EAU

SEPTEMBER 2013

PROJECT ID: 1022-09-80

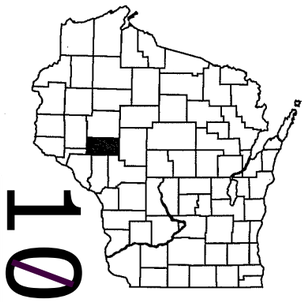
WITH: N/A

COUNTY: EAU CLAIRE

ORDER OF SHEETS



TOTAL SHEETS = 70



10

N

DESIGN DESIGNATION

| | | |
|---|---|---|
| A.A.D.T. | = | 24,800 (2014) |
| A.A.D.T. | = | 29,500 (2034) |
| D.H.V. | = | 2,980 |
| D.D. | = | 58/42 |
| T. | = | 25.3% OF A.A.D.T. |
| DESIGN SPEED | = | 70 MPH |
| ESALS | = | 26,000,000 |

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)
- SWAMP 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

# EAU CLAIRE - OSSEO

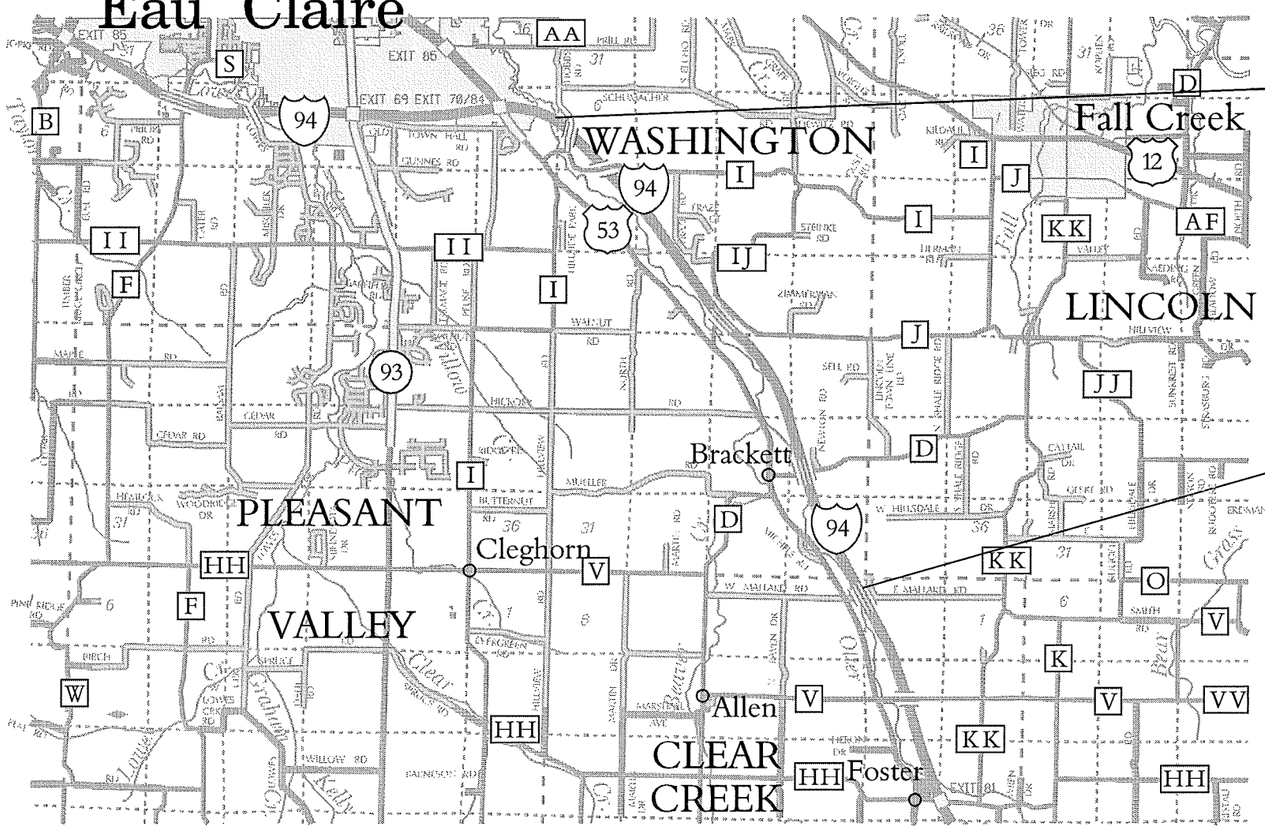
(USH 53 TO MALLARD ROAD)

## IH 94

## EAU CLAIRE COUNTY

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 1022-09-80 | WISC 2013425 | 1 |
| | | |
| | | |
| | | |

STATE PROJECT NUMBER
**1022-09-80**




LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 7.230 MI.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

| | |
|---|---|
| Surveyor | NW REGION, EAU CLAIRE |
| Designer | K. KOPACZ |
| Project Manager | S. RUSCH |
| Regional Examiner | D. OJIBWAY |
| Regional Supervisor | R. SHERMO |
| C.O. Examiner | |

APPROVED FOR THE DEPARTMENT
DATE: 4/23/13 (Signature)

E

## UTILITIES CONTACTS

AT&T LEGACY
MR. BILL KOENIG
P.O. BOX 244
LAKE MILLS, WI 53551
PHONE: 608-628-0575

CENTURYLINK
MS. DONNA SMOTHERS
835 RED IRON RD.
BLACK RIVER FALLS, WI 54615
PHONE: 715-284-4375

DAIRYLAND POWER COOPERATIVE
MR. KURT CHILDS
3200 EAST AVE. SOUTH
P.O. BOX 817
LACROSSE, WI 54602-0817
PHONE: 608-787-1367

EAU CLAIRE ELECTRIC COOPERATIVE
MR. RICHARD RASMUSSEN
8214 HWY. 12
P.O. BOX 368
FALL CREEK, WI 54742-0368
PHONE: 715-832-1603

WINDSTREAM KDL, INC.
MR. JIM KOSTUCH
13935 BISHOPS DR.
BROOKFIELD, WI 53005
PHONE: 262-792-7938

XCEL ENERGY (TRANS.)
MS. PAM TAYLOR
1414 W. HAMILTON AVE.
P.O. BOX 8
EAU CLAIRE, WI 54702-0008
PHONE: 715-839-1306

DIGGERS HOTLINE

**Call 811 3 Work Days Before You Dig**
**or Toll Free (800) 242-8511**
**Hearing Impaired TDD (800) 542-2289**
**www.DiggersHotline.com**

## GENERAL NOTES

THE EXACT LOCATIONS OF BUTT JOINTS AND CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL ARE TO BE DETERMINED BY THE ENGINEER.

BEAM GUARD RAIL HEIGHT AT LEAST 27¾INCHES AND LESS THAN 29 INCHES IN THE FINAL CONDITION DOES NOT REQUIRE ADJUSTMENT.

THE EXACT LOCATIONS OF BEAM GUARD ADJUSTMENTS AND REPLACEMENTS ARE TO BE DETERMINED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT OF WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.

WITH PRIOR APPROVAL OF THE ENGINEER, REMOVE/CLEAR TREES 3 INCHES OR GREATER IN DIAMETER THAT ARE WITHIN 30 FEET OF THE EDGE OF THE TRAVELED WAY.

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

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE COUNTY SURVEYOR CONCERNING MONUMENT AND PROPERTY CORNER PRESERVATION.

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. SLOPES AND DISTANCES MAY VARY WITHIN THE STATION LIMITS.

WHEN THE QUANTITY OF THE ITEM OF HMA PAVEMENT IS MEASURED BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

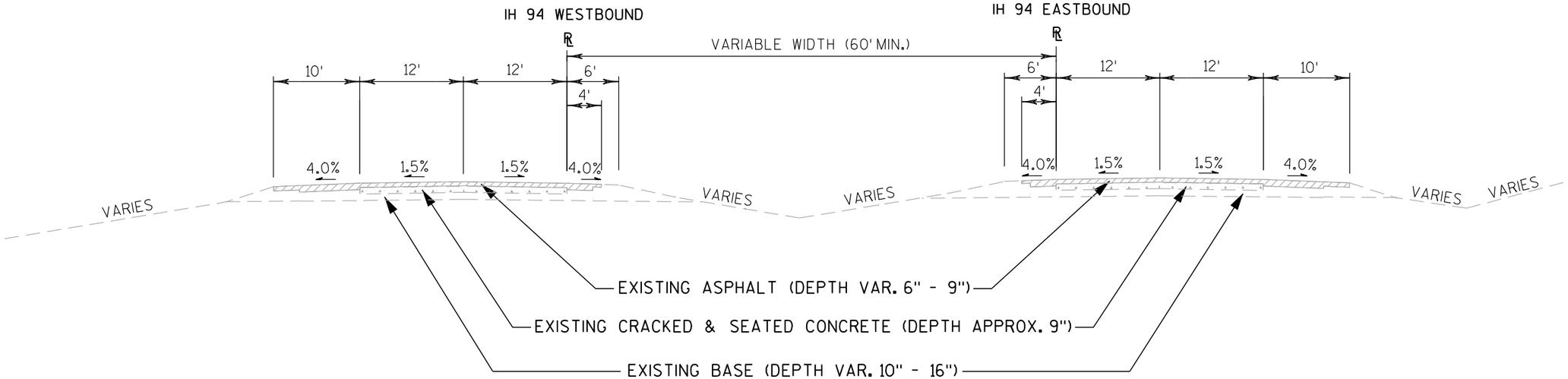
LOCATIONS FOR PERMANENT SIGNS SHOWN ON THE PLAN ARE APPROXIMATE. ACTUAL LOCATIONS OF PERMANENT SIGNS ARE TO BE COORDINATED IN THE FIELD BY THE ENGINEER.

PAVEMENT MARKING PAINT FOR LANE LINES ARE INTENDED TO BE INTERIM LANE LINE MARKINGS UNTIL GROOVES CAN BE CUT IN THE NEW ASPHALT SURFACE FOR WET REFLECTIVE TAPE APPLICATION. CUT THE GROOVES FOR WET REFLECTIVE TAPE APPLICATION AT THE SAME LOCATION WHERE THE PAVEMENT MARKING PAINT WAS APPLIED AS LANE LINES.

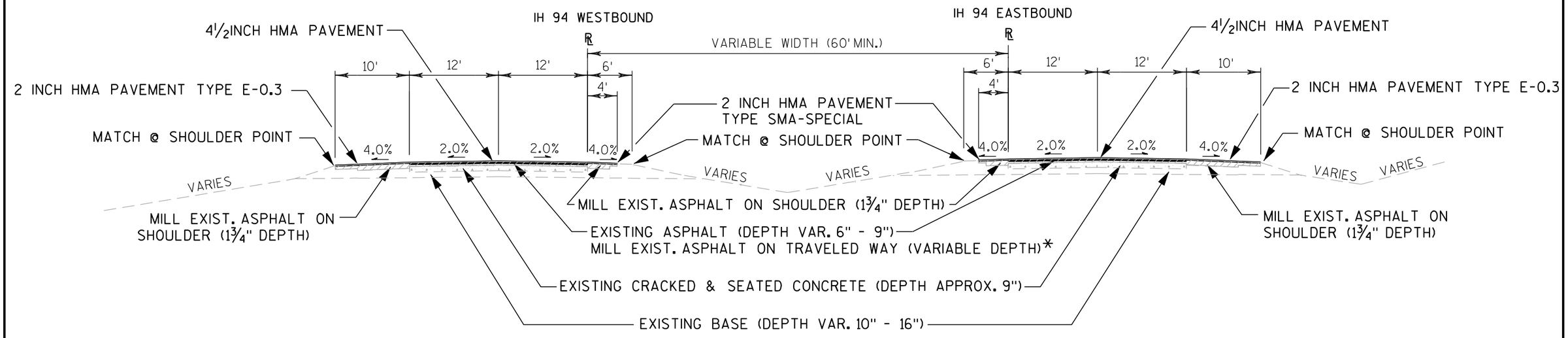
THE 4½" HMA PAVEMENT SHALL BE PLACED WITH A 2½" 19.0 mm TYPE E-10 LOWER LAYER AND A 2" TYPE SMA-SPECIAL UPPER LAYER.

MAINTENACE AND REPAIR OF TEMPORAY WEDGE JOINT WILL BE INCIDENTAL TO THE APPROPRIATE HMA PAVEMENT BID ITEM.

TRAFFIC CONTROL NEEDED DURING MAINTENACE AND REPAIRS TEMPORAY WEDGE JOINT WILL BE INCIDENTAL TO THE TRAFFIC CONTROL PROJECT BID ITEM.



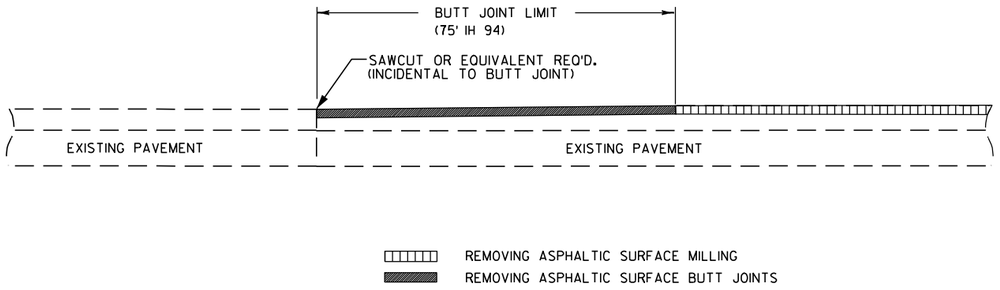

TYPICAL EXISTING SECTION
IH 94
STA. 604'E'+00 - 985'E'+75, E.B.
STA. 604'W'+12 - 986'W'+26, W.B.




TYPICAL FINISHED SECTION
IH 94
STA. 604'E'+00 - 985'E'+75, E.B.
STA. 604'W'+12 - 986'W'+26, W.B.

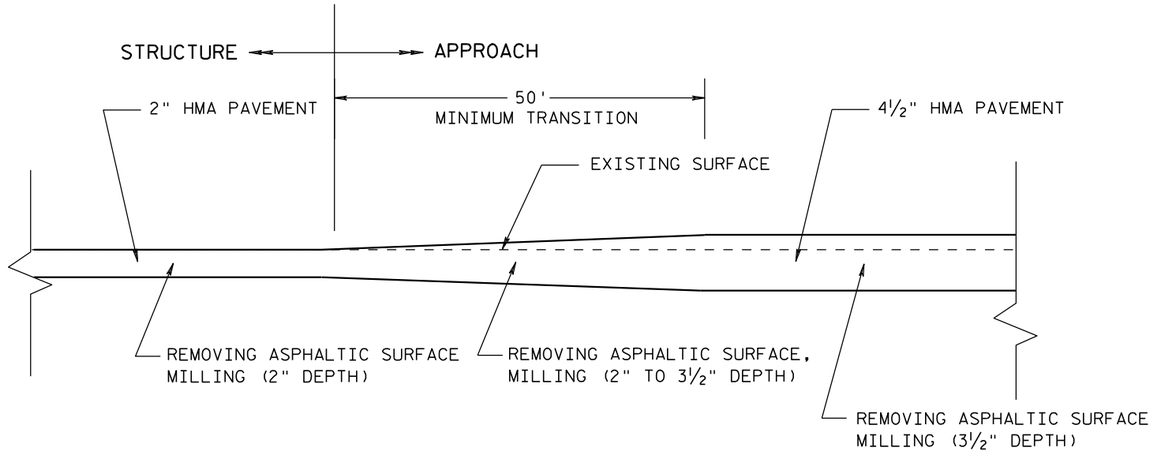
*MILL EXIST. ASPHALT ON TRAVELED WAY 3½" DEPTH AT CENTERLINE TO 4¼" DEPTH AT LANE EDGE.

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | TYPICAL SECTIONS | SHEET NO: | E |
|---|---|---|---|---|---|

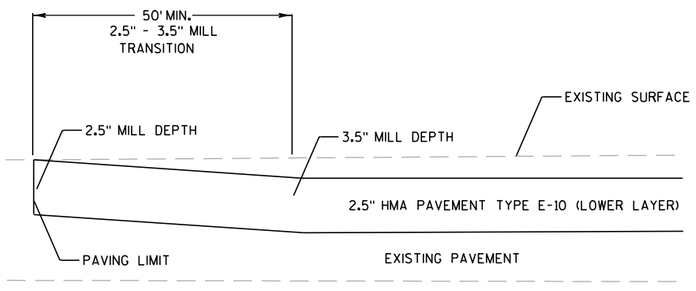



## BUTT JOINT DETAIL

EXACT LOCATIONS DETERMINED BY THE ENGINEER.

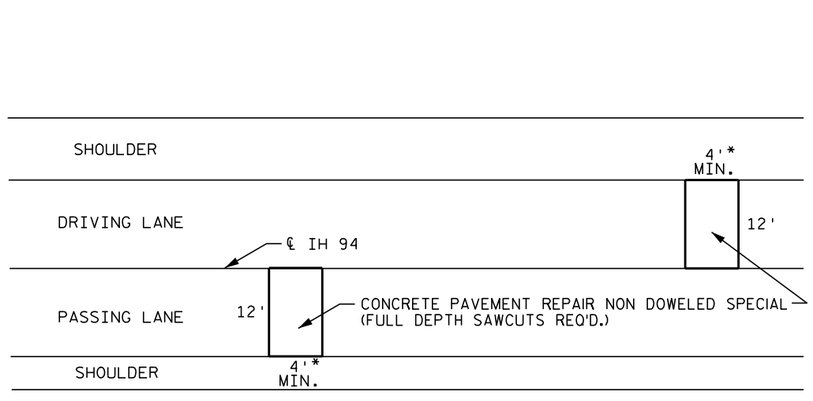



## PAVEMENT TRANSITION NEAR STRUCTURES ON IH 94 DETAIL
(CTH J AND CTH D STRUCTURES)

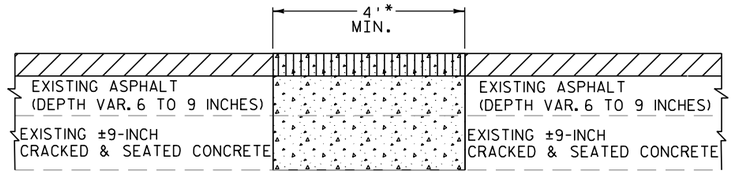



## JOINT TRANSITION DETAIL: LOWER LAYER

REQUIRED AT BEGIN AND END OF PROJECT PRIOR TO OPENING TO TRAFFIC




PLAN VIEW




SIDE VIEW

* 4'-8' TYPICAL OR AS DIRECTED BY THE ENGINEER.

NOTES

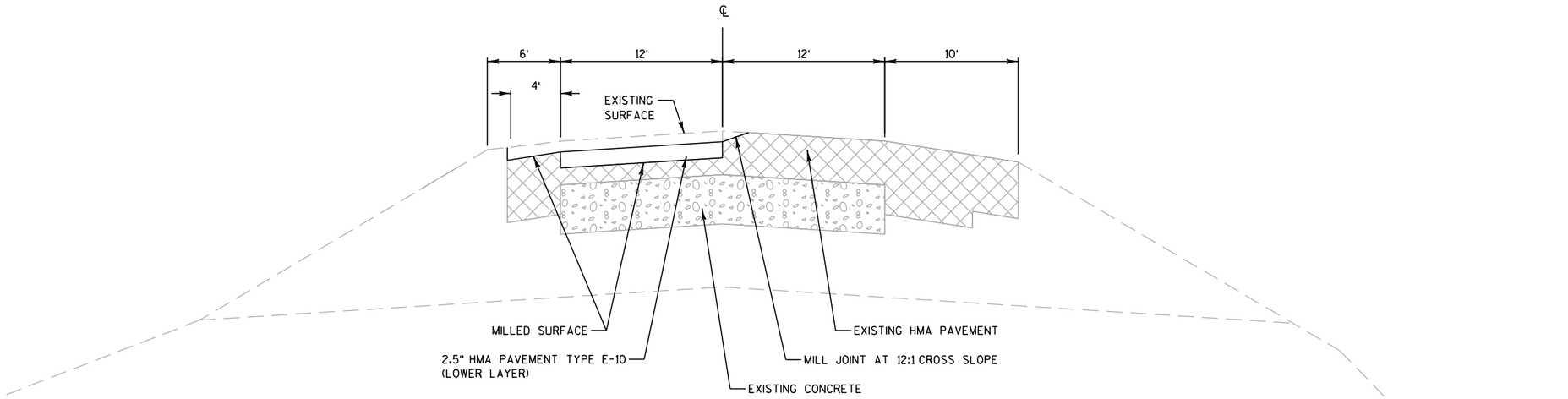
DAMAGE TO EITHER EXISTING PAVEMENTS OR EXISTING SHOULDERS DURING CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL SHALL BE REPAIRED AND CONSIDERED INCIDENTAL TO THE ITEM OF CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL.

SAWING EXISTING ASPHALT OVERLAYED ON CONCRETE IS CONSIDERED INCIDENTAL TO SAWING CONCRETE.

## CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL DETAIL

EXACT LOCATIONS DETERMINED BY THE ENGINEER.

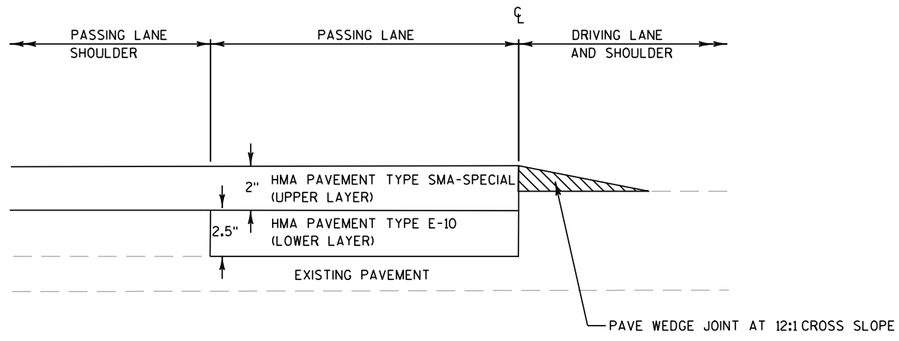
2




## TEMPORARY LONGITUDINAL JOINT DETAIL

MILL JOINT PRIOR TO OPENING NEW PAVEMENT TO TRAFFIC

NOTES:
DETAIL ASSUMES MILL & OVERLAY IN PASSING LANE FIRST.
MIRROR JOINT IF MILL & OVERLAY IS COMPLETED IN DRIVING LANE FIRST.
MILL AND REMOVE TEMPORARY JOINT PRIOR TO OPENING LANE TO TRAFFIC.



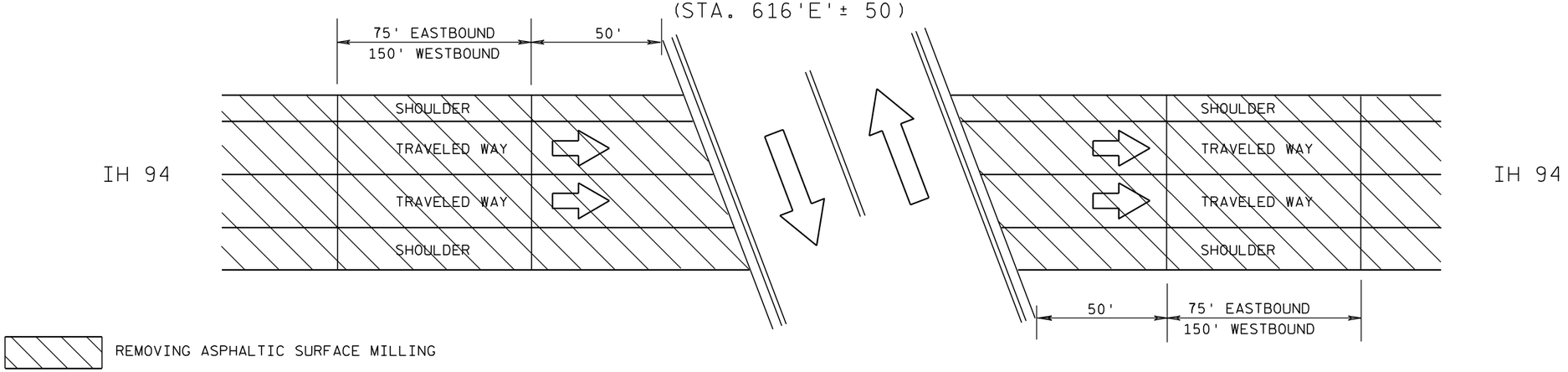

## TEMPORARY WEDGE JOINT DETAIL

REQUIRED AT LONGITUDINAL JOINT PRIOR TO OPENING TO TRAFFIC

NOTE: TEMPORARY WEDGE JOINT REMOVAL TO BE PAID UNDER ITEM "MILLING AND REMOVING TEMPORARY JOINT"

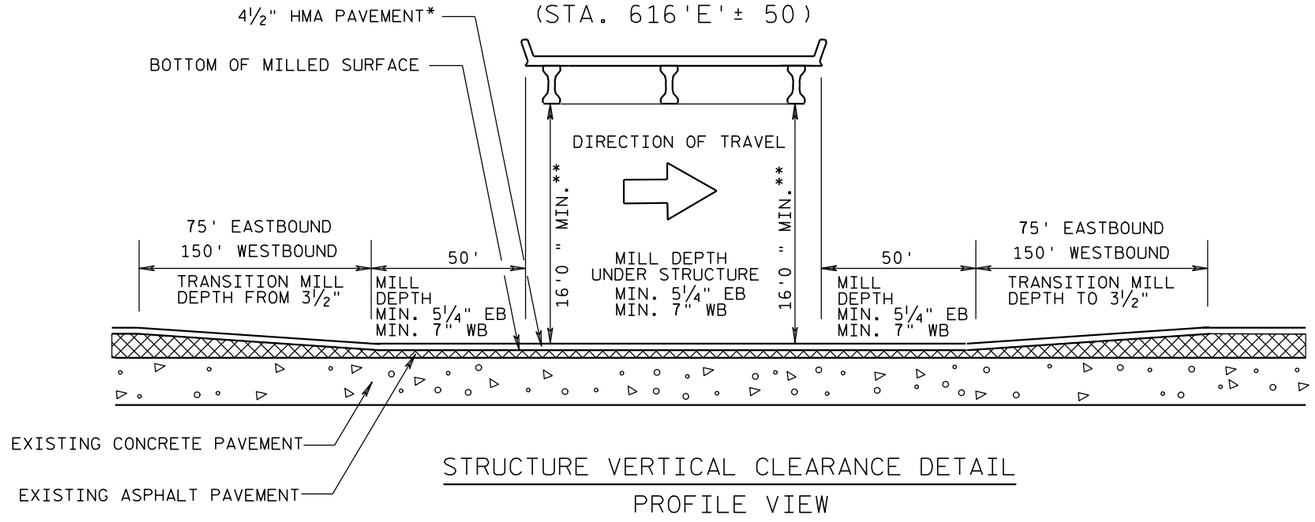
NOTES:
DETAIL ASSUMES MILL & OVERLAY IN PASSING LANE FIRST.
MIRROR JOINT IF MILL & OVERLAY IS COMPLETED IN DRIVING LANE FIRST.
PLACE TEMPORARY WEDGE JOINT PRIOR TO OPENING LANE TO TRAFFIC.

HOBBS ROAD
OVERPASS STRUCTURE
(STA. 616'E'± 50)




STRUCTURE VERTICAL CLEARANCE DETAIL
PLAN VIEW

HOBBS ROAD
OVERPASS STRUCTURE
(STA. 616'E'± 50)




STRUCTURE VERTICAL CLEARANCE DETAIL
PROFILE VIEW

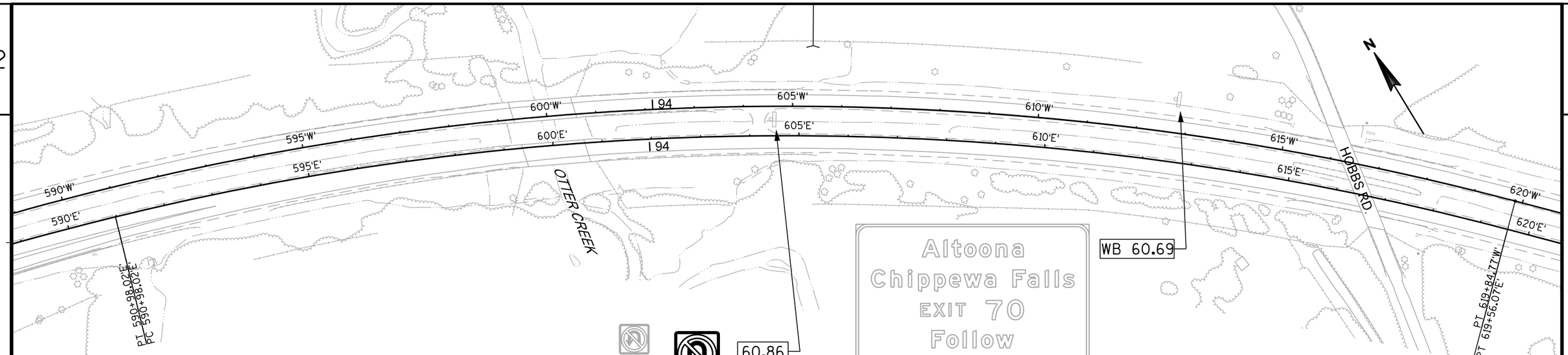
* PAVE SHOULDERS AT 4½" DEPTH WHERE MILL DEPTH IS TRANSITIONED NEAR HOBBS ROAD OVERPASS STRUCTURE.
** 16'0" MINIMUM VERTICAL CLEARANCE IS REQUIRED IN THE FINAL CONDITION.

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | DETAIL - STRUCTURE VERTICAL CLEARANCE | SHEET NO: | E |
|---|---|---|---|---|---|



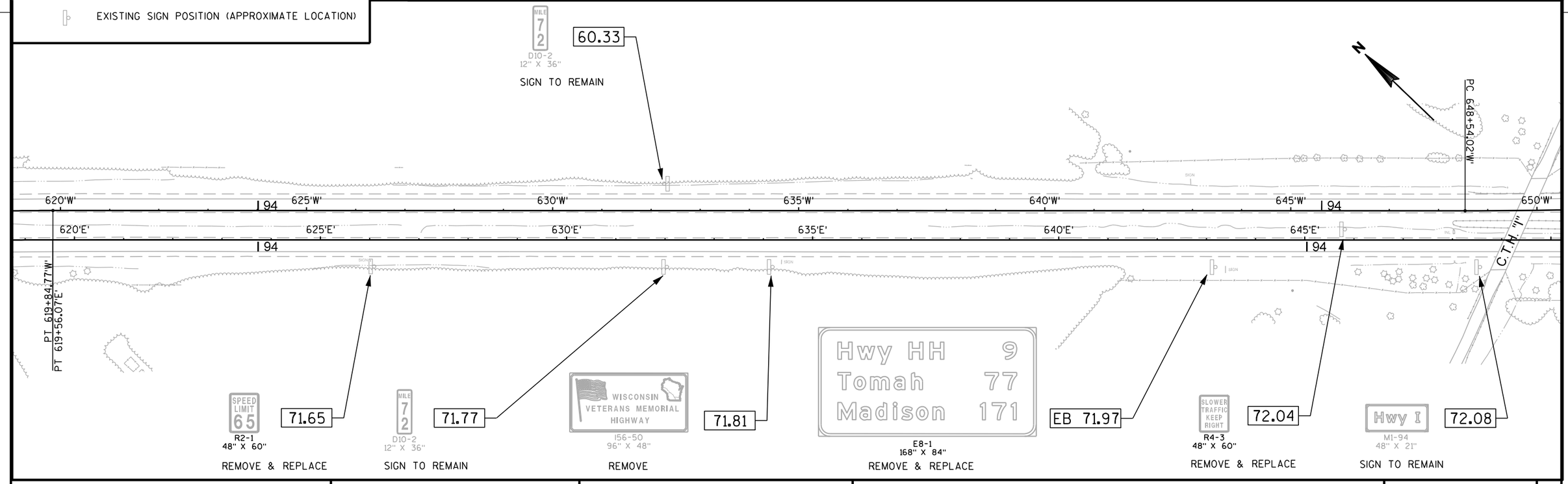
FILE NAME : n:±PDS±Projects-LET±1022-00-36±Misc±020335_cd.dgn PLOT DATE : 29-NOV-2011 10:57 PLOT BY : dotkyk PLOT NAME : PLOT SCALE : 2:1

2




XX.XX MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)




| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PERMANENT SIGNING | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : C:±Users±PROJECTS±1022-09-01±Misc±023205_ps_53Mal.DGN PLOT DATE : 22-DEC-2011 12:36 PLOT BY : DOTKYK PLOT NAME : PLOT SCALE : 2:1

2

WB 59.98

Hwy I
M1-94
48" X 21"
REMOVE & REPLACE

PT 659+92.22"W

TRAVEL INFO CALL 511
SP--
XX" X XX"
SIGN TO REMAIN

WB 59.56

N

680'W'
675'W'
670'W'
665'W'
660'W'
655'W'
650'W'

I 94

PT 674+79.91"W

650'E'
655'E'
660'E'
665'E'
670'E'
675'E'

C.T.H. "I"

E1-5
108" X 30"
EXIT 70
53
Eau Claire
Superior
1 MILE

WB 59.95

PT 654+23.59"W

WB 59.79

EMERGENCY STOPPING ONLY
R8-7
48" X 36"
REMOVE & REPLACE

72.28

XX.XX MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)

State Patrol Hdqrs
Chippewa Valley
Regional Airport
EXIT 70
E3-1
228" X 120"
REMOVE & REPLACE

E1-5
108" X 30"
EXIT 70
53
Eau Claire
Superior
2 MILES
E1-1A
192" X 162"
REMOVE & REPLACE

WB 59.02

E1-1A
192" X 162"
REMOVE & REPLACE

680'W'
685'W'
690'W'
695'W'
700'W'
705'W'
710'W'

I 94

PT 693+76.39"E'

59.33

MILE 73
D10-2
12" X 36"
REMOVE & REPLACE

PT 693+71.02"W

680'E'
685'E'
690'E'
695'E'
700'E'
705'E'

I 94

PC 686+23.75"E'

PT 701+27.27"E'

N

72.77

MILE 73
D10-2
12" X 36"
REMOVE & REPLACE

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PERMANENT SIGNING | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : C:±Users±PROJECTS±1022-09-01±Misc±023205_ps_53Mal.DGN PLOT DATE : 22-DEC-2011 12:37 PLOT BY : DOTKYK PLOT NAME : PLOT SCALE : 2:1

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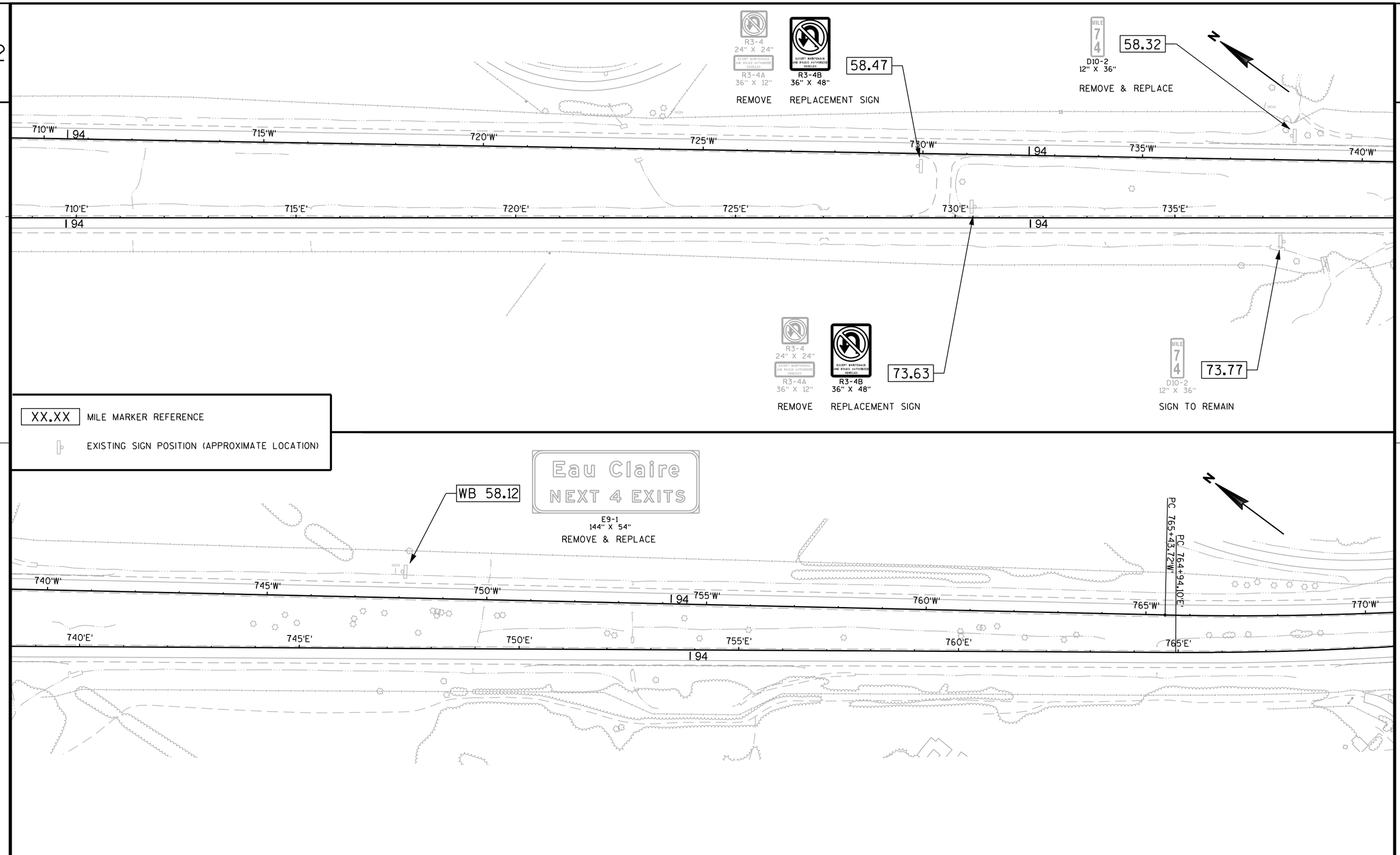


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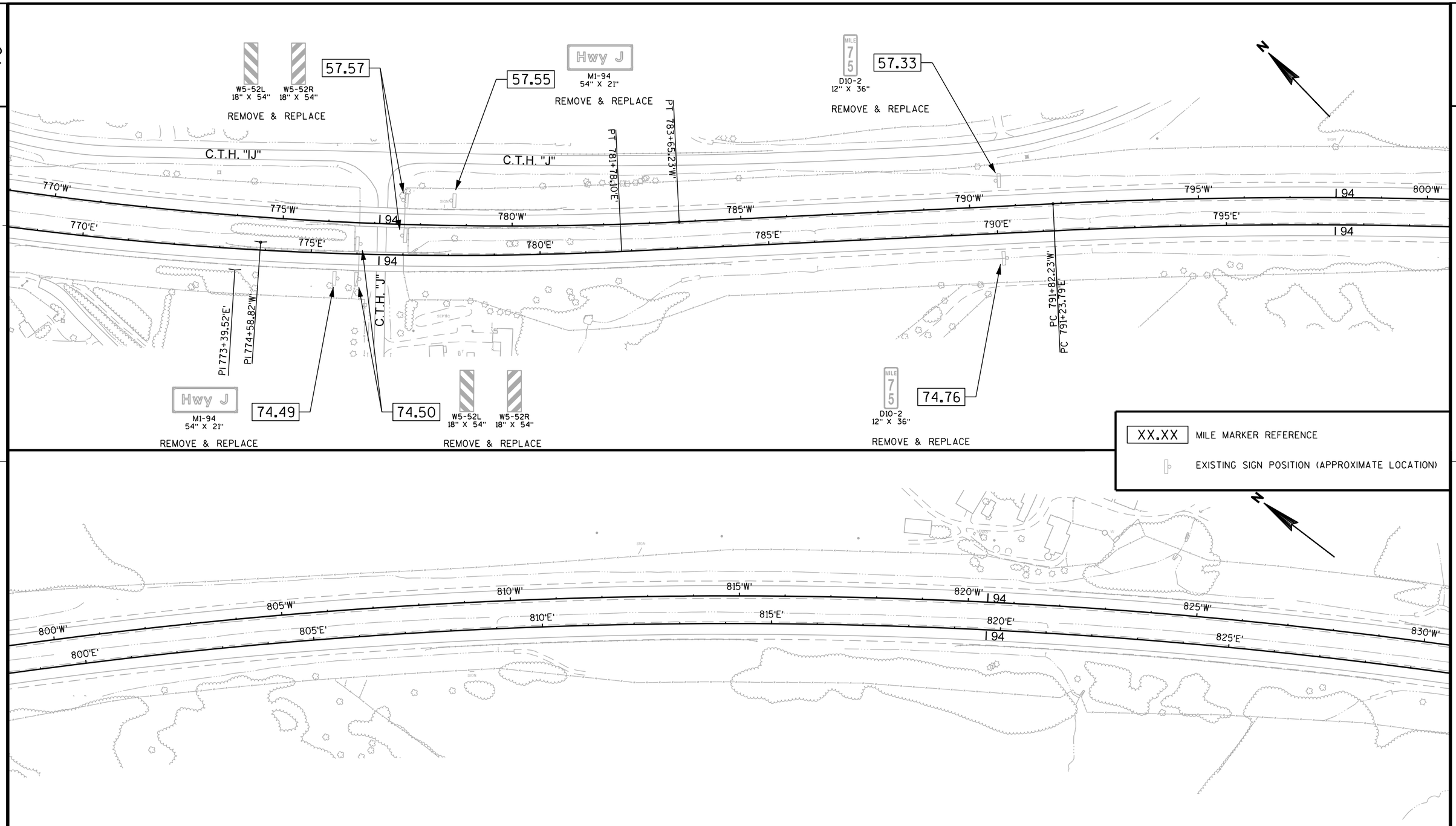
FILE NAME : C:±Users±PROJECTS±1022-09-01±Misc±023205_ps_53Mal.DGN PLOT DATE : 22-DEC-2011 12:38 PLOT BY : DOTKYK PLOT NAME : PLOT SCALE : 2:1

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FILE NAME : C:±Users±PROJECTS±1022-09-01±Misc±023205_ps_53Mal.DGN PLOT DATE : 22-DEC-2011 12:38 PLOT BY : DOTKYK PLOT NAME : PLOT SCALE : 2:1

2

R3-4
24" X 24"
EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES
R3-4A
36" X 12"

REMOVE

R3-4B
36" X 48"
EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

REPLACEMENT SIGN

56.40

MILE 7 6
D10-2
12" X 36"

REMOVE & REPLACE

56.32

830'W' 835'W' 840'W' 845'W' 850'W' 855'W' 860'W'

830'E' 835'E' 840'E' 845'E' 850'E' 855'E'

I 94

PT 853+12.13 W'

PT 855+81.76 E'

R3-4
24" X 24"
EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES
R3-4A
36" X 12"

REMOVE

R3-4B
36" X 48"
EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

REPLACEMENT SIGN

75.68

MILE 7 6
D10-2
12" X 36"

REMOVE & REPLACE

75.76

XX.XX MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)

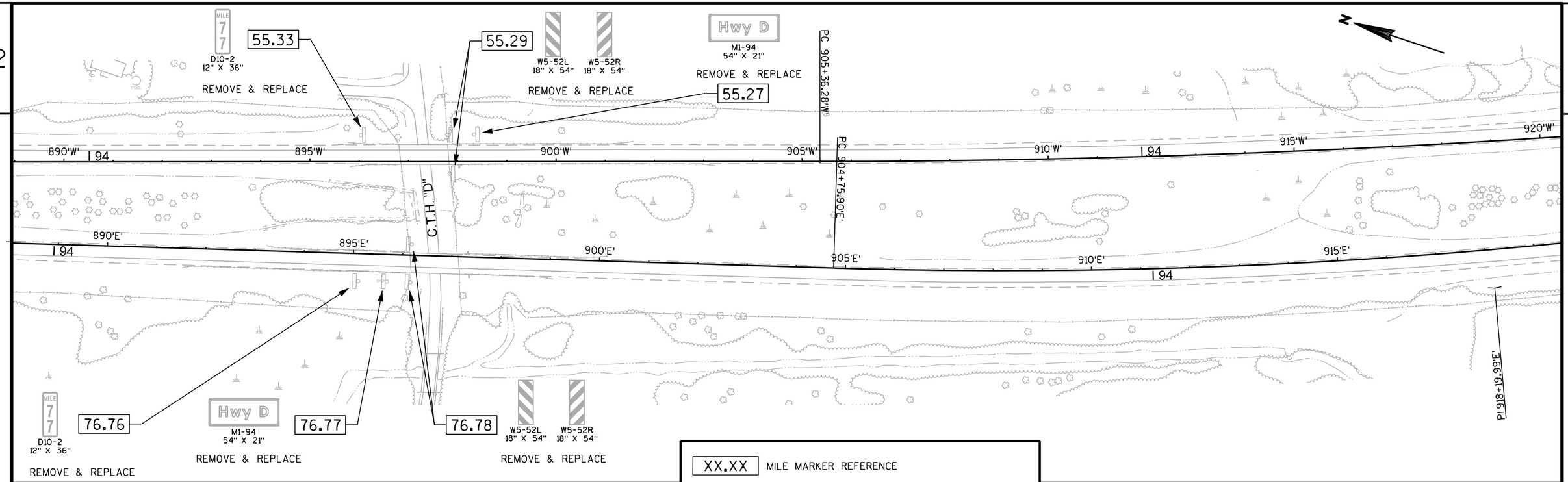
860'W' 865'W' 870'W' 875'W' 880'W' 885'W' 890'W'

860'E' 865'E' 870'E' 875'E' 880'E' 885'E'

I 94

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PERMANENT SIGNING | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : C:±Users±PROJECTS±1022-09-01±Misc±023205_ps_53Mal.DGN PLOT DATE : 22-DEC-2011 12:39 PLOT BY : DOTKYK PLOT NAME : PLOT SCALE : 2:1

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|---|---|---|---|---|---|

FILE NAME : C:±Users±PROJECTS±1022-09-01±Misc±023205_ps_53Mal.DGN PLOT DATE : 22-DEC-2011 12:39 PLOT BY : DOTKYK PLOT NAME : PLOT SCALE : 2:1

2

PT 951+79.95'W'

950'W' 955'W' 960'W' 965'W' 970'W' 975'W'

950'E' 955'E' 960'E' 965'E' 970'E' 975'E'

I 94

I 94

I 94

XX.XX MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)

MALLARD RD.

980'W' 985'W' 990'W' I-94 995'W'

980'E' 985'E' 990'E' 995'E' 1000'E' 1005'E'

I-94

PI 999+15.95'W'

PC 998+71.41'E'

PI 1005+27.12'E'

OTTER CR

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PERMANENT SIGNING | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : C:±Users±PROJECTS±1022-09-01±Misc±023205_ps_53Mal.DGN PLOT DATE : 22-DEC-2011 12:40 PLOT BY : DOTKYK PLOT NAME : PLOT SCALE : 2:1

## FTMS STANDARD ABBREVIATIONS

PB ——————— PULL BOX
MD ——————— MICROWAVE DETECTOR
S-F ——————— STATE-FURNISHED
DMS ——————— DYNAMIC MESSAGE SIGN
MB ——————— METER BREAKER
S-F ——————— STATE FURNISHED

## LEGEND

PROPOSED

METER BREAKER PEDESTAL - - - - - - - - -
24"X36" STEEL PULL BOX - - - - - - - - - -
ITS CONDUIT - - - - - - - - - - - - - - - -
MICROWAVE DETECTOR AND POLE - - - - - - -
GROUND MOUNT SIGN - - - - - - - - - - - -
POLE-MOUNTED CABINET - - - - - - - - - -

## FTMS GENERAL NOTES

THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.

BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.

NO TREES (AND/OR SHRUBS) ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER AND SEED, AND MULCH. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION WILL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS. NO PAYMENT WILL BE MADE FOR RESTORING AREAS DISTURBED FOR FTMS CONSTRUCTION OPERATIONS.

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

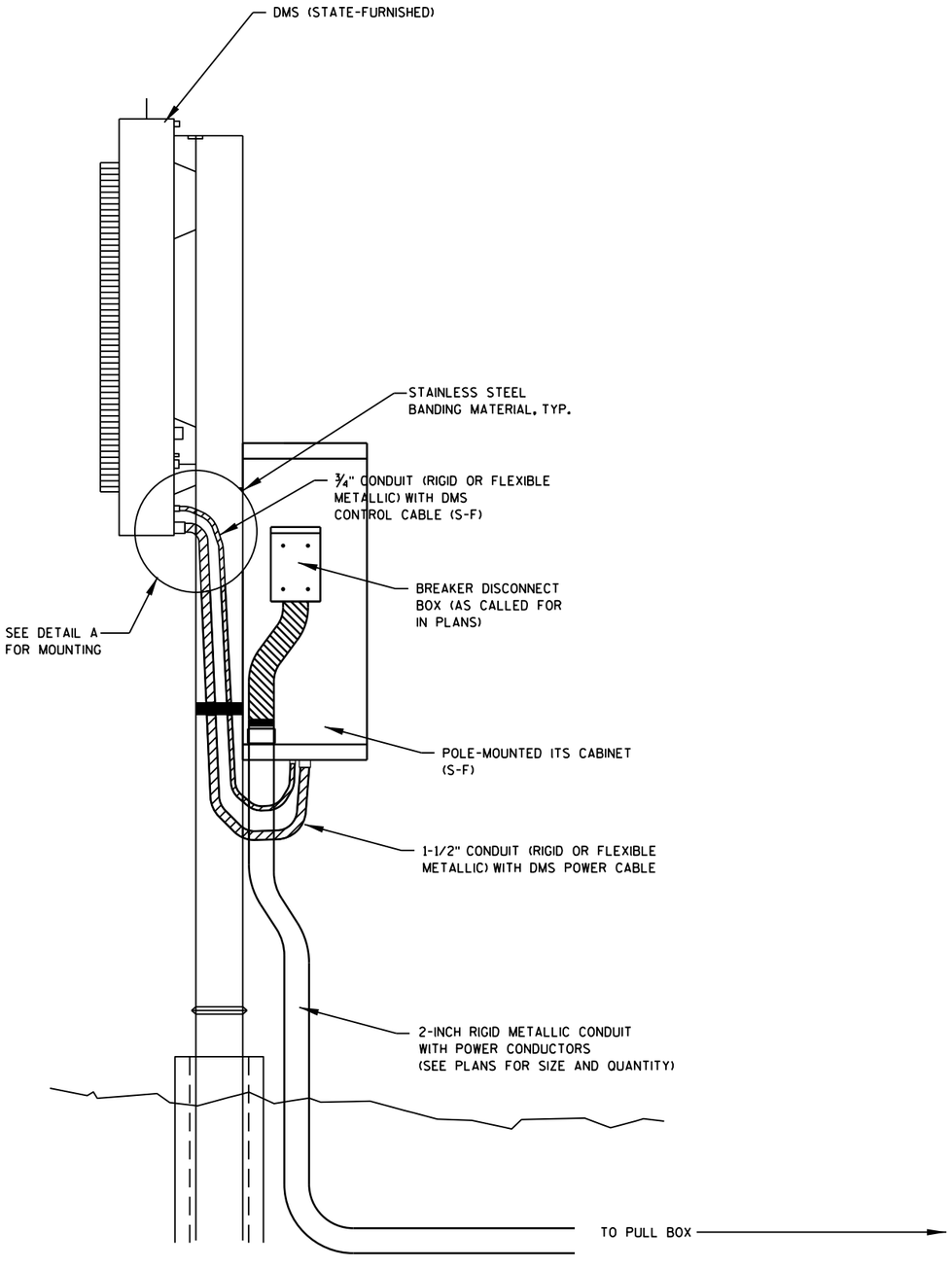
BE ADVISED THAT DUE TO RAMP, LANE, AND SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.

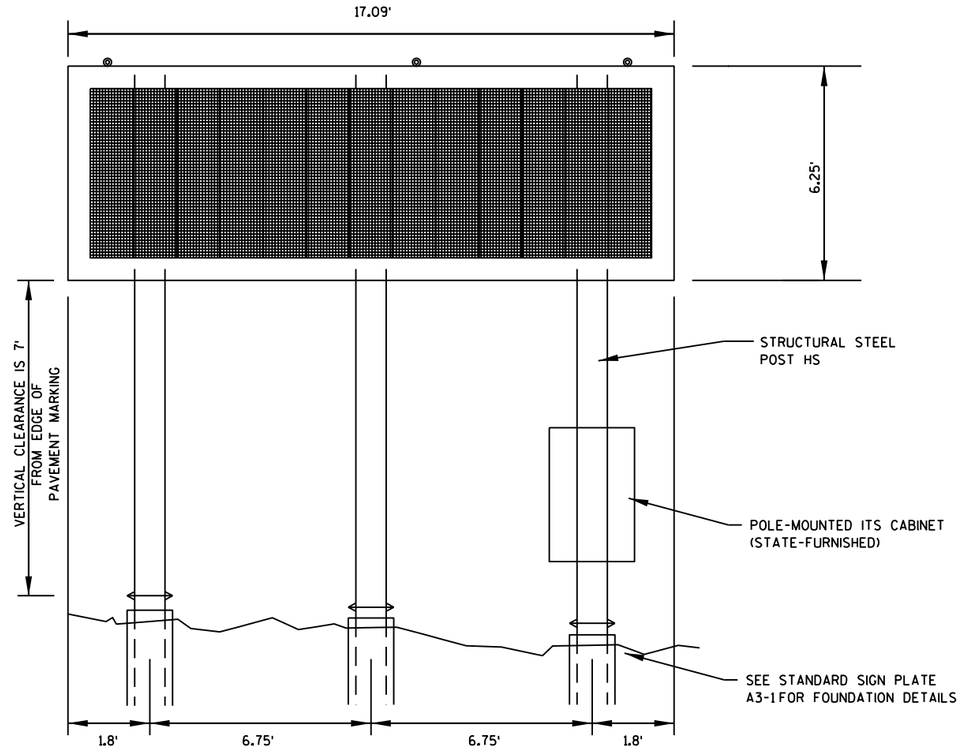
THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.

CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.

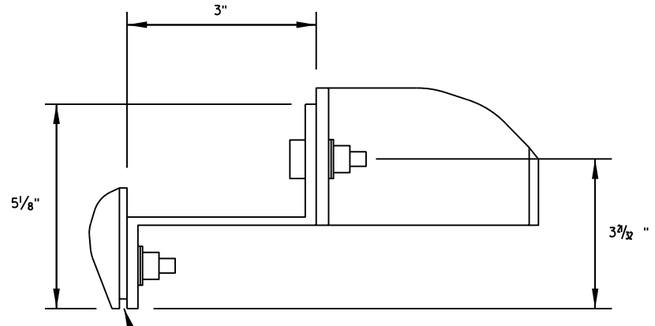
HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.

VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.




DMS-18-0012 IH 94 WB NORTH OF FRASE RD.
ELEVATION VIEW

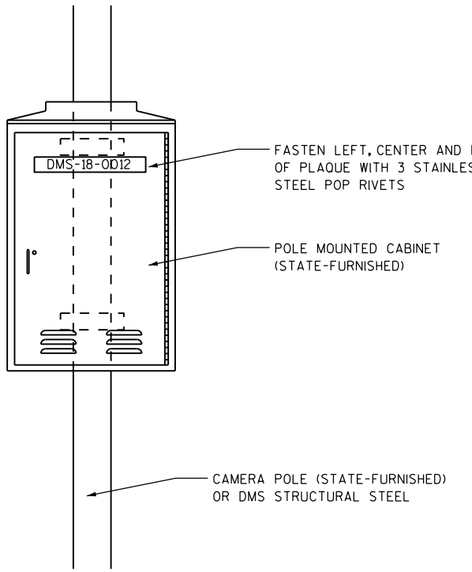



TWO Z-BRACKETS ARE BOLTED TO THE REAR OF THE DISPLAY BY DAKTRONICS. THE VERTICAL SUPPORTS SHOWN ARE STRUCTURAL STEEL SIGN SUPPORTS. EACH Z-BRACKET IS ATTACHED TO THE SIGN ENCLOSURE USING * ½" A325 MECHANICALLY GALVANIZED STRUCTURAL GRADE HARDWARE.

Z-BRACKETS ARE
3" X 2 11/16 " X ¼"
WEB X FLANGE X THINKNESS
ALUMINUM 6061-T6-ALLOY

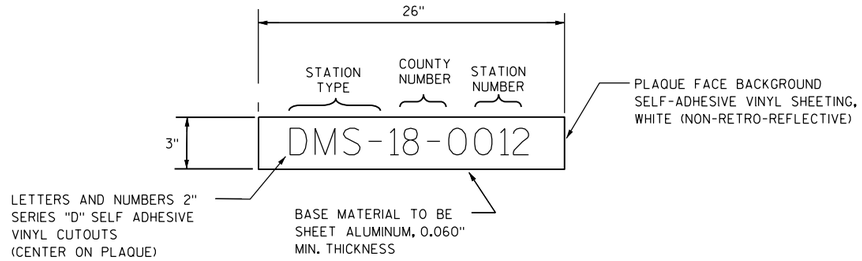
DETAIL A

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | ITS CONSTRUCTION DETAILS | SHEET 15 | E |
|---|---|---|---|---|---|




## CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)




## CONTROL CABINET IDENTIFICATION PLAQUE DETAIL

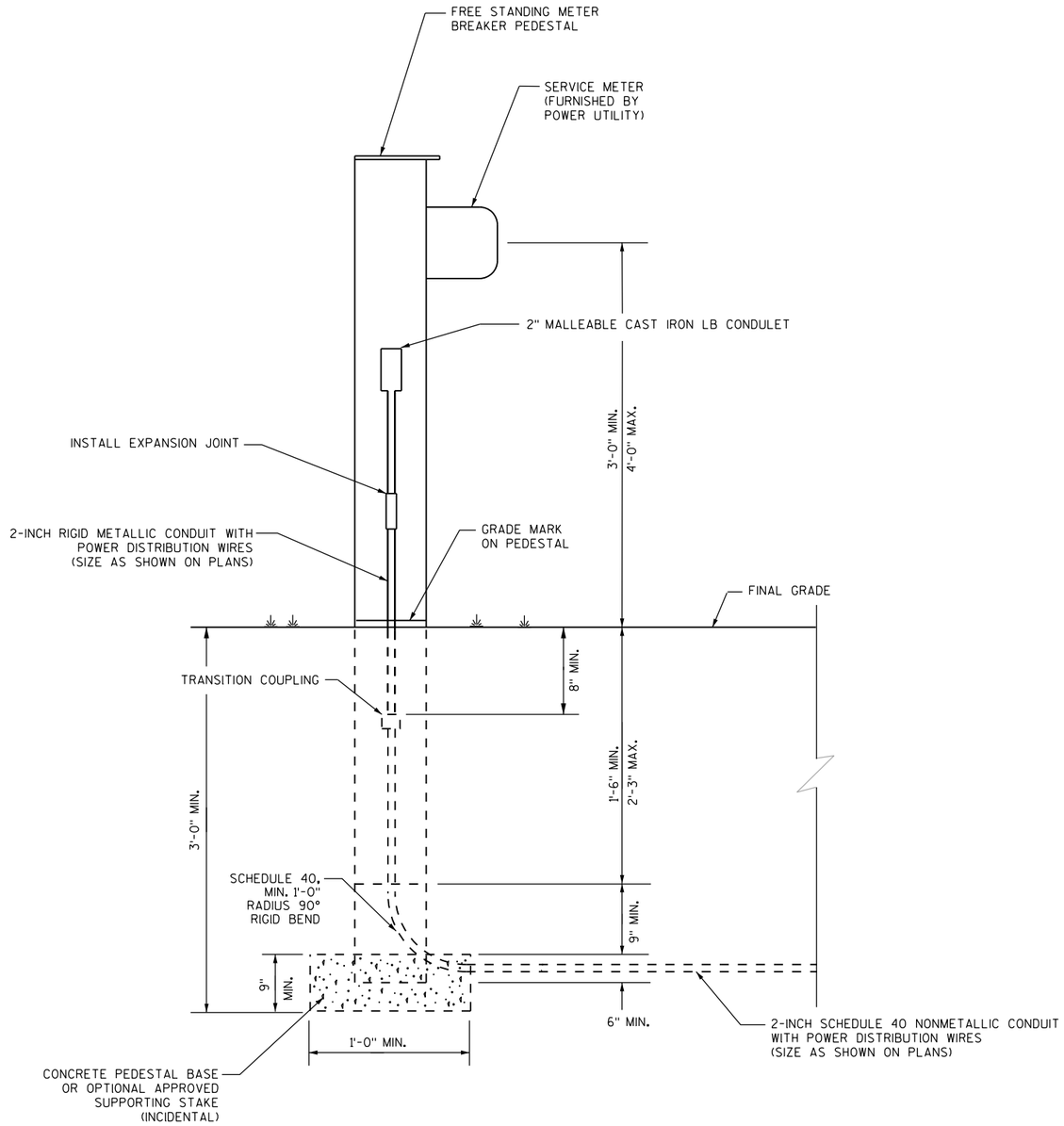
### LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

### NOTES

1) TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2) FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3) FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE 2, FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4) COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

2




## ELECTRICAL SERVICE METER BREAKER PEDESTAL

NOTES

1) MINIMUM REQUIREMENT SHOWN. ADDITIONAL BREAKERS MAY BE REQUIRED.

2

DMS-18-0012
INSTALL ON HIGH STRENGTH STRUCTURAL STEEL POSTS
(1) GROUND MOUNT DMS (S-F)
(1) POLE-MOUNTED CABINET (S-F)
(1) DMS CONTROLLER (S-F)
(1) CELLULAR MODEM (S-F)
(1) BREAKER DISCONNECT BOX

PBFR10

(1) 2-INCH METALLIC CONDUIT WITH (3) NO. 6 AWG LIGHTING WIRES AND (1) NO. 10 AWG LIGHTING WIRE

(1) 2-INCH NONMETALLIC CONDUIT WITH (3) NO. 6 AWG LIGHTING WIRES AND (1) NO. 10 LIGHTING WIRE

PBFR05

MBFR05

IH 94 WB

IH 94 EB

ERASE RD.

157

923.27

AZ
920.11

SIGN

156

98
924.45

N

EDGE OF TRAVELED WAY

30'

7°

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | FTMS PLANS | SHEET 18 | E |
|---|---|---|---|---|---|

DATE 26JUN13 E S T I M A T E O F Q U A N T I T I E S

| LINE NUMBER | ITEM | ITEM DESCRIPTION | UNIT | TOTAL | 1022-09-80 QUANTITY |
|---|---|---|---|---|---|
| 0010 | 201.0105 | CLEARING | STA | 25.000 | 25.000 |
| 0020 | 204.0109.S | REMOVING CONCRETE SURFACE PARTIAL DEPTH | SF | 47,063.000 | 47,063.000 |
| 0030 | 204.0115 | REMOVING ASPHALTIC SURFACE BUTT JOINTS | SY | 1,332.000 | 1,332.000 |
| 0040 | 204.0120 | REMOVING ASPHALTIC SURFACE MILLING | SY | 321,204.000 | 321,204.000 |
| 0050 | 204.0165 | REMOVING GUARDRAIL | LF | 750.000 | 750.000 |
| 0060 | 211.0100 | PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 01. 1022-09-80 | LS | 1.000 | 1.000 |
| 0070 | 213.0100 | FINISHING ROADWAY (PROJECT) 01. 1022-09-80 | EACH | 1.000 | 1.000 |
| 0080 | 305.0110 | BASE AGGREGATE DENSE 3/4-INCH | TON | 1,000.000 | 1,000.000 |
| 0090 | 305.0500 | SHAPING SHOULDERS | STA | 764.000 | 764.000 |
| 0100 | 440.4410.S | INCENTIVE IRI RIDE | DOL | 57,840.000 | 57,840.000 |
| 0110 | 455.0105 | ASPHALTIC MATERIAL PG58-28 | TON | 570.000 | 570.000 |
| 0120 | 455.0140 | ASPHALTIC MATERIAL PG64-28P | TON | 1,711.000 | 1,711.000 |
| 0130 | 455.0605 | TACK COAT | GAL | 13,156.000 | 13,156.000 |
| 0140 | 460.1100 | HMA PAVEMENT TYPE E-0.3 | TON | 9,507.000 | 9,507.000 |
| 0150 | 460.1110 | HMA PAVEMENT TYPE E-10 | TON | 28,519.000 | 28,519.000 |
| 0160 | 460.2000 | INCENTIVE DENSITY HMA PAVEMENT | DOL | 24,340.000 | 24,340.000 |
| 0170 | 465.0110 | ASPHALTIC SURFACE PATCHING | TON | 400.000 | 400.000 |
| 0180 | 465.0125 | ASPHALTIC SURFACE TEMPORARY | TON | 110.000 | 110.000 |
| 0190 | 465.0400 | ASPHALTIC SHOULDER RUMBLE STRIP | LF | 152,778.000 | 152,778.000 |
| 0200 | 614.0305 | STEEL PLATE BEAM GUARD CLASS A | LF | 750.000 | 750.000 |
| 0210 | 614.0400 | ADJUSTING STEEL PLATE BEAM GUARD | LF | 10,512.500 | 10,512.500 |
| 0220 | 618.0100 | MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1022-09-80 | EACH | 1.000 | 1.000 |
| 0230 | 619.1000 | MOBILIZATION | EACH | 1.000 | 1.000 |
| 0240 | 627.0200 | MULCHING | SY | 4,500.000 | 4,500.000 |
| 0250 | 629.0210 | FERTILIZER TYPE B | CWT | 3.000 | 3.000 |
| 0260 | 630.0120 | SEEDING MIXTURE NO. 20 | LB | 122.000 | 122.000 |
| 0270 | 630.0200 | SEEDING TEMPORARY | LB | 122.000 | 122.000 |
| 0280 | 634.0616 | POSTS WOOD 4X6-INCH X 16-FT | EACH | 28.000 | 28.000 |
| 0290 | 634.0618 | POSTS WOOD 4X6-INCH X 18-FT | EACH | 9.000 | 9.000 |
| 0300 | 635.0200 | SIGN SUPPORTS STRUCTURAL STEEL HS | LB | 1,430.000 | 1,430.000 |
| 0310 | 635.0300 | SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS | EACH | 48.000 | 48.000 |
| 0320 | 636.0100 | SIGN SUPPORTS CONCRETE MASONRY | CY | 2.700 | 2.700 |
| 0330 | 636.0500 | SIGN SUPPORTS STEEL REINFORCEMENT | LB | 150.000 | 150.000 |
| 0340 | 637.0101 | SIGNS TYPE I | SF | 984.000 | 984.000 |
| 0350 | 637.0202 | SIGNS REFLECTIVE TYPE II | SF | 234.500 | 234.500 |
| 0360 | 638.2601 | REMOVING SIGNS TYPE I | EACH | 8.000 | 8.000 |
| 0370 | 638.2602 | REMOVING SIGNS TYPE II | EACH | 37.000 | 37.000 |
| 0380 | 638.3000 | REMOVING SMALL SIGN SUPPORTS | EACH | 38.000 | 38.000 |
| 0390 | 642.5201 | FIELD OFFICE TYPE C 01. 1022-09-80 | EACH | 1.000 | 1.000 |
| 0400 | 643.0200 | TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1022-09-80 | DAY | 90.000 | 90.000 |
| 0410 | 643.0300 | TRAFFIC CONTROL DRUMS | DAY | 18,774.000 | 18,774.000 |
| 0420 | 643.0420 | TRAFFIC CONTROL BARRICADES TYPE III | DAY | 724.000 | 724.000 |
| 0430 | 643.0715 | TRAFFIC CONTROL WARNING LIGHTS TYPE C | DAY | 739.000 | 739.000 |
| 0440 | 643.0800 | TRAFFIC CONTROL ARROW BOARDS | DAY | 84.000 | 84.000 |
| 0450 | 643.0900 | TRAFFIC CONTROL SIGNS | DAY | 840.000 | 840.000 |
| 0460 | 643.1050 | TRAFFIC CONTROL SIGNS PCMS | DAY | 180.000 | 180.000 |
| 0470 | 646.0103 | PAVEMENT MARKING PAINT 4-INCH | LF | 19,113.000 | 19,113.000 |
| 0480 | 646.0106 | PAVEMENT MARKING EPOXY 4-INCH | LF | 152,778.000 | 152,778.000 |
| 0490 | 646.0600 | REMOVING PAVEMENT MARKINGS | LF | 300.000 | 300.000 |

3

DATE 26JUN13 E S T I M A T E O F Q U A N T I T I E S

| LINE NUMBER | ITEM | ITEM DESCRIPTION | UNIT | TOTAL | 1022-09-80 QUANTITY |
|---|---|---|---|---|---|
| 0500 | 646.0881.S | PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH | LF | 19,113.000 | 19,113.000 |
| 0510 | 647.0803 | PAVEMENT MARKING AERIAL ENFORCEMENT BARS EPOXY 24-INCH | LF | 60.000 | 60.000 |
| 0520 | 649.0100 | TEMPORARY PAVEMENT MARKING 4-INCH | LF | 20,000.000 | 20,000.000 |
| 0530 | 650.8000 | CONSTRUCTION STAKING RESURFACING REFERENCE | LF | 76,389.000 | 76,389.000 |
| 0540 | 650.9910 | CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1022-09-80 | LS | 1.000 | 1.000 |
| 0550 | 652.0125 | CONDUIT RIGID METALLIC 2-INCH | LF | 15.000 | 15.000 |
| 0560 | 652.0225 | CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH | LF | 290.000 | 290.000 |
| 0570 | 653.0135 | PULL BOXES STEEL 24X36-INCH | EACH | 2.000 | 2.000 |
| 0580 | 655.0615 | ELECTRICAL WIRE LIGHTING 10 AWG | LF | 325.000 | 325.000 |
| 0590 | 655.0625 | ELECTRICAL WIRE LIGHTING 6 AWG | LF | 975.000 | 975.000 |
| 0600 | 656.0200 | ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. IH 94 WB & FRASE RD | LS | 1.000 | 1.000 |
| 0610 | 656.0500 | ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 02. IH 94 WB & FRASE RD | LS | 1.000 | 1.000 |
| 0620 | 659.0802 | PLAQUES SEQUENCE IDENTIFICATION | EACH | 1.000 | 1.000 |
| 0630 | 670.0100 | FIELD SYSTEM INTEGRATOR | LS | 1.000 | 1.000 |
| 0640 | 670.0200 | ITS DOCUMENTATION | LS | 1.000 | 1.000 |
| 0650 | 673.0225.S | INSTALL POLE MOUNTED CABINET | EACH | 1.000 | 1.000 |
| 0660 | 690.0250 | SAWING CONCRETE | LF | 29,340.000 | 29,340.000 |
| 0670 | ASP.1T0A | ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR | HRS | 2,400.000 | 2,400.000 |
| 0680 | ASP.1T0G | ON-THE-JOB TRAINING GRADUATE AT $5.00/HR | HRS | 1,380.000 | 1,380.000 |
| 0690 | SPV.0045 | SPECIAL 01. PORTABLE CHANGABLE MESSAGE SIGN (PCSM) CELLULAR COMMUNICATIONS | DAY | 180.000 | 180.000 |
| 0700 | SPV.0060 | SPECIAL 01. INSTALL GROUND MOUNT DYNAMIC MESSAGE SIGN | EACH | 1.000 | 1.000 |
| 0710 | SPV.0105 | SPECIAL 01. MATERIAL TRANSFER VEHICLE | LS | 1.000 | 1.000 |
| 0720 | SPV.0105 | SPECIAL 02 MILLNG AND REMOVING TEMPORARY JOINT | LS | 1.000 | 1.000 |
| 0730 | SPV.0170 | SPECIAL 01. REHEATING HMA PAVEMENT LONGITUDINAL JOINTS SPECIAL | STA | 764.000 | 764.000 |
| 0740 | SPV.0180 | SPECIAL 01. CONCRETE PAVEMENT REPAIR NON-DOWELED SPECIAL | SY | 3,060.000 | 3,060.000 |
| 0750 | SPV.0195 | SPECIAL 01. HMA PAVEMENT TYPE SMA-SPECIAL | TON | 26,618.000 | 26,618.000 |
| 0760 | SPV.0195 | SPECIAL 02. SMA PAVEMENT COMPACTION ACCEPTANCE | TON | 26,618.000 | 26,618.000 |

3

3

## CLEARING

| STATION TO | STATION | LOCATION | 201.0105 STA | REMARKS |
|---|---|---|---|---|
| 679'E'+00 | 680'E'+00 | IH 94 EB, RT. | 1 | WITHIN 30 FEET OF TRAVELED WAY |
| 687'E'+00 | 689'E'+00 | IH 94 EB, LT. & RT. | 2 | WITHIN 30 FEET OF TRAVELED WAY |
| 779'E'+00 | 781'E'+00 | IH 94 EB, LT. | 2 | WITHIN 30 FEET OF TRAVELED WAY |
| 864'E'+00 | 865'E'+00 | IH 94 EB, LT. | 1 | WITHIN 30 FEET OF TRAVELED WAY |
| 865'E'+00 | 866'E'+00 | IH 94 EB, RT. | 1 | WITHIN 30 FEET OF TRAVELED WAY |
| 939'E'+00 | 941'E'+00 | IH 94 EB, RT. | 2 | WITHIN 30 FEET OF TRAVELED WAY |
| 965'E'+00 | 967'E'+00 | IH 94 EB, RT. | 2 | WITHIN 30 FEET OF TRAVELED WAY |
| 979'E'+00 | 984'E'+00 | IH 94 EB, RT. | 5 | WITHIN 30 FEET OF TRAVELED WAY |
| 885'W'+00 | 886'W'+00 | IH 94 WB, LT. | 1 | WITHIN 30 FEET OF TRAVELED WAY |
| 890'W'+00 | 893'W'+00 | IH 94 WB, LT. | 3 | WITHIN 30 FEET OF TRAVELED WAY |
| | | UNDISTRIBUTED | 5 | WITHIN 30 FEET OF TRAVELED WAY |
| | | TOTAL 0010 | 25 | |

## REMOVING ASPHALTIC SURFACE BUTT JOINTS

| STATION TO | STATION | LOCATION | 204.0115 SY | REMARKS |
|---|---|---|---|---|
| 604'E'+00 | 604'E'+75 | IH 94 EB | 333 | |
| 985'E'+00 | 985'E'+75 | IH 94 EB | 333 | |
| 604'W'+12 | 604'W'+87 | IH 94 WB | 333 | |
| 985'W'+51 | 986'W'+26 | IH 94 WB | 333 | |
| | | TOTAL 0010 | 1332 | |

## BASE AGGREGATE DENSE 3/4-INCH

| STATION TO | STATION | LOCATION | 305.0110 TON | REMARKS |
|---|---|---|---|---|
| 604'E'+00 | 985'E'+75 | IH 94 EB, LT. | 500 | MEDIAN SHOULDER |
| 604'W'+12 | 986'W'+26 | IH 94 WB, RT. | 500 | MEDIAN SHOULDER |
| | | TOTAL 0010 | 1000 | |

## REMOVING CONCRETE SURFACE PARTIAL DEPTH

| STATION TO | STATION | LOCATION | 204.0109.S SF | REMARKS |
|---|---|---|---|---|
| 604'E'+00 | 985'E'+75 | IH 94 EB | 23535 | CONCRETE PAVEMENT REPAIR AREAS |
| 604'W'+12 | 986'W'+26 | IH 94 WB | 23528 | CONCRETE PAVEMENT REPAIR AREAS |
| | | TOTAL 0010 | 47063 | |

## REMOVING ASPHALTIC SURFACE MILLING

| STATION TO | STATION | LOCATION | 204.0120 SY | REMARKS |
|---|---|---|---|---|
| 604'E'+75 | 985'E'+00 | IH 94 EB | 160520 | |
| 604'W'+87 | 985'W'+51 | IH 94 WB | 160684 | |
| | | TOTAL 0010 | 321204 | |

## REMOVING GUARDRAIL

| STATION TO | STATION | LOCATION | 204.0165 LF | REMARKS |
|---|---|---|---|---|
| | | UNDISTRIBUTED | 750 | REPLACE DAMAGED SECTIONS |
| | | TOTAL 0010 | 750 | |

## SHAPING SHOULDERS

| STATION TO | STATION | LOCATION | 305.0500 STA | REMARKS |
|---|---|---|---|---|
| 604'E'+00 | 985'E'+75 | IH 94 EB, LT. | 382 | MEDIAN SHOULDER |
| 604'W'+12 | 986'W'+26 | IH 94 WB, RT. | 382 | MEDIAN SHOULDER |
| | | TOTAL 0010 | 764 | |

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

## ASPHALT PAVEMENT

| STATION TO STATION | LOCATION | ASPHALTIC MATERIAL PG58-28 455.0105 TON | ASPHALTIC MATERIAL PG64-28P 455.0140 TON | TACK COAT 455.0605 GAL | HMA PAVEMENT TYPE E-0.3 460.1100 TON | HMA PAVEMENT TYPE E-10 460.1110 TON | HMA PAVEMENT TYPE SMA-SPECIAL SPV.0195.01 TON | SMA PAVEMENT COMPACTION ACCEPTANCE SPV.0195.02 TON | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 604'E'+00 - 985'E'+75 | IH 94 EB LANES | - | 855 | 2545 | - | 14252 | - | - | LOWER LAYER |
| 604'W'+12 - 986'W'+26 | IH 94 WB LANES | - | 856 | 2548 | - | 14267 | - | - | LOWER LAYER |
| 604'E'+00 - 985'E'+75 | IH 94 EB LANES & MEDIAN SHOULDER | - | - | 2969 | - | - | 13302 | 13302 | UPPER LAYER |
| 604'W'+12 - 986'W'+26 | IH 94 WB LANES & MEDIAN SHOULDER | - | - | 2972 | - | - | 13316 | 13316 | UPPER LAYER |
| 604'E'+00 - 985'E'+75 | OUTSIDE SHOULDER | 285 | - | 1060 | 4751 | - | - | - | |
| 604'W'+12 - 986'W'+26 | OUTSIDE SHOULDER | 285 | - | 1062 | 4756 | - | - | - | |
| | TOTAL 0010 | 570 | 1711 | 13156 | 9507 | 28519 | 26618 | 26618 | |

## ASPHALTIC SURFACE PATCHING

| STATION TO STATION | LOCATION | 465.0110 TON | REMARKS |
|---|---|---|---|
| | PROJECT | 400 | IH 94 MAINLINE |
| | TOTAL 0010 | 400 | |

## ASPHALTIC SURFACE TEMPORARY

| STATION TO STATION | LOCATION | 465.0125 TON | REMARKS |
|---|---|---|---|
| 604'E'+00 - 985'E'+75 | IH 94 EASTBOUND | 55 | FILLING RUMBLE STRIPS |
| 604'W'+12 - 986'W'+26 | IH 94 WESTBOUND | 55 | FILLING RUMBLE STRIPS |
| | TOTAL 0010 | 110 | |

## ASPHALTIC SHOULDER RUMBLE STRIP

| STATION TO STATION | LOCATION | 465.0400 LF | REMARKS |
|---|---|---|---|
| 604'E'+00 - 985'E'+75 | IH 94 EB, LT. | 38175 | MEDIAN SHOULDER |
| 604'E'+00 - 985'E'+75 | IH 94 EB, RT. | 38175 | OUTSIDE SHOULDER |
| 604'W'+12 - 986'W'+26 | IH 94 WB, LT. | 38214 | MEDIAN SHOULDER |
| 604'W'+12 - 986'W'+26 | IH 94 WB, RT. | 38214 | OUTSIDE SHOULDER |
| | TOTAL 0010 | 152778 | |

## STEEL PLATE BEAM GUARD CLASS A

| STATION TO STATION | LOCATION | 614.0305 LF | REMARKS |
|---|---|---|---|
| | UNDISTRIBUTED | 750 | REPLACEMENTS |
| | TOTAL 0010 | 750 | |

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

## ADJUSTING STEEL PLATE BEAM GUARD

| STATION TO | STATION | LOCATION | 614.0400 LF | REMARKS |
|---|---|---|---|---|
| 647'E'+50 | 654'E'+75 | IH 94 EB, RT. | 725 | |
| 735'E'+50 | 739'E'+75 | IH 94 EB, RT. | 425 | |
| 750'E'+65 | 756'E'+52.5 | IH 94 EB, RT. | 587.5 | |
| 769'E'+10 | 775'E'+72.5 | IH 94 EB, RT. | 662.5 | |
| 773'E'+10 | 775'E'+72.5 | IH 94 EB, LT. | 262.5 | |
| 777'E'+30 | 784'E'+17.5 | IH 94 EB, RT. | 687.5 | |
| 777'E'+30 | 778'E'+05 | IH 94 EB, LT. | 75 | |
| 807'E'+90 | 814'E'+65 | IH 94 EB, RT. | 675 | |
| 819'E'+50 | 828'E'+62.5 | IH 94 EB, RT. | 912.5 | |
| 862'E'+90 | 864'E'+52.5 | IH 94 EB, RT. | 162.5 | |
| 869'E'+95 | 877'E'+20 | IH 94 EB, RT. | 725 | |
| 892'E'+05 | 895'E'+80 | IH 94 EB, RT. | 375 | |
| 600'W'+87.5 | 604'W'+75 | IH 94 WB, LT. | 387.5 | |
| 614'W'+55 | 618'W'+05 | IH 94 WB, LT. | 350 | |
| 648'W'+65 | 656'W'+65 | IH 94 WB, LT. | 800 | |
| 736'W'+50 | 741'W'+00 | IH 94 WB, LT. | 450 | |
| 774'W'+80 | 776'W'+30 | IH 94 WB, LT. | 150 | |
| 775'W'+55 | 776'W'+30 | IH 94 WB, RT. | 75 | |
| 777'W'+92.5 | 781'W'+80 | IH 94 WB, RT. | 387.5 | |
| 821'W'+75 | 826'W'+00 | IH 94 WB, LT. | 425 | |
| 829'W'+40 | 833'W'+40 | IH 94 WB, LT. | 400 | |
| 875'W'+52.5 | 880'W'+65 | IH 94 WB, LT. | 512.5 | |
| 898'W'+05 | 901'W'+05 | IH 94 WB, LT. | 300 | |
| | | TOTAL 0010 | 10512.5 | |

## TRAFFIC CONTROL

| LOCATION | DRUMS 643.0300 DAYS | BARRICADES TYPE III 643.0420 DAYS | WARNING LIGHTS TYPE C 643.0715 DAYS | ARROW BOARDS 643.0800 DAYS | SIGNS 643.0900 DAYS | SIGNS PCMS 643.1050 DAYS | PORTABLE CHANGEABLE MESSAGE SIGN CELLULAR COMMUNICATIONS SPV.0045.01 DAYS | REMARKS |
|---|---|---|---|---|---|---|---|---|
| PROJECT | 18774 | 724 | 739 | 84 | 840 | 180 | 180 | |
| TOTAL 0010 | 18774 | 724 | 739 | 84 | 840 | 180 | 180 | |

## RESTORATION ITEMS

| STATION TO | STATION | LOCATION | MULCHING 627.0200 SY | FERTILIZER TYPE B 629.0210 CWT | SEEDING MIXTURE NO. 20 630.0120 LB | SEEDING TEMPORARY 630.0200 LB | REMARKS |
|---|---|---|---|---|---|---|---|
| | | PROJECT | 4500 | 3 | 122 | 122 | AS NEEDED AFTER CLEARING |
| | | TOTAL 0010 | 4500 | 3 | 122 | 122 | |

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

# TYPE I PERMANENT SIGNS

| | | | | 635.0300 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sign | | | | | | | | | | | | | |
| | | | | Supports | | | | | | | | | | | | | |
| | | | | Replacing | 638.2601 | | | | | | | | | | | | |
| | | | | Base | Removing | | | | New | New | 637.0101 | | | | | | |
| IH 94 | Existing | | Existing | Connection | Signs | New | | New | Sign | Sign | Signs | | | | | | |
| Mile | Sign | | Sign | Bolts | Type I | Sign | | Sign | Size | Size | Type I | | | | | | |
| Marker | Code | Existing Sign Description | Position | (Each) | (Each) | Code | New Sign Description | Position | Width | Height | (SF) | Order -Line 1 | Order -Line 2 | Order -Line 3 | Order -Line 4 | Order -Line 5 | Notes |
| EB 71.97 mi | E8-1 | Sequence Sign-Highways_Miles | Right | 8 | 1 | E8-1 | Sequence Sign-Highways_Miles | Right | 168.00 | 84.00 | 98.00 | Hwy HH 9 | Tomah 77 | Madison 171 | | | See Sign Detail; Exist. Sign Size 168" x 84" |
| WB 58.12 mi | E9-1 | (Name) Next_Exits | Right | 8 | 1 | E9-1 | (Name) Next_Exits | Right | 144.00 | 54.00 | 54.00 | Eau Claire | 4 | | | | See Sign Detail; Exist. Sign Size 144" x 54" |
| WB 59.02 mi | E1-1A | Advance Exit Guide Signs_Mile | Right | 8 | 1 | E1-1A | Advance Exit Guide Signs_Mile | Right | 192.00 | 162.00 | 216.00 | 53 | Eau Claire | Superior | 2 | | See Sign Detail; Exist. Sign Size 204" x 162" |
| WB 59.02 mi | E1-5P | Exit Number For E1-1 & E4-1 | Right | - | 1 | E1-5P | Exit Number For E1-1 & E4-1 | Right | 108.00 | 30.00 | 22.50 | 70 | | | | | See Sign Detail; Exist. Sign Size 108" x 30" |
| WB 59.79 mi | E3-1 | Destination-Next Right-Exit Number | Right | 8 | 1 | E3-1 | Destination-Next Right-Exit Number | Right | 228.00 | 120.00 | 190.00 | State Patrol Hdqrs | Chippewa Valley | Regional Airport | 70 | | See Sign Detail; Exist. Sign Size 228" x 120" |
| WB 59.95 mi | E1-1A | Advance Exit Guide Signs_Mile | Right | 8 | 1 | E1-1A | Advance Exit Guide Signs_Mile | Right | 192.00 | 162.00 | 216.00 | 53 | Eau Claire | Superior | 1 | | See Sign Detail; Exist. Sign Size 204" x 162" |
| WB 59.95 mi | E1-5P | Exit Number For E1-1 & E4-1 | Right | - | 1 | E1-5P | Exit Number For E1-1 & E4-1 | Right | 108.00 | 30.00 | 22.50 | 70 | | | | | See Sign Detail; Exist. Sign Size 108" x 30" |
| WB 60.69 mi | E3-1 | Destination-Next Right-Exit Number | Right | 8 | 1 | E3-1 | Destination-Next Right-Exit Number | Right | 180.00 | 132.00 | 165.00 | Altoona | Chippewa Falls | Exit 70 | Follow | 53 North | See Sign Detail; Exist. Sign Size 192" x 132" |
| | | | Totals | 48 | 8 | | | | | Totals | 984.00 | | | | | | |

# TYPE II PERMANENT SIGNS

| | | | | 638.2602 | 638.3000 | | | | | | 637.0202 | 634.0616 | 634.0618 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IH 94 | | | | Removing | Removing | | | | New | New | Signs | Posts Wood | Posts Wood | | |
| Eastbound | Existing | | Existing | Signs | Small Sign | New | | New | Sign | Sign | Reflective | 4x6 - Inch | 4x6 - Inch | | |
| Mile | Sign | | Sign | Type II | Supports | Sign | | Sign | Size | Size | Type II | x 16 - Ft. | x 18 - Ft. | | |
| Marker | Code | Existing Sign Description | Position | (Each) | (Each) | Code | New Sign Description | Position | Width | Height | (SF) | Each | Each | Order -Line 1 | Notes |
| 71.65 mi | R2-1 | Speed Limit _ MPH | Right | 1 | 2 | R2-1 | Speed Limit _ MPH | Right | 48.00 | 60.00 | 20.00 | - | 2 | 65 | |
| 71.77 mi | D10-2 | Milepost Marker (2 Digit) | Right | - | - | - | - | - | - | - | - | - | - | | Existing Sign To Remain |
| 71.81 mi | I-56-50 | Wisconsin Veterans Memorial Highway | Right | 1 | 2 | - | - | - | - | - | - | - | - | | Do Not Replace |
| 72.04 mi | R4-3 | Slower Traffic Keep Right | Median | 1 | 2 | R4-3 | Slower Traffic Keep Right | Median | 48.00 | 60.00 | 20.00 | - | - | | |
| 72.08 mi | M1-94 | Crossroad Name | Right | - | - | - | - | - | - | - | - | - | - | | Existing Sign To Remain |
| 72.28 mi | R8-7 | Emergency Stopping Only | Right | 1 | 2 | R8-7 | Emergency Stopping Only | Right | 48.00 | 36.00 | 12.00 | - | 2 | | |
| 72.77 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 73 | |
| 73.63 mi | R3-4 | No U-Turn Symbol | Median | 1 | 1 | R3-4B | No U-Turn Symbol (w/R3-4A message) | Median | 36.00 | 48.00 | 12.00 | - | 1 | | |
| 73.63 mi | R3-4A | Except Maintenance and Police | Median | 1 | - | - | - | - | - | - | - | - | - | | |
| 73.77 mi | D10-2 | Milepost Marker (2 Digit) | Right | - | - | - | - | - | - | - | - | - | - | | Existing Sign To Remain |
| 74.49 mi | M1-94 | Crossroad Name | Right | 1 | 1 | M1-94 | Crossroad Name | Right | 54.00 | 21.00 | 7.88 | 2 | - | Hwy J | See Sign Detail |
| 74.50 mi | W5-52L | Bridge Hash Marks | Median | 1 | 1 | W5-52L | Bridge Hash Marks | Median | 18.00 | 54.00 | 6.75 | 1 | - | | |
| 74.50 mi | W5-52R | Bridge Hash Marks | Right | 1 | 1 | W5-52R | Bridge Hash Marks | Right | 18.00 | 54.00 | 6.75 | 1 | - | | |
| 74.76 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 75 | |
| 75.68 mi | R3-4 | No U-Turn Symbol | Median | 1 | 1 | R3-4B | No U-Turn Symbol (w/R3-4A message) | Median | 36.00 | 48.00 | 12.00 | - | 1 | | |
| 75.68 mi | R3-4A | Except Maintenance and Police | Median | 1 | - | - | - | - | - | - | - | - | - | | |
| 75.76 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 76 | |
| 76.76 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 77 | |
| 76.77 mi | M1-94 | Crossroad Name | Right | 1 | 2 | M1-94 | Crossroad Name | Right | 54.00 | 21.00 | 7.88 | 2 | - | Hwy D | See Sign Detail |
| 76.78 mi | W5-52L | Bridge Hash Marks | Median | 1 | 1 | W5-52L | Bridge Hash Marks | Median | 18.00 | 54.00 | 6.75 | 1 | - | | |
| 76.78 mi | W5-52R | Bridge Hash Marks | Right | 1 | 1 | W5-52R | Bridge Hash Marks | Right | 18.00 | 54.00 | 6.75 | 1 | - | | |
| 77.75 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 78 | |

**(CONTINUED ON NEXT SHEET)**

# TYPE II PERMANENT SIGNS

3

| IH 94 Westbound Mile Marker | Existing Sign Code | Existing Sign Description | Existing Sign Position | 638.2602 Removing Signs Type II (Each) | 638.3000 Removing Small Sign Supports (Each) | New Sign Code | New Sign Description | New Sign Position | New Sign Size Width | New Sign Size Height | 637.0202 Signs Reflective Type II (SF) | 634.0616 Posts Wood 4x6 - Inch x 16 - Ft. Each | 634.0618 Posts Wood 4x6 - Inch x 18 - Ft. Each | Order -Line 1 | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54.34 mi | D10-2 | Milepost Marker (2 Digit) | Right | - | - | - | - | - | - | - | - | - | - | | Existing Sign To Remain |
| 55.27 mi | M1-94 | Crossroad Name | Right | 1 | 2 | M1-94 | Crossroad Name | Right | 54.00 | 21.00 | 7.88 | 2 | - | Hwy D | See Sign Detail |
| 55.29 mi | W5-52-L | Bridge Hash Marks | Median | 1 | 1 | W5-52-L | Bridge Hash Marks | Median | 18.00 | 54.00 | 6.75 | 1 | - | | |
| 55.29 mi | W5-52-R | Bridge Hash Marks | Right | 1 | 1 | W5-52-R | Bridge Hash Marks | Right | 18.00 | 54.00 | 6.75 | 1 | - | | |
| 55.33 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 77 | |
| 56.32 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 76 | |
| 56.40 mi | R3-4 | No U-Turn Symbol | Median | 1 | 1 | R3-4B | No U-Turn Symbol (w/R3-4A message) | Median | 36.00 | 48.00 | 12.00 | - | 1 | | |
| 56.40 mi | R3-4A | Except Maintenance and Police | Median | 1 | - | - | - | - | - | - | - | - | - | | |
| 57.33 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 75 | |
| 57.55 mi | M1-94 | Crossroad Name | Right | 1 | 1 | M1-94 | Crossroad Name | Right | 54.00 | 21.00 | 7.88 | 2 | - | Hwy J | See Sign Detail |
| 57.57 mi | W5-52-L | Bridge Hash Marks | Median | 1 | 1 | W5-52-L | Bridge Hash Marks | Median | 18.00 | 54.00 | 6.75 | 1 | - | | |
| 57.57 mi | W5-52-R | Bridge Hash Marks | Right | 1 | 1 | W5-52-R | Bridge Hash Marks | Right | 18.00 | 54.00 | 6.75 | 1 | - | | |
| 58.32 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 74 | |
| 58.47 mi | R3-4 | No U-Turn Symbol | Median | 1 | 1 | R3-4B | No U-Turn Symbol (w/R3-4A message) | Median | 36.00 | 48.00 | 12.00 | - | 1 | | |
| 58.47 mi | R3-4A | Except Maintenance and Police | Median | 1 | - | - | - | - | - | - | - | - | - | | |
| 59.33 mi | D10-2 | Milepost Marker (2 Digit) | Right | 1 | 1 | D10-2 | Milepost Marker (2 Digit) | Right | 12.00 | 36.00 | 3.00 | 1 | - | 73 | |
| 59.56 mi | SP- - | ANY SPECIAL SIGN | Right | - | - | - | - | - | - | - | - | - | - | | |
| 59.98 mi | M1-94 | Crossroad Name | Right | 1 | 1 | M1-94 | Crossroad Name | Right | 48.00 | 21.00 | 7.00 | 2 | - | Hwy I | See Sign Detail |
| 60.33 mi | D10-2 | Milepost Marker (2 Digit) | Right | - | - | - | - | - | - | - | - | - | - | | Existing Sign To Remain |
| 60.86 mi | R3-4 | No U-Turn Symbol | Median | 1 | 1 | R3-4B | No U-Turn Symbol (w/R3-4A message) | Median | 36.00 | 48.00 | 12.00 | - | 1 | | |
| 60.86 mi | R3-4A | Except Maintenance and Police | Median | 1 | - | - | - | - | - | - | - | - | - | | |
| | | | **Totals** | **37** | **38** | | | | | **Totals** | **234.50** | **28** | **9** | | |

3

## PAVEMENT MARKING PAINT 4-INCH

| STATION TO STATION | LOCATION | 646.0103 LF | REMARKS |
|---|---|---|---|
| 604'E'+00 - 985'E'+75 | IH 94 EB | 9550 | INTERIM LANE LINE (WHITE), SEE GEN. NOTES |
| 604'W'+12 - 986'W'+26 | IH 94 WB | 9563 | INTERIM LANE LINE (WHITE), SEE GEN. NOTES |
| | TOTAL 0010 | 19113 | |

## PAVEMENT MARKING EPOXY 4-INCH

| STATION TO STATION | LOCATION | 646.0106 LF | REMARKS |
|---|---|---|---|
| 604'E'+00 - 985'E'+75 | IH 94 EB, RT. | 38175 | EDGELINE (WHITE) |
| 604'E'+00 - 985'E'+75 | IH 94 EB, LT. | 38175 | EDGELINE (YELLOW) |
| 604'W'+12 - 986'W'+26 | IH 94 WB, RT. | 38214 | EDGELINE (YELLOW) |
| 604'W'+12 - 986'W'+26 | IH 94 WB, LT. | 38214 | EDGELINE (WHITE) |
| | TOTAL 0010 | 152778 | |

3

## REMOVING PAVEMENT MARKINGS

| STATION TO STATION | LOCATION | 646.0600 LF | REMARKS |
|---|---|---|---|
| | IH 94 MAINLINE | 300 | |
| | TOTAL 0010 | 300 | |

## PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH

| STATION TO STATION | LOCATION | 646.0881.S LF | REMARKS |
|---|---|---|---|
| 604'E'+00 - 985'E'+75 | IH 94 EB | 9550 | LANE LINE (WHITE), SEE GEN. NOTES |
| 604'W'+12 - 986'W'+26 | IH 94 WB | 9563 | LANE LINE (WHITE), SEE GEN. NOTES |
| | TOTAL 0010 | 19113 | |

## PAVEMENT MARKING AERIAL ENFORCEMENT BARS EPOXY 24-INCH

| STATION TO STATION | LOCATION | 647.0803 LF | REMARKS |
|---|---|---|---|
| | IH 94 WB | 60 | 1 MILE EAST OF CTH I OVERPASS |
| | TOTAL 0010 | 60 | |

## TEMPORARY PAVEMENT MARKING 4-INCH

| STATION TO STATION | LOCATION | 649.0100 LF | REMARKS |
|---|---|---|---|
| | IH 94 EASTBOUND | 10000 | |
| | IH 94 WESTBOUND | 10000 | |
| | TOTAL 0010 | 20000 | |

## CONSTRUCTION STAKING RESURFACING REFERENCE

| STATION TO STATION | LOCATION | 650.8000 LF | REMARKS |
|---|---|---|---|
| 604'E'+00 - 985'E'+75 | IH 94 EB | 38175 | |
| 604'W'+12 - 986'W'+26 | IH 94 WB | 38214 | |
| | TOTAL 0010 | 76389 | |

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

## SAWING CONCRETE

| STATION TO | STATION | LOCATION | 690.0250 LF | REMARKS |
|---|---|---|---|---|
| 604'E'+00 | - 985'E'+75 | IH 94 EASTBOUND | 14670 | |
| 604'W'+12 | - 986'W'+26 | IH 94 WESTBOUND | 14670 | |
| | | TOTAL 0010 | 29340 | |

## REHEATING HMA PAVEMENT LONGITUDINAL JOINTS SPECIAL

| STATION TO | STATION | LOCATION | SPV.0170.01 STA | REMARKS |
|---|---|---|---|---|
| 604'E'+00 | - 985'E'+75 | IH 94 EB | 382 | FINAL CENTERLINE JOINT ONLY |
| 604'W'+12 | - 986'W'+26 | IH 94 WB | 382 | FINAL CENTERLINE JOINT ONLY |
| | | TOTAL 0010 | 764 | |

## CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL

| STATION TO | STATION | LOCATION | SPV.0180.01 SY | REMARKS |
|---|---|---|---|---|
| 604'E'+00 | - 985'E'+75 | IH 94 EASTBOUND | 1530 | |
| 604'W'+12 | - 986'W'+26 | IH 94 WESTBOUND | 1530 | |
| | | TOTAL 0010 | 3060 | |

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

## DMS SIGNING ITEMS

| CAT. | ITEM I.D. | LOCATION | STEEL POST TYPE | 635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB | 636.0100 SIGN SUPPORTS CONCRETE MASONRY CY | 636.0500 SIGN SUPPORTS STEEL REINFORCEMENT LB | SPV.0060.01 INSTALL GROUND MOUNT DMS EACH | INFO ONLY - POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO. 1 LENGTH FT | POST NO. 2 LENGTH FT | POST NO. 3 LENGTH FT | SIGN OFFSET DISTANCE FT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0020 | DMS-18-0012 | IH-94 WB @ FRASE RD. | C | 1430 | 2.7 | 150 | 1 | 16.00 | 15.50 | 15.00 | 30 |
| | | | TOTAL | 1430 | 2.7 | 150 | 1 | | | | |

## ITS CONDUIT

| CAT. | FROM | TO | LINEAR DISTANCE | 652.0125 CONDUIT RIGID METALLIC 2-INCH LF | 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF |
|---|---|---|---|---|---|
| 0020 | MBFR05 | PBFR05 | 10 | -- | 10 |
| 0020 | PBFR05 | PBFR10 | 280 | -- | 280 |
| 0020 | PBFR10 | DMS-18-0012 | 10 | 15 | -- |
| | | TOTAL | | 15 | 290 |

## ITS PULLBOXES

| CAT. | ITEM ID | LOCATION | 653.0135 PULL BOXES STEEL 24 x 36 EACH |
|---|---|---|---|
| 0020 | PBFR05 | IH-94 WB @ FRASE RD. | 1 |
| 0020 | PBFR10 | IH-94 WB @ FRASE RD. | 1 |
| | | TOTAL | 2 |

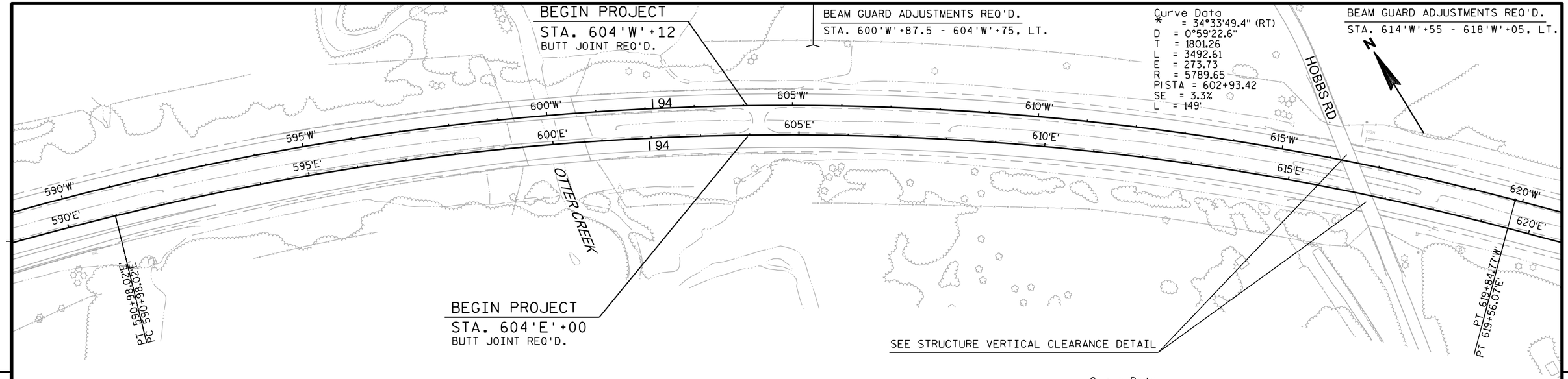
## ITS POWER

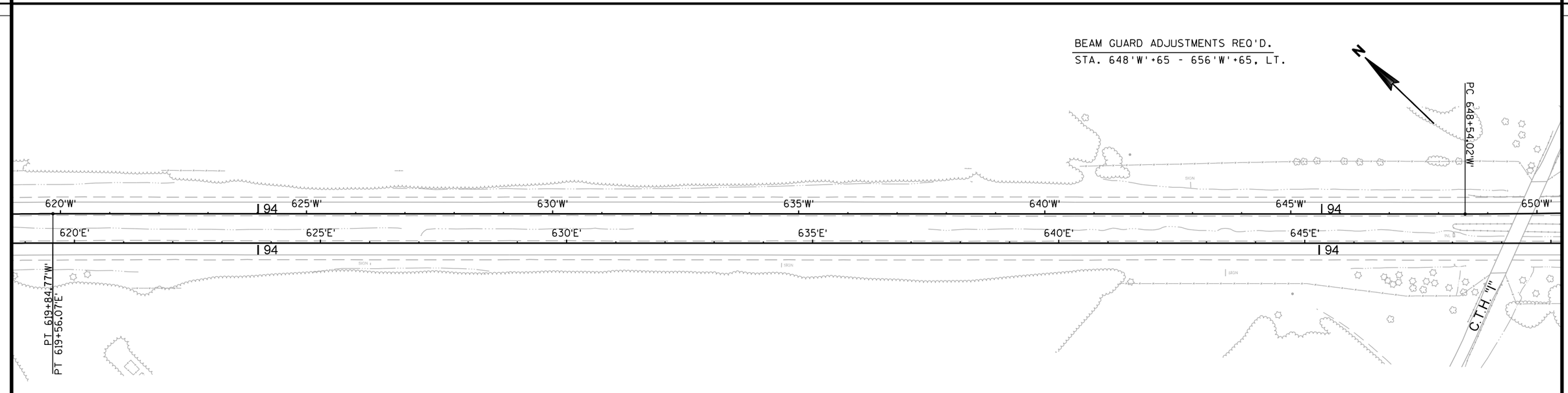
| CAT. | ITEM I.D. | LOCATION | MB I.D. | NUMBER OF WIRES | WIRE LINEAR DISTANCE FROM CABINET TO METER BREAKER | 655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF | 655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF | 656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL (IH-94 WB @ FRASE RD.) LS | 656.0500.01 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (IH-94 WB @ FRASE RD.) LS |
|---|---|---|---|---|---|---|---|---|---|
| 0020 | DMS-18-0012 | IH-94 WB @ FRASE RD. | MBFR05 | 3 | 300 | 325 | 975 | 1 | 1 |
| | | | | TOTAL | | 325 | 975 | 1 | 1 |

## ITS CABINETS

| CAT. | ITEM I.D. | LOCATION | 659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH | 673.0225.S INSTALL POLE MOUNTED CABINET EACH |
|---|---|---|---|---|
| 0020 | DMS-18-0012 | IH 94-WB @ FRASE RD. | 1 | 1 |
| | | TOTAL | 1 | 1 |

ALL ITEMS ON THIS SHEET ARE CATEGORY 0020



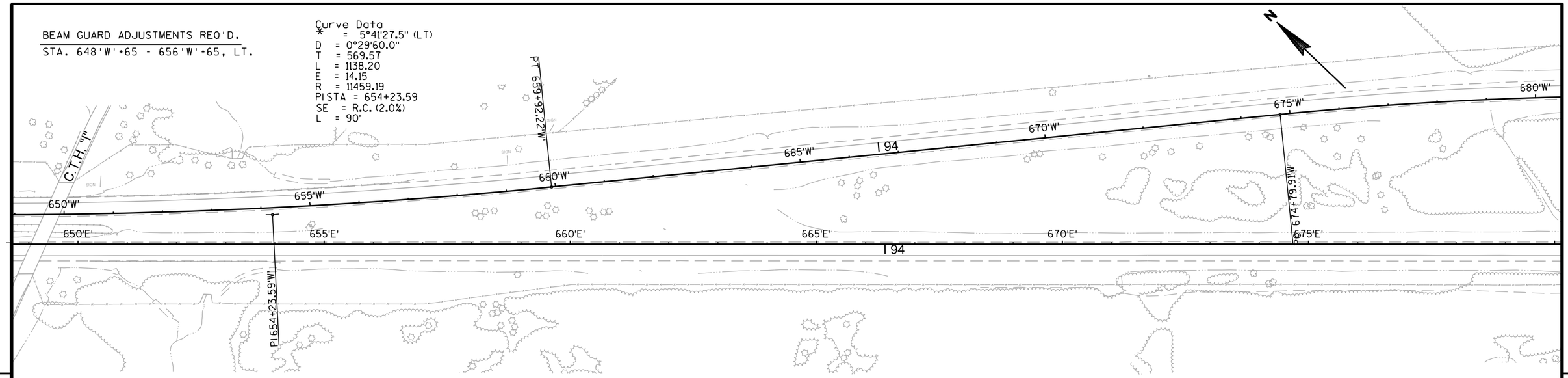




| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PLAN | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : c:±Users±PROJECTS±1022-00-36±Misc±050101_pl_53Mal.DGN PLOT DATE : 12-FEB-2013 14:54 PLOT BY : dotkyk PLOT NAME : PLOT SCALE : 2:1

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 648'W'+65 - 656'W'+65, LT.

Curve Data
* = 5°41'27.5" (LT)
D = 0°29'60.0"
T = 569.57
L = 1138.20
E = 14.15
R = 11459.19
PI STA = 654+23.59
SE = R.C. (2.0%)
L = 90'

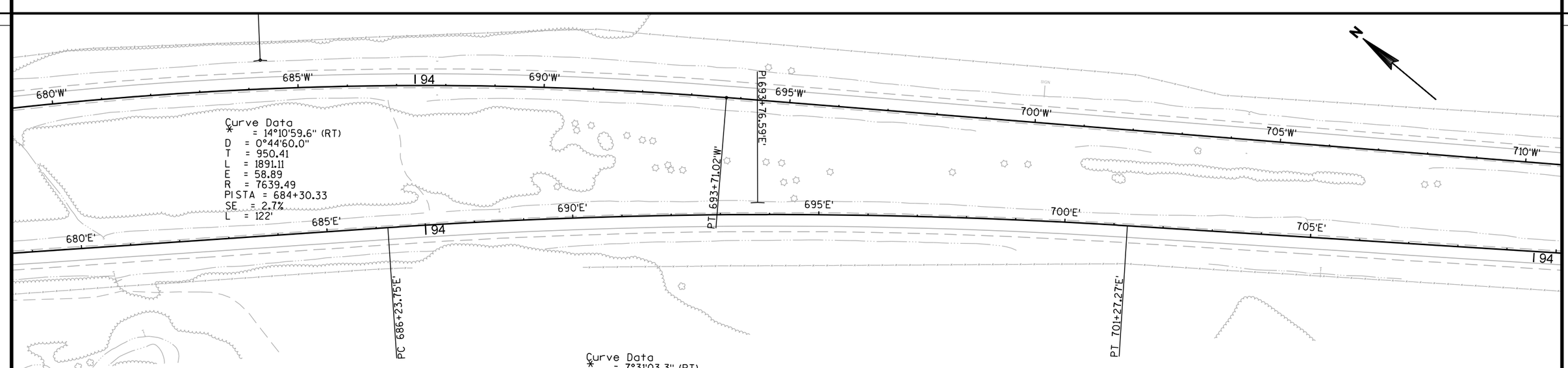



BEAM GUARD ADJUSTMENTS REQ'D.
STA. 647'E'+50 - 654'E'+75, RT.

0 100 FEET 200 300
SCALE

5

5




Curve Data
* = 14°10'59.6" (RT)
D = 0°44'60.0"
T = 950.41
L = 1891.11
E = 58.89
R = 7639.49
PI STA = 684+30.33
SE = 2.7%
L = 122'

Curve Data
* = 7°31'03.3" (RT)
D = 0°29'60.0"
T = 752.84
L = 1503.52
E = 24.70
R = 11459.19
PI STA = 693+76.59
SE = R.C. (2.0%)
L = 90'

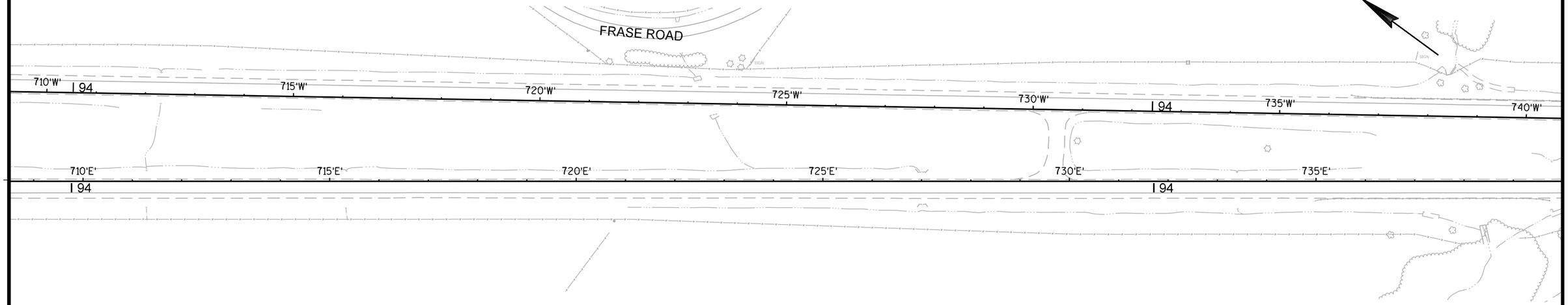
0 100 FEET 200 300
SCALE

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PLAN | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : c:±Users±PROJECTS±1022-00-36±Misc±050101_pl_53Mal.DGN PLOT DATE : 12-FEB-2013 14:54 PLOT BY : dotkyk PLOT NAME : PLOT SCALE : 2:1

INSTALL ITS/FTMS MATERIALS (SEE DETAILS)
STA. 718'W'+00 - 721'W'+00, LT.

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 736'W'+50 - 741'W'+00, LT.




BEAM GUARD ADJUSTMENTS REQ'D.
STA. 735'E'+50 - 739'E'+75, RT.

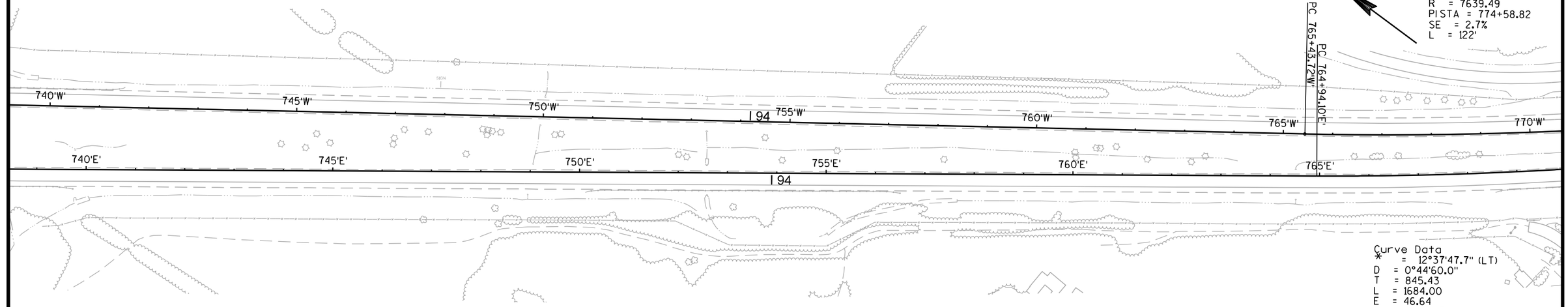
0 100 FEET 200 300
SCALE

5

5

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 736'W'+50 - 741'W'+00, LT.

Curve Data
* = 13°39'40.4" (LT)
D = 0°44'60.0"
T = 915.09
L = 1821.51
E = 54.61
R = 7639.49
PISTA = 774+58.82
SE = 2.7%
L = 122'




Curve Data
* = 12°37'47.7" (LT)
D = 0°44'60.0"
T = 845.43
L = 1684.00
E = 46.64
R = 7639.49
PISTA = 773+39.52
SE = 2.7%
L = 122'

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 735'E'+50 - 739'E'+75, RT.

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 750'E'+65 - 756'E'+52.5, RT.

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 769'E'+10 - 775'E'+72.5, RT.

0 100 FEET 200 300
SCALE

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PLAN | SHEET NO: | E |
|---|---|---|---|---|---|

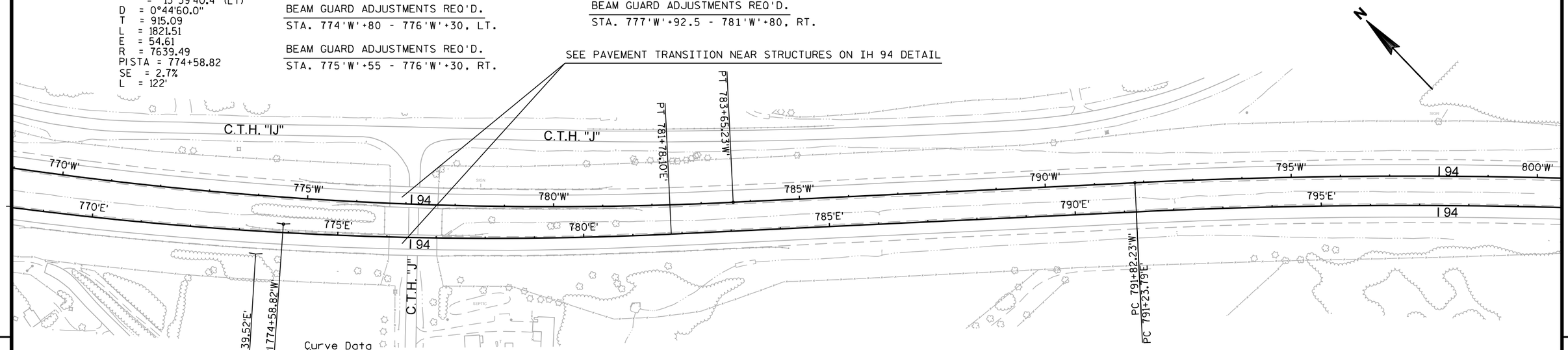
Curve Data
* = 13°39'40.4" (LT)
D = 0°44'60.0"
T = 915.09
L = 1821.51
E = 54.61
R = 7639.49
PISTA = 774+58.82
SE = 2.7%
L = 122'

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 774'W'+80 - 776'W'+30, LT.

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 775'W'+55 - 776'W'+30, RT.

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 777'W'+92.5 - 781'W'+80, RT.

SEE PAVEMENT TRANSITION NEAR STRUCTURES ON IH 94 DETAIL




5

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 773'E'+10 - 775'E'+72.5, LT.

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 769'E'+10 - 775'E'+72.5, RT.

Curve Data
* = 12°37'47.7" (LT)
D = 0°44'60.0"
T = 845.43
L = 1684.00
E = 46.64
R = 7639.49
PISTA = 773+39.52
SE = 2.7%
L = 122'

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 777'E'+30 - 778'E'+05, LT.

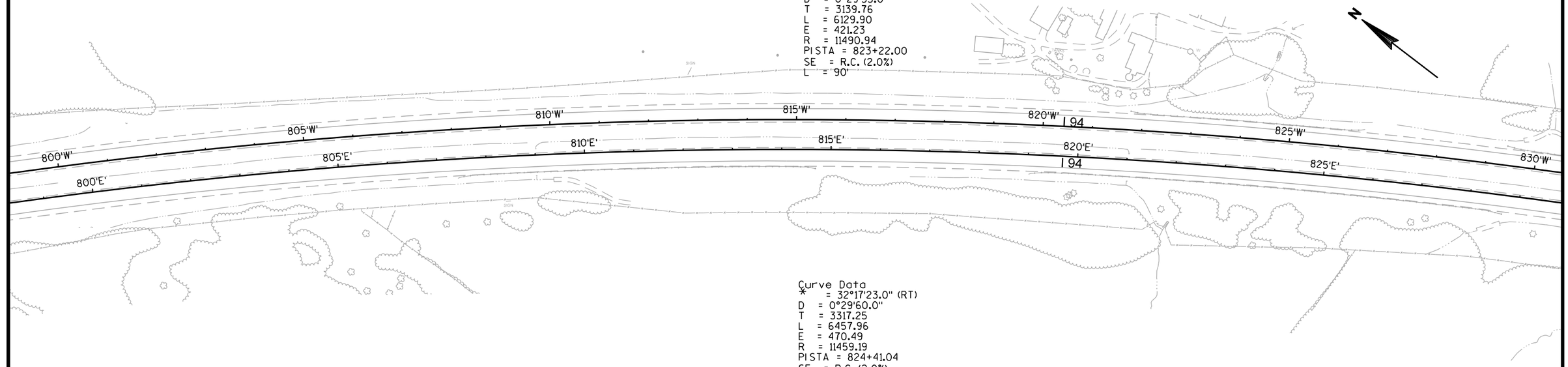
BEAM GUARD ADJUSTMENTS REQ'D.
STA. 777'E'+30 - 784'E'+17.5, RT.

5

Curve Data
* = 30°33'53.0" (RT)
D = 0°29'55.0"
T = 3139.76
L = 6129.90
E = 421.23
R = 11490.94
PISTA = 823+22.00
SE = R.C. (2.0%)
L = 90'

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 821'W'+75 - 826'W'+00, LT.

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 829'W'+40 - 833'W'+40, LT.




Curve Data
* = 32°17'23.0" (RT)
D = 0°29'60.0"
T = 3317.25
L = 6457.96
E = 470.49
R = 11459.19
PISTA = 824+41.04
SE = R.C. (2.0%)
L = 90'

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 807'E'+90 - 814'E'+65, RT.

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 819'E'+50 - 828'E'+62.5, RT.

0 100 FEET 200 300
SCALE

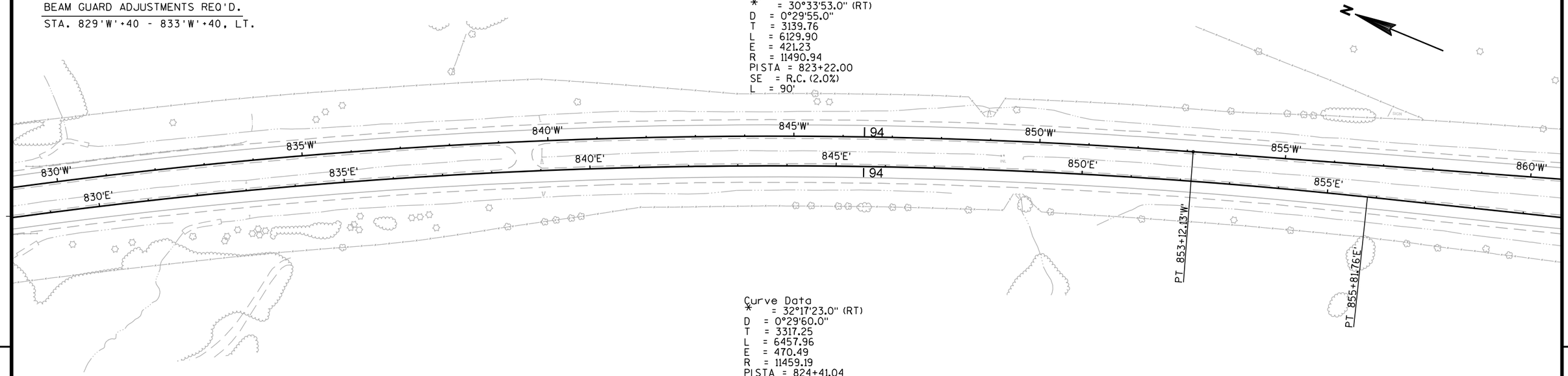
| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PLAN | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : c:±Users±PROJECTS±1022-00-36±Misc±050101_pl_53Mal.DGN PLOT DATE : 12-FEB-2013 14:55 PLOT BY : dotkyk PLOT NAME : PLOT SCALE : 2:1

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 829'W'+40 - 833'W'+40, LT.

Curve Data
* = 30°33'53.0" (RT)
D = 0°29'55.0"
T = 3139.76
L = 6129.90
E = 421.23
R = 11490.94
PI STA = 823+22.00
SE = R.C. (2.0%)
L = 90'




Curve Data
* = 32°17'23.0" (RT)
D = 0°29'60.0"
T = 3317.25
L = 6457.96
E = 470.49
R = 11459.19
PI STA = 824+41.04
SE = R.C. (2.0%)
L = 90'

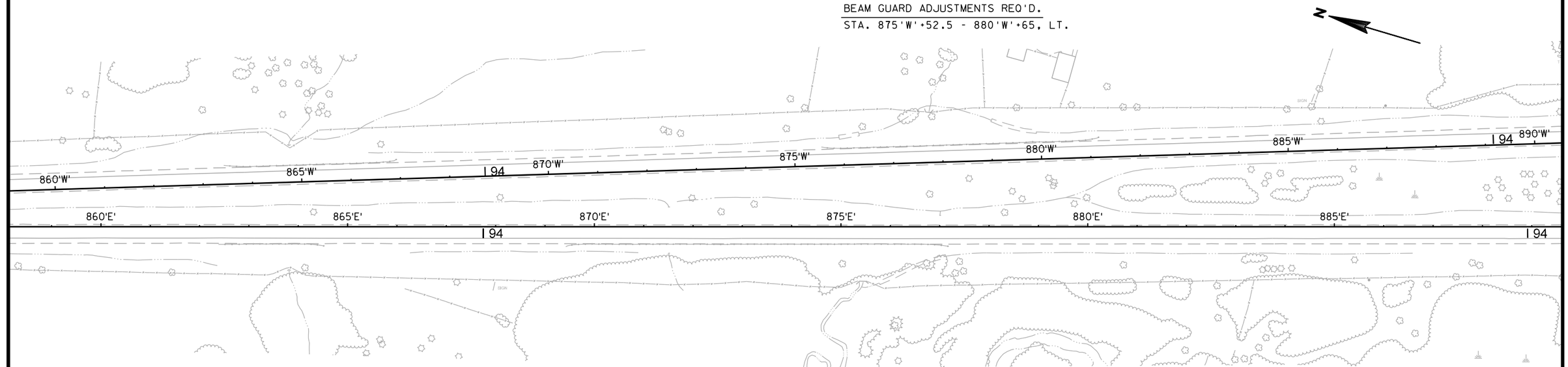
BEAM GUARD ADJUSTMENTS REQ'D.
STA. 819'E'+50 - 828'E'+62.5, RT.

0 100 FEET 200 300
SCALE

5

5

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 875'W'+52.5 - 880'W'+65, LT.




BEAM GUARD ADJUSTMENTS REQ'D.
STA. 862'E'+90 - 864'E'+52.5, RT.

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 869'E'+95 - 877'E'+20, RT.

0 100 FEET 200 300
SCALE

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PLAN | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : c:±Users±PROJECTS±1022-00-36±Misc±050101_pl_53Mal.DGN PLOT DATE : 12-FEB-2013 14:55 PLOT BY : dotkyk PLOT NAME : PLOT SCALE : 2:1

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 898'W'+05 - 901'W'+05, LT.

PC 905+36.28W'

PC 904+75.90E'

Curve Data
* = 11°36'33.0" (LT)
D = 0°14'60.0"
T = 2329.81
L = 4643.67
E = 118.12
R = 22918.33
PISTA = 928+66.09
SE = N.C. (2.0%)
L = 0'

890'W' 895'W' 900'W' 905'W' 910'W' 915'W' 920'W'

I 94

C.T.H. "D"

890'E' 895'E' 900'E' 905'E' 910'E' 915'E'

I 94

PI 918+19.99E'

Curve Data
* = 13°22'47.0" (LT)
D = 0°29'60.0"
T = 1344.09
L = 2675.95
E = 78.56
R = 11459.19
PISTA = 918+19.99
SE = R.C. (2.0%)
L = 90'

0 100 FEET 200 300
SCALE

BEAM GUARD ADJUSTMENTS REQ'D.
STA. 892'E'+05 - 895'E'+80, RT.

SEE PAVEMENT TRANSITION NEAR STRUCTURES ON IH 94 DETAIL

5

5

Curve Data
* = 11°36'33.0" (LT)
D = 0°14'60.0"
T = 2329.81
L = 4643.67
E = 118.12
R = 22918.33
PISTA = 928+66.09
SE = N.C. (2.0%)
L = 0'

920'W' 925'W' 930'W' 935'W' 940'W' 945'W'

PT 931+51.98E'

I 94

920'E' 925'E' 930'E' 935'E' 940'E' 945'E'

I 94

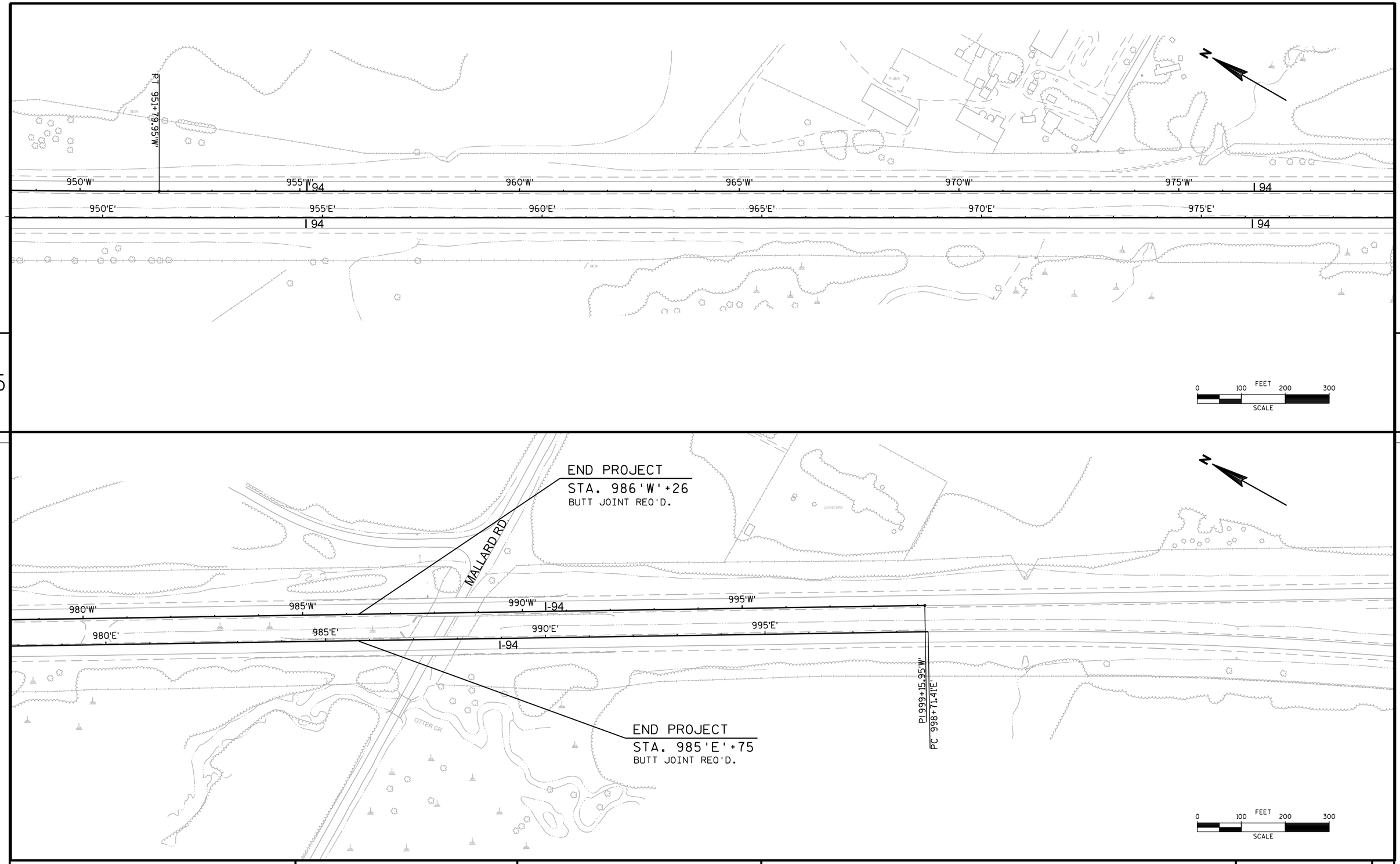
PI 928+66.09W'

Curve Data
* = 13°22'47.0" (LT)
D = 0°29'60.0"
T = 1344.09
L = 2675.95
E = 78.56
R = 11459.19
PISTA = 918+19.99
SE = R.C. (2.0%)
L = 90'

0 100 FEET 200 300
SCALE

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PLAN | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : c:±Users±PROJECTS±1022-00-36±Misc±050101_pl_53Mal.DGN PLOT DATE : 12-FEB-2013 14:55 PLOT BY : dotkyk PLOT NAME : PLOT SCALE : 2:1

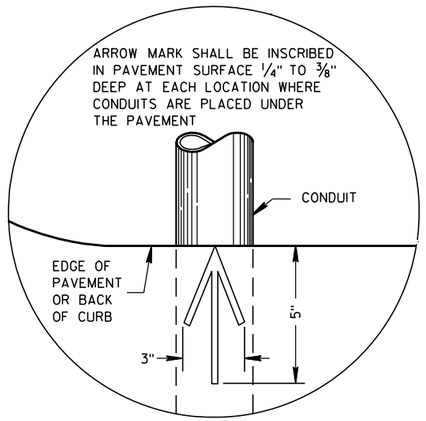



| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PLAN | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : c:±Users±PROJECTS±1022-00-36±Misc±050101_pl_53Mal.DGN PLOT DATE : 12-FEB-2013 14:55 PLOT BY : dotkyk PLOT NAME : PLOT SCALE : 2:1

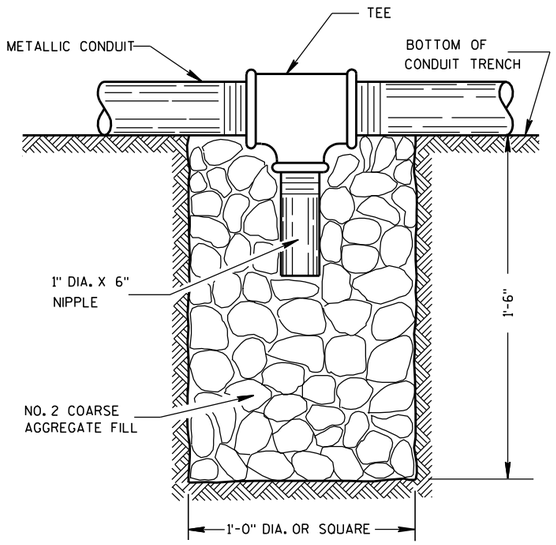
# Standard Detail Drawing List

| | |
|---|---|
| 09B02-07 | CONDUIT |
| 09B04-10 | PULL BOX |
| 13A05-05A | SHOULDER RUMBLE STRIP, MILLING |
| 13A05-05B | SHOULDER RUMBLE STRIP, MILLING |
| 14B15-07A | STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS |
| 14B15-07B | STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS |
| 14B15-07C | STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS |
| 14B16-04A | ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2 |
| 14B18-06A | STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS) |
| 15C08-15A | PAVEMENT MARKING (MAINLINE) |
| 15C14-01 | AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS |
| 15D12-02 | TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. |
| 15D15-01 | TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE |
| 15D27-01 | TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH |



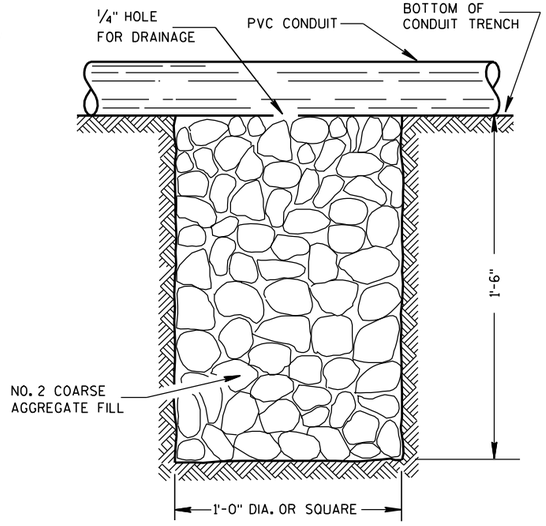

PLAN VIEW

**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.

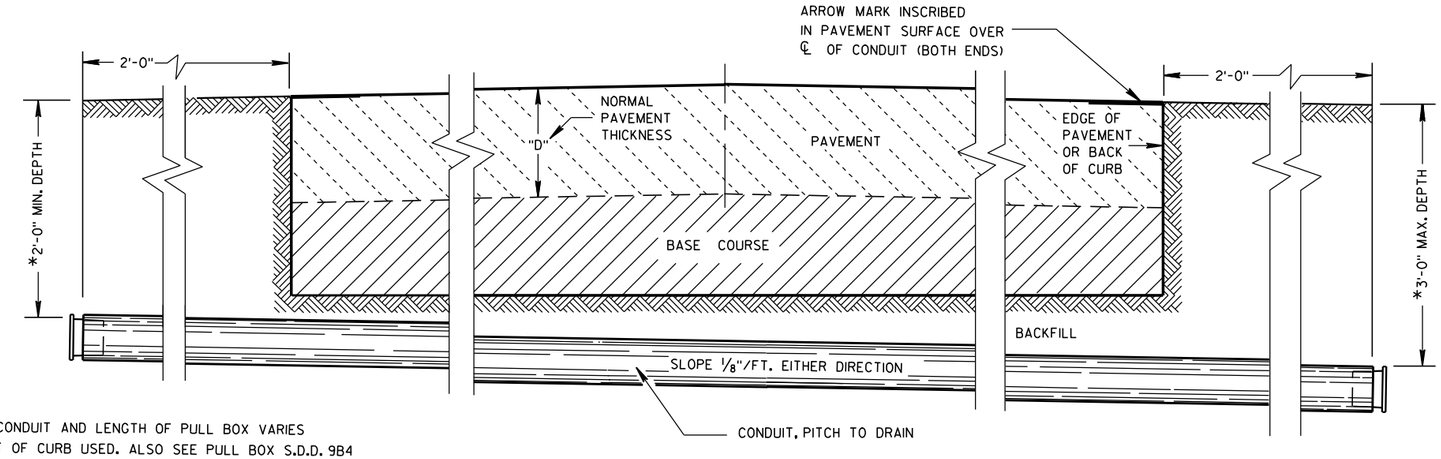
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.).

POLY ROPE OR A PULL 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

10/23/03 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI

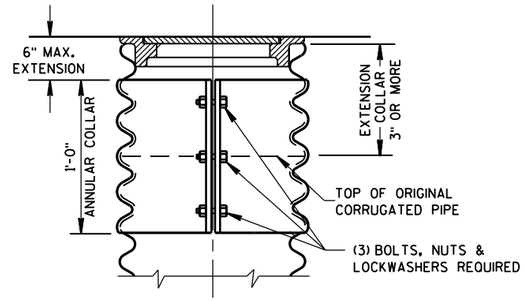
FHWA — 38 — HWYS

## TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

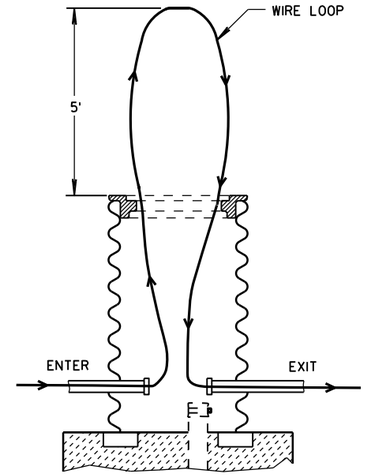
| DIMENSION IN INCHES | | CORRUGATED STEEL PIPE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| PIPE DIAMETER (INSIDE) | A | 12 | 12 | 12 | 18 | 18 | 18 | 24 | 24 | 24 |
| PIPE LENGTH ** | B | 24 | 30 | 36 | 24 | 30 | 36 | 36 | 42 | 48 |
| WALL THICKNESS | C | 0.064 | 0.064 | 0.064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

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

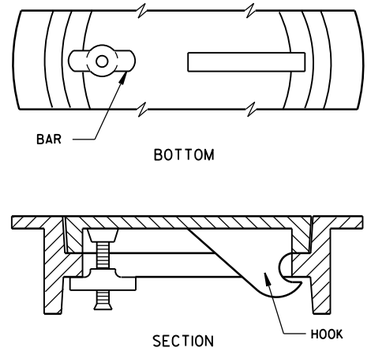
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.




CORRUGATED PIPE EXTENDER

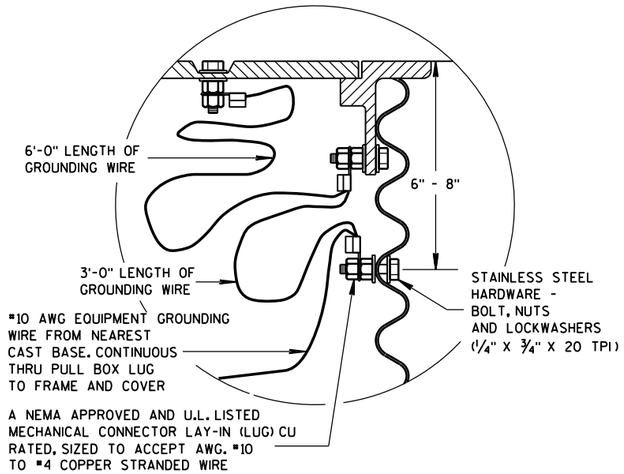



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

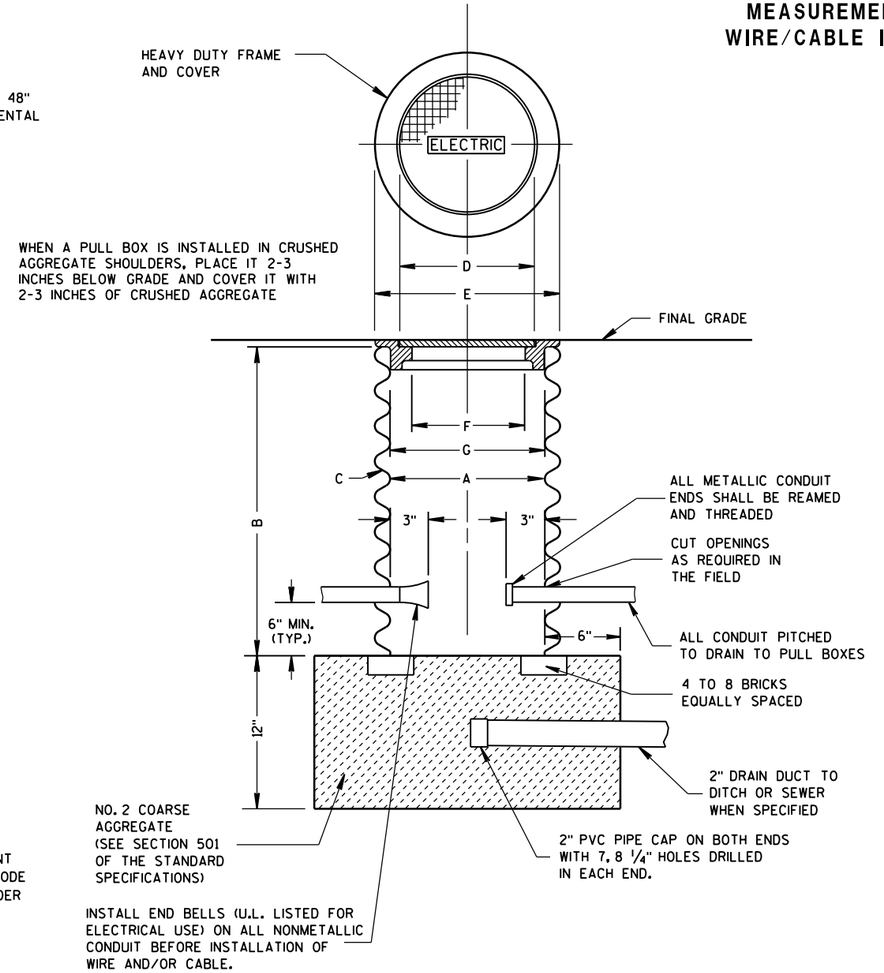



ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE




EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES




PULL BOX

## GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

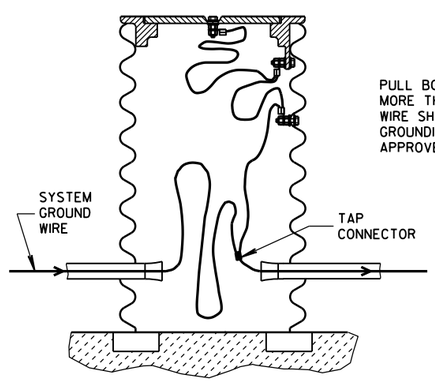
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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




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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

**PULL BOX**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-7-2013
DATE

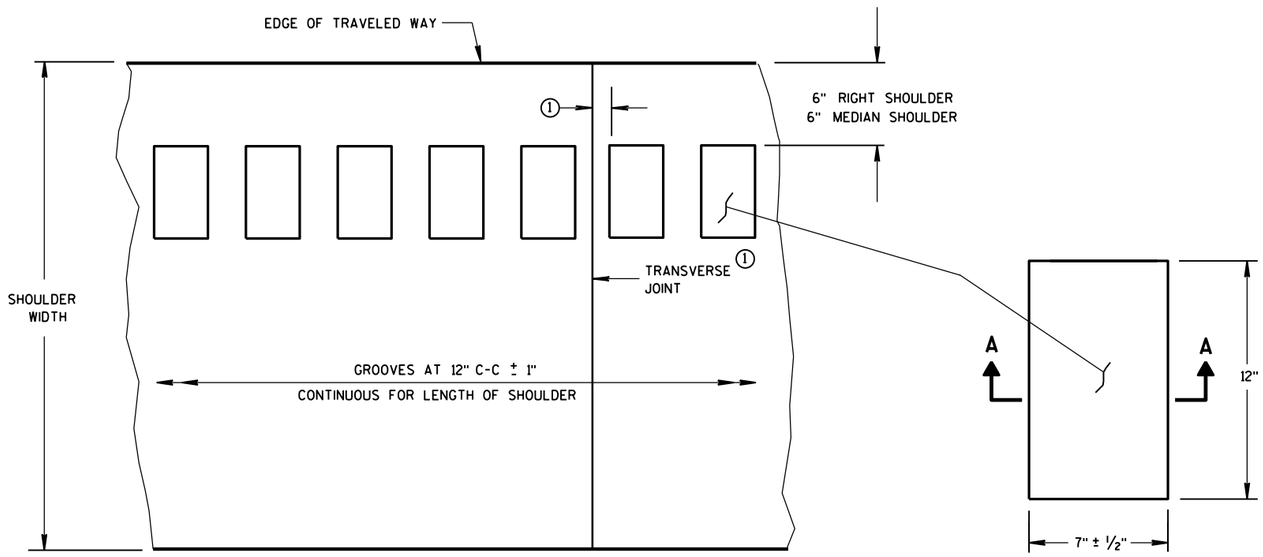
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA




6


S.D.D. 9 B 4-10




PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

## PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

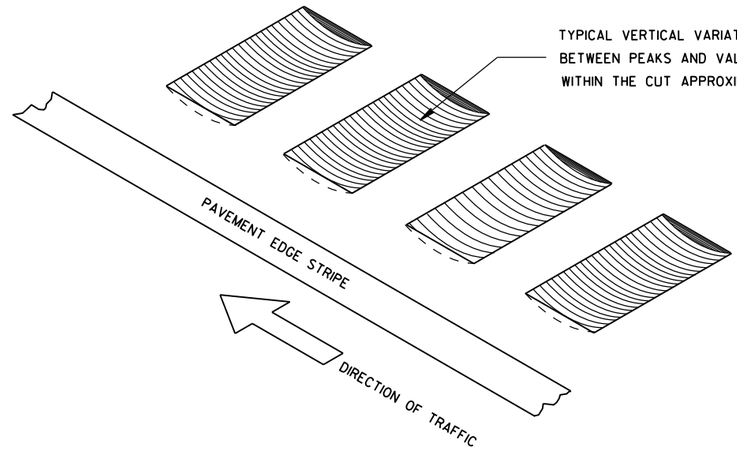
## GENERAL NOTES

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

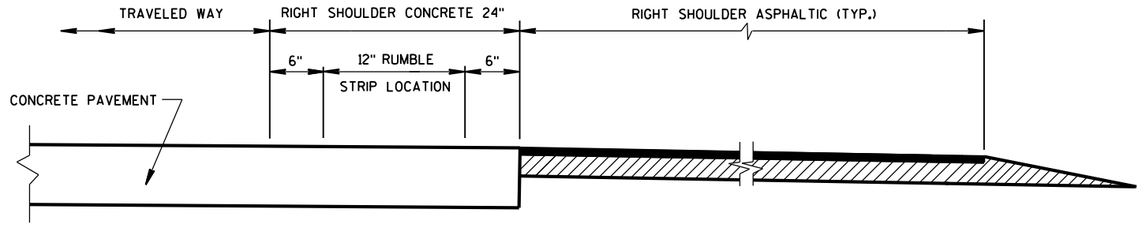
RUMBLE STRIPS ON EXPRESSWAYS

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.

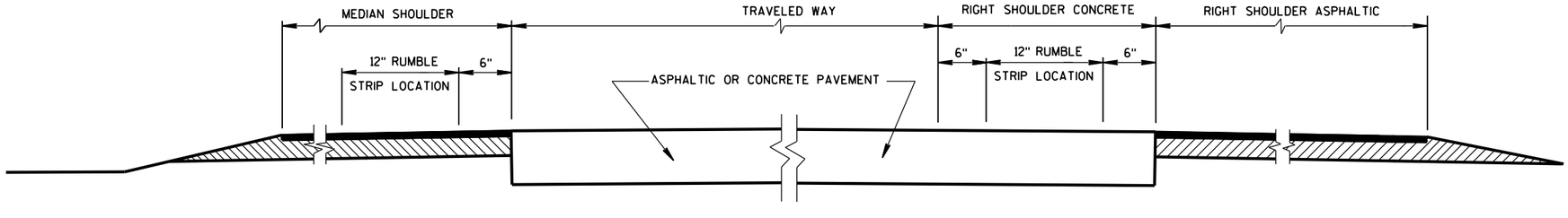
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.




ISOMETRIC



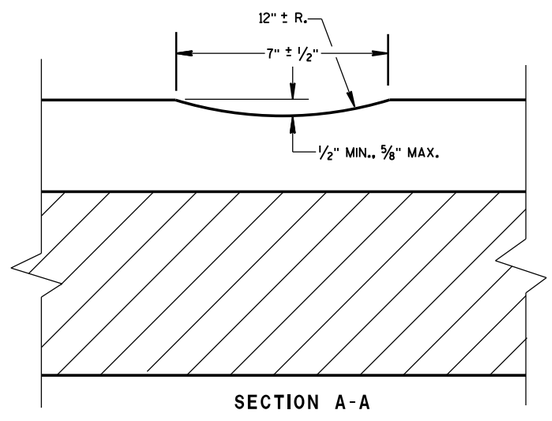

SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)




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

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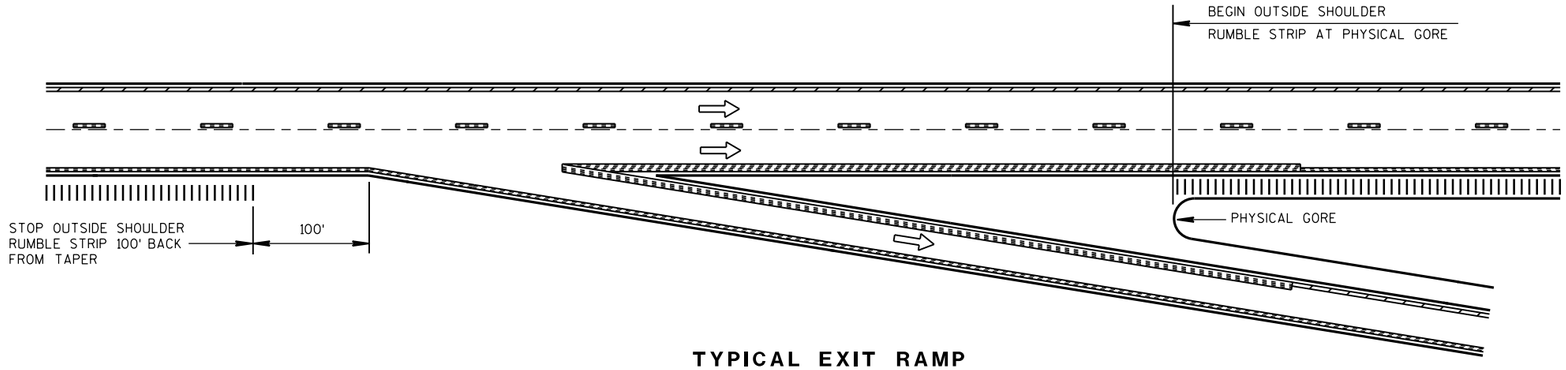
S.D.D. 13 A 5-5a



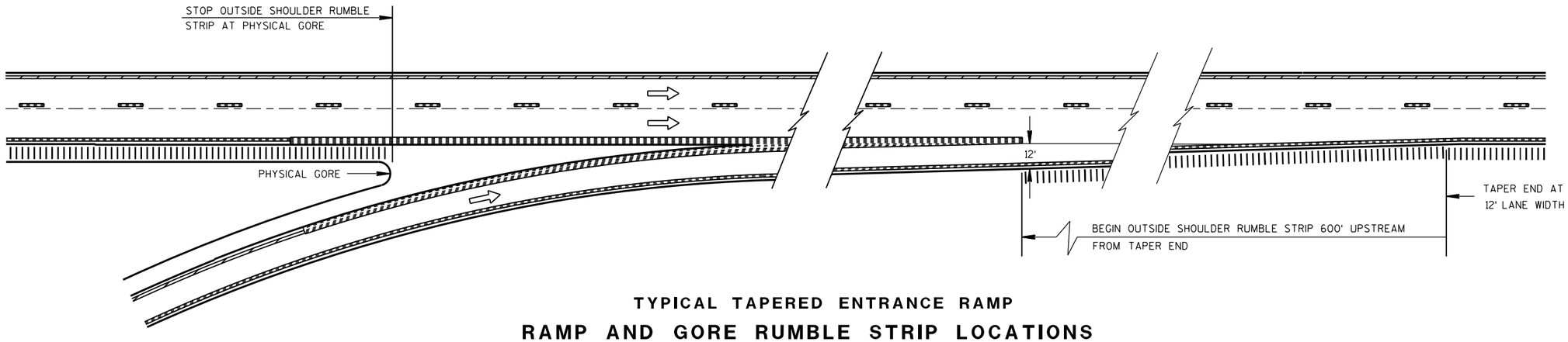

**TYPICAL EXIT RAMP**

## NOTES:

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

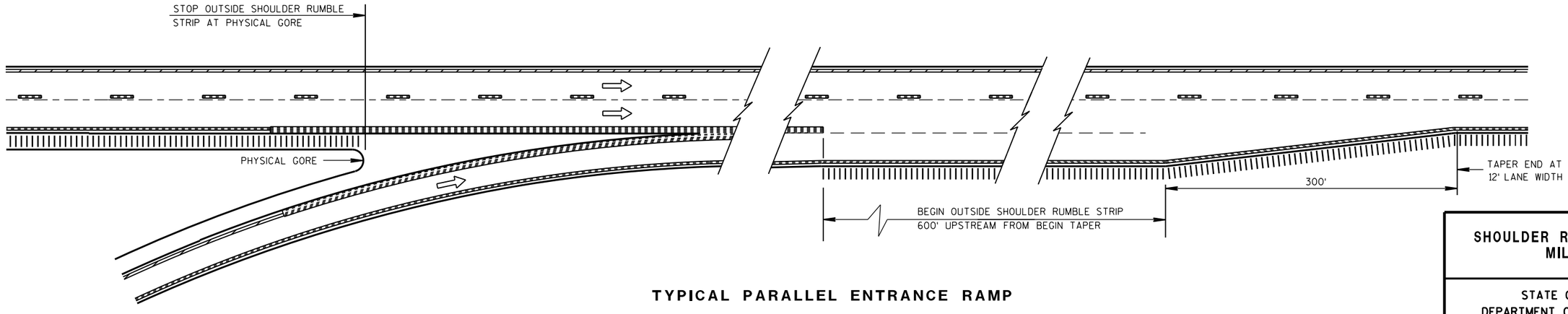
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

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



6

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

## 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) 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.

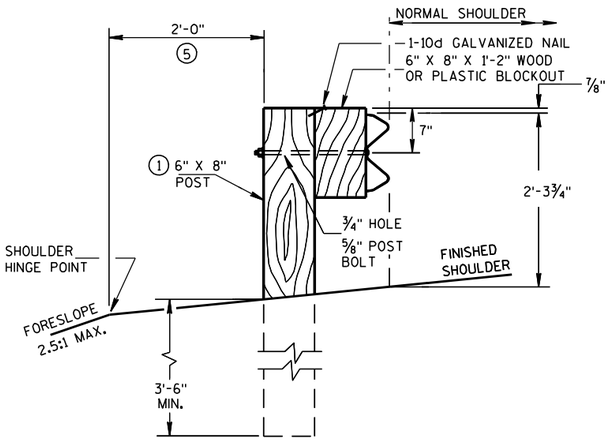
(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

(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).

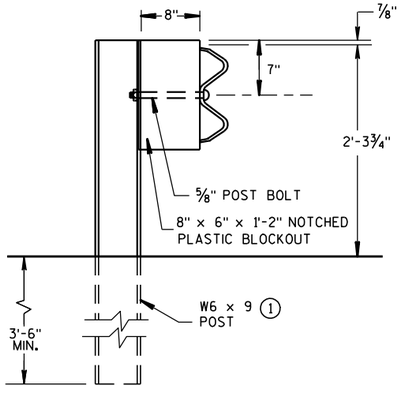
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

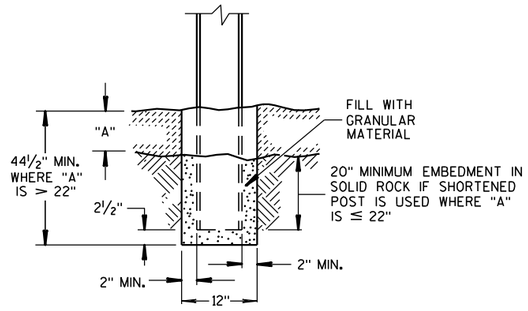
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



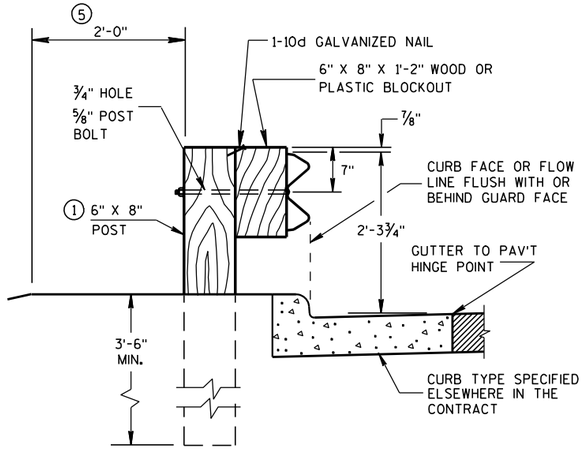

END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



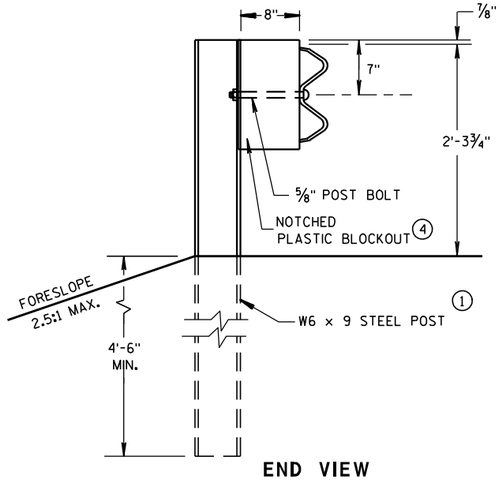

END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



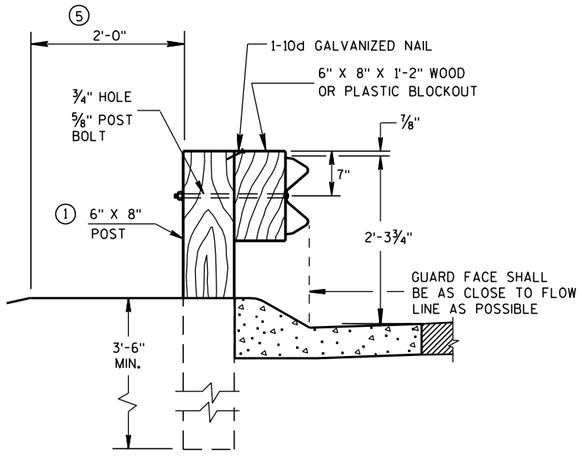

END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



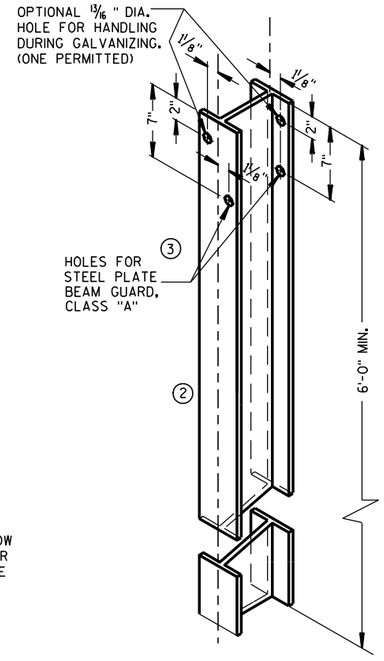

END VIEW
LOCATED ALONG A CURBED ROADWAY




END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

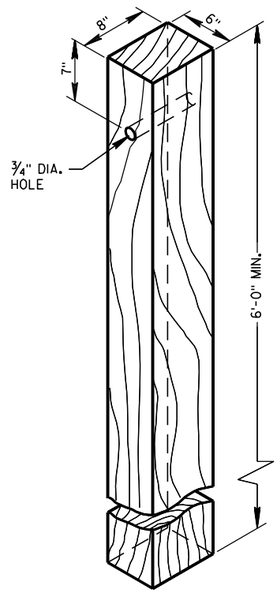



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

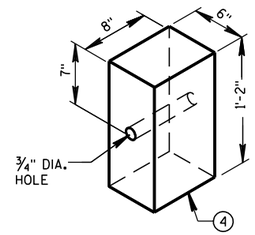



STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

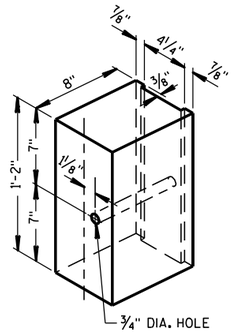
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



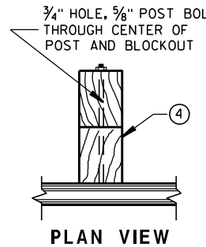

WOOD POST
(6"X8") NOMINAL



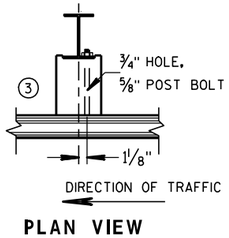

WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS




TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS




PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM




PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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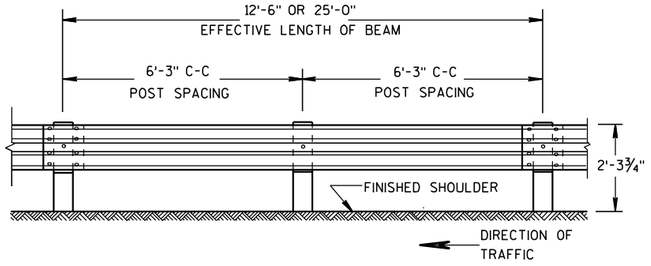
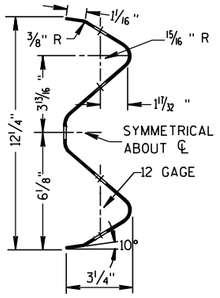
S.D.D. 14 B 15-7a

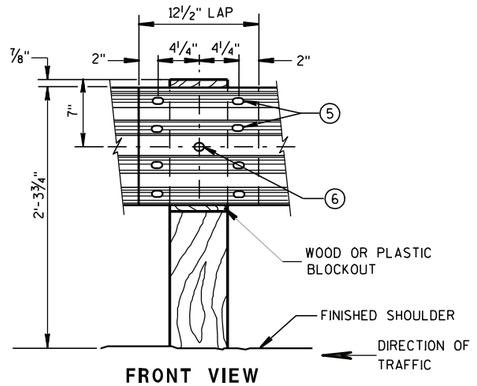



FRONT VIEW

## POST SPACING STANDARD INSTALLATION




## SECTION THRU W BEAM

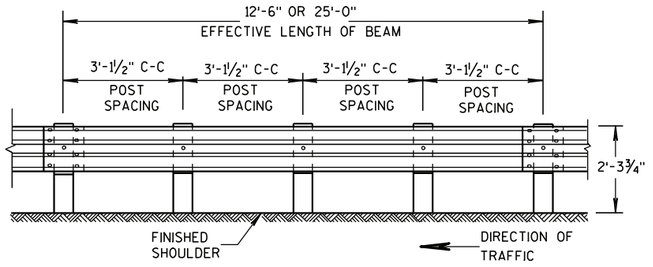



FRONT VIEW

## BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

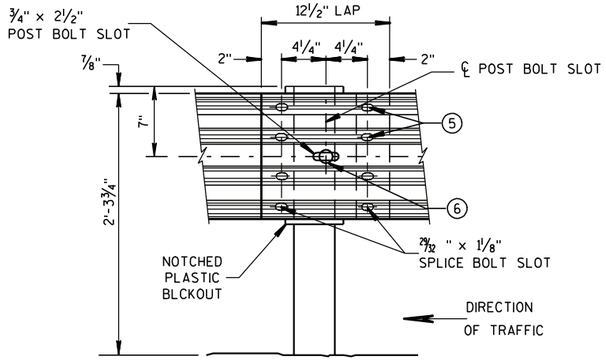
## GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 8 - 5/8" ϕ X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
6. 5/8" ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.




FRONT VIEW

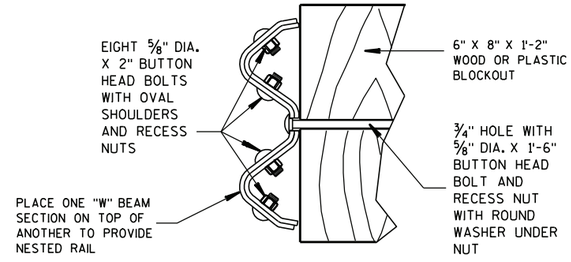
## POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)




FRONT VIEW

## BEAM SPLICE AT STEEL POST

## TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

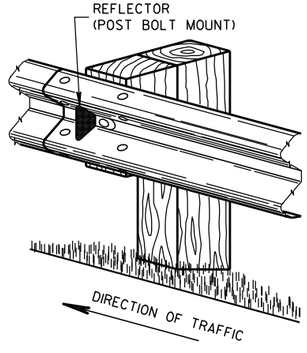


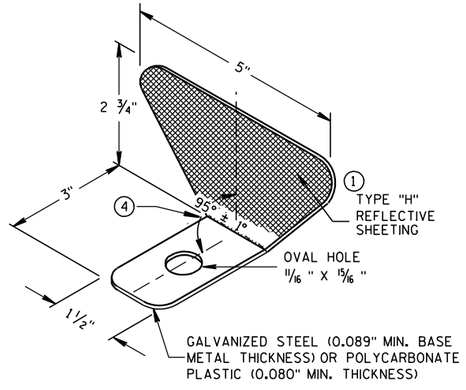

### NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (2)

| | 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 (3) | 6 |
| | > 200' | 50' C-C | 1 | |
| TWO WAY TRAFFIC | < 200' | 50' C-C | 2 | 3 |
| | > 200' | 100' C-C | 2 (4) | |




## ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....T

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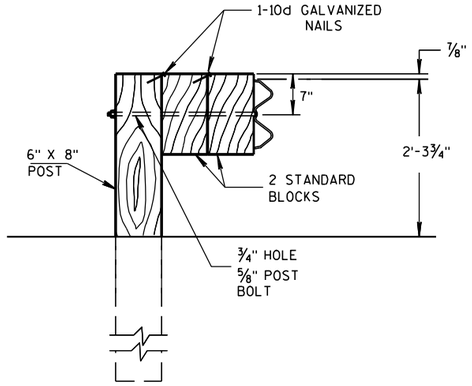
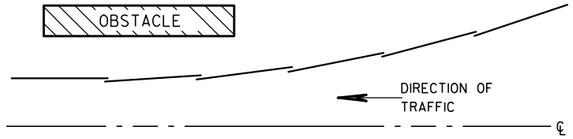
S.D.D. 14 B 15-7b

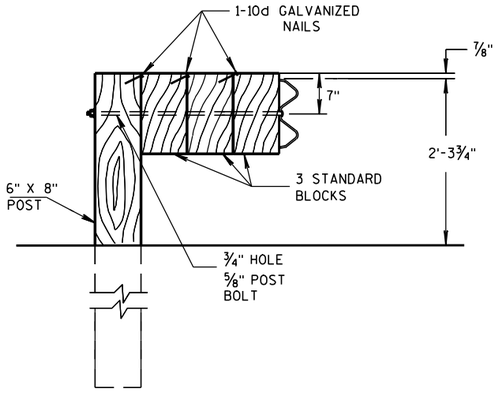



**DETAIL FOR DOUBLE BLOCKS**

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

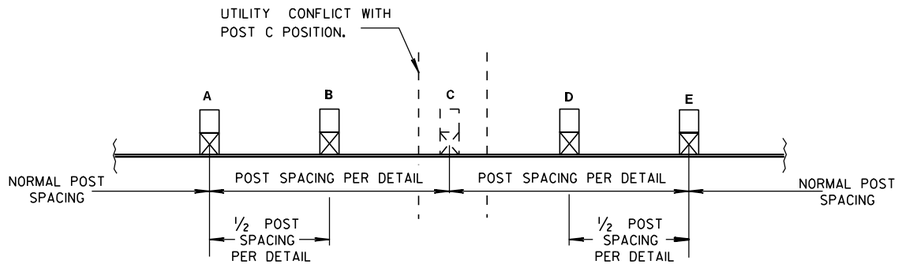



**PLAN VIEW**
**BEAM LAPPING DETAIL**




**DETAIL FOR TRIPLE BLOCKS**

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.




**POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION**

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.

**STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

| 5/23/11 | /S/ Jerry H. Zogg | |
|---|---|---|
| DATE | ROADWAY STANDARDS ENGINEER | ENT |

FHWA





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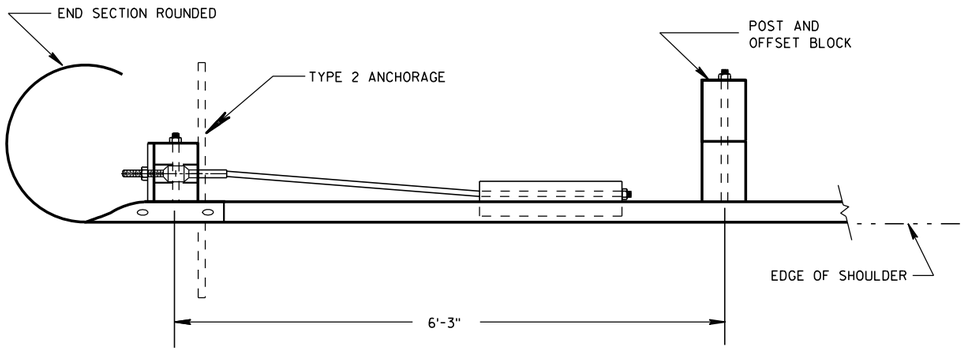
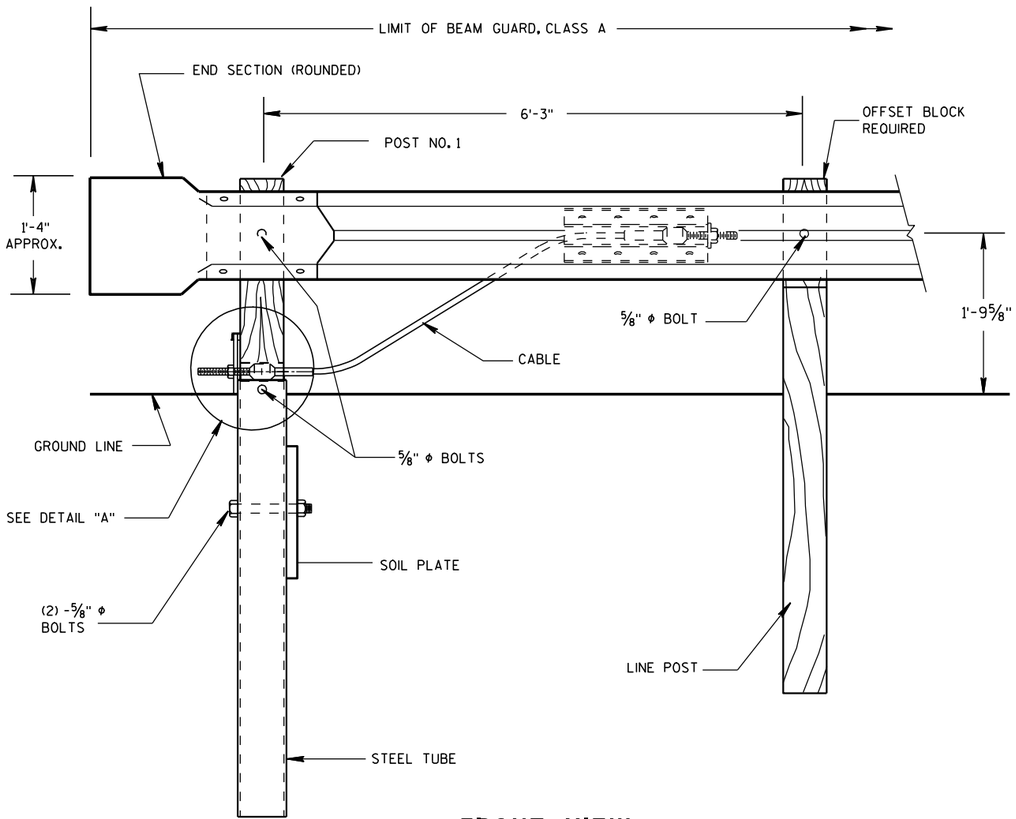
S.D.D. 14 B 15-7c



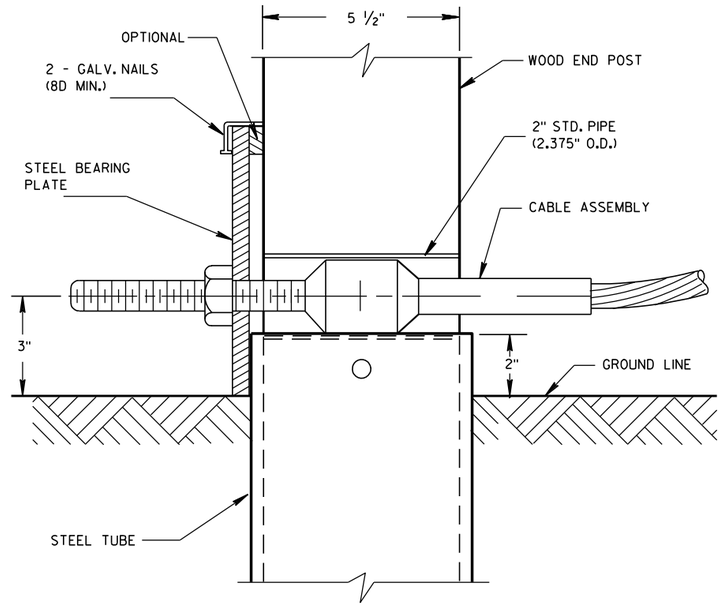

**PLAN VIEW**




**FRONT VIEW**

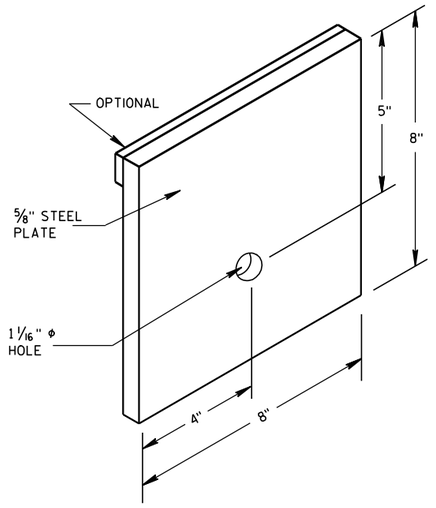
## END TREATMENT WITH TYPE 2 ANCHORAGE

(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





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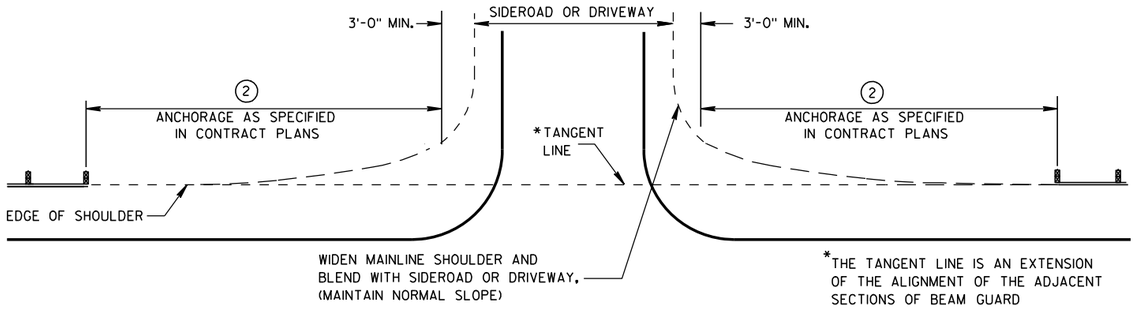
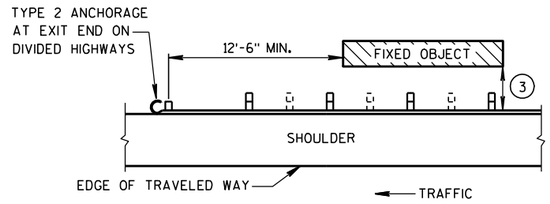
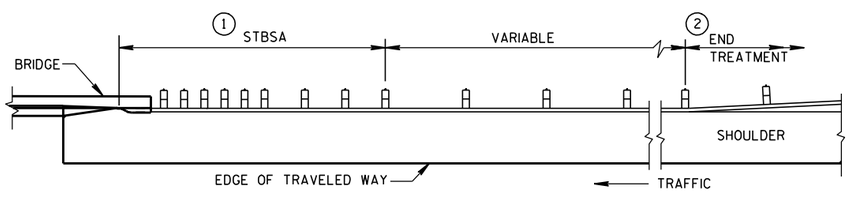
S.D.D. 14 B 16-4a



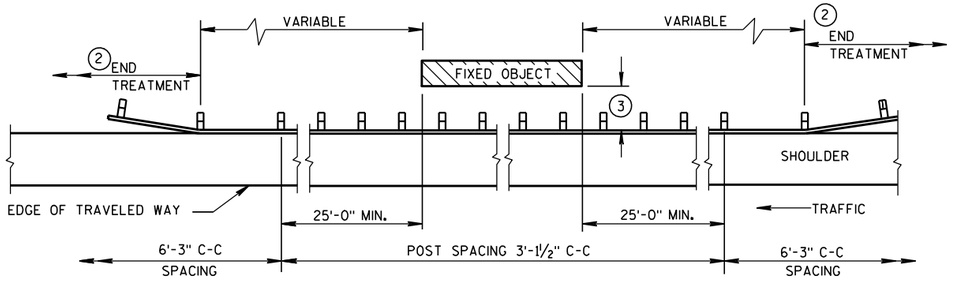

## BEAM GUARD AT SIDEROADS OR DRIVEWAYS




## BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

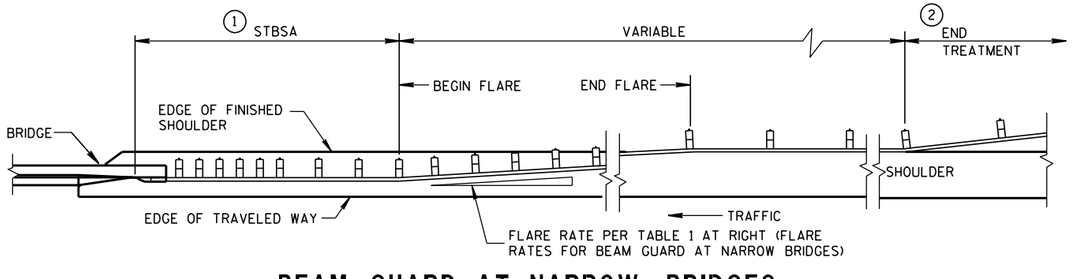



## BEAM GUARD AT FULL WIDTH BRIDGES




## BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")




## BEAM GUARD AT NARROW BRIDGES

(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

**TABLE 1**
**FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES**

| POSTED SPEED (MPH) | FLARE RATE |
|---|---|
| 25 | 13:1 |
| 30 | 15:1 |
| 35 | 16:1 |
| 40 | 18:1 |
| 45 | 21:1 |
| 50 | 24:1 |
| 55 | 26:1 |
| 65 | 30:1 |

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH 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.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

| MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT | POST SPACING |
|---|---|
| 3'-6" | 3' - 1½" |
| 4'-6" | 6' - 3" |

**STEEL PLATE BEAM GUARD CLASS "A" AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-21-07 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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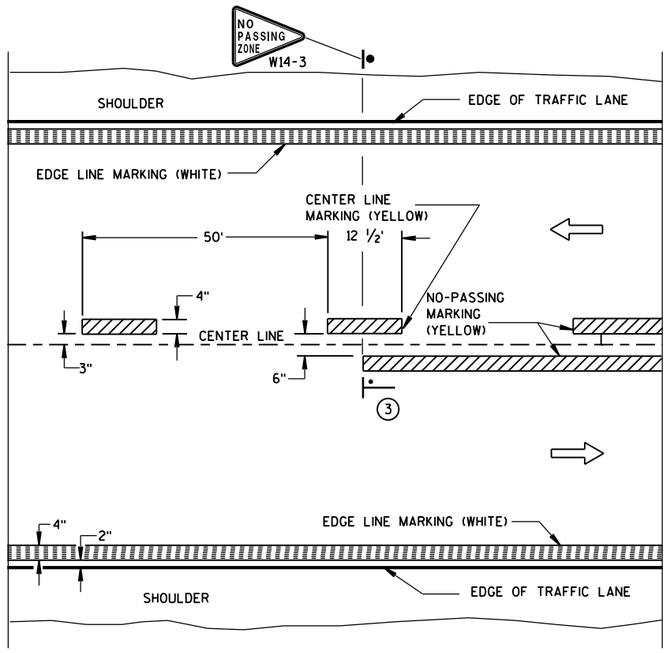
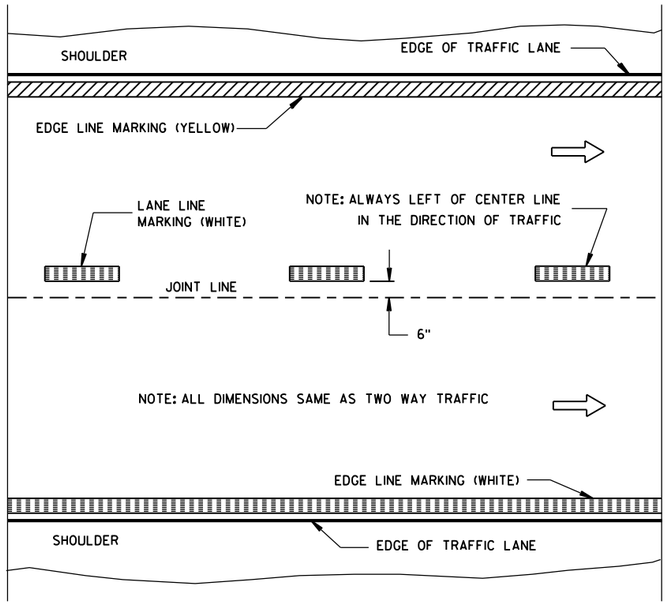
S.D.D. 14 B 18-6a




TWO WAY TRAFFIC




ONE WAY TRAFFIC

## PERMANENT PAVEMENT MARKING

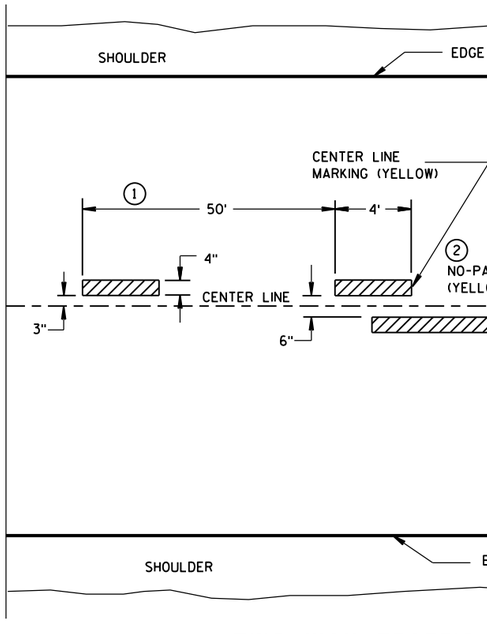
## GENERAL NOTES

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

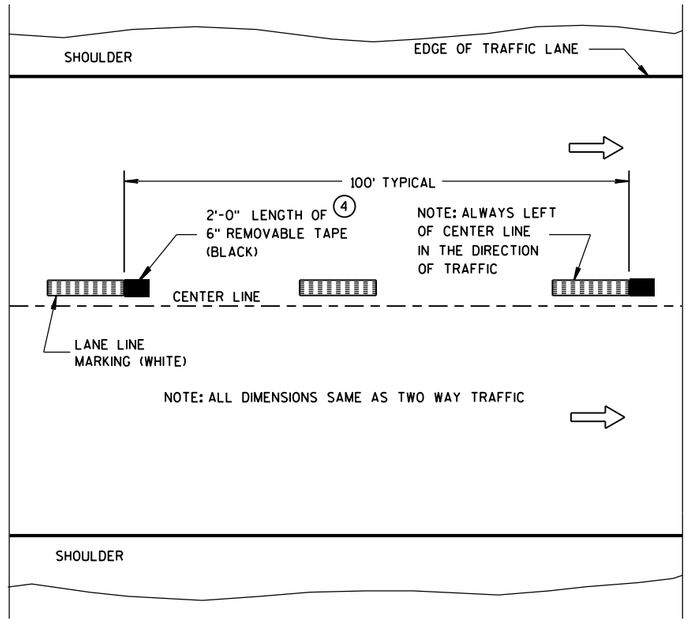
1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING 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



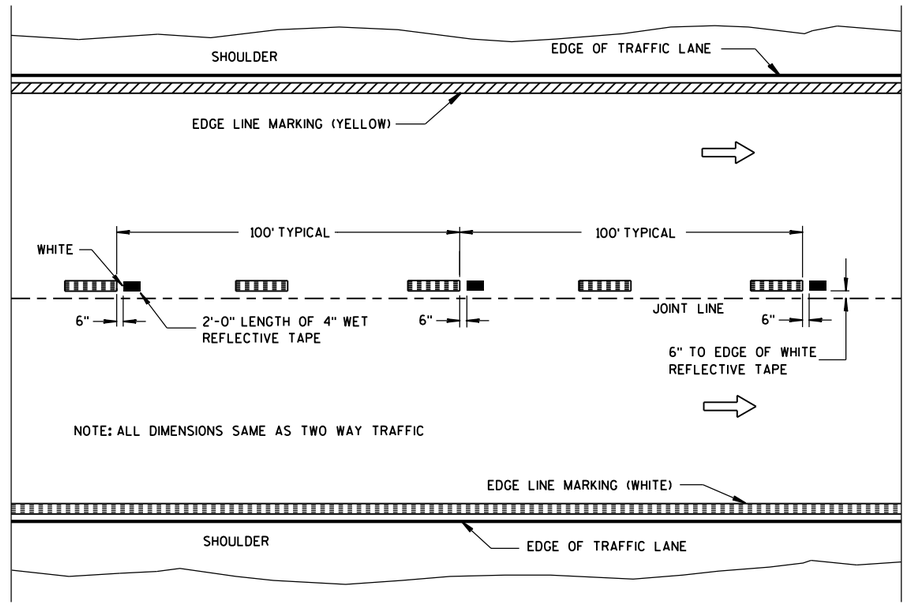

TWO WAY TRAFFIC




ONE WAY TRAFFIC

## TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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




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
10-1-2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA



6

S.D.D. 15 C 8-15a

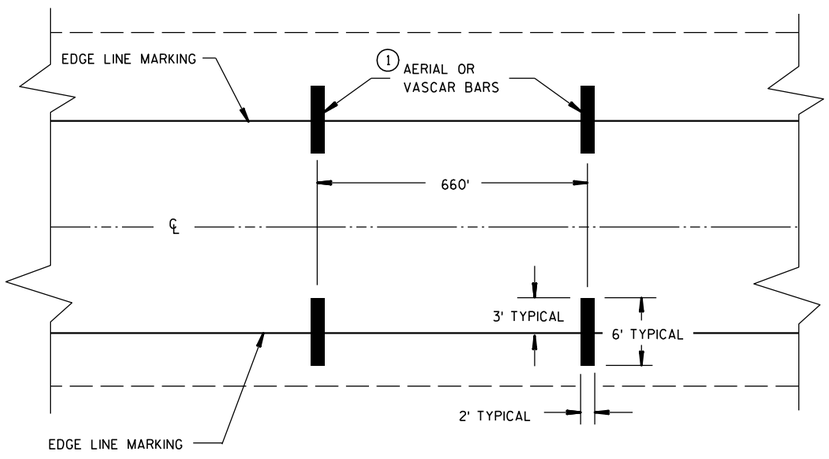
6

S.D.D. 15 C 8-15a

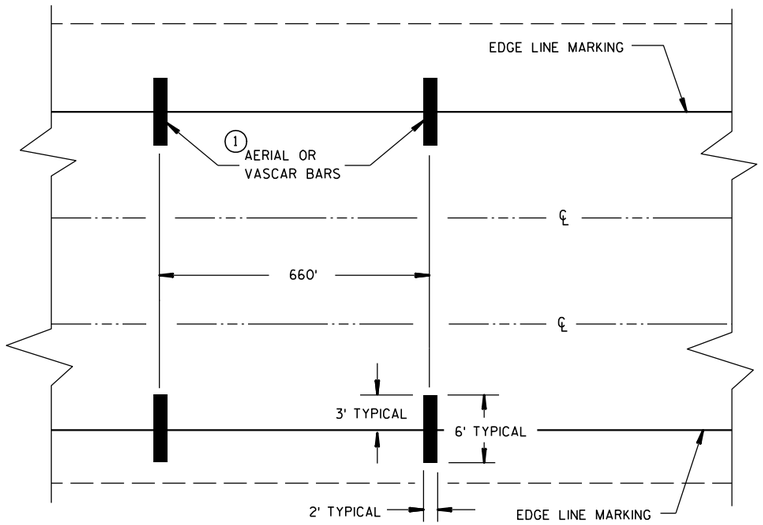
## GENERAL NOTES

(1) NUMBER OF VASCAR OR AERIAL BARS SHALL BE A MINIMUM OF 2 OR A MAXIMUM OF 5 AT 660' SPACING.

A CAR CAN BE PROVIDED BY THE WISCONSIN STATE PATROL FOR TRAFFIC CONTROL.




TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC




TYPICAL FOR MULTILANE TRAFFIC

## SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

6

S.D.D. 15 C 14-1

| AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS | |
|---|---|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED | |
| 4/23/01 DATE | /S/ Chester L Spong CHIEF SIGNS AND MARKINGS ENGINEER |
| FHWA | |



6

S.D.D. 15 C 14-1

## LEGEND

- POST WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN IN DRUM
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- 8' TYPE III BARRICADE
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

## 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"x48" 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.

(1) 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.

## GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

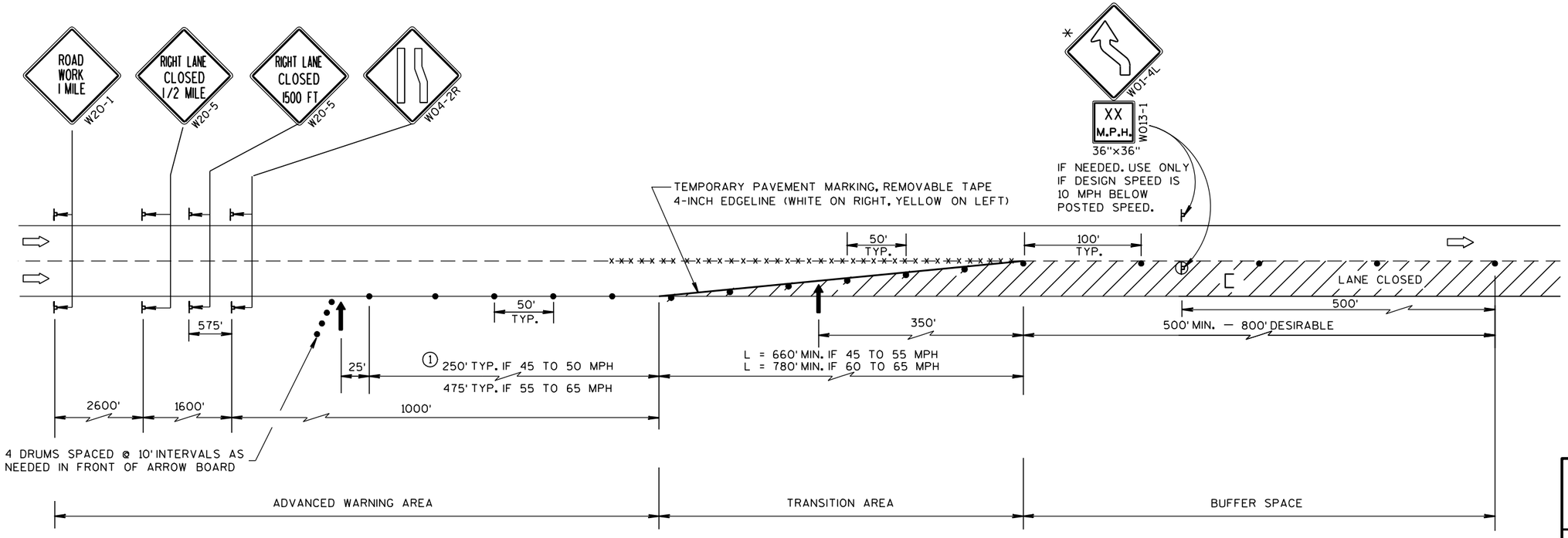
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

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.



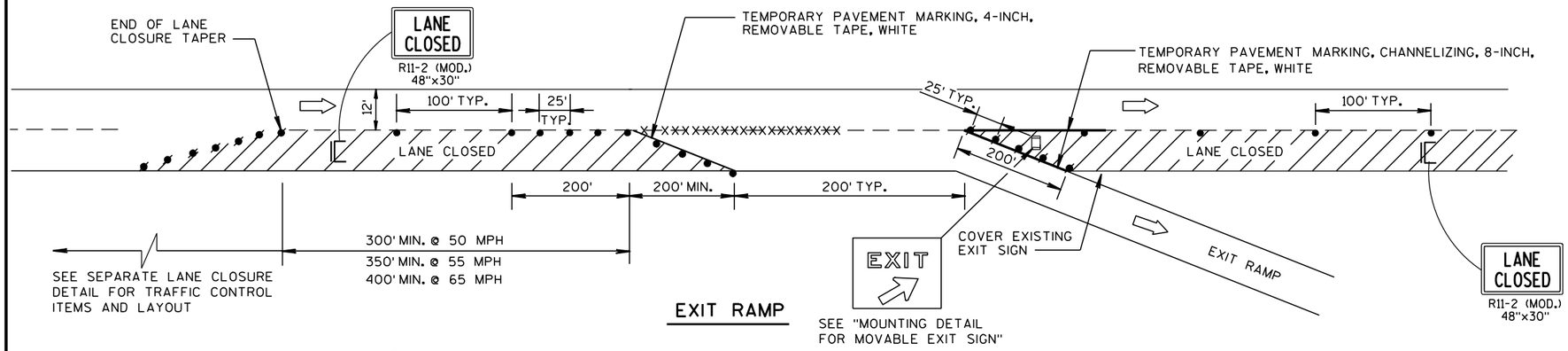

**TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

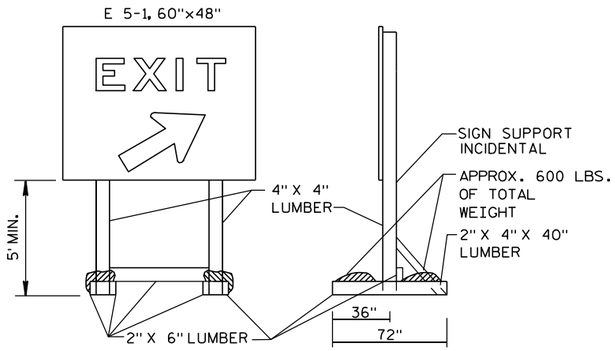
APPROVED
8-7-95 DATE
/S/ Chester J. [illegible]
DIRECTOR, OFFICE O
FHWA



6
S.D.D. 15 D 12-2

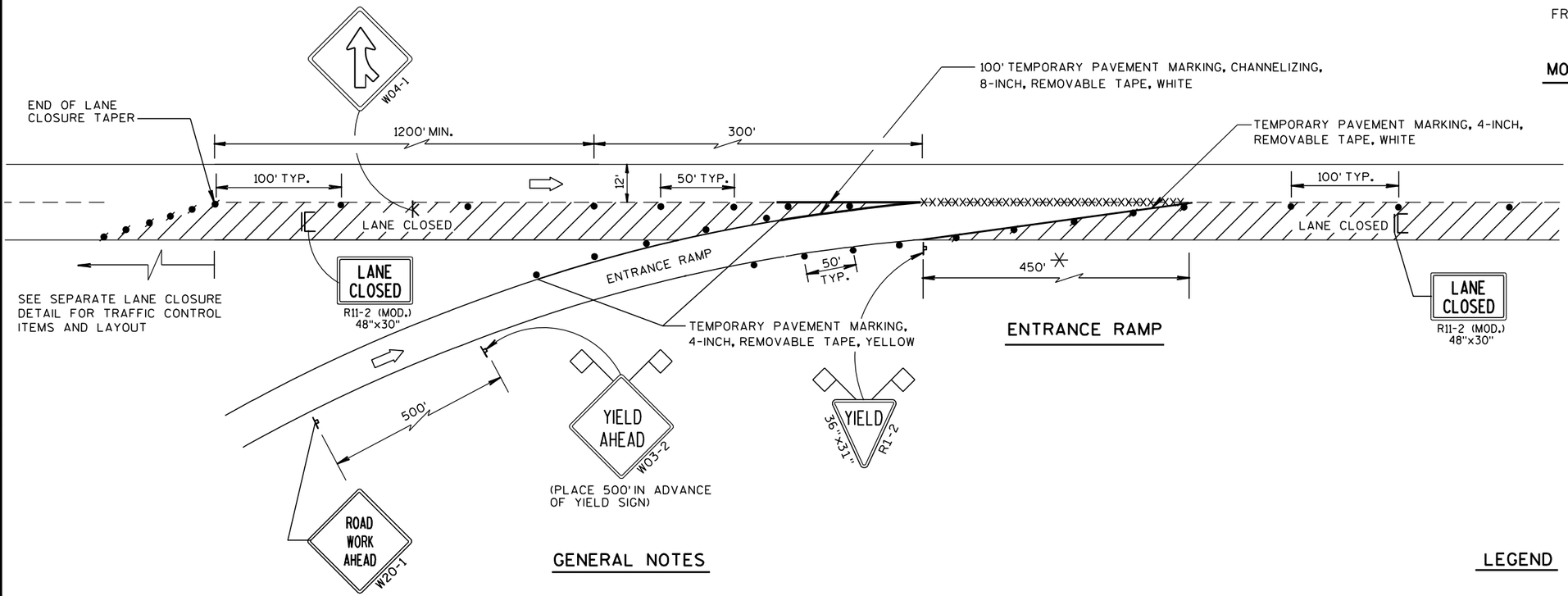



## EXIT RAMP




NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

## MOUNTING DETAIL FOR MOVABLE EXIT SIGN




## 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 R11-2 (MOD.) "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

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

# TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000
DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKING ENGINEER
FHWA


6
S.D.D. 15 D 15-1

## SYMBOLS

- TRAFFIC CONTROL DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW
- ARROW BOARD IN CAUTION MODE

## 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.

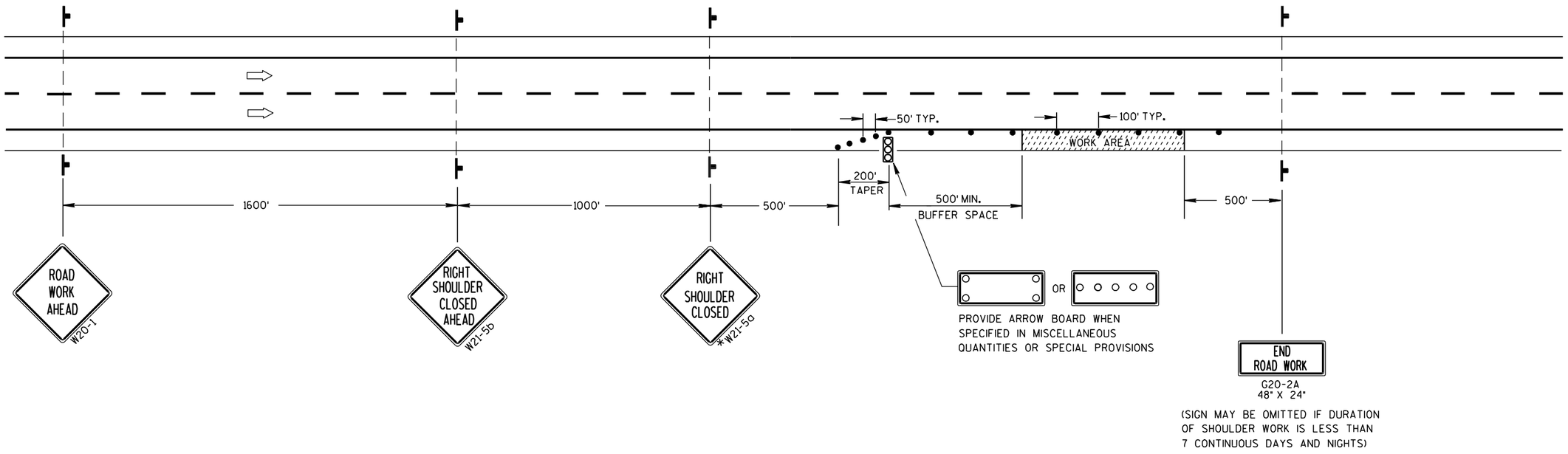
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

5/23/00
DATE

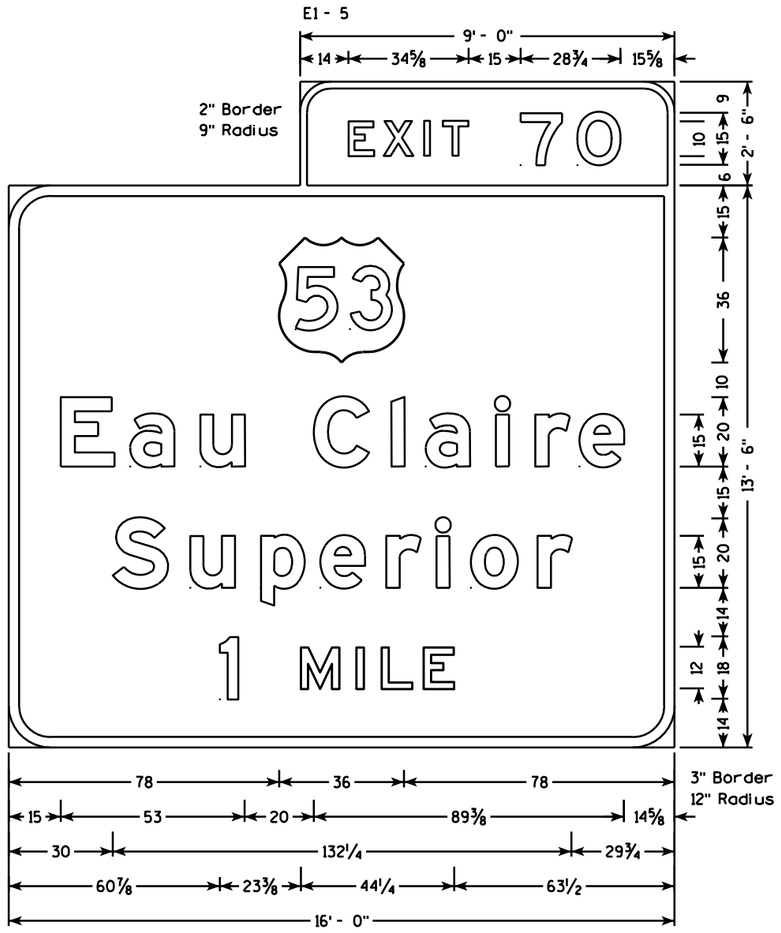
/S/ Chester J Sapas
CHIEF SIGNS AND MARKING ENGINEER

FHWA

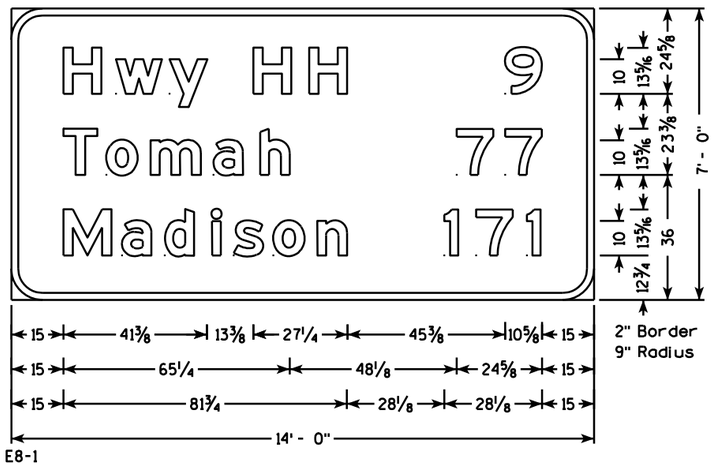



6


S.D.D. 15 D 27-1



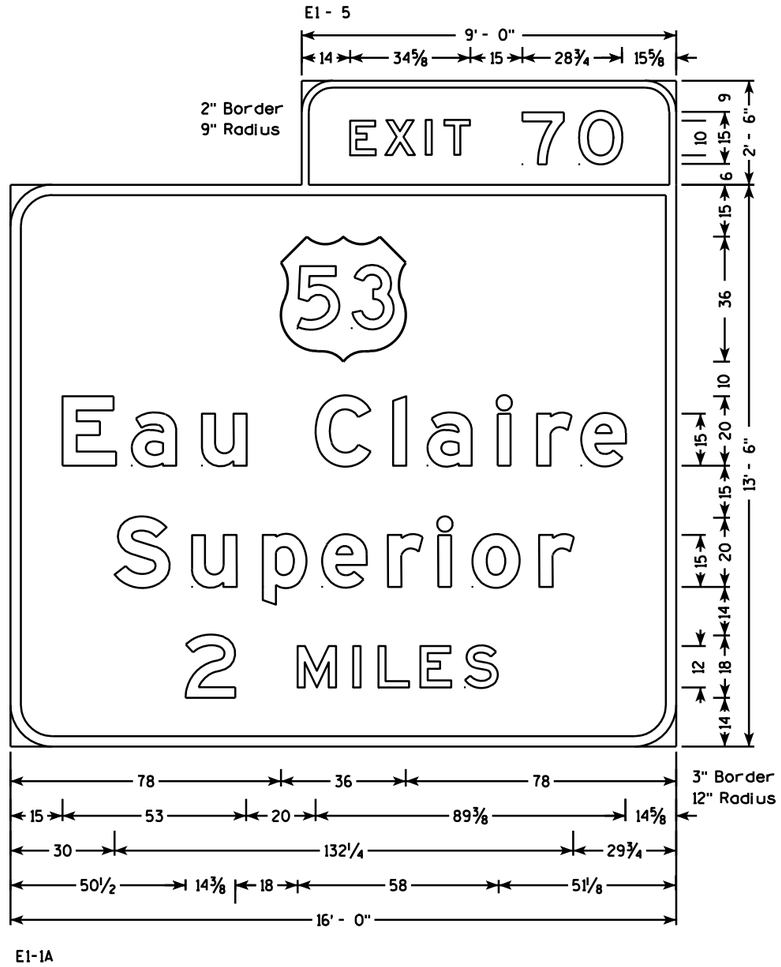

E1-1A




E8-1

NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all cap Words are Series E

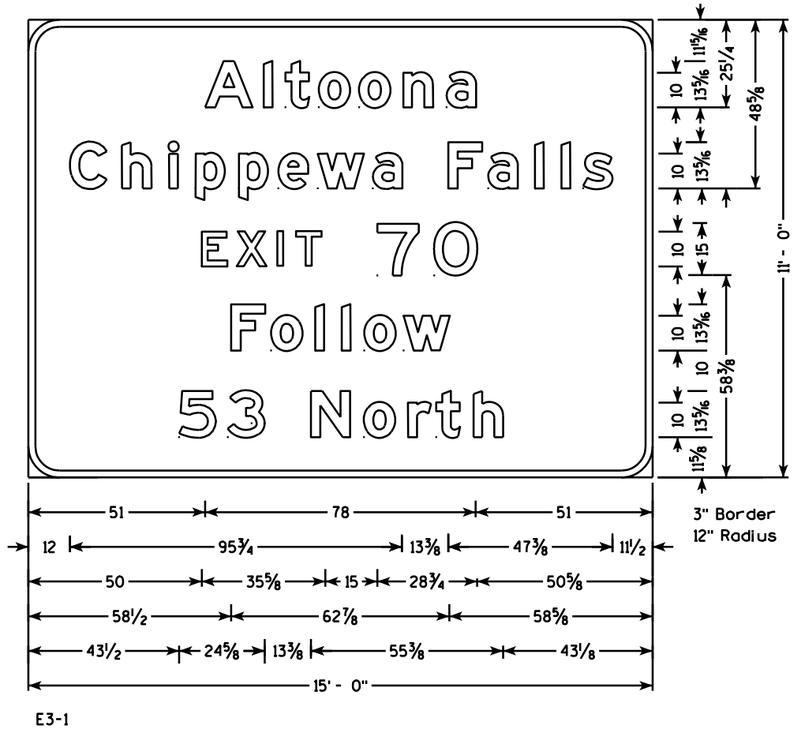



E1-1A

7

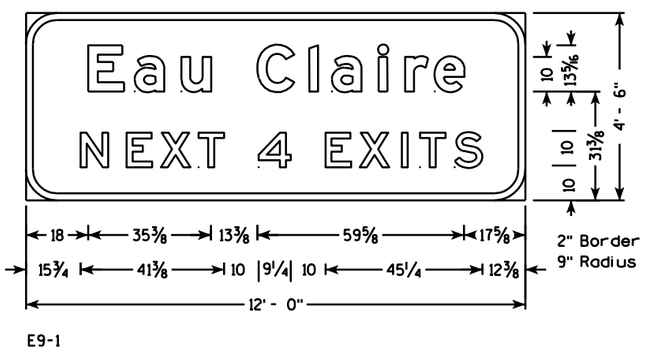
7

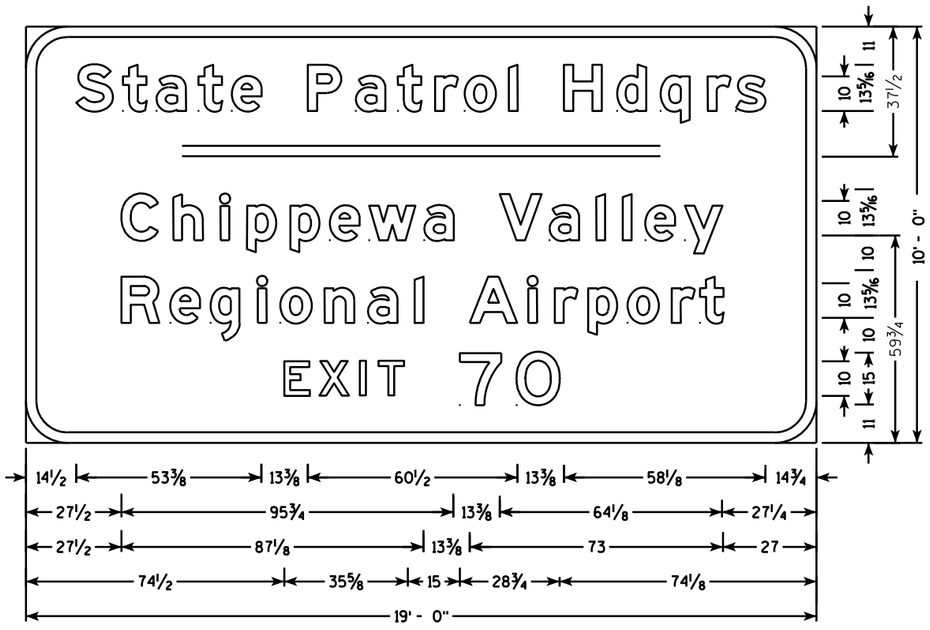
| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PERMANENT SIGNING | SHEET NO: 52 | E |
|---|---|---|---|---|---|




NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all cap Words are Series E

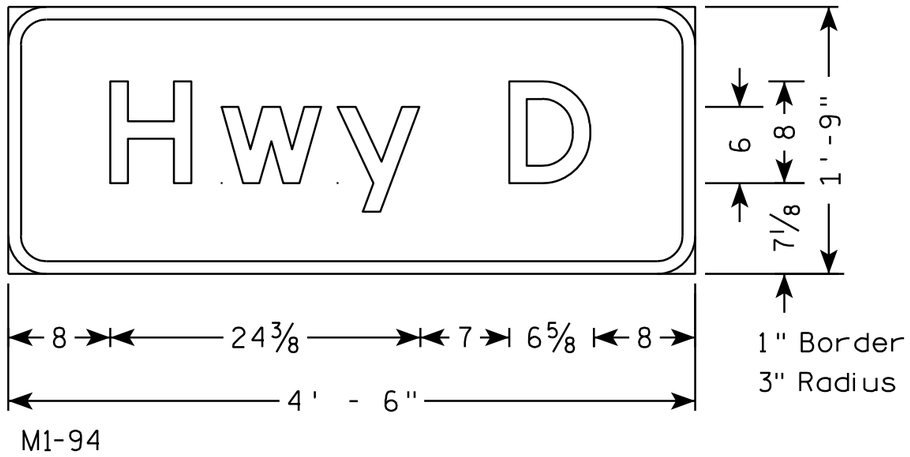



7

7

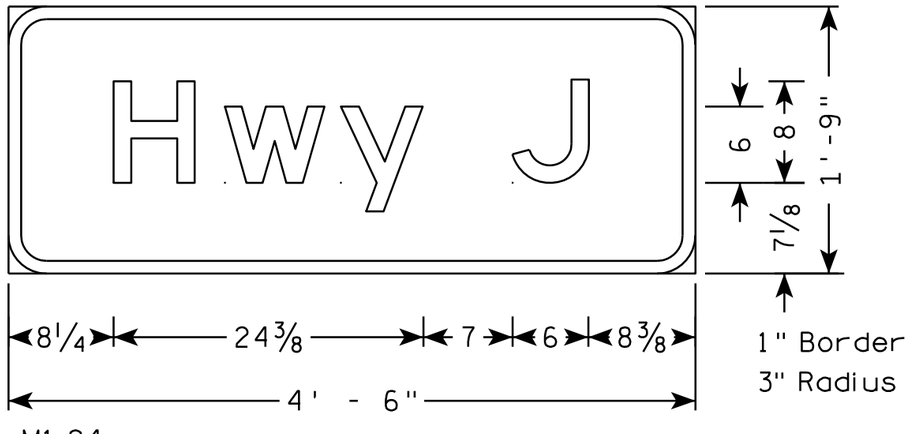
| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PERMANENT SIGNING | SHEET NO: 53 | E |
|---|---|---|---|---|---|



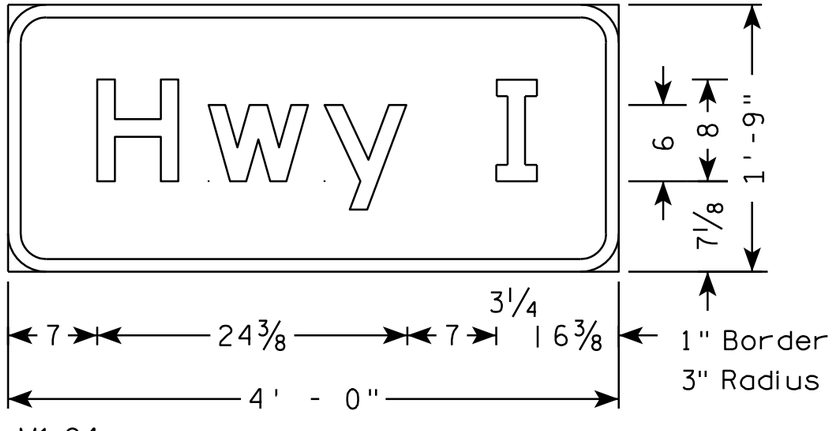

M1-94

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E




M1-94

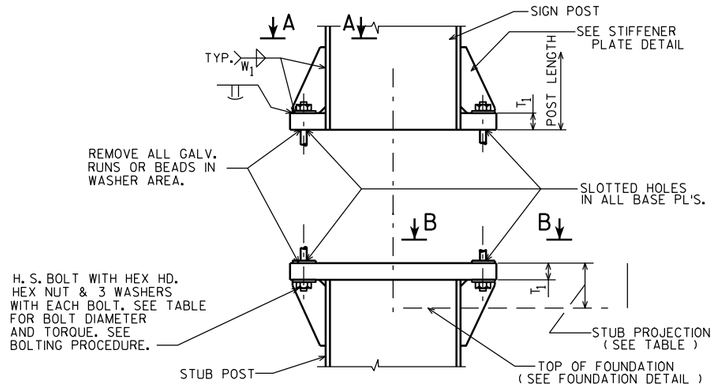



M1-94

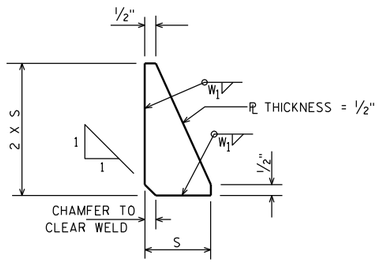
7

7

| PROJECT NO: 1022-09-80 | HWY: IH 94 | COUNTY: EAU CLAIRE | PERMANENT SIGNING | SHEET NO: 54 | E |
|---|---|---|---|---|---|

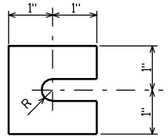



## SIGN POST AND STUB POST ELEVATION



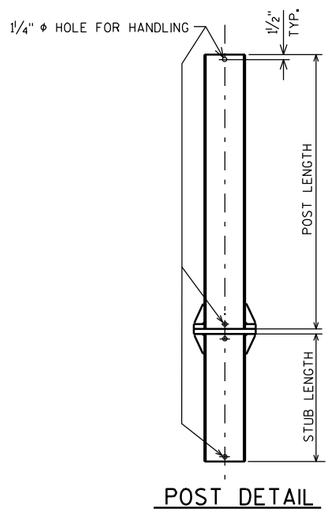

## STIFFENER PLATE DETAIL

( 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



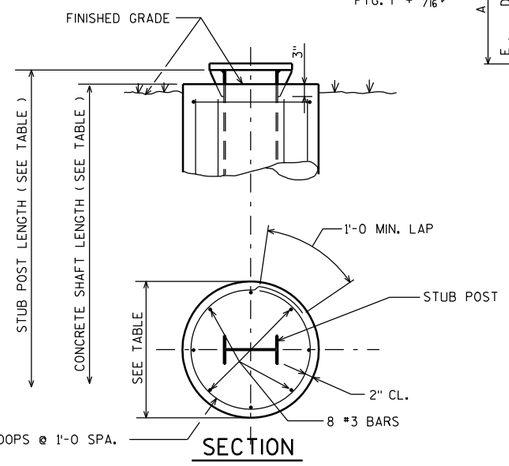

## POST DETAIL

| | 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 |
| 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 |

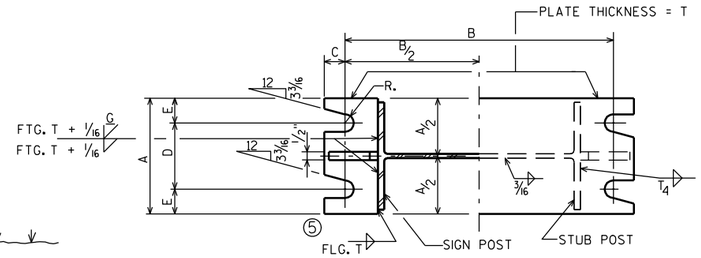
⑦



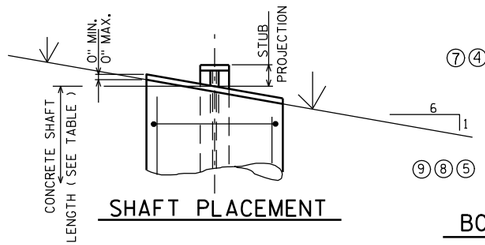

## SECTION




## FOUNDATION DETAIL




## SECTION A-A SECTION B-B




## 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△ | 140 △25 P.S.F. MIN. |

ALLOWABLE SOIL PRESSURE = 1½T / 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.

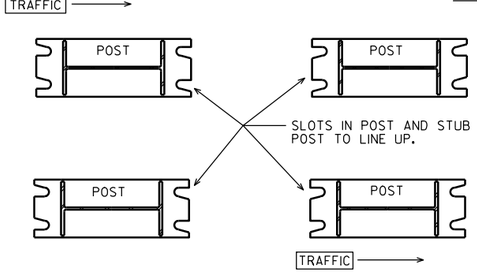
## GENERAL NOTES

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.
⑨ THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

## 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. 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 )
4. 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.




## POST SLOT ORIENTATION ⑦

| | | BASE CONNECTION DATA TABLE | | | | | | | | | | | FOUNDATION DATA | | | | ② |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| 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 | 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" | 15/32 " | 3" | 5'-6 | 3" | 2'-0 ϕ | 7'-0 | 146.5# ④ |
| | 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" | 15/32 " | 3" | 6'-0 | 3" | 2'-0 ϕ | 7'-6 | 182.1# |
| | 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" | 15/32 " | 3" | 6'-6 | 3" | 2'-0 ϕ | 8'-0 | 210.5# |
| 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 4/26/11 PLATE NO. A3-1.13

| NO. | DATE | REVISION |
|---|---|---|
| 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" ③4-23-79 TYPE "E" |
| ① | 5-4-78 | $T_1$ , $T_2$ & $W_1$ |

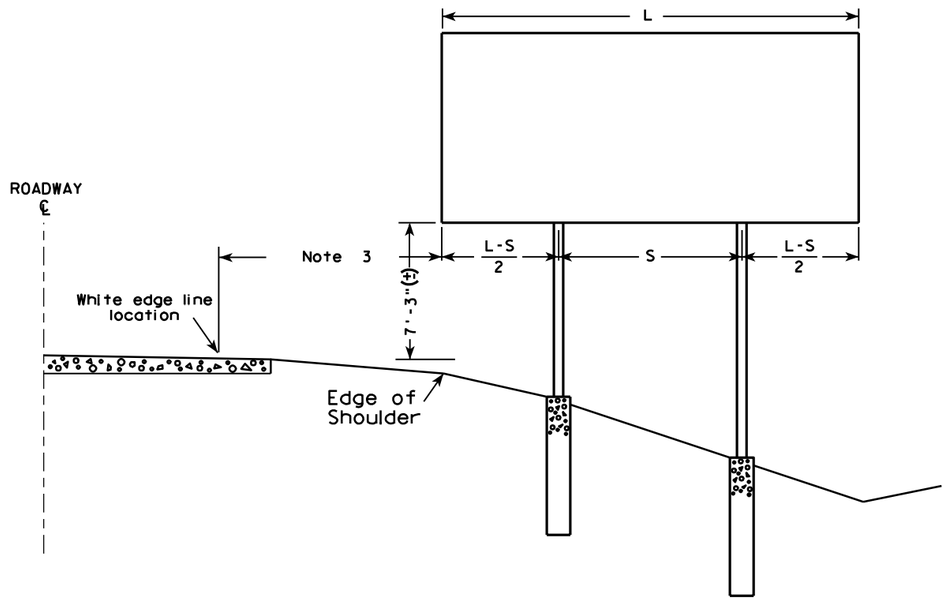
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

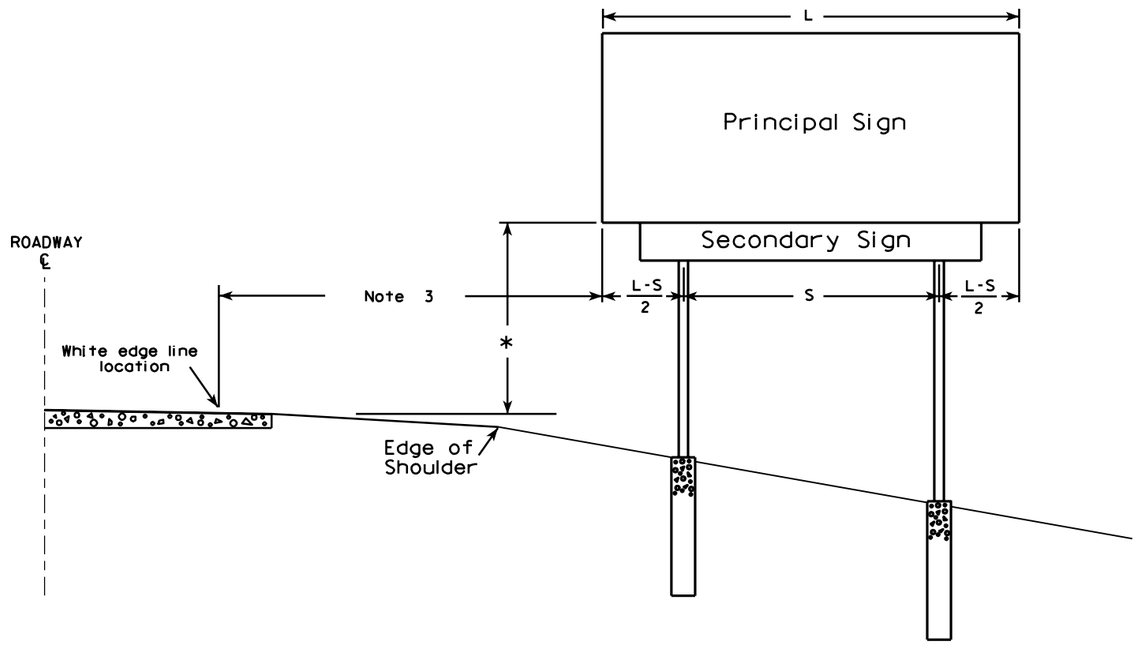
TYPE A, B, C, D, & E

CONST. SPEC. 2011 | DRAWN BY JPH | PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS | SHEET

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 55 | E




## 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

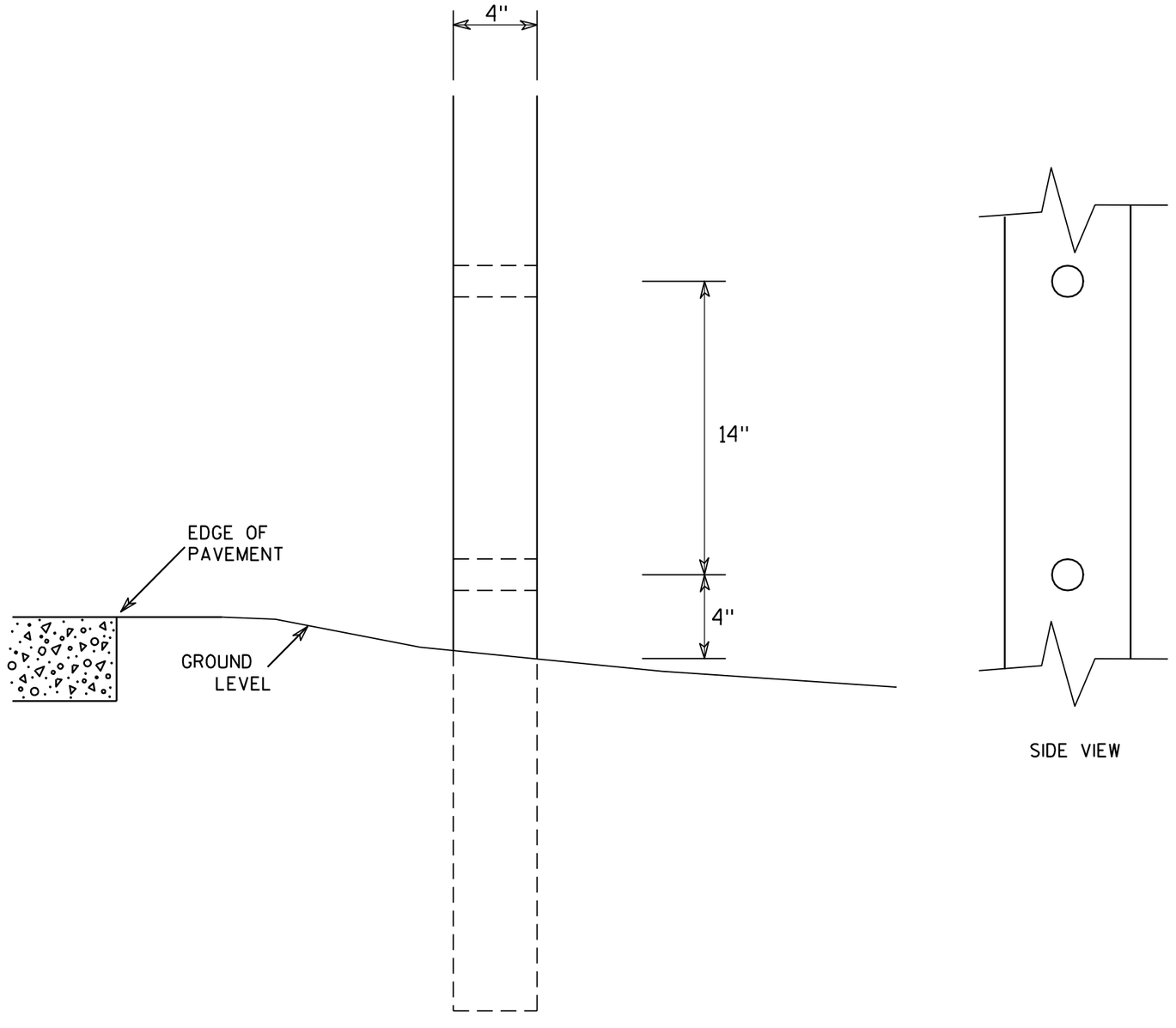
TYPICAL INSTALLATION
OF TYPE I SIGNS

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: 56 | 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

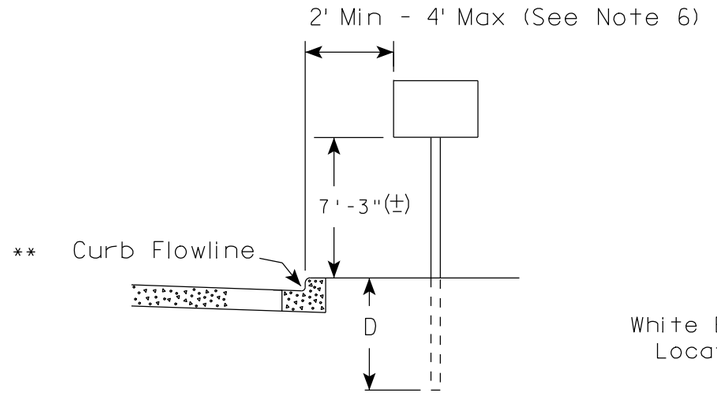
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

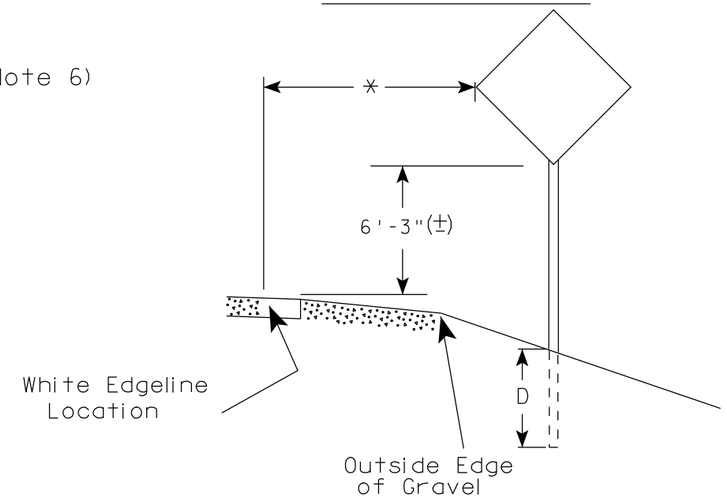
DATE 3/27/97 PLATE NO. A4-11.2

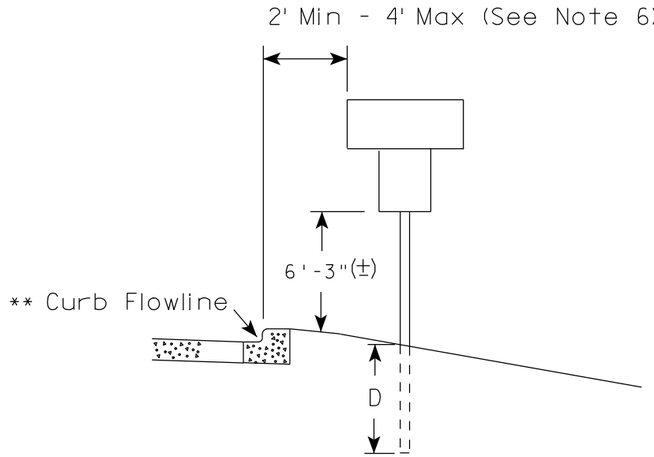
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 57 | E |
|---|---|---|---|---|---|

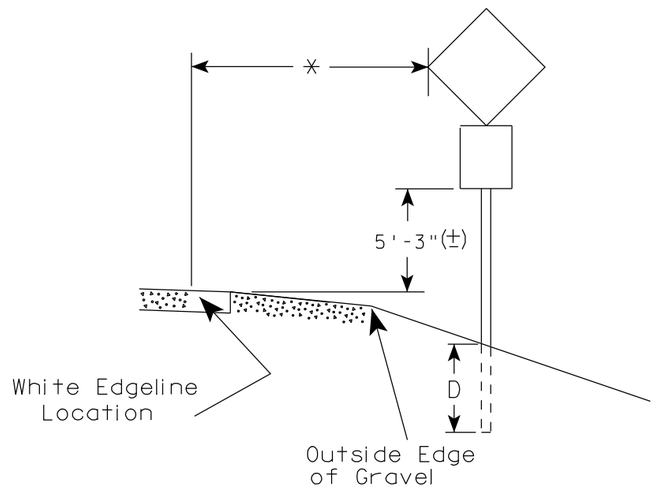
## URBAN AREA




## RURAL AREA (See Note 2)




## GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. 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 (A4-5) 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 stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed 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) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

## POST EMBEDMENT DEPTH

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

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

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

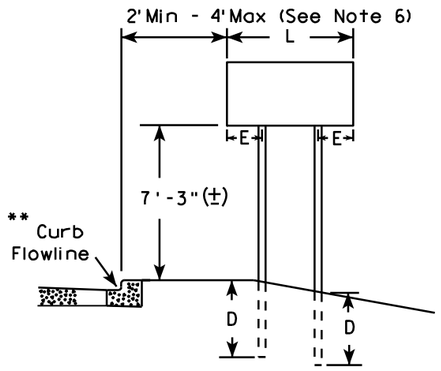
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

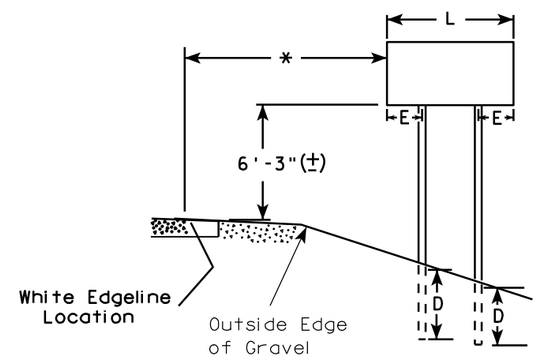
DATE 5/24/2013 PLATE NO. A4-3.17

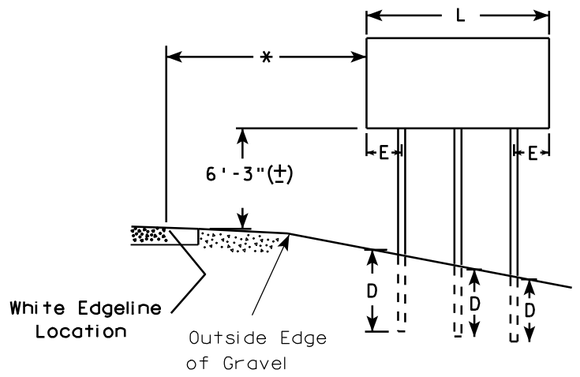
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 58 | E |
|---|---|---|---|---|---|

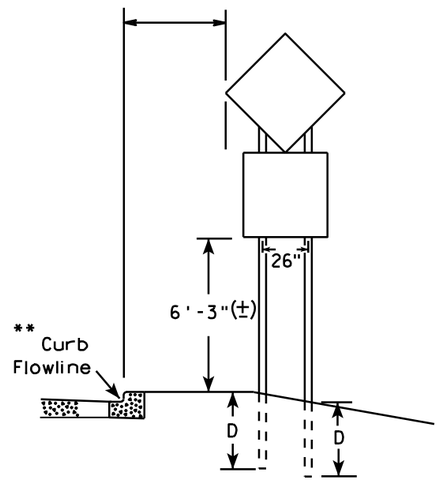
## URBAN AREA



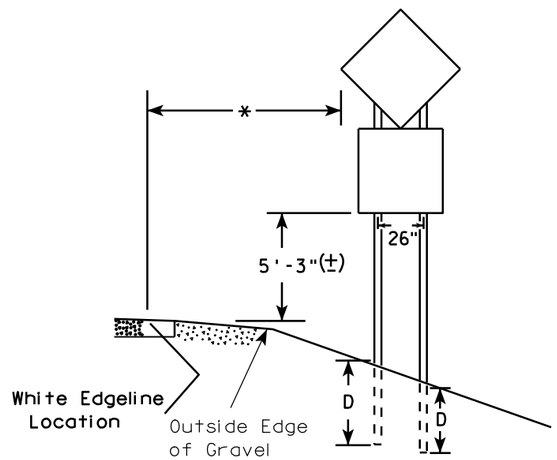

## RURAL AREA (See Note 3)




48" DIAMOND WARNING SIGN




48" DIAMOND WARNING SIGN

| *** | SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED) | |
|---|---|---|
| | L | E |
| | Greater than 48" Less than 60" | 12" |
| | 60" to 120" | L/5 |

| SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED) | |
|---|---|
| L | E |
| Greater than 120" less than 168" | 12" |

| SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED) | |
|---|---|
| L | E |
| 168" and greater | 12" |

## POST EMBEDMENT DEPTH

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

## GENERAL NOTES

1. For multiple 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 (A4-5) 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 stop signs (R1-1F) 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) & End of Road Markers (W5-56 & W5-56A) 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 or 20 S.F. or less in area.

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-4.11

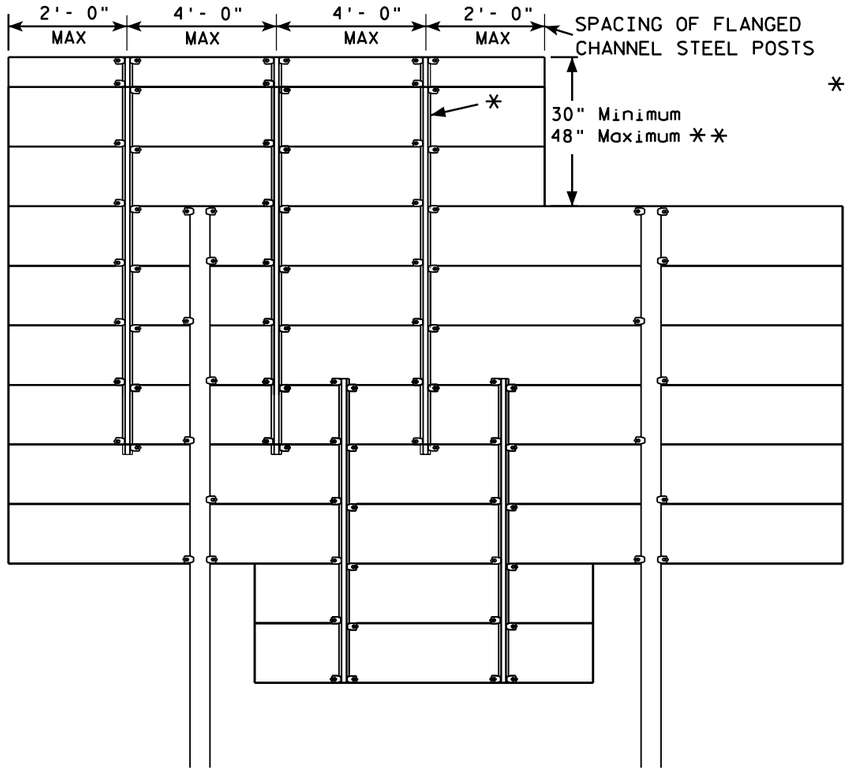
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 59 | E |
|---|---|---|---|---|---|




FILE NAME : C:\Users\PROJECTS\tr_stdplate\A44.DGN PLOT DATE : 21-SEP-2011 13:36 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 109.249131:1.000000

WISDOT/CADDS SHEET 42

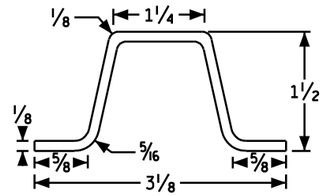
## GROUND MOUNTED SIGN




*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

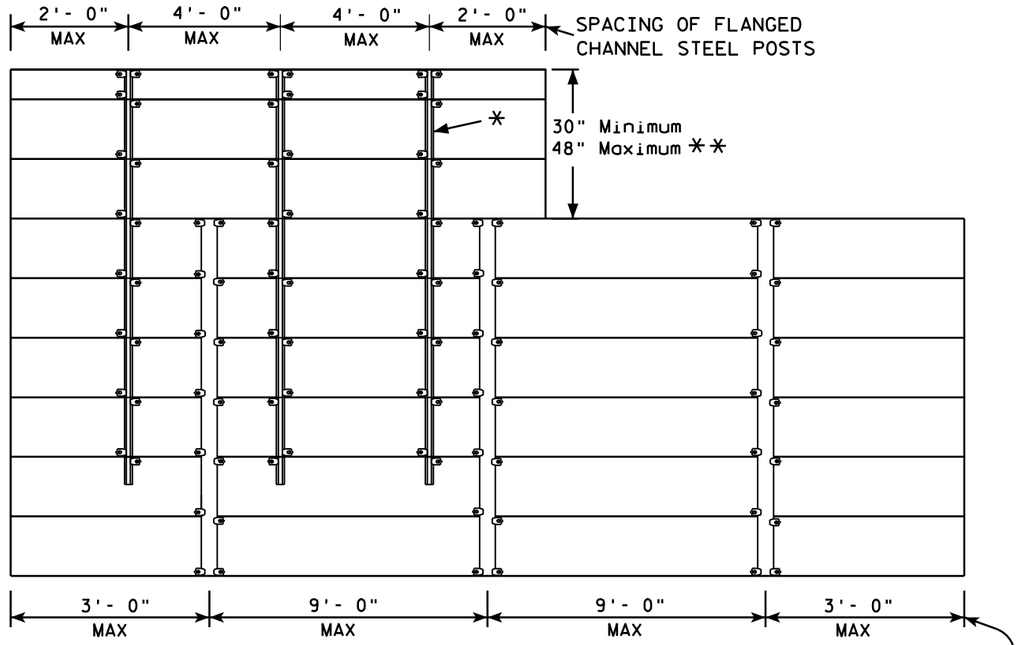
**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

## 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)

7

7

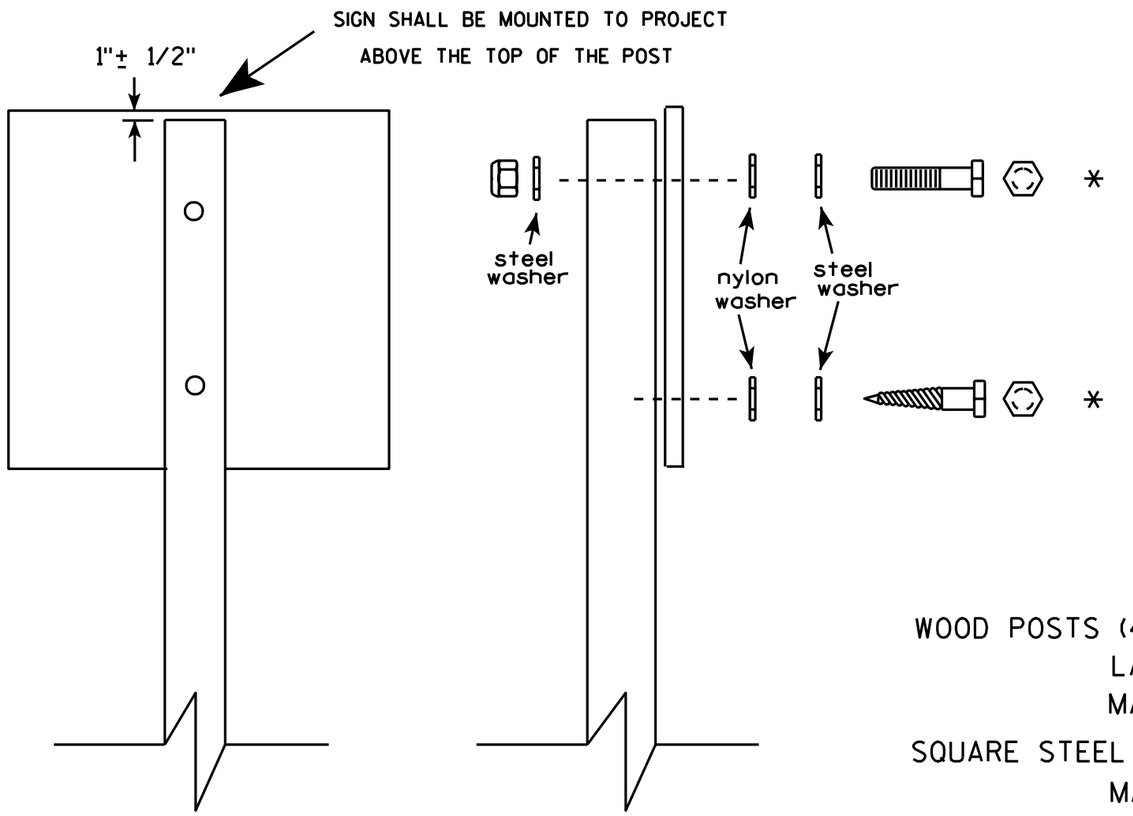
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/7/10 PLATE NO. A4-6.11

| PROJECT NO: | | | | SHEET NO: 60 | E |
|---|---|---|---|---|---|




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

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

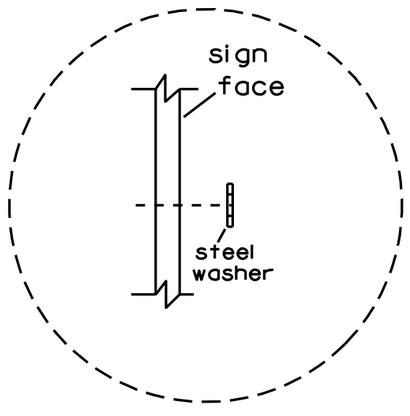
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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.




Washer Placement when Sign Has Other Than Type H or Type F Face

* 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.

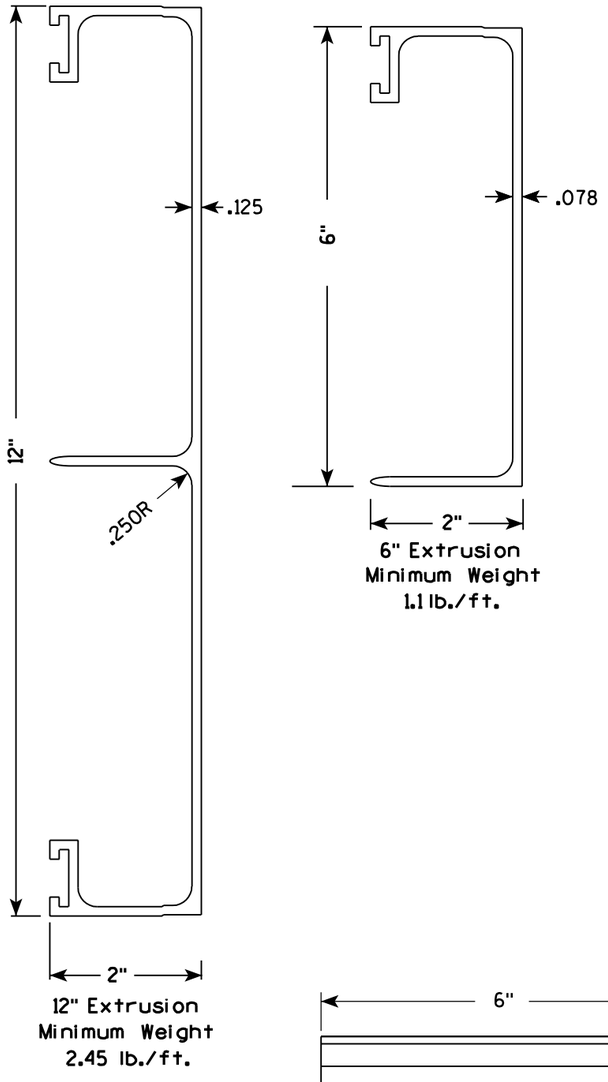
# ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

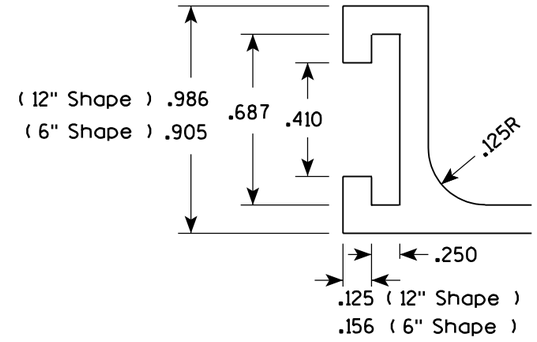
DATE 3/23/10 PLATE NO. A4-8.7

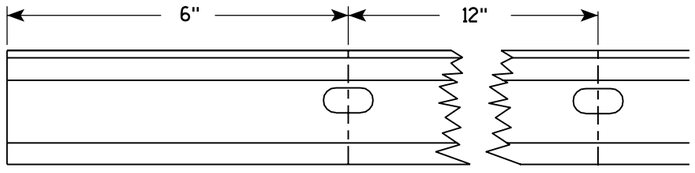
## Extruded Shape



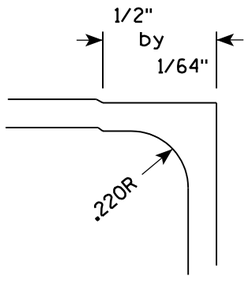







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

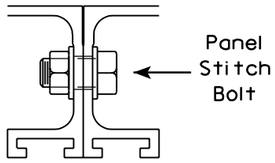



## Hardware

### STITCH BOLT, WASHER & NUT

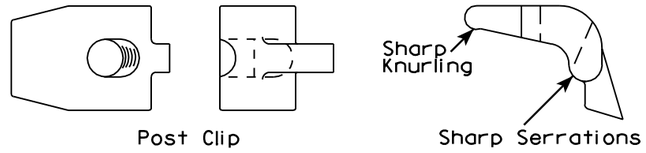
The hardware includes:

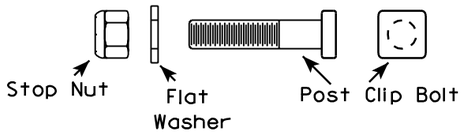
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy




### 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.

# ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

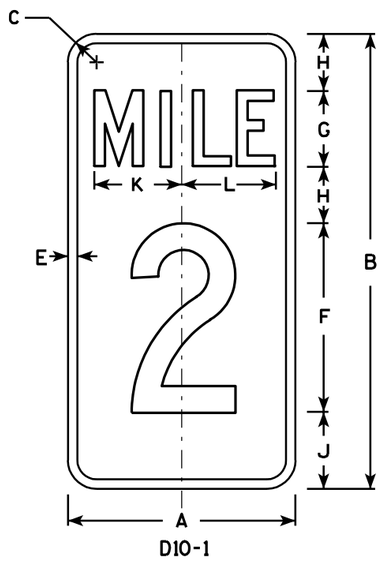
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

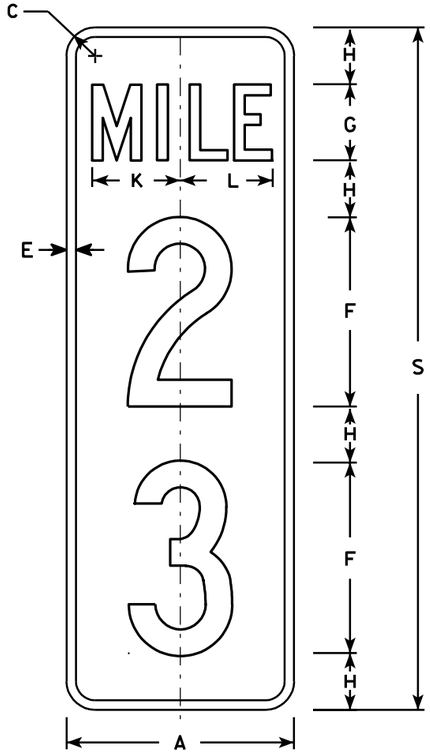
DATE 11/18/99 PLATE NO. A5-2.9

PROJECT NO:

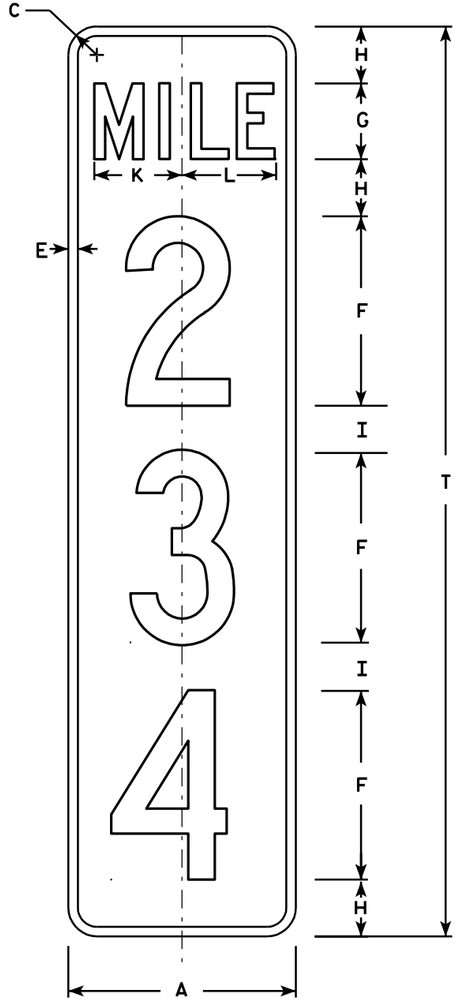
SHEET NO: 62 E



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

| PHY. SIZE | |
|---|---|
| 12 X 24 | 300 mm X 600 mm |
| 12 X 36 | 300 mm X 900 mm |
| 12 X 48 | 300 mm X 1200 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 12 | 24 | 1 ½ | | ½ | 10 | 4 | 3 | 2 ½ | 4 | 4 ⅝ | 4 ⅞ | | | | | | | 36 | 48 | | | | | | |
| 5 | 12 | 24 | 1 ½ | | ½ | 10 | 4 | 3 | 2 ½ | 4 | 4 ⅝ | 4 ⅞ | | | | | | | 36 | 48 | | | | | | |

| D10-1 | D10-2 | D10-3 |
|---|---|---|
| Area sq. ft. | Area sq. ft. | Area sq. ft. |
| 2.0 | 3.0 | 4.0 |
| Area m2 | Area m2 | Area m2 |
| .19 | .28 | .38 |
| | | |

STANDARD SIGN
D10-1 , D10-2 & D10-3

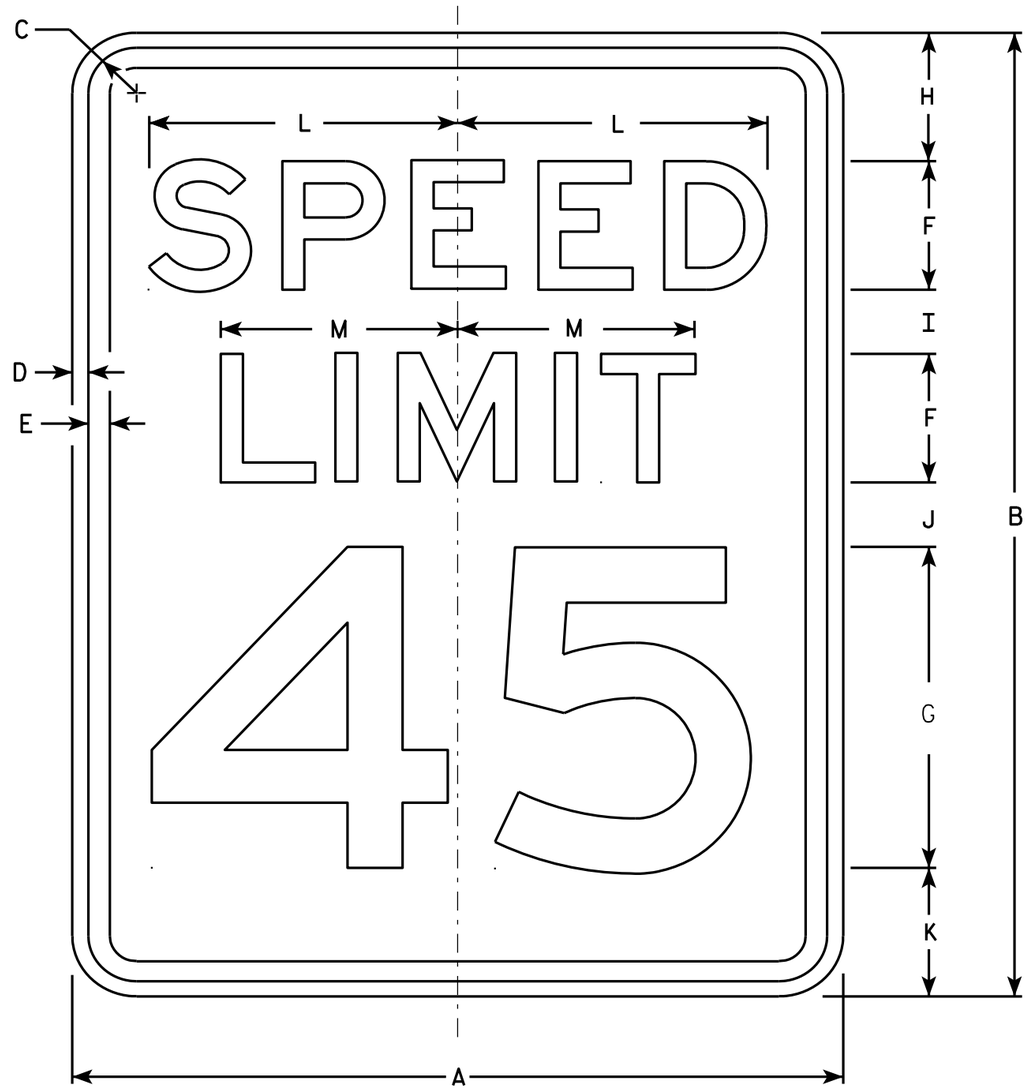
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

SHEET NO: 63 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 |

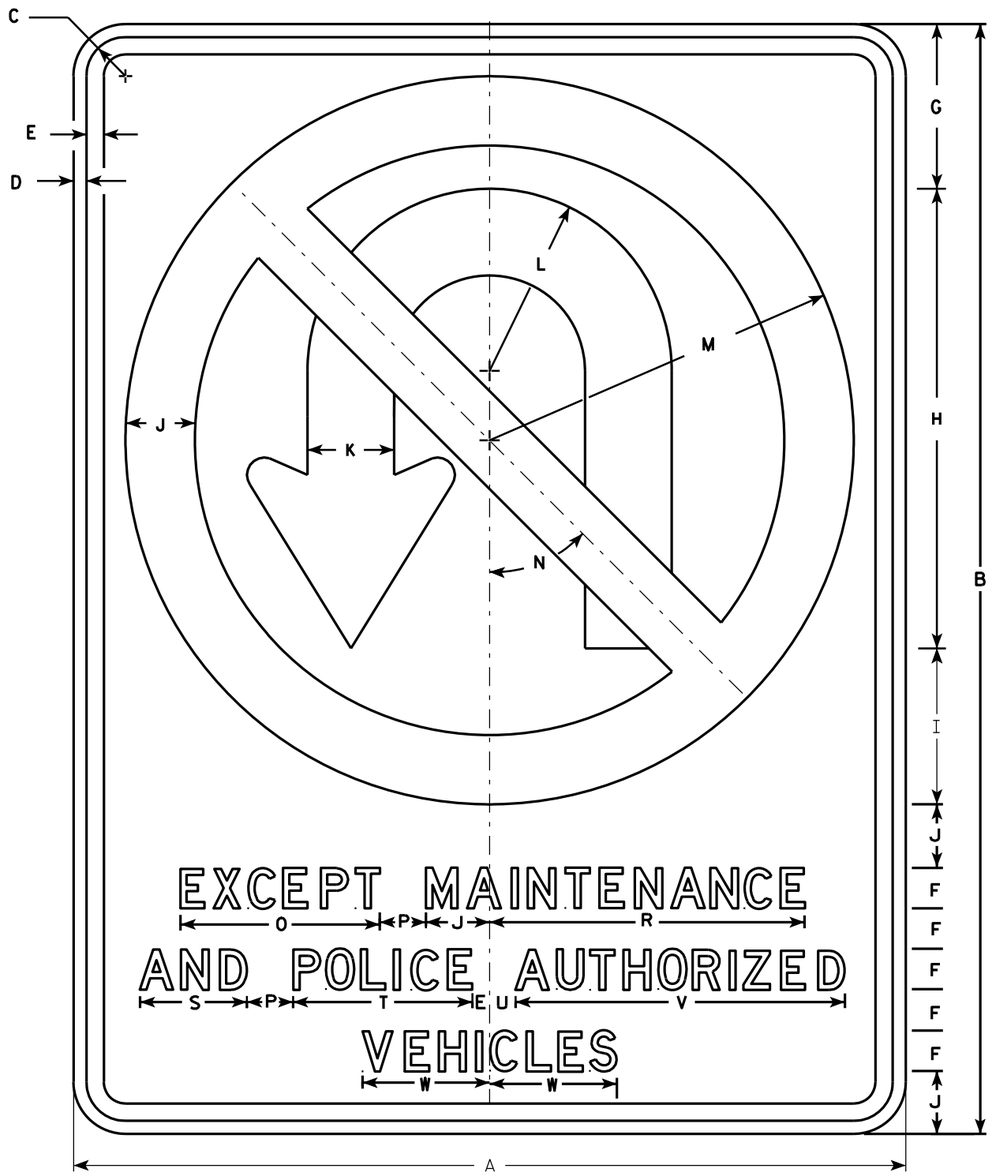
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

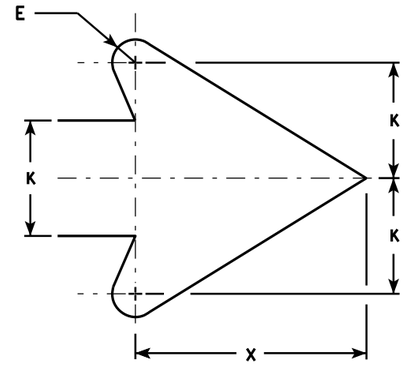
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 64 | E




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 |

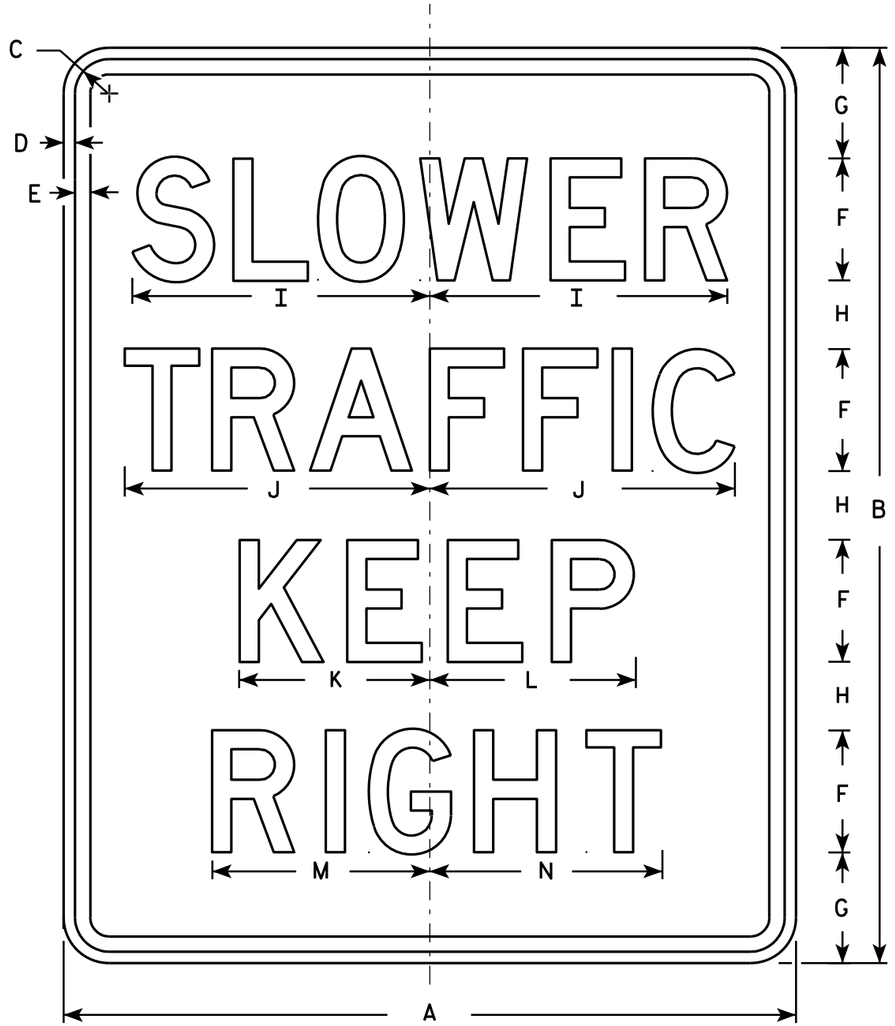
# STANDARD SIGN
# R3-4B

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: 65 | E |
|---|---|---|---|---|---|




R4-3

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.

| 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 5/8 | 2 1/4 | 9 3/4 | 10 | 6 1/4 | 6 3/4 | 7 1/8 | 7 5/8 | | | | | | | | | | | | | 5.0 |
| 2M | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 4 | 3 5/8 | 2 1/4 | 9 3/4 | 10 | 6 1/4 | 6 3/4 | 7 1/8 | 7 5/8 | | | | | | | | | | | | | 5.0 |
| 3 | 36 | 48 | 1 5/8 | 5/8 | 3/4 | 6 | 6 | 4 | 14 5/8 | 15 | 9 3/8 | 10 | 10 3/4 | 11 3/8 | | | | | | | | | | | | | 12.0 |
| 4 | 36 | 48 | 1 5/8 | 5/8 | 3/4 | 6 | 6 | 4 | 14 5/8 | 15 | 9 3/8 | 10 | 10 3/4 | 11 3/8 | | | | | | | | | | | | | 12.0 |
| 5 | 48 | 60 | 2 1/4 | 3/4 | 1 | 8 | 7 1/4 | 4 1/2 | 19 1/2 | 20 | 12 1/2 | 13 1/2 | 14 1/4 | 15 1/4 | | | | | | | | | | | | | 20.0 |

STANDARD SIGN
R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

PROJECT NO:

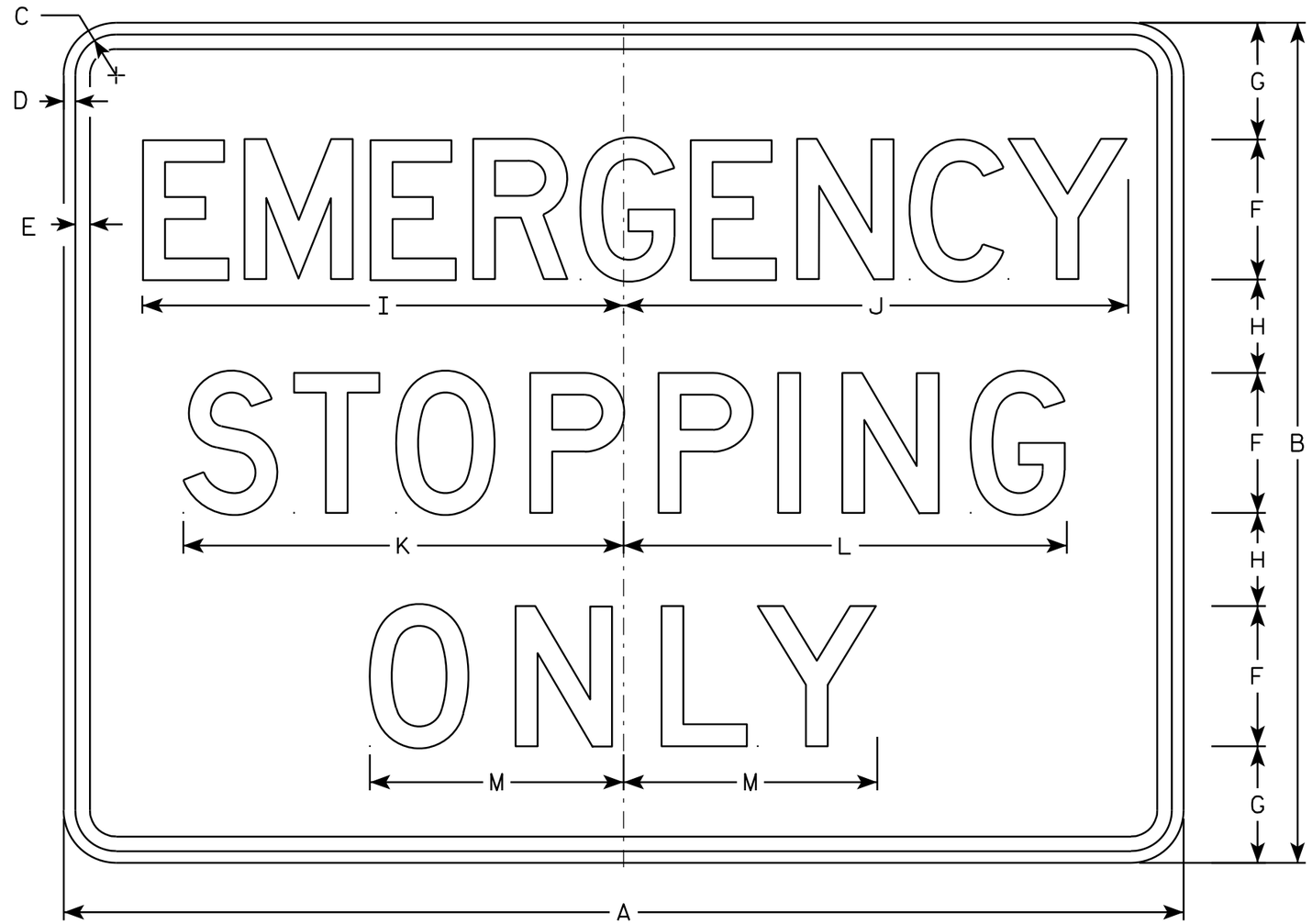
SHEET NO: 66 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R43.DGN PLOT DATE : 25-MAR-2011 13:40 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7




R8-7

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 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 48 | 36 | 1 3/4 | 1/2 | 5/8 | 6 | 5 | 4 | 20 5/8 | 21 5/8 | 18 7/8 | 19 | 10 7/8 | | | | | | | | | | | | | | 12.0 |
| 5 | 48 | 36 | 1 3/4 | 1/2 | 5/8 | 6 | 5 | 4 | 20 5/8 | 21 5/8 | 18 7/8 | 19 | 10 7/8 | | | | | | | | | | | | | | 12.0 |

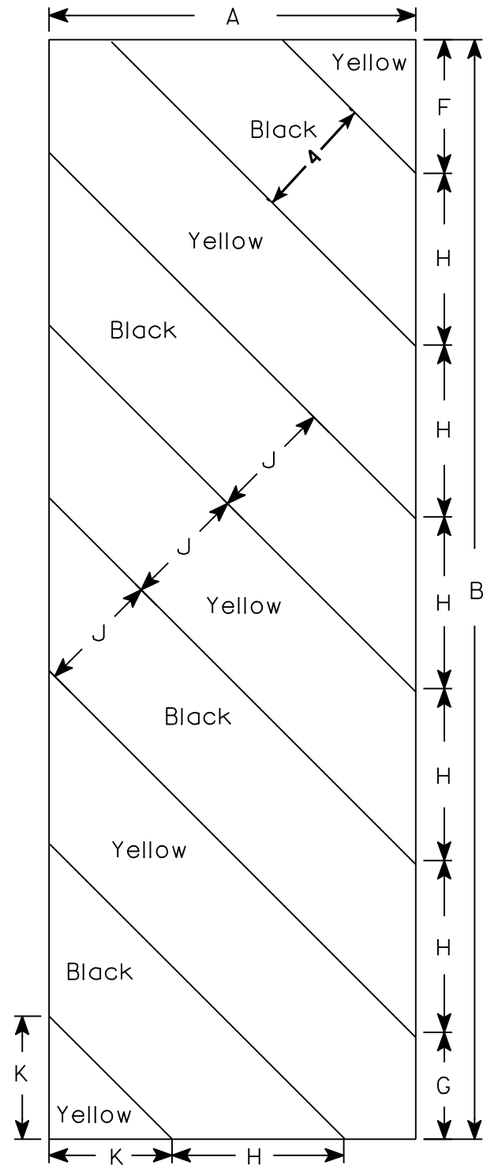
STANDARD SIGN
R8-7

WISCONSIN DEPT OF TRANSPORTATION

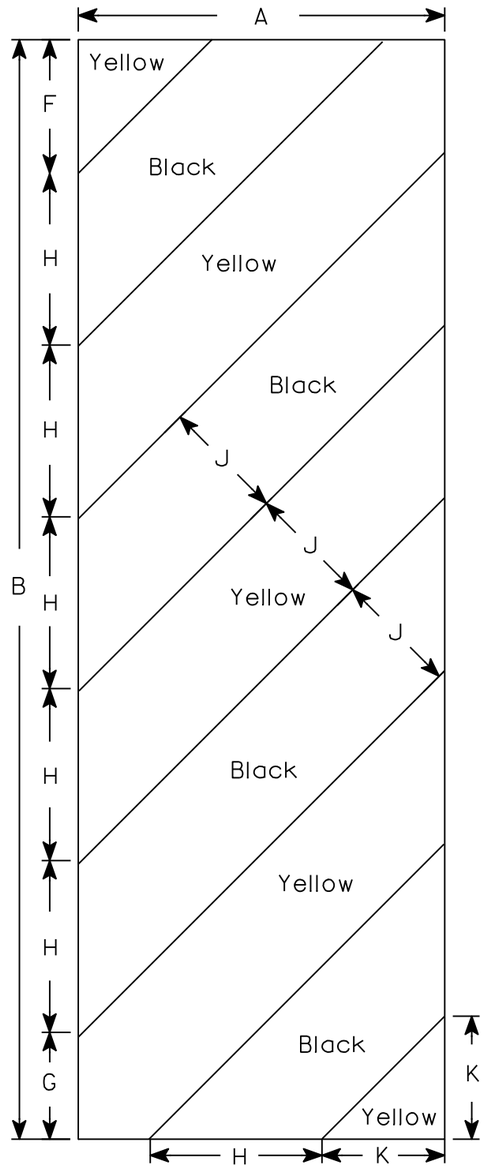
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R8-7.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 67 | 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: 68 | E |
|---|---|---|---|---|---|

Notes

**Wisconsin Department of Transportation**

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through innovation and exceptional service.

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