GRE

FEBRURAY 2026

PROJECT ID: 9249-04-70

WITH: N/A

COUNTY: MARINETTE

29

ORDER OF SHEETS

TOTAL SHEETS = 90

N

DESIGN DESIGNATION

A.A.D.T.	(2022)	=	560
A.A.D.T.	(2046)	=	700
D.H.V.		=	50/50
D.D.		=	N/A
T.		=	5.00%
DESIGN SPEED		=	60 MPH
ESALS		=	N/A

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'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

T ATHLESTANE, CTH C

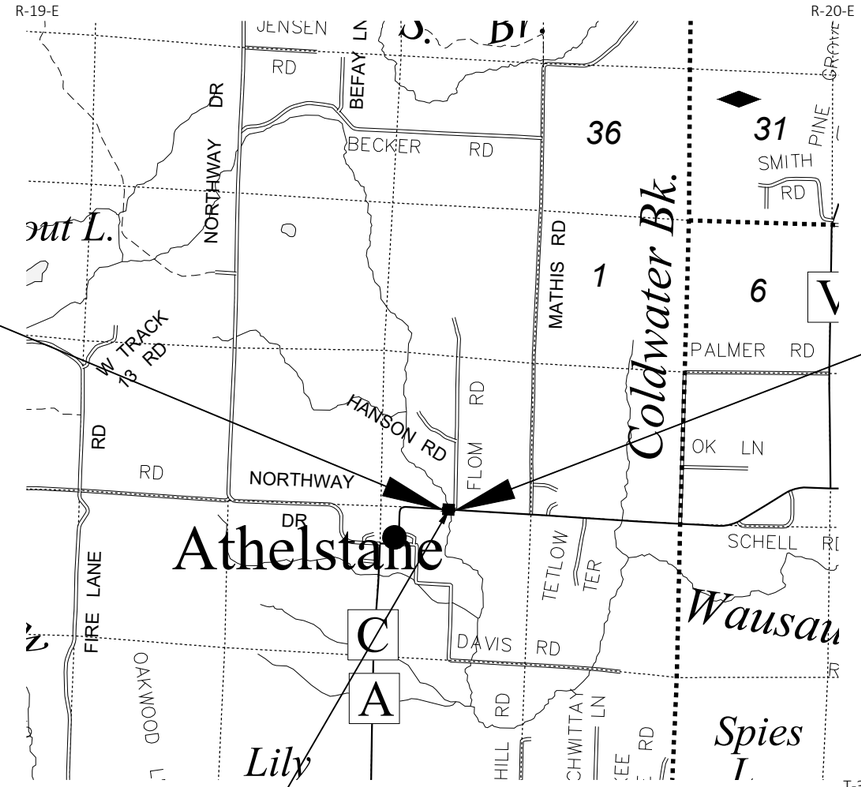
WAUSAUKEE RIVER BRIDGE

CTH C

MARINETTE COUNTY

STATE PROJECT NUMBER
9249-04-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9249-04-70	WISC2026192	1



BEGIN PROJECT
STA 11+06.98
Y=268351.616
X=685779.126

END PROJECT
STA 15+41.49
Y=268327.344
X=686212.956

STRUCTURE B-38-0153
STA 13+31 - STA 13+66

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.075 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MARINETTE COUNTY, 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 HMOD PID8754.

ACCEPTED FOR

Marinette County

Date 10/21/25

(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

kapur

WISCONSIN
NICHOLAS A. BOBINSKI
E-42700-6
BROOKFIELD, WI
PROFESSIONAL ENGINEER

DATE: 10/21/25

(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KAPUR & ASSOCIATES, INC.
Designer	KAPUR & ASSOCIATES, INC.
Project Manager	ERIK BRATTLUND
Regional Examiner	
Regional Supervisor	KIMBERLY SLEZAK

APPROVED FOR THE DEPARTMENT

DATE: 10/23/2025

(Signature)

E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\SHEETS\010101_TI.DWG

PLOT DATE : 10/21/2025 8:29 AM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

GENERAL NOTES

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

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXISTING UTILITIES ARE SHOWN FROM FIELD LOCATES AND AS-BUILT PLANS PROVIDED BY THE UTILITY. 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 LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE PLACED WITH 4-INCH TYPICAL DEPTH.

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND ENGINEER IN THE FIELD.

ALL PRIVATE EXISTING UTILITIES ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED.

THE EXACT LOCATION OF EXCAVATION BELOW SUBGRADE (EBS) AND MARSH EXCAVATION WILL BE DETERMINED BY THE ENGINEER. BACKFILL EBS AND MARSH EXCAVATION AREAS WITH GRANULAR BACKFILL GRADE 2.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER ITEM "TRAFFIC CONTROL COVERING SIGNS TYPE II."

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

CONTRACTOR SHALL CONTACT PROJECT ENGINEER AND BAY-LAKE REGIONAL PLANNING COMMISSION AT LEAST TWO WEEKS PRIOR TO CONDUCTING WORK NEAR ANY PUBLIC SURVEY MONUMENT

A SAWED JOINT IS REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

LOCATIONS OF SIGNS SHOWN IN THE PLANS ARE APPROXIMATE AND THE FINAL LOCATION OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER.

HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS:

5-INCH HMA PAVEMENT
2" UPPER LAYER 4 MT 58-28 S
3" LOWER LAYER 3 MT 58-28 S

STANDARD ABBREVIATIONS

AEW	APRON ENDWALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCHMARK
BTWN	BETWEEN
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPERELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT

2

2

UTILITY CONTACTS

BRIGHTSPEED
COMMUNICATION LINE
CRAIG OBERG
N18670 ALGONQUIN TRAIL
PEMBINE, WI 54156
PHONE: (920) 241-5151
EMAIL: CRAIG.OBERG@BRIGHTSPEED.COM

WISCONSIN PUBLIC SERVICE
ELECTRICITY
SCOTT ZELLNER - REGIONAL DESIGN SPECIALIST
2850 S ASHLAND AVE
GREEN BAY, WI 54304
PHONE: (920) 617-5068
CELL: (920) 680-2188
EMAIL: SCOTT.ZELLNER@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE GENERAL MAILBOX
ELECTRICITY
PO BOX 19001
GREEN BAY, WI 54307-9001
PHONE: (920) 433-1513
EMAIL: UTILITIESRELOCATION@WISCONSINPUBLICSERVICE.COM

SPECTRUM
COMMUNICATION LINE
DAVE YOPPS
1320 N. DR. MARTIN LUTHER KING JR. DR
MILWAUKEE, WI 53212
PHONE: (414) 277-4281
EMAIL: CHTR_WI_CONST@CHARTER.COM

SPECTRUM
COMMUNICATION LINE
DAVE BERGSTROM
2580 W MASON ST
GREEN BAY, WI 54303
PHONE: (920) 831-9174
CELL: (920) 378-3648
EMAIL: DAVE.BERGSTROM@CHARTER.COM

OTHER CONTACTS

BAY LAKE REGIONAL PLANNING COMMISSION
1861 NIMITZ DR
DE PERE, WI 54115
PHONE: (920) 448-2820

DNR LIAISON
JAMES DOPERALSKI JR.
DNR NORTHEAST REGIONAL HEADQUARTERS
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
PHONE: (920) 412-0165
EMAIL: JAMES.DOPERALSKI@WISCONSIN.GOV

KAPUR & ASSOCIATES, INC.
KURT A. FARRENKOPF, PE
7711 N. PORT WASHINGTON ROAD
MILWAUKEE, WI 53217
PHONE: (414) 751-7226
EMAIL: KFARRENKOPF@KAPURINC.COM

MARINETTE COUNTY
ERIC BURMEISTER
COUNTY HIGHWAY COMMISSIONER
501 PINE STREET
PESHTIGO, WI 54157
PHONE: (715) 732-7568
EMAIL:
ERIC.BURMEISTER@MARINETTECOUNTYWI.GOV

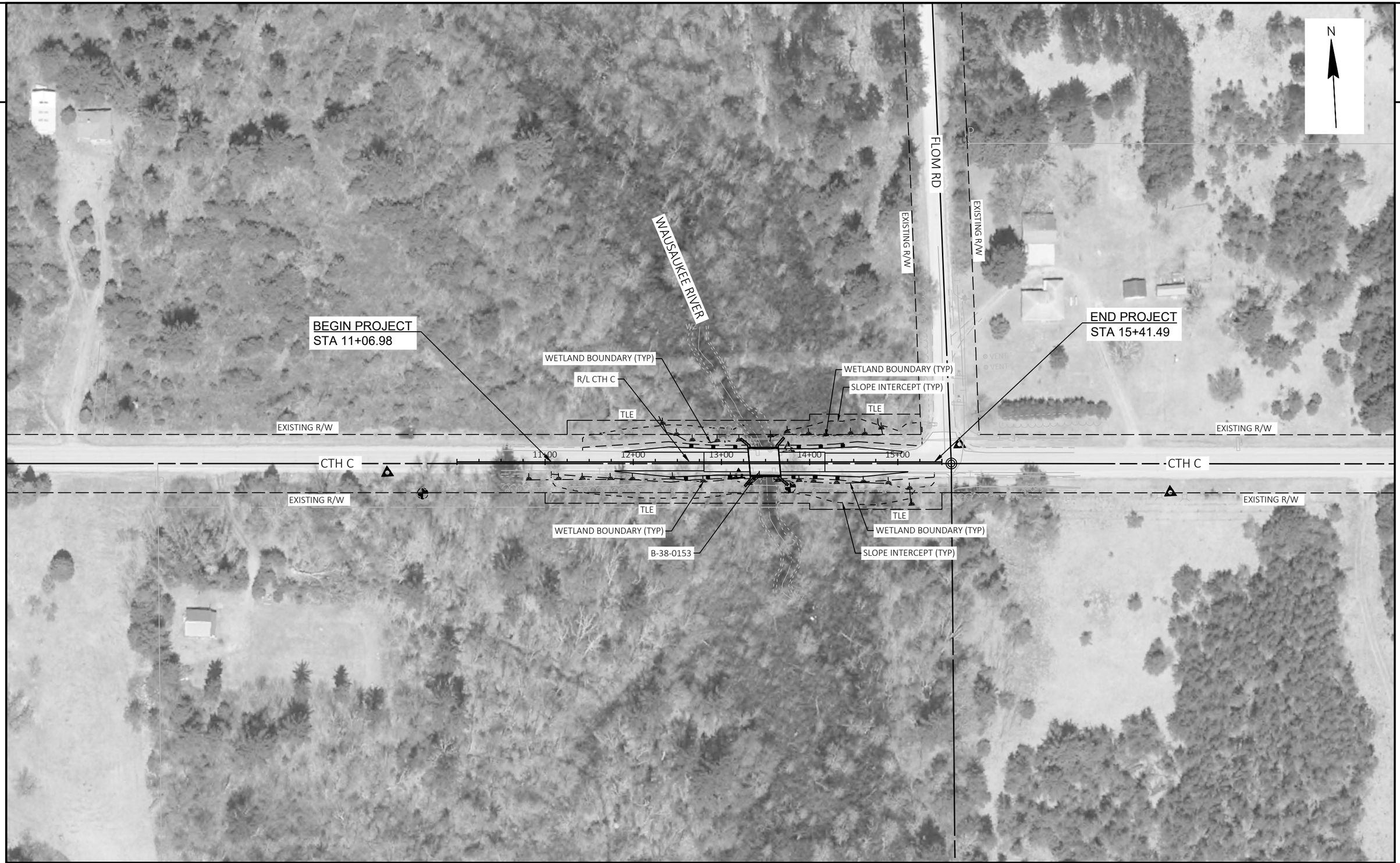
NE REGION DESIGN PROJECT MANAGER
ERIK BRATTLUND, PE
944 VANDERPERREN WAY
GREEN BAY, WI 54303
PHONE: (920) 366-8034
CELL: (920) 492-4144
EMAIL: ERIK.BRATTLUND@DOT.WI.GOV

ORDER OF SECTION 2 SHEETS

2

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

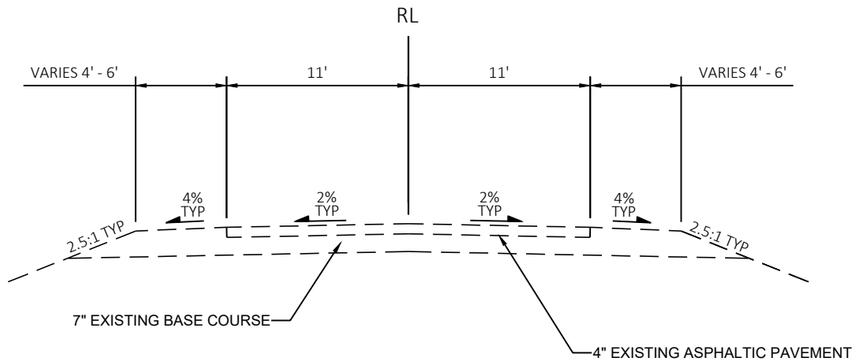
2



PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	PROJECT OVERVIEW	SHEET 4	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\SHEETS\020201_PO.DWG
LAYOUT NAME - PO1
PLOT DATE : 10/24/2025 10:17 AM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



EXISTING TYPICAL SECTION CTH C

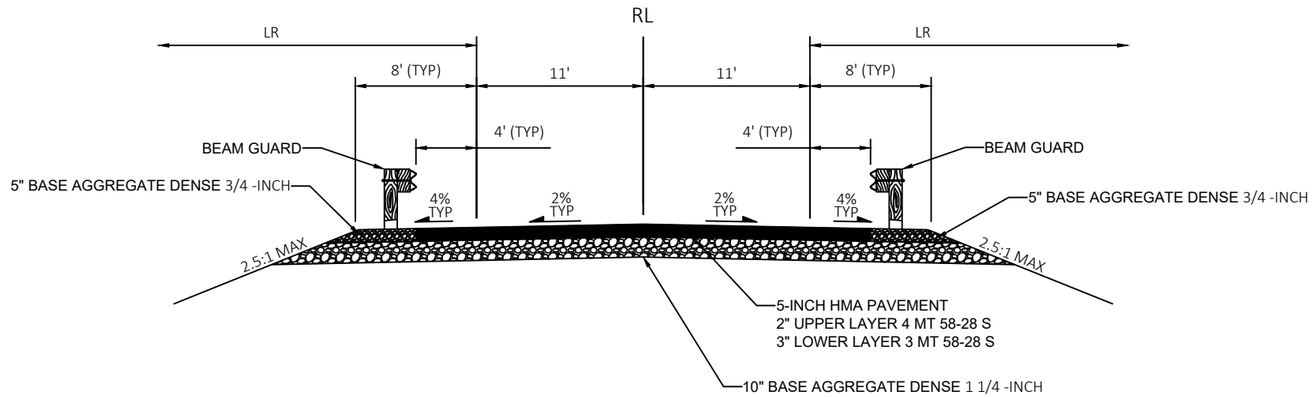
STA 11+07 - STA 15+41

PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	EXISTING TYPICAL SECTIONS	SHEET 5	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\SHEETS\020301-TS.DWG
LAYOUT NAME - 01

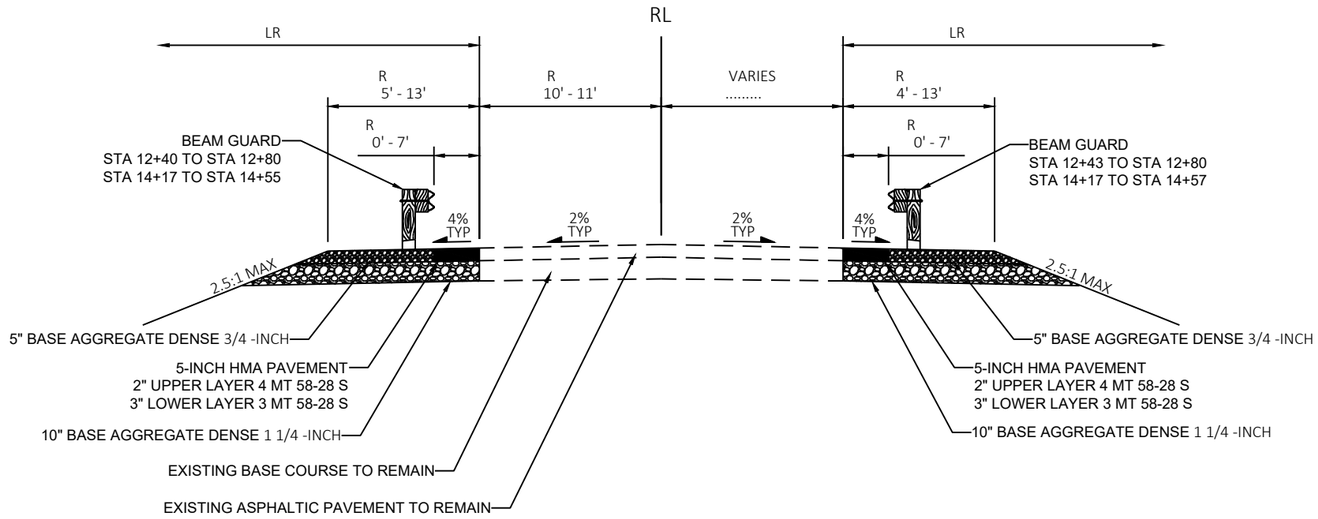
PLOT DATE : 10/24/2025 10:17 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:20 FT

2



FINISHED TYPICAL SECTION CTH C

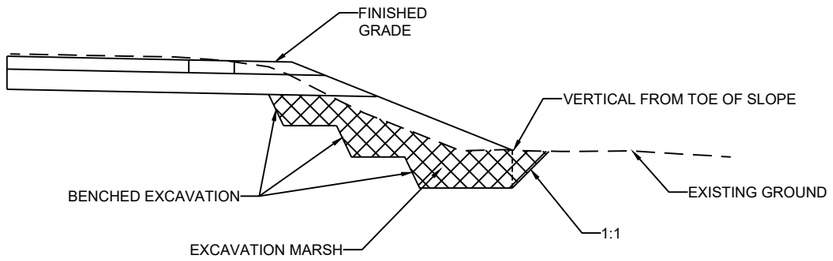
STA 12+80 TO STA 13+31
STA 13+66 TO STA 14+17



FINISHED TYPICAL SECTION CTH C

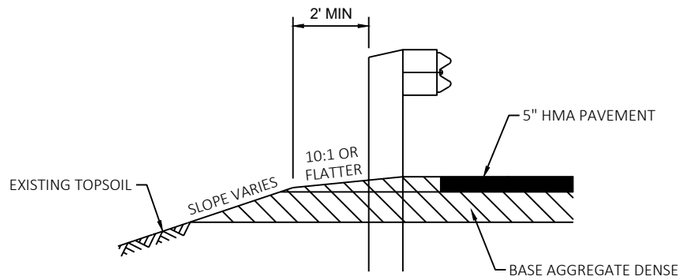
STA 11+07 TO STA 12+80
STA 14+17 TO STA 15+41

2

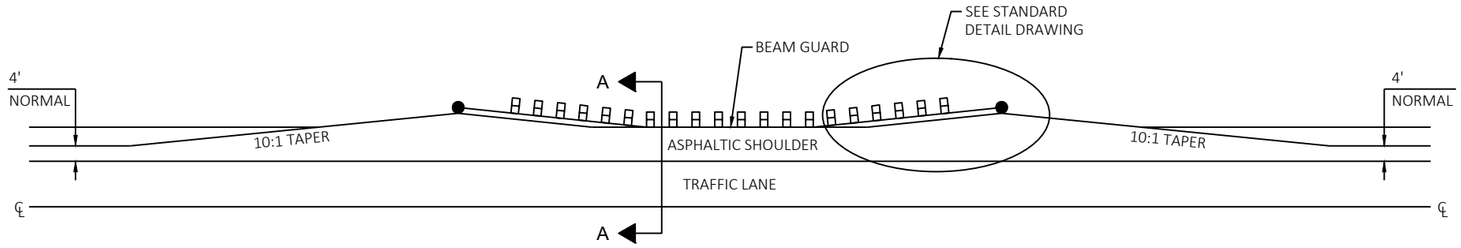


MARSH EXCAVATION

NOT TO SCALE



SECTION A-A



DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	CONSTRUCTION DETAILS	SHEET 7	E

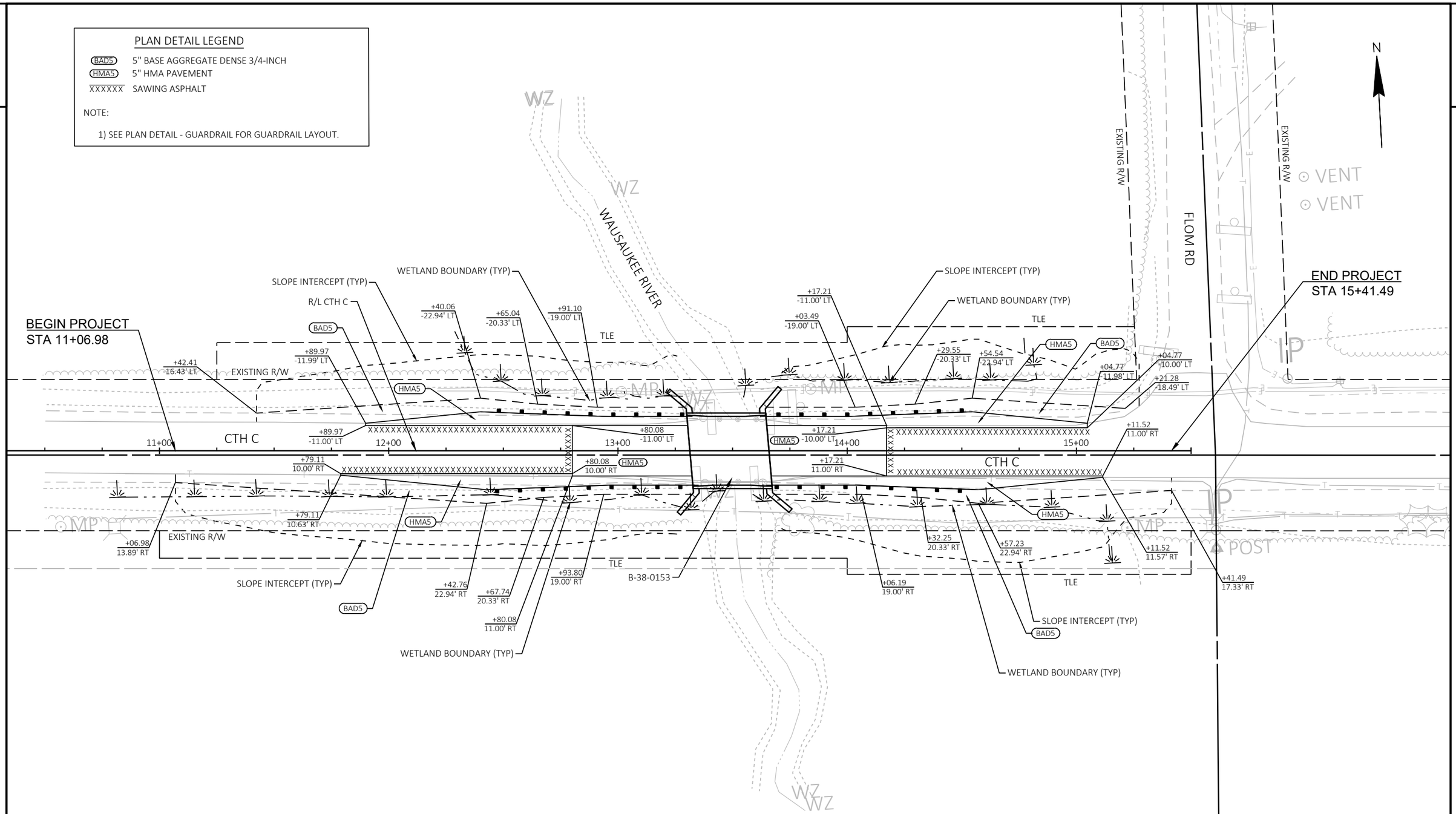
2

PLAN DETAIL LEGEND

BAD5	5" BASE AGGREGATE DENSE 3/4-INCH
HMA5	5" HMA PAVEMENT
XXXXXX	SAWING ASPHALT

NOTE:

1) SEE PLAN DETAIL - GUARDRAIL FOR GUARDRAIL LAYOUT.



PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	PLAN DETAILS	SHEET 8	E

2

N

FLOM RD

WAUSAUKEE RIVER

R/L CTH C

MGS GUARDRAIL TERMINAL EAT

MGS THRIE BEAM TRANSITION

MGS THRIE BEAM TRANSITION

MGS GUARDRAIL TERMINAL EAT

+90.02 -15.12' LT
POST 9

+65.04 -16.06' LT
POST 5

+40.06 -17.00' LT
POST 1

+32.54
-15.00' LT

+93.15
-15.00' LT

+62.05
-15.00' LT

+01.45
-15.00' LT

+04.57 -15.12' LT
POST 9

+29.55 -16.06' LT
POST 5

+54.54 -17.00' LT
POST 1

10:1 TAPER

10:1 TAPER

11+00

CTH C

12+00

13+00

14+00

15+00

CTH C

10:1 TAPER

10:1 TAPER

+42.76 17.00' RT
POST 1

+67.74 16.06' RT
POST 5

+92.72 15.12' RT
POST 9

+95.84
15.00' RT

+35.24
15.00' RT

B-38-0153

+04.15
15.00' RT

+64.75
15.00' RT

+07.27 15.12' RT
POST 9

+32.25 16.06' RT
POST 5

+57.23 17.00' RT
POST 1

MGS GUARDRAIL TERMINAL EAT

MGS THRIE BEAM TRANSITION

MGS THRIE BEAM TRANSITION

MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	PLAN DETAIL - GUARDRAIL	SHEET 9	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\SHEETS\021210-PD.DWG
LAYOUT NAME - PD10

PLOT DATE : 10/24/2025 10:18 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

EROSION CONTROL LEGEND

- SILT FENCE
- EROSION MAT URBAN CLASS I TYPE B
- SLOPE INTERCEPT
- TURBIDITY BARRIER
- SURFACE WATER FLOW

N

WZ

WAUSAUKEE RIVER

EXISTING R/W

FLOM RD

EXISTING R/W

VENT

VENT

WETLAND BOUNDARY (TYP)

R/L CTH C

SLOPE INTERCEPT (TYP)

B-38-0153

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY (TYP)

TLE

TLE

BEGIN PROJECT
STA 11+06.98

EXISTING R/W

MP

MP

IP

11+00

CTH C

12+00

13+00

14+00

15+00

CTH C

MP

EXISTING R/W

TLE

TLE

IP

POST

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY (TYP)

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

SEE STRUCTURE PLANS
FOR RIPRAP INFORMATION

END PROJECT
STA 15+41.49

WZ

WZ

PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	EROSION CONTROL	SHEET 10	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\SHEETS\022001-EC.DWG
LAYOUT NAME - EC1

PLOT DATE : 10/24/2025 10:19 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (RXXX) EXISTING SIGN TO BE REMOVED
- (MXXX) EXISTING SIGN TO BE MOVED
- (PXXX) PROPOSED SIGN
- (ETR) EXISTING SIGN TO REMAIN

PAVEMENT MARKING LEGEND

- (4W) MARKING LINE EPOXY 4-INCH (WHITE)
- (4Y) MARKING LINE EPOXY 4-INCH (YELLOW)
- (4D) MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP)

N

BEGIN PROJECT
STA 11+06.98

END PROJECT
STA 15+41.49

CTH C

EXISTING R/W

FLOM RD

WZ

WAUSAUKEE RIVER

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

TLE

R/L CTH C

R101 P101 W5-52L 12"X36"

R104 P104 W5-52R 12"X36"

R102 P102 W5-52R 12"X36"

R103 P103 W5-52L 12"X36"

WAUSAUKEE RIVER M106

WAUSAUKEE RIVER M105

WAUSAUKEE RIVER M105

FLOM RD ETR

STOP ETR

VENT

VENT

IP

POST

MP

B-38-0153

11+00 12+00 13+00 14+00 15+00

+11 +11 +15 +41

11' 11'

4W 4Y 4D 4W

PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	SIGNING AND MARKING	SHEET 11	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\SHEETS\023201-PS.DWG
LAYOUT NAME - PS1

PLOT DATE : 10/24/2025 10:19 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

LEGEND

- DETOUR ROUTE
- WORKZONE
- TYPE III BARRICADE WITH ATTACHED SIGN AND TWO TYPE "A" WARNING LIGHTS
- SIGN ON PERMANENT SUPPORT

1 — R11-4, 60" X 30": ROAD CLOSED TO THRU TRAFFIC
TYPE III BARRICADE TYPE III BARRICADE
BARRICADES SPACED 50'
SEE SDD "BARRICADES AND SIGNS FOR VARIOUS CLOSURES" DETAIL E

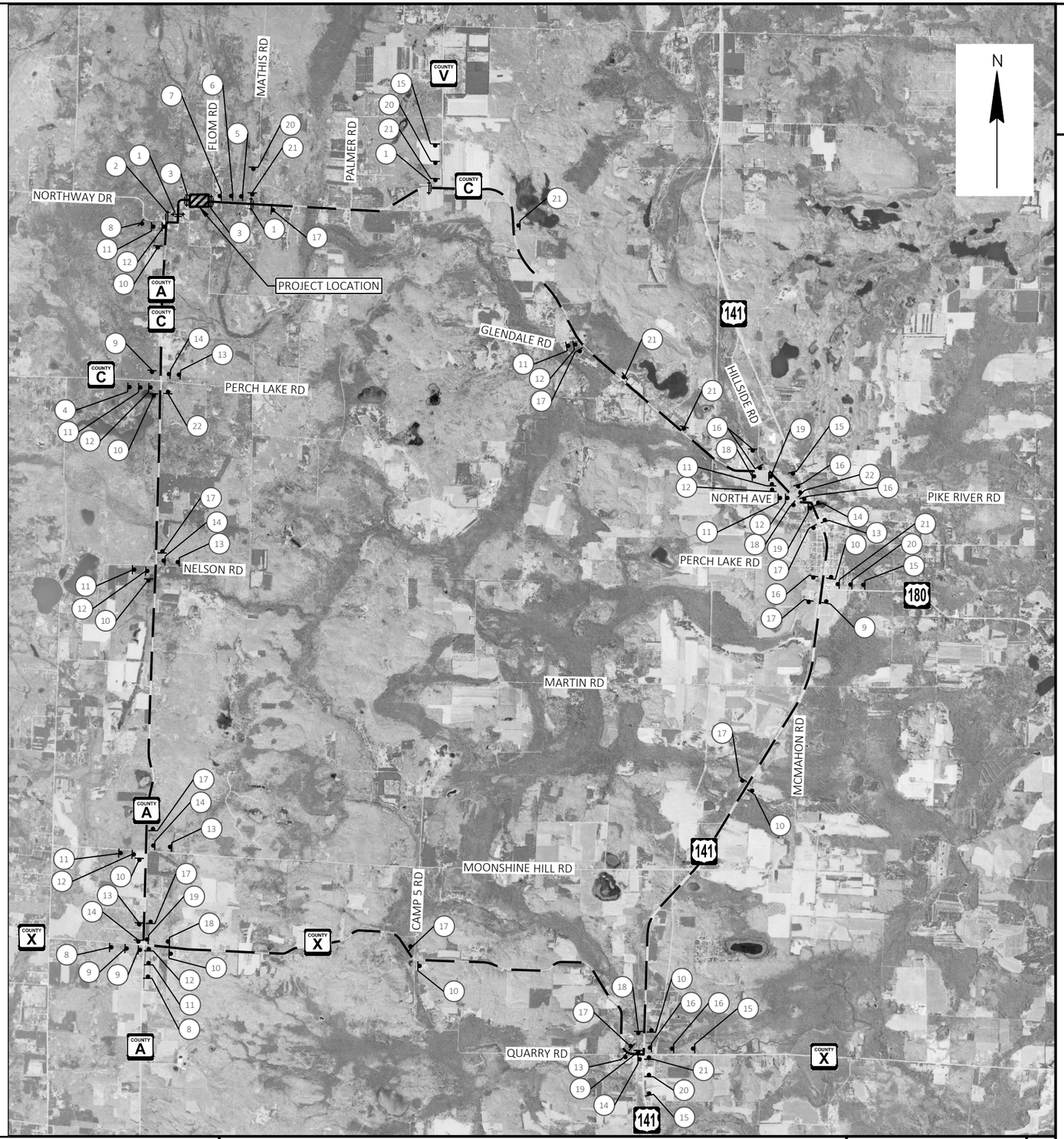
2 — R11-3C, 60"X30": BRIDGE OUT 0.5 MILES AHEAD; DETOUR M4-9R 30"X24"
TYPE III BARRICADE TYPE III BARRICADE
BARRICADES ON C/L & SHOULDER
SEE SDD "BARRICADES AND SIGNS FOR VARIOUS CLOSURES" DETAIL A

3 — R11-2B, 48" X 30": BRIDGE OUT
TYPE III BARRICADE ×5
5 TYPE III BARRICADES,
SEE SDD "BARRICADES AND SIGNS FOR VARIOUS CLOSURES"DETAIL D

4 — DETOUR AHEAD W20-2A
5 — ROAD CLOSED AHEAD W20-3A
6 — ROAD CLOSED 1000 FT W20-3C
7 — ROAD CLOSED 500 FT W20-3D

8 — EAST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; DETOUR AHEAD W20-2A
9 — DETOUR M4-8 24"X12"; EAST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M6-1 21"X21"
10 — DETOUR M4-8 24"X12"; EAST M3-2 24"X12"; COUNTY C M1-5A 24"X24"
11 — DETOUR M4-8 24"X12"; EAST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M5-1R 21"X21"
12 — DETOUR M4-8 24"X12"; EAST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M6-1 21"X21"
13 — DETOUR M4-8 24"X12"; EAST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M5-1L 21"X21"
14 — DETOUR M4-8 24"X12"; EAST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M6-1 21"X21"

15 — WEST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; DETOUR AHEAD W20-2A
16 — DETOUR M4-8 24"X12"; WEST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M6-1 21"X21"
17 — DETOUR M4-8 24"X12"; WEST M3-2 24"X12"; COUNTY C M1-5A 24"X24"
18 — DETOUR M4-8 24"X12"; WEST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M5-1R 21"X21"
19 — DETOUR M4-8 24"X12"; WEST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M6-1 21"X21"
20 — DETOUR M4-8 24"X12"; WEST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M5-1L 21"X21"
21 — DETOUR M4-8 24"X12"; WEST M3-2 24"X12"; COUNTY C M1-5A 24"X24"; M6-1 21"X21"
22 — END DETOUR M4-8A 24"X18"; COUNTY C M1-5A 24"X24"



PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	DETOUR PLAN	SHEET 12	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\SHEETS\027001-DT.DWG PLOT DATE : 10/24/2025 10:20 AM PLOT BY : WALTER A. WOLAK II PLOT NAME :

WISDOT/CADDS SHEET 42

2

CONTROL POINTS AND BENCHMARKS				
POINT #	Y LOCATION	X LOCATION	ELEVATION	DESCRIPTION
BM 10	268330.110	685628.047	929.120	BM RR SPIKE 18" OAK
BM 20	268306.595	686045.973	924.927	BM RR SPIKE 18" OAK
CP 201	268349.790	685592.685	929.311	CP MAGHUB
CP 202	268325.002	685990.695	928.714	CP MAGHUB
CP 203	268351.969	686048.369	928.994	CP MAGHUB
CP 204	268345.732	686242.362	930.695	CP MAGHUB
8754	268277.974	686478.088	929.224	HMOD 6K85

N

QUARTER LINE

FLOM RD

WAUSAUKEE RIVER

BEGIN PROJECT
STA 11+06.98
Y=268351.616
X=685779.126

S86°47'52"E
550.00'

CP 203

END PROJECT
STA 15+41.49
Y=268327.344
X=686212.956

CP 204

11+00 CTH C 12+00 13+00 14+00 15+00

SECTION LINE

SECTION LINE

CP 201

BM 10

CP 202

BM 20

8754

T 34 N
R 11 E
14
19

Y = 268324.403
N = 686231.996

QUARTER LINE

PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	ALIGNMENT PLAN	SHEET 13	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\SHEETS\027201-AD.DWG
LAYOUT NAME - AD1

PLOT DATE : 10/24/2025 10:20 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

Estimate Of Quantities

9249-04-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	5.000	5.000
0004	201.0205	Grubbing	STA	5.000	5.000
0006	203.0270	Removing Structure Over Waterway Debris Capture (structure) 01. P-38-0915	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	296.000	296.000
0010	205.0400	Excavation Marsh	CY	1,730.000	1,730.000
0012	206.1001	Excavation for Structures Bridges (structure) 01. B-38-0153	EACH	1.000	1.000
0014	206.5001	Cofferdams (structure) 01. B-38-0153	EACH	1.000	1.000
0016	208.0100	Borrow	CY	442.000	442.000
0018	209.2100	Backfill Granular Grade 2	CY	1,805.000	1,805.000
0020	210.1500	Backfill Structure Type A	TON	594.000	594.000
0022	213.0100	Finishing Roadway (project) 01. 9249-04-70	EACH	1.000	1.000
0024	305.0110	Base Aggregate Dense 3/4-Inch	TON	176.000	176.000
0026	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	806.000	806.000
0028	450.4000	HMA Cold Weather Paving	TON	155.000	155.000
0030	455.0605	Tack Coat	GAL	31.000	31.000
0032	460.2000	Incentive Density HMA Pavement	DOL	100.000	100.000
0034	460.6223	HMA Pavement 3 MT 58-28 S	TON	93.000	93.000
0036	460.6224	HMA Pavement 4 MT 58-28 S	TON	62.000	62.000
0038	502.0100	Concrete Masonry Bridges	CY	163.000	163.000
0040	502.3200	Protective Surface Treatment	SY	161.000	161.000
0042	502.3210	Pigmented Surface Sealer	SY	34.000	34.000
0044	505.0400	Bar Steel Reinforcement HS Structures	LB	5,120.000	5,120.000
0046	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	21,450.000	21,450.000
0048	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0050	550.0500	Pile Points	EACH	14.000	14.000
0052	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	396.000	396.000
0054	606.0300	Riprap Heavy	CY	76.000	76.000
0056	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	158.000	158.000
0058	612.0804	Apron Endwalls for Underdrain Reinforced Concrete 4-Inch	EACH	2.000	2.000
0060	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0062	614.2500	MGS Thrie Beam Transition	LF	158.000	158.000
0064	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0066	619.1000	Mobilization	EACH	1.000	1.000
0068	624.0100	Water	MGAL	4.340	4.340
0070	625.0100	Topsoil	SY	1,738.000	1,738.000
0072	628.1104	Erosion Bales	EACH	100.000	100.000
0074	628.1504	Silt Fence	LF	1,065.000	1,065.000
0076	628.1520	Silt Fence Maintenance	LF	1,065.000	1,065.000
0078	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0080	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000
0082	628.2008	Erosion Mat Urban Class I Type B	SY	1,659.000	1,659.000
0084	628.6005	Turbidity Barriers	SY	185.000	185.000
0086	628.7570	Rock Bags	EACH	100.000	100.000
0088	629.0205	Fertilizer Type A	CWT	3.000	3.000
0090	630.0130	Seeding Mixture No. 30	LB	80.000	80.000
0092	630.0500	Seed Water	MGAL	39.000	39.000
0094	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	6.000	6.000
0096	637.2210	Signs Type II Reflective H	SF	12.000	12.000
0098	638.2102	Moving Signs Type II	EACH	2.000	2.000

Estimate Of Quantities

9249-04-70

Line	Item	Item Description	Unit	Total	Qty
0100	638.2602	Removing Signs Type II	EACH	4.000	4.000
0102	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0104	642.5201	Field Office Type C	EACH	1.000	1.000
0106	643.0420	Traffic Control Barricades Type III	DAY	1,531.000	1,531.000
0108	643.0705	Traffic Control Warning Lights Type A	DAY	3,062.000	3,062.000
0110	643.0900	Traffic Control Signs	DAY	27,897.000	27,897.000
0112	643.0920	Traffic Control Covering Signs Type II	EACH	20.000	20.000
0114	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0116	643.5000	Traffic Control	EACH	1.000	1.000
0118	645.0111	Geotextile Type DF Schedule A	SY	106.000	106.000
0120	645.0120	Geotextile Type HR	SY	164.000	164.000
0122	646.1020	Marking Line Epoxy 4-Inch	LF	1,372.000	1,372.000
0124	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	1,372.000	1,372.000
0126	650.4500	Construction Staking Subgrade	LF	400.000	400.000
0128	650.5000	Construction Staking Base	LF	400.000	400.000
0130	650.6501	Construction Staking Structure Layout (structure) 01. B-38-0153	EACH	1.000	1.000
0132	650.9911	Construction Staking Supplemental Control (project) 01. 9249-04-70	EACH	1.000	1.000
0134	650.9920	Construction Staking Slope Stakes	LF	400.000	400.000
0136	690.0150	Sawing Asphalt	LF	420.000	420.000
0138	715.0502	Incentive Strength Concrete Structures	DOL	978.000	978.000
0140	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0142	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000

3

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010	11+07	-	15+41	LT/RT	5	5
				TOTAL 0010	5	5

DIVISION	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT (2) CY	205.0100 EXCAVATION COMMON (1) EBS EXCAVATION CY	AVAILABLE MATERIAL CY	205.0400 EXCAVATION MARSH CY	EXPANDED MARSH BACKFILL (10) FACTOR 1.00 CY	EXPANDED EBS BACKFILL (11) FACTOR 1.00 CY	209.2100 BACKFILL GRANULAR GRADE 2 CY	UNEXPANDED FILL CY	EXPANDED FILL (13) FACTOR 1.00 CY	MASS ORDINATE +/- (14) CY	WASTE CY	208.0100 BORROW CY
DIVISION 1														
WAUSAUKEE RIVER BRIDGE	11+06.98/15+41.49	CTH C	221	0	221	1,730	1,730	0	1,730	663	663	-442	1,730	
UNDISTRIBUTED		CTH C	0	75	0	0	0	75	75	0	0	0	75	
DIVISION 1 SUBTOTAL			221	75	221	1,730	1,730	75	1,805	663	663	-442	1,805	442
GRAND TOTAL			221		221	1,730	1,730	75	1,805	663	663	-442	1,805	442
TOTAL EXCAVATION COMMON			296											

NOTES:
(1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(10) EXPANDED MARSH BACKFILL - THIS IS TO BE FILLED WITH BACKFILL GRANULAR GRADE 2. MARSH BACKFILL FACTOR = 1.00. ITEM NUMBER 209.2100
(11) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH BACKFILL GRANULAR GRADE 2 AS DIRECTED BY ENGINEER. EBS BACKFILL FACTOR = 1.00. ITEM NUMBER 209.2100
(13) EXPANDED FILL FACTOR = 1.00
(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. [CUT - ((FILL) * FILL FACTOR)]
(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

3

AGGREGATE

CATEGORY	STATION	TO	STATION	OFFSET	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
0010	11+07	-	12+80	LT/RT	79	267
0010	12+80	-	13+31	LT/RT	19	163
0010	13+66	-	14+17	LT/RT	19	163
0010	14+17	-	15+41	LT/RT	59	213
				TOTAL 0010	176	806

HMA PAVEMENT

CATEGORY	STATION	TO	STATION	OFFSET	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
0010	11+07	-	12+80	LT/RT	28	6	17	11
0010	12+80	-	13+31	LT/RT	50	10	30	20
0010	13+66	-	14+17	LT/RT	50	10	30	20
0010	14+17	-	15+41	LT/RT	27	5	16	11
				TOTAL 0010	155	31	93	62

GUARDRAIL

CATEGORY	STATION	TO	STATION	OFFSET	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
0010	12+40	-	13+31	LT/RT	79	2
0010	13+66	-	14+57	LT/RT	79	2
				TOTAL 0010	158	4

WATER

CATEGORY	LOCATION	624.0100 WATER MGAL
0010	PROJECT-BASE AGGREGATE	1.69
0010	PROJECT EXCAVATION	2.65
	TOTAL 0010	4.34

EROSION CONTROL & RESTORATION

CATEGORY	STATION	TO	STATION	OFFSET	625.0100 TOPSOIL SY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.6005 TURBIDITY BARRIERS SY	628.7570 ROCK BAGS EACH	629.0205 FERTILIZER TYPE A CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0500 SEED WATER MGAL
0010	11+07	-	13+31	LT/RT	809	--	452	452	--	--	809	--	--	1	37	18.1
0010	13+31	-	13+66	LT/RT	--	--	--	--	--	--	--	148	--	--	--	--
0010	13+66	-	15+41	LT/RT	771	--	400	400	--	--	771	--	--	1	35	17.3
0010				SUBTOTAL	1,580	--	852	852	--	--	1,580	148	--	2	72	35.4
				UNDISTRIBUTED	158	100	213	213	5	5	79	37	100	1	8	3.6
				TOTAL 0010	1,738	100	1,065	1,065	5	5	1,659	185	100	3	80	39.0

NOTE: UNDISTRIUBTED ITEMS SHALL BE USED AT THE DIRECTION OF THE ENGINEER BASED ON FIELD CONDITIONS.
PLACE EROSION BALES ALONG WETLANDS TO SUPPLEMENT/REINFORCE SILT FENCE AS NEEDED.
PLACE ROCK BAGS ALONG THE WAUSAUKEE RIVER TO SUPPLEMENT/REINFORCE SILT FENCE AS NEEDED.

3

PERMANENT SIGNING

CATEGORY	SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	SIGN SIZE H [IN.]	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	638.2102 MOVING SIGNS TYPE II EACH	REMARKS / NEW SIGN LOCATION
0010	P101	W5-52L [2S]	CLEARANCE STRIPER DOWN LEFT	12	x	36	1	3.00	--	
0010	P102	W5-52R [2S]	CLEARANCE STRIPER DOWN RIGHT	12	x	36	1	3.00	--	
0010	P103	W5-52L [2S]	CLEARANCE STRIPER DOWN LEFT	12	x	36	1	3.00	--	
0010	P104	W5-52R [2S]	CLEARANCE STRIPER DOWN RIGHT	12	x	36	1	3.00	--	
0010	M105		WAUSAUKEE RIVER				1	--	1	MOVE TO NORTHEAST SIDE OF BRIDGE
0010	M106		WAUSAUKEE RIVER				1	--	1	MOVE TO SOUTHWEST SIDE OF BRIDGE
			TOTAL 0010				6	12.00	2	

REMOVING SIGNS

CATEGORY	SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
0010	R101	W5-52L	CLEARANCE STRIPER DOWN LEFT	1	1
0010	R102	W5-52R	CLEARANCE STRIPER DOWN RIGHT	1	1
0010	R103	W5-52L	CLEARANCE STRIPER DOWN LEFT	1	1
0010	R104	W5-52R	CLEARANCE STRIPER DOWN RIGHT	1	1
0010	M105 / M106		WAUSAUKEE RIVER	--	1
			TOTAL 0010	4	5

TRAFFIC CONTROL

CATEGORY	STAGE	STAGE DURATION DAYS	LOCATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH**	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH**	643.0705 DAY	643.0900 TRAFFIC CONTROL SIGNS EACH**	643.0900 DAY	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.0920 CYCLES**	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH**	643.1050 DAY
0010	DETOUR	81	DETOUR ROUTE	18	1,458	36	2,916	328	26,568	--	--	--	--
			DETOUR SUBTOTAL		1,458		2,916		26,568	--	--		--
	UNDISTRIBUTED				73		146		1,329	20	1		28
			TOTAL 0010		1,531		3,062		27,897	20			28

**FOR INFORMATION ONLY

3

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	OFFSET	646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF	646.1020 MARKING LINE EPOXY 4-INCH (WHITE) LF	MARKING LINE EPOXY 4-INCH (YELLOW DASH 12.5 FT LINE 37.5 FT SKIP) LF	646.6464 COLD WEATHER MARKING EPOXY 4-INCH LF
0010	11+07	-	15+41	R/L	435	828	109	1,372
				SUBTOTAL	435	828	109	1,372
				TOTAL 0010		1,372		1,372

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (9249-04-70) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	11+07	-	15+41	CTH C	400	400	1	400
				TOTAL 0010	400	400	1	400

CONSTRUCTION STAKING

CATEGORY	LOCATION	STRUCTURE	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (B-38-0153) EACH
0020	CTH C	B-38-0153	1
		TOTAL 0020	1

SAWING

CATEGORY	STATION	TO	STATION	OFFSET	690.0150 SAWING ASPHALT LF
0010	11+07	-	13+31	LT/RT	214
0010	13+66	-	15+41	LT/RT	206
				TOTAL 0010	420

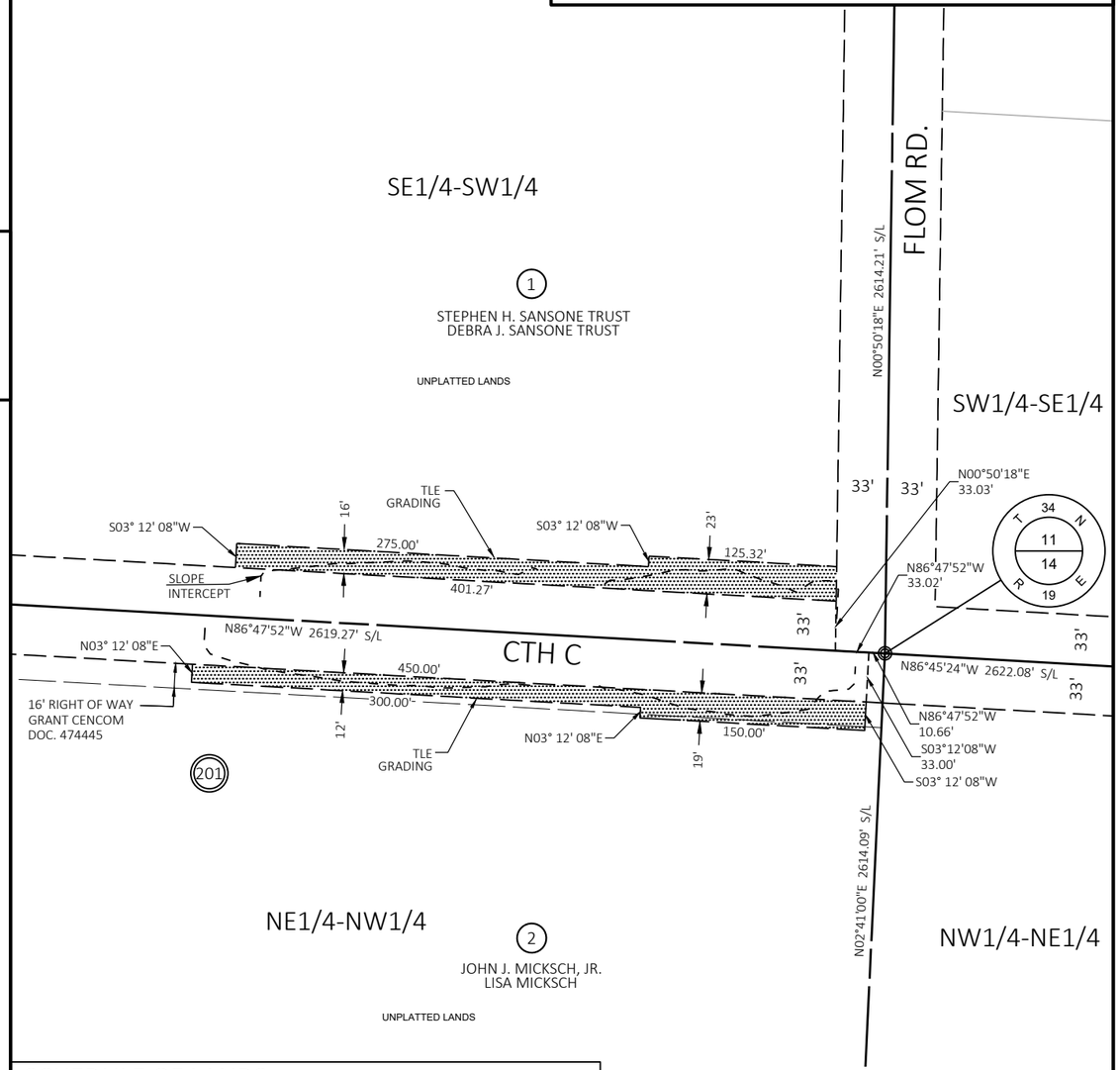
NOTES:
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY.
REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.

R/W PROJECT NUMBER: 9249-04-00	SHEET NUMBER: 4.01

TLE ACQUISITION EXHIBIT
CTH C
WAUSAUKEE RIVER BRIDGE

CTH C — MARINETTE COUNTY

PART OF SE1/4-SW1/4 OF SECTION 11,PART OF NE1/4-NW1/4 OF SECTION 14
T34N-R19E, TOWN OF ATHELSTANE, MARINETTE COUNTY, WISCONSIN.



GN

SCALE, FEET
0 50 100

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNERS()	INTEREST REQUIRED	TLE Acres	PARCEL NUMBER
1	STEPHEN H. SANSONE TRUST DEBRA J. SANSONE TRUST	TLE	0.167	1
2	JOHN J. MICKSCH, JR. LISA MICKSCH	TLE	0.148	2

UTILITY INTERESTS REQUIRED

PARCEL NUMBER	UTILITIES OWNERS()	INTEREST REQUIRED	PARCEL NUMBER
201	CENCOM	RELEASE OF RIGHTS	201

THIS MAP IS APPROVED FOR
MARINETTE COUNTY HIGHWAY DEPARTMENT.

SIGNATURE: _____ DATE: 5/16/2025

PRINT NAME: ERIC BURMEISTER
HIGHWAY COMMISSIONER

FILE NAME : 92490400_RW_PLAT_EXHIBIT.DWG PLOT DATE : 5/14/2025 3:13 PM R/W PROJECT: R/W PROJ NO

4

R/W PROJECT NUMBER:	SHEET NUMBER:
-	

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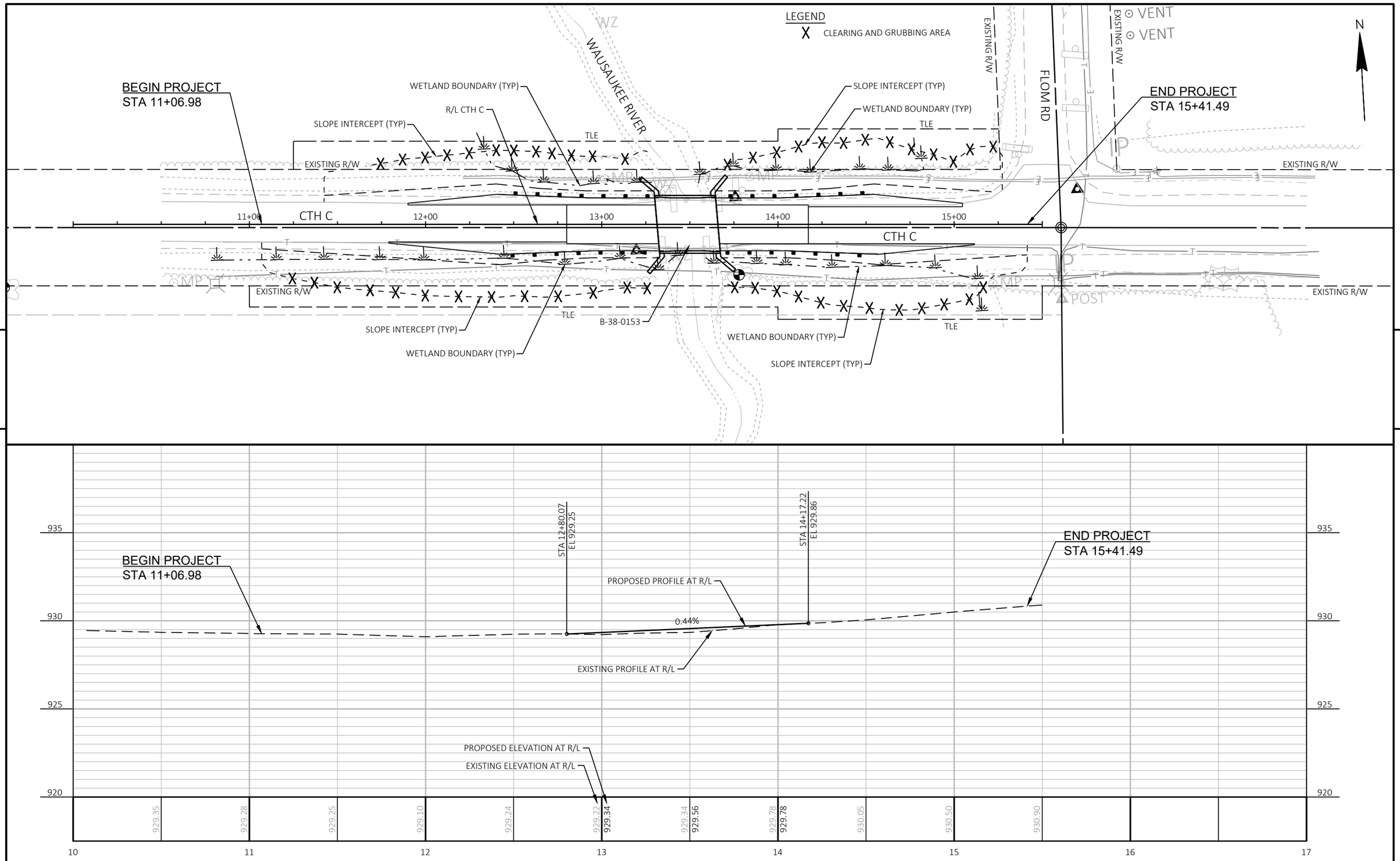
SCHEDULE OF LANDS & INTERESTS REQUIRED

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

UTILITY INTERESTS REQUIRED

FILE NAME : 92490400_RW_PLAT_EXHIBIT.DWG PLOT DATE : 5/14/2025 3:13 PM R/W PROJECT: R/W PROJ NO

4



PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	PLAN AND PROFILE: CTH C	SHEET 21 E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\SHEETS\050101-PP.DWG
LAYOUT NAME - PP1

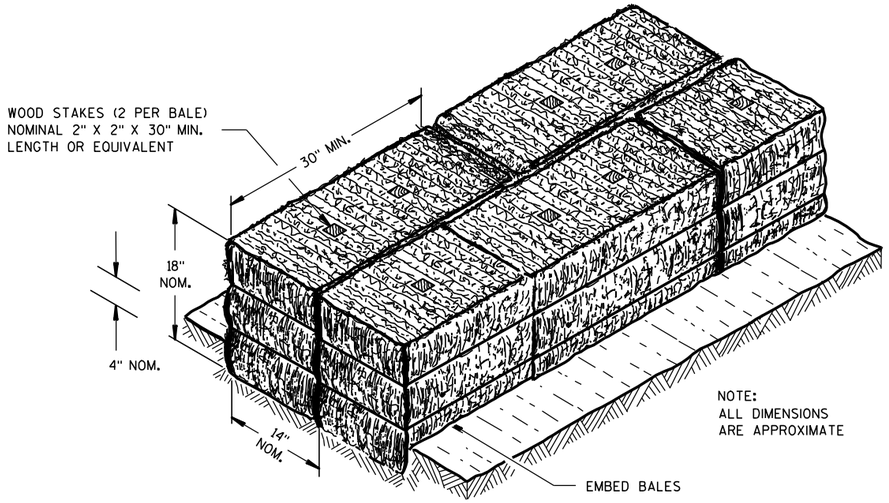
PLOT DATE : 10/24/2025 10:20 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

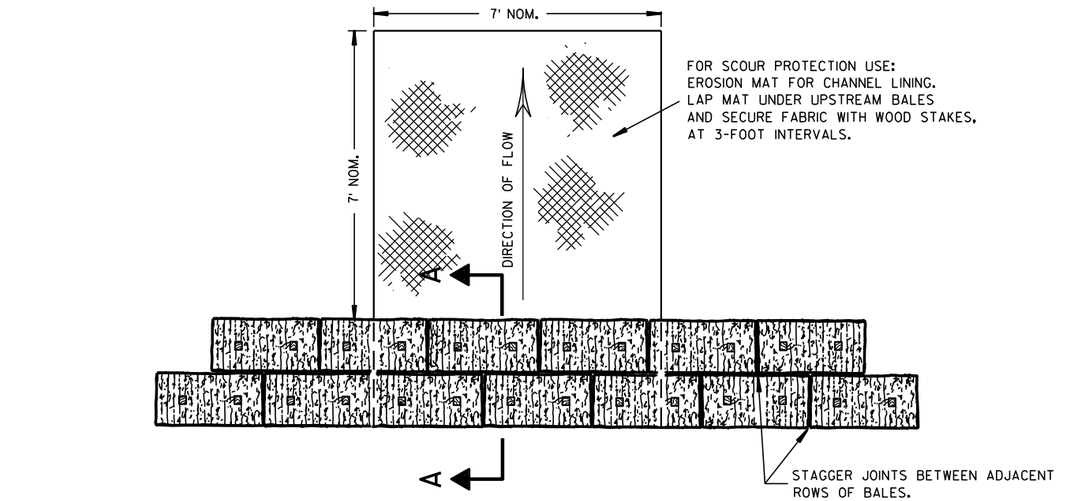
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
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)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

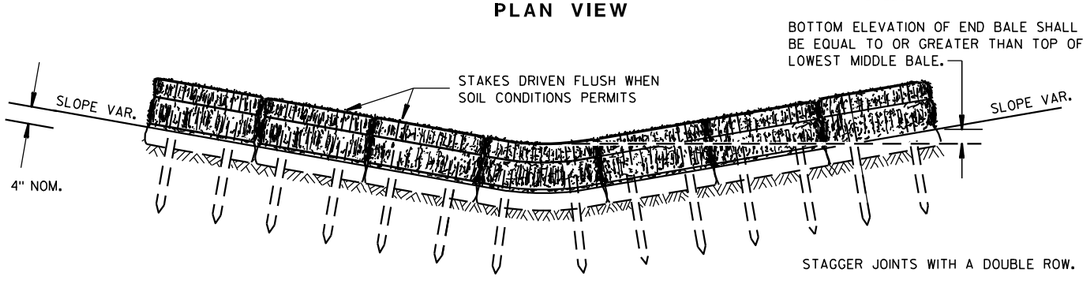
6



SECTION A-A



PLAN VIEW



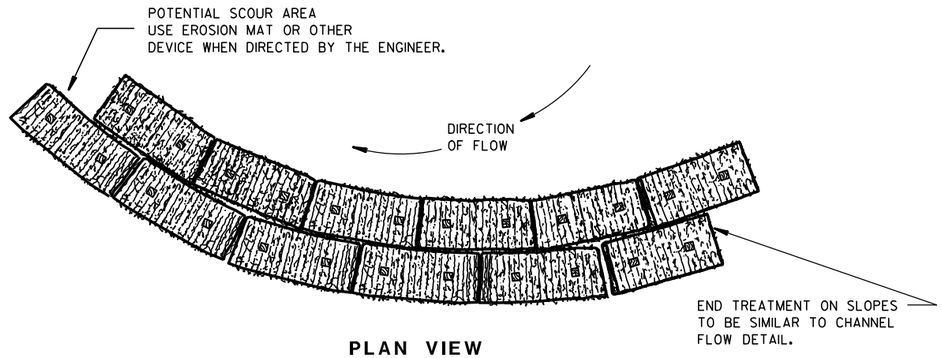
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

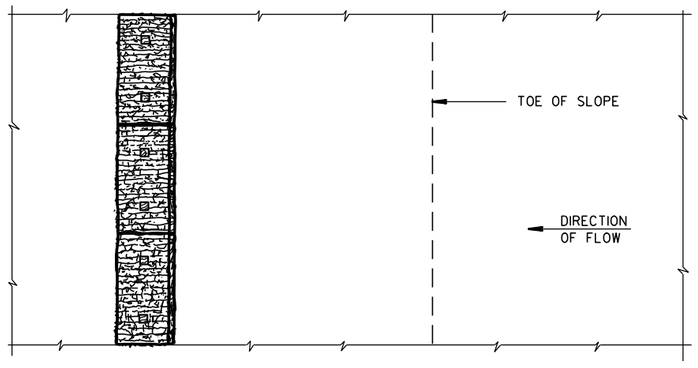
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

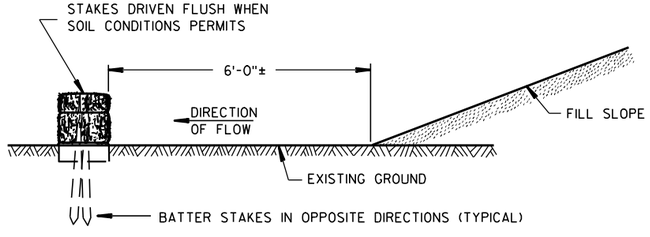


PLAN VIEW

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

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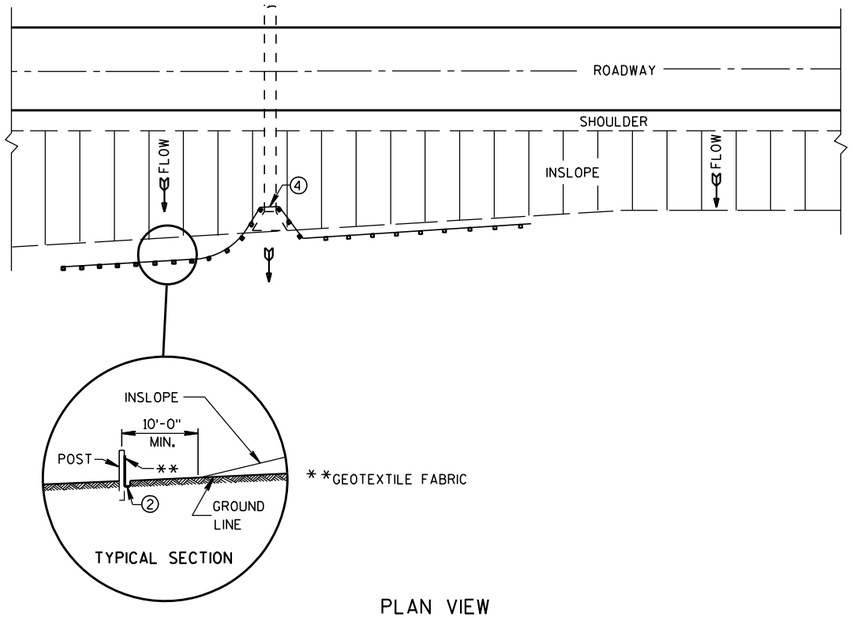
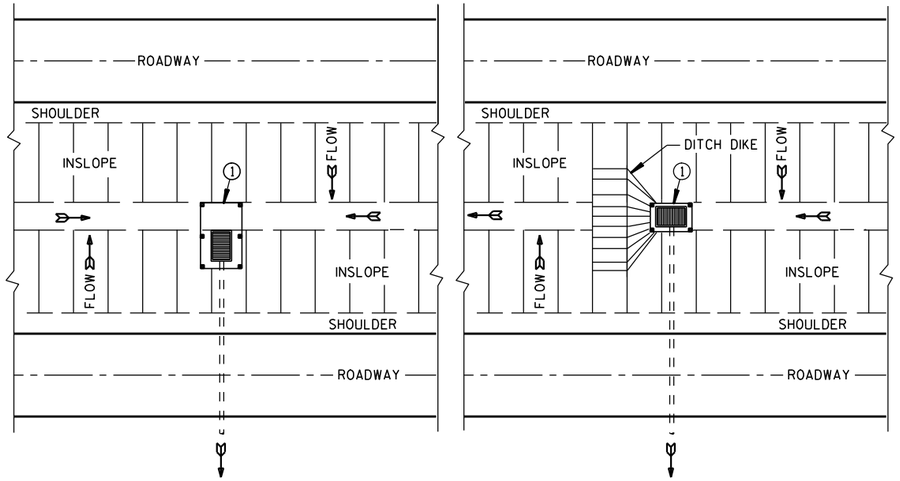
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



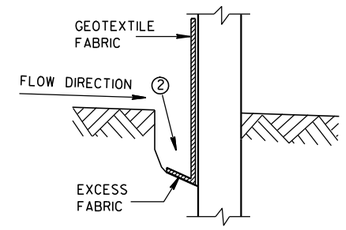
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

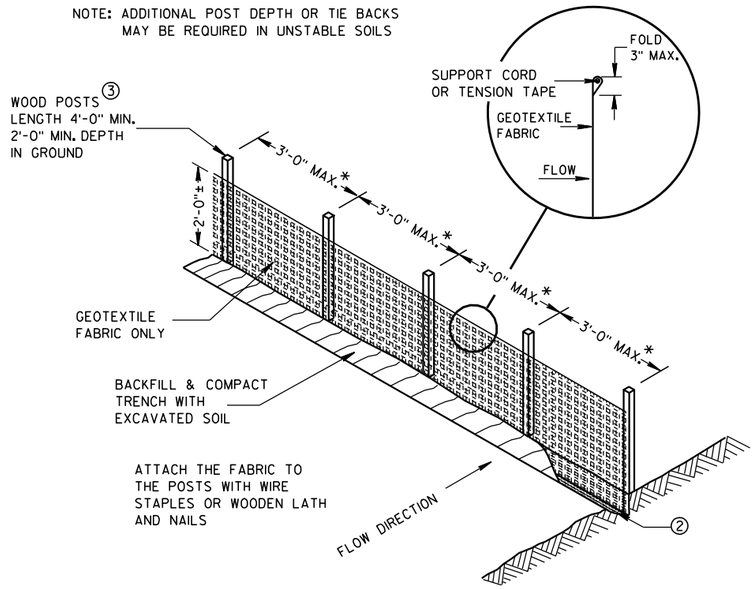
GENERAL NOTES

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

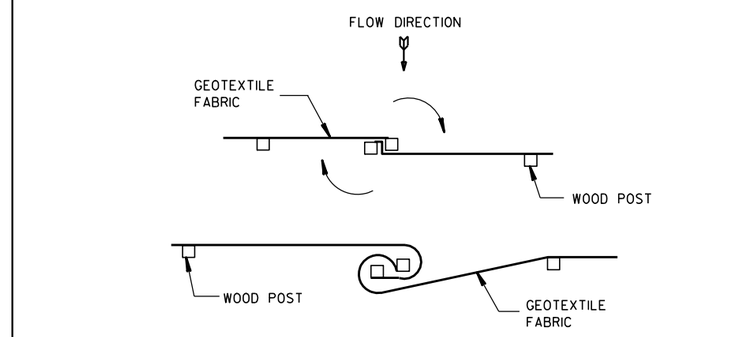
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



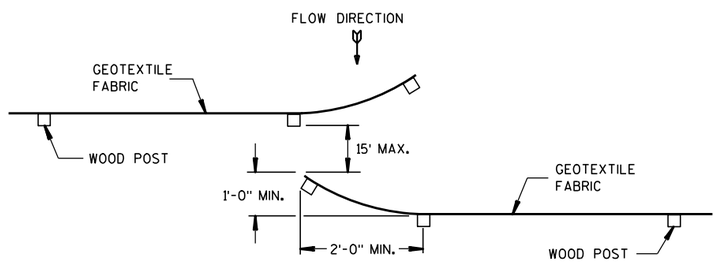
TRENCH DETAIL



SILT FENCE

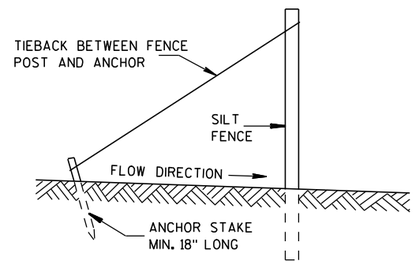


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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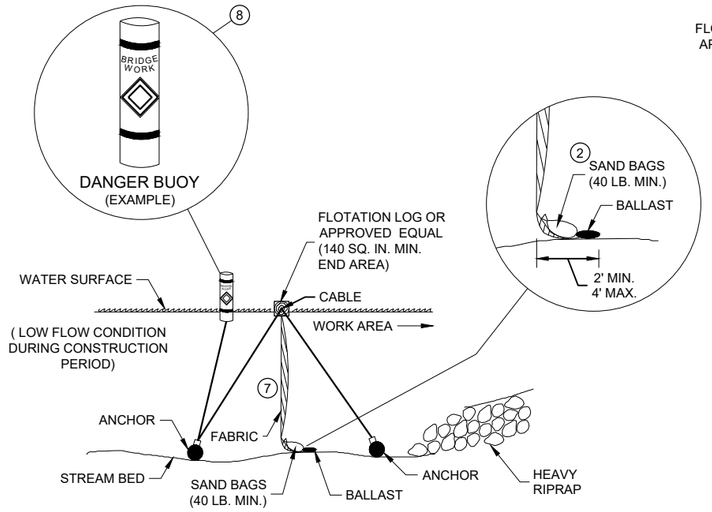
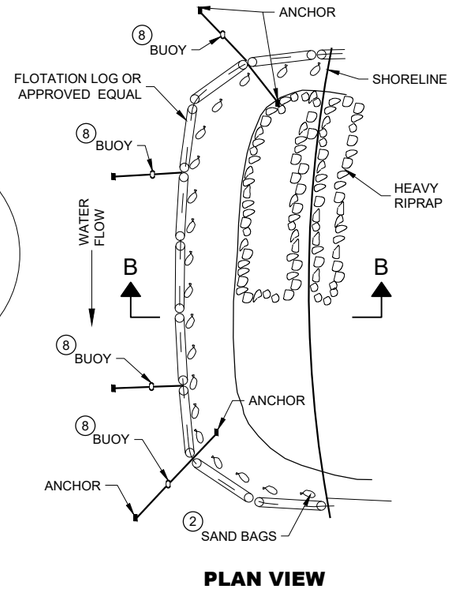
S.D.D. 8 E 9-6

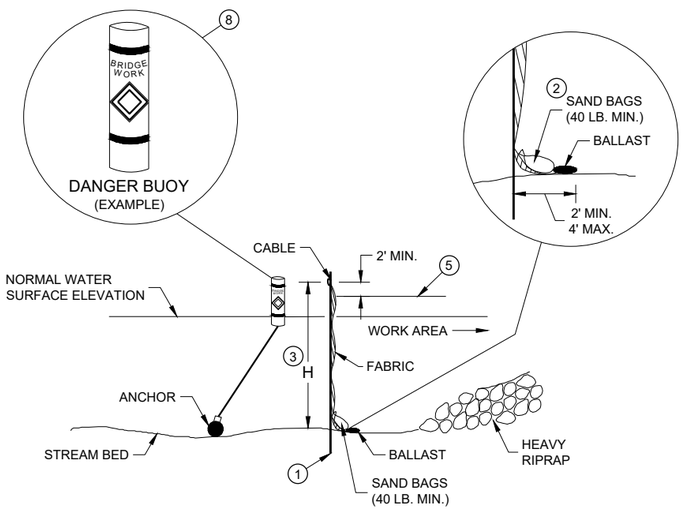


SECTION B - B

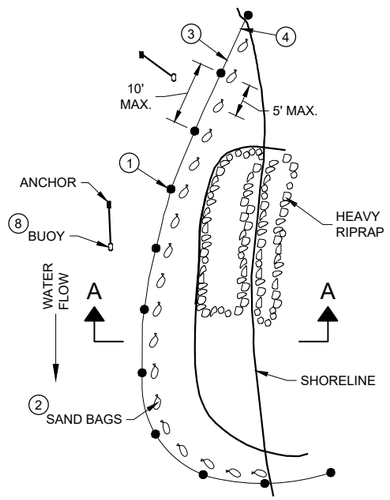


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT 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.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

(1) DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

(2) SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

(3) WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

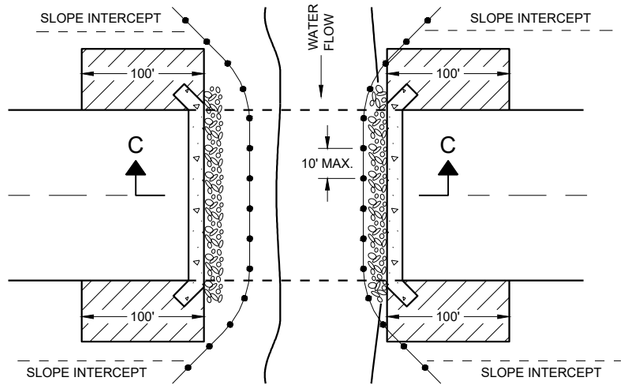
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

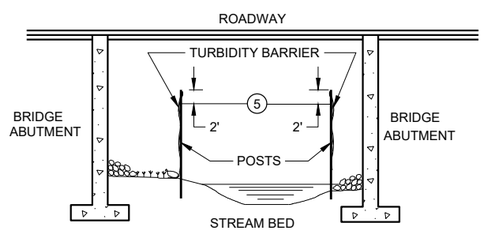
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

(8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOI
ENGINEER

FHWA

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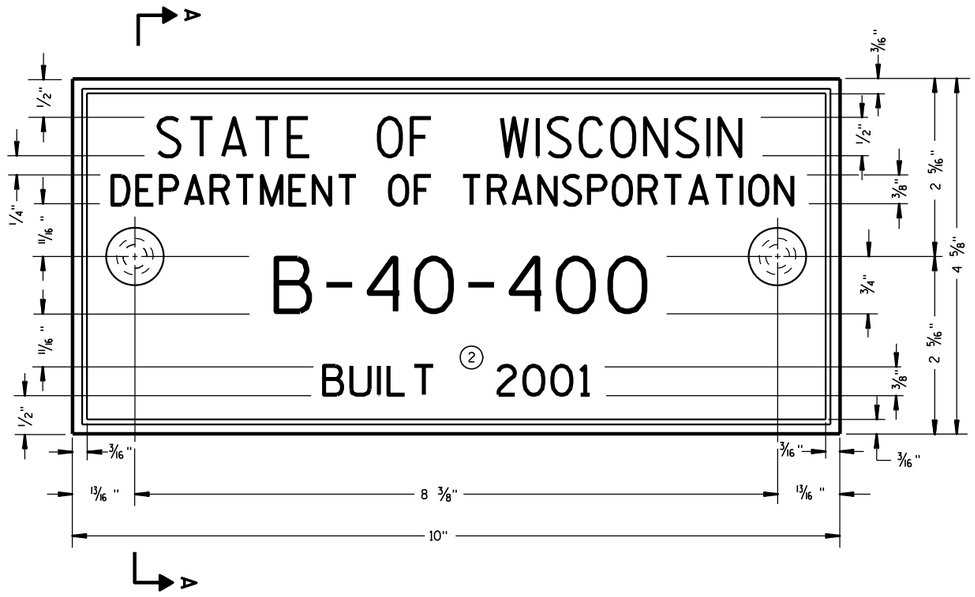
SDD 08E11 - 02



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

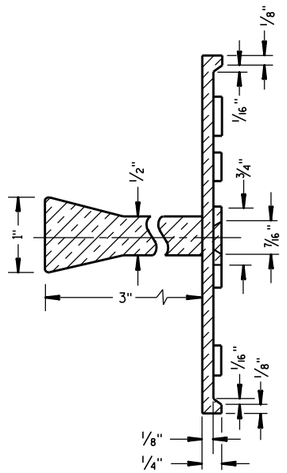
GENERAL NOTES

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.

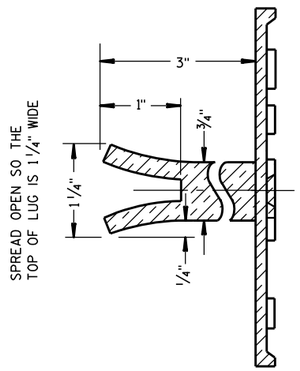
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

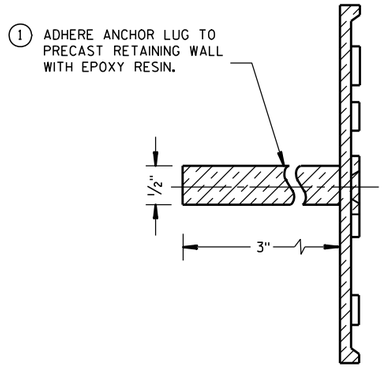
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



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

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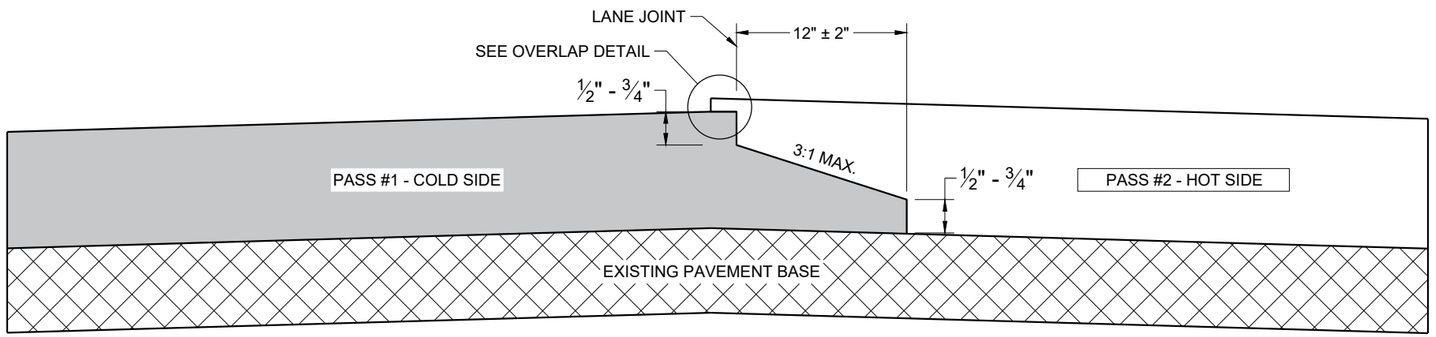
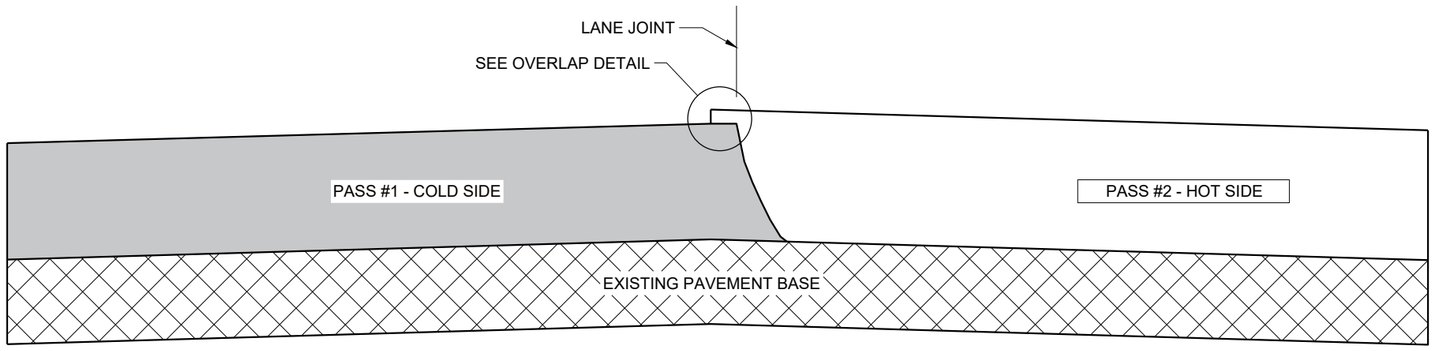
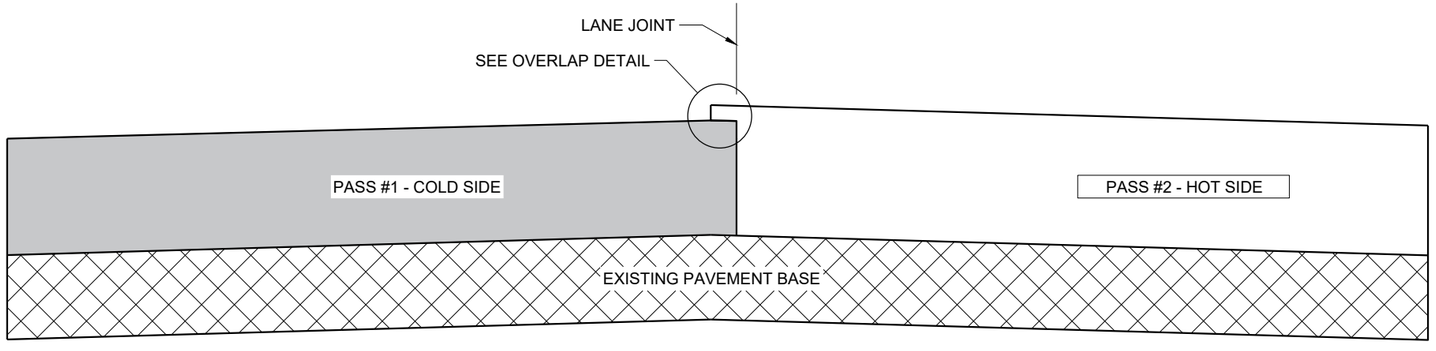
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

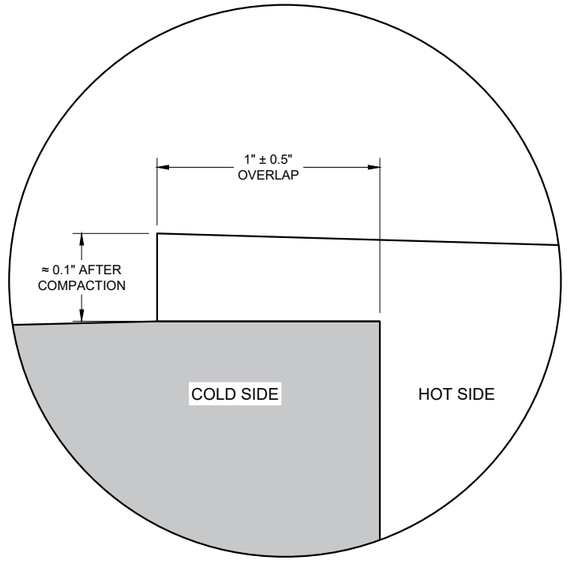
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

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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.

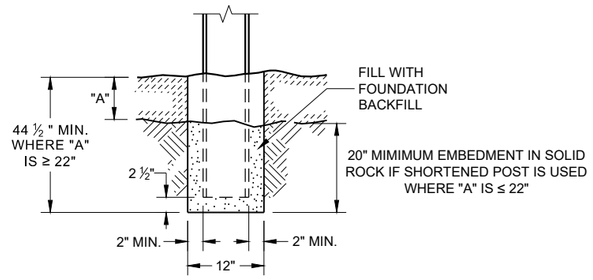
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

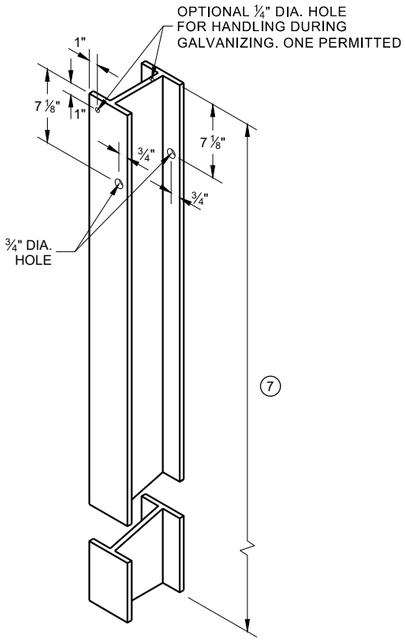
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

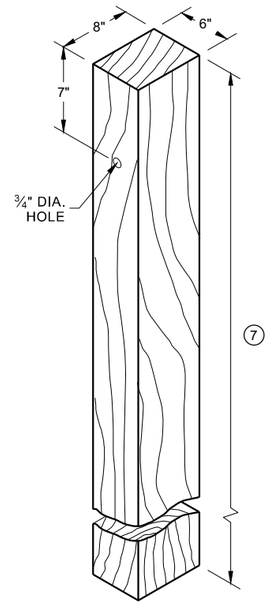
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



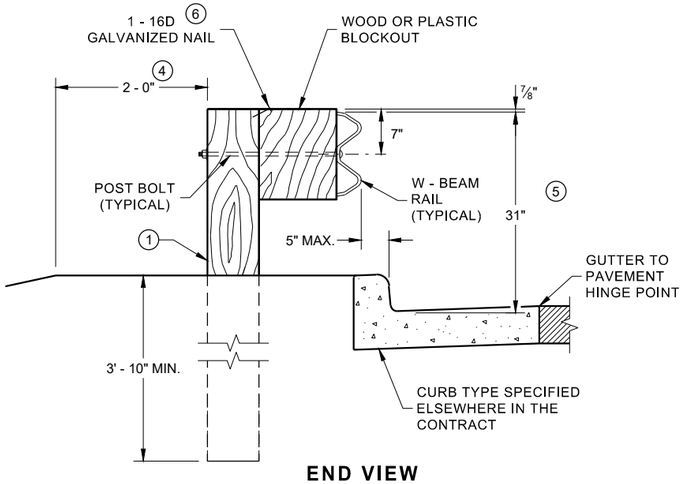
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



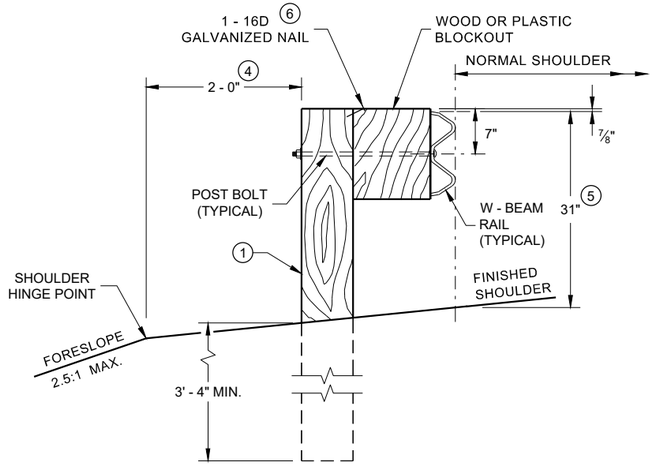
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



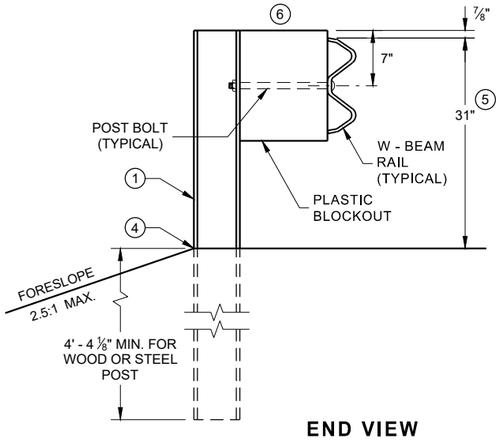
WOOD POST (6" X 8") NOMINAL (1)



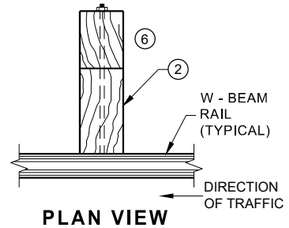
END VIEW
LOCATED ALONG A CURBED ROADWAY



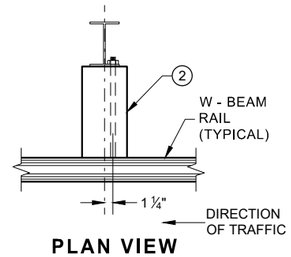
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



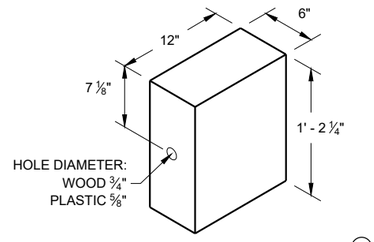
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



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

SDD 14B42 - 07a

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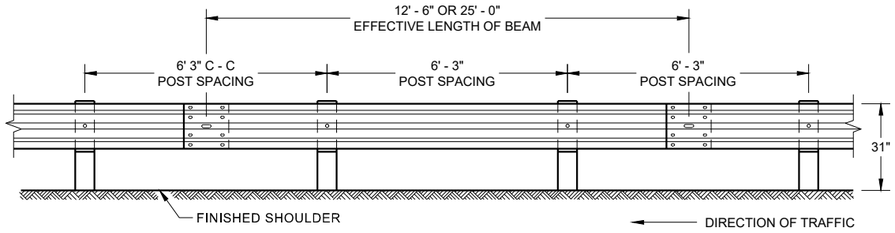
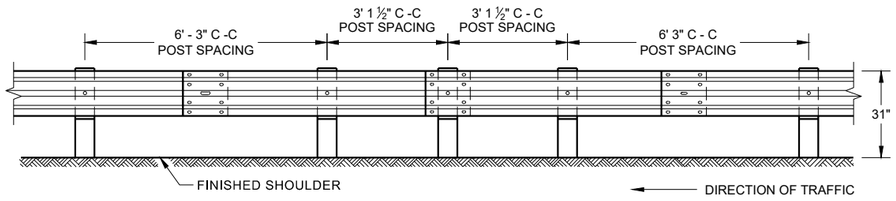
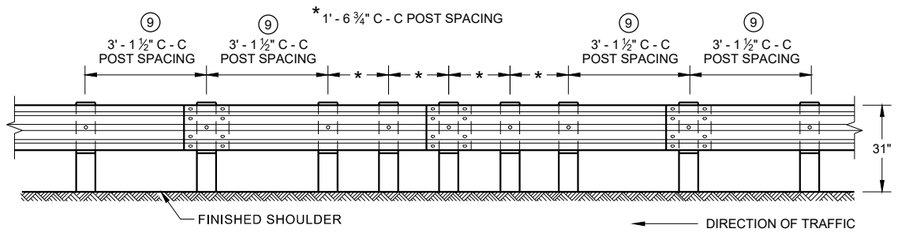
SDD 14B42 - 07a



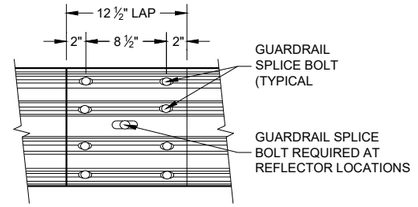
FRONT VIEW
POST SPACING STANDARD INSTALLATION



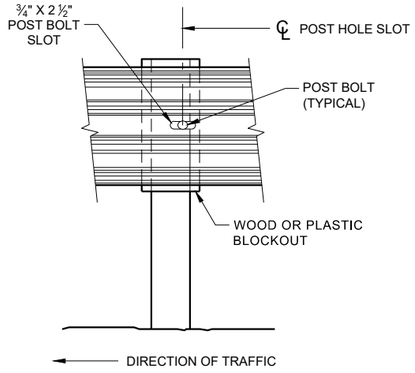
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



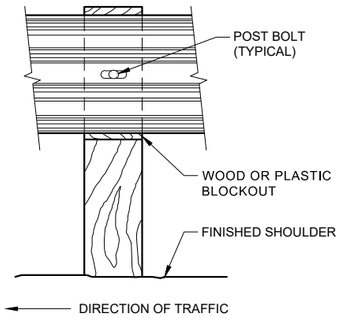
FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST

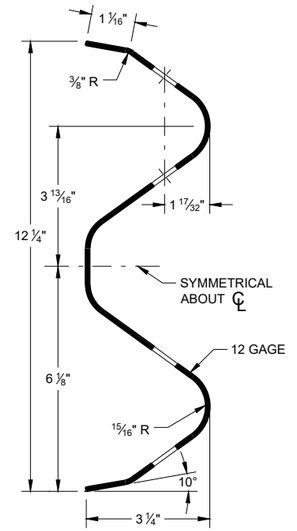
GENERAL NOTES

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

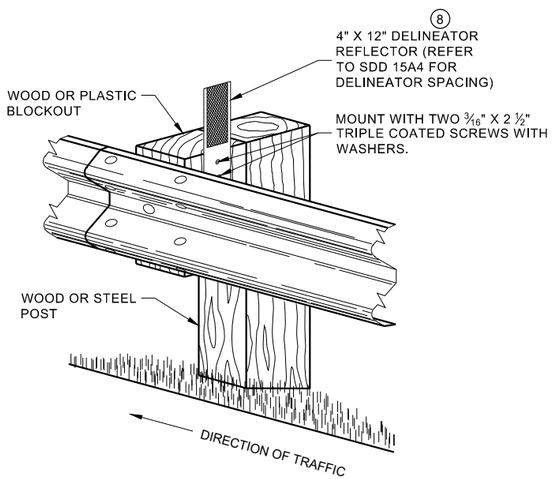
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

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



SECTION THRU W-BEAM RAIL



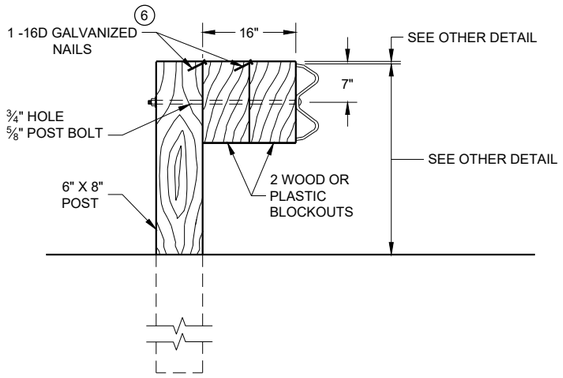
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

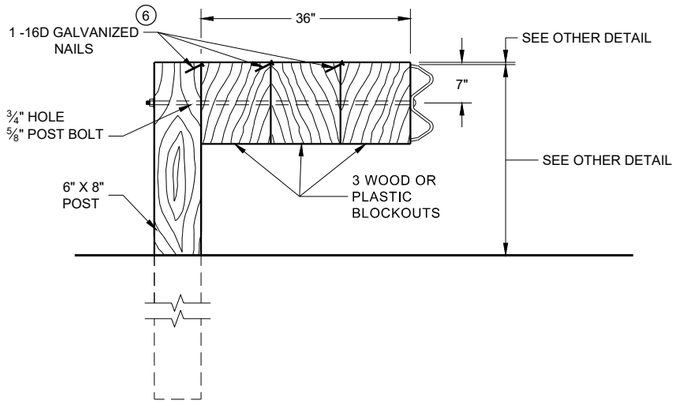
6

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



DETAIL FOR 16" BLOCKOUT DEPTH

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



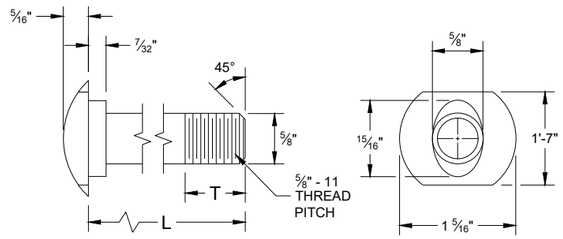
DETAIL FOR 36" BLOCKOUT DEPTH

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.

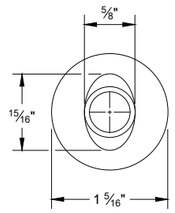
NOTE:

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.

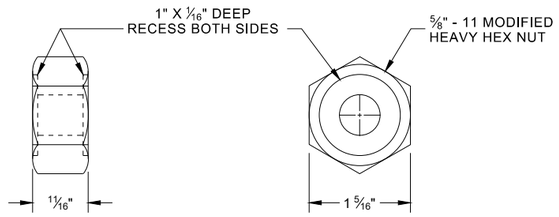


POST BOLT TABLE

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

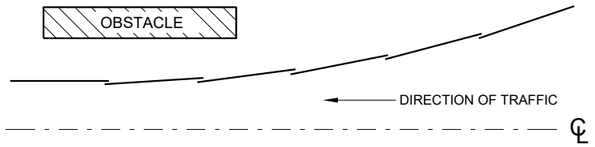


ALTERNATE BOLT HEAD

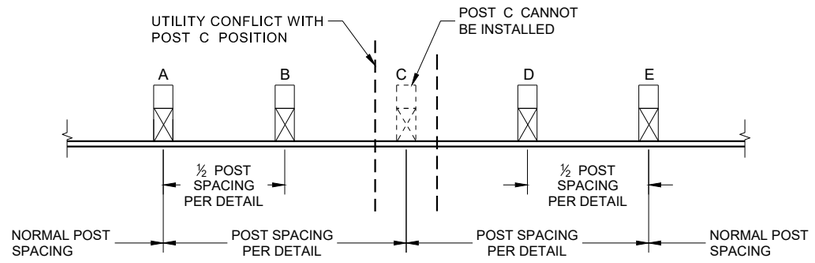


POST BOLT, SPLICE BOLT AND RECESS NUT

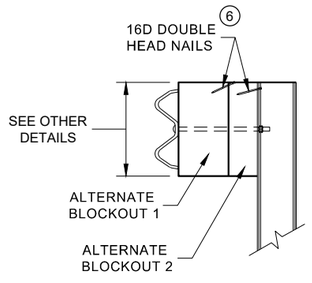
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



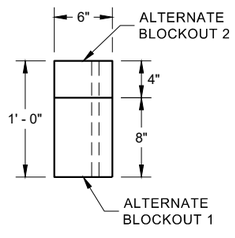
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

6

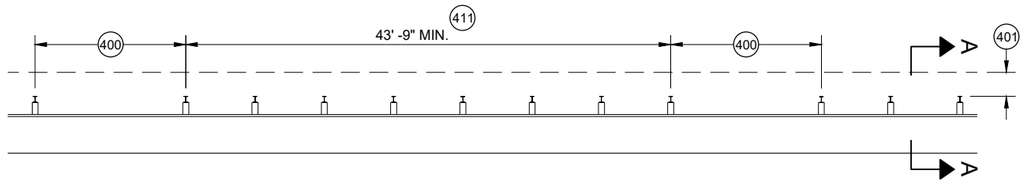
SDD 14B42 - 07c

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

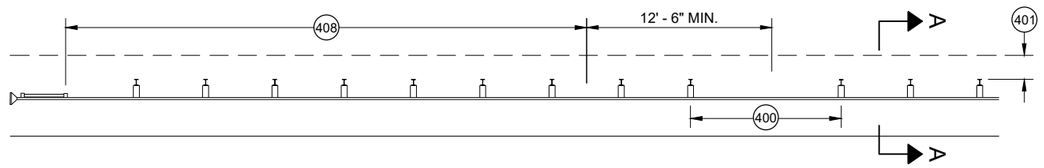
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

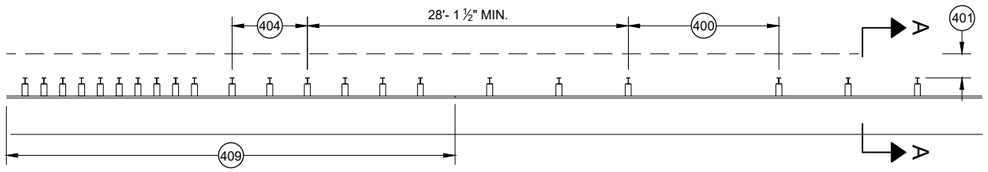
SDD 14B42 - 07c



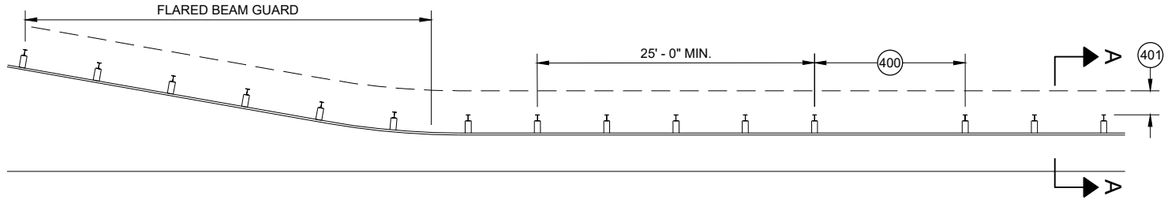
MISSING POST IN MGS GUARDRAIL



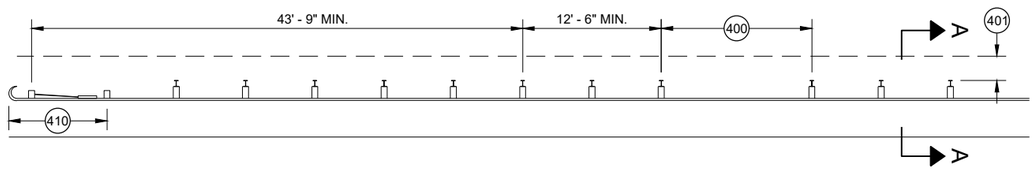
MISSING POST IN MGS GUARDRAIL NEAR EAT



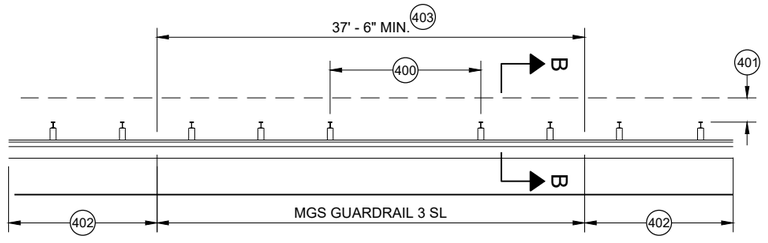
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

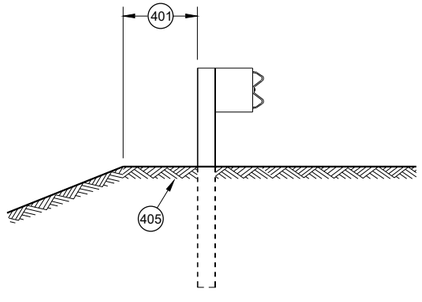


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

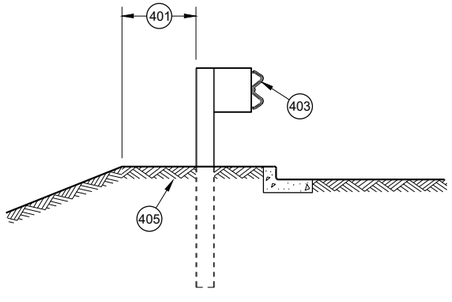


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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

6

SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

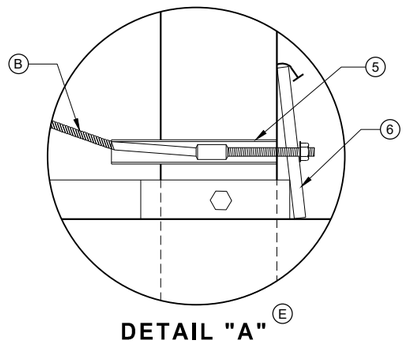
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

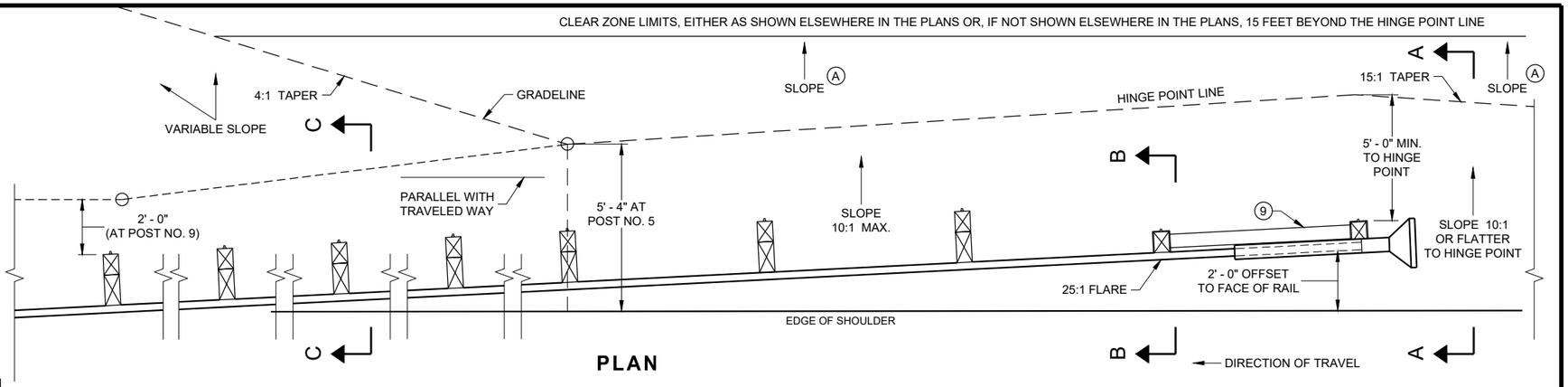
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

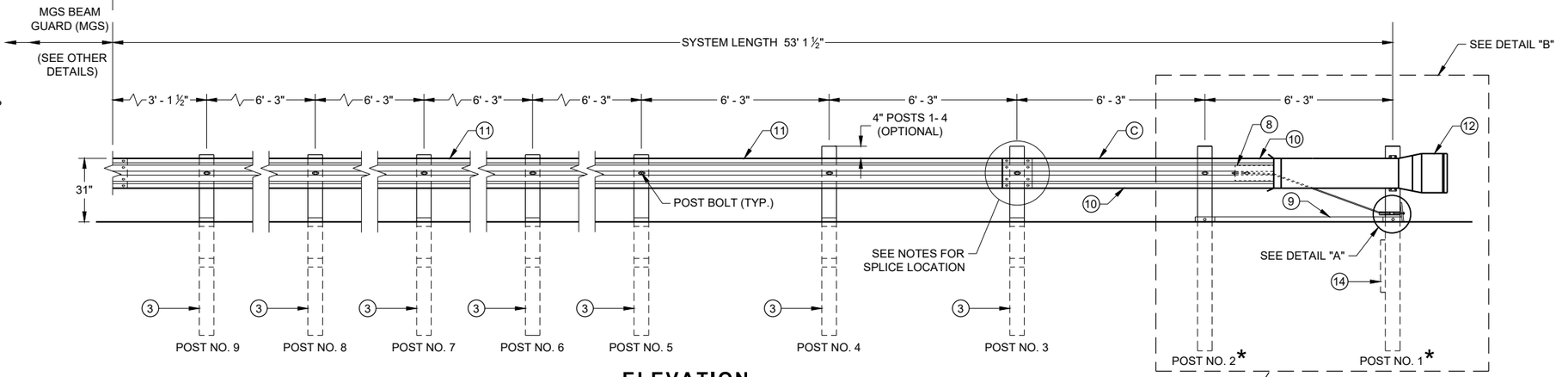
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

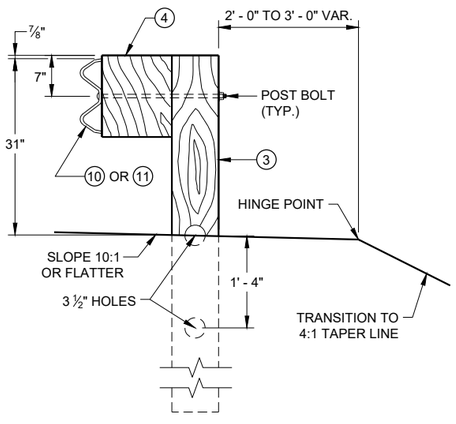
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



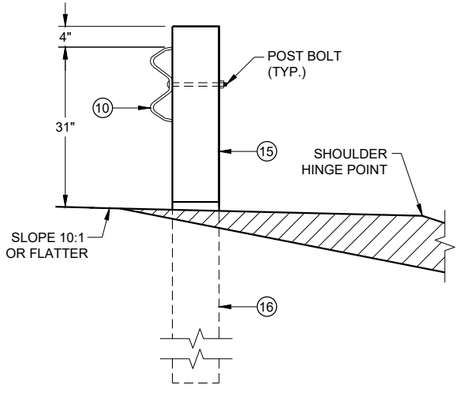
DETAIL "A" (E)



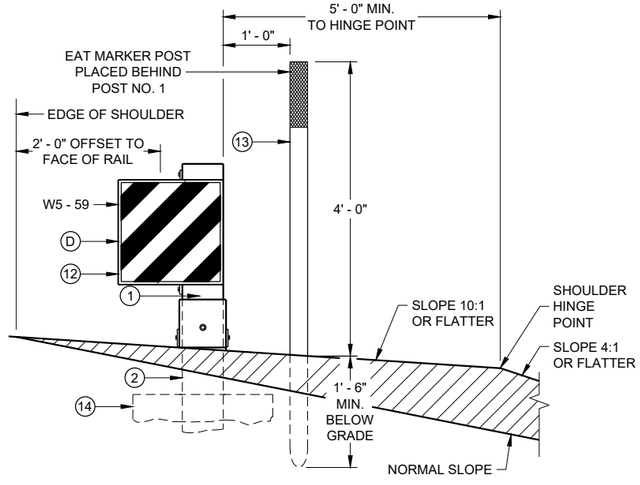




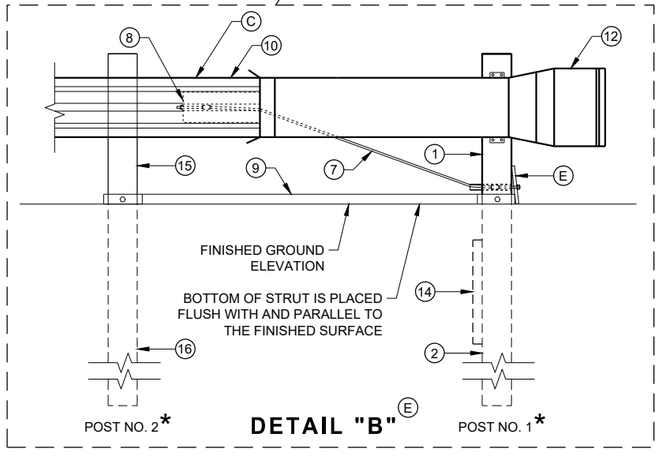
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

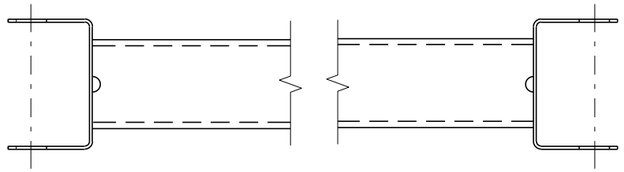
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

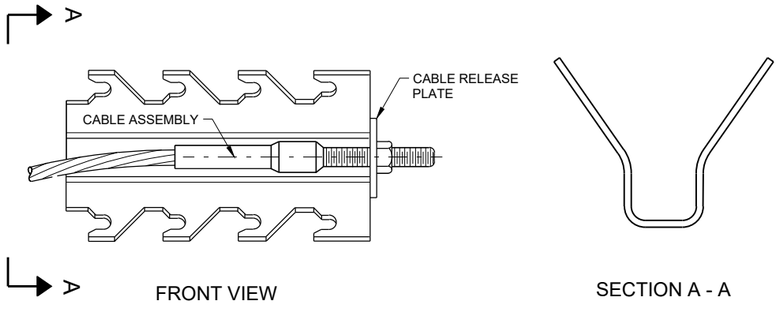
SDD 14B44 - 04a

BILL OF MATERIALS

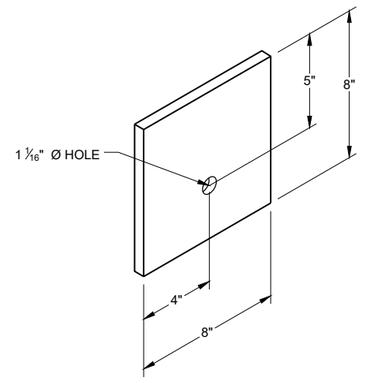
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL 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 GROUND STRUT ⑨ Ⓔ



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



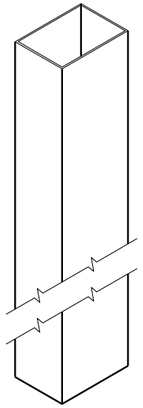
BEARING PLATE ⑥ Ⓔ

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

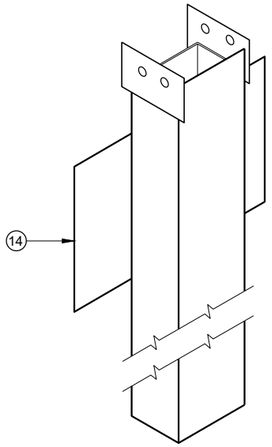
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

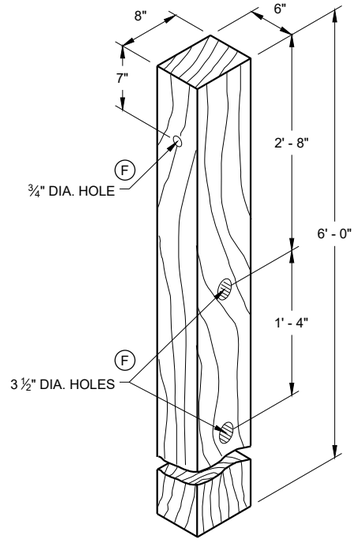
SDD 14B44 - 04b



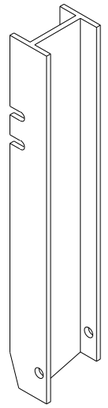
UPPER POST NO. 1 (1) (E)



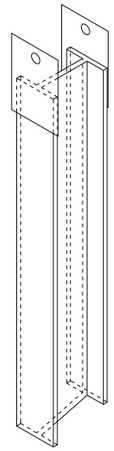
LOWER POST NO. 1 (2) (E)



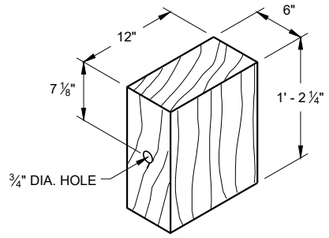
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



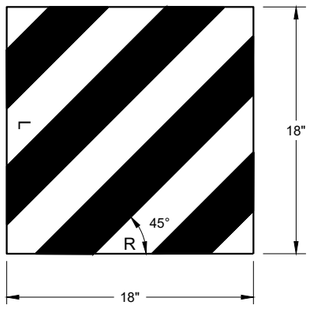
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

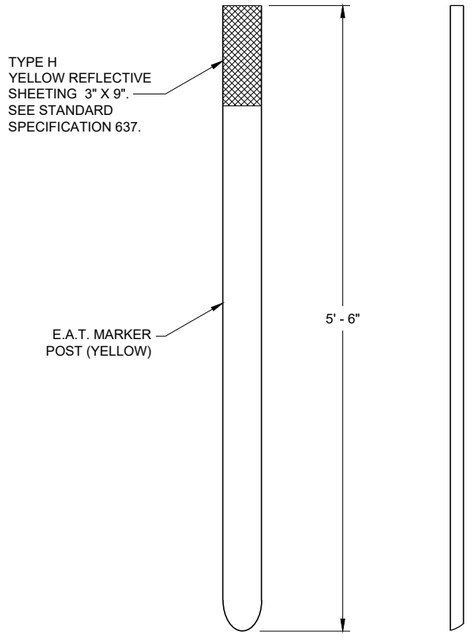


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



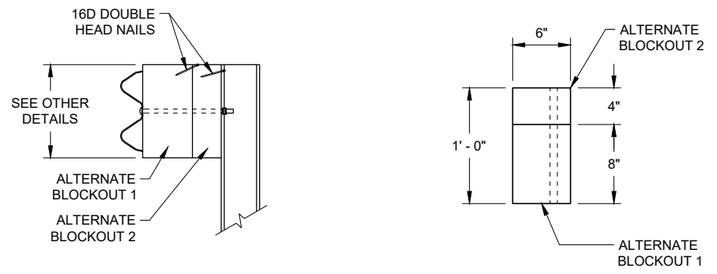
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

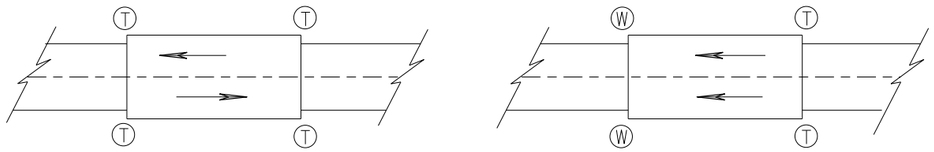
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

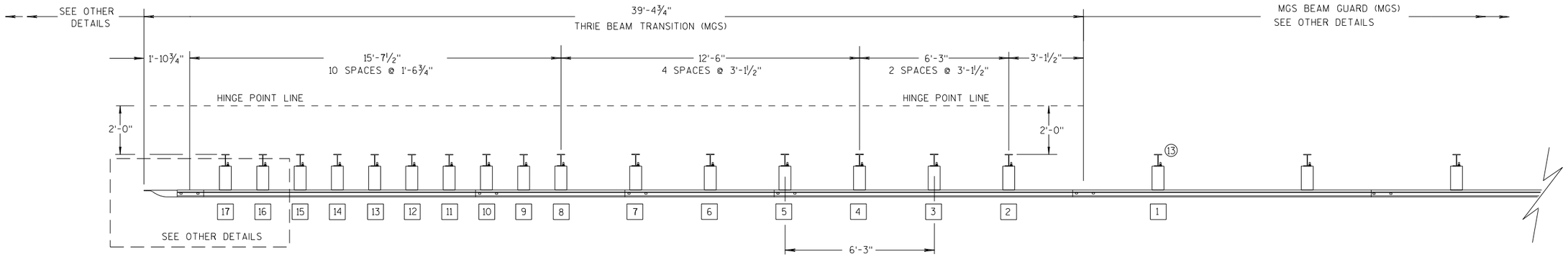
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

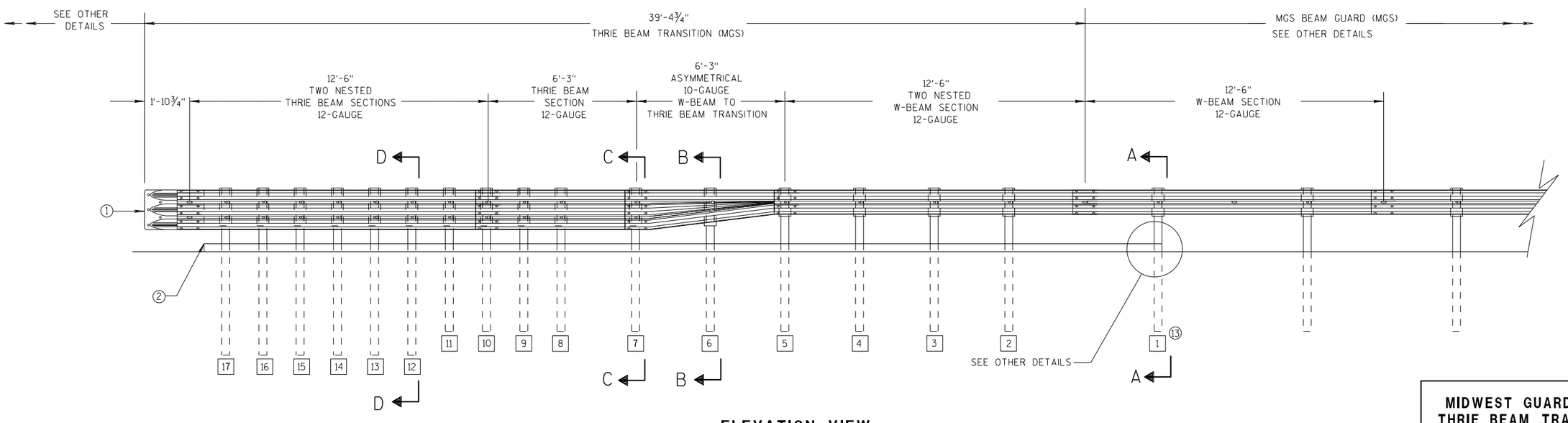
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

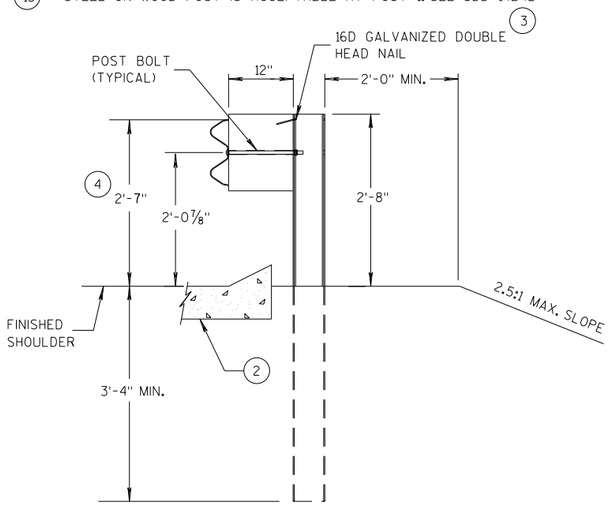
GENERAL NOTES

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

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

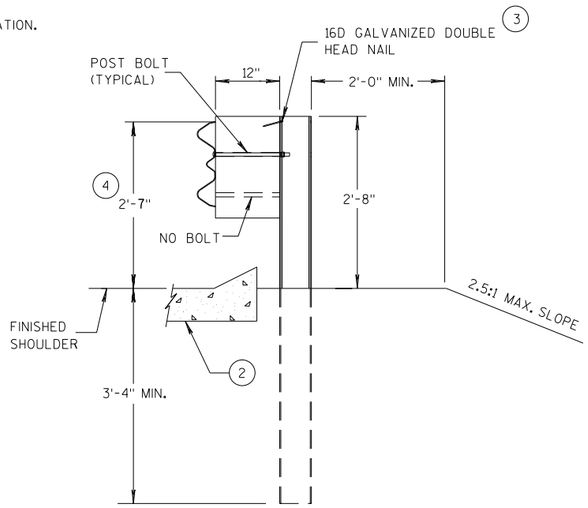
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



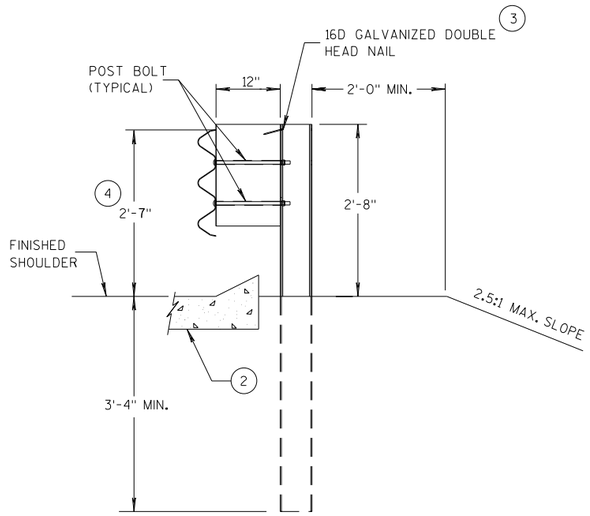
SECTION A-A (13)

POSTS 1-5



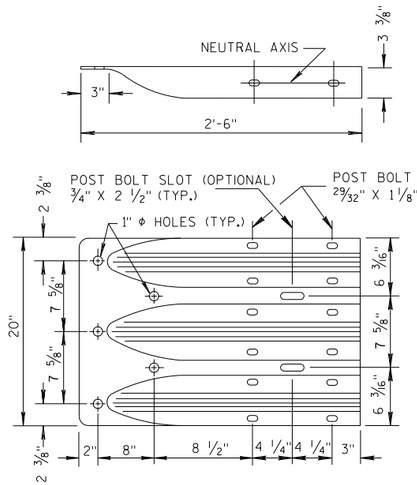
SECTION B-B

POST 6

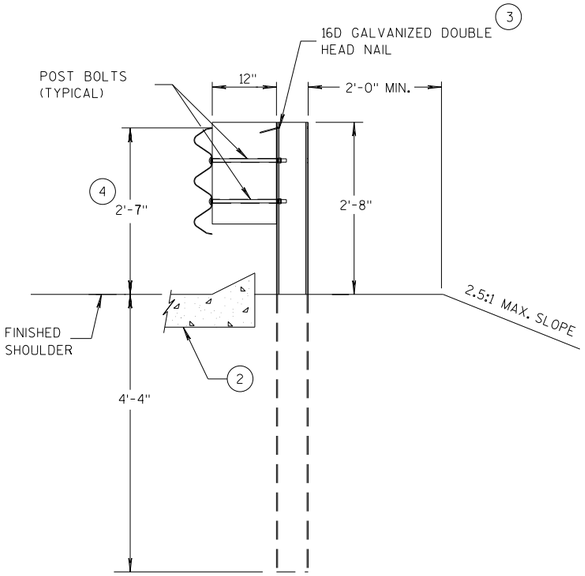


SECTION C-C

POSTS 7-11

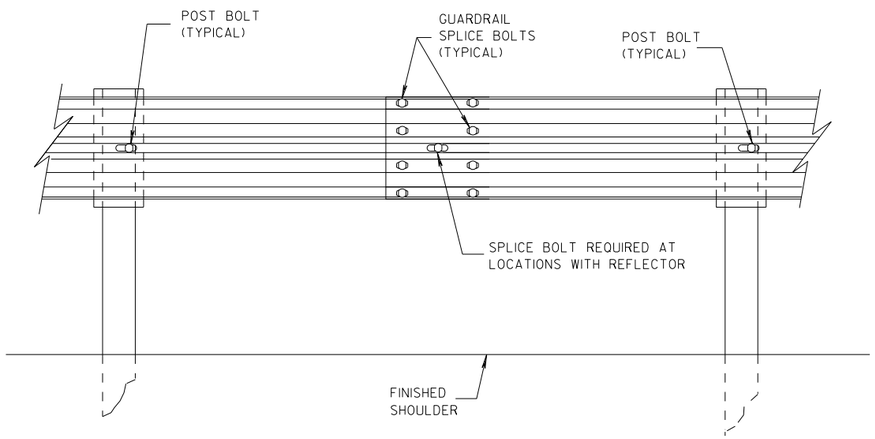


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

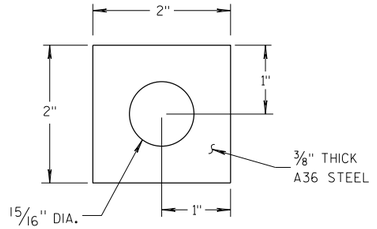
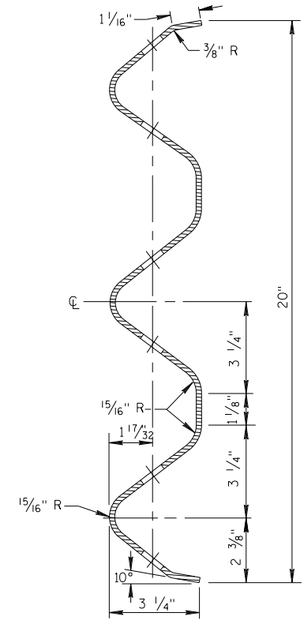


PLATE WASHER DETAIL



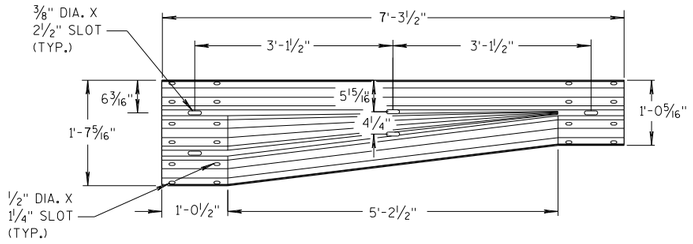
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

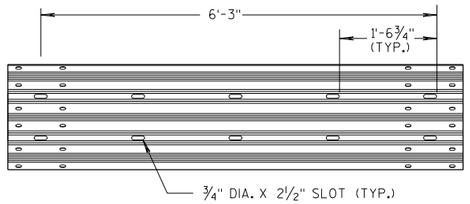
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

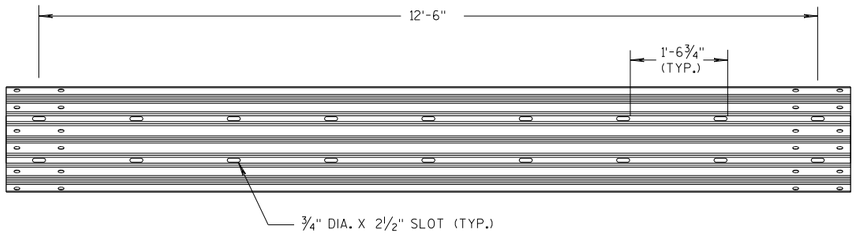
S.D.D. 14 B 45-5b



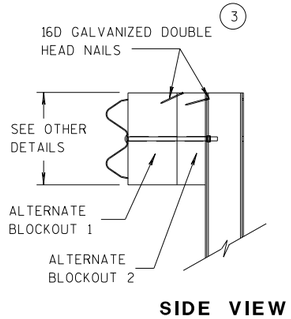
W-BEAM TO THRIE BEAM TRANSITION SECTION



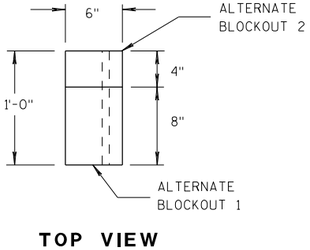
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

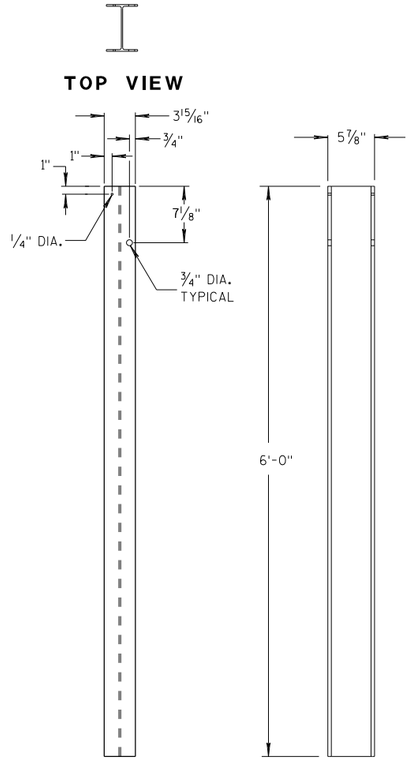


SIDE VIEW

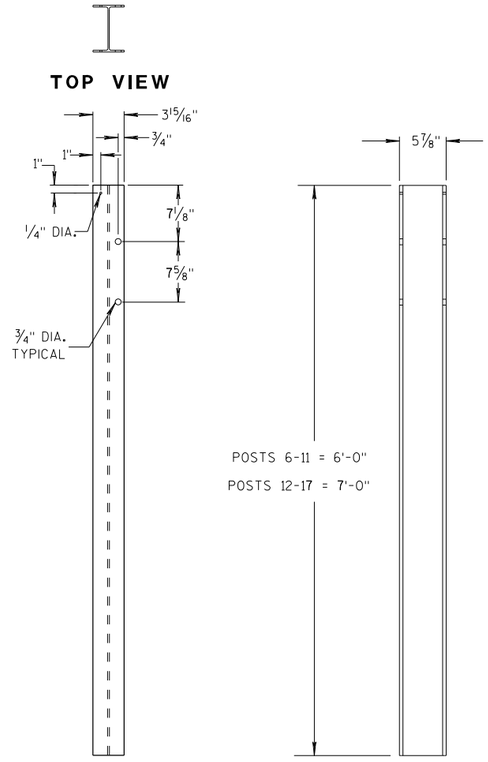


TOP VIEW

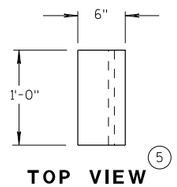
ALTERNATE WOOD BLOCKOUT DETAIL



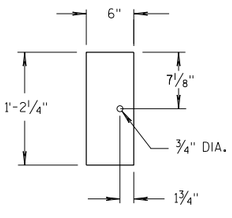
STEEL POSTS 1-5 (13)



STEEL POSTS 6-17

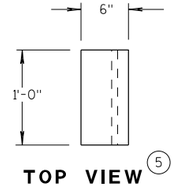


TOP VIEW (5)

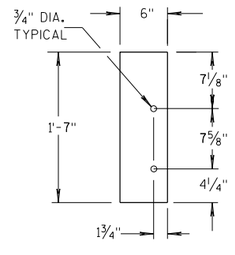


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

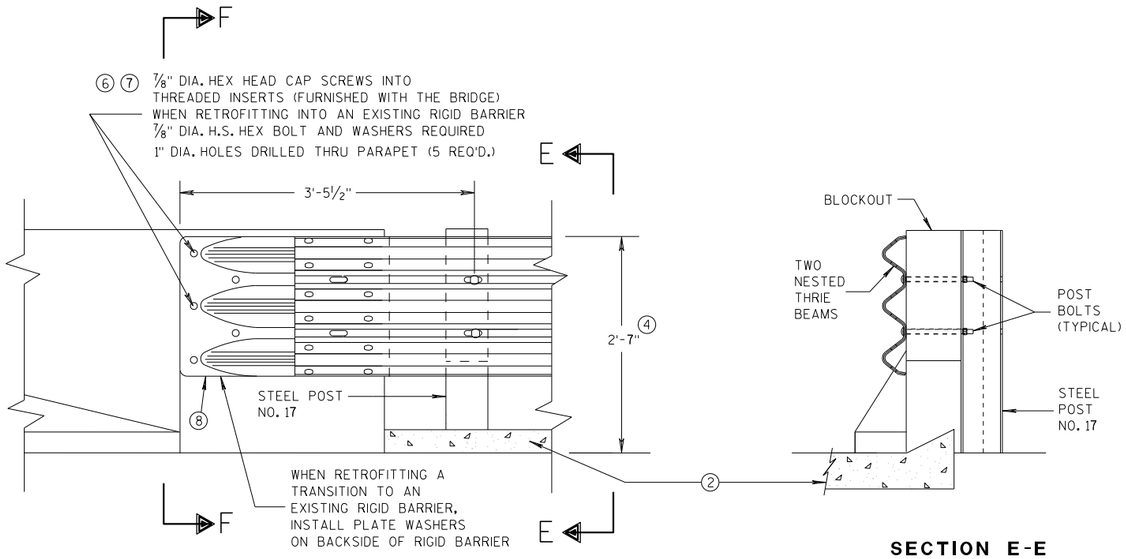
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

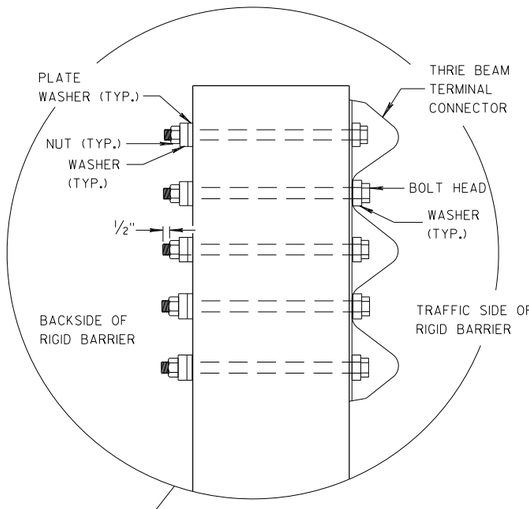
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

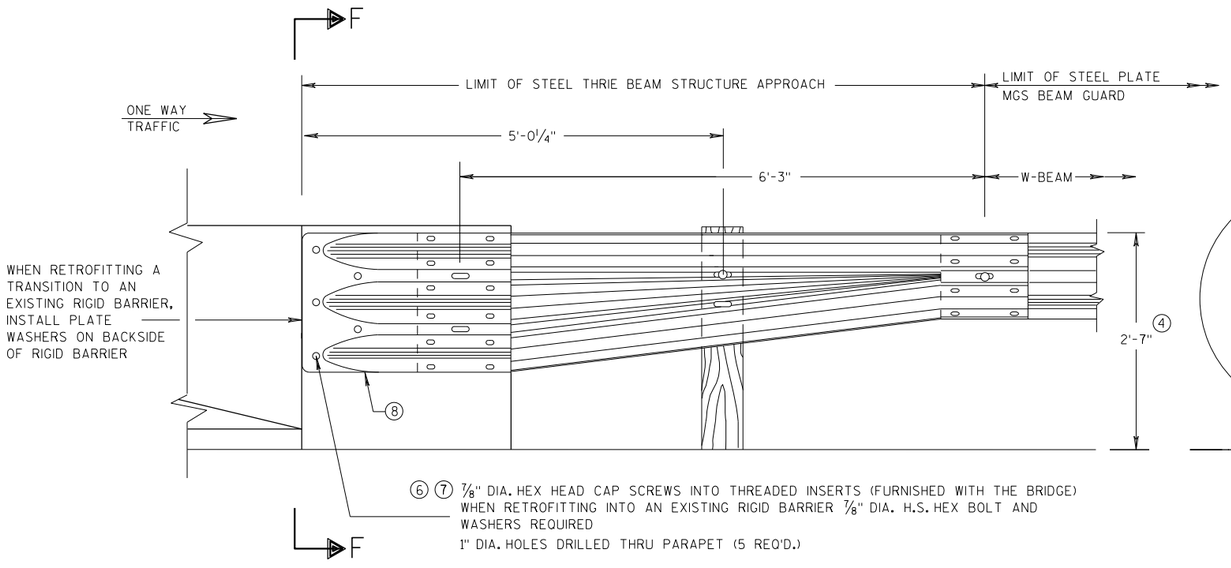
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

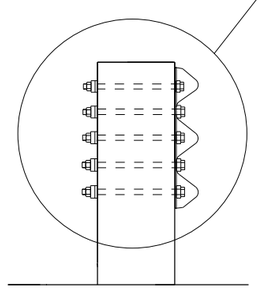
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

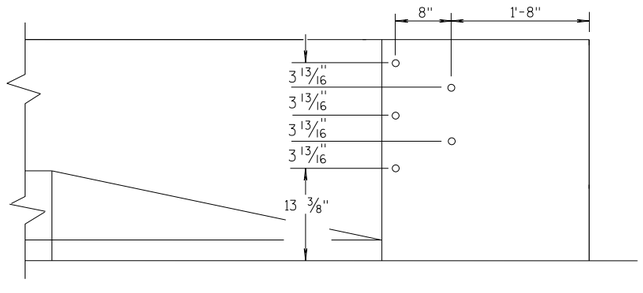




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

6

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

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

GENERAL NOTES

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

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

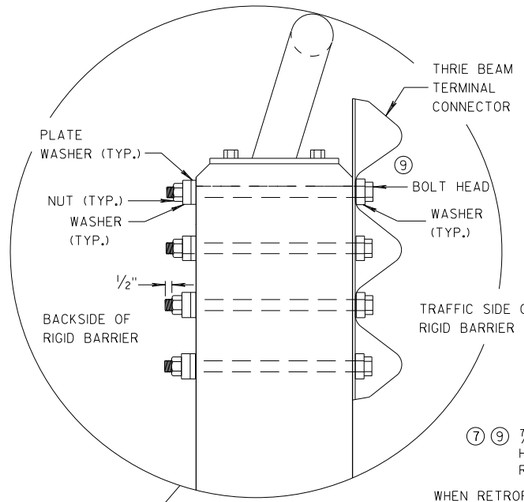
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

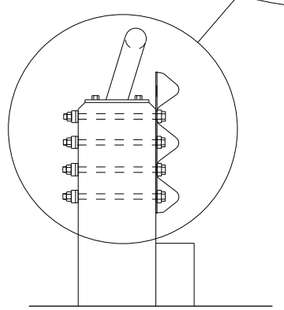
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

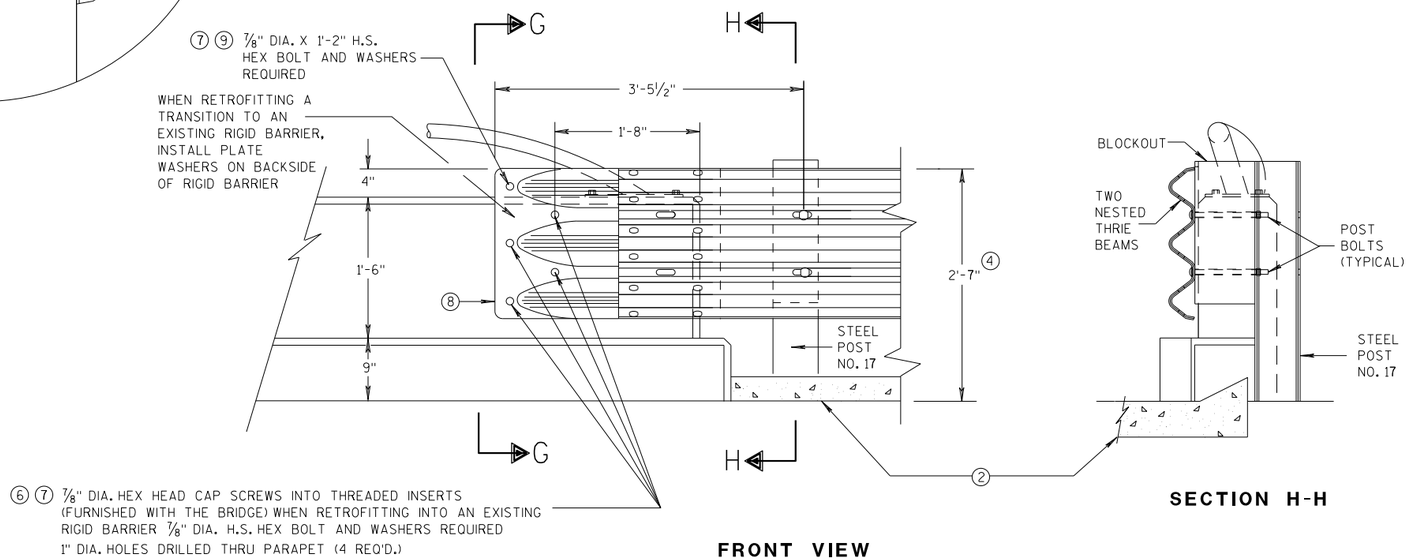
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

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





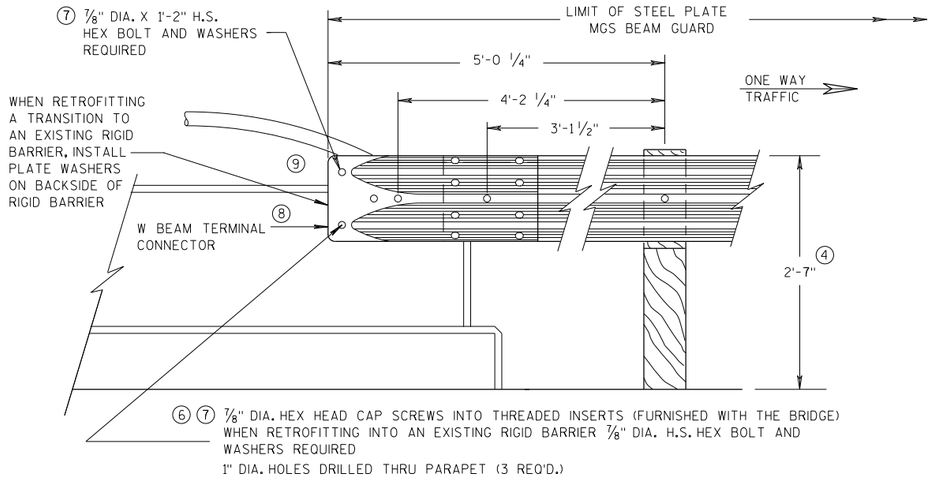
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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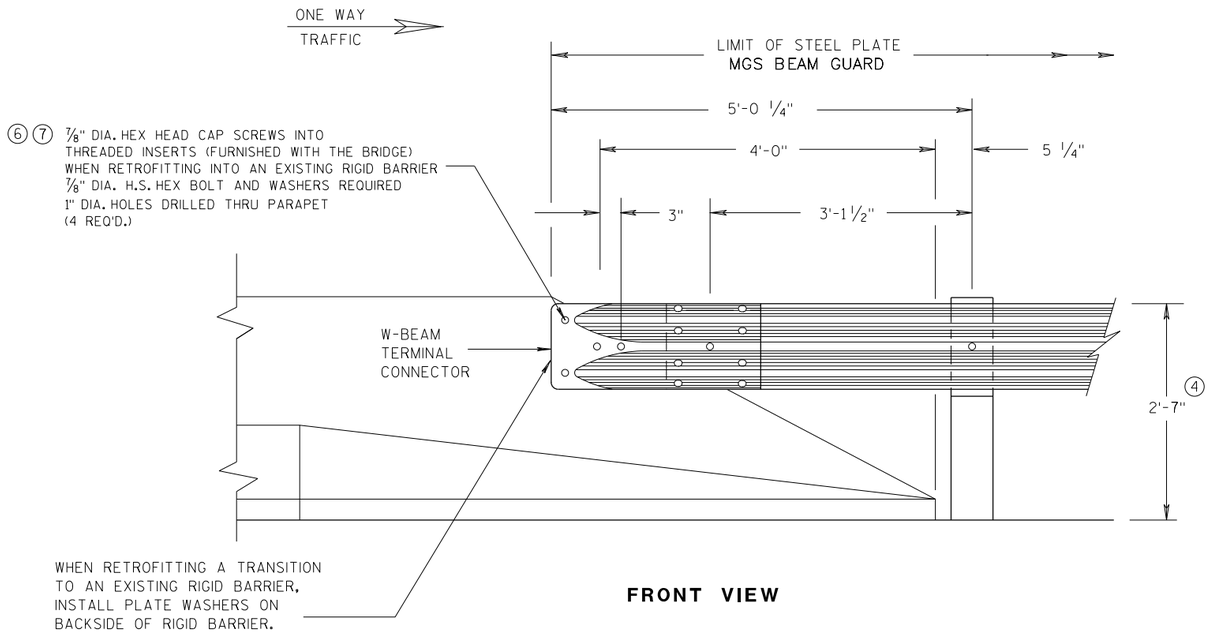
S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

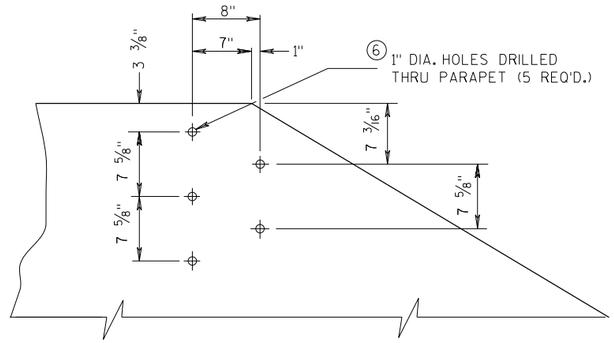
GENERAL NOTES

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

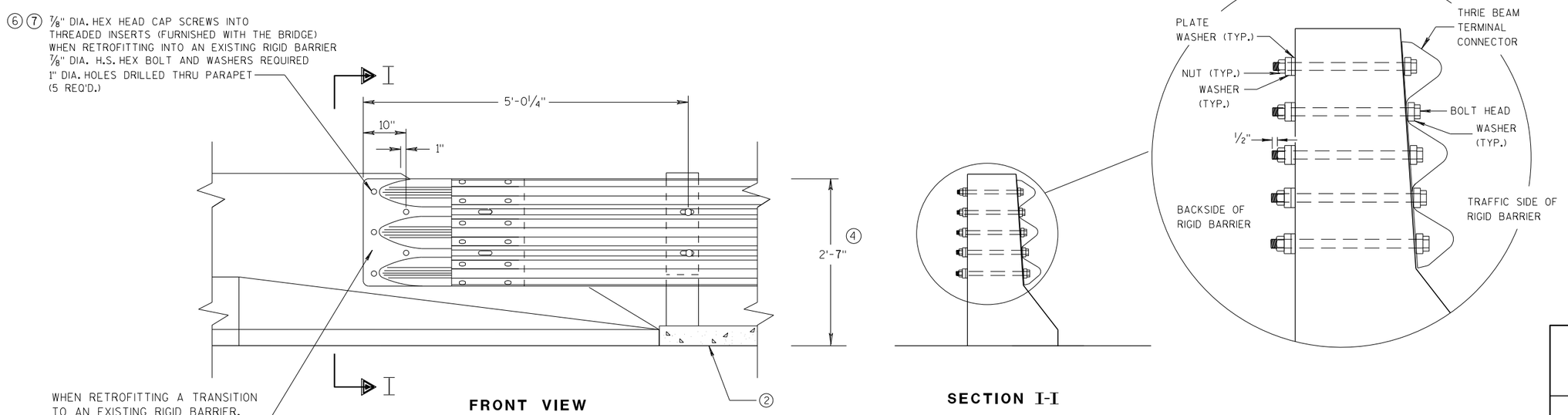
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

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



DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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

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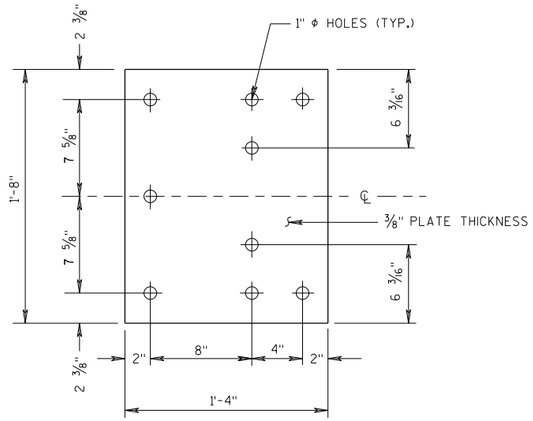
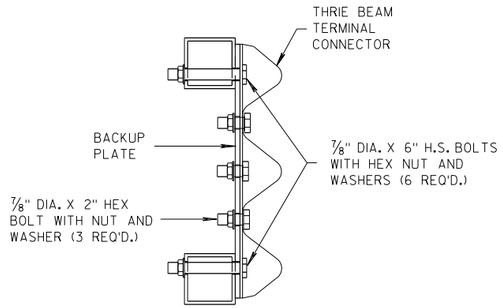
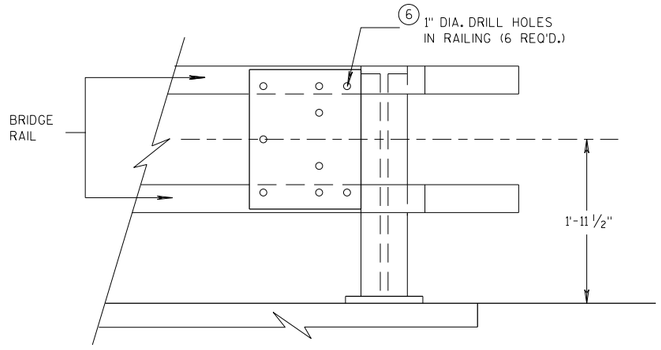
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

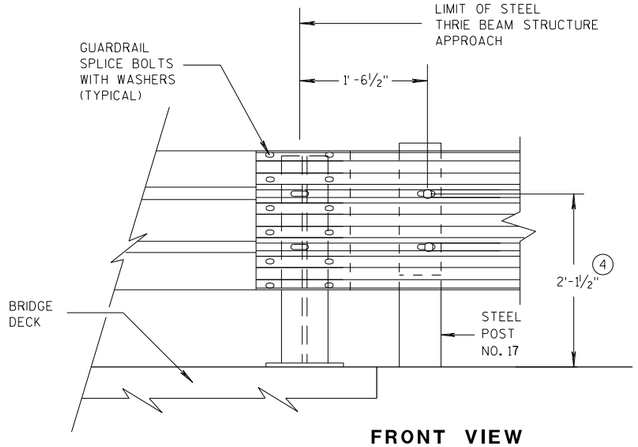


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

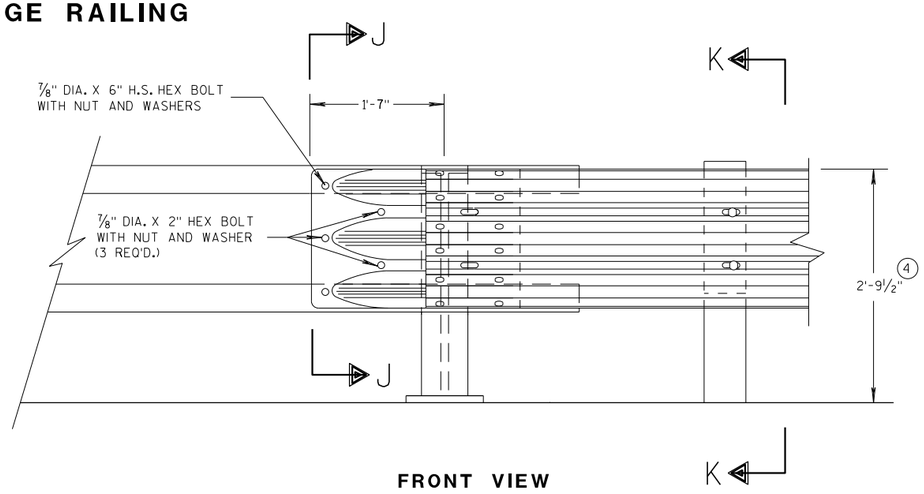
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

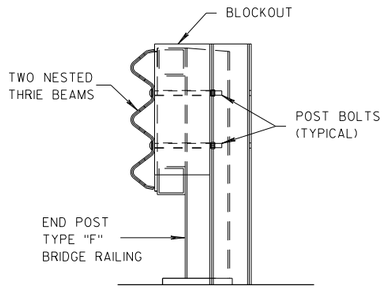


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
FHWA

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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

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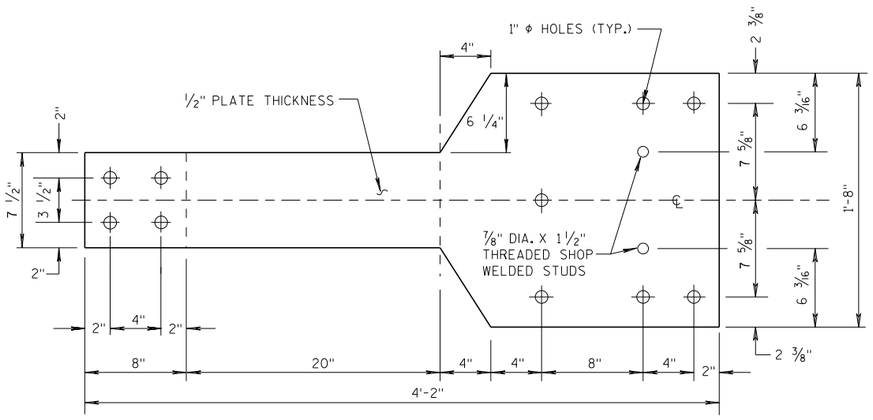
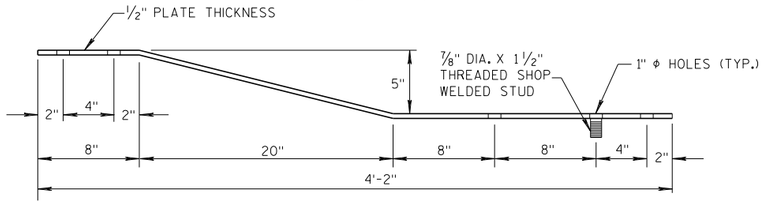
S.D.D. 14 B 45-5g

GENERAL NOTES

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

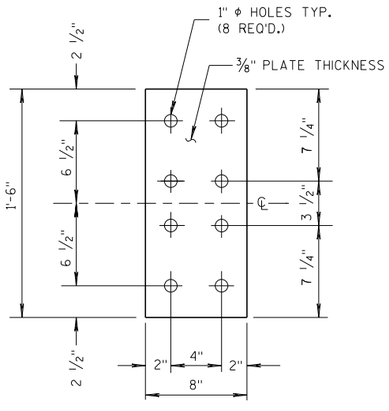


FRONT VIEW



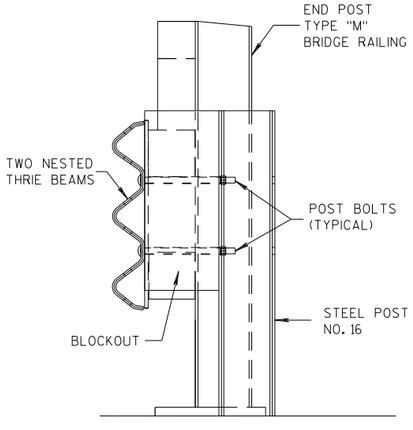
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

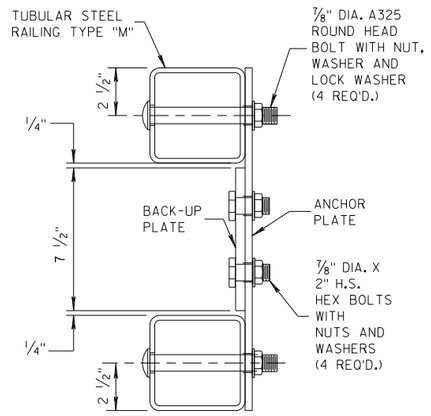


FRONT VIEW

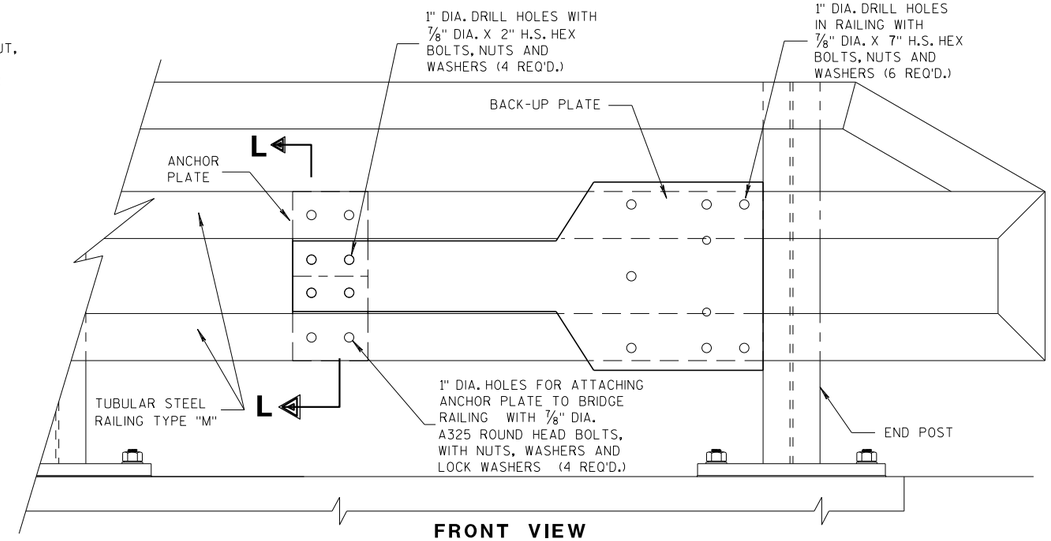
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

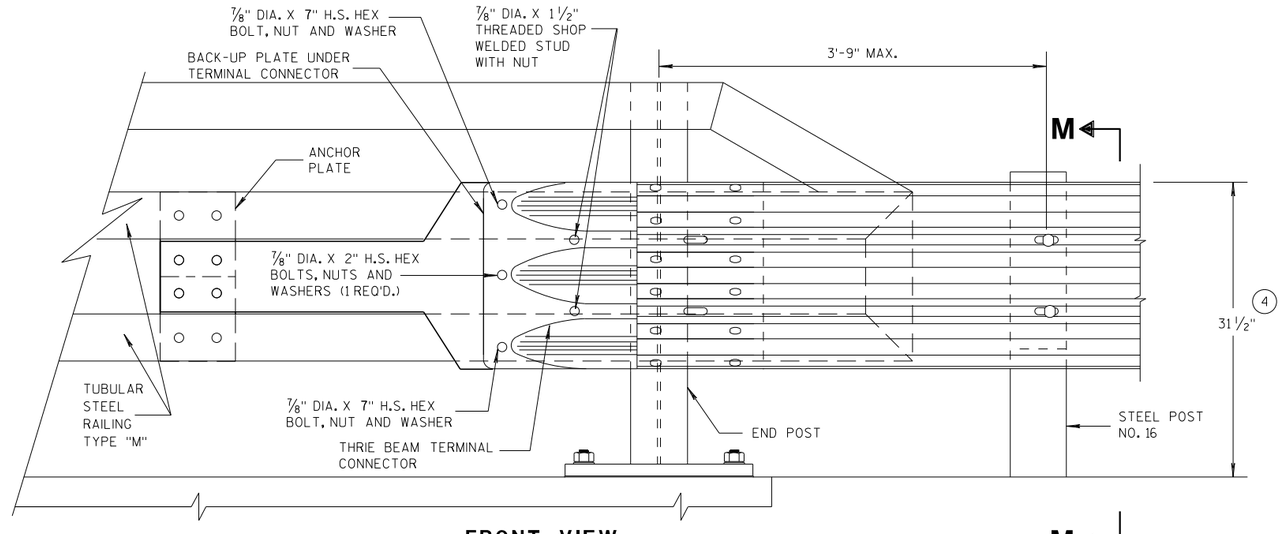


SECTION L-L

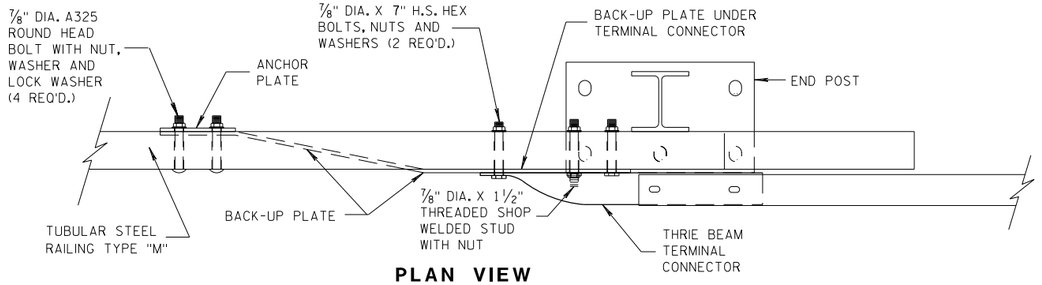


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

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

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

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

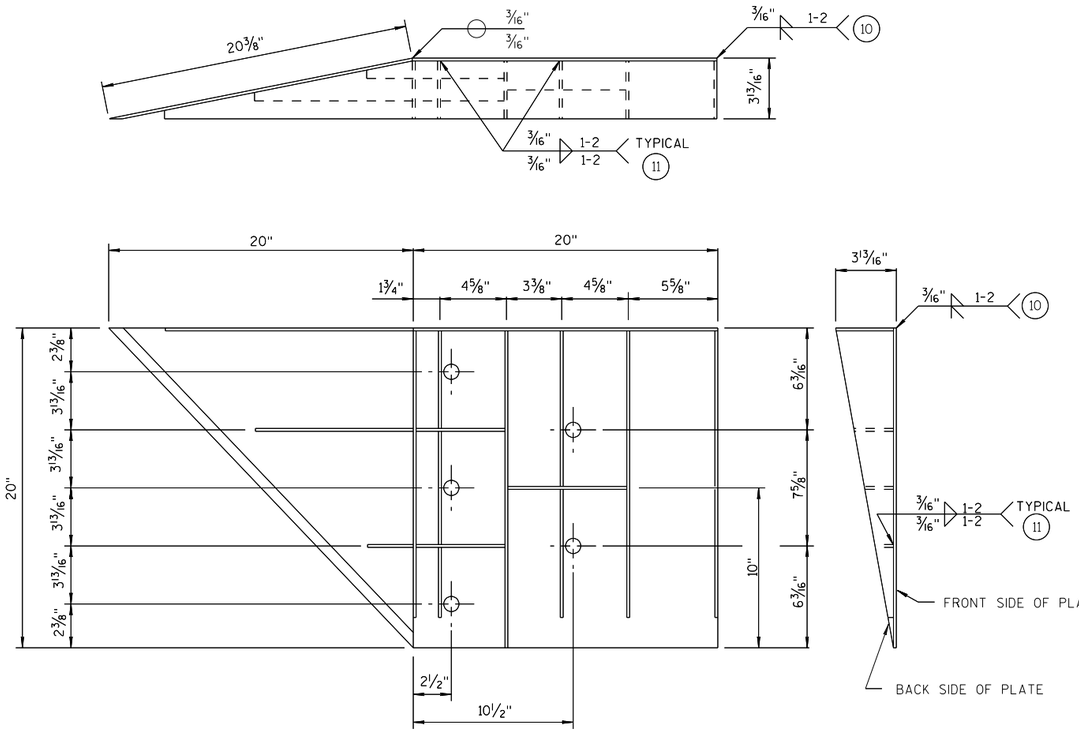
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

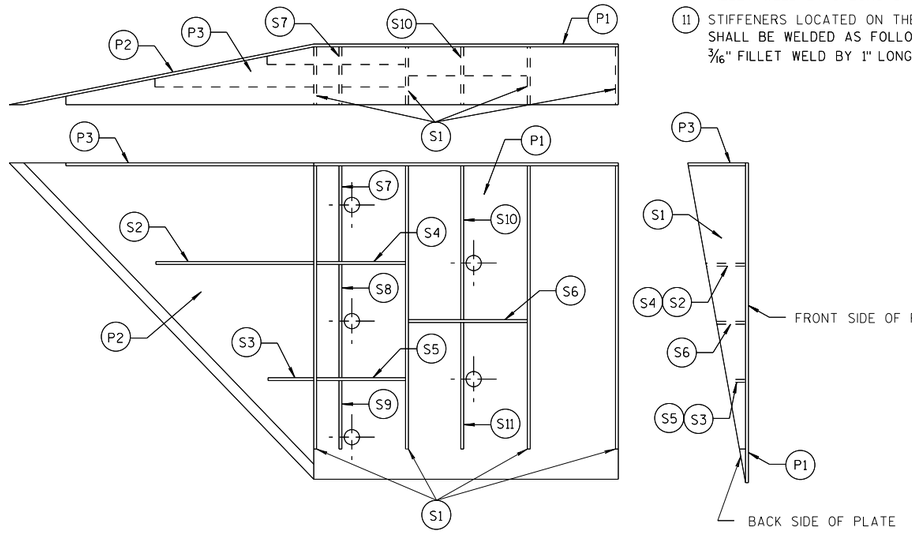


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7/2018
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FHWA

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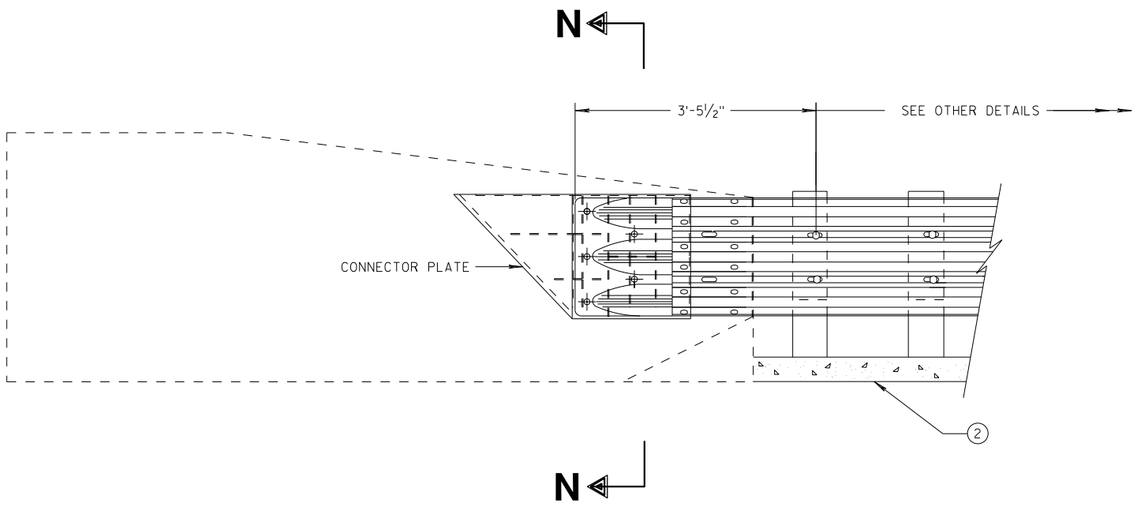
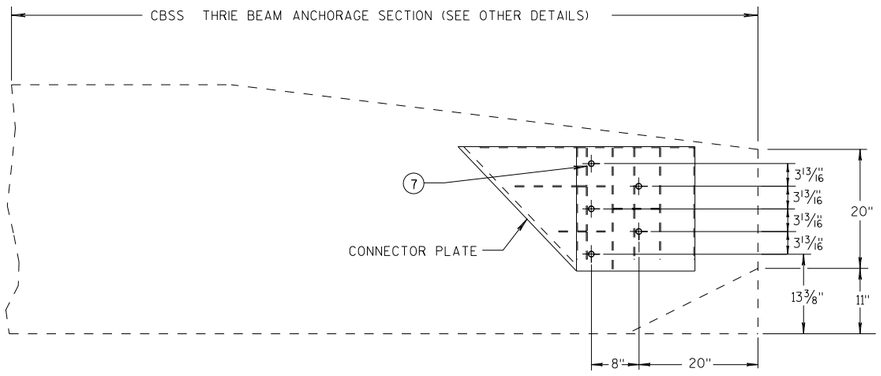
S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



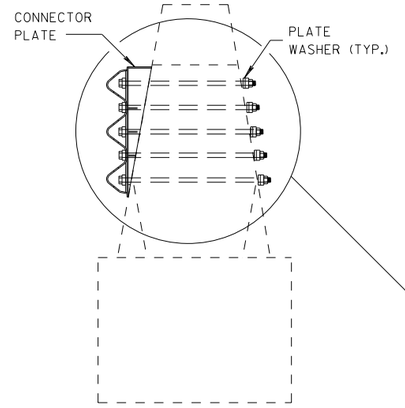
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

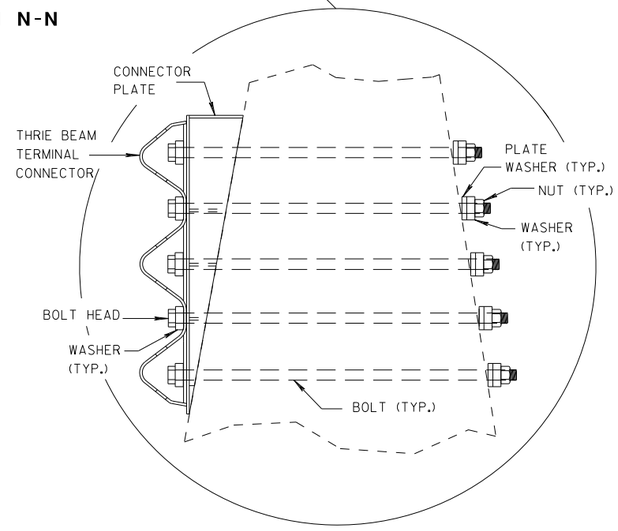
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

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



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DI UNIT SUPERVIS
FHWA

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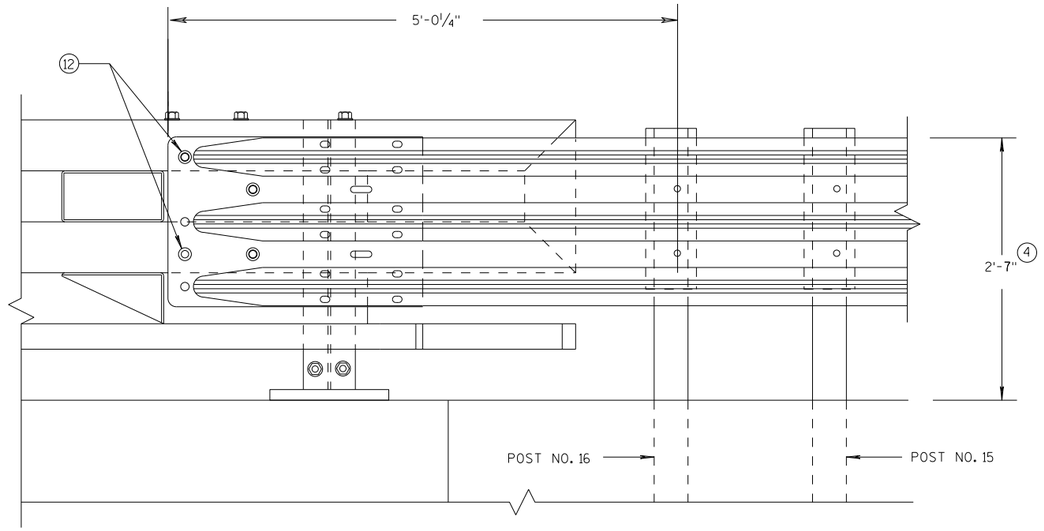
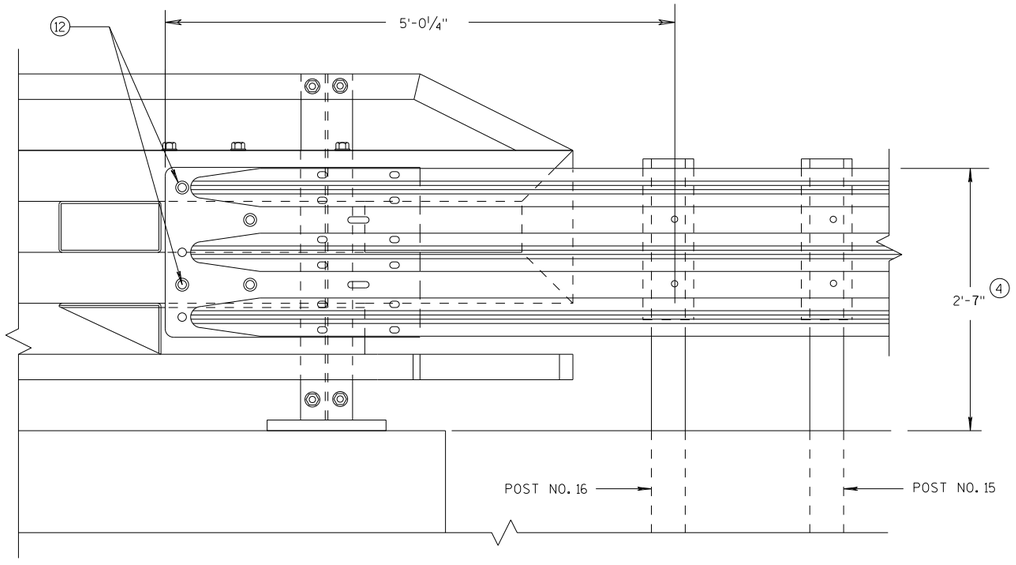


ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D 45 NT
UNIT SUPERVIS

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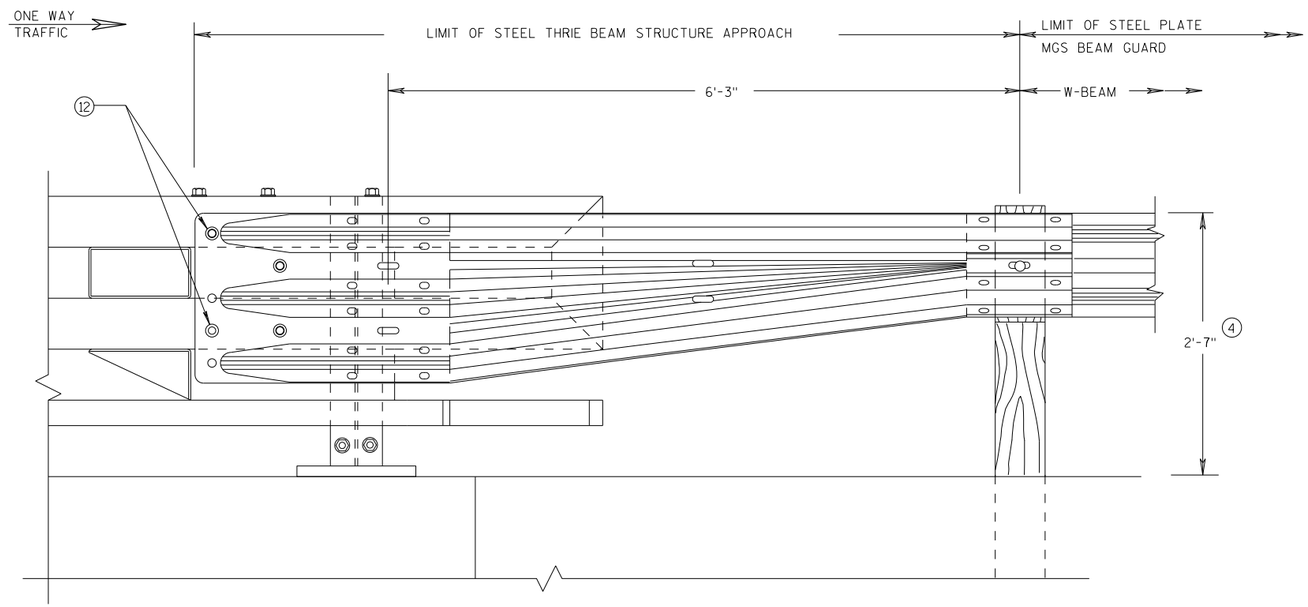


FRONT VIEW

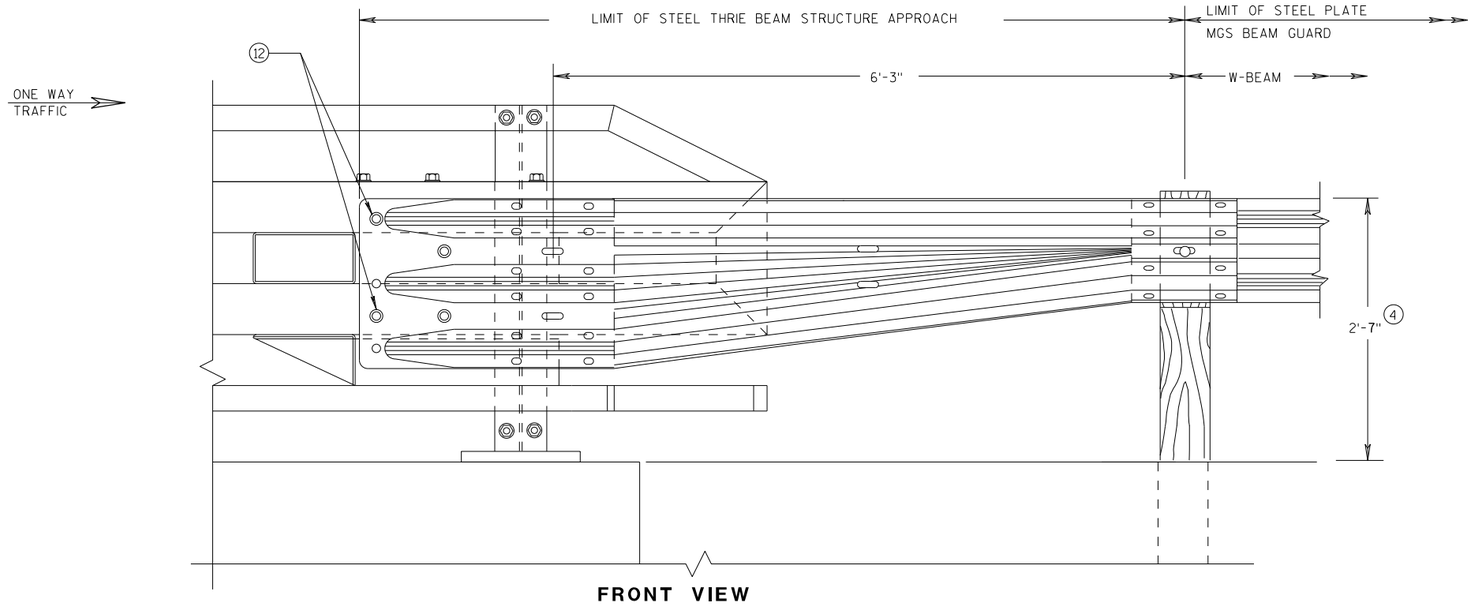
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

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



FRONT VIEW

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVIS
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FHWA

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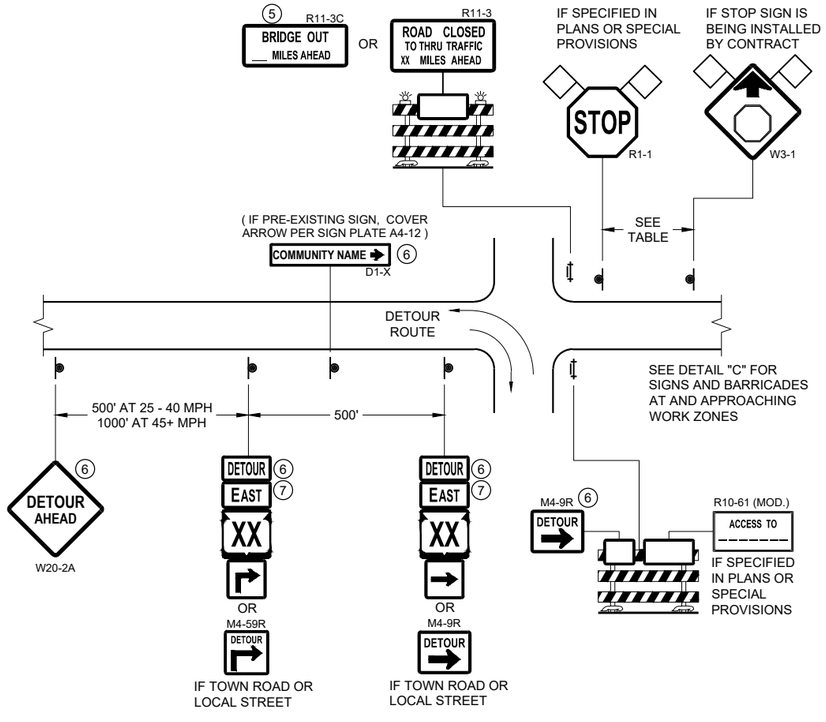
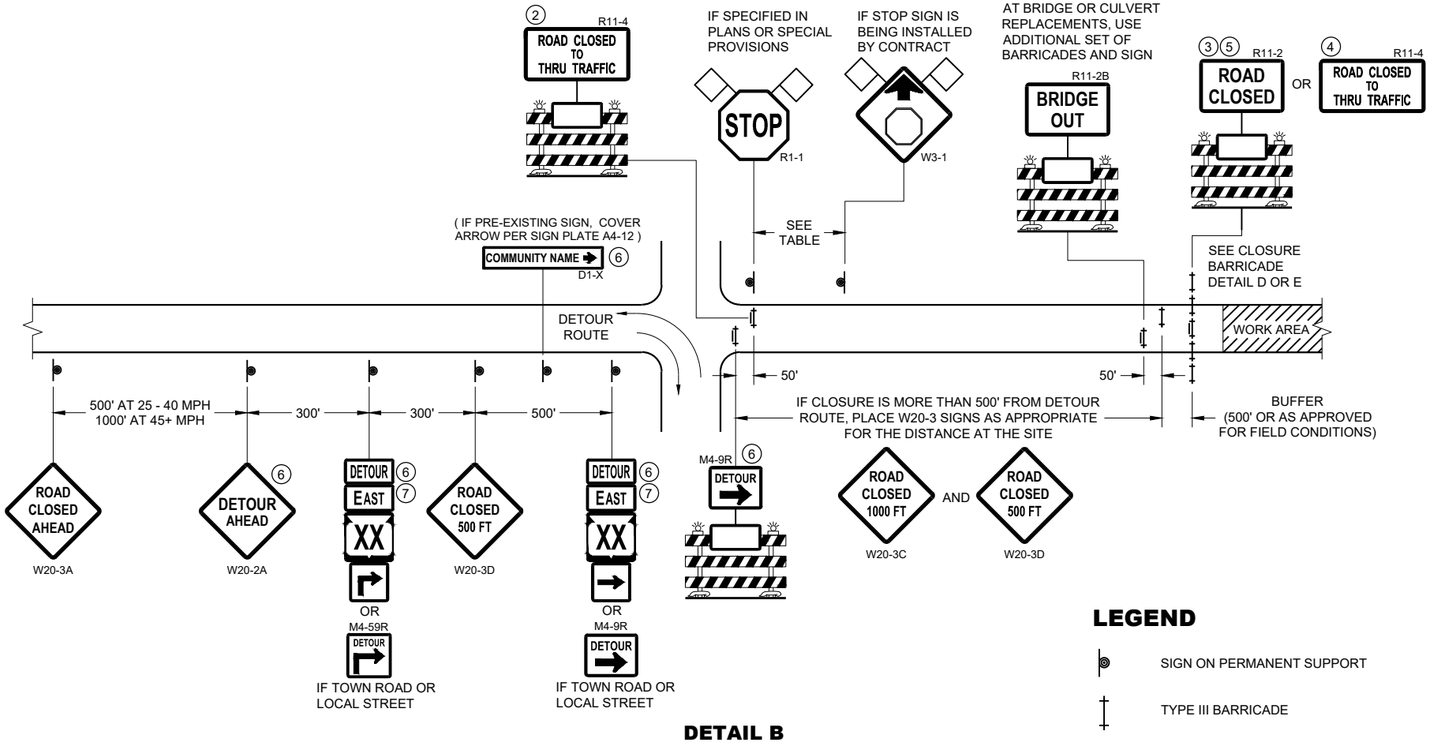


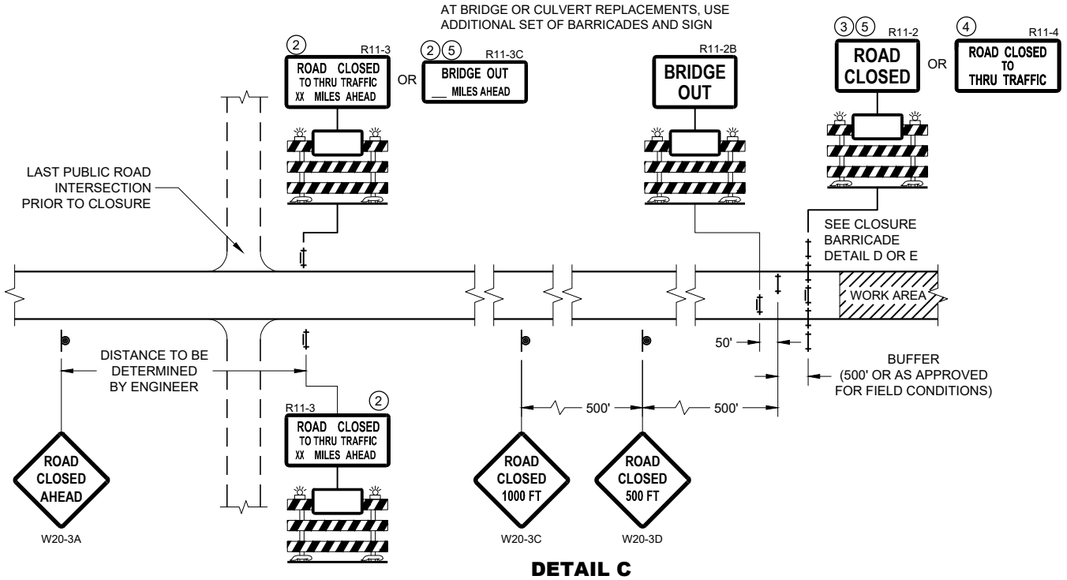
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

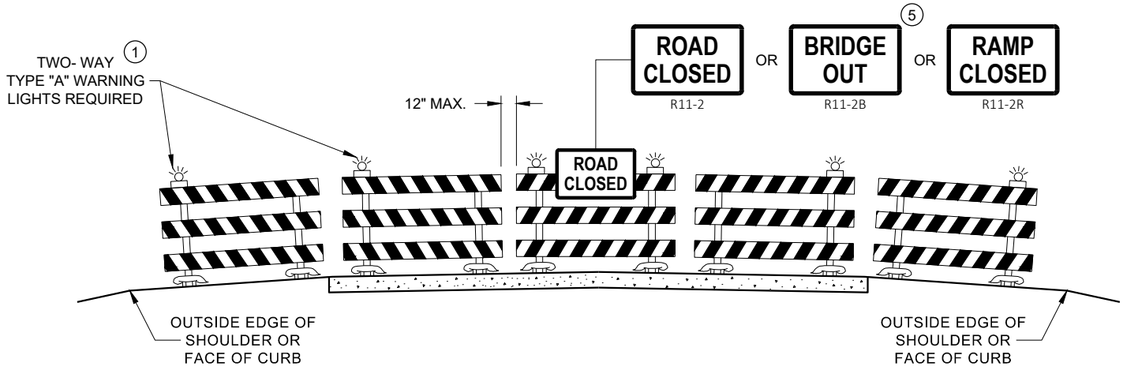
FHWA

6

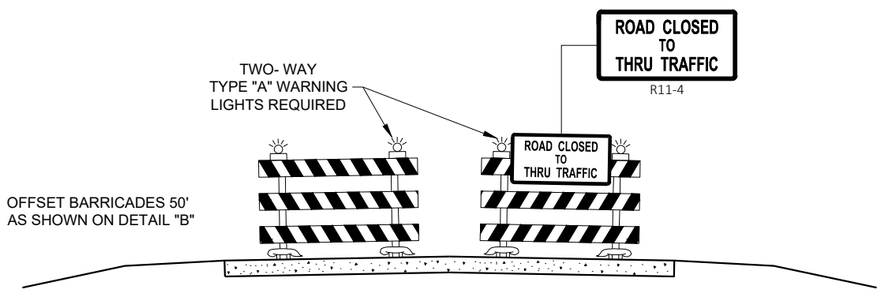
SDD 15C02 - 09a

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

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.

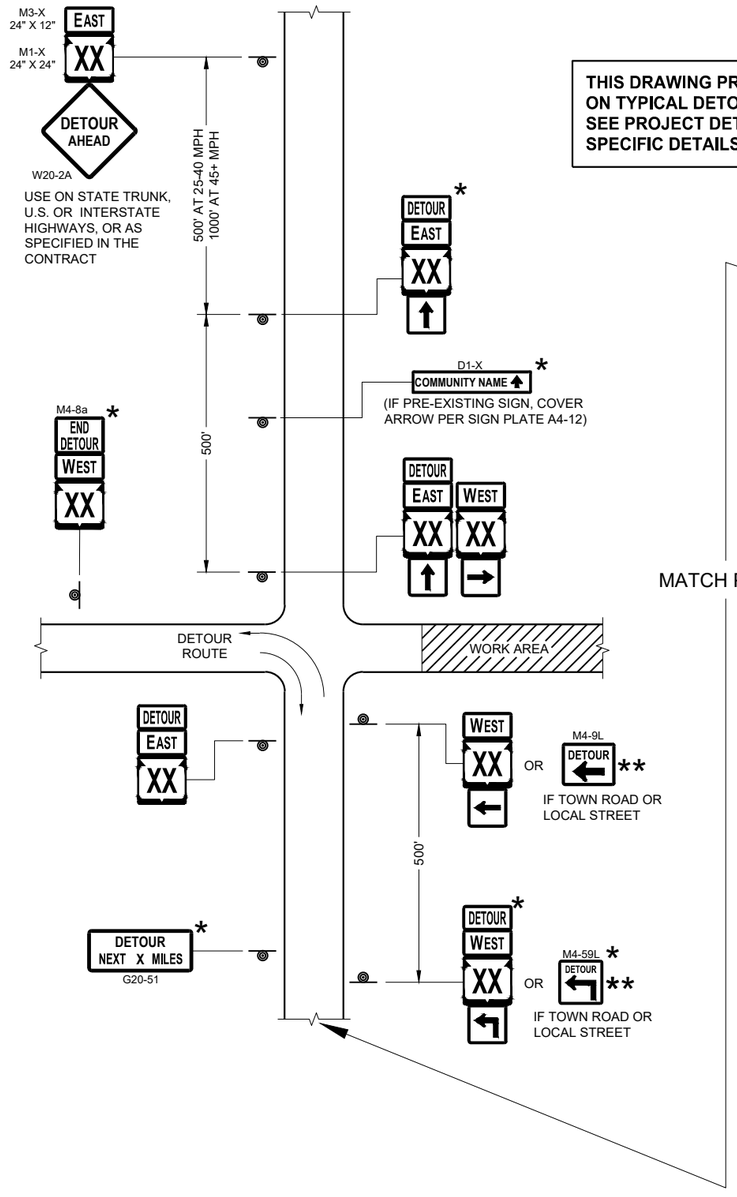
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

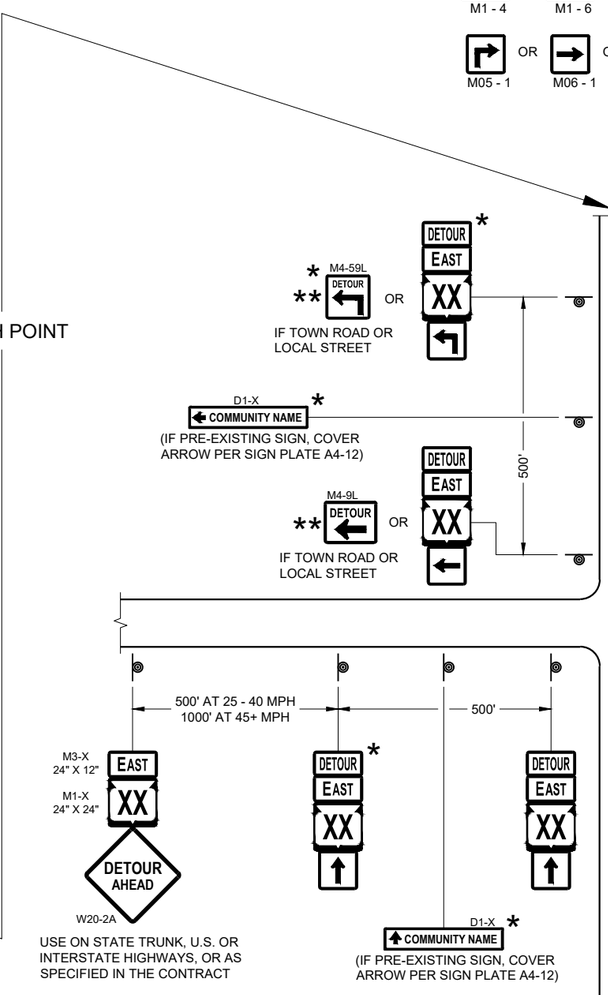
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING 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.

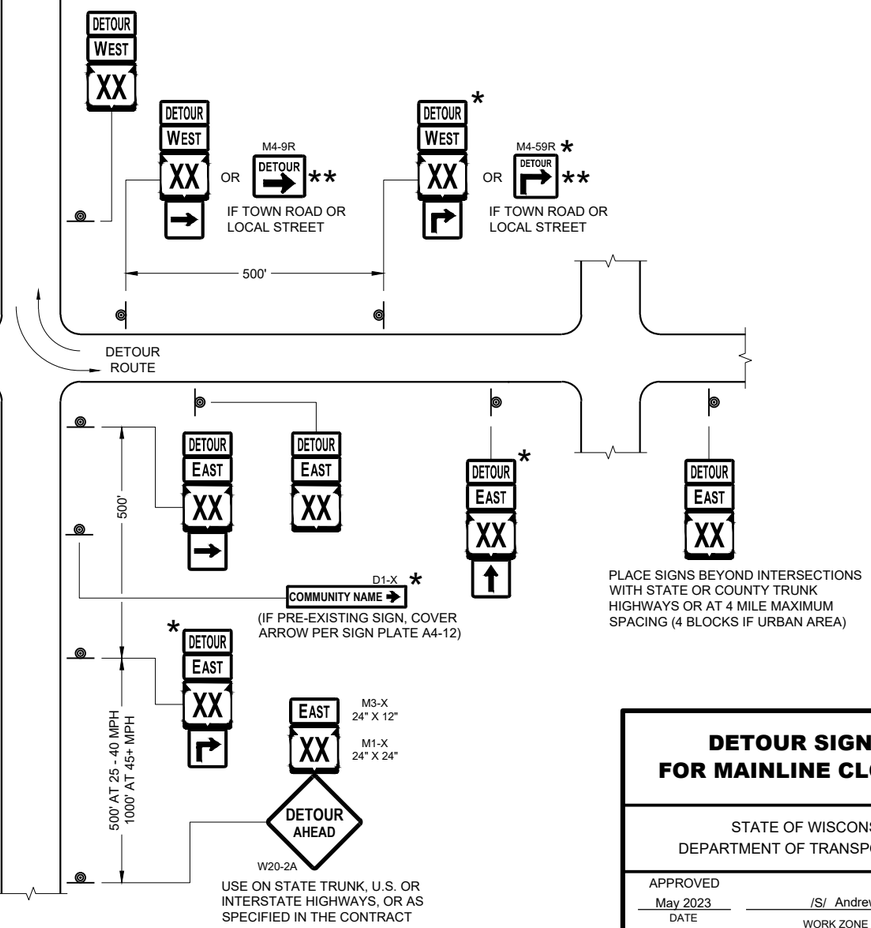
* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** 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.



MATCH POINT





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

DETAIL F
DETOUR SIGNING

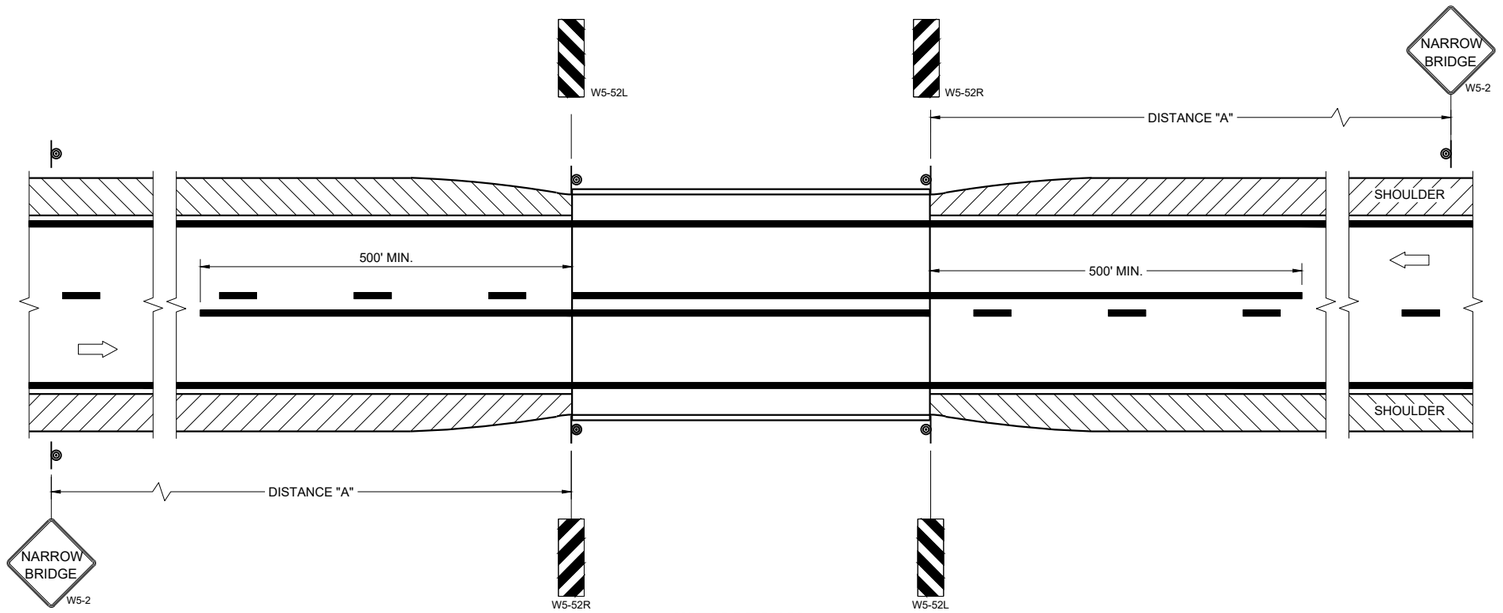
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

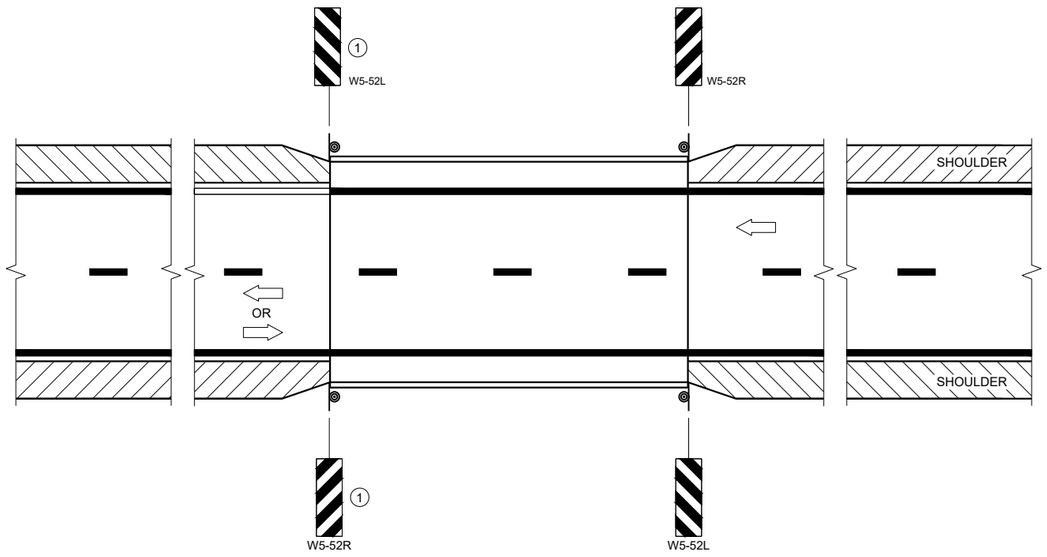
FHWA

SDD 15C02 - 09c
6



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
Statewide Pavement Marking Engineer
FHWA

6
SDD 15C06-12

GENERAL NOTES

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

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

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

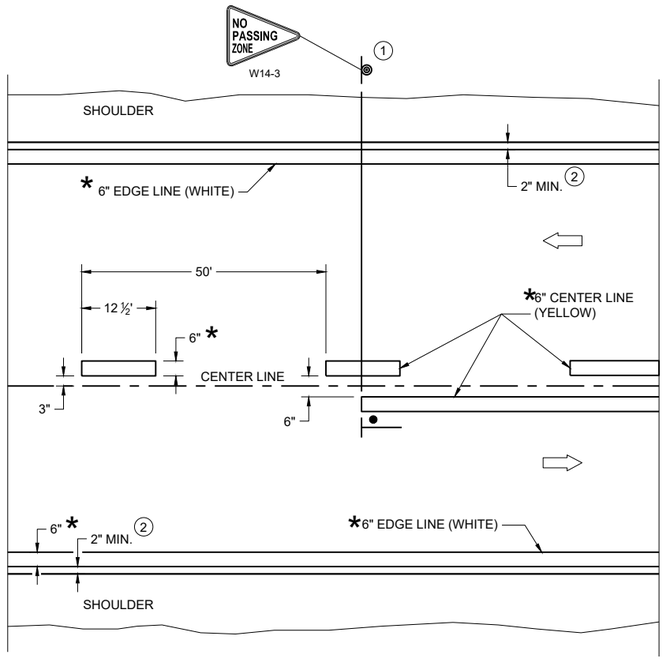
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

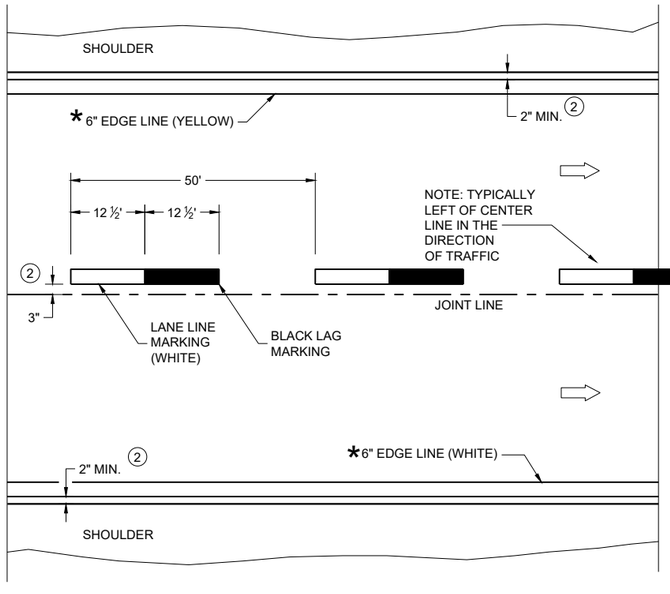
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

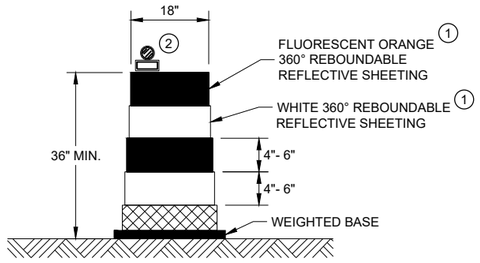
6

SDD 15C08-24a

SDD 15C08-24a

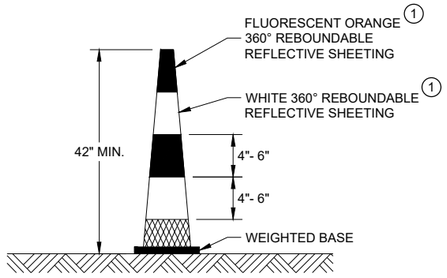
GENERAL NOTES

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

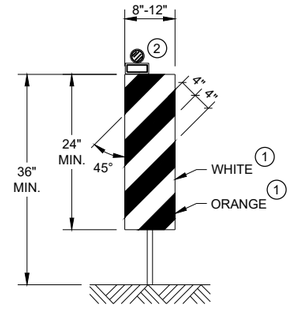
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

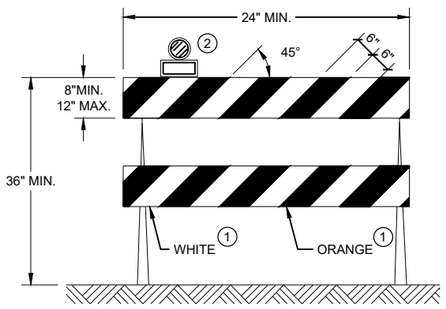
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



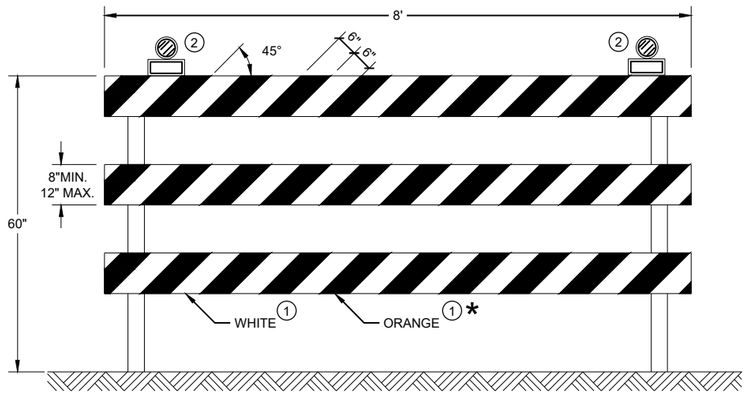
VERTICAL PANEL

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

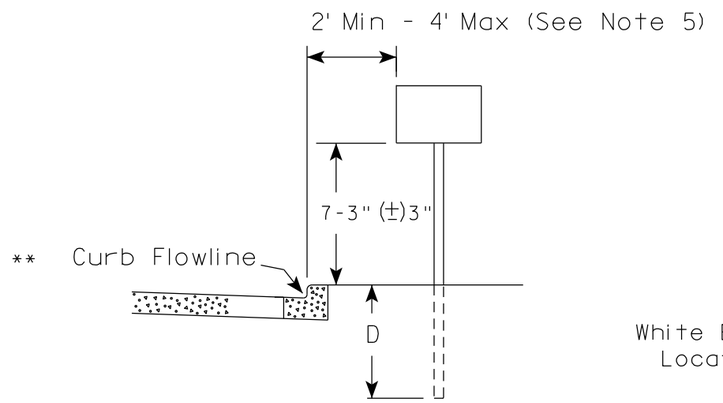
6

SDD 15C11 - 10b

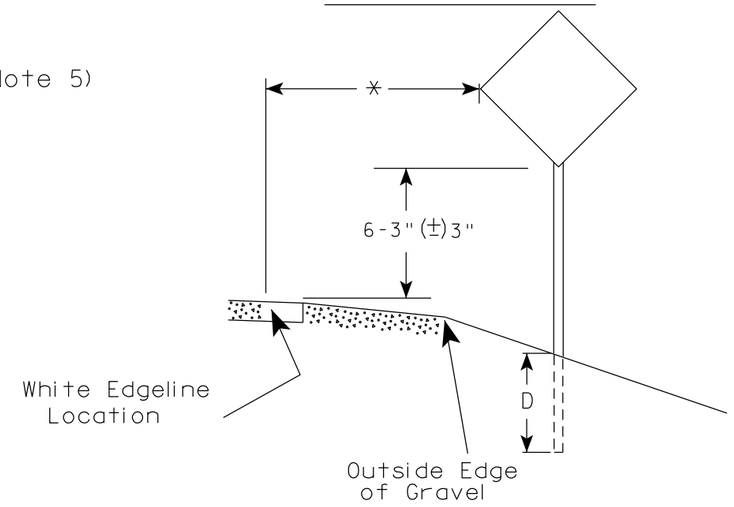
6

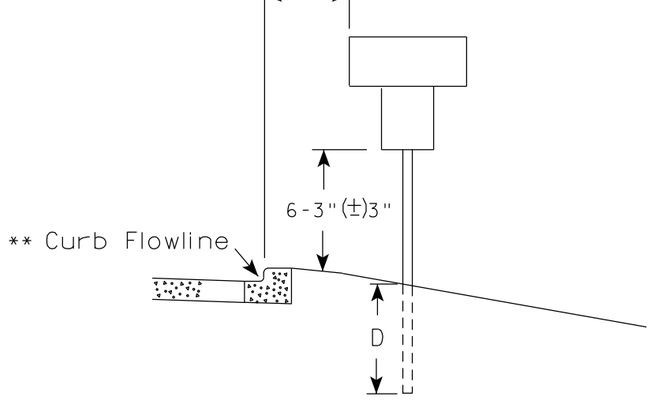
SDD 15C11 - 10b

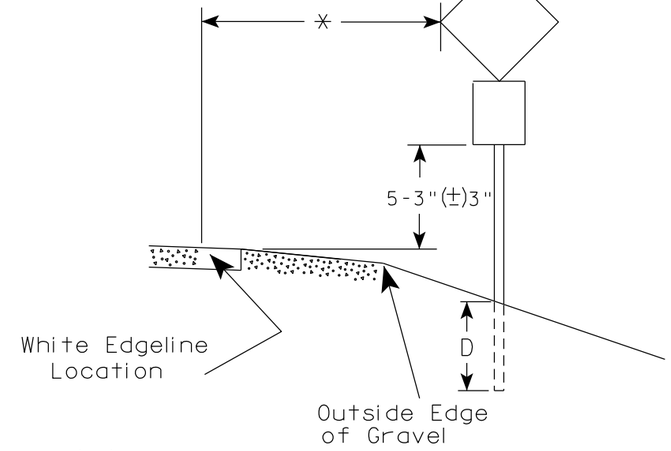
URBAN AREA



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.

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

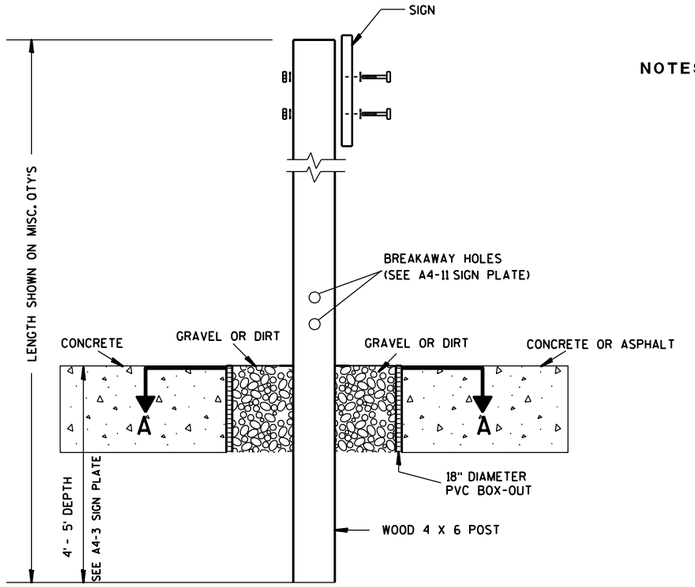
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

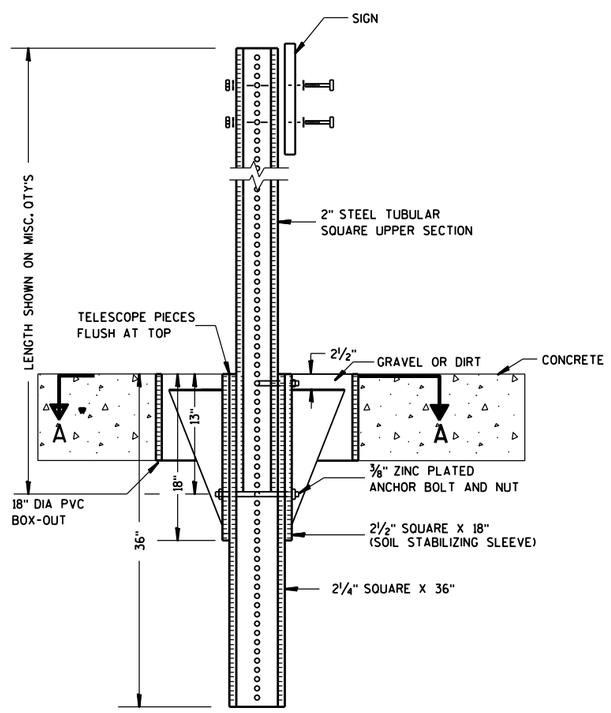
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 53	E



ELEVATION VIEW

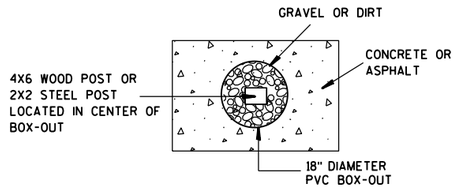
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

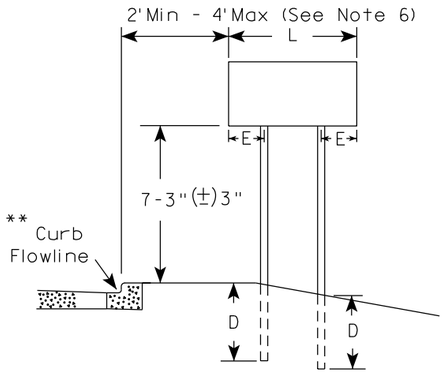
APPROVED Matthew R Rauch
for State Traffic Engineer

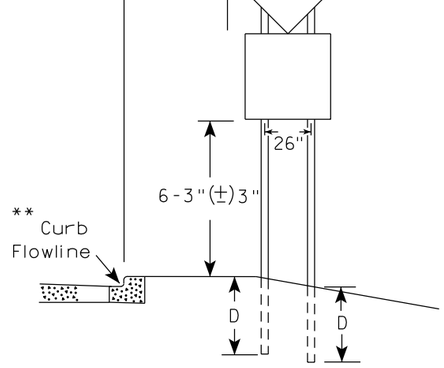
DATE 1/27/14 PLATE NO. A4-3B.1

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

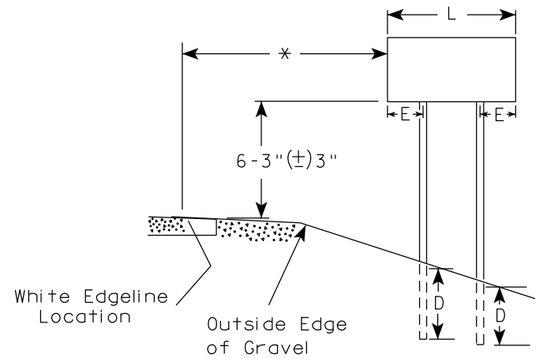
URBAN AREA

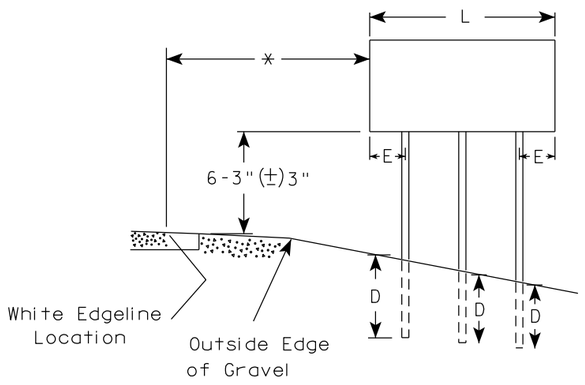


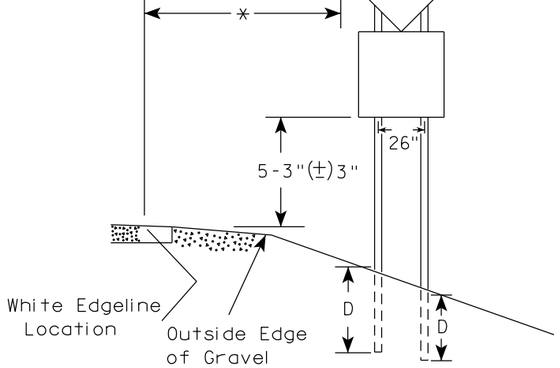


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

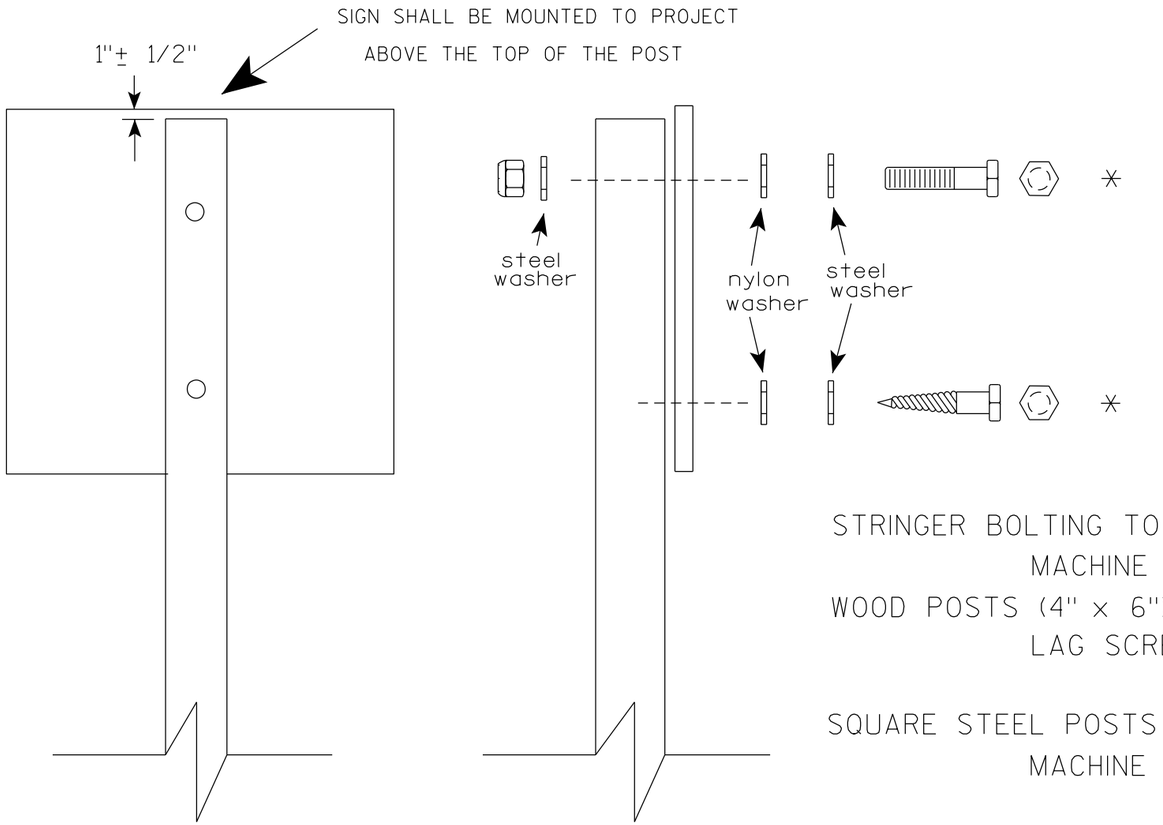
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 55	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

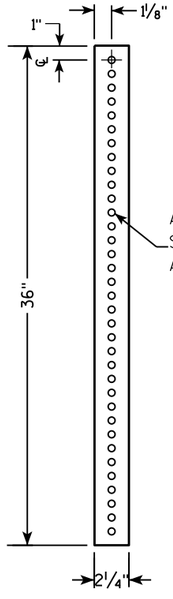
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

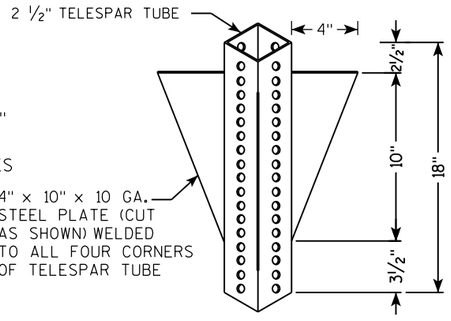
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

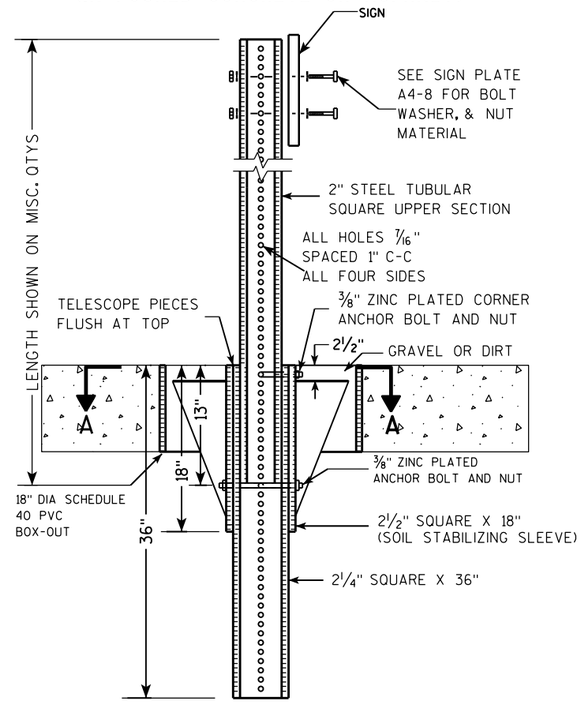
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



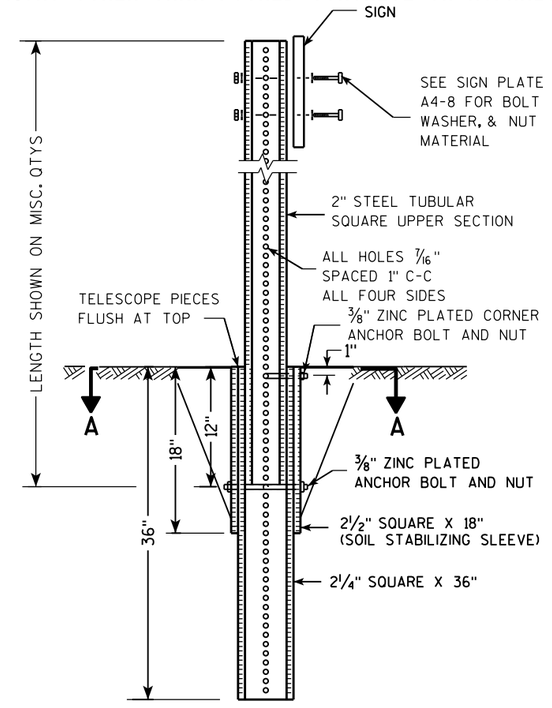
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

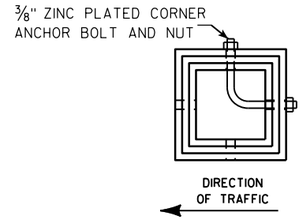


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

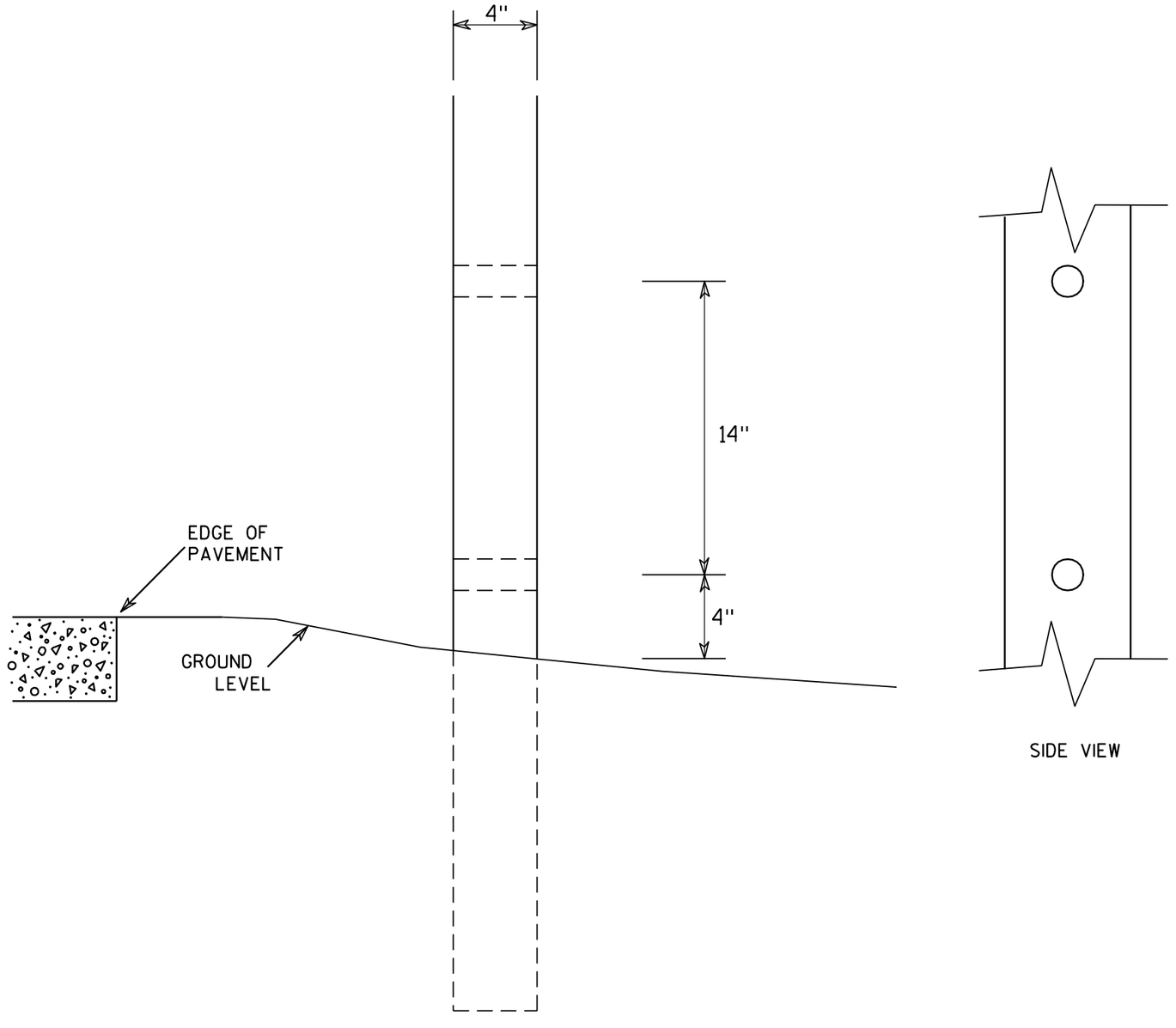
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 57 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

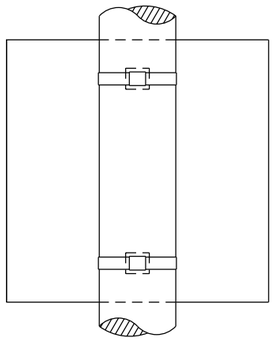
APPROVED Chester J Spang
for State Traffic Engineer

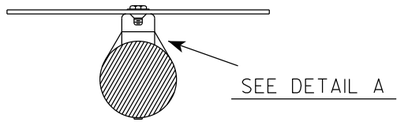
DATE 3/27/97 PLATE NO. A4-11.2

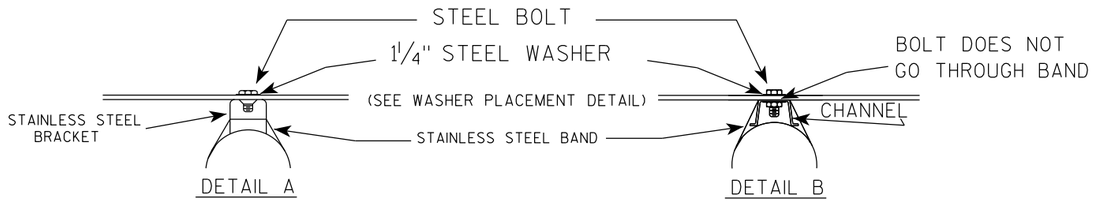
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 58	E

BANDING

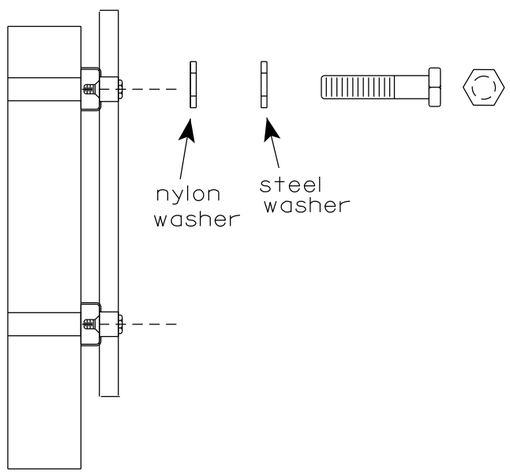
SINGLE SIGN







WASHER PLACEMENT

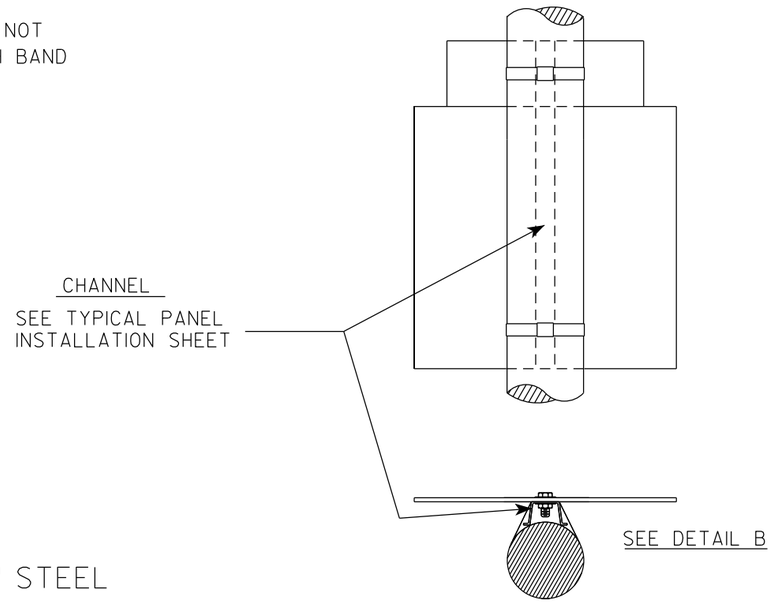


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

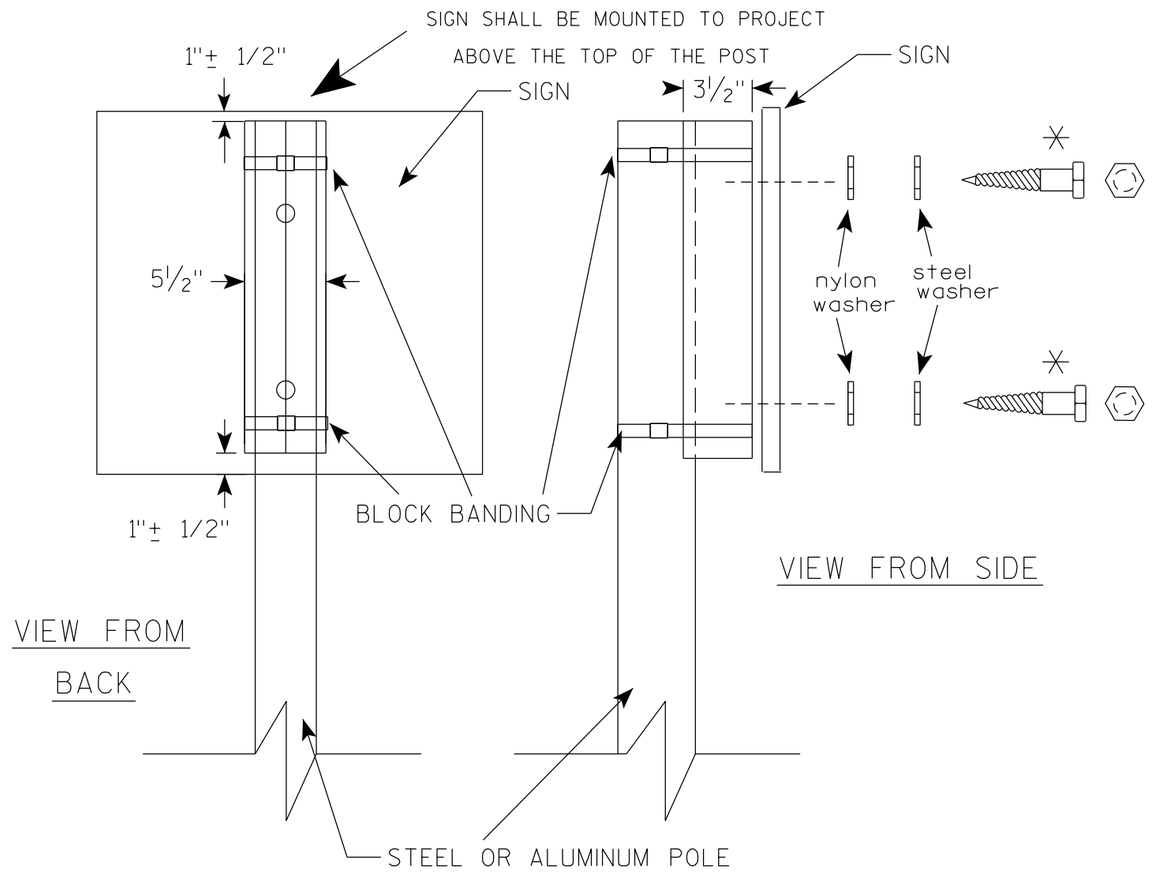
DATE 6/10/19 PLATE NO. A5-9.4

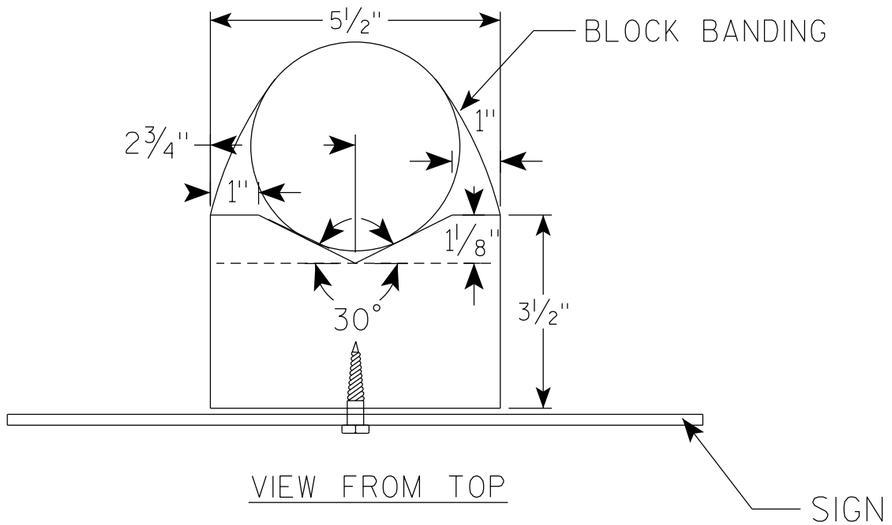
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 59	E

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

7

7





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

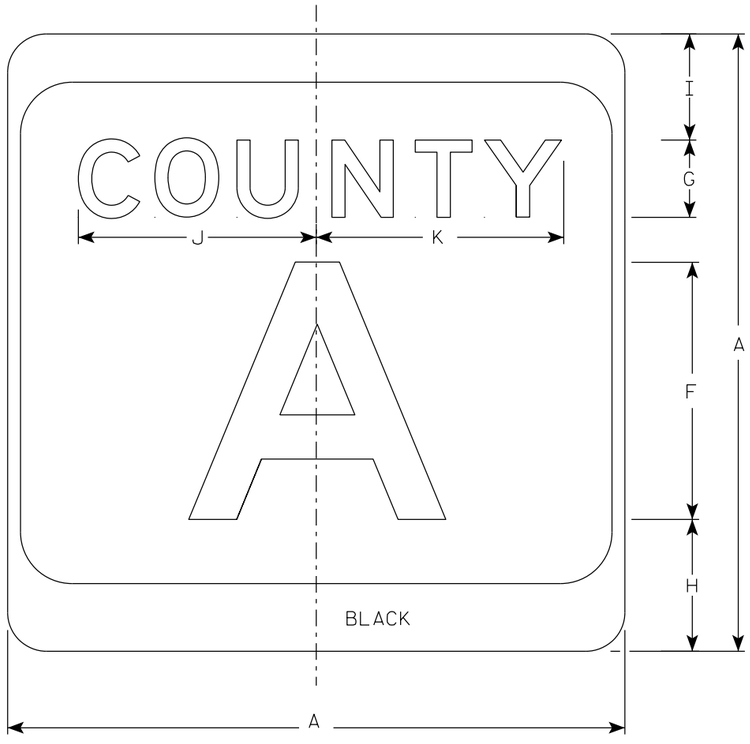
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

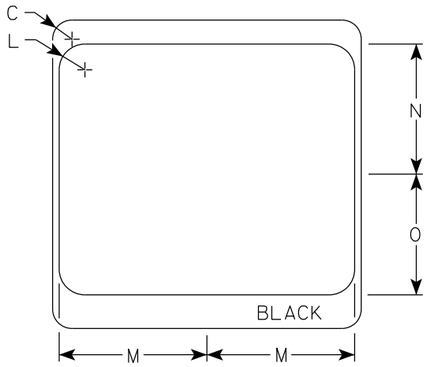
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 60 E

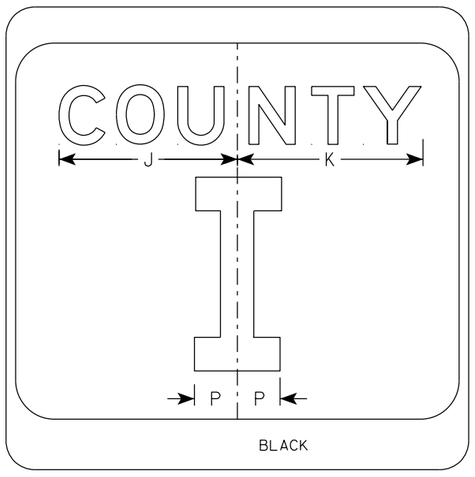


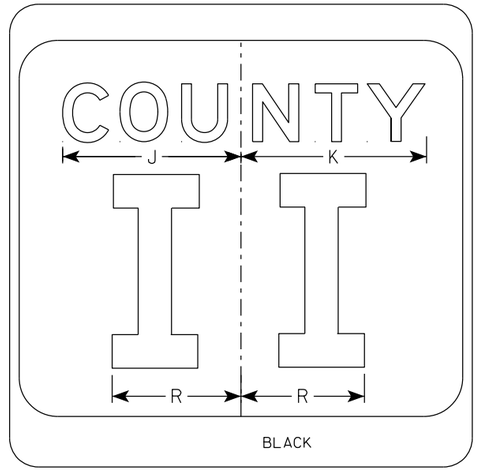
M1-5A



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White & Black
   Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
5. Substitute appropriate letters & optically center to achieve proper balance.





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			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

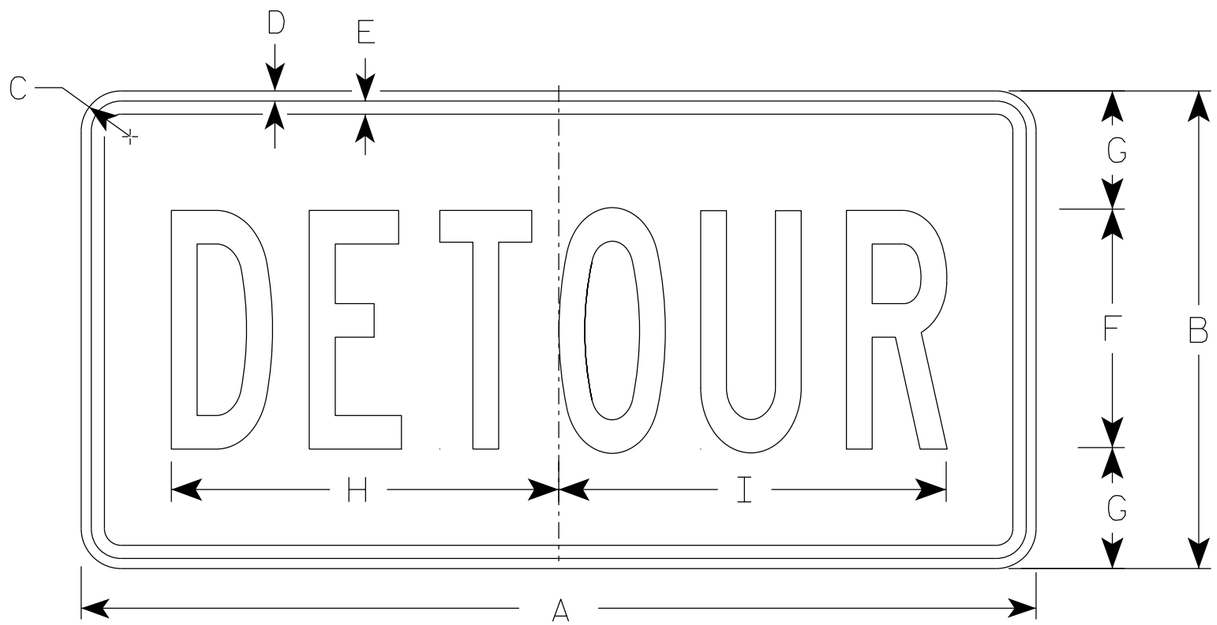
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M15A.dgn PLOT DATE : 8-NOV 2022 8:26 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

NOTES

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



M4-8

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 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

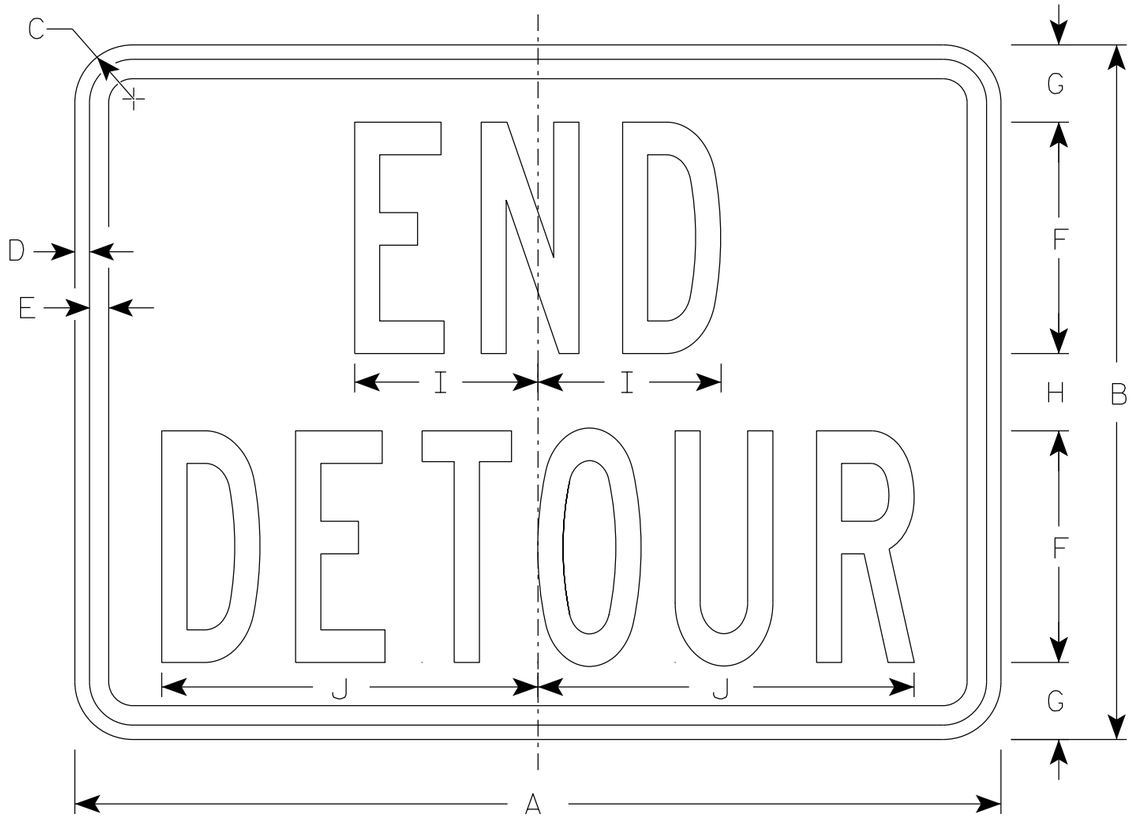
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 62	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective
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 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
2M	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
3	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
4	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
5	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0

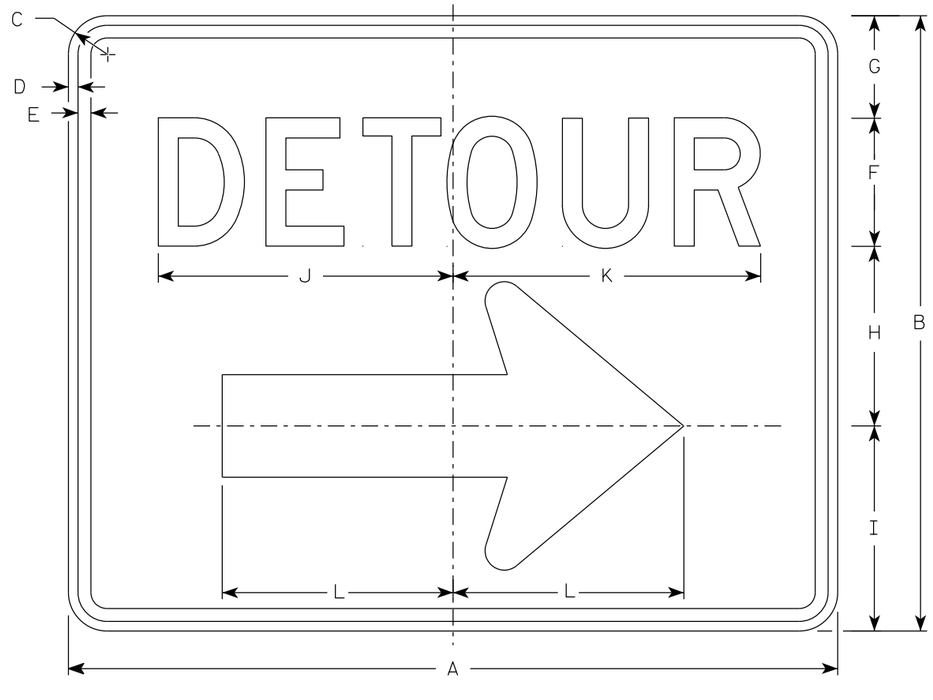
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8A.4

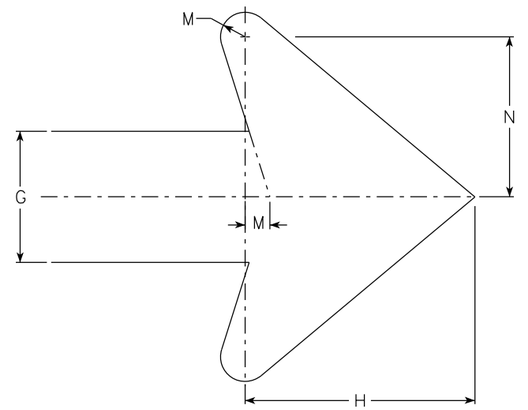
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 63 | E



M4-9R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
2M	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

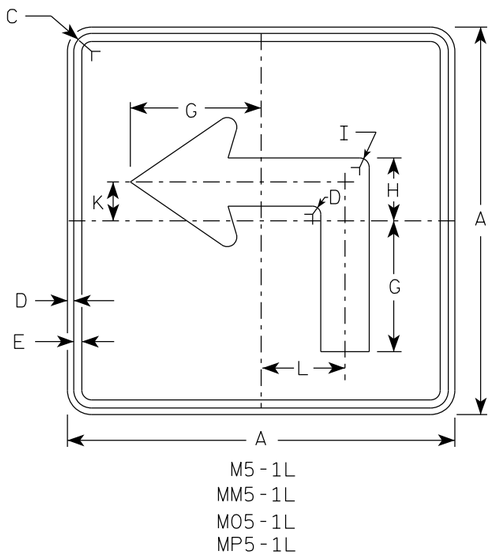
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

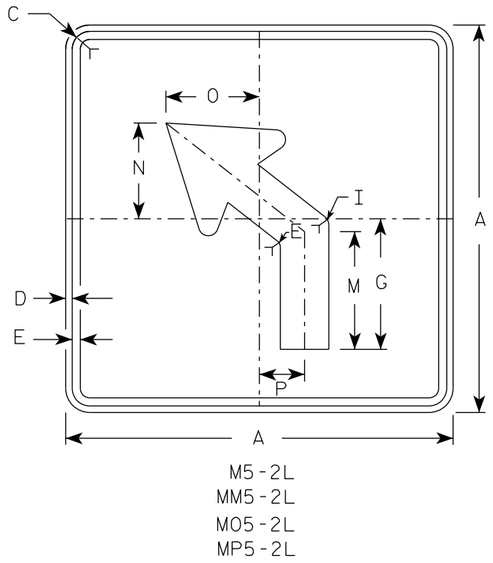
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9R.6

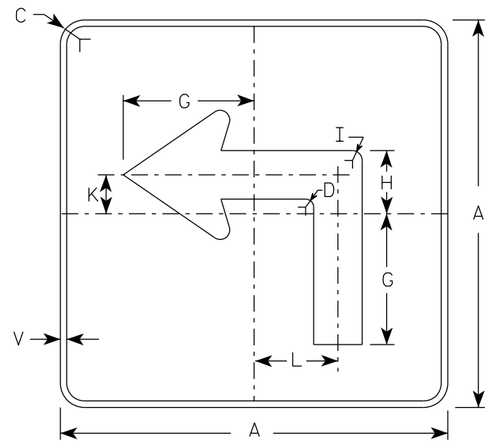
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



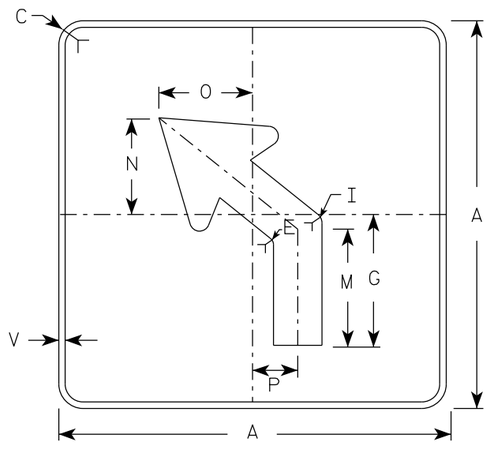
M5-1L
MM5-1L
MO5-1L
MP5-1L



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



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

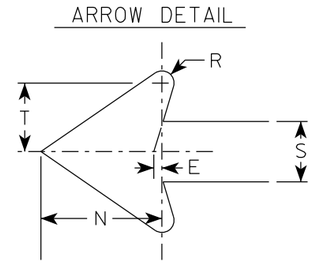


MB5-2L
MK5-2L
MN5-2L
MR5-2L

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
   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.

ARROW DETAIL



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

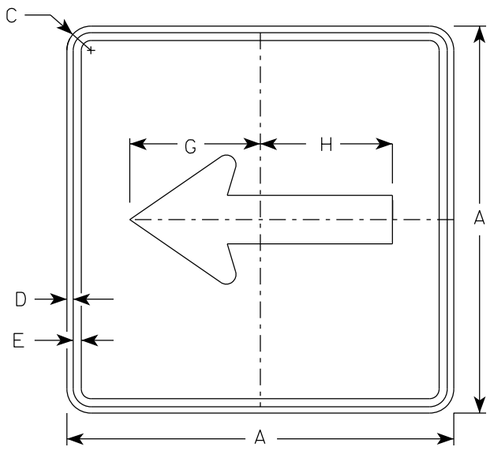
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

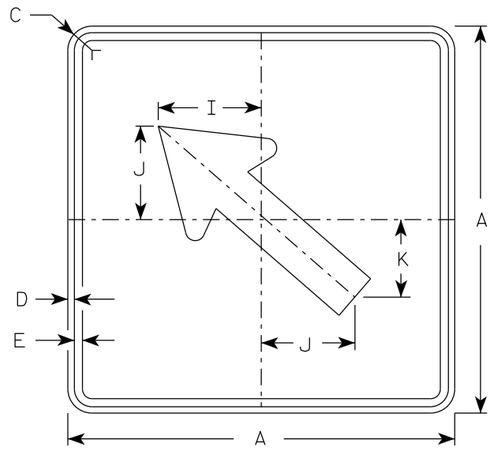
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

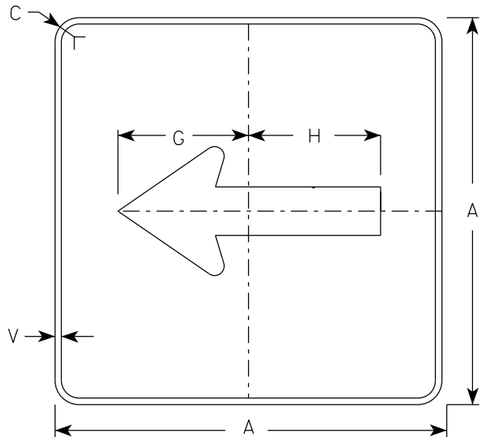
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 65 | E



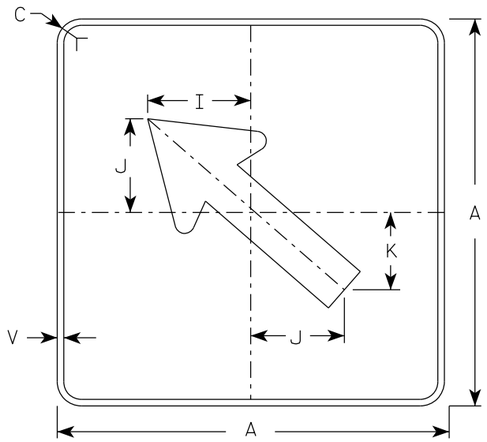
M6-1
MM6-1
MO6-1
MP6-1



M6-2
MM6-2
MO6-2
MP6-2



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

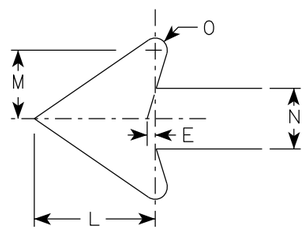


MB6-2
MK6-2
MN6-2
MR6-2

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. 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

ARROW DETAIL



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

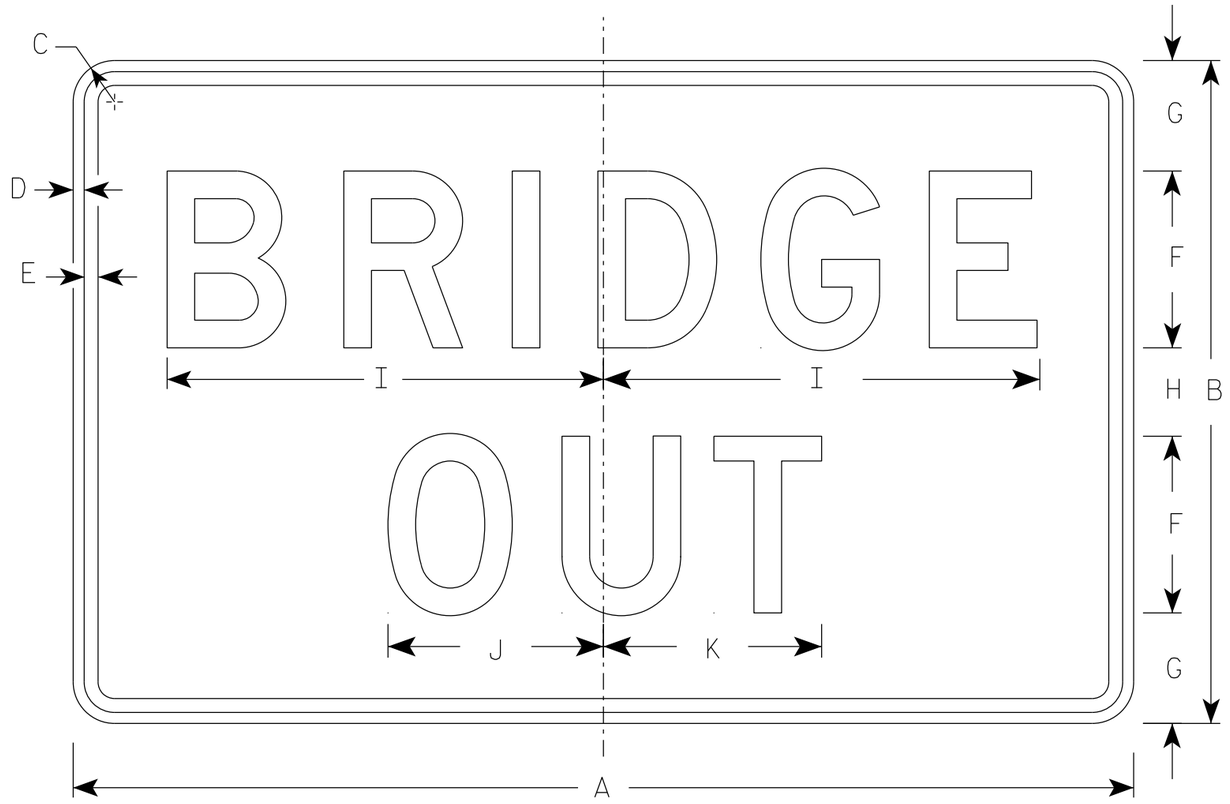
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 66 | E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective
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 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 7/8	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

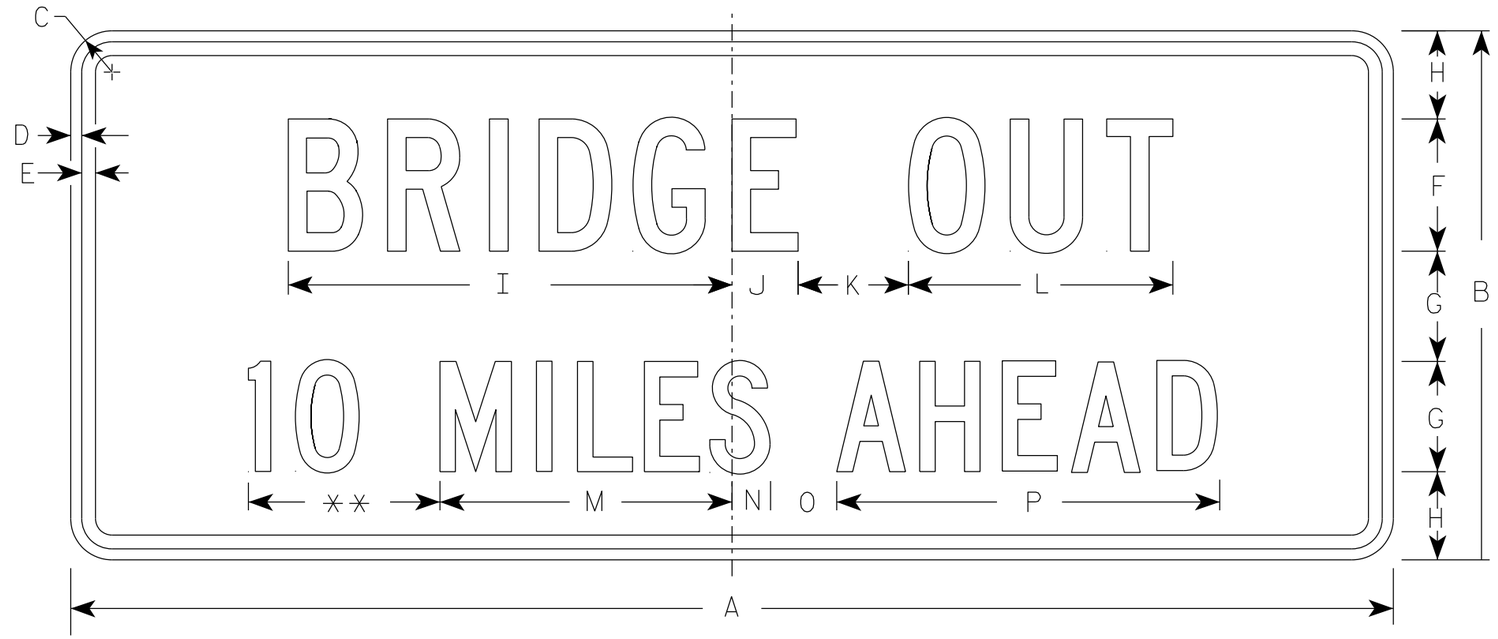
DATE 2/5/24 PLATE NO. R11-2B.3

PROJECT NO:

SHEET NO: 67 E

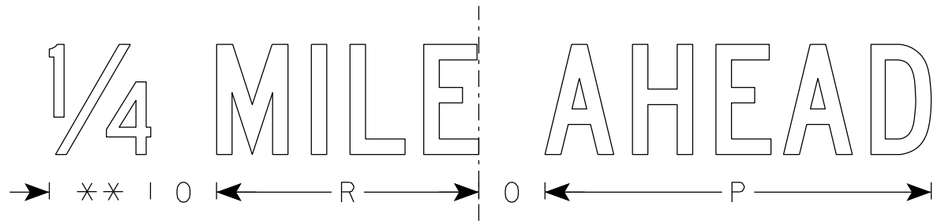
NOTES

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 1/2	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 7/8	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 7/8	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

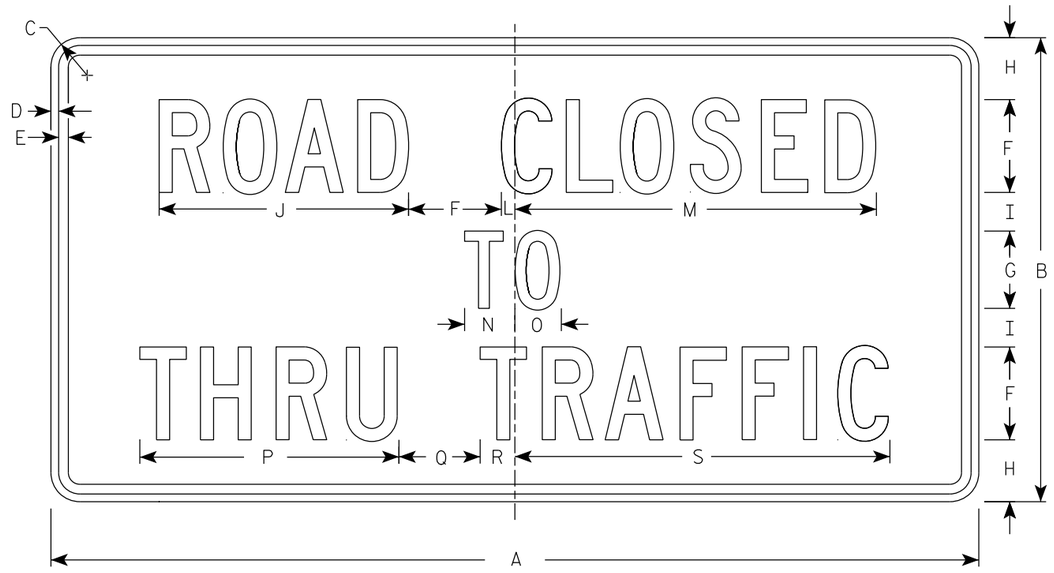
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3C.4

PROJECT NO:

SHEET NO: 68 E



R11-4

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.

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	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

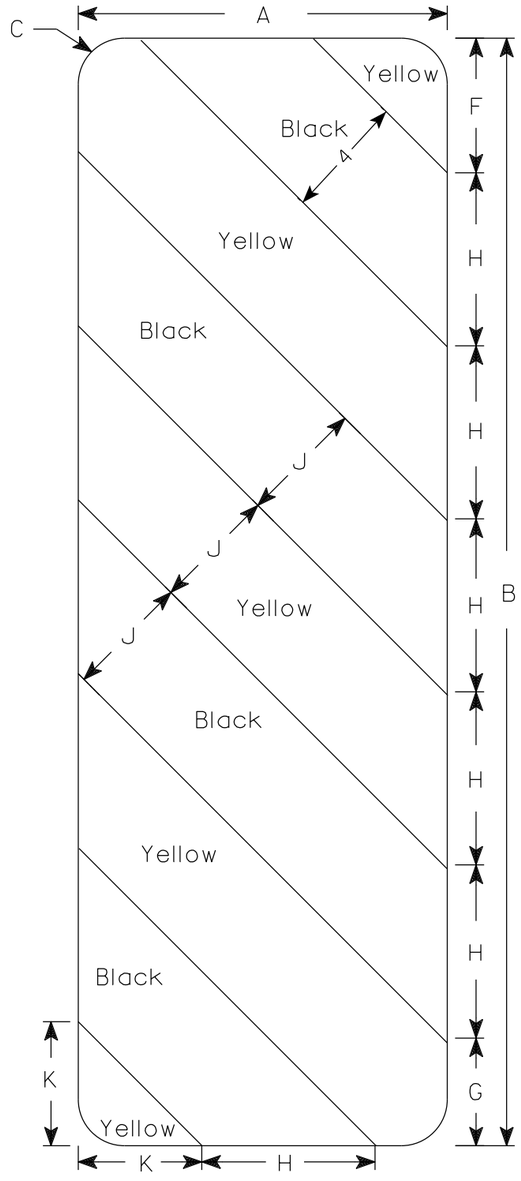
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

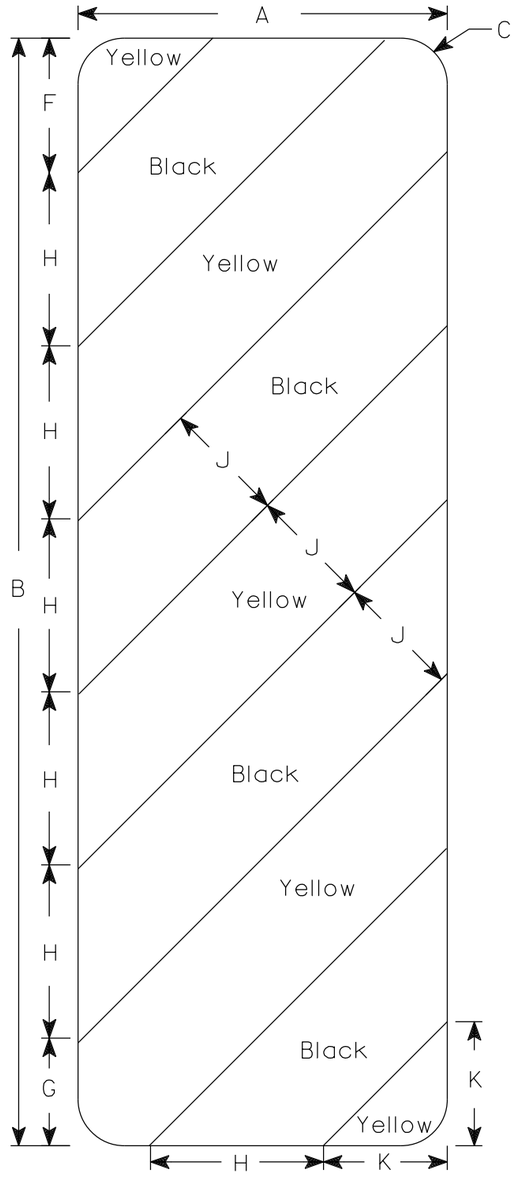
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-4.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 69 | E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. 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	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			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

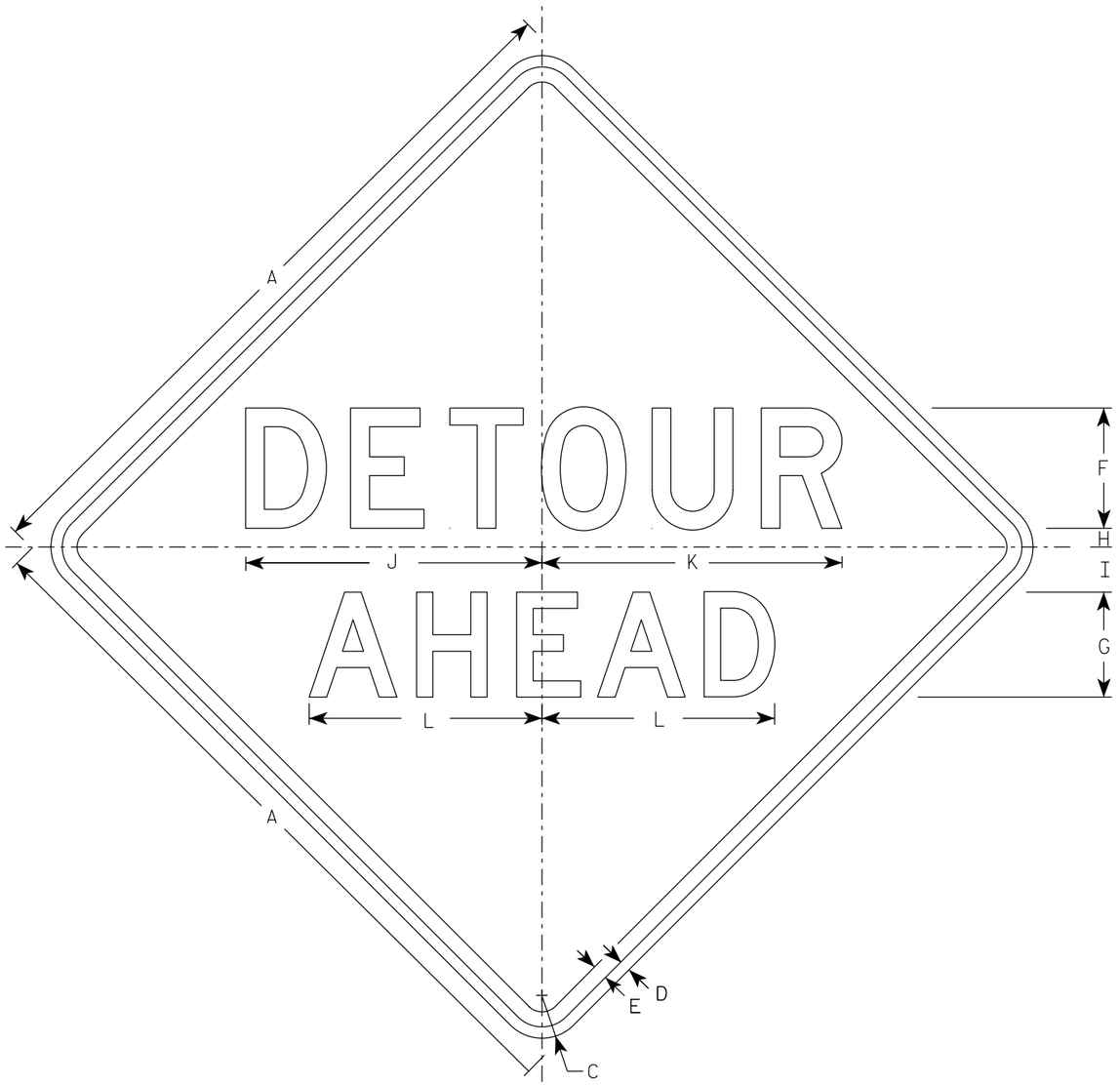
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/4/2024 PLATE NO. W5-52.10

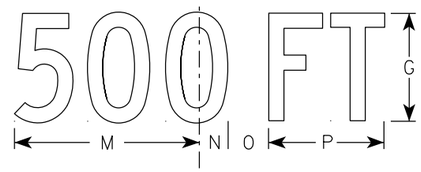
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 70 E

7

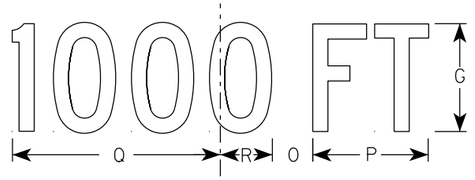
7



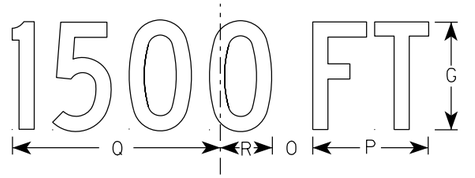
W20-2A



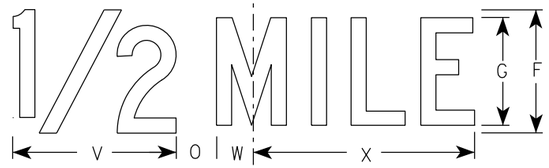
W20-2D



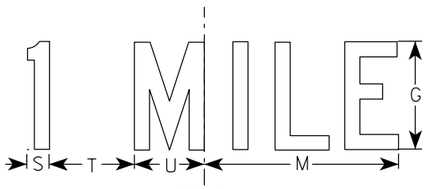
W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective
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		2 1/4	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		3	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		3	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		3	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		3	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		3	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

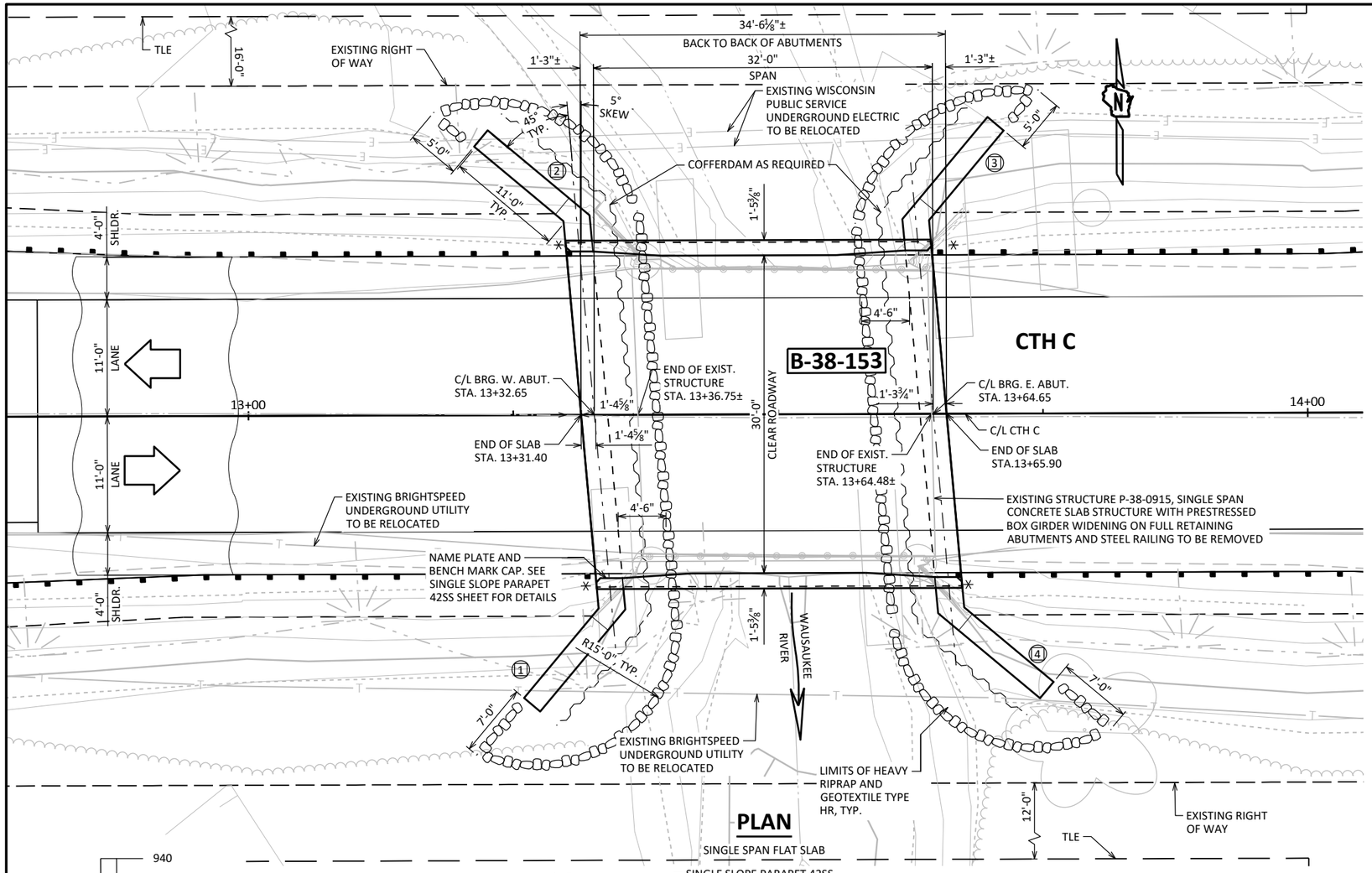
DATE 1/10/2024 PLATE NO. W20-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

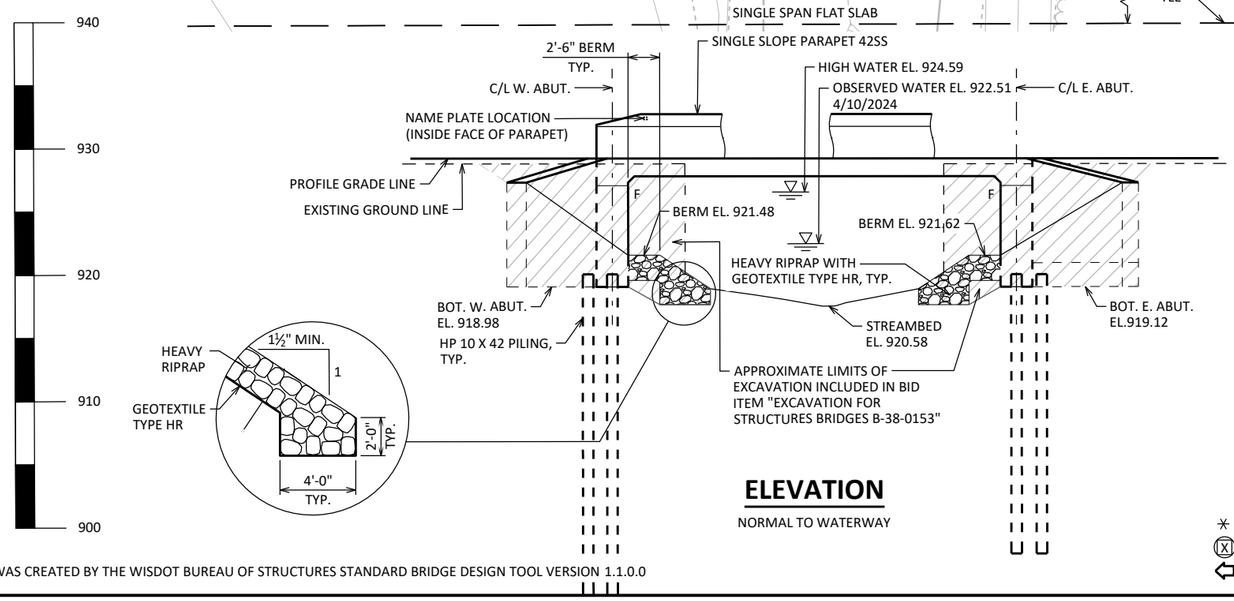
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W202.DGN PLOT DATE : 10-JAN 2024 11:36 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER

9249-04-70



PLAN



ELEVATION

NORMAL TO WATERWAY

LEGEND

- ⚹ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT
- (X) INDICATE WINGWALL NUMBER
- DIRECTION OF TRAFFIC

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.09
OPERATING RATING FACTOR: RF = 1.42
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
- SUPERSTRUCTURE — f'c = 4,000 P.S.I.
- ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
- GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. PILE POINTS REQUIRED.

ESTIMATED PILE LENGTHS:
- EAST ABUTMENT - 30'-0" LONG.
- WEST ABUTMENT - 30'-0" LONG.

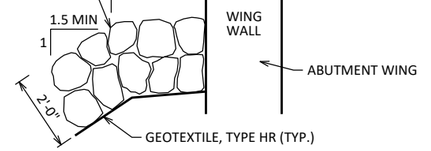
**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE PILE CAPACITY.

TRAFFIC VOLUME

FEATURE ON

ADT = 560 (2022)
ADT = 700 (2046)
R.D.S. = 60 M.P.H

NOTE: PLACE HEAVY RIPRAP AS SHOWN IN WING ELEVATION DETAIL.



TYPICAL FILL SECTION AT WING

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 380 C.F.S.
VEL. = 3.62 F.P.S.
HW_{100} = EL. 924.61
WATERWAY AREA = 105.12 SQ. FT.
DRAINAGE AREA = 18.47 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 120 C.F.S.
VEL. = 1.92 F.P.S.
HW_2 = EL. 923.16

LIST OF DRAWINGS

STRUCTURE DESIGN CONTACTS:
CONSULTANT: SHANNON CONNOLLY 414-751-7200
BOS: AARON BONK 608-261-0261

THESE PLANS ARE BASED UPON STANDARD BRIDGE PLANS DEVELOPED AND MAINTAINED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION THROUGH THE USE OF THE WISDOT STANDARD BRIDGE DESIGN TOOL. THE UNDERSIGNED DESIGNER CERTIFIES THE ACCURACY OF THE BRIDGE TYPE, SIZE AND LOCATION, HYDRAULICS AND FOUNDATION SUPPORT, AND INFORMATION IN THE PLANS THAT IS NOT PART OF THE STANDARD PLANS SUPPLIED BY THE DEPARTMENT. THE DESIGNER FURTHER CERTIFIES THAT USE OF THE STANDARD BRIDGE DESIGN TOOL FOR DEVELOPMENT OF THIS PLAN IS CONSISTENT WITH THE GUIDANCE PROVIDED IN THE WISDOT BRIDGE MANUAL.

NO.	DATE	REVISION	BY

kapur

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED JLR 11/10/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-38-153

CTH C OVER WAUSAUKEE RIVER

COUNTY	TOWN
MARINETTE	ATHELSTANE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	SK	DESIGNED CK'D	SMC	DRAWN BY	SK	PLANS CK'D	SMC

GENERAL PLAN & ELEVATION

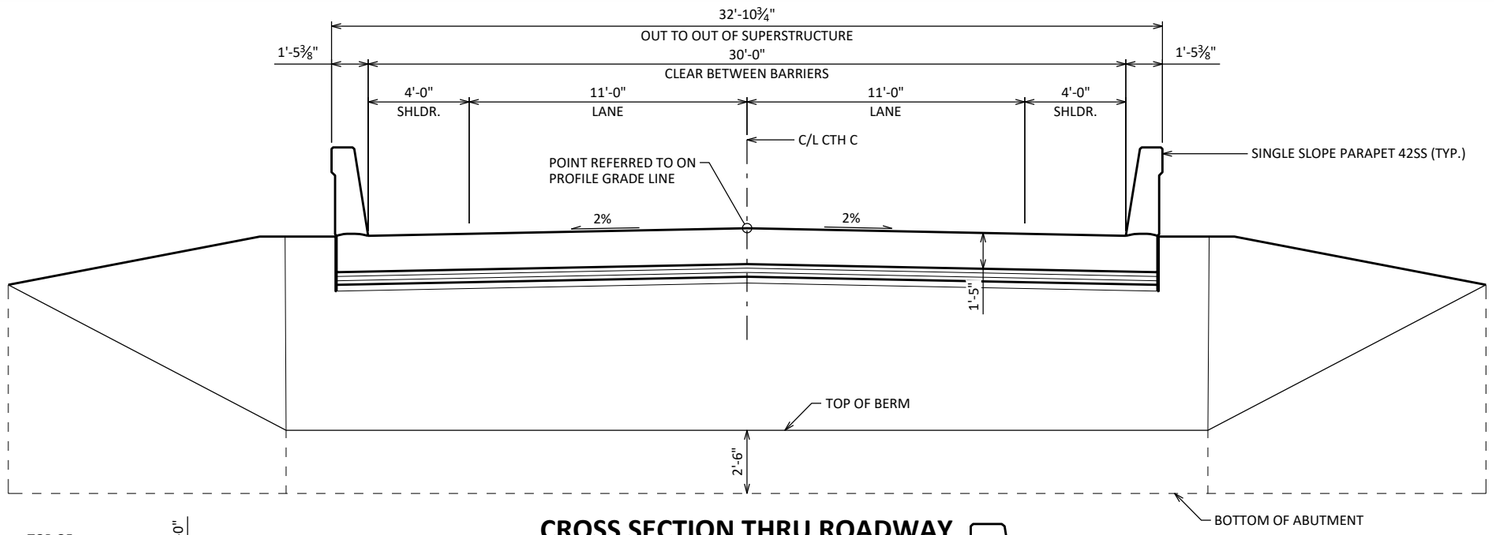
SHEET 1 OF 10
72

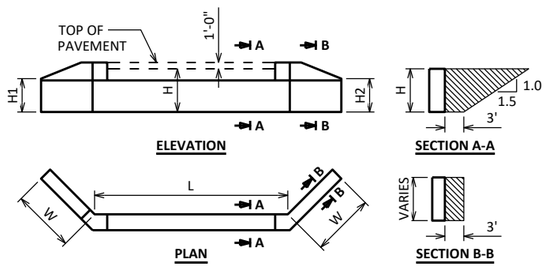
I.D. DATE:

SCALE = SCALE

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0

8 8



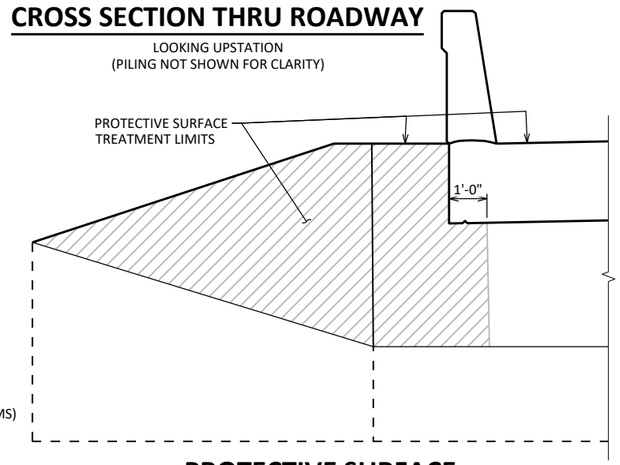


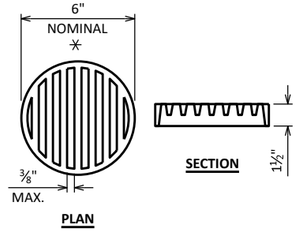
ABUTMENT BACKFILL DIAGRAM

L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

CROSS SECTION THRU ROADWAY

LOOKING UPSTATION
(PILING NOT SHOWN FOR CLARITY)





RODENT SHIELD DETAIL

⚹ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

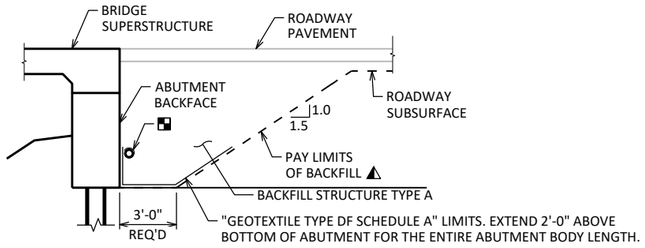
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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

TOTAL ESTIMATED QUANTITIES

PROTECTIVE SURFACE TREATMENT DETAILS

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	WEST ABUT.	EAST ABUT.	TOTALS
203.0270	REMOVING STRUCTURE OVER WATERWAY DEBRIS CAPTURE B-38-153	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-38-0153	EACH	---	---	---	1
206.5001	COFFERDAMS B-38-0152	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	297	297	594
502.0100	CONCRETE MASONRY BRIDGES	CY	73	45	45	163
502.3200	PROTECTIVE SURFACE TREATMENT	SY	115	23	23	161
502.3210	PIGMENTED SURFACE SEALER	SY	34	---	---	34
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	2,560	2,560	5,120
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	17,750	1,850	1,850	21,450
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	6	6	12
550.0500	PILE POINTS	EACH	---	7	7	14
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	198	198	396
606.0300	RIPRAP HEAVY	CY	---	38	38	76
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	79	79	158
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	---	---	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	53	53	106
645.0120	GEOTEXTILE TYPE HR	SY	---	82	82	164
	NON-BID ITEMS					
	FILLER	SIZE	---	---	---	½", ¾"
	NAME PLATE	EACH	---	---	---	1



TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

STATE PROJECT NUMBER

9249-04-70

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 BRIDGES B-38-0153" SHALL BE THE EXISTING GROUNDLINE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MARINETTE COUNTY. ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATION ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 HMOD PID8754.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE EXPOSED TOP OF SLAB, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS AND FRONT FACE OF ABUTMENT TO 1'-0" PAST THE EDGE OF SLAB.

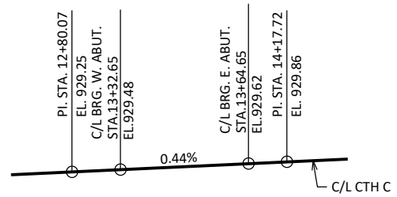
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND TOP OF PARAPET.

NAME PLATE SHALL BE BE CONSIDERED INCIDENTAL TI BID ITEM "CONCRETE MASONRY BRIDGES". FABRICATE IN ACCORDANCE TO SDD 12 A 3-10.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAYBE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

BENCH MARK

NO.	NORTHING	EASTING	DESCRIPTION	ELEVATION
10	268330.1	685628	BR RR SPIKE 18' OAK	929.12
20	268306.6	686046	BM RR SPIKE 18" OAK	924.927
8754	268278	686478.1	HMOD 6K85	929.224



PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-38-153

DRAWN BY SK | PLANS CK'D SMC

TYPICAL SECTION, QUANTITIES & GENERAL NOTES

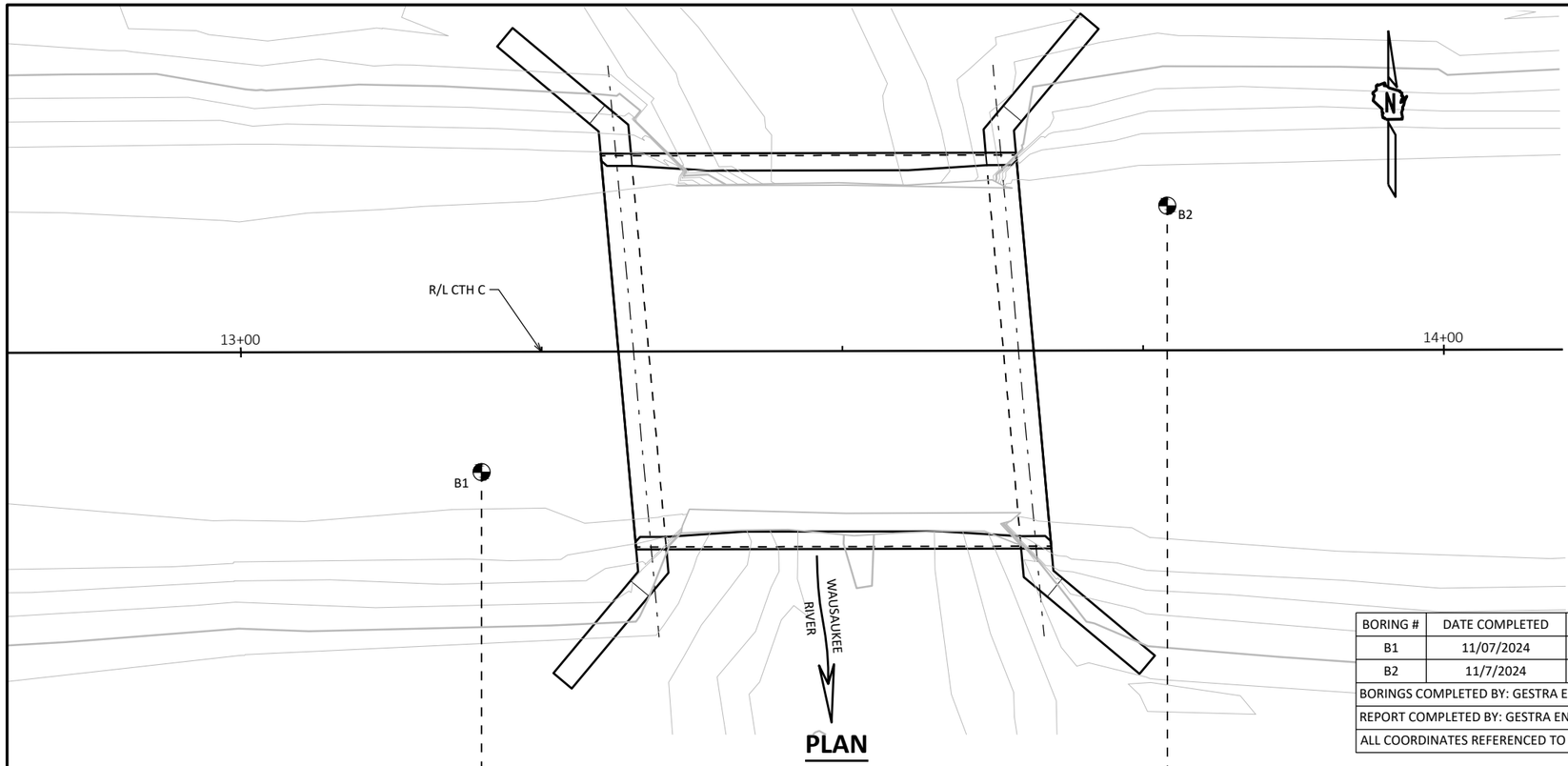
SHEET 2 OF 10
73

SCALE = 6.0

8

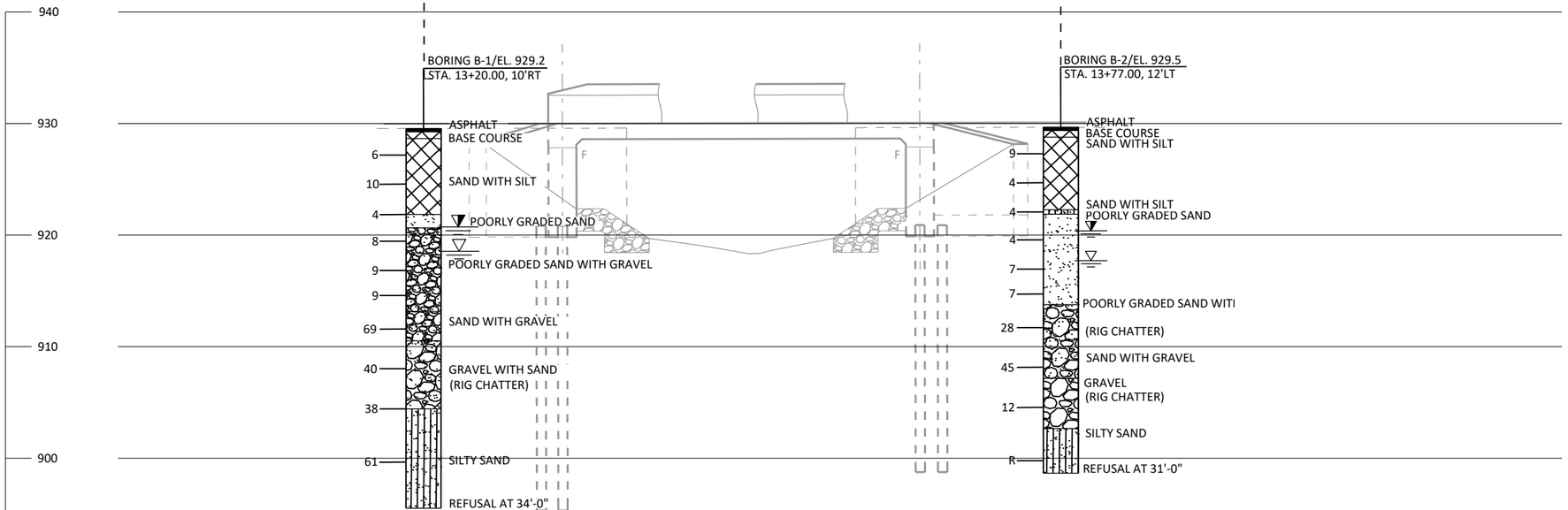
8

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0



PLAN

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B1	11/07/2024	268329.7	685991.2
B2	11/7/2024	268348.5	686049.4
BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.			
REPORT COMPLETED BY: GESTRA ENGINEERING, INC.			
ALL COORDINATES REFERENCED TO WCCS, MARINETTE COUNTY			



ELEVATION
(LOOKING NORTH)

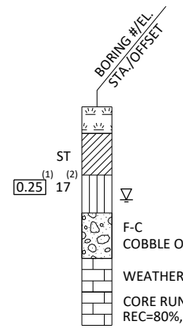
STATE PROJECT NUMBER

9249-04-70

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

STRUCTURE B-38-153

DRAWN BY SK | PLANS CK'D SMC

SUBSURFACE EXPLORATION

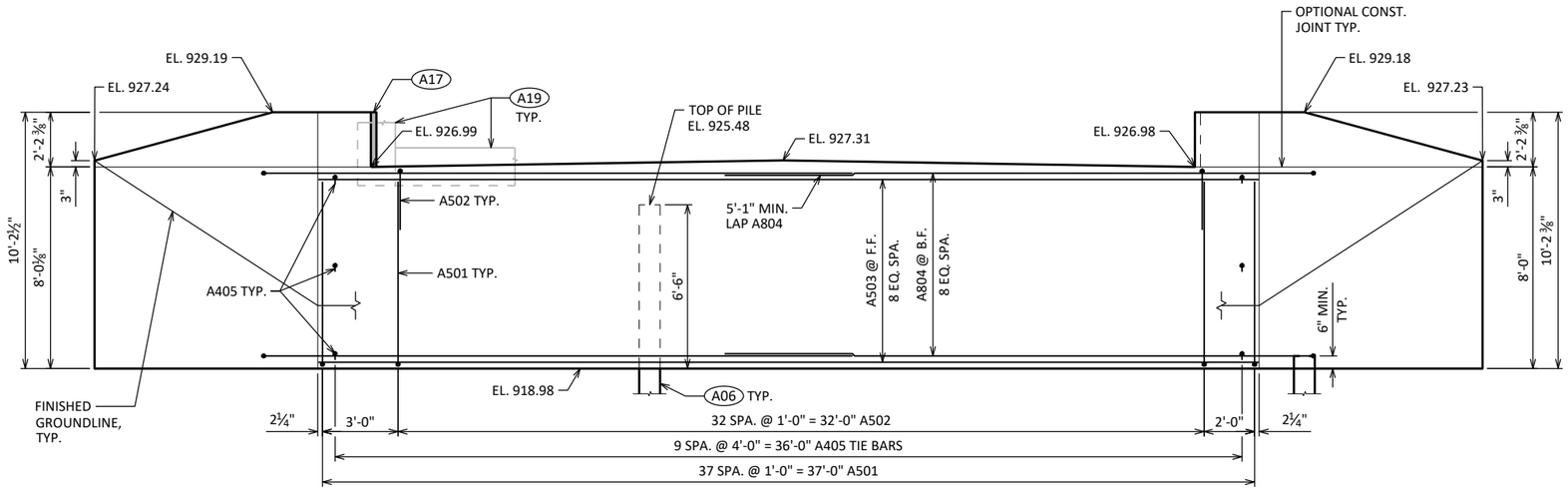
SHEET 3 OF 10
74

8

8

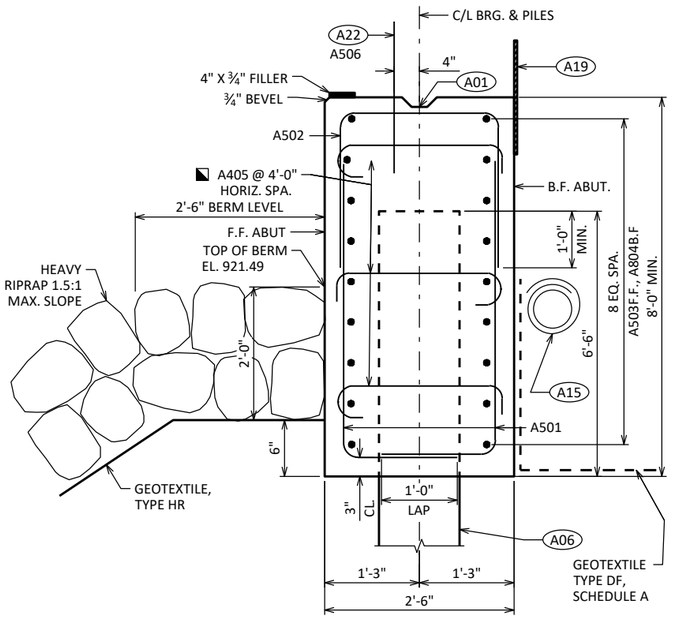
STATE PROJECT NUMBER

9249-04-70

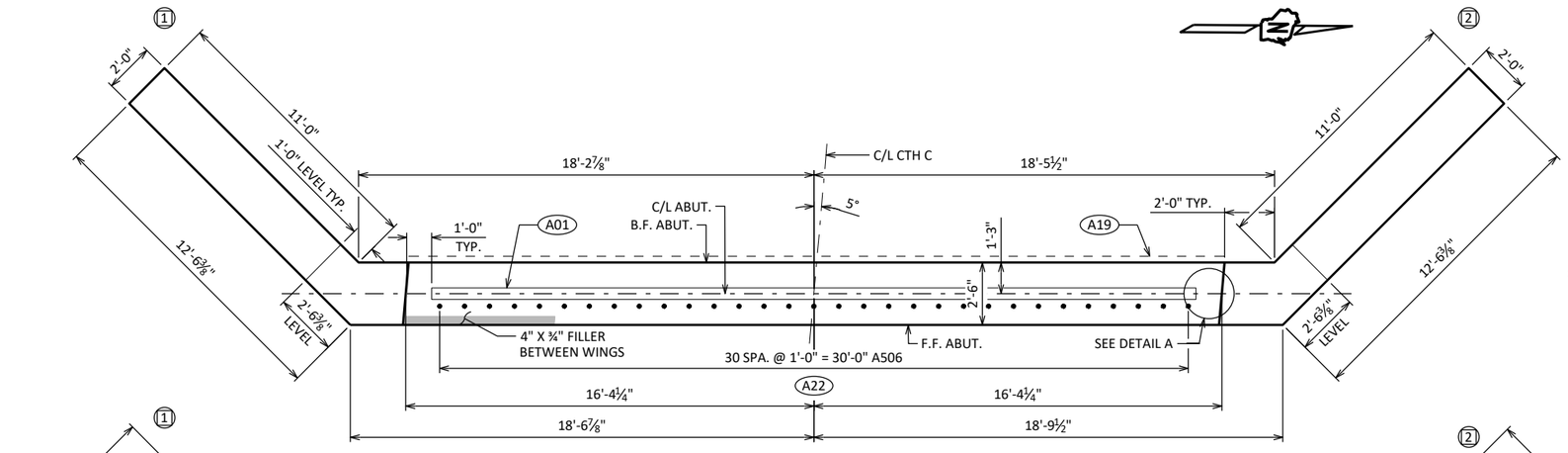


ELEVATION

LOOKING DOWNSTATION

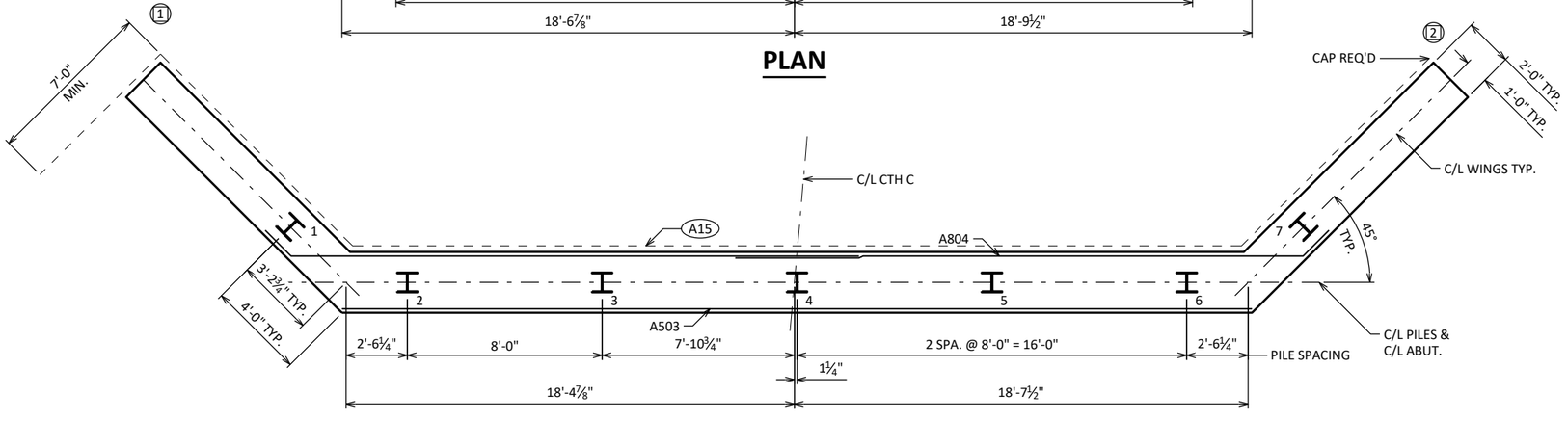


SECTION THRU BODY



PLAN

DETAIL A



PILE PLAN

NOTES

DO NOT PLACE FILL ABOVE 3'-0" FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

LEGEND

- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6.
- (A06) SUPPORT ABUTMENT ON HP 10X42 PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQUIRED.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A22) #506 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

◪ ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-38-153

DRAWN BY SK | PLANS CK'D SMC

WEST ABUTMENT

SHEET 4 OF 10

75

SCALE =

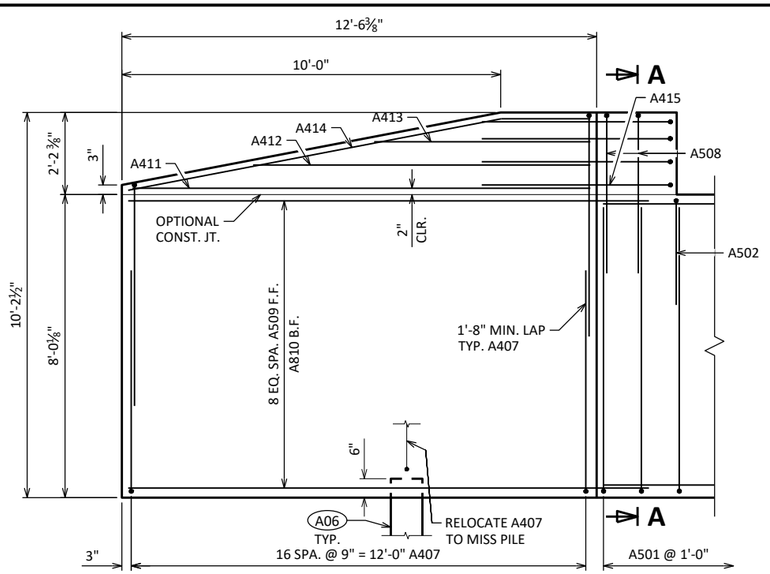
8

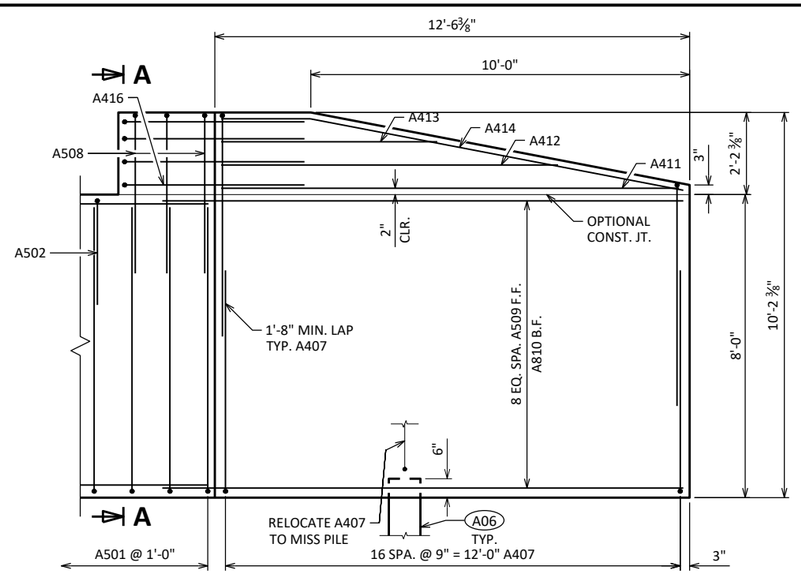
8

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0

STATE PROJECT NUMBER

9249-04-70





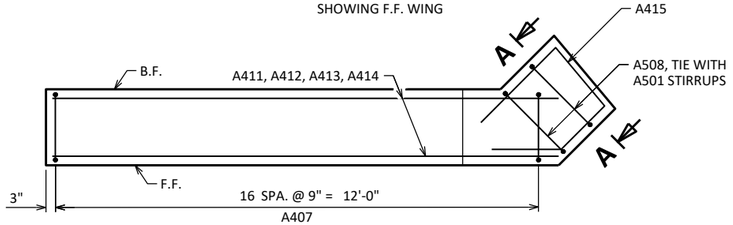
BILL OF BARS

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
A501		76	9'-0"	X		ABUT BODY STIRRUPS
A502		33	7'-5"	X		ABUT BODY STIRRUPS - TOP U-BAR
A503		9	37'-4"			ABUT BODY HORIZ. - F.F.
A804		18	24'-8"	X		ABUT BODY HORIZ. - B.F.
A405		30	3'-0"	X		ABUT BODY TIE BARS
A506	X	31	2'-0"			ABUT BODY DOWEL BARS
A407	X	68	13'-2"	X		WING STIRRUPS
A508	X	5	10'-3"	X		WING CORNER STIRRUPS
A509	X	18	13'-9"	X		WING LOWER HORIZ - F.F.
A810	X	18	15'-3"	X		WING LOWER HORIZ. - B.F.
A411	X	4	12'-0"			WING UPPER HORIZ.
A412	X	4	8'-10"			WING UPPER HORIZ.
A413	X	4	5'-7"			WING UPPER HORIZ.
A414	X	4	11'-7"	X		WING TOP HORIZ.
A415	X	4	8'-1"	X		WING 1 UPPER HORIZ. CORNER
A416	X	4	8'-8"	X		WING 2 UPPER HORIZ. CORNER

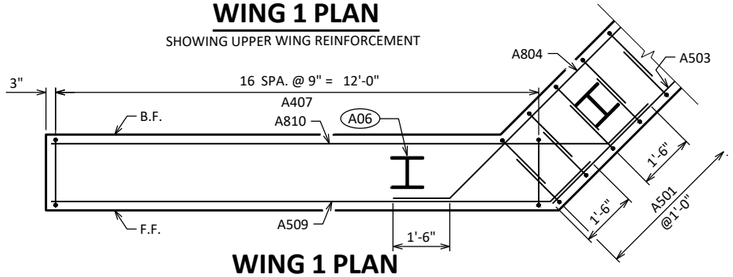
WING 1 ELEVATION

SHOWING F.F. WING



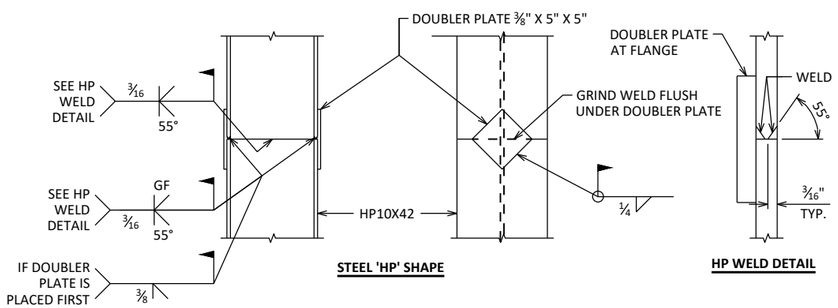
WING 1 PLAN

SHOWING UPPER WING REINFORCEMENT



WING 1 PLAN

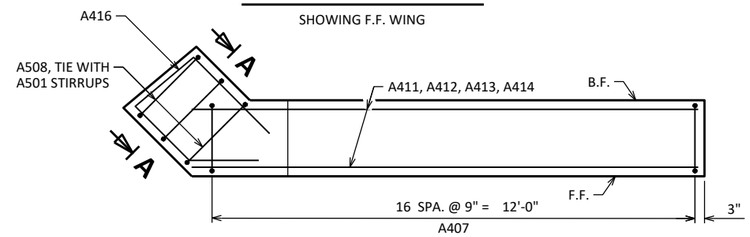
SHOWING LOWER WING REINFORCEMENT
WING 2 SIMILAR



'HP' PILE DETAILS

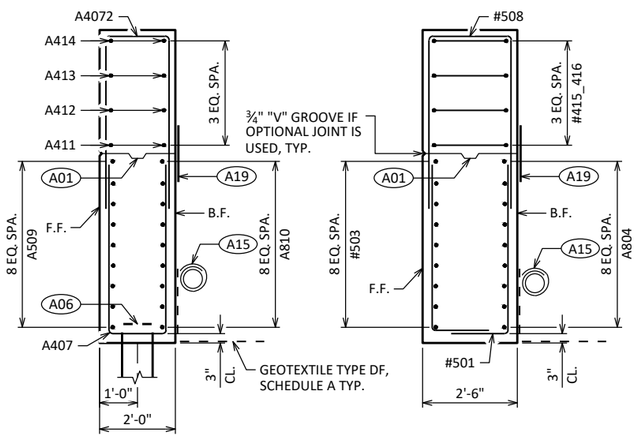
WING 2 ELEVATION

SHOWING F.F. WING



WING 2 PLAN

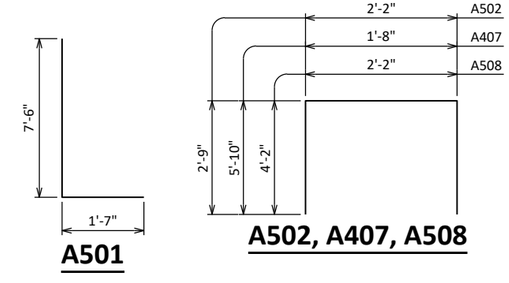
SHOWING UPPER WING REINFORCEMENT

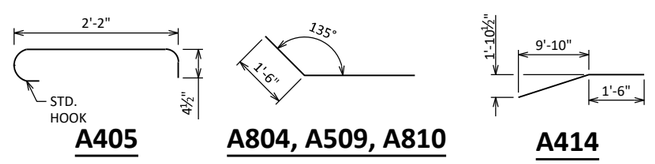


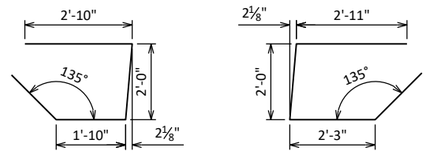
SECTION THRU WING 1

TYPICAL BOTH WINGS

SECTION A-A







NOTES

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LEGEND

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-38-153

DRAWN BY SK | PLANS CK'D SMC

WEST ABUTMENT DETAILS

SHEET 5 OF 10

76

SCALE =

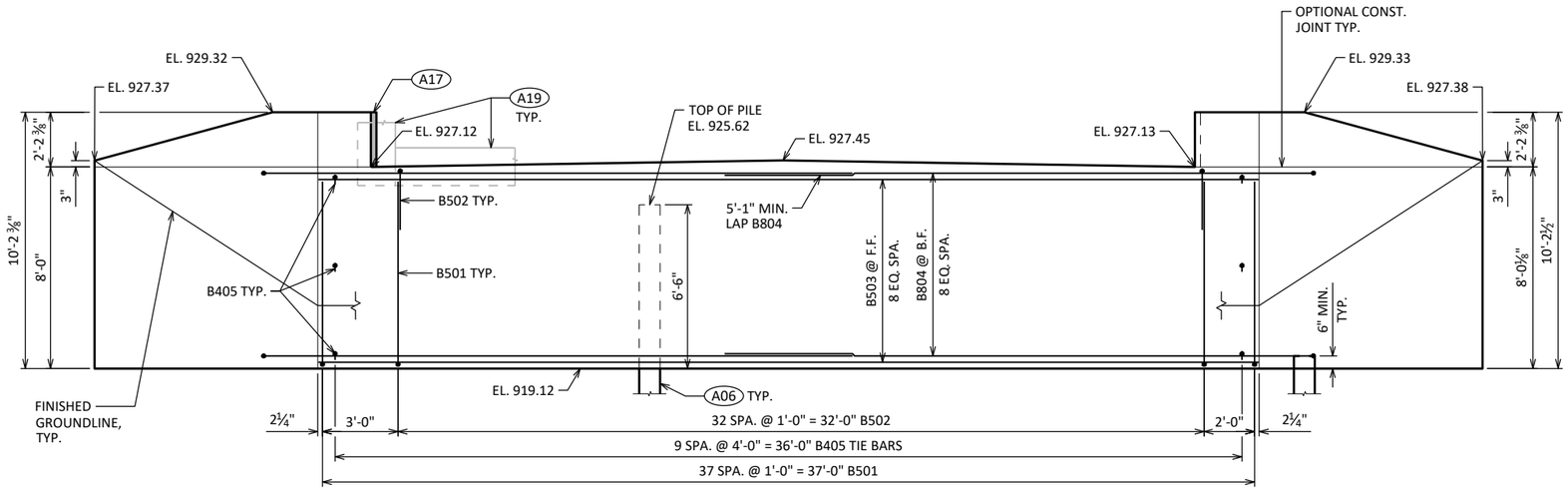
8

8

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0

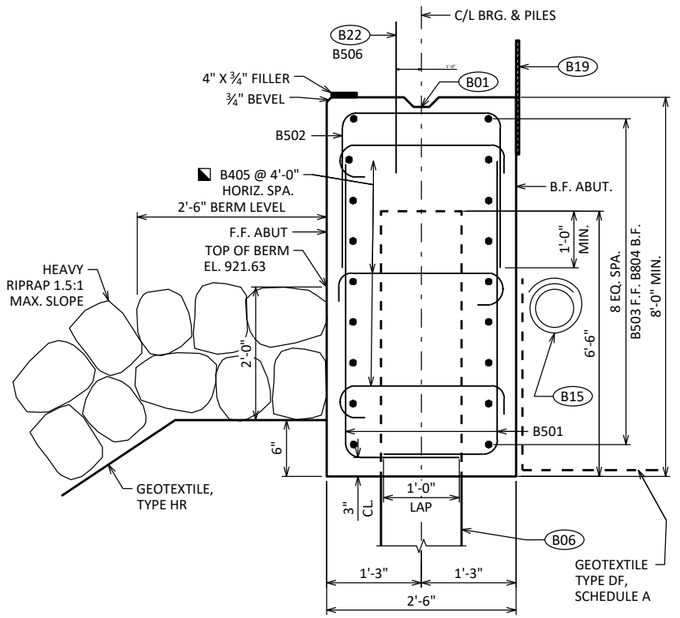
STATE PROJECT NUMBER

9249-04-70

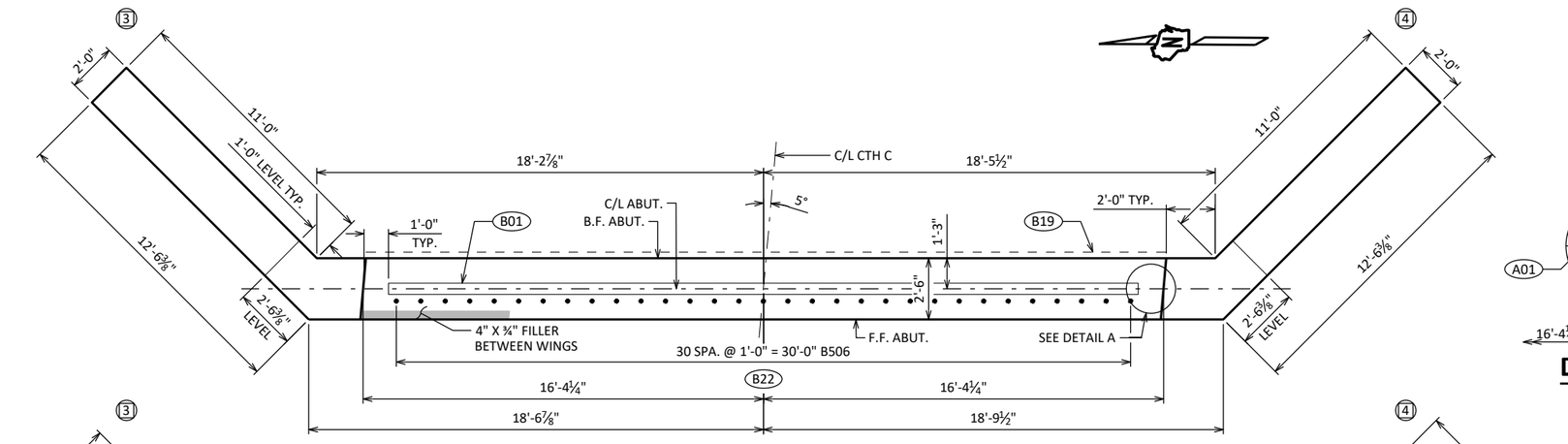


ELEVATION

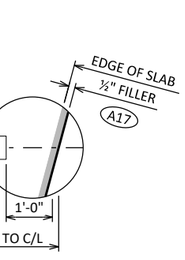
LOOKING UPSTATION



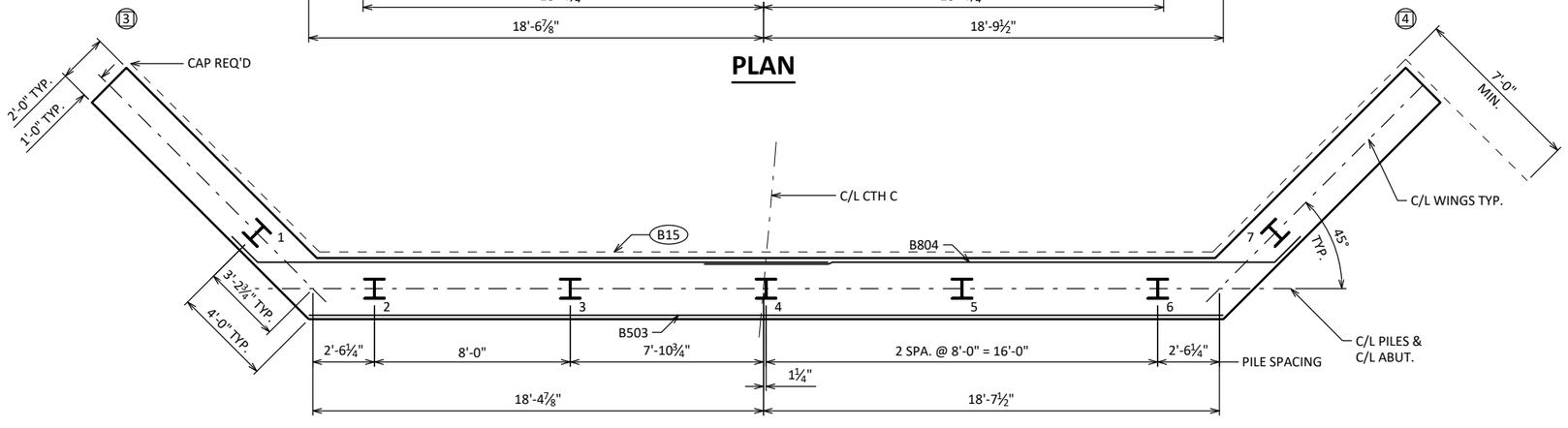
SECTION THRU BODY



PLAN



DETAIL A



PILE PLAN

NOTES

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-38-153

DRAWN BY SK | PLANS CK'D SMC

EAST ABUTMENT

SHEET 6 OF 10

77

SCALE =

8

8

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STATE PROJECT NUMBER

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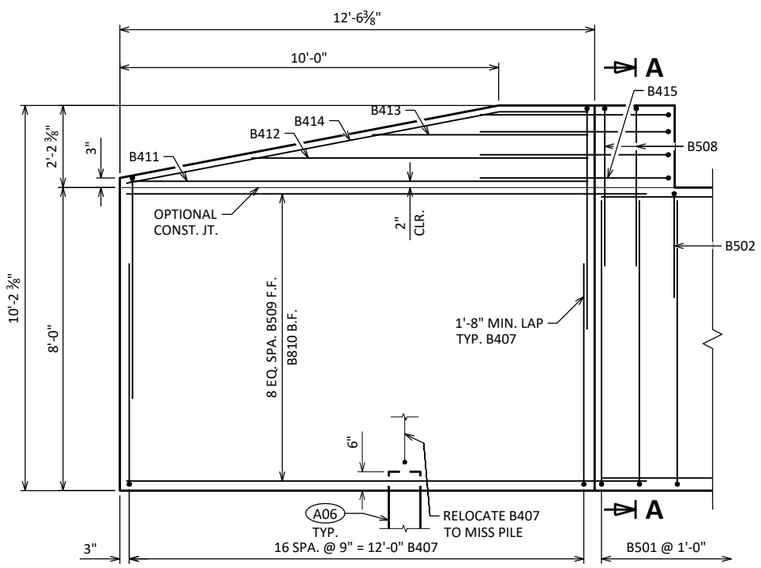

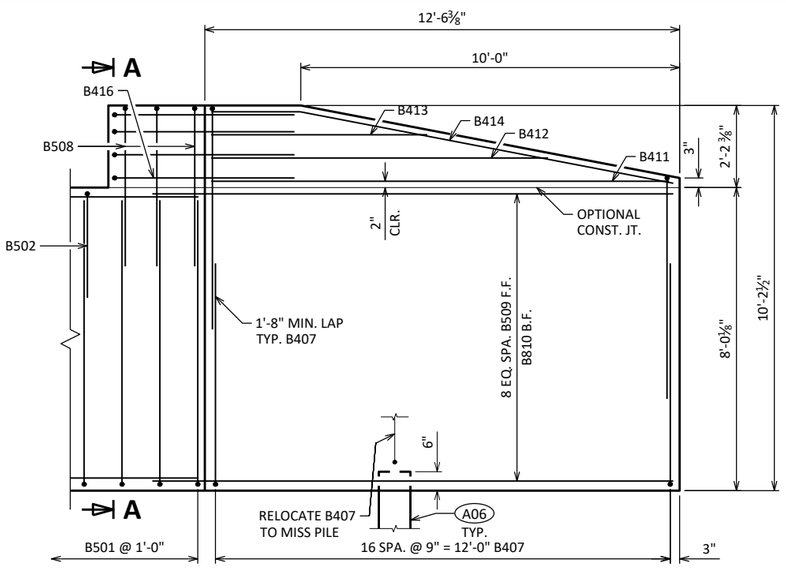

BILL OF BARS

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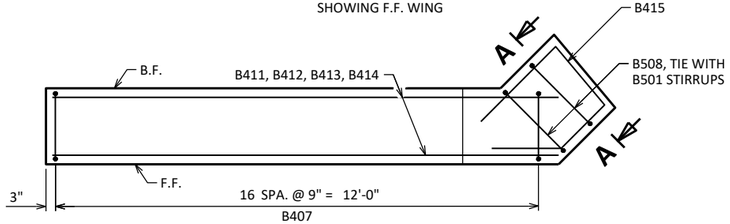
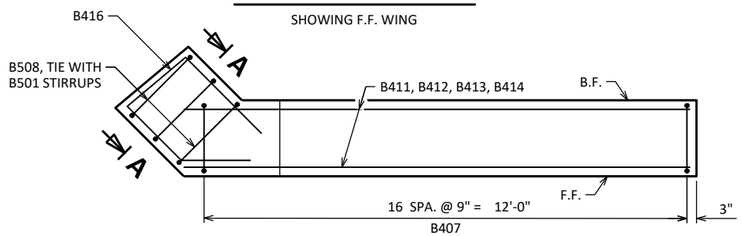
WING 3 ELEVATION

SHOWING F.F. WING



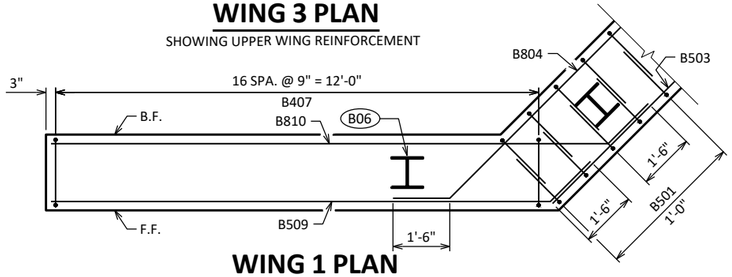
WING 4 ELEVATION

SHOWING F.F. WING



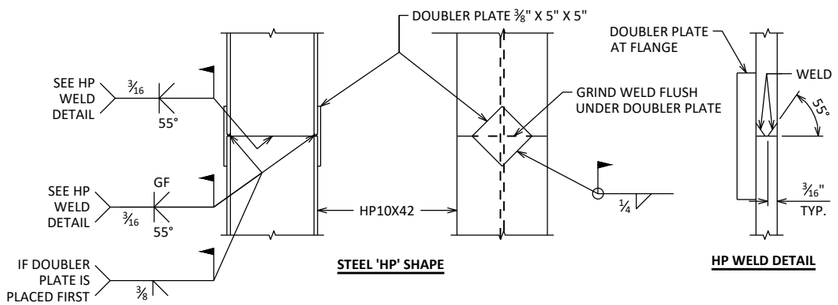
WING 3 PLAN

SHOWING UPPER WING REINFORCEMENT

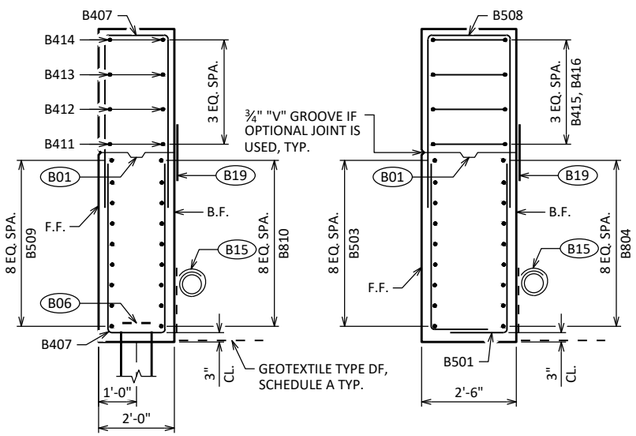


WING 1 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 2 SIMILAR



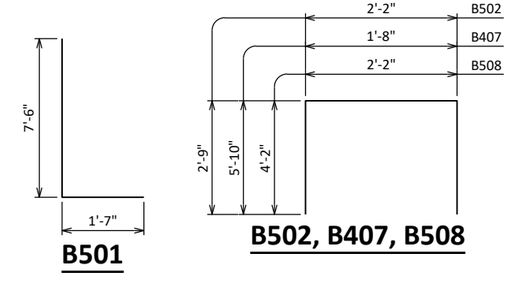
'HP' PILE DETAILS

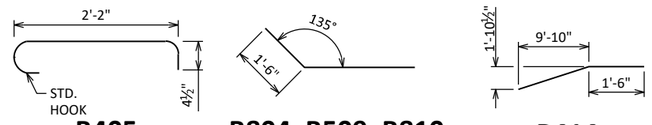


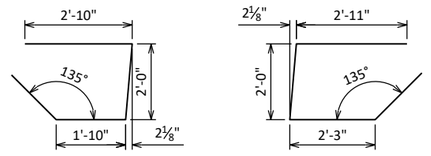
SECTION THRU WING 1

TYPICAL BOTH WINGS

SECTION A-A







NOTES

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LEGEND

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-38-153

DRAWN BY SK | PLANS CK'D SMC

EAST ABUTMENT DETAILS

SHEET 7 OF 10

78

SCALE =

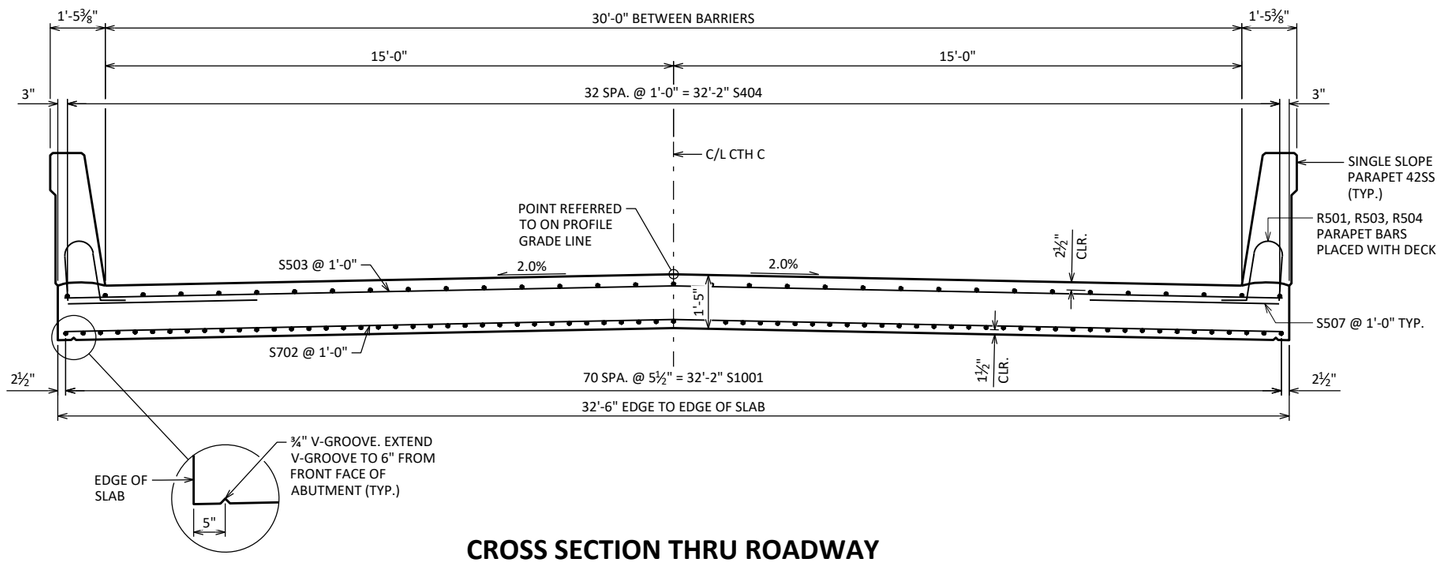
THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0

8

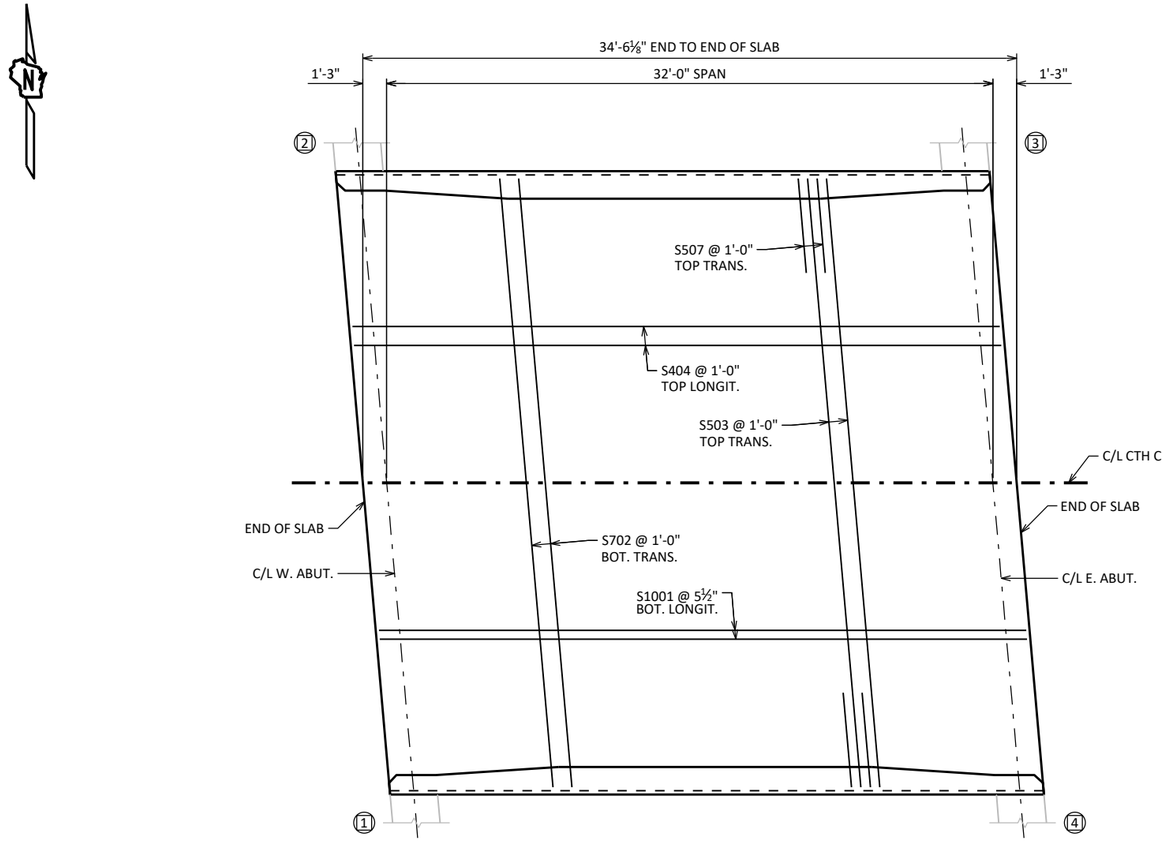
8

STATE PROJECT NUMBER

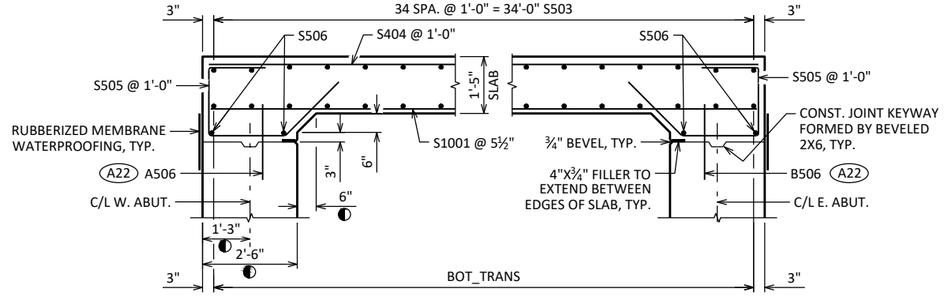
9249-04-70



CROSS SECTION THRU ROADWAY



PLAN



LONGITUDINAL SECTION

DIMENSIONS ARE GIVEN PARALLEL TO ℄ ROADWAY UNLESS OTHERWISE NOTED.

◐ MEASURED NORMAL TO THE ℄ OF ABUTMENT. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.

(A22) A506, B506 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-38-153

DRAWN BY SK | PLANS CK'D SMC

SUPERSTRUCTURE

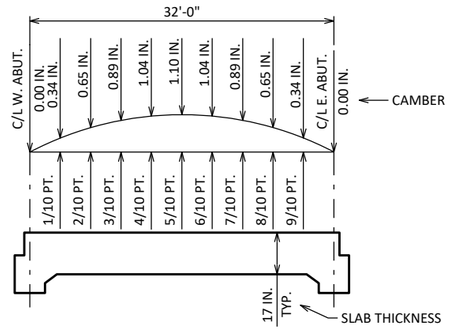
SHEET 8 OF 10

79

SCALE =

8

8



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED, EXCEPT FOR STAGED CONSTRUCTION.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION

TOP OF SLAB ELEVATIONS

LOCATION	C/L BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. E. ABUT.
N. EDGE OF DECK	929.18	929.19	929.20	929.22	929.23	929.25	929.26	929.27	929.29	929.30	929.32
CROWN OR R/L	929.48	929.50	929.51	929.52	929.54	929.55	929.57	929.58	929.59	929.61	929.62
S. EDGE OF DECK	929.19	929.20	929.22	929.23	929.24	929.26	929.27	929.29	929.30	929.31	929.33

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	W. ABUTMENT	5/10 PT.	E. ABUTMENT
N. GUTTER			
CROWN OR R/L			
S. GUTTER			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF ABUTMENTS, THE C/L OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR R/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NOTES

FILL IN THE TABLE OF "SURVEY TOP OF SLAB ELEVATIONS" FOR EACH SPAN ON AS BUILT PLANS.

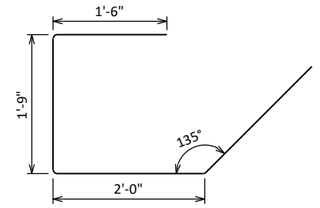
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

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
S1001	X	71	34'-2"			SLAB BOTTOM LONGITUDINAL
S702	X	35	32'-3"			SLAB BOTTOM TRANSVERSE
S503	X	35	32'-3"			SLAB TOP TRANSVERSE
S404	X	33	34'-2"			SLAB TOP LONGITUDINAL
S505	X	66	7'-0"	X		ABUTMENT DIAPHRAGM STIRRUPS
S506	X	4	32'-3"			ABUTMENT DIAPHRAGM LONGITUDINAL
S507	X	68	5'-0"			SLAB TOP EDGE TRANSVERSE



S505

STATE PROJECT NUMBER

9249-04-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-38-153

DRAWN BY SK | PLANS CK'D SMC

SUPERSTRUCTURE DETAILS

SHEET 9 OF 10

80

SCALE =

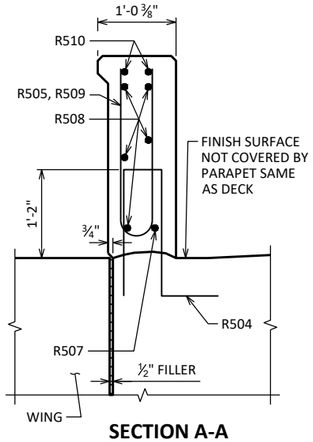
8

8

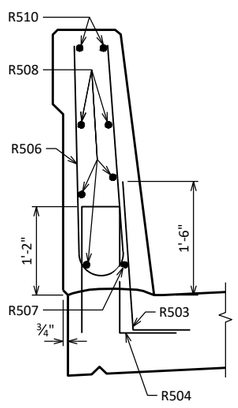
THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0

STATE PROJECT NUMBER

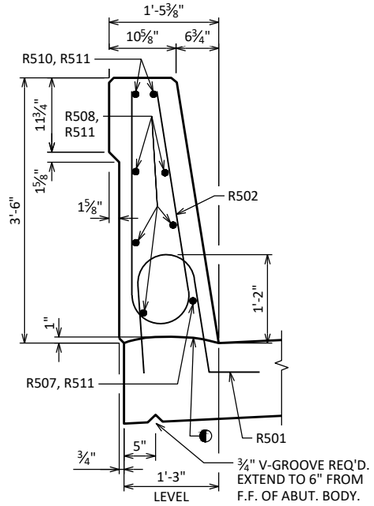
9249-04-70



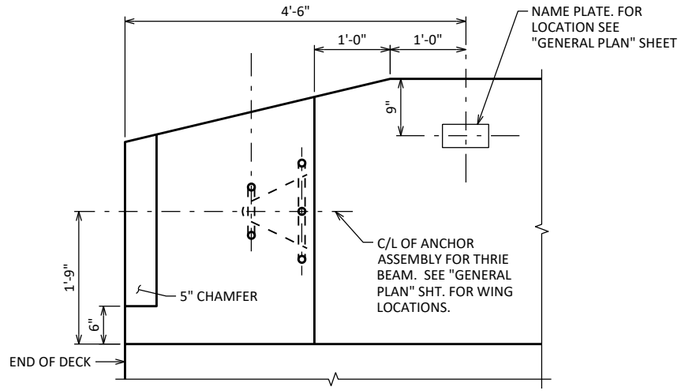
SECTION A-A



SECTION B-B



SECTION C-C



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

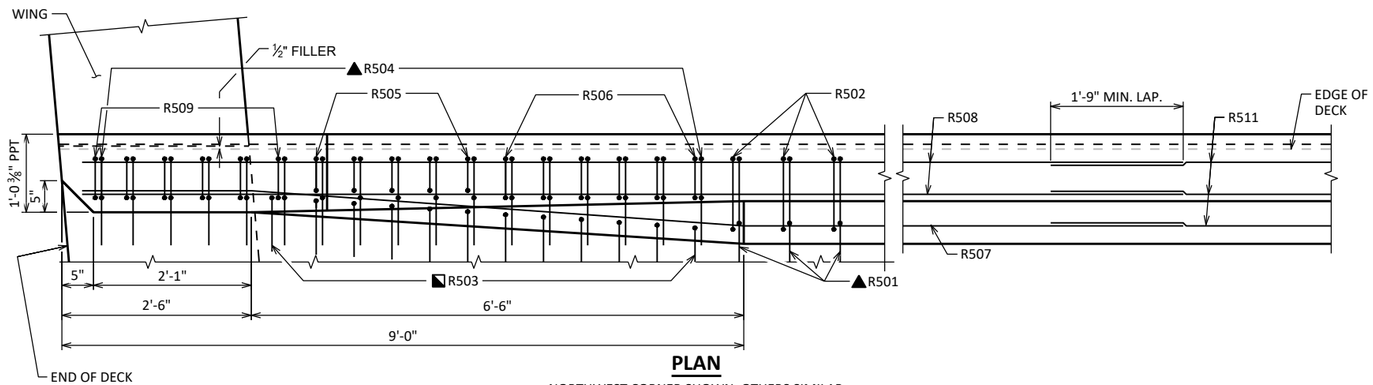
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	52	4'-5"	X		PARAPET VERT.
R502	X	52	6'-8"	X		PARAPET VERT.
R503	X	48	2'-9"	X		PARAPET VERT.
R504	X	68	4'-4"	X		PARAPET VERT.
R505	X	20	6'-5"	X		PARAPET VERT.
R506	X	24	6'-6"	X		PARAPET VERT.
R507	X	4	11'-3"	X		PARAPET HORIZ.
R508	X	20	11'-3"			PARAPET HORIZ.
R509	X	24	5'-5"	X	⚠	PARAPET VERT.
R510	X	8	11'-3"	X		PARAPET HORIZ.
R511	X	16	15'-2"			PARAPET HORIZ.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

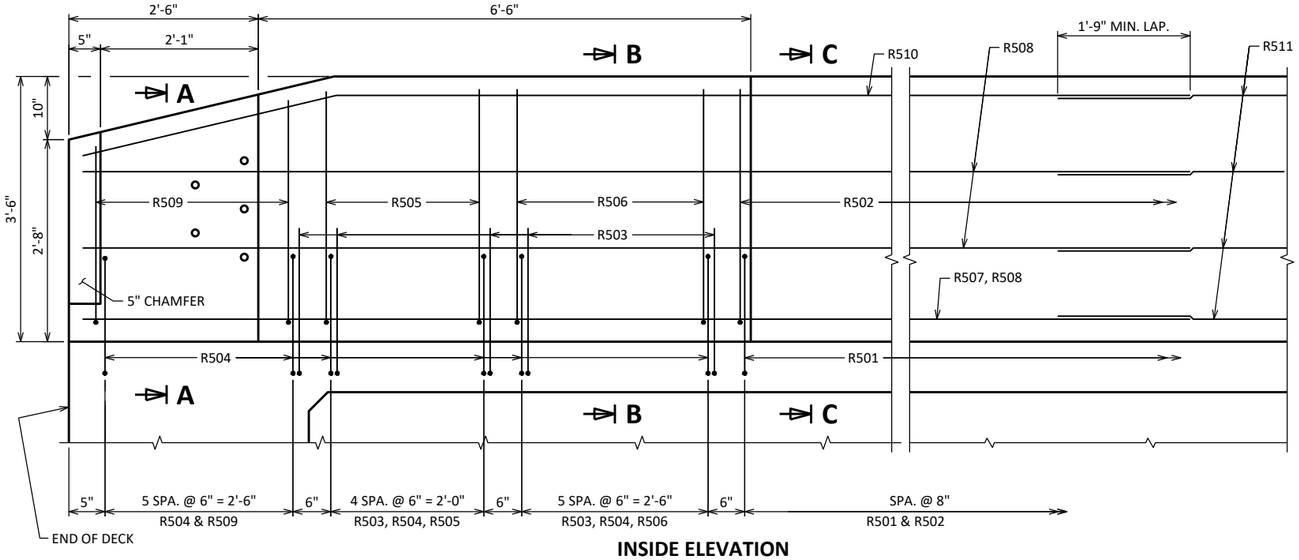
BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"



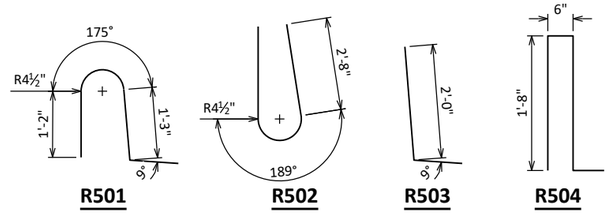
PLAN

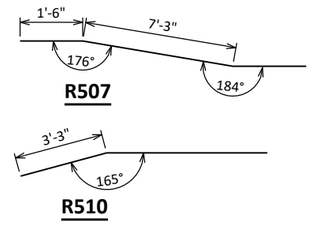
NORTHWEST CORNER SHOWN, OTHERS SIMILAR

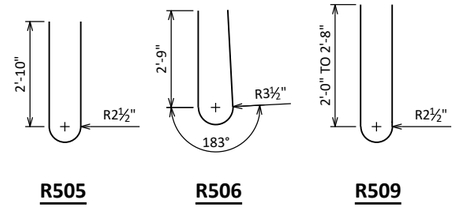


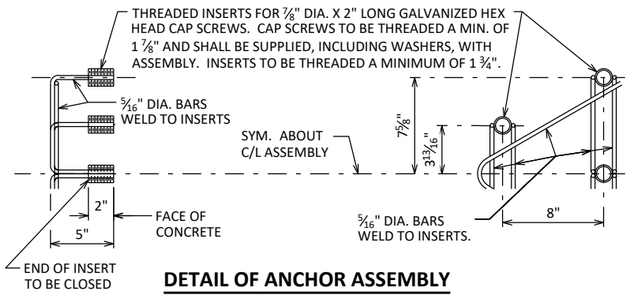
INSIDE ELEVATION

NORTHWEST CORNER SHOWN, OTHERS SIMILAR









DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▲ R501, R503, AND R504 BARS TO BE TIED TO SUPERSTRUCTURE STEEL BEFORE SUPERSTRUCTURE IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-38-153

DRAWN BY SK | PLANS CK'D SMC

SINGLE SLOPE PARAPET 42SS

SHEET 10 OF 10

81

SCALE =

8

8

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0

DIVISION 1 - CTH C

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	FILL	MARSH EXC	CUT NOTE 1	FILL NOTE 3	EXCAVATION MARSH	CUT 1.00 NOTE 1	EXPANDED FILL 1.00	EXPANDED MARSH BACKFILL 1.00 NOTE 4	MASS ORDINATE NOTE 8
11+06.98	1106.98	0.00	7.01	0.20	20.21	0	0	0	0	0	0	0
11+42.40	1142.40	35.42	12.62	12.25	91.11	13	8	73	13	8	73	5
11+50.00	1150.00	7.6	12.82	17.92	98.86	4	4	27	17	12	100	5
12+00.00	1200.00	50	16.47	44.76	142.49	27	58	223	44	70	323	-26
12+40.06	1240.06	40.06	16.46	62.57	157.66	24	80	223	68	150	546	-82
12+42.76	1242.76	2.7	16.51	63.36	156.95	2	6	16	70	156	562	-86
12+50.00	1250.00	7.24	16.59	62.40	152.87	4	17	42	74	173	604	-99
12+65.04	1265.04	15.04	15.02	76.20	154.57	9	39	86	83	212	690	-129
12+67.74	1267.74	2.7	15.40	71.52	153.72	2	7	15	85	219	705	-134
12+90.02	1290.02	22.28	40.41	50.72	143.50	23	50	123	108	269	828	-161
12+92.72	1292.72	2.7	39.87	50.68	143.99	4	5	14	112	274	842	-162
13+00.00	1300.00	7.28	38.14	55.35	130.19	11	14	37	123	288	879	-165
14+00.00	1400.00	0	44.21	49.94	158.15	0	0	0	123	288	879	-165
14+04.57	1404.57	4.57	44.08	57.03	167.94	7	9	28	130	297	907	-167
14+07.27	1407.27	2.7	43.96	61.41	173.96	4	6	17	134	303	924	-169
14+29.55	1429.55	22.28	14.84	117.62	206.73	24	74	157	158	377	1081	-219
14+32.25	1432.25	2.7	14.80	97.40	203.03	1	11	20	159	388	1101	-229
14+50.00	1450.00	17.75	14.82	129.53	218.62	10	75	139	169	463	1240	-294
14+54.54	1454.54	4.54	15.25	135.81	224.21	3	22	37	172	485	1277	-313
14+57.23	1457.23	2.69	15.50	137.96	225.86	2	14	22	174	499	1299	-325
15+00.00	1500.00	42.77	19.21	42.16	169.69	27	143	313	201	642	1612	-441
15+27.37	1527.37	27.37	10.21	0.05	34.20	15	21	103	216	663	1715	-447
15+41.49	1541.49	14.12	9.37	0.00	23.00	5	0	15	221	663	1730	-442

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH GRANULAR BACKFILL
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - ((FILL) * FILL FACTOR)]

9

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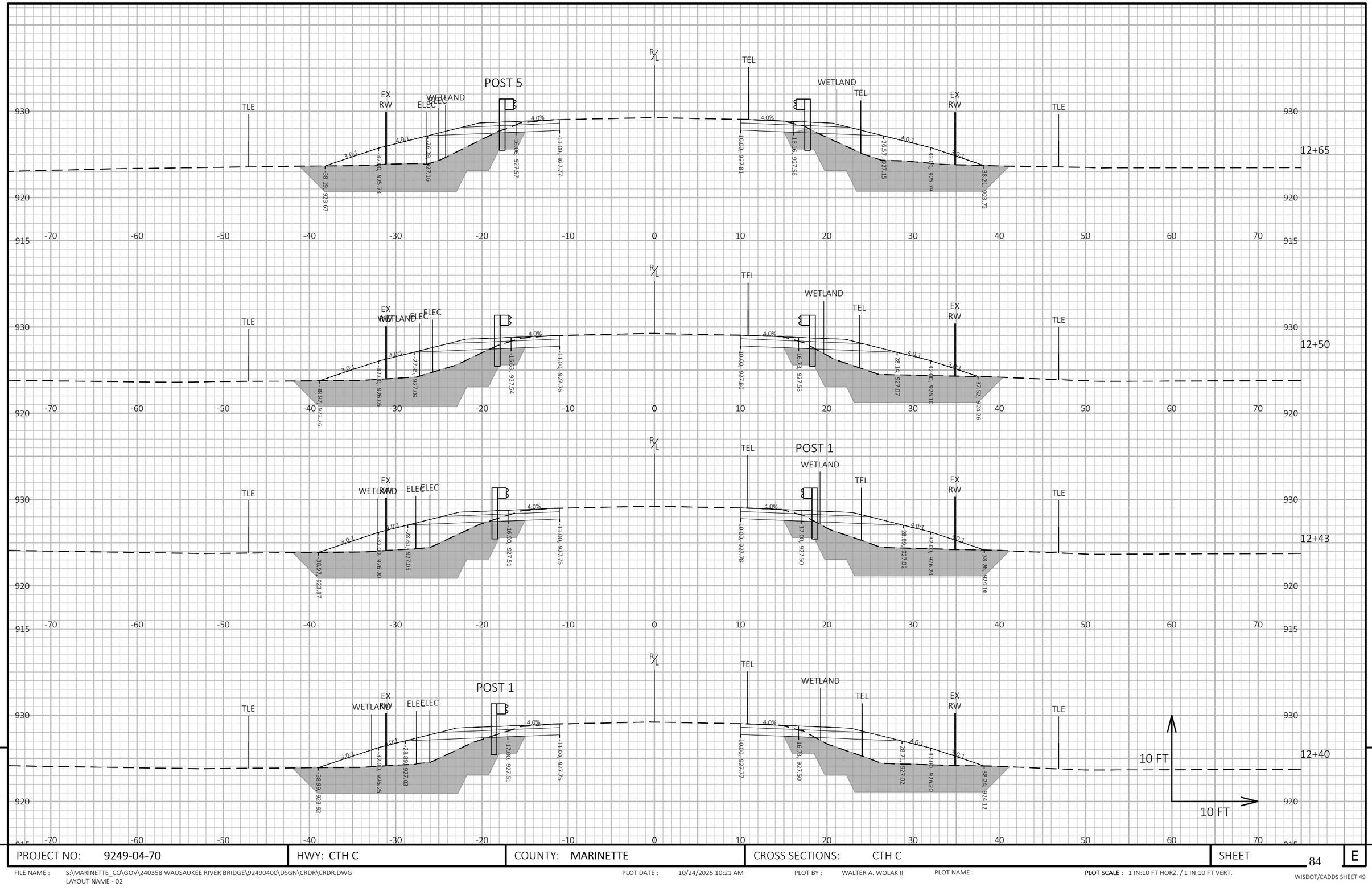
PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	CROSS SECTIONS: CTH C	SHEET 83	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\DSGN\CRDR\CRDR.DWG
LAYOUT NAME - 01

PLOT DATE : 10/24/2025 10:21 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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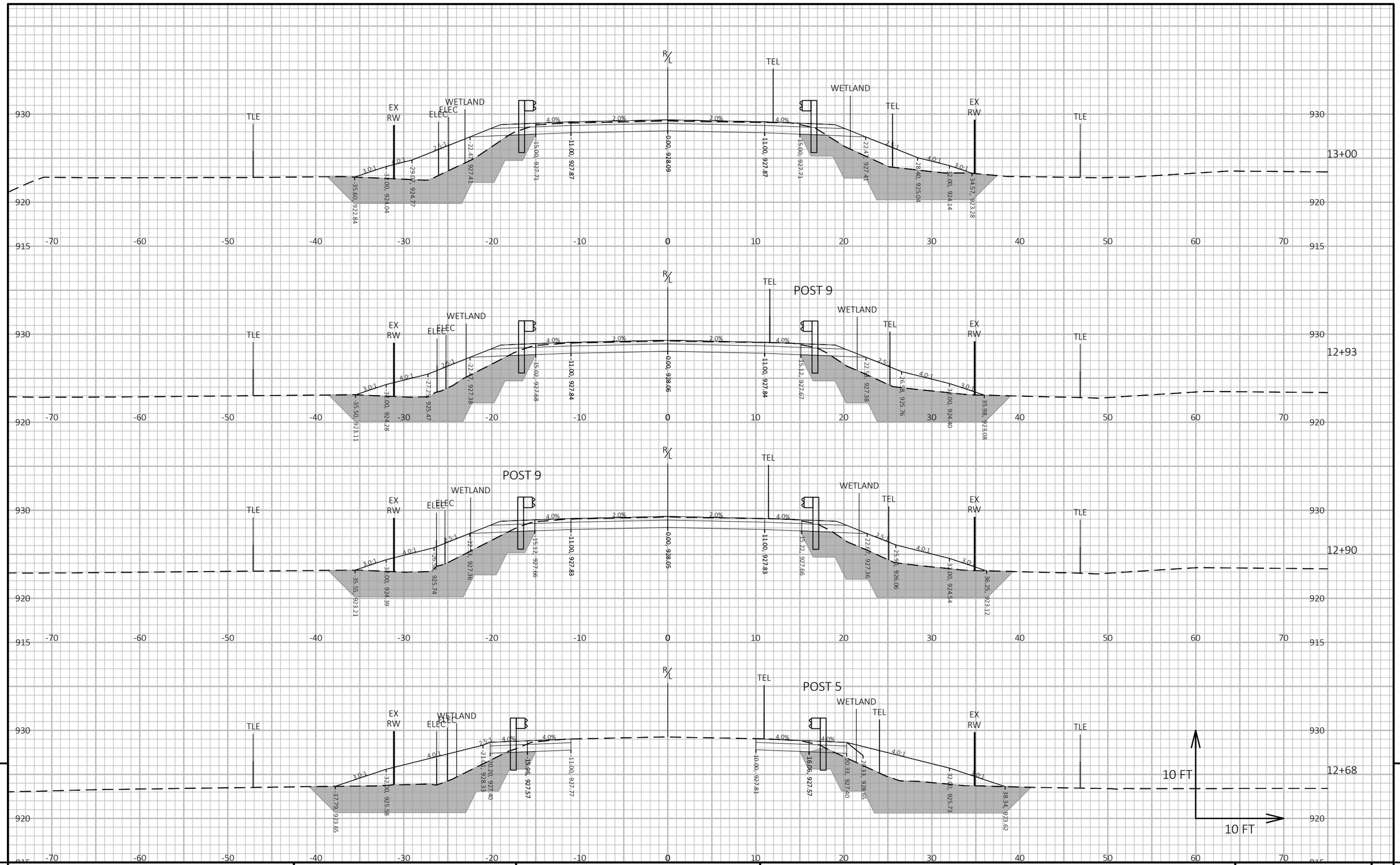
PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	CROSS SECTIONS: CTH C	SHEET 84	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\DSGN\CRDR\CRDR.DWG
LAYOUT NAME - 02

PLOT DATE : 10/24/2025 10:21 AM PLOT BY : WALTER A. WOLAK II PLOT NAME :

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

WISDOT/CADDS SHEET 49



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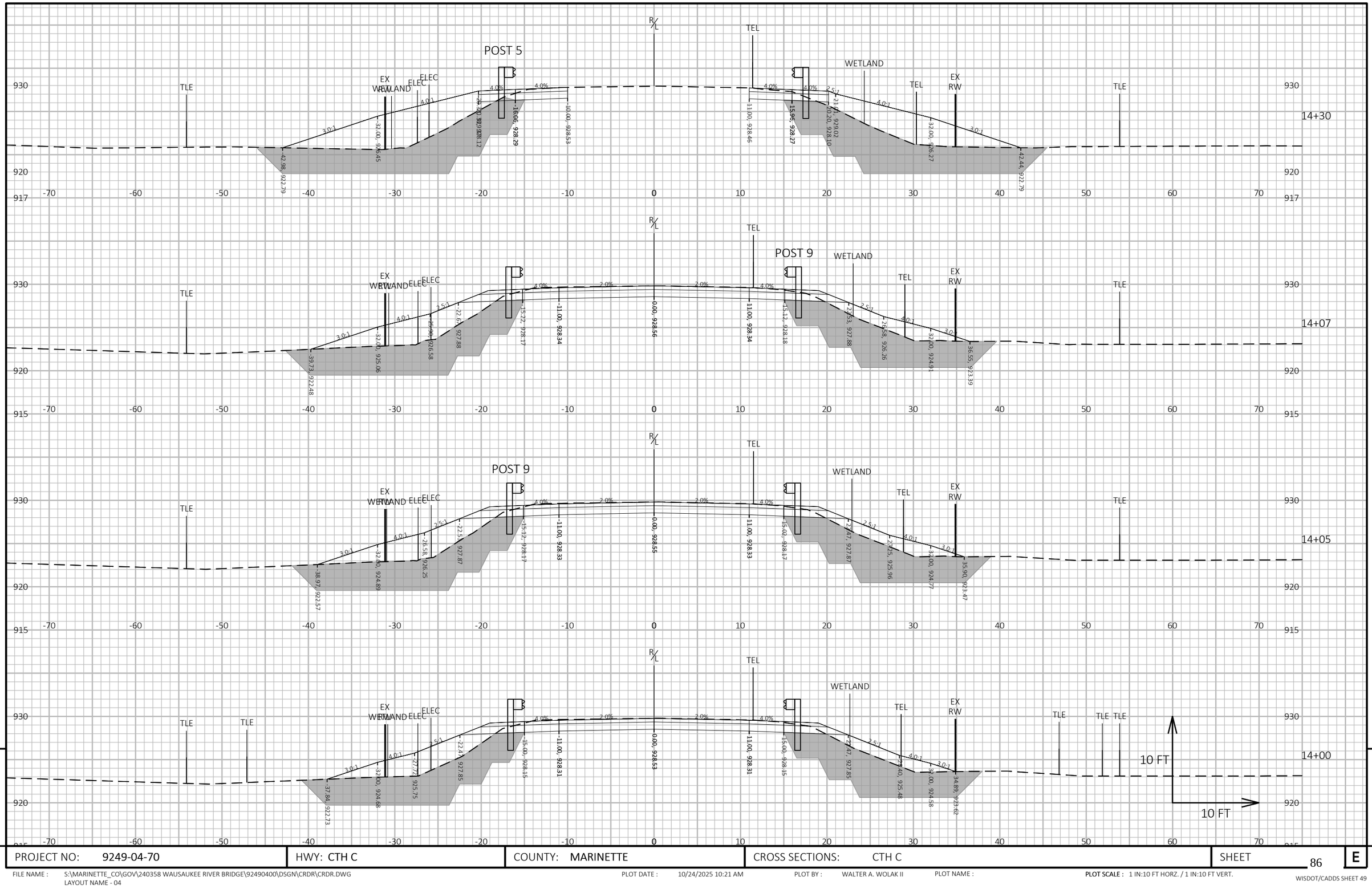
PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	CROSS SECTIONS: CTH C	SHEET 85	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\DSGN\CRDR\CRDR.DWG
LAYOUT NAME - 03

PLOT DATE : 10/24/2025 10:21 AM PLOT BY : WALTER A. WOLAK II PLOT NAME :

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

WISDOT/CADDS SHEET 49

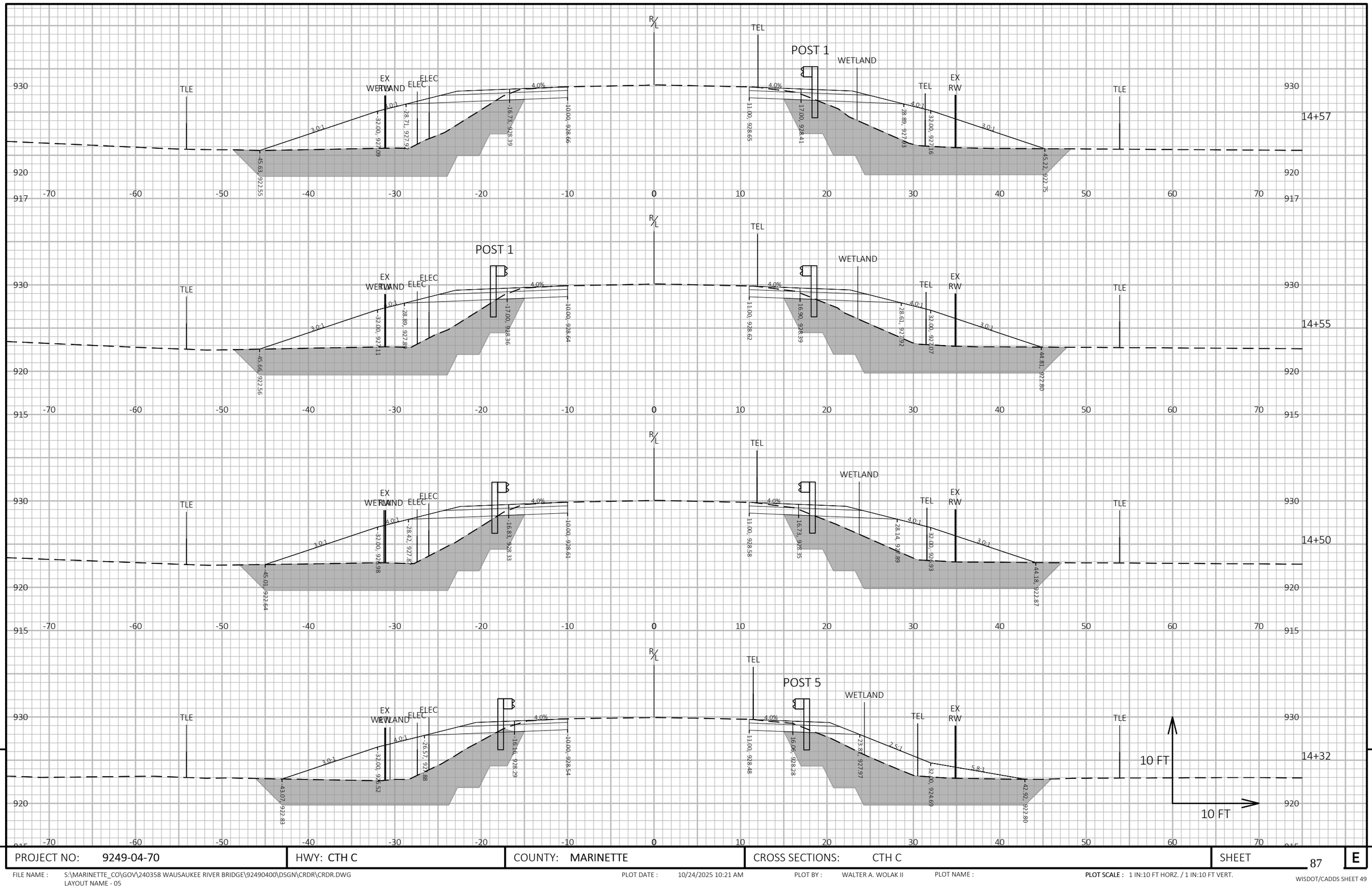


PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	CROSS SECTIONS: CTH C	SHEET 86 E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\DSGN\CRDR\CRDR.DWG
LAYOUT NAME - 04

PLOT DATE : 10/24/2025 10:21 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	CROSS SECTIONS: CTH C	SHEET 87	E

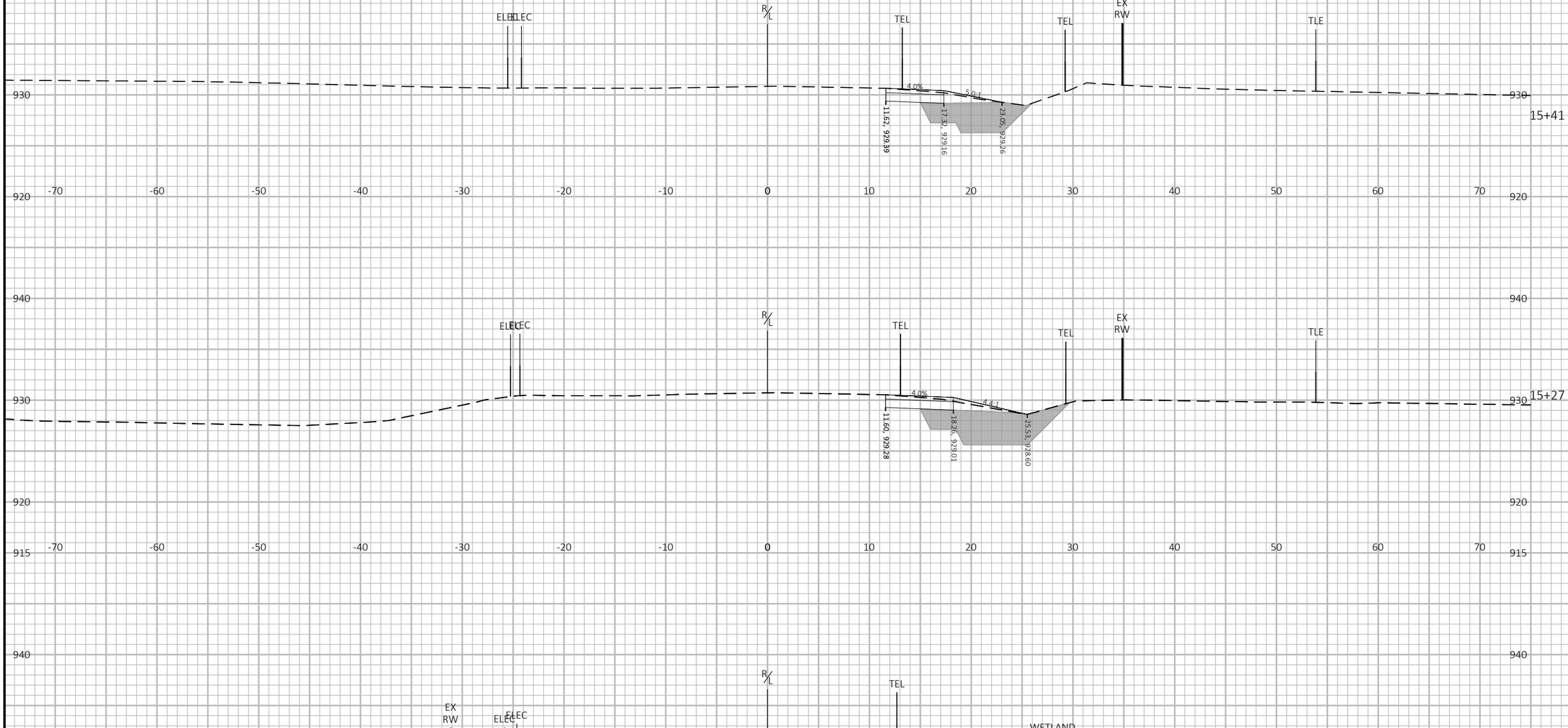
FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\DSGN\CRDR\CRDR.DWG
LAYOUT NAME - 05

PLOT DATE : 10/24/2025 10:21 AM PLOT BY : WALTER A. WOLAK II PLOT NAME :

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

WISDOT/CADDS SHEET 49

END PROJECT STA 15+41.49



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PROJECT NO: 9249-04-70	HWY: CTH C	COUNTY: MARINETTE	CROSS SECTIONS: CTH C	SHEET 88	E

FILE NAME : S:\MARINETTE_CO\GOV\240358 WAUSAUKEE RIVER BRIDGE\92490400\DSGN\CRDR\CRDR.DWG
LAYOUT NAME - 06

PLOT DATE : 10/24/2025 10:21 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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through innovation and exceptional service.

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