RHI NOV 2016

PROJECT ID: 9240-08-70/71

WITH: N/A

COUNTY: PRICE

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9240-08-70	WISC 2016418	1
9240-08-71	WISC 2016419	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ORDER OF SHEETS

TOTAL SHEETS = 158

PARK FALLS - SPRINGSTEAD
N FORK FLAMBEAU RVR BRIDGE B-50-0082
STH 182
PRICE COUNTY

STATE PROJECT NUMBER
9240-08-70

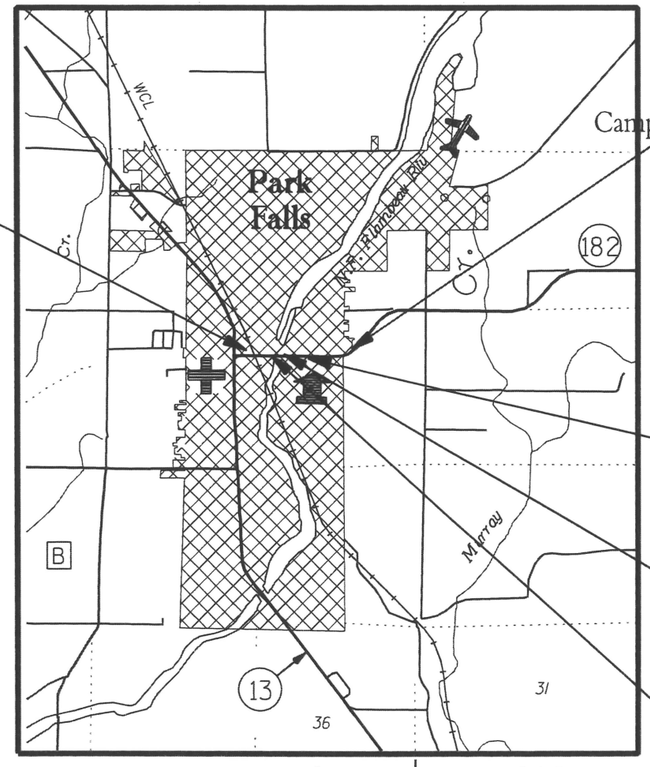
PARK FALLS - SPRINGSTEAD
STH 13 TO SAUNDERS AVENUE
STH 182
PRICE COUNTY

STATE PROJECT NUMBER
9240-08-71

PROJECT LOCATION

27

N



BEGIN PROJECT ID 9240-08-71
STA. 21+82.00
Y=502,702.89
X=757,624.64

END PROJECT ID 9240-08-71
STA 56+34.50
Y= 502,744.48
X= 761,072.30

END PROJECT ID 9240-08-70
STA 37+76.36
Y= 502,699.38
X= 759,218.85

STRUCTURE
B-50-0082

BEGIN PROJECT ID 9240-08-70
STA 28+74.4
Y= 502,696.07
X= 758,317.01

LAYOUT
SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.672 MI

DESIGN DESIGNATION

A.A.D.T.	2017	=	5400
A.A.D.T.	2037	=	6600
D.H.V.	2037	=	277
D.D.		=	63/37
T.		=	6.4%
DESIGN SPEED		=	30 MPH
ESALS		=	919,800

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- HIGH VOLTAGE (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

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS) PRICE COUNTY.
ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO ADJACENT WISDOT PROJECT ID 9931-02-70 ON STH 13 (COMPLETED IN 2012) NAVD 88 DATUM. COORDINATES ARE TIED INTO SAME PROJECT ON NAD 83 (91) BASIS.

ACCEPTED FOR
CITY OF PARK FALLS

7/28/16 DATE

MAYOR

ORIGINAL PLANS PREPARED BY:

MSA PROFESSIONAL SERVICES
TRANSPORTATION · MUNICIPAL DEVELOPMENT · ENVIRONMENTAL
1835 N.Stevens St. Rhinelander, WI 54501
715-362-3244 1-800-844-7854 Fax: 715-362-4116
Web Address: www.msa-ps.com

WISCONSIN
JESSE D. JEFFERSON
E-41823
RHINELANDER
WI
PROFESSIONAL ENGINEER

07/29/2016 Date

Signature

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA Professional Services
Designer	MSA Professional Services
Project Manager	MICHAEL GRAGE
Regional Examiner	CHERYL SIMON
Regional Supervisor	ROBIN STAFFORD
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 7/29/2016 (Signature)

E

GENERAL NOTES

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

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

THE 6" HMA PAVEMENT TYPE 4 LT 58-28 S SHALL BE PLACED IN 3 2-INCH LIFTS.

DO NOT OPERATE AND/OR STORE MATERIALS WITHIN CITY PARKLANDS AND/OR IN WETLANDS, OUTSIDE OF THE SHOWN SLOPE INTERCEPTS. CITY PARKLANDS INCLUDE ALL AREAS LABELED AS CITY OF PARK FALLS PROPERTY LOCATED IMMEDIATELY SOUTHEAST OF THE BRIDGE ON STH 182.

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

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR A MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY THE ENGINEER.

SECTION 2 SHEET ORDER

UTILITIES

Communication Line:
CenturyLink
Brian Huhn
425 Ellingson Ave
Hawkins, WI 54530
(715) 532-0023
brian.huhn@centurylink.com

Communication Line:
Charter Communications
Mark Olejniczak
821 Lincoln Street
Rhinelander, WI 54501
(715) 490-1795
mark.olejniczak@charter.com

Communication Line:
Price County Telephone Company
Brad Kuhnert
P.O. Box 108
Phillips, WI 54555
(715) 339-2151
kuhnertb@pctcnet.net

Electric:
Xcel Energy
Andy Halopka
310 Hickory Hills Lane
Phillips, WI 54555
(715) 737-1183
andrew.a.halopka@xcelenergy.com

Electric:
Renewable World Energies
Scott McNelis
1001 Stephenson St
Norway, MI 49870
(906) 563-5265 Ext. 226
smcnelis@kiserhydro.com

Electric:
Flambeau River Papers
Bill Hilgart
200 1ST Avenue North
Park Falls WI 54552-1260
(715) 762-5397
bhilgart@flambeauriverpapers.com

Gas/Petroleum:
Xcel Energy
Andy Halopka
310 Hickory Hills Lane
Phillips, WI 54555
(715) 737-1183
andrew.a.halopka@xcelenergy.com

Electric-Transmission:
Xcel Energy
Bruce Zemke
414 Nicolet Mall - MP8
Minneapolis, MN 55401
(612) 330-7815
bruce.m.zemke@xcelenergy.com

UTILITIES

Water:
City of Park Falls
Scott Hilgart
400 4th Ave S
Park Falls, WI 54552-1121
(715) 492-0564
pfdpw@pctcnet.net

Sanitary Sewer:
City of Park Falls
Scott Hilgart
400 4th Ave S
Park Falls, WI 54552-1121
(715) 492-0564
pfdpw@pctcnet.net

DNR LIAISON

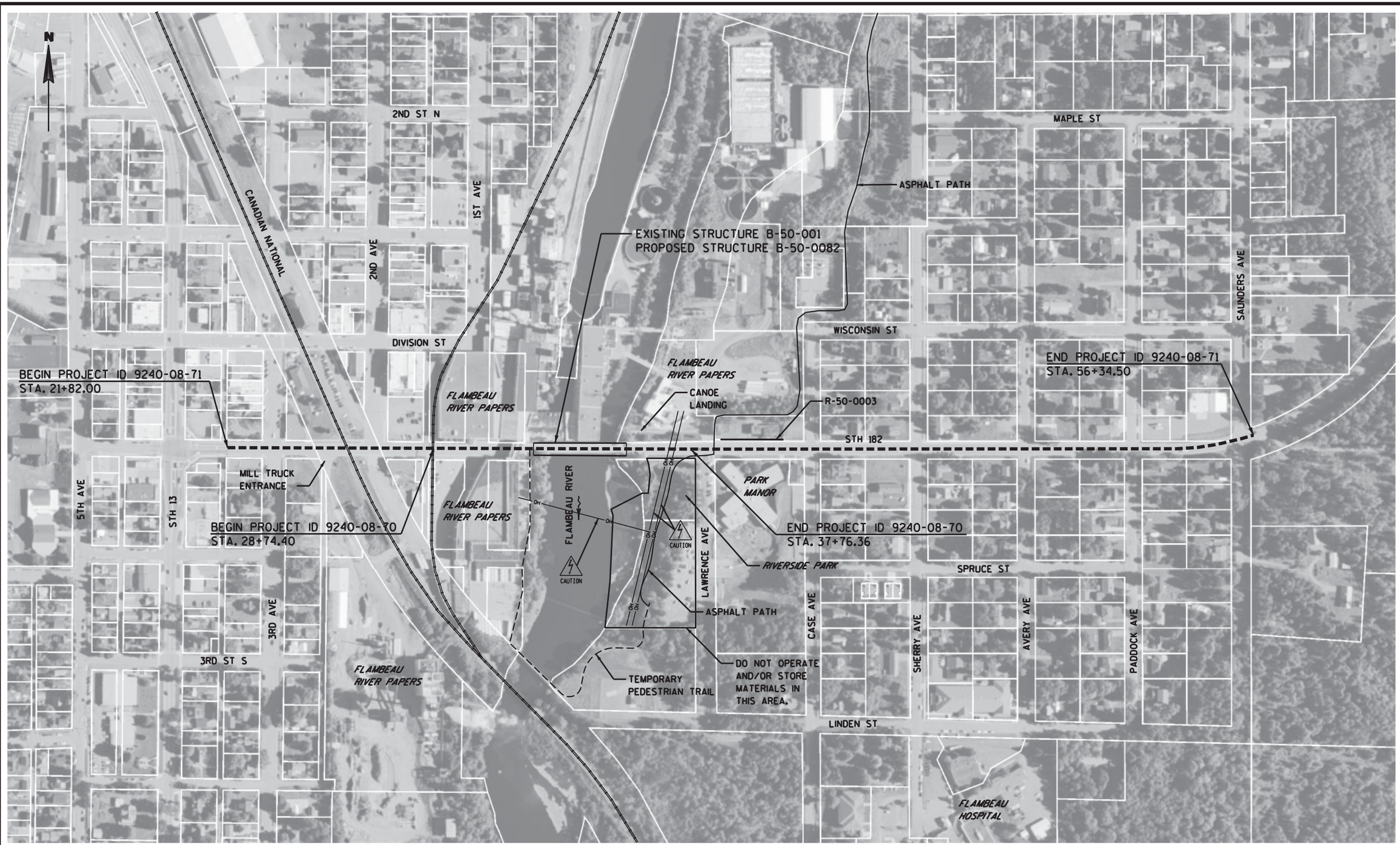
DEPARTMENT OF NATURAL RESOURCES
ATTN.: SHAWN HASELEU
810 W. MAPLE STREET
SPOONER, WI 54801
(715) 635-4228
shawn.haseleu@wisconsin.gov

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

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL TABLE			
	A	B	C	D
	SLOPE RANGE %	SLOPE RANGE %	SLOPE RANGE %	SLOPE RANGE %
LAND USE:	6 & OVER	6 & OVER	6 & OVER	6 & OVER
SIDE SLOPE-TURF	.25 .32	.27 .34	.28 .36	.30 .38
PAVEMENT:				
ASPHALT	.70 - .95			
CONCRETE	.80 - .95			
GRAVEL ROADS, SHOULDERS	.40 - .60			

THE RUNOFF COEFFICIENTS OF SURFACE DRAINAGE AT THE PROJECT SITES WILL NOT BE CHANGED FROM BEFORE TO AFTER CONSTRUCTION. THE TOTAL AREA OF THE PROJECT IS 5.10 ACRES. THE TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES IS 3.22 ACRES.

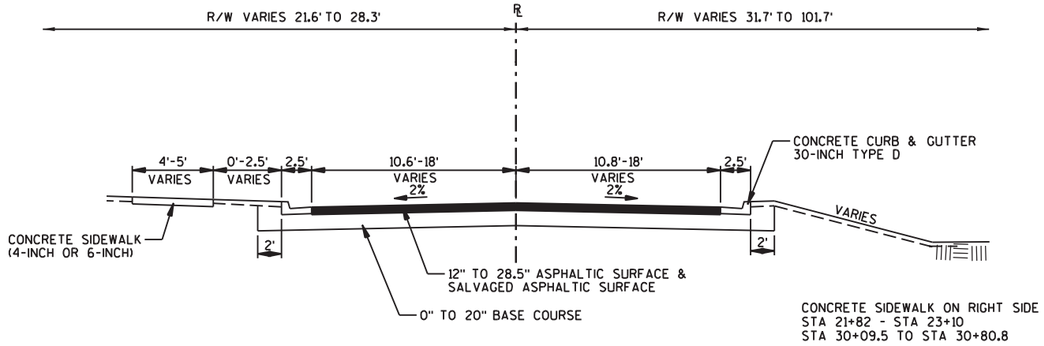


PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\Overview.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : PLOT SCALE : 1:300

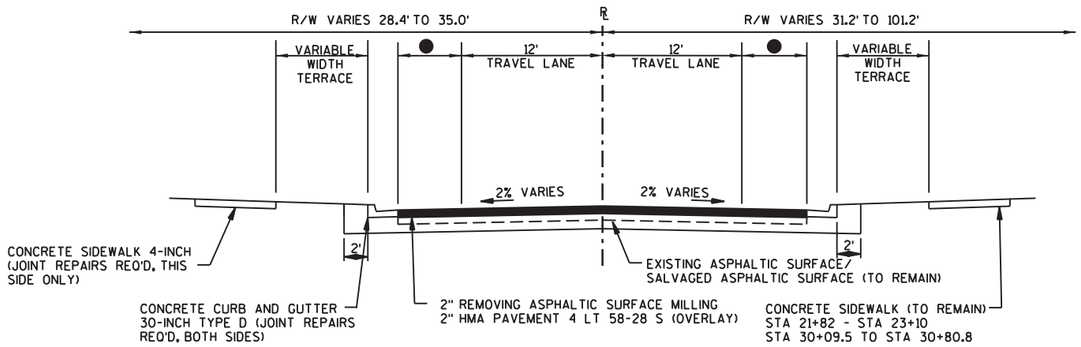
WISDOT/CADDS SHEET 42

Overview.dgn 7/29/2016 10:56:07 AM CRooyakkers



TYPICAL EXISTING SECTION - STH 182

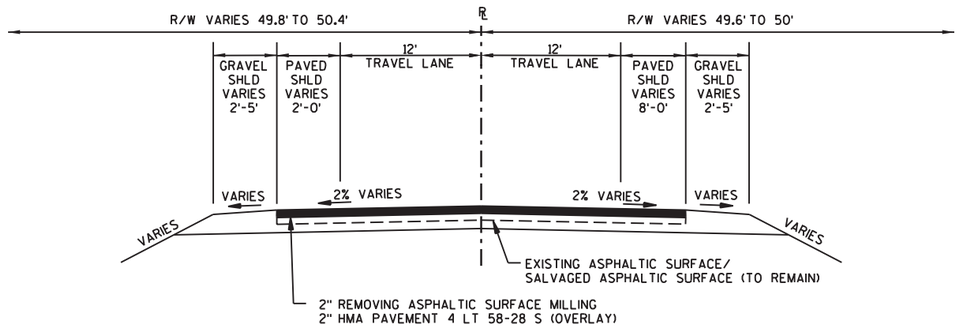
STA 21+82 - STA 56+34.5



TYPICAL FINISHED SECTION - STH 182

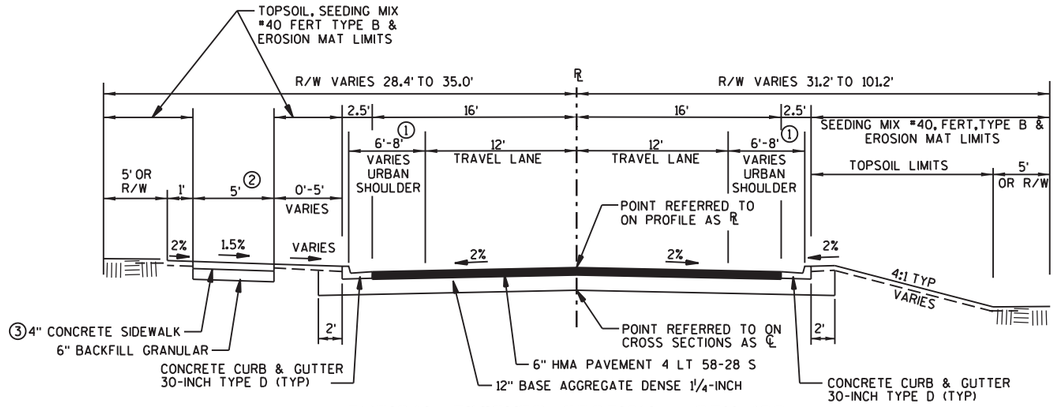
STA 21+82 - STA 28+74.4
STA 37+76.36 - STA 56+34.5

● STA 21+82 - STA 28+74.4 LT & RT: PAVED URBAN SHOULDER, 6' WIDE
STA 37+76.36 - STA 47+50 LT: PARKING LANE, 8' WIDE
STA 47+50 - STA 55+50 LT: PAVED URBAN SHOULDER, 4' WIDE
STA 37+76.36 - STA 55+50 RT: PAVED URBAN SHOULDER, 4' WIDE



TYPICAL FINISHED SECTION - STH 182

STA 55+50 - STA 56+34.5



TYPICAL FINISHED SECTION - STH 182

STA 28+74.4 - STA 37+76.36

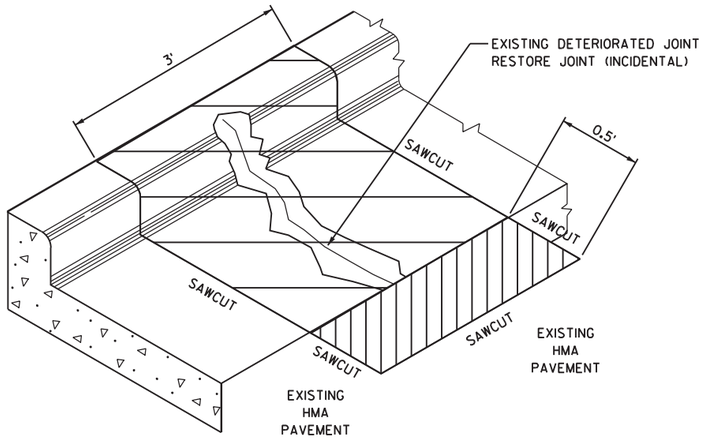
6' SIDEWALK REQUIRED AT BACK OF CURB
STA 30+09.5 TO STA 30+80.8 RT

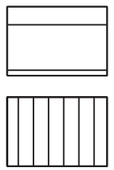
① BIKE ACCOMMODATION: 8' STA 29+00 - STA 31+00
6'-8' STA 31+00 - STA 32+25
6' STA 32+25 - STA 35+50
6'-8' STA 35+50 RT - STA 37+00 RT
6' STA 35+50 LT - STA 37+00 LT
8' STA 37+00 - STA 37+50

② 6' SIDEWALK WHEN TERRACE WIDTH IS 0'

③ 6" CONCRETE SIDEWALK STA 28+74 - STA 32+25

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	TYPICAL SECTIONS	SHEET 4	E



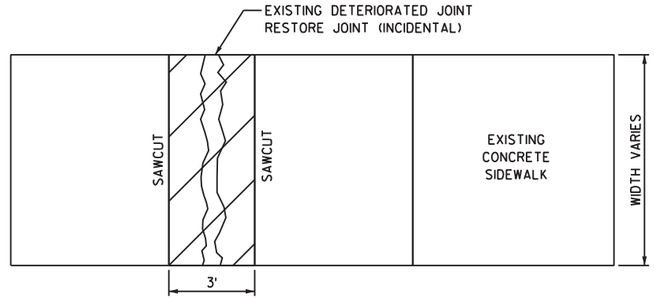


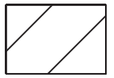
REMOVING CURB & GUTTER AND
CURB & GUTTER 30-INCH TYPE D

REMOVING ASPHALTIC SURFACE
AND HMA PAVEMENT 4 LT 58-28 S

CONCRETE CURB AND GUTTER JOINT REPAIR DETAIL

LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD

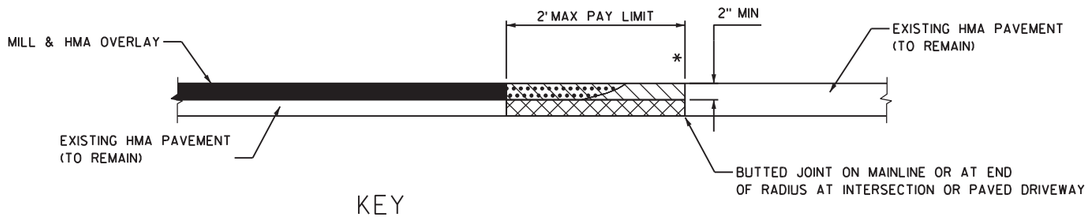




REMOVING SIDEWALK
CONCRETE SIDEWALK 4-INCH (REQD)

CONCERETE SIDEWALK JOINT REPAIR DETAIL

STA 38+39, LT TO STA 40+48, LT



KEY

ASPHALT WEDGING
(FULL DEPTH REMOVAL OPTION)

REMOVING ASPHALTIC SURFACE, BUTT JOINTS (FULL DEPTH REMOVAL OPTIONAL)
DO NOT REMOVE MATERIAL UNDER THIS ITEM UNTIL 24 HOURS BEFORE PAVING

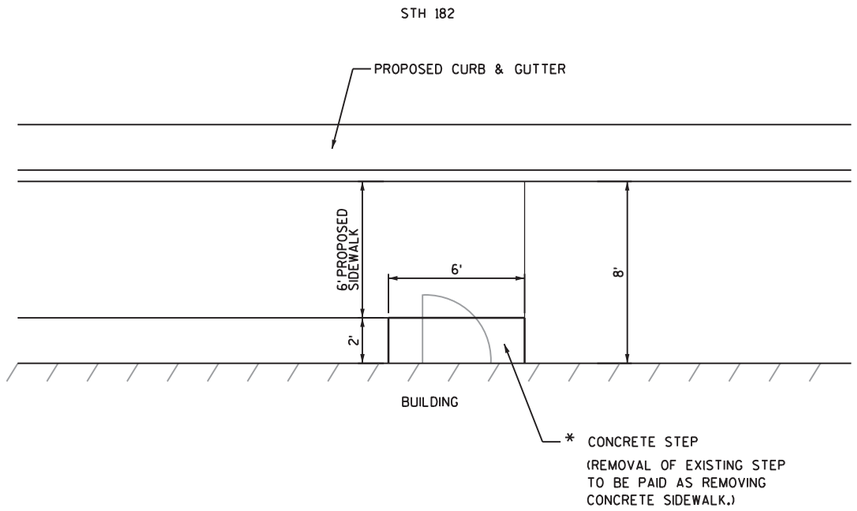
REMOVING ASPHALTIC SURFACE MILLING

* SAWCUT REQ'D

BUTT JOINT DETAIL ON MAINLINE, AT INTERSECTIONS, & PAVED DRIVEWAYS

NOTES:
FOR MAINLINE AND SIDE ROADS USE 2-INCH HMA PAVEMENT 4 LT 58-28 S
FOR PAVED DRIVEWAYS USE 2-INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

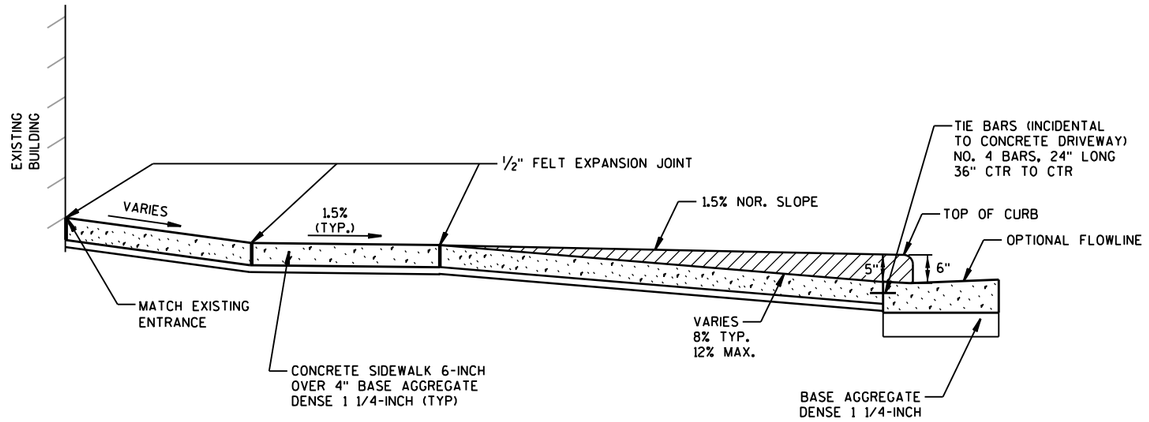
AT DRIVEWAYS WITH CURB & GUTTER RETURNS, REMOVE ASPHALTIC SURFACE AND REPLACE IN
KIND WITH ASHPALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES.



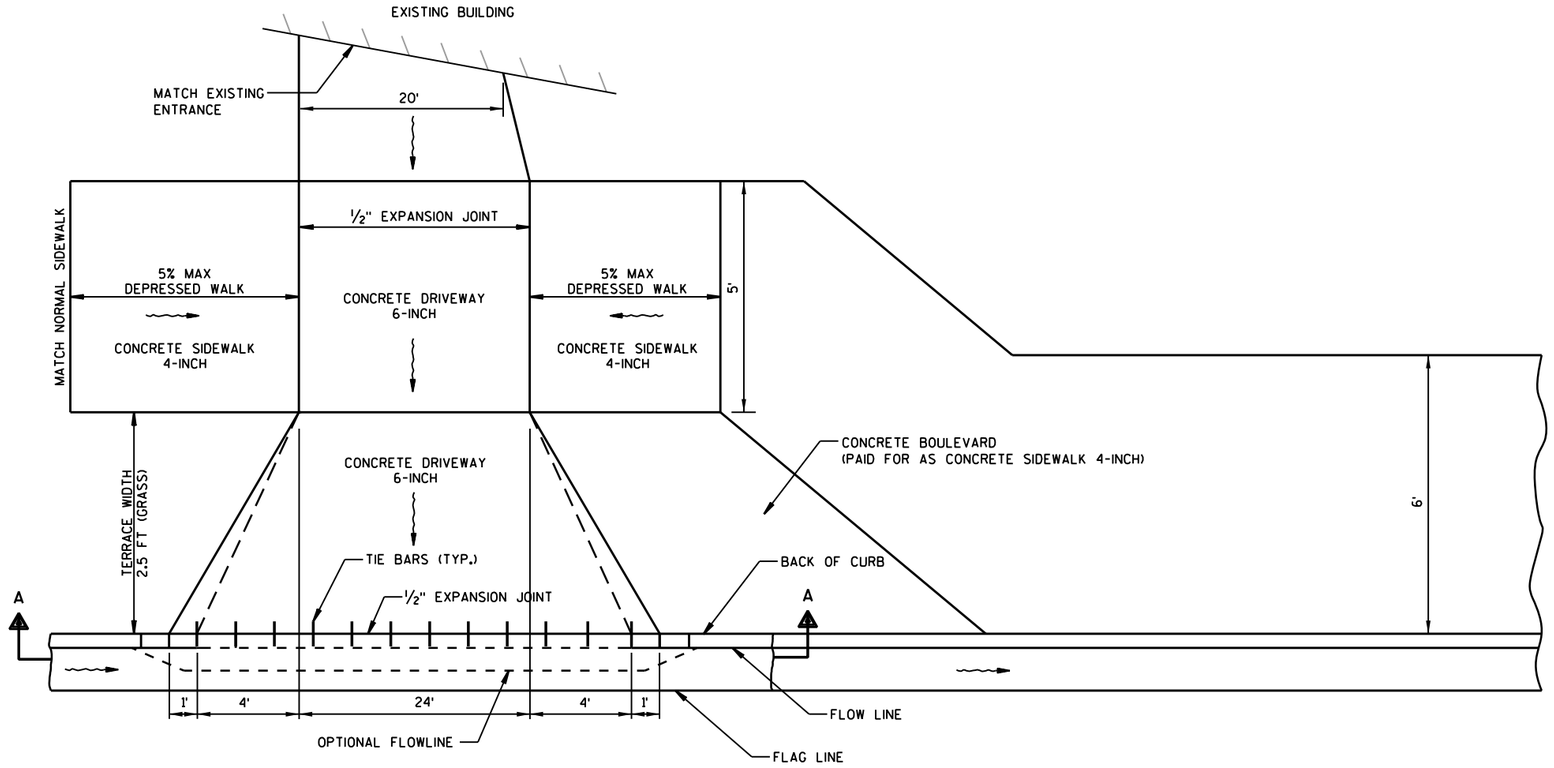
CONCRETE STEP DETAIL

STA 30+55, RT

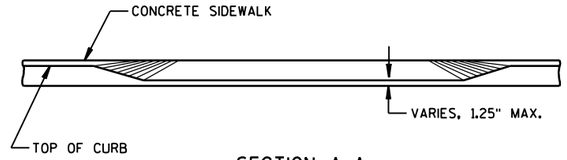
* CONCRETE STEP HEIGHT SHALL BE NO MORE
THAN 8 INCHES AND NO LESS THAN 6 INCHES



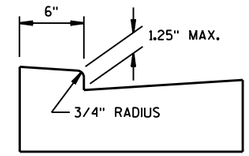
PROFILE



PLAN



SECTION A-A

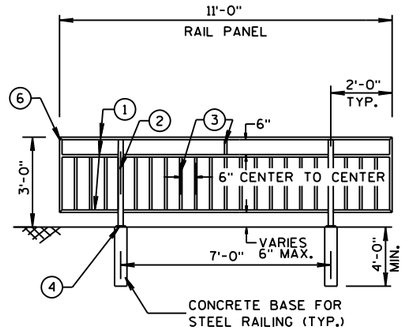


OPTIONAL METHOD FOR CONCRETE GUTTER

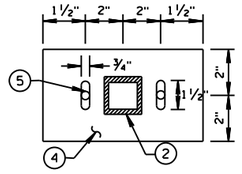
URBAN DRIVEWAY DETAIL

CE 31+00 LT

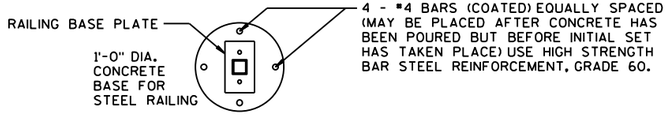
PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	CONSTRUCTION DETAILS	SHEET 6	E



ELEVATION - RAILING PEDESTRIAN STEEL



RAILING BASE PLATE



CONCRETE BASE PLAN

POSITION CONCRETE BASE AT ℄ OF STEEL PLATE (4)

LEGEND

(1) 2" X 1½" X 3/16" STRUCTURAL STEEL TUBING CONFORMING TO ASTM DESIGNATION A501 OR A500 GRADE B.
NOTE: RAILS TO BE HORIZONTAL.

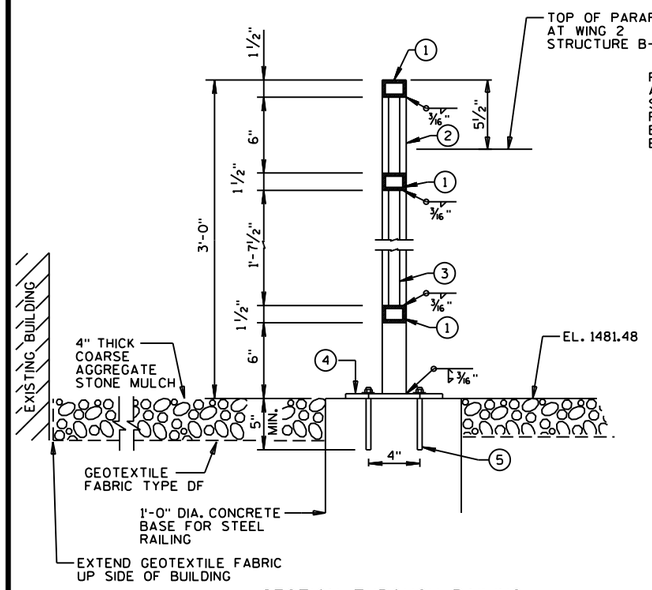
(2) TS 2" X 2" X 3/16" STRUCTURAL STEEL TUBING CONFORMING TO ASTM DESIGNATION A501 OR A500 GRADE B. CUT BOTTOM OF POST LEVEL. HOLD 1/16" ABOVE BASE PLATE TO ALLOW POST AND BASE PLATE TO BE WELDED TOGETHER. PLACE POST VERTICAL AND CENTERED ON BASE PLATE.

(3) BAR 1" X 1" PICKETS CONFORMING TO ASTM DESIGNATION A501 OR A500 GRADE B. NOTE: PLACE PICKETS VERTICAL.

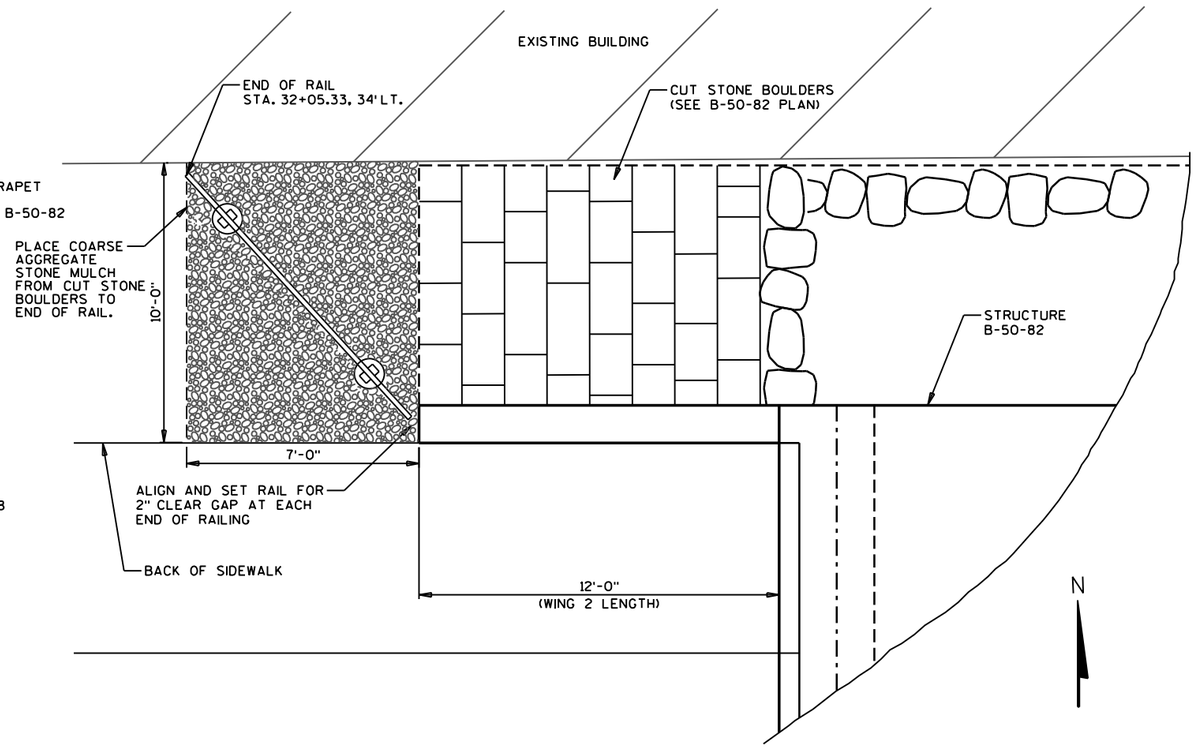
(4) BASE PLATE ½" X 4" X 7" CONFORMING TO ASTM DESIGNATION A709 GRADE 36 WITH ¾" X 1½" SLOTTED HOLES FOR ANCHOR BOLTS NO. 5. WELD TO NO. 2 AS SHOWN.

(5) MASONRY ANCHORS TYPE S 5/8 INCH, STAINLESS STEEL ANCHOR BOLTS, NUTS, AND WASHERS. PULLOUT STRENGTH SHALL BE 4 KIPS. TWO REQUIRED PER POST. PLACE NORMAL TO PLATE NO. 4. EMBED 5" MIN.

(6) 2" X 1" X 3/16" STRUCTURAL STEEL TUBING CONFORMING TO ASTM DESIGNATION A501 OR A500 GRADE B. PLACE VERTICAL.



SECTION THROUGH RAILING ON CONCRETE BASE



PLAN

GENERAL NOTES

THE ITEM "RAILING PEDESTRIAN STEEL" SHALL INCLUDE ALL WORK SHOWN, INCLUDING CONCRETE BASES, REINFORCING STEEL, MASONRY ANCHORS TYPE S, STEEL, GALVANIZING, AND PAINTING.

FINAL LOCATIONS OF THE "RAILING POSTS", THE CONCRETE BASES FOR STEEL RAILING AND SIDEWALK ELEVATIONS SHALL BE VERIFIED PRIOR TO FABRICATION AND INSTALLATION OF RAILING.

POST BASE PLATES NO. 4 SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STEEL SHIMS SHALL BE PROVIDED AND USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

PROVIDE VENTING OF ALL TUBULAR STEEL MEMBERS WITH 1/4" Φ VENT HOLES LOCATED IN BOTTOM OF HORIZONTAL RAILS, AND AT BOTTOM OF STEEL RAIL POSTS.

ALL MATERIALS EXCEPT ANCHOR BOLTS NO. 5, SHALL BE GALVANIZED AND GIVEN A TWO-COAT PAINT SYSTEM, MATCHING THE PAINT SYSTEM FOR THE COMBINATION RAILINGS ON STRUCTURE B-50-82. FINISH COAT COLOR TO BE FEDERAL COLOR 27038 BLACK.

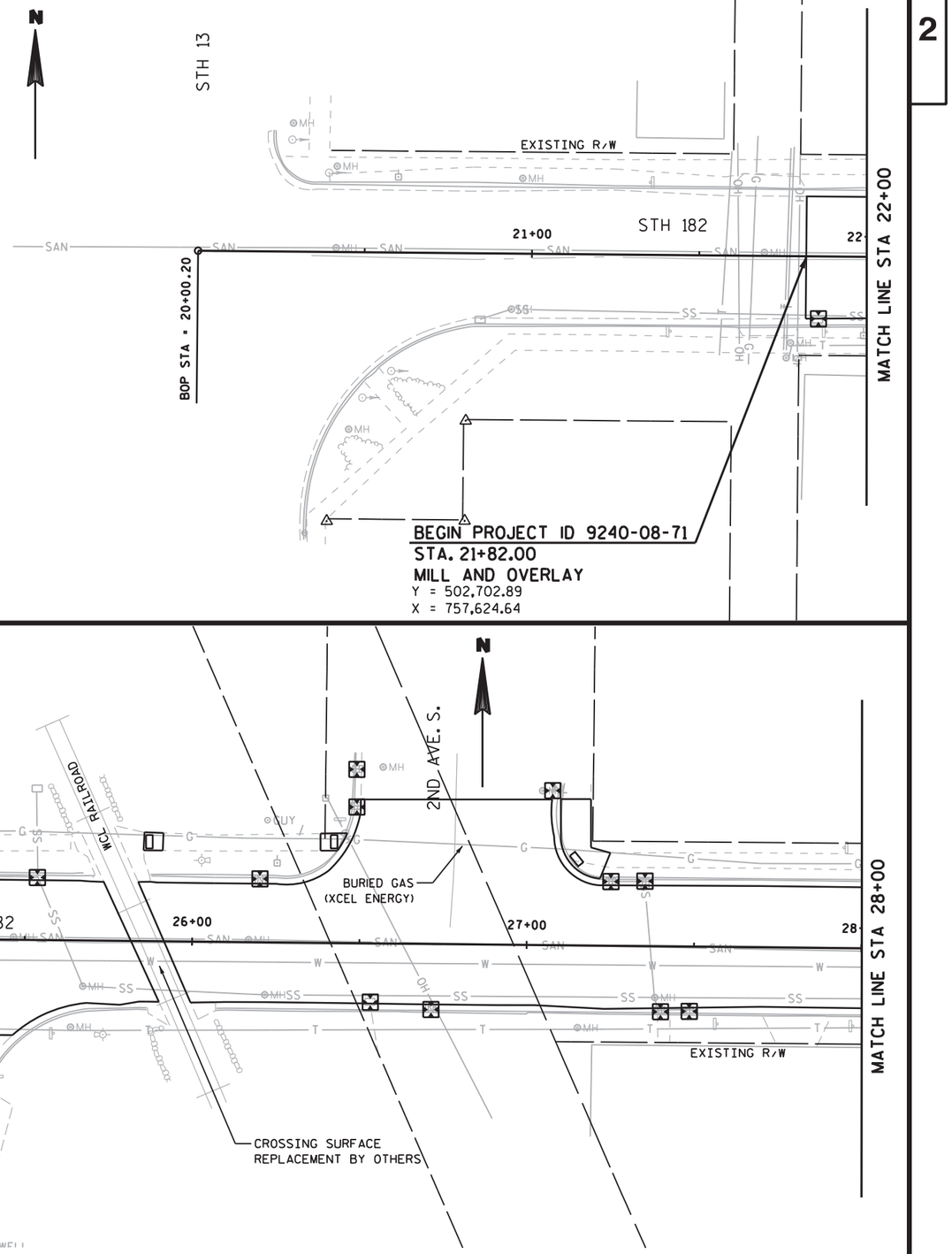
TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AND INCIDENTAL TO ITEM "RAILING PEDESTRIAN STEEL."

PROJECT NO: 9240-08-70	HWY: STH 182	COUNTY: PRICE	RAILING PEDESTRIAN STEEL AND MOUNTING DETAIL	SHEET 7	E

2

LEGEND

- SILT FENCE
- TURBIDITY BARRIER
- INLET PROTECTION
- SEEDING MIX #40, FERT TYPE B, & EROSION MAT LIMITS

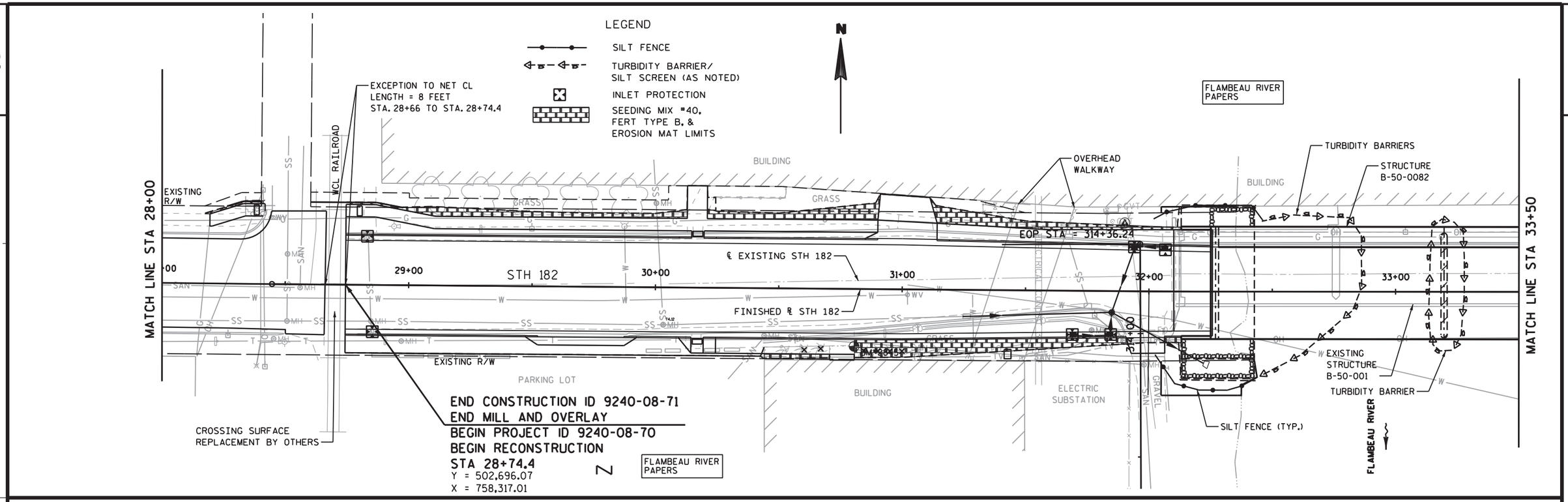


PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	EROSION CONTROL	SHEET	E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\EROSION1.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:39.9999

WISDOT/CADDS SHEET 42

EROSION1.dgn 7/29/2016 10:56:12 AM CRooyakkers

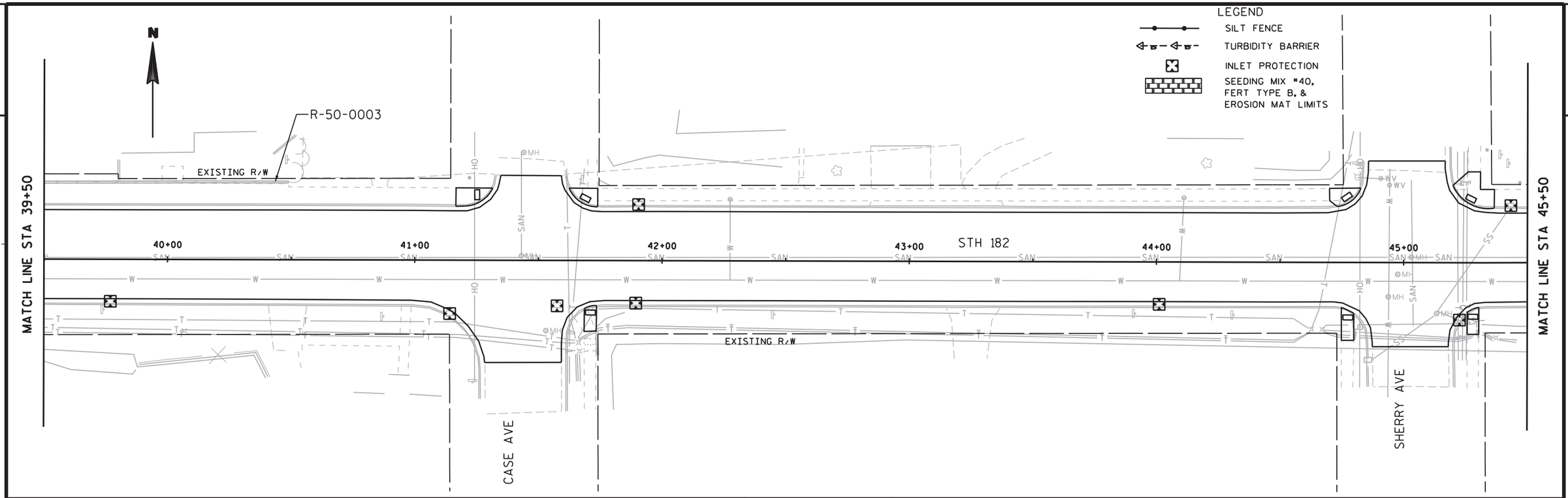


PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	EROSION CONTROL	SHEET E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\EROSION2.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:39.9999

WISDOT/CADDS SHEET 42

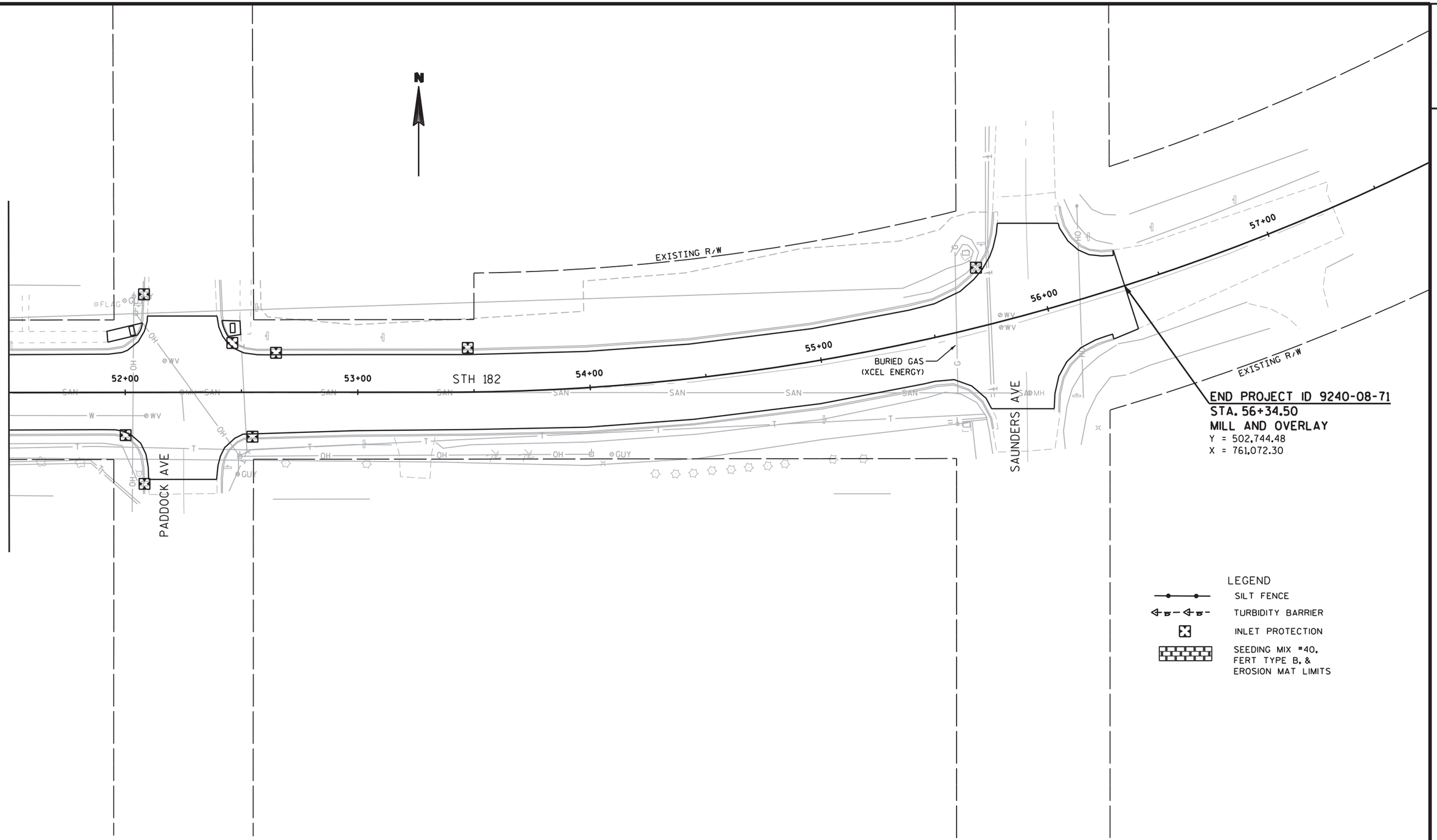
EROSION2.dgn 7/29/2016 10:56:13 AM CRooyakkers



2

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	EROSION CONTROL	SHEET 10	E

2



PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	EROSION CONTROL	SHEET	E

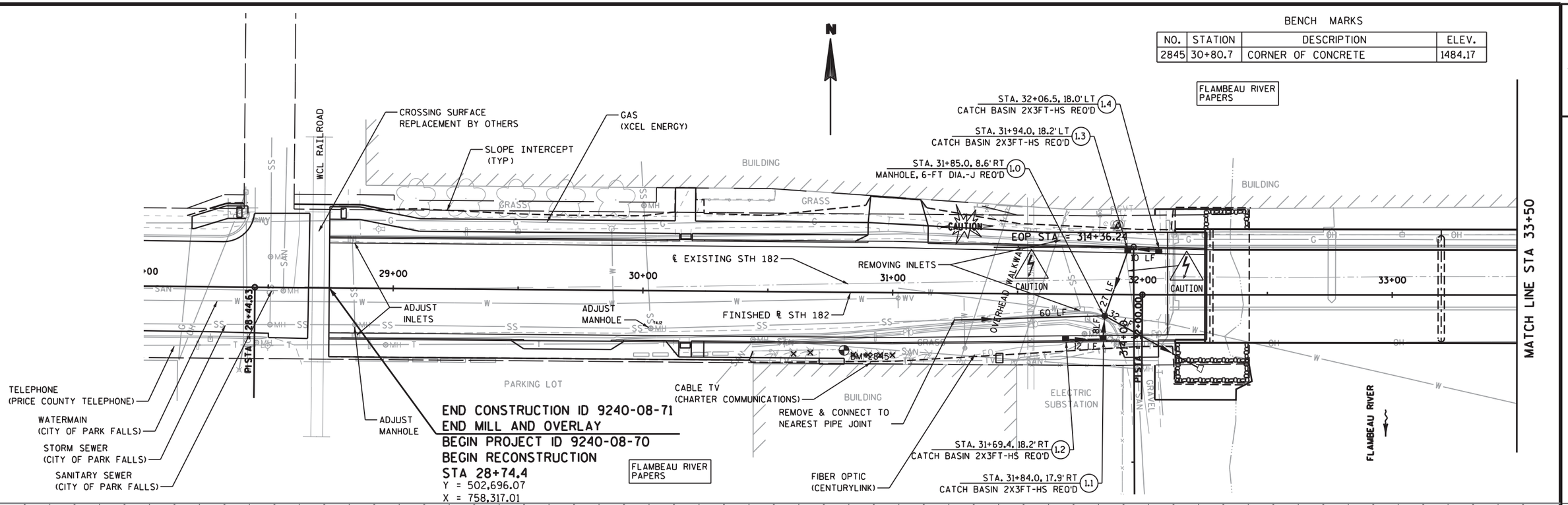
FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\EROSION4.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:39.9999

WISDOT/CADDS SHEET 42

EROSION4.dgn 7/29/2016 10:56:16 AM CRooyakkers

BENCH MARKS

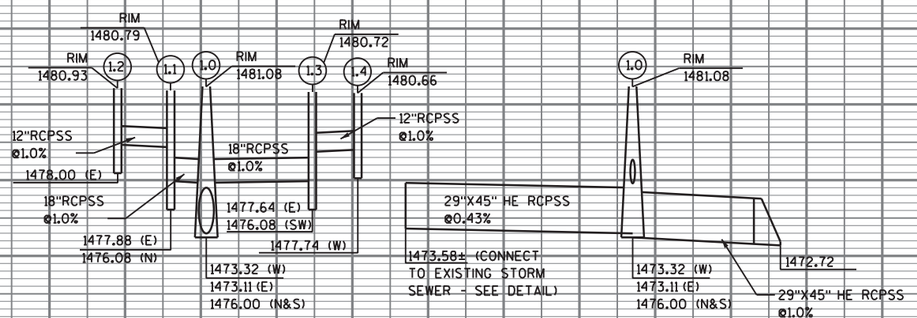
NO.	STATION	DESCRIPTION	ELEV.
2845	30+80.7	CORNER OF CONCRETE	1484.17



END CONSTRUCTION ID 9240-08-71
END MILL AND OVERLAY
BEGIN PROJECT ID 9240-08-70
BEGIN RECONSTRUCTION
STA 28+74.4
Y = 502,696.07
X = 758,317.01

FLAMBEAU RIVER PAPERS

FLAMBEAU RIVER PAPERS



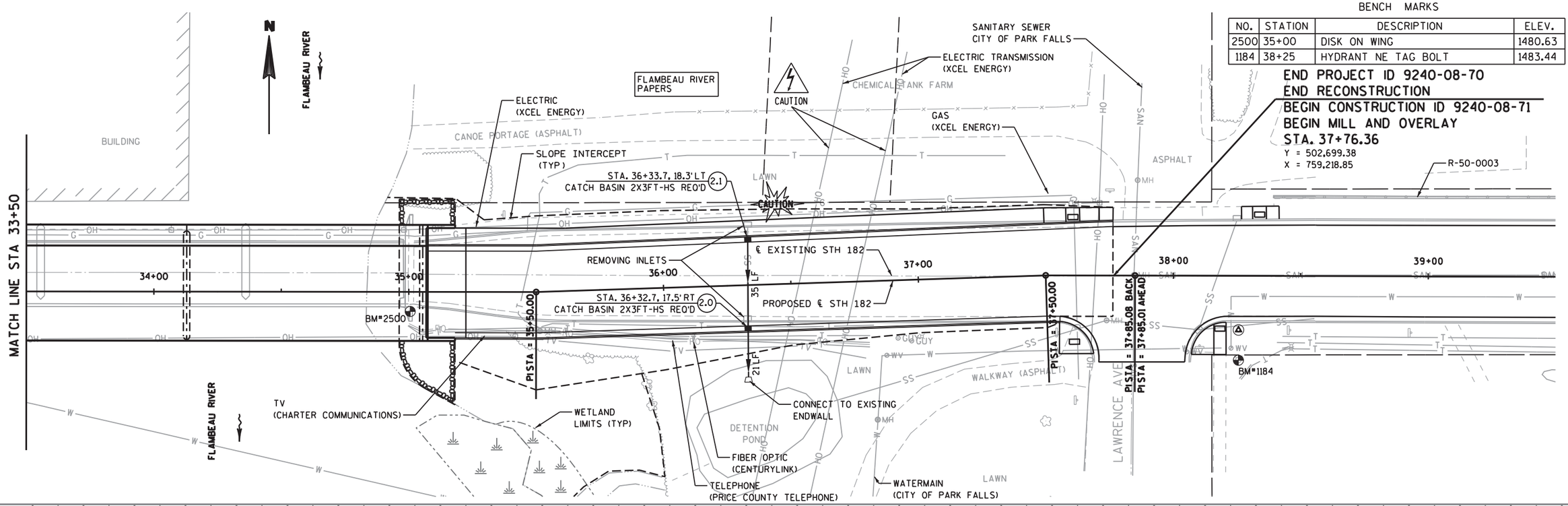
1492 1488 1484 1480 1476 1472 1468 1464 1460

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	STORM SEWER	SHEET	E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\STORM1.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:40

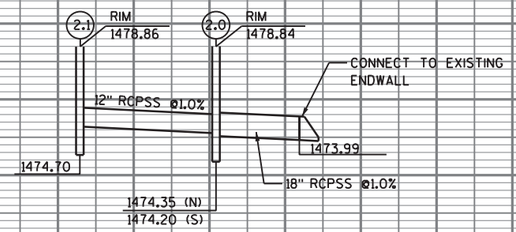
WISDOT/CADDS SHEET 41a

STORM1.dgn 7/29/2016 2:11:03 PM CRooyakkers



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
2500	35+00	DISK ON WING	1480.63
1184	38+25	HYDRANT NE TAG BOLT	1483.44



1488 1484 1480 1476 1472 1468 1464 1460 1456

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	STORM SEWER	SHEET E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\storm2.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:40

WISDOT/CADDS SHEET 41a

storm2.dgn 7/29/2016 10:56:18 AM CRooyakkers

GENERAL NOTE

1. CONNECT NEW "LIGHTING ASSEMBLIES DECORATIVE" TO EXISTING WIRING PER THE SPECIAL PROVISIONS UNLESS OTHERWISE INDICATED ON THE PLANS. INSTALL ON EXISTING CONCRETE BASE.

2. REMOVE HORIZONTAL LIGHTING CIRCUIT CONDUCTORS AND REINSTALL (INCIDENTAL TO REMOVING CONCRETE BASES).

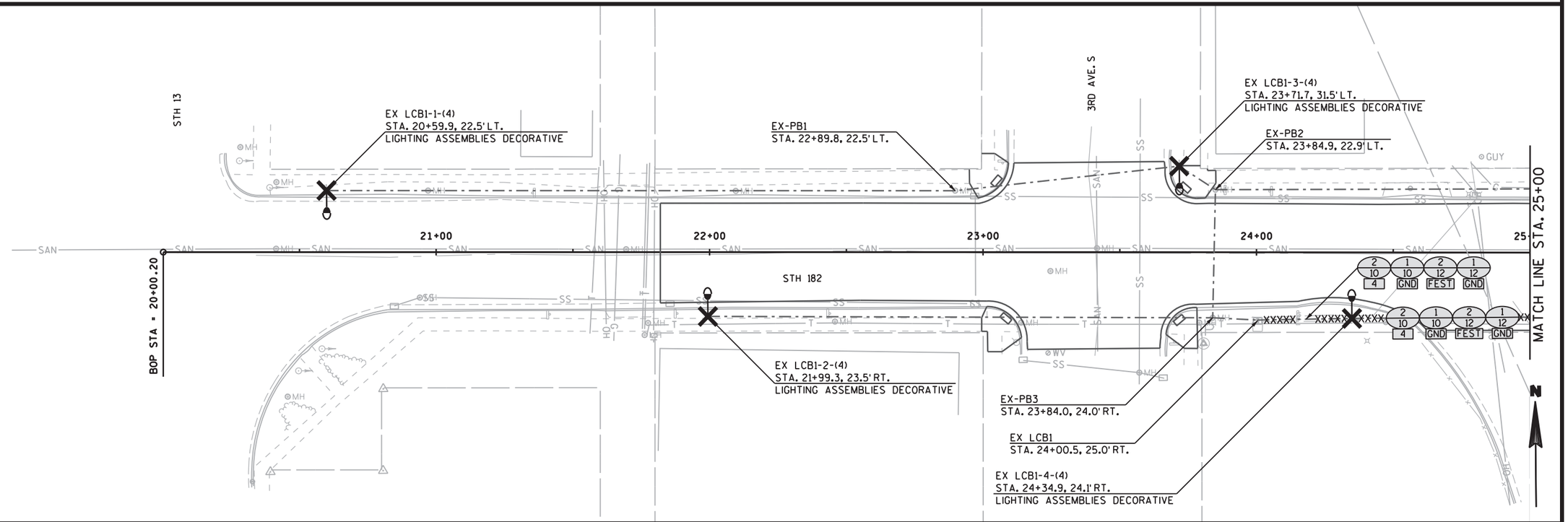
LEGEND

- EXISTING NONMETALLIC CONDUIT TO REMAIN
- CONDUIT RIGID NONMETALLIC SCHEDULE 40, 2-INCH UNLESS OTHERWISE NOTED (SCHEDULE 80 UNDER ROADWAY)
- PROPOSED LIGHTING UNIT
- MH — EXISTING PULL BOX TO REMAIN
- PULL BOXES STEEL 24X42-INCH
- EXISTING LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL TO REMAIN
- REMOVAL AND SALVAGE OF LIGHT POLE ASSEMBLIES
- XXXXX — REMOVING WIRE (CONDUIT TO REMAIN UNLESS OTHERWISE NOTED) (PAID FOR UNDER "REMOVAL OF CONDUIT AND WIRE" BID ITEM)

CONTROL CABINET DESIGNATION (EX=EXISTING)
POLE NUMBER
LIGHTING CIRCUIT
X-X-(X)
STA. XXX+XX.XX, XX.X' RT. — LOCATION (TO CENTER OF POLE)
X-X(T)-X'
LUMINAIRE ARM LENGTH
POLE TYPE (T=WITH TRANSFORMER BASE)
LUMINAIRE DESIGNATION (LED)

CONDUIT QUANTITY / SIZE
PHASE CONDUCTOR QUANTITY / SIZE (AWG) / CIRCUIT
EQUIPMENT GROUNDING CONDUCTOR QUANTITY / SIZE (AWG)
PHASE CONDUCTOR QUANTITY / SIZE (AWG) FOR FESTOON RECEPTACLE
EQUIPMENT GROUNDING CONDUCTOR QUANTITY / SIZE (AWG) FOR FESTOON RECEPTACLE

1 2" | 2 10 | 1 10 | 2 12 | 1 12
4 | GND | FEST | GND



PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	STREET LIGHTING	SHEET	E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\Street Lighting_01.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : PLOT SCALE : 1:39.9999

WISDOT/CADDS SHEET 42

Street Lighting_01.dgn 7/29/2016 2:11:05 PM CRooyakkers

2

EX LCB1-5-(4)
STA. 26+25.2, 23.7' LT.
LIGHTING ASSEMBLIES DECORATIVE

2ND AVE. S

EX LCB1-7-(4)
STA. 29+49.8, 23.3' LT.
LIGHTING ASSEMBLIES DECORATIVE

MATCH LINE STA. 25+00

26+00 27+00 STH 182 28+00 29+00 30+00 31+

MATCH LINE STA. 31+00

EX LCB1-6-(4)
STA. 28+27.0, 21.0' RT.
LIGHTING ASSEMBLIES DECORATIVE

EX-PB4
STA. 28+97.2, 22.6' RT.

INSTALL CONDUIT INTO EXISTING PULL BOX

REMOVE EXISTING 2-INCH CONDUIT
FROM EX-PB4 TO EX-LP1
(PAID FOR UNDER "REMOVAL OF
CONDUIT AND WIRE" BID ITEM)

N

INSTALL CONDUIT TO WINGWALL,
CONNECT TO CONDUIT INSTALLED
AS PART OF BRIDGE

PB-2
STA. 31+95.0, 27.0' LT.

EOP STA = 314+36.24

EX-LP1
STA. 31+78.0, 10.0' RT.
REMOVING CONCRETE BASES

EX-LP2
STA. 32+12.7, 24.0' LT.

REMOVE OVERHEAD WIRE
(PAID FOR UNDER "REMOVAL OF
CONDUIT AND WIRE" BID ITEM)

EX-LP3
STA. 33+04.0, 24.0' LT.

EX LCB1-9-(4)
SEE BRIDGE PLANS
A-5-6'

REMOVE OVERHEAD WIRE
(PAID FOR UNDER "REMOVAL OF
CONDUIT AND WIRE" BID ITEM)

EX-LP4
STA. 34+06.8, 24.0' LT.

EX LCB1-10-(4)
SEE BRIDGE PLANS
A-5-6'

REMOVE OVERHEAD WIRE
(PAID FOR UNDER "REMOVAL OF
CONDUIT AND WIRE" BID ITEM)

EX-LP5
STA. 34+98.1, 24.0' LT.

INSTALL CONDUIT TO WINGWALL,
CONNECT TO CONDUIT INSTALLED
AS PART OF BRIDGE

EX LCB1-11-(4)
STA. 35+30.0, 26.5' LT.
A-5(T)-6'
CONCRETE BASES TYPE 5

PB-3
STA. 35+38.0, 26.5' LT.

REMOVE OVERHEAD WIRE TO STREET
LIGHT POLE AT LAWRENCE AVENUE
(PAID FOR UNDER "REMOVAL OF CONDUIT
AND WIRE" BID ITEM)

MATCH LINE STA. 31+00

32+00 33+00 STH 182 34+00 35+00 36+00 37+00

EX LCB1-8-(4)
STA. 31+82.0, 21.0' RT.
A-5(T)-6'
CONCRETE BASES TYPE 5

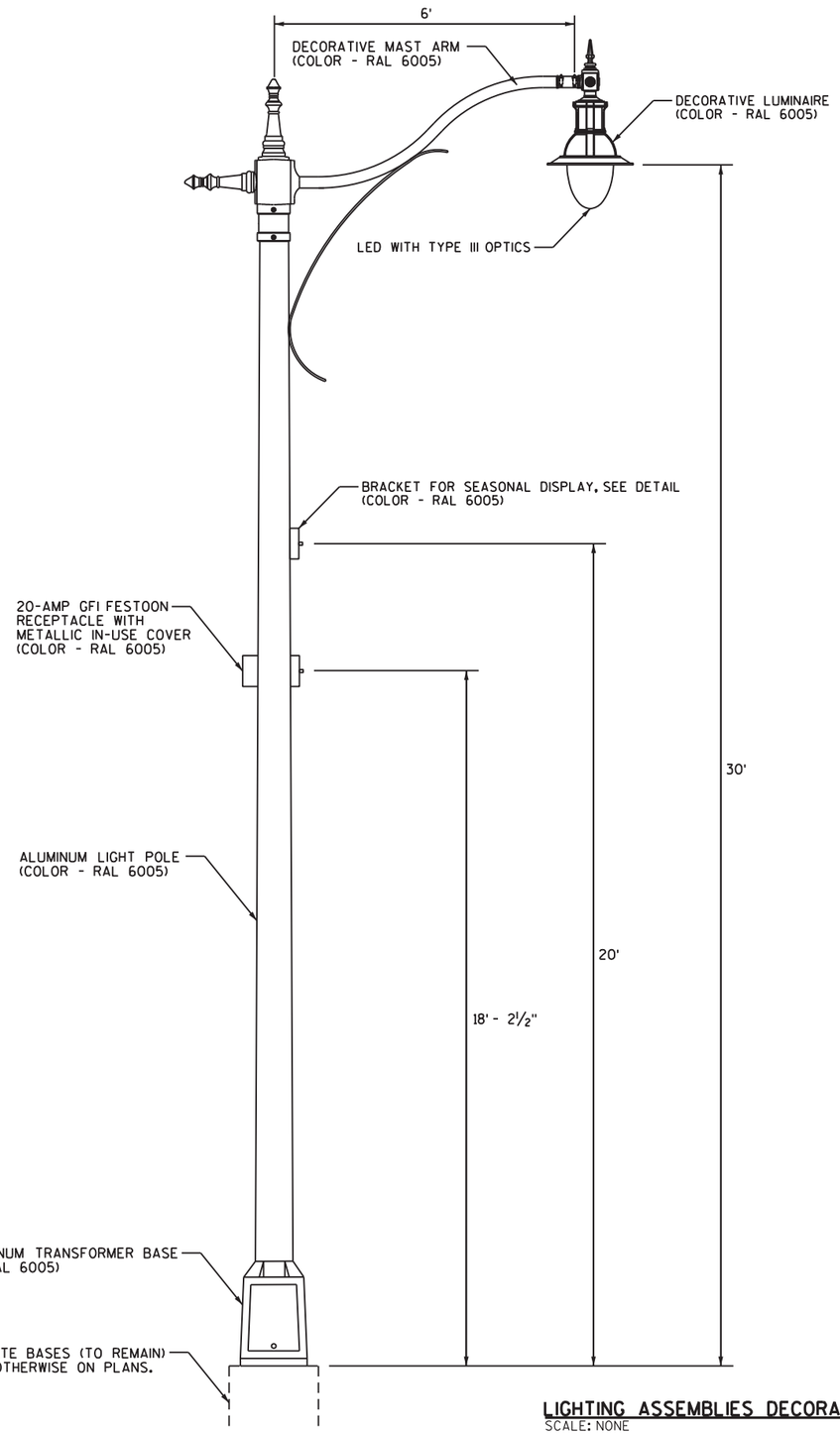
OVERHEAD
WALKWAY

PB-1
STA. 31+77.0, 21.0' RT.

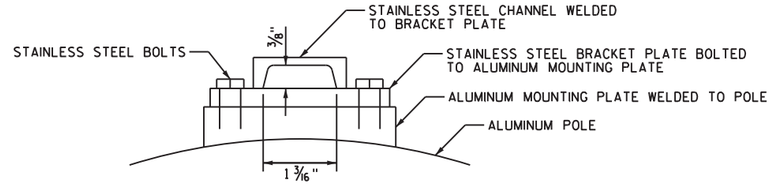
REMOVE EXISTING 2-INCH CONDUIT FROM EX-PB4 TO EX-LP1
(PAID FOR UNDER "REMOVAL OF CONDUIT AND WIRE" BID ITEM)

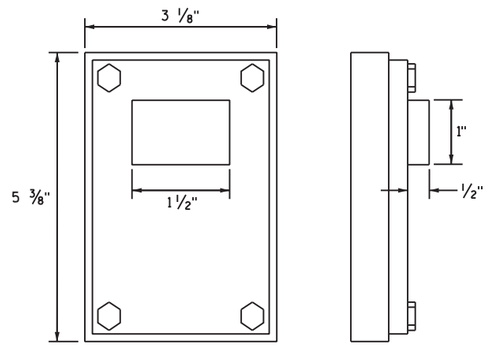
N

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	STREET LIGHTING	SHEET 15	E



LIGHTING ASSEMBLIES DECORATIVE DETAIL
SCALE: NONE





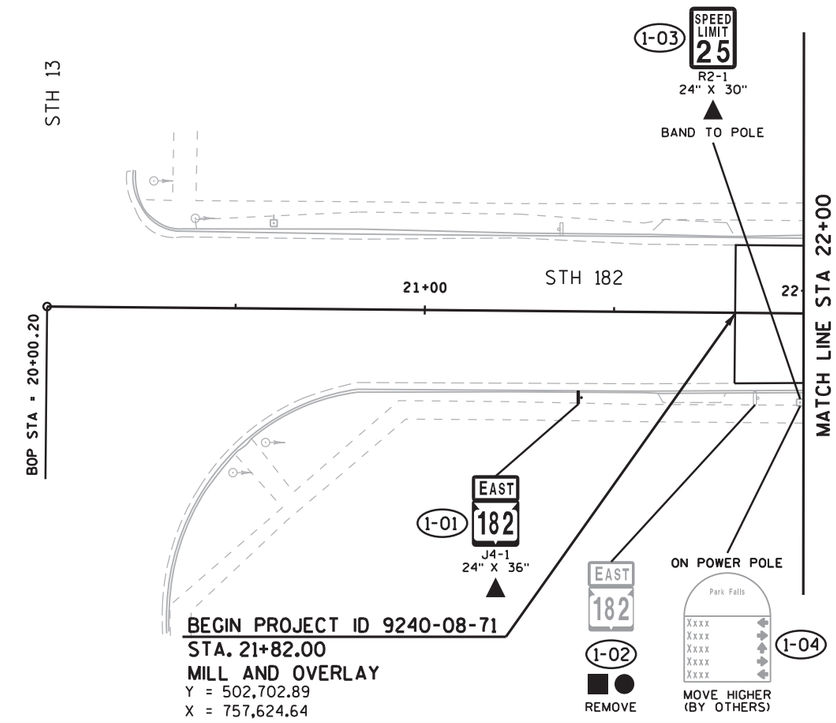
BRACKET DETAIL FOR SEASONAL DISPLAY

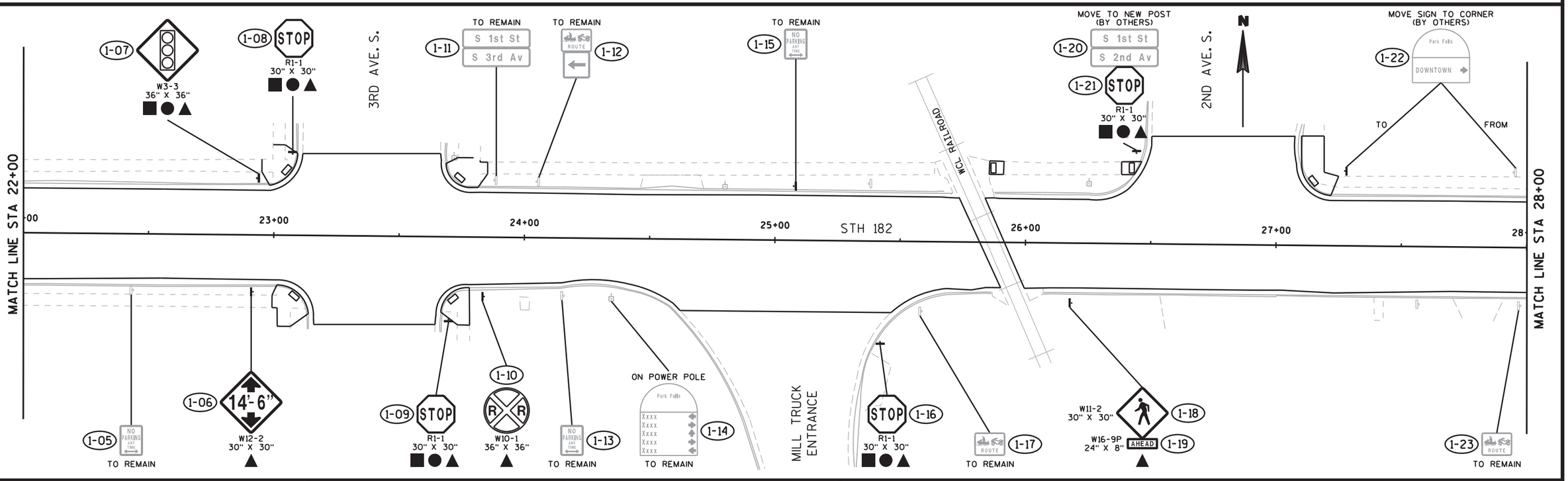
PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	STREET LIGHTING DETAILS	SHEET 16	E

2

LEGEND

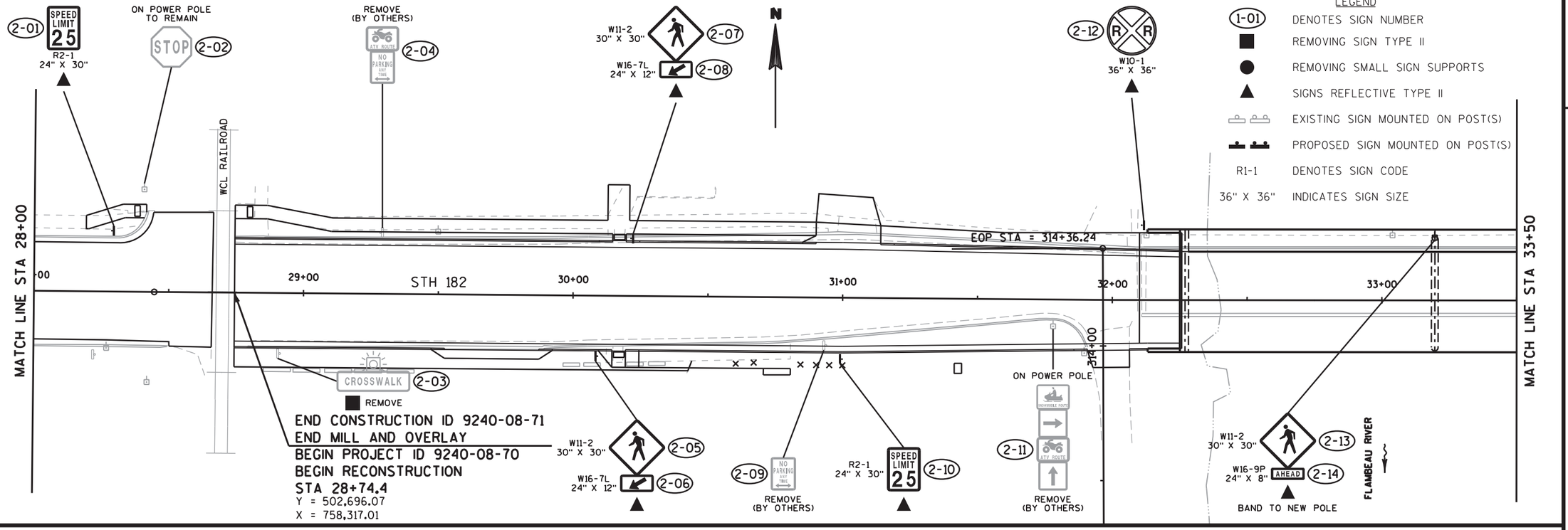
(1-01)	DENOTES SIGN NUMBER
■	REMOVING SIGN TYPE II
●	REMOVING SMALL SIGN SUPPORTS
▲	SIGNS REFLECTIVE TYPE II
⊓⊓	EXISTING SIGN MOUNTED ON POST(S)
▬▬	PROPOSED SIGN MOUNTED ON POST(S)
R1-1	DENOTES SIGN CODE
36" X 36"	INDICATES SIGN SIZE

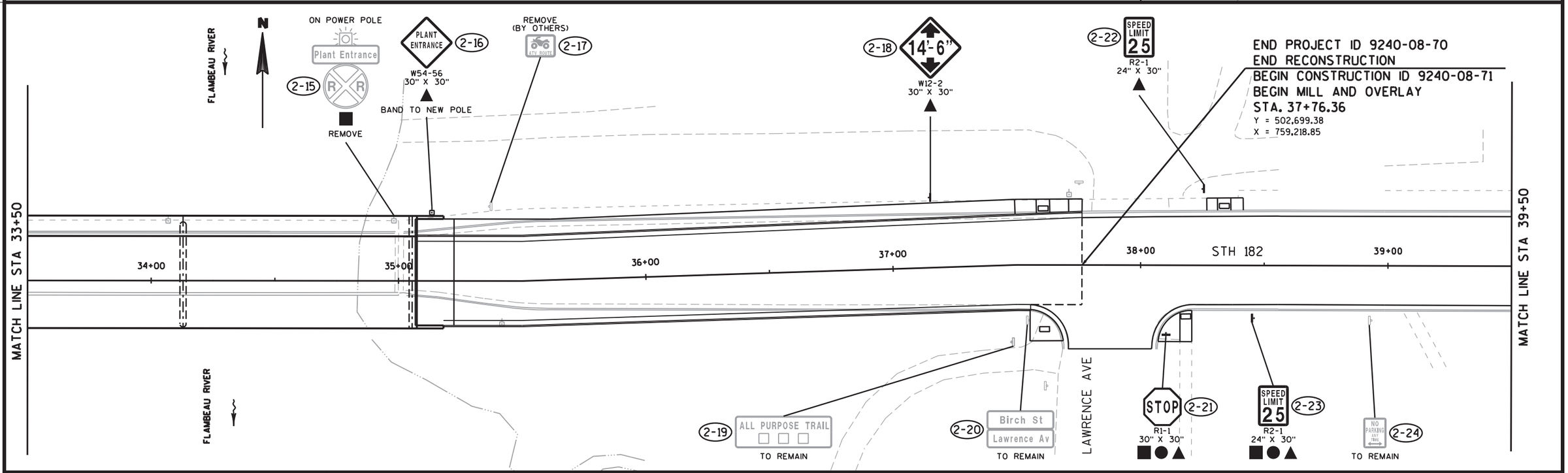




PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PERMANENT SIGNING	SHEET 17	E

2



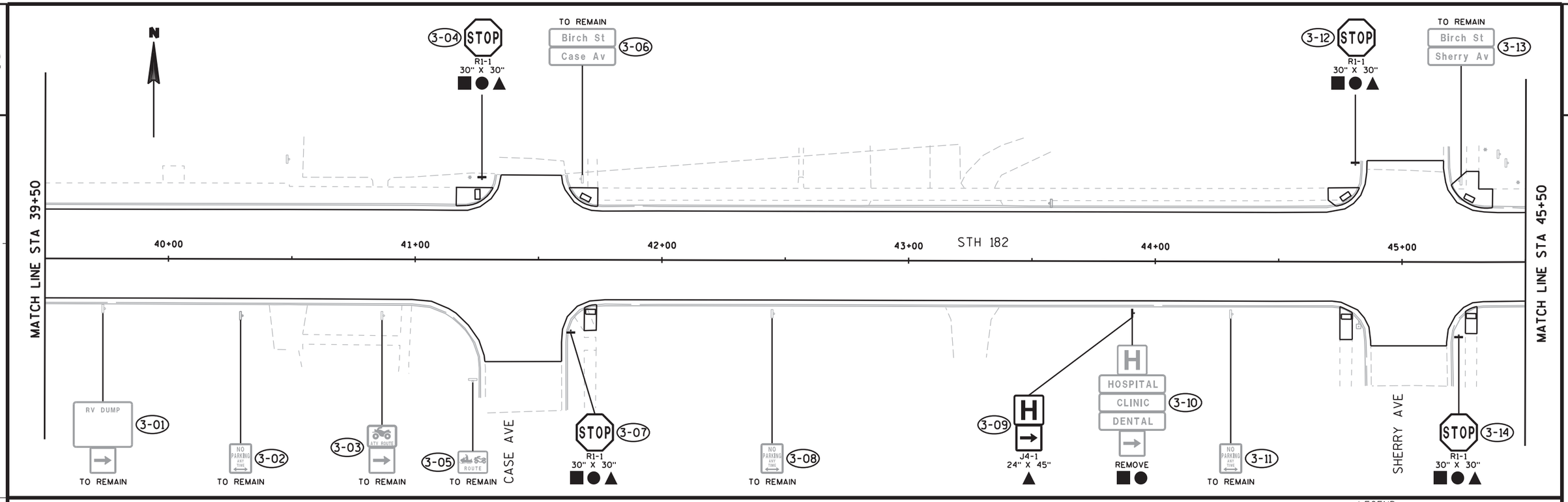


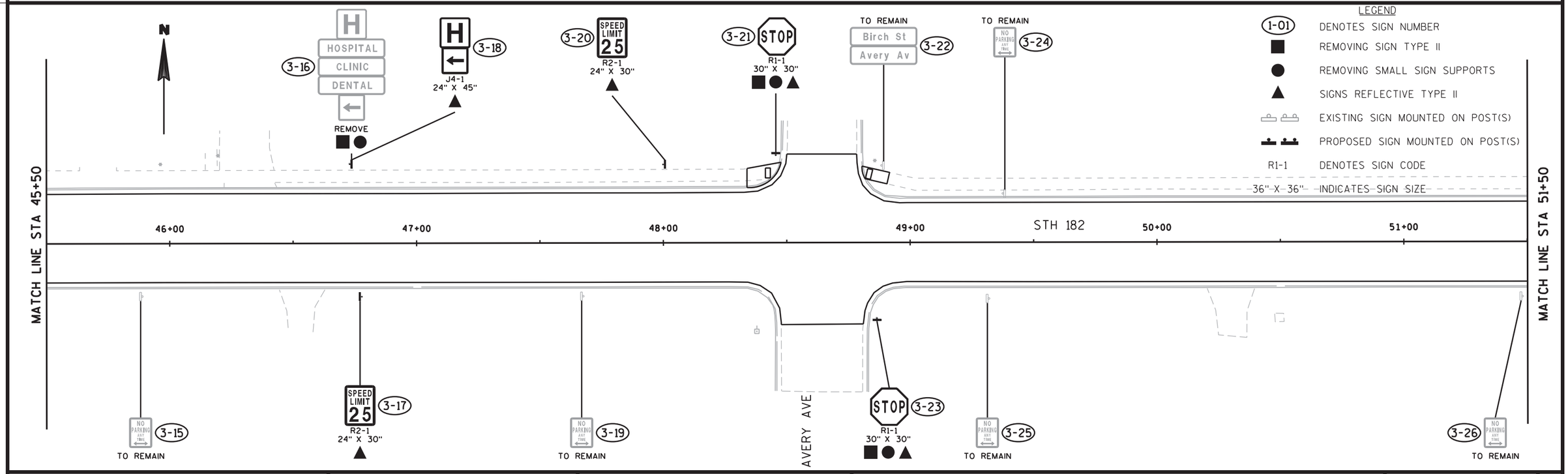
PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\023202_ps.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : PLOT SCALE : 1:39.9999

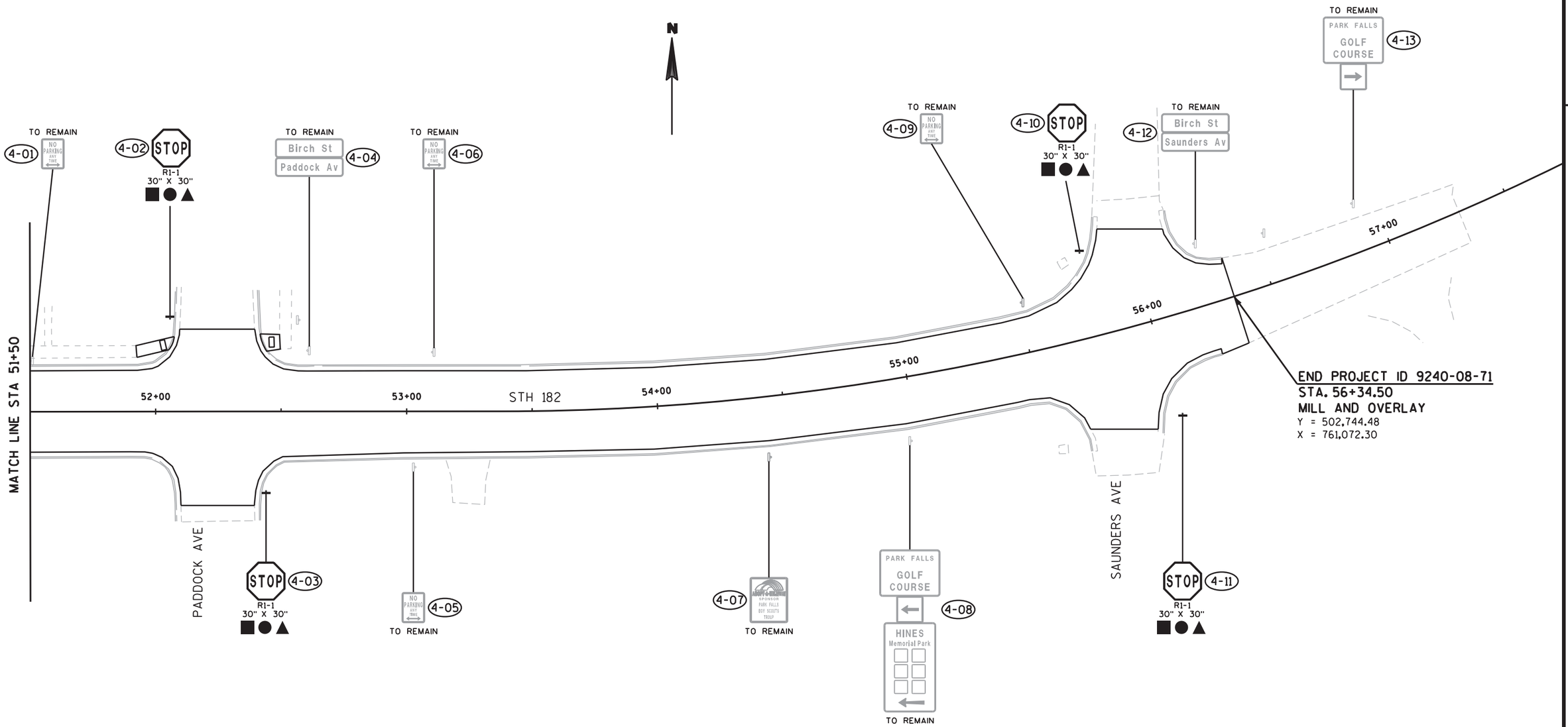
WISDOT/CADDS SHEET 42

023202_ps.dgn 7/29/2016 10:56:24 AM CRooyakkers





PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PERMANENT SIGNING	SHEET 19	E



LEGEND

1-01	DENOTES SIGN NUMBER
■	REMOVING SIGN TYPE II
●	REMOVING SMALL SIGN SUPPORTS
▲	SIGNS REFLECTIVE TYPE II
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
R1-1	DENOTES SIGN CODE
36" X 36"	INDICATES SIGN SIZE

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PERMANENT SIGNING	SHEET 20	E

2

2

N

STH 13

STH 182

21+00

D

A

BOP STA = 20+00.20

MATCH LINE STA 22+00

BEGIN PROJECT ID 9240-08-71
STA. 21+82.00
MILL AND OVERLAY
Y = 502,702.89
X = 757,624.64

LEGEND

A	PAVEMENT MARKING EPOXY 4-INCH, DOUBLE YELLOW
B	PAVEMENT MARKING EPOXY 4-INCH, WHITE
C	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH
D	PAVEMENT MARKING EPOXY 8-INCH, WHITE

N

3RD AVE. S.

2ND AVE. S.

WCL RAILROAD

MATCH LINE STA 22+00

MATCH LINE STA 28+00

D

C

23+00

24+00

25+00

STH 182

26+00

27+00

28+

B

A

PAVEMENT MARKING
ARROWS TYPE 2 EPOXY

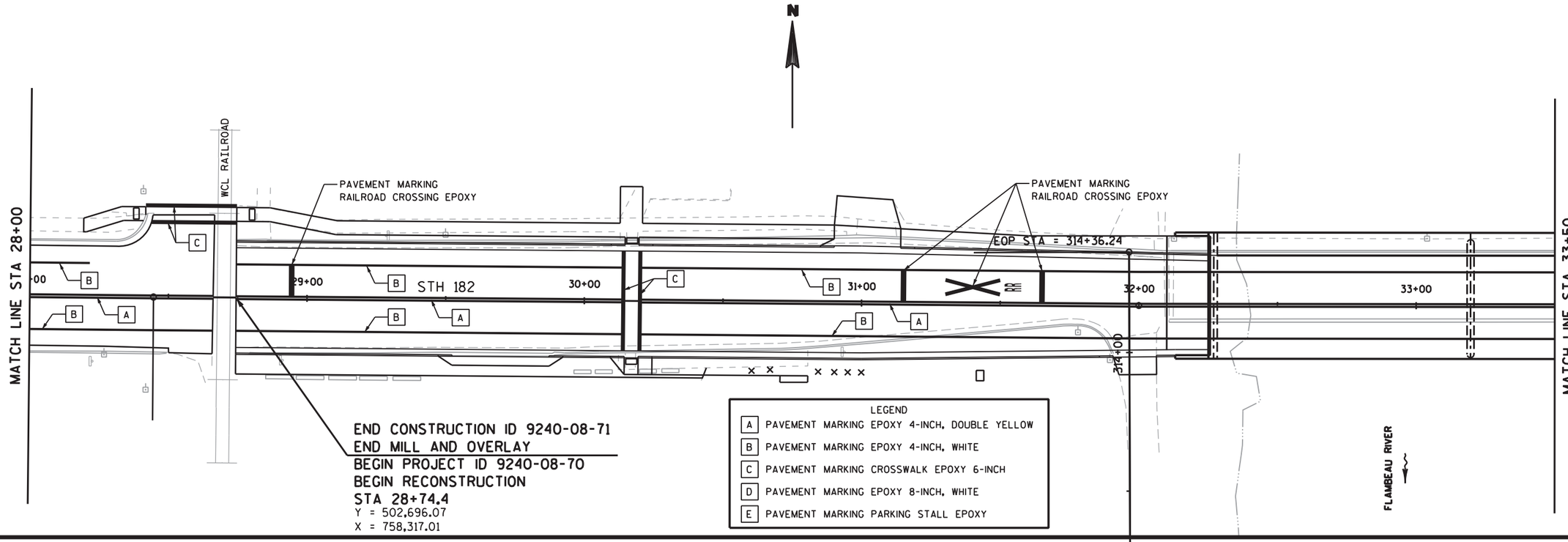
PAVEMENT MARKING
RAILROAD CROSSING EPOXY

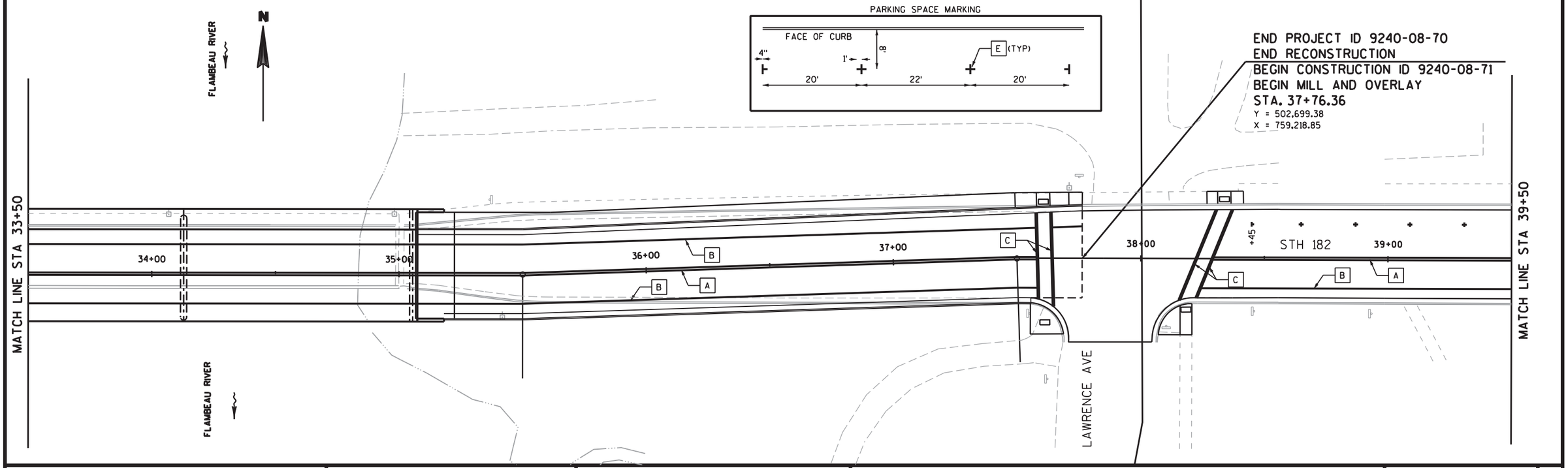
PAVEMENT MARKING
RAILROAD CROSSING EPOXY

MILL TRUCK
ENTRANCE

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PAVEMENT MARKING	SHEET 21	E

2



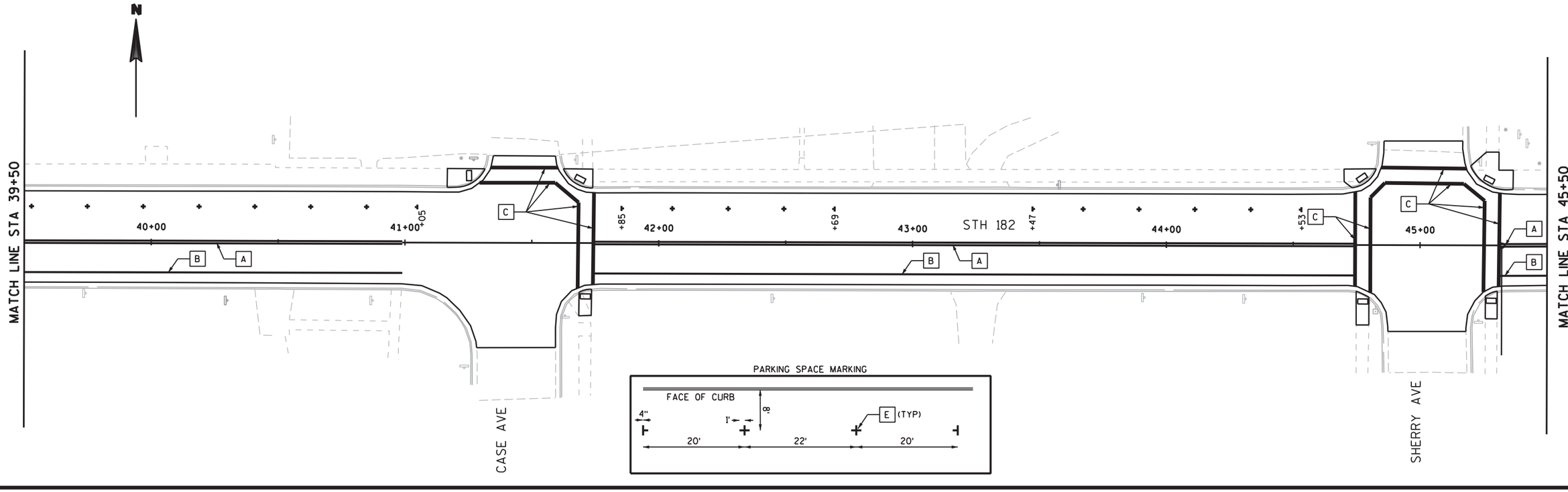


PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PAVEMENT MARKING	SHEET	E

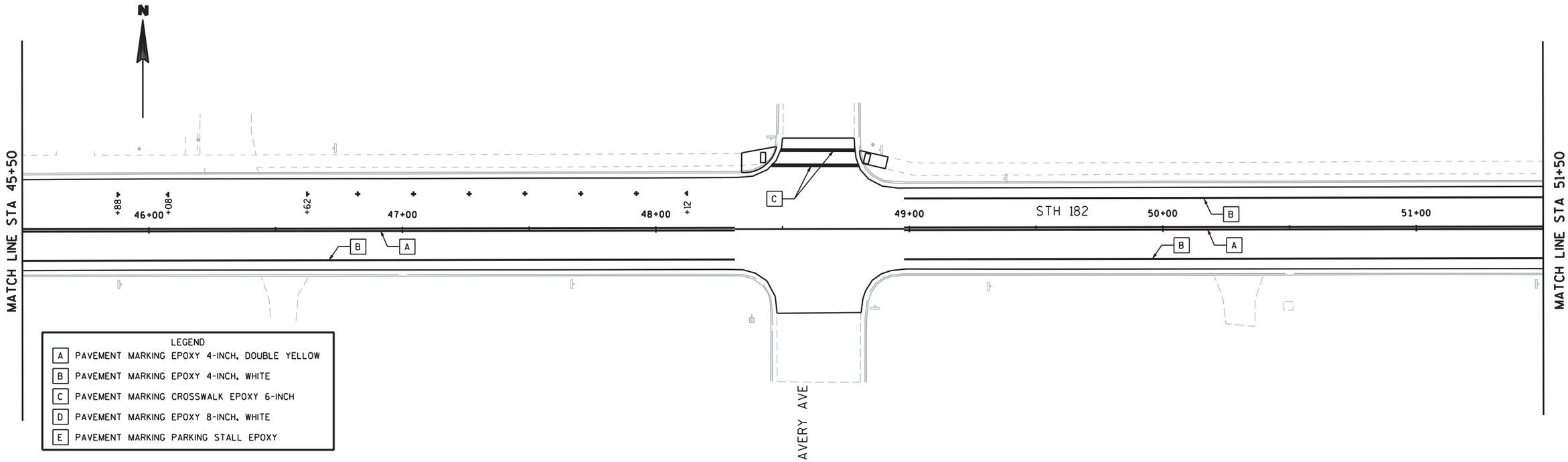
FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\024502_pm.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : PLOT SCALE : 1:39.9999

WISDOT/CADDS SHEET 42

024502_pm.dgn 7/29/2016 2:11:13 PM CRooyakkers



PARKING SPACE MARKING



LEGEND

A	PAVEMENT MARKING EPOXY 4-INCH, DOUBLE YELLOW
B	PAVEMENT MARKING EPOXY 4-INCH, WHITE
C	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH
D	PAVEMENT MARKING EPOXY 8-INCH, WHITE
E	PAVEMENT MARKING PARKING STALL EPOXY

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PAVEMENT MARKING	SHEET 23 E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\024503_pm.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:39.9999

WISDOT/CADDS SHEET 42

024503_pm.dgn 7/29/2016 10:56:29 AM CRooyakkers

2

N

MATCH LINE STA 51+50

PADDOCK AVE

SAUNDERS AVE

52+00

53+00

STH 182

54+00

55+00

56+00

57+00

END PROJECT ID 9240-08-71
STA. 56+34.50
MILL AND OVERLAY
Y = 502,744.48
X = 761,072.30

LEGEND

A	PAVEMENT MARKING EPOXY 4-INCH, DOUBLE YELLOW
B	PAVEMENT MARKING EPOXY 4-INCH, WHITE
C	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH
D	PAVEMENT MARKING EPOXY 8-INCH, WHITE

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PAVEMENT MARKING	SHEET 24	E

ASHLAND COUNTY

Glidden

PEEKSVILLE

Butternut

Park Falls

Fifield

Coolidge

Lugerville

IRON COUNTY

Mercer

Manitowish

Springstead

PRICE COUNTY

ONEIDA COUNTY

VILAS COUNTY

Lac du Flambeau

Woodruff

Minocqua

Arbor Vitae

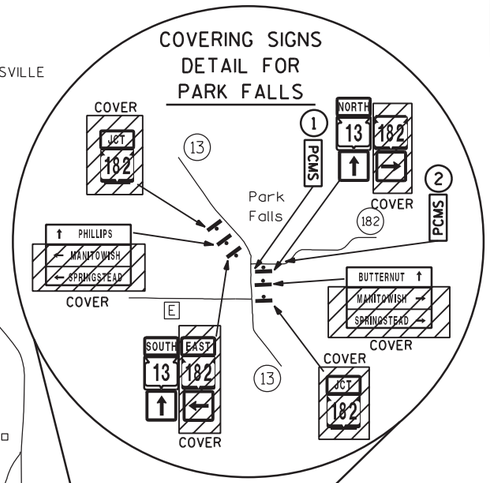
Hazelhurst

PROJECT LOCATION

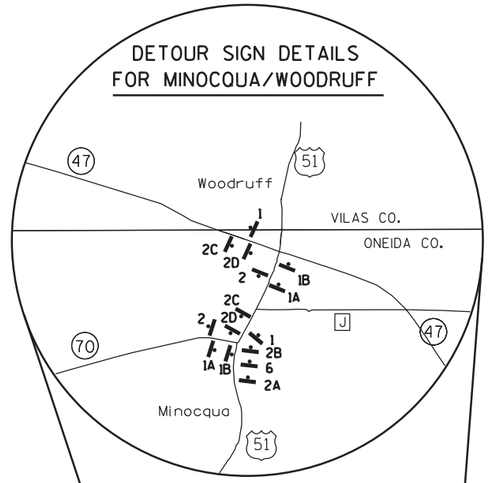
CLOSE STH 182 BETWEEN STA. 28+72 - STA. 37+76. PLACEMENT OF CLOSURE APPROACHING PROJECT LIMITS TO FOLLOW SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", DETAIL C & D.

PLACEMENT OF SIDE ROAD ADVANCED WARNING DEVICES DURING APPROACH MILL AND OVERLAY WORK TO FOLLOW SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC".

COVERING SIGNS DETAIL FOR PARK FALLS



DETOUR SIGN DETAILS FOR MINOCQUA/WOODRUFF



LEGEND

- WORK ZONE
- DETOUR ROUTE
- POST MOUNTED SIGN
- TYPE III BARRICADE WITH/WITHOUT SIGN
- TRAFFIC CONTROL COVERING SIGN
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTE:
SPACING AND PLACEMENT OF SIGNS TO FOLLOW SDD "DETOUR SIGNING FOR MAINLINE CLOSURES", AND "BARRICADES AND SIGNS FOR MAINLINE CLOSURES".

M4-8 24" X 12" — DETOUR EAST 182 / DETOUR WEST 182
M3-1 24" X 12"
M1-6 24" X 24"
M05-1L 21" X 21" (A)
M06-1 21" X 21" (B)
M05-1R 21" X 21" (C)
M06-1 21" X 21" (D)
M06-1 21" X 21" (E)

WEST 182 / EAST 182 — M3-1 24" X 12", M1-6 24" X 24"
ROAD CLOSED AHEAD 48" X 48" W20-3A (F)
DETOUR AHEAD 48" X48" W20-2A (G)

M4-8A 24" X 18" — END DETOUR
M1-6 24" X 24" — 182

BRIDGE OUT
HWY 182
IN PARK FALLS
FOLLOW DETOUR

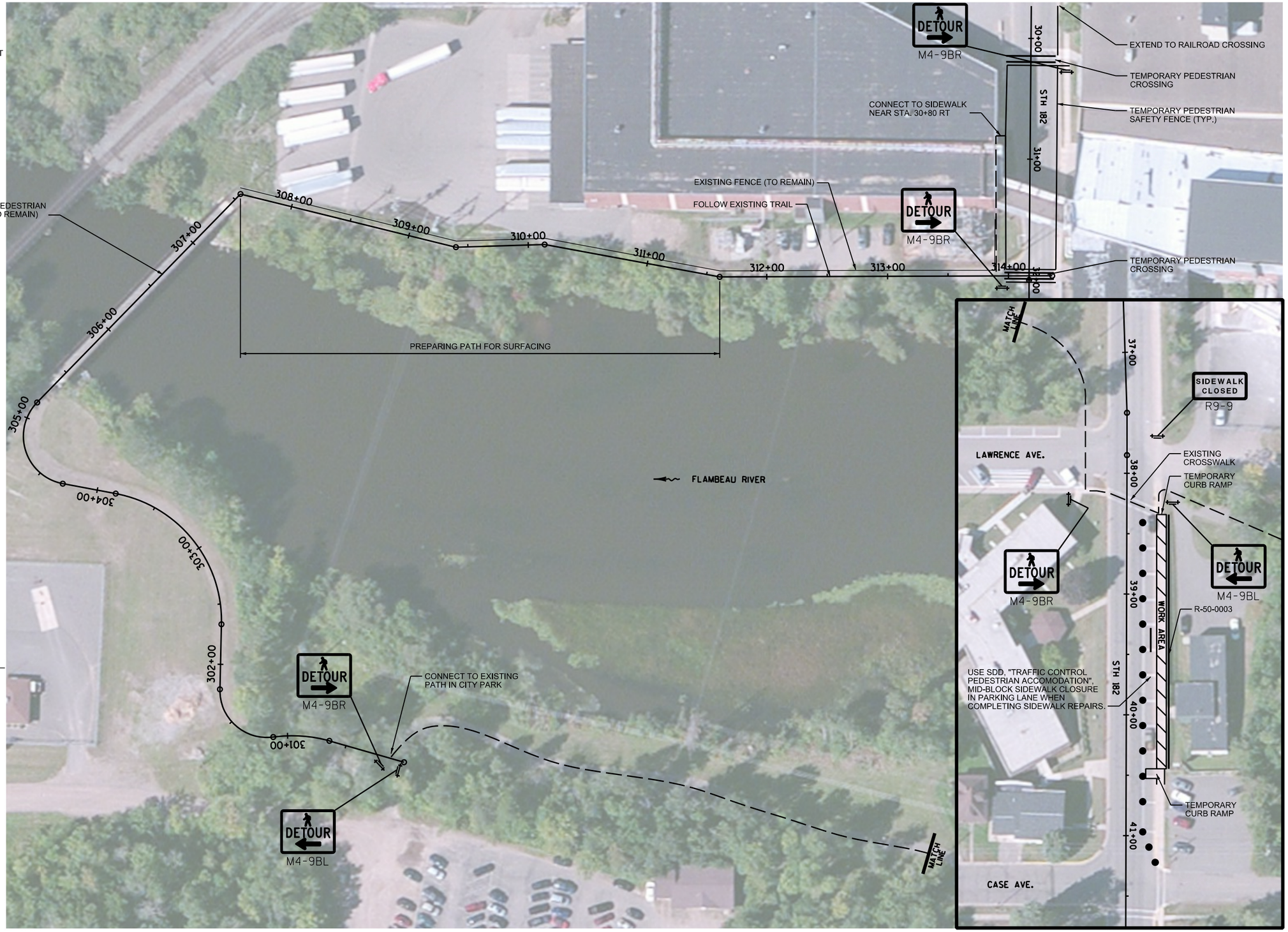
NOTES:

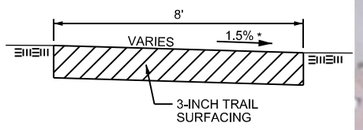
1. PLACE EB PCMS ON CITY RIGHT OF WAY 25' WEST OF ALLEY BETWEEN 4TH AND 3RD AVENUES.
2. PLACE WB PCMS ON DOT RIGHT OF WAY 150' WEST OF SAUNDERS AVE.
3. PLACE PCMS SIGNS 7 CALENDAR DAYS PRIOR TO CLOSURE OVER N. FORK FLAMBEAU RIVER USE MESSAGE AS FOLLOWS:

STH 182 BRIDGE TO CLOSE	[DAY] [MO] [DATE]

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	DETOUR ROUTE	SHEET 25	E

NOTE:
TEMPORARY PEDESTRIAN CROSSING CONSISTS OF TEMPORARY CURB RAMPS ON BOTH SIDES OF THE STREET WHEN NOT USING EXISTING RAMPS. USE TEMPORARY PEDESTRIAN ACCESS TO CROSS STREET AS SOWN IN SDD, "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION". CROSSING SHALL BE MOVED AS NEEDED TO ALLOW CONSTRUCTION OPERATIONS TO PROCEED THROUGH THE WORK AREA.





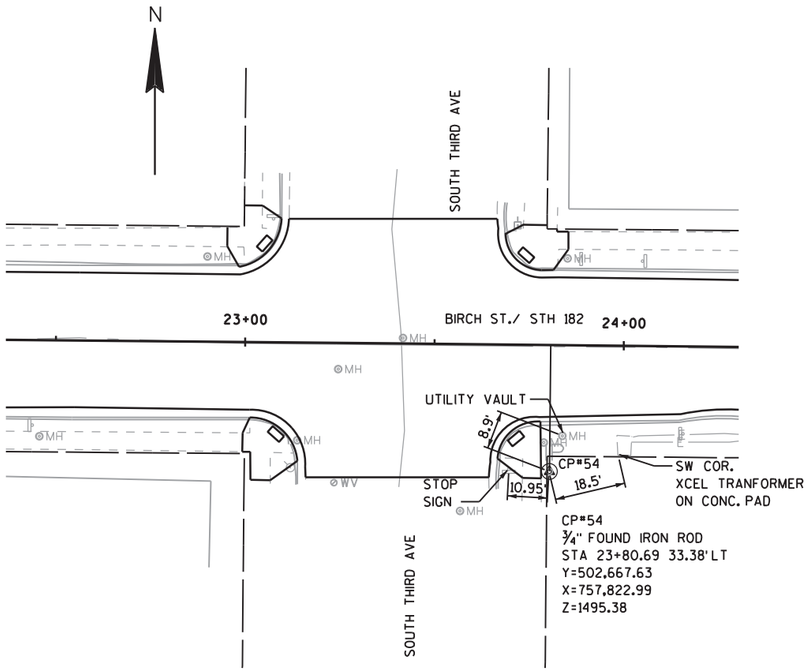
TRAIL TYPICAL SECTION
(EXCLUDING PEDESTRIAN BRIDGE)

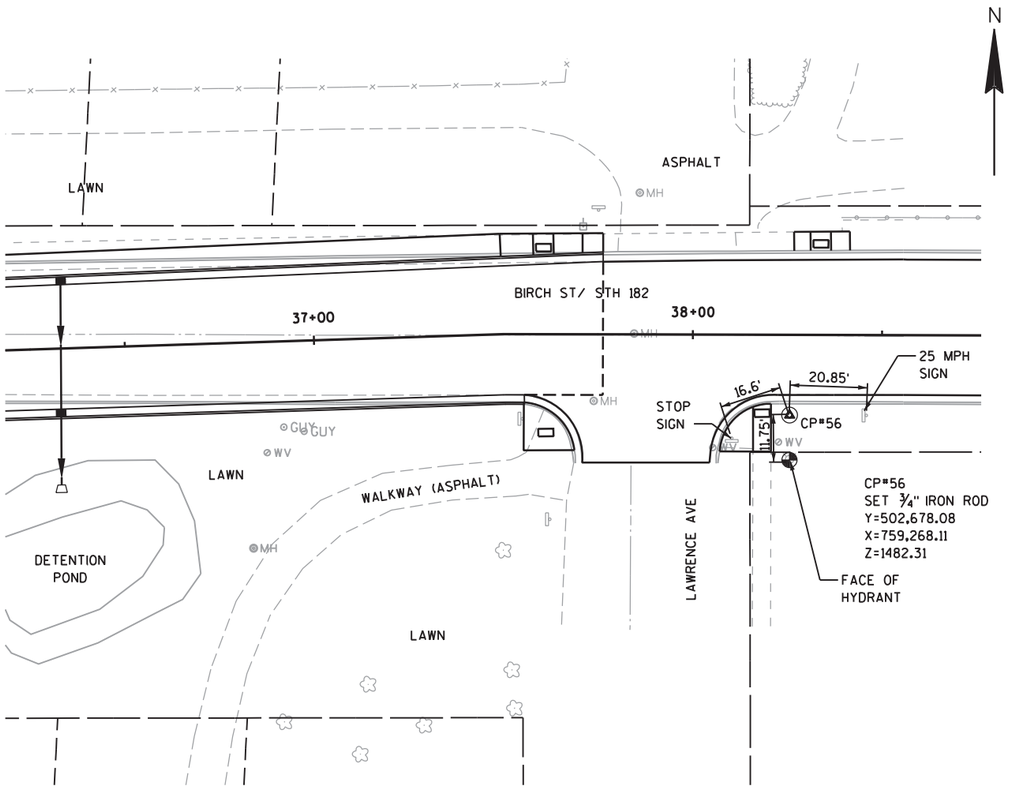
* SLOPE TO NATURAL DRAINAGE

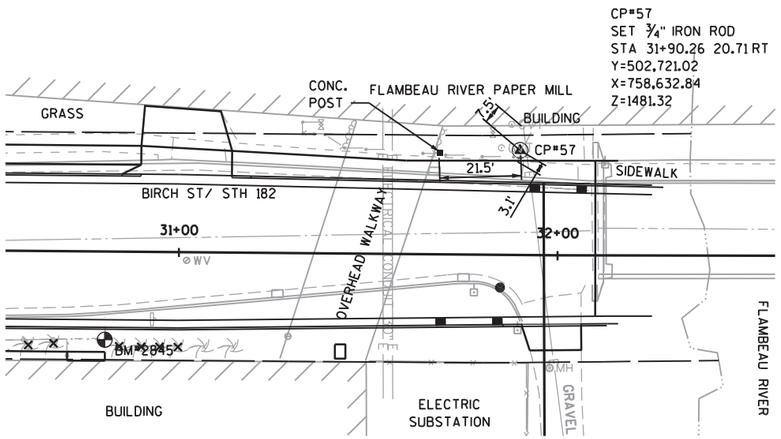
N

NOT TO SCALE

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	TEMPORARY PEDESTRIAN ACCESS	SHEET	E







PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	CONTROL POINT DATA	SHEET	E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\93125ties.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:39.9999

WISDOT/CADDS SHEET 42

93125ties.dgn 7/29/2016 10:56:38 AM CRooyakkers

DATE 27SEP16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9240-08-70 QUANTITY	9240-08-71 QUANTITY
0010	201.0110	Clearing	SY	615.000	615.000	
0020	201.0210	Grubbing	SY	615.000	615.000	
0030	203.0700.S	Removing Old Structure Over Waterway With Debris Capture System (station) 01. Station 33+55, 7' LT	LS	1.000	1.000	
0040	204.0110	Removing Asphaltic Surface	SY	135.000	30.000	105.000
0050	204.0115	Removing Asphaltic Surface Butt Joints	SY	185.000	185.000	
0060	204.0120	Removing Asphaltic Surface Milling	SY	11,645.000		11,645.000
0070	204.0150	Removing Curb & Gutter	LF	1,920.000	1,190.000	730.000
0080	204.0155	Removing Concrete Sidewalk	SY	825.000	405.000	420.000
0090	204.0195	Removing Concrete Bases	EACH	1.000	1.000	
0100	204.0220	Removing Inlets	EACH	5.000	5.000	
0110	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	64.000	64.000	
0120	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	21.000	21.000	
0130	204.0245	Removing Storm Sewer (size) 03. 29 X 45-Inch Horizontal Eliptical	LF	92.000	92.000	
0140	205.0100	Excavation Common	CY	1,948.000	1,948.000	
0150	206.1000	Excavation for Structures Bridges (structure) 01. B-50-0082	LS	1.000	1.000	
0160	209.0200.S	Backfill Controlled Low Strength	CY	140.000	140.000	
0170	209.1100	Backfill Granular Grade 1	CY	175.000	172.000	3.000
0180	210.1500	Backfill Structure Type A	TON	275.000	275.000	
0190	213.0100	Finishing Roadway (project) 01. 9240-08-70	EACH	1.000	1.000	
0200	213.0100	Finishing Roadway (project) 02. 9240-08-71	EACH	1.000		1.000
0210	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,100.000	2,100.000	
0220	415.0080	Concrete Pavement 8-Inch	SY	6.000	6.000	
0230	415.0410	Concrete Pavement Approach Slab	SY	124.000	124.000	
0240	416.0160	Concrete Driveway 6-Inch	SY	48.000	48.000	
0250	440.4410	Incentive IRI Ride	DOL	2,688.000	683.000	2,005.000
0260	450.4000	HMA Cold Weather Paving	TON	2,130.000	790.000	1,340.000
0270	455.0605	Tack Coat	GAL	1,050.000	230.000	820.000
0280	460.2000	Incentive Density HMA Pavement	DOL	1,364.000	506.000	858.000
0290	460.5224	HMA Pavement 4 LT 58-28 S	TON	2,130.000	790.000	1,340.000
0300	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	5.000	5.000	
0310	502.0100	Concrete Masonry Bridges	CY	722.000	722.000	
0320	502.3200	Protective Surface Treatment	SY	1,670.000	1,670.000	
0330	503.0146	Prestressed Girder Type I 45W-Inch	LF	1,395.000	1,395.000	
0340	505.0400	Bar Steel Reinforcement HS Structures	LB	28,625.000	28,625.000	
0350	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	109,730.000	109,730.000	
0360	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	30.000	30.000	
0370	506.4000	Steel Diaphragms (structure) 01. B-50-0082	EACH	24.000	24.000	
0380	511.1200	Temporary Shoring (structure) 01. B-50-0082	SF	200.000	200.000	
0390	513.7016	Railing Steel Type C3 (structure) 01. B-50-0082	LF	610.000	610.000	
0400	516.0500	Rubberized Membrane Waterproofing	SY	26.000	26.000	
0410	517.1015.S	Concrete Staining Multi-Color (structure) 01. B-50-0082	SF	2,580.000	2,580.000	
0420	517.1050.S	Architectural Surface Treatment (structure) 01. B-50-0082	SF	1,380.000	1,380.000	

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DATE 27SEP16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9240-08-70 QUANTITY	9240-08-71 QUANTITY
0430	517.1050.S	Architectural Surface Treatment (structure) 02. Traffic Face B-50-0082	SF	1,200.000	1,200.000	
0440	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000	
0450	523.0529	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	EACH	1.000	1.000	
0460	550.0020	Pre-Boring Rock or Consolidated Materials	LF	329.000	329.000	
0470	550.1125	Piling Steel HP 12-Inch X 74 Lb	LF	355.000	355.000	
0480	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	30.000	30.000	
0490	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	1,898.000	1,168.000	730.000
0500	602.0405	Concrete Sidewalk 4-Inch	SF	6,570.000	3,950.000	2,620.000
0510	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	260.000	40.000	220.000
0520	602.1500	Concrete Steps	SF	40.000	40.000	
0530	606.0300	Riprap Heavy	CY	180.000	180.000	
0540	606.0700	Grouted Riprap Heavy	CY	15.000	15.000	
0550	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	57.000	57.000	
0560	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	56.000	56.000	
0570	610.0129	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	LF	92.000	92.000	
0580	611.0530	Manhole Covers Type J	EACH	1.000	1.000	
0590	611.0639	Inlet Covers Type H-S	EACH	6.000	6.000	
0600	611.1230	Catch Basins 2x3-FT	EACH	6.000	6.000	
0610	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000	
0620	611.8110	Adjusting Manhole Covers	EACH	4.000	4.000	
0630	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000	
0640	611.8120.S	Cover Plates Temporary	EACH	6.000	6.000	
0650	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	230.000	230.000	
0660	616.0700.S	Fence Safety	LF	200.000	100.000	100.000
0670	619.1000	Mobilization	EACH	1.000	0.900	0.100
0680	621.0100	Landmark Reference Monuments	EACH	12.000	12.000	
0690	624.0100	Water	MGAL	40.000	40.000	
0700	625.0100	Topsoil	SY	940.000	930.000	10.000
0710	627.0200	Mulching	SY	70.000	60.000	10.000
0720	628.1504	Silt Fence	LF	765.000	765.000	
0730	628.1520	Silt Fence Maintenance	LF	1,530.000	1,530.000	
0740	628.1550	Silt Screen	LF	90.000	90.000	
0750	628.1905	Mobilizations Erosion Control	EACH	5.000	4.000	1.000
0760	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	4.000	2.000
0770	628.2008	Erosion Mat Urban Class I Type B	SY	930.000	930.000	
0780	628.6005	Turbidity Barriers	SY	680.000	680.000	
0790	628.7005	Inlet Protection Type A	EACH	8.000	8.000	
0800	628.7010	Inlet Protection Type B	EACH	2.000		2.000
0810	628.7015	Inlet Protection Type C	EACH	48.000	8.000	40.000
0820	628.7570	Rock Bags	EACH	25.000	25.000	
0830	629.0210	Fertilizer Type B	CWT	3.200	3.200	
0840	630.0120	Seeding Mixture No. 20	LB	55.000	55.000	
0850	630.0140	Seeding Mixture No. 40	LB	35.000	34.000	1.000
0860	631.0300	Sod Water	MGAL	22.000	20.000	2.000
0870	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	31.000	4.000	27.000

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DATE 27SEP16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9240-08-70 QUANTITY	9240-08-71 QUANTITY
0880	637.2210	Signs Type II Reflective H	SF	172.840	24.570	148.270
0890	637.2230	Signs Type II Reflective F	SF	31.660	24.080	7.580
0900	638.2602	Removing Signs Type II	EACH	31.000	3.000	28.000
0910	638.3000	Removing Small Sign Supports	EACH	21.000	1.000	20.000
0920	642.5001	Field Office Type B	EACH	1.000	1.000	
0930	643.0100	Traffic Control (project) 01. 9240-08-70	EACH	1.000	1.000	
0940	643.0100	Traffic Control (project) 02. 9240-08-71	EACH	1.000		1.000
0950	643.0300	Traffic Control Drums	DAY	9,660.000	2,760.000	6,900.000
0960	643.0420	Traffic Control Barricades Type III	DAY	3,036.000	3,036.000	
0970	643.0705	Traffic Control Warning Lights Type A	DAY	3,036.000	3,036.000	
0980	643.0900	Traffic Control Signs	DAY	4,692.000	1,242.000	3,450.000
0990	643.0920	Traffic Control Covering Signs Type II	EACH	9.000	9.000	
1000	643.1000	Traffic Control Signs Fixed Message	SF	224.000	224.000	
1010	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000	
1020	643.2000	Traffic Control Detour (project) 01. 9240-08-70	EACH	1.000	1.000	
1030	643.3000	Traffic Control Detour Signs	DAY	22,770.000	22,770.000	
1040	644.1410.S	Temporary Pedestrian Surface Asphalt	SF	75.000	50.000	25.000
1050	644.1420.S	Temporary Pedestrian Surface Plywood	SF	150.000	100.000	50.000
1060	644.1430.S	Temporary Pedestrian Surface Plate	SF	150.000	100.000	50.000
1070	644.1601.S	Temporary Curb Ramp	EACH	6.000	4.000	2.000
1080	644.1616.S	Temporary Pedestrian Safety Fence	LF	720.000	500.000	220.000
1090	645.0111	Geotextile Type DF Schedule A	SY	8.000	8.000	
1100	645.0120	Geotextile Type HR	SY	390.000	390.000	
1110	646.0106	Pavement Marking Epoxy 4-Inch	LF	10,230.000	3,515.000	6,715.000
1120	646.0126	Pavement Marking Epoxy 8-Inch	LF	65.000		65.000
1130	647.0110	Pavement Marking Railroad Crossings Epoxy	EACH	2.000	1.000	1.000
1140	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	1.000		1.000
1150	647.0656	Pavement Marking Parking Stall Epoxy	LF	130.000		130.000
1160	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	1,345.000	145.000	1,200.000
1170	650.4000	Construction Staking Storm Sewer	EACH	7.000	7.000	
1180	650.4500	Construction Staking Subgrade	LF	620.000	620.000	
1190	650.5000	Construction Staking Base	LF	620.000	620.000	
1200	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,198.000	1,198.000	
1210	650.8000	Construction Staking Resurfacing Reference	LF	2,552.000		2,552.000
1220	650.8500	Construction Staking Electrical Installations (project) 01. 9240-08-70	LS	1.000	1.000	
1230	650.9910	Construction Staking Supplemental Control (project) 01. 9240-08-70	LS	1.000	1.000	
1240	650.9910	Construction Staking Supplemental Control (project) 02. 9240-08-71	LS	1.000		1.000
1250	650.9920	Construction Staking Slope Stakes	LF	620.000	620.000	
1260	652.0125	Conduit Rigid Metallic 2-Inch	LF	48.000	48.000	
1270	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,523.000	1,523.000	
1280	652.0325	Conduit Rigid Nonmetallic Schedule 80 2-Inch	LF	52.000	52.000	
1290	652.0700.S	Install Conduit into Existing Item	EACH	1.000	1.000	
1300	653.0140	Pull Boxes Steel 24x42-Inch	EACH	3.000	3.000	
1310	653.0222	Junction Boxes 18x12x6-Inch	EACH	4.000	4.000	
1320	654.0105	Concrete Bases Type 5	EACH	2.000	2.000	
1330	655.0610	Electrical Wire Lighting 12 AWG	LF	4,140.000	4,140.000	

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DATE 27SEP16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9240-08-70 QUANTITY	9240-08-71 QUANTITY
1340	655.0615	Electrical Wire Lighting 10 AWG	LF	2,634.000	2,634.000	
1350	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	2.000	2.000	
1360	657.0322	Poles Type 5-Aluminum	EACH	4.000	4.000	
1370	657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	4.000	4.000	
1380	657.6005.S	Anchor Assemblies Light Poles on Structures	EACH	2.000	2.000	
1390	659.1115	Luminaires Utility LED A	EACH	4.000	4.000	
1400	690.0150	Sawing Asphalt	LF	1,854.000	244.000	1,610.000
1410	690.0250	Sawing Concrete	LF	1,508.000	52.000	1,456.000
1420	999.1500.S	Crack and Damage Survey	LS	1.000	1.000	
1430	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	1,400.000	600.000
1440	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,260.000	880.000	380.000
1450	SPV.0030	Special 01. Fertilizer for Lawn Type Turf	CWT	0.600	0.400	0.200
1460	SPV.0060	Special 01. Adjusting Water Valve Boxes	EACH	2.000	2.000	
1470	SPV.0060	Special 02. Utility Line Opening (ULO)	EACH	4.000	4.000	
1480	SPV.0060	Special 03. Removal and Salvage of Light Pole Assemblies	EACH	12.000	12.000	
1490	SPV.0060	Special 04. Lighting Assemblies Decorative	EACH	7.000	7.000	
1500	SPV.0060	Special 05. Remove Flashing Beacon	EACH	2.000	2.000	
1510	SPV.0060	Special 06. Moving Bike Rack	EACH	1.000	1.000	
1520	SPV.0060	Special 07. Tree Trimming	EACH	5.000	5.000	
1530	SPV.0090	Special 01. Drilled Shaft Foundation 36-Inch **P**	LF	183.000	183.000	
1540	SPV.0090	Special 02. Railing Pedestrian Steel	LF	11.000	11.000	
1550	SPV.0090	Special 03. Preparing Trail for Surfacing	LF	450.000	450.000	
1560	SPV.0090	Special 04. Move Precast Concrete Barrier	LF	120.000	120.000	
1570	SPV.0090	Special 05. Remove Railing	LF	40.000	40.000	
1580	SPV.0105	Special 01. Remove and Repaint Railing, R-50-3	LS	1.000		1.000
1590	SPV.0105	Special 02. Removal of Conduit and Wire	LS	1.000	1.000	
1600	SPV.0105	Special 03. Seismograph/Vibration Monitoring	LS	1.000	1.000	
1610	SPV.0105	Special 04. Utility Line Opening (ULO) Water Main at Bridge	LS	1.000	1.000	
1620	SPV.0165	Special 01. Cut-Stone Boulders	SF	72.000	72.000	
1630	SPV.0165	Special 02. Coarse Aggregate Stone Mulch	SF	70.000	70.000	
1640	SPV.0180	Special 01. Trail Surfacing	SY	1,100.000	1,100.000	
1650	SPV.0180	Special 02. Preparing Topsoil for Lawn Type Turf	SY	420.000	410.000	10.000
1660	SPV.0195	Special 01. Exc, Haul, and Disposal of Contam Sed & Dewtrng of Contam Set	TON	170.000	170.000	

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CLEARING AND GRUBBING ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	201.0110 CLEARING SY	201.0210 GRUBBING SY
0010	9240-08-70	30+55	-	31+25	STH 182 RT	40	40
		32+05	-	32+40	STH 182 RT	125	125
		34+95	-	36+00	STH 182 RT	450	450
	9240-08-70 TOTALS:					615	615
	PROJECT TOTALS:					615	615

REMOVING ASPHALTIC SURFACE ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
0010	9240-08-70	28+74	-	30+45	STH 182 RT	20	--	--
		37+55	-	37+70	STH 182 LT	10	--	--
	9240-08-70 TOTAL:					30	0	0
0010	9240-08-71	21+82	-	28+74	STH 182 MAINLINE	--	85	3290
		21+82	-	28+74	3-FT CURB SPOT REPAIRS	6	--	--
		21+82	-	28+74	CURB RAMP IMPROVEMENTS	31	--	--
		28+20	-	28+40	LT, ASPHALT PARKING LOT	5	--	--
		37+76	-	56+35	STH 182 MAINLINE	--	100	8355
		37+76	-	56+35	3-FT CURB SPOT REPAIRS	15	--	--
		37+76	-	56+35	CURB RAMP IMPROVEMENTS	48	--	--
	9240-08-71 TOTAL:					105	185	11645
	PROJECT TOTAL:					135	185	11645

REMOVING CURB & GUTTER

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF
0010	9240-08-70	28+74	-	32+10	STH 182 LT	335
		28+74	-	31+94	STH 182 RT	320
		35+00	-	37+76	STH 182 LT	280
		35+00	-	37+55	STH 182 RT	255
	9240-08-70 TOTAL:					1190
0010	9240-08-71	21+82	-	28+74	3-FT CURB SPOT REPAIRS	100
		37+76	-	56+35	3-FT CURB SPOT REPAIRS	275
		21+82	-	28+74	CURB RAMP IMPROVEMENTS	140
		37+76	-	56+35	CURB RAMP IMPROVEMENTS	215
	9240-08-71 TOTAL:					730
	PROJECT TOTAL:					1920

REMOVING CONCRETE SIDEWALK

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK SY
0010	9240-08-70	28+74	-	32+10	STH 182 LT	200
		30+14	-	30+80	STH 182 RT, MILL STEP REMOVAL	50
		35+00	-	37+76	STH 182 LT	155
	9240-08-70 TOTAL:					405
0010	9240-08-71	28+19	-	28+42	STH 182 LT	15
		38+39	-	40+48	3-FT SIDEWALK JOINT REPAIRS	150
		21+82	-	28+74	CURB RAMP IMPROVEMENTS	80
		37+76	-	56+35	CURB RAMP IMPROVEMENTS	175
	9240-08-71 TOTAL:					420
	PROJECT TOTAL:					825

REMOVING INLETS

CATEGORY	PROJECT	STATION	LOCATION	204.0220 REMOVING INLETS EACH
0010	9240-08-70	31+26	RT	1
		31+68	LT	1
		31+75	RT	1
		36+33	LT	1
		36+33	RT	1
	9240-08-70 TOTAL:			5
	PROJECT TOTAL:			5

STREET LIGHTING ASSEMBLY REMOVAL ITEMS

CATEGORY	PROJECT	NUMBER	STATION	OFFSET	204.0195 REMOVING CONCRETE BASES EACH	SPV.0060.03 REMOVAL AND SALVAGE OF LIGHT POLE ASSEMBLIES EACH
0020	9240-08-70	EX-LP1	31+78.0	10.0' RT	1	1
		EX-LP2	32+12.7	24.0' LT	-	1
		EX-LP3	33+04.0	24.0' LT	-	1
		EX-LP4	34+06.8	24.0' LT	-	1
		EX-LP5	34+98.1	24.0' LT	-	1
0030	9240-08-70	LP-1	20+59.9	22.5' LT	--	1
		LP-2	21+99.3	23.5' RT	--	1
		LP-3	23+71.7	31.5' LT	--	1
		LP-4	24+34.9	24.1' RT	--	1
		LP-5	26+25.2	23.7' LT	--	1
		LP-6	28+27.0	21.0' RT	--	1
		LP-7	29+49.8	23.3' LT	--	1
	9240-08-70 TOTALS:				1	12
	PROJECT TOTALS:				1	12

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EXCAVATION & BORROW

Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/- (7)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.30				
1	28+54 - 32+25	STH 182	1,044	0	0	1044	0	0	1044	1044	0	
	35+07 - 37+76	STH 182	805	0	0	805	6	8	797	797	0	
	ULO WASTE MATERIAL	STH 182	100	0	0	100	0	0	100	100	0	
Division 1 Subtotal			1948	0	0	1948	6	8	1941	1941	0	
Grand Total Project 9240-08-70			1948	0	0	1948	6	8	1941	1941	0	

PROJECT 9240-08-70 Total Common Exc 1,948

Notes:
1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Crushed material.
4) Salvaged/Unsuable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Expanded Fill. Factor = 1.30
7) 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.

REMOVING STORM SEWER ITEMS

CATEGORY	PROJECT	STATION	-	STATION	204.0245.01 REMOVING STORM SEWER 12-INCH LF	204.0245.02 REMOVING STORM SEWER 18-INCH LF	204.0245.03 REMOVING STORM SEWER 29"x45" HE LF
0010	9240-08-70	31+26, RT	-	31+75, RT	--	--	47
		31+68, LT	-	31+75, RT	27	--	--
		31+75, RT	-	32+18, RT (1)	--	--	45
		36+33, LT	-	36+33, RT	37	--	--
		36+33, RT	-	36+33, RT (1)	--	21	--
	9240-08-70 TOTALS:				64	21	92
	PROJECT TOTALS:				64	21	92

(1) - INCLUDES OUTLET APRON ENDWALL
ALL STORM SEWER IS REINFORCED CONCRETE PIPE.

BACKFILL GRANULAR

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	209.1100 BACKFILL GRANULAR GRADE 1 CY
0010	9240-08-70	28+74		32+25	SIDEWALK LT	35
		30+07		30+81	SIDEWALK RT	9
		35+18		37+76	SIDEWALK LT	28
		UNDISTRIBUTED			STORM SEWER	100
	9240-08-70 TOTAL:					172
0010	9240-08-71	28+18		28+42	SIDEWALK LT	3
	9240-08-71 TOTAL:					3
	PROJECT TOTAL:					175

BASE AGGREGATE DENSE

CATEGORY	PROJECT	STATION	-	STATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
0010	9240-08-70	28+74	-	32+25	1175
		35+07	-	37+76	900
		TEMP CROSSWALK BASE			25
	9240-08-70 TOTAL:				2100
	PROJECT TOTAL:				2100

CONCRETE PAVEMENT ITEMS

CATEGORY	PROJECT	LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
0010	9240-08-70	B-50-0082 WEST APPR.	3	62
		B-50-0082 EAST APPR.	3	62
	9240-08-70 TOTALS:		6	124
	PROJECT TOTALS:		6	124

FILE NAME : P:\90S\93\00093125\RHINELANDER\CADD\93125_MQ.DWG
LAYOUT NAME - 93125_MQ - 3_BORDER_MQ
PLOT DATE : 5/24/2016 1:49 PM PLOT BY : JESSE JEFFERSON PLOT NAME : PLOT SCALE : 1:1
WISDOT/CADDS SHEET 42

CONCRETE DRIVEWAY

CATEGORY	PROJECT	STATION	LOCATION	416.0160 CONCRETE DRIVEWAY 6-INCH SY
0010	9240-08-70	31+00	DRIVEWAY LT	48
	9240-08-70 TOTAL:			48
	PROJECT TOTAL:			48

ASPHALTIC PAVEMENT ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	455.0605 TACK COAT GAL (1)	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
0010	9240-08-70	28+74	-	32+11	STH 182	135	460	--
		35+22	-	37+76	STH 182	95	330	--
		DRIVEWAYS				--	--	5
	9240-08-70 TOTALS:					230	790	5
0010	9240-08-71	21+82	-	28+74	STH 182	230	380	--
		37+76	-	57+32	STH 182	590	960	--
	9240-08-71 TOTALS:					820	1340	0
	TOTALS:					1050	2130	5

(1) - TACK COAT APPLICATION RATE: 0.05 GAL/SY, EXCEPT ON MILLED SURFACES AT RATE 0.07 GAL/SY.

APRON ENDWALL ITEMS

CATEGORY	PROJECT	STATION	LOCATION	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	523.0529 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELIPTICAL 29x45-INCH EACH
0010	9240-08-70	32+22.8	29.5' RT	--	1
		36+32.1	37.0' RT	1	--
	9240-08-70 TOTALS:			1	1
	PROJECT TOTALS:			1	1

CONCRETE CURB & GUTTER ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF
0010	9240-08-70	28+74	-	32+11	LT	--	337
		32+11	-	32+26	LT	15	--
		28+74	-	32+13	RT	--	340
		35+07	-	35+22	LT	15	--
		35+18	-	37+76	LT	--	254
		35+18	-	37+55	RT	--	237
	9240-08-70 TOTAL:					30	1168
0010	9240-08-71	21+82	-	28+74	3-FT SPOT REPAIRS	--	100
		37+76	-	57+32	3-FT SPOT REPAIRS	--	275
		21+82	-	28+74	CURB RAMP IMPROVEMENTS	--	140
		37+76	-	56+35	CURB RAMP IMPROVEMENTS	--	215
	9240-08-71 TOTAL:					0	730
	TOTAL:					30	1898

CONCRETE SIDEWALK ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	602.1500 CONCRETE STEPS SF
0010	9240-08-70	28+74	-	32+25	SIDEWALK LT	1910	20	--
		30+09	-	30+81	SIDEWALK RT	435	10	--
			30+55		STEPS RT	--	--	40
		35+07	-	37+76	SIDEWALK LT	1605	10	--
	9240-08-70 TOTALS:					3950	40	40
0010	9240-08-71	28+18	-	28+42	SIDEWALK LT	115	10	--
		21+82	-	28+74	3-FT SPOT REPAIRS	205	--	--
		37+76	-	57+32	3-FT SPOT REPAIRS	620	--	--
		21+82	-	28+74	CURB RAMP IMPROVEMENTS	700	70	--
		37+76	-	56+35	CURB RAMP IMPROVEMENTS	980	140	--
	9240-08-71 TOTALS:					2620	220	0
	TOTALS:					6570	260	40

ADJUSTING MANHOLES, INLETS, AND WATER VALVES

CATEGORY	PROJECT	STATION	LOCATION	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH	SPV.0060.01 ADJUSTING WATER VALVE BOXES EACH
0010	9240-08-70	28+85	LT	--	1	--
		28+85	RT	1	1	--
		30+03	RT	1	--	--
		31+77	RT	1	--	--
0040	9240-08-70	30+45	RT	1	--	--
		31+02	RT	--	--	1
		31+29	RT	--	--	1
	9240-08-70 TOTALS:			4	2	2
	PROJECT TOTALS:			4	2	2

LANDMARK REFERENCE MONUMENTS

CATEGORY	PROJECT	COMMENTS	621.0100 LANDMARK REFERENCE MONUMENTS EACH
0010	9240-08-70	SEE PROJECT PLAT 9240-08-20 FOR LOCATION DETAILS	12
	9240-08-70 TOTALS:		12
	PROJECT TOTALS:		12

STORM SEWER ITEMS

CATEGORY	PROJECT	STRUCTURE	-	STRUCTURE	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	610.0129 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELIPTICAL CLASS HE-III 29x45-INCH LF
0010	9240-08-70	EXISTING	-	1.0	--	--	60
		1.2	-	1.1	12	--	--
		1.1	-	1.0	--	8	--
		1.4	-	1.3	10	--	--
		1.3	-	1.0	--	27	--
		1.0	-	AEW	--	--	32
		2.1	-	2.0	35	--	--
		2.0	-	AEW	--	21	--
	9240-08-70 TOTALS:				57	56	92
	PROJECT TOTALS:				57	56	92

WATER

CATEGORY	PROJECT	DESCRIPTION	624.0100 WATER MGAL
0010	9240-08-70	COMPACTION	20
		DUST CONTROL	20
	9240-08-70 TOTALS:		40
	PROJECT TOTALS:		40

CATCH BASINS, MANHOLES, AND INLETS

CATEGORY	PROJECT	STORM STRUCTURE	STATION	LOCATION	RIM ELEV	TOS ELEV	INVERT ELEV	DEPTH FT (1)	611.2006 MANHOLES 6-FT DIAMETER EACH	611.1230 CATCH BASINS 2x3-FT EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0639 INLET COVERS TYPE H-S EACH	611.8120.S COVER PLATES TEMPORARY EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
0010	9240-08-70	1.0	31+85.0	8.6' RT	1481.08	1479.83	1473.11	6.72	1	--	1	--	--	1
		1.1	31+84.0	17.9' RT	1480.79	1479.75	1476.08	5.67	--	1	--	1	1	1
		1.2	31+69.4	18.2' RT	1480.93	1479.89	1478.00	3.89	--	1	--	1	1	1
		1.3	31+94.0	18.2' LT	1480.72	1479.68	1476.08	5.60	--	1	--	1	1	1
		1.4	32+06.5	18.0' LT	1480.66	1479.62	1477.74	3.88	--	1	--	1	1	1
		2.0	36+32.7	17.5' RT	1478.84	1477.80	1474.20	5.60	--	1	--	1	1	1
		2.1	36+33.7	18.3' LT	1478.86	1477.82	1474.70	5.12	--	1	--	1	1	1
	9240-08-70 TOTALS:								1	6	1	6	6	7
	PROJECT TOTALS:								1	6	1	6	6	7

(1) - DEPTH INCLUDES 2-FOOT SUMP IN INLETS ONLY.

3

3

EROSION CONTROL ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7570 ROCK BAGS EACH	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0140 SEEDING MIXTURE NO. 40 LB	631.0300 SOD WATER MGAL	SPV.0030.01 FERTILIZER FOR LAWN TYPE TURF CWT	SPV.0180.02 PREPARING TOPSOIL FOR LAWN TYPE TURF SY
0010	9240-08-70	28+74	-	37+76	STH 182 LT	205	--	205	--	--	--	6	10	0.2	205
		28+74	-	37+76	STH 182 RT	205	--	205	--	--	--	6	10	0.2	205
		RIVER ACCESS AREA			STH 182 RT	380	--	380	--	0.2	--	7	--	--	--
		WASTE AREA				--	--	--	--	2.0	55	--	--	--	--
		UNDISTRIBUTED				140	60	140	25	1.0	--	15	--	--	--
	9240-08-70 TOTALS:					930	60	930	25	3.2	55	34	20	0.4	410
0010	9240-08-71	21+82	-	28+74	3-FT SPOT REPAIRS	5	5	--	--	--	--	0.5	1	0.1	5
		37+76	-	56+35	3-FT SPOT REPAIRS	5	5	--	--	--	--	0.5	1	0.1	5
	9240-08-71 TOTALS:					10	10	0	0	0	0	1	2	0.2	10
	PROJECT TOTALS:					940	70	930	25	3.2	55	35	22	0.6	420

SILT FENCE ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
0010	9240-08-70	32+05	-	32+38	RT	50	100
		34+92	-	37+80	LT	290	580
		35+35	-	37+80	RT	275	550
		UNDISTRIBUTED				150	300
	9240-08-70 TOTALS:					765	1530
	PROJECT TOTALS:					765	1530

TURBIDITY BARRIER

CATEGORY	PROJECT	LOCATION	628.1550 SILT SCREEN LF	628.6005 TURBIDITY BARRIER SY
0010	9240-08-70	WEST BANK/EXISTING PIER 1	--	200
		PROPOSED PIER 1	--	200
		EXISTING PIER 2	90	--
		PROPOSED PIER 2/EXISTING PIER 3	--	160
		EAST BANK	--	120
	9240-08-70 TOTALS:		90	680
	PROJECT TOTALS:		90	680

INLET PROTECTION

CATEGORY	PROJECT	STRUCTURE	STATION	LOCATION	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH
0010	9240-08-70	--	28+85	LT	1	--	1
		--	28+85	RT	1	--	1
		1.1	31+84.0	RT	1	--	1
		1.2	31+69.4	RT	1	--	1
		1.3	31+94.0	LT	1	--	1
		1.4	32+06.5	LT	1	--	1
		2.0	36+32.7	RT	1	--	1
		2.1	36+33.7	LT	1	--	1
	9240-08-70 TOTAL:				8	0	8
0010	9240-08-71	--	VARIOUS	EXISTING INLETS	--	2	40
	9240-08-71 TOTAL:				0	2	40
	PROJECT TOTAL:				8	2	48

FILE NAME : P:\90S\93\00093125\RHINELANDER\CADD\93125_MQ.DWG
LAYOUT NAME - 93125_MQ - 3_BORDER_MQ
PLOT DATE : 5/24/2016 1:49 PM PLOT BY : JESSE JEFFERSON PLOT NAME : PLOT SCALE : 1:1
WISDOT/CADDS SHEET 42

SIGNING ITEMS

CATEGORY	PROJECT	STATION	LOCATION	PLAN SIGN NUMBER	SIGN CODE	SIGN MESSAGE	634.0614 POSTS WOOD 4x6-INCH x 14-FT EACH	WIDTH IN	LENGTH IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
0010	9240-08-70	28+96	RT	2-03	CUSTOM	CROSSWALK	--	--	--	--	--	1	1	
		29+26	LT	2-04	MULTIPLE	NO PARKING ANY TIME/ATV ROUTE	--	--	--	--	--	--	--	REMOVE (BY OTHERS)
		30+05	RT	2-05	W11-2	PEDESTRIAN CROSSING SYMBOL	1	30	30	--	6.25	--	--	
		30+05	RT	2-06	W16-7L	DOWN-LEFT ARROW	--	24	12	--	2.00	--	--	INSTALL UNDER SIGN 2-05
		30+25	LT	2-07	W11-2	PEDESTRIAN CROSSING SYMBOL	1	30	30	--	6.25	--	--	
		30+25	LT	2-08	W16-7L	DOWN-LEFT ARROW	--	24	12	--	2.00	--	--	INSTALL UNDER SIGN 2-07
		30+93	RT	2-09	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	REMOVE (BY OTHERS)
		31+00	RT	2-10	R2-1	SPEED LIMIT 25	--	24	30	5.00	--	--	--	
		31+75	RT	2-11	MULTIPLE	SNOWMOBILE ROUTE/ATV ROUTE	--	--	--	--	--	--	--	REMOVE FROM POWER POLE (BY OTHERS)
		32+07	LT	2-12	W10-1	RAILROAD CROSSING	1	36	36	7.07	--	--	--	
		33+20	LT	2-13	W11-2	PEDESTRIAN CROSSING SYMBOL	--	30	30	--	6.25	--	--	BAND TO LIGHT POLE
		33+20	LT	2-14	W16-9P	AHEAD PLAQUE	--	24	8	--	1.33	--	--	INSTALL UNDER SIGN 2-13
		34+98	LT	2-15	MULTIPLE	PLANT ENTRANCE/RAILROAD CROSSING	--	--	--	--	--	2	--	
		35+13	LT	2-16	W54-56	PLANT ENTRANCE	--	30	30	6.25	--	--	--	BAND TO LIGHT POLE
		35+37	LT	2-17	D11-10	ATV ROUTE	--	--	--	--	--	--	--	REMOVE (BY OTHERS)
		37+15	LT	2-18	W12-2	LOW CLEARANCE 14'-6"	1	30	30	6.25	--	--	--	
		37+50	RT	2-19	CUSTOM	ALL PURPOSE TRAIL	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		37+55	RT	2-20	D3-1	STREET NAME SIGN	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
	9240-08-70 TOTALS:						4			24.57	24.08	3	1	
0010	9240-08-71	21+40	RT	1-01	J4-1	EAST STH 182	1	24	36	6.00	--	--	--	
		21+87	RT	1-02	J4-1	EAST STH 182	--	--	--	--	--	1	1	
		21+98	RT	1-03	R2-1	SPEED LIMIT 25	--	24	30	5.00	--	--	--	BAND TO LIGHT POLE
		21+98	RT	1-04	CUSTOM	DOWNTOWN PARK FALLS GUIDE SIGN	--	--	--	--	--	--	--	MOVE ABOVE SIGN 1-03 (BY OTHERS)
		22+43	RT	1-05	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		22+90	RT	1-06	W12-2	LOW CLEARANCE 14'-6"	1	30	30	6.25	--	--	--	
		22+93	LT	1-07	W3-3	SIGNAL AHEAD	1	30	30	6.25	--	1	1	
		23+06	LT	1-08	R1-1	STOP	1	30	30	5.18	--	1	1	3RD AVE LT
		23+70	RT	1-09	R1-1	STOP	1	30	30	5.18	--	1	1	3RD AVE RT
		23+80	RT	1-10	W10-1	RAILROAD CROSSING	1	36	36	7.07	--	--	--	
		23+87	LT	1-11	D3-1	STREET NAME SIGN	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		24+03	LT	1-12	D11-8	SNOWMOBILE/ATV ROUTE	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		24+15	RT	1-13	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		24+35	RT	1-14	CUSTOM	DOWNTOWN PARK FALLS GUIDE SIGN	--	--	--	--	--	--	--	REMOVE SIGN (BY OTHERS)
		25+06	LT	1-15	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		25+45	RT	1-16	R1-1	STOP	1	30	30	5.18	--	1	1	DRIVEWAY RT
		24+03	LT	1-17	D11-8	SNOWMOBILE/ATV ROUTE	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		26+20	RT	1-18	W11-2	PEDESTRIAN CROSSING SYMBOL	1	30	30	--	6.25	--	--	
		26+20	RT	1-19	W16-9P	AHEAD PLAQUE	--	24	8	--	1.33	--	--	INSTALL UNDER SIGN 1-18
		26+42	LT	1-20	D3-1	STREET NAME SIGN	--	--	--	--	--	--	--	MOVE SIGN TO NEW POST IN SAME LOCATION (BY OTHERS)
		26+42	LT	1-21	R1-1	STOP	1	30	30	5.18	--	1	1	2ND AVE LT
		27+94	LT	1-22	CUSTOM	DOWNTOWN PARK FALLS GUIDE SIGN	--	--	--	--	--	--	--	MOVE SIGN TO STA. 27+30 (BY OTHERS)
		27+97	RT	1-23	D11-8	SNOWMOBILE/ATV ROUTE	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		28+20	RT	2-01	R2-1	SPEED LIMIT 25	1	24	30	5.00	--	--	--	
		28+42	LT	2-02	R1-1	STOP	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		38+12	RT	2-21	R1-1	STOP	1	30	30	5.18	--	1	1	LAWRENCE AVE RT
		38+25	LT	2-22	R2-1	SPEED LIMIT 25	1	24	30	5.00	--	--	--	
		38+45	RT	2-23	R2-1	SPEED LIMIT 25	1	24	30	5.00	--	1	1	
		38+93	RT	2-24	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		39+74	RT	3-01	MULTIPLE	RV DUMP/RIGHT ARROW	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		40+30	RT	3-02	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		40+87	RT	3-03	MULTIPLE	ATV ROUTE/RIGHT ARROW	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		41+27	LT	3-04	R1-1	STOP	1	30	30	5.18	--	1	1	CASE AVE LT
		41+27	RT	3-05	D11-8	SNOWMOBILE/ATV ROUTE	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		41+65	LT	3-06	D3-1	STREET NAME SIGN	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		41+65	RT	3-07	R1-1	STOP	1	30	30	5.18	--	1	1	CASE AVE RT
		42+45	RT	3-08	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
	9240-08-71 SUBTOTALS:						15			81.83	7.58	10	10	*CONTINUED ON NEXT SHEET*

SIGNING ITEMS (CONTINUED)

CATEGORY	PROJECT	STATION	LOCATION	PLAN SIGN NUMBER	SIGN CODE	SIGN MESSAGE	634.0614 POSTS WOOD 4x6-INCH x 14-FT EACH	WIDTH IN	LENGTH IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
		43+92	RT	3-09	JH-1	HOSPITAL ROUTE ASSEMBLY	1	24	45	7.50	--	--	--	
					D9-2	HOSPITAL	--	--	--	--	--	--	--	
					MB6-1	ARROW RIGHT (BLUE)	--	--	--	--	--	--	--	
		43+92	RT	3-10	MULTIPLE	HOSPITAL ROUTE ASSEMBLY	--	--	--	--	--	5	1	
		44+30	RT	3-11	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		44+77	LT	3-12	R1-1	STOP	1	30	30	5.18	--	1	1	SHERRY AVE LT
		45+23	LT	3-13	D3-1	STREET NAME SIGN	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		45+22	RT	3-14	R1-1	STOP	1	30	30	5.18	--	1	1	SHERRY AVE RT
		45+87	RT	3-15	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		46+73	LT	3-16	JH-1	HOSPITAL ROUTE ASSEMBLY	--	--	--	--	--	5	1	
		46+73	RT	3-17	R2-1	SPEED LIMIT 25	1	24	30	5.00	--	--	--	
		46+73	LT	3-18	JH-1	HOSPITAL ROUTE ASSEMBLY	1	24	45	7.50	--	--	--	
					D9-2	HOSPITAL	--	--	--	--	--	--	--	
					MB6-1	ARROW LEFT (BLUE)	--	--	--	--	--	--	--	
		47+66	RT	3-19	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		48+00	LT	3-20	R2-1	SPEED LIMIT 25	1	24	30	5.00	--	--	--	
		48+43	LT	3-21	R1-1	STOP	1	30	30	5.18	--	1	1	AVERY AVE LT
		48+86	LT	3-22	D3-1	STREET NAME SIGN	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		48+86	RT	3-23	R1-1	STOP	1	30	30	5.18	--	1	1	AVERY AVE RT
		49+30	LT	3-24	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		49+37	RT	3-25	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		51+46	RT	3-26	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		51+50	LT	4-01	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		52+03	LT	4-02	R1-1	STOP	1	30	30	5.18	--	1	1	PADDOCK AVE LT
		52+45	RT	4-03	R1-1	STOP	1	30	30	5.18	--	1	1	PADDOCK AVE RT
		52+59	LT	4-04	D3-1	STREET NAME SIGN	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		53+02	RT	4-05	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		53+09	LT	4-06	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		54+42	RT	4-07	I55-56	ADOPT A HIGHWAY	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		54+96	RT	4-08	MULTIPLE	PARK FALLS RECREATION GUIDE SIGNS	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		55+50	LT	4-09	R7-1-D	NO PARKING ANY TIME	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		55+77	LT	4-10	R1-1	STOP	1	30	30	5.18	--	1	1	SAUNDERS AVE LT
		56+00	RT	4-11	R1-1	STOP	1	30	30	5.18	--	1	1	SAUNDERS AVE RT
		56+27	LT	4-12	D3-1	STREET NAME SIGN	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
		56+96	LT	4-14	MULTIPLE	PARK FALLS RECREATION GUIDE SIGNS	--	--	--	--	--	--	--	EXISTING SIGN TO REMAIN
	9240-08-71 SUBTOTALS:						12			66.44	0.00	18	10	
	9240-08-71 TOTALS:						27			148.27	7.58	28	20	*INCLUDES QUANTITIES FROM PREVIOUS SHEET*
	PROJECT TOTALS:						31			172.83	31.67	31	21	

TRAFFIC CONTROL ITEMS

CATEGORY	PROJECT	DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 DAYS
0010	9240-08-70	138	--	--	17	2346	22	3036	9	1242	9	224	2	14	165	22770
	UNDISTRIBUTED		20	2760	5	690	--	--	--	--	--	--	2	14	--	--
	9240-08-70 TOTALS:			2760		3036		3036		1242	9	224		28		22770
0010	9240-08-71	138	--	--	--	--	--	--	25	3450	--	--	--	--	--	--
	UNDISTRIBUTED		50	6900	--	--	--	--	--	--	--	--	--	--	--	--
	9240-08-71 TOTALS:			6900		0		0		3450		0		0		0
	PROJECT TOTALS:			9660		3036		3036		4692		224		28		22770

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TEMPORARY PEDESTRIAN ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	616.0700.S FENCE SAFETY LF	644.1410.S TEMPORARY PEDESTRIAN SURFACE ASPHALT SF	644.1420.S TEMPORARY PEDESTRIAN SURFACE PLYWOOD SF	644.1430.S TEMPORARY PEDESTRIAN SURFACE PLATE SF	644.1601.S TEMPORARY CURB RAMP EACH	644.1616.S TEMPORARY PEDESTRIAN SAFETY FENCE LF
0010	9240-08-70	28+75	-	32+10	N. SIDE SIDEWALK STAGING	--	50	100	100	4	500
					UNDISTRIBUTED	100	--	--	--	--	--
	9240-08-70 TOTALS:					100	50	100	100	4	500
0010	9240-08-71	38+00	-	41+30	SIDEWALK REPAIRS	--	25	50	50	2	--
		38+35	-	40+50	R-50-003 REMOVE AND REPAINT	--	--	--	--	--	220
					UNDISTRIBUTED	100	--	--	--	--	--
	9240-08-71 TOTALS:					100	25	50	50	2	220
	PROJECT TOTALS:					200	75	150	150	6	720

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

CATEGORY	PROJECT	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS
0010	9240-08-70	1
9240-08-70 TOTAL:		1
0010	9240-08-71	1
9240-08-71 TOTAL:		1
PROJECT TOTAL:		2

PAVEMENT MARKING ITEMS

CATEGORY	PROJECT	STATION	-	STATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH LF	COMMENTS
0010	9240-08-70	28+74	-	37+76	1750	--	DOUBLE YELLOW CENTERLINE
		28+74	-	37+76	890	--	WHITE EDGELINE LT
		28+74	-	37+76	875	--	WHITE EDGELINE RT
	9240-08-70 TOTALS:				3515	0	
0010	9240-08-71	21+82	-	22+47	--	65	WHITE SOLID LANE LINE LT
		21+82	-	28+74	1010	--	DOUBLE YELLOW CENTERLINE
		23+80	-	28+74	335	--	WHITE EDGELINE LT
		23+80	-	28+74	360	--	WHITE EDGELINE RT
		37+76	-	56+35	2940	--	DOUBLE YELLOW CENTERLINE
		37+76	-	56+35	600	--	WHITE EDGELINE LT
		37+76	-	56+35	1470	--	WHITE EDGELINE RT
	9240-08-71 TOTALS:				6715	65	
	PROJECT TOTALS:				10230	65	

CONSTRUCTION STAKING ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF
0010	9240-08-70	28+74	-	32+25	STH 182	351	351	351	--
		35+07	-	37+76	STH 182	269	269	269	--
	9240-08-70 TOTALS:					620	620	620	0
	9240-08-71	21+82	-	28+74	STH 182	--	--	--	693
		37+76	-	56+35	STH 182	--	--	--	1859
	9240-08-71 TOTALS:					0	0	0	2552
	PROJECT TOTALS:					620	620	620	2552

SPECIAL PAVEMENT MARKING ITEMS

CATEGORY	PROJECT	STATION	-	STATION	647.0110 PAVEMENT MARKING RAILROAD CROSSING EPOXY EACH	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 EACH	647.0656 PAVEMENT MARKING PARKING STALL EPOXY LF	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH LF
0010	9240-08-70	28+74	-	37+76	1	--	--	145
	9240-08-70 TOTALS:				1	0	0	145
0010	9240-08-71	21+82	-	28+74	1	1	--	600
		37+76	-	56+35	--	--	130	600
	9240-08-71 TOTALS:				1	1	130	1200
	PROJECT TOTALS:				2	1	130	1345

CONSTRUCTION STAKING CURB & GUTTER

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
0010	9240-08-70	28+74	-	32+26	LT	352
		28+74	-	32+13	RT	340
		35+07	-	37+76	LT	269
		35+18	-	37+76	RT	237
9240-08-70 TOTAL:						1198
PROJECT TOTAL:						1198

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CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS

CATEGORY	PROJECT	DESCRIPTION	650.8500.01 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS LS
0010	9240-08-70	PROJECT 9240-08-70	1
	9240-08-70 TOTAL:		1
	PROJECT TOTAL:		1

STREET LIGHT POLE ASSEMBLY ITEMS

CATEGORY	PROJECT	POLE NUMBER	STATION	OFFSET	654.0105 CONCRETE BASES TYPE 5 EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5-ALUMINUM EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	659.1115 LUMINAIRES UTILITY LED A EACH	SPV.0060.04 LIGHTING ASSEMBLIES DECORATIVE EACH	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
0020	9240-08-70	LP-8	31+82.0	21.0' RT	1	1	1	1	1	-	117
		LP-9	MOUNTED TO BRIDGE		-	-	1	1	1	-	117
		LP-10	MOUNTED TO BRIDGE		-	-	1	1	1	-	117
		LP-11	35+30.0	26.5' LT	1	1	1	1	1	-	117
0030	9240-08-70	LP-1	20+59.9	22.5' LT	-	-	-	-	-	1	117
		LP-2	21+99.3	23.5' RT	-	-	-	-	-	1	117
		LP-3	23+71.7	31.5' LT	-	-	-	-	-	1	117
		LP-4	24+34.9	24.1' RT	-	-	-	-	-	1	180
		LP-5	26+25.2	23.7' LT	-	-	-	-	-	1	117
		LP-6	28+27.0	21.0' RT	-	-	-	-	-	1	180
		LP-7	29+49.8	23.3' LT	-	-	-	-	-	1	117
	9240-08-70 TOTALS:				2	2	4	4	4	7	1413
	PROJECT TOTALS:				2	2	4	4	4	7	1413

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CONDUIT ITEMS

CATEGORY	PROJECT	FROM	TO	* 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0325 CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH LF	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
0020	9240-08-70	EX-PB4	PB-1	280	-	1
		PB-1	LP-8	5	-	-
		PB-1	PB-2	-	52	-
		PB-2	WINGWALL	18	-	-
		WINGWALL	LP-11	12	-	-
		LP-11	PB-3	8	-	-
	9240-08-70 TOTALS:			323	52	1
	PROJECT TOTALS:			323	52	1

*ADDITIONAL QUANTITIES FOUND ON THE BRIDGE PLANS

ELECTRICAL WIRE LIGHTING ITEMS

CATEGORY	PROJECT	FROM	TO	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF
0020	9240-08-70	EX LCB1	LP-4	141	141
		LP-4	LP-6	1,206	1,206
		LP-6	EX-PB4	-	273
		EX-PB4	PB-1	-	936
		PB-1	LP-8	-	78
		PB-1	PB-2	252	-
		PB-2	LP-9	438	-
		LP-9	LP-10	309	-
		LP-10	LP-11	381	-
	9240-08-70 TOTALS:			2,727	2,634
	PROJECT TOTALS:			2,727	2,634

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

PULL BOXES STEEL 24x42-INCH

CATEGORY	PROJECT	PULL BOX NUMBER	STATION	OFFSET	653.0140 PULL BOXES STEEL 24X42-INCH EACH
0020	9240-08-70	PB-1	31+77.0	21.0' RT	1
		PB-2	31+95.0	27.0' LT	1
		PB-3	35+38.0	26.5' LT	1
	9240-08-70 TOTAL:				3
	PROJECT TOTAL:				3

REMOVAL OF CONDUIT AND WIRE

CATEGORY	PROJECT	DESCRIPTION	SPV.0105.02 REMOVAL OF CONDUIT AND WIRE LS
0020	9240-08-70	PROJECT 9240-08-70	1
	9240-08-70 TOTAL:		1
	PROJECT TOTAL:		1

SAWING ITEMS

CATEGORY	PROJECT	STA	-	STA	OFFSET	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
0010	9240-08-70	28+74	-	30+45	30' RT	PARKING LOT RR TO BUILDING	172	--
		28+85			LT	SIDEWALK	--	5
		30+18			LT	SIDEWALK	--	8
		30+90	-	31+15	LT	DRIVEWAY	--	28
		37+60			RT	MATCH EXISTING CURB	--	3
		37+60	-	37+75	RT	RAMP UPGRADE	15	--
		37+76			LT/RT	END PROJECT 9240-08-70	57	8
	9240-08-70 TOTALS:						244	52
0010	9240-08-71	21+82	-	21+82	LT/RT	BEGIN PROJECT 9240-08-71	37	--
		22+95	-	23+85	33' LT	3RD AVE	55	--
		23+40	-	23+40	35' RT	3RD AVE	48	--
		25+10	-	25+10	29' RT	DRIVEWAY	85	--
		25+95			LT	SIDEWALK RAMP UPGRADE AT RR	--	5
		26+80	-	26+80	43' LT	2ND AVE	67	--
		28+19			LT	SIDEWALK	--	5
		28+50			30' LT	ALLEY	22	--
		28+50			20' RT	ALLEY	16	--
		21+82	-	28+74	LT/RT	CURB RAMP IMPROVEMENTS	164	96
		37+70	-	38+20	34' RT	LAWRENCE AVE	42	--
		38+40	-	40+50	LT	3-FOOT SIDEWALK REPAIRS	--	550
		41+25	-	41+75	35' LT	CASE AVE	25	--
		41+28	-	41+75	42' RT	CASE AVE	32	--
		44+70	-	45+35	41' LT	SHERRY AVE	31	--
		45+75	-	45+35	34' RT	SHERRY AVE	31	--
		48+35	-	48+75	36' LT	AVERY AVE	28	--
		48+75	-	48+75	34' RT	AVERY AVE	33	--
		52+00	-	52+55	33' LT	PADDOCK AVE	30	--
		52+25	-	52+25	38' RT	PADDOCK AVE	30	--
		55+95	-	55+95	40' LT	SAUNDERS AVE LT	27	--
		55+95	-	55+95	40' RT	SAUNDERS AVE RT	27	--
		56+35	-	56+35	LT/RT	END PROJECT 9240-08-71	35	--
		37+76	-	56+35	LT/RT	CURB RAMP IMPROVEMENTS	245	175
		UNDISTRIBUTED				3-FOOT CURB REPAIRS	500	625
	9240-08-71 TOTALS:						1610	1456
	PROJECT TOTALS:						1854	1508

UTILITY LINE OPENING (ULO)

CATEGORY	PROJECT	STATION	LOCATION	SPV.0060.02 UTILITY LINE OPENING (ULO) EACH
0010	9240-08-70	31+35	FLAMBEAU RIVER PAPERS CONDUIT	1
		31+95	RENEWABLE WORLD ENERGIES CONDUIT	1
		31+95	XCEL ENERGIES GAS MAIN	1
		31+85	CITY OF PARK FALLS WATER MAIN	1
	9240-08-70 TOTALS:			4
	PROJECT TOTALS:			4

REMOVE FLASHING BEACON

CATEGORY	PROJECT	STATION	LOCATION	SPV.0060.05 REMOVE FLASHING BEACON EACH
0010	9240-08-70	28+96	RT, EXISTING CROSSWALK SIGN	1
		34+98	LT, EXISTING RAILROAD CROSSING SIGN	1
	9240-08-70 TOTAL:			2
	PROJECT TOTAL:			2

MOVING BIKE RACK

CATEGORY	PROJECT	STATION	LOCATION	SPV.0060.06 MOVING BIKE RACK EACH
0010	9240-08-70	31+40	RT	1
	9240-08-70 TOTAL:			1
	PROJECT TOTAL:			1

TREE TRIMMING

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	SPV.0060.07 TREE TRIMMING EACH
0010	9240-08-70	29+00	-	30+00	LT	5
	9240-08-70 TOTAL:					5
	PROJECT TOTAL:					5

PEDESTRIAN RAILING ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A SY	SPV.0090.02 RAILING PEDESTRIAN STEEL LF	SPV.0165.02 COARSE AGGREGATE STONE MULCH SF
0010	9240-08-70	32+05	-	32+13	LT	8	11	70
	9240-08-70 TOTAL:					8	11	70
	PROJECT TOTAL:					8	11	70

REMOVE RAILING

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	SPV.0090.05 REMOVE RAILING LF
0010	9240-08-70	30+45	-	30+72	RT	40
	9240-08-70 TOTAL:					40
	PROJECT TOTAL:					40

TRAIL SURFACING

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	SPV.0090.03 PREPARING TRAIL FOR SURFACING LF	SPV.0180.01 TRAIL SURFACING CY
0010	9240-08-70	30+00	-	32+00	TEMPORARY STH 182 PEDESTRIAN PATH	--	50
		300+00	-	314+09	TEMPORARY PEDESTRIAN ACCESS	450	1050
	9240-08-70 TOTAL:					450	1100
	PROJECT TOTAL:					450	1100

RAILING R-50-3 ITEMS

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	SPV.0105.01 REMOVE AND REPAINT RAILING R-50-3 LS
0010	9240-08-71	38+39	-	40+49	LT	1
	9240-08-71 TOTAL:					1
	PROJECT TOTAL:					1

MOVE PRECAST CONCRETE BARRIER

CATEGORY	PROJECT	STATION	-	STATION	LOCATION	SPV.0090.04 MOVE PRECAST CONCRETE BARRIER LF
0010	9240-08-70	28+75	-	29+45	RT	70
		29+95	-	30+45	RT	50
	9240-08-70 TOTAL:					120
	PROJECT TOTAL:					120

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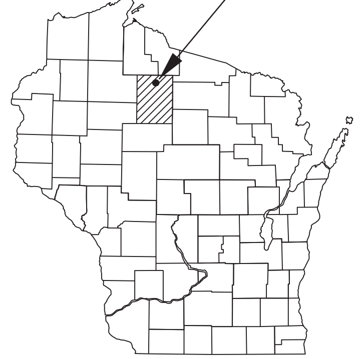
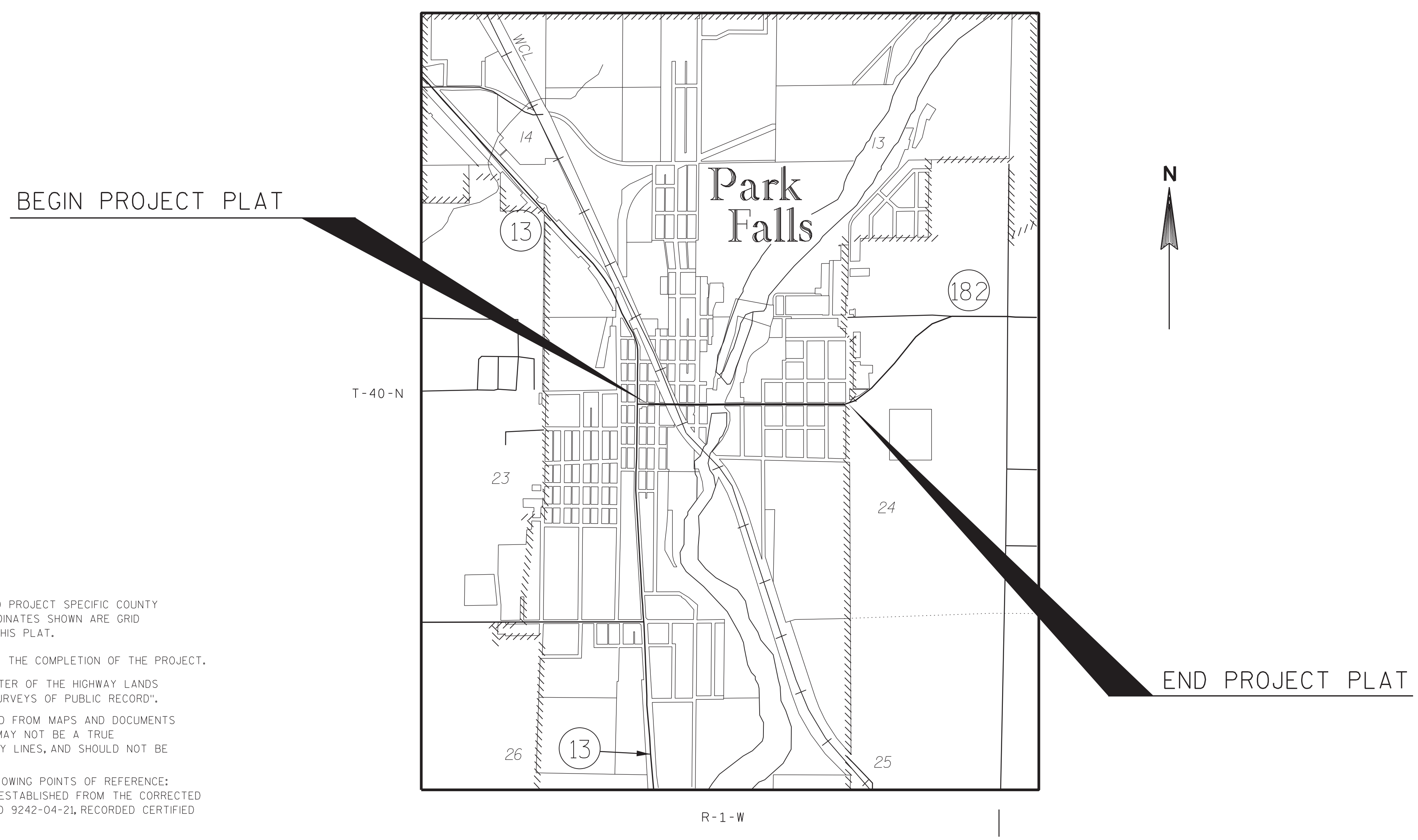
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
9240-08-20
PARK FALLS - SPRINGSTEAD
N. FORK FLAMBEAU RIVER BRIDGE B-50-001
STH 182
PRICE COUNTY

4

PROJECT LOCATION





LAYOUT
SCALE 0 1/4 MI.

NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO PROJECT SPECIFIC COUNTY COORDINATES, PRICE COUNTY ZONE, NAD83 (1991) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 183 AND FOR SIDEROADS IS ESTABLISHED FROM THE CORRECTED PARK FALLS LUMBER COMPANY PLAT OF PARK FALLS, PROJECT PLAT ID 9242-04-21, RECORDED CERTIFIED SURVEY MAPS AND IRONS LOCATED IN THE FIELD.

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

THE REFERENCE LINE SHOWN IS FROM THE CONSTRUCTION PLANS AND MAY NOT REPRESENT THE ACTUAL CENTERLINE OF THE RIGHT-OF-WAY.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE REFERENCE LINE.

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

EASEMENT	EASE.
HIGHWAY EASEMENT	H.E.
LAND CONTRACT	LC
MONUMENT	MON.
PAGE	P.
PERMANENT LIMITED EASEMENT	PLE
PROPERTY LINE	P.L.
RECORDED AS	(100')

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	I.P. (1" UNLESS NOTED)
R/W MONUMENT	(NO MON.)
R/W MONUMENT	(SET)
R/W STANDARD	(SET)
SIGN	SIGN
SECTION CORNER MONUMENT	
SECTION CORNER SYMBOL	17 N 26 26 35 35 18 E R T
FEE (HATCH VARIES)	
TEMPORARY LIMITED EASEMENT	
PERMANENT LIMITED EASEMENT	
R/W BOUNDARY POINT	205
PARCEL NUMBER	102
UTILITY PARCEL NUMBER	92
SIGN NUMBER (OFF PREMISE)	21-1
BUILDING	

PROPOSED R/W LINE
EXISTING H.E. LINE
PROPERTY LINE
LOT & TIE LINES
SLOPE INTERCEPTS
CORPORATE LIMITS
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
NO ACCESS (BY ACQUISTION)
NO ACCESS (BY STATUTORY AUTHORITY)
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
EXISTING CENTERLINE
PROPOSED REFERENCE LINE
PARALLEL OFFSET

CONVENTIONAL UTILITY SYMBOLS

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

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 9240-08-20 - 4.01
SHEET 2 OF 2

TRANSPORTATION PROJECT PLAT NO: 9240-08-20 - 4.01

THAT PART OF LOTS 11 & 12 IN BLOCK 19 AND VACATED FIRST AVENUE SOUTH IN THE PLAT OF PARK FALLS LOCATED IN GOVERNMENT LOT #1 OF SECTION 23, T 40 N, R 1 W, CITY OF PARK FALLS, PRICE COUNTY, WISCONSIN.

RELOCATION ORDER STH 182, PRICE COUNTY

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09 AND 84.03, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF THIS DOCUMENT, FOR ADDITIONAL INFORMATION.

373468 25th
REGISTER OF DEEDS OFFICE
PRICE COUNTY, WIS.
Received for Record
DEC 23 2015
AT 1 O'CLOCK P M DULY RECORDED
REGISTER OF DEEDS
Wood Cabinet #50

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 9240-08-20 - 4.01
AMENDMENT NO.:

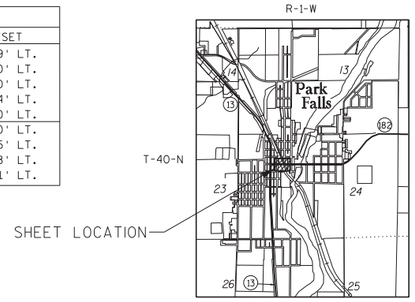
SCHEDULE OF LANDS AND INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LANDS TO THE DEPARTMENT.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W REQUIRED (SF) NEW	EXISTING	TOTAL	TLE (SF)
1	FLAMBEAU RIVER PAPERS, LLC	FEE & TLE	85	-	85	800

CONTROL POINT TABLE					
POINT	DESCRIPTION	STATION	OFFSET	Y	X
CP 54	3/4" I.R.	23+80.65	33.36' RT.	502,667.66	757,822.94
CP 108	PK NAIL	27+58.57	15.48' LT.	502,712.66	758,201.34

TLE POINT TABLE		
POINT	STATION	OFFSET
T01	28+16.99	31.39' LT.
T02	28+31.98	37.00' LT.
T03	28+39.98	37.00' LT.
T04	28+60.05	37.44' LT.
T05	29+00.05	37.00' LT.
T06	29+00.05	35.00' LT.
T07	30+05.05	35.45' LT.
T08	30+05.05	41.28' LT.
T09	30+51.03	41.31' LT.



LOCATION SKETCH
NOT TO SCALE

ALIGNMENT

PI = 23+39.31 Y = 502,701.43 X = 757,781.95
PI = 26+80.75 Y = 502,697.97 X = 758,123.37
PI = 28+44.63 Y = 502,696.31 X = 758,287.24

EXISTING HIGHWAY RIGHT OF WAY BASED ON THE CORRECTED PLAT OF PARK FALLS LUMBER COMPANY'S RECORDED PLAT OF PARK FALLS, DOT R/W PLAT NO. 9242-04-21, CSMS AND IRONS LOCATED IN THE FIELD.

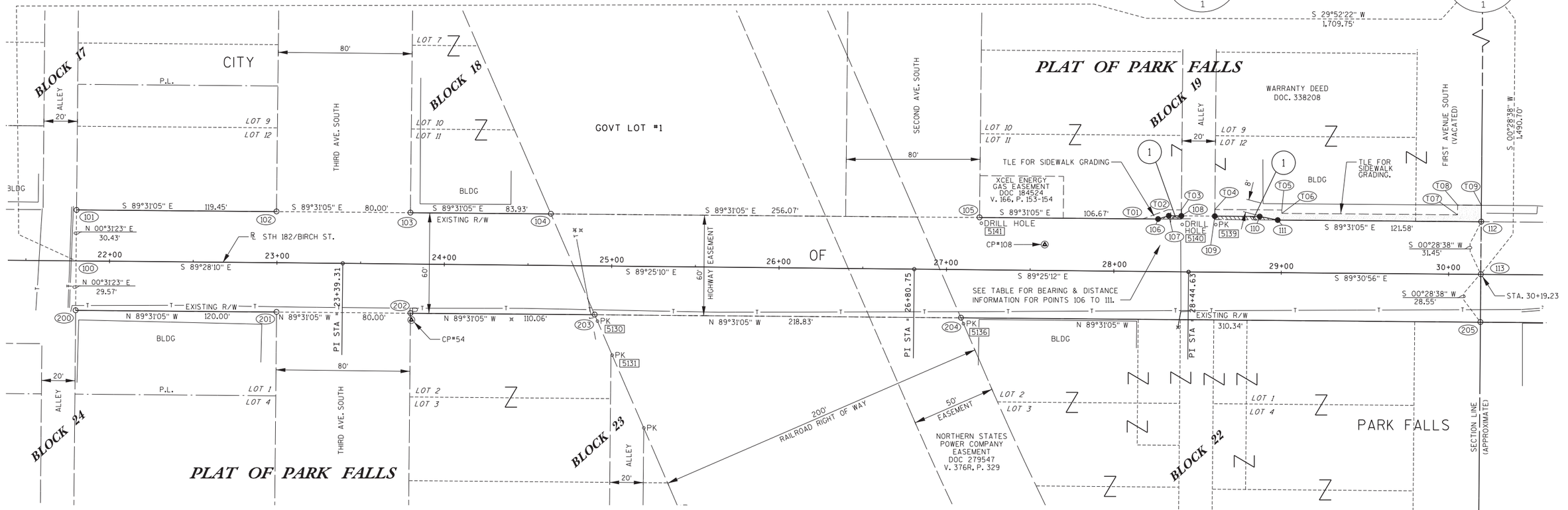
3" I.P. (FOUND) Y = 504,180.07 X = 755,862.68

3" CAPPED MON. (FOUND) Y = 504,185.49 X = 758,474.25

T 40 N R 1 W — 14 23 — 14 13 23 24

S 89°52'52" W 2,611.58'

S 29°52'22" W 1,709.75'



* - TYPE 2 MONUMENT TO BE SET.

R/W POINT TABLE				
POINT	STATION	OFFSET	Y	X
100	21+80.02	0.00' CL	502,702.90	757,622.66
101	21+80.02	30.43' LT.	502,733.34	757,622.94
102	22+99.47	30.54' LT.	502,732.33	757,742.39
103	23+79.44	30.64' LT.	502,731.66	757,822.38
104	24+63.37	30.78' LT.	502,730.95	757,906.31
105	27+19.44	31.22' LT.	502,728.80	758,162.37
* 106	28+26.11	31.41' LT.	502,727.90	758,269.04
* 107	28+32.48	33.42' LT.	502,729.85	758,275.43
* 108	28+39.99	33.43' LT.	502,729.79	758,282.94
* 109	28+60.05	33.44' LT.	502,729.62	758,302.94
* 110	28+86.87	33.44' LT.	502,729.39	758,329.75
* 111	28+97.65	31.44' LT.	502,727.30	758,340.52
112	30+19.23	31.45' LT.	502,726.28	758,462.10
113	30+19.23	0.00' CL	502,694.83	758,461.83

R/W POINT TABLE				
POINT	STATION	OFFSET	Y	X
200	21+80.03	29.57' RT.	502,673.34	757,622.39
201	23+00.03	29.46' RT.	502,673.33	757,742.39
202	23+80.05	29.36' RT.	502,671.66	757,822.39
203	24+90.11	29.17' RT.	502,670.73	757,932.45
204	27+08.95	28.79' RT.	502,668.89	758,151.27
205	30+19.24	28.55' RT.	502,666.28	758,461.60

R/W POINT BEARING & DISTANCE TABLE		
PT. - PT.	BEARING	DISTANCE
106-107	N 73°03'23" E	6.68'
107-108	S 89°31'05" E	7.51'
108-109	S 89°31'05" E	20.00'
109-110	S 89°31'05" E	26.82'
110-111	S 79°00'33" E	10.97'

EXISTING MONUMENT TABLE			
POINT	TYPE	Y	X
5130	PK NAIL	502,666.94	757,934.10
5131	PK NAIL	502,646.63	757,942.91
5136	PK NAIL	502,665.39	758,152.76
5139	PK NAIL	502,724.50	758,303.46
5140	DRILL HOLE	502,724.65	758,283.46
5141	DRILL HOLE	502,725.40	758,163.48

GN

0 30 60
SCALE, FEET

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1835 N Stevens St. Rhinelander, WI 54501
715-362-3244 1-800-844-7854 Fax: 715-362-4116

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

WISCONSIN JEFFREY L. DEMUTH S-2656 RHINELANDER, WI LAND SURVEYOR

(SIGNATURE) DATE 12/03/15
JEFFREY L. DEMUTH P.L.S. NUMBER S-2656

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHCENTRAL REGION - RHINELANDER

(SIGNATURE) Brent L Stella DATE 12-14-15
(PRINTED NAME) Brent L Stella
TITLE: Real Estate Supervisor

COMPUTED POSITION (FALLS IN RIVER)
Y = 501,731.68
X = 758,453.81

T 40 N R 1 W — 23 24

FILE NAME : P:\90s\93\00093125\Baraboo\caddWDOT\Planshts\Plat with changes USE\TPP 4-01.dgn
PLOT DATE : 12/9/2015 PLOT BY : bhalley PLOT NAME : PLOT SCALE : 1:30
APPRAISAL PLAT DATE : 11/16/2015

9240-08-20 4.01

TPP 4-01.dgn 12/9/2015 2:54:50 PM bhalley

SCHEDULE OF LANDS AND INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LANDS TO THE DEPARTMENT.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W REQUIRED (SF)			TLE (SF)
			NEW	EXISTING	TOTAL	
1	FLAMBEAU RIVER PAPERS, LLC	FEE & TLE	844	-	844	948

CONTROL POINT TABLE					
POINT	DESCRIPTION	STATION	OFFSET	Y	X
CP 57	3/4" I.R.	31+90.01	27.63' LT.	502,721.02	758,632.84
CP 60	60 D NAIL	35+51.92	29.38' LT.	502,722.38	758,993.56
CP 56	3/4" I.R.	38+25.60	21.18' RT.	502,678.08	759,268.11

ALIGNMENT

PI = 32+00.00 Y = 502,693.31 X = 758,642.60

PI = 35+50.00 Y = 502,692.95 X = 758,992.59

PI = 37+50.00 Y = 502,699.45 X = 759,192.49

PI = 37+85.08 (BACK) PI = 37+82.01 (AHEAD) Y = 502,699.36 X = 759,227.57

TRANSPORTATION PROJECT PLAT NO: 9240-08-20 - 4.02

THAT PART OF LOT 11, BLOCK 20, THE PLAT OF PARK FALLS, PART OF VACATED FIRST AVENUE SOUTH AND PART OF BLOCK 24, THE PLAT OF RIVER VIEW ADDITION TO VILLAGE OF PARK FALLS, LOCATED IN GOVERNMENT LOTS 2 & 4 IN SECTION 24, T 40 N, R 1 W, CITY OF PARK FALLS, PRICE COUNTY, WIS.

RELOCATION ORDER STH 182, PRICE COUNTY

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.03 AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF TPP 9240-08-20 - 4.01. IN WOOD CABINET #50, AS DOCUMENT NO. 373468 FOR ADDITIONAL INFORMATION.

373649

REGISTER OF DEEDS OFFICE
PRICE COUNTY, WIS.
Received for Record
JAN 19 2016
11 A
AT O'CLOCK M. DULY RECORDED
REGISTER OF DEEDS
Wood Cabinet #11

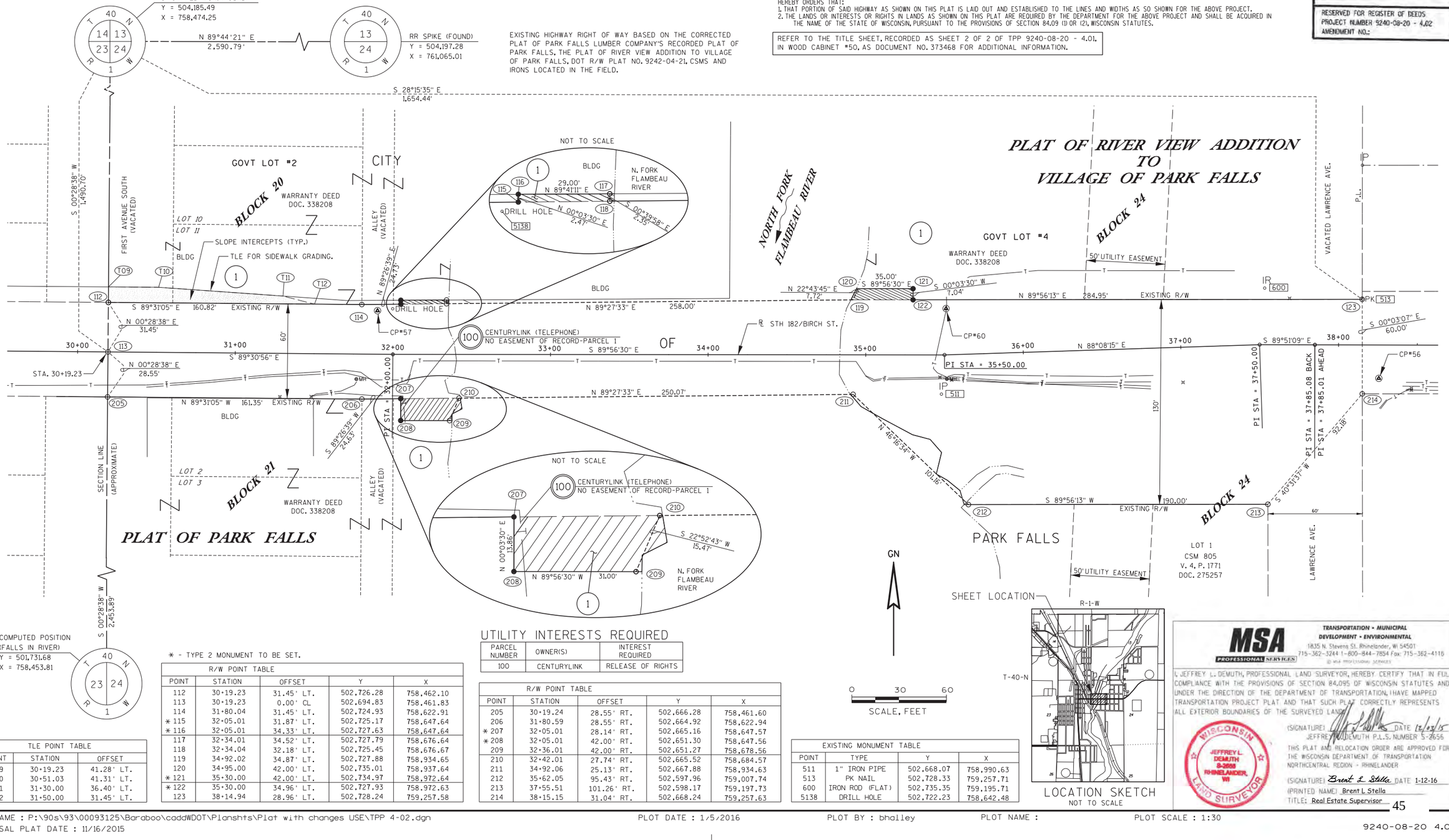
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 9240-08-20 - 4.02
AMENDMENT NO.:

3" CAPPED MON. (FOUND)
Y = 504,185.49
X = 758,474.25

N 89°44'21" E 2,590.79'

RR SPIKE (FOUND)
Y = 504,197.28
X = 761,065.01

EXISTING HIGHWAY RIGHT OF WAY BASED ON THE CORRECTED PLAT OF PARK FALLS LUMBER COMPANY'S RECORDED PLAT OF PARK FALLS, THE PLAT OF RIVER VIEW ADDITION TO VILLAGE OF PARK FALLS, DOT R/W PLAT NO. 9242-04-21, CSMS AND IRONS LOCATED IN THE FIELD.



COMPUTED POSITION (FALLS IN RIVER)
Y = 501,731.68
X = 758,453.81

* - TYPE 2 MONUMENT TO BE SET.

R/W POINT TABLE				
POINT	STATION	OFFSET	Y	X
112	30+19.23	31.45' LT.	502,726.28	758,462.10
113	30+19.23	0.00' CL	502,694.83	758,461.83
114	31+80.04	31.45' LT.	502,724.93	758,622.91
* 115	32+05.01	31.87' LT.	502,725.17	758,647.64
* 116	32+05.01	34.33' LT.	502,727.63	758,647.64
117	32+34.01	34.52' LT.	502,727.79	758,676.64
118	32+34.04	32.18' LT.	502,725.45	758,676.67
119	34+92.02	34.87' LT.	502,727.88	758,934.65
120	34+95.00	42.00' LT.	502,735.01	758,937.64
* 121	35+30.00	42.00' LT.	502,734.97	758,972.64
* 122	35+30.00	34.96' LT.	502,727.93	758,972.63
123	38+14.94	28.96' LT.	502,728.24	759,257.58

TLE POINT TABLE		
POINT	STATION	OFFSET
T09	30+19.23	41.28' LT.
T10	30+51.03	41.31' LT.
T11	31+30.00	36.40' LT.
T12	31+50.00	31.45' LT.

UTILITY INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED
100	CENTURYLINK	RELEASE OF RIGHTS

R/W POINT TABLE				
POINT	STATION	OFFSET	Y	X
205	30+19.24	28.55' RT.	502,666.28	758,461.60
206	31+80.59	28.55' RT.	502,664.92	758,622.94
* 207	32+05.01	28.14' RT.	502,665.16	758,647.57
* 208	32+05.01	42.00' RT.	502,651.30	758,647.56
209	32+36.01	42.00' RT.	502,651.27	758,678.56
210	32+42.01	27.74' RT.	502,665.52	758,684.57
211	34+92.06	25.13' RT.	502,667.88	758,934.63
212	35+62.05	95.43' RT.	502,597.96	759,007.74
213	37+55.51	101.26' RT.	502,598.17	759,197.73
214	38+15.15	31.04' RT.	502,668.24	759,257.63

EXISTING MONUMENT TABLE			
POINT	TYPE	Y	X
511	1" IRON PIPE	502,668.07	758,990.63
513	PK NAIL	502,728.33	759,257.71
600	IRON ROD (FLAT)	502,735.35	759,195.71
5138	DRILL HOLE	502,722.23	758,642.48

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1835 N. Stevens St. Rhinelander, WI 54501
715-362-3244 1-800-844-7854 Fax: 715-362-4116

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

(SIGNATURE) DATE 12/03/15
JEFFREY L. DEMUTH P.L.S. NUMBER S-2656

JEFFREY L. DEMUTH S-2656 RHINELANDER, WI LAND SURVEYOR

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHCENTRAL REGION - RHINELANDER

(SIGNATURE) Brent L Stella DATE 1-12-16
(PRINTED NAME) Brent L Stella
TITLE: Real Estate Supervisor

FILE NAME : P:\90s\93\00093125\Baraboo\caddWDOT\Plansht s\Plat with changes USE\TPP 4-02.dgn
PLOT DATE : 1/5/2016 PLOT BY : bhalley PLOT NAME : PLOT SCALE : 1:30
APPRAISAL PLAT DATE : 11/16/2015

9240-08-20 4.02

TPP 4-02.dgn 1/5/2016 1:33:33 PM bhalley

EXISTING HIGHWAY RIGHT OF WAY BASED ON THE PLAT OF RIVER VIEW ADDITION TO VILLAGE OF PARK FALLS, DOT R/W PLAT NO. 9242-04-21, CSMS AND IRONS LOCATED IN THE FIELD.

TRANSPORTATION PROJECT PLAT NO: 9240-08-20 - 4.03

THAT PART OF GOVERNMENT LOT #4 AND SE 1/4 - NW 1/4, SECTION 24, T 40 N, R 1 W, CITY OF PARK FALLS, PRICE COUNTY, WISCONSIN.

STH 182, PRICE COUNTY

THE STATE OF WISCONSIN HAS DEEMED IT NECESSARY TO MONUMENT RIGHT-OF-WAY INTERESTS PREVIOUSLY ACQUIRED UNDER SECTIONS 82.01, 82.31 (1), 82.31 (2) AND 84.09 OF THE WISCONSIN STATE STATUTES AND DOES HEREBY CERTIFY THE DEPARTMENT OF TRANSPORTATION HAS SURVEYED THE HIGHWAY RIGHT-OF-WAY; THAT THIS PLAT IS A TRUE AND CORRECT REPRESENTATION OF THE EXTERIOR BOUNDARIES OF THE LAND SURVEYED AND SHOWS ACCURATE MEASUREMENTS THEREOF.

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF TPP 9240-08-20 - 4.01, IN WOOD CABINET #50, AS DOCUMENT NO. 373468 FOR ADDITIONAL INFORMATION.

373712

REGISTER OF DEEDS OFFICE
PRICE COUNTY, WIS.
Received for Record
FEB 01 2016
8 A
AT O'CLOCK M. DULY RECORDED
REGISTER OF DEEDS
Wood Cabinet #13

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 9240-08-20 - 4.03
AMENDMENT NO.:

3" CAPPED MON. (FOUND)
Y = 504,185.49
X = 758,474.25

RR SPIKE (FOUND)
Y = 504,197.28
X = 761,065.01

N 89°44'21" E
2,590.79'

ALIGNMENT

PI = 37+85.08 (BACK)
PI = 37+82.01 (AHEAD)
Y = 502,699.36
X = 759,227.57

PI = 45+32.15
Y = 502,697.43
X = 759,974.71

S 37°59'28" W
1,863.09'

S 28°15'35" E
1,654.44'

PLAT OF RIVER VIEW ADDITION TO VILLAGE OF PARK FALLS

CITY

GOVT LOT #4

SE-NW

PARK FALLS

BLOCK 21

BLOCK 22

BLOCK 18

BLOCK 17

LOT 5 | LOT 4 | LOT 1 | LOT 2 | LOT 8

P.L.

BLDG

HSE

GARAGE

CSM 1316
V. 7, P. 155
DOC. 366942

LAWRENCE AVE.

CASE AVE.

SHERRY AVE.

60'

(123) PK 513 N 00°05'50" E 5.00'

(124) N 89°56'13" E 165.04' EXISTING R/W

(125) S 00°03'47" E 2.00' (126)

N 89°56'13" E 134.50' EXISTING R/W (127)

S 87°12'01" E 60.07' (128)

N 89°56'13" E 301.08' EXISTING R/W (129)

S 02°34'33" W 60.06'

N 00°03'07" W 60.00'

38+00 | 39+00 | 40+00 | 41+00 | 42+00 | 43+00 | 44+00 | 45+00 | 46+00

65' | 63' | 60'

PI STA = 37+50.00

PI STA = 37+85.08 BACK
PI STA = 37+85.01 AHEAD

PI STA = 45+32.15

CP#56

(214) S 89°56'13" W 298.99' EXISTING R/W

(215) S 89°56'13" W 60.00' (216)

CP#604

S 89°56'13" W 298.88' EXISTING R/W (217)

CP#69

℄ STH 182/BIRCH ST.

S 89°51'07" E

NO RIGHT OF WAY MONUMENTS ARE TO BE SET.

R/W POINT TABLE

POINT	STATION	OFFSET	Y	X
123	38+14.94	28.96' LT.	502,728.24	759,257.58
124	38+14.94	33.96' LT.	502,733.24	759,257.59
125	39+79.97	34.57' LT.	502,733.42	759,422.62
126	39+79.98	32.57' LT.	502,731.42	759,422.63
127	41+14.48	33.06' LT.	502,731.57	759,557.13
128	14+74.48	30.28' LT.	502,728.64	759,617.12
129	44.75.57	31.39' LT.	502,728.97	759,918.21
214	38+15.15	31.04' RT.	502,668.24	759,257.63
215	41+14.14	29.94' RT.	502,668.57	759,556.62
216	41+74.14	29.72' RT.	502,668.64	759,616.62
217	44.73.02	28.62' RT.	502,668.97	759,915.51

EXISTING MONUMENT TABLE

POINT	TYPE	Y	X
513	PK NAIL	502,728.33	759,257.71

CONTROL POINT TABLE

POINT	DESCRIPTION	STATION	OFFSET	Y	X
CP 56	3/4" I.R.	38+25.60	21.18' RT.	502,678.08	759,268.11
CP 604	1" I.P.	41+14.15	30.66' RT.	502,667.85	759,556.63
CP 69	MAG NAIL	44+89.45	89.32' RT.	502,608.22	759,931.78

GN

0 30 60
SCALE, FEET

SHEET LOCATION

R-1-W

T-40-N

Park Falls

LOCATION SKETCH
NOT TO SCALE

MSA PROFESSIONAL SERVICES

TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1835 N. Stevens St. Rhinelander, WI 54501
715-362-3244 1-800-844-7854 Fax: 715-362-4116
© MSA PROFESSIONAL SERVICES

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

(SIGNATURE) _____ DATE 12/03/15
JEFFREY L. DEMUTH P.L.S. NUMBER S-2656

WISCONSIN JEFFREY L. DEMUTH S-2656 RHINELANDER, WI LAND SURVEYOR

THIS PLAT IS APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHCENTRAL REGION - RHINELANDER

(SIGNATURE) Brent L Stella DATE 1-21-16
(PRINTED NAME) Brent L Stella
TITLE: Real Estate Supervisor

FILE NAME : P:\90s\93\00093125\Baraboo\caddWDOT\Planshts\Plat with changes USE\TPP 4-03.dgn
PLOT DATE : 1/19/2016
PLOT BY : bhalley
PLOT NAME :
PLOT SCALE : 1:30
APPRAISAL PLAT DATE : 11/16/2015

9240-08-20 - 4.03

TPP 4-03.dgn 1/19/2016 7:45:01 AM bhalley

TRANSPORTATION PROJECT PLAT NO: 9240-08-20 - 4.04

THAT PART OF THE SE 1/4 - NW 1/4 SECTION 24, T 40 N, R 1 W, CITY OF PARK FALLS, PRICE COUNTY, WISCONSIN.

STH 182, PRICE COUNTY

THE STATE OF WISCONSIN HAS DEEMED IT NECESSARY TO MONUMENT RIGHT-OF-WAY INTERESTS PREVIOUSLY ACQUIRED UNDER SECTIONS 82.01, 82.31 (1), 82.31 (2) AND 84.09 OF THE WISCONSIN STATE STATUTES AND DOES HEREBY CERTIFY THE DEPARTMENT OF TRANSPORTATION HAS SURVEYED THE HIGHWAY RIGHT-OF-WAY; THAT THIS PLAT IS A TRUE AND CORRECT REPRESENTATION OF THE EXTERIOR BOUNDARIES OF THE LAND SURVEYED AND SHOWS ACCURATE MEASUREMENTS THEREOF.

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF TPP 9240-08-20 - 4.01, IN WOOD CABINET #50, AS DOCUMENT NO. 373468 FOR ADDITIONAL INFORMATION.

3"Φ CAPPED MON. (FOUND)
Y = 504,185.49
X = 758,474.25

RR SPIKE (FOUND)
Y = 504,197.28
X = 761,065.01

N 89°44'21" E
2,590.79'

ALIGNMENT

PI = 45+32.15
Y = 502,697.43
X = 759,974.71

PI = 52+25.04
Y = 502,698.65
X = 760,667.60

EXISTING HIGHWAY RIGHT OF WAY BASED ON THE PLAT OF RIVER VIEW ADDITION TO VILLAGE OF PARK FALLS, DOT R/W PLAT NO. 9242-04-21, CSMS AND IRONS LOCATED IN THE FIELD.

S 16°13'55" W
1,528.45'

S 36°30'32" W
1,826.72'

PLAT OF RIVER VIEW ADDITION TO VILLAGE OF PARK FALLS

CITY

SE-NW

BLOCK 13

BLOCK 8

LOT 5 | LOT 4 | LOT 5 | LOT 4

P.L.

HSE

130 — 131 — 520 — 132 — 133

N 89°56'13" E 297.43' — N 89°56'13" E 60.00' — EXISTING R/W — N 89°56'13" E 302.13'

N 02°34'37" E 60.06'

CP#66

R STH 182/BIRCH ST.

S 00°04'31" W 60.00'

CP#67

44+00 | 45+00 | 46+00 | 47+00 | 48+00 | 49+00 | 50+00 | 51+00 | 52+00

N 89°53'57" E

60'

OF

PI STA = 45+32.15

PI STA = 52+25.04

218 — 219 — 220 — 221

EXISTING R/W

S 89°56'13" W 301.28' — S 89°56'13" W 60.00' — S 89°56'13" W 300.90'

60'

CP#69

SHERRY AVE.

AVERY AVE.

PADDOCK AVE.

LOT 8 | LOT 1 | LOT 8 | LOT 1

BLOCK 14

BLOCK 7

PARK FALLS

NO RIGHT OF WAY MONUMENTS ARE TO BE SET.

R/W POINT TABLE

POINT	STATION	OFFSET	Y	X
130	45+35.71	31.60' LT.	502,729.03	757,978.21
131	48+33.13	31.40' LT.	502,729.36	760,275.64
132	48+93.13	31.36' LT.	502,729.43	760,335.64
133	51+95.26	31.16' LT.	502,729.76	760,637.77
218	45+32.90	28.40' RT.	502,669.03	759,975.51
219	48+34.18	28.60' RT.	502,669.36	760,276.79
220	48+94.18	28.64' RT.	502,669.43	760,336.79
221	51+95.08	28.84' RT.	502,669.76	760,637.69

CONTROL POINT TABLE

POINT	DESCRIPTION	STATION	OFFSET	Y	X
CP 69	MAG NAIL	44+89.45	89.32' RT.	502,608.22	759,931.78
CP 66	60D NAIL	46+52.69	29.65' LT.	502,727.29	760,095.20
CP 67	60D NAIL	52+85.11	26.25' LT.	502,724.92	760,727.66

EXISTING MONUMENT TABLE

POINT	TYPE	Y	X
520	1.5" IRON PIPE (LYING FLAT)	502,730.72	760,276.42

GN

0 30 60

SCALE, FEET

SHEET LOCATION

R-1-W

T-40-N

Park Falls

LOCATION SKETCH
NOT TO SCALE

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL
DEVELOPMENT • ENVIRONMENTAL
1835 N. Stevens St. Rhinelander, WI 54501
715-362-3244 1-800-844-7854 Fax: 715-362-4116

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

(SIGNATURE) _____ DATE 12/03/15
JEFFREY L. DEMUTH P.L.S. NUMBER S-2656

WISCONSIN JEFFREY L. DEMUTH S-2656 RHINELANDER, WI LAND SURVEYOR

THIS PLAT IS APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHCENTRAL REGION - RHINELANDER

(SIGNATURE) Brent L Stella DATE 1-21-16
(PRINTED NAME) Brent L Stella
TITLE: Real Estate Supervisor

FILE NAME : P:\90s\93\00093125\Baraboo\caddWDOT\Planshts\Plat with changes USE\TPP 4-04.dgn
APPRAISAL PLAT DATE : 11/16/2015
PLOT DATE : 1/19/2016
PLOT BY : bhalley
PLOT NAME :
PLOT SCALE : 1:30

9240-08-20 4.04

TPP 4-04.dgn 1/19/2016 7:46:28 AM bhalley

TRANSPORTATION PROJECT PLAT NO: 9240-08-20 - 4.05

THAT PART OF THE SE 1/4 - NW 1/4, SECTION 24, T 40 N, R 1 W, CITY OF PARK FALLS, PRICE COUNTY, WISCONSIN.

STH 182, PRICE COUNTY

THE STATE OF WISCONSIN HAS DEEMED IT NECESSARY TO MONUMENT RIGHT-OF-WAY INTERESTS PREVIOUSLY ACQUIRED UNDER SECTIONS 82.01, 82.31 (1), 82.31 (2) AND 84.09 OF THE WISCONSIN STATE STATUTES AND DOES HEREBY CERTIFY THE DEPARTMENT OF TRANSPORTATION HAS SURVEYED THE HIGHWAY RIGHT-OF-WAY; THAT THIS PLAT IS A TRUE AND ACCURATE REPRESENTATION OF THE EXTERIOR BOUNDARIES OF THE LAND SURVEYED AND SHOWS ACCURATE MEASUREMENTS THEREOF.

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF TPP 9240-08-20 - 4.01, IN WOOD CABINET #50, AS DOCUMENT NO. 373468 FOR ADDITIONAL INFORMATION.

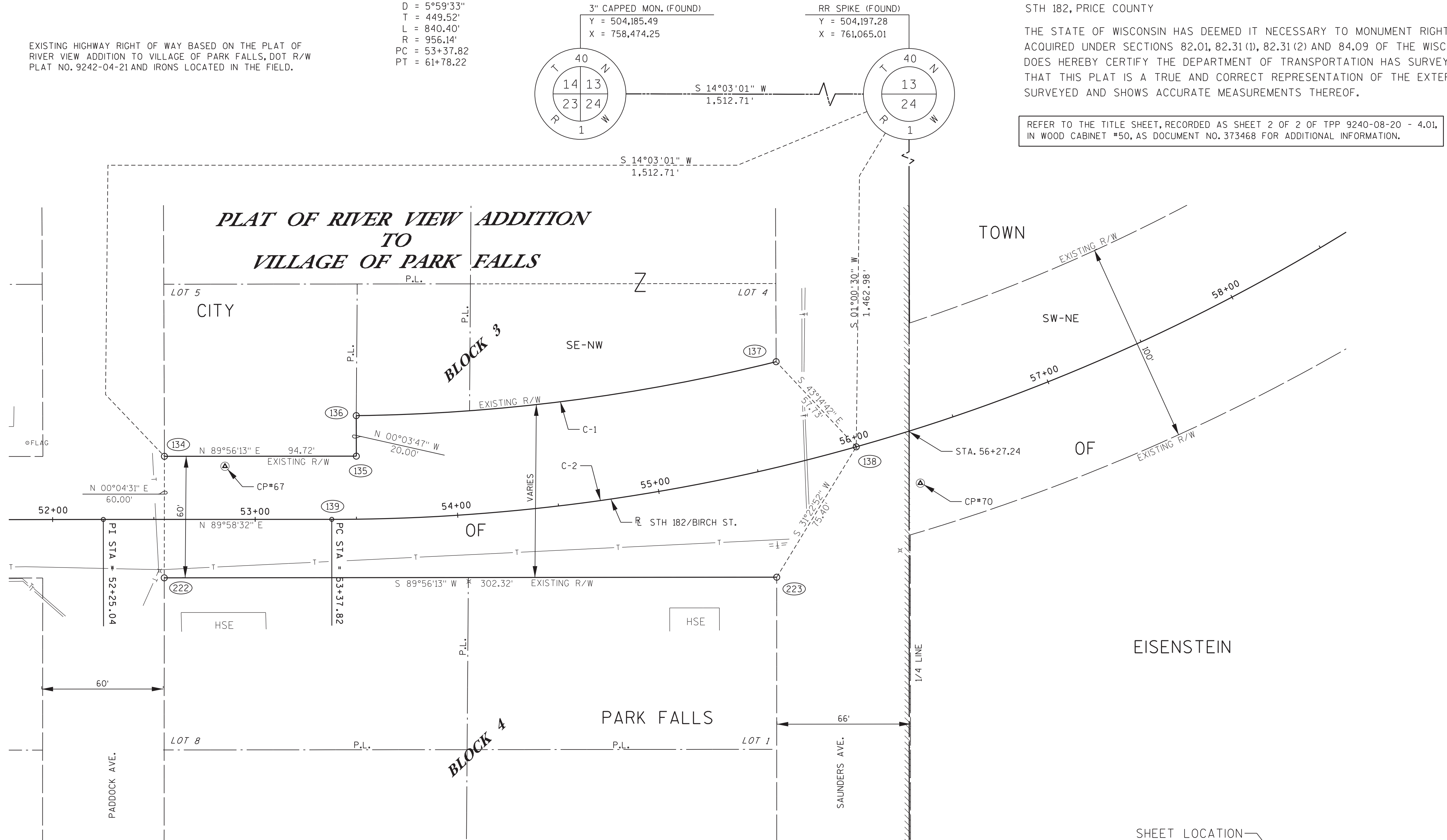
373714 25⁰⁰
REGISTER OF DEEDS OFFICE
PRICE COUNTY, WIS.
Received for Record
FEB 0 1 2016
AT 8 O'CLOCK A M. DULY RECORDED
REGISTER OF DEEDS
Wood Cabinet #16
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 9240-08-20 - 4.05
AMENDMENT NO.:

CONSTRUCTION ℄ ALIGNMENT DATA

PI = 52+25.04
Y = 502,698.65
X = 760,667.60

PI = 57+87.34
Y = 502,698.89
X = 761,229.90
Δ = 50°21'38"
D = 5°59'33"
T = 449.52'
L = 840.40'
R = 956.14'
PC = 53+37.82
PT = 61+78.22

EXISTING HIGHWAY RIGHT OF WAY BASED ON THE PLAT OF RIVER VIEW ADDITION TO VILLAGE OF PARK FALLS, DOT R/W PLAT NO. 9242-04-21 AND IRONS LOCATED IN THE FIELD.



NO RIGHT OF WAY MONUMENTS ARE TO BE SET.

R/W POINT TABLE

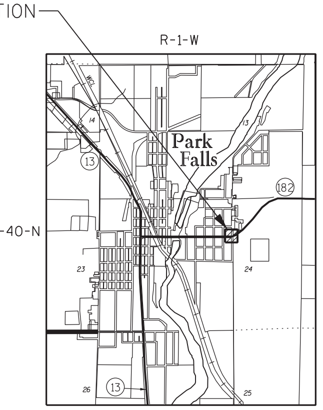
POINT	STATION	OFFSET	Y	X
134	52+55.22	29.17' LT.	502,727.83	760,697.77
135	53+50.35	31.15' LT.	502,729.93	760,792.49
136	53+50.62	51.15' LT.	502,749.93	760,729.47
137	55+71.84	50.81' LT.	502,776.58	760,999.72
138	56+00.00	0.00' CL	502,702.90	761,039.27
139	53+37.82	0.00' CL	502,698.70	760,780.38
222	52+55.12	30.83' RT.	502,667.83	760,697.69
223	55+47.62	52.82' RT.	502,670.16	761,000.01

CURVE DATA

CURVE	LENGTH	CHORD LENGTH	CHORD BEARING	RADIUS
C-1 (136 - 137)	209.42'	208.96'	N 82°40'26" E	904.93'
C-2 (139 - 138)	262.18'	261.36'	N 82°07'13" E	956.14'

CONTROL POINT TABLE

POINT	DESCRIPTION	STATION	OFFSET	Y	X
CP 67	60D NAIL	52+85.11	26.25' LT.	502,724.92	760,727.66
CP 70	60D NAIL	56+24.92	26.17' RT.	502,716.60	761,070.92



LOCATION SKETCH
NOT TO SCALE

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1835 N. Stevens St. Rhinelander, WI 54501
715-362-3244 1-800-844-7854 Fax: 715-362-4116

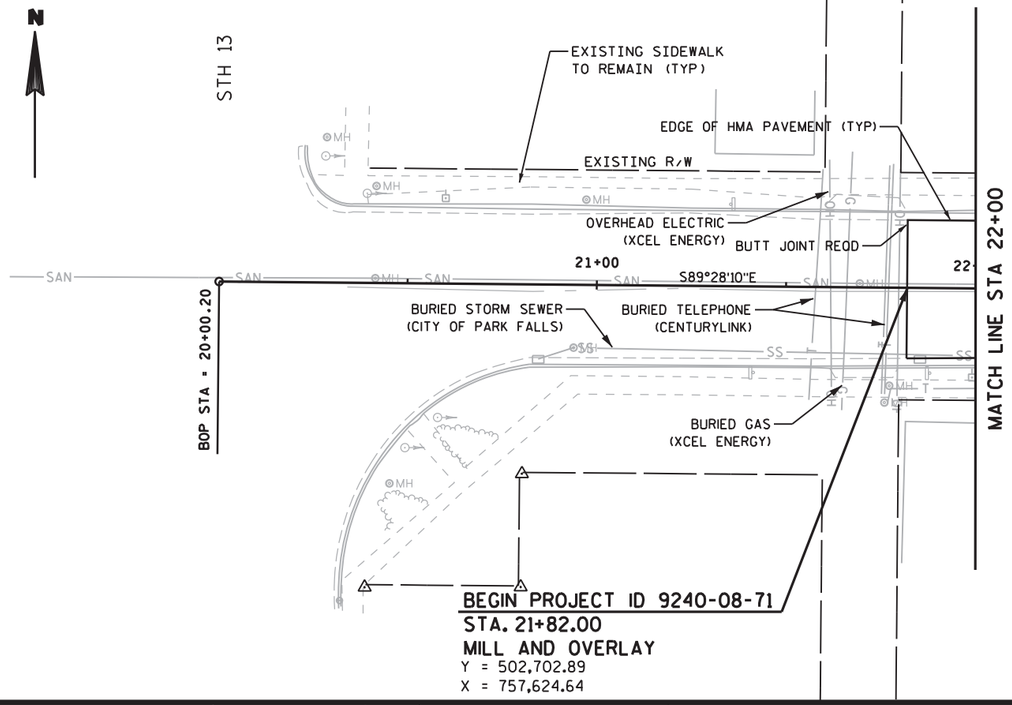
I, JEFFREY L. DEMUTH, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR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

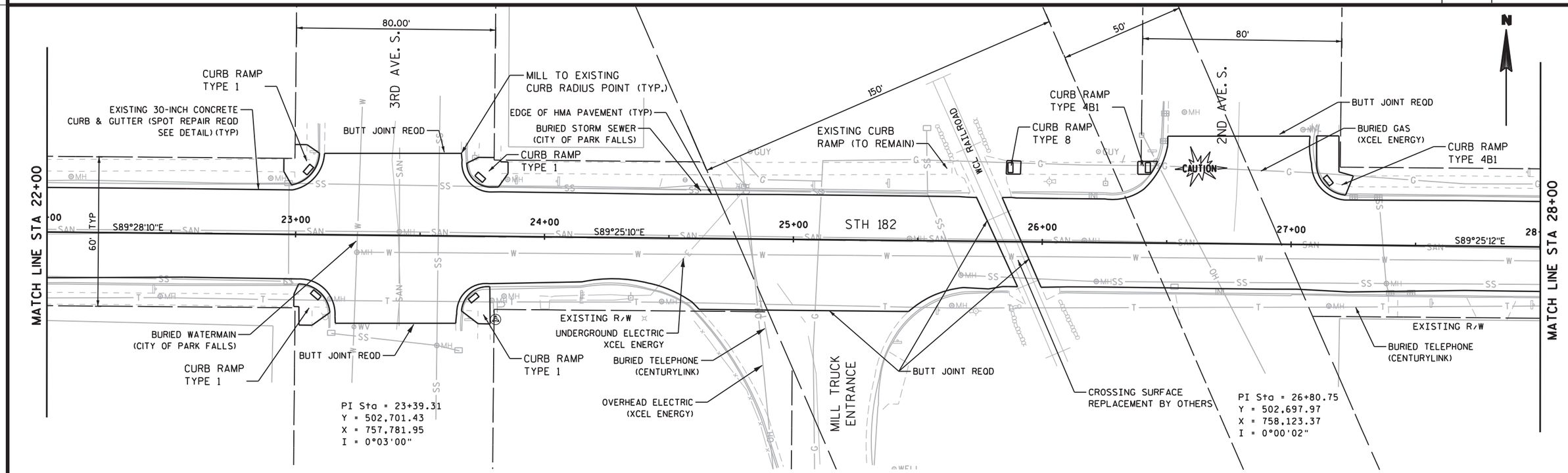
(SIGNATURE) ____ DATE 12/03/15
JEFFREY L. DEMUTH P.L.S. NUMBER S-2656

WISCONSIN JEFFREY L. DEMUTH S-2656 RHINELANDER, WI LAND SURVEYOR

THIS PLAT IS APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHCENTRAL REGION - RHINELANDER

(SIGNATURE) Brent L Stella DATE 1-21-16
(PRINTED NAME) Brent L Stella
TITLE: Real Estate Supervisor





PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PLAN SHEET	SHEET

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\plan on plan 1.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:40
WISDOT/CADDS SHEET 30
plan on plan 1.dgn 7/29/2016 2:11:22 PM CRooyakkers

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
2845	30+80.7	CORNER OF CONCRETE	1484.17

FLAMBEAU RIVER PAPERS

REMOVE OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM STA 33+55.65 (B-50-001) 4-SPAN STEEL DECK GIRDER BRIDGE 24.1' CLEAR ROADWAY WIDTH 5' CLEAR SIDEWALK WIDTH (N SIDE ONLY) 293' OVERALL LENGTH NO SKEW

PI Sta = 32+00.00
Y = 502,693.31
X = 758,642.60
I = 0°25'34"L

CURB RAMP TYPE 4B1
FEE FOR SIDEWALK
TLE FOR GRADING
SAWING CONCRETE
BUTT JOINT REOD
FEE FOR SIDEWALK
CROSSING SURFACE REPLACEMENT BY OTHERS
WCL RAILROAD
CURB RAMP TYPE 8
SLOPE INTERCEPT (TYP)
TREE TRIMMING (TYP)
BURIED/SUSPENDED GAS (XCEL ENERGY)
CONCRETE SIDEWALK
RELOCATE HYDRANT (BY OTHERS)
TLE FOR GRADING
REMOVING CONCRETE SIDEWALK
SAWING CONCRETE
CONCRETE DRIVEWAY
OVERHEAD WALKWAY
BOLLARDS (TO REMAIN)
REMOVING CURB & GUTTER
RAILING PEDESTRIAN STEEL
STRUCTURE B-50-0082
MATCH LINE STA 28+00
MATCH LINE STA 33+50
R/W
28+19 23.26'LT
28+33 27.48'LT
28+87 28.00'LT
29+10 23.00'LT
29+00
30+00
31+00
32+00
33+00
S89°25'12"E
S89°32'12"E
S89°56'30"E
STH 182
2.5'
& EXISTING STH 182
CURB RAMP TYPE 3
CAUTION
EOP STA = 314+36.24
REMOVE FLASHING BEACON
REMOVE RAILING
CLEARING & GRUBBING
FINISHED & STH 182
END CONCRETE PAVEMENT APPROACH SLAB
EXISTING STRUCTURE B-50-001
PI STA = 28+44.63
PI STA = 32+00.00
BURIED/SUSPENDED TELEPHONE (PRICE COUNTY TELEPHONE)
BURIED WATERMAIN (CITY OF PARK FALLS)
BURIED STORM SEWER (CITY OF PARK FALLS)
BURIED SANITARY SEWER (CITY OF PARK FALLS)
BUTT JOINT REOD
ADJUSTING MANHOLE COVERS (TYP)
R/W
SAWING ASPHALT
PARKING LOT
MOVE PRECAST CONCRETE BARRIER
ASPHALTIC SURFACE DRIVEWAYS
CONCRETE SIDEWALK
CURB RAMP TYPE 7B
BM=2845
BUILDING
MOVING BIKE RACK
ELECTRIC SUBSTATION
FIBER OPTIC (CENTURYLINK)
CABLE TV (CHARTER COMMUNICATIONS)
ASPHALTIC SURFACE DRIVEWAYS
SEE STORM SEWER PLANS
CLEARING & GRUBBING
FLAMBEAU RIVER
ELECTRIC TRANSMISSION (XCEL ENERGY)
CAUTION CROSSES RIVER 178'± SOUTH OF ℄

END CONSTRUCTION ID 9240-08-71
END MILL AND OVERLAY
BEGIN PROJECT ID 9240-08-70
BEGIN RECONSTRUCTION
STA 28+74.4
Y = 502,696.07
X = 758,317.01

REMOVE EXISTING STEP CONCRETE STEP (OUTSIDE) OF 6' WIDE SIDEWALK

FLAMBEAU RIVER PAPERS

PI Sta = 28+44.63
Y = 502,696.31
X = 758,287.24
I = 0°07'00"

STA 33+62.5 STRUCTURE B-50-0082 REOD
THREE SPAN CONCRETE PRESTRESSED GIRDER BRIDGE (45W")
36' CLEAR ROADWAY WIDTH
7' CLEAR SIDEWALK (N SIDE ONLY)
282.33' OVERALL LENGTH
NO SKEW

BOP STA = 29+00.00
BOP EL = 1484.58
0.47%
VPI STA = 29+91.50
VPI EL = 1485.01
CURVE LEN = 150.00
K = 54.70
VPC STA = 29+16.50
VPC EL = 1484.66
EXISTING GROUND
FINISHED PROFILE ON ℄
-2.28%
VPC STA = 31+00.00
VPC EL = 1482.54
VPT STA = 30+66.50
VPT EL = 1483.30
15.05' VERTICAL CLEARANCE W SIDE OVERHEAD WALKWAY
15.35' VERTICAL CLEARANCE E SIDE OVERHEAD WALKWAY
VPI STA = 31+50.00
VPI EL = 1481.40
CURVE LEN = 100.00
K = 56.34
VPT STA = 32+00.00
VPT EL = 1481.15
-0.50%
REGULATORY HW 100 E 1472.39±
OBSERVED WATER EL 1468.06± (11-4-11)
STREAMBED EL 1460.59

1492 1488 1484 1480 1476 1472 1468 1464 1460

1483.9
1484.6 1484.58
1484.6 1484.71
1484.4 1484.41
1483.6 1483.65
1482.7 1482.54
1481.8 1481.62
1481.1 1481.15
1467.5 1480.90
1461.7 1460.65
1460.8 1460.40

27+50 28+00 28+50 29+00 29+50 30+00 30+50 31+00 31+50 32+00 32+50 33+00 33+50

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PLAN AND PROFILE	SHEET 50 E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : _____ PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 30

PLAN1.dgn 8/16/2016 11:33:53 AM crooyakkers

PI Sta = 35+50.00
Y = 502,692.95
X = 758,992.59
I = 1°55'15"R

PI Sta = 37+50.00
Y = 502,699.45
X = 759,192.49
I = 2°00'36"R

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
2500	35+00	DISK ON WING	1480.63
1184	38+25	HYDRANT NE TAG BOLT	1483.44

END PROJECT ID 9240-08-70
END RECONSTRUCTION
BEGIN CONSTRUCTION ID 9240-08-71
BEGIN MILL AND OVERLAY
STA. 37+76.36
Y = 502,699.38
X = 759,218.85

PI Sta = 37+85.08
Y = 502,699.36
X = 759,227.57
I = 0°00'02"

MATCH LINE STA 33+50

MATCH LINE STA 39+50

BUILDING

FLAMBEAU RIVER

FLAMBEAU RIVER PAPERS

CANOE PORTAGE (ASPHALT)

ELECTRIC (XCEL ENERGY)

REMOVE FLASHING BEACON

SLOPE INTERCEPT (TYP.)

REMOVING CURB & GUTTER

REMOVING CONCRETE SIDEWALK

CONCRETE SIDEWALK

CAUTION

CHEMICAL TANK FARM

SANITARY SEWER CITY OF PARK FALLS

ELECTRIC TRANSMISSION (XCEL ENERGY)

CURB RAMP TYPE 7A

GAS (XCEL ENERGY)

SAWCUT REQD ASPHALT

EXISTING CONCRETE SIDEWALK (TYP)

REMOVE AND REPAINT RAILINGS R-50-3

CURB RAMP TYPE 7A

SIDEWALK JOINT REPAIRS REQ'D (SEE DETAIL)

R/W

LAWN

34+00

35+00

36+00

37+00

38+00

39+00

S89°56'30"E

N88°8'15"E

S89°51'9"E

S89°51'07"E

℄ EXISTING STH 182

STH 182

END CONCRETE PAVEMENT APPROACH SLAB

SEE STORM SEWER PLANS

FINISHED ℄ STH 182

PI STA = 35+50.00

PI STA = 37+50.00

PI STA = 37+85.08 BACK

PI STA = 37+85.01 AHEAD

BM=2500

BM=1184

STRUCTURE B-50-0082

TV (CHARTER COMMUNICATIONS)

RIVER'S EDGE

PERMITTED WETLAND IMPACTS

WETLAND LIMITS

FIBER OPTIC (CENTURYLINK)

DETENTION POND

TELEPHONE (PRICE COUNTY TELEPHONE)

LIMITS OF CONTRACTOR ACCESS AREA

BURIED WATERMAIN (CITY OF PARK FALLS)

WALKWAY (ASPHALT)

CURB RAMP TYPE 4A1

BUTT JOINT REQD

LAWRENCE AVE

CURB RAMP TYPE 4B1

EXISTING 30-INCH CONCRETE CURB AND GUTTER (SPOT REPAIR REQ'D SEE DETAIL) (TYP)

ELECTRIC TRANSMISSION (XCEL ENERGY) CROSSES RIVER 278'± SOUTH OF ℄

VPC STA = 35+73.23
VPC EL = 1479.28

VPT STA = 36+73.23
VPT EL = 1479.69

HIGH VOLTAGE ELCTRIC LINE APPROXIMATE 30' CLEAR

EXISTING GROUND

-0.50%

1.32%

FINISHED PROFILE ON ℄

VPI STA = 36+23.23
VPI EL = 1479.03
CURVE LEN = 100.00
K = 54.88

EOP STA = 37+50.00
EOP EL = 1480.71

1460.8	1463.9	1464.7	1480.2	1479.9	1479.8	1479.9	1480.1	1480.7
1480.40	1480.15	1479.90	1479.65	1479.40	1479.22	1479.44	1480.05	

1488 1484 1480 1476 1472 1468 1464 1460 1456

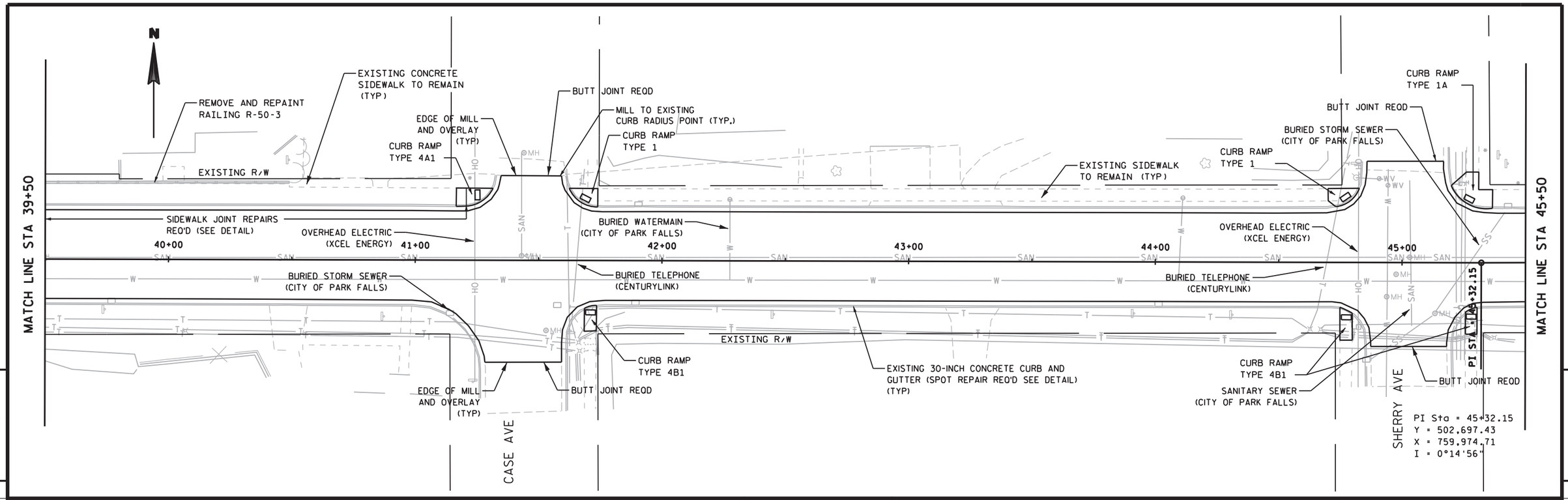
33+50 34+00 34+50 35+00 35+50 36+00 36+50 37+00 37+50 38+00 38+50 39+00 39+50

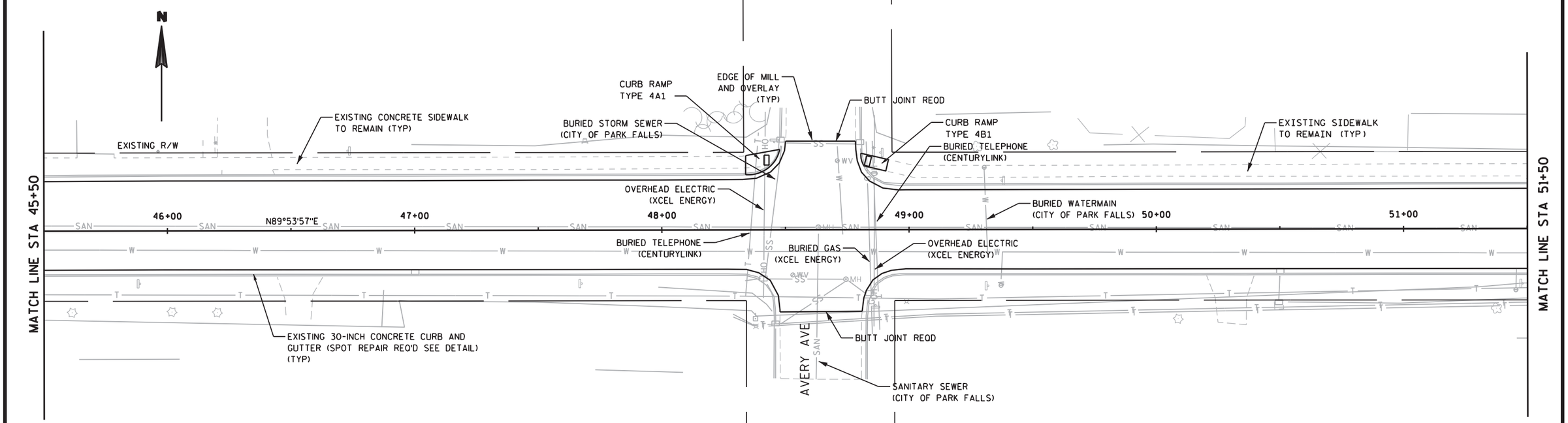
PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PLAN AND PROFILE	SHEET E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Plansht\PLAN2.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:40

WISDOT/CADDS SHEET 30

PLAN2.dgn 7/29/2016 10:56:42 AM CRooyakkers





PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PLAN SHEET	SHEET E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Planshts\plan on plan 2.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:40

WISDOT/CADDS SHEET 30

plan on plan 2.dgn 7/29/2016 10:56:43 AM CRooyakkers

END PROJECT ID 9240-08-71
STA. 56+34.50
MILL AND OVERLAY
Y = 502,744.48
X = 761,072.30

N

MATCH LINE STA 51+50

EXISTING CONCRETE SIDEWALK TO REMAIN (TYP)

BUTT JOINT REOD

CURB RAMP TYPE 4B1

CURB RAMP TYPE 4B1

MILL TO EXISTING CURB RADIUS POINT (TYP.)

EXISTING R/W

EDGE OF MILL AND OVERLAY (TYP)

BUTT JOINT REOD

52+00

53+00

54+00

55+00

56+00

57+00

BURIED GAS (XCEL ENERGY)

BUTT JOINT REOD

EXISTING R/W

SAUNDERS AVE

BUTT JOINT REOD

PI STA = 52+25.04

PC STA = 53+37.82

EDGE OF MILL AND OVERLAY (TYP)

PADDOCK AVE

BUTT JOINT REOD

EXISTING 30-INCH CONCRETE CURB AND GUTTER (SPOT REPAIR REQ'D SEE DETAIL) (TYP)

PI Sta = 57+87.34
Y = 502,698.89
X = 761,229.90
I = 50°21'38"
D = 5°59'34"
T = 449.52'
L = 840.40'
R = 956.14'
SE = NC.

PI Sta = 52+25.04
Y = 502,698.65
X = 760,667.60
I = 0°43'51"

5

5

PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	PLAN SHEET	SHEET E

FILE NAME : P:\90s\93\00093125\Rhinelander\caddWDOT\Plansht\plan on plan 3.dgn PLOT DATE : 7/29/2016 PLOT BY : CRooyakkers PLOT NAME : _____ PLOT SCALE : 1:40

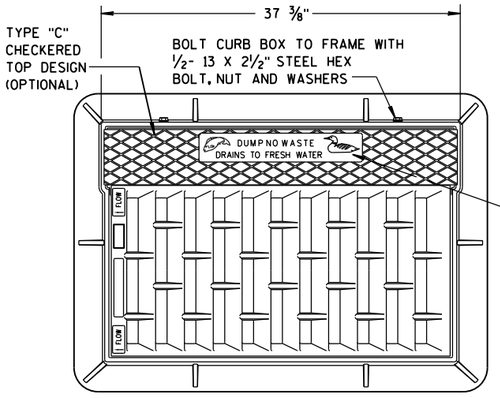
WISDOT/CADDS SHEET 30

plan on plan 3.dgn 7/29/2016 10:56:44 AM CRooyakkers

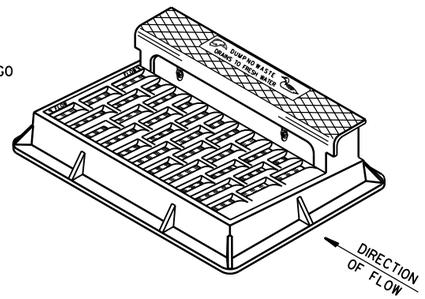
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A09-01	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-18	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-16A	CURB RAMPS TYPES 1 AND 1-A
08D05-16B	CURB RAMPS TYPES 2 AND 3
08D05-16C	CURB RAMPS TYPES 4A AND 4A1
08D05-16D	CURB RAMPS TYPE 4B AND 4B1
08D05-16E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08E12-01	SILT SCREEN
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C04-04	CONCRETE BASE BOLT REPAIR
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
12A03-10	NAME PLATE (STRUCTURES)
13B01-10	PAVEMENT DETAILS FOR RAILROAD APPROACH
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C09-09A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-03A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-03	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D30-02A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-02B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-02C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

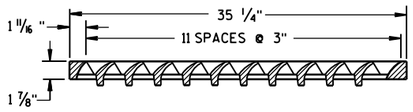
6

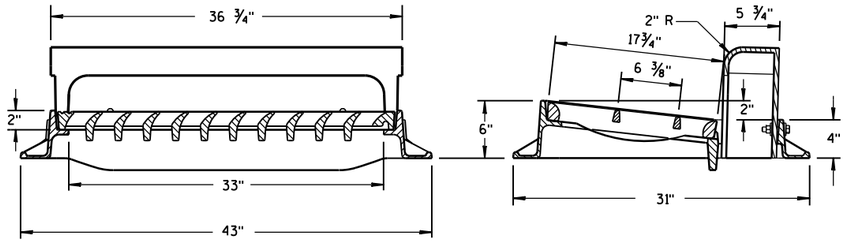


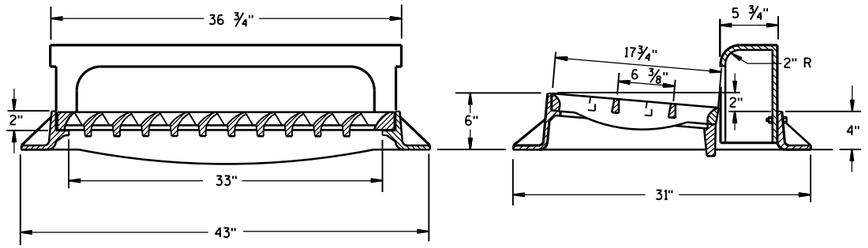
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

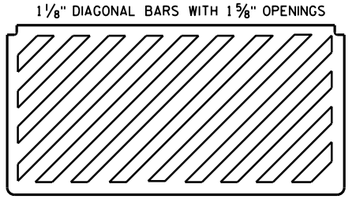






TYPE "H"

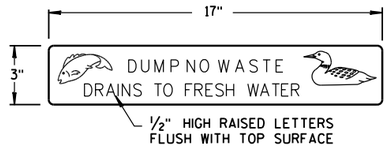
NOTE: EITHER CASTING IS ACCEPTABLE



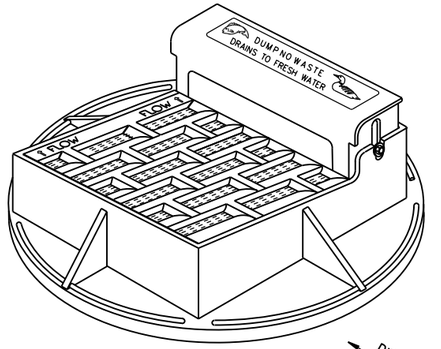
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

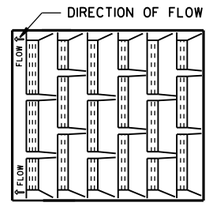
NOTE:
GRATE IS REVERSIBLE.

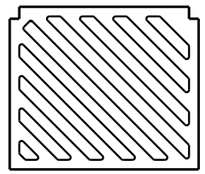
GENERAL NOTES

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

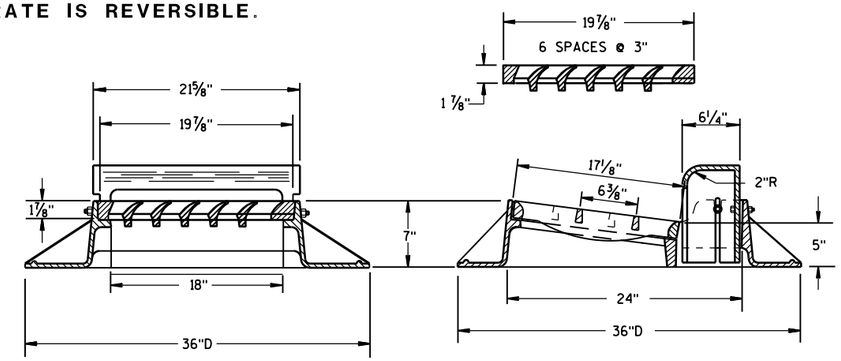




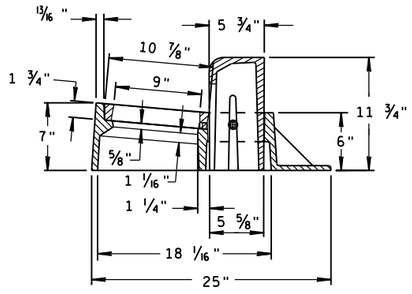
SPECIAL GRATE FOR TYPE "A" COVER

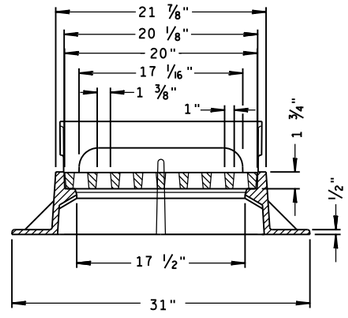
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

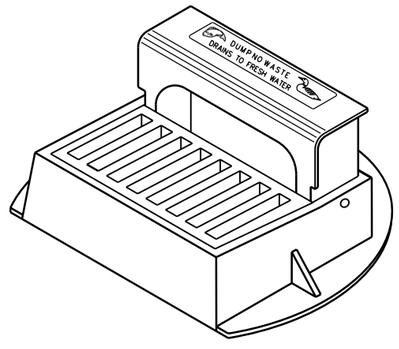


TYPE "A"





TYPE "Z"



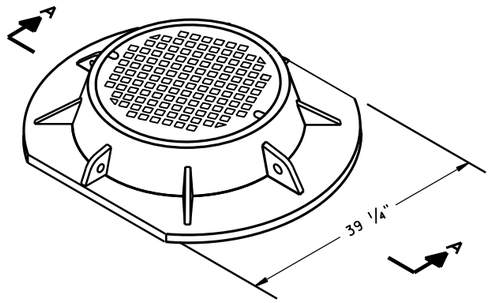
INLET COVERS
TYPE A, H, A-S, H-S & Z

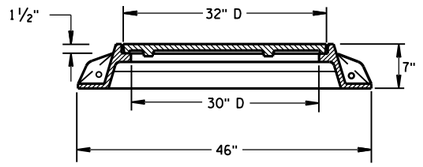
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

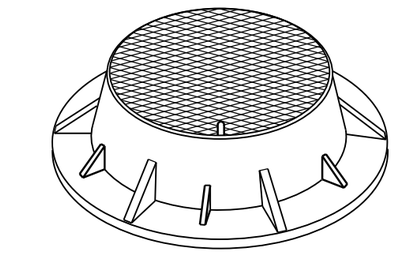
6

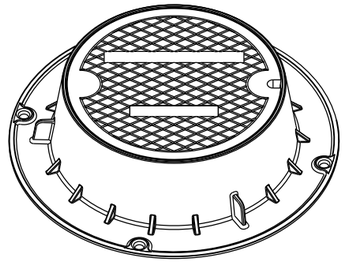
S.D.D. 8 A 5-19a

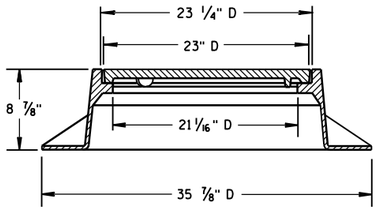


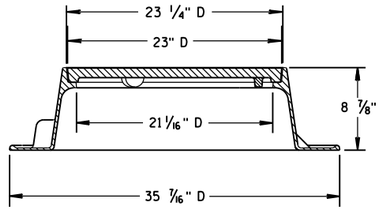


SECTION A-A
TYPE "K"









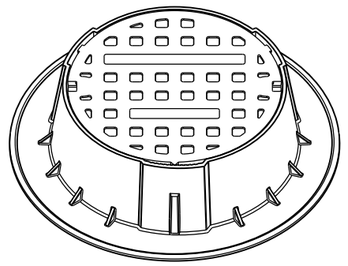
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

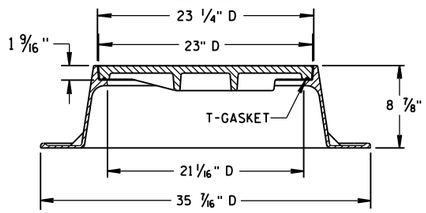
GENERAL NOTES

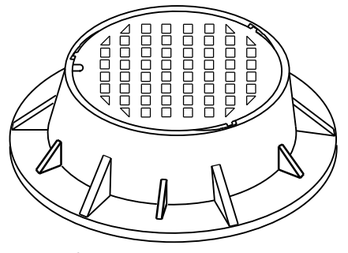
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

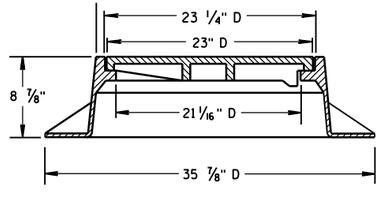
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

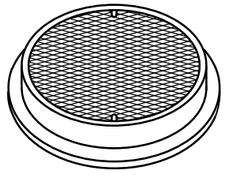


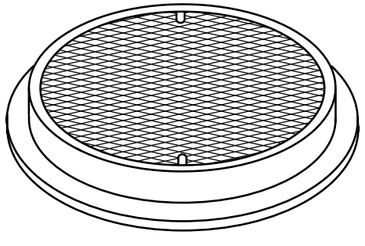


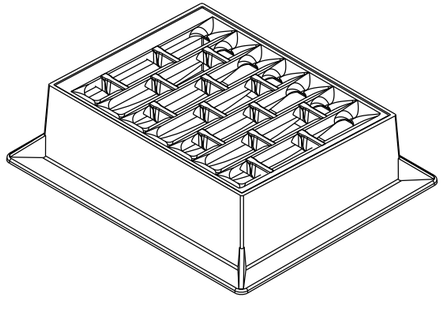


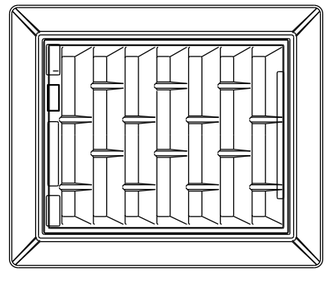


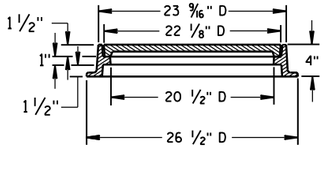
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



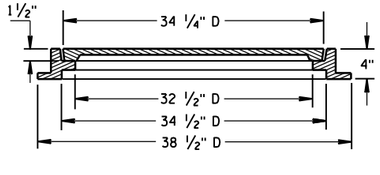




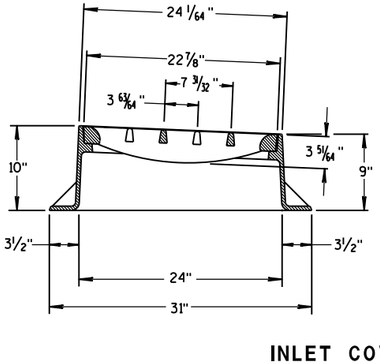


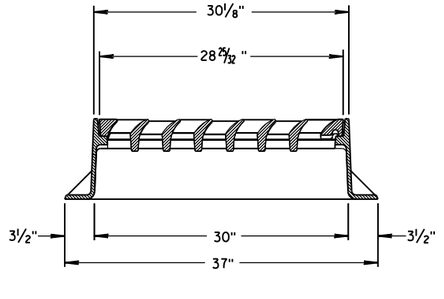


TYPE "L"



TYPE "M"





INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

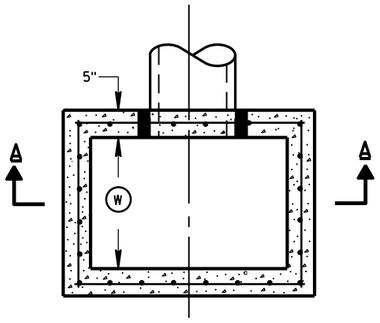
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

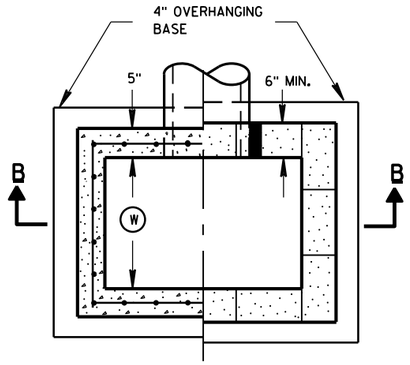
S.D.D. 8 A 5-19d

6

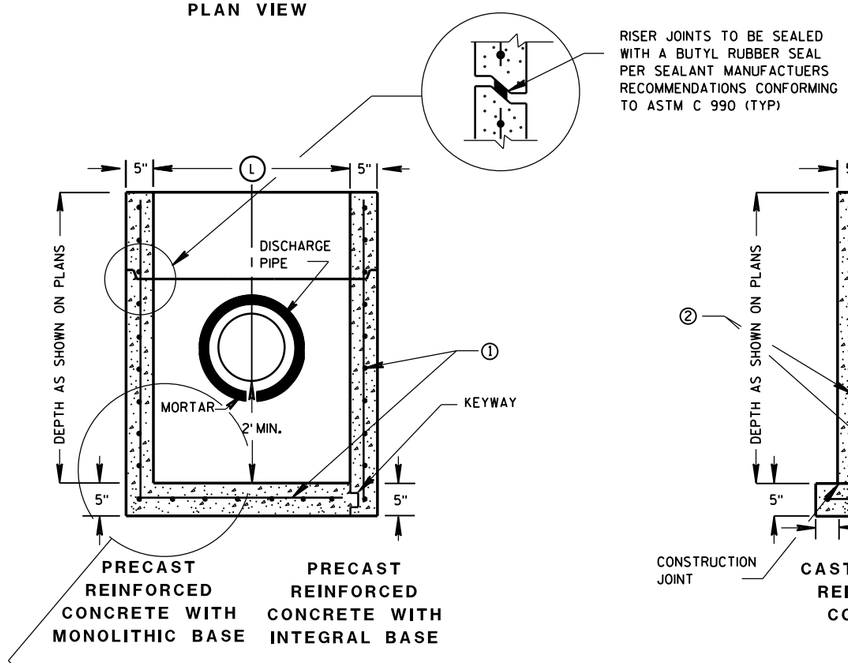
S.D.D. 8 A 5-19d



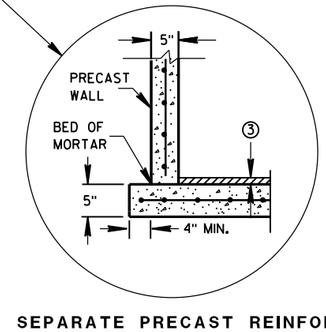
PLAN VIEW



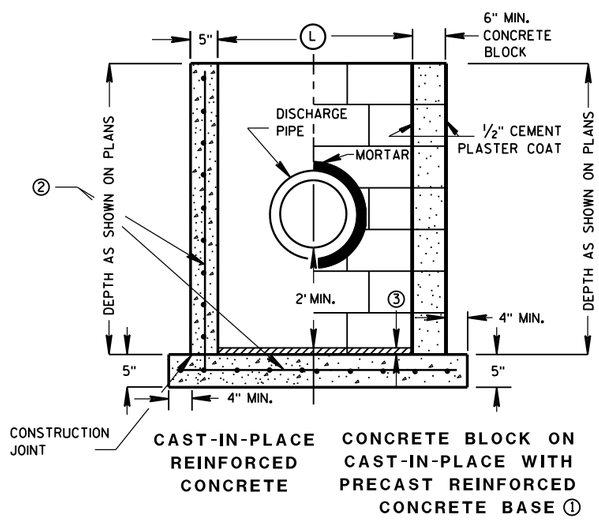
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



SECTION B-B

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

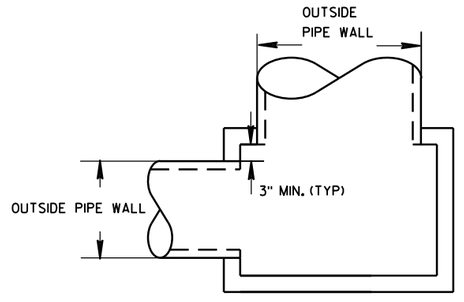
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE		INLET COVER TYPE	F	ALL H'S
	WIDTH (W) (FT)	LENGTH (L) (FT)		
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

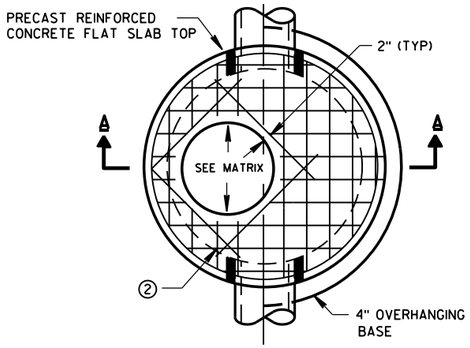
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

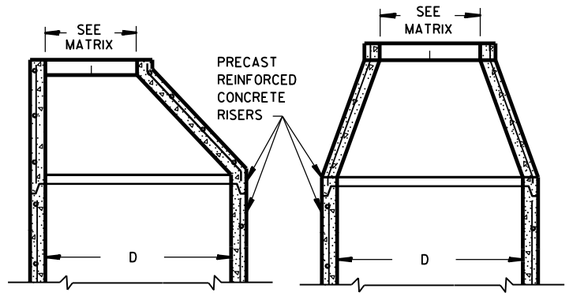
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 A 9-1

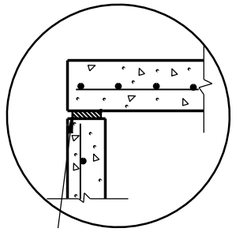


PLAN VIEW CIRCULAR OPENING

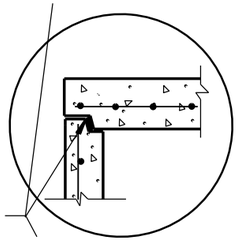


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

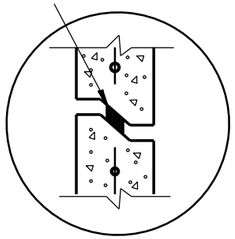


TOP WITH PLAIN END JOINT



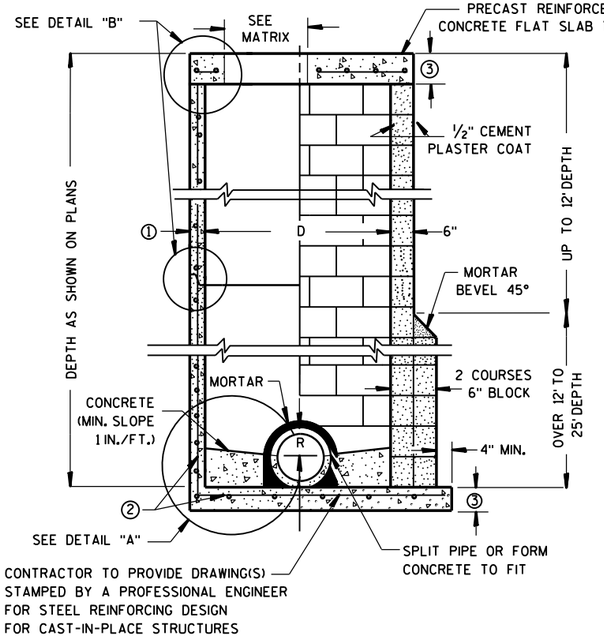
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



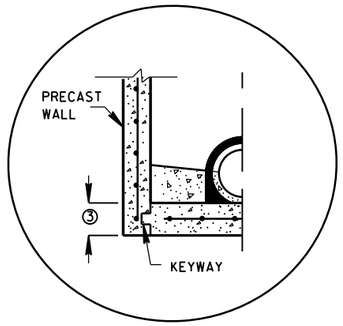
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

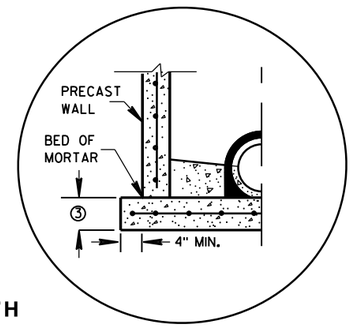


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

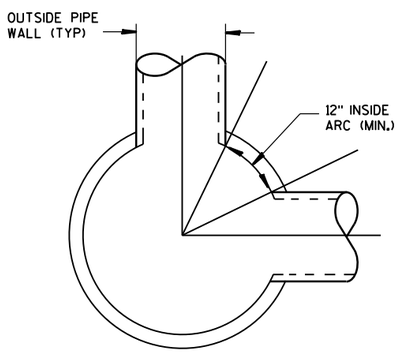


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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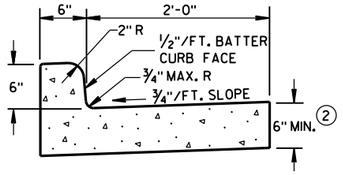
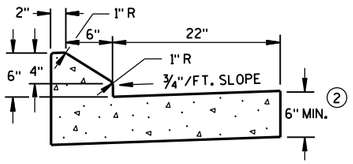
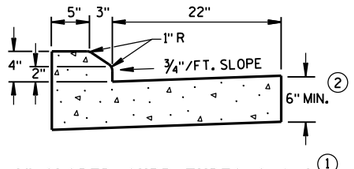
S.D.D. 8 B 9-1



TYPES A & D ①

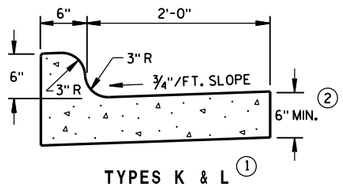


6" SLOPED CURB TYPES G & J ①

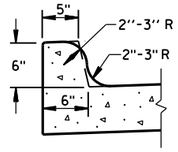


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

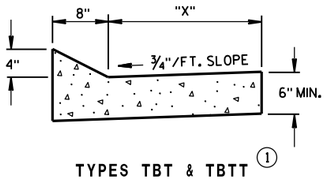


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

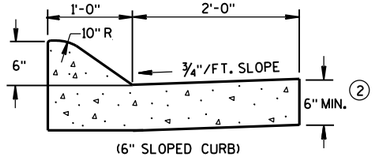
CONCRETE CURB & GUTTER 30"



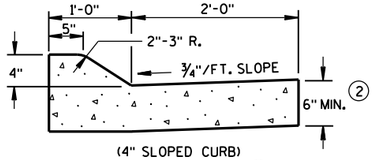
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

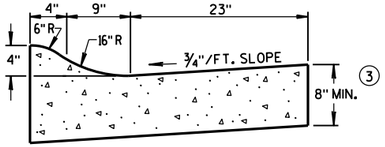


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

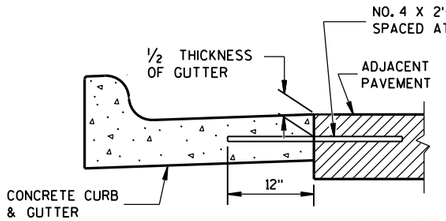
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

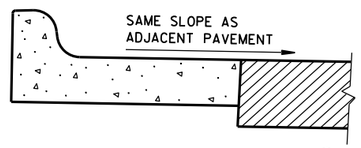
③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

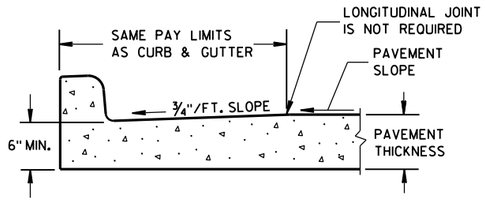
⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



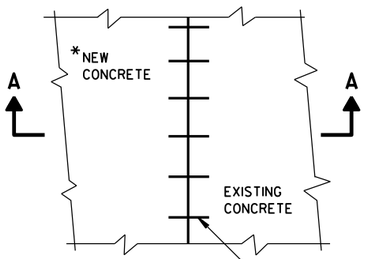
TYPICAL TIE BAR LOCATION ①



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)

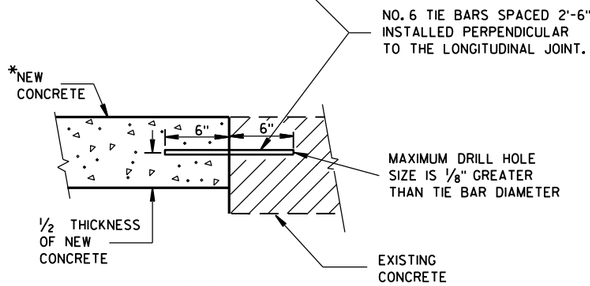


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



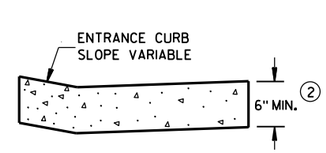
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

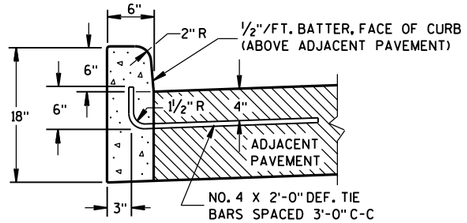


SECTION A-A

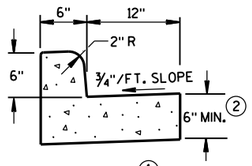
TIE BARS DRILLED
INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

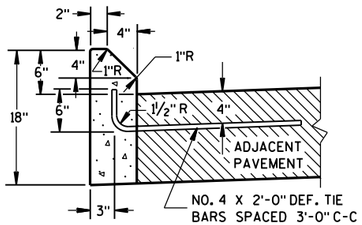


① TYPES A & D

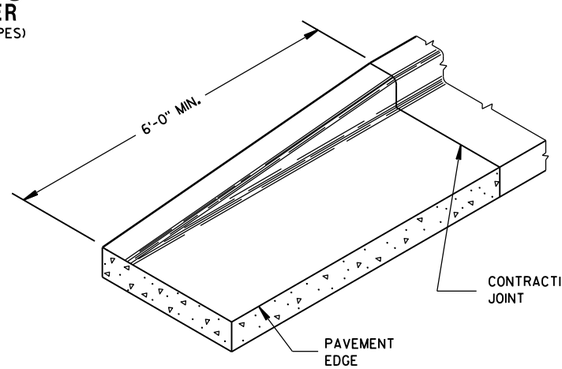


① TYPES A & D

CONCRETE CURB & GUTTER 18"



① TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

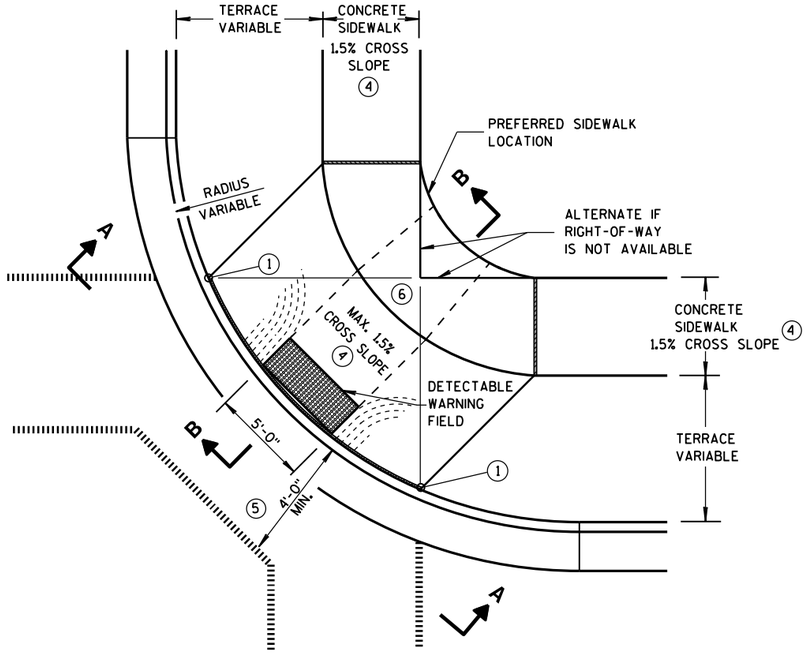
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

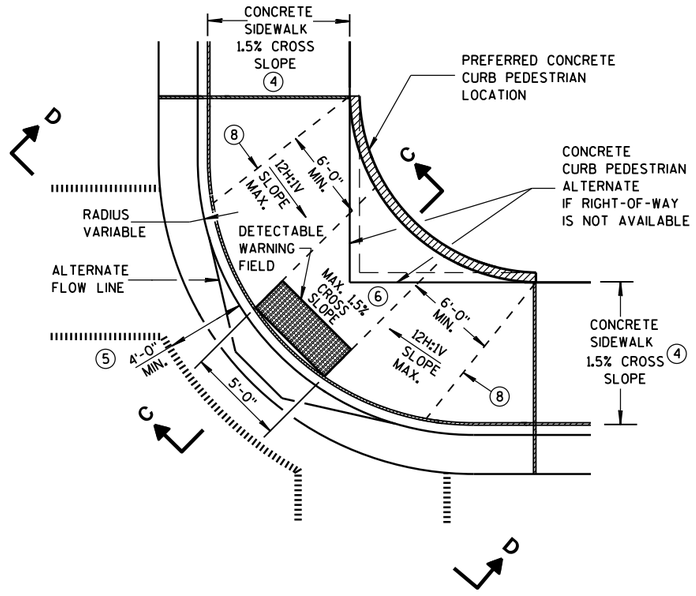
S.D.D. 8 D 1-18



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

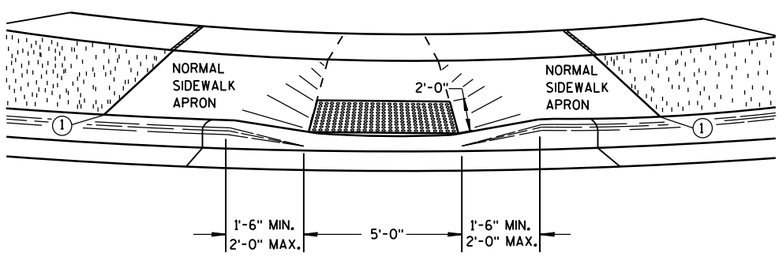
(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

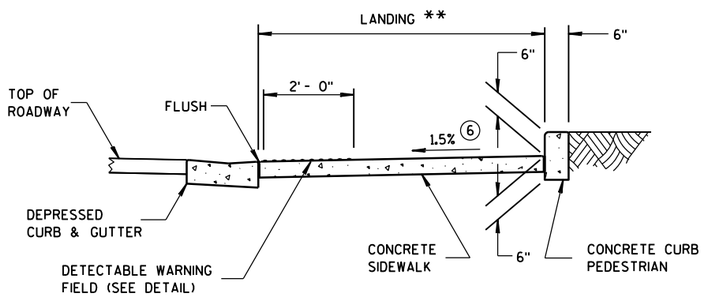
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.



VIEW A-A

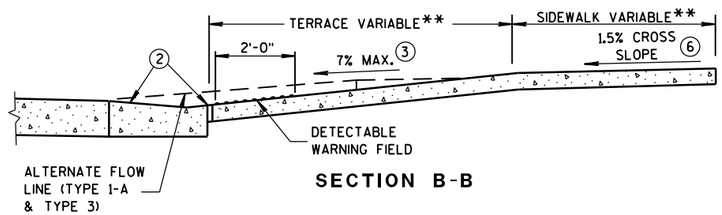
** WIDTH SHOWN ELSEWHERE IN THE PLANS



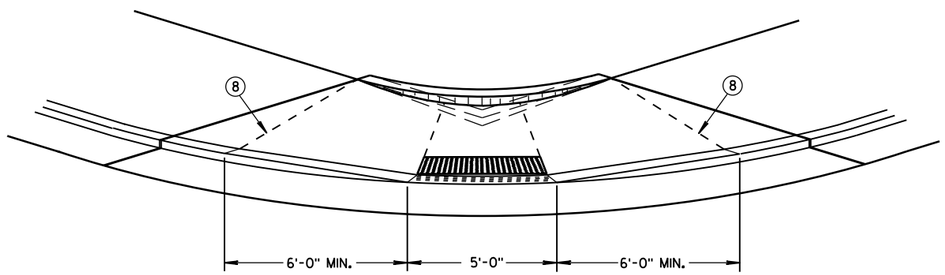
SECTION C-C

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



SECTION B-B



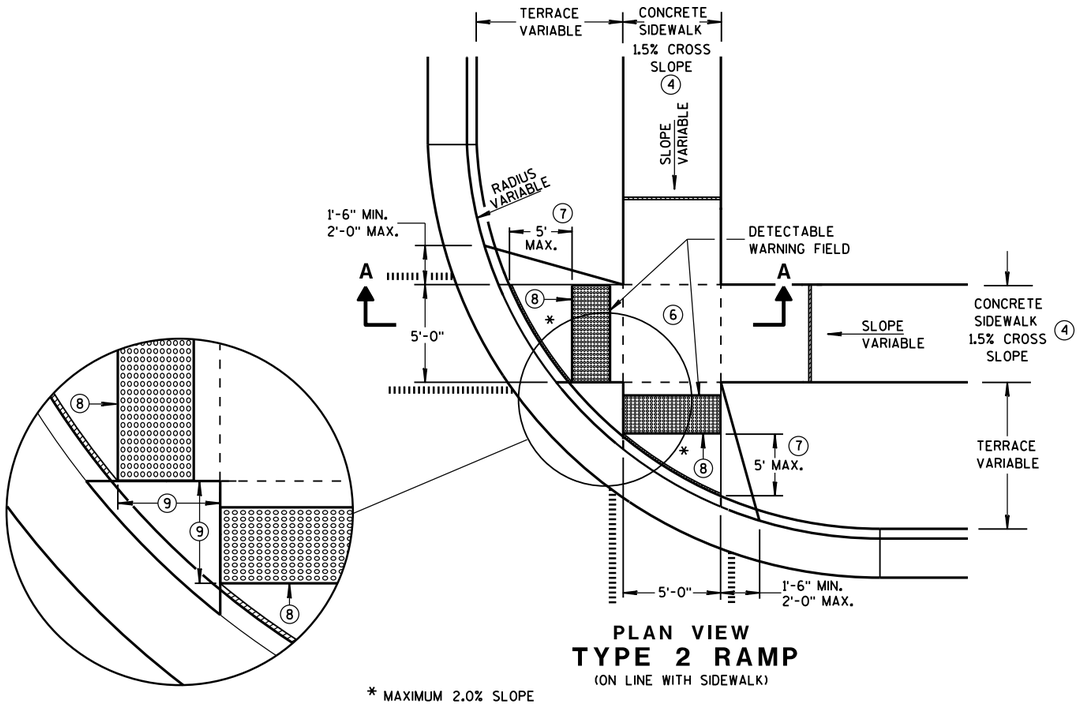
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-16a

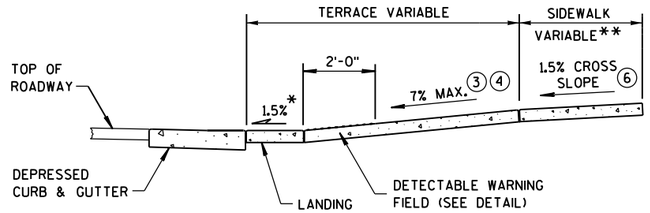


PLAN VIEW

TYPE 2 RAMP

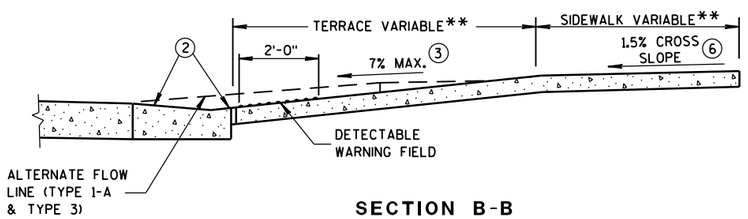
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

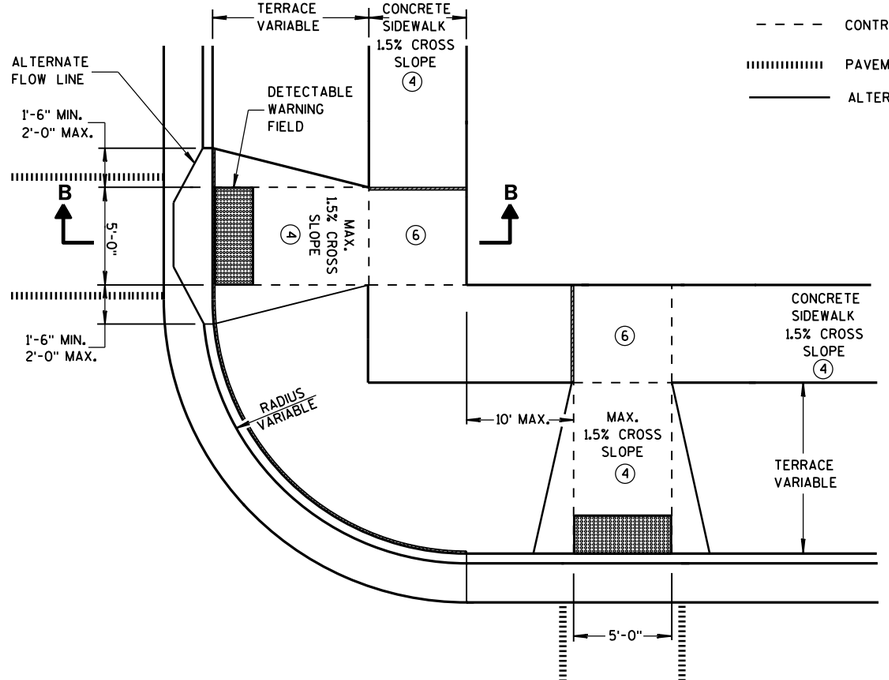
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. 2" MINIMUM CURB HEIGHT.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW

TYPE 3 RAMP

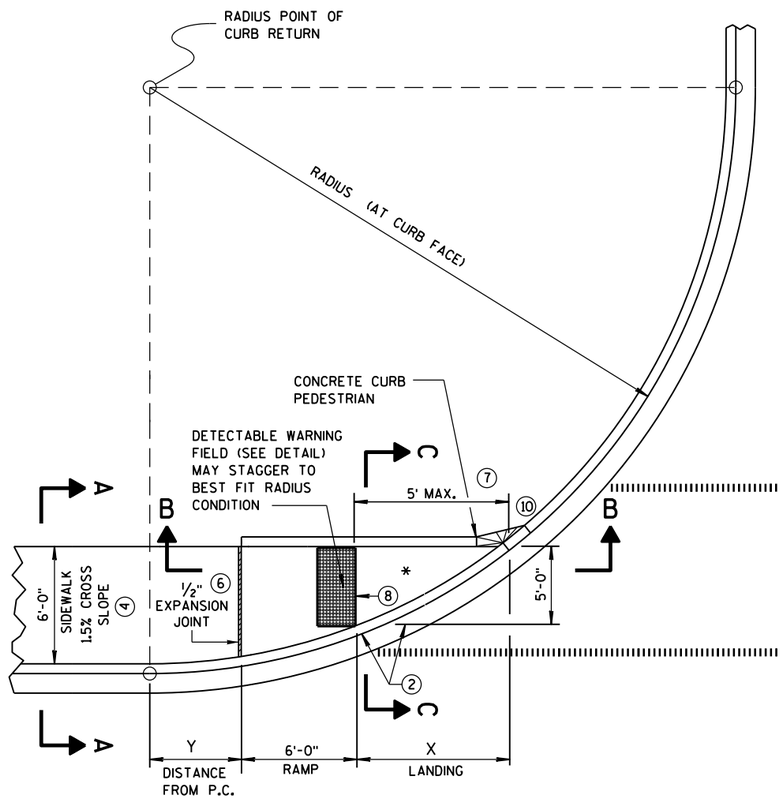
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-16b

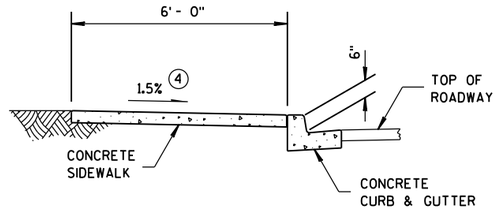


CURB RAMP TYPE 4A

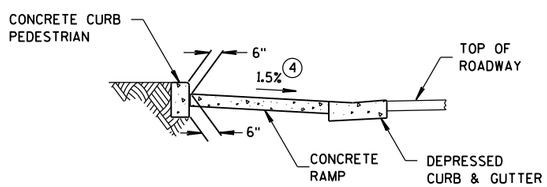
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

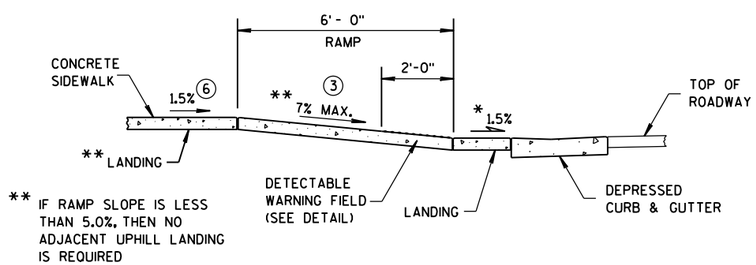
INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

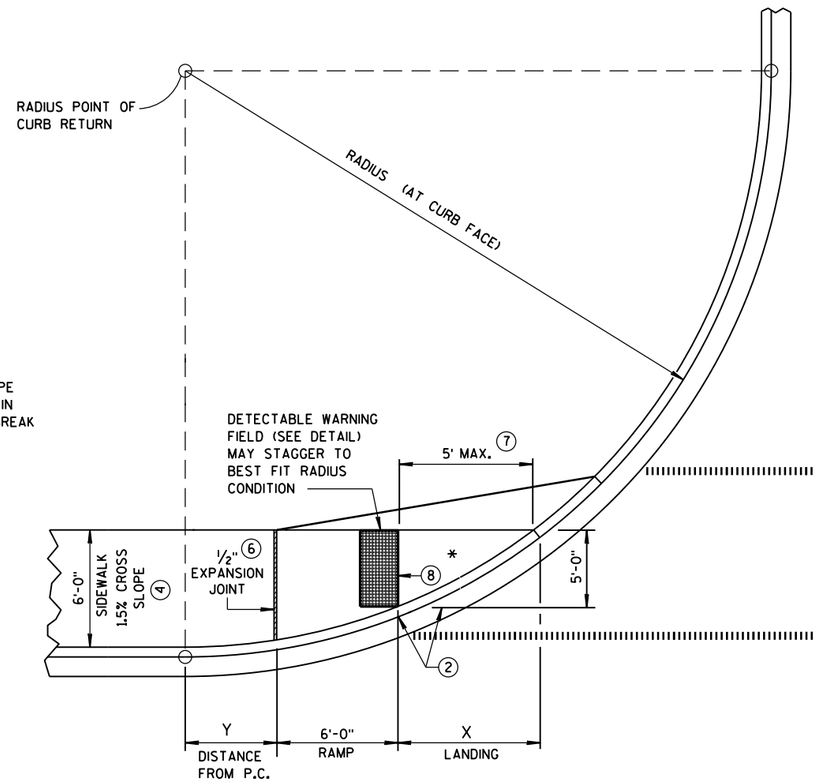


SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK



CURB RAMP TYPE 4A1

PLAN VIEW

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

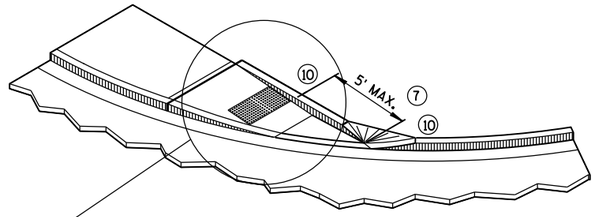
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

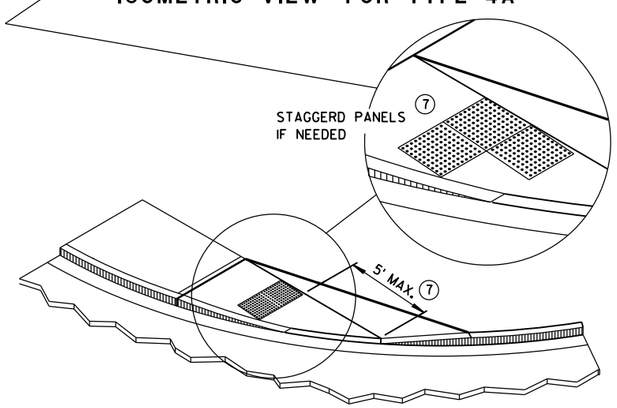
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

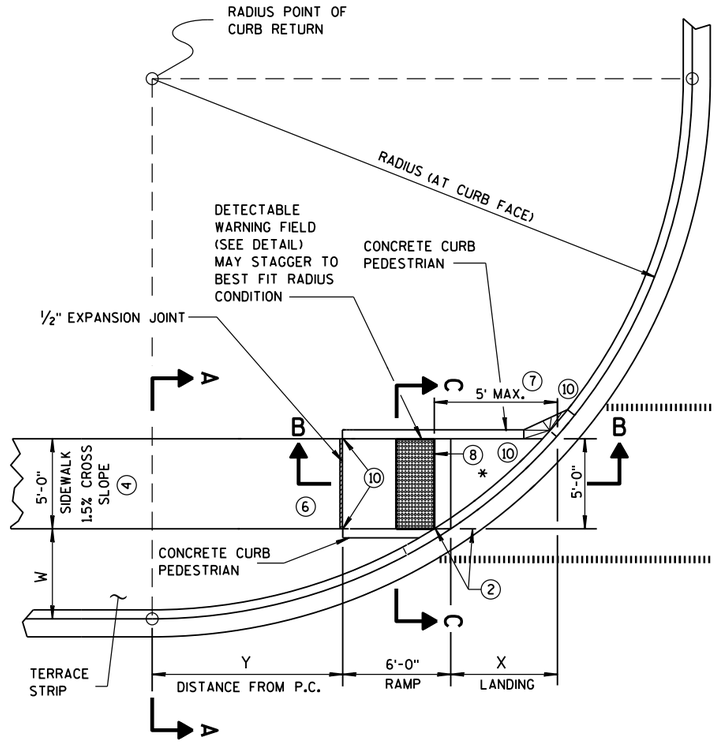
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

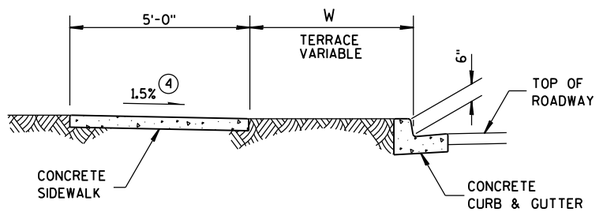
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

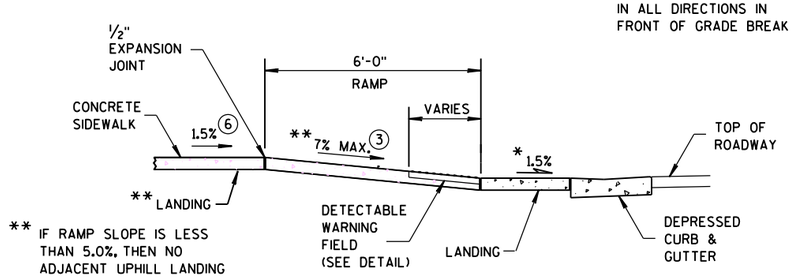
S.D.D. 8 D 5-16c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

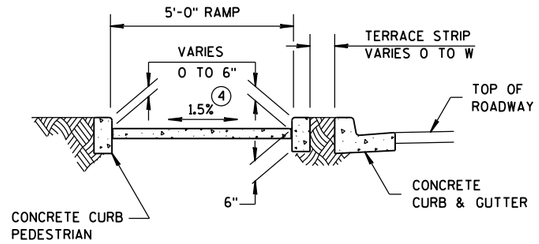
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

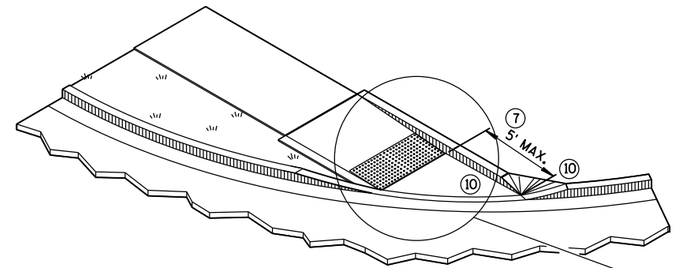
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

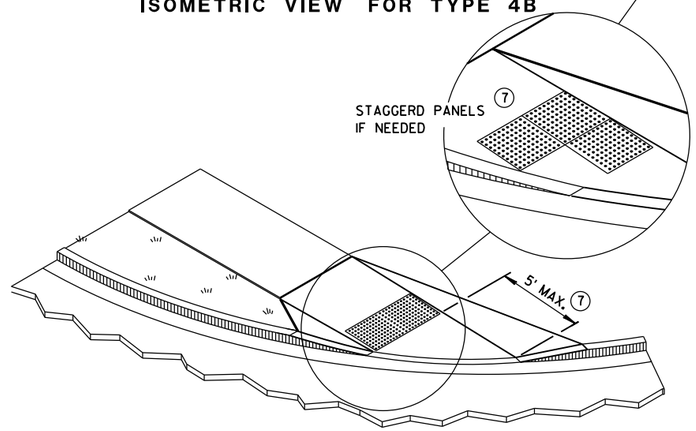
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

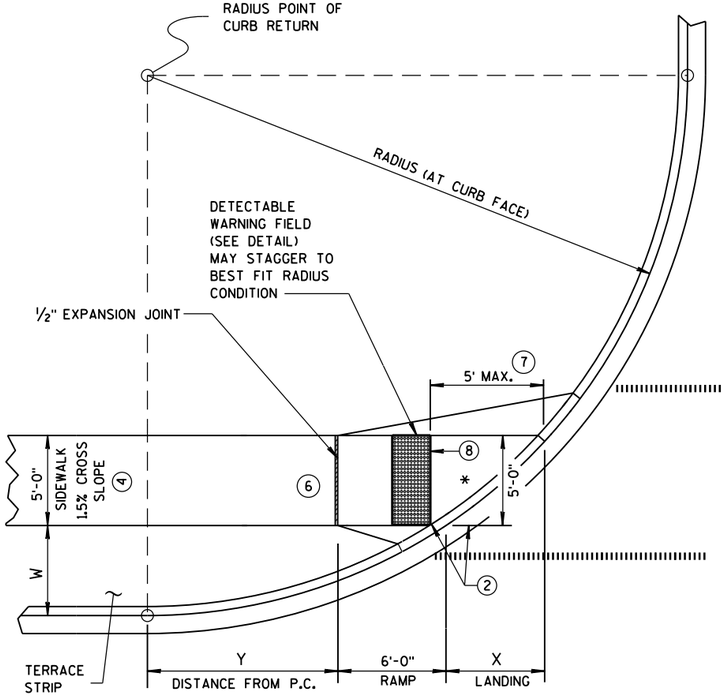
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



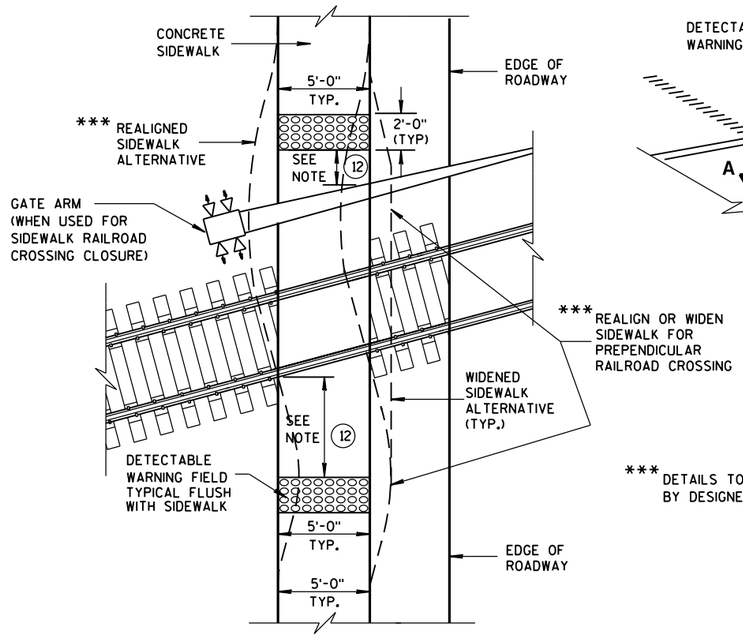
CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

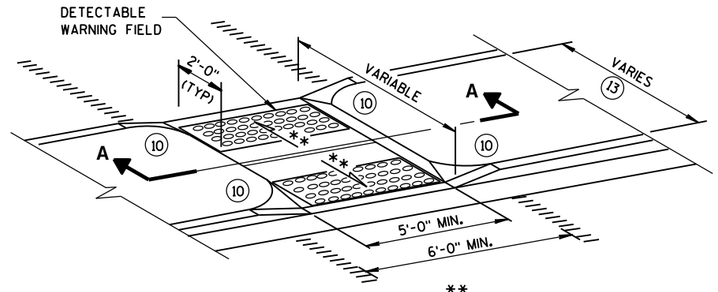
6

S.D.D. 8 D 5-16d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY DESIGNER



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

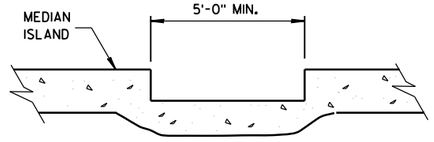
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

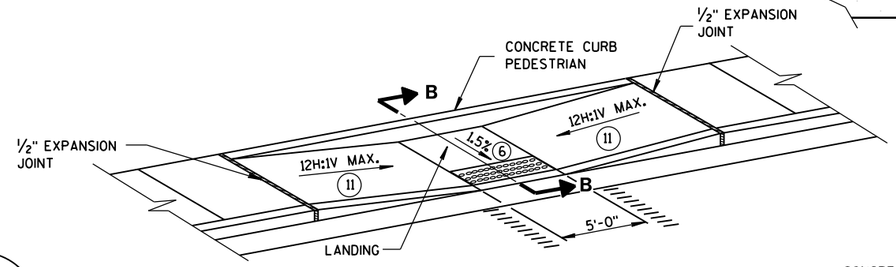
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



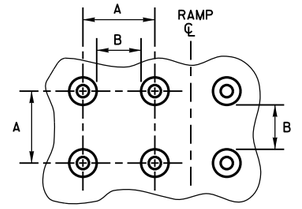
SECTION A-A



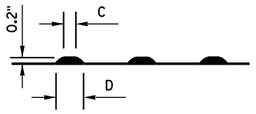
MID-BLOCK CROSSING
TYPE 7A

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

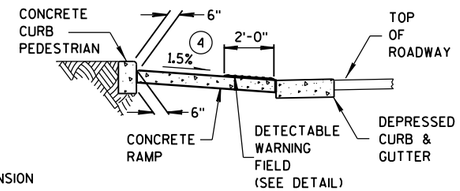


PLAN VIEW

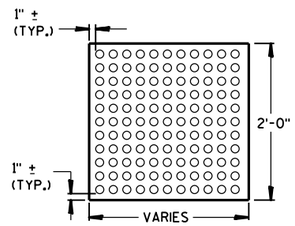


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



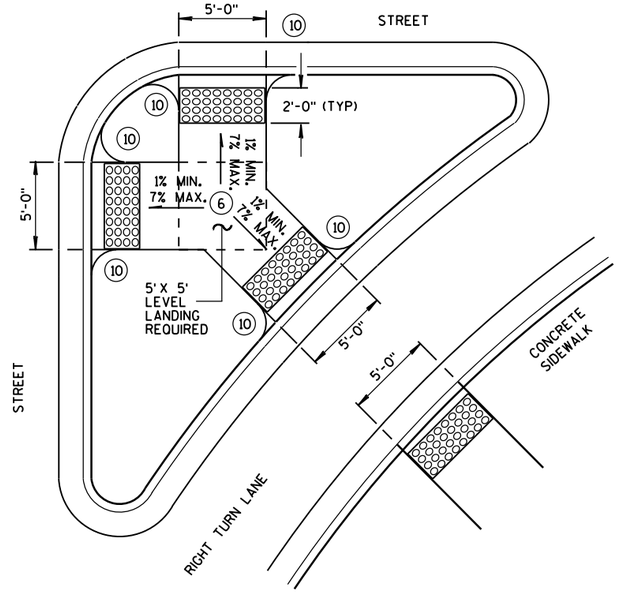
SECTION B-B



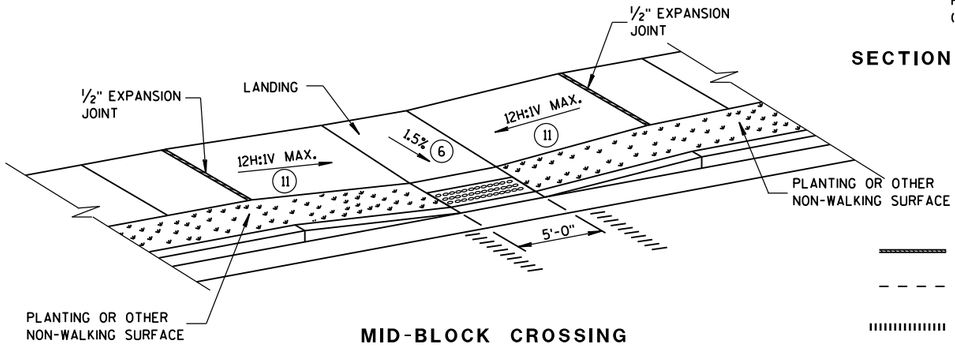
PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

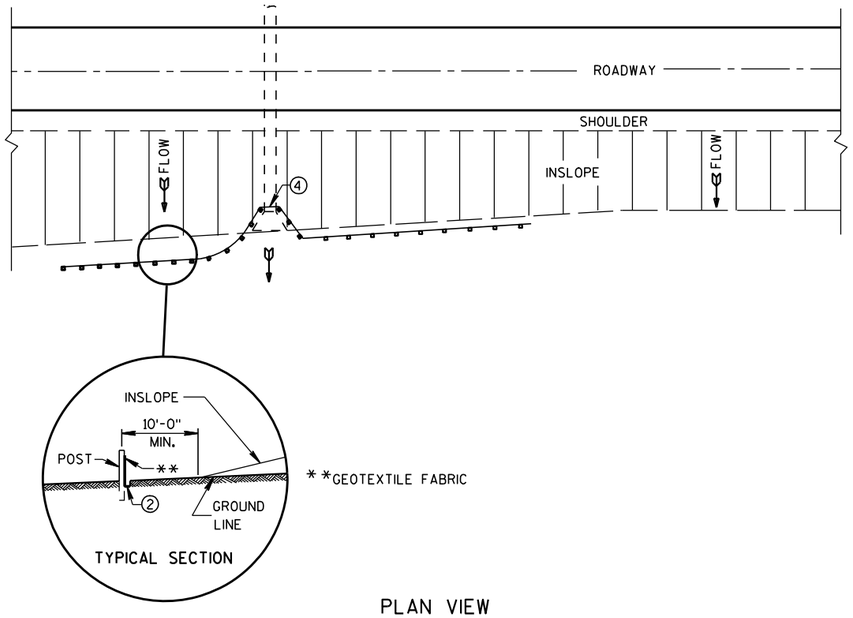
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

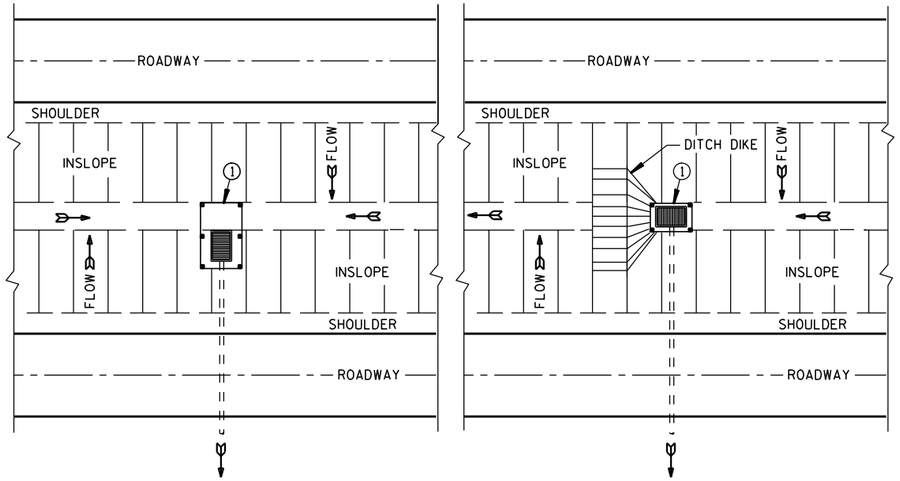
6

S.D.D. 8 D 5-16e



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



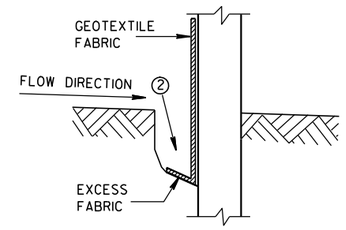
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

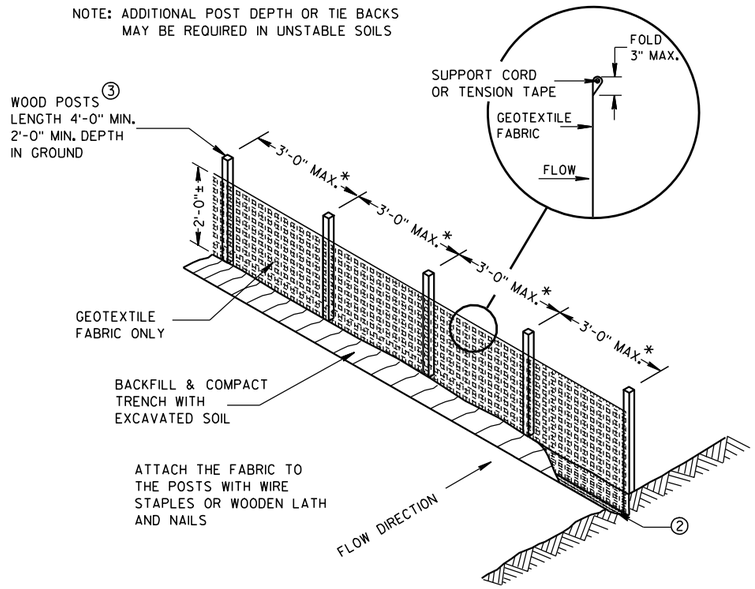
GENERAL NOTES

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

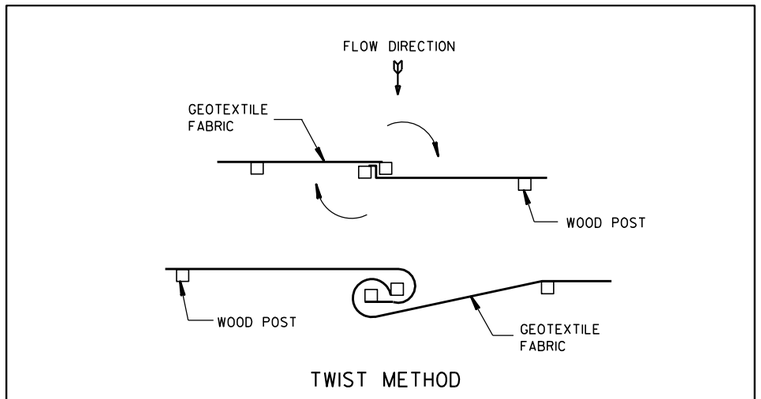
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



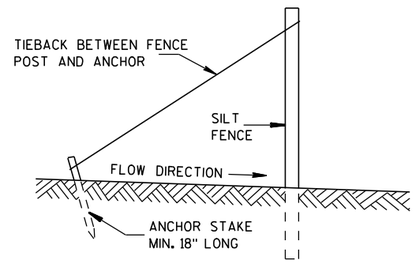
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

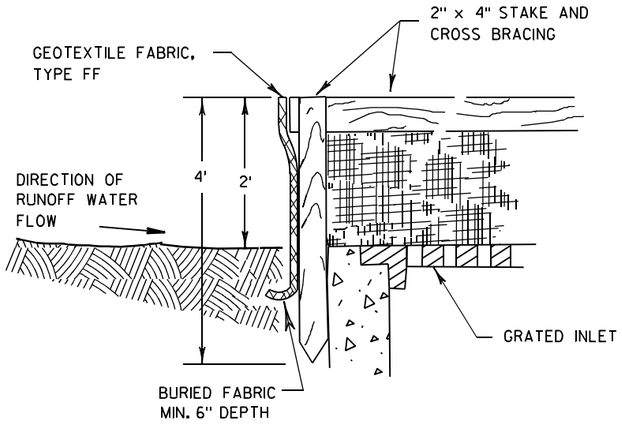
SILT FENCE

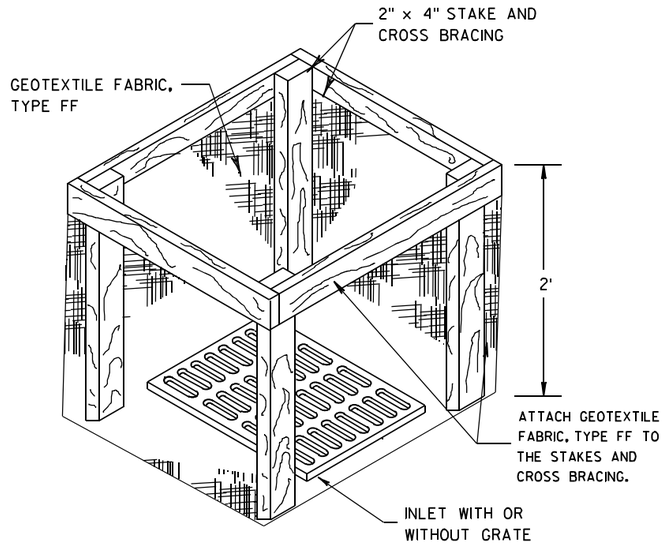
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

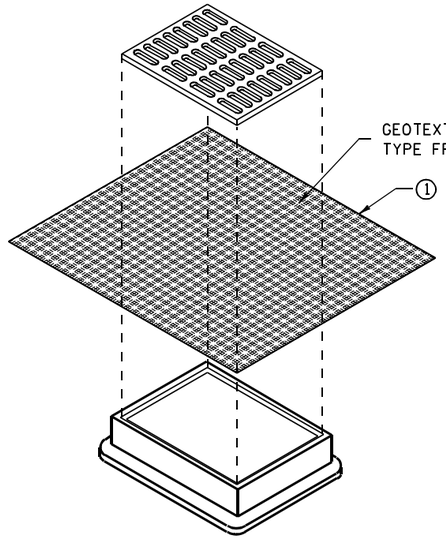
FHWA

6
S.D.D. 8 E 9-6



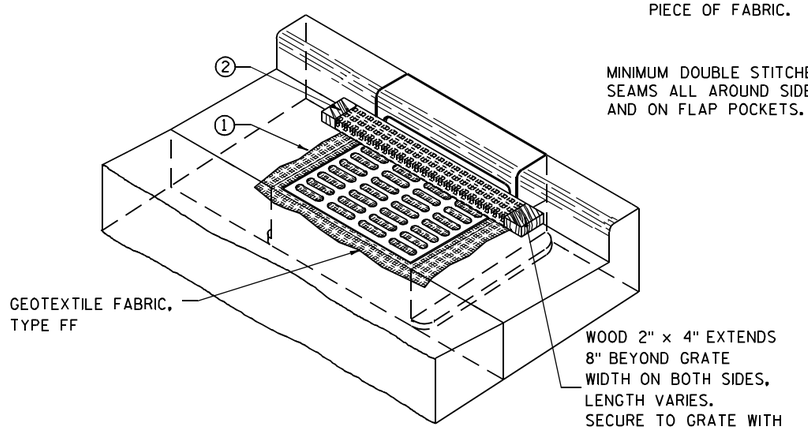


INLET PROTECTION, TYPE A

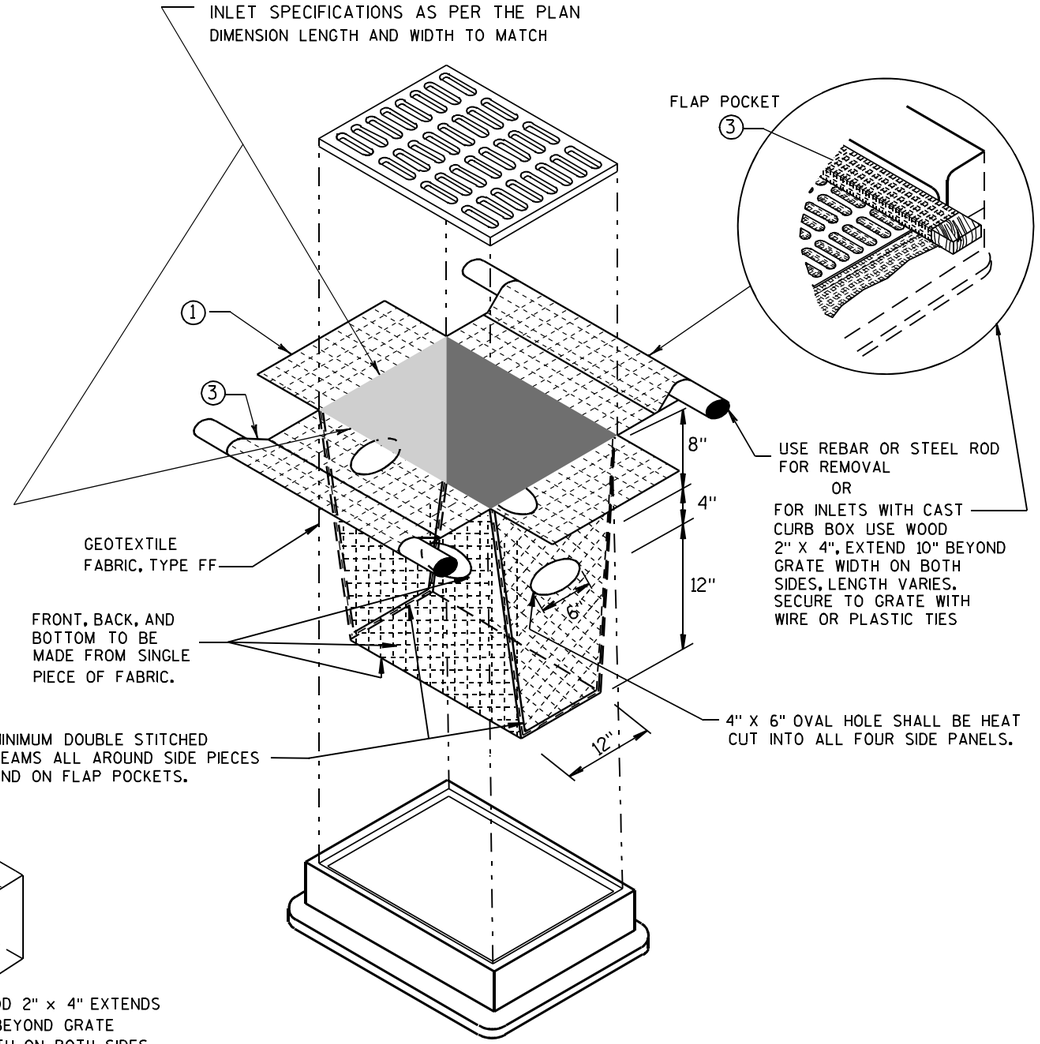


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

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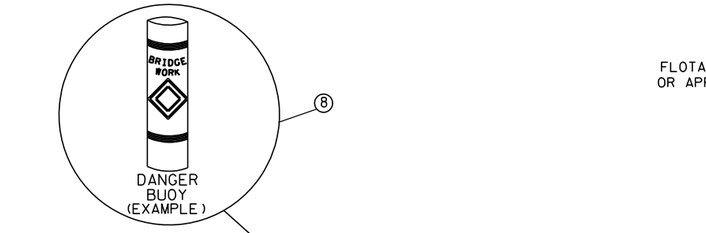
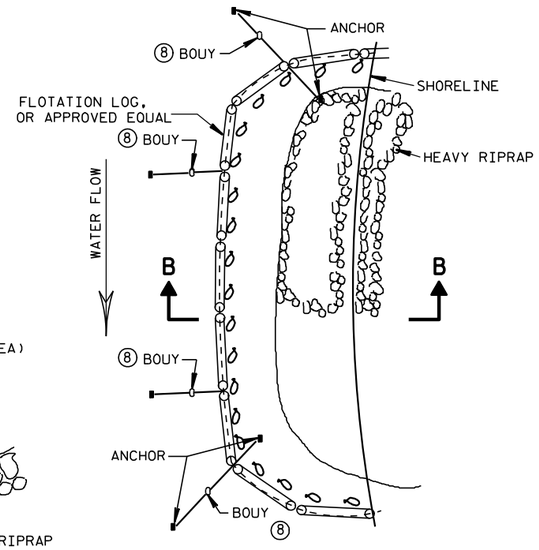
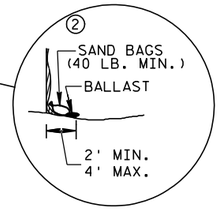
6

S.D.D. 8 E 10-2

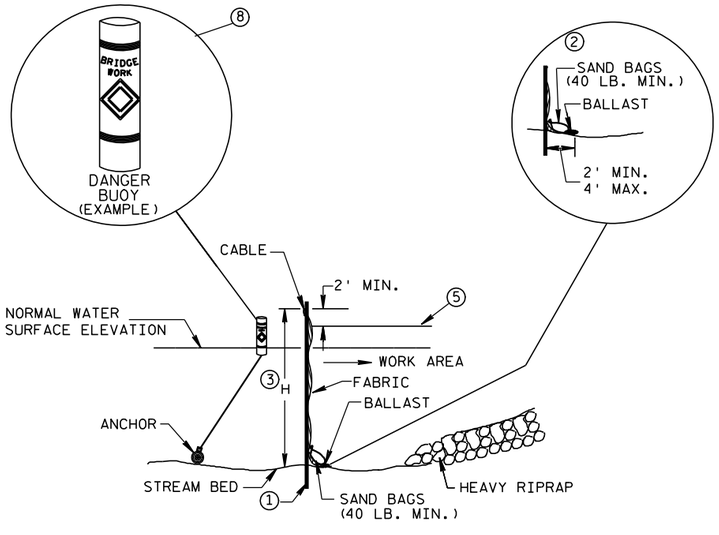


SECTION B-B

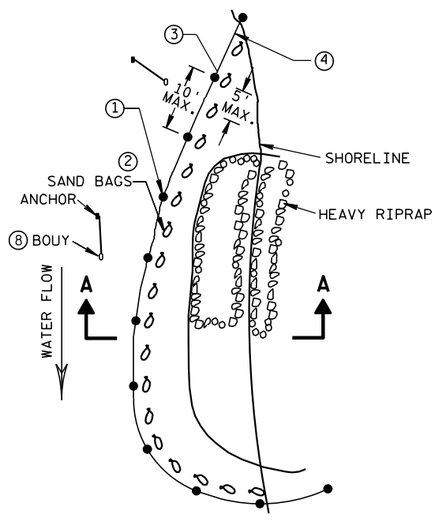




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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 SANDBAGS 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 FT., POST SPACING MAY NEED TO BE DECREASED.

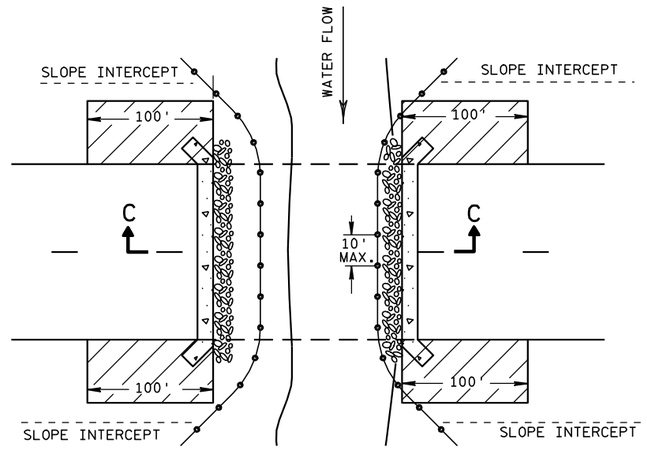
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

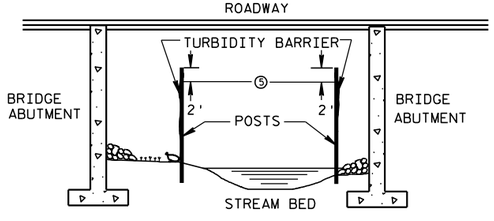
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

6

S.D.D. 8 E 11-2

6

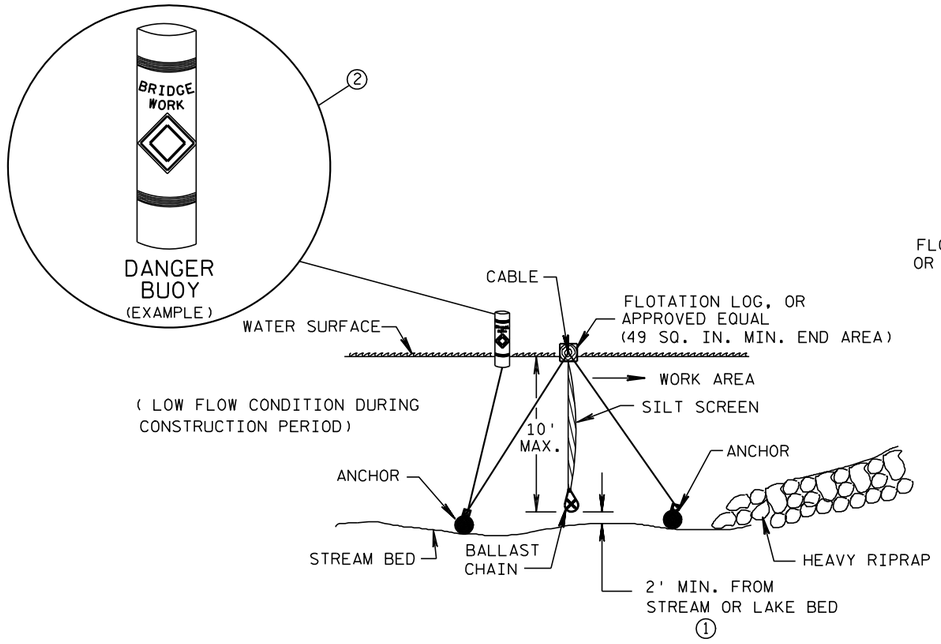
S.D.D. 8 E 11-2

GENERAL NOTES

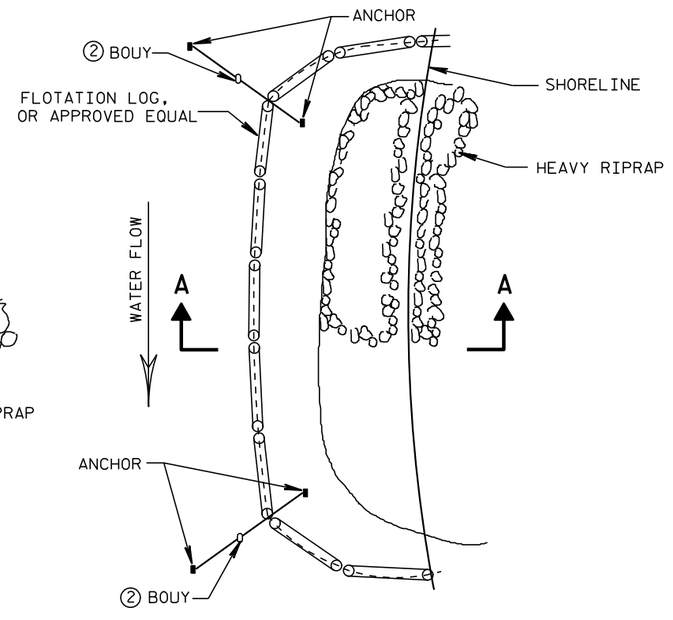
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① 2' MINIMUM SHALL BE MAINTAINED DURING CONSTRUCTION PERIOD.

② USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



SECTION A-A



PLAN VIEW

SILT SCREEN PLACEMENT DETAIL

SILT SCREEN
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 12-1

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S.D.D. 8 E 12-1

METAL APRON ENDWALLS

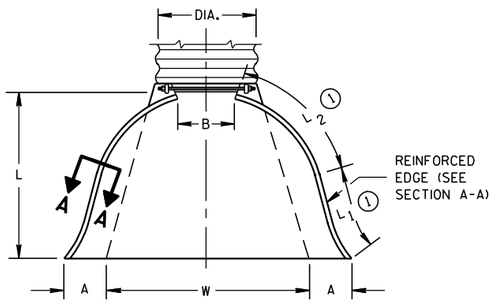
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

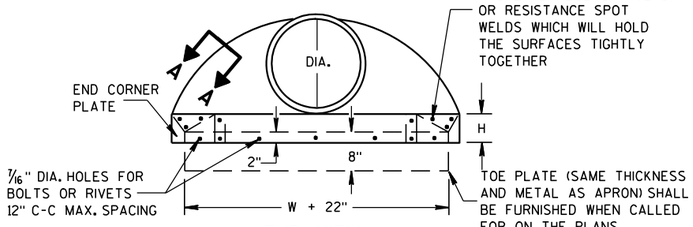
REINFORCED CONCRETE APRON ENDWALLS

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

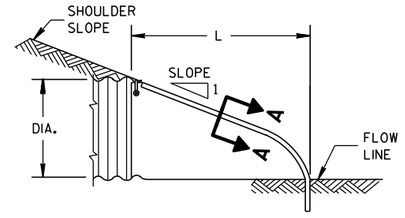
*MINIMUM
**MAXIMUM



PLAN VIEW

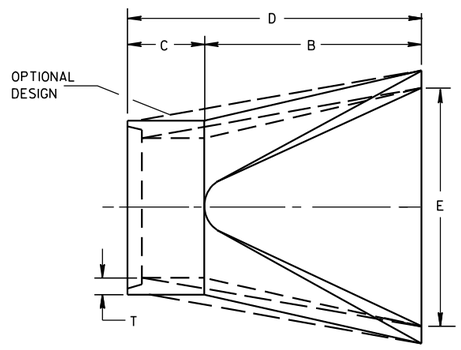


END VIEW

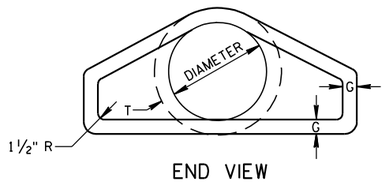


SIDE ELEVATION

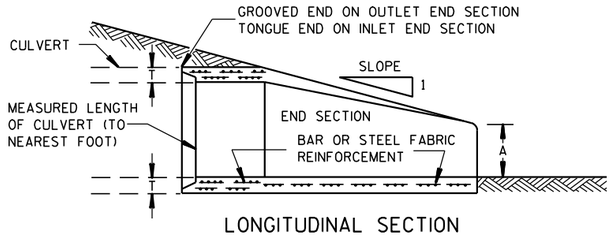
METAL ENDWALLS



PLAN

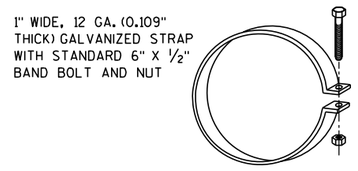


END VIEW



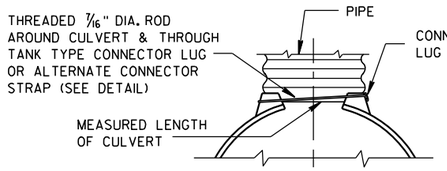
LONGITUDINAL SECTION

CONCRETE ENDWALLS

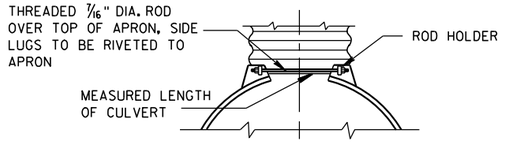


ALTERNATE FOR TYPE 1 CONNECTION

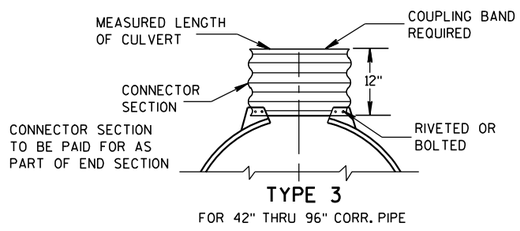
END SECTION CONNECTOR STRAP



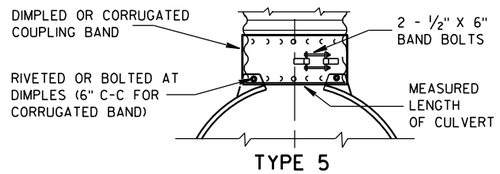
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

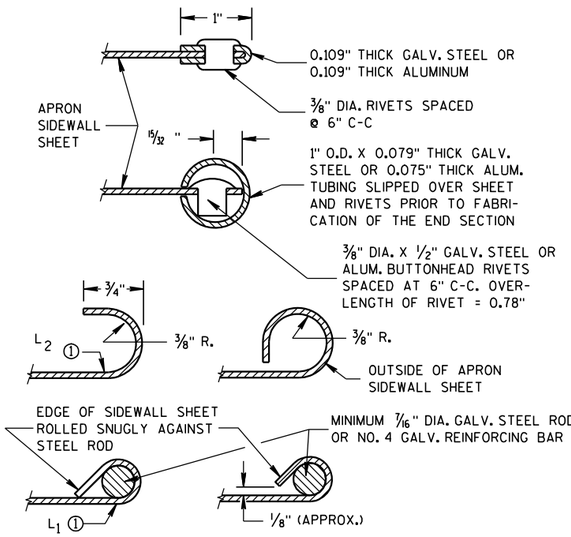
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

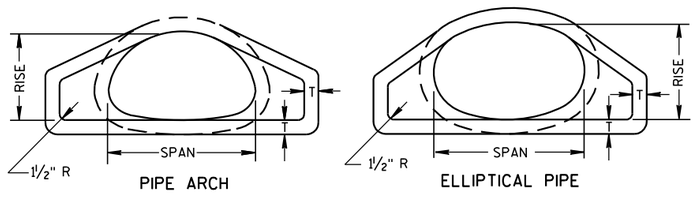
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

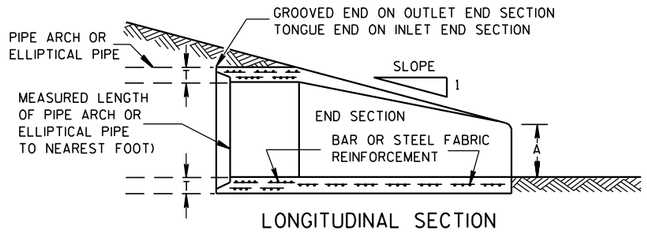
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

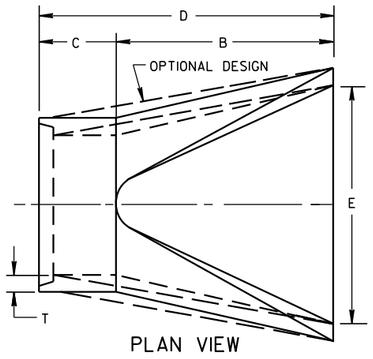
S.D.D. 8 F 1-11



END VIEW

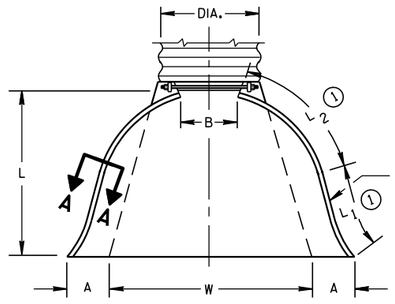


LONGITUDINAL SECTION

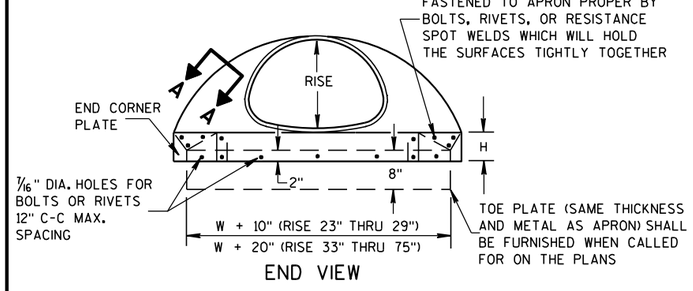


PLAN VIEW

CONCRETE ENDWALLS

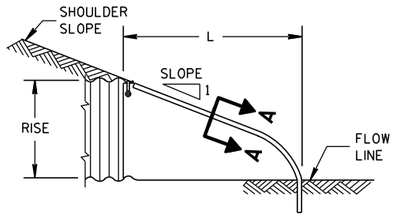


PLAN VIEW



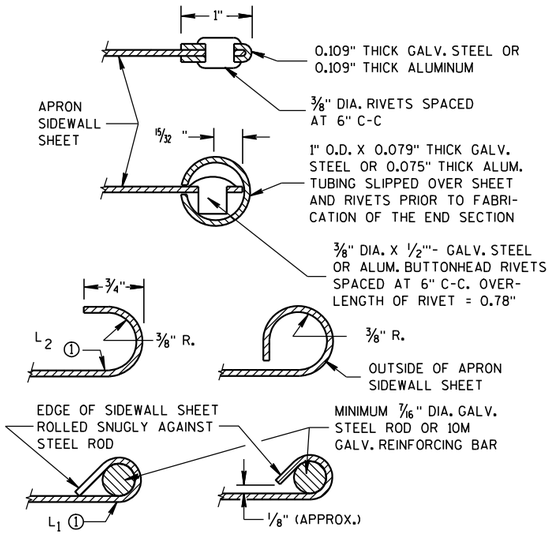
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- ⅔" X ½" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1½")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1½")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

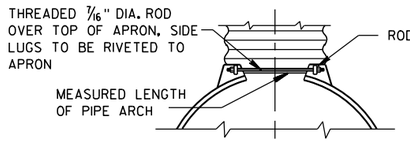
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

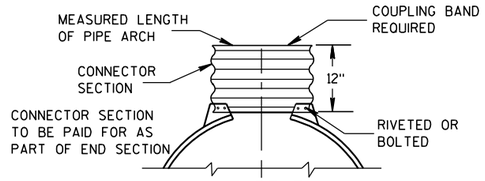
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



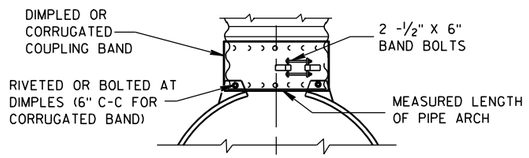
TYPE 2

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



TYPE 3

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



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

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

CONNECTION DETAILS

GENERAL NOTES

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

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

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

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

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

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

FHWA

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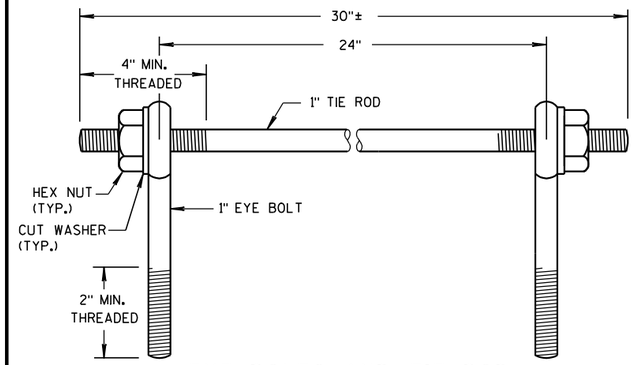
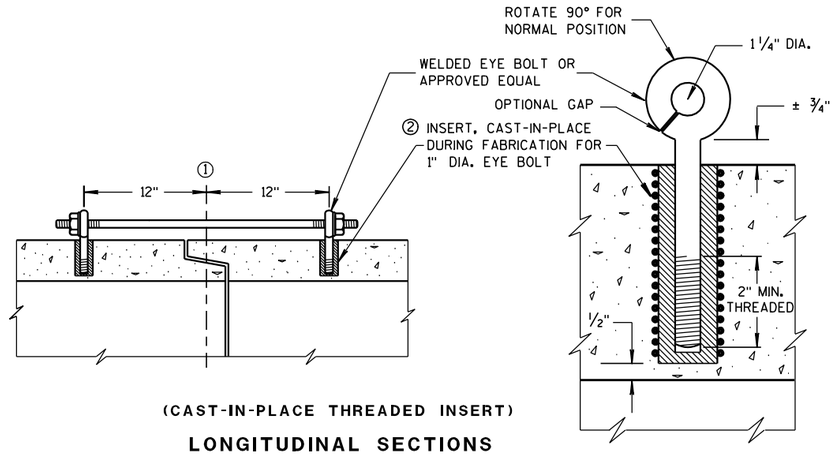
S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 APPLICABLE SPECIAL PROVISIONS.

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

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

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

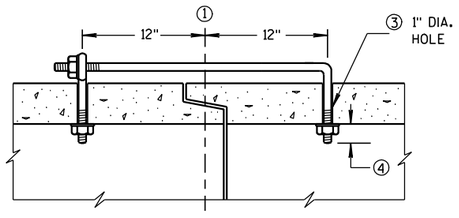
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

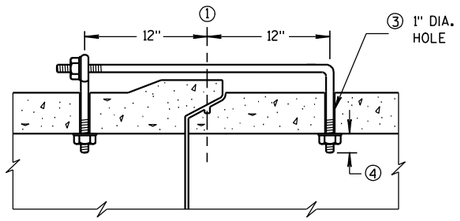
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

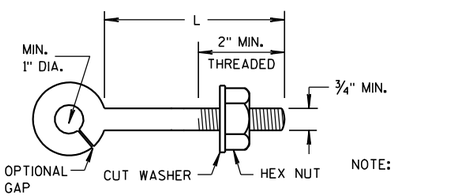


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

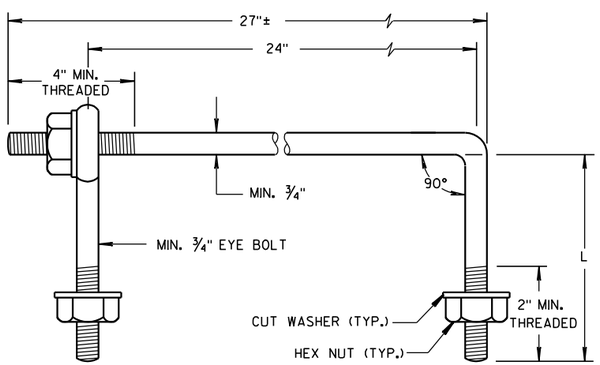
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

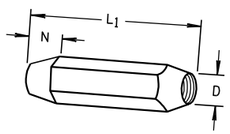
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



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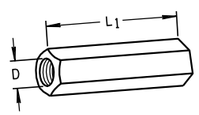
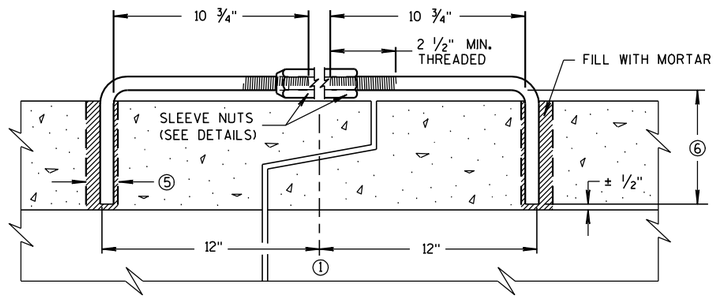


PLAIN

RIGHT AND LEFT THREADS

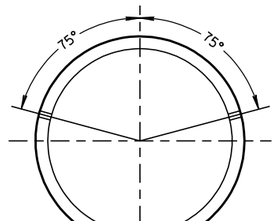
SLEEVE NUTS



LONGITUDINAL SECTION

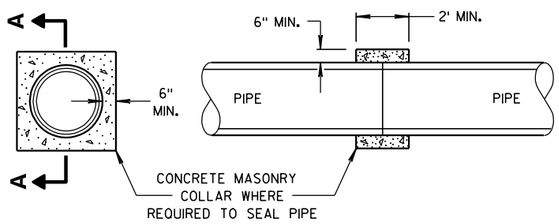
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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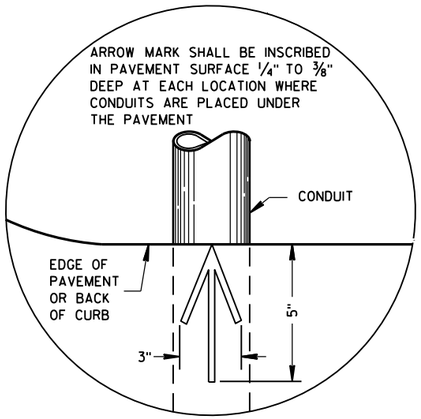
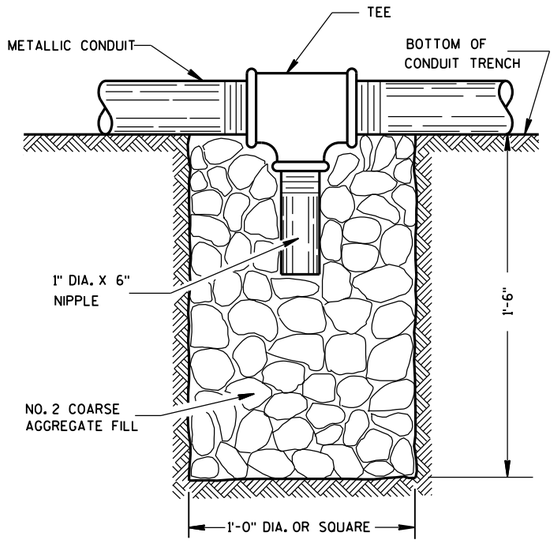
S.D.D. 8 F 4-7



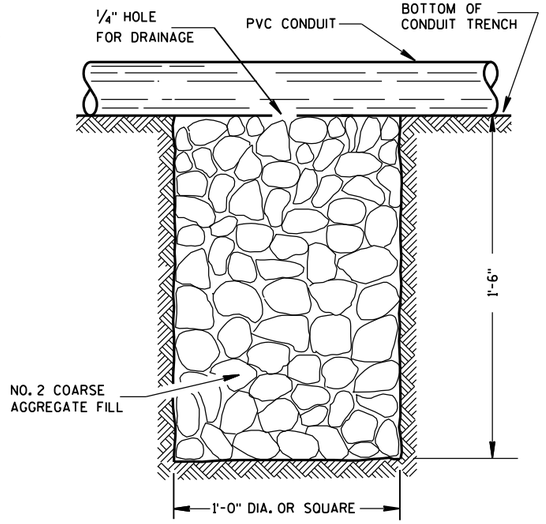
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

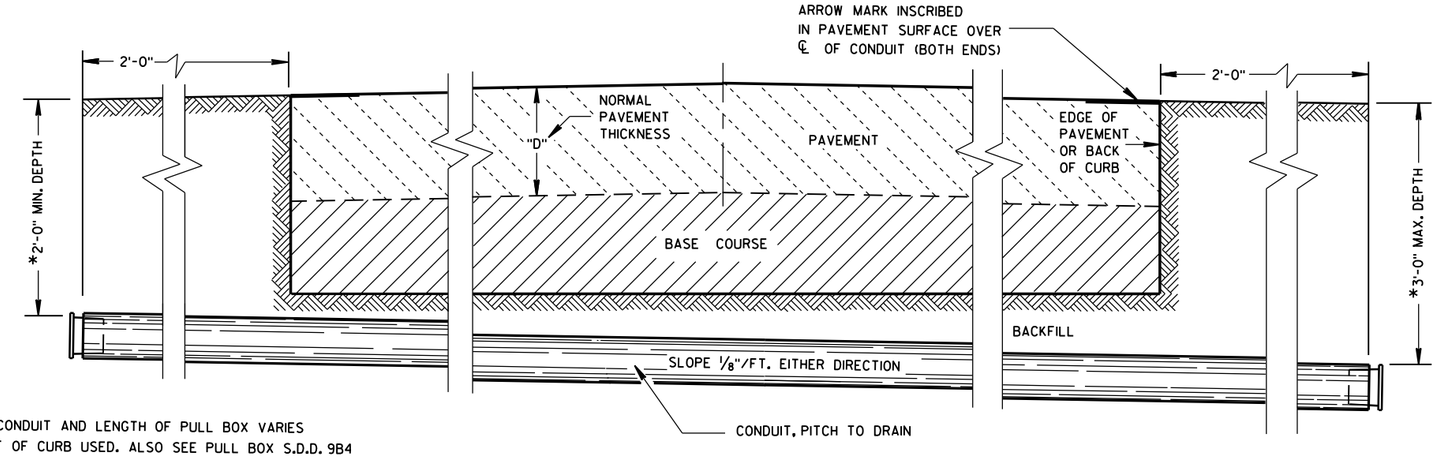
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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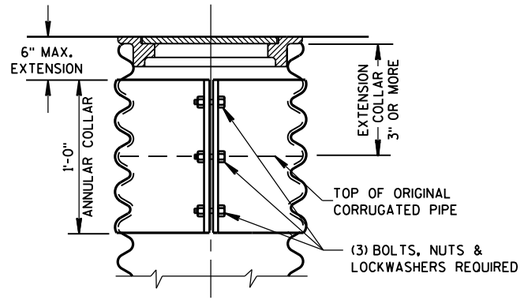
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

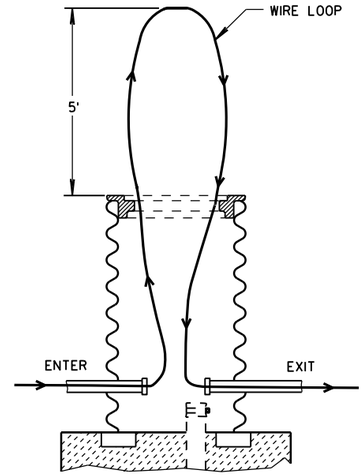
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

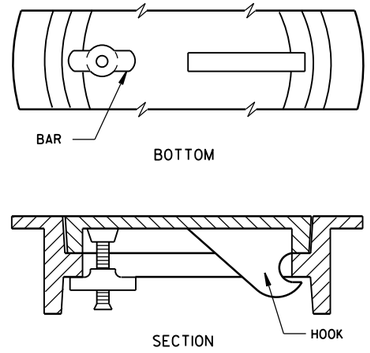
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

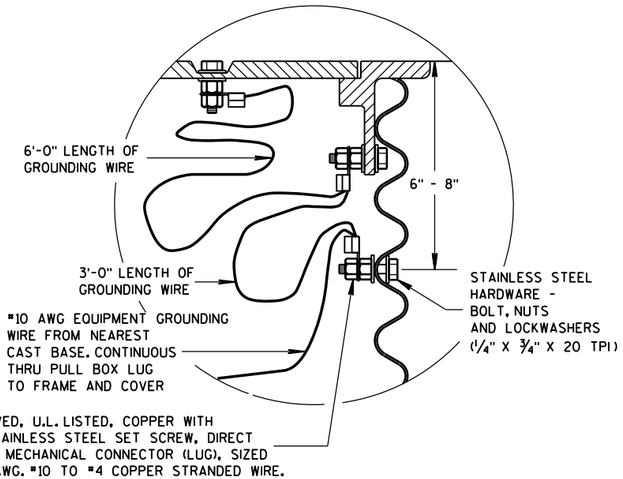


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

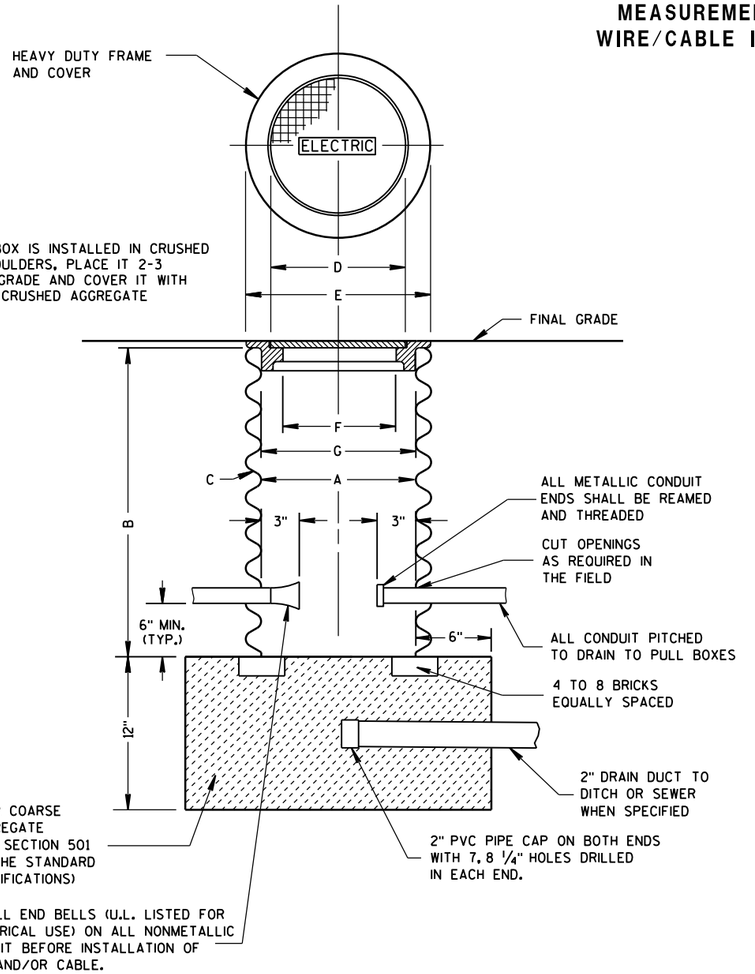


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

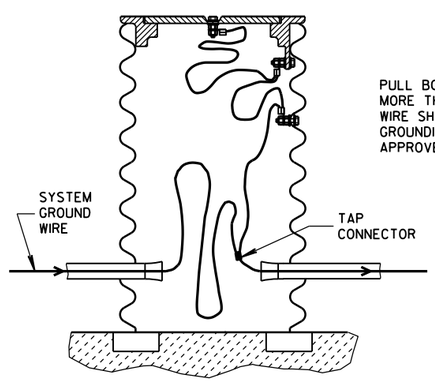
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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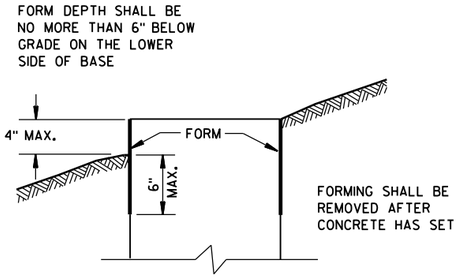


FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

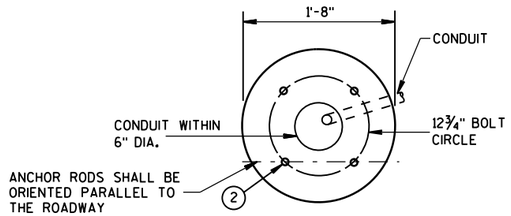
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

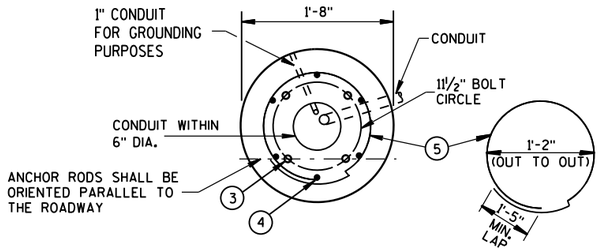
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

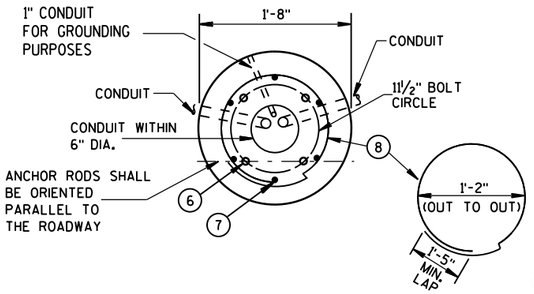
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

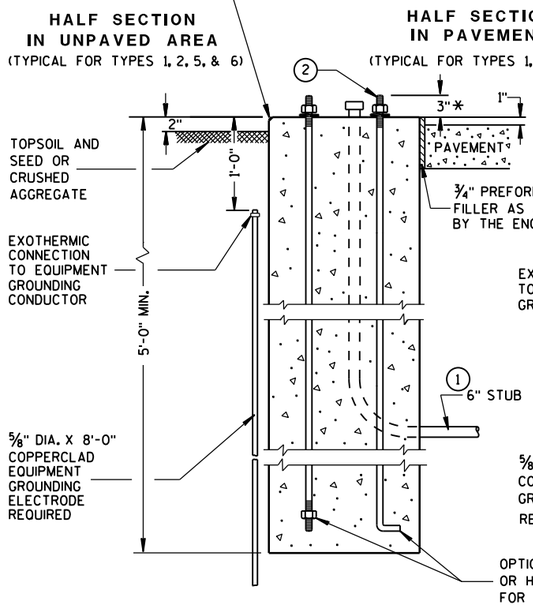
(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

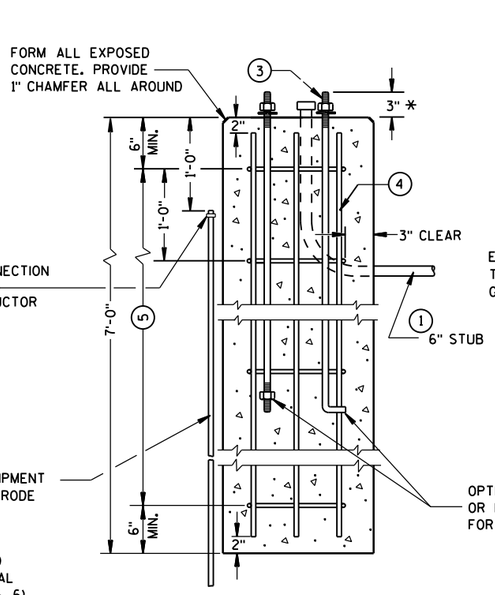
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.



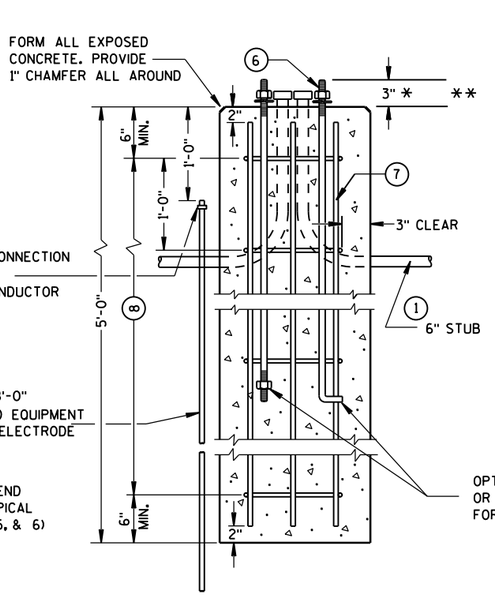








TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

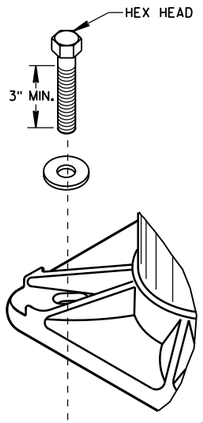
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

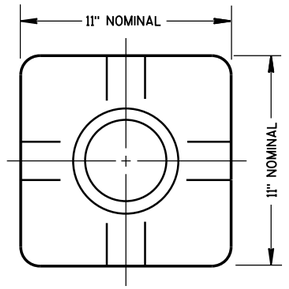
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

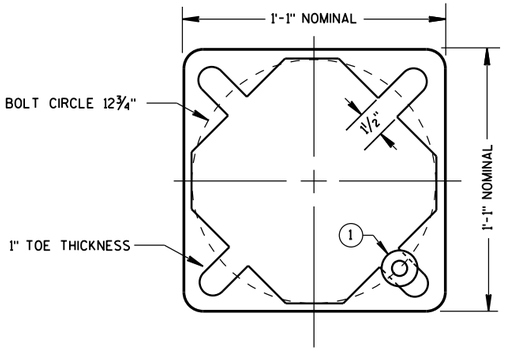
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

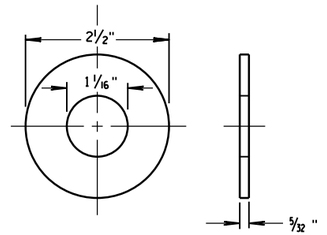




TOP VIEW
(PEDESTAL BASE)

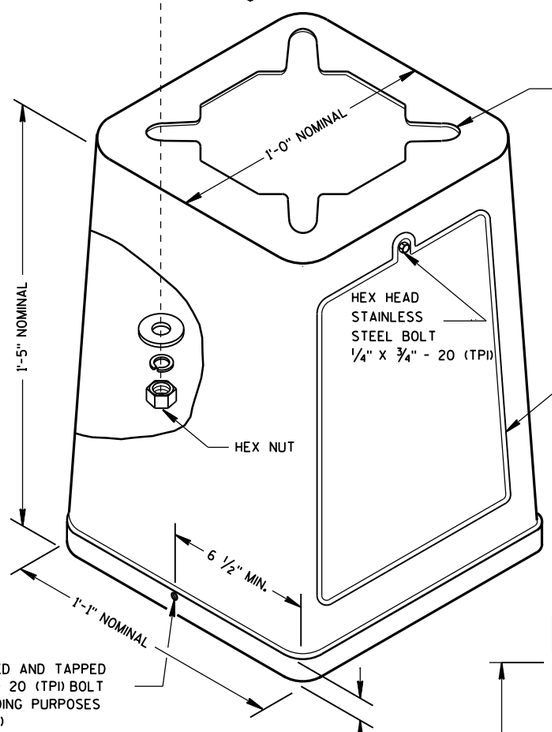


BOTTOM VIEW
(PEDESTAL BASE)

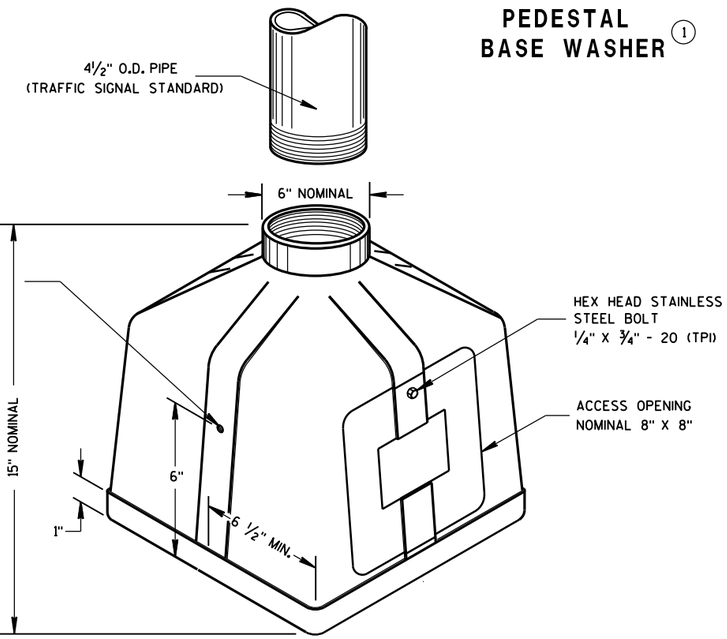


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

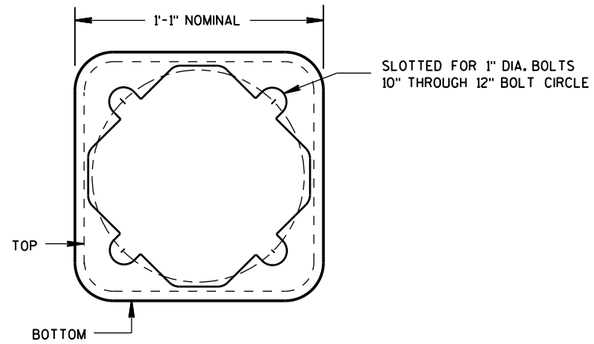


ISOMETRIC VIEW

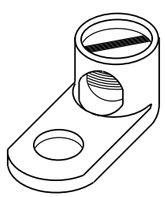


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

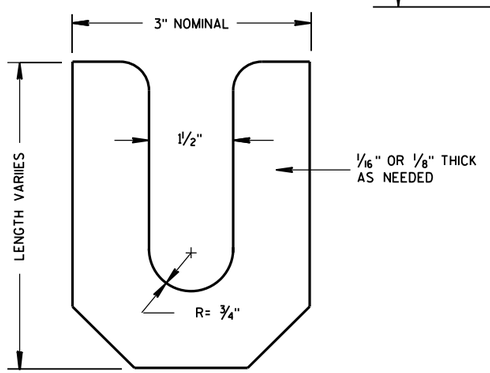


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
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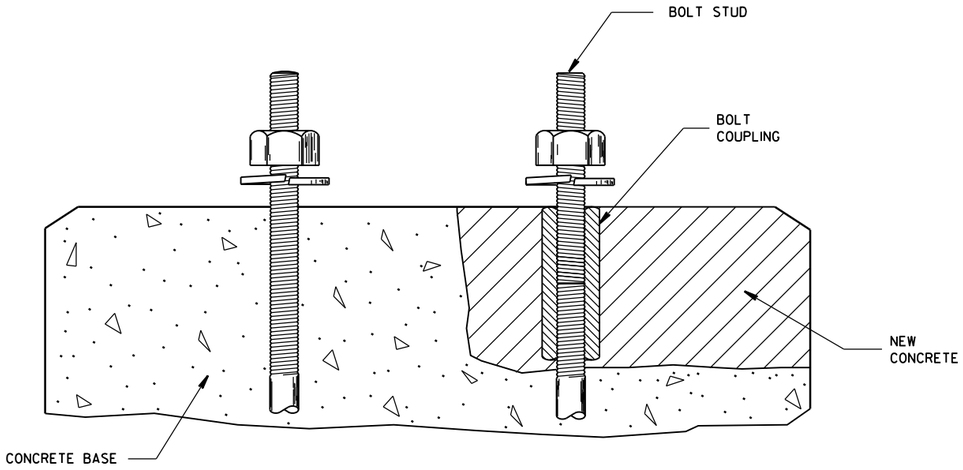


STEP 2
SECTION VIEW

ALL THREADING SHALL BE STANDARD UNIFIED NATIONAL COARSE SERIES WITH-

1" - 8 THREADS PER INCH
¾" - 10 THREADS PER INCH
⅝" - 11 THREADS PER INCH

GENERAL NOTES

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

CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 501 OF THE STANDARD SPECIFICATIONS.

BOLT COUPLINGS AND BOLT STUDS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS FOR ANCHOR RODS IN SUBSECTION 654.2.1 FOR GRADE 105 ANCHOR BOLTS AND 641.2.2 FOR GRADE 55 ANCHOR BOLTS IN THE STANDARD SPECIFICATIONS.

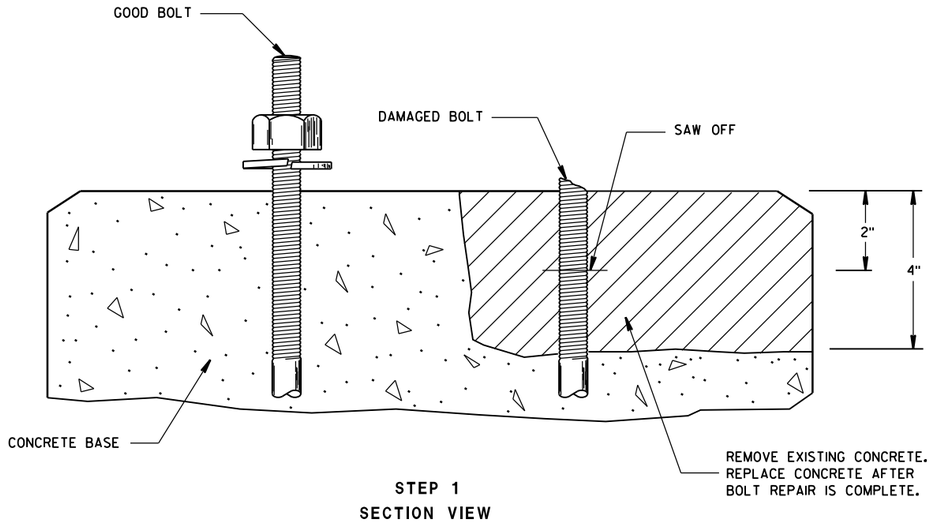
BOLT STUDS SHALL BE THREADED ALONG THEIR ENTIRE LENGTH.

THREADS ON BOLTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE COATINGS TO PERMIT NUTS TO RUN FREELY ON THE THREADS.

A FORM SHALL BE USED WHEN REPLACING THE CONCRETE THAT WAS REMOVED FOR BOLT REPAIR.

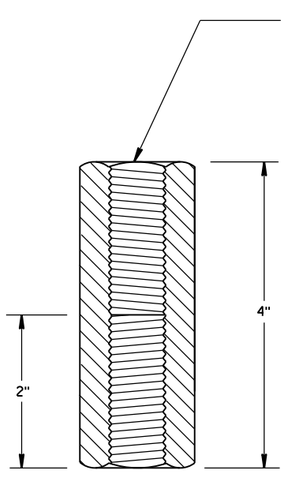
THE CURVATURE OF THE FORM SHALL CONFORM TO THE BASE DIAMETER AND BE LARGE ENOUGH TO COMPLETELY COVER THE OPENING IN THE SIDE OF THE CONCRETE BASE.

IN THE EVENT THAT A REINFORCING ROD IS SO CLOSE TO A BOLT BEING REPAIRED THAT THE COUPLING CANNOT BE INSTALLED, CUT OFF THE REINFORCING ROD.

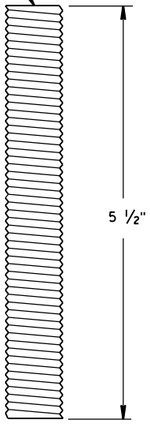


STEP 1
SECTION VIEW

CONCRETE BASE BOLT REPAIR



SECTION VIEW
BOLT COUPLING



BOLT STUD

CONCRETE BASE
BOLT REPAIR

STATE OF WISCONSIN
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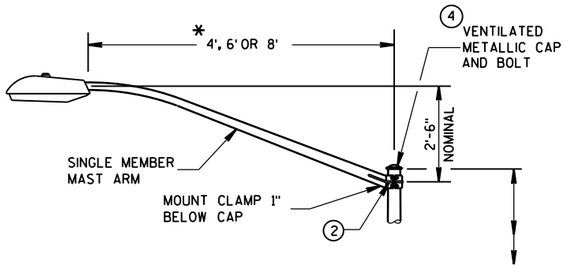
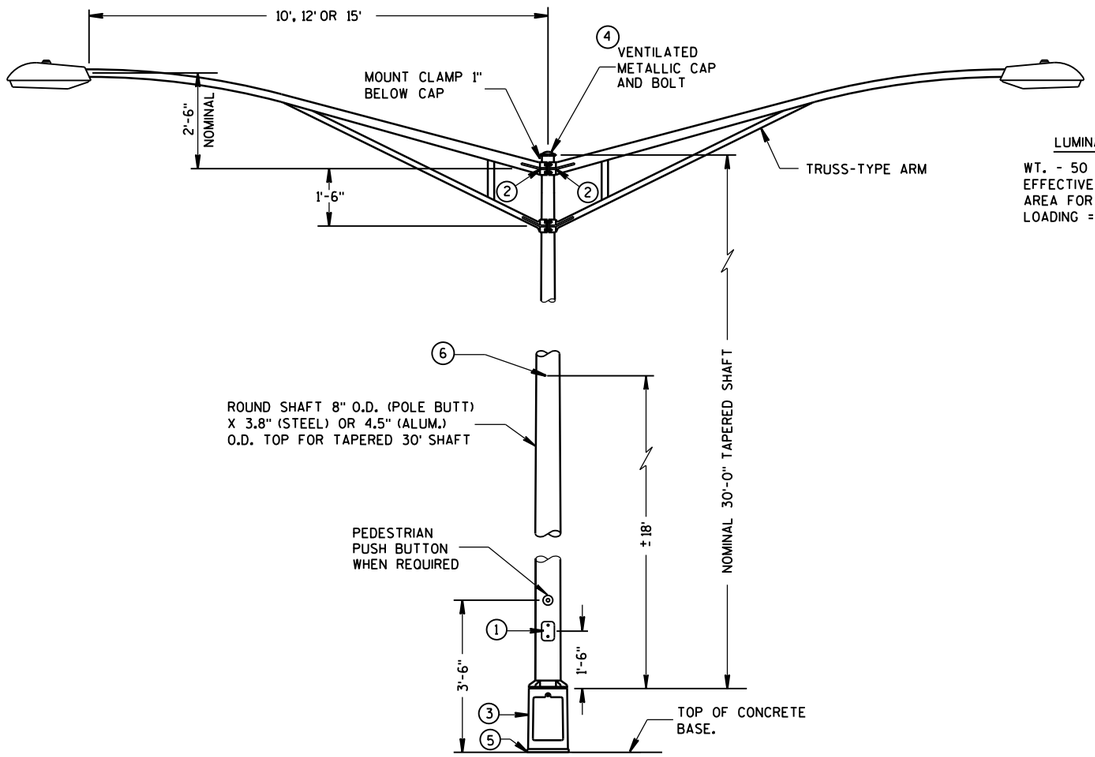
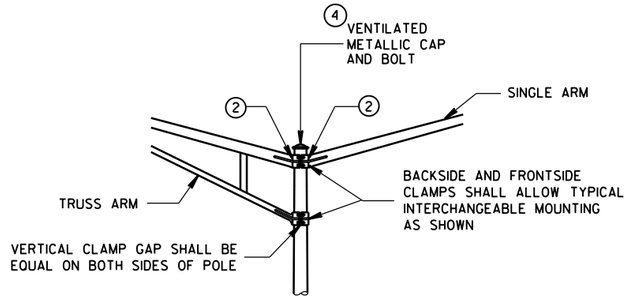
*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

S.D.D. 9 E 1-14d

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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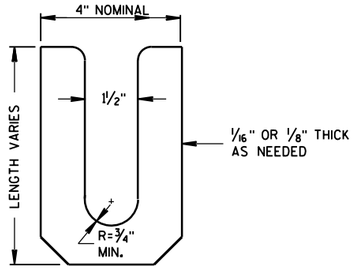
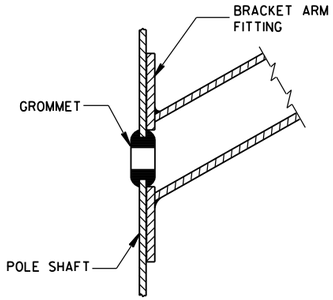
S.D.D. 9 E 1-14d

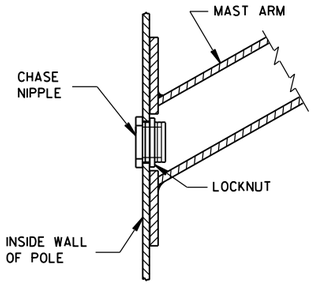


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

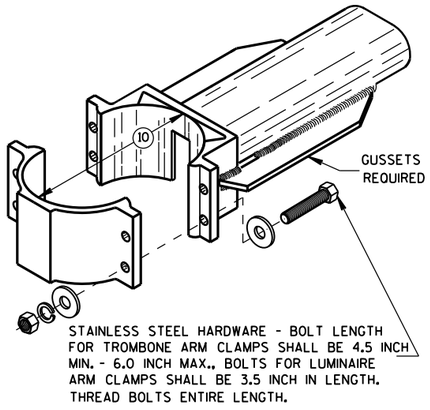
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

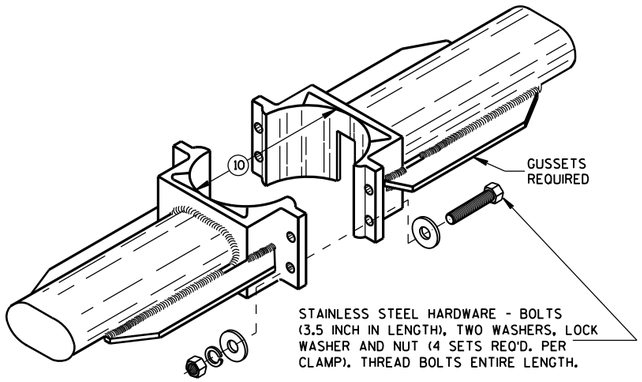
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

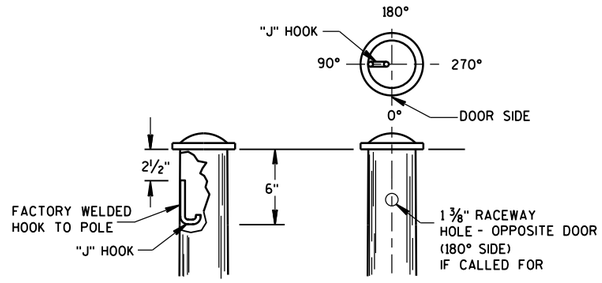
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



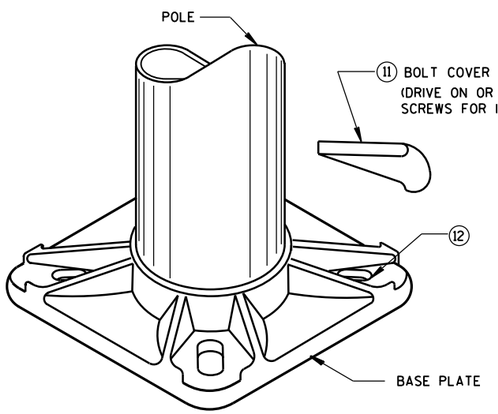
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



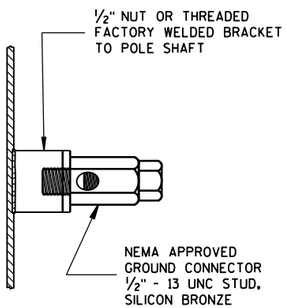
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

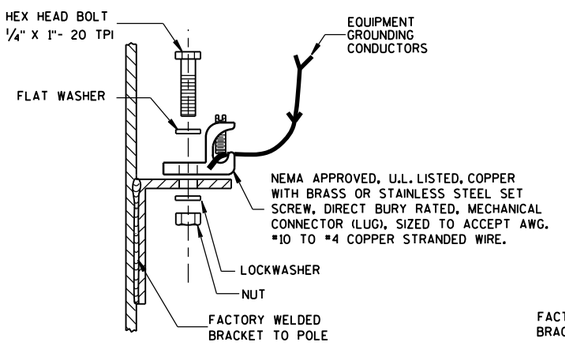


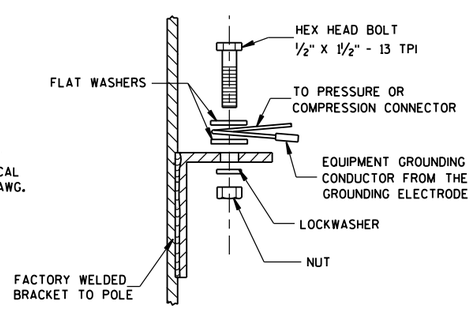
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

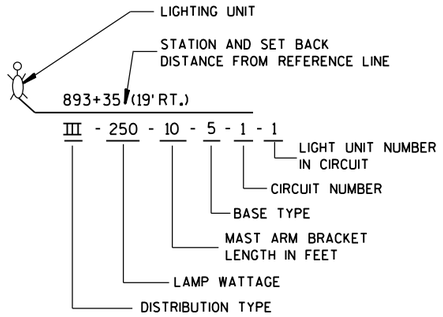
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

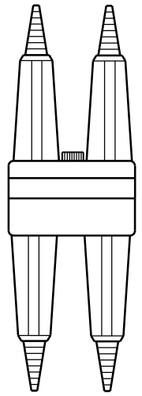
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

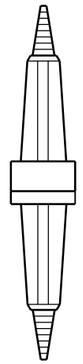
6
S.D.D. 9 E 1-14g



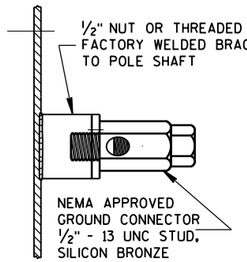
LIGHTING UNIT CODE
(TYPICAL)

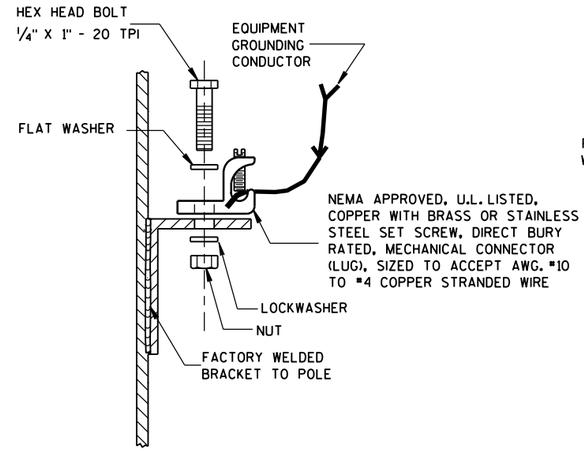


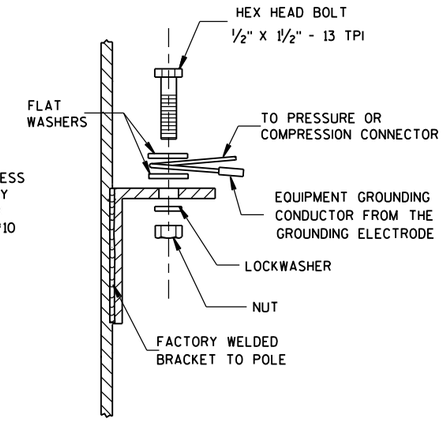
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



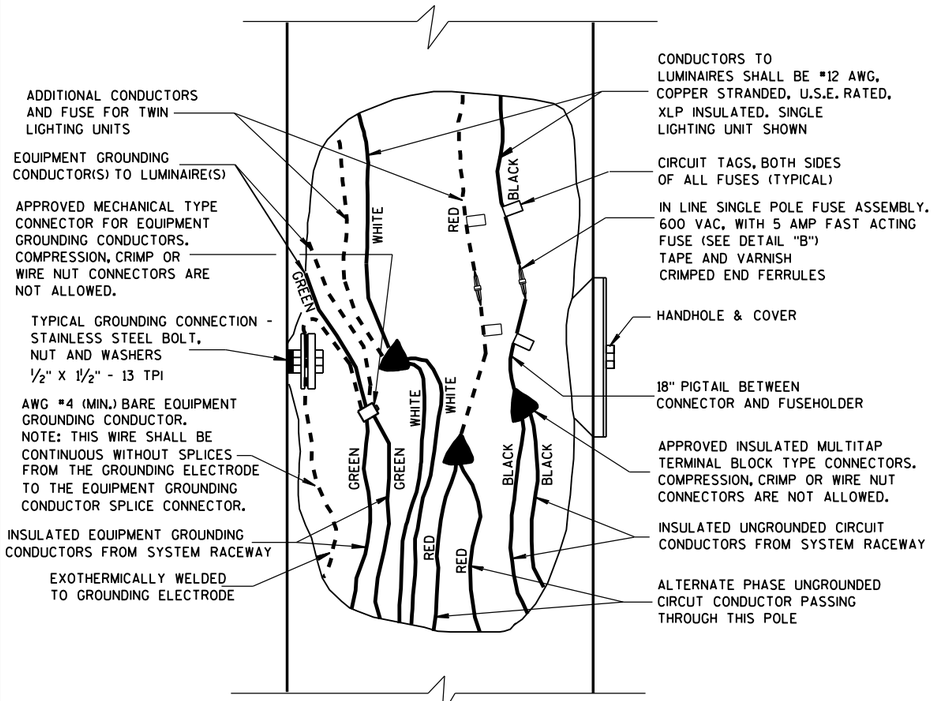
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



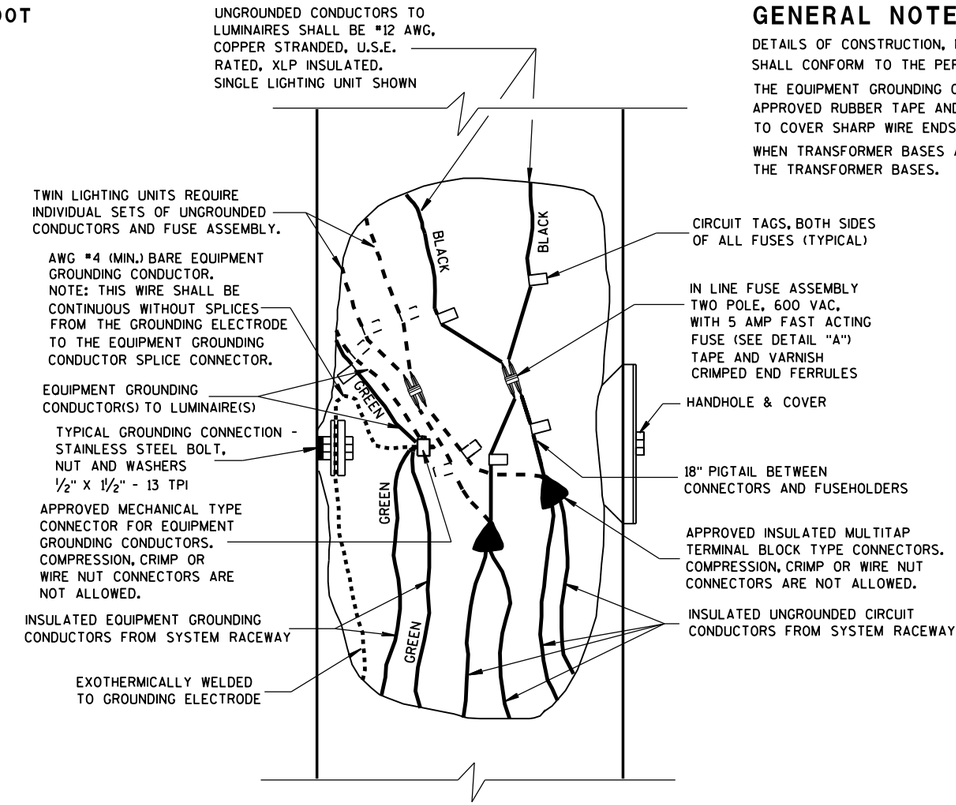




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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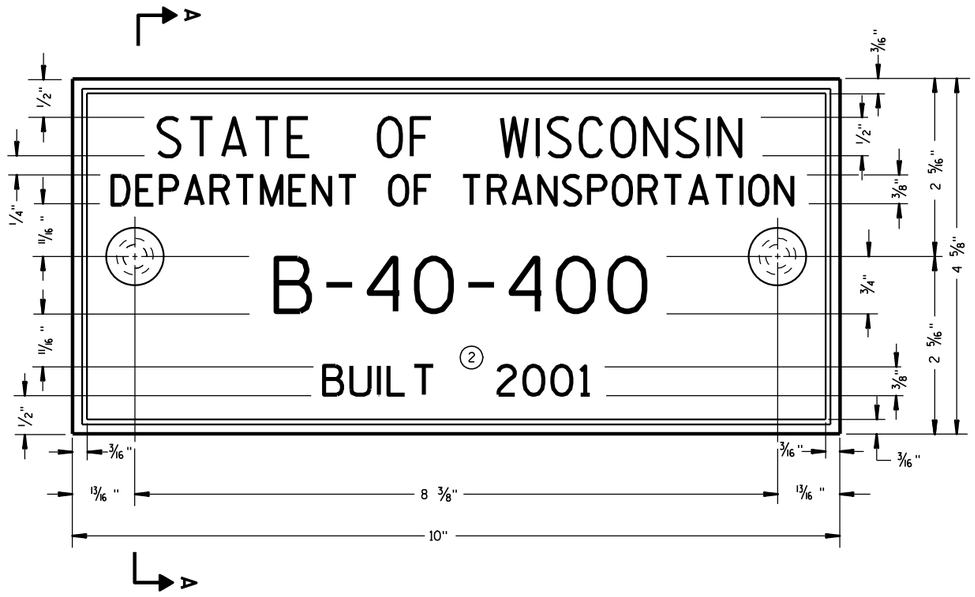
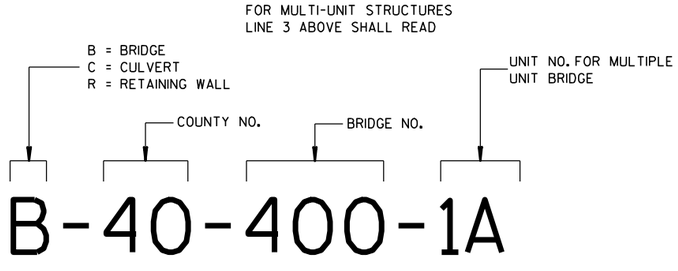
S.D.D. 9 E 3-5



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

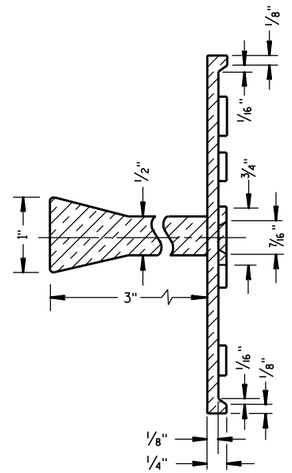
GENERAL NOTES

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.

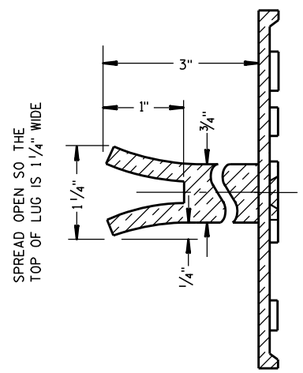
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

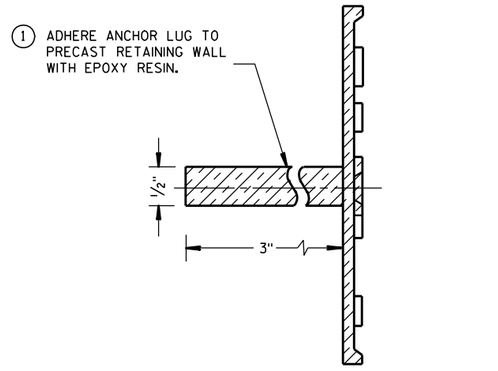
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



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

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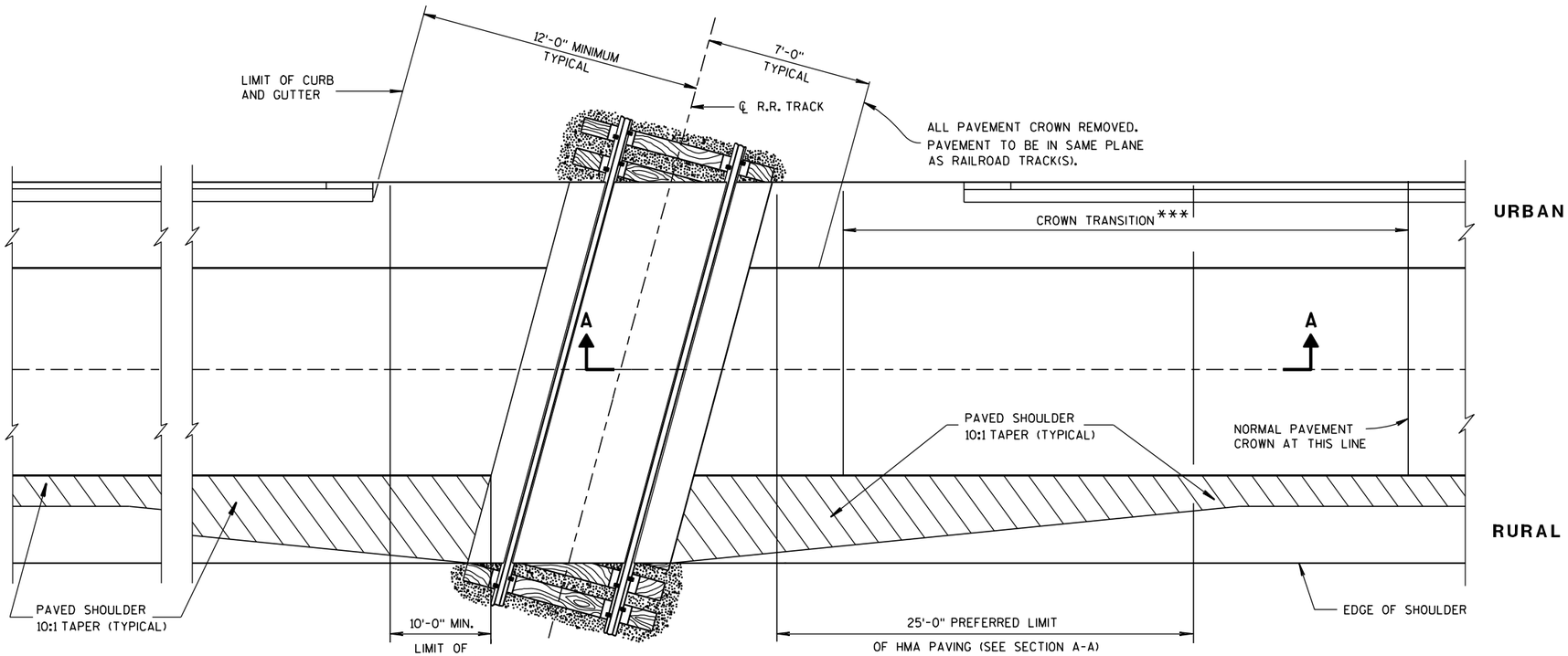
S.D.D. 12 A 3-10



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.

TIMBER, CONCRETE OR RUBBER CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, GEOTEXTILE FABRIC AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS OTHERWISE PROVIDED.

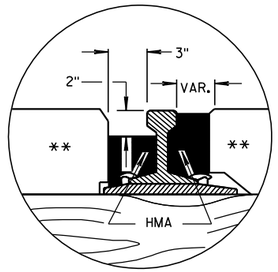
HMA PAVEMENT APPROACHES AND HMA PAVEMET CROSSING SURFACES TO BE PLACED BY CONTRACTOR UNLESS OTHERWISE PROVIDED.

HMA FLANGEWAY AND FIELD FILLERS TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR WHEN NOT PROVIDED BY OTHERS. SEE DETAIL B. HMA FILLERS NOT REQUIRED WHEN RUBBER FILLERS ARE PROVIDED.

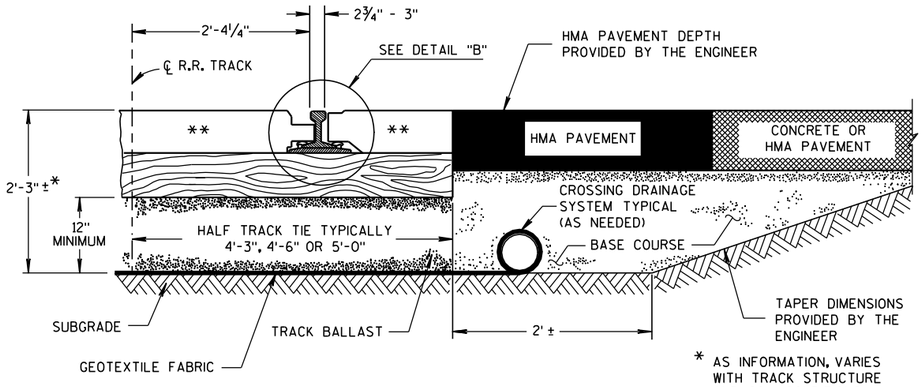
HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

** CROSSING SURFACE MAY BE TIMBER, RUBBER, CONCRETE, HMA PAVEMENT OR A COMBINATION OF SUCH MATERIALS.

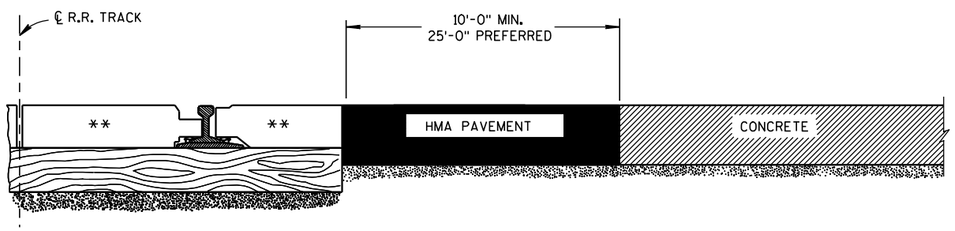
*** CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.



DETAIL B
HMA FLANGEWAY AND FIELD FILLERS



TYPICAL HALF SECTION



SECTION A-A
CONCRETE PAVEMENT APPROACH

SECTION A-A
HMA PAVEMENT APPROACH

EXAMPLES OF PAVEMENT APPROACHES

PAVEMENT DETAILS FOR RAILROAD APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-28-09 DATE
/S/ Ronald E. Adams
CHIEF, RAILROADS & HAI CTION
FHWA

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S.D.D. 13 B 1-10

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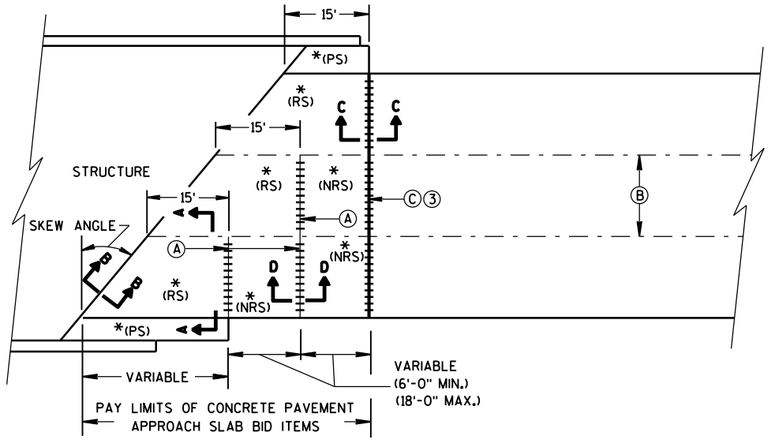
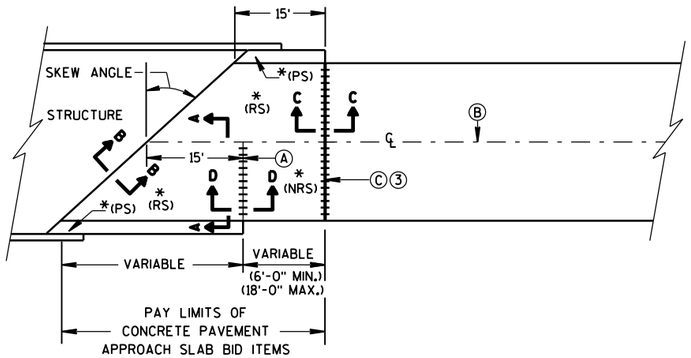
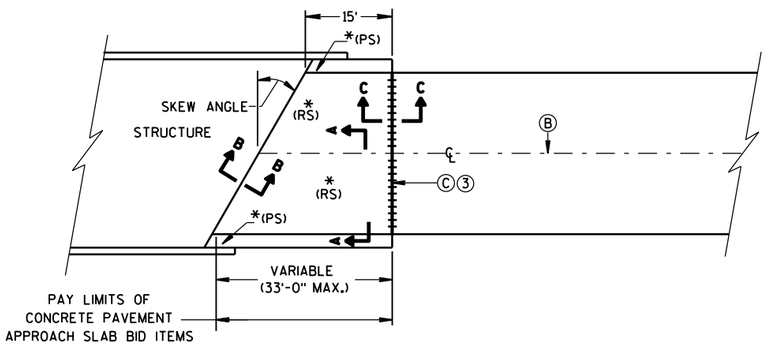
S.D.D. 13 B 1-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



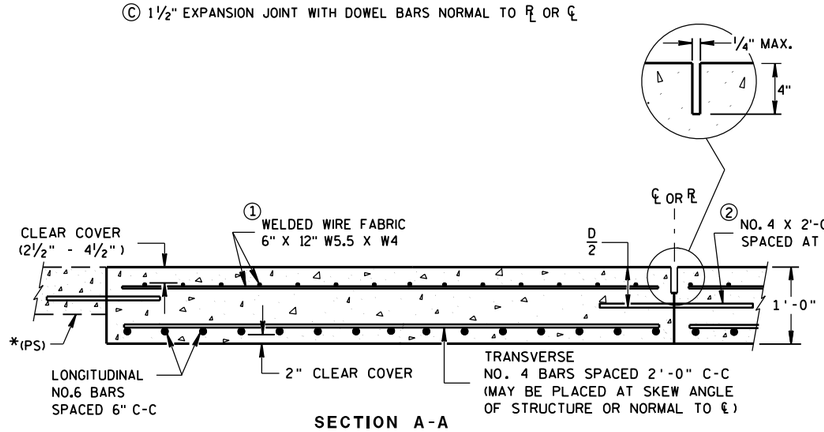
SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

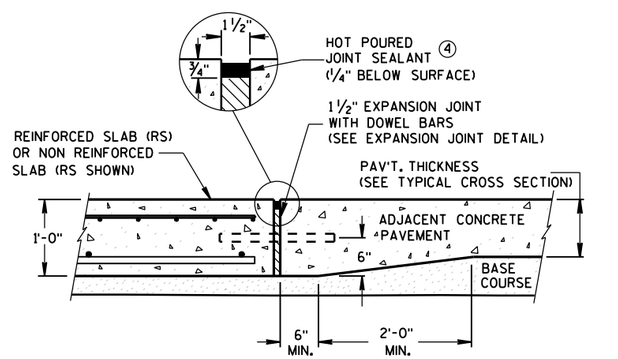
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

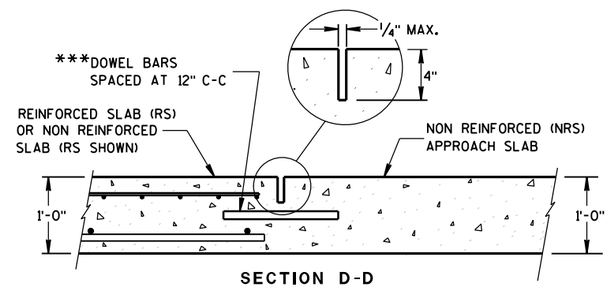
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

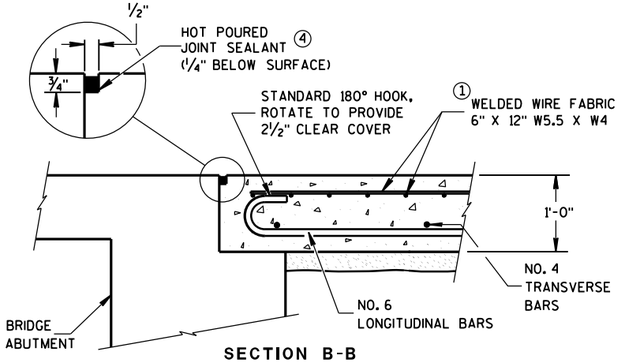
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

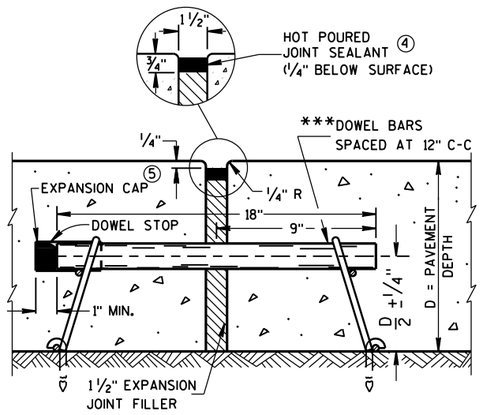
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

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



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

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S.D.D. 13 B 2-8a
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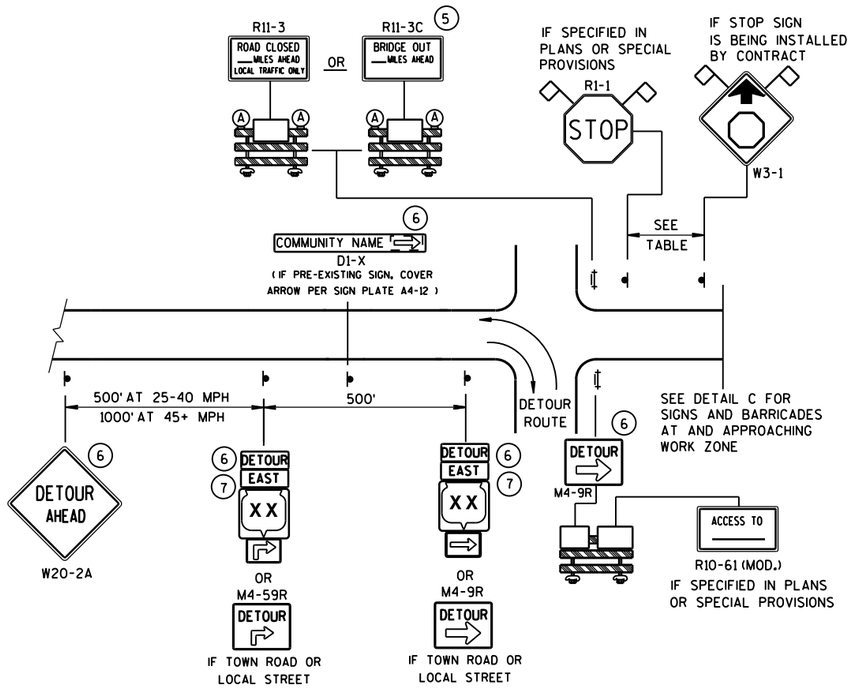
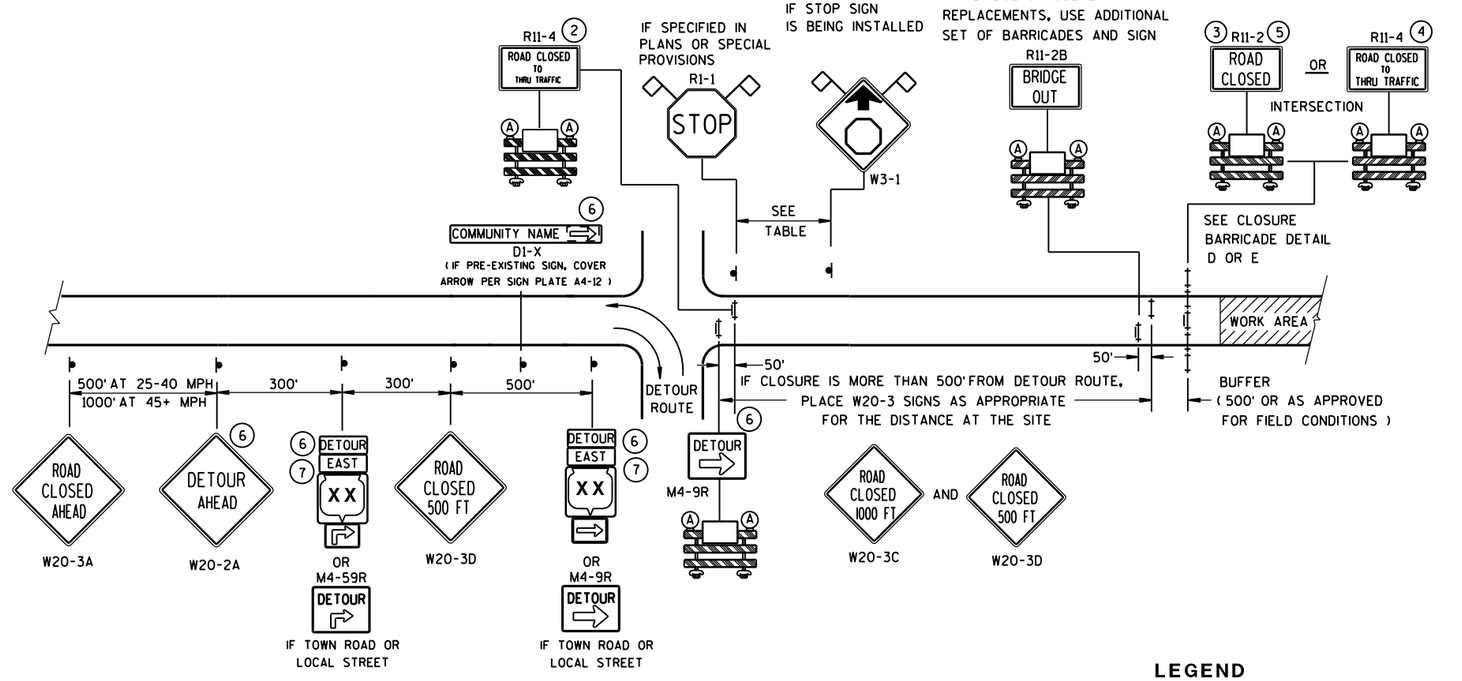
S.D.D. 13 B 2-8a



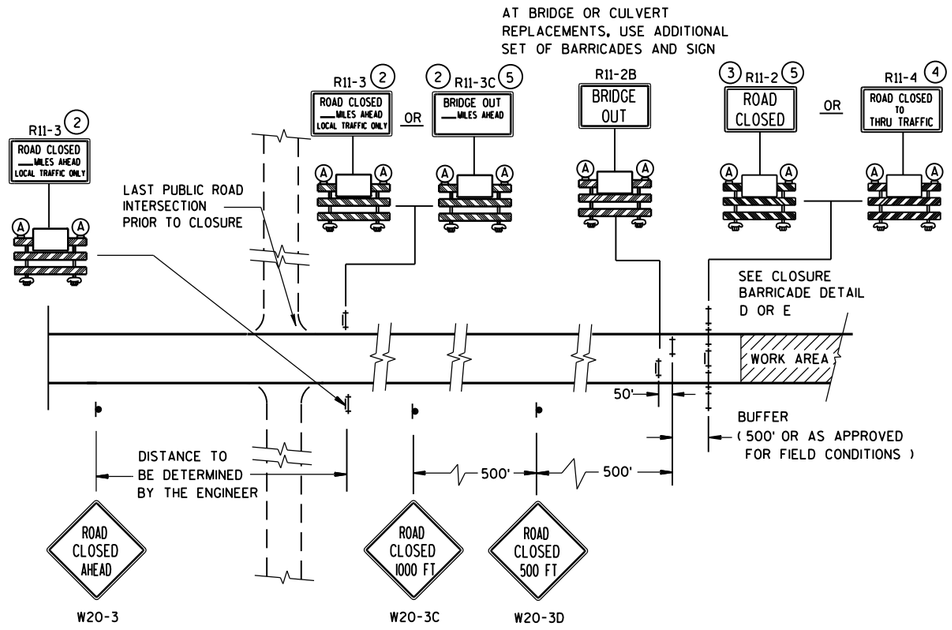
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

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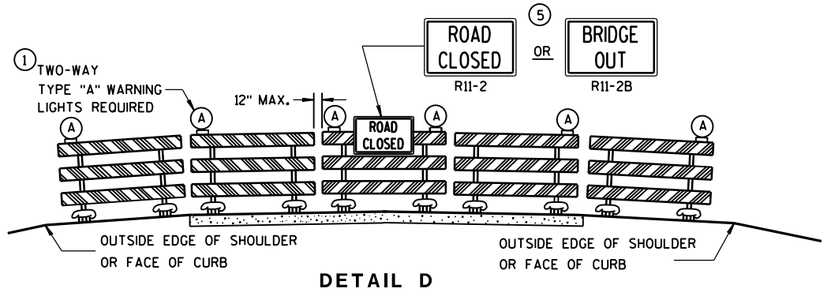
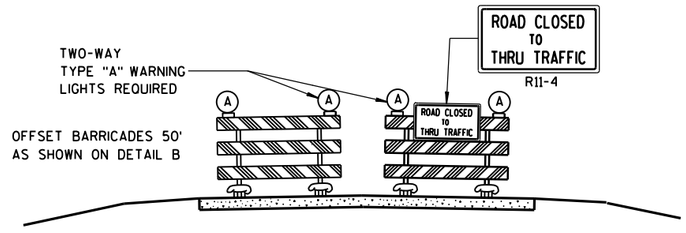
S.D.D. 15 C 2-6a



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)
- 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 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 LANE 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 MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA — FIC

6

S.D.D. 15 C 2-6b

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

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.

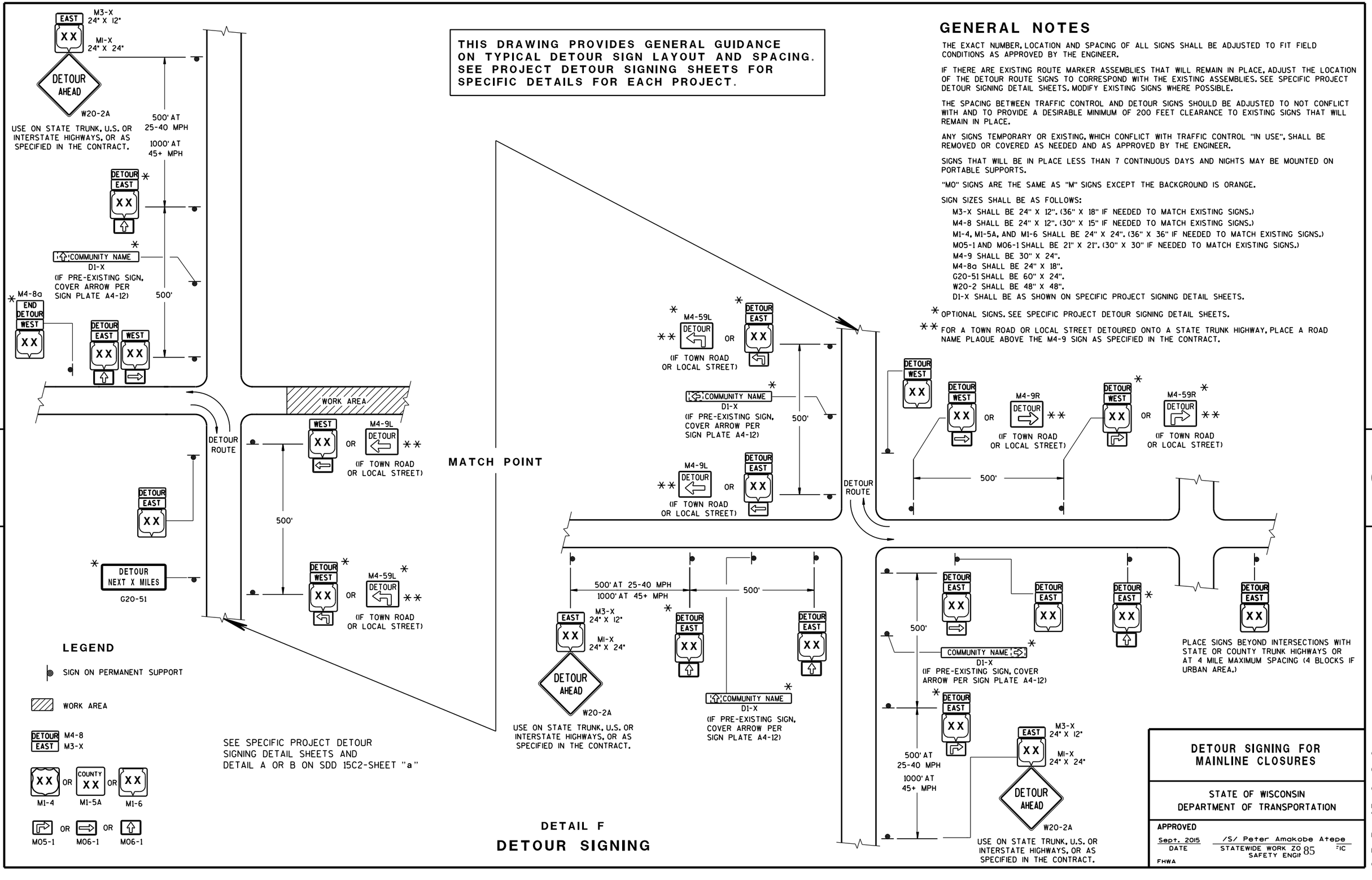
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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". (30" X 15" 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 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 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.



DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept. 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZO SAFETY ENGI
FHWA	

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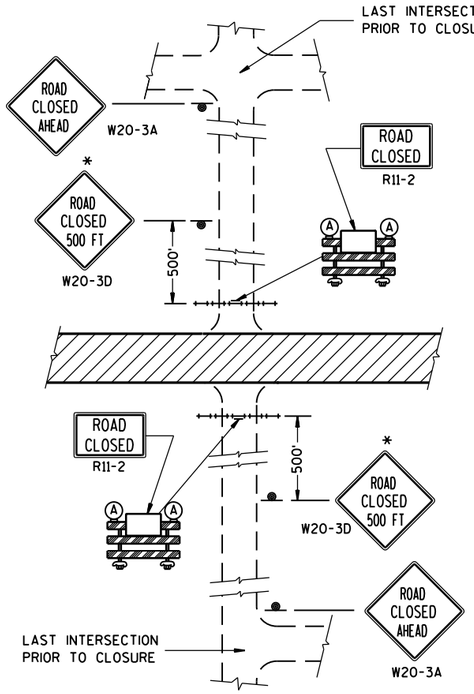
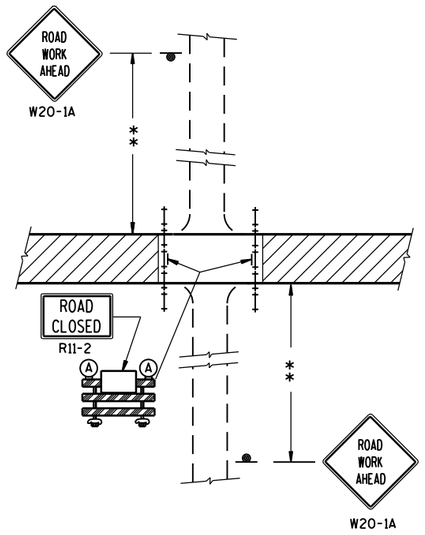
S.D.D. 15 C 2-6c



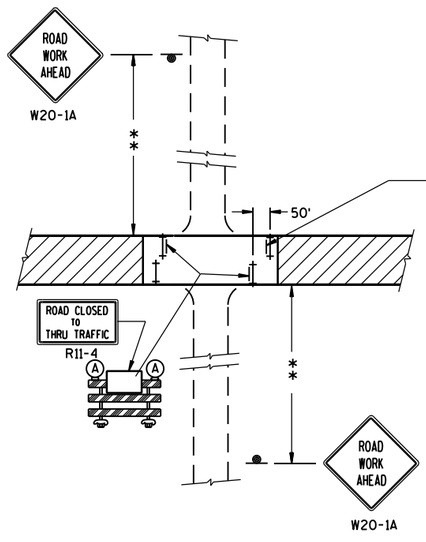
DETAIL 1

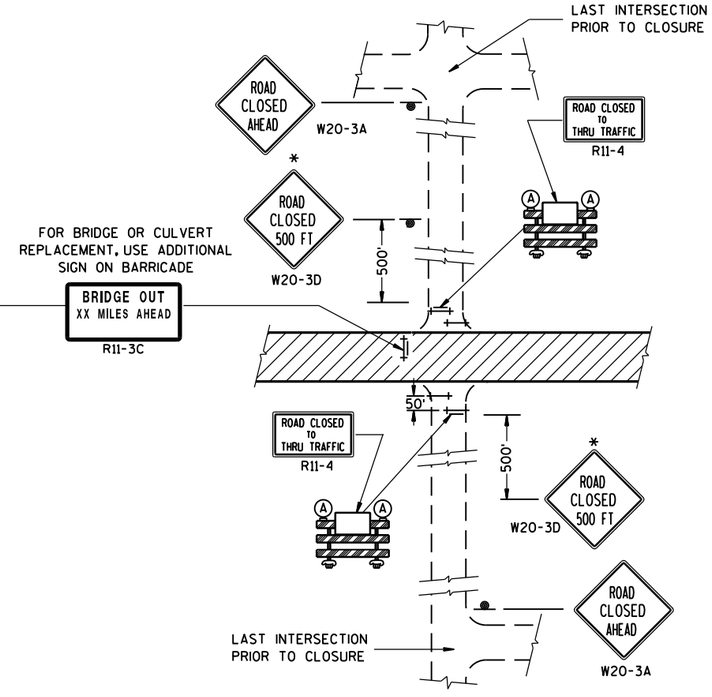
(NO ACCESS TO PROJECT)



DETAIL 2

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





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).

DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA

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S.D.D. 15 C 3-3

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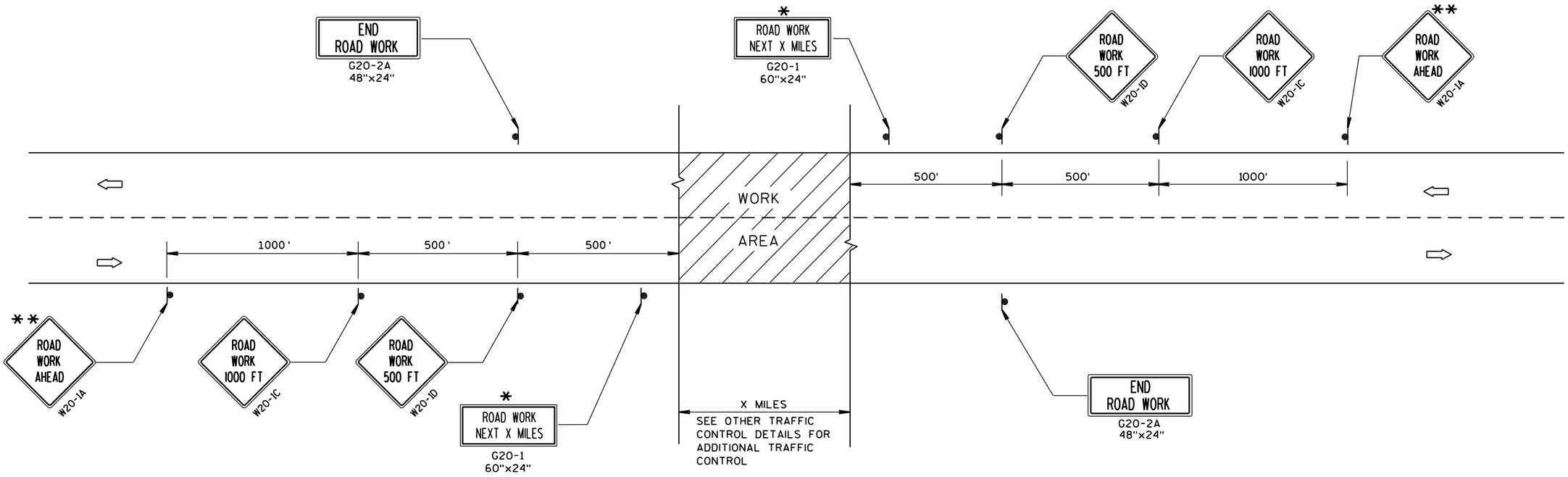
S.D.D. 15 C 3-3



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

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

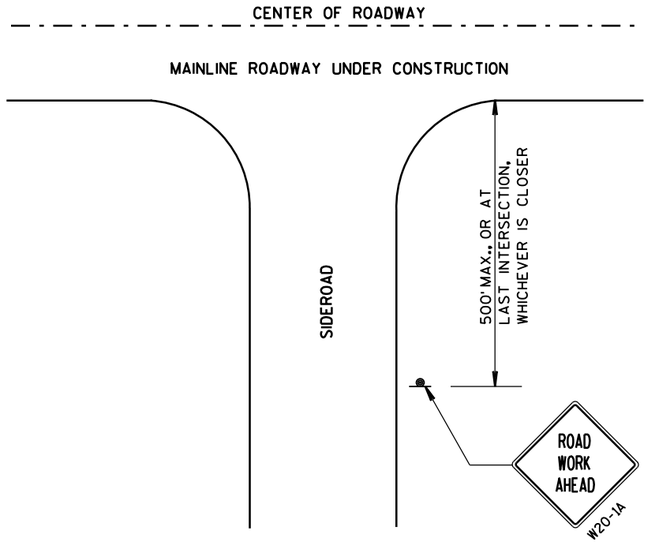
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE SAFETY ENGINEER

FHWA

6

S.D.D. 15 C 4-3

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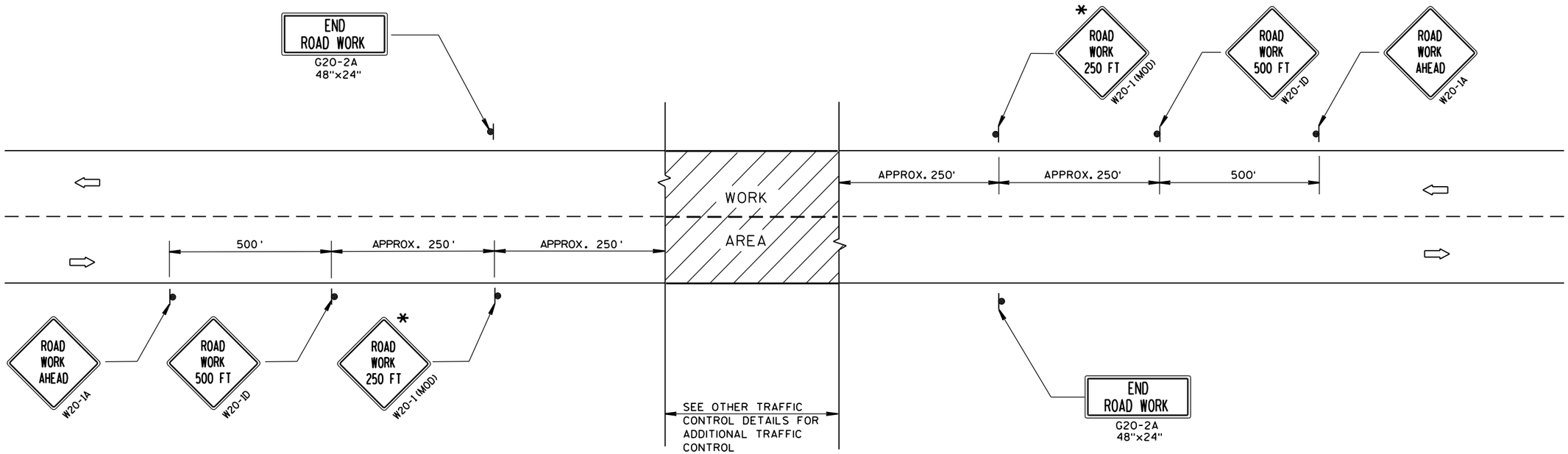
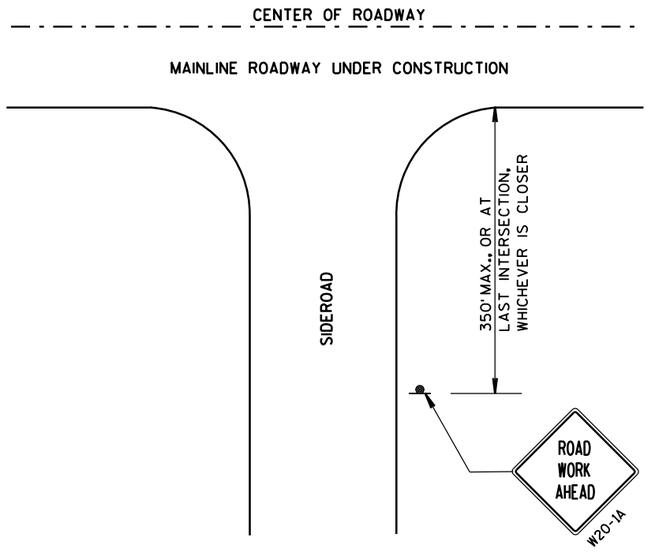
S.D.D. 15 C 4-3



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

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

LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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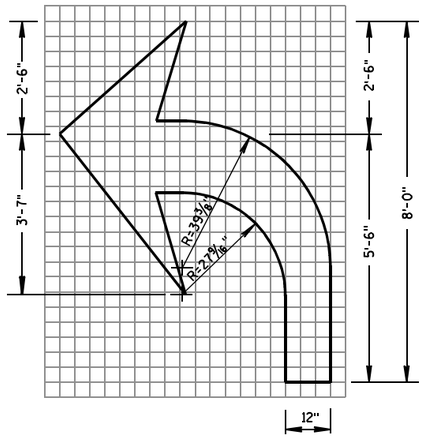
S.D.D. 15 C 5-3

GENERAL NOTES

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

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



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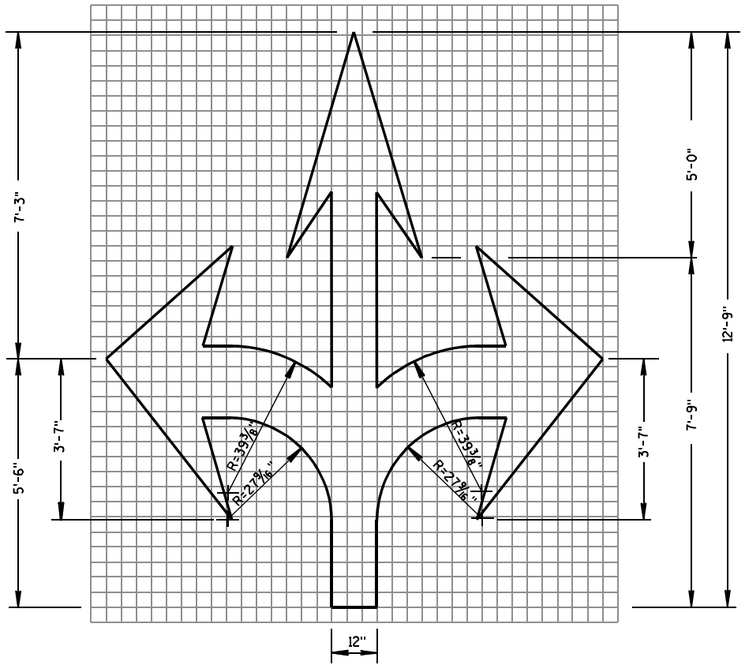

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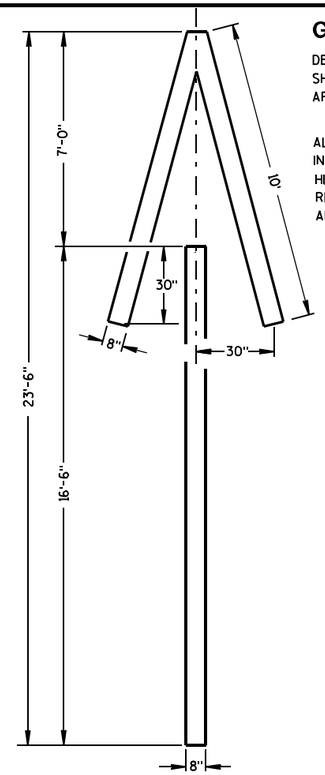

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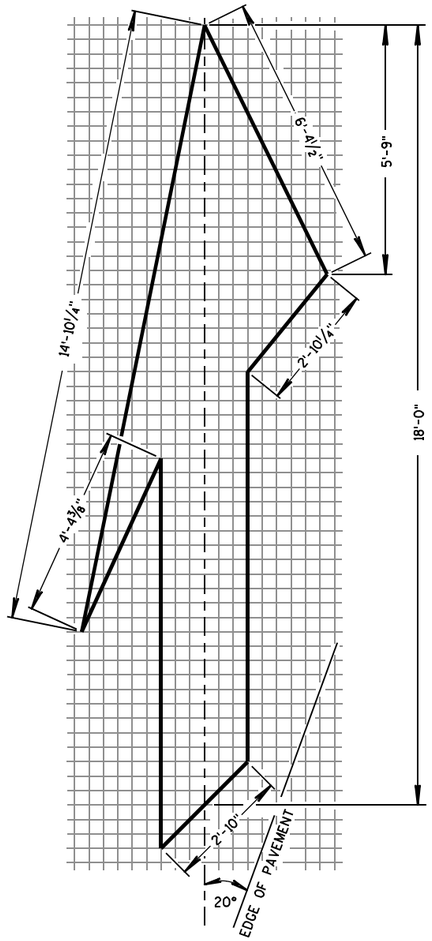
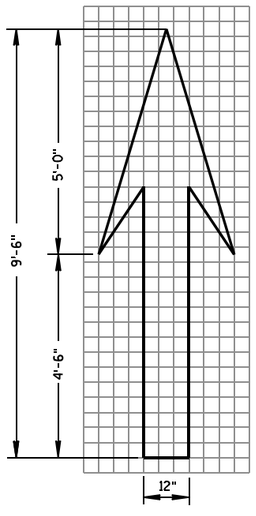
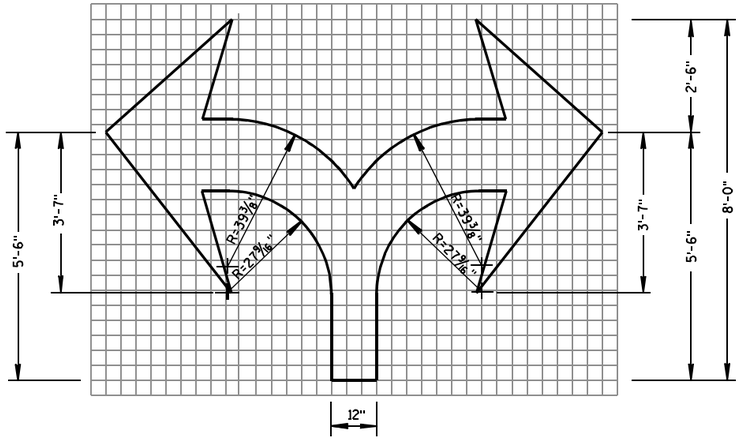


TYPE 5 LANE DROP ARROW



TYPE 1



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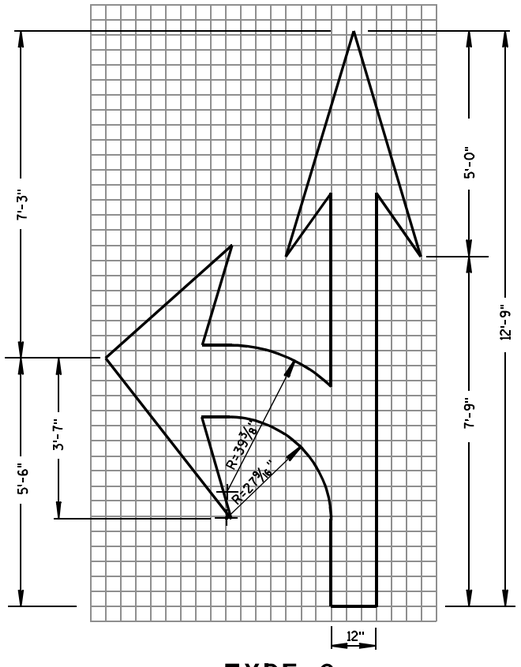

TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

FHWA

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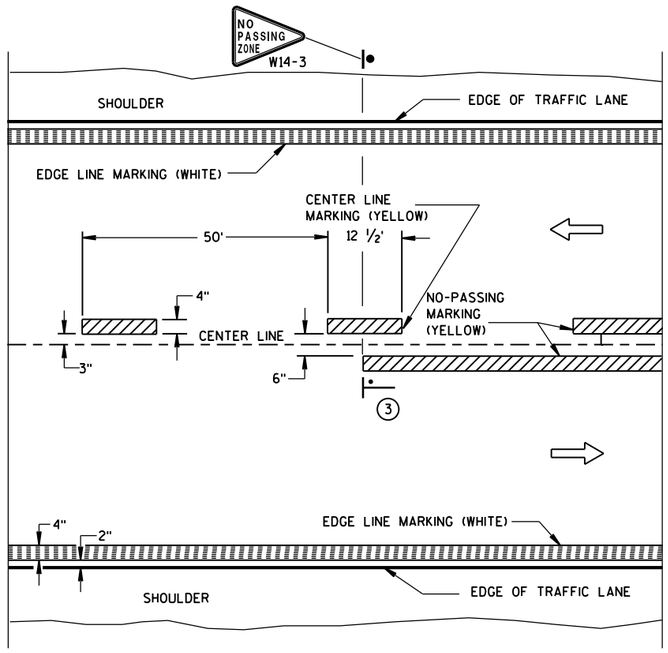
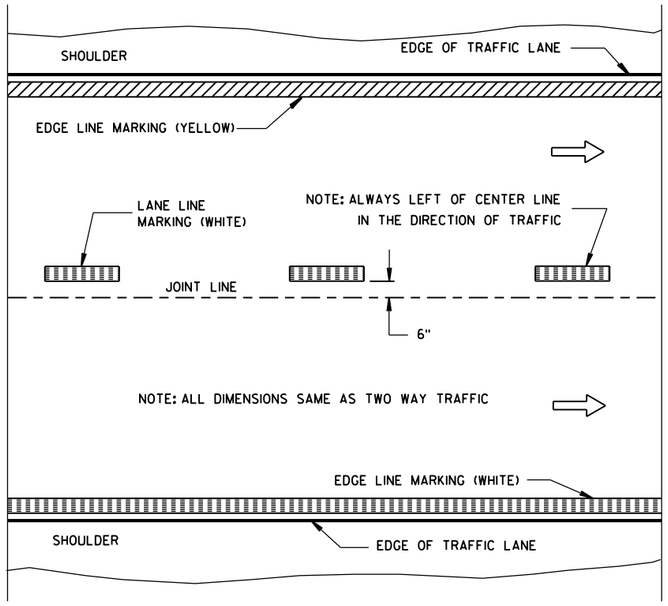
S.D.D. 15 C 7-12c

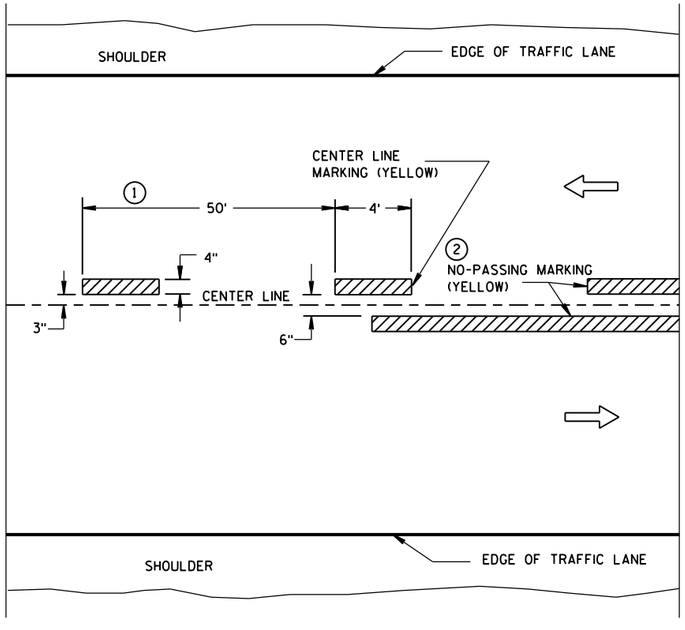


TWO WAY TRAFFIC

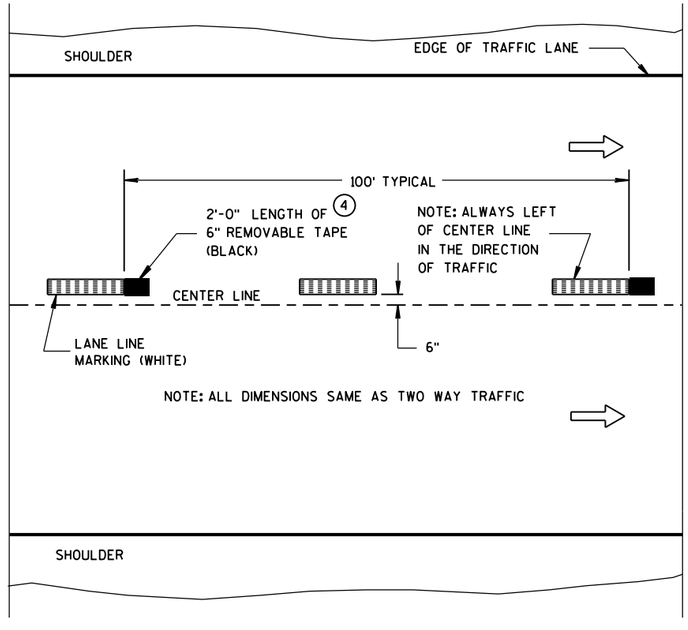


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

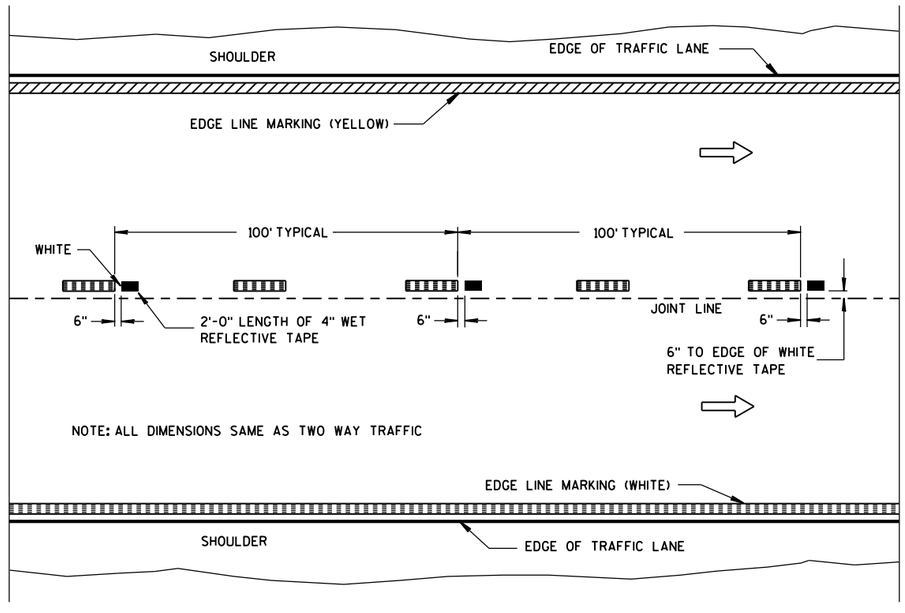
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

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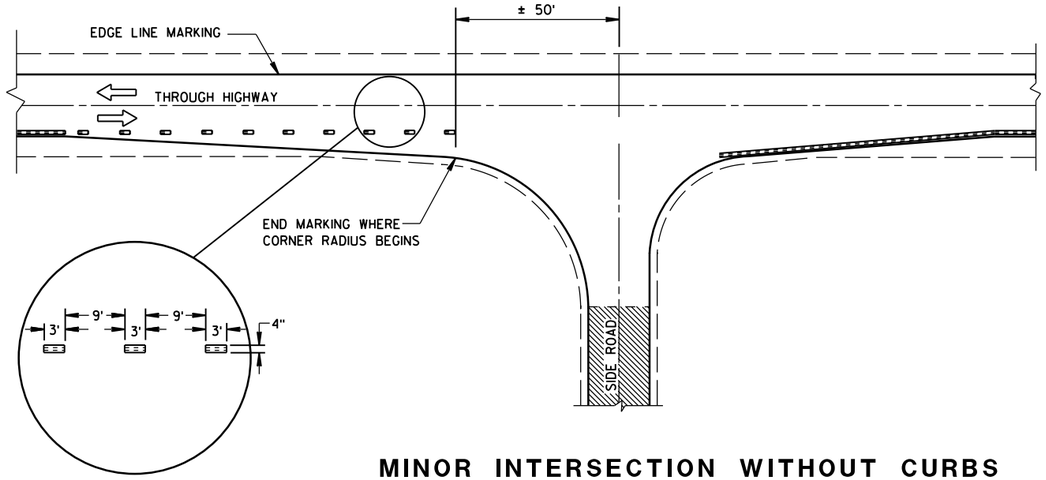
S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

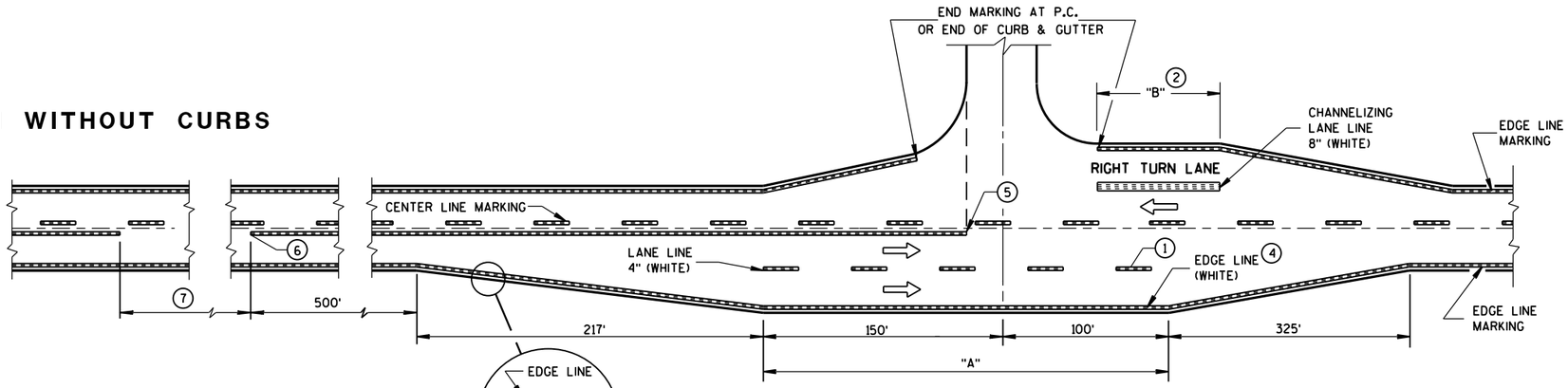
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

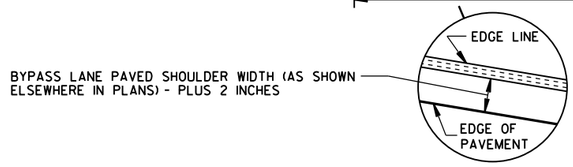
(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

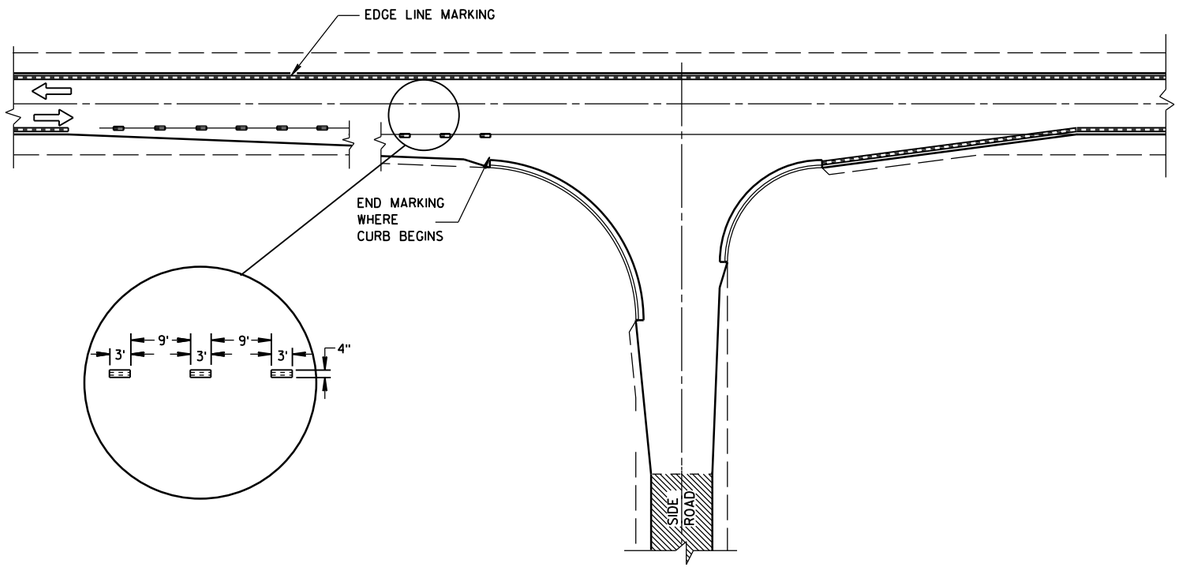
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792





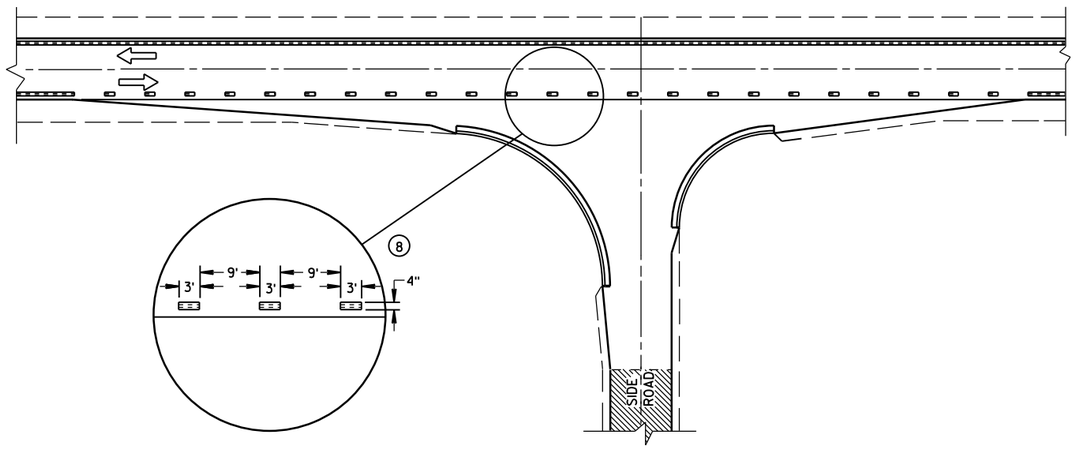
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

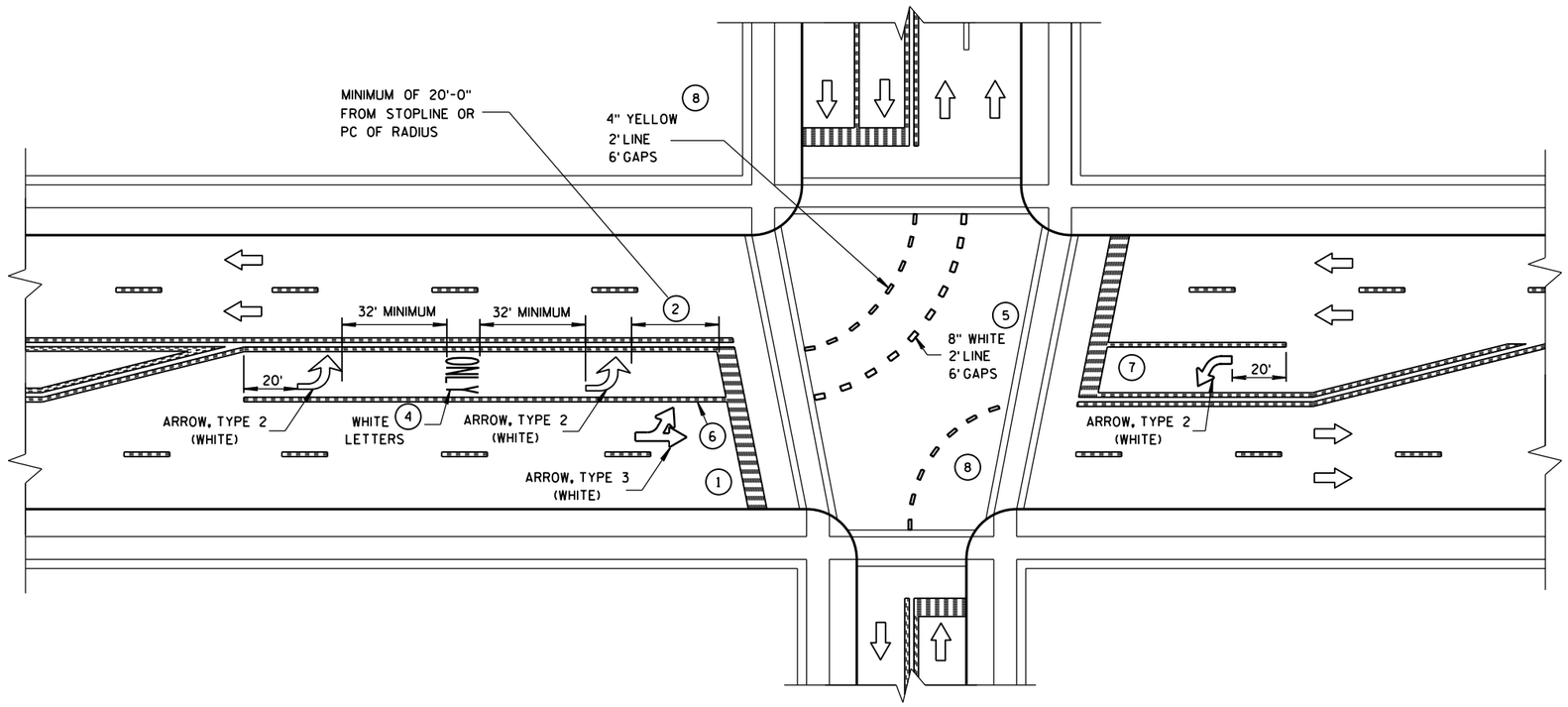
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-16b

6

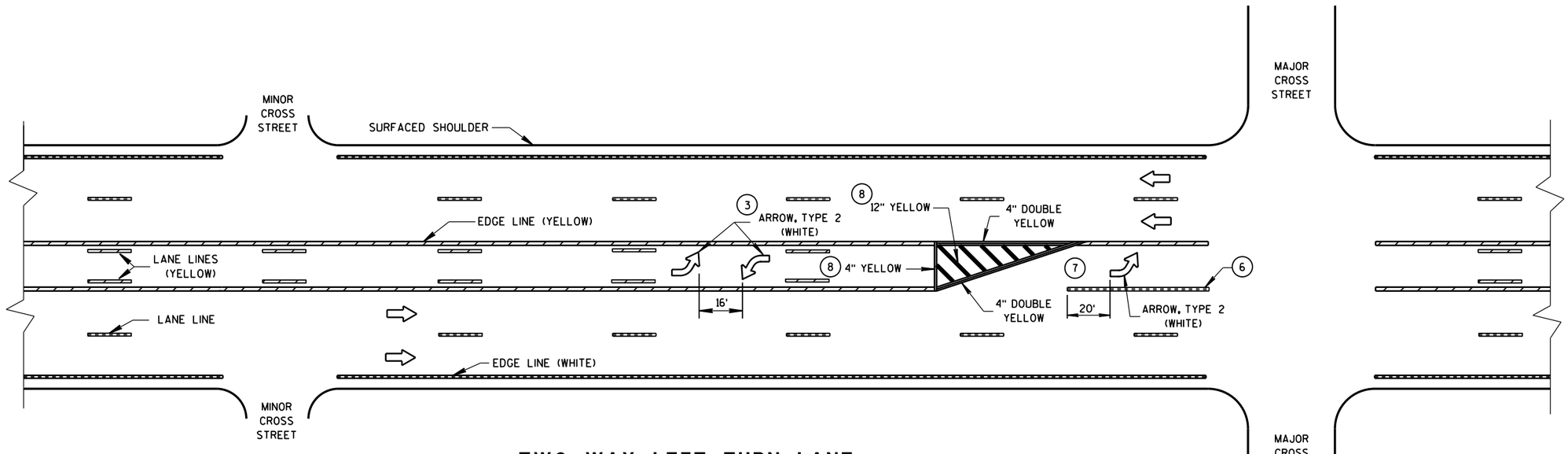
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

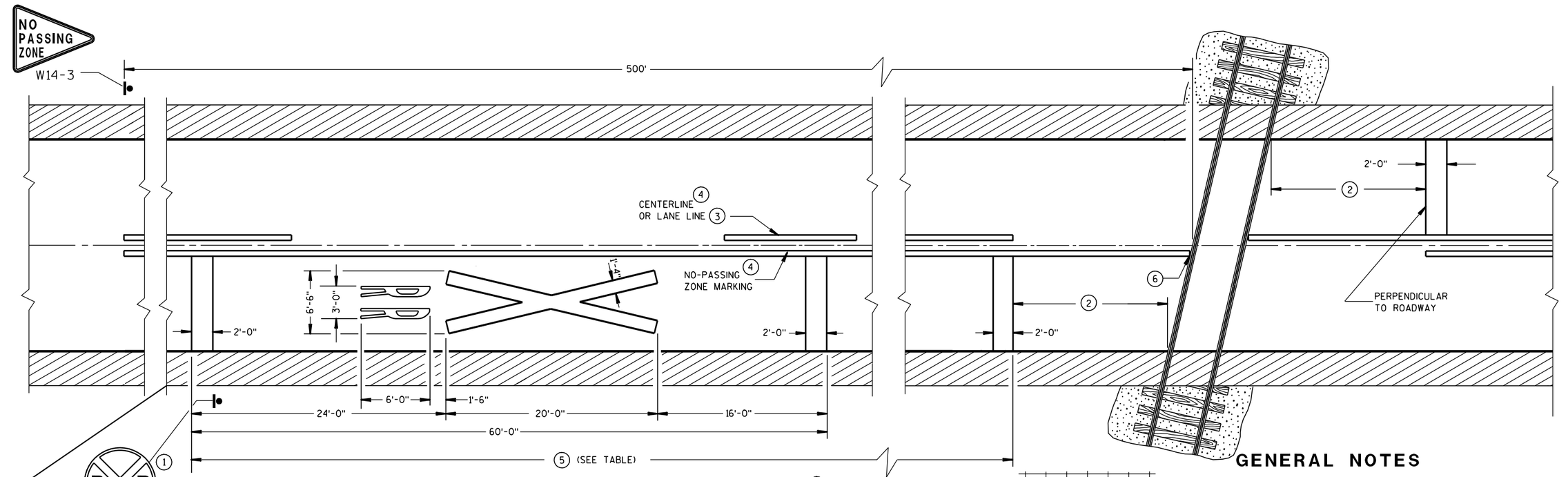
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

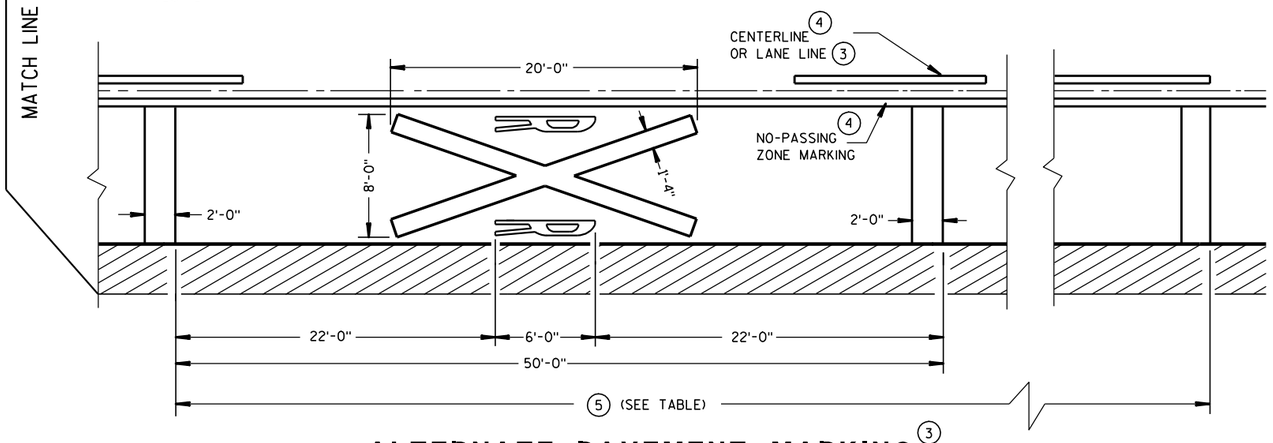
S.D.D. 15 C 8-16e

6

S.D.D. 15 C 8-16e



PREFERRED PAVEMENT MARKING (3)

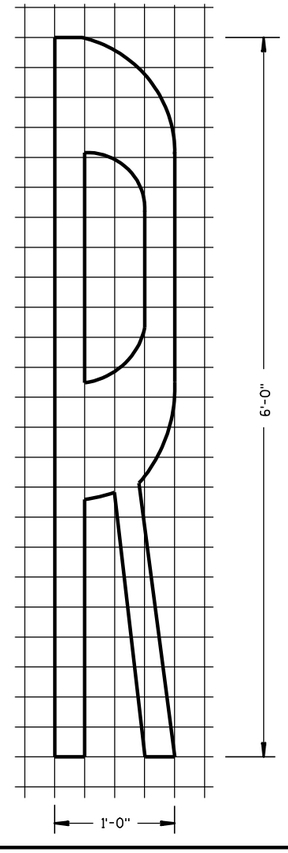


ALTERNATE PAVEMENT MARKING (3)

(5)

Posted Speed (M.P.H.)	Dimension Range (Feet)
25	150*- 250
30	200*- 300
35	250*- 450
40	300*- 500
45	400*- 650
50	550*- 800
55	750*- 1000
60	1000*- 1250
65	1000*- 1250

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



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.

A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" (ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION).

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

(1) A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).

(2) MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.

(3) REFLECTIVE WHITE.

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

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

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

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

1-9-2012
DATE

/S/ Thomas N. [illegible]
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 9-9a

6

S.D.D. 15 C 9-9a

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

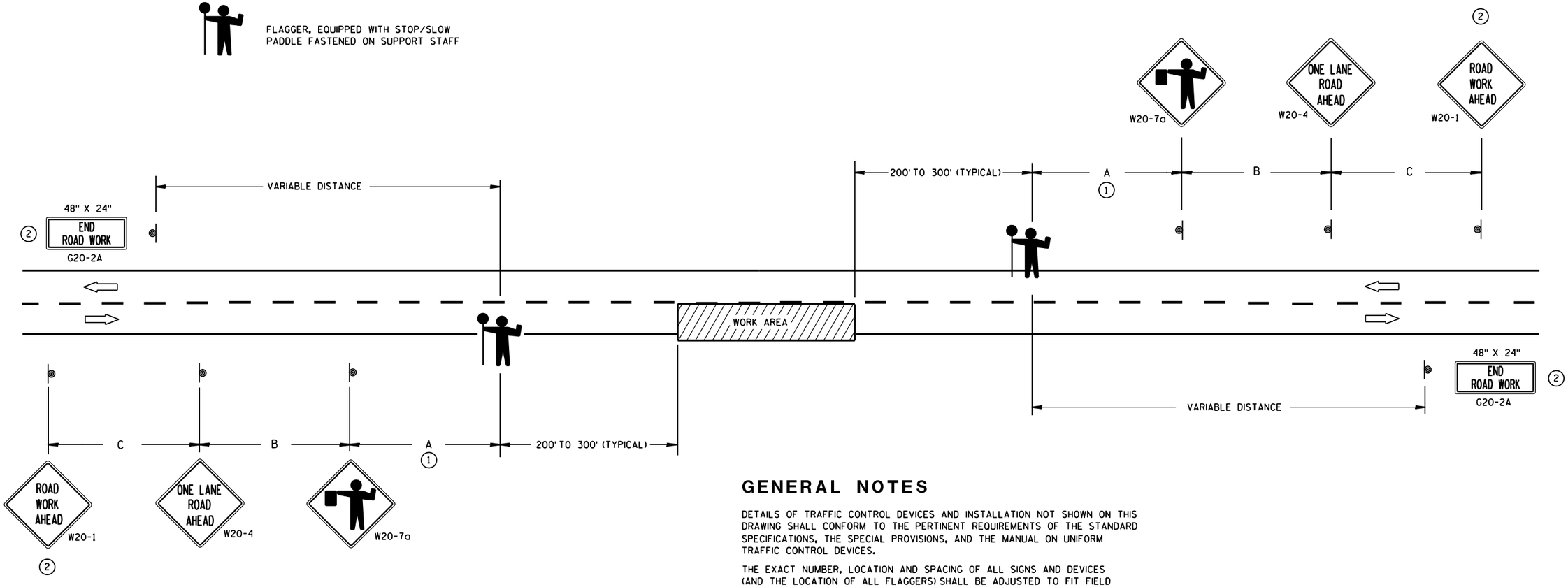
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

BE PREPARED TO STOP
W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

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

GENERAL NOTES

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

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

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 12-4

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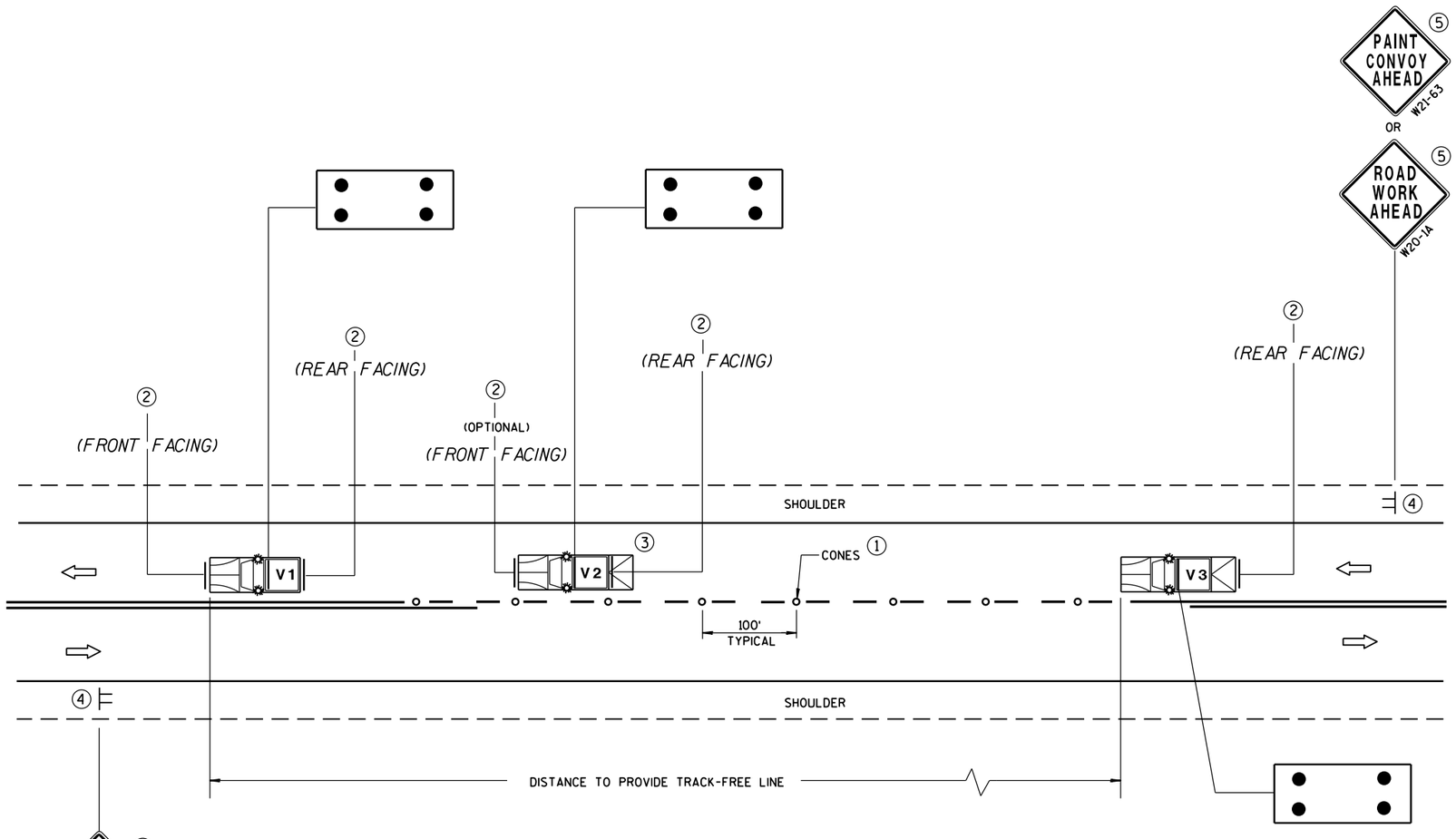
S.D.D. 15 C 12-4



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

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

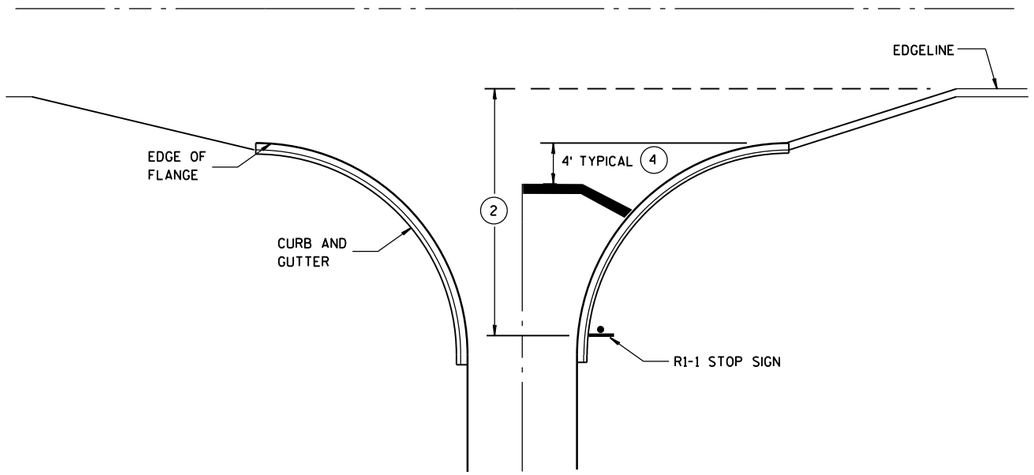
(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

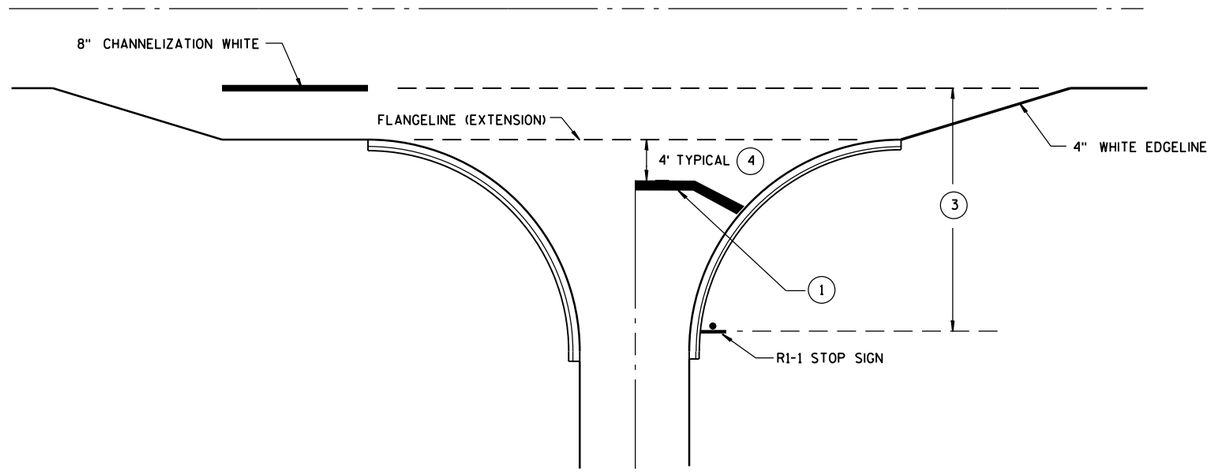
- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA	

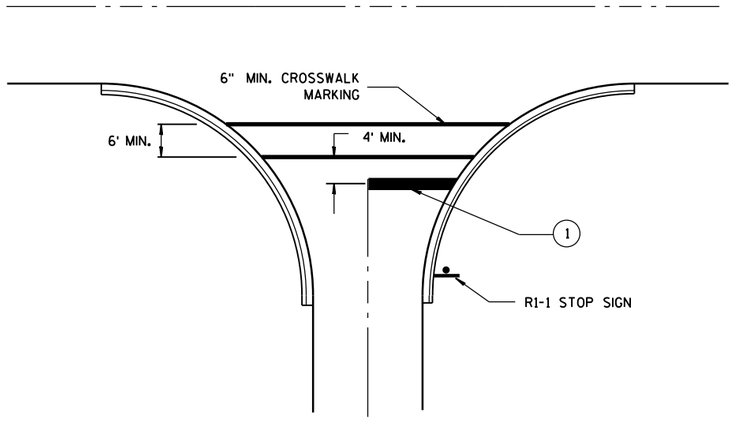
S.D.D. 15 C 19-3a
S.D.D. 15 C 19-3a



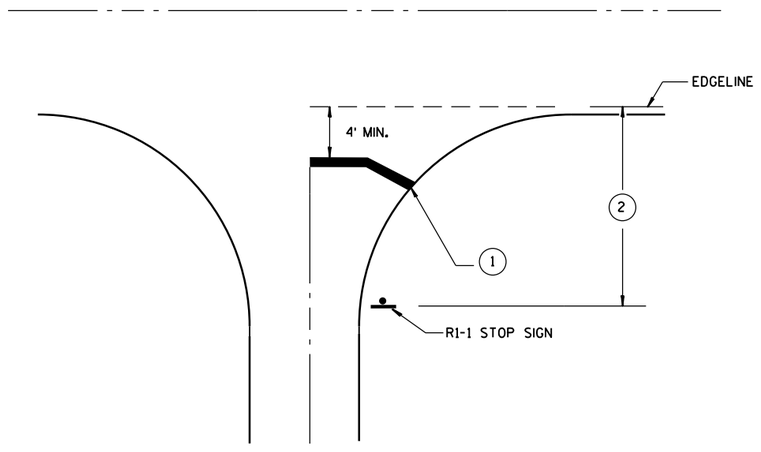
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

6

S.D.D. 15 C 33-1

GENERAL NOTES

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

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

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

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

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.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

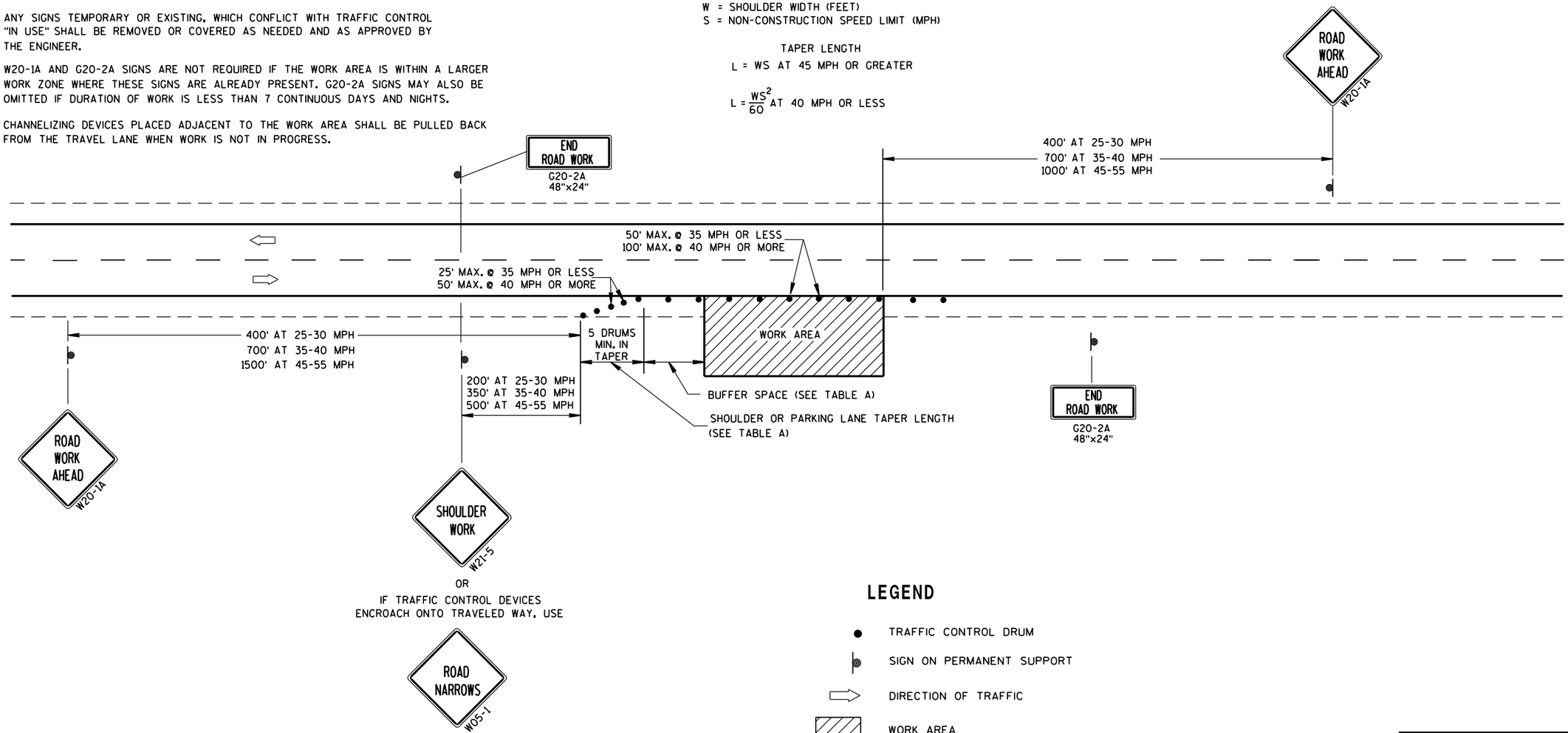
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

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

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI FIC

FHWA

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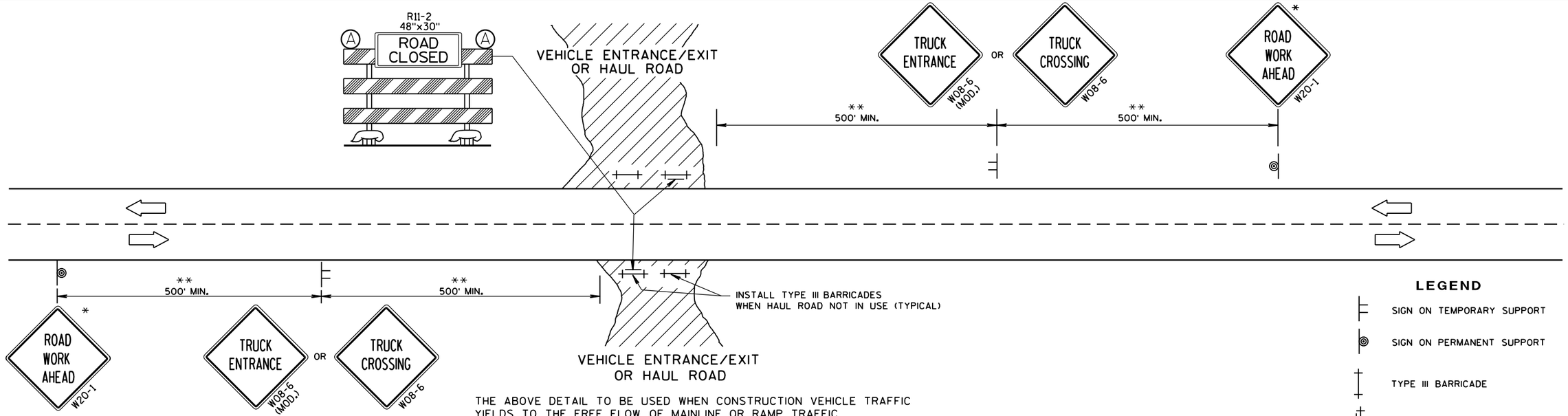
S.D.D. 15 D 28-3



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

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

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE/EXIT CONDITIONS ARE SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

** 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FEET. FOR 25-30 MPH, USE 200 FEET. USE 1000 FEET/1500 FEET FOR EXPRESSWAY/FREEWAY.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

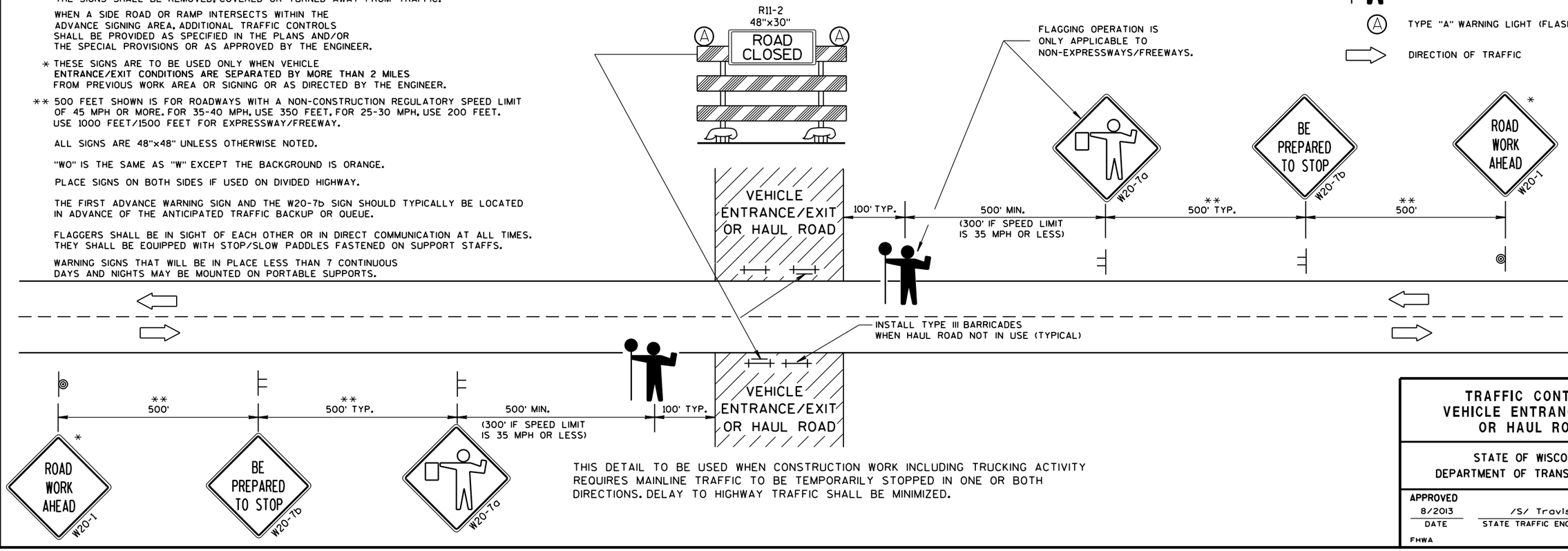
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS.

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



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

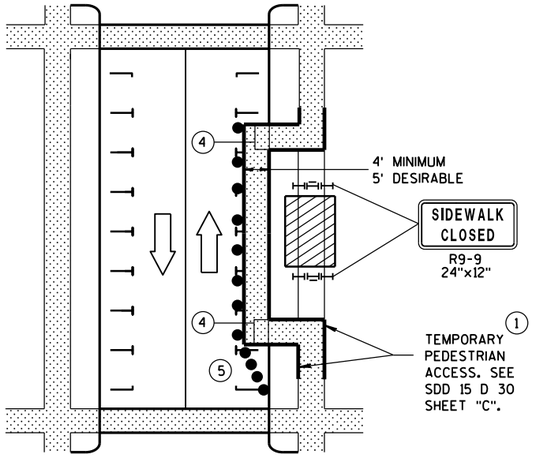
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

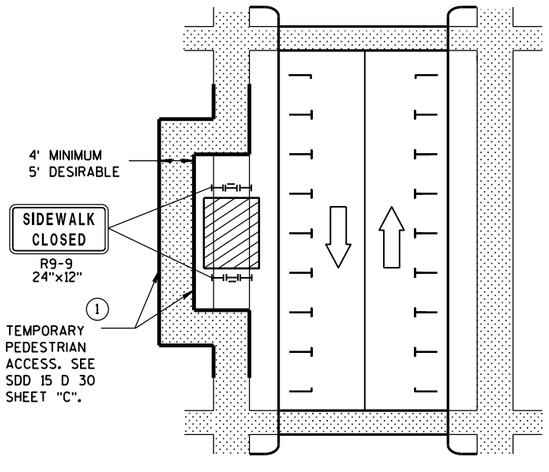
S.D.D. 15 D 29-3

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

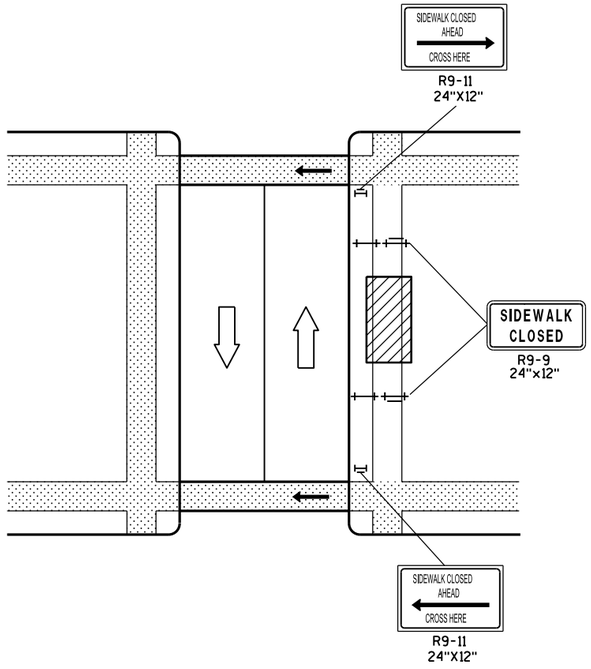


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

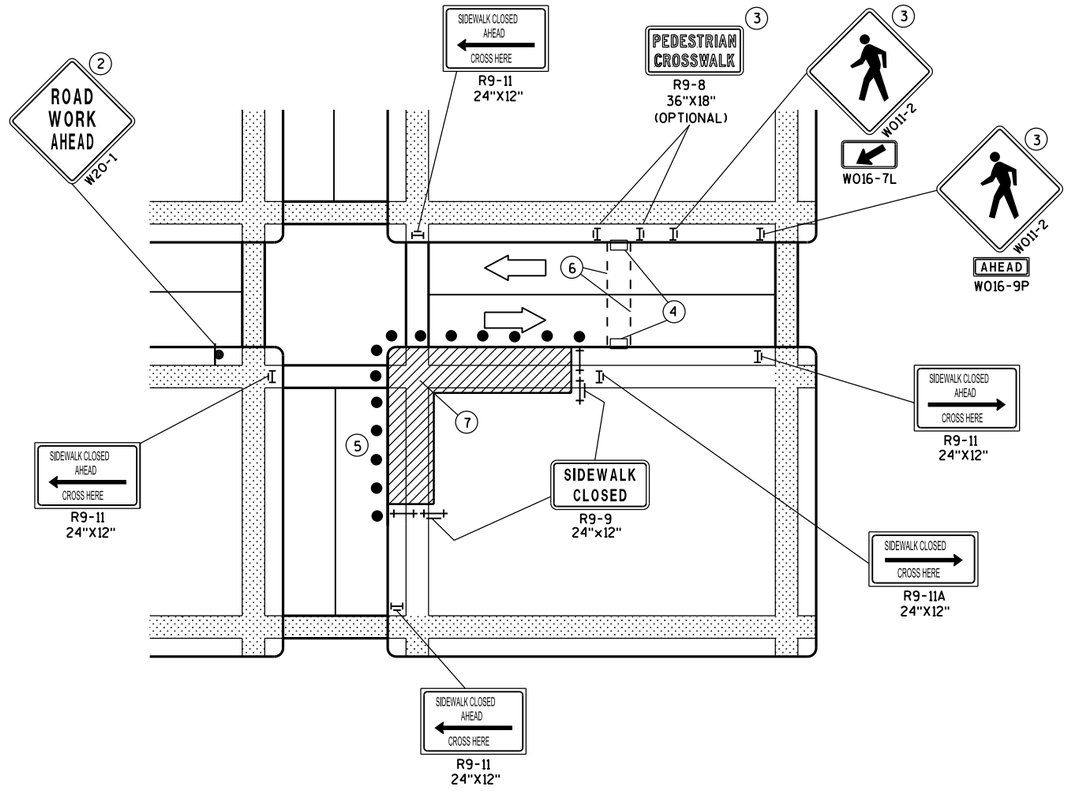
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

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

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

(1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

(2) "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

(3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

(4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

(5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

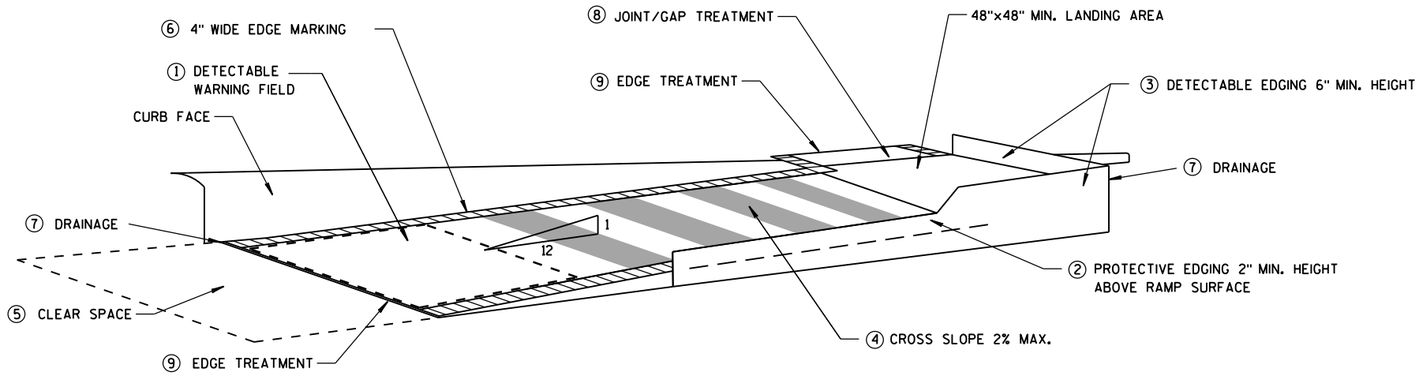
- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 30-2a



TEMPORARY CURB RAMP PARALLEL TO CURB

GENERAL NOTES

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".

② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

⑤ CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

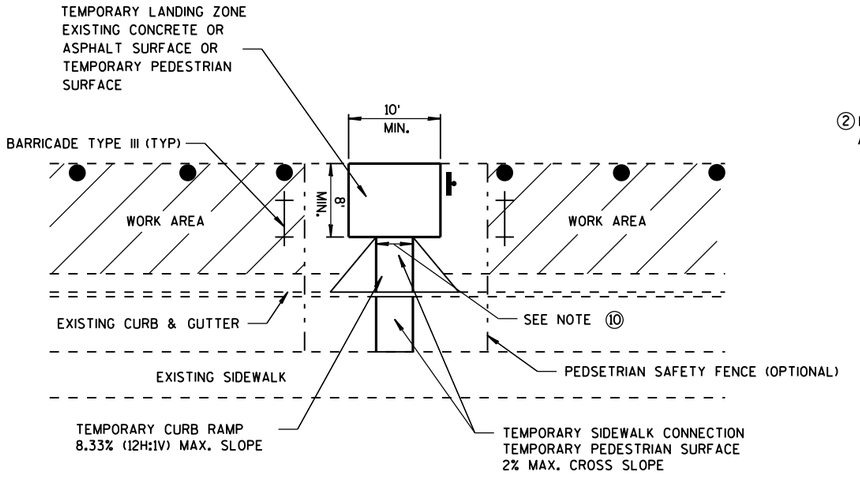
⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.

⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

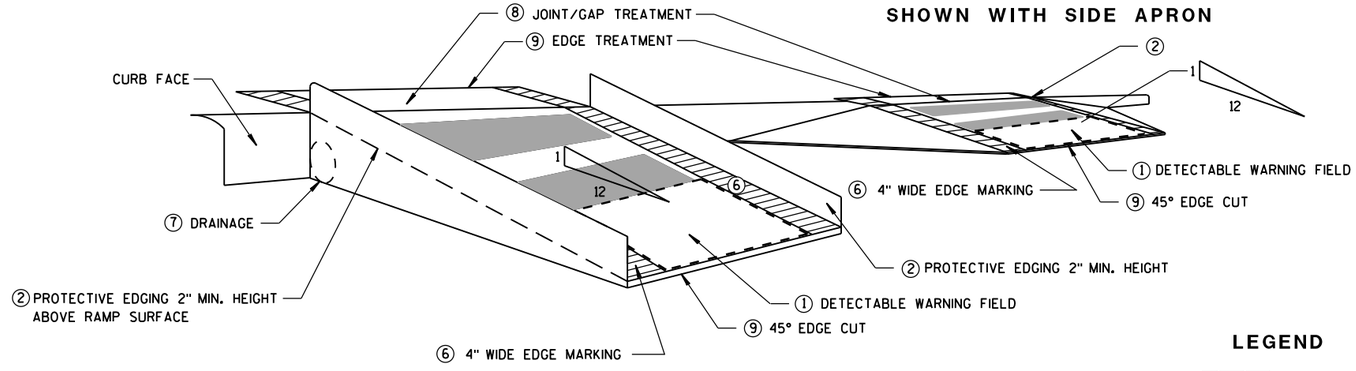
⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

⑩ 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



SHOWN WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

LEGEND

WORK AREA

TYPE III BARRICADE

TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

March 2015 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER — SIGN

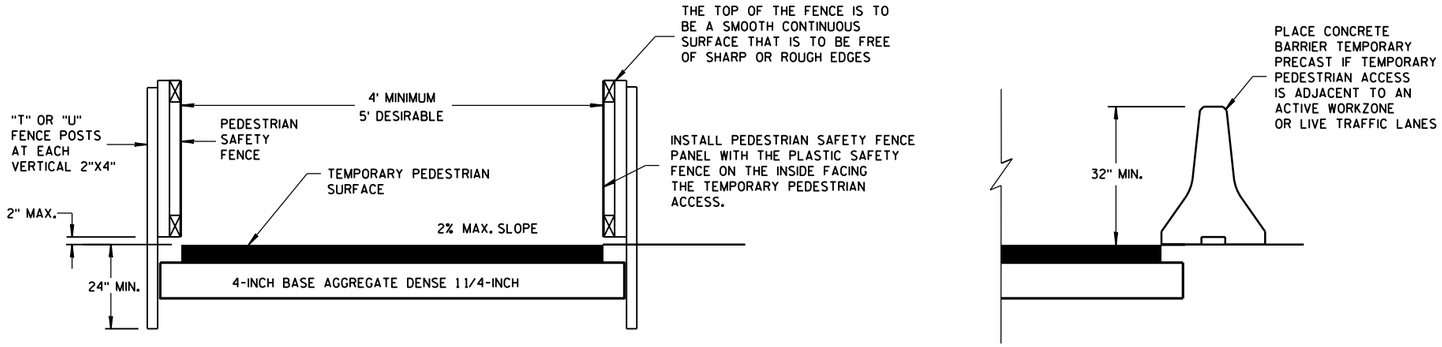
FHWA

6

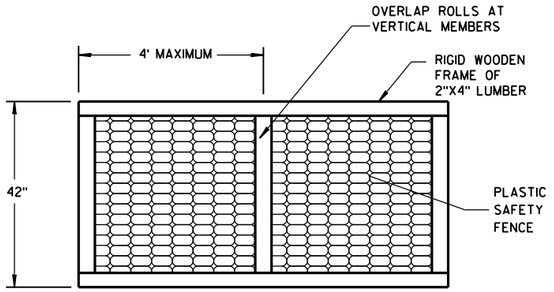
S.D.D. 15 D 30-2b

6

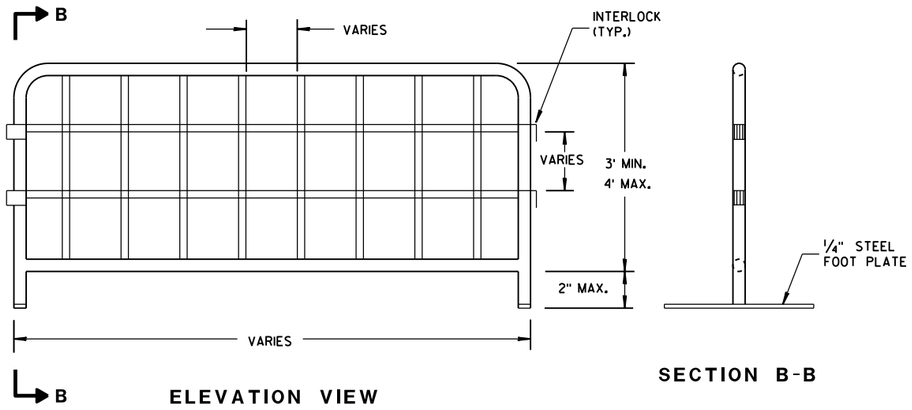
S.D.D. 15 D 30-2b



TEMPORARY PEDESTRIAN ACCESS



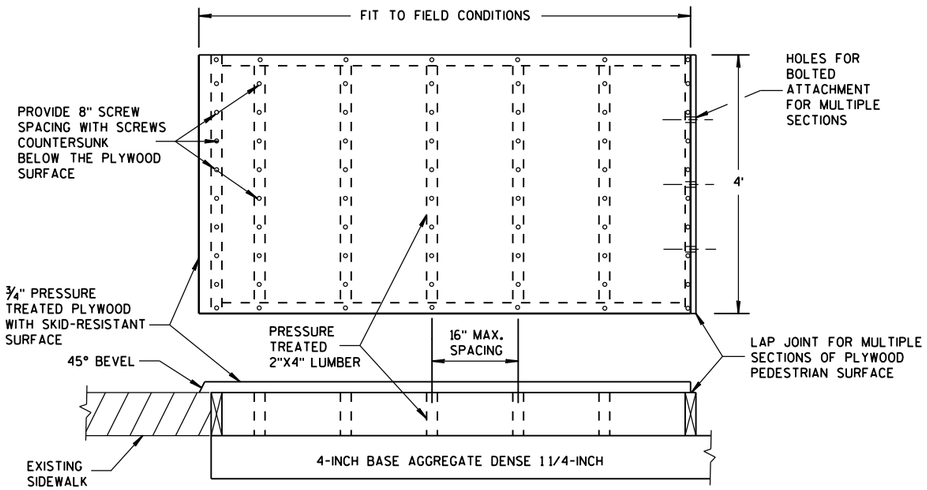
PEDESTRIAN SAFETY FENCE



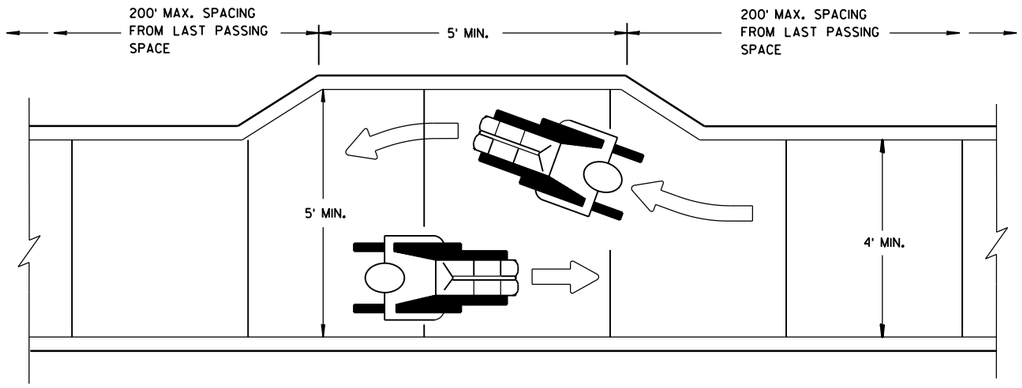
ELEVATION VIEW

SECTION B-B

TEMPORARY PEDESTRIAN STEEL BARRICADE (1)



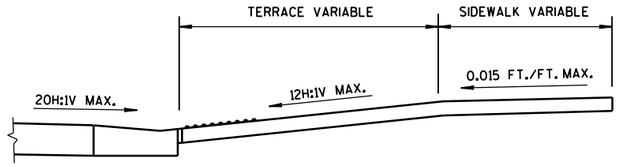
TEMPORARY PEDESTRIAN SURFACE PLYWOOD



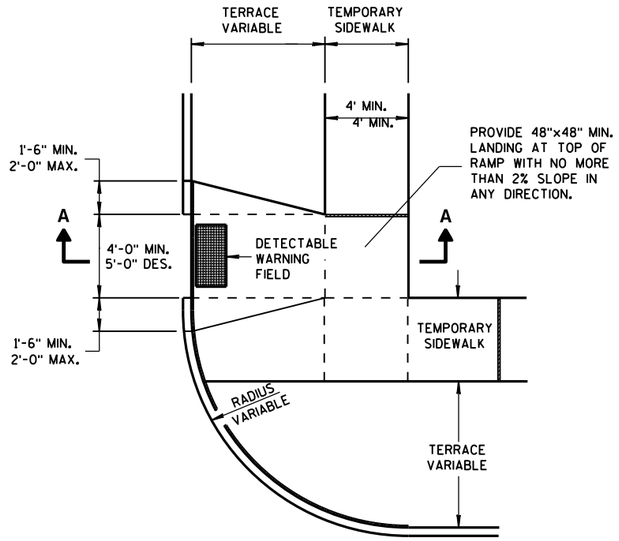
NARROW SIDEWALK PASSING DETAIL

GENERAL NOTES

(1) INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



SECTION A-A



PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

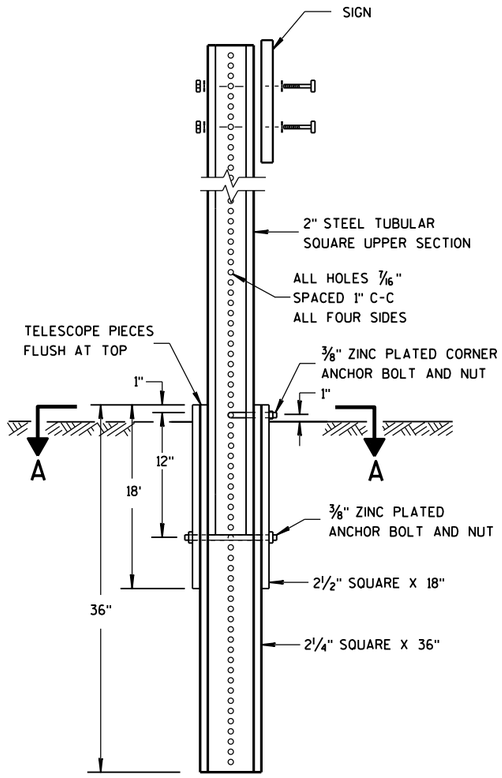
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

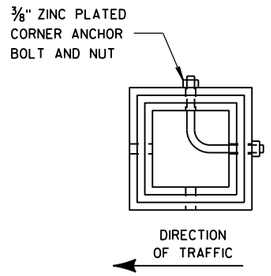
APPROVED
March 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER — SIGN
FHWA

6

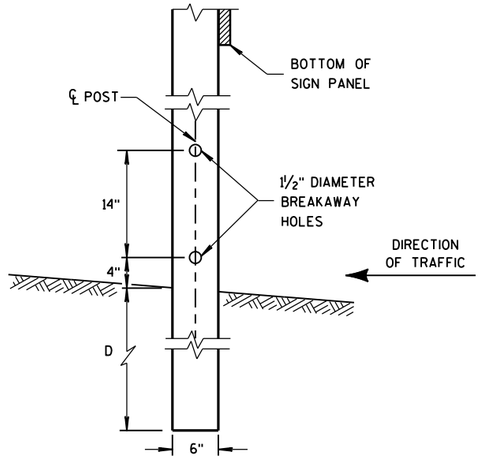
S.D.D. 15 D 30-2c



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



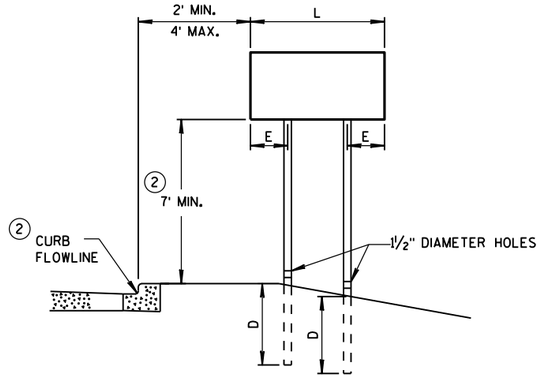
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

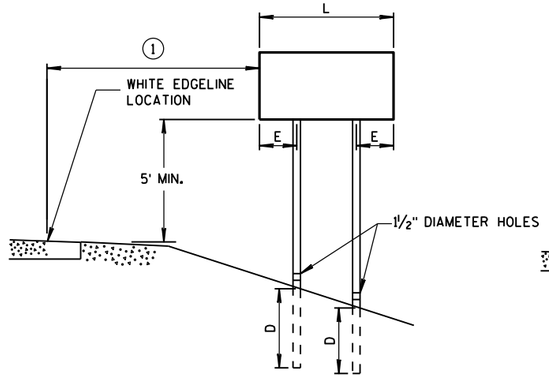
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

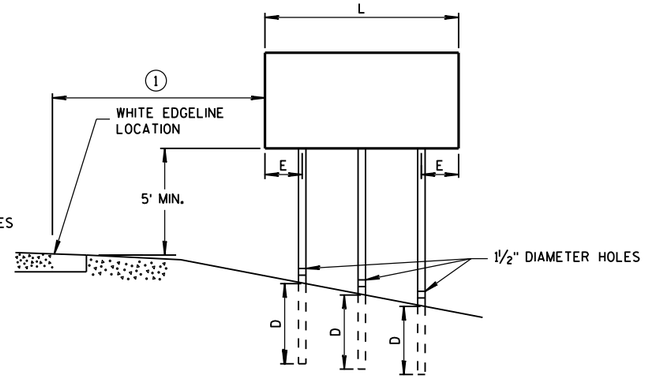
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

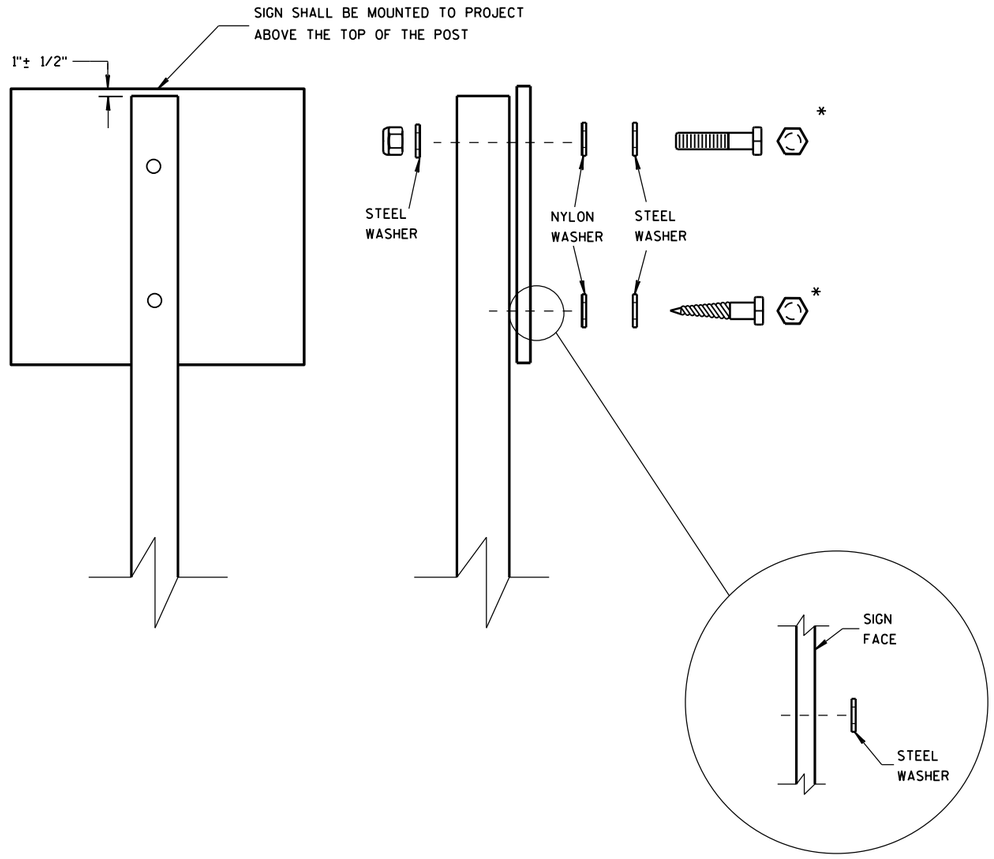
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 38-1a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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 FOR ALL TYPE H SIGNS

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

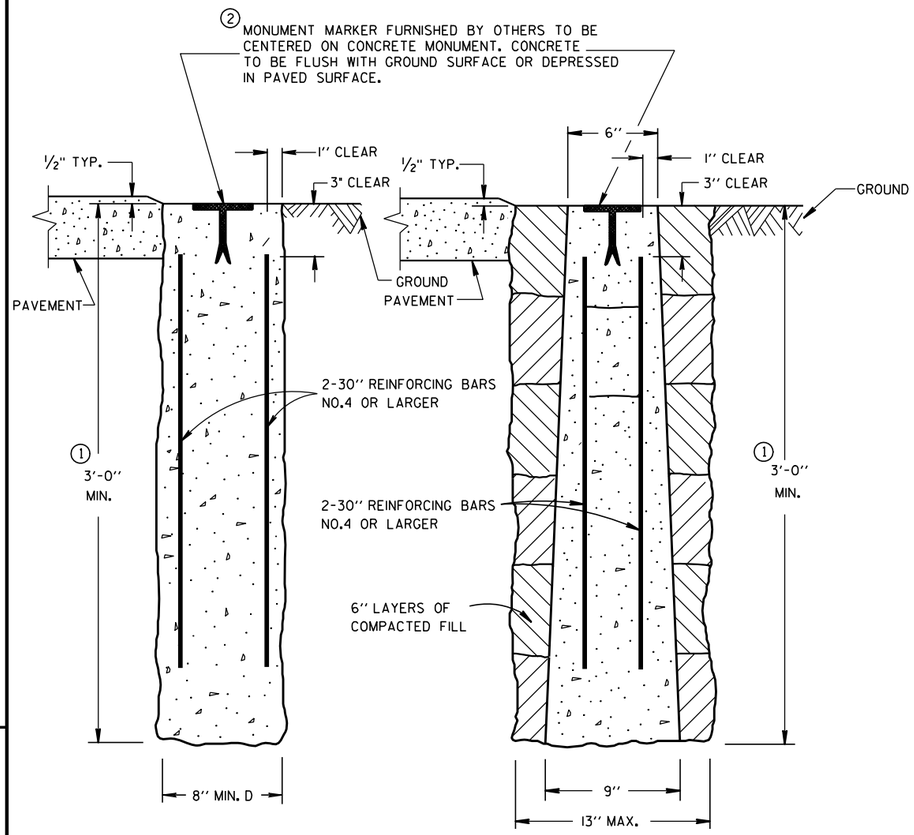
S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

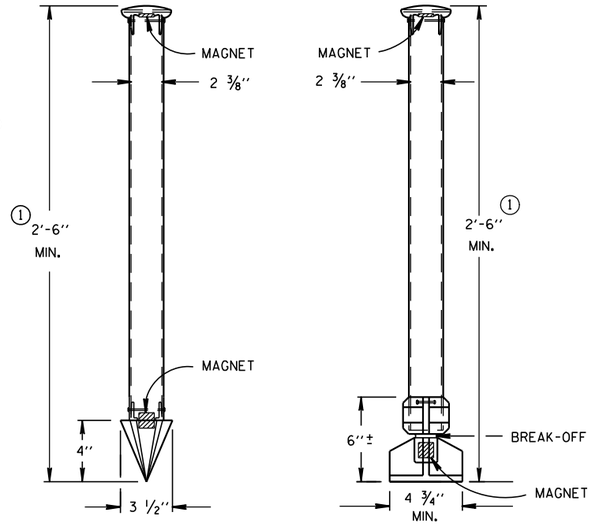
APPROVED
Feb. 2015
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
SIGN
FHWA



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



TYPE C DRIVE-IN MONUMENT

TYPE D BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

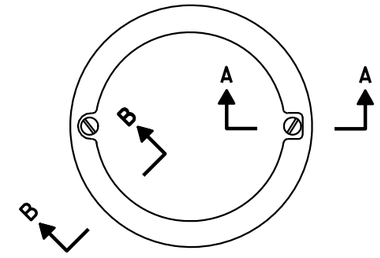
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

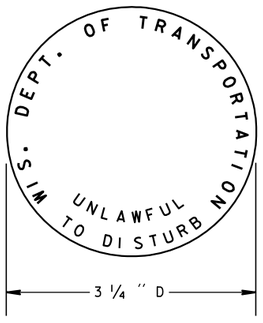
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

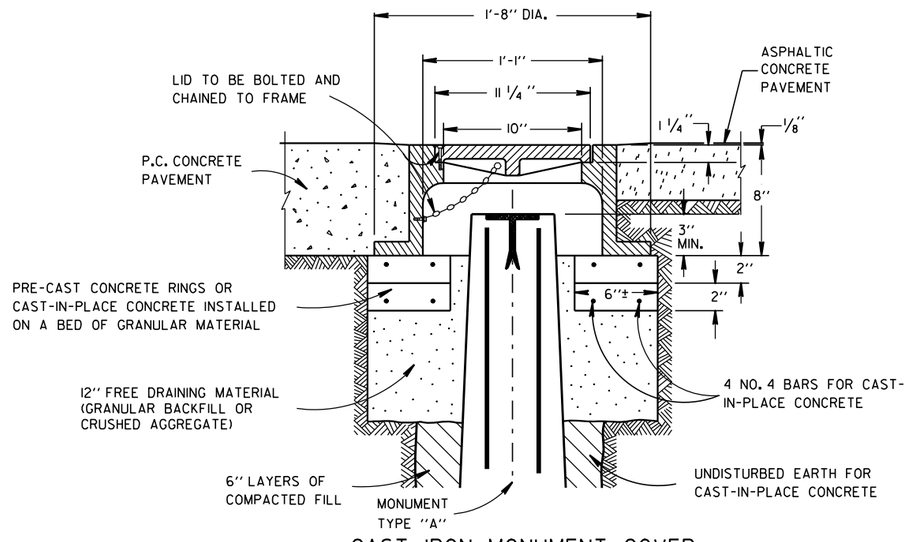
② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW

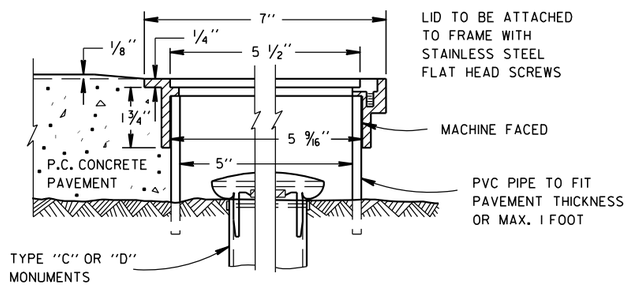


② WIS DOT MONUMENT MARKER LOGO FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/22/1999 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

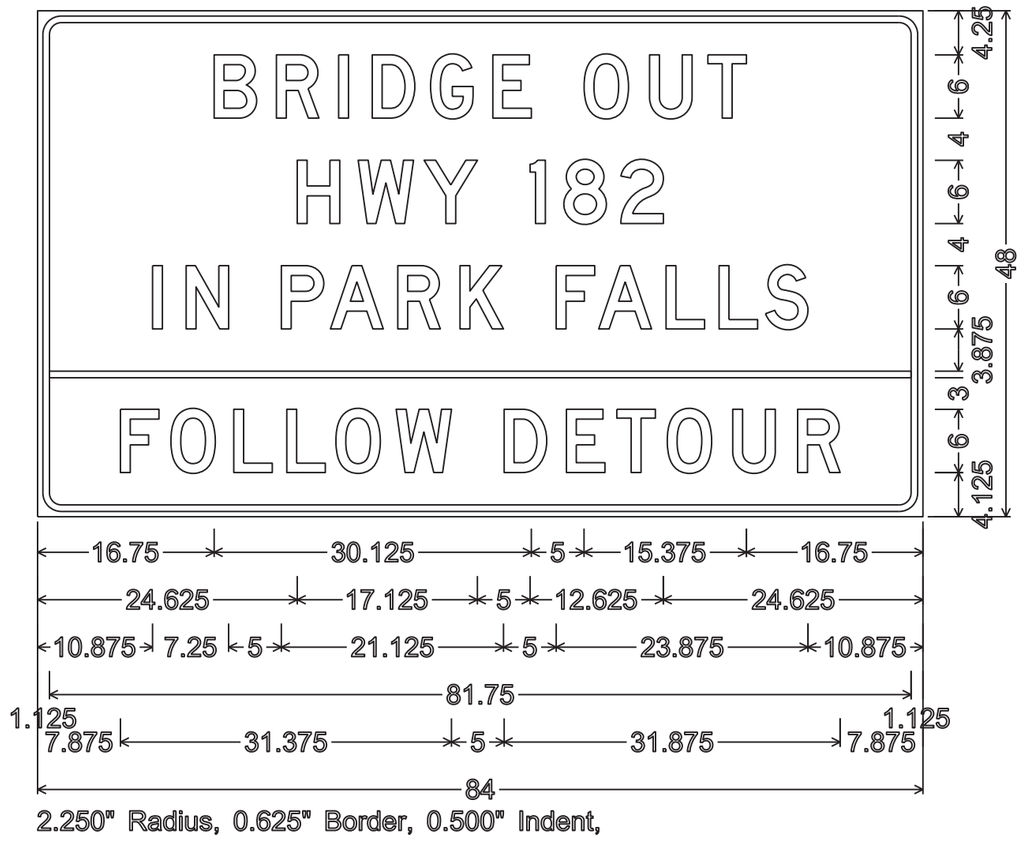
S.D.D. 16 A 1-6

6

S.D.D. 16 A 1-6

NOTES

1. All Signs are Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



2.250" Radius, 0.625" Border, 0.500" Indent,

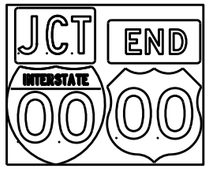
7

PROJECT NO: 9240-08-70	HWY: STH 182	COUNTY: PRICE	TEMPORARY SIGNING	SHEET NO:	E

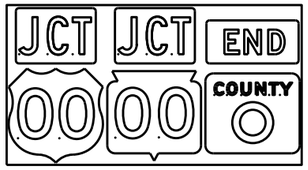
FILE NAME : C:\CAEfiles\Projects\tr_d6\BridgeOutHwy182.dgn PLOT DATE : 21-JUL-2016 16:44 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 14.372203:1.000000

TYPICAL ASSEMBLIES

J1-1

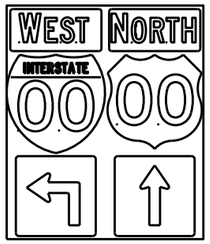


J1-2

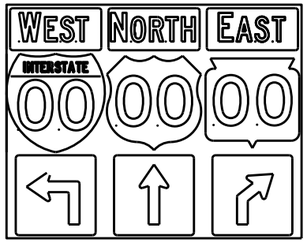


J1-3

J2-1



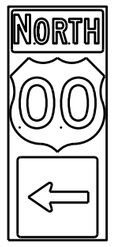
J2-2



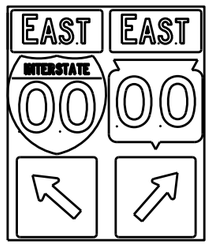
J2-3

JV

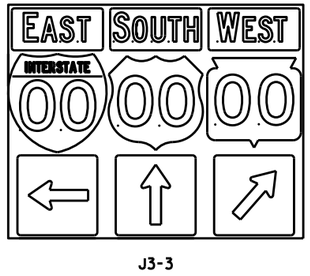
(Typical Vertical J-Assembly
See Note 10 and 11)



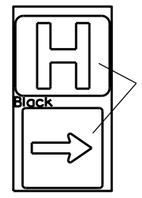
J3-1



J3-2



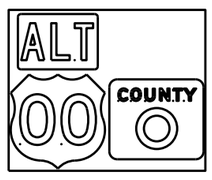
J3-3



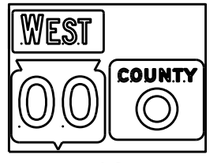
Blue Background

JH-1

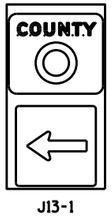
J4-1



J4-2



J4-2



J13-1

J12-1

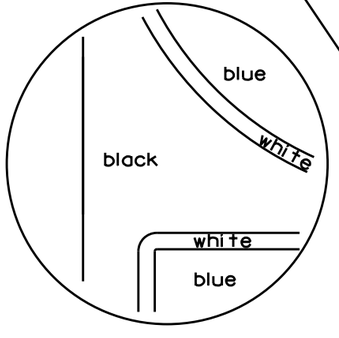
J32-1

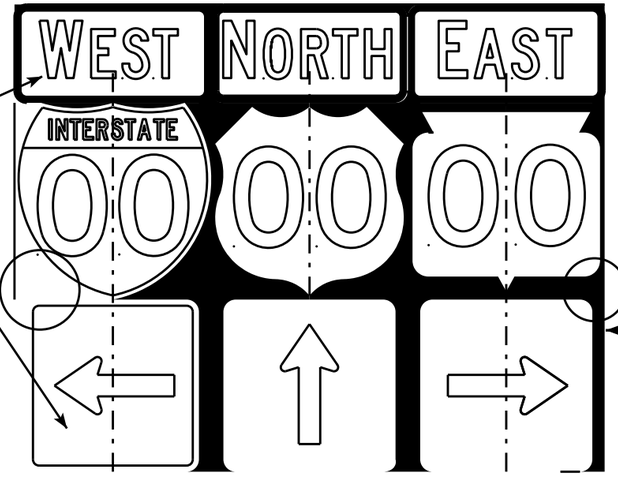
J33-1

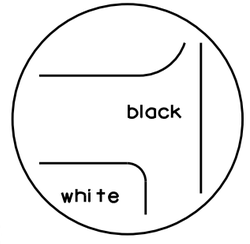
J23-1

J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

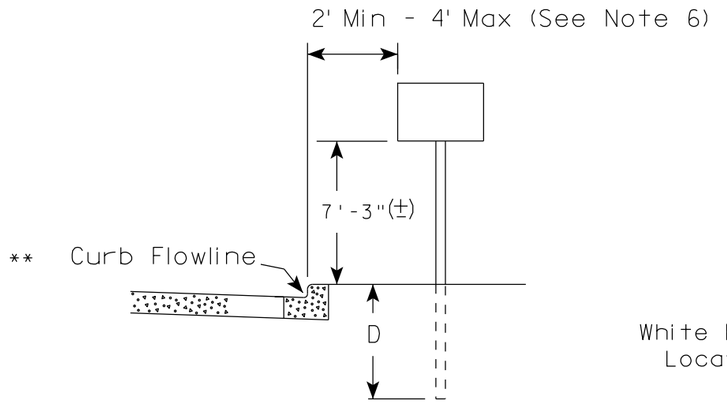
PROJECT NO:

SHEET NO: E

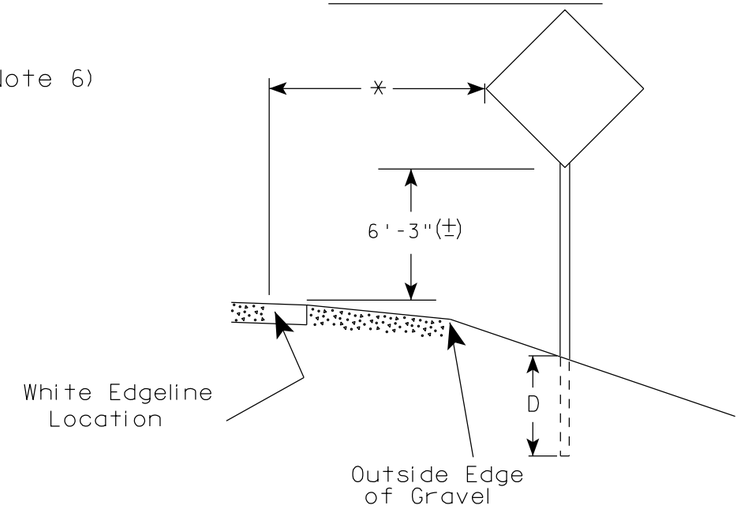
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

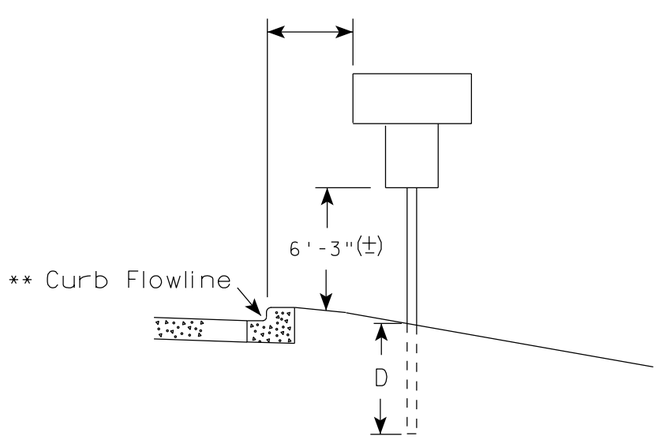
WISDOT/CADDS SHEET 42

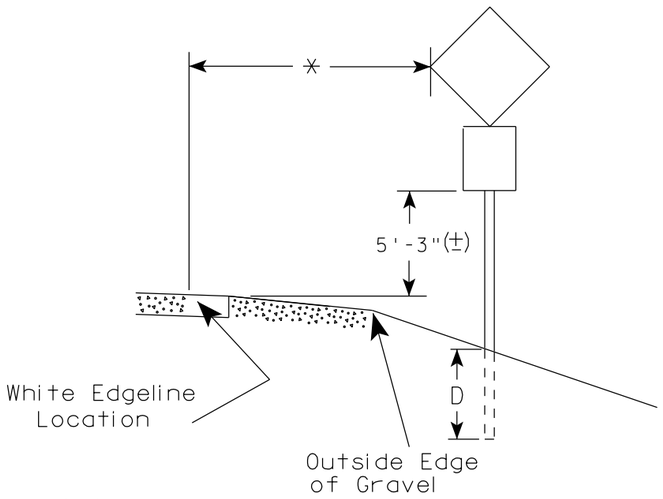
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), 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" (±).

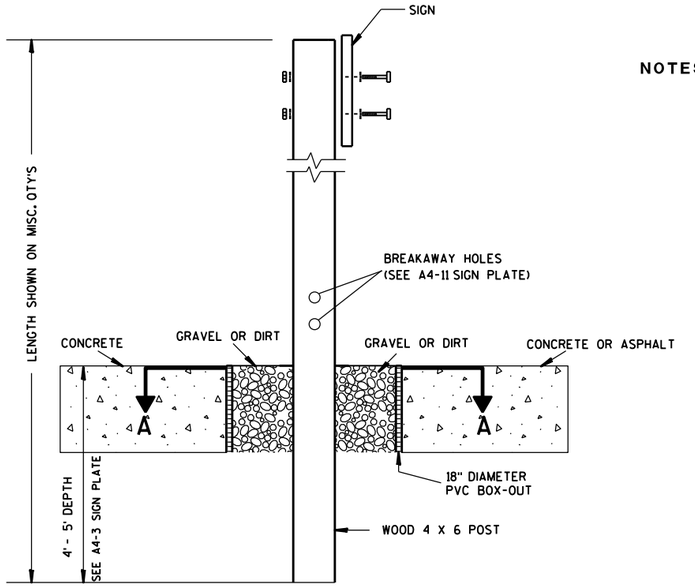
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

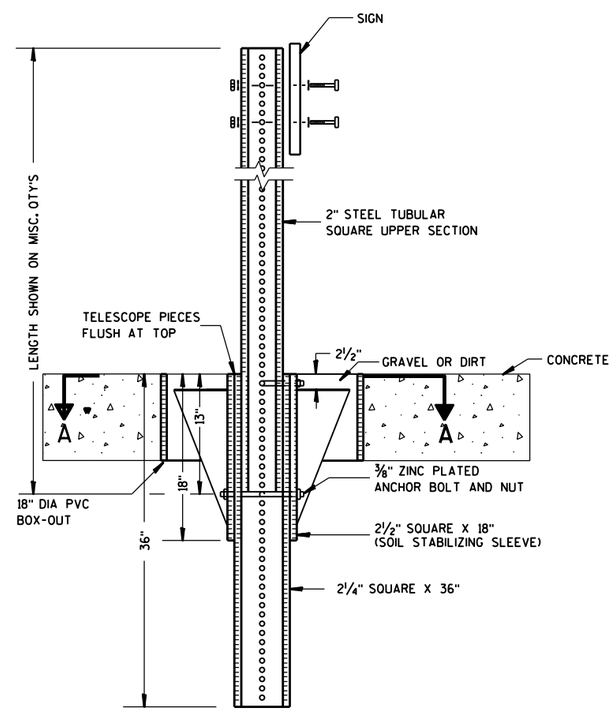
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

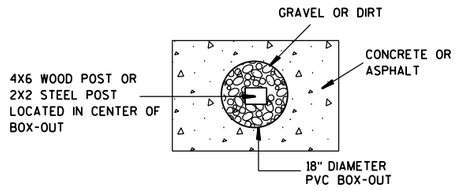
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

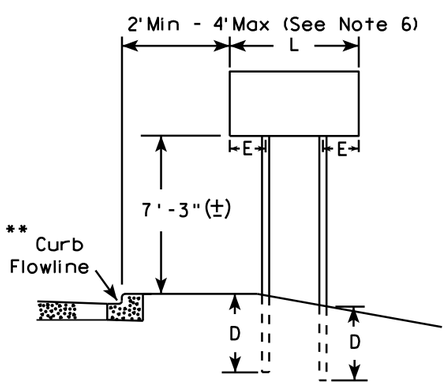
APPROVED Matthew R Rauch
for State Traffic Engineer

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

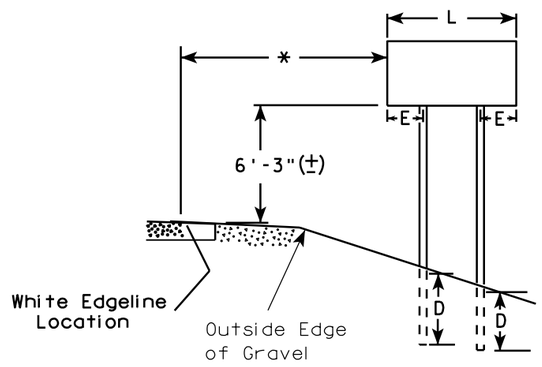
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

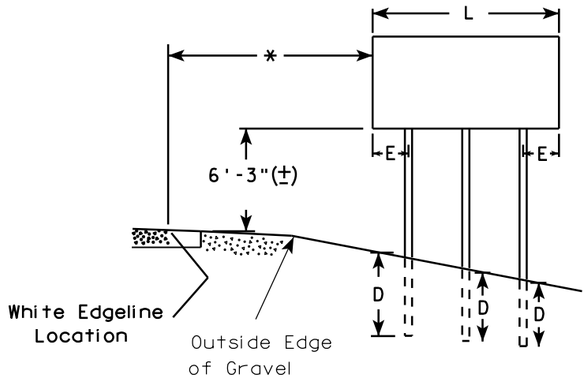
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

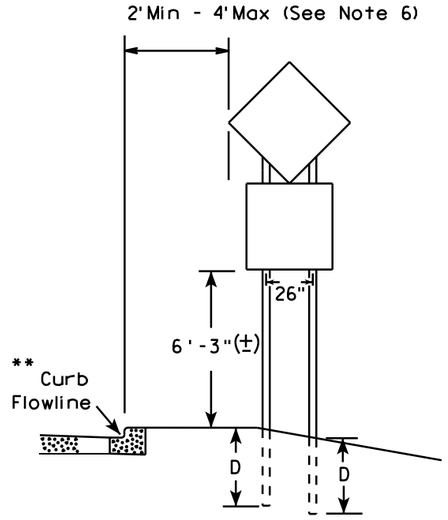
URBAN AREA



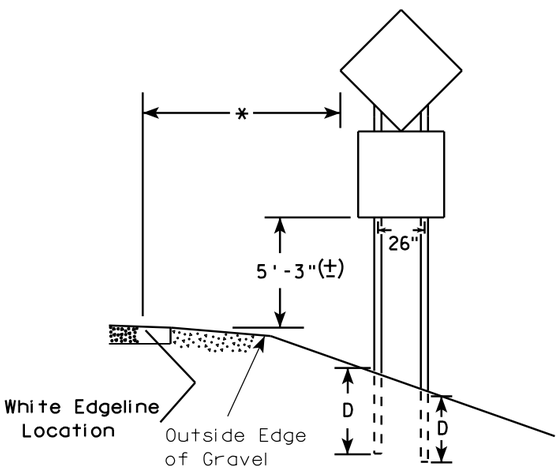
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

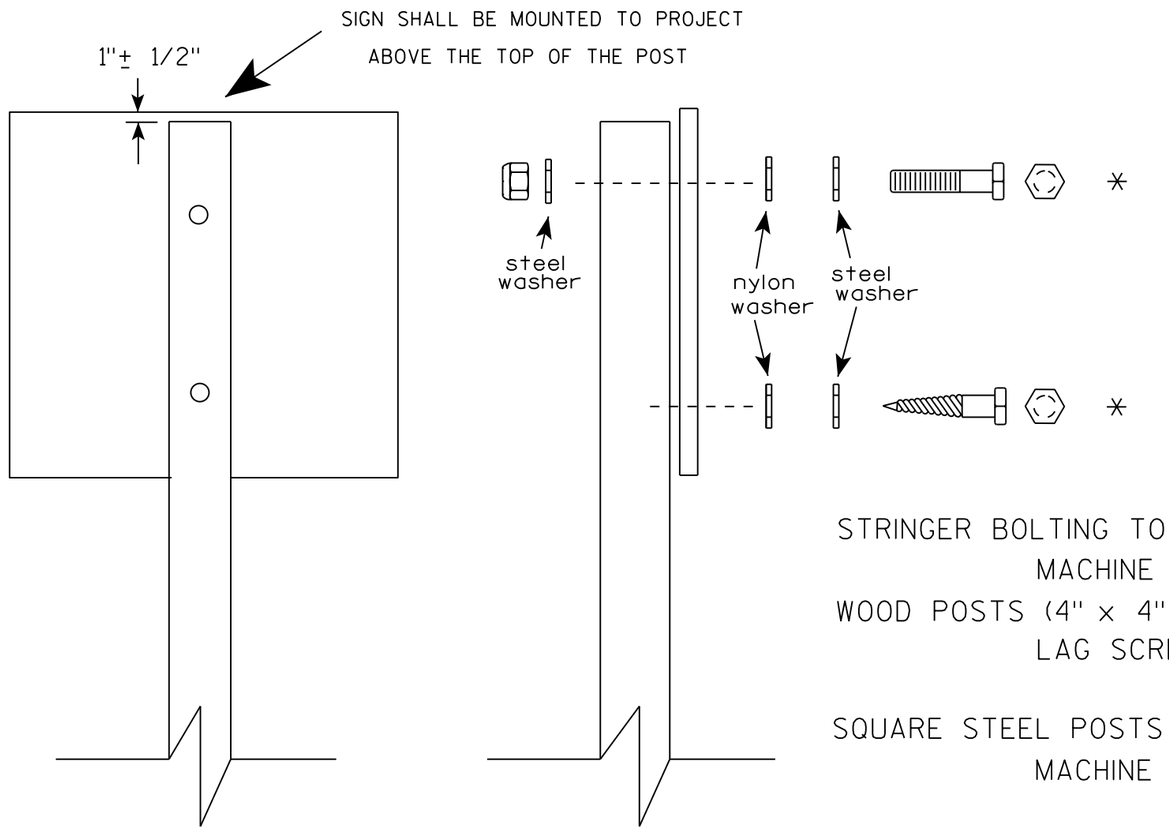
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 23-JUL-2015 15:23 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000 WISDOT/CADDS SHEET 42



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 4" or 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

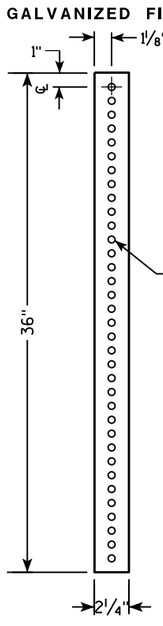
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

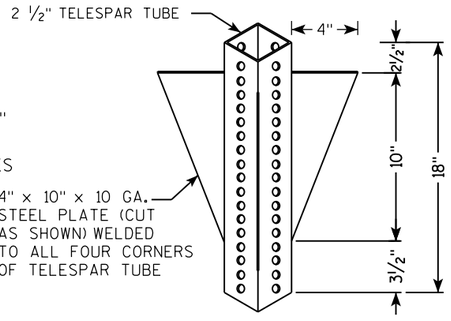
PROJECT NO: SHEET NO: E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

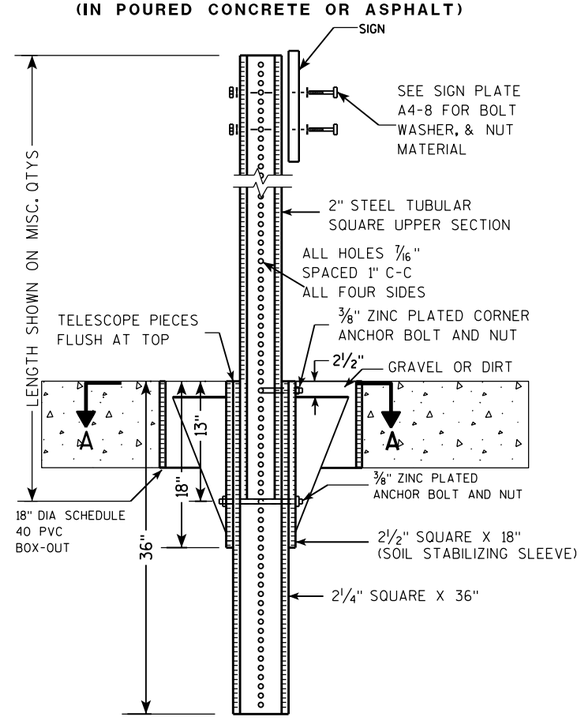
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



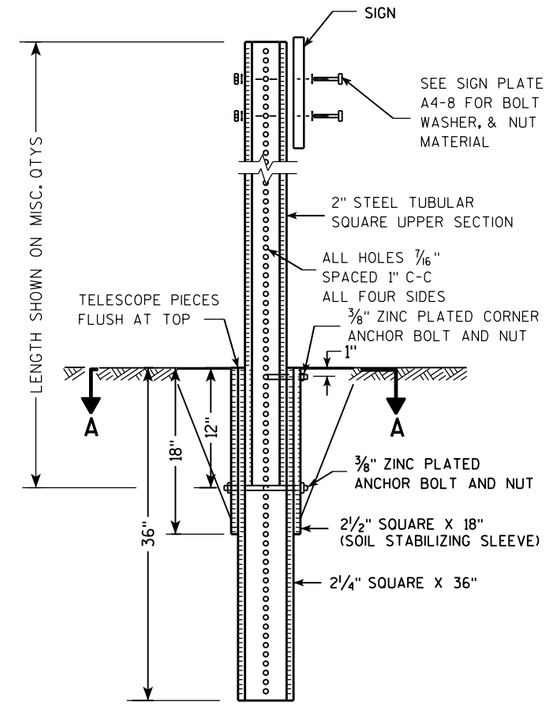
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

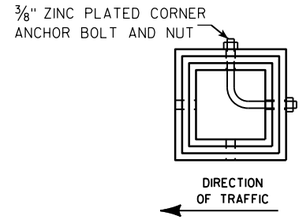


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

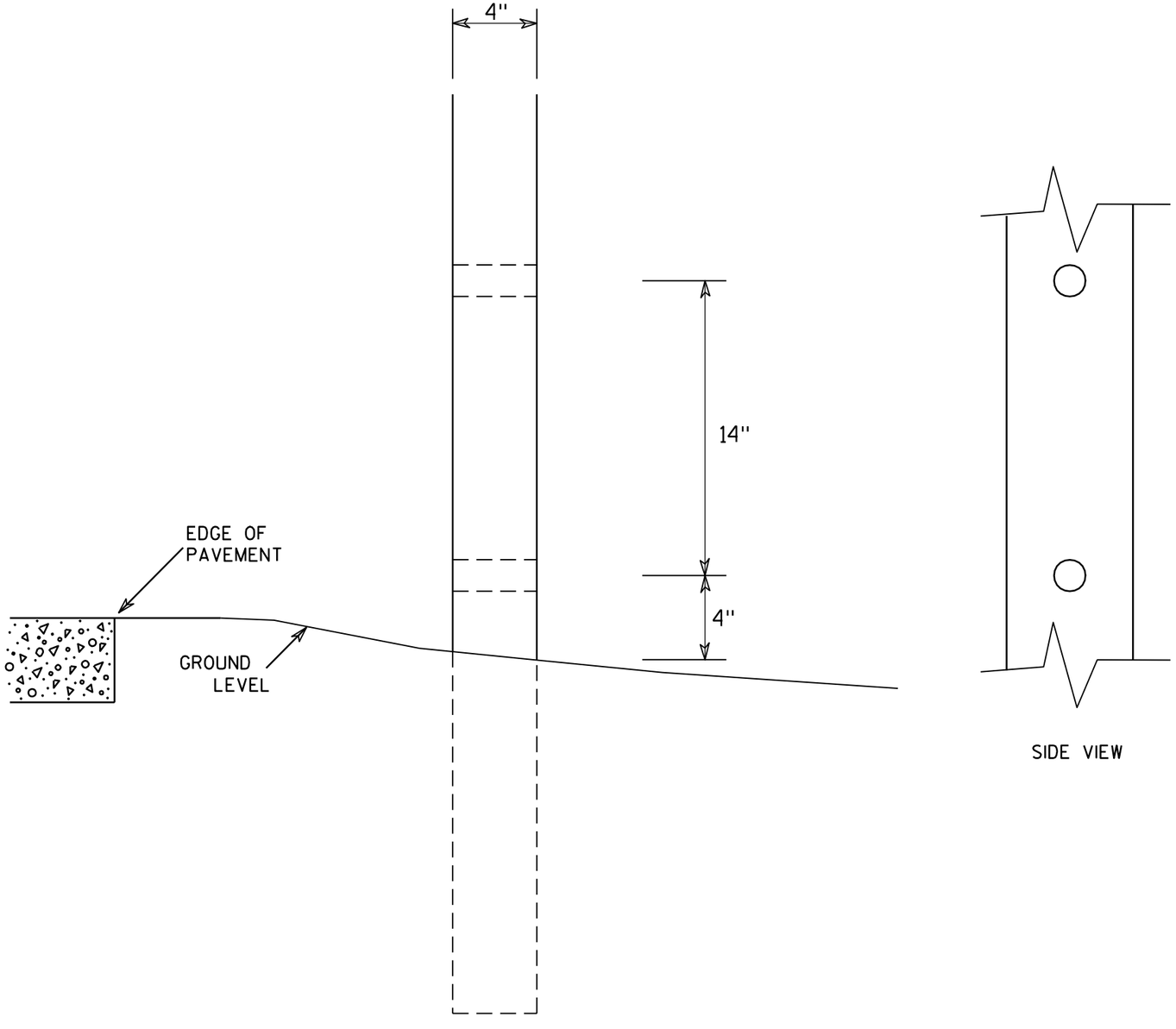
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

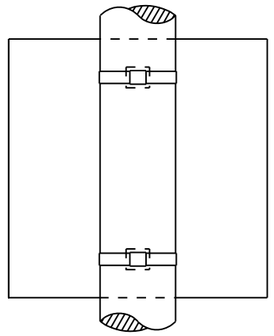
APPROVED Chester J Spang
for State Traffic Engineer

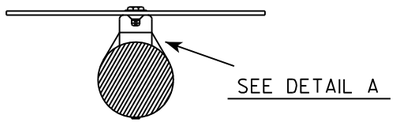
DATE 3/27/97 PLATE NO. A4-11.2

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

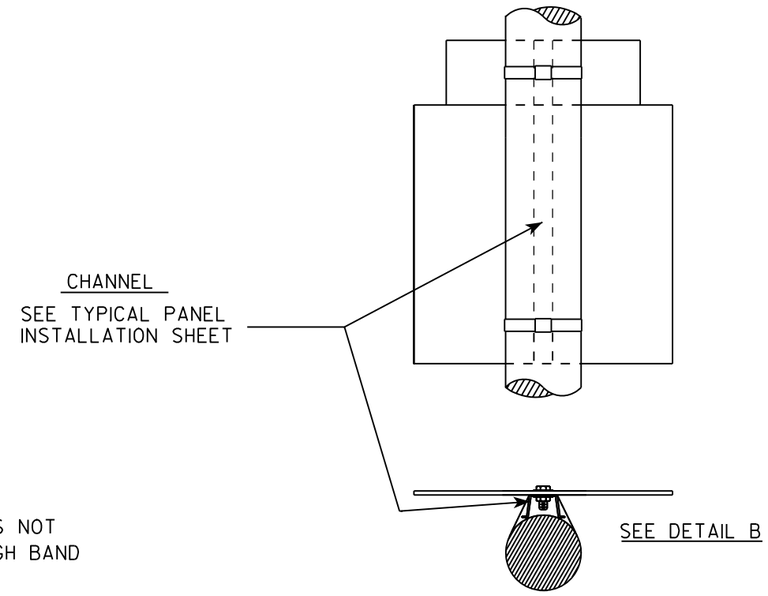
BANDING

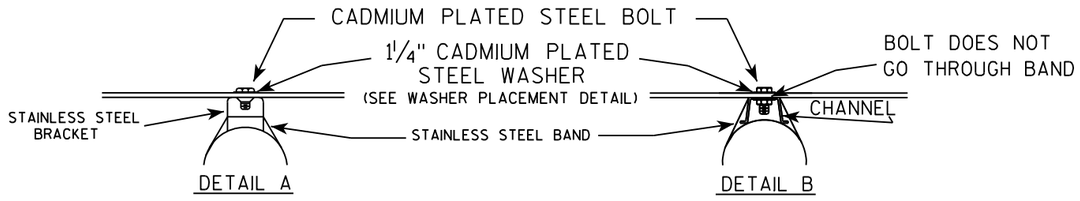
SINGLE SIGN



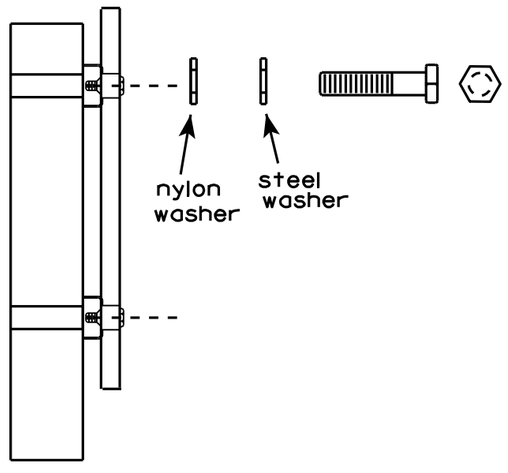


"J" ASSEMBLY





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 3/4" in width and 0.025" thickness.

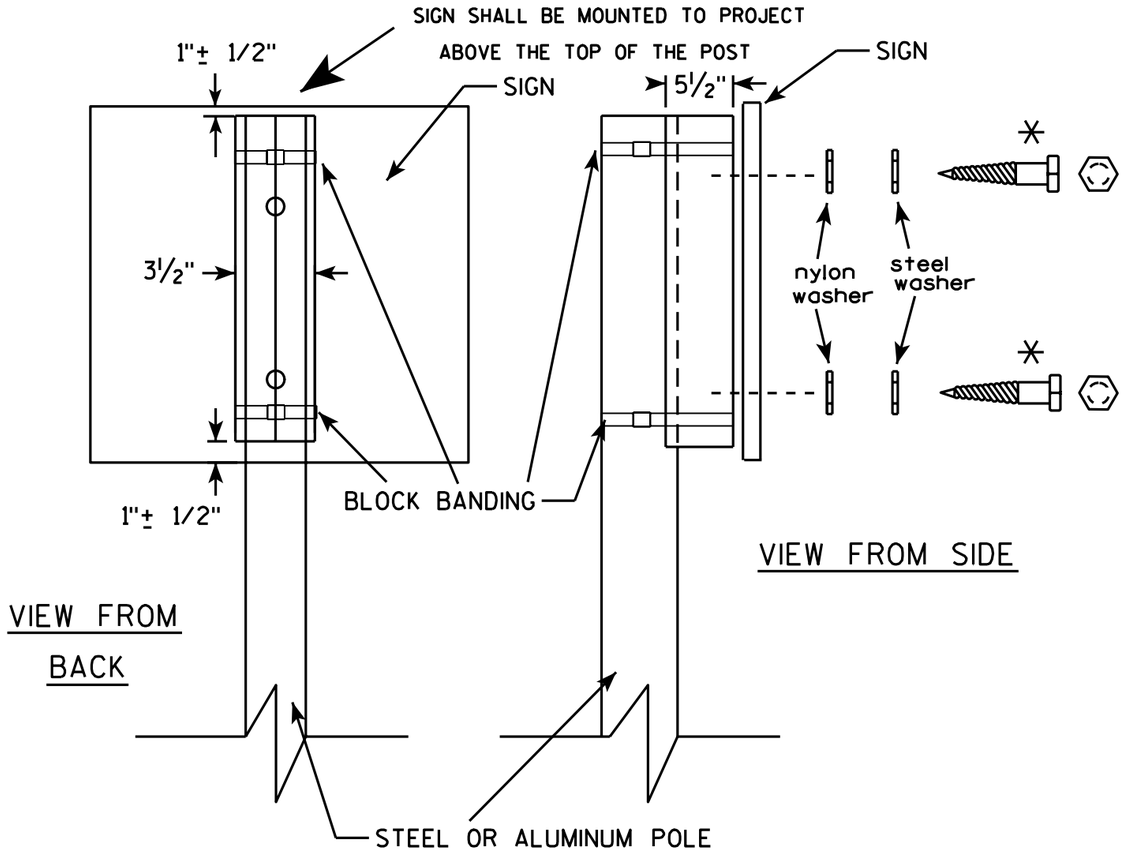
STANDARD SIGN
SIGN BANDING DETAILS

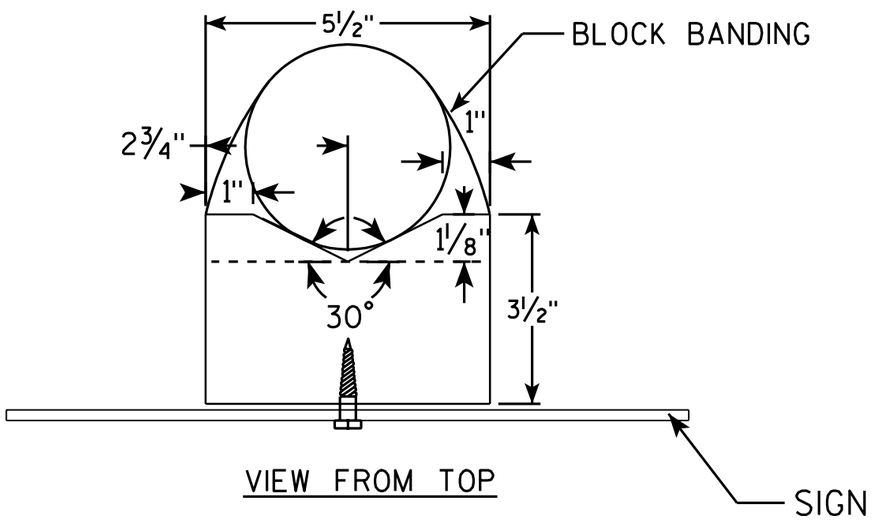
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

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





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, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. 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

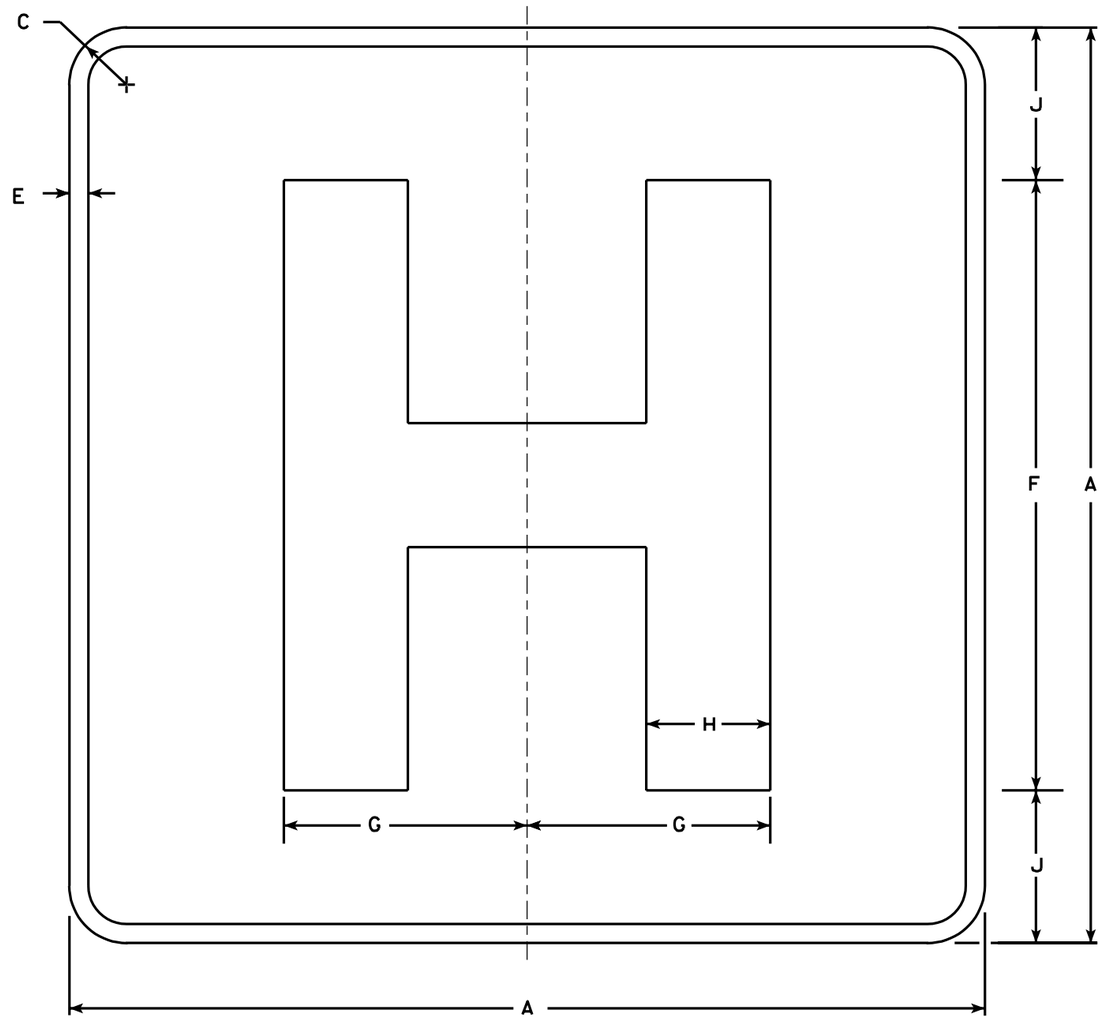
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 114 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph
WISDOT/CADDS SHEET 42



D9-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - E Modified
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.

Metric equivalent for this sign is:

SIZE	
1	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

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	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

STANDARD SIGN
D9-2

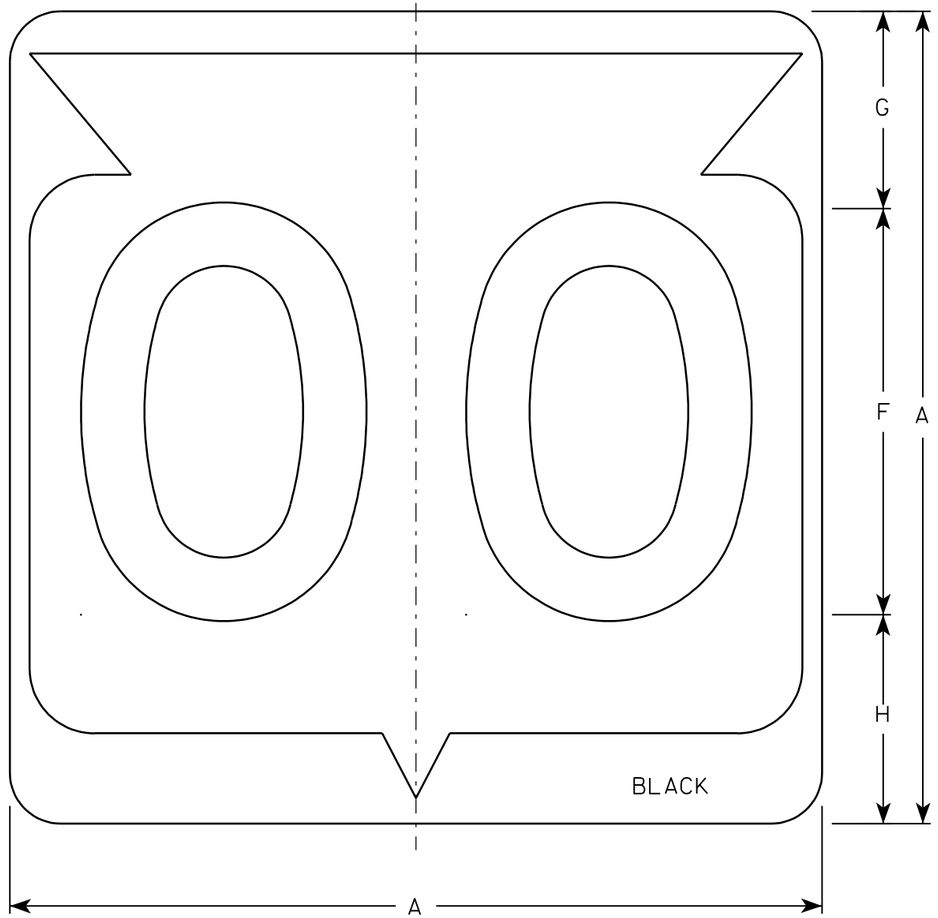
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spong
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

PROJECT NO:

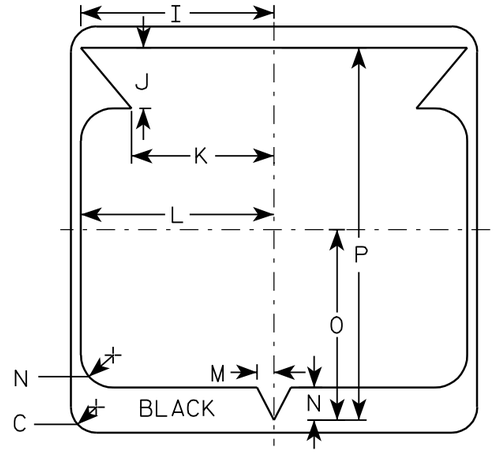
SHEET NO: 115 E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   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. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

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.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

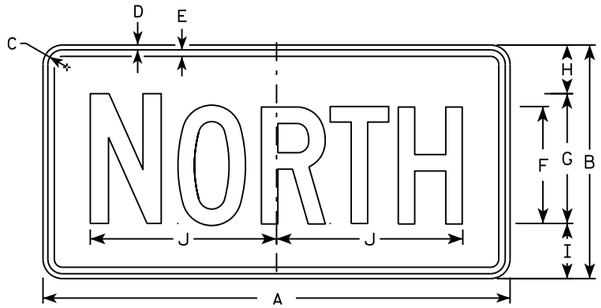
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

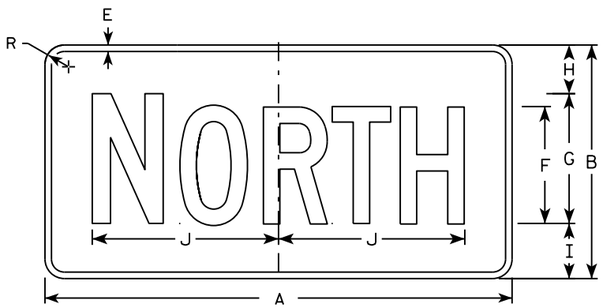
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 116	E



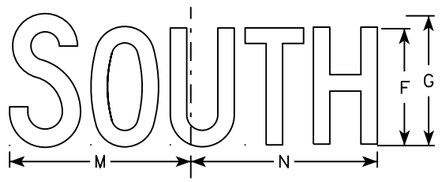
M3-1
MM3-1
MP3-1



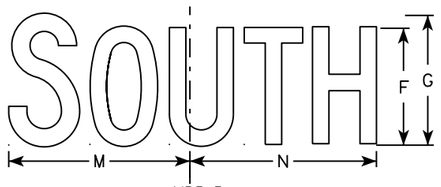
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

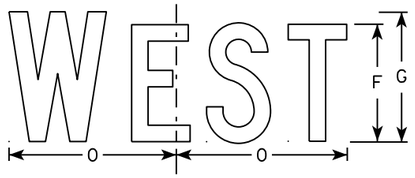
MB3-2
MK3-2
MN3-2



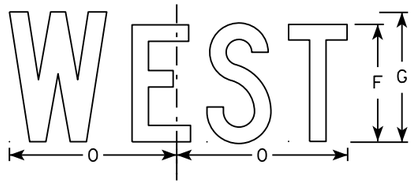
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

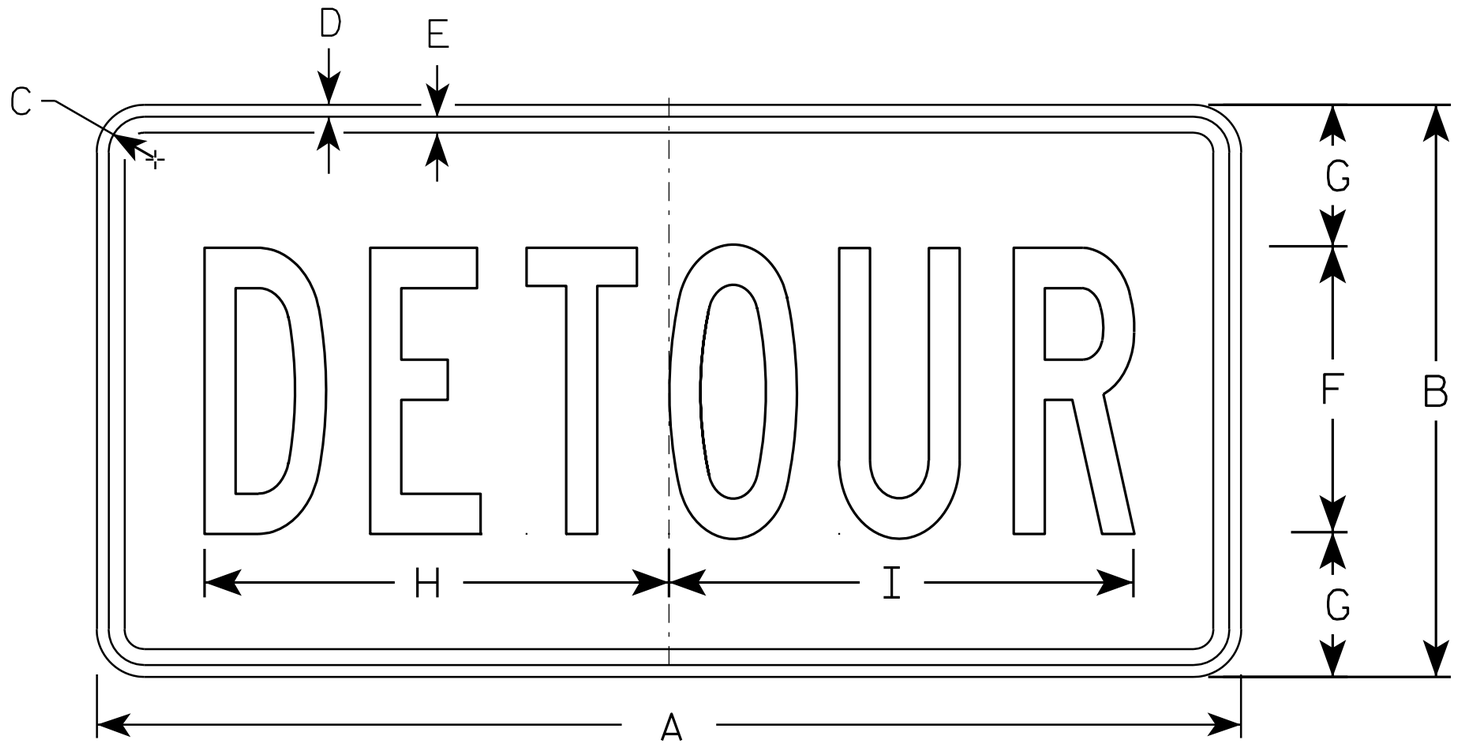
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

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

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



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

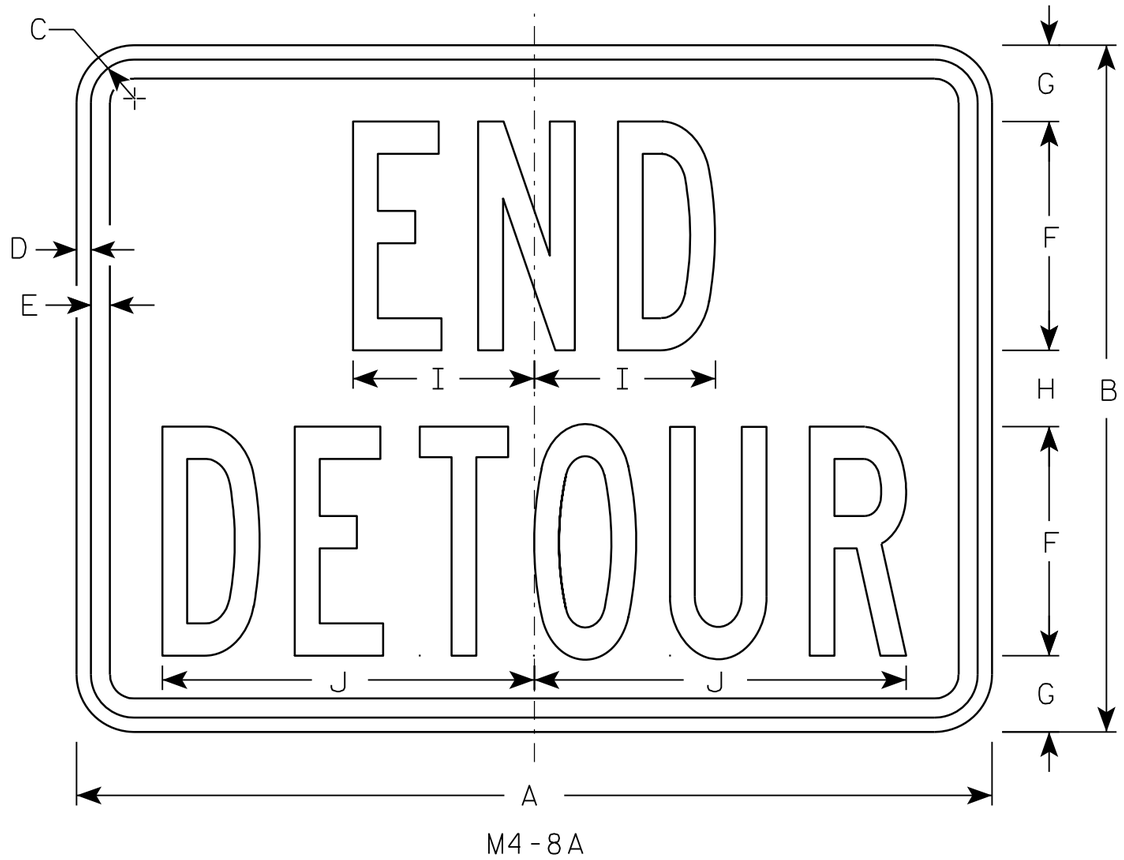
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 118	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

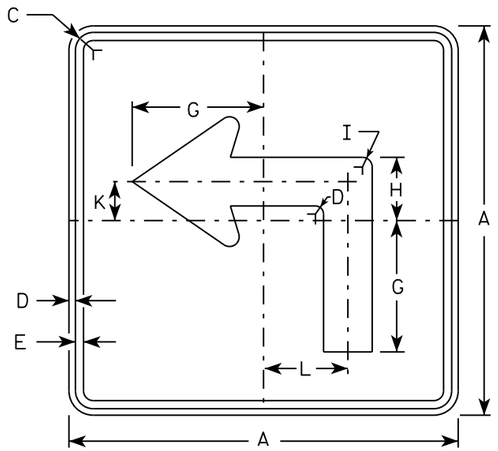
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

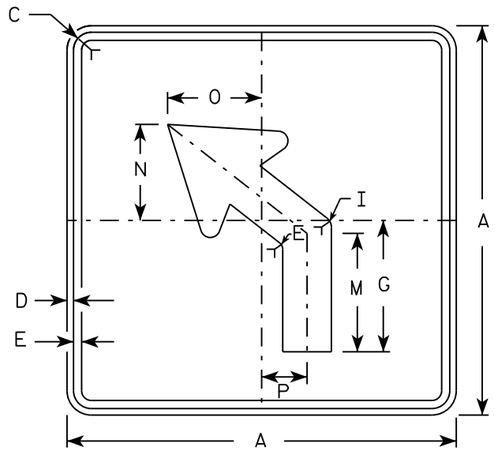
APPROVED Matthew R Rauch
for State Traffic Engineer

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

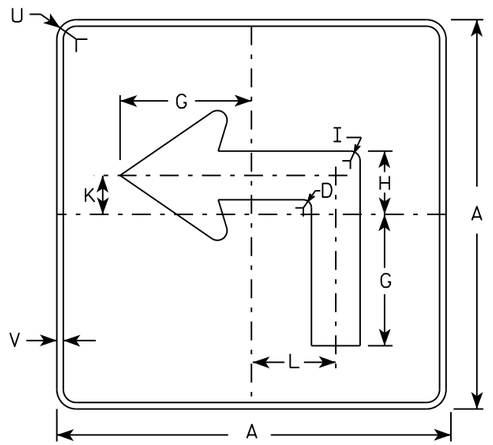
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 119	E



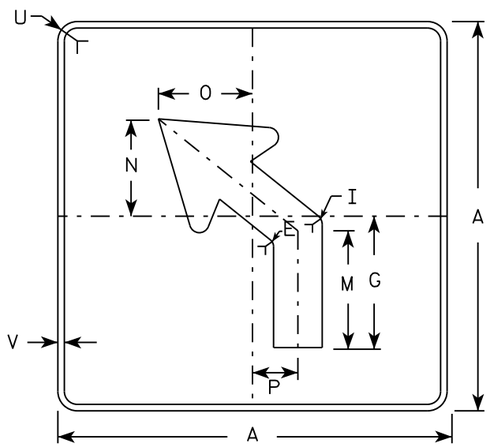
M5-1L
MM5-1L
MO5-1L
MP5-1L



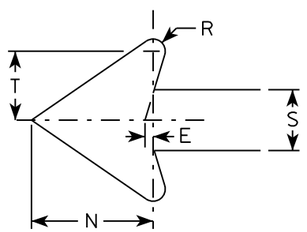
M5-2L
MM5-2L
MO5-2L
MP5-2L



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



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



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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

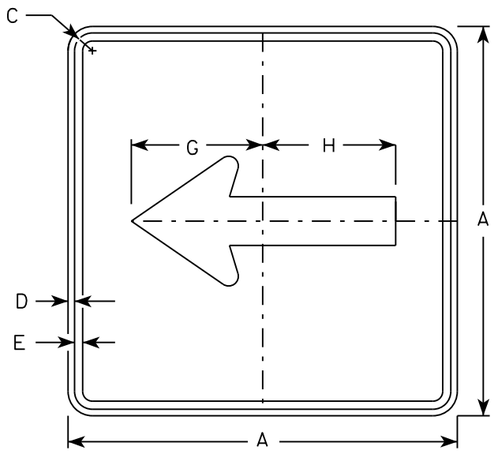
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

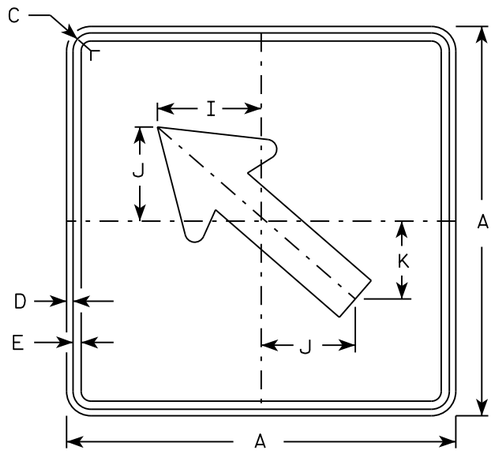
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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



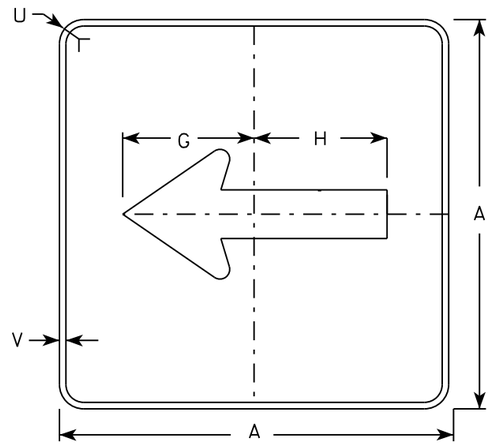
M6-1
MM6-1
MO6-1
MP6-1



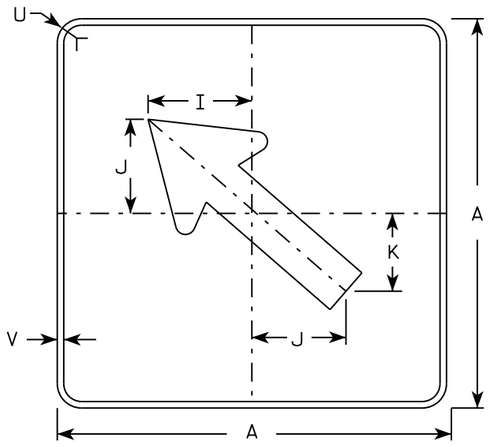
M6-2
MM6-2
MO6-2
MP6-2

NOTES

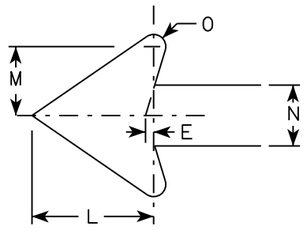
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



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



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



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

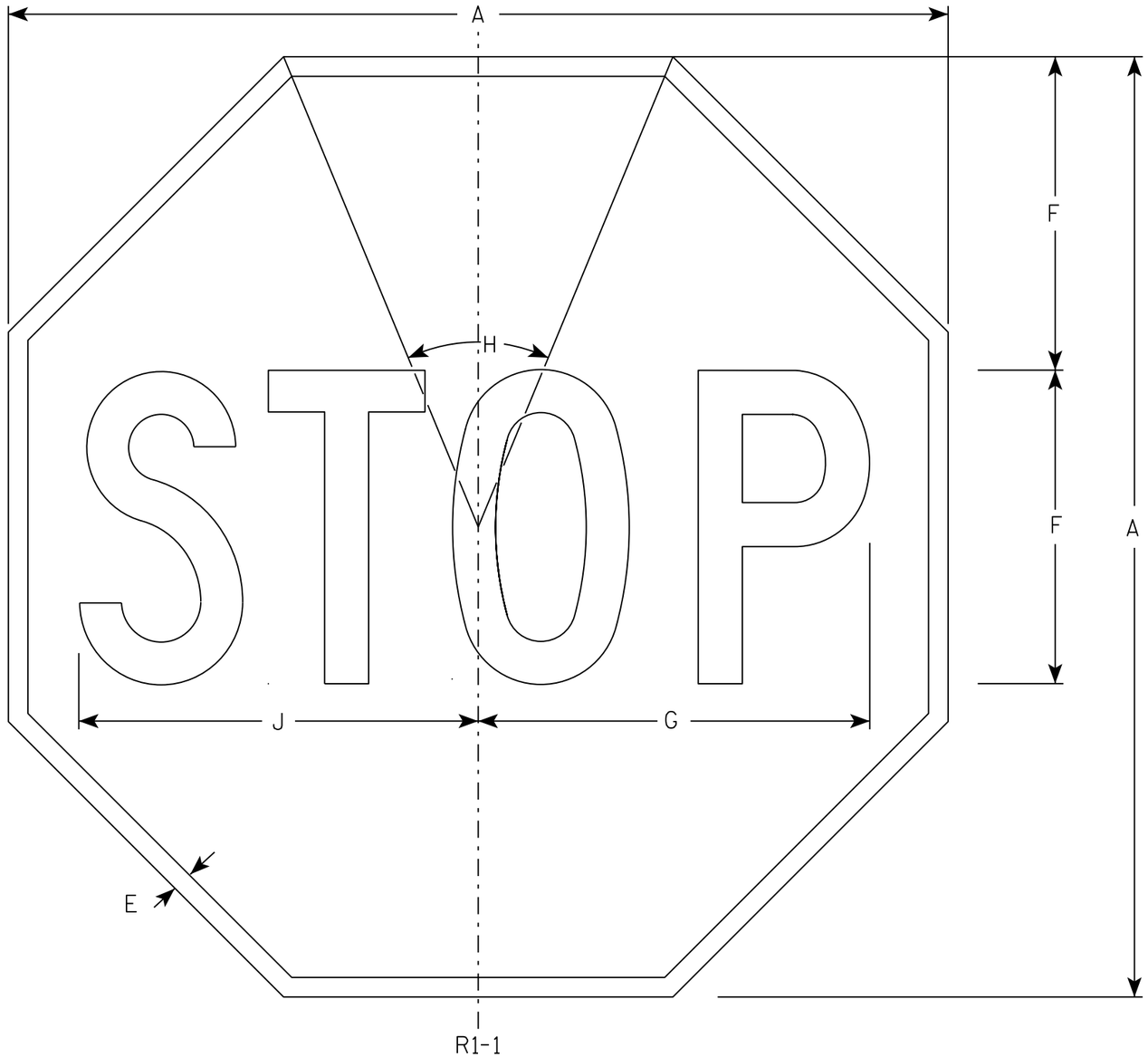
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 121 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



R1-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1-1

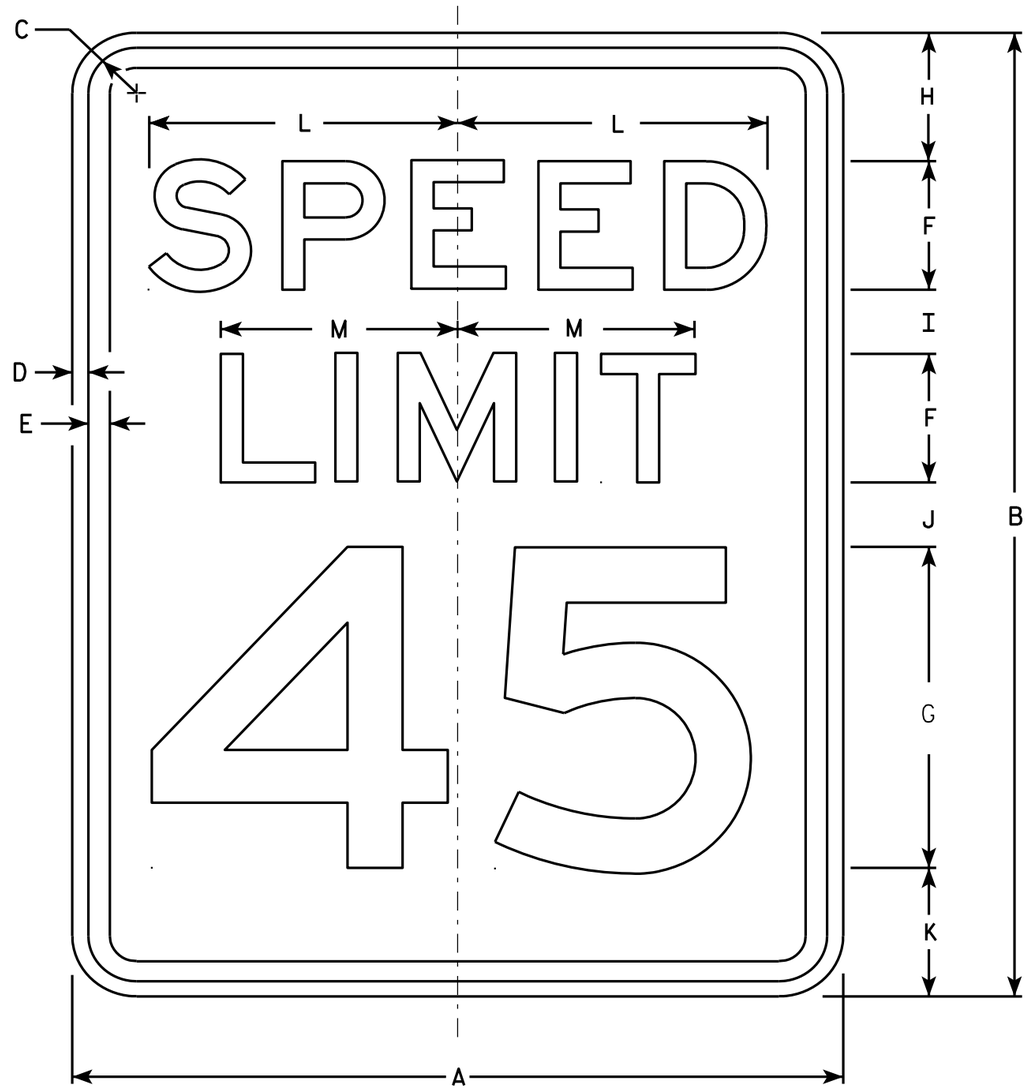
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R11.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.378143:1.000000



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
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 and optically adjust spacing 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	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

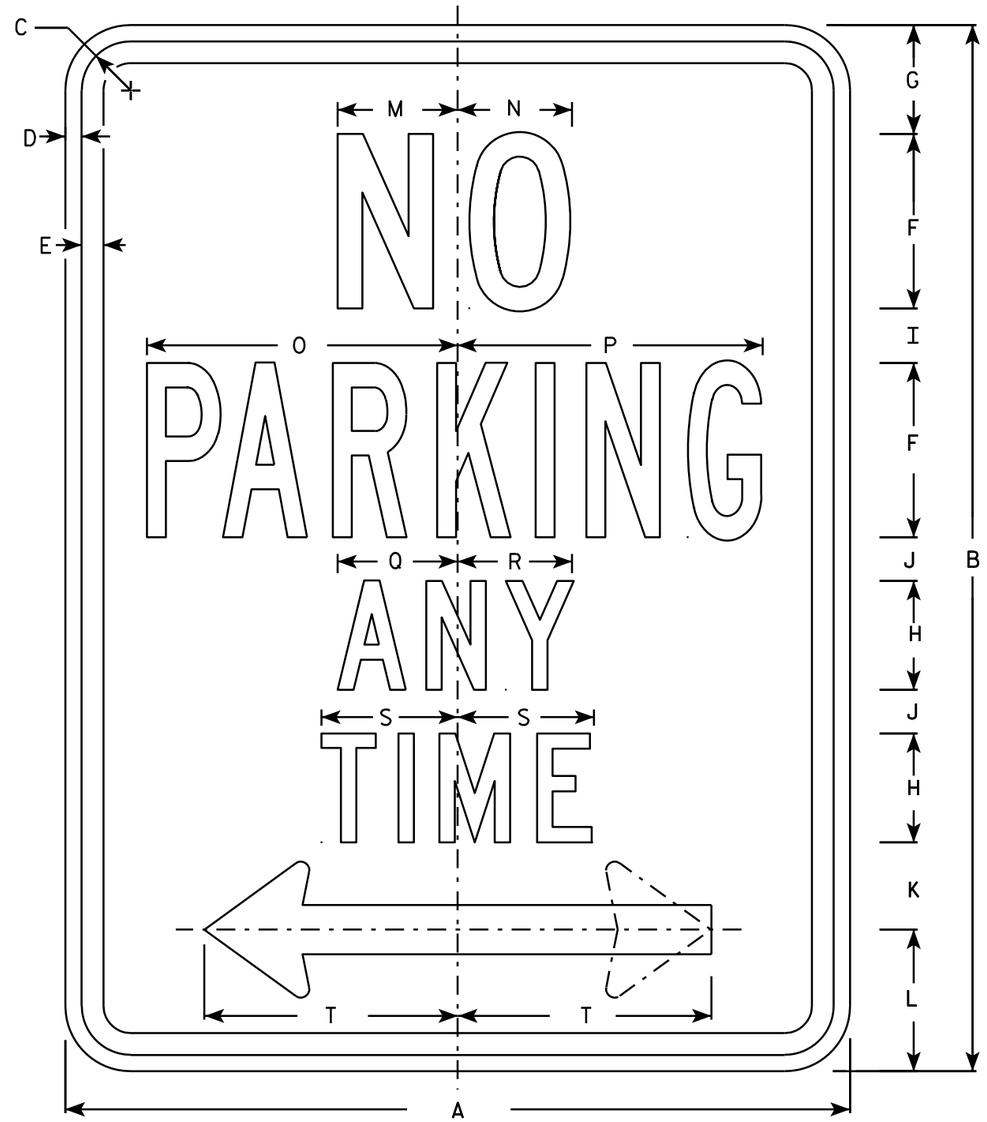
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 123 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R21.DGN PLOT DATE : 28-MAY-2010 08:32 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.717577:1.000000

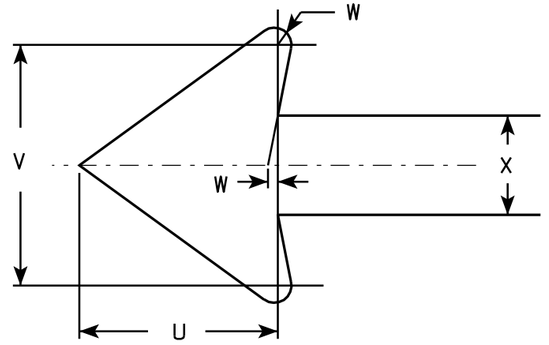
WISDOT/CADDS SHEET 42



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
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. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

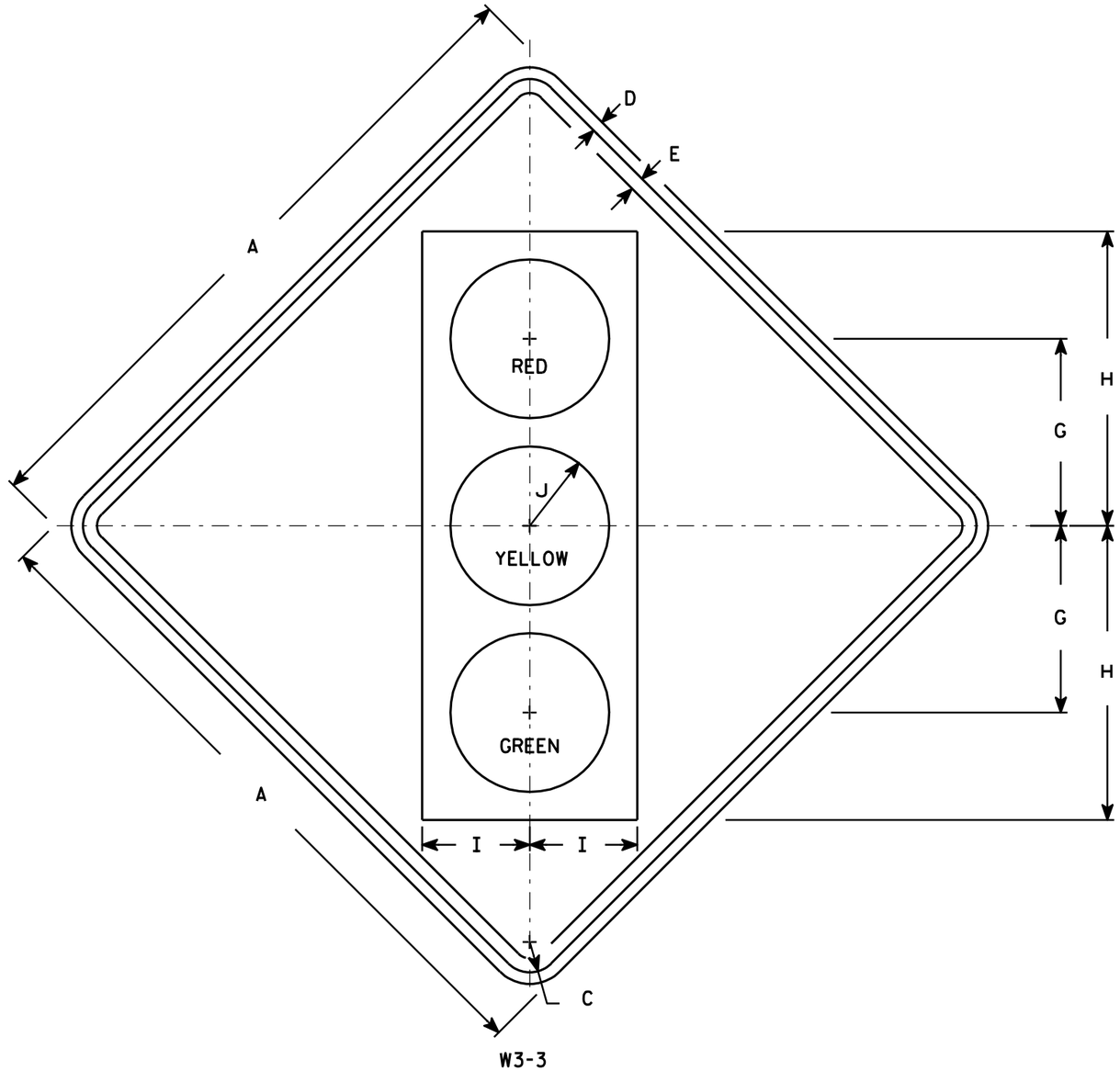
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 124	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

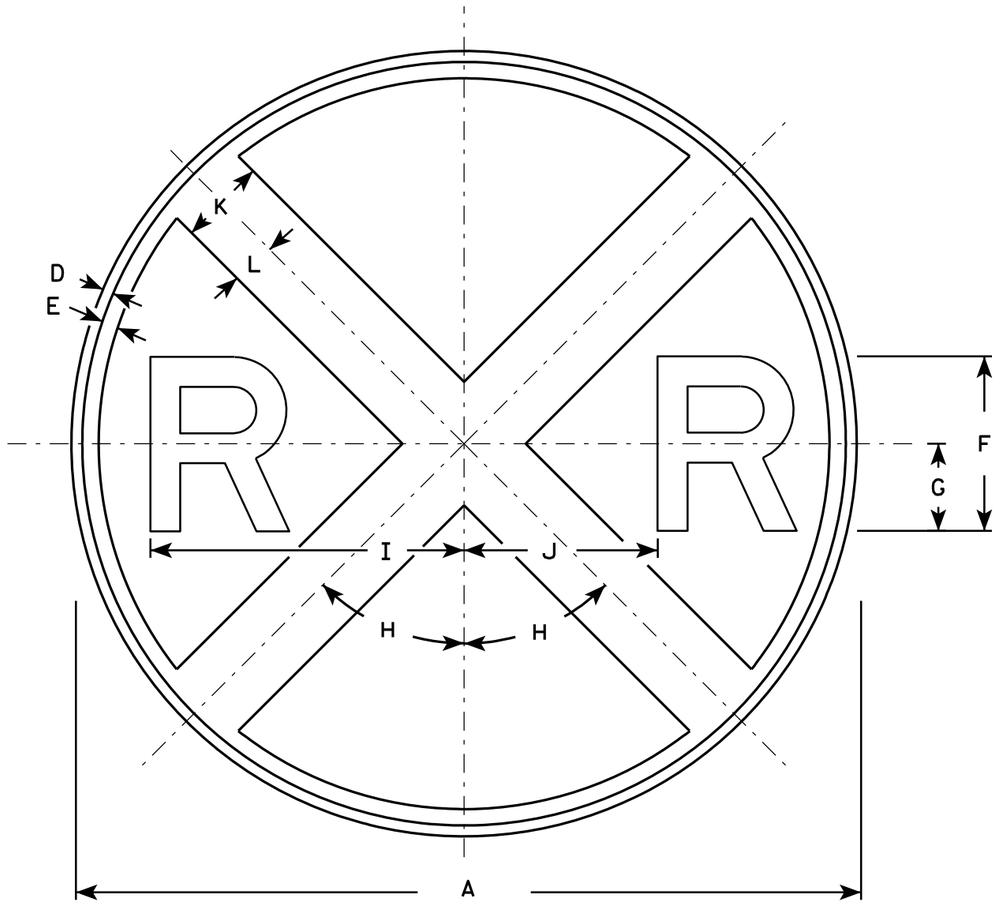
STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 125 | E



W10-1

NOTES

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

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	30			3/8	5/8	7	3 1/2	45°	12 3/8	7 1/8	3	1 1/2															4.91
2S	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
2M	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
3																											
4	48			3/4	1 1/4	10	5	45°	18 3/8	11 5/8	5	2 1/2															12.57
5																											

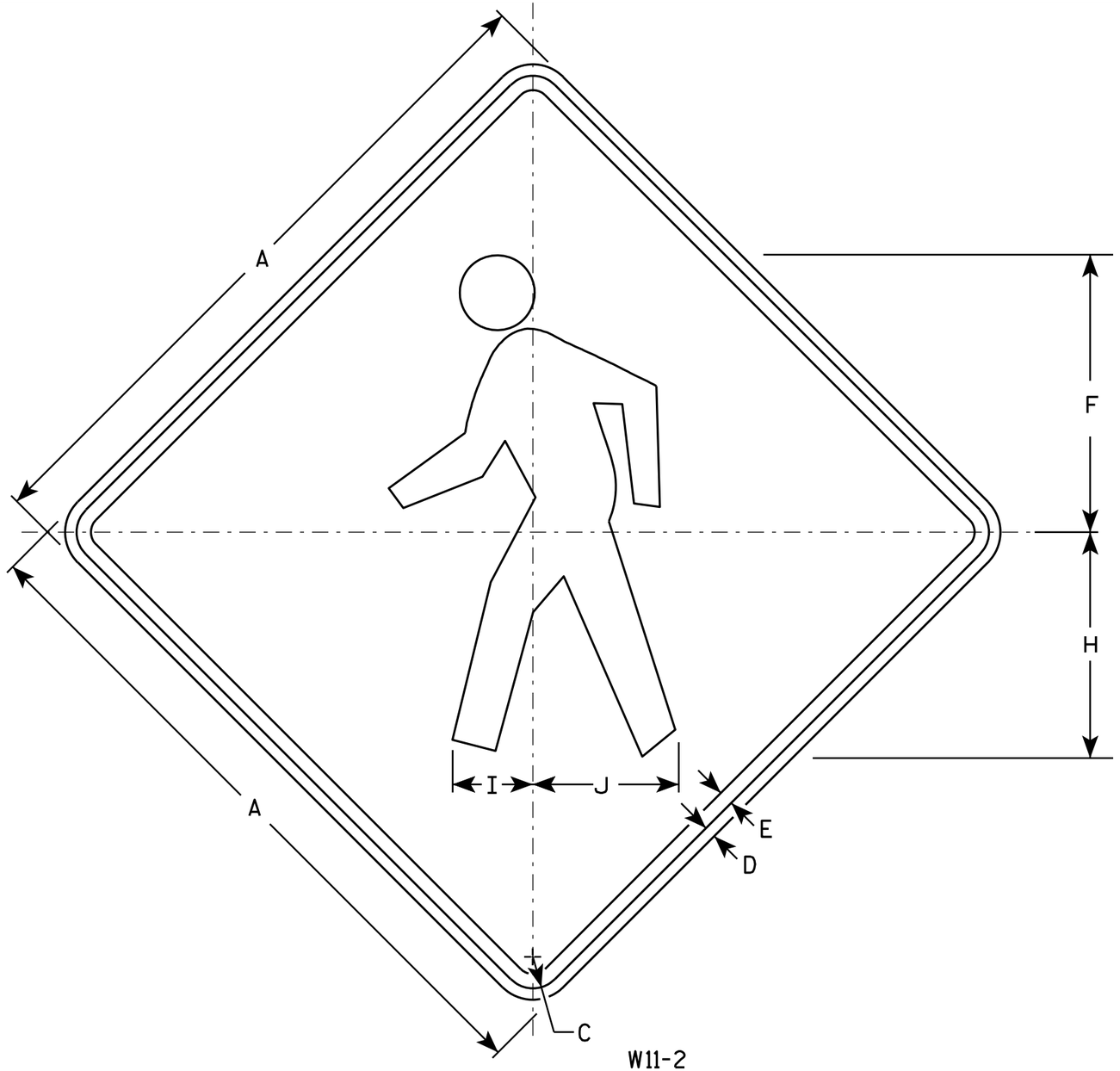
STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/13/13 PLATE NO. W10-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 126	E



W11-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

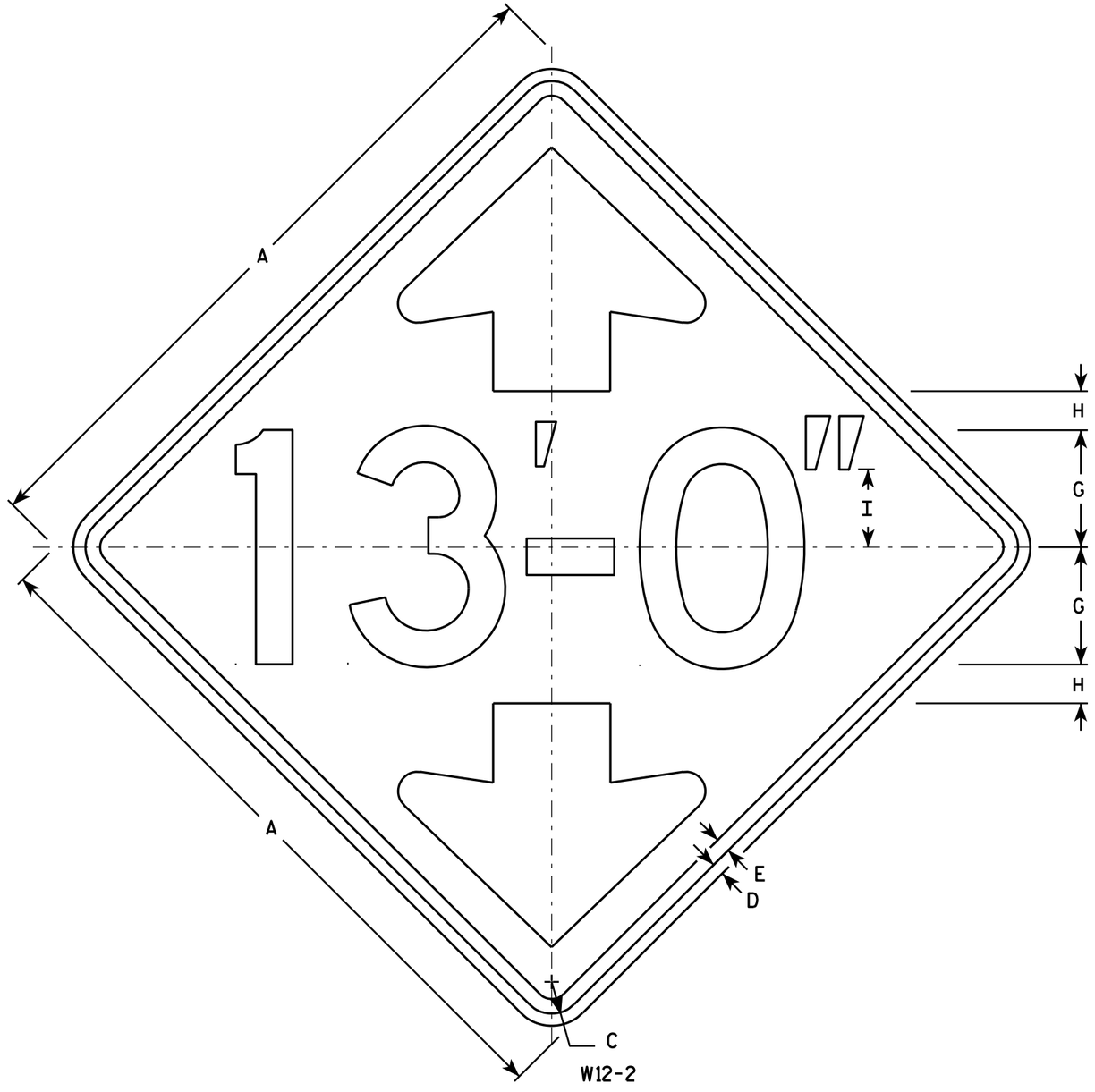
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

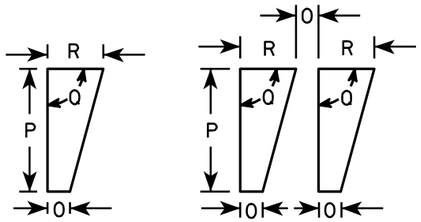
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 127	E



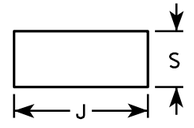
NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing of numerals, hyphen, foot & inch marks to achieve proper balance.

Arrow Detail



Foot Mark & Inch Mark Detail



Hyphen 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	30		1 3/8	1/2	5/8		5	1 5/8	3 3/8	3 3/4	6 5/8	5 3/4	3/4	2 1/2	1/2	2 1/4	90°	1	1 5/8								6.25
2S	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
2M	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
3	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
4	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
5	48		2 1/4	3/4	1		8	2 5/8	5 1/2	5 7/8	10 5/8	9 1/4	1 3/8	4	5/8	3 5/8	90°	1 5/8	2 1/2								16.00

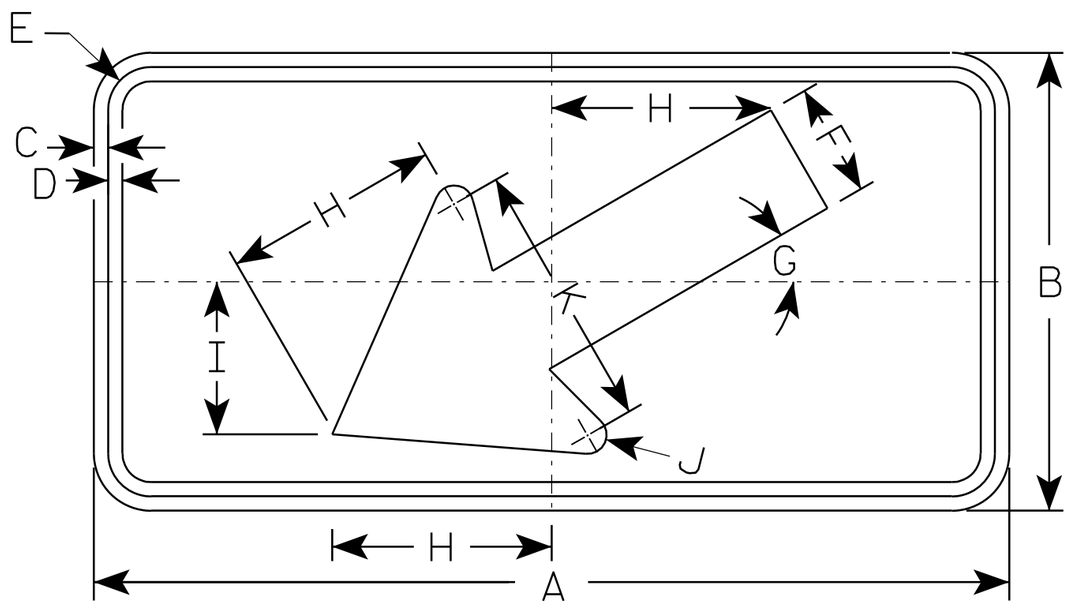
STANDARD SIGN
W12-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-2.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 128	E



W16-7L

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8

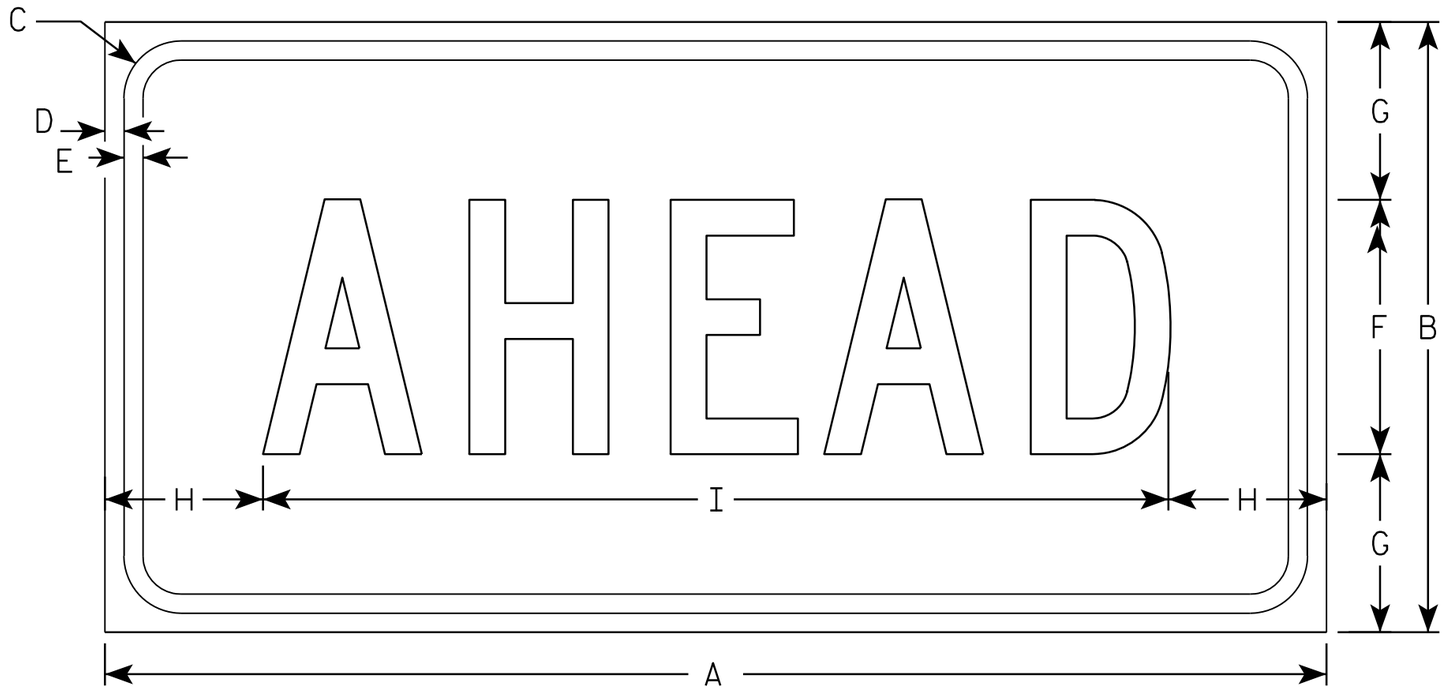
STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. W16-7.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 129	E



W16-9P

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. 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	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN
W16-9P

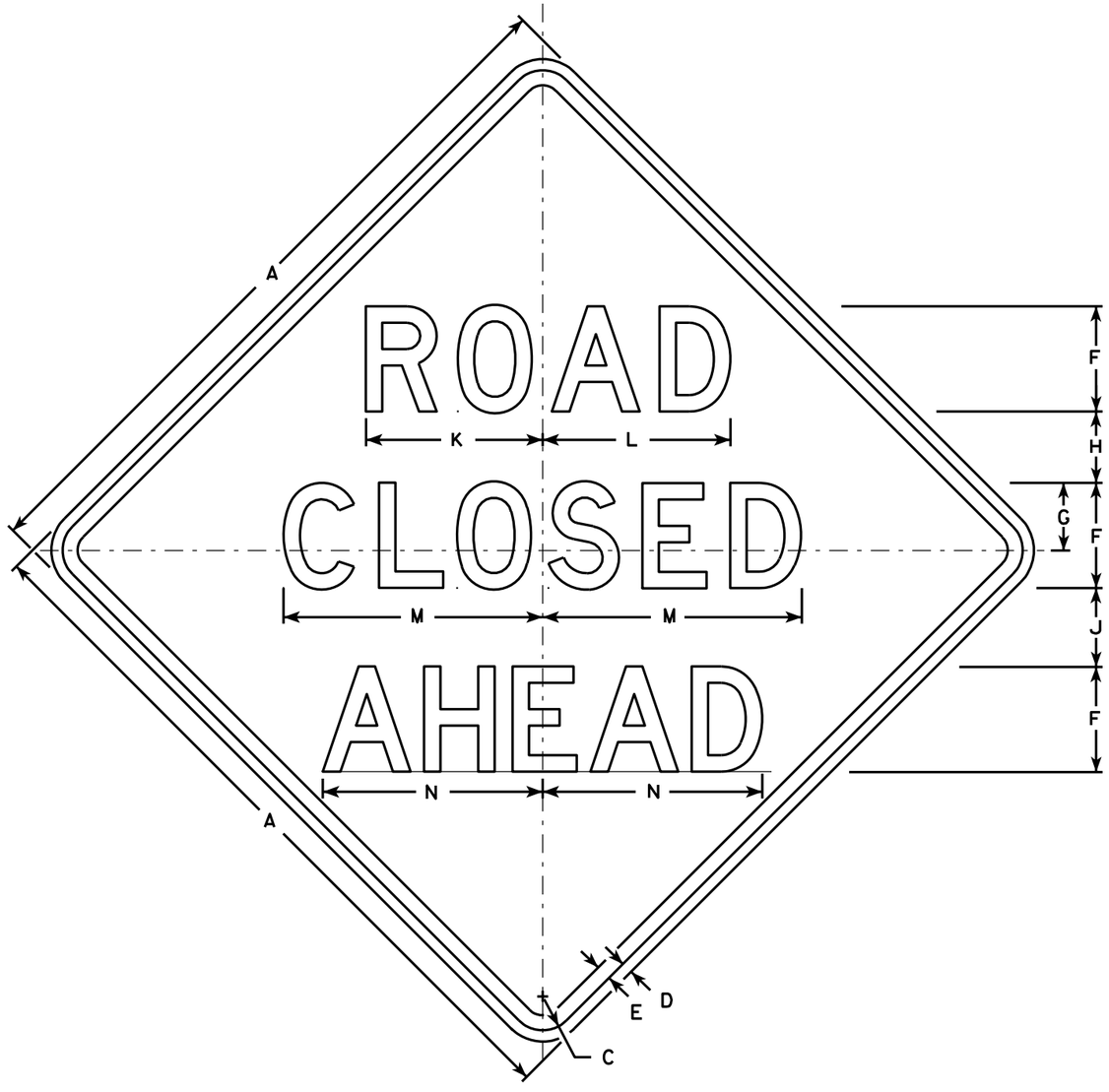
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

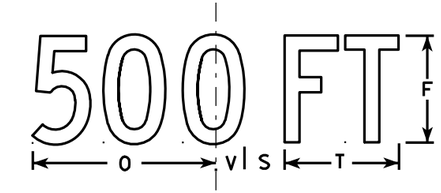
DATE 12/28/10 PLATE NO. W16-9P.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 130 | E

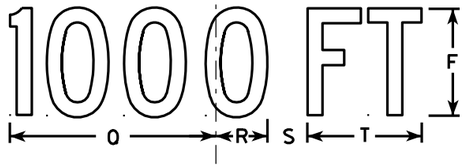
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W169P.DGN PLOT DATE : 28-DEC-2010 13:39 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 2.979524:1.000000
WISDOT/CADDS SHEET 42



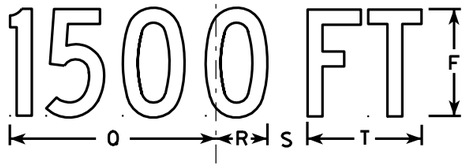
W20-3A



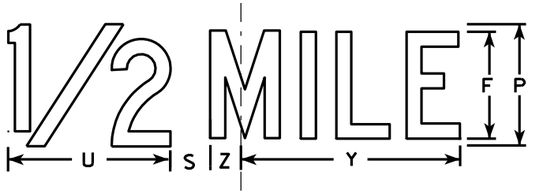
W20-3D



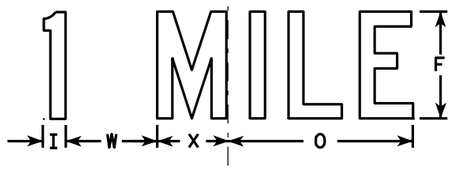
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

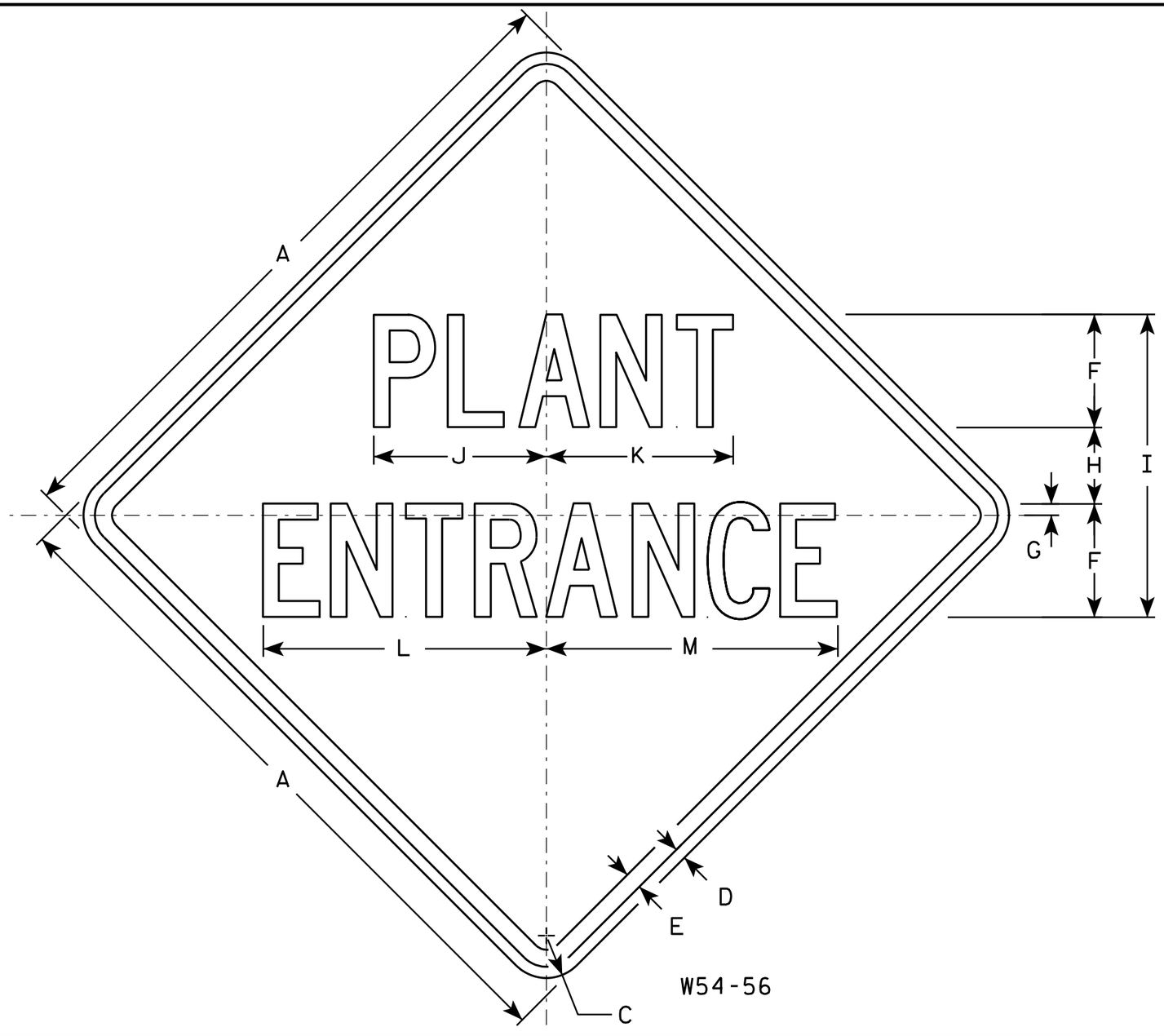
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 131 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. 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	24		1 1/8	3/8	1/2	4	3/8	2 3/4	10 3/4	6 1/8	6 5/8	10	10 3/8														4.00
2S	30		1 3/8	1/2	5/8	5	1/2	3 3/8	13 3/8	7 5/8	8 1/4	12 1/2	12 7/8														6.25
2M	36		1 5/8	5/8	3/4	6	5/8	4 1/8	16 1/8	9 1/8	9 7/8	15	15 3/8														9.00
3	36		1 5/8	5/8	3/4	6	5/8	4 1/8	16 1/8	9 1/8	9 7/8	15	15 3/8														9.00
4																											
5																											

STANDARD SIGN
W54-56

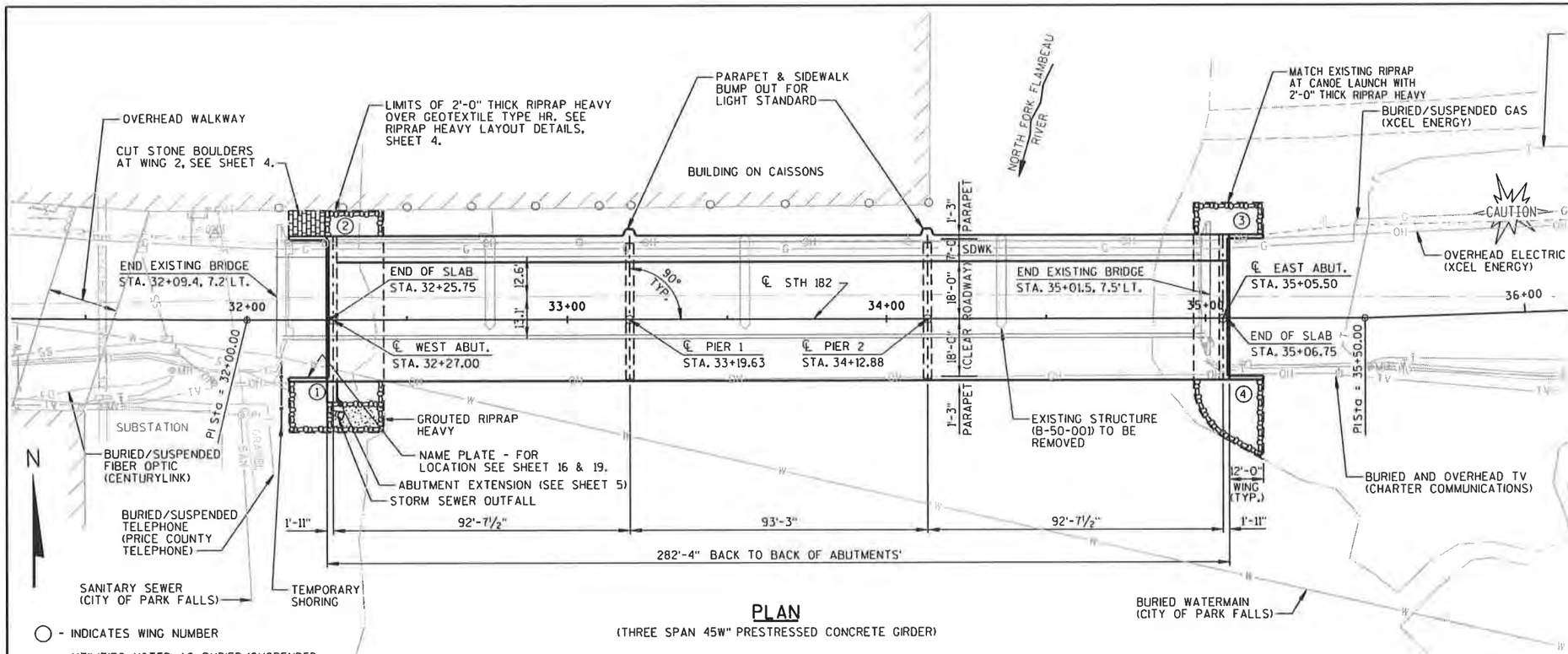
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W54-56.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 132	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W5456.DGN PLOT DATE : 13-MAR-2013 14:04 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.458087:1.000000
WISDOT/CADDS SHEET 42

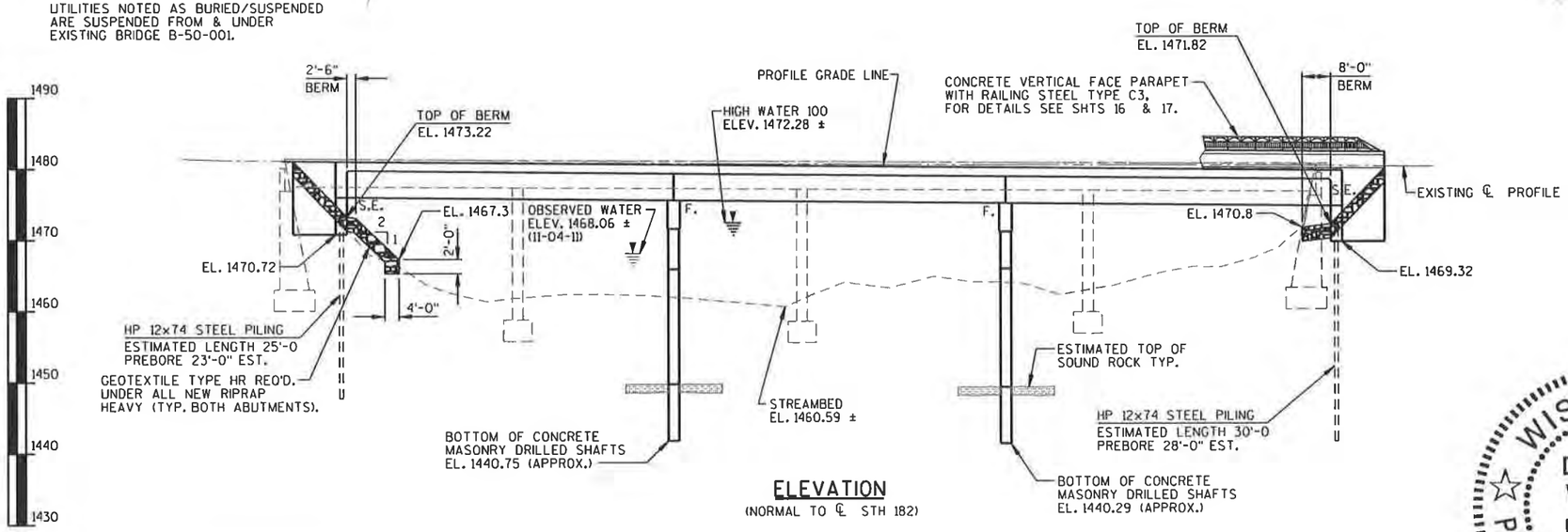


PLAN

(THREE SPAN 45W" PRESTRESSED CONCRETE GIRDER)

◯ - INDICATES WING NUMBER

UTILITIES NOTED AS BURIED/SUSPENDED ARE SUSPENDED FROM & UNDER EXISTING BRIDGE B-50-001.



ELEVATION

(NORMAL TO ℄ STH 182)

LIST OF DRAWINGS

STATE PROJECT NUMBER

9240-08-70

BENCH MARKS ⌖ NAVD 88

NO.	STATION/LOCATION	DESCRIPTION	ELEV.
2845	30+80.7, 23.3' RT.	CORNER OF CONCRETE	1484.17
2500	35+00.6, 7.7' RT.	DISK ON WING	1480.63

DESIGN DATA

LIVE LOAD:
DESIGN LOADING : HL-93
INVENTORY RATING FACTOR : RF=1.19
OPERATING RATING FACTOR : RF=1.62

TRAFFIC DATA:
A.A.D.T. (2017) = 5400
A.A.D.T. (2037) = 6600
R.D.S. = 30 MPH

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) : 250 (KIPS)

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

ULTIMATE DESIGN STRESSES:
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.

45W" PRESTRESSED GIRDERS
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS - 0.60" ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA:
ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 12-INCH x 74 LB. WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS (XX) PER PILE BY SEATING THE PILE IN GRANITIC BEDROCK. PREBORE ALL PILES TO EXTEND A MINIMUM 3'-0" INTO BEDROCK OR CONSOLIDATED MATERIAL. ESTIMATED PILE LENGTHS ARE 25'-0" AT THE WEST ABUTMENT AND 30'-0" AT THE EAST ABUTMENT. ESTIMATED PREBORE DEPTHS ARE 23'-0" AT THE WEST ABUTMENT AND 28'-0" AT THE EAST ABUTMENT.

(XX) - THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 FOR THE SEATED PILE.

NOTE: AN HP 14-INCH x 73 LB. PILE IS AN ACCEPTABLE ALTERNATIVE PILE. USE SAME PILE SIZE THROUGHOUT THE STRUCTURE. INSTALL AS DESCRIBED ABOVE.

PIERS SHALL BE SUPPORTED ON CONCRETE MASONRY DRILLED SHAFTS IN SOUND ROCK WITH A MINIMUM REQUIRED FACTORED END BEARING RESISTANCE OF 70,000 PSF [++] AND A MINIMUM REQUIRED FACTORED SKIN FRICTION RESISTANCE OF 21,000 PSF [++].

[++] THE FACTORED RESISTANCE IS THE VALUE USED FOR DESIGN.

HYDRAULIC DATA:
100 YEAR FREQUENCY
DRAINAGE AREA — 720 SQ. MI.
Q_{100} — 7,000 C.F.S.
VELOCITY — 3.26 F.P.S.
WATERWAY AREA — 2150 SQ. FT.
HIGH WATER$_{100}$ ELEVATION — 1472.28 ±
ROADWAY OVERFLOW DESIGN FREQUENCY — N/A
SCOUR CRITICAL CODE — 5
2 YEAR FREQUENCY
HIGH WATER$_2$ ELEVATION — 1469.45 ±
Q_2 — 2,900 C.F.S.

WISCONSIN DANIEL H. WAGNER E-19220 BARABOO, WI PROFESSIONAL ENGINEER
8-1-2016

CONSULTANT DESIGN CONTACT:
DANIEL WAGNER
(608) 355-8952

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

NO.	DATE	REVISION	BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
800-336-2770 1-800-362-4100 Fax: 608-356-2770

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/05/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-50-82

STH 182 OVER NORTH FORK FLAMBEAU RIVER

COUNTY PRICE — ~~TOWN/CITY/VILLAGE~~ PARK FALLS

DESIGN SPEC. AASHTO LRFD DESIGN SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JAS	DHW	RLR	DHW

GENERAL PLAN

SHEET 1 OF 19
133

FILE= 93125_01.DGN
DATE= 7/29/2016

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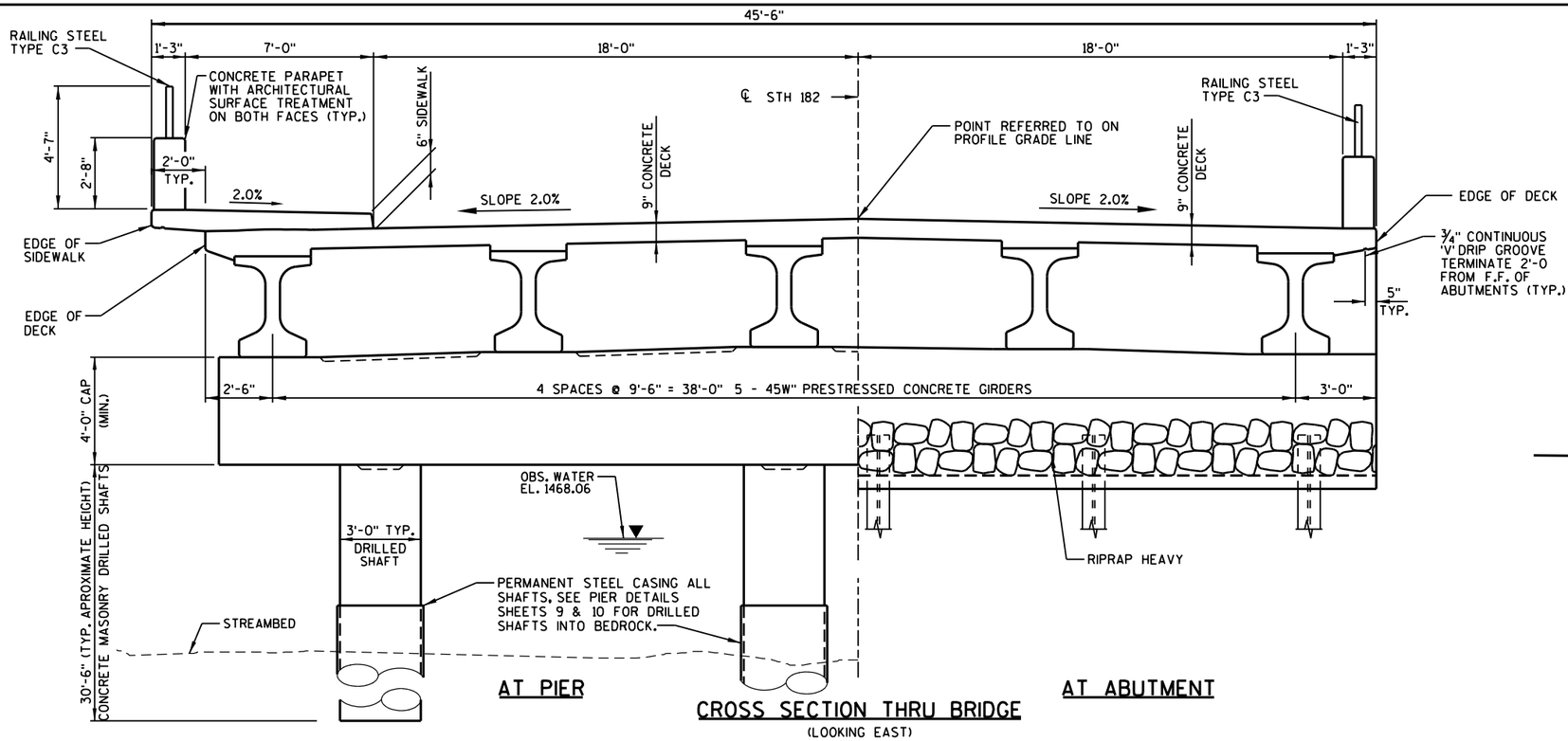
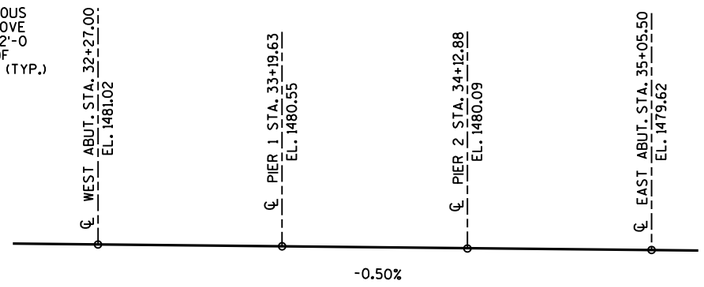


CROSS SECTION THRU BRIDGE
(LOOKING EAST)



PROFILE GRADE LINE - ℄ STH 182

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	SUPER	TOTAL
203.0700.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM STATION 33+55, 7'LT.	LS	-	-	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-50-0082	LS	-	-	-	-	-	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	140	-	-	-	-	140
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	-	-	275	-	275
502.0100	CONCRETE MASONRY BRIDGES	CY	53	23	23	50	573	722
502.3200	PROTECTIVE SURFACE TREATMENT	SY	4	-	-	4	1662	1670
503.0146	PRESTRESSED GIRDER TYPE I45W-INCH	LF	-	-	-	-	1395	1395
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	3140	11360	11360	2765	-	28625
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2255	50	50	2255	105120	109730
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	-	-	-	30	30
506.4000.01	STEEL DIAPHRAGMS B-50-0082	EACH	-	-	-	-	24	24
511.1200	TEMPORARY SHORING B-50-0082	SF	200	-	-	-	-	200
513.7016.01	RAILING STEEL TYPE C3 B-50-0082	LF	-			-	610	610
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	13	-	-	13	-	26
517.1050.S.01	ARCHITECTURAL SURFACE TREATMENT B-50-0082	SF	110	-	-	90	1180	1380
517.1050.S.02	ARCHITECTURAL SURFACE TREATMENT TRAFFIC FACE B-50-0082	SF	-	-	-	-	1200	1200
517.1015.S.01	CONCRETE STAINING MULTI-COLOR B-50-0082	SF	110	-	-	90	2380	2580
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	161	-	-	168	-	329
550.1125	PILING STEEL HP 12-INCH X 74 LB	LF	175	-	-	180	-	355
606.0300	RIPRAP HEAVY	CY	100	-	-	80	-	180
606.0700	GROUTED RIPRAP HEAVY	CY	15	-	-	-	-	15
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	115	-	-	115	-	230
645.0120	GEOTEXTILE TYPE HR	SY	235	-	-	155	-	390
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	-	-	-	-	48	48
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	-	-	-	-	1200	1200
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	-	-	-	-	4	4
657.6005.S	ANCHOR ASSEMBLY LIGHT POLES ON STRUCTURES	EACH	-	-	-	-	2	2
SPV.0090.01	DRILLED SHAFT FOUNDATION 36-INCH	LF	-	91.5	91.5	-	-	183
SPV.0105.03	SEISMOGRAPH/VIBRATION MONITORING	LS	-	-	-	-	-	1
SPV.0105.04	UTILITY LINE OPENING (ULO) WATER MAIN AT BRIDGE	LS	-	-	-	-	-	1
SPV.0165.01	CUT-STONE BOULDERS	SF	72	-	-	-	-	72
SPV.0195.01	EXCAVATION, HAULING, AND DISPOSAL OF CONTAMINATED SEDIMENT	TON	-	-	-	-	-	170
	NON-BID ITEMS							
	PREFORMED FILLER	SIZE	-	-	-	-	-	½", ¾"
	CORK FILLER	SIZE	-			-	-	¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

THE FIRST DIGIT OR THE FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY TO THE LIMITS SHOWN ON SHEETS 1, 4, 19, AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS.

THIS STRUCTURE WILL REPLACE EXISTING BRIDGE, B-50-001, A 293 FOOT LONG, FOUR SPAN, STEEL DECK GIRDER BRIDGE SET ON CONCRETE ABUTMENTS AND OPEN FRAME CONCRETE PIERS ALL ON SPREAD FOOTINGS.

AT THE ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED. THE BACKFILL STRUCTURE TYPE A ESTIMATED QUANTITIES ASSUMED A 1½:1 EXCAVATION SLOPE AT THE ABUTMENTS. AT THE WEST ABUTMENT USE BACKFILL CONTROLLED LOW STRENGTH. AT THE EAST ABUTMENT USE BACKFILL STRUCTURE TYPE A.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO ADJACENT WISDOT PROJECT ID 9931-02-70 ON STH 13, NAVD 88 DATUM.

APPLY PROTECTIVE SURFACE TREATMENT (NONPIGMENTED) TO ALL EXPOSED SURFACES OF DECK, SIDEWALKS, PARAPETS, WING WALLS AND ABUTMENT ENDS NOT RECEIVING A.S.T. AND CONCRETE STAINING MULTI-COLOR. APPLY ALSO TO EXTERIOR EDGES OF SIDEWALK, SIDEWALK OVERHANG, DECK EDGE AT SOUTH SIDE AND ABUTMENT DIAPHRAGM ENDS.

PROVIDE TEMPORARY SHORING BETWEEN WEST ABUTMENT WING 1 EXCAVATION AND UTILITIES AT ACCESS LANE.

SEE THE ROAD PLAN MISCELLANEOUS QUANTITIES FOR ADDITIONAL QUANTITY OF CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

CROSS SECTION, QUANTITIES & NOTES

SHEET 7 OF 19
134

FILE= 93125_02.DGN
DATE= 8/1/2016

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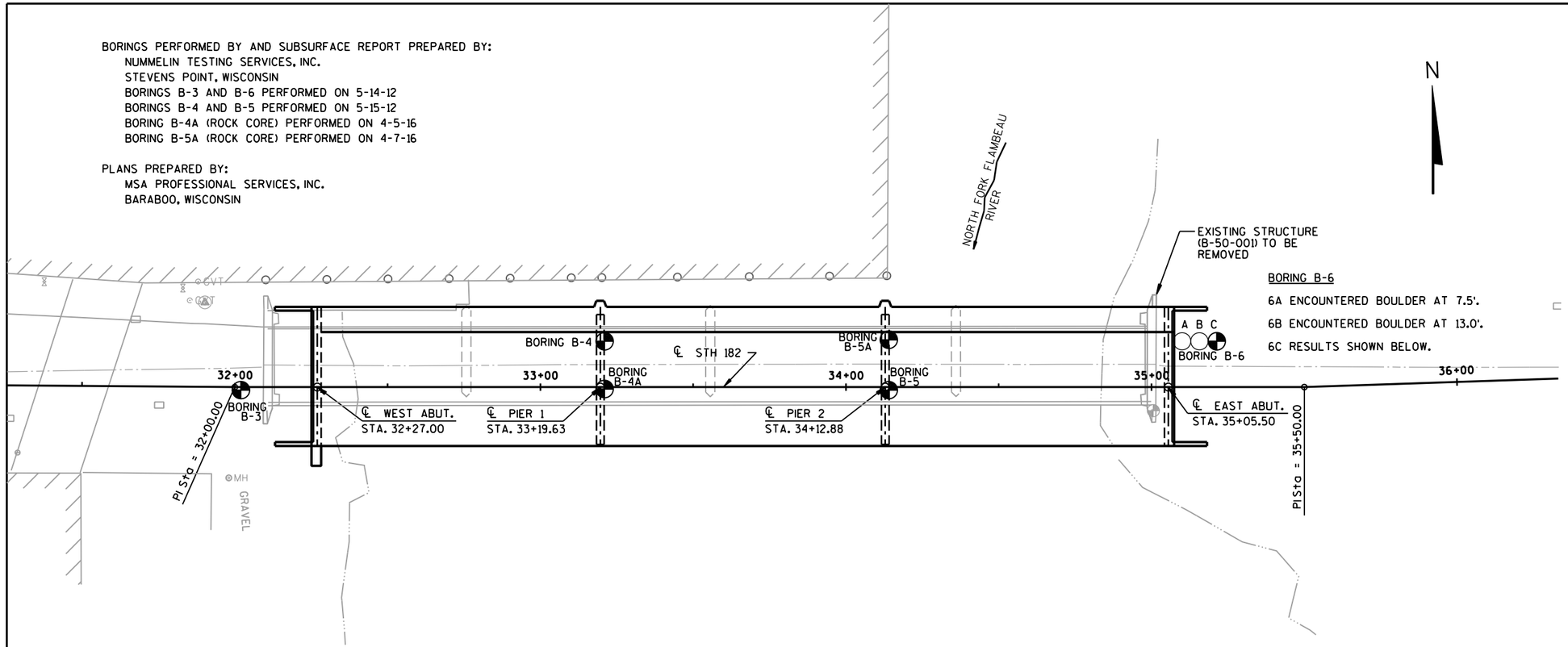
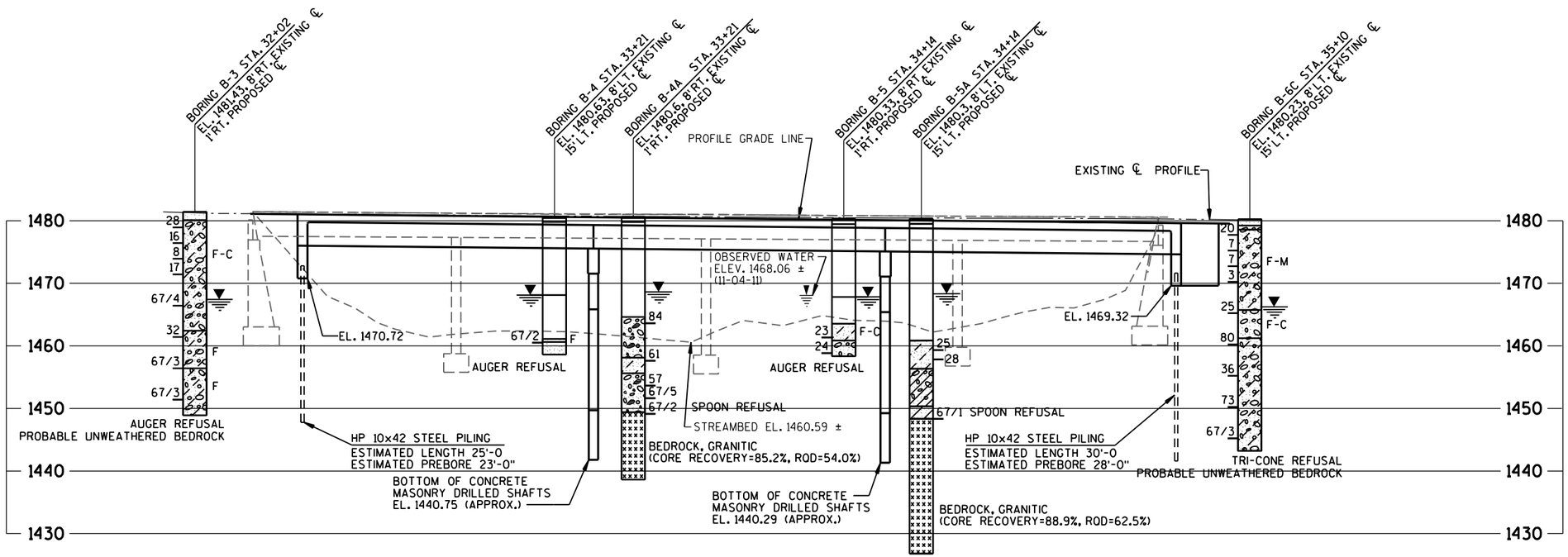
93125_02.dgn 8/1/2016 11:34:07 AM rrabska

BORINGS PERFORMED BY AND SUBSURFACE REPORT PREPARED BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT, WISCONSIN
BORINGS B-3 AND B-6 PERFORMED ON 5-14-12
BORINGS B-4 AND B-5 PERFORMED ON 5-15-12
BORING B-4A (ROCK CORE) PERFORMED ON 4-5-16
BORING B-5A (ROCK CORE) PERFORMED ON 4-7-16

PLANS PREPARED BY:
MSA PROFESSIONAL SERVICES, INC.
BARABOO, WISCONSIN





STATE PROJECT NUMBER

9240-08-70

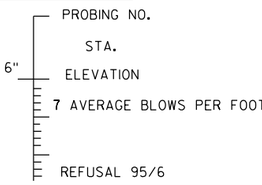
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

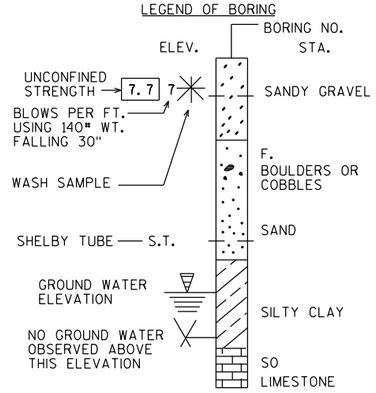
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

SUBSURFACE EXPLORATION

SHEET 2 OF 19
135

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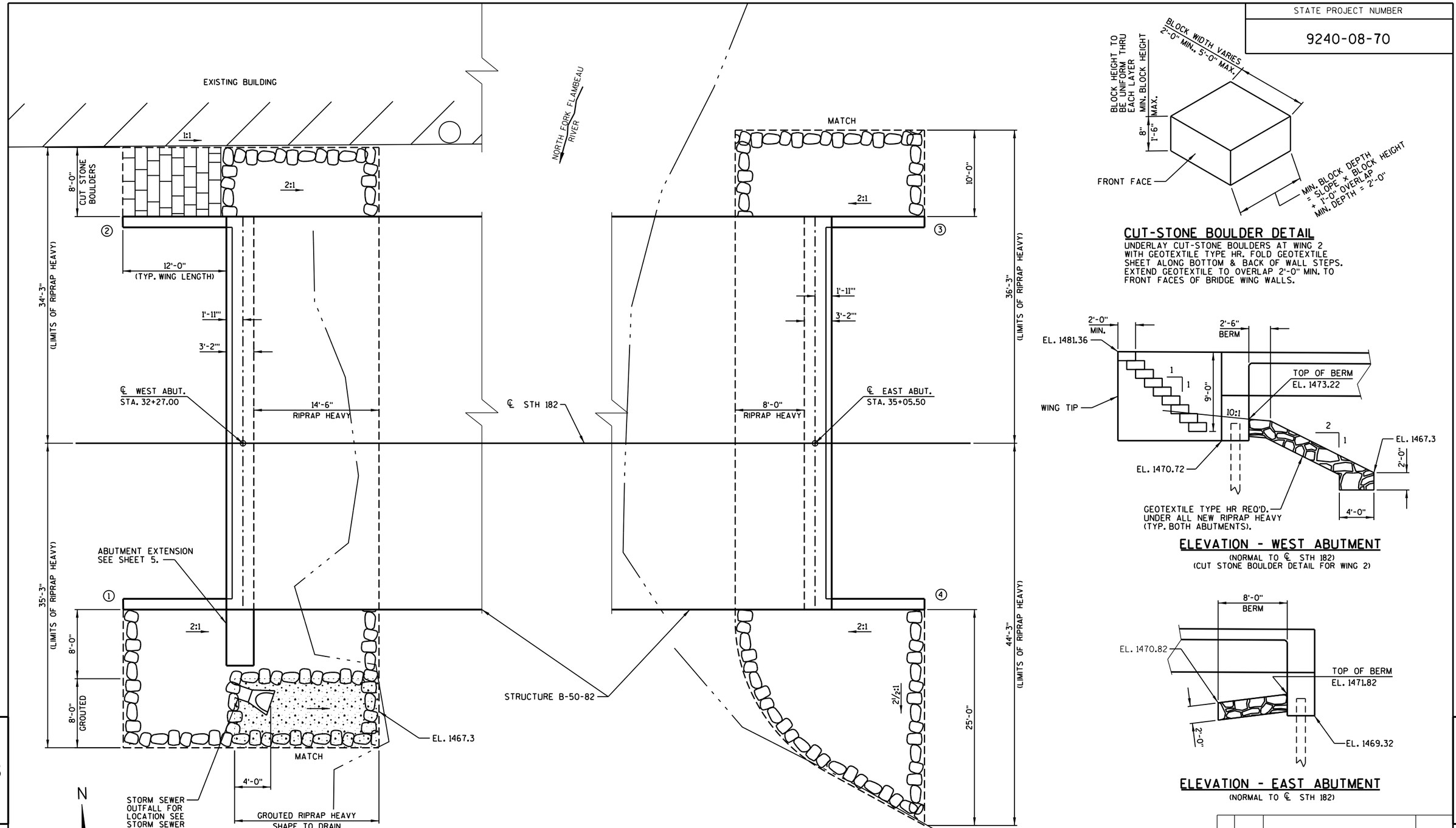
FILE= 93125_03.DGN
DATE= 5/31/2016

STATE PROJECT NUMBER

9240-08-70



PLAN - SLOPE PROTECTION

(THREE SPAN 45W" PRESTRESSED CONCRETE GIRDER)

CUT-STONE BOULDER DETAIL

UNDERLAY CUT-STONE BOULDERS AT WING 2 WITH GEOTEXTILE TYPE HR. FOLD GEOTEXTILE SHEET ALONG BOTTOM & BACK OF WALL STEPS. EXTEND GEOTEXTILE TO OVERLAP 2'-0" MIN. TO FRONT FACES OF BRIDGE WING WALLS.

ELEVATION - WEST ABUTMENT

(NORMAL TO ℄ STH 182)
(CUT STONE BOULDER DETAIL FOR WING 2)

ELEVATION - EAST ABUTMENT

(NORMAL TO ℄ STH 182)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

RIPRAP HEAVY & CUT STONE BOULDER LAYOUT DETAILS

SHEET 4 OF 19
136

FILE= 93125_04.DGN
DATE= 7/29/2016

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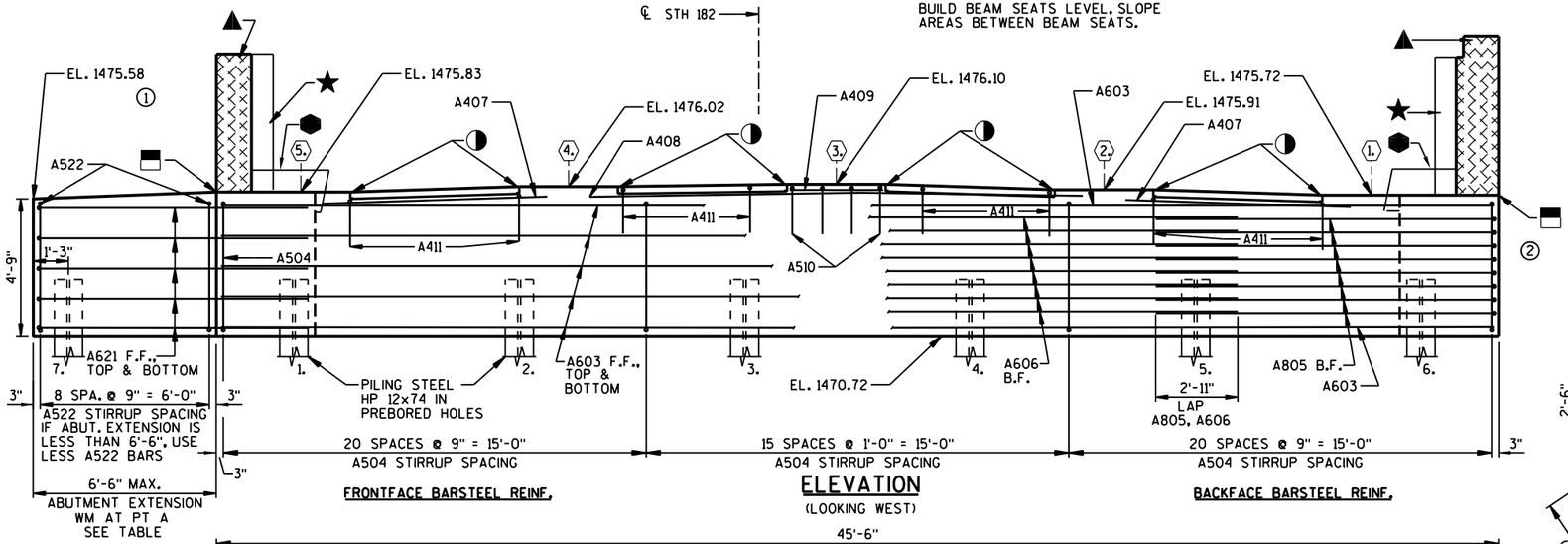
FOR WING ELEVATIONS AND DETAILS SEE SHEET 6.

BUILD BEAM SEATS LEVEL, SLOPE AREAS BETWEEN BEAM SEATS.



ELEVATION
(LOOKING WEST)

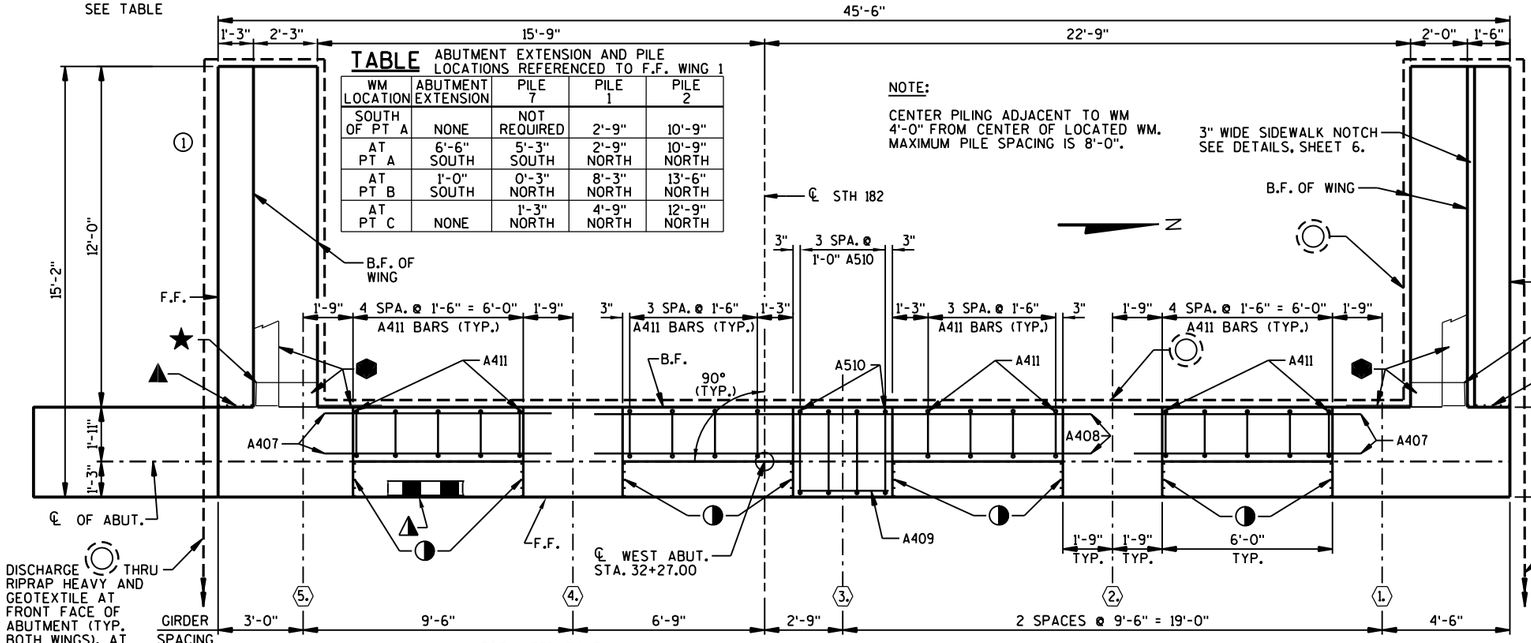
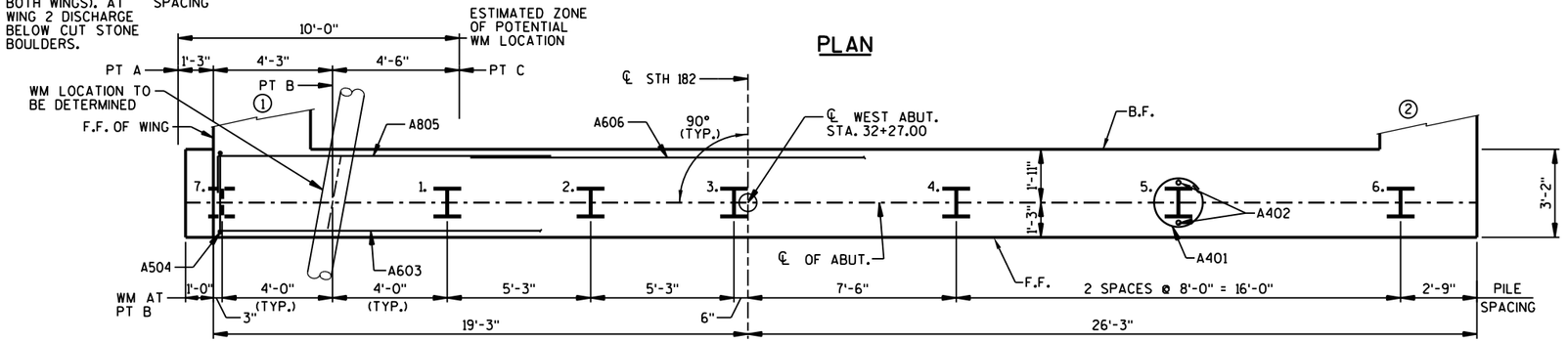


TABLE ABUTMENT EXTENSION AND PILE LOCATIONS REFERENCED TO F.F. WING 1				
WM LOCATION	ABUTMENT EXTENSION	PILE 7	PILE 1	PILE 2
SOUTH OF PT A	NONE	NOT REQUIRED	2'-9"	10'-9"
AT PT A	6'-6" SOUTH	5'-3" SOUTH	2'-9" NORTH	10'-9" NORTH
AT PT B	1'-0" SOUTH	0'-3" NORTH	8'-3" NORTH	13'-6" NORTH
AT PT C	NONE	1'-3" NORTH	4'-9" NORTH	12'-9" NORTH

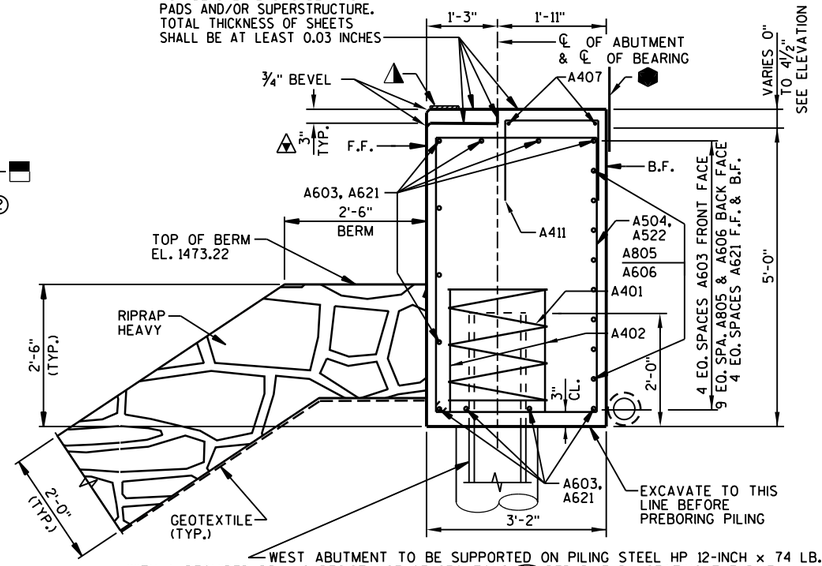
PLAN



ABUTMENT EXTENSION, DEPENDENT ON WM LOCATION DETERMINED BY UTILITY LINE OPENING. SEE TABLE ABOVE FOR EXAMPLE LAYOUTS. PILE PLAN SHOWS WM AT PT B AS SHOWN IN PLAN VIEW ON SHEET 1.

PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03 INCHES



WEST ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 12-INCH x 74 LB. WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS (XX) PER PILE BY SEATING THE PILE IN GRANITIC BEDROCK. ESTIMATED PILE LENGTHS ARE 25'-0". PREBORE ALL PILES TO EXTEND A MINIMUM 3'-0" INTO BEDROCK OR CONSOLIDATED MATERIAL. ESTIMATED PREBORE DEPTHS ARE 23'-0". PILES PLACED IN PREBORED HOLES CORED INTO ROCK DO NOT REQUIRE DRIVING. SEE SHEET 8 FOR PILE SPLICE DETAILS.

(XX) - THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 FOR THE SEATED PILE.

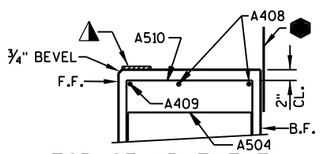
NOTE: AN HP 14-INCH x 73 LB. PILE IS AN ACCEPTABLE ALTERNATIVE PILE. USE SAME PILE SIZE THROUGHOUT THE STRUCTURE.

TYPICAL SECTION THRU ABUTMENT

LEGEND

- ◯ – INDICATES WING NUMBER.
- ⬡ – INDICATES GIRDER NUMBER.
- ▬ – CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. PLACE ⬢ ON B.F. OF WING. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.
- ◈ – ARCHITECTURAL SURFACE TREATMENT ON F.F. OF WINGS. FOR LIMITS ON WINGS SEE SHEET 19.
- ⧋ – SEMI-EXPANSION POCKET. CONSTRUCT 3" DEEPER THAN SURROUNDING BEAM SEATS AND BACKWALL.
- ◑ – ¾" CORK FILLER (SIDE VERTICAL FACES ONLY).
- ▲ – ½" PREFORMED JOINT FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONC.).
- ◭ – 4"x ¾" PREFORMED JOINT FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN WING CORNERS. SEE BEARING PAD DETAIL, SHEET 12.
- ★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS OR SIDEWALK NOTCH ON WING.
- ⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WING TOPS AND ALONG WING CONSTRUCTION JOINT.
- ◎ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU RIPRAP HEAVY AND GEOTEXTILE. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. SEE DETAIL SHEET 6.

F.F.– FRONT FACE B.F.–BACK FACE CL.–CLEAR WM – WATER MAIN



TOP OF ABUTMENT @ BEARING SEAT 3
SEE PLAN FOR REINF. SPACING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

WEST ABUTMENT

SHEET 5 OF 19
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9240-08-70

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DATE= 7/29/2016

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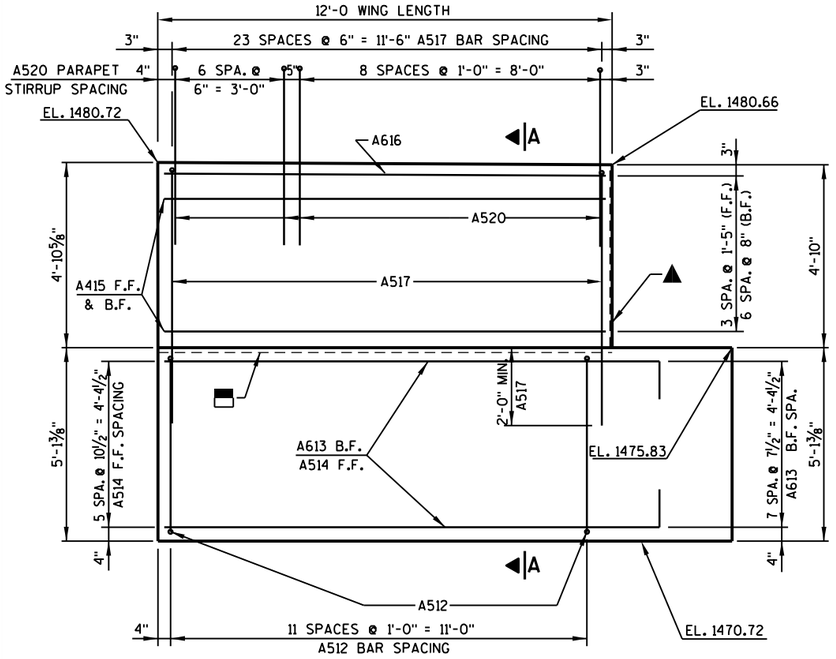
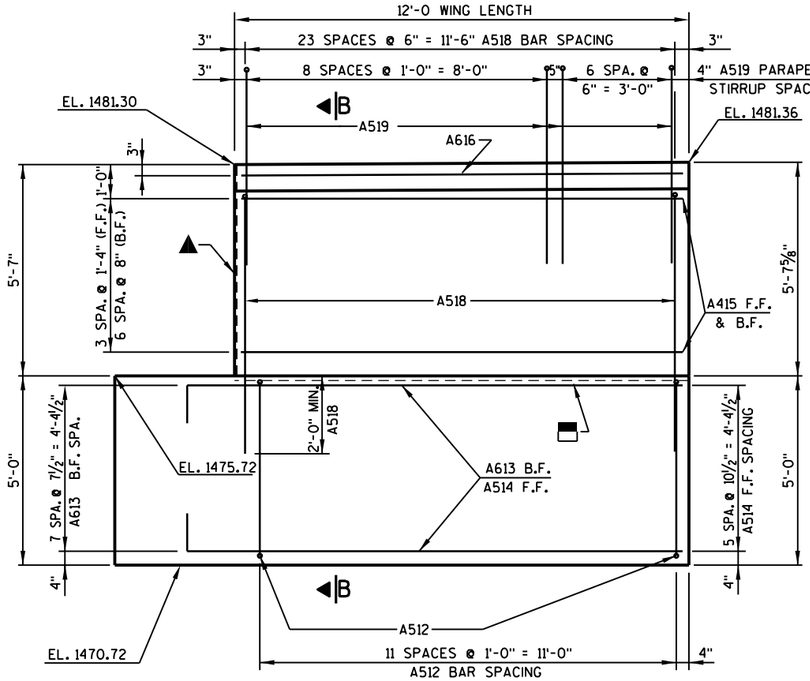
STATE PROJECT NUMBER

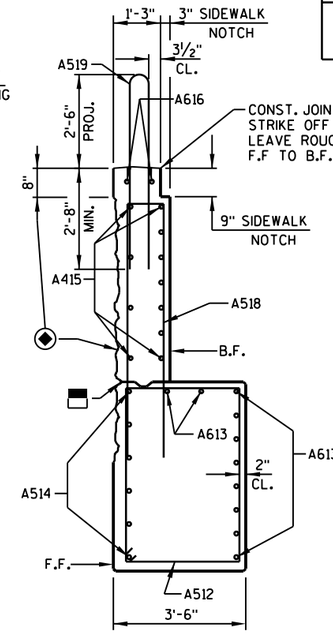
9240-08-70



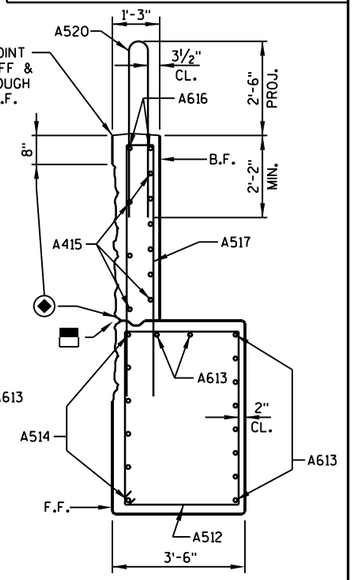
ELEVATION WING 1



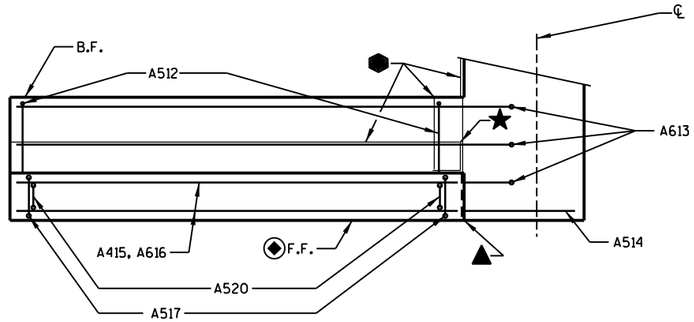
ELEVATION WING 2



SECTION B-B THRU WING 2

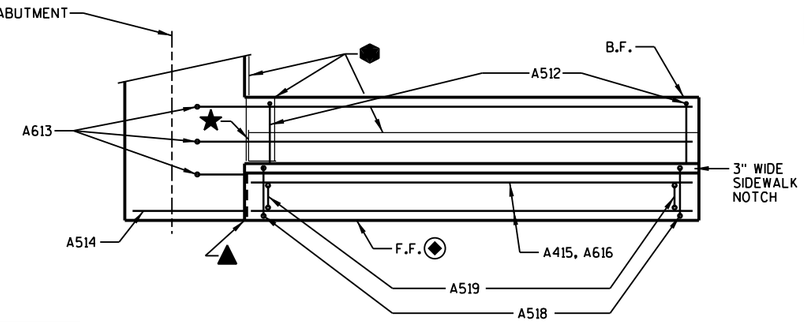


SECTION A-A THRU WING 1



PLAN WING 1

(SEE SHEET 5 FOR POTENTIAL ABUTMENT BODY EXTENSION)



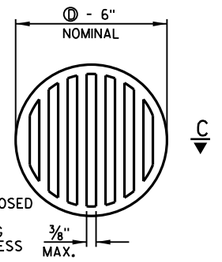
PLAN WING 2

SEE SHEET 5 LEGEND FOR DESCRIPTION OF

RODENT SHIELD NOTES:

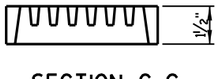
ORIENT SHIELD SO SLOTS ARE VERTICAL.

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 ATTACHEMENT 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. THE RODENT SHIELD, PIPE COUPLING AND SCREWS, SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

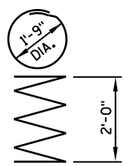


RODENT SHIELD

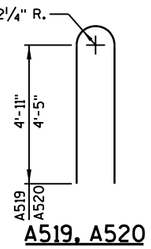
Ⓓ - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



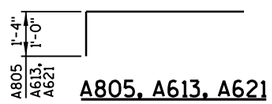
SECTION C-C



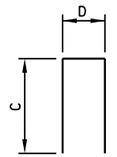
A401



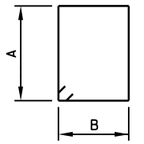
A519, A520



A805, A613, A621



MARK	C	D
A510	1'-6"	2'-10"
A411	1'-6"	1'-7"
A517	6'-9"	8"
A518	6'-9"	11"



MARK	A	B
A504	4'-4"	2'-10"
A512	4'-7"	2'-11"
A522	4'-4"	2'-10"

BILL OF BARS (WEST ABUTMENT)

UNCOATED 3140 LBS.
COATED 2255 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A401	-	7	28'-0"	X	ABUT. BODY PILES - 1 PER PILE 7 SPIRAL WRAPS
A402	-	14	2'-3"		ABUT. BODY PILES - 2 PER PILE - VERT.
A603	-	11	45'-2"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
A504	-	56	15'-0"	X	ABUT. BODY - STIRRUPS - VERT.
A805	-	16	13'-2"	X	ABUT. BODY - B.F. @ WINGS - HORIZ.
A606	-	8	27'-0"		ABUT. BODY - B.F. @ CENTER - HORIZ.
A407	-	4	8'-0"		ABUT. TOP - B.F. SEMI-EXP. POCKET - HORIZ.
A408	-	2	17'-6"		ABUT. TOP - B.F. SEMI-EXP. POCKET - HORIZ.
A409	-	1	3'-2"		ABUT. TOP - F.F. - GIRDER 3 - HORIZ.
A510	-	4	5'-7"	X	ABUT. TOP - GIRDER SEAT 3 - VERT.
A411	-	18	4'-5"	X	ABUT. TOP - B.F. SEMI-EXP. POCKET - VERT.
A512	24	-	15'-8"	X	WINGS - BOTTOM - STIRRUP - VERT.
A613	20	-	13'-11"	X	WINGS - BOTTOM - B.F. & TOP - HORIZ.
A514	12	-	14'-10"		WINGS - BOTTOM - F.F. - HORIZ.
A415	20	-	11'-8"		WINGS - TOP - F.F. & B.F. - HORIZ.
A616	4	-	11'-8"		WINGS - TOP - F.F. & B.F. - HORIZ.
A517	24	-	13'-11"	X	WING 1 - TOP - TIES - VERT.
A518	24	-	14'-2"	X	WING 2 - TOP - TIES - VERT.
A519	16	-	10'-5"	X	WING 2 - TOP - PARAPET STIRRUP - VERT.
A520	16	-	9'-5"	X	WING 1 - TOP - PARAPET STIRRUP - VERT.
A621	-	14	10'-2"	X	ABUT. BODY - EXTENSION - HORIZ.
A522	-	9	15'-0"	X	ABUT. BODY - EXTENSION - STIRRUPS - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

WEST ABUTMENT DETAILS

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DATE=7/29/2016

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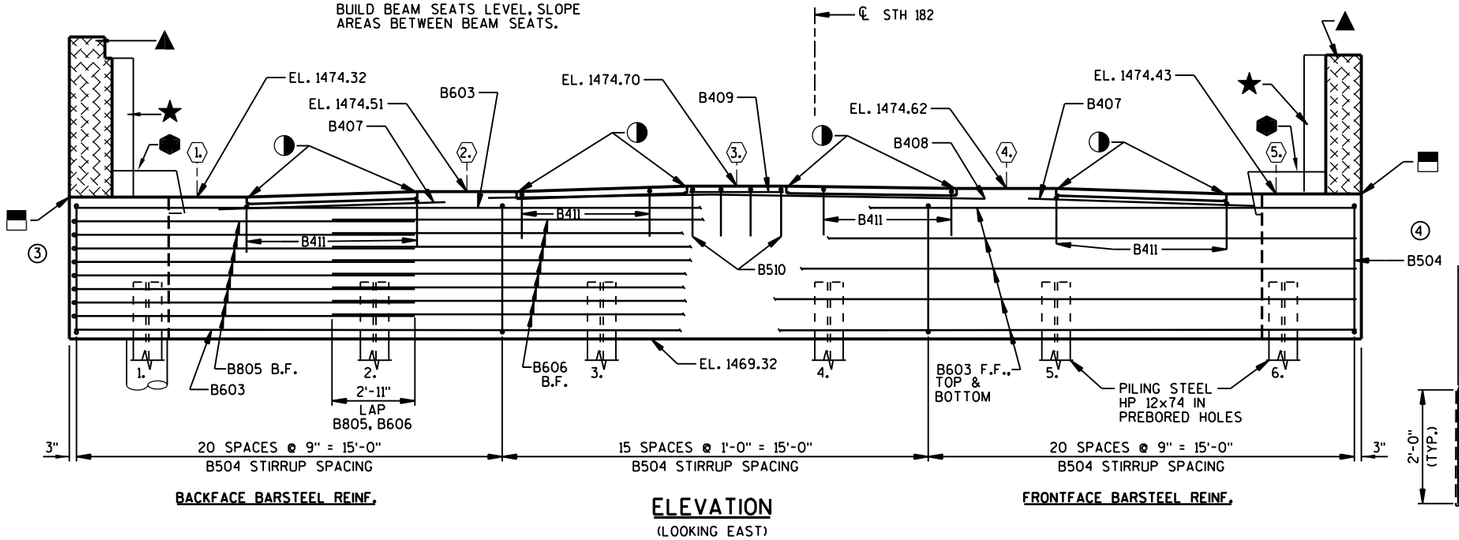
FOR WING ELEVATIONS AND DETAILS SEE SHEET 8.

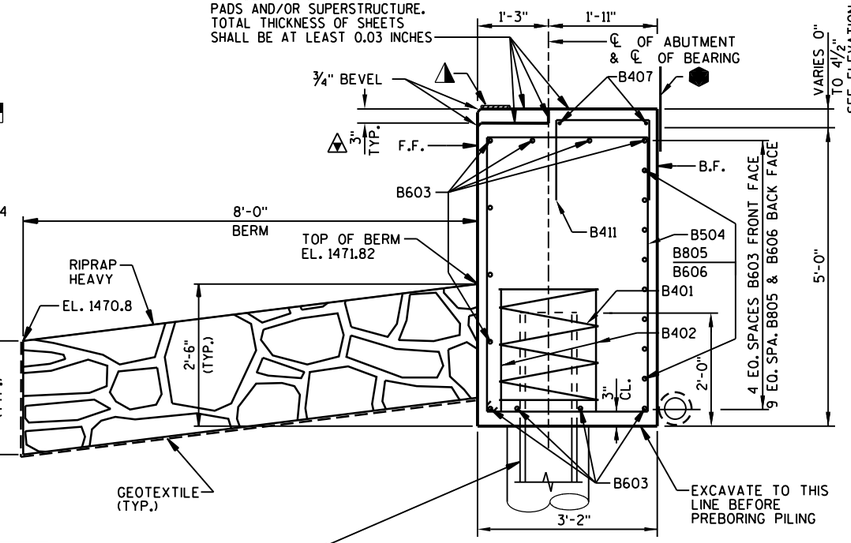
BUILD BEAM SEATS LEVEL, SLOPE AREAS BETWEEN BEAM SEATS.

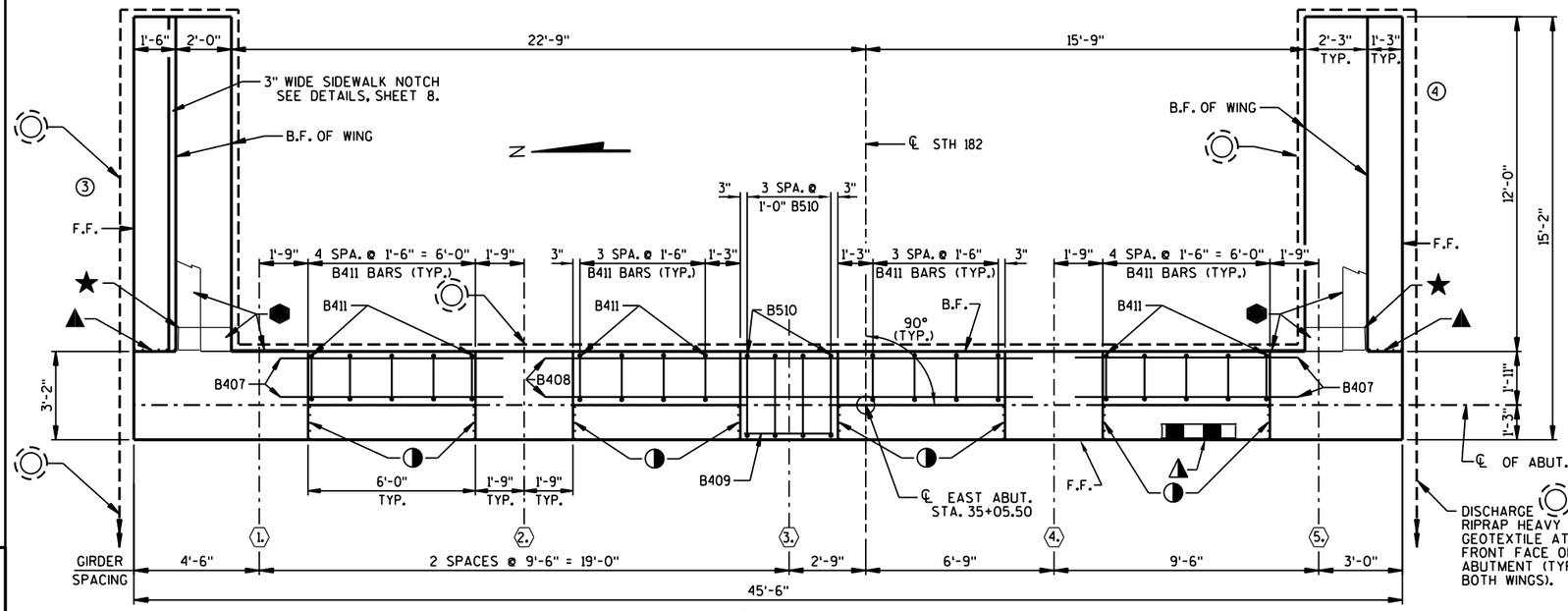


BACKFACE BARSTEEL REINF.

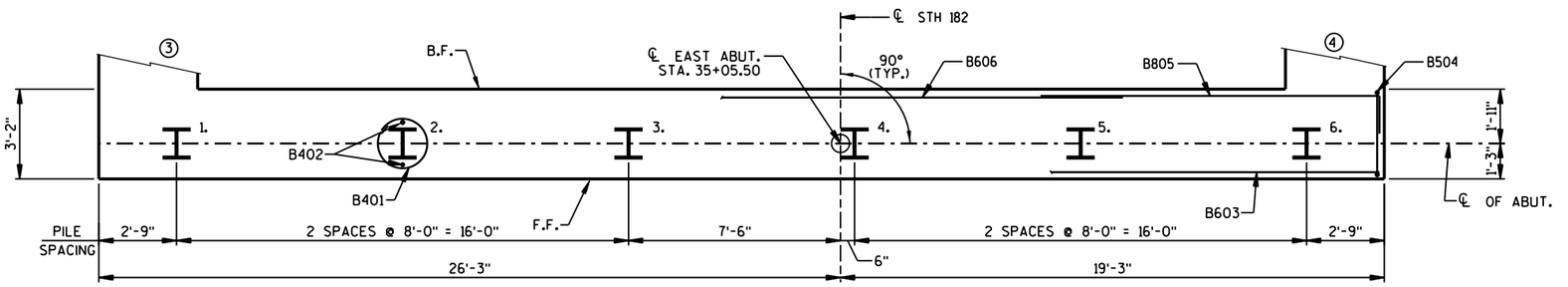
FRONTFACE BARSTEEL REINF.

ELEVATION
(LOOKING EAST)





PLAN



PILE PLAN

EAST ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 12-INCH x 74 LB. WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS ⓧⓧ PER PILE BY SEATING THE PILE IN GRANITIC BEDROCK. ESTIMATED PILE LENGTHS ARE 30'-0". PREBORE ALL PILES TO EXTEND A MINIMUM 3'-0" INTO BEDROCK OR CONSOLIDATED MATERIAL. ESTIMATED PREBORE DEPTHS ARE 28'-0". PILES PLACED IN PREBORED HOLES CORED INTO ROCK DO NOT REQUIRE DRIVING. SEE SHEET 8 FOR PILE SPLICE DETAILS.

ⓧⓧ - THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 FOR THE SEATED PILE.

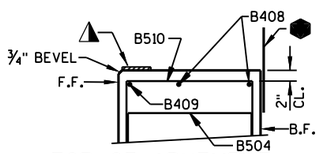
NOTE: AN HP 14-INCH x 73 LB. PILE IS AN ACCEPTABLE ALTERNATIVE PILE. USE SAME PILE SIZE THROUGHOUT THE STRUCTURE.

TYPICAL SECTION THRU ABUTMENT

LEGEND

- ◯ – INDICATES WING NUMBER.
- ⬡ – INDICATES GIRDER NUMBER.
- ▬ – CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. PLACE ⬢ ON B.F. OF WING. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.
- ◈ – ARCHITECTURAL SURFACE TREATMENT ON F.F. OF WINGS. FOR LIMITS ON WINGS SEE SHEET 19.
- ⧋ – SEMI-EXPANSION POCKET. CONSTRUCT 3" DEEPER THAN SURROUNDING BEAM SEATS AND BACKWALL.
- ◑ – ¾" CORK FILLER (SIDE VERTICAL FACES ONLY).
- ▲ – ½" PREFORMED JOINT FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONC.).
- ◭ – 4"x ¾" PREFORMED JOINT FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN WING CORNERS. SEE BEARING PAD DETAIL, SHEET 12.
- ★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS OR SIDEWALK NOTCH ON WING.
- ⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WING TOPS AND ALONG WING CONSTRUCTION JOINT.
- ◯ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU RIPRAP HEAVY AND GEOTEXTILE. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. SEE DETAIL SHEET 6.

F.F.– FRONT FACE B.F.– BACK FACE CL.– CLEAR



TOP OF ABUTMENT ⓐ BEARING SEAT 3
SEE PLAN FOR REINF. SPACING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

EAST ABUTMENT

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DATE= 7/30/2016

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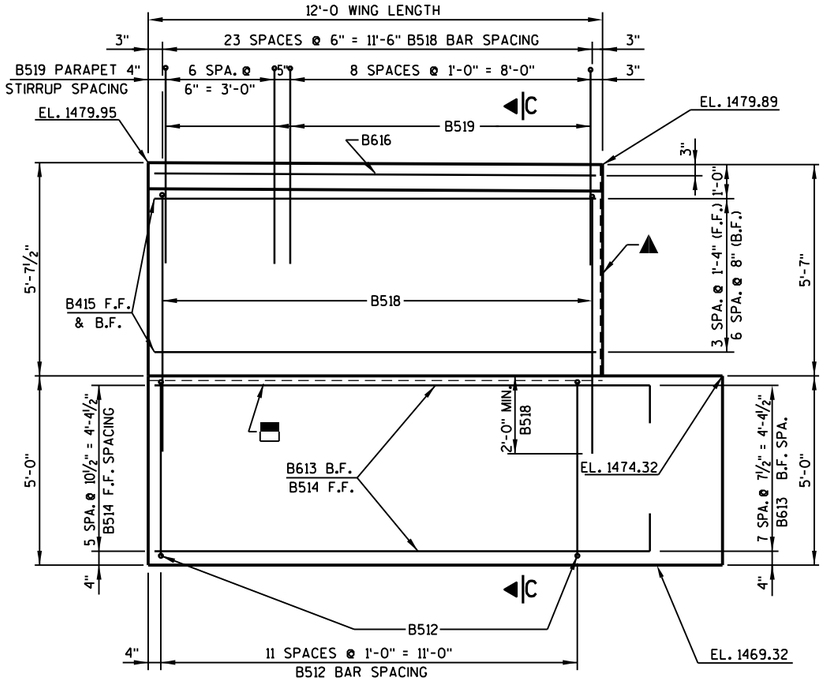
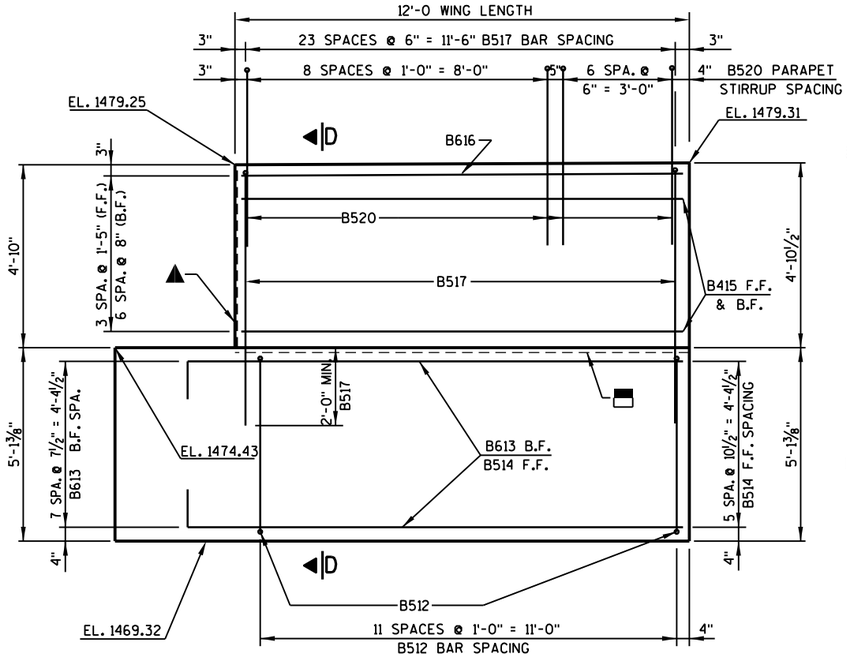
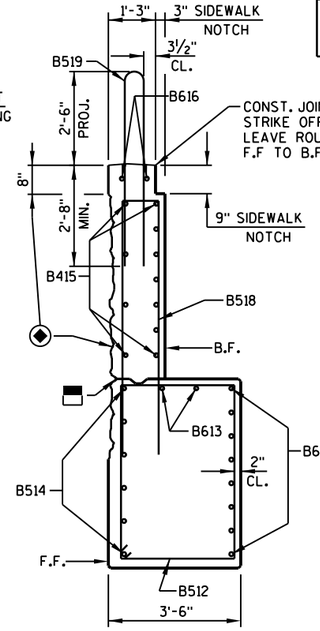


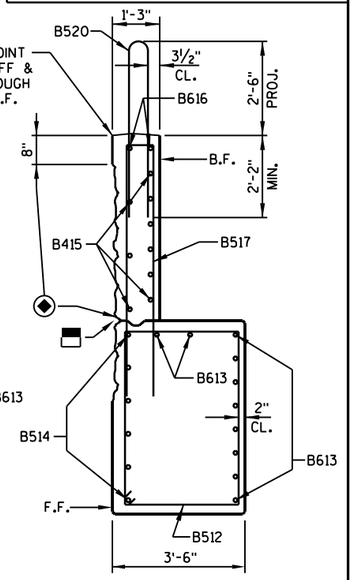
ELEVATION WING 3



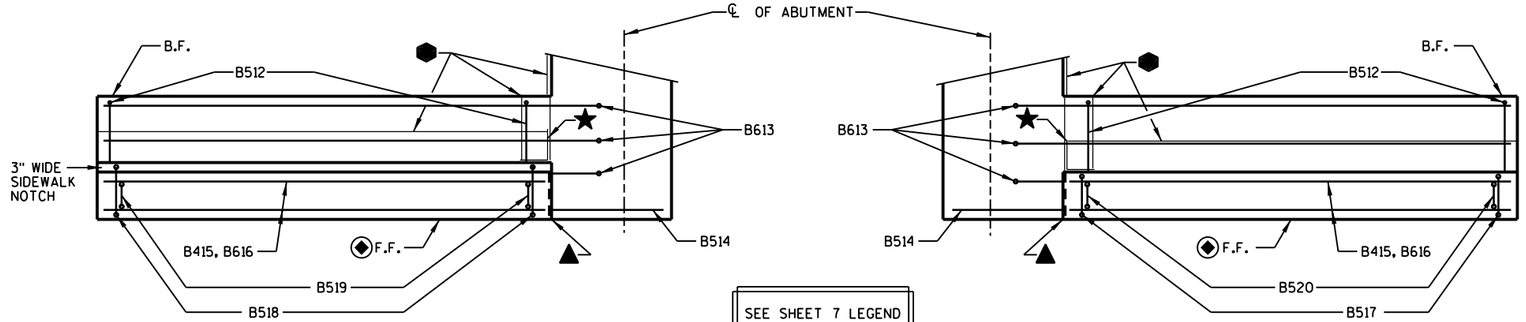
ELEVATION WING 4



SECTION C-C THRU WING 3



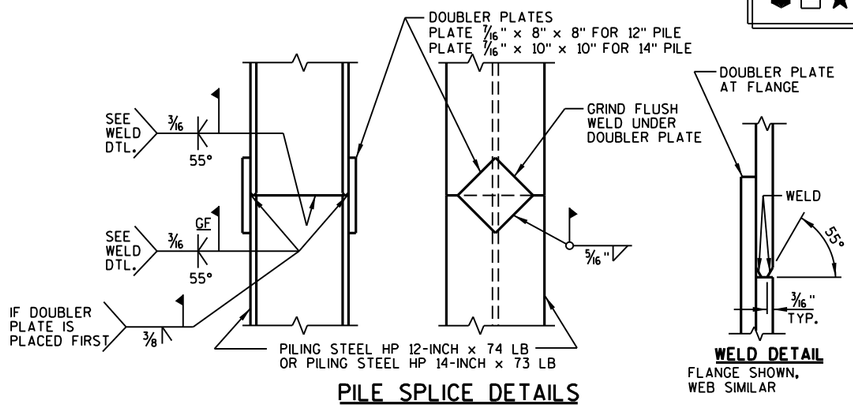
SECTION D-D THRU WING 4



PLAN WING 3

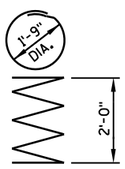
PLAN WING 4

SEE SHEET 7 LEGEND FOR DESCRIPTION OF



PILE SPLICE DETAILS

WELD DETAIL
FLANGE SHOWN, WEB SIMILAR



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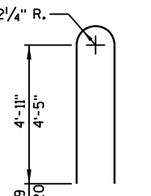
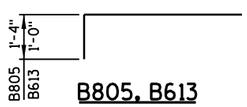
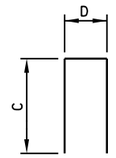


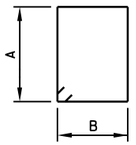
B519, B520



B805, B613



MARK	C	D
B510	1'-6"	2'-10"
B411	1'-6"	1'-7"
B517	6'-9"	8"
B518	6'-9"	11"



MARK	A	B
B504	4'-4"	2'-10"
B512	4'-7"	2'-11"

BILL OF BARS (EAST ABUTMENT)

UNCOATED 2765 LBS.
COATED 2255 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
B401	-	6	28'-0"	X	ABUT. BODY PILES - 1 PER PILE 7 SPIRAL WRAPS
B402	-	12	2'-3"		ABUT. BODY PILES - 2 PER PILE - VERT.
B603	-	11	45'-2"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
B504	-	56	15'-0"	X	ABUT. BODY - STIRRUPS - VERT.
B805	-	16	13'-2"	X	ABUT. BODY - B.F. @ WINGS - HORIZ.
B606	-	8	27'-0"		ABUT. BODY - B.F. @ CENTER - HORIZ.
B407	-	4	8'-0"		ABUT. TOP - B.F. SEMI-EXP. POCKET - HORIZ.
B408	-	2	17'-6"		ABUT. TOP - B.F. SEMI-EXP. POCKET - HORIZ.
B409	-	1	3'-2"		ABUT. TOP - F.F. - GIRDER 3 - HORIZ.
B510	-	4	5'-7"	X	ABUT. TOP - GIRDER SEAT 3 - VERT.
B411	-	18	4'-5"	X	ABUT. TOP - B.F. SEMI-EXP. POCKET - VERT.
B512	24	-	15'-8"	X	WINGS - BOTTOM - STIRRUP - VERT.
B613	20	-	13'-11"	X	WINGS - BOTTOM - B.F. & TOP - HORIZ.
B514	12	-	14'-10"		WINGS - BOTTOM - F.F. - HORIZ.
B415	20	-	11'-8"		WINGS - TOP - F.F. & B.F. - HORIZ.
B616	4	-	11'-8"		WINGS - TOP - F.F. & B.F. - HORIZ.
B517	24	-	13'-11"	X	WING 4 - TOP - TIES - VERT.
B518	24	-	14'-2"	X	WING 3 - TOP - TIES - VERT.
B519	16	-	10'-5"	X	WING 3 - TOP - PARAPET STIRRUP - VERT.
B520	16	-	9'-5"	X	WING 4 - TOP - PARAPET STIRRUP - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

EAST ABUTMENT DETAILS

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DATE=7/30/2016

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STATE PROJECT NUMBER
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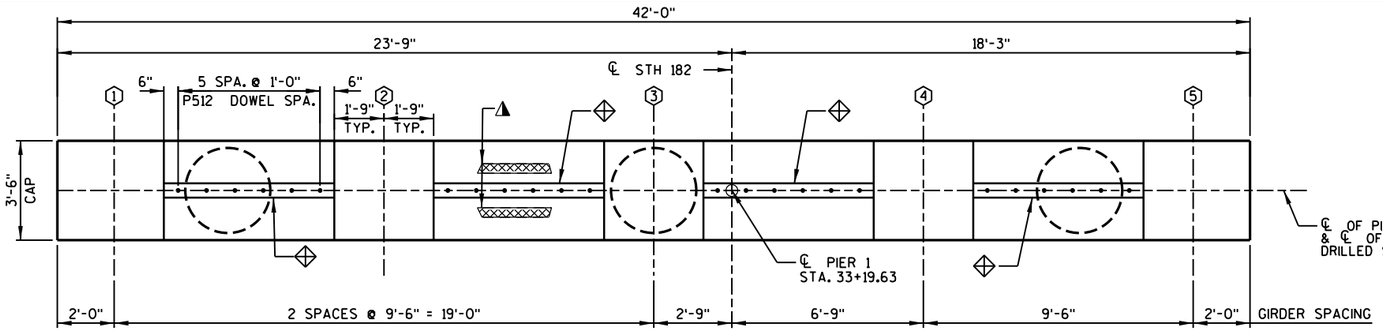
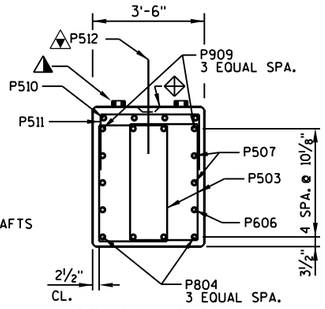


PIER TOP PLAN

N



SECTION B-B

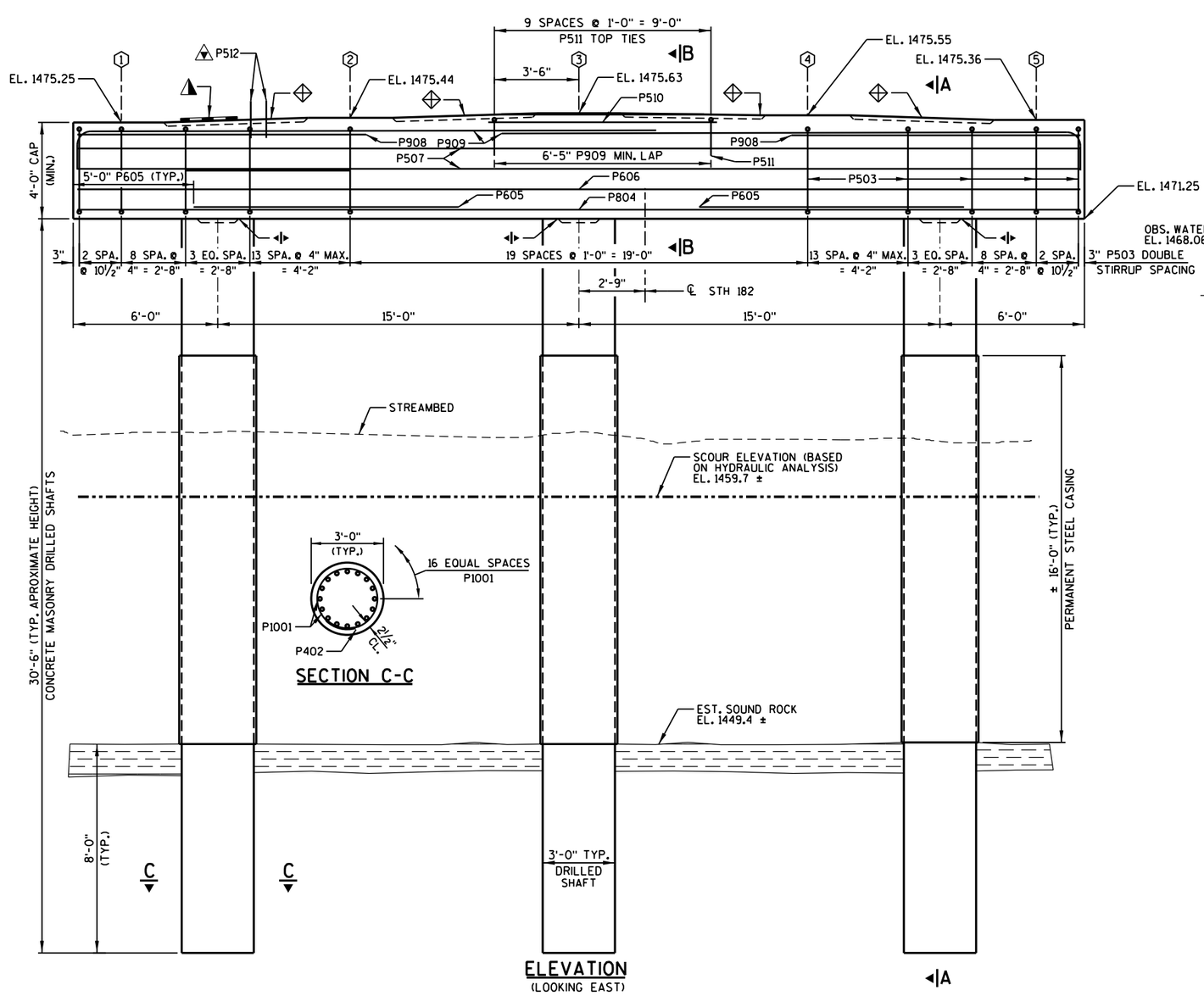
BILL OF BARS

UNCOATED 11,360 LBS.
COATED 50 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
P1001	48	33'-9"		PIER DRILLED SHAFT - VERT.
P402	93	9'-4"	X	PIER DRILLED SHAFT - STIRRUP - HORIZ.
P503	144	12'-1"	X	PIER CAP - STIRRUP - VERT.
P804	4	41'-8"		PIER CAP - BOTTOM - HORIZ.
P605	8	11'-0"		PIER CAP - BOTTOM - HORIZ.
P606	2	41'-8"		PIER CAP - HORIZ.
P507	4	41'-8"		PIER CAP - HORIZ.
P908	8	12'-0"		PIER CAP - TOP - HORIZ.
P909	8	25'-5"	X	PIER CAP - TOP - HORIZ.
P510	4	9'-6"		PIER CAP - TOP - HORIZ.
P511	10	5'-8"	X	PIER CAP - TOP - TIE - VERT.
* P512	24	2'-0"		PIER CAP - TOP - DOWEL - VERT.

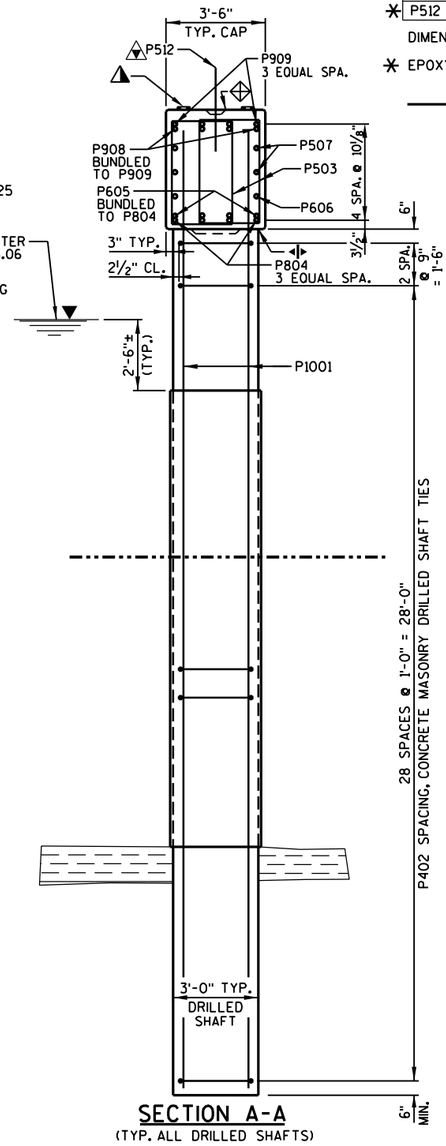
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

* EPOXY COAT THESE BARS.

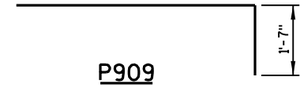


ELEVATION
(LOOKING EAST)

SECTION C-C



SECTION A-A
(TYP. ALL DRILLED SHAFTS)



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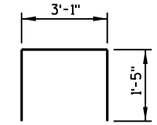

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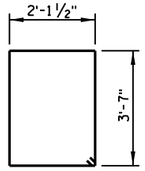

P503

P402

BUNDLING DETAIL
P605 BUNDLED TO P804 BARS
P908 BUNDLED TO P909 BARS

LEGEND

CL.- CLEAR

⬡ - DENOTES GIRDER NUMBER.

△ - P512 BARS @ 1'-0" CENTERS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONCRETE).

◭ - 4" x ¾" FILLER, TYPICAL ALL AROUND TOP EDGES OF PIER. SEE SHEET 12 FOR FILLER AT BEARING PAD DETAIL.

⊕ - 2" x 6" BEVELED KEYWAY BETWEEN GIRDER SEATS.

◂▸ - KEYED CONST. JOINT FORMED BY SURFACED & BEVELED 1'-3 x 1'-3 x 2" TYP. TOP OF ALL DRILLED SHAFTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY	RLR	PLANS CK'D.	DHW

PIER 1

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DATE= 7/30/2016

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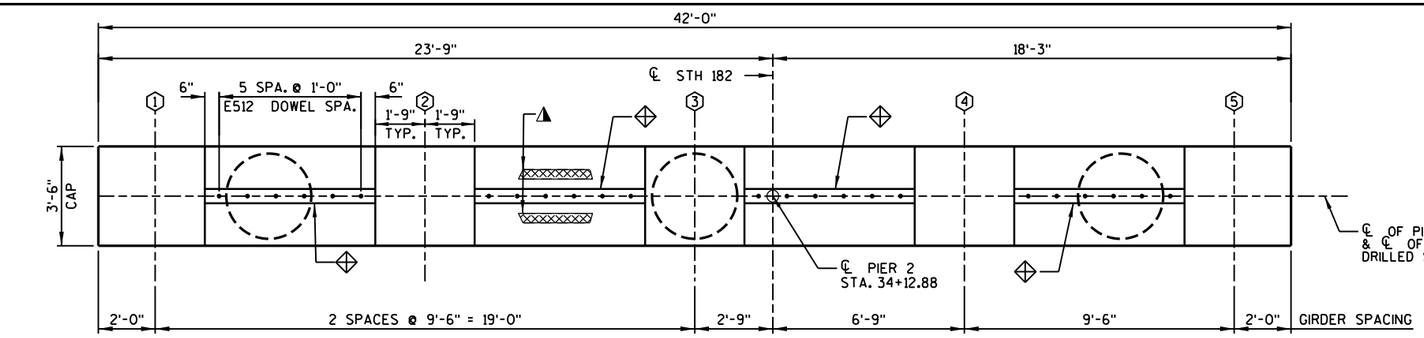
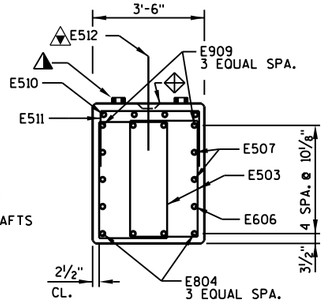
STATE PROJECT NUMBER
9240-08-70



PIER TOP PLAN

N



SECTION B-B

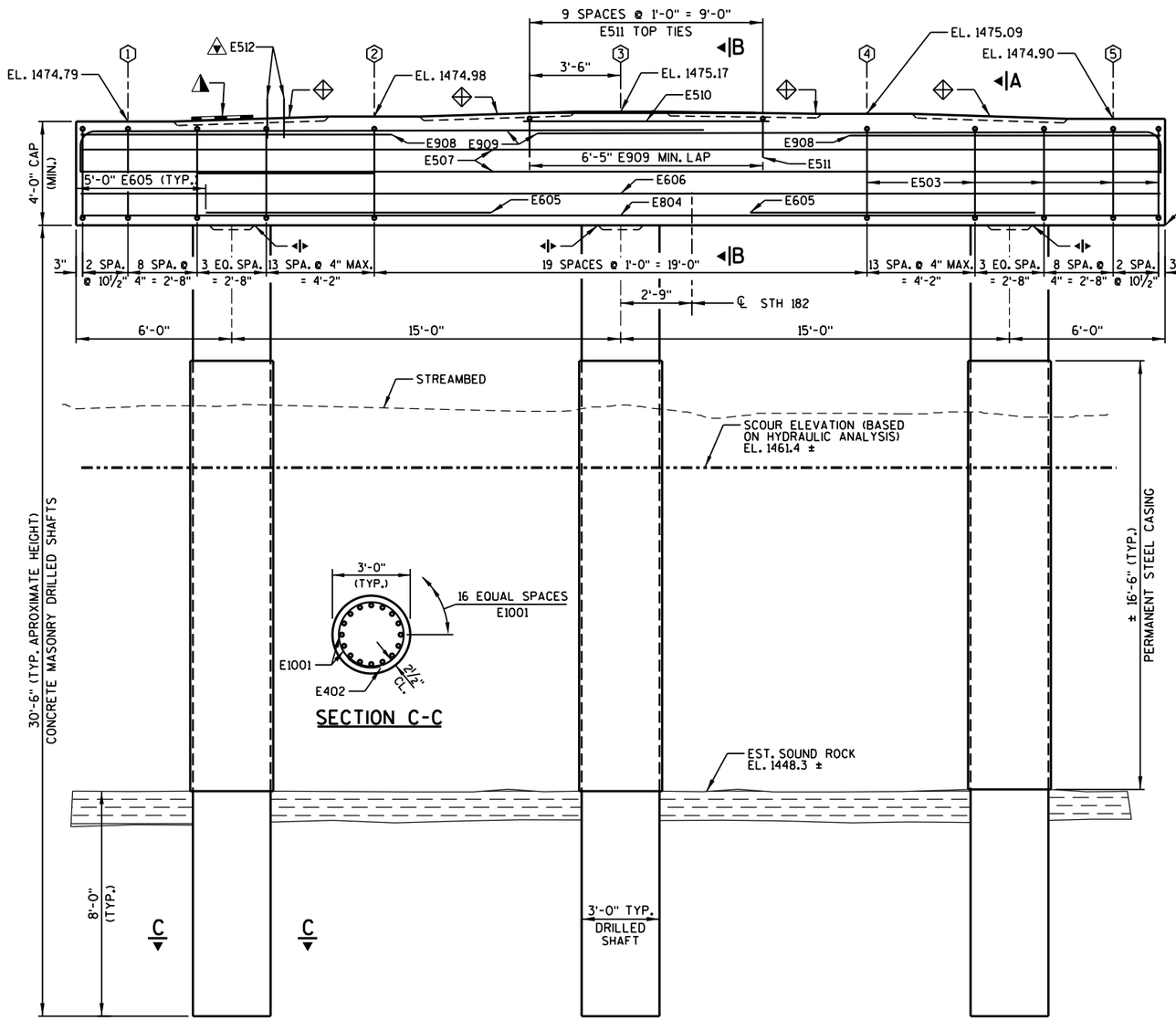
BILL OF BARS

UNCOATED 11,360 LBS.
COATED 50 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
E1001	48	33'-9"		PIER DRILLED SHAFT - VERT.
E402	93	9'-4"	X	PIER DRILLED SHAFT - STIRRUP - HORIZ.
E503	144	12'-1"	X	PIER CAP - STIRRUP - VERT.
E804	4	41'-8"		PIER CAP - BOTTOM - HORIZ.
E605	8	11'-0"		PIER CAP - BOTTOM - HORIZ.
E606	2	41'-8"		PIER CAP - HORIZ.
E507	4	41'-8"		PIER CAP - HORIZ.
E908	8	12'-0"		PIER CAP - TOP - HORIZ.
E909	8	25'-5"	X	PIER CAP - TOP - HORIZ.
E510	4	9'-6"		PIER CAP - TOP - HORIZ.
E511	10	5'-8"	X	PIER CAP - TOP - TIE - VERT.
* E512	24	2'-0"		PIER CAP - TOP - DOWEL - VERT.

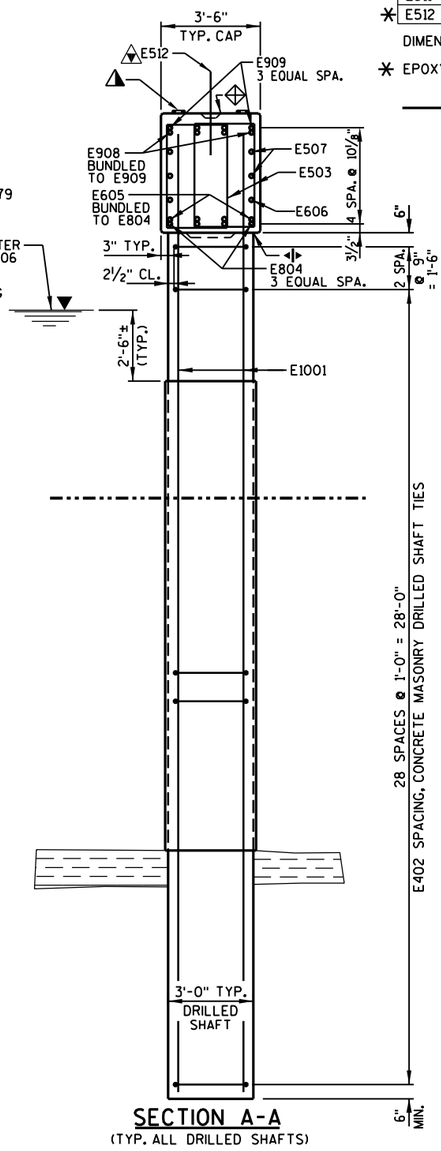
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

* EPOXY COAT THESE BARS.

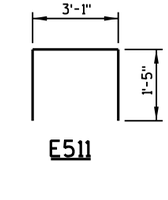


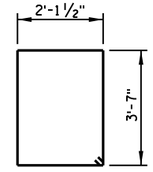
SECTION C-C

ELEVATION
(LOOKING EAST)



SECTION A-A
(TYP. ALL DRILLED SHAFTS)





BUNDLING DETAIL
E605 BUNDLED TO E804 BARS
E908 BUNDLED TO E909 BARS

LEGEND

CL.- CLEAR

⬡ - DENOTES GIRDER NUMBER.

△ - E512 BARS @ 1'-0" CENTERS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONCRETE).

◭ - 4" x ¾" FILLER, TYPICAL ALL AROUND TOP EDGES OF PIER. SEE SHEET 12 FOR FILLER AT BEARING PAD DETAIL.

◈ - 2" x 6" BEVELED KEYWAY BETWEEN GIRDER SEATS.

◂▸ - KEYED CONST. JOINT FORMED BY SURFACED & BEVELED 1'-3 x 1'-3 x 2" TYP. TOP OF ALL DRILLED SHAFTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

PIER 2

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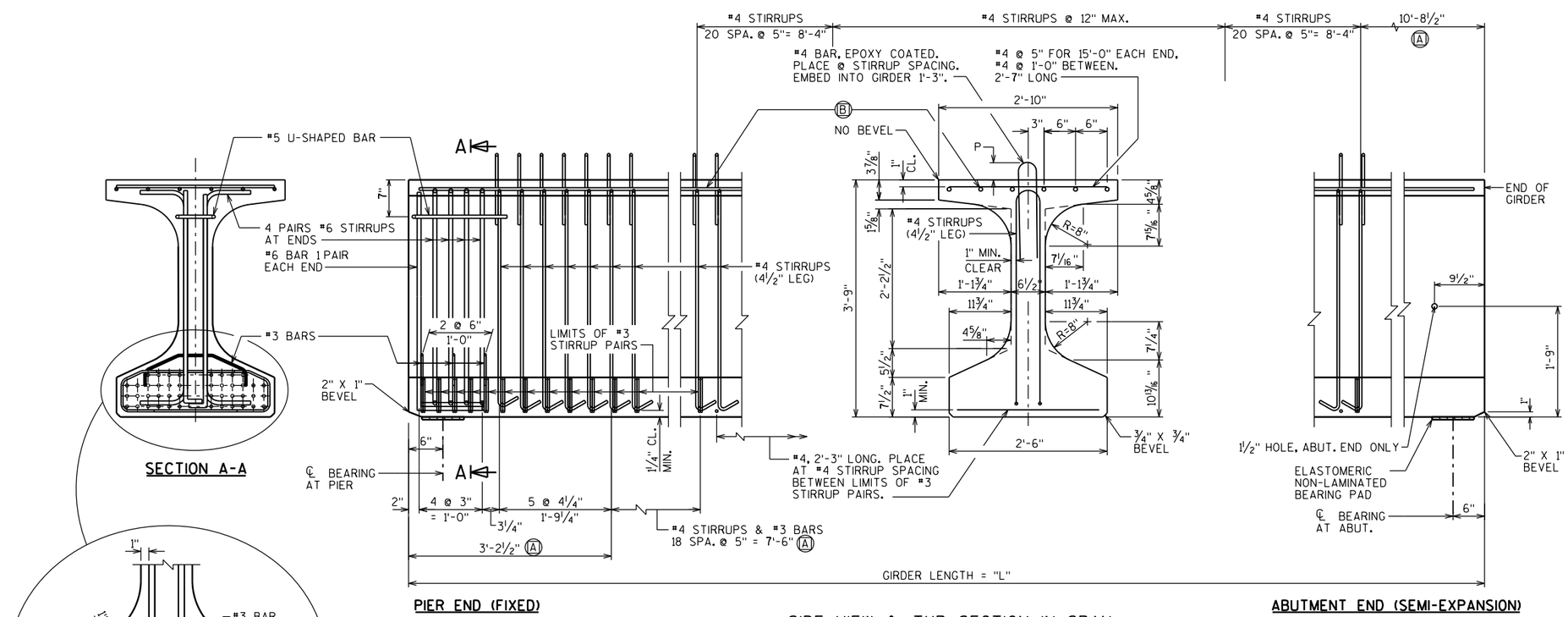
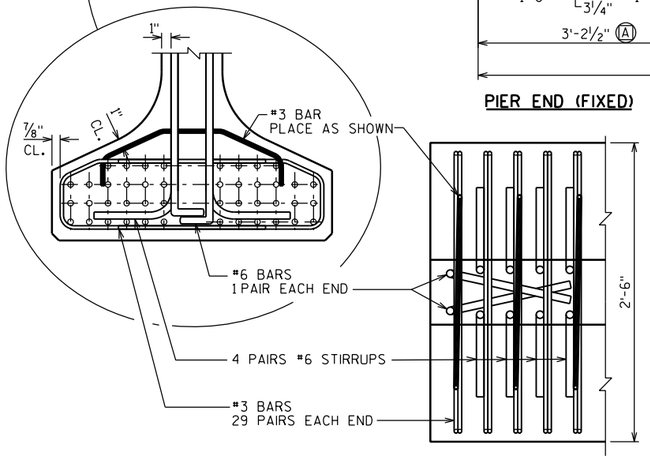


PIER END (FIXED)

ABUTMENT END (SEMI-EXPANSION)

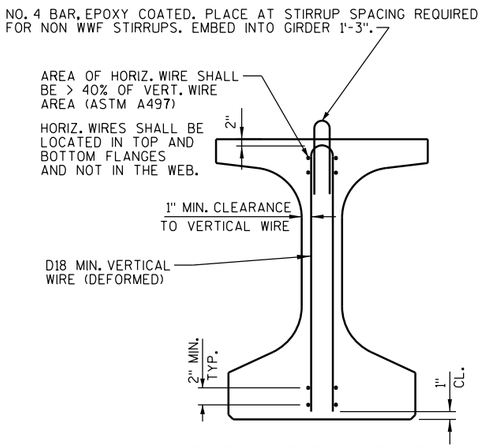


BOTTOM FLANGE

SIDE VIEW & TYP. SECTION IN SPAN

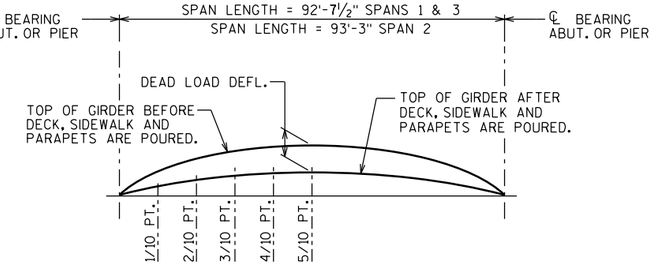
Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

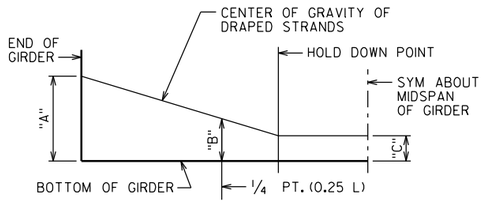


SECTION THRU GIRDER

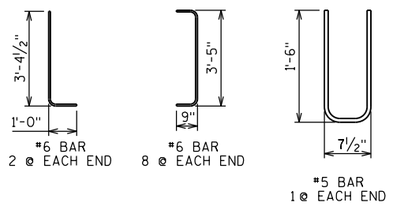
SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS ASTM A497 (Fy = 70 Ksi)

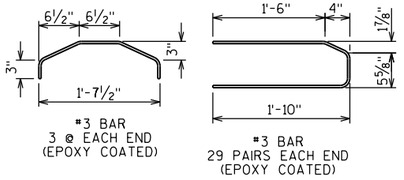


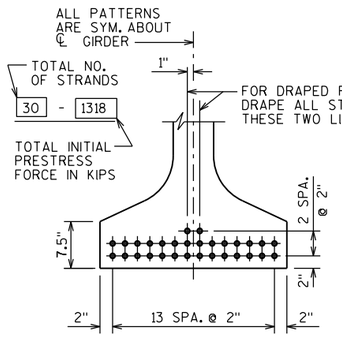
DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE







TYP. STRAND PATTERN

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 0.6"ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1 & 3	1-5	93'-0"	0.6	1.1	1.5	1.7	1.8	1.7	1.5	1.1	0.6	8000	7.75"	7.75"	7.75"	0.6	30	6800	41.0	13.25	16.25	4.0	-	-
2	1-5	93'-0"	0.5	1.0	1.4	1.7	1.8	1.7	1.4	1.0	0.5	8000	7.75"	7.75"	7.75"	0.6	30	6800	41.0	13.25	16.25	4.0	-	-

✳THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPANS	CAMBER (IN.) ✳
1, 2 & 3	3.0

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS. SEE SHEET 13 FOR SLAB HAUNCH DETAIL.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

45W" PRESTRESSED GIRDER DETAILS

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FILE= 93125_11.DGN
DATE= 5/17/2016

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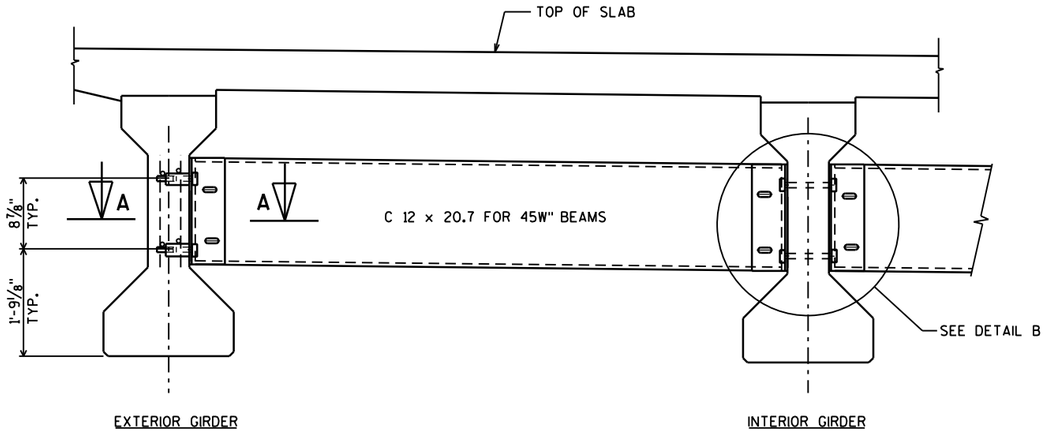
93125_11.dgn 5/17/2016 4:21:03 PM trabska

STATE PROJECT NUMBER

9240-08-70



PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-50-82", EACH.

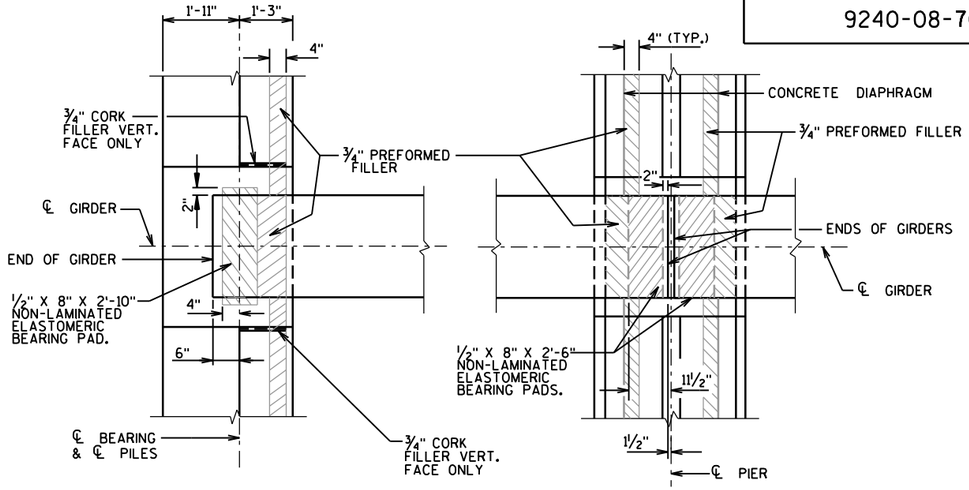
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

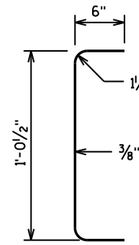
ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

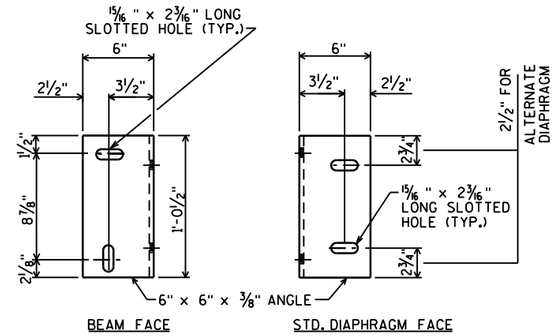
SEE HALF PLAN, SHEET 13 FOR LOCATION OF DIAPHRAGMS.



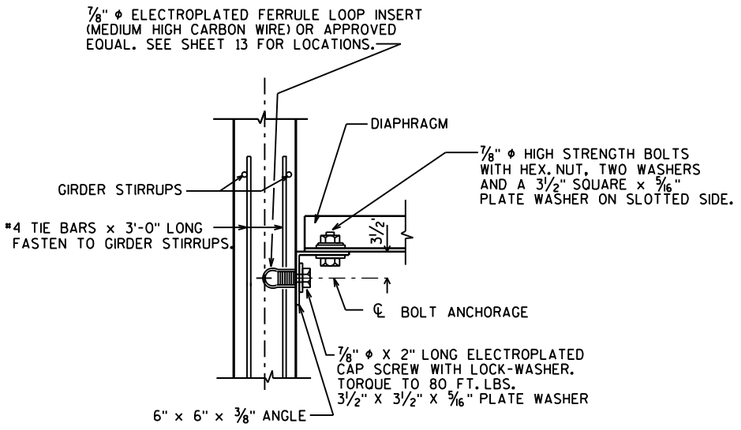
BEARING PAD DETAIL



SECTION THRU ALTERNATE DIAPHRAGM

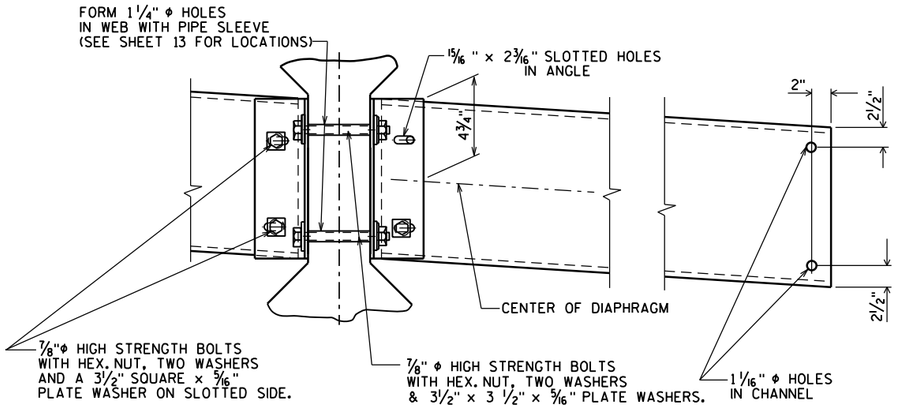


DIAPHRAGM SUPPORT



SECT. A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

STEEL DIAPHRAGM & BEARING PAD DETAIL

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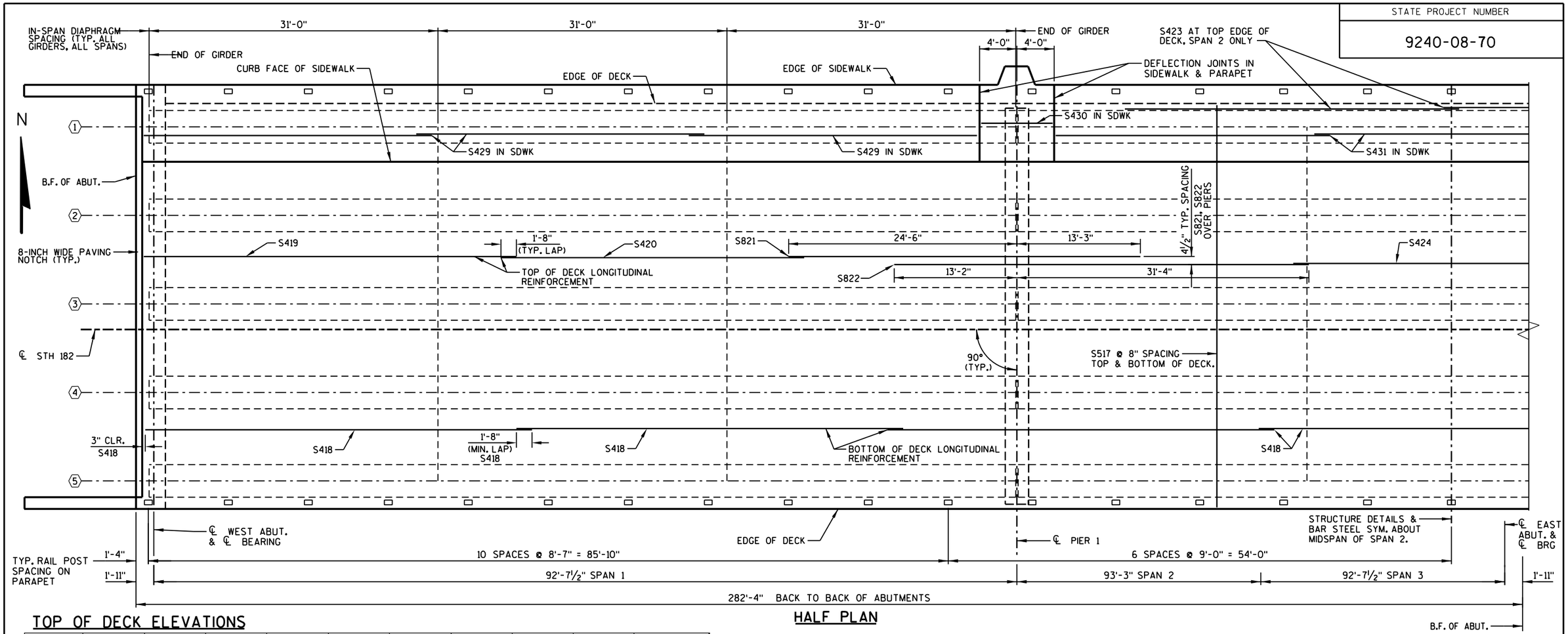
FILE= 93125_12.DGN
DATE=5/18/2016

93125_12.dgn 5/18/2016 12:42:00 PM rrabska

STATE PROJECT NUMBER

9240-08-70

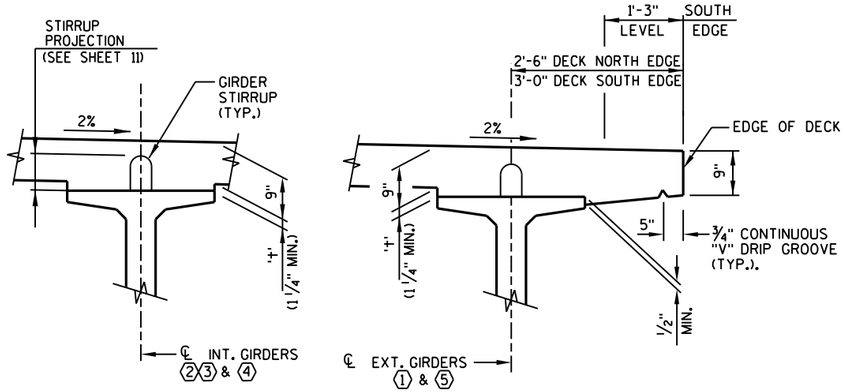


HALF PLAN

TOP OF DECK ELEVATIONS

LOCATION	SPAN POINT	SOUTH PARAPET FACE	GIRDER 5	GIRDER 4	C/L	GIRDER 3	GIRDER 2	SIDEWALK CURB FACE	GIRDER 1	NORTH DECK EDGE
W. ABUT.	1	1480.66	1480.69	1480.88	1481.02	1480.96	1480.77	1480.66	1480.58	1480.53
	1.1	1480.61	1480.64	1480.83	1480.97	1480.91	1480.72	1480.61	1480.53	1480.48
	1.2	1480.56	1480.60	1480.79	1480.92	1480.87	1480.68	1480.56	1480.49	1480.44
	1.3	1480.52	1480.55	1480.74	1480.88	1480.82	1480.63	1480.52	1480.44	1480.39
	1.4	1480.47	1480.50	1480.69	1480.83	1480.77	1480.58	1480.47	1480.39	1480.34
	1.5	1480.42	1480.46	1480.65	1480.78	1480.73	1480.54	1480.42	1480.35	1480.30
	1.6	1480.38	1480.41	1480.60	1480.74	1480.68	1480.49	1480.38	1480.30	1480.25
	1.7	1480.33	1480.37	1480.56	1480.69	1480.64	1480.45	1480.33	1480.26	1480.21
	1.8	1480.28	1480.32	1480.51	1480.64	1480.59	1480.40	1480.28	1480.21	1480.16
	1.9	1480.24	1480.27	1480.46	1480.60	1480.54	1480.35	1480.24	1480.16	1480.11
PIER #1	2	1480.19	1480.23	1480.42	1480.55	1480.50	1480.31	1480.19	1480.12	1480.07
	2.1	1480.15	1480.18	1480.37	1480.51	1480.45	1480.26	1480.15	1480.07	1480.02
	2.2	1480.10	1480.13	1480.32	1480.46	1480.40	1480.21	1480.10	1480.02	1479.97
	2.3	1480.05	1480.09	1480.28	1480.41	1480.36	1480.17	1480.05	1479.98	1479.93
	2.4	1480.01	1480.04	1480.23	1480.37	1480.31	1480.12	1480.01	1479.93	1479.88
	2.5	1479.96	1479.99	1480.18	1480.32	1480.26	1480.07	1479.96	1479.88	1479.83
	2.6	1479.91	1479.95	1480.14	1480.27	1480.22	1480.03	1479.91	1479.84	1479.79
	2.7	1479.87	1479.90	1480.09	1480.23	1480.17	1479.98	1479.87	1479.79	1479.74
	2.8	1479.82	1479.85	1480.04	1480.18	1480.12	1479.93	1479.82	1479.74	1479.69
	2.9	1479.77	1479.81	1480.00	1480.13	1480.08	1479.89	1479.77	1479.70	1479.65
PIER #2	3	1479.73	1479.76	1479.95	1480.09	1480.03	1479.84	1479.73	1479.65	1479.60
	3.1	1479.68	1479.71	1479.90	1480.04	1479.98	1479.79	1479.68	1479.60	1479.55
	3.2	1479.63	1479.67	1479.86	1479.99	1479.94	1479.75	1479.63	1479.56	1479.51
	3.3	1479.59	1479.62	1479.81	1479.95	1479.89	1479.70	1479.59	1479.51	1479.46
	3.4	1479.54	1479.58	1479.77	1479.90	1479.85	1479.66	1479.54	1479.47	1479.42
	3.5	1479.49	1479.53	1479.72	1479.85	1479.80	1479.61	1479.49	1479.42	1479.37
	3.6	1479.45	1479.48	1479.67	1479.81	1479.75	1479.56	1479.45	1479.37	1479.32
	3.7	1479.40	1479.44	1479.63	1479.76	1479.71	1479.52	1479.40	1479.33	1479.28
	3.8	1479.36	1479.39	1479.58	1479.72	1479.66	1479.47	1479.36	1479.28	1479.23
	3.9	1479.31	1479.34	1479.53	1479.67	1479.61	1479.42	1479.31	1479.23	1479.18
E. ABUT	4	1479.26	1479.30	1479.49	1479.62	1479.57	1479.38	1479.26	1479.19	1479.14

NOTE: AN AVERAGE HAUNCH ("†") OF 2⅞" FOR ALL SPANS WAS USED IN THE QUANTITY "CONCRETE MASONRY STRUCTURES."



DECK HAUNCH DETAIL

TO DETERMINE '†' ELEV. OF TOP OF GIRDERS AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. TO DETERMINE THE TOP OF DECK ELEVATION FOR POINT REFERRED USE TABLE ON THIS SHEET AND ADJUST FOR CROSS SLOPE OVER GIRDER. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEADLOAD DEFLECTION (SEE SHEET 11)
- DECK THICKNESS

= HAUNCH HEIGHT '†'

IF 1¼" MINIMUM HAUNCH HEIGHT '†' CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. MAX. HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

SUPERSTRUCTURE

SHEET 13 OF 19
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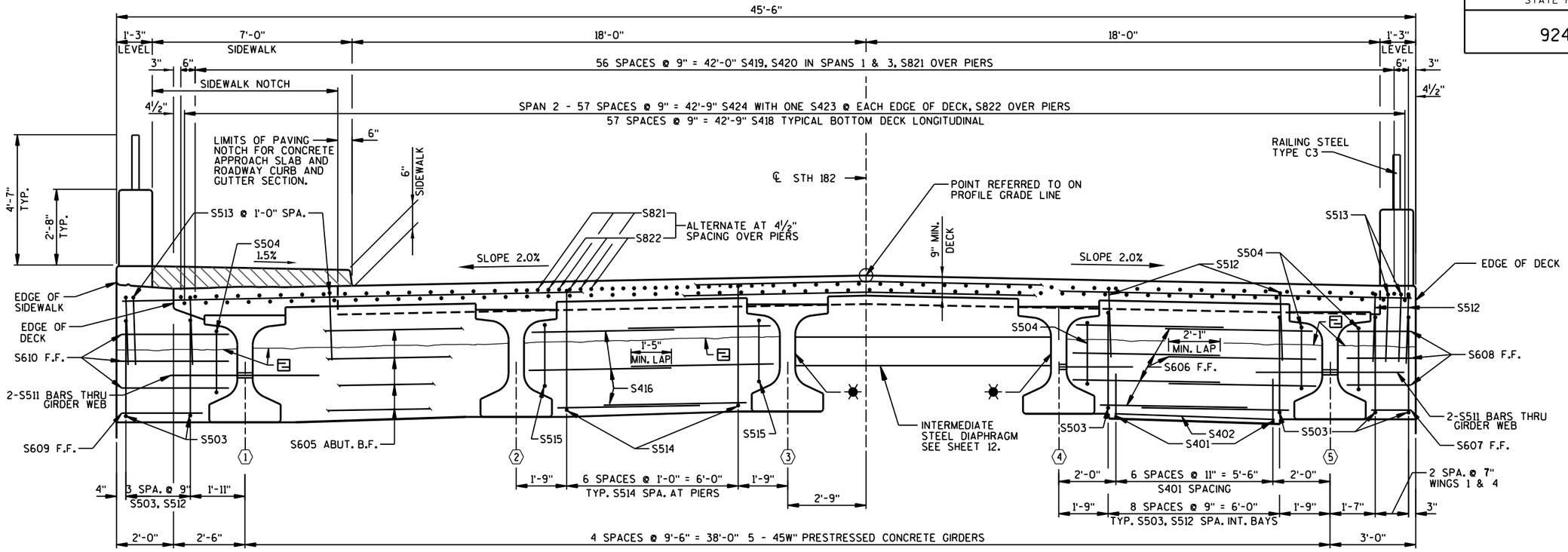
FILE= 93125_13.DGN
DATE= 7/30/2016

STATE PROJECT NUMBER

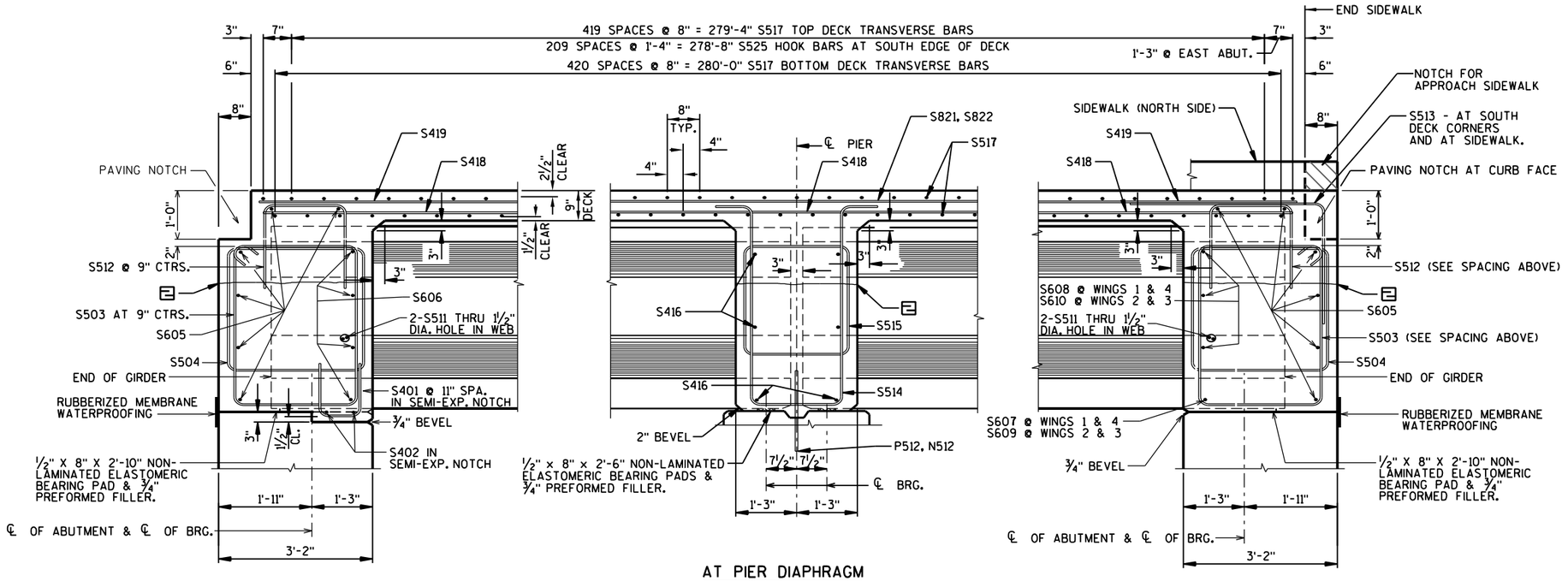
9240-08-70

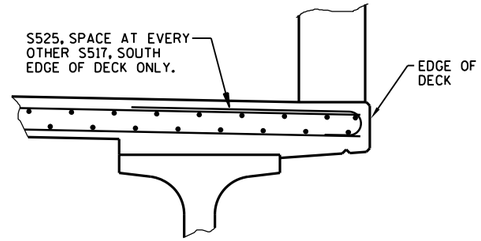


AT ABUTMENTS AT PIER IN SPAN AT ABUTMENTS

CROSS SECTION THRU BRIDGE

(LOOKING EAST)





SOUTH EDGE OF DECK DETAIL

LEGEND

⬡ - INDICATES GIRDER NUMBER

✷ - FOR DETAILS OF STEEL DIAPHRAGMS AND DIAPHRAGM INSERTS, SEE SHEET 12. FOR LAYOUT AND SPACING OF STEEL DIAPHRAGMS, SEE HALF PLAN, SHEET 13.

F.F. - FRONT FACE B.F. - BACK FACE

⊟ - OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR. PLACE 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING ON B.F. OF ABUTMENT DIAPHRAGM AT JOINT. (COST OF RMW IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES")

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-80-82

DRAWN BY RLR | PLANS CK'D. DHW

SUPERSTRUCTURE SECTIONS & DETAILS

SHEET 14 OF 19

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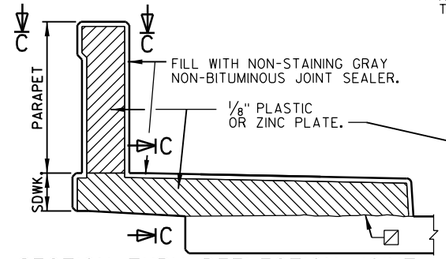
BILL OF BARS (COATED) 105,120 LBS.

MARK	NUMBER REQUIRED	LENGTH	BENT	LOCATION
S401	56	3'-9"	X	ABUT. DIAPH. - S.E. SEAT - STIRRUP - VERT.
S402	16	5'-7"		ABUT. DIAPH. - S.E. SEAT - TRANS.
S503	86	13'-0"	X	ABUT. DIAPH. - STIRRUP - VERT.
S504	20	10'-8"	X	ABUT. DIAPH. - STIRRUP - VERT.
S605	12	45'-2"		ABUT. DIAPH. - B.F. & TOP - TRANS.
S606	64	5'-2"		ABUT. DIAPH. - - F.F. - INT. BAY - TRANS.
S607	2	1'-4"		ABUT. DIAPH. - F.F. @ WINGS 1 & 4 - TRANS.
S608	6	2'-3"		ABUT. DIAPH. - F.F. @ WINGS 1 & 4 - TRANS.
S609	2	2'-10"		ABUT. DIAPH. - F.F. @ WINGS 2 & 3 - TRANS.
S610	6	3'-9"		ABUT. DIAPH. - F.F. @ WINGS 2 & 3 - TRANS.
S511	20	6'-0"		ABUT. DIAPH. - THRU GIRDER WEB - TRANS.
S512	86	6'-9"	X	ABUT. DIAPH. - TOP STIRRUP - VERT.
S513	20	6'-5"	X	ABUT. DIAPH. - DECK CORNERS - VERT.
S514	56	11'-0"	X	PIER DIAPH. - STIRRUP - VERT.
S515	16	9'-4"	X	PIER DIAPH. - STIRRUP - VERT.
S416	96	5'-0"		PIER DIAPH. - TRANS.
S517	843	43'-2"		DECK - TOP & BOTTOM - TRANS.
S418	406	41'-6"		DECK - BOTTOM - LONGIT.
S419	118	40'-0"		DECK - TOP @ ABUTS. & SPANS 1 & 3 - LONGIT.
S420	118	32'-6"		DECK - TOP @ ABUTS. & SPANS 1 & 3 - LONGIT.
S821	118	37'-9"		DECK - TOP - OVER PIERS - LONGIT.
S822	116	44'-6"		DECK - TOP - OVER PIERS - LONGIT.
S423	4	35'-11"		DECK - TOP - SPAN 2 - OUTSIDE EDGES ONLY - LONGIT.
S424	56	34'-0"		DECK - TOP - SPAN 2 - LONGIT.
S525	210	4'-11"	X	DECK - HOOK BARS @ SOUTH EDGE - TRANS.
S426	1124	2'-8"	X	SIDEWALK - INTO DECK - VERT.
S427	188	2'-10"		SIDEWALK - BOTTOM - TRANS.
S528	562	8'-5"	X	SIDEWALK - TOP - TRANS.
S429	90	30'-11"		SIDEWALK - SPANS 1 & 3 - LONGIT.
S430	30	7'-8"		SIDEWALK - OVER PIERS - LONGIT.
S431	45	29'-5"		SIDEWALK - SPAN 2 - LONGIT.
S532	12	9'-5"	X	PARAPET STIRRUP - OVER ABUT. - VERT.
S533	554	6'-8"	X	PARAPET STIRRUP - INTO SIDEWALK - VERT.
S434	36	31'-0"		NORTH PARAPET ON BRIDGE - SPANS 1 & 3 - LONGIT.
S435	12	7'-8"		NORTH PARAPET ON BRIDGE - OVER PIERS - LONGIT.
S436	18	29'-3"		NORTH PARAPET ON BRIDGE - SPAN 2 - LONGIT.
S437	24	11'-8"		PARAPET ON WINGS - LONGIT.
S538	8	10'-2"	X	LIGHT STANDARD - INTO SIDEWALK - TRANS.
S639	14	10'-0"	X	LIGHT STANDARD - HORIZ.
S540	8	7'-4"	X	LIGHT STANDARD - LOW STIRRUP - VERT.
S541	8	6'-6"	X	LIGHT STANDARD - TOP TIE - VERT.
S542	4	3'-10"	X	LIGHT STANDARD - AT JUNCT. BOX - VERT.
S543	4	3'-9"	X	LIGHT STANDARD - VERT.
S444	54	32'-8"		SOUTH PARAPET ON BRIDGE - LONGIT.

EPOXY COAT ALL SUPERSTRUCTURE & PARAPET BARSTEEL.

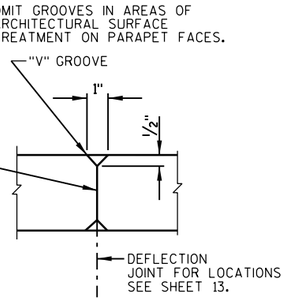
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



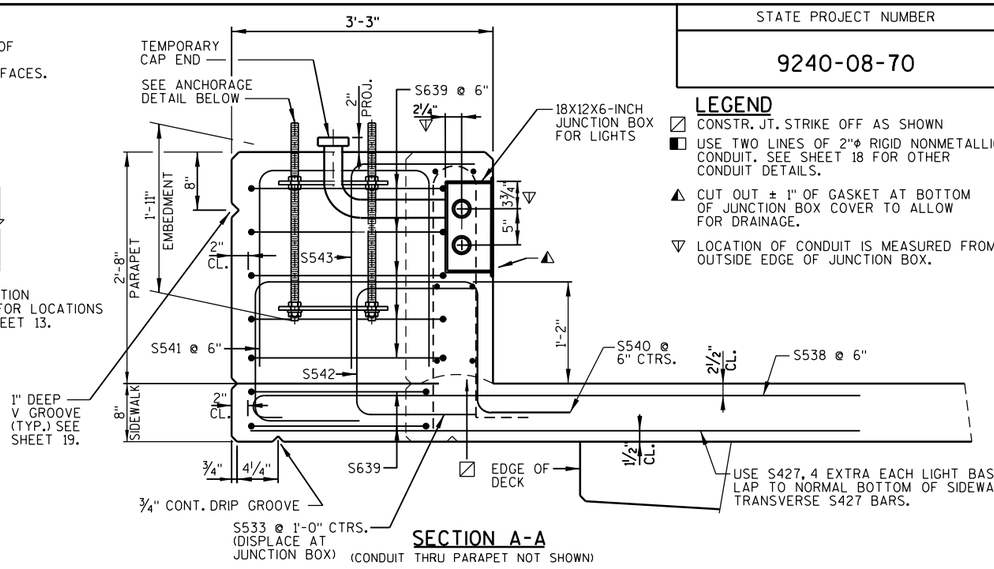
SECTION THRU DEFLECTION JOINT

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION B-B BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.



SECTION C-C



SECTION A-A

(CONDUIT THRU PARAPET NOT SHOWN)

LEGEND

- CONSTR. JT. STRIKE OFF AS SHOWN
- USE TWO LINES OF 2"ϕ RIGID NONMETALLIC CONDUIT. SEE SHEET 18 FOR OTHER CONDUIT DETAILS.
- CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.
- LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

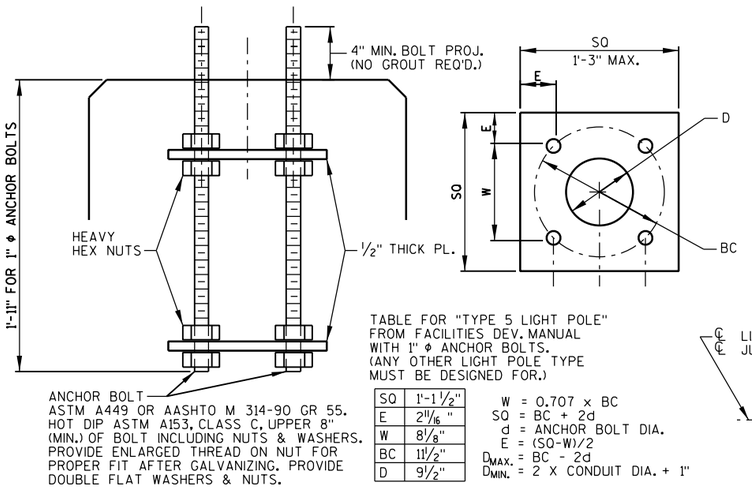


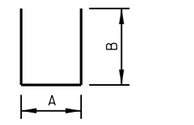
TABLE FOR "TYPE 5 LIGHT POLE" FROM FACILITIES DEV. MANUAL WITH 1" ϕ ANCHOR BOLTS. (ANY OTHER LIGHT POLE TYPE MUST BE DESIGNED FOR.)

SQ	1'-1 1/2"
E	2 11/16"
W	8 1/8"
BC	11 1/2"
D	9 1/2"

W = 0.707 x BC
SQ = BC + 2d
d = ANCHOR BOLT DIA.
E = (SQ-W)/2
$D_{MAX.}$ = BC - 2d
$D_{MIN.}$ = 2 X CONDUIT DIA. + 1"

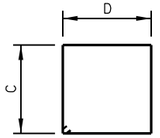
ANCHORAGE DETAIL

PLAN AT LIGHT STANDARD



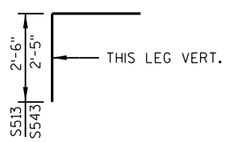
(STIRRUPS)

MARK	A	B
S401	11"	1'-6"
S512	2'-2"	2'-5"
S426	10"	1'-0"
S541	2'-3"	2'-3"
S542	1'-5"	1'-4"

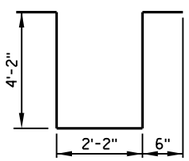


(STIRRUPS)

MARK	C	D
S503	3'-4"	2'-10"
S504	2'-2"	2'-10"
S515	2'-2"	2'-2"

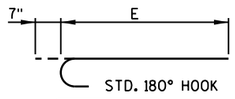


S513, S543

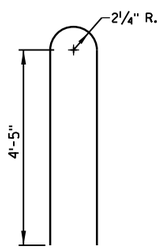


S514

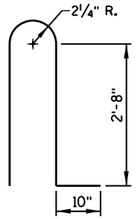
(STIRRUP)



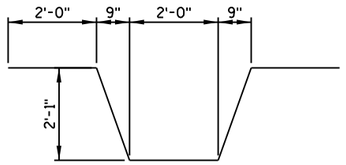
MARK	E
S525	4'-4"
S528	7'-10"
S538	9'-7"



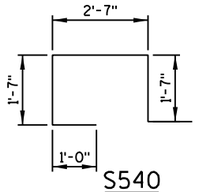
S532



S533



S639



S540

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

SUPERSTRUCTURE, LIGHT STANDARD & PARAPET DETAILS

SHEET 15 OF 19
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STATE PROJECT NUMBER

9240-08-70

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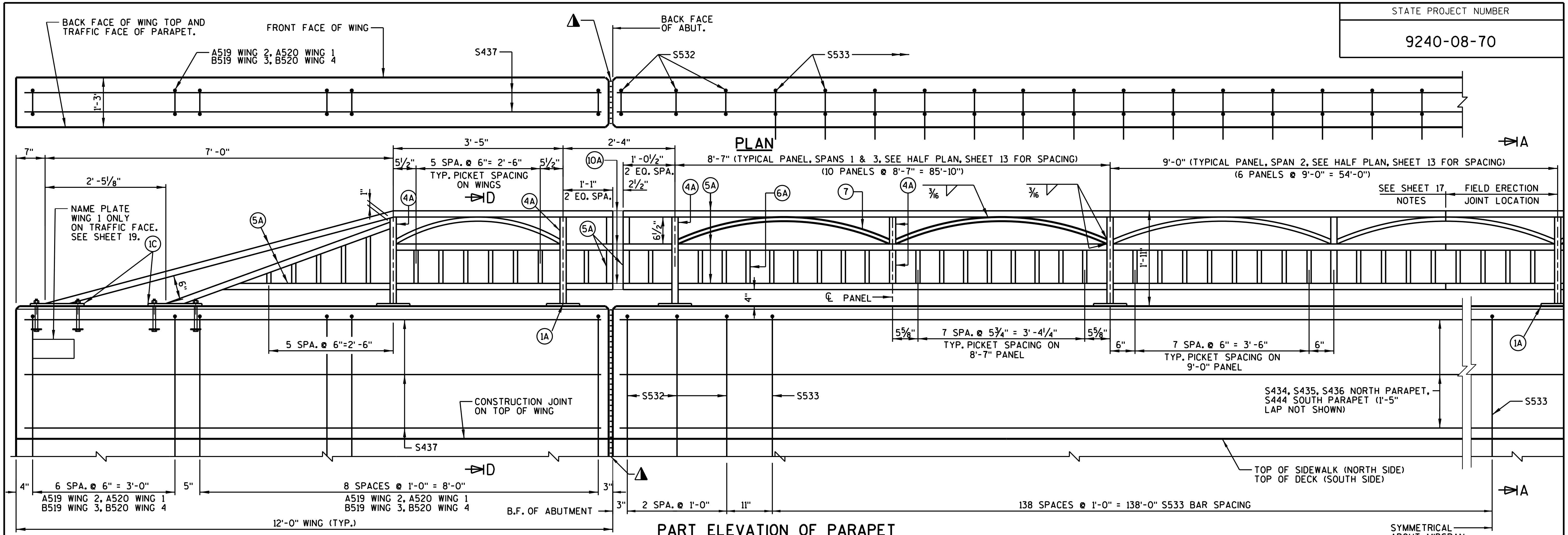
STATE PROJECT NUMBER
9240-08-70

PLAN

PART ELEVATION OF PARAPET

LOOKING AT TRAFFIC FACE
(ARCHITECTURAL SURFACE TREATMENT NOT SHOWN)

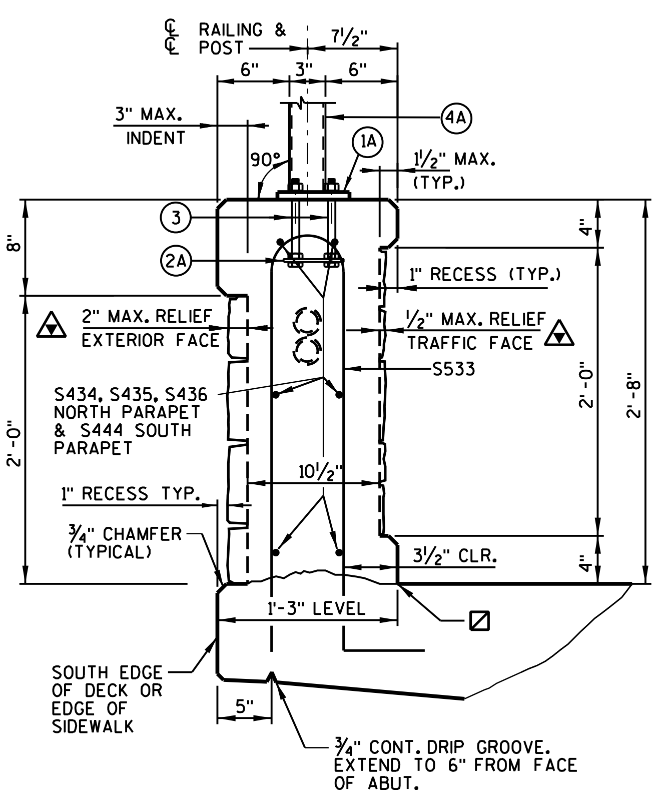


NOTE:

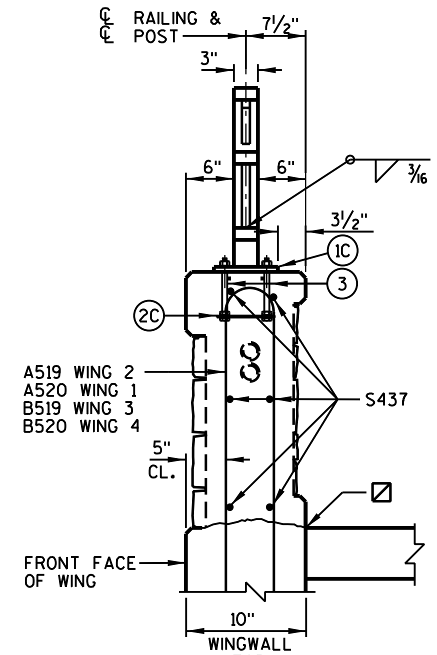
FOR LEGEND AND RAILING DETAILS, SEE SHEET 17.

FOR CONDUIT PLACEMENT SEE SHEET 18.

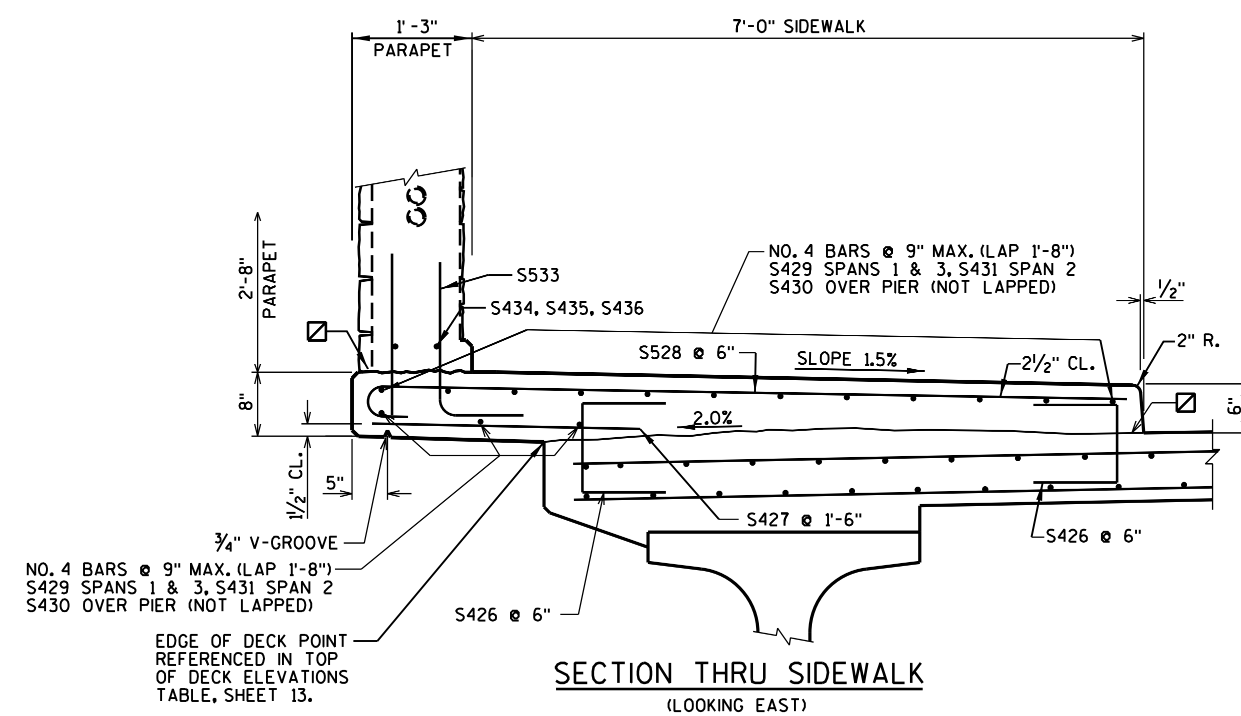
FOR ARCHITECTURAL SURFACE TREATMENT (A.S.T.) LIMITS AND DETAILS, SEE SHEET 19. OUTSIDE THE LIMITS OF THE A.S.T. THE FACES OF PARAPET SHALL BE FLAT AND VERTICAL WITH NO INDENTS OR GROOVES EXCEPT AS NOTED AT THE LIGHT STANDARD. THE BID ITEM FOR ALL A.S.T. IN THE TRAFFIC FACES OF THE PARAPETS SHALL BE "ARCHITECTURAL SURFACE TREATMENT TRAFFIC FACE".



SECTION A-A THRU PARAPET ON BRIDGE



SECTION D-D



SECTION THRU SIDEWALK

(LOOKING EAST)

LEGEND

- ARCHITECTURAL SURFACE TREATMENT MAXIMUM RELIEF ½" TRAFFIC FACE, 2" EXTERIOR FACE.
- CONSTRUCTION JOINT STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- ½" FILLER FROM BRIDGE SEAT TO TOP OF PARAPET.
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH IN BOTH PARAPETS, 2 REQUIRED PER PARAPET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

DRAWN BY RLR | PLANS CK'D. DHW

SIDEWALK, PARAPET & RAILING

SHEET 16 OF 19

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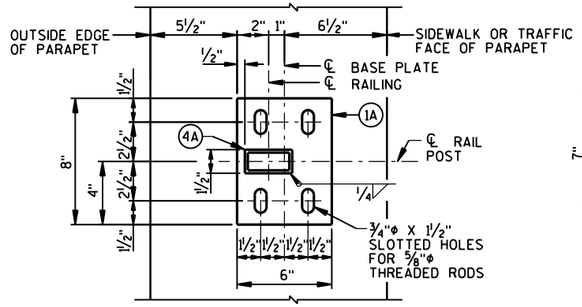
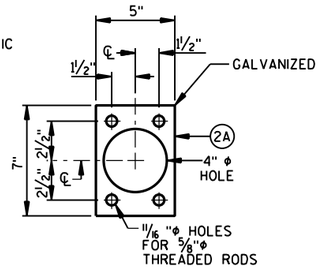
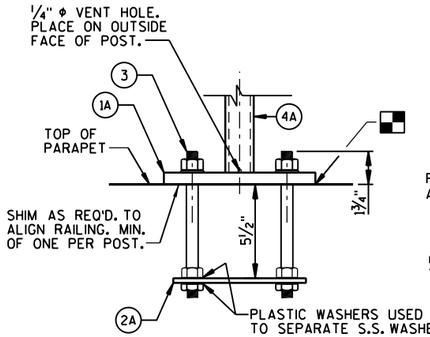
FILE= 93125_16.DGN
DATE=8/1/2016



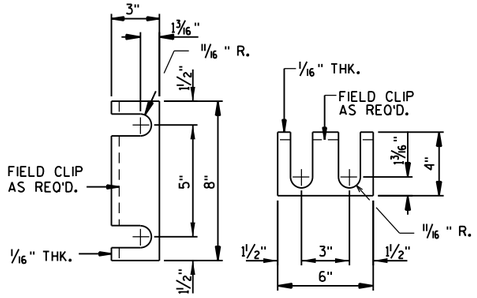
TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE

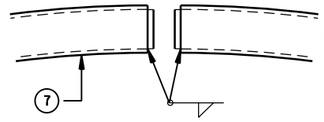


ANCHOR BOLTS FOR RAIL POSTS

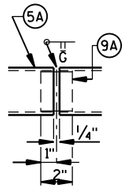


RAIL POST SHIM DETAIL
(2 SETS PER POST)

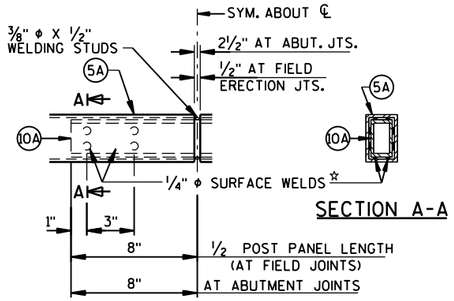
RAIL POST DETAILS



CURVED RAIL JOINT DETAIL



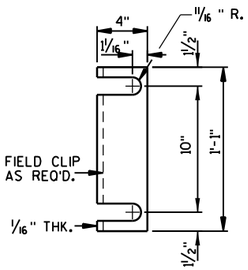
SHOP RAIL SPLICE DETAIL
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

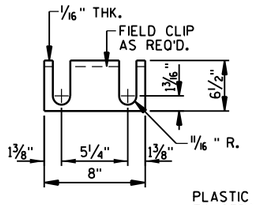


SECTION A-A

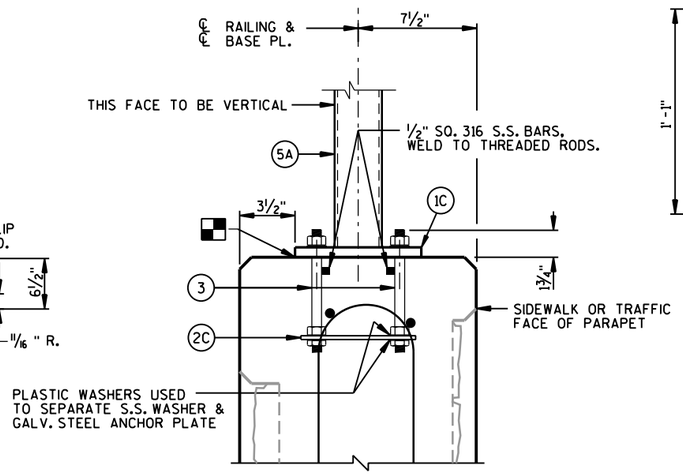
FIELD ERECTION JOINT DETAIL
☆MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

JOINT DETAILS

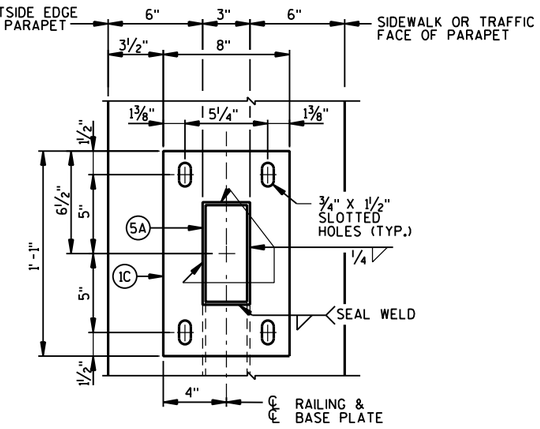




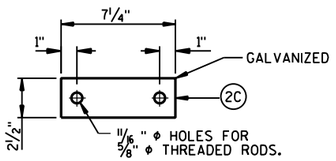
END RAIL SHIM DETAIL
(2 SETS PER POST)



ANCHOR BOLTS FOR END RAIL



END RAIL BASE PLATE



END RAIL ANCHOR PLATE
FOR END RAIL BASE PLATES
2 REQ'D. PER END RAIL BASE PLATE

END RAIL DETAILS

STATE PROJECT NUMBER

9240-08-70

LEGEND

(1A) PLATE ⅝" X 6" X 8" WITH ¾" X 1½" SLOTTED HOLES.

(1C) PLATE ⅝" X 8" X 1'-1" WITH ¾" X 1½" SLOTTED HOLES.

(2A) ¼" X 5" X 7" ANCHOR PLATE WITH 11/16 " ϕ HOLES FOR THREADED RODS NO. 3.

(2C) ¼" X 2½" X 7¼" ANCHOR PLATE WITH 11/16 " ϕ HOLES FOR THREADED RODS NO. 3.

(3) ⅝" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE: 4 EQUIVALENT STAINLESS STEEL ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS.)

(4A) STRUCTURAL TUBING 3" X 1½" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.

(5A) STRUCTURAL TUBING 3" X 1½" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. *

(6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.

(7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.

(9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

(10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ ABUTMENT JOINTS).

* INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION AND EXPANSION JOINTS.

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3 B-50-82", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, GALVANIZING, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1, 2, 6, 7, 9 AND NO. 10 SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE DIRECTION AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

RAILING ON THE SUPERSTRUCTURE SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

ALL MATERIAL EXCEPT NO. 3 SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE "SPECIAL PROVISIONS". THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 27038 BLACK. AT COMPLETION OF STEEL RAILING INSTALLATION, PAINT THE TOPS OF ANCHOR BOLTS AND NUTS WITH THE TIE COAT. TOUCH-UP PAINT WITH THE TOP COAT ALL DAMAGED AREAS AND THE ANCHOR BOLTS TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST. DO NOT PAINT ANCHORAGE (NO. 2 & 3) & SHIMS.

ANCHOR PLATES NO. 2 ARE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

ALL JOINTS IN CONCRETE PARAPET ARE TO BE VERTICAL.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-82

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RAILING DETAILS

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DATE= 8/1/2016

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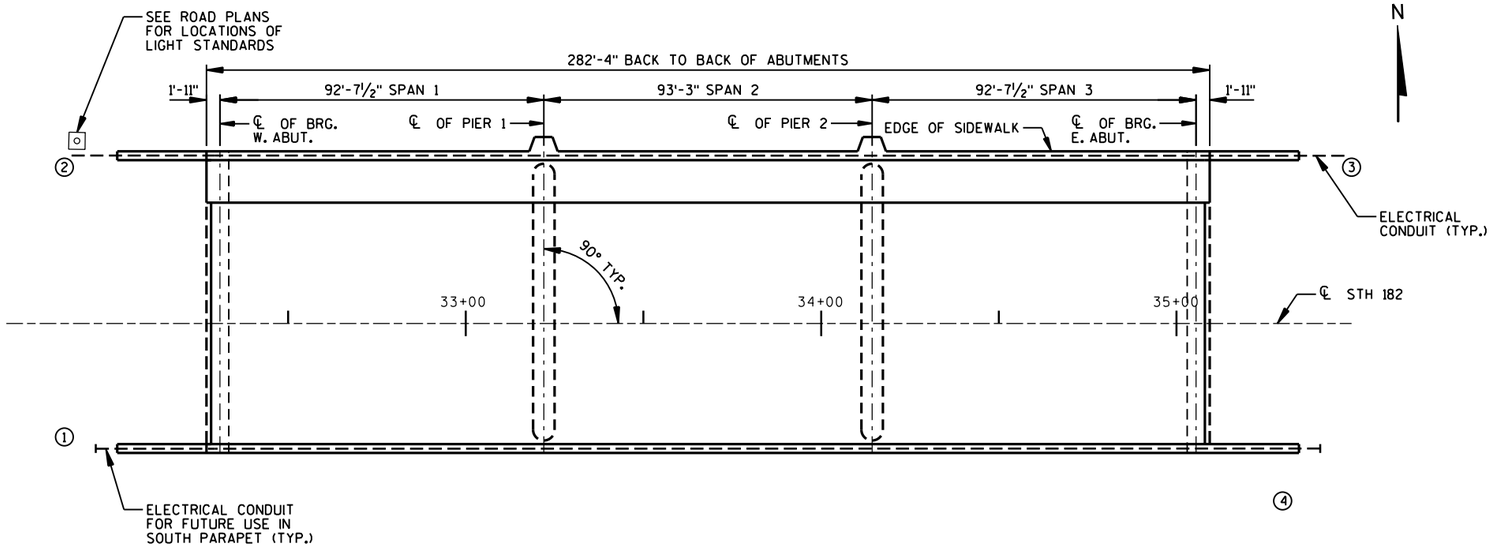
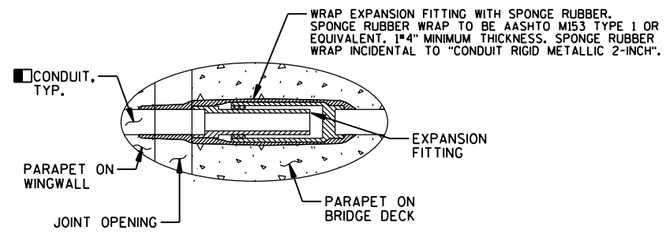
STATE PROJECT NUMBER

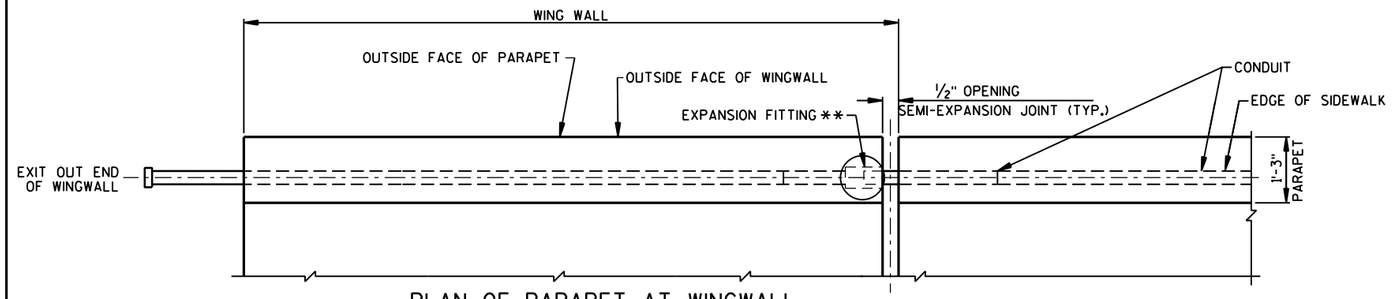
9240-08-70



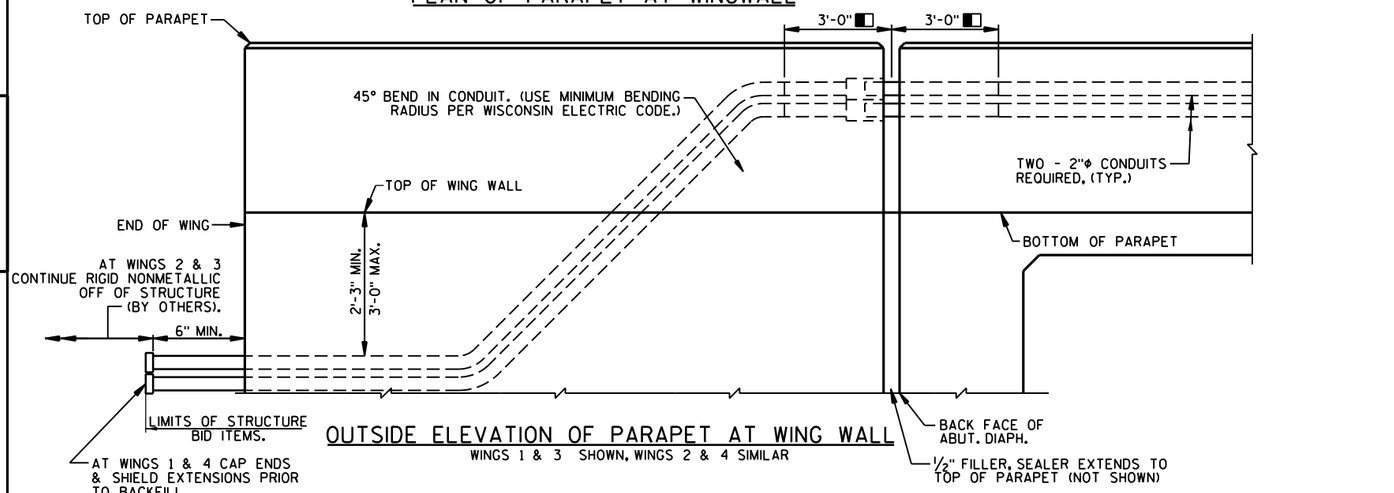
PLAN



EXPANSION FITTING DETAIL



PLAN OF PARAPET AT WINGWALL



OUTSIDE ELEVATION OF PARAPET AT WING WALL

WINGS 1 & 3 SHOWN, WINGS 2 & 4 SIMILAR

NOTES

BID ITEMS SHALL BE:
"CONDUIT RIGID METALLIC 2-INCH".
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCLUDED IN THE BID ITEM "CONDUIT RIGID METALLIC 2-INCH".

SEE SHEET 15 FOR JUNCTION BOX DETAILS AND FOR CONDUIT REQUIRED AT LIGHT STANDARDS.

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. LISTED FOR ELECTRICAL USE SHALL BE USED.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

JUNCTION BOX REQUIREMENTS
- PLACE A 18" X 12" X 6" JUNCTION BOX ON THE TRAFFIC FACE OF PARAPET AT THE LIGHT STANDARDS ON THE NORTH PARAPET ON BRIDGE AND AT THE ℄ OF PIERS ON THE SOUTH PARAPET.

CONDUIT REQUIREMENTS
- USE 2"Φ CONDUIT. POSITION CONDUITS VERTICALLY TO ENSURE DRAINAGE OF CONDENSATE.
- BRIDGE CONTRACTOR TO PROVIDE A PULL WIRE IN ALL CONDUIT FOR FUTURE CABLE INSTALLATION BY OTHERS AS PROVIDED IN THE STANDARD SPECIFICATIONS.

EXPANSION FITTING REQUIREMENTS
- USE AN APPROVED EXPANSION FITTING AT EACH SEMIEXPANSION JOINT. POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING TO ALLOW FOR EXPANSION/CONTRACTION MOVEMENT OF 1/2" EACH WAY. INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

LEGEND

◯ INDICATES WING NUMBER.

■ USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT EXTENDING 3'-0" EACH SIDE OF THE JOINT OPENING AT WINGS.

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ELECTRICAL CONDUIT PLAN & DETAILS

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150

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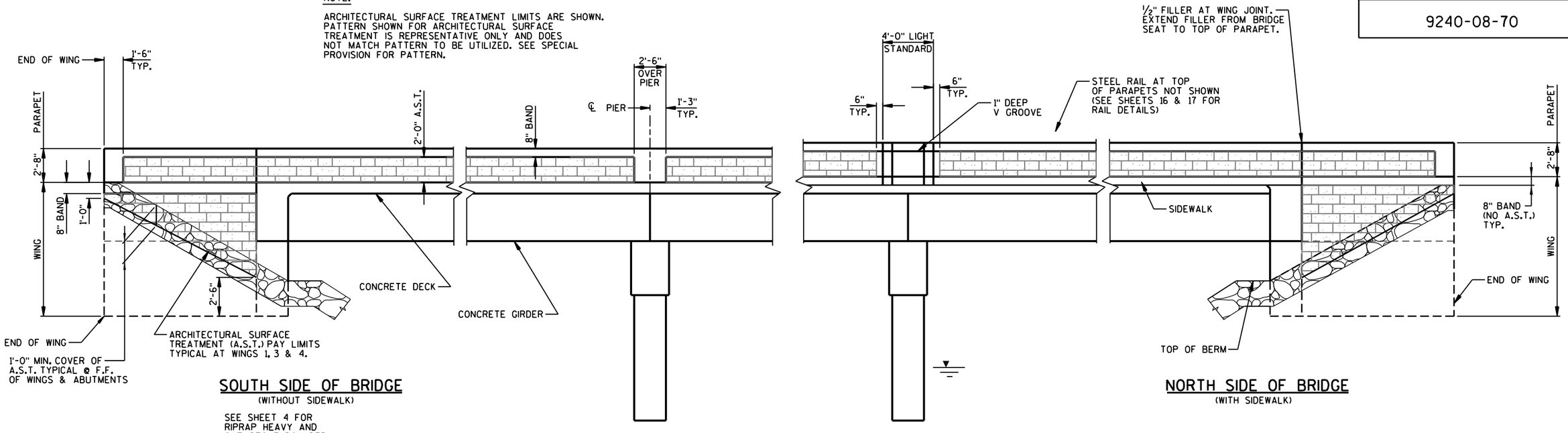
STATE PROJECT NUMBER
9240-08-70

NOTE:

ARCHITECTURAL SURFACE TREATMENT LIMITS ARE SHOWN. PATTERN SHOWN FOR ARCHITECTURAL SURFACE TREATMENT IS REPRESENTATIVE ONLY AND DOES NOT MATCH PATTERN TO BE UTILIZED. SEE SPECIAL PROVISION FOR PATTERN.

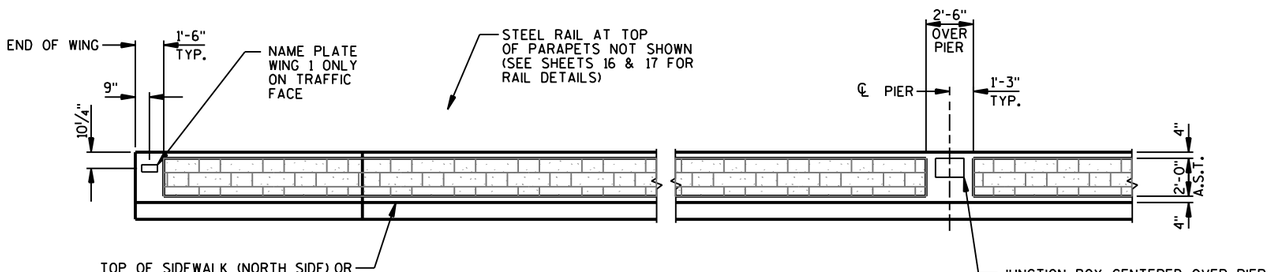


SOUTH SIDE OF BRIDGE
(WITHOUT SIDEWALK)

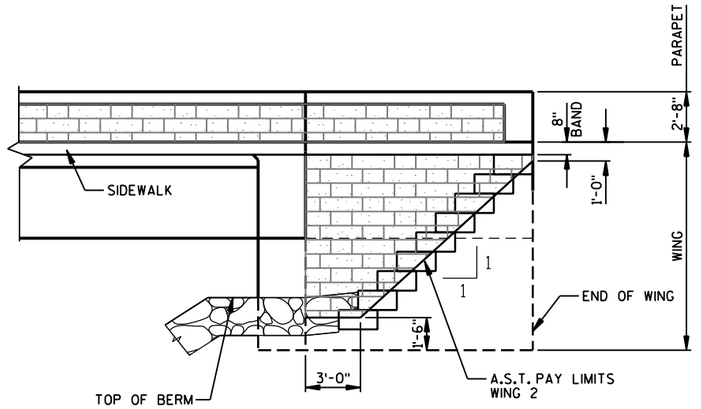
SEE SHEET 4 FOR RIPRAP HEAVY AND CUT STONE BOULDER LAYOUT AT ABUTMENTS.

NORTH SIDE OF BRIDGE
(WITH SIDEWALK)

EXTERIOR ELEVATION OF BRIDGE
ARCHITECTURAL SURFACE TREATMENT PAY LIMITS



INTERIOR ELEVATION OF BRIDGE PARAPET
ARCHITECTURAL SURFACE TREATMENT PAY LIMITS
(TRAFFIC FACE OF PARAPET SHOWN)



EXTERIOR ELEVATION AT WING 2
(WITH CUT STONE BOULDERS)

NOTE:

OUTSIDE FACES OF PARAPETS AND WING WALLS TO RECEIVE "ARCHITECTURAL SURFACE TREATMENT" AND "CONCRETE STAINING MULTI-COLOR" TO LIMITS OF A.S.T. SHOWN.

INSIDE FACES OF PARAPETS TO RECEIVE "ARCHITECTURAL SURFACE TREATMENT TRAFFIC FACE" AND "CONCRETE STAINING MULTI-COLOR" AS SHOWN.

SEE SPECIAL PROVISIONS FOR PATTERN IN BOTH ARCHITECTURAL SURFACE TREATMENT ITEMS.

FORMLINER PATTERN ON PARAPETS SHALL BE CONTINUOUS ACROSS JOINTS.

FORMLINER COURSING ON PARAPETS AND ON WING WALLS SHALL BE PARALLEL TO TOP OF PARAPET.

SEE SHEET 16 FOR MAXIMUM PATTERN RELIEF VALUES IN BOTH ARCHITECTURAL SURFACE TREATMENT ITEMS.

FILL ALL EXPOSED SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT FILLER.

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STATE OF WISCONSIN
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STRUCTURE B-50-82

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ARCHITECTURAL SURFACE TREATMENT DETAILS

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DATE= 5/26/2016

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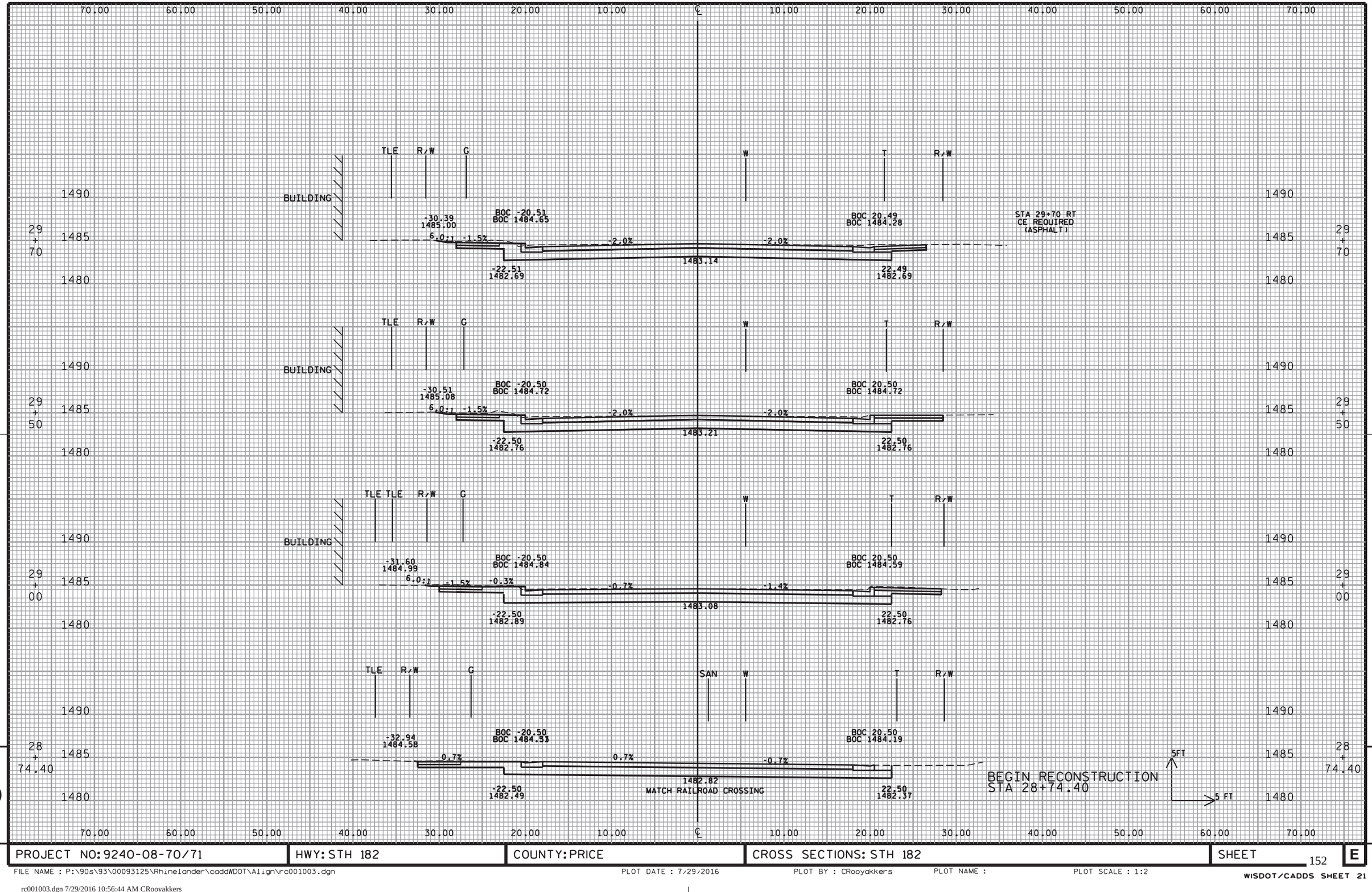

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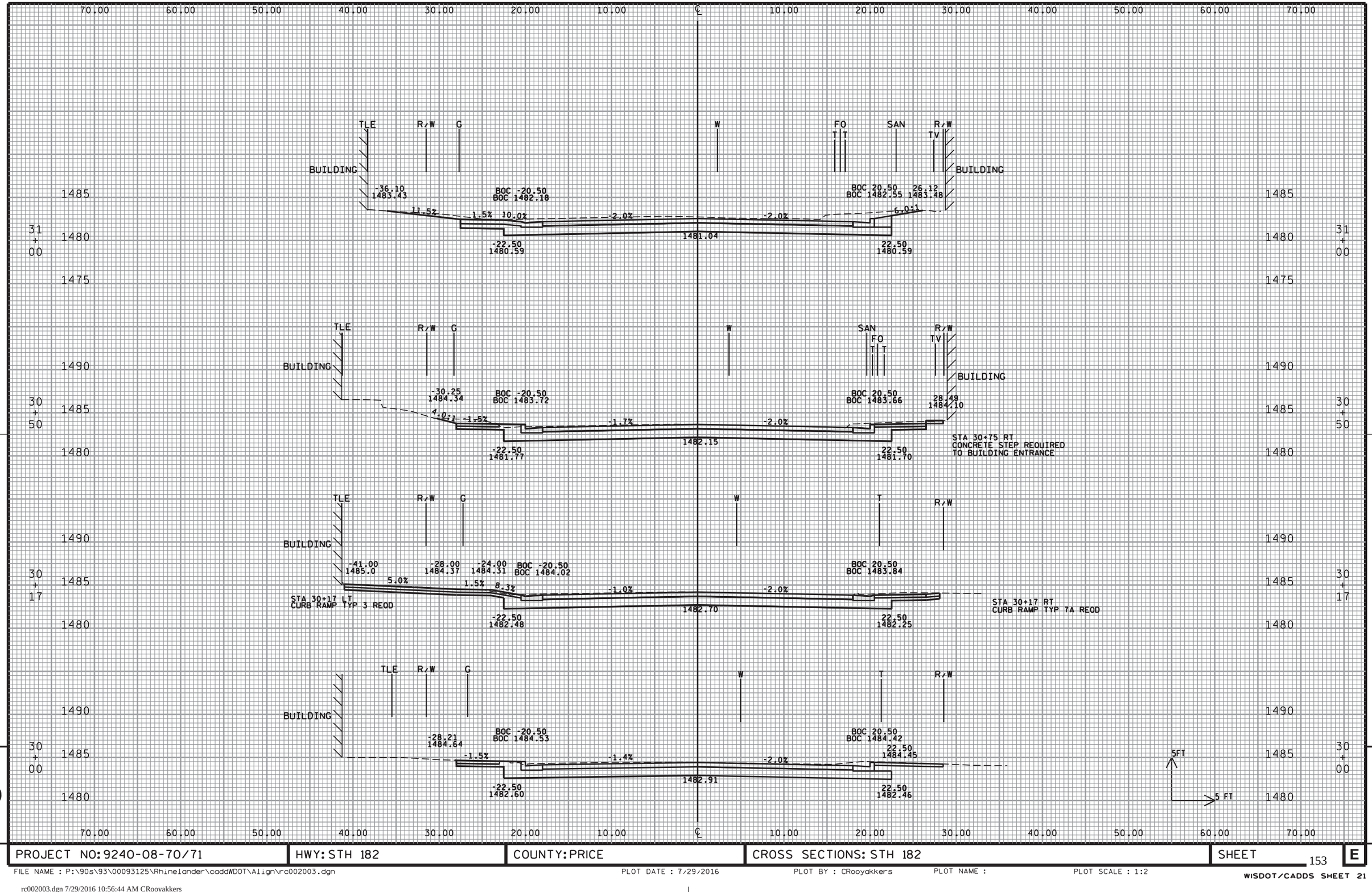
WISDOT/CADDS SHEET 21

rc001003.dgn 7/29/2016 10:56:44 AM CRooyakkers



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WISDOT/CADDS SHEET 21

rc002003.dgn 7/29/2016 10:56:44 AM CRooyakkers

STRUCTURE B-50-0082

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W G W FO T T T R/W E

BUILDING

STA 32+00, RT
CE REOD
(ASPH SURFACE DRIVEWAYS)

1485 1480 1475

32 + 00

-26.33 1481.33
BOC -19.10 BOC 1481.19
6.0:1 -1.5% -2.0% -2.0%
BOC 18.65 BOC 1480.83
20.65 1480.94
1479.65
-21.10 1479.23
20.65 1479.24

R/W G W FO T E T R/W

BUILDING

1485 1480 1475

31 + 99

-26.31 1481.33
BOC -19.12 BOC 1481.19
6.0:1 -1.5% -2.0% -2.0%
BOC 18.67 BOC 1480.83
20.67 1480.95
1479.66
-21.12 1479.23
20.67 1479.24

OVERHEAD WALKWAY

VERTICAL CLEARANCE APPROX. 15.05'

R/W G W FO T T T SAN TV R/W

BUILDING BUILDING

1485 1480 1475

31 + 50

-28.26 1482.07
BOC -19.80 BOC 1481.65
6.0:1 -1.5% -2.0% -2.0%
BOC 19.57 BOC 1481.65
21.57 1482.07
1480.12
-21.80 1479.69
21.57 1479.69

TLE R/W G W FO T T SAN R/W TV

BUILDING BUILDING

STA 31+02 LT
CE REOD
(CONCRETE)

1485 1480 1475

31 + 02

-35.97 1483.37
BOC -20.47 BOC 1482.13
11.5% 1.5% 10.0% -2.0% -2.0%
BOC 20.46 26.01 BOC 1482.50 1483.43
6.0:1
1480.99
-22.47 1480.54
22.46 1480.54

5FT
5 FT

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

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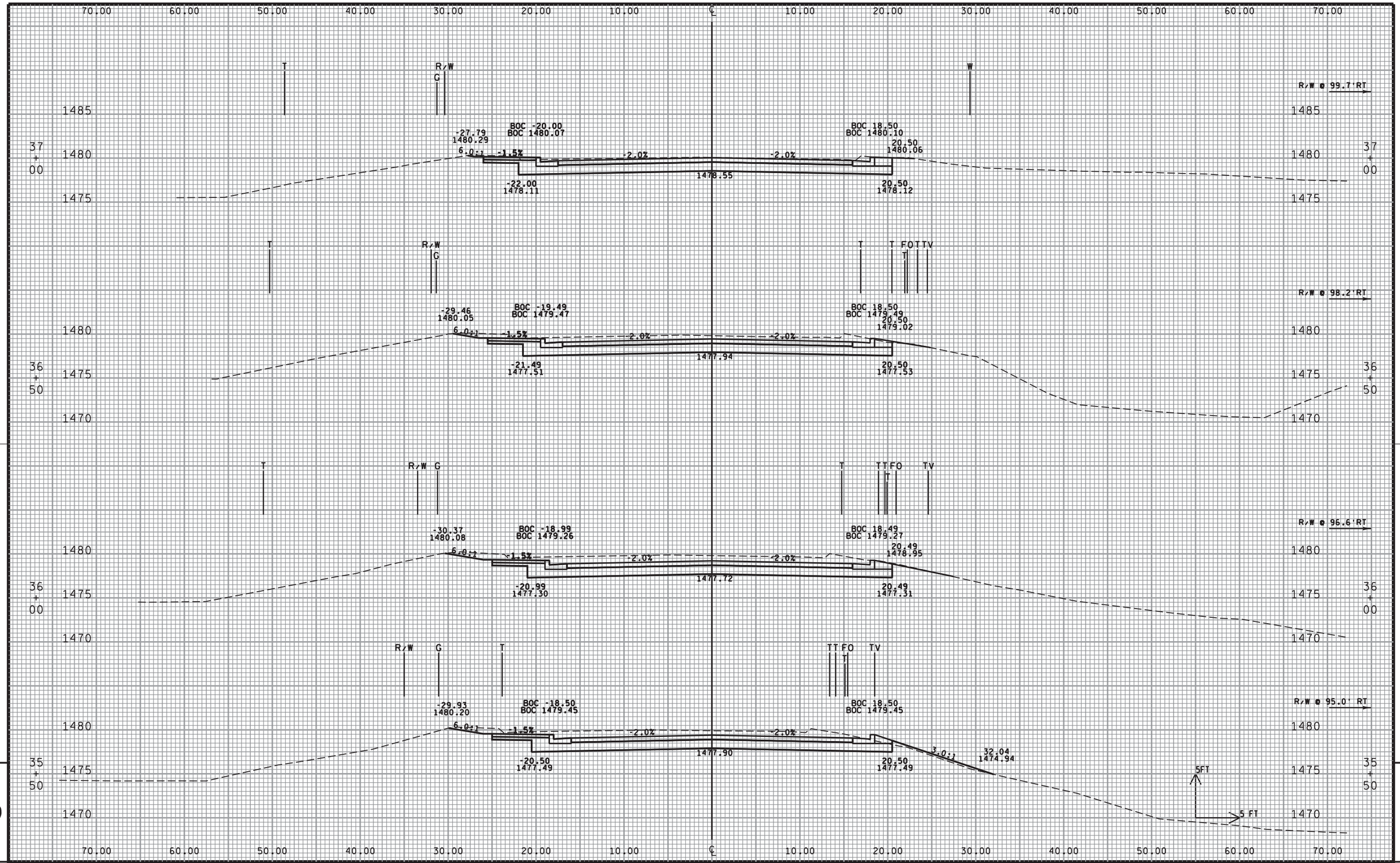
PROJECT NO: 9240-08-70/71	HWY: STH 182	COUNTY: PRICE	CROSS SECTIONS: STH 182	SHEET 154	E



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WISDOT/CADDS SHEET 21

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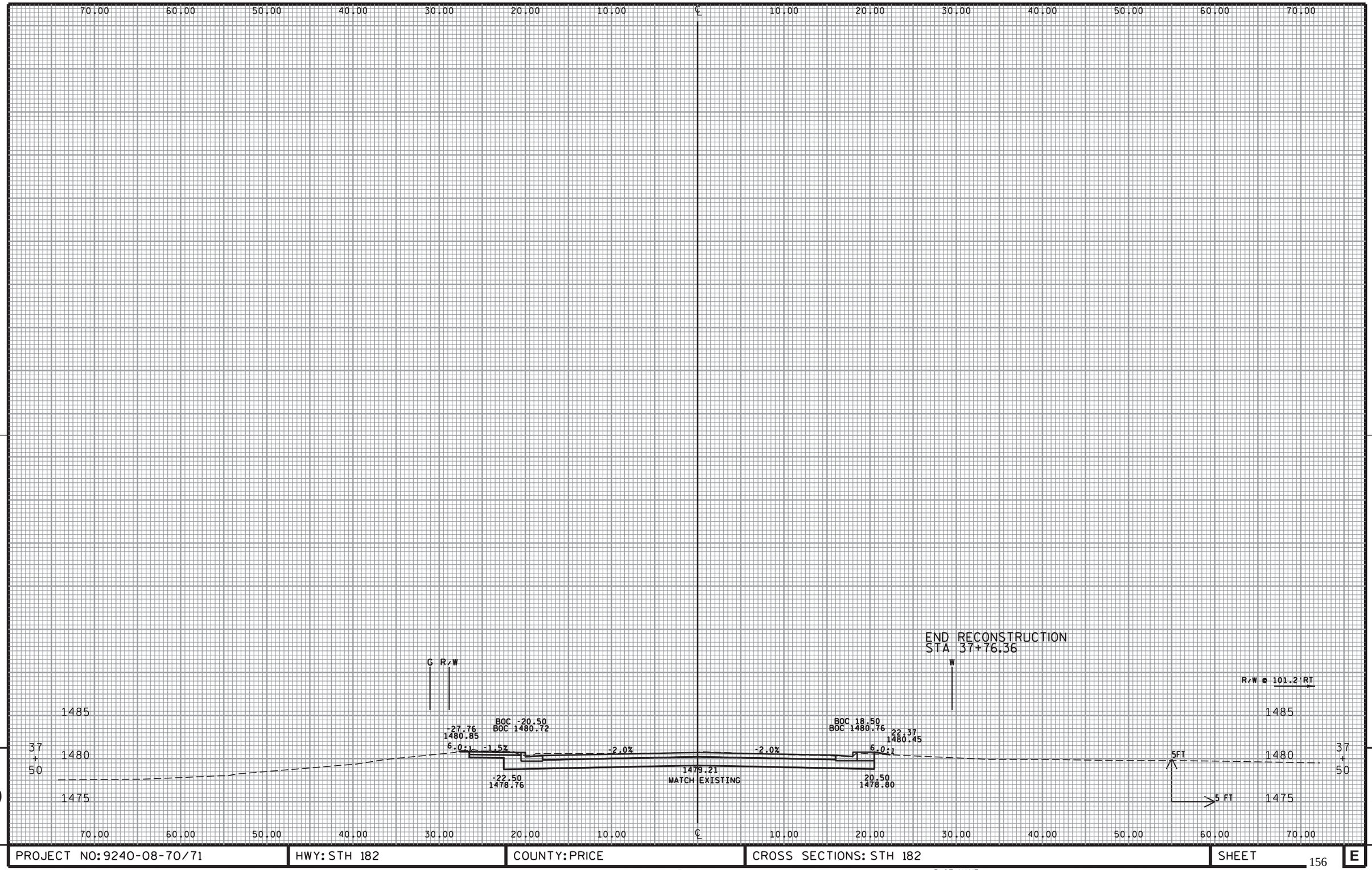

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WISDOT/CADDS SHEET 21

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Notes

Wisconsin Department of Transportation

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