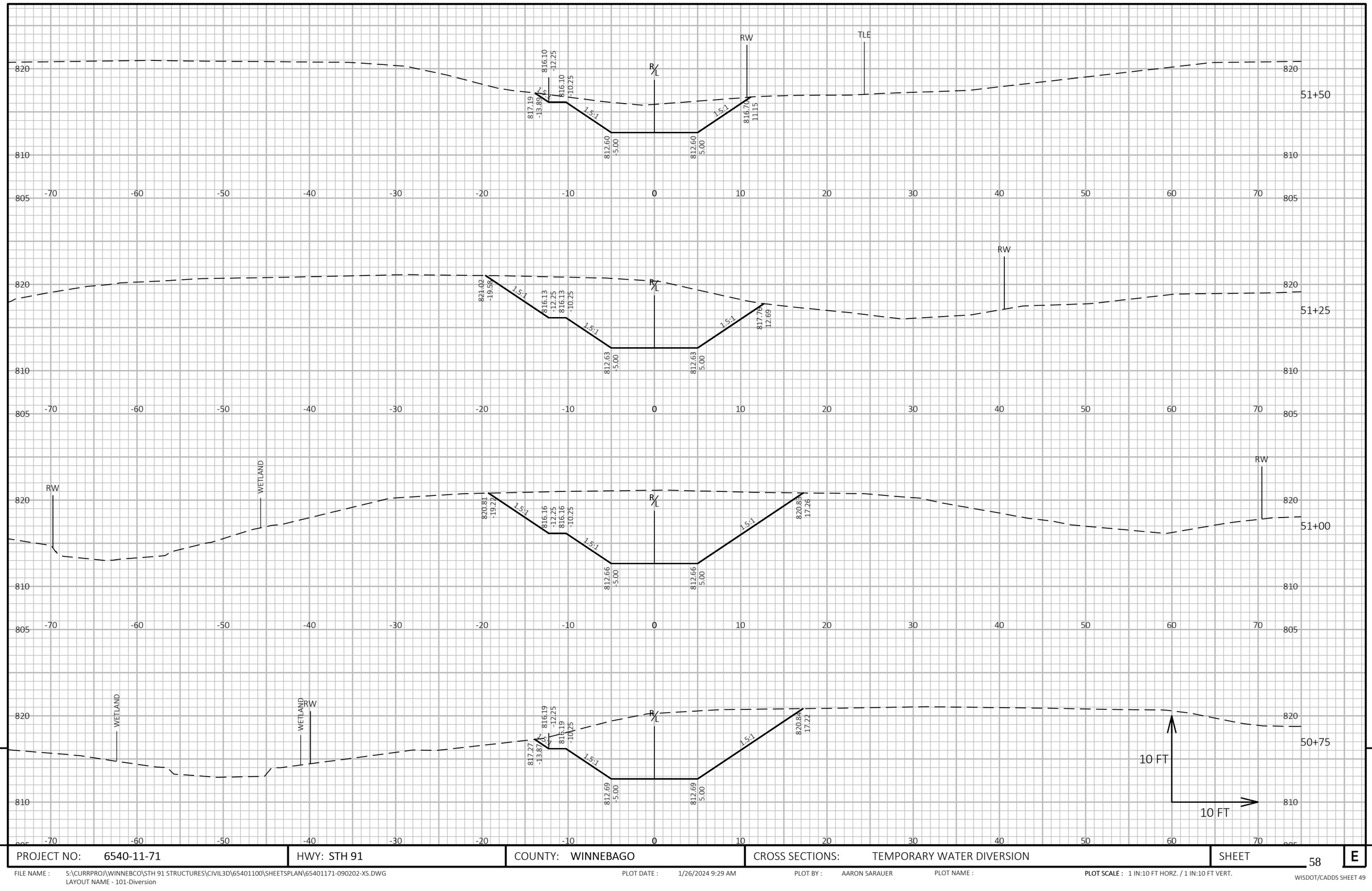
PLOT DATE : 1/26/2024 9:29 AM

PLOT BY : AARON SARAUER

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: TEMPORARY WATER DIVERSION	SHEET 58	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-090202-XS.DWG
LAYOUT NAME - 101-Diversion

PLOT DATE : 1/26/2024 9:29 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

9

9

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: TEMPORARY WATER DIVERSION	SHEET 59	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-090202-XS.DWG
LAYOUT NAME - 102-Diversion

PLOT DATE : 1/26/2024 9:29 AM

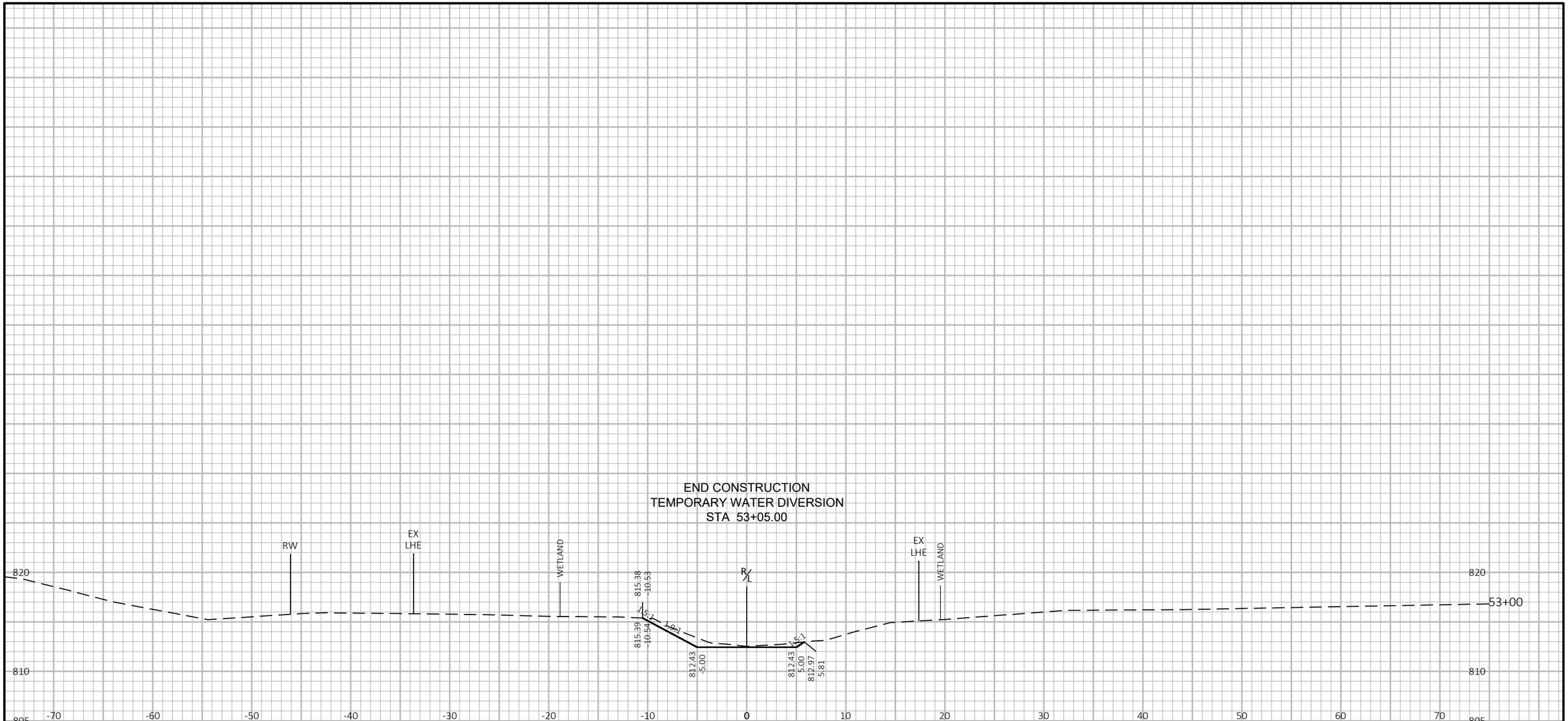
PLOT BY : AARON SARAUER

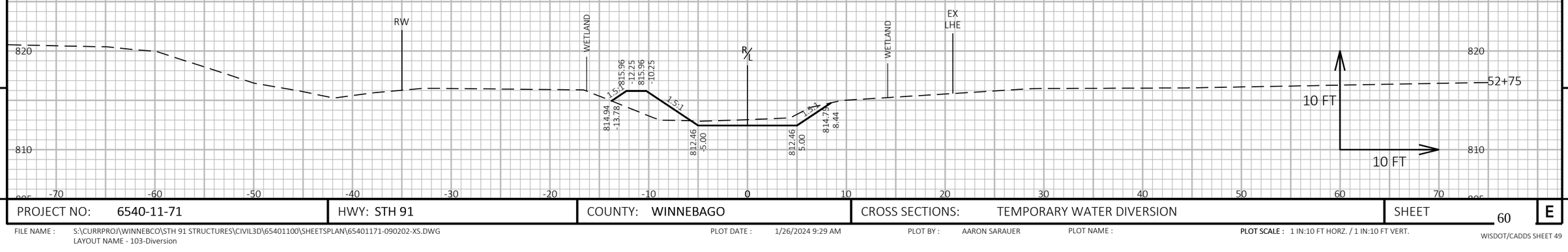
PLOT NAME :

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

WISDOT/CADDS SHEET 49

END CONSTRUCTION
TEMPORARY WATER DIVERSION
STA 53+05.00





9

9

PROJECT NO: 6540-11-71	HWY: STH 91	COUNTY: WINNEBAGO	CROSS SECTIONS: TEMPORARY WATER DIVERSION	SHEET 60	E

FILE NAME : S:\CURRPROJ\WINNEBCO\STH 91 STRUCTURES\CIVIL3D\65401100\SHEETSPLAN\65401171-090202-XS.DWG
LAYOUT NAME - 103-Diversion

PLOT DATE : 1/26/2024 9:29 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov