SUP

PROJECT ID: **8460-00-70**

WITH: N/A

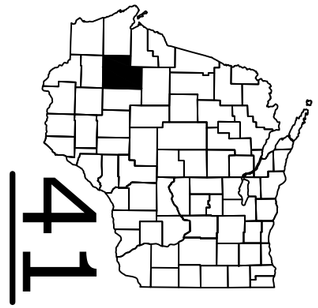
COUNTY: **SAWYER**

FEBRUARY 2026

ORDER OF SHEETS



TOTAL SHEETS = 96



N

DESIGN DESIGNATION

| | | | |
|---|---|---|---|
| A.A.D.T. | (2026) | = | 430 |
| A.A.D.T. | (2046) | = | 460 |
| D.H.V. | | = | 40 |
| D.D. | | = | 50/50 |
| T. | | = | 5% |
| DESIGN SPEED | | = | 50 MPH |
| ESALS | | = | XX,XXX |

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

**PLAN OF PROPOSED IMPROVEMENT**

# STH 40 - STH 27

**CHIPPEWA RIVER BRIDGE B-57-0018**

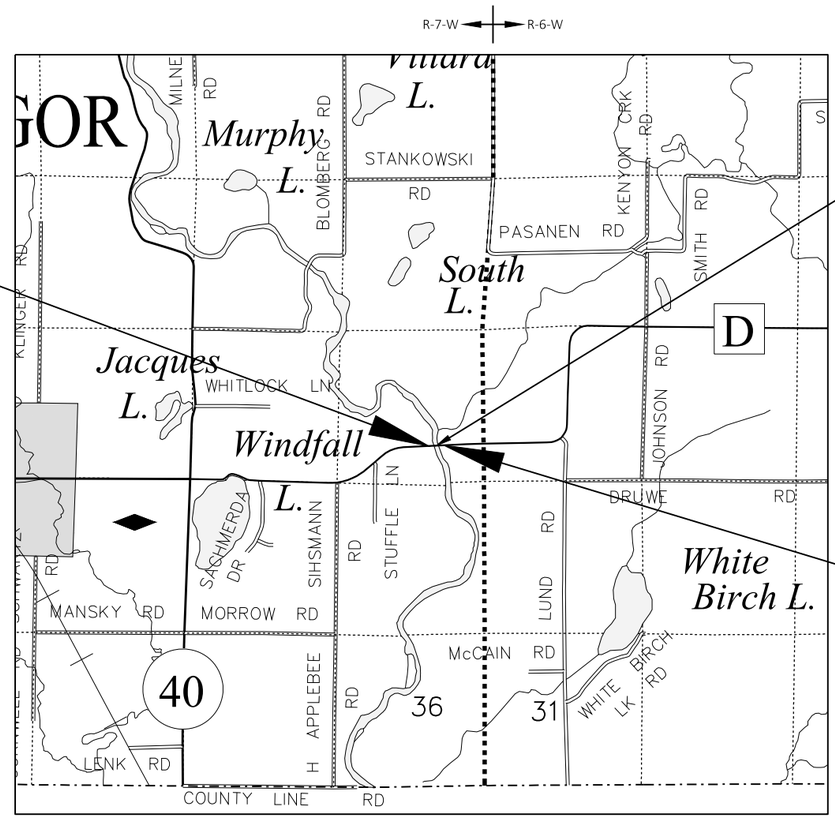
## CTH D

## SAWYER COUNTY

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 8460-00-70 | WISC 2026195 | 1 |
| | | |
| | | |
| | | |

STATE PROJECT NUMBER

**8460-00-70**




STRUCTURE B-57-0018
STA 98+13.76

BEGIN PROJECT
STA 96+43
Y = 312654.016
X = 694238.617

END PROJECT
STA 102+63.17
Y = 312684.677
X = 694858.028

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.117 MI

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

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

ACCEPTED FOR

COUNTY of SAWYER

10/15/25 (Date) (HIGHWAY COMMISSIONER)

ORIGINAL PLANS PREPARED BY

AYRES

WISCONSIN
ARLEN E. BEAUDETTE
E-36829
EAU CLAIRE
PROFESSIONAL ENGINEER

10/28/2025

(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

| | |
|---|---|
| Surveyor | AYRES ASSOCIATES INC |
| Designer | AYRES ASSOCIATES INC |
| Project Manager | TOU YANG, PE |
| Regional Examiner | NW REGION |
| Regional Supervisor | TOU YANG, PE |

APPROVED FOR THE DEPARTMENT

DATE: 10/28/2025 (Signature)

E

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\SHEETS\010101-TI.DWG

PLOT DATE : 3/4/2025 7:36 AM

PLOT BY : PEDERSON, CARMEN

PLOT NAME :

## UTILITIES CONTACTS

BEVCOMM
RANDY MONNIER
N3737 4TH AVENUE
WEYERHAEUSER, WI 54895
PHONE: 715-353-2434
MOBILE: 715-492-5029
EMAIL: rmonnier@bevcomm.com

NORTH CENTRAL POWER CO.
MICHAEL HEATH
3661 NORTH CLARK STREET
PO BOX 68
RADISSON, WI 54867
PHONE: 715-945-2630
MOBILE: 715-266-3411
EMAIL: ncpmike85@yahoo.com
EMAIL: ncpoffice@bevcomm.net

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

## WISCONSIN DNR LIAISON

SHAWN HASELEU
810 W. MAPLE STREET
SPOONER, WI 54801
PHONE: 715-416-0478
EMAIL: Shawn.Haseleu@wisconsin.gov

## DESIGN PROJECT MANAGER

TOU YANG, PE
WISDOT NW REGION
718 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715-833-5570
EMAIL: tou.yang@dot.wi.gov

## DESIGN PROJECT LEADER

ARLEN BEAUDETTE
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
PHONE: 715-834-3161
EMAIL: beaudettea@AyresAssociates.com

## COUNTY HIGHWAY COMMISSIONER

JOHN PINNOW
SAWYER COUNTY
14688W COUNTY ROAD B
HAYWARD, WI 54843
PHONE: 715-492-7180
EMAIL: john.pinnow@sawyercountygov.org

## GENERAL NOTES

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

FILL EXPANSION FACTOR IS 30%.

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SUBGRADE SHOULDER POINTS ARE TO BE SEEDED AND MULCHED OR EROSION MATTED AS DIRECTED BY THE ENGINEER.

SEED MIXTURE NO. 20 AND SEEDING TEMPORARY SHALL BE USED IN THE PROJECT AND SHALL BE PLACED AS SHOWN IN THE PLANS AND/OR DIRECTED BY THE ENGINEER.

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

ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 2" UPPER LAYER AND A 2" LOWER LAYER. ASPHALTIC SURFACE SHALL BE USED 12.5 mm NOMINAL AGGREGATE SIZE.

THE PROPOSED SHOULDER WIDTH SHOWN IN THE TYPICAL SECTIONS ARE MINIMUM WIDTH. PERPETUATE EXISTING SHOULDERS THAT ARE WIDER THAN WHAT IS SHOWN IN THE TYPICAL SECTIONS.

SAWCUTS, AS SHOWN ON THE PLANS, ARE SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS.

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

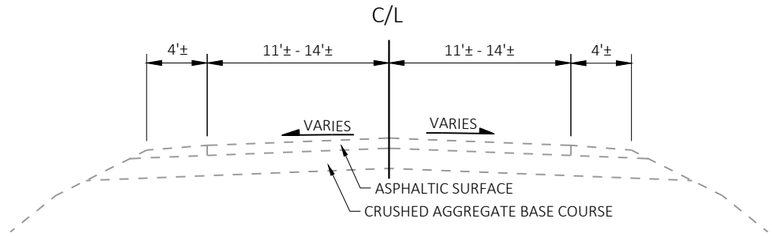
THE DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH A MONUMENT TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

MAINTAIN ACCESS TO CANOE LAUNCH IN SOUTHEAST QUADRANT OF THE BRIDGE DURING CONSTRUCTION.

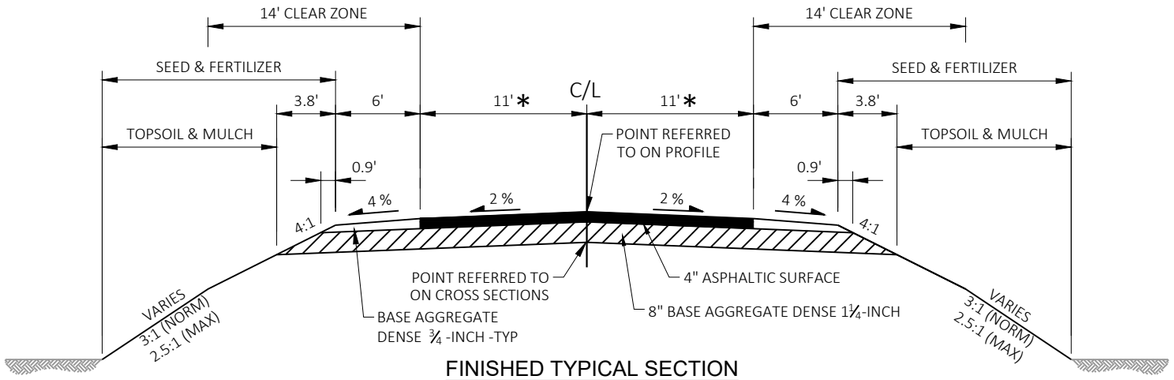
## RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 2.307 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.854 ACRES

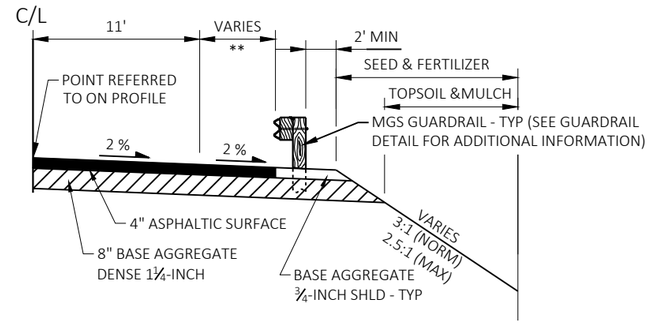



EXISTING TYPICAL SECTION
CTH D



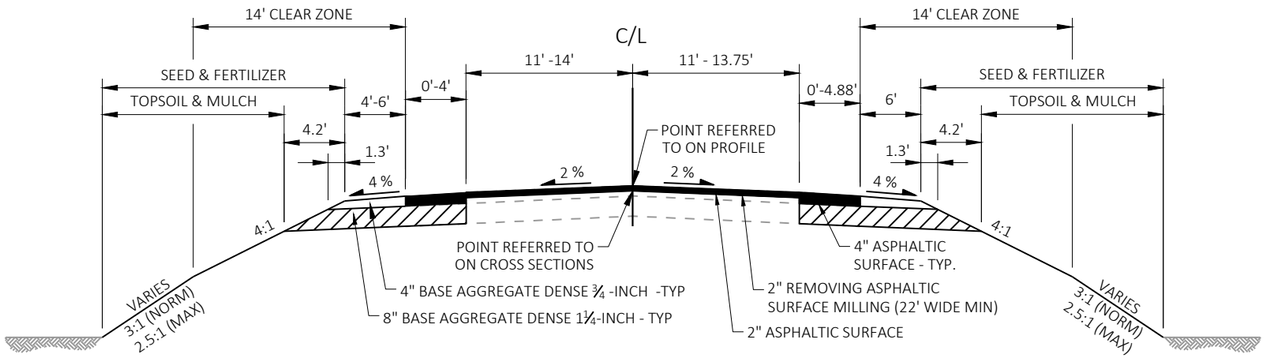

FINISHED TYPICAL SECTION
CTH D
STA 96+43.00 - STA 96+93.06
STA 99+34.43 - STA 102+63.17

* THE ASPHALT SHALL BE PLACED 32' WIDE AT THE ENDS OF THE BRIDGE WINGWALLS AND FOLLOW THE FACE OF GUARDRAIL, AND TAPER TO MATCH EXISTING AT THE ENDS OF THE PROJECT.

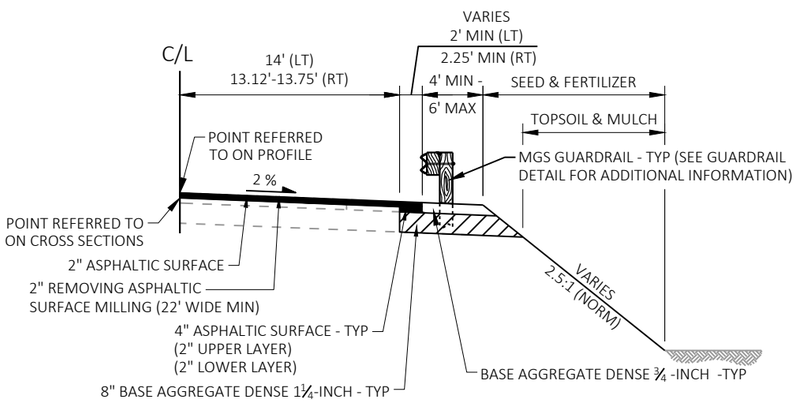



FINISHED TYPICAL HALF SECTION WITH GUARDRAIL

** 5' MIN (AT BRIDGE)
7' MAX (AT END TERMINAL)

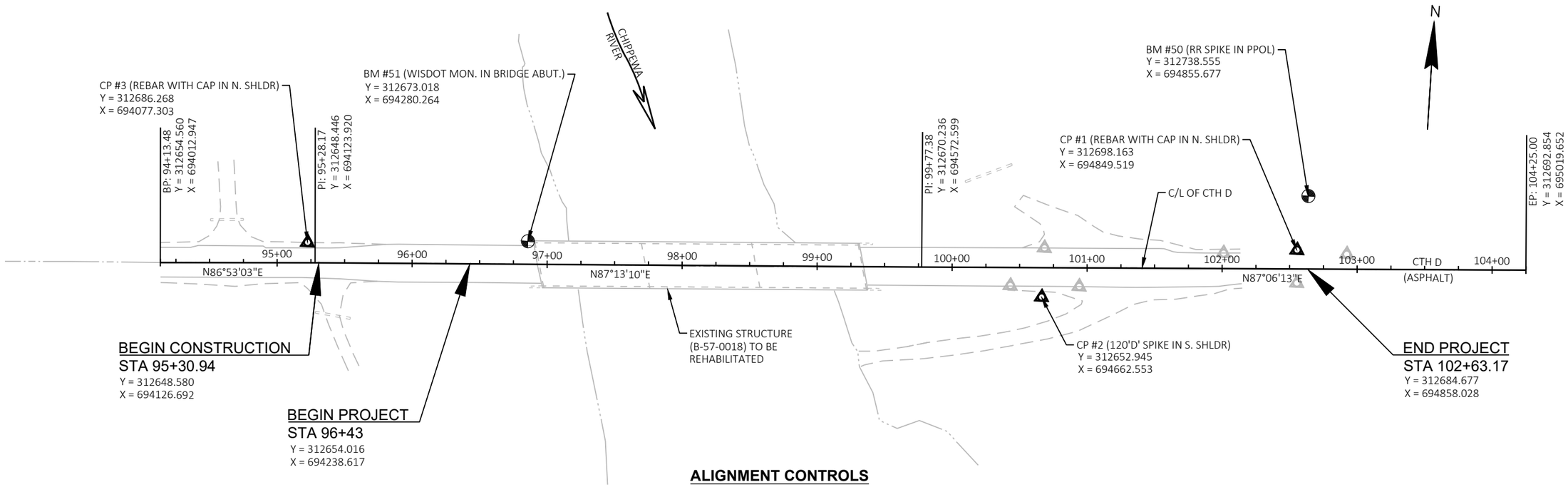



FINISHED TYPICAL SECTION
CTH D
STA 95+30.94 - STA 96+43.00

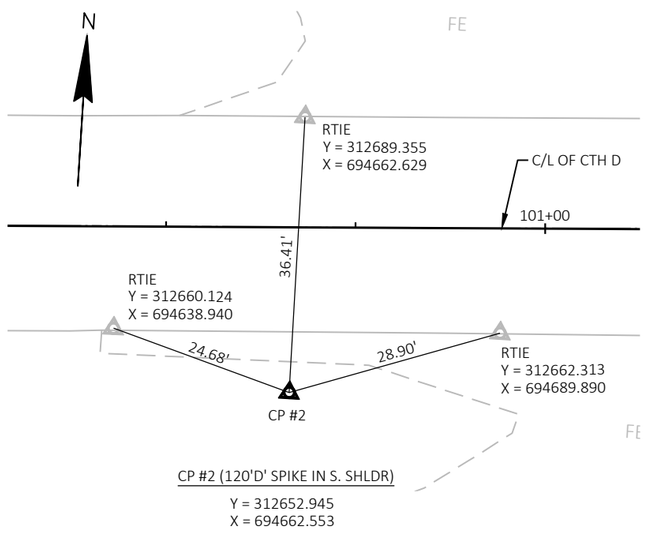



FINISHED TYPICAL HALF SECTION W/GUARDRAIL
CTH D

| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | TYPICAL SECTIONS | SHEET 3 | E |
|---|---|---|---|---|---|

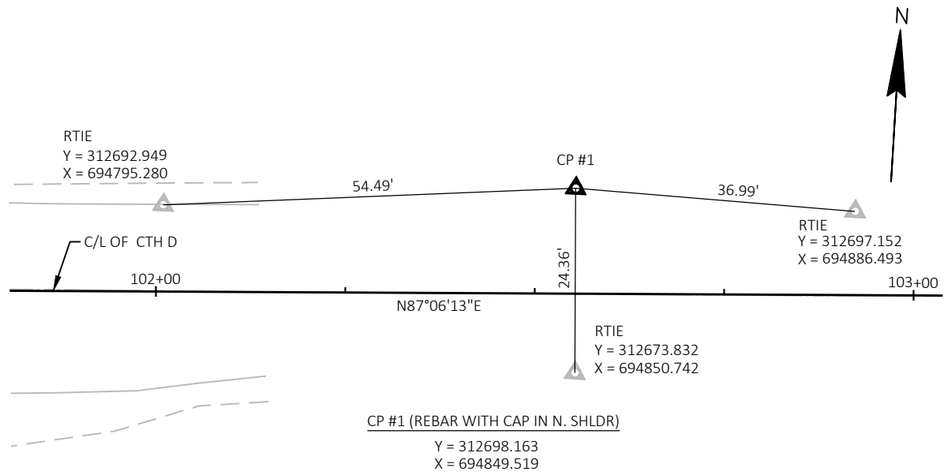



**ALIGNMENT CONTROLS**




CP #2 (120'D' SPIKE IN S. SHLDR)

Y = 312652.945
X = 694662.553



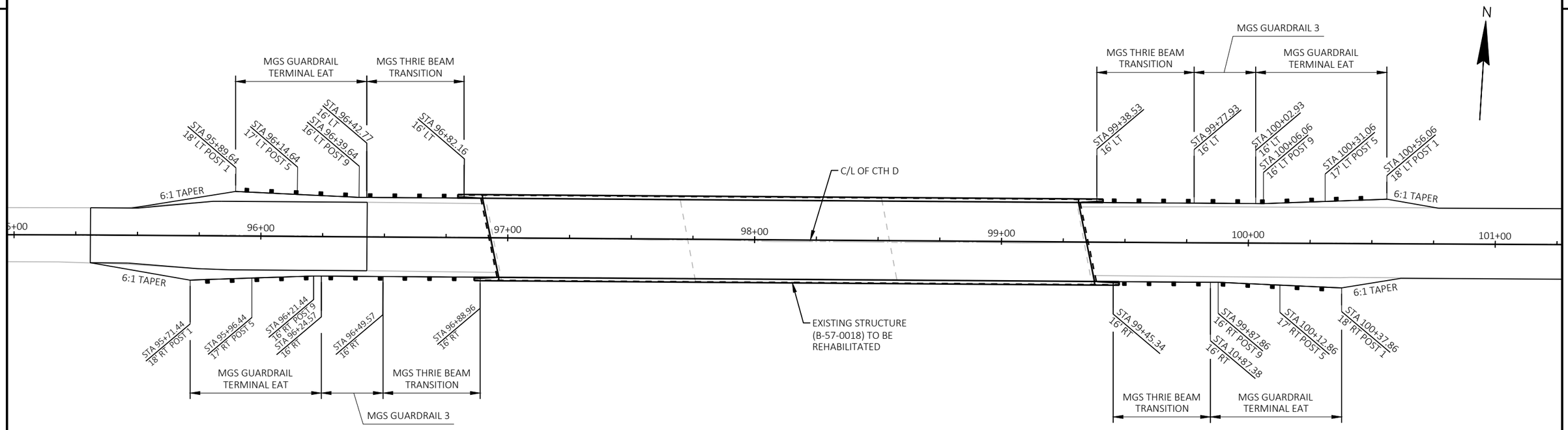

CP #1 (REBAR WITH CAP IN N. SHLDR)

Y = 312698.163
X = 694849.519

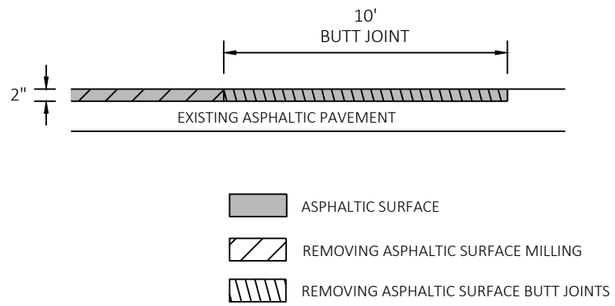
**ALIGNMENT TIES**

| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | ALIGNMENT CONTROLS | SHEET 4 | E |
|---|---|---|---|---|---|

2

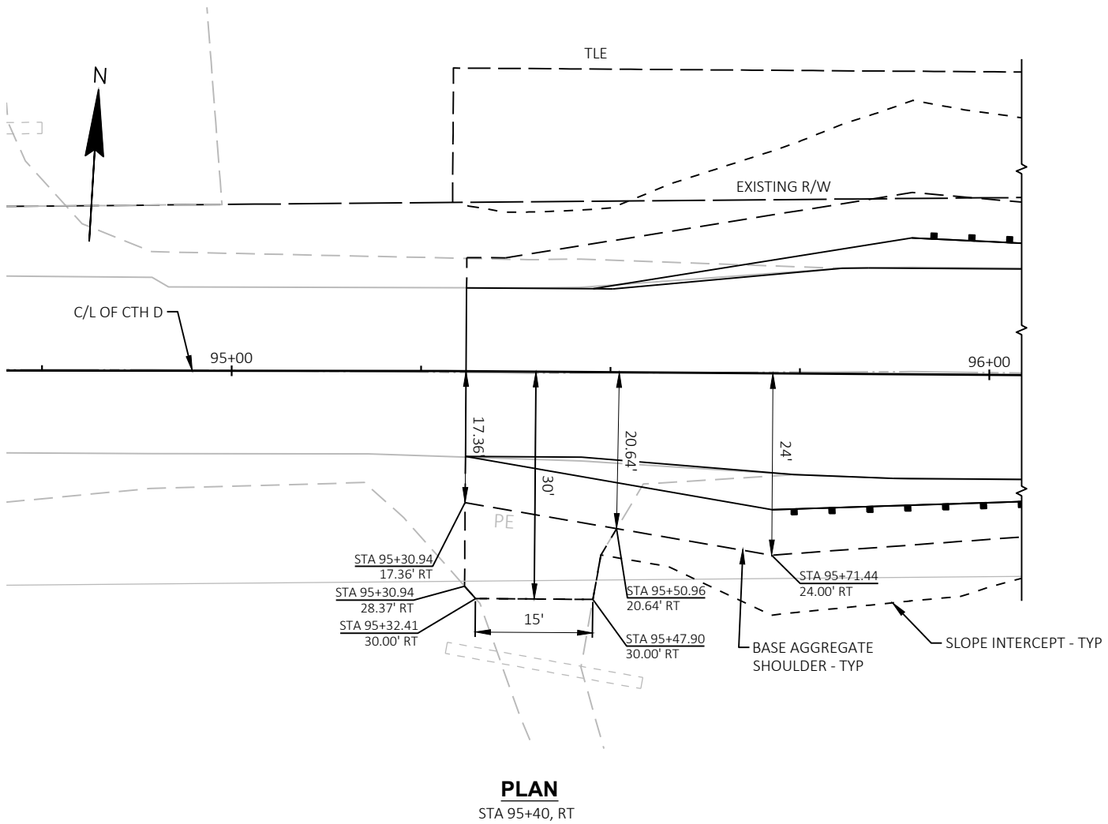



## GUARDRAIL LAYOUT

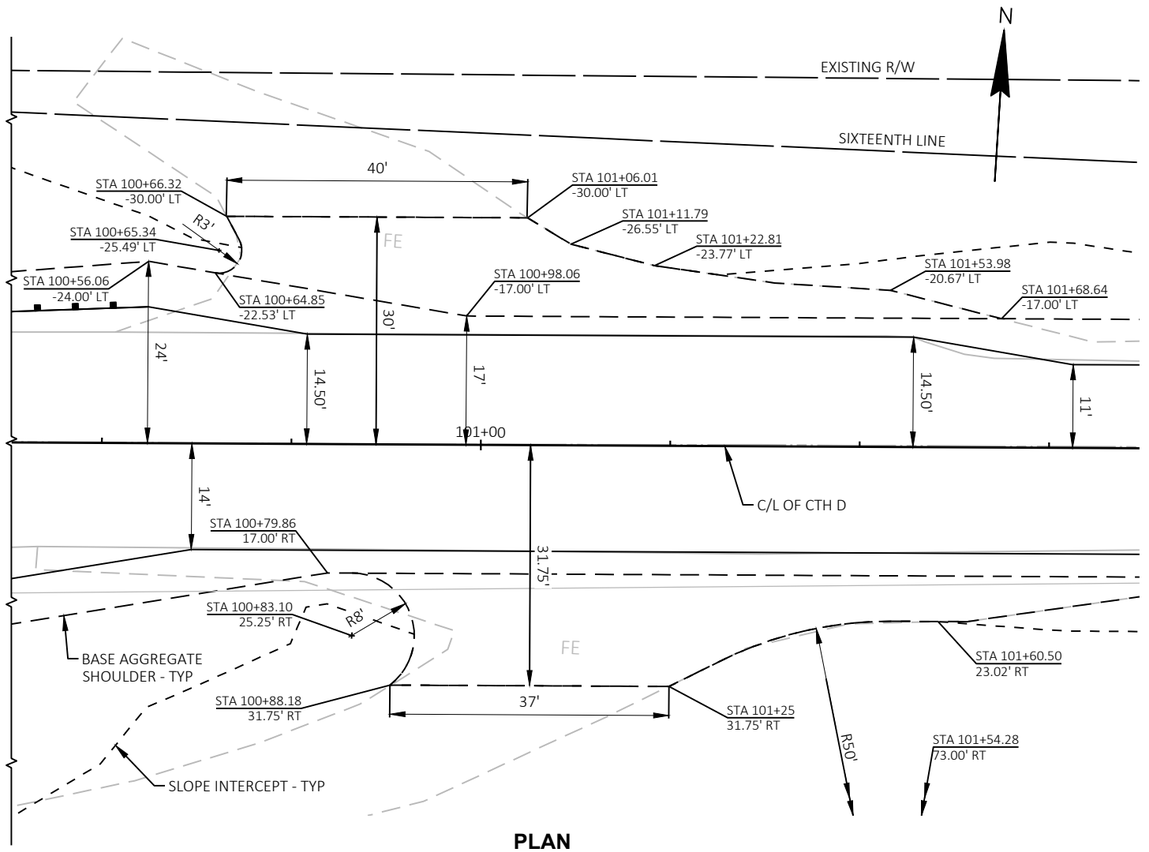



## BUTT JOINT DETAIL

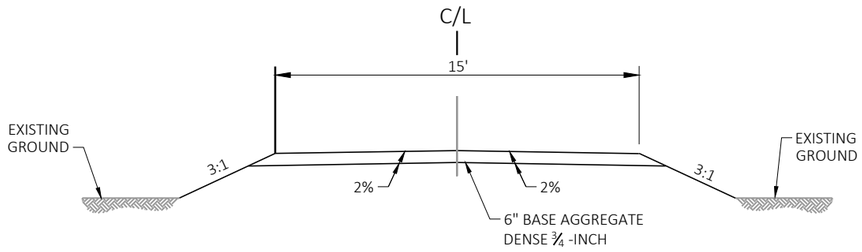
| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CONSTRUCTION DETAILS | SHEET 5 | E |
|---|---|---|---|---|---|




**PLAN**
STA 95+40, RT

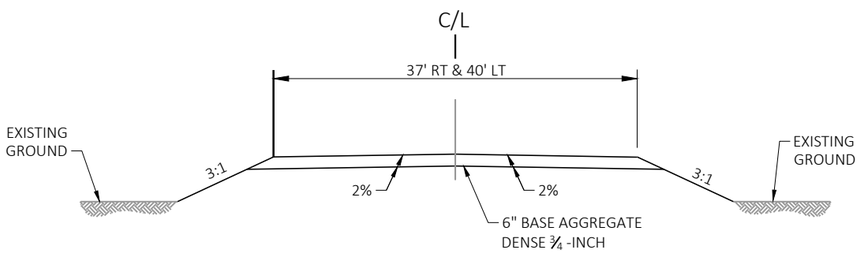



**PLAN**
STA 101+07, RT
STA 100+87, LT




**TYPICAL CROSS SECTION**

**PRIVATE ENTRANCE DETAILS**



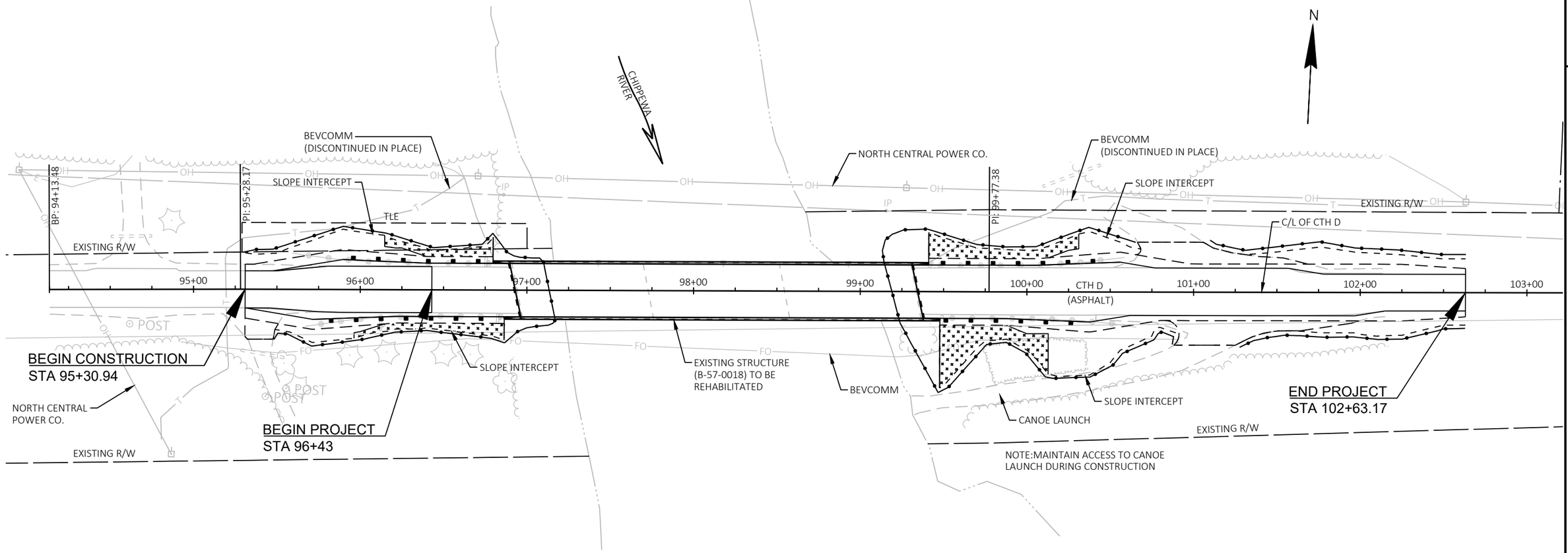

**TYPICAL CROSS SECTION**

**FIELD ENTRANCE DETAILS**

| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CONSTRUCTION DETAILS | SHEET 6 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\SHEETS\021002-CD.DWG
LAYOUT NAME - PE -- FE
PLOT DATE : 4/1/2025 10:40 AM
PLOT BY : WALDERA, KAREN
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2




LEGEND

- EROSION MAT CLASS II (TYPE C)
- SILT FENCE
- SLOPE INTERCEPT
- TEMPORARY DITCH CHECK (UNDISTRIBUTED)

NOTES:
NO DISTURBANCE OR TOPSOIL STOCKPILING IS ALLOWED OUTSIDE OF THE SLOPE INTERCEPTS.

WETLANDS EXIST IN THE PROJECT AREA.

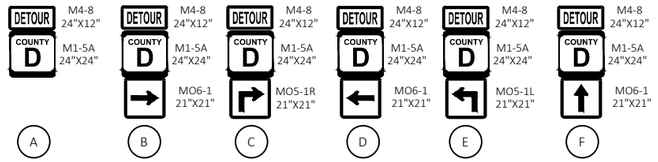
NO IN-STREAM WORK BETWEEN MARCH 1 TO JUNE 15, WITH BOTH DATES INCLUSIVE OF THE TIMEOUT PERIOD.

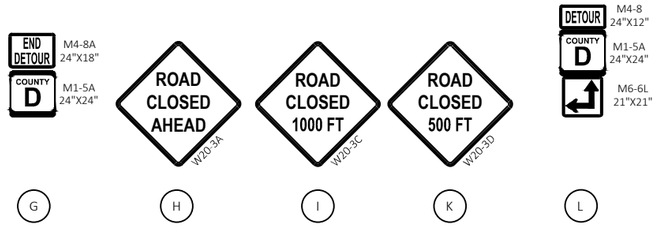
MULCH TO BE PLACED ON SIDE SLOPES NOT PROTECTED BY EROSION MAT.

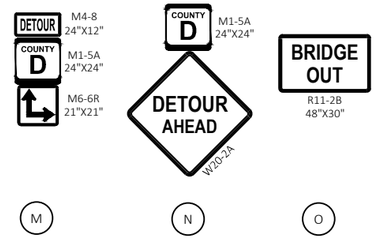
| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | EROSION CONTROL | SHEET 7 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022001-ec
PLOT DATE : 10/23/2025 11:34 AM PLOT BY : WALDERA, KAREN PLOT NAME : PLOT SCALE : 1 IN:60 FT
WISDOT/CADDS SHEET 42

2




DETOUR NOTES:

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

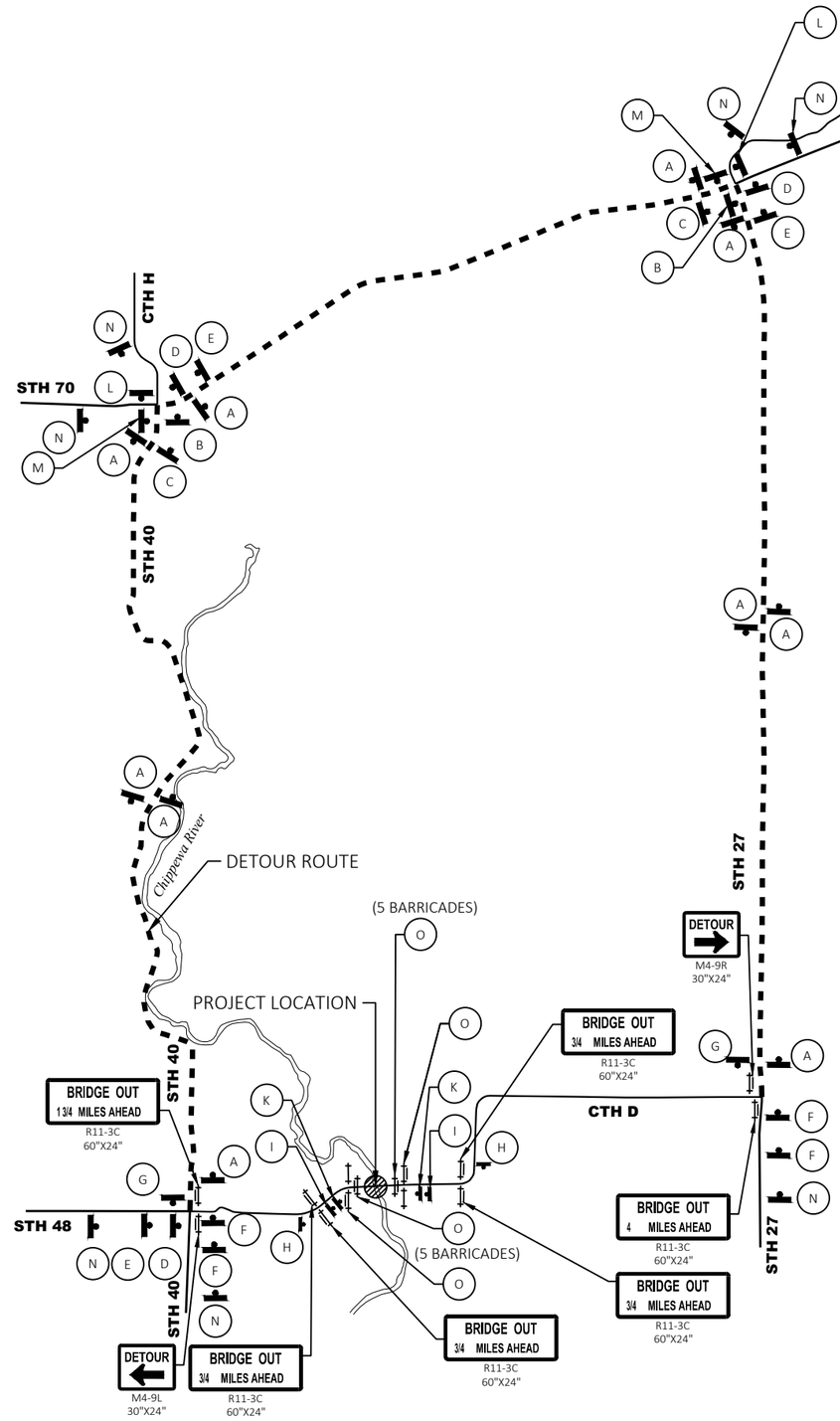
IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED OR REMOVED AS NEEDED AND AS APPROVED BY THE ENGINEER. THERE IS AN UNDISTRIBUTED AMOUNT IN THE QUANTITIES FOR THESE SIGNS.

ALL SIGNS SHALL BE 48"X48" UNLESS NOTED BY THE ENGINEER.

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

FOR DETAILS NOT SHOWN SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURE AND DETOUR SIGNING FOR MAINLINE CLOSURES" FOR ADDITIONAL INFORMATION.




NOT TO SCALE

| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | DETOUR ROUTE | SHEET 8 | E |
|---|---|---|---|---|---|

## Estimate Of Quantities

8460-00-70

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 201.0105 | Clearing | STA | 2.000 | 2.000 |
| 0004 | 201.0205 | Grubbing | STA | 2.000 | 2.000 |
| 0006 | 203.0270 | Removing Structure Over Waterway Debris Capture (structure) 01. B-57-0018 | EACH | 1.000 | 1.000 |
| 0008 | 204.0115 | Removing Asphaltic Surface Butt Joints | SY | 25.000 | 25.000 |
| 0010 | 204.0120 | Removing Asphaltic Surface Milling | SY | 300.000 | 300.000 |
| 0012 | 204.0165 | Removing Guardrail | LF | 482.000 | 482.000 |
| 0014 | 205.0100 | Excavation Common | CY | 411.000 | 411.000 |
| 0016 | 206.1001 | Excavation for Structures Bridges (structure) 01. B-57-0018 | EACH | 1.000 | 1.000 |
| 0018 | 210.1500 | Backfill Structure Type A | TON | 150.000 | 150.000 |
| 0020 | 213.0100 | Finishing Roadway (project) 01. 8460-00-70 | EACH | 1.000 | 1.000 |
| 0022 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 205.000 | 205.000 |
| 0024 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 900.000 | 900.000 |
| 0026 | 455.0605 | Tack Coat | GAL | 92.000 | 92.000 |
| 0028 | 465.0105 | Asphaltic Surface | TON | 330.000 | 330.000 |
| 0030 | 502.0100 | Concrete Masonry Bridges | CY | 353.900 | 353.900 |
| 0032 | 502.3200 | Protective Surface Treatment | SY | 860.000 | 860.000 |
| 0034 | 502.3210 | Pigmented Surface Sealer | SY | 260.000 | 260.000 |
| 0036 | 502.4204 | Adhesive Anchors No. 4 Bar | EACH | 66.000 | 66.000 |
| 0038 | 502.4205 | Adhesive Anchors No. 5 Bar | EACH | 148.000 | 148.000 |
| 0040 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 80,780.000 | 80,780.000 |
| 0042 | 506.2605 | Bearing Pads Elastomeric Non-Laminated | EACH | 8.000 | 8.000 |
| 0044 | 506.4000 | Steel Diaphragms (structure) 01. B-57-0018 | EACH | 9.000 | 9.000 |
| 0046 | 506.7050.S | Removing Bearings (structure) 01. B-57-0018 | EACH | 8.000 | 8.000 |
| 0048 | 509.1500 | Concrete Surface Repair | SF | 100.000 | 100.000 |
| 0050 | 516.0500 | Rubberized Membrane Waterproofing | SY | 18.000 | 18.000 |
| 0052 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 150.000 | 150.000 |
| 0054 | 614.0150 | Anchor Assemblies for Steel Plate Beam Guard | EACH | 4.000 | 4.000 |
| 0056 | 614.2300 | MGS Guardrail 3 | LF | 50.000 | 50.000 |
| 0058 | 614.2500 | MGS Thrie Beam Transition | LF | 160.000 | 160.000 |
| 0060 | 614.2610 | MGS Guardrail Terminal EAT | EACH | 4.000 | 4.000 |
| 0062 | 618.0100 | Maintenance and Repair of Haul Roads (project) 01. 8460-00-70 | EACH | 1.000 | 1.000 |
| 0064 | 619.1000 | Mobilization | EACH | 1.000 | 1.000 |
| 0066 | 624.0100 | Water | MGAL | 28.000 | 28.000 |
| 0068 | 625.0100 | Topsoil | SY | 945.000 | 945.000 |
| 0070 | 627.0200 | Mulching | SY | 1,155.000 | 1,155.000 |
| 0072 | 628.1504 | Silt Fence | LF | 1,425.000 | 1,425.000 |
| 0074 | 628.1520 | Silt Fence Maintenance | LF | 2,850.000 | 2,850.000 |
| 0076 | 628.1905 | Mobilizations Erosion Control | EACH | 4.000 | 4.000 |
| 0078 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 4.000 | 4.000 |
| 0080 | 628.2027 | Erosion Mat Class II Type C | SY | 355.000 | 355.000 |
| 0082 | 628.7504 | Temporary Ditch Checks | LF | 50.000 | 50.000 |
| 0084 | 629.0210 | Fertilizer Type B | CWT | 1.000 | 1.000 |
| 0086 | 630.0120 | Seeding Mixture No. 20 | LB | 68.000 | 68.000 |
| 0088 | 630.0200 | Seeding Temporary | LB | 40.000 | 40.000 |
| 0090 | 630.0500 | Seed Water | MGAL | 34.000 | 34.000 |
| 0092 | 634.0614 | Posts Wood 4x6-Inch X 14-FT | EACH | 7.000 | 7.000 |
| 0094 | 637.2210 | Signs Type II Reflective H | SF | 6.000 | 6.000 |
| 0096 | 637.2230 | Signs Type II Reflective F | SF | 23.120 | 23.120 |
| 0098 | 638.2602 | Removing Signs Type II | EACH | 8.000 | 8.000 |

## Estimate Of Quantities

8460-00-70

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0100 | 638.3000 | Removing Small Sign Supports | EACH | 7.000 | 7.000 |
| 0102 | 642.5001 | Field Office Type B | EACH | 1.000 | 1.000 |
| 0104 | 643.0420 | Traffic Control Barricades Type III | DAY | 2,888.000 | 2,888.000 |
| 0106 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 4,725.000 | 4,725.000 |
| 0108 | 643.0900 | Traffic Control Signs | DAY | 14,438.000 | 14,438.000 |
| 0110 | 643.0920 | Traffic Control Covering Signs Type II | EACH | 5.000 | 5.000 |
| 0112 | 643.5000 | Traffic Control | EACH | 1.000 | 1.000 |
| 0114 | 645.0111 | Geotextile Type DF Schedule A | SY | 70.000 | 70.000 |
| 0116 | 646.1020 | Marking Line Epoxy 4-Inch | LF | 2,050.000 | 2,050.000 |
| 0118 | 650.4500 | Construction Staking Subgrade | LF | 491.000 | 491.000 |
| 0120 | 650.5000 | Construction Staking Base | LF | 491.000 | 491.000 |
| 0122 | 650.6501 | Construction Staking Structure Layout (structure) 01. B-57-0018 | EACH | 1.000 | 1.000 |
| 0124 | 650.9911 | Construction Staking Supplemental Control (project) 01. 8394-00-73 | EACH | 1.000 | 1.000 |
| 0126 | 650.9920 | Construction Staking Slope Stakes | LF | 491.000 | 491.000 |
| 0128 | 690.0150 | Sawing Asphalt | LF | 274.000 | 274.000 |
| 0130 | 715.0502 | Incentive Strength Concrete Structures | DOL | 2,123.000 | 2,123.000 |
| 0132 | 999.2000.S | Installing and Maintaining Bird Deterrent System (station) 01. 98+13.76 | EACH | 1.000 | 1.000 |
| 0134 | ASP.1T0A | On-the-Job Training Apprentice at $5.00/HR | HRS | 300.000 | 300.000 |
| 0136 | ASP.1T0G | On-the-Job Training Graduate at $5.00/HR | HRS | 300.000 | 300.000 |
| 0138 | SPV.0060 | Special 01. Foam Void Filling B-57-0018 | EACH | 1.000 | 1.000 |

3

## CLEARING & GRUBBING

| STATION | TO | STATION | LOCATION | 201.0105 CLEARING STA | 201.0205 GRUBBING STA |
|---|---|---|---|---|---|
| 99+00 | - | 101+00 | CTH D | 2 | 2 |
| | | | **TOTAL 0010** | **2** | **2** |

NOTE: TREES HAVE BEEN CUT BY OTHERS PRIOR TO CONSTRUCTION. CLEAR DOWN TREES.

## REMOVING ASHPALTIC SURFACE MILLING

| STATION | TO | STATION | LOCATION | 204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY | 204.0120 REMOVING ASPHALTIC SURFACE MILLING SY |
|---|---|---|---|---|---|
| 95+40.94 | - | 96+43 | CTH D | -- | 300 |
| 95+30.94 | | | CTH D | 25 | -- |
| | | | **TOTAL 0010** | **25** | **300** |

## REMOVING GUARDRAIL

| STATION | TO | STATION | LOCATION | 204.0165 REMOVING GUARDRAIL LF |
|---|---|---|---|---|
| 95+59 | - | 96+81 | LT | 122 |
| 95+67 | - | 96+88 | RT | 121 |
| 99+40 | - | 100+59 | LT | 119 |
| 99+46 | - | 100+66 | RT | 120 |
| | | | **TOTAL 0010** | **482** |

3

CTH D EARTHWORK SUMMARY

| From/To Station | Location | Excavation Common (1) 205.0100 Cut | Salvaged / Unuseable Pavement Material (5) | Unexpanded Fill | Expanded Fill (2) Factor 1.30 | Mass Ordinate +/- (3) | Waste |
|---|---|---|---|---|---|---|---|
| 95+30.94- 96+93.06 | CTH D | 103 | 14 | 29 | 37 | 52 | 52 |
| 99+34.43 - 102+63.17 | CTH D | 308 | 89 | 116 | 151 | 68 | 68 |
| | **TOTAL** | **411** | **103** | **145** | **188** | | **120** |

1) Excavation Common is the Cut. Item number 205.0100.
2) Expanded Fill. Factor = 1.30; Expanded Fill = Unexpanded Fill * Fill Factor
3) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material on the project.
4) All quantities shown in CY.
5) Salvaged/unuseable pavement material

## BASE AGGREGATE DENSE

| STATION | TO | STATION | LOCATION | 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON | 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON |
|---|---|---|---|---|---|
| 95+30.94 | - | 96+43 | CTH D | 35 | 120 |
| 95+40 | | | PE RT | 10 | -- |
| 96+43 | - | 96+93.06 | CTH D | 10 | 105 |
| 99+34.43 | - | 102+63.17 | CTH D | 80 | 675 |
| 100+87 | | | PE LT | 30 | -- |
| 101+07 | | | PE RT | 40 | -- |
| | | | **TOTAL 0010** | **205** | **900** |

## ASPHALTIC SURFACE

| STATION | TO | STATION | LOCATION | 455.0605 TACK COAT GAL | 465.0105 ASPHALTIC SURFACE TON |
|---|---|---|---|---|---|
| 95+30.94 | - | 96+43 | CTH D | 5 | 55 |
| 96+43 | - | 96+93.06 | CTH D | 13 | 40 |
| 99+34.43 | - | 102+63.17 | CTH D | 74 | 235 |
| | | | **TOTAL 0010** | **92** | **330** |

## MGS GUARDRAIL

| STATION | TO | STATION | LOCATION | 614.2300 MGS GUARDRAIL 3 LF | 614.2500 MGS THRIE BEAM TRANSITION LF | 614.2610 MGS GUARDRAIL TERMINAL EAT EACH |
|---|---|---|---|---|---|---|
| 95+71.44 | - | 96+88.96 | RT | 25 | 40 | 1 |
| 95+89.64 | - | 96+82.16 | LT | -- | 40 | 1 |
| 99+38.53 | - | 100+56.06 | LT | 25 | 40 | 1 |
| 99+45.34 | - | 100+37.86 | RT | -- | 40 | 1 |
| | | | **TOTAL 0010** | **50** | **160** | **4** |

## WATER

| LOCATION | 624.0100 WATER MGAL |
|---|---|
| COMPACTION | 17 |
| DUST CONTROL | 11 |
| **TOTAL 0010** | **28** |

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

## EROSION CONTROL

| STATION | TO | STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF | 628.2027 EROSION MAT CLASS II TYPE C SY | 628.7504 TEMPORARY DITCH CHECKS LF |
|---|---|---|---|---|---|---|---|
| 95+30.94 | - | 97+17 | LT\RT | 410 | 820 | 85 | -- |
| 99+13 | - | 102+63.17 | LT\RT | 730 | 1,460 | 200 | -- |
| | | | UNDISTRIBUTED | 285 | 570 | 70 | 50 |
| | | | **TOTAL 0010** | **1,425** | **2,850** | **355** | **50** |

## MOBILIZATIONS EROSION CONTROL

| LOCATION | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH |
|---|---|---|
| PROJECT LIMITS | 4 | 4 |
| **TOTAL 0010** | **4** | **4** |

## RESTORATION ITEMS

| STATION | TO | STATION | LOCATION | 625.0100 TOPSOIL SY | 627.200 MULCHING SY | 629.0210 FERTILIZER TYPE B CWT | 630.0120 SEEDING MIXTURE NO. 20 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|---|---|
| 95+30.94 | - | 97+17 | LT/RT | 210 | 290 | 0.3 | 17 | 10 | 8 |
| 99+13 | - | 102+63.17 | LT/RT | 545 | 635 | 0.5 | 37 | 22 | 19 |
| | | | UNDISTRIBUTED | 190 | 230 | 0.2 | 14 | 8 | 7 |
| | | | **TOTAL 0010** | **945** | **1,155** | **1.0** | **68** | **40** | **34** |

## SIGNS TYPE II

| STATION | LOCATION | SIGN CODE | SIGN SIZE (INCHES) | 634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH | 637.2210 SIGNS TYPE II REFLECTIVE H SF | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 96+14 | RT | W14-3 | 48X36 | 1 | -- | 5.56 | 1 | 1 | NO PASSING SIGN |
| 96+77 | LT | W5-52L | 12X36 | 1 | -- | 3 | 1 | 1 | OBJECT MARKER SIGN |
| 96+84 | RT | W5-52R | 12X36 | 1 | -- | 3 | 1 | 1 | OBJECT MARKER SIGN |
| 99+43 | LT | W5-52R | 12X36 | 1 | -- | 3 | 1 | 1 | OBJECT MARKER SIGN |
| 99+43 | LT | W14-3 | 48X36 | | -- | 6 | 1 | | NO PASSING SIGN |
| 99+51 | RT | W5-52L | 12X36 | 1 | -- | 3 | 1 | 1 | OBJECT MARKER SIGN |
| 100+39 | LT | D11-10 | 24X18 | 1 | 3 | -- | 1 | 1 | ATV ROUTE |
| 100+46 | RT | D11-10 | 24X18 | 1 | 3 | -- | 1 | 1 | ATV ROUTE |
| | **TOTAL 0010** | | | **7** | **6** | **23.12** | **8** | **7** | |

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

## TRAFFIC CONTROL

| | DURATION DAYS | EACH | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY | EACH | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY | EACH | 643.0900 TRAFFIC CONTROL SIGNS DAY |
|---|---|---|---|---|---|---|---|
| PER SDD 15C02 | 105 | 22 | 2,310 | 36 | 3,780 | 110 | 11,550 |
| UNDISTRIBUTED | | -- | 578 | -- | 945 | -- | 2,888 |
| **TOTAL 0010** | | | **2,888** | | **4,725** | | **14,438** |

## TRAFFIC CONTROL COVERING SIGNS TYPE II

| LOCATION | 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH |
|---|---|
| UNDISTRIBUTED | 5 |
| TOTAL 0010 | 5 |

## MARKING LINE EPOXY 4-INCH

| STATION | TO | STATION | LOCATION | 646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF | WHITE LF | REMARKS |
|---|---|---|---|---|---|---|
| 95+30.94 | - | 96+14 | CTH D | 104 | -- | YELLOW SOLID & DASHED CENTERLINE |
| 96+14 | - | 99+43 | CTH D | 82 | -- | YELLOW DASHED CENTERLINE |
| 99+43 | - | 102+63.17 | CTH D | 400 | -- | YELLOW SOLID & DASHED CENTERLINE |
| 95+30.94 | - | 102+63.17 | CTH D, LT | -- | 732 | WHITE EDGELINE |
| 95+30.94 | - | 102+63.17 | CTH D, RT | -- | 732 | WHITE EDGELINE |
| SUBTOTALS | | | | 1,464 | 1,464 | |
| | | | **TOTAL 0010** | **2,050** | | |

3

## CONSTRUCTION STAKING

| STATION | TO | STATION | LOCATION | 650.4500 CONSTRUCTION STAKING SUBGRADE LF | 650.5000 CONSTRUCTION STAKING BASE LF | 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF |
|---|---|---|---|---|---|---|
| 95+30.94 | - | 102+63.17 | CTH D | 491 | 491 | 491 |
| | | | **TOTAL 0010** | **491** | **491** | **491** |

## CONSTRUCTION STAKING STRUCTURE LAYOUT

| CATEGORY | LOCATION | 650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-57-0018) EACH |
|---|---|---|
| 0020 | B-57-0018 | 1 |
| | **TOTAL 0020** | **1** |

## CONSTRUCTION SUPPLEMENTAL CONTROL

| LOCATION | 650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 8460-00-70) EACH |
|---|---|
| PROJECT LIMITS | 1 |
| **TOTAL 0010** | **1** |

## SAWING ASPHALT

| STATION | TO | STATION | LOCATION | 690.0150 SAWING ASPHALT LF |
|---|---|---|---|---|
| 95+30.94 | - | 96+43 | CTH D, LT/RT | 224 |
| 96+43 | | | CTH D | 28 |
| 102+63.17 | | | CTH D | 22 |
| | | | **TOTAL 0010** | **274** |

## INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM

| STATION | LOCATION | 999.2000.S.01 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. 98+13.76) EACH |
|---|---|---|
| 98+13.76 | B-57-0018 | 1 |
| | **TOTAL 0010** | **1** |

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

4

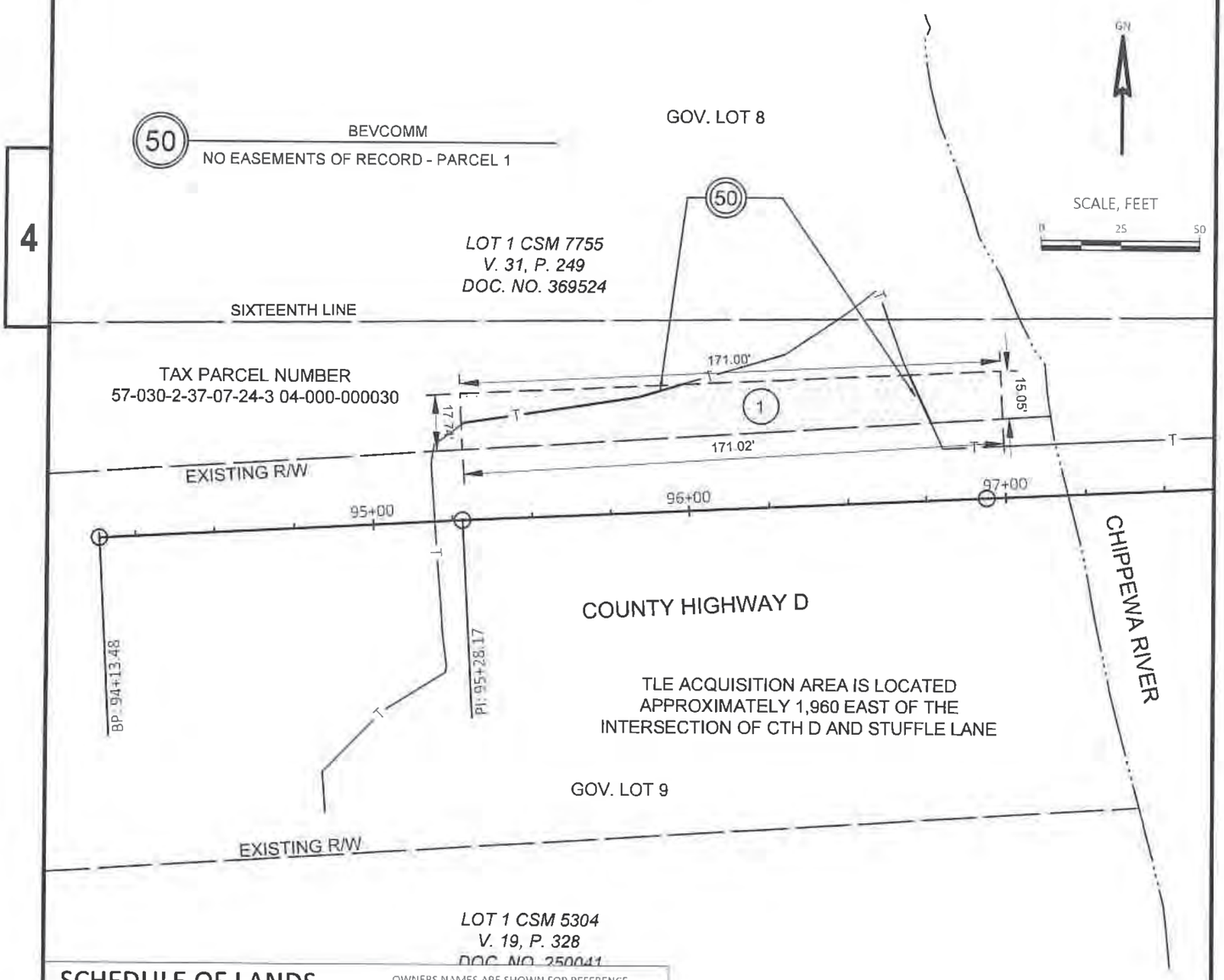
| R/W PROJECT NUMBER: 8460-00-00 | SHEET NUMBER: 1 |
|---|---|

TLE ACQUISITION EXHIBIT
STH 40 - STH 27
CHIPPEWA RIVER BRIDGE B-57-0018
CTH D — SAWYER COUNTY

PART OF GOVERNMENT LOT 9 OF SECTION 24, T37N, R7W, TOWN OF WEIRGOR, SAWYER COUNTY, WISCONSIN

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

THIS TLE IS FOR THE RIGHT TO CONSTRUCT, CUT, AND/OR FILL SLOPES, INCLUDING FOR SUCH PURPOSE THE RIGHT TO OPERATE THE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES DEEM NECESSARY OR DESIRABLE




## SCHEDULE OF LANDS & INTERESTS REQUIRED

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

| PARCEL NUMBER | OWNER(S) | INTEREST REQUIRED | TLE S.F |
|---|---|---|---|
| 1 | MAE KATHRYN ROBERS | TLE | 2,804 |

## UTILITY INTERESTS REQUIRED

| UTILITY NUMBER | UTILITY OWNER(S) | INTEREST REQUIRED |
|---|---|---|
| 50 | BEVCOMM | RELEASE OF RIGHTS |

THIS MAP IS APPROVED FOR THE COUNTY OF SAWYER

SIGNATURE: _____ DATE: 7/2/25

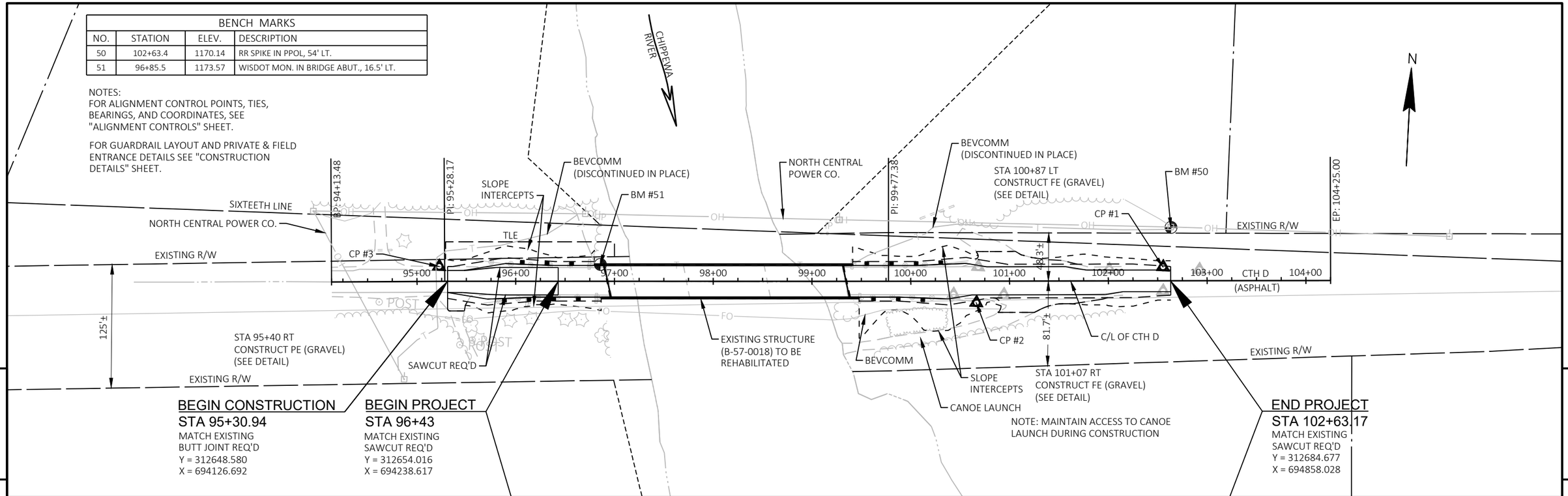
PRINT NAME: John Pinnow

FILE NAME : 84600000 TLE EXHIBIT DWG PLOT DATE : 5/8/2025 2:48 PM R/W PROJECT: 8460-00-00

| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| 50 | 102+63.4 | 1170.14 | RR SPIKE IN PPOL, 54' LT. |
| 51 | 96+85.5 | 1173.57 | WISDOT MON. IN BRIDGE ABUT., 16.5' LT. |

NOTES:
FOR ALIGNMENT CONTROL POINTS, TIES, BEARINGS, AND COORDINATES, SEE "ALIGNMENT CONTROLS" SHEET.

FOR GUARDRAIL LAYOUT AND PRIVATE & FIELD ENTRANCE DETAILS SEE "CONSTRUCTION DETAILS" SHEET.

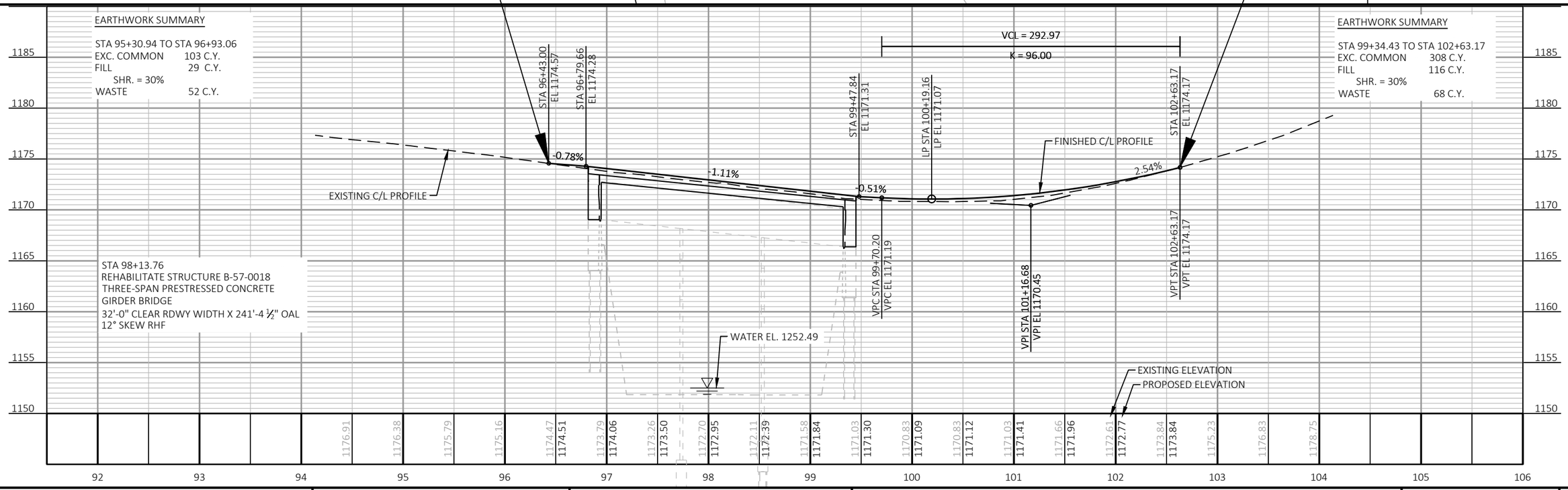



EARTHWORK SUMMARY

STA 95+30.94 TO STA 96+93.06
EXC. COMMON 103 C.Y.
FILL 29 C.Y.
SHR. = 30%
WASTE 52 C.Y.

EARTHWORK SUMMARY

STA 99+34.43 TO STA 102+63.17
EXC. COMMON 308 C.Y.
FILL 116 C.Y.
SHR. = 30%
WASTE 68 C.Y.

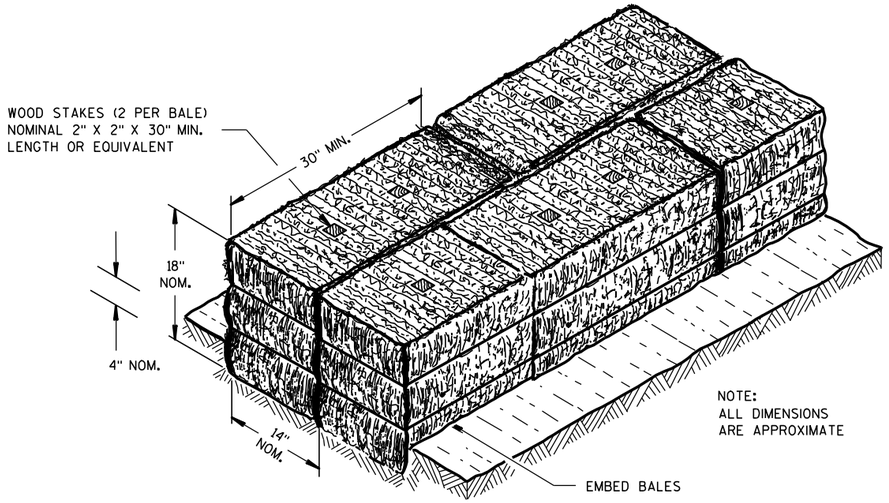



| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | PLAN AND PROFILE: | SHEET 15 | E |
|---|---|---|---|---|---|

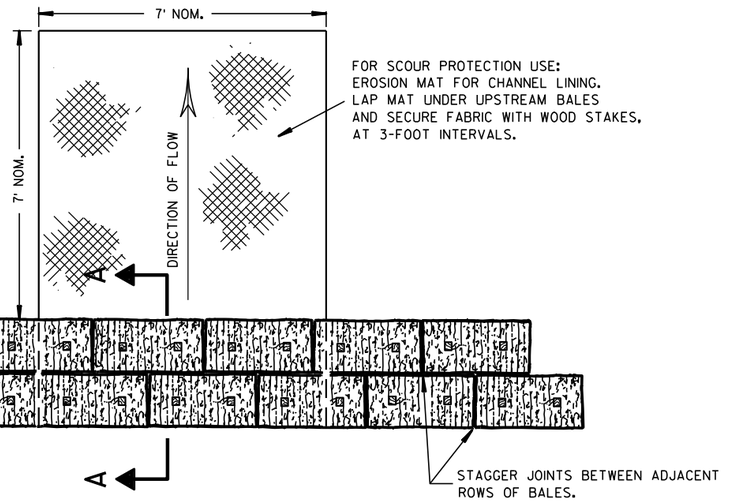
# Standard Detail Drawing List

| | |
|---|---|
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 13C19-03 | HMA LONGITUDINAL JOINTS |
| 14B42-07A | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07B | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07C | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07D | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B44-04A | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04B | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04C | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B45-05A | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05B | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05C | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05D | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C02-09C | DETOUR SIGNING FOR MAINLINE CLOSURES |
| 15C06-12 | SIGNING & MARKING FOR TWO LANE BRIDGES |
| 15C08-24A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS |
| 15C11-10B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS |

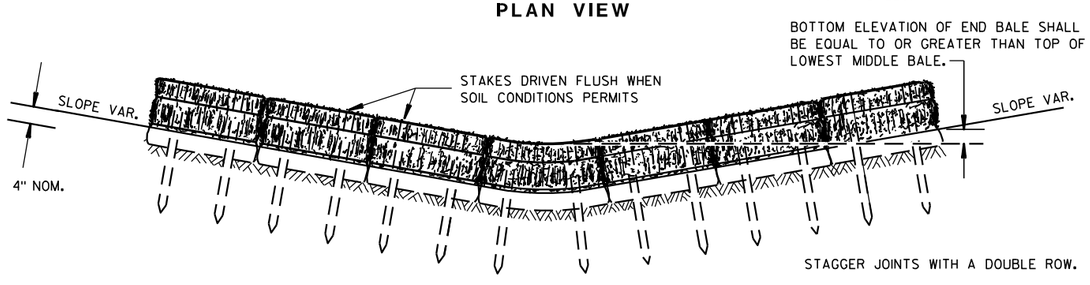

6




**SECTION A-A**




**PLAN VIEW**



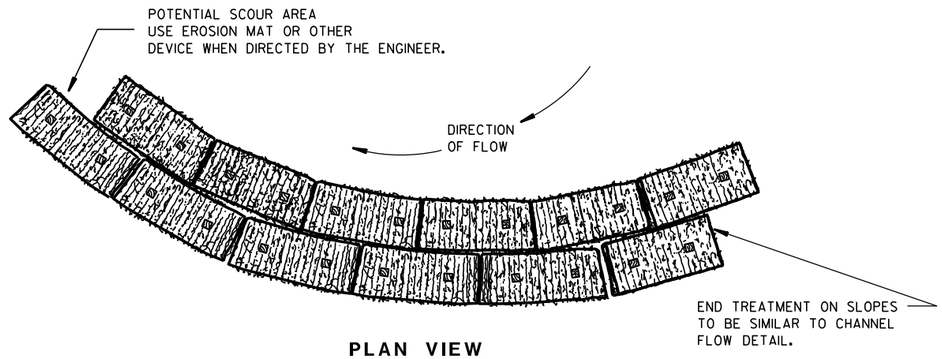

**FRONT ELEVATION**

## TEMPORARY DITCH CHECK USING EROSION BALES (1)

## GENERAL NOTES

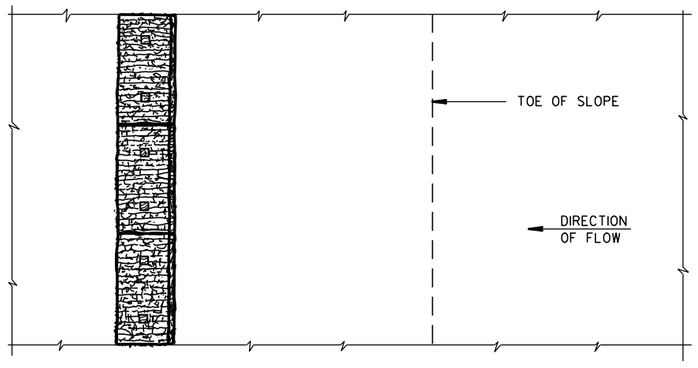
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

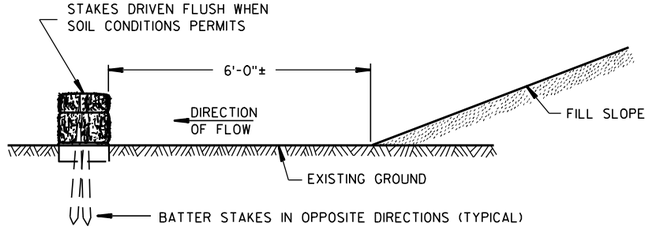



**PLAN VIEW**

WHEN ALTERING THE DIRECTION OF FLOW




**PLAN VIEW**




**FRONT ELEVATION**

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

## EROSION BALES FOR SHEET FLOW

**TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

FHWA

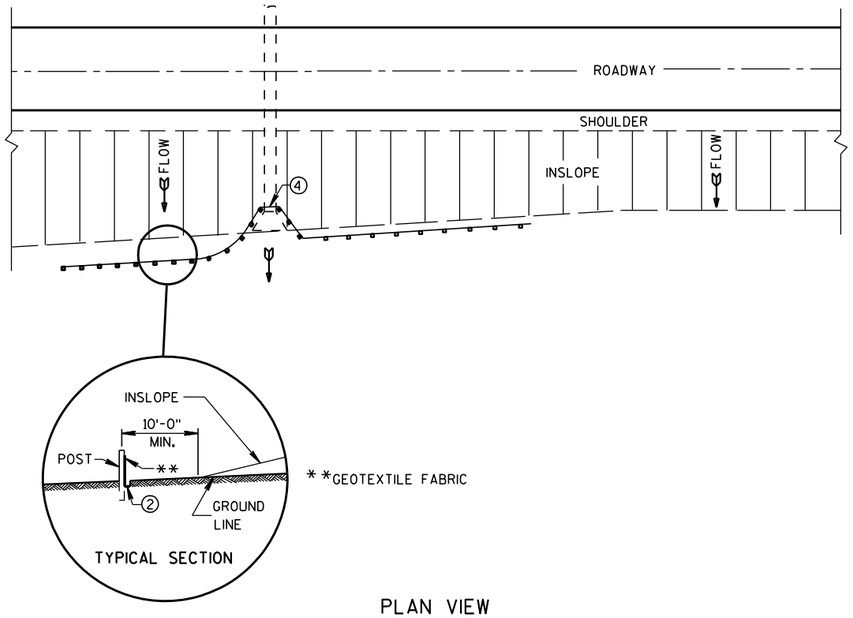


6

S.D.D. 8 E 8-3

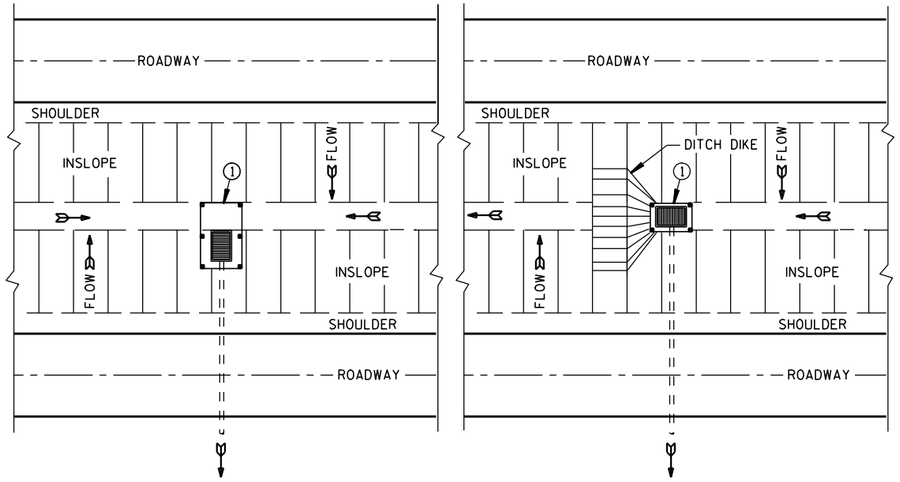
6

S.D.D. 8 E 8-3




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE



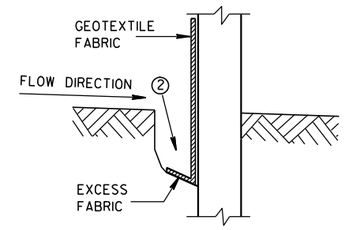

PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

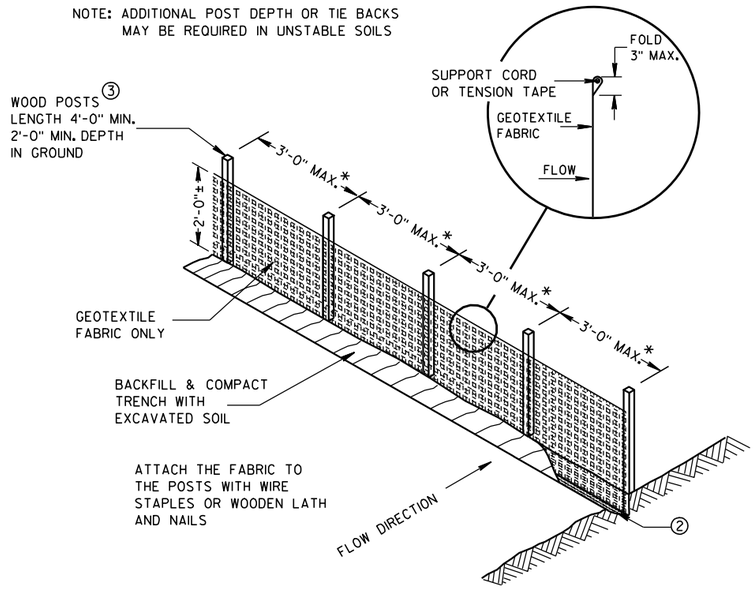
## GENERAL NOTES

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

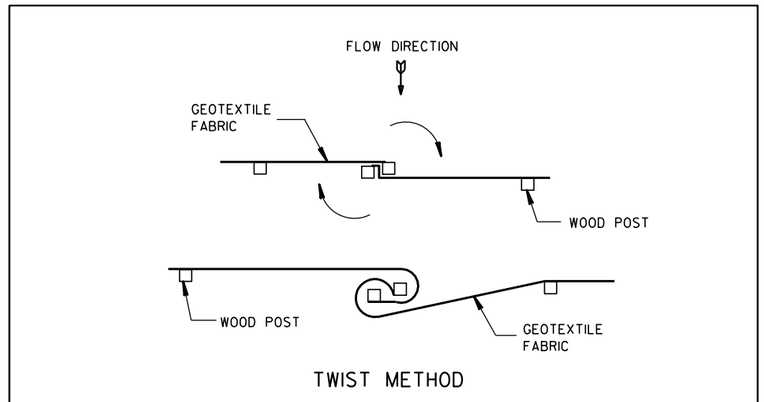
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



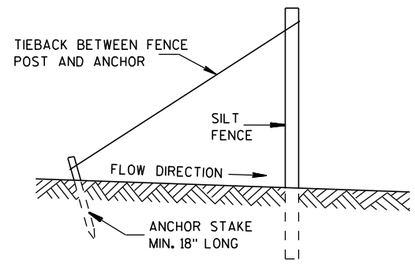

## TRENCH DETAIL




## SILT FENCE




## JOINING TWO LENGTHS OF SILT FENCE 5




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

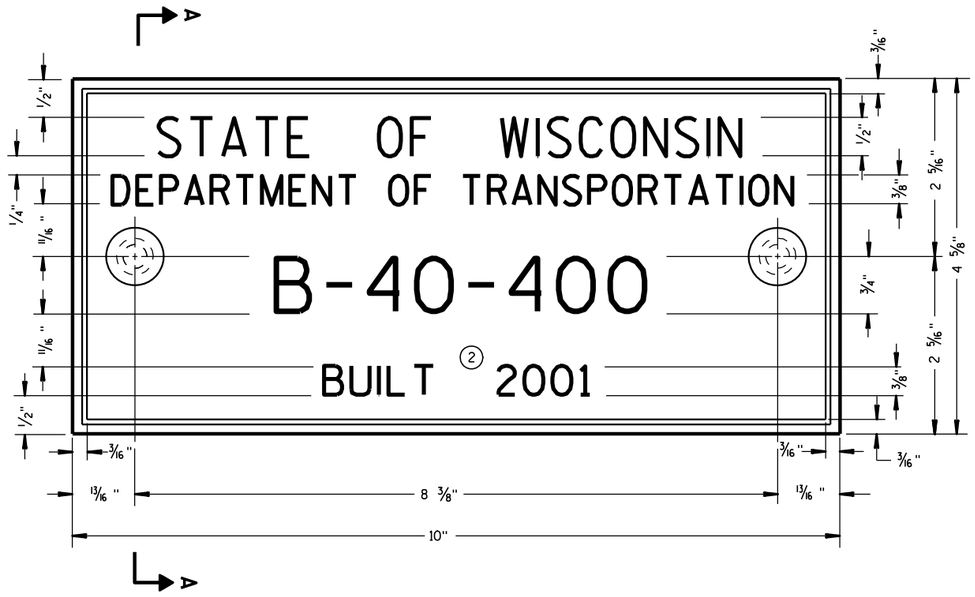


6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6




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

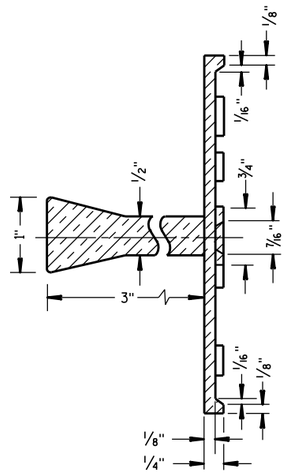
## GENERAL NOTES

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

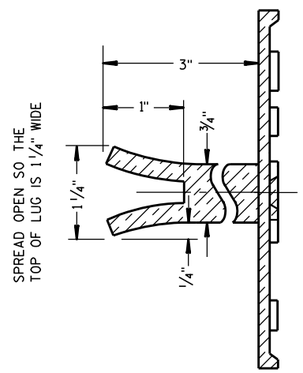
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

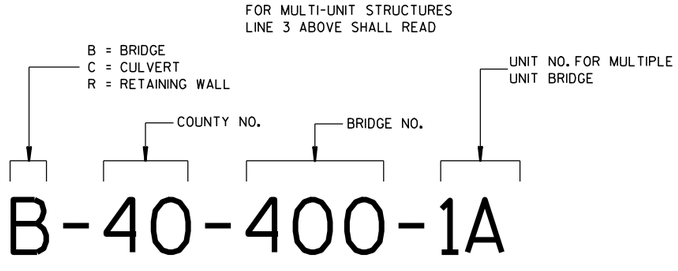
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



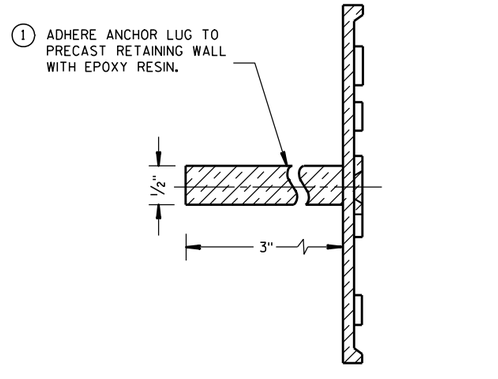

**SECTION A-A**




**ALTERNATE LUG**




**NUMBERING DESIGNATION**
**MULTI-UNIT STRUCTURES**




**ALTERNATE LUG**
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE (STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA



6

S.D.D. 12 A 3-10

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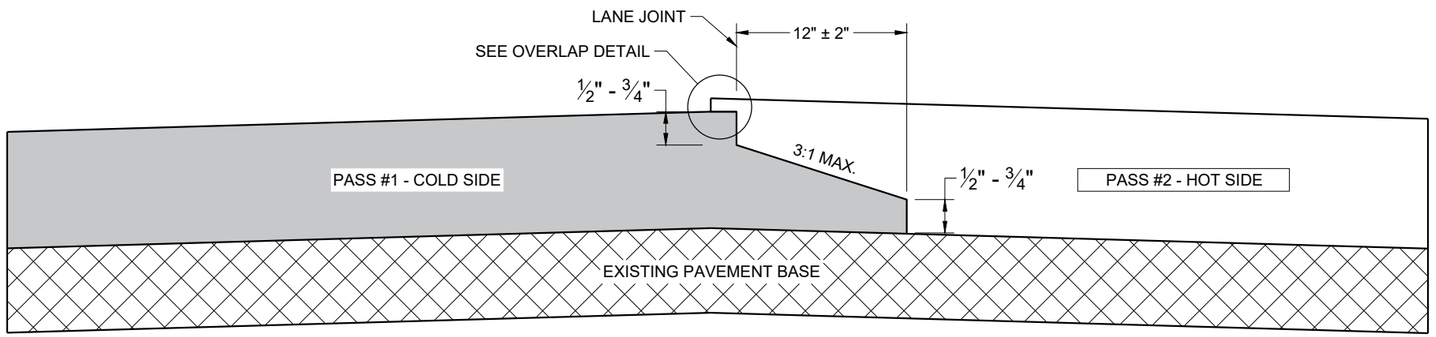
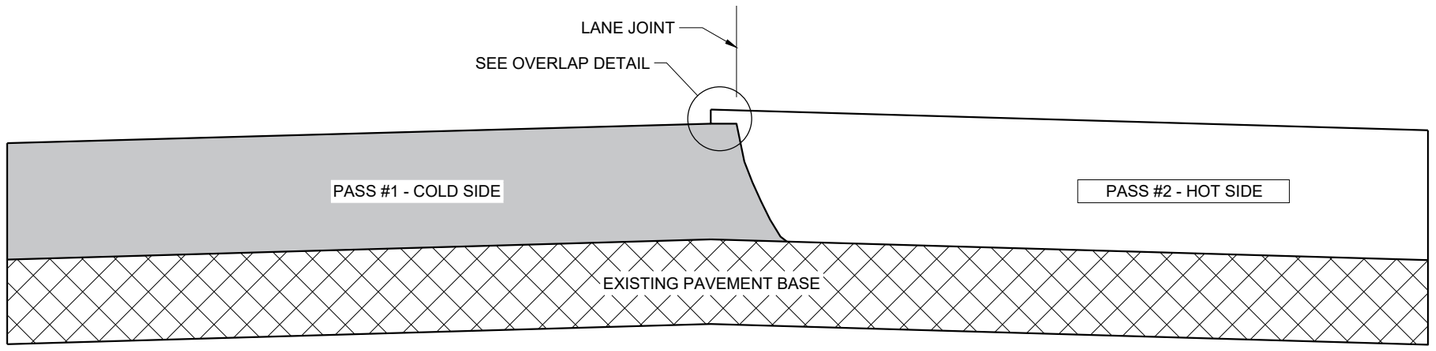
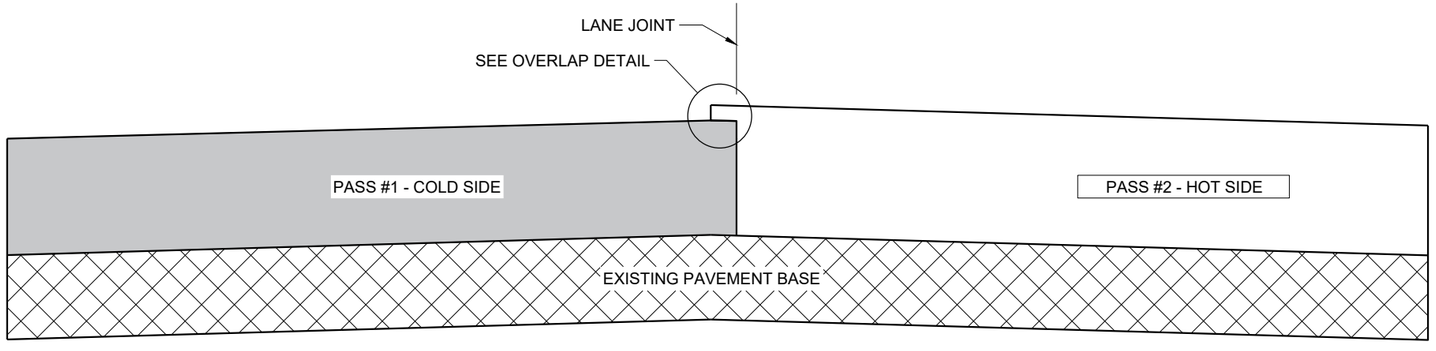
S.D.D. 12 A 3-10




**TYPICAL PAVEMENT CROSS SECTION**
**NOTCHED WEDGE JOINT**




**TYPICAL PAVEMENT CROSS SECTION**
**VERTICAL JOINT**




**TYPICAL PAVEMENT CROSS SECTION**
**VERTICAL JOINT (MILLED)**

## GENERAL NOTES

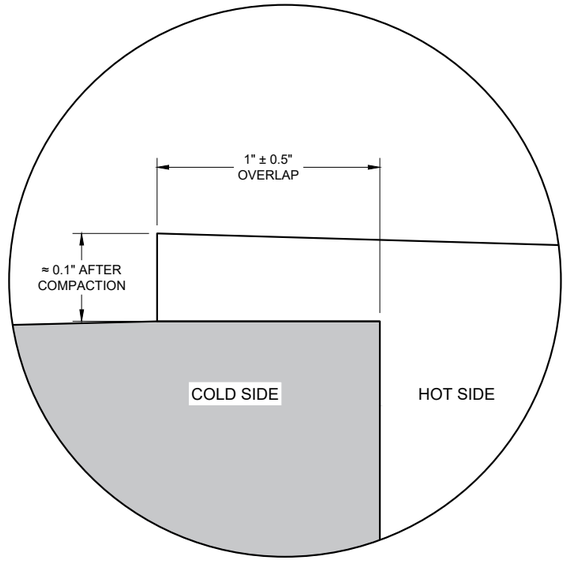
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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




**OVERLAP DETAIL (TYPICAL)**

6

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SDD 13C19 - 03

SDD 13C19 - 03

**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

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

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

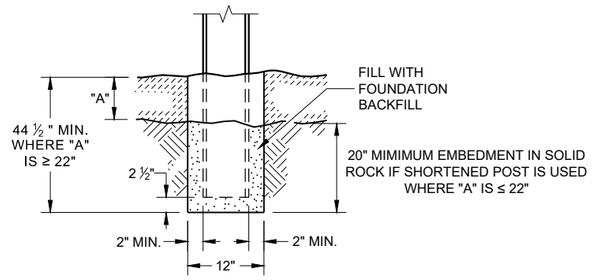
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

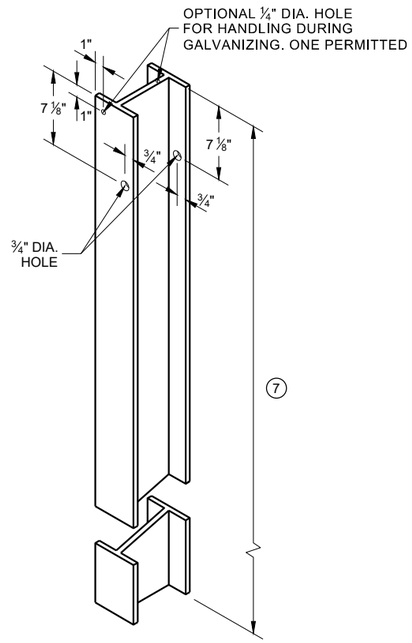
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

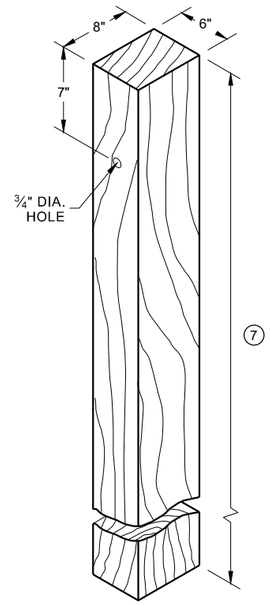
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



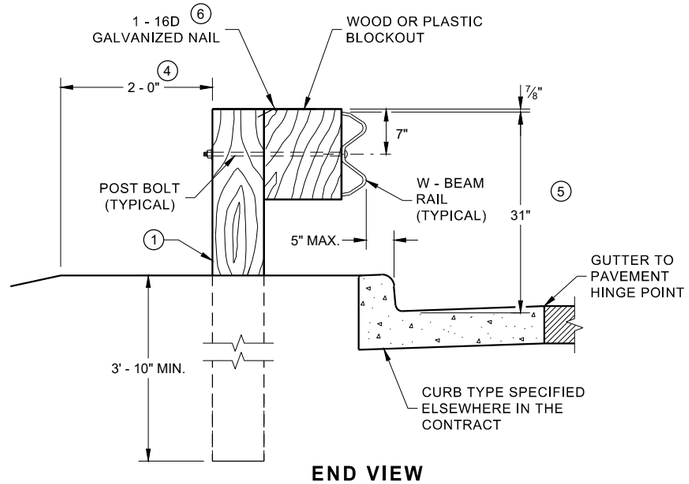

END VIEW
**SETTING STEEL OR WOOD POST IN ROCK** (3)



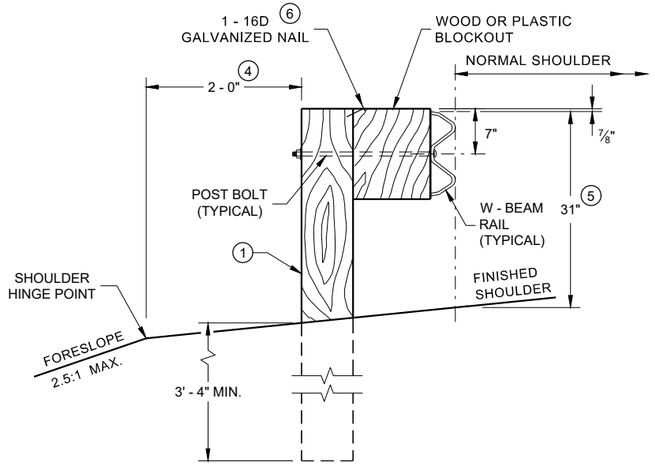

**STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9)** (1)



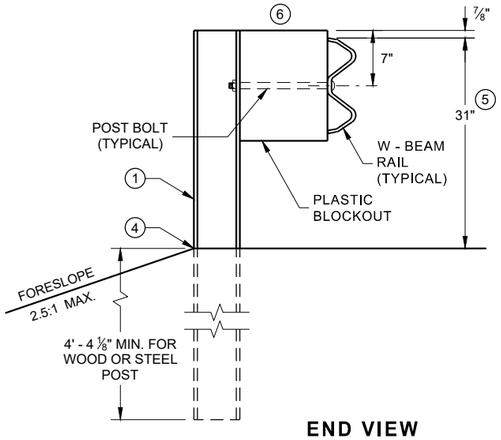

**WOOD POST (6" X 8") NOMINAL** (1)



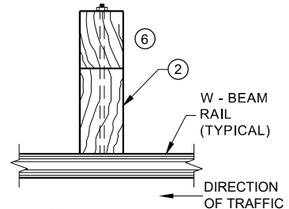

END VIEW
**LOCATED ALONG A CURBED ROADWAY**



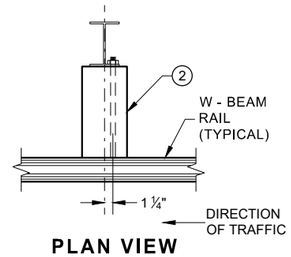

END VIEW
**LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION**



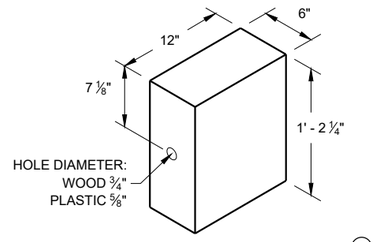

END VIEW
**MGS LONGER POST AT HALFPOST SPACING W BEAM (K)**




PLAN VIEW
**WOOD POST, BLOCKOUT & BEAM**




PLAN VIEW
**STEEL POST, PLASTIC BLOCKOUT & BEAM**




**WOOD OR PLASTIC BLOCKOUT** (2)

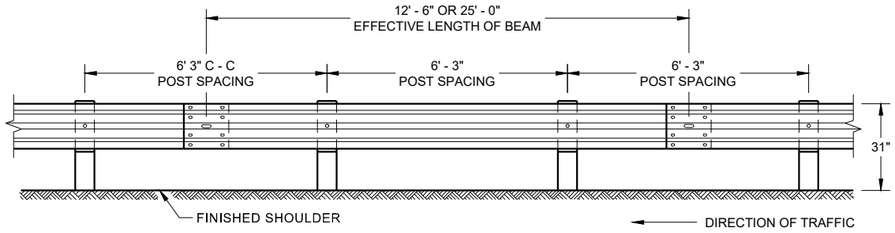
**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

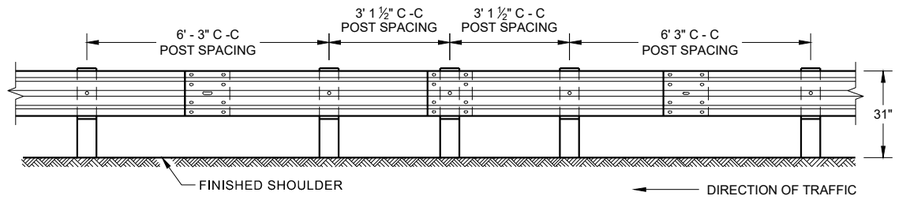


SDD 14B42 - 07a

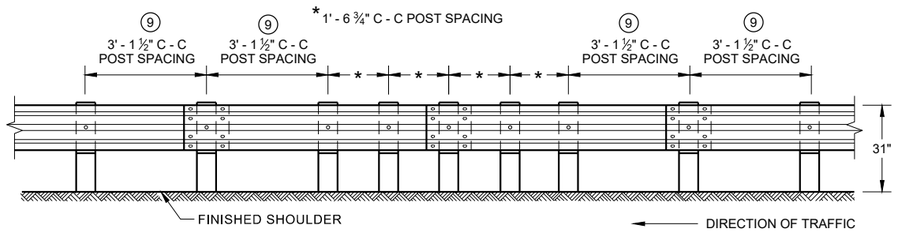
SDD 14B42 - 07a



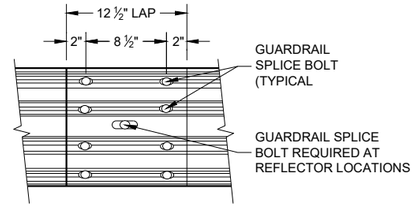

**FRONT VIEW**
**POST SPACING STANDARD INSTALLATION**



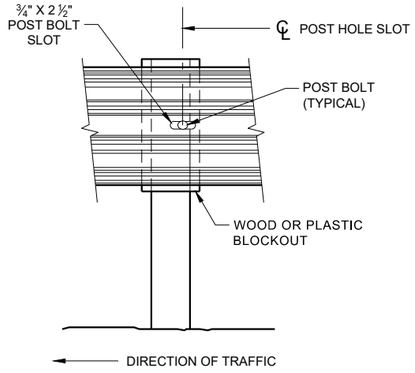

**FRONT VIEW**
**HALF POST SPACING (HS) AND**
**HALF POST SPACING WITH LONGER POSTS (K)**



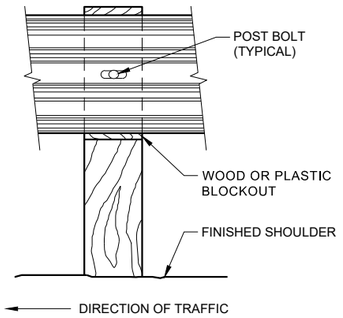

**FRONT VIEW**
**QUARTER POST SPACING (QS)**



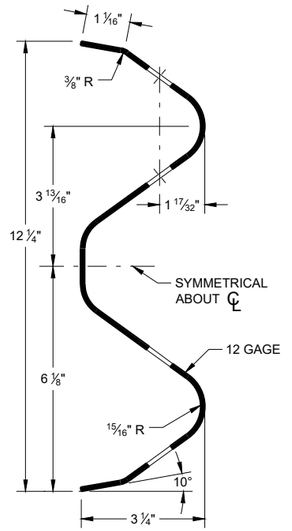

**FRONT VIEW**
**MID-SPAN BEAM SPLICE**



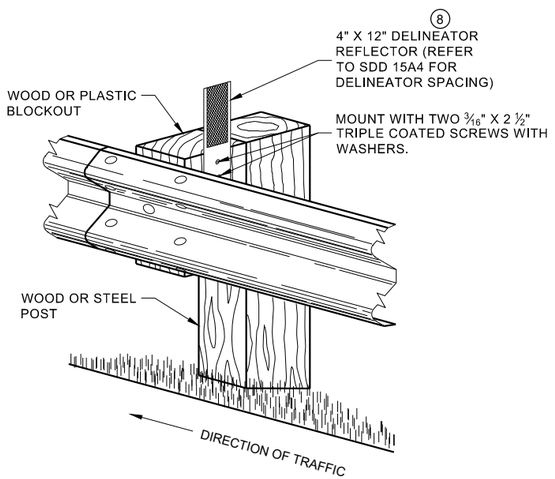

**FRONT VIEW AT STEEL POST**




**FRONT VIEW AT WOOD POST**




**SECTION THRU W-BEAM RAIL**




**ONE SIDED REFLECTOR DETAIL**
**AND TYPICAL INSTALLATION**

## GENERAL NOTES

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

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

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

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

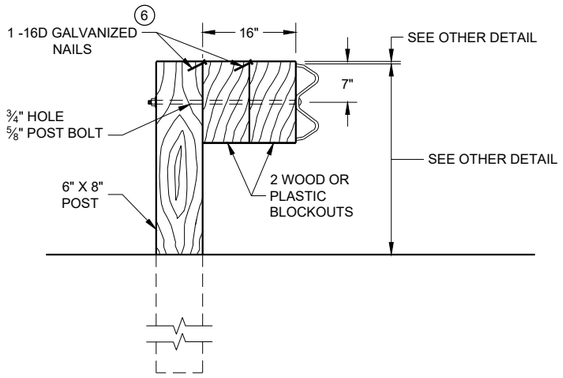
**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




6

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

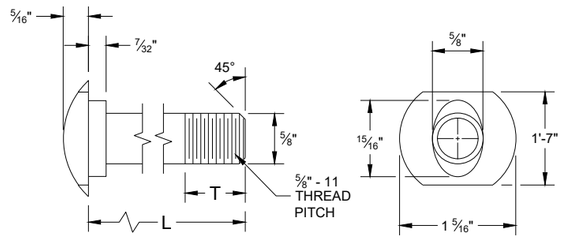



## DETAIL FOR 16" BLOCKOUT DEPTH

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

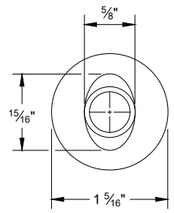
NOTE:

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

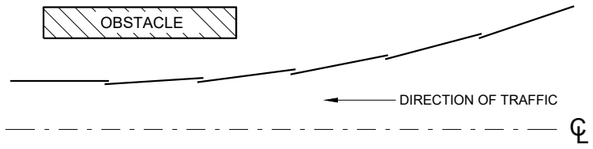



## POST BOLT TABLE

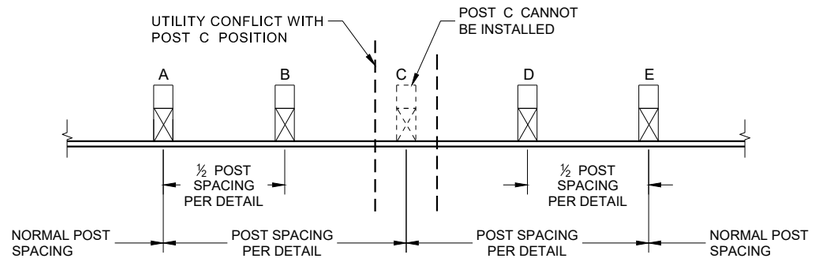
| L | T (MIN.) |
|---|---|
| 1 ¼" | 1 ⅛" |
| 2" | 1 ¾" |
| 10" | 4" |
| 14" | 4 1⁄16" |
| 18" | 4" |
| 21" | 4 1⁄16" |
| 25" | 4" |



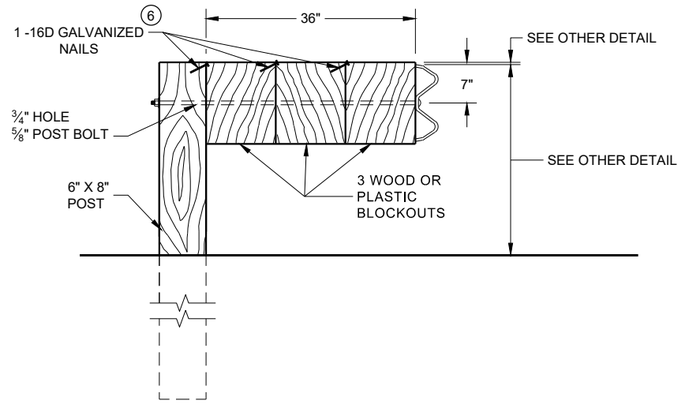

## ALTERNATE BOLT HEAD



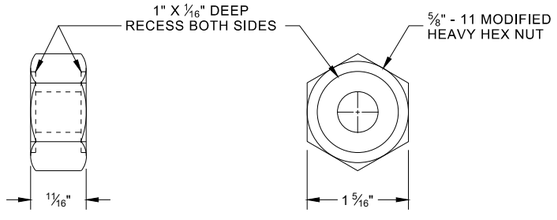

## PLAN VIEW
## BEAM LAPPING DETAIL



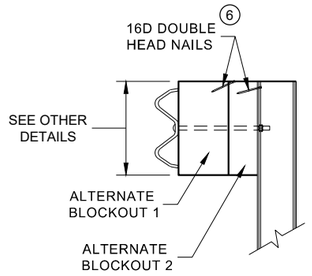

## POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



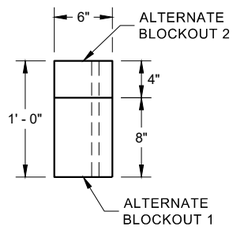

## DETAIL FOR 36" BLOCKOUT DEPTH




## POST BOLT, SPLICE BOLT AND RECESS NUT




## SIDE VIEW




## PLAN VIEW

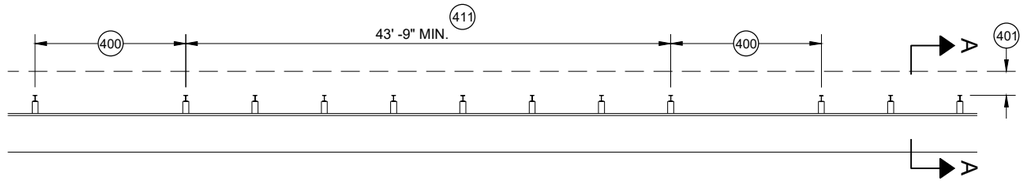
## ALTERNATE WOOD BLOCKOUT DETAIL

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

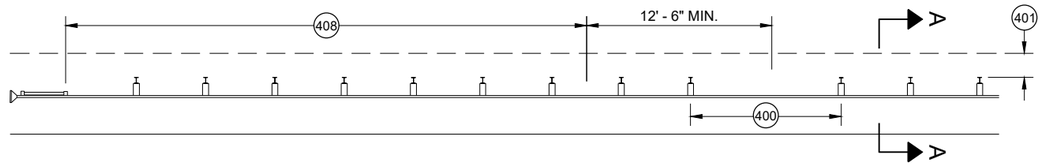
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

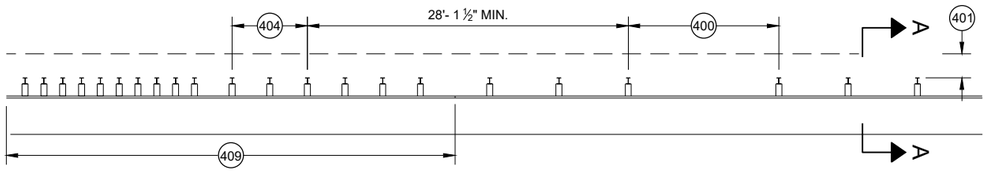
**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**



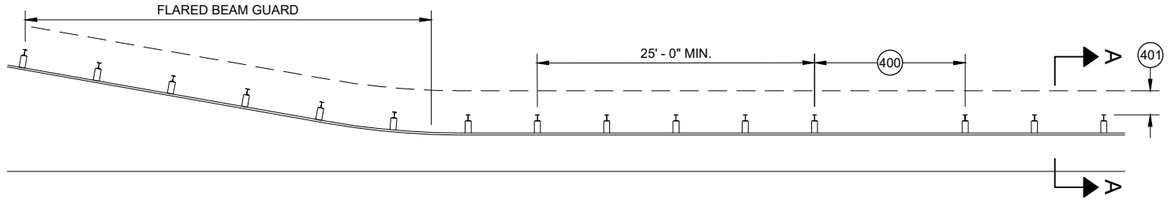

**MISSING POST IN MGS GUARDRAIL**



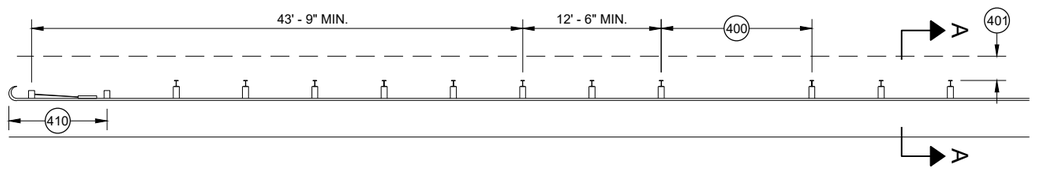

**MISSING POST IN MGS GUARDRAIL NEAR EAT**



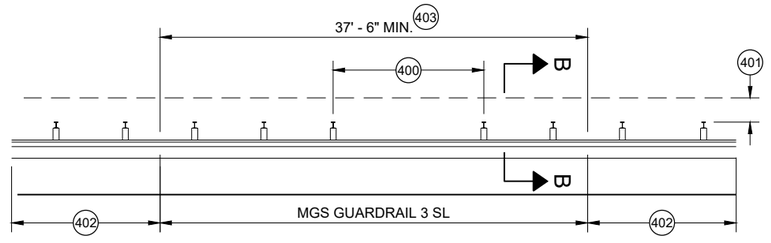

**MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION**




**MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD**

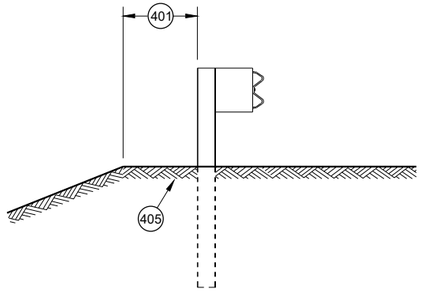



**MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL**

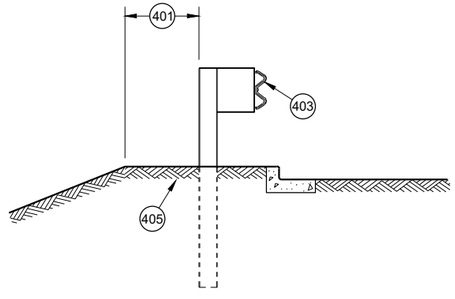



**MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)** 407

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




**SECTION A - A** 406




**SECTION B - B** 406

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA



6

SDD 14B42 - 07d

SDD 14B42 - 07d

## GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

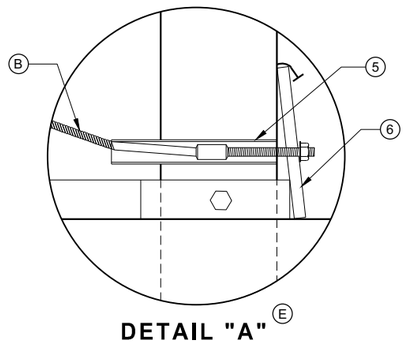
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

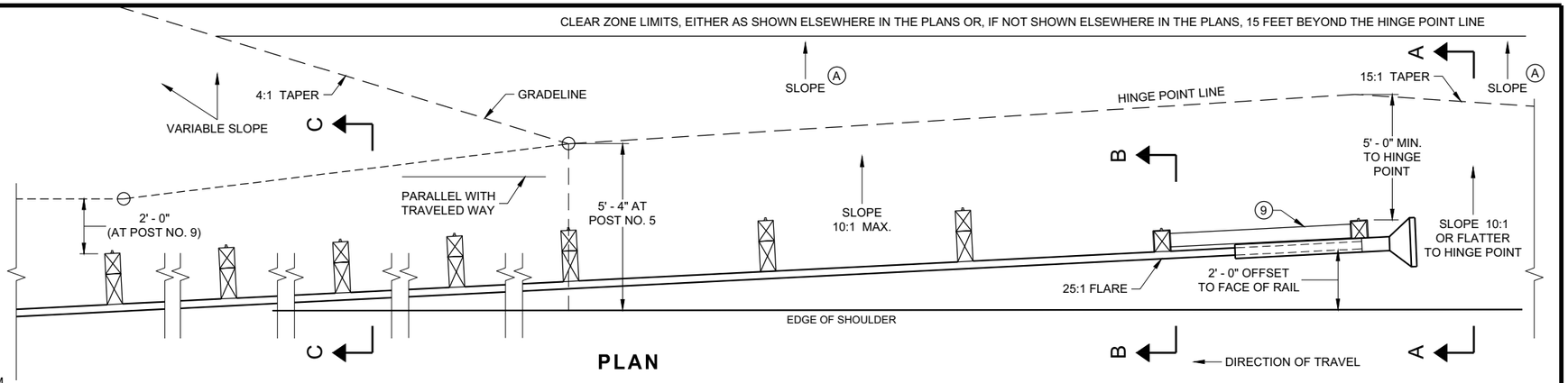
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

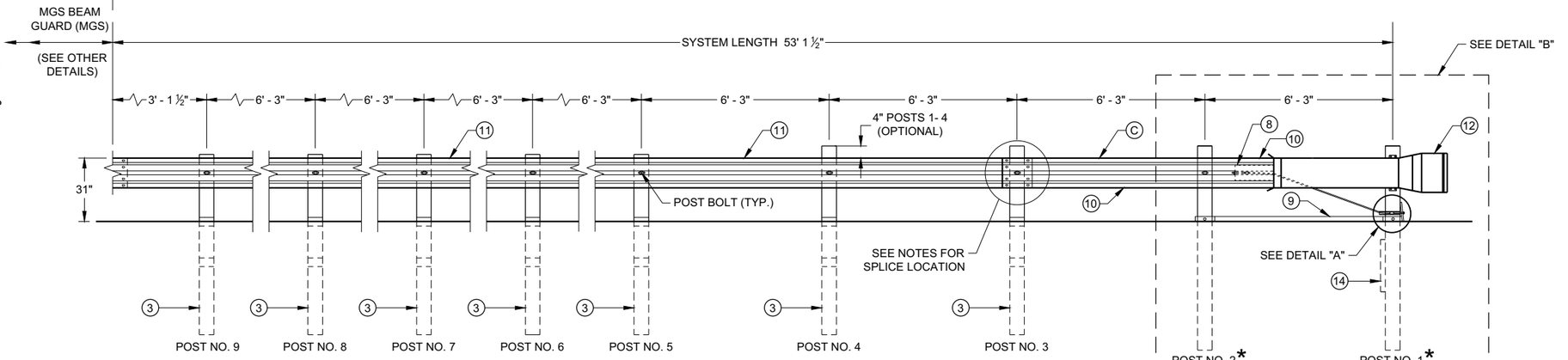
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



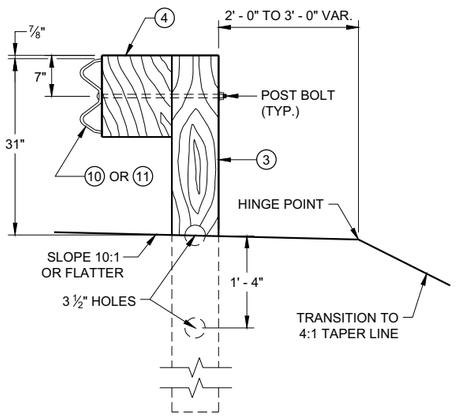

DETAIL "A" (E)



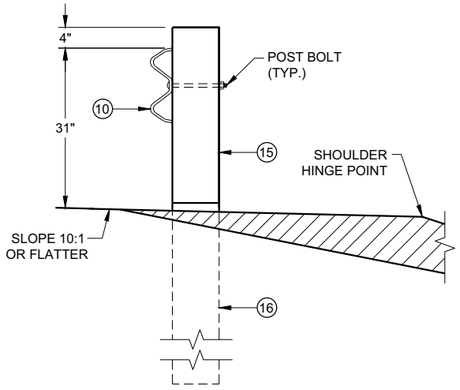

PLAN



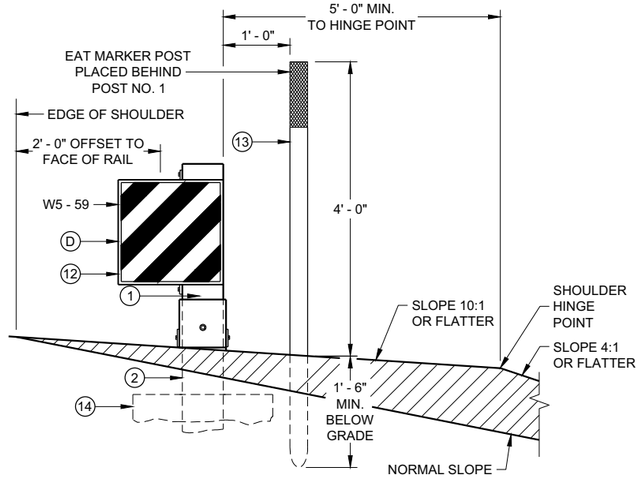

ELEVATION



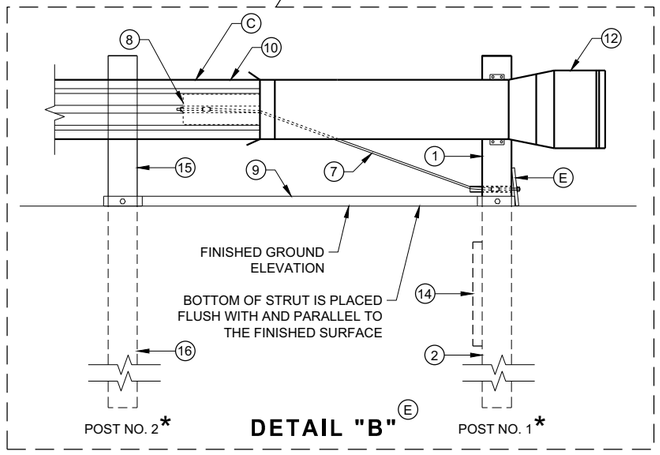

SECTION C - C
TYPICAL AT POST NOS. 3 - 9




SECTION B - B
TYPICAL AT POST NO. 2*




SECTION A - A
TYPICAL AT POST NO. 1*




DETAIL "B" (E)

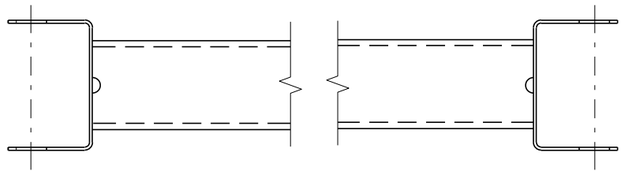
**MIDWEST GUARDRAIL SYSTEM**
**ENERGY ABSORBING TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SDD 14B44 - 04a

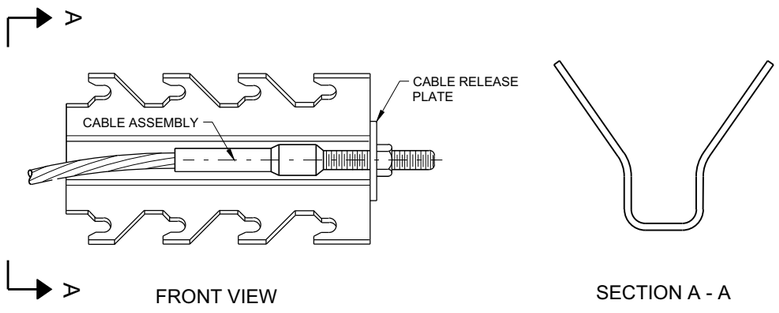
SDD 14B44 - 04a



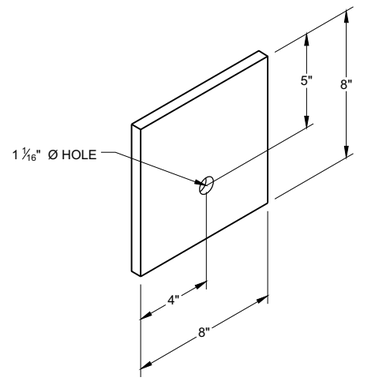
## GENERIC GROUND STRUT ⑨ Ⓔ

## BILL OF MATERIALS

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




## GENERIC ANCHOR CABLE BOX ⑨ Ⓔ




## BEARING PLATE ⑥ Ⓔ

6

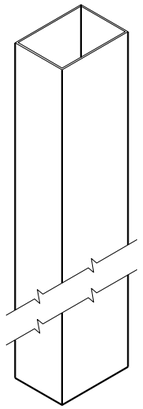
6

SDD 14B44 - 04b

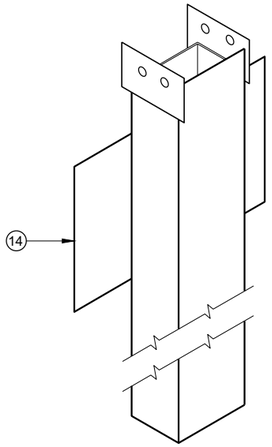
SDD 14B44 - 04b

**MIDWEST GUARDRAIL SYSTEM**
**ENERGY ABSORBING TERMINAL**
**(MGS)**

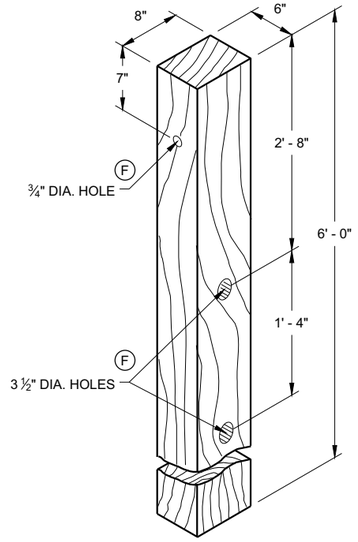
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



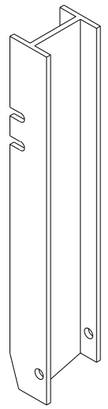
**UPPER POST NO. 1** (1) (E)



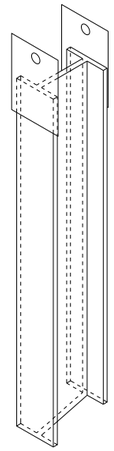

**LOWER POST NO. 1** (2) (E)



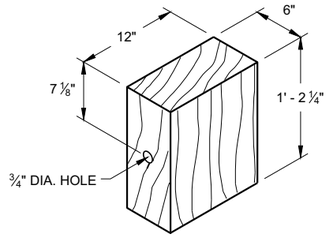

**WOOD CRT POST** (3) (E)
POSTS NUMBER 3-9



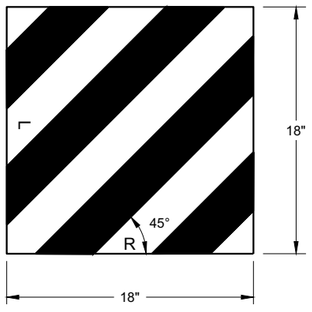
**UPPER POST NO. 2** (15) (E)



**LOWER POST NO. 2** (16) (E)

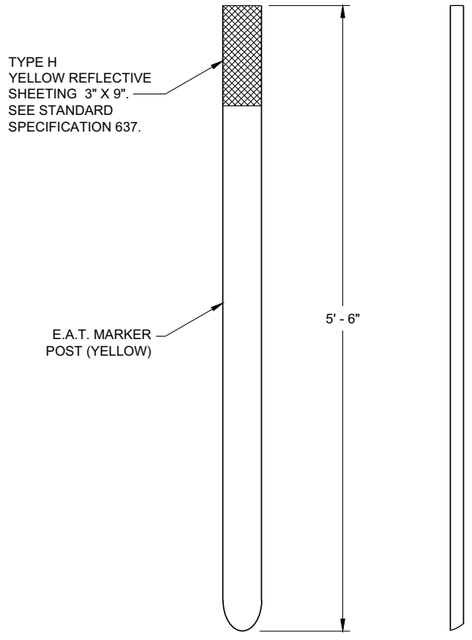



**WOOD BLOCKOUT** (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



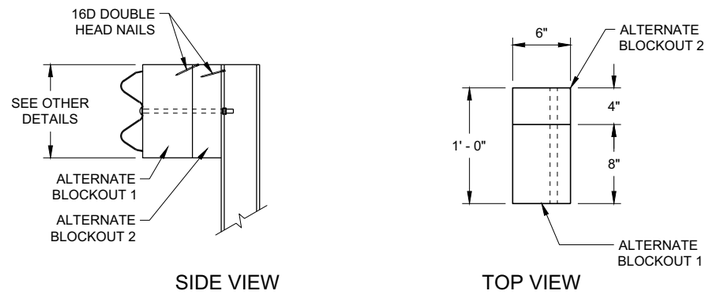

W5 - 59

**REFLECTIVE SHEETING DETAIL** (E)




FRONT VIEW SIDE VIEW

**E.A.T. MARKER POST** (13)




SIDE VIEW TOP VIEW

**ALTERNATE WOOD BLOCKOUT DETAIL**

**MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)**

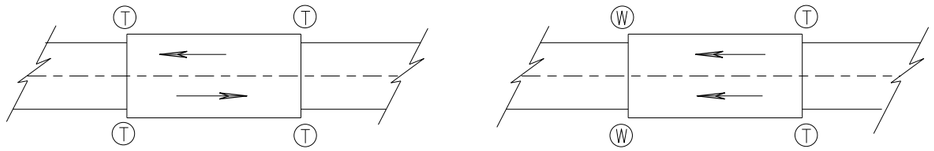
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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




6


SDD 14B44 - 04c




**TWO WAY TRAFFIC**




**ONE WAY TRAFFIC**

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

## GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

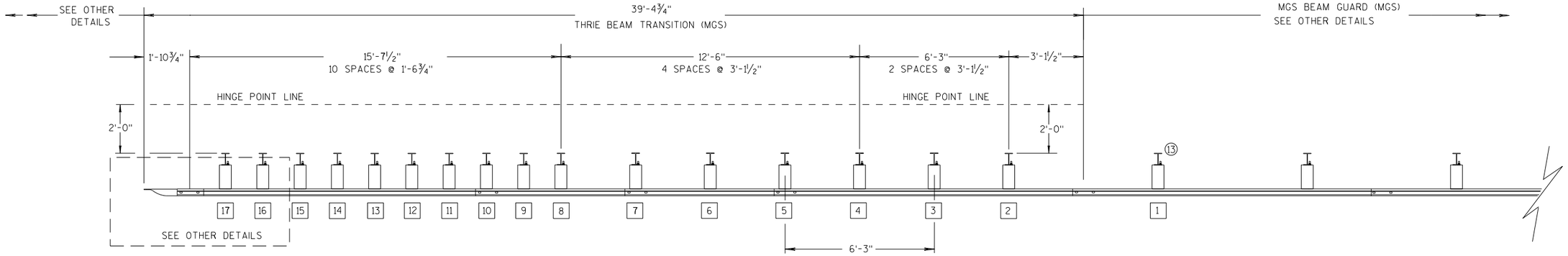
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

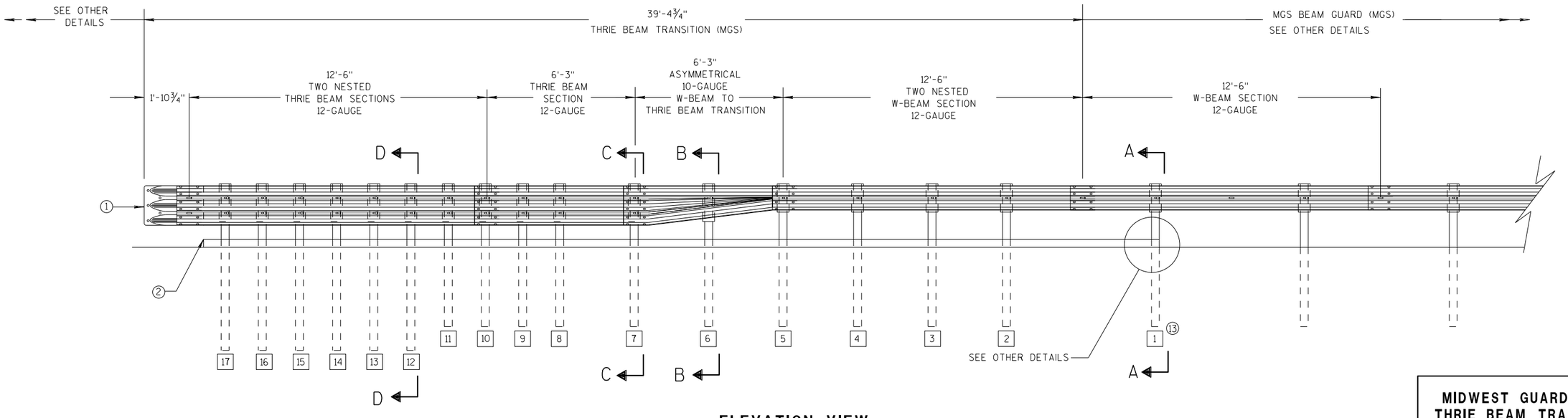
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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




**PLAN VIEW**




**ELEVATION VIEW**

## MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR







6

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

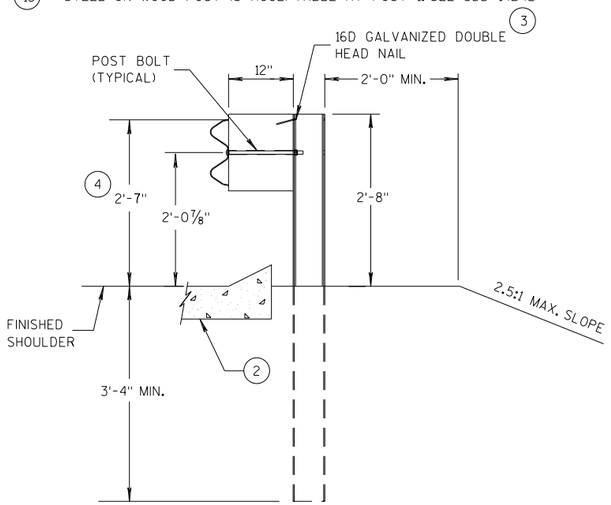
## GENERAL NOTES

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

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

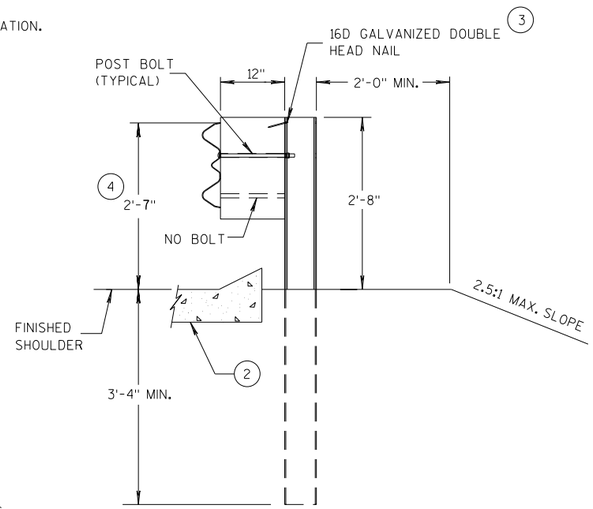
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



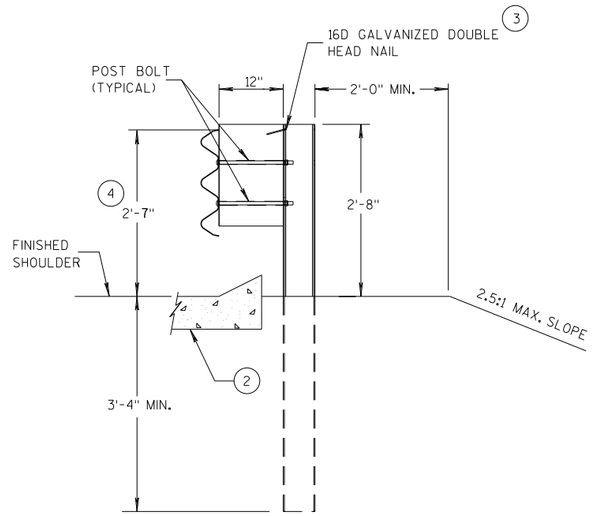

SECTION A-A (13)

**POSTS 1-5**



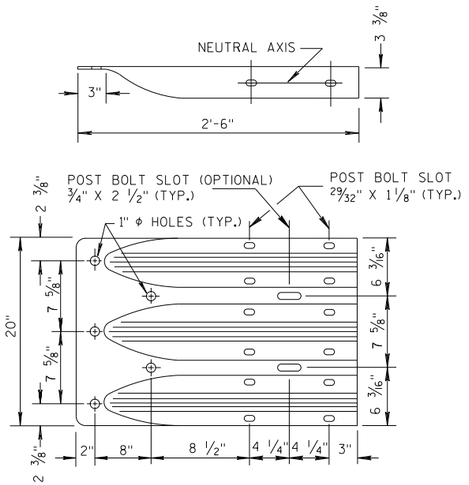

SECTION B-B

**POST 6**

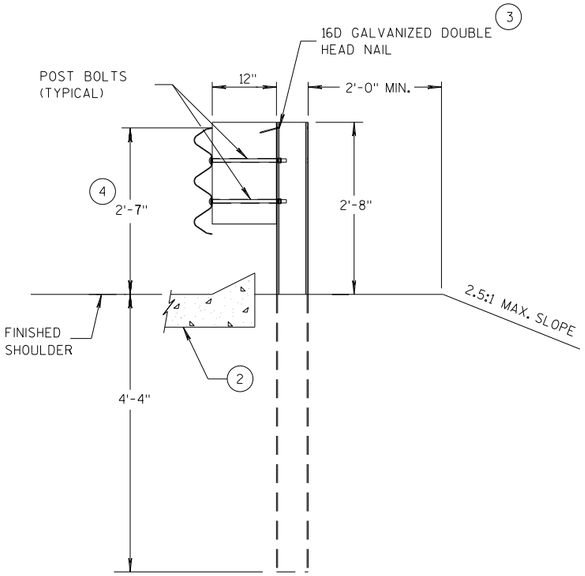



SECTION C-C

**POSTS 7-11**

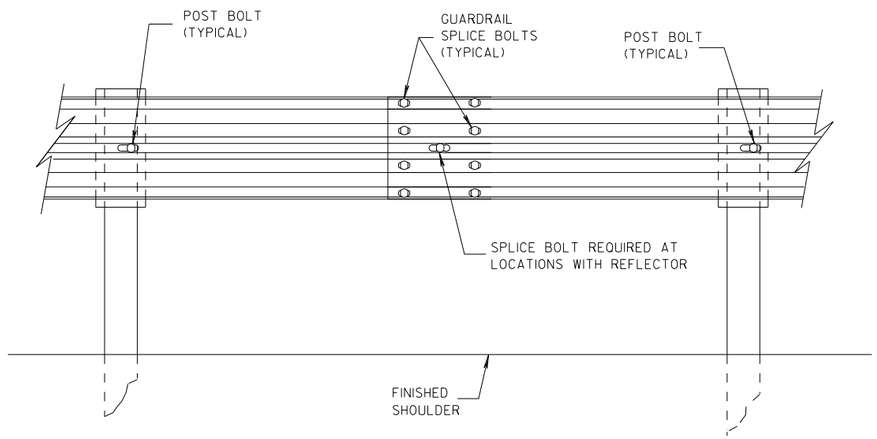



**THRIE BEAM TERMINAL CONNECTOR**




SECTION D-D

**POSTS 12-17**




**SPLICE DETAIL**

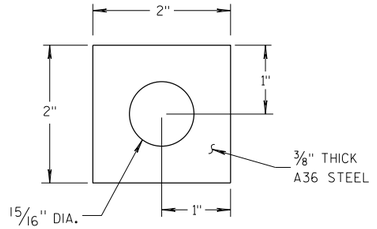
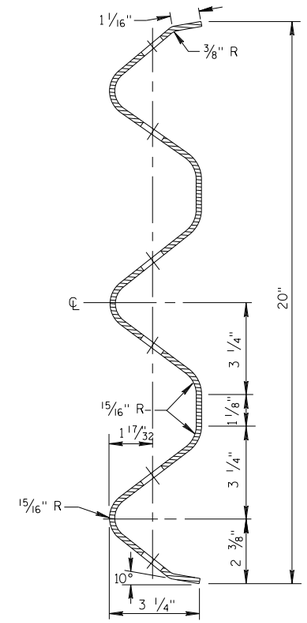



**PLATE WASHER DETAIL**




**SECTION THRU THRIE BEAM RAIL ELEMENT**

**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

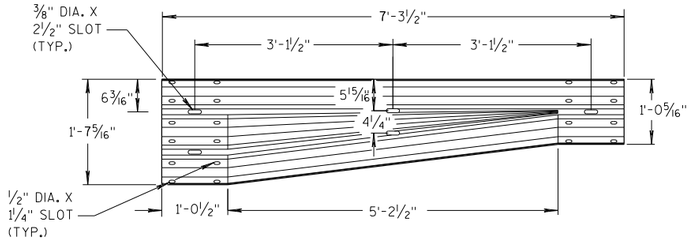
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 29

6

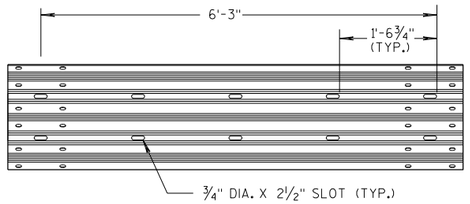
S.D.D. 14 B 45-5b

6

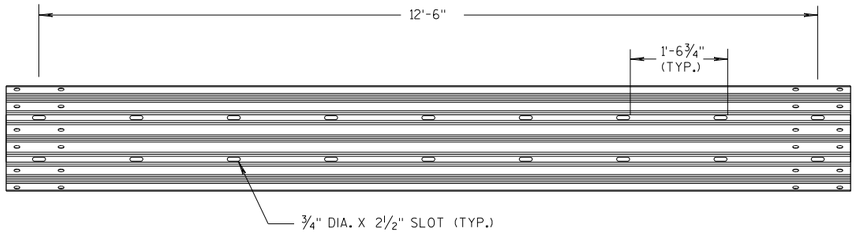
S.D.D. 14 B 45-5b



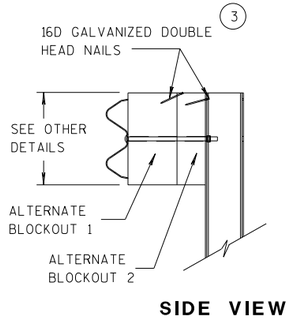

## W-BEAM TO THRIE BEAM TRANSITION SECTION



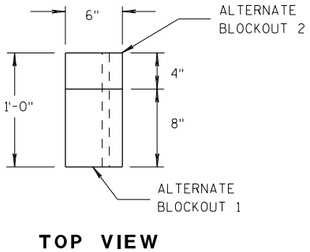

## 6'-3" THRIE BEAM SECTION




## 12'-6" THRIE BEAM SECTION

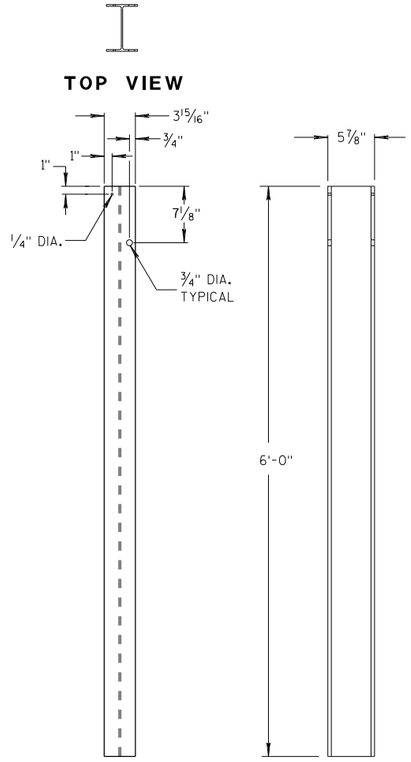



SIDE VIEW



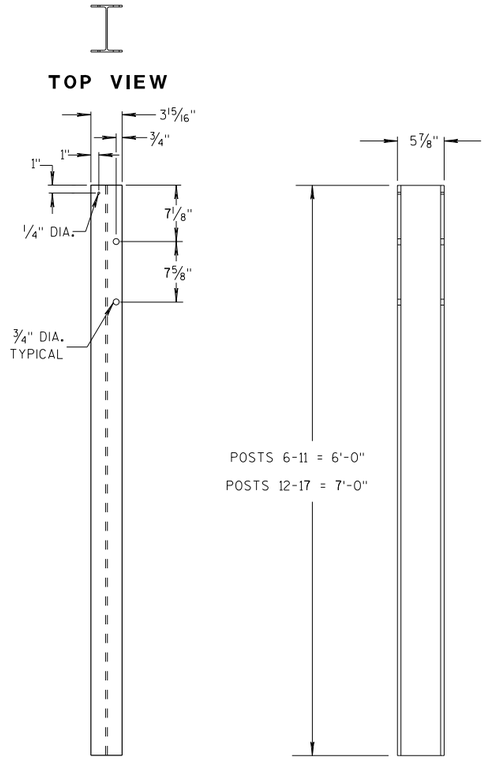

TOP VIEW

## ALTERNATE WOOD BLOCKOUT DETAIL



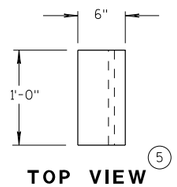

FRONT VIEW SIDE VIEW

## STEEL POSTS 1-5 (13)

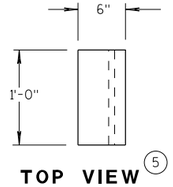



FRONT VIEW SIDE VIEW

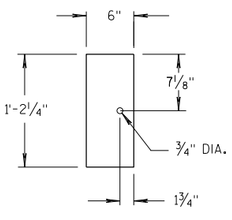
## STEEL POSTS 6-17




TOP VIEW (5)

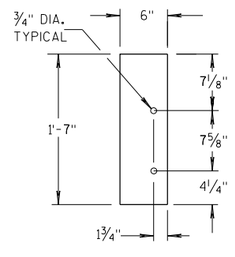



TOP VIEW (5)




FRONT VIEW

## BLOCKOUT POSTS 1-5




FRONT VIEW

## BLOCKOUT POSTS 6-17

## GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

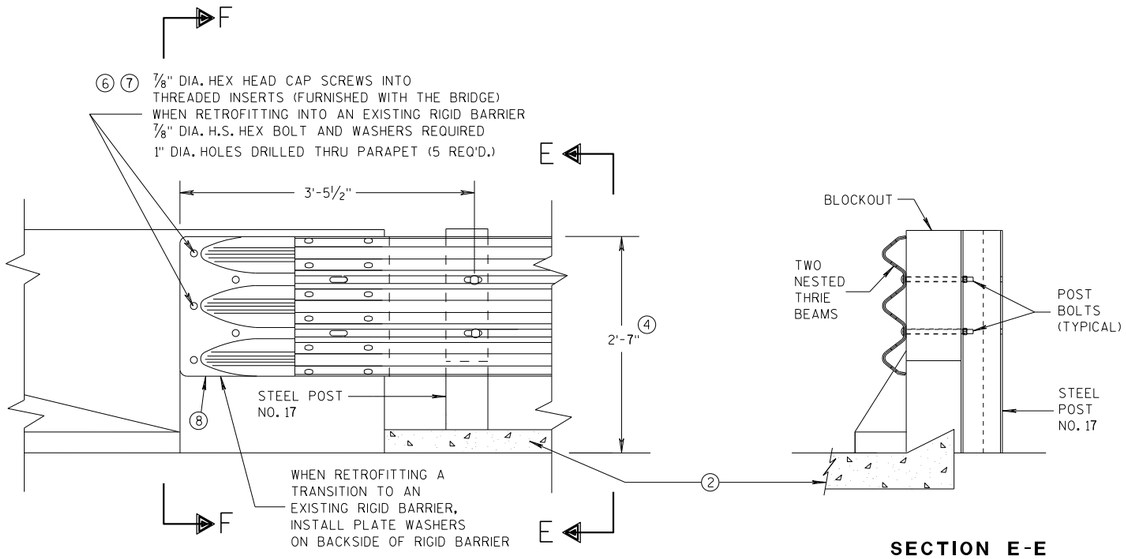
**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR




6

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




FRONT VIEW

SECTION E-E

# THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

## GENERAL NOTES

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

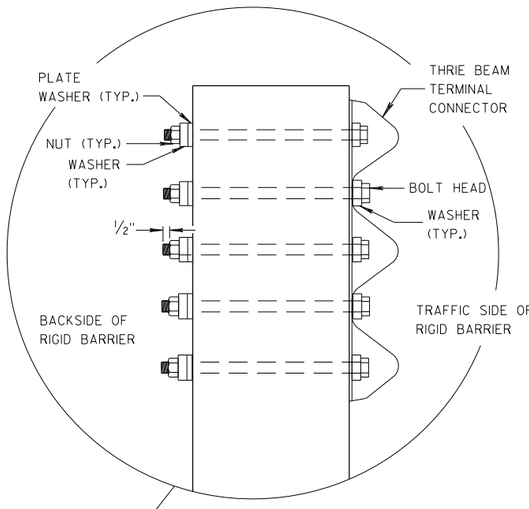
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

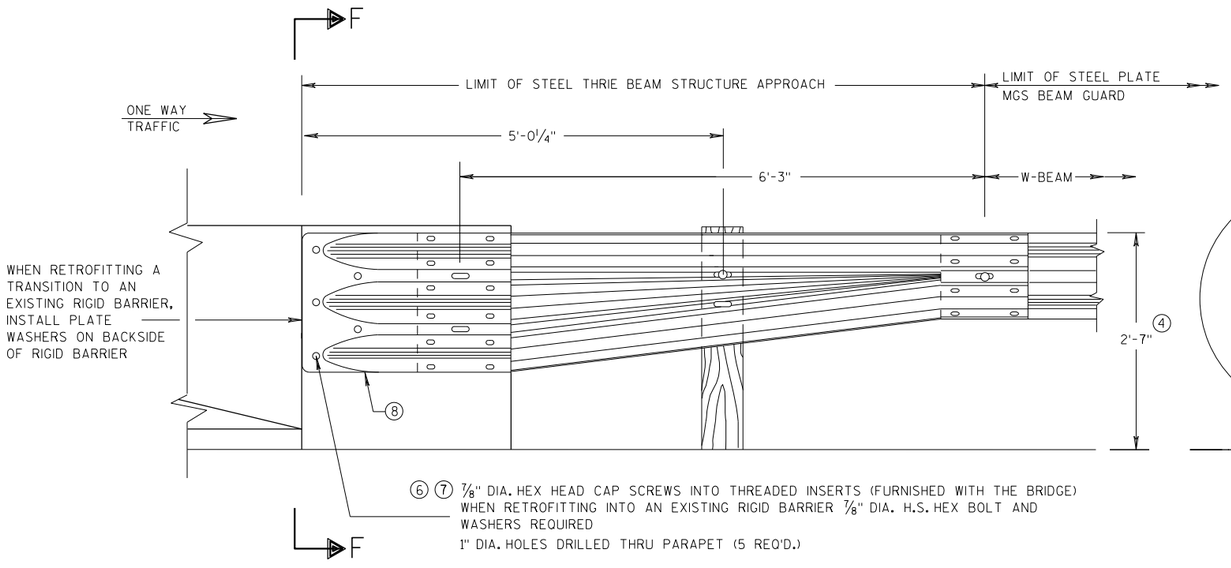
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

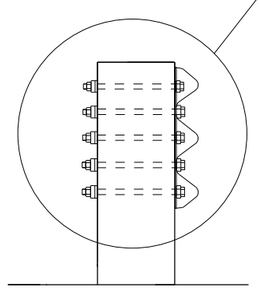
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

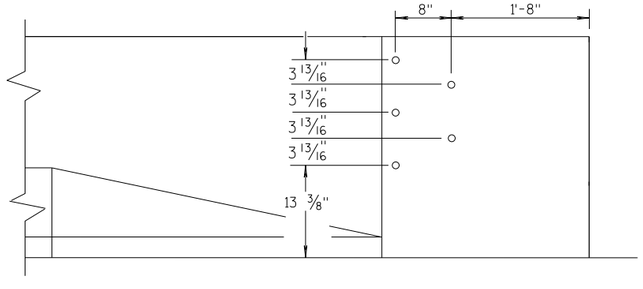



FRONT VIEW



SECTION F-F




DRILL HOLE LOCATION

# W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

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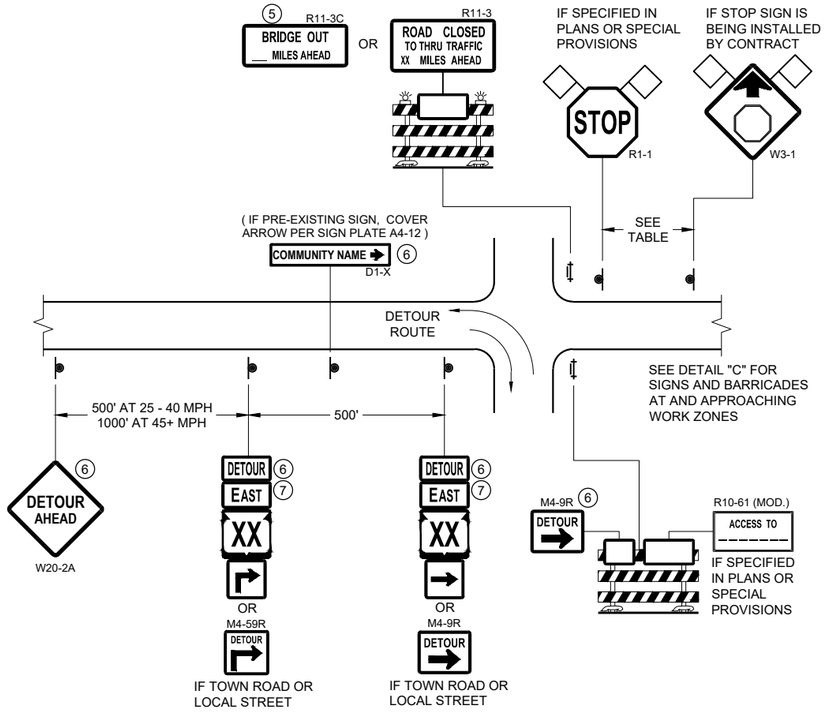
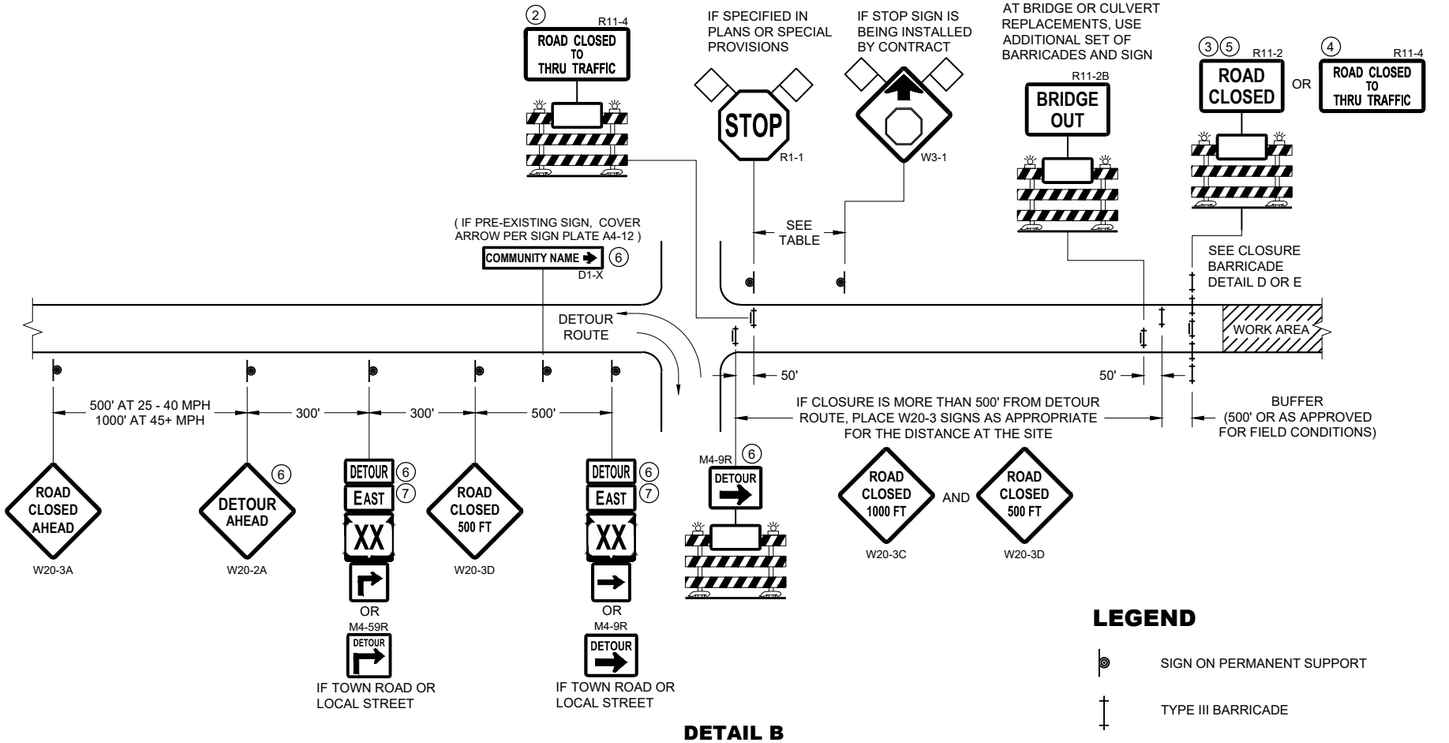
S.D.D. 14 B 45-5d




## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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



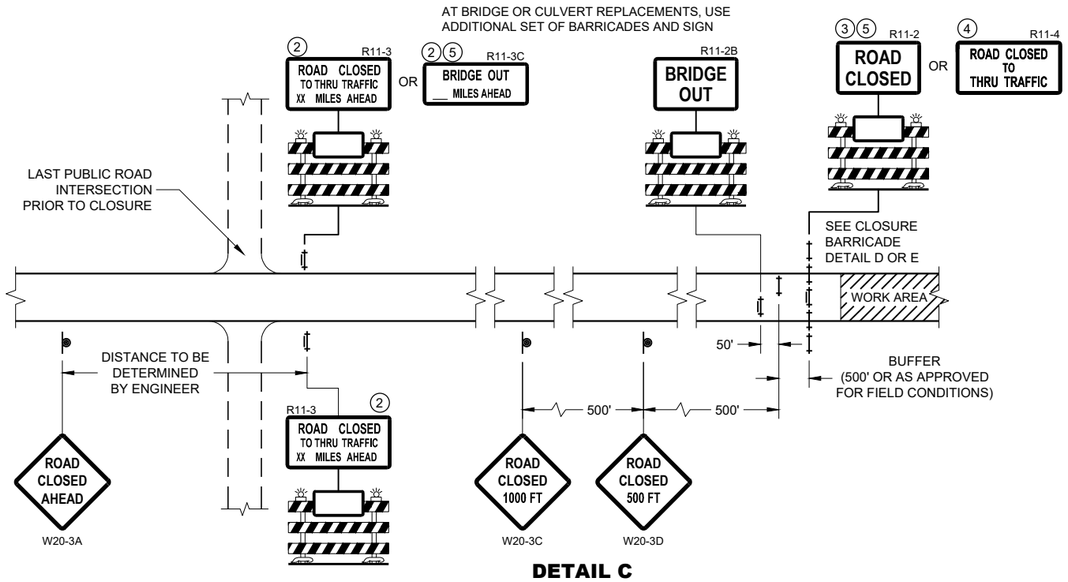

## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

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

### LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1




## DETAIL C
## MAINLINE CLOSURE, NO POSTED DETOUR

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

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

**BARRICADES AND SIGNS FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



6

SDD 15C02 - 09a

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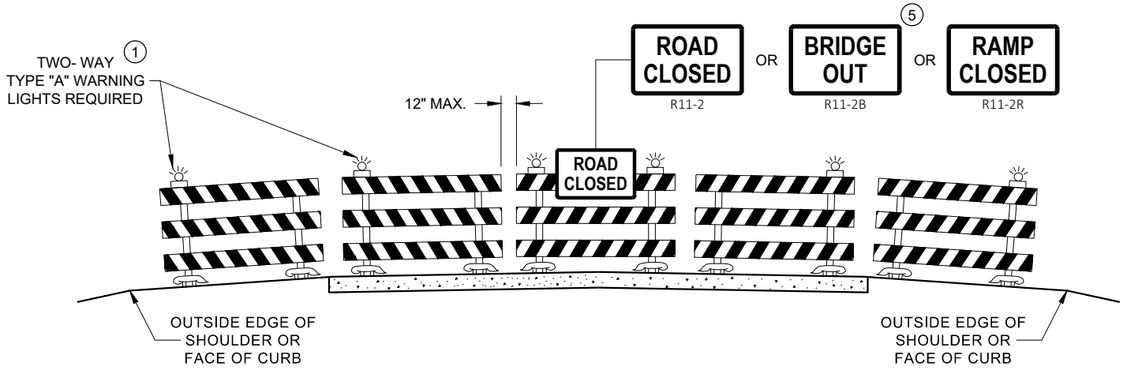
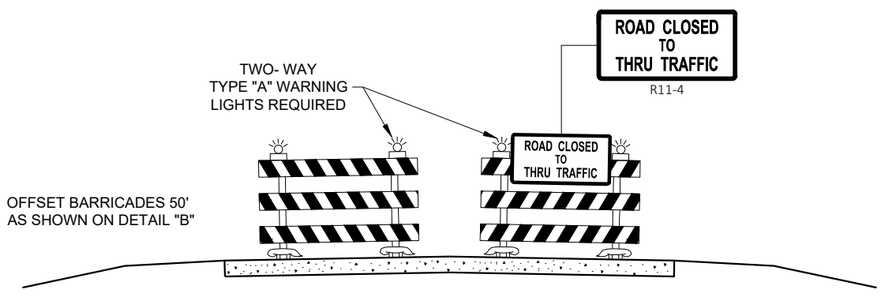
SDD 15C02 - 09a




**DETAIL D**
**ROAD CLOSURE BARRICADE DETAIL**
**APPROACH VIEW**




**DETAIL E**
**LANE CLOSURE BARRICADE DETAIL**
**APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**BARRICADES AND SIGNS FOR VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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SDD 15C02 - 09b

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SDD 15C02 - 09b

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

## LEGEND

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

## GENERAL NOTES

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

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

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

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

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

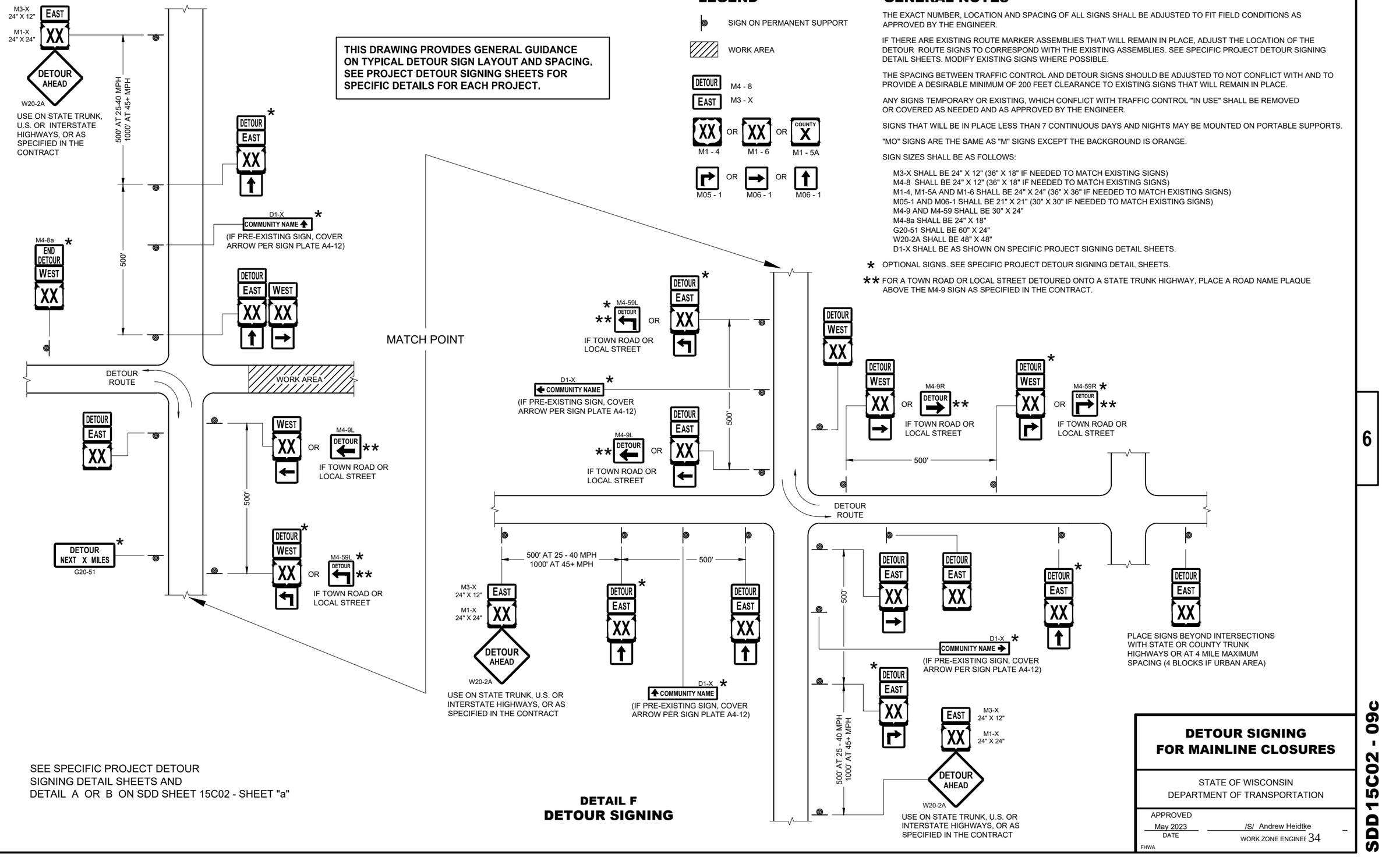
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

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

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

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




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

**DETAIL F**
**DETOUR SIGNING**

## DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA





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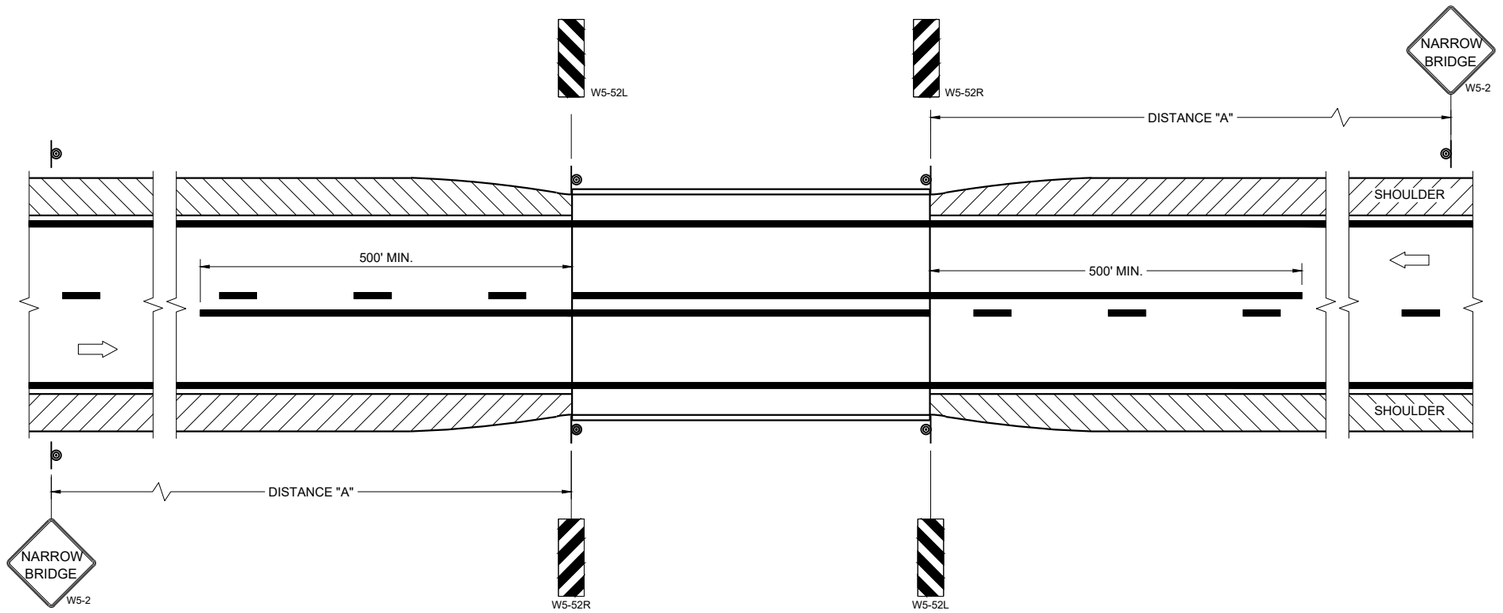
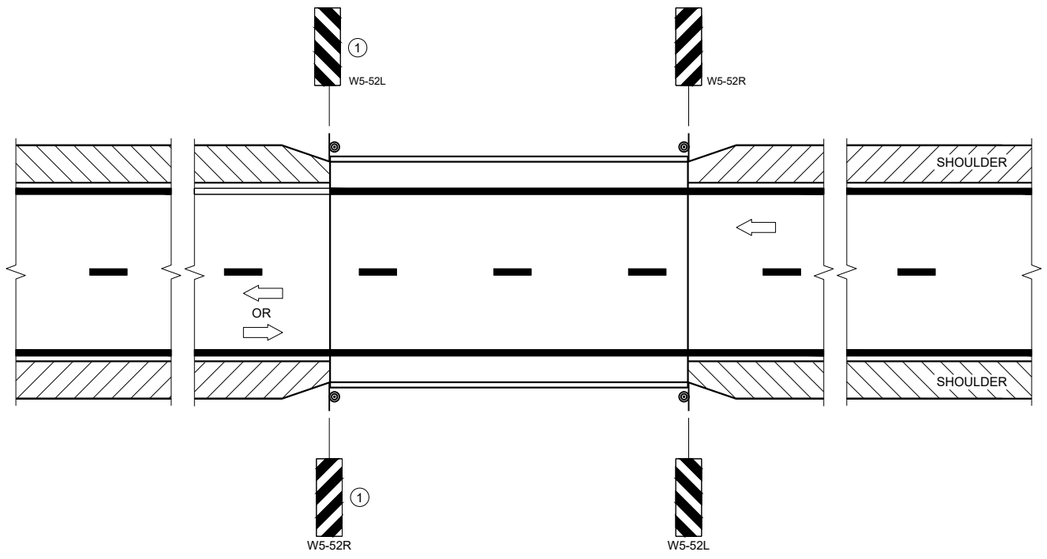
SDD 15C02 - 09c




## SITUATION 1

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




## SITUATION 2

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

## GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

## LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

### DISTANCE TABLE

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

# SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA


6
SDD 15C06-12

## GENERAL NOTES

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

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

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

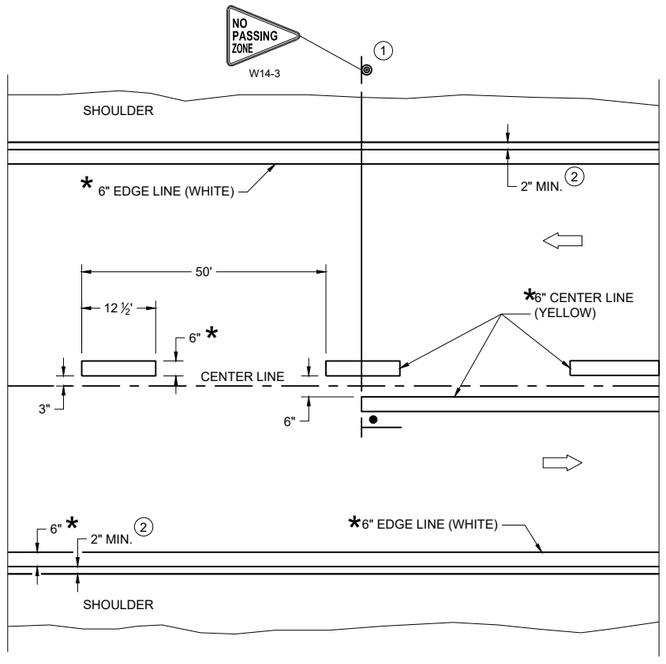
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

## LEGEND

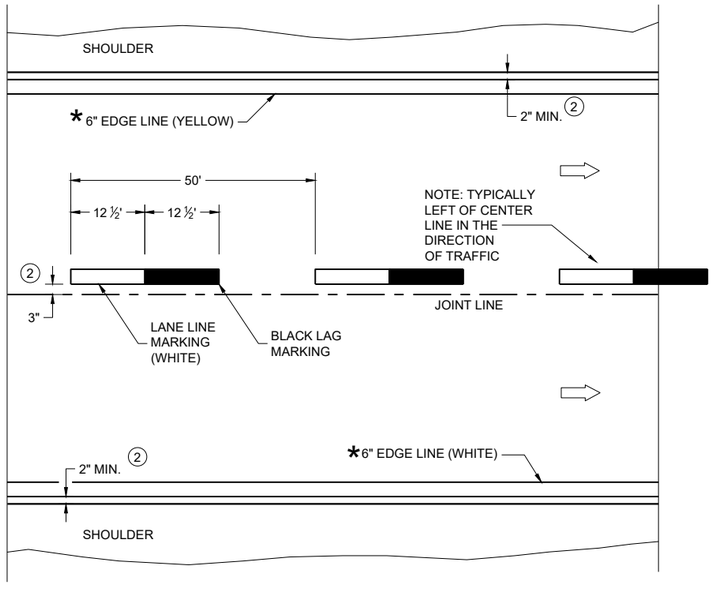
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC




TWO WAY TRAFFIC




ONE WAY TRAFFIC

**PERMANENT PAVEMENT MARKING**

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA



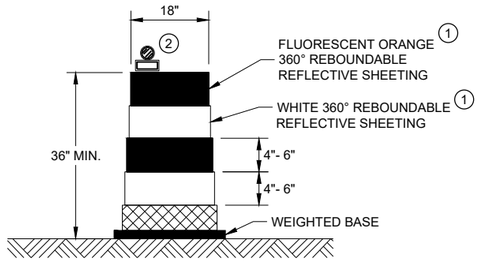
6

SDD 15C08-24a

SDD 15C08-24a

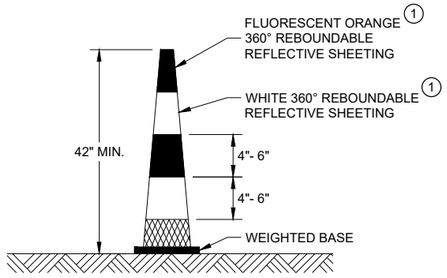
## GENERAL NOTES

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




### DRUM

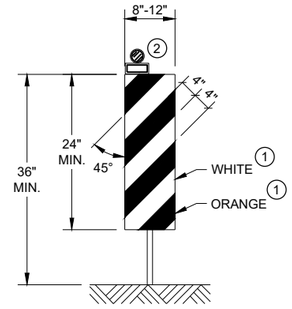
BALLAST WIDTHS
RANGE FROM 24"-36"




### 42" CONE

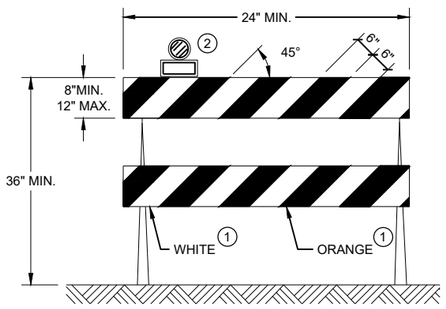
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



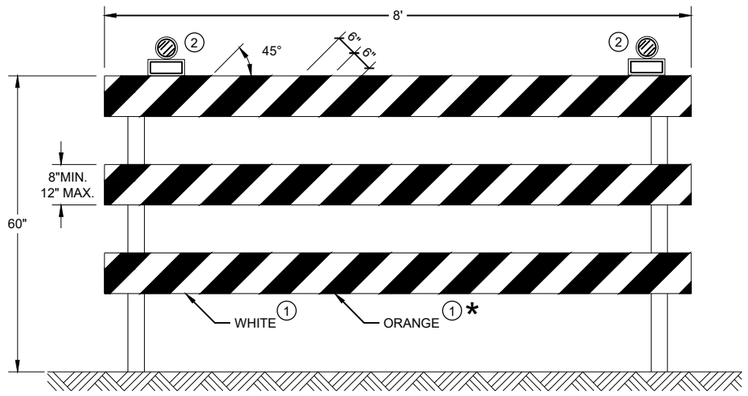

### VERTICAL PANEL

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




### TYPE II BARRICADE

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




### TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

## CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



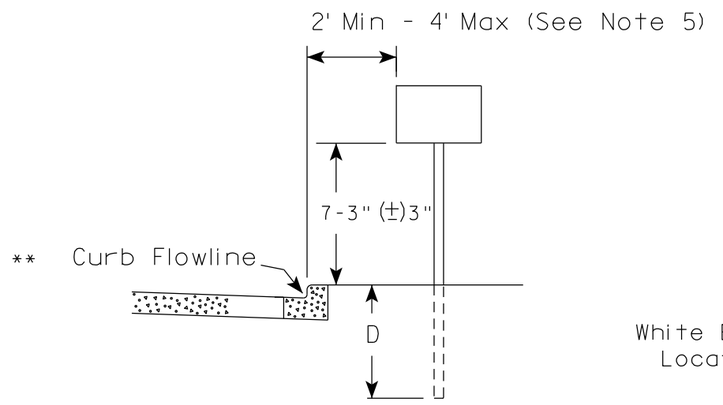
6

SDD 15C11 - 10b

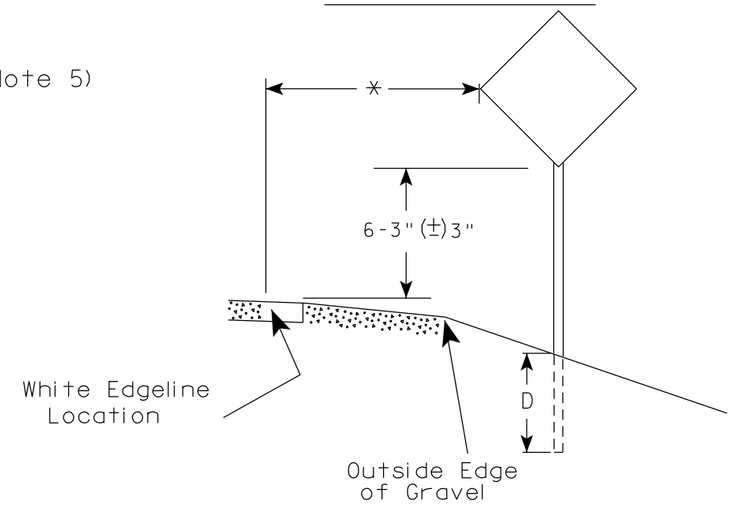
6

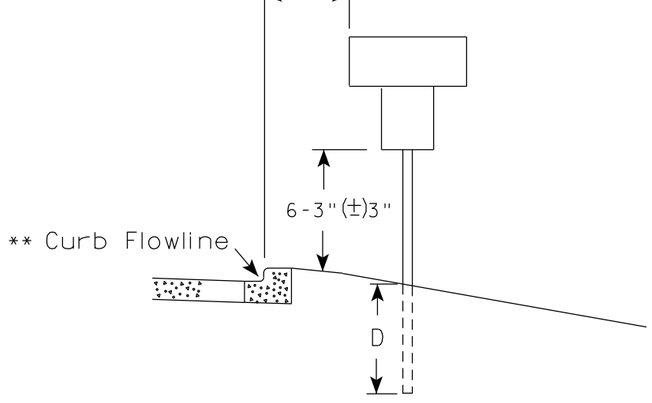
SDD 15C11 - 10b

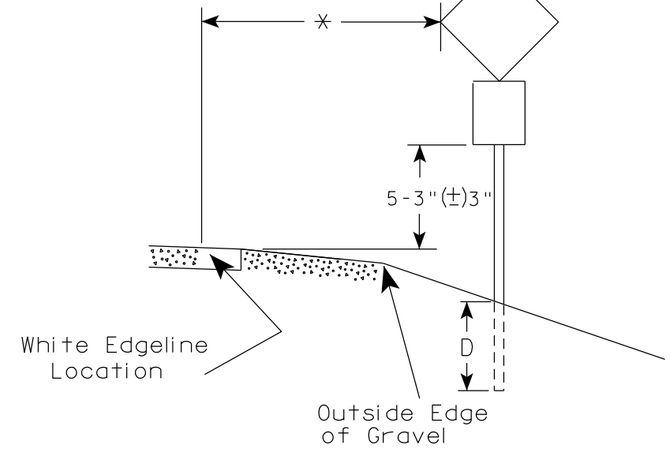
## URBAN AREA




## RURAL AREA (See Note 2)




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

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

### POST EMBEDMENT DEPTH

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

### GENERAL NOTES

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

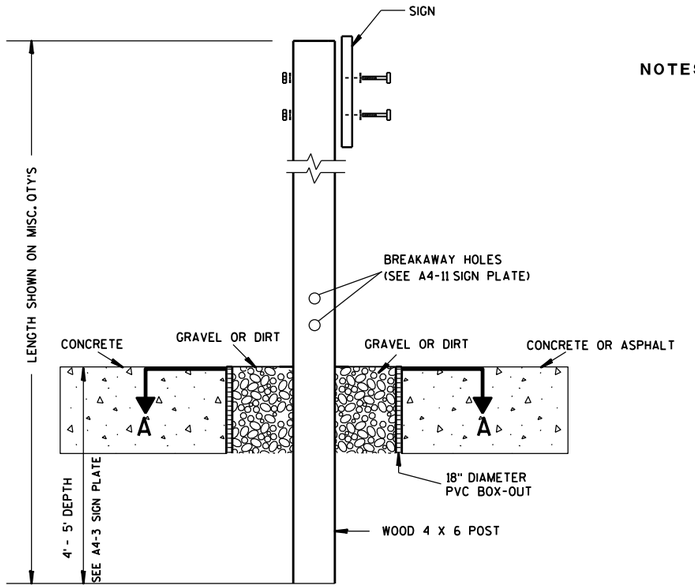
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

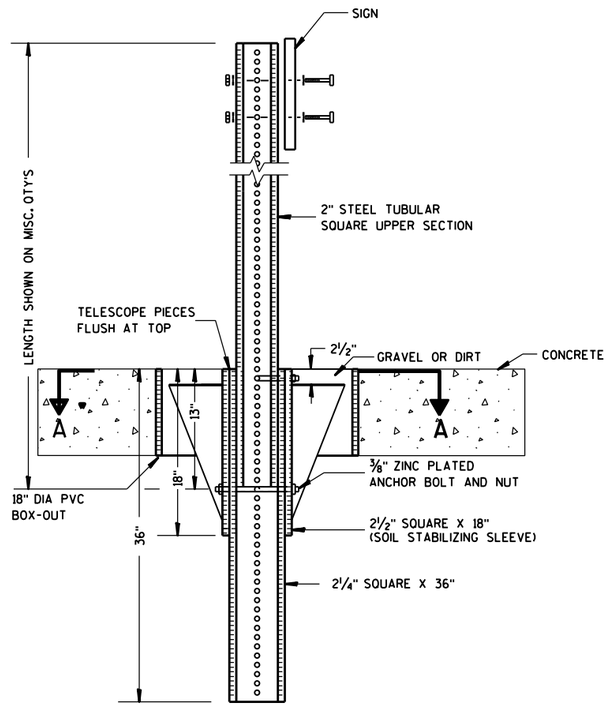
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 38 | E |
|---|---|---|---|---|---|




**ELEVATION VIEW**

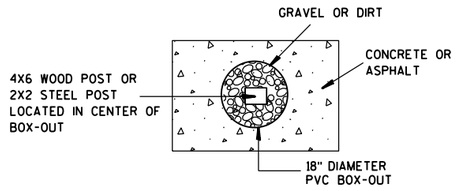
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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




**ELEVATION VIEW**

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




**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

# SIGN POST BOX-OUTS A4-3B

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

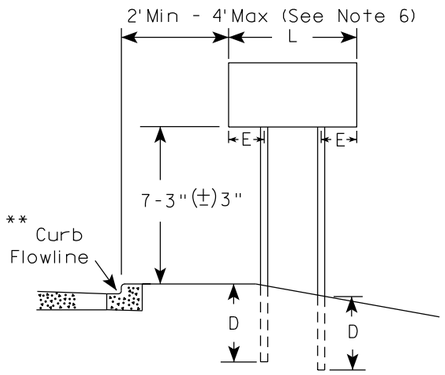
DATE 1/27/14 PLATE NO. A4-3B.1



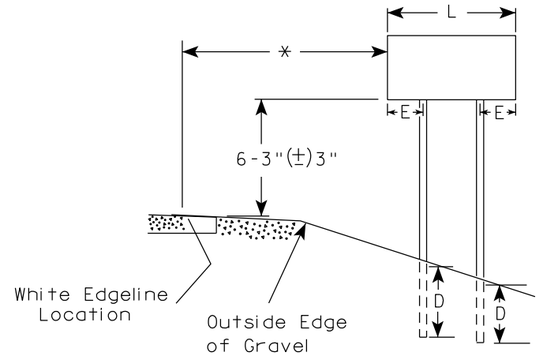
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

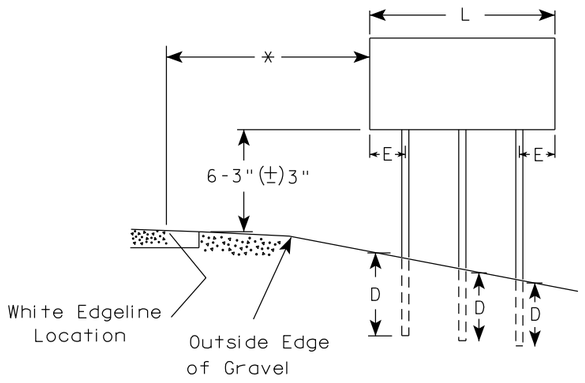
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

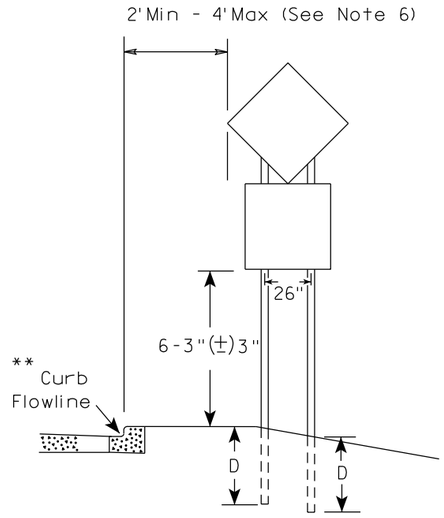
## URBAN AREA



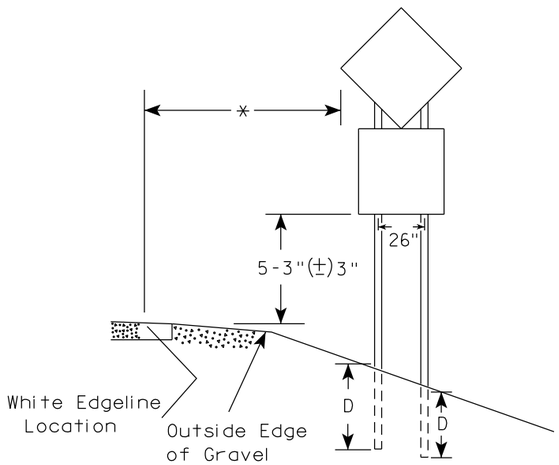

## RURAL AREA (See Note 3)




48" DIAMOND WARNING SIGN




48" DIAMOND WARNING SIGN

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

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

## GENERAL NOTES

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

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

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

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

## POST EMBEDMENT DEPTH

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

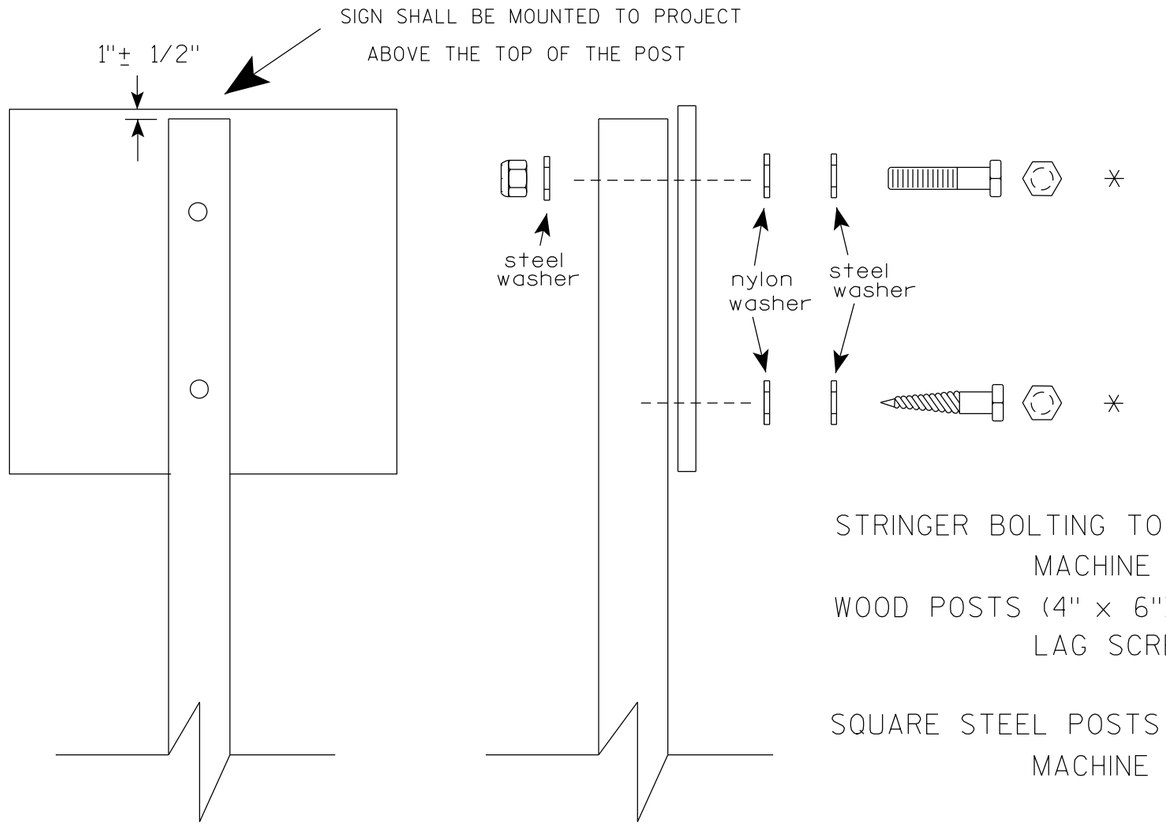
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

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




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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

# ATTACHMENT OF SIGNS TO POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

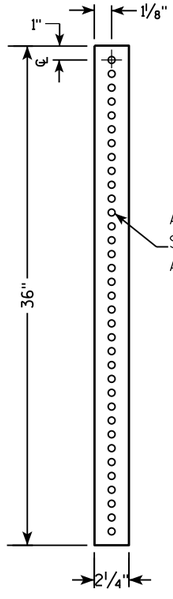
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

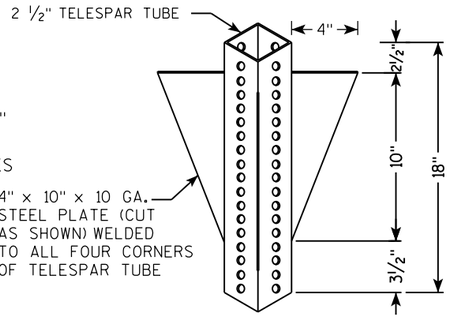
SHEET NO: 41 E

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

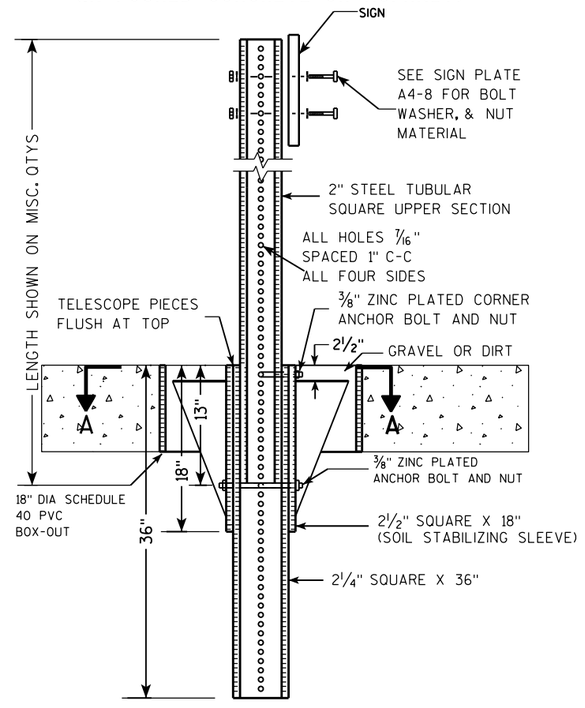
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



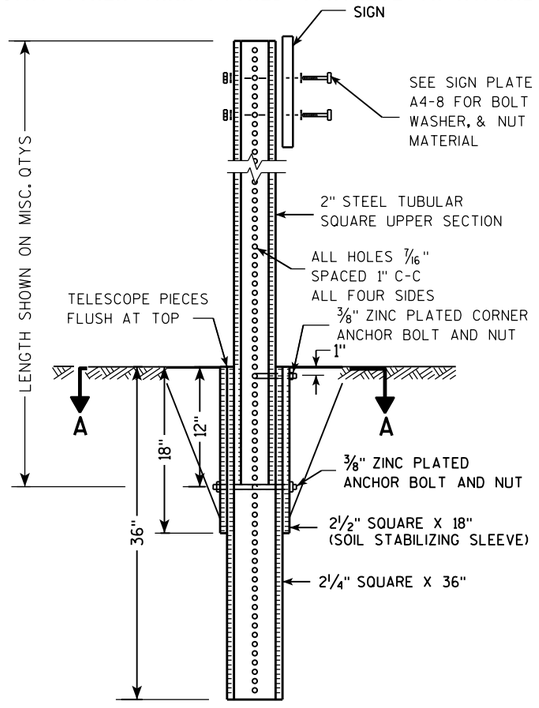

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

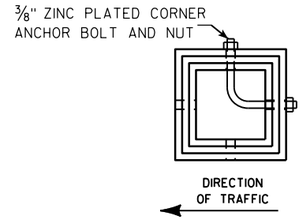



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




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




**SECTION A-A**

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

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

TUBULAR STEEL
SIGN POST
A4-9

*WISCONSIN DEPT OF TRANSPORTATION*

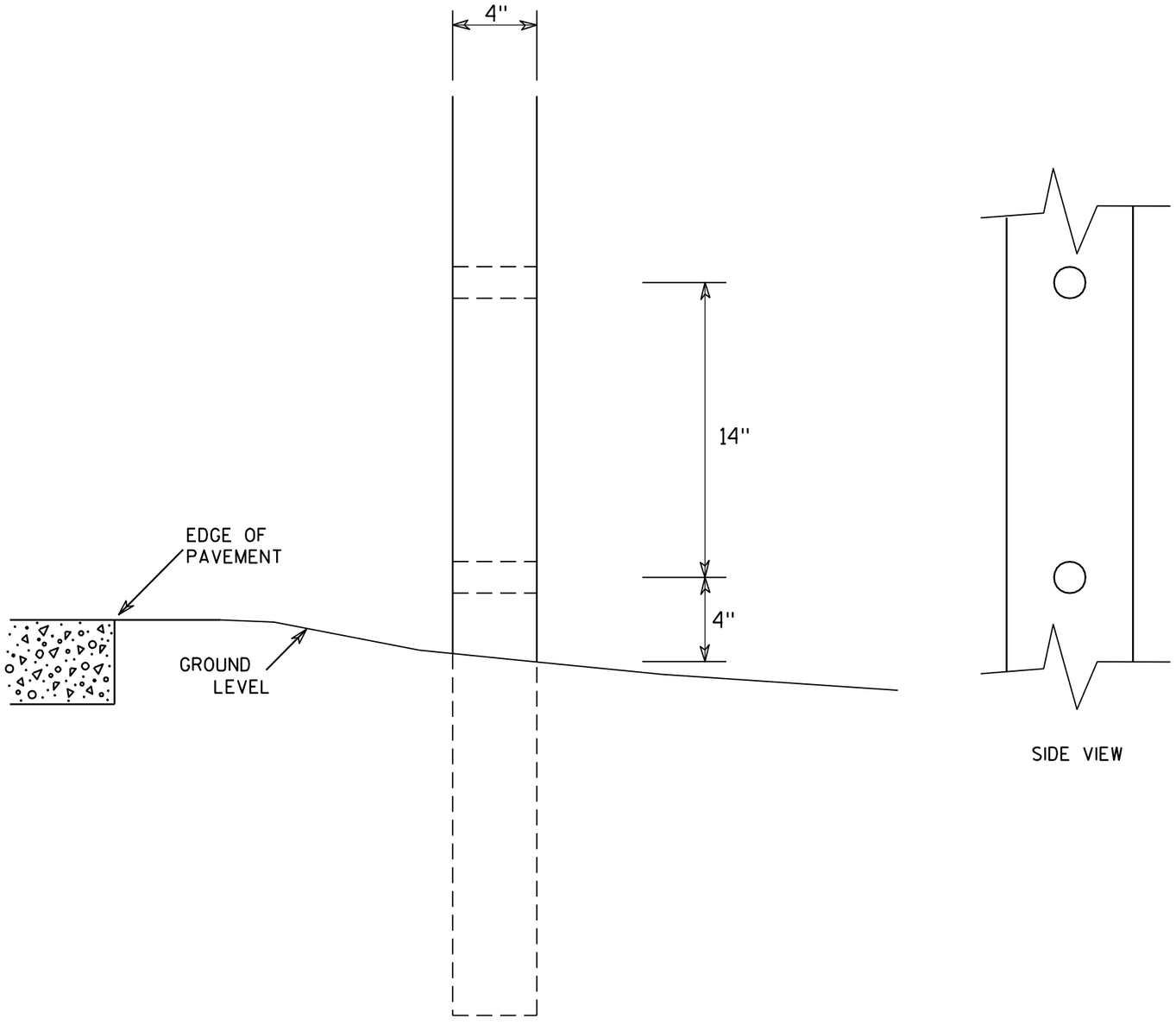
APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/05/15 PLATE 42 A4-9.9

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

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

WISDOT/CADDS SHEET 42






SIDE VIEW

GENERAL NOTES

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

7

7

# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

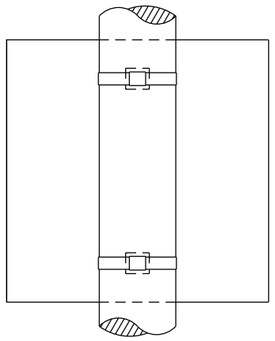
APPROVED Chester J Spang for State Traffic Engineer

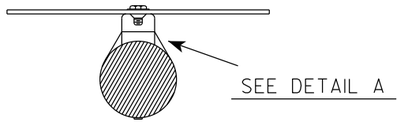
DATE 3/27/97 PLATE NO. A4-11.2

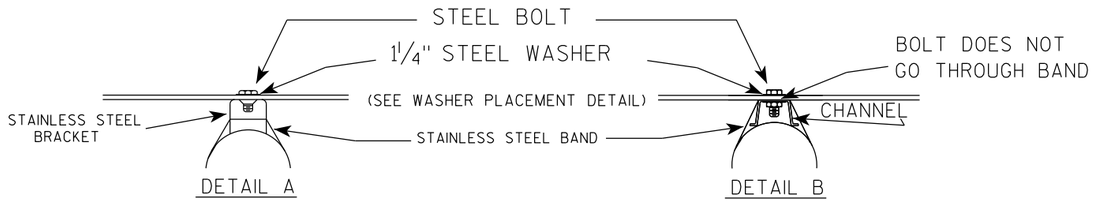
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 43 | E |
|---|---|---|---|---|---|

# BANDING

SINGLE SIGN



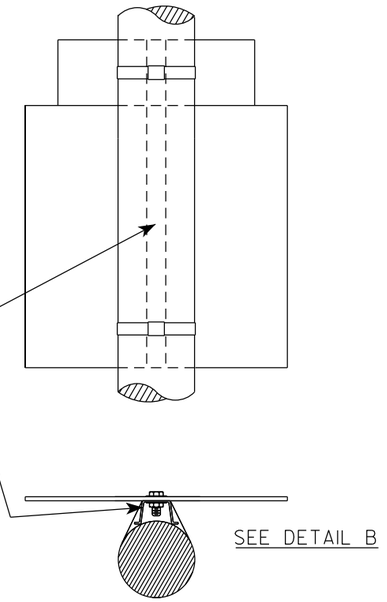


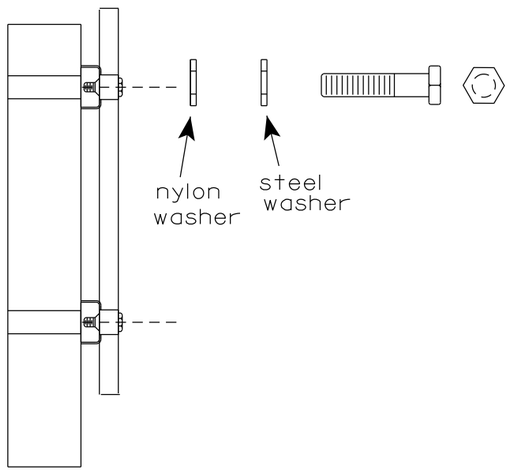

## GENERAL NOTES

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

"J" ASSEMBLY




WASHER PLACEMENT




WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

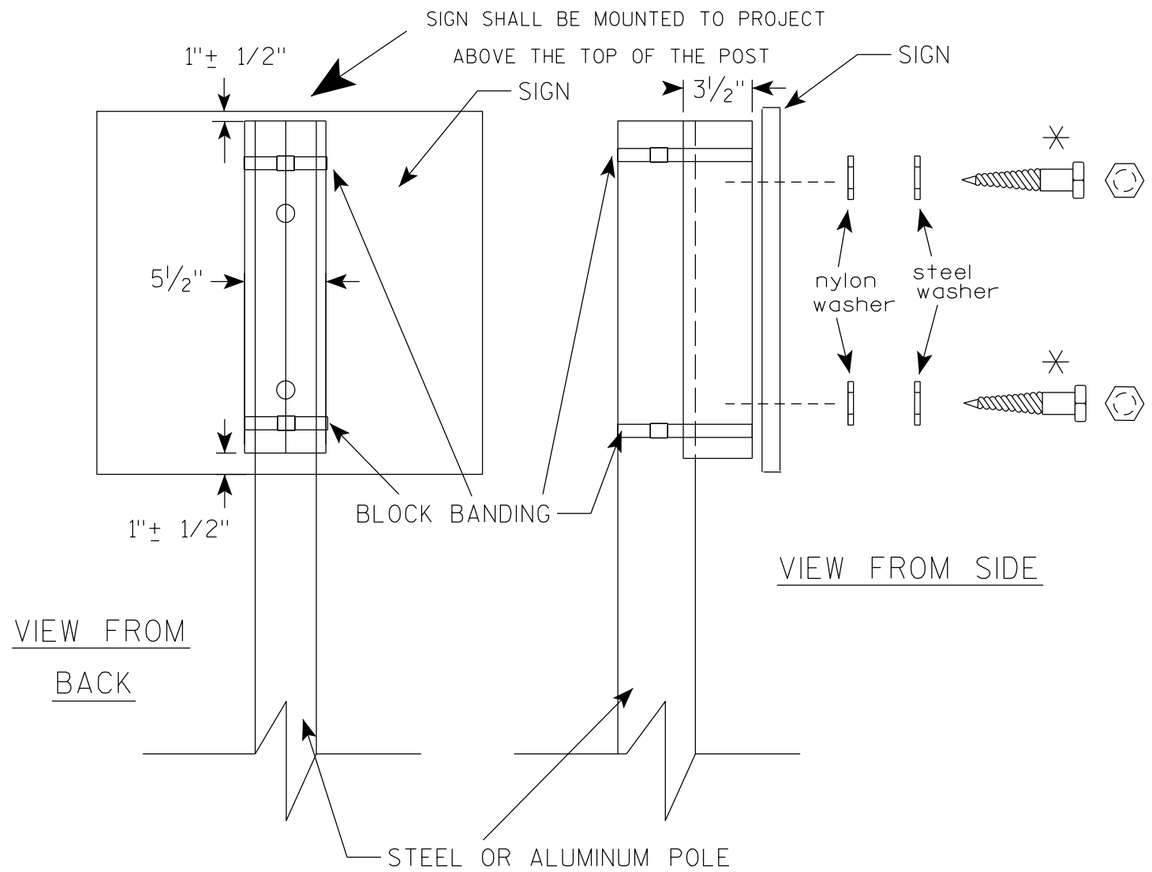
*WISCONSIN DEPT OF TRANSPORTATION*

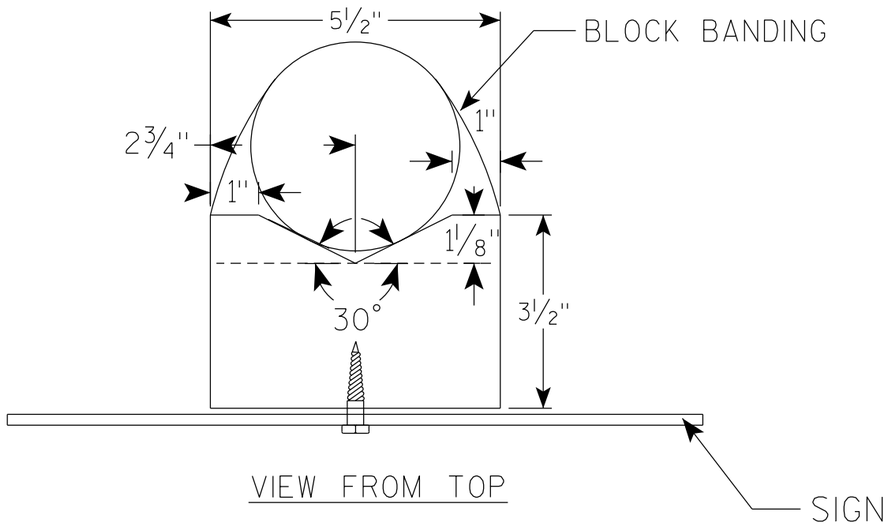
APPROVED Matthew R Rauch
for State Traffic Engineer

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

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 44 | E |
|---|---|---|---|---|---|

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




## GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

# BLOCK BANDING DETAIL ( V-BLOCK OPTION )

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

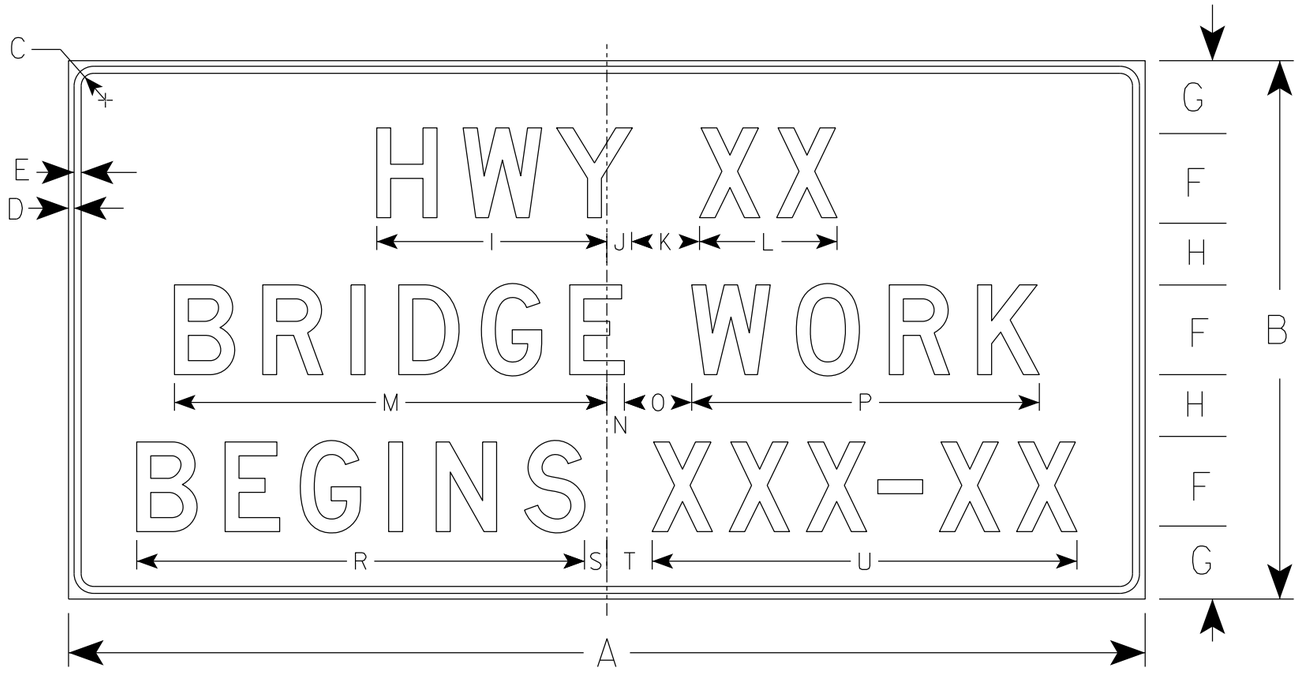
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 45 E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.




G20-57B

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 72 | 36 | 1 1/8 | 1/2 | 5/8 | 6 | 5 | 4 | 15 5/8 | 1 5/8 | 5 | 9 1/4 | 29 1/8 | 7/8 | 5 | 23 1/4 | | 29 7/8 | 1 3/4 | 3 1/4 | 28 1/2 | | | | | | 18.0 |
| 4 | 96 | 48 | 2 1/4 | 3/4 | 1 | 8 | 6 1/2 | 5 1/2 | 20 5/8 | 2 1/4 | 6 | 12 1/4 | 38 1/2 | 1 1/2 | 6 | 31 | | 39 1/4 | 2 | 4 | 37 7/8 | | | | | | 32.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN

G20-57B

*WISCONSIN DEPT OF TRANSPORTATION*

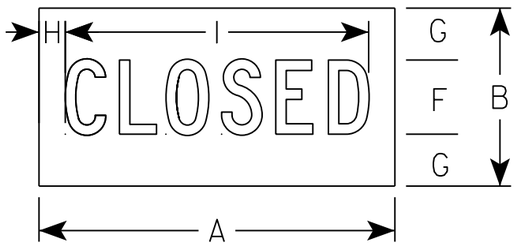
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57B.1

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 46 | E |
|---|---|---|---|---|---|

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Material shall be .040 aluminmum




G20-62

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 48 | 24 | | | | 10 | 7 | 3 1/2 | 40 7/8 | | | | | | | | | | | | | | | | | | 8.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
G20-62

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

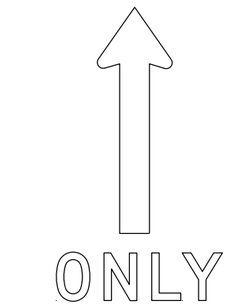
DATE 9/24/15 PLATE NO G20-62.1

47

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

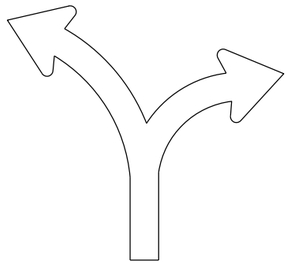


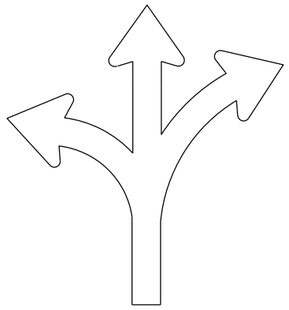
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\G2062.DGN PLOT DATE : 01-DEC-2015 17:53 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 20.431338:1.000000

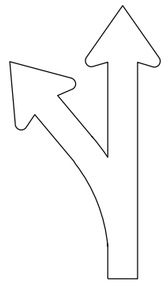


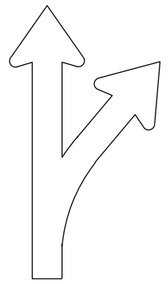
(A)

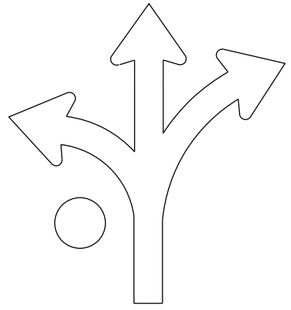
(B)

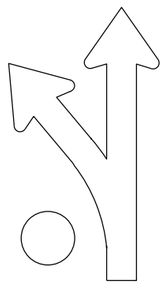

(C)

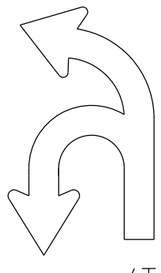

(D)

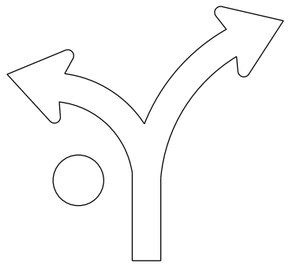

(E)

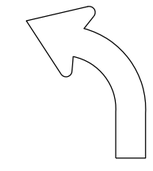

(F)


(G)

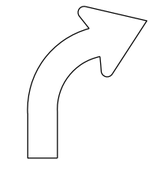

(H)


(I)


(J)



(L)



(R)

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
   Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

| | | |
|---|---|---|
| 1 | Letter = | 3.75 sq ft for Size 2 |
| | | 6.0 sq ft for Size 3 |
| | | 10.0 sq ft for Size 4 or 5 |
| 2 | Letters = | 7.5 sq ft for Size 2 |
| | | 12.0 sq ft for Size 3 |
| | | 20.0 sq ft for Size 4 or 5 |
| 3 | Letters = | 11.25 sq ft for Size 2 |
| | | 18.0 sq ft for Size 3 |
| | | 30.0 sq ft for Size 4 or 5 |
| 4 | Letters = | 15.0 sq ft for Size 2 |
| | | 24.0 sq ft for Size 3 |
| | | 40.0 sq ft for Size 4 or 5 |
| 5 | Letters = | 18.75 sq ft for Size 2 |
| | | 30.0 sq ft for Size 3 |
| | | 50.0 sq ft for Size 4 or 5 |
| 6 | Letters = | 22.5 sq ft for Size 2 |
| | | 36.0 sq ft for Size 3 |
| | | 60.0 sq ft for Size 4 or 5 |

6. When letters C,D,G,J are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

SHEET NO: 48 E

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 14-FEB 2023 3:01 PLOT BY : mscj9h PLOT NAME :

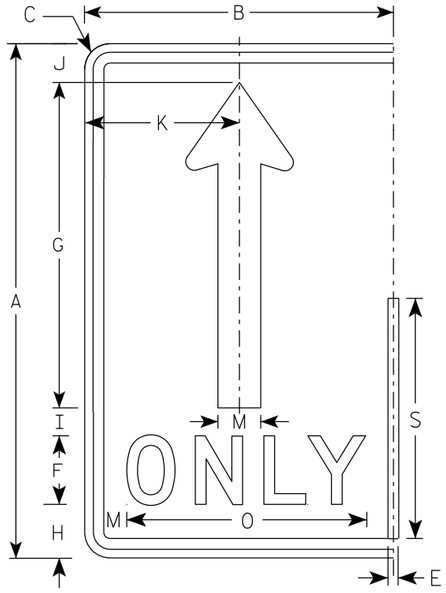
WISDOT/CADDS SHEET 42

7

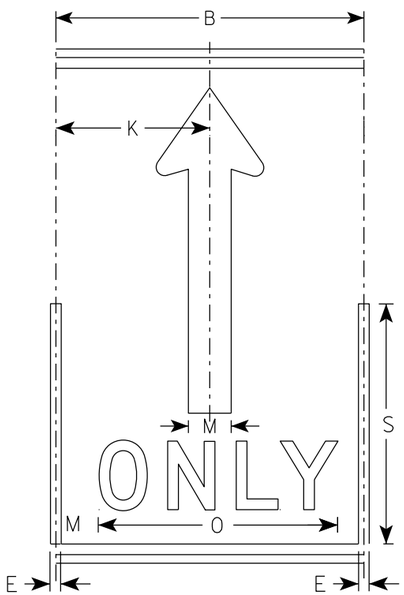
7

NOTES

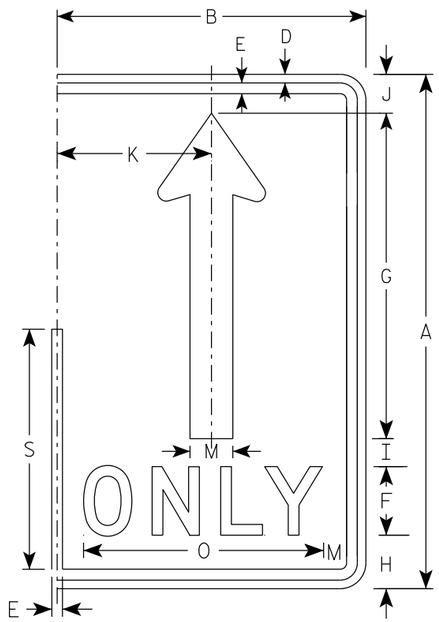
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



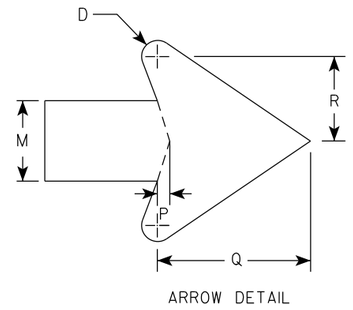

(A)




(A)




(A)




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 | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 19 | 3 1/8 | 1 5/8 | 2 1/4 | 9 | | 2 1/2 | | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | | | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 19 | 3 1/8 | 1 5/8 | 2 1/4 | 9 | | 2 1/2 | | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | | | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 22 3/4 | 3 3/4 | 1 3/4 | 2 3/4 | 12 | | 3 | | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | | | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 30 3/8 | 5 1/8 | 2 7/8 | 3 5/8 | 15 | | 4 | | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 30 3/8 | 5 1/8 | 2 7/8 | 3 5/8 | 15 | | 4 | | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | | | | | | | 10.0 |

# STANDARD SIGN
# R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

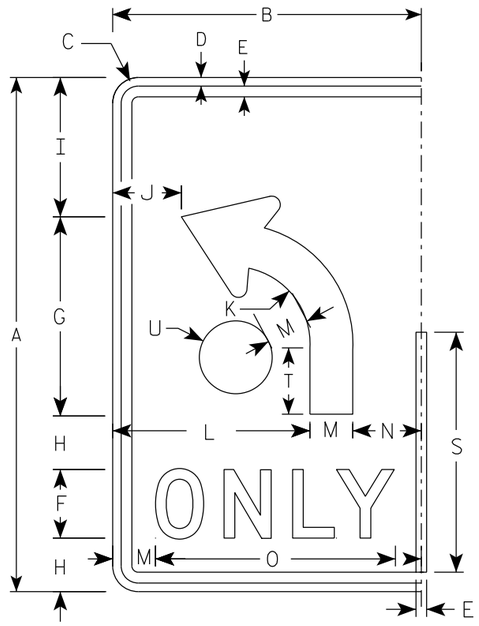
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

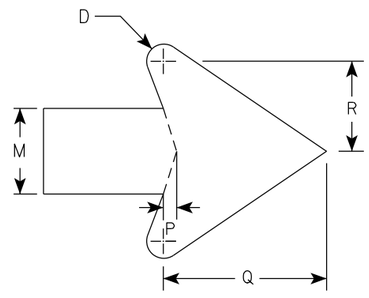
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 49 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
   Message Series - D




(B)




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 | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8 | 4 | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | 3 7/8 | 2 1/8 | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8 | 4 | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | 3 7/8 | 2 1/8 | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 14 | 3 1/2 | 9 3/4 | 6 | 5 3/8 | 15 | 3 | 6 | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 4 5/8 | 2 1/2 | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18 | 4 | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | 3 3/8 | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18 | 4 | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | 3 3/8 | | | | | | 10.0 |

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

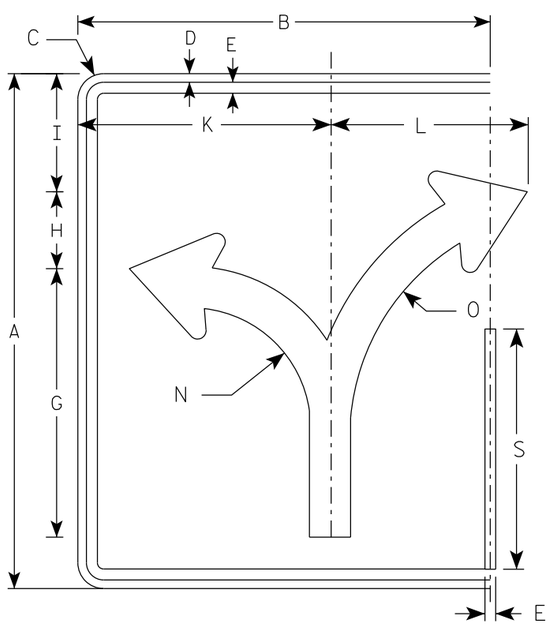
DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

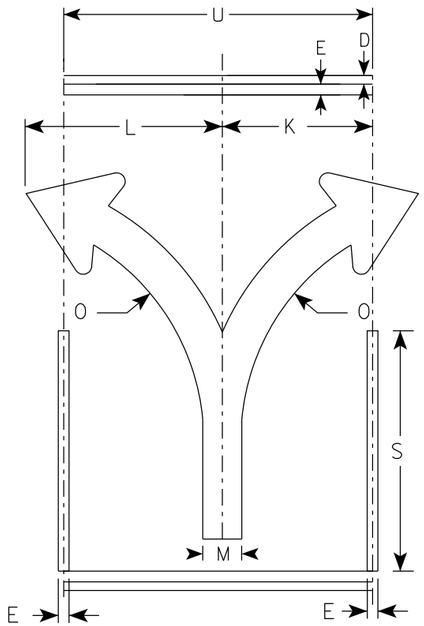
SHEET NO: 50 E

NOTES

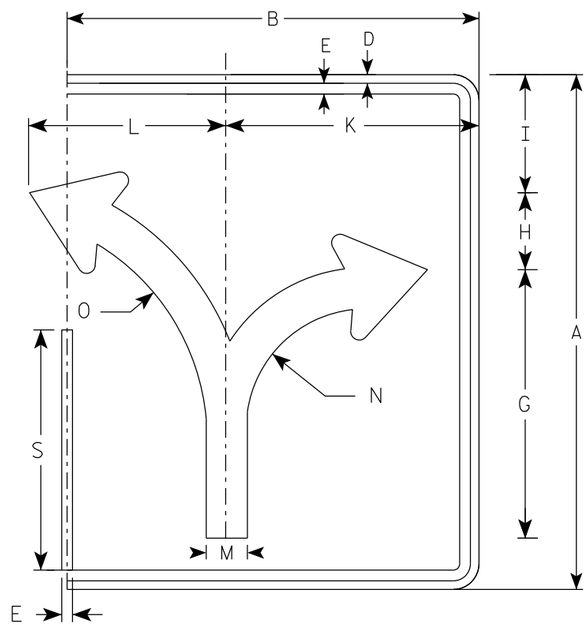
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



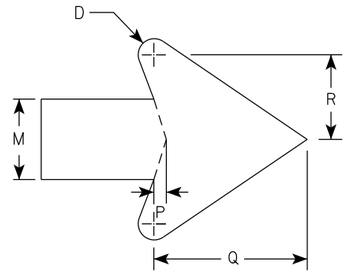

(C)




(C)




(C)




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 | ENDS Area sq. ft. | MIDDLE Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 6 7/8 | | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 18 | | | | | | 5.0 | 3.75 |
| 2M | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 6 7/8 | | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 18 | | | | | | 5.0 | 3.75 |
| 3 | 36 | 30 | 1 1/2 | 1/2 | 5/8 | | 18 3/4 | 5 1/2 | 8 1/4 | | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8 | 16 | 1/2 | 5 1/2 | 3 | 16 3/4 | | 24 | | | | | | 7.5 | 6.0 |
| 4 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 11 | | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 30 | | | | | | 12.0 | 10.0 |
| 5 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 11 | | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 30 | | | | | | 12.0 | 10.0 |

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 51 | E

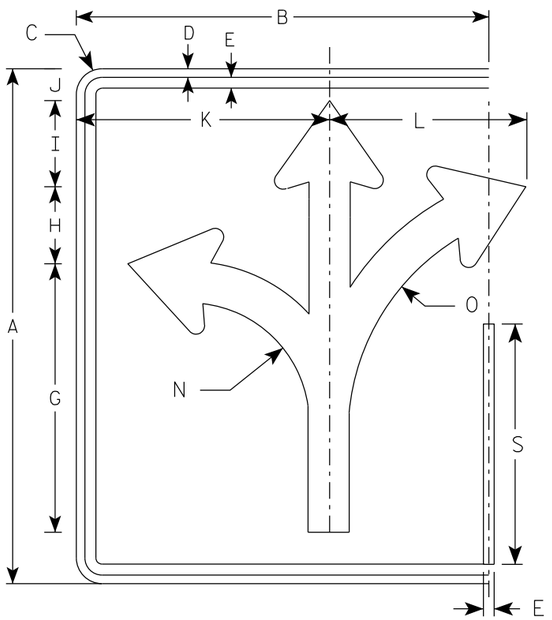


7

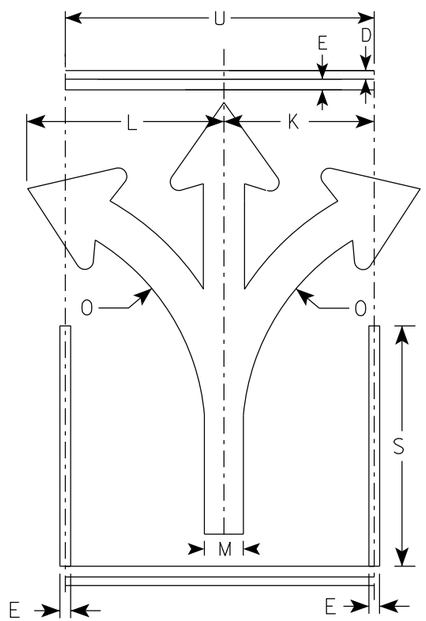
7

NOTES

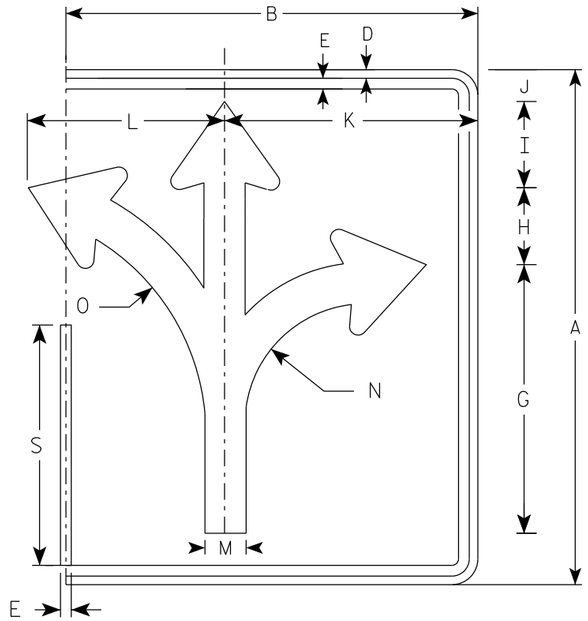
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



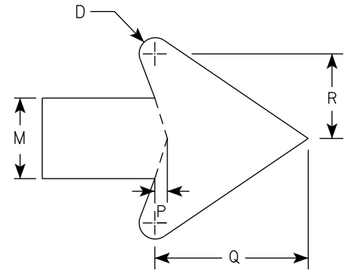

(D)




(D)




(D)




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 | ENDS Area sq. ft. | MIDDLE Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 5 | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 18 | | | | | | 5.0 | 3.75 |
| 2M | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 5 | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 18 | | | | | | 5.0 | 3.75 |
| 3 | 36 | 30 | 1 1/2 | 1/2 | 5/8 | | 18 3/4 | 5 1/2 | 6 | 2 1/4 | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8 | 16 | 1/2 | 5 1/2 | 3 | 16 3/4 | | 24 | | | | | | 7.5 | 6.0 |
| 4 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 30 | | | | | | 12.0 | 10.0 |
| 5 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 30 | | | | | | 12.0 | 10.0 |

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

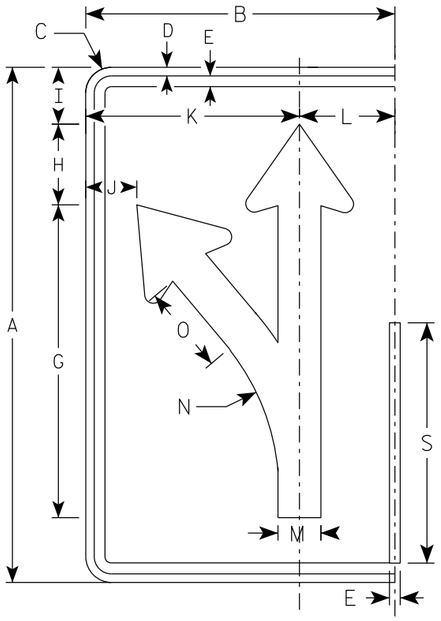
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

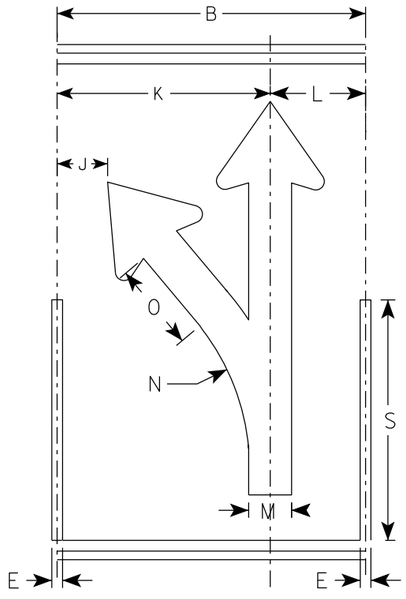
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 52 | E

NOTES

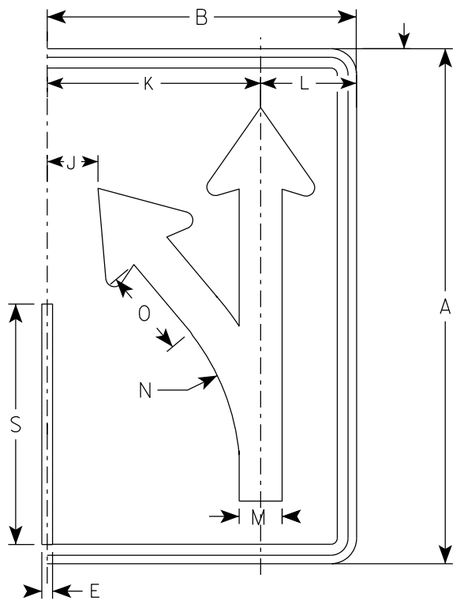
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



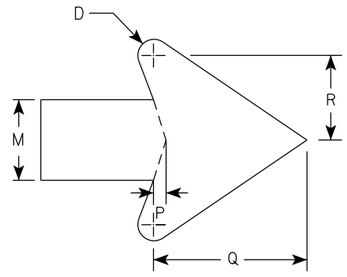

(E)




(E)




(E)




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 | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 18 1/4 | 4 3/4 | 3 1/4 | 3 | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | | | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 18 1/4 | 4 3/4 | 3 1/4 | 3 | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | | | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | | 21 7/8 | 5 5/8 | 4 | 4 7/8 | 16 1/8 | 7 3/4 | 3 | 15 7/8 | 6 1/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | | | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4 | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4 | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | | | | | | | 10.0 |

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

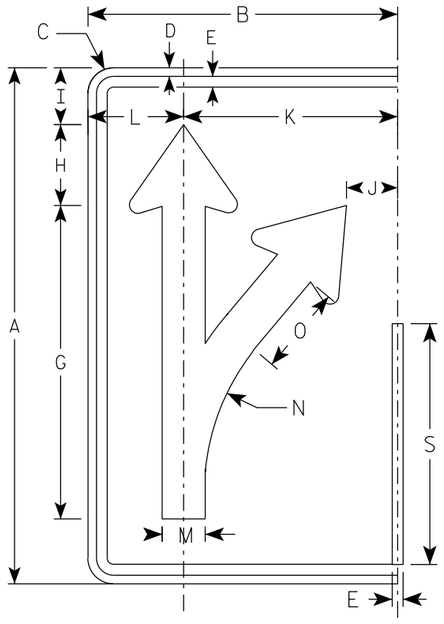
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

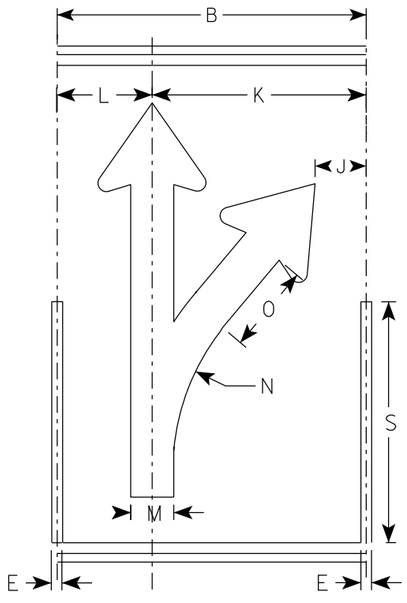
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 53 | E

NOTES

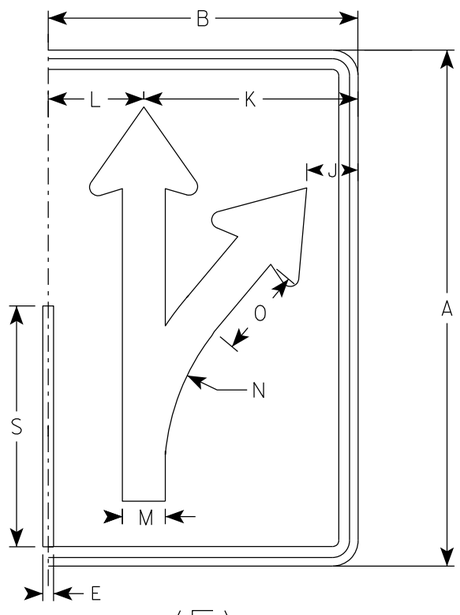
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



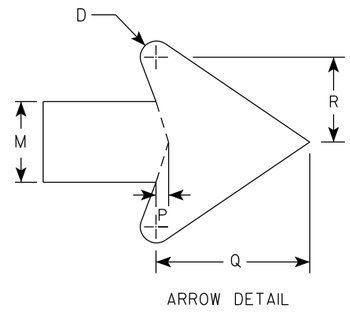

(F)




(F)




(F)




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 | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 18 1/4 | 4 3/4 | 3 1/4 | 3 | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | | | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 18 1/4 | 4 3/4 | 3 1/4 | 3 | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | | | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | | 21 7/8 | 5 5/8 | 4 | 4 7/8 | 16 1/8 | 7 3/4 | 3 | 15 7/8 | 6 1/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | | | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4 | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4 | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | | | | | | | 10.0 |

STANDARD SIGN
R3-8 (F) Arrow

*WISCONSIN DEPT OF TRANSPORTATION*

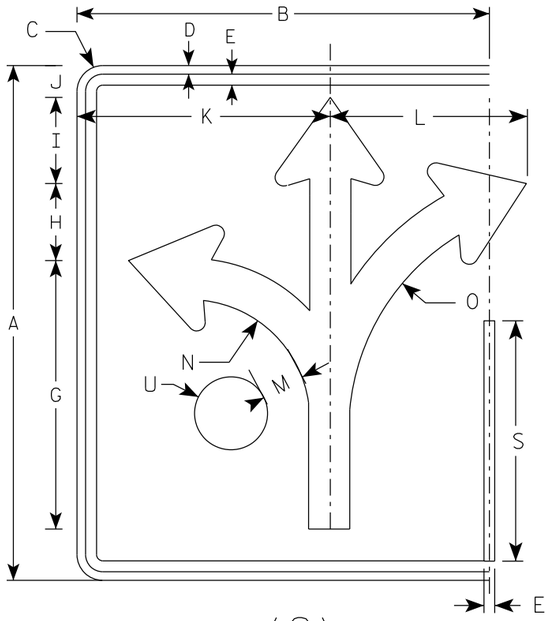
APPROVED Matthew R Rauch
*For* State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

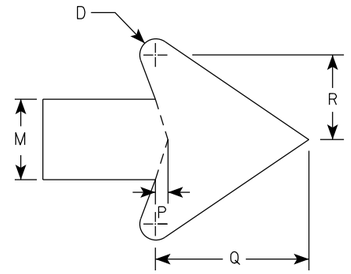
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 54 | E

## NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None




(G)




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 | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 5 | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 2 1/8 | | | | | | 5.0 |
| 2M | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 5 | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 2 1/8 | | | | | | 5.0 |
| 3 | 36 | 30 | 1 1/2 | 1/2 | 5/8 | | 18 3/4 | 5 1/2 | 6 | 3 1/8 | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8 | 16 | 1/2 | 5 1/2 | 3 | 16 3/4 | | 2 1/2 | | | | | | 7.5 |
| 4 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 3 3/8 | | | | | | 12.0 |
| 5 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 3 3/8 | | | | | | 12.0 |

# STANDARD SIGN
# R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

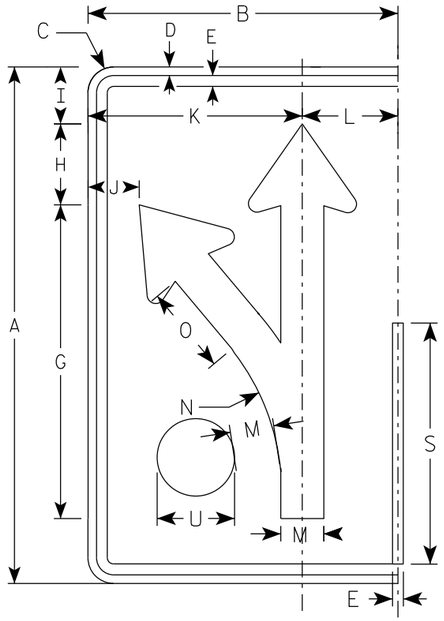
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

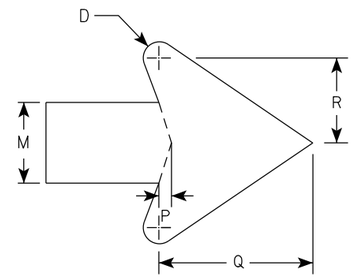
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 55 | E |
|---|---|---|---|---|---|

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None




(H)




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 | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 18 1/4 | 4 3/4 | 3 1/4 | 3 | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | | 2 1/8 | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 18 1/4 | 4 3/4 | 3 1/4 | 3 | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | | 2 1/8 | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | | 21 7/8 | 5 5/8 | 4 | 4 7/8 | 16 1/8 | 7 3/4 | 3 | 15 7/8 | 6 1/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | | 2 1/2 | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4 | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | 3 3/8 | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4 | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | 3 3/8 | | | | | | 10.0 |

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

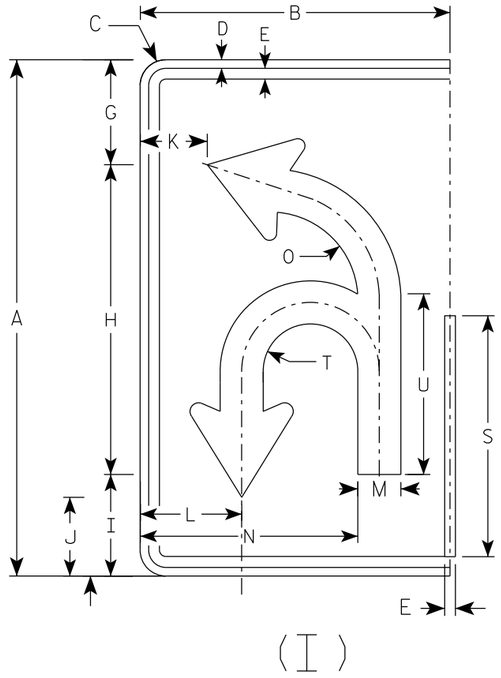
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

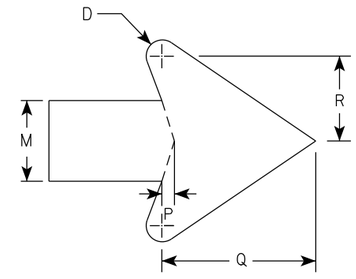
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 56 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None




(I)




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 | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 6 1/8 | 18 | 5 7/8 | 4 5/8 | 3 7/8 | 5 7/8 | 2 1/2 | 12 5/8 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | 2 3/4 | 10 1/2 | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 6 1/8 | 18 | 5 7/8 | 4 5/8 | 3 7/8 | 5 7/8 | 2 1/2 | 12 5/8 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | 2 3/4 | 10 1/2 | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | | 21 7/8 | 21 5/8 | 7 1/8 | 5 1/2 | 5 7/8 | 8 1/4 | 3 | 16 3/8 | 6 1/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 3 1/4 | 12 5/8 | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 28 3/4 | 9 3/8 | 7 1/4 | 6 7/8 | 10 | 4 | 20 7/8 | 8 1/8 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 4 3/8 | 16 3/4 | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 28 3/4 | 9 3/8 | 7 1/4 | 6 7/8 | 10 | 4 | 20 7/8 | 8 1/8 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 4 3/8 | 16 3/4 | | | | | | 10.0 |

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

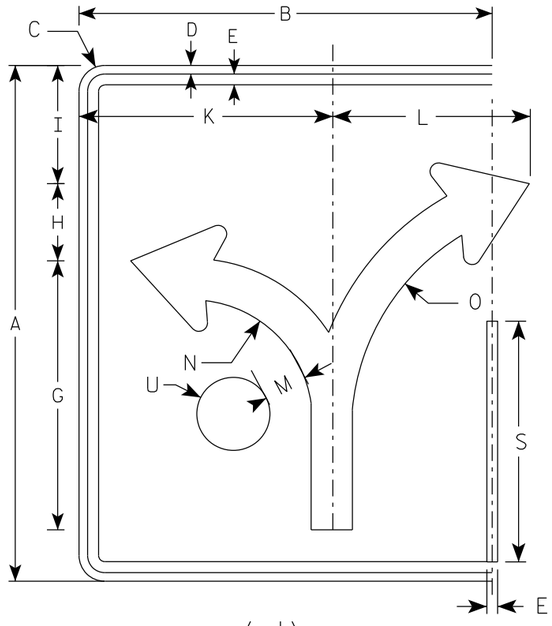
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

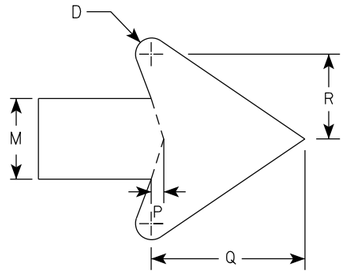
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 57 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None




(J)




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 | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 6 7/8 | | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 2 1/8 | | | | | | 5.0 |
| 2M | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 6 7/8 | | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 2 1/8 | | | | | | 5.0 |
| 3 | 36 | 30 | 1 1/2 | 1/2 | 5/8 | | 18 3/4 | 5 1/2 | 8 1/4 | | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8 | 16 | 1/2 | 5 1/2 | 3 | 16 3/4 | | 2 1/2 | | | | | | 7.5 |
| 4 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 11 | | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 3 3/8 | | | | | | 12.0 |
| 5 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 11 | | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 3 3/8 | | | | | | 12.0 |

STANDARD SIGN
R3-8 (J) Arrow

WISCONSIN DEPT OF TRANSPORTATION

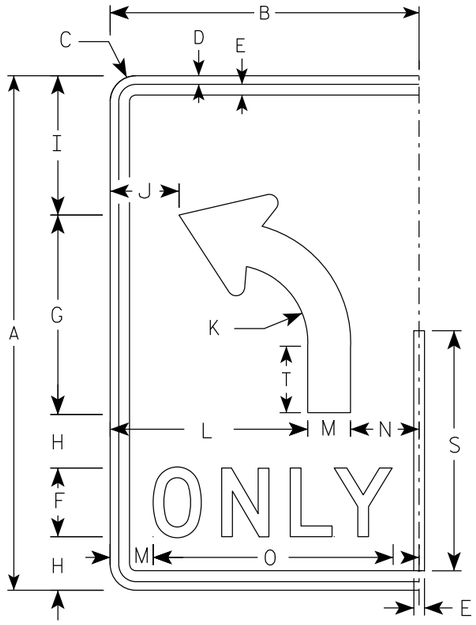
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

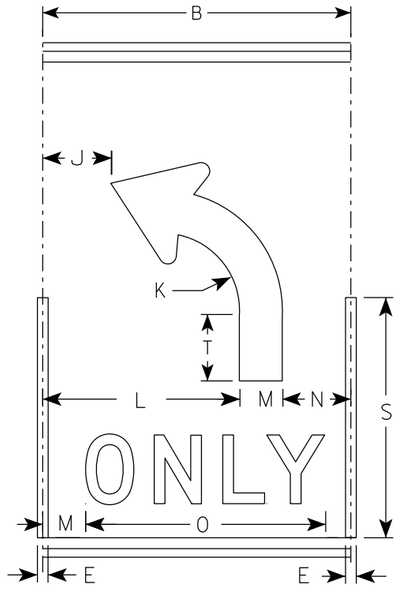
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 58 | E

NOTES

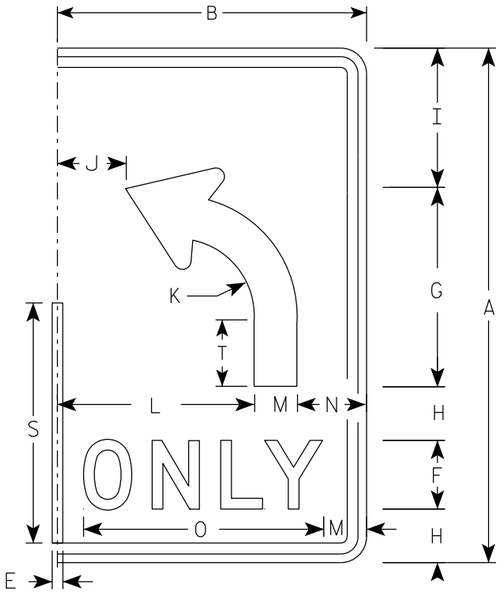
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



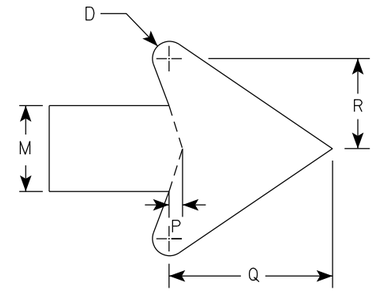

(L)




(L)




(L)




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 | 30 | 18 | 1 ½ | ½ | ⅝ | 4 | 11 ⅝ | 3 ⅛ | 8 ⅛ | 4 | 4 ½ | 11 ½ | 2 ½ | 4 | 14 | ⅜ | 4 ¾ | 2 ⅝ | 14 | 3 ⅞ | | | | | | | 3.75 |
| 2M | 30 | 18 | 1 ½ | ½ | ⅝ | 4 | 11 ⅝ | 3 ⅛ | 8 ⅛ | 4 | 4 ½ | 11 ½ | 2 ½ | 4 | 14 | ⅜ | 4 ¾ | 2 ⅝ | 14 | 3 ⅞ | | | | | | | 3.75 |
| 3 | 36 | 24 | 1 ½ | ½ | ⅝ | 5 | 14 | 3 ½ | 9 ¾ | 6 | 5 ⅜ | 15 | 3 | 6 | 17 ⅝ | ½ | 5 ¾ | 3 ⅛ | 16 ¾ | 4 ⅝ | | | | | | | 6.0 |
| 4 | 48 | 30 | 2 ¼ | ¾ | 1 | 6 | 18 ⅝ | 5 ⅛ | 13 ⅛ | 6 ⅛ | 7 ¼ | 18 | 4 | 8 | 21 ¾ | ⅝ | 7 ⅝ | 4 ¼ | 22 ⅜ | 6 ¼ | | | | | | | 10.0 |
| 5 | 48 | 30 | 2 ¼ | ¾ | 1 | 6 | 18 ⅝ | 5 ⅛ | 13 ⅛ | 6 ⅛ | 7 ¼ | 18 | 4 | 8 | 21 ¾ | ⅝ | 7 ⅝ | 4 ¼ | 22 ⅜ | 6 ¼ | | | | | | | 10.0 |

STANDARD SIGN

R3-8 (L) Arrow

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

SHEET NO: 59 E

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 14-FEB 2023 3:02 PLOT BY : mscj9h PLOT NAME :

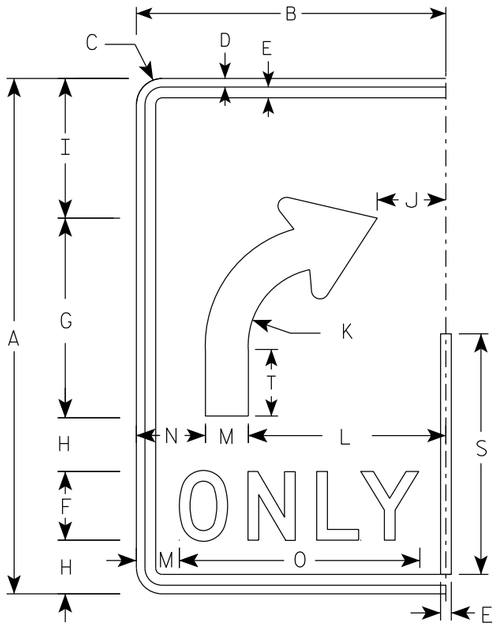
WISDOT/CADDS SHEET 42

7

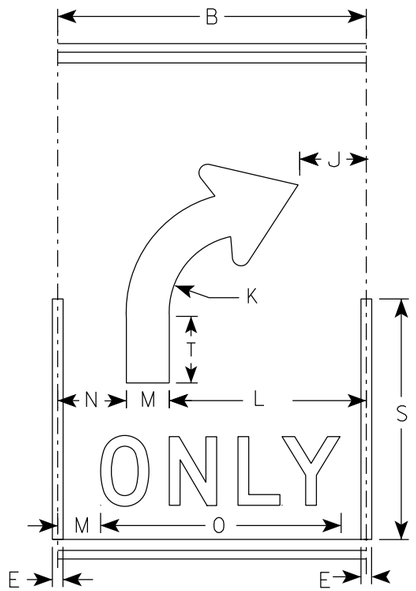
7

## NOTES

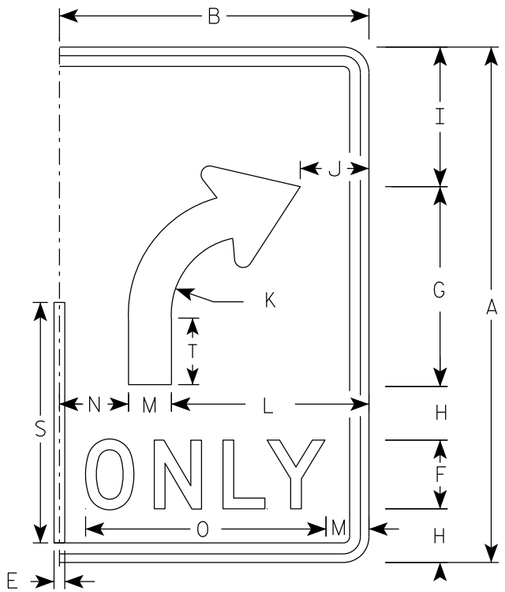
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



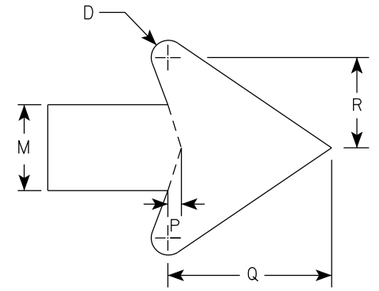

(R)




(R)




(R)




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 | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8 | 4 | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | 3 7/8 | | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8 | 4 | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | 3 7/8 | | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 14 | 3 1/2 | 9 3/4 | 6 | 5 3/8 | 15 | 3 | 6 | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 4 5/8 | | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18 | 4 | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18 | 4 | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | | | | | | | 10.0 |

STANDARD SIGN

R3-8 (R) Arrow

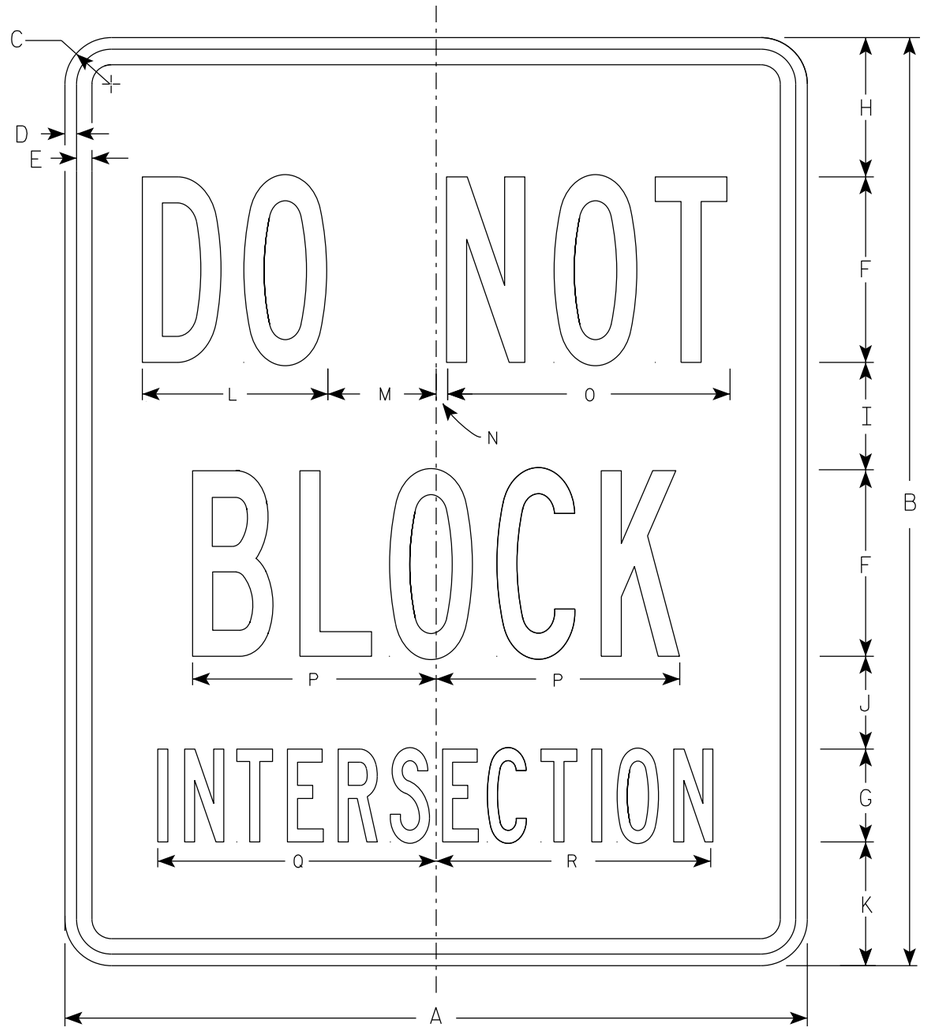
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

SHEET NO: 60 **E**




R10-7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - B

| 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 1/2 | 3/8 | 1/2 | 6 | 3 | 4 1/2 | 3 1/2 | 3 | 4 | 6 | 3 1/2 | 3/8 | 9 1/8 | 7 7/8 | 9 | 8 7/8 | | | | | | | | | 5.0 |
| 2M | 24 | 30 | 1 1/2 | 3/8 | 1/2 | 6 | 3 | 4 1/2 | 3 1/2 | 3 | 4 | 6 | 3 1/2 | 3/8 | 9 1/8 | 7 7/8 | 9 | 8 7/8 | | | | | | | | | 5.0 |
| 3 | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 10 | 5 | 7 | 5 1/4 | 4 1/2 | 6 1/4 | 10 | 5 5/8 | 1/2 | 15 1/8 | 13 1/8 | 15 | 14 7/8 | | | | | | | | | 12.0 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

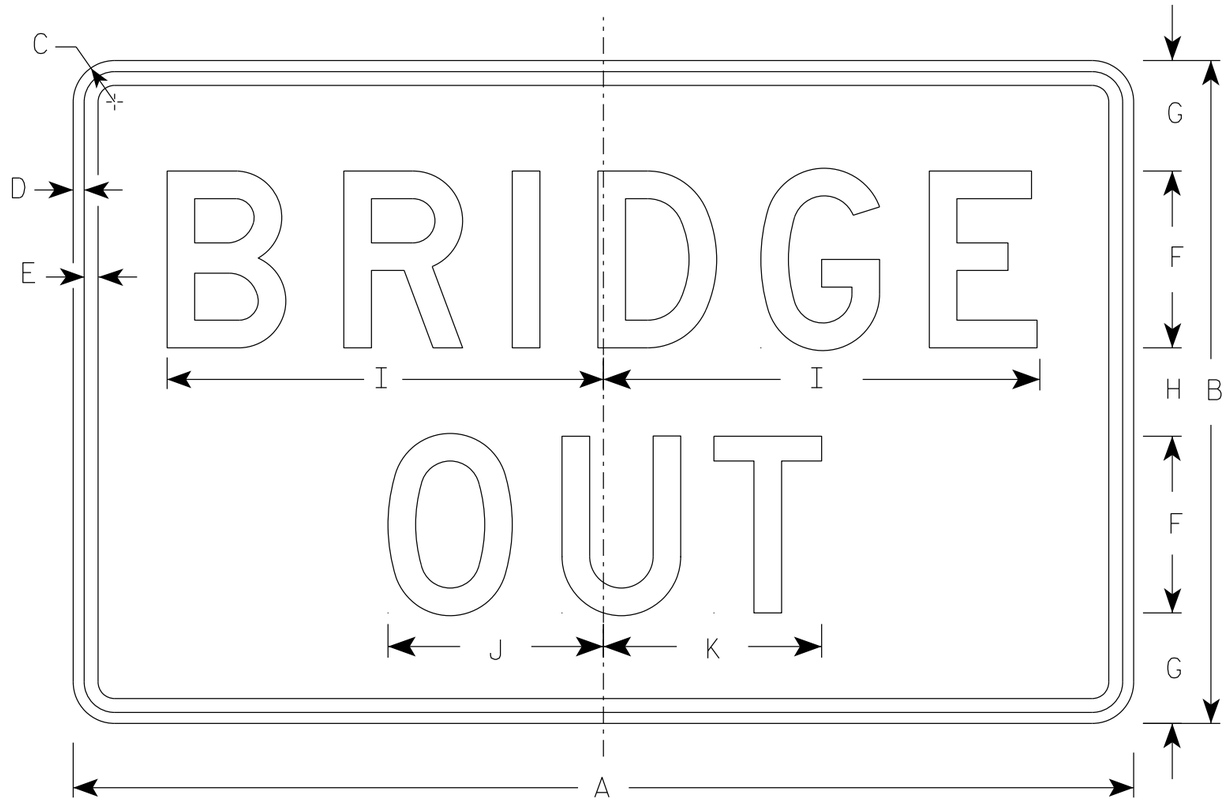
STANDARD SIGN
R10-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/25/24 PLATE NO. R10-7.6

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 61 | E |
|---|---|---|---|---|---|




R11-2B

NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 19 3/4 | 9 3/4 | 9 7/8 | | | | | | | | | | | | | | | | 10.0 |
| 2M | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 19 3/4 | 9 3/4 | 9 7/8 | | | | | | | | | | | | | | | | 10.0 |
| 3 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 19 3/4 | 9 3/4 | 9 7/8 | | | | | | | | | | | | | | | | 10.0 |
| 4 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 19 3/4 | 9 3/4 | 9 7/8 | | | | | | | | | | | | | | | | 10.0 |
| 5 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 19 3/4 | 9 3/4 | 9 7/8 | | | | | | | | | | | | | | | | 10.0 |

STANDARD SIGN
R11-2B

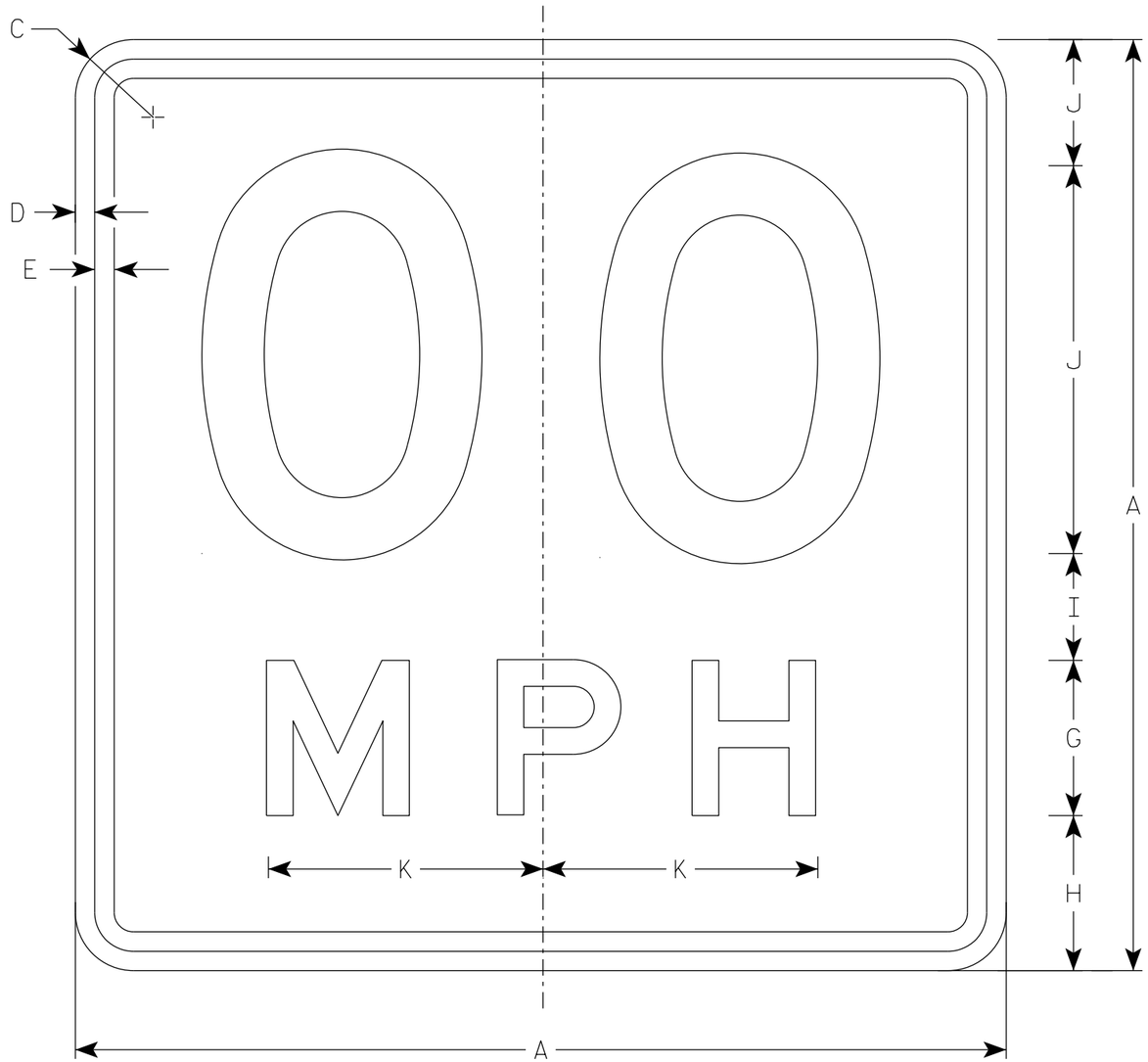
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:

SHEET NO: 62 E




W013-1

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | | 1 1/2 | 3/8 | 1/2 | 10 | 4 | 4 | 2 3/4 | 3 1/4 | 7 1/8 | | | | | | | | | | | | | | | | 4.0 |
| 2S | 36 | | 2 1/4 | 5/8 | 3/4 | 16 | 6 | 5 1/2 | 4 | 4 1/2 | 10 5/8 | | | | | | | | | | | | | | | | 9.0 |
| 2M | 36 | | 2 1/4 | 5/8 | 3/4 | 16 | 6 | 5 1/2 | 4 | 4 1/2 | 10 5/8 | | | | | | | | | | | | | | | | 9.0 |
| 3 | 36 | | 2 1/4 | 5/8 | 3/4 | 16 | 6 | 5 1/2 | 4 | 4 1/2 | 10 5/8 | | | | | | | | | | | | | | | | 9.0 |
| 4 | 36 | | 2 1/4 | 5/8 | 3/4 | 16 | 6 | 5 1/2 | 4 | 4 1/2 | 10 5/8 | | | | | | | | | | | | | | | | 9.0 |
| 5 | 36 | | 2 1/4 | 5/8 | 3/4 | 16 | 6 | 5 1/2 | 4 | 4 1/2 | 10 5/8 | | | | | | | | | | | | | | | | 9.0 |

STANDARD SIGN

W013-1

WISCONSIN DEPT OF TRANSPORTATION

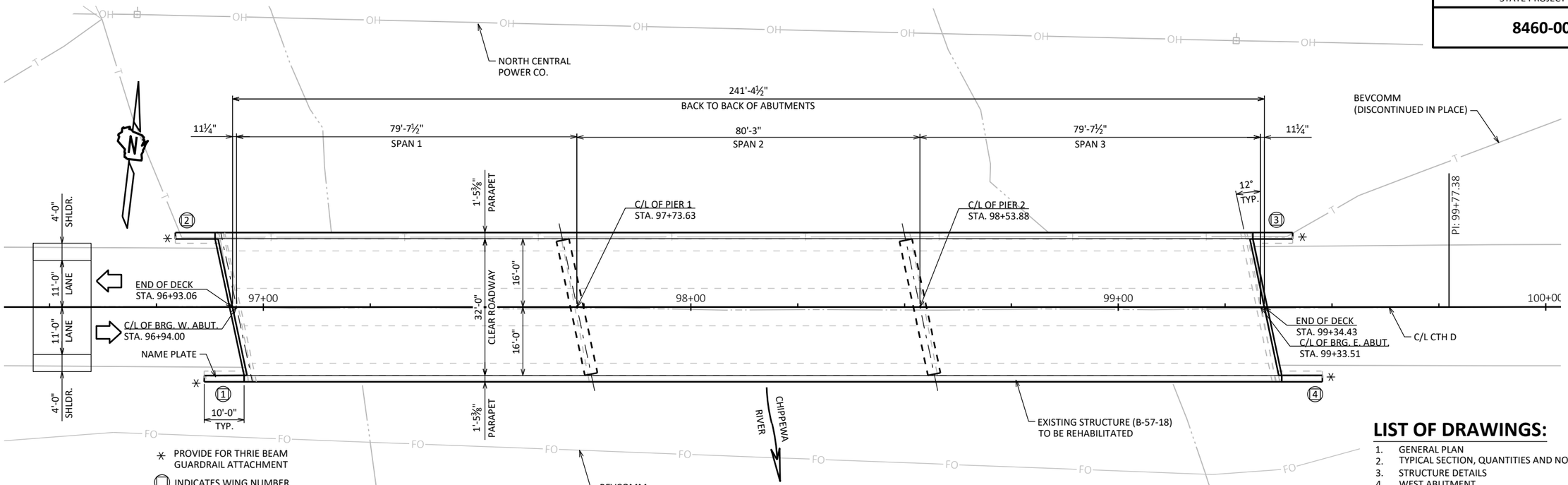
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W013-1.2

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

STATE PROJECT NUMBER

**8460-00-70**




## PLAN

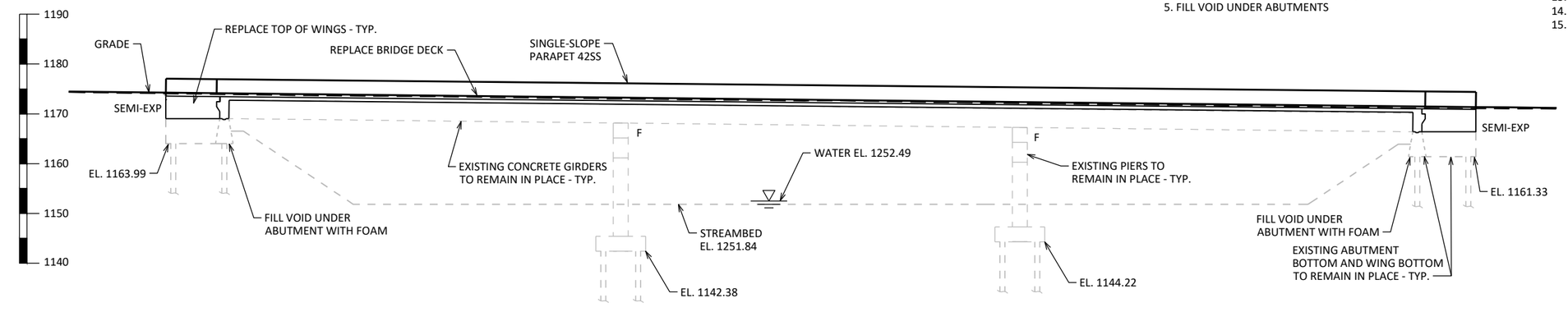
3-SPAN 45" PRESTRESSED CONCRETE GIRDER BRIDGE DECK REPLACEMENT

## SCOPE OF WORK

1. REPLACE CONCRETE DECK
2. REPLACE PARAPETS
3. REPLACE TOPS OF WINGS
4. CONCRETE SURFACE REPAIR ON ABUTMENT WALLS
5. FILL VOID UNDER ABUTMENTS

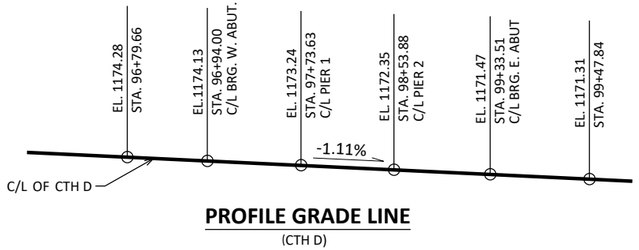
## LIST OF DRAWINGS:






## ELEVATION

NORMAL TO THE C/L OF CHIPPEWA RIVER




## PROFILE GRADE LINE

(CTH D)

| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| 50 | 102+63.4 | 1170.138 | RR SPIKE IN PPOL, 54' LT. |
| 51 | 96+85.5 | 1173.571 | WISDOT MON. IN BRIDGE ABUT., 16.5' LT. |

WISCONSIN
ARLEN E. BEAUDETTE
E-36829
EAU CLAIRE
WI
PROFESSIONAL ENGINEER

09/23/2025

**STRUCTURE DESIGN CONTACTS:**

| | |
|---|---|
| ARLEN BEAUDETTE | 715-834-3161 |
| AARON BONK | 608-261-0261 |

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

ORIGINAL PLANS PREPARED BY

AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

**STRUCTURE B-57-18**

CTH D OVER CHIPPEWA RIVER

| COUNTY | TOWN |
|---|---|
| SAWYER | WEIRGOR |

DESIGN SPEC.
REHABILITATION N/A

| DESIGNED BY | DESIGNED CK'D | DRAWN BY | PLANS CK'D |
|---|---|---|---|
| NBE | ZSS | DRS/CLP | AEB |

**GENERAL PLAN**

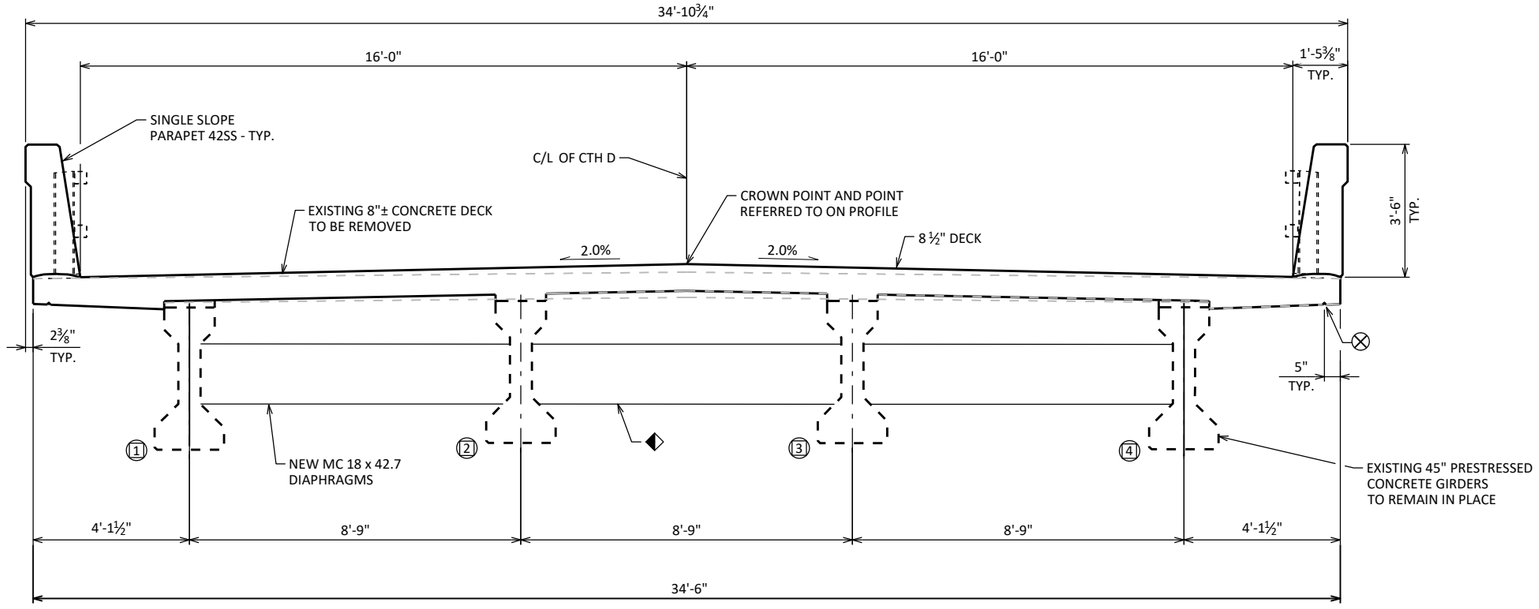
SHEET 1 OF 15
64

I.D.

DATE:

STATE PROJECT NUMBER

**8460-00-70**




## TYPICAL SECTION THRU BRIDGE

(Looking Upstation)

⊗ ¾" V - GROOVE REQ'D. EXTEND TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGMS - TYP.

◆ EXISTING CONCRETE DIAPHRAGMS TO BE REMOVED AND REPLACED WITH STEEL DIAPHRAGMS, MID-SPAN ONLY.

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF THE NEW DECK.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOPS OF PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE UPPER LIMIT OF "EXCAVATION FOR STRUCTURES B-57-18" SHALL BE THE EXISTING GROUND LINE.

THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE OF 4", WHICH IS THE MAXIMUM HAUNCH FOR WHICH THE CONTRACTOR WILL BE PAID.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT UNLESS SHOWN OR NOTED OTHERWISE.

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

VARIATIONS TO THE NEW GRADE LINE OF ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR OF 1972.

## DESIGN DATA

**LIVE LOAD:**

DESIGN LOADING: HS- 20
INVENTORY RATING: HS- 15
OPERATING RATING: HS- 37
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 210 (KIPS)

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

**MATERIAL PROPERTIES:**

CONCRETE MASONRY:
SUPERSTRUCTURE ——— $f'_c$ = 4,000 PSI
ALL OTHER ——— $f'_c$ = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 ——— $f_y$ = 60,000 PSI

## TRAFFIC DATA

**FEATURE ON:**

AADT = 430 (2026)
AADT = 460 (2046)
R.D.S. = 50 MPH

## TOTAL ESTIMATED QUANTITIES

| BID ITEM NUMBER | BID ITEMS | UNIT | SUPER | W. ABUT. | PIER 1 | PIER 2 | E. ABUT. | TOTALS |
|---|---|---|---|---|---|---|---|---|
| 203.0270 | REMOVING STRUCTURE OVER WATERWAY DEBRIS CAPTURE B-57-18 | EACH | ----- | ----- | ----- | ----- | ----- | 1 |
| 206.1001 | EXCAVATION FOR STRUCTURES BRIDGES B-57-18 | EACH | ----- | ----- | ----- | ----- | ----- | 1 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | ----- | 75 | ----- | ----- | 75 | 150 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 337.3 | 8.4 | ----- | ----- | 8.2 | 353.9 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | 860 | ----- | ----- | ----- | ----- | 860 |
| 502.3210 | PIGMENTED SURFACE SEALER | SY | 240 | 10 | ----- | ----- | 10 | 260 |
| 502.4204 | ADHESIVE ANCHORS NO. 4 BARS | EACH | 66 | ----- | ----- | ----- | ----- | 66 |
| 502.4205 | ADHESIVE ANCHORS NO. 5 BARS | EACH | ------ | 74 | ----- | ----- | 74 | 148 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 78,000 | 1,390 | ----- | ----- | 1,390 | 80,780 |
| 506.2605 | BEARING PADS ELASTOMERIC NON-LAMINATED | EACH | ----- | 4 | ----- | ----- | 4 | 8 |
| 506.4000 | STEEL DIAPHRAGMS B-57-18 | EACH | 9 | ----- | ----- | ----- | ----- | 9 |
| 506.7050.S | REMOVING BEARINGS B-57-18 | EACH | 8 | ----- | ----- | ----- | ----- | 8 |
| 509.1500 | CONCRETE SURFACE REPAIR | SF | 100 | ----- | ----- | ----- | ----- | 100 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | ----- | 9 | ----- | ----- | 9 | 18 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | ----- | 75 | ----- | ----- | 75 | 150 |
| 614.0150 | ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD | EACH | 4 | ----- | ----- | ----- | ----- | 4 |
| 645.0111 | GEOTEXTILE FABRIC TYPE DF SCHEDULE A | SY | ----- | 35 | ----- | ----- | 35 | 70 |
| SPV.0060 | FOAM VOID FILLING B-57-18 | EACH | ----- | ----- | ----- | ----- | ----- | 1 |
| | | | | | | | | |
| | NON-BID ITEMS | | | | | | | |
| | FILLER | SIZE | --- | --- | --- | --- | --- | ½", ¾" |
| | | | | | | | | |

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY DRS/CLP | PLANS CK'D AEB

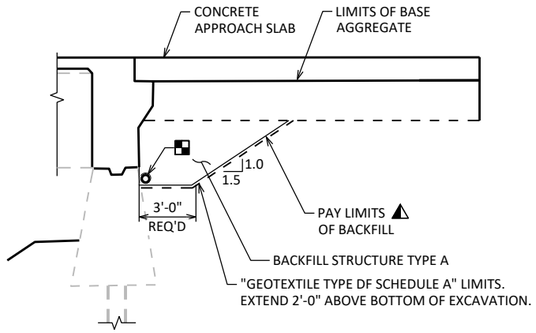
**TYPICAL SECTION, QUANTITIES AND NOTES**

SHEET 2 OF 15

65

STATE PROJECT NUMBER

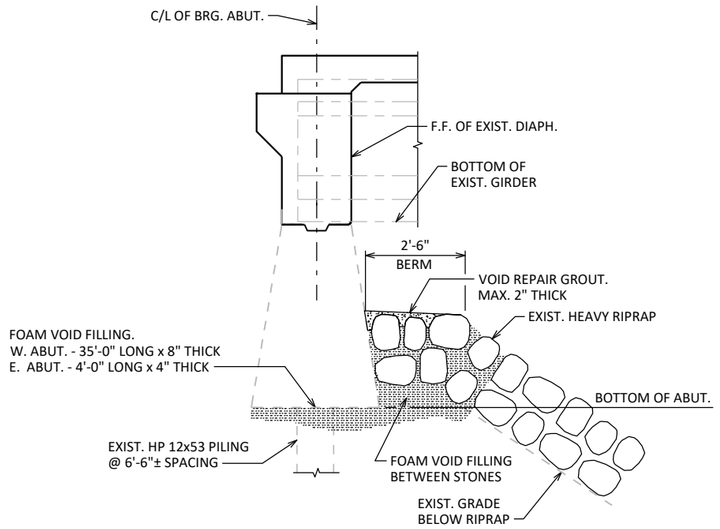
**8460-00-70**



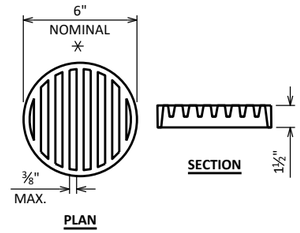

## TYPICAL SECTION THRU ABUTMENT

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

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




## SECTION THRU ABUTMENT

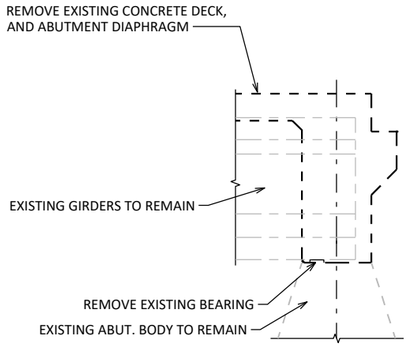



## RODENT SHIELD DETAIL

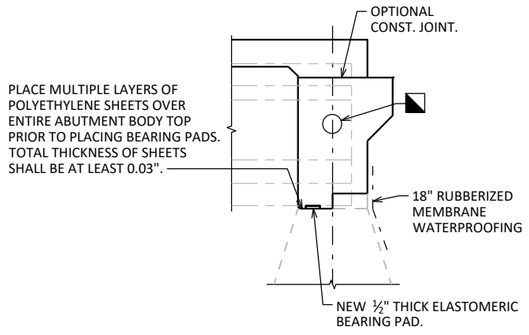
✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

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

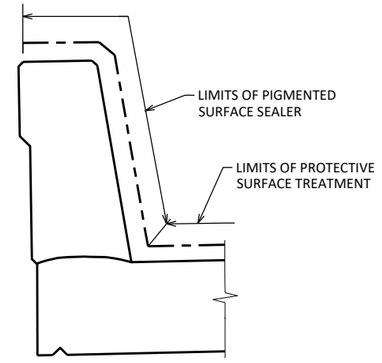



## ABUTMENT REMOVAL SECTION




## ABUTMENT TYPICAL SECTION

◪ FIELD DRILL 1 ½ " DIA. HOLE IN WEB OF EXISTING GIRDERS FOR 2 #5 BARS. FIELD DRILLING INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES". LOCATE HOLE TO MISS EXISTING STRANDS.




## PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER DETAIL

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY DRS/CLP | PLANS CK'D AEB

**STRUCTURE DETAILS**

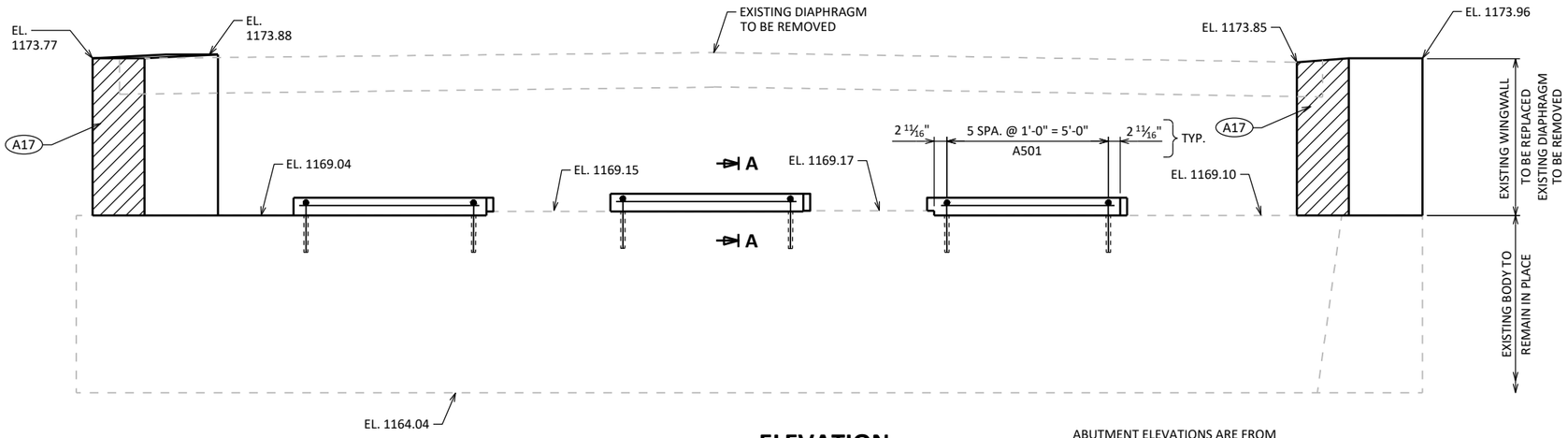
SHEET 3 OF 15

66

STATE PROJECT NUMBER

**8460-00-70**

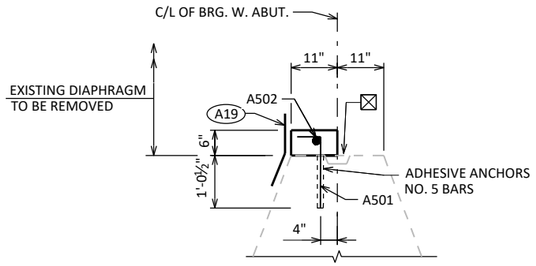
NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½ " FILLER WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛ " SURFACE OF CONCRETE).



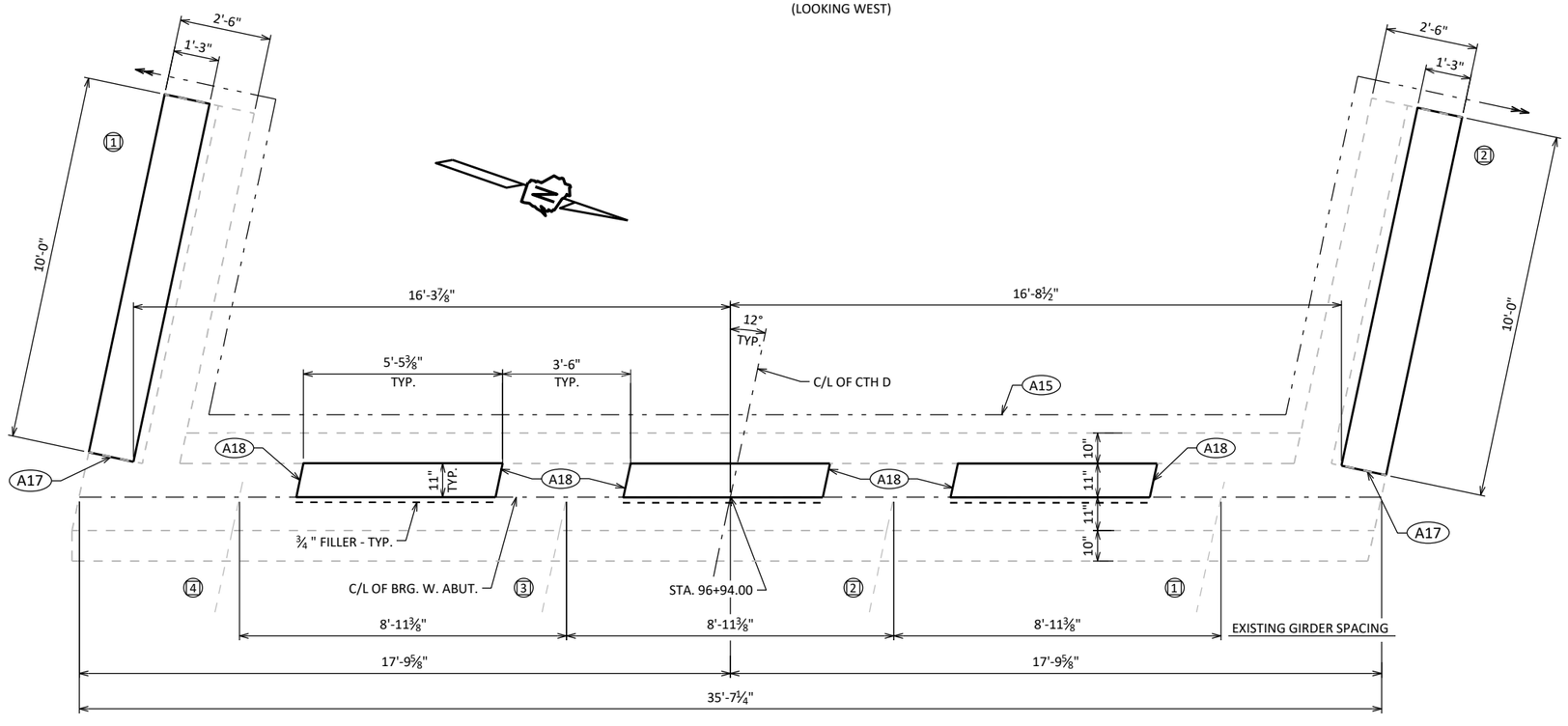

## ELEVATION

(LOOKING WEST)

ABUTMENT ELEVATIONS ARE FROM EXISTING PLANS.




## SECTION A




## PLAN

⊠ FILL IN KEYWAY WITH NON-SHRINK GROUT PRIOR TO ABUTMENT DIAPHRAGM POUR.

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A17) ¾ " FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) ¾ " CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

**WEST ABUTMENT**

SHEET 4 OF 15

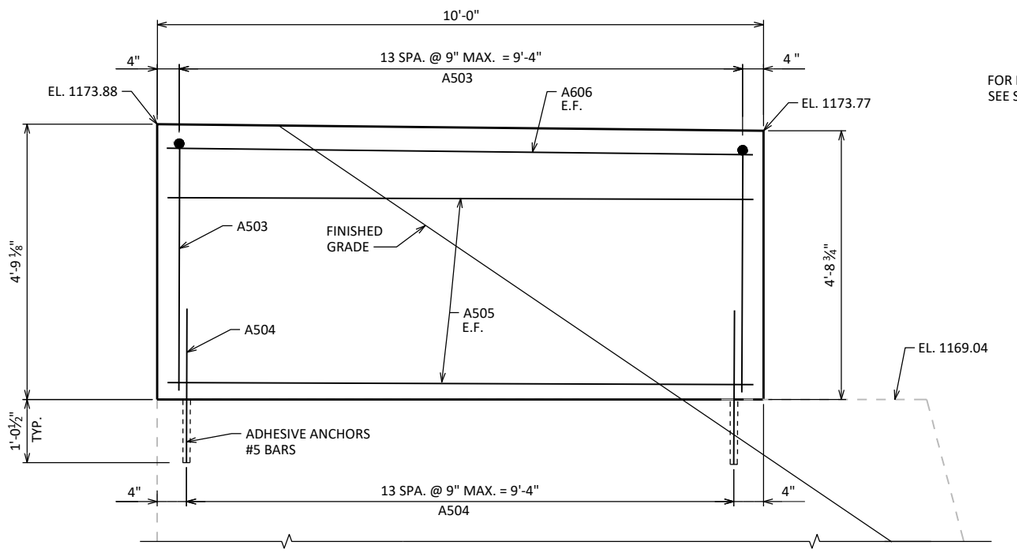
67

8

8

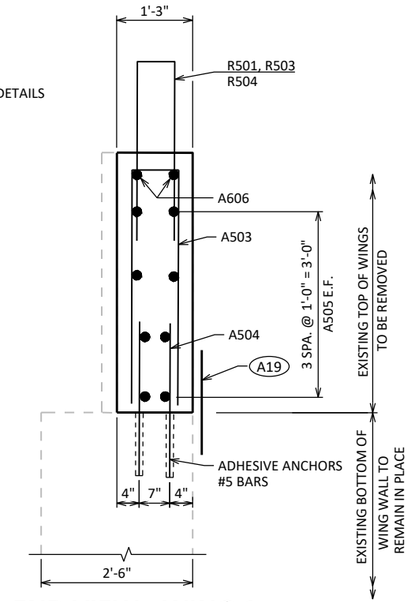
STATE PROJECT NUMBER

**8460-00-70**




## ELEVATION - WING 1

FOR PARAPET DETAILS
SEE SHEET 15




## END VIEW - WING 1

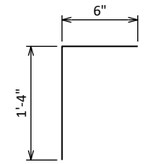
## BILL OF BARS

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

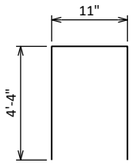
| | BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|---|
| ⚠ | A501 | X | 18 | 1'-9" | X | | BODY @ SEMI-EXP. BLOCK VERT. |
| | A502 | X | 3 | 5'-0" | | | BODY @ SEMI-EXP. BLOCK HORIZ. |
| | A503 | X | 28 | 9'-5" | X | | WINGS 1 & 2 VERT. |
| ⚠ | A504 | X | 56 | 2'-6" | | | WINGS 1 & 2 DOWELS VERT. |
| | A505 | X | 16 | 9'-8" | | | WINGS 1 & 2 HORIZ. |
| | A606 | X | 4 | 9'-8" | | | WINGS 1 & 2 HORIZ. TOP |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS

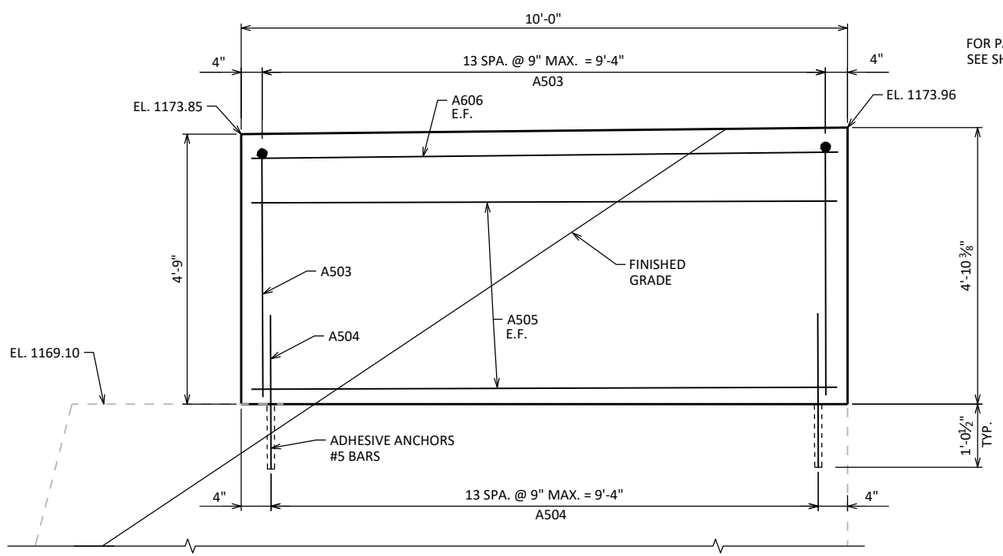
⚠ ADHESIVE ANCHORS NO. 5 BAR




## A501

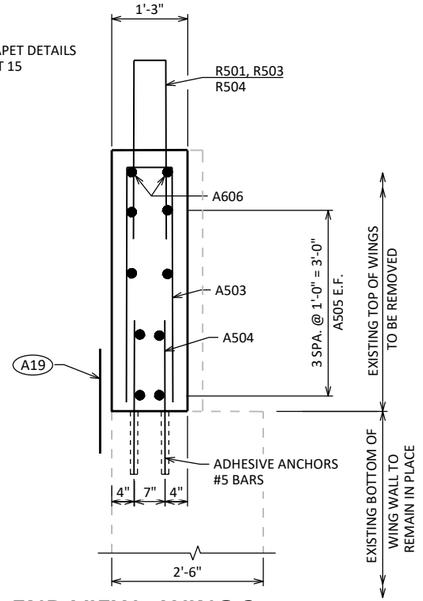



## A503




## ELEVATION - WING 2

FOR PARAPET DETAILS
SEE SHEET 15




## END VIEW - WING 2

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

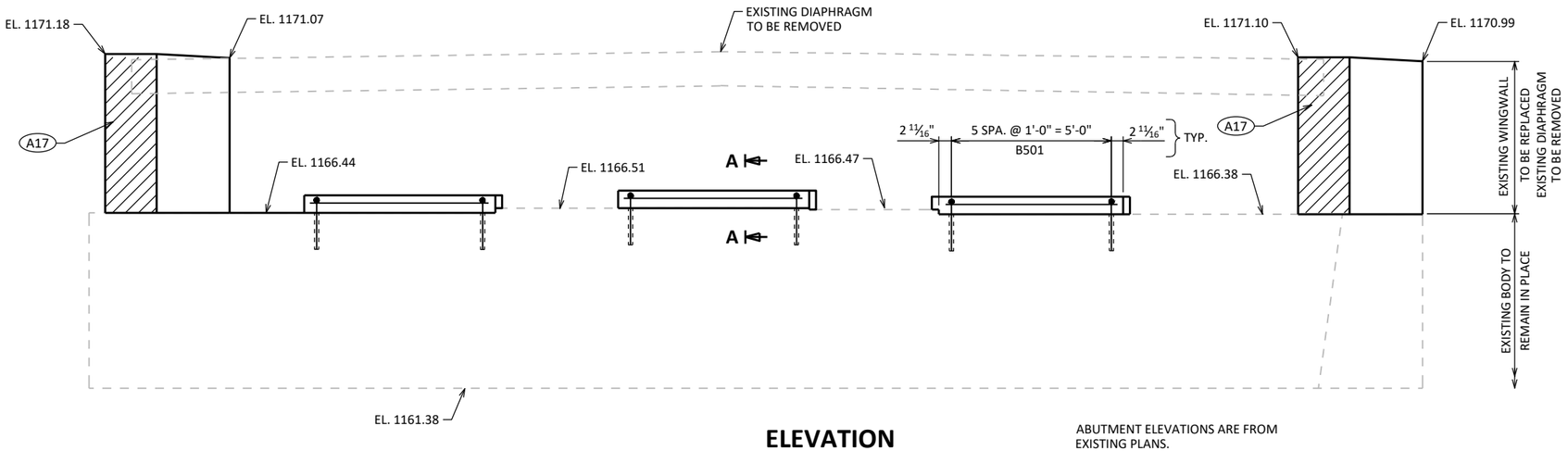
**WEST ABUTMENT DETAILS**

SHEET 5 OF 15

STATE PROJECT NUMBER

**8460-00-70**

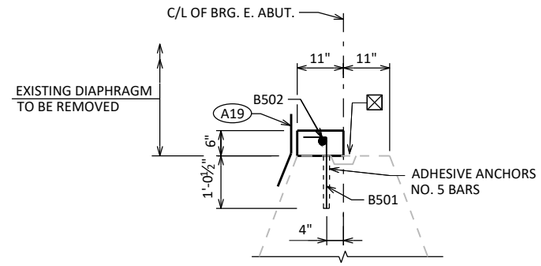
NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½ " FILLER WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛ " SURFACE OF CONCRETE).



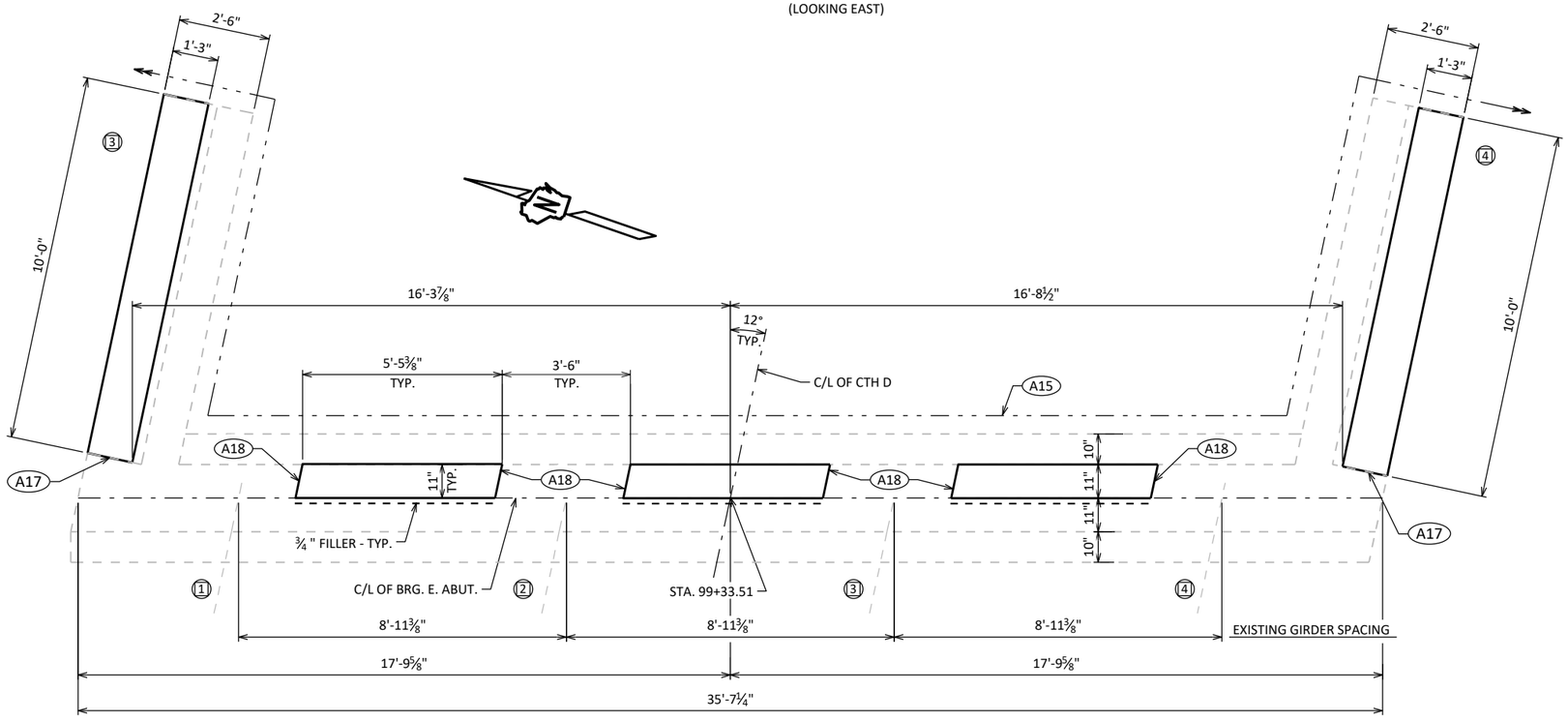

## ELEVATION

(LOOKING EAST)

ABUTMENT ELEVATIONS ARE FROM EXISTING PLANS.




## SECTION A




## PLAN

⊠ FILL IN KEYWAY WITH NON-SHRINK GROUT PRIOR TO ABUTMENT DIAPHRAGM POUR.

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A17) ¾ " FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) ¾ " CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

**EAST ABUTMENT**

SHEET 6 OF 15

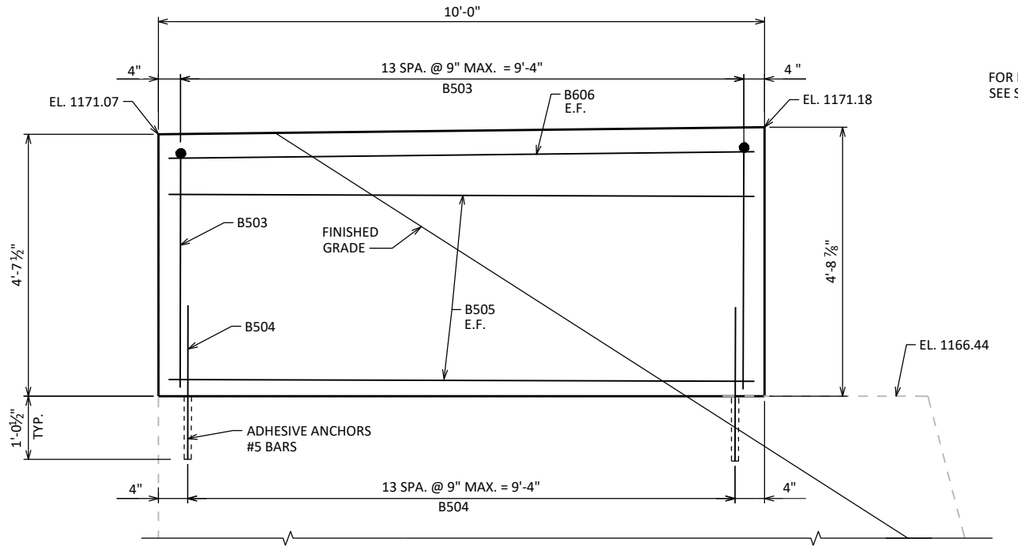
69

8

8

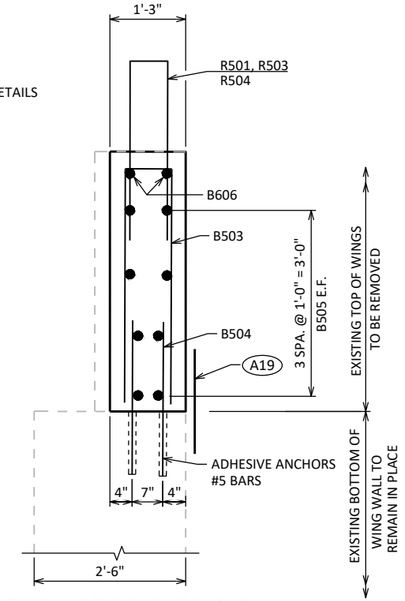
STATE PROJECT NUMBER

**8460-00-70**




## ELEVATION - WING 3

FOR PARAPET DETAILS
SEE SHEET 15




## END VIEW - WING 3

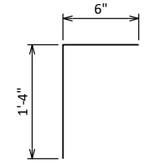
## BILL OF BARS

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

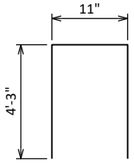
| | BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|---|
| ⚠ | B501 | X | 18 | 1'-9" | X | | BODY @ SEMI-EXP. BLOCK VERT. |
| | B502 | X | 3 | 5'-0" | | | BODY @ SEMI-EXP. BLOCK HORIZ. |
| | B503 | X | 28 | 9'-3" | X | | WINGS 3 & 4 VERT. |
| ⚠ | B504 | X | 56 | 2'-6" | | | WINGS 3 & 4 DOWELS VERT. |
| | B505 | X | 16 | 9'-8" | | | WINGS 3 & 4 HORIZ. |
| | B606 | X | 4 | 9'-8" | | | WINGS 3 & 4 HORIZ. TOP |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS

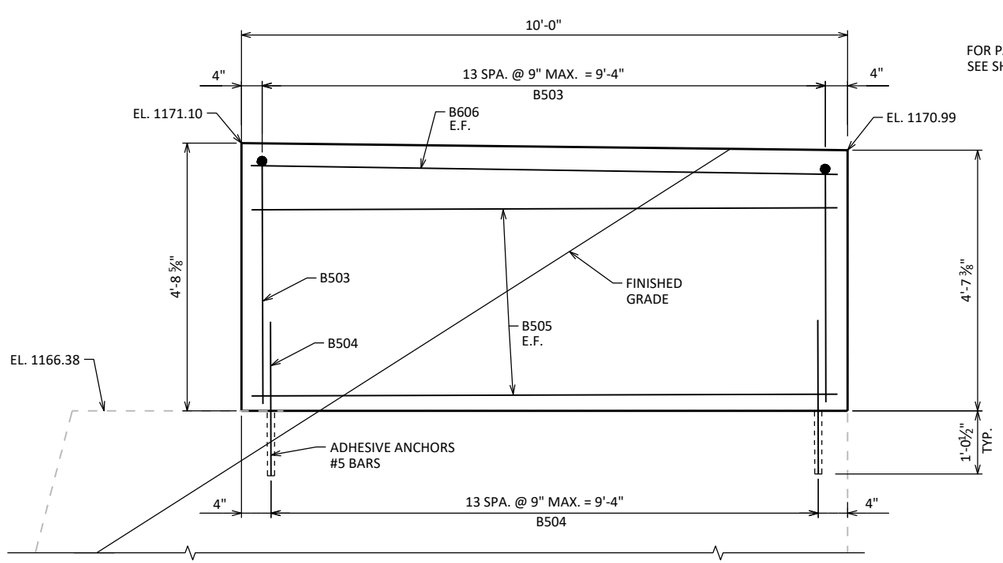
⚠ ADHESIVE ANCHORS NO. 5 BAR




## B501

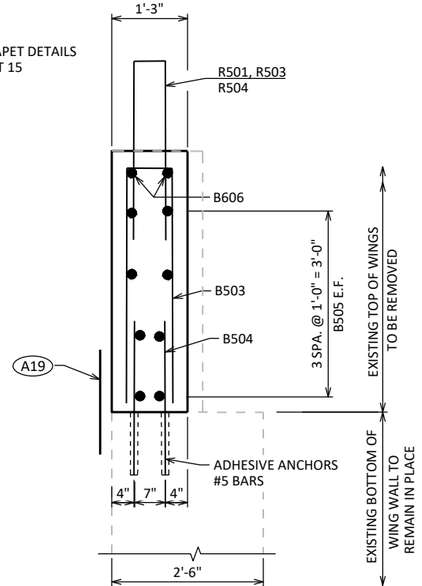



## B503




## ELEVATION - WING 4

FOR PARAPET DETAILS
SEE SHEET 15




## END VIEW - WING 4

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

**EAST ABUTMENT DETAILS**

SHEET 7 OF 15

70

8

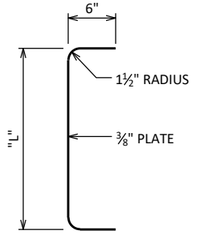
8

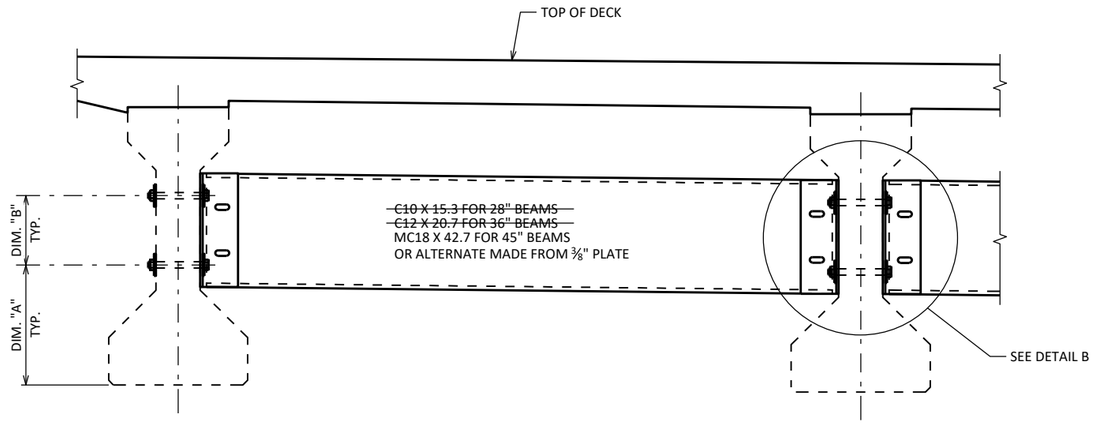
STATE PROJECT NUMBER

**8460-00-70**

## TABLE

| GIRDER HEIGHT | DIM. "A" | DIM. "B" | DIM. "L" | * DIM. "X" |
|---|---|---|---|---|
| ~~28"~~ | ~~1'-0⅞"~~ | ~~5⅞"~~ | ~~9½"~~ | ~~2¼"~~ |
| ~~36"~~ | ~~1'-2⅞"~~ | ~~9⅞"~~ | ~~1'-1½"~~ | ~~3¼"~~ |
| 45" | 1'-5⅜" | 1'-1⅞" | 1'-5½" | 2¼" |
| ~~45W"~~ | ~~1'-9⅛"~~ | ~~8⅞"~~ | ~~1'-0½"~~ | ~~2¾"~~ |
| ~~54"~~ | ~~1'-7⅞"~~ | ~~1'-5⅞"~~ | ~~1'-9½"~~ | ~~4¼"~~ |
| ~~54W"~~ | ~~1'-9⅛"~~ | ~~1'-5⅞"~~ | ~~1'-9½"~~ | ~~4¼"~~ |




**EXTERIOR GIRDER** **INTERIOR GIRDER**

## NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-57-18", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

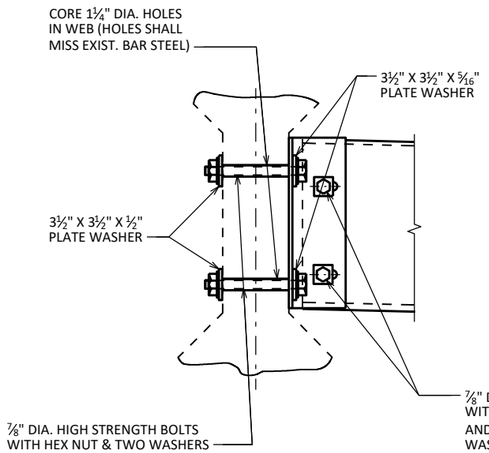
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ½ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

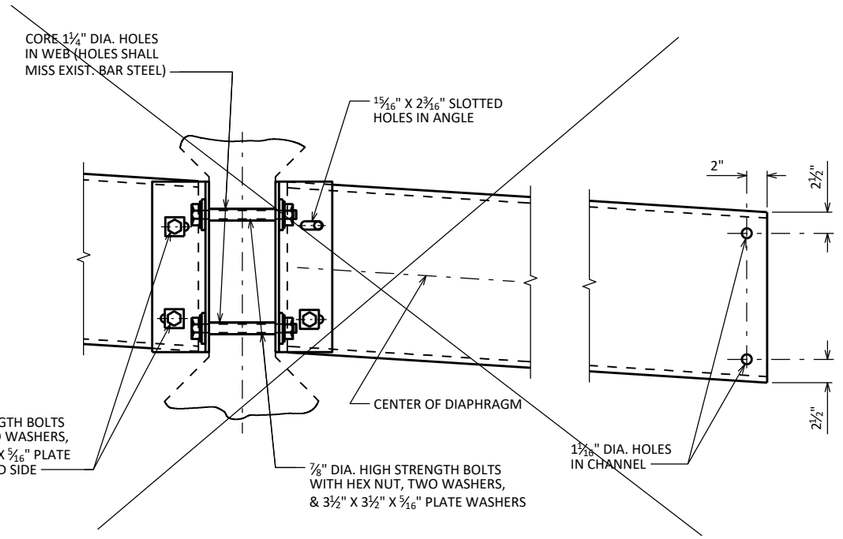
## SECTION THRU ALTERNATE DIAPHRAGM

*DIM "X" = 2½" FOR ALTERNATE PLATE DIAPHRAGM



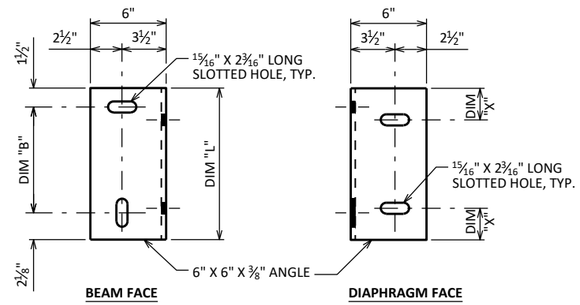

**(FOR EXTERIOR GIRDERS & STAGGERED DIAPHRAGMS)**

## PART TRANSVERSE SECTION AT DIAPHRAGM




**(FOR CONTINUOUS LINE OF DIAPHRAGMS)**

## DETAIL B




## DIAPHRAGM SUPPORT

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

**STEEL DIAPHRAGM**

SHEET 8 OF 15

71

SCALE = 2.00

8

8

STATE PROJECT NUMBER

**8460-00-70**

## TOP OF DECK ELEVATIONS - SPAN 1

| | ABUT 1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | Pier 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N. EDGE OF DECK | 1173.84 | 1173.75 | 1173.67 | 1173.58 | 1173.49 | 1173.40 | 1173.31 | 1173.22 | 1173.14 | 1173.05 | 1172.96 |
| FACE OF PARAPET | 1173.84 | 1173.75 | 1173.66 | 1173.57 | 1173.49 | 1173.40 | 1173.31 | 1173.22 | 1173.13 | 1173.05 | 1172.96 |
| Girder 1 | 1173.89 | 1173.80 | 1173.71 | 1173.63 | 1173.54 | 1173.45 | 1173.36 | 1173.27 | 1173.18 | 1173.10 | 1173.01 |
| Girder 2 | 1174.04 | 1173.96 | 1173.87 | 1173.78 | 1173.69 | 1173.60 | 1173.51 | 1173.43 | 1173.34 | 1173.25 | 1173.16 |
| CL OF CTH D | 1174.12 | 1174.03 | 1173.94 | 1173.86 | 1173.77 | 1173.68 | 1173.59 | 1173.50 | 1173.42 | 1173.33 | 1173.24 |
| Girder 3 | 1174.02 | 1173.94 | 1173.85 | 1173.76 | 1173.67 | 1173.58 | 1173.49 | 1173.41 | 1173.32 | 1173.23 | 1173.14 |
| Girder 4 | 1173.83 | 1173.74 | 1173.65 | 1173.56 | 1173.48 | 1173.39 | 1173.30 | 1173.21 | 1173.12 | 1173.03 | 1172.95 |
| FACE OF PARAPET | 1173.76 | 1173.68 | 1173.59 | 1173.50 | 1173.41 | 1173.32 | 1173.23 | 1173.15 | 1173.06 | 1172.97 | 1172.88 |
| S. EDGE OF DECK | 1173.76 | 1173.67 | 1173.58 | 1173.50 | 1173.41 | 1173.32 | 1173.23 | 1173.14 | 1173.06 | 1172.97 | 1172.88 |

## TOP OF DECK ELEVATIONS - SPAN 2

| | PIER 1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | Pier 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N. EDGE OF DECK | 1172.96 | 1172.87 | 1172.78 | 1172.69 | 1172.60 | 1172.52 | 1172.43 | 1172.34 | 1172.25 | 1172.16 | 1172.07 |
| FACE OF PARAPET | 1172.96 | 1172.87 | 1172.78 | 1172.69 | 1172.60 | 1172.51 | 1172.42 | 1172.33 | 1172.25 | 1172.16 | 1172.07 |
| Girder 1 | 1173.01 | 1172.92 | 1172.83 | 1172.74 | 1172.65 | 1172.56 | 1172.47 | 1172.39 | 1172.30 | 1172.21 | 1172.12 |
| Girder 2 | 1173.16 | 1173.07 | 1172.98 | 1172.90 | 1172.81 | 1172.72 | 1172.63 | 1172.54 | 1172.45 | 1172.36 | 1172.27 |
| CL OF CTH D | 1173.24 | 1173.15 | 1173.06 | 1172.97 | 1172.88 | 1172.80 | 1172.71 | 1172.62 | 1172.53 | 1172.44 | 1172.35 |
| Girder 3 | 1173.14 | 1173.05 | 1172.96 | 1172.87 | 1172.79 | 1172.70 | 1172.61 | 1172.52 | 1172.43 | 1172.34 | 1172.25 |
| Girder 4 | 1172.95 | 1172.86 | 1172.77 | 1172.68 | 1172.59 | 1172.50 | 1172.41 | 1172.32 | 1172.23 | 1172.15 | 1172.06 |
| FACE OF PARAPET | 1172.88 | 1172.79 | 1172.70 | 1172.62 | 1172.53 | 1172.44 | 1172.35 | 1172.26 | 1172.17 | 1172.08 | 1171.99 |
| S. EDGE OF DECK | 1172.88 | 1172.79 | 1172.70 | 1172.61 | 1172.52 | 1172.43 | 1172.35 | 1172.26 | 1172.17 | 1172.08 | 1171.99 |

## TOP OF DECK ELEVATIONS - SPAN 3

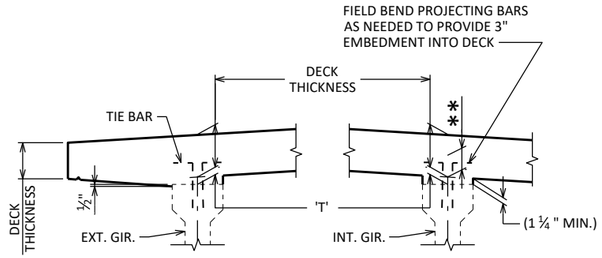
| | PIER 2 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | ABUT 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N. EDGE OF DECK | 1172.07 | 1171.98 | 1171.89 | 1171.81 | 1171.72 | 1171.63 | 1171.54 | 1171.45 | 1171.37 | 1171.28 | 1171.19 |
| FACE OF PARAPET | 1172.07 | 1171.98 | 1171.89 | 1171.80 | 1171.72 | 1171.63 | 1171.54 | 1171.45 | 1171.36 | 1171.27 | 1171.19 |
| Girder 1 | 1172.12 | 1172.03 | 1171.94 | 1171.85 | 1171.77 | 1171.68 | 1171.59 | 1171.50 | 1171.41 | 1171.33 | 1171.24 |
| Girder 2 | 1172.27 | 1172.19 | 1172.10 | 1172.01 | 1171.92 | 1171.83 | 1171.74 | 1171.66 | 1171.57 | 1171.48 | 1171.39 |
| CL OF CTH D | 1172.35 | 1172.26 | 1172.17 | 1172.09 | 1172.00 | 1171.91 | 1171.82 | 1171.73 | 1171.65 | 1171.56 | 1171.47 |
| Girder 3 | 1172.25 | 1172.16 | 1172.08 | 1171.99 | 1171.90 | 1171.81 | 1171.72 | 1171.64 | 1171.55 | 1171.46 | 1171.37 |
| Girder 4 | 1172.06 | 1171.97 | 1171.88 | 1171.79 | 1171.70 | 1171.62 | 1171.53 | 1171.44 | 1171.35 | 1171.26 | 1171.18 |
| FACE OF PARAPET | 1171.99 | 1171.90 | 1171.82 | 1171.73 | 1171.64 | 1171.55 | 1171.46 | 1171.38 | 1171.29 | 1171.20 | 1171.11 |
| S. EDGE OF DECK | 1171.99 | 1171.90 | 1171.81 | 1171.73 | 1171.64 | 1171.55 | 1171.46 | 1171.37 | 1171.28 | 1171.20 | 1171.11 |

## DEAD LOAD DEFLECTIONS

| SPAN 1 & 3 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | C/L OF BRG. | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | C/L OF BRG. |
| GDR 1 & 4 | 0.00 | 0.40 | 0.80 | 1.20 | 1.40 | 1.40 | 1.40 | 1.20 | 0.80 | 0.40 | 0.00 |
| GDR 2 & 3 | 0.00 | 0.40 | 0.80 | 1.10 | 1.30 | 1.40 | 1.30 | 1.10 | 0.80 | 0.40 | 0.00 |

| SPAN 2 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | C/L OF BRG. | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | C/L OF BRG. |
| GDR 1 & 4 | 0.00 | 0.40 | 0.80 | 1.10 | 1.30 | 1.30 | 1.30 | 1.10 | 0.80 | 0.40 | 0.00 |
| GDR 2 & 3 | 0.00 | 0.40 | 0.80 | 1.10 | 1.30 | 1.30 | 1.30 | 1.10 | 0.80 | 0.40 | 0.00 |

DEFLECTIONS SHOWN ARE IN INCHES.




## DECK HAUNCH DETAIL

IF 1 ¼ " MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½ " OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T' ELEV. OF TOP OF GIRDERS AT C/L OF SUBSTRUCTURE UNITS AND AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

| | |
|---|---|
| | TOP OF DECK ELEV. AT FINAL GRADE |
| - | TOP OF GIRDER ELEVATION |
| + | DEAD LOAD DEFLECTION |
| - | DECK THICKNESS |
| = | HAUNCH HEIGHT 'T' |

NOTE: AN AVERAGE HAUNCH ('T') OF 4" WAS USED IN THE QUANITITY "CONCRETE MASONRY BRIDGES".

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

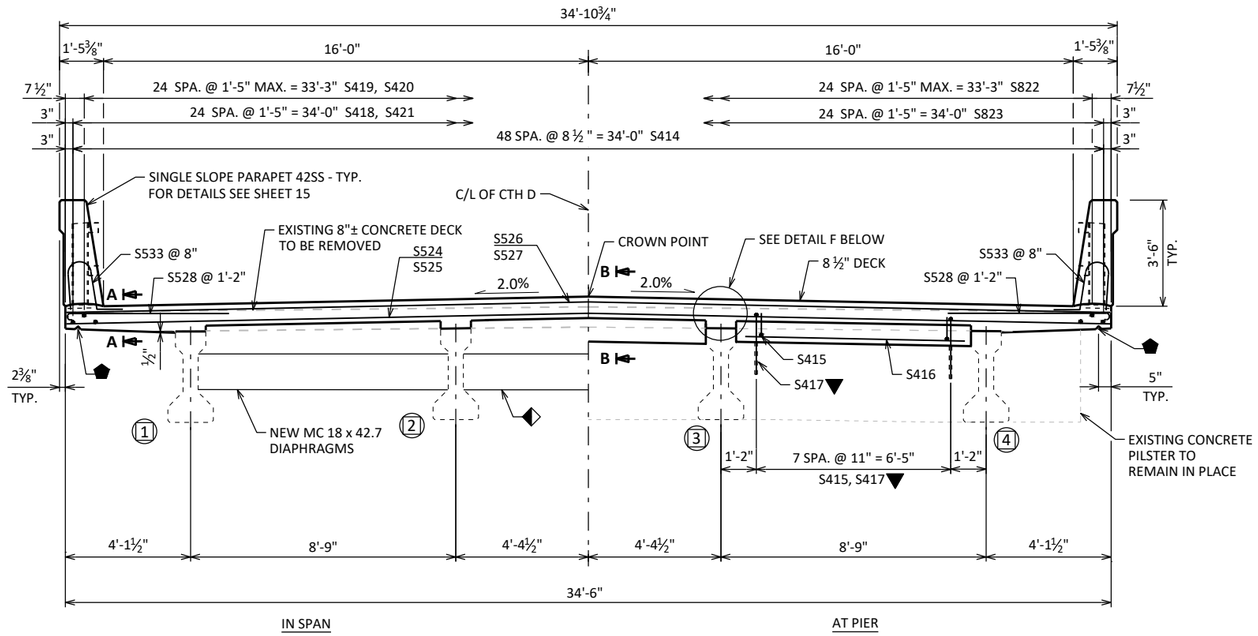
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

**DECK ELEVATIONS AND DEAD LOAD DEFLECTIONS**

SHEET 9 OF 15




## TYPICAL SECTION THRU BRIDGE

(LOOKING UPSTATION)

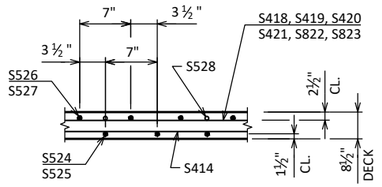
NOTE:
DAMAGE TO THE EXISTING GIRDERS CAUSED DURING DECK REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

◆ EXISTING CONCRETE INTERMEDIATE DIAPHRAGMS TO BE REMOVED, MID-SPAN ONLY, AND TO BE REPLACED WITH MC 18 X 42.7 STEEL DIAPHRAGMS. FOR DETAILS SEE SHEET 8.

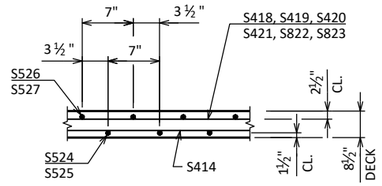
⬟ ¾ " V-GROOVE REQ'D. EXTEND TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGMS - TYP.

▼ ADHESIVE ANCHORS NO. 4 BARS SHALL BE NOT SPACED LESS THAN 9". SPACING NORMAL TO C/L OF GIRDER.

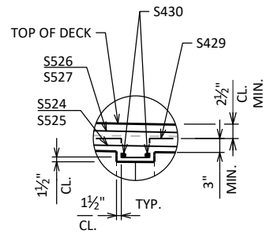
ALL EXISTING 45" PRESTRESSED CONCRETE GIRDERS TO REMAIN IN PLACE




## SECTION A

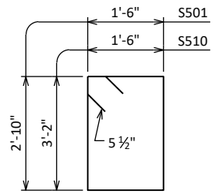



## SECTION B

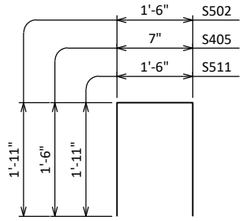



## DETAIL F

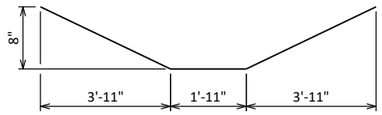
S429 BARS @ 1'-0" MAX. SPA. TIP FROM VERTICAL FOR VARYING HAUNCH HEIGHTS. MAX. TILT FROM VERTICAL IS 30 DEGREES.



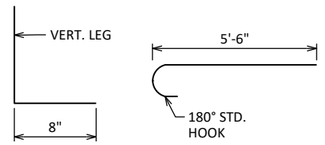

## S501, S510




## S502, S405, S511



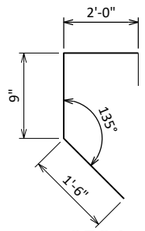

## S415



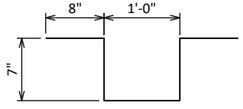

## S417



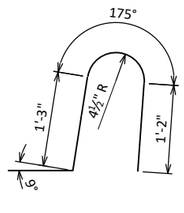

## S528



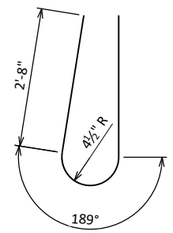

## S531




## S429




## S533




## S534

## BILL OF BARS

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

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|
| S501 | X | 60 | 9'-4" | X | | DIAPH. @ ABUT. VERT. BTWN GIRDERS |
| S502 | X | 60 | 5'-1" | X | | DIAPH. @ ABUT. VERT. TOP BTWN GIRDERS |
| S603 | X | 30 | 6'-8" | | | DIAPH. @ ABUT. HORIZ. F.F. BTWN GIRDERS |
| S604 | X | 12 | 34'-11" | | | DIAPH. @ ABUT. HORIZ. B.F. |
| S405 | X | 42 | 3'-5" | X | | DIAPH. @ ABUT. NOTCH VERT. BTWN GIRDERS |
| S406 | X | 12 | 5'-10" | | | DIAPH. @ ABUT. NOTCH HORIZ. BTWN GIRDERS |
| | | | | | | LEFT BLANK |
| S608 | X | 8 | 2'-6" | | | DIAPH. @ ABUT. HORIZ. @ GIRDER B.F. |
| S509 | X | 16 | 6'-0" | | | DIAPH. @ ABUT. HORIZ. THRU GIRDER |
| S510 | X | 20 | 9'-11" | X | | DIAPH. @ ABUT. VERT. @ EXT. |
| S511 | X | 20 | 5'-1" | X | | DIAPH. @ ABUT. VERT. TOP @ EXT. |
| S612 | X | 8 | 3'-1" | | | DIAPH. @ ABUT. HORIZ. @ EXT. |
| S613 | X | 16 | 3'-3" | | | DIAPH. @ ABUT. HORIZ. @ EXT. |
| S414 | X | 294 | 41'-7" | | | DECK LONG. BOT. |
| S415 | X | 48 | 10'-0" | X | | DIAPH. @ PIERS LONG. |
| S416 | X | 36 | 7'-3" | | | DIAPH. @ PIERS HORIZ. |
| ⚠ S417 | X | 96 | 2'-4" | X | | VERT. DOWEL BAR @ PIER |
| S418 | X | 100 | 36'-4" | | | DECK LONG. TOP SPAN 1 & 3 |
| S419 | X | 100 | 31'-4" | | | DECK LONG. TOP SPAN 1 & 3 |
| S420 | X | 50 | 25'-8" | | | DECK LONG. TOP SPAN 2 |
| S421 | X | 25 | 5'-10" | | | DECK LONG. TOP SPAN 2 |
| S822 | X | 50 | 38'-0" | | | DECK LONG. TOP @ PIERS |
| S823 | X | 50 | 50'-0" | | | DECK LONG. TOP @ PIERS |
| S524 | X | 401 | 34'-2" | | | DECK TRANS. BOT. |
| S525 | X | 24 | 17'-4" | | ⊗ | DECK TRANS. BOT. |
| S526 | X | 402 | 34'-2" | | | DECK TRANS. TOP |
| S527 | X | 22 | 17'-4" | | ⊗ | DECK TRANS. TOP |
| S528 | X | 418 | 6'-1" | X | | DECK TRANS. TOP @ ENDS |
| S429 | X | 1,428 | 3'-2" | X | | DECK @ GDR. HAUNCHES |
| S430 | X | 56 | 35'-5" | | | DECK LONG. @ HAUNCHES BOT. |
| S531 | X | 66 | 5'-0" | X | | DIAPH. @ PAVING NOTCH ABUT. |
| S432 | X | 4 | 34'-11" | | | HORIZ. BAR @ PAVING NOTCH ABUT. |
| S533 | X | 728 | 4'-5" | X | | DECK @ PARAPET VERT. |
| S534 | X | 728 | 6'-8" | X | | PARAPET VERT. |
| S535 | X | 80 | 49'-7" | | | PARAPET HORIZ. |
| | | | | | | |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS

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

⚠ ADHESIVE ANCHORS NO. 4 BAR

## BAR SERIES TABLE

| BAR MARK | NO. REQ'D. | LENGTH |
|---|---|---|
| S525 | 2 SERIES OF 12 | 2'-3" TO 32'-5" |
| S527 | 2 SERIES OF 11 | 3'-7" TO 31'-1" |

BUNDLE AND TAG EACH SERIES SEPARATELY

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

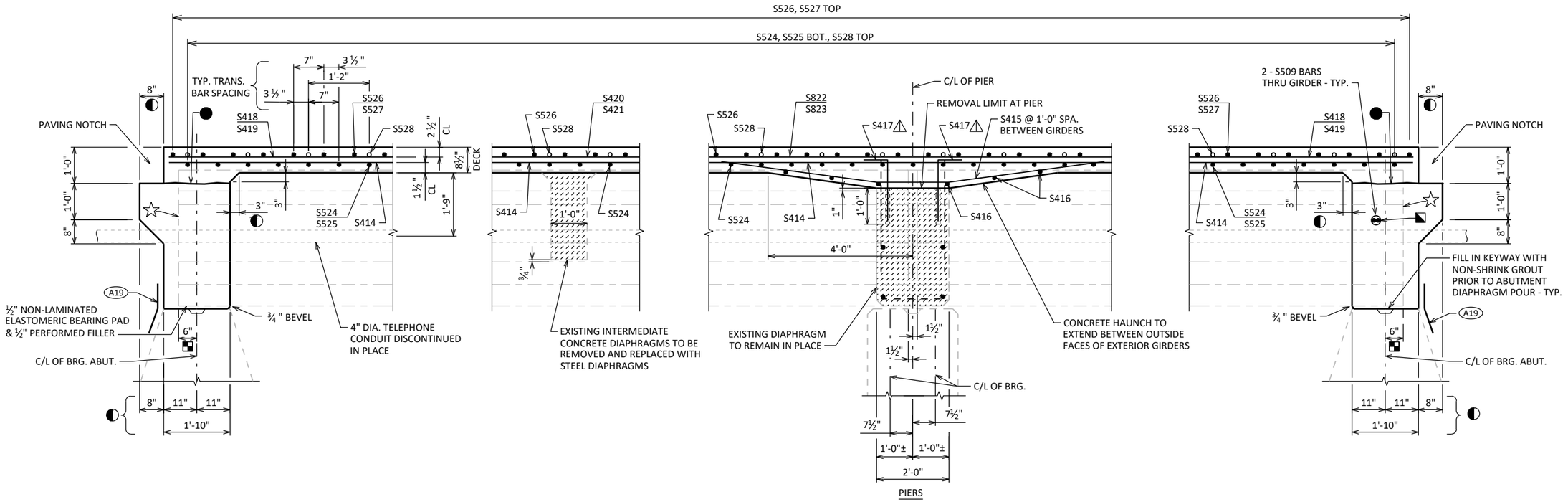
**SUPERSTRUCTURE**




8

STATE PROJECT NUMBER

**8460-00-70**




## PART LONGITUDINAL SECTION

DIMENSIONS ARE GIVEN PARALLEL TO C/L ROADWAY UNLESS OTHERWISE NOTED

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◐ MEASURED NORMAL TO THE C/L OF SUBSTRUCTURE.

◪ MEASURED ALONG C/L OF GIRDER.

☆ END OF EXISTING GIRDER.

● OPT. CONST. JOINT. DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

⚠ ADHESIVE ANCHORS NO. 4 BARS SHALL NOT BE SPACED LESS THAN 9".

◥ FIELD DRILL 1 ½ " DIA. HOLE IN WEB OF EXISTING GIRDERS FOR 2 - S511 BARS THRU GIRDER. FIELD DRILLING INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES".

EXISTING CONCRETE PILASTERS AT PIERS TO REMAIN IN PLACE.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

**SUPERSTRUCTURE LONG. SECTION AND DETAILS**

SHEET 11 OF 15

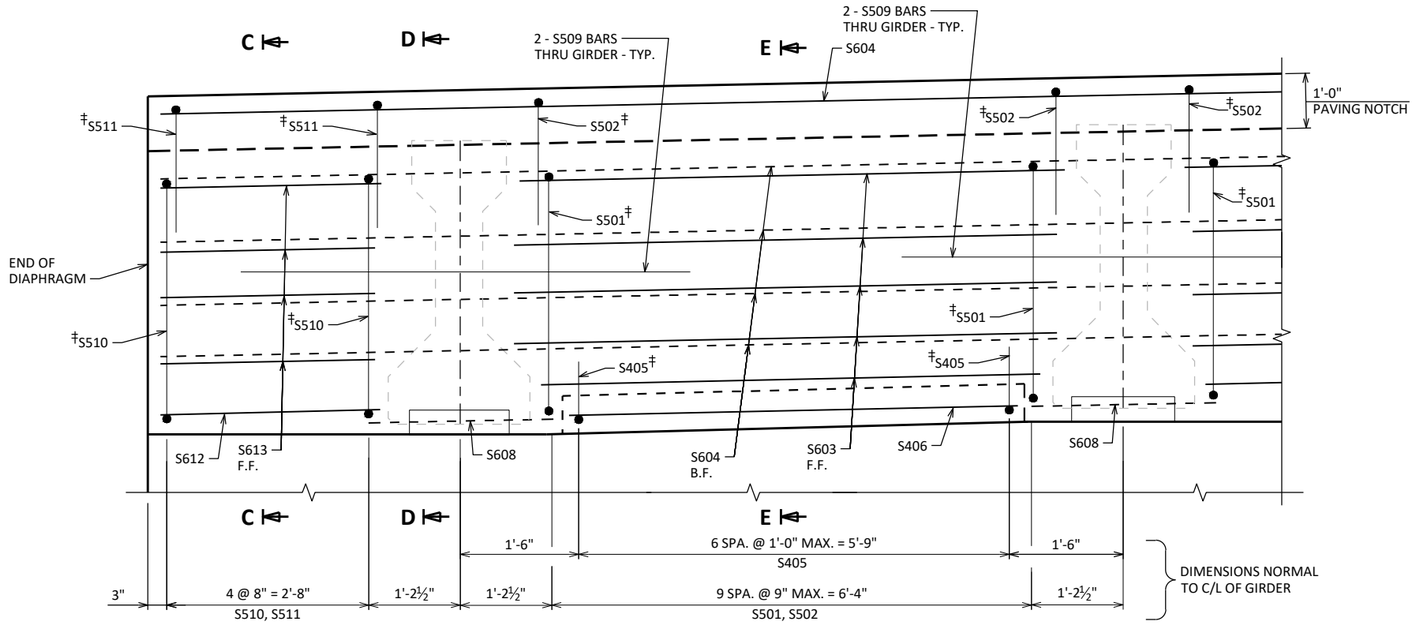


8

8

STATE PROJECT NUMBER

**8460-00-70**




## PART ELEVATION AT ABUTMENT

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

MEASURED NORMAL TO THE C/L OF SUBSTRUCTURE.

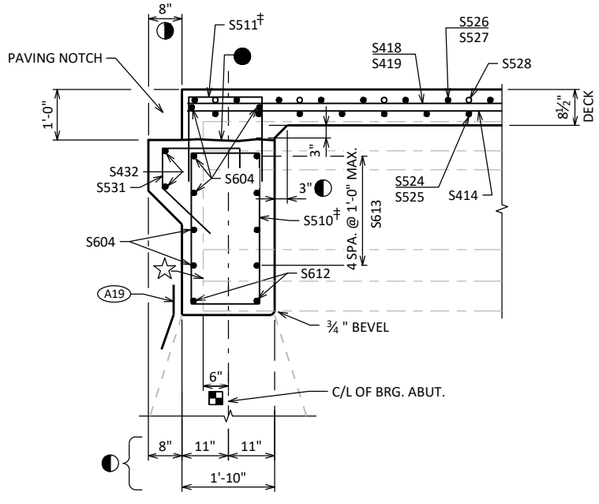
MEASURED ALONG C/L OF GIRDER.

END OF EXISTING GIRDER.

OPT. CONST. JOINT. DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

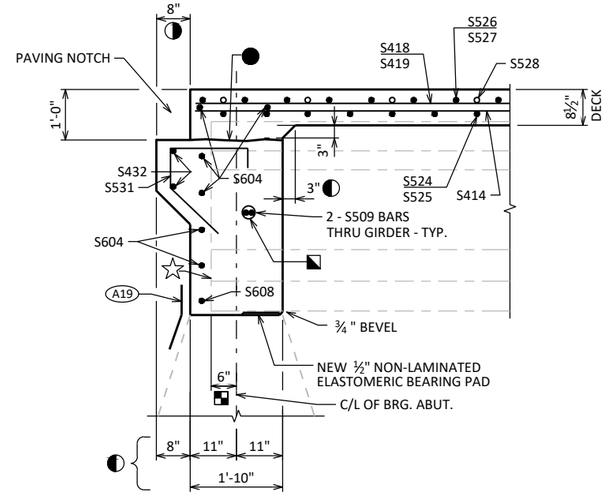
FIELD DRILL 1 ½ " DIA. HOLE IN WEB OF EXISTING GIRDERS FOR 2 - S511 BARS THRU GIRDER. FIELD DRILLING INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES".

‡ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO C/L OF GIRDERS.



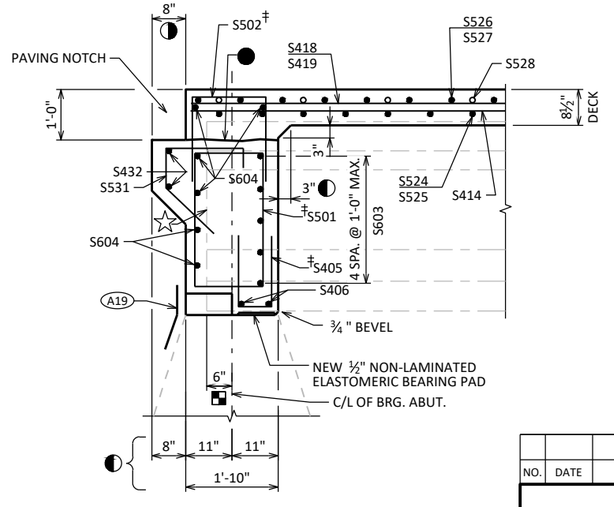

## SECTION C

TYP. AT EXTERIOR




## SECTION D

TYP. AT GIRDERS




## SECTION E

TYP. BTWN. GIRDERS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

**SUPERSTRUCTURE DETAILS**

SHEET 12 OF 15

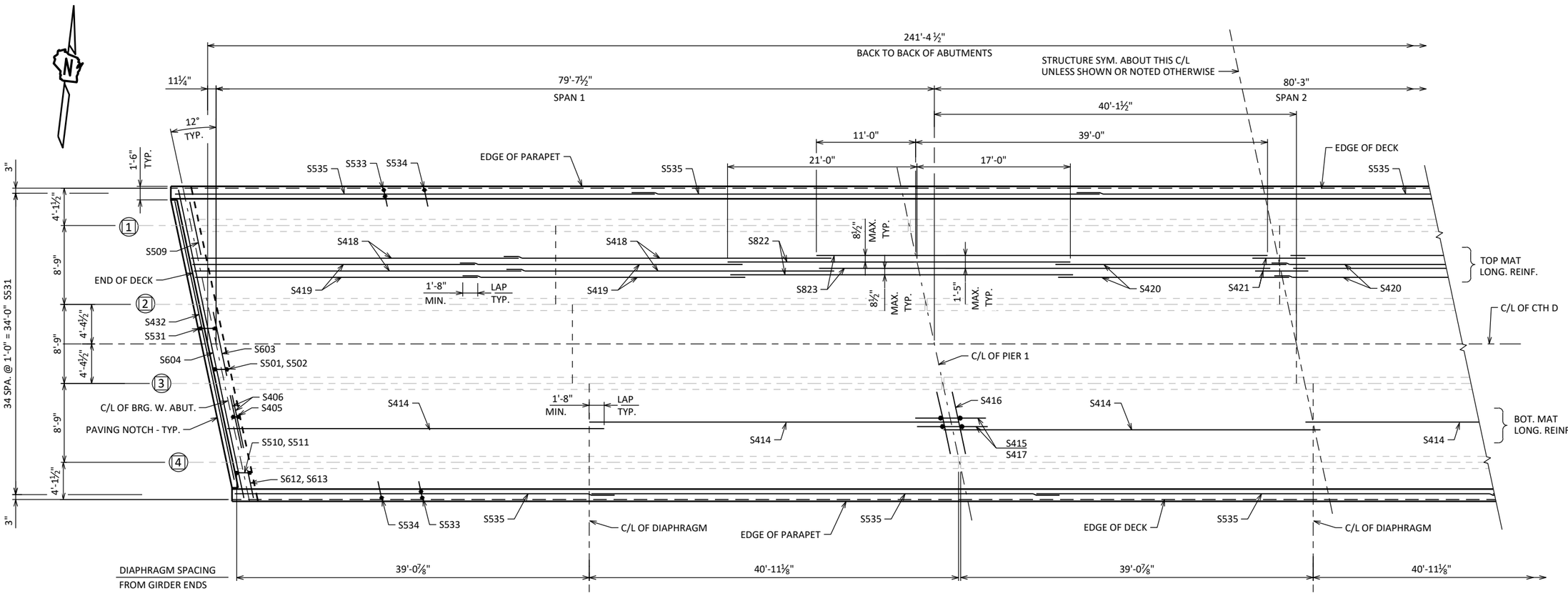
75

8

8

STATE PROJECT NUMBER

**8460-00-70**




## PARTIAL PLAN

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

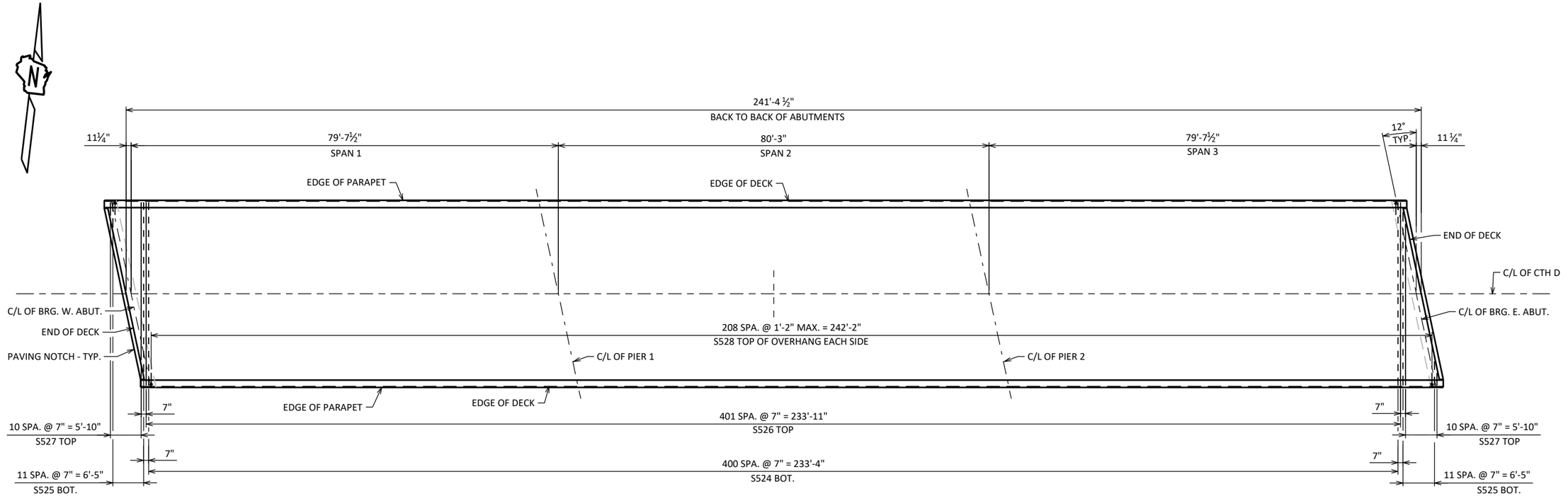
DRAWN BY CLP | PLANS CK'D AEB

**SUPERSTRUCTURE PLAN**

SHEET 13 OF 15

STATE PROJECT NUMBER

**8460-00-70**




## PLAN - TRANSVERSE DECK STEEL LAYOUT

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

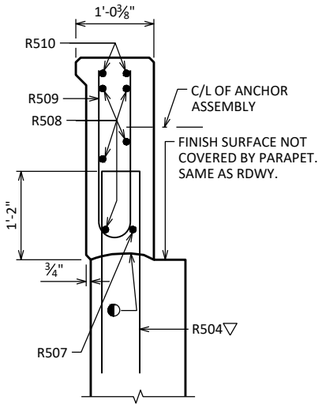
**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

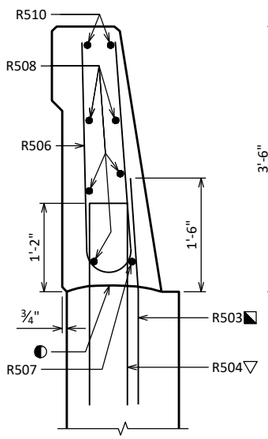
**SUPERSTRUCTURE TRANSVERSE DECK STEEL LAYOUT**

SHEET 14 of 15

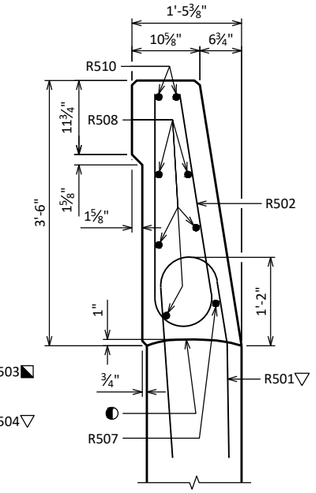
77



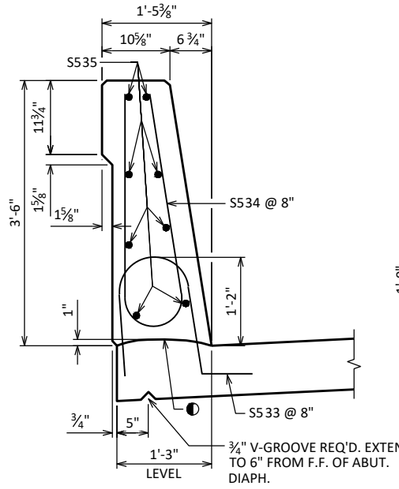

## SECTION A-A



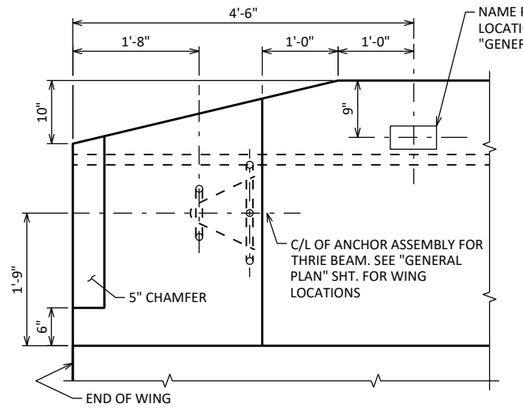

## SECTION B-B




## SECTION C-C




## SECTION THRU PARAPET ON DECK




## PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

STATE PROJECT NUMBER

**8460-00-70**

## BILL OF BARS

FOR WING PARAPETS

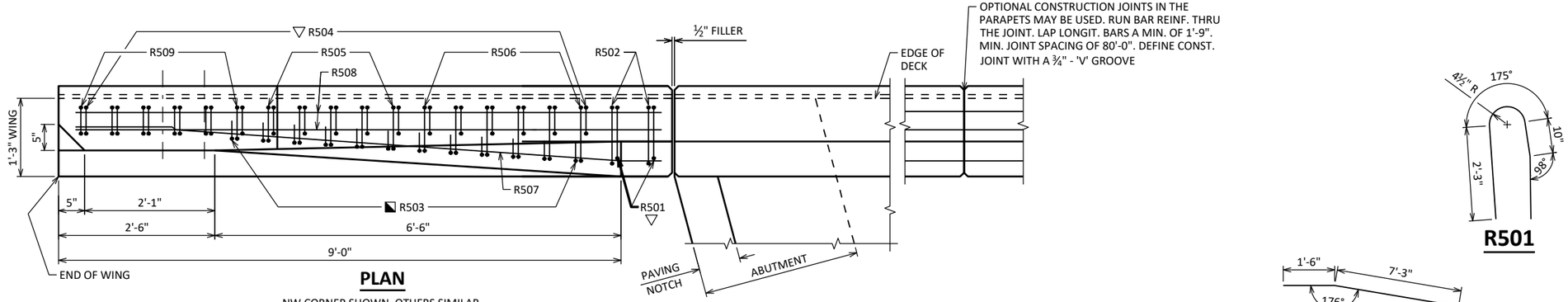
| BAR MARK | COAT | W. ABUT. | E. ABUT. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|---|
| R501 | X | 4 | 4 | 5'-10" | X | | PARAPET VERT. |
| R502 | X | 4 | 4 | 6'-8" | X | | PARAPET VERT. |
| R503 | X | 22 | 22 | 3'-0" | X | | PARAPET VERT. |
| R504 | X | 34 | 34 | 5'-7" | X | | PARAPET VERT. |
| R505 | X | 10 | 10 | 6'-5" | X | | PARAPET VERT. |
| R506 | X | 12 | 12 | 6'-6" | X | | PARAPET VERT. |
| R507 | X | 2 | 2 | 9'-8" | X | | PARAPET HORIZ. |
| R508 | X | 10 | 10 | 9'-8" | | | PARAPET HORIZ. |
| R509 | X | 12 | 12 | 5'-5" | X | ▲ | PARAPET VERT. |
| R510 | X | 4 | 4 | 9'-8" | X | | PARAPET HORIZ. |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

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

## BAR SERIES TABLE

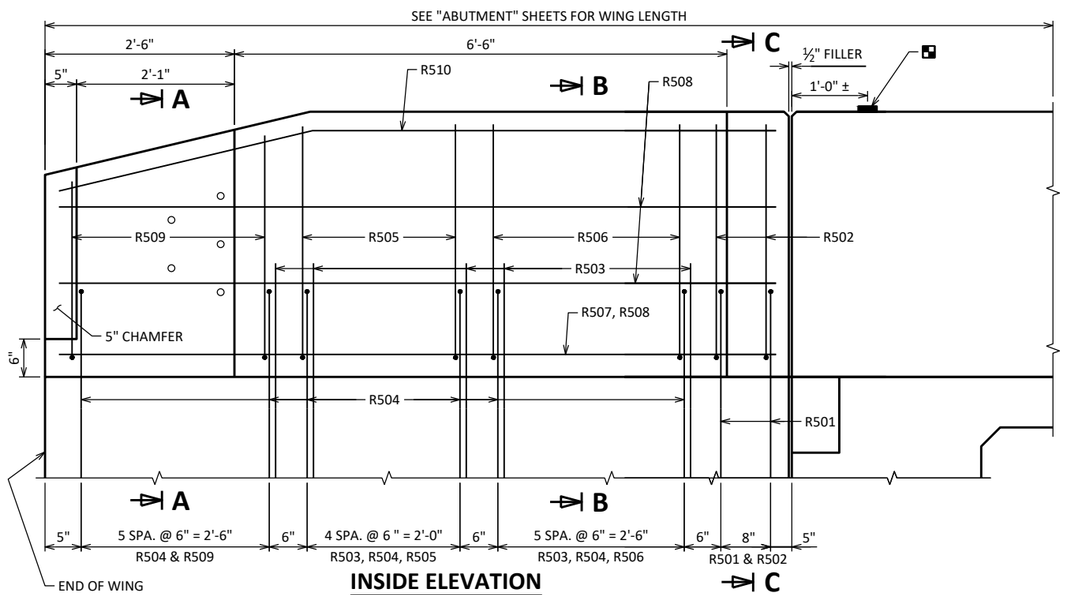
BUNDLE AND TAG EACH SERIES SEPARATELY.

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




## PLAN

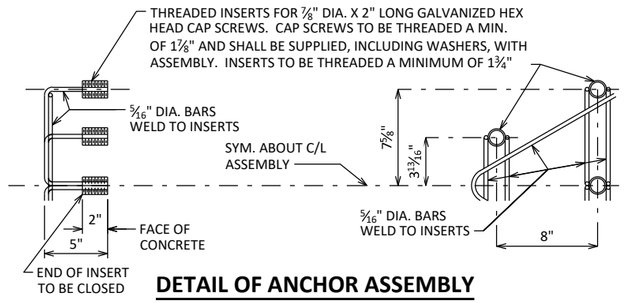
NW CORNER SHOWN, OTHERS SIMILAR




## INSIDE ELEVATION

CORNER SHOWN, OTHERS SIMILARNW

■ BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



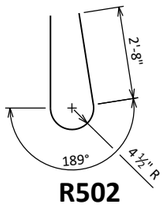

## DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.

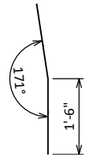
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



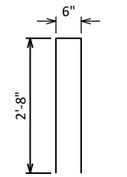

**R501**




**R502**



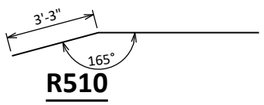

**R503**



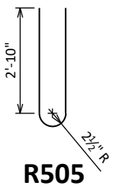

**R504**



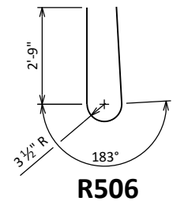

**R507**



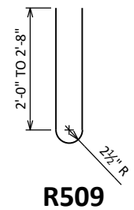

**R510**




**R505**




**R506**




**R509**

● CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-57-18**

DRAWN BY CLP | PLANS CK'D AEB

**SINGLE SLOPE PARAPET 42SS**

SHEET 15 OF 15

78

SCALE = 2.00

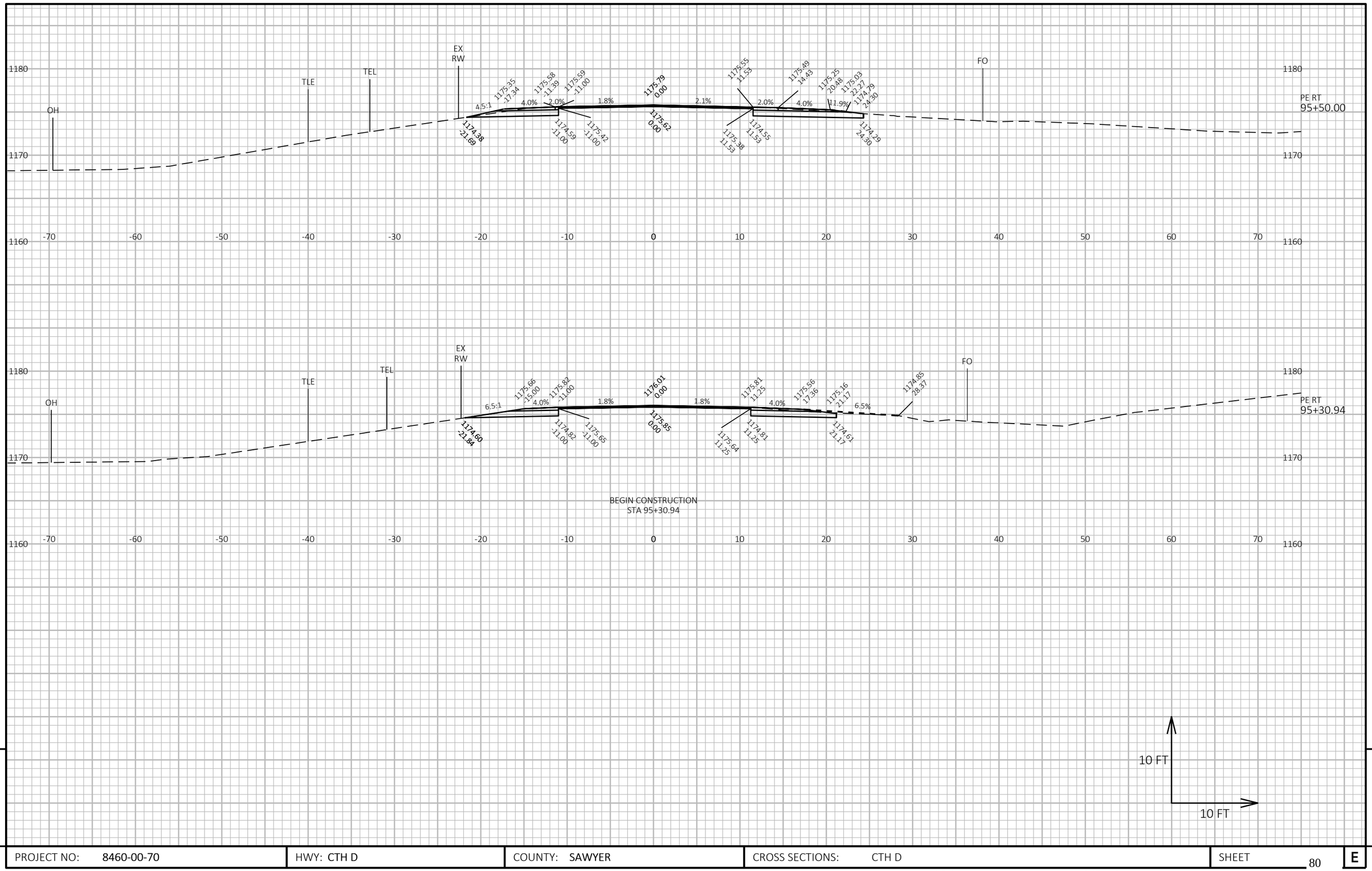
8

8

CTH D COMPUTER EARTHWORK

| Station | Distance | Area (SF) | | | Incremental Vol (CY) (Unadjusted) | | | Cumulative Vol (CY) | | Mass Ordinate |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cut | Unuseable Pavement Material | Fill | Cut | Salvaged / Unuseable Pavement Material | Fill | Cut 1.00 | Expanded Fill 1.30 | |
| | | | | | Note 1 | Note 4 | Note 2 | Note 5 | | Note 3 |
| 95+30.94 | -- | 14.0 | 0.0 | 0.1 | | | | | | |
| 95+50 | 19.06 | 16.7 | 0.0 | 0.0 | 11 | 0 | 0 | 11 | 0 | 11 |
| 95+71.44 | 21.44 | 10.6 | 0.0 | 5.1 | 11 | 0 | 2 | 22 | 3 | 19 |
| 95+75 | 3.56 | 10.2 | 0.0 | 5.8 | 1 | 0 | 1 | 23 | 4 | 20 |
| 95+89.64 | 14.64 | 10.3 | 0.0 | 9.5 | 6 | 0 | 4 | 29 | 9 | 20 |
| 95+96.44 | 6.80 | 10.5 | 0.0 | 8.0 | 3 | 0 | 2 | 31 | 12 | 19 |
| 96+00 | 3.56 | 10.5 | 0.0 | 7.0 | 1 | 0 | 1 | 33 | 13 | 20 |
| 96+14.64 | 14.64 | 9.3 | 0.0 | 5.2 | 5 | 0 | 3 | 38 | 17 | 21 |
| 96+21.44 | 6.80 | 8.8 | 0.0 | 3.6 | 2 | 0 | 1 | 40 | 19 | 21 |
| 96+25 | 3.56 | 8.5 | 0.0 | 3.2 | 1 | 0 | 0 | 41 | 19 | 22 |
| 96+39.64 | 14.64 | 7.8 | 0.0 | 1.4 | 4 | 0 | 1 | 46 | 21 | 25 |
| 96+43 | 3.36 | 36.8 | 7.3 | 0.5 | 3 | 0 | 0 | 48 | 21 | 27 |
| 96+50 | 7.00 | 34.0 | 7.3 | 1.1 | 9 | 2 | 0 | 55 | 21 | 34 |
| 96+75 | 25.00 | 26.0 | 7.3 | 9.4 | 28 | 7 | 5 | 77 | 28 | 49 |
| 96+79.68 | 4.68 | 25.6 | 7.3 | 19.8 | 4 | 1 | 3 | 80 | 31 | 49 |
| 96+86.45 | 6.77 | 25.5 | 7.3 | 9.3 | 6 | 2 | 4 | 84 | 36 | 49 |
| 96+93.06 | 6.61 | 25.5 | 7.3 | 0.0 | 6 | 2 | 1 | 89 | 37 | 52 |
| B-57-0018 | -- | | -- | -- | -- | -- | -- | | | |
| 99+34.43 | | 23.9 | 7.3 | 0.0 | | | | | | |
| 99+41.05 | 6.62 | 23.9 | 7.3 | 13.1 | 6 | 2 | 2 | 93 | 39 | 56 |
| 99+47.82 | 6.77 | 24.2 | 7.3 | 69.4 | 6 | 2 | 10 | 97 | 53 | 46 |
| 99+50 | 2.18 | 23.7 | 7.3 | 59.1 | 2 | 1 | 5 | 98 | 59 | 41 |
| 99+75 | 25.00 | 24.2 | 7.3 | 8.7 | 22 | 7 | 31 | 114 | 100 | 16 |
| 99+87.86 | 12.86 | 25.4 | 7.3 | 5.7 | 12 | 3 | 3 | 122 | 105 | 20 |
| 100+00 | 12.14 | 26.3 | 7.3 | 10.0 | 12 | 3 | 4 | 130 | 109 | 23 |
| 100+06.06 | 6.06 | 26.4 | 7.3 | 14.6 | 6 | 2 | 3 | 135 | 113 | 24 |
| 100+12.86 | 6.80 | 26.4 | 7.3 | 21.8 | 7 | 2 | 5 | 140 | 119 | 23 |
| 100+25 | 12.14 | 26.7 | 7.3 | 27.2 | 12 | 3 | 11 | 148 | 133 | 17 |
| 100+31.06 | 6.06 | 26.7 | 7.3 | 28.8 | 6 | 2 | 6 | 153 | 141 | 13 |
| 100+37.86 | 6.80 | 24.6 | 7.3 | 36.0 | 6 | 2 | 8 | 157 | 152 | 7 |
| 100+50 | 12.14 | 23.9 | 7.3 | 18.2 | 11 | 3 | 12 | 165 | 168 | -1 |
| 100+56.06 | 6.06 | 25.2 | 7.3 | 8.1 | 6 | 2 | 3 | 169 | 172 | -1 |
| 100+75 | 18.94 | 23.3 | 7.3 | 0.3 | 17 | 5 | 3 | 181 | 175 | 7 |
| 101+00 | 25.00 | 19.6 | 7.3 | 3.3 | 20 | 7 | 2 | 194 | 178 | 18 |
| 101+25 | 25.00 | 20.5 | 7.3 | 1.0 | 19 | 7 | 2 | 205 | 180 | 27 |
| 101+50 | 25.00 | 22.8 | 7.3 | 0.6 | 20 | 7 | 1 | 219 | 181 | 40 |
| 101+75 | 25.00 | 24.3 | 7.3 | 2.9 | 22 | 7 | 2 | 234 | 183 | 53 |
| 102+00 | 25.00 | 27.1 | 7.3 | 1.3 | 24 | 7 | 2 | 251 | 186 | 67 |
| 102+25 | 25.00 | 32.4 | 7.3 | 1.3 | 28 | 7 | 1 | 272 | 187 | 86 |
| 102+50 | 25.00 | 32.9 | 7.3 | 0.0 | 30 | 7 | 1 | 295 | 188 | 109 |
| 102+63.17 | 13.17 | 33.1 | 7.3 | 0.0 | 16 | 4 | 0 | 308 | 188 | 120 |
| | | | | | 411 | 103 | 145 | | | |

| | |
|---|---|
| Note 1 - Cut | Cut includes existing asphalt pavement. |
| Note 2 - Fill | Volume needed to be filled. |
| Note 3 - Mass Ordinate | (Cut) - (Fill * 1.30) |
| Note 4 - Salvaged / Unuseable Pavement Material | Existing asphalt pavement to be removed from Cut. |
| Note 5 - Cut | Cut reducerd by salvaged/unuseable apshalt pavement. |

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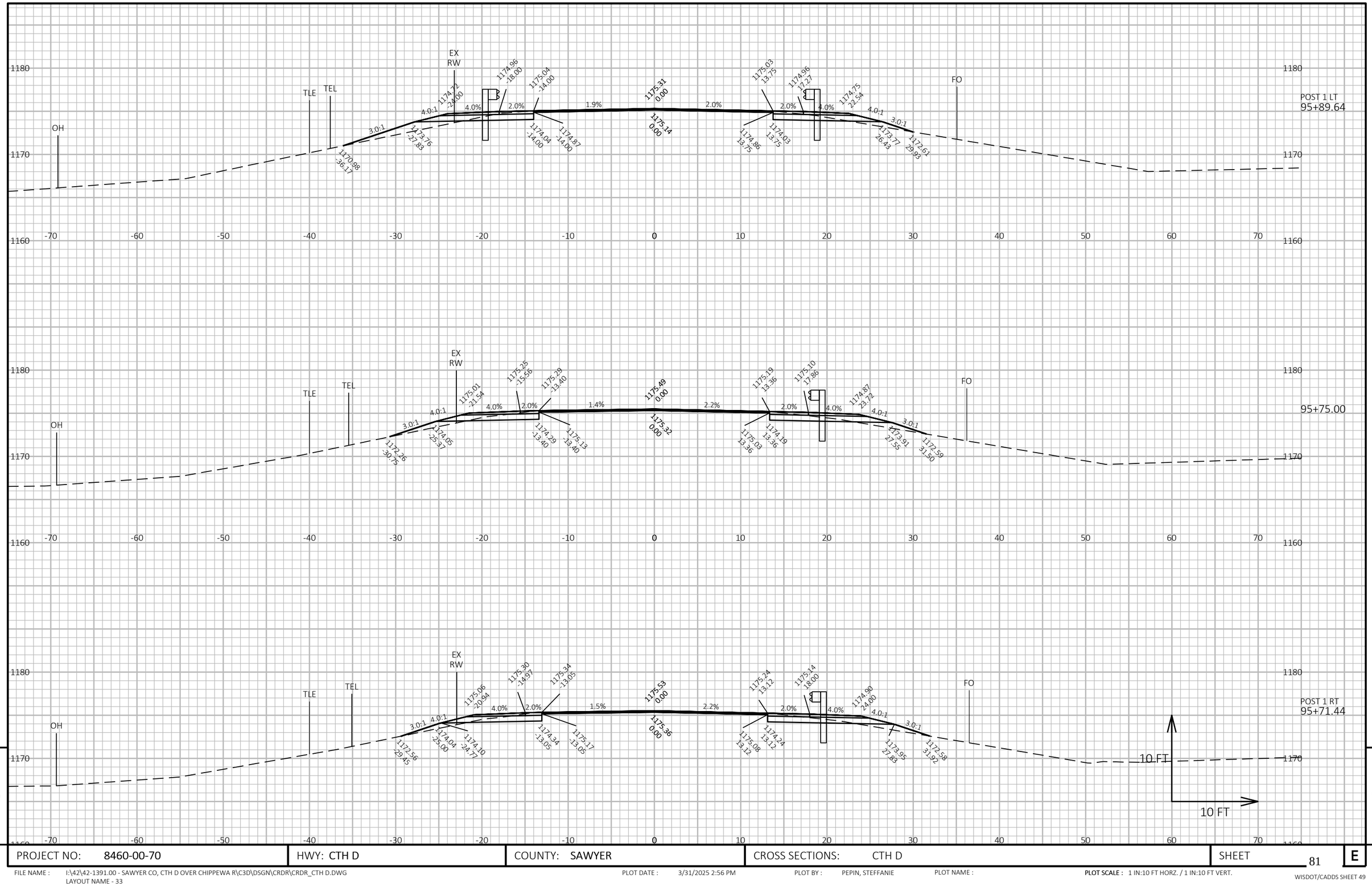
| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 80 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 32

PLOT DATE : 3/31/2025 2:56 PM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 81 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 33

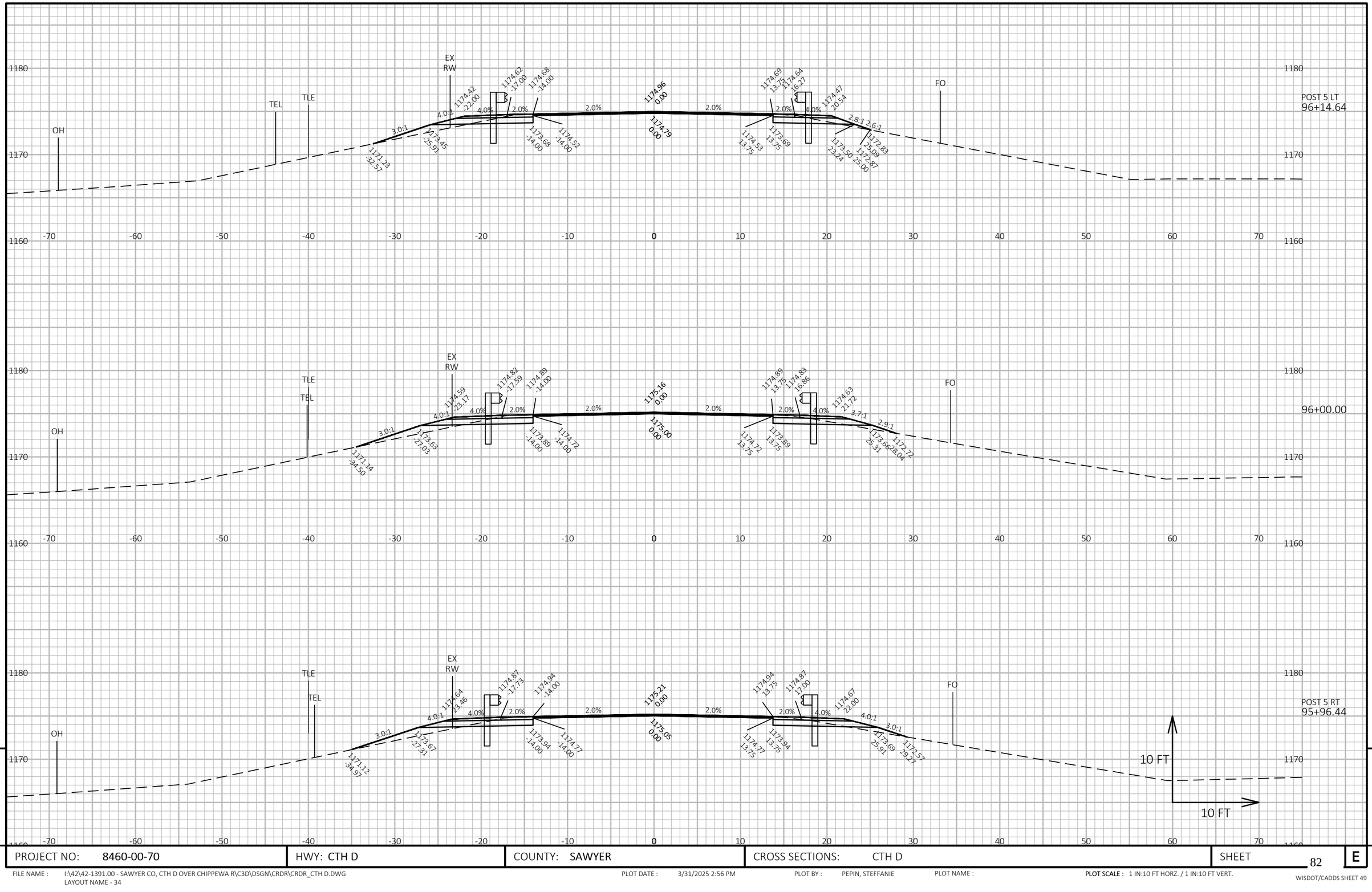
PLOT DATE : 3/31/2025 2:56 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

WISDOT/CADDS SHEET 49

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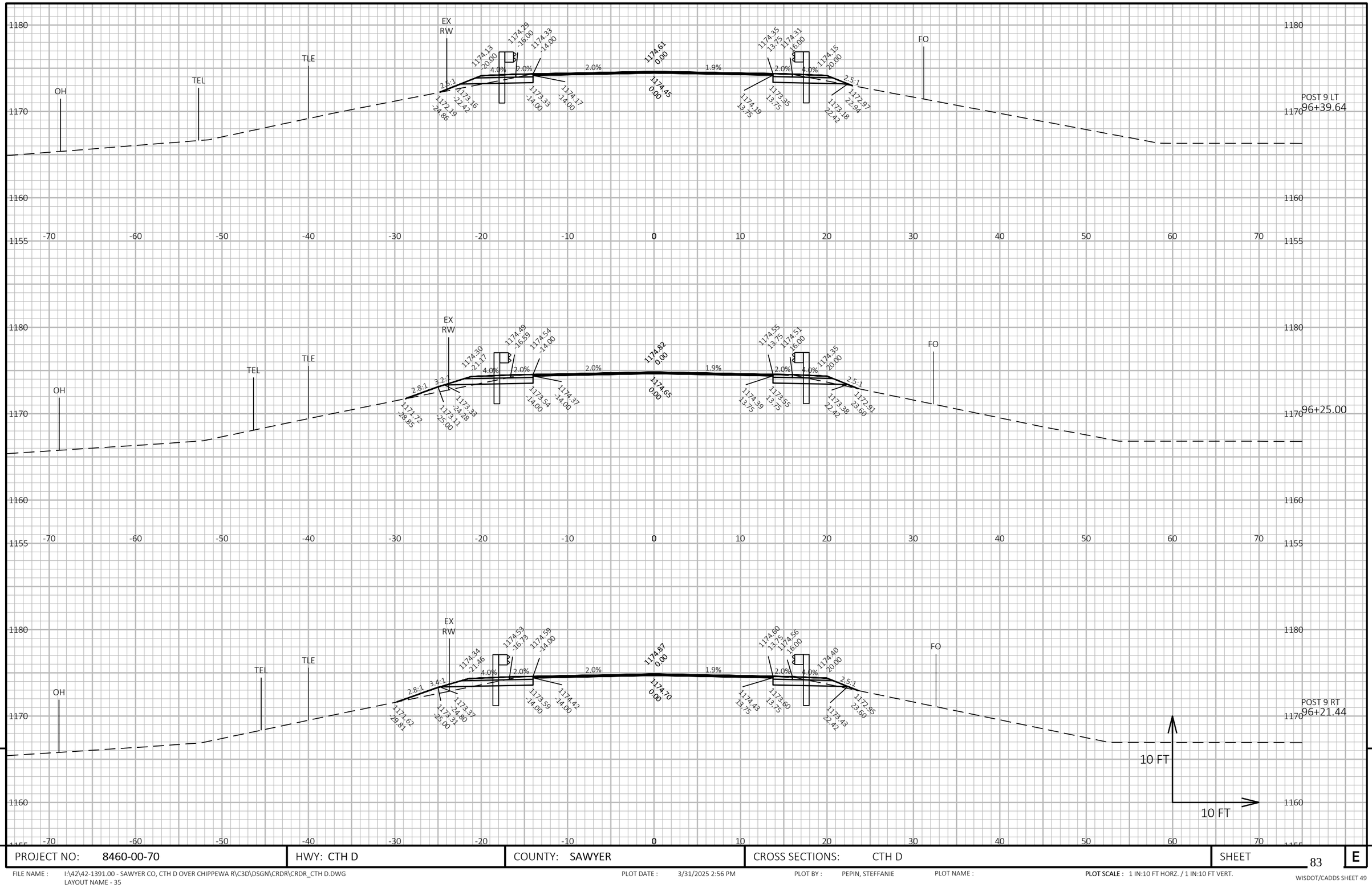
| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 82 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 34

PLOT DATE : 3/31/2025 2:56 PM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

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| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 83 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 35

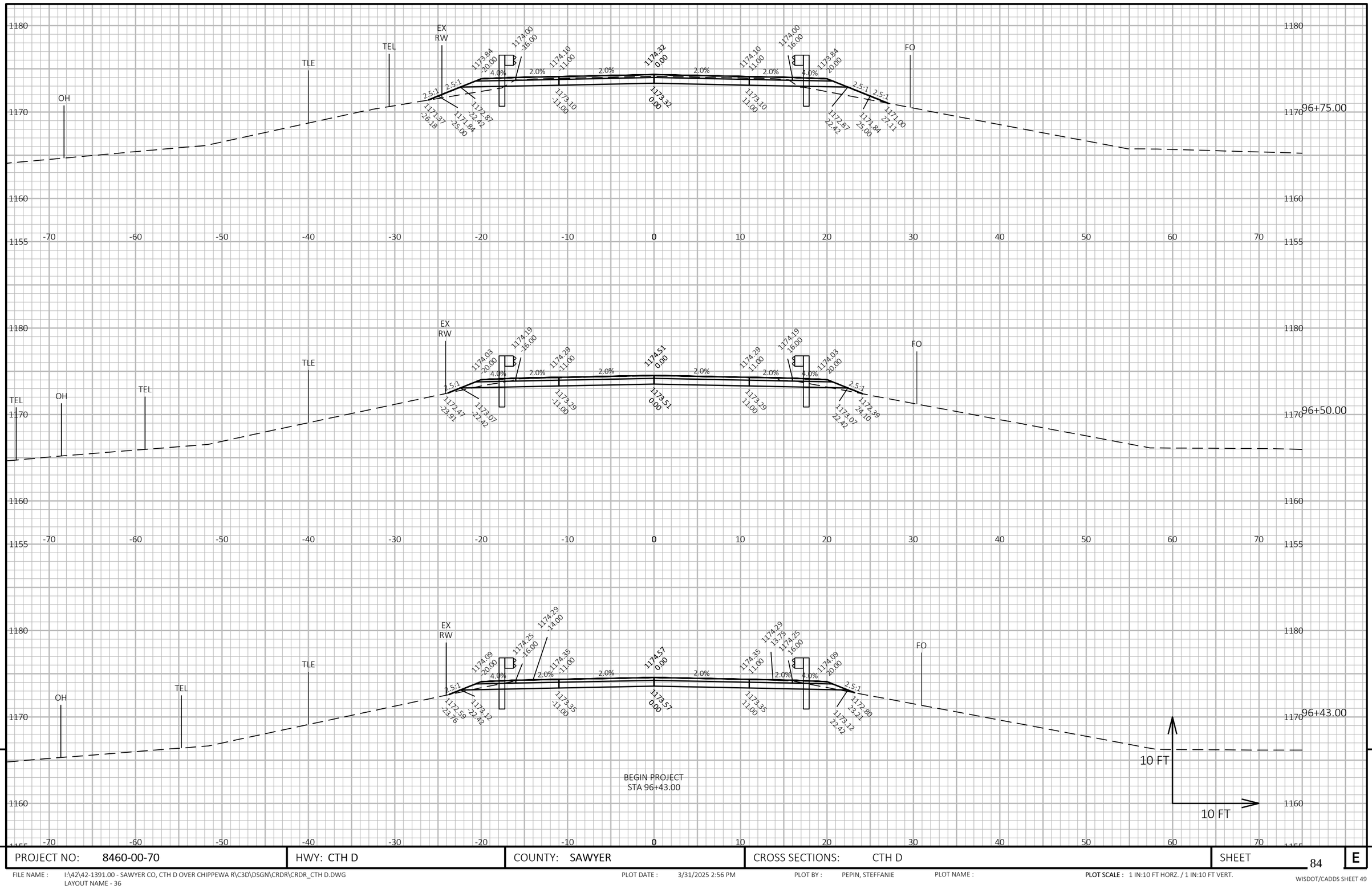
PLOT DATE : 3/31/2025 2:56 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

WISDOT/CADDS SHEET 49

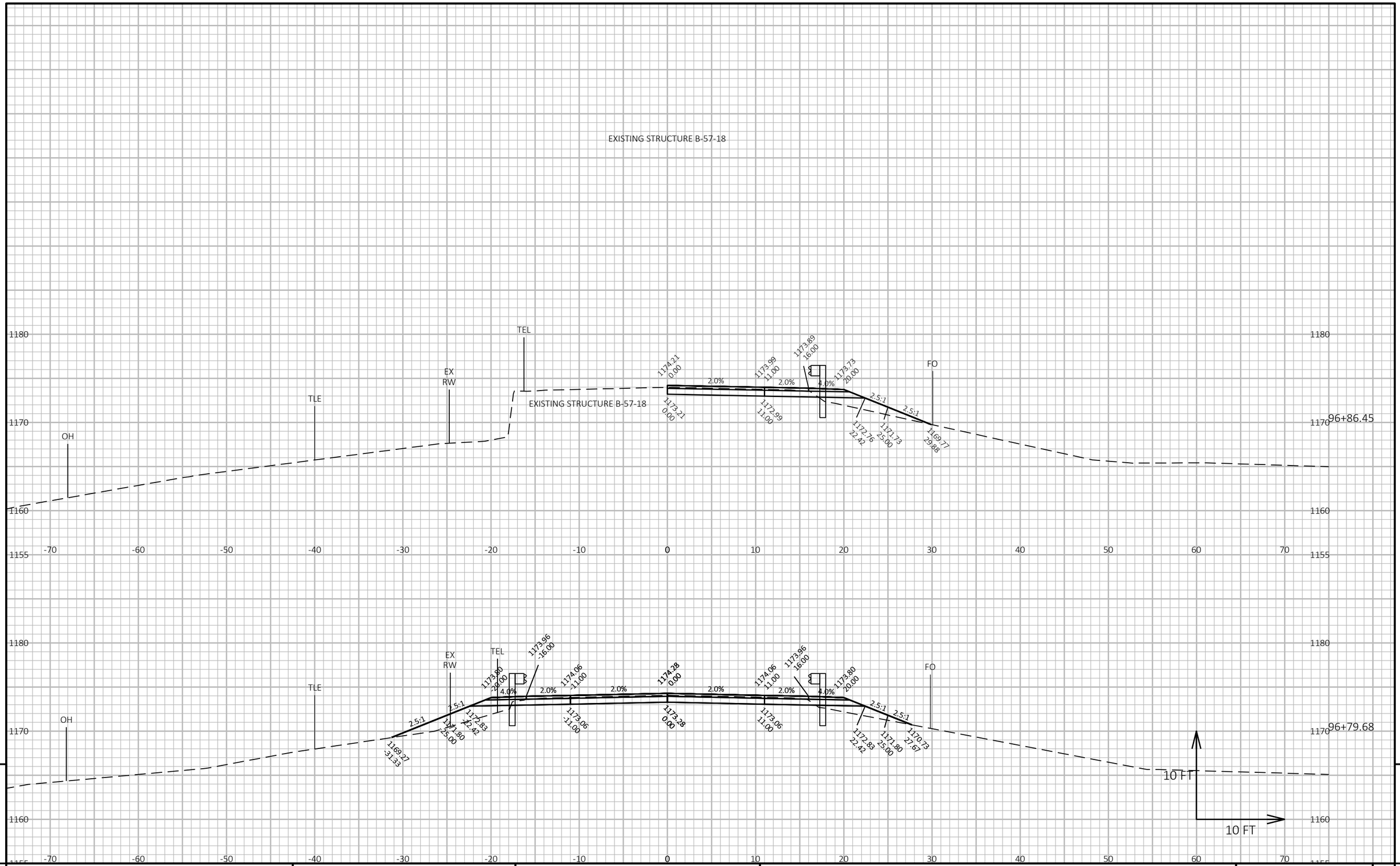



| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 84 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 36

PLOT DATE : 3/31/2025 2:56 PM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 85 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 37

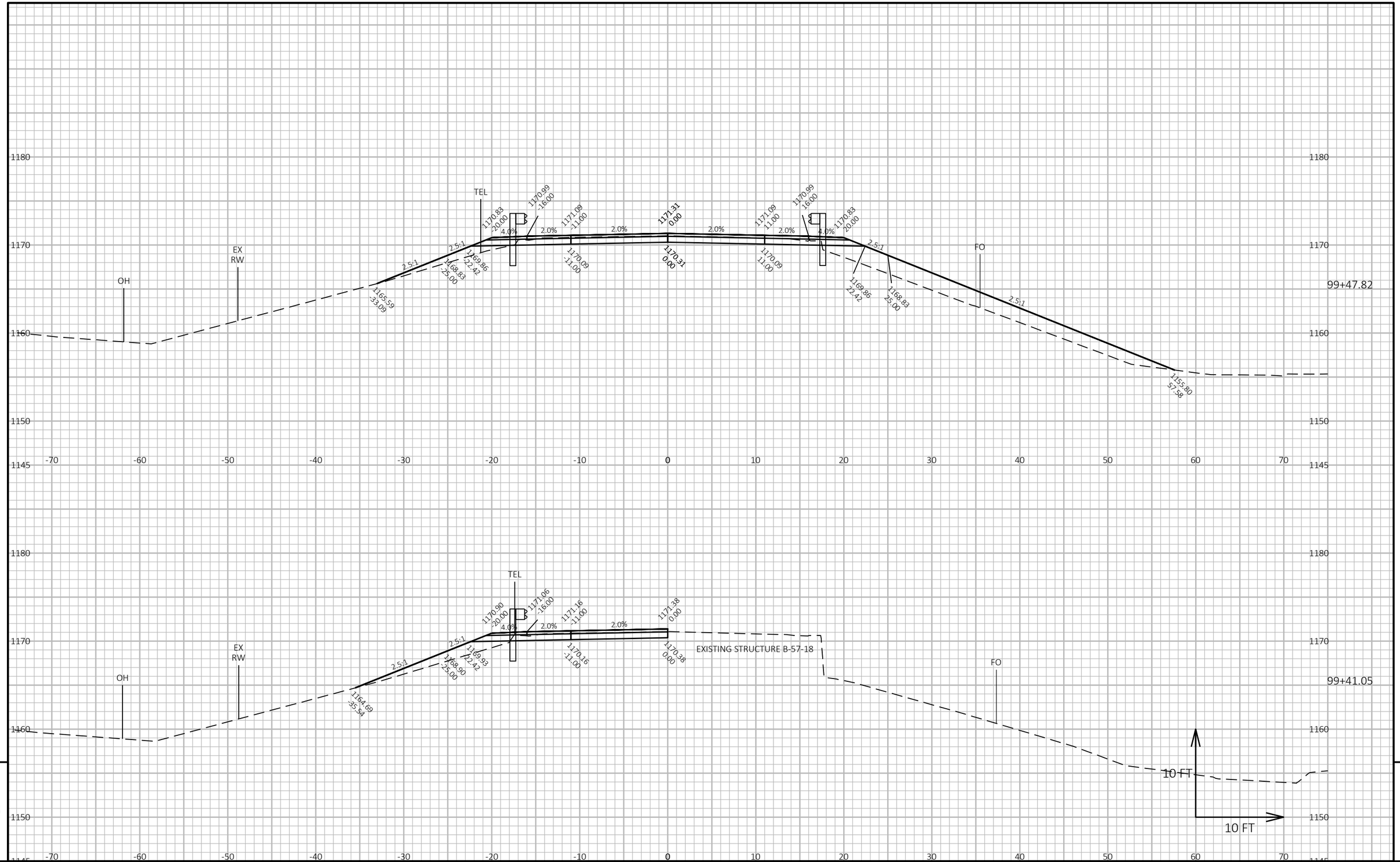
PLOT DATE : 3/31/2025 2:56 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

WISDOT/CADDS SHEET 49

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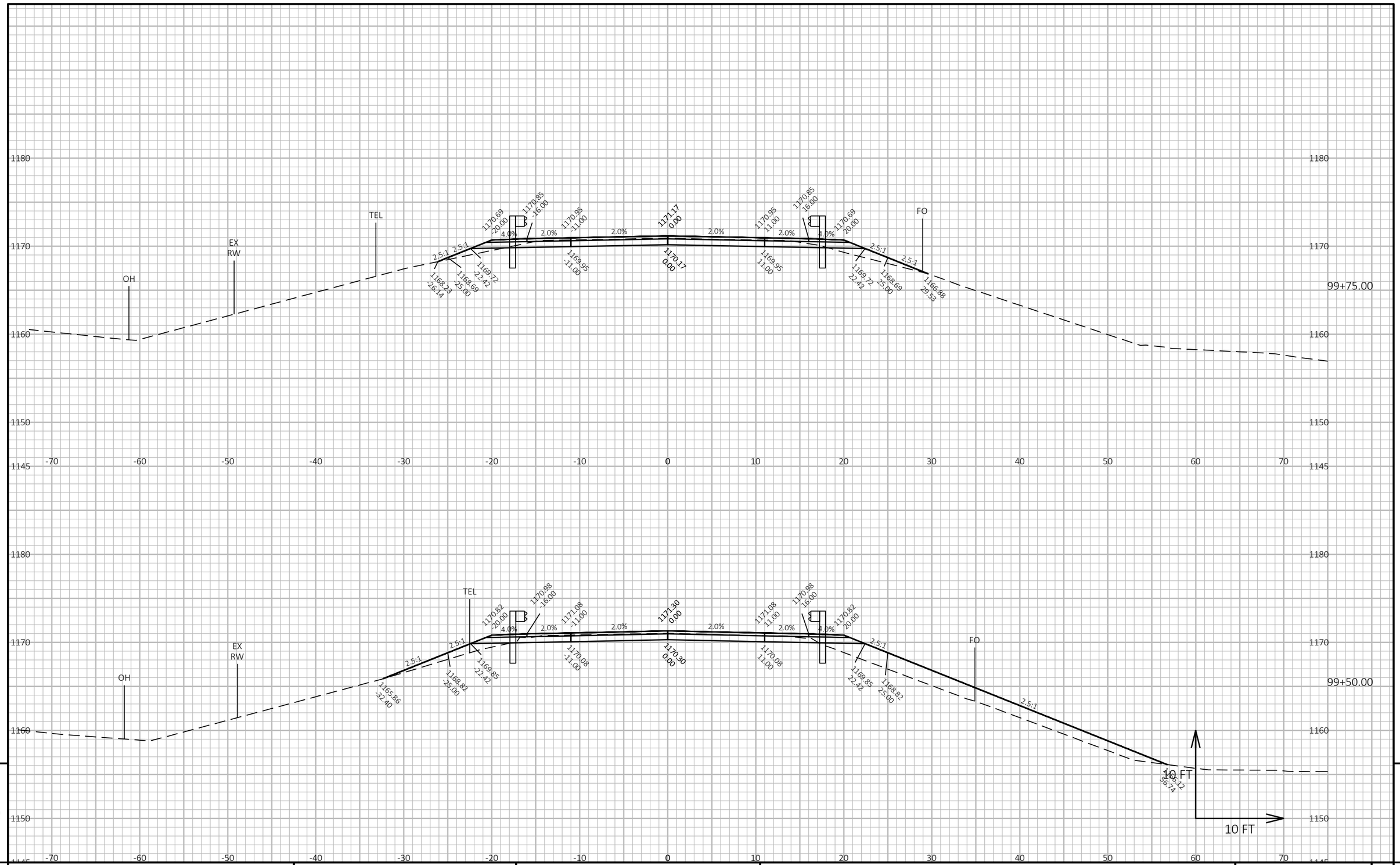
| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 86 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 38

PLOT DATE : 3/31/2025 2:56 PM PLOT BY : PEPIN, STEFFANIE PLOT NAME :

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

WISDOT/CADDS SHEET 49

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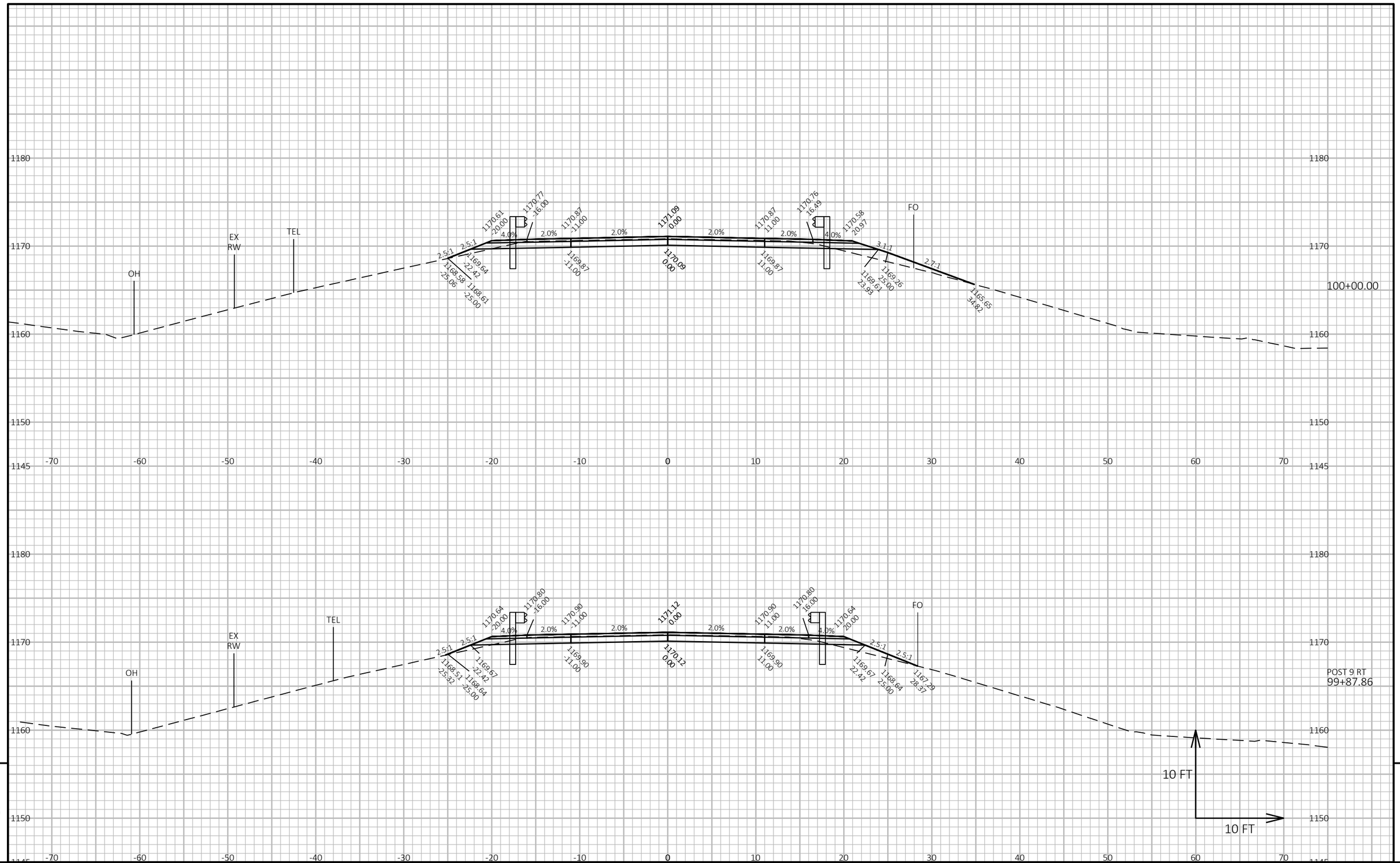
| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 87 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 39

PLOT DATE : 3/31/2025 2:56 PM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 88 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 40

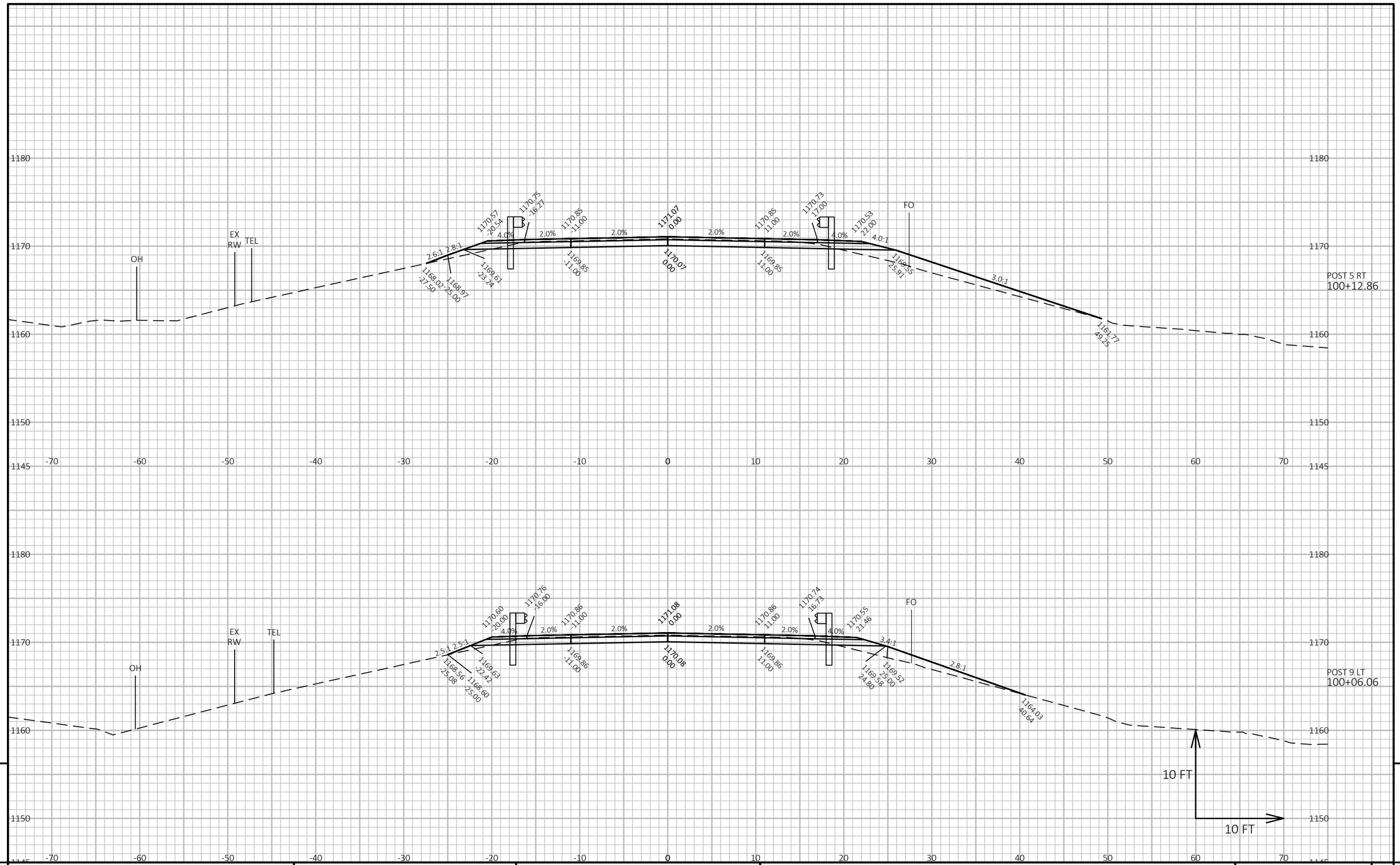
PLOT DATE : 3/31/2025 2:56 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

WISDOT/CADDS SHEET 49

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| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 89 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 41

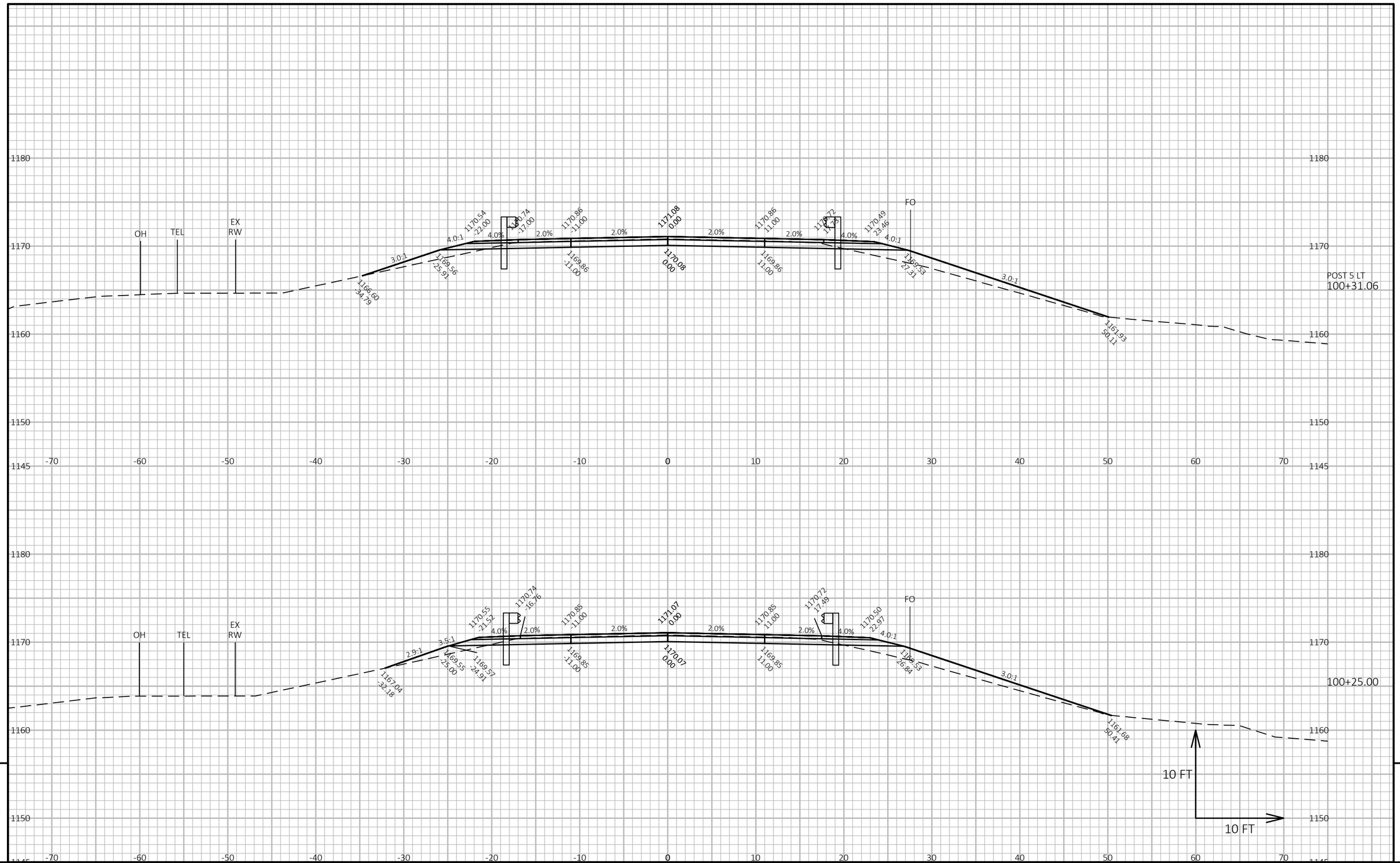
PLOT DATE : 3/31/2025 2:56 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

WISDOT/CADDS SHEET 49

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| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 90 | E |
|---|---|---|---|---|---|

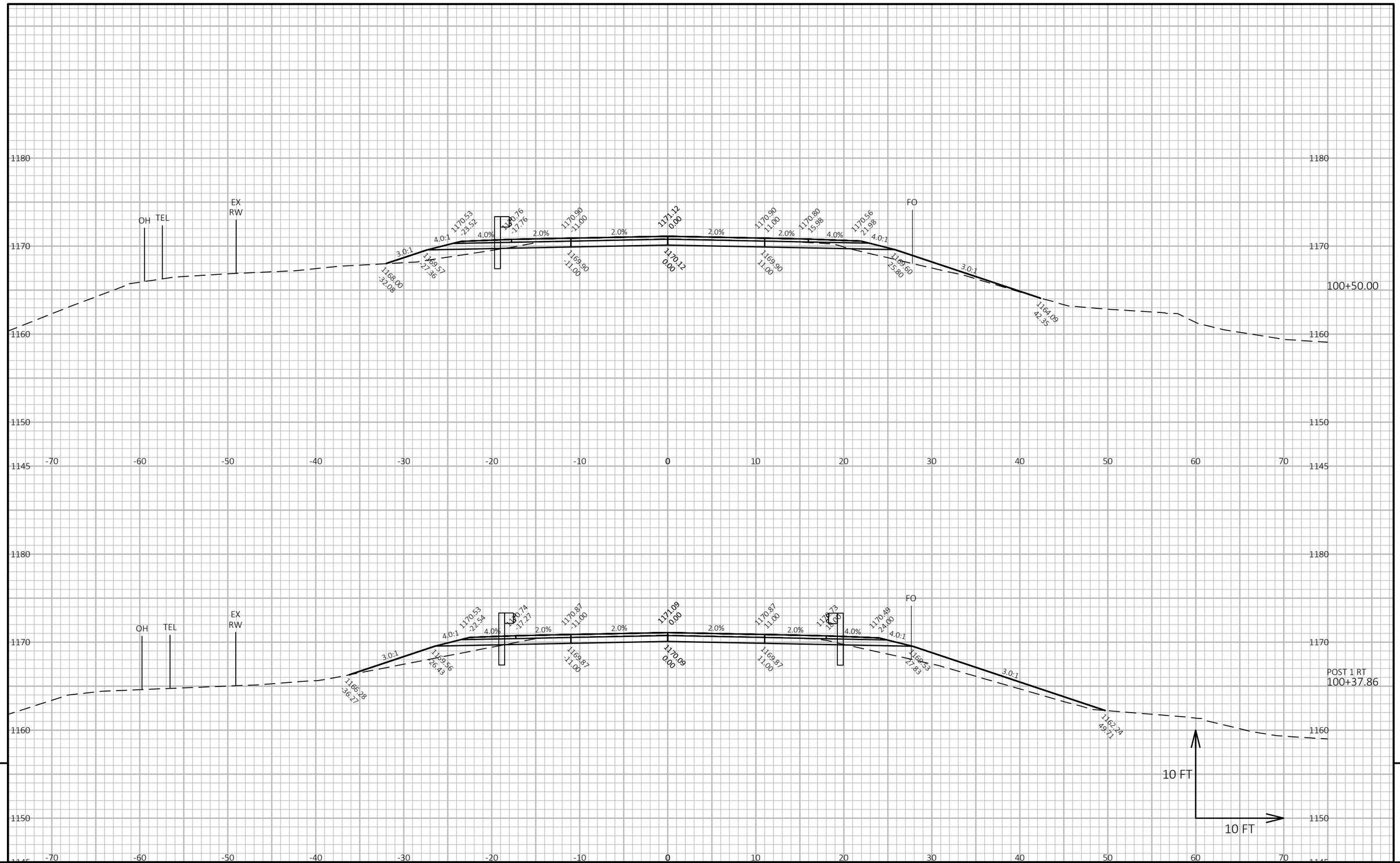
FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 42

PLOT DATE : 3/31/2025 2:56 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

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| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 91 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 43

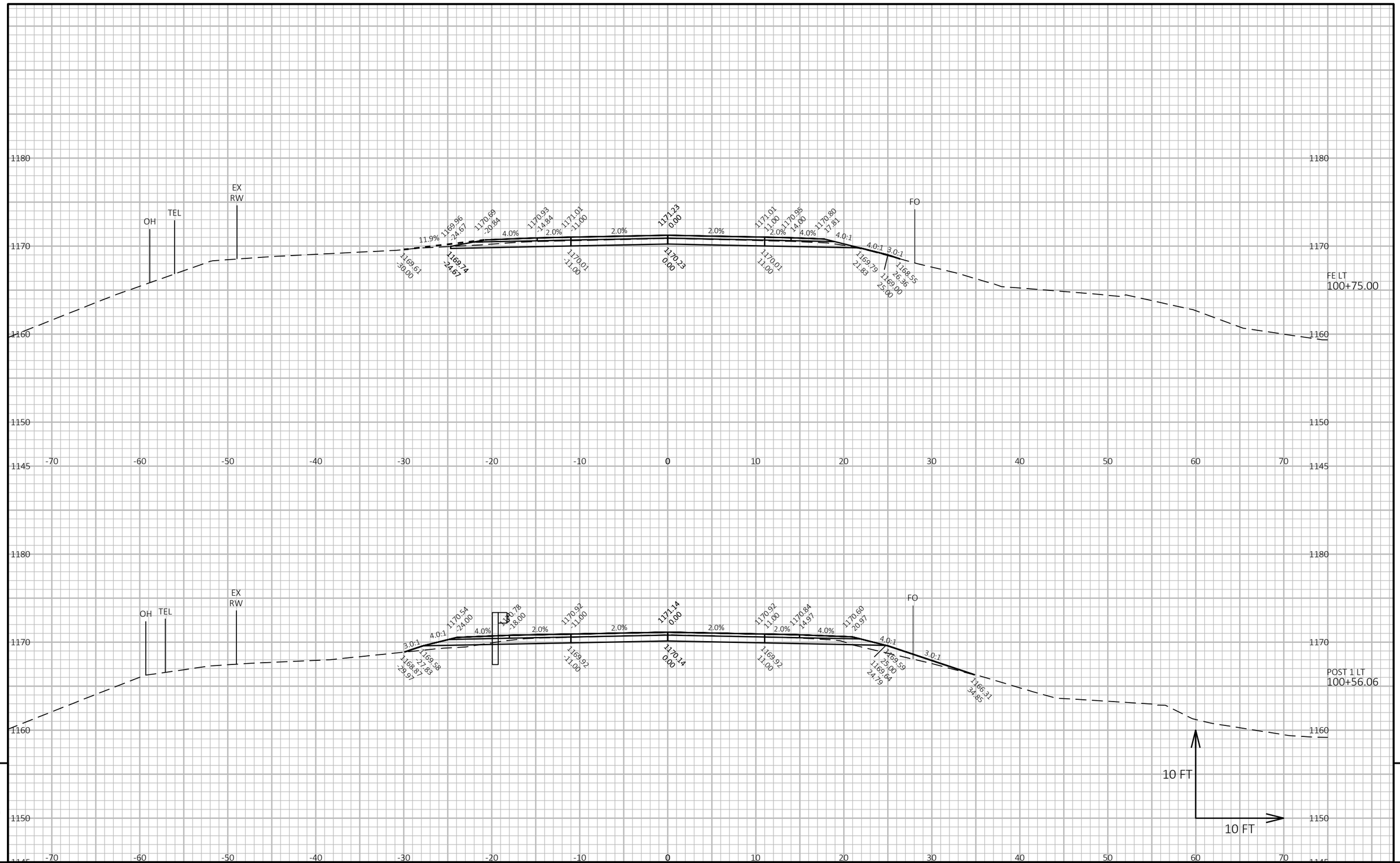
PLOT DATE : 3/31/2025 2:57 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

WISDOT/CADDS SHEET 49

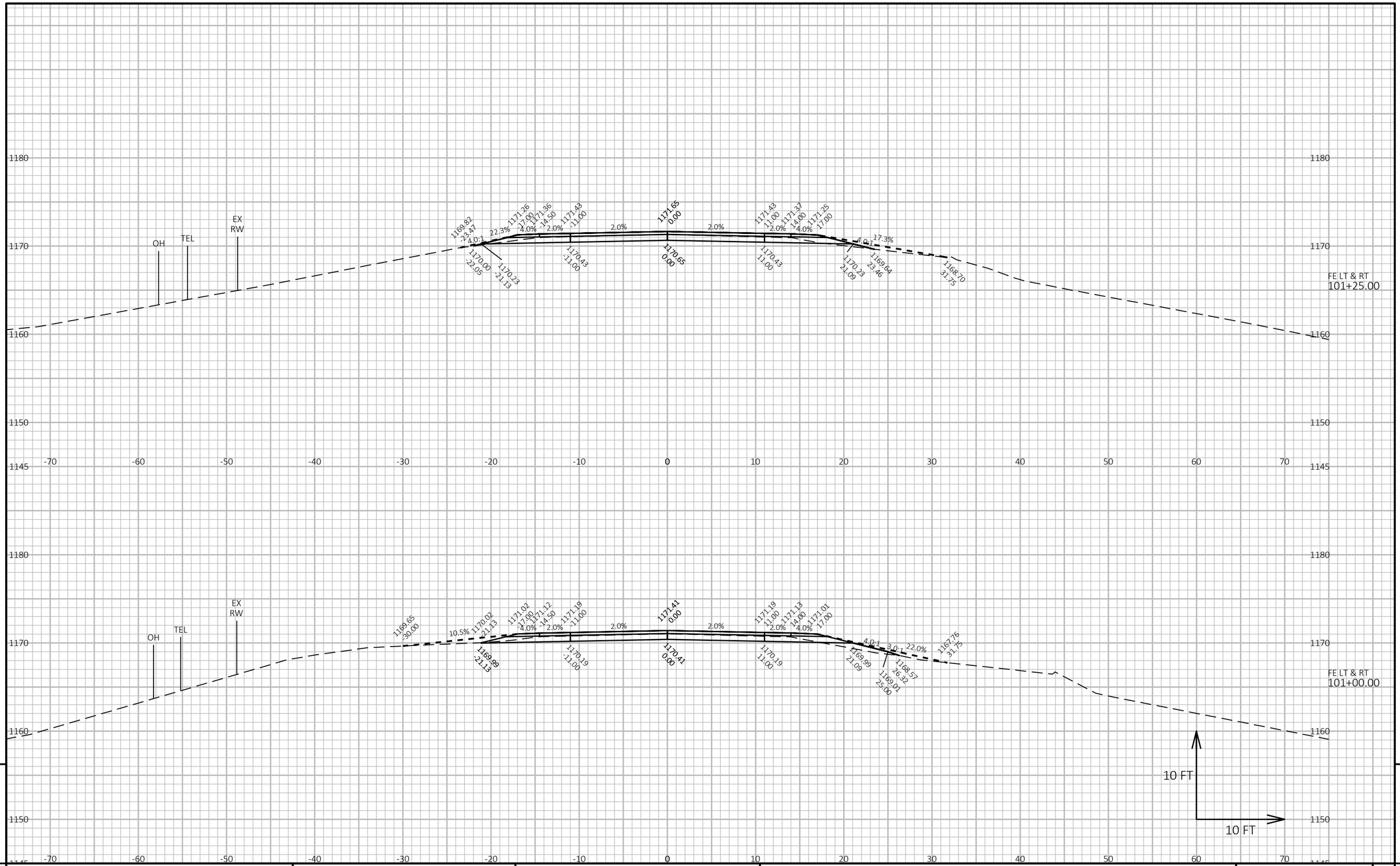



9 9

| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 92 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 44

PLOT DATE : 3/31/2025 2:57 PM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

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| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 93 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 45

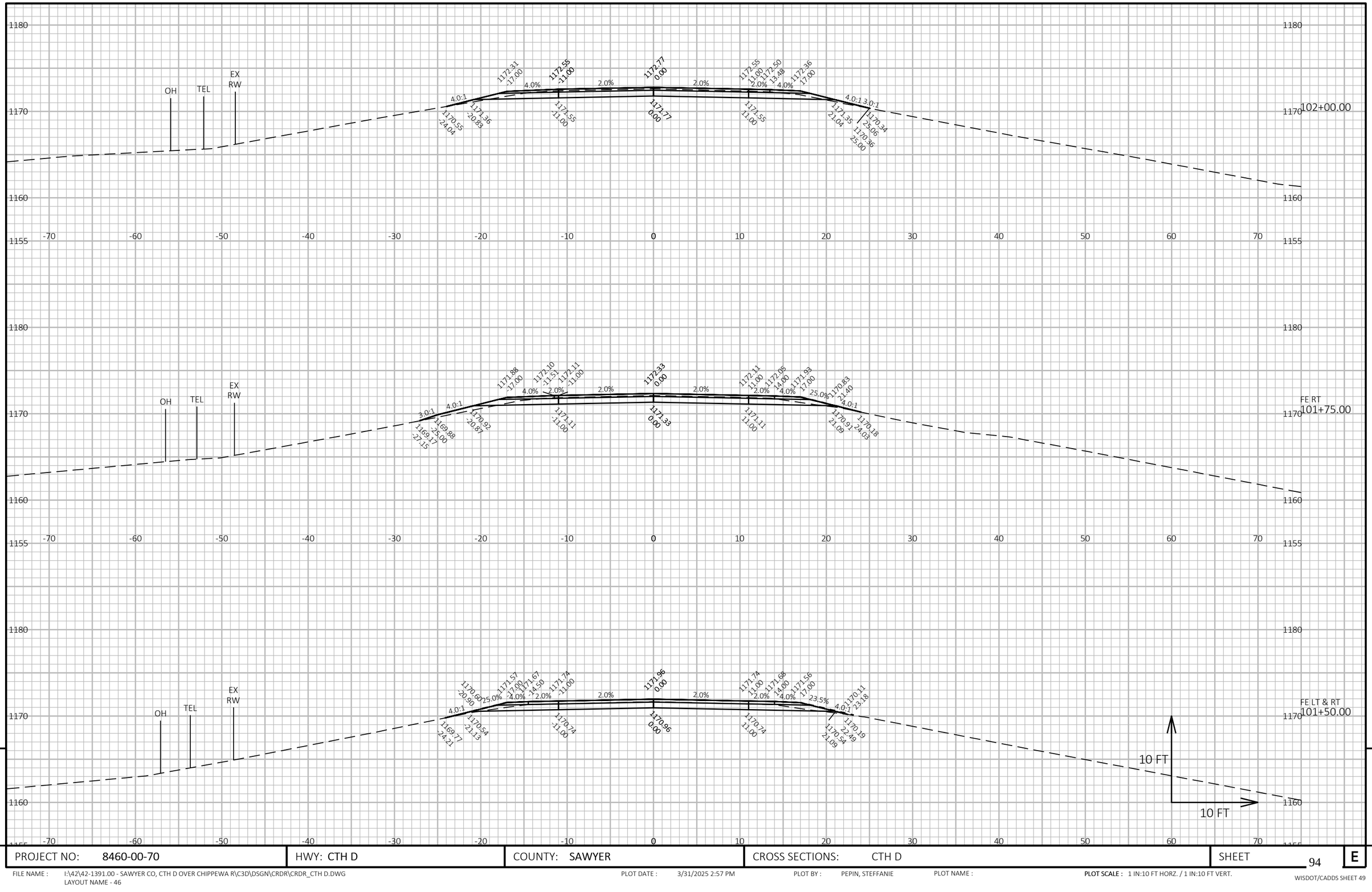
PLOT DATE : 3/31/2025 2:57 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9 9

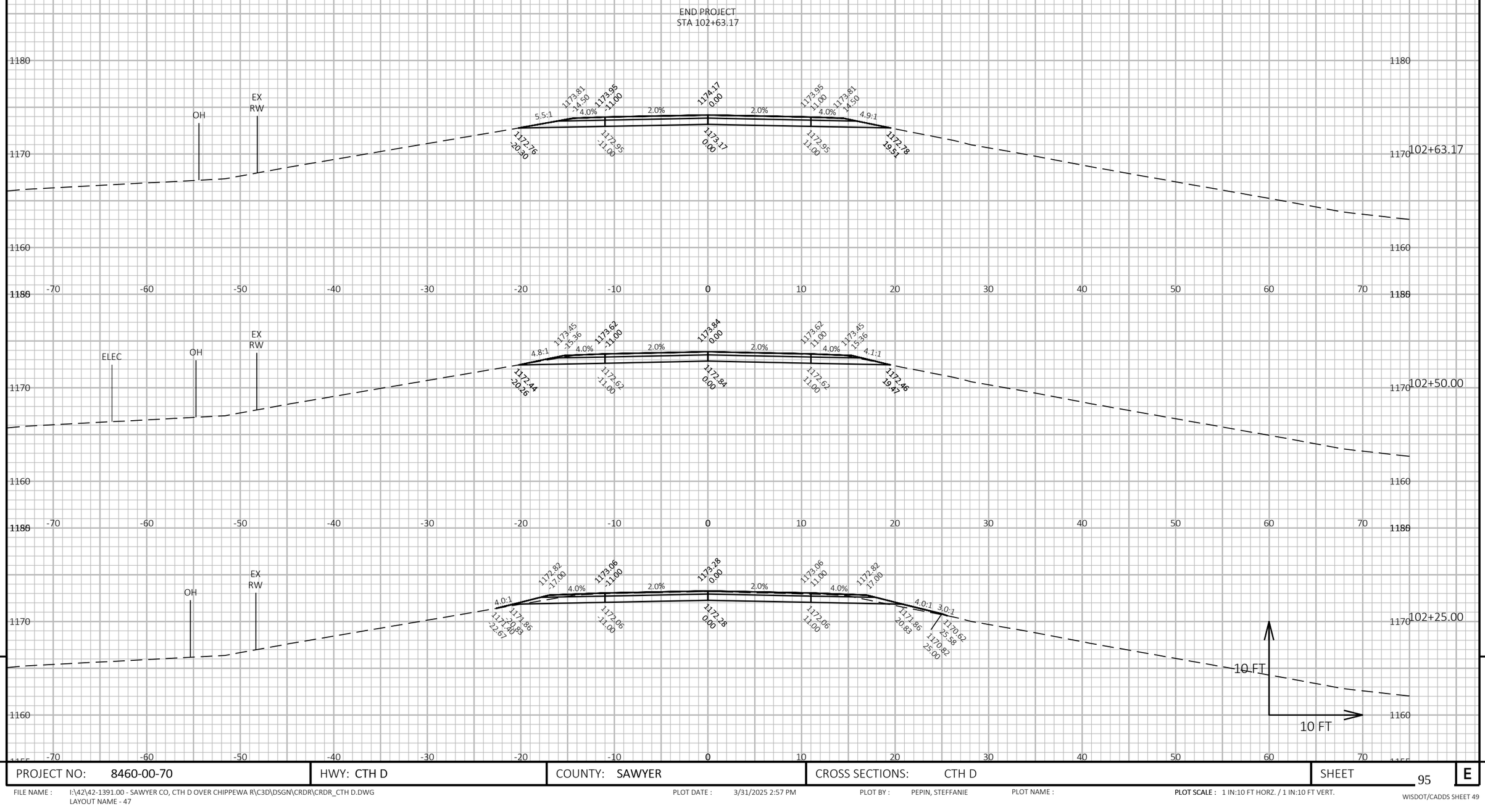
| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 94 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 46

PLOT DATE : 3/31/2025 2:57 PM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END PROJECT
STA 102+63.17




9

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| PROJECT NO: 8460-00-70 | HWY: CTH D | COUNTY: SAWYER | CROSS SECTIONS: CTH D | SHEET 95 | E |
|---|---|---|---|---|---|

FILE NAME : I:\42\42-1391.00 - SAWYER CO, CTH D OVER CHIPPEWA R\C3D\DSGN\CRDR\CRDR_CTH D.DWG
LAYOUT NAME - 47

PLOT DATE : 3/31/2025 2:57 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

WISDOT/CADDS SHEET 49

**Wisconsin Department of Transportation**

Dedicated people creating transportation solutions
through innovation and exceptional service.

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