EAU | APR 2017

PROJECT ID: 1190-02-81
WITH: N/A

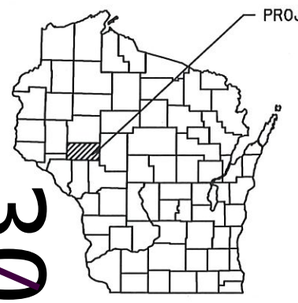
COUNTY: EAU CLAIRE

30 30

ORDER OF SHEETS

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

TOTAL SHEETS = 306



N

DESIGN DESIGNATION

A.A.D.T.	2017	= 15,200
A.A.D.T.	2037	= 18,800
D.H.V.		= 2,160
D.D.		= 59/41
T.		= 7.4%
DESIGN SPEED		= 60-70 MPH
ESALS		= 5,300,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

OSSEO - EAU CLAIRE

IH 94 TO GOLF ROAD (NB & SB)

U.S.H. 53

EAU CLAIRE COUNTY

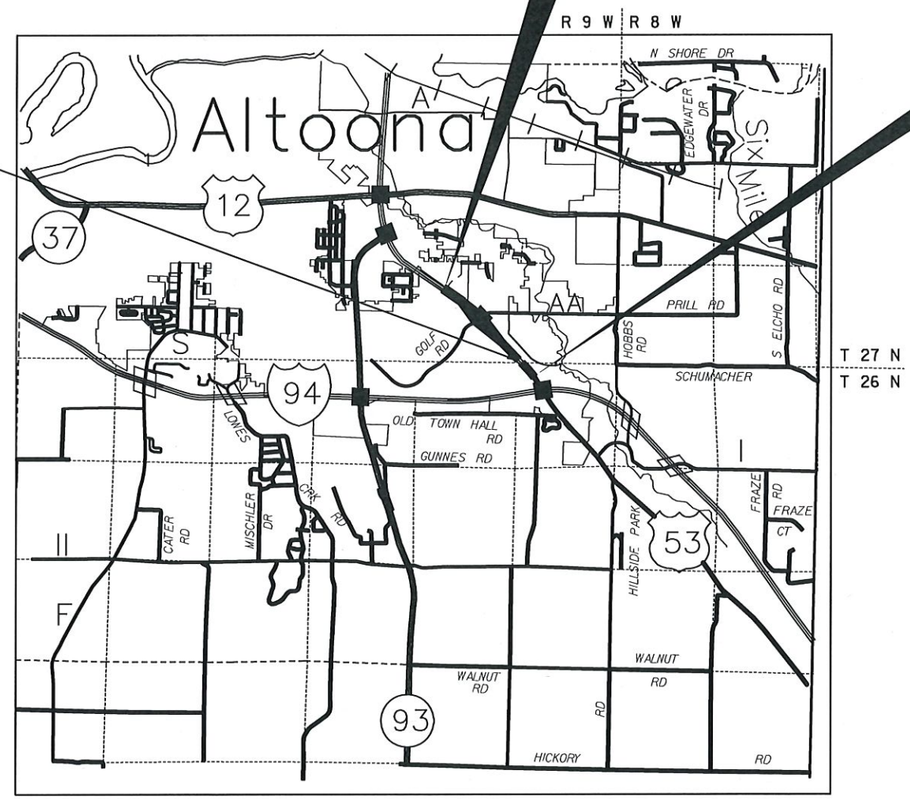
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1190-02-81	WISC 2017175	1

STATE PROJECT NUMBER
1190-02-81

END PROJECT 1190-02-81
110+30'NB'

BEGIN PROJECT 1190-02-81
STA. 43+20'NB'
Y= 262,807.35
X= 359,272.84

EXCEPTION TO
CENTERLINE LENGTH
B-18-37 & B-18-38
STA. 62+63'NB' - STA. 63+61'NB'



LAYOUT
SCALE 0 2 MILES

TOTAL NET LENGTH OF CENTERLINE = 1.252 MILES

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), EAU CLAIRE COUNTY NAD 83 (2011)

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88 2012)

ORIGINAL PLANS PREPARED BY

KL Engineering
[A] Better Experience

WISCONSIN
JOSHUA P. MELBY
43963-6
MADISON, WI
PROFESSIONAL ENGINEER

10-25-16 (Date)
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KL ENGINEERING/WISDOT
Designer	KL ENGINEERING
Project Manager	DAVID KOEPP
Regional Examiner	TAO YANG
Regional Supervisor	TIMOTHY MASON

APPROVED FOR THE DEPARTMENT
DATE: 10/26/2016
(Signature)

E

WISDOT CONTACT
DAVID KOEPP
WISDOT NW REGION
718 W. CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
(715) 836-2078
DAVID.KOEPP@DOT.WI.GOV

DNR CONTACT
CHRIS WILLGER
DNR WEST CENTRAL REGION
1300 W. CLAIREMONT STREET
EAU CLAIRE, WI 54702
(715) 839-1609
CHRISTOPHERJ.WILLGER@WISCONSIN.GOV

DESIGN CONTACT
JOSHUA MELBY
KL ENGINEERING, INC.
5950 SEMINOLE CENTRE COURT SUITE 200
MADISON, WI 53715
(608) 663-1218
JMELBY@KLENGINEERING.COM

ORDER OF TYPICAL SECTION AND DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
PLAN DETAILS
EROSION CONTROL PLAN
PERMANENT SIGNING PLAN
TRAFFIC SIGNAL PLAN
PAVEMENT MARKING PLAN
TRAFFIC CONTROL AND CONSTRUCTION STAGING PLAN
ALIGNMENT DIAGRAM
BENCHMARK/CONTROL POINT DETAIL

UTILITY CONTACTS

AT&T LEGACY
WILLIAM KOENIG
128 W. SUNSET AVENUE
APPLETON, WI 54911
(608) 628-0575
WEKOENIG@ATT.NET

AT&T WISCONSIN
RICK PODOLAK
304 S. DEWEY STREET
EAU CLAIRE, WI 54701
(715) 839-5565
RP4514@ATT.COM

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

CHARTER COMMUNICATIONS
SHANE YODER
1201 MCCANN DRIVE
ALTOONA, WI 54720
(715) 831-8940 EXT. 51113
SHANE.YODER@CHARTER.COM

WISCONSIN DOT RWIS PROGRAM
MIKE ADAMS
PO BOX 7986
MADISON, WI 53707
(608) 266-5004
MICHAEL.ADAMS@DOT.WI.GOV

WINDSTREAM NTI
DENNIS RUESS
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
(608) 512-5587
DENNIS.RUESS@WINDSTREAM.COM

XCEL ENERGY - ELECTRIC DISTRIBUTION
DAN KLEIN
1400 WESTERN AVE
PO BOX 8
EAU CLAIRE, WI 54702
(715) 737-4203
DANIEL.J.KLEIN@XCELENERGY.COM

WISDOT STOC
JEFF MADSON
433 W. ST. PAUL AVENUE #300
MILWAUKEE, WI 53203
(414) 225-3723
JEFFREY.MADSON@DOT.WI.GOV

CHIPPEWA VALLEY INTERNETWORK CONSORTIUM (CINC)
DAREN BAUER
105 GARFIELD AVENUE
EAU CLAIRE, WI 54701
(715) 836-5286
BAUERDP@UWEC.EDU

GENERAL NOTES

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

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

PLAN REMOVAL AREAS ARE APPROXIMATE, DETERMINE EXACT LIMITS IN THE FIELD.

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER WILL DETERMINE THE EXACT LOCATION OF EROSION CONTROL ITEMS. MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. THE CONTRACTOR WILL REMOVE EROSION CONTROL ITEMS AT THE DIRECTION OF THE ENGINEER.

DO NOT DRIVE EQUIPMENT OR STORE EQUIPMENT OR MATERIAL IN WETLANDS, WATERWAYS, OR ENVIRONMENTALLY SENSITIVE AREAS ADJACENT TO THE PROJECT.

THE EXACT LOCATIONS AND QUANTITIES OF CONCRETE PAVEMENT REPAIR AND JOINT CRACK REPAIR SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 110 LBS/SY/IN.

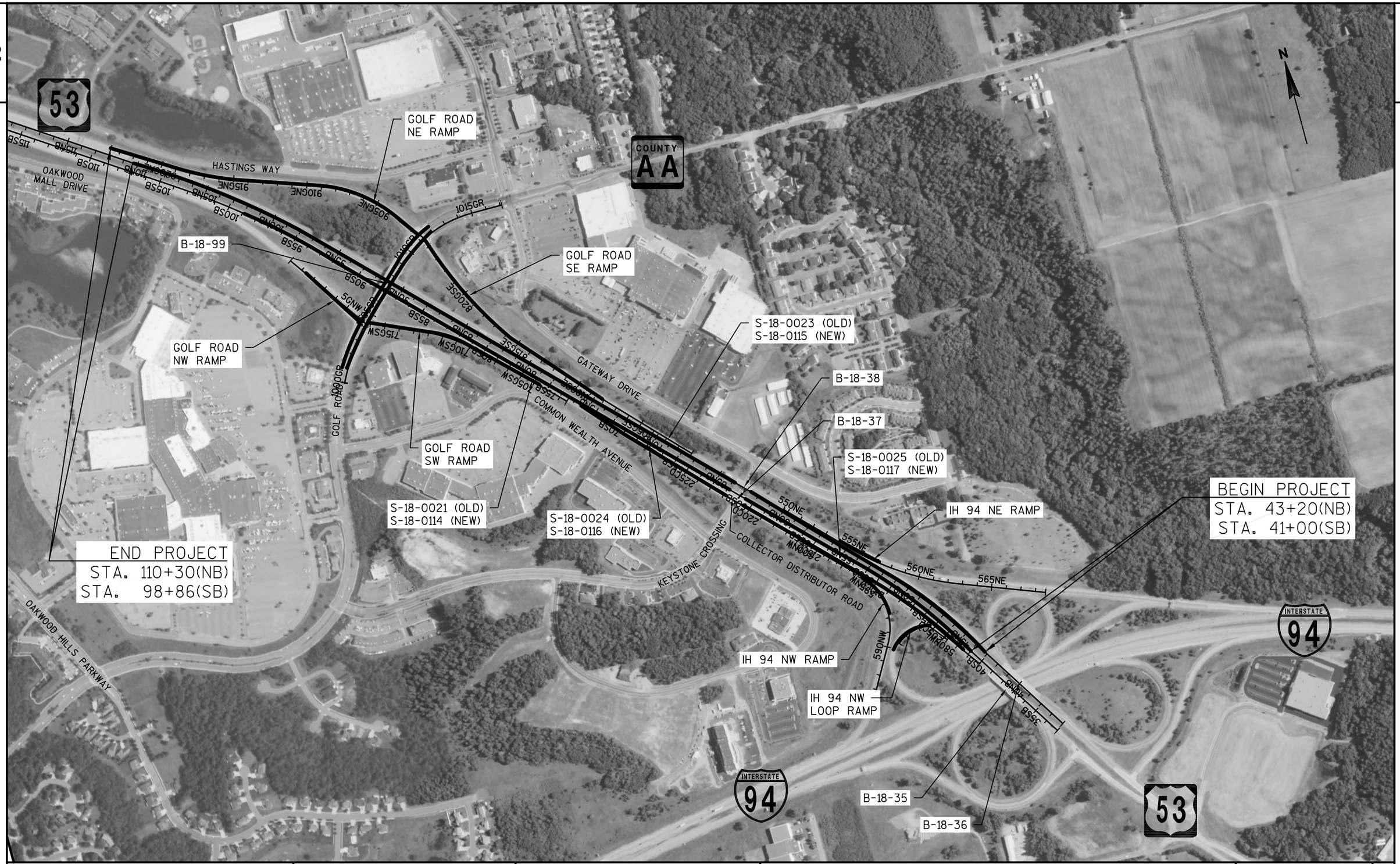
THE CONTRACTOR'S PAVING OPERATIONS WILL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, PASSING, TURNING, OR AUXILLARY LANE.

CURB AND GUTTER LAYOUT DATA ARE GIVEN TO THE FLANGE OF THE CURB.

NO SUPERELEVATION CORRECTION IS REQUIRED WITH MILLING ON THIS PROJECT.

ROADWAY	TOTAL PAVEMENT THICKNESS	LOWER LAYER THICKNESS & TYPE	UPPER LAYER THICKNESS & TYPE
USH 53 (LANES & INSIDE SHOULDER)	3.5"	1.75" (4 MT 58-34 H)	1.75" (4 MT 58-34 H)
USH 53 (OUTSIDE SHOULDER)	1.75"	--	1.75" (12.5MM, ASPHALTIC SURFACE)
IH 94/USH 53 RAMPS (NW LOOP, NW, & NE RAMPS)	2"	--	2" (12.5MM, ASPHALTIC SURFACE)
USH 53/GOLF ROAD RAMPS (SW, SE, & NE RAMPS)	2"	--	2" (12.5MM, ASPHALTIC SURFACE)
USH 53/GOLF ROAD RAMPS (SE RAMP WIDENING)	7"	(2) - 2.5" (12.5MM, ASPHALTIC SURFACE)	2" (12.5MM, ASPHALTIC SURFACE)
GOLF ROAD	2.5"	1" (9.5MM, ASPHALTIC SURFACE SPECIAL)	1.5" (9.5MM, ASPHALTIC SURFACE SPECIAL)

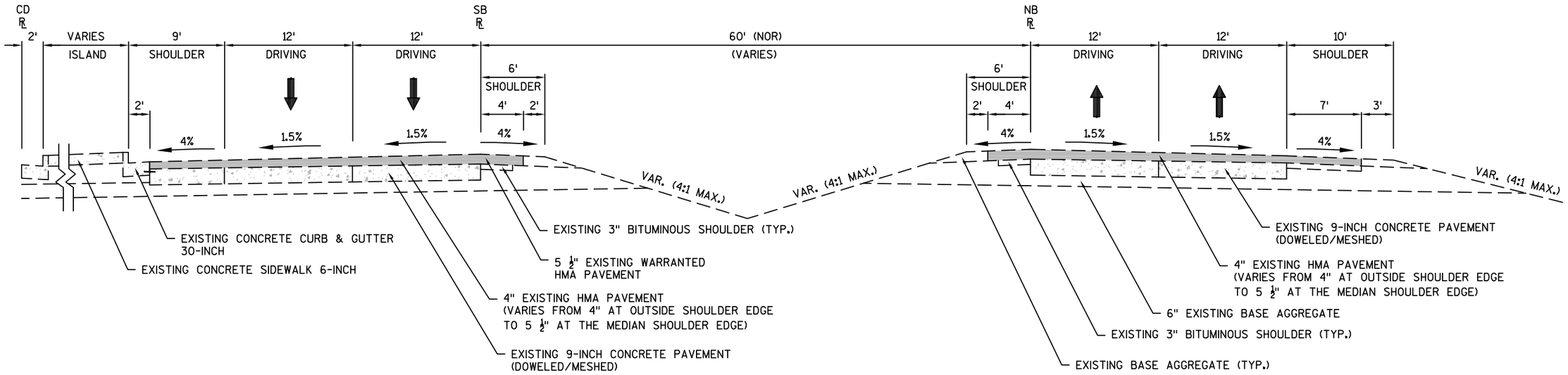
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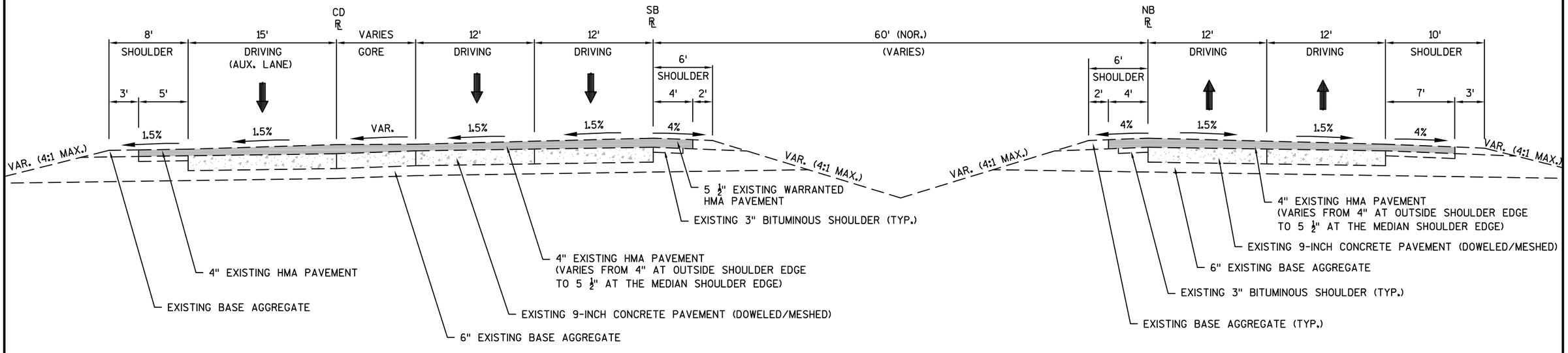
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PROJECT OVERVIEW	SHEET	E

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LAYOUT NAME - ****

WISDOT/CADDS SHEET 42

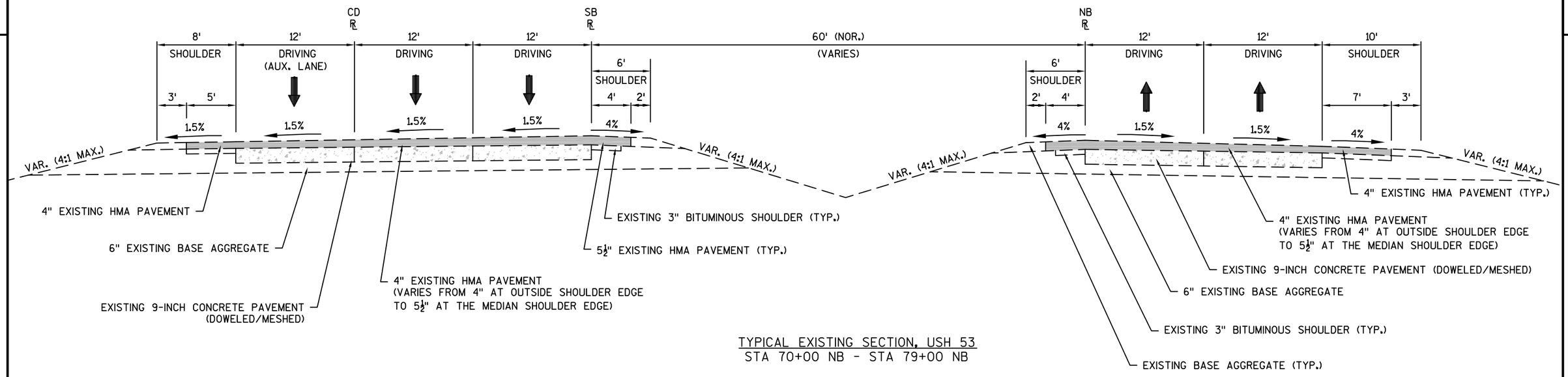


TYPICAL EXISTING SECTION, USH 53
STA 43+20 NB - STA 66+75 NB

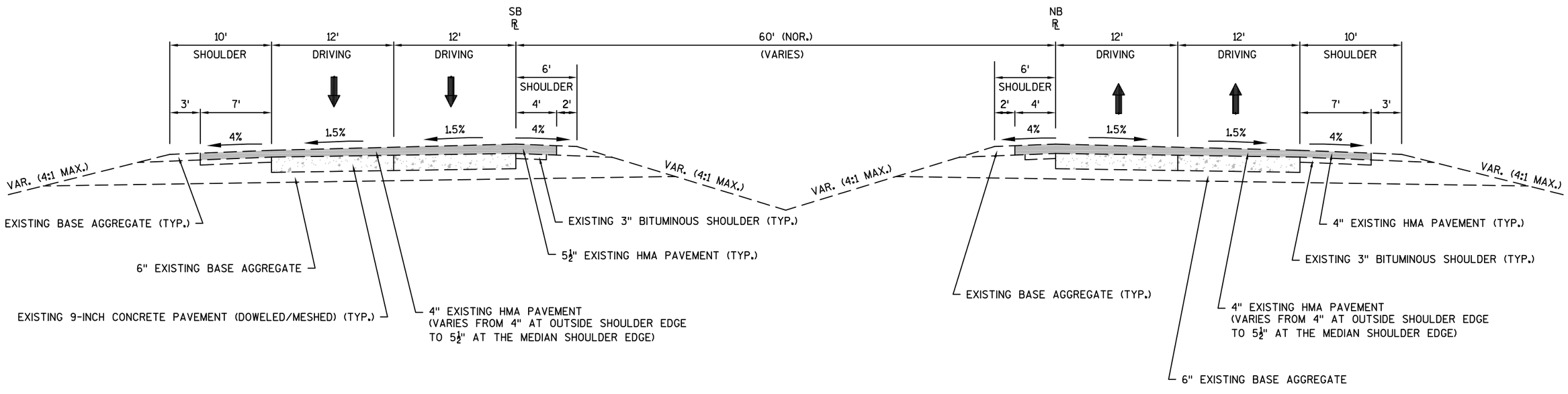


TYPICAL EXISTING SECTION, USH 53
STA 66+75 NB - STA 70+00 NB

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EXISTING TYPICAL SECTIONS	SHEET 4	E

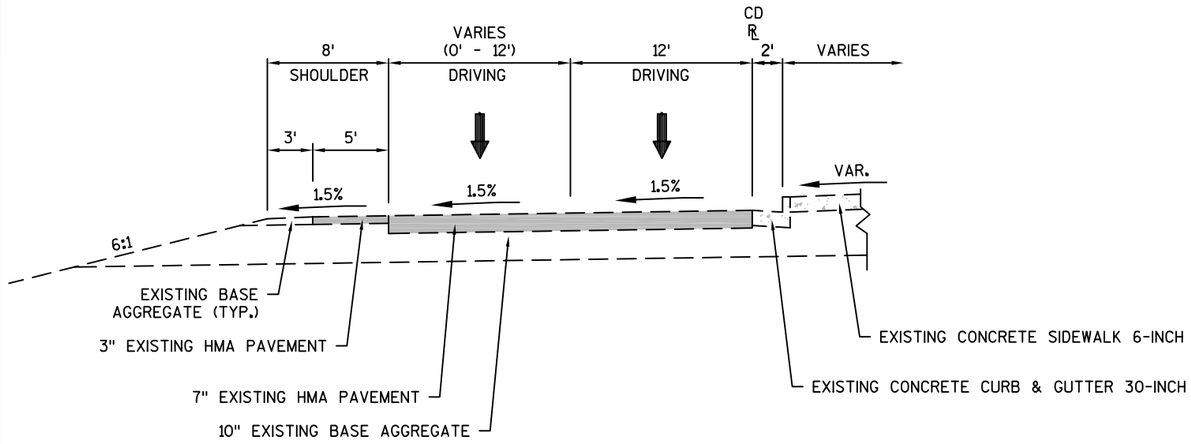


TYPICAL EXISTING SECTION, USH 53
STA 70+00 NB - STA 79+00 NB

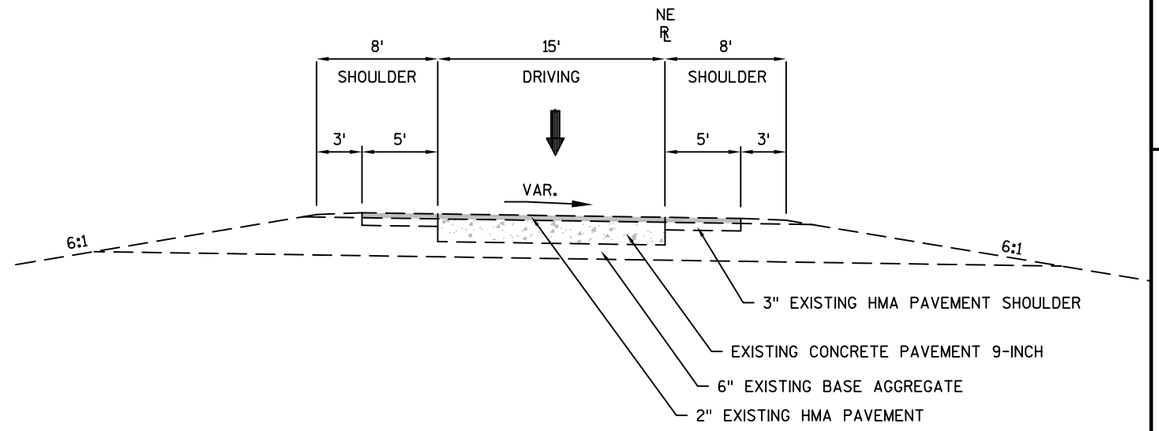


TYPICAL EXISTING SECTION, USH 53
STA 79+00 NB - STA 110+30 NB

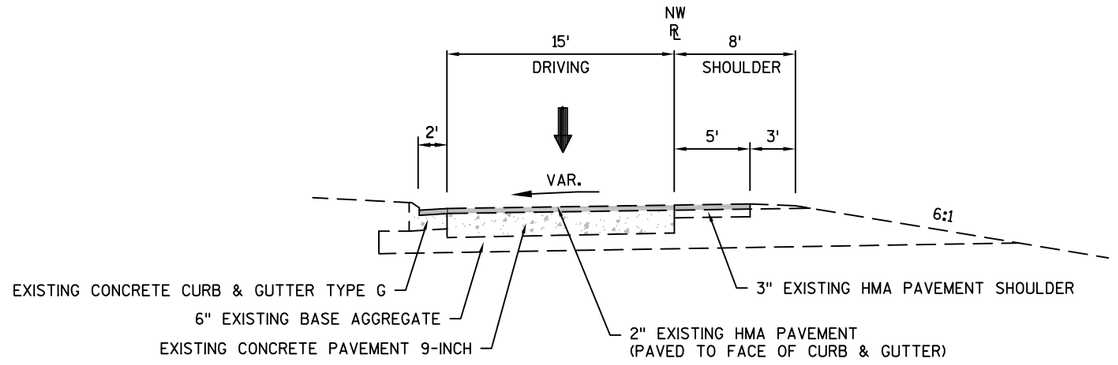
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EXISTING TYPICAL SECTIONS	SHEET 5	E



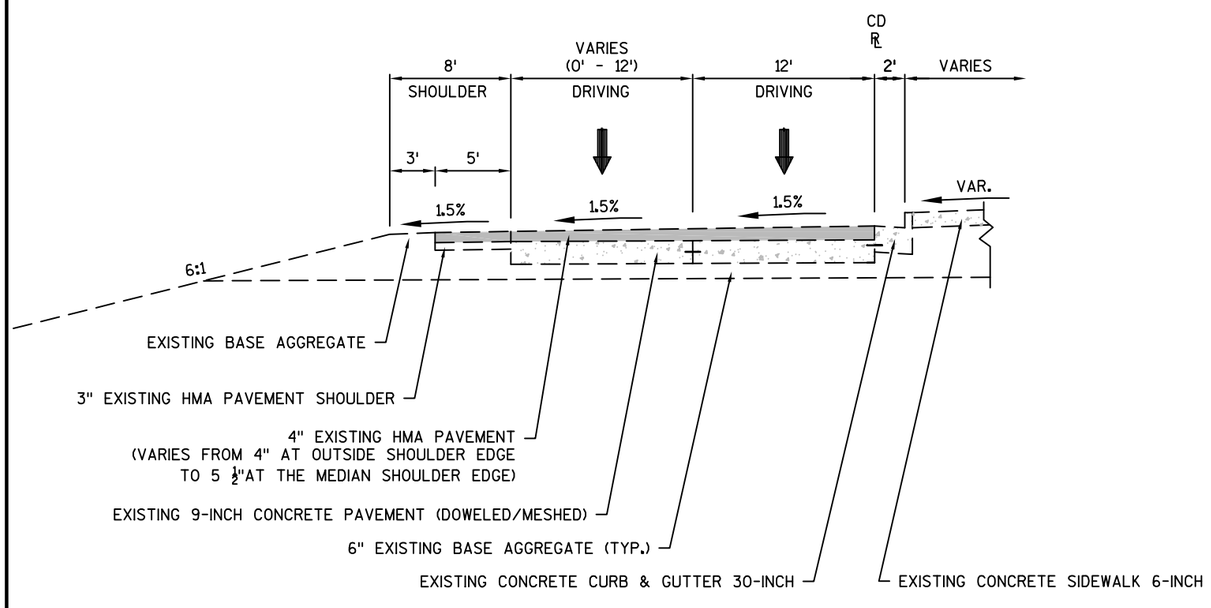
TYPICAL EXISTING SECTION, COLLECTOR - DISTRIBUTOR ROAD
STA 203+60 CD - STA 213+58 CD



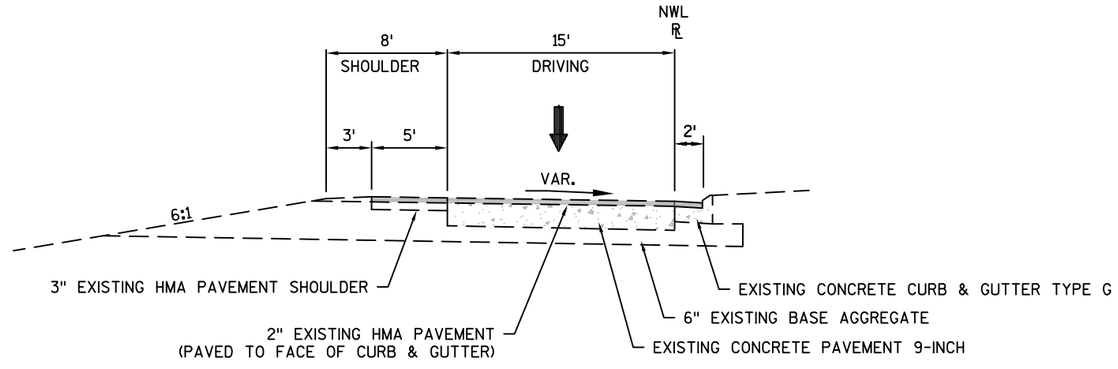
TYPICAL EXISTING SECTION, IH 94 NE RAMP
STA 549+64 NE - STA 557+00 NE



TYPICAL EXISTING SECTION, IH 94 NW RAMP
STA 592+95 NW - 594+95 NW



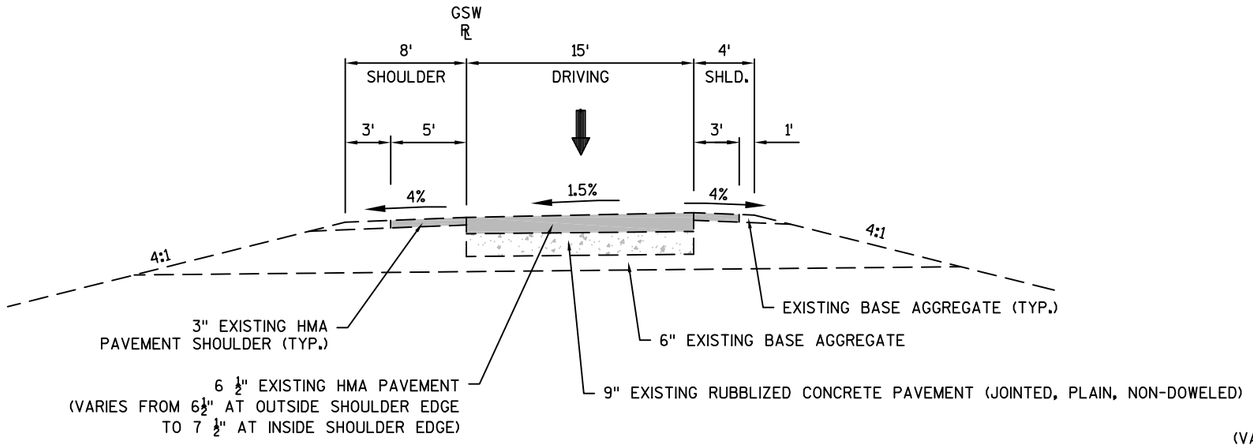
TYPICAL EXISTING SECTION, COLLECTOR - DISTRIBUTOR ROAD
STA 213+58 CD - STA 228+19 CD



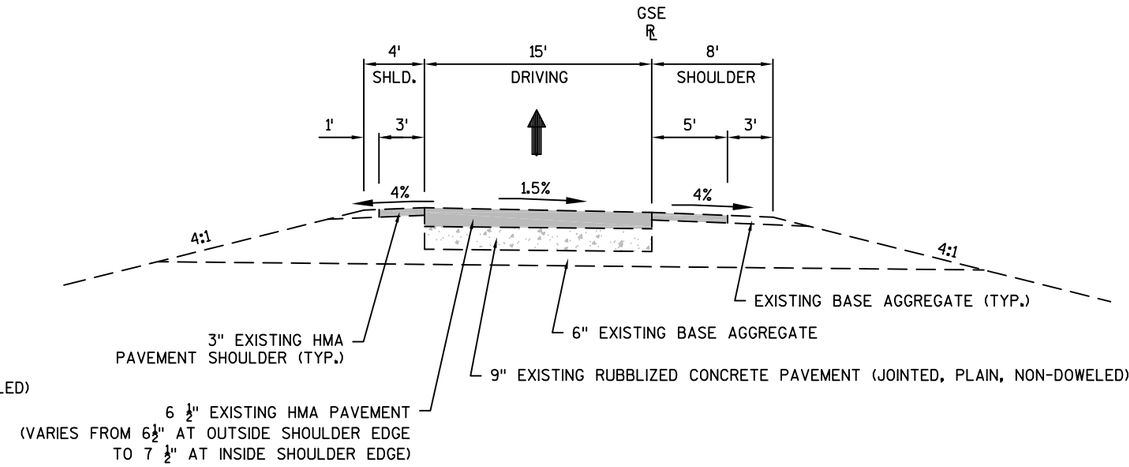
TYPICAL EXISTING SECTION, IH 94 NW LOOP RAMP
STA 581+61 NWL - STA 583+61 NWL

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EXISTING TYPICAL SECTIONS	SHEET 6	E

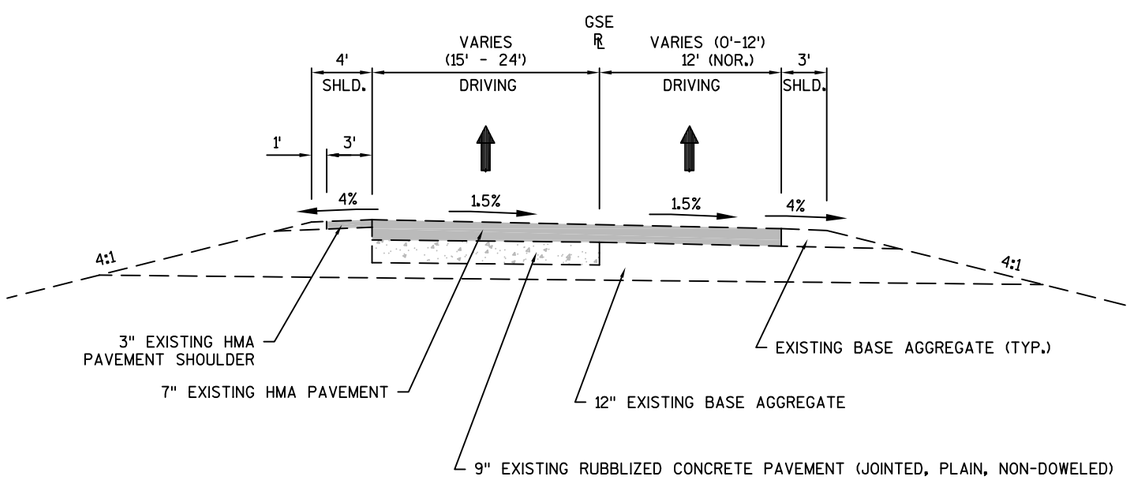
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LAYOUT NAME - EXISTING TYPICAL SECTIONS - MAIN (2)



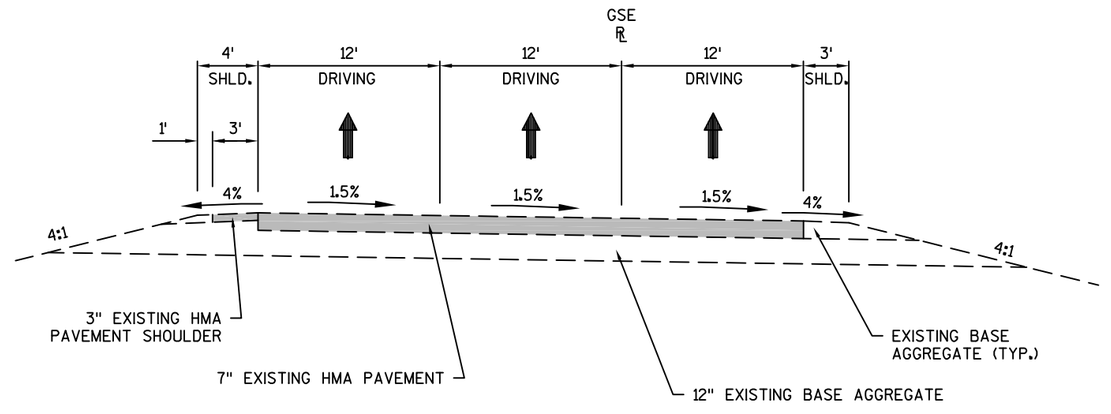
TYPICAL EXISTING SECTION, GOLF ROAD SW RAMP
STA 704+00 GSW - STA 715+53 GSW



TYPICAL EXISTING SECTION, GOLF ROAD SE RAMP
STA 807+88 GSE - STA 819+80 GSE



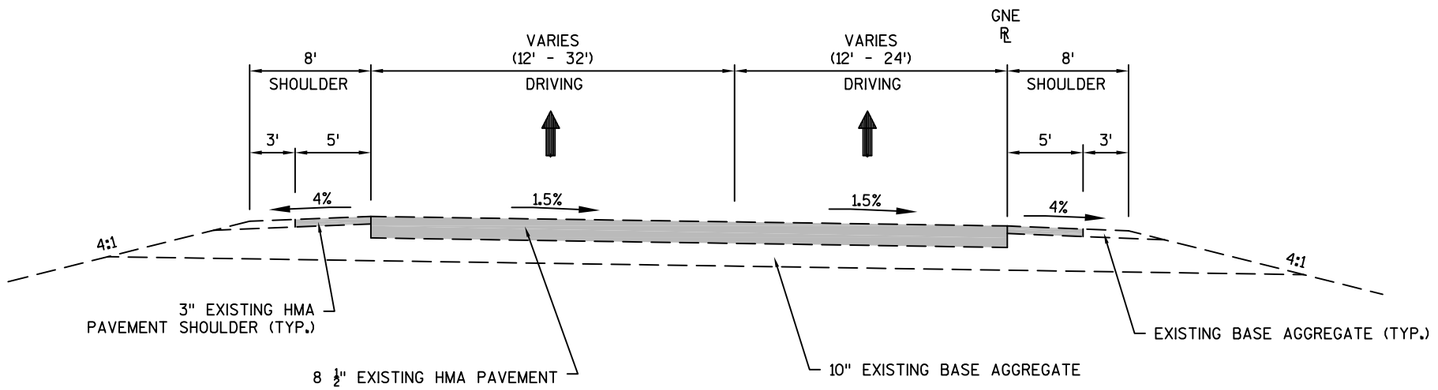
TYPICAL EXISTING SECTION, GOLF ROAD SE RAMP
STA 819+80 GSE - STA 821+80 GSE



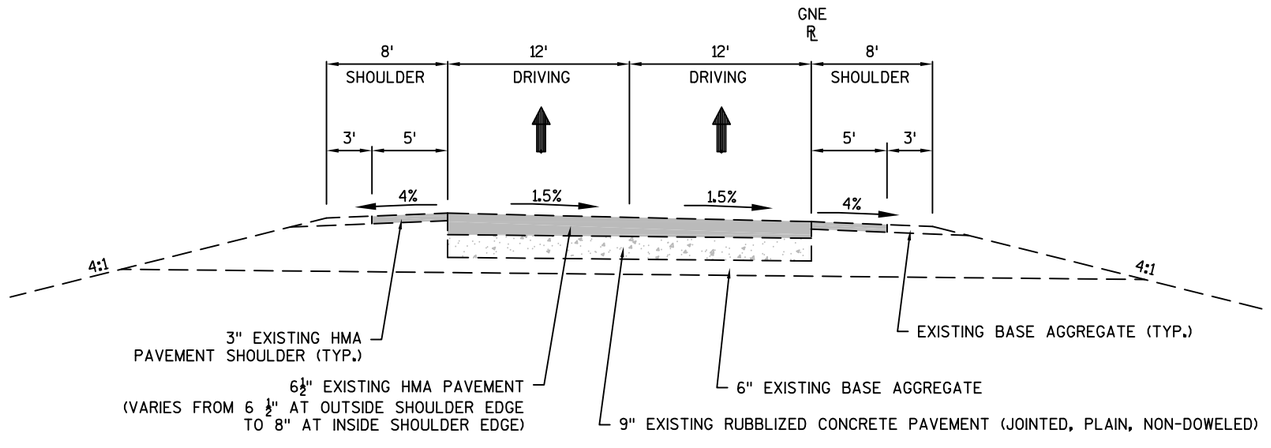
TYPICAL EXISTING SECTION, GOLF ROAD SE RAMP
STA 821+80 GSE - STA 823+80 GSE

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EXISTING TYPICAL SECTIONS	SHEET 7	E

2



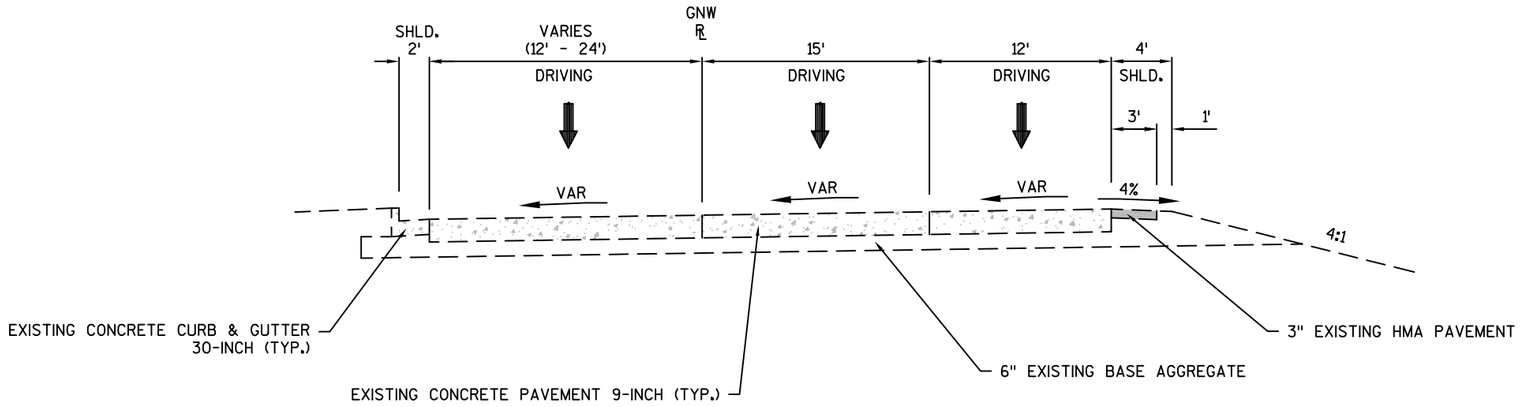
TYPICAL EXISTING SECTION, GOLF ROAD NE RAMP
STA 901+78 GNE - STA 903+78 GNE



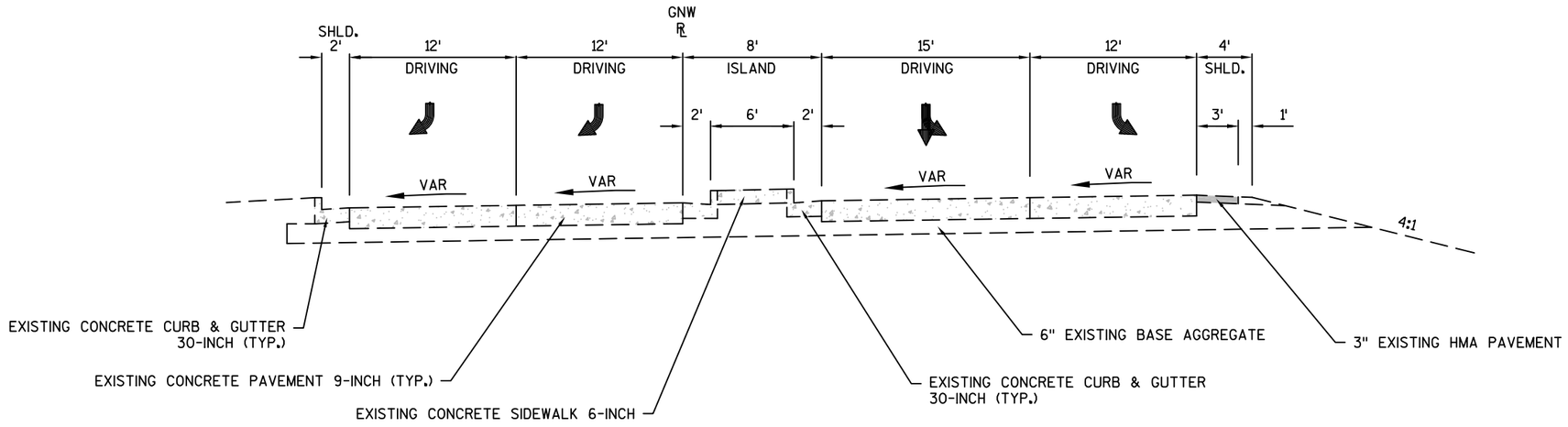
TYPICAL EXISTING SECTION, GOLF ROAD NE RAMP
STA 903+78 GNE - STA 921+87 GNE

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EXISTING TYPICAL SECTIONS	SHEET 8	E

2



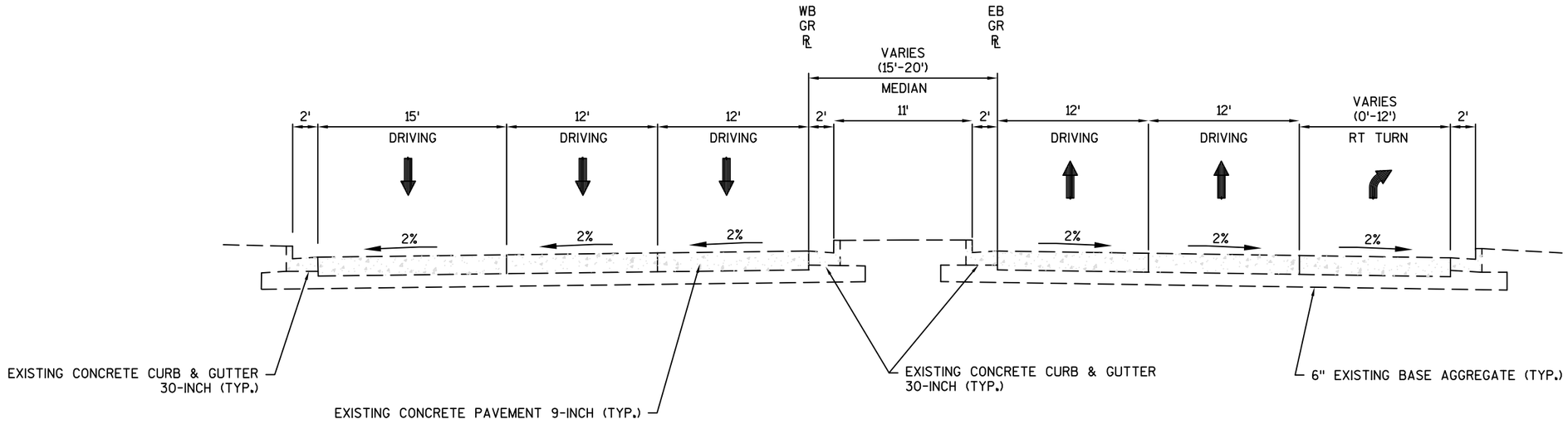
TYPICAL EXISTING SECTION, GOLF ROAD NW RAMP
STA 0+00 GNW - STA 2+50 GNW



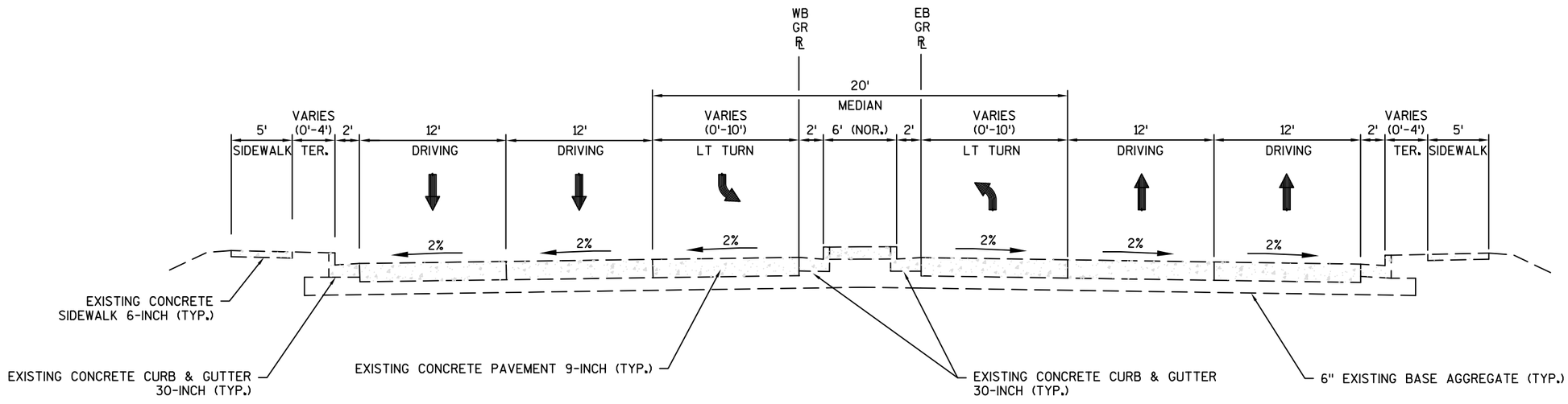
TYPICAL EXISTING SECTION, GOLF ROAD NW RAMP
STA 2+50 GNW - STA 7+27 GNW

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EXISTING TYPICAL SECTIONS	SHEET 9	E

2

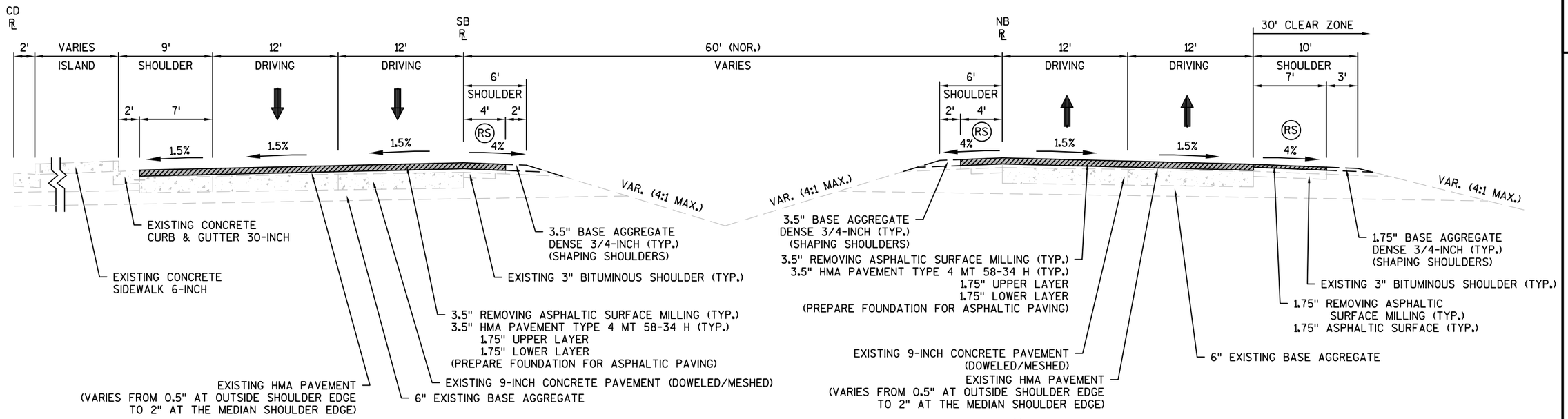


TYPICAL EXISTING SECTION, GOLF ROAD
STA 1001+00 GR - STA 1004+00 GR



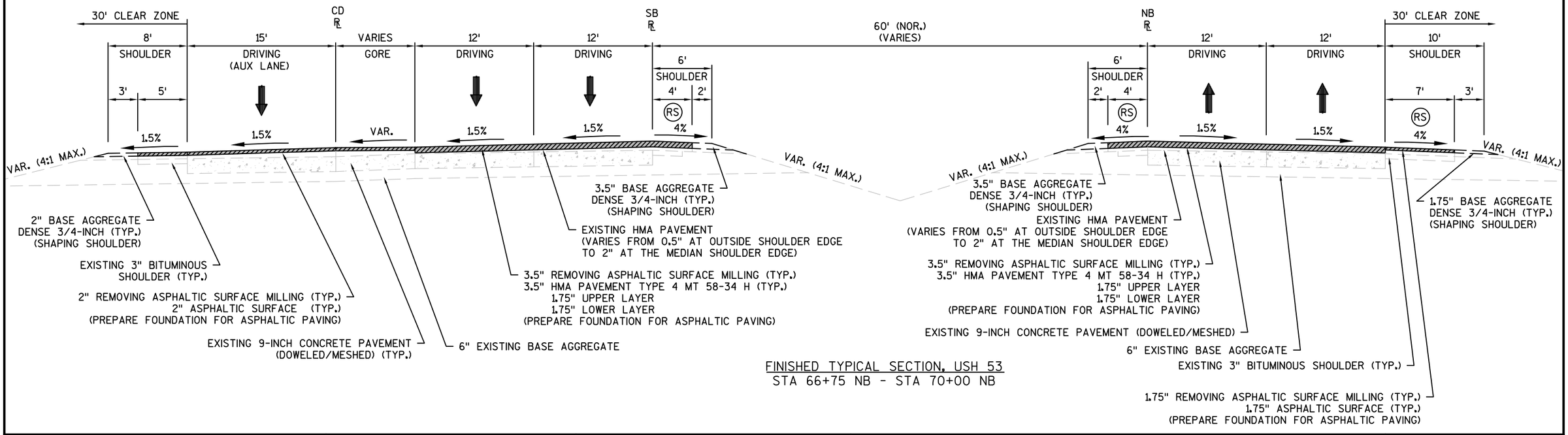
TYPICAL EXISTING SECTION, GOLF ROAD
STA 1004+00 GR - STA 1006+13 GR
STA 1008+39 GR - STA 1012+00 GR

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EXISTING TYPICAL SECTIONS	SHEET 10	E



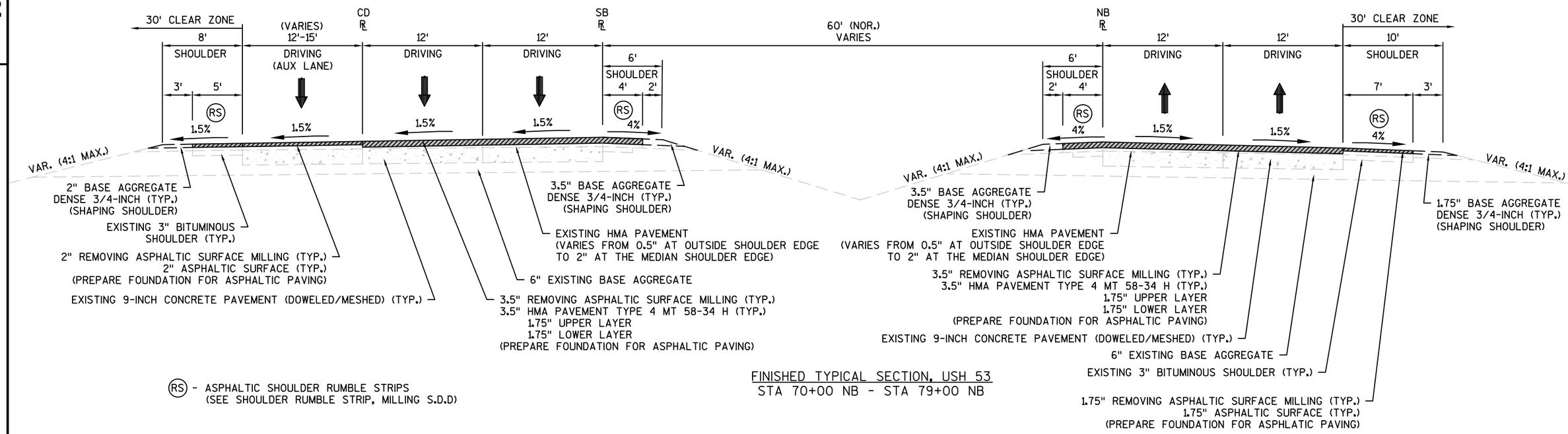
FINISHED TYPICAL SECTION, USH 53
STA 43+20 NB - STA 66+75 NB

(RS) - ASPHALTIC SHOULDER RUMBLE STRIPS
(SEE SHOULDER RUMBLE STRIP, MILLING S.D.D)



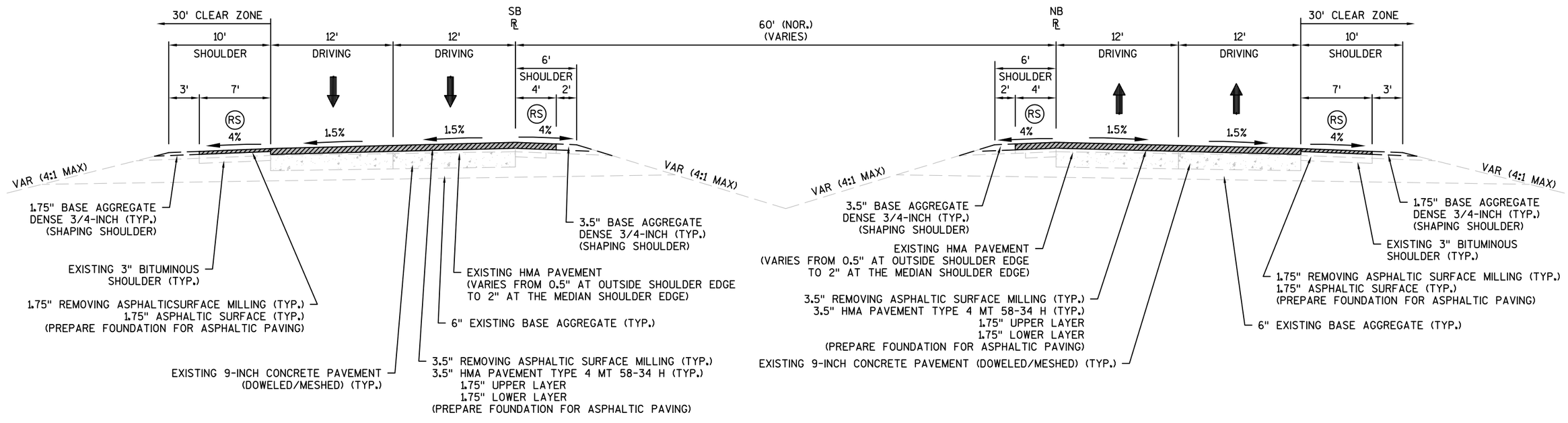
FINISHED TYPICAL SECTION, USH 53
STA 66+75 NB - STA 70+00 NB

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	FINISHED TYPICAL SECTIONS	SHEET 11	E



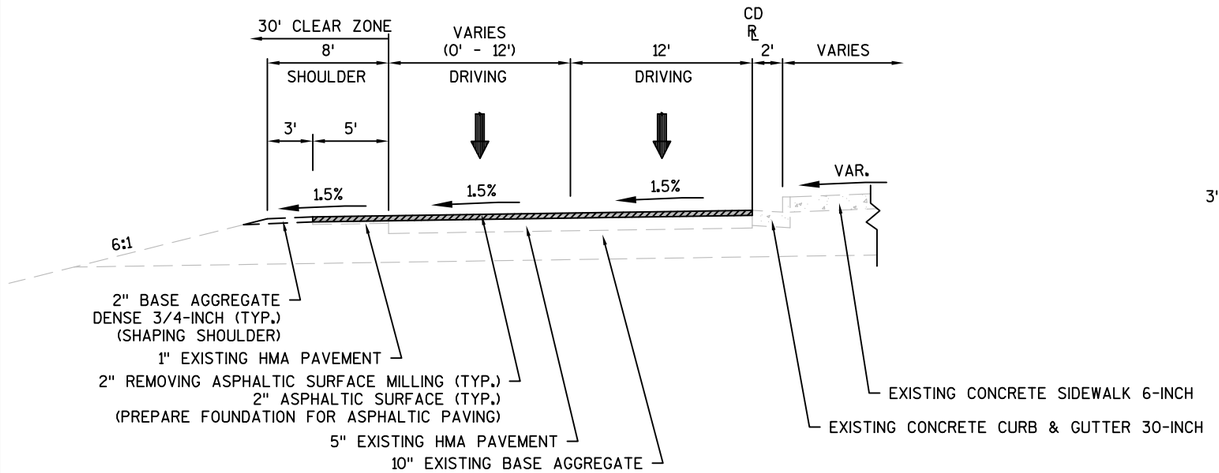
RS - ASPHALTIC SHOULDER RUMBLE STRIPS
(SEE SHOULDER RUMBLE STRIP, MILLING S.D.D)

FINISHED TYPICAL SECTION, USH 53
STA 70+00 NB - STA 79+00 NB

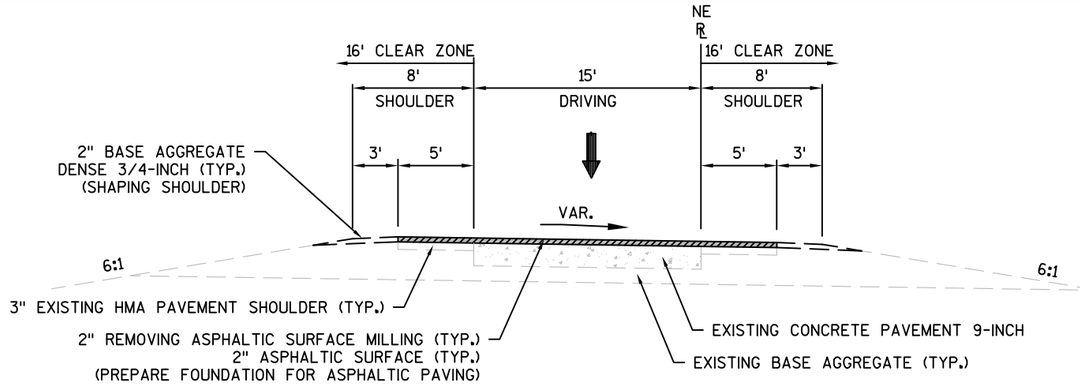


FINISHED TYPICAL SECTION, USH 53
STA 79+00 NB - STA 110+30 NB

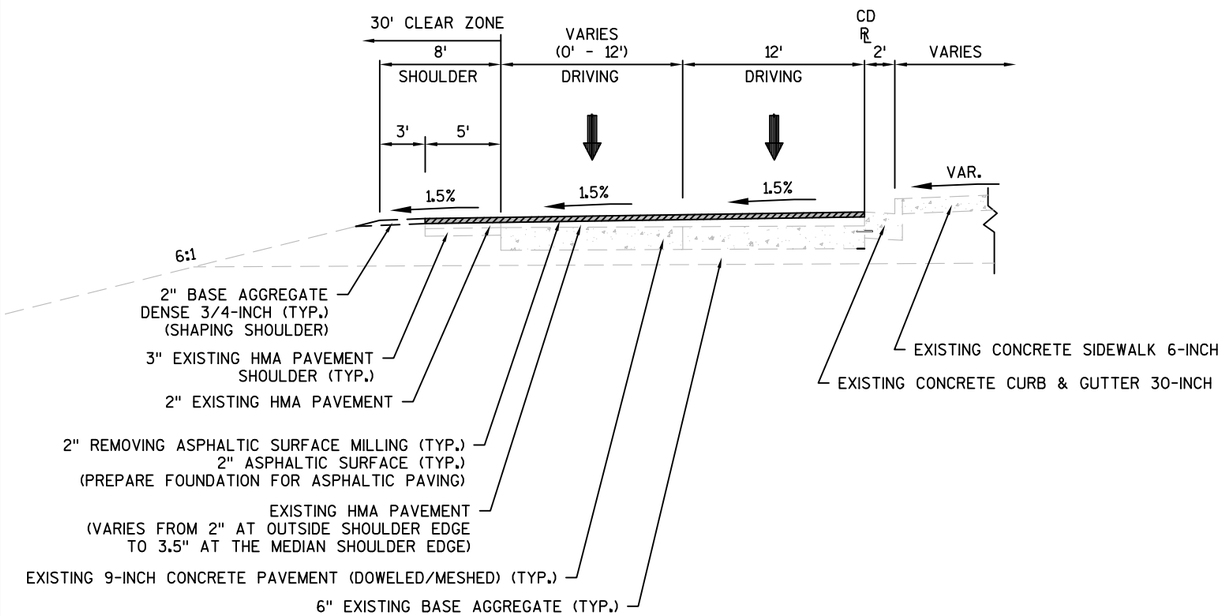
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	FINISHED TYPICAL SECTIONS	SHEET 12	E



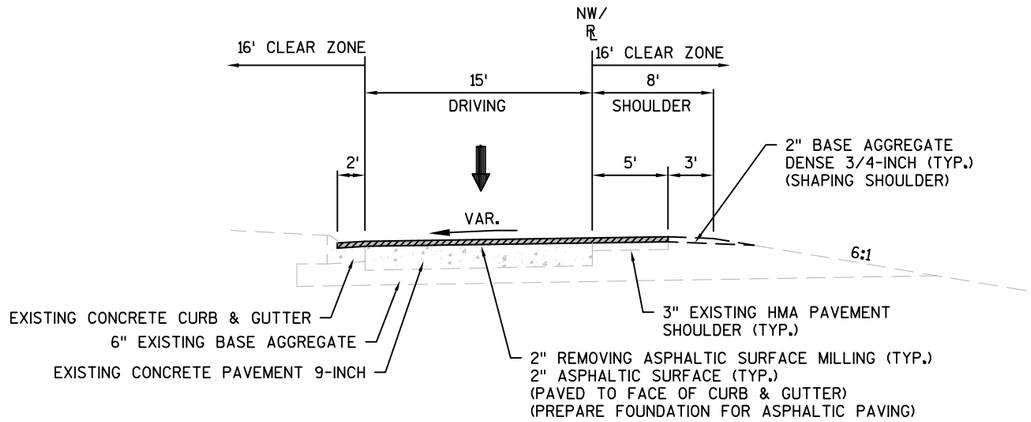
FINISHED TYPICAL SECTION, COLLECTOR - DISTRIBUTOR ROAD
STA 203+60 CD - STA 213+58 CD



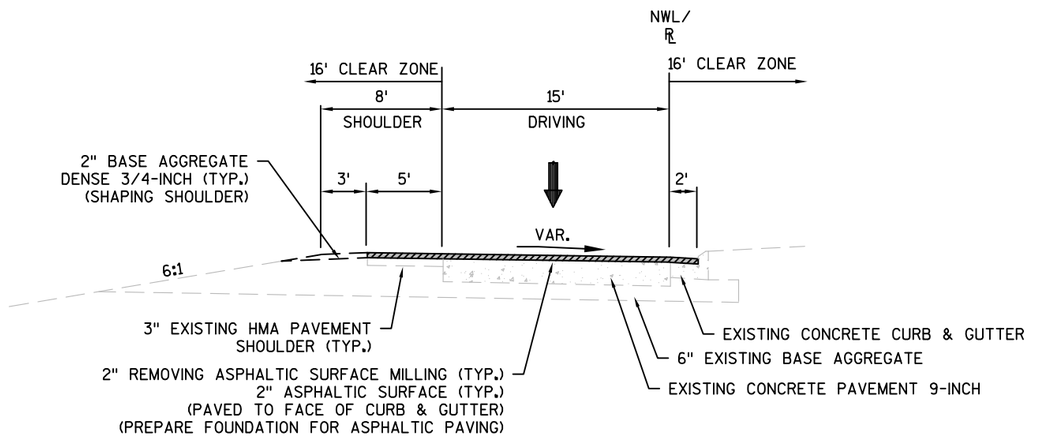
FINISHED TYPICAL SECTION, IH 94 NE RAMP
STA 549+64 NE - STA 557+00 NE



FINISHED TYPICAL SECTION, COLLECTOR - DISTRIBUTOR ROAD
STA 213+58 CD - STA 228+19 CD

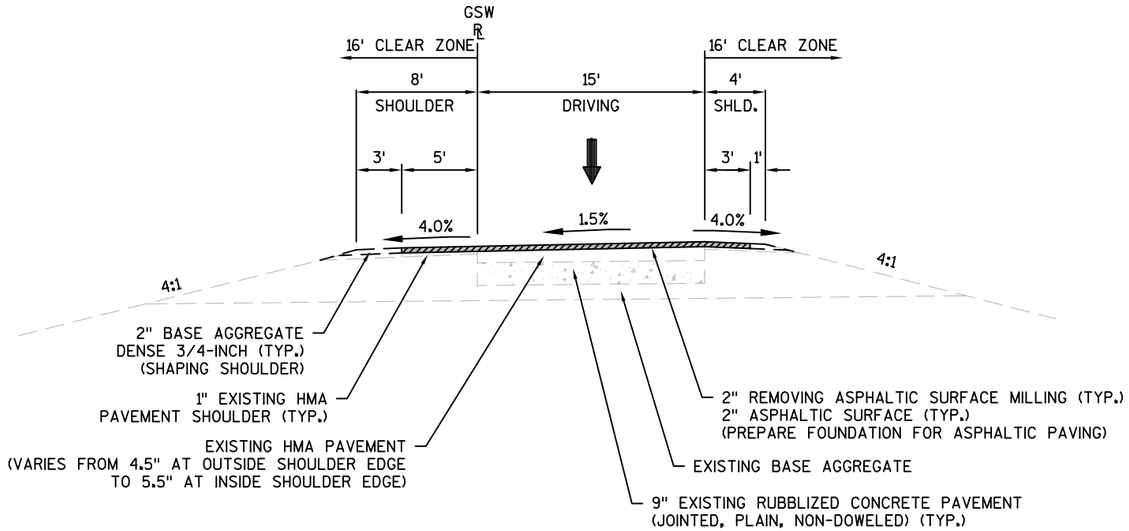


FINISHED TYPICAL SECTION, IH 94 NW RAMP
STA 592+95 NW - 594+95 NW

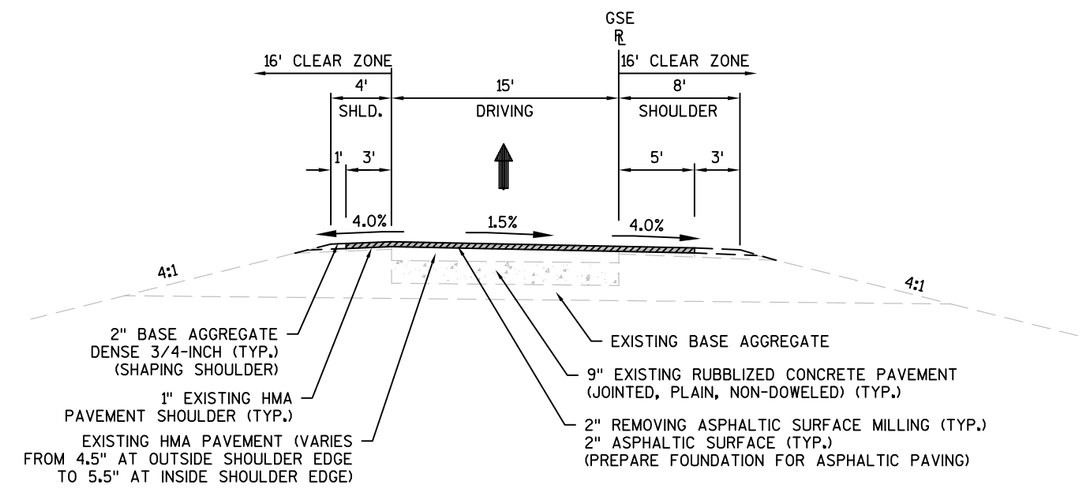


FINISHED TYPICAL SECTION, IH 94 NW LOOP RAMP
STA 581+61 NWL - STA 583+61 NWL

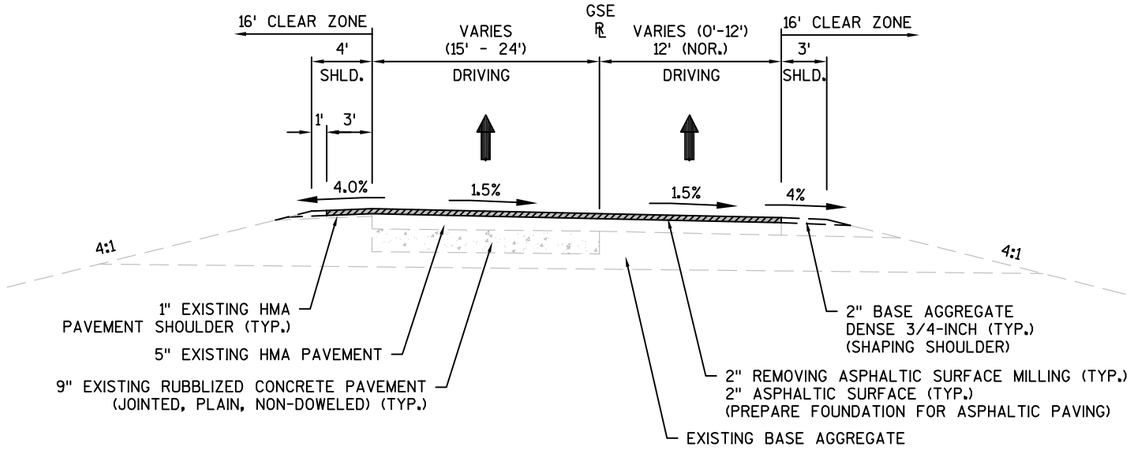
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	FINISHED TYPICAL SECTIONS	SHEET 13	E



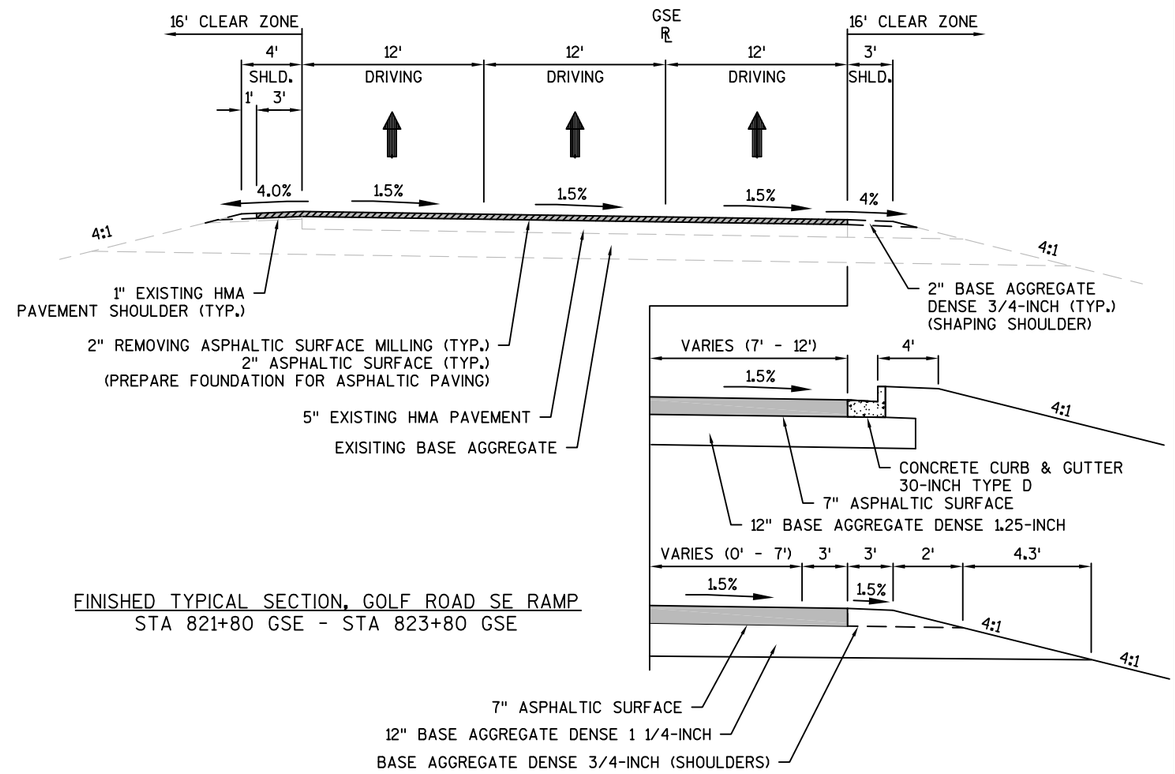
FINISHED TYPICAL SECTION, GOLF ROAD SW RAMP
STA 704+00 GSW - STA 715+53 GSW



FINISHED TYPICAL SECTION, GOLF ROAD SE RAMP
STA 807+88 GSE - STA 819+80 GSE

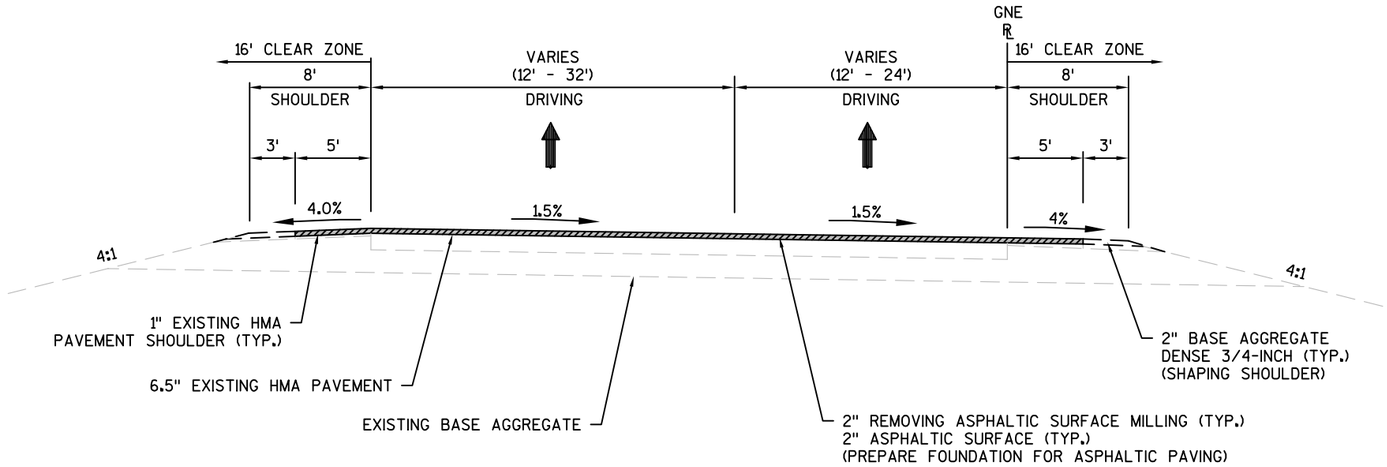


FINISHED TYPICAL SECTION, GOLF ROAD SE RAMP
STA 819+80 GSE - STA 821+80 GSE

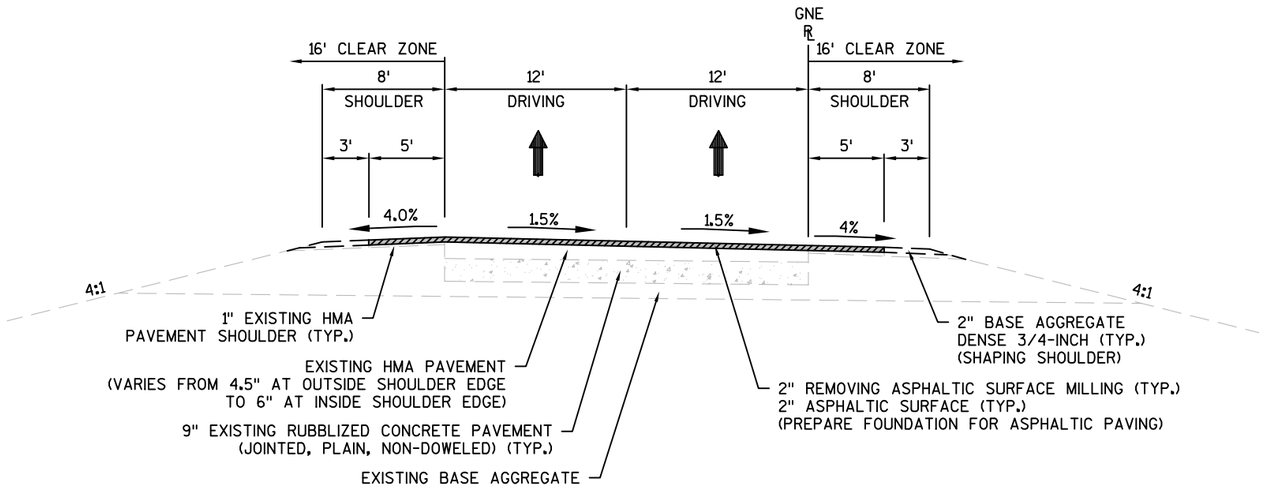


FINISHED TYPICAL SECTION, GOLF ROAD SE RAMP
STA 821+80 GSE - STA 823+80 GSE

2

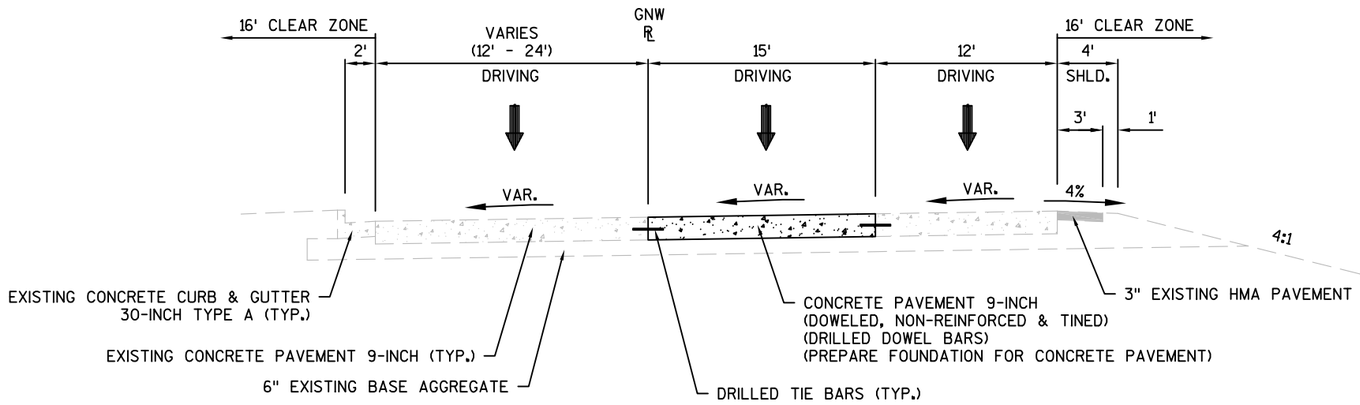


FINISHED TYPICAL SECTION, GOLF ROAD NE RAMP
STA 901+78 GNE - STA 903+78 GNE

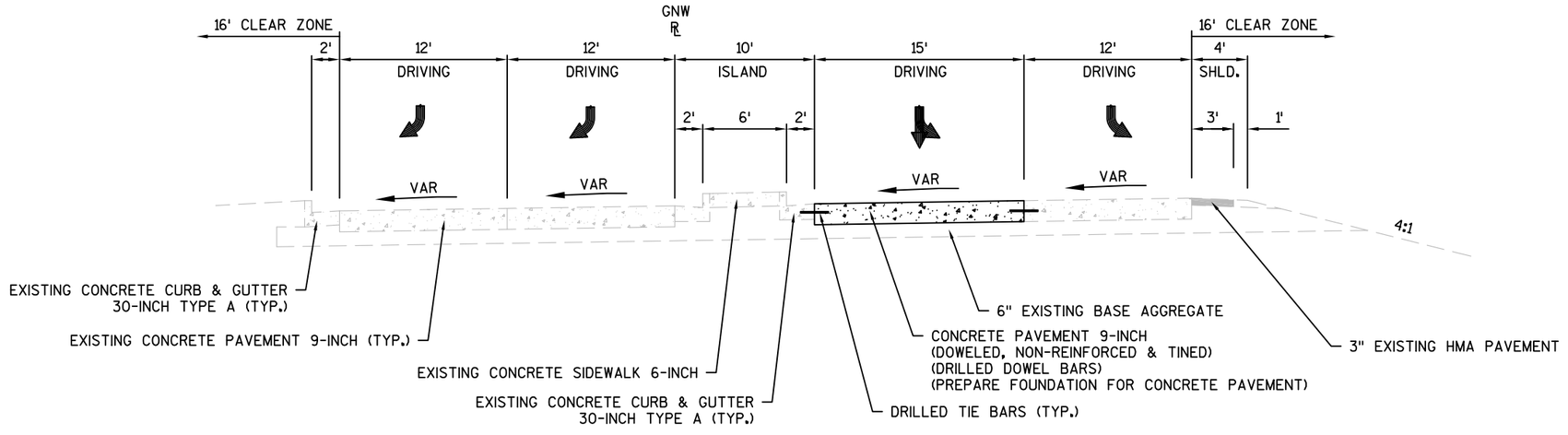


FINISHED TYPICAL SECTION, GOLF ROAD NE RAMP
STA 903+78 GNE - STA 921+87 GNE

2



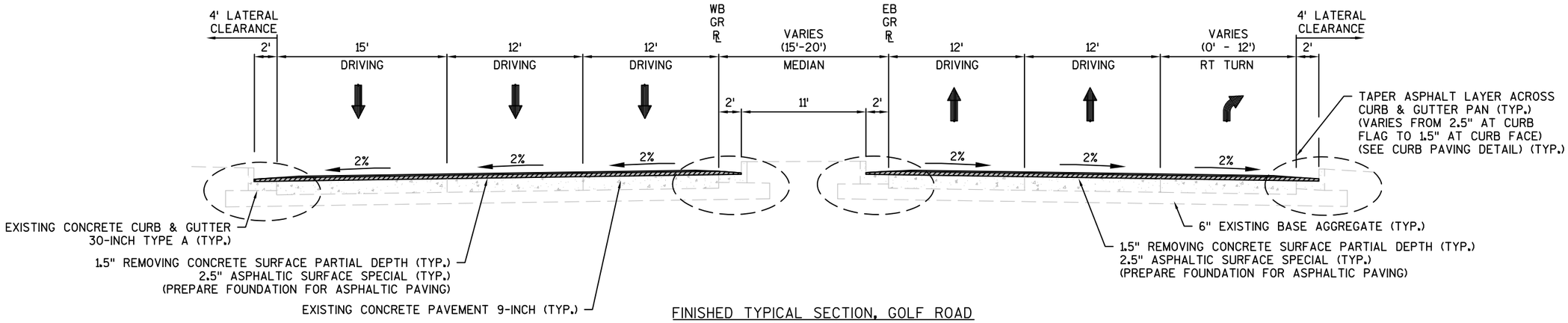
FINISHED TYPICAL SECTION, GOLF ROAD NW RAMP
STA 2+35 GNW - STA 4+76 GNW



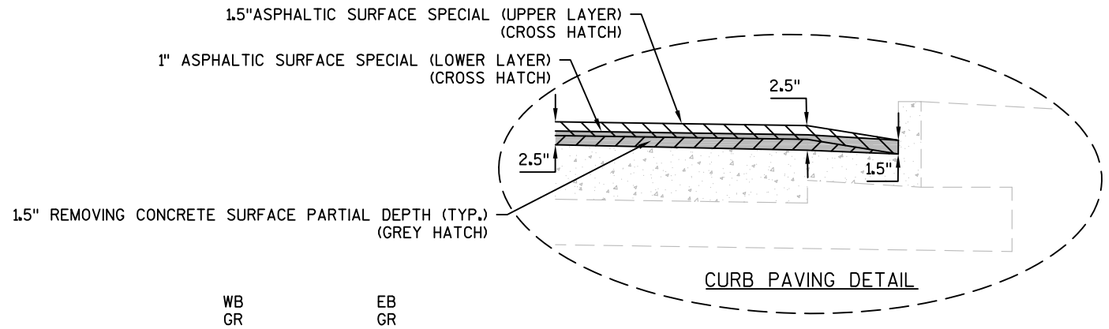
FINISHED TYPICAL SECTION, GOLF ROAD NW RAMP
STA 4+76 GNW - STA 6+35 GNW

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	FINISHED TYPICAL SECTIONS	SHEET 16	E

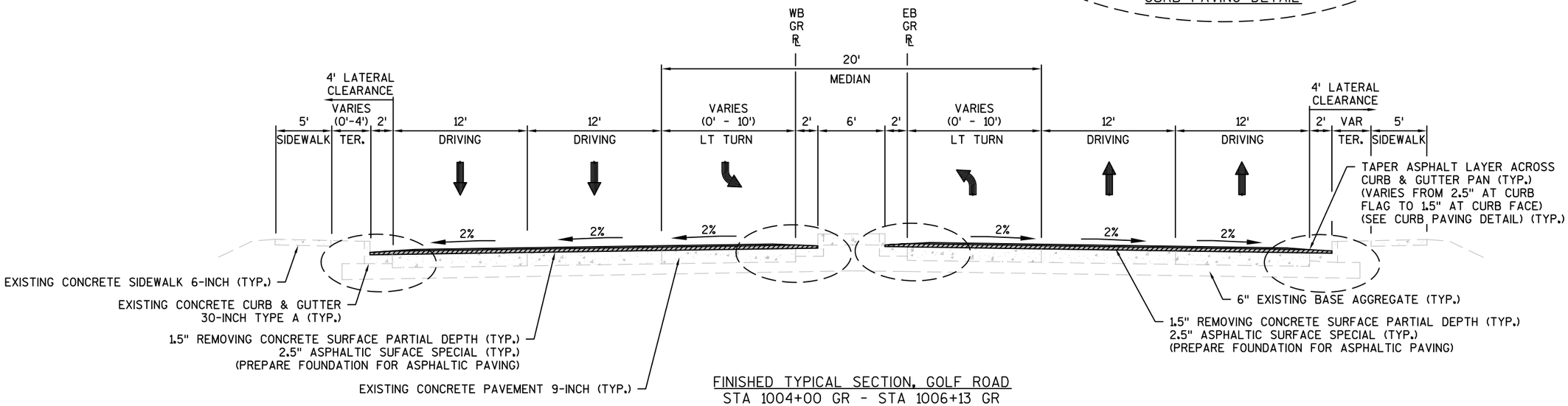
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FINISHED TYPICAL SECTION, GOLF ROAD
STA 1001+00 GR - STA 1004+00 GR



CURB PAVING DETAIL



FINISHED TYPICAL SECTION, GOLF ROAD
STA 1004+00 GR - STA 1006+13 GR
STA 1008+39 GR - STA 1012+00 GR

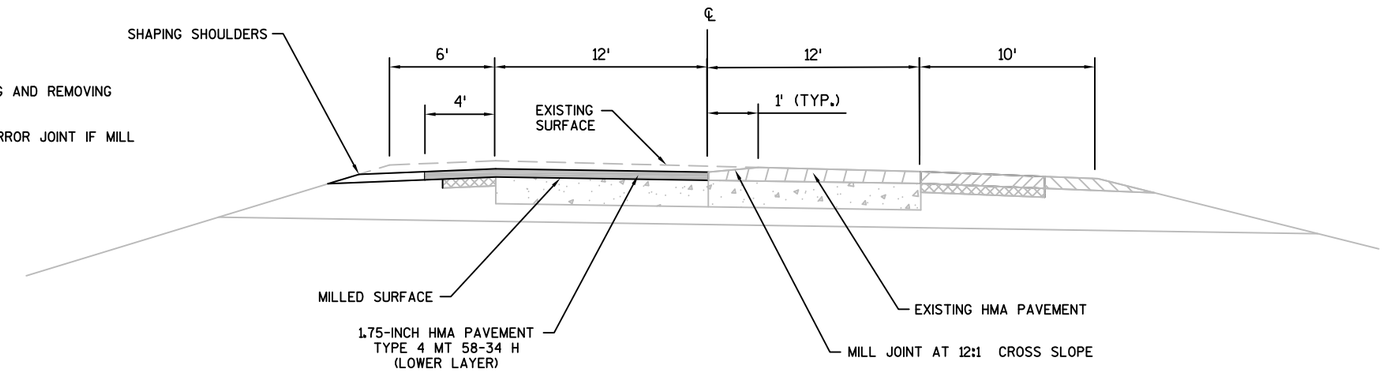
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	FINISHED TYPICAL SECTIONS	SHEET 17	E

2

NOTES:

TEMPORARY LONGITUDINAL JOINT MILLING TO BE PAID AS "MILLING AND REMOVING TEMPORARY JOINT".

DETAIL ASSUMES MILL AND OVERLAY IN PASSING LANE FIRST, MIRROR JOINT IF MILL AND OVERLAY IS COMPLETED IN DRIVING LANE FIRST.



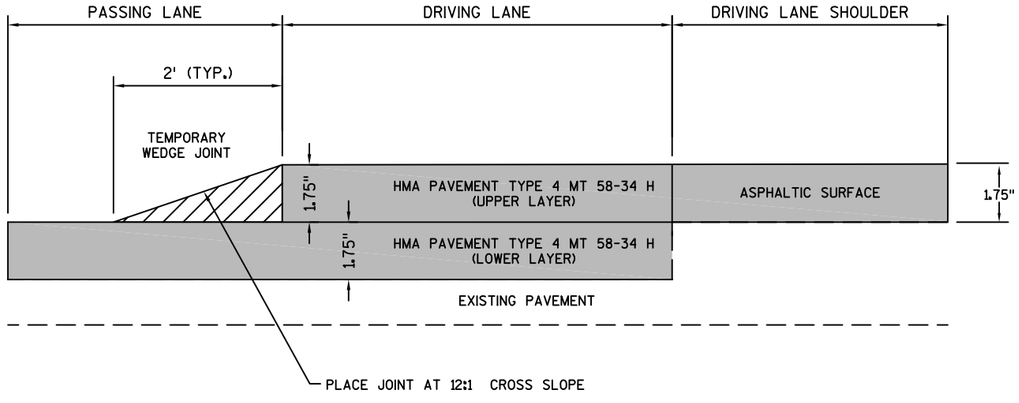
TEMPORARY LONGITUDINAL JOINT DETAIL

MILL JOINT PRIOR TO OPENING NEW PAVEMENT TO TRAFFIC

NOTES:

TEMPORARY WEDGE JOINT REMOVAL TO BE PAID AS "MILLING AND REMOVING TEMPORARY JOINT".

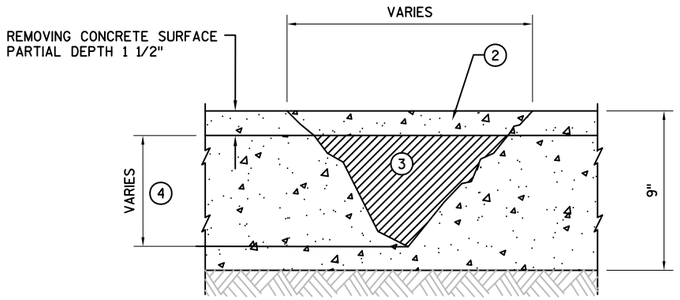
REMOVE TEMPORARY WEDGE JOINT PRIOR TO PLACING ADJACENT SURFACE LAYERS.



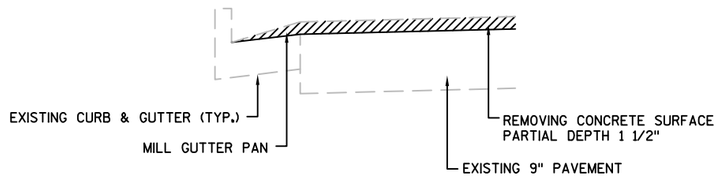
TEMPORARY WEDGE JOINT DETAIL

REQUIRED AT LONGITUDINAL JOINT PRIOR TO OPENING TO TRAFFIC

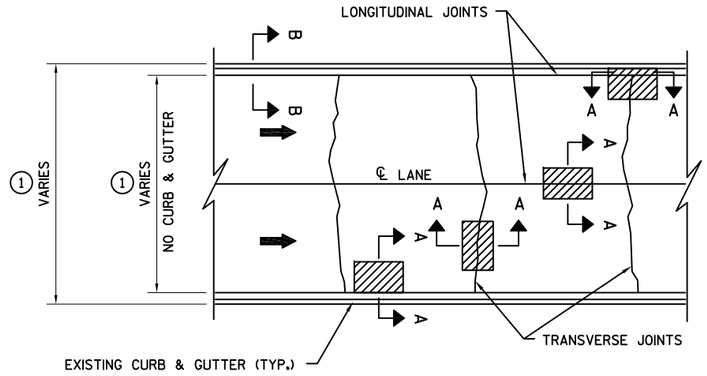
2



SECTION A-A



SECTION B-B

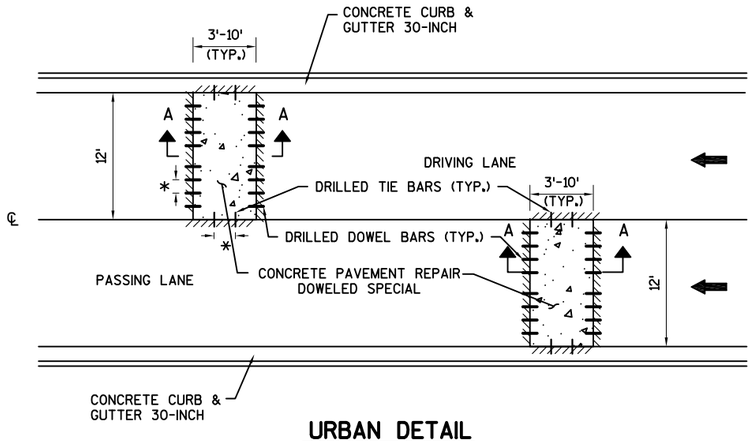


PLAN VIEW

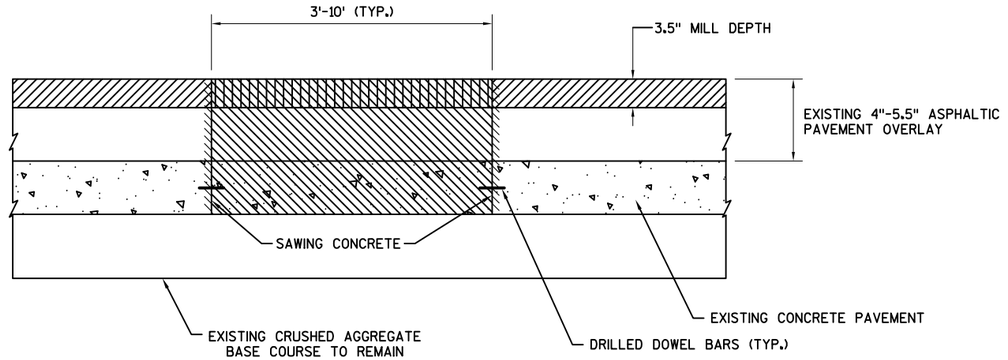
NOTES:

1. WIDTH VARIES FOR REMOVING CONCRETE PARTIAL DEPTH 1 1/2" BETWEEN FACE OF CURB TO FACE OF CURB ALONG GOLF ROAD EB & WB AND ALL TURN LANES AND SLOTTED TURN LANES WITHIN THE INTERSECTION. SEE PLAN FOR TYPICALS.
2. REMOVE ALL CONCRETE, ASPHALT AND ANY UNSOUND MATERIAL FROM TRANSVERSE AND LONGITUDINAL JOINTS AND RANDOM CRACKS. LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD AND JOINTS OR CRACKS WITHIN THE CURB AND GUTTER.
3. ASPHALTIC SURFACE PATCHING SHALL BE PLACED IN THE JOINT REPAIR AREAS. THE HMA PAVEMENT SHALL BE COMPACTED IN LIFTS UNTIL FLUSH WITH THE SURFACE OF THE CONCRETE.
4. DEPTH VARIES FROM PARTIAL TO FULL DEPTH.

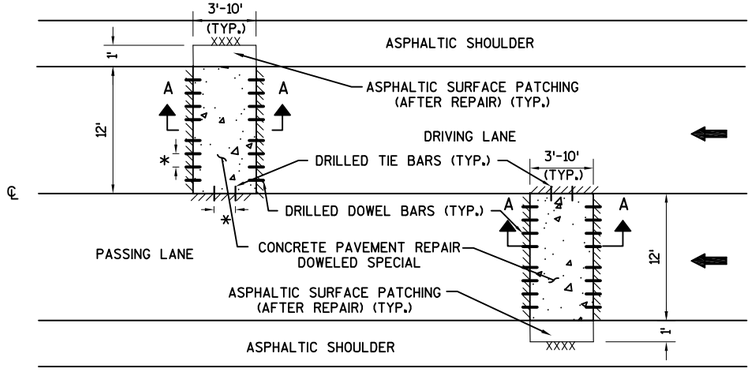
PREPARE FOUNDATION FOR ASPHALT PAVING



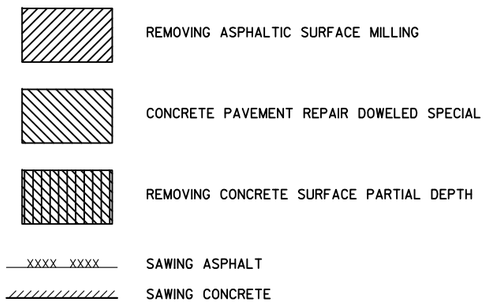
URBAN DETAIL



SECTION A-A



RURAL DETAIL



NOTES:

DAMAGE TO EITHER EXISTING PAVEMENTS OF EXISTING SHOULDERS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND WILL BE INCIDENTAL TO THE ITEM OF CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL.

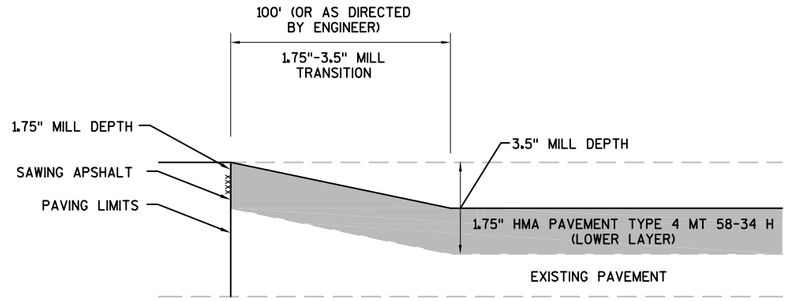
SAWING EXISTING ASPHALTIC PAVEMENT OVERLAY WILL BE INCIDENTAL TO SAWING CONCRETE.

COMPLETE CONCRETE PAVING REPAIRS PRIOR TO MILLING.

* SEE CONCRETE PAVEMENT REPAIR AND REPLACEMENT SDD FOR DRILLED TIE BAR AND DRILLED DOWEL BAR SPACING

CONCRETE PAVEMENT REPAIR DOWELED SPECIAL DETAIL

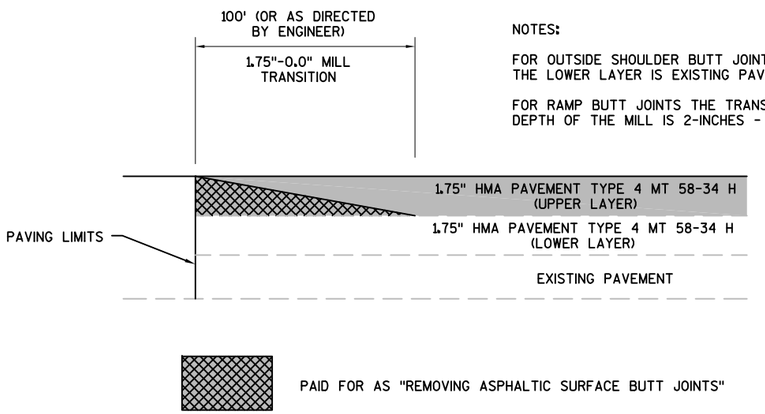
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION DETAILS	SHEET 20	E



MILL AND REMOVE 3.5" OF EXISTING SURFACE, EXCEPT IN TRANSITION AREA
MILL AND REMOVE 1.75" TO 3.5" OF EXISTING SURFACE IN TRANSITION AREA
OVERLAY 1.75" HMA PAVEMENT TYPE 4 MT 58-34 H (LOWER LAYER)
NOTE: AREA EXTENDS ACROSS MAINLINE AND INSIDE SHOULDERS)

USH 53 JOINT TRANSITION DETAIL: LOWER LAYER

REQUIRED AT BEGIN AND END OF PROJECT, BRIDGES AND RAMPS
(EXACT LOCATION AND LENGTH TO BE DETERMINED BY THE ENGINEER)



NOTES:

FOR OUTSIDE SHOULDER BUTT JOINTS
THE LOWER LAYER IS EXISTING PAVEMENT.

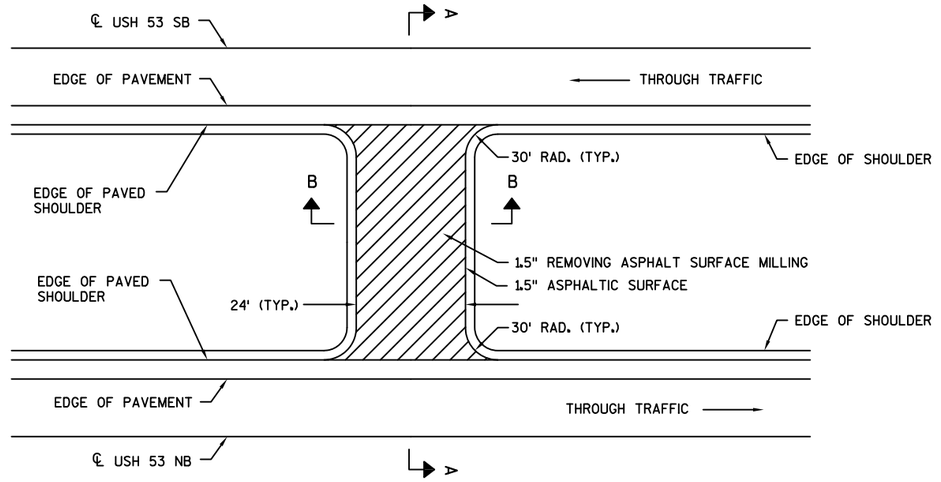
FOR RAMP BUTT JOINTS THE TRANSITION
DEPTH OF THE MILL IS 2-INCHES - 0-INCH

PAID FOR AS "REMOVING ASPHALTIC SURFACE BUTT JOINTS"

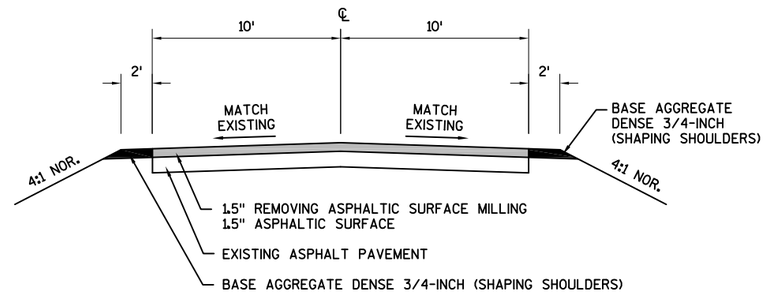
USH 53 MAINLINE REMOVING ASPHALTIC SURFACE BUTT JOINT DETAIL: UPPER LAYER

REQUIRED AT BEGIN AND END OF PROJECT, BRIDGES AND RAMPS
(EXACT LOCATION AND LENGTH TO BE DETERMINED BY THE ENGINEER)

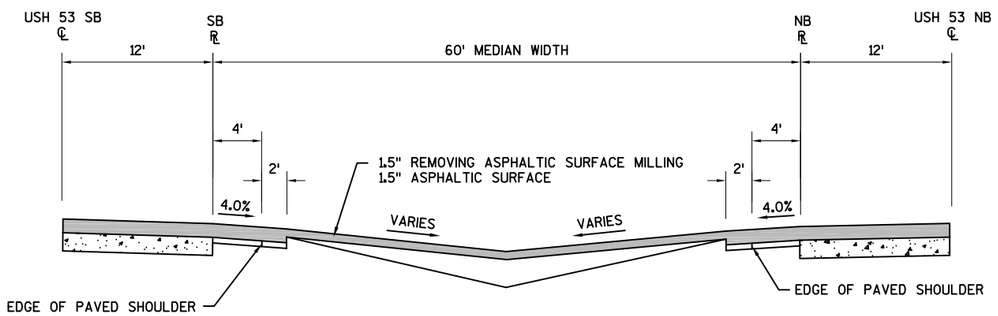
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PLAN VIEW



SECTION B-B

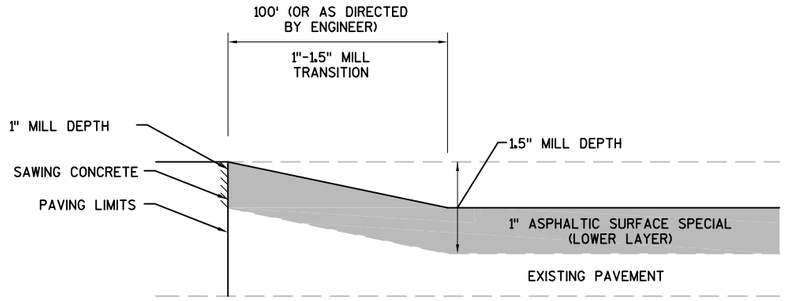


SECTION A-A

DETAIL FOR MAINTENANCE CROSSOVER

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION DETAILS	SHEET 21 E

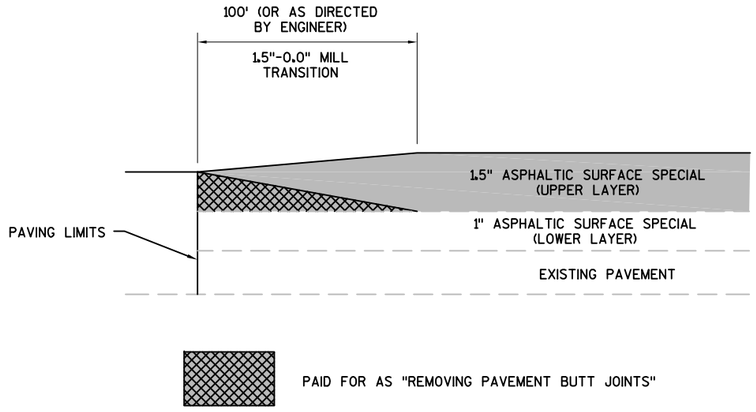
2



MILL AND REMOVE 1.5" OF EXISTING PAVEMENT, EXCEPT IN TRANSITION AREA
MILL AND REMOVE 1" TO 1.5" OF EXISTING SURFACE IN TRANSITION AREA
OVERLAY 1" ASPHALTIC SURFACE SPECIAL (LOWER LAYER)

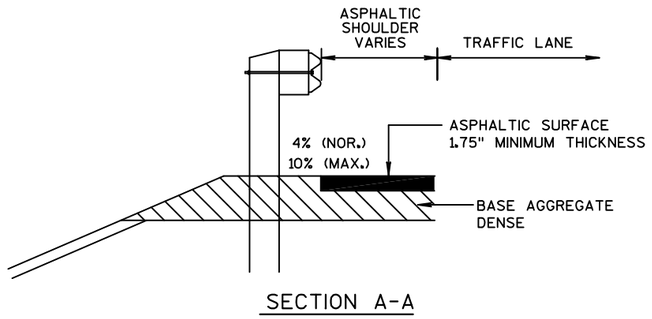
GOLF ROAD JOINT TRANSITION DETAIL: LOWER LAYER

REQUIRED AT BEGIN AND END OF PROJECT, BRIDGES AND RAMPS
(EXACT LOCATION AND LENGTH TO BE DETERMINED BY THE ENGINEER)



GOLF ROAD REMOVING PAVEMENT BUTT JOINT DETAIL: UPPER LAYER

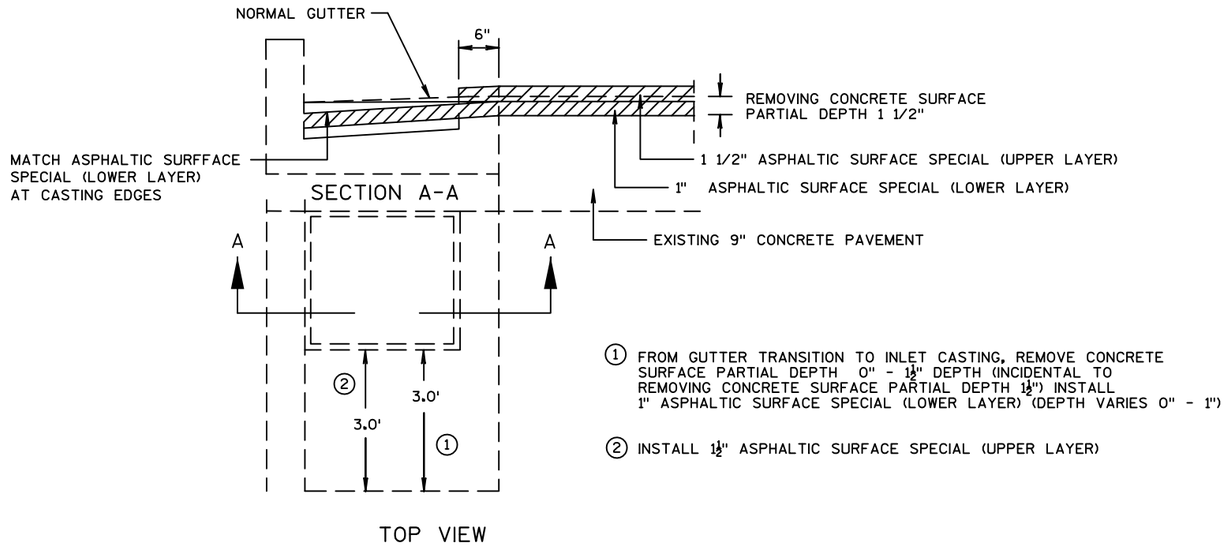
REQUIRED AT BEGIN AND END OF PROJECT, BRIDGES AND RAMPS
(EXACT LOCATION AND LENGTH TO BE DETERMINED BY THE ENGINEER)



SECTION A-A

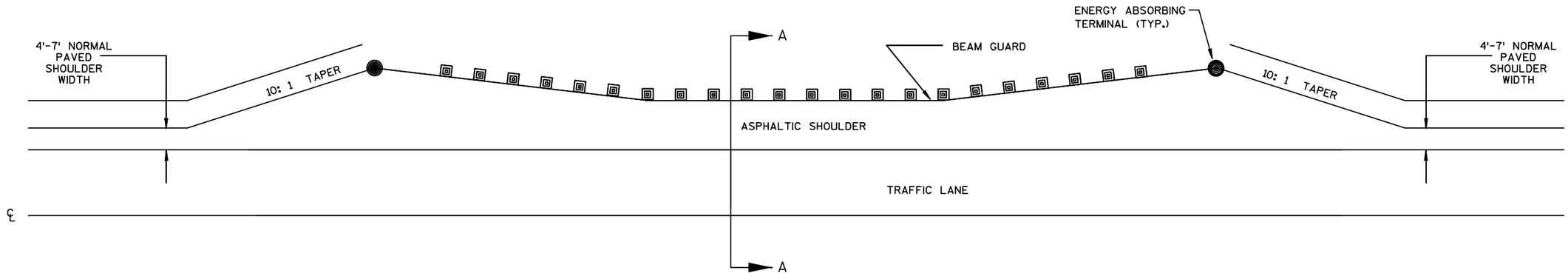
NOTE:

HMA PAVEMENT TO FACE OF BEAM GUARD REQUIRED TO BE COMPACTED.



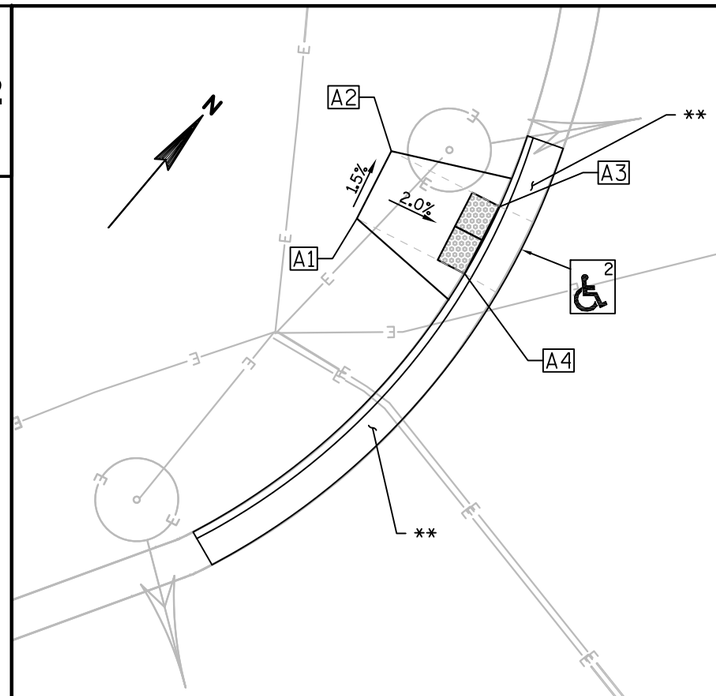
TOP VIEW

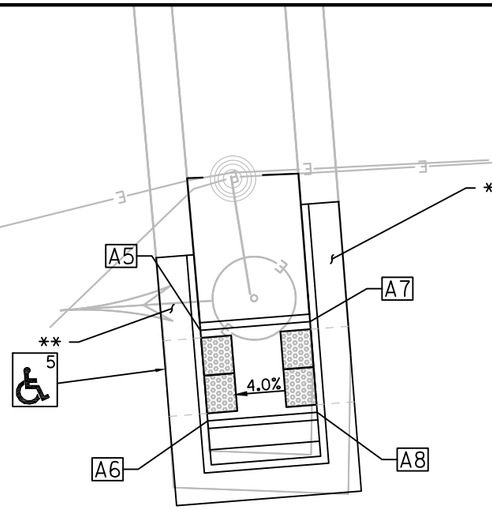
RESURFACING AT INLETS



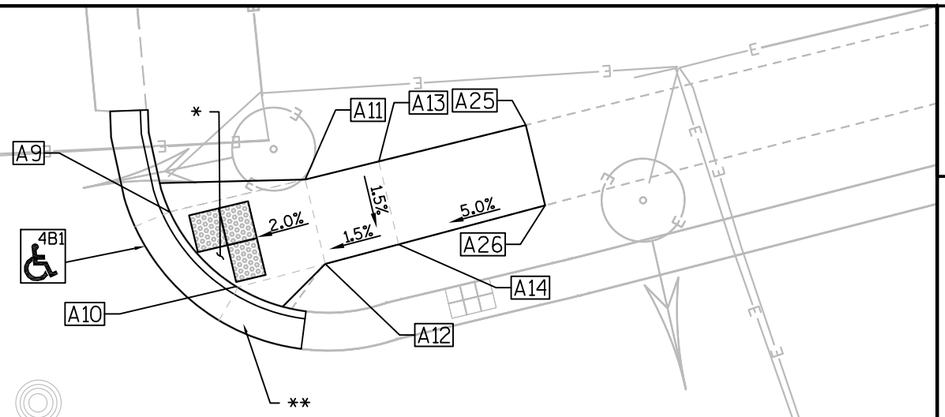
DETAIL FOR ASPHALTIC SHOULDER AT GUARDRAIL

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION DETAILS	SHEET 23	E





GOLF ROAD NW RAMP



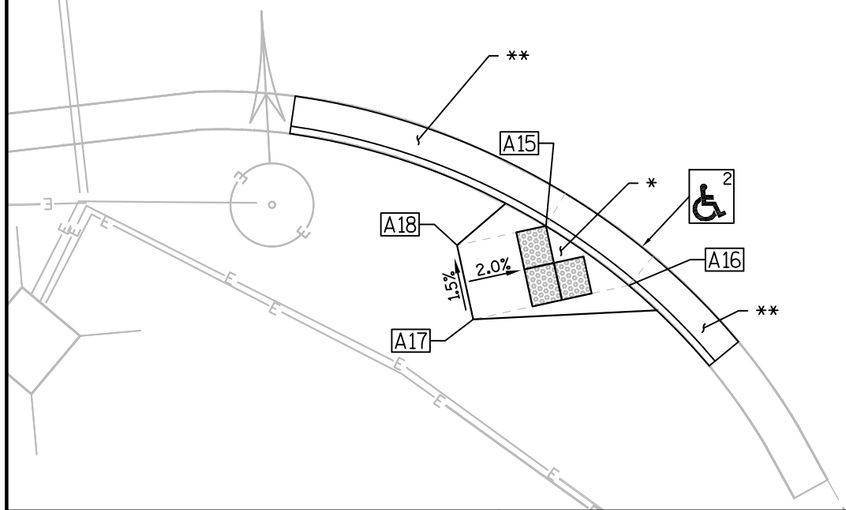
GOLF ROAD/CTH AA

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK.

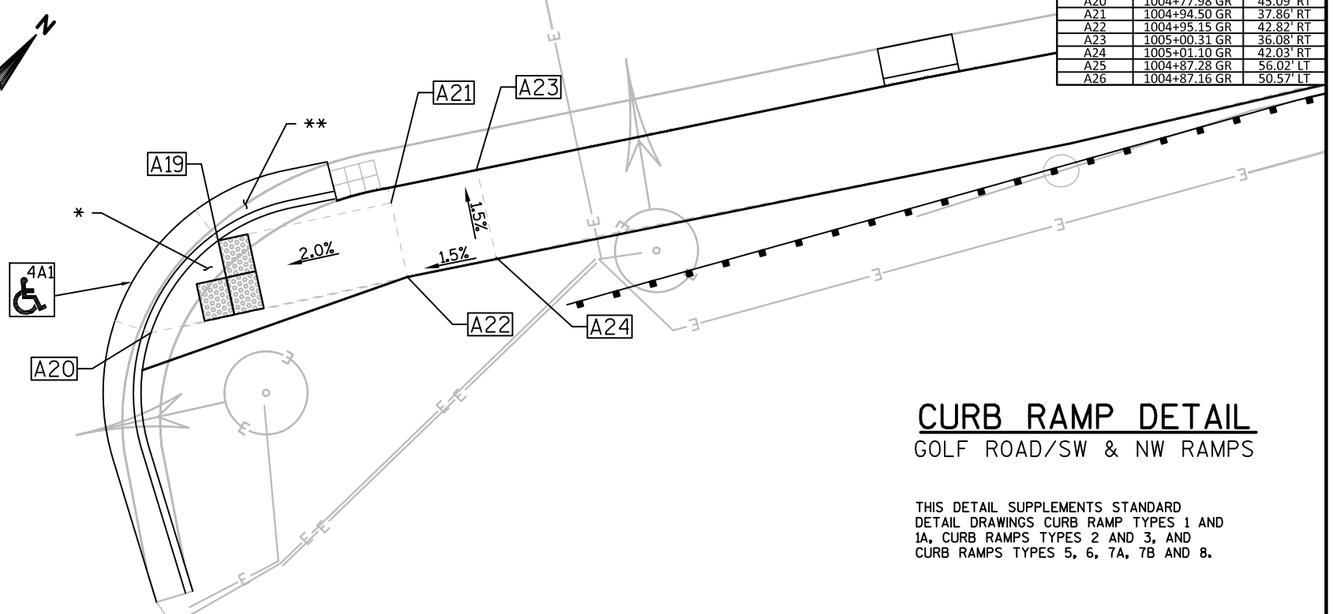
** TRANSITITION GUTTER FLAG SLOPE FROM EXISTING TO 4% MAX. PROVIDE DRAINAGE AROUND CURB.

POINT NO.	STATION	OFFSET
A1	1003+82.15 GR	77.47' LT
A2	1003+85.29 GR	81.18' LT
A3	1003+91.02 GR	75.80' LT
A4	1003+87.73 GR	72.11' LT
A5	1004+22.27 GR	59.07' LT
A6	1004+21.22 GR	53.16' LT
A7	1004+29.41 GR	57.78' LT
A8	1004+28.35 GR	51.87' LT
A9	1004+63.11 GR	56.43' LT
A10	1004+66.08 GR	50.58' LT
A11	1004+72.29 GR	56.25' LT
A12	1004+72.16 GR	50.53' LT
A13	1004+77.28 GR	56.15' LT
A14	1004+77.16 GR	50.54' LT
A15	1004+33.45 GR	45.50' RT
A16	1004+38.61 GR	49.86' RT
A17	1004+28.16 GR	51.25' RT
A18	1004+27.50 GR	46.29' RT
A19	1004+82.91 GR	39.40' RT
A20	1004+77.98 GR	45.09' RT
A21	1004+94.50 GR	37.86' RT
A22	1004+95.15 GR	42.82' RT
A23	1005+00.31 GR	36.08' RT
A24	1005+01.10 GR	42.03' RT
A25	1004+87.28 GR	56.02' LT
A26	1004+87.16 GR	50.57' LT

GOLF ROAD/CTH AA



GOLF ROAD SW RAMP

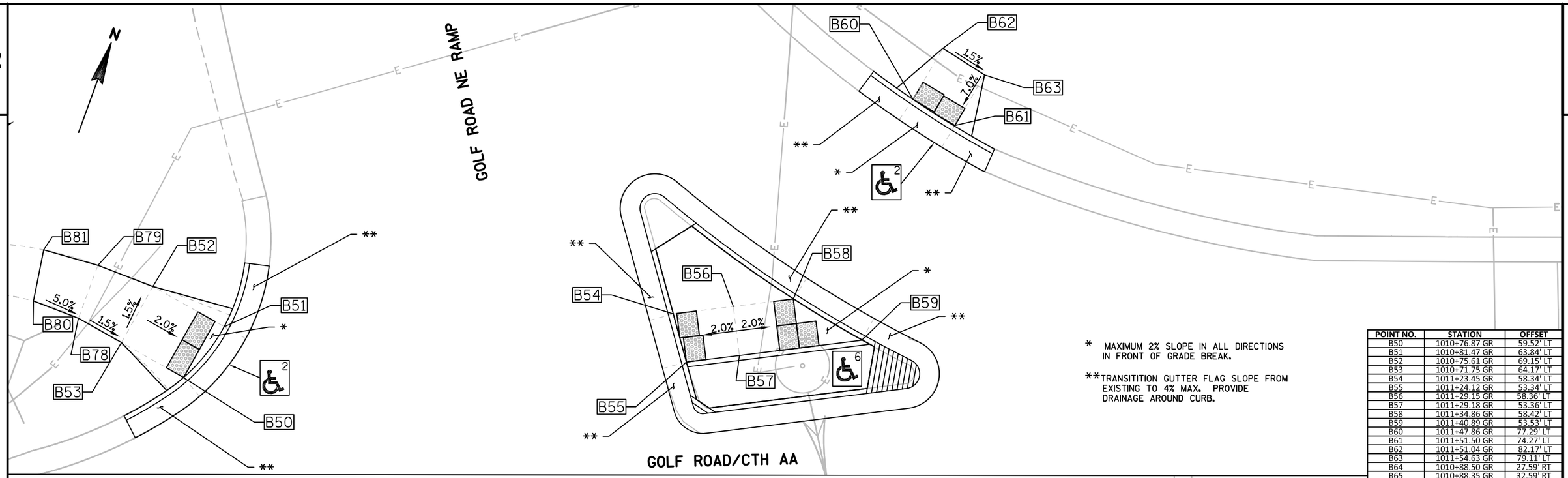


CURB RAMP DETAIL

GOLF ROAD/SW & NW RAMPS

THIS DETAIL SUPPLEMENTS STANDARD DETAIL DRAWINGS CURB RAMP TYPES 1 AND 1A, CURB RAMPS TYPES 2 AND 3, AND CURB RAMPS TYPES 5, 6, 7A, 7B AND 8.

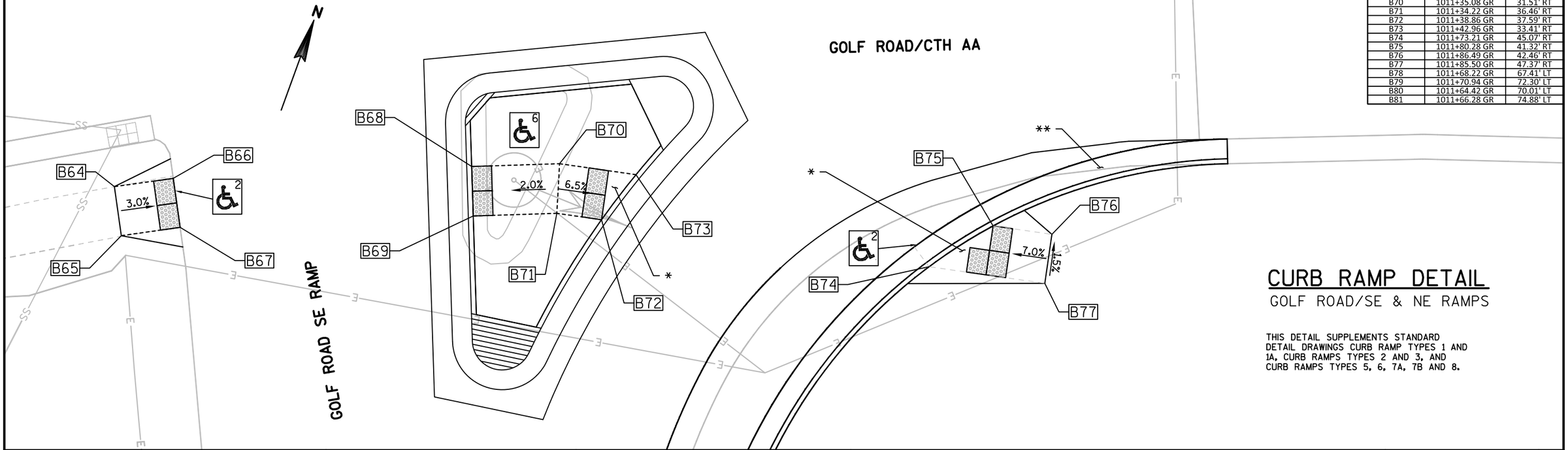
PROJECT NO: 1190-02-11	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION DETAILS: CURB RAMP	SHEET 24	E



POINT NO.	STATION	OFFSET
B50	1010+76.87 GR	59.52' LT
B51	1010+81.47 GR	63.84' LT
B52	1010+75.61 GR	69.15' LT
B53	1010+71.75 GR	64.17' LT
B54	1011+23.45 GR	58.34' LT
B55	1011+24.12 GR	53.34' LT
B56	1011+29.15 GR	58.36' LT
B57	1011+29.18 GR	53.36' LT
B58	1011+34.86 GR	58.42' LT
B59	1011+40.89 GR	53.53' LT
B60	1011+47.86 GR	77.29' LT
B61	1011+51.50 GR	74.27' LT
B62	1011+51.04 GR	82.17' LT
B63	1011+54.63 GR	79.11' LT
B64	1010+88.50 GR	27.59' RT
B65	1010+88.35 GR	32.59' RT
B66	1010+94.71 GR	27.74' RT
B67	1010+94.61 GR	32.73' RT
B68	1011+25.87 GR	30.77' RT
B69	1011+25.41 GR	35.75' RT
B70	1011+35.08 GR	31.51' RT
B71	1011+34.22 GR	36.46' RT
B72	1011+38.86 GR	37.59' RT
B73	1011+42.96 GR	33.41' RT
B74	1011+73.21 GR	45.07' RT
B75	1011+80.28 GR	41.32' RT
B76	1011+86.49 GR	42.46' RT
B77	1011+85.50 GR	47.37' RT
B78	1011+68.22 GR	67.41' LT
B79	1011+70.94 GR	72.30' LT
B80	1011+64.42 GR	70.01' LT
B81	1011+66.28 GR	74.88' LT

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK.

** TRANSITITION GUTTER FLAG SLOPE FROM EXISTING TO 4% MAX. PROVIDE DRAINAGE AROUND CURB.



CURB RAMP DETAIL

GOLF ROAD/SE & NE RAMPS

THIS DETAIL SUPPLEMENTS STANDARD DETAIL DRAWINGS CURB RAMP TYPES 1 AND 1A, CURB RAMPS TYPES 2 AND 3, AND CURB RAMPS TYPES 5, 6, 7A, 7B AND 8.

PROJECT NO: 1190-02-11	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION DETAILS: CURB RAMP	SHEET 25	E

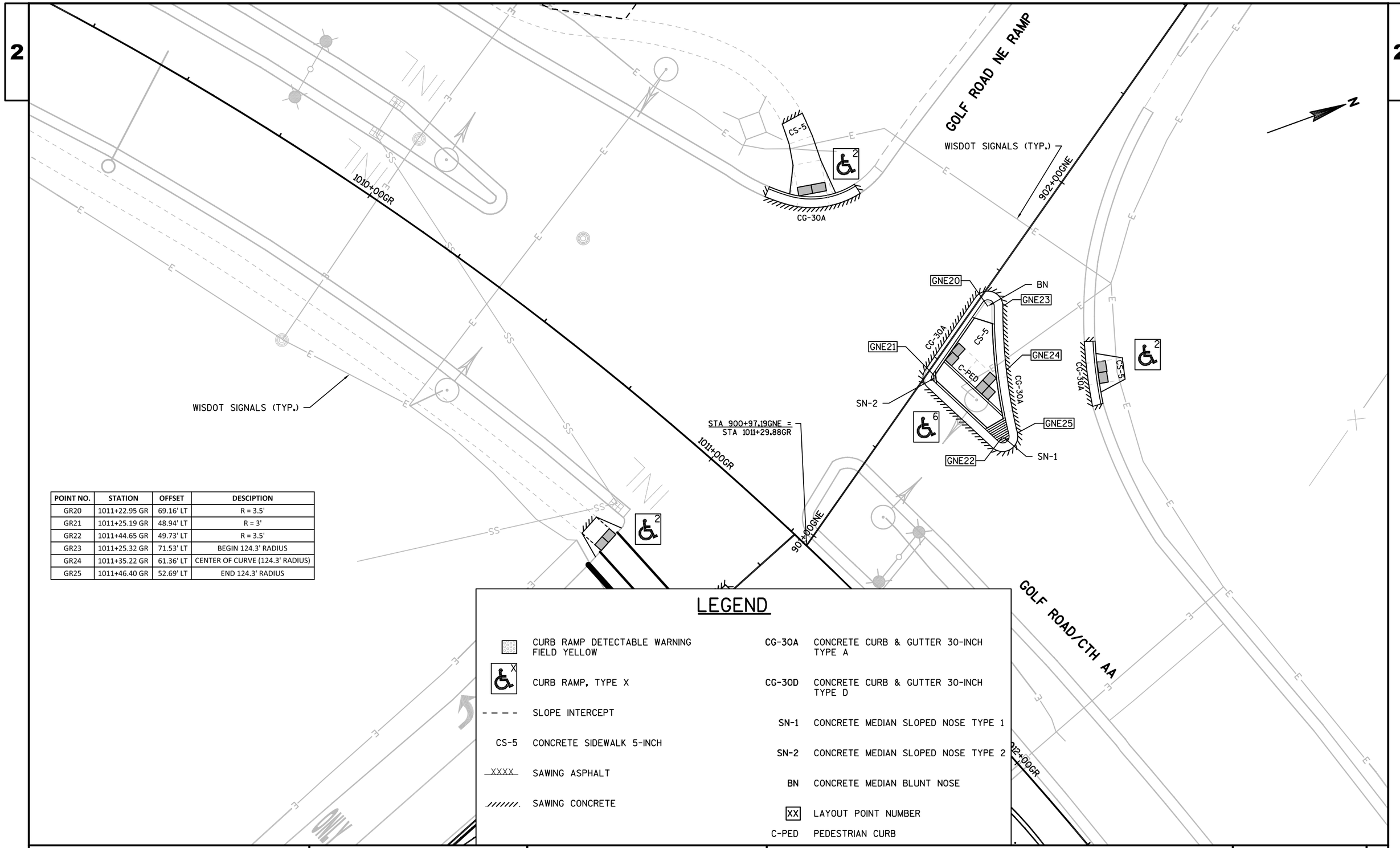
POINT NO.	STATION	OFFSET	DESCIPTION
GR50	1004+90.51 GR	34.81' RT	BEGIN CURB AND GUTTER
GR51	1004+77.25 GR	41.33' RT	CENTER OF CURVE (15' RADIUS)
GR52	1004+74.80 GR	53.22' RT	END 15' RADIUS
GR53	1004+76.88 GR	62.84' RT	END CURB AND GUTTER
GR54	1004+89.58 GR	50.03' RT	R = 15'

LEGEND

	CURB RAMP DETECTABLE WARNING FIELD YELLOW	CG-30A	CONCRETE CURB & GUTTER 30-INCH TYPE A
X	CURB RAMP, TYPE X	CG-30D	CONCRETE CURB & GUTTER 30-INCH TYPE D
- - - -	SLOPE INTERCEPT	SN-1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CS-5	CONCRETE SIDEWALK 5-INCH	SN-2	CONCRETE MEDIAN SLOPED NOSE TYPE 2
XXXX	SAWING ASPHALT	BN	CONCRETE MEDIAN BLUNT NOSE
	SAWING CONCRETE	XX	LAYOUT POINT NUMBER
		C-PED	PEDESTRIAN CURB

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	INTERSECTION DETAIL	SHEET 26 E

2



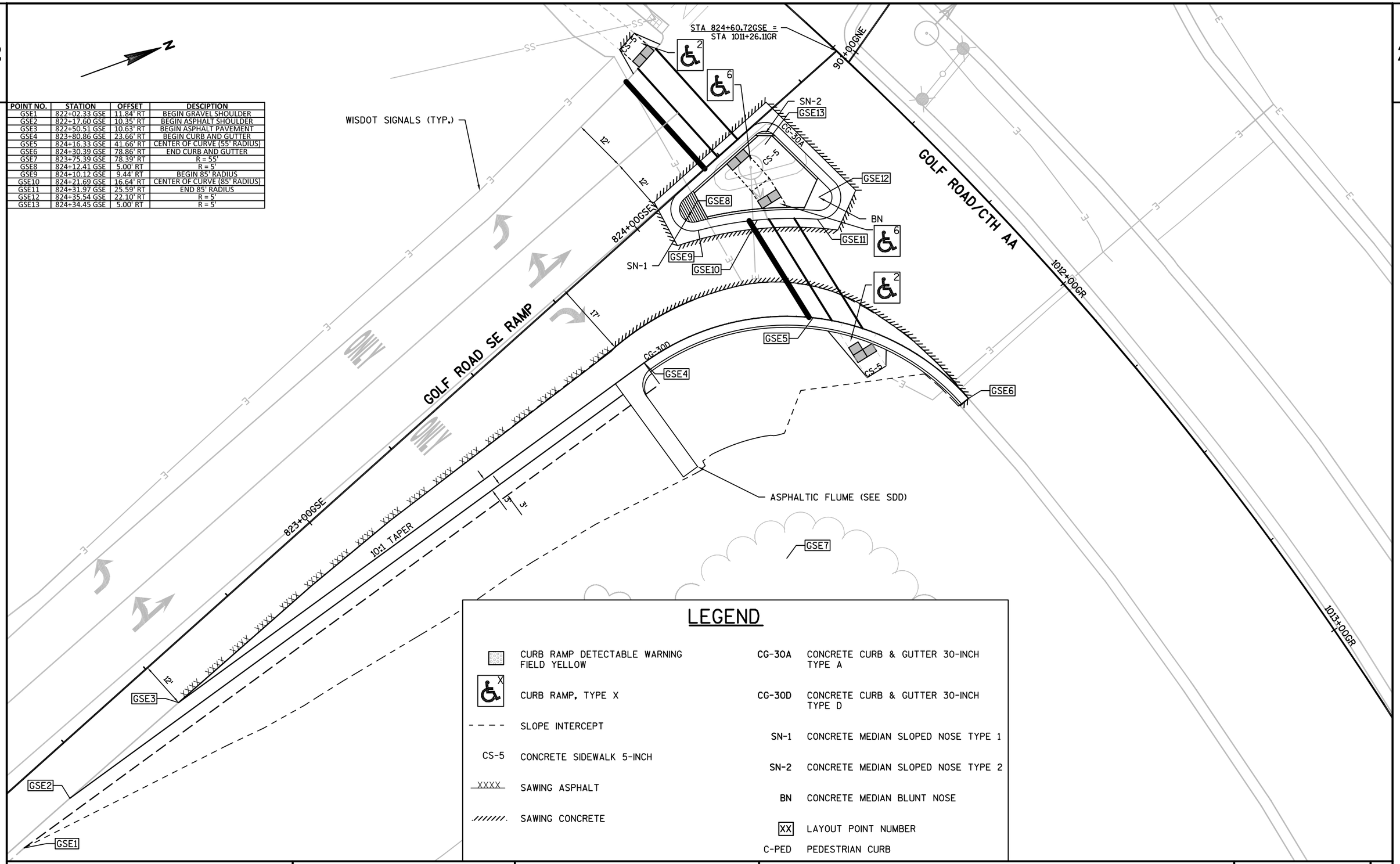
POINT NO.	STATION	OFFSET	DESCIPTION
GR20	1011+22.95 GR	69.16' LT	R = 3.5'
GR21	1011+25.19 GR	48.94' LT	R = 3'
GR22	1011+44.65 GR	49.73' LT	R = 3.5'
GR23	1011+25.32 GR	71.53' LT	BEGIN 124.3' RADIUS
GR24	1011+35.22 GR	61.36' LT	CENTER OF CURVE (124.3' RADIUS)
GR25	1011+46.40 GR	52.69' LT	END 124.3' RADIUS

LEGEND

	CURB RAMP DETECTABLE WARNING FIELD YELLOW	CG-30A	CONCRETE CURB & GUTTER 30-INCH TYPE A
X	CURB RAMP, TYPE X	CG-30D	CONCRETE CURB & GUTTER 30-INCH TYPE D
- - - -	SLOPE INTERCEPT	SN-1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CS-5	CONCRETE SIDEWALK 5-INCH	SN-2	CONCRETE MEDIAN SLOPED NOSE TYPE 2
XXXX	SAWING ASPHALT	BN	CONCRETE MEDIAN BLUNT NOSE
//////	SAWING CONCRETE	XX	LAYOUT POINT NUMBER
		C-PED	PEDESTRIAN CURB

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	INTERSECTION DETAIL	SHEET 27	E

POINT NO.	STATION	OFFSET	DESCIPTION
GSE1	822+02.33 GSE	11.84' RT	BEGIN GRAVEL SHOULDER
GSE2	822+17.60 GSE	10.35' RT	BEGIN ASPHALT SHOULDER
GSE3	822+50.51 GSE	10.63' RT	BEGIN ASPHALT PAVEMENT
GSE4	823+80.86 GSE	23.66' RT	BEGIN CURB AND GUTTER
GSE5	824+16.33 GSE	41.66' RT	CENTER OF CURVE (55' RADIUS)
GSE6	824+30.39 GSE	78.86' RT	END CURB AND GUTTER
GSE7	823+75.39 GSE	78.39' RT	R = 55'
GSE8	824+12.41 GSE	5.00' RT	R = 5'
GSE9	824+10.12 GSE	9.44' RT	BEGIN 85' RADIUS
GSE10	824+21.69 GSE	16.64' RT	CENTER OF CURVE (85' RADIUS)
GSE11	824+31.97 GSE	25.59' RT	END 85' RADIUS
GSE12	824+35.54 GSE	22.10' RT	R = 5'
GSE13	824+34.45 GSE	5.00' RT	R = 5'

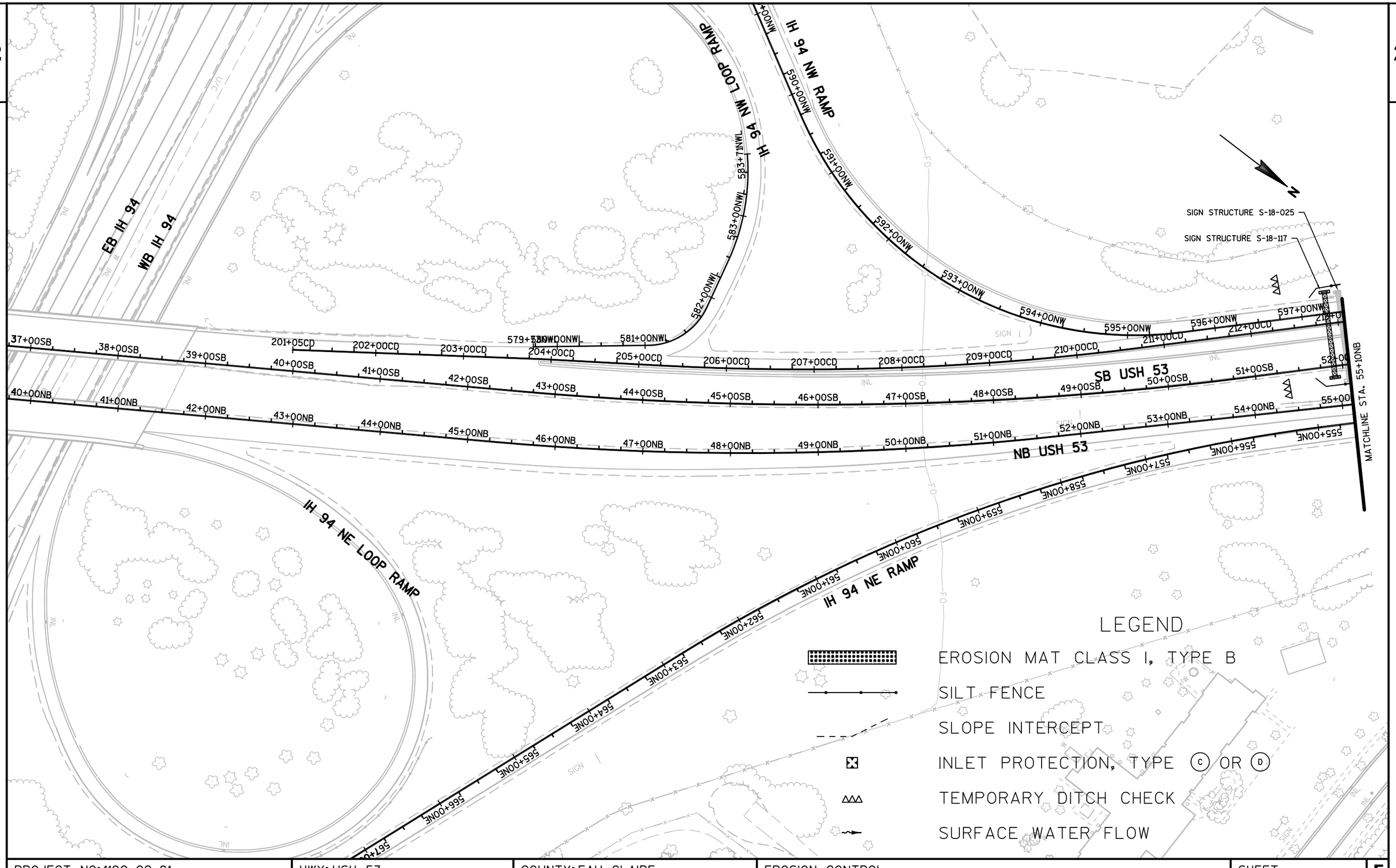


LEGEND

	CURB RAMP DETECTABLE WARNING FIELD YELLOW
X	CURB RAMP, TYPE X
- - - -	SLOPE INTERCEPT
CS-5	CONCRETE SIDEWALK 5-INCH
XXXX	SAWING ASPHALT
//////	SAWING CONCRETE

CG-30A	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG-30D	CONCRETE CURB & GUTTER 30-INCH TYPE D
SN-1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
SN-2	CONCRETE MEDIAN SLOPED NOSE TYPE 2
BN	CONCRETE MEDIAN BLUNT NOSE
XX	LAYOUT POINT NUMBER
C-PED	PEDESTRIAN CURB

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	INTERSECTION DETAIL	SHEET 28	E



LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION, TYPE (C) OR (D)
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EROSION CONTROL	SHEET 29	E

2

COMMONWEALTH AVE

KEYSTONE CROSSING

GRADING, SHAPING, AND FINISHING FOR BARRIER SYSTEMS

SIGN STRUCTURE S-18-024

SIGN STRUCTURE S-18-116

598+00NW 599+00NW 600+00NW 600+48NW 214+00CD 215+00CD 216+00CD 217+00CD 218+00CD 219+00CD 220+00CD 221+00CD 222+00CD 223+00CD 224+00CD 225+00CD 226+00CD 227+00CD 228+00

SB USH 53

53+00SB 54+00SB 55+00SB 56+00SB 57+00SB 58+00SB 59+00SB 60+00SB 61+00SB 62+00SB 63+00SB 64+00SB 65+00SB 66+00SB 67+00

MATCHLINE STA. 55+10NB

56+00NB 57+00NB 58+00NB 59+00NB 60+00NB 61+00NB 62+00NB 63+00NB 64+00NB 65+00NB 66+00NB 67+00NB 68+00NB 69+00NB 70+00

554+00NE 553+00NE 552+00NE 551+00NE 549+68NE

NB USH 53

801+00GSE 802+00GSE 803+00GSE

MATCHLINE STA. 70+10NB

GRADING, SHAPING, AND FINISHING FOR BARRIER SYSTEMS

GRADING, SHAPING, AND FINISHING FOR BARRIER SYSTEMS

SIGN STRUCTURE S-18-023

SIGN STRUCTURE S-18-115

GATEWAY DR

BERM

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION, TYPE (C) OR (D)
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EROSION CONTROL	SHEET 30	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\022001_EC.DWG PLOT DATE : 10/28/2016 7:53 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (13)

2

COMMONWEALTH AVE

GRADING, SHAPING, AND FINISHING FOR BARRIER SYSTEMS

SIGN STRUCTURE S-18-021

SIGN STRUCTURE S-18-114

GRADING, SHAPING, AND FINISHING FOR BARRIER SYSTEMS

701+44GSW 702+00GSW 703+00GSW 707+00GSW 708+00GSW 709+00GSW 710+00

68+00SB 69+00SB 70+00SB 71+00SB 72+00SB 73+00SB 74+00SB 75+00SB 76+00SB 77+00SB 78+00SB 79+00SB 80+00SB 81+00SB 82+00

SB USH 53

71+00NB 72+00NB 73+00NB 74+00NB 75+00NB 76+00NB 77+00NB 78+00NB 79+00NB 80+00NB 81+00NB 82+00NB 83+00NB 84+00NB 85+00

NB USH 53

MATCHLINE STA. 70+10NB

MATCHLINE STA. 85+10NB

804+00GSE 805+00GSE 806+00GSE 807+00GSE 808+00GSE 809+00GSE 810+00GSE 811+00GSE 812+00GSE 813+00GSE 814+00GSE 815+00GSE 816+00GSE 817+00GSE 818+00GSE

GOLF ROAD SE RAMP

GATEWAY DR

RIPRAP

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION, TYPE (C) OR (D)
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EROSION CONTROL	SHEET 31 E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\022001_EC.DWG PLOT DATE : 10/28/2016 7:53 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (14)

2

MATCHLINE STA. 103+00GR

MATCHLINE STA. 103+00GR

GOLF ROAD SW RAMP

GOLF ROAD NW RAMP

CTH AA/GOLF ROAD

GRADING, SHAPING, AND FINISHING FOR BARRIER SYSTEMS

SB USH 53

NB USH 53

MATCHLINE STA. 85+10NB

MATCHLINE STA. 100+10NB

GOLF ROAD SE RAMP

GOLF ROAD NE RAMP

GRADING, SHAPING, AND FINISHING FOR BARRIER SYSTEMS

SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION, TYPE (C) OR (D)
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EROSION CONTROL	SHEET 32	E

2

S OAKWOOD MALL DR

GOLF ROAD NW RAMP

SB USH 53

98+00SB 99+00SB 100+00SB 101+00SB 102+00SB 103+00SB 104+00SB 105+00SB 106+00SB 107+00SB 108+00SB 109+00SB 110+00SB 111+00SB 112+00SB

MATCHLINE STA. 100+10NB

101+00NB 102+00NB 103+00NB 104+00NB 105+00NB 106+00NB 107+00NB 108+00NB 109+00NB 110+00NB 111+00NB 112+00NB 113+00NB 114+00NB 115+00NB

NB USH 53

912+00GNE 913+00GNE 914+00GNE 915+00GNE 916+00GNE 917+00GNE 918+00GNE 919+00GNE 920+00GNE 921+00GNE 922+00GNE 923+00GNE 923+64GNE

GOLF ROAD NE RAMP

S HASTINGS WAY

N

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION, TYPE (C) OR (D)
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	EROSION CONTROL	SHEET 33	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\022001_EC.DWG PLOT DATE : 10/28/2016 7:54 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (16)

Note:
* SIMILAR SIGN LOCATED ON STRUCTURE S-18-025, TO BE REMOVED
* SIGN LOCATED ON STRUCTURE S-18-117, SEE SIGN DETAILS

EB IH 94
WB IH 94
IH 94 NW LOOP RAMP
IH 94 NW RAMP
IH 94 NE LOOP RAMP
IH 94 SW LOOP RAMP
IH 94 NE RAMP

STA. 43+20.00NB
BEGIN PROJECT 1190-02-81

SOUTH 53 MILE 85 .0 D10-5 21"X60" (1R-18, 1-18)
NORTH 53 MILE 85 .0 D10-5 21"X60" (1R-1, 1-1)
DO NOT ENTER R5-1 30"X30" (1R-14, 1-14)
SOUTH 53 J3-1 24"X57" (1R-15, 1-15)
W4-2R 48"X48" (1R-2, 1-2; 1R-3, 1-3)
YIELD R1-2 36"X31" (1R-16, 1-16)
ONE WAY R6-2-R 24"X30" (1R-17, 1-17)
R3-1 24"X24" (1R-11, 1-11)
ONE WAY R6-2-R 24"X30" (1R-13, 1-13)
W4-3R 48"X48" (1R-4, 1-4)
R3-1 36"X36" (1R-12, 1-12)
PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED R5-57 36"X36" (1R-10, 1-10)
RAMP CLOSED USE ALT ROUTE R11-54-F 48"X30" (1R-9, 1-9)
SOUTH 53 AHEAD
EXIT 84A — INTERSTATE 94 East Madison — NEXT RIGHT — EXIT 25 M.P.H (1R-19, 1-19)
EXIT 84B — INTERSTATE 94 West St. Paul — EXIT ONLY (1R-21, 1-21A, 1-21B, 1-21C)
EXIT 84B E5-1B 96"X60" (1R-20, 1-20A)
25 MPH E13-3P 90"X24" (1-24)
S-18-025 TO BE REMOVED
S-18-117
Eau Claire NEXT 6 EXITS E9-1 132"X54" (1R-5, 1-5)
SPEED LIMIT 65 W3-5 48"X48" (1R-6, 1-6; 1R-7, 1-7)

SB USH 53
NB USH 53
MATCHLINE STA. 40+50NB
MATCHLINE STA. 55+00NB

EXIT 84A — INTERSTATE 94 East Madison — EXIT ONLY (1R-22, 1-22A, 1-22B, 1-22C)
S-18-104 TO BE REMAIN
EXIT 84A
25 MPH E13-3P 90"X24" (1-23)
SB USH 53
NB USH 53
RIPRAP
SIGN
INL

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON LIGHT POLES
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON LIGHT/SIGNAL POLES
- (X-XX) DENOTES SIGN NUMBER
- (XR-XX) DENOTES SIGN TO BE REMOVED
- (XM-XX) DENOTES SIGN TO BE MOVED

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SHEET 34 E

COMMONWEALTH AVE

SOUTH 53 AHEAD

EXIT 84A
I/S 94 East
Madison

EXIT 84B
I/S 94 West
St. Paul
EXIT ONLY

EXIT 84B

RAMP 25 M.P.H. W13-3 36X48"

RAMP CLOSED USE ALT ROUTE R11-54-F 48"X30"

SOUTH 53 MILE 85 .2 D10-5 21"X60"

SPEED LIMIT 55 R2-1 48"X60"

W5-52R 18"X54"

W5-52L 18"X54"

E5-1B 96"X60"

NORTH 53 MILE 85 .4 D10-5 21"X60"

REMOVE

S-18-024 TO BE REMOVED

S-18-116

598+00NW 599+00NW 600+00NW 600+48NW

214+00CD 215+00CD 216+00CD 217+00CD 218+00CD 219+00CD 220+00CD 221+00CD 222+00CD 223+00CD 224+00CD 225+00CD 226+00CD 227+00CD 228+00

SB USH 53

53+00SB 54+00SB 55+00SB 56+00SB 57+00SB 58+00SB 59+00SB 60+00SB 61+00SB 62+00SB 63+00SB 64+00SB 65+00SB 66+00SB 67+00

MATCHLINE STA. 55+00NB

56+00NB 57+00NB 58+00NB 59+00NB 60+00NB 61+00NB 62+00NB 63+00NB 64+00NB 65+00NB 66+00NB 67+00NB 68+00NB 69+00NB 70+00

554+00NE 553+00NE 552+00NE 551+00NE 549+68.48NE+00NE

NB USH 53

801+00GSE 802+00GSE 803+00GSE

MATCHLINE STA. 70+00NB

EXISTING TYPE I SIGN TO REMAIN

EXISTING BLUE SIS TO REMAIN

S-18-115

S-18-023 TO BE REMOVED

CITY OF EAU CLAIRE
24 HOUR PARKING LIMIT ENFORCED ON ALL STREETS AND ALLEYS
SNOW EMERGENCY REGULATIONS ARE IN EFFECT
CALENDER PARKING IN EFFECT NOV. 1 to MAY 1 MIDNIGHT to 7:00 A.M

GATEWAY DR

EXIT 85

AA Golf RD

2R-1 2-1 | 2R-2 2-2 | 2R-3 2-3 | 2R-5 2-5 | 2R-6 2-6 | 2R-7 2-7 | 2R-8 2-8A 2-8B | 2R-9 2-9 | 2R-10 2-10A 2-10B | 2R-11 2-11A 2-11B 2-11C | 2R-12 | 2R-13 2-13 | 2R-14 2-14 | 2R-15 2-15 | 2R-16 2-16 | 2R-17 2-17 | 2R-18 2-18 | 2R-19 2-19 | 2R-20 2-20 | 2M-4 | 2M-21

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON LIGHT POLES
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON LIGHT/SIGNAL POLES
- X-XX — DENOTES SIGN NUMBER
- XR-XX — DENOTES SIGN TO BE REMOVED
- XM-XX — DENOTES SIGN TO BE MOVED

Note:
° SIMILAR SIGN LOCATED ON STRUCTURE S-18-023, TO BE REMOVED
@ SIGN LOCATED ON STRUCTURE S-18-115, SEE SIGN DETAILS
* SIMILAR SIGN LOCATED ON STRUCTURE S-18-024, TO BE REMOVED
# SIGN LOCATED ON STRUCTURE S-18-116, SEE SIGN DETAILS

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SHEET 35 E

2

Note:
* SIMILAR SIGN LOCATED ON STRUCTURE S-18-021, TO BE REMOVED
\# SIGN LOCATED ON STRUCTURE S-18-114, SEE SIGN DETAILS

EXIT 84B
94 West
St. Paul
EXIT ONLY

3R-7 *
3-7A *
3-7B *
3-7C *

COMMONWEALTH AVE

3R-9
3-9
SPEED LIMIT 55
W3-5
48"X48"

3R-10
3-10

EXISTING TYPE I SIGNS TO REMAIN

SOUTH 53 MILE 85 .6
D10-5
21"X60"

3R-8
3-8

S-18-114

S-18-021
TO BE REMOVED

SB USH 53

68+00SB 69+00SB 70+00SB 71+00SB 72+00SB 73+00SB 74+00SB 75+00SB 76+00SB 77+00SB 78+00SB 79+00SB 80+00SB 81+00SB 82+00

701+44GSW 702+00GSW 703+00GSW 704+00GSW 705+00GSW 706+00GSW 707+00GSW 708+00GSW 709+00GSW 710+00

MATCHLINE STA. 70+00NB

71+00NB 72+00NB 73+00NB 74+00NB 75+00NB 76+00NB 77+00NB 78+00NB 79+00NB 80+00NB 81+00NB 82+00NB 83+00NB 84+00NB 85+00

NB USH 53

804+00GSE 805+00GSE 806+00GSE 807+00GSE 808+00GSE 809+00GSE 810+00GSE 811+00GSE 812+00GSE 813+00GSE 814+00GSE 815+00GSE 816+00GSE 817+00GSE 818+00GSE

MATCHLINE STA. 85+00NB

3R-1
3-1
3R-2
3-2
R3-4-B
36"X48"

NORTH 53 MILE 85 .6
D10-5
21"X60"

3R-3
3-3

3R-4
3-4

EXIT 85
E5-1A
72"X60"

3R-5
3-5
W3-3
36"X36"

EXISTING BLUE SIS SIGN TO REMAIN

GOLF ROAD SE RAMP

3R-6
3-6
ALTERNATE
94
J4-1
36"X54"

EXISTING TYPE I SIGN TO REMAIN

GATEWAY DR

RIPRAP

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON LIGHT POLES
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON LIGHT/SIGNAL POLES
- X-XX — DENOTES SIGN NUMBER
- XR-XX — DENOTES SIGN TO BE REMOVED
- XM-XX — DENOTES SIGN TO BE MOVED

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SHEET 36 E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\PLAN SHEETS\023201PSTDWG
LAYOUT NAME - SHEET - (14)
PLOT DATE : 1/24/2017 9:56 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON LIGHT/SIGNAL POLES
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON LIGHT/SIGNAL POLES
- X-XX — DENOTES SIGN NUMBER
- XR-XX — DENOTES SIGN TO BE REMOVED
- XM-XX — DENOTES SIGN TO BE MOVED

MATCHLINE STA. 103+00GR

MATCHLINE STA. 1003+00GR

MATCHLINE STA. 85+00NB

MATCHLINE STA. 100+00NB

GOLF ROAD SW RAMP

GOLF ROAD NW RAMP

GOLF ROAD SE RAMP

GOLF ROAD NE RAMP

CTH AA/GOLF ROAD

SB USH 53

NB USH 53

EXISTING TYPE I SIGN TO REMAIN

EXISTING TYPE I SIGNS ON OVERHEAD SIGN TO REMAIN (2)

EXISTING BLUE SIS SIGNS TO REMAIN

EXISTING TYPE II SIGNS TO REMAIN

EXISTING BLUE SIS SIGN TO REMAIN

EXISTING TYPE II SIGNS ON OVERHEAD SUPPORT TO REMAIN (3)

EXIT 84A
INTERSTATE 94 East
Madison
1 MILE

EXIT 84B
INTERSTATE 94 West
St Paul
1/2 MILE

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SHEET 37 E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\PLAN SHEETS\023201PP01.DWG LAYOUT NAME - SHEET - (15)

PLOT DATE : 1/24/2017 9:56 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

5R-3
5-3

W3-3
36"X36"

EXIT
85

E5-1A
72"X60"

5R-2
5-2

GOLF ROAD NW RAMP

S OAKWOOD MALL DR

SB USH 53

98+00SB 99+00SB 100+00SB 101+00SB 102+00SB 103+00SB 104+00SB 105+00SB 106+00SB 107+00SB 108+00SB 109+00SB 110+00SB 111+00SB 112+00SB

EXISTING TYPE I SIGNS TO REMAIN

MATCHLINE STA. 100+00NB

101+00NB 102+00NB 103+00NB 104+00NB 105+00NB 106+00NB 107+00NB 108+00NB 109+00NB 110+00NB 111+00NB 112+00NB 113+00NB 114+00NB 115+00NB

NB USH 53

912+00GNE 913+00GNE 914+00GNE 915+00GNE 916+00GNE 917+00GNE 918+00GNE 919+00GNE 920+00GNE 921+00GNE 922+00GNE 923+00GNE 923+64GNE

GOLF ROAD NE RAMP

S HASTINGS WAY

STA. 110+30.00NB
END PROJECT 1190-02-81

5R-1
5-1

NORTH
53
MILE
86
.2

D10-5
21"X60"

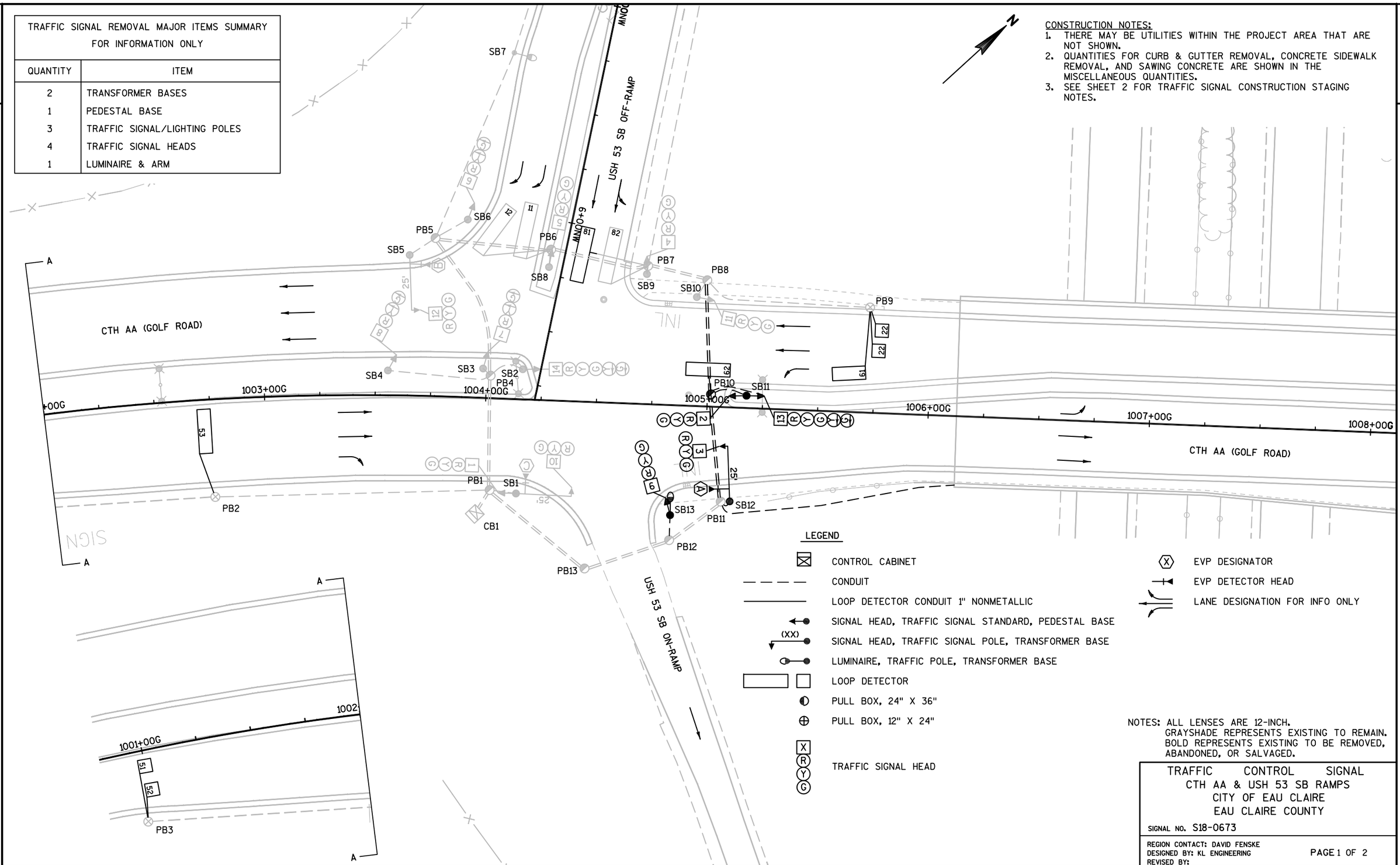
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON LIGHT POLES
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON LIGHT/SIGNAL POLES
- X-XX — DENOTES SIGN NUMBER
- XR-XX — DENOTES SIGN TO BE REMOVED
- XM-XX — DENOTES SIGN TO BE MOVED

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SHEET 38	E

TRAFFIC SIGNAL REMOVAL MAJOR ITEMS SUMMARY FOR INFORMATION ONLY	
QUANTITY	ITEM
2	TRANSFORMER BASES
1	PEDESTAL BASE
3	TRAFFIC SIGNAL/LIGHTING POLES
4	TRAFFIC SIGNAL HEADS
1	LUMINAIRE & ARM

CONSTRUCTION NOTES:
1. THERE MAY BE UTILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. QUANTITIES FOR CURB & GUTTER REMOVAL, CONCRETE SIDEWALK REMOVAL, AND SAWING CONCRETE ARE SHOWN IN THE MISCELLANEOUS QUANTITIES.
3. SEE SHEET 2 FOR TRAFFIC SIGNAL CONSTRUCTION STAGING NOTES.



LEGEND

- CONTROL CABINET
- CONDUIT
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR
- PULL BOX, 24" X 36"
- PULL BOX, 12" X 24"
- X R Y G TRAFFIC SIGNAL HEAD
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- LANE DESIGNATION FOR INFO ONLY

NOTES: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING TO REMAIN.
BOLD REPRESENTS EXISTING TO BE REMOVED, ABANDONED, OR SALVAGED.

TRAFFIC CONTROL SIGNAL
CTH AA & USH 53 SB RAMPS
CITY OF EAU CLAIRE
EAU CLAIRE COUNTY

SIGNAL NO. S18-0673

REGION CONTACT: DAVID FENSKE
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL REMOVAL & STAGING PLAN	SHEET 39	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\024001-SR.DWG PLOT DATE : 1/31/2017 3:18 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

CONSTRUCTION STAGING NOTES

GENERAL NOTES:

1. CONTRACTOR TO NOTIFY WISDOT NORTHWEST REGION ELECTRICAL UNIT (715-839-3787) 2 WEEKS PRIOR TO STARTING WORK ON CTH AA & USH 53 RAMP SIGNALS.
2. CONTRACTOR TO NOTIFY CITY OF EAU CLAIRE TRAFFIC ENGINEER (715-839-4934) FOR LIGHTING CONDUCTOR ADJUSTMENT 2 WEEKS PRIOR TO STARTING WORK ON CTH AA & USH 53 RAMP SIGNALS.
3. CONTRACTOR IS TO SAW CUT LOOPS PRIOR TO FINAL OVERLAY WHEN LOOPS ARE TO BE PLACED WITHIN MILL AND OVERLAY LIMITS.
4. WISDOT TO INSTALL & MAINTAIN NON-INTRUSIVE DETECTION EQUIPMENT FOR CONSTRUCTION ACTIVITIES.

PRIOR TO MILLING ACTIVITIES ON USH 53 RAMPS AND CTH AA (GOLF RD.):

1. CONTRACTOR TO INSTALL PROPOSED PB13, PB15, AND PB16 AND COMPLETE BORE CONNECTING THE PULL BOXES. CONTRACTOR TO COMPLETE CONDUIT RING BY CONNECTING PB12 TO PB13 AND PB16 TO PB17. CONTRACTOR TO INSTALL CONDUIT FROM PROPOSED PB15 TO EXISTING LIGHT BASE (EXLB1).
2. CONTRACTOR TO INSTALL PROPOSED CONCRETE BASES AS WELL AS CONNECTING CONDUITS FOR SB12 & SB13 AT LEAST 2 WEEKS IN ADVANCE OF WISDOT INSTALLING ABOVE GROUND SIGNAL EQUIPMENT.
3. CONTRACTOR TO REMOVE EXISTING PB10, SB11, SB12, & SB13 AFTER WISDOT FINISHES CABLING AND ABOVE GROUND SIGNAL EQUIPMENT INSTALLATION OF PROPOSED SB12 & SB13. ABANDON EXISTING CONDUITS AS SHOWN.
4. CONTRACTOR TO INSTALL WISDOT FURNISHED EVP CABLE AT PROPOSED SB13.
5. CONTRACTOR TO INSTALL CONDUIT FROM PROPOSED PB16 TO MATCH INTO EXISTING BRIDGE CONDUIT.
6. WISDOT TO RELOCATE IMPACTED SIGNAL CABLE AND CITY OF EAU CLAIRE LIGHTING CONDUCTORS FROM EXISTING PB8 TO PB11 CONDUIT CROSSING TO PROPOSED PB13 TO PB16 CROSSING.
7. WISDOT TO INSTALL ABOVE GROUND WIRING AND SIGNAL EQUIPMENT ON THE CONTRACTOR INSTALLED CONCRETE BASE ON PROPOSED SB12 & SB13.

STAGE 3C WORK - USH 53 SB OFF RAMP AT CTH AA (GOLF RD.):

1. CONTRACTOR IS TO INSTALL LOOP 81 AND NEW CABLING.
2. DURING OFF-PEAK PERIODS, CONTRACTOR IS TO INSTALL LOOPS 13, 14, 83, & 84 AS WELL AS NEW CABLING.
3. CONTRACTOR IS TO INSTALL PB5-1, PB7-1 AND CONDUIT CONNECTIONS.

STAGE 3D WORK - CTH AA (GOLF RD.) OUTSIDE LANES:

1. CONTRACTOR TO INSTALL COMPLETE OUTSIDE LOOP CONDUIT AFTER MILLING OPERATIONS.
2. CONTRACTOR TO INSTALL INSIDE LANE LOOP LEADS FROM THE PULL BOX TO THE STAGE 3D MILLING EDGE. LOOP INSTALLATION TO BE COMPLETED AFTER MILLING IN STAGE 3E.
3. NOTE- WORK AT THIS INTERSECTION INCLUDES INSTALLATION OF NB RAMP LOOPS 61 & 62.

STAGE 3E WORK - CTH AA (GOLF RD.) INSIDE & TURN LANES:

1. CONTRACTOR TO COMPLETE INSTALLATION OF INSIDE LANE LOOP CONDUIT.
2. CONTRACTOR TO INSTALL LOOPS 61 AND 62 IN THE WB LEFT TURN LANE.
3. NOTE- WORK AT THIS INTERSECTION INCLUDES INSTALLATION OF NB RAMP LOOPS 61.

NON-STAGE SPECIFIC WORK

1. CONTRACTOR TO INSTALL SB14, RAMP GATE EQUIPMENT, & ANY NECESSARY CABLING.
2. CONTRACTOR TO INSTALL SB15, SB16, AND ALL REMAINING PEDESTRIAN SIGNAL HEADS, PEDESTRIAN PUSH BUTTONS, & ANY NECESSARY CABLING.

TRAFFIC CONTROL SIGNAL
CTH AA & USH 53 SB RAMPS
CITY OF EAU CLAIRE
EAU CLAIRE COUNTY

SIGNAL NO. S18-0673

REGION CONTACT: DAVID FENSKE
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL REMOVAL AND STAGING PLAN	SHEET	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\024001-SR.DWG PLOT DATE : 1/31/2017 4:07 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

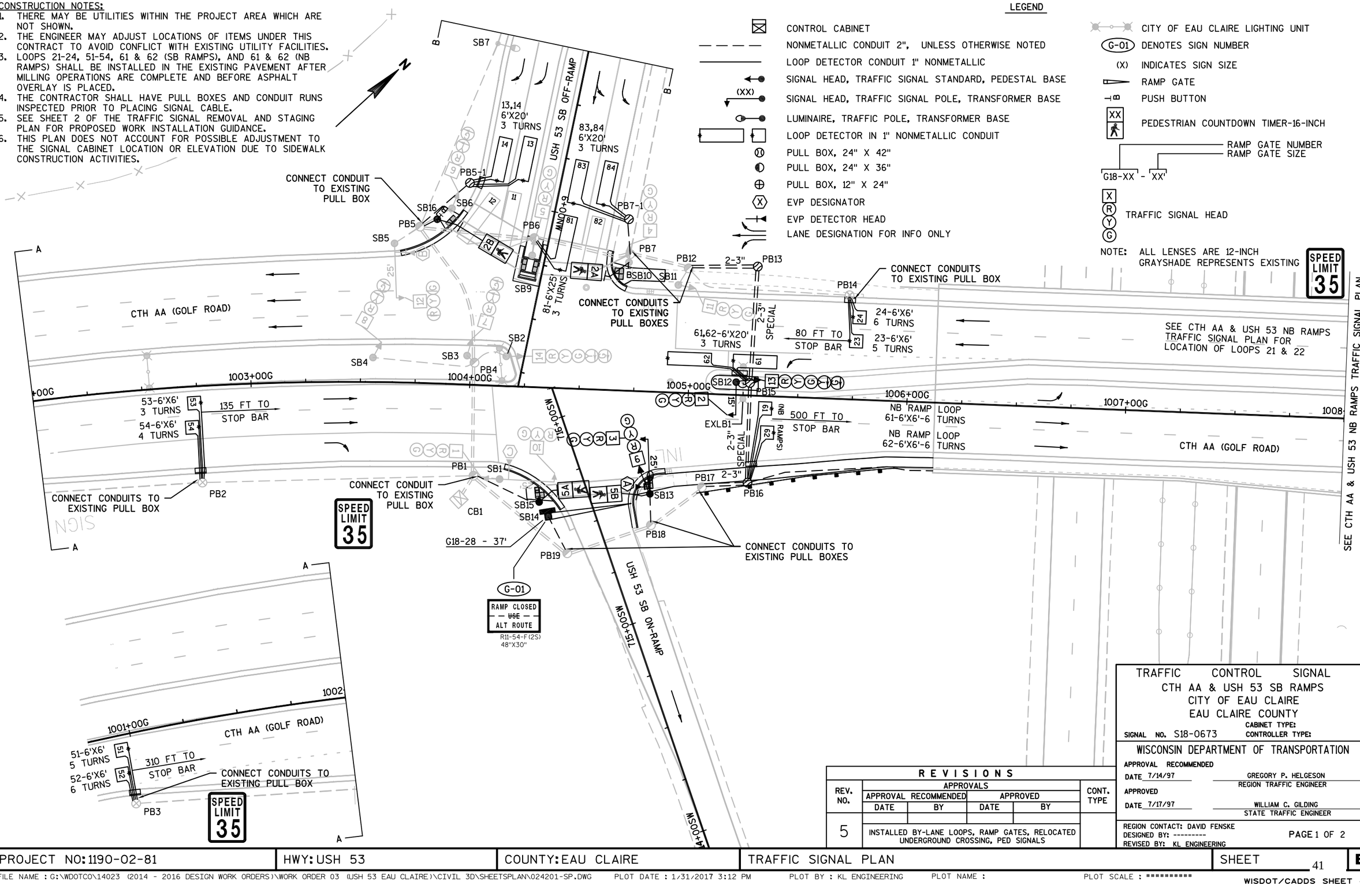
CONSTRUCTION NOTES:

1. THERE MAY BE UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE ENGINEER MAY ADJUST LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
3. LOOPS 21-24, 51-54, 61 & 62 (SB RAMPS), AND 61 & 62 (NB RAMPS) SHALL BE INSTALLED IN THE EXISTING PAVEMENT AFTER MILLING OPERATIONS ARE COMPLETE AND BEFORE ASPHALT OVERLAY IS PLACED.
4. THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED PRIOR TO PLACING SIGNAL CABLE.
5. SEE SHEET 2 OF THE TRAFFIC SIGNAL REMOVAL AND STAGING PLAN FOR PROPOSED WORK INSTALLATION GUIDANCE.
6. THIS PLAN DOES NOT ACCOUNT FOR POSSIBLE ADJUSTMENT TO THE SIGNAL CABINET LOCATION OR ELEVATION DUE TO SIDEWALK CONSTRUCTION ACTIVITIES.

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- PULL BOX, 12" X 24"
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- LANE DESIGNATION FOR INFO ONLY
- CITY OF EAU CLAIRE LIGHTING UNIT
- G-01 DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- RAMP GATE
- PUSH BUTTON
- XX PEDESTRIAN COUNTDOWN TIMER-16-INCH
- RAMP GATE NUMBER / RAMP GATE SIZE — G18-XX - XX'
- X R Y G TRAFFIC SIGNAL HEAD

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



REVISIONS						
REV. NO.	APPROVALS				CONT. TYPE
	APPROVAL RECOMMENDED		APPROVED		
	DATE	BY	DATE	BY	
5	INSTALLED BY-LANE LOOPS, RAMP GATES, RELOCATED UNDERGROUND CROSSING, PED SIGNALS				

TRAFFIC CONTROL SIGNAL
CTH AA & USH 53 SB RAMPS
CITY OF EAU CLAIRE
EAU CLAIRE COUNTY
CABINET TYPE:
SIGNAL NO. S18-0673 CONTROLLER TYPE:

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 7/14/97 GREGORY P. HELGESON, REGION TRAFFIC ENGINEER

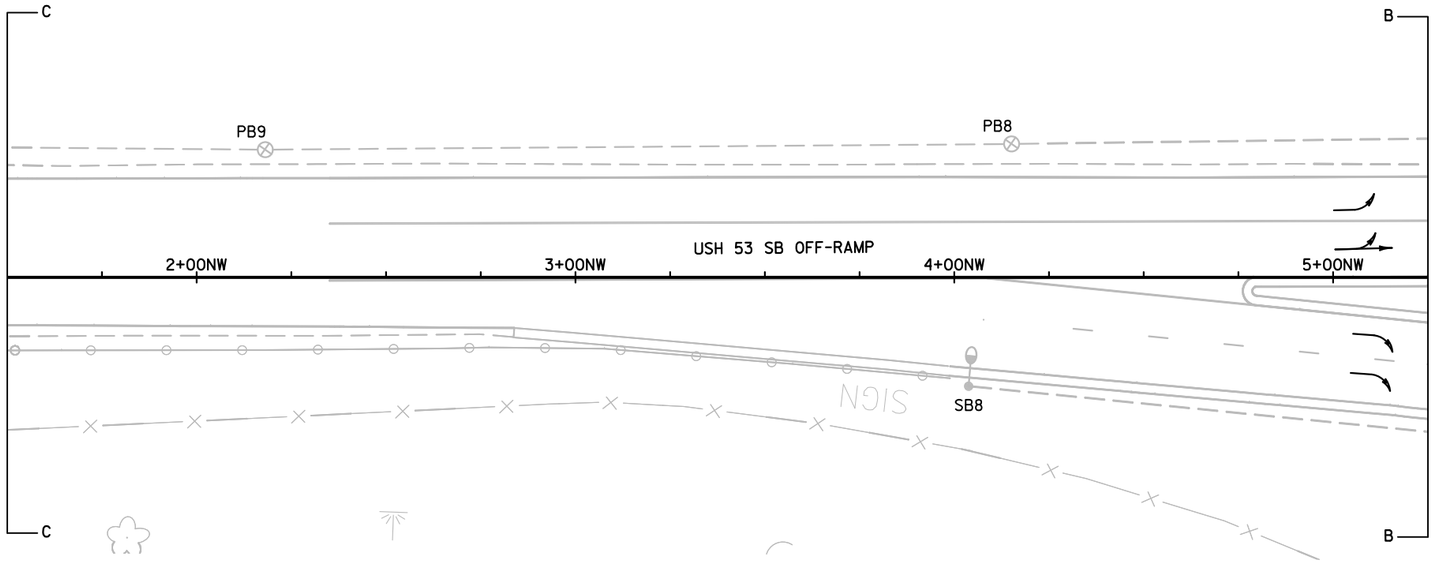
APPROVED
DATE 7/17/97 WILLIAM C. GILDING, STATE TRAFFIC ENGINEER

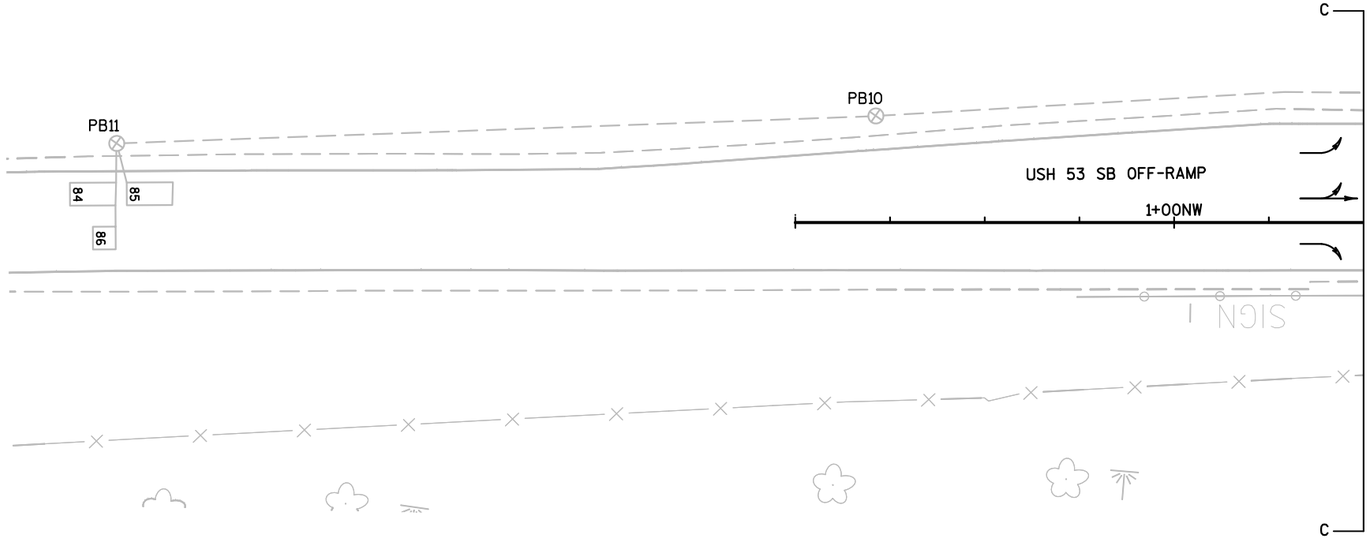
REGION CONTACT: DAVID FENSKE
DESIGNED BY: ---------
REVISED BY: KL ENGINEERING

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SHEET 41	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\024201-SP.DWG PLOT DATE : 1/31/2017 3:12 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2





TRAFFIC CONTROL SIGNAL
CTH AA & USH 53 SB RAMPS
CITY OF EAU CLAIRE
EAU CLAIRE COUNTY

SIGNAL NO. S18-0673

REGION CONTACT: DAVID FENSKE
DESIGNED BY: --------
REVISED BY: KL ENGINEERING

PAGE 2 OF 2

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SHEET 42	E

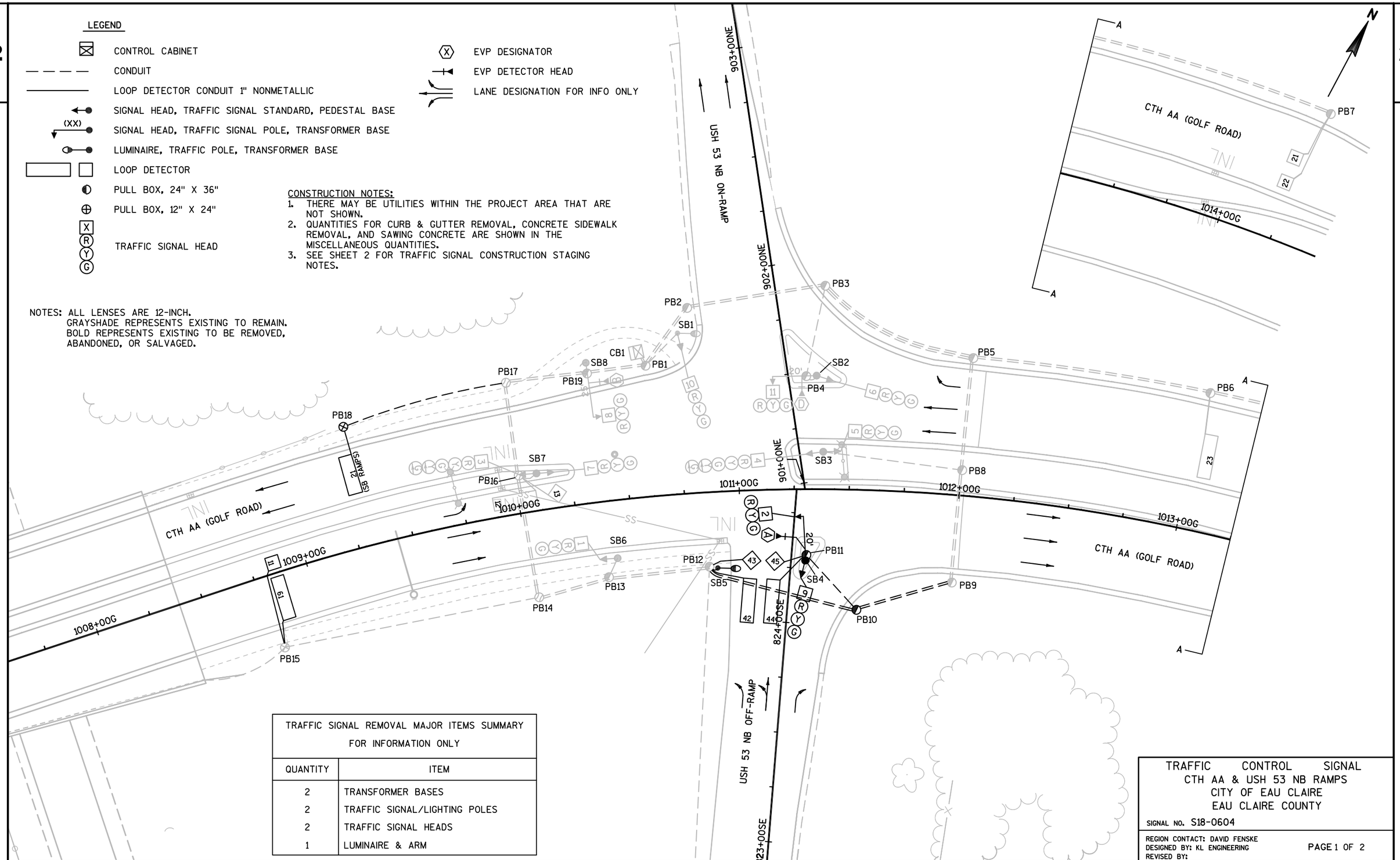
2

LEGEND

- CONTROL CABINET
- CONDUIT
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR
- PULL BOX, 24" X 36"
- PULL BOX, 12" X 24"
- X / R / Y / G TRAFFIC SIGNAL HEAD
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- LANE DESIGNATION FOR INFO ONLY

CONSTRUCTION NOTES:
1. THERE MAY BE UTILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. QUANTITIES FOR CURB & GUTTER REMOVAL, CONCRETE SIDEWALK REMOVAL, AND SAWING CONCRETE ARE SHOWN IN THE MISCELLANEOUS QUANTITIES.
3. SEE SHEET 2 FOR TRAFFIC SIGNAL CONSTRUCTION STAGING NOTES.

NOTES: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING TO REMAIN.
BOLD REPRESENTS EXISTING TO BE REMOVED, ABANDONED, OR SALVAGED.



TRAFFIC SIGNAL REMOVAL MAJOR ITEMS SUMMARY
FOR INFORMATION ONLY

QUANTITY	ITEM
2	TRANSFORMER BASES
2	TRAFFIC SIGNAL/LIGHTING POLES
2	TRAFFIC SIGNAL HEADS
1	LUMINAIRE & ARM

TRAFFIC CONTROL SIGNAL
CTH AA & USH 53 NB RAMPS
CITY OF EAU CLAIRE
EAU CLAIRE COUNTY

SIGNAL NO. S18-0604

REGION CONTACT: DAVID FENSKE
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL REMOVAL & STAGING PLAN	SHEET 43	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\024001-SR.DWG PLOT DATE : 1/31/2017 3:17 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : **********

2

CONSTRUCTION STAGING NOTES

GENERAL NOTES:

1. CONTRACTOR TO NOTIFY WISDOT NORTHWEST REGION ELECTRICAL UNIT (715-839-3787) 2 WEEKS PRIOR TO STARTING WORK ON CTH AA & USH 53 RAMP SIGNALS.
2. CONTRACTOR TO NOTIFY CITY OF EAU CLAIRE TRAFFIC ENGINEER (715-839-4934) FOR LIGHTING CONDUCTOR ADJUSTMENT 2 WEEKS PRIOR TO STARTING WORK ON CTH AA & USH 53 RAMP SIGNALS.
3. CONTRACTOR IS TO SAW CUT LOOPS PRIOR TO FINAL OVERLAY WHEN LOOPS ARE TO BE PLACED WITHIN MILL AND OVERLAY LIMITS.
4. WISDOT TO INSTALL & MAINTAIN NON-INTRUSIVE DETECTION EQUIPMENT FOR CONSTRUCTION ACTIVITIES.

PRIOR TO MILLING ACTIVITIES ON USH 53 RAMPS AND CTH AA (GOLF RD.):

1. CONTRACTOR TO INSTALL PROPOSED CONCRETE BASE AS WELL AS CONNECTING CONDUIT FOR SB6 AT LEAST 2 WEEKS IN ADVANCE OF WISDOT INSTALLING CABLING AND ABOVE GROUND SIGNAL EQUIPMENT FOR SB6.
2. CONTRACTOR TO INSTALL PROPOSED PB10 & PB12 AND COMPLETE BORE CONNECTING THE PULL BOXES. ENSURE ADEQUATE DEPTH IS ACHIEVED WHERE FUTURE PAVEMENT WIDENING WILL OCCUR.
3. CONTRACTOR TO INSTALL CONDUIT LINK BETWEEN PB9 & PB10 AND PB12 & PB16.

STAGE 3C WORK - USH 53 NB OFF RAMP & ON RAMP AT CTH AA (GOLF RD.):

1. CONTRACTOR TO REMOVE EXISTING SB4, PB11, & PB10. ABANDON EXISTING CONDUITS AS SHOWN.
2. CONTRACTOR TO FURNISH & INSTALL PROPOSED TRAFFIC SIGNAL EQUIPMENT ON THE USH 53 NB OFF RAMP TERMINAL INCLUDING: PB11, SB7, SB8, LOOPS 42-45, AND CONDUIT AS SHOWN ON THE PLAN.
3. CONTRACTOR TO INSTALL SB3 AND RAMP GATE EQUIPMENT, SB14, AND CONDUIT AT THE USH 53 NB ON RAMP TERMINAL AS SHOWN ON THE PLAN.
4. CONTRACTOR TO INSTALL ALL PEDESTRIAN SIGNAL EQUIPMENT ON SIGNAL POLES INSTALLED IN THIS STAGE AS SHOWN ON THE PLANS.
5. CONTRACTOR TO INSTALL CABLING FOR WORK COMPLETED IN THIS STAGE.

STAGE 3D WORK - CTH AA (GOLF RD.) OUTSIDE LANES:

1. CONTRACTOR TO INSTALL COMPLETE OUTSIDE LOOP CONDUIT AFTER MILLING OPERATIONS.
2. CONTRACTOR TO INSTALL INSIDE LANE LOOP LEADS FROM THE PULL BOX TO THE STAGE 3D MILLING EDGE. LOOP INSTALLATION TO BE COMPLETED AFTER MILLING IN STAGE 3E.
3. CONTRACTOR TO INSTALL PB22 AND CONDUIT TO PB21.
4. NOTE- WORK AT THIS INTERSECTION INCLUDES INSTALLATION OF SB RAMP LOOPS 21 & 22.

STAGE 3E WORK - CTH AA (GOLF RD.) INSIDE & TURN LANES:

1. CONTRACTOR TO COMPLETE INSTALLATION OF INSIDE LANE LOOP CONDUIT.
2. NOTE- WORK AT THIS INTERSECTION INCLUDES INSTALLATION OF SB RAMP LOOP 21.

NON-STAGE SPECIFIC WORK

1. CONTRACTOR TO INSTALL SB4 AND RAMP GATE EQUIPMENT AS WELL AS ANY NECESSARY CABLING.
2. CONTRACTOR TO INSTALL SB9, SB13, AND ALL REMAINING PEDESTRIAN SIGNAL HEADS, PEDESTRIAN PUSH BUTTONS, & ANY NECESSARY CABLING.

TRAFFIC CONTROL SIGNAL
CTH AA & USH 53 NB RAMPS
CITY OF EAU CLAIRE
EAU CLAIRE COUNTY

SIGNAL NO. S18-0673

REGION CONTACT: DAVID FENSKE
DESIGNED BY: KL ENGINEERING
REVISED BY:

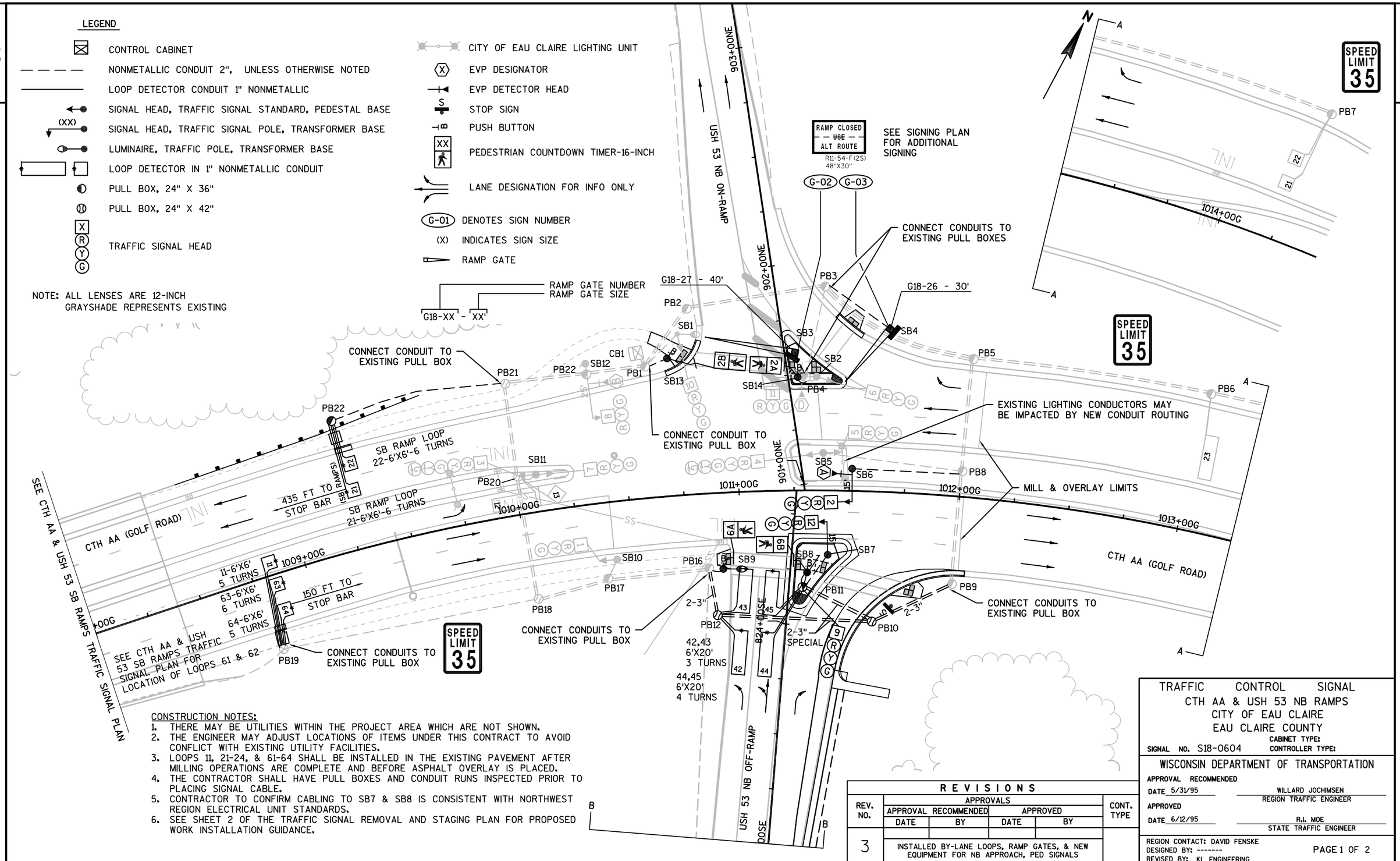
PAGE 2 OF 2

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL REMOVAL AND STAGING PLAN	SHEET	E

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- X / R / Y / G TRAFFIC SIGNAL HEAD
- CITY OF EAU CLAIRE LIGHTING UNIT
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- S STOP SIGN
- B PUSH BUTTON
- XX PEDESTRIAN COUNTDOWN TIMER-16-INCH
- LANE DESIGNATION FOR INFO ONLY
- G-01 DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- RAMP GATE
- RAMP GATE NUMBER / RAMP GATE SIZE — G18-XX - XX'

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THERE MAY BE UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE ENGINEER MAY ADJUST LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
3. LOOPS 11, 21-24, & 61-64 SHALL BE INSTALLED IN THE EXISTING PAVEMENT AFTER MILLING OPERATIONS ARE COMPLETE AND BEFORE ASPHALT OVERLAY IS PLACED.
4. THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED PRIOR TO PLACING SIGNAL CABLE.
5. CONTRACTOR TO CONFIRM CABLING TO SB7 & SB8 IS CONSISTENT WITH NORTHWEST REGION ELECTRICAL UNIT STANDARDS.
6. SEE SHEET 2 OF THE TRAFFIC SIGNAL REMOVAL AND STAGING PLAN FOR PROPOSED WORK INSTALLATION GUIDANCE.

REVISIONS					
REV. NO.	APPROVALS				CONT. TYPE
	APPROVAL RECOMMENDED		APPROVED		
	DATE	BY	DATE	BY	
3	INSTALLED BY-LANE LOOPS, RAMP GATES, & NEW EQUIPMENT FOR NB APPROACH, PED SIGNALS				

TRAFFIC CONTROL SIGNAL
CTH AA & USH 53 NB RAMPS
CITY OF EAU CLAIRE
EAU CLAIRE COUNTY

CABINET TYPE:
SIGNAL NO. S18-0604 CONTROLLER TYPE:

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 5/31/95 WILLARD JOCHIMSEN, REGION TRAFFIC ENGINEER

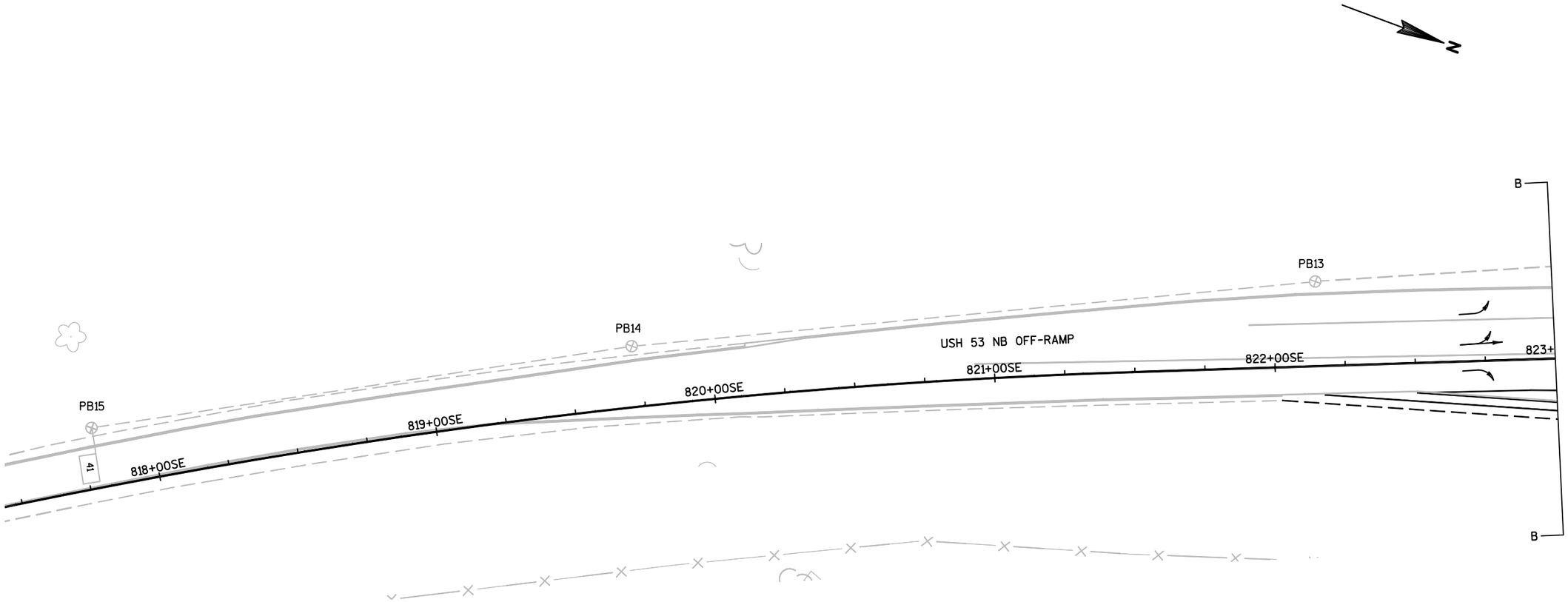
APPROVED
DATE 6/12/95 R.I. MOE, STATE TRAFFIC ENGINEER

REGION CONTACT: DAVID FENSKE
DESIGNED BY: -------
REVISED BY: KL ENGINEERING

PAGE 1 OF 2

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SHEET 45	E

2



TRAFFIC CONTROL SIGNAL
CTH AA & USH 53 NB RAMPS
CITY OF EAU CLAIRE
EAU CLAIRE COUNTY

SIGNAL NO. S18-0604

REGION CONTACT: DAVID FENSKE
DESIGNED BY: --------
REVISED BY: KL ENGINEERING

PAGE 2 OF 2

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SHEET 46	E

2

STA. 583+61.00NWL
BEGIN CONSTRUCTION

IH 94 NW LOOP RAMP

IH 94 NW RAMP

STA. 203+60.00CD
BEGIN CONSTRUCTION

STA. 592+95.00NW
BEGIN CONSTRUCTION

STA. 41+00.00SB
BEGIN CONSTRUCTION

37SB 38SB 39SB 40SB 41SB 42SB 43SB 44SB 45SB 46SB 47SB 48SB 49SB 50SB 51SB

202CD 203CD 204CD 205CD 206CD 207CD 208CD 209CD 210CD 211CD 212CD

580+00NWL 581+00NWL 582+00NWL 583+00NWL

590NW 591NW 592NW 593NW 594NW 595NW 596NW 597NW

15' 12'

SB USH 53

MATCH LINE STA. 55+00NB

40NB 41NB 42NB 43NB 44NB 45NB 46NB 47NB 48NB 49NB 50NB 51NB 52NB 53NB 54NB

555NE

24'

NB USH 53

STA. 43+20.00NB
BEGIN PROJECT 1190-02-81

IH 94 NE LOOP RAMP

IH 94 NE RAMP

STA. 557+00.00NE
BEGIN CONSTRUCTION

555NE 556NE 557NE 558NE 559NE 560NE 561NE 562NE 563NE 564NE 565NE 566NE

SIGN

INL FO

PAVEMENT MARKING LEGEND

(1) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
(2) PAVEMENT MARKING EPOXY 4-INCH, WHITE
(3) PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP)
(5) PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH, WHITE

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PAVEMENT MARKING	SHEET 47 E

2

COMMONWEALTH AVE

KEYSTONE CROSSING

GATEWAY DR

SB USH 53

NB USH 53

MATCH LINE STA. 55+00NB

MATCH LINE STA. 70+00NB

598NW 599NW 600NW 214CD 215CD 216CD 217CD 218CD 219CD 220CD 221CD 222CD 223CD 224CD 225CD 226CD 227CD

53SB 54SB 55SB 56SB 57SB 58SB 59SB 60SB 61SB 62SB 63SB 64SB 65SB 66SB

56NB 57NB 58NB 59NB 60NB 61NB 62NB 63NB 64NB 65NB 66NB 67NB 68NB 69NB

550NE 551NE 552NE 553NE 554NE

802GSE 803GSE

12' 15'

BERM

SIGN

INL

OH

W

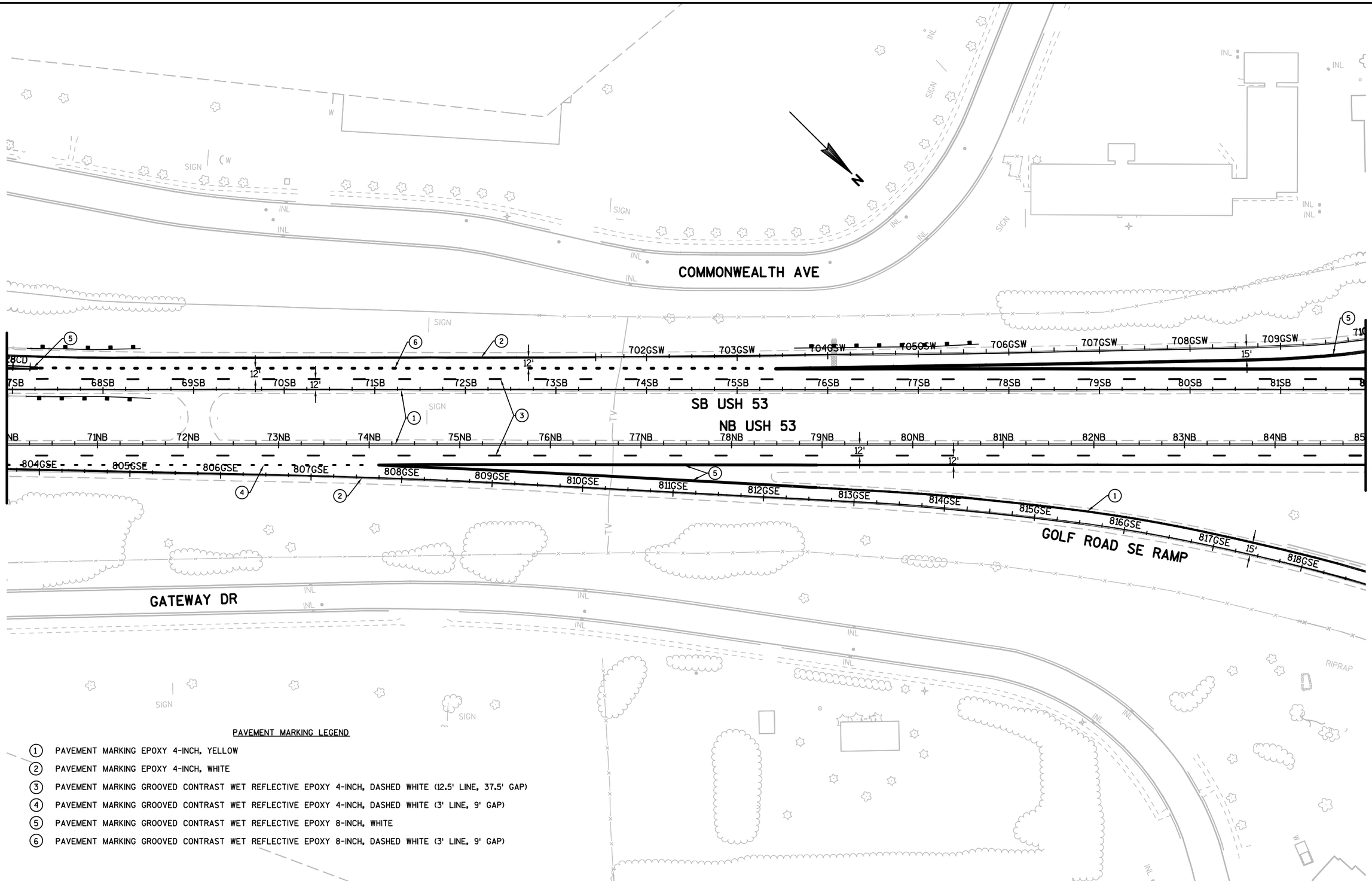
PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH, YELLOW
2. PAVEMENT MARKING EPOXY 4-INCH, WHITE
3. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP)
4. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH, DASHED WHITE (3' LINE, 9' GAP)
5. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH, WHITE

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PAVEMENT MARKING	SHEET 48	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\024501_PM.DWG PLOT DATE : 10/29/2016 9:44 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (2)

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH, YELLOW
2. PAVEMENT MARKING EPOXY 4-INCH, WHITE
3. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP)
4. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH, DASHED WHITE (3' LINE, 9' GAP)
5. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH, WHITE
6. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH, DASHED WHITE (3' LINE, 9' GAP)

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PAVEMENT MARKING	SHEET 49	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\024501_PM.DWG PLOT DATE : 10/29/2016 9:44 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (3)
WISDOT/CADDS SHEET 42

2

MATCH LINE STA. 1003+00GR

STA. 1001+00.00GR
BEGIN CONSTRUCTION

MATCH LINE STA. 1003+00GR

GOLF ROAD NW RAMP

GOLF ROAD SW RAMP

CTH AA/GOLF ROAD

SB USH 53

NB USH 53

MATCH LINE STA. 85+00NB

MATCH LINE STA. 100+00NB

GOLF ROAD SE RAMP

GOLF ROAD NE RAMP

S HASTINGS WAY

STA. 1012+00.00GR
END CONSTRUCTION

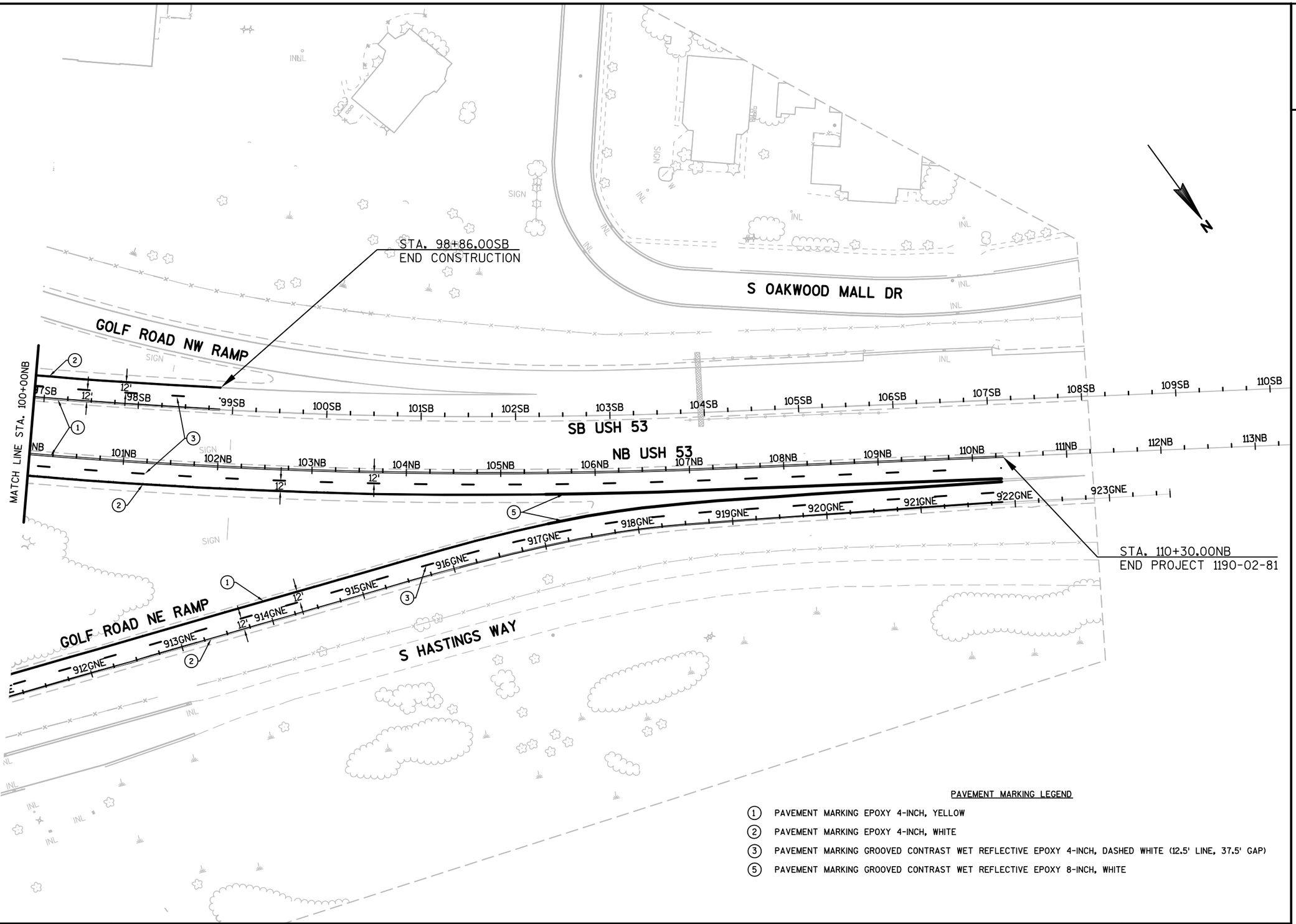
PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH, YELLOW
2. PAVEMENT MARKING EPOXY 4-INCH, WHITE
3. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP)
4. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH, DASHED WHITE (3' LINE, 9' GAP)
5. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH, WHITE
6. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH, DASHED WHITE (3' LINE, 9' GAP)
7. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
8. PAVEMENT MARKING CROSSWALK EPOXY 6-INCH
9. PAVEMENT MARKING ISLAND NOSE EPOXY
10. PAVEMENT MARKING CURB EPOXY
11. PAVEMENT MARKING ARROWS EPOXY TYPE 2
12. PAVEMENT MARKING ARROWS EPOXY TYPE 3
13. PAVEMENT MARKING WORDS EPOXY
14. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (10' SPACING)

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PAVEMENT MARKING	SHEET 50	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\024501_PM.DWG PLOT DATE : 1/31/2017 11:57 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (4)

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH, YELLOW
2. PAVEMENT MARKING EPOXY 4-INCH, WHITE
3. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP)
5. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH, WHITE

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PAVEMENT MARKING	SHEET 51	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\024501_PM.DWG PLOT DATE : 10/29/2016 9:44 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (5)

2

SEE USH 53 TRAFFIC CONTROL SHEETS FOR ADVANCED SIGNING DETAILS

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

SEE S.D.D. TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

CONSTRUCTION OPERATIONS

STAGE 1A
- FILL RUMBLE STRIP ON OUTSIDE SHOULDER OF NB & SB USH 53

STAGE 1B
- SPOT CONCRETE PAVEMENT REPAIR ALONG NB & SB USH 53

53

B-18-99

HASTINGS WAY

OAKWOOD MALL DRIVE

COUNTY AA

N

GOLF ROAD

GATEWAY DRIVE

B-18-38

COMMON WEALTH AVENUE

KEYSTONE CROSSING

B-18-37

B-18-36

OAKWOOD HILLS PARKWAY

INTERSTATE 94

B-18-35

SEE USH 53 TRAFFIC CONTROL SHEETS FOR ADVANCED SIGNING DETAILS

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

SEE S.D.D. TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

TRAFFIC OPERATIONS

STAGE 1A
- REDUCE USH 53 TRAFFIC TO SINGLE LANE & SHIFT TO PASSING LANE.

STAGE 1B
- REDUCE USH 53 TRAFFIC TO SINGLE LANE & SHIFT TO PASSING OR DRIVING LANE.

INTERSTATE 94

53

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC CONTROL OVERVIEW STAGE 1	SHEET 52	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\025001-TC.DWG PLOT DATE : 10/31/2016 6:47 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ******
LAYOUT NAME - ****

WISDOT/CADDS SHEET 42

2

SEE USH 53 TRAFFIC CONTROL SHEETS FOR ADVANCED SIGNING DETAILS

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

SEE S.D.D. TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

CONSTRUCTION OPERATIONS

STAGE 2A
- MILL 3.5" PASSING LANE AND SHOULDER.
- MILL TEMPORARY LONGITUDINAL JOINT ALONG ROADWAY CENTERLINE.
- PAVE 1.75" LOWER LIFT ON PASSING LANE AND INSIDE SHOULDER.
- INSTALL NEW SIGN BRIDGES/BEAM GUARD ALONG USH 53

STAGE 2B
- MILL 3.5" DRIVING LANE.
- MILL 1.75" ON OUTSIDE SHOULDER.
- PAVE 1.75" LOWER LIFT ON DRIVING LANE.

TRAFFIC OPERATIONS

STAGE 2A
- REDUCE USH 53 TRAFFIC TO SINGLE LANE & SHIFT TO DRIVING LANES.

STAGE 2B
- REDUCE USH 53 TRAFFIC TO SINGLE LANE & SHIFT TO PASSING LANES.

SEE USH 53 TRAFFIC CONTROL SHEETS FOR ADVANCED SIGNING DETAILS

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

SEE S.D.D. TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC CONTROL OVERVIEW STAGE 2	SHEET 53	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\025001-TC.DWG PLOT DATE : 10/31/2016 6:48 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ******
LAYOUT NAME - ****

WISDOT/CADDS SHEET 42

SEE USH 53 TRAFFIC CONTROL SHEETS FOR ADVANCED SIGNING DETAILS

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

SEE S.D.D. TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

53

OAKWOOD MALL DRIVE

HASTINGS WAY

GOLF ROAD NE RAMP

COUNTY AA

B-18-99

GOLF ROAD SE RAMP

GOLF ROAD NW RAMP

GOLF ROAD

GOLF ROAD SW RAMP

GATEWAY DRIVE

B-18-38

B-18-37

COMMON WEALTH AVENUE

KEYSTONE CROSSING

COLLECTOR DISTRIBUTOR ROAD

IH 94 NE RAMP

B-18-35

B-18-36

OAKWOOD HILLS PARKWAY

IH 94 NW RAMP

IH 94 NW LOOP RAMP

INTERSTATE 94

INTERSTATE 94

53

N

CONSTRUCTION OPERATIONS

STAGE 3A
- PAVE 1.75" UPPER LAYER ON PASSING LANE AND INSIDE SHOULDER.
- PAVE TEMPORARY LONGITUDINAL JOINT WEDGE ALONG ROADWAY CENTERLINE.

STAGE 3B
- PAVE 1.75" UPPER LAYER ON DRIVING LANE.
- PAVE 1.75" UPPER LAYER ON OUTSIDE SHOULDER.

STAGE 3C
- MILL 2" AND PAVE 2" ON USH 53 SB AUXILIARY LANE AND COLLECTOR-DISTRIBUTOR ROAD.
- MILL 2" AND PAVE 2" ON IH 94 RAMPS, CONSTRUCT NE RAMP ONE-HALF AT A TIME. CONSTRUCT NW RAMP & NW LOOP RAMP ALONGSIDE AUXILIARY LANE.
- MILL 2" AND PAVE 2" ON GOLF ROAD RAMPS, CONSTRUCT RAMPS ONE-HALF AT A TIME (NE RAMP, SE RAMP, & SW RAMP).
- CONCRETE PAVEMENT REPLACEMENT ON GOLF ROAD RAMP (NW RAMP).
- RECONSTRUCT GOLF ROAD SE RAMP TERMINAL

STAGE 3D-3E-3F
- MILL 1.5" ON GOLF ROAD AND PAVE 2.5" ON GOLF ROAD
- INSTALL PERMANENT SIGNALS ON GOLF ROAD

TRAFFIC OPERATIONS

STAGE 3A
- REDUCE USH 53 TRAFFIC TO SINGLE LANE & SHIFT TO DRIVING LANES.

STAGE 3B
- REDUCE USH 53 TRAFFIC TO SINGLE LANE & SHIFT TO PASSING LANES.

STAGE 3C
- CLOSE USH 53 SB AUXILLARY LANE AND COLLECTOR DISTRIBUTER ROAD. (ROUTE IH 94 NW RAMP TRAFFIC VIA SB USH 53 - USH 53 ROUNDABOUT - NB USH 53 - NE LOOP RAMP).
- CLOSE IH 94 NW LOOP RAMP (ROUTE IH 94 NW LOOP RAMP TRAFFIC VIA IH 94 NE RAMP - NB USH 53 - GOLF ROAD SE RAMP - GOLF ROAD - GOLF ROAD SW RAMP).
- SHIFT IH 94 NE RAMP ONTO LANE/SHOULDER.
- SHIFT GOLF ROAD SE RAMP ONTO LANE/SHOULDER.
- SHIFT GOLF ROAD SW RAMP ONTO LANE/SHOULDER.
- REDUCE GOLF ROAD NE RAMP TO SINGLE LANE.
- REDUCE GOLF ROAD NW RAMP TO SINGLE LEFT TURN LANE DURING PEAK HOURS AND CLOSE BOTH LEFT TURN LANES DURING OFF-PEAK HOURS.

STAGE 3D-3E-3F
- REDUCE GOLF ROAD TRAFFIC TO SINGLE LANE.

SEE USH 53 TRAFFIC CONTROL SHEETS FOR ADVANCED SIGNING DETAILS

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

SEE S.D.D. TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC CONTROL OVERVIEW STAGE 3	SHEET 54	E

TRAFFIC CONTROL NOTES

1. COVER OR REMOVE CONFLICTING TRAFFIC SIGNS AS DIRECTED BY THE ENGINEER.

2. A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE THE WORK ZONE IF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER. HOWEVER THE CONTRACTOR MAY NOT USE FLAG PERSONS TO DIRECT, STOP, OR CONTROL TRAFFIC ON USH 53 AT ANY TIME.

3. DURING NIGHTTIME OPERATIONS ALL DRUMS IN TAPERS WILL HAVE A TYPE C WARNING LIGHT.

4. EQUIP TYPE III BARRICADES WITH TYPE A WARNING LIGHTS PER STANDARD DETAIL DRAWINGS.

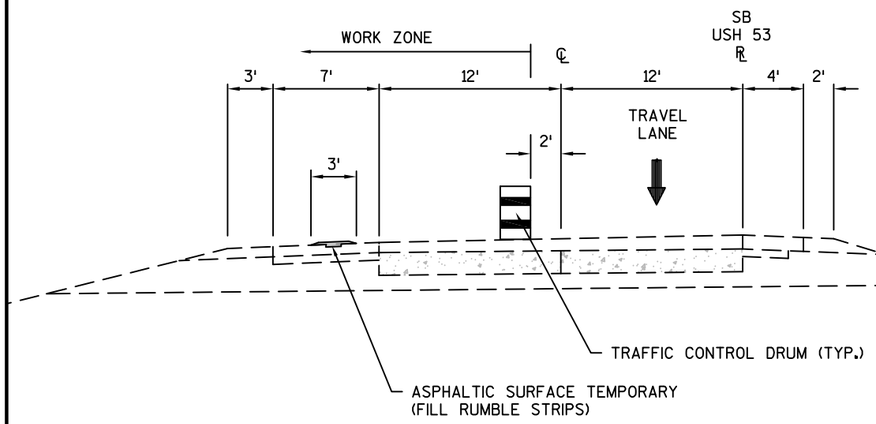
5. TRAFFIC CONTROL PLANS FOR USH 53 PROVIDE SUGGESTED STAGING WITH TRAFFIC CONTROL DEVICE LOCATIONS. STAGING MAY BE ALTERED WITH APPROVAL OF THE ENGINEER.

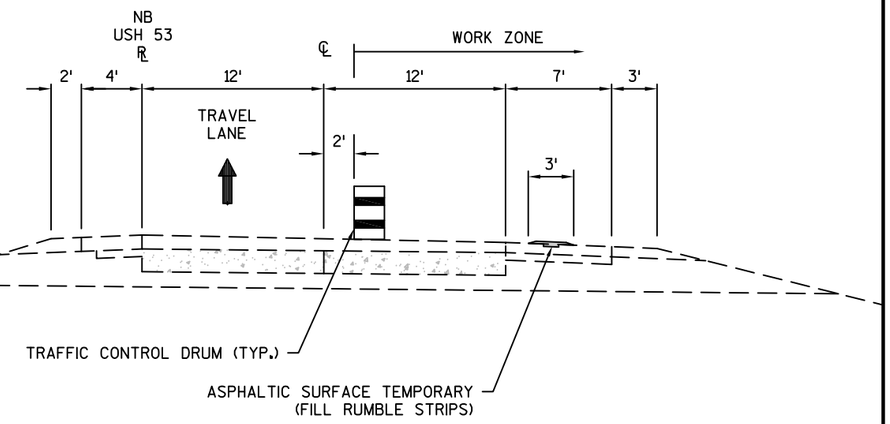
6. FOR LANE CLOSURES SEE SDD 'TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION' AND THE DETAIL FOR TRAFFIC CONTROL ADVANCED WARNING.

7. FOR EXIT AND ENTRANCE RAMPS SEE SDD 'TRAFFIC CONTROL. EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE'.

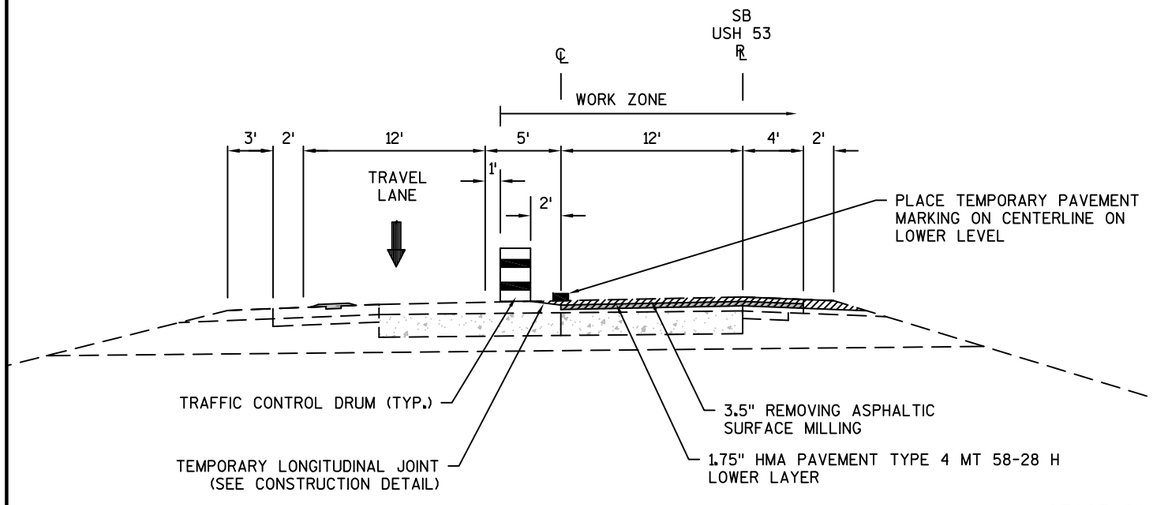
SPEED REDUCTION

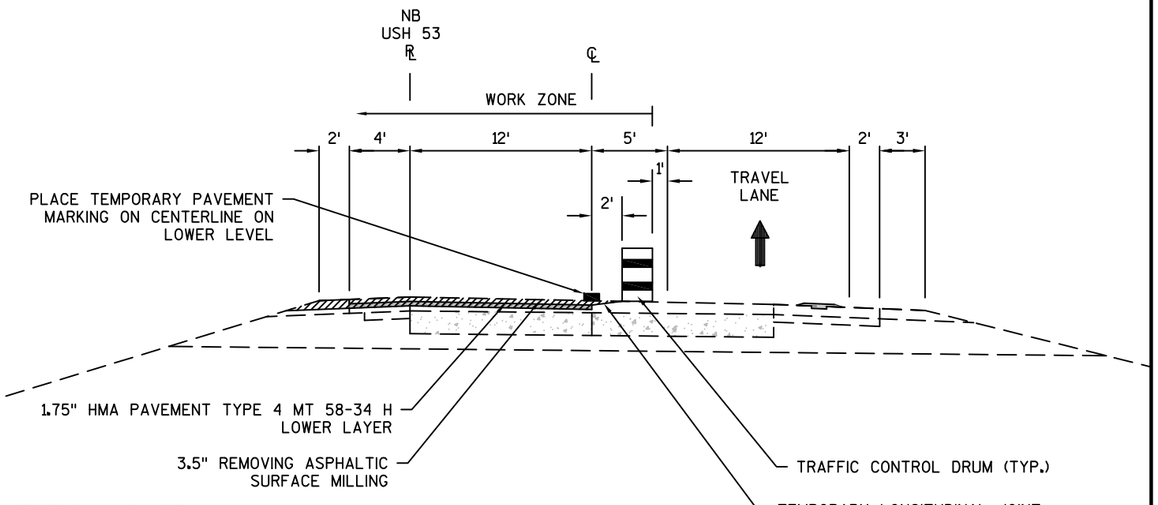
REDUCE THE SPEED LIMIT ON USH 53 TO 55 MPH WHEN WORK IS BEING PERFORMED ON USH 53. SEE THE PLAN SHEET FOR TRAFFIC CONTROL ADVANCED WARNING FOR REQUIRED TRAFFIC CONTROL SIGNS.





STAGE 1A/1B TYPICAL SECTION, USH 53
FILLING RUMBLE STRIPS
ON OUTSIDE SHOULDERS



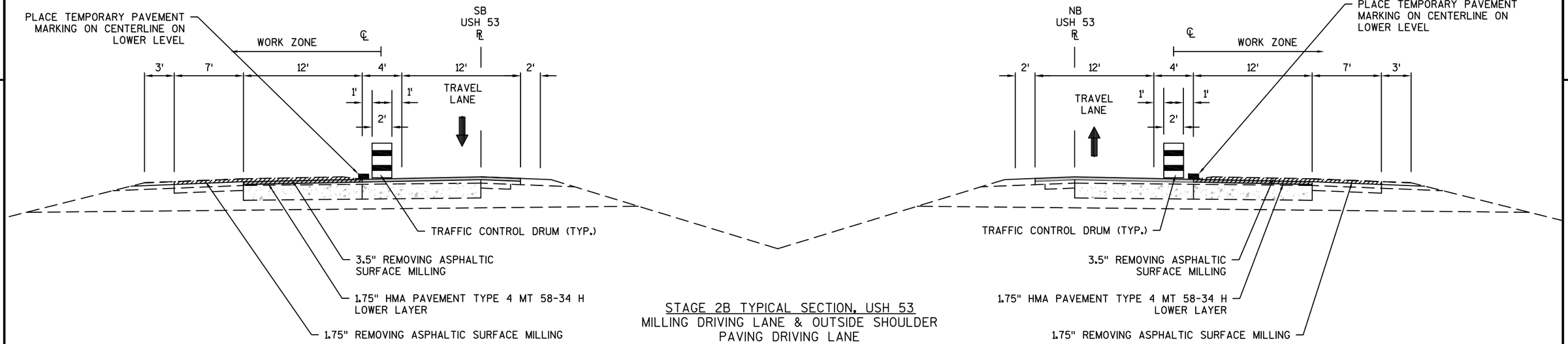


STAGE 2A TYPICAL SECTION, USH 53
MILLING PASSING LANE & INSIDE SHOULDER
PAVING PASSING LANE & INSIDE SHOULDER
LOWER LAYER

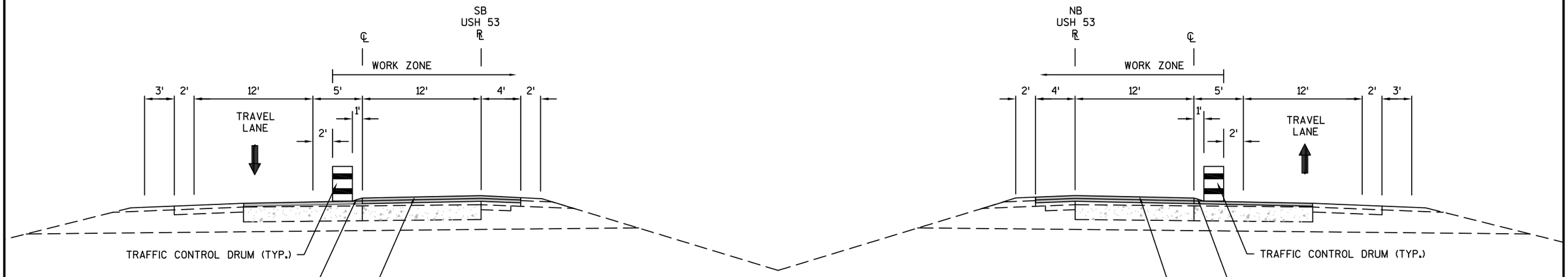
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION STAGING TYPICAL SECTIONS	SHEET 55	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\CONSTRUCTION STAGING TYPICAL SECTIONS.DWG 17 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - EXISTING TYPICAL SECTIONS - MAIN (2)

WISDOT/CADDS SHEET 42

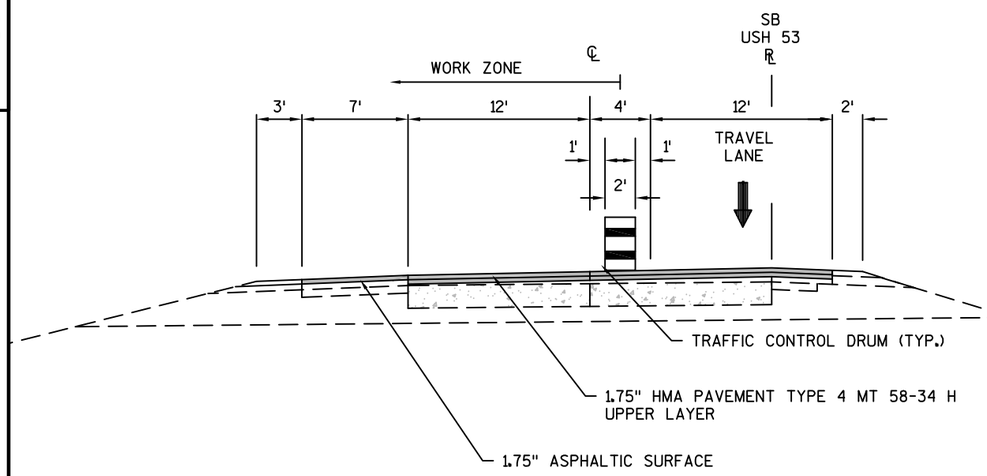


STAGE 2B TYPICAL SECTION, USH 53
MILLING DRIVING LANE & OUTSIDE SHOULDER
PAVING DRIVING LANE
LOWER LAYER

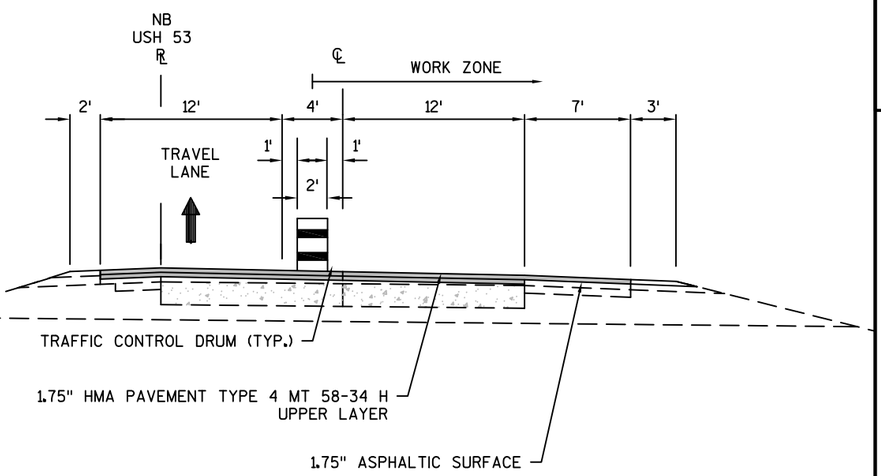


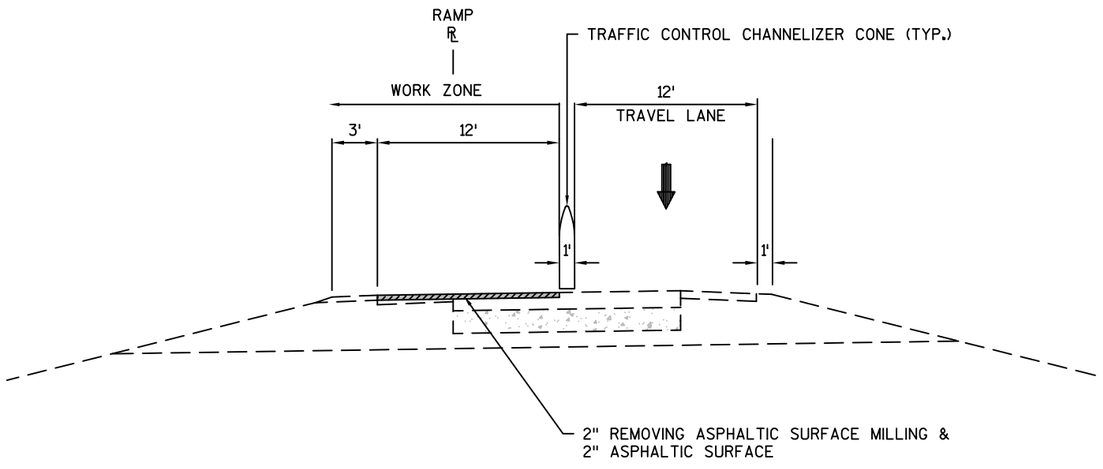
STAGE 3A TYPICAL SECTION, USH 53
PAVING PASSING LANE
AND INSIDE SHOULDER
UPPER LAYER

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION STAGING TYPICAL SECTIONS	SHEET 56	E

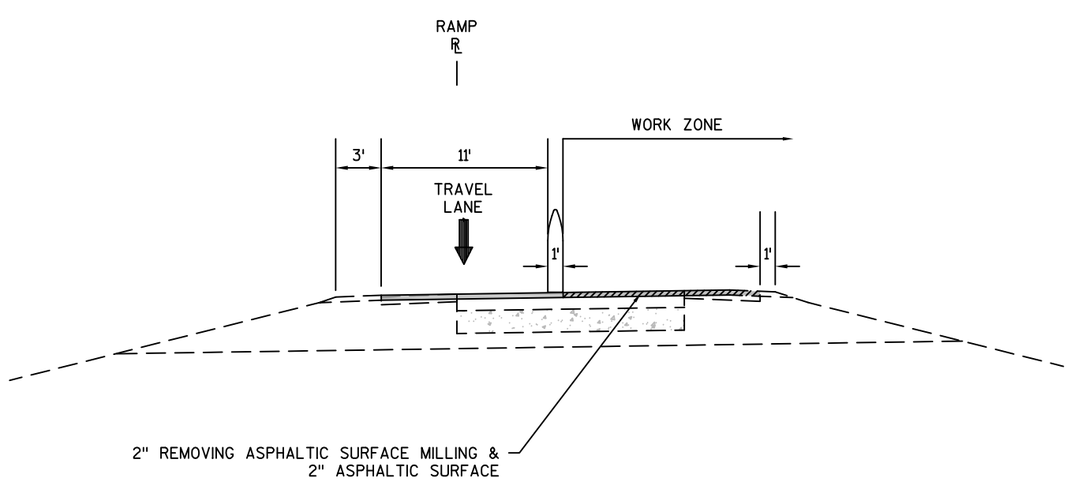


STAGE 3B TYPICAL SECTION, USH 53
PAVING DRIVING LANE
AND OUTSIDE SHOULDER
UPPER LAYER





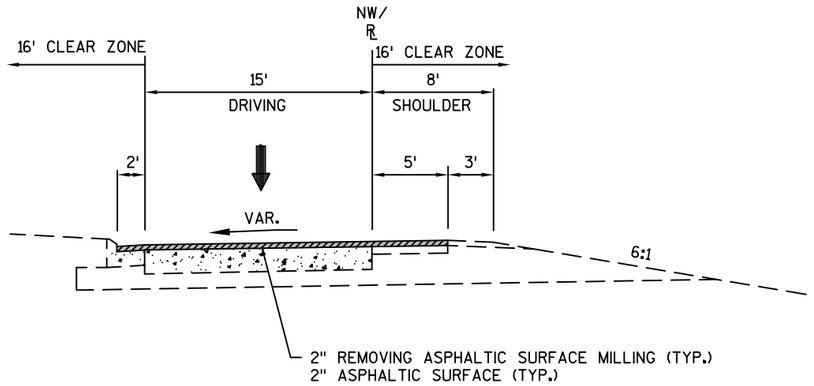
STAGE 3C TYPICAL SECTION, IH 94 NE RAMP
MILLING LEFT LANE & SHOULDER
PAVING LEFT LANE & SHOULDER



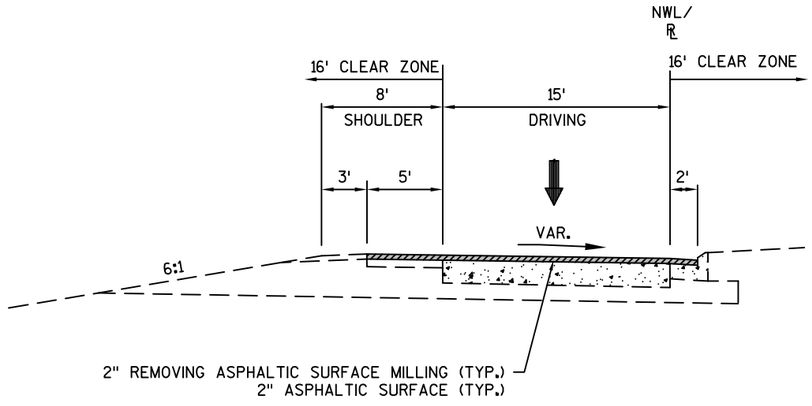
STAGE 3C TYPICAL SECTION, IH 94 NE RAMP
MILLING RIGHT LANE & SHOULDER
PAVING RIGHT LANE & SHOULDER

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION STAGING TYPICAL SECTIONS	SHEET 57	E

2

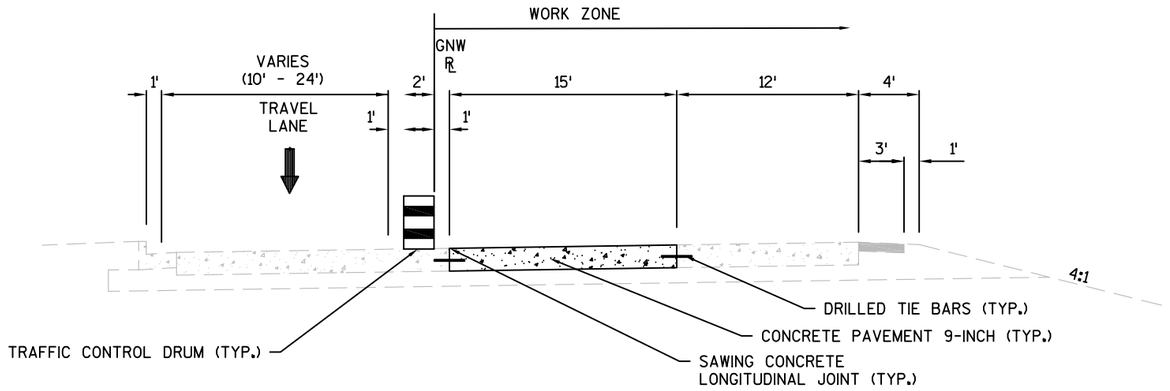


STAGE 3C TYPICAL SECTION, IH 94 NW RAMP
RAMP CLOSED
PAVING FULL LANE & SHOULDER

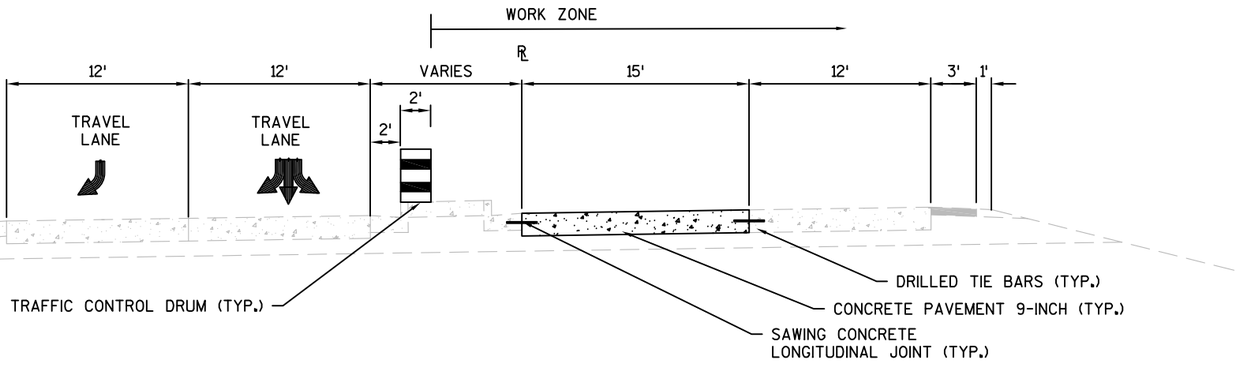


STAGE 3C TYPICAL SECTION, IH 94 NW LOOP RAMP
RAMP CLOSED
PAVING FULL LANE & SHOULDER

2



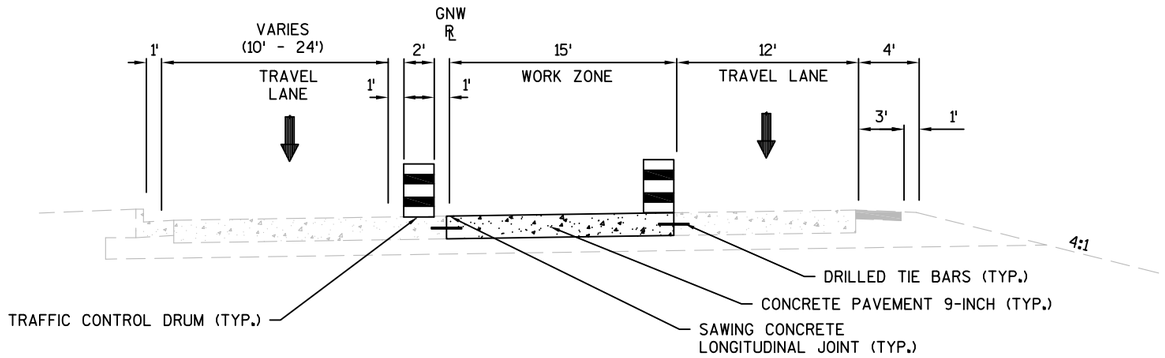
STAGE 3C TYPICAL SECTION, GOLF ROAD NW RAMP
CONCRETE PAVEMENT REPLACEMENT OFF-PEAK HOURS
STA. 1+25'GNW' - STA. 4+76'GNW'



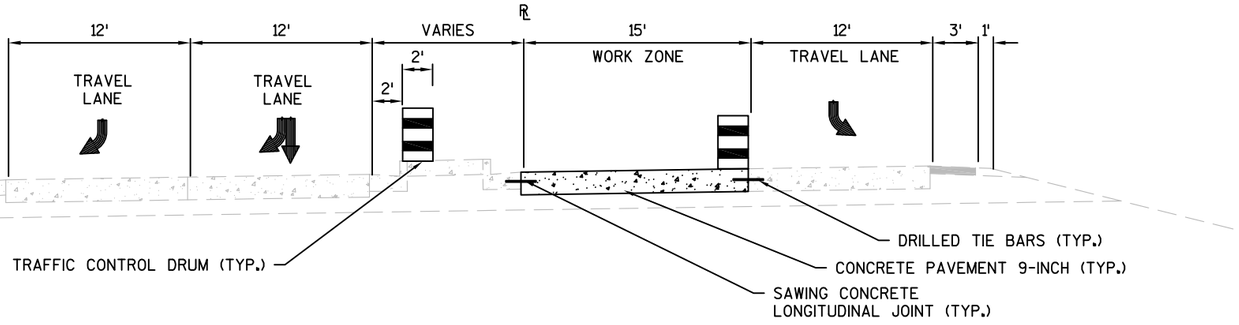
STAGE 3C TYPICAL SECTION, GOLF ROAD NW RAMP
CONCRETE PAVEMENT REPLACEMENT OFF-PEAK HOURS
STA. 4+76'GNW' - STA. 6+35'GNW'

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION STAGING TYPICAL SECTIONS	SHEET 59	E

2



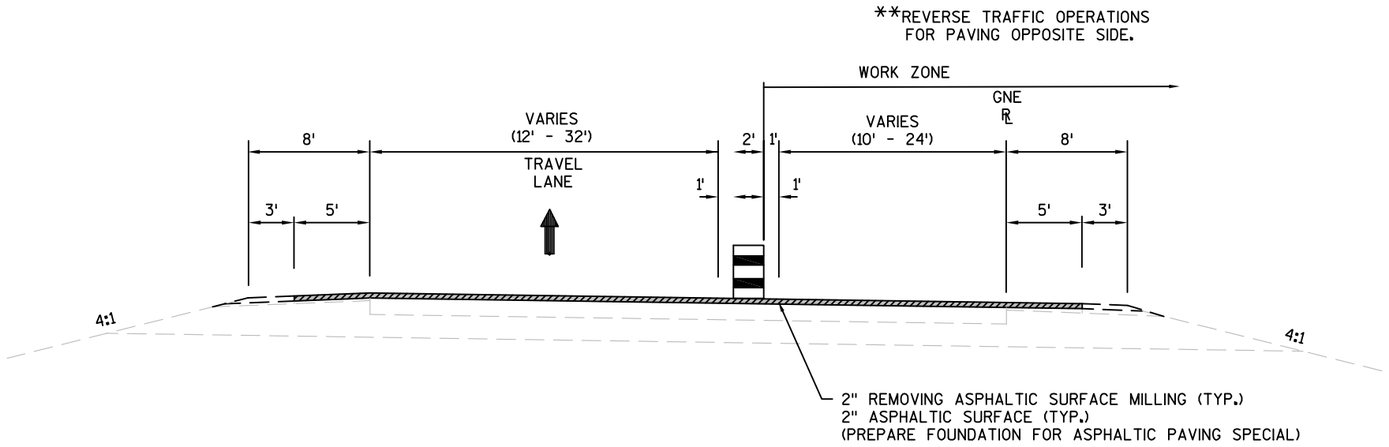
STAGE 3C TYPICAL SECTION, GOLF ROAD NW RAMP
CONCRETE PAVEMENT REPLACEMENT PEAK HOURS
STA. 1+25'GNW' - STA. 4+76'GNW'



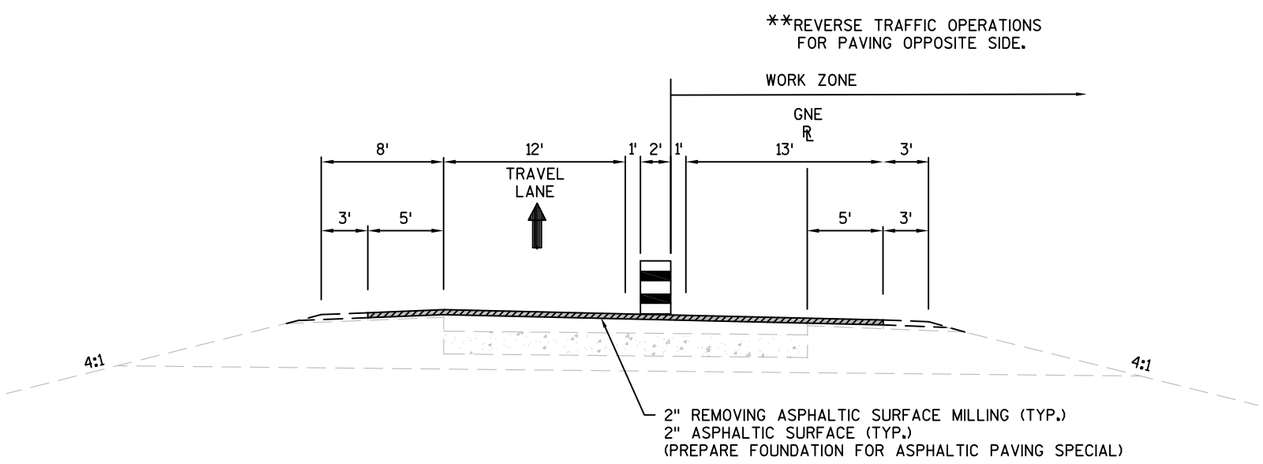
STAGE 3C TYPICAL SECTION, GOLF ROAD NW RAMP
CONCRETE PAVEMENT REPLACEMENT PEAK HOURS
STA. 4+76'GNW' - STA. 6+35'GNW'

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION STAGING TYPICAL SECTIONS	SHEET 60	E

2

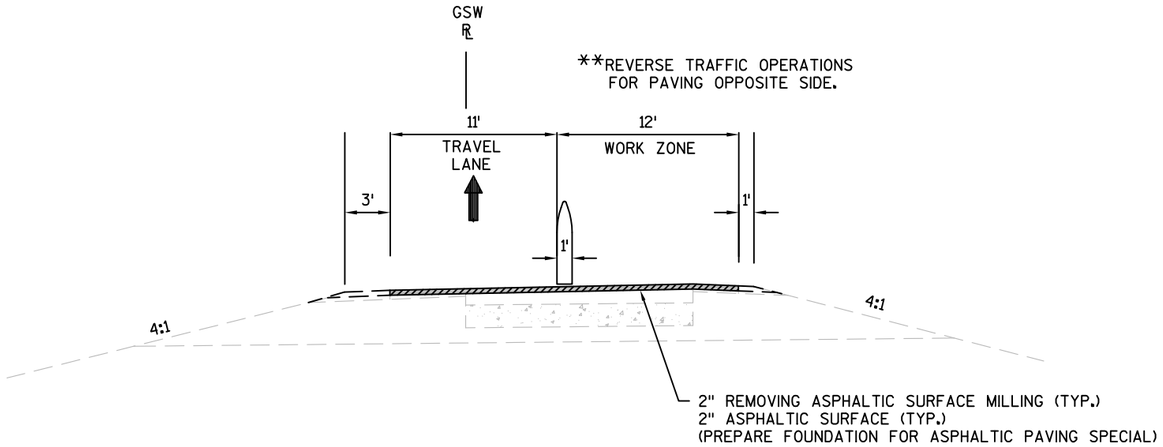


STAGE 3C TYPICAL SECTION, GOLF ROAD NE RAMP
MILLING INSIDE LANE & SHOULDER
PAVING INSIDE LANE & SHOULDER
STA. 901+78'GNE' - STA. 903+07'GNE'

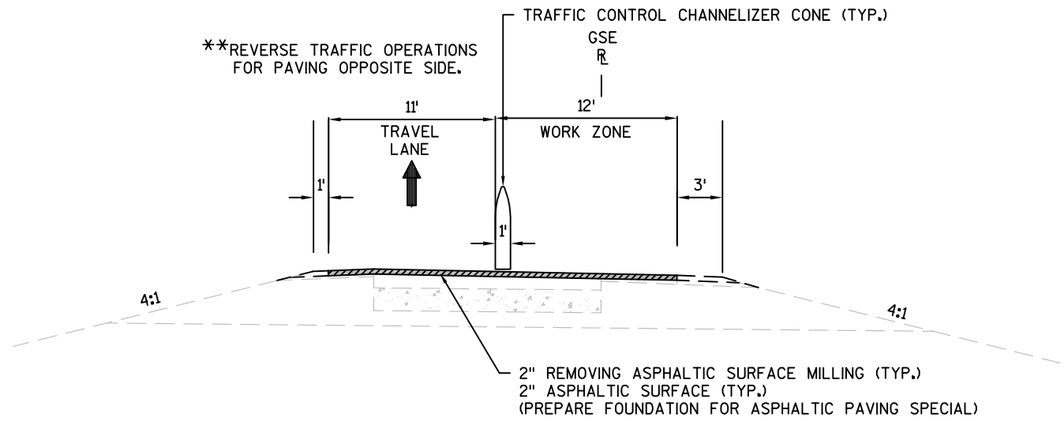


STAGE 3C TYPICAL SECTION, GOLF ROAD NE RAMP
MILLING INSIDE LANE & SHOULDER
PAVING INSIDE LANE & SHOULDER
STA. 903+07'GNE' - STA. 917+57'GNE'

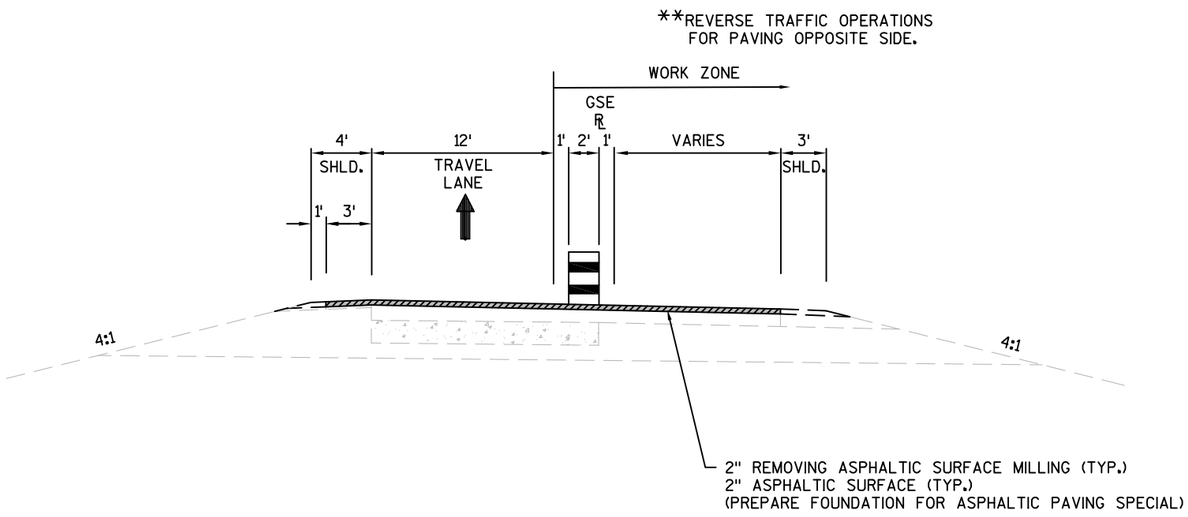
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION STAGING TYPICAL SECTIONS	SHEET 61	E



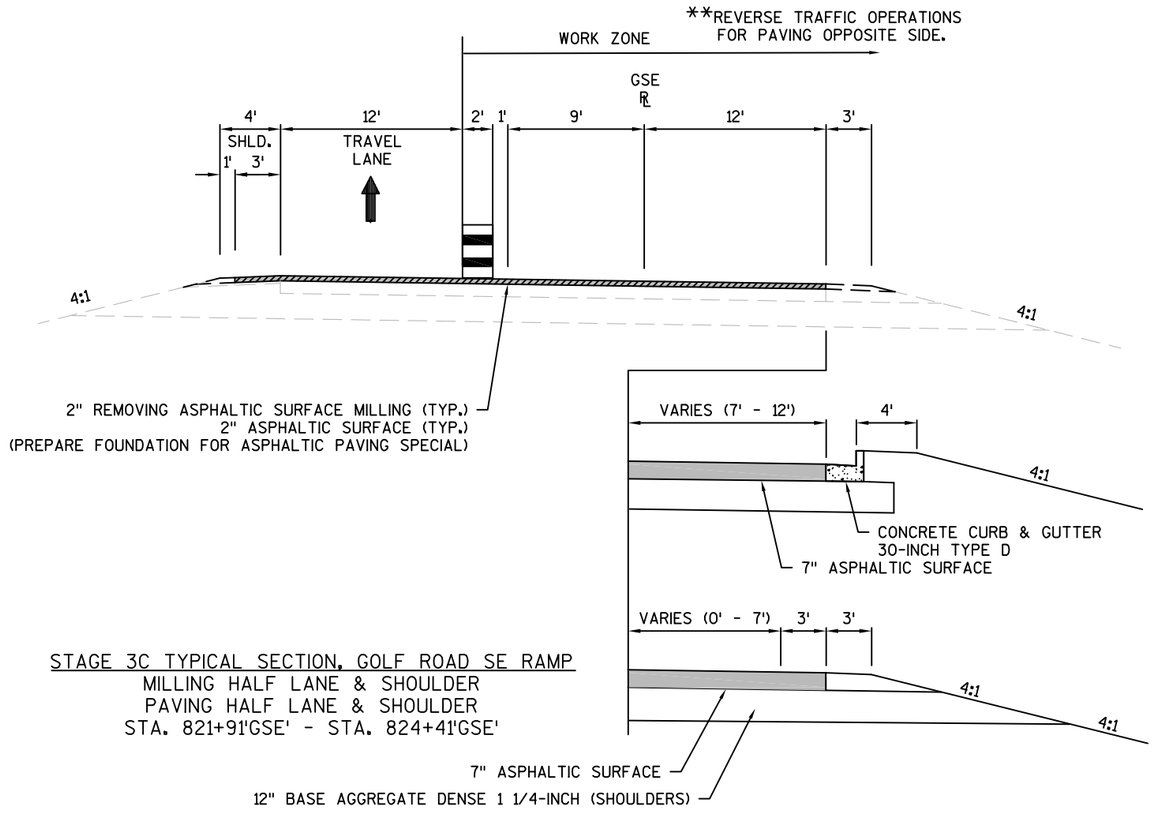
STAGE 3C TYPICAL SECTION, GOLF ROAD SW RAMP
MILLING HALF LANE & SHOULDER
PAVING HALF LANE & SHOULDER



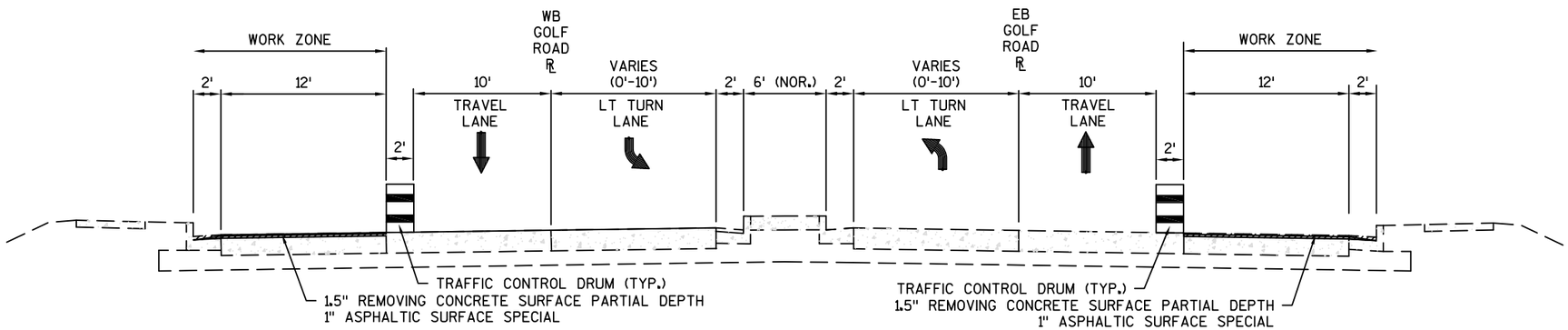
STAGE 3C TYPICAL SECTION, GOLF ROAD SE RAMP
MILLING HALF LANE & SHOULDER
PAVING HALF LANE & SHOULDER
STA. 807+89'GSE' - STA. 819+20'GSE'



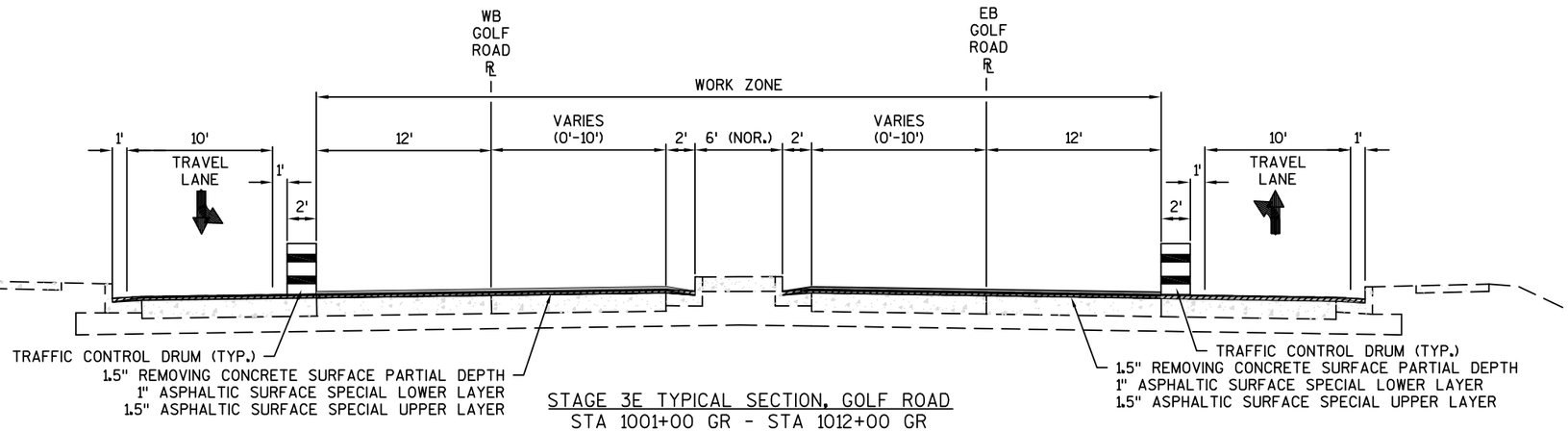
STAGE 3C TYPICAL SECTION, GOLF ROAD SE RAMP
MILLING HALF LANE & SHOULDER
PAVING HALF LANE & SHOULDER
STA. 819+20'GSE' - STA. 821+91'GSE'



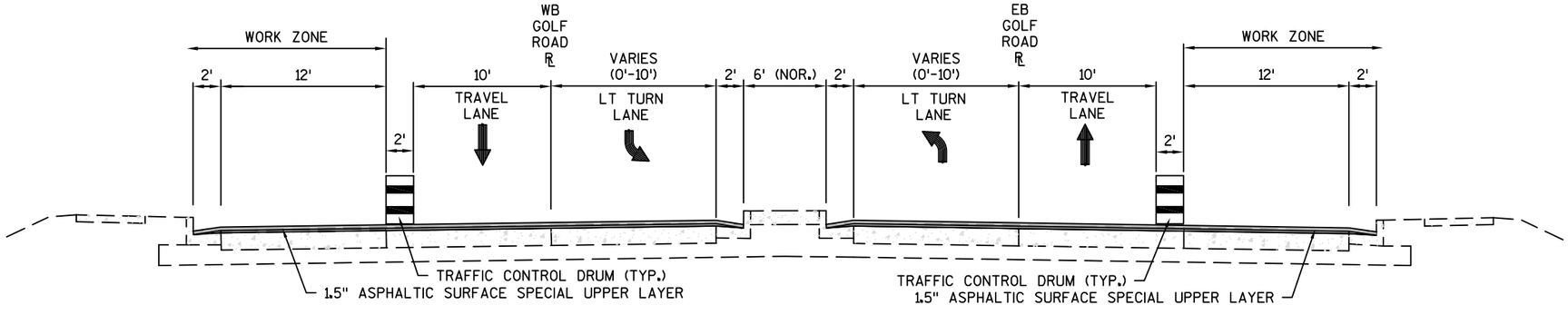
STAGE 3C TYPICAL SECTION, GOLF ROAD SE RAMP
MILLING HALF LANE & SHOULDER
PAVING HALF LANE & SHOULDER
STA. 821+91'GSE' - STA. 824+41'GSE'



STAGE 3D TYPICAL SECTION, GOLF ROAD
STA 1001+00 GR - STA 1012+00 GR
MILLING OUTSIDE LANE
PAVING OUTSIDE LANE LOWER LAYER



STAGE 3E TYPICAL SECTION, GOLF ROAD
STA 1001+00 GR - STA 1012+00 GR
MILLING INSIDE & TURN LANES
PAVING INSIDE & TURN LANES BOTH LAYERS



STAGE 3F TYPICAL SECTION, GOLF ROAD
STA 1001+00 GR - STA 1012+00 GR
PAVING OUTSIDE LANES UPPER LIFT

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CONSTRUCTION STAGING TYPICAL SECTIONS	SHEET 63	E

2

2

OLD TOWN HALL ROAD

IH 94 SW RAMP

IH 94 SW LOOP RAMP

N

LANE CLOSED

END ROAD WORK

USH 53

SEE S.D.D TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY

34+00SB

35+00SB

36+0

37+00NB

38+00NB

39+0

MATCHLINE STA. 39+00NB

PERIODIC LANE CLOSURES
WATCH FOR SLOW TRAFFIC
(FIXED MESSAGE)

660' LANE MERGE TAPER
(55 MPH)

SEE S.D.D TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

YIELD

IH 94 SE RAMP

IH 94 SE LOOP RAMP

IH 94

LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL ARROW BOARDS
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

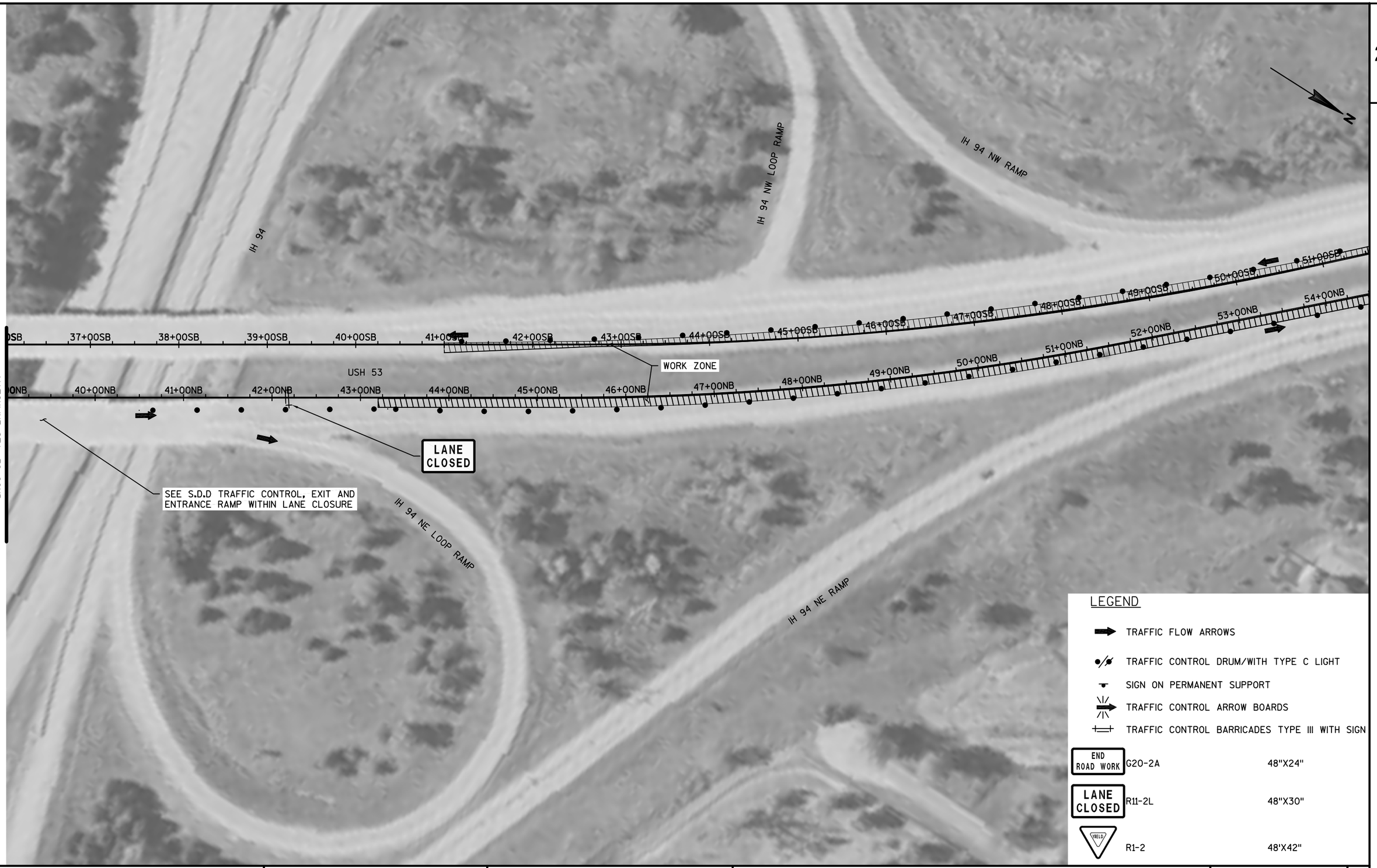
END ROAD WORK	G20-2A	48"X24"
LANE CLOSED	R11-2L	48"X30"
YIELD	R1-2	48'X42"

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC CONTROL-USH 53 (STAGE 1A/B, 2A/B, 3A/B)	SHEET 64	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\025001-TC_USH 53.DWG
LAYOUT NAME - SHEET - (1)

PLOT DATE : 10/31/2016 7:22 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



PROJECT NO:1190-02-81	HWY:USH 53	COUNTY:EAU CLAIRE	TRAFFIC CONTROL-USH 53 (STAGE 2A, 3A)	SHEET 65 E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\025001-TC_USH 53-2.DWG
LAYOUT NAME - SHEET - (1)
PLOT DATE : 10/31/2016 7:05 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

IH 94

IH 94 NW LOOP RAMP

IH 94 NW RAMP

N

37+00SB 38+00SB 39+00SB 40+00SB 41+00SB 42+00SB 43+00SB 44+00SB 45+00SB 46+00SB 47+00SB 48+00SB 49+00SB 50+00SB 51+00SB

54+00NB 53+00NB 52+00NB 51+00NB 50+00NB 49+00NB 48+00NB 47+00NB 46+00NB 45+00NB 44+00NB 43+00NB 42+00NB 41+00NB 40+00NB

USH 53

WORK ZONE

LANE CLOSED

330' LANE SHIFT TAPER
(55 MPH)

MATCHLINE STA. 39+00NB

IH 94 NE LOOP RAMP

IH 94 NE RAMP

LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL ARROW BOARDS
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

END ROAD WORK	G20-2A	48"X24"
LANE CLOSED	R11-2L	48"X30"
YIELD	R1-2	48"X42"

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC CONTROL-USH 53 (STAGE 1B, 2B, 3B)	SHEET E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\025001-TC_USH 53.DWG
LAYOUT NAME - SHEET - (1)

PLOT DATE : 10/31/2016 7:22 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL ARROW BOARDS
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

END ROAD WORK	G20-2A	48"X24"
LANE CLOSED	R11-2L	48"X30"
YIELD	R1-2	48'X42"

PROJECT NO:1190-02-81	HWY:USH 53	COUNTY:EAU CLAIRE	TRAFFIC CONTROL-USH 53 (STAGE 2A, 3A)	SHEET 67	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\025001-TC_USH 53-2.DWG
LAYOUT NAME - SHEET - (4)
PLOTTED DATE : 10/31/2016 7:06 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



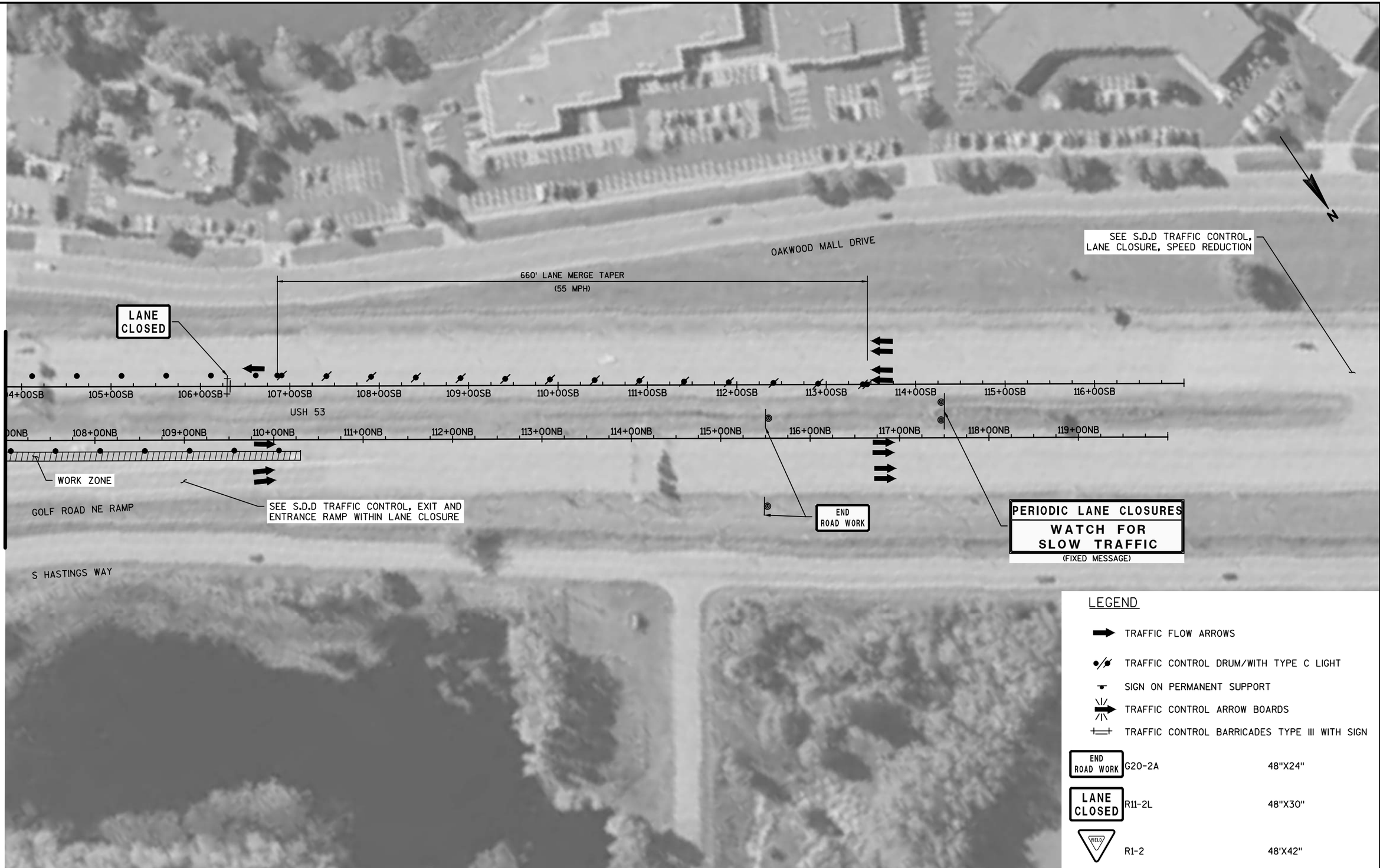
LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL ARROW BOARDS
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

END ROAD WORK	G20-2A	48"X24"
LANE CLOSED	R11-2L	48"X30"
YIELD	R1-2	48'X42"

PROJECT NO:1190-02-81	HWY:USH 53	COUNTY:EAU CLAIRE	TRAFFIC CONTROL-USH 53 (STAGE 1B, 2B, 3B)	SHEET 68	E

2



LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL ARROW BOARDS
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

END ROAD WORK	G20-2A	48"X24"
LANE CLOSED	R11-2L	48"X30"
YIELD	R1-2	48'X42"

PROJECT NO:1190-02-81	HWY:USH 53	COUNTY:EAU CLAIRE	TRAFFIC CONTROL-USH 53 (STAGE 1A/B, 2A/B, 3A/B)	SHEET 69	E

2

2

LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL ARROW BOARDS
- MB — TRAFFIC CONTROL SIGNS PCMS
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

LANE CLOSED	R11-2L	48"X30"
BEGIN LEFT TURN LANE	R3-20-L	24"X36"
ROAD WORK AHEAD (W20-1-A)	W20-XX	48'X48"



PROJECT NO:1190-02-81	HWY:USH 53	COUNTY:USH 53	TRAFFIC CONTROL-GOLF ROAD NW RAMP STAGE 3C (PEAK HOURS)	SHEET 70 E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\025002-TC-3C.DWG PLOT DATE : 10/27/2016 7:23 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (1)

2

2

LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL ARROW BOARDS
- MB TRAFFIC CONTROL SIGNS PCMS
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

LANE CLOSED	R11-2L	48"X30"
BEGIN LEFT TURN LANE	R3-20-L	24"X36"
ROAD WORK AHEAD (W20-1-A)	W20-XX	48'X48"

GOLF ROAD NE RAMP

USH 53

GOLF ROAD

N

LANE CLOSED

WORK ZONE

1+00GNW 2+00GNW 3+00GNW 4+00GNW 5+00GNW 6+00GNW

GOLF ROAD NW RAMP

CONSTRUCT TRAFFIC SIGNAL LOOPS UNDER TEMPORARY SINGLE LANE CLOSURES DURING OFF-PEAK HOURS

540' LANE MERGE TAPER
(45 MPH)

MB

SEE S.D.D TRAFFIC CONTROL,
SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY

PROJECT NO:1190-02-81	HWY:USH 53	COUNTY:USH 53	TRAFFIC CONTROL-GOLF ROAD NW RAMP STAGE 3C (OFF-PEAK)	SHEET 71	E

2

LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

	W01-6	48"X24"
	G20-2A	48"X24"
	R11-2L	48"X30"
	W20-XX	48'X48"

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC CONTROL-GOLF ROAD/CTH AA (STAGE 3D/3F)	SHEET 72 E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\025002-TC-3D&F.DWGPLOT DATE : 11/1/2016 1:31 PM
LAYOUT NAME - SHEET - (4)
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

GOLF ROAD NE RAMP

LANE CLOSED

WORK ZONE

1016GR

1014GR

1012GR

CTH AA/PRILL ROAD

END ROAD WORK

COMPLETE RESURFACING DURING RAMP WORK IN STAGE 3C

LANE CLOSED

SEE S.D.D TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

GATEWAY DRIVE

LANE CLOSED

LANE CLOSED

RIGHT LANE CLOSED AHEAD W20-5-A

GR

MATCHLINE STA. 1010+00GR

GOLF ROAD SE RAMP

LANE CLOSED

LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

W01-6		48"X24"
END ROAD WORK	G20-2A	48"X24"
LANE CLOSED	R11-2L	48"X30"
ROAD WORK AHEAD W20-1-A	W20-XX	48'X48"

PROJECT NO:1190-02-81	HWY:USH 53	COUNTY:EAU CLAIRE	TRAFFIC CONTROL-GOLF ROAD/CTH AA (STAGE 3D/3F)	SHEET 73 E

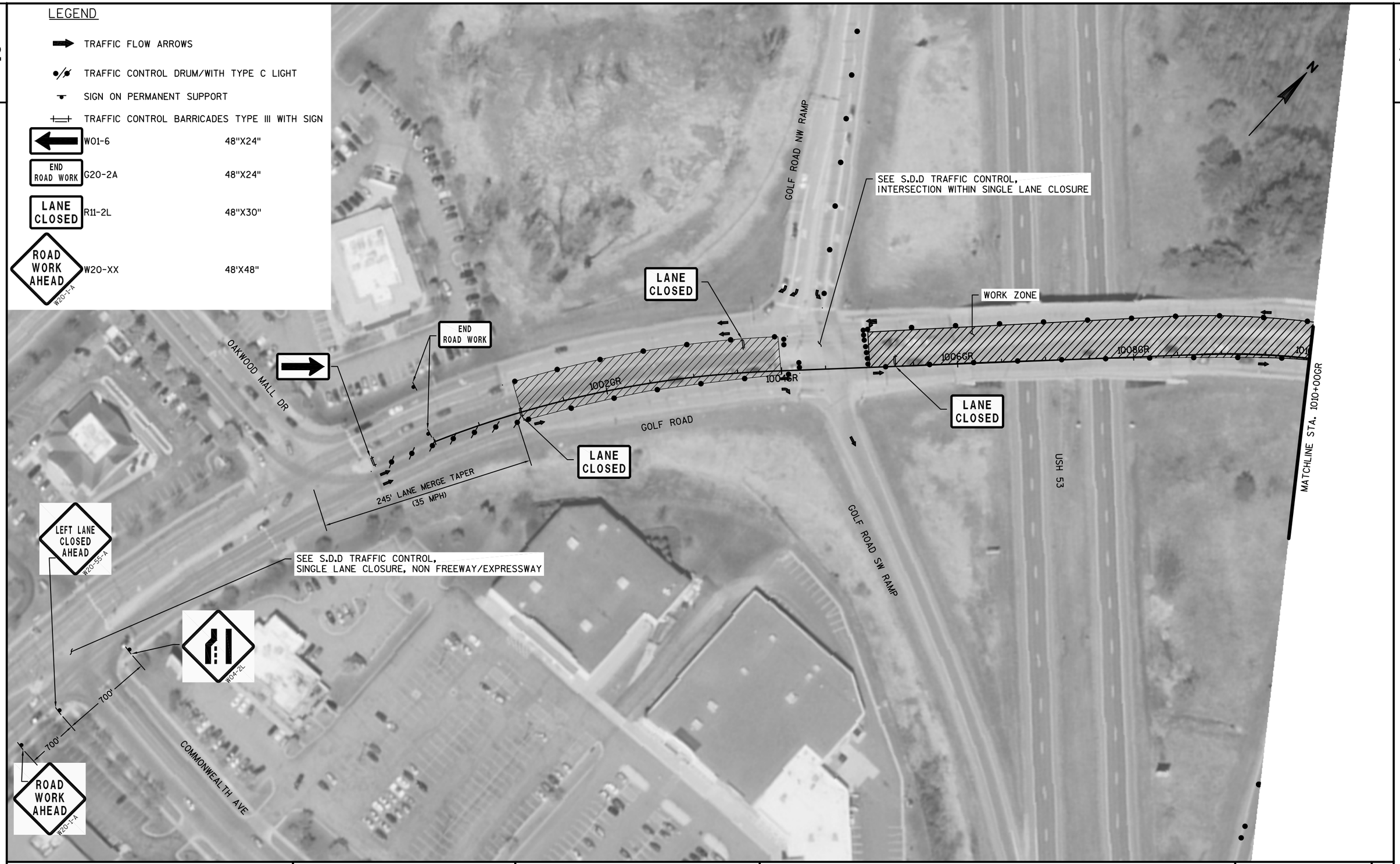
2

2

LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

W01-6	48"X24"
END ROAD WORK G20-2A	48"X24"
LANE CLOSED R11-2L	48"X30"
ROAD WORK AHEAD W20-XX (W20-1-A)	48'X48"



PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC CONTROL-GOLF ROAD/CTH AA (STAGE 3E)	SHEET 74	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\025002-TC-3E.DWG PLOT DATE : 11/1/2016 1:40 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (4)

2

2

N

LANE CLOSED

LANE CLOSED

RIGHT LANE CLOSED AHEAD W20-5-A

WORK ZONE

LANE CLOSED

1016GR

1014GR

1012GR

123' LANE SHIFT TAPER
(35 MPH)

CTH AA/PRILL ROAD

END ROAD WORK

LANE CLOSED

SEE S.D.D TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

GOLF ROAD NE RAMP

GATEWAY DRIVE

GOLF ROAD SE RAMP

MATCHLINE STA. 1010+00GR

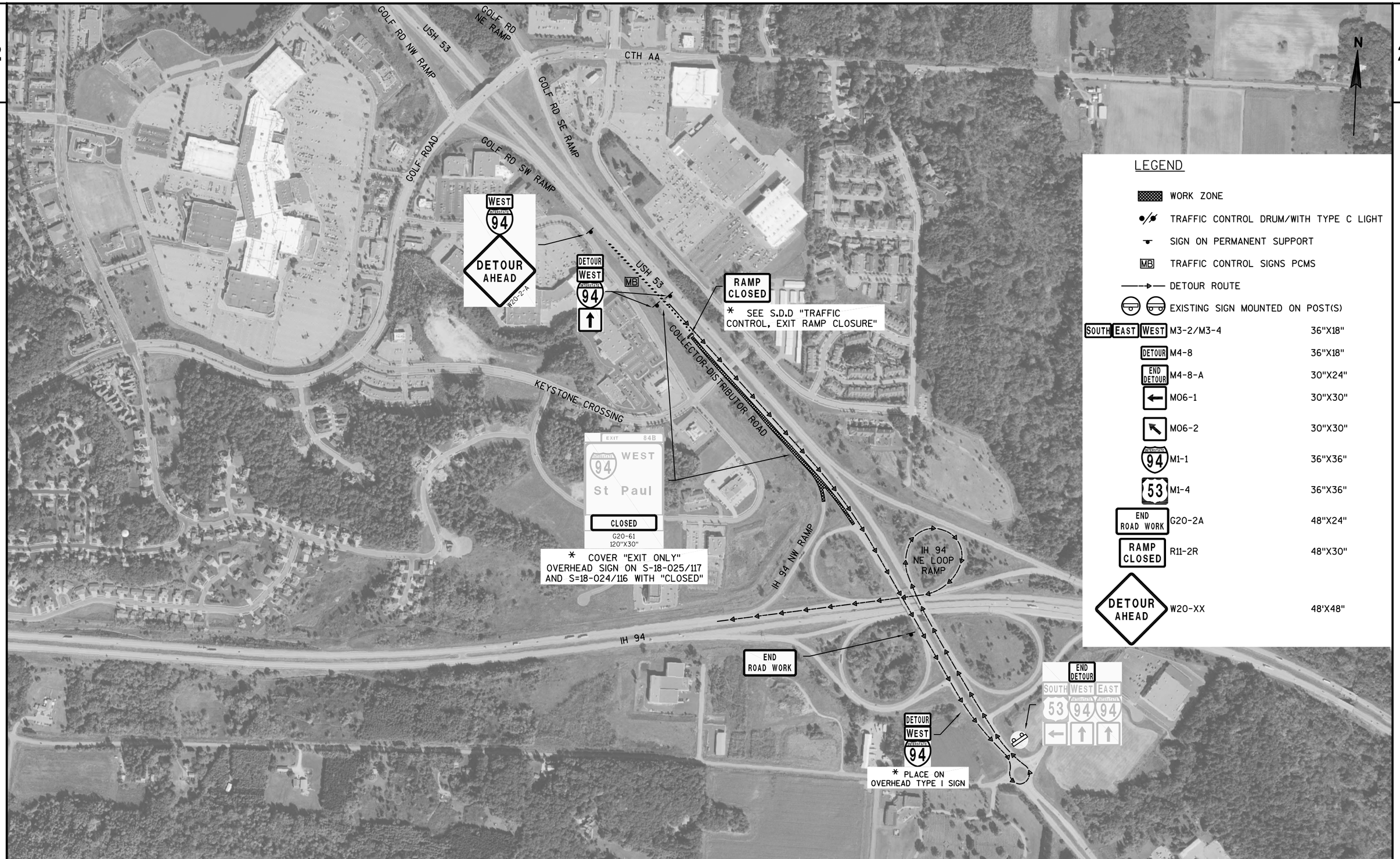
LANE CLOSED

LEGEND

- TRAFFIC FLOW ARROWS
- TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL BARRICADES TYPE III WITH SIGN

W01-6		48"X24"
END ROAD WORK	G20-2A	48"X24"
LANE CLOSED	R11-2L	48"X30"
ROAD WORK AHEAD W20-1-A	W20-XX	48"X48"

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TRAFFIC CONTROL-GOLF ROAD/CTH AA (STAGE 3E)	SHEET 75	E



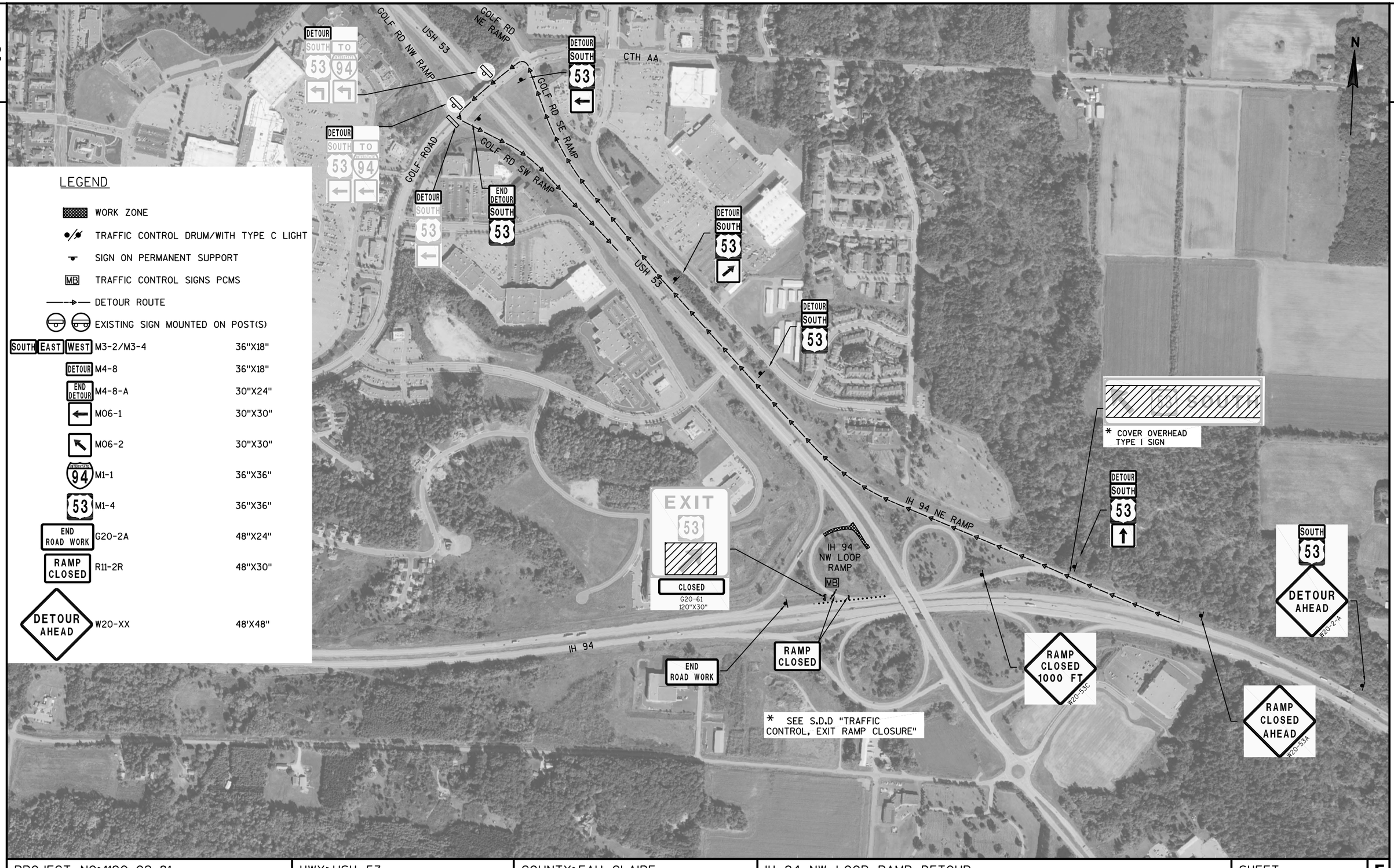
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	USH 53 COLLECTOR-DISTRIBUTOR ROAD/IH 94 NW RAMP DETOUR	SHEET E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\027001-DT.DWG PLOT DATE : 10/31/2016 11:36 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : Custom
LAYOUT NAME - SHEET - (1)

2

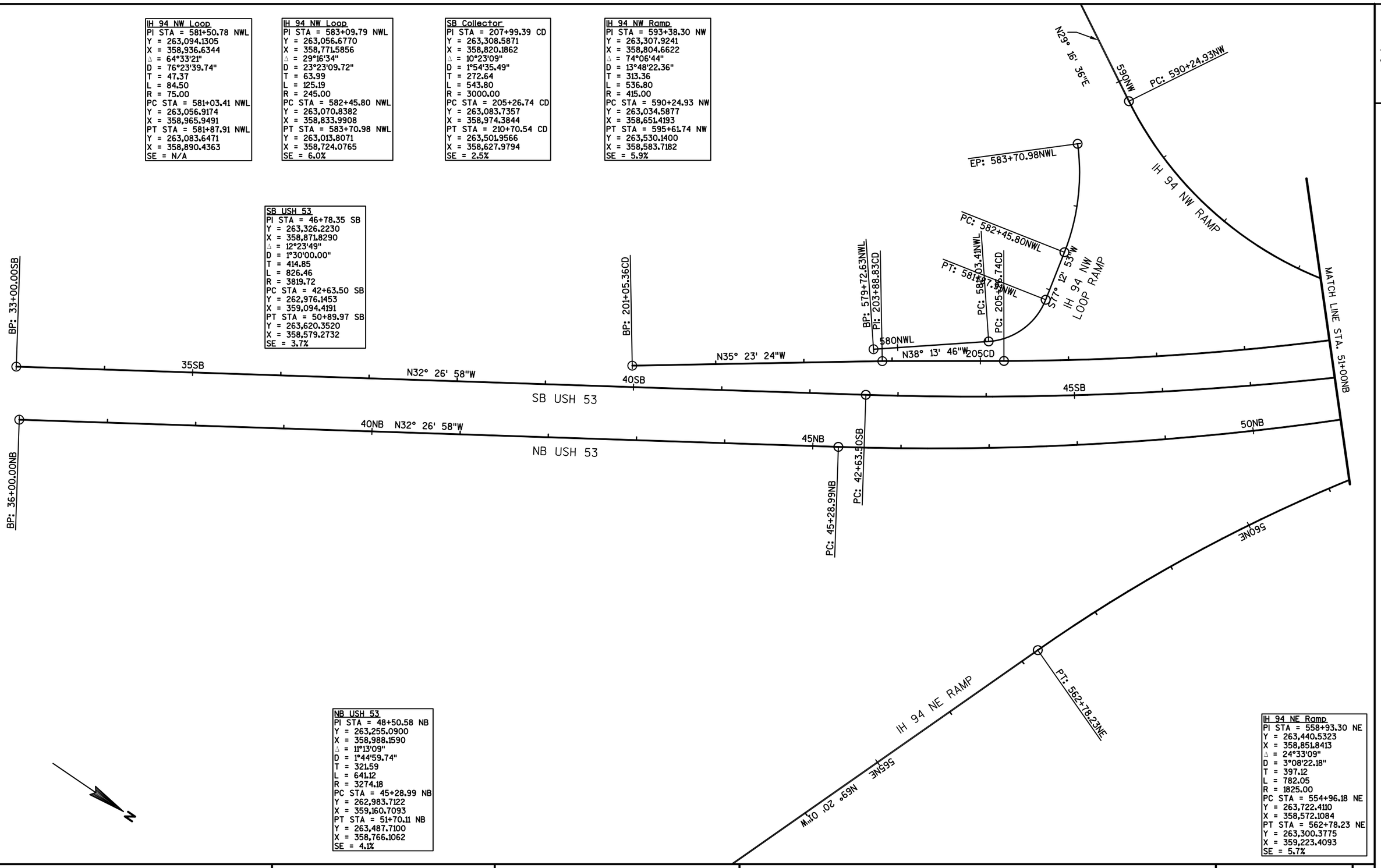
LEGEND

	WORK ZONE	
	TRAFFIC CONTROL DRUM/WITH TYPE C LIGHT	
	SIGN ON PERMANENT SUPPORT	
MB	TRAFFIC CONTROL SIGNS PCMS	
	DETOUR ROUTE	
	EXISTING SIGN MOUNTED ON POST(S)	
SOUTH EAST WEST	M3-2/M3-4	36"X18"
DETOUR	M4-8	36"X18"
END DETOUR	M4-8-A	30"X24"
	M06-1	30"X30"
	M06-2	30"X30"
94	M1-1	36"X36"
53	M1-4	36"X36"
END ROAD WORK	G20-2A	48"X24"
RAMP CLOSED	R11-2R	48"X30"
DETOUR AHEAD	W20-XX	48'X48"



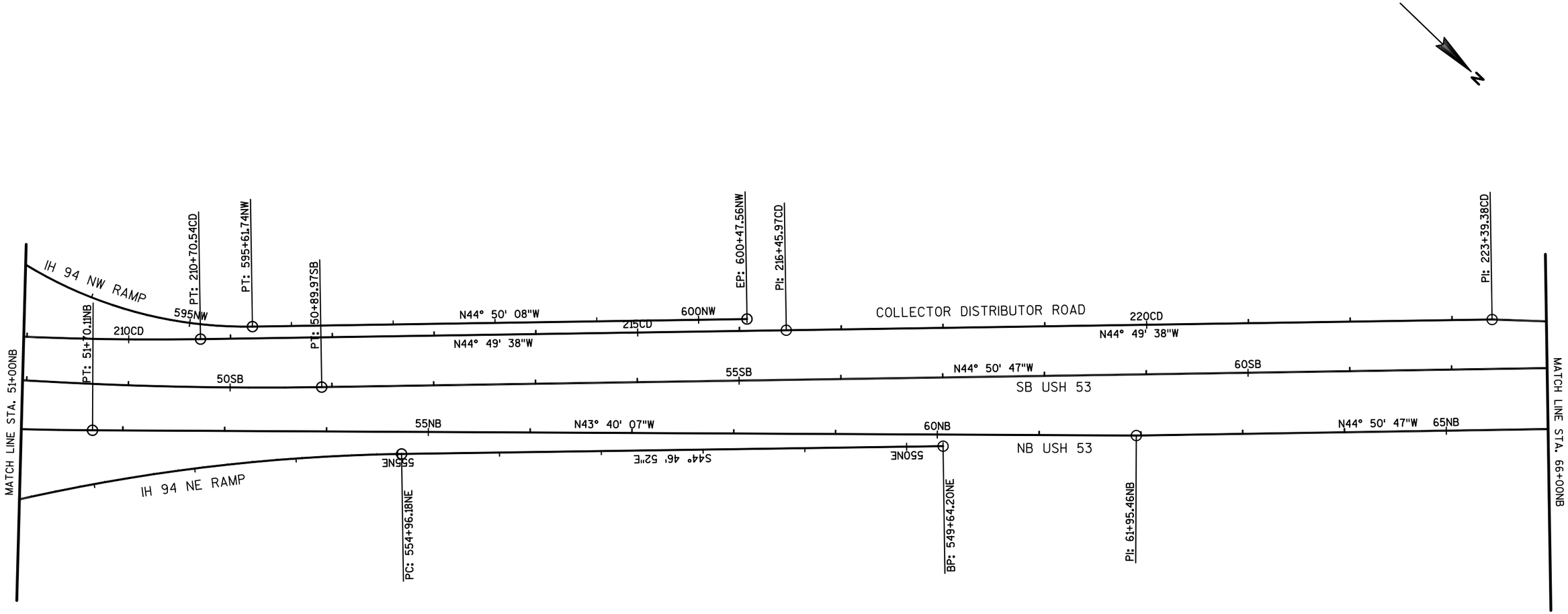
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	IH 94 NW LOOP RAMP DETOUR	SHEET 77	E

2



PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	ALIGNMENT DIAGRAM	SHEET 78	E

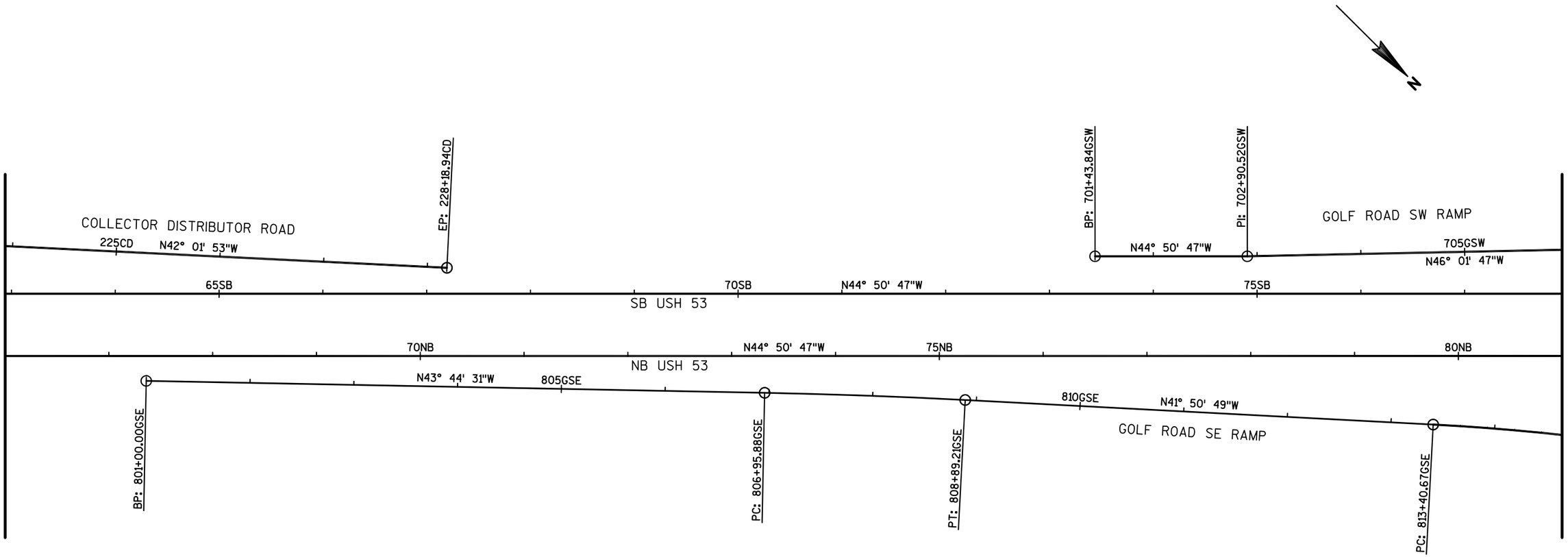
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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	ALIGNMENT DIAGRAM	SHEET 79	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\027201_AD.DWG PLOT DATE : 10/14/2016 12:05 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (5)

2



Golf Road SE Ramp
PI STA = 807+92.55 GSE
Y = 265,129.8800
X = 357,215.1210
Δ = 1°53'42"
D = 0°58'48.91"
T = 96.67
L = 193.33
R = 5845.00
PC STA = 806+95.88 GSE
Y = 265,060.0387
X = 357,281.9607
PT STA = 808+89.21 GSE
Y = 265,201.8935
X = 357,150.6275
SE = N/A

Golf Road SE Ramp
PI STA = 814+45.54 GSE
Y = 265,616.3210
X = 356,779.4760
Δ = 5°24'20"
D = 2°34'44.68"
T = 104.87
L = 209.59
R = 2221.56
PC STA = 813+40.67 GSE
Y = 265,538.1990
X = 356,849.4402
PT STA = 815+50.25 GSE
Y = 265,700.6864
X = 356,717.1822
SE = 3.6%

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	ALIGNMENT DIAGRAM	SHEET 80	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\027201_AD.DWG PLOT DATE : 10/14/2016 12:05 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (6)

2

MATCH LINE STA. 103+00GR

PT: 1003+89.10GR

EP: 6+81.61GNW

EP: 716+14.02GSW

GOLF ROAD NW RAMP

S35° 06' 04"E

S6GNW

N

Golf Road SW Ramp
PI STA = 710+50.19 GSW
Y = 265,824.3860
X = 356,314.1220
Δ = 19°47'45"
D = 5°59'13.27"
T = 166.99
L = 330.65
R = 957.00
PC STA = 708+83.21 GSW
Y = 265,708.4491
X = 356,434.3028
PT STA = 712+13.85 GSW
Y = 265,892.7700
X = 356,161.7789
SE = 5.6%

PT: 712+13.85GSW

GOLF ROAD SW RAMP

N65° 49' 32"W

715GSW

PC: 708+83.21GSW

710GSW

1005+00GR

GOLF ROAD

N45° 14' 58"E

PC: 92+51.26SB

MATCH LINE STA. 81+00NB

80SB

N44° 50' 47"W

85SB

90SB

SB USH 53

85NB

N44° 50' 47"W

90NB

95NB

NB USH 53

MATCH LINE STA. 96+00NB

PC: 95+57.43NB

PT: 815+56.25GSE

PC: 815+39.36GSE

815GSE

N36° 26' 29"W

GOLF ROAD SE RAMP

820GSE

PT: 821+48.99GSE

N21° 50' 03"W

PC: 1008+77.02GR

1010+00GR

Golf Road SE Ramp
PI STA = 818+53.98 GSE
Y = 265,945.0200
X = 356,536.7710
Δ = 14°36'26"
D = 2°27'43.98"
T = 298.25
L = 593.26
R = 2327.00
PC STA = 815+55.73 GSE
Y = 265,705.0919
X = 356,713.9293
PT STA = 821+48.99 GSE
Y = 266,221.8709
X = 356,425.8470
SE = 3.5%

Golf Road NE Ramp
PI STA = 906+12.10 GNE
Y = 266,935.2200
X = 356,018.6420
Δ = 35°12'25"
D = 5°49'21.87"
T = 312.21
L = 604.64
R = 984.00
PC STA = 902+99.89 GNE
Y = 266,679.1740
X = 356,197.2880
PT STA = 909+04.53 GNE
Y = 267,041.4341
X = 355,725.0563
SE = 5.5%

BP: 900+97.19GNE

EP: 824+60.72GSE

N34° 54' 14"W

PC: 902+99.89GNE

905GNE

GOLF ROAD NE RAMP

MATCH LINE STA. 1012+00GR

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	ALIGNMENT DIAGRAM	SHEET 81	E

2

2

SB USH 53
PI STA = 98+34.52 SB
Y = 266,984.2460
X = 355,233.3720
Δ = 11°31'25"
D = 0°59'28.35"
T = 583.26
L = 1162.59
R = 5780.40
PC STA = 92+51.26 SB
Y = 266,570.7142
X = 355,644.6919
PT STA = 104+13.85 SB
Y = 267,307.2717
X = 354,747.7311
SE = 3.3%

N

GOLF ROAD NW RAMP

S35° 06' 04"E

BP: 0+00.00GNW

MATCH LINE STA. 96+00NB

95SB

100SB

SB USH 53

PT: 104+13.85SB

105SB

N56° 22' 12"W

MATCH LINE STA. 111+00NB

100NB

NB USH 53

105NB

110NB

N56° 22' 12"W

PT: 107+32.08NB

920GNE

N57° 33' 19"W

PT: 918+89.22GNE

915GNE

PC: 916+05.22GNE

N70° 06' 39"W

GOLF ROAD NE RAMP

910GNE

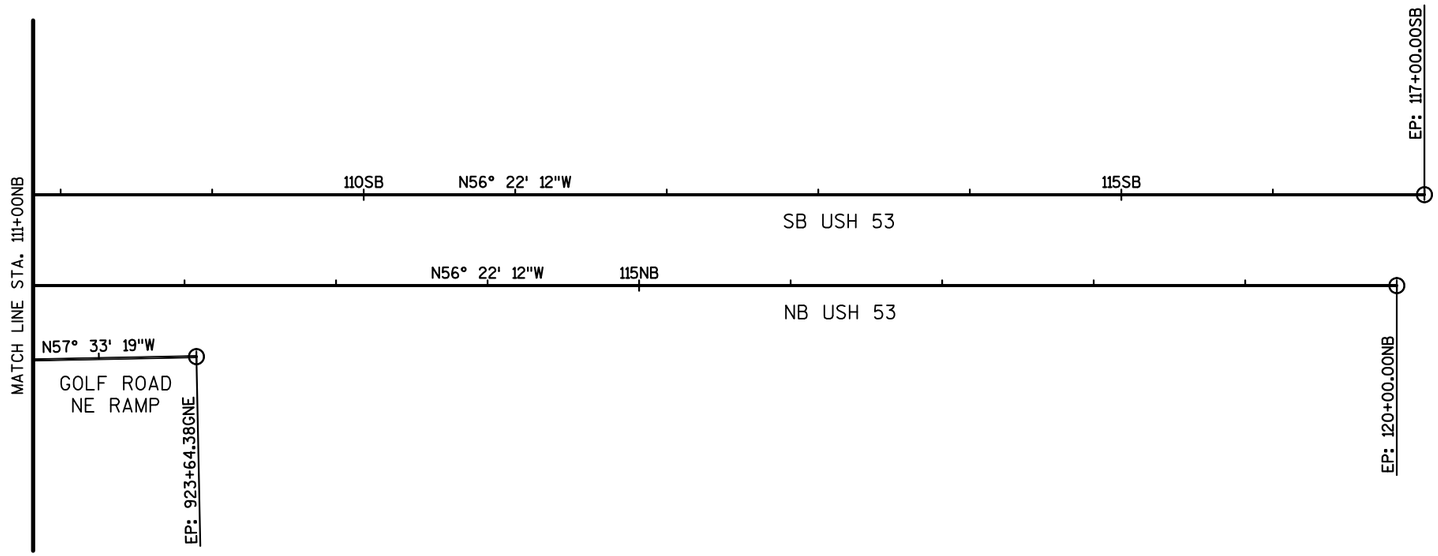
PT: 909+04.53GNE

NB USH 53
PI STA = 101+46.74 NB
Y = 267,030.8510
X = 355,271.6420
Δ = 11°31'25"
D = 0°58'51.69"
T = 589.31
L = 1174.65
R = 5840.40
PC STA = 95+57.43 NB
Y = 266,613.0267
X = 355,687.2315
PT STA = 107+32.08 NB
Y = 267,357.2297
X = 354,780.9601
SE = 3.3%

Golf Road NE Ramp
PI STA = 917+47.79 GNE
Y = 267,328.3110
X = 354,932.1020
Δ = 12°33'20"
D = 4°25'15.49"
T = 142.57
L = 284.00
R = 1296.00
PC STA = 916+05.22 GNE
Y = 267,279.8082
X = 355,066.1682
PT STA = 918+89.22 GNE
Y = 267,404.7979
X = 354,811.7856
SE = 5.8%

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	ALIGNMENT DIAGRAM	SHEET 82	E

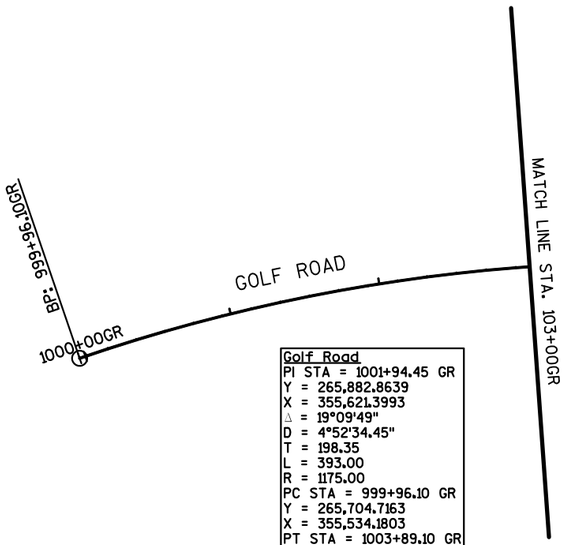
2



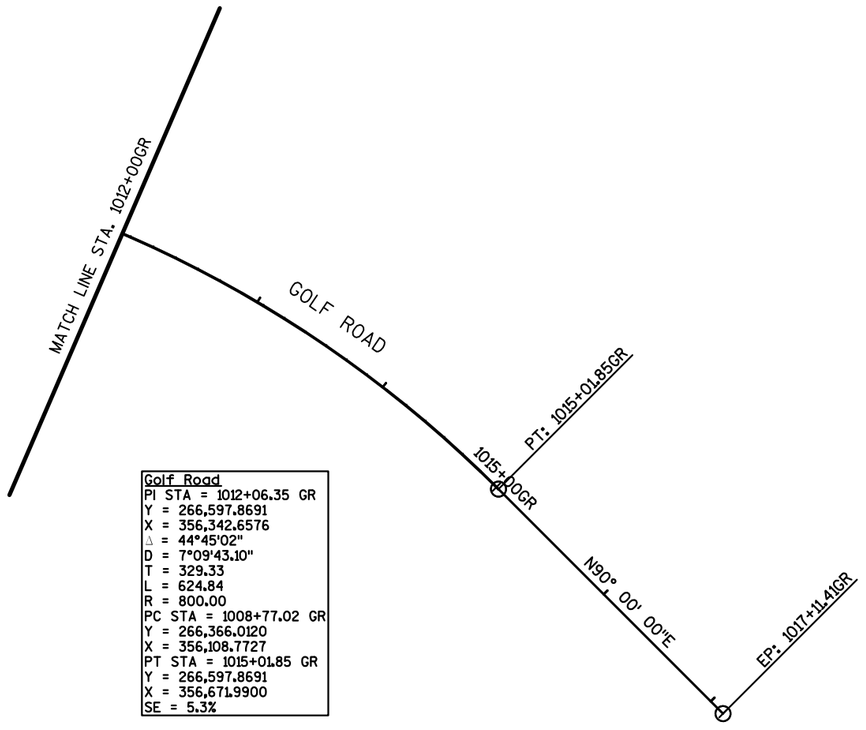
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	ALIGNMENT DIAGRAM	SHEET 83	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\027201_AD.DWG PLOT DATE : 10/14/2016 12:05 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - SHEET - (9)

2



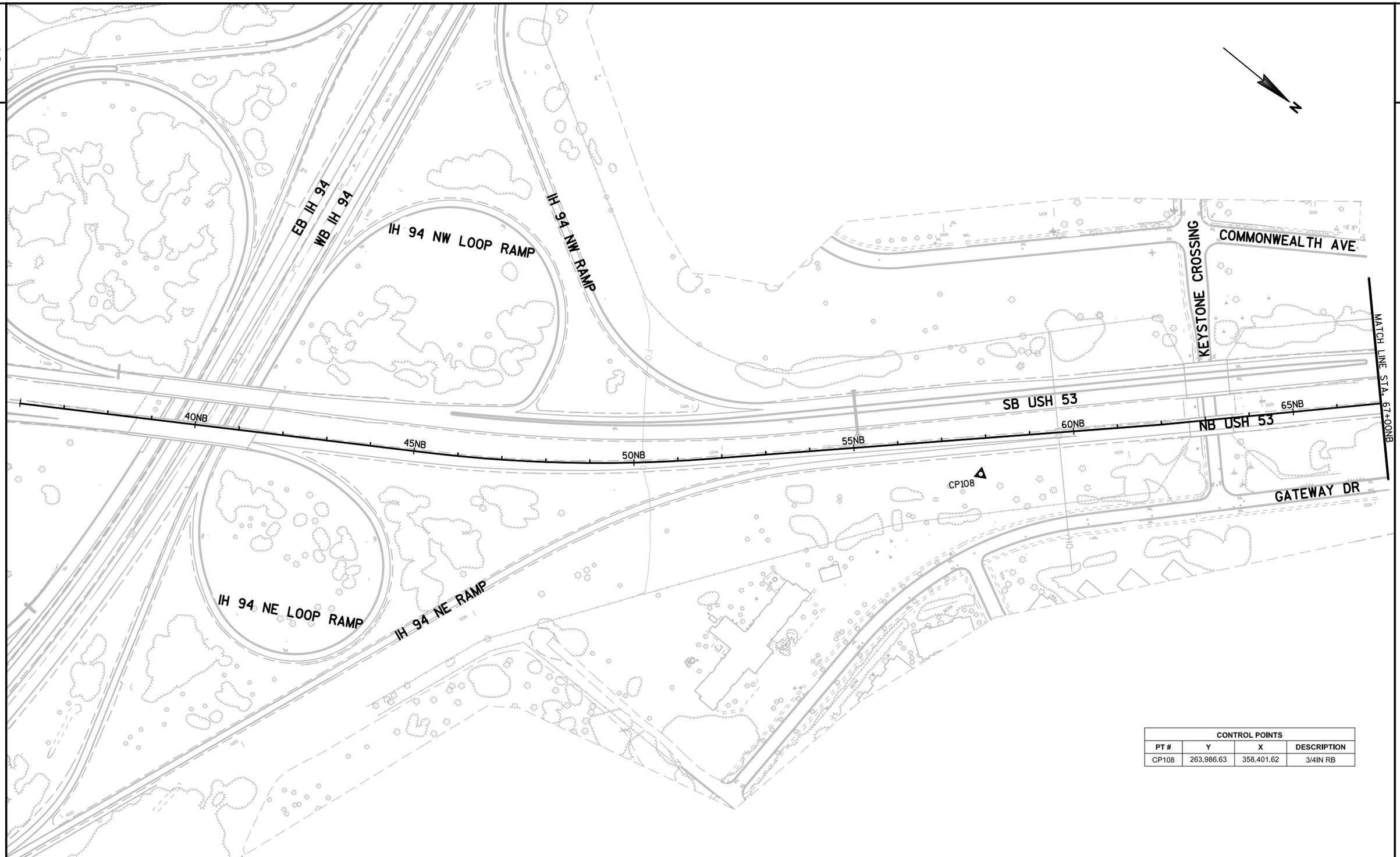
Golf Road
PI STA = 1001+94.45 GR
Y = 265,882.8639
X = 355,621.3993
Δ = 19°09'49"
D = 4°52'34.45"
T = 198.35
L = 393.00
R = 1175.00
PC STA = 999+96.10 GR
Y = 265,704.7163
X = 355,534.1803
PT STA = 1003+89.10 GR
Y = 266,022.5084
X = 355,762.2651
SE = 4.5%



Golf Road
PI STA = 1012+06.35 GR
Y = 266,597.8691
X = 356,342.6576
Δ = 44°45'02"
D = 7°09'43.10"
T = 329.33
L = 624.84
R = 800.00
PC STA = 1008+77.02 GR
Y = 266,366.0120
X = 356,108.7727
PT STA = 1015+01.85 GR
Y = 266,597.8691
X = 356,671.9900
SE = 5.3%

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	ALIGNMENT DIAGRAM	SHEET 84	E

2

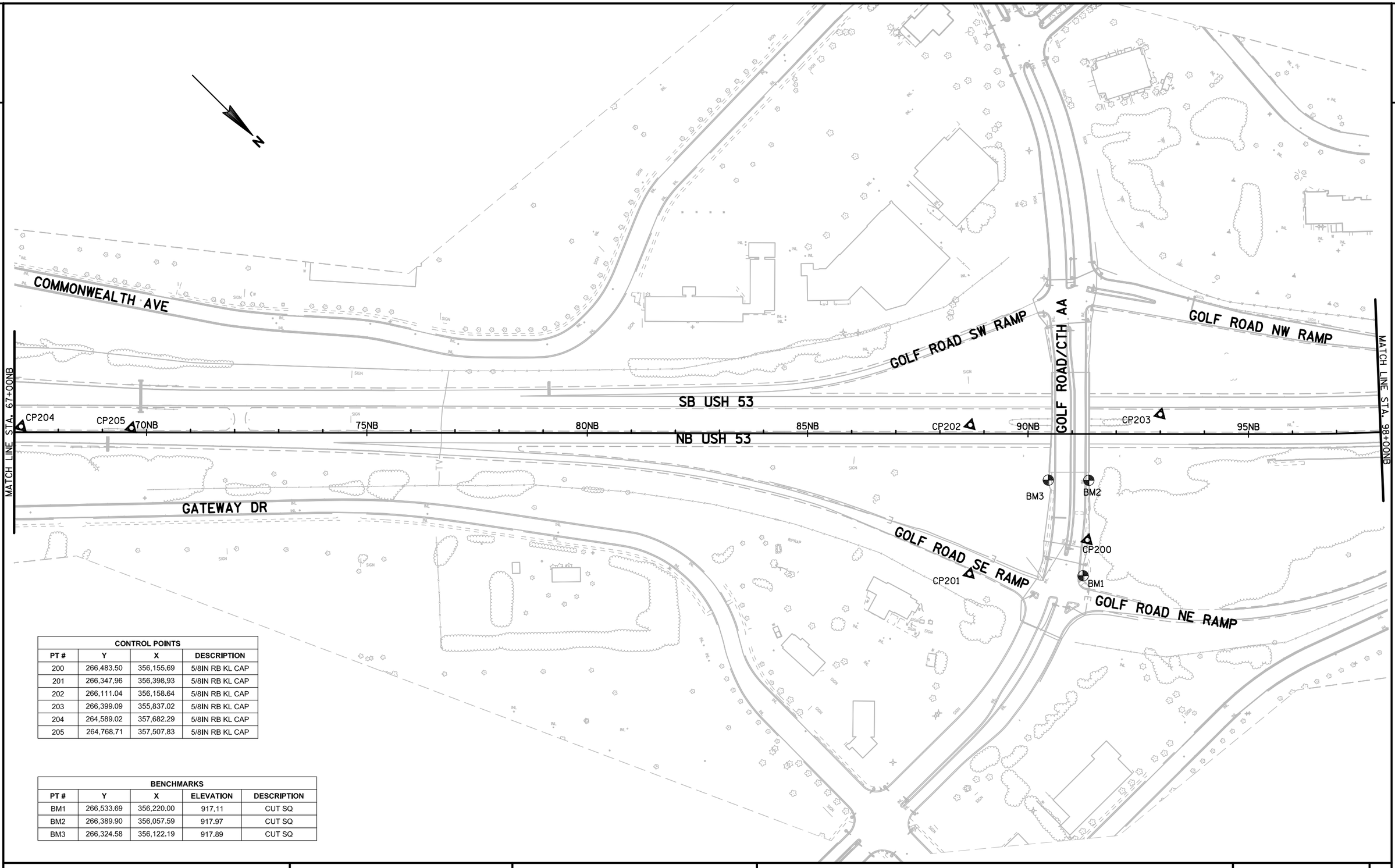


CONTROL POINTS			
PT #	Y	X	DESCRIPTION
CP108	263,986.63	358,401.62	3/4IN RB

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	BENCHMARK/CONTROL POINT DETAIL	SHEET 85	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\027301_CP.DWG PLOT DATE : 10/14/2016 12:45 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:200 FT
LAYOUT NAME - SHEET - (1)
WISDOT/CADDS SHEET 42

2



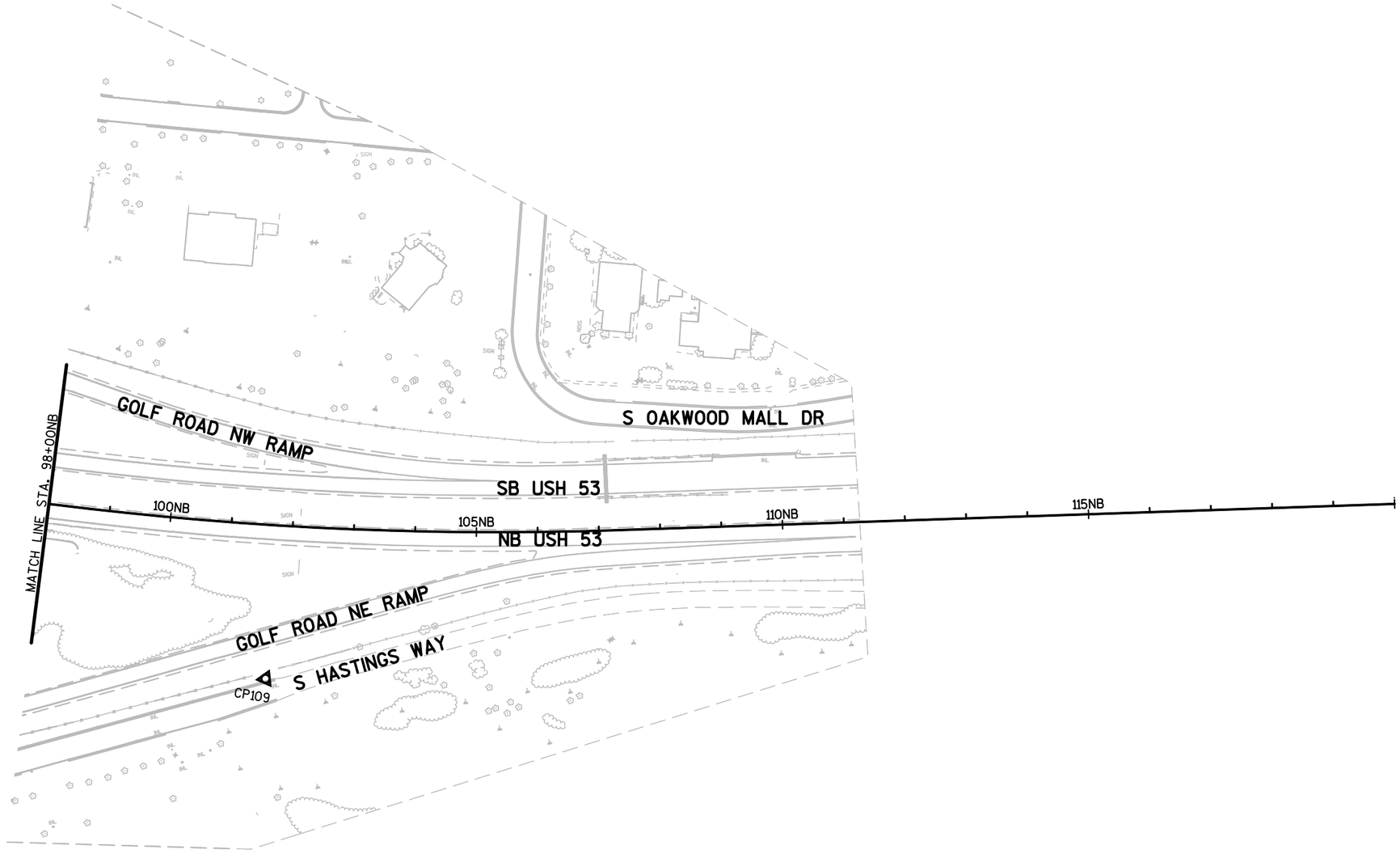
CONTROL POINTS			
PT #	Y	X	DESCRIPTION
200	266,483.50	356,155.69	5/8IN RB KL CAP
201	266,347.96	356,398.93	5/8IN RB KL CAP
202	266,111.04	356,158.64	5/8IN RB KL CAP
203	266,399.09	355,837.02	5/8IN RB KL CAP
204	264,589.02	357,682.29	5/8IN RB KL CAP
205	264,768.71	357,507.83	5/8IN RB KL CAP

BENCHMARKS				
PT #	Y	X	ELEVATION	DESCRIPTION
BM1	266,533.69	356,220.00	917.11	CUT SQ
BM2	266,389.90	356,057.59	917.97	CUT SQ
BM3	266,324.58	356,122.19	917.89	CUT SQ

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	BENCHMARK/CONTROL POINT DETAIL	SHEET 86	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\027301_CP.DWG LAYOUT NAME - SHEET - (2)
PLOT DATE : 10/14/2016 12:45 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2



CONTROL POINTS			
PT #	Y	X	DESCRIPTION
CP109	267,219.29	355,390.95	3/4IN RB

1190-02-81

Line	Item	Item Description	Unit	Total	Qty
0010	201.0105	Clearing	STA	6.000	6.000
0020	201.0120	Clearing	ID	18.000	18.000
0030	203.0200	Removing Old Structure (station) 001. Sta 76+07 SB	LS	1.000	1.000
0040	203.0200	Removing Old Structure (station) 002. Sta 69+11 NB	LS	1.000	1.000
0050	203.0200	Removing Old Structure (station) 003. Sta 66+80 SB	LS	1.000	1.000
0060	203.0200	Removing Old Structure (station) 004. Sta 52+07 SB	LS	1.000	1.000
0070	204.0100	Removing Pavement	SY	670.000	670.000
0080	204.0105	Removing Pavement Butt Joints	SY	2,500.000	2,500.000
0090	204.0109.S	Removing Concrete Surface Partial Depth	SF	77,800.000	77,800.000
0100	204.0115	Removing Asphaltic Surface Butt Joints	SY	5,100.000	5,100.000
0110	204.0120	Removing Asphaltic Surface Milling	SY	71,800.000	71,800.000
0120	204.0150	Removing Curb & Gutter	LF	430.000	430.000
0130	204.0155	Removing Concrete Sidewalk	SY	180.000	180.000
0140	204.0165	Removing Guardrail	LF	443.000	443.000
0150	204.0170	Removing Fence	LF	1,000.000	1,000.000
0160	204.0195	Removing Concrete Bases	EACH	5.000	5.000
0170	205.0100	Excavation Common	CY	106.000	106.000
0180	208.0100	Borrow	CY	77.000	77.000
0190	211.0100	Prepare Foundation for Asphaltic Paving (project) 001. 1190-02-81	LS	1.000	1.000
0200	211.0200	Prepare Foundation for Concrete Pavement (project) 001. 1190-02-81	LS	1.000	1.000
0210	213.0100	Finishing Roadway (project) 001. 1190-02-81	EACH	1.000	1.000
0220	305.0110	Base Aggregate Dense 3/4-Inch	TON	115.000	115.000
0230	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	230.000	230.000
0240	305.0500	Shaping Shoulders	STA	310.000	310.000
0250	311.0110	Breaker Run	TON	10.000	10.000
0260	415.0090	Concrete Pavement 9-Inch	SY	670.000	670.000
0270	416.0610	Drilled Tie Bars	EACH	850.000	850.000
0280	416.0620	Drilled Dowel Bars	EACH	720.000	720.000
0290	440.4410	Incentive IRI Ride	DOL	9,685.000	9,685.000
0300	455.0605	Tack Coat	GAL	3,200.000	3,200.000
0310	460.2000	Incentive Density HMA Pavement	DOL	4,736.000	4,736.000
0320	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	32,600.000	32,600.000
0330	460.6444	HMA Pavement 4 MT 58-34 H	TON	7,400.000	7,400.000
0340	465.0105	Asphaltic Surface	TON	3,800.000	3,800.000
0350	465.0110	Asphaltic Surface Patching	TON	200.000	200.000
0360	465.0125	Asphaltic Surface Temporary	TON	30.000	30.000
0370	465.0315	Asphaltic Flumes	SY	15.000	15.000
0380	465.0400	Asphaltic Shoulder Rumble Strips	LF	19,400.000	19,400.000

1190-02-81

Line	Item	Item Description	Unit	Total	Qty
0390	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	300.000	300.000
0400	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	80.000	80.000
0410	601.0600	Concrete Curb Pedestrian	LF	35.000	35.000
0420	602.0410	Concrete Sidewalk 5-Inch	SF	2,150.000	2,150.000
0430	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	185.000	185.000
0440	611.8110	Adjusting Manhole Covers	EACH	3.000	3.000
0450	614.0010	Barrier System Grading Shaping Finishing	EACH	9.000	9.000
0460	614.0115	Anchorages for Steel Plate Beam Guard Type 2	EACH	1.000	1.000
0470	614.0305	Steel Plate Beam Guard Class A	LF	450.000	450.000
0480	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	6.000	6.000
0490	614.0920	Salvaged Rail	LF	307.000	307.000
0500	614.2300	MGS Guardrail 3	LF	175.000	175.000
0510	614.2500	MGS Thrie Beam Transition	LF	78.000	78.000
0520	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0530	614.2620	MGS Guardrail Terminal Type 2	EACH	1.000	1.000
0540	616.0100	Fence Woven Wire (height) 001. 4-FT	LF	500.000	500.000
0550	616.0205	Fence Chain Link 5-FT	LF	500.000	500.000
0560	619.1000	Mobilization	EACH	1.000	1.000
0570	620.0200	Concrete Median Blunt Nose	SF	115.000	115.000
0580	620.0300	Concrete Median Sloped Nose	SF	190.000	190.000
0590	624.0100	Water	MGAL	10.000	10.000
0600	625.0100	Topsoil	SY	350.000	350.000
0610	628.1504	Silt Fence	LF	3,000.000	3,000.000
0620	628.1520	Silt Fence Maintenance	LF	6,000.000	6,000.000
0630	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0640	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0650	628.2004	Erosion Mat Class I Type B	SY	7,250.000	7,250.000
0660	628.7015	Inlet Protection Type C	EACH	6.000	6.000
0670	628.7020	Inlet Protection Type D	EACH	2.000	2.000
0680	628.7504	Temporary Ditch Checks	LF	100.000	100.000
0690	629.0210	Fertilizer Type B	CWT	0.500	0.500
0700	630.0130	Seeding Mixture No. 30	LB	7.000	7.000
0710	630.0200	Seeding Temporary	LB	10.000	10.000
0720	633.0100	Delineator Posts Steel	EACH	25.000	25.000
0730	633.0500	Delineator Reflectors	EACH	25.000	25.000
0740	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	3.000	3.000
0750	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	41.000	41.000
0760	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	37.000	37.000
0770	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	31.000	31.000
0780	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	2.000	2.000

1190-02-81

Line	Item	Item Description	Unit	Total	Qty
0790	636.0100	Sign Supports Concrete Masonry	CY	68.000	68.000
0800	636.1500	Sign Supports Steel Coated Reinforcement HS	LB	7,970.000	7,970.000
0810	637.1220	Signs Type I Reflective SH	SF	1,229.500	1,229.500
0820	637.1230	Signs Type I Reflective F	SF	221.500	221.500
0830	637.2210	Signs Type II Reflective H	SF	887.810	887.810
0840	637.2215	Signs Type II Reflective H Folding	SF	60.720	60.720
0850	637.2230	Signs Type II Reflective F	SF	270.000	270.000
0860	638.2102	Moving Signs Type II	EACH	2.000	2.000
0870	638.2601	Removing Signs Type I	EACH	13.000	13.000
0880	638.2602	Removing Signs Type II	EACH	108.000	108.000
0890	638.3000	Removing Small Sign Supports	EACH	106.000	106.000
0900	641.1200	Sign Bridge Cantilevered (structure) 001. S-18-114	LS	1.000	1.000
0910	641.1200	Sign Bridge Cantilevered (structure) 002. S-18-115	LS	1.000	1.000
0920	641.6600	Sign Bridge (structure) 001. S-18-116	LS	1.000	1.000
0930	641.6600	Sign Bridge (structure) 002. S-18-117	LS	1.000	1.000
0940	642.5001	Field Office Type B	EACH	1.000	1.000
0950	643.0100	Traffic Control (project) 001. 1190-02-81	EACH	1.000	1.000
0960	643.0300	Traffic Control Drums	DAY	48,000.000	48,000.000
0970	643.0420	Traffic Control Barricades Type III	DAY	1,600.000	1,600.000
0980	643.0705	Traffic Control Warning Lights Type A	DAY	3,100.000	3,100.000
0990	643.0715	Traffic Control Warning Lights Type C	DAY	4,400.000	4,400.000
1000	643.0800	Traffic Control Arrow Boards	DAY	300.000	300.000
1010	643.0900	Traffic Control Signs	DAY	3,500.000	3,500.000
1020	643.0910	Traffic Control Covering Signs Type I	EACH	20.000	20.000
1030	643.0920	Traffic Control Covering Signs Type II	EACH	25.000	25.000
1040	643.1000	Traffic Control Signs Fixed Message	SF	112.000	112.000
1050	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	350.000	350.000
1060	643.2000	Traffic Control Detour (project) 001.1190-02-81	EACH	1.000	1.000
1070	643.3000	Traffic Control Detour Signs	DAY	50.000	50.000
1080	646.0106	Pavement Marking Epoxy 4-Inch	LF	36,400.000	36,400.000
1090	646.0600	Removing Pavement Markings	LF	2,500.000	2,500.000
1100	646.0842.S	Pavement Marking Grooved Contrast Wet Reflective Epoxy 4-Inch	LF	4,100.000	4,100.000
1110	646.0844.S	Pavement Marking Grooved Contrast Wet Reflective Epoxy 8-Inch	LF	9,600.000	9,600.000
1120	647.0156	Pavement Marking Arrows Epoxy Type 1	EACH	6.000	6.000
1130	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	15.000	15.000
1140	647.0176	Pavement Marking Arrows Epoxy Type 3	EACH	4.000	4.000
1150	647.0356	Pavement Marking Words Epoxy	EACH	19.000	19.000

1190-02-81

Line	Item	Item Description	Unit	Total	Qty
1160	647.0456	Pavement Marking Curb Epoxy	LF	110.000	110.000
1170	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	210.000	210.000
1180	647.0606	Pavement Marking Island Nose Epoxy	EACH	3.000	3.000
1190	647.0746	Pavement Marking Diagonal Epoxy 24-Inch	LF	55.000	55.000
1200	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	410.000	410.000
1210	647.0955	Removing Pavement Markings Arrows	EACH	8.000	8.000
1220	647.0965	Removing Pavement Markings Words	EACH	4.000	4.000
1230	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	2,700.000	2,700.000
1240	649.1100	Temporary Pavement Marking Stop Line 18-Inch	LF	25.000	25.000
1250	650.4500	Construction Staking Subgrade	LF	130.000	130.000
1260	650.5000	Construction Staking Base	LF	130.000	130.000
1270	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	70.000	70.000
1280	650.8000	Construction Staking Resurfacing Reference	LF	33,660.000	33,660.000
1290	650.8500	Construction Staking Electrical Installations (project) 001. 1190-02-81	LS	1.000	1.000
1300	650.9910	Construction Staking Supplemental Control (project) 001. 1190-02-81	LS	1.000	1.000
1310	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	456.000	456.000
1320	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	232.000	232.000
1330	652.0615	Conduit Special 3-Inch	LF	412.000	412.000
1340	652.0700.S	Install Conduit into Existing Item	EACH	23.000	23.000
1350	652.0800	Conduit Loop Detector	LF	2,092.000	2,092.000
1360	652.0900	Loop Detector Slots	LF	1,355.000	1,355.000
1370	653.0135	Pull Boxes Steel 24x36-Inch	EACH	3.000	3.000
1380	653.0140	Pull Boxes Steel 24x42-Inch	EACH	6.000	6.000
1390	653.0905	Removing Pull Boxes	EACH	4.000	4.000
1400	654.0101	Concrete Bases Type 1	EACH	4.000	4.000
1410	654.0102	Concrete Bases Type 2	EACH	6.000	6.000
1420	654.0105	Concrete Bases Type 5	EACH	3.000	3.000
1430	655.0230	Cable Traffic Signal 5-14 AWG	LF	2,325.000	2,325.000
1440	655.0260	Cable Traffic Signal 12-14 AWG	LF	504.000	504.000
1450	655.0305	Cable Type UF 2-12 AWG Grounded	LF	276.000	276.000
1460	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2,250.000	2,250.000
1470	655.0610	Electrical Wire Lighting 12 AWG	LF	135.000	135.000
1480	655.0700	Loop Detector Lead In Cable	LF	7,789.000	7,789.000
1490	655.0800	Loop Detector Wire	LF	9,038.000	9,038.000
1500	657.0100	Pedestal Bases	EACH	5.000	5.000
1510	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	5.000	5.000
1520	657.0305	Poles Type 2	EACH	1.000	1.000
1530	657.0315	Poles Type 4	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
1540	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	1.000	1.000
1550	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	4.000	4.000
1560	657.0585	Trombone Arms 15-FT	EACH	1.000	1.000
1570	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	2.000	2.000
1580	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	2.000	2.000
1590	658.0416	Pedestrian Signal Face 16-Inch	EACH	8.000	8.000
1600	658.0500	Pedestrian Push Buttons	EACH	8.000	8.000
1610	658.0600	Led Modules 12-Inch Red Ball	EACH	2.000	2.000
1620	658.0605	Led Modules 12-Inch Yellow Ball	EACH	2.000	2.000
1630	658.0610	Led Modules 12-Inch Green Ball	EACH	2.000	2.000
1640	658.0635	Led Modules Pedestrian Countdown Timer 16-Inch	EACH	8.000	8.000
1650	658.5069	Signal Mounting Hardware (location) 001. CTH AA & USH 53 NB Ramps	LS	1.000	1.000
1660	658.5069	Signal Mounting Hardware (location) 002. CTH AA & USH 53 SB Ramps	LS	1.000	1.000
1670	662.1030.S	Ramp Closure Gates Hardwired 30-FT	EACH	1.000	1.000
1680	662.1037.S	Ramp Closure Gates Hardwired 37-FT	EACH	1.000	1.000
1690	662.1040.S	Ramp Closure Gates Hardwired 40-FT	EACH	1.000	1.000
1700	690.0150	Sawing Asphalt	LF	400.000	400.000
1710	690.0250	Sawing Concrete	LF	1,780.000	1,780.000
1720	715.0415	Incentive Strength Concrete Pavement	DOL	200.000	200.000
1730	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
1740	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	630.000	630.000
1750	SPV.0045	Special 001. Traffic Control Channelizer Cones	DAY	7,250.000	7,250.000
1760	SPV.0060	Special 003. Salvage And Reinstall Luminaire And Arm	EACH	1.000	1.000
1770	SPV.0090	Special 001. Install EVP Detector Cable	LF	515.000	515.000
1780	SPV.0105	Special 001. Milling And Removing Temporary Joint	LS	1.000	1.000
1790	SPV.0105	Special 002. Material Transfer Vehicle	LS	1.000	1.000
1800	SPV.0105	Special 003. Salvage Traffic Signal Equipment CTH AA & USH 53 SB Ramps	LS	1.000	1.000
1810	SPV.0105	Special 004. Salvage Traffic Signal Equipment CTH AA & USH 53 NB Ramps	LS	1.000	1.000
1820	SPV.0165	Special 001. Modifying Signs Type I	SF	143.000	143.000
1830	SPV.0180	Special 001. Concrete Pavement Repair Doweled Special	SY	850.000	850.000
1840	SPV.0195	Special 001. Asphaltic Surface Special	TON	1,300.000	1,300.000

3

CLEARING

CATEGORY	STATION TO STATION	LOCATION	201.0105 (STA.)	201.0120 (ID.)
0010	IH 94 NW RAMP			
	594+00 NW - 596+00 NW	LT ONLY	—	18
	USH 53 SB COLLECTOR			
	221+00 CD - 227+00 CD	LT ONLY	6	—
PROJECT 1190-02-81 TOTAL			**6**	**18**

REMOVING PAVEMENT

CATEGORY	STAGE	STATION TO STATION	204.0100 (SY)
0010	STAGE 3		
		GOLF ROAD NW RAMP	
		2+35 GNW - 6+35 GNW	670
	STAGE 3 TOTAL		670
PROJECT 1190-02-81 TOTAL			**670**

REMOVING PAVEMENT BUTT JOINTS

CATEGORY	STAGE	STATION TO STATION	204.0105 (SY)
0010	STAGE 3		
		GOLF ROAD	
		1004+00 GR - 1006+13 GR	750
		1008+39 GR - 1012+00 GR	930
	STAGE 3 TOTAL - CATEGORY 0010		1680
	TOTAL - CATEGORY 0010		1,680
0020	STAGE 3		
		GOLF ROAD	
		1001+00 GR - 1004+00 GR	820
	STAGE 3 TOTAL - CATEGORY 0020		820
	TOTAL - CATEGORY 0020		820
PROJECT 1190-02-81 TOTAL			**2,500**

REMOVING CONCRETE SURFACE PARTIAL DEPTH

CATEGORY	STAGE	STATION TO STATION	204.0109.S (SF)
0010	STAGE 2		
		USH 53	
		UNDISTRIBUTED	6,800
	STAGE 2 TOTAL - CATEGORY 0010		6,800
	STAGE 3		
		GOLF ROAD	
		1004+00 GR - 1006+13 GR	17,700
		1008+39 GR - 1012+00 GR	29,400
	STAGE 3 TOTAL - CATEGORY 0010		47,100
	TOTAL - CATEGORY 0010		53,900
0020	STAGE 3		
		GOLF ROAD	
		1001+00 GR - 1004+00 GR	23,900
	STAGE 3 TOTAL - CATEGORY 0020		23,900
	TOTAL - CATEGORY 0020		23,900
PROJECT 1190-02-81 TOTAL - CATEGORY 0020			**77,800**

REMOVING CURB AND GUTTER

CATEGORY	STAGE	STATION TO STATION	204.0150 (LF)
0010	STAGE 3		
		GOLF ROAD	
		1004+00 GR - 1006+13 GR	137
		1008+39 GR - 1012+00 GR	258
	STAGE 3 TOTAL - CATEGORY 0010		395
	TOTAL - CATEGORY 0010		395
0020	STAGE 3		
		GOLF ROAD	
		1001+00 GR - 1004+00 GR	35
	STAGE 3 TOTAL - CATEGORY 0020		35
	TOTAL - CATEGORY 0020		35
PROJECT 1190-02-81 TOTAL			**430**

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STAGE	STATION TO STATION	204.0120 (SY)
0010	STAGE 2		
		USH 53 NORTHBOUND	
		43+20 NB - 62+63 NB	5,648
		63+61 NB - 110+32 NB	18,026
		USH 53 SOUTHBOUND	
		41+00 SB - 59+57 SB	7,202
		60+55 SB - 98+86 SB	13,469
	STAGE 2 TOTAL		44,345
	STAGE 3		
		USH 53 SOUTHBOUND	
		60+55 SB - 98+86 SB	1,623
		IH 94 NW RAMP	
		592+95 NW - 595+36 NW	699
		IH 94 NW LOOP RAMP	
		581+21 NWL - 583+61 NWL	1185
		IH 94 NE RAMP	
		556+65 NE - 557+00 NE	2,428
		USH 53 SOUTHBOUND COLLECTOR	
		203+60 CD - 228+19 CD	5,637
		GOLF ROAD SW RAMP	
		709+96 GSW - 715+53 GSW	3,383
		GOLF ROAD SE RAMP	
		807+89 GSE - 824+41 GSE	5,101
		GOLF ROAD NW RAMP	
		901+78 GNE - 917+57 GNE	7,399
	STAGE 3 TOTAL		27,455
PROJECT 1190-02-81 TOTAL			**71,800**

3

3

REMOVING ASPHALTIC SURFACE BUTT JOINTS

			204.0115
CATEGORY	STAGE	STATION TO STATION	(SY)
0010	STAGE 2		
		USH 53 NORTHBOUND	
		43+20 NB - 62+63 NB	815
		63+61 NB - 110+32 NB	761
			1,576
		USH 53 SOUTHBOUND	
		41+00 SB - 59+57 SB	788
		60+55 SB - 98+86 SB	797
			1,585
	STAGE 2 TOTAL		3,160
	STAGE 3		
		IH 94 NW RAMP	
		592+95 NW - 595+36 NW	243
		IH 94 NW LOOP RAMP	
		581+21 NWL - 583+61 NWL	492
		IH 94 NE RAMP	
		556+65 NE - 557+00 NE	369
		USH 53 SOUTHBOUND COLLECTOR	
		203+60 CD - 228+19 CD	482
		GOLF ROAD NE RAMP	
		901+78 GNE - 917+57 GNE	354
	STAGE 3 TOTAL		1,940
PROJECT 1190-02-81 TOTAL			**5,100**

REMOVING FENCE

				204.0170
CATEGORY	STAGE	STATION TO STATION	LOCATION	(LF)
0010	STAGE 3	IH 94 NW RAMP		
		594+44 NW - 595+44 NW	LT	100
		USH 53 SOUTHBOUND COLLECTOR		
		221+53 CD - 226+17 CD	LT	500
		GOLF ROAD SE RAMP		
		805+16 GSE - 809+16 GSE	RT	400
	STAGE 3 TOTAL			1,000
PROJECT 1190-02-81 TOTAL				**1,000**

REMOVING CONCRETE SIDEWALK

			204.0155
CATEGORY	STAGE	STATION TO STATION	(SY)
0010	STAGE 3		
		GOLF ROAD	
		1004+00 GR - 1006+13 GR	120
		1008+39 GR - 1012+00 GR	60
	STAGE 3 TOTAL		180
PROJECT 1180-02-81 TOTAL			**180**

REMOVING GUARDRAIL

				204.0165	614.0920
CATEGORY	STAGE	STATION TO STATION	LOCATION	(LF)	SALVAGED RAIL (LF)
0010	STAGE 2				
		USH 53 NORTHBOUND			
		61+46 NB - 61+96 NB	RT	50	50
		68+27 NB - 68+77 NB	RT	50	50
		USH 53 SOUTHBOUND			
		52+38 SB - 52+88 SB	RT	50	50
		66+55 SB - 66+62 SB	RT	7	7
		67+15 SB - 67+65 SB	RT	50	50
		67+16 SB - 67+66 SB	LT	50	50
	STAGE 2 TOTAL			257	257
	STAGE 3				
		USH 53 SOUTHBOUND COLLECTOR			
		213+51 CD - 214+01 CD	LT	50	50
		GOLF ROAD			
		1005+29 GR - 1005+97 GR	RT	68	—
		1008+55 GR - 1009+24 GR	LT	68	—
	STAGE 3 TOTAL			186	50
PROJECT 1190-02-81 TOTAL				**443**	**307**

BASE AGGREGATE DENSE

			305.0110	305.0120	305.0500	311.0110
CATEGORY	STAGE	STATION TO STATION	3/4 - INCH (TON)	1 1/4 - INCH (TON)	SHAPING SHOULDERS (STA)	BREAKER RUN (TON)
0010	STAGE 3					
		USH 53 NORTHBOUND				
		43+20 NB - 62+63 NB	—	—	35	---
		63+61 NB - 110+32 NB	—	—	85	---
		USH 53 SOUTHBOUND				
		41+00 SB - 59+57 SB	—	—	19	---
		60+55 SB - 98+86 SB	—	—	61	---
		IH 94 NW RAMP				
		592+95 NW - 595+36 NW	—	—	6	---
		IH 94 NW LOOP RAMP				
		581+21 NWL - 583+61 NWL	—	—	4	---
		IH 94 NE RAMP				
		556+65 NE - 557+00 NE	—	—	7	---
		USH 53 SOUTHBOUND COLLECTOR				
		203+60 CD - 228+19 CD	—	—	12	---
		GOLF ROAD				
		1004+00 GR - 1006+13 GR	52	—	---	---
		1008+39 GR - 1012+00 GR	37	—	---	---
		GOLF ROAD SW RAMP				
		709+96 GSW - 715+53 GSW	—	—	20	---
		GOLF ROAD SE RAMP				
		807+89 GSE - 824+41 GSE	23	230	26	---
		EBS	—	—	---	10
		GOLF ROAD NW RAMP				
		2+35 GNW - 6+35 GNW	—	—	---	---
		GOLF ROAD NE RAMP				
		901+78 GNE - 917+57 GNE	—	—	35	---
	STAGE 3 CATEGORY 0010 TOTAL		113	230	310	10
0020	STAGE 3					
		GOLF ROAD				
		1001+00 GR - 1004+00 GR	2	—	---	---
	STAGE 3 CATEGORY 0020 TOTAL		2	—	---	---
PROJECT 1190-02-81 TOTAL			**115**	**230**	**310**	**10**

EARTHWORK													
CATEGORY	STAGE	DIVISION	LOCATION	STATION - STATION	205.0100 Excavation Common (1) Cut (2) (CY)	205.0100 Excavation Common (1) EBS Excavation (3) (CY)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Reduced EBS in Fill (6) Factor 0.80	Unexpanded Fill	Expanded Fill (7) Factor 1.25	Mass Ordinate +/- (8)	Waste	208.0100 Borrow (CY)
0010	3	1	Golf Road SE Ramp	822+51'GSE' - 824+41'GSE'	101	5	3	99	4	145	176	-77	0	
		Sub-total 1			101	5	3	99	4	145	176	-77	0	77
Grand Totals					101	5	3	99	4	145	176	-77	0	77
Total Excavation Common					106									

1) Common Excavation is the sum of the Cut and EBS Excavation columns
2) Salvaged/Unsuable Pavement Material is included in Cut
3) EBS Excavation to be backfilled with Breaker Run
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusable Pavement Material
6) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
7) Expanded Fill. Factor = 1.25
8) 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.

CONCRETE PAVEMENT

CATEGORY	STAGE	STATION TO STATION	415.0090 9-INCH (SY)	416.0610 DRILLED TIE BARS (EACH)	416.0620 DRILLED DOWEL BARS (EACH)	SPV.0180.001 REPAIR DOWELED SPECIAL (SY)
0010	STAGE 1					
		USH 53				
		UNDISTRIBUTED	—	460	610	750
	STAGE 1 TOTAL		0	460	610	750
	STAGE 3					
		GOLF ROAD NW RAMP				
		2+35 GNW - 6+35 GNW	670	320	30	—
		GOLF ROAD				
		UNDISTRIBUTED	—	70	80	100
	STAGE 3 TOTAL		670	390	110	100
PROJECT 1190-02-81 TOTAL			**670**	**850**	**720**	**850**

ASPHALTIC ITEMS (1)

CATEGORY	STAGE	STATION TO STATION	455.0605 TACK COAT (GAL)	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS (LF)	460.6444 HMA PAVEMENT 4 MT 58-34 H (TON)	465.0105 ASPHALTIC SURFACE (TON)	465.0110 ASPHALTIC SURFACE PATCHING (TON)	465.0125 ASPHALTIC SURFACE TEMPORARY (TON)	465.0315 ASPHALTIC FLUMES (SY)	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS (LF)	SPV.0195.001 ASPHALTIC SURFACE SPECIAL (TON)
0010	STAGE 1										
		USH 53 NORTHBOUND									
		43+20 NB - 62+63 NB	—	—	—	---	—	7	—	—	---
		63+61 NB - 110+32 NB	—	—	—	---	—	15	—	—	---
		USH 53 SOUTHBOUND									
		41+00 SB - 59+57 SB	—	—	—	---	—	---	—	—	---
		60+55 SB - 98+86 SB	—	—	—	---	—	8	—	—	---
	STAGE 1 TOTAL - CATEGORY 0010		0	0	0	0	0	30	0	0	0
	STAGE 2										
		USH 53 NORTHBOUND									
		43+20 NB - 62+63 NB	119	1,943	439	---	—	---	—	—	---
		63+61 NB - 110+32 NB	374	4,671	1415	---	—	---	—	—	---
		USH 53 SOUTHBOUND									
		41+00 SB - 59+57 SB	181	1,857	693	---	—	---	—	—	---
		60+55 SB - 98+86 SB	301	3,831	1,153	---	—	---	—	—	---
		UNDISTRIBUTED	—	30	—	188	75	---	—	—	---
	STAGE 2 TOTAL - CATEGORY 0010		973	12,332	3,700	188	75	0	0	0	0
	STAGE 3										
		USH 53 NORTHBOUND									
		43+20 NB - 62+63 NB	145	1,943	439	103	—	---	—	3,595	---
		63+61 NB - 110+32 NB	453	4,671	1,415	315	—	---	—	8,450	---
		USH 53 SOUTHBOUND									
		41+00 SB - 59+57 SB	184	1,857	693	---	—	---	—	1,850	---
		60+55 SB - 98+86 SB	380	3,831	1,153	303	—	---	—	5,505	---
		IH 94 NW RAMP									
		592+95 NW - 595+36 NW	19	241	—	81	—	---	—	—	---
		IH 94 NW LOOP RAMP									
		581+21 NWL - 583+61 NWL	30	240	—	131	—	---	—	—	---
		IH 94 NE RAMP									
		556+65 NE - 557+00 NE	61	35	—	266	—	---	—	—	---
	STAGE 3 SUBTOTAL - CATEGORY 0010		1,272	12,818	3,700	1,199	0	0	0	19,400	0

ASPHALTIC ITEMS (2)

CATEGORY	STAGE	STATION TO STATION	455.0605 TACK COAT (GAL)	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS (LF)	460.6444 HMA PAVEMENT 4 MT 58-34 H (TON)	465.0105 ASPHALTIC SURFACE (TON)	465.0110 ASPHALTIC SURFACE PATCHING (TON)	465.0125 ASPHALTIC SURFACE TEMPORARY (TON)	465.0315 ASPHALTIC FLUMES (SY)	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS (LF)	SPV.0195.001 ASPHALTIC SURFACE SPECIAL (TON)
	STAGE 1 TOTAL - CATEGORY 0010		0	0	0	0	0	30	0	0	0
	STAGE 2 TOTAL - CATEGORY 0010		973	12,332	3,700	188	75	0	0	0	0
	STAGE 3 SUBTOTAL - CATEGORY 0010		1,272	12,818	3,700	1,199	0	0	0	19,400	0
0010	STAGE 3 CONTINUED										
		USH 53 SOUTHBOUND COLLECTOR									
		203+60 CD - 228+19 CD	141	2,459	---	627	---	---	—	—	---
		GOLF ROAD									
		1004+00 GR - 1006+13 GR	97	213	---	---	---	---	—	—	294
		1008+39 GR - 1012+00 GR	166	361	---	---	---	---	—	—	454
		UNDISTRIBUTED	---	29	---	---	125	---	—	—	188
		GOLF ROAD SW RAMP									
		709+96 GSW - 715+53 GSW	85	557	---	371	---	---	—	—	---
		GOLF ROAD SE RAMP									
		807+89 GSE - 824+41 GSE	130	1,652	---	589	---	---	15	—	---
		GOLF ROAD NW RAMP									
		2+35 GNW - 6+35 GNW	---	—	---	---	---	---	—	—	---
		GOLF ROAD NW RAMP									
		901+78 GNE - 917+57 GNE	186	1,579	---	827	---	---	—	—	---
	STAGE 3 TOTAL - CATEGORY 0010		2,076	19,668	3,700	3,612	125	0	15	19,400	935
	CATEGORY 0010 SUBTOTAL		3,050	32,000	7,400	3,800	200	30	15	19,400	935
0020	STAGE 3										
		GOLF ROAD									
		1001+00 GR - 1004+00 GR	150	600	---	---	---	---	—	—	365
	STAGE 3 TOTAL - CATEGORY 0020		150	600	---	---	---	---	—	—	365
	CATEGORY 0020 SUBTOTAL		150	600	0	0	0	0	0	0	365
PROJECT 1190-02-81 TOTAL			**3,200**	**32,600**	**7,400**	**3,800**	**200**	**30**	**15**	**19,400**	**1,300**

CONCRETE SIDEWALK

CATEGORY	STAGE	STATION TO STATION	602.0410 5-INCH (SF)	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW (SF)
0010	STAGE 3			
		GOLF ROAD		
		1004+00 GR - 1006+13 GR	1,195	70
		1008+39 GR - 1012+00 GR	885	105
	TOTAL - CATEGORY 0010		2,080	175
0020	STAGE 3			
		GOLF ROAD		
		1001+00 GR - 1004+00 GR	70	10
	TOTAL - CATEGORY 0020		70	10
PROJECT 1190-02-81 TOTAL			**2,150**	**185**

ADJUSTING MANHOLE COVERS

CATEGORY	STAGE	STATION TO STATION	611.8110 (EACH)
0010	STAGE 3		
		GOLF ROAD	
		UNDISTRIBUTED	3
	STAGE 3 TOTAL		3
PROJECT 1190-02-81 TOTAL			**3**

3

CONCRETE CURB & GUTTER

CATEGORY	STAGE	STATION TO STATION	601.0409 30-INCH TYPE A (LF)	601.0411 30-INCH TYPE D (LF)	601.0600 PEDESTRIAN (LF)	620.0200 CONCRETE MEDIAN BLUNT NOSE (SF)	620.0300 CONCRETE MEDIAN SLOPED NOSE (SF)
0010	STAGE 3						
		GOLF ROAD					
		1004+00 GR - 1006+13 GR	120	—	15	---	45
		1008+39 GR - 1012+00 GR	145	80	20	115	145
	TOTAL - CATEGORY 0010		264	80	35	115	190
0020	STAGE 3						
		GOLF ROAD					
		1001+00 GR - 1004+00 GR	35	—	---	---	—
	TOTAL - CATEGORY 0020		35	—	---	---	—
PROJECT 1190-02-81 TOTAL			**300**	**80**	**35**	**115**	**190**

MGS GUARDRAIL

CATEGORY	STAGE	STATION TO STATION	614.2300 MGS GUARDRAIL 3 (LF)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 (EACH)
0010	STAGE 2					
		USH 53 SOUTHBOUND				
		60+55 SB - 98+86 SB	150	---	1	1
	STAGE 2 TOTAL		150	---	1	1
	STAGE 3					
		GOLF ROAD				
		1001+00 GR - 1006+13 GR	---	39	1	---
		1008+39 GR - 1012+00 GR	25	39	1	---
	STAGE 3 TOTAL		25	78	2	---
PROJECT 1190-02-81 TOTAL			**175**	**78**	**3**	**1**

3

BARRIER SYSTEM GRADING SHAPING FINISHING

CATEGORY	STAGE	STATION TO STATION	EXCAVATION COMMON ** (CY)	BORROW ** (CY)	SALVAGED TOPSOIL ** (SY)	FERTILIZER TYPE B ** (CWT)	SEEDING MIXTURE NO. 30 ** (LB)	SEEDING TEMPORARY ** (LB)	614.0010 (EACH)
0010	STAGE 2								
		USH 53 NORTHBOUND							
		59+93 NB - 61+96 NB RT	178	—	310	0.2	6	8	1
		66+98 NB - 66+77 NB RT	151	—	272	0.2	5	7	1
		USH 53 SOUTHBOUND							
		52+38 SB - 54+28 SB RT	142	—	307	0.2	6	8	1
		67+15 SB - 68+78 SB LT & RT	215	—	537	0.3	10	15	2
		75+64 SB - 78+41 SB LT	193	—	518	0.3	9	14	1
	STAGE 2 TOTAL		879	0	1,426	1	26	39	6
	STAGE 3								
		USH 53 SOUTHBOUND COLLECTOR							
		213+51 CD - 214+71 CD LT	83	—	240	0.2	4	6	1
		GOLF ROAD							
		1004+95 GR - 1005+97 GR RT	32	118	514	0.3	9	14	1
		1008+55 GR - 1010+24 GR LT	54	1,365	1,399	0.9	25	38	1
	STAGE 3 TOTAL		169	1,483	2,153	1	39	58	3
PROJECT 1190-02-81 TOTAL			**1,048**	**1,483**	**3,580**	**2**	**64**	**97**	**9**

** ITEMS & QUANTITES LISTED FOR BID INFORMATION ONLY. ALL ITEMS INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING ITEM

STEEL PLATE BEAM GUARD

CATEGORY	STAGE	STATION TO STATION	614.0115 ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2 (EACH)	614.0305 CLASS A (LF)	614.0370 ENERGY ABSORBING TERMINAL (EACH)
0010	STAGE 2				
		USH 53 NORTHBOUND			
		43+20 NB - 62+63 NB	---	112.5	1
		63+61 NB - 110+32 NB	---	75	1
		USH 53 SOUTHBOUND			
		41+00 SB - 59+57 SB	---	62.5	1
		60+55 SB - 98+86 SB	1	175	2
	STAGE 2 TOTAL		1	425	5
	STAGE 3				
		USH 53 SOUTHBOUND COLLECTOR			
		203+60 CD - 228+19 CD	---	25	1
	STAGE 3 TOTAL		---	25	1
PROJECT 1190-02-81 TOTAL			**1**	**450**	**6**

3

FENCE CHAIN LINK 5-FT

CATEGORY	STAGE	STATION TO STATION	616.0205 (LF)
0010	STAGE 3		
		USH 53 SOUTHBOUND COLLECTOR	
		203+60 CD - 228+19 CD	500
	STAGE 3 TOTAL		500
PROJECT 1190-02-81 TOTAL			**500**

FENCE WOVEN WIRE 4-FT

CATEGORY	STAGE	STATION TO STATION	LOCATION	616.0100 (LF)
0010	STAGE 3	IH 94 NW RAMP		
		594+44 NW - 595+44 NW	LT	100
		GOLF ROAD SE RAMP		
		805+16 GSE - 809+16 GSE	RT	400
	STAGE 3 TOTAL			500
PROJECT 1190-02-81 TOTAL				**500**

LANDSCAPING ITEMS

CATEGORY	STAGE	STATION TO STATION	625.0100 TOPSOIL (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0130 SEEDING MIXTURE NO. 30 (LB)	630.0200 SEEDING TEMPORARY (LB)
0010	STAGE 3					
		GOLF ROAD SE RAMP				
		807+89 GSE - 824+41 GSE	321	0.2	6	9
		UNDISTRIBUTED	29	0.3	1	1
	STAGE 3 TOTAL		350	0.5	7	10
PROJECT 1190-02-81 TOTAL			**350**	**0.5**	**7**	**10**

WATER

CATEGORY	LOCATION	TASK	624.0100 (MGAL)
0010	PROJECT	DUST CONTROL	5
		COMPACTION	5
PROJECT 1190-02-81 TOTALS			**10**

EROSION CONTROL

CATEGORY	STAGE	STATION TO STATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.2004 EROSION MAT CLASS I TYPE B (SY)	628.7015 INLET PROTECTION TYPE C (EACH)	628.7020 INLET PROTECTION TYPE D (EACH)	628.7504 TEMPORARY DITCH CHECK (LF)
0010	STAGE 3							
		USH 53 NORTHBOUND						
		43+20 NB - 62+63 NB	243	486	566	—	---	---
		63+61 NB - 110+32 NB	291	582	493	—	---	16
		USH 53 SOUTHBOUND						
		41+00 SB - 59+57 SB	294	589	478	—	---	16
		60+55 SB - 98+86 SB	204	408	464	—	---	---
		IH 94 NW RAMP						
		592+95 NW - 595+36 NW	210	421	337	—	---	16
		USH 53 SOUTHBOUND COLLECTOR						
		203+60 CD - 228+19 CD	260	520	377	—	---	16
		GOLF ROAD						
		1001+00 GR - 1006+13 GR	133	267	526	2	---	---
		1008+39 GR - 1012+00 GR	207	415	1475	3	1	---
		GOLF ROAD SW RAMP						
		709+96 GSW - 715+53 GSW	310	620	761	—	---	16
		GOLF ROAD SE RAMP						
		807+89 GSE - 824+41 GSE	247	494	321	—	---	---
	STAGE 3 TOTAL		2,400	4,800	5,800	5	1	80
	UNDISTRIBUTED		600	1,200	1,450	1	1	20
PROJECT 1190-02-81 TOTAL			**3,000**	**6,000**	**7,250**	**6**	**2**	**100**

MOBILIZATION EROSION CONTROL

CATEGORY	LOCATION	628.1905 (EACH)	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
0010	STAGE 1	1	---
	STAGE 2	—	---
	STAGE 3	3	2
PROJECT 1190-02-81 TOTALS		**4**	**2**

DELINEATORS

CATEGORY	STAGE	STATION TO STATION	633.0100 POSTS STEEL (EACH)	633.0500 REFLECTORS (EACH)
0010	STAGE 2			
		USH 53		
		UNDISTRIBUTED	25	25
	STAGE 2 TOTAL		25	25
PROJECT 1190-02-81 TOTAL			**25**	**25**

3

PERMANENT SIGNING TYPE I

CATEGORY	SIGN #	SIGN CODE	W IN	SIGN SIZE X	H IN	637.1220 SIGNS TYPE I REFLECTIVE SH (SF)	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	634.0618* WOOD POSTS 4X6-INCH 18 FT (EACH)	SPV.0165.001 MODIFYING SIGNS TYPE I (SF)	SIGN MOUNTED ON	REMARKS
0010											
	1-5	E9-1	132	X	54	49.5	---	3	—	STA. 51+75NB, LT	Eau Claire NEXT 6 EXITS
	1-19	E6-51	96	X	102	68	---	—	—	S-18-117, 1-20, 1-21,	SOUTH USH 53 AHEAD
	1-20A	E1-5P	132	X	156	—	---	—	143	S-18-117, 1-19, 1-21,	EXIT 84A
	1-21A	E1-5P	120	X	30	25	---	—	—	S-18-117, 1-19, 1-20,	EXIT 84B
	1-21B	E6-51	168	X	90	105	---	—	—		WEST IH 94 ST PAUL
	1-21C	E13-1P	168	X	42	—	49	—	—		EXIT (TILTED ARROW) ONLY
	1-22A	E1-5P	120	X	30	25	---	—	—	S-18-104	EXIT 84A
	1-22B	E6-51	168	X	90	105	---	—	—		EAST IH 94 MADISON
	1-22C	E13-1P	168	X	42	—	49	—	—		EXIT (TILTED ARROW) ONLY
	2-8A	E1-5P	108	X	30	22.5	---	—	—	S-18-115	EXIT 85
	2-8B	E6-51	156	X	84	91	---	—	—		CTH AA GOLF RD (TILTED ARROW)
	2-9	E6-51	96	X	102	68	---	—	—	S-18-116, 2-10, 2-11	SOUTH USH 53 AHEAD
	2-10A	E1-5P	120	X	30	25	---	—	—	S-18-116, 2-9, 2-11	EXIT 84A
	2-10B	E6-51	132	X	126	115.5	---	—	—		EAST IH 94 MADISON (ARROW)
	2-11A	E1-5P	120	X	30	25	---	—	—	S-18-116, 2-9, 2-10	EXIT 84B
	2-11B	E6-51	168	X	90	105	---	—	—		WEST IH 94 ST PAUL
	2-11C	E13-1P	168	X	42	—	49	—	—		EXIT (TILTED ARROW) ONLY
	3-7A	E1-5P	120	X	30	25	---	—	—	S-18-114	EXIT 84B
	3-7B	E6-51	168	X	90	105	---	—	—		WEST IH 94 ST PAUL
	3-7C	E13-1P	168	X	36	—	42	—	—		EXIT (DOWN ARROW) ONLY
	4-65A	E1-5P	120	X	30	25	---	—	—	STRUCTURE B-18-99	EXIT 84A
	4-65B	E6-51	132	X	120	110	---	—	—		EAST IH 94 MADISON 1 MILE
	4-66A	E1-5P	120	X	30	25	---	—	—	STRUCTURE B-18-99	EXIT 84B
	4-66B	E6-51	132	X	120	110	---	—	—		WEST IH 94 ST PAUL 1/2 MILE
PROJECT 1190-02-81 TOTAL						**1,229.5**	**189**	**3**	**143**		

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

PERMANENT SIGNING TYPE II (1)

CATEGORY	SIGN #	SIGN CODE	SIGN SIZE W IN	X	H IN	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2215* SIGNS TYPE II REFLECTIVE H FOLDING (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	634.0612 POSTS WOOD 4X6-INCH 12 FT (EACH)	634.0614 POSTS WOOD 4X6-INCH 14 FT (EACH)	634.0616 POSTS WOOD 4X6-INCH 16 FT (EACH)	634.0618* POSTS WOOD 4X6-INCH 18 FT (EACH)	634.0620 POSTS WOOD 4X6-INCH 20 FT (EACH)	SIGN MOUNTED ON SAME POST AS	REMARKS
0010	1-1	D10-5	21	X	60	8.75	---	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	1-2	W4-2R	48	X	48	---	---	16	—	---	---	2	—	---	LANE REDUCTION TRANSITION SYMBOL (RIGHT)
	1-3	W4-2R	48	X	48	---	---	16	—	---	---	2	—	---	LANE REDUCTION TRANSITION SYMBOL (RIGHT)
	1-4	W4-3R	48	X	48	---	---	16	—	---	---	2	—	---	MERGE-ADDED LANE FROM RIGHT
	1-6	W3-5	48	X	48	---	---	16	—	---	---	2	—	---	SPEED LIMIT 65 AHEAD (ARROW)
	1-7	W3-5	48	X	48	---	---	16	—	---	---	2	—	---	SPEED LIMIT 65 AHEAD (ARROW)
	1-8	E5-1B	96	X	60	40.00	---	---	—	---	---	---	2	---	EXIT 84B (ARROW)
	1-9	R11-54F	48	X	30	---	10	---	—	1	---	---	—	---	RAMP CLOSED USE ALT ROUTE
	1-10	R5-57	36	X	36	9.00	---	---	—	1	---	---	—	---	PEDESTRIANS, ETC., PROHIBITED
	1-11	R3-1	24	X	24	4.00	---	---	—	1	---	---	—	---	NO RIGHT TURN SYMBOL
	1-12	R3-1	36	X	36	9.00	---	---	—	1	---	---	—	---	NO RIGHT TURN SYMBOL
	1-13	R6-2R	24	X	30	5.00	---	---	—	1	---	---	—	---	ONE WAY RIGHT ARROW
	1-14	R5-1	30	X	30	6.25	---	---	—	1	---	---	—	---	DO NOT ENTER
	1-15	J3-1	24	X	57	9.50	---	---	—	---	1	---	—	---	DIRECTIONAL ASSEMBLY
	1-16	R1-2	36	X	31	3.88	---	---	—	---	1	---	—	1-17	YIELD
	1-17	R6-2R	24	X	30	5.00	---	---	—	---	---	---	—	1-16	ONE WAY RIGHT ARROW
	1-18	D10-5	21	X	60	8.75	---	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	1-23	E13-1P	90	X	24	---	---	15	—	---	---	---	—	ON EXISTING SIGN	RAMP ADVISORY SPEED (25 MPH)
	1-24	E13-1P	90	X	24	---	---	15	—	---	---	---	—	1-8	RAMP ADVISORY SPEED (25 MPH)
	2-1	D10-5	21	X	60	8.75	---	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	2-2	R2-1	48	X	60	20.00	---	---	—	---	2	---	—	---	SPEED LIMIT 65 MPH
	2-3	R2-1	48	X	60	20.00	---	---	—	---	2	---	—	---	SPEED LIMIT 65 MPH
	2M-4	I55-56	30	X	36	---	---	---	—	1	---	---	—	---	ADOPT A HIGHWAY SPONSOR
	2-5	W5-52L	18	X	54	---	---	6.75	—	1	---	---	—	---	CLEARANCE STRIPER DOWN RIGHT
	2-6	W5-52R	18	X	54	---	---	6.75	—	1	---	---	—	---	CLEARANCE STRIPER DOWN LEFT
	2-7	D10-5	21	X	60	8.75	---	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	2-12	E5-1B	96	X	60	40.00	---	---	—	---	---	2	—	---	EXIT 84B (ARROW)
	2-13	E5-1B	96	X	60	8.75	---	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	2-14	W5-52L	18	X	54	---	---	6.75	—	1	---	---	—	---	CLEARANCE STRIPER DOWN RIGHT
	2-15	W5-52R	18	X	54	---	---	6.75	—	1	---	---	—	---	CLEARANCE STRIPER DOWN LEFT
	2-16	R2-1	48	X	60	20.00	---	---	—	---	2	---	—	---	SPEED LIMIT 55 MPH
	2-17	R2-1	48	X	60	20.00	---	---	—	---	2	---	—	---	SPEED LIMIT 55 MPH
	2-18	D10-5	21	X	60	8.75	---	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	2-19	R11-54F	48	X	30	10.00	---	---	—	1	---	---	—	---	RAMP CLOSED USE ALT ROUTE
	2-20	W13-3	36	X	48	---	---	12	—	---	1	---	—	---	RAMP SPEED 25 MPH
	2M-21	R7-66	36	X	66	---	---	---	—	---	---	2	—	---	CITY OF EAU CLAIRE PARKING REGULATIONS
	3-1	R3-4B	36	X	48	12.00	---	---	—	---	1	---	—	3-2	NO U TURN SIGN COMBINED W/MAINT&POLICE
	3-2	R3-4B	36	X	48	12.00	---	---	—	---	---	---	—	3-1	NO U TURN SIGN COMBINED W/MAINT&POLICE
	3-3	D10-5	21	X	60	8.75	---	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	3-4	E5-1A	72	X	60	30.00	---	---	—	---	---	2	—	---	EXIT 85 (ARROW)
	3-5	W3-3	36	X	36	---	---	9	—	---	2	---	—	---	SIGNAL AHEAD
	3-6	JB4-1	36	X	54	13.50	---	---	—	---	1	---	—	---	REASSURANCE ASSEMBLY (BLUE)
	3-8	D10-5	21	X	60	8.75	---	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	3-9	W3-5	48	X	48	---	---	16	—	---	---	2	—	---	SPEED LIMIT 55 AHEAD (ARROW)
	3-10	W3-5	48	X	48	---	---	16	—	---	---	2	—	---	SPEED LIMIT 55 AHEAD (ARROW)
SUBTOTAL						359.13	10.00	190.00	—	20	15	20	2		

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

PERMANENT SIGNING TYPE II (2)

CATEGORY	SIGN #	SIGN CODE	SIGN SIZE W IN	X	SIGN SIZE H IN	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2215* SIGNS TYPE II REFLECTIVE H FOLDING (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	634.0612 POSTS WOOD 4X6-INCH 12 FT (EACH)	634.0614 POSTS WOOD 4X6-INCH 14 FT (EACH)	634.0616 POSTS WOOD 4X6-INCH 16 FT (EACH)	634.0618* POSTS WOOD 4X6-INCH 18 FT (EACH)	634.0620 POSTS WOOD 4X6-INCH 20 FT (EACH)	SIGN MOUNTED ON SAME POST AS	REMARKS
0010	SUBTOTAL					359.13	10.00	190.00	—	20	15	20	2		
	4-1	R5-1A	30	X	30	6.25	—	---	—	1	---	---	—	—	WRONG WAY
	4-2	R5-1A	30	X	30	6.25	—	---	—	1	---	---	—	—	WRONG WAY
	4-3	J13-1	24	X	45	7.5	—	---	—	—	1	---	—	4-4	DIRECTIONAL WITHOUT CARDINAL
	4-4	R5-1	30	X	30	6.25	—	---	—	—	---	---	—	4-3	DO NOT ENTER
	4-5	R1-1F	30	X	30	---	5.18	---	—	—	---	---	—	SP, 4-6	STOP SIGN (FOLDING)
	4-6	R6-3	30	X	30	6.25	—	---	—	—	---	---	—	SP, 4-5	DIVIDED HIGHWAY SIGN CROSSROAD
	4-7	R1-1	30	X	30	5.18	—	---	—	—	---	---	—	4-8	STOP SIGN
	4-8	R1-53	24	X	30	5	—	---	—	—	1	---	—	4-7	RIGHT TURN OBEY THIS SIGN
	4-9	J13-1	24	X	45	7.5	—	---	—	—	1	---	—	—	DIRECTIONAL WITHOUT CARDINAL
	4-10	R5-1	30	X	30	6.25	—	---	—	—	---	---	—	LP, 4-11	DO NOT ENTER
	4-11	R3-1	24	X	24	4	—	---	—	—	---	---	—	LP, 4-10	NO RIGHT TURN SYMBOL
	4-12	R5-1A	36	X	24	6	—	---	—	—	---	---	—	OVERHEAD POLE	WRONG WAY
	4-13	R4-7	24	X	30	5	—	---	—	—	---	---	—	SP	KEEP RIGHT
	4-14	J3-1	24	X	57	9.5	—	---	—	—	1	---	—	—	DIRECTIONAL ASSEMBLY
	4-15	R3-18	24	X	24	4	—	---	—	—	---	---	—	SP	NO U TURNS OR LEFT TURNS
	4-16	R5-1	30	X	30	6.25	—	---	—	—	---	---	—	4-17	DO NOT ENTER
	4-17	J3-1	24	X	57	9.5	—	---	—	—	1	---	—	4-16	DIRECTIONAL ASSEMBLY
	4-18	R6-2L	24	X	30	5	—	---	—	—	---	---	—	LP/SP	ONE WAY LEFT ARROW
	4-19	W4-3R	36	X	36	---	—	9	—	—	---	---	—	RAMP GATE POLE	MERGE-ADDED LANE FROM RIGHT
	4-20	R2-1	24	X	30	5	—	---	—	—	---	---	—	SP	SPEED LIMIT 35 MPH
	4-21	J1-1	24	X	36	6	—	---	—	1	---	---	—	—	JUNCTION OR END ASSEMBLY
	4-22	J2-2	48	X	57	19	—	---	—	—	1	---	—	—	ROUTE TURN ASSEMBLY
	4-23	R5-57	36	X	36	9	—	---	—	1	---	---	—	—	PEDESTRIANS, ETC., PROHIBITED
	4-24	R7-64	48	X	30	10	—	---	—	1	---	---	—	—	NO PARKING ON RAMP
	4-25	W4-3R	36	X	36	---	—	9	—	—	2	---	—	SP	MERGE-ADDED LANE FROM RIGHT
	4-26	R3-8B	36	X	30	7.5	—	---	—	1	---	---	—	SP	LEFT ONLY / LEFT, AHEAD
	4-27	R3-8B	36	X	30	7.5	—	---	—	1	---	---	—	SP	LEFT ONLY / LEFT, AHEAD
	4-28	R3-8P	54	X	30	11.25	—	---	—	2	---	---	—	—	LEFT ONLY / LEFT, AHEAD / RIGHT ONLY
	4-29	R3-8B	36	X	30	7.5	—	---	—	1	---	---	—	4-30	LEFT ONLY / LEFT, AHEAD
	4-30	R5-1A	36	X	24	6	—	---	—	—	---	---	—	4-29	WRONG WAY
	4-31	R1-1F	30	X	30	---	5.18	---	—	—	---	---	—	SP, 4-32	STOP SIGN (FOLDING)
	4-32	R5-1	30	X	30	6.25	—	---	—	—	---	---	—	SP, 4-31	DO NOT ENTER
	4-33	R5-1	30	X	30	6.25	—	---	—	—	---	---	—	SP, 4-34	DO NOT ENTER
	4-34	R3-1	24	X	24	4	—	---	—	—	---	---	—	SP, 4-33	NO RIGHT TURN SYMBOL
	4-35	J3-2	48	X	57	19	—	---	—	—	1	---	—	—	DIRECTIONAL ASSEMBLY
	4-36	J13-1	24	X	45	7.5	—	---	—	—	1	---	—	—	DIRECTIONAL WITHOUT CARDINAL
	4-37	R5-1A	36	X	24	6	—	---	—	1	---	---	—	—	WRONG WAY
	4-38	R6-3	30	X	24	5	—	---	—	—	---	---	—	SP, 4-39	DIVIDED HIGHWAY SIGN CROSSROAD
	4-39	R1-1F	30	X	30	---	5.18	---	—	—	---	---	—	SP, 4-38	STOP SIGN (FOLDING)
	4-40	R1-1F	30	X	30	---	5.18	---	—	—	---	---	—	SP	STOP SIGN (FOLDING)
	SUBTOTALS:					607.56	30.72	208.00	—	31	25	20	2		

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

3

PERMANENT SIGNING TYPE II (3)

						637.2210	637.2215*	637.2230	634.0612	634.0614	634.0616	634.0618*	634.0620		
				SIGN SIZE		SIGNS TYPE II REFLECTIVE	SIGNS TYPE II REFLECTIVE	SIGNS TYPE II REFLECTIVE	POSTS WOOD 4X6-INCH					SIGN MOUNTED	
CATEGORY	SIGN #	SIGN CODE	W IN	X	H IN	H (SF)	H FOLDING (SF)	F (SF)	12 FT (EACH)	14 FT (EACH)	16 FT (EACH)	18 FT (EACH)	20 FT (EACH)	ON SAME POST AS	REMARKS
0010	SUBTOTAL					607.56	30.72	208.00	—	31	25	20	2		
	4-41	R4-7	24	X	30	5	—	---	—	---	---	---	—	SP, 4-42	KEEP RIGHT
	4-42	R3-4	24	X	24	4	—	---	—	---	---	---	—	SP, 4-41	NO U TURN SYMBOL
	4-43	J3-1	24	X	57	9.5	—	---	—	---	---	---	—	SP, 4-44	DIRECTIONAL ASSEMBLY
	4-44	R3-18	24	X	24	4	—	---	—	---	---	---	—	SP, 4-43	NO U TURNS OR LEFT TURNS
	4-45	R2-1	24	X	30	5	—	---	—	1	---	---	—	---	SPEED LIMIT 35 MPH
	4-46	W3-3	36	X	36	---	—	9	—	---	2	---	—	---	SIGNAL AHEAD
	4-47	R3-8X	54	X	30	11.25	—	---	—	2	---	---	—	---	LANE CONTROL
	4-48	R3-8X	54	X	30	11.25	—	---	—	2	---	---	—	---	LANE CONTROL
	4-49	J1-2	48	X	39	13	—	---	—	---	1	---	—	---	JUNCTION OR END ASSEMBLY
	4-50	J2-4	96	X	57	38	—	---	—	---	---	2	—	4-51	ROUTE TURN ASSEMBLY
	4-51	R5-1A	36	X	24	6	—	---	—	---	---	---	—	4-50	WRONG WAY
	4-52	J3-2	48	X	57	19	—	---	—	---	1	---	—	---	DIRECTIONAL ASSEMBLY
	4-53	R6-2L	24	X	30	5	—	---	—	---	---	---	—	SP, 4-55	ONE WAY LEFT ARROW
	4-54	J2-2	48	X	57	19	—	---	—	---	1	---	—	---	ROUTE TURN ASSEMBLY
	4-55	R5-1	30	X	30	6.25	—	---	—	---	---	---	—	SP, 4-53	DO NOT ENTER
	4-56	R7-64	48	X	30	10	—	---	—	1	---	---	—	---	NO PARKING ON RAMP
	4-57	D10-5	21	X	60	8.75	—	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	4-58	R2-1	48	X	60	20	—	---	—	---	2	---	—	---	SPEED LIMIT 65 MPH
	4-59	R2-1	48	X	60	20	—	---	—	---	2	---	—	---	SPEED LIMIT 65 MPH
	4-60	D10-5	21	X	60	8.75	—	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	4-61	W4-3R	48	X	48	---	—	16	—	---	---	2	—	---	MERGE-ADDED LANE FROM RIGHT
	4-62	D10-5	21	X	60	8.75	—	---	—	---	1	---	—	---	ENHANCED REFERENCE MARKER
	4-63	W4-3R	48	X	48	---	—	16	—	---	---	2	—	---	MERGE-ADDED LANE FROM RIGHT
	4-67	R5-57	36	X	36	9	—	---	—	1	---	---	—	---	PEDESTRIANS, ETC., PROHIBITED
	4-68	W12-1D	24	X	24	---	—	4	1	---	---	---	—	---	DOUBLE DOWN ARROW
	4-69	W12-1D	24	X	24	---	—	4	1	---	---	---	—	---	DOUBLE DOWN ARROW
	4-70	W12-1D	24	X	24	---	—	4	1	---	---	---	—	---	DOUBLE DOWN ARROW
	5-1	D10-5	21	X	60	8.75	—	---	—	1	---	---	—	---	ENHANCED REFERENCE MARKER
	5-2	E5-1A	72	X	60	30	—	---	—	---	---	2	—	---	EXIT NUMBER (ARROW) 1-4 DIGITS
	5-3	W3-3	36	X	36	---	—	9	—	---	2	---	—	---	SIGNAL AHEAD
PROJECT 1190-02-81 TOTAL						**887.81**	**30.72**	**270.00**	**3**	**41**	**37**	**28**	**2**		

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

REMOVING & MOVING SIGNS (1)

CATEGORY	SIGN #	SIGN CODE	638.2102 MOVING SIGNS TYPE II (EACH)	638.2601 REMOVING SIGNS TYPE I (EACH)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	SIGN MOUNTED ON SAME POST AS	REMARKS
0010	1R-1	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	1R-2	W4-2R	---	---	1	2	—	LANE REDUCTION TRANSITION SYMBOL (RIGHT)
	1R-3	W4-2R	---	---	1	2	—	LANE REDUCTION TRANSITION SYMBOL (RIGHT)
	1R-4	W4-3R	---	---	1	2	—	MERGE-ADDED LANE FROM RIGHT
	1R-5	E9-1	---	1	---	3	—	EAU CLAIRE AREA NEXT 6 EXITS
	1R-6	W3-5	---	---	1	2	—	SPEED LIMIT 65 AHEAD (ARROW)
	1R-7	W3-5	---	---	1	2	—	SPEED LIMIT 65 AHEAD (ARROW)
	1R-8	E5-1A	---	---	1	2	—	EXIT NUMBER (ARROW) 1-4 DIGITS
	1R-9	R11-54F	---	---	1	1	—	RAMP CLOSED USE ALT ROUTE
	1R-10	R5-57	---	---	1	1	—	PEDESTRIANS, ETC., PROHIBITED
	1R-11	R3-1	---	---	1	1	—	NO RIGHT TURN SYMBOL
	1R-12	R3-1	---	---	1	2	—	NO RIGHT TURN SYMBOL
	1R-13	R6-2R	---	---	1	1	—	ONE WAY RIGHT ARROW
	1R-14	R5-1	---	---	1	1	—	DO NOT ENTER
	1R-15	J3-1	---	---	1	2	—	DIRECTIONAL ASSEMBLY
	1R-16	R1-2	---	---	1	1	1R-17	YIELD
	1R-17	R6-2R	---	---	1	---	1R-16	ONE WAY RIGHT ARROW
	1R-18	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	1R-19	E6-1	---	1	---	---	1R-21	SOUTH USH 53 BRACKETT AHEAD (S-18-025)
	1R-21	E6-51	---	1	---	---	1R-19	EXIT 84B WEST IH 94 ST PAUL (S-18-025)
	1R-22	E6-51	---	1	---	---	—	EXIT 84A EAST IH 94 MADISON/CHICAGO EXIT 25 MPH (S-18-104)
	2R-1	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	2R-2	R2-1	---	---	1	2	—	SPEED LIMIT 65 MPH
	2R-3	R2-1	---	---	1	2	—	SPEED LIMIT 65 MPH
	2M-4	I55-56	1	---	---	---	—	ADOPT A HIGHWAY SPONSOR
	2R-5	W5-52L	---	---	1	1	—	CLEARANCE STRIPER DOWN RIGHT
	2R-6	W5-52R	---	---	1	1	—	CLEARANCE STRIPER DOWN LEFT
	2R-7	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	2R-8	E6-1	---	1	---	---	—	EXIT 85 CTH AA GOLF RD (S-18-023)
	2R-9	E6-1	---	1	---	---	2R-10, 2R-11	SOUTH USH 53 BRACKETT (S-18-024)
	2R-10	E6-51	---	1	---	---	2R-09, 2R-11	EXIT 84A EAST IH 94 MADISON/CHICAGO 1/2 MILE (S-18-024)
	2R-11	E6-51	---	1	---	---	2R-09, 2R-10	EXIT 84B WEST IH 94 ST PAUL EXIT ONLY (S-18-024)
	2R-12	W12-1D	---	---	1	1	—	DOUBLE DOWN ARROW
	2R-13	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	2R-14	W5-52L	---	---	1	1	—	CLEARANCE STRIPER DOWN RIGHT
	2R-15	W5-52R	---	---	1	1	—	CLEARANCE STRIPER DOWN LEFT
	2R-16	R2-1	---	---	1	2	—	SPEED LIMIT 55 MPH
	2R-17	R2-1	---	---	1	2	—	SPEED LIMIT 55 MPH
	2R-18	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	2R-19	R11-54F	---	---	1	1	—	RAMP CLOSED USE ALT ROUTE
	2R-20	W13-3	---	---	1	2	—	RAMP SPEED 35 MPH
	2M-21	CUSTOM	1	---	---	---	—	PARKING REGULATIONS SIGN
	3R-1	R3-4B	---	---	1	1	3R-2	NO U TURN SIGN COMBINED W/MAINT&POLICE
	3R-2	R3-4B	---	---	1	---	3R-1	NO U TURN SIGN COMBINED W/MAINT&POLICE
	3R-3	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
SUBTOTAL			2	8	35	49		

REMOVING & MOVING SIGNS (2)

CATEGORY	SIGN #	SIGN CODE	638.2102 MOVING SIGNS TYPE II (EACH)	638.2601 REMOVING SIGNS TYPE I (EACH)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	SIGN MOUNTED ON SAME POST AS	REMARKS
0010	SUBTOTALS (1)		2	8	35	49		
	3R-4	E5-1A	—	—	1	2	---	EXIT NUMBER (ARROW) 1-4 DIGITS
	3R-5	W3-3	—	—	1	1	---	SIGNAL AHEAD
	3R-6	J1-1	—	—	1	1	---	JUNCTION OR END ASSEMBLY
	3R-7	E6-51	—	1	—	—	---	EXIT 84B WEST IH 94 ST PAUL EXIT ONLY (S-18-021)
	3R-8	D10-5	—	—	1	1	---	ENHANCED REFERENCE MARKER
	3R-9	W3-5	—	—	1	1	---	SPEED LIMIT 55 AHEAD (ARROW)
	3R-10	W3-5	—	—	1	1	---	SPEED LIMIT 55 AHEAD (ARROW)
	4R-1	R5-1A	—	—	1	1	---	WRONG WAY
	4R-2	R5-1A	—	—	1	1	---	WRONG WAY
	4R-3	J13-1	—	—	1	1	4R-4	DIRECTIONAL WITHOUT CARDINAL
	4R-4	R5-1	—	—	1	—	4R-3	DO NOT ENTER
	4R-5	R1-1F	—	—	1	—	SP	STOP SIGN (FOLDING)
	4R-6	R6-3	—	—	1	—	SP	DIVIDED HIGHWAY SIGN CROSSROAD
	4R-7	R1-1F	—	—	1	1	4R-8	STOP SIGN (FOLDING)
	4R-8	R1-53	—	—	1	—	4R-7	RIGHT TURN OBEY THIS SIGN
	4R-9	J13-1	—	—	1	1	---	DIRECTIONAL WITHOUT CARDINAL
	4R-10	R5-1	—	—	1	—	4R-11, SP	DO NOT ENTER
	4R-11	R3-1	—	—	1	—	4R-10, SP	NO RIGHT TURN SYMBOL
	4R-12	R5-1A	—	—	1	—	OVERHEAD POLE	WRONG WAY
	4R-13	R4-7	—	—	1	—	SP	KEEP RIGHT
	4R-14	J3-1	—	—	1	1	---	DIRECTIONAL ASSEMBLY
	4R-15	R3-18	—	—	1	—	SP	NO U OR LEFT TURN SYMBOL
	4R-16	R5-1	—	—	1	—	4R-17	DO NOT ENTER
	4R-17	J3-1	—	—	1	2	4R-16	DIRECTIONAL ASSEMBLY
	4R-18	R6-2L	—	—	1	—	LP/SP	ONE WAY LEFT ARROW
	4R-19	W4-3R	—	—	1	1	---	MERGE-ADDED LANE FROM RIGHT
	4R-20	R2-1	—	—	1	—	SP	SPEED LIMIT 35 MPH
	4R-21	J4-1	—	—	1	1	---	REASSURANCE ASSEMBLY
	4R-22	J2-2	—	—	1	1	---	ROUTE TURN ASSEMBLY
	4R-23	R5-57	—	—	1	1	---	PEDESTRIANS, ETC., PROHIBITED
	4R-24	R7-64	—	—	1	1	---	NO PARKING ON RAMP
	4R-25	W4-3R	—	—	1	1	---	MERGE-ADDED LANE FROM RIGHT
	4R-26	R3-8B	—	—	1	1	---	LEFT ONLY / LEFT, AHEAD
	4R-27	R3-8B	—	—	1	1	---	LEFT ONLY / LEFT, AHEAD
	4R-28	R3-8P	—	—	1	2	---	VARIOUS ONLYS
	4R-29	R3-8B	—	—	1	1	4R-30	LEFT ONLY / LEFT, AHEAD
	4R-30	R5-1A	—	—	1	—	4R-29	WRONG WAY
	4R-31	R1-1F	—	—	1	—	4R-32, SP	STOP SIGN (FOLDING)
	4R-32	R5-1	—	—	1	—	4R-31, SP	DO NOT ENTER
	4R-33	R5-1	—	—	1	—	4R-34, SP	DO NOT ENTER
	4R-34	R3-1	—	—	1	—	4R-33, SP	NO RIGHT TURN SYMBOL
	4R-35	J3-2	—	—	1	1	---	DIRECTIONAL ASSEMBLY
	4R-36	J13-1	—	—	1	1	---	DIRECTIONAL WITHOUT CARDINAL
	4R-37	R5-1A	—	—	1	1	---	WRONG WAY
	4R-38	R6-3	—	—	1	—	4R-39, SP	DIVIDED HIGHWAY SIGN CROSSROAD
	4R-39	R1-1F	—	—	1	—	4R-38, SP	STOP SIGN (FOLDING)
	4R-40	R1-1F	—	—	1	—	SP	STOP SIGN (FOLDING)
	4R-41	R4-7	—	—	1	—	SP	KEEP RIGHT
	4R-42	R3-4	—	—	1	—	SP	NO U TURN SYMBOL
	SUBTOTALS (2)		2	9	83	78		

REMOVING & MOVING SIGNS (3)

CATEGORY	SIGN #	SIGN CODE	638.2102 MOVING SIGNS TYPE II (EACH)	638.2601 REMOVING SIGNS TYPE I (EACH)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	SIGN MOUNTED ON SAME POST AS	REMARKS
0010	SUBTOTALS (2)		2	9	83	78		
	4R-43	J3-1	---	---	1	---	4R-44, SP	DIRECTIONAL ASSEMBLY
	4R-44	R3-18	---	---	1	---	4R-43, SP	NO U OR LEFT TURN SYMBOL
	4R-45	R2-1	---	---	1	1	—	SPEED LIMIT 35 MPH
	4R-46	W3-3	---	---	1	1	—	SIGNAL AHEAD
	4R-47	R3-8X	---	---	1	1	—	LANE CONTROL
	4R-48	R3-8X	---	---	1	1	—	LANE CONTROL
	4R-49	J1-2	---	---	1	2	—	JUNCTION OR END ASSEMBLY
	4R-50	J2-4	---	---	1	2	4R-51	ROUTE TURN ASSEMBLY
	4R-51	R5-1A	---	---	1	---	4R-50	WRONG WAY
	4R-52	J3-2	---	---	1	2	—	DIRECTIONAL ASSEMBLY
	4R-53	R6-2L	---	---	1	---	4R-55, SP	ONE WAY LEFT ARROW
	4R-54	J2-2	---	---	1	1	—	ROUTE TURN ASSEMBLY
	4R-55	R5-1	---	---	1	---	4R-53, SP	DO NOT ENTER
	4R-56	R7-64	---	---	1	1	—	NO PARKING ON RAMP
	4R-57	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	4R-58	R2-1	---	---	1	2	—	SPEED LIMIT 65 MPH
	4R-59	R2-1	---	---	1	2	—	SPEED LIMIT 65 MPH
	4R-60	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	4R-61	W4-3R	---	---	1	2	—	MERGE-ADDED LANE FROM RIGHT
	4R-62	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	4R-63	W4-3R	---	---	1	2	—	MERGE-ADDED LANE FROM RIGHT
	4R-64	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	4R-65	E1-5P	---	1	---	---	4R-66, B-18-99	EXIT 84A
	4R-66	E6-51	---	1	---	---	4R-65, B-18-99	EAST IH 94 MADISON 1 MILE
	4R-67	E1-5P	---	1	---	---	4R-68, B-18-99	EXIT 84B
	4R-68	E6-51	---	1	---	---	4R-67, B-18-99	WEST IH 94 ST PAUL 1/2 MILE
	5R-1	D10-5	---	---	1	1	—	ENHANCED REFERENCE MARKER
	5R-2	E5-1A	---	---	1	2	—	EXIT 85
	5R-3	W3-3	---	---	1	1	—	SIGNAL AHEAD
PROJECT 1190-02-81 TOTAL			**2**	**13**	**108**	**106**		

3

TRAFFIC CONTROL

CATEGORY	LOCATION	643.0300 DRUMS (DAY)	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0715 WARNING LIGHTS TYPE C (DAY)	643.0800 ARROW BOARD (DAY)	643.0900 SIGNS (DAY)	643.1000 FIXED MESSAGE (SF)	643.1051 SIGNS PCMS WITH CELLULAR COMMUNICATIONS (DAY)	643.3000 DETOUR SIGNS (DAY)	646.0600 REMOVING PAVEMENT MARKINGS (LF)	647.0955 REMOVING PAVEMENT MARKINGS ARROWS (EACH)	647.0965 REMOVING PAVEMENT MARKINGS WORDS (EACH)	SPV.0045.001 CHANNELIZER CONES (DAY)
0010	STAGE 1	6,947	225	451	684	76	760	112	76	---	—	---	—	---
	STAGE 2	7,728	427	855	1,008	72	864	—	72	---	—	---	—	---
	STAGE 3	28,884	724	1,448	2,257	122	1,464	—	164	42	1,430	8	4	7,138
	UNDISTRIBUTED	4,442	224	346	451	30	412	—	38	8	1,070	---	—	112
PROJECT 1190-02-81 TOTAL		**48,000**	**1,600**	**3,100**	**4,400**	**300**	**3,500**	**112**	**350**	**50**	**2,500**	**8**	**4**	**7,250**

COVERING SIGNS

CATEGORY	LOCATION	643.0910 TYPE I (EACH)	643.0920 TYPE II (EACH)	NUMBER OF CYCLES	NUMBER OF SIGNS
0010	IH 94 NW LOOP RAMP CLOSURE	20	---	10	2
	UNDISTRIBUTED	—	25	1	25
PROJECT 1190-02-81 TOTAL		**20**	**25**		

TEMPORARY PAVMENT MARKING

CATEGORY	STAGE	649.0402 PAINT 4-INCH WHITE 12.5' SEG., 37.5' GAP (LF)	649.1100 STOP LINE 18-INCH SOLID (LF)
0010	STAGE 2	2,700	—
	STAGE 3	---	25
PROJECT 1190-02-81 TOTAL		**2,700**	**25**

PAVEMENT MARKING

CATEGORY	STAGE	STATION TO STATION	646.0106 EPOXY 4-INCH YELLOW SOLID (LF)	646.0106 EPOXY 4-INCH WHITE SOLID (LF)	646.0842.S GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH WHITE 12.5' SEG, 37.5' GAP (LF)	646.0842.S GROOVED CONTRAST WET REFLECTIVE EPOXY 4-INCH WHITE 3' SEG, 9' GAP (LF)	646.0844.S GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH WHITE SOLID (LF)	646.0844.S GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH WHITE 3' SEG, 9' GAP (LF)	647.0156 ARROWS EPOXY TYPE 1 (EACH)	647.0166 ARROWS EPOXY TYPE 2 (EACH)	647.0176 ARROWS EPOXY TYPE 3 (EACH)	647.0356 WORDS EPOXY (EACH)	647.0456 CURB EPOXY (LF)	647.0566 STOP LINE EPOXY 18-INCH (LF)	647.0606 ISLAND NOSE EPOXY (EACH)	646.0746 DIAGONAL EPOXY 24-INCH (LF)	647.0766 CROSSWALK EPOXY 6-INCH (LF)
0010	STAGE 3																
		USH 53 NORTHBOUND															
		43+20 NB - 63+12 NB	1,992	1,223	71	—	773	---	---	—	—	—	---	---	---	0	—
		63+12 NB - 110+32 NB	4,720	3,755	1,181	190	969	---	---	—	—	—	---	---	---	0	—
		USH 53 SOUTHBOUND															
		41+00 SB - 59+95 SB	1,906	1,673	476	—	228	---	---	—	—	—	---	---	---	0	—
		59+95 SB - 98+86 SB	3,880	2,767	970	—	1,111	210	---	—	—	—	---	---	---	0	—
		IH 94 NW RAMP															
		592+95 NW - 595+36 NW	47	233	---	—	194	---	---	—	—	—	---	---	---	0	—
		IH 94 NW LOOP RAMP															
		581+21 NWL - 583+61 NWL	155	407	---	—	104	---	---	—	—	—	---	---	---	0	—
		IH 94 NE RAMP															
		556+65 NE - 557+00 NE	—	756	---	—	755	---	---	—	—	—	---	---	---	0	—
		USH 53 SOUTHBOUND COLLECTOR															
		203+60 CD - 228+19 CD	1,986	2,476	---	—	772	---	---	—	—	—	---	---	---	0	—
		GOLF ROAD															
		1004+38 GR - 1011+00 GR	—	---	255	95	263	---	6	3	—	9	20	66	2	0	—
		1011+00 GR - 1012+00 GR	—	–	51	—	---	---	---	—	—	—	34	30	---	0	—
		GOLF ROAD SW RAMP															
		709+96 GSW - 715+53 GSW	498	1,208	---	—	706	---	---	—	—	—	---	---	---	0	75
		GOLF ROAD SE RAMP															
		807+89 GSE - 824+41 GSE	1,169	1,607	---	190	1,093	---	---	4	2	4	---	53	---	0	110
		GOLF ROAD NW RAMP															
		2+35 GNW - 6+35 GNW	392	49	29	—	951	---	---	6	2	4	21	27	1	0	125
		GOLF ROAD NE RAMP															
		901+78 GNE - 917+57 GNE	1,525	1,978	333	—	1,272	---	---	—	—	—	---	---	---	55	100
	STAGE 3 TOTAL		18,270	18,130	3,365	475	9,190	210	6	13	4	17	75	175	3	55	410
PROJECT 1190-02-81 TOTAL - CATEGORY 0010			**18,270**	**18,130**	**3,365**	**475**	**9,190**	**210**	**6**	**13**	**4**	**17**	**75**	**175**	**3**	**55**	**410**
			36,400		**3,840**		**9,400**										
0020	STAGE 3																
		GOLF ROAD															
		1001+00 GR - 1004+38 GR	—	---	235	27	200	---	---	2	—	2	35	35	---	0	—
	STAGE 3 TOTAL		0	0	235	25	200	0	0	2	0	2	35	35	0	0	0
PROJECT 1190-02-81 TOTAL - CATEGORY 0020			**0**	**0**	**235**	**25**	**200**	**0**	**0**	**2**	**0**	**2**	**35**	**35**	**0**	**0**	**0**
			0		**260**		**200**										
PROJECT 1190-02-81 TOTAL			**18,270**	**18,130**	**3,600**	**500**	**9,390**	**210**	**6**	**15**	**4**	**19**	**110**	**210**	**3**	**55**	**410**
			36,400		**4,100**		**9,600**										

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	650.5500 CURB GUTTER AND CURB AND GUTTER (LF)	650.8000 RESURFACING REFERENCE (LF)	650.9910 SUPPLEMENTAL CONTROL (LF)
0010				PROJECT					1
	43+20	-	62+63	USH 53 NORTHBOUND	---	---	---	3,886	---
	63+61	-	110+32	USH 53 NORTHBOUND	---	---	---	9,342	---
	41+00	-	59+57	USH 53 SOUTHBOUND	---	---	---	3,714	---
	60+58	-	98+86	USH 53 SOUTHBOUND	---	---	---	7,656	---
	592+95	-	595+36	IH 94 NW RAMP	---	---	---	241	---
	581+21	-	583+61	IH 94 NW LOOP RAMP	---	---	---	240	---
	556+65	-	557+00	IH 94 NE RAMP	---	---	---	35	---
	203+60	-	228+19	USH 53 SOUTHBOUND COLLECTOR	---	---	---	2,459	---
	1004+00	-	1006+13	GOLF ROAD	---	---	---	852	---
	1008+39	-	1012+00	GOLF ROAD	---	---	---	1,444	---
	709+96	-	715+53	GOLF ROAD SW RAMP	---	---	---	557	---
	807+89	-	824+41	GOLF ROAD SE RAMP	---	---	---	1,652	---
	822+50	-	823+79	GOLF ROAD SE RAMP	130	130	---	---	---
	823+80	-	824+42	GOLF ROAD SE RAMP	---	---	70	---	---
	901+78	-	917+57	GOLF ROAD NE RAMP	---	---	---	1,582	---
PROJECT 1190-02-81 TOTAL					**130**	**130**	**70**	**33,660**	**1**

SAWING

CATEGORY	STAGE	STATION TO STATION	690.0150 ASPHALT (LF)	690.0250 CONCRETE (LF)
0010	STAGE 2			
		USH 53 NORTHBOUND		
		43+20 NB - 62+63 NB	35	---
		63+61 NB - 110+32 NB	34	---
		USH 53 SOUTHBOUND		
		41+00 SB - 59+57 SB	35	---
		60+55 SB - 98+86 SB	34	---
	STAGE 2 TOTAL - CATEGORY 0010		138	---
	STAGE 3			
		IH 94 NW RAMP		
		592+95 NW - 595+36 NW	24	---
		IH 94 NW LOOP RAMP		
		581+21 NWL - 583+61 NWL	24	---
		IH 94 NE RAMP		
		556+65 NE - 557+00 NE	24	---
		USH 53 SOUTHBOUND COLLECTOR		
		203+60 CD - 228+19 CD	24	---
		GOLF ROAD		
		1004+00 GR - 1006+13 GR	---	180
		1008+39 GR - 1012+00 GR	---	115
		GOLF ROAD SW RAMP		
		709+96 GSW - 715+53 GSW	---	80
		GOLF ROAD SE RAMP		
		807+89 GSE - 824+41 GSE	133	225
		GOLF ROAD NW RAMP		
		2+35 GNW - 6+35 GNW	---	830
		GOLF ROAD NE RAMP		
		901+78 GNE - 917+57 GNE	33	150
	STAGE 3 TOTAL - CATEGORY 0010		262	1,580
PROJECT 1190-02-81 TOTAL - CATEGORY 0010			**400**	**1,580**
0020	STAGE 3			
		GOLF ROAD		
		1001+00 GR - 1004+00 GR	---	200
	STAGE 3 TOTAL - CATEGORY 0020		---	200
PROJECT 1190-02-81 TOTAL - CATEGORY 0020			**---**	**200**
PROJECT 1190-02-81 TOTAL			**400**	**1,780**

TRAFFIC SIGNAL REMOVALS

LOCATION / ITEM NUMBER	STATION	L/R	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH
CATEGORY 0030				
CTH AA & USH 53 SB RAMPS				
PB10	1005+02G	L	--	1
SB11	1005+18G	L	1	--
SB12	1005+12G	R	1	--
SB13	1004+85G	R	1	--
INTERSECTION SUBTOTAL			3	1
CTH AA & USH 53 NB RAMPS				
SB4	1010+88G	R	1	--
SB5	1011+30G	R	1	--
PB10	1011+55G	R	--	1
PB11	1011+30G	R	--	1
PB18	1009+32G	L	--	1
INTERSECTION SUBTOTAL			2	3
CATEGORY 0030 TOTAL			5	4

TRAFFIC SIGNAL PULL BOXES

LOCATION / PULL BOX NUMBER	STATION	OFFSET	L/R	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
CATEGORY 0030						
CTH AA & USH 53 SB RAMPS						
PB1	1004+03G	41.5	R	1	--	--
PB2	1002+75G	44.0	R	1	--	--
PB3	1000+96G	32.0	R	1	--	--
PB5	1003+75G	71.4	L	2	--	--
PB6	1004+27G	68.1	L	1	--	--
PB7	1004+71G	62.5	L	1	--	--
PB12	1004+98G	57.0	L	1	--	--
PB14	1005+72G	47.5	L	1	--	--
PB17	1005+08G	42.5	R	1	--	--
PB18	1004+85G	61.1	R	1	--	--
PB19	1004+48G	74.5	R	1	--	--
PB13	1005+29G	59.1	L	--	--	1
PB15	1005+28G	5.7	L	--	--	1
PB16	1005+29G	39.9	R	--	--	1
PB5-1	1003+96G	92.1	L	--	1	--
PB7-1	1004+70G	78.4	L	--	1	--
INTERSECTION SUBTOTAL				12	2	3
CTH AA & USH 53 NB RAMPS						
PB1	1010+63G	59.5	L	1	--	--
PB3	1011+39G	92.0	L	1	--	--
PB4	1011+31G	51.0	L	2	--	--
PB8	1012+00G	11.5	R	1	--	--
PB9	1012+00G	40.0	R	2	--	--
PB16	1010+84G	34.0	R	2	--	--
PB19	1008+78G	34.0	R	1	--	--
PB21	1010+03G	60.0	L	1	--	--
PB10	1011+62G	59.0	R	--	--	1
PB11	1011+29G	43.8	R	--	--	1
PB12	1010+87G	55.3	R	--	--	1
PB22	1009+28G	59.5	L	--	1	--
INTERSECTION SUBTOTAL				11	1	3
CATEGORY 0030 TOTAL				23	3	6

TRAFFIC SIGNAL CONDUIT

LOCATION	FROM - TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CATEGORY 0030				
CTH AA & USH 53 SB RAMPS				
PB1 -	SB15	33	--	--
PB5 -	PB5-1	31	--	--
PB5 -	SB16	9	--	--
PB7 -	PB7-1	16	--	--
PB12 -	PB13	--	64	--
PB13 -	PB15	--	--	108
PB15 -	SB12	10	--	--
PB15 -	EXSLB1	5	--	--
PB15 -	PB16	--	--	92
PB16 -	STRUCTURE	86	--	--
PB16 -	PB17	--	42	--
PB18 -	SB13	15	--	--
PB19 -	SB14	19	--	--
INTERSECTION SUBTOTAL		224	106	200
CTH AA & USH 53 NB RAMPS				
PB1 -	SB13	11	--	--
PB3 -	SB4	36	--	--
PB4 -	SB3	13	--	--
PB4 -	SB14	5	--	--
PB8 -	SB6	51	--	--
PB9 -	PB10	--	82	--
PB10 -	PB11	--	--	72
PB11 -	SB7	19	--	--
PB11 -	SB8	8	--	--
PB10 -	PB12	--	--	140
PB12 -	PB16	--	44	--
PB16 -	SB9	7	--	--
PB22 -	PB21	82	--	--
INTERSECTION SUBTOTAL		232	126	212
CATEGORY 0030 TOTAL		456	232	412

* ADDITIONAL QUANTITIES LISTED ELSEWHERE.

TRAFFIC SIGNAL LOOP DETECTORS

LOCATION / LOOP NO.	STATION	OFFSET	L/R	SIZE FT X FT	NO. OF TURNS	INSTALLATION METHOD	652.0900 LOOP DETECTOR SLOTS LF	652.0800 CONDUIT LOOP DETECTOR LF	655.0800 LOOP DETECTOR WIRE LF	655.0700 * LOOP DETECTOR LEAD IN CABLE LF
CATEGORY 0030										
CTH AA & USH 53 SB RAMPS										
13	1004+21G	94.2	L	6 X 20	3	SDD: LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT	89	95	288	164
14	1004+09G	93.7	L	6 X 20	3	SDD: LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT	65	71	216	164
21	1009+27G	26.7	L	6 X 6	6	SEE NOTE BELOW	70	78	468	805
22	1009+28G	38.7	L	6 X 6	6	SEE NOTE BELOW	46	54	324	805
23	1005+73G	26.7	L	6 X 6	5	SEE NOTE BELOW	55	60	300	364
24	1005+74G	37.7	L	6 X 6	6	SEE NOTE BELOW	34	36	216	364
51	1000+98G	6.8	R	6 X 6	5	SEE NOTE BELOW	60	70	350	310
52	1000+96G	17.8	R	6 X 6	6	SEE NOTE BELOW	37	46	276	310
53	1002+77G	7.6	R	6 X 6	3	SEE NOTE BELOW	81	90	270	136
54	1002+75G	18.6	R	6 X 6	4	SEE NOTE BELOW	60	66	264	136
61	1005+20G	15.6	L	6 X 20	3	SEE NOTE BELOW	64	76	228	200
62	1004+90G	15.6	L	6 X 20	3	SEE NOTE BELOW	81	94	282	200
81	6+25NW	7.8	L	6 X 25	3	SDD: LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	--	92	276	187
83	1004+44G	84.6	L	6 X 20	3	SDD: LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	--	95	222	248
84	1004+58G	84.6	L	6 X 20	3	SDD: LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT	65	73	300	248
INTERSECTION SUBTOTAL							807	1096	4280	4641
CTH AA & USH 53 NB RAMPS										
11	1008+88G	5.7	L	6 X 6	5	SEE NOTE BELOW	80	96	480	280
42	823+98SE	20.0	L	6 X 20	3	SEE NOTE BELOW	61	74	222	197
43	824+23SE	20.0	L	6 X 20	3	SEE NOTE BELOW	61	74	222	197
44	823+95SE	8.0	L	6 X 20	4	SEE NOTE BELOW	75	94	376	303
45	824+24SE	8.0	L	6 X 20	4	SEE NOTE BELOW	58	78	312	303
61	1005+38G	5.6	R	6 X 6	6	SEE NOTE BELOW	71	84	504	630
62	1005+40G	16.6	R	6 X 6	6	SEE NOTE BELOW	49	60	360	630
63	1008+88G	4.8	R	6 X 6	6	SEE NOTE BELOW	59	76	456	280
64	1008+88G	16.8	R	6 X 6	5	SEE NOTE BELOW	34	52	260	280
INTERSECTION SUBTOTAL							548	996	4758	3100
CATEGORY 0030 TOTAL							1,355	2,092	9,038	7,741

LOCATION IS TO THE FRONT CENTER OF DETECTOR LOOP & FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
NOTE- CONFORM TO SDD FOR *LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)* FOR INSTALLATION GUIDANCE OF MULTIPLE PULLBOX TO LOOP CONDUIT LEADS AND TO SDD *LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT WITH NEW ASPHALTIC OVERLAY* FOR OTHER INSTALLATION GUIDANCE. LOOPS TO BE INSTALLED FULLY BEFORE OVERLAY IS PLACED.

* ADDITIONAL QUANTITY LISTED ELSEHWERE.

TRAFFIC SIGNAL STRUCTURES

LOCATION / BASE NUMBER	STATION	OFFSET	L/R	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	657.0100 PEDESTAL BASES EACH	657.0255 * TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0315 POLES TYPE 4 EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0585 TROMBONE ARMS 15-FT EACH	SPV.0060.003 SALVAGE AND REINSTALL LUMINAIRE AND ARM EACH
CATEGORY 0030													
CTH AA & USH 53 SB RAMPS													
SB12	1005+22G	5.9	L	--	1	--	--	--	--	--	--	--	--
SB13	1004+84G	46.7	R	--	1	--	--	--	--	--	--	--	--
SB15	1004+34G	52.3	R	1	--	1	--	--	--	1	--	--	--
SB16	1003+83G	75.1	L	1	--	1	--	--	--	1	--	--	--
INTERSECTION SUBTOTAL				2	2	2	0	0	0	2	0	0	0
CTH AA & USH 53 NB RAMPS													
SB6	1011+51G	10.0	L	--	1	--	--	--	--	--	--	--	--
SB7	1011+40G	29.2	R	--	1	--	1	1	--	--	--	1	--
SB8	1011+31G	37.1	R	1	--	1	--	--	--	--	1	--	--
SB9	1010+91G	34.5	R	--	1	--	1	--	1	--	--	--	1
SB13	1010+72G	62.4	L	1	--	1	--	--	--	1	--	--	--
SB14	1011+27G	51.4	L	--	1	1	--	--	--	1	--	--	--
INTERSECTION SUBTOTAL				2	4	3	2	1	1	2	1	1	1
CATEGORY 0030 TOTAL				4	6	5	2	1	1	4	1	1	1

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

PEDESTRIAN PUSH BUTTONS

LOCATION / BASE NUMBER	658.0500 PEDESTRIAN PUSH BUTTONS EACH
CATEGORY 0030	
CTH AA & USH 53 SB RAMPS	
SB10	1
SB13	1
SB15	1
SB16	1
INTERSECTION SUBTOTAL	4
CTH AA & USH 53 NB RAMPS	
SB8	1
SB9	1
SB13	1
SB14	1
INTERSECTION SUBTOTAL	4
CATEGORY 0030 TOTAL	8

TRAFFIC SIGNAL HEADS

LOCATION	SIGNAL BASE NO.	HEAD NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0215 BACK PLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
CATEGORY 0030									
CTH AA & USH 53 SB RAMPS									
	SB10	2A	--	--	--	--	--	1	1
	SB13	5B	--	--	--	--	--	1	1
	SB15	5A	--	--	--	--	--	1	1
	SB16	2A	--	--	--	--	--	1	1
INTERSECTION SUBTOTAL			0	0	0	0	0	4	4
CTH AA & USH 53 NB RAMPS									
	SB7	12	1	1	1	1	1		
	SB8	9	1	1	1	1	1	--	--
	SB8	6B	--	--	--	--	--	1	1
	SB9	6A	--	--	--	--	--	1	1
	SB13	2B	--	--	--	--	--	1	1
	SB14	2A	--	--	--	--	--	1	1
INTERSECTION SUBTOTAL			2	2	2	2	2	4	4
CATEGORY 0030 TOTAL			2	2	2	2	2	8	8

TRAFFIC SIGNAL CABLE AND WIRE - ABOVE GROUND

LOCATION	FROM SIGNAL BASE	-	TO SIGNAL HEAD	655.0230 * CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	655.0700 * LOOP DETECTOR LEAD IN CABLE LF
CATEGORY 0030						
CTH AA & USH 53 SB RAMPS						
	SB10	-	2A	16	--	--
		-	BUTTON	--	--	6
	SB13	-	5B	16	--	--
		-	BUTTON	--	--	6
	SB15	-	5A	16	--	--
		-	BUTTON	--	--	6
	SB16	-	2B	16	--	--
		-	BUTTON	--	--	6
INTERSECTION SUBTOTAL				64	0	24
CTH AA & USH 53 NB RAMPS						
	SB7	-	12	39	--	--
	SB8	-	9	20	--	--
		-	6B	16	--	--
		-	BUTTON	--	--	6
	SB9	-	LUMINAIRE	--	135	--
		-	6A	16	--	--
		-	BUTTON	--	--	6
	SB13	-	2B	16	--	--
		-	BUTTON	--	--	6
	SB14	-	2A	16	--	--
		-	BUTTON	--	--	6
INTERSECTION SUBTOTAL				123	135	24
CATEGORY 0030 TOTAL				187	135	48

*ADDITIONAL QUANTITY LISTED ELSEWHERE.

TRAFFIC SIGNAL CABLE AND WIRE - BELOW GROUND

LOCATION	FROM - TO	655.0230 * CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED LF	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	SPV.0090.001 INSTALL EVP DETECTOR CABLE LF
CATEGORY 0030						
CTH AA & USH 53 SB RAMPS						
	CB1 - SB10	325	--	--	--	--
	CB1 - SB13	185	--	--	--	171
	CB1 - SB14	131	--	--	--	--
	CB1 - SB15	73	--	--	-	--
	CB1 - SB16	201	--	--	--	--
UNDISTRIBUTED GROUNDING		--	--	--	750	--
INTERSECTION SUBTOTAL		915	0	0	750	171
CTH AA & USH 53 NB RAMPS						
	CB1 - SB6	--	--	--	--	344
	CB1 - SB7	567	--		--	--
	CB1 - SB8	--	504	--	--	--
	CB1 - SB9	380	--	276	--	--
	CB1 - SB13	47	--	--	--	--
	CB1 - SB14	229	--	--	--	--
UNDISTRIBUTED GROUNDING		--	--	--	1500	--
INTERSECTION SUBTOTAL		1223	504	276	1500	344
CATEGORY 0030 TOTAL		2138	504	276	2250	515

*ADDITIONAL QUANTITIES LISTED ELSEWHERE.

CONSTRUCTION STAKING

LOCATION	650.8500.01 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS 1190-02-81 LS
PROJECT 1190-02-81	
CATEGORY 0030	
PROJECT	1
TOTALS	1

3

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.001 SIGNAL MOUNTING HARDWARE (CTH AA & USH 53 NB RAMPS) LS	658.5069.002 SIGNAL MOUNTING HARDWARE (CTH AA & USH 53 SB RAMPS) LS
PROJECT 1190-02-81		
CATEGORY 0030		
CTH AA & USH 53 SB RAMPS	--	1
CTH AA & USH 53 NB RAMPS	1	--
TOTALS	1	1

3

TRAFFIC SIGNAL EQUIPMENT REMOVAL

LOCATION	SPV.0105.003 SALVAGE TRAFFIC SIGNAL EQUPIMENT (CTH AA & USH 53 SB RAMPS) LS	SPV.0105.004 SALVAGE TRAFFIC SIGNAL EQUPIMENT (CTH AA & USH 53 NB RAMPS) LS
PROJECT 1190-02-81		
CATEGORY 0030		
CTH AA & USH 53 SB RAMPS	1	--
CTH AA & USH 53 NB RAMPS	--	1
TOTALS	1	1

RAMP CLOSURE GATE ITEMS

LOCATION	STATION	OFFSET	L/R	ITEM ID	SIGN #	654.0105 CONCRETE BASES TYPE 5 EACH	657.0255 * TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	637.2215 * SIGNS TYPE II REFLECTIVE H FOLDING SF	662.1030.S RAMP CLOSURE GATES HARDWIRED 30-FT EACH	662.1037.S RAMP CLOSURE GATES HARDWIRED 37-FT EACH	662.1040.S RAMP CLOSURE GATES HARDWIRED 40-FT EACH
CATEGORY 0030											
CTH AA & USH 53 SB RAMPS											
	1004+38G	58.8	R	G18-28 / SB14	G-01	1	1	10	--	1	--
INTERSECTION SUBTOTAL						1	1	10	0	1	0
CTH AA & USH 53 NB RAMPS											
	1011+26	62.4	L	G18-27 / SB3	G-02	1	1	10	--	--	1
	1011+66	73.9	L	G18-26 / SB4	G-03	1	1	10	1	--	--
INTERSECTION SUBTOTAL						2	2	20	1	0	1
CATEGORY 0030 TOTAL						3	3	30	1	1	1

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

STA. 583+61.00NWL
BEGIN CONSTRUCTION
MATCH EXISTING
SAWCUT REQUIRED
BUTT JOINT REQUIRED
(SEE DETAIL)

STA. 203+60.00CD
BEGIN CONSTRUCTION
MATCH EXISTING
SAWCUT REQUIRED
BUTT JOINT REQUIRED
(SEE DETAIL)

STA. 41+00.00SB
BEGIN CONSTRUCTION
MATCH EXISTING
SAWCUT REQUIRED
BUTT JOINT REQUIRED
(SEE DETAIL)

STA. 592+95.00NW
BEGIN CONSTRUCTION
MATCH EXISTING
SAWCUT REQUIRED
BUTT JOINT REQUIRED
(SEE DETAIL)

STA. 43+20.00NB
BEGIN PROJECT 1190-02-81
MATCH EXISTING
SAWCUT REQUIRED
BUTT JOINT REQUIRED
(SEE DETAIL)

STA. 557+00.00NE
BEGIN CONSTRUCTION
MATCH EXISTING
SAWCUT REQUIRED
BUTT JOINT REQUIRED
(SEE DETAIL)

REPLACE 100' WOVEN WIRE FENCE

REMOVE SIGN STRUCTURE S-18-025

INSTALL SIGN STRUCTURE S-18-117

WINDSTREAM NTI

MATCHLINE STA. 55+10NB

EB IH 94

WB IH 94

IH 94 NW LOOP RAMP

IH 94 NW RAMP

IH 94 NE LOOP RAMP

IH 94 NE RAMP

SB USH 53

NB USH 53

LEGEND

3.5" REMOVE ASPHALTIC SURFACE MILLING/HMA PAVEMENT TYPE 4 MT 58-34H

1.75" REMOVE ASPHALTIC SURFACE MILLING/ASPHALTIC SURFACE

2" REMOVE ASPHALTIC SURFACE MILLING/ASPHALTIC SURFACE

CONCRETE PAVEMENT 9-INCH

1.5" REMOVING CONCRETE PARTIAL DEPTH/2.5" ASPHALTIC SURFACE SPECIAL

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PLAN SHEETS	SHEET 113 E

COMMONWEALTH AVE

KEYSTONE CRossing

SB USH 53

NB USH 53

GATEWAY DR

MATCHLINE STA. 55+10NB

MATCHLINE STA. 70+10NB

5

5

BUTT JOINT REQUIRED (SEE DETAIL)

REMOVE EXISTING STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (213+51CD - 214+01CD)
- INSTALL 25' STEEL PLATE BEAM GUARD CLASS A (213+51CD - 213+76CD)
- INSTALL STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (213+76CD - 214+26CD)
- BARRIER SYSTEM GRADING SHAPING FINISHING (SEE CROSS SECTIONS)

REMOVE SIGN STRUCTURE S-18-024

INSTALL SIGN STRUCTURE S-18-116

REPLACE 500' CHAIN LINK FENCE

REMOVE EXISTING STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (52+38SB - 52+88SB)
- INSTALL 62.5' STEEL PLATE BEAM GUARD CLASS A (52+38SB - 53+01SB)
- INSTALL STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (53+01SB - 53+51SB)
- BARRIER SYSTEM GRADING SHAPING FINISHING (SEE CROSS SECTIONS)

REMOVE EXISTING ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2 (66+62SB)
- INSTALL 12.5' STEEL PLATE BEAM GUARD CLASS A (66+49SB - 66+62SB)
- INSTALL ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2 (66+49SB)

XCEL ENERGY (ELECTRIC)

BUTT JOINT REQUIRED

SLOPE INTERCEPTS (TYP.)

REMOVE EXISTING STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (68+27NB - 68+77NB)
- INSTALL 75' STEEL PLATE BEAM GUARD CLASS A (68+02NB - 68+77NB)
- INSTALL STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (67+52NB - 68+02NB)
- BARRIER SYSTEM GRADING SHAPING FINISHING (SEE CROSS SECTIONS)

REMOVE EXISTING STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (61+46NB - 61+96NB)
- INSTALL 112.5' STEEL PLATE BEAM GUARD CLASS A (60+83NB - 61+96NB)
- INSTALL STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (60+33NB - 60+83NB)
- BARRIER SYSTEM GRADING SHAPING FINISHING (SEE CROSS SECTIONS)

REMOVE SIGN STRUCTURE S-18-023

INSTALL SIGN STRUCTURE S-18-115

LEGEND

3.5" REMOVE ASPHALTIC SURFACE MILLING/HMA PAVEMENT TYPE 4 MT 58-34H

1.75" REMOVE ASPHALTIC SURFACE MILLING/ASPHALTIC SURFACE

2" REMOVE ASPHALTIC SURFACE MILLING/ASPHALTIC SURFACE

CONCRETE PAVEMENT 9-INCH

1.5" REMOVING CONCRETE PARTIAL DEPTH/2.5" ASPHALTIC SURFACE SPECIAL

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PLAN SHEETS	SHEET 114	E

COMMONWEALTH AVE

SLOPE INTERCEPTS (TYP.)

REMOVE EXISTING STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (67+16SB - 67+66SB)
- INSTALL 75' STEEL PLATE BEAM GUARD CLASS A (67+16SB - 67+91SB)
- INSTALL STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (67+91SB - 68+41SB)
- BARRIER SYSTEM GRADING SHAPING FINISHING (SEE CROSS SECTIONS)

REMOVE SIGN STRUCTURE S-18-021

INSTALL SIGN STRUCTURE S-18-114

INSTALL 150' MGS GUARDRAIL 3 (STA 75+63SB - 77+13SB)
- INSTALL MGS GUARDRAIL TERMINAL TYPE 2 (75+63SB)
- INSTALL MGS GUARDRAIL TERMINAL EAT (STA 77+13SB - 77+66SB)
- BARRIER SYSTEM GRADING SHAPING AND FINISHING (SEE CROSS SECTIONS)

REMOVE EXISTING STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (67+15SB - 67+65SB)
- INSTALL 87.5' STEEL PLATE BEAM GUARD CLASS A (67+15SB - 68+03SB)
- INSTALL STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (68+03SB - 68+53SB)
- BARRIER SYSTEM GRADING SHAPING FINISHING (SEE CROSS SECTIONS)

SB USH 53

NB USH 53

CHARTER COMMUNICATIONS

REPLACE 400' WOVEN WIRE FENCE

GATEWAY DR

COLE ROAD SE RAMP

RIPRAP

MATCHLINE STA. 70+10NB

MATCHLINE STA. 85+10NB

LEGEND

- 3.5" REMOVE ASPHALTIC SURFACE MILLING/HMA PAVEMENT TYPE 4 MT 58-34H
- 1.75" REMOVE ASPHALTIC SURFACE MILLING/ASPHALTIC SURFACE
- 2" REMOVE ASPHALTIC SURFACE MILLING/ASPHALTIC SURFACE
- CONCRETE PAVEMENT 9-INCH
- 1.5" REMOVING CONCRETE PARTIAL DEPTH/2.5" ASPHALTIC SURFACE SPECIAL

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PLAN SHEETS	SHEET 115 E

5

MATCHLINE STA. 103+00GR

INTERSECTION IMPROVEMENT
- CURB AND GUTTER 30-INCH TYPE A
- CONCRETE SIDEWALK 5-INCH
- DETECTABLE WARNING FIELD
- SAWING CONCRETE

STA. 1001+00.00GR
BEGIN CONSTRUCTION
MATCH EXISTING
SAWCUT REQUIRED
BUTT JOINT REQUIRED
(SEE DETAIL)

INSTALL RAMP GATE
(SEE TRAFFIC SIGNAL PLANS)

WISDOT SIGNALS

GOLF ROAD NW RAMP

CTH AA/GOLF ROAD

GOLF ROAD SW RAMP

CINC

REMOVE EXISTING BEAM GUARD (1005+29GR - 1005+97GR)
- INSTALL MGS GUARDRAIL TERMINAL EAT (1005+05GR - 1005+58GR)
- INSTALL MGS THRIE BEAM TRANSITION (1005+58GR - 1005+97GR)
- BARRIER SYSTEM GRADING SHAPING FINISHING (SEE CROSS SECTIONS)

MATCHLINE STA. 85+10NB

SB USH 53

NB USH 53

MATCHLINE STA. 100+10NB

REMOVE EXISTING BEAM GUARD (1008+55GR - 1009+24GR)
- INSTAL MGS GUARDRAIL TERMINAL EAT (1009+17GR - 1009+66GR)
- INSTALL 25' MGS GUARDRAIL 3 (1008+94GR - 1009+17GR)
- INSTALL MGS THRIE BEAM TRANSITION (1008+55GR - 1008+94GR)
- BARRIER SYSTEM GRADING SHAPING FINISHING (SEE CROSS SECTIONS)

GOLF ROAD SE RAMP

CINC

WISDOT SIGNALS

INTERSECTION IMPROVEMENT
- CONCRETE PAVEMENT 9-INCH
- CURB AND GUTTER 30-INCH TYPE D
- CURB AND GUTTER 30-INCH TYPE A
- CONCRETE SIDEWALK 5-INCH
- ASPHALTIC SURFACE SPECIAL
- ASPHALTIC FLUME
- DETECTABLE WARNING FIELD
- SAWING ASPHALT/CONCRETE

STA. 1012+00.00GR
END CONSTRUCTION
MATCH EXISTING
SAWCUT REQUIRED
BUTT JOINT REQUIRED
(SEE DETAIL)

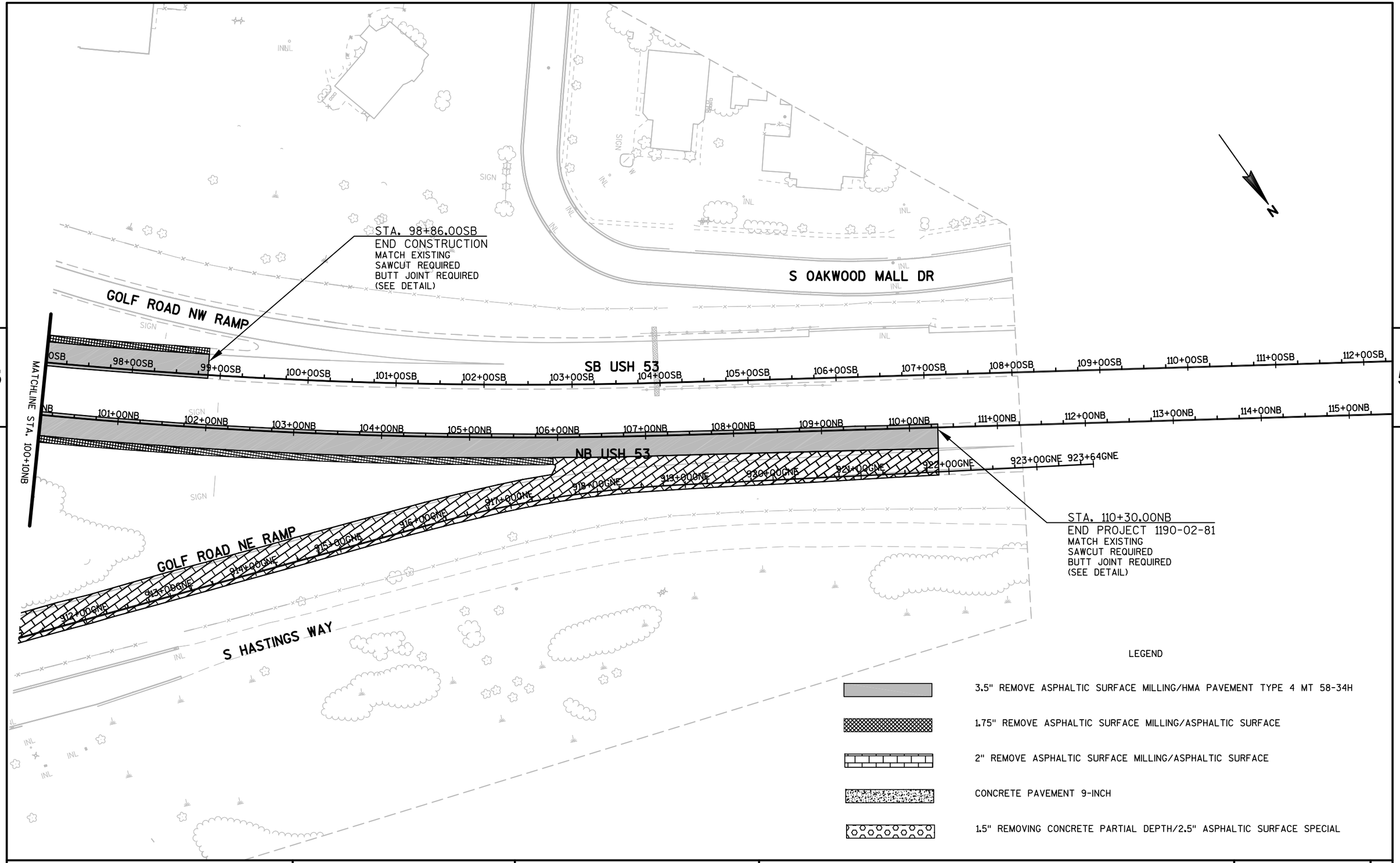
INSTALL RAMP GATES
(SEE TRAFFIC SIGNAL PLANS)

GOLF ROAD NE RAMP

LEGEND

- 3.5" REMOVE ASPHALTIC SURFACE MILLING/HMA PAVEMENT TYPE 4 MT 58-34H
- 1.75" REMOVE ASPHALTIC SURFACE MILLING/ASPHALTIC SURFACE
- 2" REMOVE ASPHALTIC SURFACE MILLING/ASPHALTIC SURFACE
- CONCRETE PAVEMENT 9-INCH
- 1.5" REMOVING CONCRETE PARTIAL DEPTH/2.5" ASPHALTIC SURFACE SPECIAL

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PLAN SHEETS	SHEET 116	E



PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PLAN SHEETS	SHEET 117 E

Standard Detail Drawing List

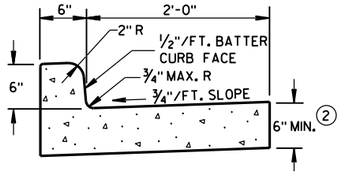
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-17A	CURB RAMPS TYPES 1 AND 1-A
08D05-17B	CURB RAMPS TYPES 2 AND 3
08D05-17C	CURB RAMPS TYPES 4A AND 4A1
08D05-17D	CURB RAMPS TYPE 4B AND 4B1
08D05-17E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-09	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-14A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-14C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E05-06	TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09F11-04	LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT WITH NEW ASPHALTIC OVERLAY
09F12-04	LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-13A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-13B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-13C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
14B15-09A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B24-08A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A06-02	DELINEATOR LAYOUT
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

6

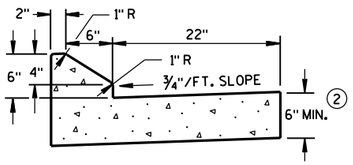
Standard Detail Drawing List

15C18-03	MEDIAN ISLAND MARKING
15C19-04C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C27-01	DOUBLE ARROW WARNING SIGN PLACEMENT
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01B	LANE DROP PAVEMENT MARKING
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D04-01	TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-02	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D35-02A	RAMP GATE HARD WIRED
15D35-02B	RAMP GATE HARD WIRED
15D35-02C	RAMP GATE HARD WIRED
15D35-02D	RAMP GATE HARD WIRED
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

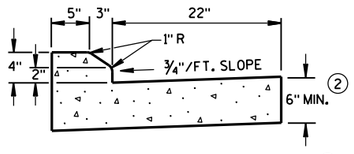
6



TYPES A & D ①

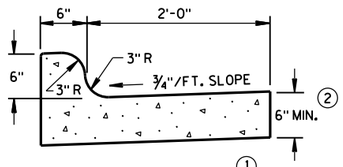


6" SLOPED CURB TYPES G & J ①

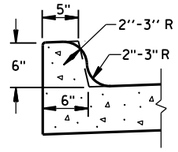


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

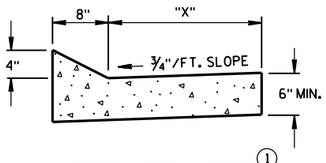


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

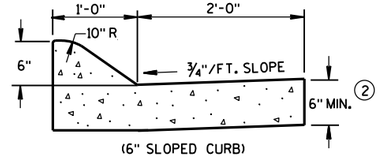
CONCRETE CURB & GUTTER 30"



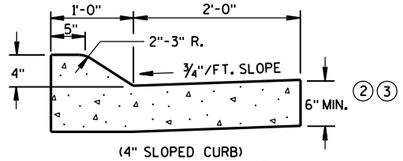
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

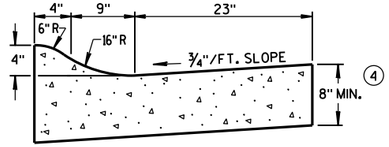


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

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.

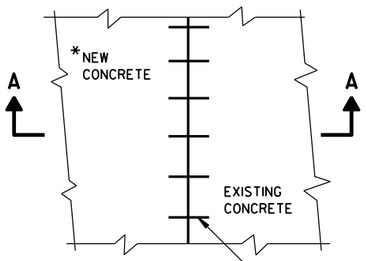
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

④ 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.

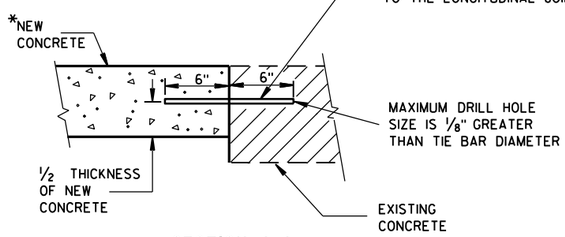
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



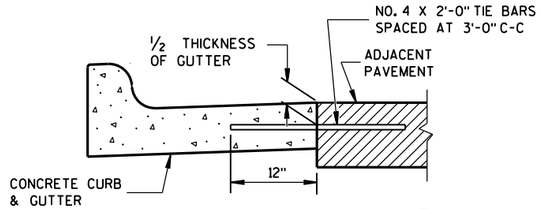
PLAN VIEW

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

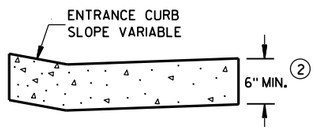


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

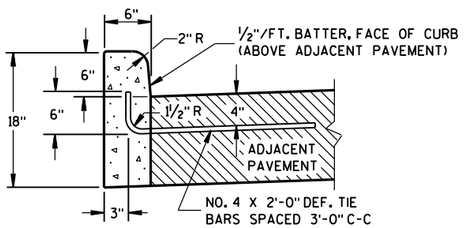


TYPICAL TIE BAR LOCATION ①

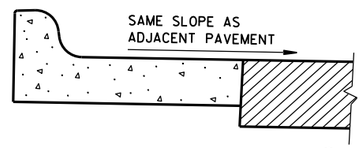


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

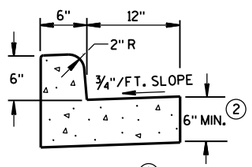


① TYPES A & D



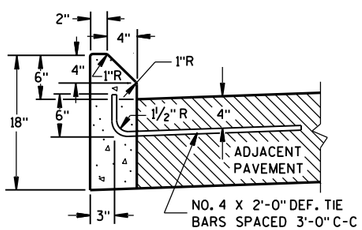
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



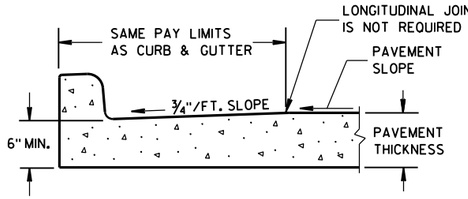
① TYPES A & D

CONCRETE CURB & GUTTER 18"

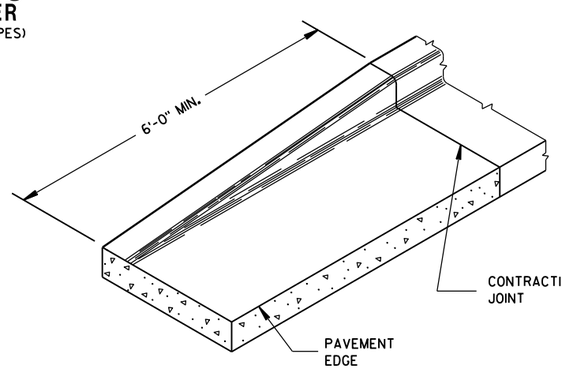


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2016 — DATE

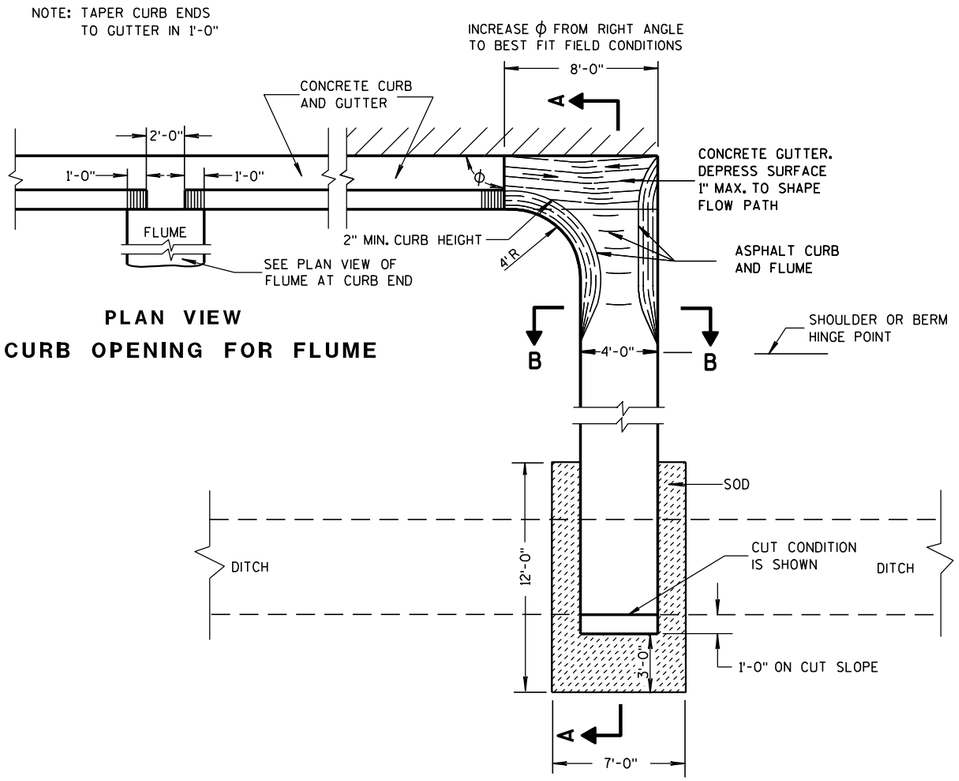
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

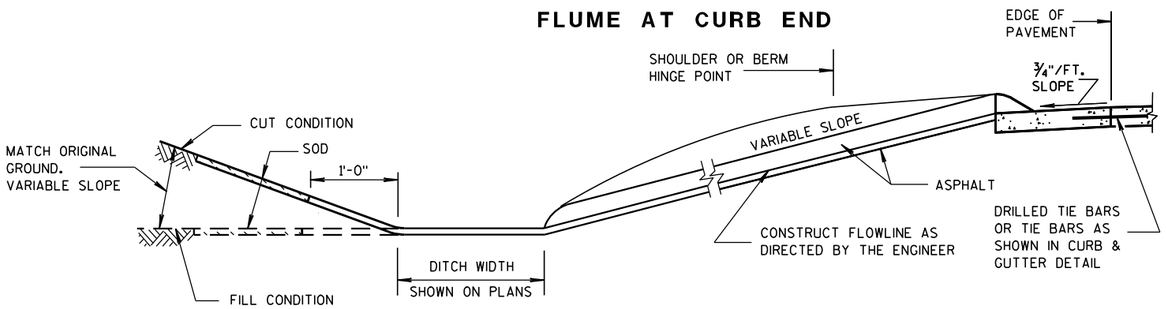
S.D.D. 8 D 1-19

ASPHALTIC FLUME

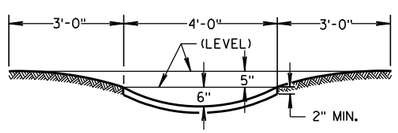


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

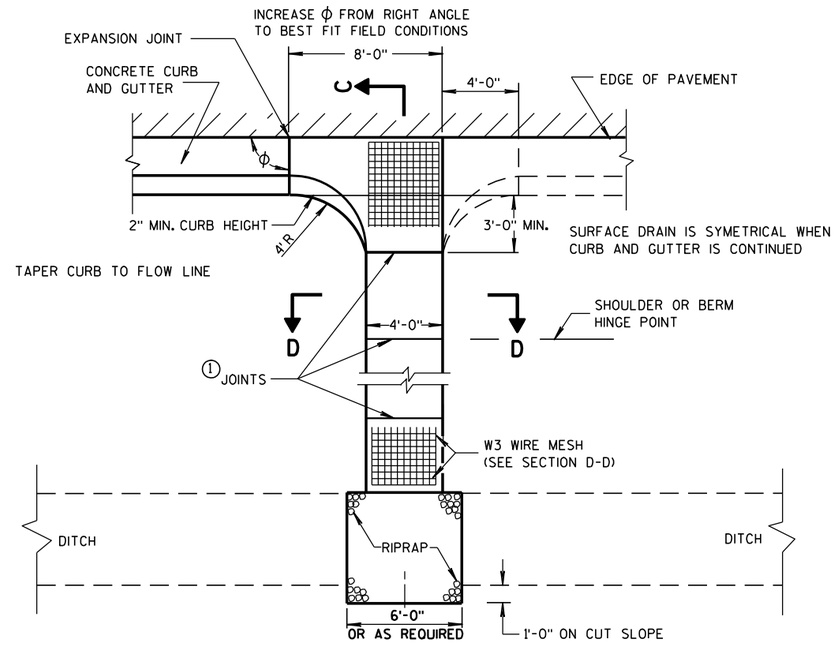
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

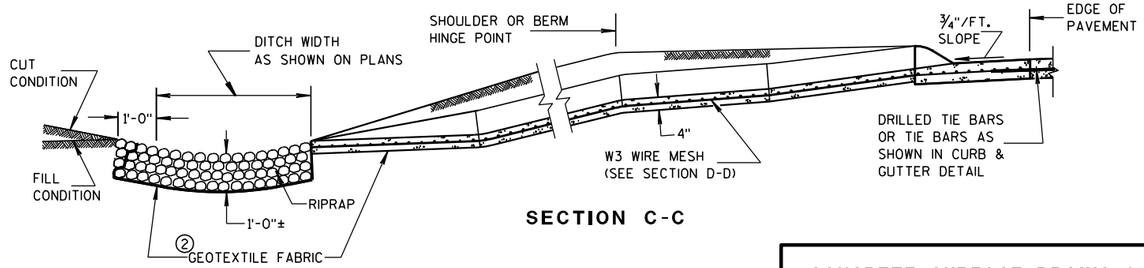
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

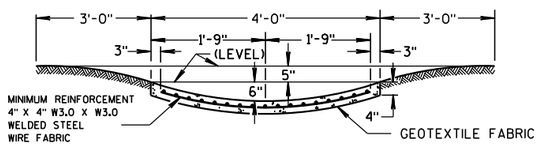
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

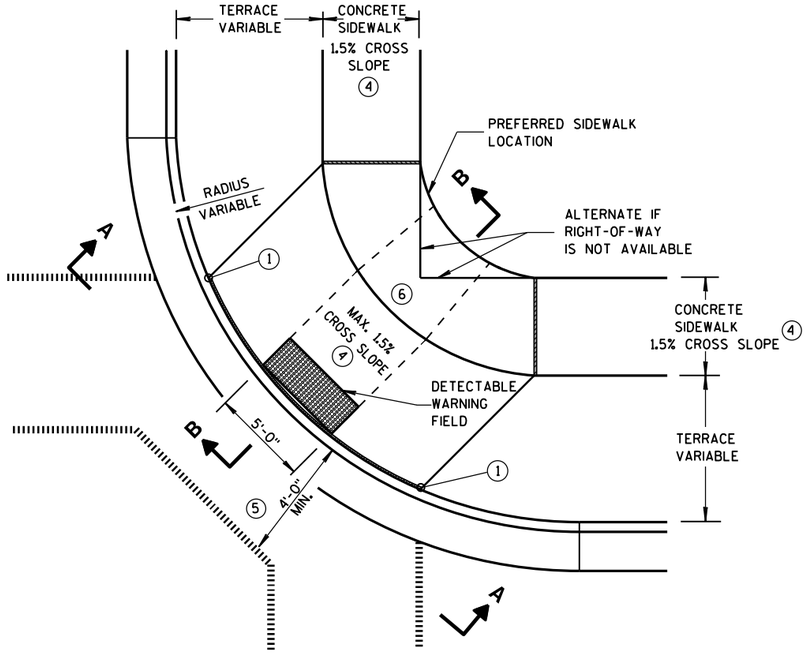
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT
FHWA

6

S.D.D. 8 D 4-5

6

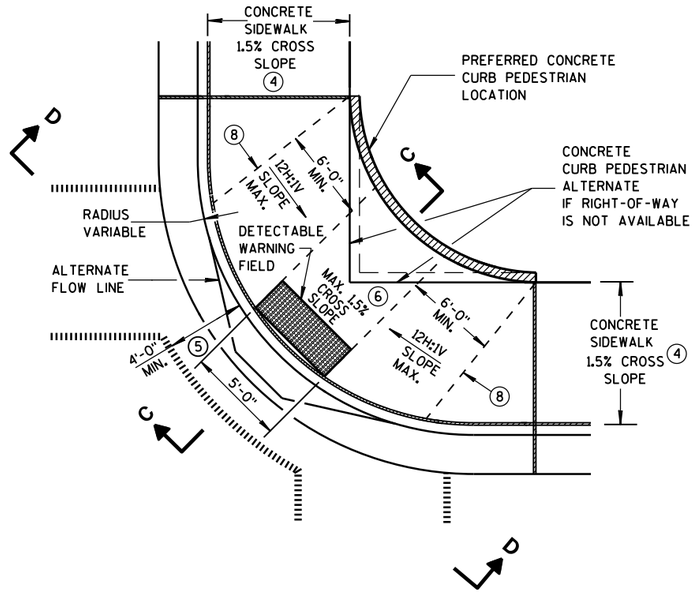
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

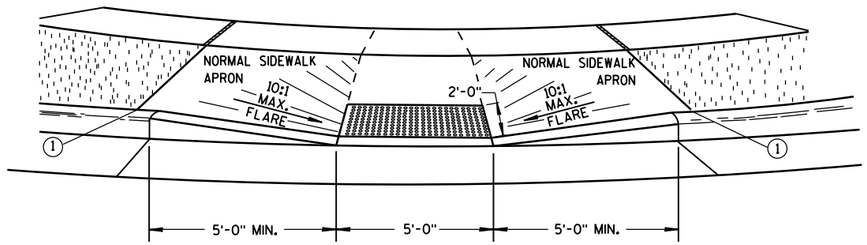
(CENTER OF CORNER RADIUS)



PLAN VIEW

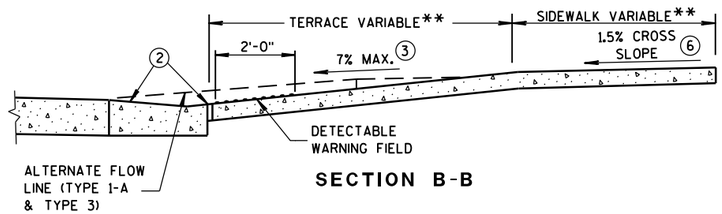
TYPE 1-A RAMP

(NO TERRACE)

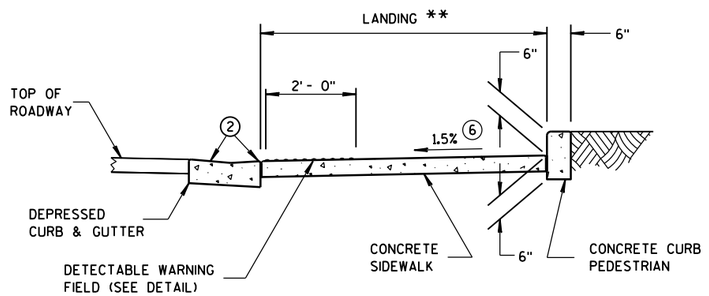


VIEW A-A

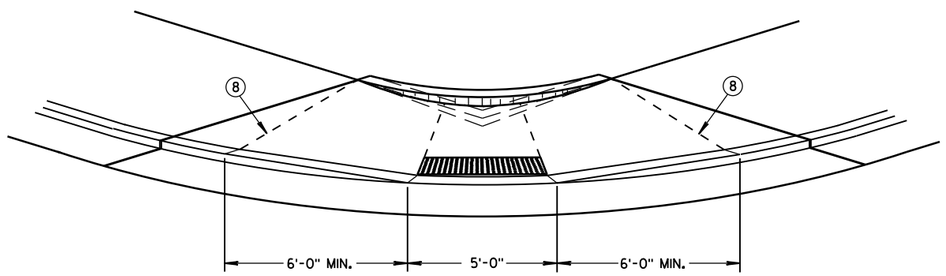
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

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. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(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.

LEGEND

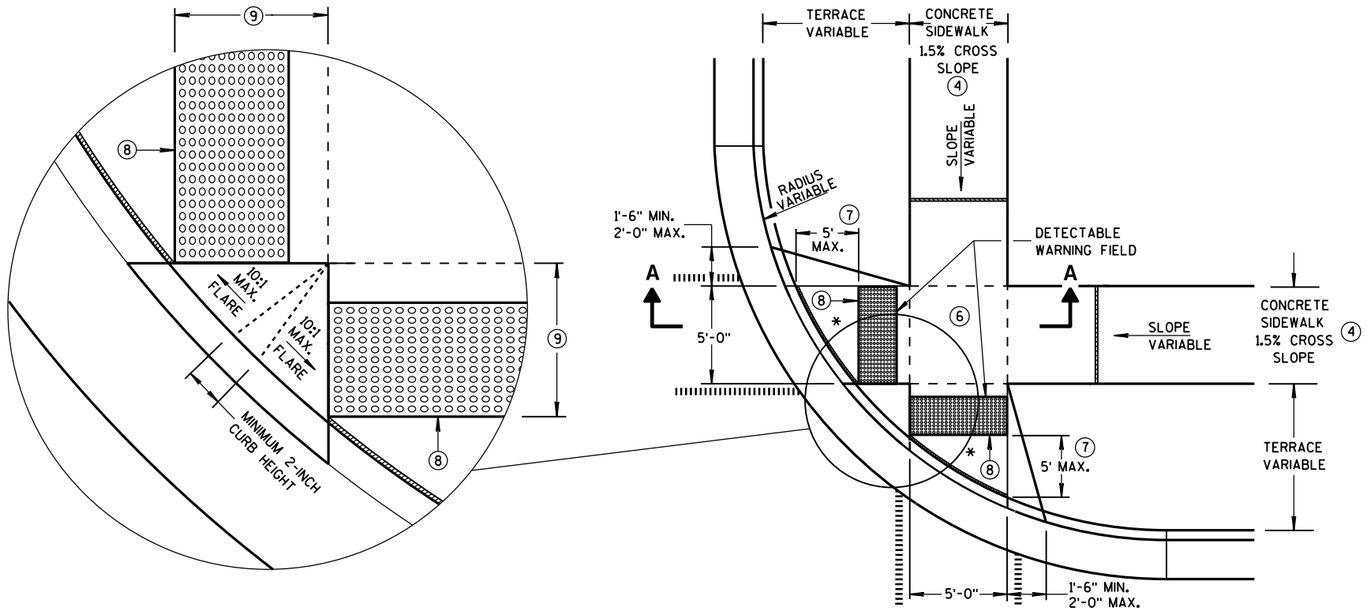
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 8 D 5-17a

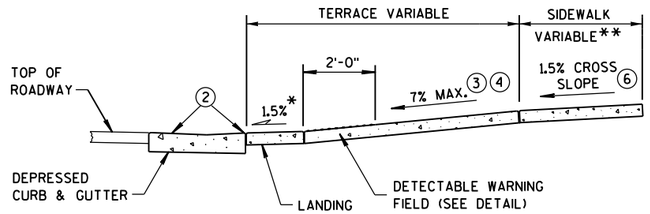


PLAN VIEW

TYPE 2 RAMP

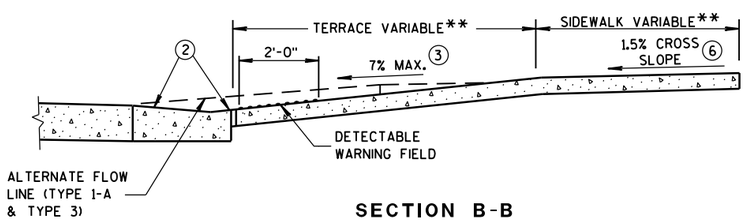
(ON LINE WITH SIDEWALK)

* 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

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 LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(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).

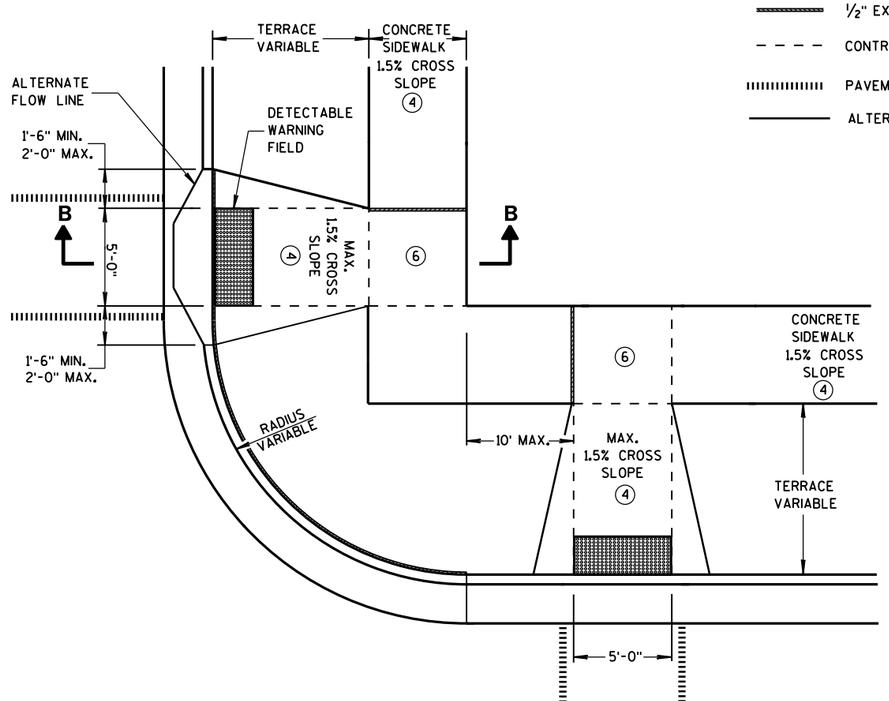
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(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. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

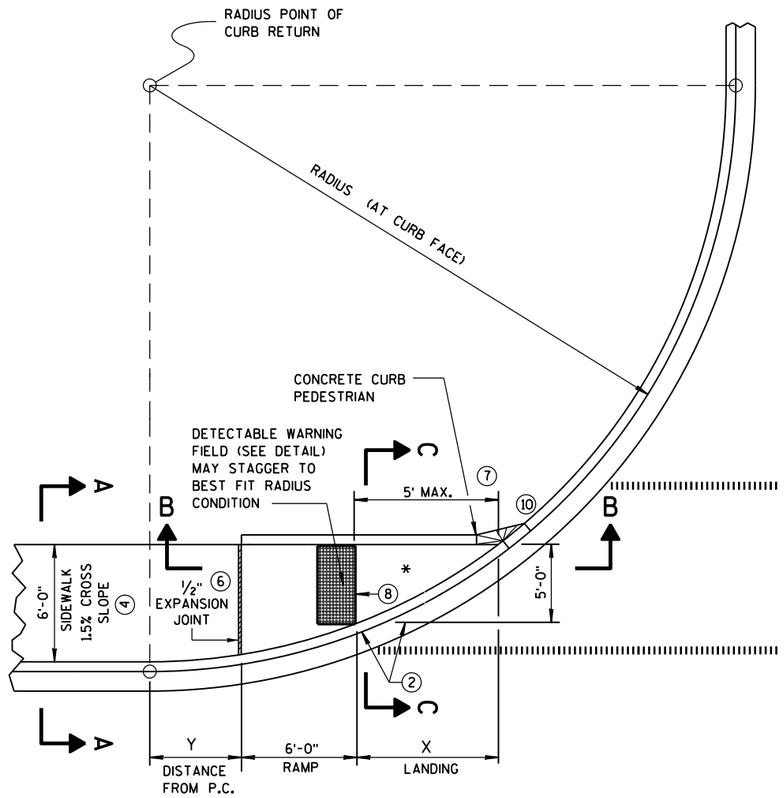
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

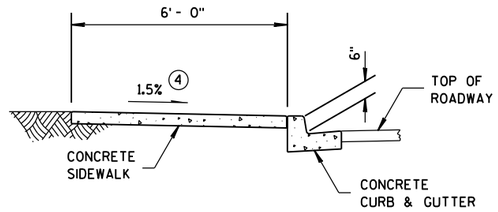
S.D.D. 8 D 5-17b



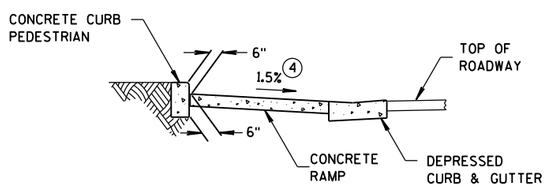
CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2¾"	1'-7½"
40 FEET	12'-1¼"	2'-10"
50 FEET	13'-8¾"	3'-10¾"
60 FEET	15'-2"	4'-10¼"

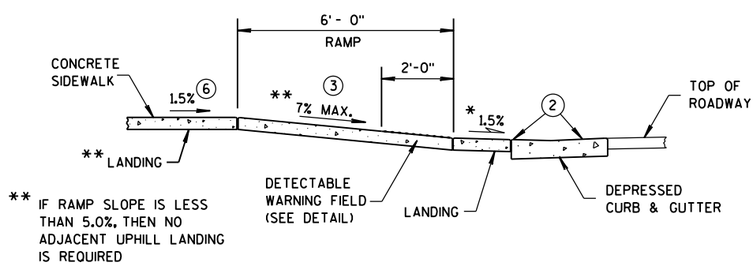
INTERMEDIATE RADII CAN BE INTERPOLATED



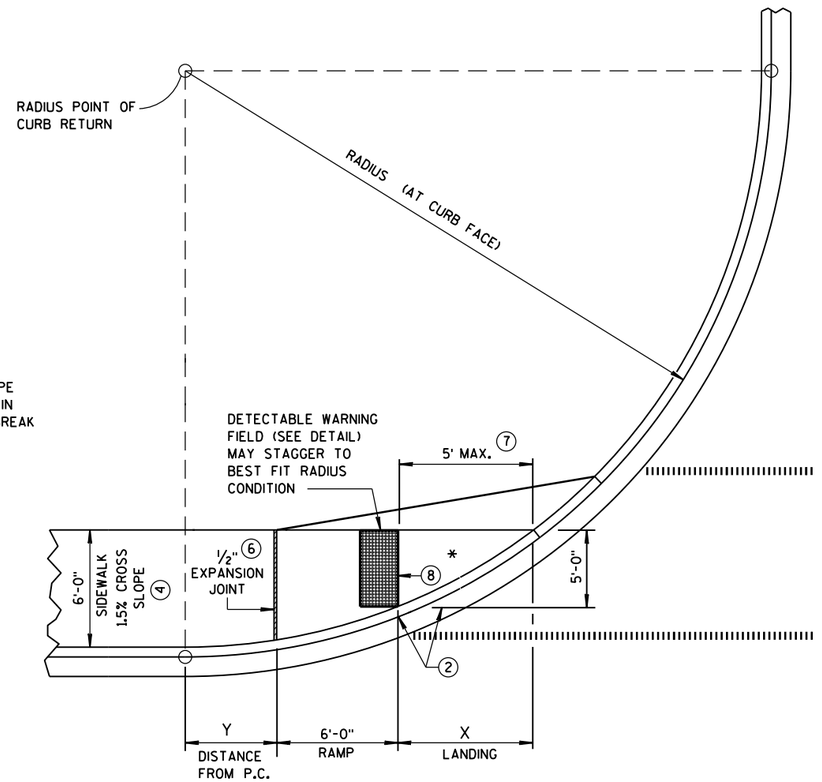
SECTION A-A FOR TYPE 4A



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 LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

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

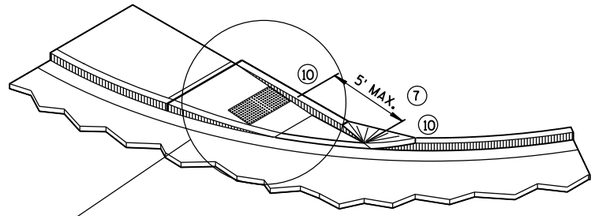
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(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).

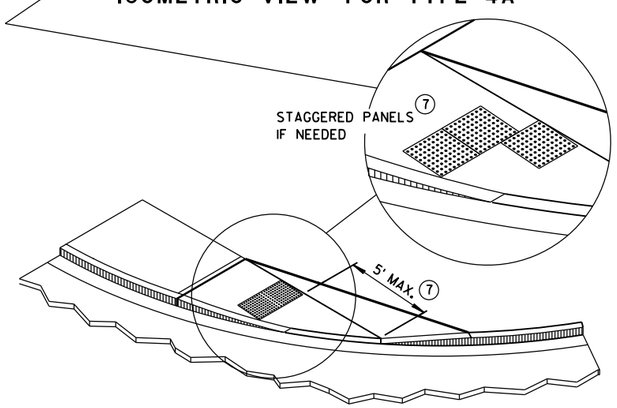
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(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

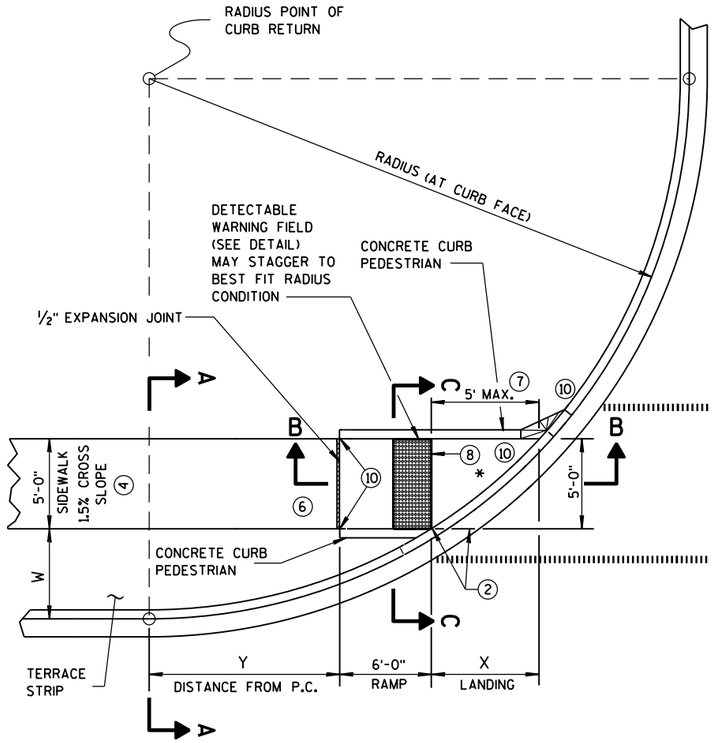
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

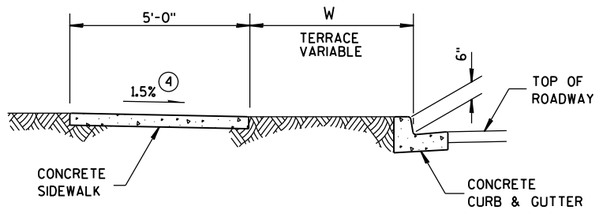
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

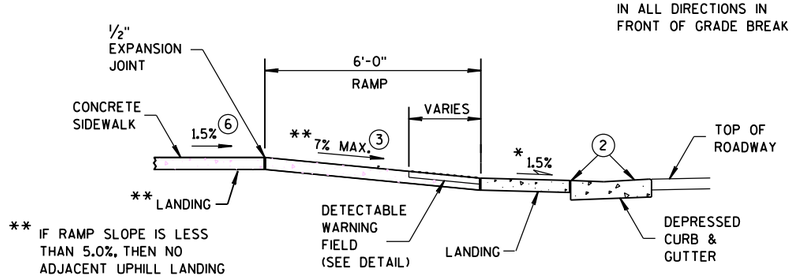
S.D.D. 8 D 5-17c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



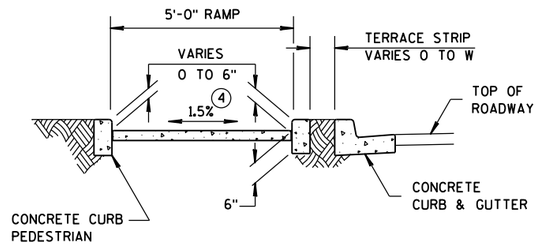
SECTION B-B FOR TYPE 4B

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'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-6¾"	3'-3"	8'-6¼"
30 FEET	7'-9¼"	5'-10½"	6'-9½"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"
40 FEET	9'-4"	7'-10"	8'-2¾"	10'-3"	7'-4¾"	12'-3¾"	6'-8½"	14'-1¼"	6'-1¾"	15'-8½"
50 FEET	10'-8"	9'-6½"	9'-5½"	12'-3¼"	8'-6½"	14'-7½"	7'-9¾"	16'-8¼"	7'-2½"	18'-6¼"
60 FEET	11'-10¼"	11'-0¾"	10'-6½"	14'-1¼"	9'-6½"	16'-8½"	8'-9¼"	18'-11¾"	8'-1½"	21'-0½"

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 LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

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

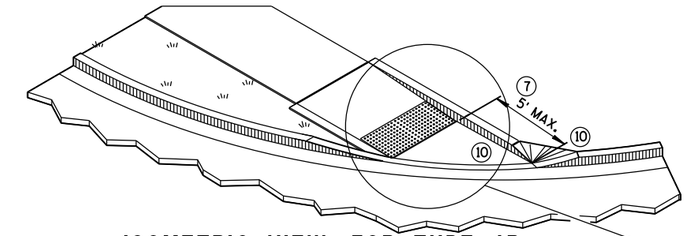
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(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).

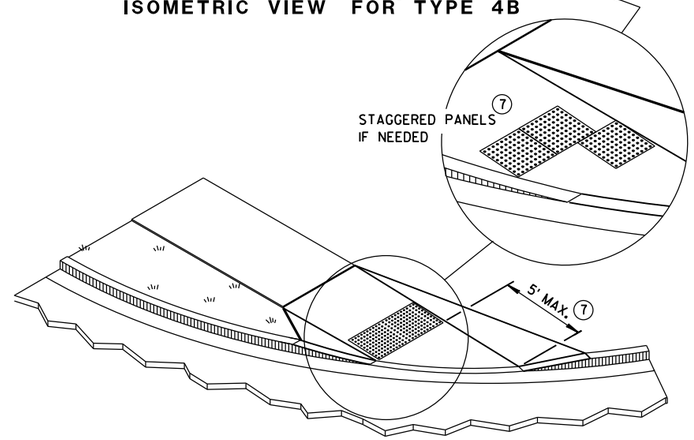
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

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

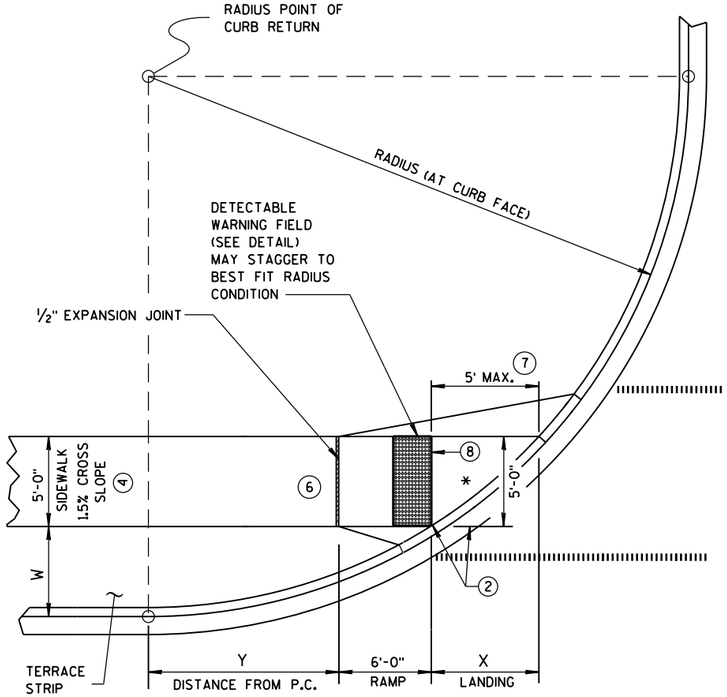
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



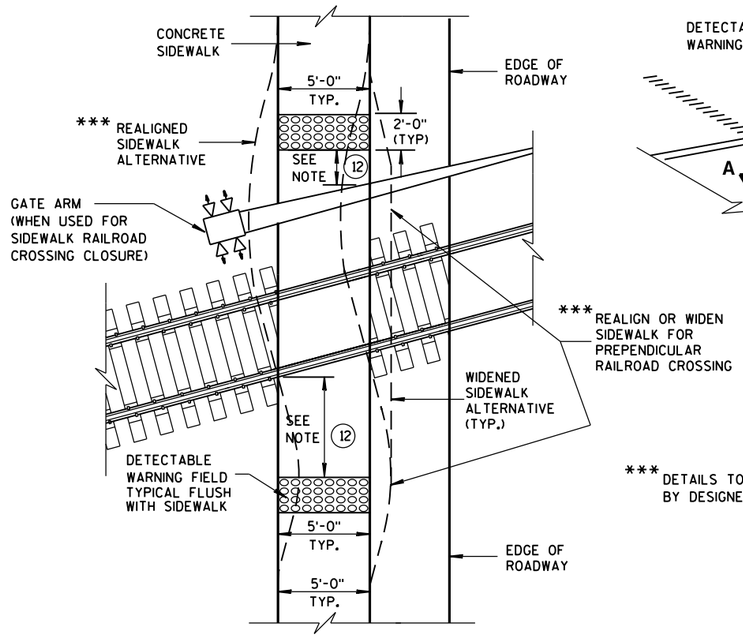
CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

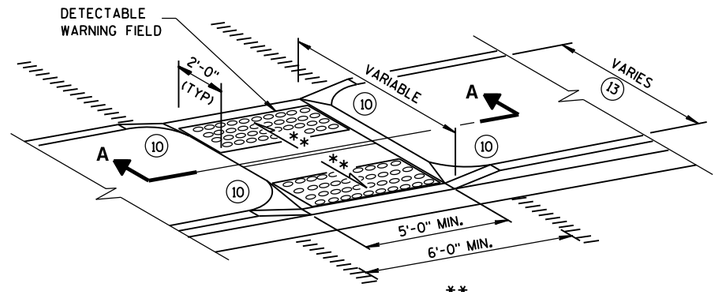
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S.D.D. 8 D 5-17d



*** DETAILS TO BE DETERMINED BY DESIGNER

TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



** 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 LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(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.

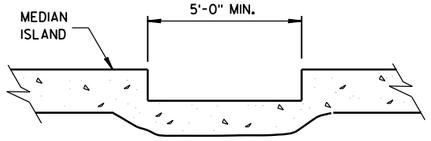
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(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.

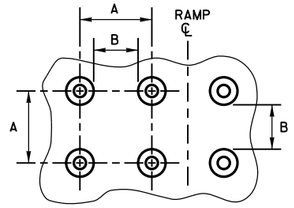
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



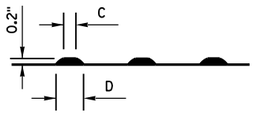
SECTION A-A

	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.

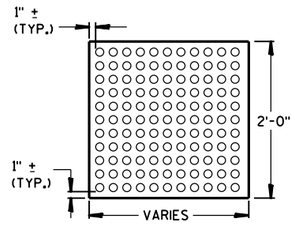


PLAN VIEW

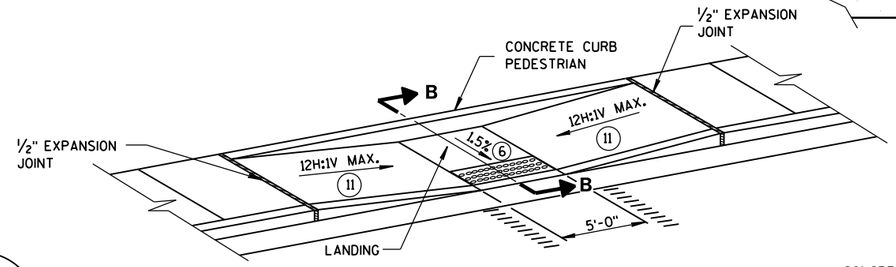


ELEVATION VIEW

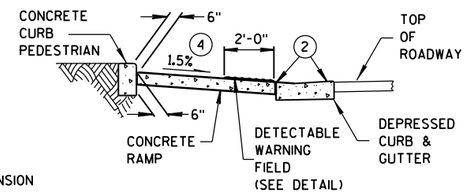
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING FIELD (TYPICAL)

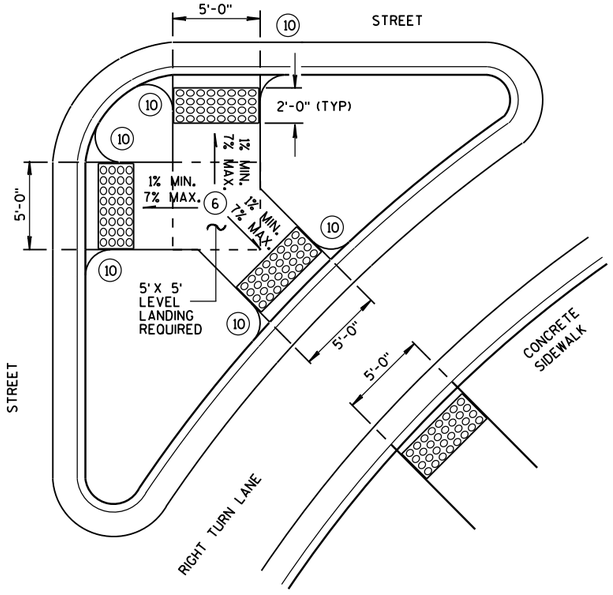


MID-BLOCK CROSSING
TYPE 7A

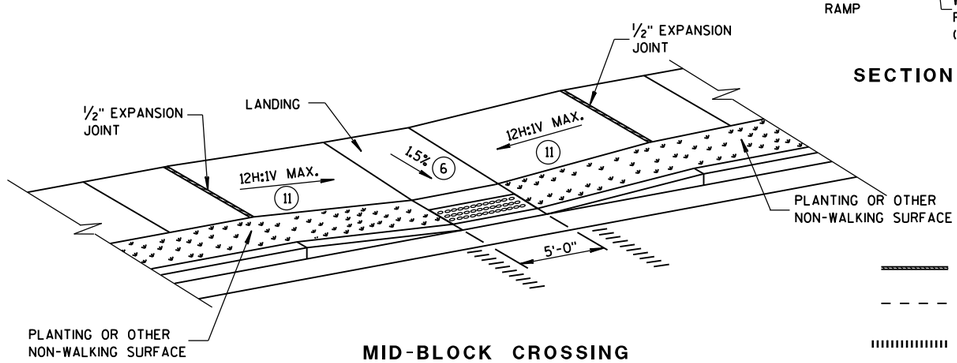


SECTION B-B

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)

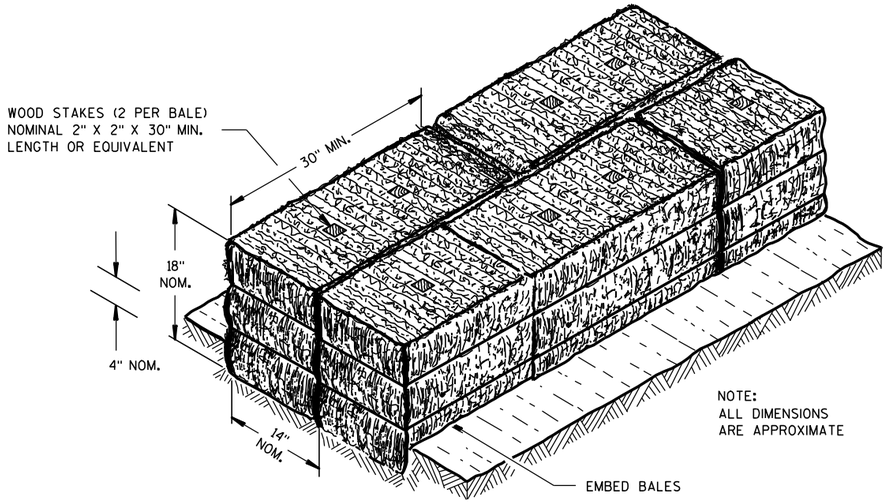
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

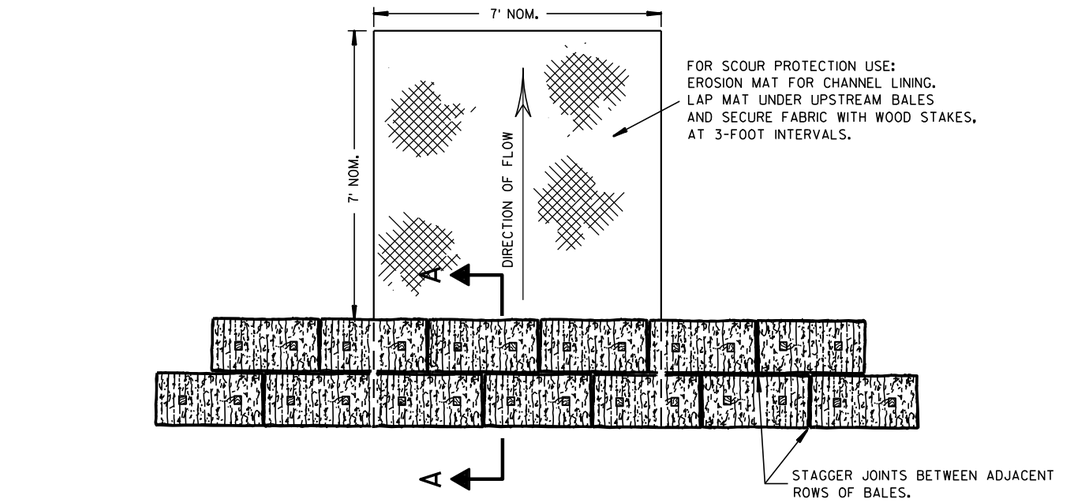
APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS [illegible] ENGINEER
FHWA

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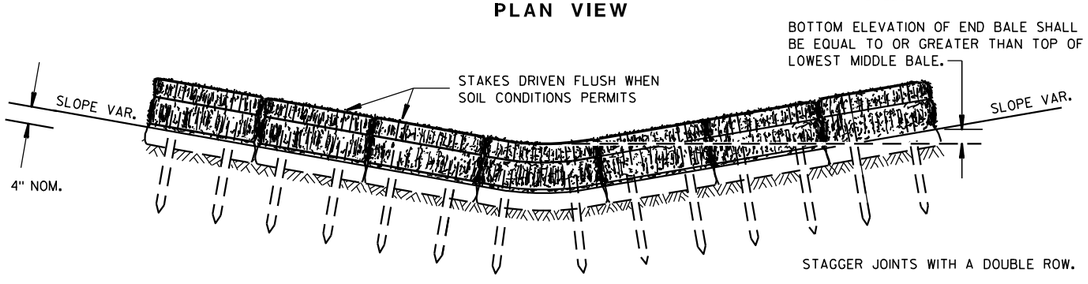
S.D.D. 8 D 5-17e



SECTION A-A



PLAN VIEW



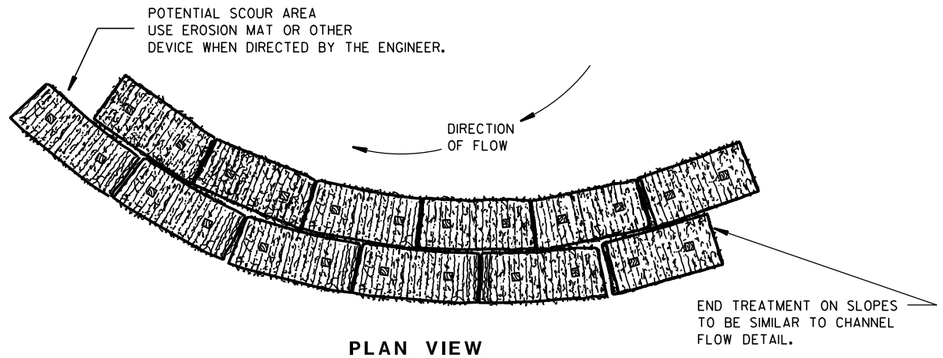
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

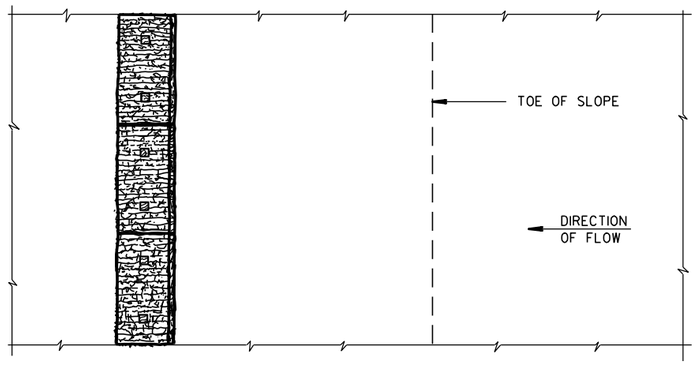
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

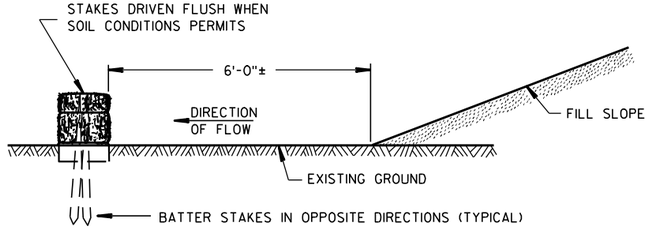


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

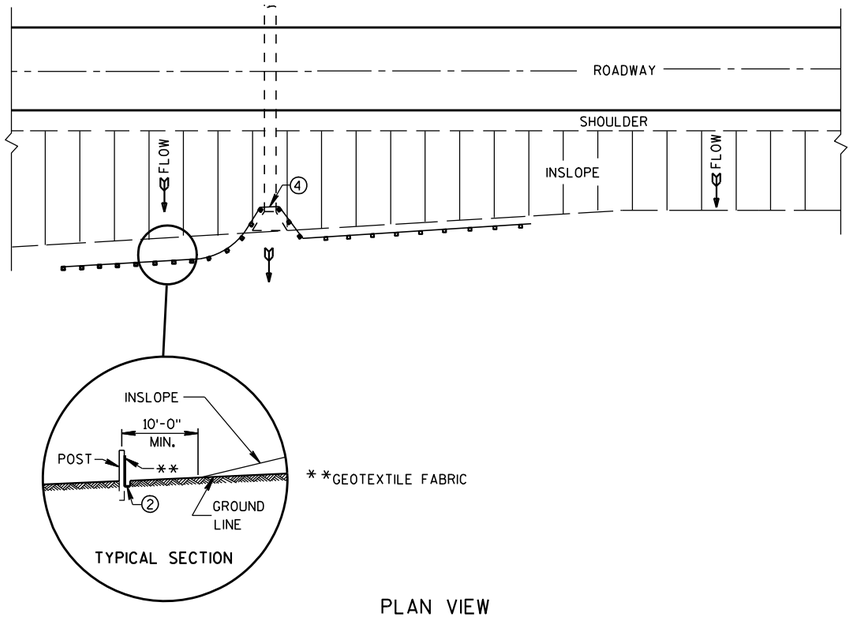
APPROVED
6/04/02 DATE
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

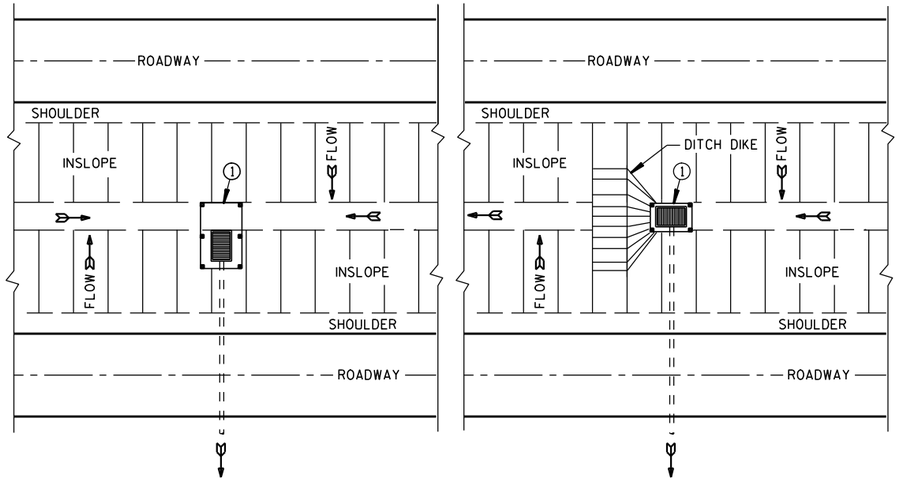
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

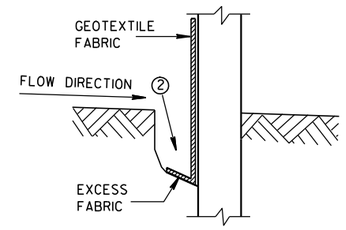
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

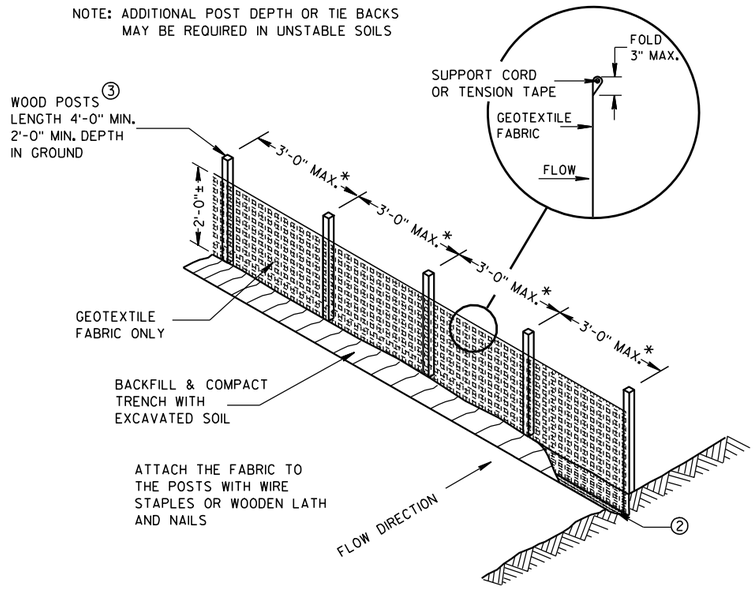
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

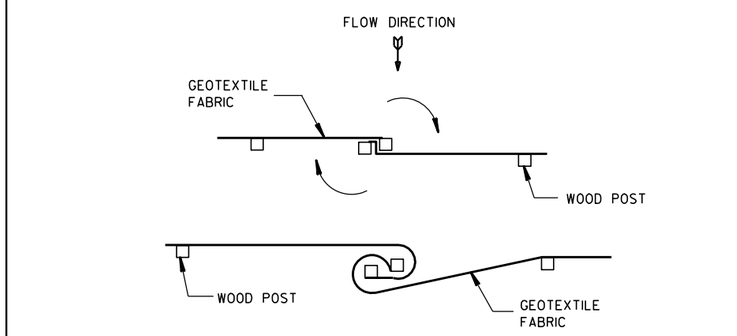
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



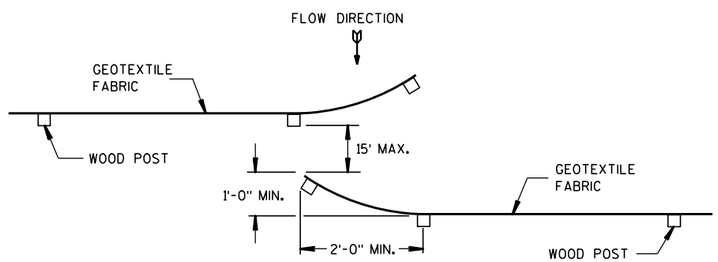
TRENCH DETAIL



SILT FENCE

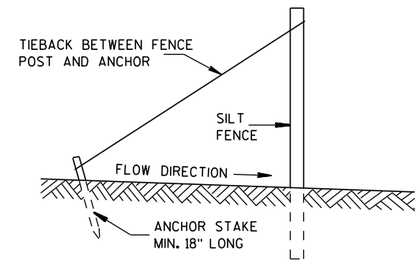


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

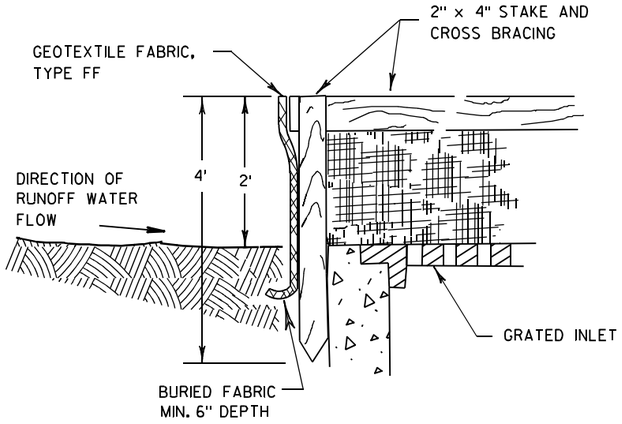
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

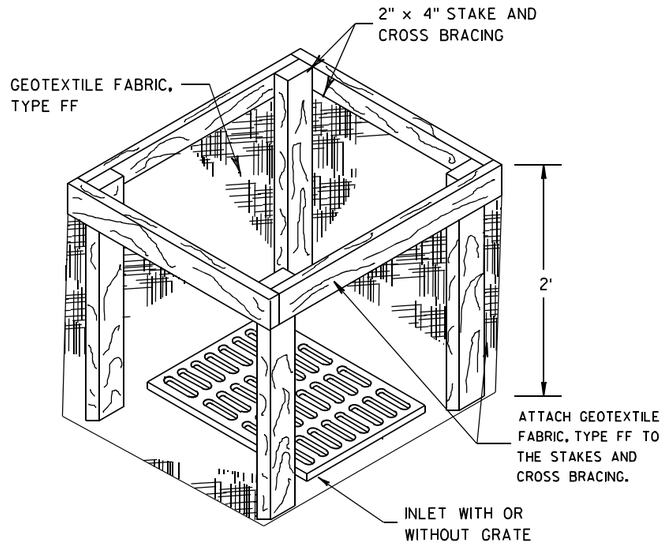
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S.D.D. 8 E 9-6

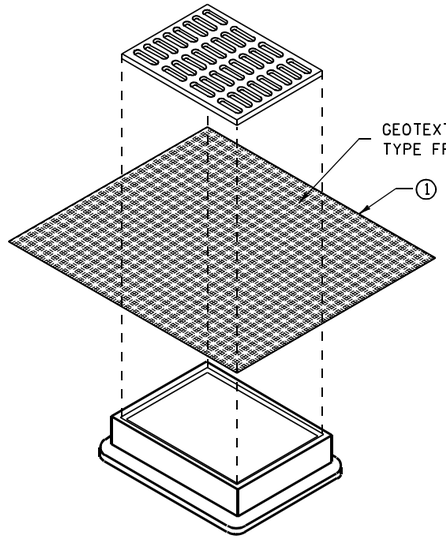
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S.D.D. 8 E 9-6



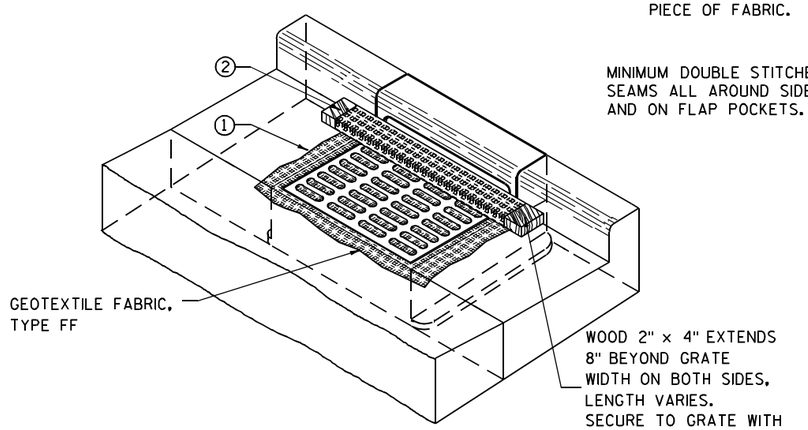


INLET PROTECTION, TYPE A

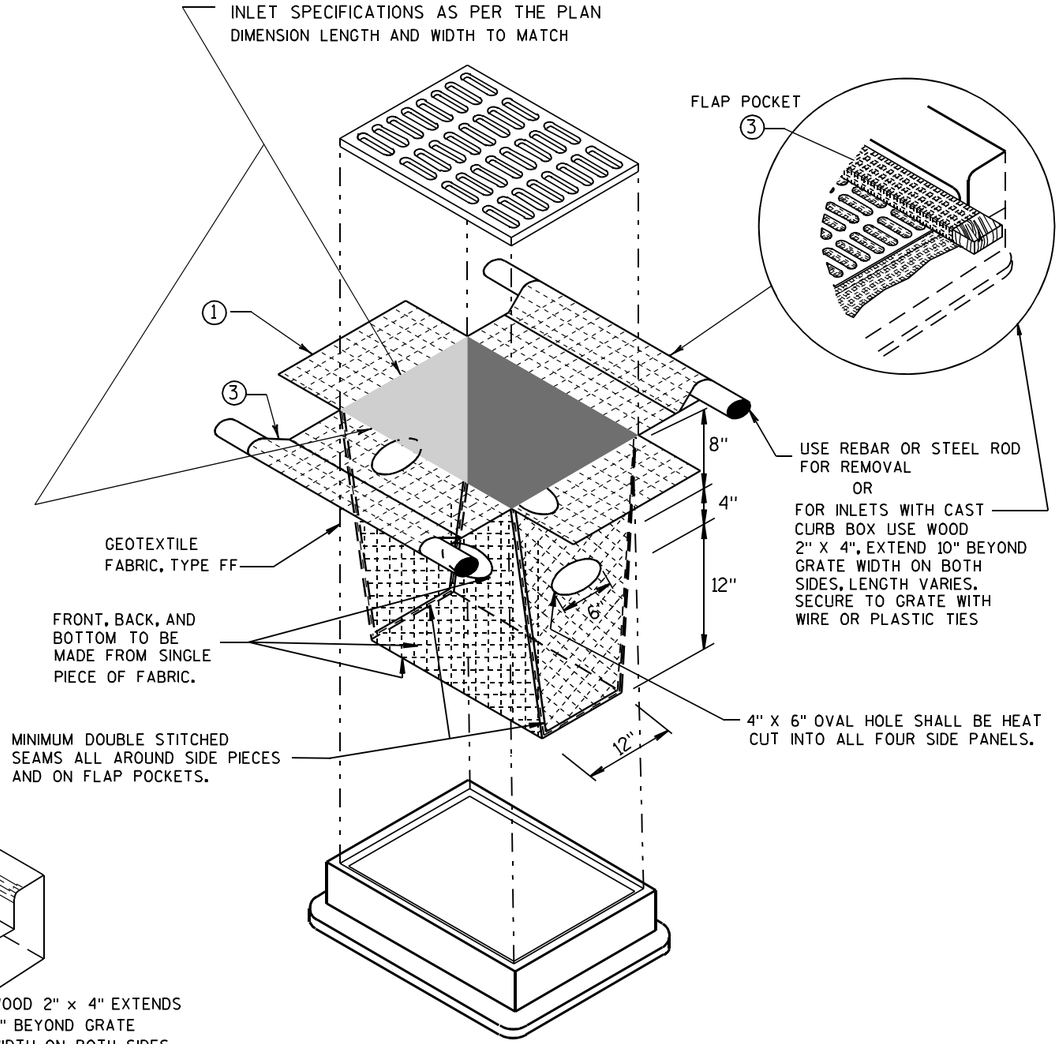


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

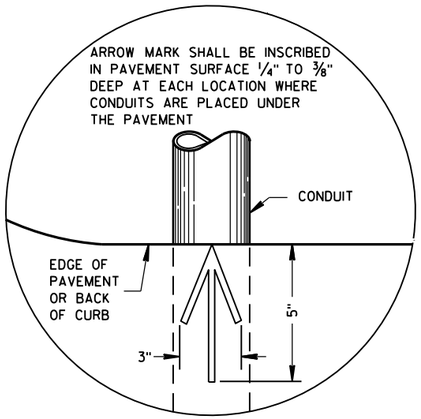
APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

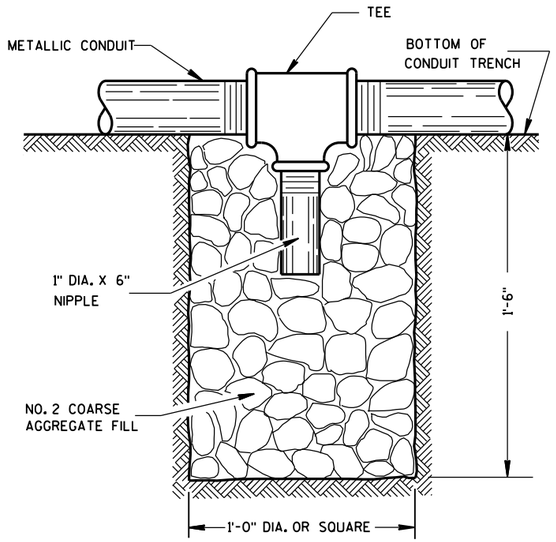
FHWA

6
S.D.D. 8 E 10-2



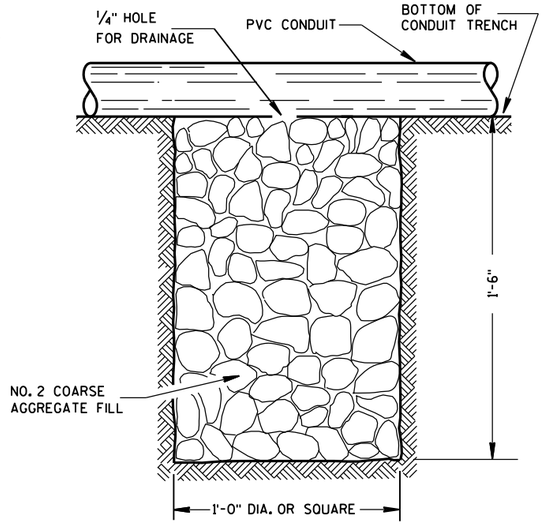
PLAN VIEW

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.

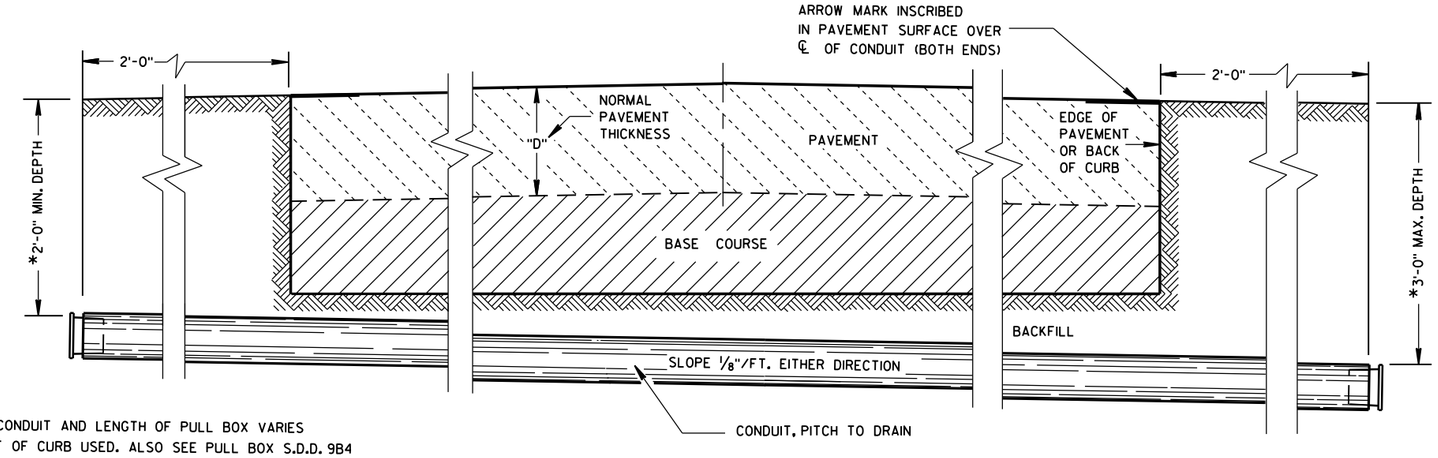
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

6

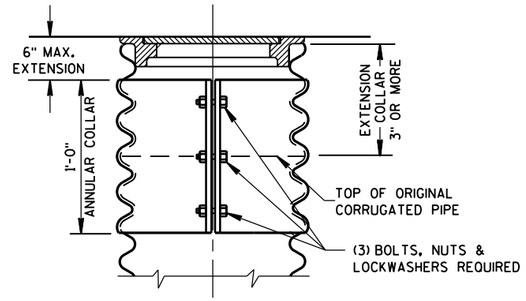
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

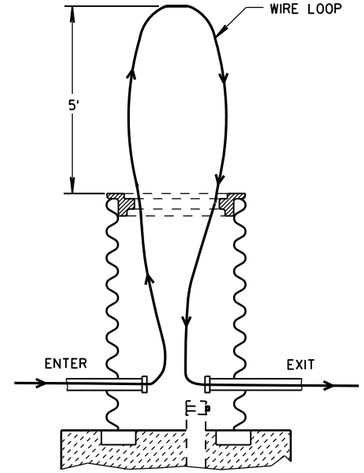
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

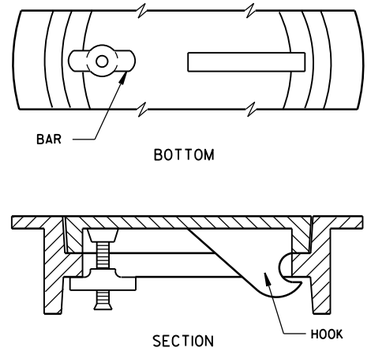
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

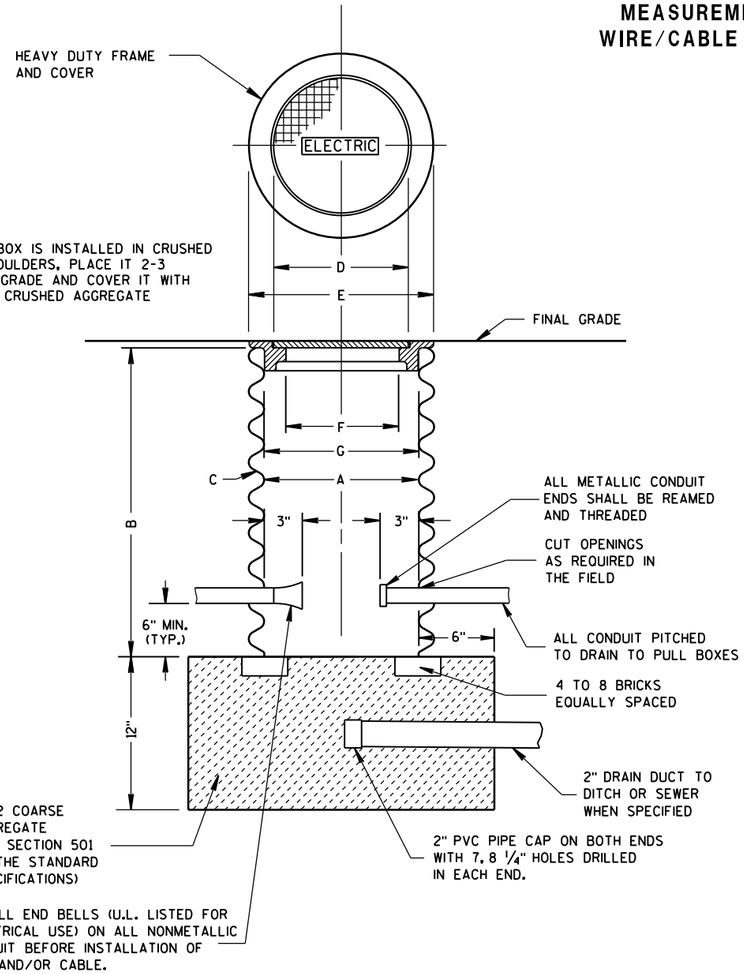


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



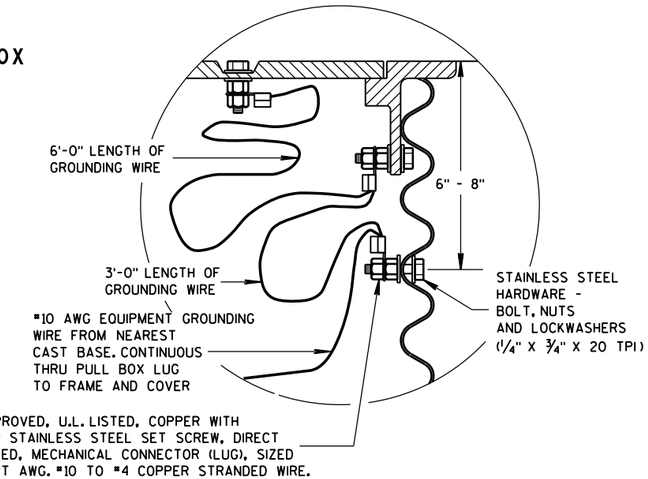
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

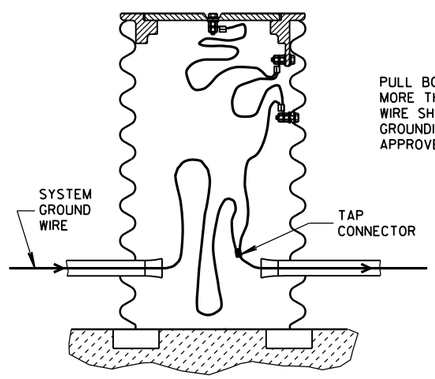


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

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.

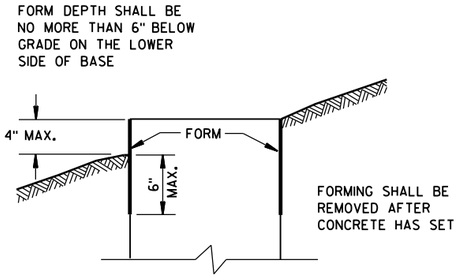
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 9 B 4-11



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.

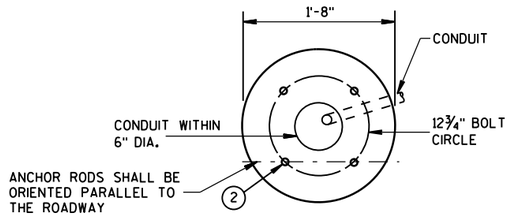
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

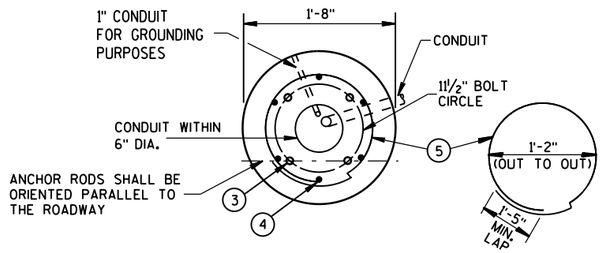
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

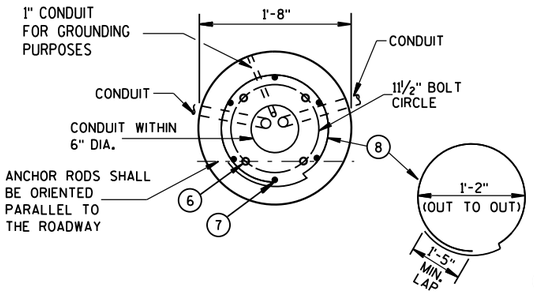
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

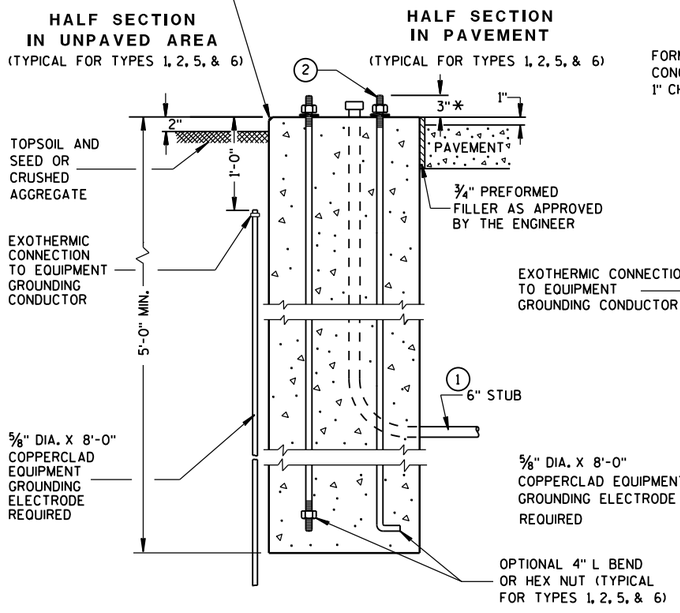


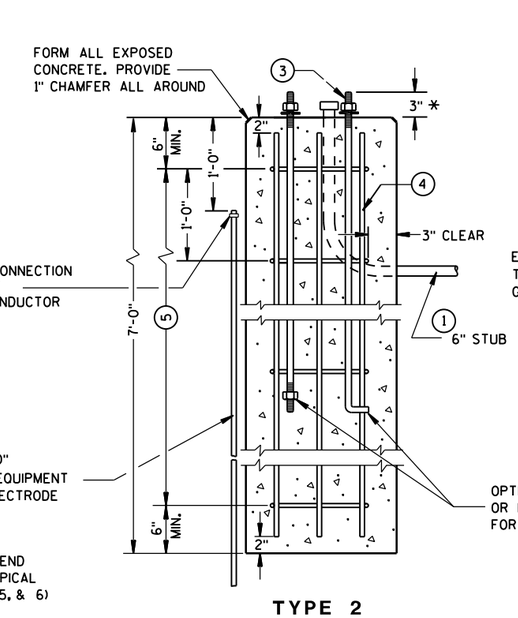




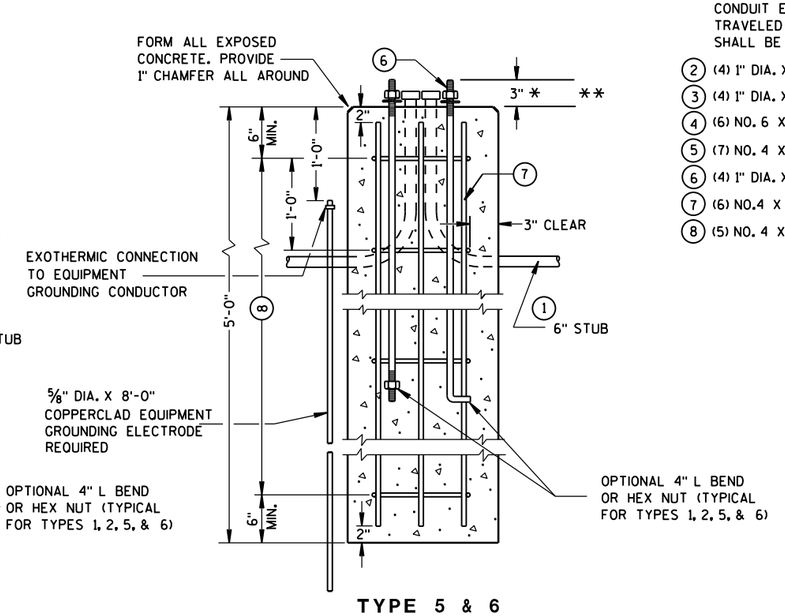
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)





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
FHWA

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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.

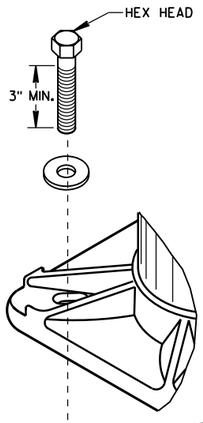
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

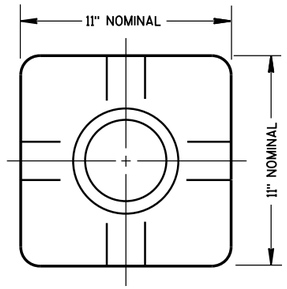
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

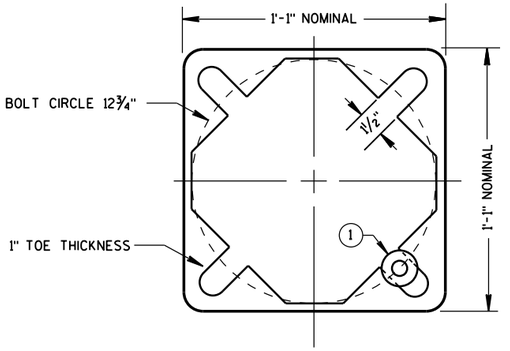
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

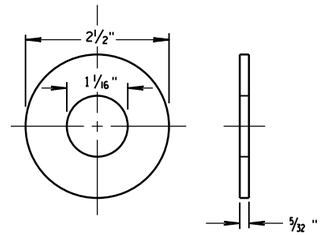




TOP VIEW
(PEDESTAL BASE)

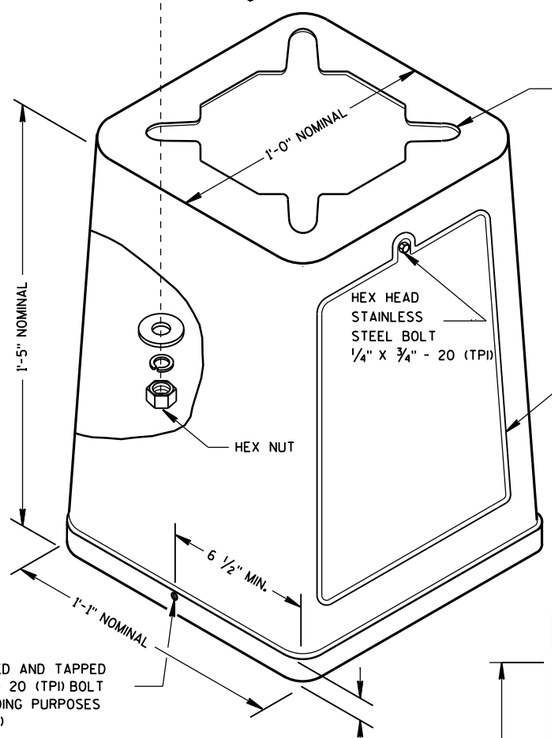


BOTTOM VIEW
(PEDESTAL BASE)

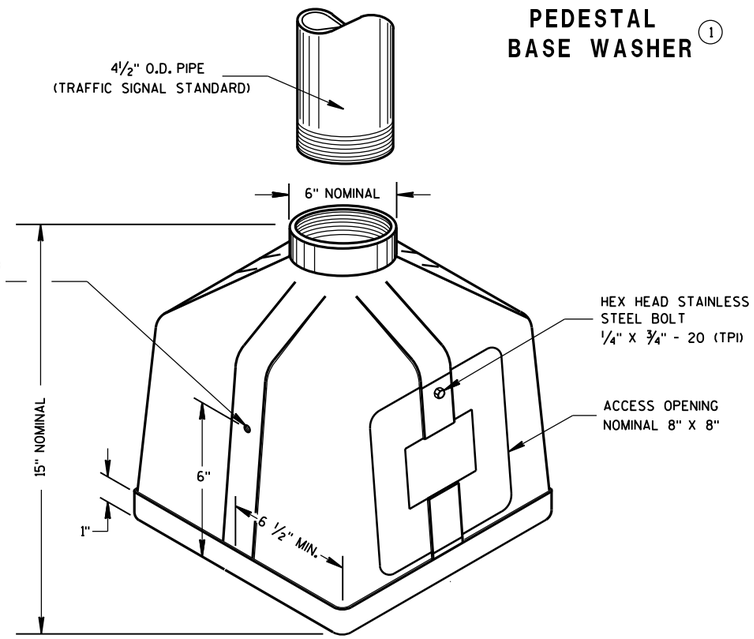


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

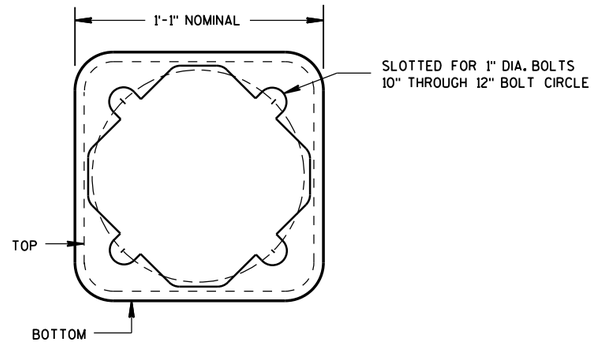


ISOMETRIC VIEW

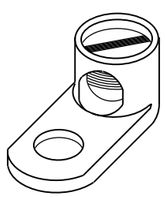


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

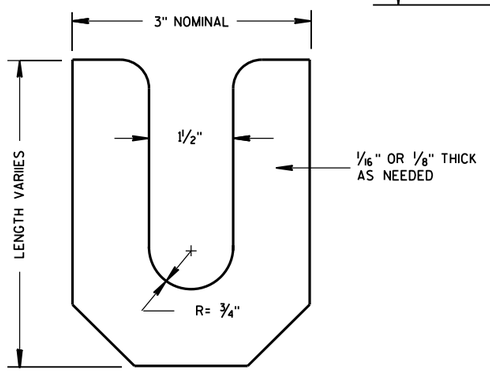


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



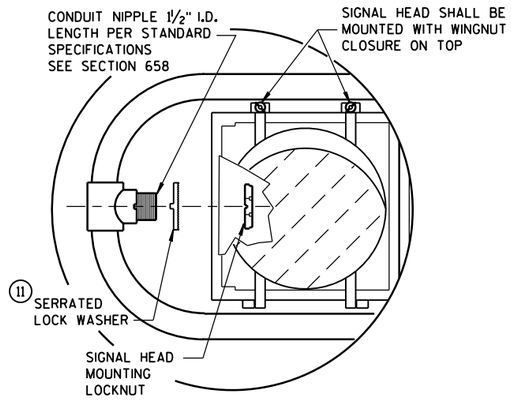
LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

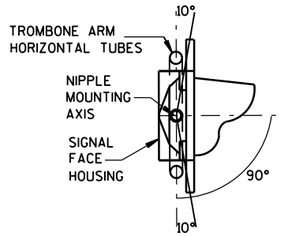
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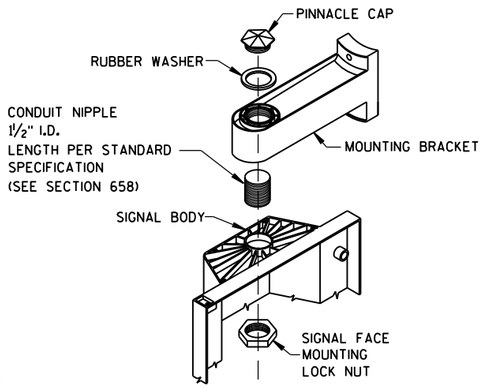
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR



SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)



SIGNAL FACE MOUNTING DETAIL

(BANDED)

GENERAL NOTES

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

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

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

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

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

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

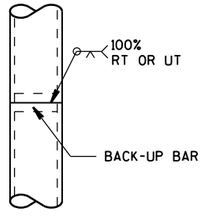
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

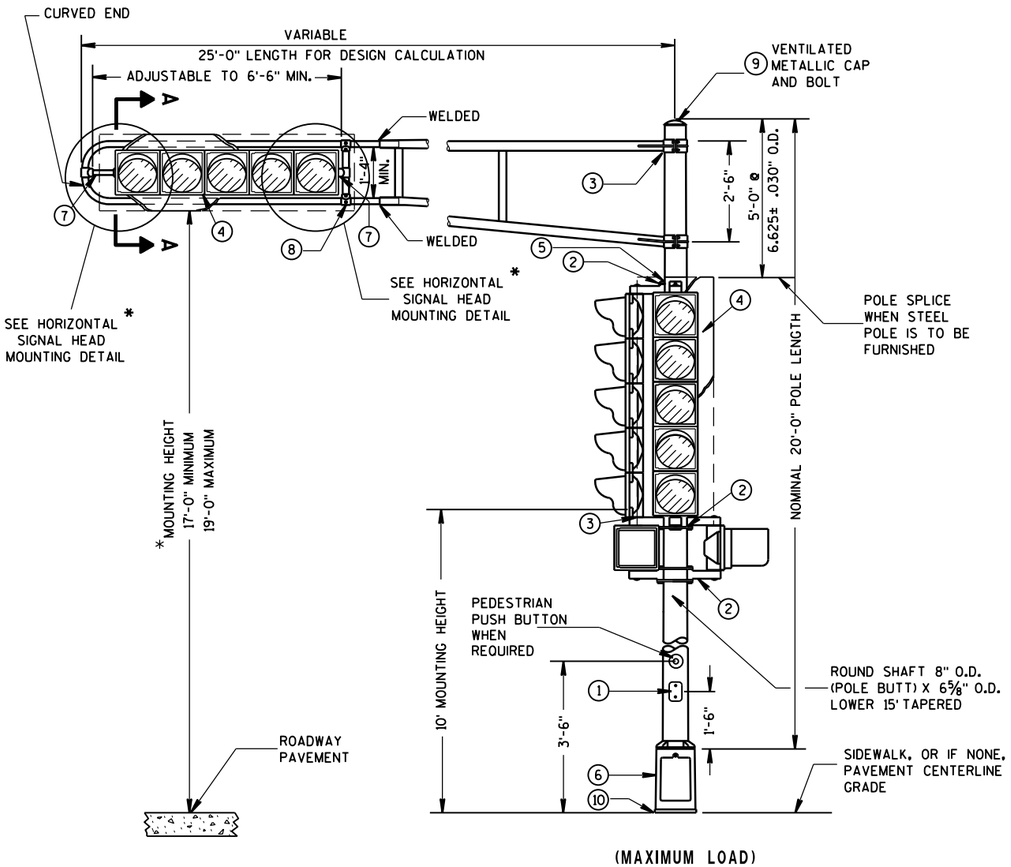
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

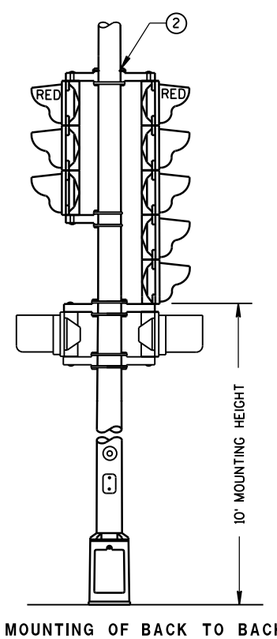
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



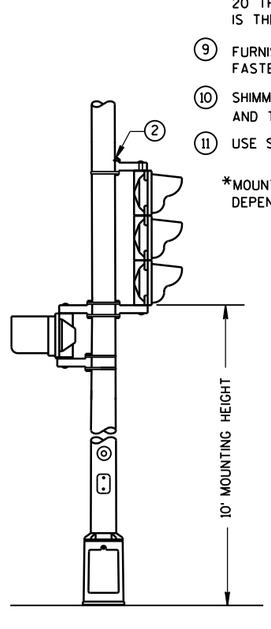
POLE SPLICE DETAIL



(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 2 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

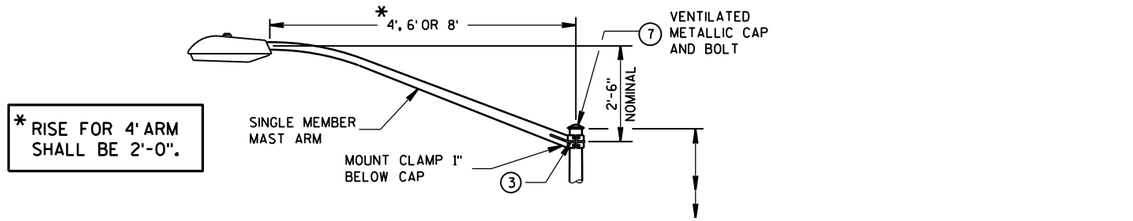
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

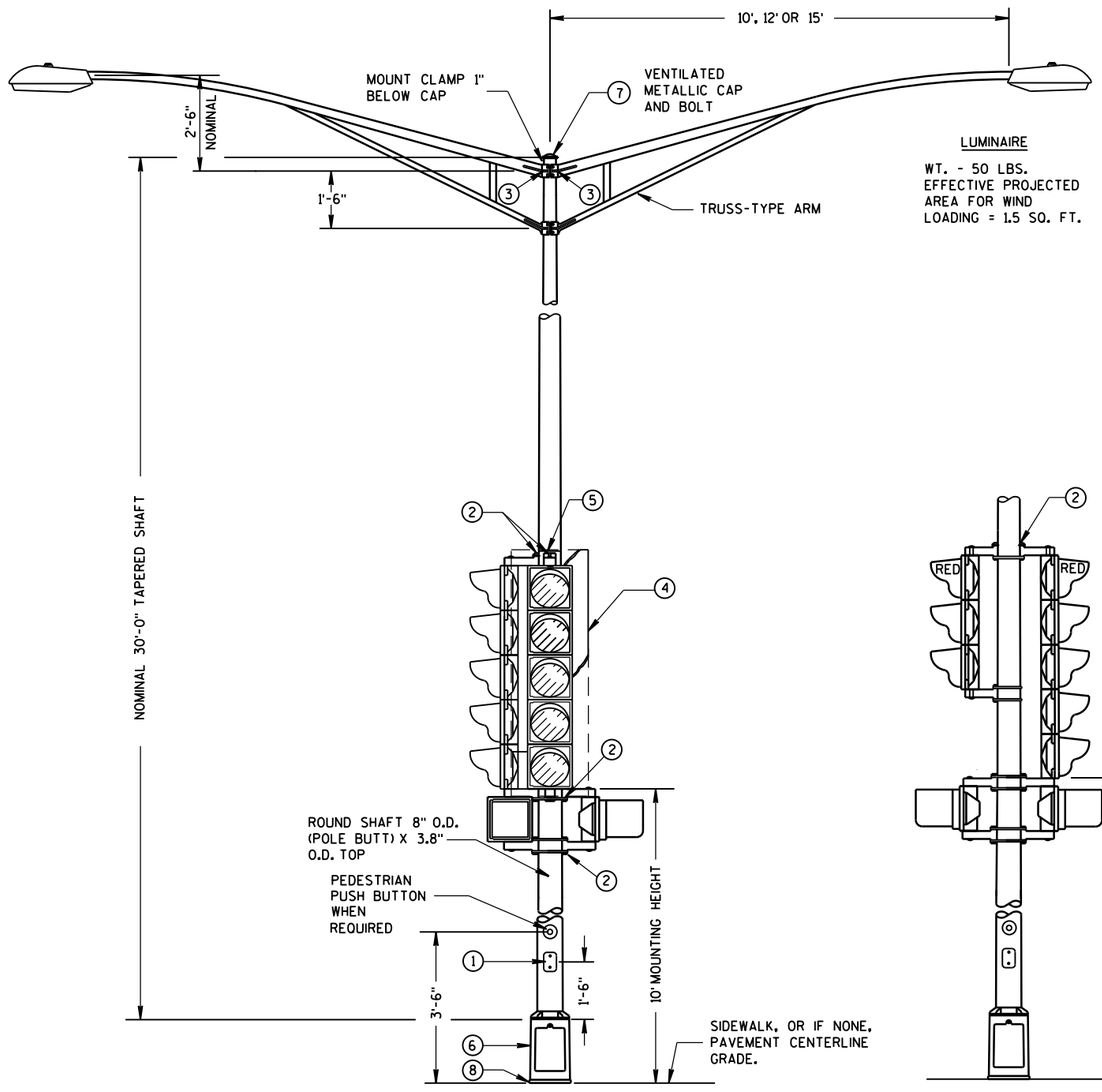
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S.D.D. 9 E 1-14a

6

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

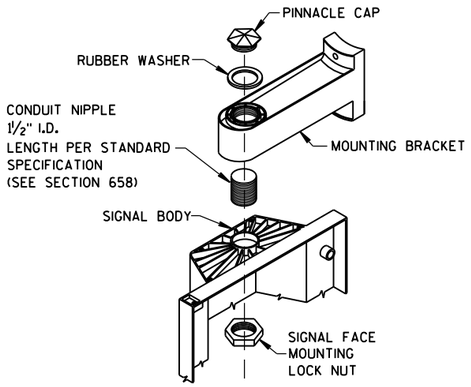




LUMINAIRE

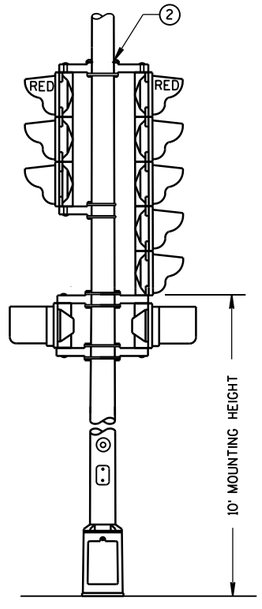
WT. - 50 LBS.
EFFECTIVE PROJECTED AREA FOR WIND LOADING = 1.5 SQ. FT.

(MAXIMUM LOAD)

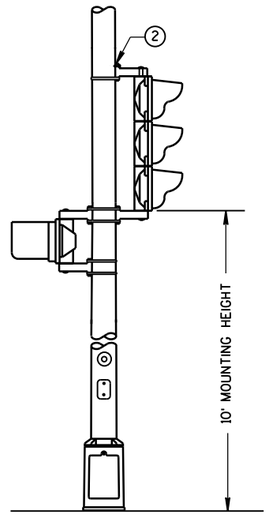


SIGNAL FACE MOUNTING DETAIL

(BANDED)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 4 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

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 MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658).

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

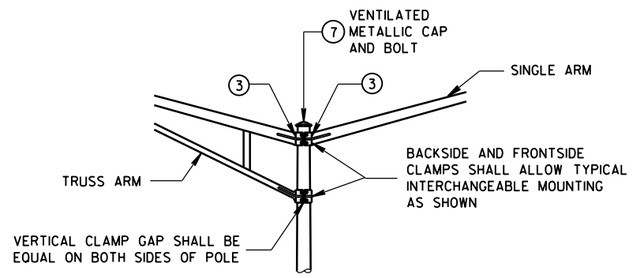
(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

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



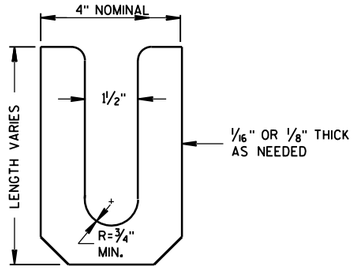
INTERCHANGEABLE MOUNTING DETAIL

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

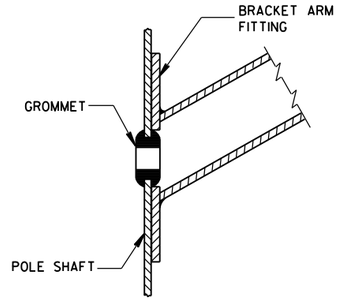
6

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

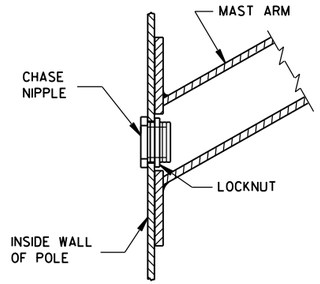


LEVELING SHIM (13)

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.

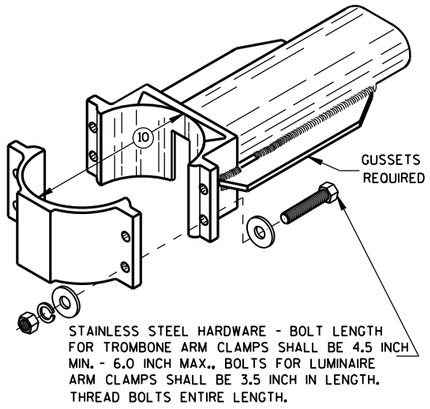
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

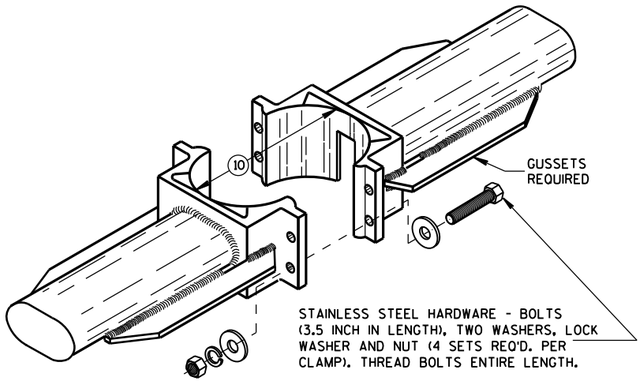
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(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.

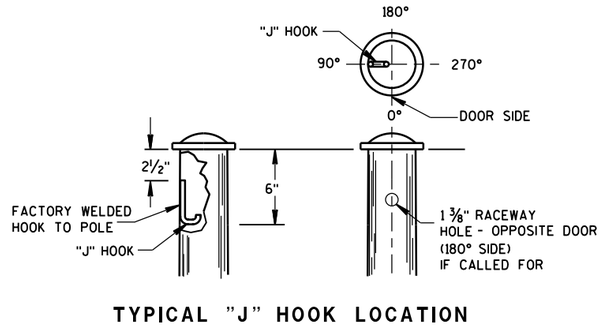
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



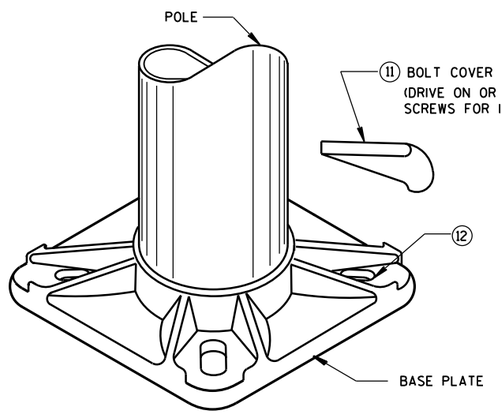
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



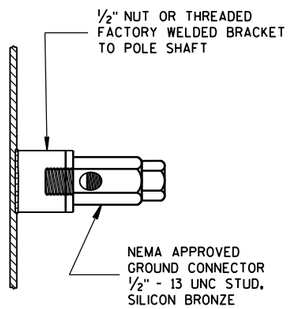
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

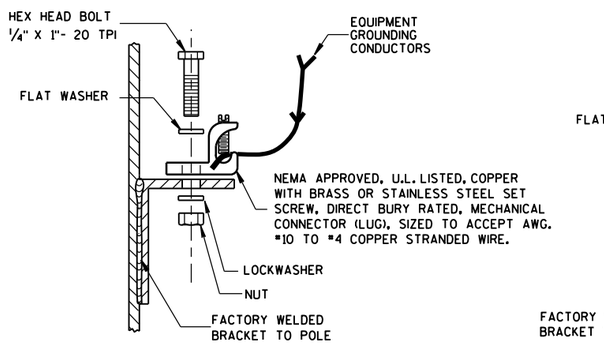


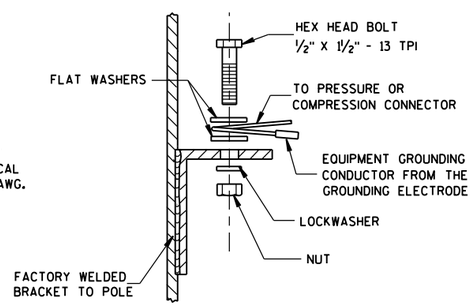
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

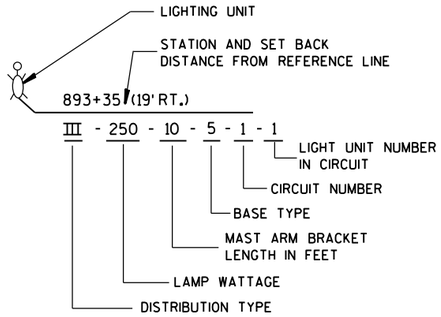
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

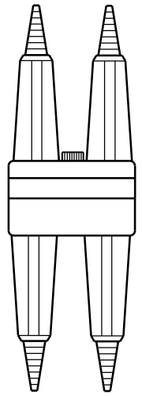
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

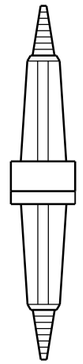
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S.D.D. 9 E 1-14g



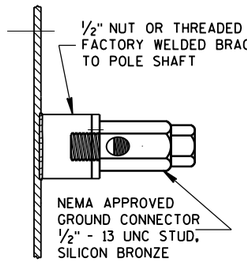
LIGHTING UNIT CODE
(TYPICAL)

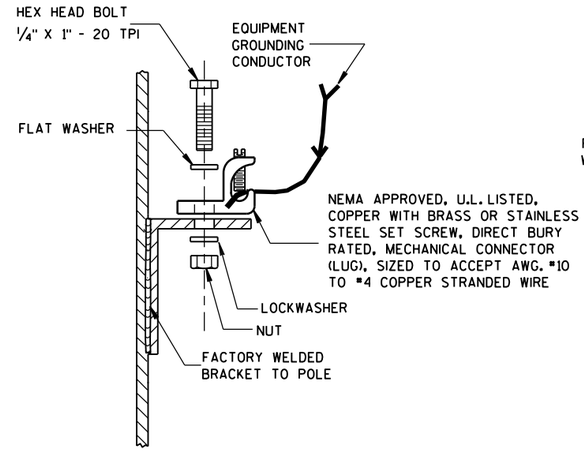


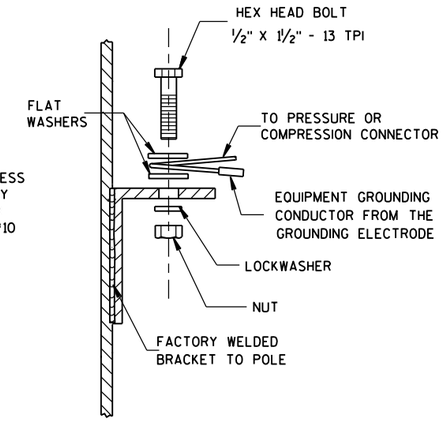
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



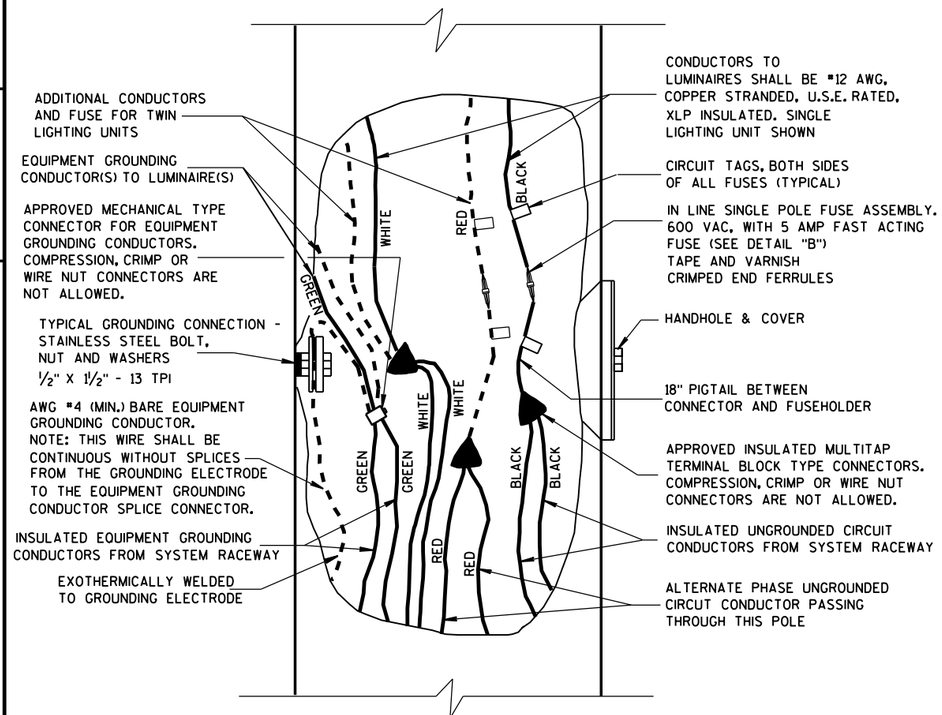
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



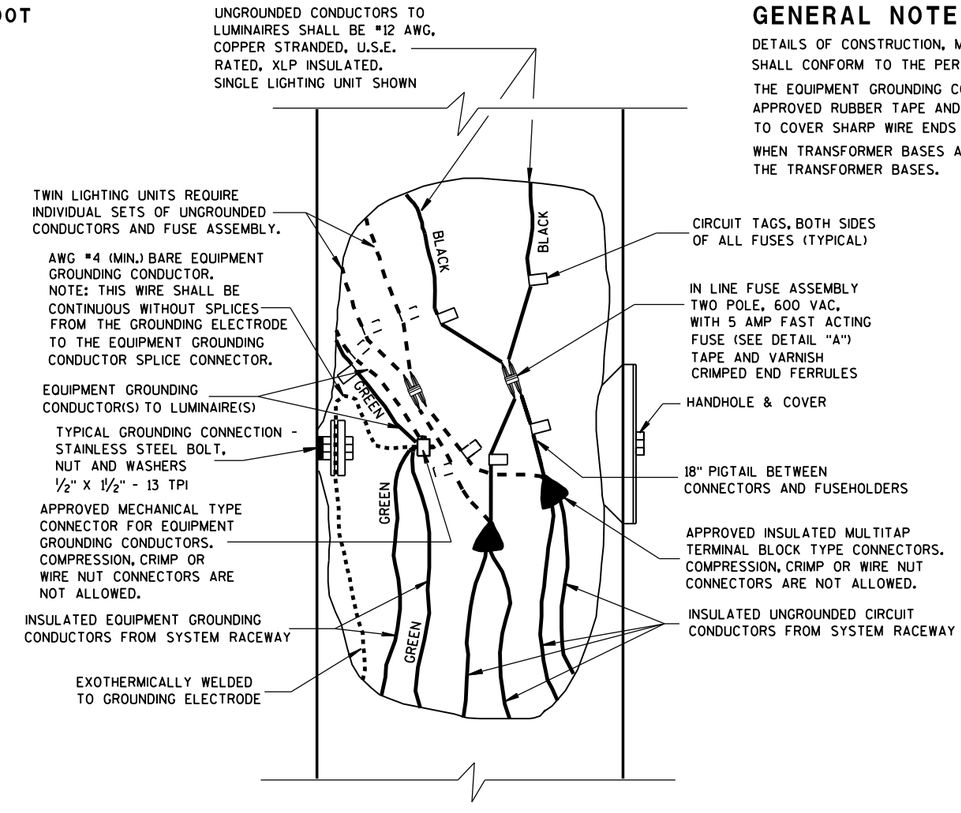




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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.

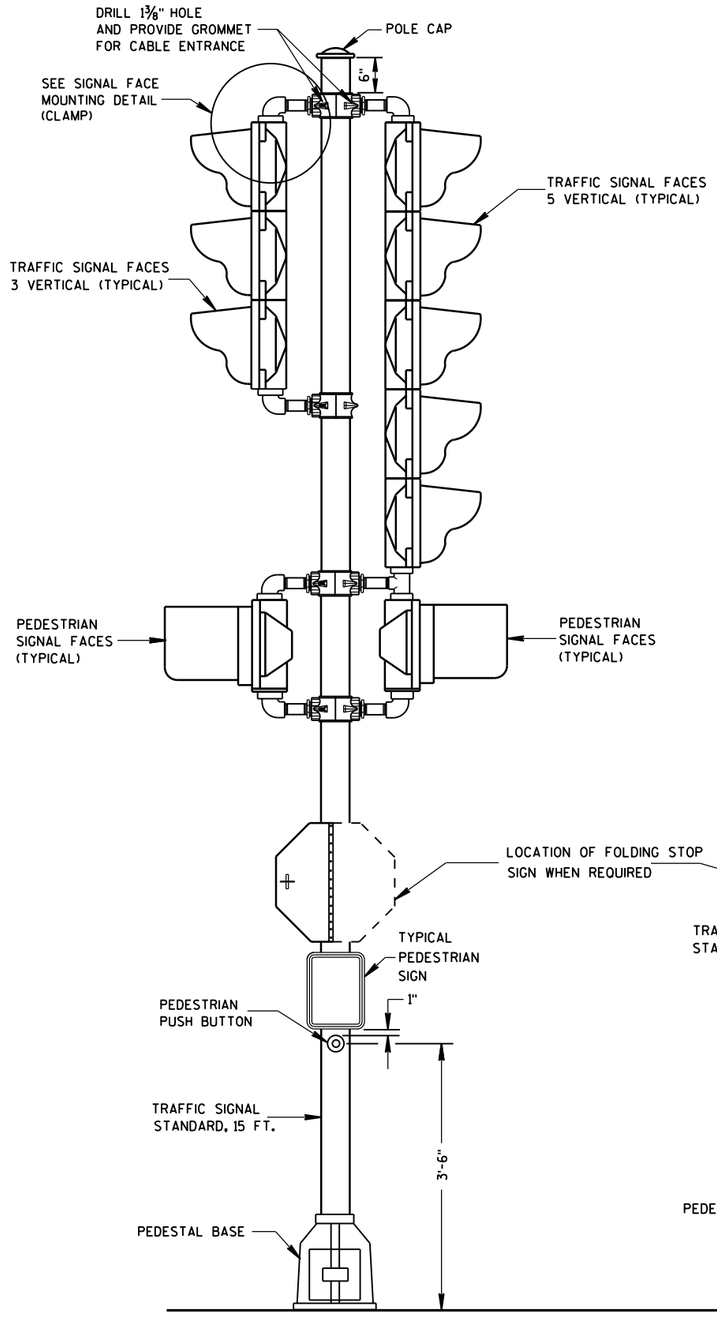
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

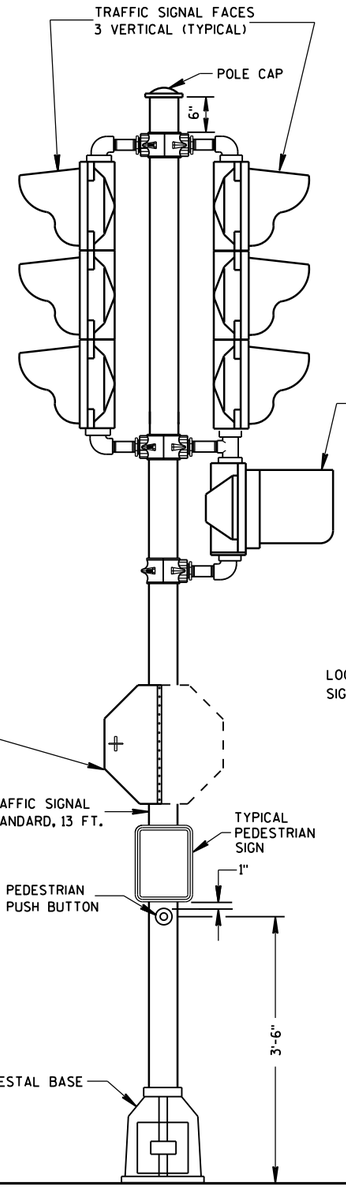
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

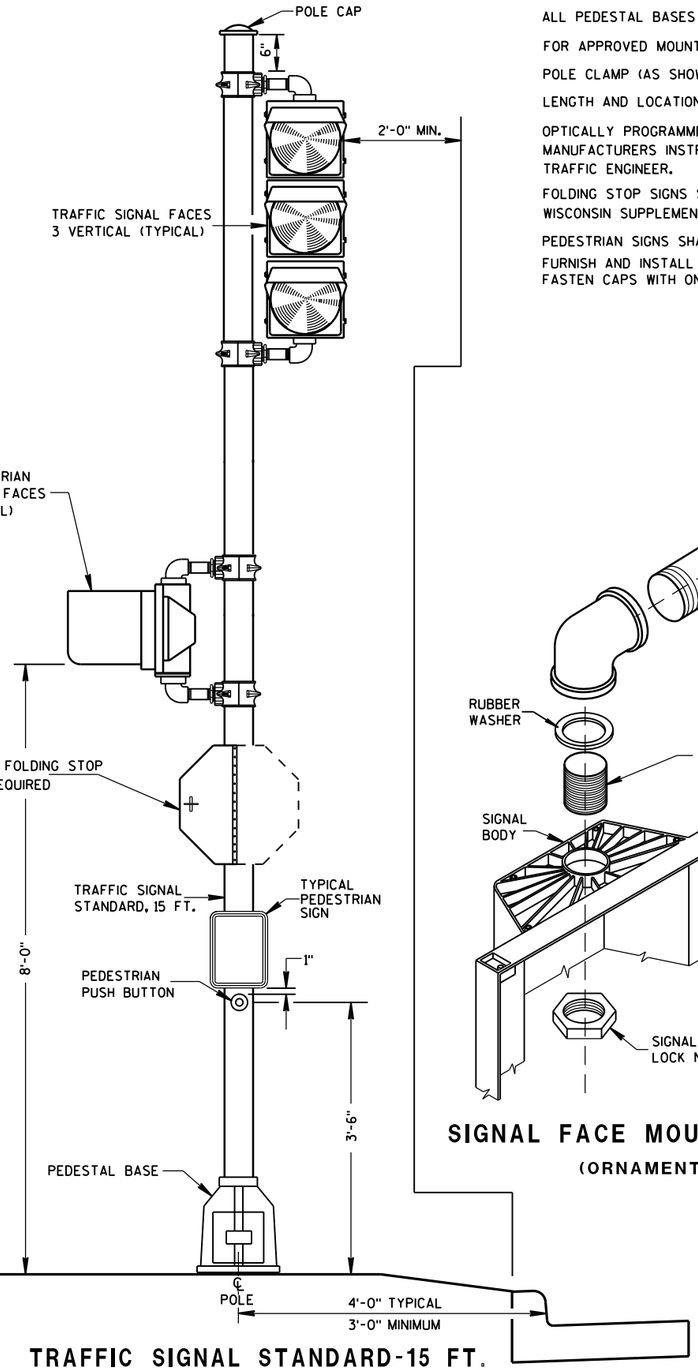
6
S.D.D. 9 E 3-5



TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLE CLAMP (AS SHOWN) MOUNTING BRACKETS SHALL BE USED.

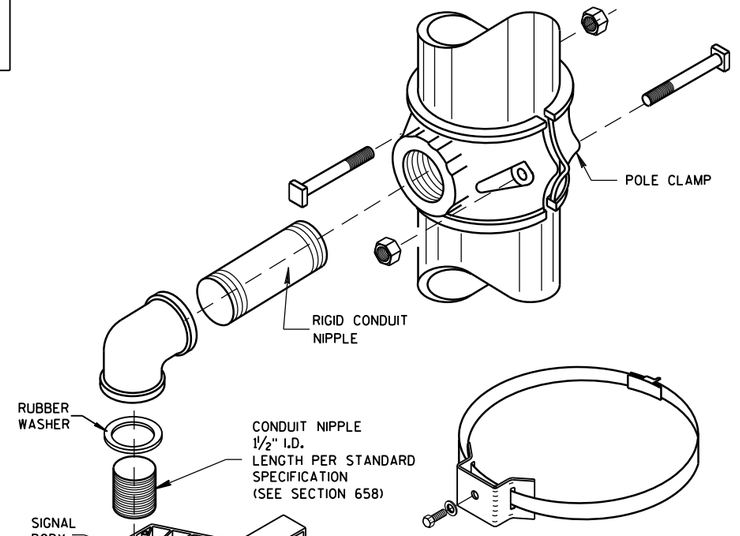
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

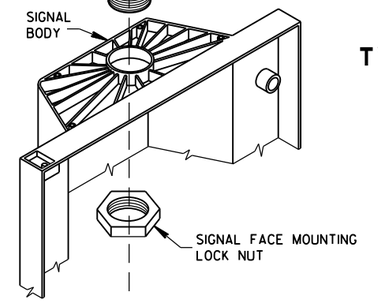
FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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.



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



SIGNAL FACE MOUNTING DETAIL
(ORNAMENTAL)

TRAFFIC SIGNAL STANDARD
ORNAMENTAL BRACKET MOUNTINGS
TYPICAL FOR 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

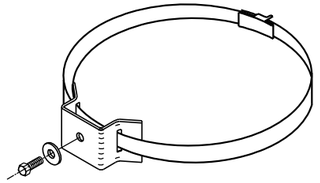
APPROVED
2/28/2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

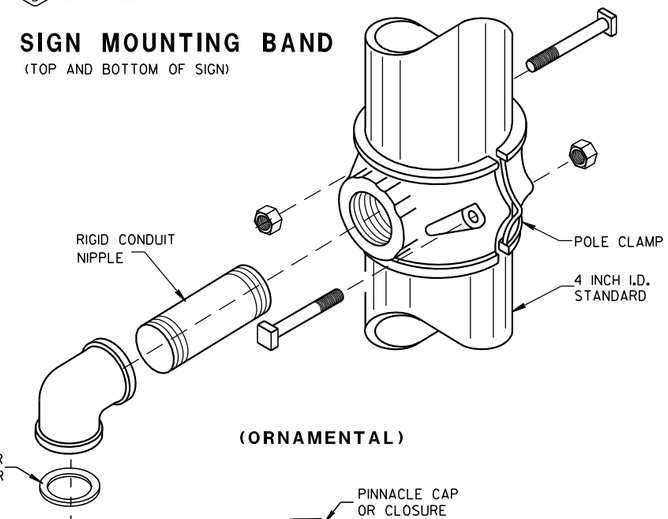
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S.D.D. 9 E 5-6

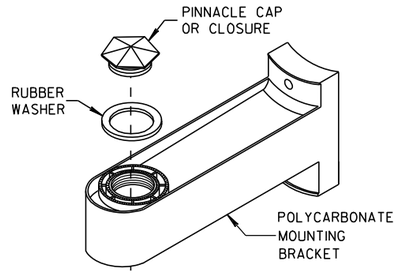
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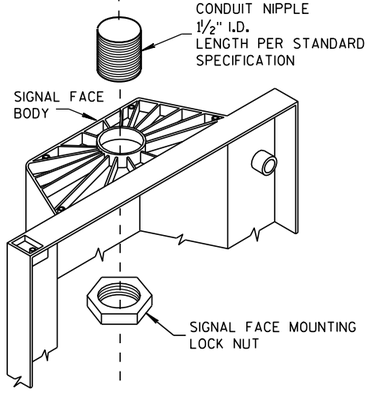
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



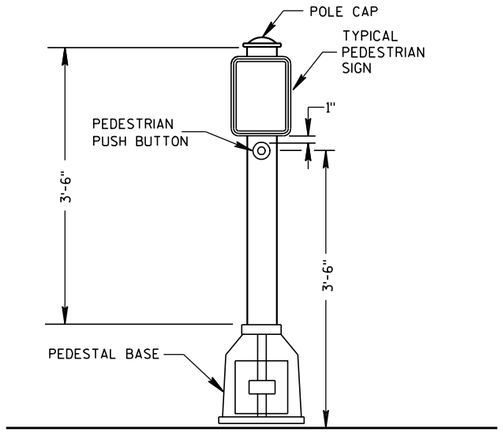
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

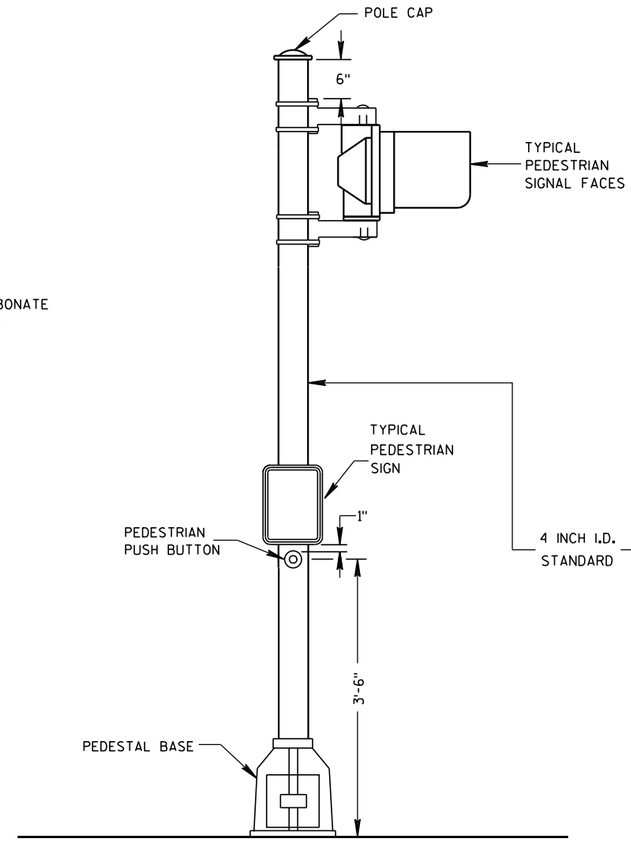
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

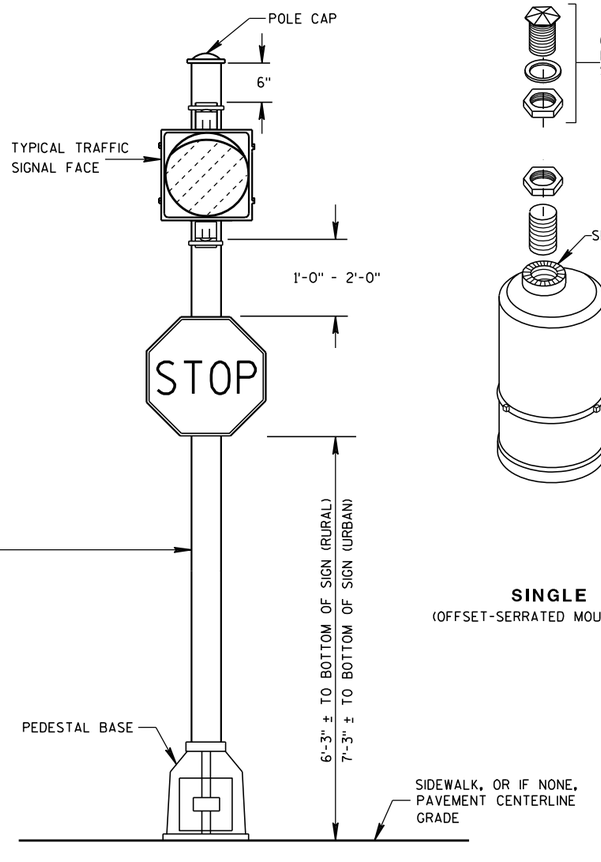
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

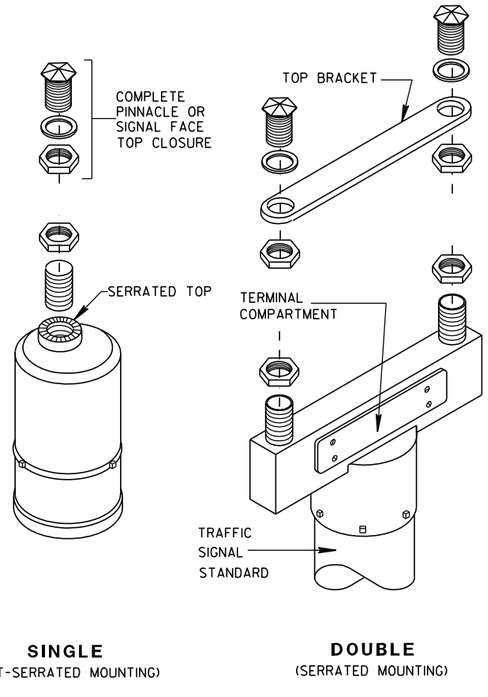
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)



STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10 — DATE

/S/ John Corbin — STATE ELECTRICAL ENGI

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HWYS

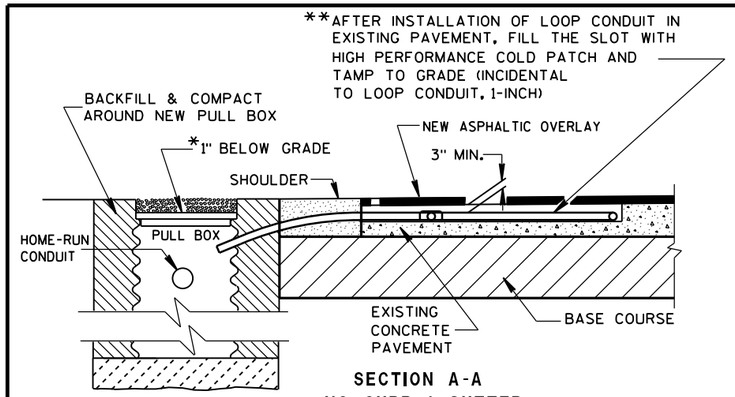
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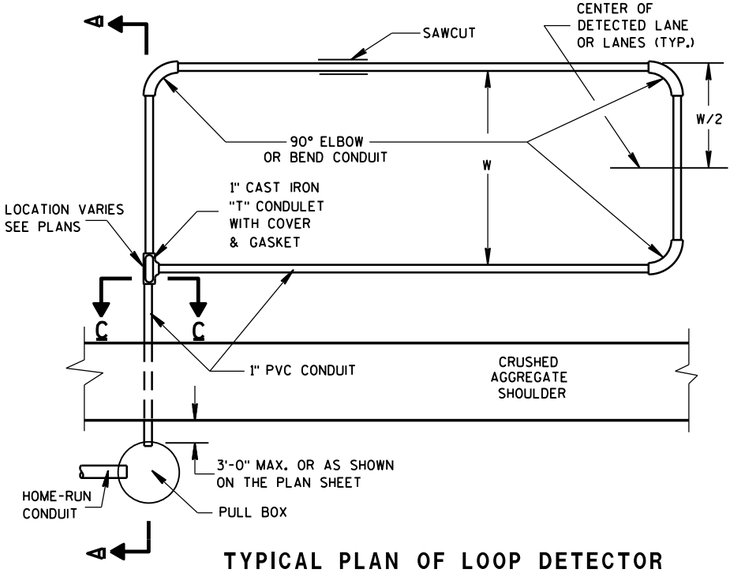
S.D.D. 9 E 7-5



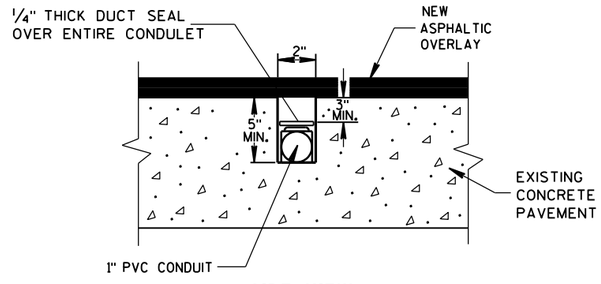
SECTION A-A
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF LOOP DETECTOR



SIDE VIEW
SECTION C-C

LOOP DETECTOR SLOT DETAIL

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

IN THE EVENT EPOXY IS USED AS A LOOP SLOT FILLER, THE SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION.

BEFORE PLACING THE 1 INCH CONDUIT IN THE CLEANED OUT SLOT, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY 1/2 INCH.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

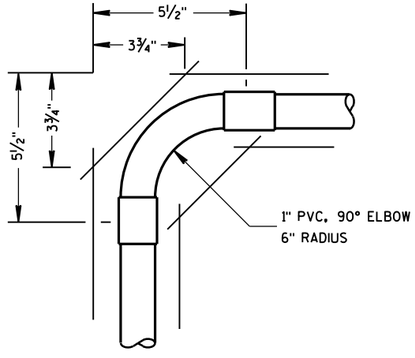
LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

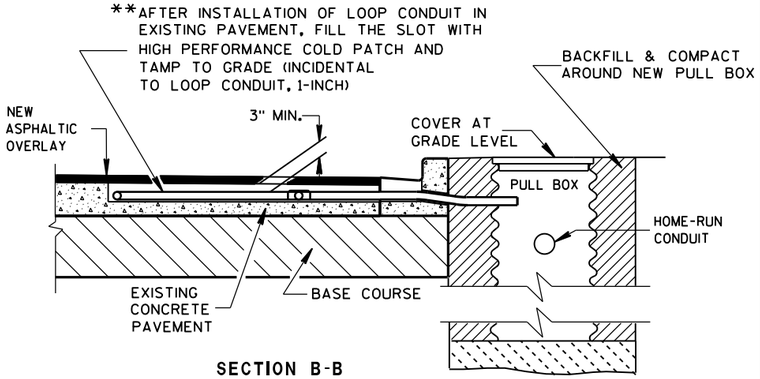
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/ PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".



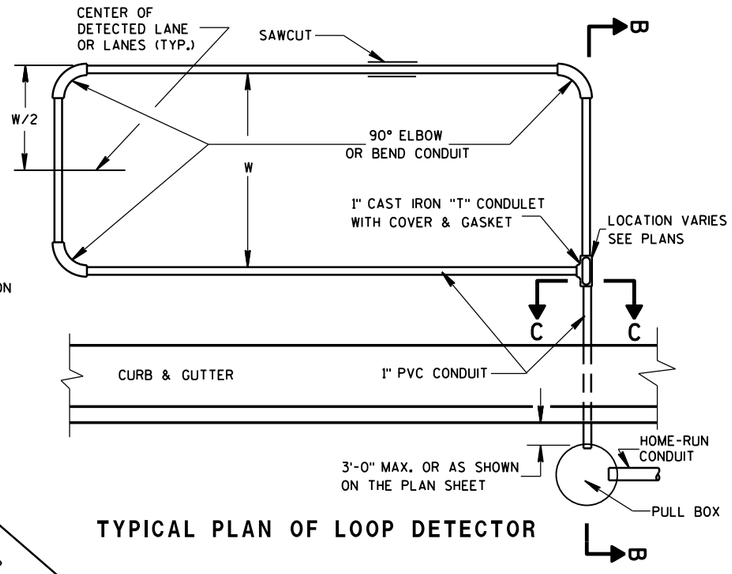
TOP VIEW

CORNER SAW SLOT DETAIL

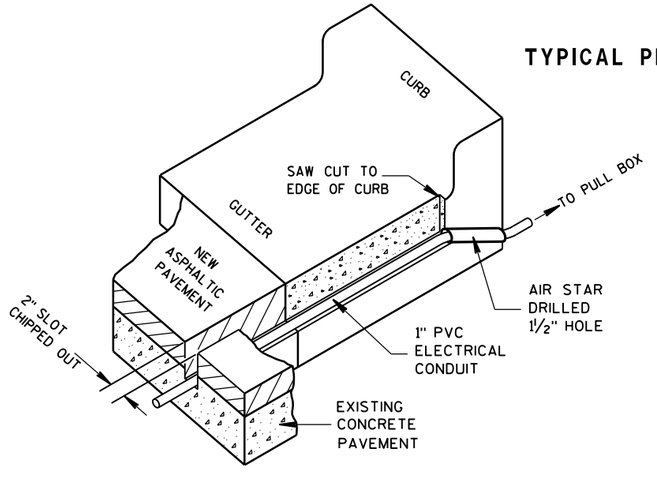


SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR



ISOMETRIC VIEW

TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT

LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT WITH NEW ASPHALTIC OVERLAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

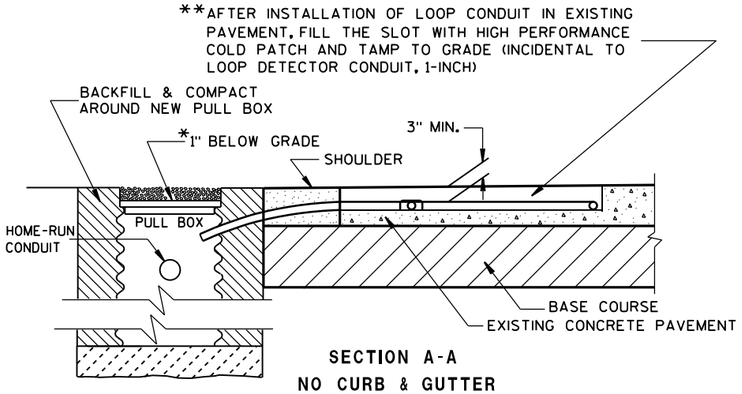
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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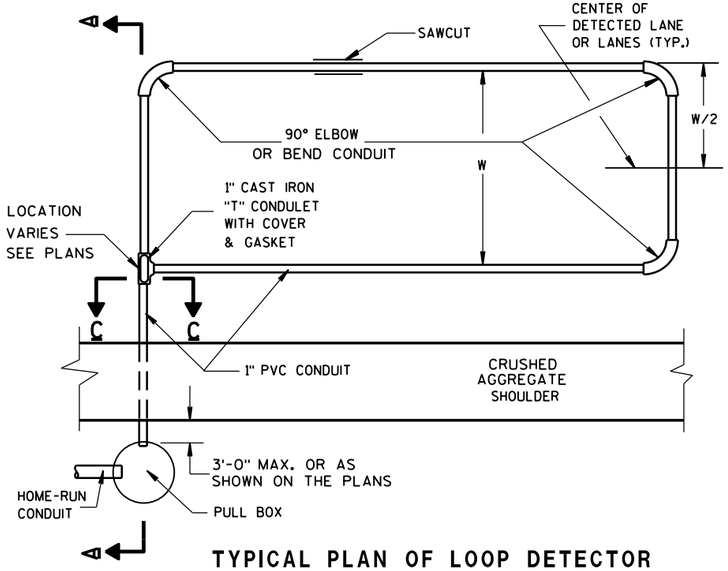
S.D.D. 9 F 11-4



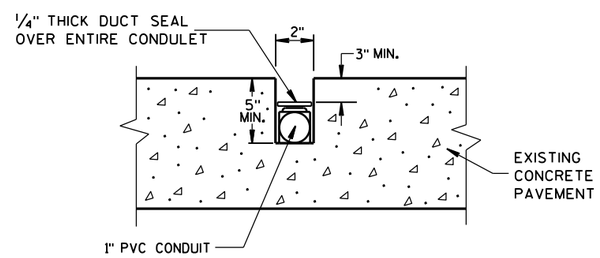
SECTION A-A
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF LOOP DETECTOR



SIDE VIEW
SECTION C-C

LOOP DETECTOR SLOT DETAIL

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISITANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

BEFORE PLACING THE 1 INCH CONDUIT IN THE CLEANED OUT SLOT, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY $\frac{1}{2}$ INCH.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

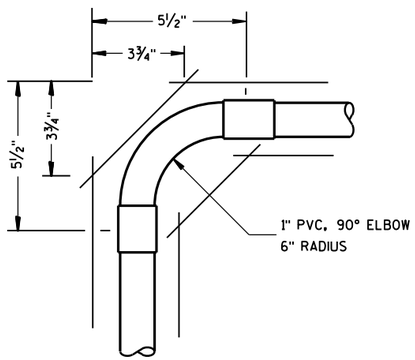
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

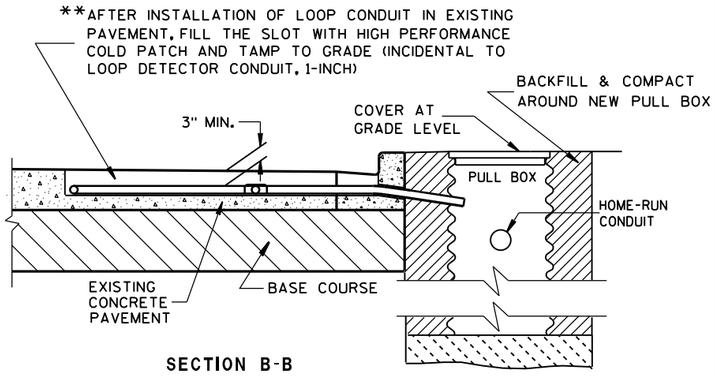
** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/ PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

IN THE EVENT HIGH PERFORMANCE COLD PATCH IS NOT AVAILABLE, AND FLEXIBLE TYPE EPOXY IS USED AS A LOOP SLOT FILLER, THE 2 INCH SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION. EPOXY USE SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED AFTER WRITTEN APPROVAL BY THE PROJECT ENGINEER.



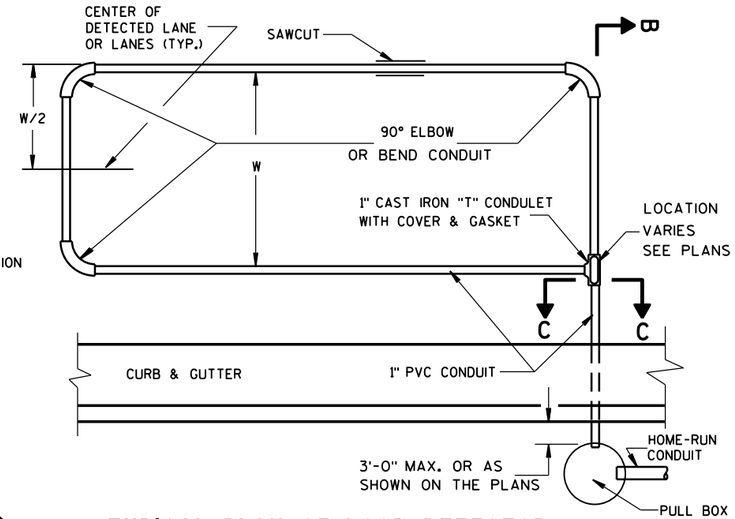
TOP VIEW

CORNER SAW SLOT DETAIL

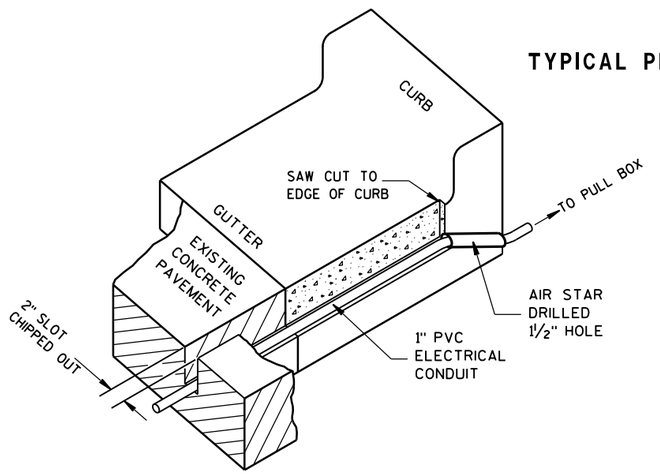


SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR



ISOMETRIC VIEW

TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT

LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

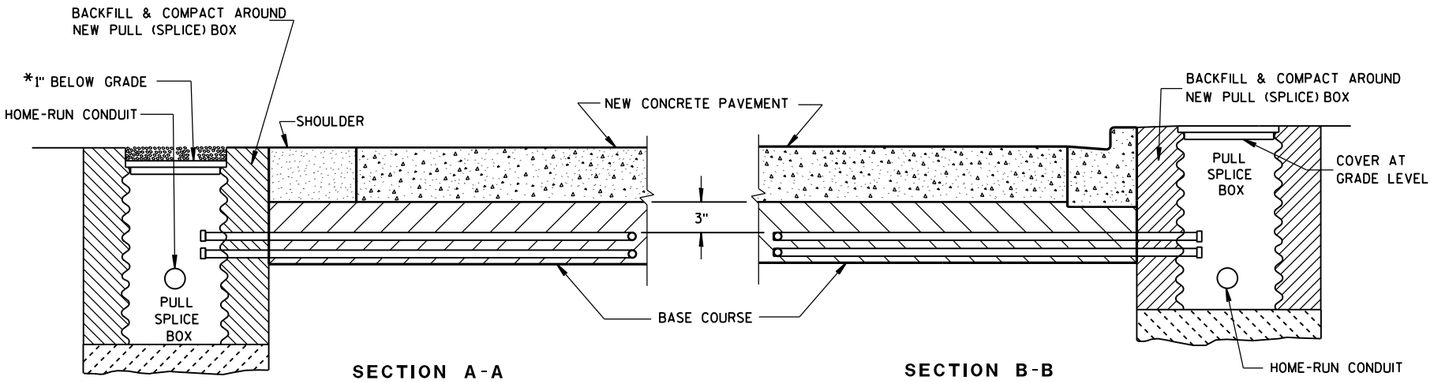
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

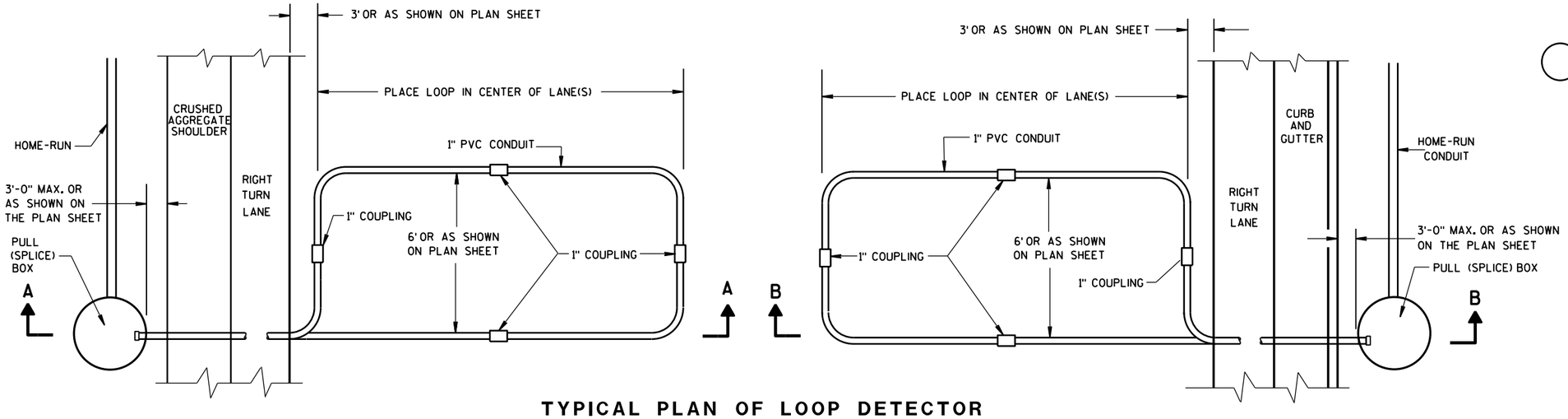
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

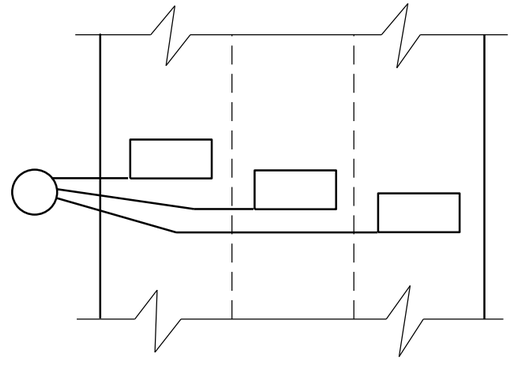
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.

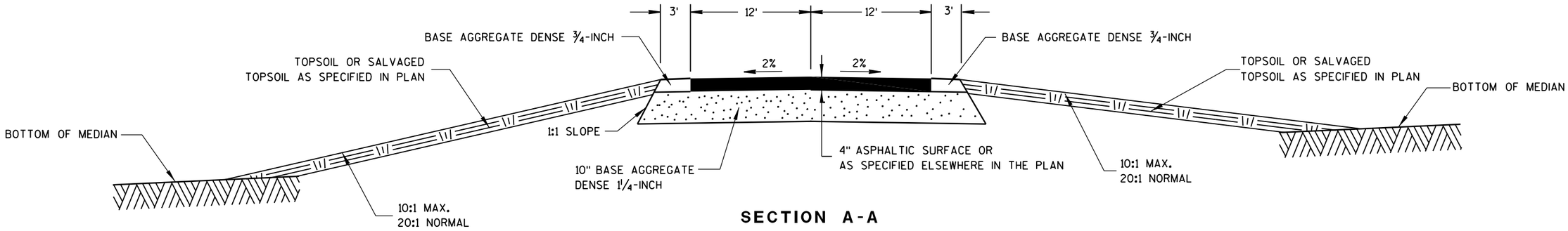


TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX

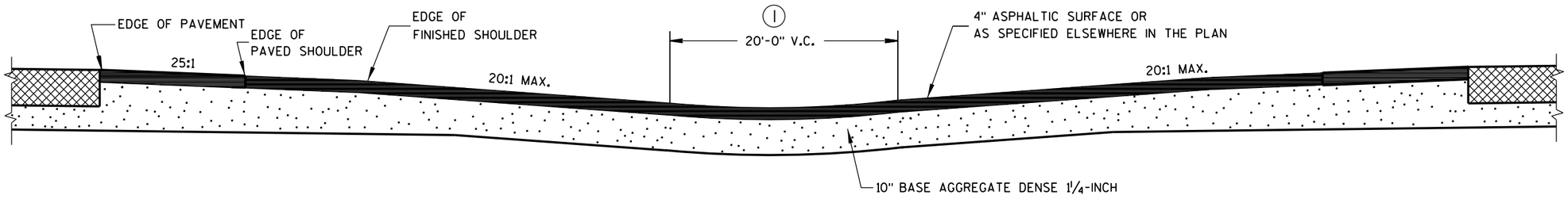


MULTI-LANE INSTALLATION

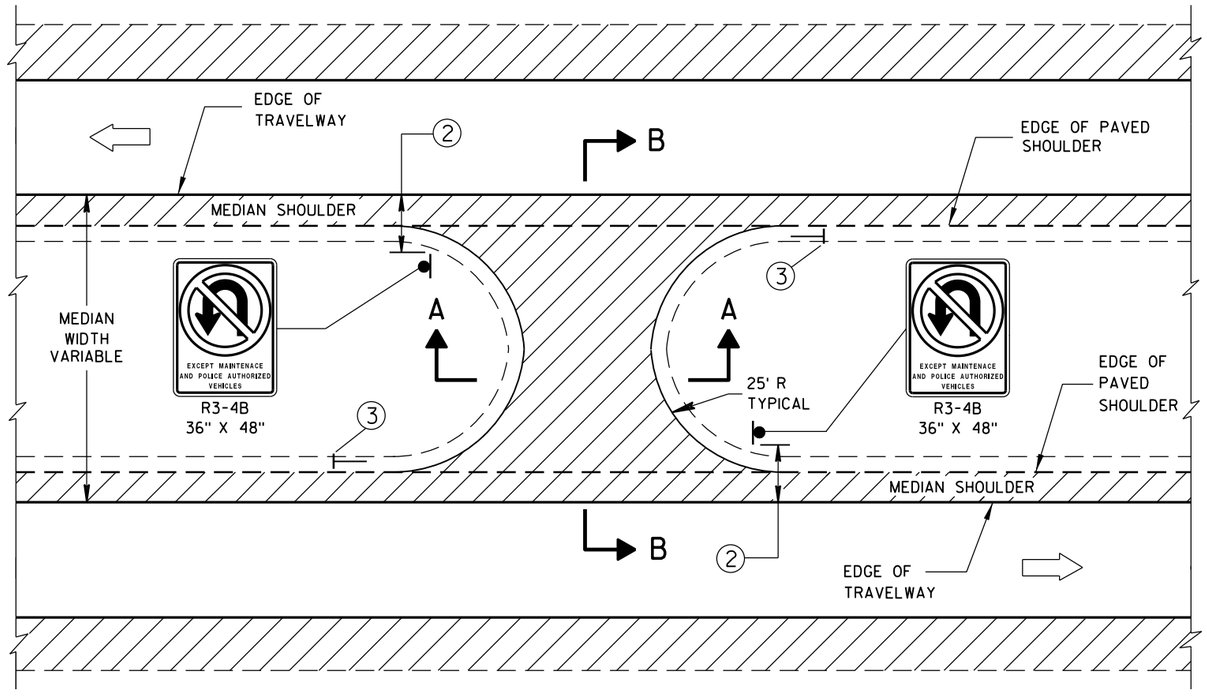
LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 — DATE /S/ Ahmet Demirbilek — STATE ELECTRICAL FHWA



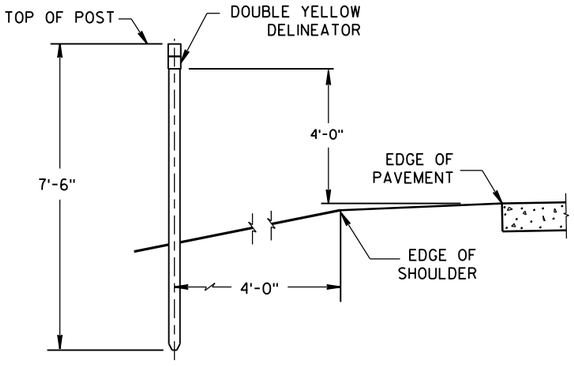
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

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) ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.

(2) SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

(3) INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

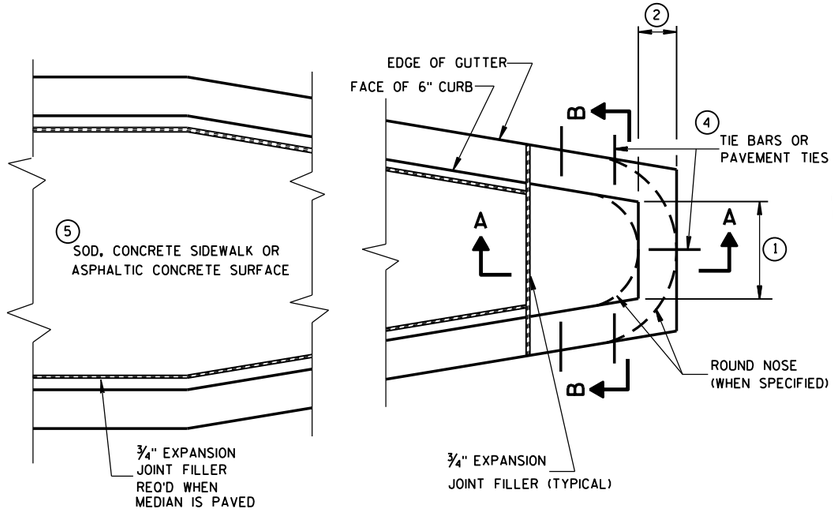
FHWA

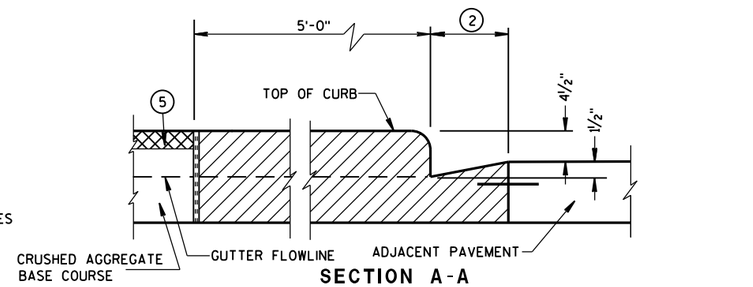
6

S.D.D. 11 A 1-5

6

S.D.D. 11 A 1-5





CONCRETE MEDIAN BLUNT NOSE DETAIL

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) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

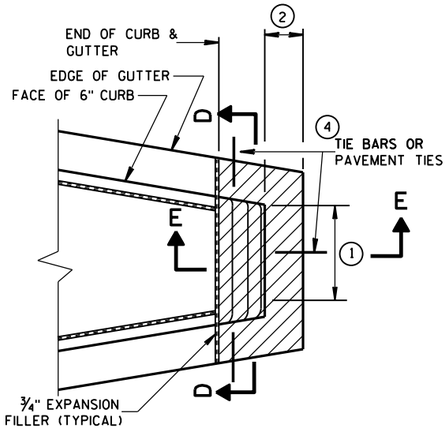
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

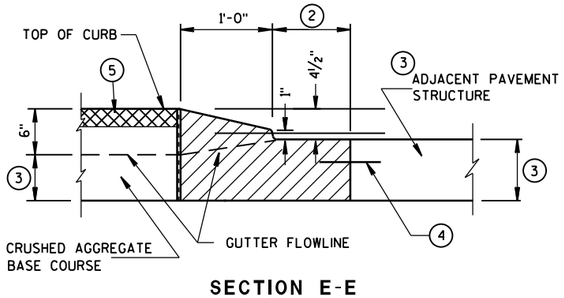
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

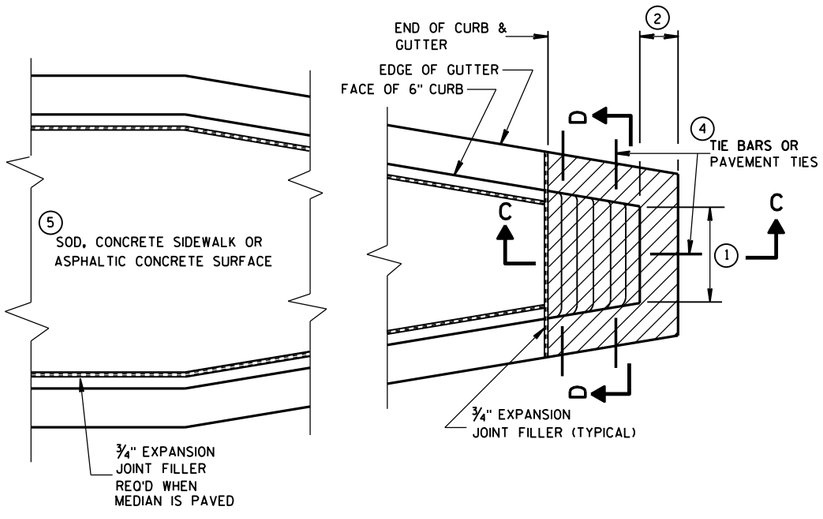
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

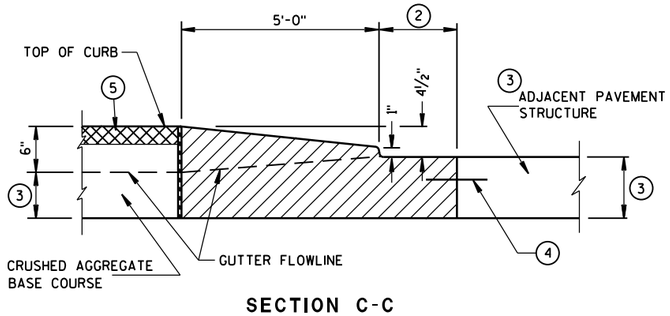
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



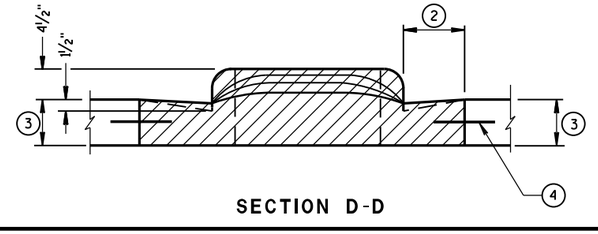


CONCRETE MEDIAN SLOPED NOSE TYPE 2





CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

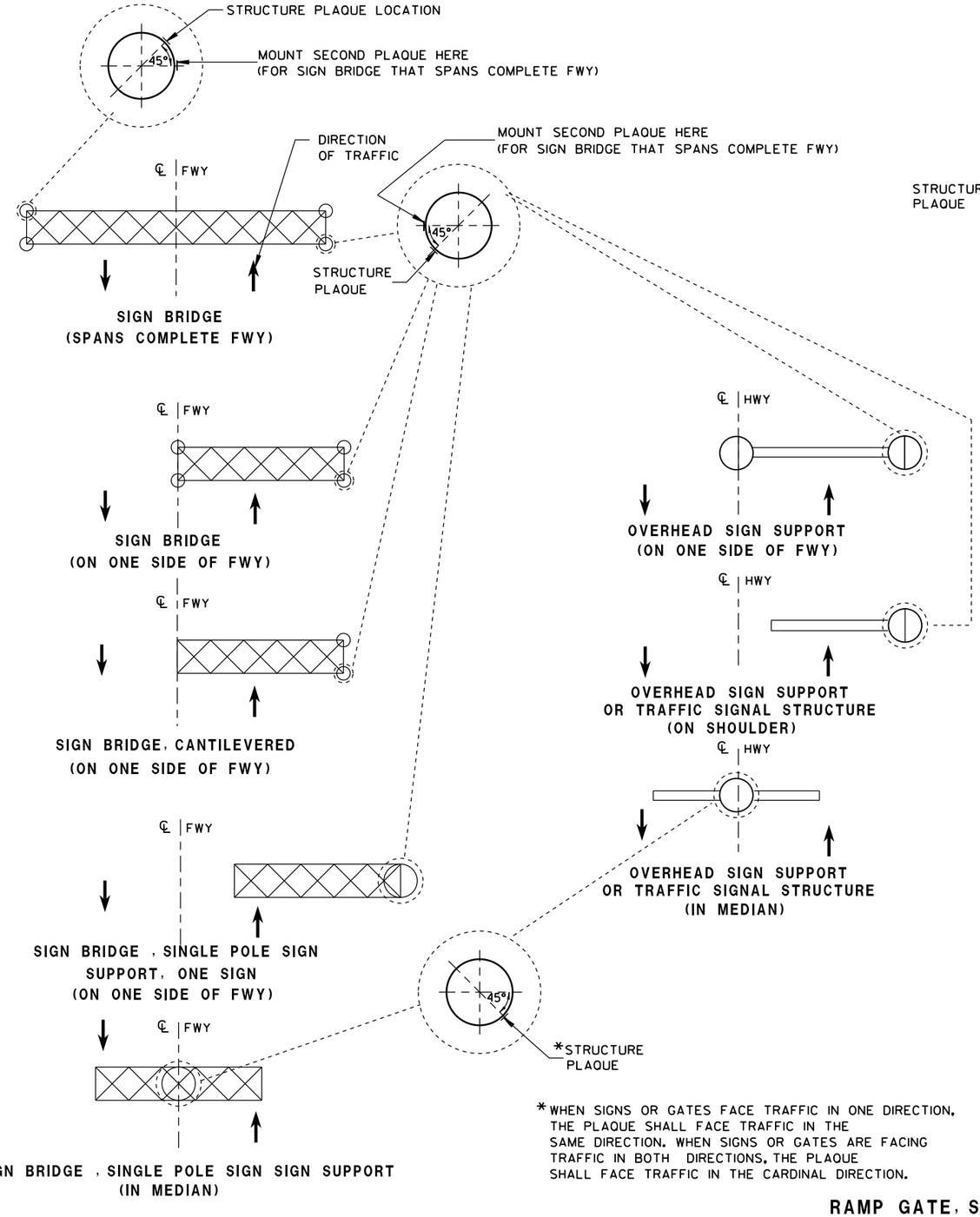
APPROVED
6/8/2006 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 11 B 2-2

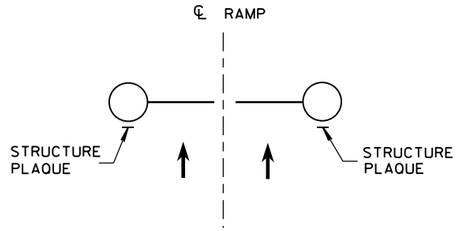
6

S.D.D. 11 B 2-2

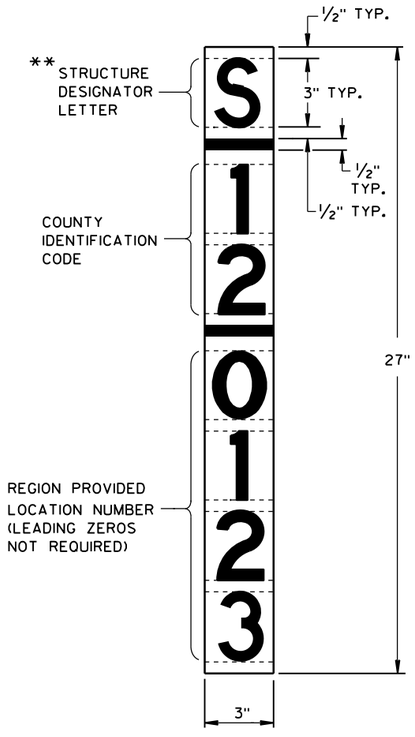


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



**RAMP GATE
(ACROSS FWY ON-RAMP)**



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

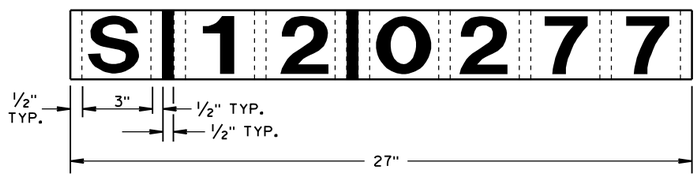
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

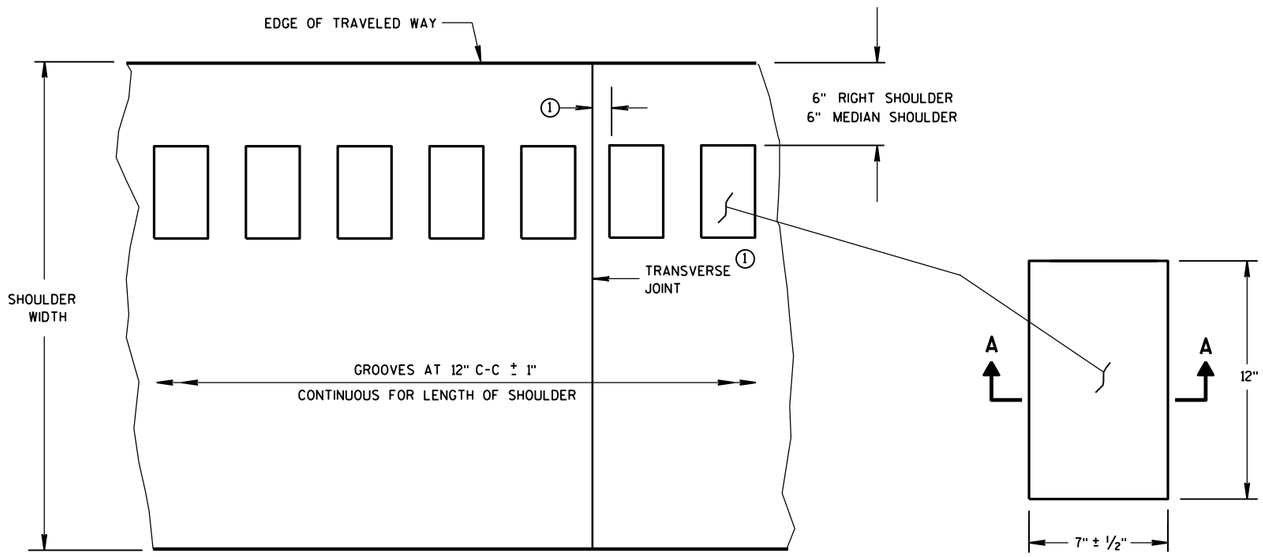
STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

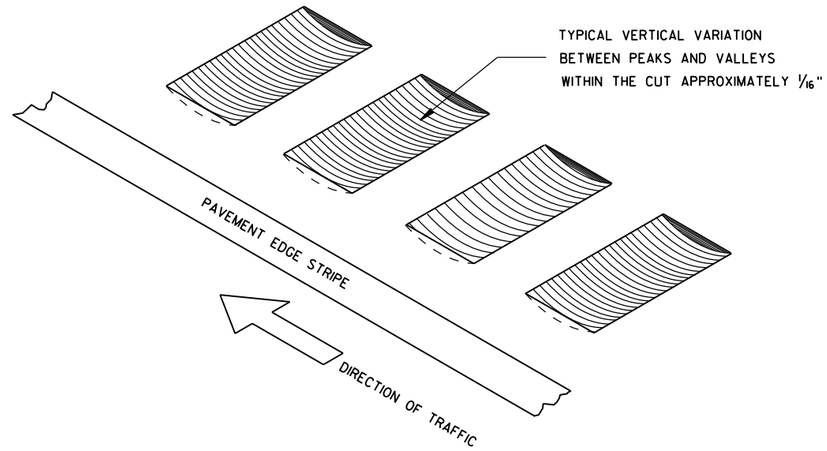
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

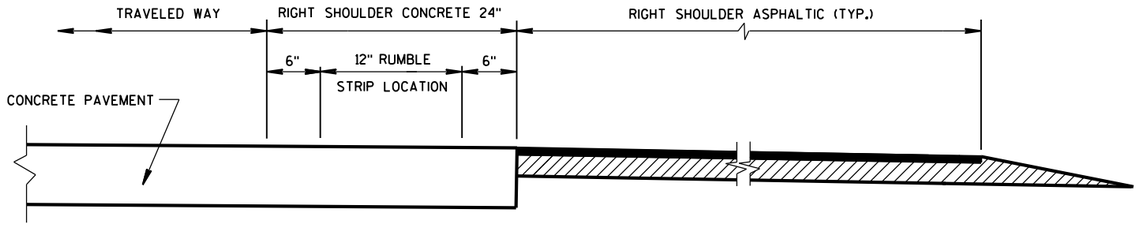
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

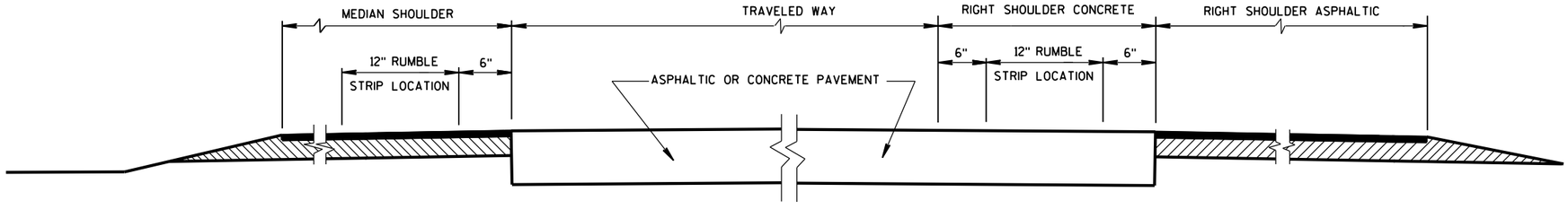
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



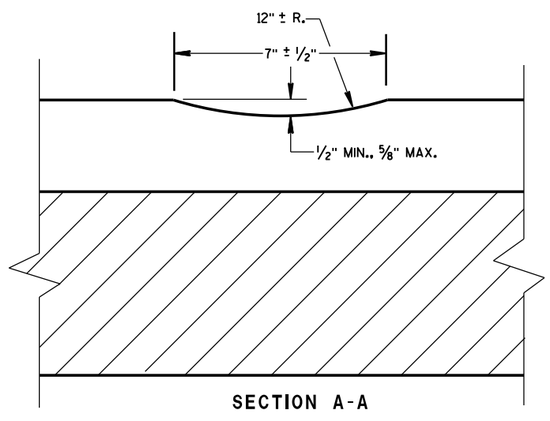
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

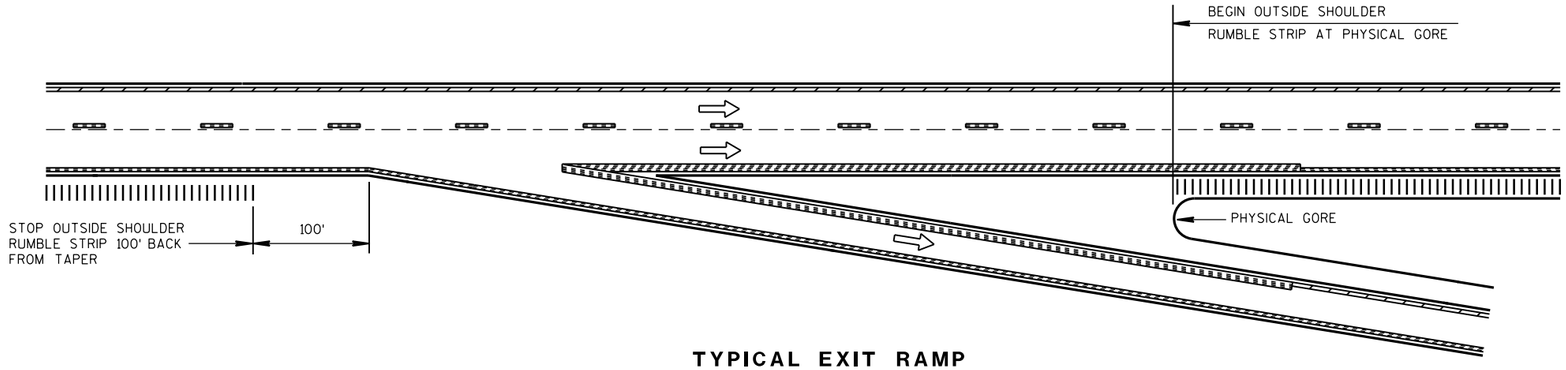
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 A 5-5a

6

S.D.D. 13 A 5-5a



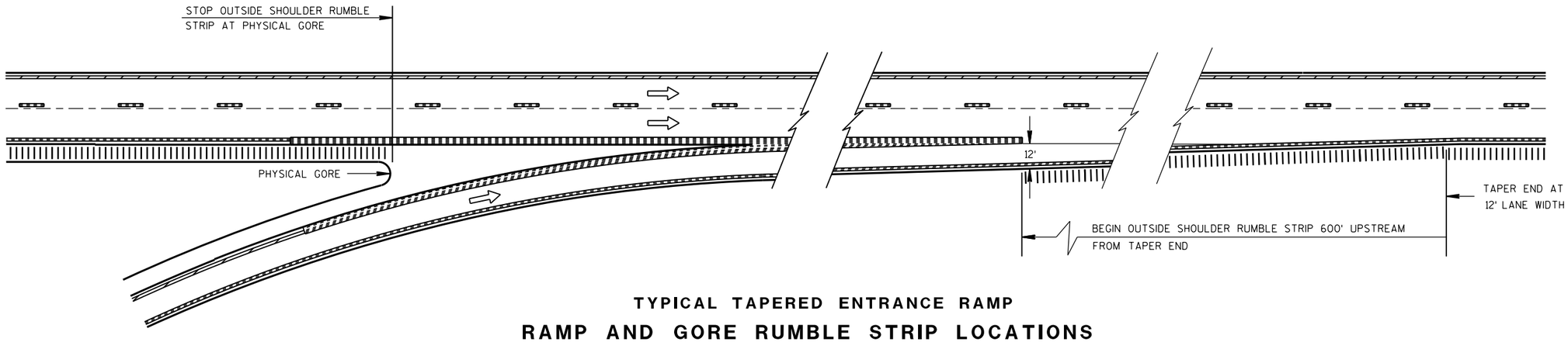
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

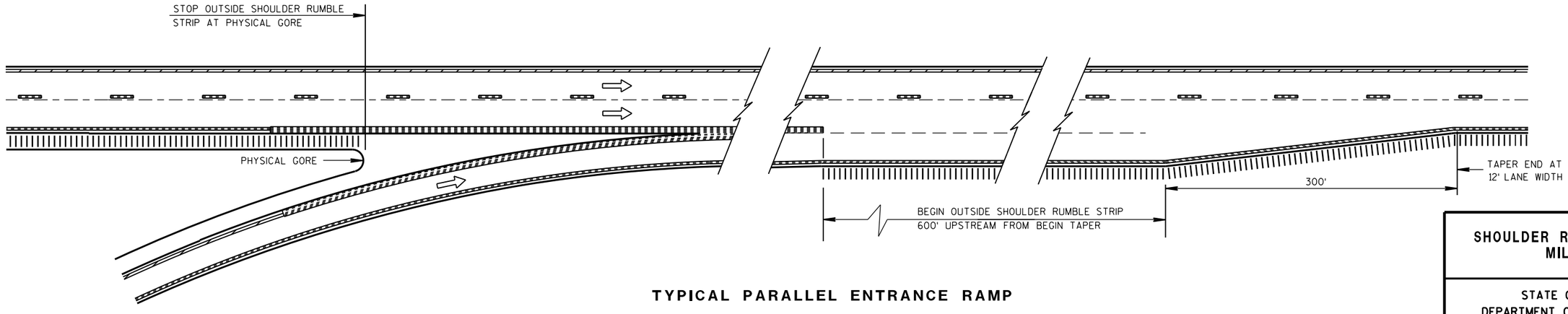
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

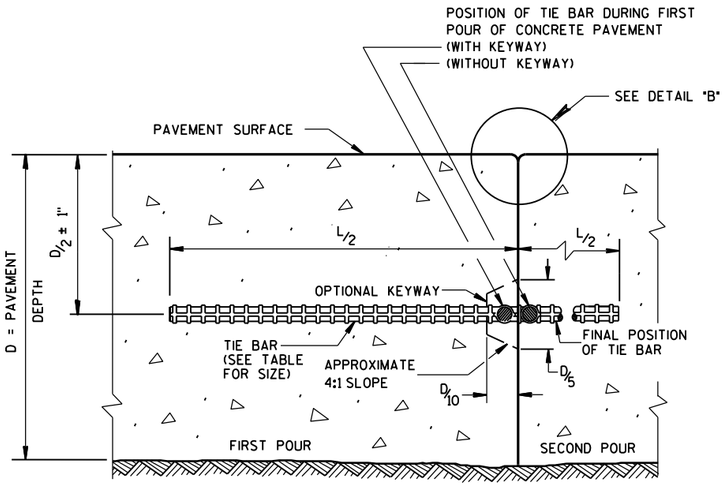
FHWA

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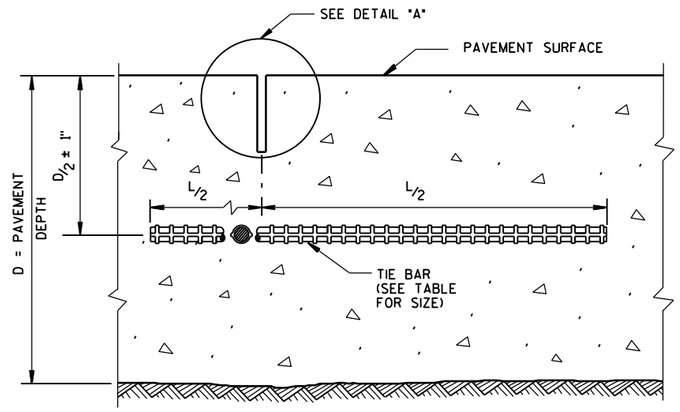
S.D.D. 13 A 5-5b

6

S.D.D. 13 A 5-5b



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

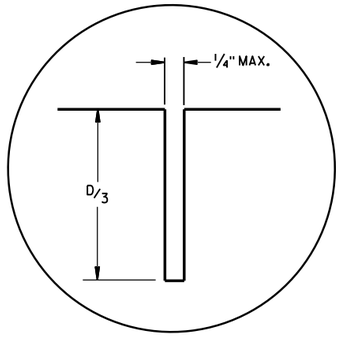
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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

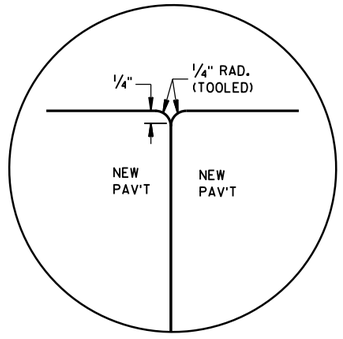
PLAN VIEW

SECTION A-A

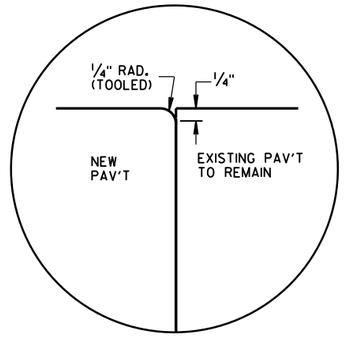
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



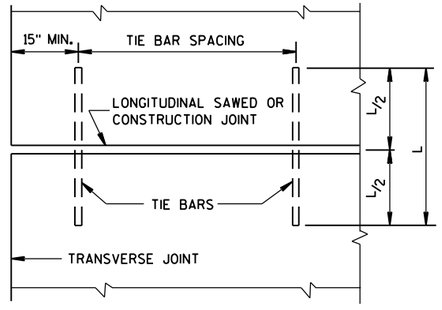
DETAIL "C"

TIE BAR TABLE

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

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

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 13 C 1-18

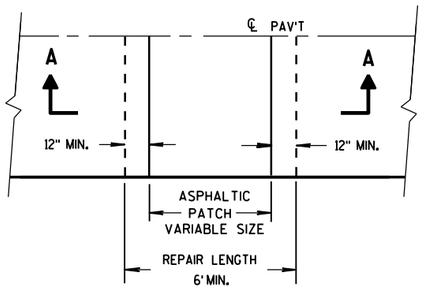
GENERAL NOTES

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

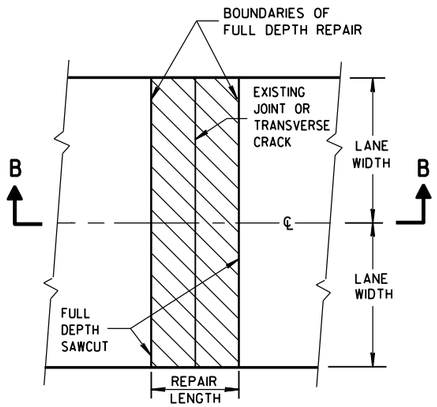
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

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

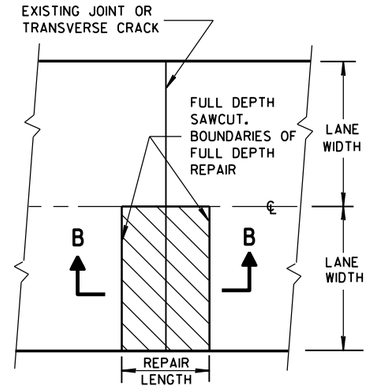
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

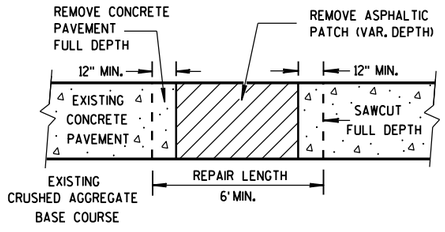


PLAN VIEW
(DOUBLE LANE REPAIR)



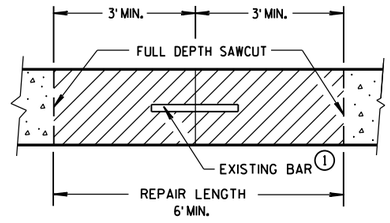
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

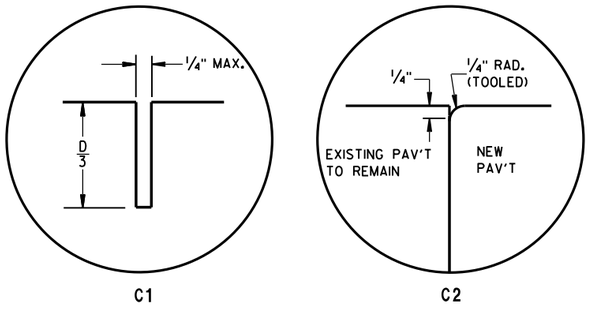
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 13 C 9-13a



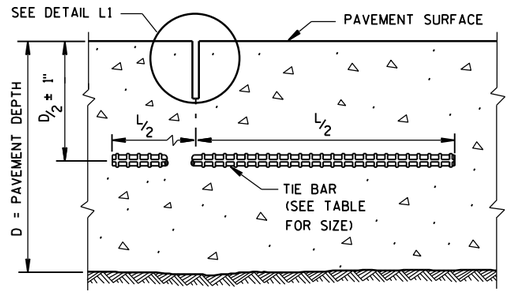
TRANSVERSE JOINTS

TIE BAR TABLE

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

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

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



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

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

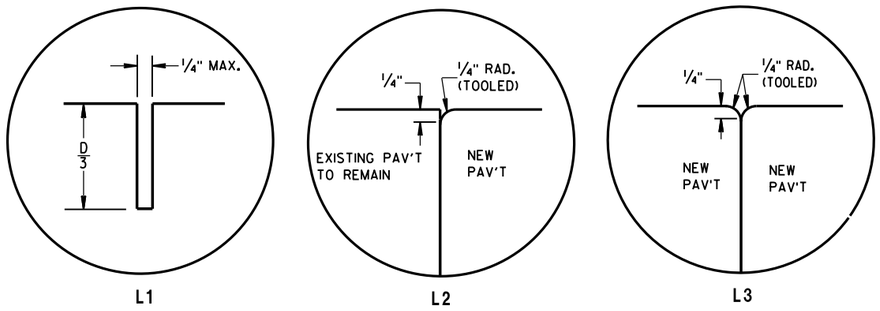
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

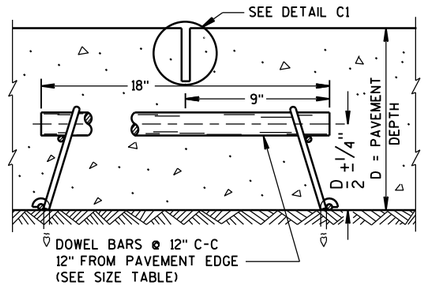
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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

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

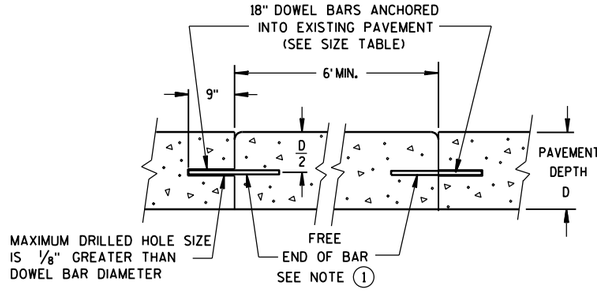


LONGITUDINAL JOINTS

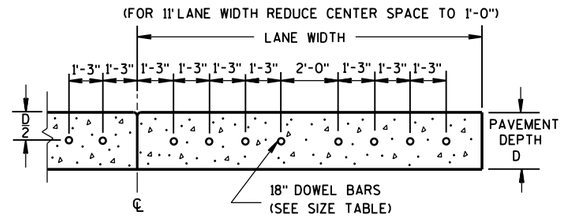


SECTION F-F

CONTRACTION JOINT



SECTION D-D

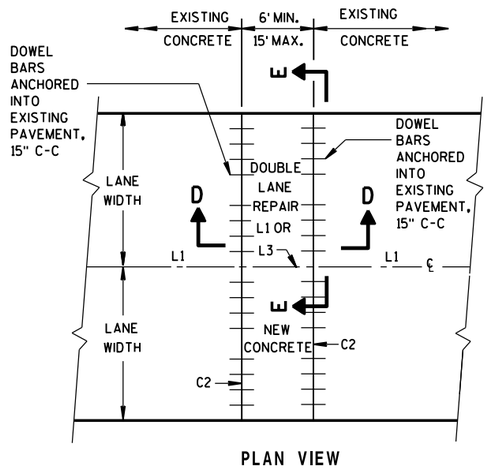


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

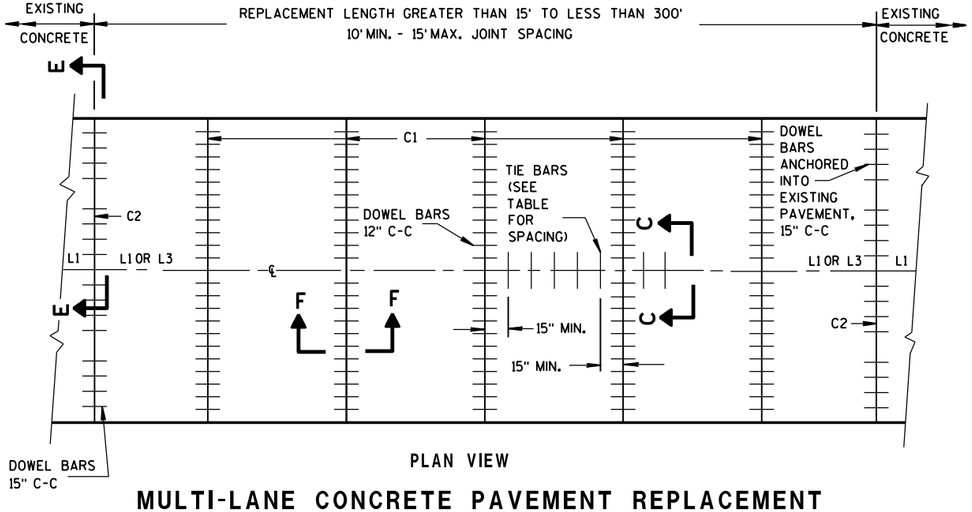
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6",6 ½"	NONE	12'
7",7 ½"	1"	14'
8",8 ½"	1 ¼"	15'
9",9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

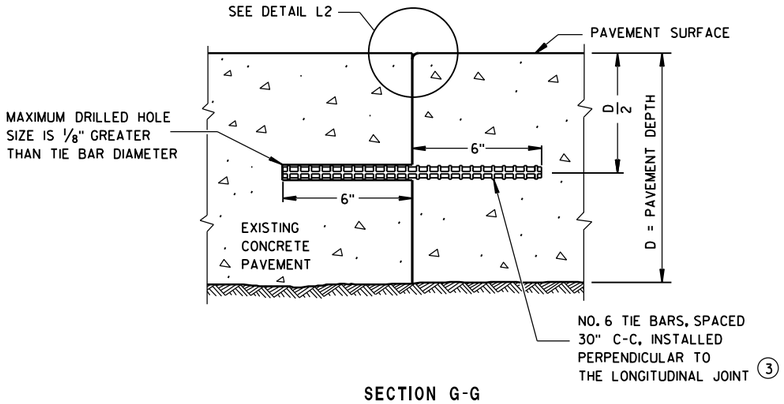
MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 9-13b



SECTION G-G

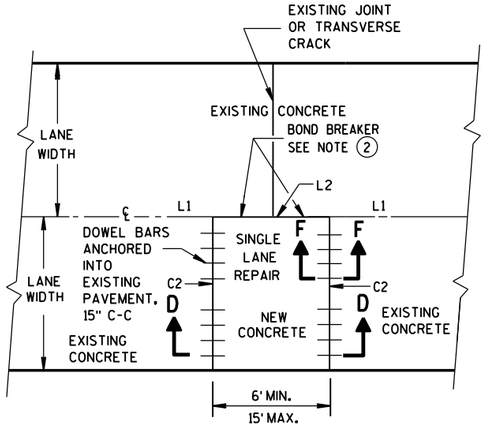
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

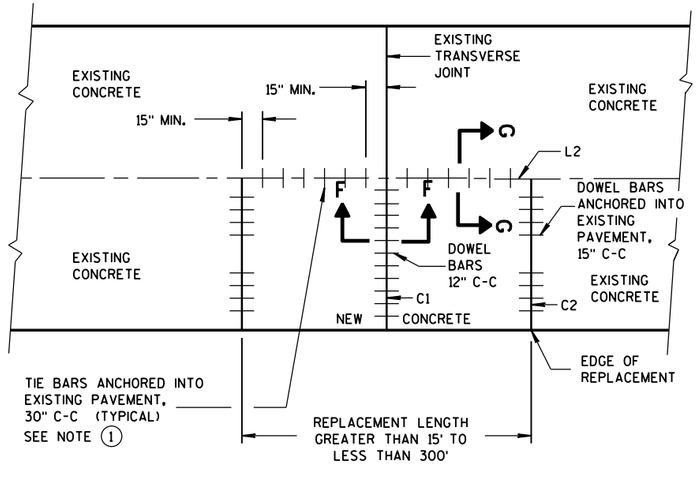
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

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



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

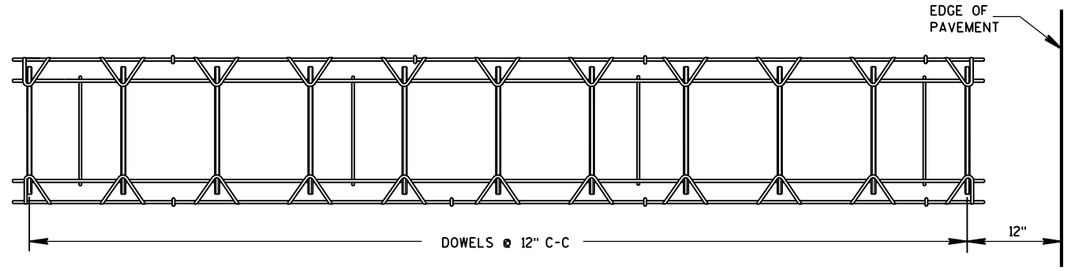
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 13 C 9-13c

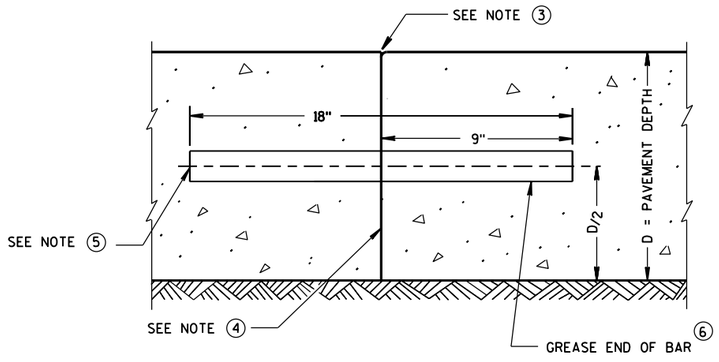


PLAN VIEW

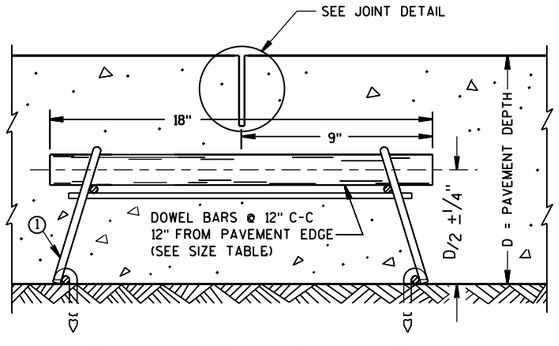


SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



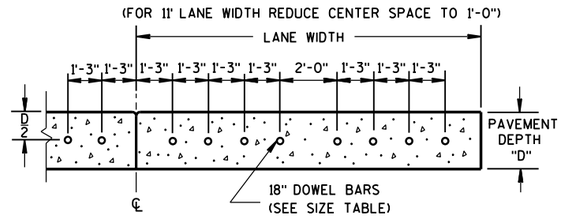
TRANSVERSE CONSTRUCTION JOINT



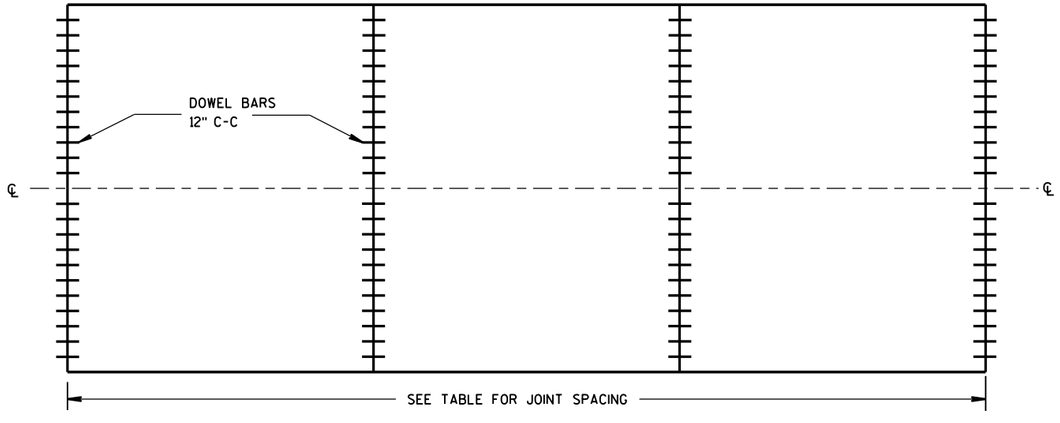
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

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

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

CONSTRUCTION JOINTS

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

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

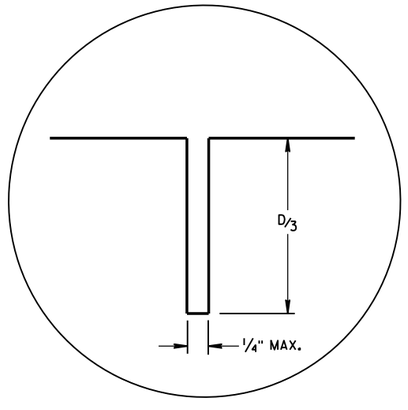
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
FHWA

6

S.D.D. 13 C 13-8

GENERAL NOTES

(1) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

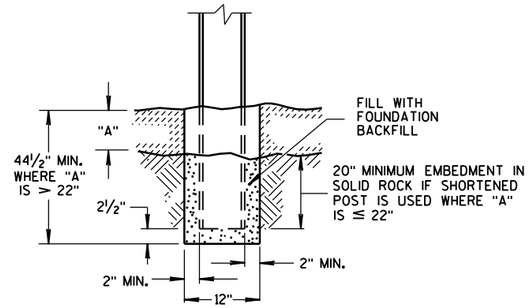
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

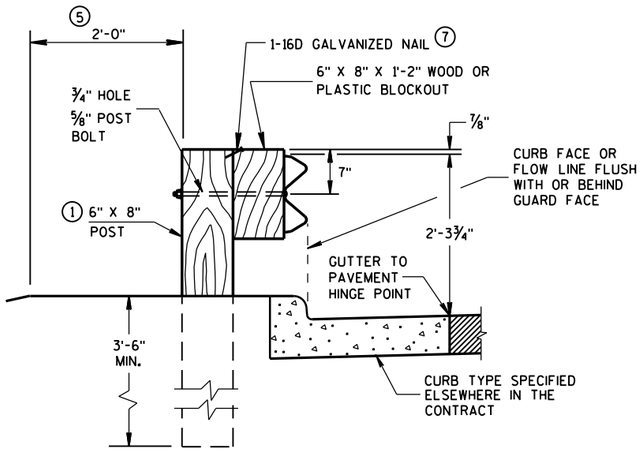
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

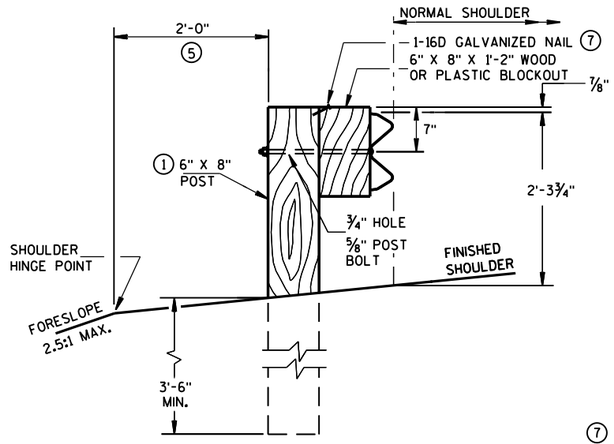
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



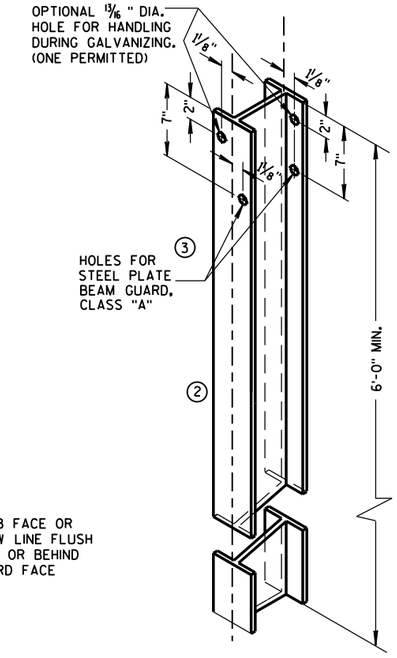
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



END VIEW
LOCATED ALONG A CURBED ROADWAY

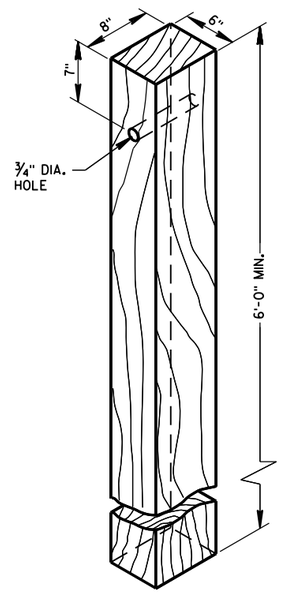


END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION

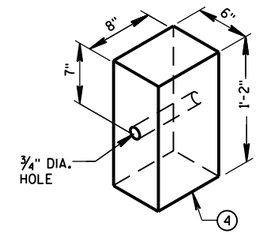


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

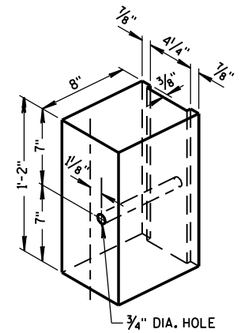
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



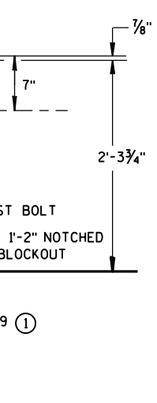
WOOD POST
(6"X8") NOMINAL



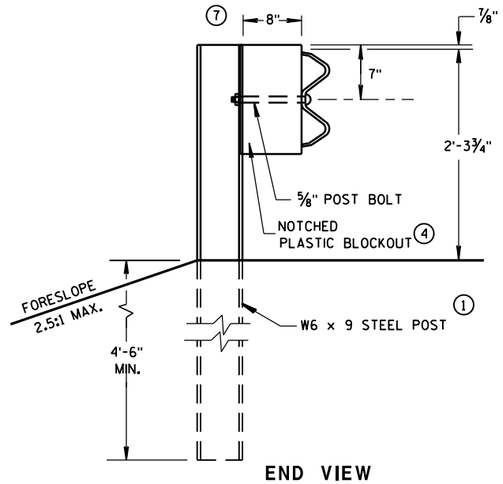
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



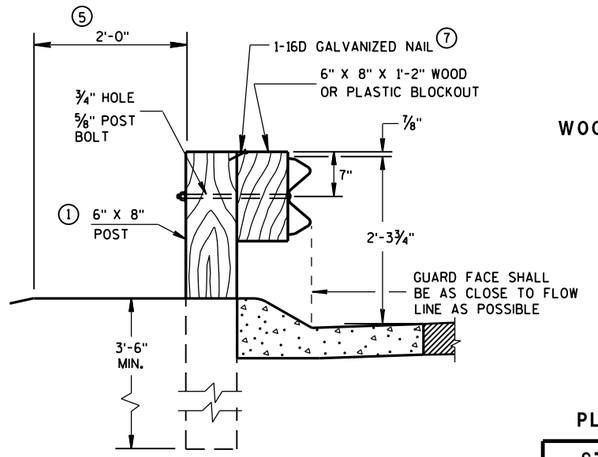
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



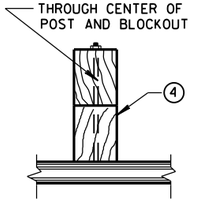
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



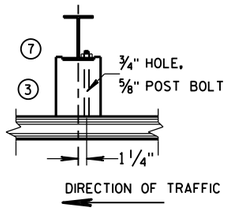
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



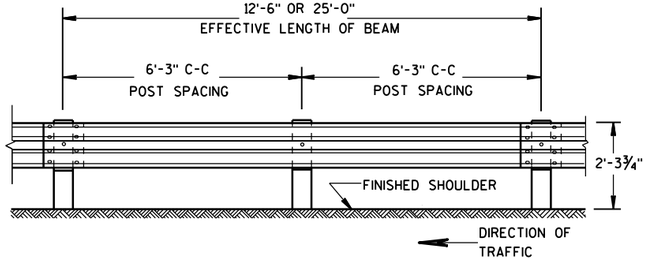
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

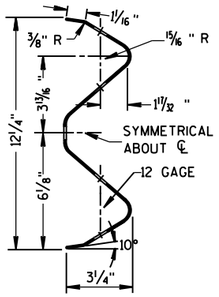
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 15-9a

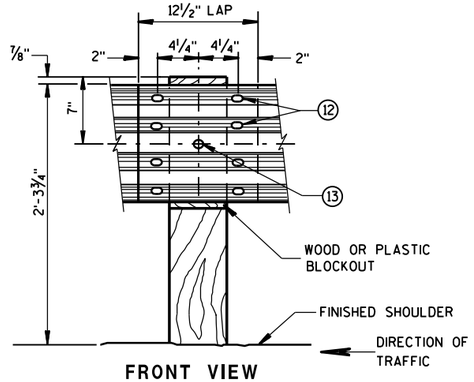


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

(8) PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

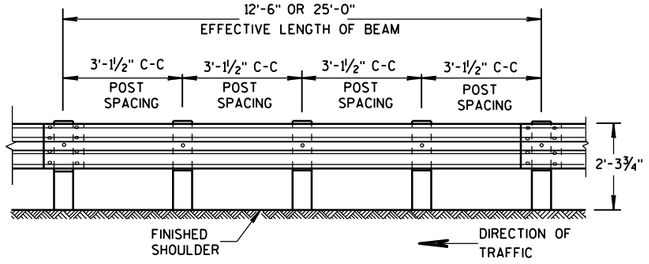
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

(10) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

(11) PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

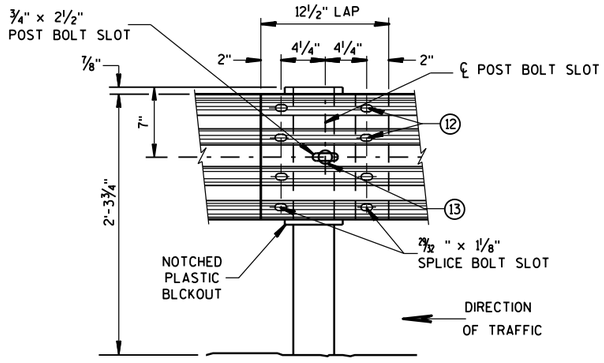
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

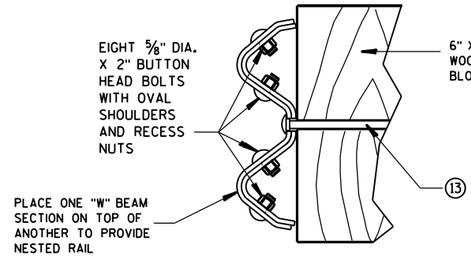
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

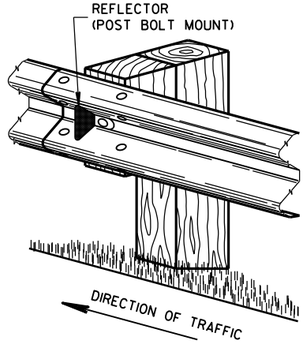


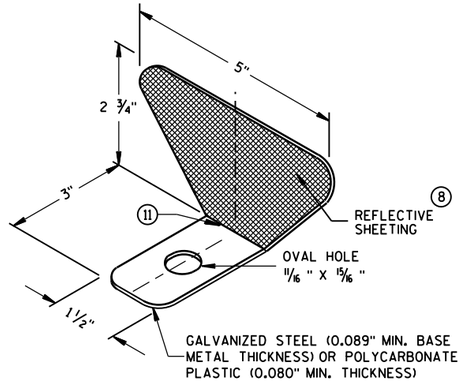
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (9)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (10)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 (11)	3
	> 200'	100' C-C	2	





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (8)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

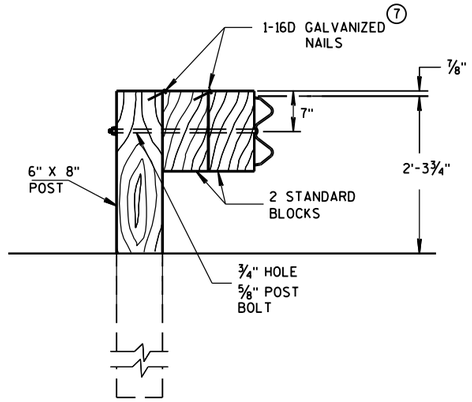
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 154

6

S.D.D. 14 B 15-9b

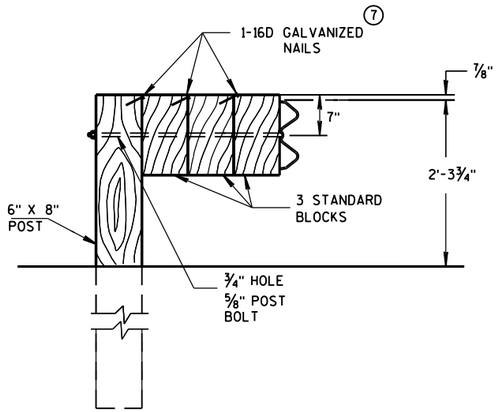
6

S.D.D. 14 B 15-9b



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

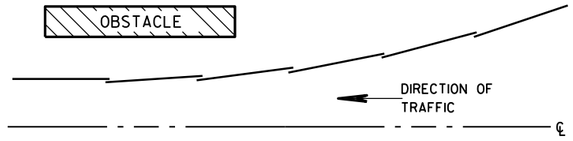


DETAIL FOR TRIPLE BLOCKS

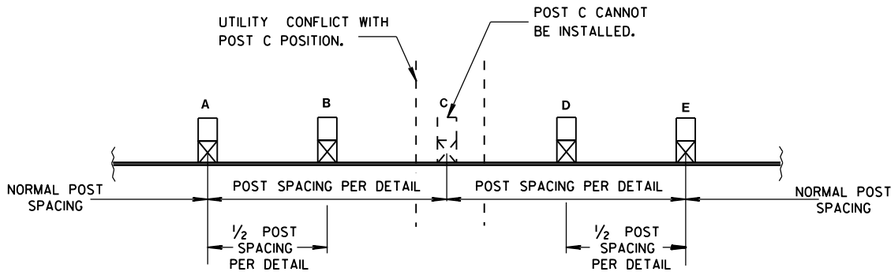
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

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



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

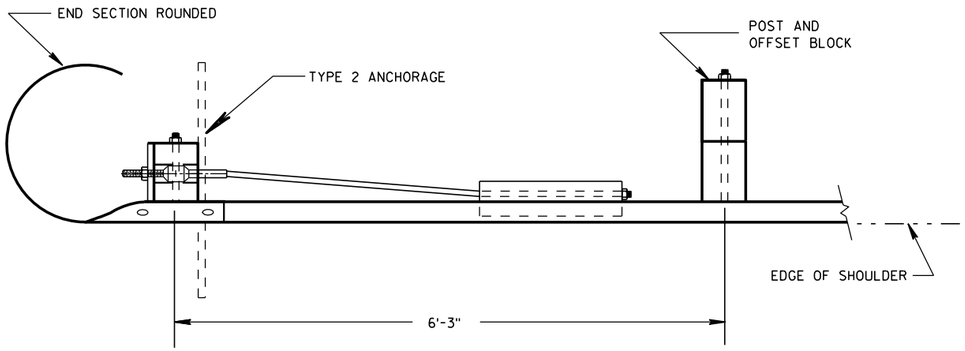
June 2016
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

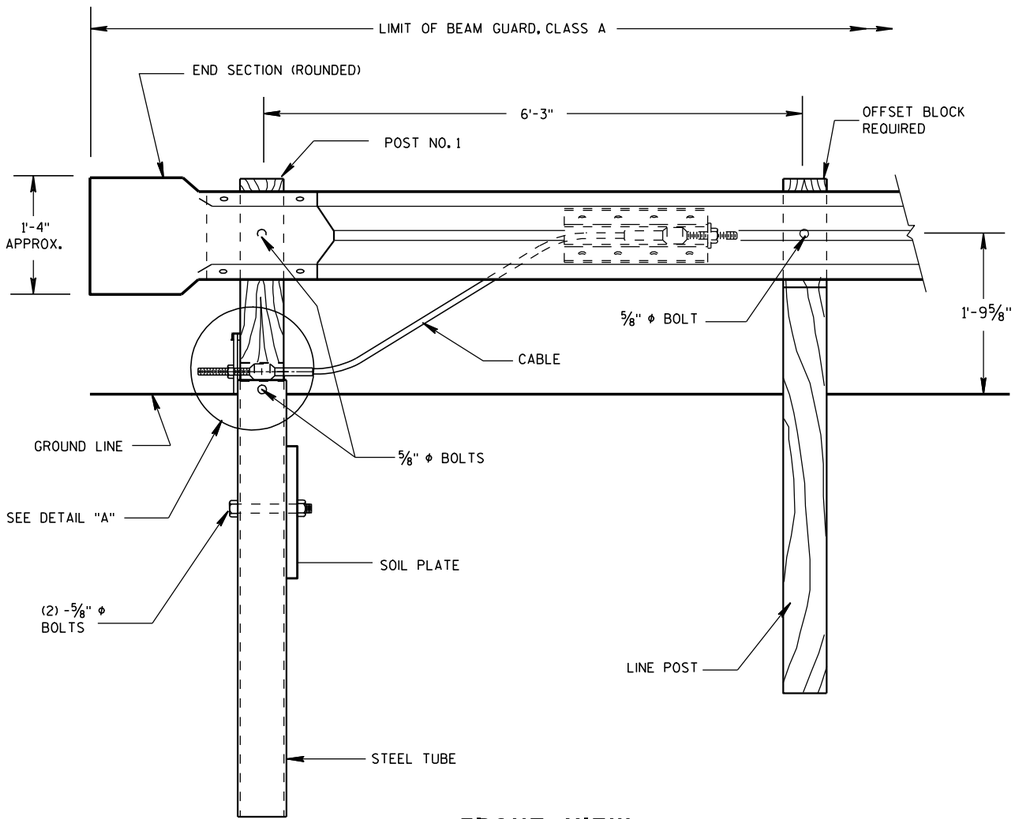
FHWA

6

S.D.D. 14 B 15-9c



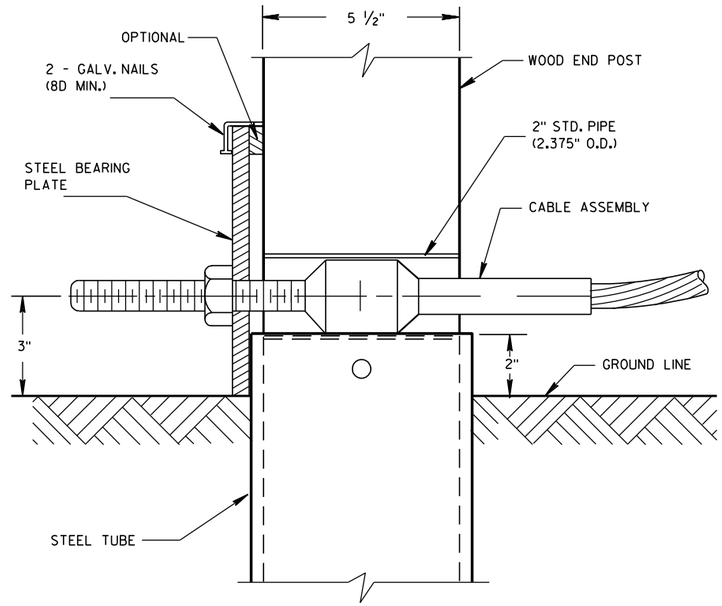
PLAN VIEW



FRONT VIEW

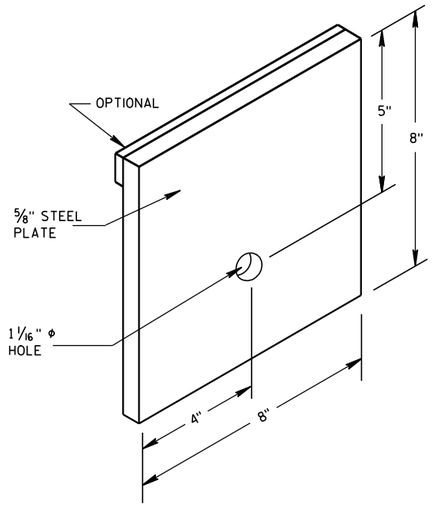
END TREATMENT WITH TYPE 2 ANCHORAGE

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



DETAIL "A"

POST NO. 1

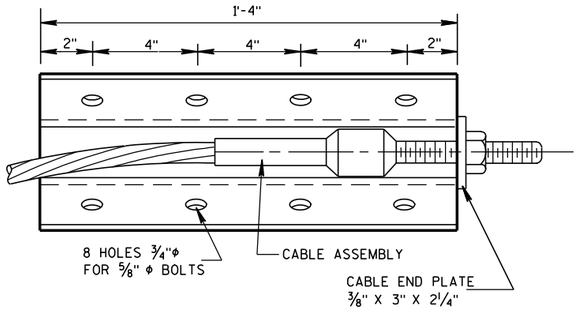


STEEL BEARING PLATE

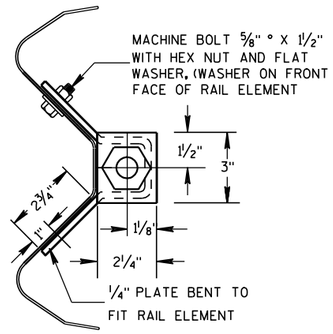
ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 16-4a

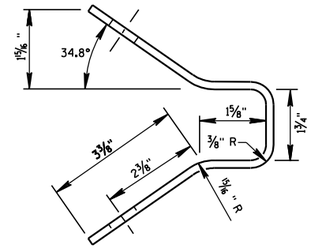


FRONT VIEW

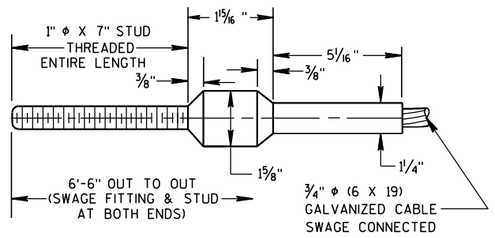


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP
A MINIMUM BREAKING STRENGTH OF 40,000 LB
(TIGHTEN UNTIL TAUT)

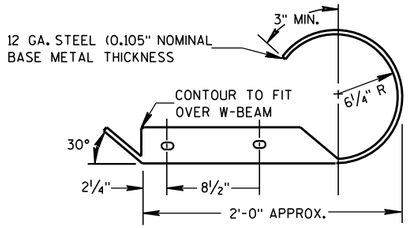
GENERAL NOTES

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

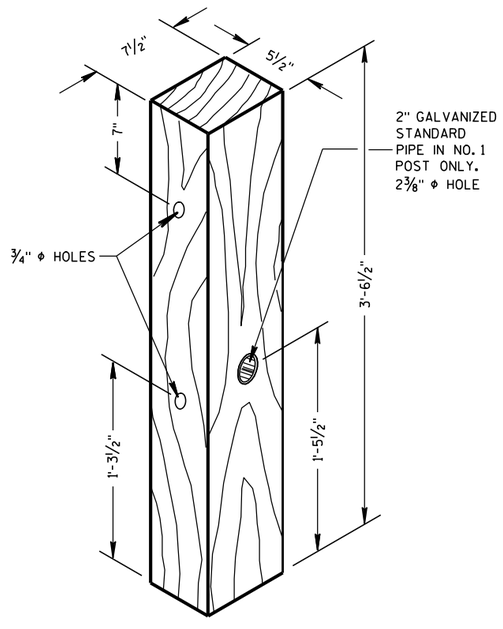
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO. 1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

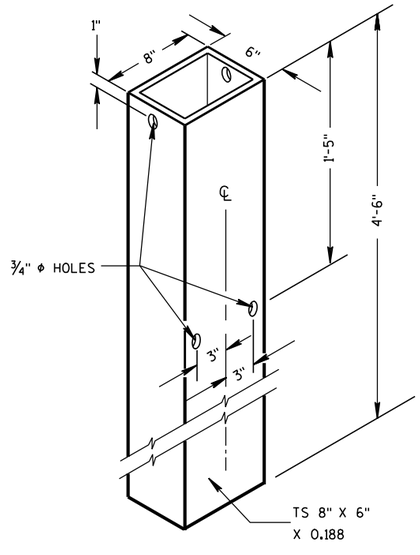
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



PLAN VIEW

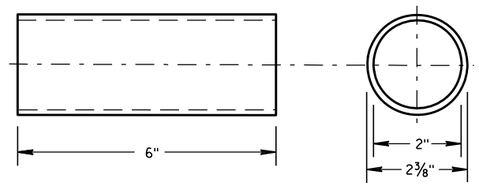


WOOD BREAKAWAY POST



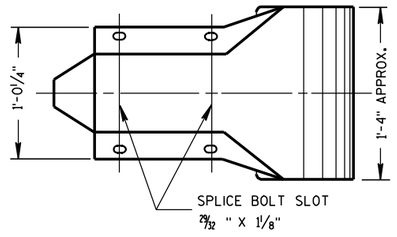
STEEL TUBE

STEEL TUBE SHALL CONFORM TO
REQUIREMENTS OF ASTM A500

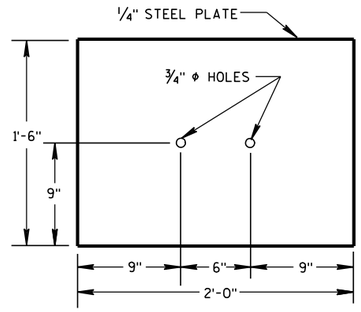


BREAKAWAY TERMINAL POST SLEEVE

GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



FRONT VIEW
W BEAM END SECTION ROUNDED



SOIL PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/21/2007
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
157
FHWA

6

S.D.D. 14 B 16-4b

6

S.D.D. 14 B 16-4b

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
①	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
③	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
④	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	1	BEARING PLATE
⑧	1	BCT CABLE ASSEMBLY
⑨	1	CABLE ANCHOR BOX
⑩	1	STRUT & YOKE
⑪	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
⑫	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
⑭	1	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑮	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ø X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

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

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

(C) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

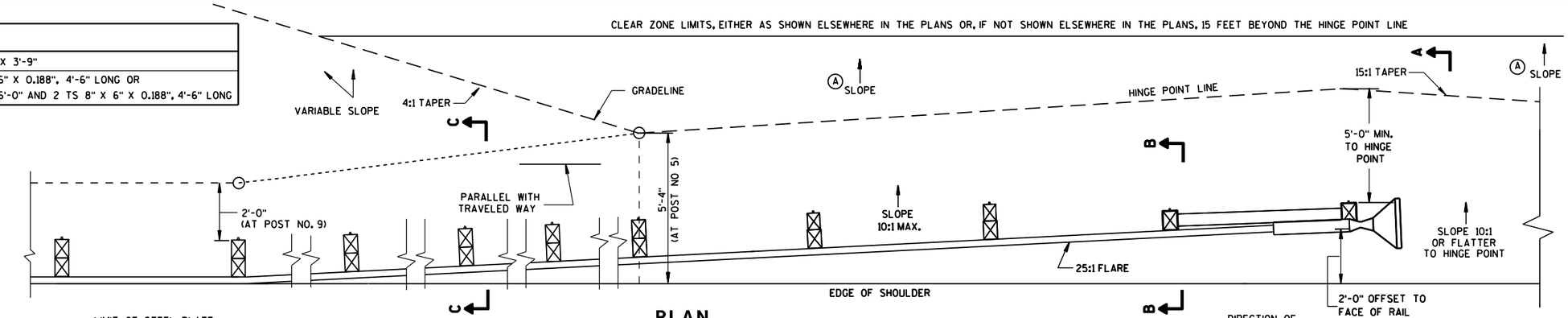
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

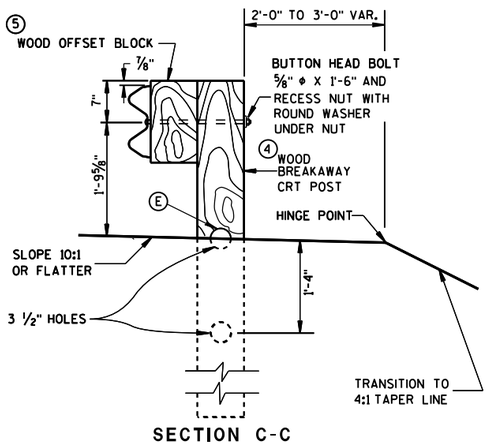
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

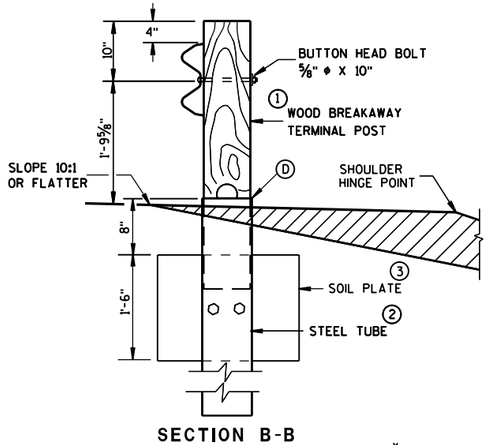
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.

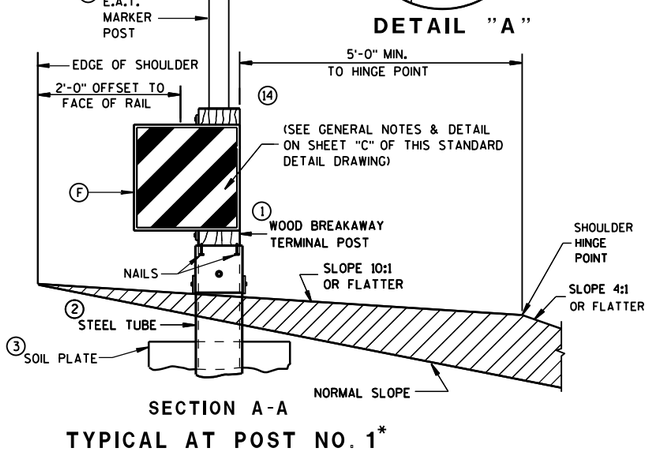




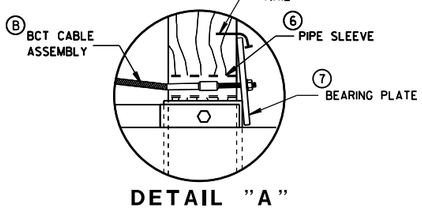
SECTION C-C
TYPICAL AT POST NOS. 6, 8



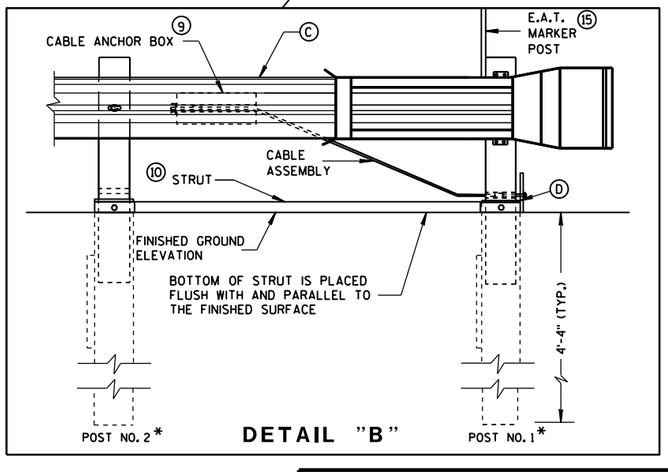
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

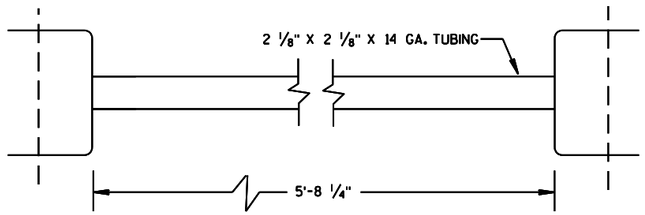
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 158

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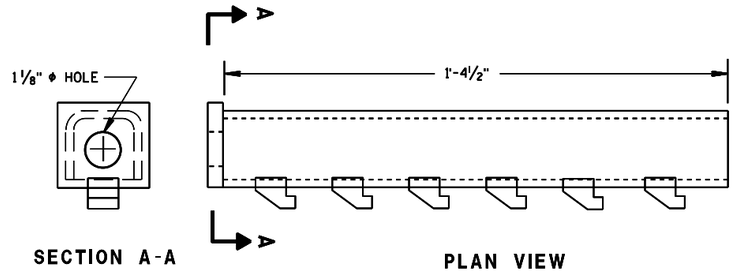
S.D.D. 14 B 24-8a

6

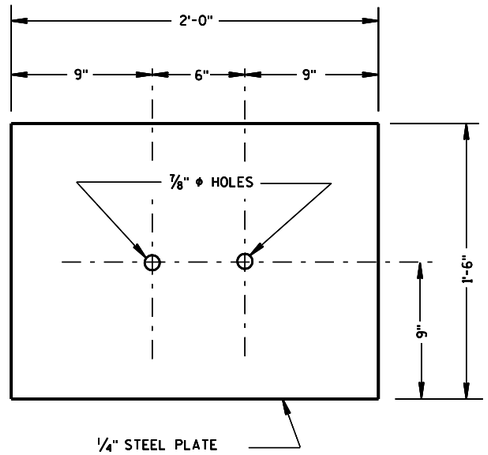
S.D.D. 14 B 24-8a



⑩ STRUT DETAIL (SKT-350)

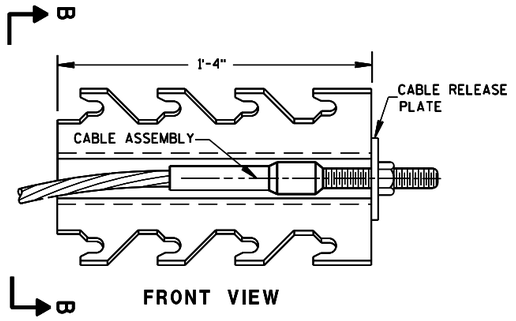


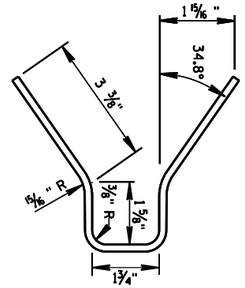
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

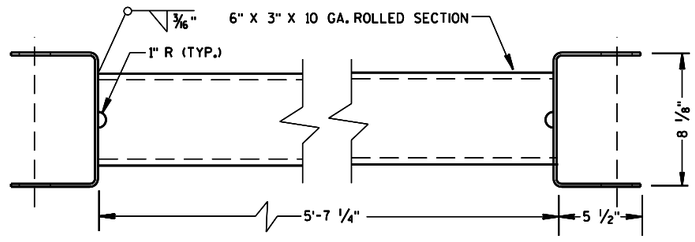
(SKT-350, ET-2000/ET-2000 PLUS)





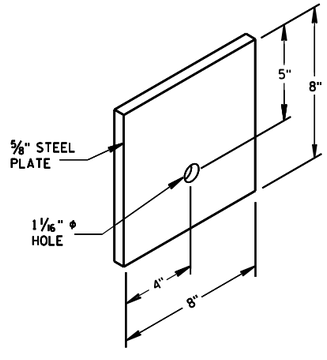
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

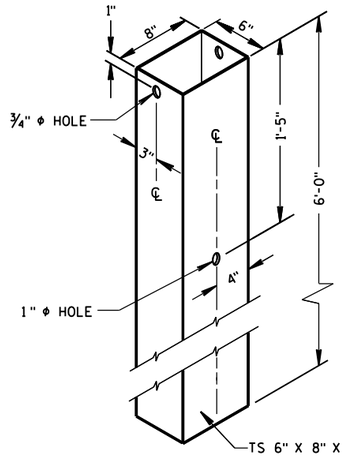
(SKT-350, ET-2000/ET-2000 PLUS)

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

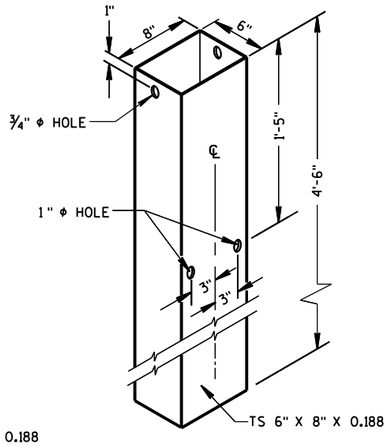
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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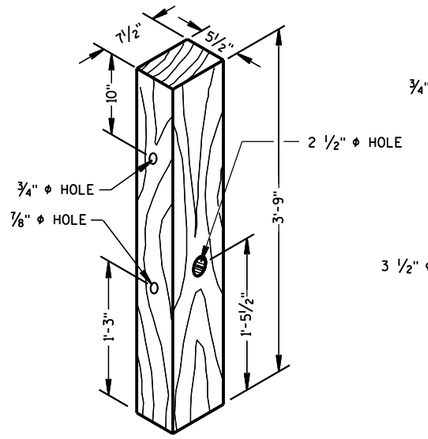
S.D.D. 14 B 24-8b



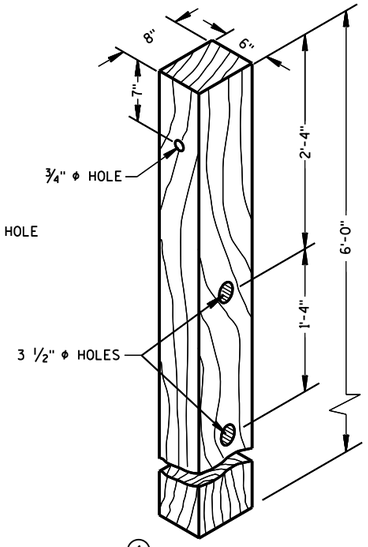
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

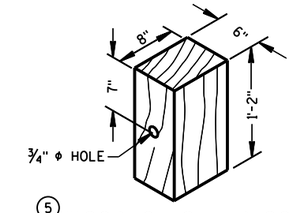
WOOD BREAKAWAY POSTS

GENERAL NOTES

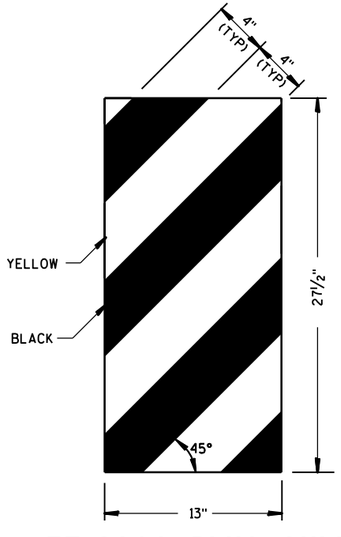
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

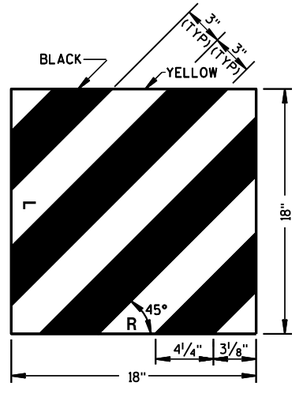
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

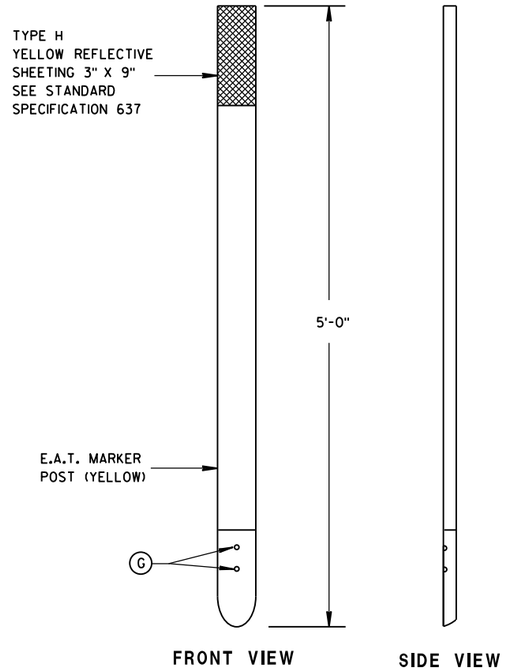


ET-2000 PLUS ONLY

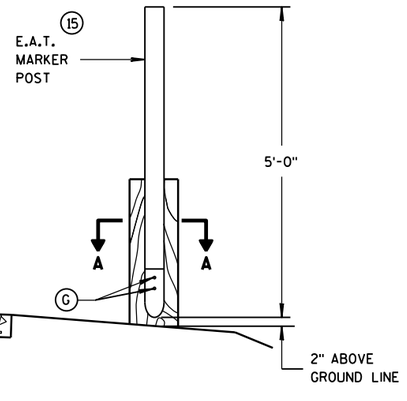


ET-2000 AND SKT-350

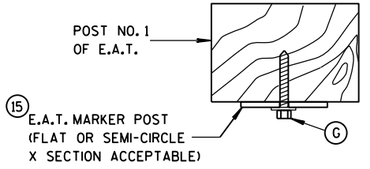
⑭ REFLECTIVE SHEETING DETAILS



⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 24-8c

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

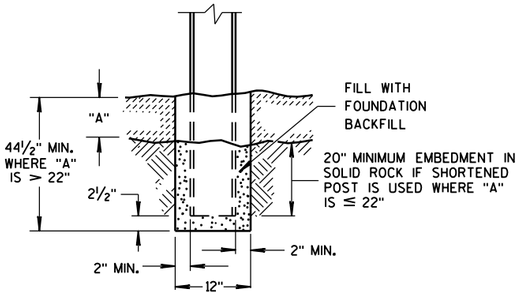
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

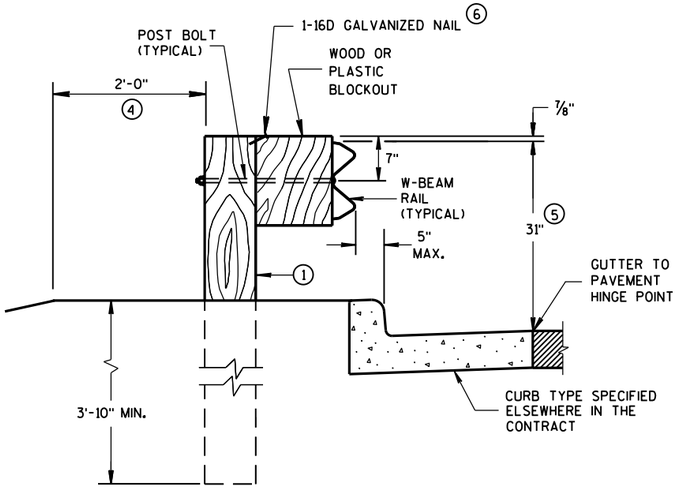
④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

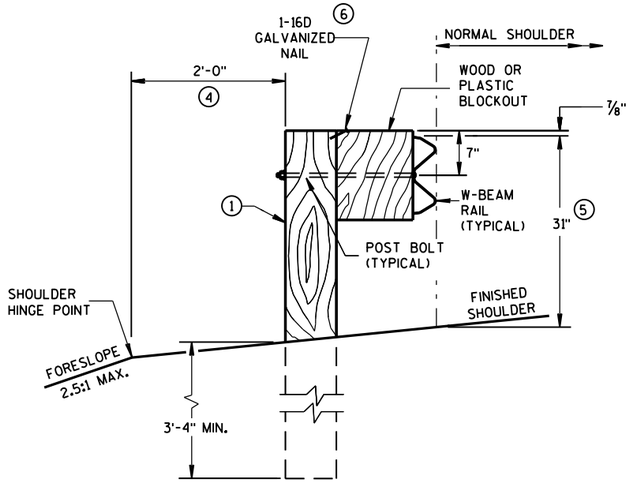
⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



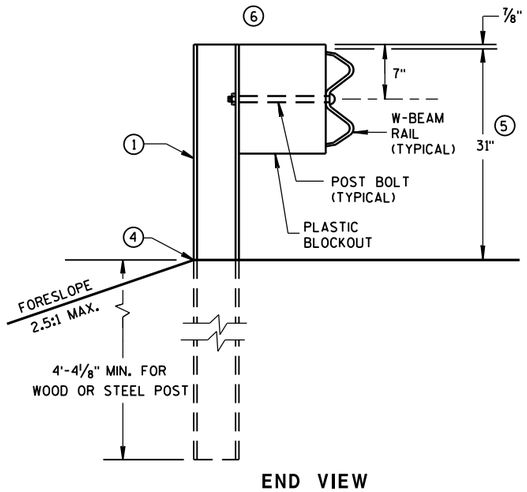
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



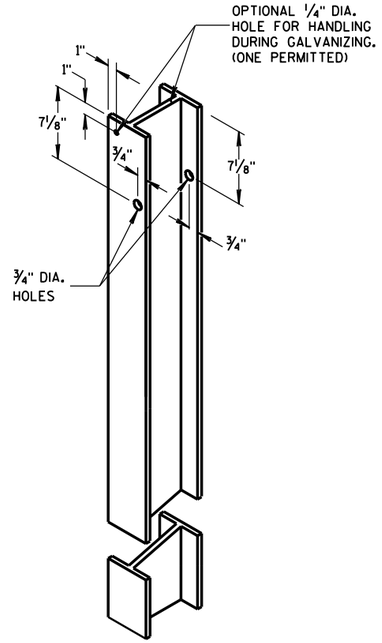
END VIEW
LOCATED ALONG A CURBED ROADWAY



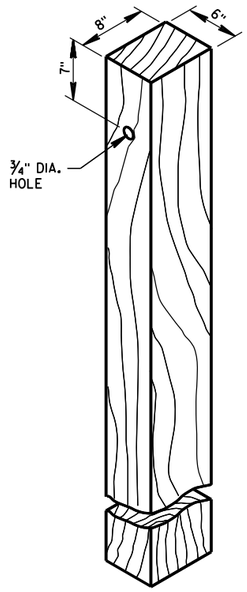
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



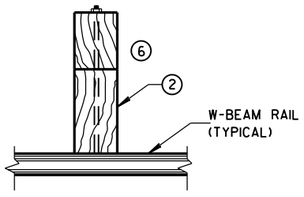
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



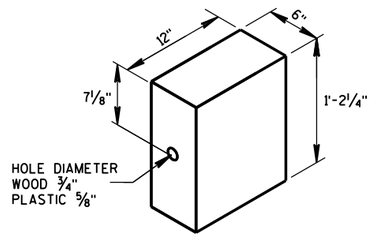
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



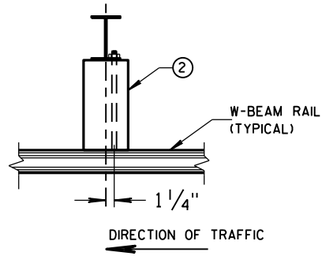
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



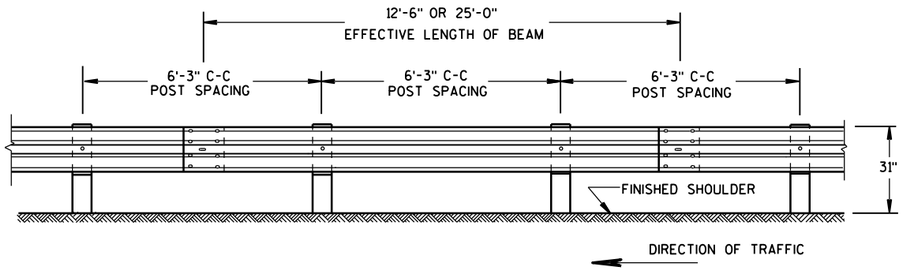
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

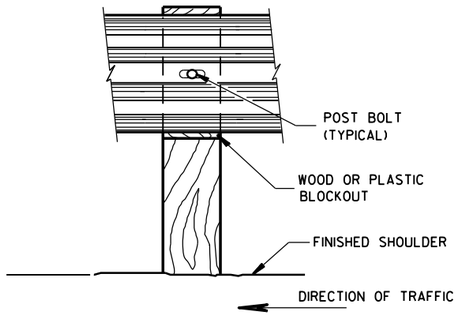
6

S.D.D. 14 B 42-4a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

7. PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

8. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

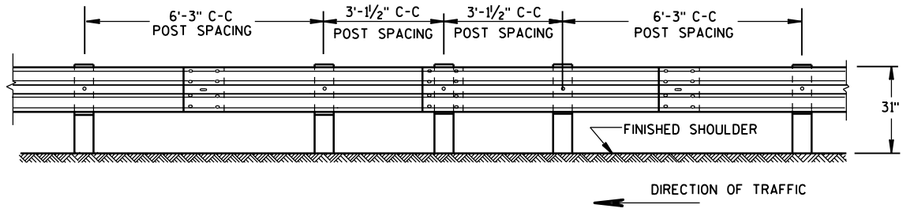
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

10. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

11. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

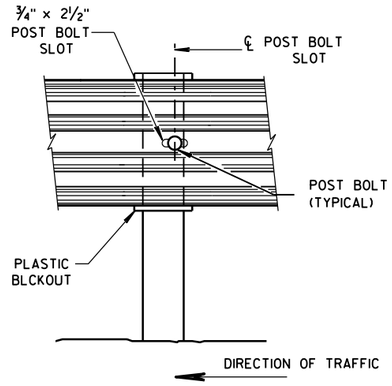
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

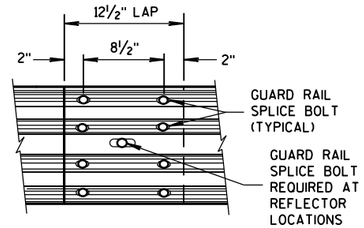


FRONT VIEW

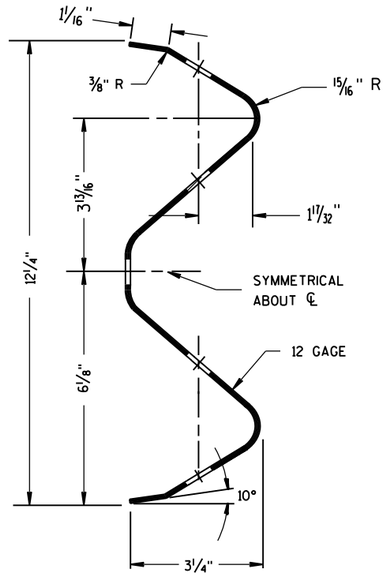
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



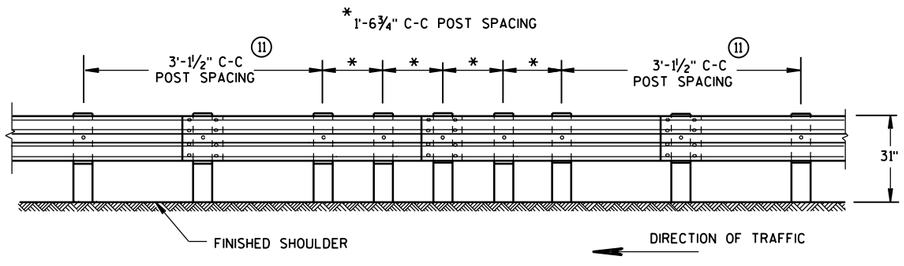
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

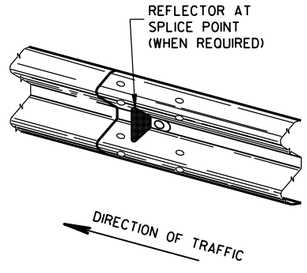


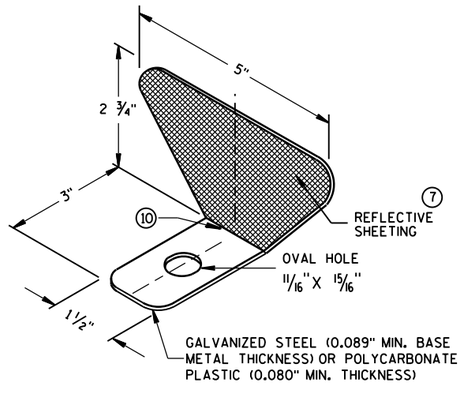
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION 7

REFLECTOR SPACING 8

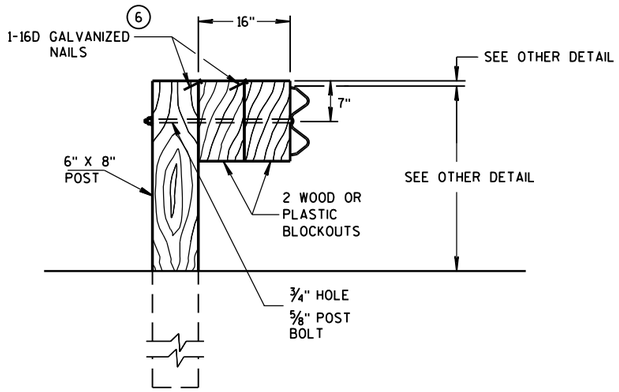
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 9	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 10	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

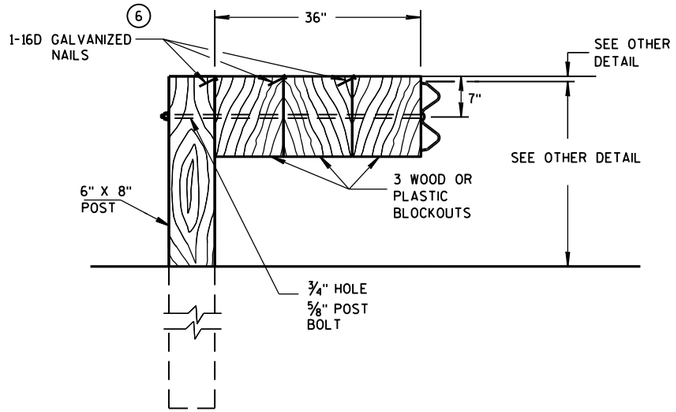
6

S.D.D. 14 B 42-4b



DETAIL FOR 16" BLOCKOUT DEPTH

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

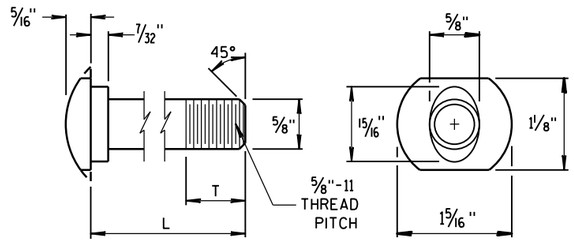


DETAIL FOR 36" BLOCKOUT DEPTH

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

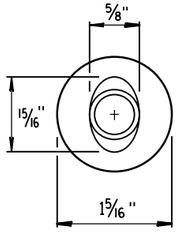
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

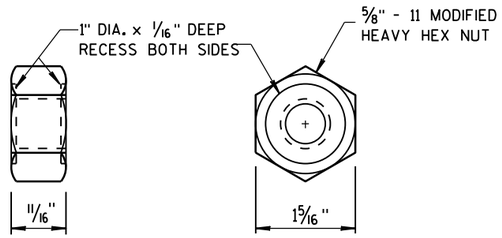


POST BOLT TABLE

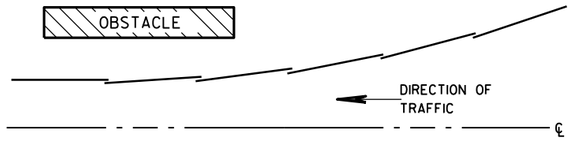
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

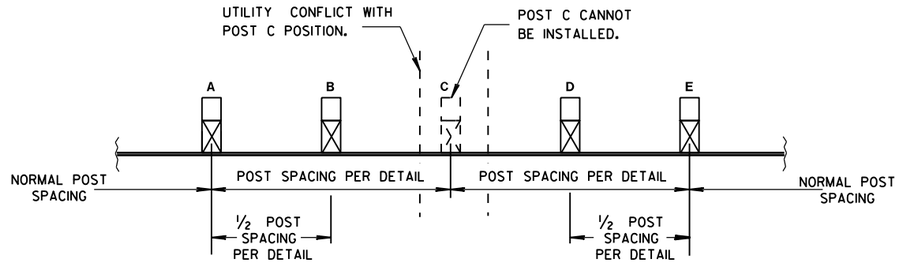


POST BOLT, SPLICE BOLT AND RECESS NUT

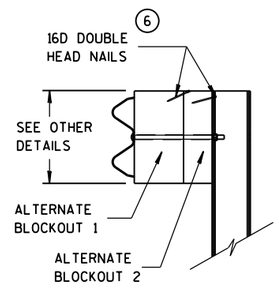


PLAN VIEW

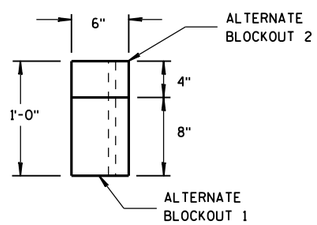
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 14 B 42-4c

GENERAL NOTES

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

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

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

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

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

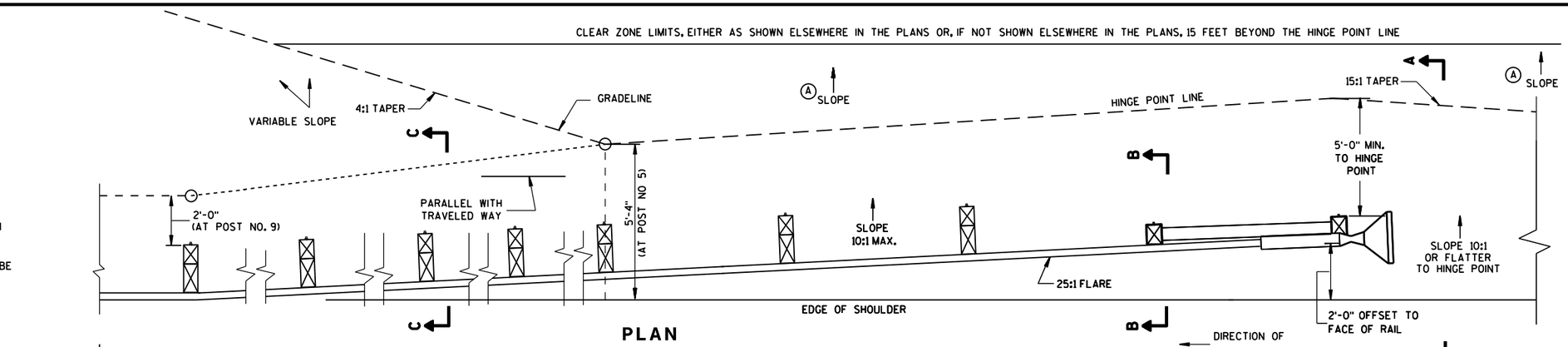
SEE SDD 14B42 FOR MORE INFORMATION.

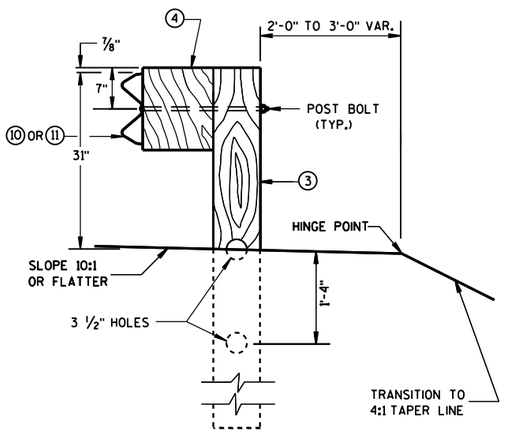
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

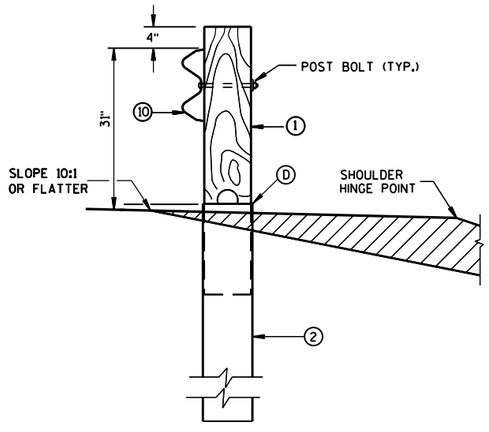
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

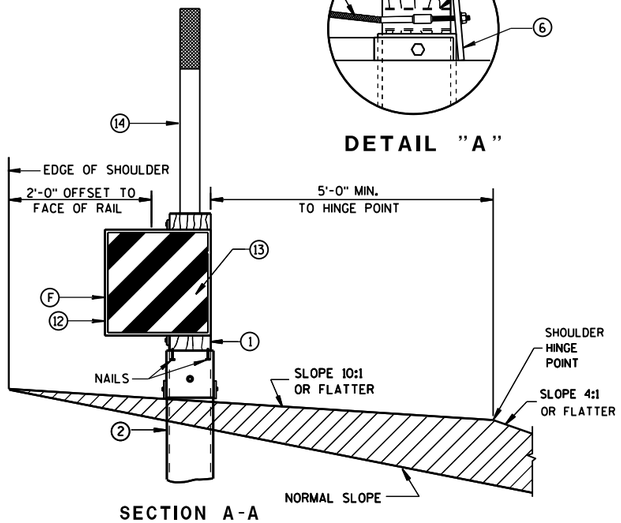




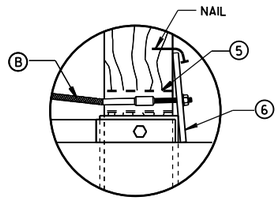
SECTION C-C
TYPICAL AT POST NOS. 3-9



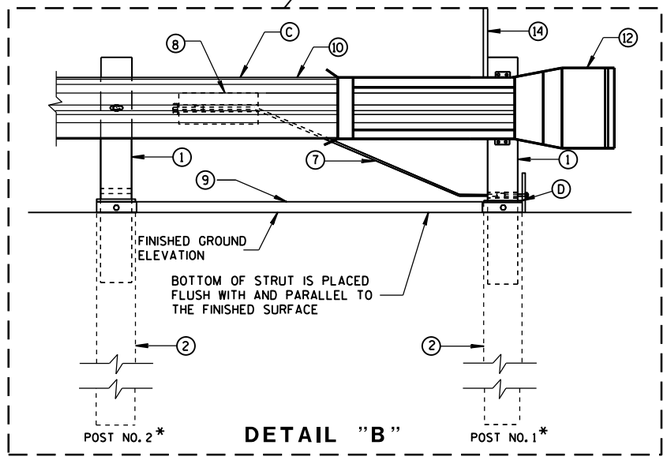
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

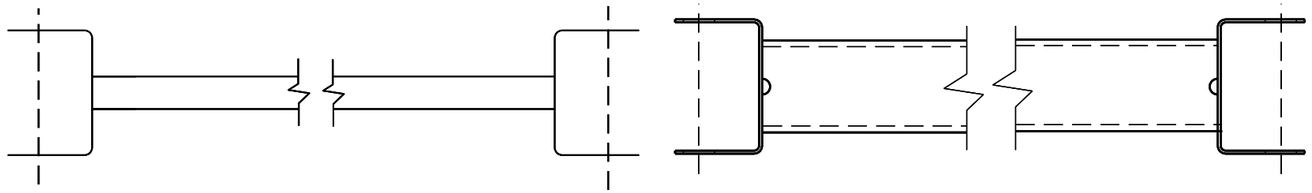


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

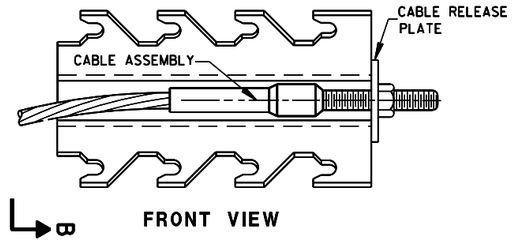
S.D.D. 14 B 44-2a



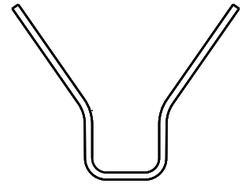
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

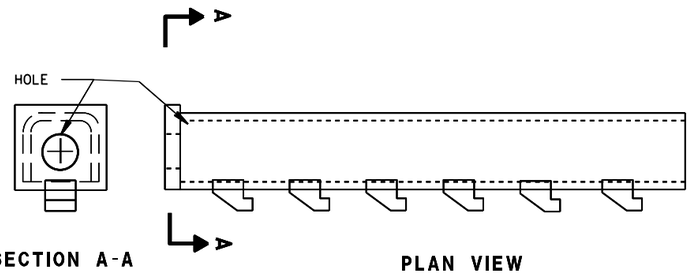
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



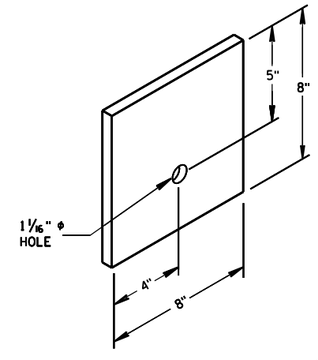
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



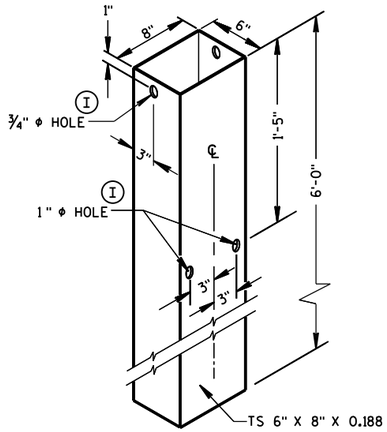
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

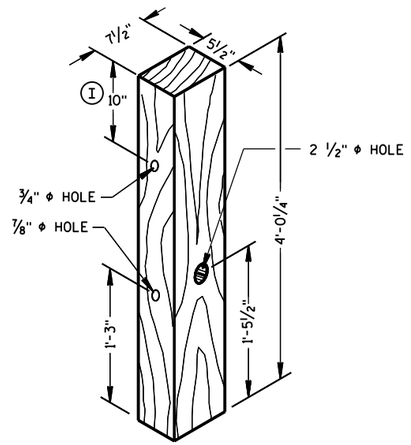
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 44-2b

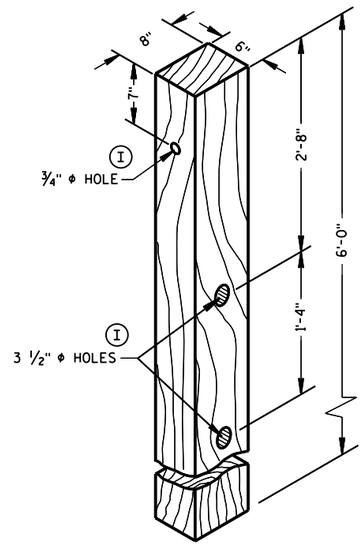


FOUNDATION TUBE (2)



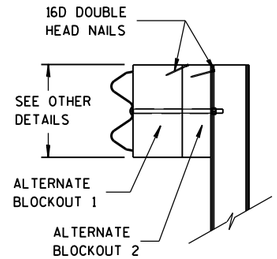
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

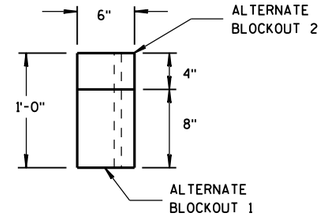


POSTS NUMBER 3-9

WOOD CRT POST (3)

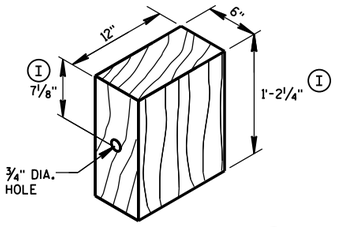


SIDE VIEW



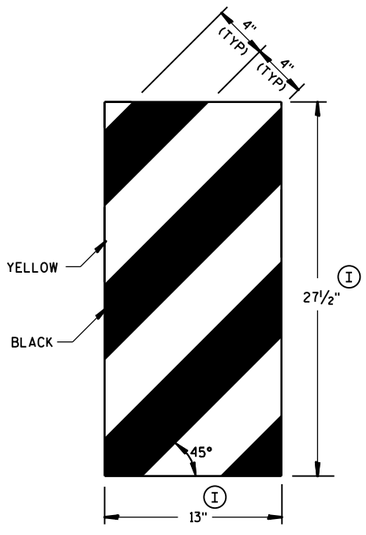
TOP VIEW

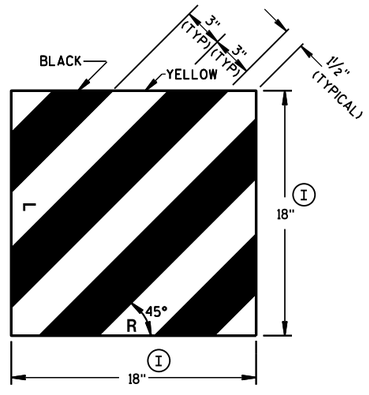
ALTERNATE WOOD BLOCKOUT DETAIL



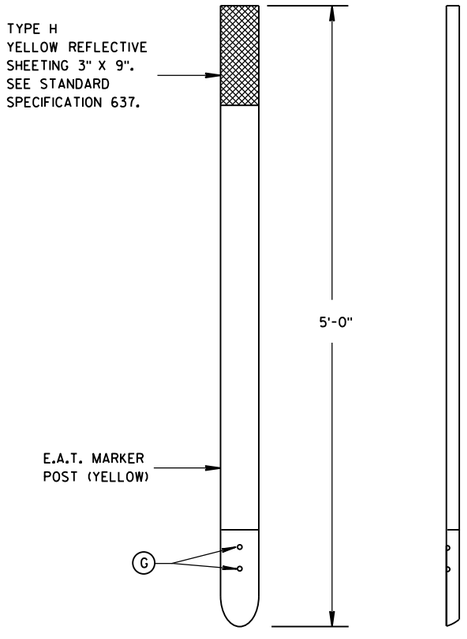
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





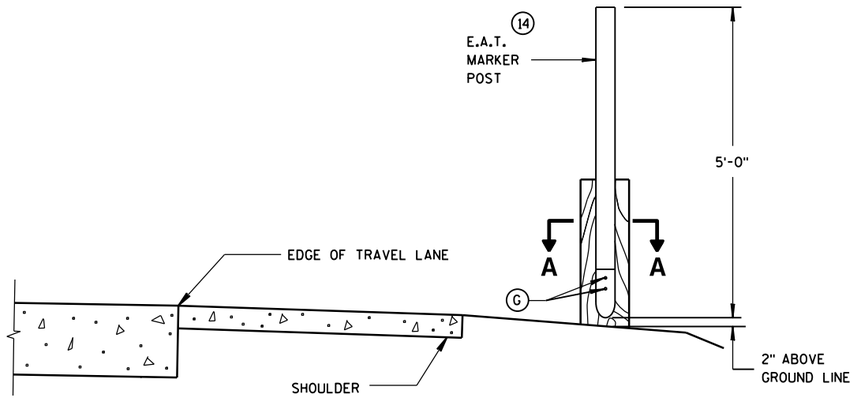
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

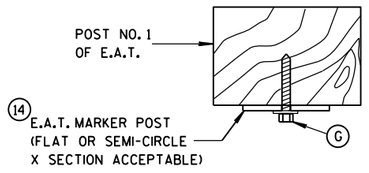
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

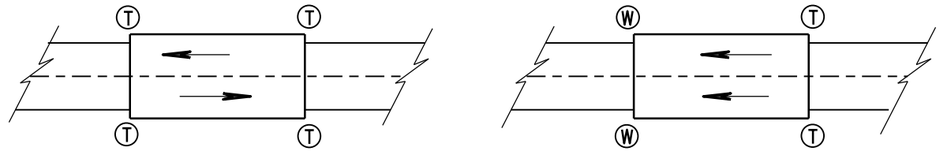
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

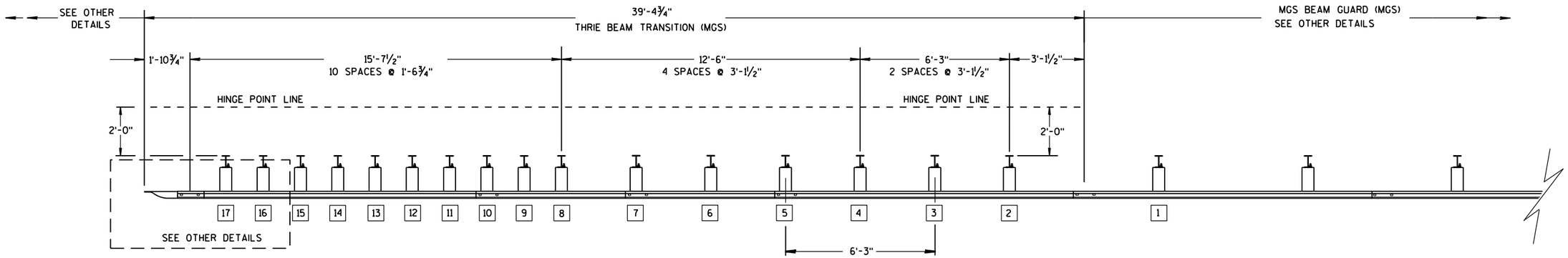
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

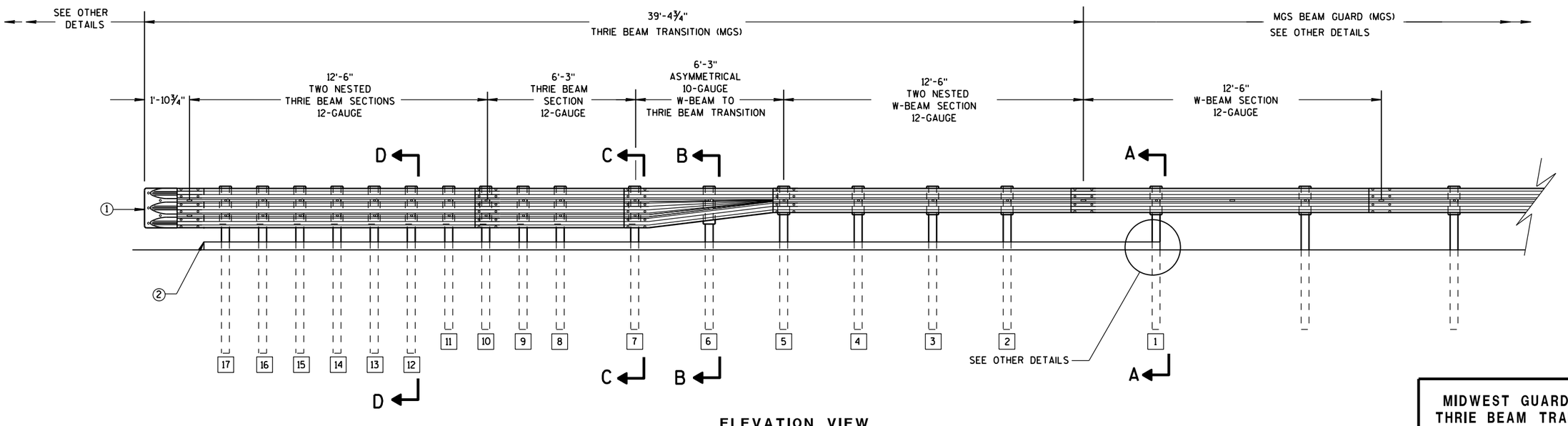
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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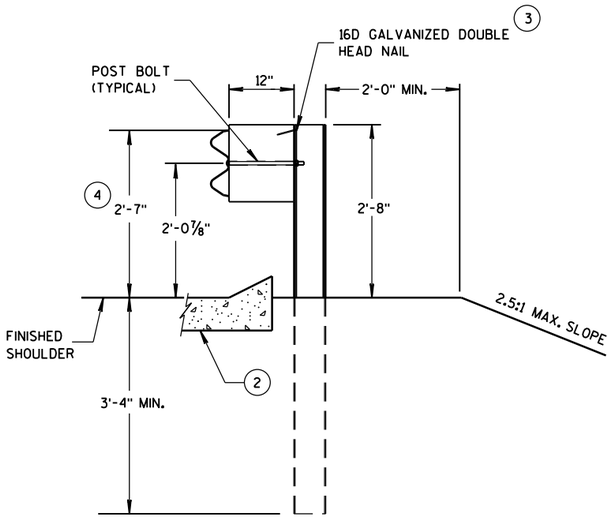
S.D.D. 14 B 45-4a

GENERAL NOTES

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

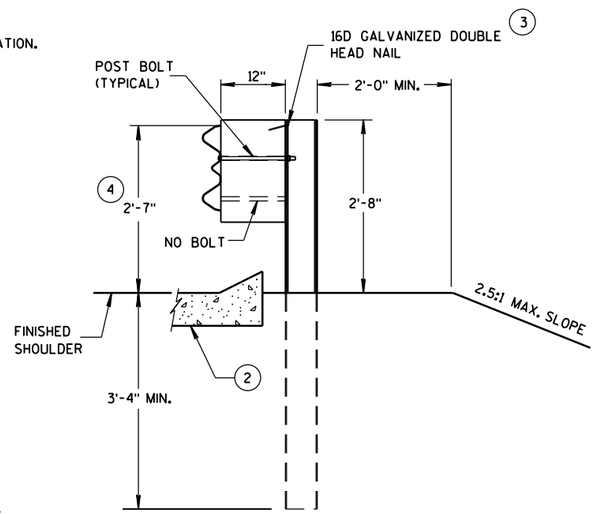
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



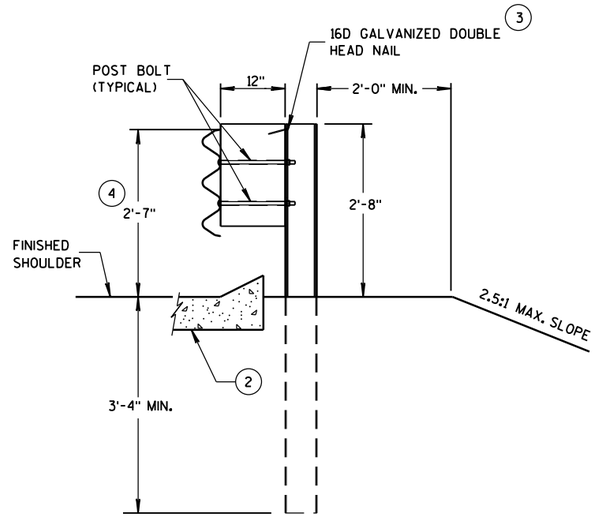
SECTION A-A

POSTS 1-5



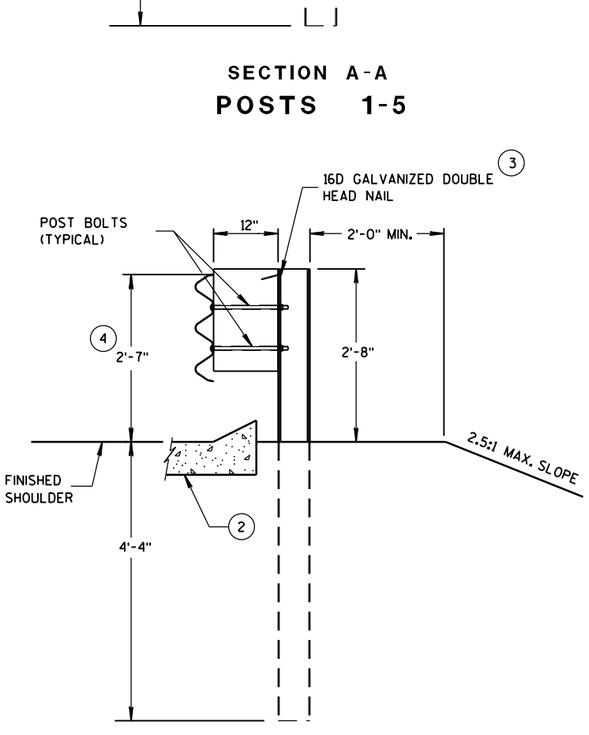
SECTION B-B

POST 6



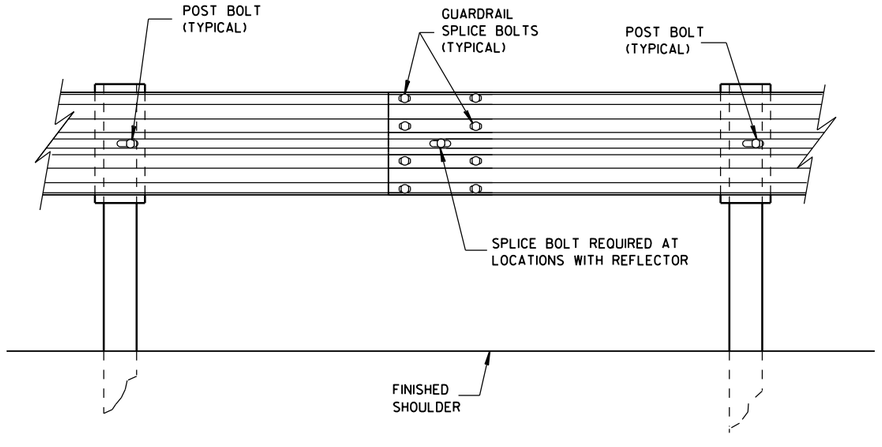
SECTION C-C

POSTS 7-11



SECTION D-D

POSTS 12-17



SPLICE DETAIL

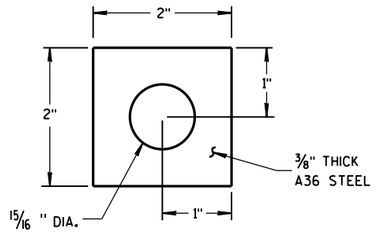
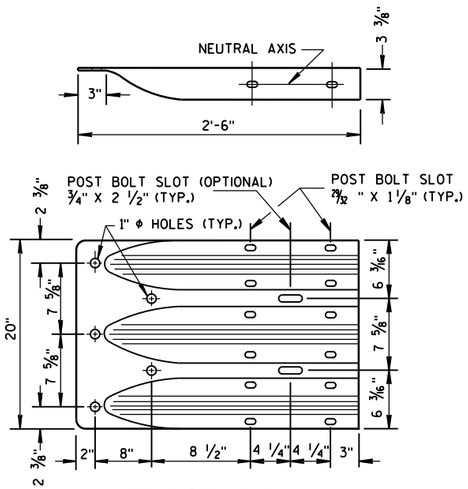
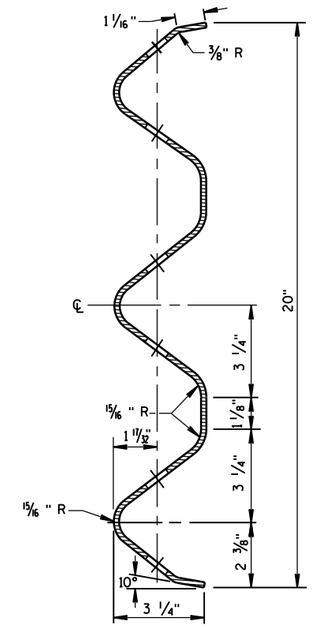


PLATE WASHER DETAIL



THRIE BEAM TERMINAL CONNECTOR



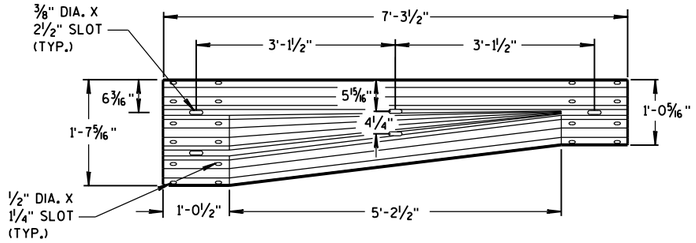
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

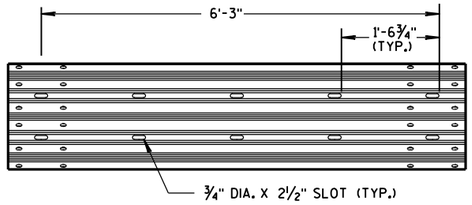
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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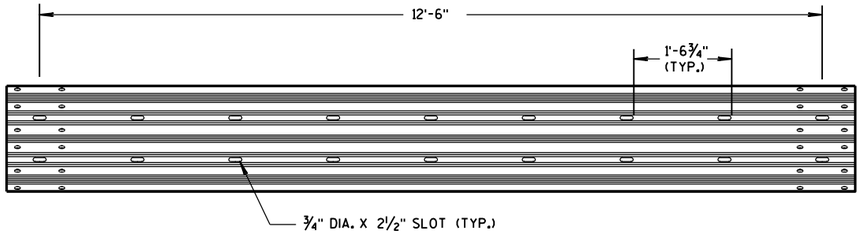
S.D.D. 14 B 45-4b



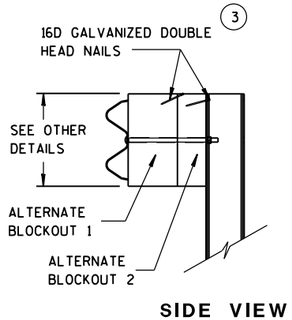
W-BEAM TO THRIE BEAM TRANSITION SECTION



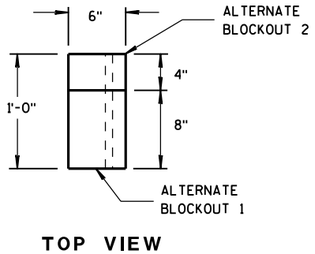
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

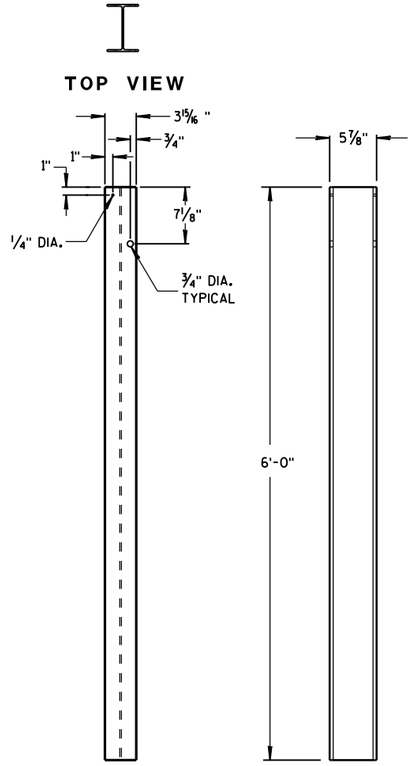


SIDE VIEW

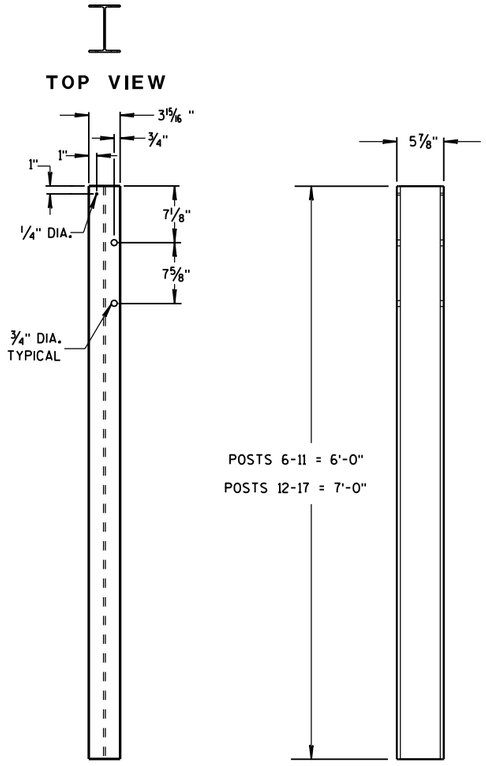


TOP VIEW

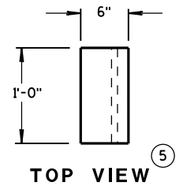
ALTERNATE WOOD BLOCKOUT DETAIL



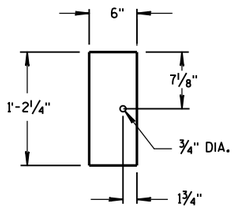
STEEL POSTS 1-5



STEEL POSTS 6-17

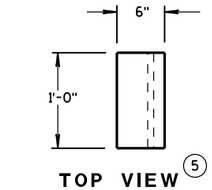


TOP VIEW

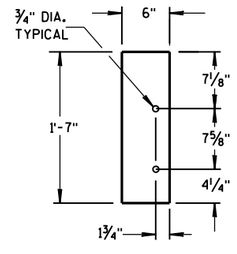


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 45-4c

6

S.D.D. 14 B 45-4c

GENERAL NOTES

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

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

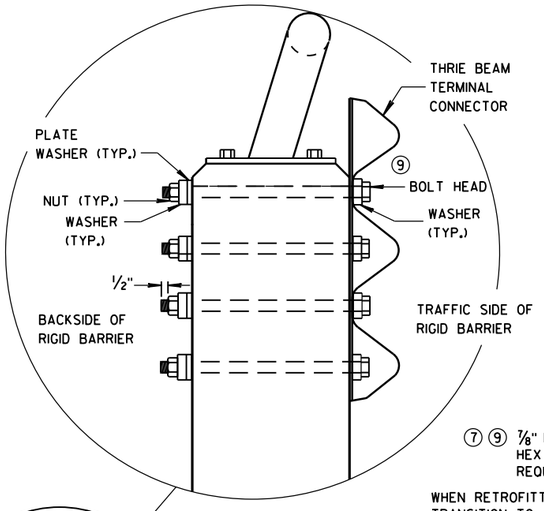
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

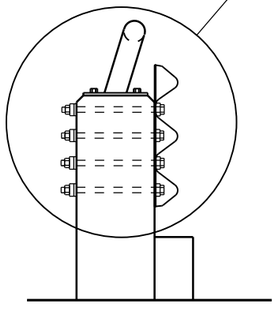
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

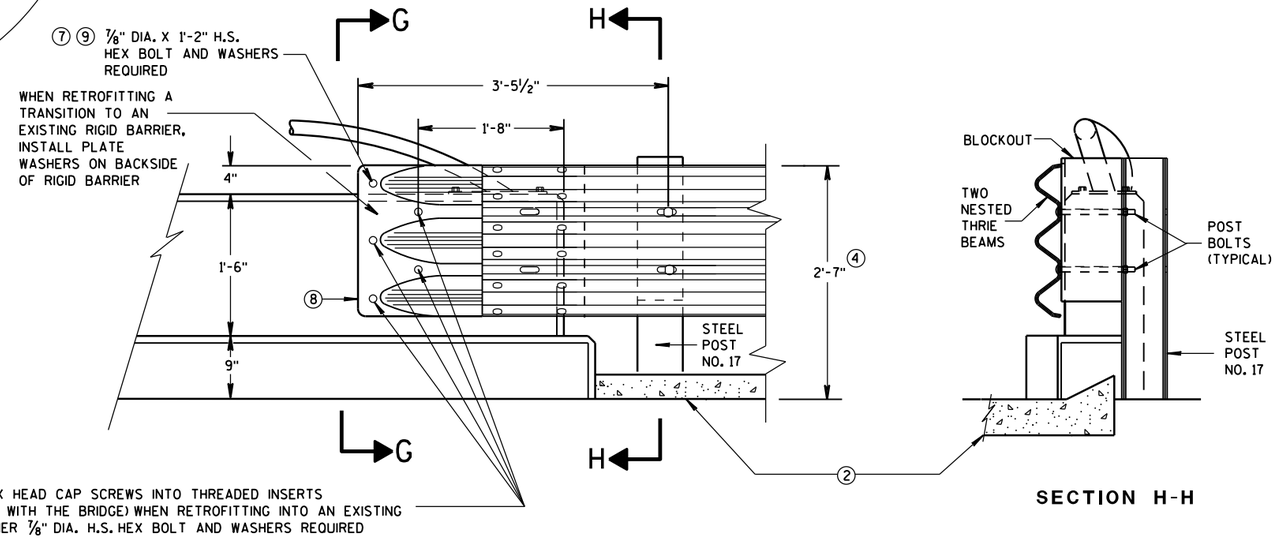
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

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





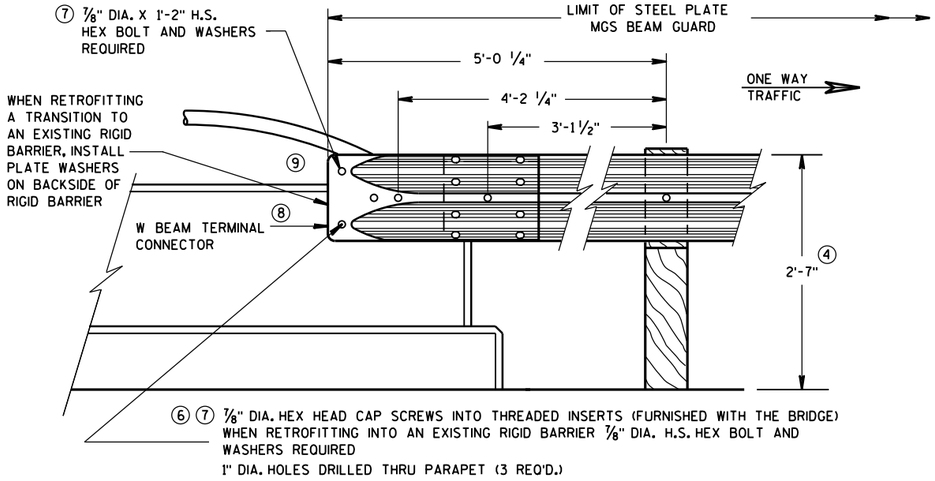
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

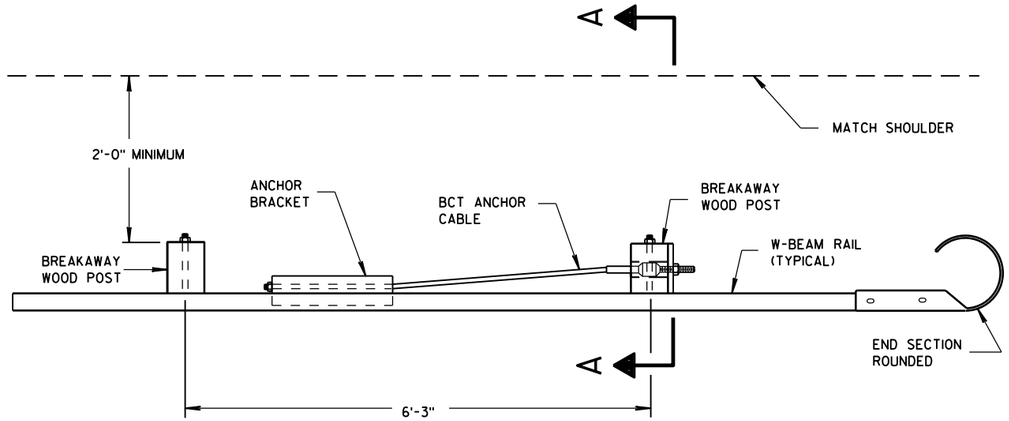
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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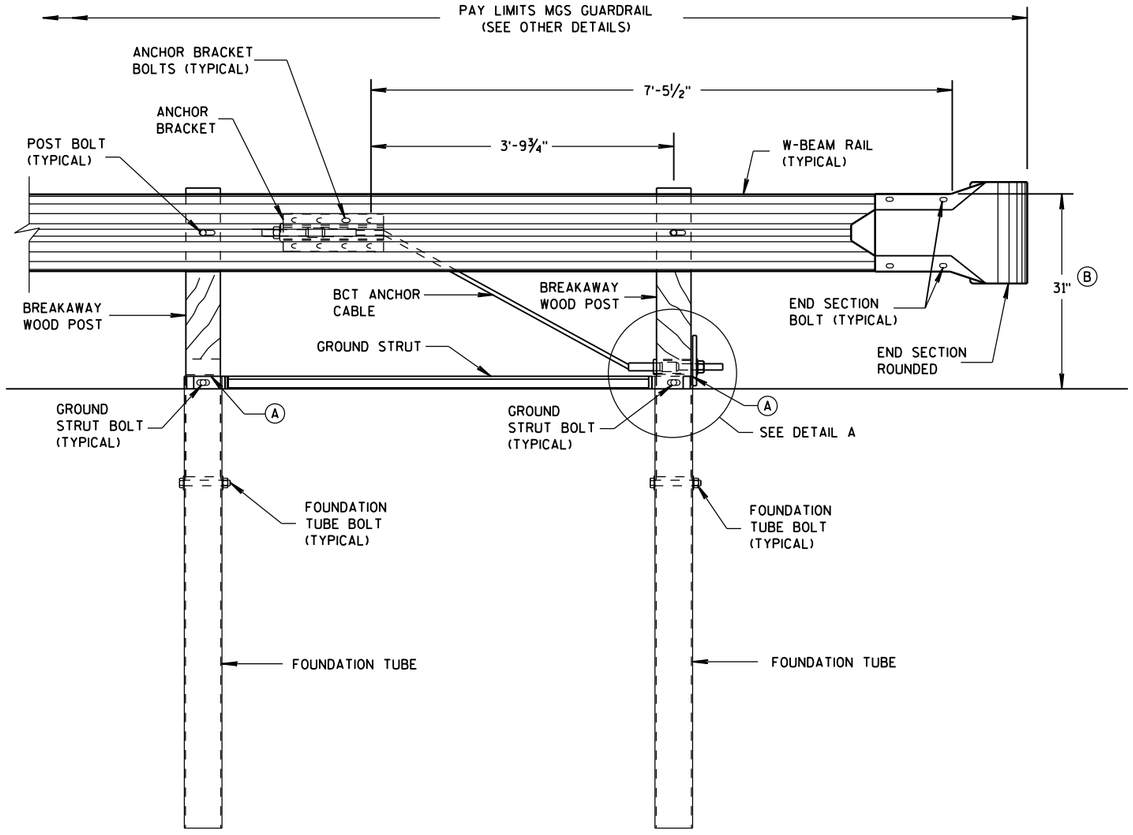
S.D.D. 14 B 45-4e

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S.D.D. 14 B 45-4e

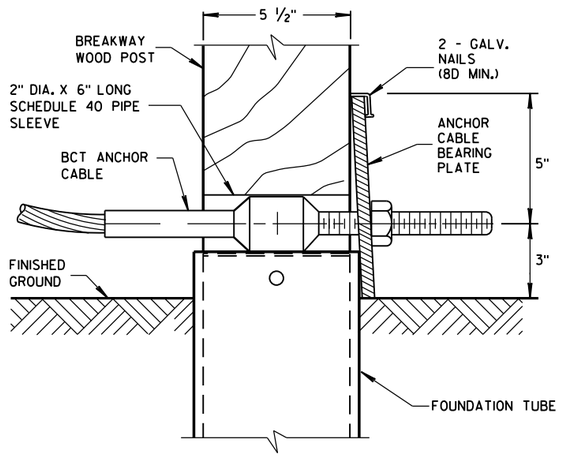


PLAN VIEW



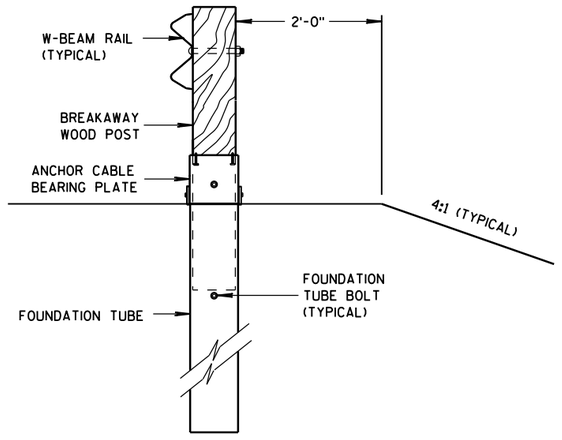
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

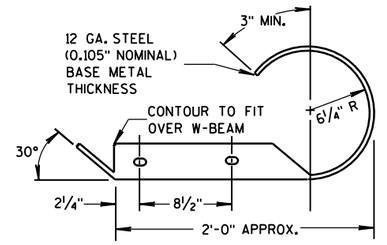
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

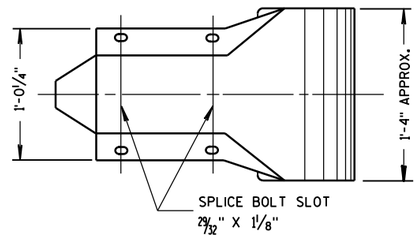
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



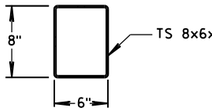
FRONT VIEW

W BEAM END
SECTION ROUNDED

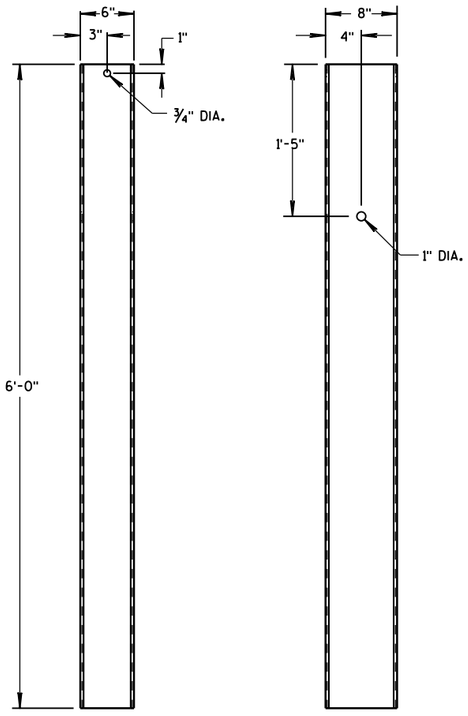
MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a

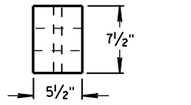


PLAN VIEW

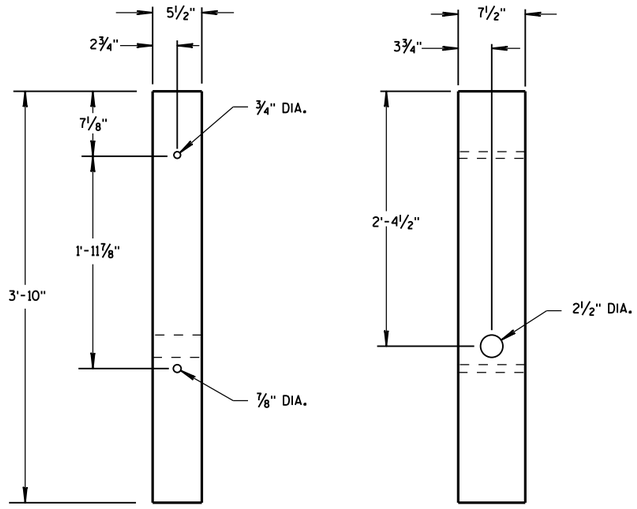


FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW



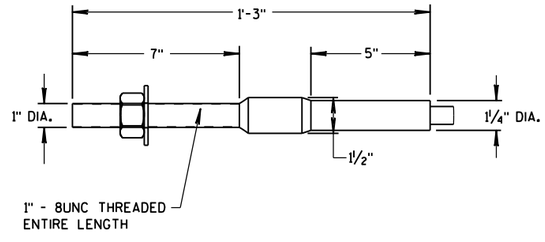
FRONT VIEW SIDE VIEW

BREAKAWAY WOOD POST

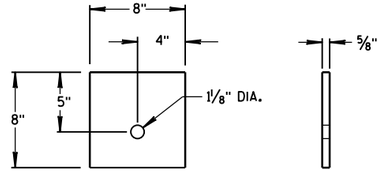
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

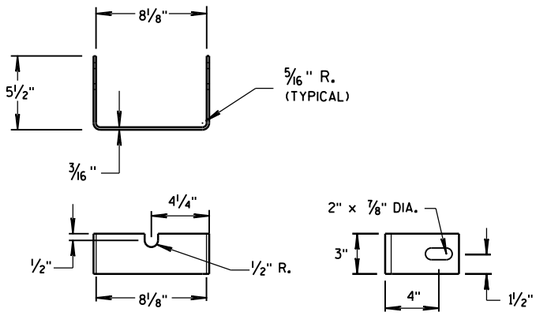
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

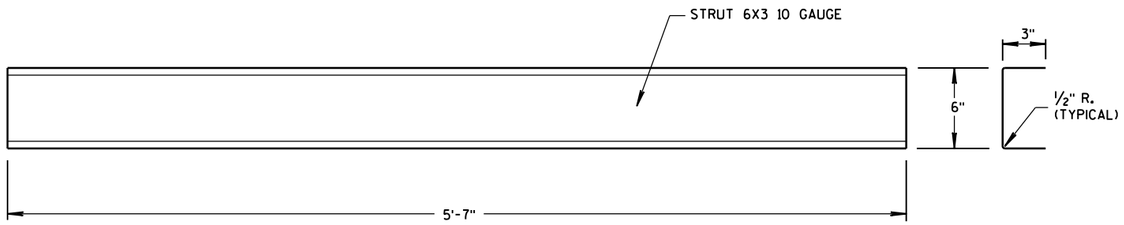
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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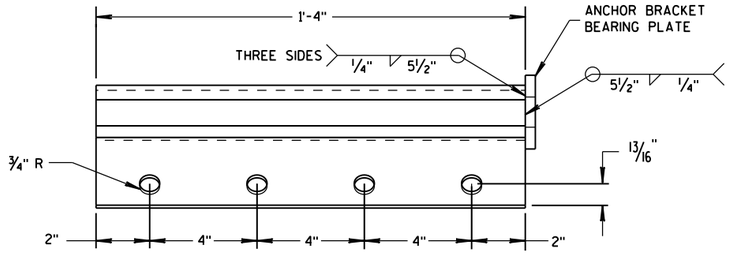
S.D.D. 14 B 47-2b

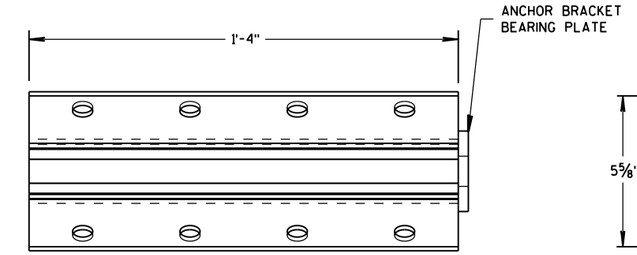


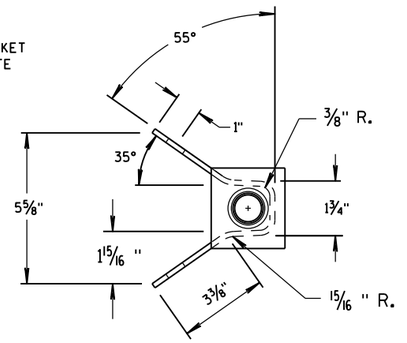
YOKE DETAIL



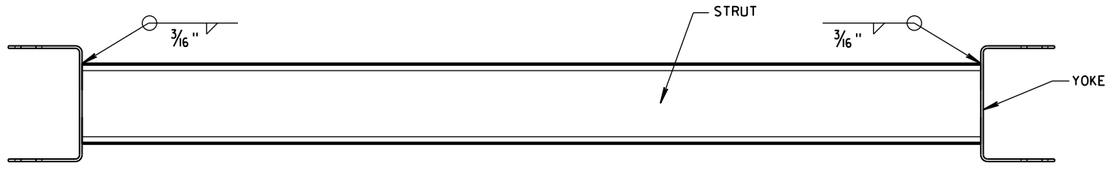
STRUT DETAIL



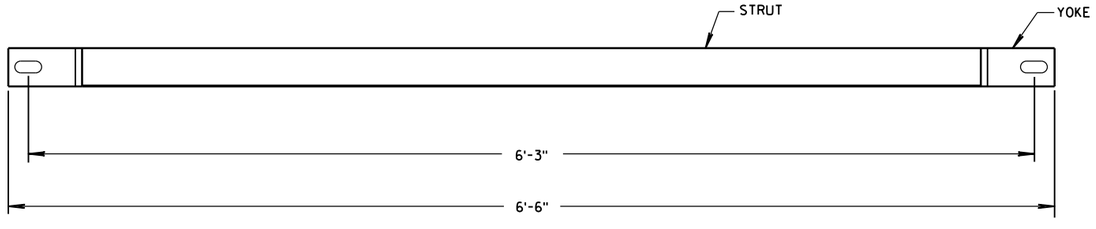




ANCHOR BRACKET

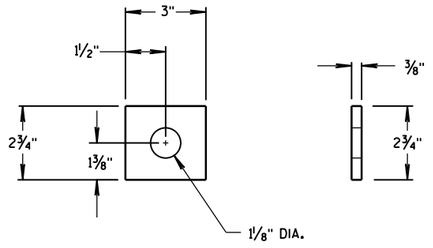


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

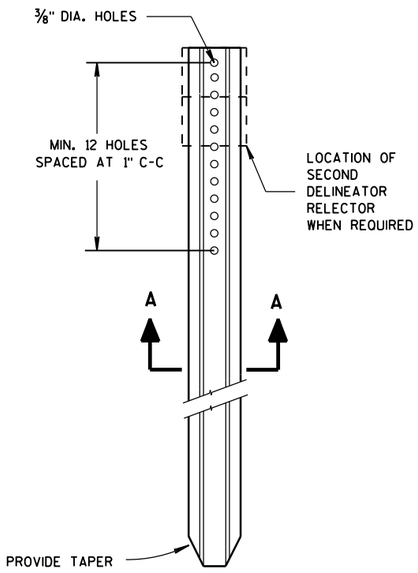
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

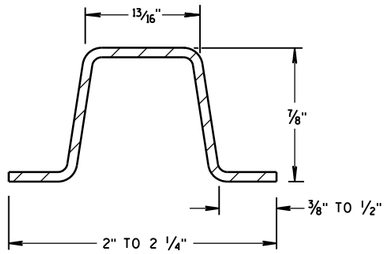
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 47-2c

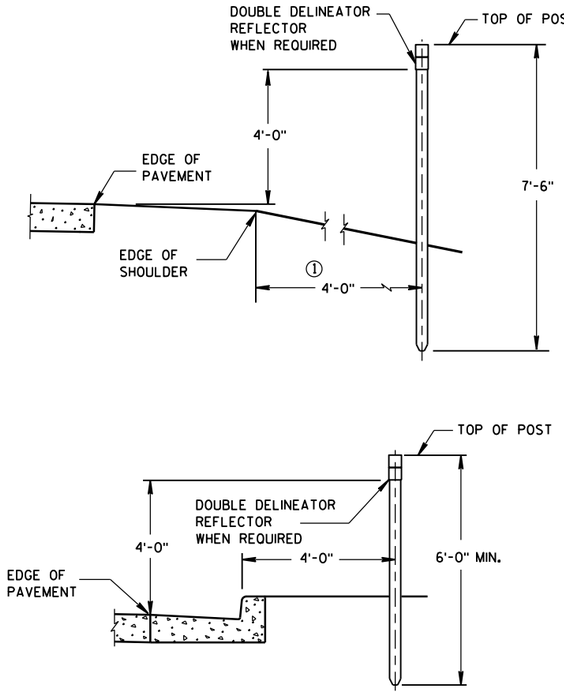


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

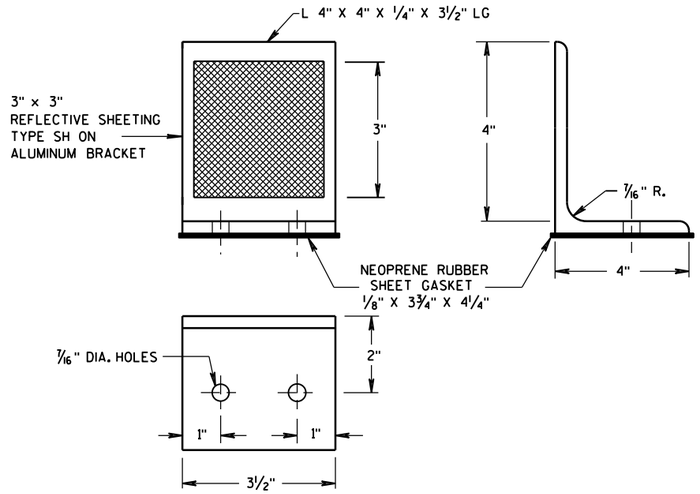


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

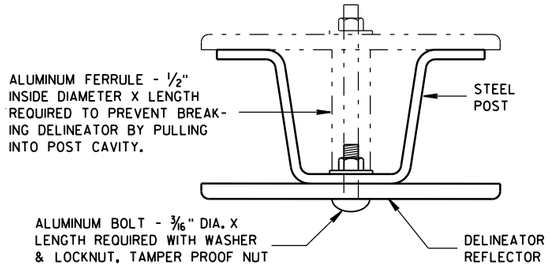
GENERAL NOTES

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

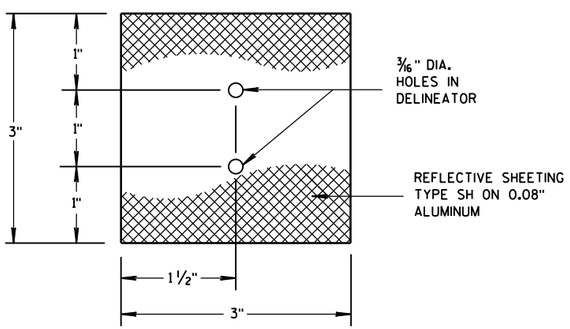
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



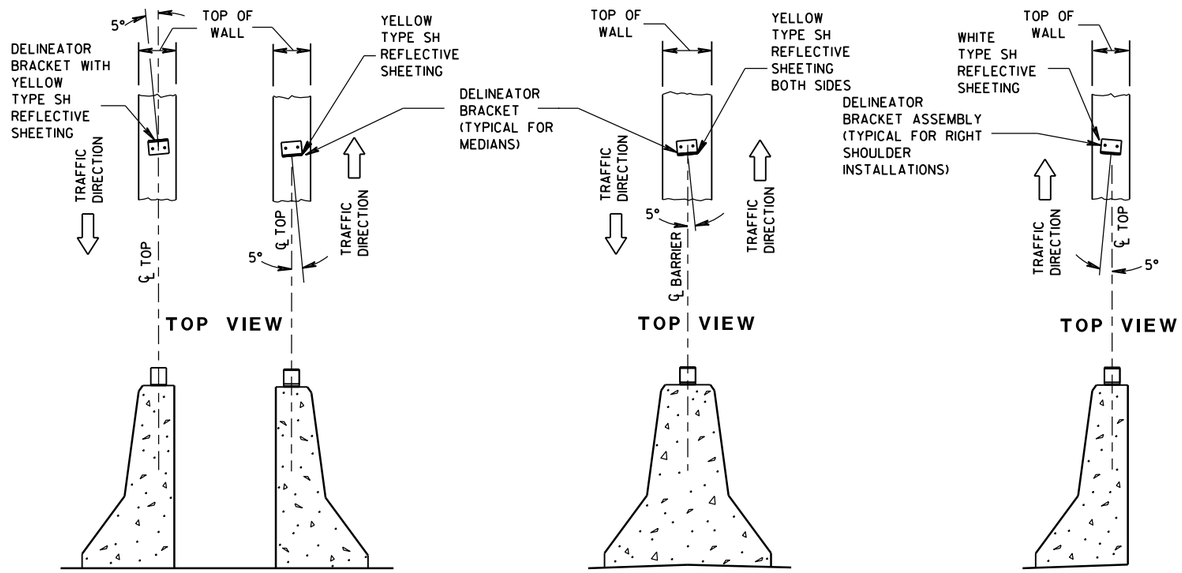
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR REFLECTOR

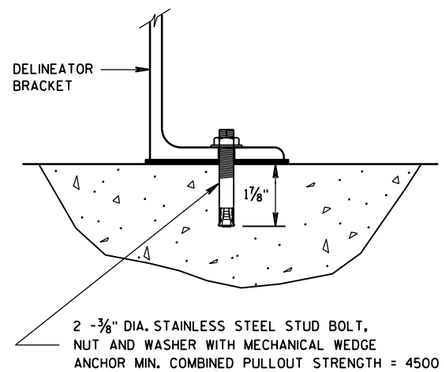


3"x 3" DELINEATOR REFLECTOR



DOUBLE BARRIERS IN MEDIAN | MEDIAN BARRIER | BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] 174 [illegible]GINEER
FHWA

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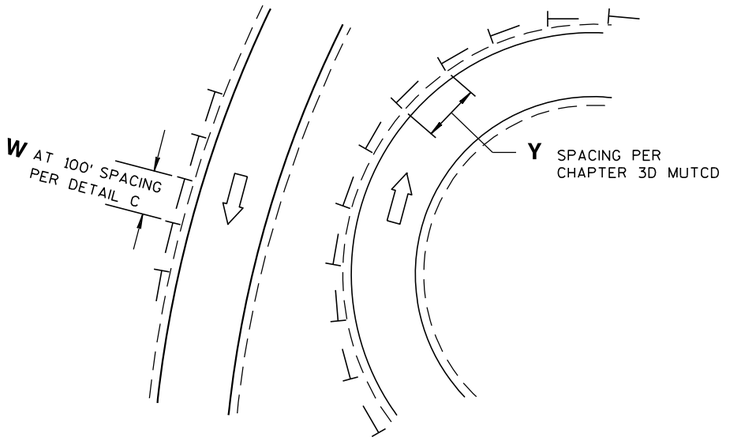
S.D.D. 15 A 2-9

6

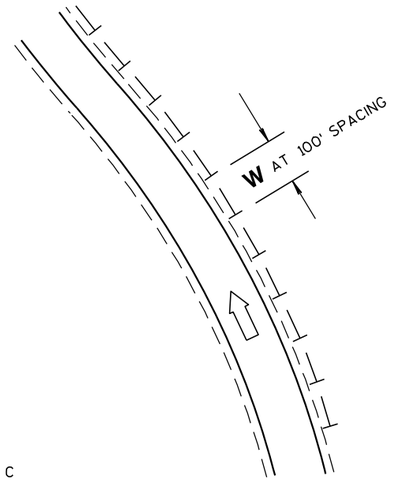
S.D.D. 15 A 2-9

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



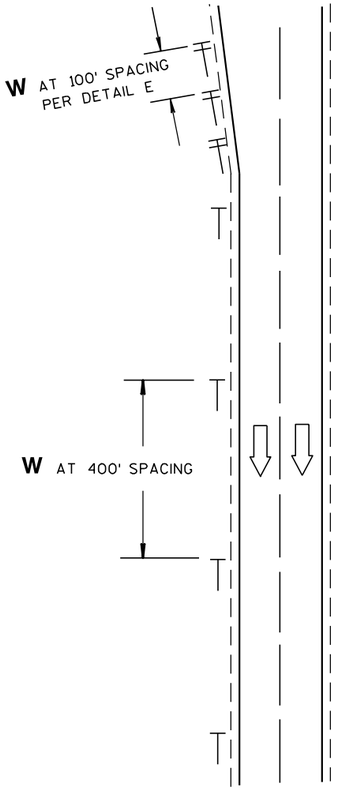
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



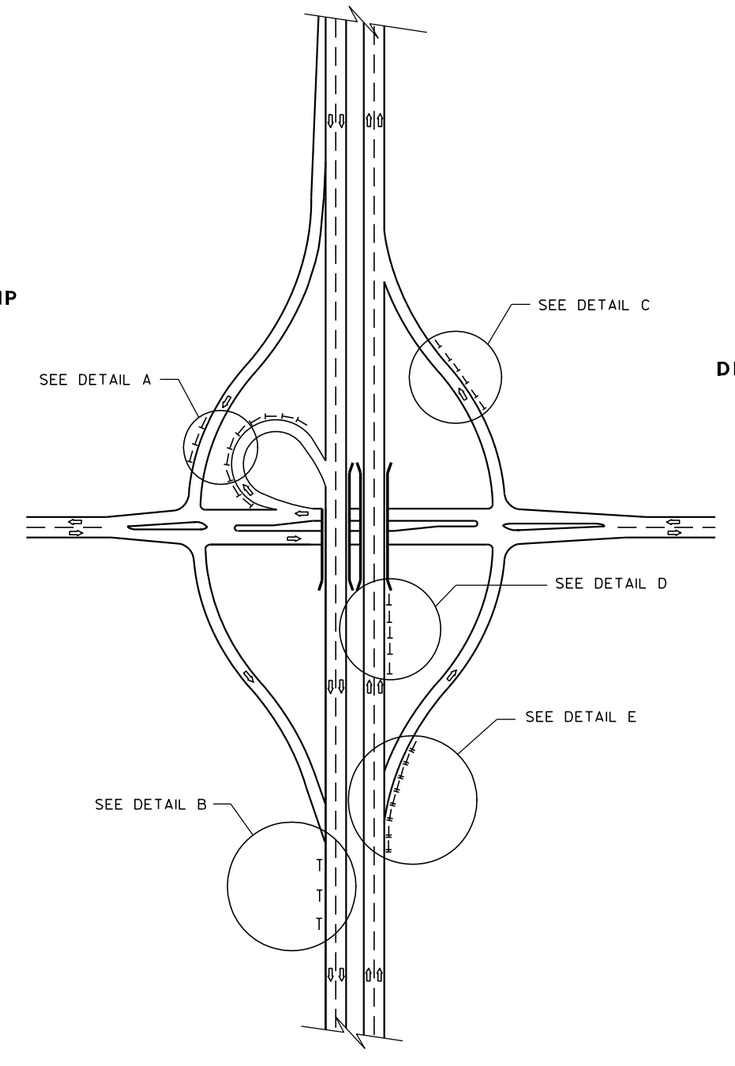
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

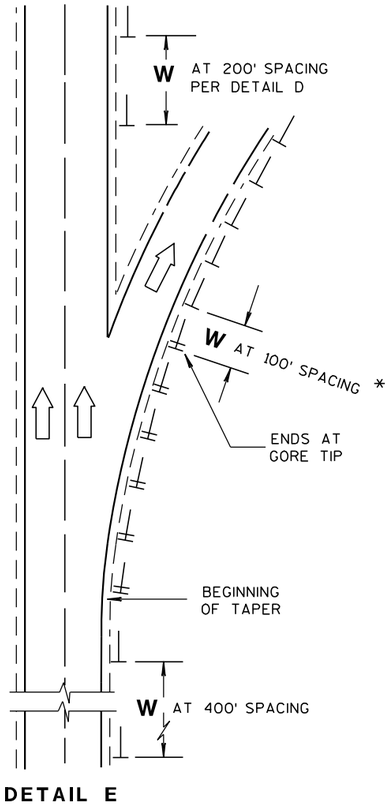
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



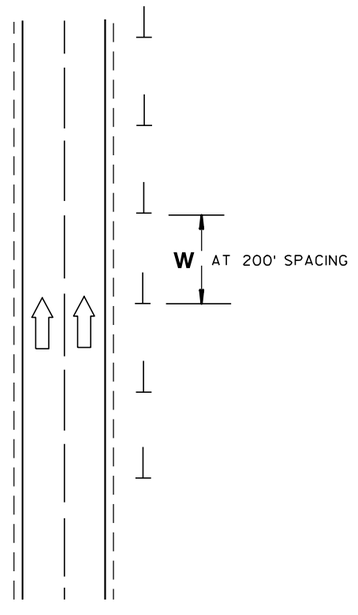
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION - DECELERATION LANES AND TAPERS AT RAMPS



DETAIL D
DELINEATOR LAYOUT BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/5/09 DATE
/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA

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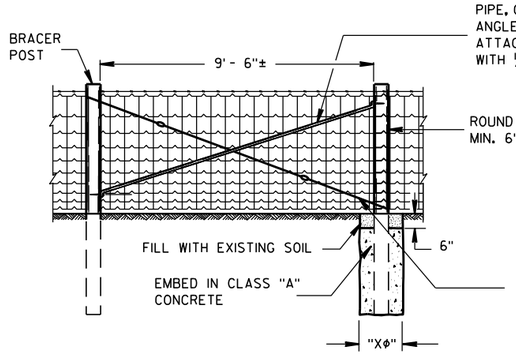
S.D.D. 15 A 6-2

6

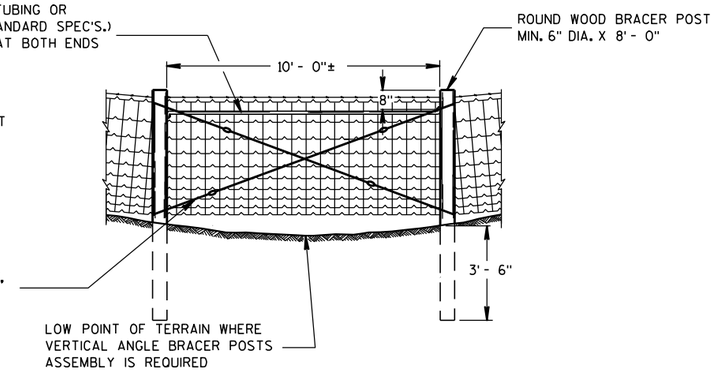
S.D.D. 15 A 6-2

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

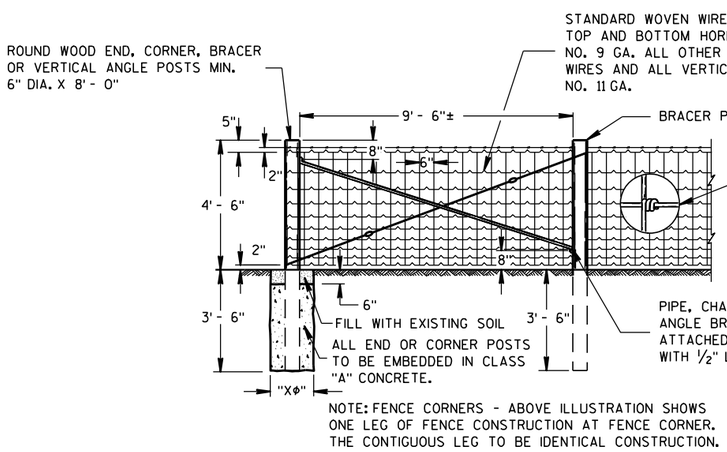
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

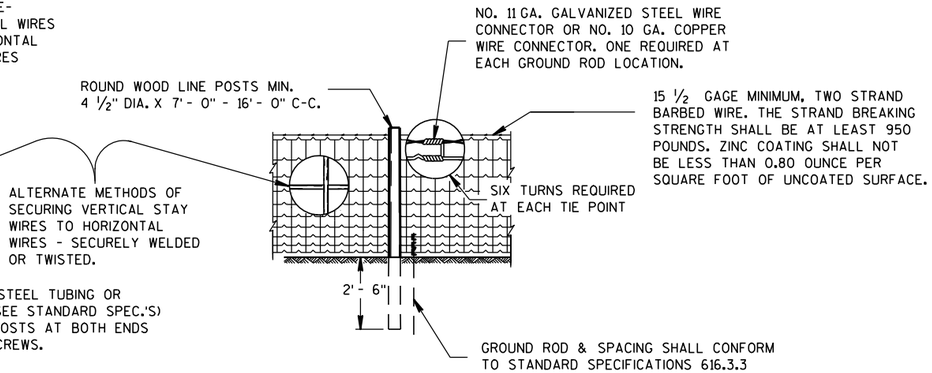
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



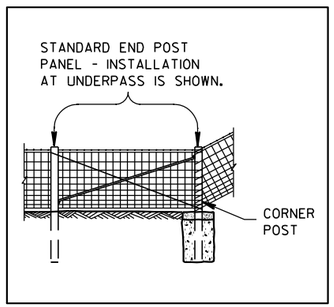
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

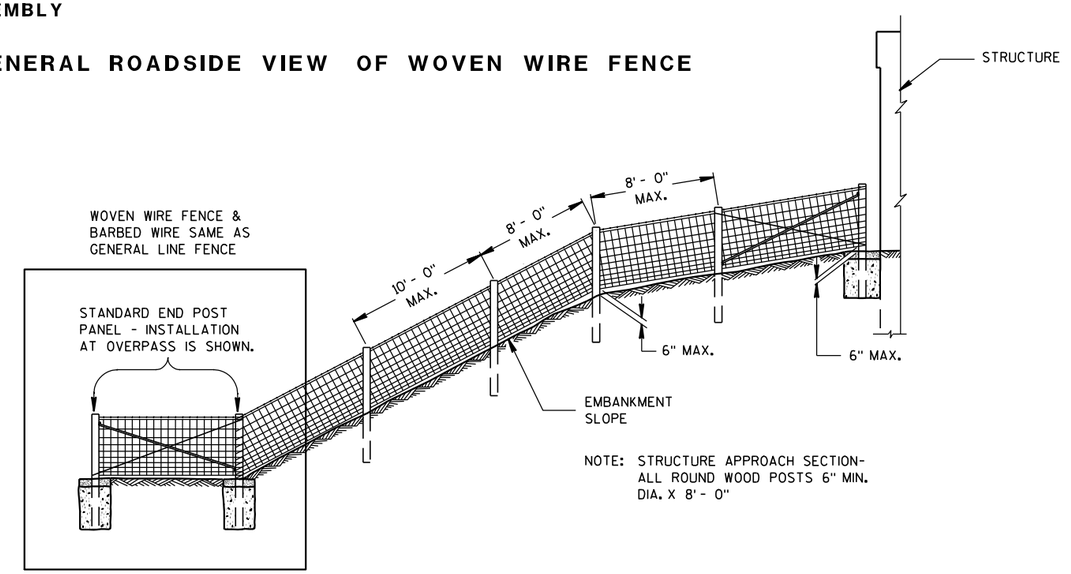


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



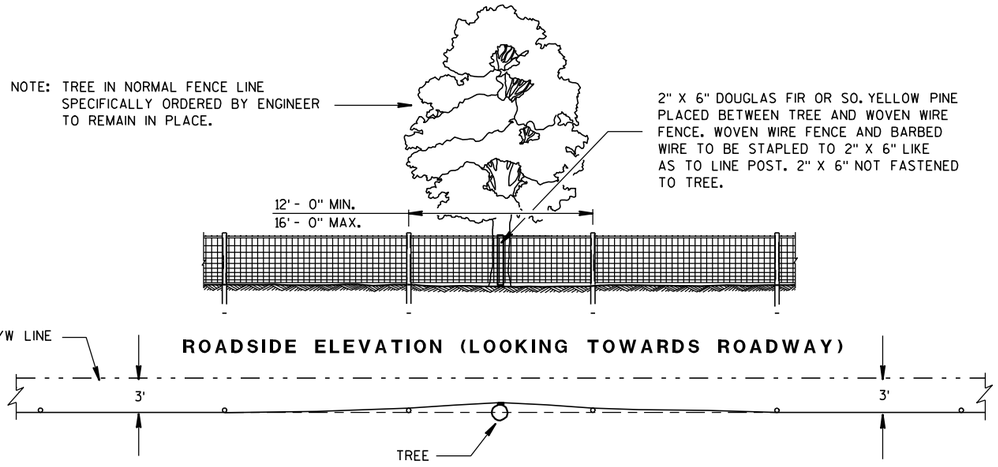
FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

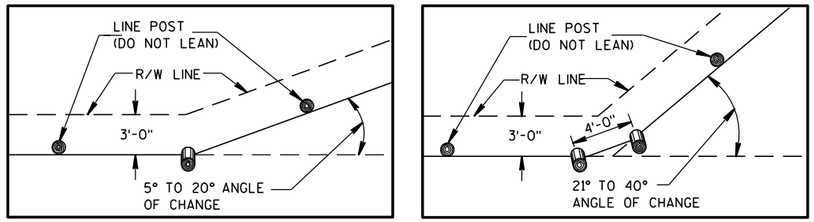
6

S.D.D. 15 B 1-8a



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



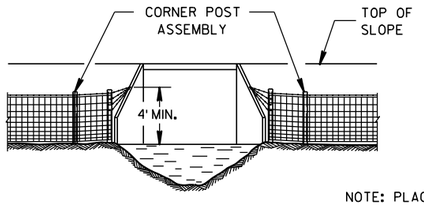
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

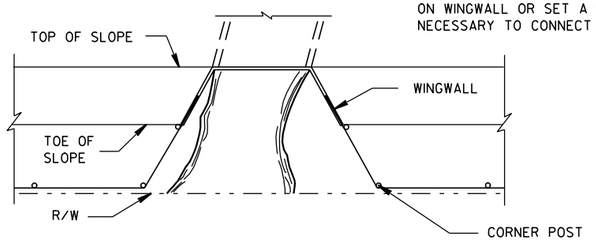
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

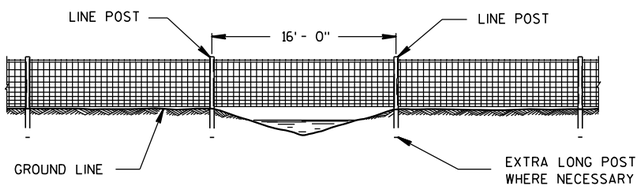
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



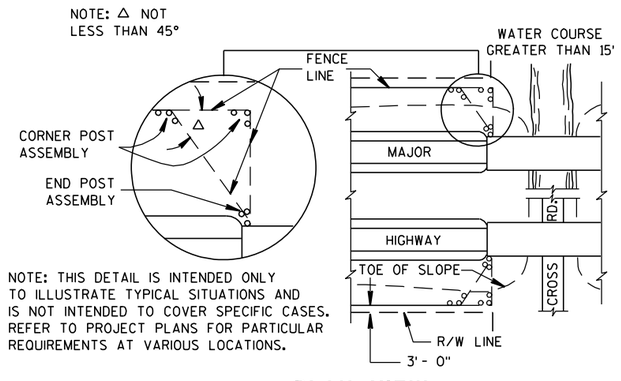
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



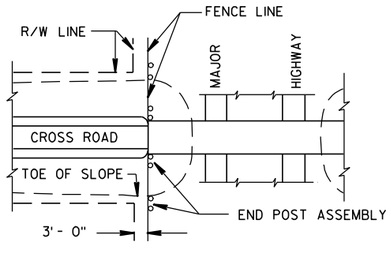
FENCE INSTALLATION TO WINGWALLS



FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



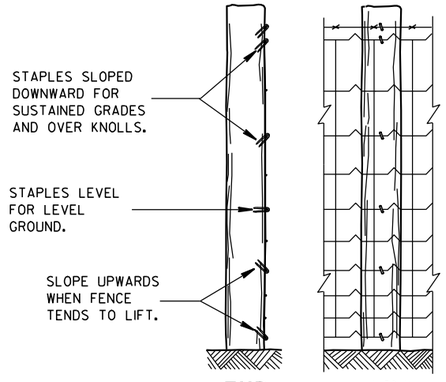
PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

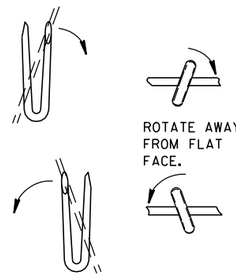
FENCE LOCATION AT STRUCTURES

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION **FARM SIDE ELEVATION**

FENCE MOUNTING DETAIL



LINE POST

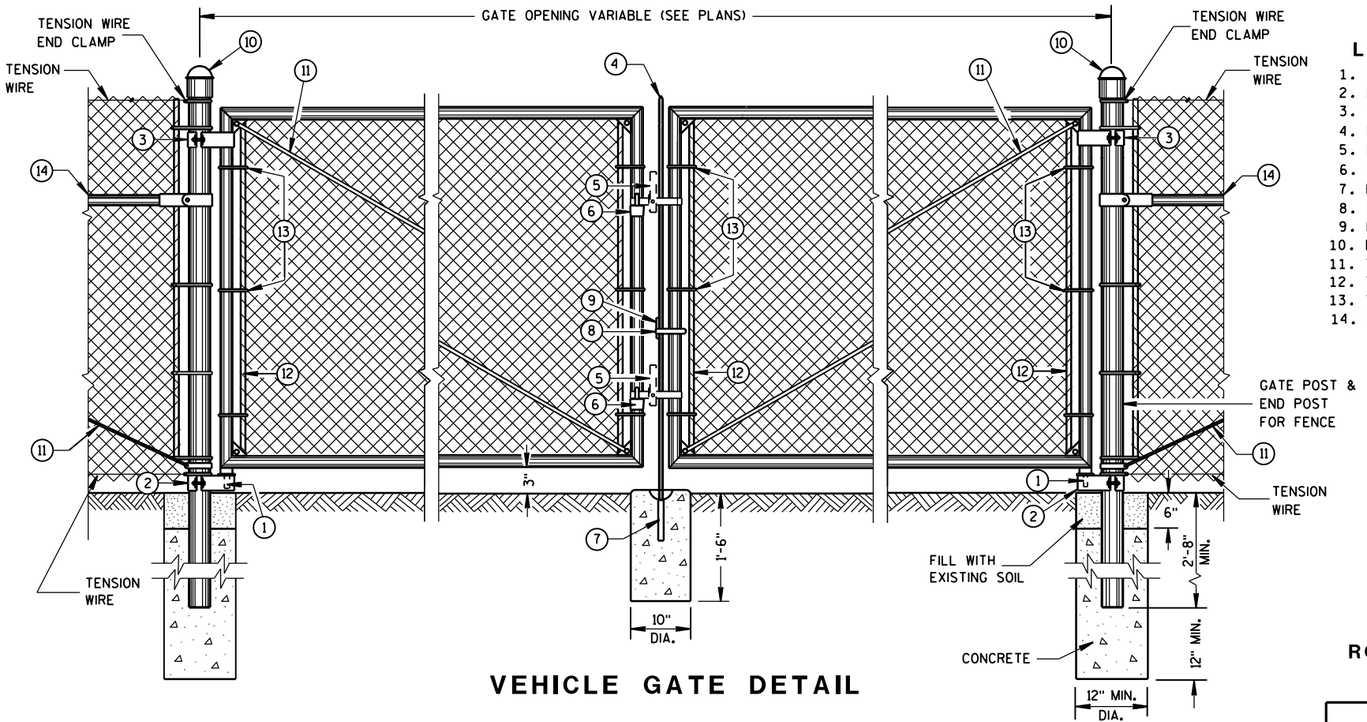
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

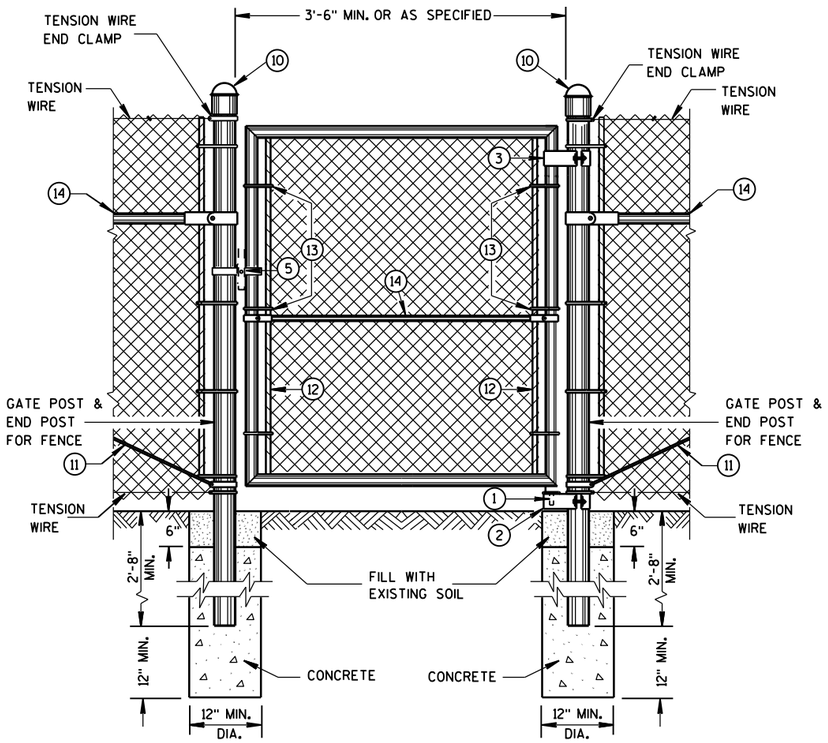
APPROVED
4/4/2008 — DATE
/S/ Jerry H. ---- — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 15 B 1-8b



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

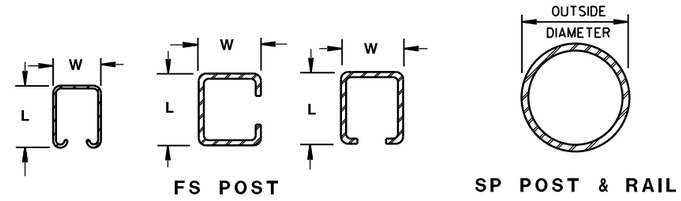
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST — SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

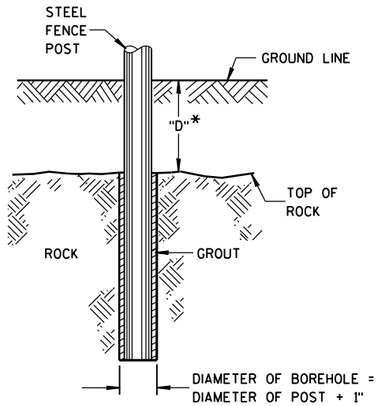
POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

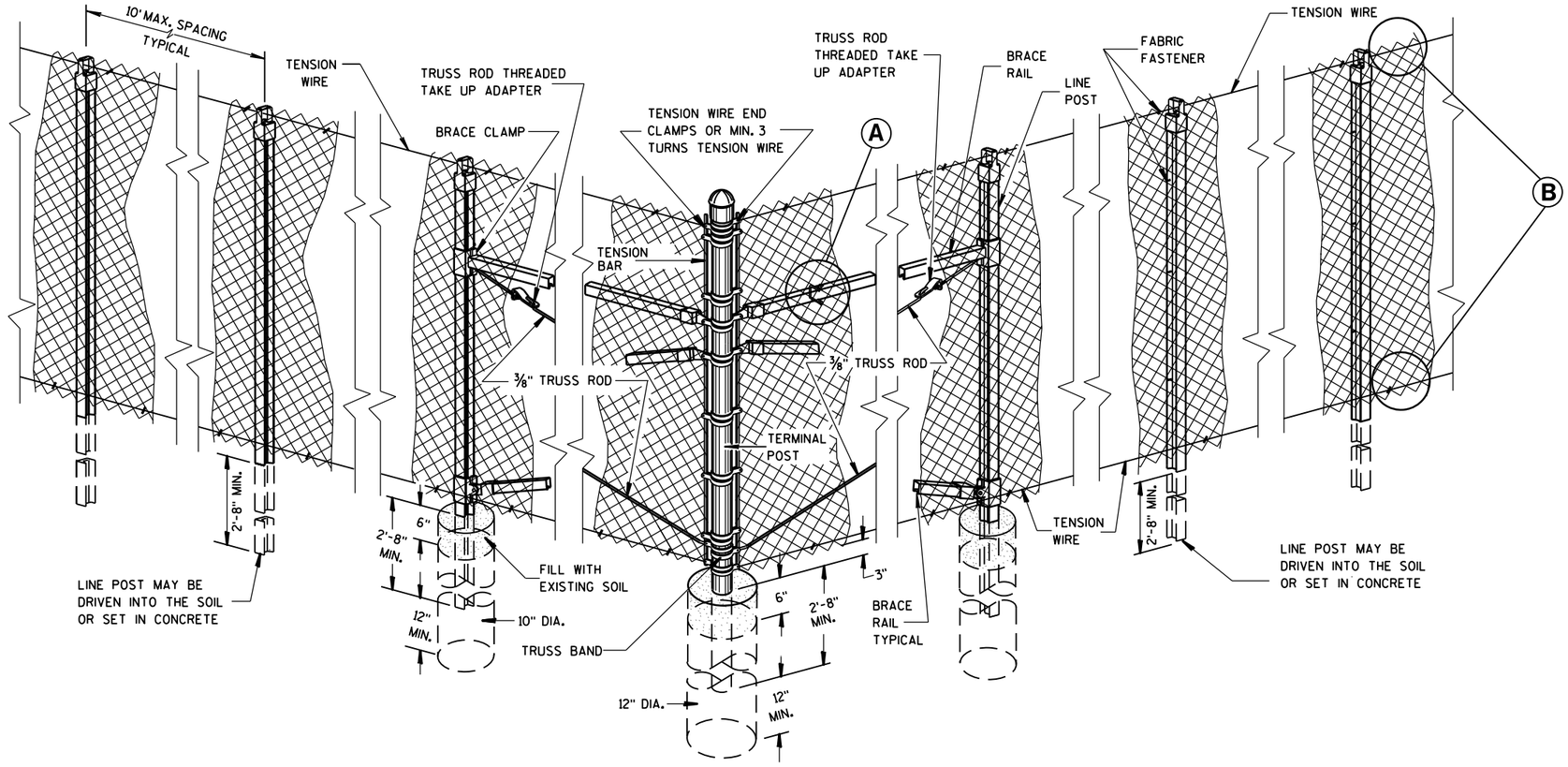
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S.D.D. 15 B 3-15a

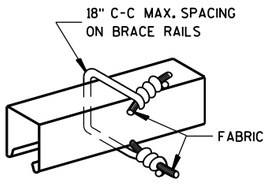


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



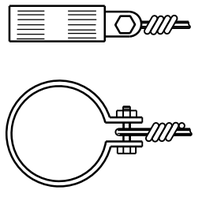
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



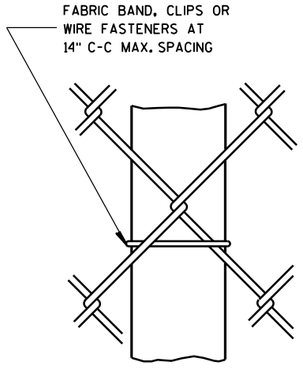
BRACE RAIL

FABRIC FASTENER

Ⓐ



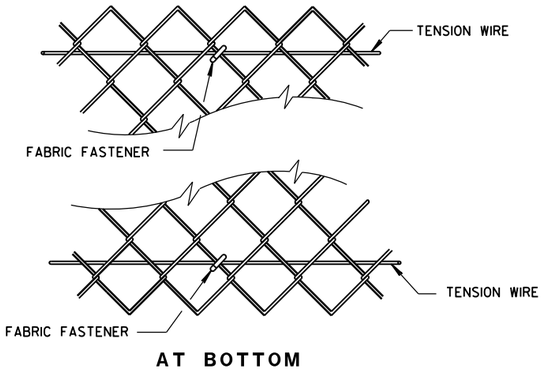
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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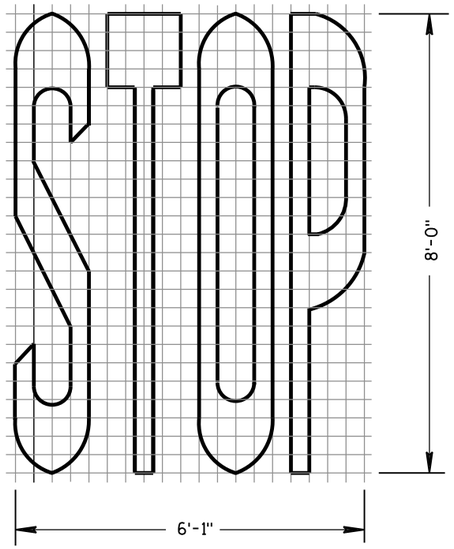
S.D.D. 15 B 3-15b

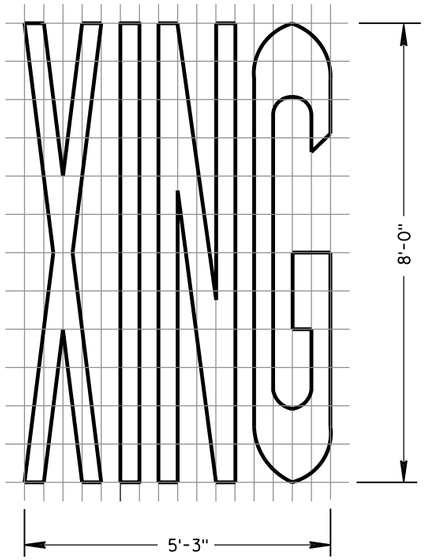
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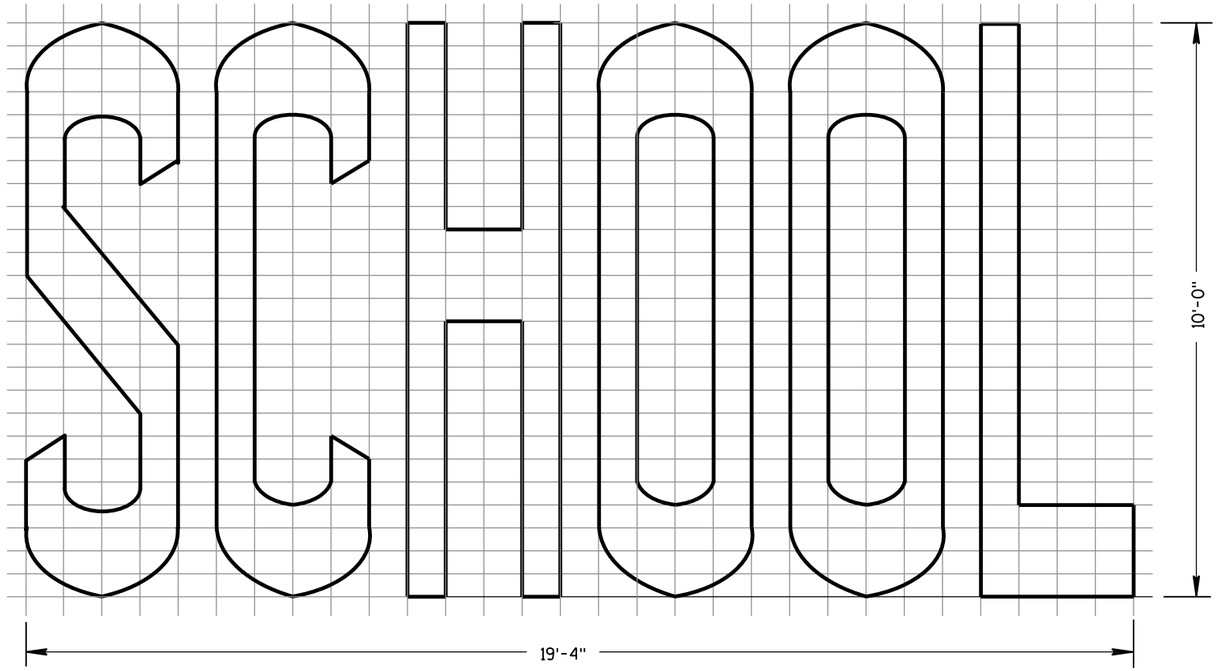
S.D.D. 15 B 3-15b

GENERAL NOTES

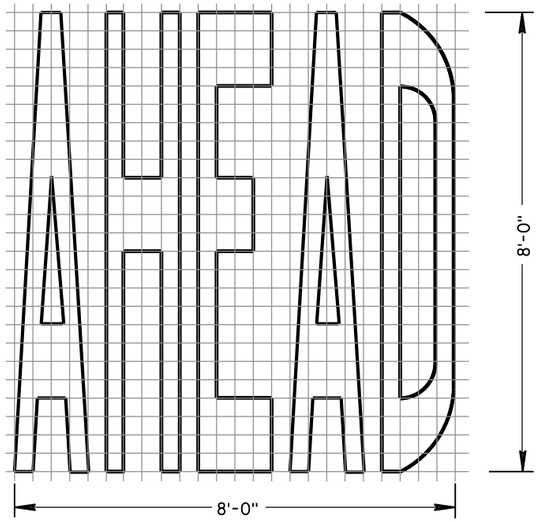
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

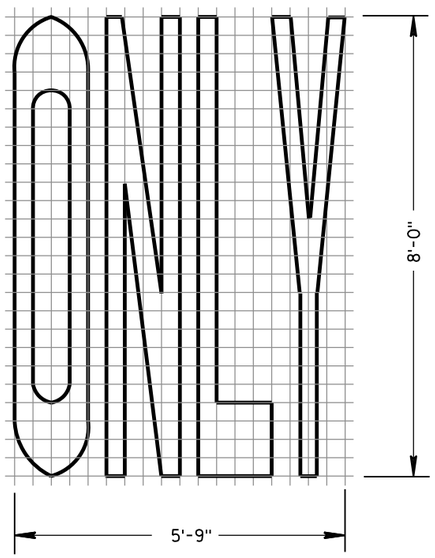


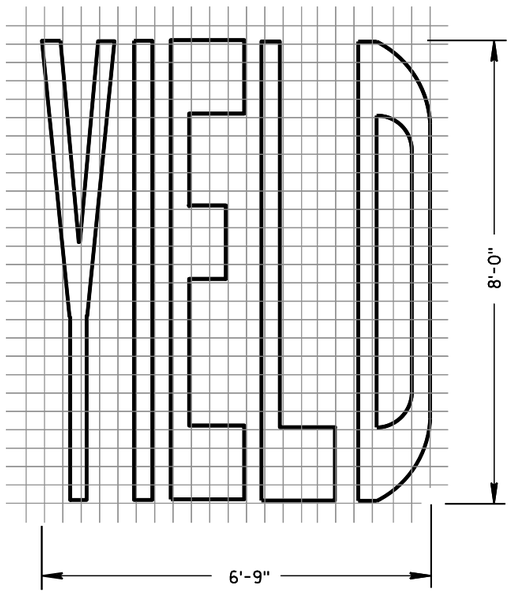


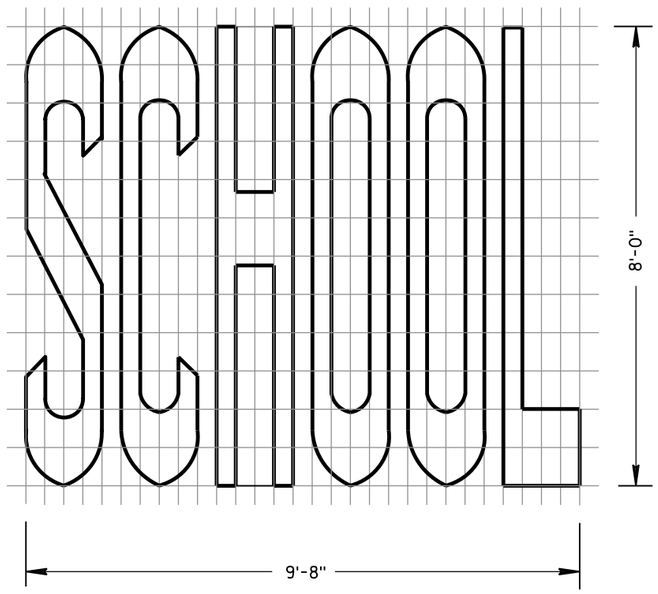


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16	/S/ Matthew R. Rauch	
DATE	STATE SIGNING AND MARK	EER

FHWA

6

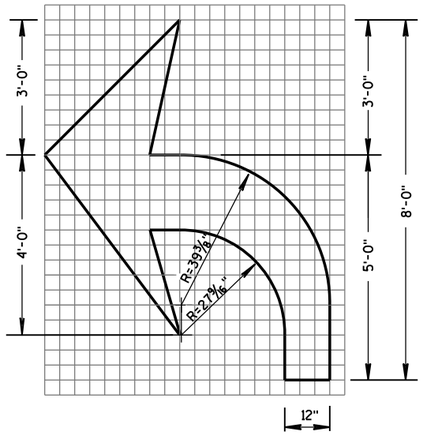
S.D.D. 15 C 7-13b

6

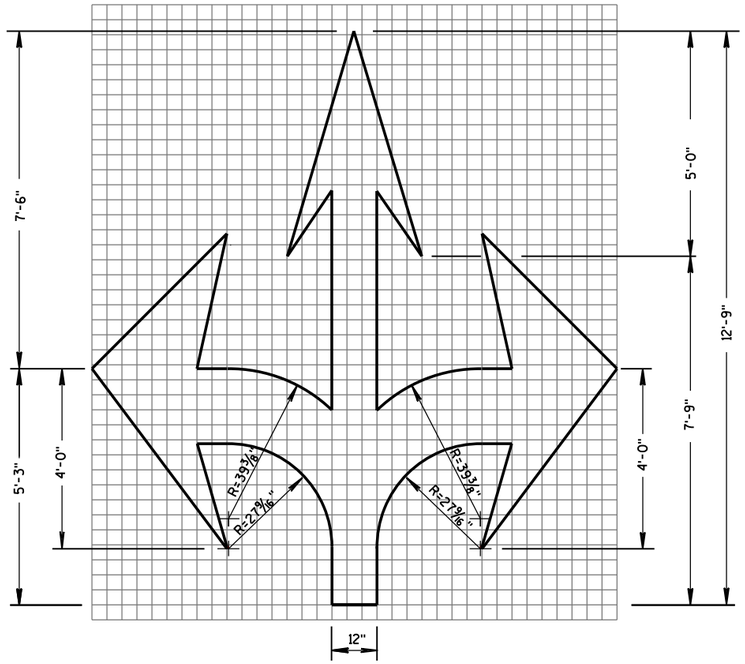
S.D.D. 15 C 7-13b

GENERAL NOTES

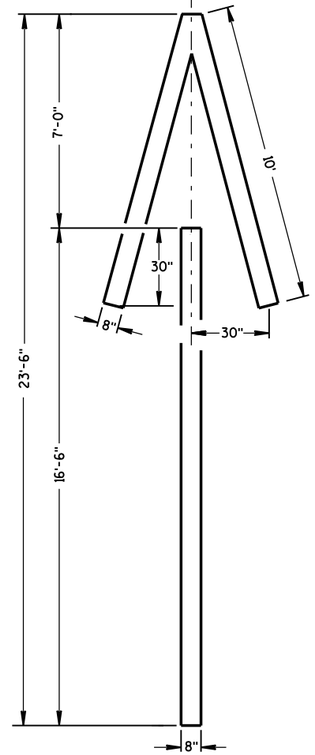
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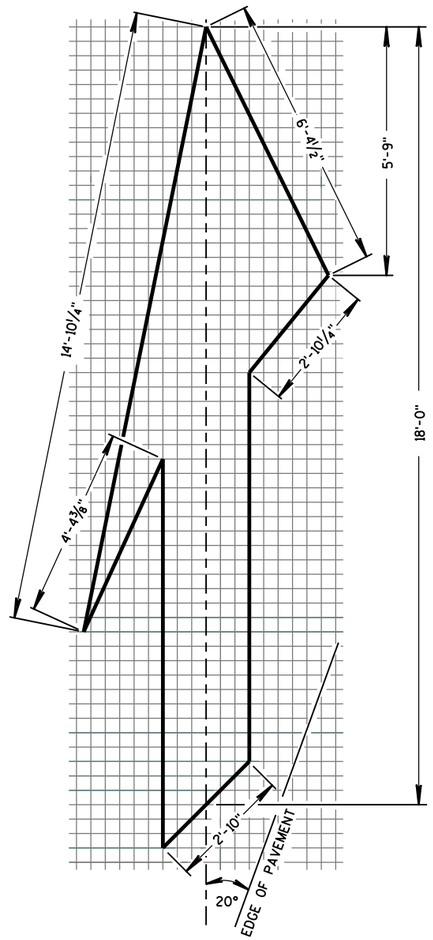
TYPE 2



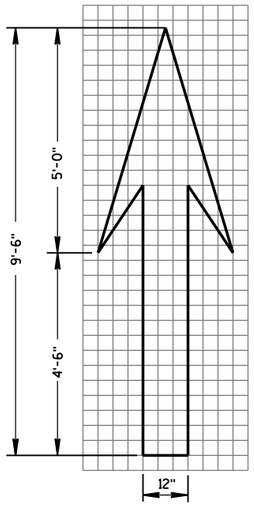
TYPE 6



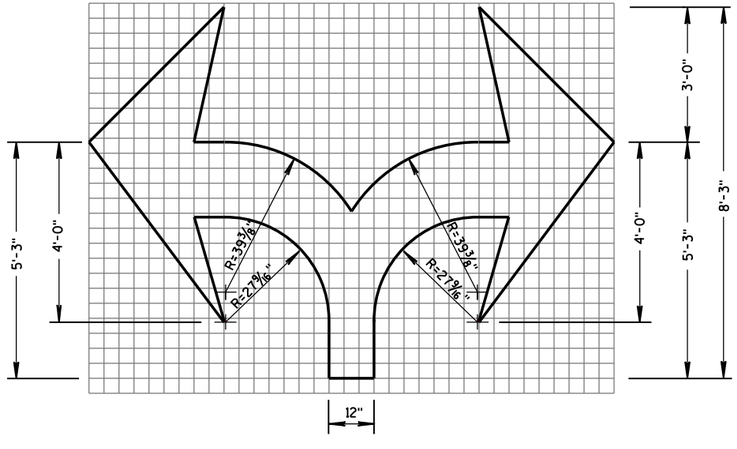
TYPE 4



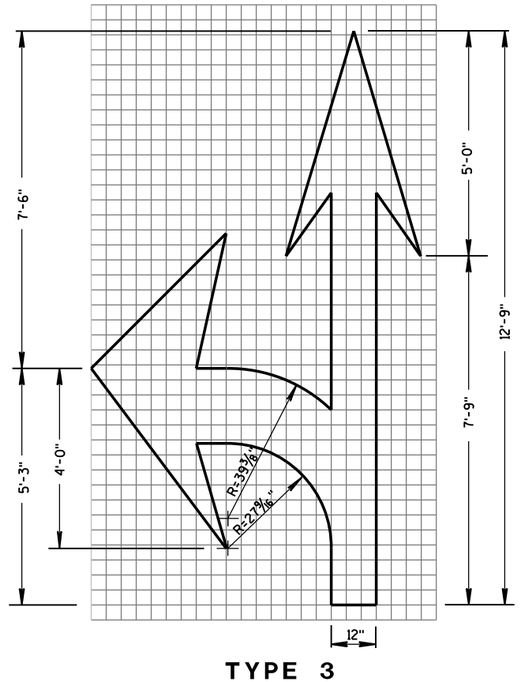
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

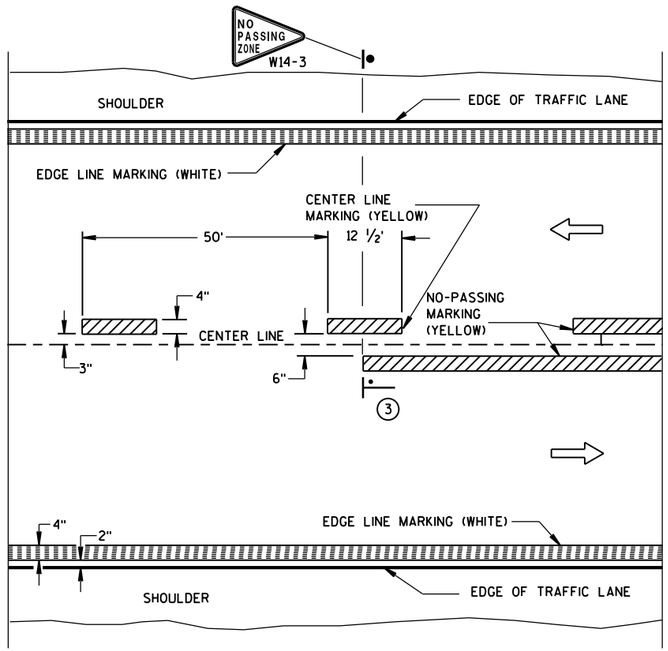
APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible]NEER
FHWA

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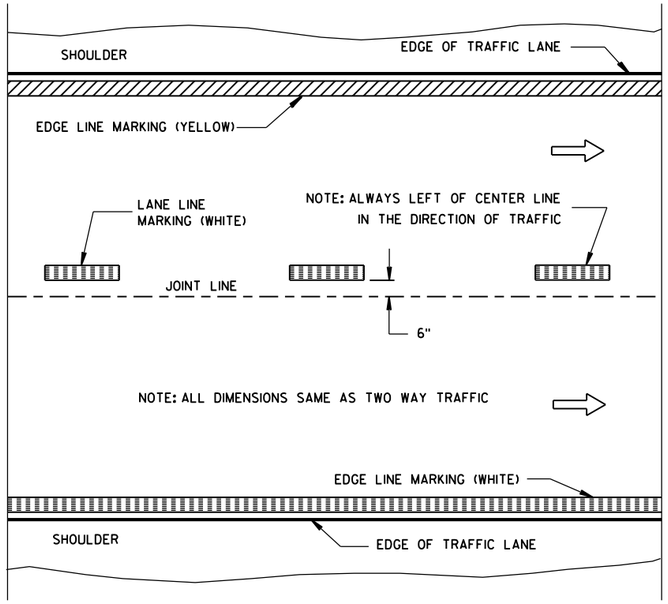
S.D.D. 15 C 7-13c

6

S.D.D. 15 C 7-13c

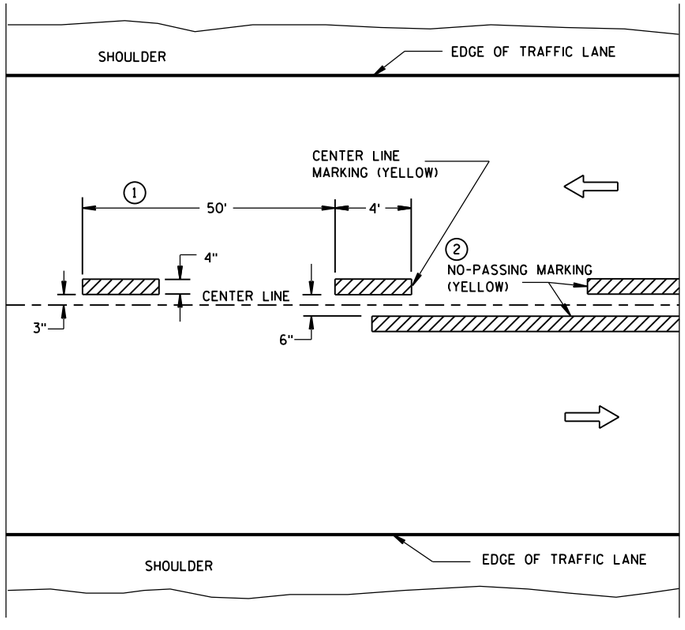


TWO WAY TRAFFIC

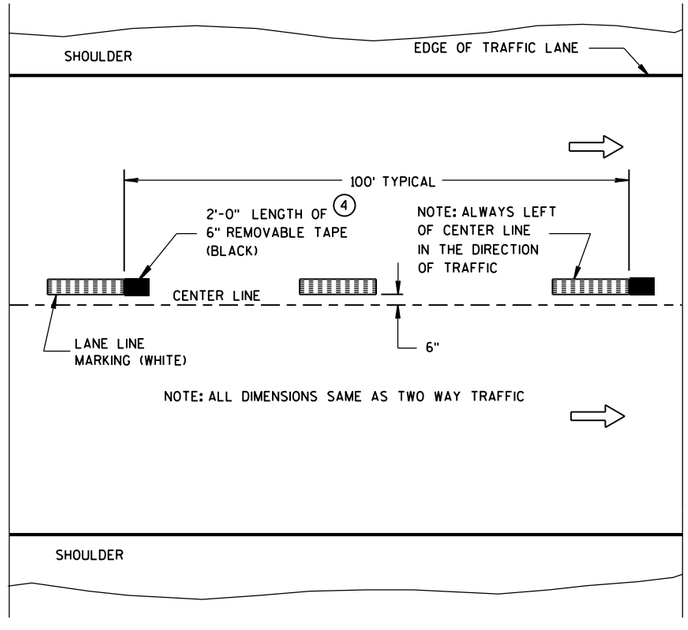


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

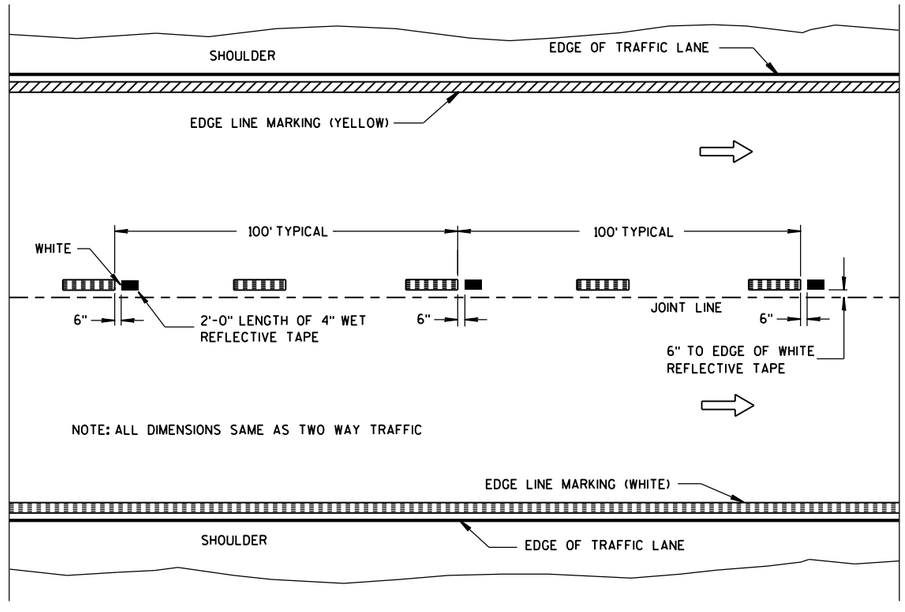
GENERAL NOTES

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

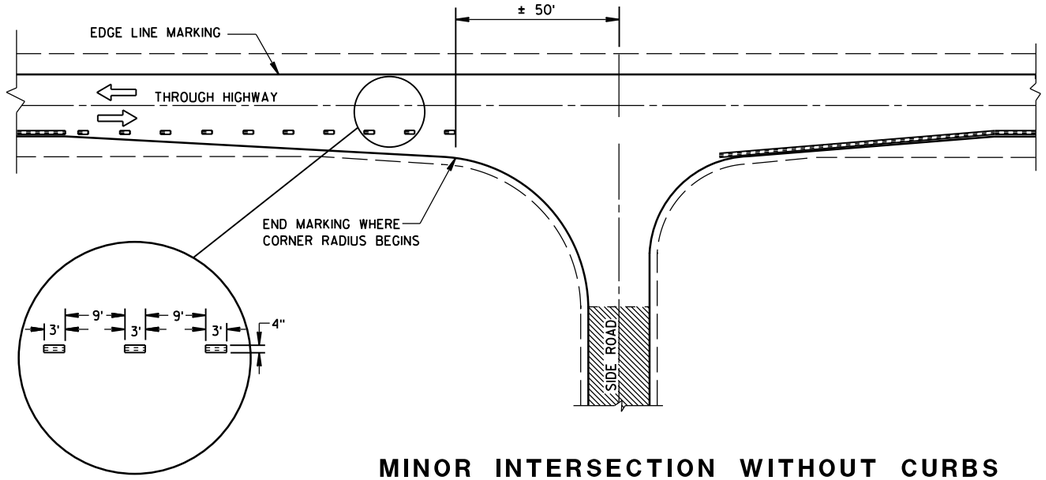
FHWA

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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.

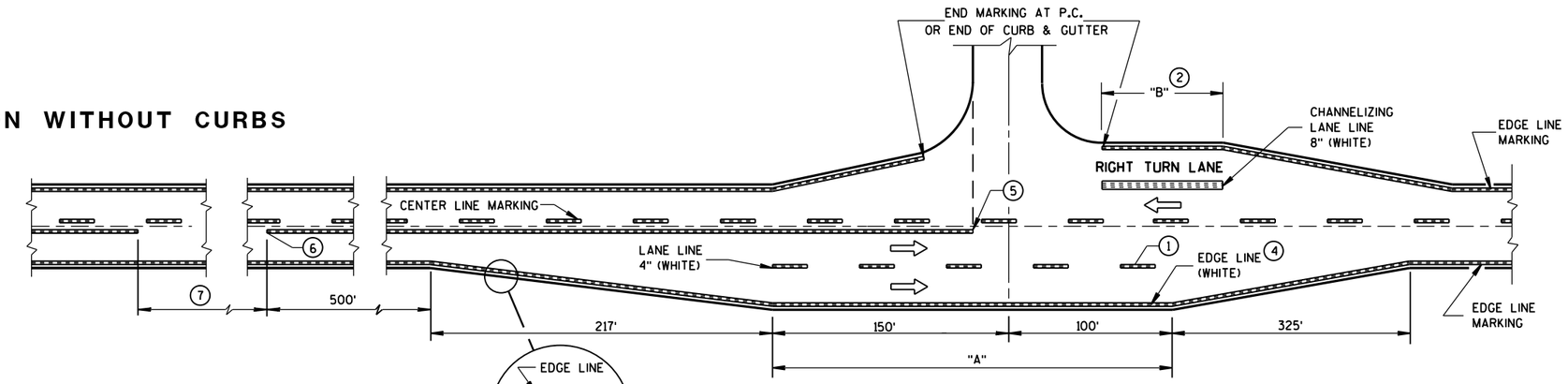
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

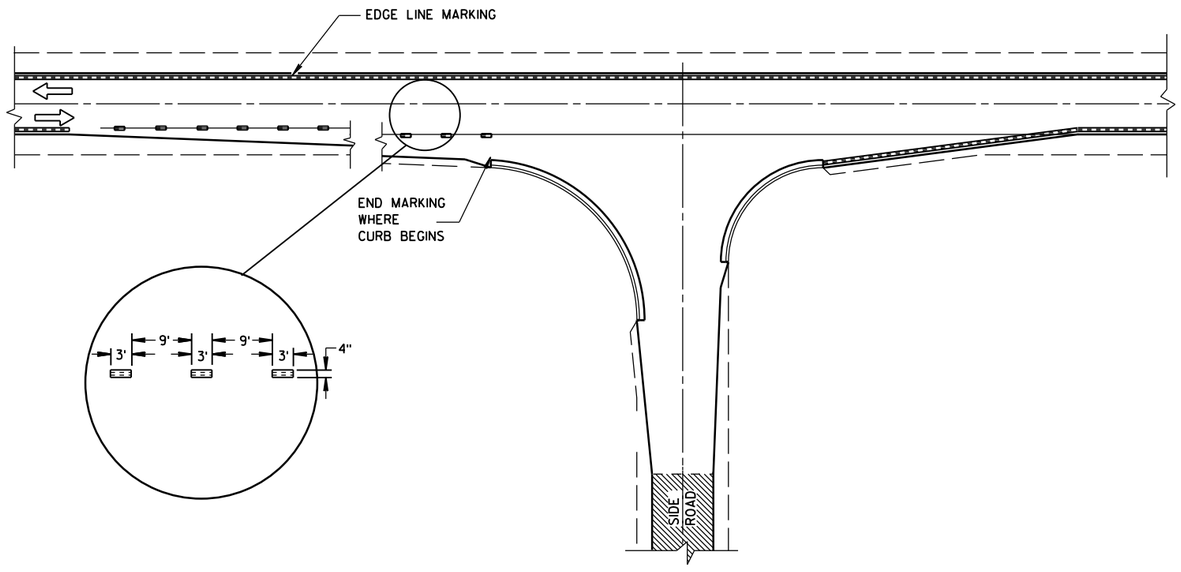
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



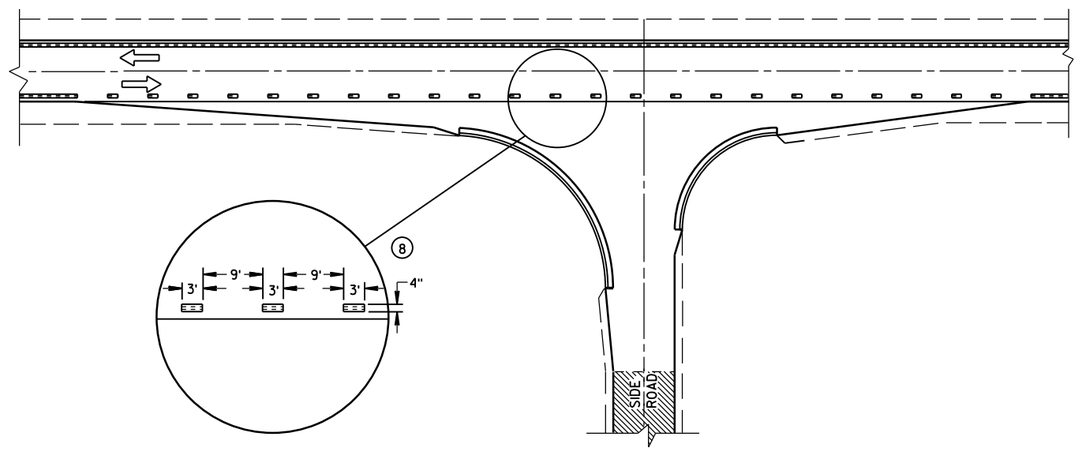
MAJOR INTERSECTIONS

(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)

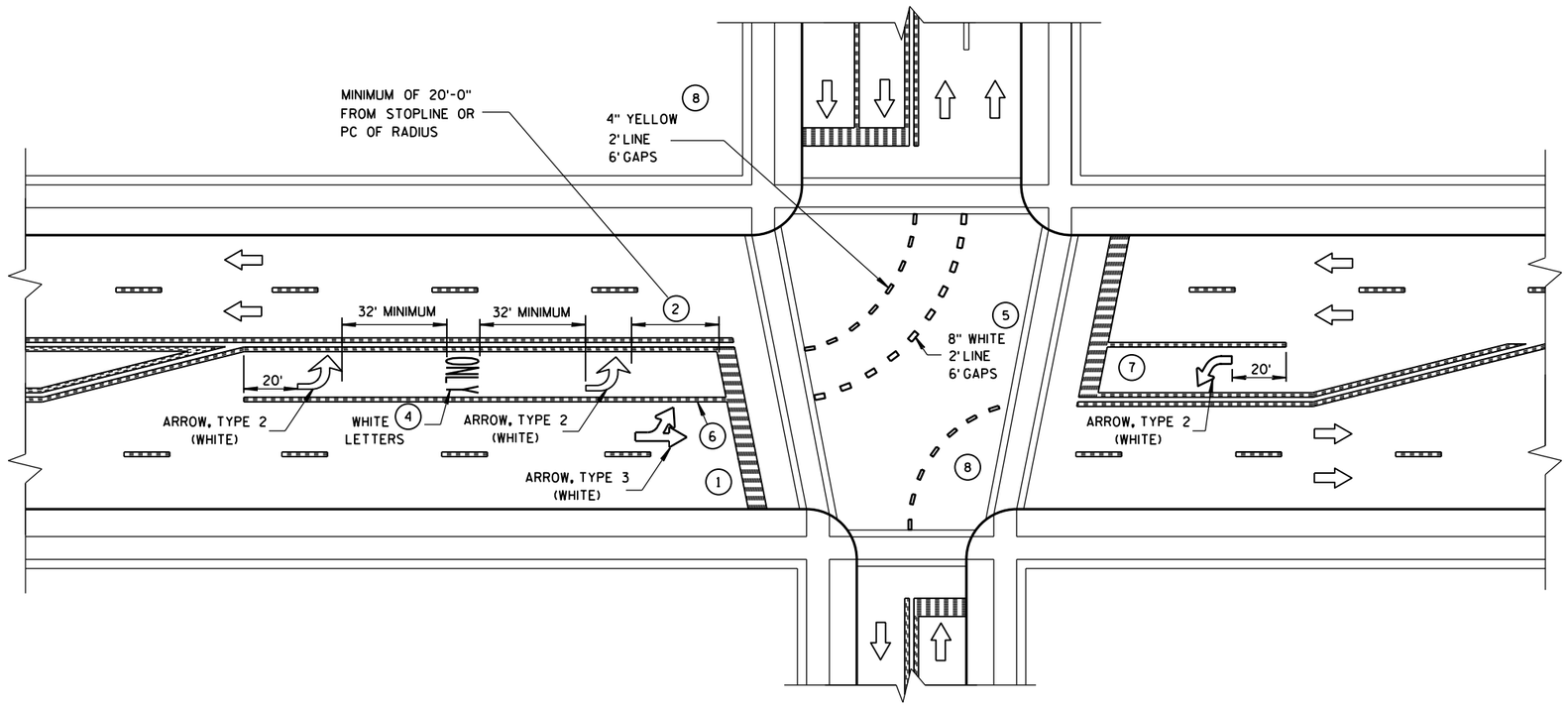
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-16b

6

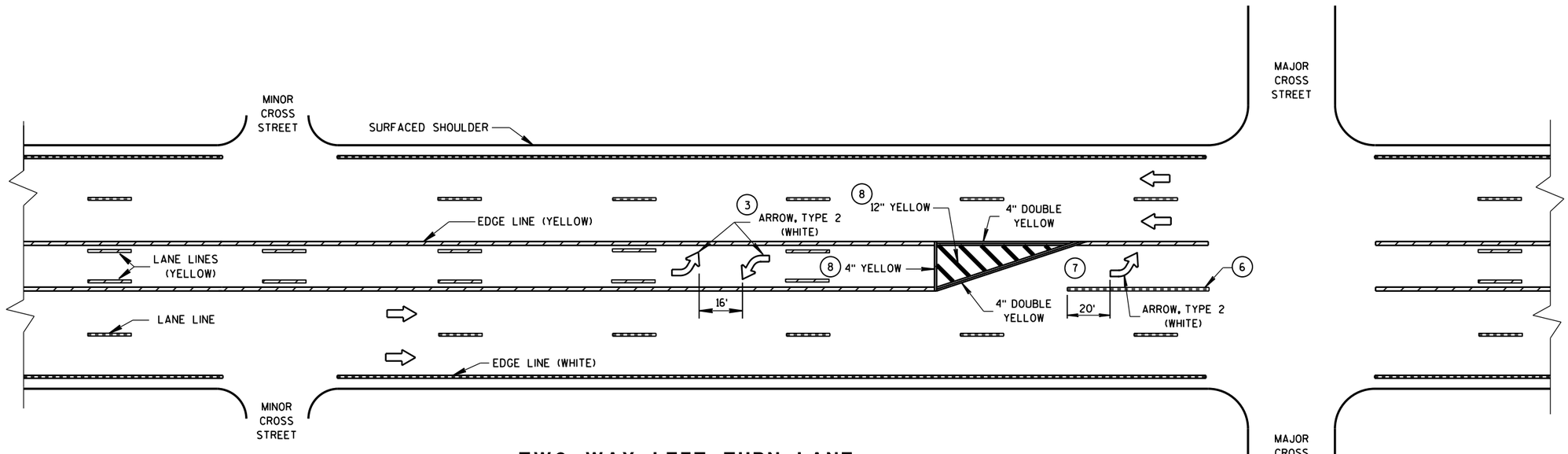
S.D.D. 15 C 8-16b



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)

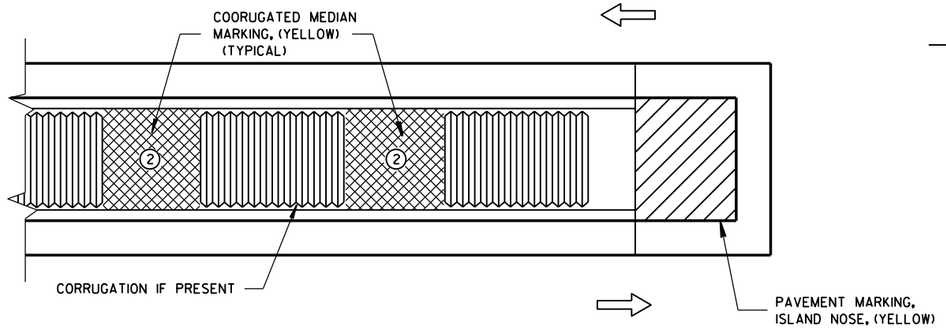
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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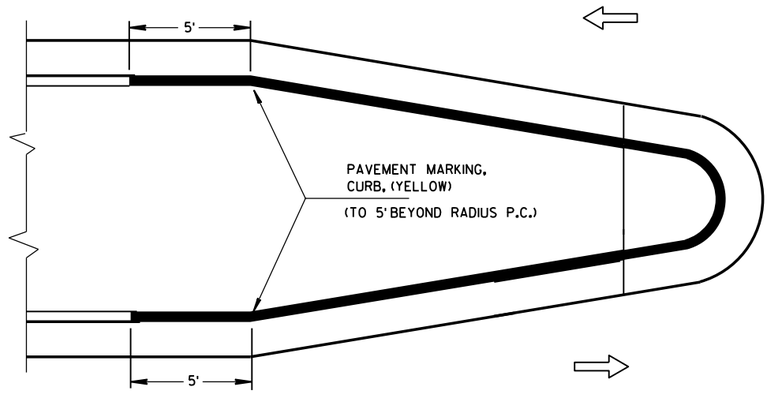
S.D.D. 15 C 8-16e

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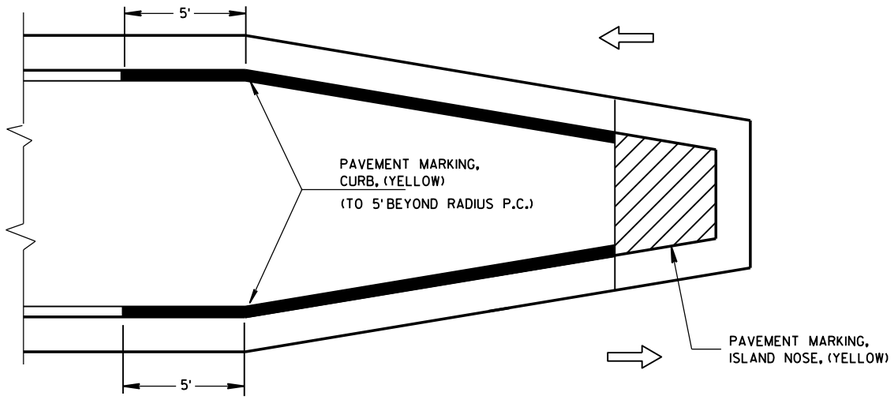
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

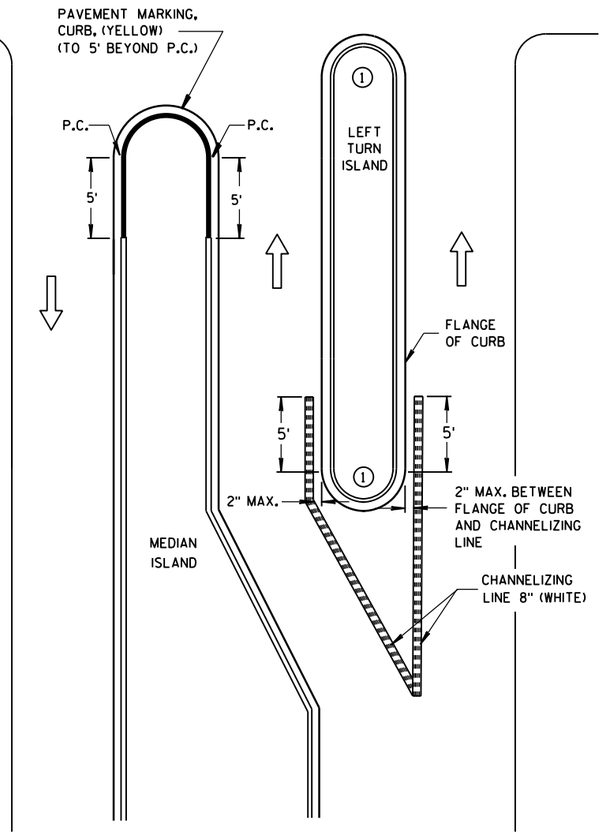


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

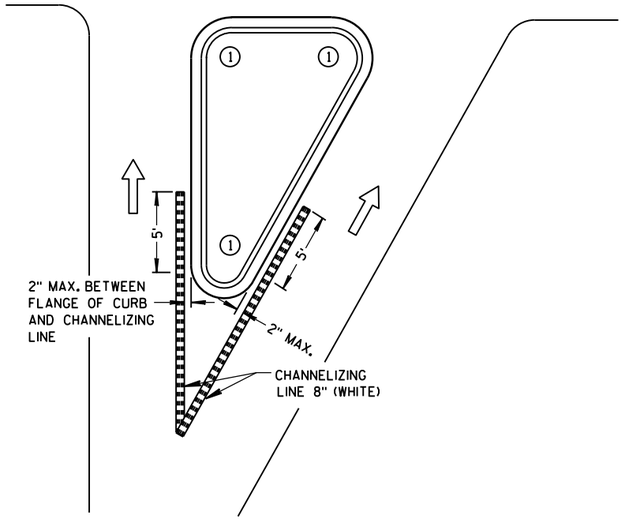


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 8-16f

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

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

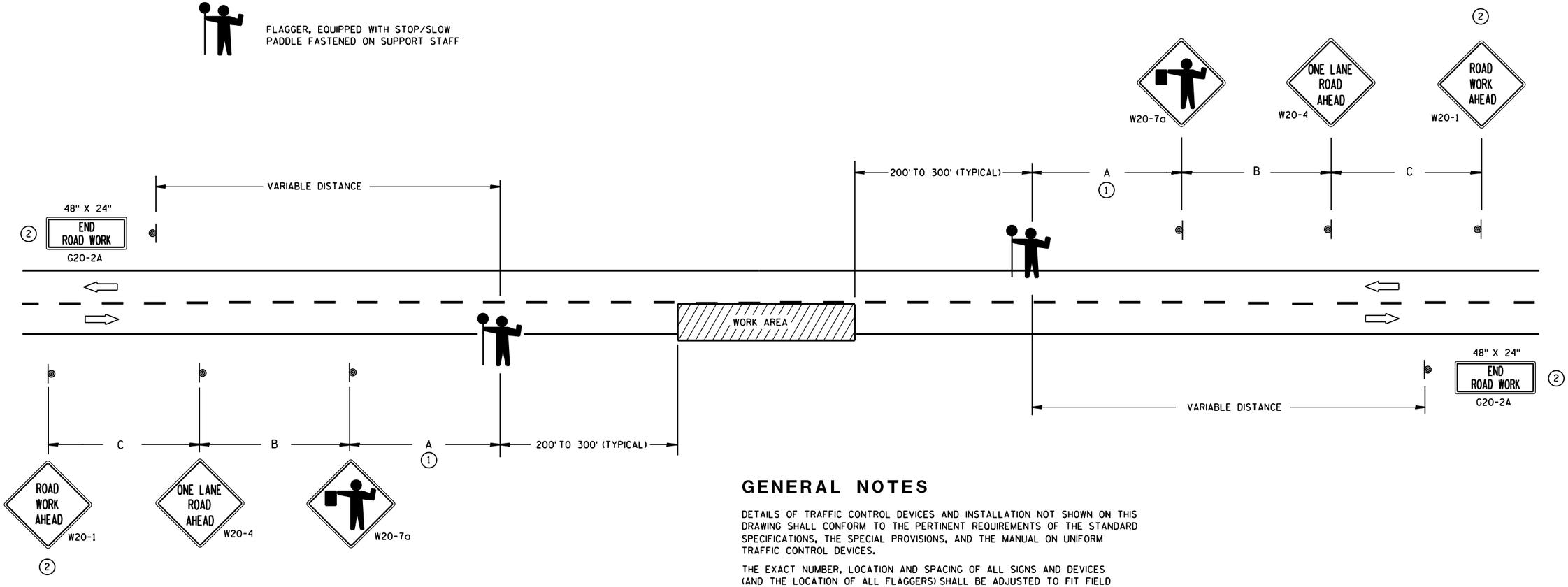
SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



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

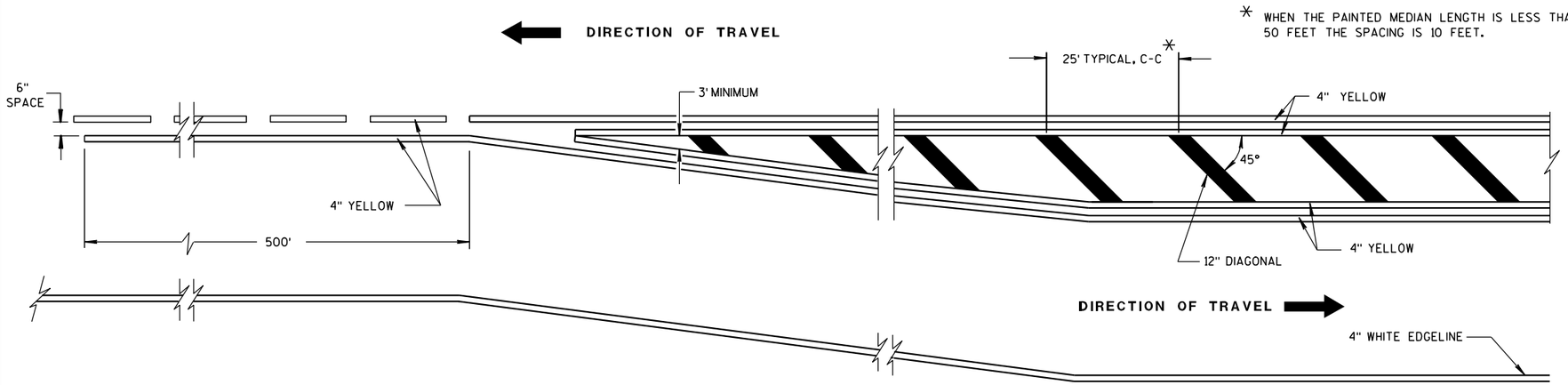
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 C 12-4

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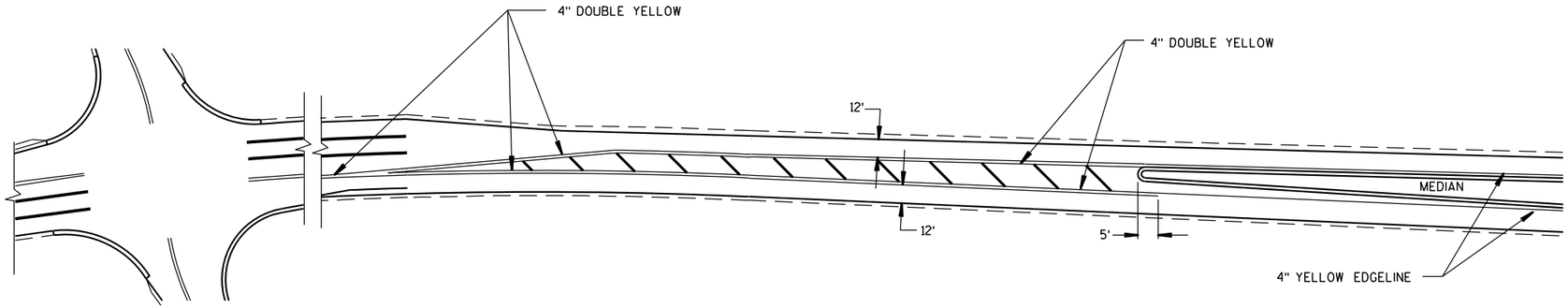
S.D.D. 15 C 12-4



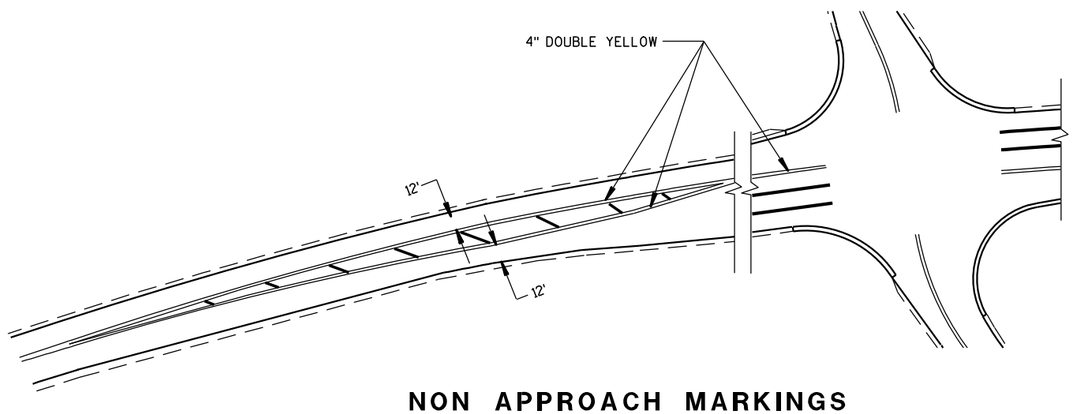
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

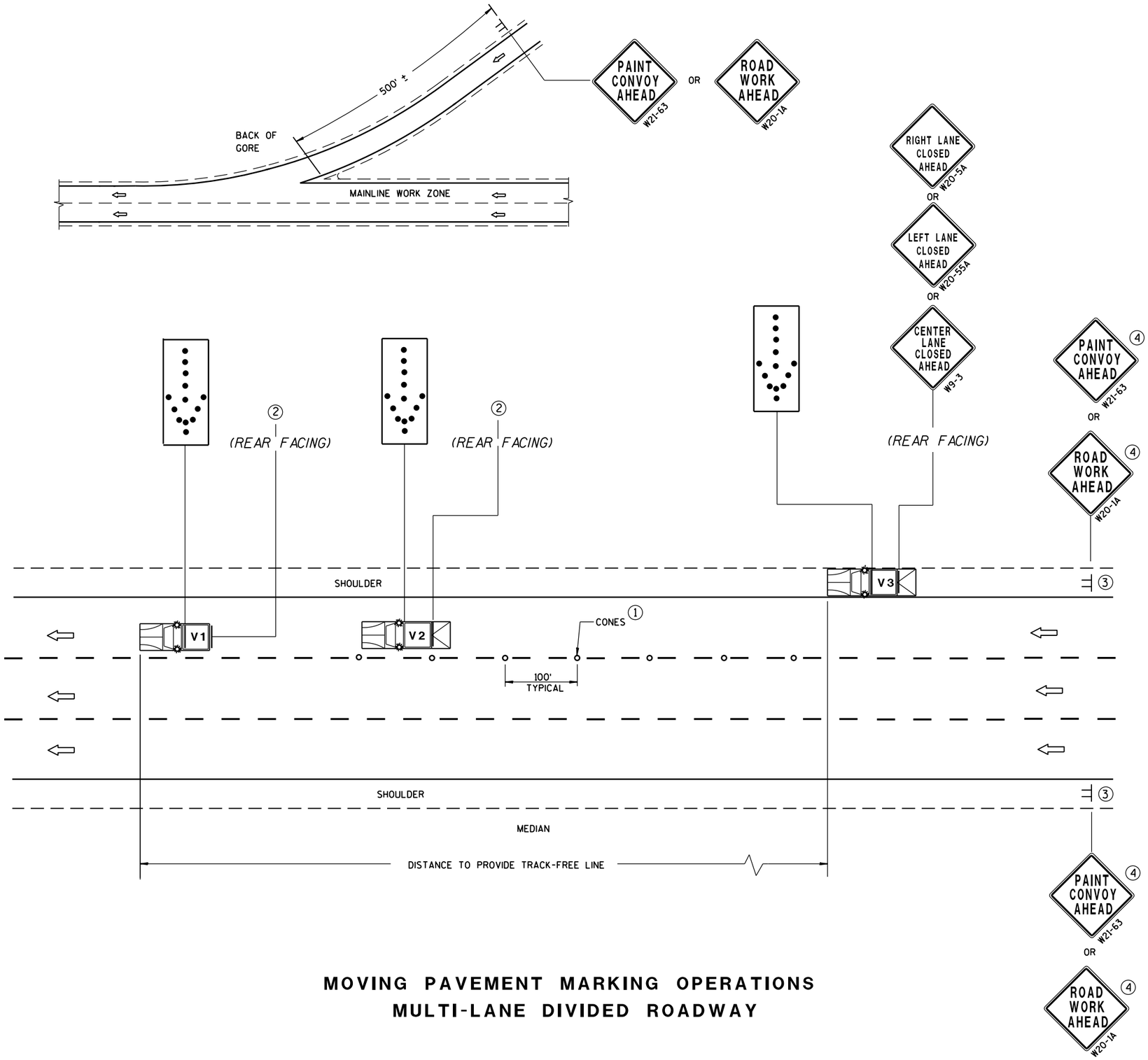
MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	187 IGN

6

S.D.D. 15 C 18-3

6

S.D.D. 15 C 18-3



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED 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.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

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.

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

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

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

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

(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) SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

(4) 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 (MERGE)

MOVING PAVEMENT MARKING OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON SAFETY ENGINI
FHWA

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S.D.D. 15 C 19-4c

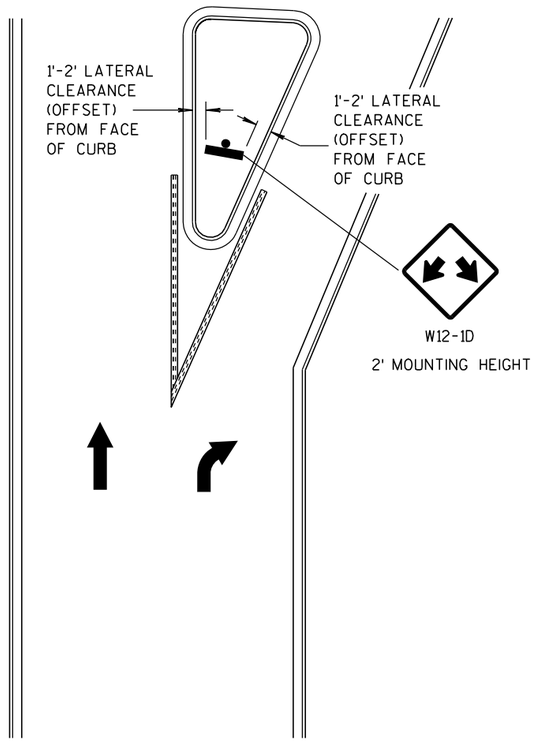
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S.D.D. 15 C 19-4c

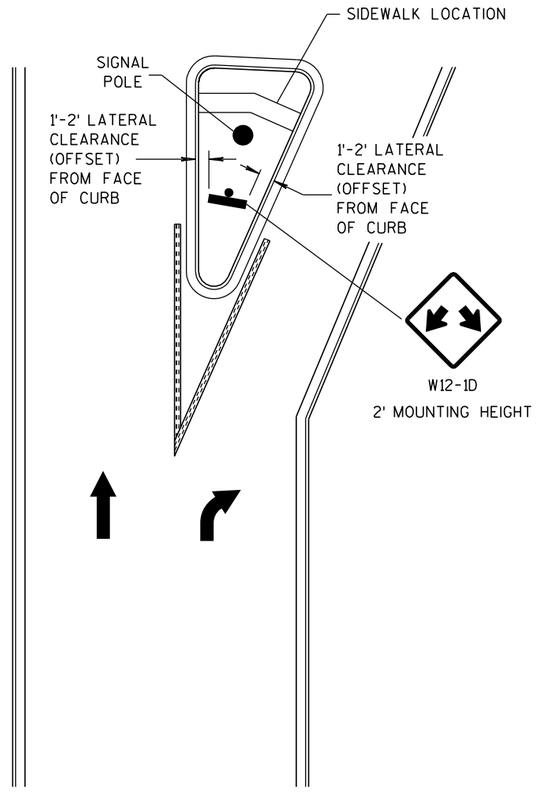
GENERAL NOTE

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

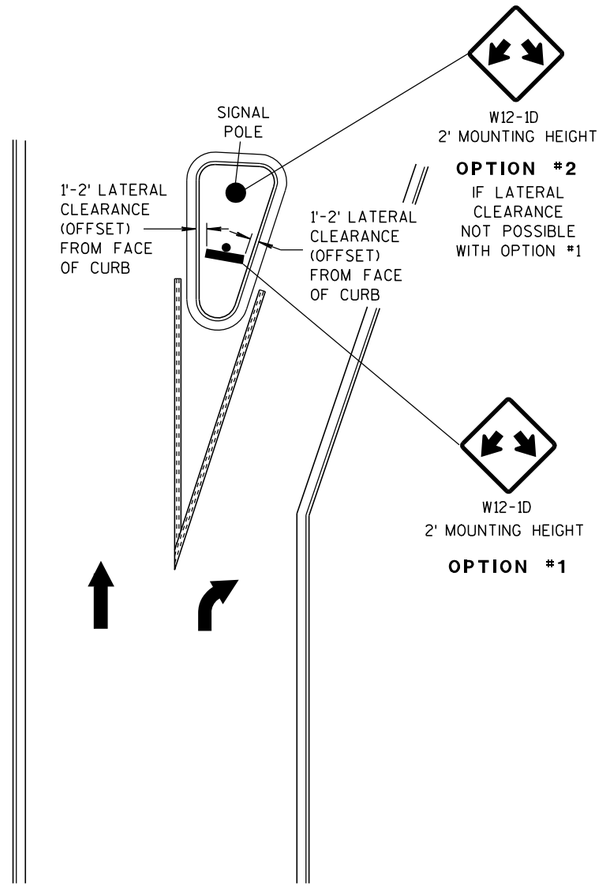
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.



LARGE RIGHT TURN ISLAND



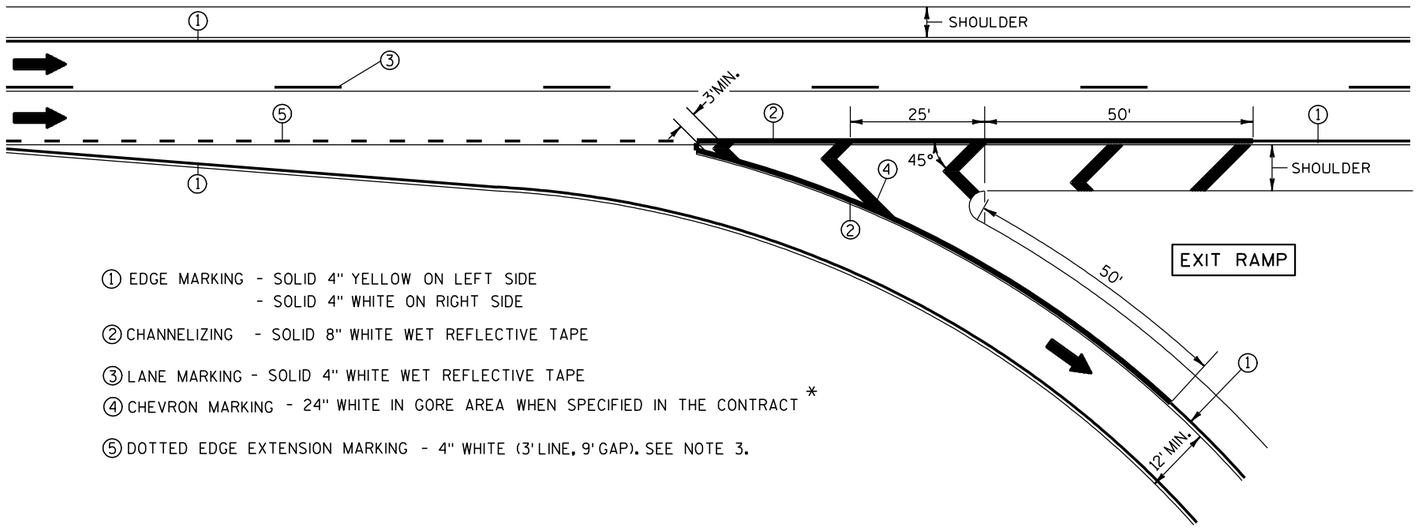
LARGE RIGHT TURN ISLAND
WITH SIGNAL POLE



SMALL RIGHT TURN ISLAND

DOUBLE ARROW WARNING SIGN PLACEMENT

DOUBLE ARROW WARNING SIGN PLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
10-22-08 DATE	/S/ Thomas N. Nothem STATE TRAFFIC ENGINEER
FHWA	189 IGN



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

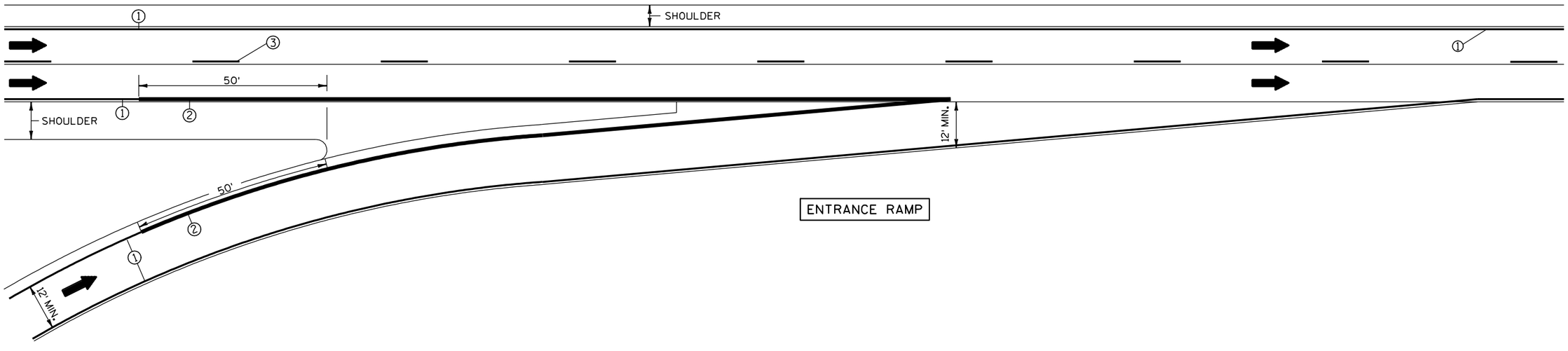
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



6

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S.D.D. 15 C 31-1a

S.D.D. 15 C 31-1a

PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

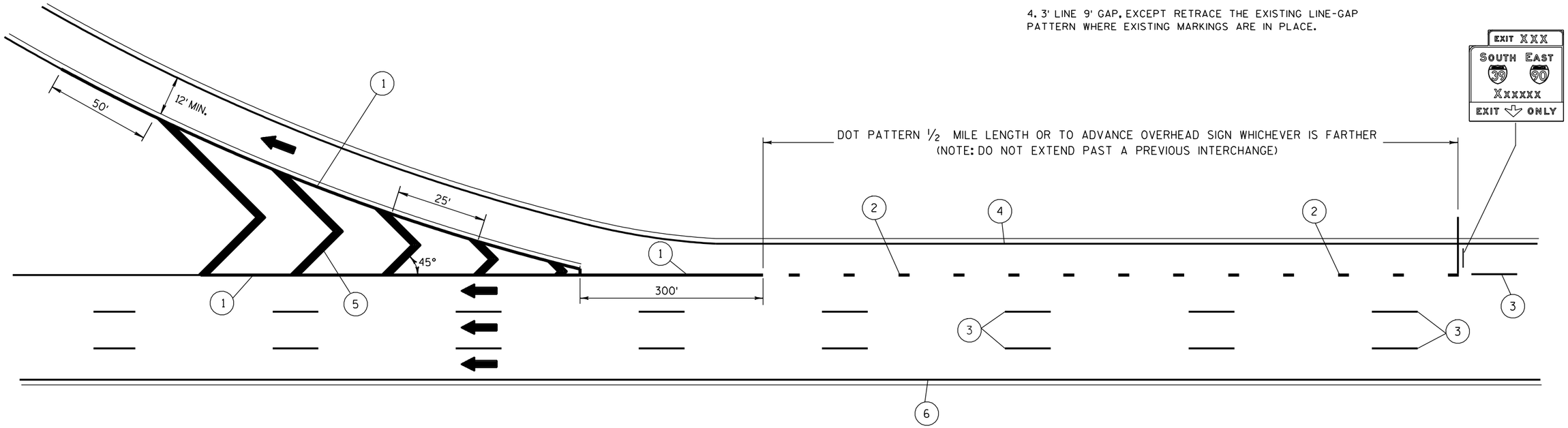
NOTES:

1. SEE STANDARD DETAIL DRAWING 15 C 10 FOR SPRAYED OR NON WET REFLECTIVE LINE SEGMENTS.

2. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

3. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

4. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.



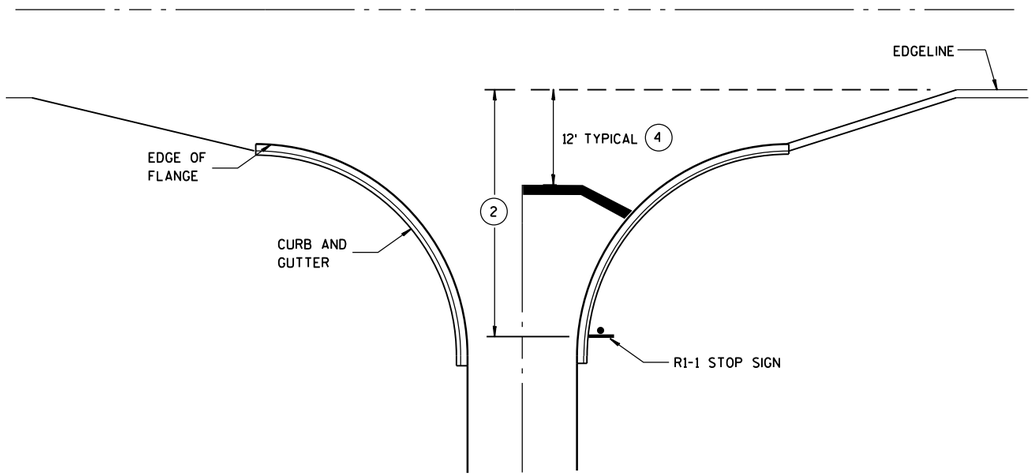
1. CHANNELIZING - SOLID 8" WHITE WET RELECTIVE TAPE
2. 3' LINE, 9' GAP SOLID 8" WHITE WET REFLECTIVE TAPE. SEE NOTE 4.
3. SOLID 4" WHITE WET REFLECTIVE TAPE
4. 4" WHITE EDGELINE
5. CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT
6. 4" YELLOW EDGELINE

LANE DROP
PAVEMENT MARKING

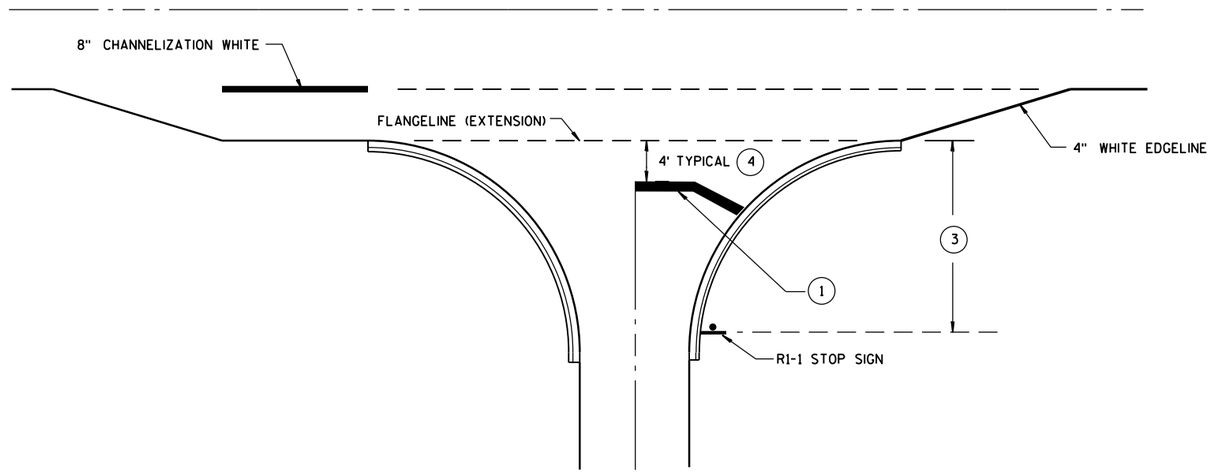
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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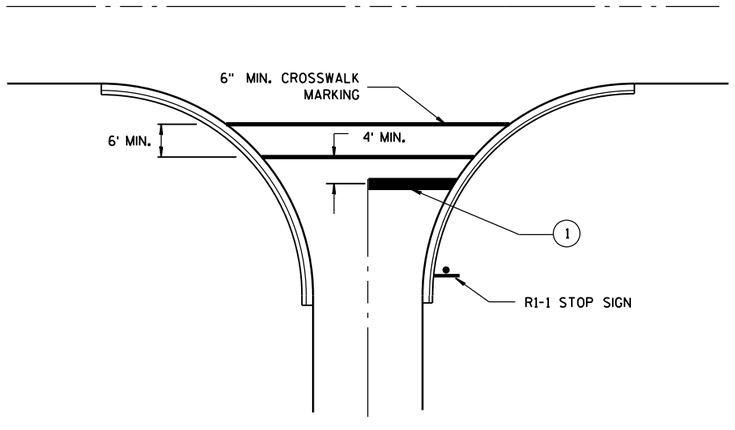
S.D.D. 15 C 31-1b
S.D.D. 15 C 31-1b



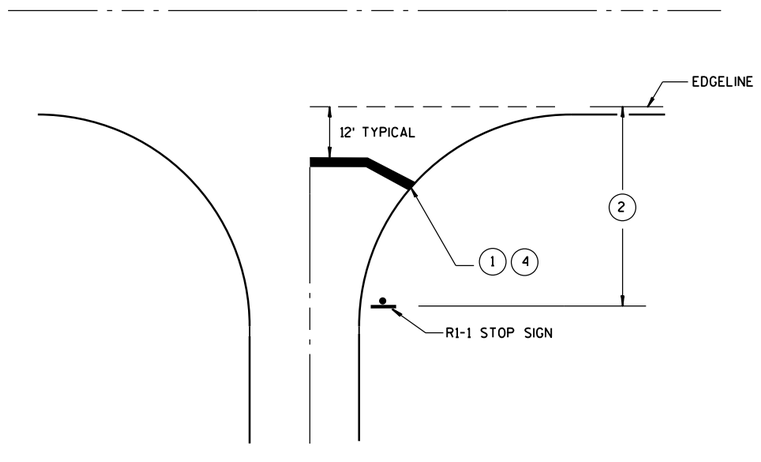
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

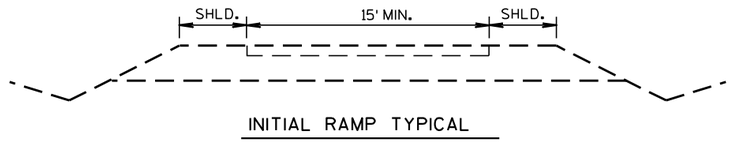
4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible]NEER

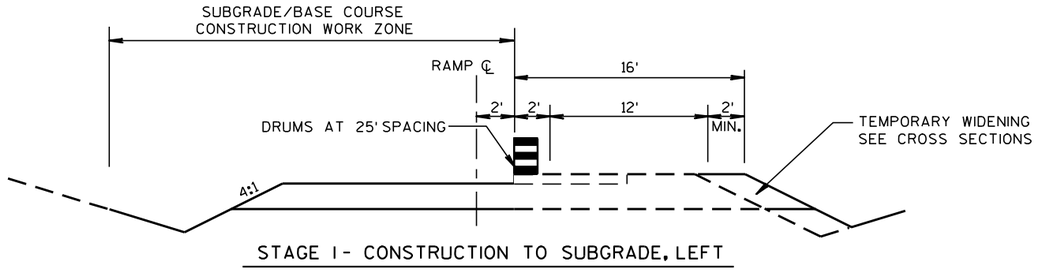
FHWA

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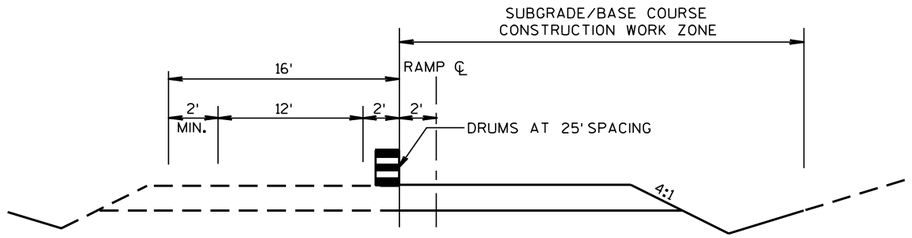
S.D.D. 15 C 33-2



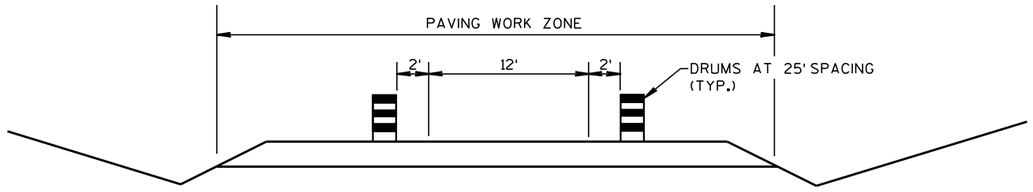
INITIAL RAMP TYPICAL



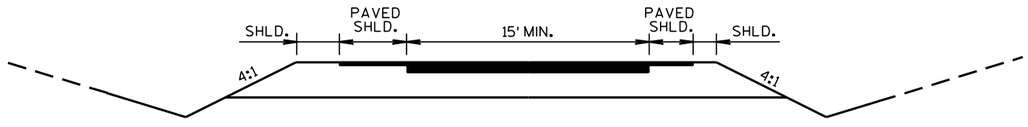
STAGE I - CONSTRUCTION TO SUBGRADE, LEFT



STAGE II - CONSTRUCTION TO SUBGRADE, RIGHT



STAGE III - TRAFFIC ON BASE COURSE



STAGE IV - PAVING

GENERAL NOTES :

WORK SHALL BE SCHEDULED FOR ALL STAGES TO MINIMIZE INCONVENIENCE TO THE TRAFFIC USING THE RAMP WHILE IT IS ONLY BASE COURSE.

IN STAGE III, A MINIMUM 12' LANE WIDTH SHALL BE DELINEATED WITH DRUMS ALONG BOTH EDGES AT ALL TIMES UNTIL PAVED AND PAVEMENT MARKINGS ARE PLACED.

TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-94
DATE

/S/ Chester J. [illegible]
DIRECTOR, OFFICE [illegible]

FHWA

6

S.D.D. 15 D 4-1

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

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

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

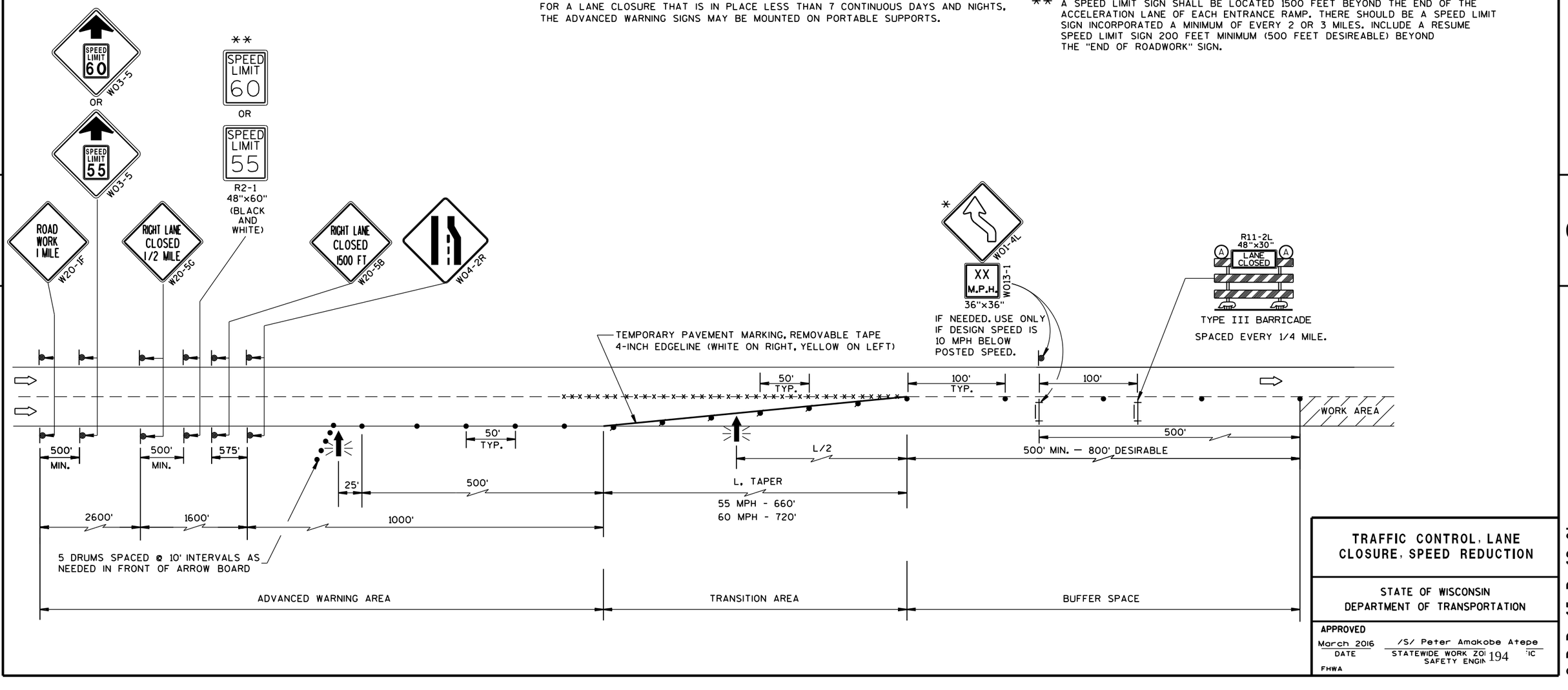
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



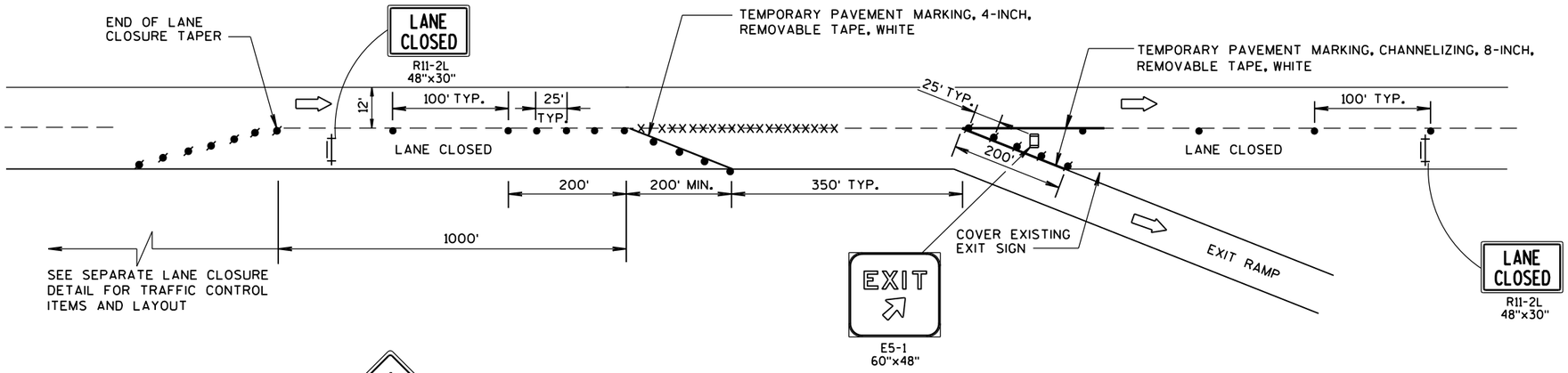
TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

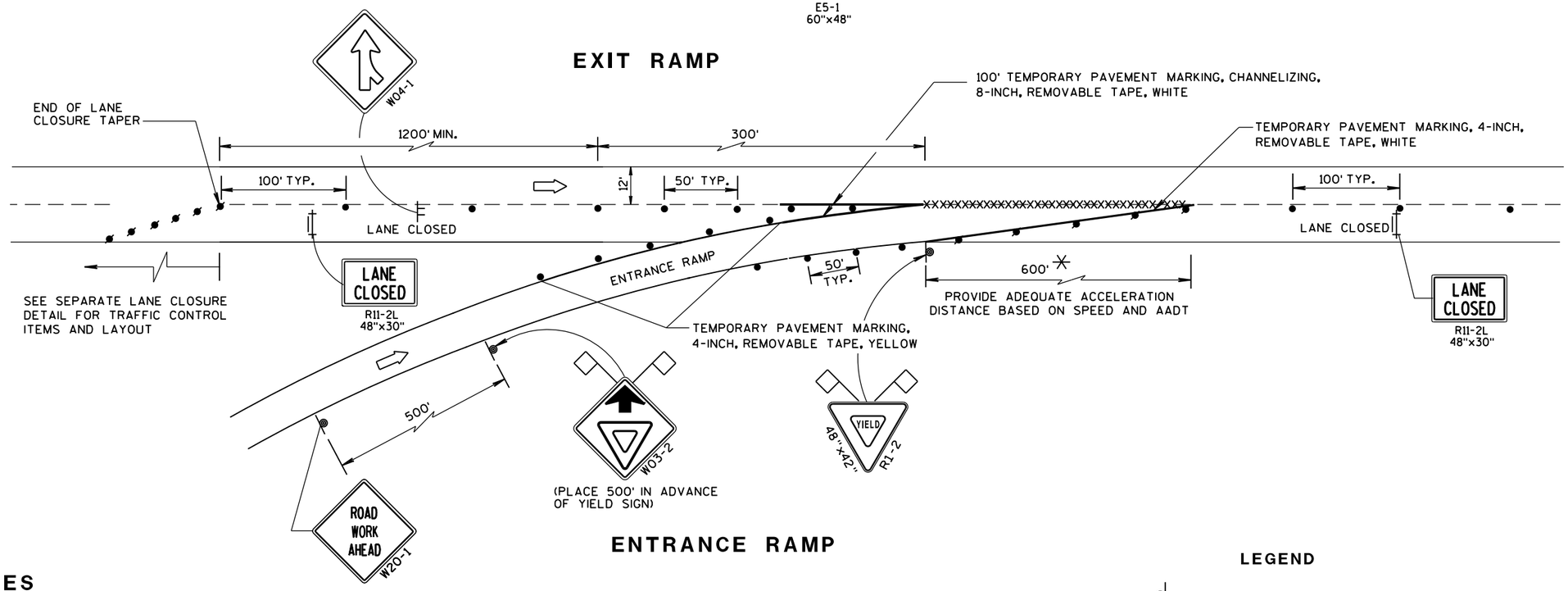
APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI IC
FHWA

S.D.D. 15 D 12-6b

S.D.D. 15 D 12-6b



EXIT RAMP



ENTRANCE RAMP

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

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

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

* LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" x 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

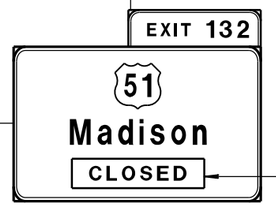
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6
S.D.D. 15 D 15-2



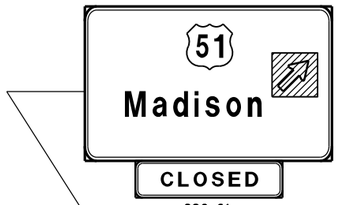
G20-60
108"x24"

OR



G20-60
108"x24"

PLACE SIGN G20-60 OVER MILEAGE
ON EXISTING E1-1A SIGN



COVER ARROW ON
EXISTING E4-1A
SIGN (COVERING
SIGNS TYPE I)

G20-61
120"x30"

TEMPORARY PAVEMENT MARKING
4" REMOVABLE TAPE, WHITE
(ACROSS THE RAMP OPENING)

END
ROAD WORK
*G20-2A
48"x24"

25' TYP.

100' MIN.

200'

EDGE OF SHOULDER

COVER EXISTING
EXIT SIGN

ROAD
WORK
AHEAD
*W20-1A

RAMP
CLOSED
AHEAD
W20-53A

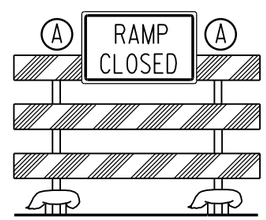
RAMP
CLOSED
1000 FT
W20-53C

1500'

1500'

1000'

R11-2R
48" X 30"
MOUNTED ON
TYPE III BARRICADE



RAMP WILL
BE CLOSED
(TIME)
BEGINNING
(DATE)

**R11-51
48"X48"
(OR SPECIAL SIGN IF INDICATED IN PLAN)

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

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

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

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.

PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

* W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

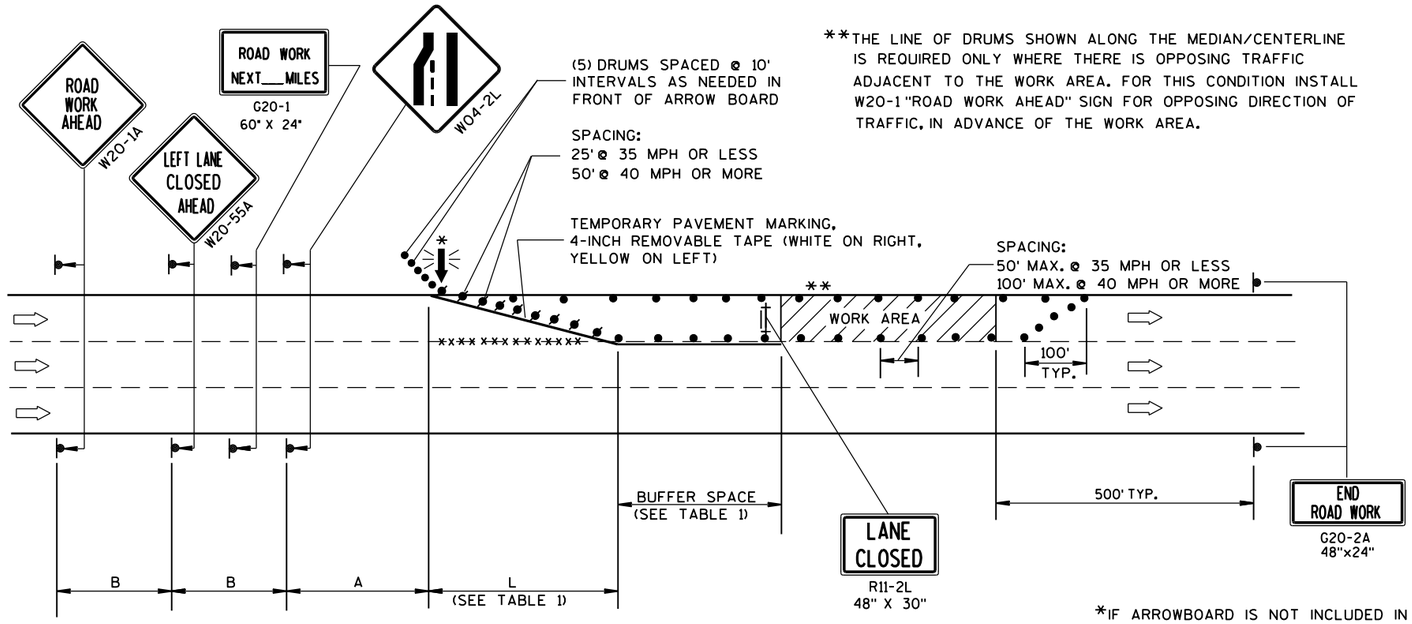
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO FIC
SAFETY ENGI
FHWA

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S.D.D. 15 D 16-3

6

S.D.D. 15 D 16-3



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

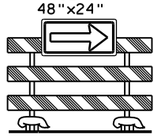


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A 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 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, OR THAT WILL BE PLACED IN A CLOSED LANE, 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.

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

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

BARRICADES IN A CLOSED LANE 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.

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

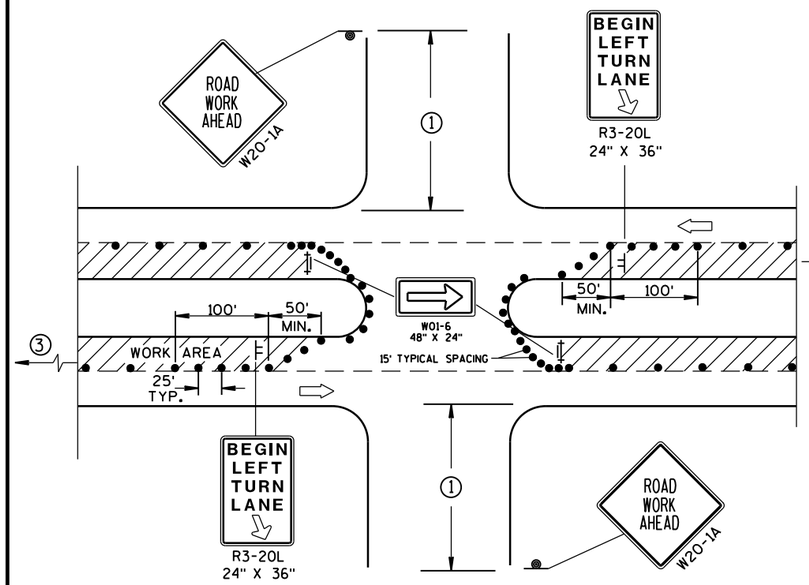
APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA — IC

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S.D.D. 15 D 20-4

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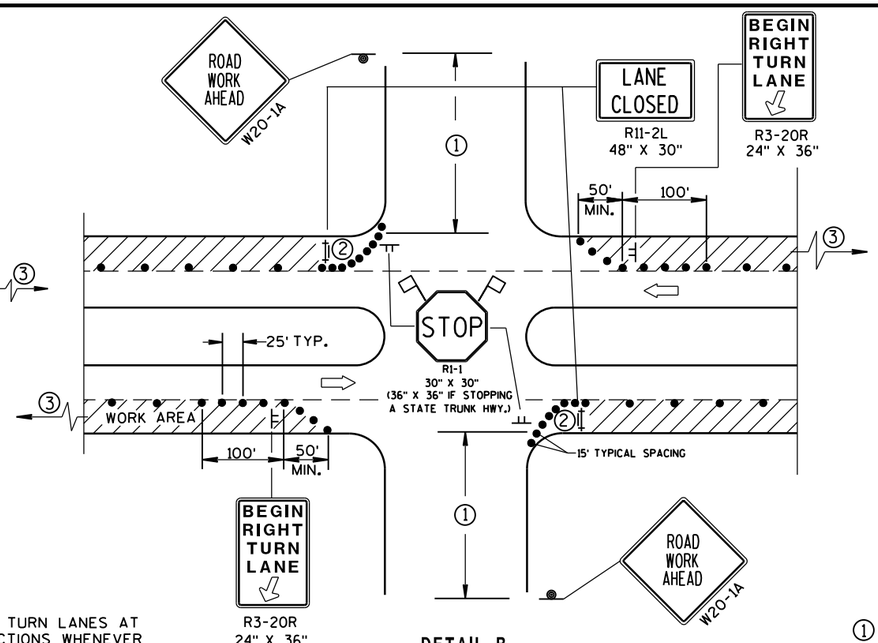
S.D.D. 15 D 20-4



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

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



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND 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 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.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, 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.

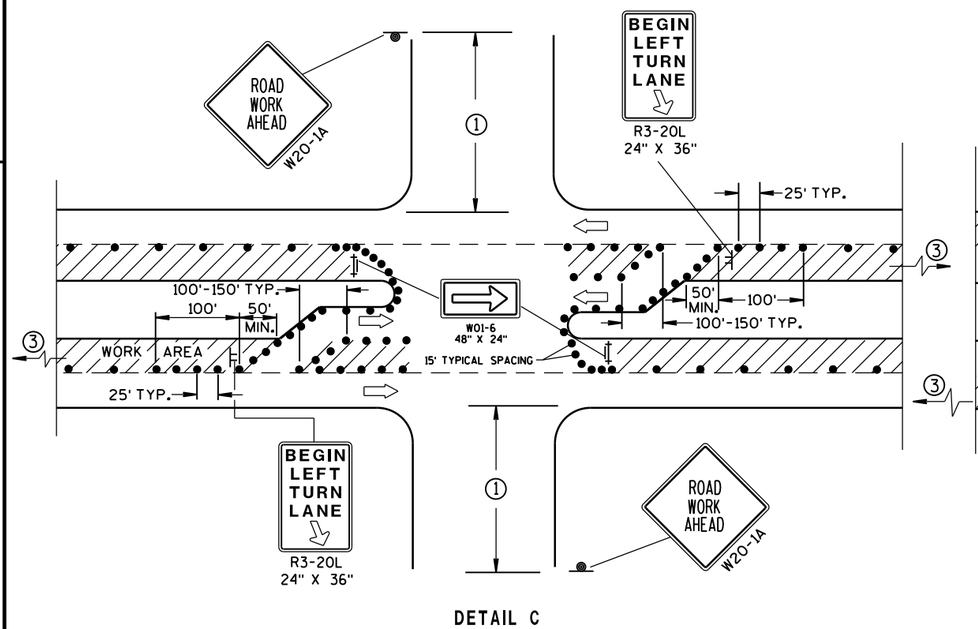
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE 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.

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

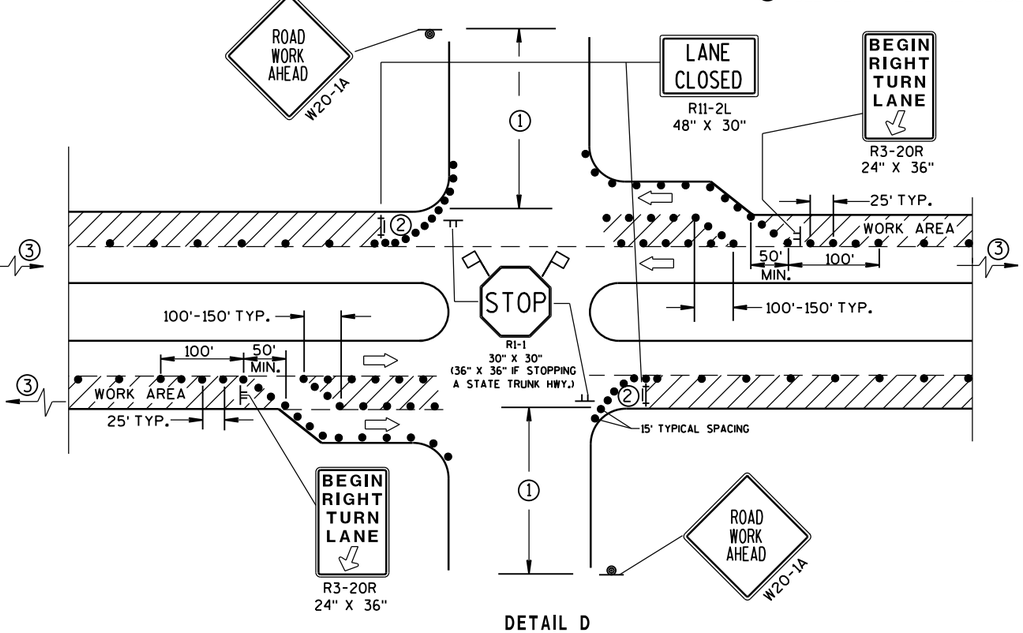
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

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



DETAIL D

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

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Anakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 21-4

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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.

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

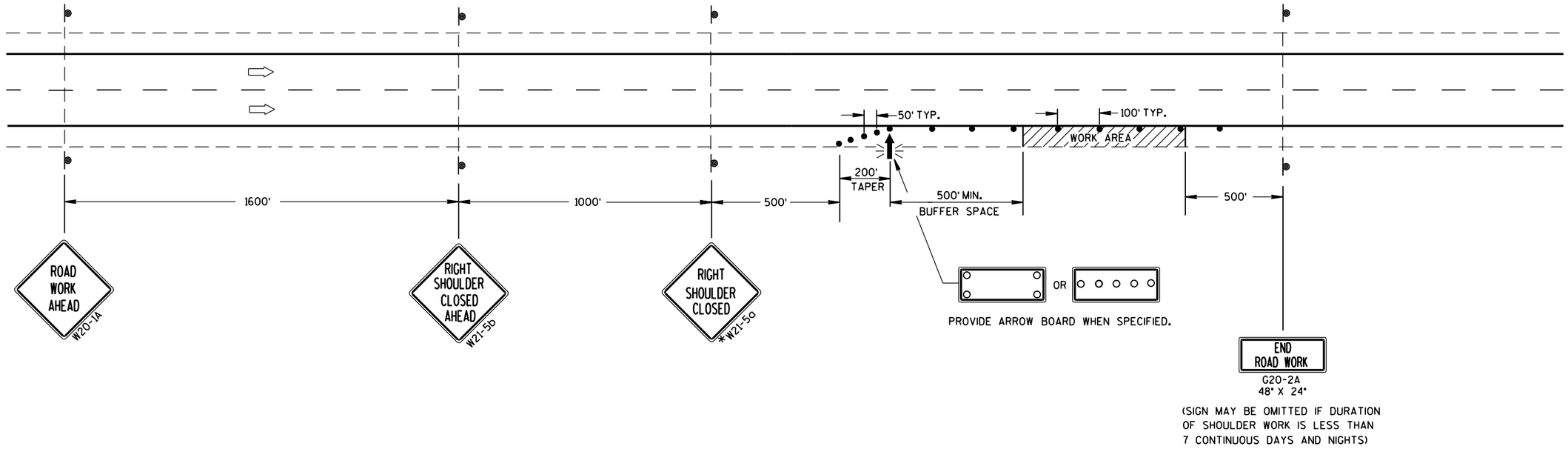
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

6

S.D.D. 15 D 27-3

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

SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
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

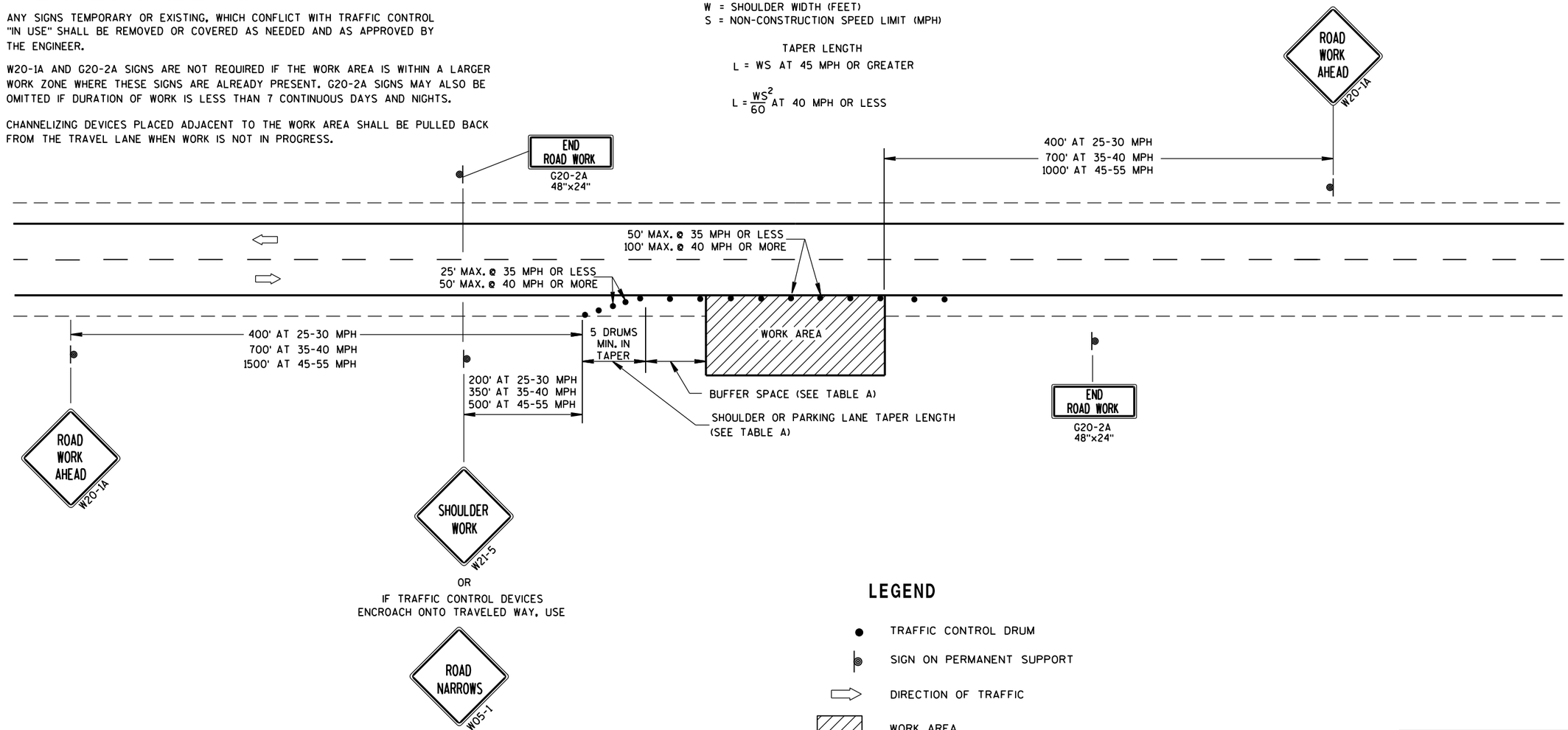
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

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[illegible] SAFETY ENGI[illegible]

FHWA

6

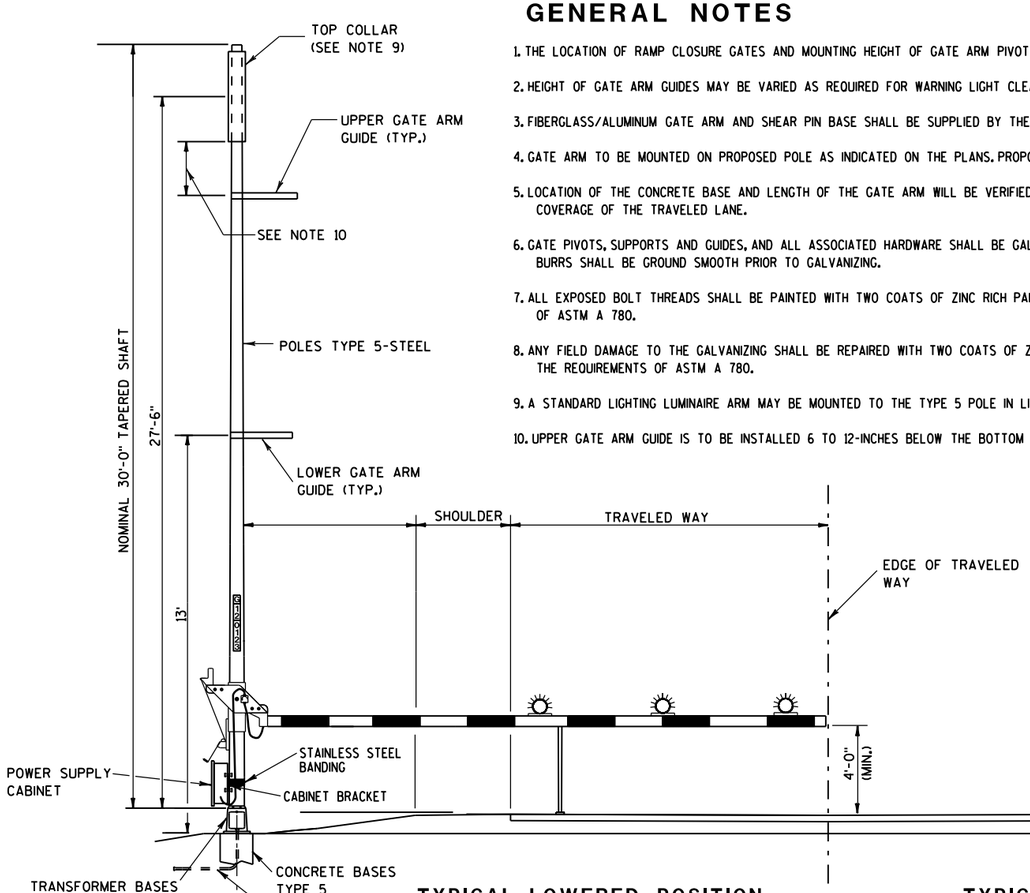
S.D.D. 15 D 28-3

6

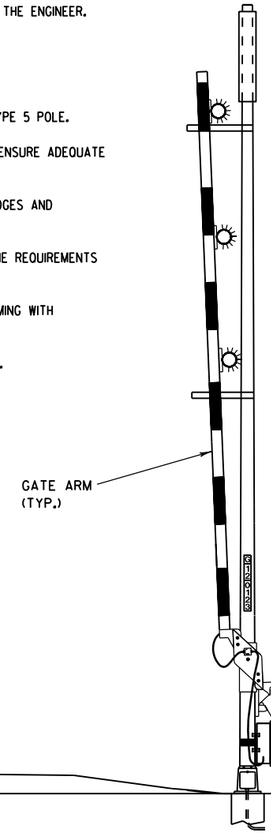
S.D.D. 15 D 28-3

GENERAL NOTES

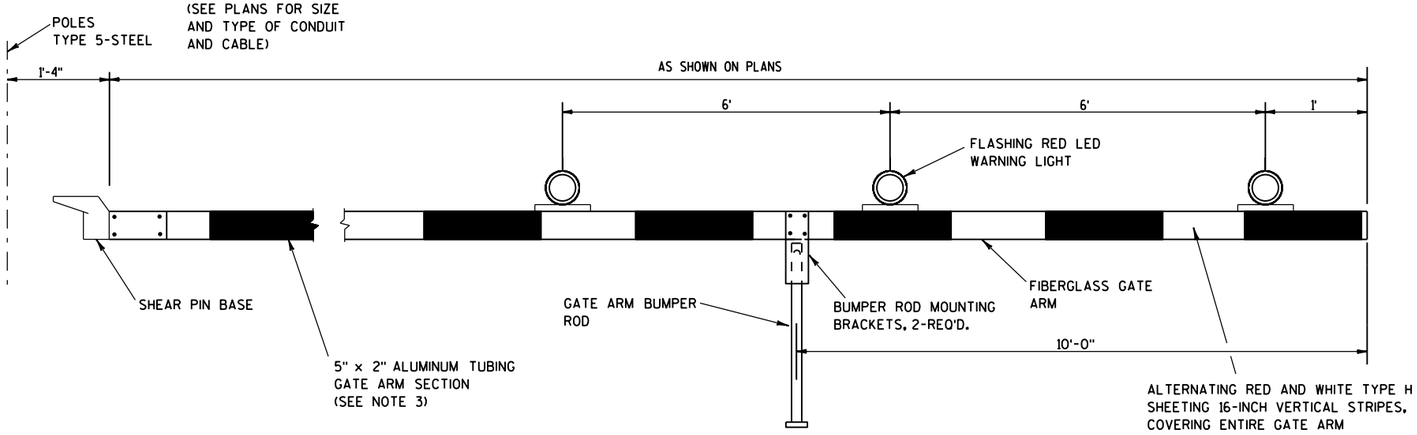
1. THE LOCATION OF RAMP CLOSURE GATES AND MOUNTING HEIGHT OF GATE ARM PIVOT SHALL BE VERIFIED BY THE ENGINEER.
2. HEIGHT OF GATE ARM GUIDES MAY BE VARIED AS REQUIRED FOR WARNING LIGHT CLEARANCE.
3. FIBERGLASS/ALUMINUM GATE ARM AND SHEAR PIN BASE SHALL BE SUPPLIED BY THE SAME VENDOR.
4. GATE ARM TO BE MOUNTED ON PROPOSED POLE AS INDICATED ON THE PLANS. PROPOSED POLE SHALL BE TYPE 5 POLE.
5. LOCATION OF THE CONCRETE BASE AND LENGTH OF THE GATE ARM WILL BE VERIFIED BY THE ENGINEER TO ENSURE ADEQUATE COVERAGE OF THE TRAVELED LANE.
6. GATE PIVOTS, SUPPORTS AND GUIDES, AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED. ALL ROUGH EDGES AND BURRS SHALL BE GROUND SMOOTH PRIOR TO GALVANIZING.
7. ALL EXPOSED BOLT THREADS SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
8. ANY FIELD DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
9. A STANDARD LIGHTING LUMINAIRE ARM MAY BE MOUNTED TO THE TYPE 5 POLE IN LIEU OF THE TOP COLLAR.
10. UPPER GATE ARM GUIDE IS TO BE INSTALLED 6 TO 12-INCHES BELOW THE BOTTOM OF THE TOP COLLAR.



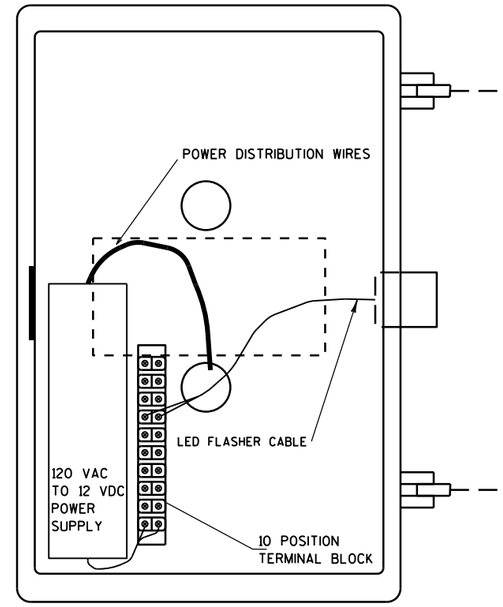
TYPICAL LOWERED POSITION



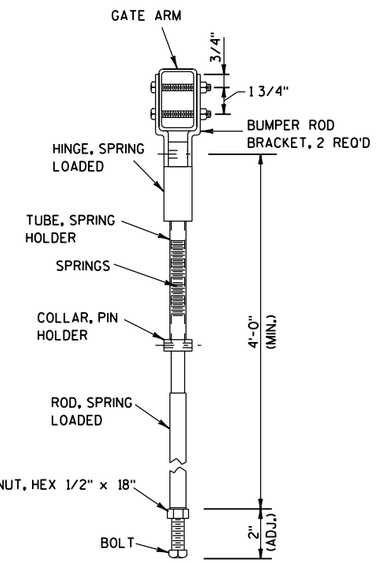
TYPICAL RAISED POSITION



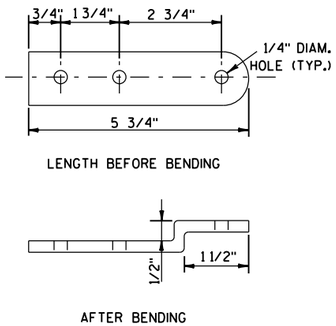
GATE DETAIL
(HARDWIRE POWER OPTION)



POWER SUPPLY CABINET



GATE ARM BUMPER ROD DETAIL

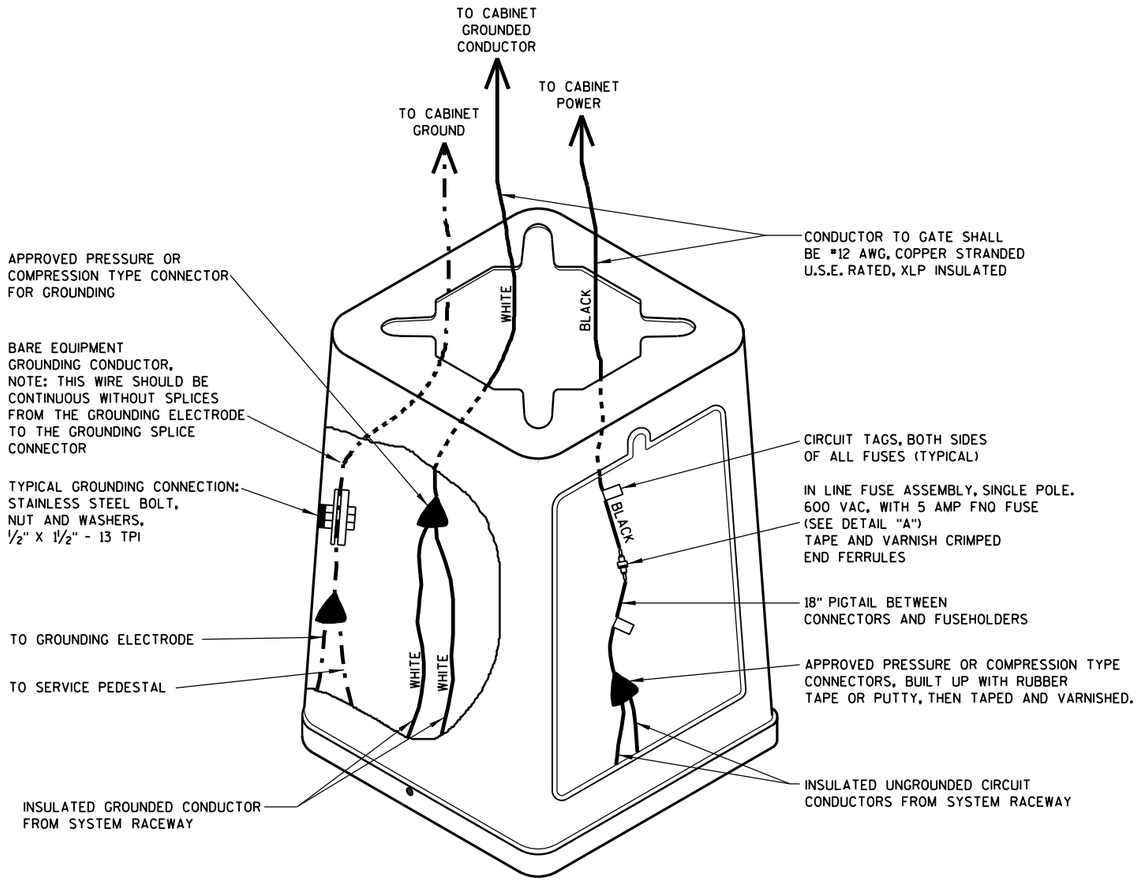


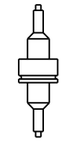
BUMPER ROD MOUNTING
BRACKET DETAIL

RAMP GATE
HARD WIRED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 15 D 35-2a





DETAIL "A"
SINGLE POLE

6

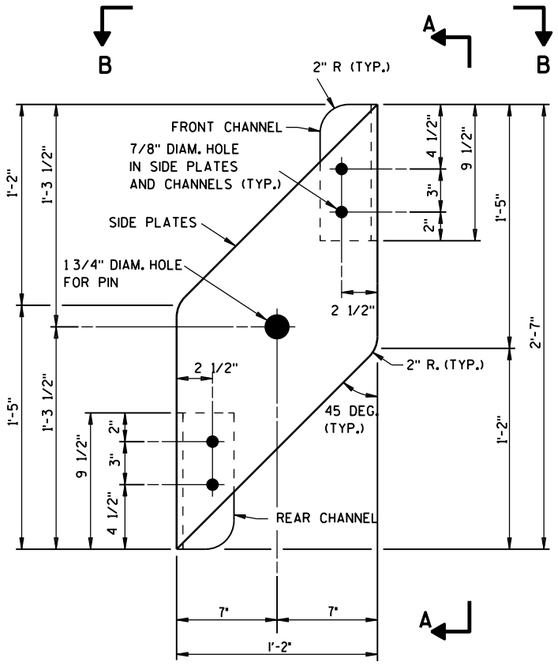
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S.D.D. 15 D 35-2b

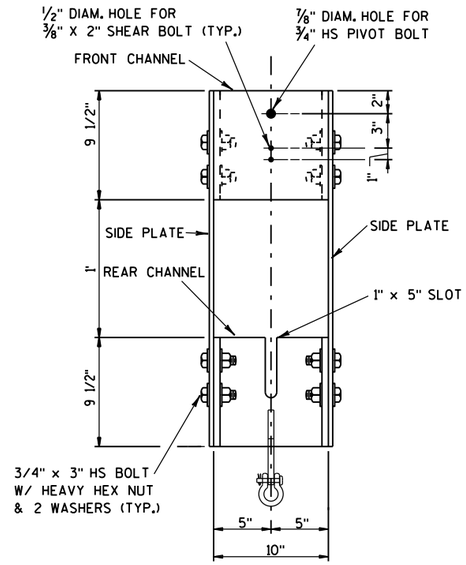
S.D.D. 15 D 35-2b

RAMP GATE
HARD WIRED

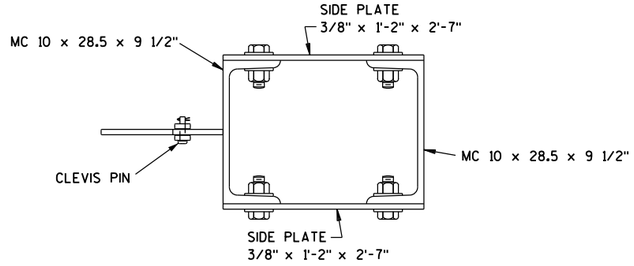
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR



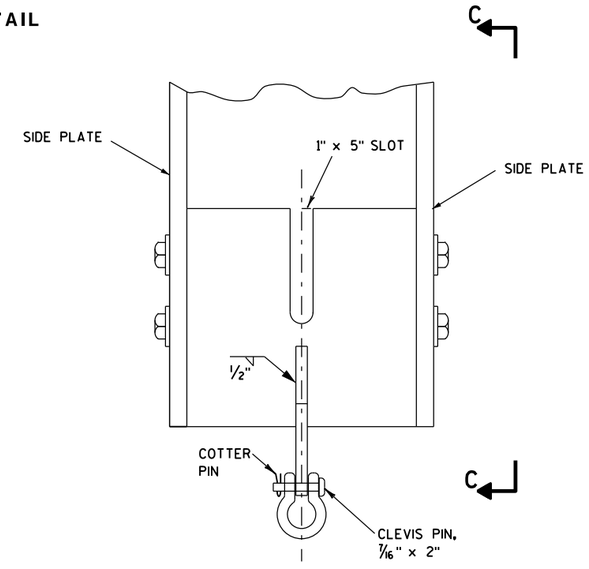
SIDE PLATE DETAIL



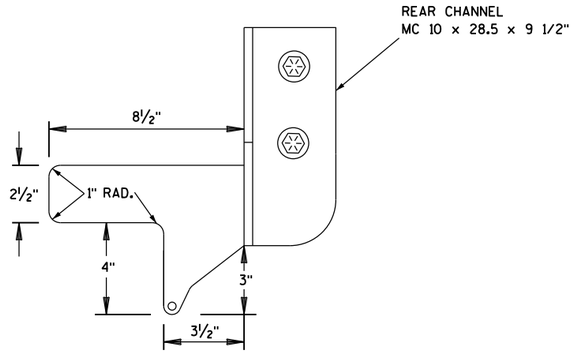
SECTION A-A



SECTION B-B



YOKE ASSEMBLY DETAIL



SECTION C-C

RAMP GATE
HARD WIRED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 35-2c

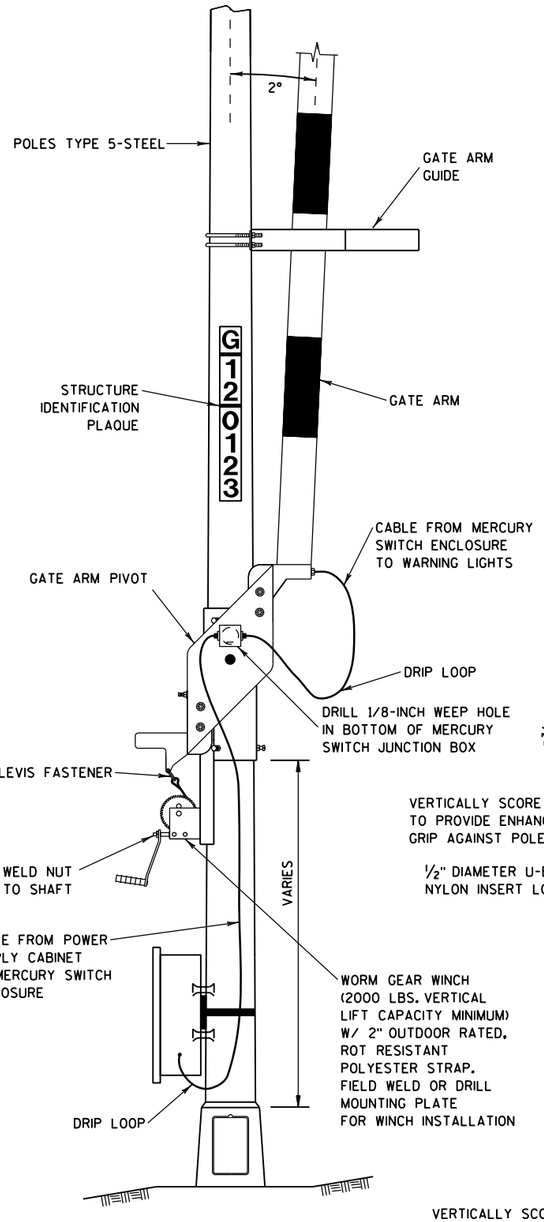
GENERAL NOTES

1. WHEN THE GATE IS FULLY RAISED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE OUTSIDE OF THE REAR CHANNEL.

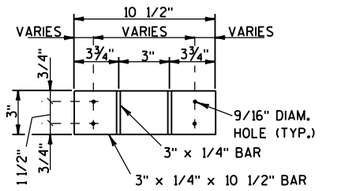
2. WHEN THE GATE IS FULLY LOWERED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE INSIDE OF THE REAR CHANNEL.

3. ANTI-SEIZE LUBRICATING MATERIAL SHALL BE USED ON ALL BOLT THREADS BEFORE INSTALLATION.

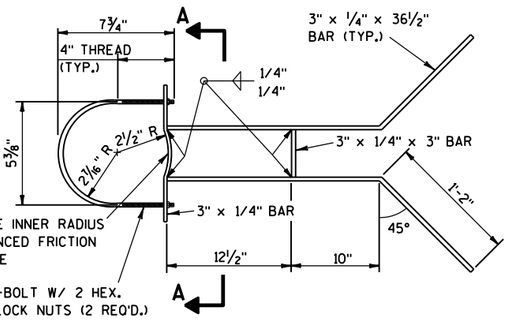
4. ALL BOLTS SHALL BE GALVANIZED AND CONFORM TO ASTM A307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH), WHICH SHALL CONFORM TO ASTM A325. BOLTS OF ½" NOMINAL DIAMTER OR LESS MAY BE STAINLESS STEEL.



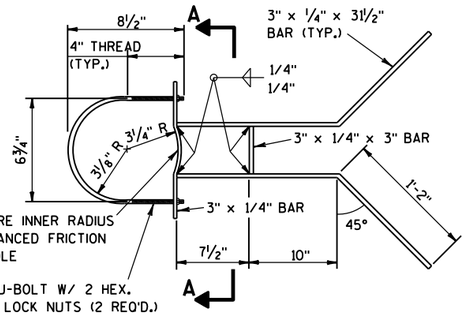
GATE PIVOT ASSEMBLY



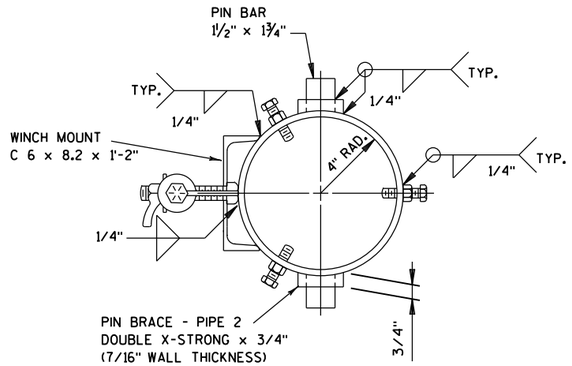
SECTION A-A
U-BOLTS NOT SHOWN



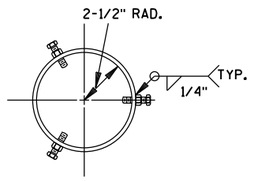
UPPER GATE ARM GUIDE DETAIL



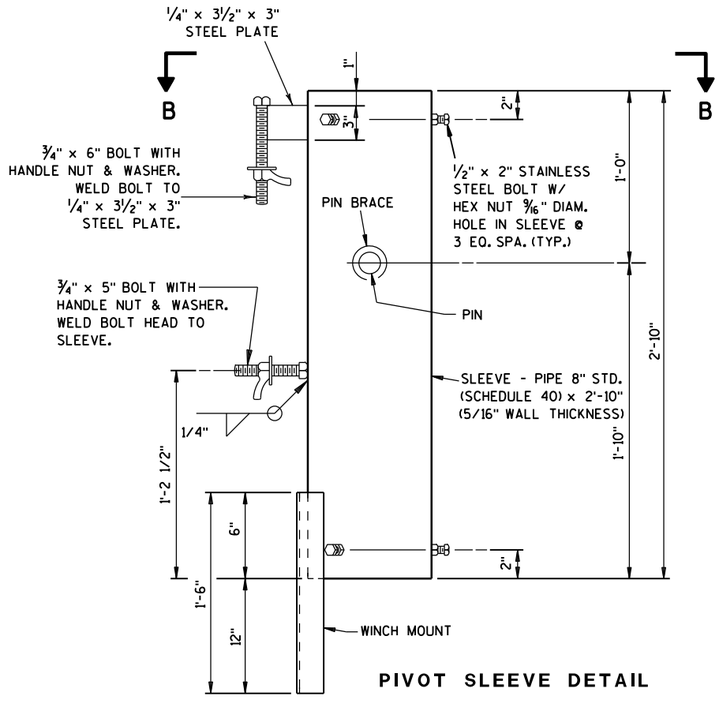
LOWER GATE ARM GUIDE DETAIL



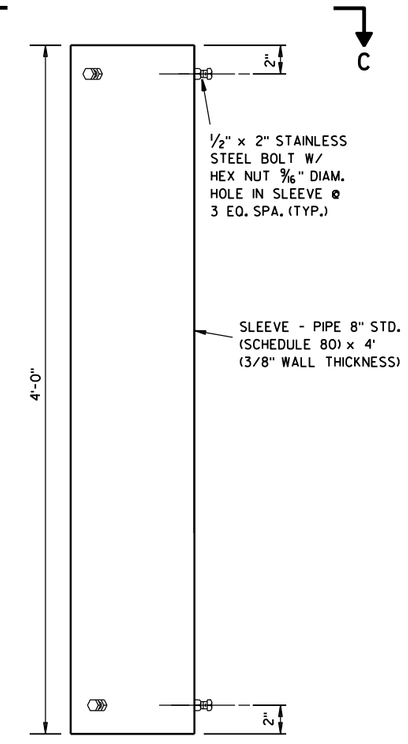
SECTION B-B



SECTION C-C



PIVOT SLEEVE DETAIL



TOP COLLAR

RAMP GATE
HARD WIRED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

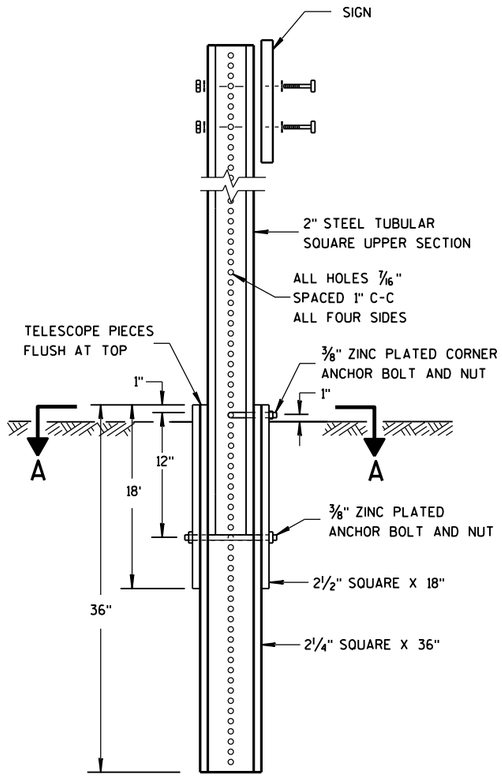
APPROVED
11/2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

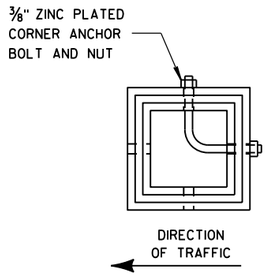
S.D.D. 15 D 35-2d

6

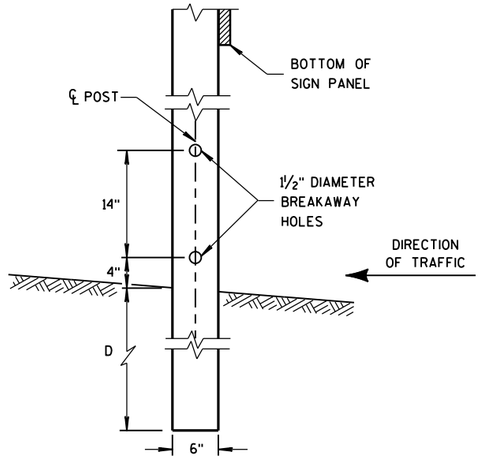
S.D.D. 15 D 35-2d



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



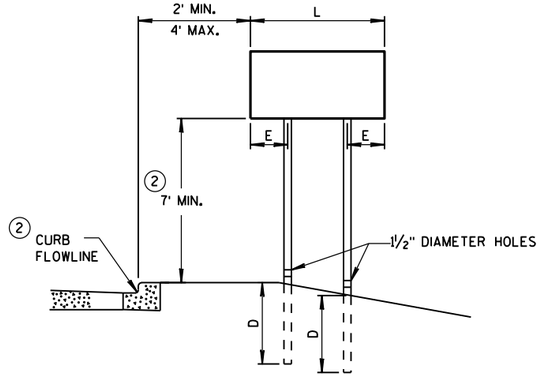
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

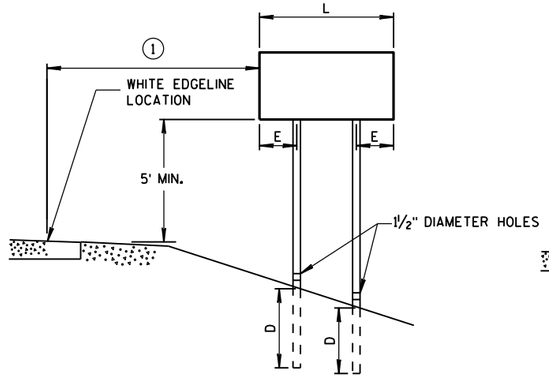
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

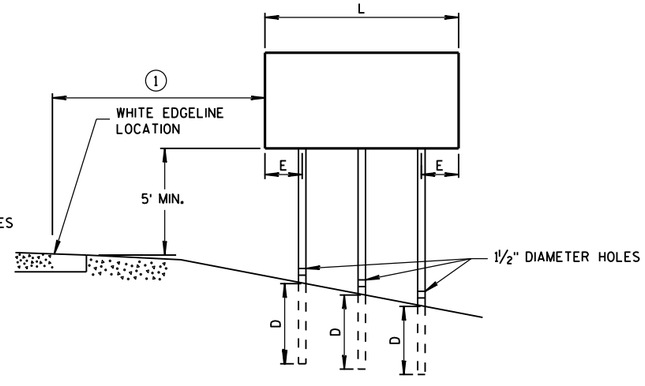
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK 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

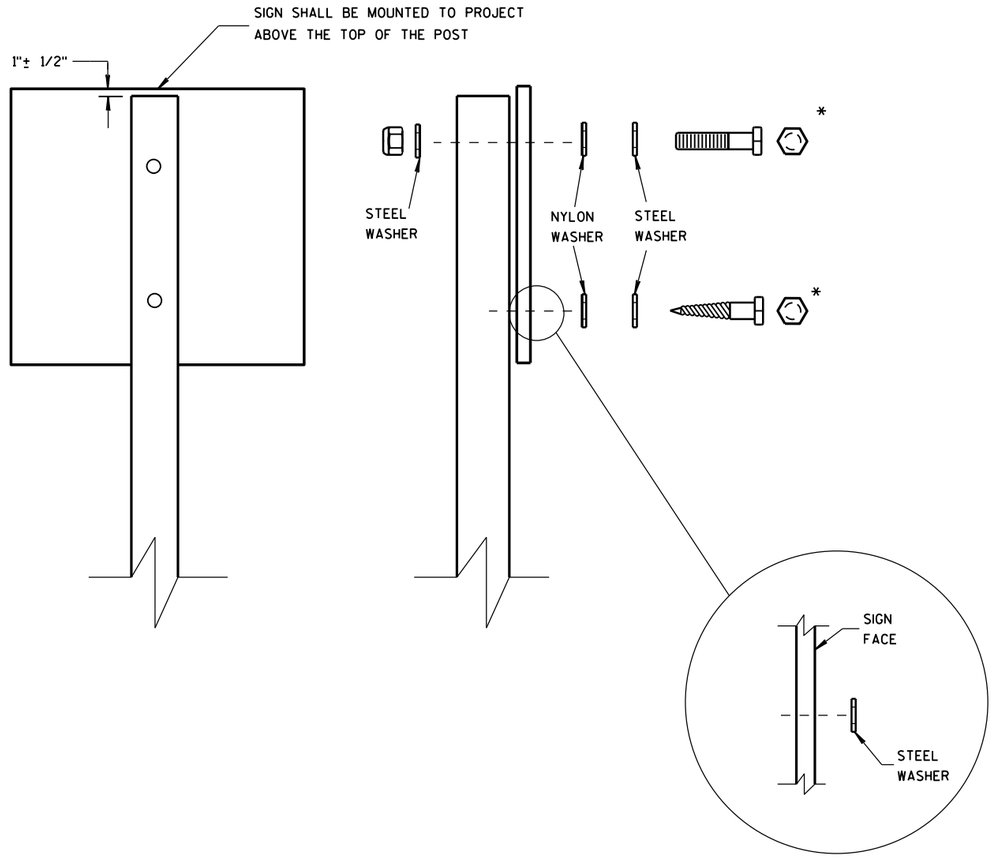
SEE NOTE (3)

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

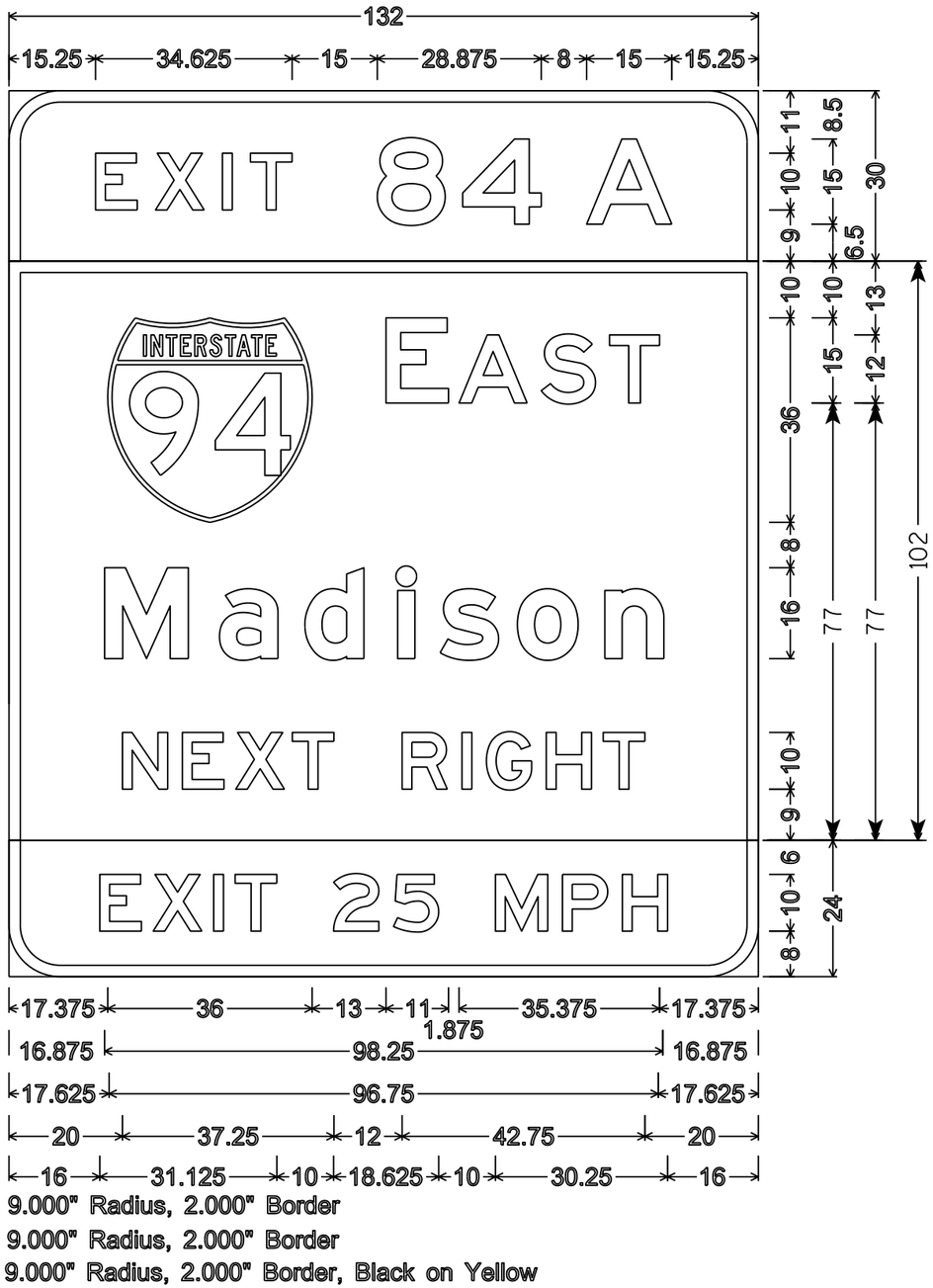
APPROVED

Feb. 2015 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

SIGN



NOTES

1. Sign is Type I - Type SH Reflective
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E Modified except all Cap Words Series E.
4. Exit Speed Panel Type F Reflective with:
   Background - Yellow
   Message - Black

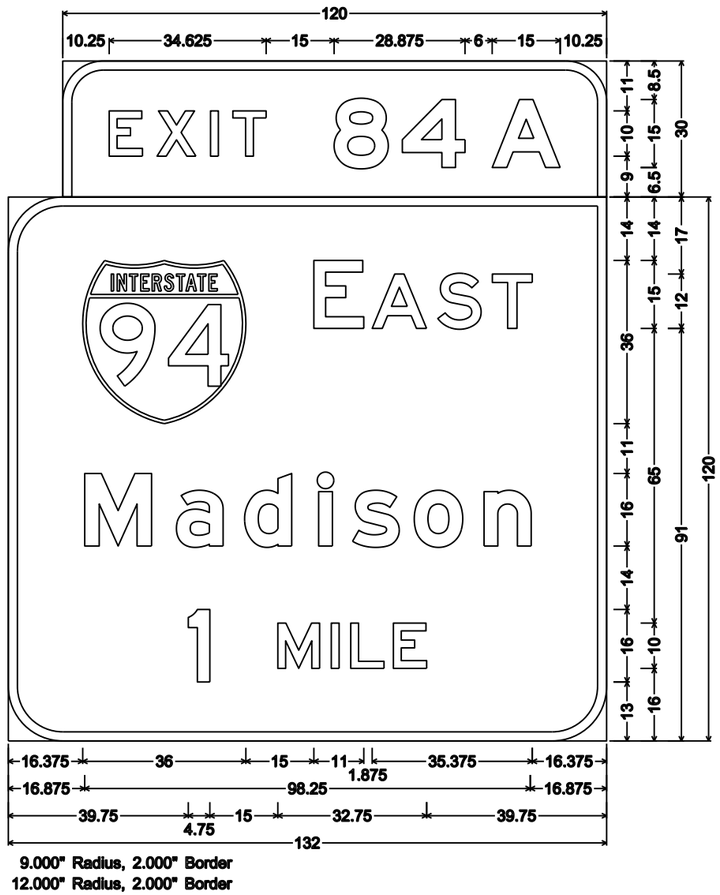
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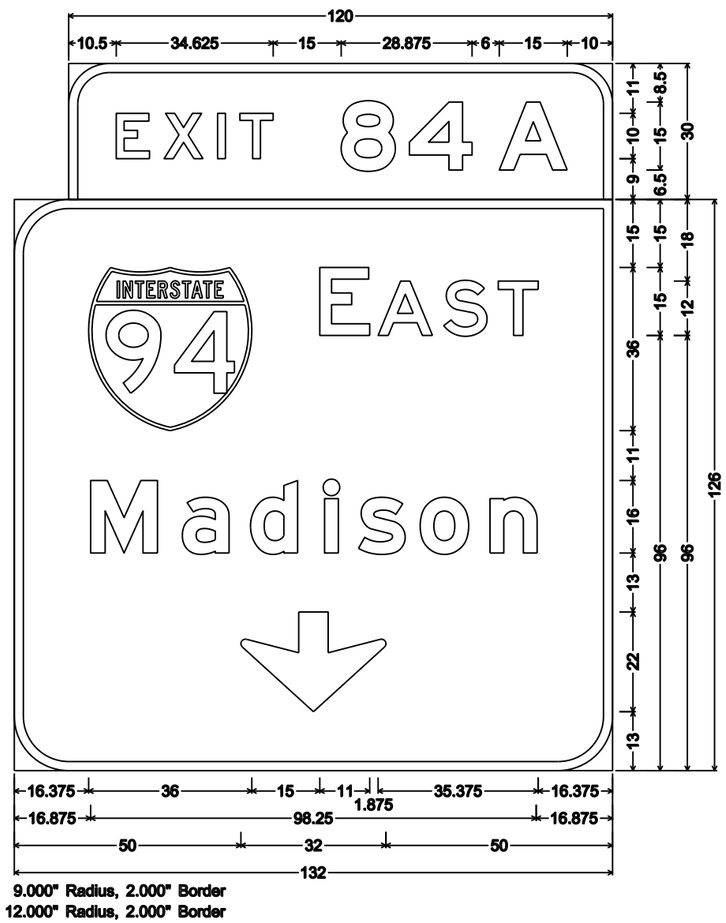
7

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SHEET NO: 207	E

NOTES

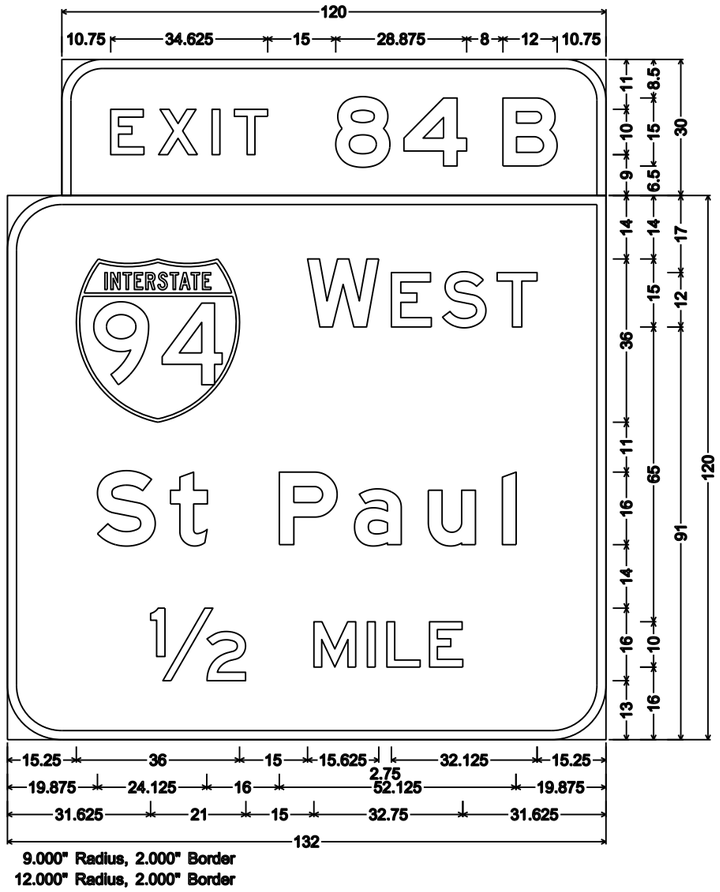
1. Sign is Type I - Type SH Reflective
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E Modified except all Cap Words Series E.
4. Exit Only Panels Type F Reflective with:
   Background - Yellow
   Message - Black

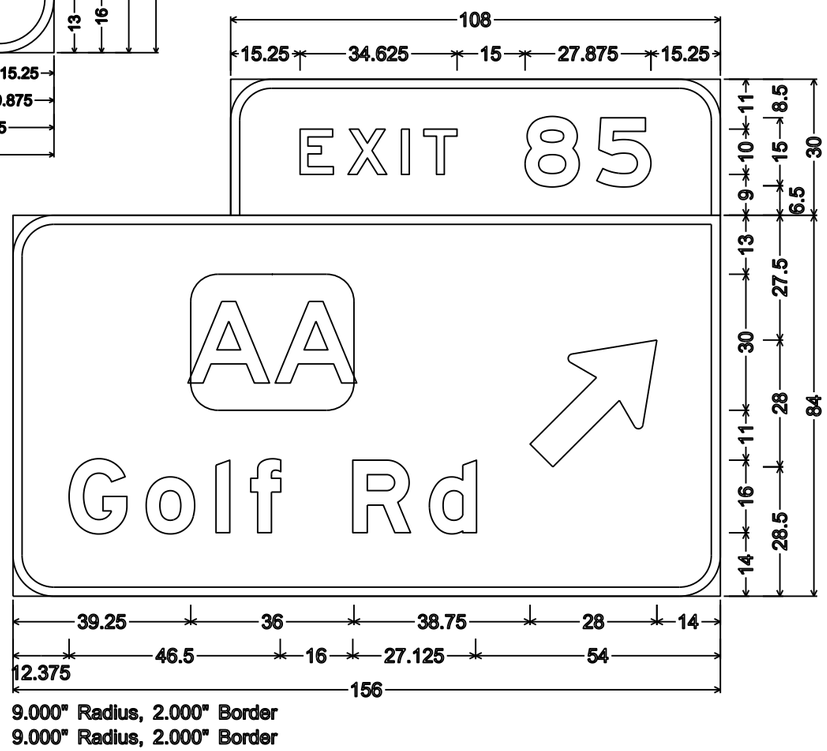


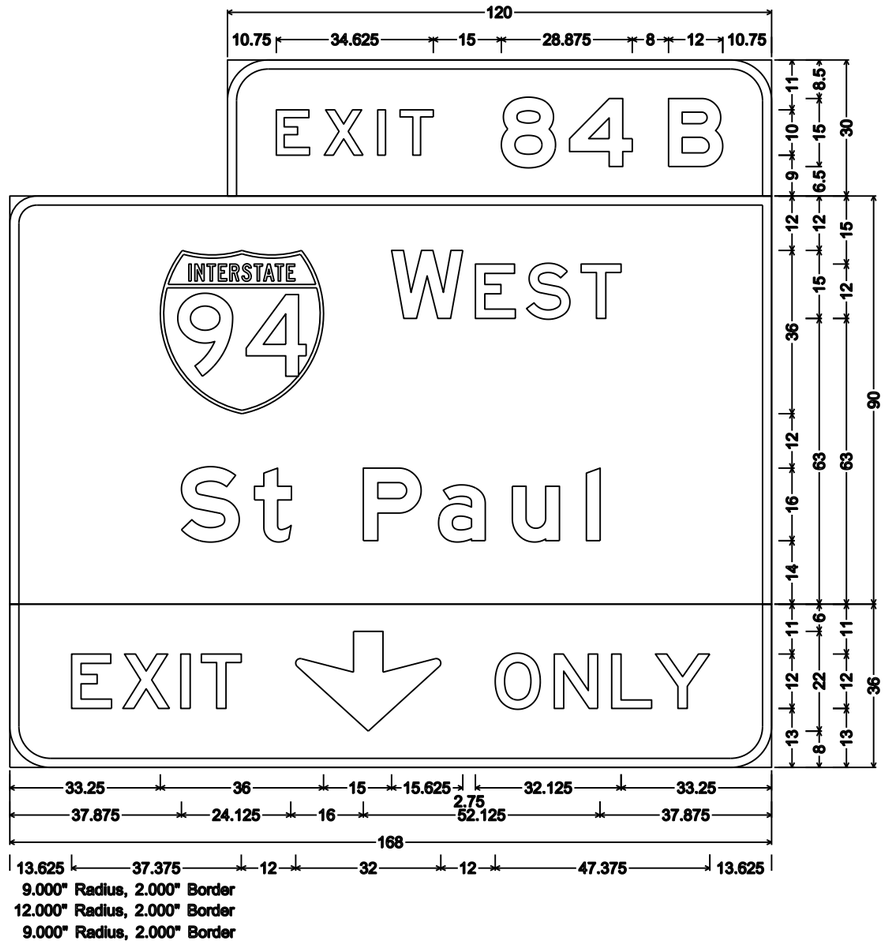


NOTES

1. Sign is Type I - Type SH Reflective
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E Modified except all Cap Words Series E.
4. Exit Only Panels Type F Reflective with:
   Background - Yellow
   Message - Black



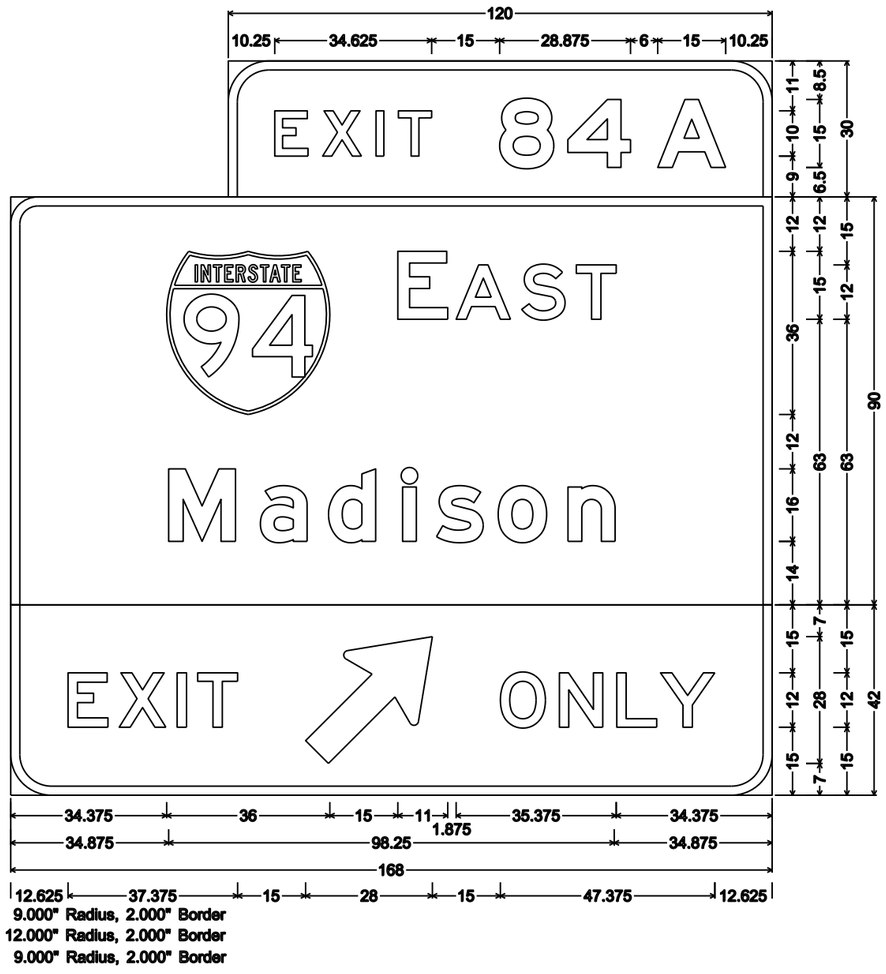


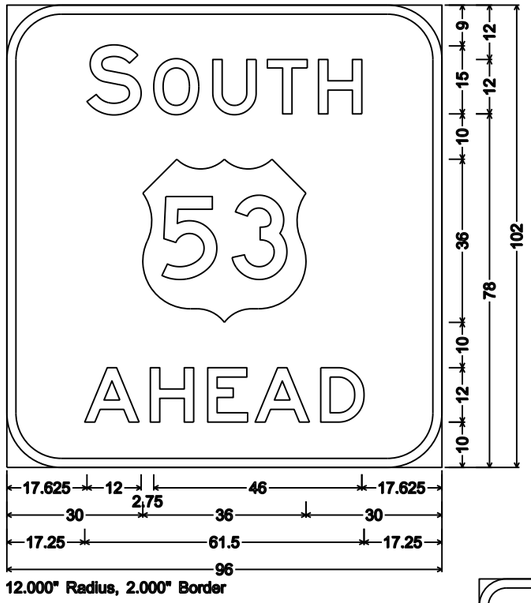


7

7

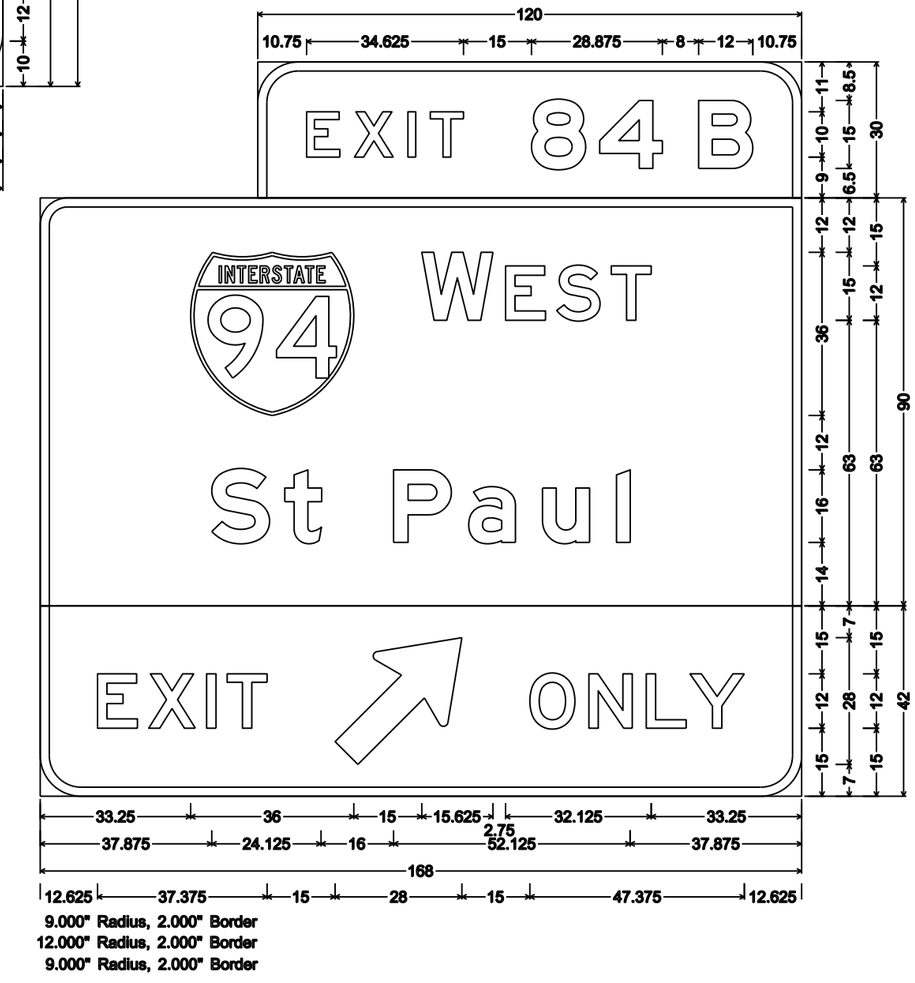
PROJECT NO:	HWY: USH 53	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SHEET NO: 209	E





NOTES

1. Sign is Type I - Type SH Reflective
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E Modified except all Cap Words Series E.
4. Exit Only Panels Type F Reflective with:
   Background - Yellow
   Message - Black



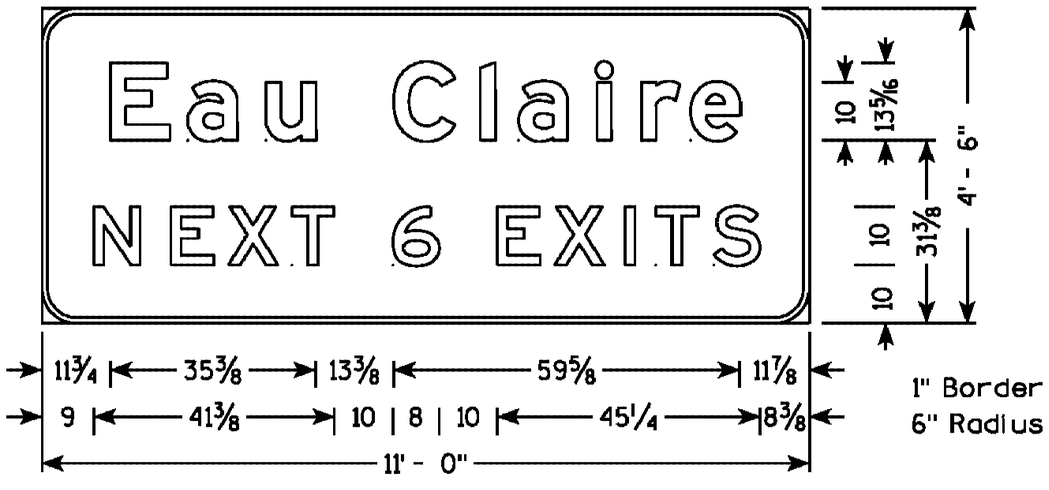
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PROJECT NO:	HWY: USH 53	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SHEET NO: 210	E

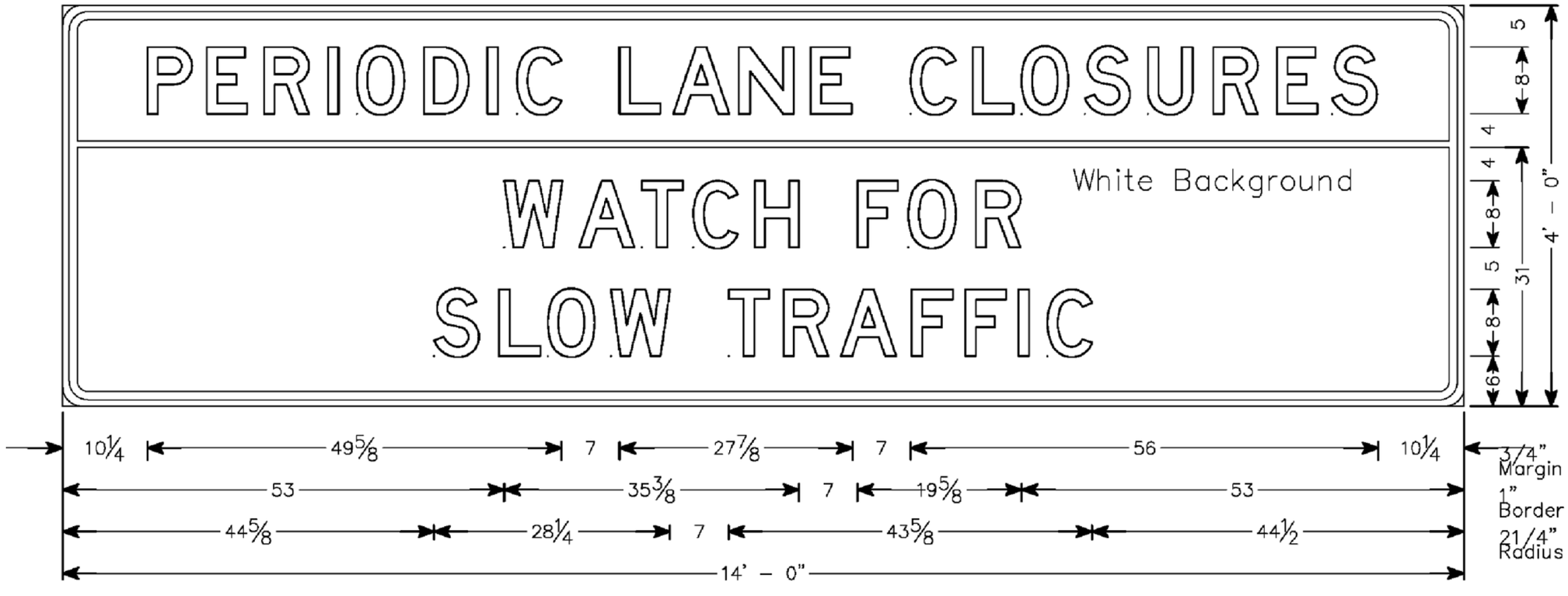
NOTES

1. All Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all cap Words are Series E



NOTES

1. All Signs Type II – Reflective – reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background – Orange except as noted
   Message – Black
3. Message Series – D



7

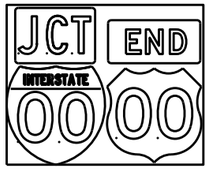
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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	TEMPORARY SIGNING	SHEET 212	E

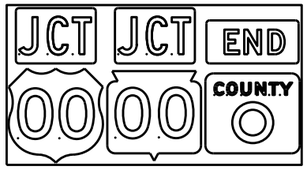
TYPICAL ASSEMBLIES



J1-1



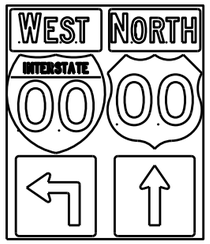
J1-2



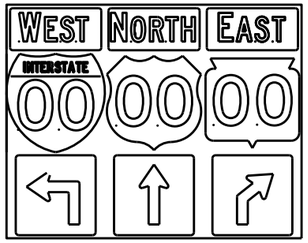
J1-3



J2-1



J2-2

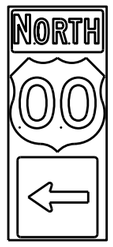


J2-3

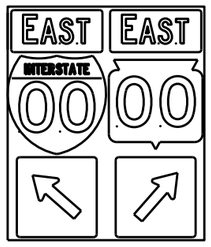


JV

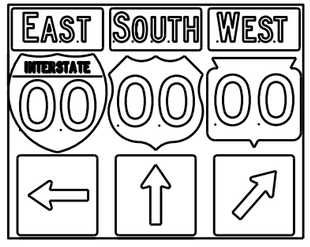
(Typical Vertical J-Assembly
See Note 10 and 11)



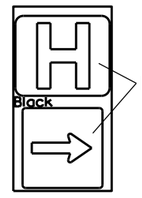
J3-1



J3-2



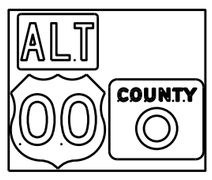
J3-3



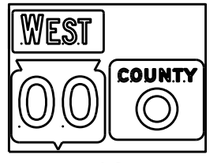
JH-1



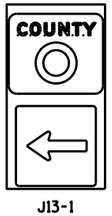
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

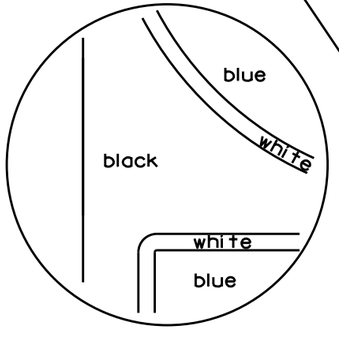


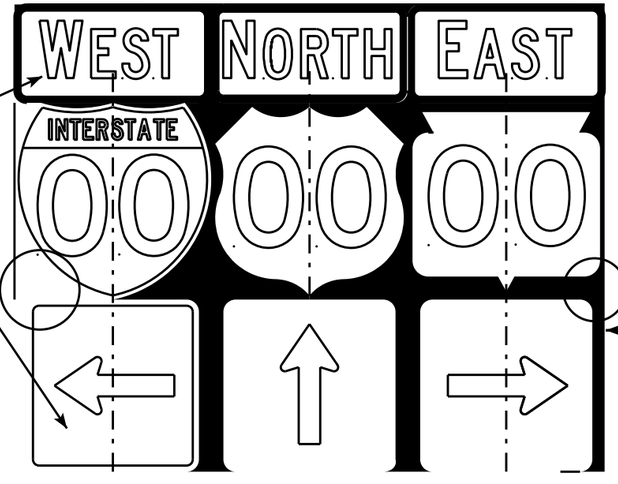
J23-1

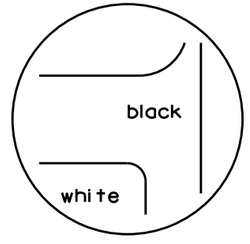


J22-1

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

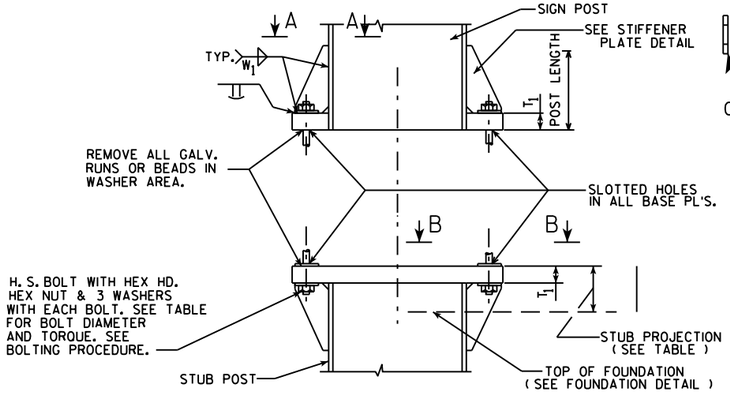
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

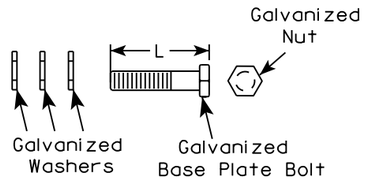
PROJECT NO: | SHEET NO: E

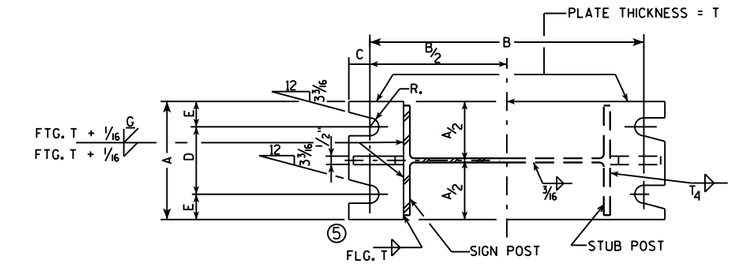
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42

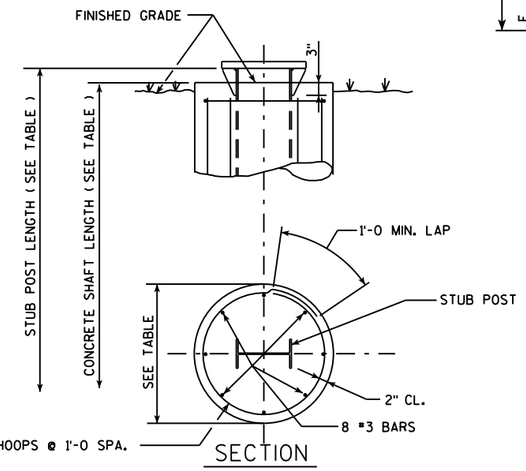


SIGN POST AND STUB POST ELEVATION

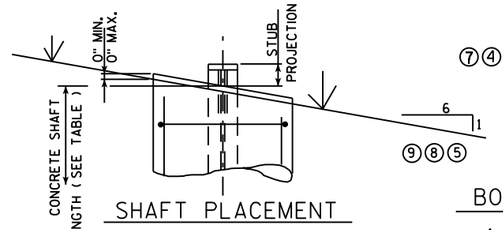




SECTION A-A SECTION B-B



SECTION



SHAFT PLACEMENT

DESIGN DATA

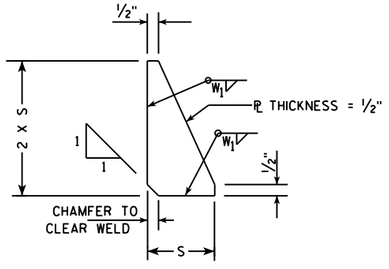
WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND[4]	140 [4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1 1/2 T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

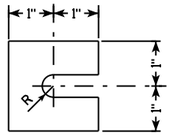
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123. (9)
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.



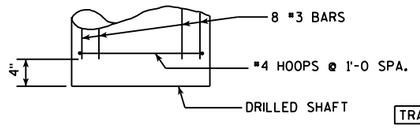
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

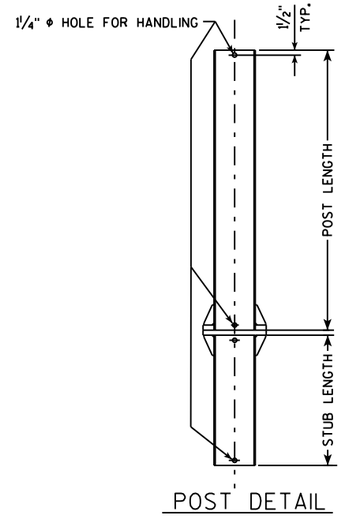
SHIM DETAIL



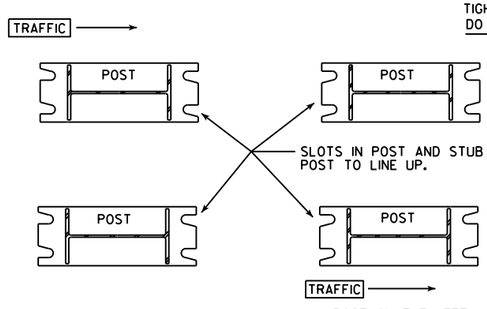
FOUNDATION DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
(7) E	1.0	62

(7) REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3



POST DETAIL



POST SLOT ORIENTATION (7)

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

BASE CONNECTION DATA TABLE														FOUNDATION DATA				(2)
L	X	TYPE	DIMENSION / POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K
3 3/4	(4)	A	W10"X12.0 #/FT.	3/4" Φ @ 75#-FT.	5 1/4"	1'-0 3/8"	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32"	2 1/8"	3'-6	3"	2'-0 Φ	5'-0	76.0# (4)
4 3/4	(4)	B	W12"X16.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	13/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5# (4)
5		C	W12"X19.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	13/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#
5		D	W12"X22.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/2"	3/8"	5/16"	13/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#
5	(3)	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4 1/4"	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	17/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0# (3)
										①	⑥	①							

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/15 PLATE NO. A3-1.16

(10)	1-21-14	LUBRICATION OF BASE BOLTS
(9)	4-26-11	REMOVE NON-GALVANIZED
(8)	10-30-96	NOT GALVANIZED/GALVANIZED
(7)	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
(6)	8-24-87	BASE CONN. WELD
(5)	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
(4)	10-19-79	POST A & B, A572 GR. 50, & K
(2)	11-28-78	"K" (3) 4-23-79 TYPE "E"
(1)	5-4-78	T_1 , T_2 & W_1
NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC. 2011	DRAWN BY JPH	PLANS CK'D.

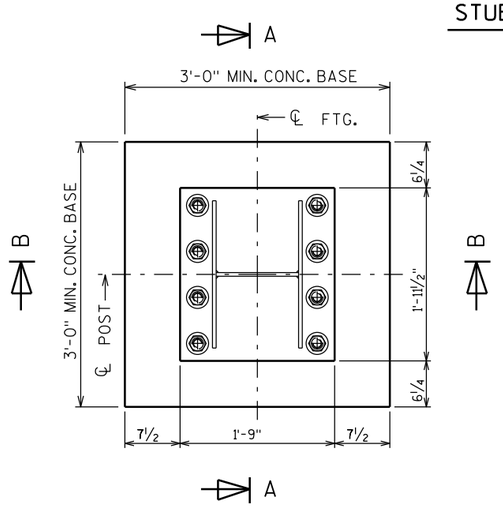
FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

SHEET 214

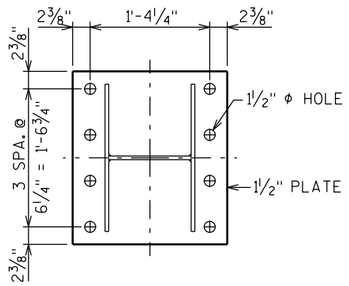
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31.DGN PLOT DATE : 01-DEC-2015 18:20 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000

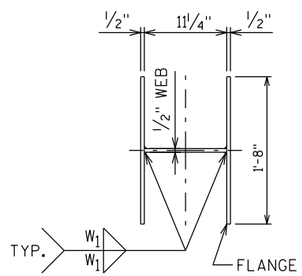
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



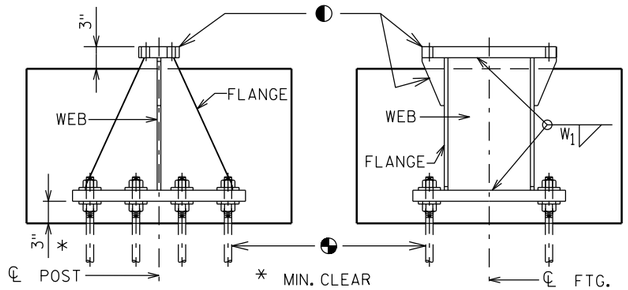
BASE PLATE



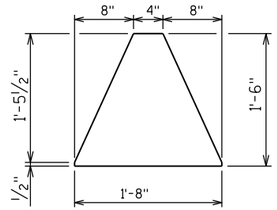
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



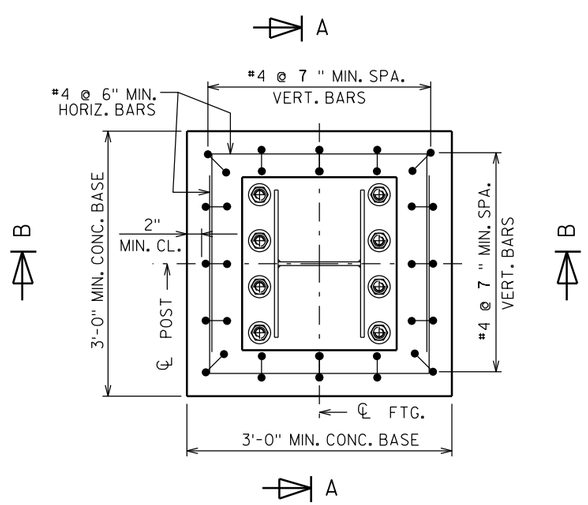
FLANGE

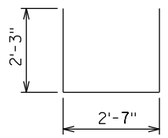
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

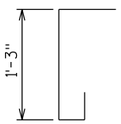
CONCRETE BASE SECTION





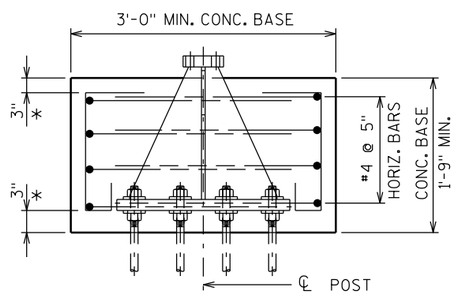
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



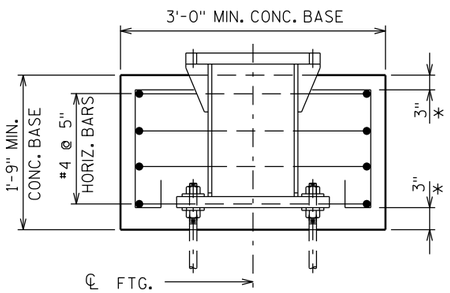
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

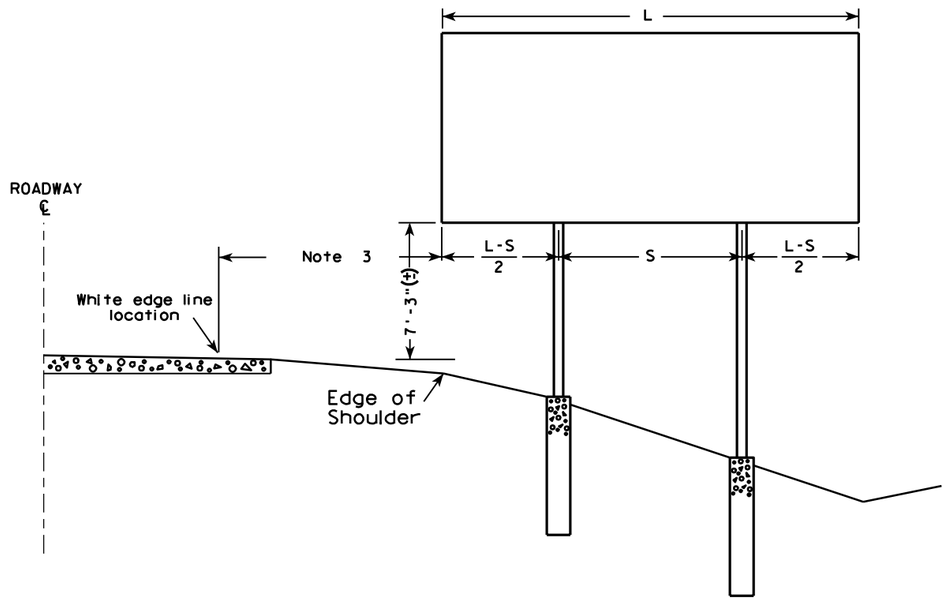
WISCONSIN DEPT OF TRANSPORTATION

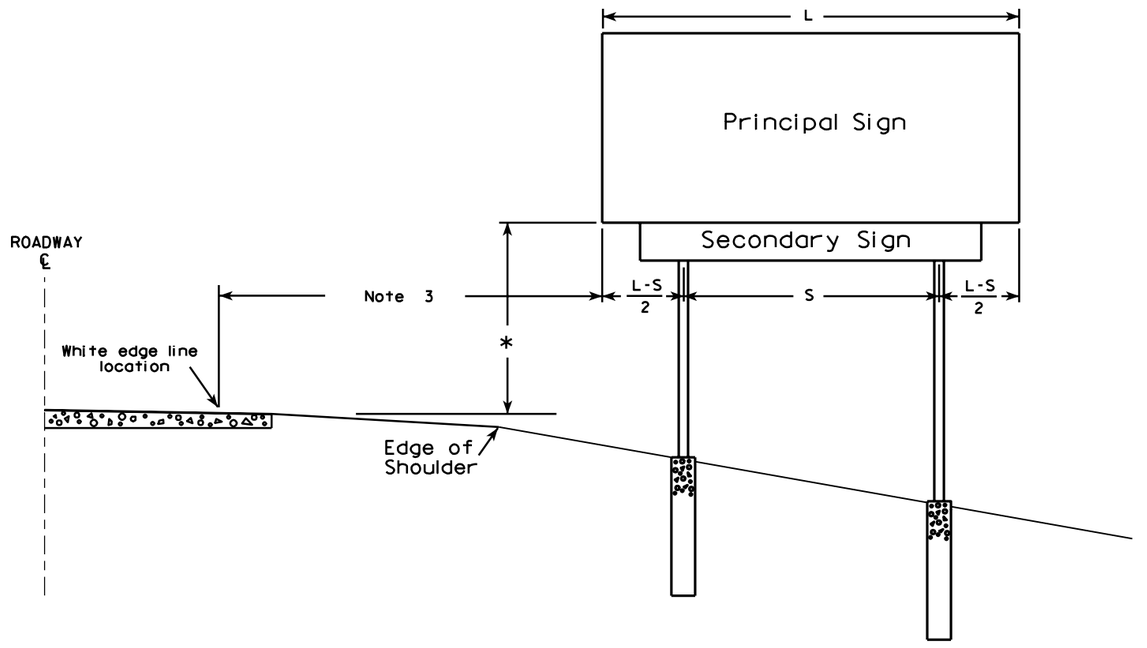
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/06/2014 PLATE A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000 WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

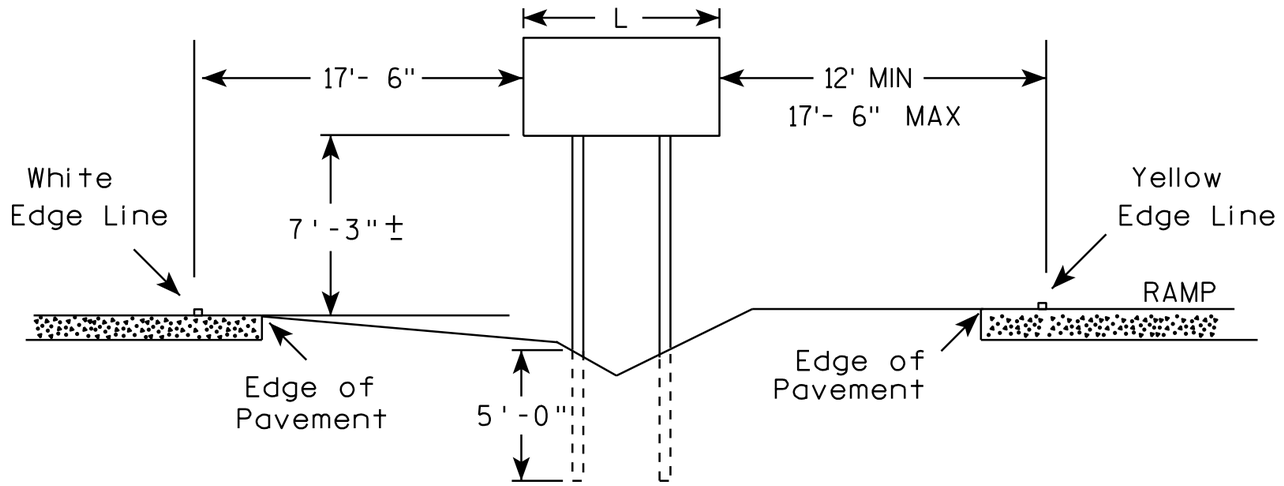
TYPICAL INSTALLATION
OF TYPE I SIGNS

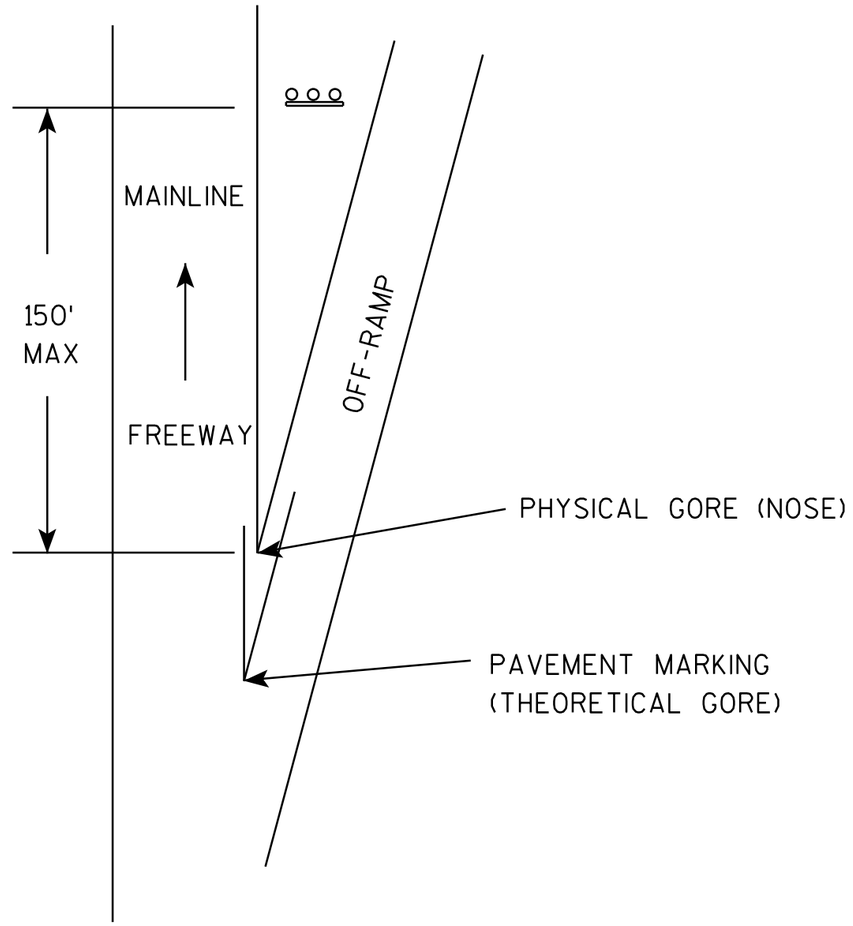
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 216	E





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

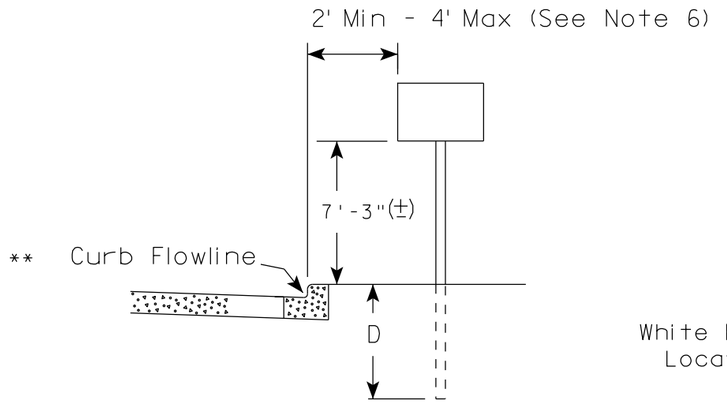
DATE 2/06/14 PLA 217 A4-2.3

7

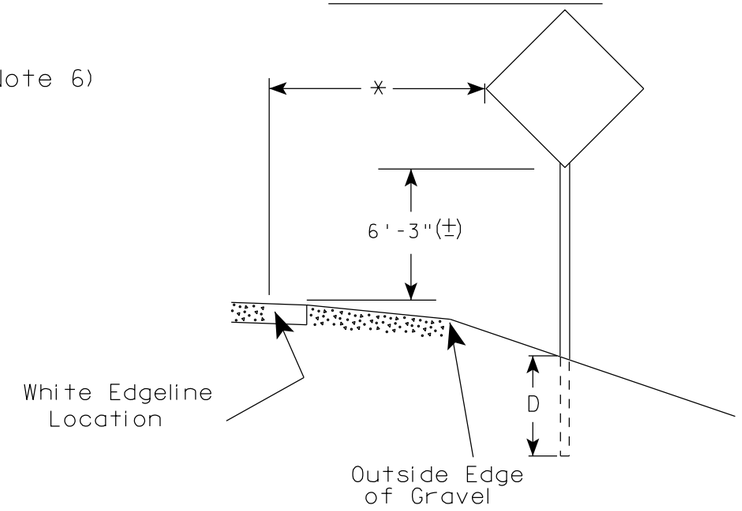
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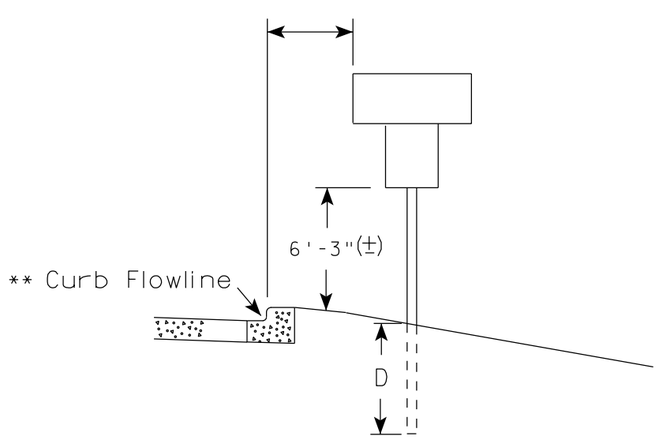
PROJECT NO: | SHEET NO: E

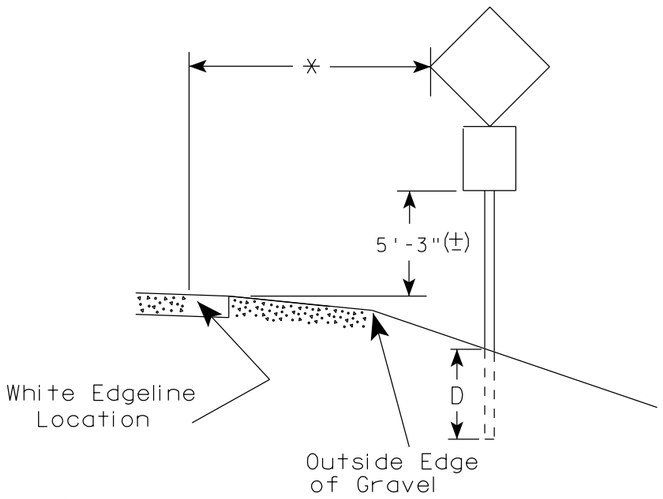
URBAN AREA



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" (±).

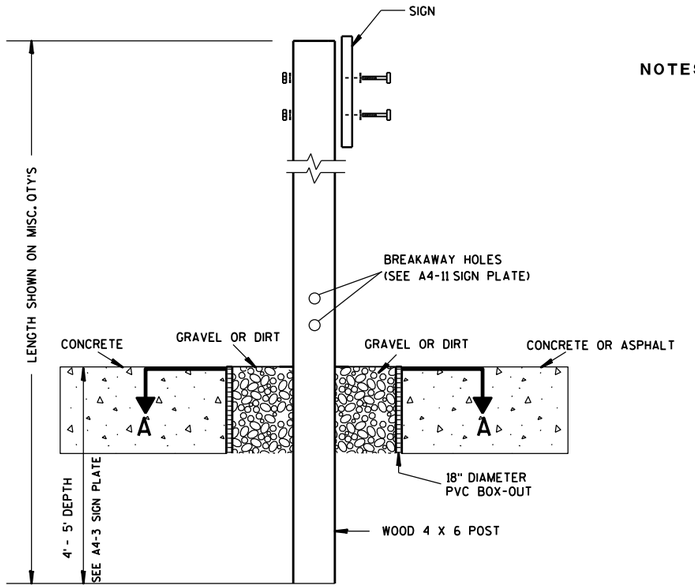
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

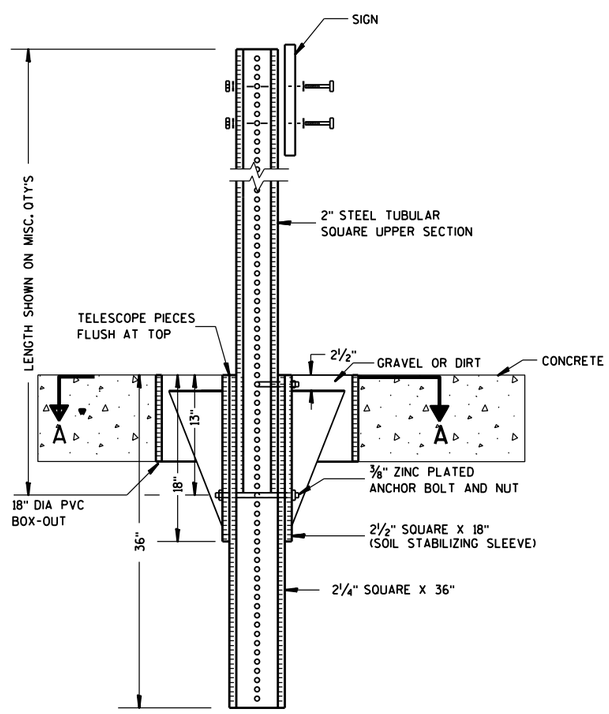
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

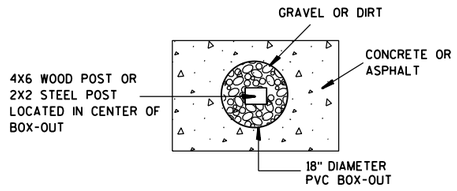
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

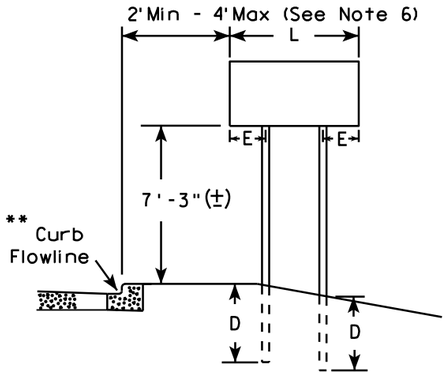
APPROVED Matthew R Rauch
for State Traffic Engineer

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

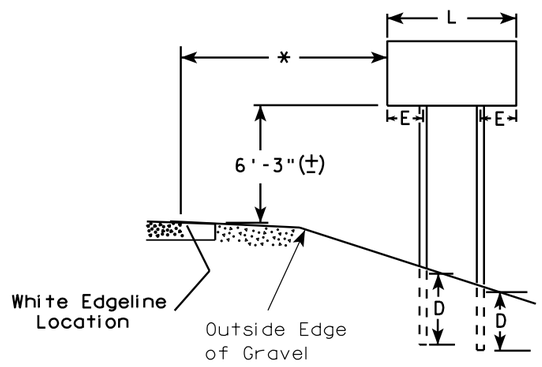
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

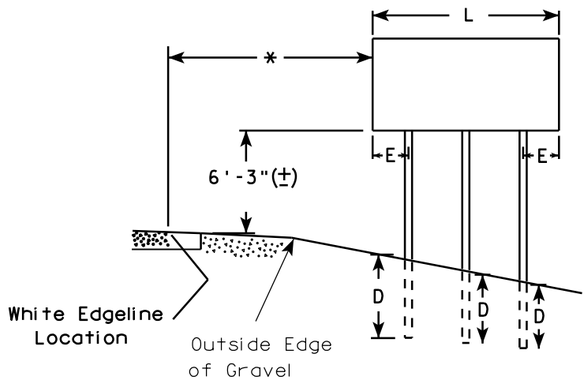
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

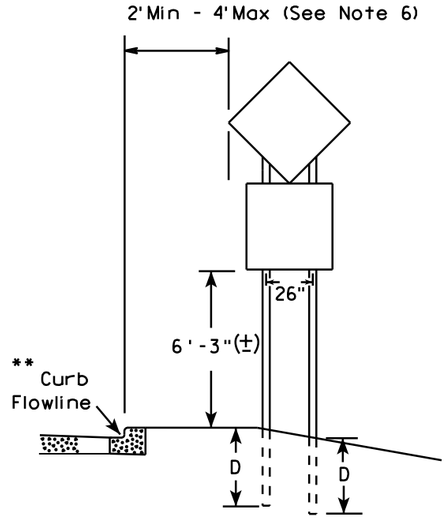
URBAN AREA



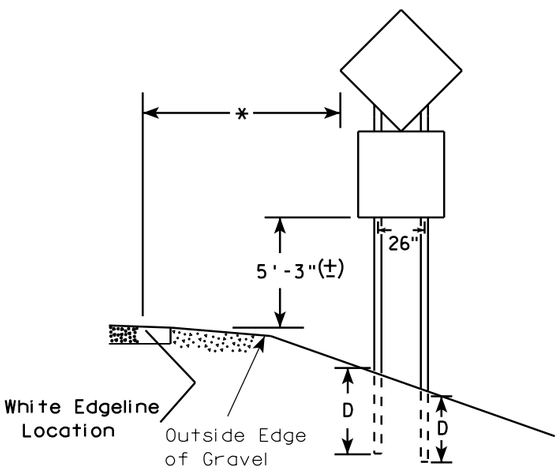
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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.

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"

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

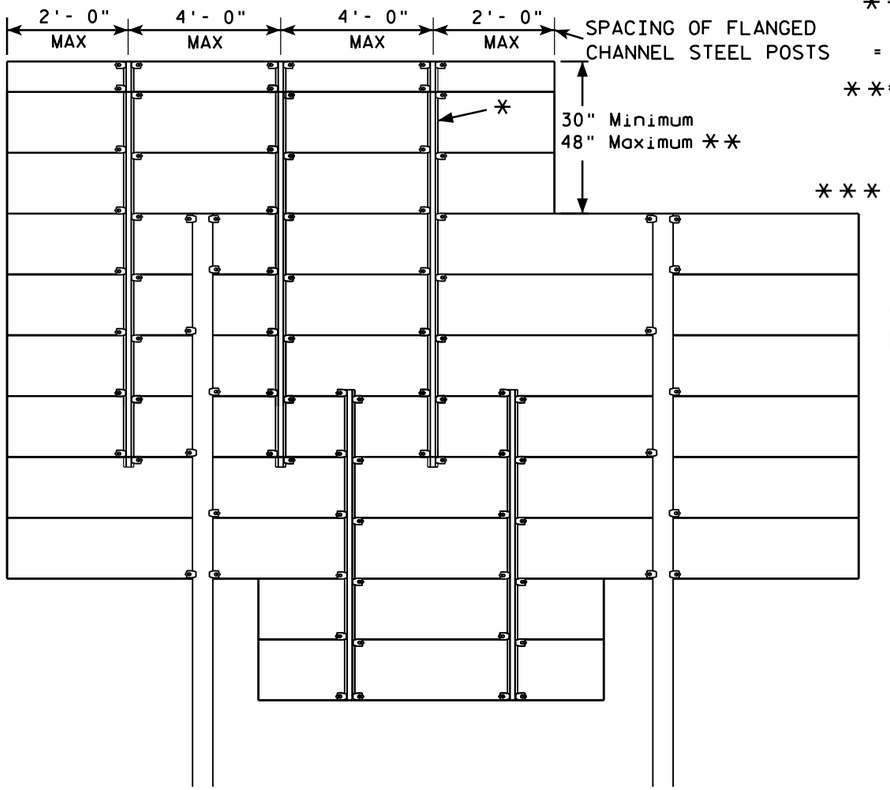
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 220 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

GROUND MOUNTED SIGN

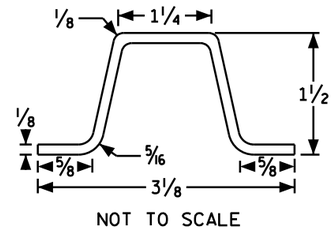


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

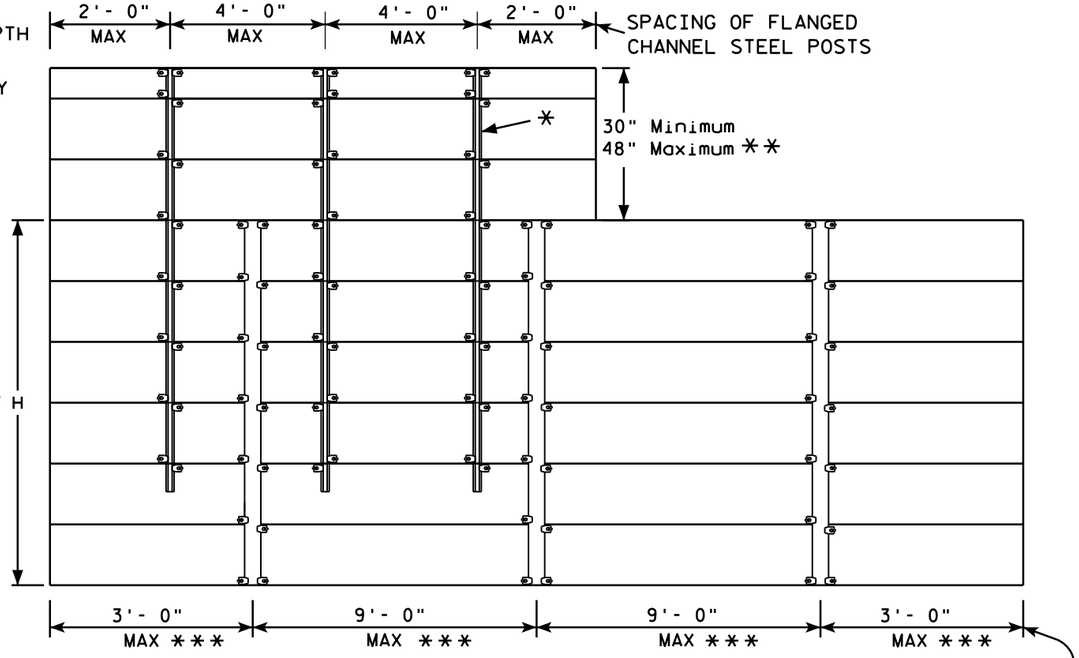
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

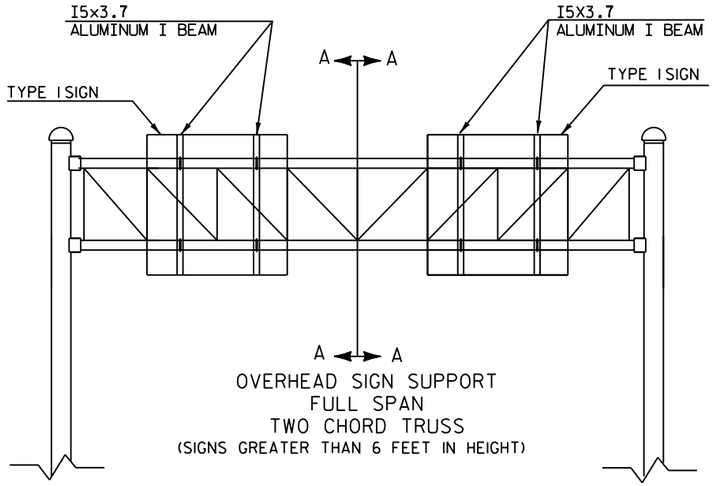
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

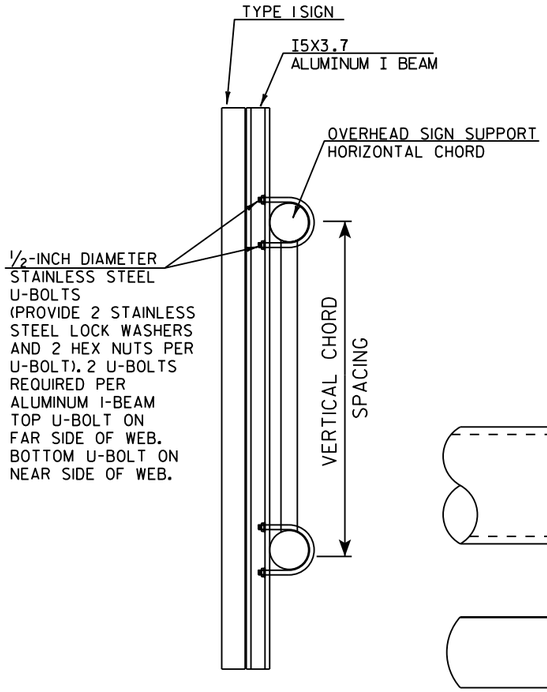
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 12/05/13 PLAT 221 A4-6.12

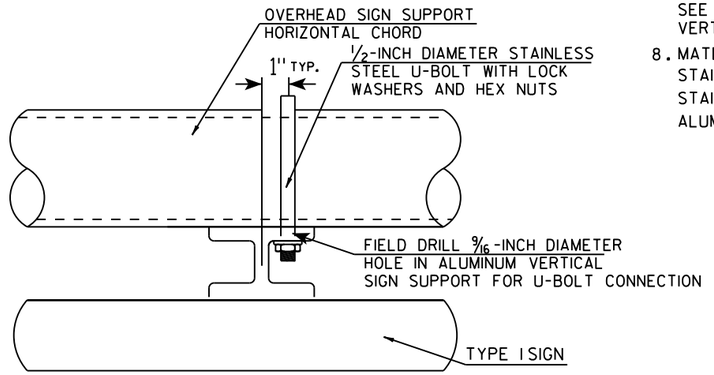
PROJECT NO: | SHEET NO: E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



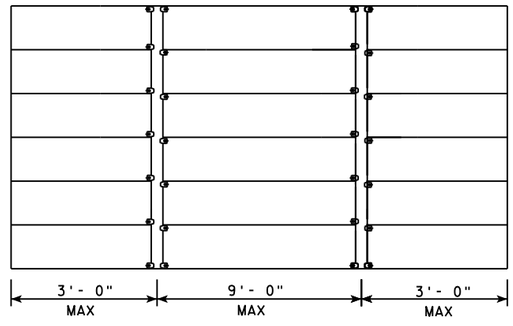
CUT SECTION A-A



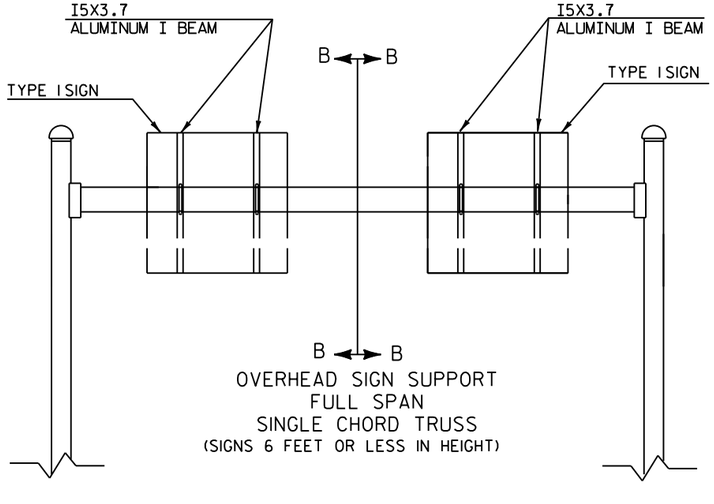
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

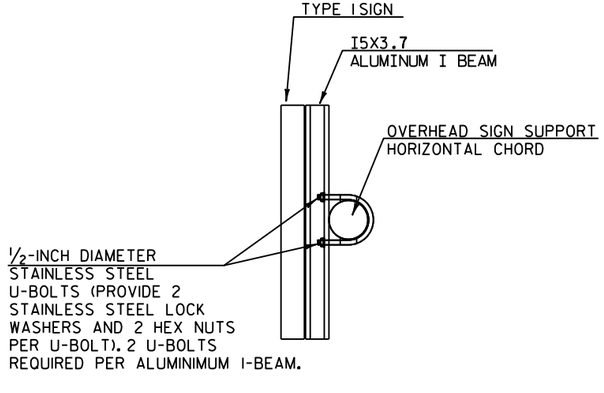
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



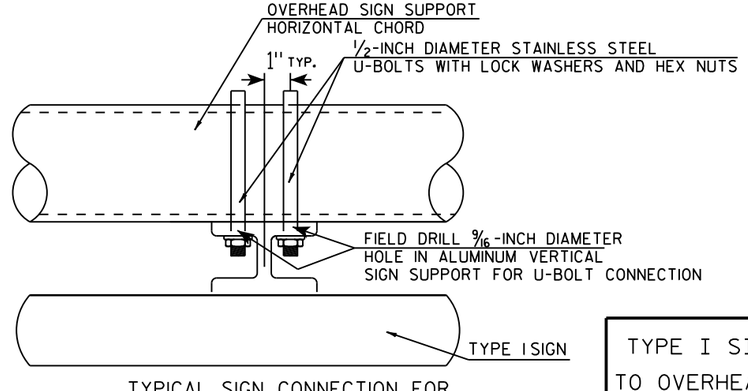
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

TYPE I SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

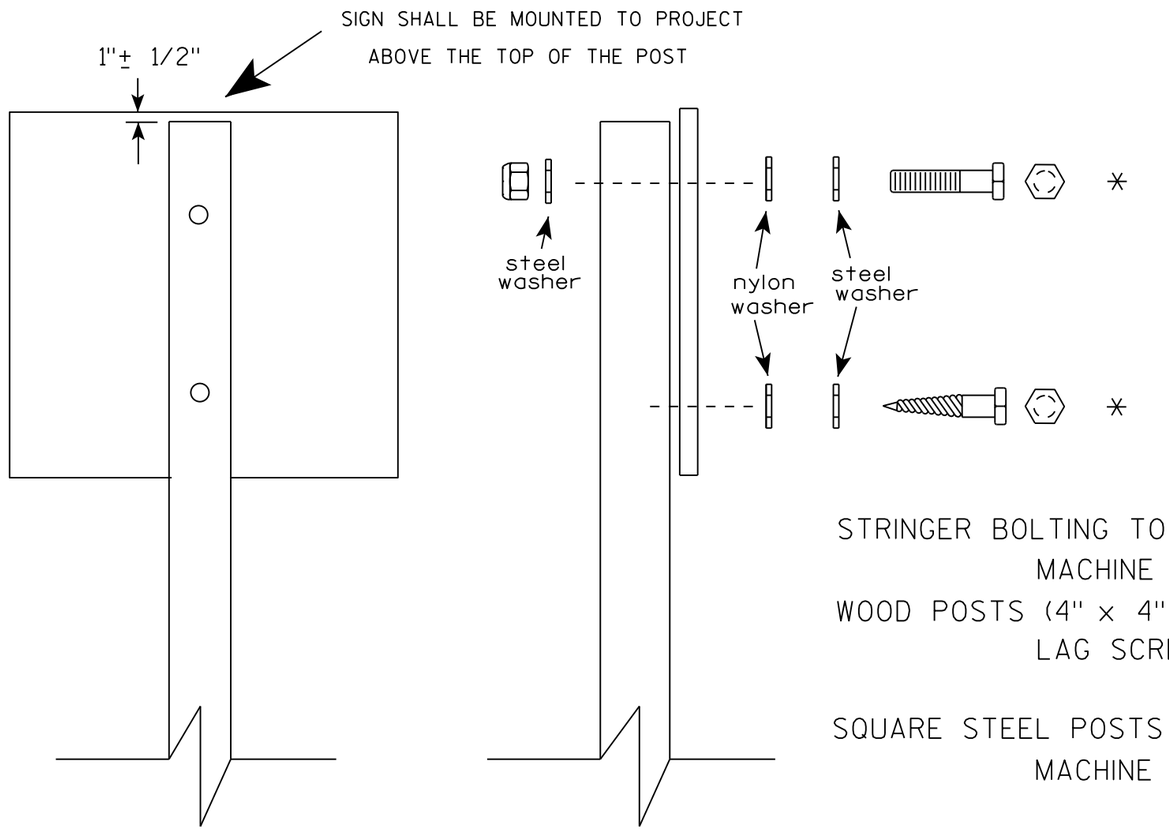
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/15 PLATE NO. A4-7.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A47.DGN PLOT DATE : 01-DEC-2015 17:42 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 38.916838:1.000000



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

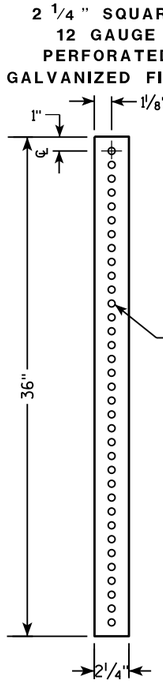
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

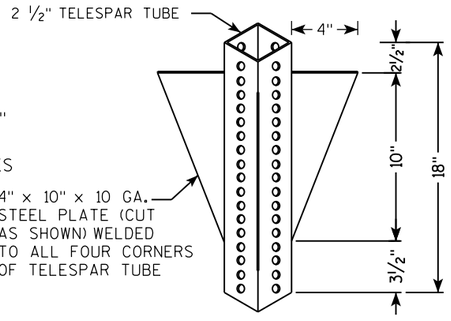
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

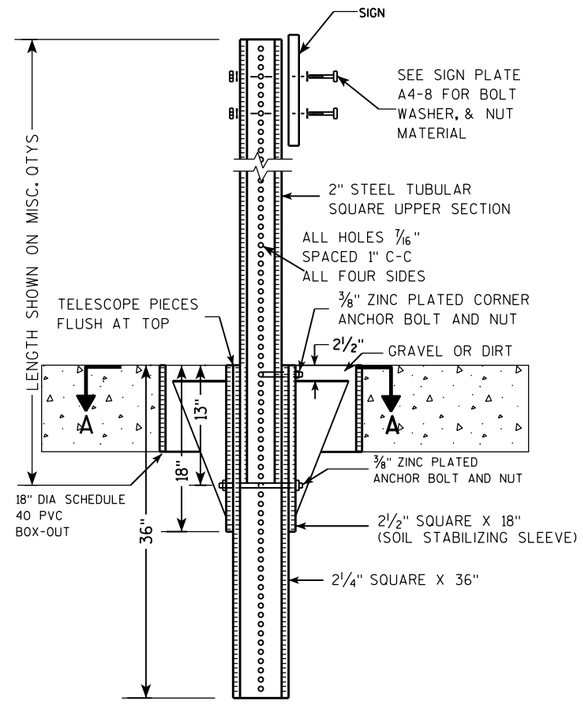
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



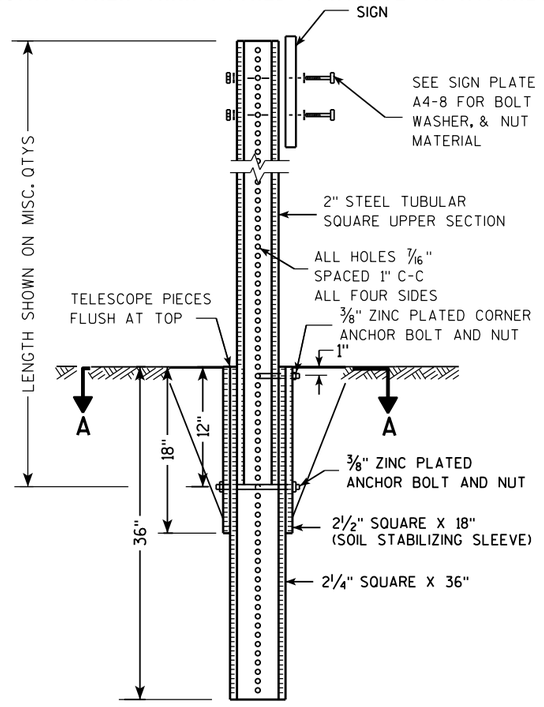
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

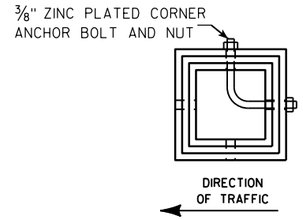


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

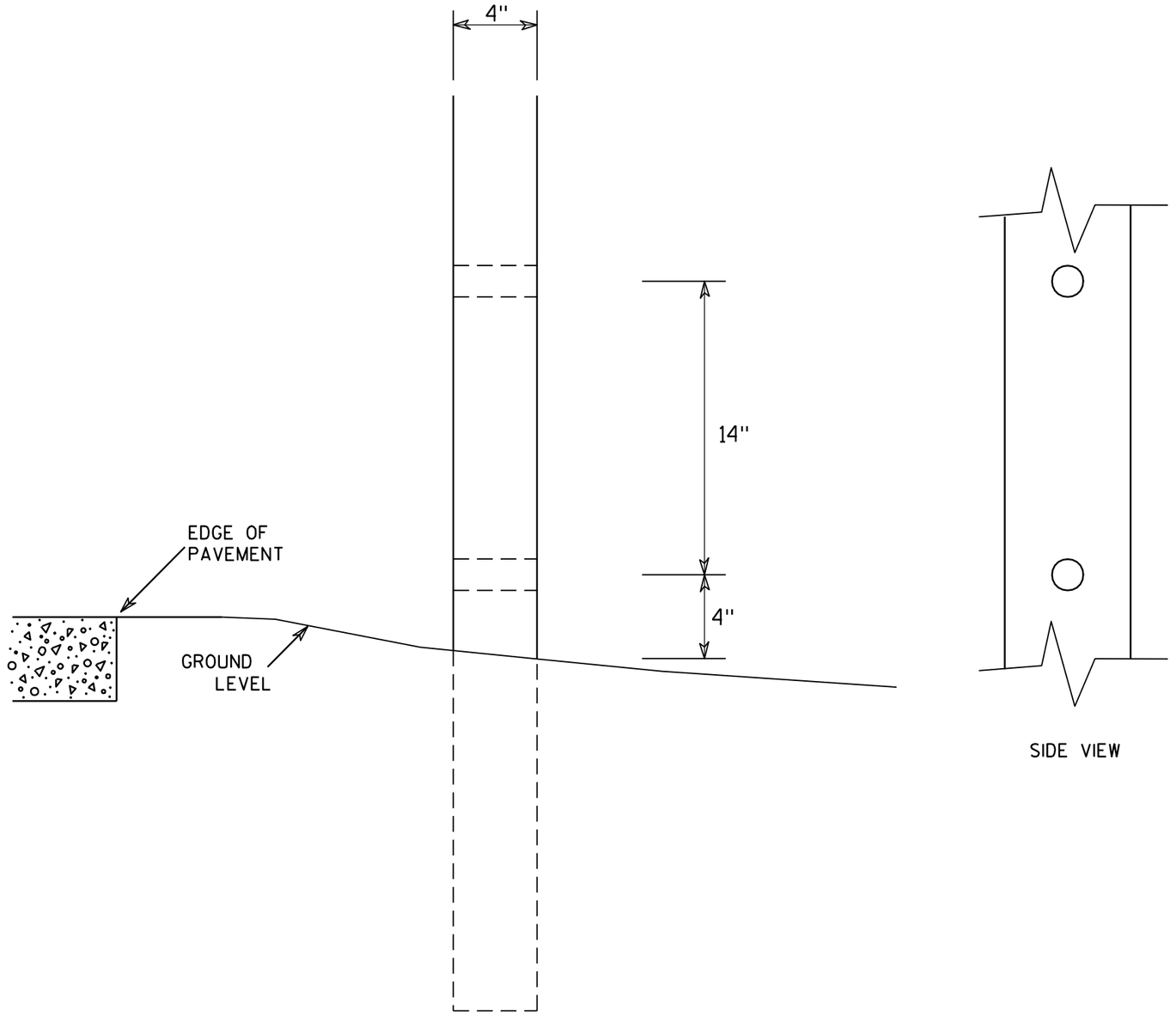
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 224 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

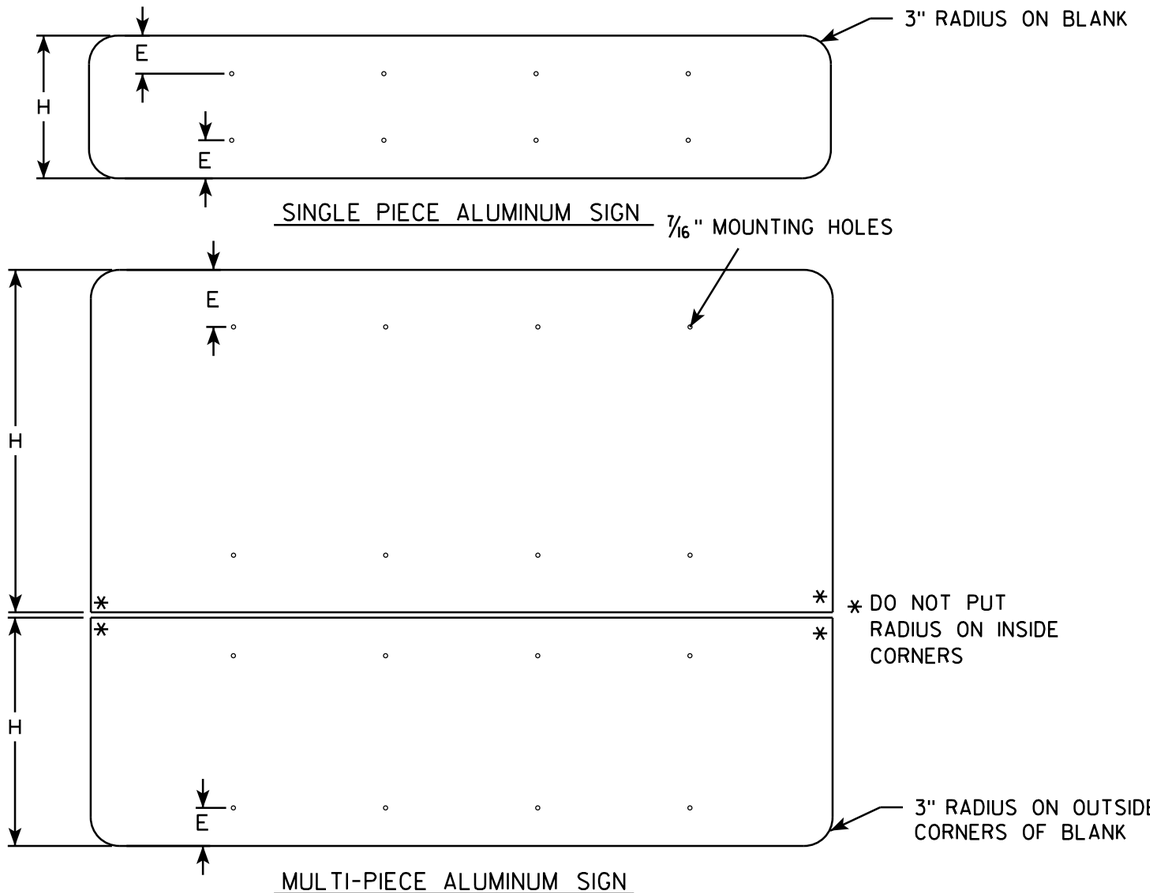
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

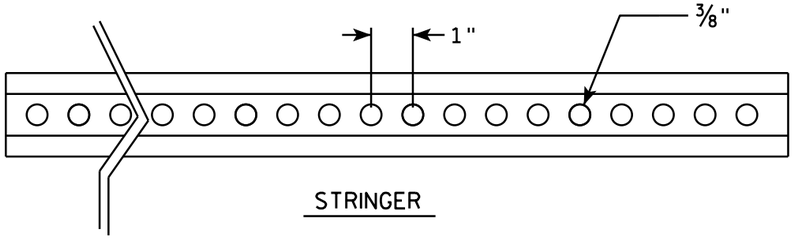
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 225	E



GENERAL NOTES

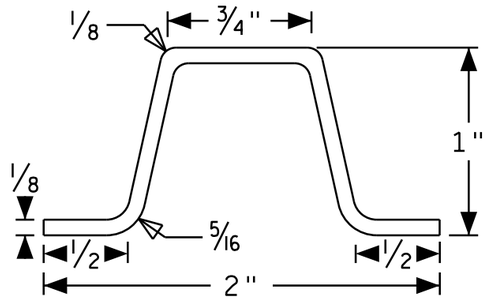
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

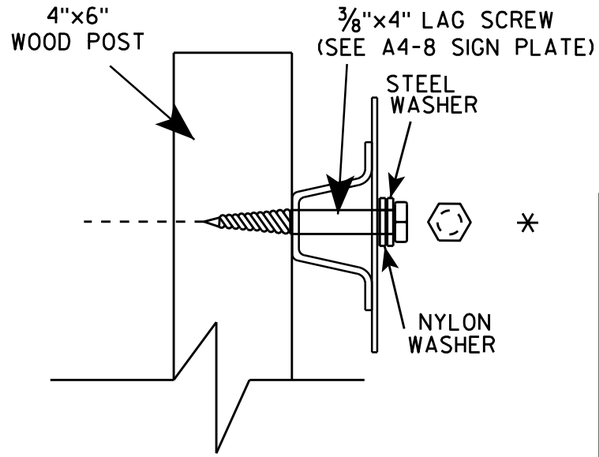


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

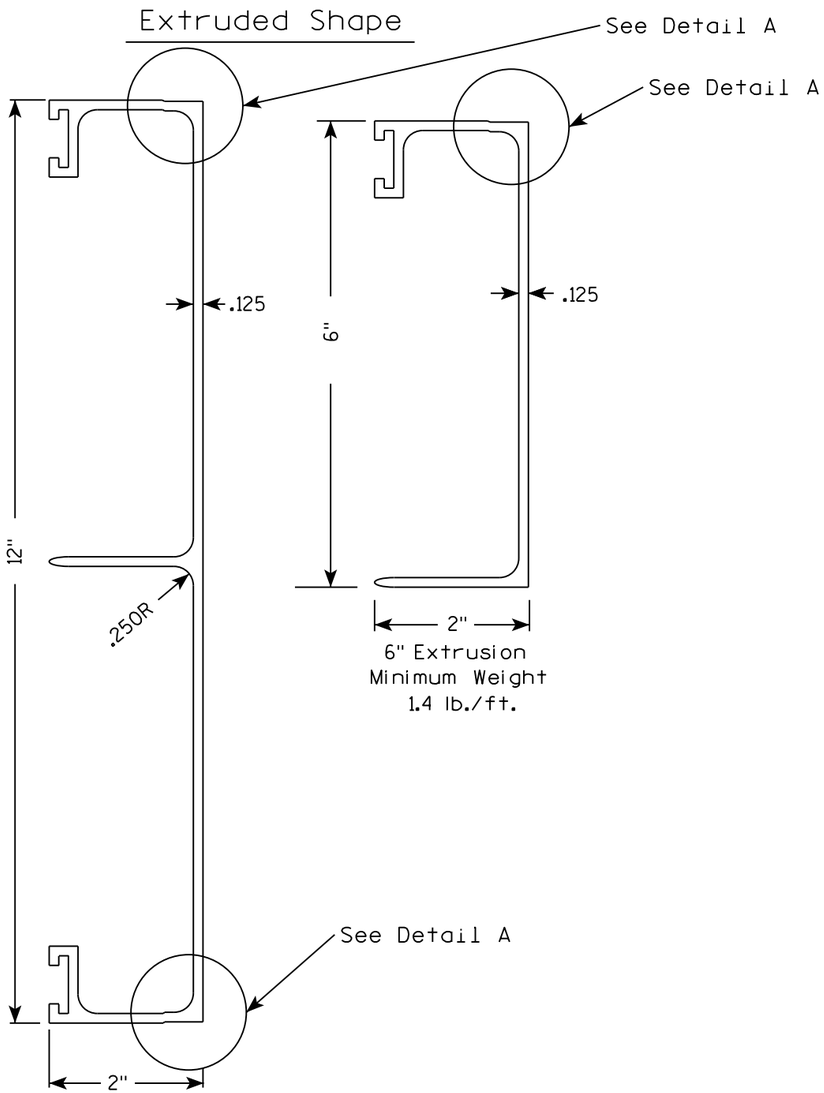
for State Traffic Engineer

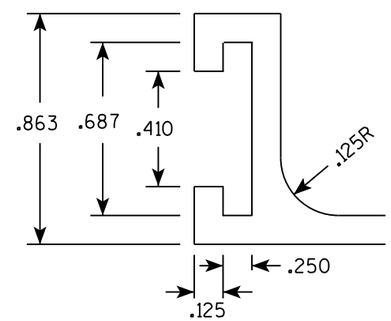
DATE 4/26/16 PLATE NO A4-18.1

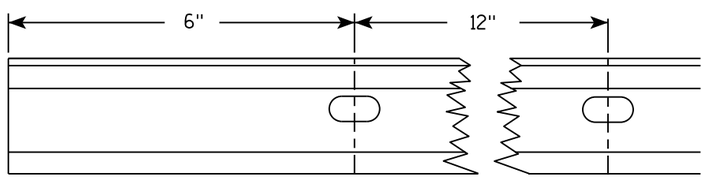
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

Extruded Shape







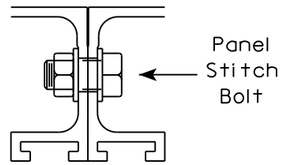
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

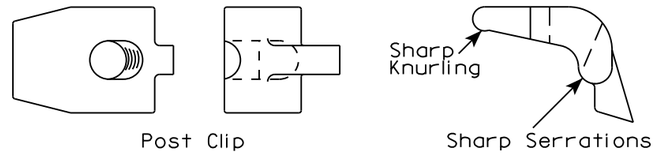
The hardware includes:

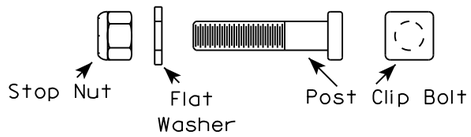
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

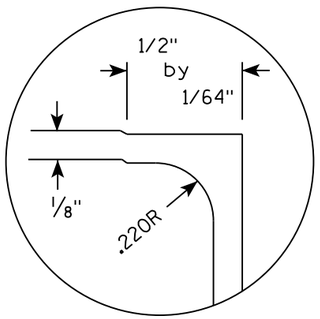
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

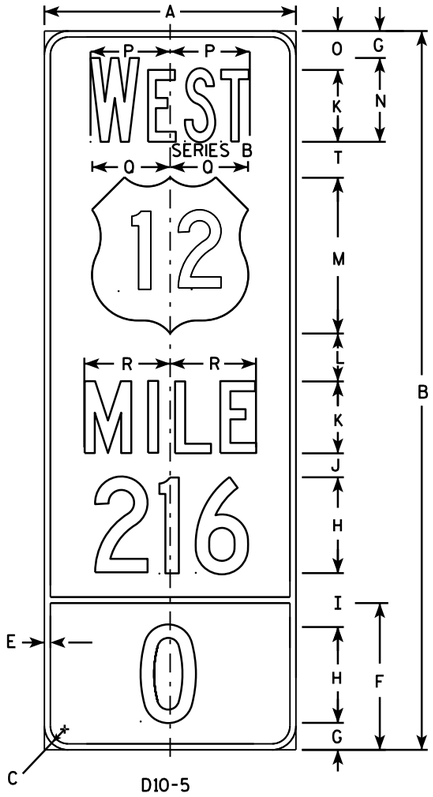
ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

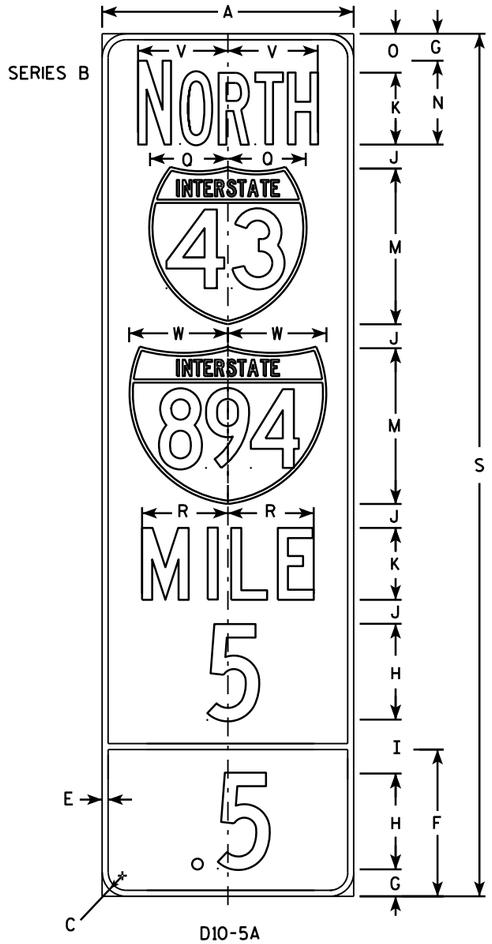
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/30/16 PLATE NO. A5-2.10

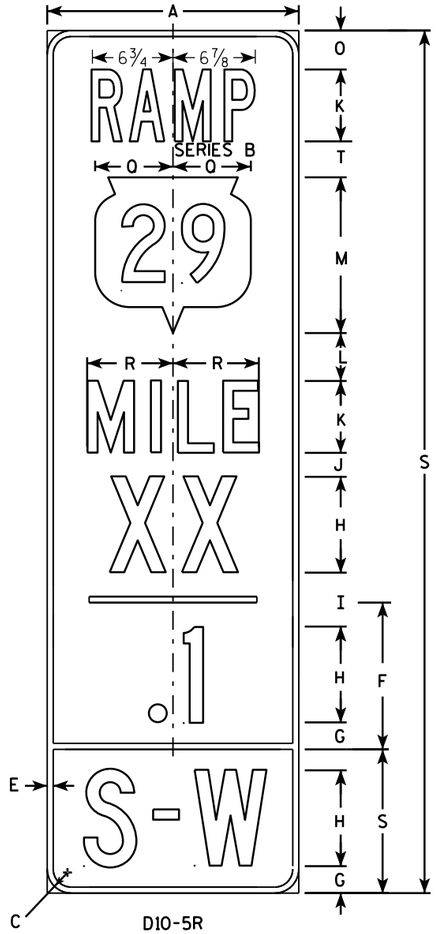
PROJECT NO:				SHEET NO: 227	E



D10-5



D10-5A



D10-5R

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - BLUE
   Message - WHITE
3. Interstate Shield Color
   Background - Top Red
   - Bottom Blue
   Message - White
4. Message Series - C or as noted on the Sign.
5. 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.
6. The decimal point is required for all digits except "0".
7. Optically adjust mileage numbers about the centerline of the sign to achieve proper balance.
8. Optically adjust Ramp direction letters about the centerline of the sign to achieve proper balance.



SERIES B



SERIES B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	D10-5 Area sq. ft.	D10-5A Area sq. ft.	D10-5R Area sq. ft.
1																													
2																													
3																													
4	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5
5	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5

STANDARD SIGN
D10-5

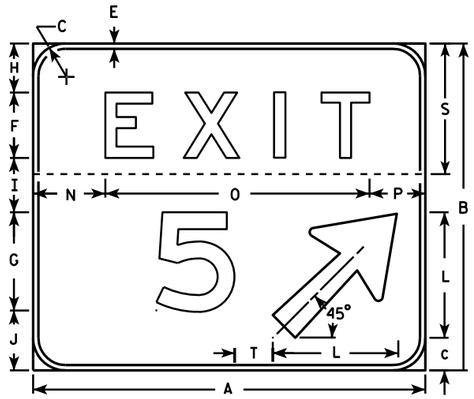
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

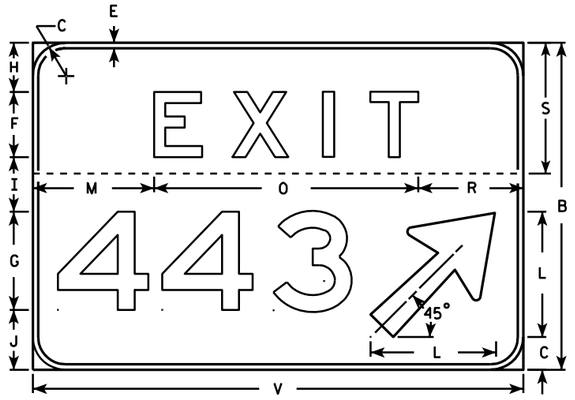
DATE 6/26/14 PL 228 D10-5.2

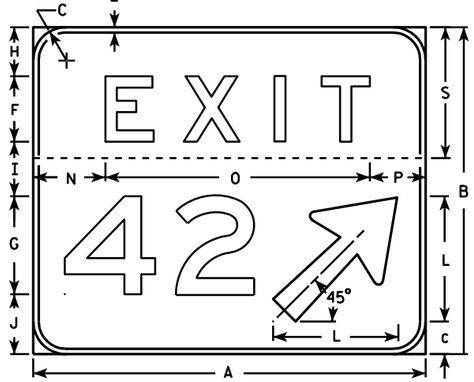
PROJECT NO:

SHEET NO: E

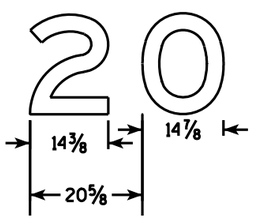


NOTE: T diminision shall be measured from the back of the number to the front of the arrow





EXAMPLE FOR USING SPACING CHART



NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 7/8	23	22 1/4	13 1/4	48 1/2	10 1/4		19 1/4	24	7		90		96	7 1/2	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

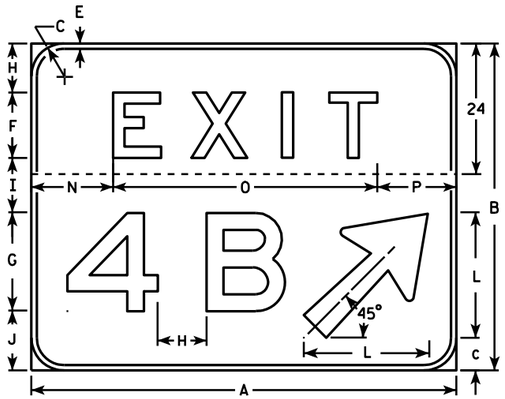
STANDARD SIGN
E5-1A

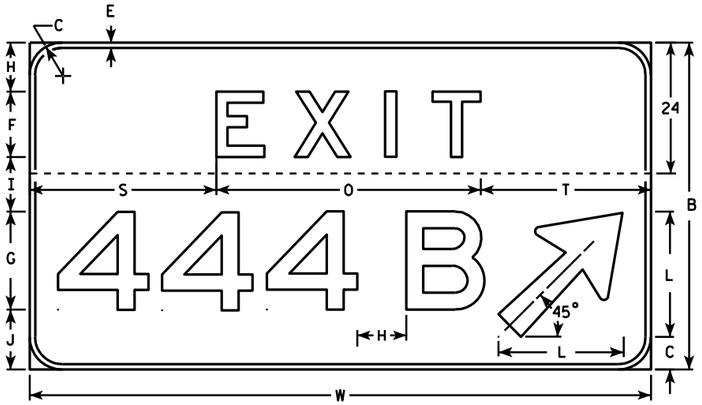
WISCONSIN DEPT OF TRANSPORTATION

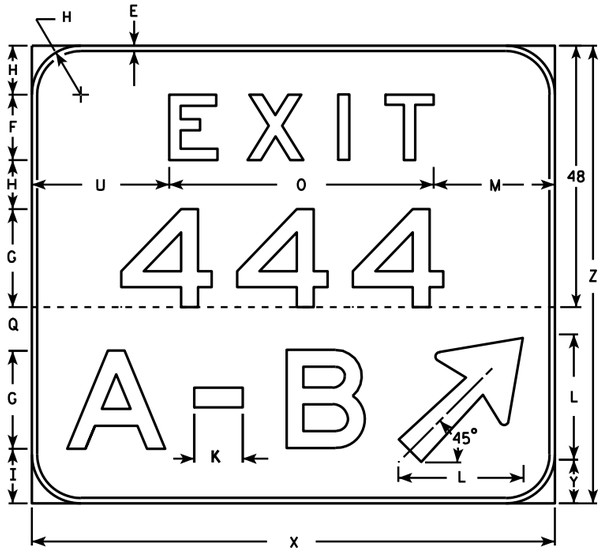
APPROVED Matthew R Rauch for State Traffic Engineer

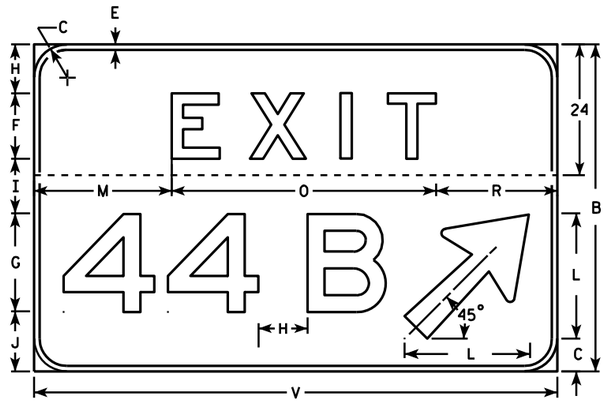
DATE 5/11/10 PLATE NO. E5-1A.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 229 | E

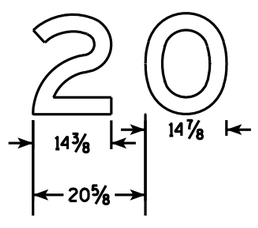








EXAMPLE FOR USING SPACING CHART



NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. When two letters are hyphenated, the distance between them should be equal to two letter heights and the hyphen is spaced optically between them.
9. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8	19 7/8	22 1/8	22 1/8
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14	9 7/8	14	14
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8	20 1/4	21 1/8	21 1/8
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4	20 1/4	21 1/8	21 1/8
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8	22 1/2	25 1/2	23 3/8
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8	19 1/4	20 5/8	20 5/8
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8	18	20 3/4	20 3/4
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/4	21 1/2	21 1/2
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18	21 3/4	21 3/4
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2																										
3																										
4																										
5	78	60	6		1	12	18	9	10	11	8 7/8	23	25 1/4	15	48 1/2	14 1/2	8	22 1/4	34 1/4	31 1/4	25 1/4	96	114	96	7 1/2	84

2 Digit Bid Area	3 Digit Bid Area	4 Digit Bid Area	5 Digit Bid Area
Sq. Ft.			
32.5	40.0	47.5	56.0

STANDARD SIGN
E5-1B

WISCONSIN DEPT OF TRANSPORTATION

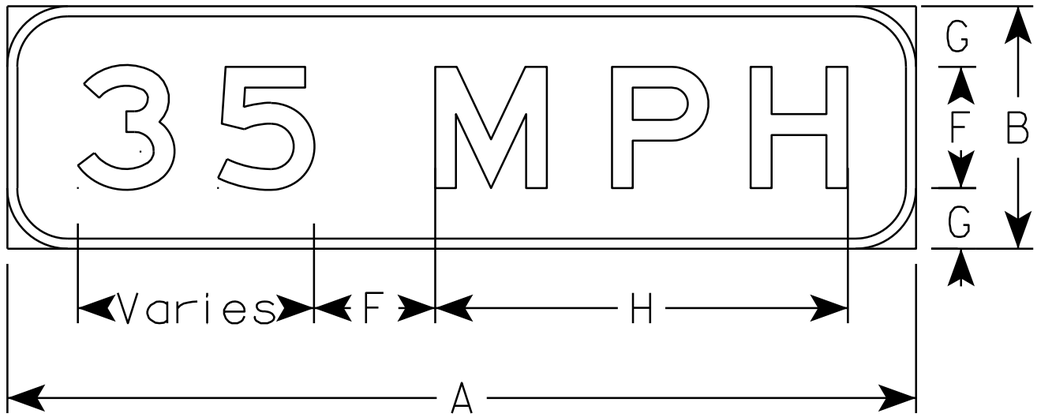
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/8/10 PLATE NO. E5-1B.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 230 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\E51B.DGN PLOT DATE : 08-JUN-2010 12:42 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 27.808870:1.000000
WISDOT/CADDS SHEET 42



E13-1P

NOTES

1. Panel is - Type F reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - E
4. The panel shown on this plate is for use with E5-1A.
5. Width, Radius and Border thickness shall match the E5-1A.
6. Substitute appropriate numerals and adjust placement 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																											
2S	VARIES	24				12	6	40 7/8																			VARIES
2M																											
3																											
4																											
5																											

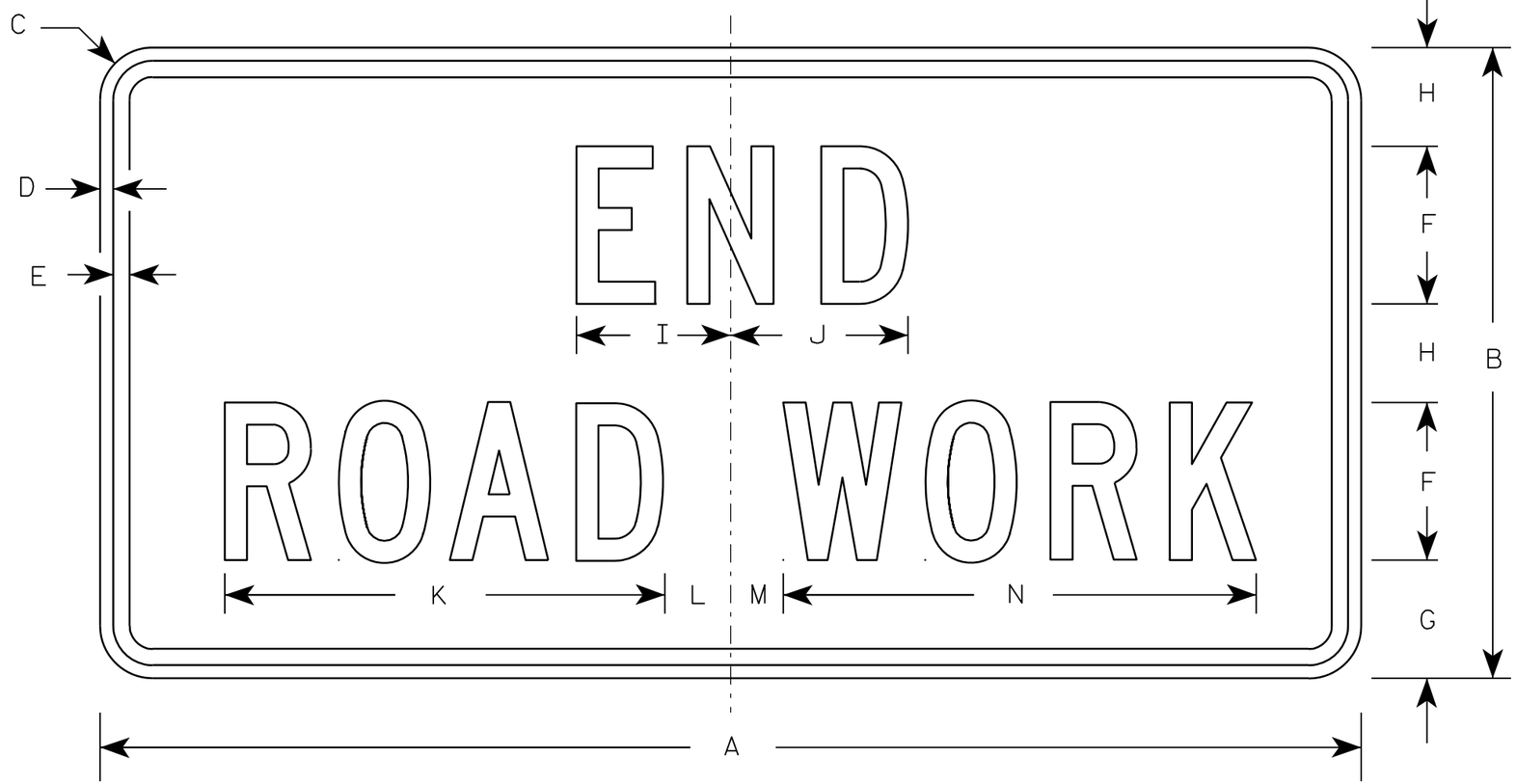
STANDARD SIGN
E13-1P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/5/2012 PLATE NO. E13-1P.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 231	E



G20-2A

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 - 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.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 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	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

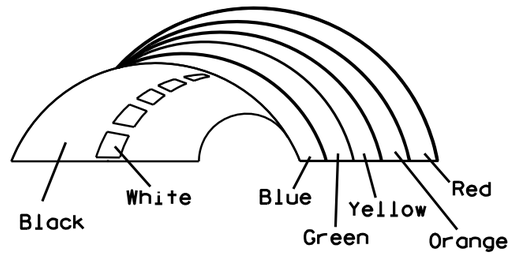
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 232	E



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 - (See Note 5)
3. Message Series - (See Note 6)
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. Border - Blue
   Line 1 - Red
   Line 2 - Black
   Line 3-5 - Blue
6. Line 1 - Dutch 8011L
   Line 2 - Series E
   Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

STANDARD SIGN
I55-56

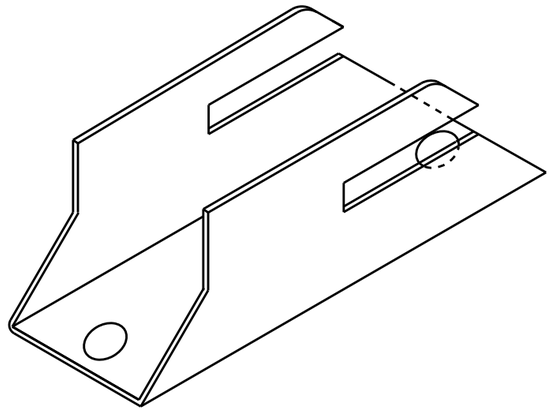
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

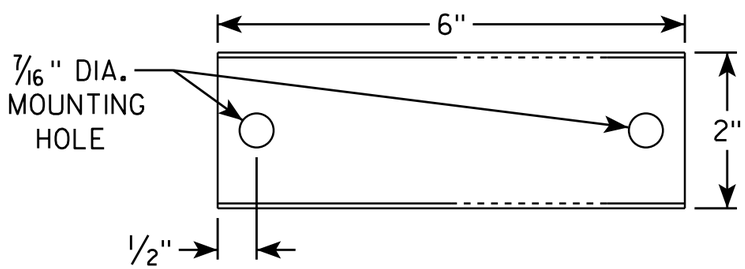
DATE 4/27/11 PLATE NO. 155-56.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 233

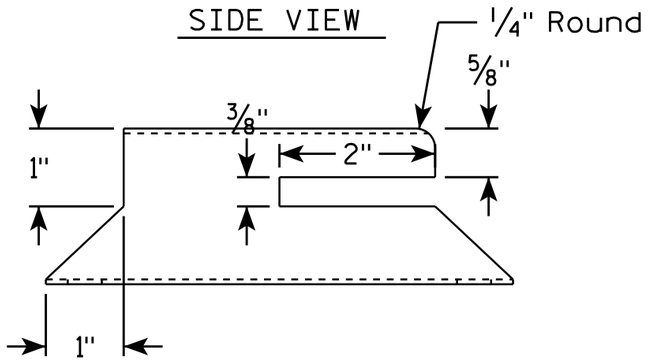
ISOMETRIC VIEW



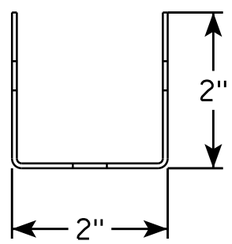
TOP VIEW



SIDE VIEW



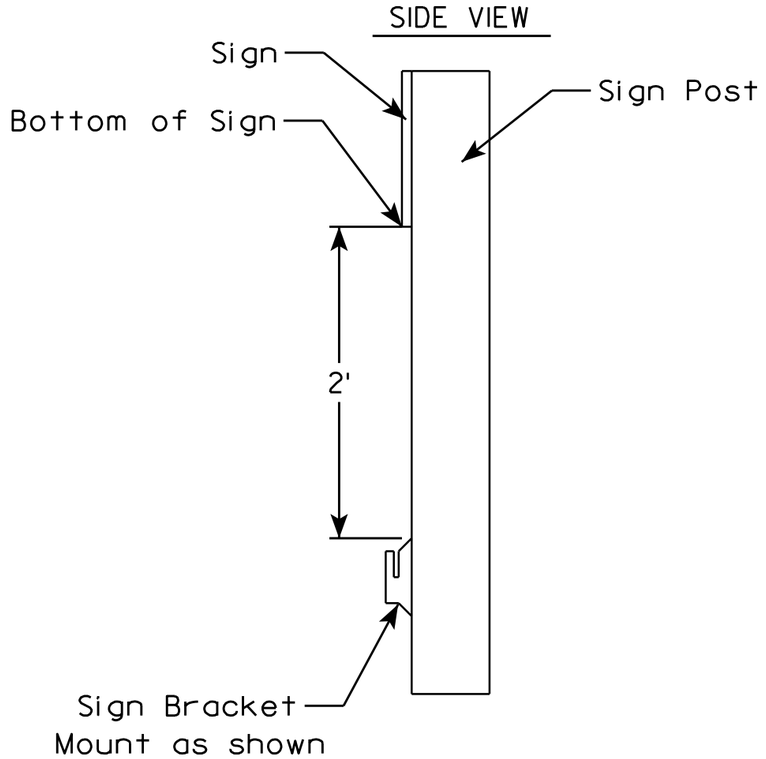
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

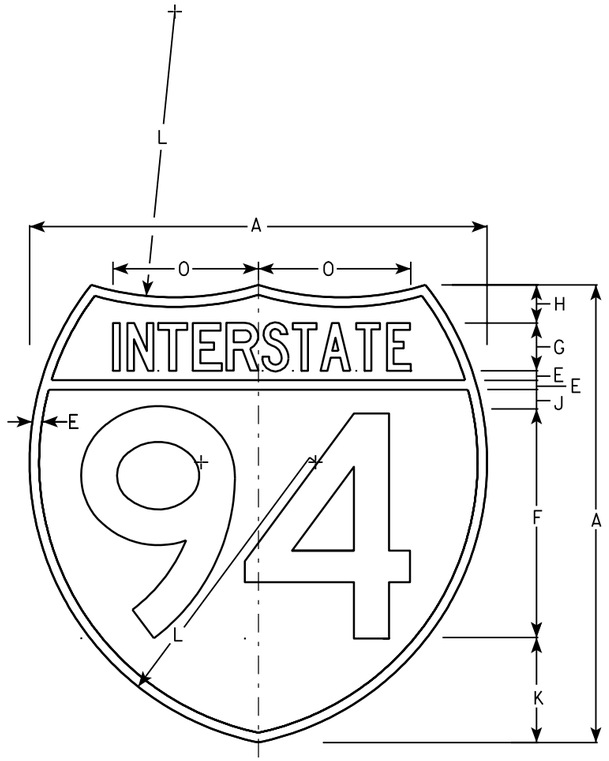
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

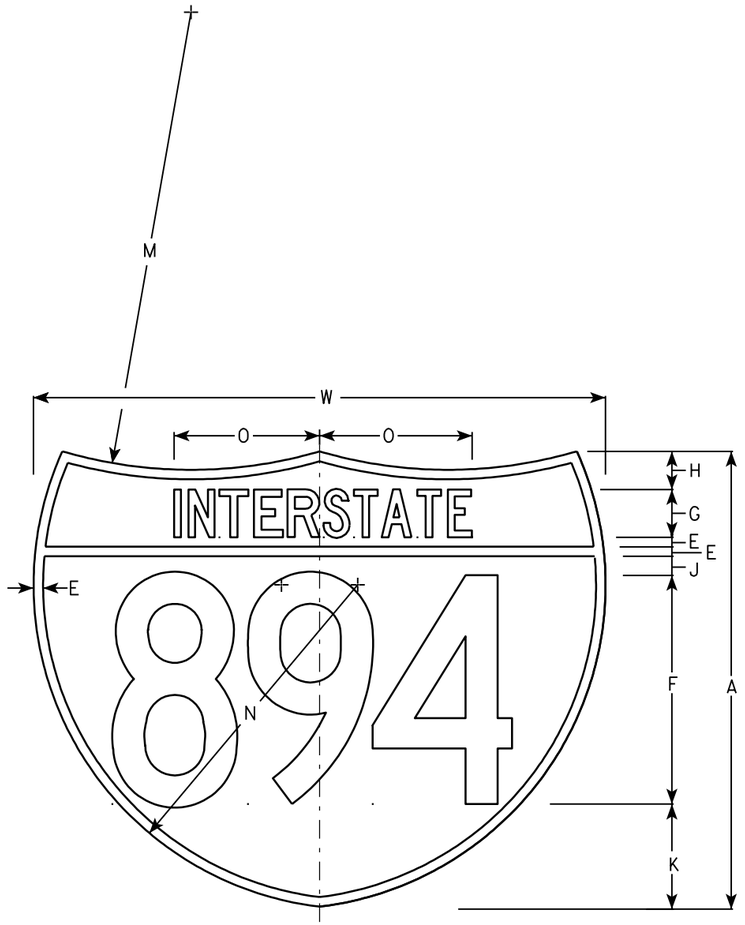
DATE 4/26/16 PLATE I55-56B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\I5556B.DGN PLOT DATE : 26-APR-2016 17:29 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.945842:1.000000
WISDOT/CADDS SHEET 42



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

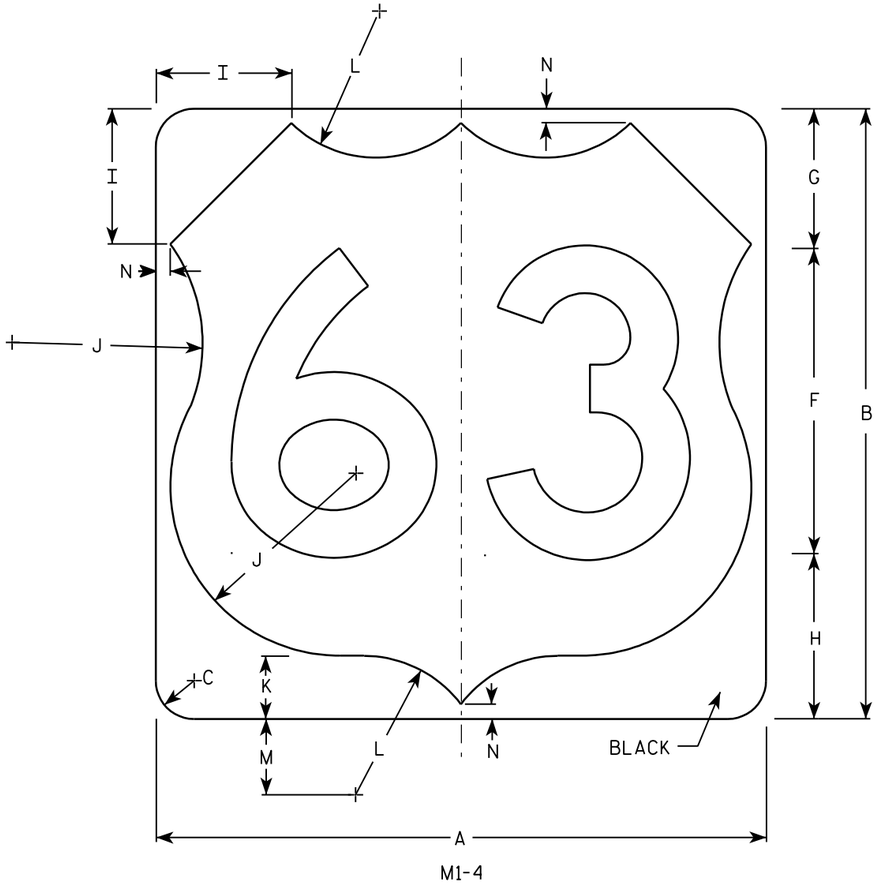
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

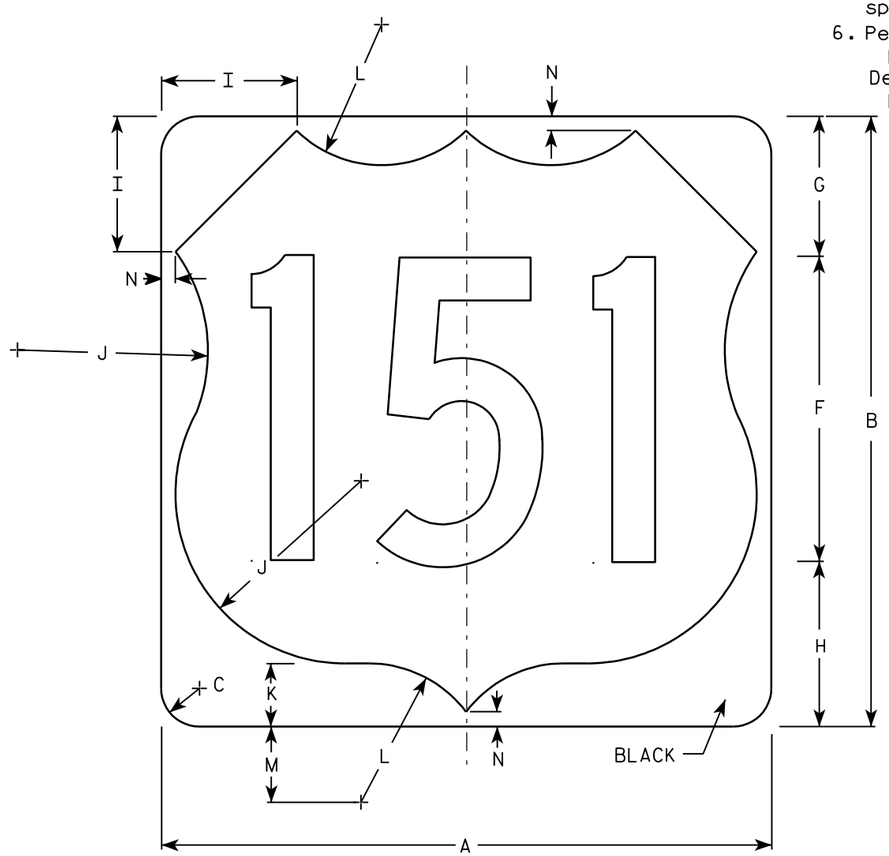
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 235	E

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 numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

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	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

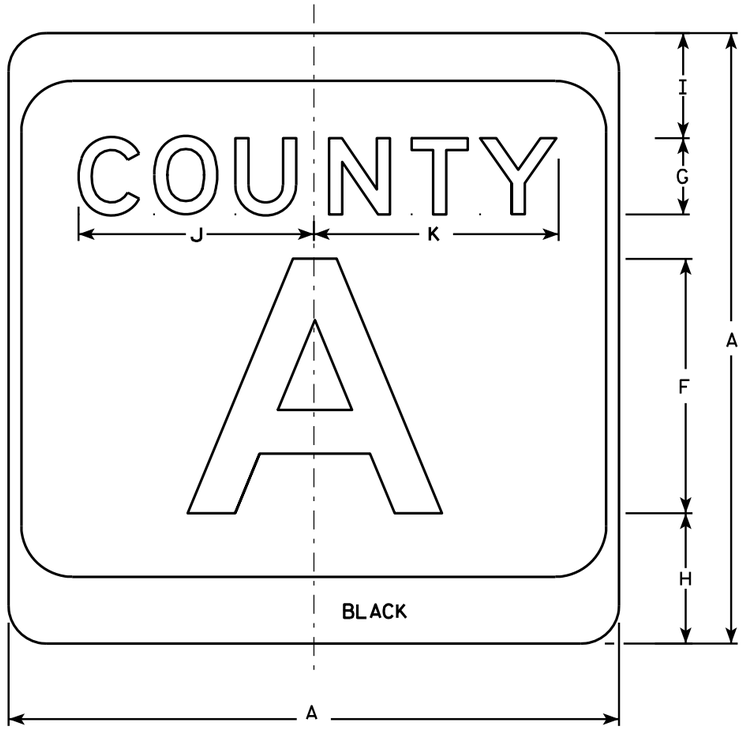
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

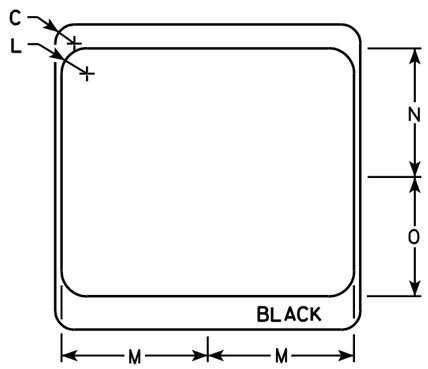
APPROVED Matthew R Rauch
for State Traffic Engineer

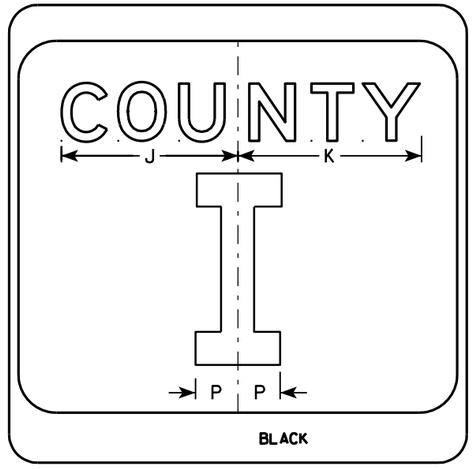
DATE 08/25/05 PLATE NO. M1-4.9

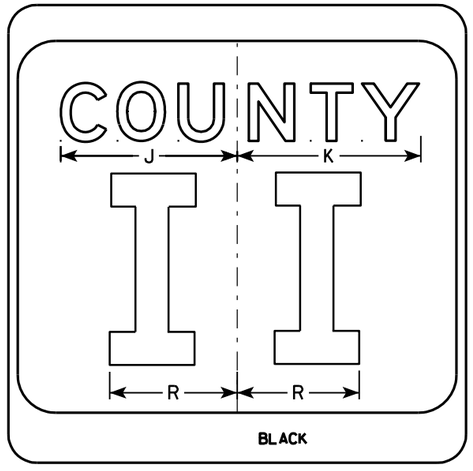
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 236 | E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

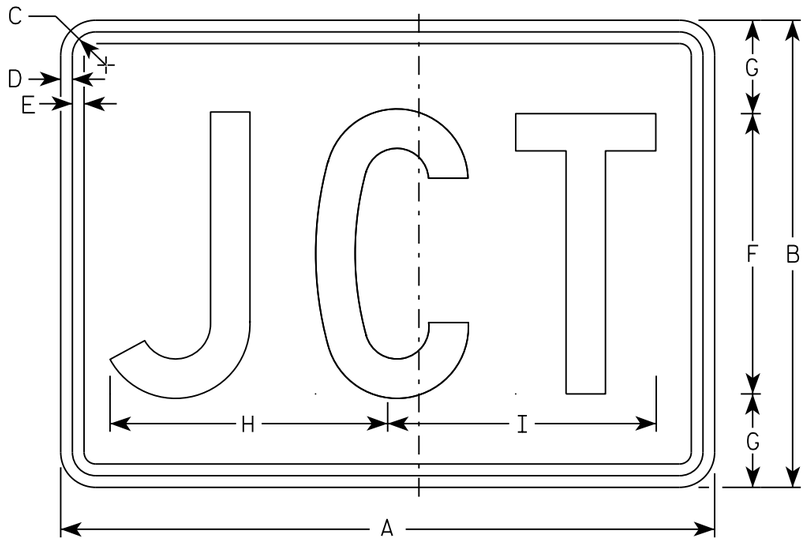
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

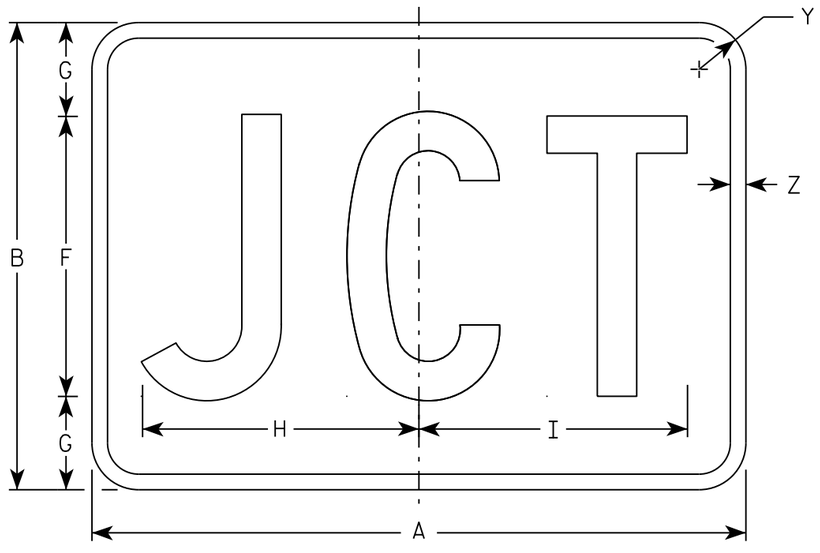
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 237	E



M2-1
MM2-1
MP2-1



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

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN
M2-1

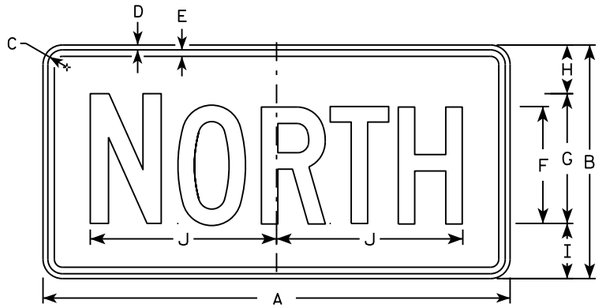
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

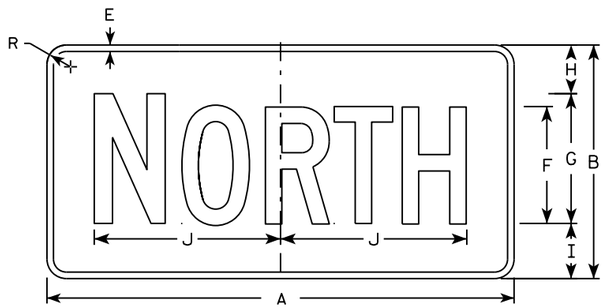
DATE 10/15/15 PLATE 238 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



M3-1
MM3-1
MP3-1



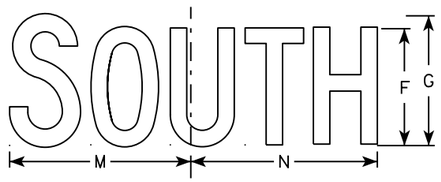
MB3-1
MK3-1
MN3-1



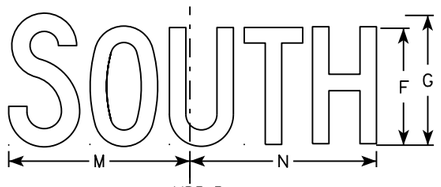
M3-2
MM3-2
MP3-2



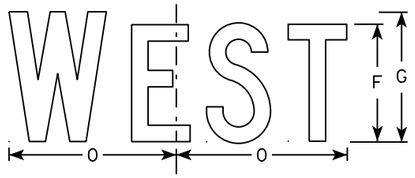
MB3-2
MK3-2
MN3-2



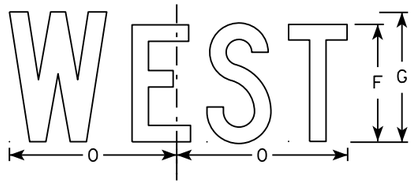
M3-3
MM3-3
MP3-3



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

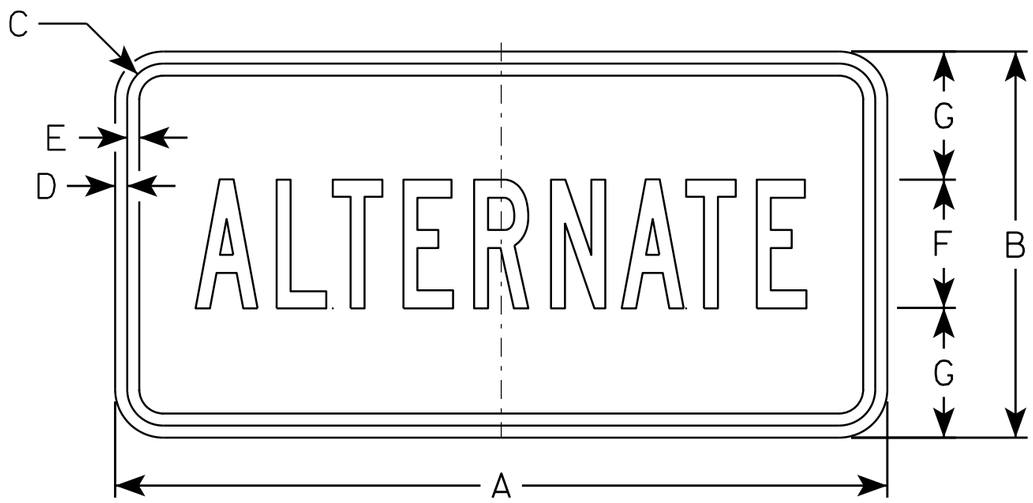
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

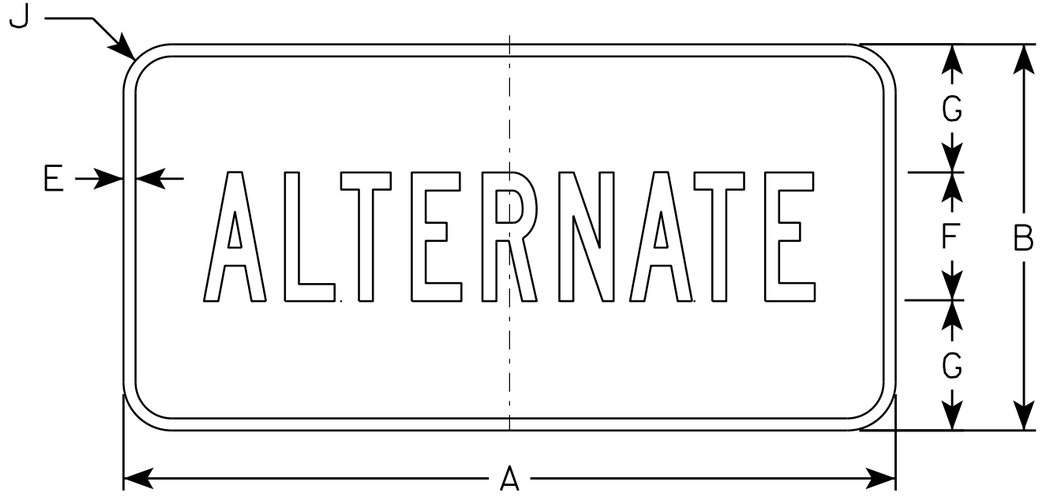
DATE 10/15/15 PLATE NO M3-1.14

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



M4-1
M04-1



MB4-1

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
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.
5. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   M04-1 Background - Orange - Type F
   Message - Black

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	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

STANDARD SIGN
M4-1

WISCONSIN DEPT OF TRANSPORTATION

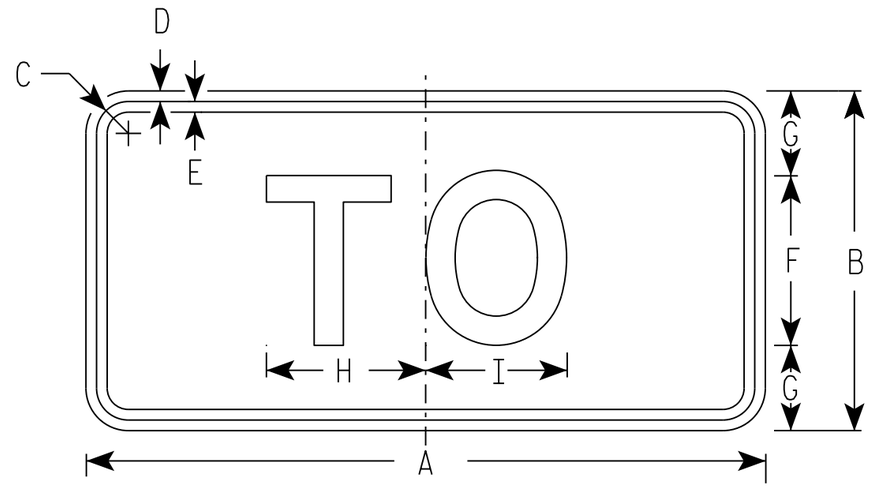
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE 240 '14-1.8

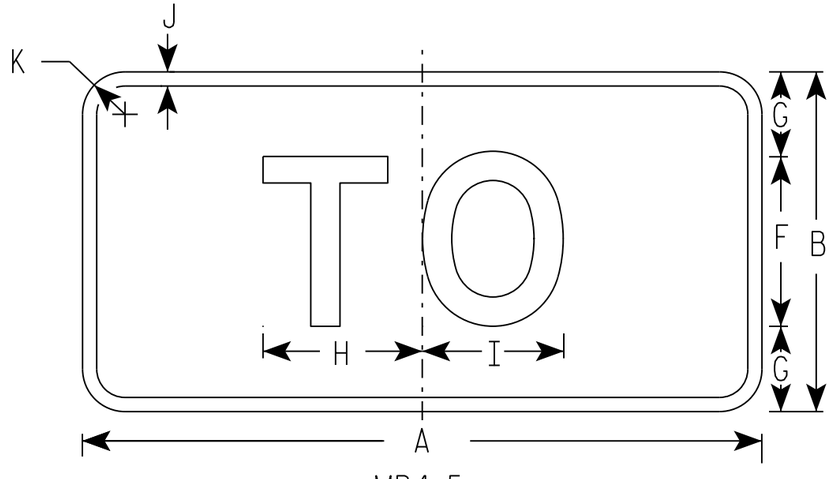
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M41.DGN PLOT DATE : 30-JUN-2014 15:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.708937:1.000000 WISDOT/CADDS SHEET 42



M4-5
MM4-5
MP4-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
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. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

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	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

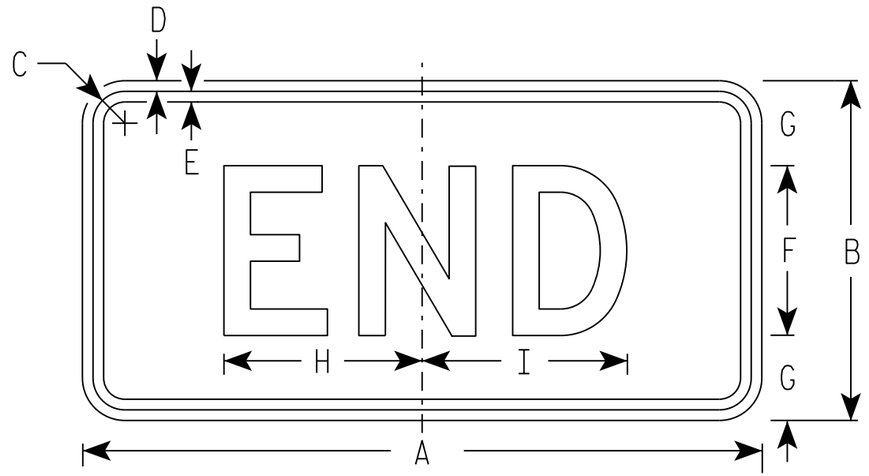
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

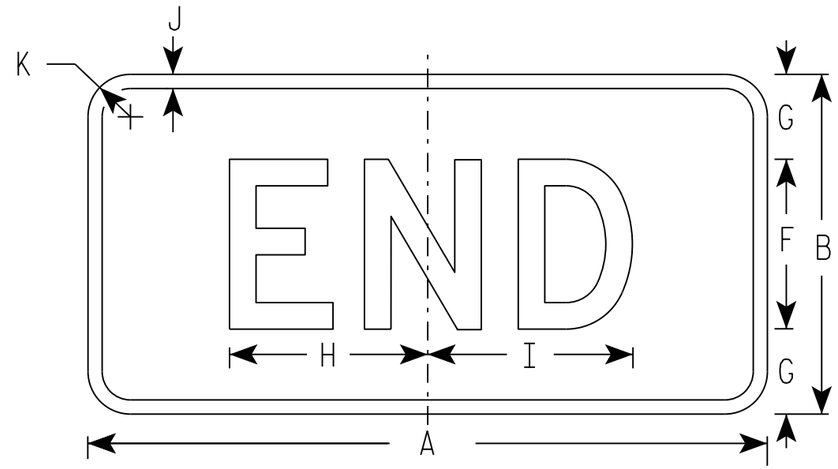
DATE 10/15/15 PLATE 241 M4-5.8

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M45.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-6 Background - White
   Message - Black

   MB4-6 Background - Blue
   Message - White

   MK4-6 Background - Green
   Message - White

   MM4-6 Background - White
   Message - Green

   MN4-6 Background - Brown
   Message - White

   MP4-6 Background - White
   Message - Blue

   MR4-6 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-6

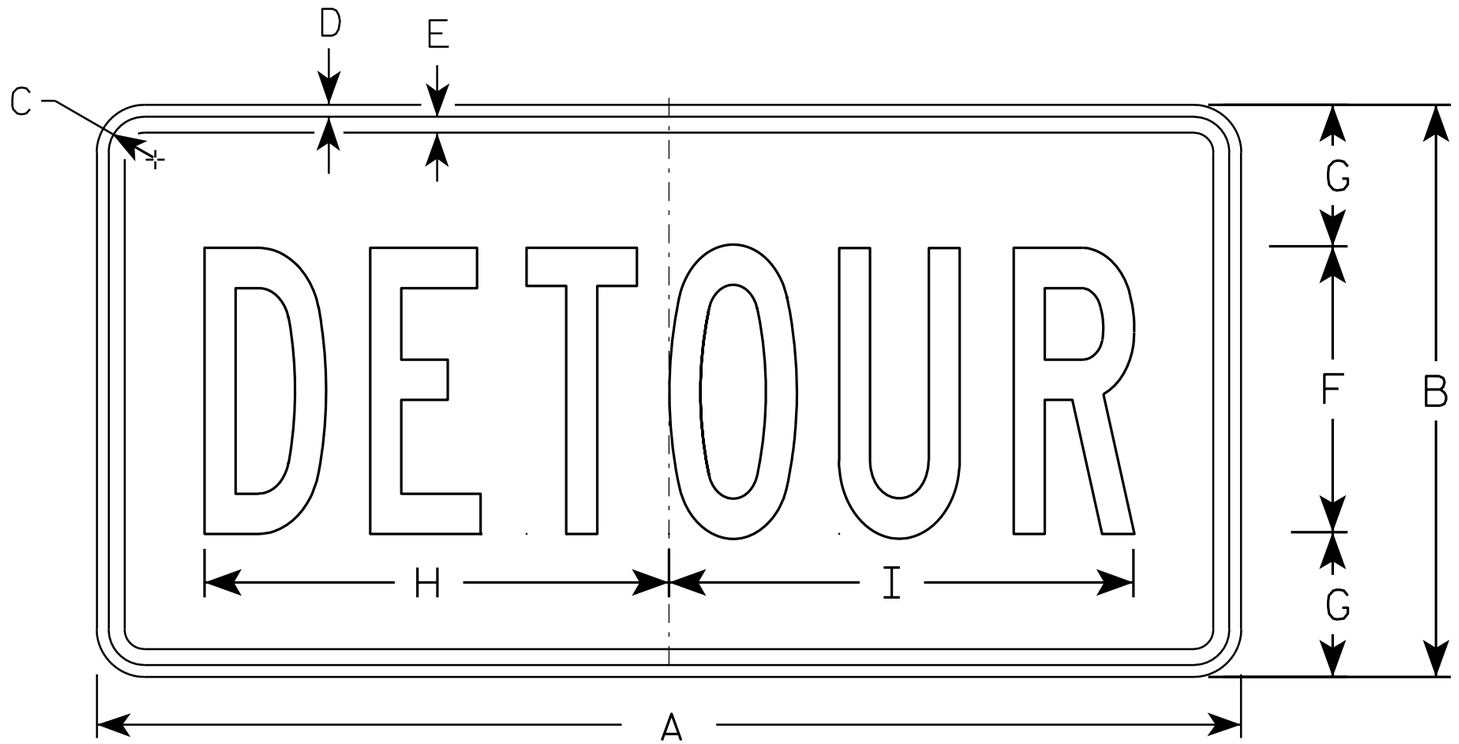
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 242 '14-7.9

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M46.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



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																											

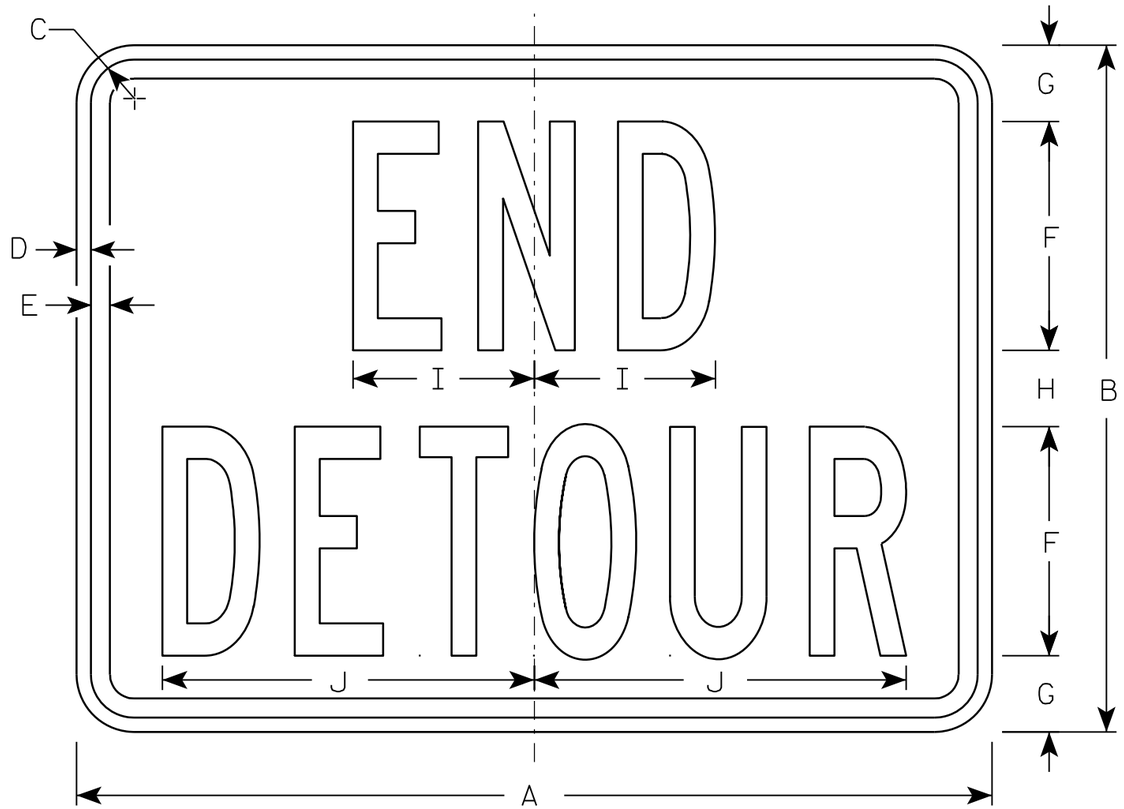
STANDARD SIGN
M4-8

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: 243	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																											

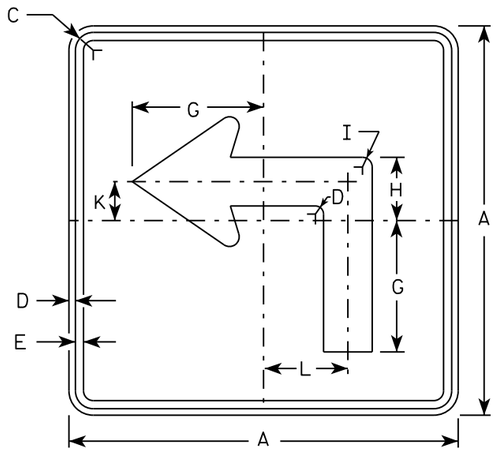
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

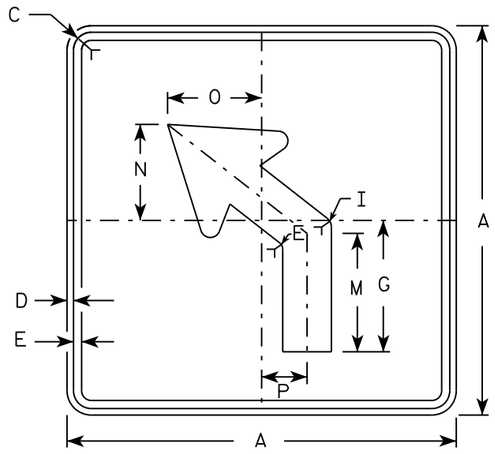
APPROVED Matthew R Rauch
for State Traffic Engineer

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

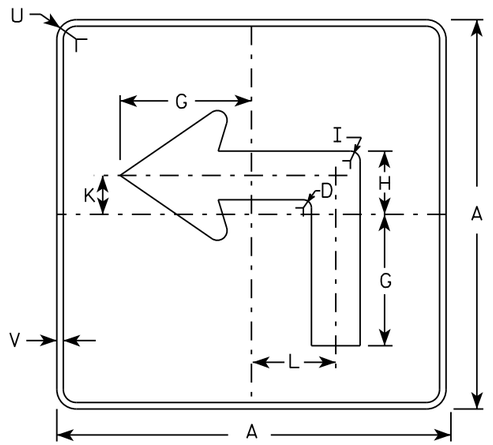
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 244	E



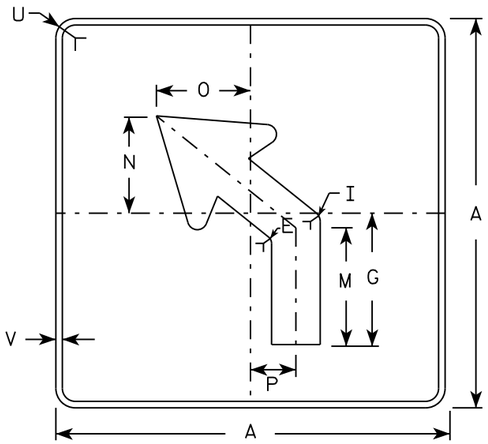
M5-1L
MM5-1L
MO5-1L
MP5-1L



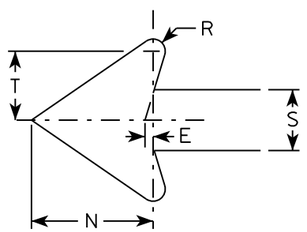
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

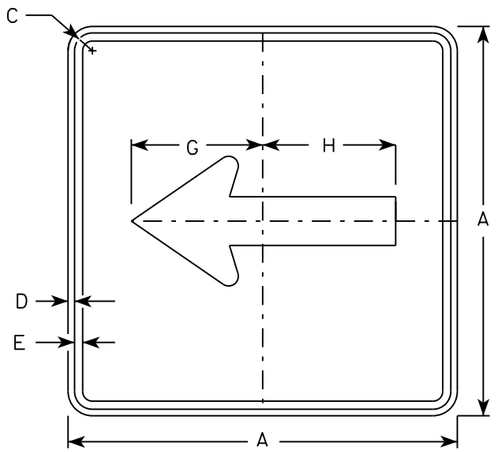
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

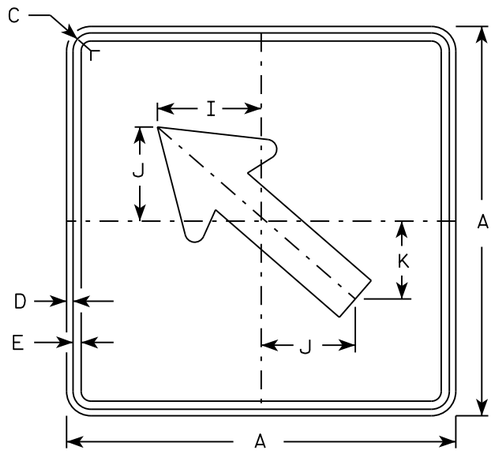
DATE 10/15/15 PLATE NO. M5-1.13

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



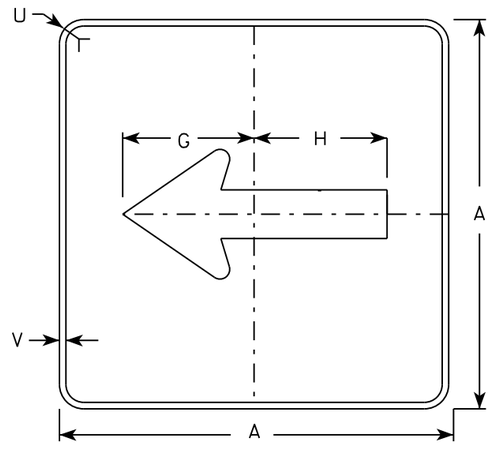
M6-1
MM6-1
MO6-1
MP6-1



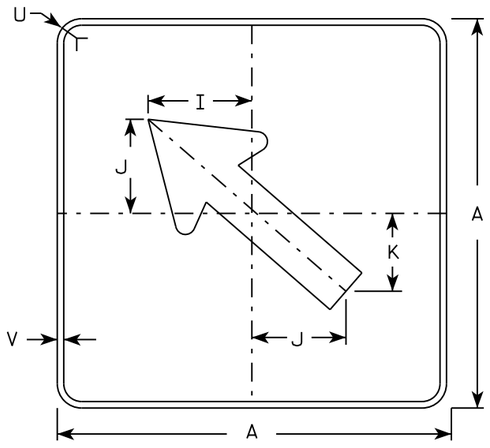
M6-2
MM6-2
MO6-2
MP6-2

NOTES

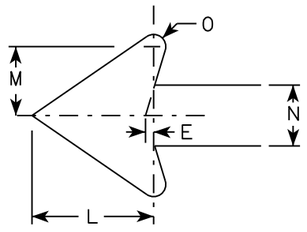
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

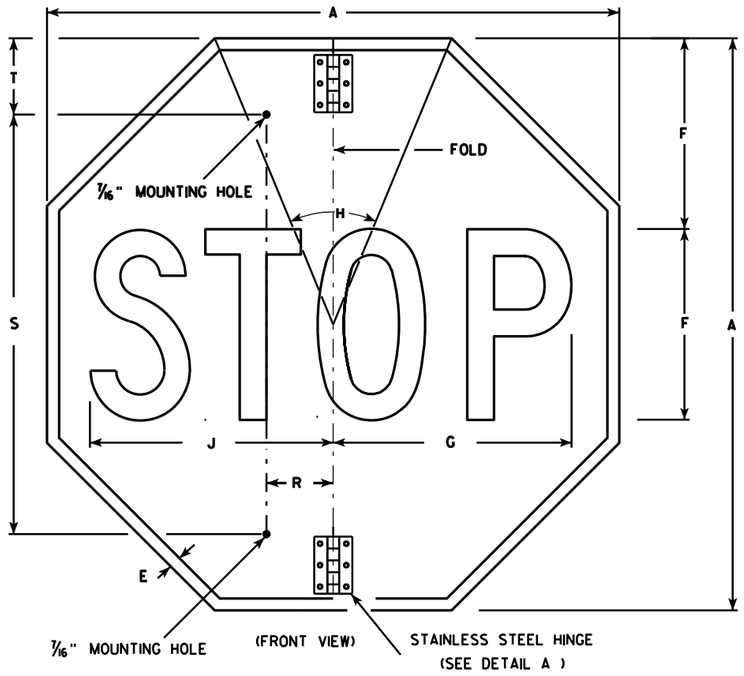
WISCONSIN DEPT OF TRANSPORTATION

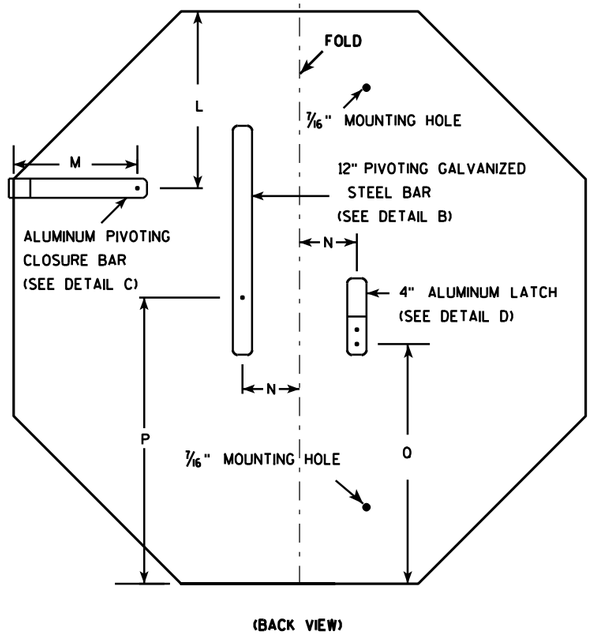
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 246 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

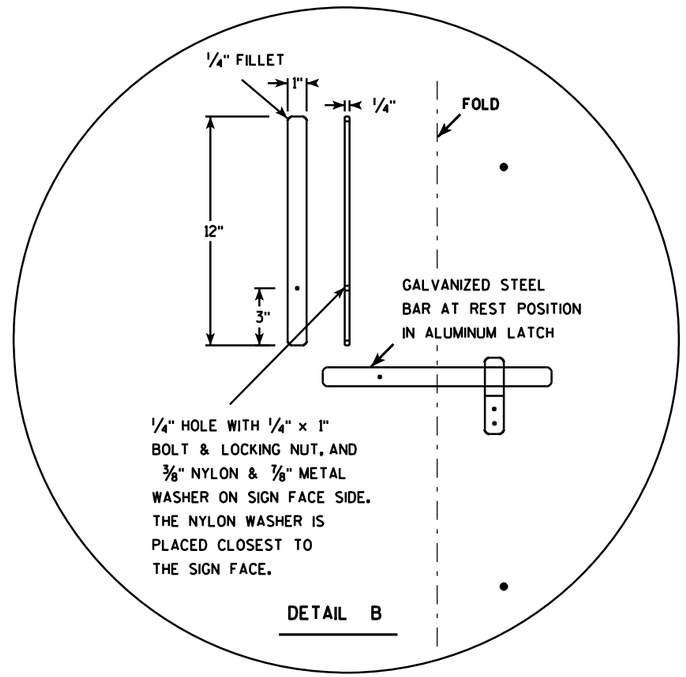
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000

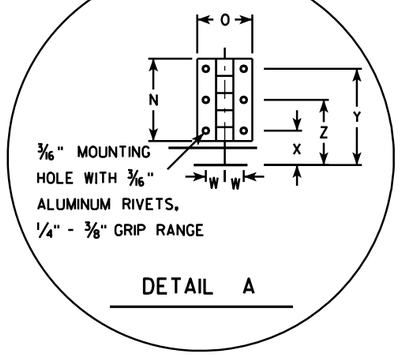


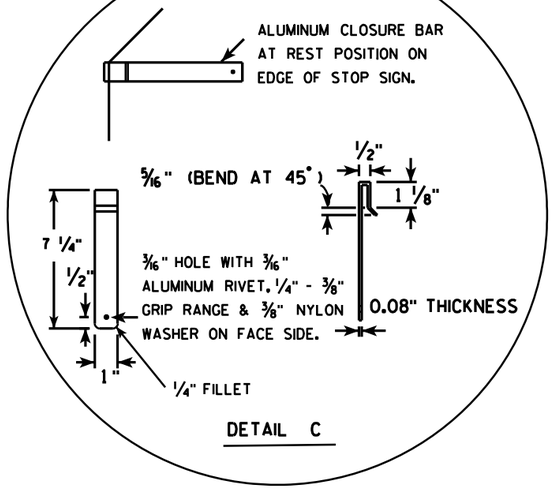


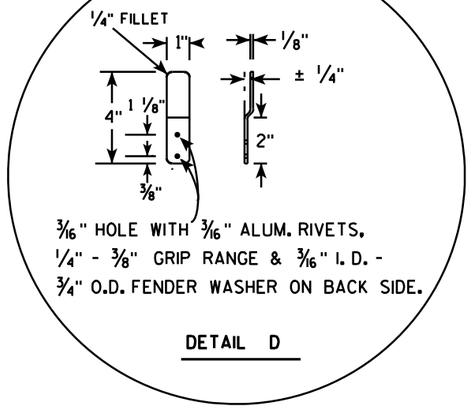
NOTES

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
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

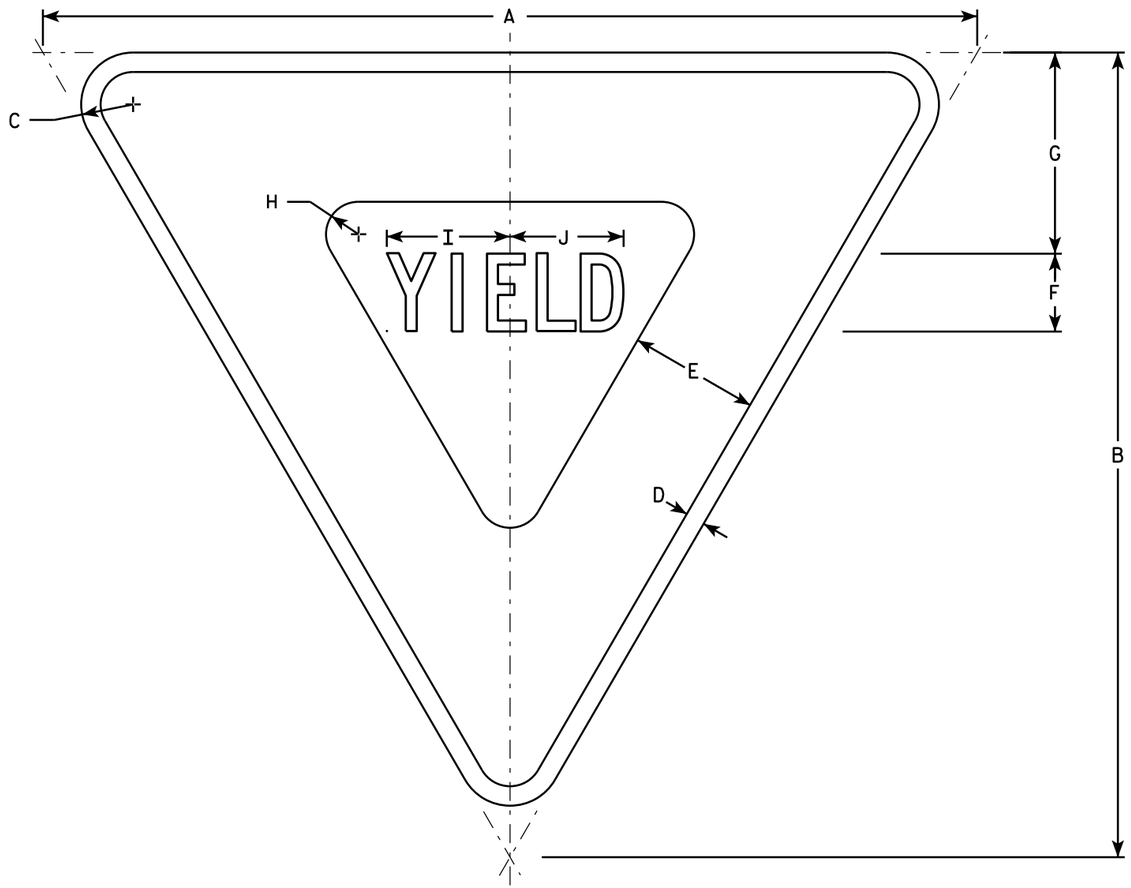
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 247 | E



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   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. The border strip and word message are reflectorized red.

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	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

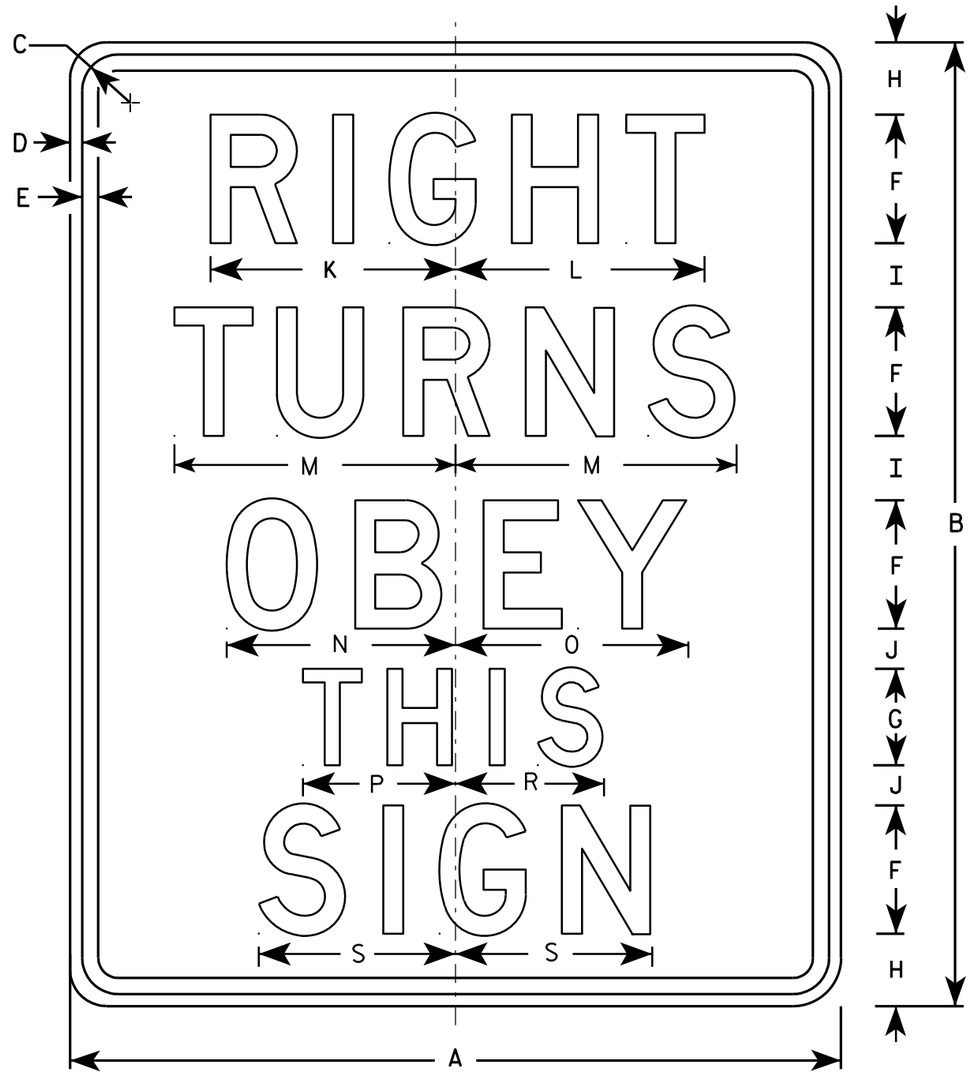
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R1-53

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	4	3	2 1/4	2	1 1/4	7 5/8	7 3/4	8 3/4	7 1/8	7 1/4	4 3/4		4 5/8	6 1/8								5.0
2M	24	30	1 1/8	3/8	1/2	4	3	2 1/4	2	1 1/4	7 5/8	7 3/4	8 3/4	7 1/8	7 1/4	4 3/4		4 5/8	6 1/8								5.0
3																											
4																											
5																											

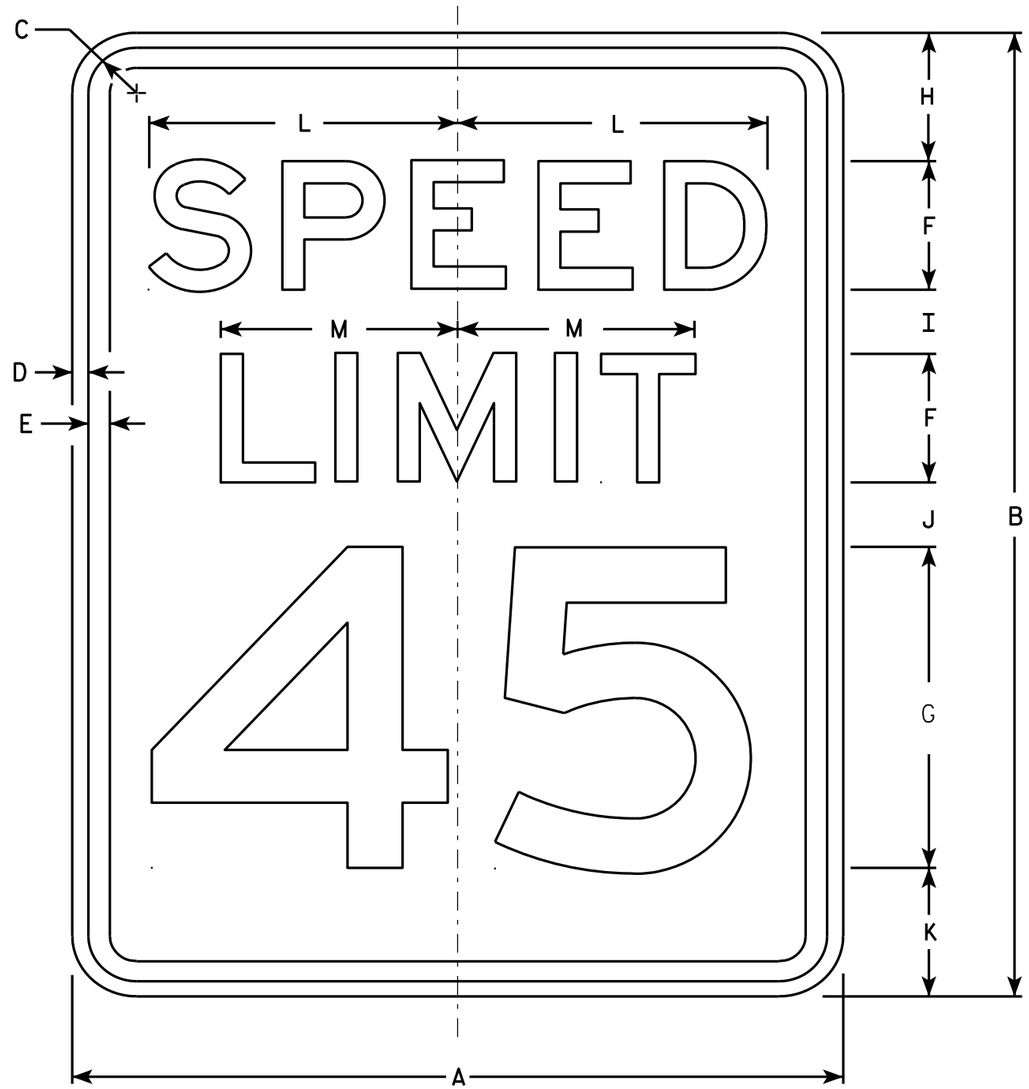
STANDARD SIGN
R1-53

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-53.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 249 | E



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

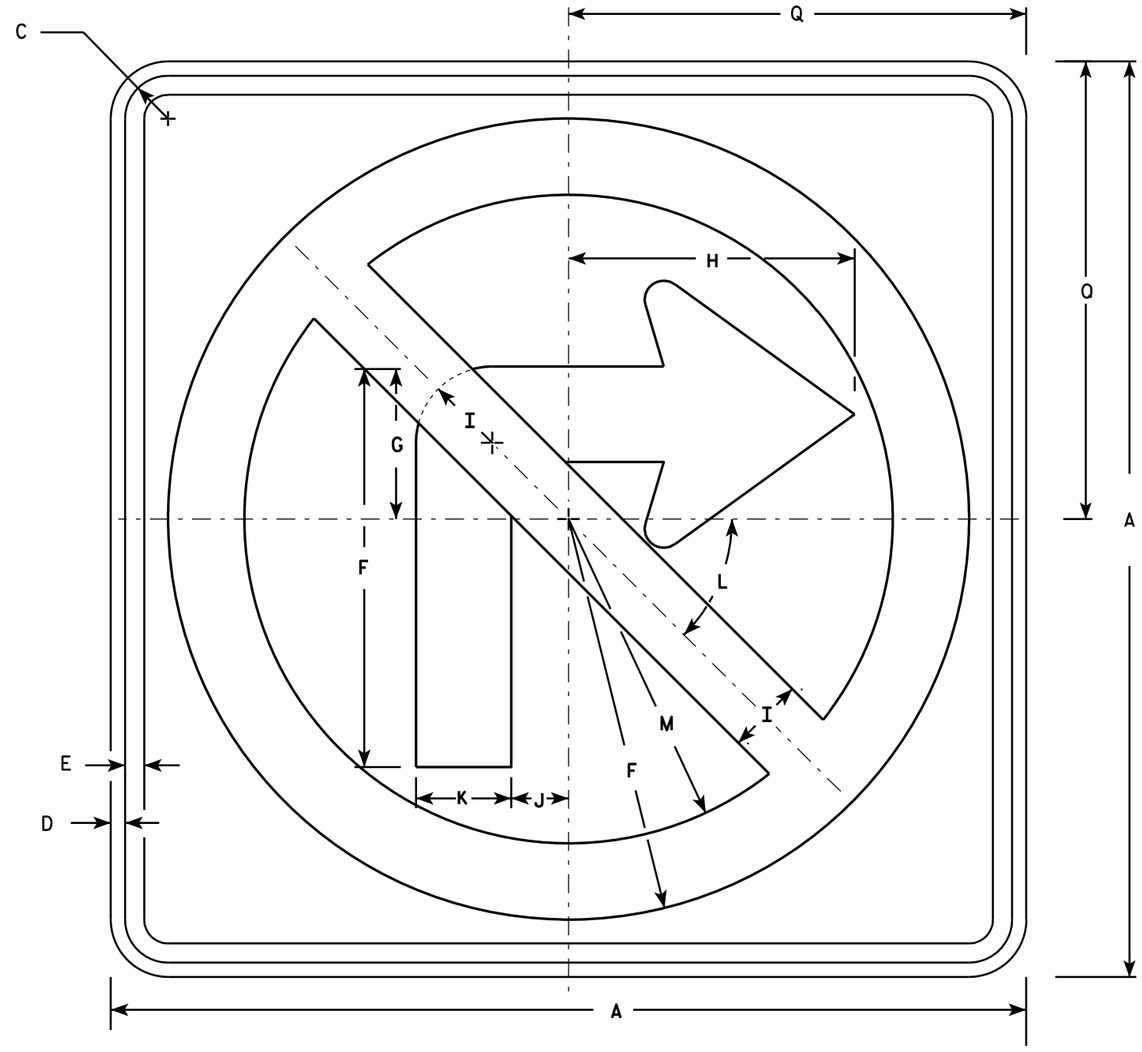
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

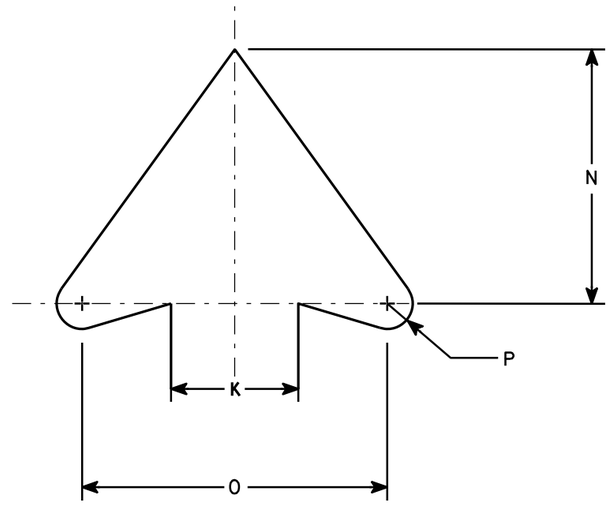
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 250	E



R3-1

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

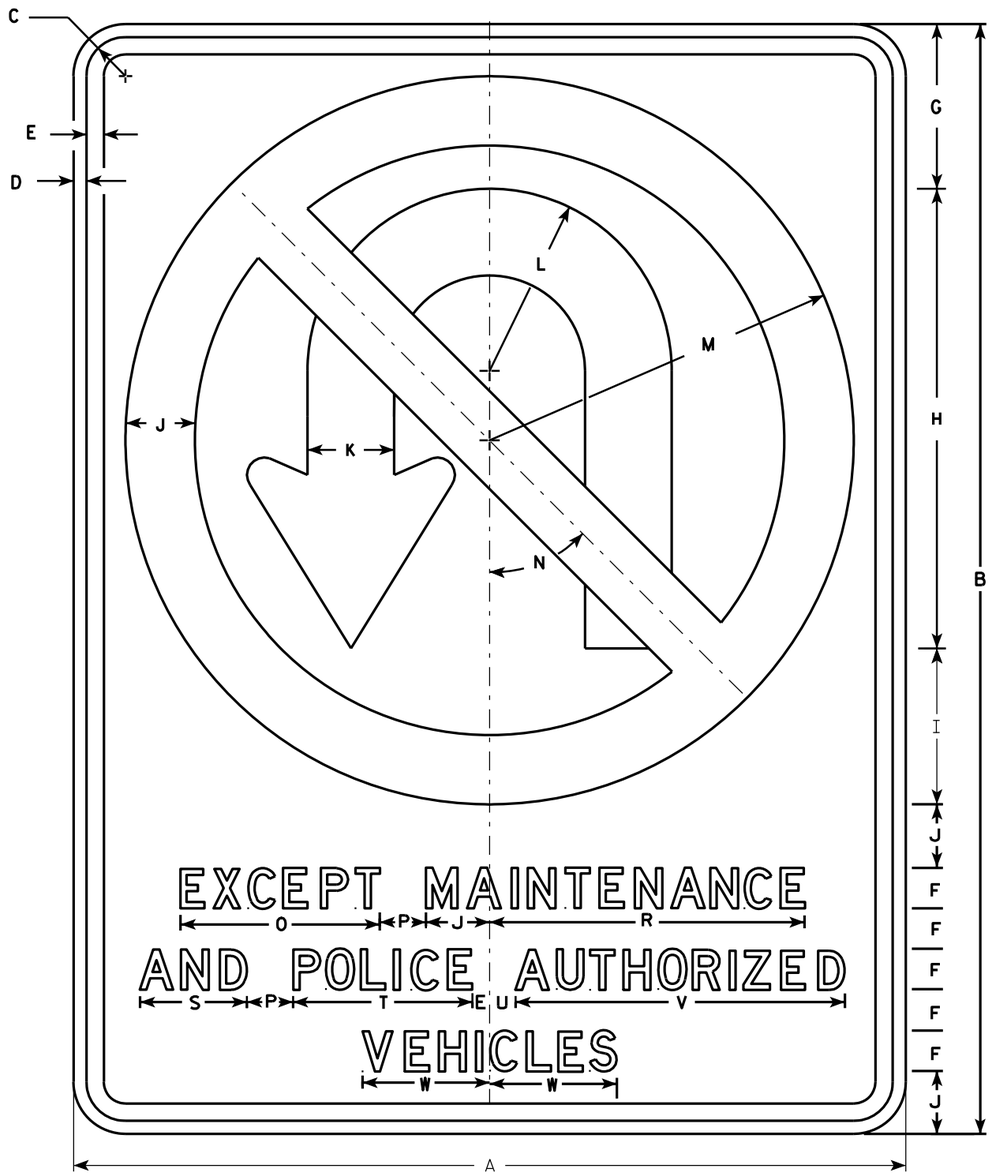
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

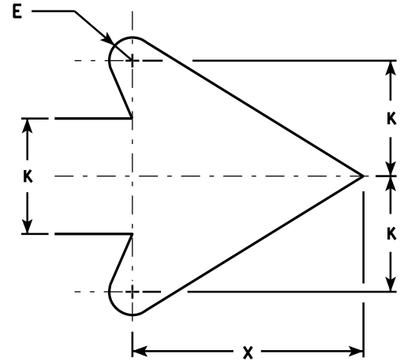
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 251	E



R3-4B

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

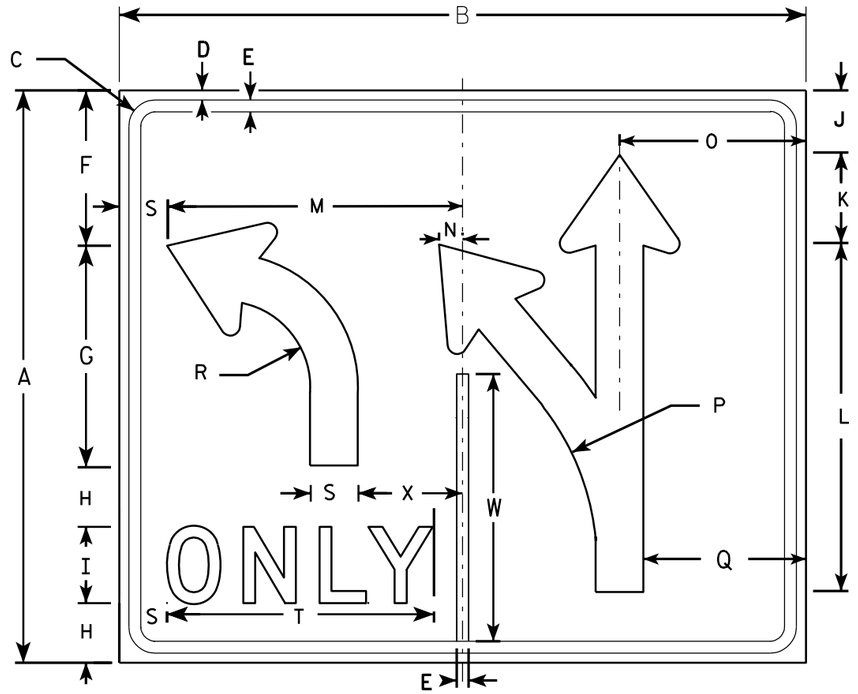
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

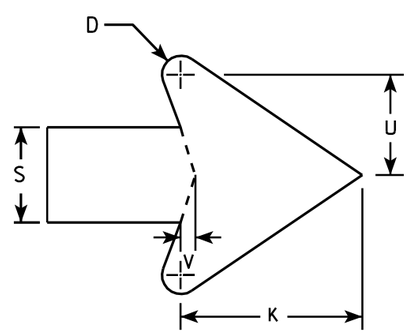
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 252	E



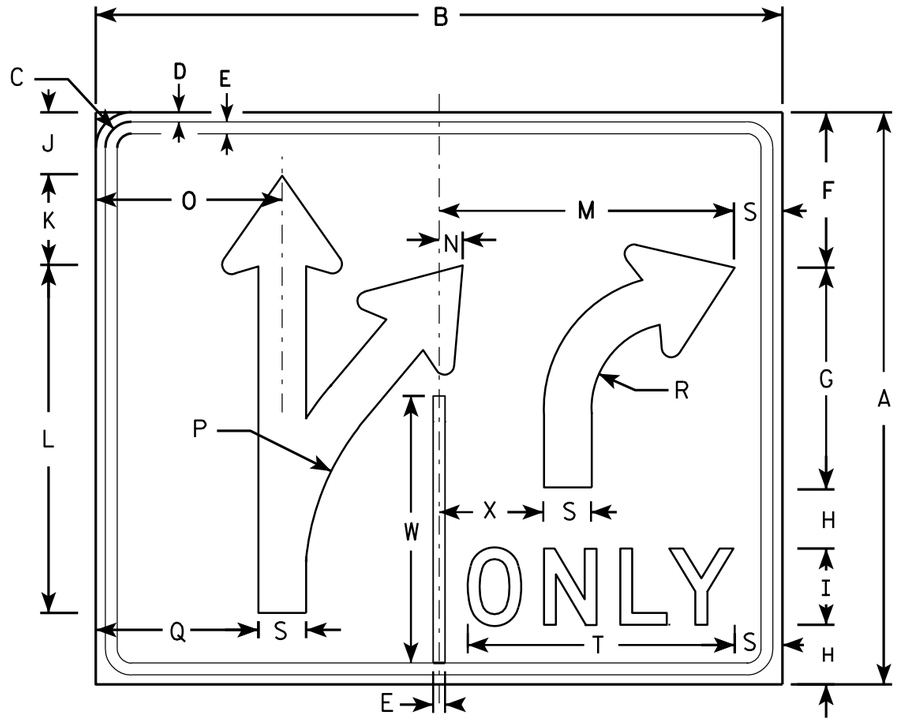
R3-8B



ARROW DETAIL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R3-8B & R3-8C is the same but reversed.



R3-8C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	15 1/2	1 1/4	9 3/4	13 1/4	8 1/2	4 1/2	2 1/2	14	2 5/8	3/8	14	5 1/4			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	15 1/2	1 1/4	9 3/4	13 1/4	8 1/2	4 1/2	2 1/2	14	2 5/8	3/8	14	5 1/4			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 5/8	23 1/8	1 7/8	14 5/8	21 7/8	12 3/4	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	8 1/8			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 5/8	23 1/8	1 7/8	14 5/8	21 7/8	12 3/4	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	8 1/8			18.0

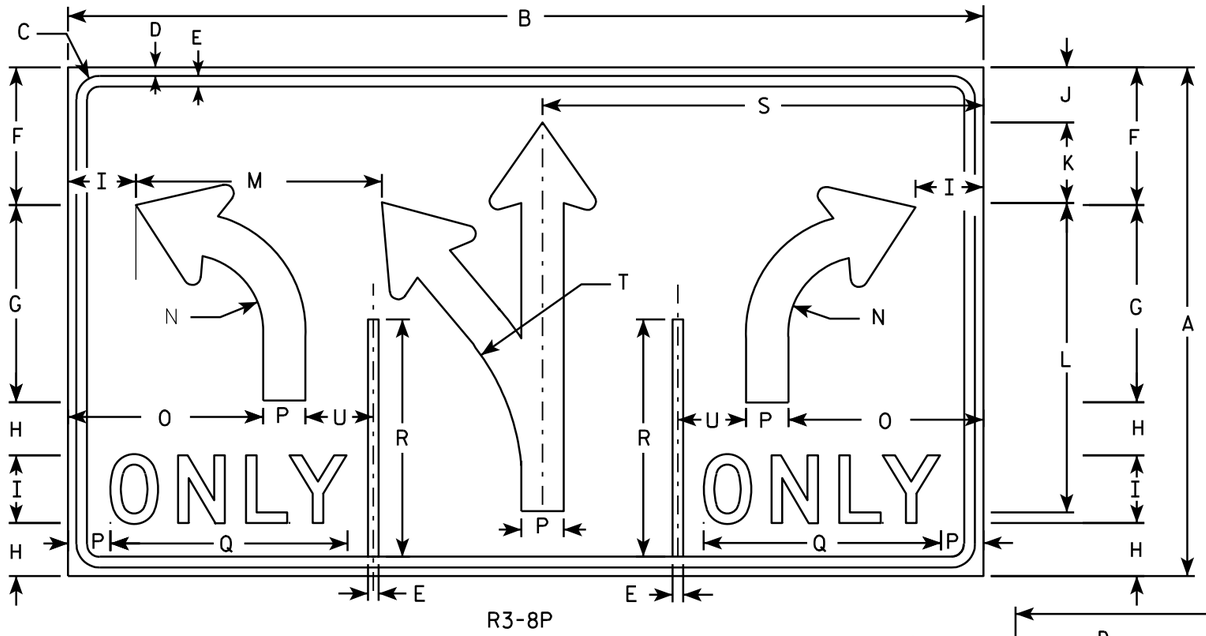
STANDARD SIGN
R3-8B & R3-8C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8B.2

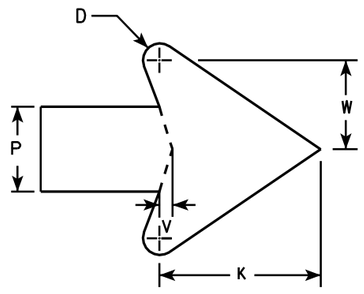
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 253	E



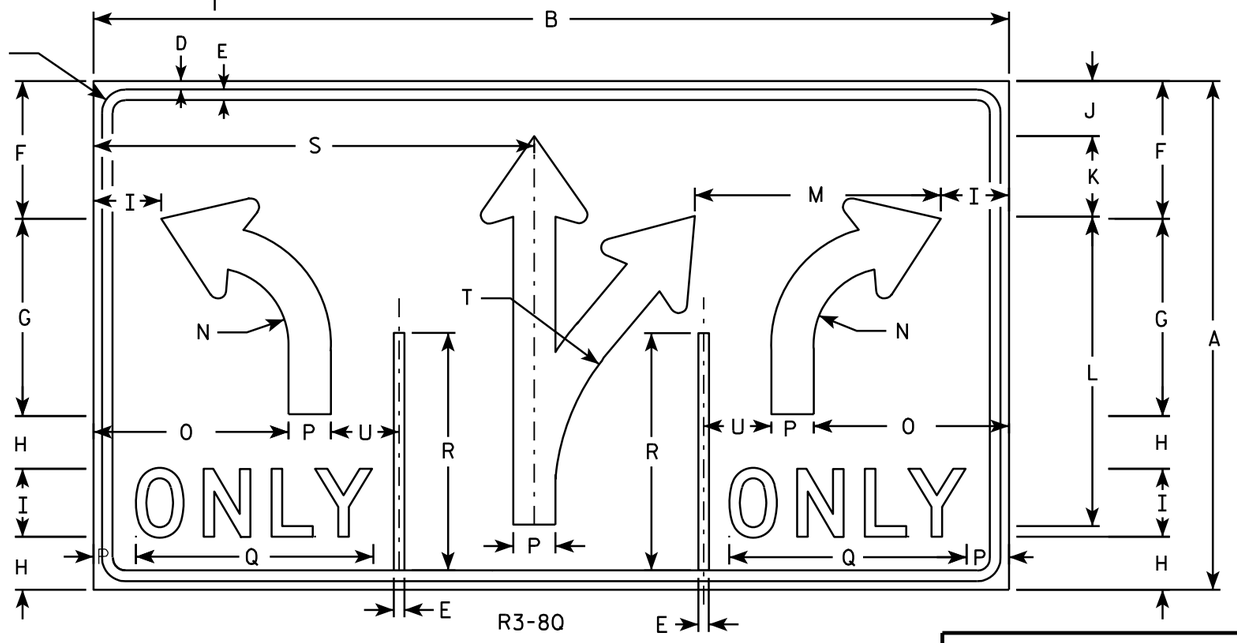
R3-8P

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL



R3-8Q

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	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14 1/2	4 1/2	11 1/2	2 1/2	14	14	26	13 1/4	4	3/8	2 5/8				11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14 1/2	4 1/2	11 1/2	2 1/2	14	14	26	13 1/4	4	3/8	2 5/8				11.25
3																											
4	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	22 5/8	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	40 3/4	21 7/8	7	5/8	4				28.0
5	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	22 5/8	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	40 3/4	21 7/8	7	5/8	4				28.0

STANDARD SIGN
R3-8P & R3-8Q

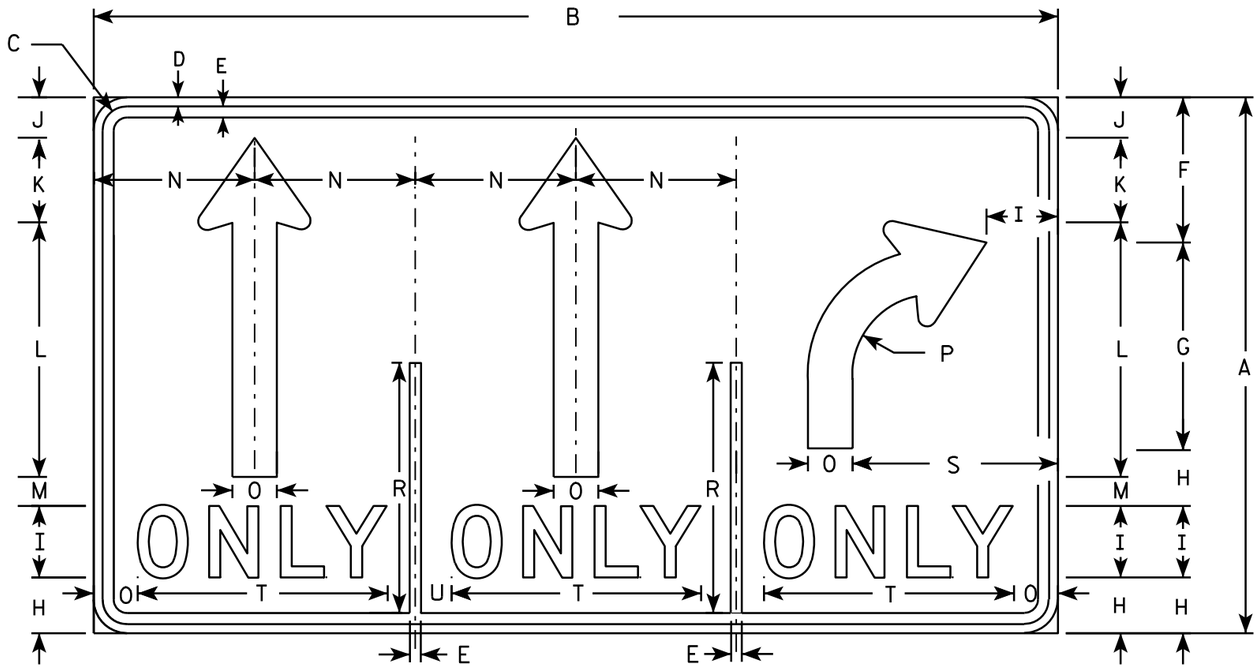
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8P.2

PROJECT NO:

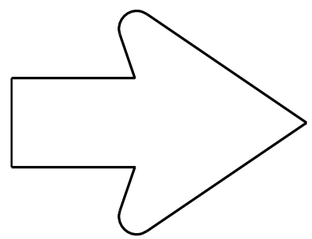
SHEET NO: 254 E



R3-8X

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SEE R3-8 FOR ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
3																											
4	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7 5/8	23	2 3/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0
5	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7 5/8	23	2 3/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0

STANDARD SIGN
R3-8X

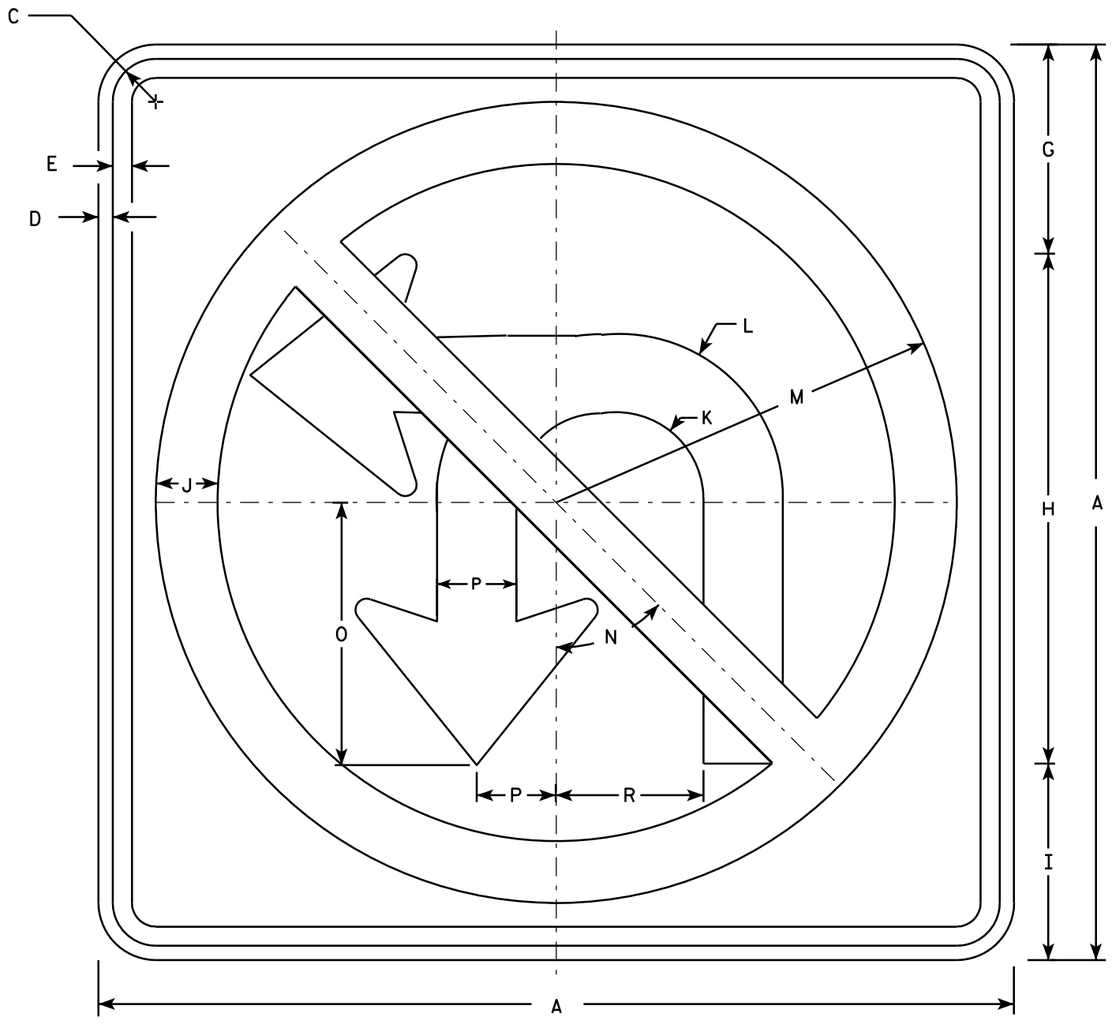
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/25/13 PLATE NO. R3-8X.3

PROJECT NO:

SHEET NO: 255 E



R3-18

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.

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		1 1/8	3/8	1/2		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

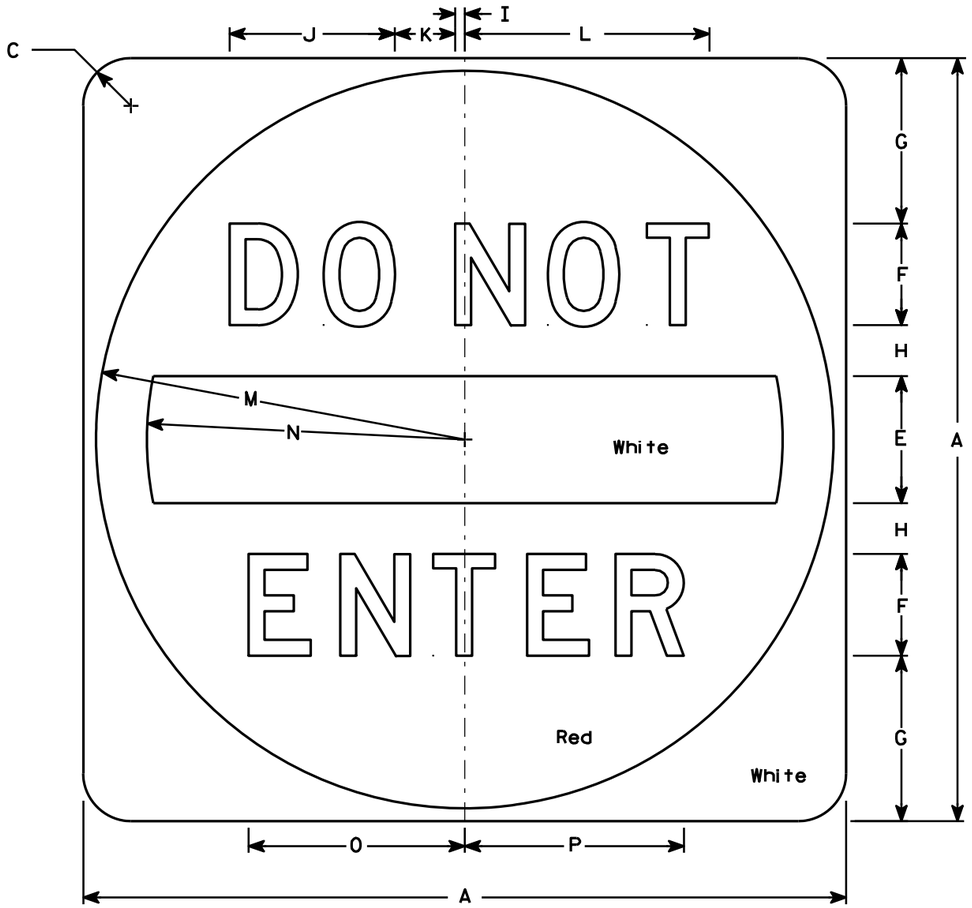
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 256	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors 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	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

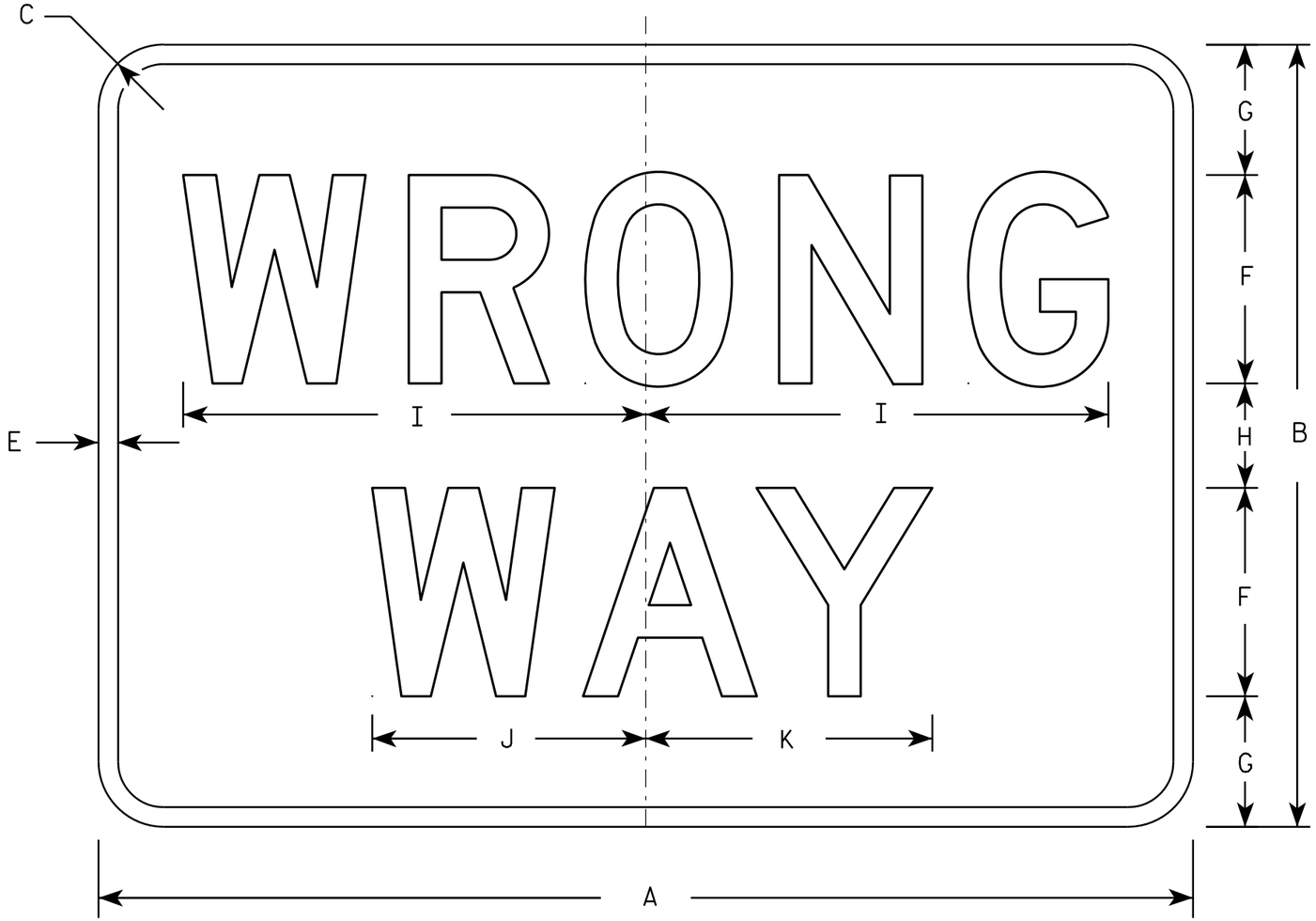
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 257 | E



R5-1A

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 - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 258	E



R5-57

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 - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are 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																											
2S																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

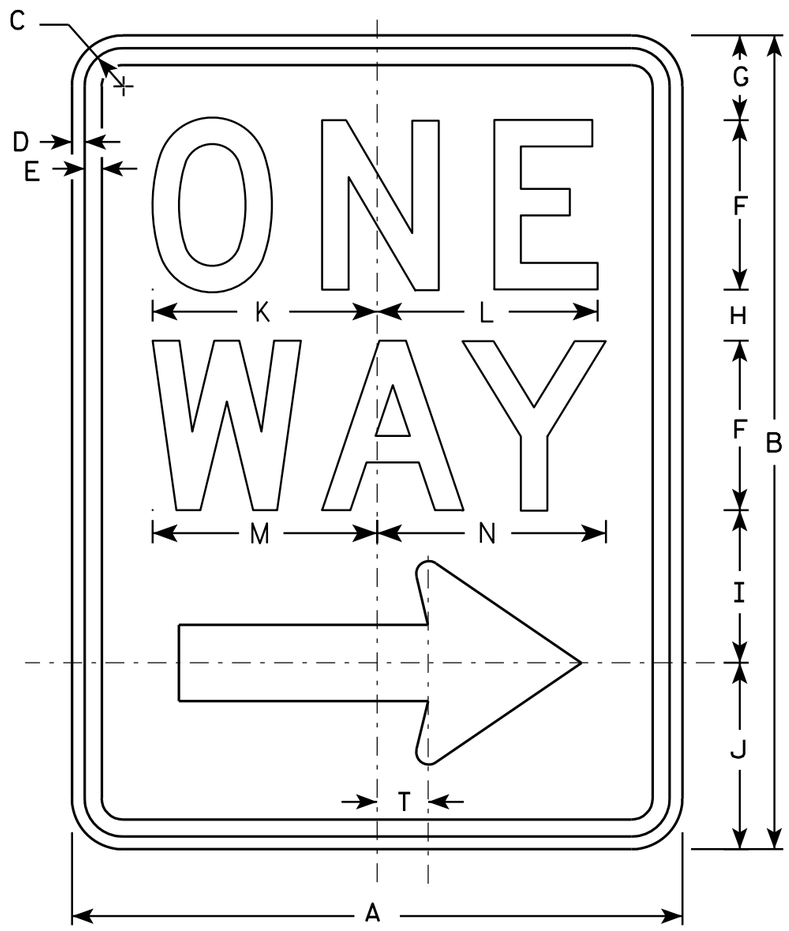
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

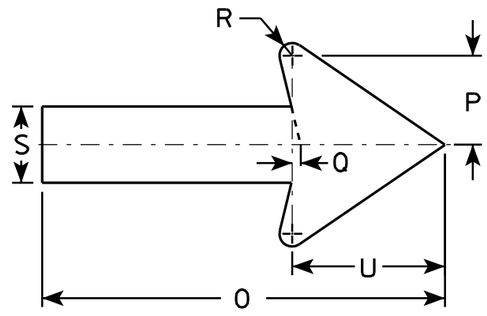
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 259 | E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

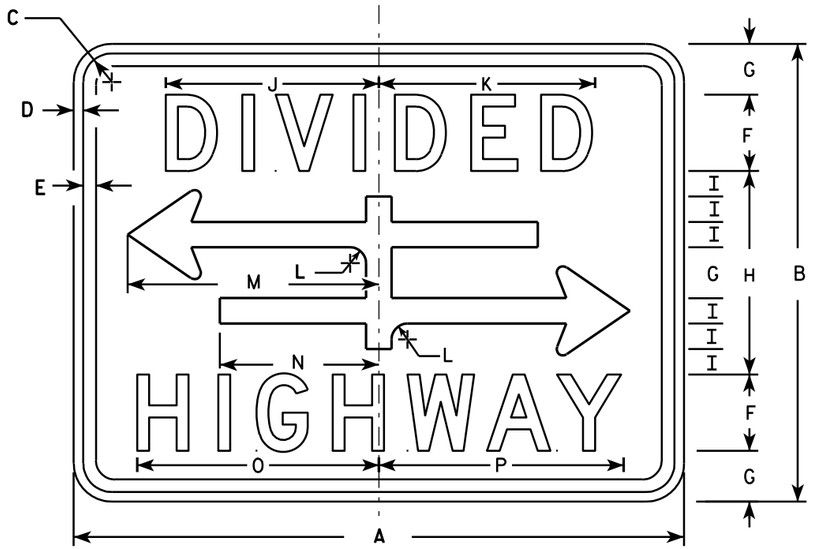
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

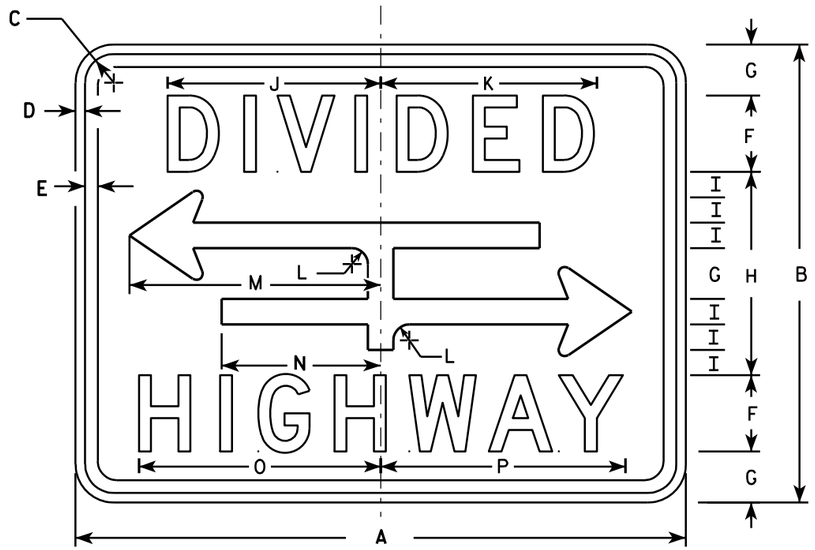
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 260	E



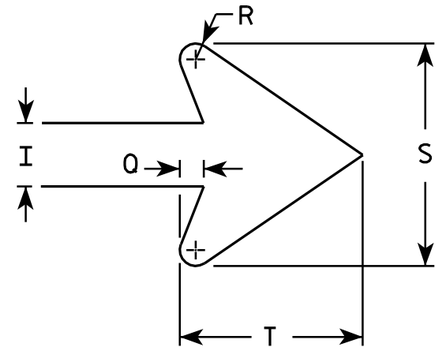
R6-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

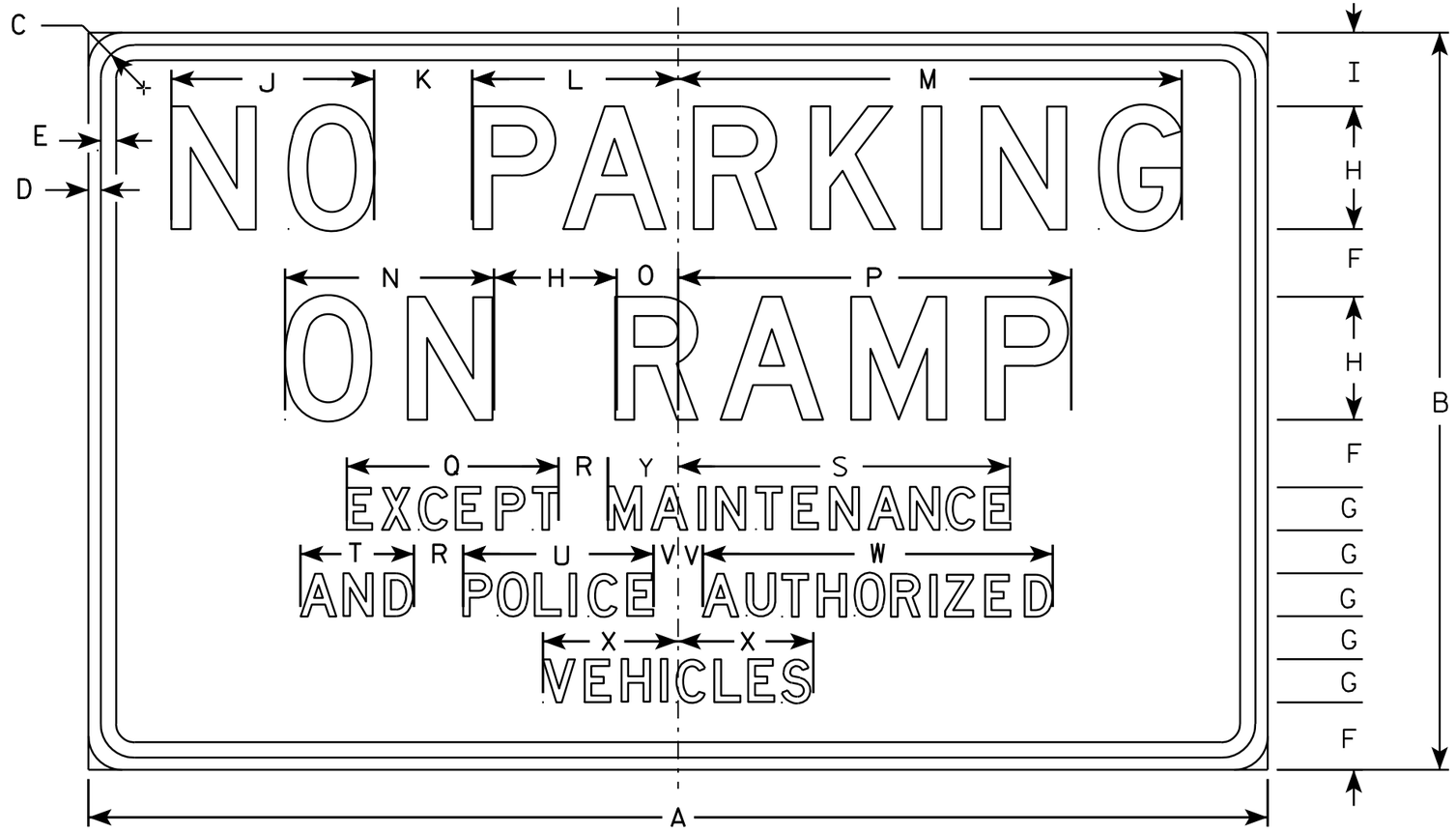
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 261 E



R7-64

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 - Lines 1& 2 and Border are RED
   Lines 3, 4, & 5 are BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3	48	30	1 3/8	1/2	5/8	2 3/4	1 3/4	5	3	8 1/4	4	8 3/8	20 1/2	8 1/2	2 1/2	16	8 5/8	2	13 5/8	4 5/8	7 3/4	1	14 1/4	5 1/2			10.0
4																											
5																											

STANDARD SIGN
R7-64

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-64.3

PROJECT NO:

SHEET NO: 262 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R764.DGN PLOT DATE : 31-MAR-2011 13:47 PLOT BY : mscsja PLOT SCALE :

WISDOT/CADDS SHEET 42

7

7



R7-66

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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. Top symbol and legend are white Type H Reflective with Red background.
   Bottom legend is Red with White Type H Reflective background.
6. Line 1 of Sign - Optically Center the Municipality designation.
7. A maximum of three supplemental messages shall be used.
8. Additional allowable supplemental messages:



CITY

TOWNSHIP

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	48	1 3/8	5/8	1/2	5	3	2 1/2	4	11 3/8	18 5/8	9 1/2	5 7/8	8 7/8	2	4 1/2	15 3/8	5 3/8	12 1/4	1	6 1/4	2 3/4	6 1/2	13 3/4			16.0
2M	48	48	1 3/8	5/8	1/2	5	3	2 1/2	4	11 3/8	18 5/8	9 1/2	5 7/8	8 7/8	2	4 1/2	15 3/8	5 3/8	12 1/4	1	6 1/4	2 3/4	6 1/2	13 3/4			16.0
3																											
4																											
5																											

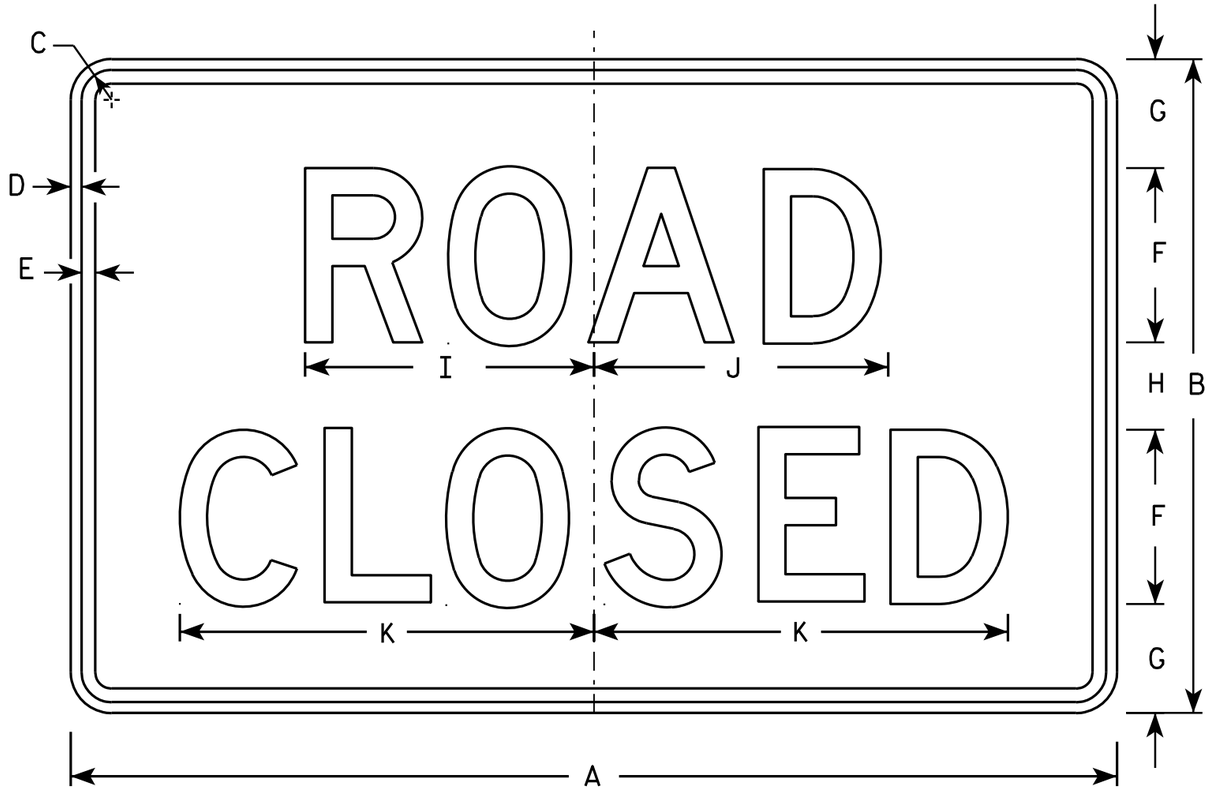
STANDARD SIGN
R7-66

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-66.2

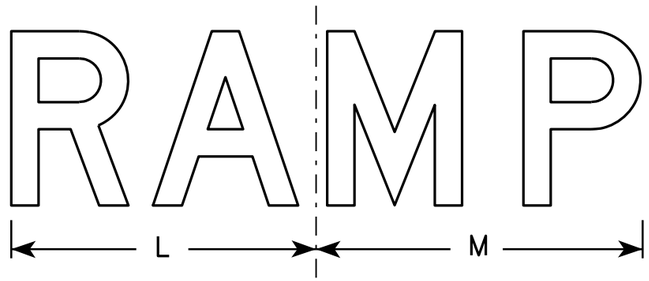
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 263	E



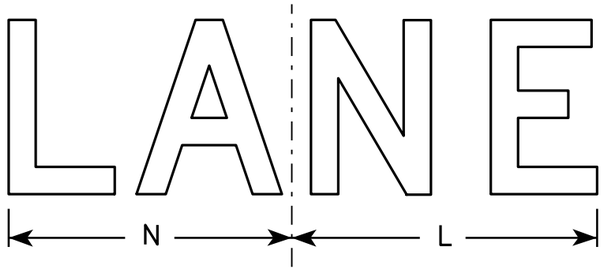
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

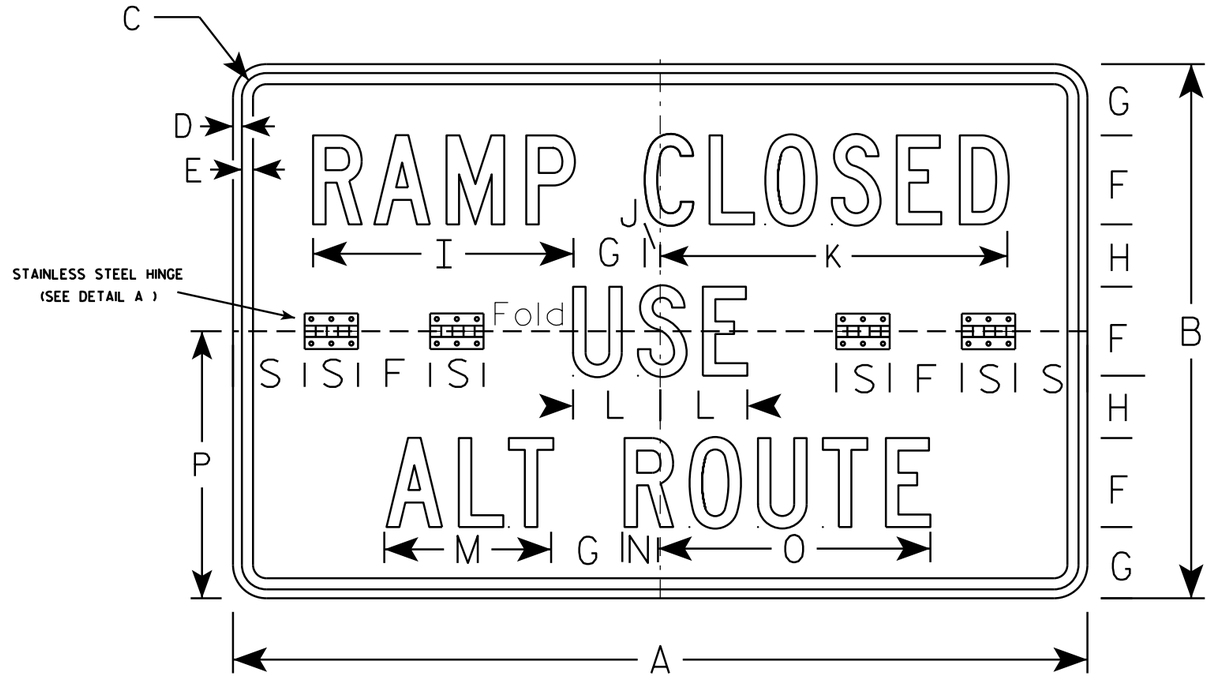
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

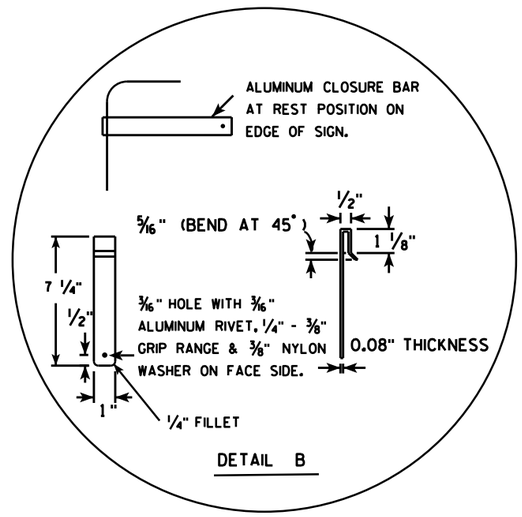
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 264 | E



R11-54F

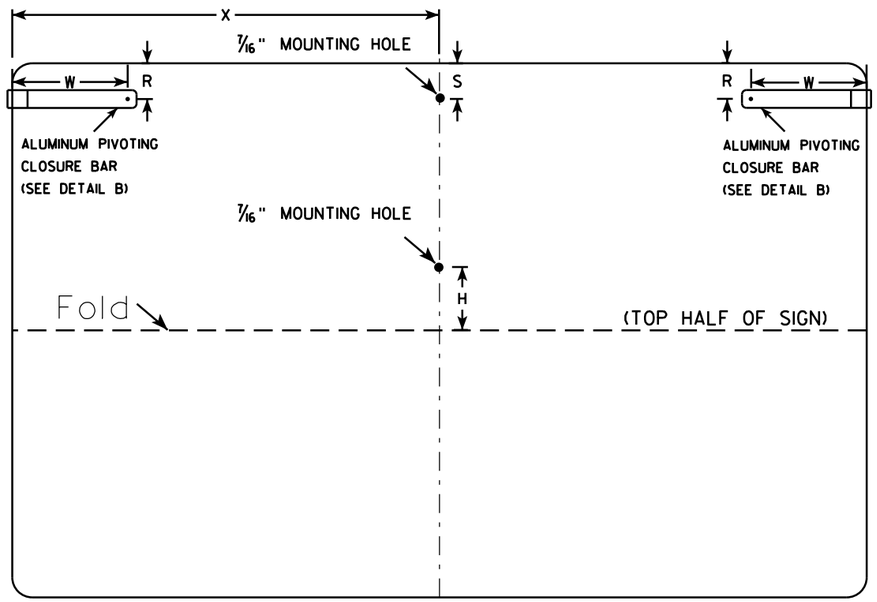
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Refer to plate A5-3A for sign blank layout.



(BACK VIEW)

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

STANDARD SIGN
R11-54F

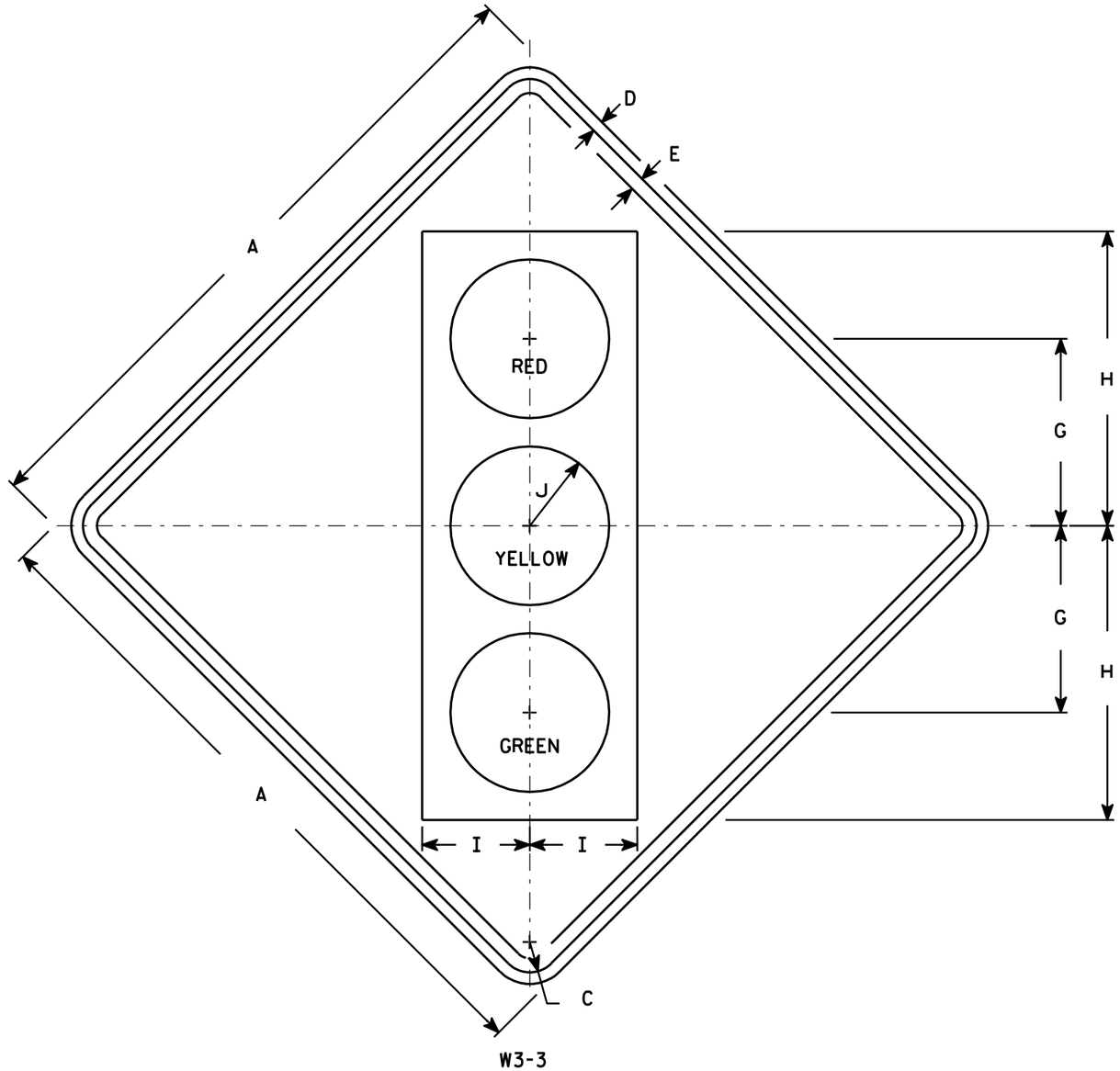
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/28/14 PLATE NO. R11-54F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R1154F.DGN PLOT DATE : 28-MAY-2014 14:15 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 8.511110:1.000000
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 - 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

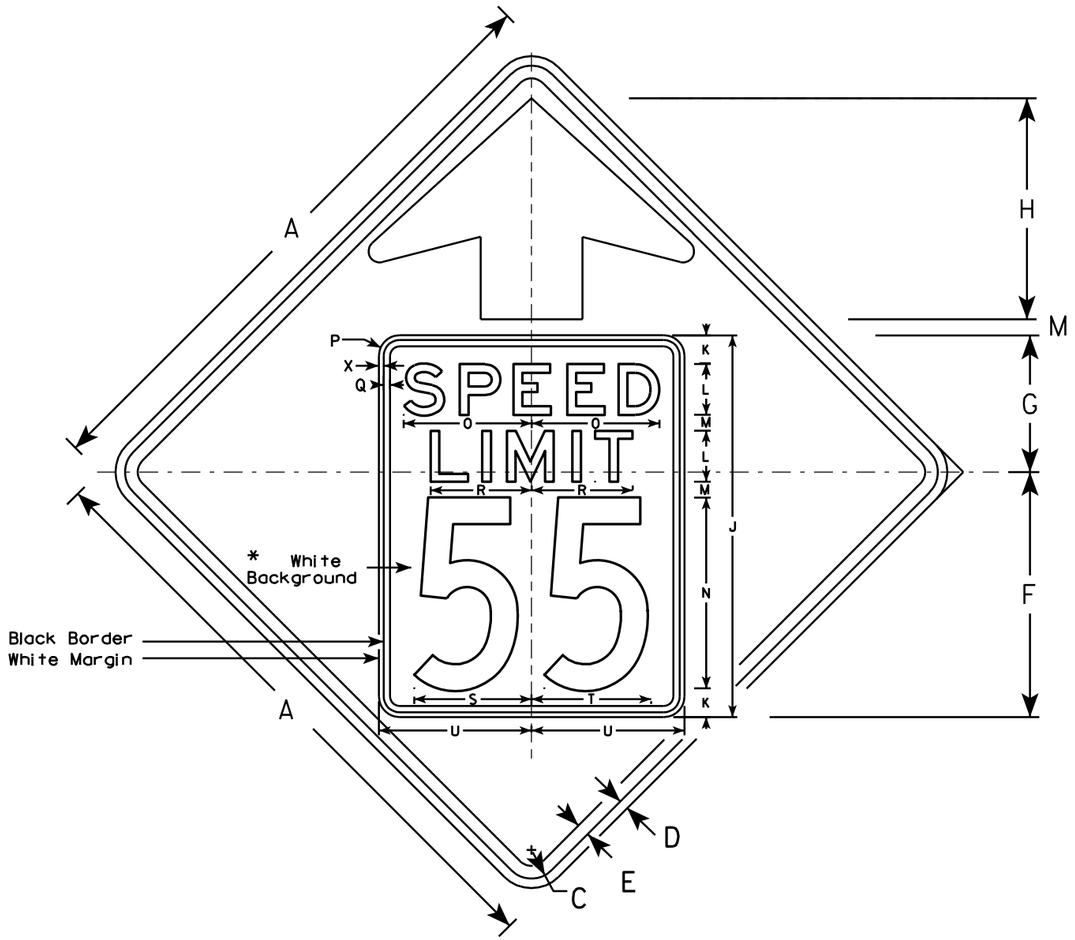
STANDARD SIGN
W3-3

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: 266 | E

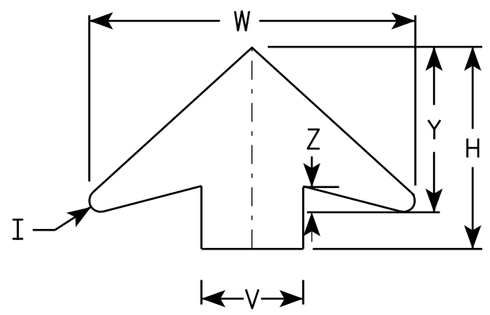


W3-5

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 for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

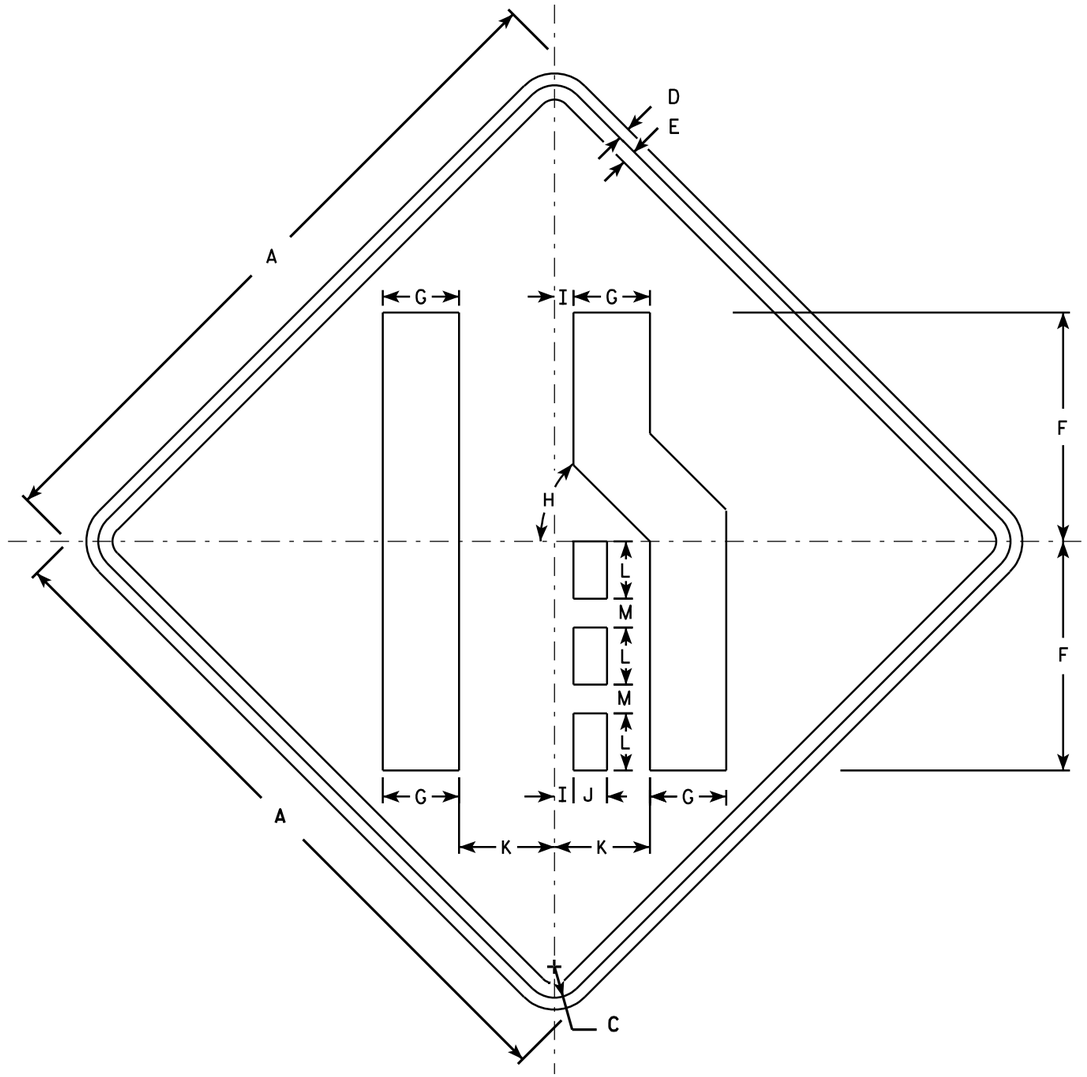
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 267 E



W4-2R

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. W4-2L is the same as W4-2R except the symbol 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	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

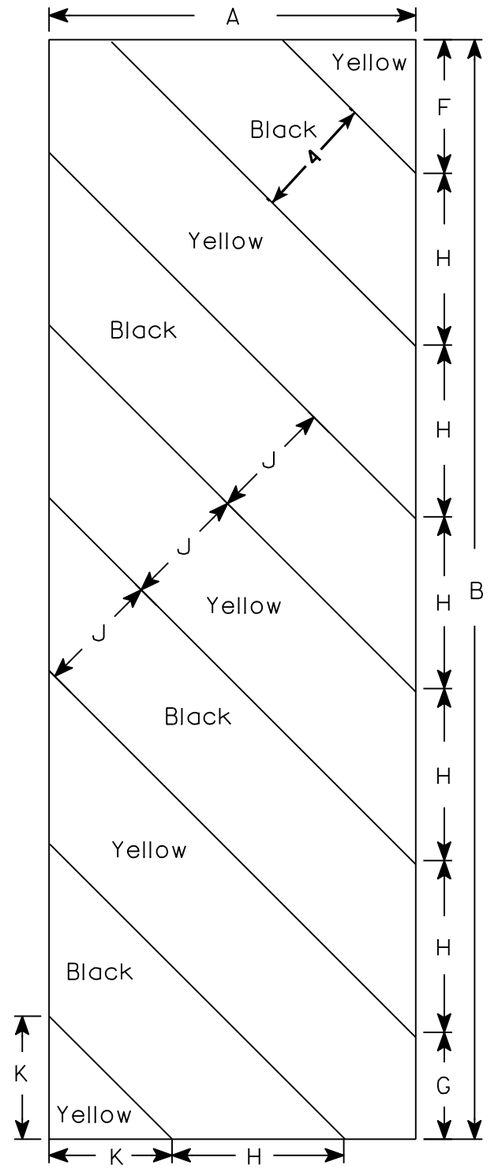
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

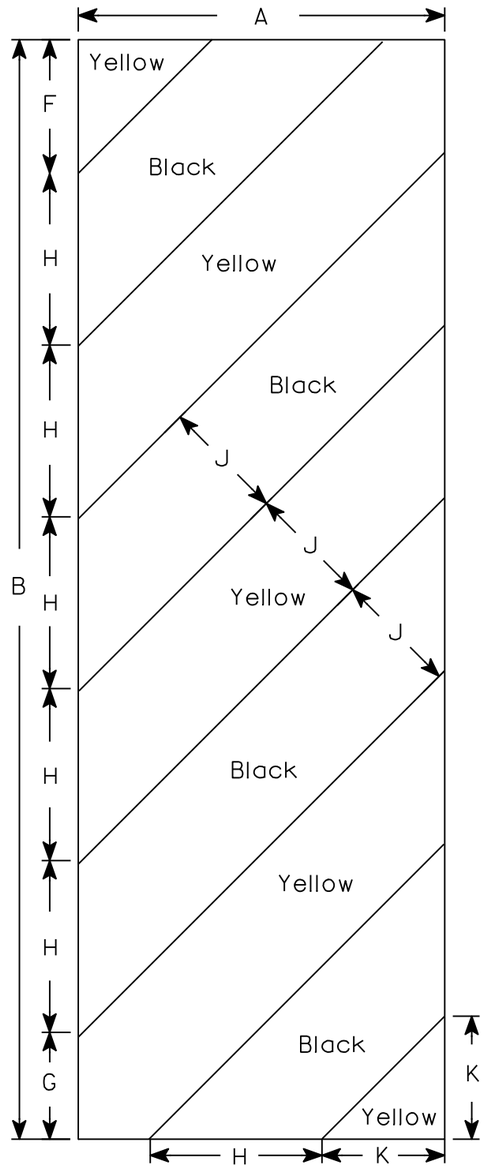
DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 268 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

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

STANDARD SIGN

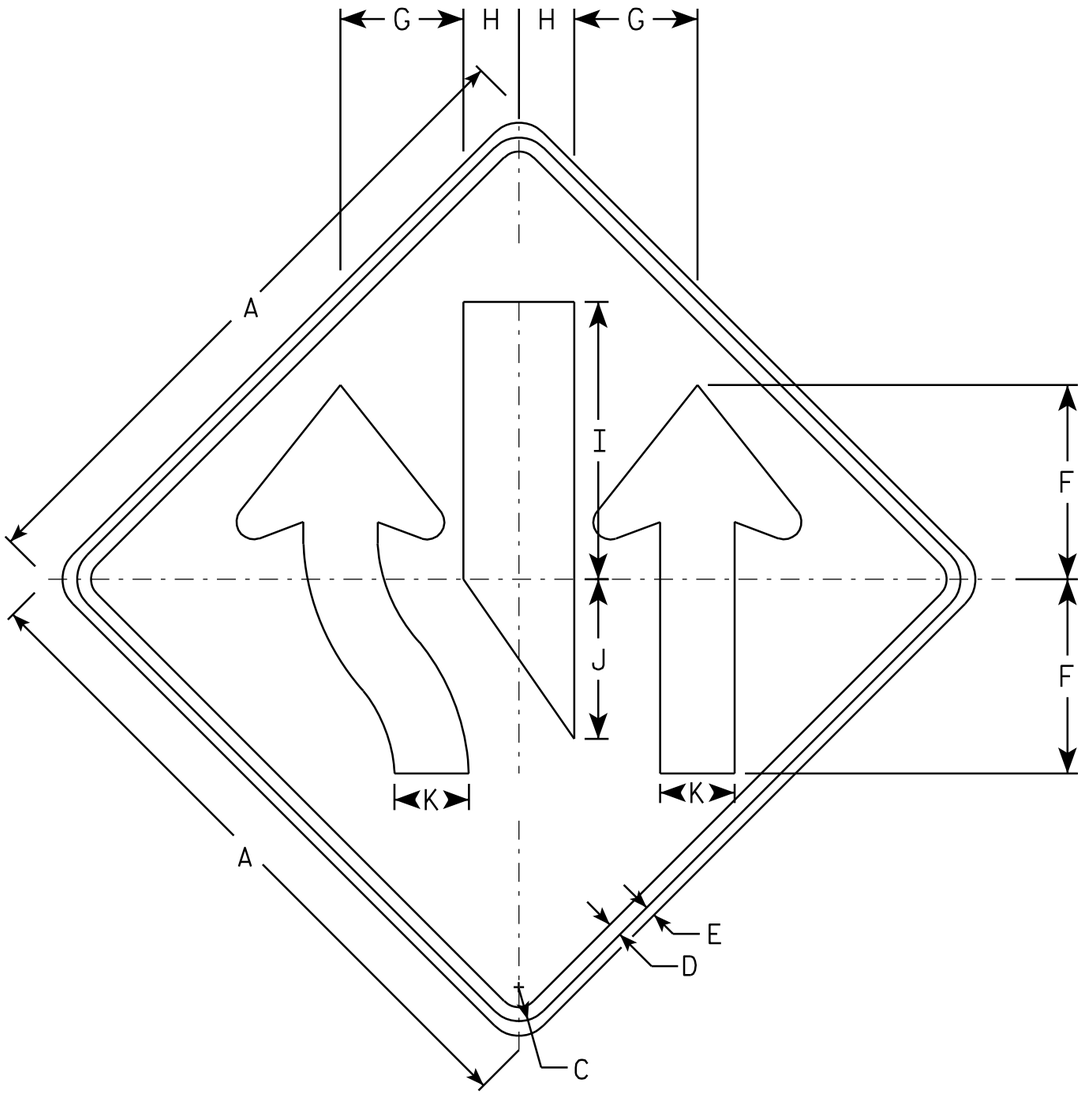
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

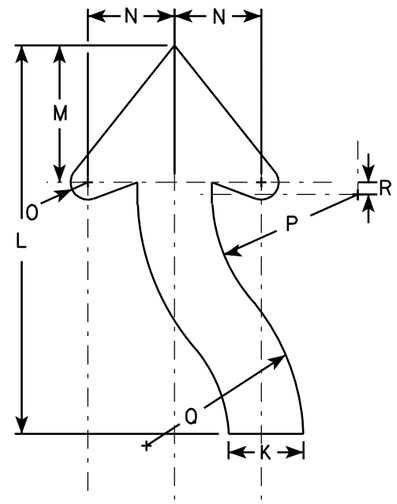
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 269 | E



W9-3A

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. 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.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 3/8	1/2	5/8	10 1/2	6 5/8	3	15	8 5/8	4	21	7 3/8	4 3/4	7/8	8	12	3/4									9
2M	36		1 3/8	1/2	5/8	10 1/2	6 5/8	3	15	8 5/8	4	21	7 3/8	4 3/4	7/8	8	12	3/4									9
3	48		2 1/4	3/4	1	14	9	4	20	11 1/2	5 3/8	28	9 7/8	6 1/4	1 1/4	10 5/8	16	7/8									16
4	48		2 1/4	3/4	1	14	9	4	20	11 1/2	5 3/8	28	9 7/8	6 1/4	1 1/4	10 5/8	16	7/8									16
5	48		2 1/4	3/4	1	14	9	4	20	11 1/2	5 3/8	28	9 7/8	6 1/4	1 1/4	10 5/8	16	7/8									16

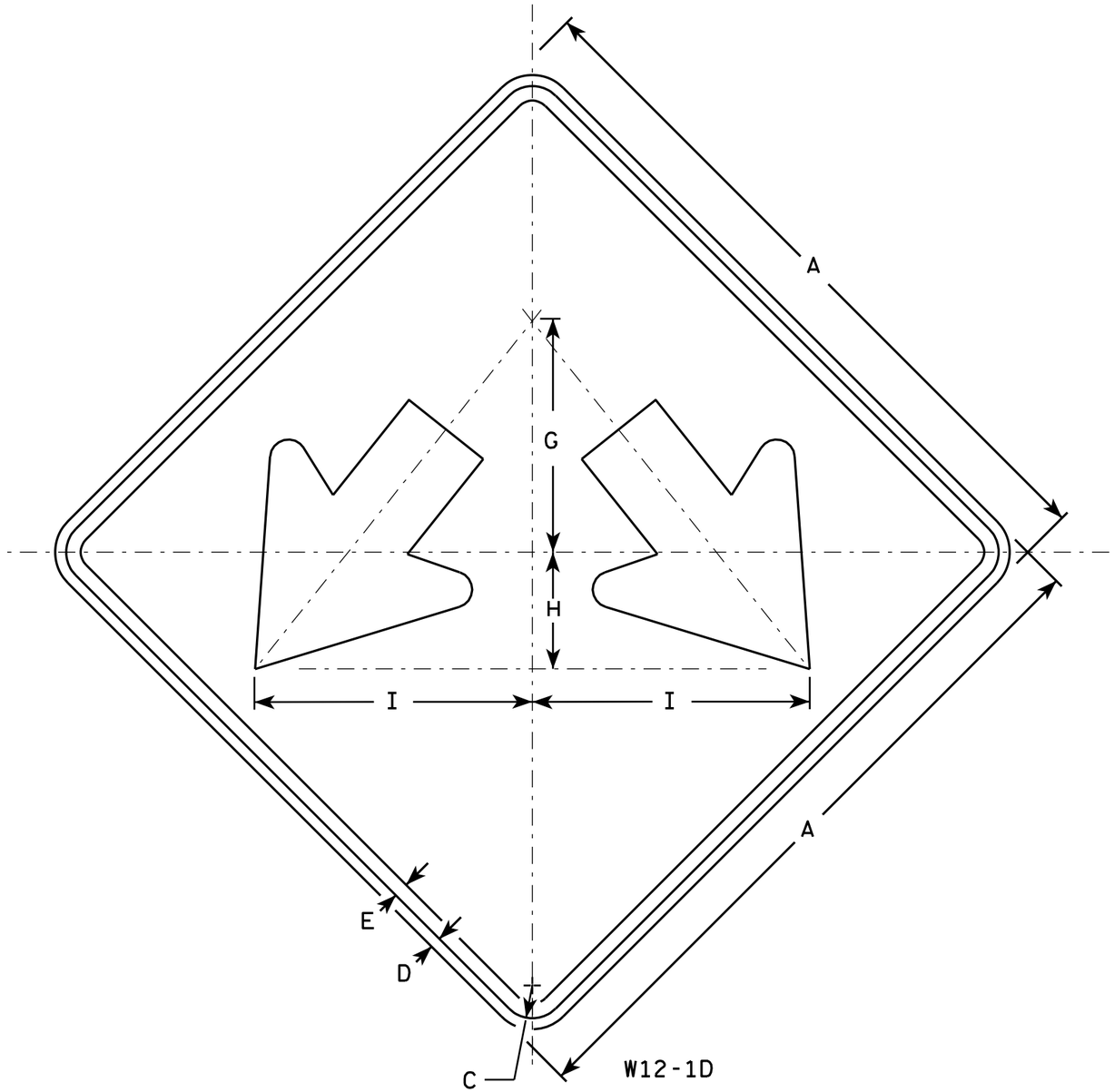
STANDARD SIGN
W9-3A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

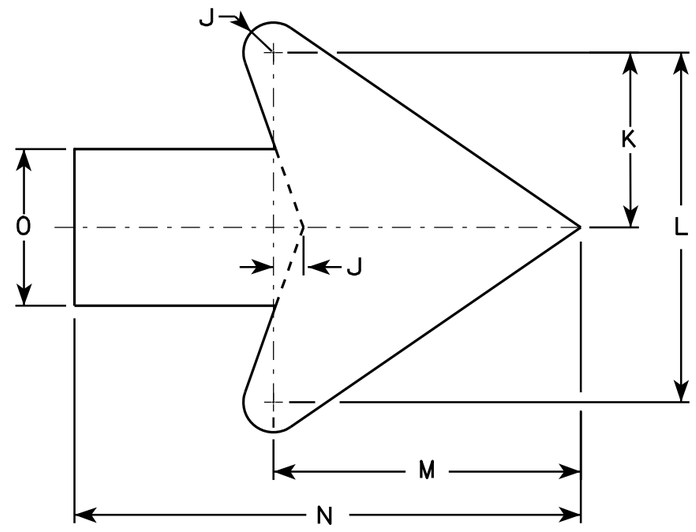
DATE 5/02/11 PLATE NO. W9-3A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 270 | 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. 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.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

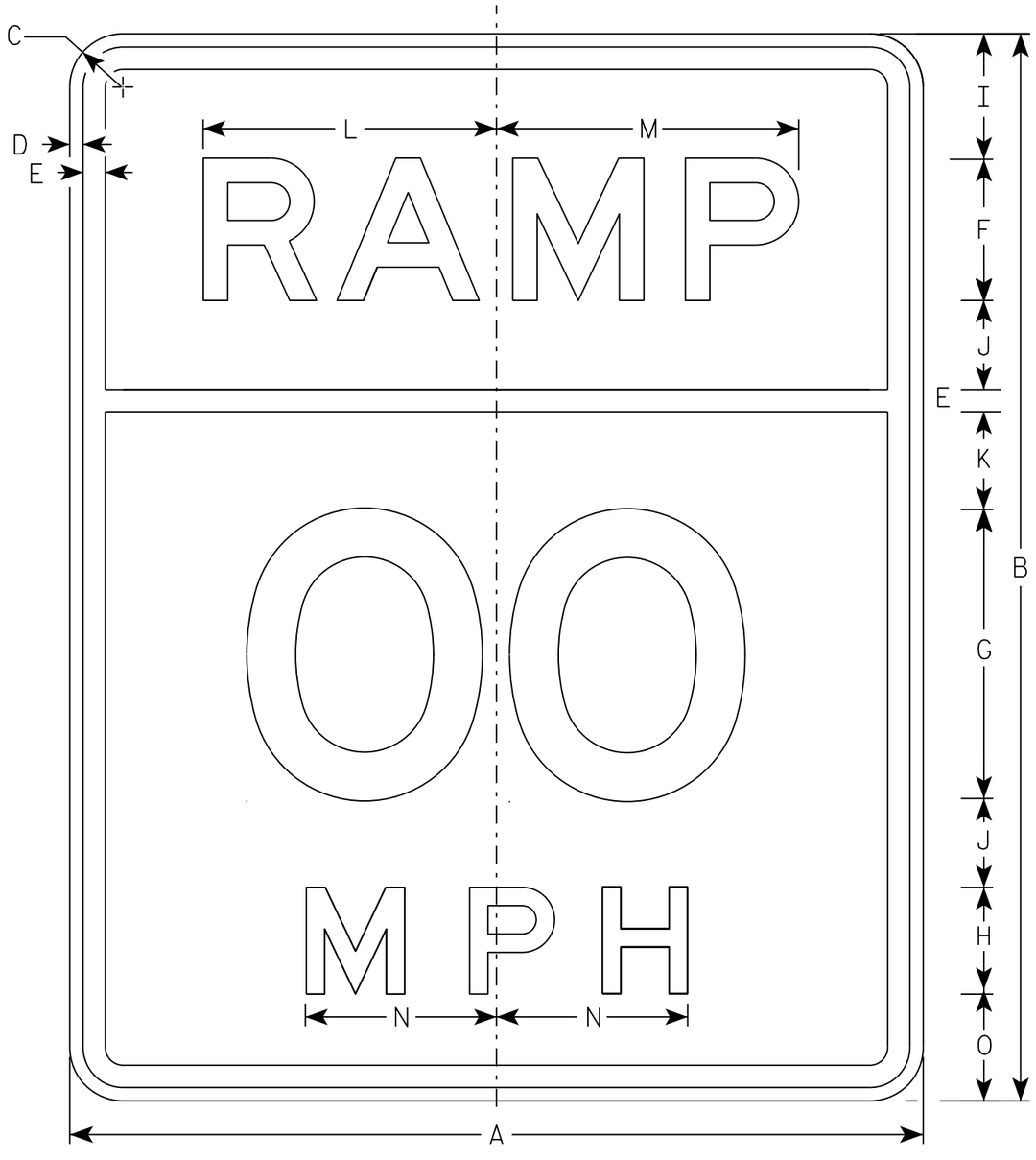
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 271	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W121D.DGN PLOT DATE : 13-MAR-2013 13:26 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.713802:1.000000

WISDOT/CADDS SHEET 42

7

7



W13-3

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - E
4. Substitute appropriate numerals and optically space about centerline 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	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2S	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2M	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
3	36	48	1 5/8	5/8	7/8	6	12	4	6	4 1/8	5 1/8	13 1/2	13 5/8	7 1/8	6												12.0
4	36	48	1 5/8	5/8	7/8	6	12	4	6	4 1/8	5 1/8	13 1/2	13 5/8	7 1/8	6												12.0
5	48	60	2 1/4	3/4	1 1/4	8	16	6	7	5	5 3/4	16 1/2	17	10 5/8	6												20.0

STANDARD SIGN
W13-3

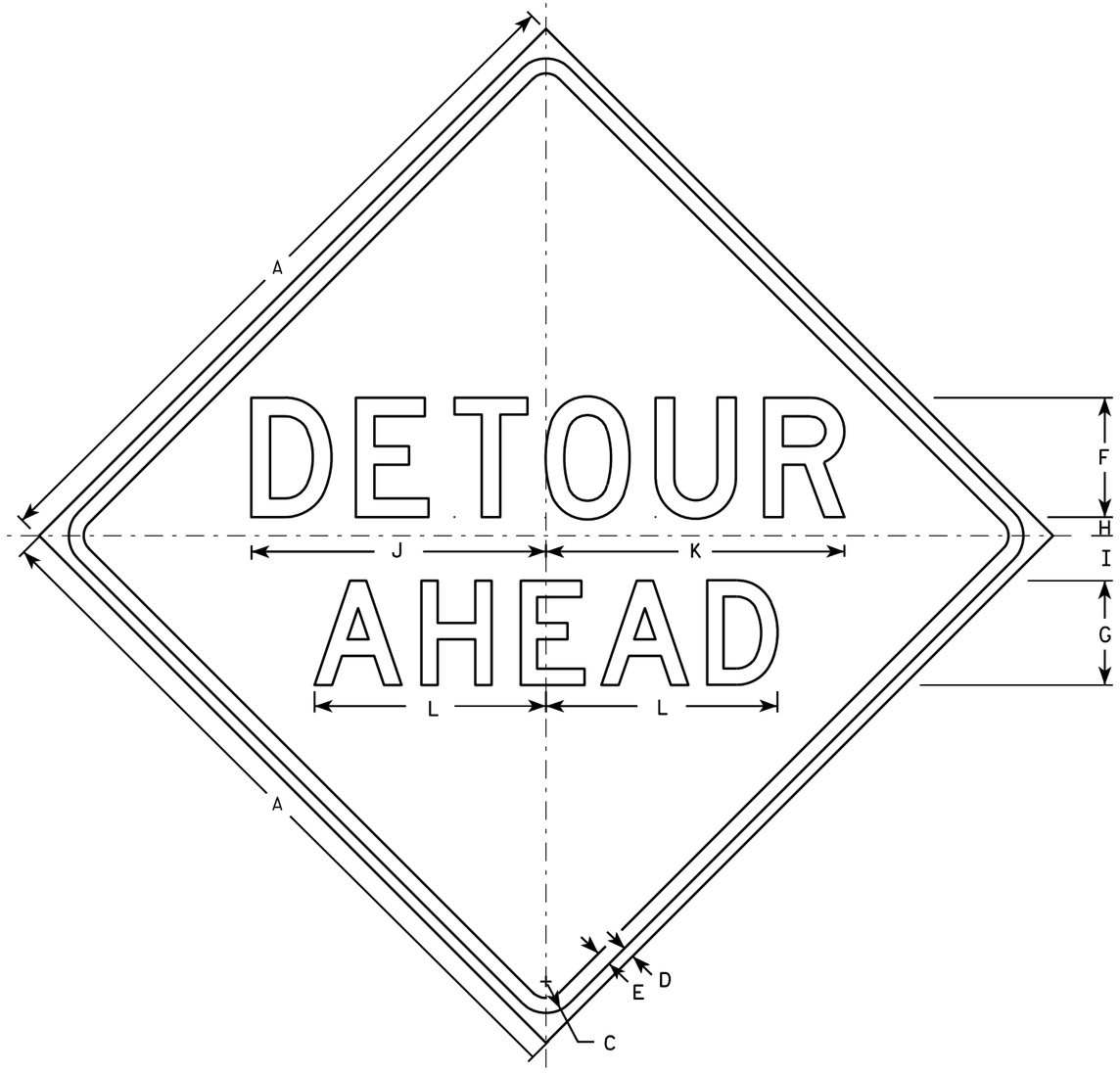
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

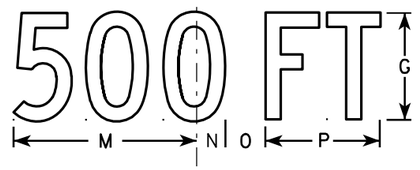
DATE 8/1/16 PLATE NO 13-3.10

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

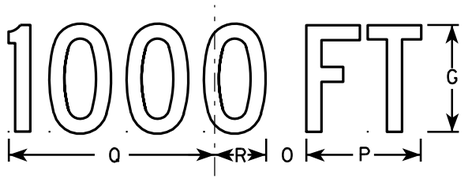
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W133.DGN PLOT DATE : 01-AUG-2016 09:57 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 4.086268:1.000000



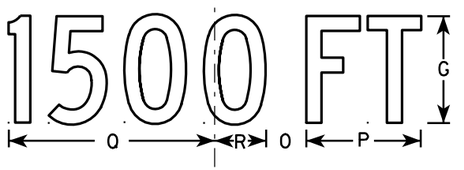
W20-2A



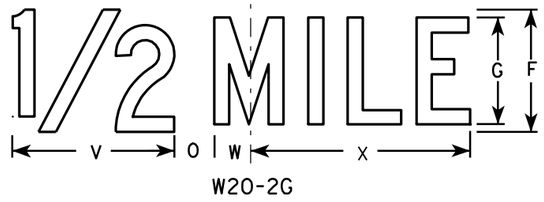
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

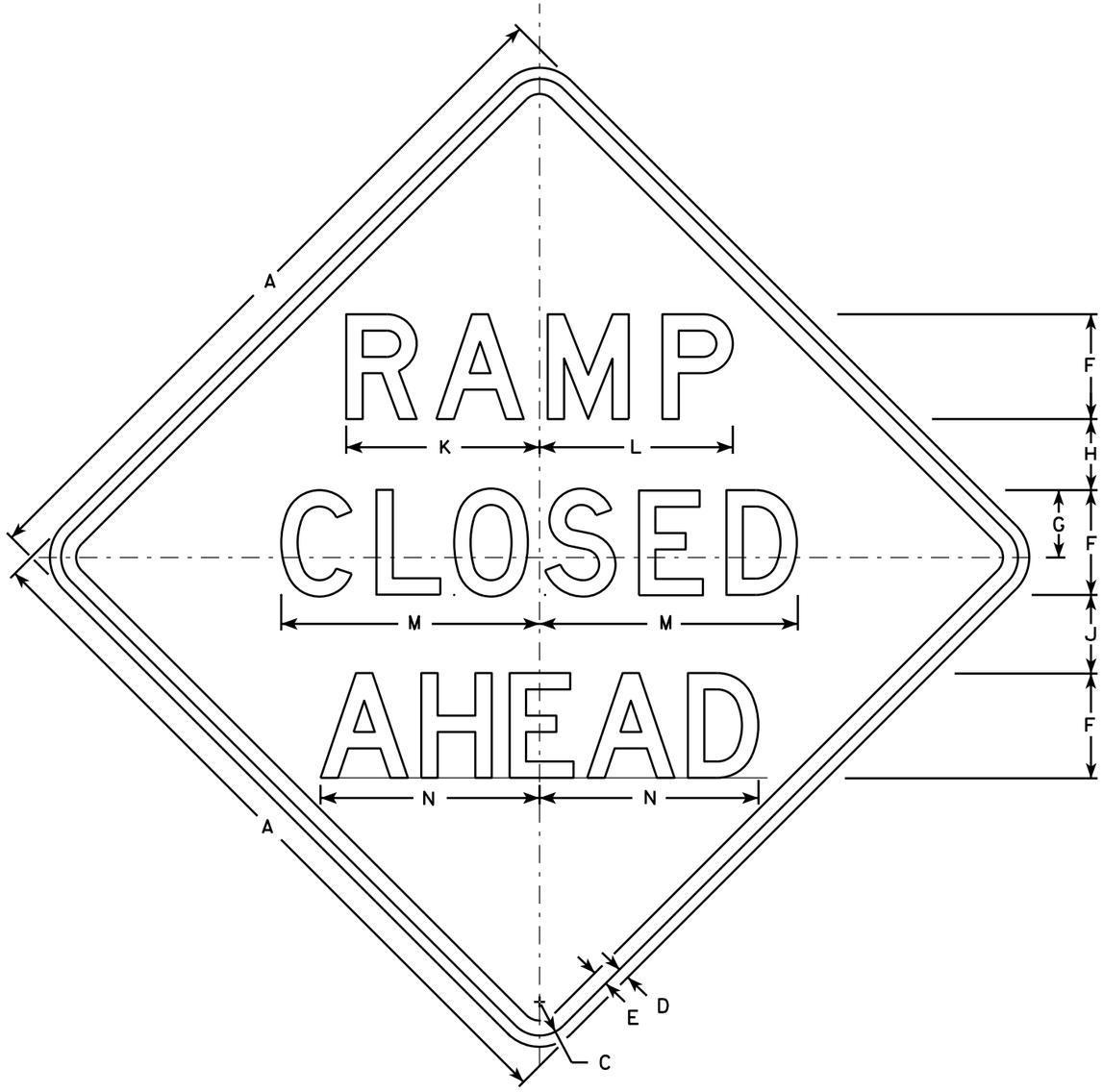
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

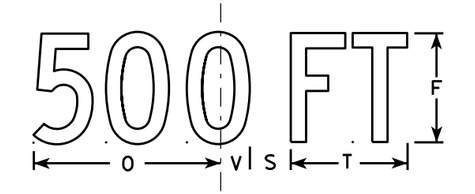
APPROVED Matthew R Rauch
for State Traffic Engineer

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

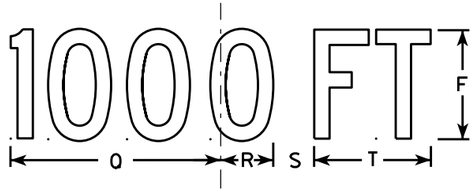
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 273	E



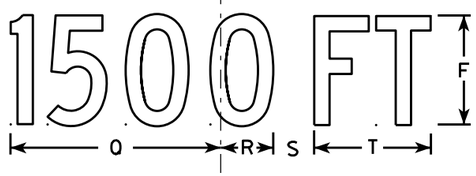
W20-53A



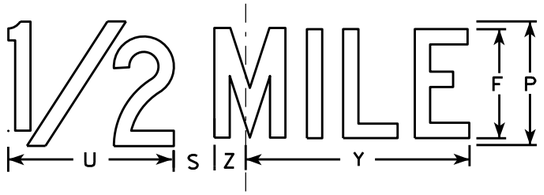
W20-53D



W20-53C



W20-53B



W20-53G



W20-53F

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	9 1/4	9 1/4	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	12 7/8	12 7/8	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	12 7/8	12 7/8	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	12 7/8	12 7/8	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	12 7/8	12 7/8	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	12 7/8	12 7/8	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
W20-53A,B,C,D,F,G

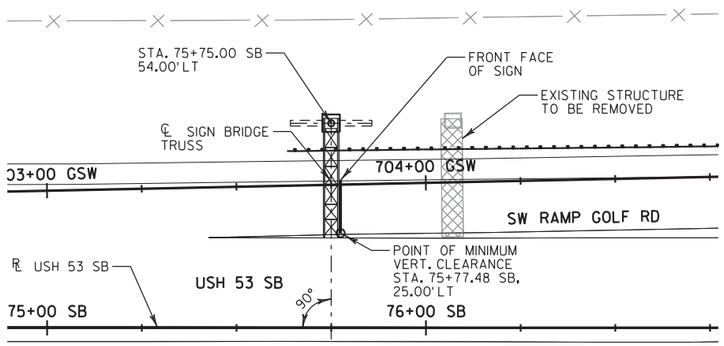
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/27/15 PLATE NO. W20-53.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 27-MAY-2015 19:40 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.729210:1.000000
WISDOT/CADDS SHEET 42



PLAN
S-18-114

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
203.0200	REMOVING OLD STRUCTURE STA. 76+07 SB	LS	1
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	9
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	1,370
641.1200.01	SIGN BRIDGE CANTILEVERED S-18-114	LS	1

ALL ITEMS ARE CATEGORY 0040

LEGEND

◓ THIS LUMP SUM PAY ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN, AND ANCHOR ASSEMBLIES.

◥ ACCOMMODATES A MINIMUM CLEARANCE OF 18'-3" WITH A MAX SIGN HEIGHT OF 12'-0" AND ACCOUNTS FOR FUTURE SIGN PLACEMENT OF 1'-0" BEYOND THE END OF THE TRUSS.

(X-X) SIGN NUMBER. SEE SIGNING PLAN

DESIGN DATA

DESIGN SIGN AREA
- S-18-114 ——— 264 SF
- S-18-115 ——— 264 SF

MAX. SIGN DEPTH
- S-18-114 ——— 12.0 FT
- S-18-115 ——— 12.0 FT

DESIGNED ACCORDING TO THE 4th EDITION AND INTERIM REVISIONS OF AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS".

DEAD LOAD - 3 PSF OF SIGN AND WT. OF SUPPORTING STRUCTURE.

ICE LOAD - 3 PSF TO 1 FACE OF SIGN AND AROUND SURFACE OF MEMBERS.

WIND PRESSURE - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

FATIGUE CATEGORY 1 WITHOUT GALLOPING WIND EFFECTS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESSES
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

FOUNDATION DATA

A GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS STRUCTURE AND IS AVAILABLE UPON REQUEST FROM WISDOT'S NW REGION OFFICE.

LIST OF DRAWINGS

1. PLAN AND ELEVATION S-18-114
2. PLAN AND ELEVATION S-18-115
3. SUBSURFACE EXPLORATION S-18-114
4. SUBSURFACE EXPLORATION S-18-115
5. FOOTING DETAILS
6. GALVANIZED STEEL CANTILEVER SIGN TRUSS
7. GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE CANTILEVERED S-18-XXX". FABRICATE IN ACCORDANCE WITH S.D.D. 12A4-3.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

CASINGS FOR THE FOOTING SHAFTS ARE INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY" IN ACCORDANCE WITH SECTION 636.3.3 OF THE STANDARD SPECIFICATIONS.

EXCAVATION FOR THE FOOTINGS FOR S-18-XXX IS INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY" IN ACCORDANCE WITH SECTION 636.3.2 OF THE STANDARD SPECIFICATIONS.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE TRUSS AT TIME OF ERECTION. BLANKS, IF USED, SHALL BE THE SAME SIZE AND LOCATION AS PERMANENT SIGNS.

ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE STANDARD SPECIFICATION.

ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾"ϕ A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

STEEL ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554 GRADE 55, ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.

THE UPPER 12" OF ANCHOR RODS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELD TEST AS PER AWS D1.1.

ROCK CORING FOR THE FOOTING SHAFT IS INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY". SEE SHEETS 3 & 4 FOR ANTICIPATED CORING LOCATIONS.

SEE SIGN PLATE NO. A4-6 OF THE SIGN PLATE MANUAL FOR INSTRUCTIONS ON CENTERING SIGN VERTICALLY ON TRUSS.

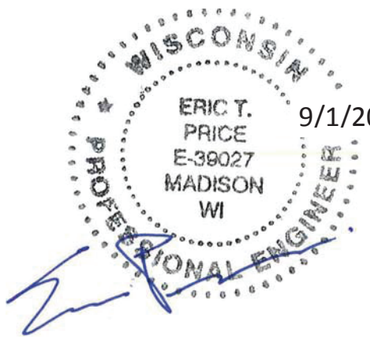
SIGN BRIDGE DESIGN DOES NOT INCLUDE ALLOWANCE FOR FUTURE CATWALK OR LOADS DUE TO LIGHTING.

PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT "Y" AT END OF TRUSS SHOWN IN "CAMBER DIAGRAM" ON SHEET 6. DO NOT RAKE VERTICAL UPRIGHT BY ADJUSTMENT OF LEVELING NUTS.

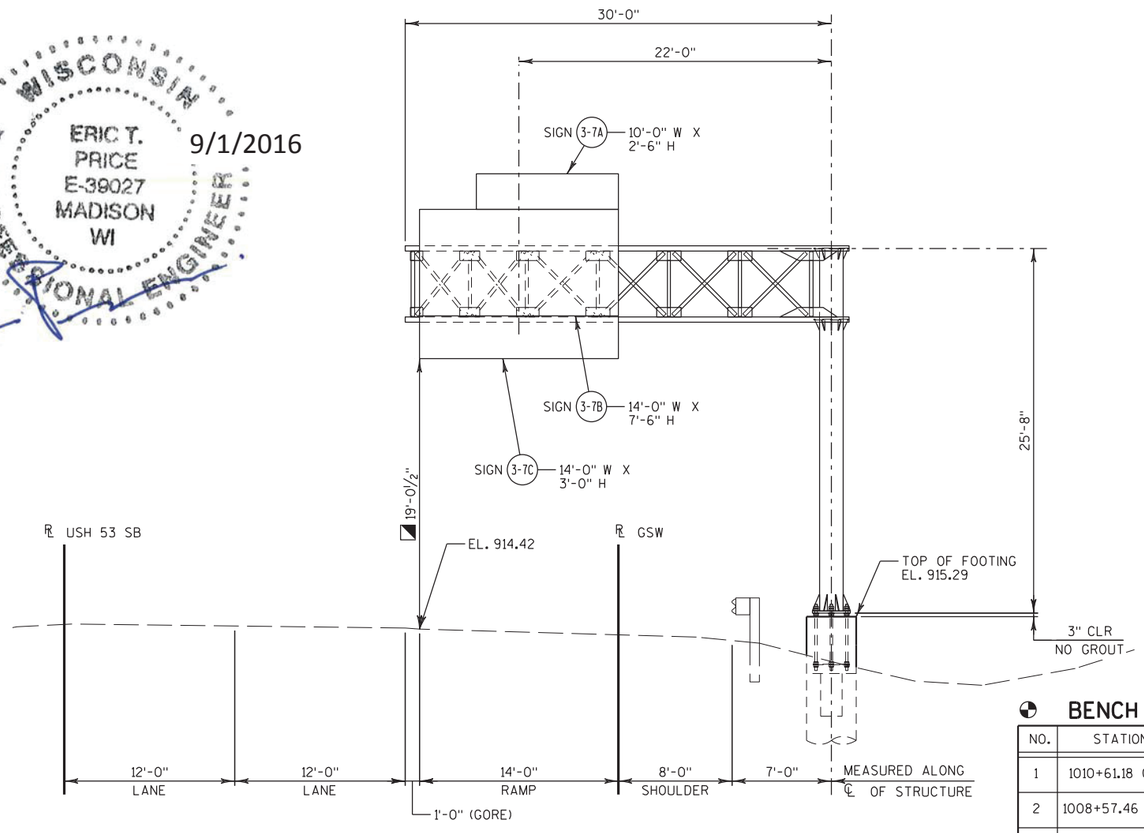
MATERIAL PROPERTIES

CONCRETE MASONRY	f'c =	3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy =	60,000 PSI
** STEEL COLUMN AND CHORD PIPE API SPEC 5L GRADE X42, PSL-2	fy =	42,000 PSI
PLATE, BARS & ANGLES - ASTM A709 GRADE 36	fy =	36,000 PSI
HIGH STRENGTH BOLTS - A325 WITH DTI WASHERS	fy =	92,000 PSI
ANCHOR RODS - ASTM F1554 GRADE 55	fy =	55,000 PSI
HARDWARE GALVANIZED		ASTM A153 CLASS C

** ALTERNATE MATERIAL FOR CHORD LESS THAN 10" DIAMETER MAY BE API SPEC. 5L GRADE X46 Fy = 46,000 PSI AND GRADE X52 Fy = 52,000 PSI, ASTM A500 GRADE B Fy = 42,000 PSI, GRADE C Fy = 46,000 PSI, OR ASTM A53 GRADE B TYPES E AND S ROUND HSS OR PIPE. (ASTM A53 GRADE B REQUIRES FULL ANALYSIS OF THE STRUCTURE).



9/1/2016



ELEVATION
(LOOKING SOUTH AT FRONT FACE OF SIGN)
S-18-114
USH 53 SB
STA. 75+75.00 SB

BENCH MARK TABLE

NO.	STATION	DESCRIPTION	ELEVATION
1	1010+61.18 GR, 63.6' LT	CUT SQ	917.11
2	1008+57.46 GR, 53.0' LT	CUT SQ	917.97
3	1008+57.40 GR, 38.9' RT	CUT SQ	917.89

NW REGION CONTACT:
DAVID KOEPP (715) 836-2078

BUREAU OF STRUCTURES CONTACT:
BILL DREHER (608) 266-8489

CONSULTANT CONTACT:
ERIC PRICE (608) 826-6146

STATE PROJECT NUMBER
1190-02-81

NO.	DATE	REVISION	BY

CORRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 01/13/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURES S-18-114/115

USH 53

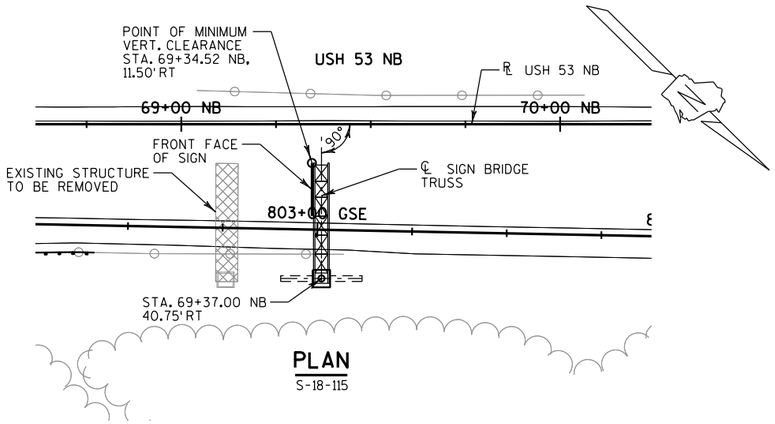
COUNTY	TOWN/CITY/VILLAGE
EAU CLAIRE	EAU CLAIRE

DESIGN SPEC. AASHTO STD. SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ETP	BH	TKB	ETP

PLAN AND ELEVATION S-18-114

SHEET 1 OF 7



PLAN
S-18-115

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
203.0200	REMOVING OLD STRUCTURE STA. 69+11 NB	LS	1
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	9
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	1,370
641.1200.02	SIGN BRIDGE CANTILEVERED S-18-115	LS	1

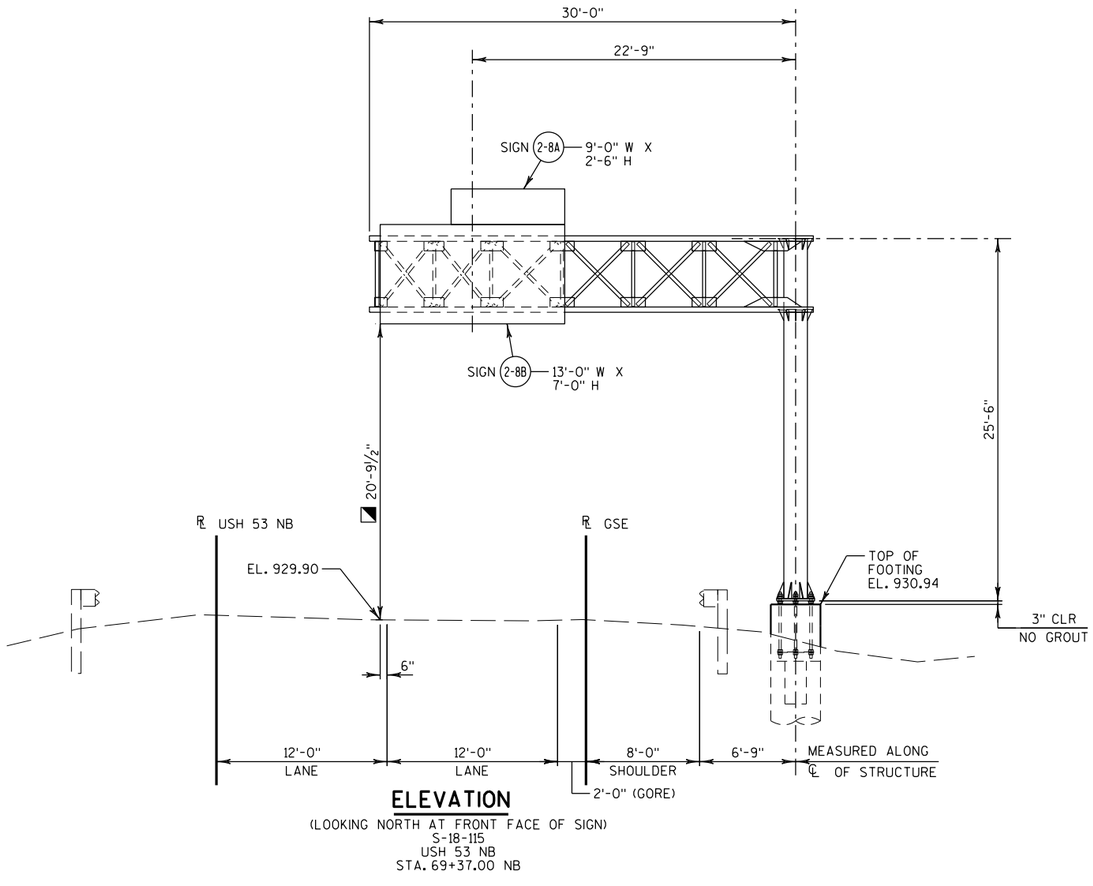
ALL ITEMS ARE CATEGORY 0050

LEGEND

◓ THIS LUMP SUM PAY ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN, AND ANCHOR ASSEMBLIES.

◪ ACCOMMODATES A MINIMUM CLEARANCE OF 18'-3" WITH A MAX SIGN HEIGHT OF 12'-0" AND ACCOUNTS FOR FUTURE SIGN PLACEMENT OF 1'-0" BEYOND THE END OF THE TRUSS.

(X-X) SIGN NUMBER. SEE SIGNING PLAN.



ELEVATION
(LOOKING NORTH AT FRONT FACE OF SIGN)
S-18-115
USH 53 NB
STA. 69+37.00 NB

◓ BENCH MARK TABLE

NO.	STATION	DESCRIPTION	ELEVATION
1	1010+61.18 GR, 63.6' LT	CUT SQ	917.11
2	1008+57.46 GR, 53.0' LT	CUT SQ	917.97
3	1008+57.40 GR, 38.9' RT	CUT SQ	917.89

STATE PROJECT NUMBER
1190-02-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-115

DRAWN BY TKB | PLANS CK'D. ETP

PLAN AND ELEVATION S-18-115

SHEET 2 OF 7

276

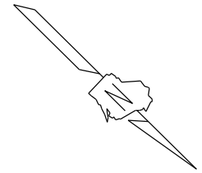
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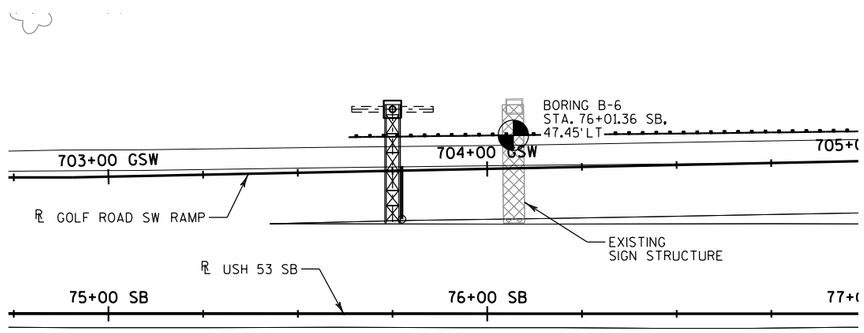
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FILE NAME : C:±Users±tbetcher±Google Drive±TKB Projects±Sign±S-18±S-18-114-117±500_CADD±502.4_Final±02_S-18-115-genplan.dgn

PLOT DATE : 8/31/2016

PLOT SCALE : 2.00000 '/ ft.





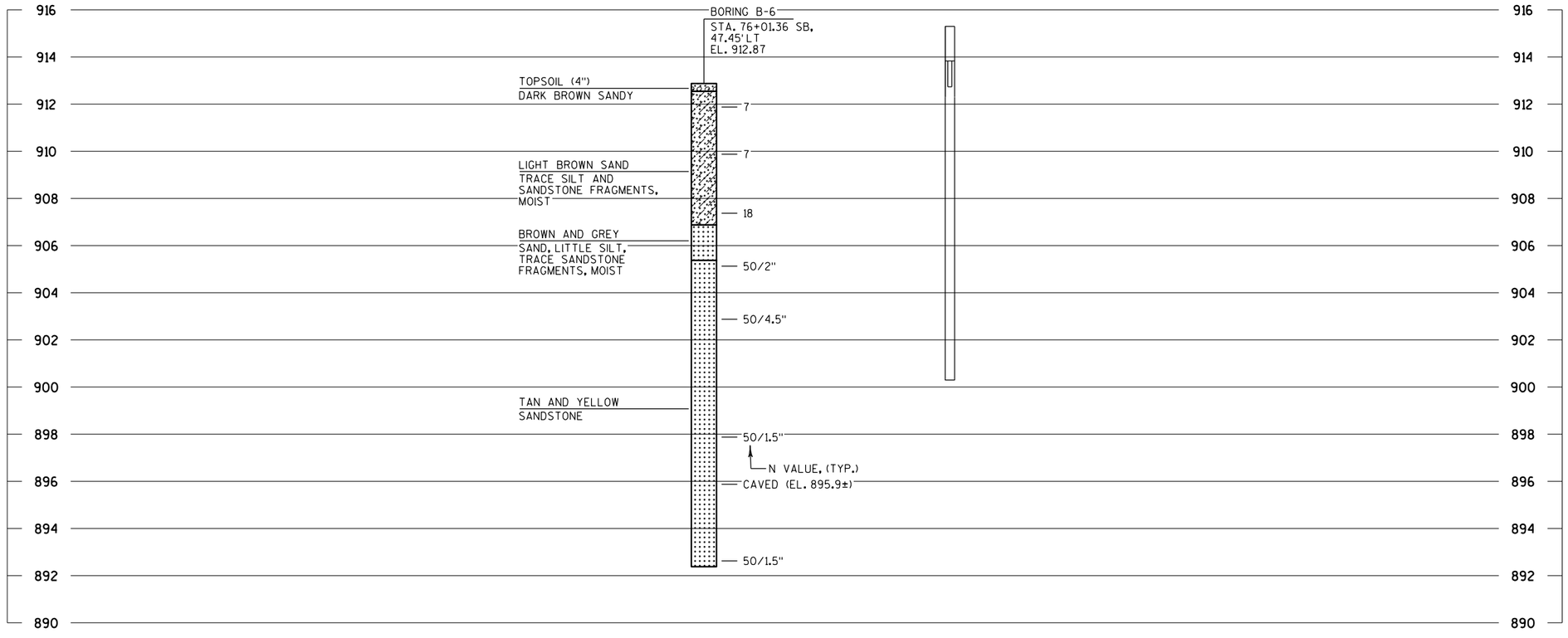
S-18-114

SOIL DESIGN PARAMETERS: BORING B-6

LAYER ELEVATION	FRICTION ANGLE DEGREES	ULTIMATE SKIN FRICTION, PSF/FT.	ULTIMATE END BEARING, TSF
912.9 - 912.6	IGNORE	IGNORE	N/A
912.6 - 907.9	IGNORE	IGNORE	N/A
907.9 - 905.4	32	300	10
905.4 - 902.9	41	600	15
902.9 - 897.9	41	800	30
897.9 - 892.4	41	1,200	40

SOIL BORINGS PERFORMED BY:
PROFESSIONAL SERVICE INDUSTRIES, INC.
12839 30TH AVENUE, SUITE A
CHIPPEWA FALLS, WI 54729

BORING B-6
PERFORMED ON 10/20/15



8

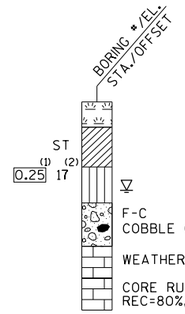
STATE PROJECT NUMBER

1190-02-81

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

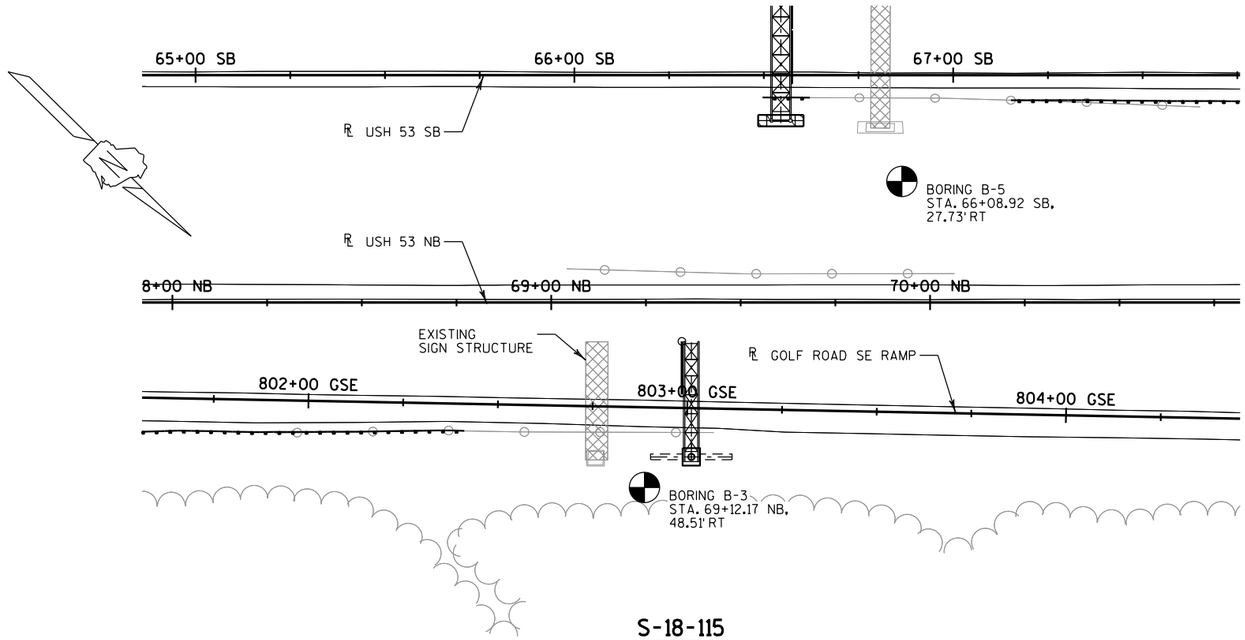
STRUCTURE S-18-114

DRAWN BY TKB | PLANS CK'D. ETP

SUBSURFACE EXPLORATION S-18-114

SHEET 3 OF 7

277



S-18-115

SOIL DESIGN PARAMETERS: BORING B-3

LAYER ELEVATION	FRICTION ANGLE DEGREES	ULTIMATE SKIN FRICTION, PSF/FT.	ULTIMATE END BEARING, TSF
927.0 - 926.3	IGNORE	IGNORE	N/A
926.3 - 922.0	IGNORE	IGNORE	N/A
922.0 - 917.0	41	550	15
917.0 - 911.5	41	1,100	30

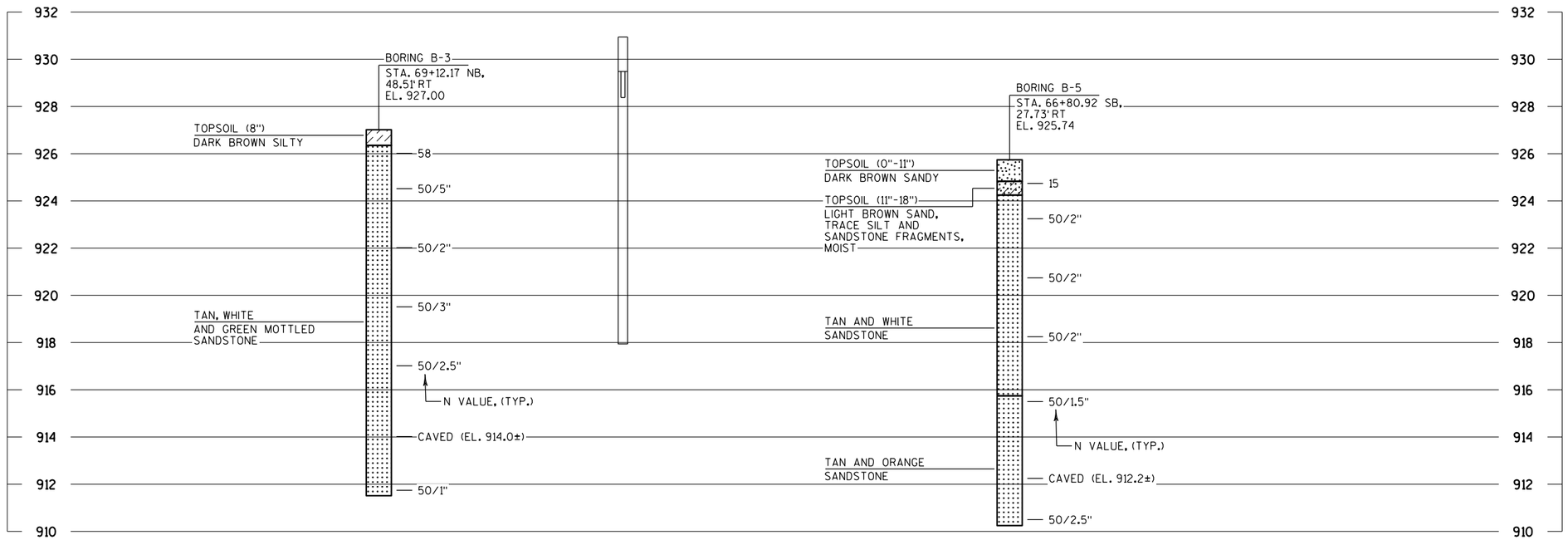
SOIL DESIGN PARAMETERS: BORING B-5

LAYER ELEVATION	FRICTION ANGLE DEGREES	ULTIMATE SKIN FRICTION, PSF/FT.	ULTIMATE END BEARING, TSF
925.7 - 924.8	IGNORE	IGNORE	N/A
924.8 - 924.2	IGNORE	IGNORE	N/A
924.2 - 920.7	IGNORE	IGNORE	N/A
920.7 - 915.7	41	550	15
915.7 - 910.2	41	1,100	30

SOIL BORINGS PERFORMED BY:
PROFESSIONAL SERVICE INDUSTRIES, INC.
12839 30TH AVENUE, SUITE A
CHIPPEWA FALLS, WI 54729

BORING B-3
PERFORMED ON 10/20/15

BORING B-5
PERFORMED ON 10/20/15



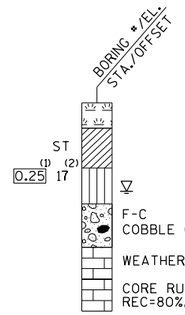
STATE PROJECT NUMBER

1190-02-81

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-115

DRAWN BY TKB | PLANS CK'D. ETP

SUBSURFACE EXPLORATION S-18-115

SHEET 4 OF 7

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8

8

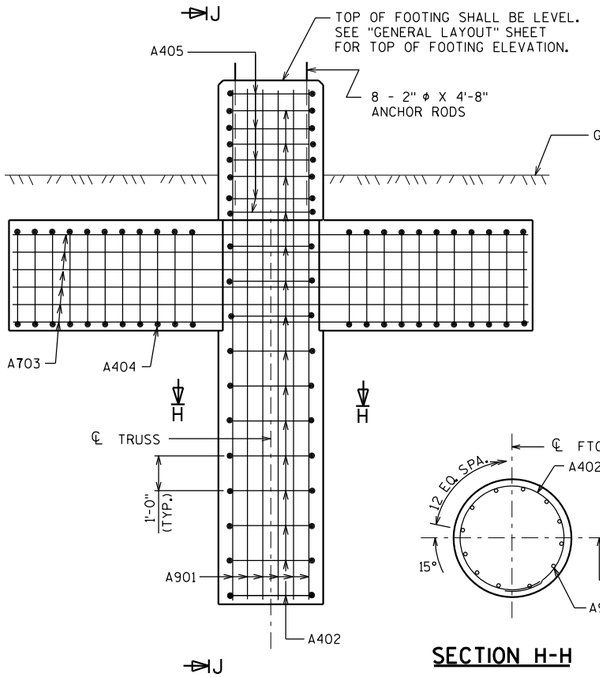
FILE NAME : C:±Users±tbetcher±Google Drive±TKB Projects±Sign±S-18±S-18-114-117±500_CADD±502.4_Final±04_S-18-115-sub sur exp.dgn

PLOT DATE : 8/31/2016

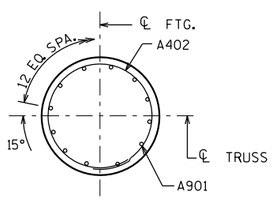
PLOT SCALE : 2.00000 '/ ft.

STATE PROJECT NUMBER

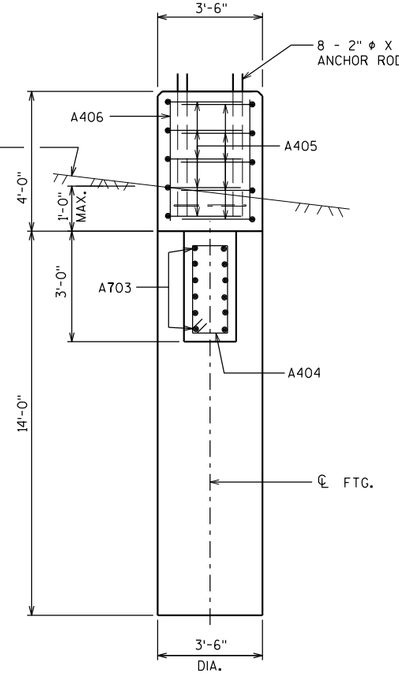
1190-02-81



ELEVATION

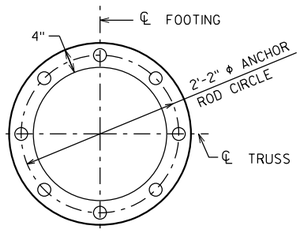


SECTION H-H

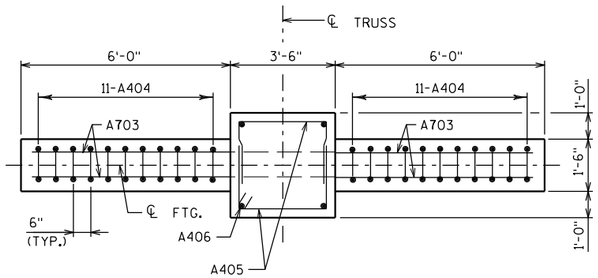


SECTION J-J

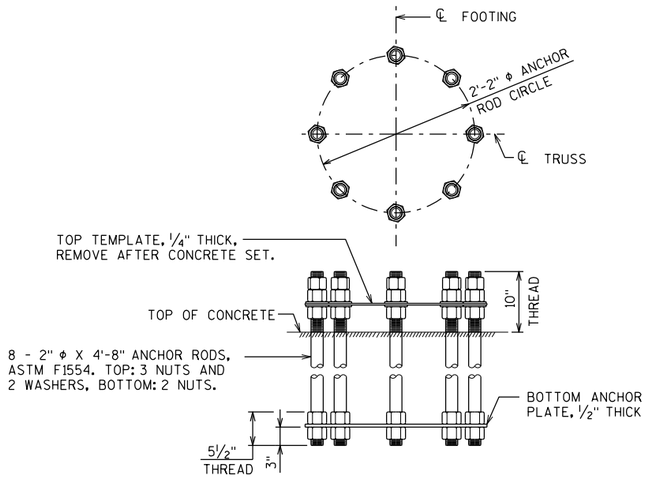
SHOWING WING AND CAP STEEL ONLY



TOP TEMPLATE AND
BOTTOM ANCHOR PLATE



PLAN



ANCHOR ROD ASSEMBLY DETAILS

NOTES

CONTRACTOR SHALL VERIFY UTILITY CONFLICTS PRIOR TO CONSTRUCTION OF FOOTING.

FOOTING BELOW THE WINGS SHALL BE EXCAVATED BY THE USE OF CIRCULAR AUGER.

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

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

BENDING DIMENSIONS ARE OUT TO OUT OF BAR.

CENTER ANCHOR ROD ASSEMBLY TO MISS BAR STEEL REINFORCEMENT AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED ON PLAN. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURE IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHOR RODS.

PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

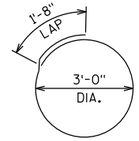
UNLESS NOTED ON PLAN, REMOVE ALL CASING AND FORMS USED TO CONSTRUCT THE FOOTING PRIOR TO BACKFILLING AROUND THE FOOTING. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE IN LAYERS OF 1'-0" OR LESS.

FOUNDATION DATA

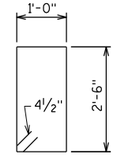
ULTIMATE Qp = 30,000 P.S.F.

BILL OF BARS

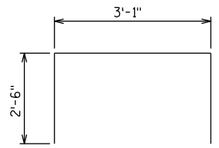
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT		BAR SERIES	LOCATION
A901	X	12	17'-6"				FOOTING - COLUMN/TOP
A402	X	15	11'-2"	X			FOOTING - COLUMN/TOP
A703	X	12	15'-0"				FOOTING - WINGS
A404	X	22	7'-6"	X			FOOTING - WINGS
A405	X	10	7'-11"	X			FOOTING - TOP
A406	X	4	3'-6"				FOOTING - TOP - COLUMNS



A402



A404



A405

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

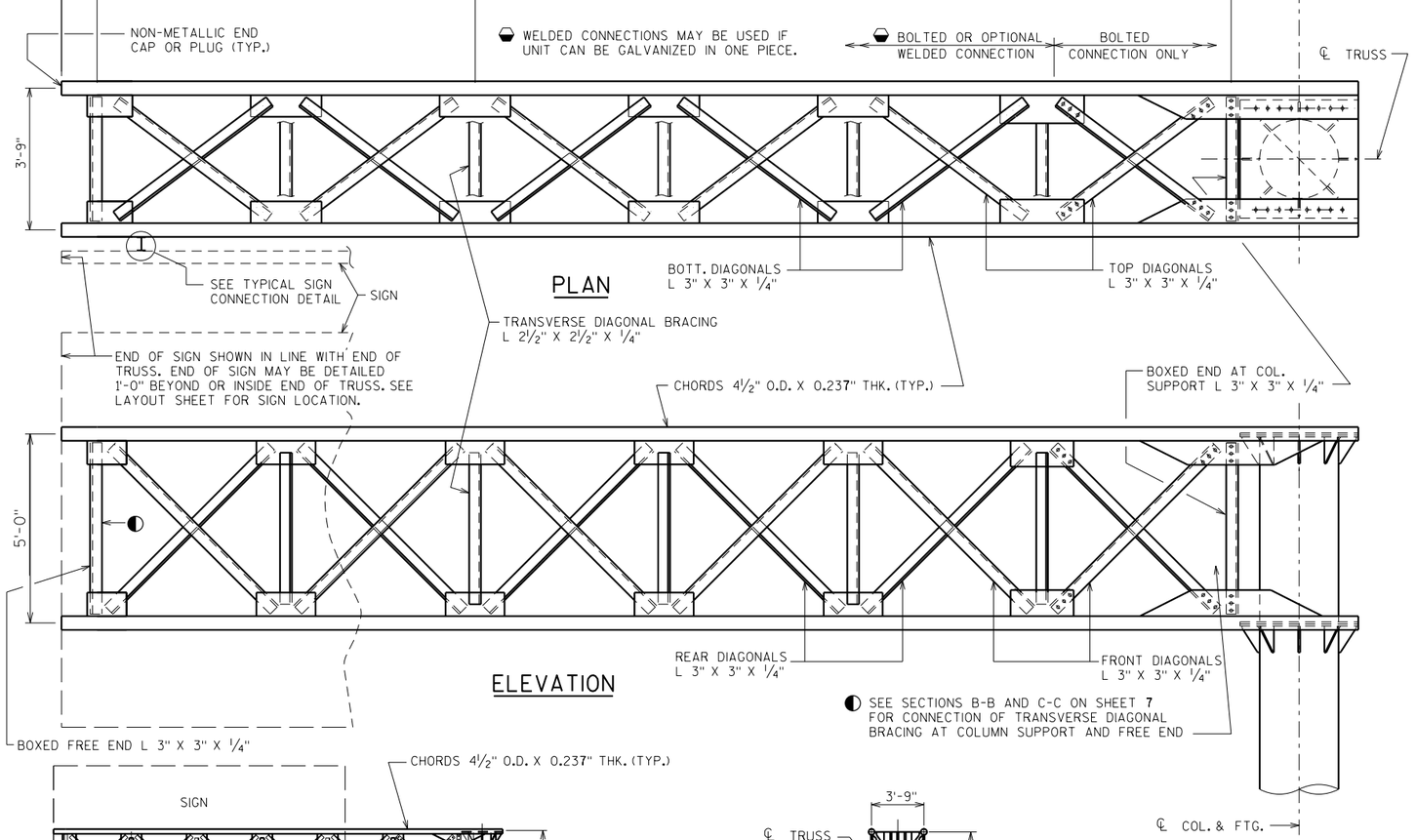
STRUCTURE S-18-114/115

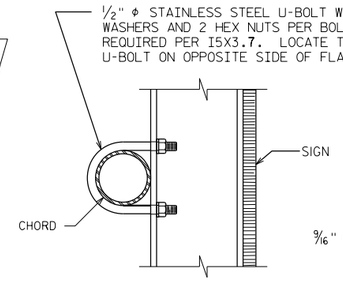
DRAWN BY TKB | PLANS CK'D. ETP

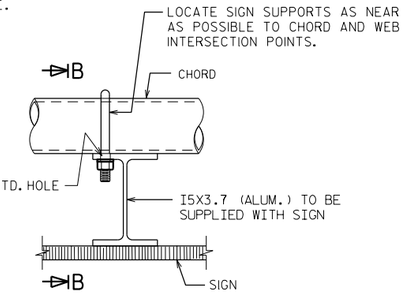
FOOTING DETAILS

SHEET 5 OF 7

STATE PROJECT NUMBER
1190-02-81

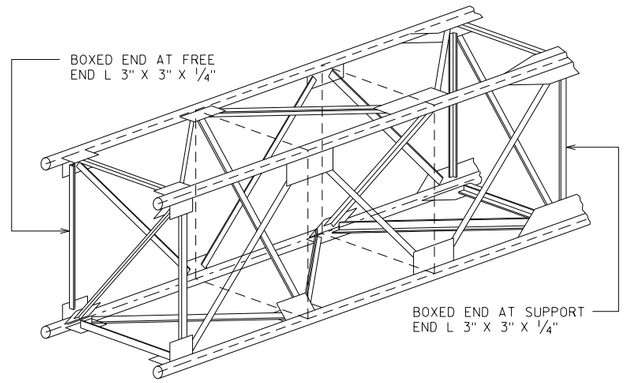






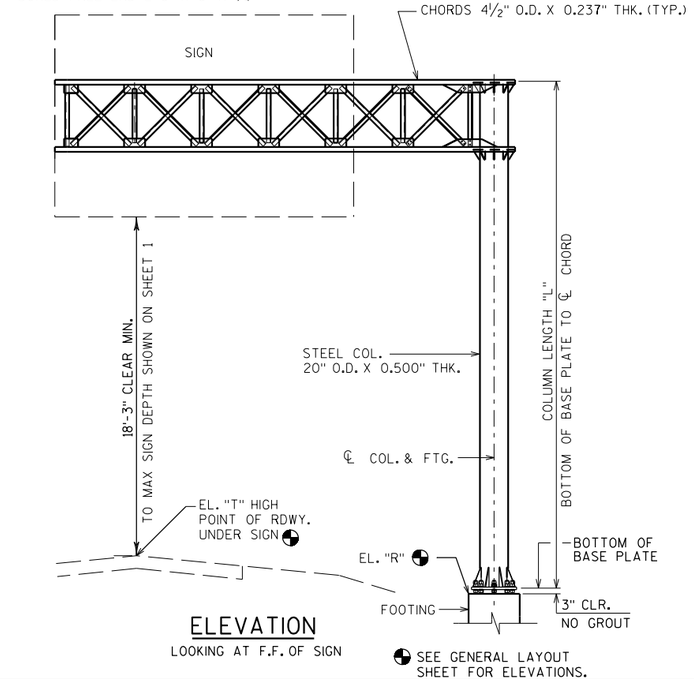
TYPICAL SIGN CONNECTION

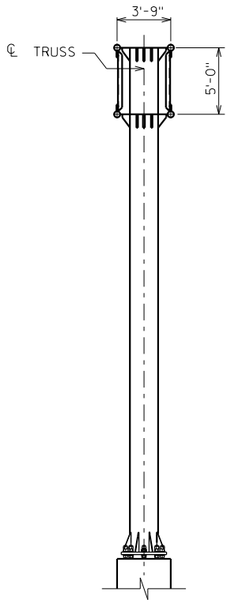
FOR TYPE I AND II SIGNS ONLY

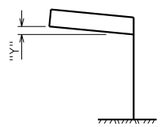


TYPICAL TRUSS SECTION

THE GENERAL PATTERN SHOWN ABOVE IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES.







CAMBER DIAGRAM

PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT "Y" AT END OF TRUSS SHOWN. DO NOT RAKE VERTICAL UPRIGHT BY ADJUSTMENT OF LEVELING NUTS.

DIMENSIONS & CAMBER VALUES

STRUCTURE	"A"	"L"	"B"	"D"	"Y"
S-18-114	30'-0"	25'-8"	4	4'-0"	2⅛"
S-18-115	30'-0"	25'-6"	4	4'-0"	2⅛"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-114/115

DRAWN BY TKB | PLANS CK'D. ETP

GALVANIZED STEEL CANTILEVER SIGN TRUSS

SHEET 6 OF 7

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8

8

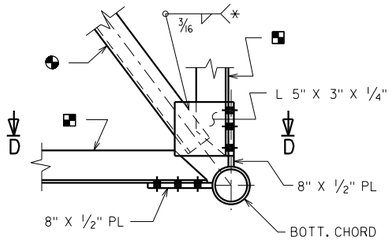
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PLOT DATE : 8/31/2016

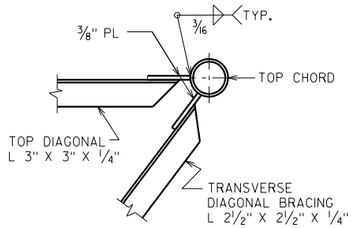
PLOT SCALE : 2.00000 '/ ft.

STATE PROJECT NUMBER

1190-02-81

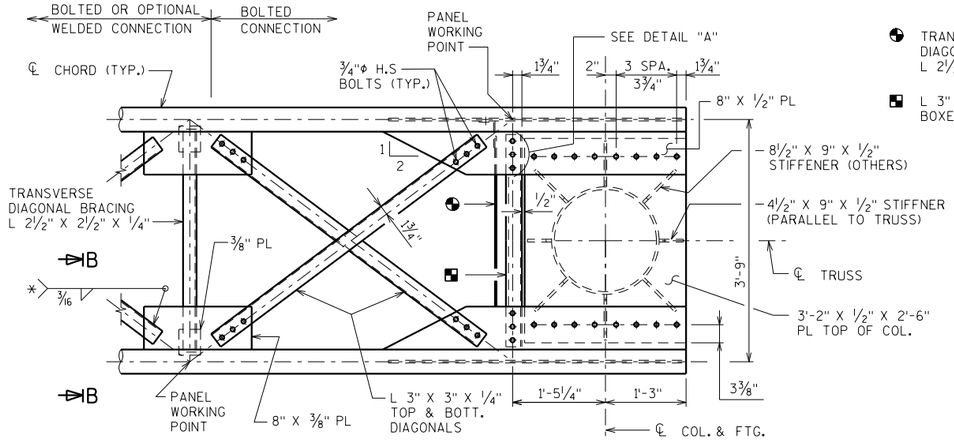


SECTION C-C



SECTION B-B

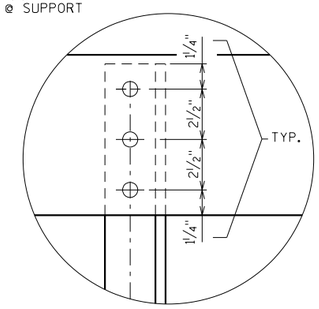
ANGLE SIZE	*MIN. WELD LENGTH
L 2 1/2" X 2 1/2" X 1/4"	7"
L 3" X 3" X 1/4"	8"



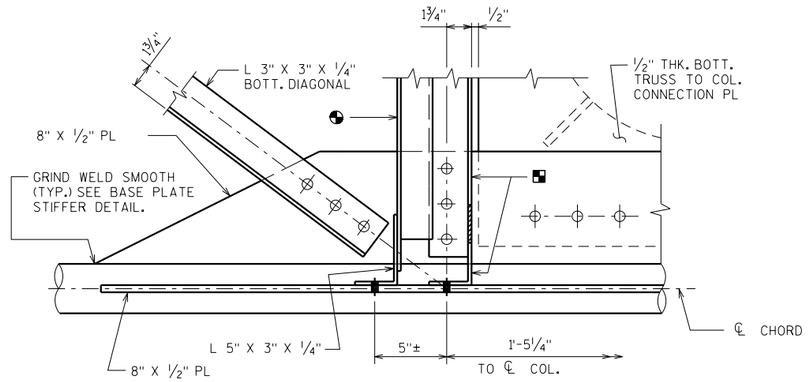
PLAN TRUSS TO COLUMN

TRANSVERSE DIAGONAL BRACING L 2 1/2" X 2 1/2" X 1/4"

L 3" X 3" X 1/4" BOXED END @ SUPPORT

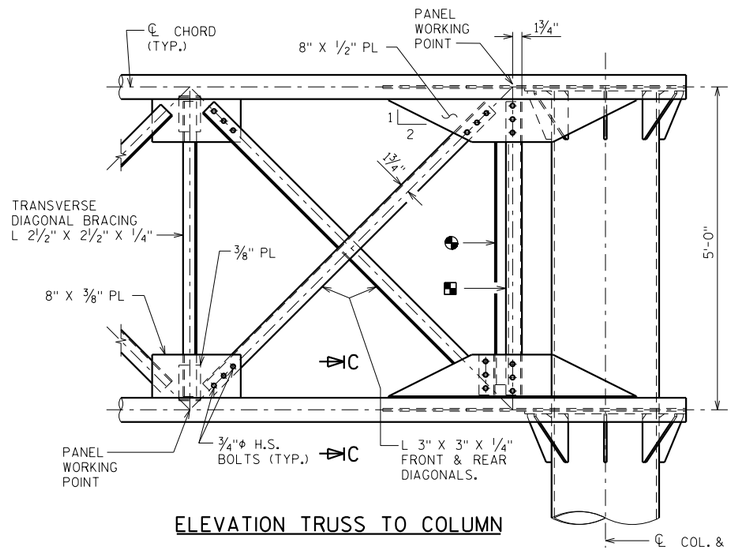


DETAIL "A"

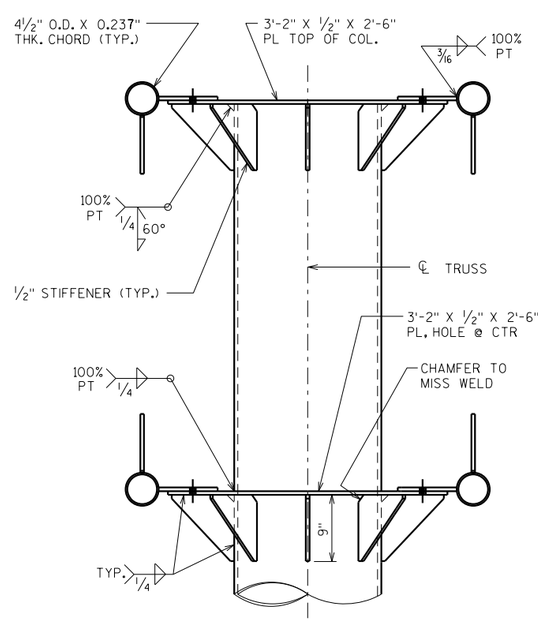


SECTION D-D

(LOOKING DOWN @ BOTT. HORIZ. PLANE @ FRONT CHORD)

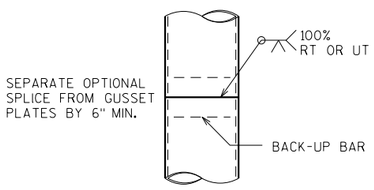


ELEVATION TRUSS TO COLUMN

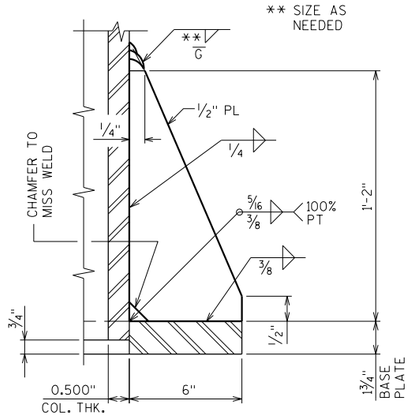


END VIEW TRUSS TO COLUMN

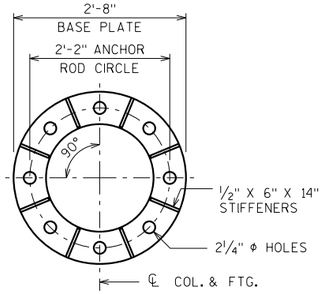
(WEB MEMBERS NOT SHOWN)

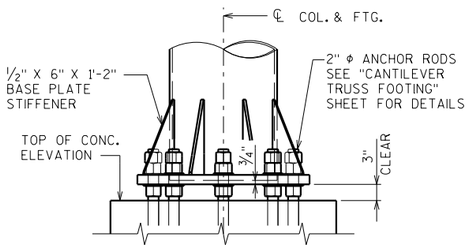


OPTIONAL COLUMN OR CHORD SPLICE DETAIL



BASE PLATE STIFFENER DETAIL





BASE PLATE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-114/115

DRAWN BY TKB | PLANS CK'D. ETP

GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS

SHEET 7 OF 7

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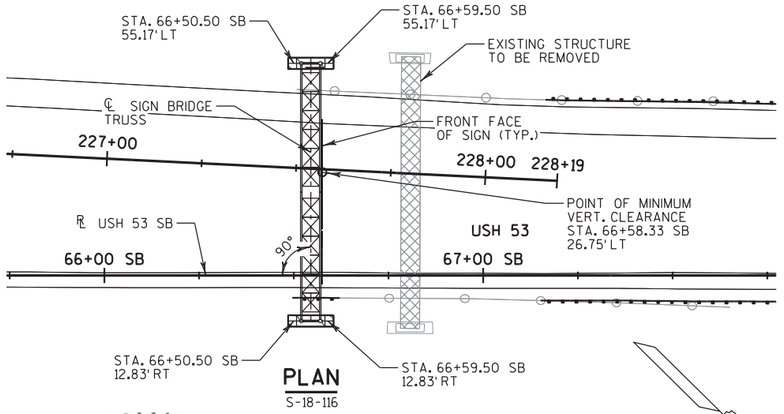
8

8

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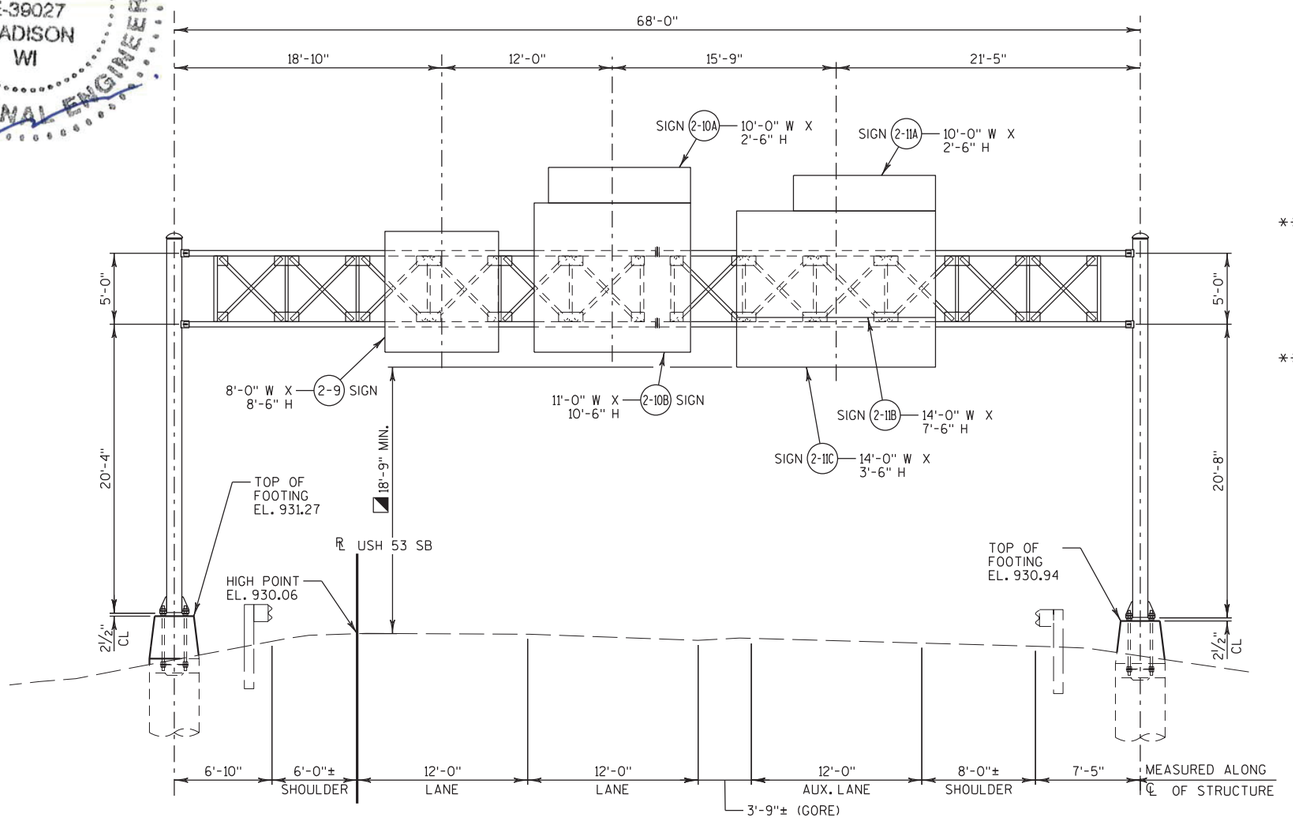
PLOT DATE : 8/31/2016

PLOT SCALE : 2.00000 '/ ft.



PLAN
S-18-116

WISCONSIN
ERIC T. PRICE
E-39027
MADISON
WI
PROFESSIONAL ENGINEER
9/1/2016



ELEVATION
(LOOKING SOUTH AT FRONT FACE OF SIGN)
S-18-116
USH 53 SB
STA. 66+55.00 SB

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
203.0200	REMOVING OLD STRUCTURE STA. 66+80 SB	LS	1
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	24
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	2,520
641.6600.01	SIGN BRIDGE S-18-116	LS	1

ALL ITEMS ARE CATEGORY 0060

LEGEND
- THIS LUMP SUM PAY ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMNS, AND ANCHOR ASSEMBLIES.
- ACCOMMODATES A MINIMUM CLEARANCE OF 18'-3" WITH A MAX SIGN HEIGHT OF 12'-0".
- (X-X) SIGN NUMBER. SEE SIGNING PLAN.

DESIGN DATA
DESIGN SIGN AREA
S-18-116 ——— 530 SF
S-18-117 ——— 865 SF
MAX. SIGN DEPTH
S-18-116 ——— 12.0 FT
S-18-117 ——— 12.0 FT

DESIGNED ACCORDING TO THE 6th EDITION OF A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS".

DEAD LOAD - 3 PSF OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1FACE OF SIGN AND AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESSES
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

MATERIAL PROPERTIES
CONCRETE MASONRY ——— f'c = 3,500 PSI
HIGH STRENGTH BAR STEEL
REINFORCEMENT, GRADE 60 ——— fy = 60,000 PSI
** STEEL COLUMN AND CHORD PIPE
API SPEC 5L GRADE X42, PSL-2 — fy = 42,000 PSI
PLATE, BARS & ANGLES - ASTM
A709 GRADE 36 ——— fy = 36,000 PSI
HIGH STRENGTH BOLTS - A325 ——— fy = 92,000 PSI
WITH DTI WASHERS
ANCHOR RODS - ASTM
F1554 GRADE 55 ——— fy = 55,000 PSI
HARDWARE GALVANIZED ——— ASTM A153 CLASS C

** ALTERNATE MATERIAL FOR CHORD LESS THAN 10" DIAMETER MAY BE API SPEC. 5L GRADE X46 Fy = 46,000 PSI AND GRADE X52 Fy = 52,000 PSI, ASTM A500 GRADE B Fy = 42,000 PSI, GRADE C Fy = 46,000 PSI, OR ASTM A53 GRADE B TYPES E AND S ROUND HSS OR PIPE. (ASTM A53 GRADE B REQUIRES FULL ANALYSIS OF THE STRUCTURE).

LIST OF DRAWINGS
1. PLAN AND ELEVATION S-18-116
2. PLAN AND ELEVATION S-18-117
3. SUBSURFACE EXPLORATION S-18-116
4. SUBSURFACE EXPLORATION S-18-117
5. FOOTING DETAILS
6. GALVANIZED STEEL FULL-SPAN SIGN TRUSS
7. GALVANIZED STEEL FULL-SPAN SIGN TRUSS DETAILS.

BENCH MARK TABLE

NO.	STATION	DESCRIPTION	ELEVATION
1	1010+61.18 GR, 63.6' LT	CUT SQ	917.11
2	1008+57.46 GR, 53.0' LT	CUT SQ	917.97
3	1008+57.40 GR, 38.9' RT	CUT SQ	917.89

NW REGION CONTACT:
DAVID KOEPP (715) 836-2078

BUREAU OF STRUCTURES CONTACT:
BILL DREHER (608) 266-8489

CONSULTANT CONTACT:
ERIC PRICE (608) 826-6146

STATE PROJECT NUMBER
1190-02-81

GENERAL NOTES
DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

SIGN BRIDGE IDENTIFICATION PLAQUE SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE STRUCTURE S-18-XXX". FABRICATE IN ACCORDANCE WITH S.D.D. 12A4-3.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

CASINGS FOR THE FOOTING SHAFTS ARE INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY" IN ACCORDANCE WITH SECTION 636.3.3 OF THE STANDARD SPECIFICATIONS.

EXCAVATION FOR THE FOOTINGS FOR S-18-XXX IS INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY" IN ACCORDANCE WITH SECTION 636.3.2 OF THE STANDARD SPECIFICATIONS.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE TRUSS AT TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN THE CENTER TO CENTER DISTANCE BETWEEN THE CHORDS, AND SHALL BE CENTERED ON THE BRIDGE.

ROCK CORING FOR THE FOOTING SHAFTS IS INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY". SEE SHEETS 3 & 4 FOR ANTICIPATED CORING LOCATIONS.

FATIGUE GROUP LOAD IS APPLIED PER SECTION 39.4.2 OF THE WISCONSIN BRIDGE MANUAL.

STEEL ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554 GRADE 55, ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.

ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATION.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1.

SEE SIGN PLATE NO. A4-6 OF THE SIGN PLATE MANUAL FOR INSTRUCTION ON CENTERING SIGN VERTICALLY ON TRUSS.

SIGN BRIDGE DESIGN DOES NOT INCLUDE ALLOWANCE FOR FUTURE CATWALK OR LOADS DUE TO LIGHTING.

FOUNDATION DATA
A GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS STRUCTURE AND IS AVAILABLE UPON REQUEST FROM WISDOT'S NW REGION OFFICE.

NO.	DATE	REVISION	BY

CORRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 01/13/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE S-18-116/117

USH 53

COUNTY: EAU CLAIRE
~~TOWN~~/CITY/~~VILLAGE~~: EAU CLAIRE

DESIGN SPEC. AASHTO STD. SPEC.

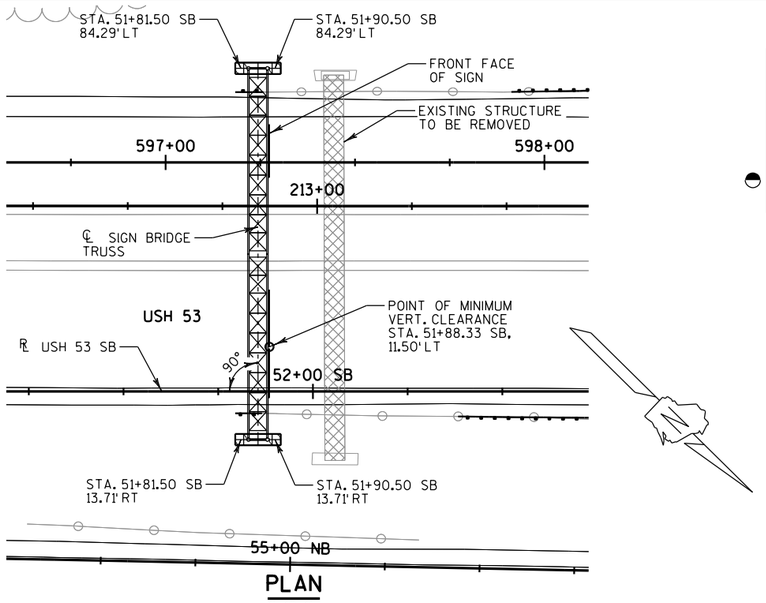
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ETP	BH	TKB	ETP

PLAN AND ELEVATION S-18-116

SHEET 1 OF 7

STATE PROJECT NUMBER

1190-02-81



PLAN

S-18-117

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
203.0200	REMOVING OLD STRUCTURE STA. 52+07 SB	LS	1
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	26
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	2,710
◓ 641.6600.02	SIGN BRIDGE S-18-117	LS	1

ALL ITEMS ARE CATEGORY 0070

LEGEND

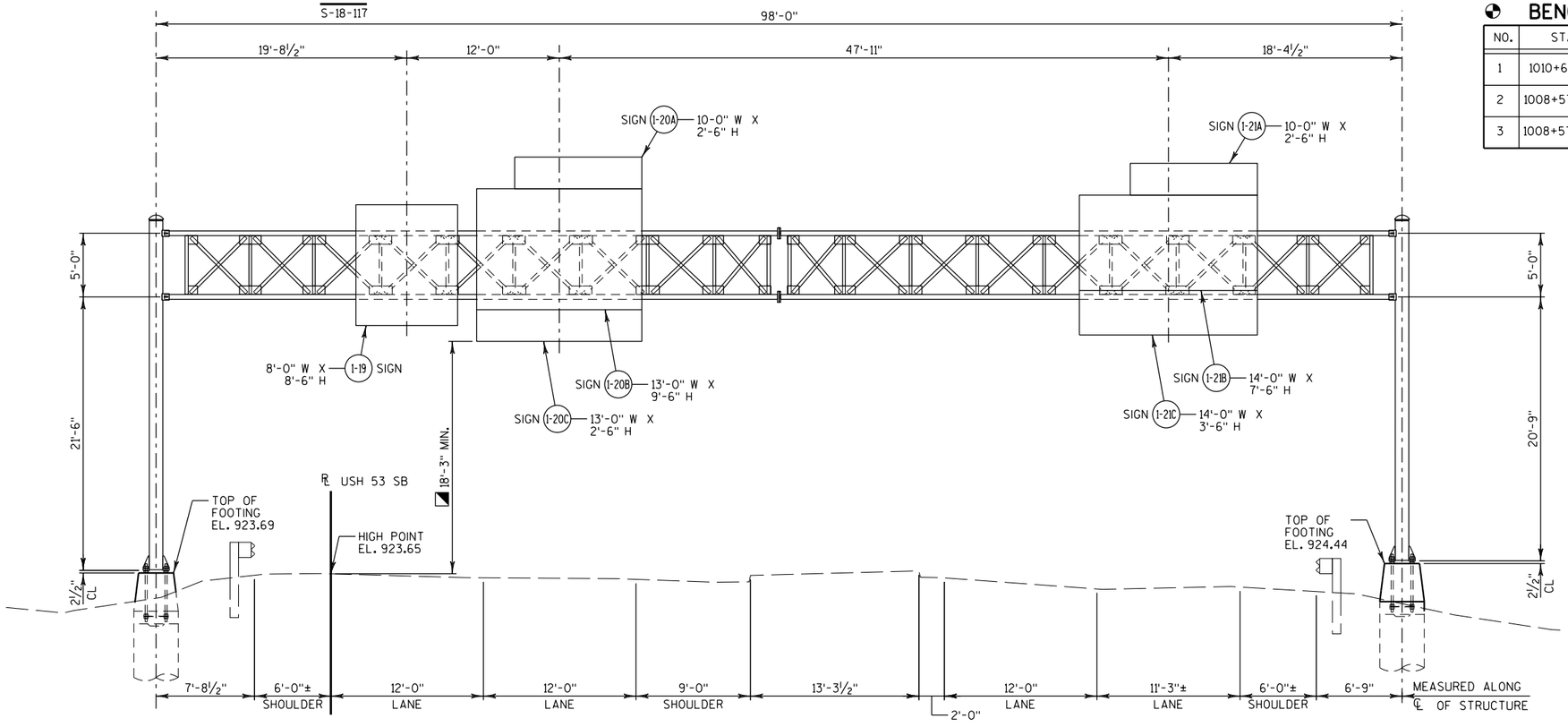
◓ THIS LUMP SUM PAY ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN, AND ANCHOR ASSEMBLIES.

◥ ACCOMMODATES A MINIMUM CLEARANCE OF 18'-3" WITH A MAX SIGN HEIGHT OF 12'-0".

(X-X) SIGN NUMBER. SEE SIGNING PLAN.

◓ BENCH MARK TABLE

NO.	STATION	DESCRIPTION	ELEVATION
1	1010+61.18 GR, 63.6' LT	CUT SQ	917.11
2	1008+57.46 GR, 53.0' LT	CUT SQ	917.97
3	1008+57.40 GR, 38.9' RT	CUT SQ	917.89



ELEVATION

(LOOKING SOUTH AT FRONT FACE OF SIGN)
S-18-117
USH 53 SB
STA. 51+85.00 SB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-117

DRAWN BY TKB | PLANS CK'D. ETP

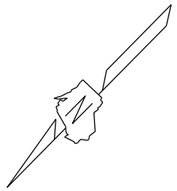
PLAN AND ELEVATION S-18-117

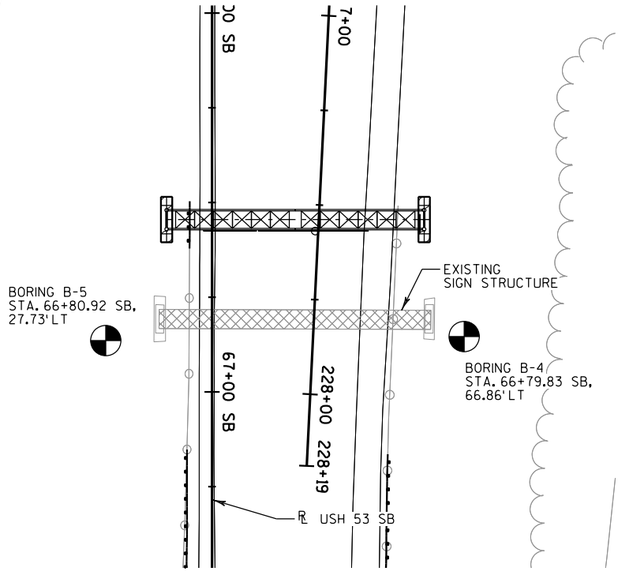
SHEET 2 OF 7

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S-18-116

SOIL DESIGN PARAMETERS: BORING B-4

LAYER ELEVATION	FRICTION ANGLE DEGREES	ULTIMATE SKIN FRICTION, PSF/FT.	ULTIMATE END BEARING, TSF
926.4 - 925.6	IGNORE	IGNORE	N/A
925.6 - 925.4	IGNORE	IGNORE	N/A
925.4 - 921.4	IGNORE	IGNORE	N/A
921.4 - 916.4	41	550	15
916.4 - 910.9	41	1,100	30

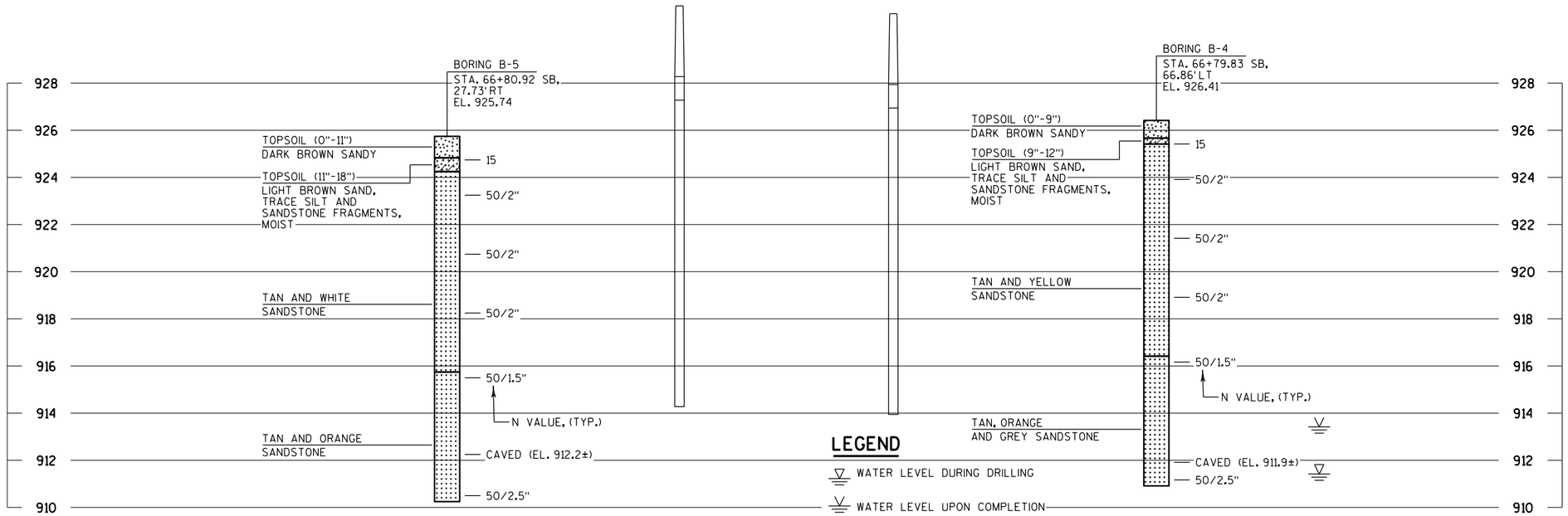
SOIL DESIGN PARAMETERS: BORING B-5

LAYER ELEVATION	FRICTION ANGLE DEGREES	ULTIMATE SKIN FRICTION, PSF/FT.	ULTIMATE END BEARING, TSF
925.7 - 924.8	IGNORE	IGNORE	N/A
924.8 - 924.2	IGNORE	IGNORE	N/A
924.2 - 920.7	IGNORE	IGNORE	N/A
920.7 - 915.7	41	550	15
915.7 - 910.2	41	1,100	30

SOIL BORINGS PERFORMED BY:
PROFESSIONAL SERVICE INDUSTRIES, INC.
12839 30TH AVENUE, SUITE A
CHIPPEWA FALLS, WI 54729

BORING B-4
PERFORMED ON 10/20/15

BORING B-5
PERFORMED ON 10/20/15



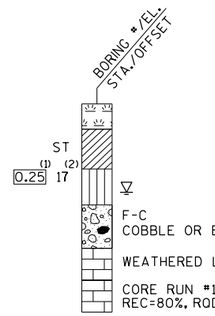
STATE PROJECT NUMBER

1190-02-81

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-116

DRAWN BY TKB | PLANS CK'D. ETP

SUBSURFACE EXPLORATION S-18-116

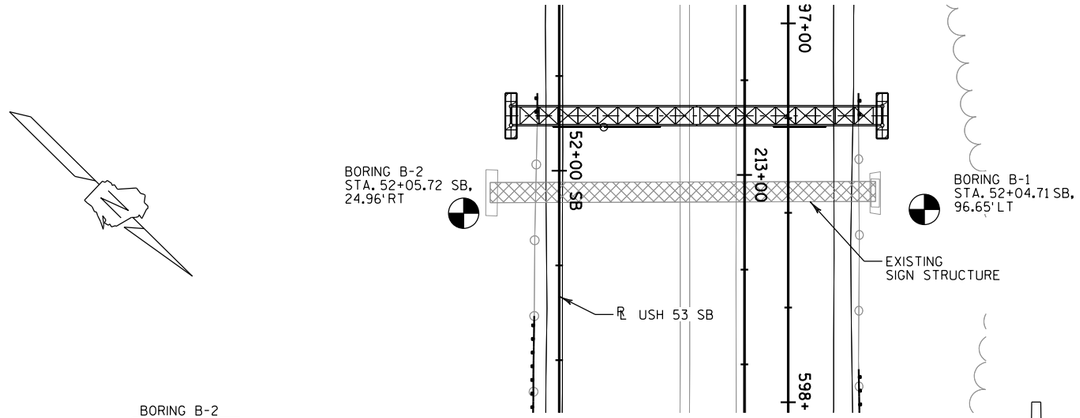
SHEET 3 OF 7

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PLOT DATE : 8/31/2016

PLOT SCALE : 2.00000 '/ ft.

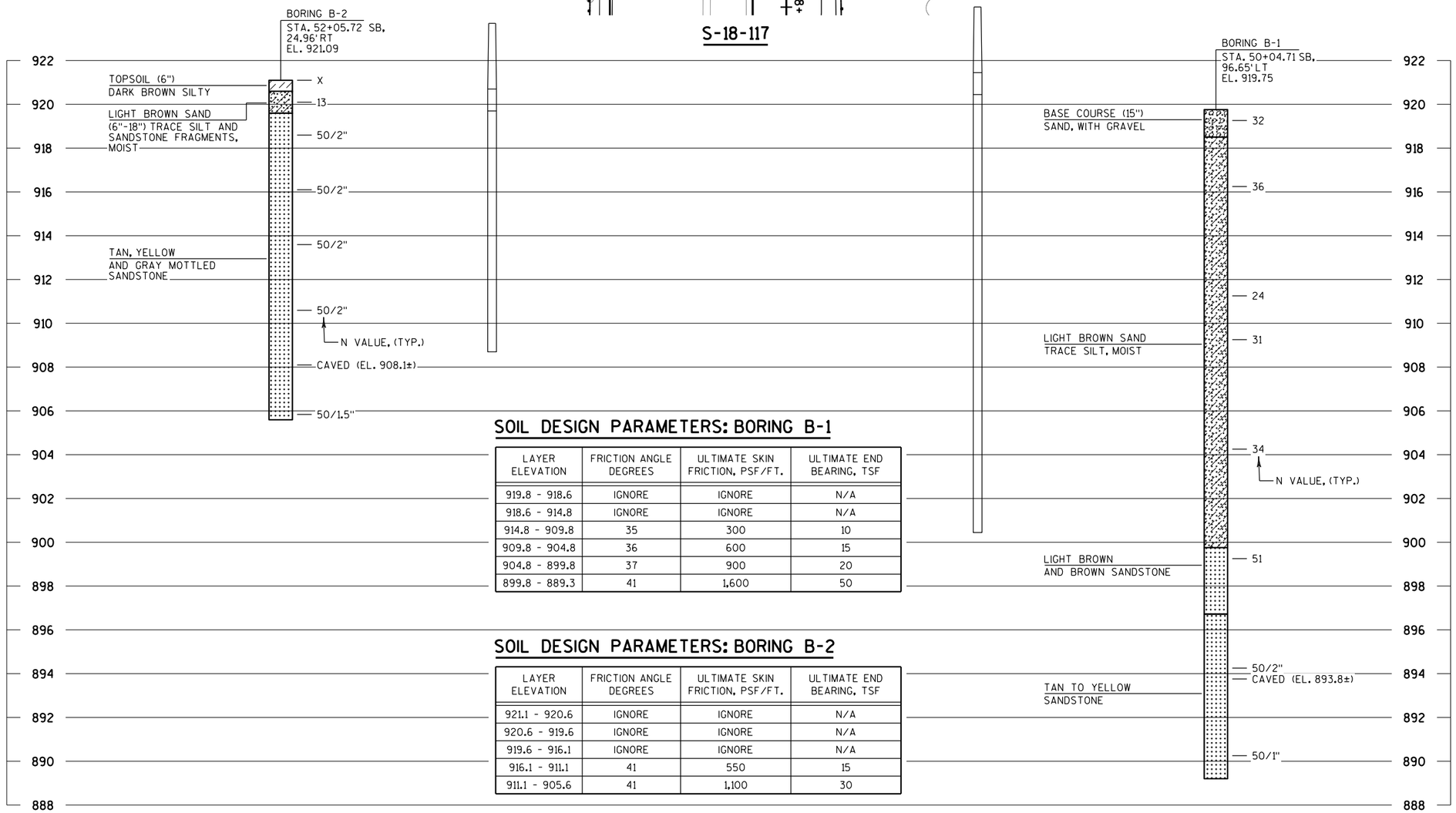


S-18-117

SOIL BORINGS PERFORMED BY:
PROFESSIONAL SERVICE INDUSTRIES, INC.
12839 30TH AVENUE, SUITE A
CHIPPEWA FALLS, WI 54729

BORING B-1
PERFORMED ON 10/8/15

BORING B-2
PERFORMED ON 10/20/15



SOIL DESIGN PARAMETERS: BORING B-1

LAYER ELEVATION	FRICTION ANGLE DEGREES	ULTIMATE SKIN FRICTION, PSF/FT.	ULTIMATE END BEARING, TSF
919.8 - 918.6	IGNORE	IGNORE	N/A
918.6 - 914.8	IGNORE	IGNORE	N/A
914.8 - 909.8	35	300	10
909.8 - 904.8	36	600	15
904.8 - 899.8	37	900	20
899.8 - 889.3	41	1,600	50

SOIL DESIGN PARAMETERS: BORING B-2

LAYER ELEVATION	FRICTION ANGLE DEGREES	ULTIMATE SKIN FRICTION, PSF/FT.	ULTIMATE END BEARING, TSF
921.1 - 920.6	IGNORE	IGNORE	N/A
920.6 - 919.6	IGNORE	IGNORE	N/A
919.6 - 916.1	IGNORE	IGNORE	N/A
916.1 - 911.1	41	550	15
911.1 - 905.6	41	1,100	30

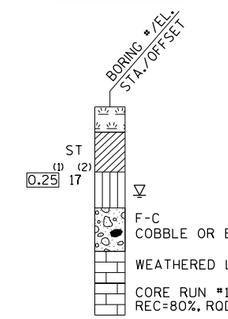
STATE PROJECT NUMBER

1190-02-81

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-117

DRAWN BY TKB | PLANS CK'D. ETP

SUBSURFACE EXPLORATION S-18-117

SHEET 4 OF 7

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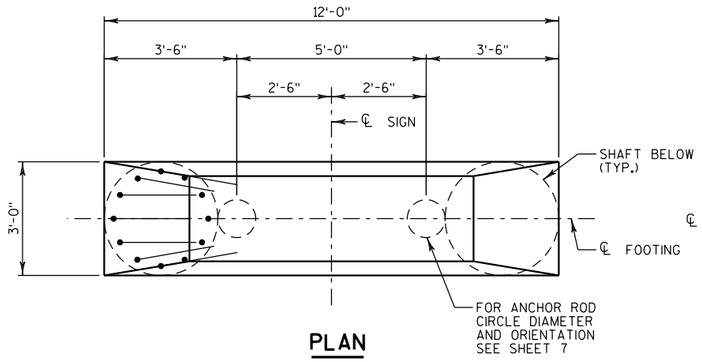
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PLOT DATE : 8/31/2016

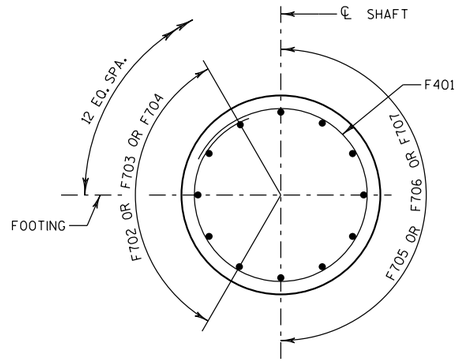
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STATE PROJECT NUMBER

1190-02-81



PLAN



SECTION A-A

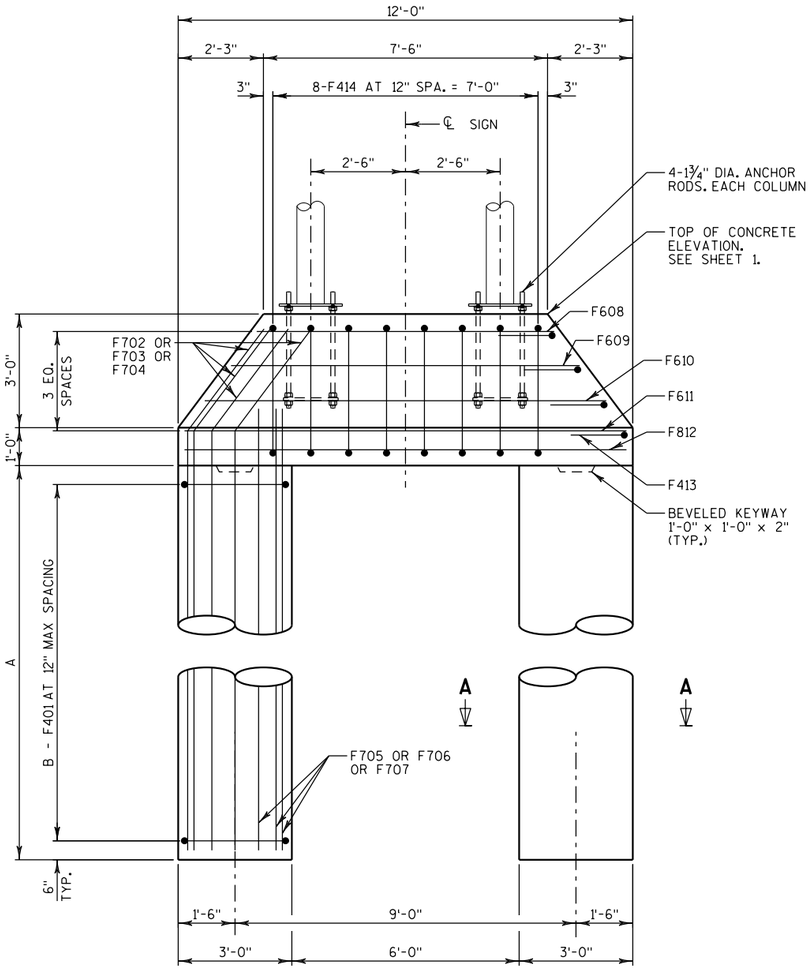
BILL OF BARS

BAR MARK	COAT	S-18-116		S-18-117		BENT	LOCATION	
		NO. REQ'D	LENGTH	NO. REQ'D	LENGTH			
F401	X	28	8'-11"	33	8'-11"	X	DRILLED SHAFTS	HOOPS
F702	X	20	17'-0"	N/A	N/A	X	DRILLED SHAFTS	VERT.
F703	X	N/A	N/A	10	15'-0"	X	DRILLED SHAFTS (MEDIAN)	VERT.
F704	X	N/A	N/A	10	20'-0"	X	DRILLED SHAFTS (OUTSIDE)	VERT.
F705	X	28	15'-3"	N/A	N/A		DRILLED SHAFTS	VERT.
F706	X	N/A	N/A	14	13'-3"		DRILLED SHAFTS (MEDIAN)	VERT.
F707	X	N/A	N/A	14	22'-3"		DRILLED SHAFTS (OUTSIDE)	VERT.
F608	X	8	7'-4"	8	7'-4"		FOOTING	HORIZ.
F609	X	4	8'-7"	4	8'-7"		FOOTING	HORIZ.
F610	X	4	9'-11"	4	9'-11"		FOOTING	HORIZ.
F611	X	4	11'-2"	4	11'-2"		FOOTING	HORIZ.
F812	X	10	11'-6"	10	11'-6"		FOOTING	HORIZ.
F413	X	32	3'-3"	32	3'-3"	X	FOOTING	HORIZ.
F414	X	16	12'-5"	16	12'-5"	X	FOOTING - STIRRUPS	TRANS.

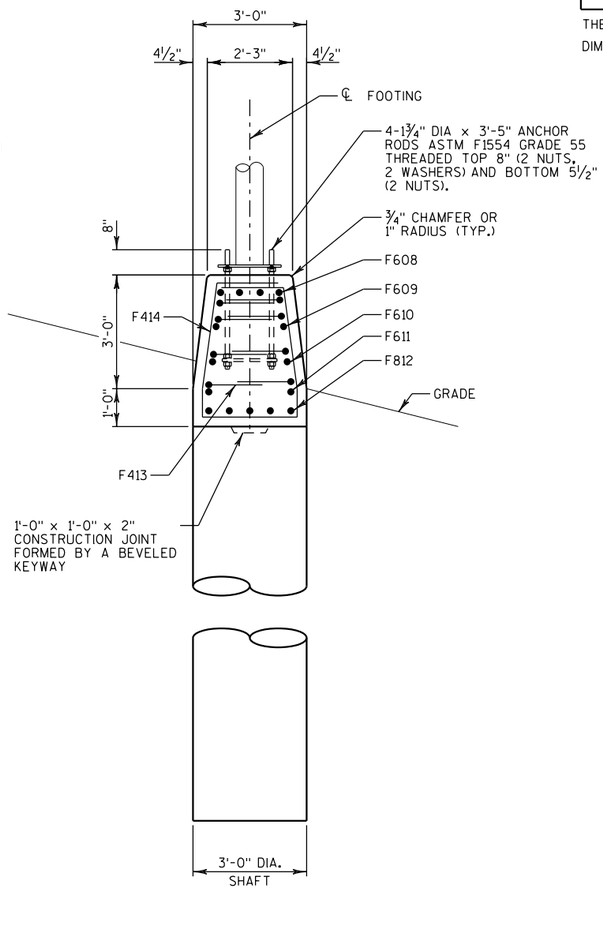
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

TABLE OF VARIABLES

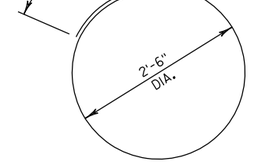
STRUCTURE	A	B
S-18-116 MEDIAN	13'-0"	14
S-18-116 OUTSIDE	13'-0"	14
S-18-117 MEDIAN	11'-0"	12
S-18-117 OUTSIDE	20'-0"	21



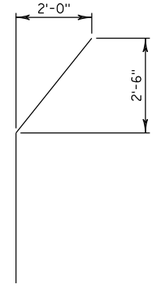
ELEVATION



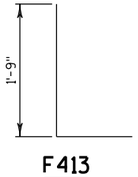
END VIEW



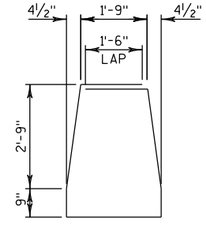
F401



F702, F703, F704



F413



F414

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS OTHERWISE NOTED.

SEE SHEET 7 FOR ANCHOR ROD CIRCLE DIAMETER AND DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-116/117

DRAWN BY TKB | PLANS CK'D. ETP

FOOTING DETAILS

SHEET 5 OF 7

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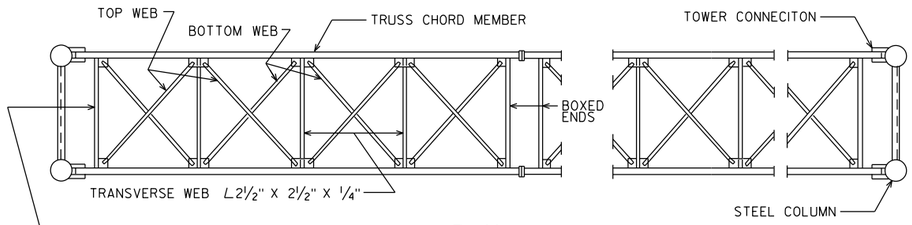
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PLOT DATE : 8/31/2016

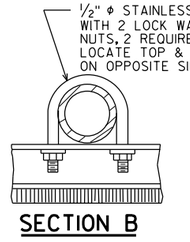
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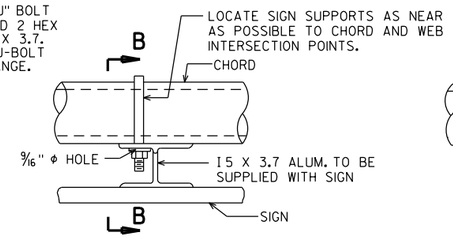
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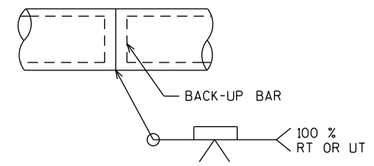
PLAN



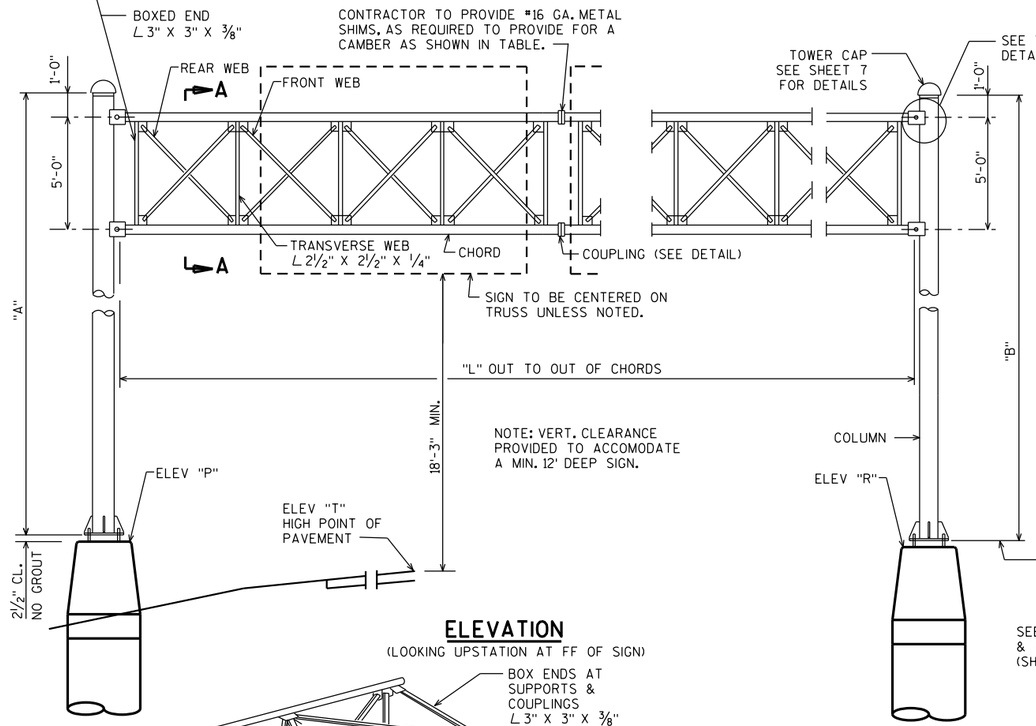
SECTION B



TYPICAL SIGN CONNECTION

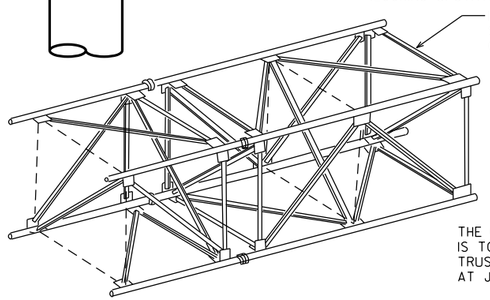


CHORD SPLICE



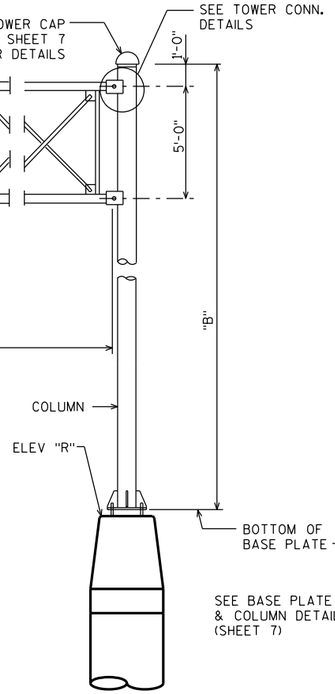
ELEVATION

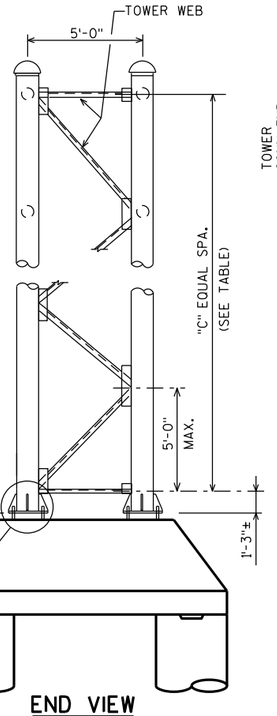
(LOOKING UPSTATION AT FF OF SIGN)



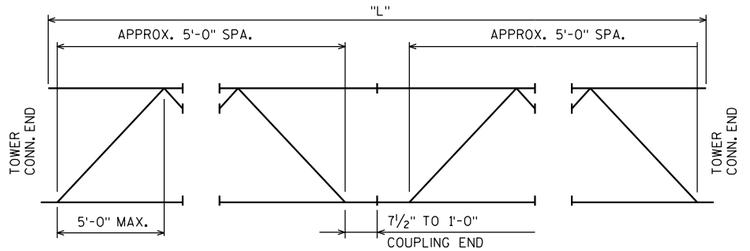
THE GENERAL PATTERN SHOWN ABOVE IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. NOTE DIRECTION OF DIAGONALS AT JOINTS.

TYPICAL TRUSS SECTION





END VIEW



TRUSS ARRANGEMENT

FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTIPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.

NOTES

DRAWINGS SHALL NOT BE SCALED.

STEEL COLUMN AND CHORD PIPES SHALL BE API SPEC. 5L GRADE X42 Fy = 42,000 PSI. **

PLATES, BARS AND STRUCTURAL ANGLES SHALL BE ASTM A709 GRADE 36 Fy = 36,000 PSI.

ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾"ϕ A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

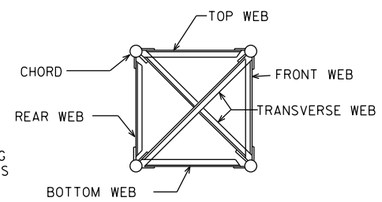
WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

STEEL ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554 GRADE 55, ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.

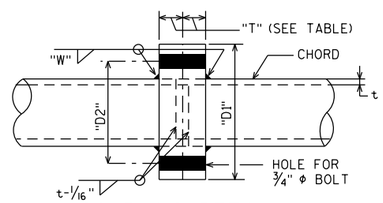
ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATION.

WELD TEST AS PER AWS D1.1.

** SEE SHEET 1 FOR ALTERNATE MATERIAL FOR COLUMN AND CHORD LESS THAN 10" DIAMETER.



SECTION A



COUPLING DETAIL

TABLE

STRUCTURE	A	B	C		CHORDS O.D. X THK.	TOP & BOTTOM WEB	FRONT & REAR WEB	COUPLING PLATE "D1" & "T"	BOLT CIRCLE DIA. "D2"	"W"	NO. OF BOLTS IN COUPLING	BOLT DIA.	CAMBER	COLUMN O.D. X THK.	TOWER WEBS	"L"	ELEV "P"	ELEV "R"	ELEV "T"
			A	B															
S-18-116	26'-4"	26'-8"	5	5	5.563"x0.375"	3"x3"x⅜"	3"x3"x⅜"	11.625"x1.25"	8.625"	⅜"	8	¾"	⅝"	12.75"x0.375"	3"x3"x¼"	66'-8¼"	931.27	930.94	930.06
S-18-117	27'-6"	26'-9"	6	5	5.563"x0.500"	3"x3"x⅜"	3"x3"x⅜"	11.625"x1.50"	8.625"	9/16"	8	¾"	1⅛"	12.75"x0.500"	3"x3"x⅜"	96'-8¼"	923.69	924.44	923.65

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-116/117

DRAWN BY TKB | PLANS CK'D. ETP

GALVANIZED STEEL FULL-SPAN SIGN TRUSS

SHEET 6 OF 7

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8

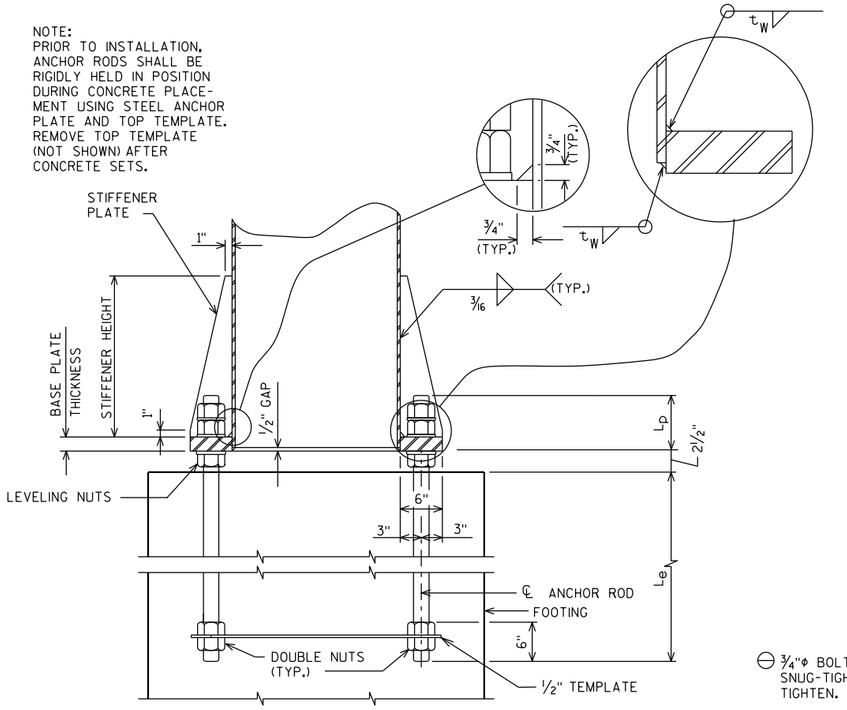
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FILE NAME : C:±Users±tbetcher±Google Drive±TKB Projects±Sign±S-18±S-18-114-117±500_CADD±502.4_Final±16-S-18-116-117-full_span_galv_steel_truss.dgn

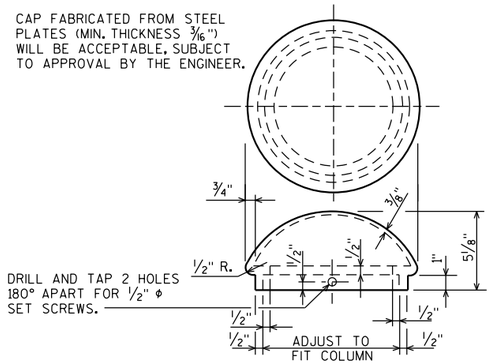
PLOT DATE : 8/31/2016

PLOT SCALE : 2.00000 '/ ft.

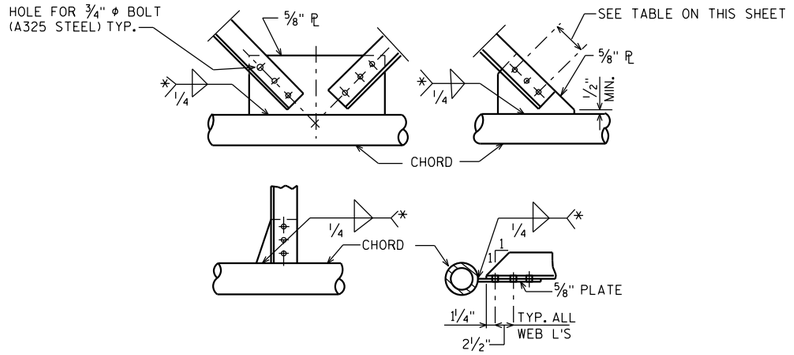
NOTE:
PRIOR TO INSTALLATION, ANCHOR RODS SHALL BE RIGIDLY HELD IN POSITION DURING CONCRETE PLACEMENT USING STEEL ANCHOR PLATE AND TOP TEMPLATE. REMOVE TOP TEMPLATE (NOT SHOWN) AFTER CONCRETE SETS.



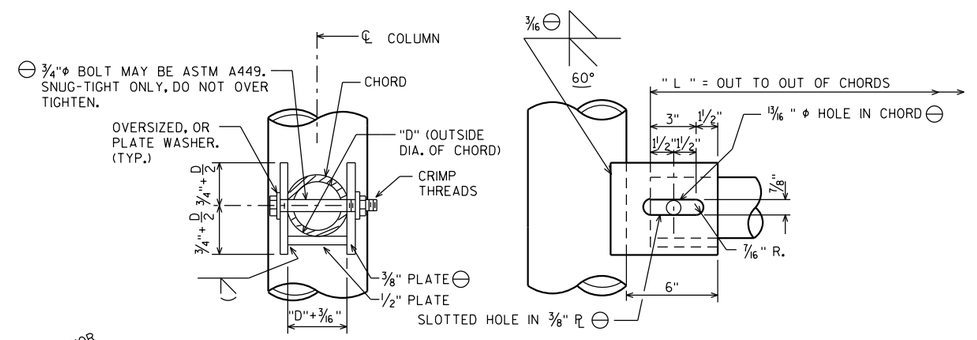
BASE PLATE DETAIL



TOWER CAP DETAIL

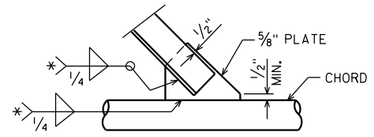


TYPICAL TRUSS CONNECTION DETAILS



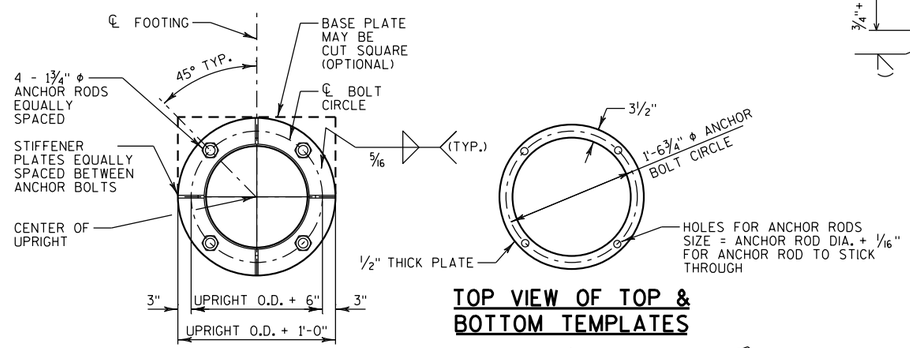
TOWER CONNECTION DETAIL

⊖ BOLT PLATE DETAILS SHOWN ARE MIN.



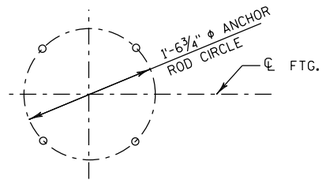
TYPICAL WELDED ALTERNATE

*ANGLE	WELD LENGTH	NO. OF BOLTS
2 1/2"x2 1/2"x1/4"	11"	3
3"x3"x3/16"	10"	3
3"x3"x1/4"	13"	4
3"x3"x5/16"	16 1/2"	5
3"x3"x3/8"	19 1/2"	6
4"x4"x1/4"	18"	5
4"x4"x5/16"	22"	6
4"x4"x3/8"	26"	8
4"x4"x7/16"	30"	9
4"x4"x1/2"	34"	10



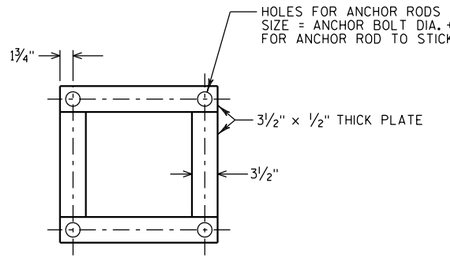
PLAN VIEW
(BASE PLATE)

TOP VIEW OF TOP & BOTTOM TEMPLATES

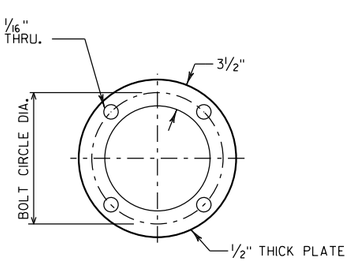


BASE PLATE & UPRIGHT COLUMN DETAILS

STRUCTURE	STEEL COLUMN O.D. X THK.	ANCHOR BOLTS SIZE	ANCHOR BOLTS L_e	ANCHOR BOLTS L_p	BASE PLATE THICKNESS (IN.)	STIFFENER PLATE THICKNESS (IN.)	STIFFENER PLATE HEIGHT (IN.)	τ_W (IN.)
S-18-116	12.75" x 0.375"	1 3/4"	3'-5"	5 1/2"	1 1/2"	1/4"	12"	1/4"
S-18-117	12.75" x 0.500"	1 3/4"	3'-5"	5 1/2"	1 1/2"	3/8"	12"	1/4"



ALTERNATE ANCHOR PLATE/TOP TEMPLATE
PLAN VIEW



ANCHOR PLATE/TOP TEMPLATE
PLAN VIEW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-18-116/117

DRAWN BY TKB | PLANS CK'D. ETP

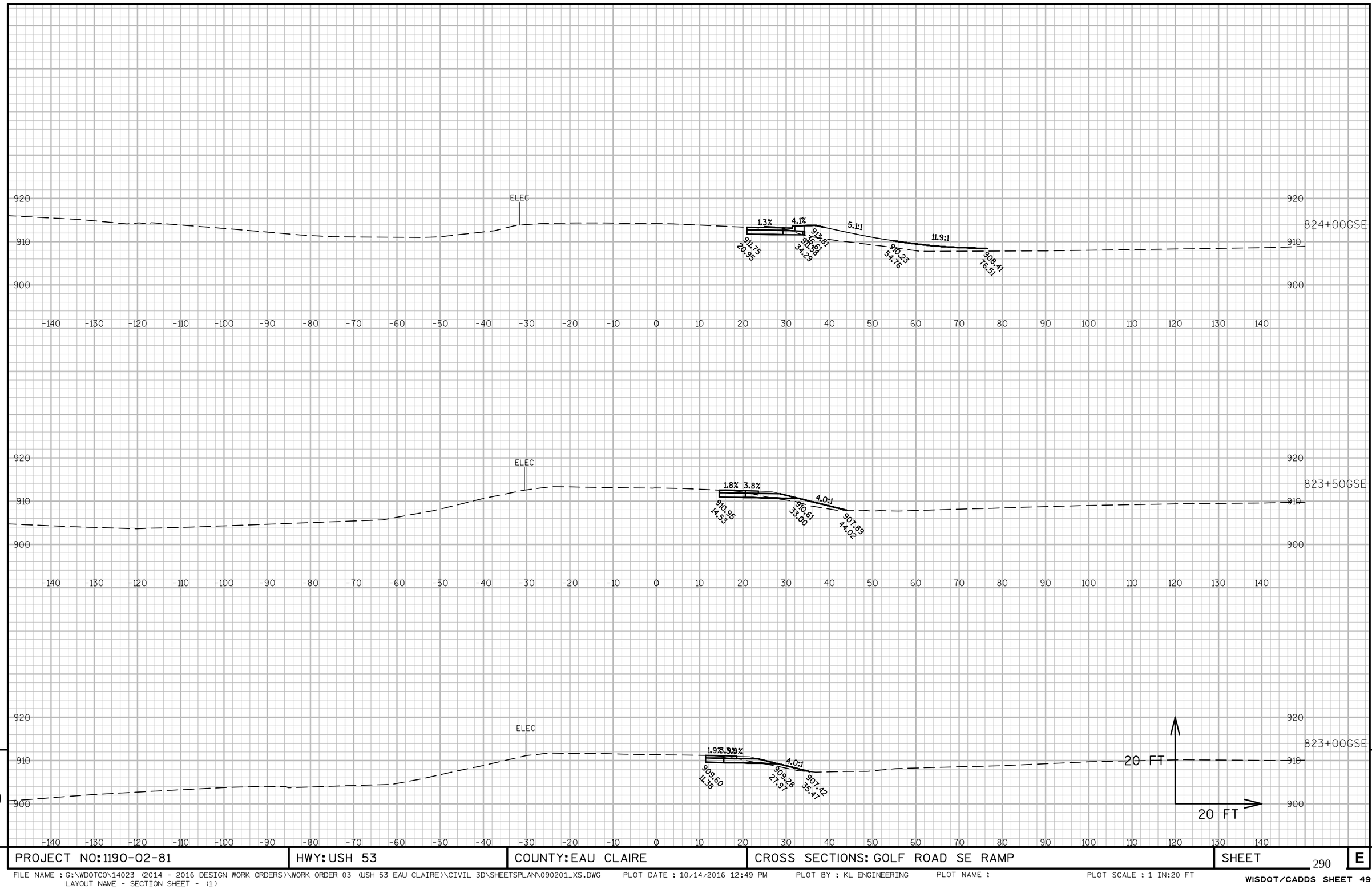
GALVANIZED STEEL FULL-SPAN SIGN TRUSS DETAILS

SHEET 7 OF 7

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume or Select Fill
4 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
5 - Mass Ordinate	If Marsh and EBS to be backfilled with Cut or Borrow: [(Cut) - ((Fill - Expanded Rock) * Fill Factor))]

DIVISION 1 (STA 822+51'GSE' - STA 824+41'GSE'): GOLF ROAD SE RAMP (STAGE 3)

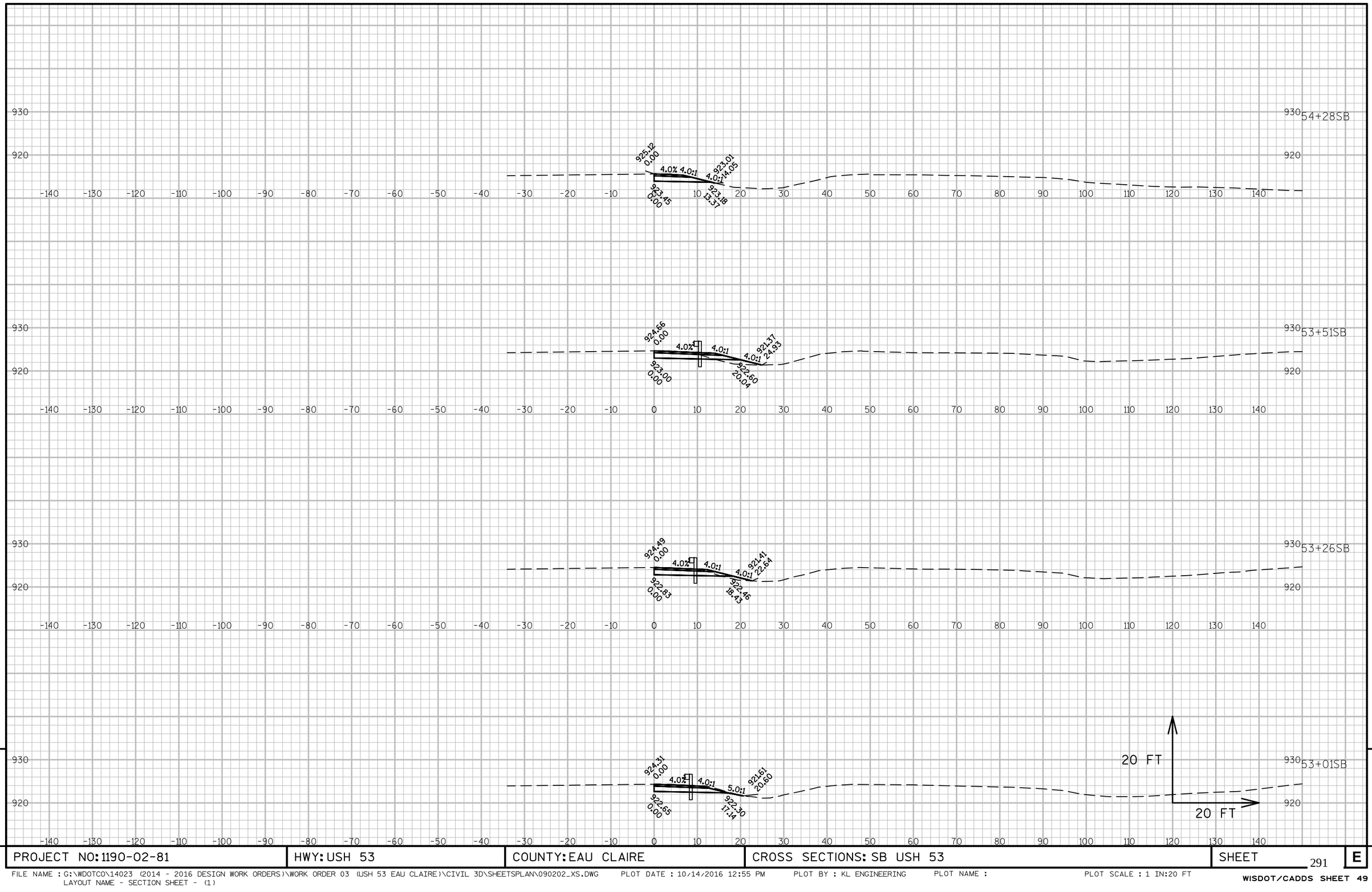
		Area								Cumulative Vol (CY)			
							Salvaged/Unusable				Expanded	Reduced EBS	Mass
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut	Pavement Material	Fill	EBS	Cut	Fill	In Fill	Ordinate
		(SF)	(SF)	(SF)	(SF)	Note 1 (CY)	Note 2 (CY)	Note 3 (CY)	(CY)	1.00 Note 1	1.25	0.80 Note 4	Note 5
822+51		11	0	0	1								
823+00	49	12	0	4	1	22	0	4	1	22	4	1	18
823+50	50	12	0	11	1	23	0	14	1	45	20	2	24
824+00	50	17	2	69	1	27	1	74	1	72	111	3	-41
824+41	41	21	0	0	1	30	1	53	1	101	176	4	-77
						101	3	145	5				



PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: GOLF ROAD SE RAMP	SHEET 290	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090201_XS.DWG PLOT DATE : 10/14/2016 12:49 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT
LAYOUT NAME - SECTION SHEET - (1)

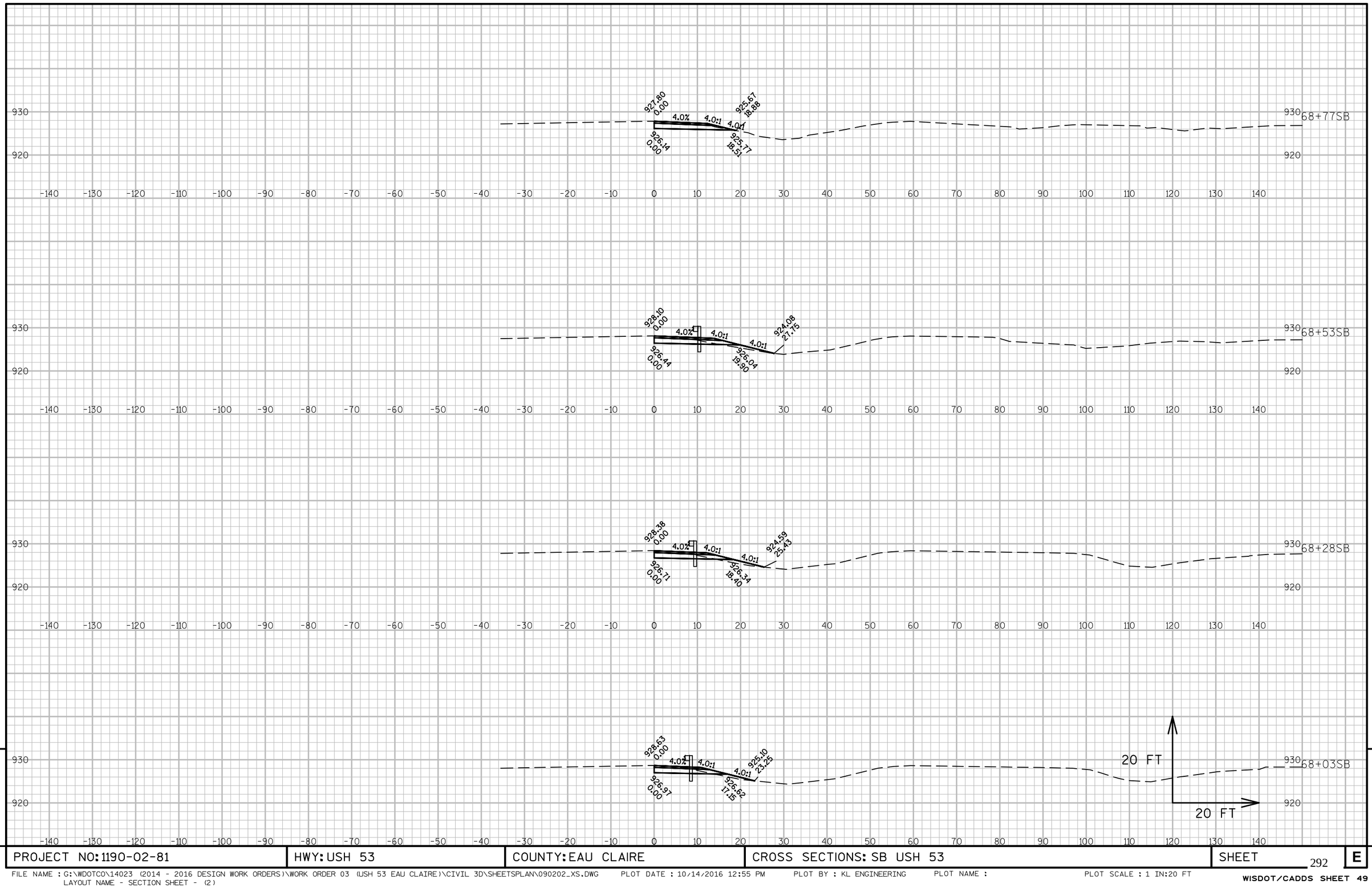
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: SB USH 53	SHEET 291	E

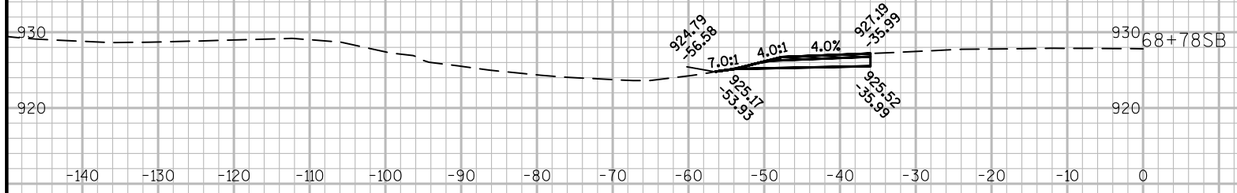


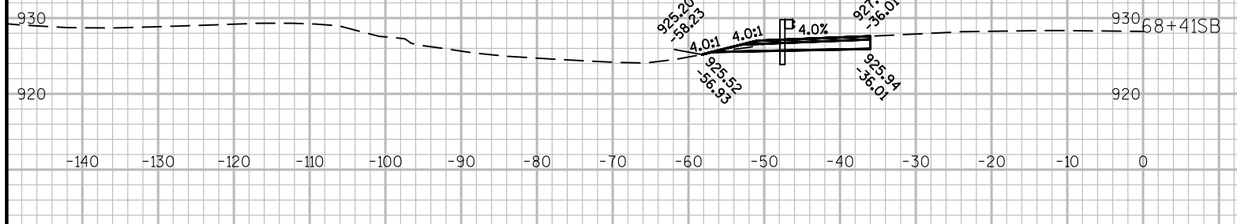
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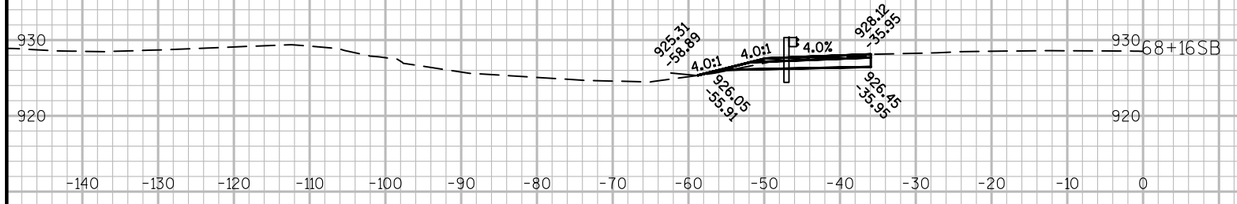
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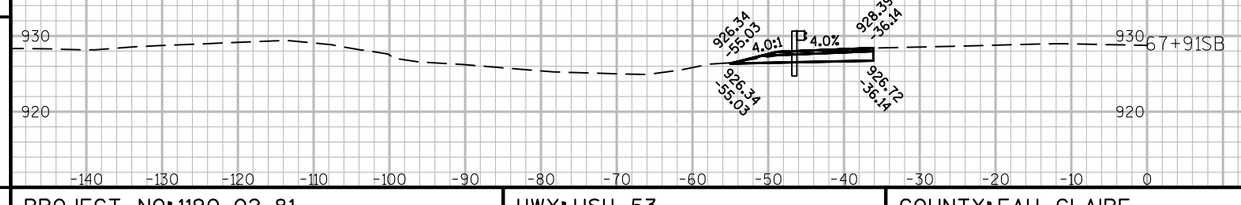
PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: SB USH 53	SHEET 292	E

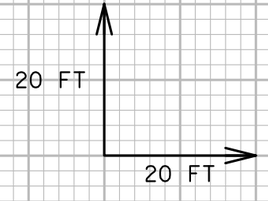
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LAYOUT NAME - SECTION SHEET - (2)
WISDOT/CADDS SHEET 49







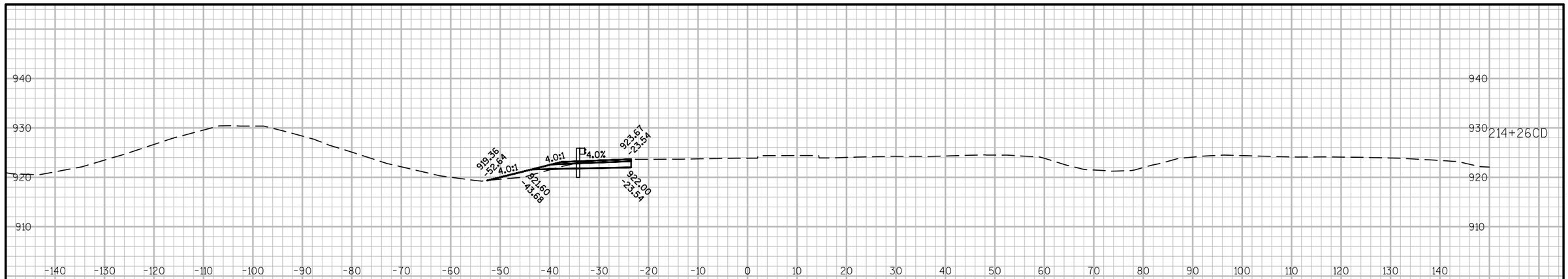


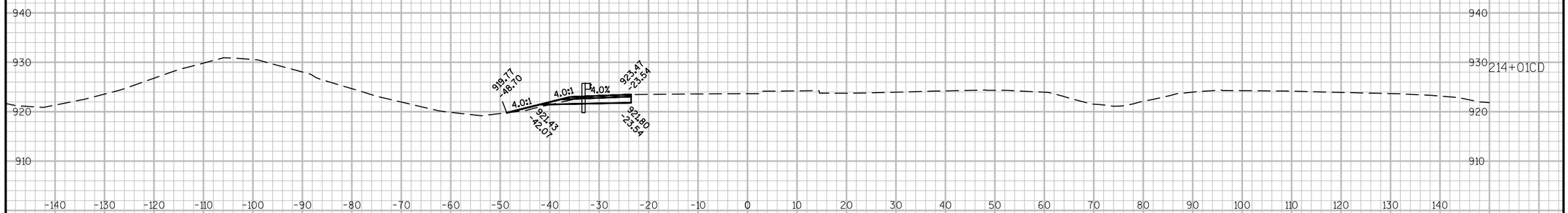


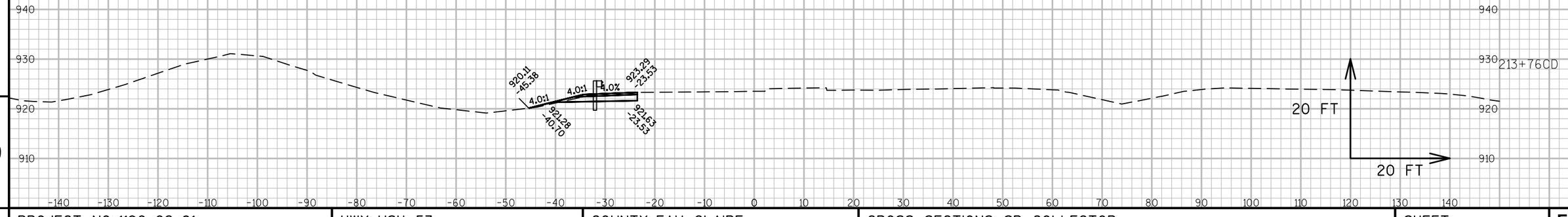
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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: SB USH 53	SHEET 293	E







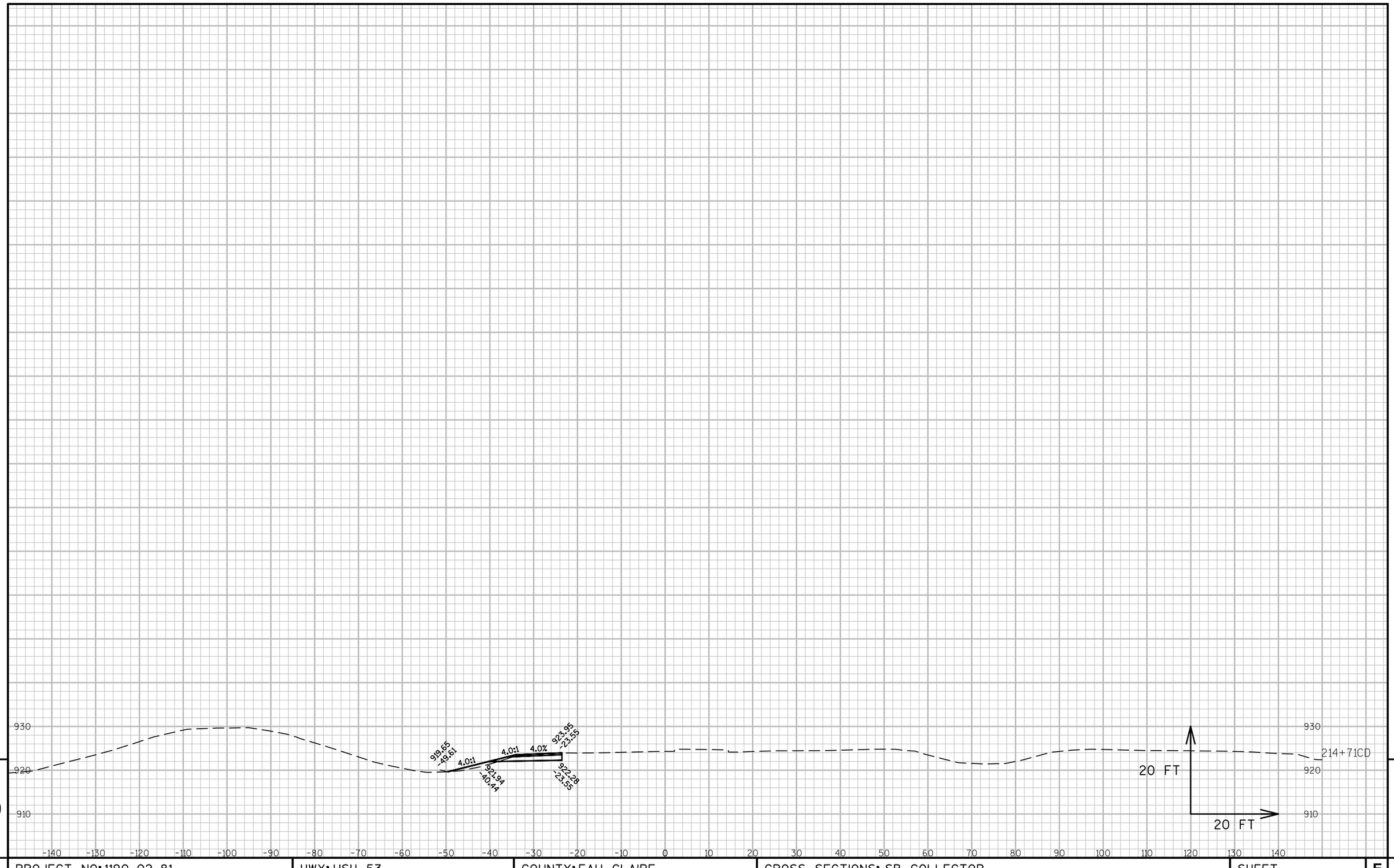
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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: SB COLLECTOR	SHEET 294	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG PLOT DATE : 10/14/2016 12:55 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT
LAYOUT NAME - SECTION SHEET - (4)

WISDOT/CADDS SHEET 49

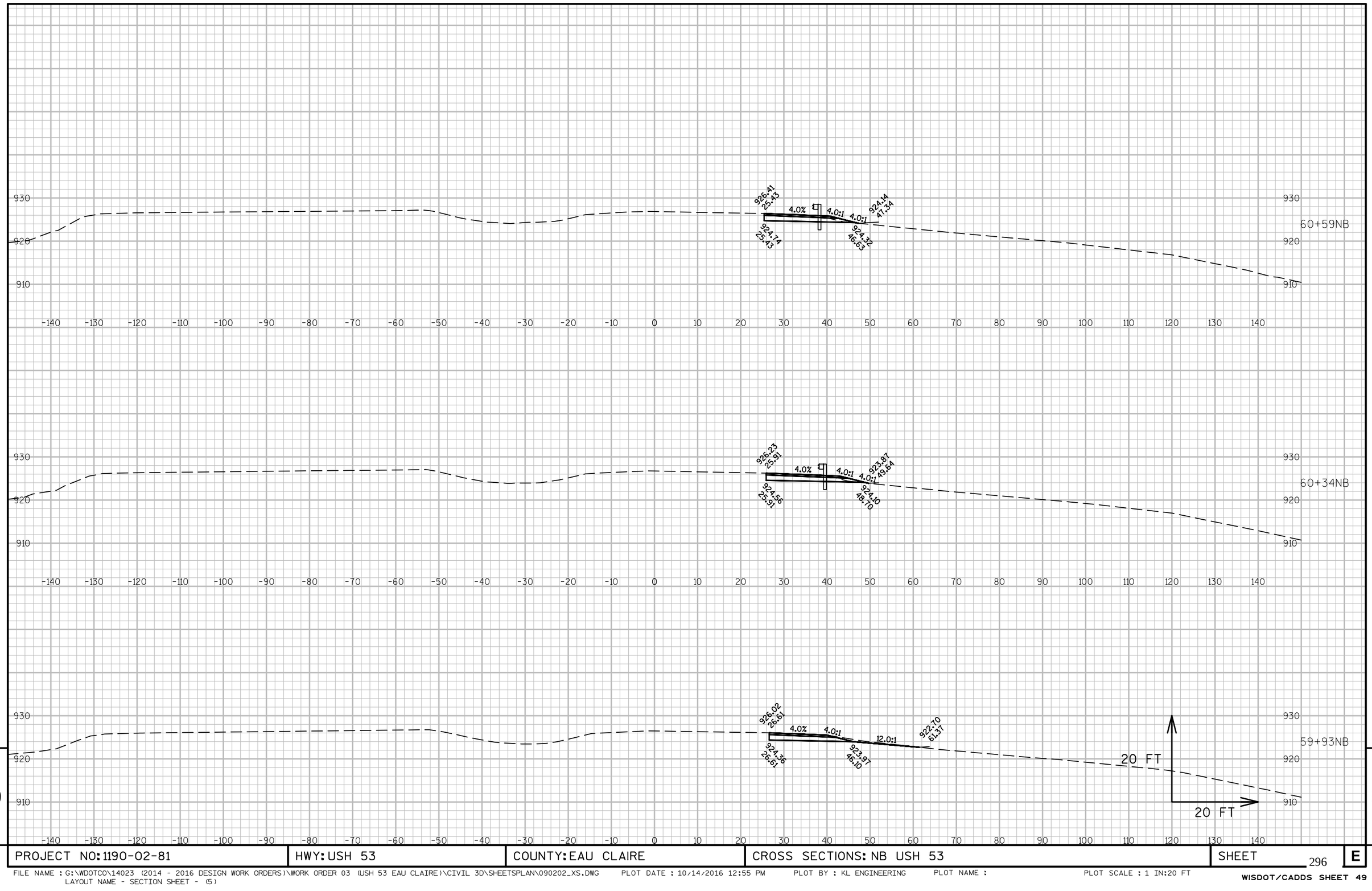


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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: SB COLLECTOR	SHEET 295	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG PLOT DATE : 10/14/2016 12:55 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT
LAYOUT NAME - SECTION SHEET - (4)



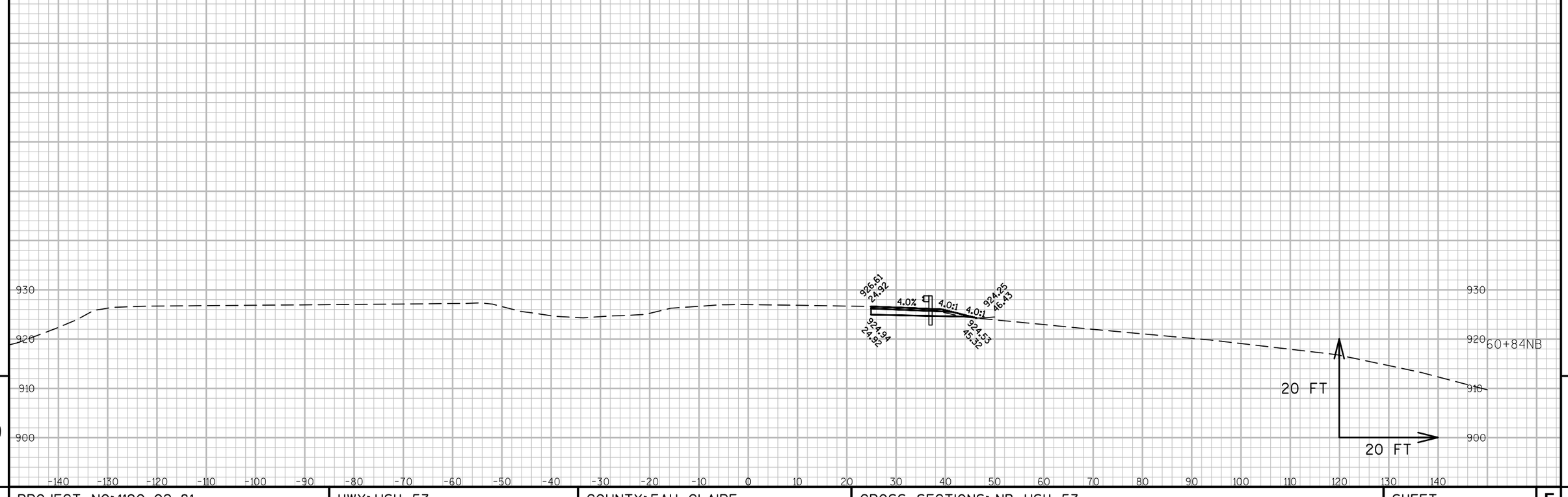
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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: NB USH 53	SHEET 296	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG PLOT DATE : 10/14/2016 12:55 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT
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WISDOT/CADDS SHEET 49

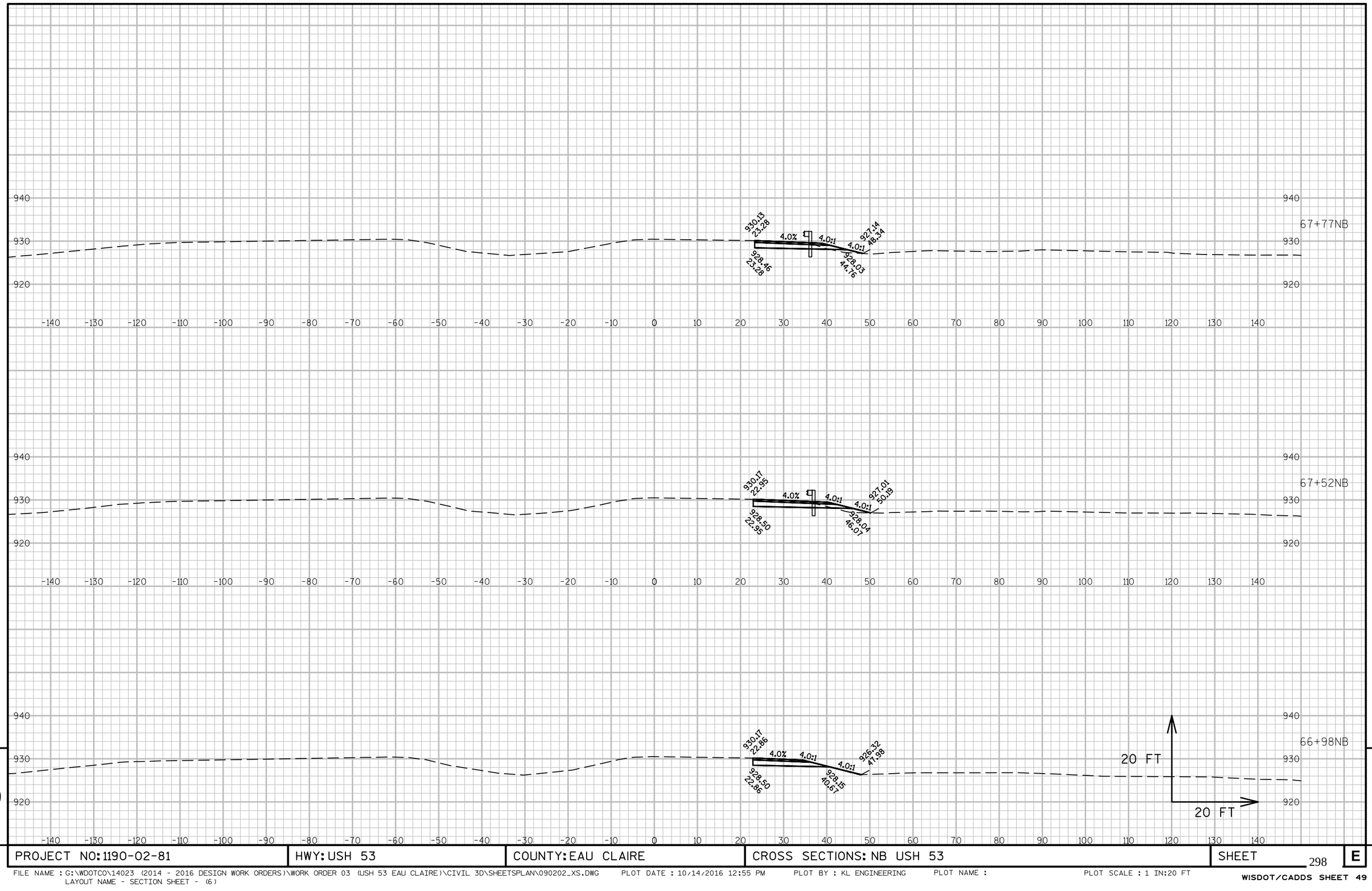


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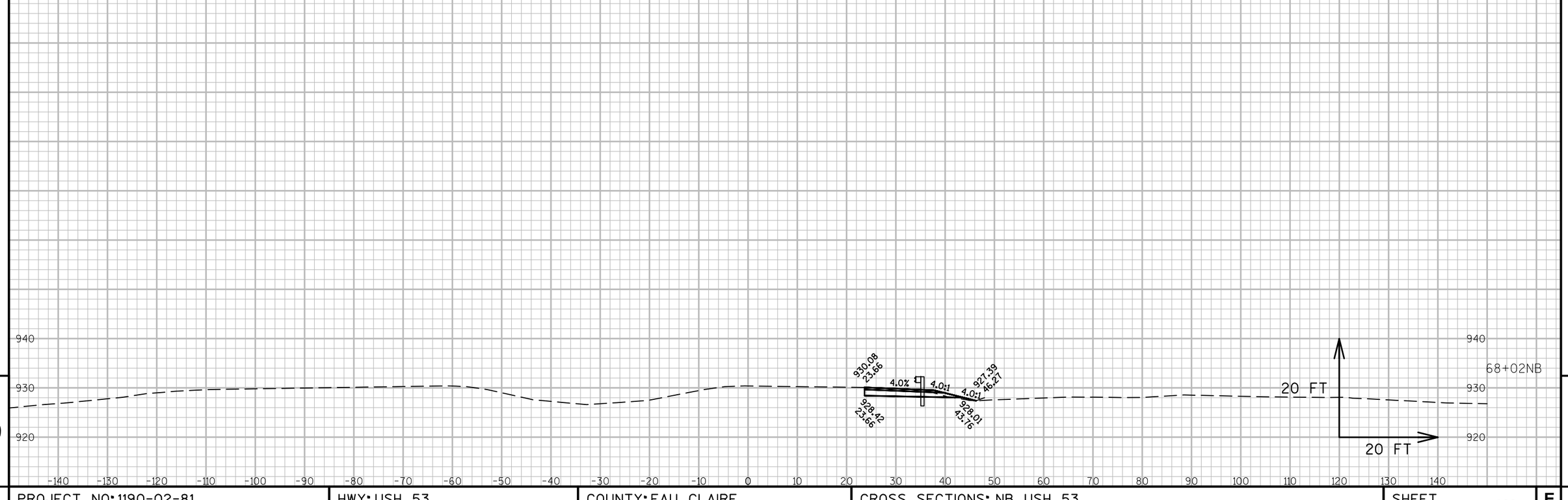
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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: NB USH 53	SHEET 297	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG PLOT DATE : 10/14/2016 12:55 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT
LAYOUT NAME - SECTION SHEET - (5)



PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: NB USH 53	SHEET 298	E

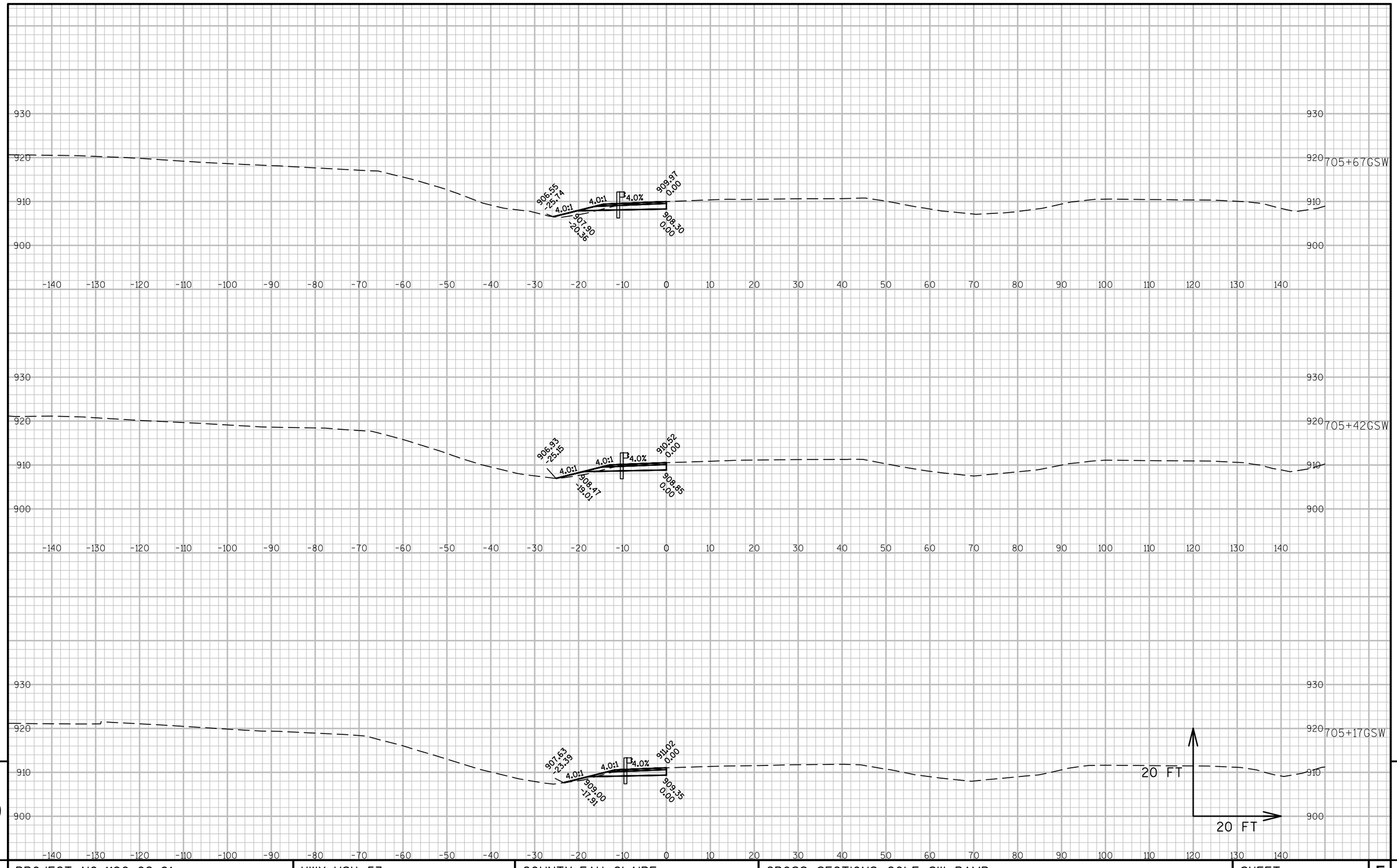


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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: NB USH 53	SHEET 299	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG PLOT DATE : 10/14/2016 12:55 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT
LAYOUT NAME - SECTION SHEET - (6)

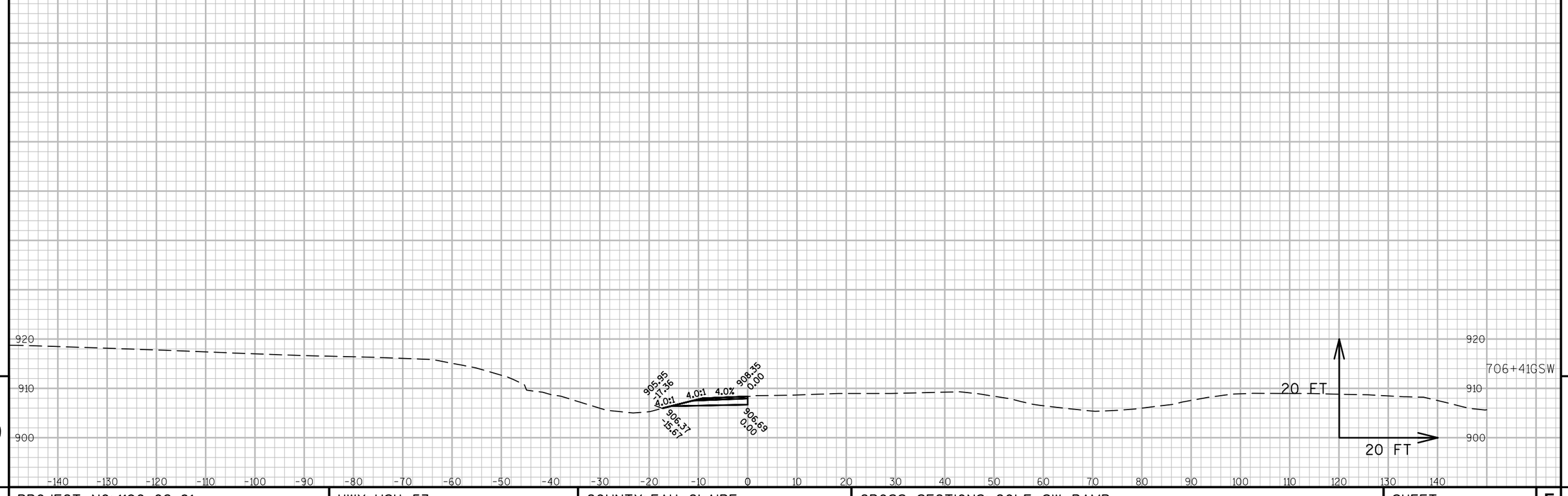


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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: GOLF SW RAMP	SHEET 300	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG PLOT DATE : 10/14/2016 12:56 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT
LAYOUT NAME - SECTION SHEET - (7)



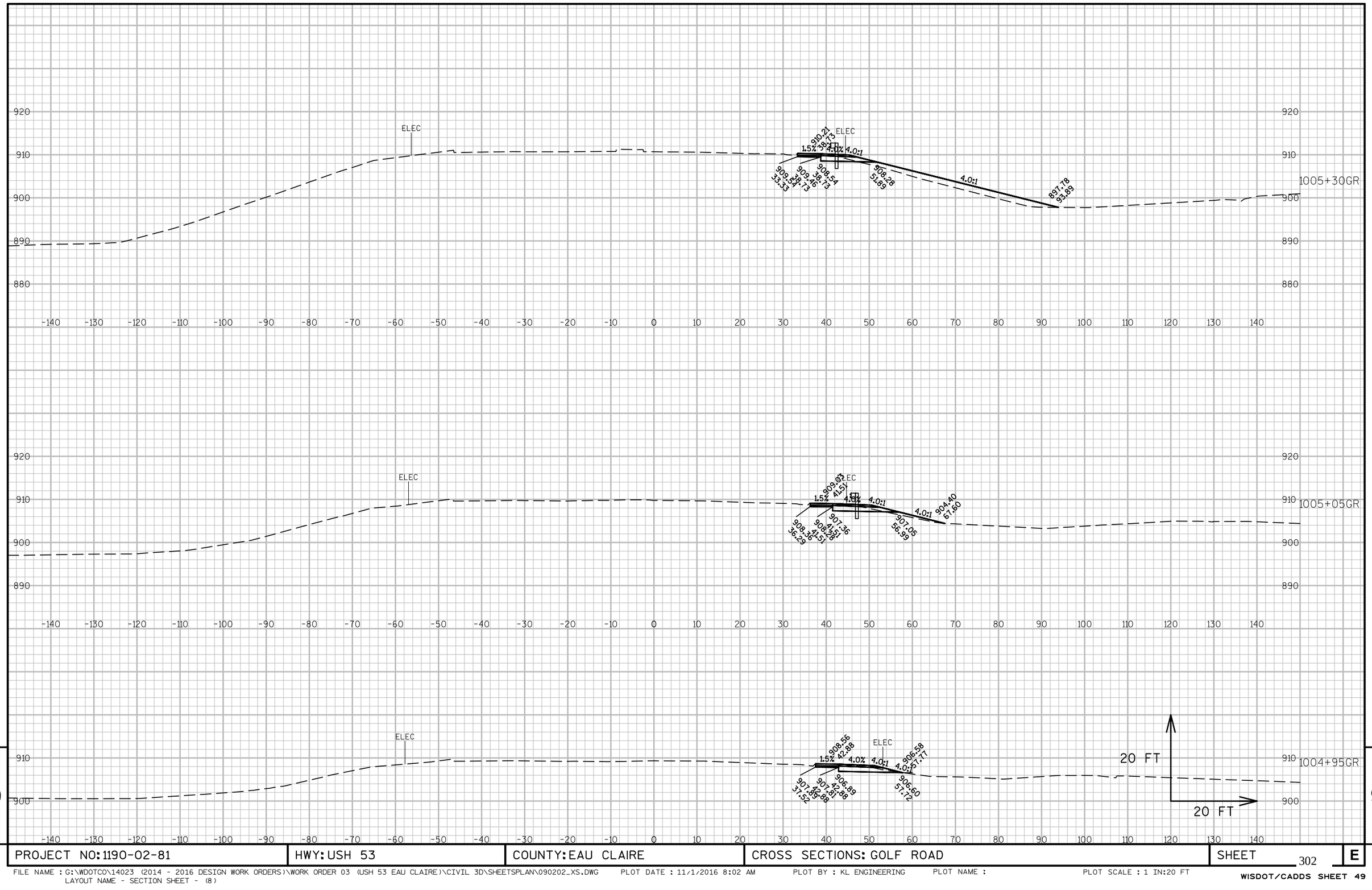
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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: GOLF SW RAMP	SHEET 301	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - SECTION SHEET - (7)

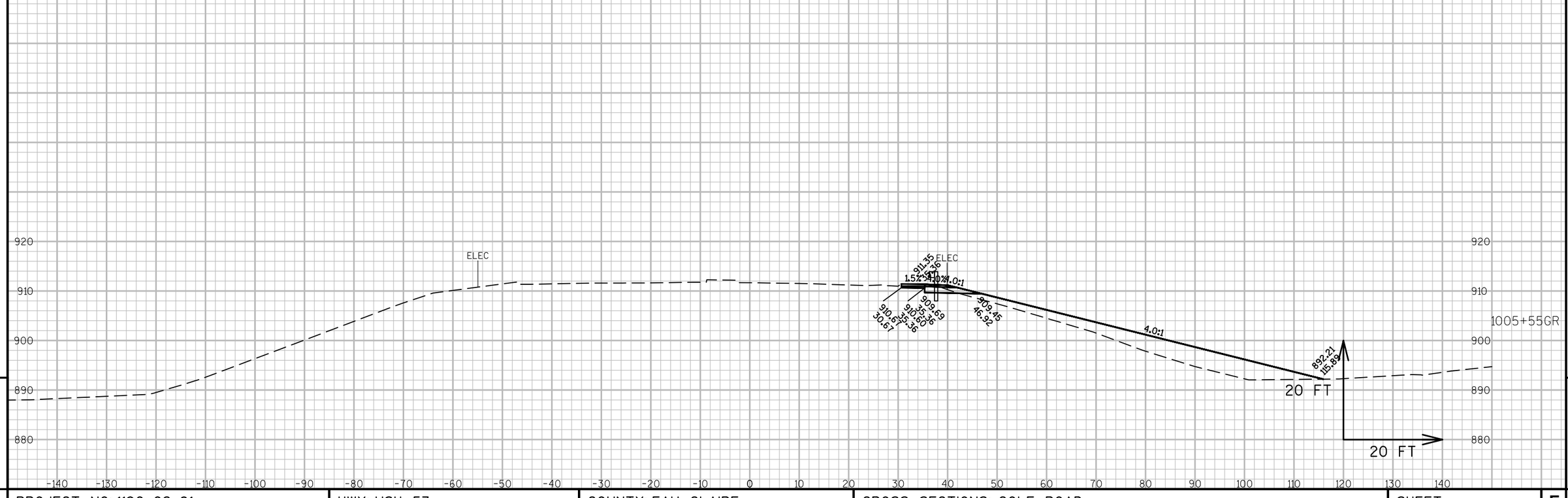
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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: GOLF ROAD	SHEET 302	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG PLOT DATE : 11/1/2016 8:02 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT
LAYOUT NAME - SECTION SHEET - (8)

WISDOT/CADDS SHEET 49



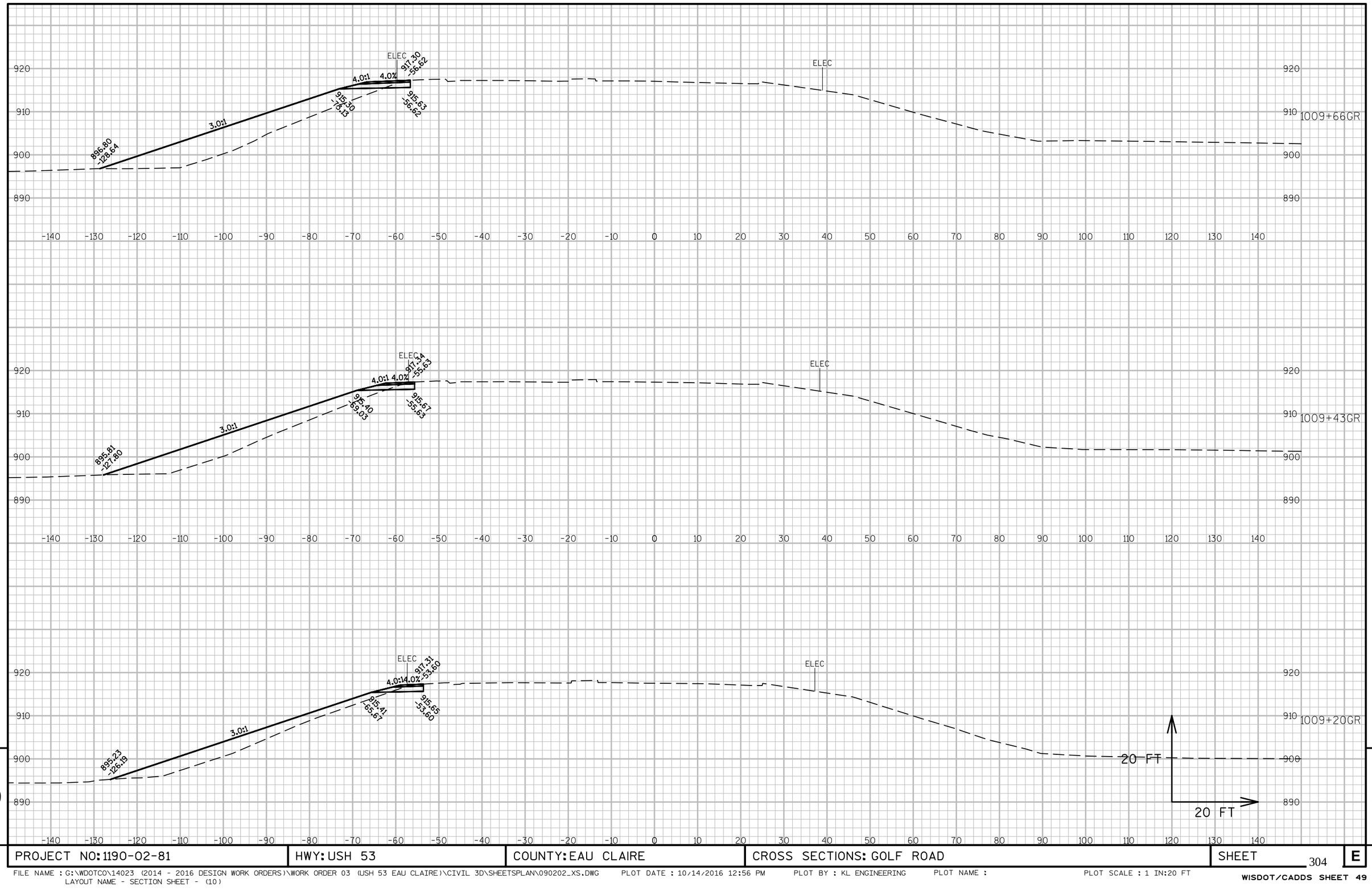
9

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PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: GOLF ROAD	SHEET 303	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG PLOT DATE : 11/1/2016 8:02 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT

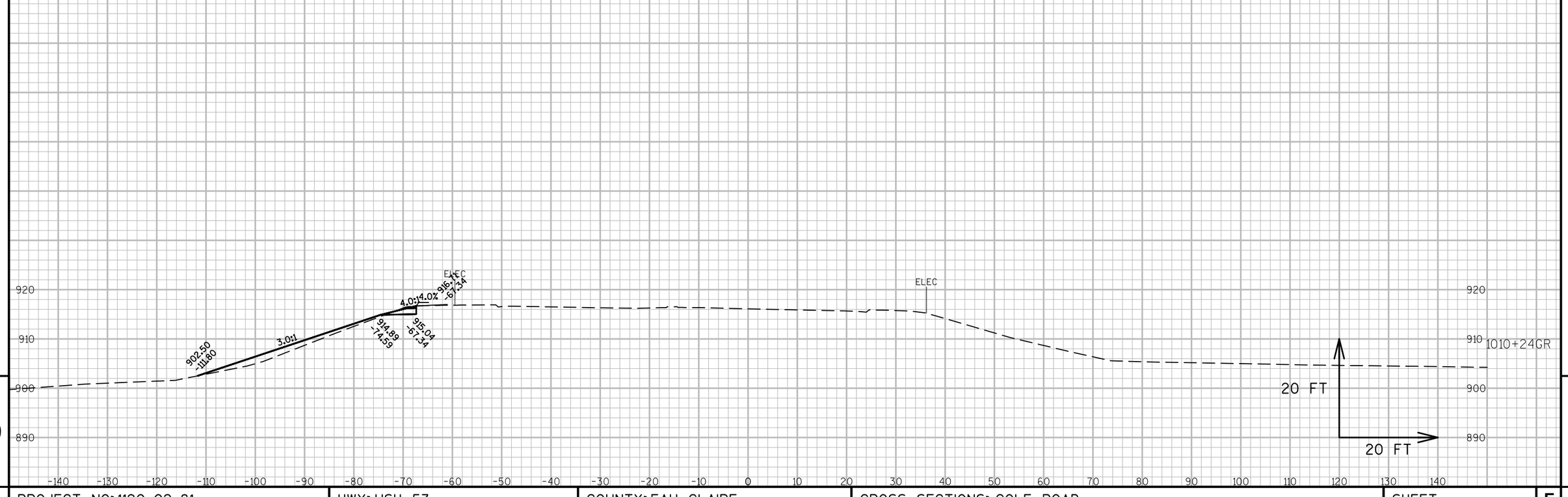
LAYOUT NAME - SECTION SHEET - (9)



PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: GOLF ROAD	SHEET 304	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG PLOT DATE : 10/14/2016 12:56 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT
LAYOUT NAME - SECTION SHEET - (10)

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1190-02-81	HWY: USH 53	COUNTY: EAU CLAIRE	CROSS SECTIONS: GOLF ROAD	SHEET 305	E

FILE NAME : G:\WDOTCO\14023 (2014 - 2016 DESIGN WORK ORDERS)\WORK ORDER 03 (USH 53 EAU CLAIRE)\CIVIL 3D\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - SECTION SHEET - (10)

PLOT DATE : 10/14/2016 12:56 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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