EAU

PROJECT ID: **9549-00-70**

WITH: 9549-00-71, 9549-00-72, 9549-00-73

COUNTY: **TAYLOR**

NOVEMBER 2024
ORDER OF SHEETS

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

TOTAL SHEETS = 56




# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

**PLAN OF PROPOSED IMPROVEMENT**

# T DEER CREEK, ELM AVENUE (1)

**DEER CREEK BRIDGE B-60-0162**

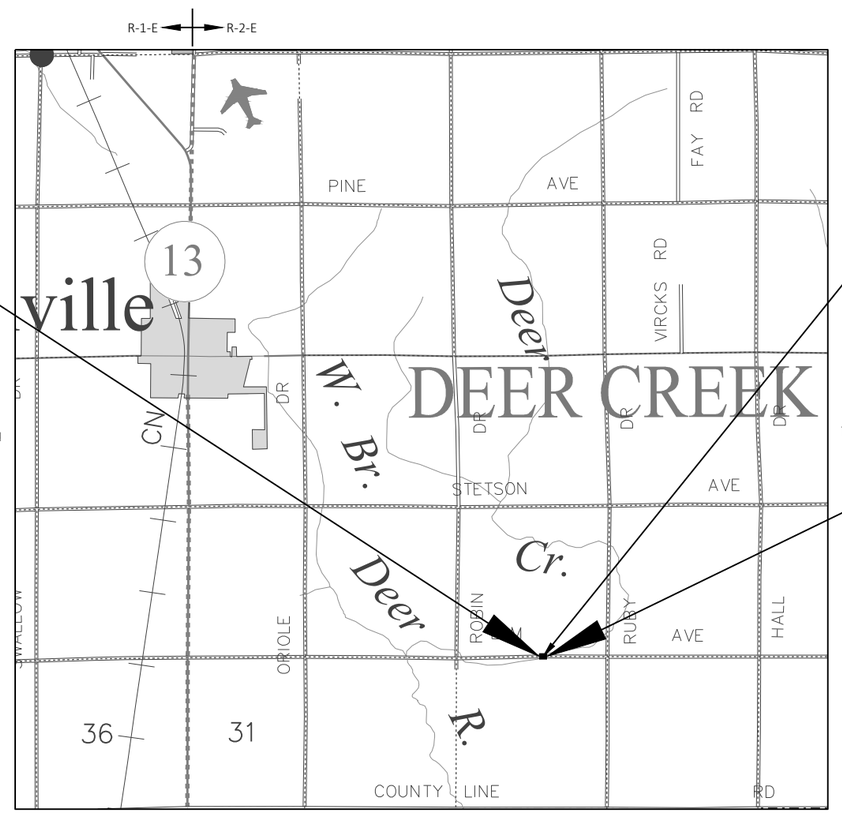
## LOC STR
## TAYLOR COUNTY

| STATE PROJECT NUMBER |
|---|
| **9549-00-70** |

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 9549-00-70 | WISC 2025071 | 1 |
| | | |
| | | |
| | | |

DESIGN DESIGNATION 9549-00-00

| | | | |
|---|---|---|---|
| A.A.D.T. | 2025 | = | 64 |
| A.A.D.T. | 2045 | = | 78 |
| D.H.V. | | = | 12 |
| D.D. | | = | 62/38 |
| T. | | = | 7.7% |
| DESIGN SPEED | | = | 60 MPH |
| ESALS | | = | 9745 |




BEGIN PROJECT
STA 13+78.67
Y = 306 315.472
X = 669 839.132

STRUCTURE B-60-0162
STA 14+50

END PROJECT
STA 15+21.33

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.0270 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), TAYLOR 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.

## 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

ACCEPTED FOR
*TAYLOR COUNTY*

7/29/24 (Date)
*Benjamin Stanfley* (Signature and Title of Official)
Highway Commissioner

ORIGINAL PLANS PREPARED BY


WESTBROOK
Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WISCONSIN 53588
PHONE (608) 588-7866
FAX (608) 588-7954


WISCONSIN PROFESSIONAL ENGINEER
AARON B. PALMER
E-35695
RICHLAND CENTER, WI

DATE: 7/26/24 *Aaron Palmer* (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

| | |
|---|---|
| Surveyor | WESTBROOK ASSOCIATED ENGINEERS, INC. |
| Designer | WESTBROOK ASSOCIATED ENGINEERS, INC. |
| Project Manager | MATT BERG, P.E. |
| Regional Examiner | NW REGION |
| Regional Supervisor | TOU YANG, P.E. |

APPROVED FOR THE DEPARTMENT

DATE: 7/30/2024 (Signature)

E

## STANDARD ABBREVIATIONS

| | | | |
|---|---|---|---|
| ABUT | ABUTMENT | ML OR M/L | MATCH LINE |
| AC | ACRE | NOM | NOMINAL |
| AGG | AGGREGATE | NC | NORMAL CROWN |
| ∠ | ANGLE | NO | NUMBER |
| AADT | ANNUAL AVERAGE DAILY TRAFFIC | PAVT | PAVEMENT |
| ASPH | ASPHALTIC | PLE | PERMANENT LIMITED EASEMENT |
| BK | BACK | PC | POINT OF CURVATURE |
| BAD | BASE AGGREGATE DENSE | PI | POINT OF INTERSECTION |
| BL OR B/L | BASE LINE | PT | POINT OF TANGENCY |
| BM | BENCH MARK | PCC | PORTLAND CEMENT CONCRETE |
| CL OR C/L | CENTER LINE | LB | POUND |
| Δ | CENTRAL ANGLE OR DELTA | PSI | POUNDS PER SQUARE INCH |
| CONC | CONCRETE | PE | PRIVATE ENTRANCE |
| CONST | CONSTRUCTION | PROJ | PROJECT |
| CP | CONTROL POINT | PL | PROPERTY LINE |
| CO | COUNTY | PRW | PROPOSED RIGHT OF WAY |
| CY | CUBIC YARD | R | RADIUS |
| D | DEGREE OF CURVE | RL OR R/L | REFERENCE LINE |
| DHV | DESIGN HOUR VOLUME | REQD | REQUIRED |
| DIA | DIAMETER | RT | RIGHT |
| DD | DIRECTIONAL DISTRIBUTION | R/W | RIGHT OF WAY |
| DWY | DRIVEWAY | RD | ROAD |
| EA | EACH | RDWY | ROADWAY |
| EL OR ELEV | ELEVATION | SHLDR | SHOULDER |
| EMB | EMBANKMENT | SPECS | SPECIFICATIONS |
| ESALS | EQUIVALENT SINGLE AXLE LOADS | SF | SQUARE FEET |
| EXC | EXCAVATION | SY | SQUARE YARD |
| EXIST | EXISTING | SDD | STANDARD DETAIL DRAWINGS |
| FERT | FERTILIZER | STH | STATE TRUNK HIGHWAY |
| FE | FIELD ENTRANCE | STA | STATION |
| FL OR F/L | FLOW LINE | SL OR S/L | SURVEY LINE |
| FT | FOOT | TEMP | TEMPORARY |
| CWT | HUNDRED WEIGHT | TLE | TEMPORARY LIMITED EASEMENT |
| IN DIA | INCH DIAMETER | TL OR T/L | TRANSIT LINE |
| INTERS | INTERSECTION | T | TRUCKS (PERCENT OF) |
| JT | JOINT | TYP | TYPICAL |
| LT | LEFT | VAR | VARIABLE |
| L | LENGTH OF CURVE | VC | VERTICAL CURVE |
| LF | LINEAR FOOT | VPC | VERTICAL POINT OF CURVATURE |
| LC | LONG CHORD OF CURVE | VPI | VERTICAL POINT OF INTERSECTION |
| LS | LUMP SUM | VPT | VERTICAL POINT OF TANGENCY |
| MGAL | ONE THOUSAND GALLONS | W | WEST |

### WISCONSIN DNR LIAISON

WENDY HENNIGES
DNR NORTHERN REGION HEADQUARTERS
810 W MAPLE STREET
SPOONER, WI 54801
PHONE: (715) 499-1608
EMAIL: wendy.henniges@wisconsin.gov

### CONSULTANT LIAISON

AARON PALMER, P.E.
WESTBROOK ASSOCIATED ENGINEERS, INC.
619 EAST HOXIE ST
SPRING GREEN, WI 53588
PHONE: (608) 588-7866
EMAIL: apalmer@westbrookeng.com

### COUNTY HIGHWAY COMMISSIONER

BENJAMIN STANFLEY, E.I.T.
TAYLOR COUNTY
208 N 8TH STREET
MEDFORD, WI 54451
PHONE: (715) 785-8326
EMAIL: ben.stanfley@co.taylor.wi.us

### WISDOT DESIGN PROJECT MANAGER

MATTHEW BERG, P.E.
WISDOT LOCAL PROGRAM PROJECT MANAGER
718 W CLAIREMONT AVE
EAU CLAIRE, WI 54701
PHONE: (920) 366-4750
EMAIL: matthew.berg@dot.wi.gov

### UTILITIES CONTACTS

TAYLOR ELECTRIC COOPERATIVE
ELECTRIC
WADE MATYKA
N 1831 STATE HWY 13
MEDFORD, WI 54451
PHONE: (715) 678-2411
EMAIL: wade@taylorelectric.org

TDS TELECOM
COMMUNICATIONS
RODNEY LINDEMANN
9508 S WASHINGTON AVE
MARSHFIELD, WI 54449
PHONE: (715) 743-5933
EMAIL: rodney.lindemann@tdstelecom.com

## 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.

THE CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

APPLY TACK COAT BETWEEN LAYERS OF HMA PAVEMENT AT A RATE OF 0.07 GAL/SY.

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

RIGHT OF WAY INFORMATION, AS SHOWN ON THE PLANS, IS APPROXIMATE.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE DONE WITH THE APPROVAL OF THE ENGINEER.

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

THE CONTRACTOR SHALL PREPARE AN EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND SUBMIT THE PLAN TO WISDOT AND WDNR FOR REVIEW AT LEAST 14 DAYS PRIOR TO THE PRECONSTRUCTION CONFERENCE.

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

BIODEGRADABLE NON-NETTED MATTING SHALL BE USED ALONG STREAM CORRIDORS.

APPLY SEED, MULCH OR EROSION MAT, AND FERTILIZER TO ALL DISTURBED AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETE.

SLOPES STEEPER THAN 3:1 REQUIRE EROSION MAT.

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

THE CONTRACTOR'S PAVING OPERATION SHALL BE CONSISTENT WITH THE TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PAVING OPERATIONS REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAYS SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER OPERATIONS ARE COMPLETED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.

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

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

D.O.T. MONUMENT IS TO BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR IN THE SAME WING THAT THE PROPOSED NAME PLATE WILL BE PLACED, AS DIRECTED BY THE ENGINEER.

### 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 = 0.26 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.17 ACRES

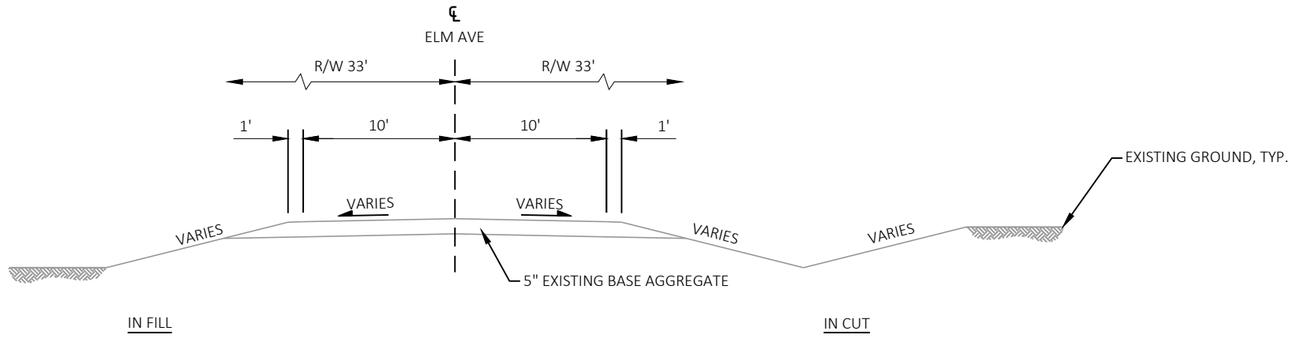
### ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
PERMANENT SIGNING
ALIGNMENT DETAILS AND CONTROL POINTS

| ELM AVENUE 4-INCHES | | |
|---|---|---|
| LAYER | THICKNESS | TYPE |
| UPPER | 1.75-INCHES | 4 LT 58-34 S |
| LOWER | 2.25-INCHES | 3 LT 58-34 S |

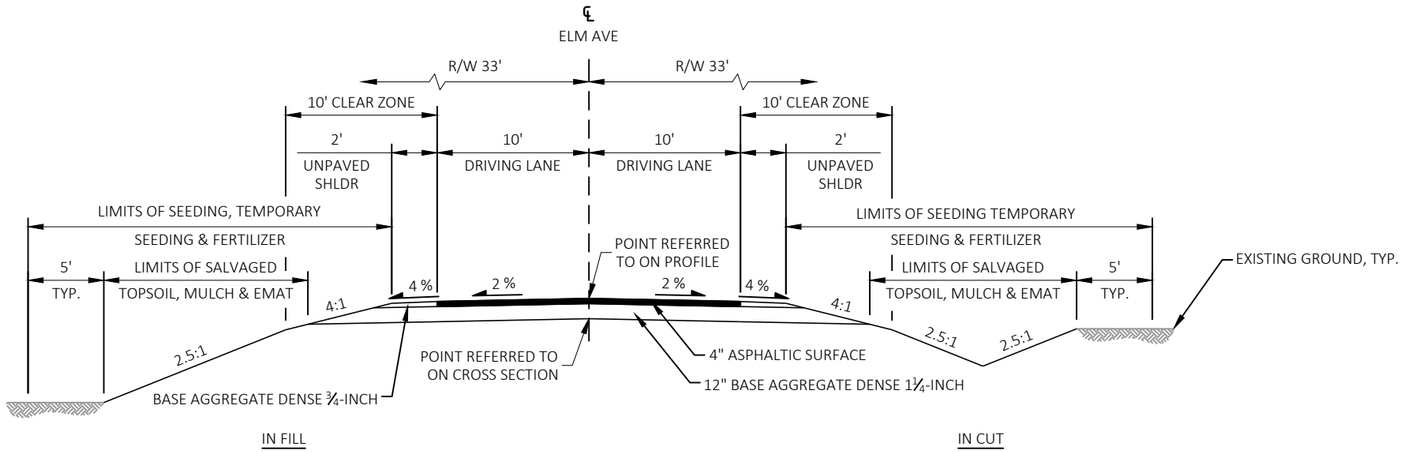
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

2




## EXISTING TYPICAL SECTION

STA 13+78.67 - 15+21.33




## FINISHED TYPICAL SECTION

STA 13+78.67 - 15+21.33

NOTE:
CONSTRUCT IN ACCORDANCE WITH SDD "SIGNING AND MARKING FOR TWO LANE BRIDGES"

N

WO5-52L
12"X36"
4

WO5-52R
12"X36"
6

WEIGHT LIMIT 20 TONS
REMOVE
7R

20 TON BRIDGE 0.5 MILES AHEAD
REMOVE
8R

PI: 13+25.00

12+00 13+00 ELM AVE 14+00 15+00 16+00 17+00

BORE

OH

1R
20 TON BRIDGE 0.5 MILES AHEAD
REMOVE

2R
WEIGHT LIMIT 20 TONS
REMOVE

3
WO5-52R
12"X36"

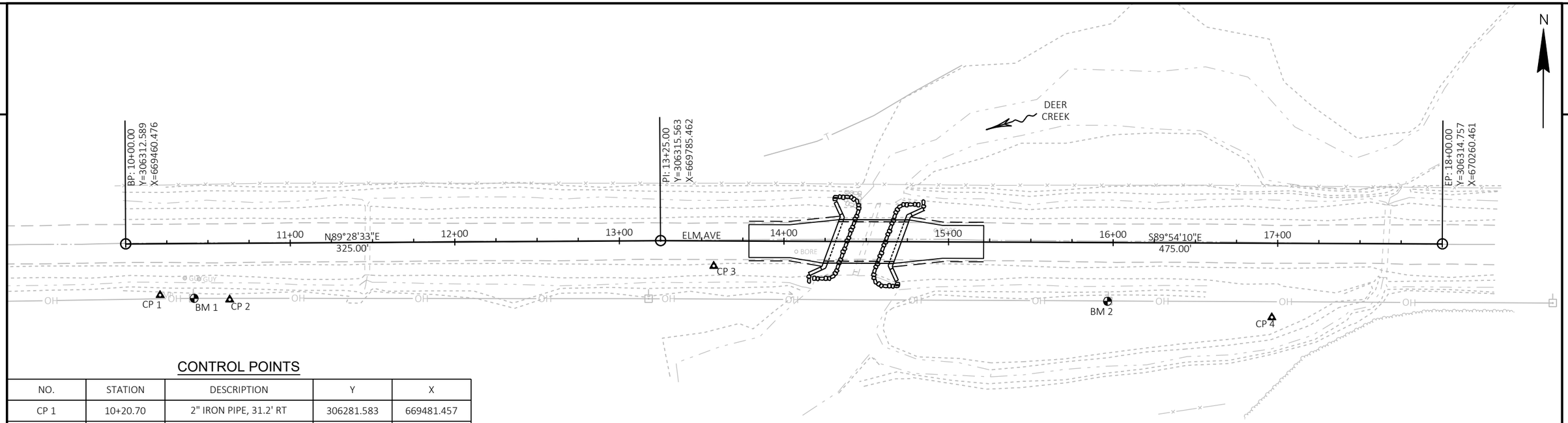
5
WO5-52L
12"X36"

## LEGEND: PERMANENT SIGNING

- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING SIGN
- 0X — DENOTES SIGN NUMBER
  - WORK CODE: R=REMOVE
  - SIGN COUNT SEQUENCE

| PROJECT NO: 9549-00-70 | HWY: ELM AVENUE | COUNTY: TAYLOR | PERMANENT SIGNING | SHEET 4 | E |
|---|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23122 ID 9549-00-00 T DEER CREEK, ELM AVENUE DEER CREEK BRIDGE P-60-0170\0-CAD\SHEETS\023201_PS.DWG
LAYOUT NAME - 023201_ps
PLOT DATE : 9/26/2024 10:01 AM PLOT BY : GAVIN WIPPERFURTH PLOT NAME : PLOT SCALE : 1 IN:40 FT

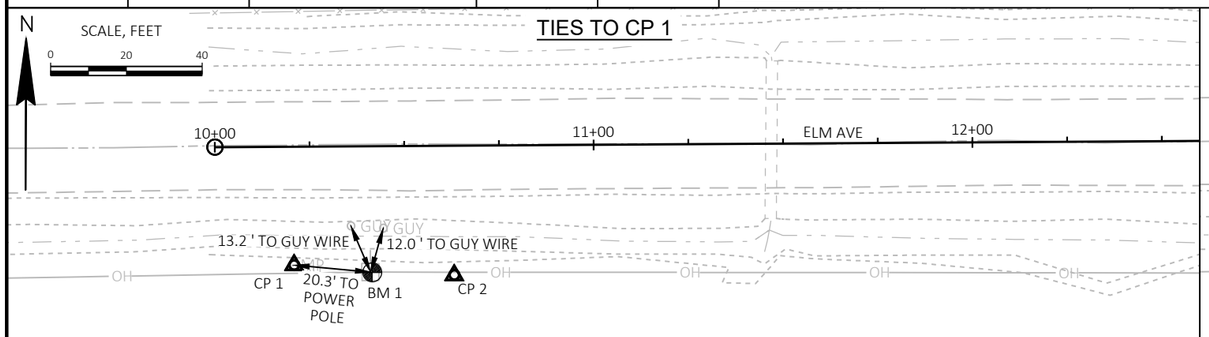



## CONTROL POINTS

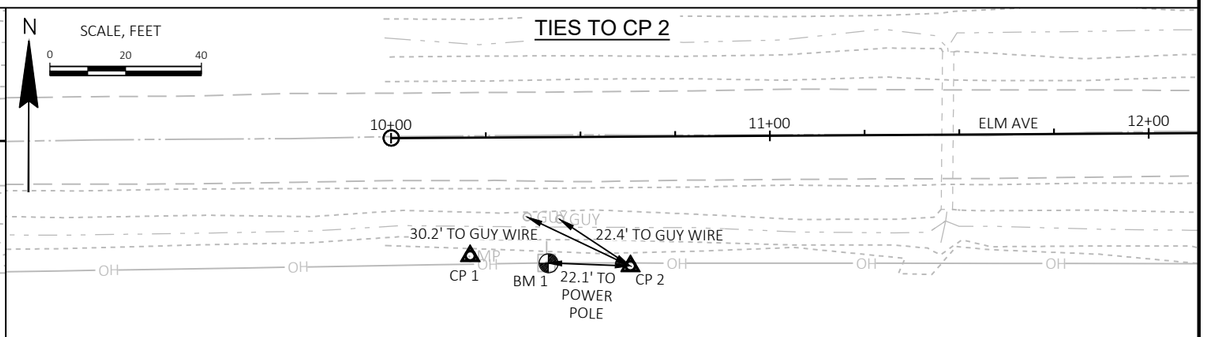
| NO. | STATION | DESCRIPTION | Y | X |
|---|---|---|---|---|
| CP 1 | 10+20.70 | 2" IRON PIPE, 31.2' RT | 306281.583 | 669481.457 |
| CP 2 | 10+62.95 | 2" IRON PIPE, 34.1' RT | 306279.032 | 669523.739 |
| CP 3 | 13+57.37 | 3/8" REBAR, 15.3' RT | 306300.202 | 669817.809 |
| CP 4 | 16+96.58 | 3/8" REBAR, 45.0' RT | 306269.906 | 670156.966 |

SCALE, FEET
0 30 60

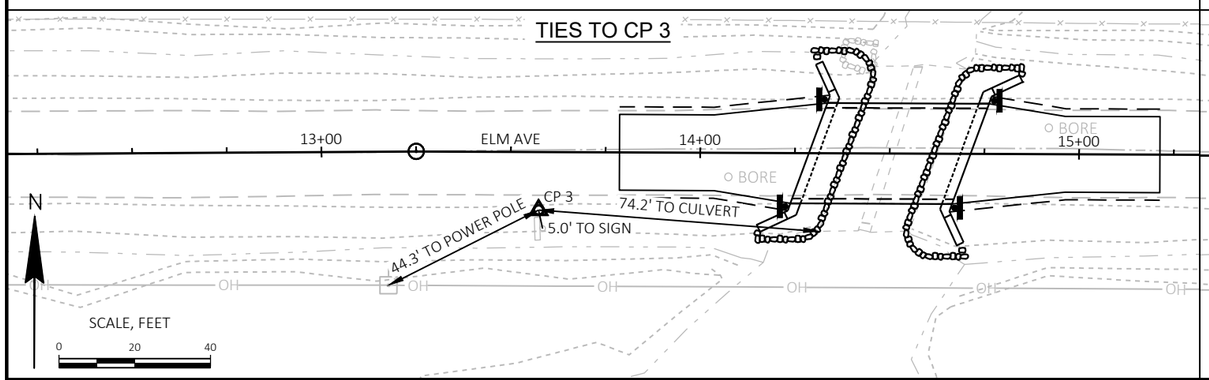
## TIES TO CP 1



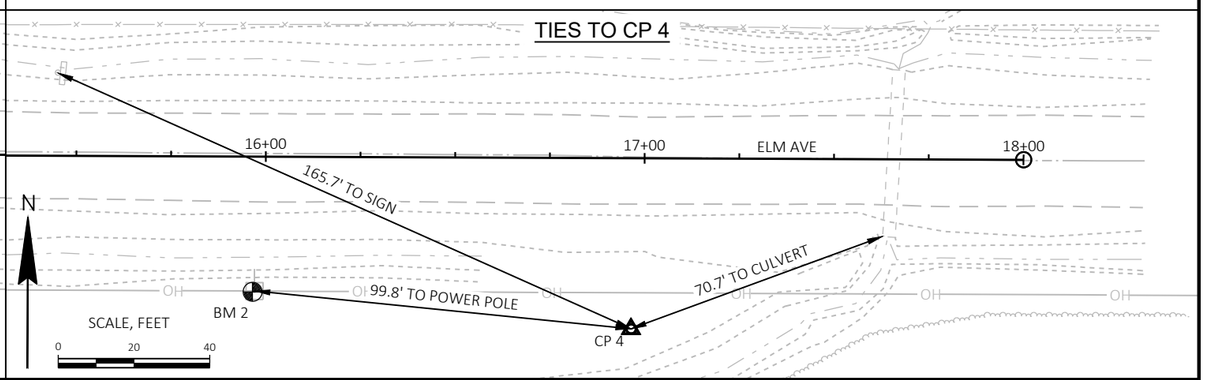

## TIES TO CP 2




## TIES TO CP 3




## TIES TO CP 4




| PROJECT NO: 9549-00-70 | HWY: ELM AVENUE | COUNTY: TAYLOR | ALIGNMENT DETAILS AND CONTROL POINTS | SHEET 5 | E |
|---|---|---|---|---|---|

## Estimate Of Quantities

| Line | Item | Item Description | Unit | Total | 9549-00-70 Qty | 9549-00-71 Qty | 9549-00-72 Qty | 9549-00-73 Qty |
|---|---|---|---|---|---|---|---|---|
| 0002 | 203.0100 | Removing Small Pipe Culverts | EACH | 1.000 | | | | 1.000 |
| 0004 | 203.0220 | Removing Structure (structure) 01. P-60-0170 | EACH | 1.000 | 1.000 | | | |
| 0006 | 203.0220 | Removing Structure (structure) 02. 5-FT Dia. Culvert | EACH | 1.000 | | 1.000 | | |
| 0008 | 203.0220 | Removing Structure (structure) 03. 5-Ft Dia. Culvert | EACH | 1.000 | | | | 1.000 |
| 0010 | 203.0220 | Removing Structure (structure) 04. P-60-0915 | EACH | 1.000 | | | | 1.000 |
| 0012 | 203.0250 | Removing Structure Over Waterway Remove Debris (structure) 01. P-60-0115 | EACH | 1.000 | | | 1.000 | |
| 0014 | 205.0100 | Excavation Common | CY | 1,239.000 | 118.000 | 139.000 | 122.000 | 860.000 |
| 0016 | 206.1001 | Excavation for Structures Bridges (structure) 01. B-60-0162 | EACH | 1.000 | 1.000 | | | |
| 0018 | 206.1001 | Excavation for Structures Bridges (structure) 02. B-60-0161 | EACH | 1.000 | | 1.000 | | |
| 0020 | 206.1001 | Excavation for Structures Bridges (structure) 03. B-60-0159 | EACH | 1.000 | | | 1.000 | |
| 0022 | 206.1001 | Excavation for Structures Bridges (structure) 04. B-60-0160 | EACH | 1.000 | | | | 1.000 |
| 0024 | 208.0100 | Borrow | CY | 276.000 | 73.000 | | 10.000 | 193.000 |
| 0026 | 210.1500 | Backfill Structure Type A | TON | 1,240.000 | 280.000 | 400.000 | 200.000 | 360.000 |
| 0028 | 213.0100 | Finishing Roadway (project) 01. 9549-00-70 | EACH | 1.000 | 1.000 | | | |
| 0030 | 213.0100 | Finishing Roadway (project) 02. 9549-00-71 | EACH | 1.000 | | 1.000 | | |
| 0032 | 213.0100 | Finishing Roadway (project) 03. 9549-00-72 | EACH | 1.000 | | | 1.000 | |
| 0034 | 213.0100 | Finishing Roadway (project) 04. 9549-00-73 | EACH | 1.000 | | | | 1.000 |
| 0036 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 100.000 | 14.000 | 14.000 | 20.000 | 52.000 |
| 0038 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 1,790.000 | 250.000 | 220.000 | 150.000 | 1,170.000 |
| 0040 | 415.0060 | Concrete Pavement 6-Inch | SY | 16.000 | | 16.000 | | |
| 0042 | 415.0410 | Concrete Pavement Approach Slab | SY | 94.000 | | 94.000 | | |
| 0044 | 455.0605 | Tack Coat | GAL | 141.000 | 18.000 | 12.000 | 17.000 | 94.000 |
| 0046 | 465.0105 | Asphaltic Surface | TON | 443.000 | 54.000 | 34.000 | 60.000 | 295.000 |
| 0048 | 502.0100 | Concrete Masonry Bridges | CY | 633.000 | 134.000 | 163.000 | 178.000 | 158.000 |
| 0050 | 502.3200 | Protective Surface Treatment | SY | 1,020.000 | 184.000 | 211.000 | 420.000 | 205.000 |
| 0052 | 505.0400 | Bar Steel Reinforcement HS Structures | LB | 17,420.000 | 4,200.000 | 4,590.000 | 4,430.000 | 4,200.000 |
| 0054 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 83,780.000 | 18,080.000 | 21,920.000 | 22,760.000 | 21,020.000 |
| 0056 | 513.4061 | Railing Tubular Type M | LF | 469.100 | 90.000 | 101.000 | 178.100 | 100.000 |
| 0058 | 516.0500 | Rubberized Membrane Waterproofing | SY | 54.000 | 12.000 | 14.000 | 16.000 | 12.000 |
| 0060 | 520.1018 | Apron Endwalls for Culvert Pipe 18-Inch | EACH | 2.000 | | | | 2.000 |
| 0062 | 520.3418 | Culvert Pipe Class III-A Non-metal 18-Inch | LF | 66.000 | | | | 66.000 |
| 0064 | 550.0020 | Pre-Boring Rock or Consolidated Materials | LF | 600.000 | | | 355.000 | 245.000 |
| 0066 | 550.1100 | Piling Steel HP 10-Inch X 42 Lb | LF | 1,815.000 | 525.000 | 560.000 | 415.000 | 315.000 |
| 0068 | 606.0300 | Riprap Heavy | CY | 485.000 | 100.000 | 160.000 | 125.000 | 100.000 |
| 0070 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 630.000 | 150.000 | 150.000 | 180.000 | 150.000 |
| 0072 | 618.0100 | Maintenance and Repair of Haul Roads (project) 01. 9549-00-70 | EACH | 1.000 | 1.000 | | | |
| 0074 | 618.0100 | Maintenance and Repair of Haul Roads (project) 02. 9549-00-71 | EACH | 1.000 | | 1.000 | | |
| 0076 | 618.0100 | Maintenance and Repair of Haul Roads (project) 03. 9549-00-72 | EACH | 1.000 | | | 1.000 | |
| 0078 | 618.0100 | Maintenance and Repair of Haul Roads (project) 04. 9549-00-73 | EACH | 1.000 | | | | 1.000 |
| 0080 | 619.1000 | Mobilization | EACH | 1.000 | 0.250 | 0.250 | 0.250 | 0.250 |
| 0082 | 623.0200 | Dust Control Surface Treatment | SY | 240.000 | | | 240.000 | |
| 0084 | 624.0100 | Water | MGAL | 19.600 | 2.800 | 2.400 | 2.000 | 12.400 |
| 0086 | 625.0100 | Topsoil | SY | 490.000 | | | 490.000 | |
| 0088 | 625.0500 | Salvaged Topsoil | SY | 1,360.000 | 340.000 | 140.000 | | 880.000 |
| 0090 | 627.0200 | Mulching | SY | 990.000 | | | 250.000 | 740.000 |
| 0092 | 628.1504 | Silt Fence | LF | 1,525.000 | 135.000 | 320.000 | 420.000 | 650.000 |
| 0094 | 628.1520 | Silt Fence Maintenance | LF | 3,030.000 | 216.000 | 510.000 | 1,260.000 | 1,044.000 |
| 0096 | 628.1905 | Mobilizations Erosion Control | EACH | 13.000 | 3.000 | 3.000 | 4.000 | 3.000 |
| 0098 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 10.000 | 2.000 | 2.000 | 4.000 | 2.000 |

| | | | | | 9549-00-70 | 9549-00-71 | 9549-00-72 | 9549-00-73 |
|---|---|---|---|---|---|---|---|---|
| **Line** | **Item** | **Item Description** | **Unit** | **Total** | **Qty** | **Qty** | **Qty** | **Qty** |
| 0100 | 628.2008 | Erosion Mat Urban Class I Type B | SY | 620.000 | 340.000 | 140.000 | | 140.000 |
| 0102 | 628.2027 | Erosion Mat Class II Type C | SY | 240.000 | | | 240.000 | |
| 0104 | 628.6005 | Turbidity Barriers | SY | 990.000 | 230.000 | 300.000 | 190.000 | 270.000 |
| 0106 | 628.7504 | Temporary Ditch Checks | LF | 50.000 | | | 50.000 | |
| 0108 | 628.7555 | Culvert Pipe Checks | EACH | 3.000 | | | | 3.000 |
| 0110 | 629.0210 | Fertilizer Type B | CWT | 2.300 | 0.400 | 0.300 | 0.500 | 1.100 |
| 0112 | 630.0120 | Seeding Mixture No. 20 | LB | 23.000 | | | 23.000 | |
| 0114 | 630.0130 | Seeding Mixture No. 30 | LB | 65.000 | 15.000 | 10.000 | | 40.000 |
| 0116 | 630.0200 | Seeding Temporary | LB | 93.000 | 20.000 | 15.000 | 8.000 | 50.000 |
| 0118 | 630.0500 | Seed Water | MGAL | 74.000 | 14.000 | 9.000 | 13.000 | 38.000 |
| 0120 | 633.5200 | Markers Culvert End | EACH | 2.000 | | | | 2.000 |
| 0122 | 634.0612 | Posts Wood 4x6-Inch X 12-FT | EACH | 12.000 | 4.000 | 4.000 | | 4.000 |
| 0124 | 634.0614 | Posts Wood 4x6-Inch X 14-FT | EACH | 7.000 | | | 4.000 | 3.000 |
| 0126 | 637.2210 | Signs Type II Reflective H | SF | 13.360 | | | | 13.360 |
| 0128 | 637.2230 | Signs Type II Reflective F | SF | 48.000 | 12.000 | 12.000 | 12.000 | 12.000 |
| 0130 | 638.2102 | Moving Signs Type II | EACH | 1.000 | | | | 1.000 |
| 0132 | 638.2602 | Removing Signs Type II | EACH | 13.000 | 4.000 | | 6.000 | 3.000 |
| 0134 | 638.3000 | Removing Small Sign Supports | EACH | 13.000 | 4.000 | | 6.000 | 3.000 |
| 0136 | 638.4000 | Moving Small Sign Supports | EACH | 1.000 | | | | 1.000 |
| 0138 | 642.5001 | Field Office Type B | EACH | 1.000 | 0.250 | 0.250 | 0.250 | 0.250 |
| 0140 | 643.0420 | Traffic Control Barricades Type III | DAY | 5,223.000 | 1,058.000 | 1,610.000 | 1,260.000 | 1,295.000 |
| 0142 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 9,886.000 | 2,116.000 | 3,220.000 | 1,960.000 | 2,590.000 |
| 0144 | 643.0900 | Traffic Control Signs | DAY | 4,104.000 | 828.000 | 1,260.000 | 980.000 | 1,036.000 |
| 0146 | 643.5000 | Traffic Control | EACH | 1.000 | 0.250 | 0.250 | 0.250 | 0.250 |
| 0148 | 645.0111 | Geotextile Type DF Schedule A | SY | 250.000 | 62.000 | 68.000 | 60.000 | 60.000 |
| 0150 | 645.0120 | Geotextile Type HR | SY | 965.000 | 166.000 | 315.000 | 270.000 | 214.000 |
| 0152 | 650.4500 | Construction Staking Subgrade | LF | 666.000 | 100.000 | 100.000 | 100.000 | 366.000 |
| 0154 | 650.5000 | Construction Staking Base | LF | 666.000 | 100.000 | 100.000 | 100.000 | 366.000 |
| 0156 | 650.6000 | Construction Staking Pipe Culverts | EACH | 1.000 | | | | 1.000 |
| 0158 | 650.6501 | Construction Staking Structure Layout (structure) 01. B-60-0162 | EACH | 1.000 | 1.000 | | | |
| 0160 | 650.6501 | Construction Staking Structure Layout (structure) 02. B-60-0161 | EACH | 1.000 | | 1.000 | | |
| 0162 | 650.6501 | Construction Staking Structure Layout (structure) 03. B-60-0159 | EACH | 1.000 | | | 1.000 | |
| 0164 | 650.6501 | Construction Staking Structure Layout (structure) 04. B-60-0160 | EACH | 1.000 | | | | 1.000 |
| 0166 | 650.9911 | Construction Staking Supplemental Control (project) 01. 9549-00-70 | EACH | 1.000 | 1.000 | | | |
| 0168 | 650.9911 | Construction Staking Supplemental Control (project) 02. 9549-00-71 | EACH | 1.000 | | 1.000 | | |
| 0170 | 650.9911 | Construction Staking Supplemental Control (project) 03. 9549-00-72 | EACH | 1.000 | | | 1.000 | |
| 0172 | 650.9911 | Construction Staking Supplemental Control (project) 04. 9549-00-73 | EACH | 1.000 | | | | 1.000 |
| 0174 | 650.9920 | Construction Staking Slope Stakes | LF | 666.000 | 100.000 | 100.000 | 100.000 | 366.000 |
| 0176 | 690.0150 | Sawing Asphalt | LF | 36.000 | | | 36.000 | |
| 0178 | 715.0502 | Incentive Strength Concrete Structures | DOL | 3,798.000 | 804.000 | 978.000 | 1,068.000 | 948.000 |
| 0180 | 715.0720 | Incentive Compressive Strength Concrete Pavement | DOL | 500.000 | | 500.000 | | |
| 0182 | 999.2000.S | Installing and Maintaining Bird Deterrent System (station) 01. 10+00 | EACH | 1.000 | | | 1.000 | |
| 0184 | ASP.1T0A | On-the-Job Training Apprentice at $5.00/HR | HRS | 300.000 | 300.000 | | | |
| 0186 | ASP.1T0G | On-the-Job Training Graduate at $5.00/HR | HRS | 300.000 | 300.000 | | | |
| 0188 | SPV.0060 | Special 01. Stream Realignment Structure B-60-0161 | EACH | 1.000 | | 1.000 | | |
| 0190 | SPV.0060 | Special 02. Stream Realignment Structure B-60-0160 | EACH | 1.000 | | | | 1.000 |

3

| DIVISION | FROM/TO STATION | 205.0100 EXCAVATION COMMON (1) CUT (2) | SALVAGED/UNUSABLE PAVEMENT MATERIAL (3) | AVAILABLE MATERIAL (4) | UNEXPANDED FILL | EXPANDED FILL (5) FACTOR 1.25 | MASS ORDINATE +/- (6) | WASTE | 208.0100 BORROW |
|---|---|---|---|---|---|---|---|---|---|
| DIVISION 1 | | | | | | | | | |
| WEST APPROACH | 13+78.67/14+30.39 | 61 | 0 | 61 | 58 | 73 | -12 | 0 | 12 |
| DIVISION 1 SUBTOTAL | | 61 | 0 | 61 | 58 | 73 | -12 | 0 | 12 |
| DIVISION 2 | | | | | | | | | |
| EAST APPROACH | 14+69.61/15+21.33 | 57 | 0 | 57 | 94 | 118 | -61 | 0 | 61 |
| DIVISION 2 SUBTOTAL | | 57 | 0 | 57 | 94 | 118 | -61 | 0 | 61 |
| GRAND TOTAL | | 118 | 0 | 118 | 152 | 191 | -73 | 0 | 73 |

NOTES:
(1) EXCAVATION COMMON IS THE SUM OF THE CUT COLUMN. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES EXISTING PAVEMENT.
(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(5) EXPANDED FILL FACTOR = 1.25
(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

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 | 624.0100 WATER MGAL |
|---|---|---|---|---|---|---|
| 13+78.67 | - | 14+28.67 | WEST APPROACH | 7 | 125 | 1.4 |
| 14+71.33 | - | 15+21.33 | EAST APPROACH | 7 | 125 | 1.4 |
| | | | TOTAL | 14 | 250 | 2.8 |

ASPHALTIC SURFACE

| STATION | TO | STATION | LOCATION | 455.0605 TACK COAT GAL | 465.0105 ASPHALTIC SURFACE TON |
|---|---|---|---|---|---|
| 13+78.67 | - | 14+28.67 | WEST APPROACH | 9 | 27 |
| 14+71.33 | - | 15+21.33 | EAST APPROACH | 9 | 27 |
| | | | TOTAL | 18 | 54 |

SILT FENCE

| STATION | TO | STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF |
|---|---|---|---|---|---|
| 13+72 | - | 14+11 | WEST APPROACH, LT | 33 | 66 |
| 13+73 | - | 14+01 | WEST APPROACH, RT | 25 | 50 |
| 14+97 | - | 15+27 | EAST APPROACH, LT | 26 | 52 |
| 14+99 | - | 15+26 | EAST APPROACH, RT | 24 | 48 |
| | | | UNDISTRIBUTED | 27 | --- |
| | | | TOTAL | 135 | 216 |

FINISHING ITEMS

| STATION | TO | STATION | LOCATION | 625.0500 SALVAGED TOPSOIL SY | 628.2008 EROSION MAT URBAN CLASS I TYPE B SY | 629.0210 FERTILIZER TYPE B CWT | 630.0130 SEEDING MIXTURE NO. 30 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|---|---|
| 13+79 | - | 14+53 | WEST APPROACH, LT | 62 | 62 | 0.09 | 3 | 4 | 3.1 |
| 13+79 | - | 14+19 | WEST APPROACH, RT | 54 | 54 | 0.06 | 2 | 3 | 2.2 |
| 14+65 | - | 15+21 | WEST APPROACH, RT | 80 | 80 | 0.10 | 3 | 4 | 3.3 |
| 14+72 | - | 15+21 | WEST APPROACH, LT | 73 | 73 | 0.08 | 3 | 4 | 2.7 |
| | | | UNDISTRIBUTED | 71 | 71 | 0.07 | 4 | 5 | 2.7 |
| | | | TOTAL | 340 | 340 | 0.40 | 15 | 20 | 14.0 |

ALL ITEMS CATEGORY 0010 UNLESS NOTED OTHERWISE

## MOBILIZATIONS EROSION CONTROL

| LOCATION | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH |
|---|---|---|
| PROJECT | 3 | 2 |
| TOTAL | 3 | 2 |

## TURBIDITY BARRIERS

| LOCATION | 628.6005 SY |
|---|---|
| WEST ABUTMENT | 92 |
| EAST ABUTMENT | 88 |
| UNDISTRIBUTED | 50 |
| TOTAL | 230 |

## PERMANENT SIGNING

| STATION | LOCATION | SIGN NUMBER | SIGN CODE | 634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|
| --- | WEST APPROACH, RT | 1R | R12-55 | --- | --- | 1 | 1 | 20 TON BRIDGE 0.5 MILES AHEAD |
| 13+58 | WEST APPROACH, RT | 2R | R12-1 | --- | --- | 1 | 1 | WEIGHT LIMIT 20 TONS |
| 14+22 | WEST APPROACH, RT | 3 | W5-5R | 1 | 3 | --- | --- | BRIDGE HASH MARKS |
| 14+33 | WEST APPROACH, LT | 4 | W5-5L | 1 | 3 | --- | --- | BRIDGE HASH MARKS |
| 14+67 | EAST APPROACH, RT | 5 | W5-5L | 1 | 3 | --- | --- | BRIDGE HASH MARKS |
| 14+78 | EAST APPROACH, LT | 6 | W5-5R | 1 | 3 | --- | --- | BRIDGE HASH MARKS |
| 15+45 | EAST APPROACH, LT | 7R | R12-1 | --- | --- | 1 | 1 | WEIGHT LIMIT 20 TONS |
| --- | EAST APPROACH, LT | 8R | R12-55 | --- | --- | 1 | 1 | 20 TON BRIDGE 0.5 MILES AHEAD |
| | | | TOTAL | 4 | 12 | 4 | 4 | |

## TRAFFIC CONTROL

| LOCATION | DURATION DAY | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY | 643.0900 TRAFFIC CONTROL SIGNS NO. | 643.0900 TRAFFIC CONTROL SIGNS DAY |
|---|---|---|---|---|---|---|---|
| WEST APPROACH | 46 | 9 | 414 | 18 | 828 | 7 | 322 |
| EAST APPROACH | 46 | 9 | 414 | 18 | 828 | 7 | 322 |
| UNDISTRIBUTED | 46 | 5 | 230 | 10 | 460 | 4 | 184 |
| PROJECT | --- | --- | --- | --- | --- | --- | --- |
| TOTAL | | 23 | 1,058 | 46 | 2,116 | 18 | 828 |

## CONSTRUCTION STAKING

| STATION | TO | STATION | LOCATION | 650.4500 CONSTRUCTION STAKING SUBGRADE LF | 650.5000 CONSTRUCTION STAKING BASE LF | 650.6501 CONSTRUCTION STAKING STRUCTURE LAYOUT 01. B-60-0162 EACH | 650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 01. 9549-00-70 EACH | 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF |
|---|---|---|---|---|---|---|---|---|
| 13+78.67 | - | 14+28.67 | WEST APPROACH | 50 | 50 | --- | --- | 50 |
| 14+71.33 | - | 15+21.33 | EAST APPROACH | 50 | 50 | --- | --- | 50 |
| | | | PROJECT | --- | --- | 1 | 1 | --- |
| | | | TOTAL | 100 | 100 | 1* | 1 | 100 |

* CATEGORY 0020

## CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
TO BE REMOVED
BRIDGE
CULVERT

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) IP
OFF-PREMISE SIGN

| | COMPENSABLE | NON-COMPENSABLE |
|---|---|---|
| ELECTRIC POLE | | |
| TELEPHONE POLE | | |
| PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.) | | |

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25
UTILITY NUMBER 40
PARALLEL OFFSETS

## CONVENTIONAL UTILITY SYMBOLS

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

## CONVENTIONAL ABBREVIATIONS

| | | | |
|---|---|---|---|
| ACCESS RIGHTS | AR | POINT OF COMPOUND CURVE | PCC |
| ACRES | AC | POINT OF INTERSECTION | PI |
| AHEAD | AH | PROPERTY LINE | PL |
| ALUMINUM | ALUM | RECORDED AS | (100') |
| AND OTHERS | ET AL | REEL / IMAGE | R/I |
| BACK | BK | REFERENCE LINE | R/L |
| BLOCK | BLK | REMAINING | REM |
| CENTERLINE | C/L | RESTRICTIVE DEVELOPMENT EASEMENT | RDE |
| CERTIFIED SURVEY MAP | CSM | RIGHT | RT |
| CONCRETE | CONC | RIGHT OF WAY | R/W |
| COUNTY | CO | SECTION | SEC |
| COUNTY TRUNK HIGHWAY | CTH | SEPTIC VENT | SEPV |
| DISTANCE | DIST | SQUARE FEET | SF |
| CORNER | COR | STATE TRUNK HIGHWAY | STH |
| DOCUMENT NUMBER | DOC | STATION | STA |
| EASEMENT | EASE | TELEPHONE PEDESTAL | TP |
| EXISTING | EX | TEMPORARY LIMITED EASEMENT | TLE |
| GAS VALVE | GV | TRANSPORTATION PROJECT PLAT | TPP |
| GRID NORTH | GN | UNITED STATES HIGHWAY | USH |
| HIGHWAY EASEMENT | HE | VOLUME | V |
| IDENTIFICATION | ID | | |
| LAND CONTRACT | LC | | |
| LEFT | LT | | |
| MONUMENT | MON | | |
| NATIONAL GEODETIC SURVEY | NGS | | |
| NUMBER | NO | | |
| OUTLOT | OL | | |
| PAGE | P | | |
| POINT OF TANGENCY | PT | | |
| PERMANENT LIMITED EASEMENT | PLE | | |
| POINT OF BEGINNING | POB | | |
| POINT OF CURVATURE | PC | | |

## CURVE DATA ABBREVIATIONS

| | |
|---|---|
| LONG CHORD | LCH |
| LONG CHORD BEARING | LCB |
| RADIUS | R |
| DEGREE OF CURVE | D |
| CENTRAL ANGLE | Δ/DELTA |
| LENGTH OF CURVE | L |
| TANGENT | T |
| DIRECTION AHEAD | DA |
| DIRECTION BACK | DB |

## NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), TAYLOR COUNTY, NAD83 (2011)IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

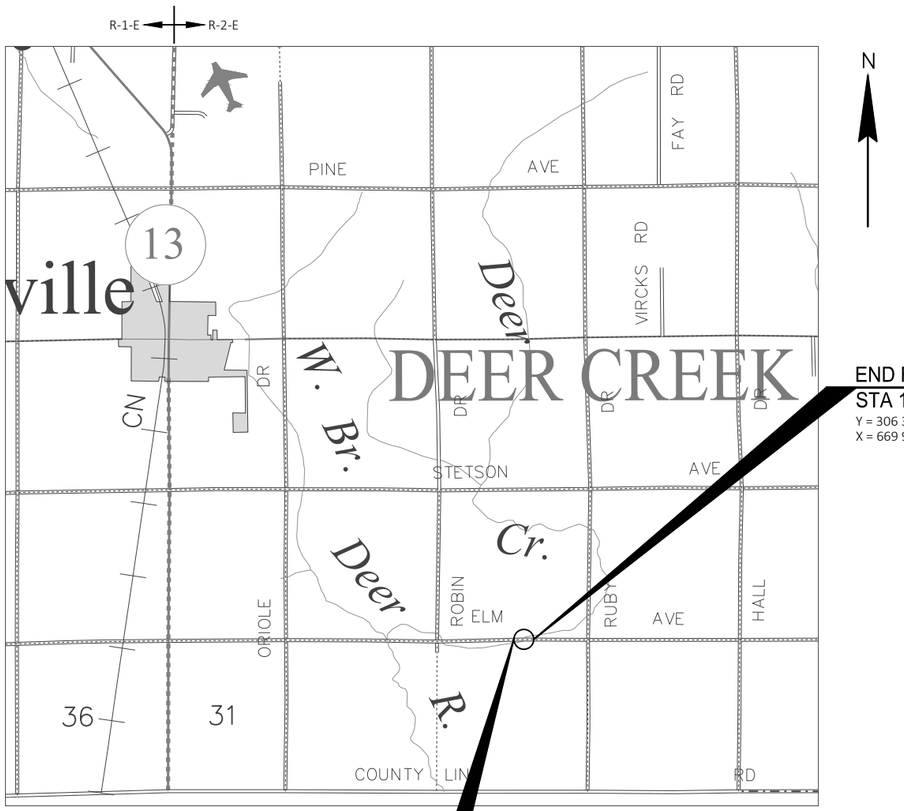
DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

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

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE TOWN OF DEER CREEK.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE DETAIL PAGES.




LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.026 MI

| R/W PROJECT NUMBER 9549-00-00 | SHEET NUMBER | TOTAL SHEETS |
|---|---|---|
| FEDERAL PROJECT NUMBER | 4.01 | 2 |

PLAT OF RIGHT OF WAY REQUIRED FOR

# T DEER CREEK, ELM AVENUE (1)
# DEER CREEK BRIDGE B-60-0162

| LOC STR | TAYLOR |
|---|---|

CONSTRUCTION PROJECT NUMBER
9549-00-70

THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

ACCEPTED FOR TOWN OF DEER CREEK

DATE: 2-28-24 Roy LaBarre TOWN CHAIR

ORIGINAL PLANS PREPARED BY


WESTBROOK
Associated Engineers, Inc.
619 East Hoxie St. | P.O. Box 429 | Spring Green, WI 53588
P: (608) 588-7866 | F: (608) 588-7954 | www.westbrookeng.com

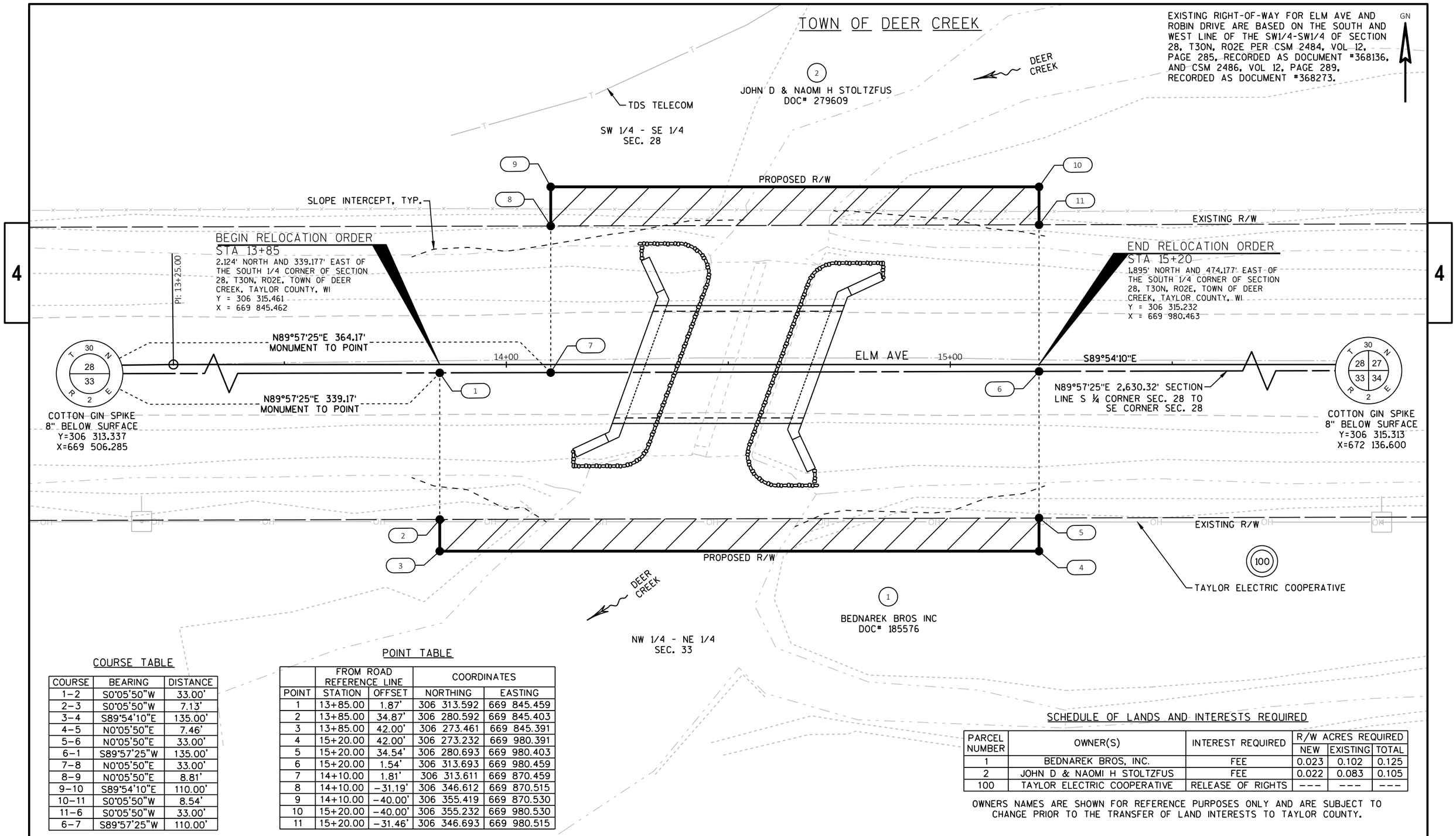

WISCONSIN
NICHOLAS J. BREY
S-3145
LAVALLE
WISCONSIN
LAND SURVEYOR
02-23-2024

REVISION DATE

DATE 02-23-2024 Signature



FILE NAME : G:\00-PROJECT FILES\2023\23122 ID 9549-00-00 T DEER CREEK, ELM AVENUE DEER CREEK BRIDGE P-60-0170\0-CAD\RW\DWG\040101_RP.DWG
PLOT DATE : 2/23/2024 2:37 PM
PLOT BY : ERICA BAUER
PLOT NAME :




4

4

## COURSE TABLE

| COURSE | BEARING | DISTANCE |
|---|---|---|
| 1–2 | S0°05'50"W | 33.00' |
| 2–3 | S0°05'50"W | 7.13' |
| 3–4 | S89°54'10"E | 135.00' |
| 4–5 | N0°05'50"E | 7.46' |
| 5–6 | N0°05'50"E | 33.00' |
| 6–1 | S89°57'25"W | 135.00' |
| 7–8 | N0°05'50"E | 33.00' |
| 8–9 | N0°05'50"E | 8.81' |
| 9–10 | S89°54'10"E | 110.00' |
| 10–11 | S0°05'50"W | 8.54' |
| 11–6 | S0°05'50"W | 33.00' |
| 6–7 | S89°57'25"W | 110.00' |

## POINT TABLE

| | FROM ROAD REFERENCE LINE | | COORDINATES | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | NORTHING | EASTING |
| 1 | 13+85.00 | 1.87' | 306 313.592 | 669 845.459 |
| 2 | 13+85.00 | 34.87' | 306 280.592 | 669 845.403 |
| 3 | 13+85.00 | 42.00' | 306 273.461 | 669 845.391 |
| 4 | 15+20.00 | 42.00' | 306 273.232 | 669 980.391 |
| 5 | 15+20.00 | 34.54' | 306 280.693 | 669 980.403 |
| 6 | 15+20.00 | 1.54' | 306 313.693 | 669 980.459 |
| 7 | 14+10.00 | 1.81' | 306 313.611 | 669 870.459 |
| 8 | 14+10.00 | –31.19' | 306 346.612 | 669 870.515 |
| 9 | 14+10.00 | –40.00' | 306 355.419 | 669 870.530 |
| 10 | 15+20.00 | –40.00' | 306 355.232 | 669 980.530 |
| 11 | 15+20.00 | –31.46' | 306 346.693 | 669 980.515 |

## SCHEDULE OF LANDS AND INTERESTS REQUIRED

| PARCEL NUMBER | OWNER(S) | INTEREST REQUIRED | R/W ACRES REQUIRED | | |
|---|---|---|---|---|---|
| | | | NEW | EXISTING | TOTAL |
| 1 | BEDNAREK BROS, INC. | FEE | 0.023 | 0.102 | 0.125 |
| 2 | JOHN D & NAOMI H STOLTZFUS | FEE | 0.022 | 0.083 | 0.105 |
| 100 | TAYLOR ELECTRIC COOPERATIVE | RELEASE OF RIGHTS | --- | --- | --- |

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

| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE | DATE 02/23/2024 | SCALE, FEET 0 10 20 | HWY: ELM AVENUE | STATE R/W PROJECT NUMBER 9549-00-00 | PLAT SHEET 4.02 |
| | GRID FACTOR N/A | | COUNTY: TAYLOR | CONSTRUCTION PROJECT NUMBER 9549-00-70 | PS&E SHEET 11 E |

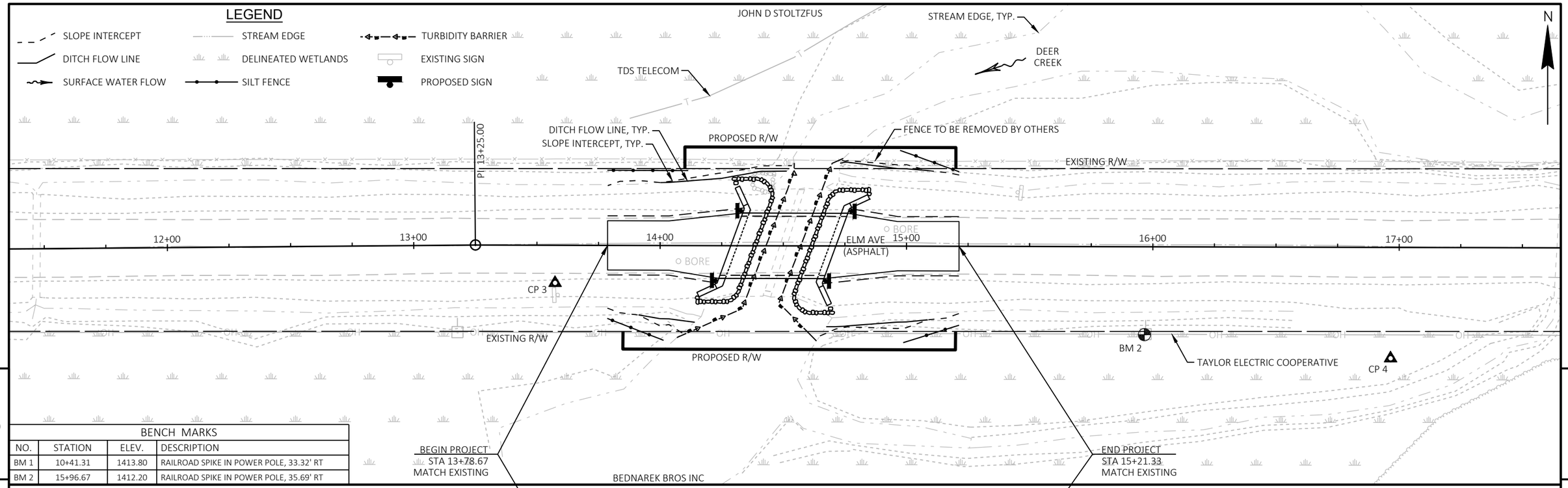
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LAYOUT NAME - 040102_rp

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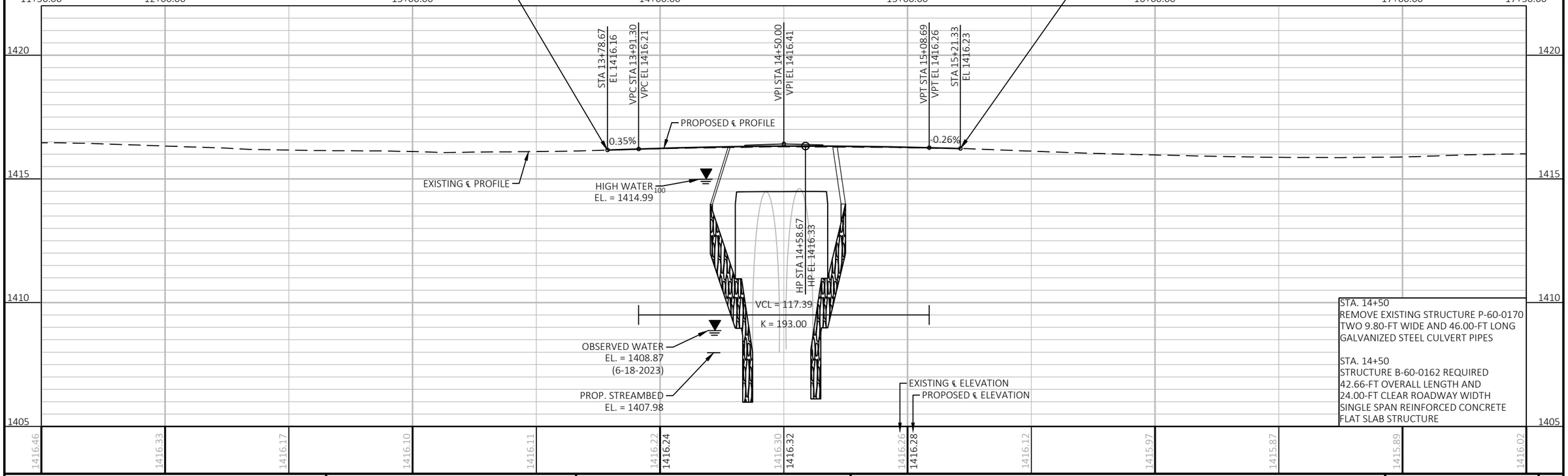
WISDOT/CADDS SHEET 75

## LEGEND

- SLOPE INTERCEPT
- DITCH FLOW LINE
- SURFACE WATER FLOW
- STREAM EDGE
- DELINEATED WETLANDS
- SILT FENCE
- TURBIDITY BARRIER
- EXISTING SIGN
- PROPOSED SIGN




| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| BM 1 | 10+41.31 | 1413.80 | RAILROAD SPIKE IN POWER POLE, 33.32' RT |
| BM 2 | 15+96.67 | 1412.20 | RAILROAD SPIKE IN POWER POLE, 35.69' RT |



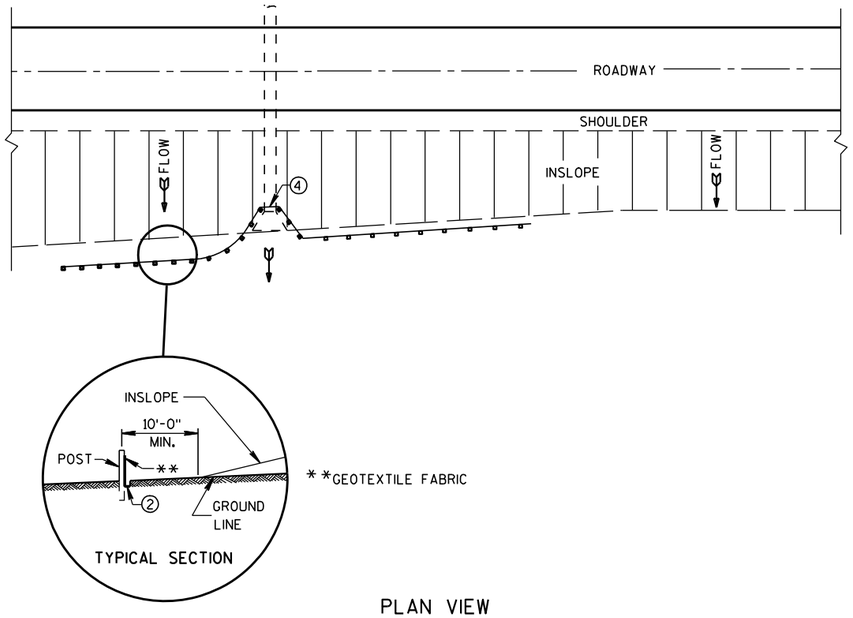

STA. 14+50
REMOVE EXISTING STRUCTURE P-60-0170
TWO 9.80-FT WIDE AND 46.00-FT LONG
GALVANIZED STEEL CULVERT PIPES

STA. 14+50
STRUCTURE B-60-0162 REQUIRED
42.66-FT OVERALL LENGTH AND
24.00-FT CLEAR ROADWAY WIDTH
SINGLE SPAN REINFORCED CONCRETE
FLAT SLAB STRUCTURE

| PROJECT NO: 9549-00-70 | HWY: ELM AVENUE | COUNTY: TAYLOR | PLAN & PROFILE | SHEET 12 E |
|---|---|---|---|---|

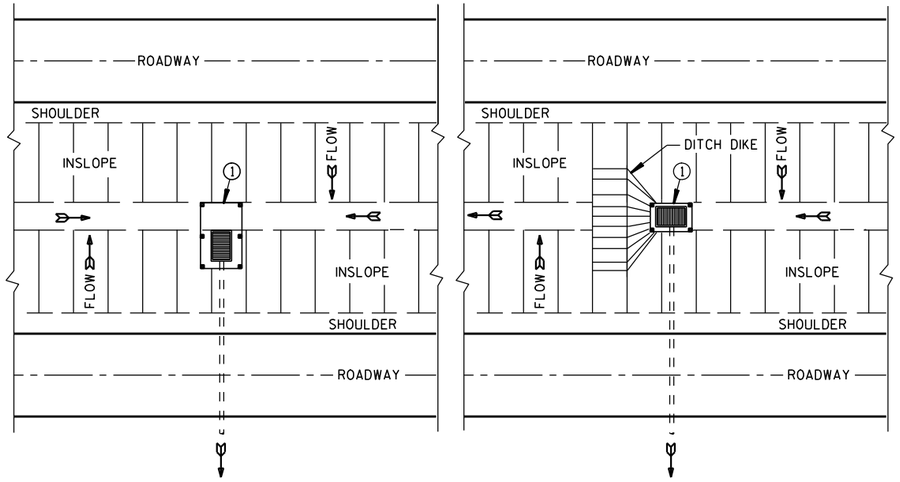
# Standard Detail Drawing List

| | |
|---|---|
| 08E09-06 | SILT FENCE |
| 08E11-02 | TURBIDITY BARRIER |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 13C19-03 | HMA LONGITUDINAL JOINTS |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C06-12 | SIGNING & MARKING FOR TWO LANE BRIDGES |




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE



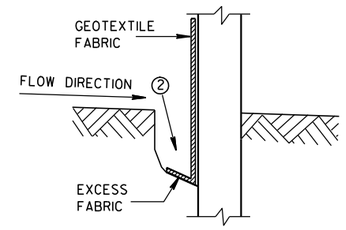

PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

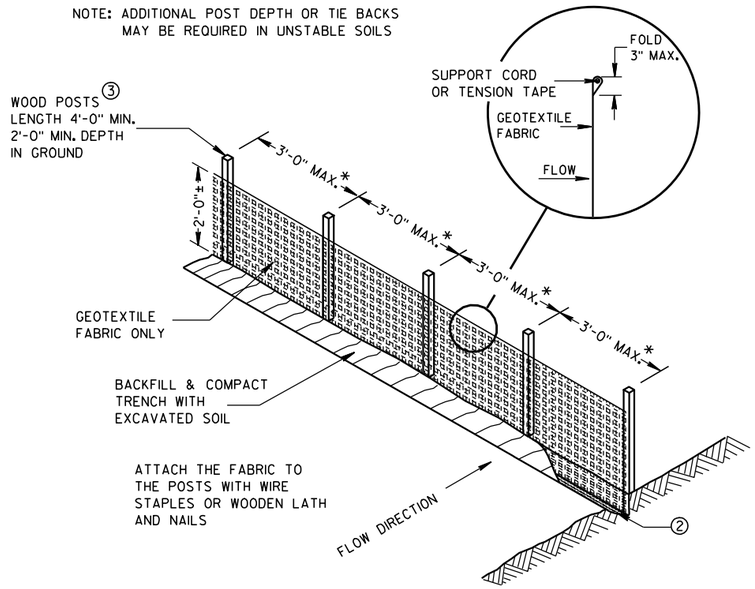
## GENERAL NOTES

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.

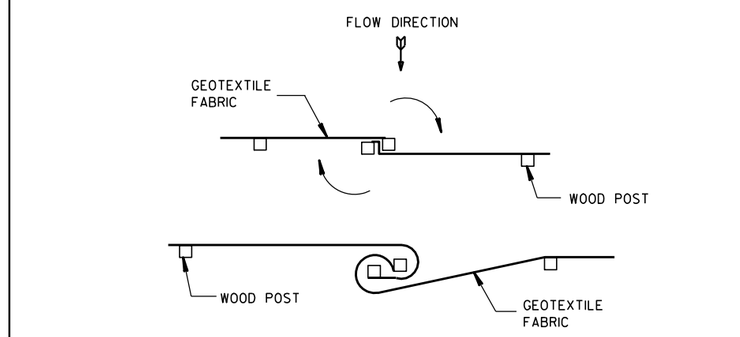



## TRENCH DETAIL

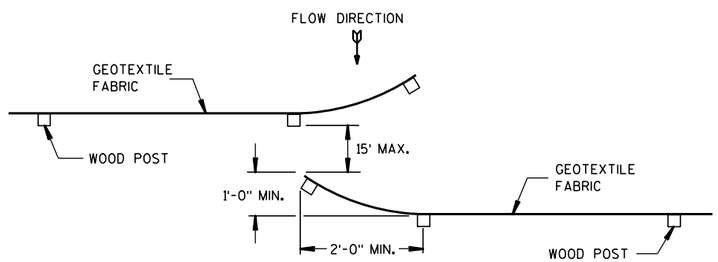



*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

## SILT FENCE

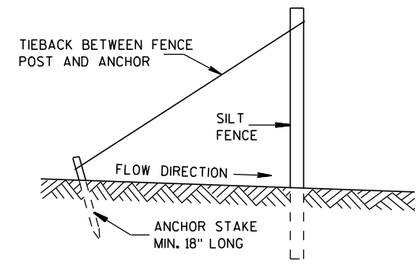



TWIST METHOD




HOOK METHOD

## JOINING TWO LENGTHS OF SILT FENCE 5




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

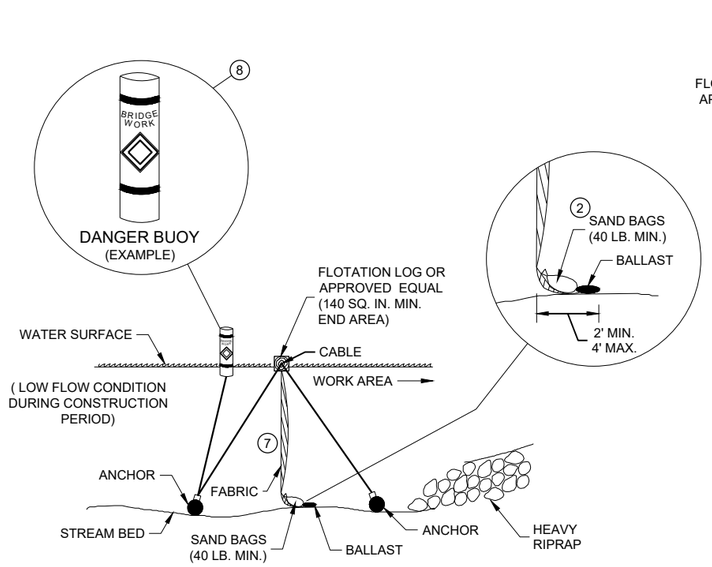


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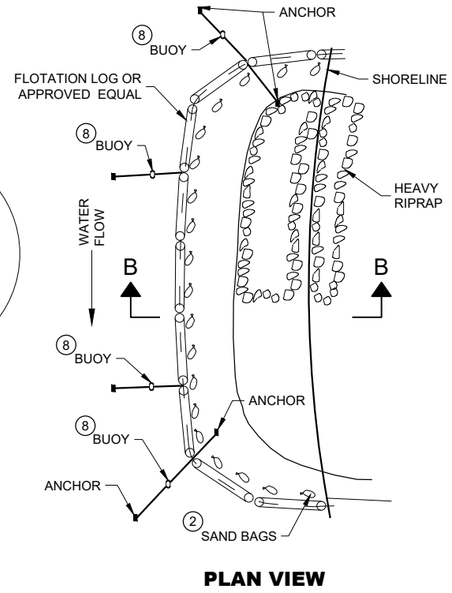
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

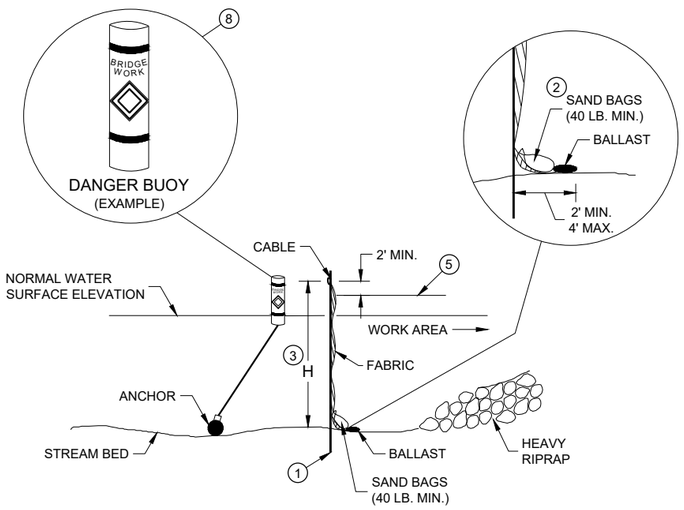



**SECTION B - B**

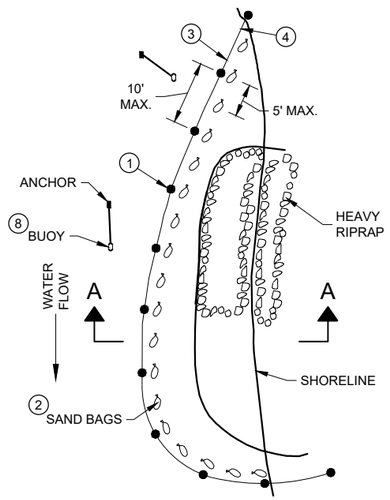



**PLAN VIEW**

**TURBIDITY BARRIER - FLOAT ALTERNATIVE**
**CAUTION - SEE NOTE 6**




**SECTION A - A**




**PLAN VIEW**

**TURBIDITY BARRIER - STANDARD POST INSTALLATION**

**TURBIDITY BARRIER PLACEMENT DETAILS**

## GENERAL NOTES

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

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

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

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

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

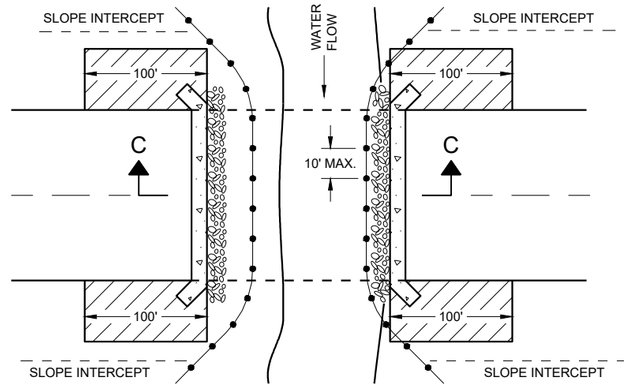
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

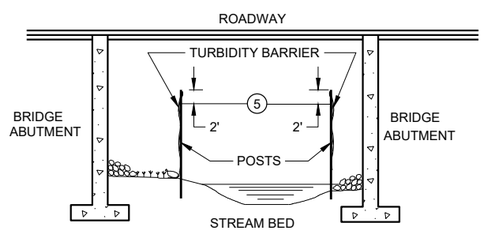
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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




**PLAN VIEW**




**SECTION C - C**

**TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES**

**TURBIDITY BARRIER**

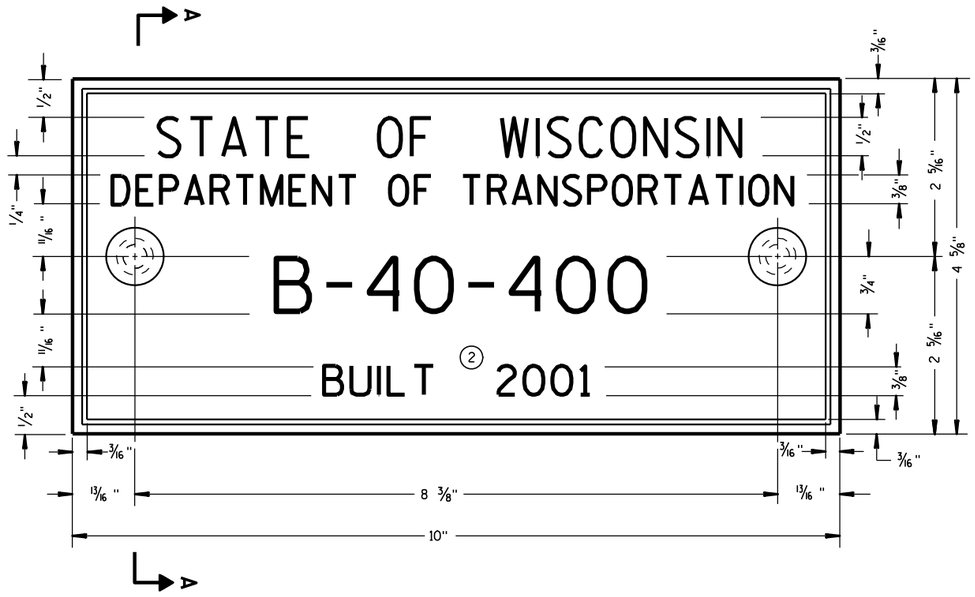
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA




6
SDD 08E11 - 02




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

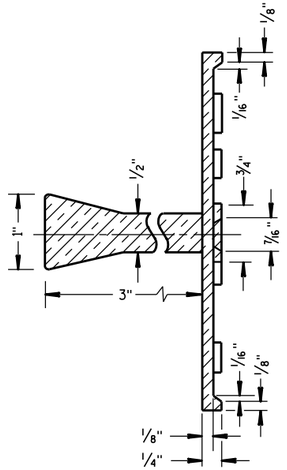
## GENERAL NOTES

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.

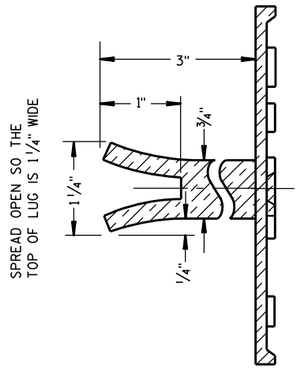
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

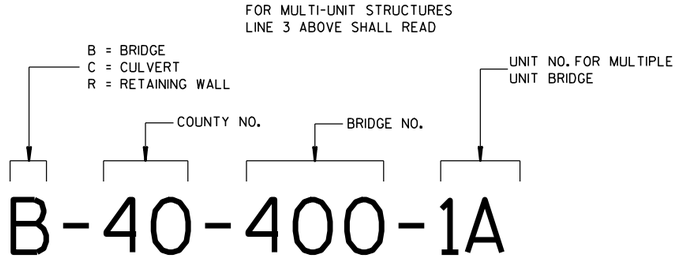
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



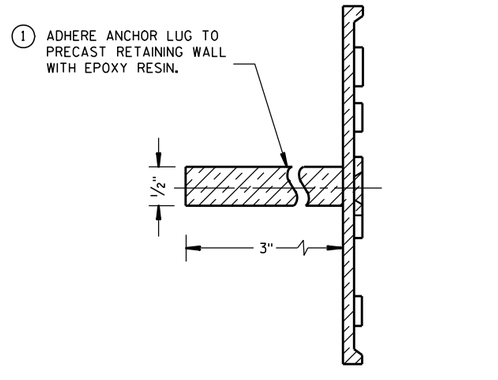

**SECTION A-A**




**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 DEVELOPMENT ENGINEER

FHWA

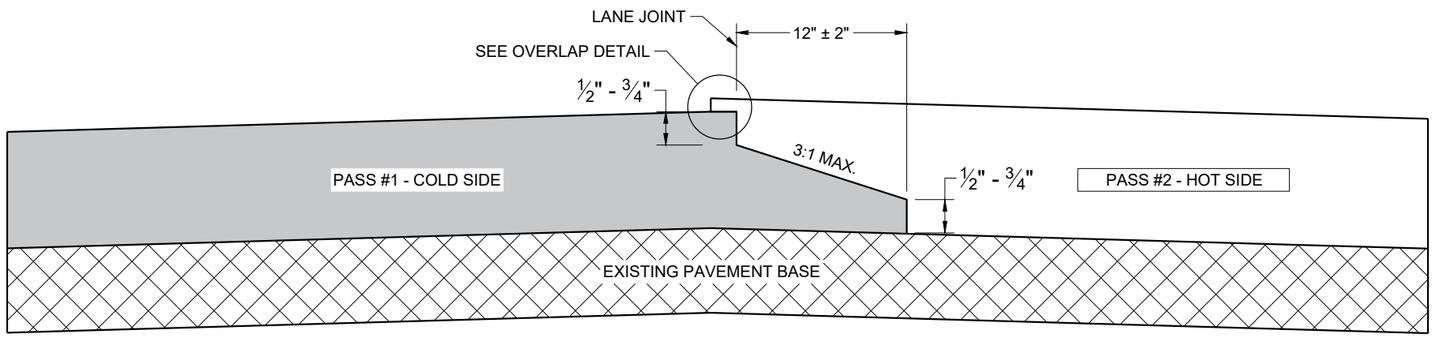




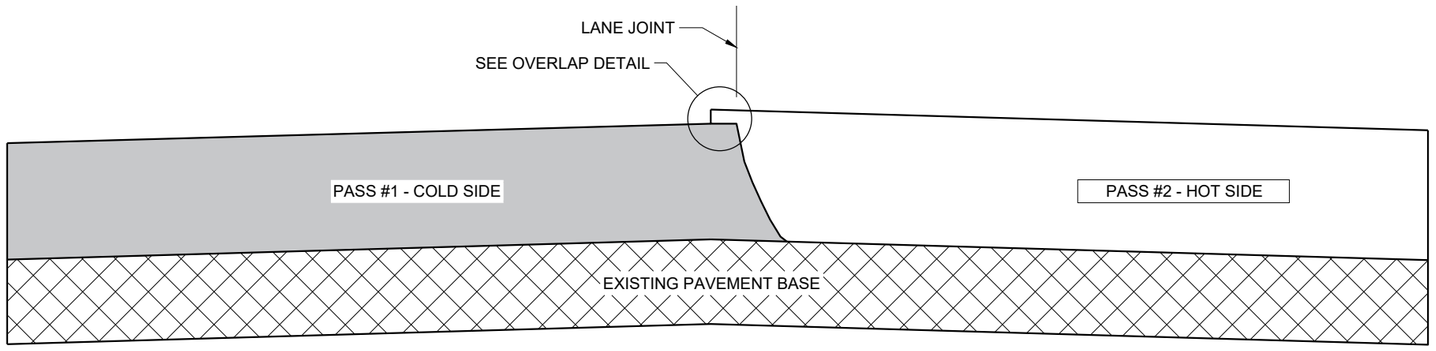


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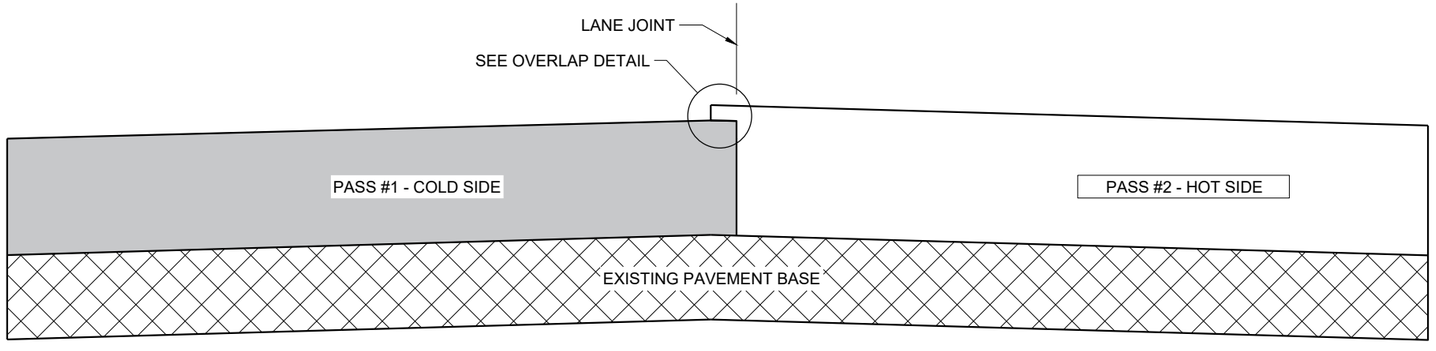
S.D.D. 12 A 3-10




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




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




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

## GENERAL NOTES

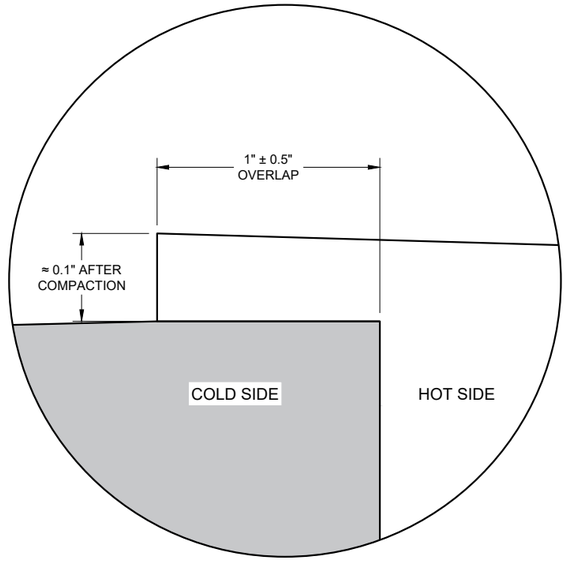
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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




**OVERLAP DETAIL (TYPICAL)**

6

6

SDD 13C19 - 03

SDD 13C19 - 03

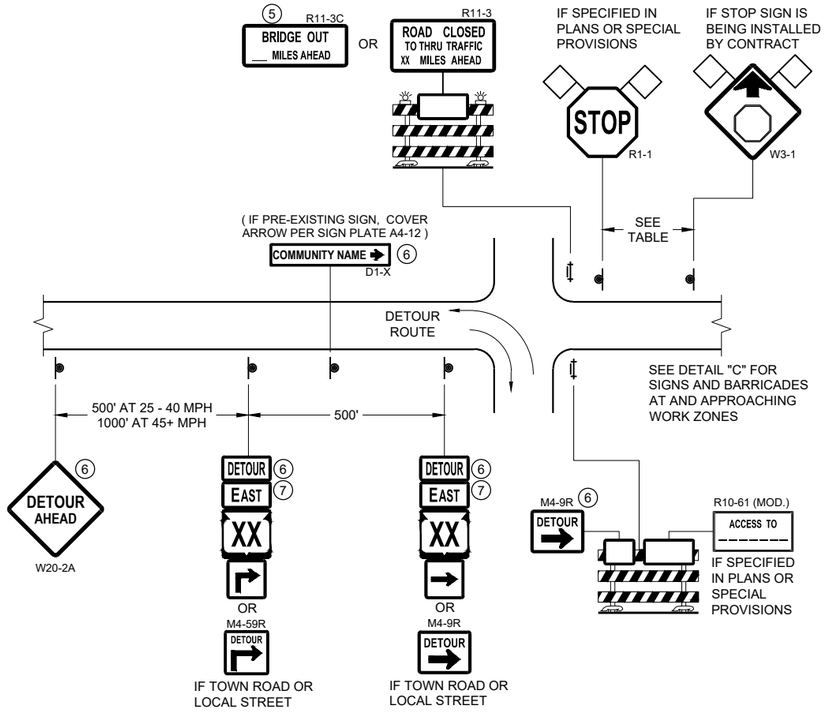
**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

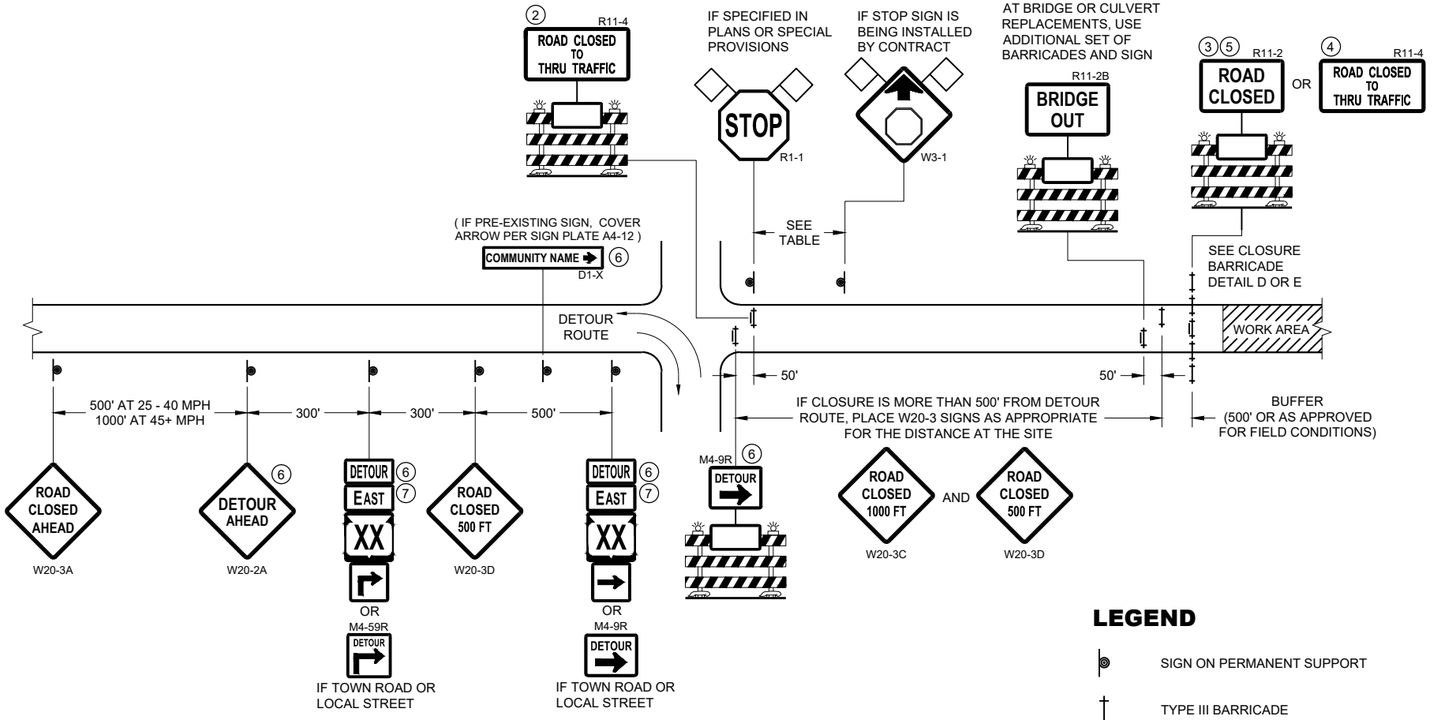
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



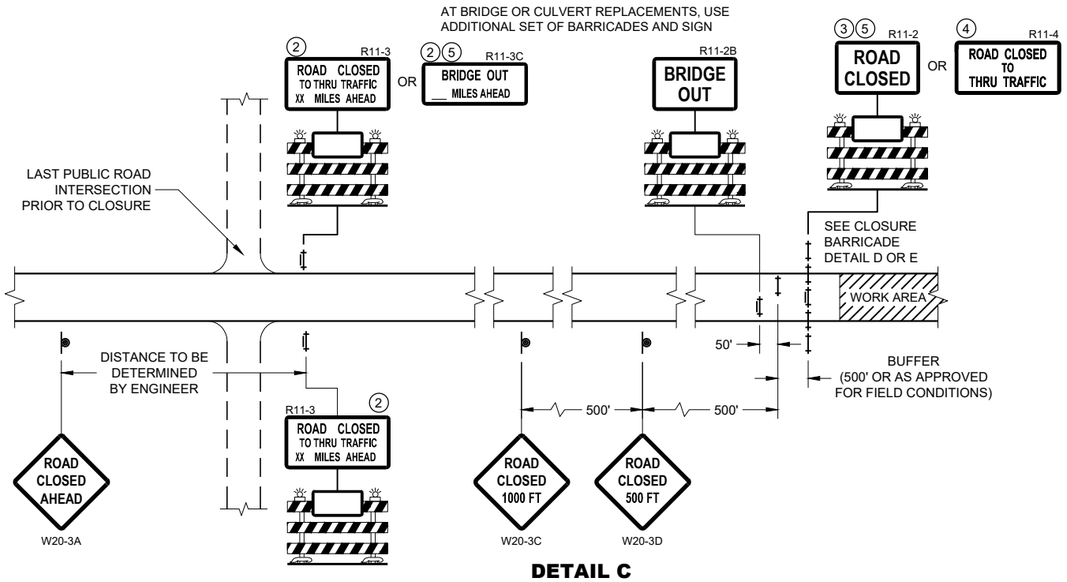

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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




## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

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




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

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

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

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

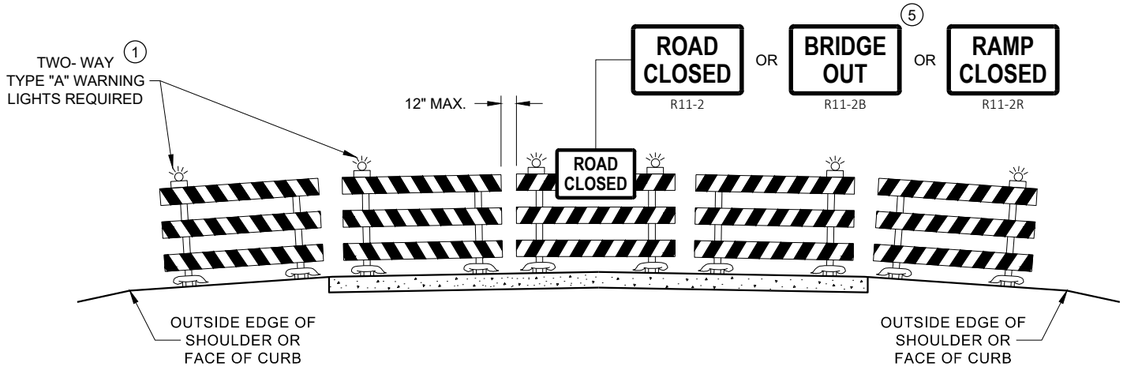
FHWA



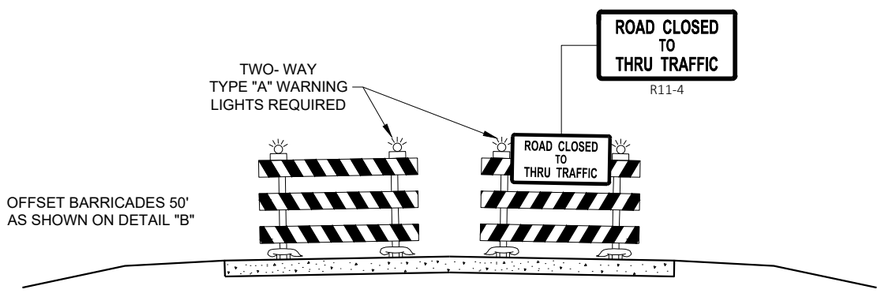
6

SDD 15C02 - 09a

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**

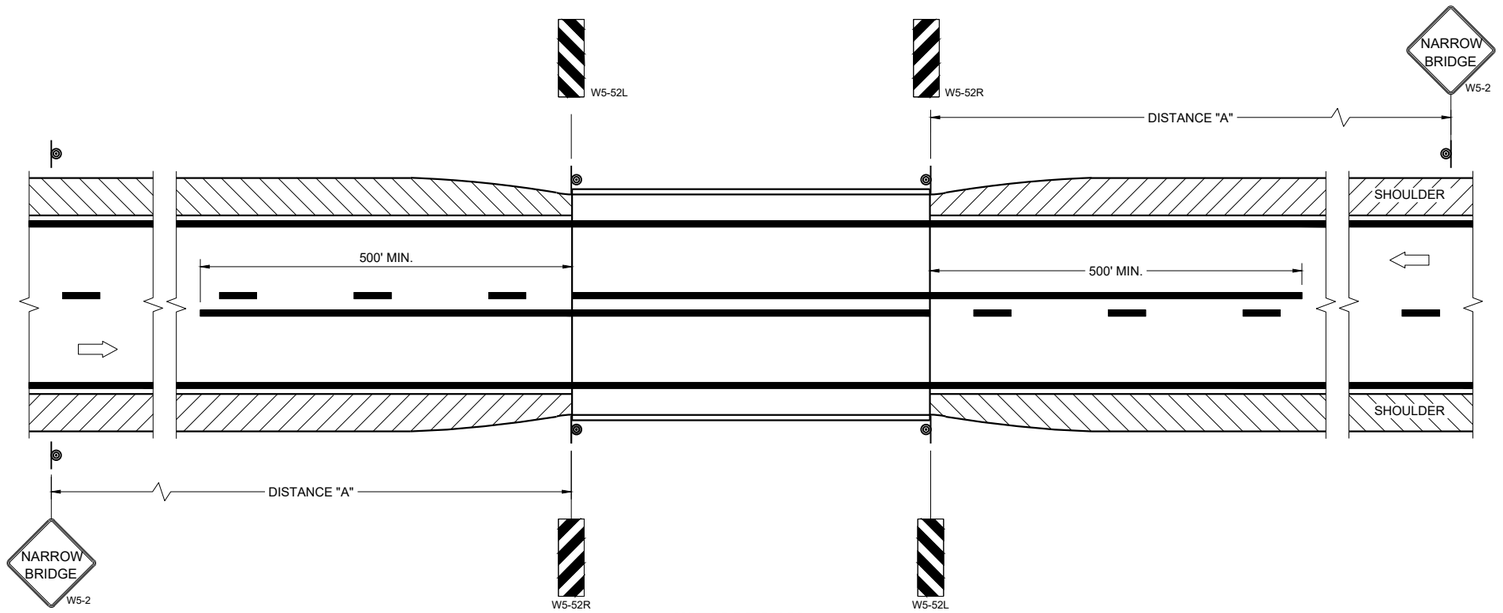
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



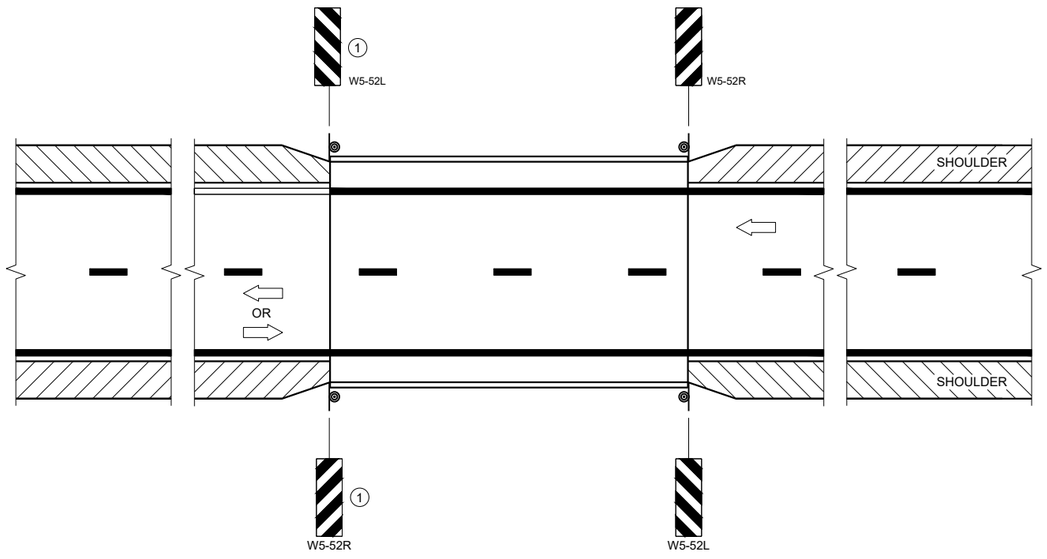

6


SDD 15C02 - 09b




## 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' |

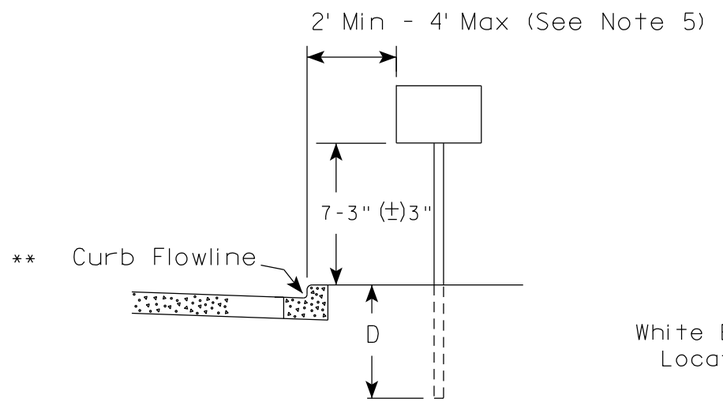
**SIGNING AND MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

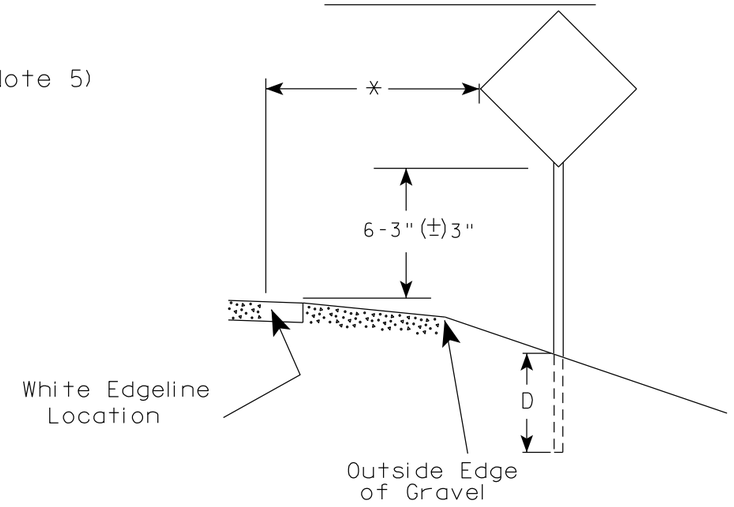
APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

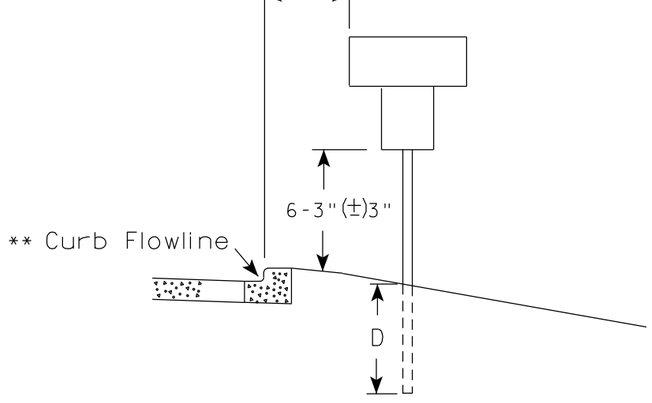

6
SDD 15C06-12

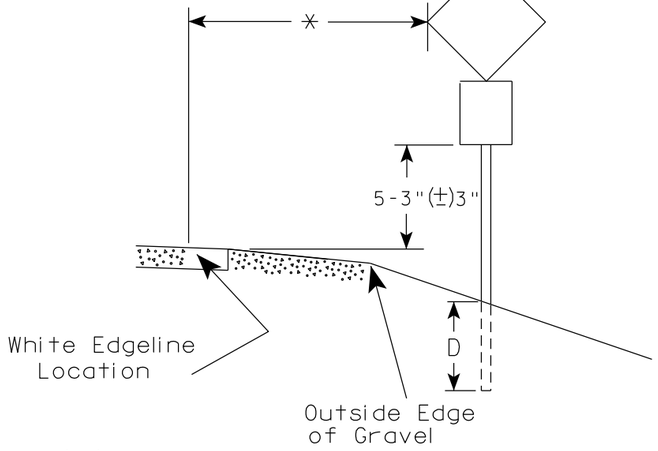
## URBAN AREA




## 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.

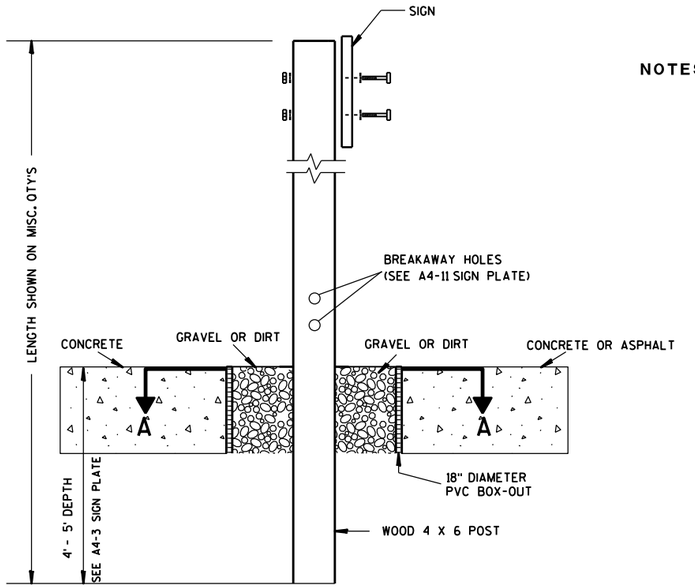
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

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

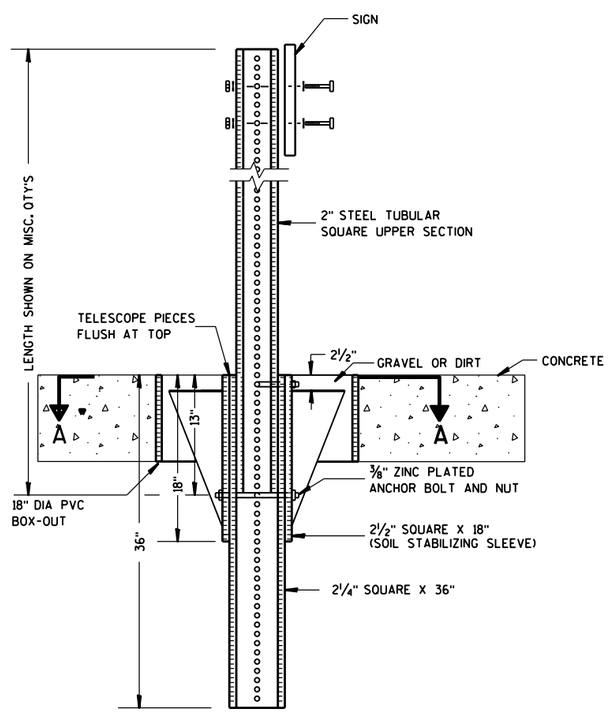
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 21 | E |
|---|---|---|---|---|---|




**ELEVATION VIEW**

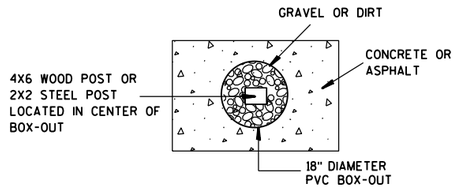
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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




**ELEVATION VIEW**

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




**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

# SIGN POST BOX-OUTS A4-3B

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

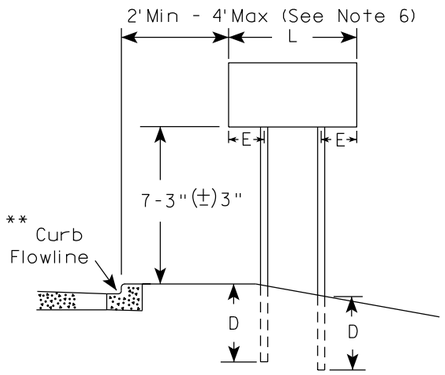
DATE 1/27/14 PLATE NO. A4-3B.1

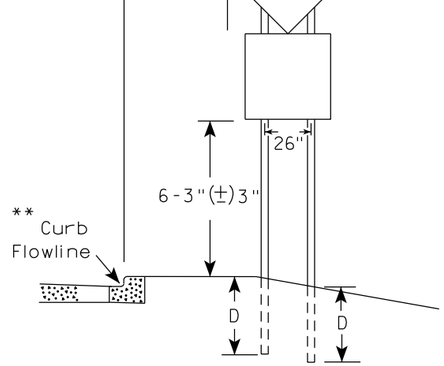


| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

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

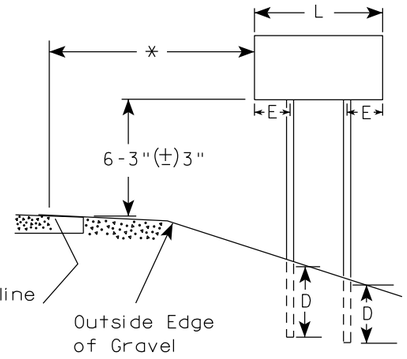
## URBAN AREA

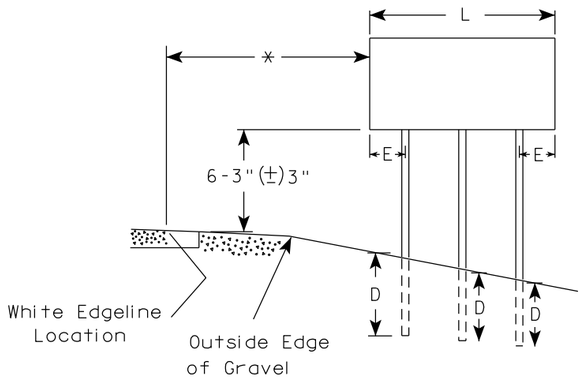


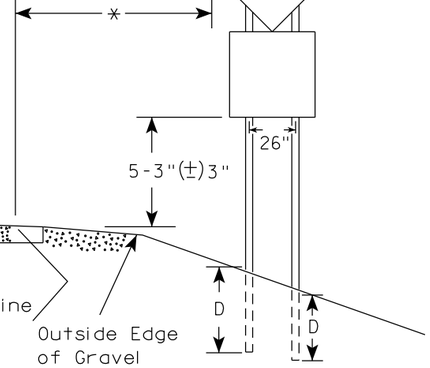




## 48" DIAMOND WARNING SIGN

## RURAL AREA (See Note 3)




## 48" DIAMOND WARNING SIGN

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

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

## GENERAL NOTES

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

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

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

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

## POST EMBEDMENT DEPTH

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

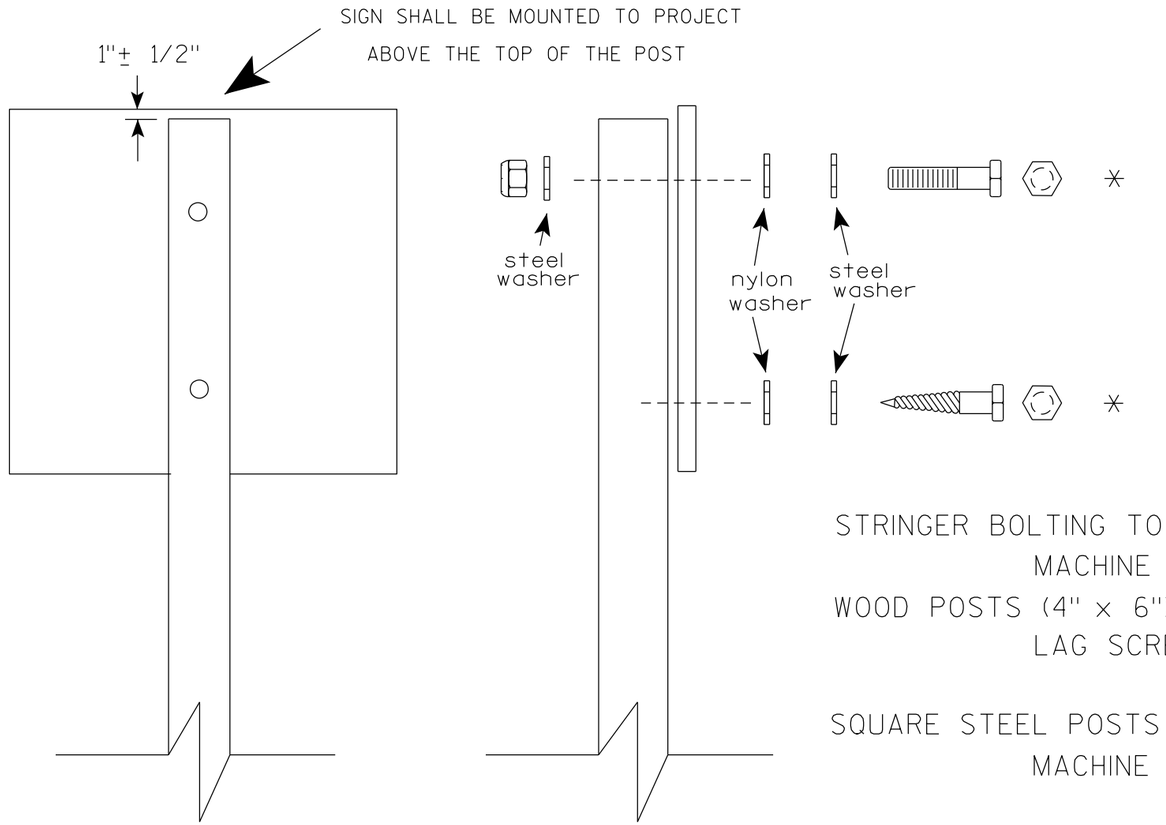
## TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

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

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 23 | E |
|---|---|---|---|---|---|




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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

# ATTACHMENT OF SIGNS TO POSTS

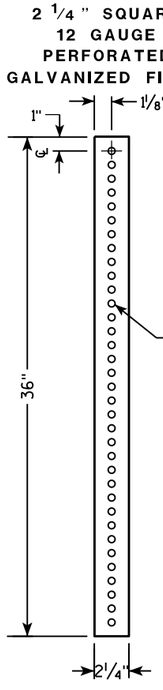
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

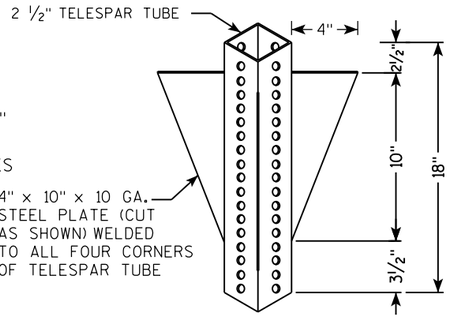
DATE 4/1/2020 PLATE NO. A4-8.9

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

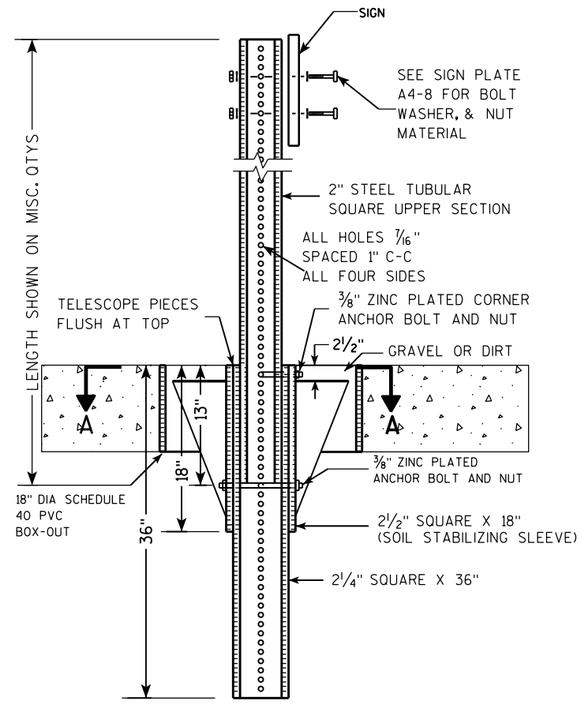
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



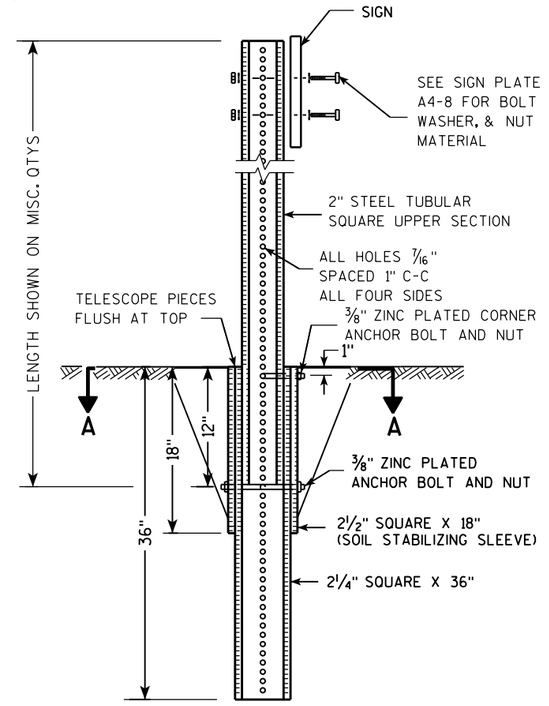

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

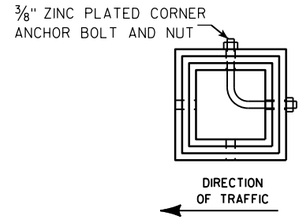



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




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




**SECTION A-A**

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

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

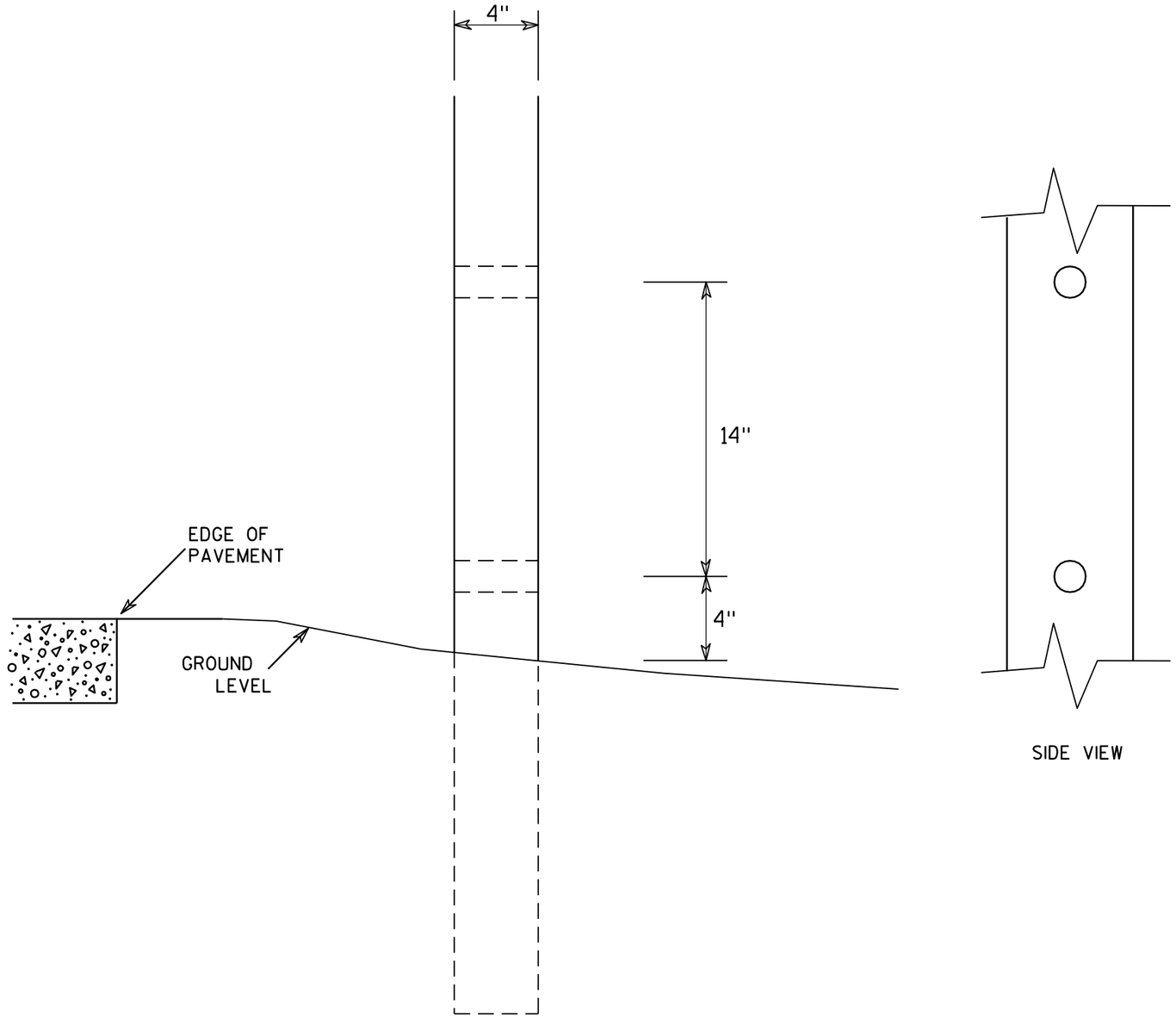
TUBULAR STEEL
SIGN POST
A4-9

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/05/15 PLATE 25 A4-9.9

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






SIDE VIEW

GENERAL NOTES

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

# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

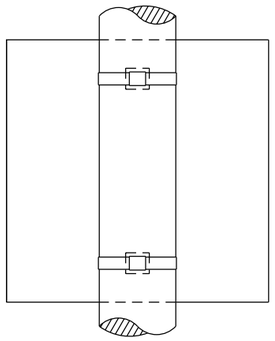
APPROVED Chester J Spang
for State Traffic Engineer

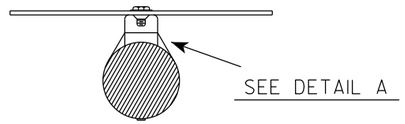
DATE 3/27/97 PLATE NO. A4-11.2

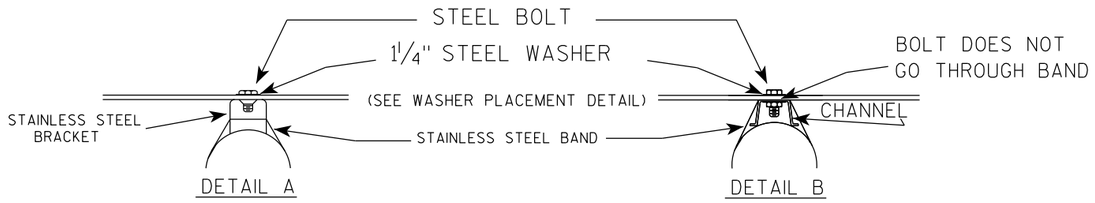
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 26 | E |
|---|---|---|---|---|---|

# BANDING

SINGLE SIGN



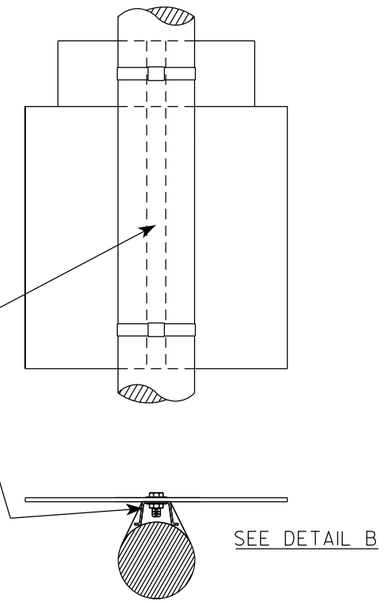


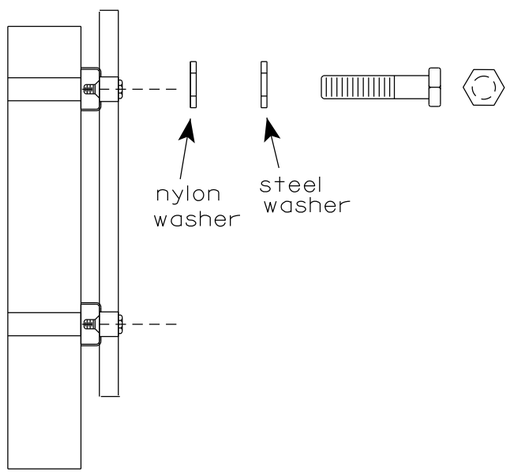

## GENERAL NOTES

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

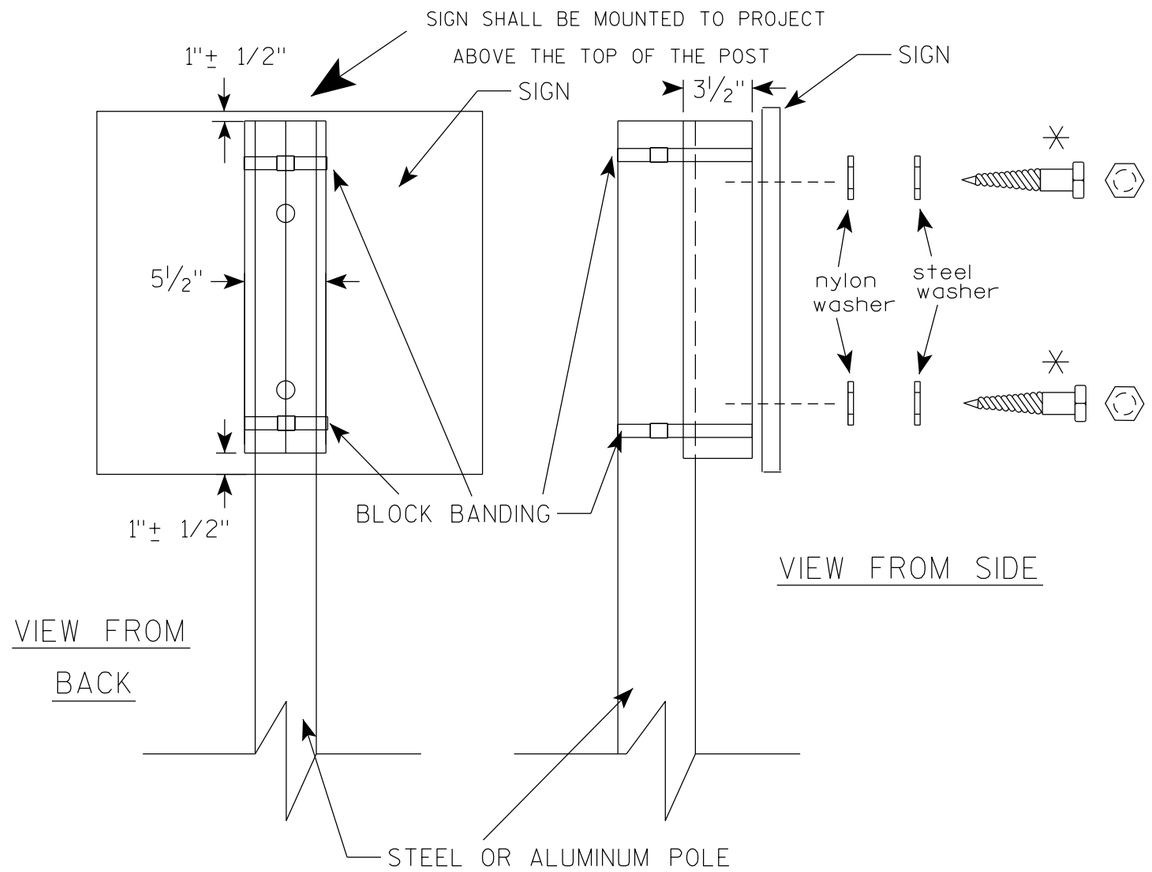
*WISCONSIN DEPT OF TRANSPORTATION*

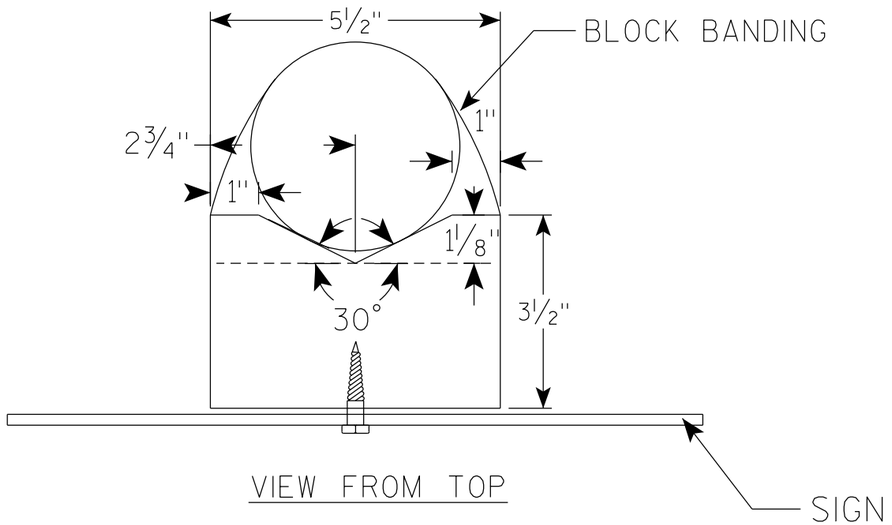
APPROVED Matthew R Rauch
for State Traffic Engineer

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

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 27 | 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 )

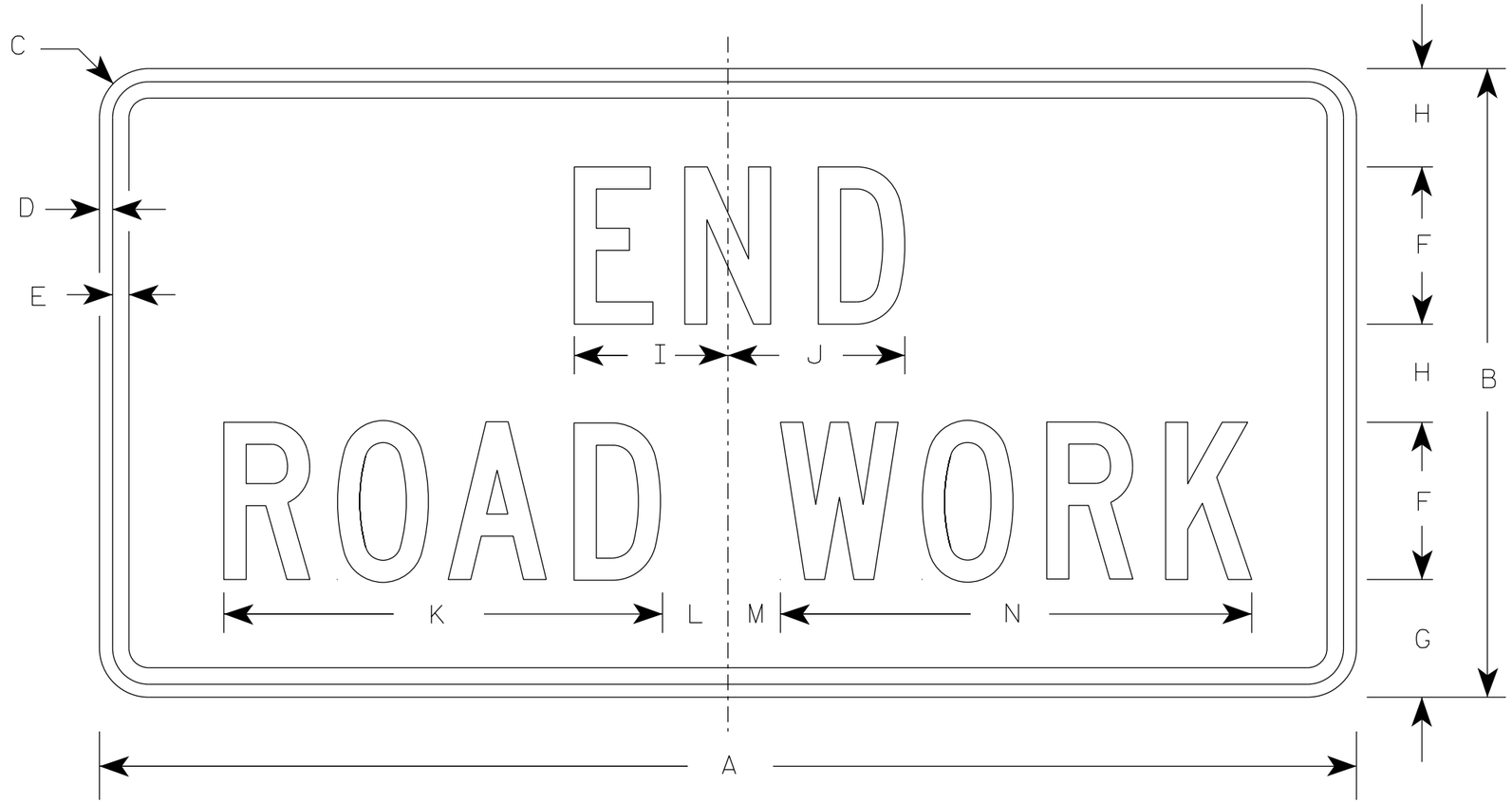
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 28 E




G20-2A

NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 4 | 3 3/4 | 2 1/2 | 4 1/8 | 4 1/8 | 11 1/8 | 2 | 1 | 12 1/8 | | | | | | | | | | | | | 4.5 |
| 2 | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |
| 2M | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |
| 3 | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |
| 4 | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |
| 5 | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

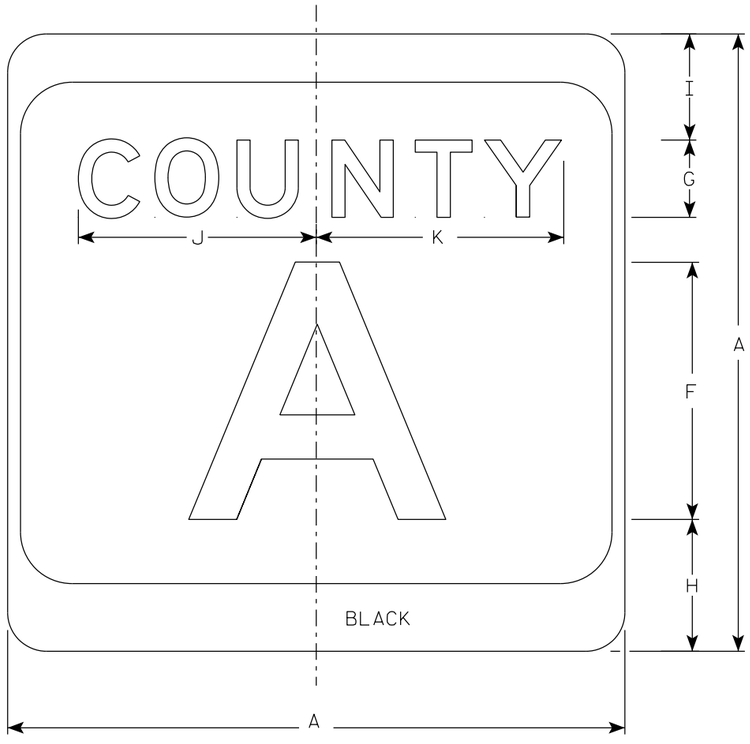
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

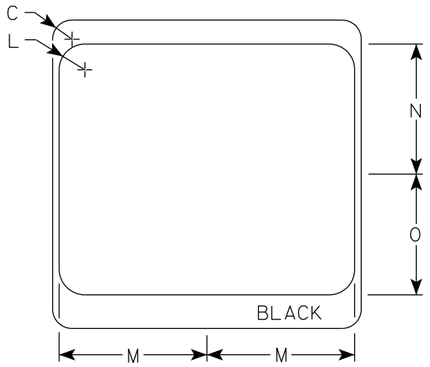
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 29 E




7

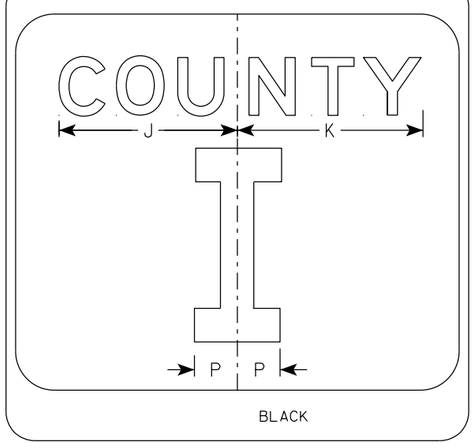


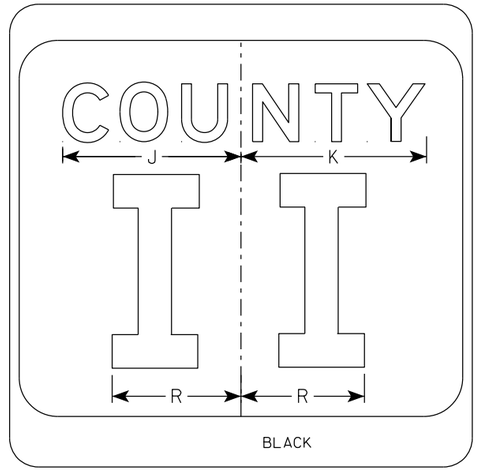

M1-5A




NOTES

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




| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 24 | | 1 1/2 | | | 10 | 3 | 5 1/8 | 4 1/8 | 9 1/4 | 9 5/8 | 2 | 11 1/2 | 10 1/8 | 9 3/8 | 2 1/4 | | 6 5/8 | | | | | | | | | 4.0 |
| 2M | 24 | | 1 1/2 | | | 10 | 3 | 5 1/8 | 4 1/8 | 9 1/4 | 9 5/8 | 2 | 11 1/2 | 10 1/8 | 9 3/8 | 2 1/4 | | 6 5/8 | | | | | | | | | 4.0 |
| 3 | 36 | | 2 1/4 | | | 16 | 4 | 7 5/8 | 5 5/8 | 12 1/4 | 12 7/8 | 3 | 17 1/8 | 15 1/4 | 14 | 3 3/8 | | 10 | | | | | | | | | 9.0 |
| 4 | 36 | | 2 1/4 | | | 16 | 4 | 7 5/8 | 5 5/8 | 12 1/4 | 12 7/8 | 3 | 17 1/8 | 15 1/4 | 14 | 3 3/8 | | 10 | | | | | | | | | 9.0 |
| 5 | 36 | | 2 1/4 | | | 16 | 4 | 7 5/8 | 5 5/8 | 12 1/4 | 12 7/8 | 3 | 17 1/8 | 15 1/4 | 14 | 3 3/8 | | 10 | | | | | | | | | 9.0 |

CTH MARKER
M1-5A FOR ASSEMBLIES

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

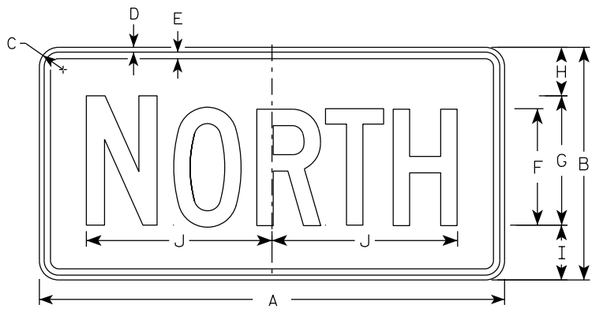
DATE 11/8/2022 PLATE NO. M1-5A.9

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

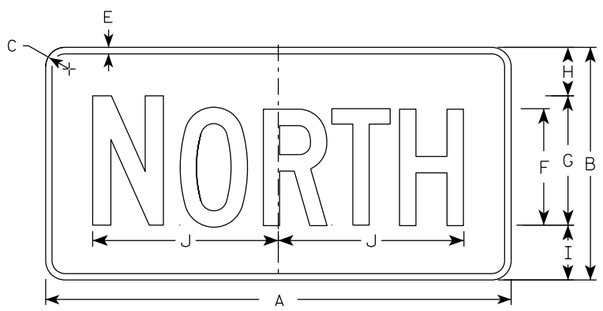


FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M15A.dgn PLOT DATE : 8-NOV 2022 8:26 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

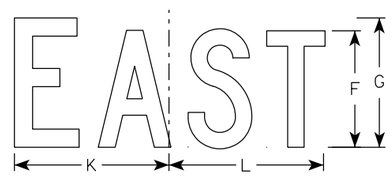

7




M3-1
MM3-1
MP3-1



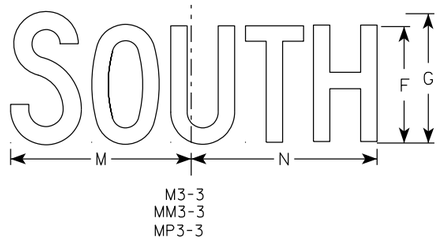

MB3-1
MK3-1
MN3-1



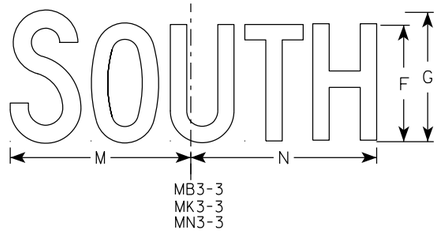

M3-2
MM3-2
MP3-2



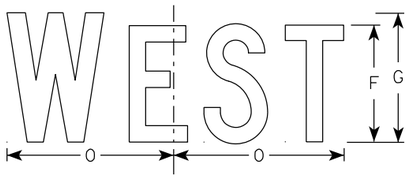

MB3-2
MK3-2
MN3-2



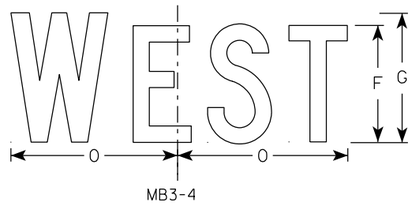

M3-3
MM3-3
MP3-3




MB3-3
MK3-3
MN3-3




M3-4
MM3-4
MP3-4




MB3-4
MK3-4
MN3-4

## NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 7 | 2 1/4 | 2 3/4 | 10 1/4 | 7 7/8 | 8 3/8 | 10 1/4 | 9 3/4 | 8 3/4 | | | | | | | | | | | | 2.00 |
| 2M | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 7 | 2 1/4 | 2 3/4 | 10 1/4 | 7 7/8 | 8 3/8 | 10 1/4 | 9 3/4 | 8 3/4 | | | | | | | | | | | | 2.00 |
| 3 | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12 | 12 1/8 | 14 | 14 1/8 | 13 | | | | | | | | | | | | 4.5 |
| 4 | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12 | 12 1/8 | 14 | 14 1/8 | 13 | | | | | | | | | | | | 4.5 |
| 5 | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12 | 12 1/8 | 14 | 14 1/8 | 13 | | | | | | | | | | | | 4.5 |

STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

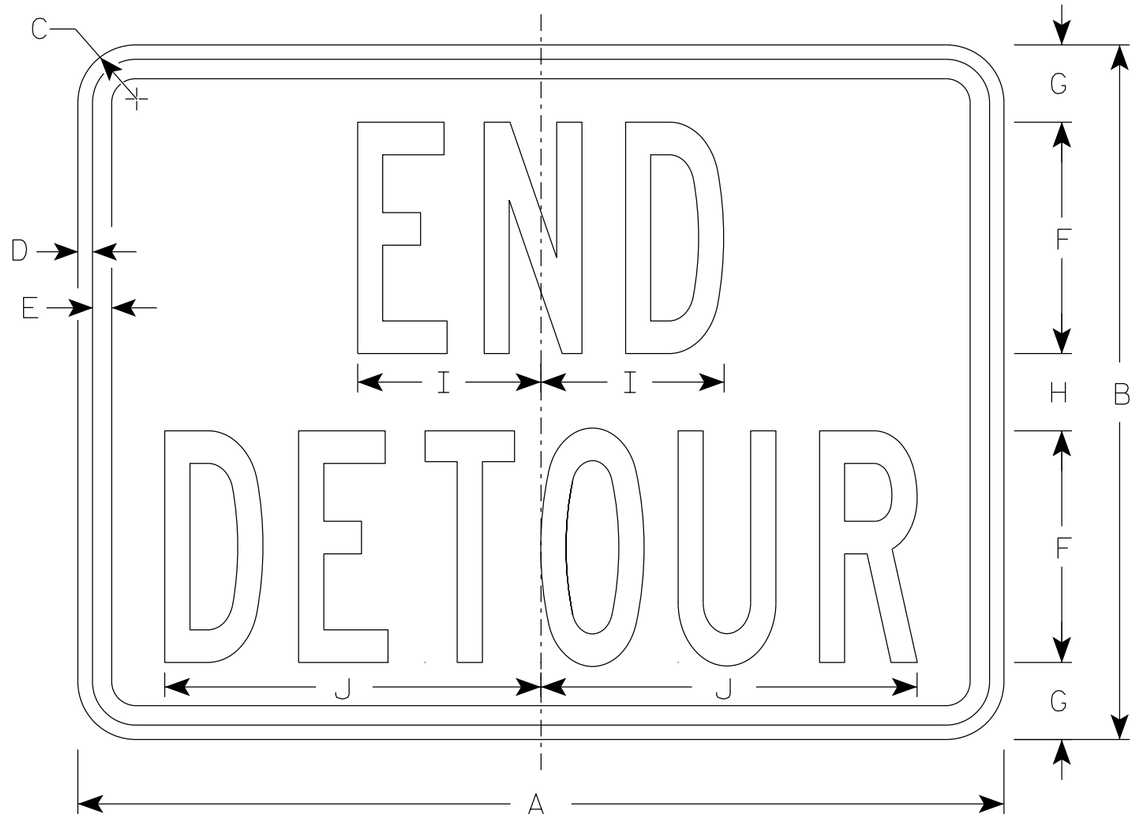
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 31 | E




7




M4-8A

NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 24 | 18 | 1 ½ | ⅜ | ½ | 6 | 2 | 2 | 4 ¾ | 9 ¾ | | | | | | | | | | | | | | | | | 3.0 |
| 2M | 24 | 18 | 1 ½ | ⅜ | ½ | 6 | 2 | 2 | 4 ¾ | 9 ¾ | | | | | | | | | | | | | | | | | 3.0 |
| 3 | 30 | 24 | 1 ½ | ⅜ | ½ | 8 | 2 ½ | 3 | 6 ¾ | 13 | | | | | | | | | | | | | | | | | 5.0 |
| 4 | 30 | 24 | 1 ½ | ⅜ | ½ | 8 | 2 ½ | 3 | 6 ¾ | 13 | | | | | | | | | | | | | | | | | 5.0 |
| 5 | 30 | 24 | 1 ½ | ⅜ | ½ | 8 | 2 ½ | 3 | 6 ¾ | 13 | | | | | | | | | | | | | | | | | 5.0 |

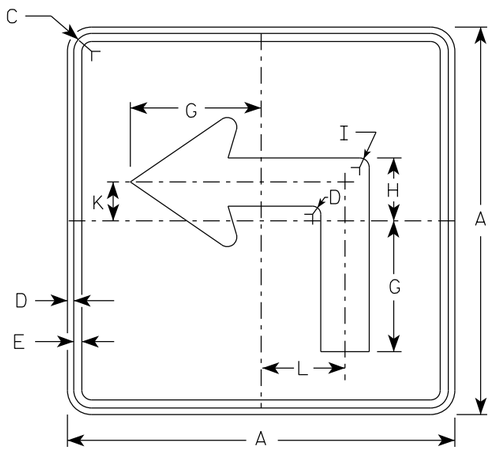
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

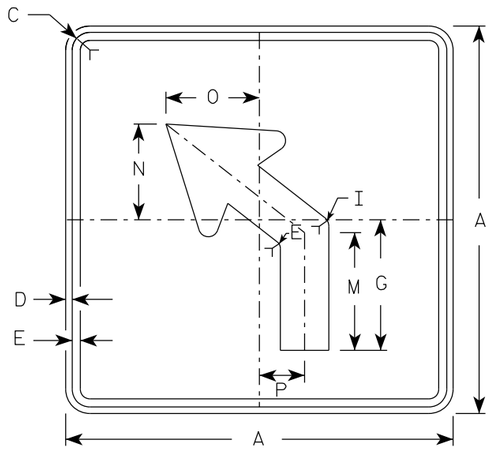
APPROVED Matthew R Rauch
for State Traffic Engineer

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

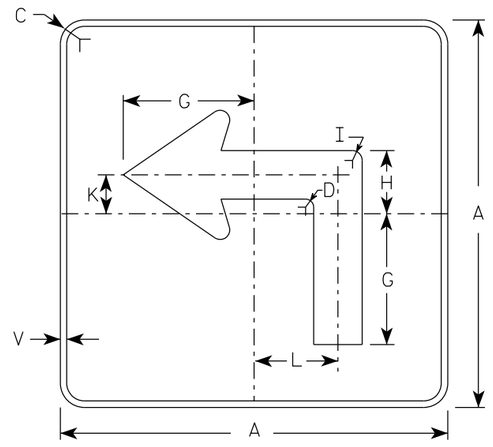
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 32 | E



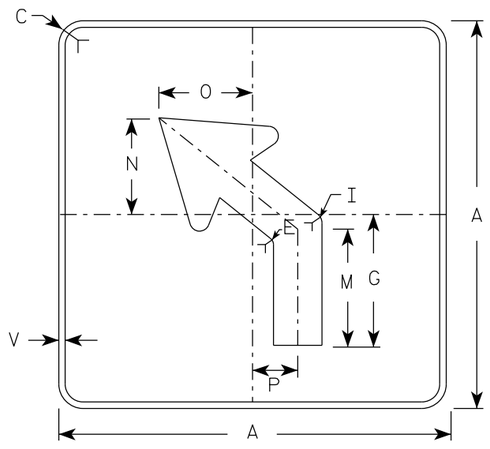

M5-1L
MM5-1L
MO5-1L
MP5-1L




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




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

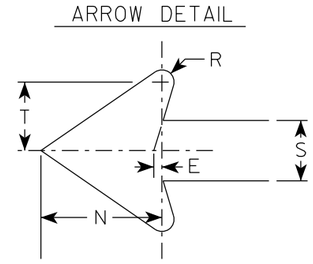



MB5-2L
MK5-2L
MN5-2L
MR5-2L

## NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL




| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 21 | | 1 1/2 | 3/8 | 3/8 | | 7 | 3 3/8 | 5/8 | | 2 1/8 | 4 1/2 | 6 3/8 | 5 1/4 | 5 | 2 1/2 | | 1/2 | 2 5/8 | 3 | | 1/2 | | | | | 3.06 |
| 2M | 21 | | 1 1/2 | 3/8 | 3/8 | | 7 | 3 3/8 | 5/8 | | 2 1/8 | 4 1/2 | 6 3/8 | 5 1/4 | 5 | 2 1/2 | | 1/2 | 2 5/8 | 3 | | 1/2 | | | | | 3.06 |
| 3 | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 1/8 | 4 7/8 | 7/8 | | 3 | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 | | 3/4 | 3 3/4 | 4 1/4 | | 1/2 | | | | | 6.25 |
| 4 | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 1/8 | 4 7/8 | 7/8 | | 3 | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 | | 3/4 | 3 3/4 | 4 1/4 | | 1/2 | | | | | 6.25 |
| 5 | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 1/8 | 4 7/8 | 7/8 | | 3 | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 | | 3/4 | 3 3/4 | 4 1/4 | | 1/2 | | | | | 6.25 |

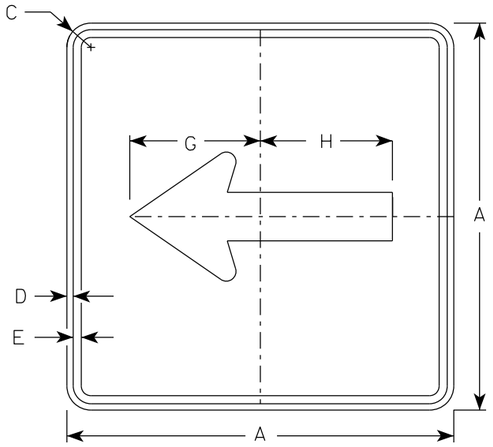
# STANDARD SIGN
# M5-1 & M5-2

*WISCONSIN DEPT OF TRANSPORTATION*

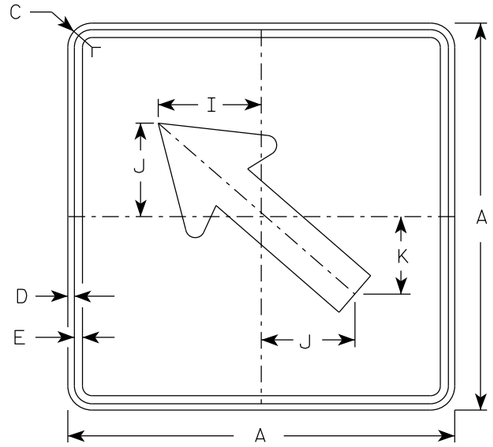
APPROVED Matthew R Rauch
for State Traffic Engineer

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

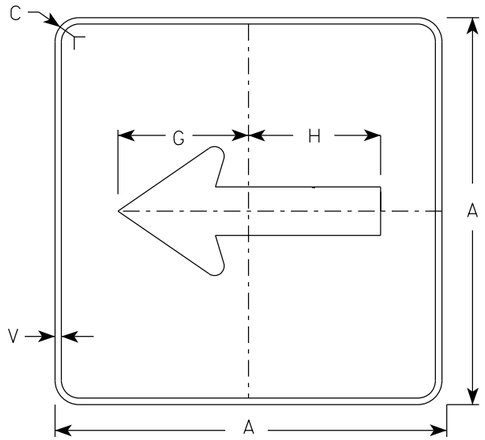
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 33 | E



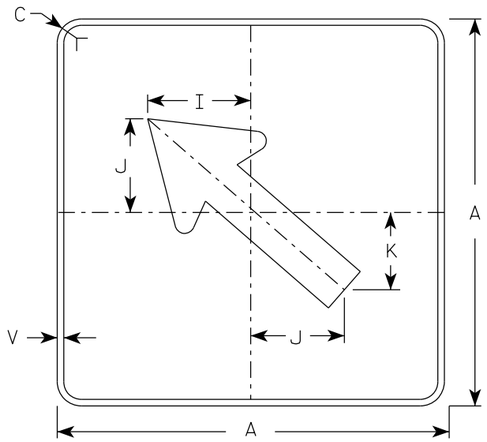

M6-1
MM6-1
MO6-1
MP6-1




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




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

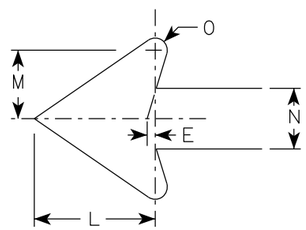



MB6-2
MK6-2
MN6-2
MR6-2

NOTES

1. Signs are Type II - Type H Reflective except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow

ARROW DETAIL




| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 21 | | 1 1/2 | 3/8 | 3/8 | | 7 1/2 | 7 1/8 | 5 5/8 | 5 | 4 1/4 | 5 1/4 | 3 | 2 5/8 | 1/2 | | | | | | | 1/2 | | | | | 3.06 |
| 2M | 21 | | 1 1/2 | 3/8 | 3/8 | | 7 1/2 | 7 1/8 | 5 5/8 | 5 | 4 1/4 | 5 1/4 | 3 | 2 5/8 | 1/2 | | | | | | | 1/2 | | | | | 3.06 |
| 3 | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 3/4 | 10 1/4 | 8 | 7 1/4 | 6 | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | | 1/2 | | | | | 6.25 |
| 4 | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 3/4 | 10 1/4 | 8 | 7 1/4 | 6 | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | | 1/2 | | | | | 6.25 |
| 5 | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 3/4 | 10 1/4 | 8 | 7 1/4 | 6 | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | | 1/2 | | | | | 6.25 |

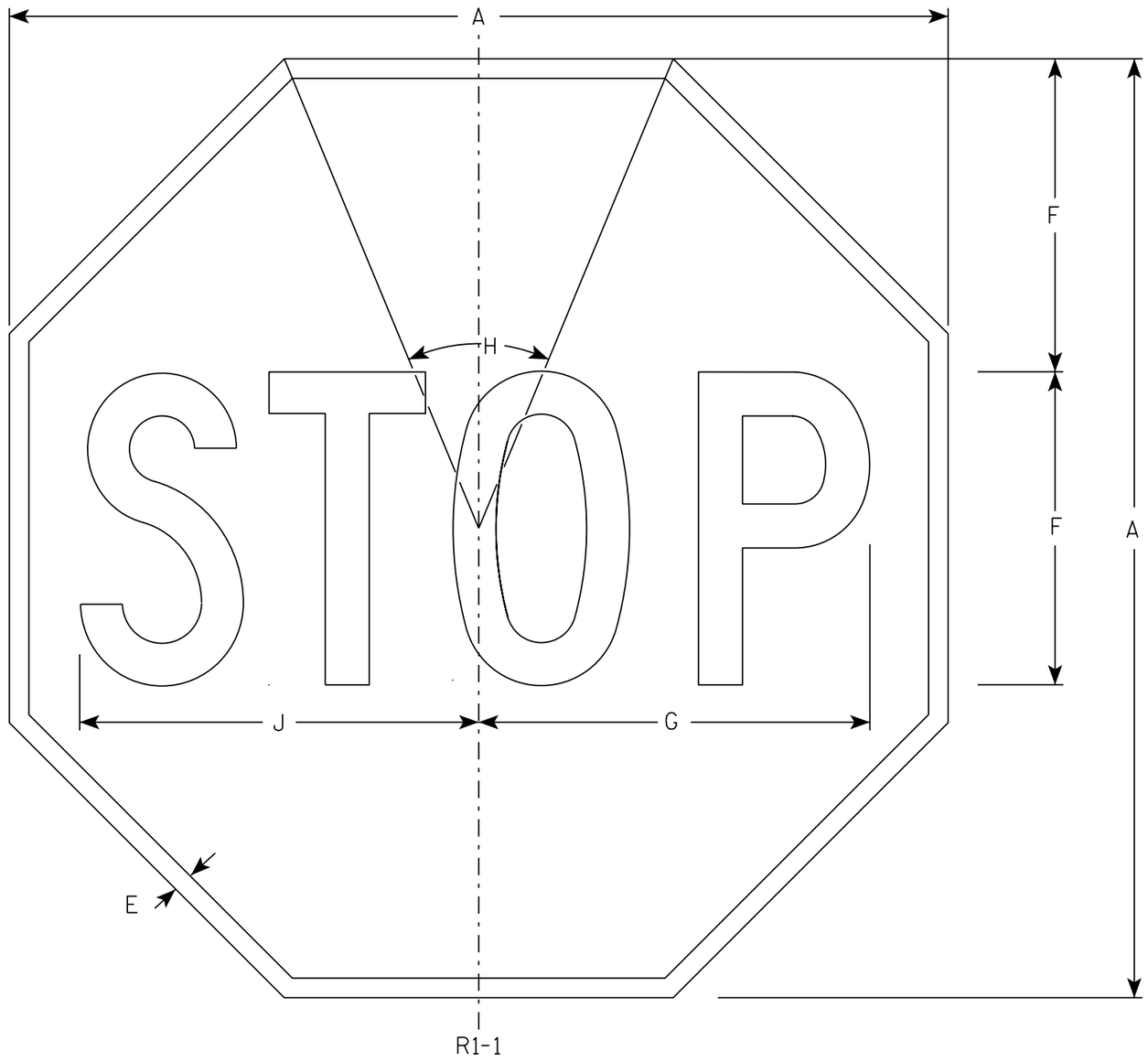
# STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 34 | E




NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | | | | 5/8 | 10 | 12 1/2 | 45° | | 12 3/4 | | | | | | | | | | | | | | | | | 5.18 |
| 2S | 30 | | | | 5/8 | 10 | 12 1/2 | 45° | | 12 3/4 | | | | | | | | | | | | | | | | | 5.18 |
| 2M | 36 | | | | 3/4 | 12 | 15 | 45° | | 15 3/8 | | | | | | | | | | | | | | | | | 7.46 |
| 3 | 36 | | | | 3/4 | 12 | 15 | 45° | | 15 3/8 | | | | | | | | | | | | | | | | | 7.46 |
| 4 | 48 | | | | 1 | 16 | 20 | 45° | | 20 1/2 | | | | | | | | | | | | | | | | | 13.25 |
| 5 | 48 | | | | 1 | 16 | 20 | 45° | | 20 1/2 | | | | | | | | | | | | | | | | | 13.25 |
| 6 | 18 | | | | 3/8 | 6 | 7 3/4 | 45° | | 7 3/4 | | | | | | | | | | | | | | | | | 1.86 |
| 7 | 12 | | | | 1/4 | 4 | 5 | 45° | | 5 1/8 | | | | | | | | | | | | | | | | | 0.78 |

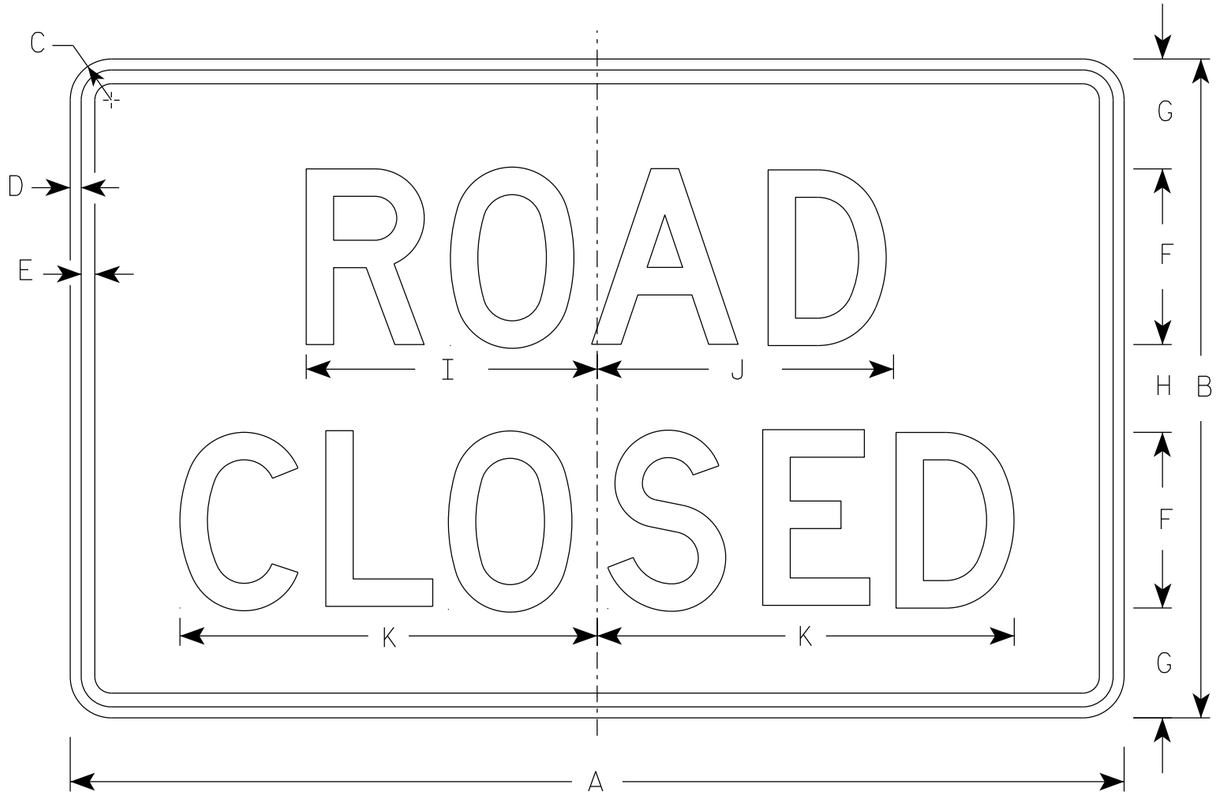
# STANDARD SIGN
# R1-1

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

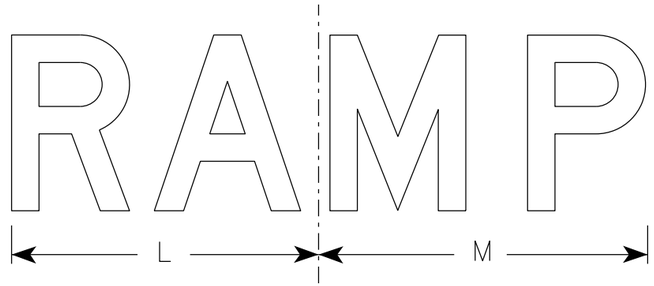
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 35 | E |
|---|---|---|---|---|---|



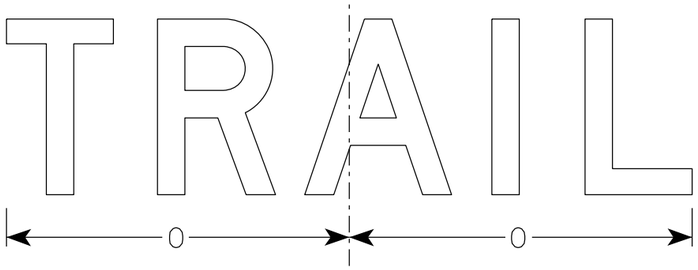

R11-2

NOTES

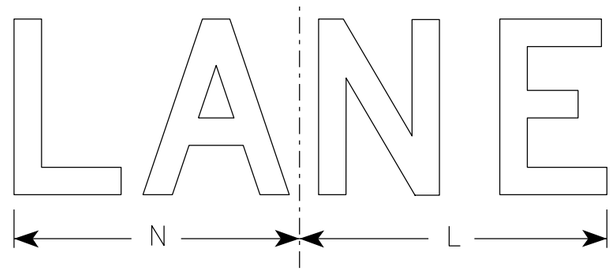
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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




R11-2R




R11-2T




R11-2L

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 2M | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 3 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 4 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 5 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-2.12

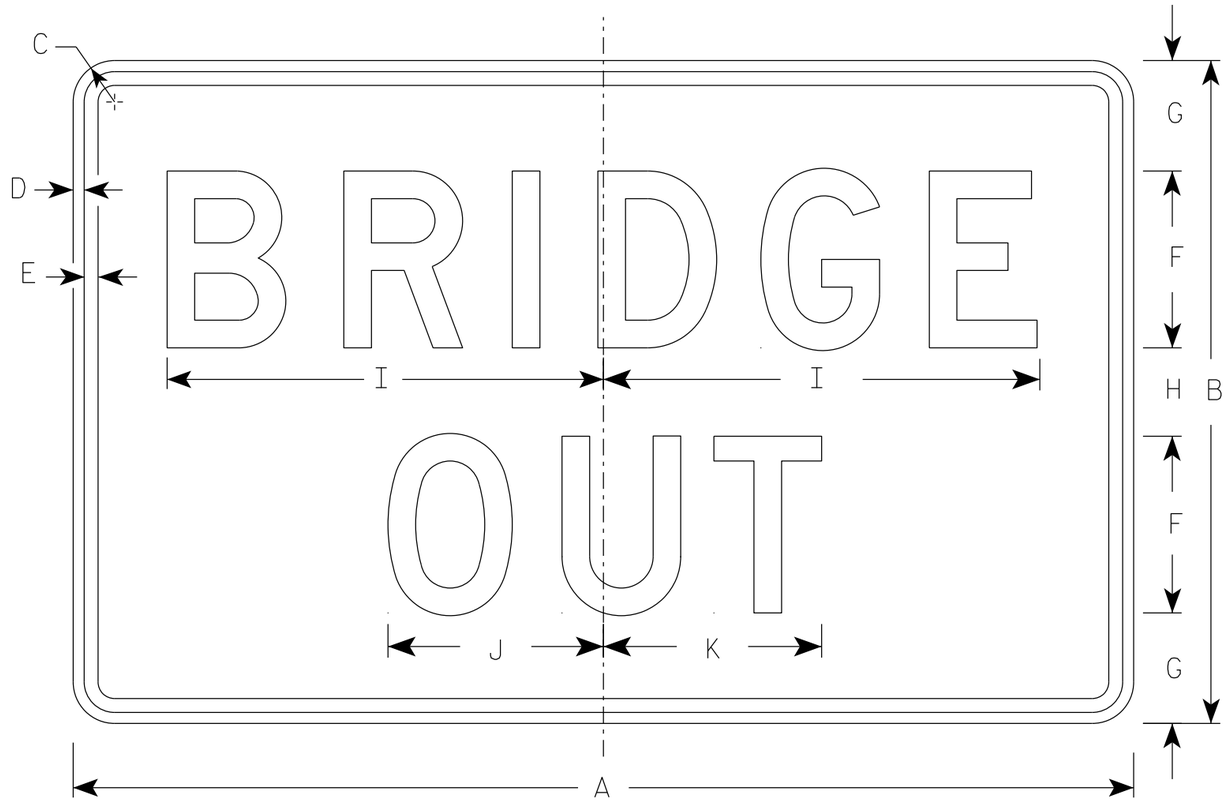
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 5-FEB 2024 2:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



7




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

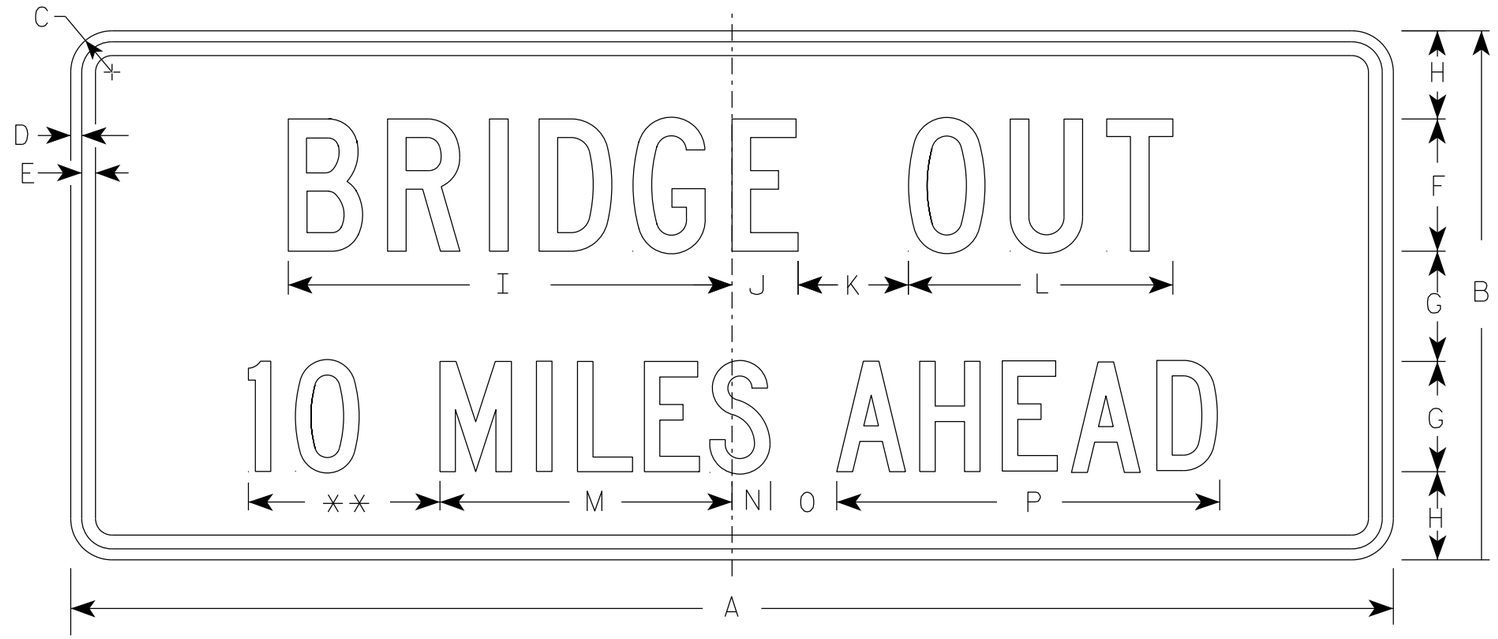
DATE 2/5/24 PLATE NO. R11-2B.3

PROJECT NO:

SHEET NO: 37 E

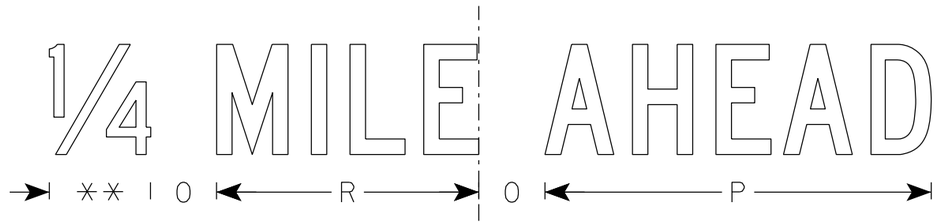
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.




R11-3C

** See Note 5




| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | 15 | 1 1/2 | 1/2 | 5/8 | 4 | 3 | 2 1/2 | 13 1/4 | 2 1/4 | 3 | 8 | 8 | 1 1/2 | 2 | 10 3/4 | | 7 1/8 | | | | | | | | | 3.75 |
| 2S | 60 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 20 1/8 | 3 | 5 | 12 | 13 1/4 | 1 3/4 | 3 | 17 3/8 | | 11 7/8 | | | | | | | | | 10.0 |
| 2M | 60 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 20 1/8 | 3 | 5 | 12 | 13 1/4 | 1 3/4 | 3 | 17 3/8 | | 11 7/8 | | | | | | | | | 10.0 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
R11-3C

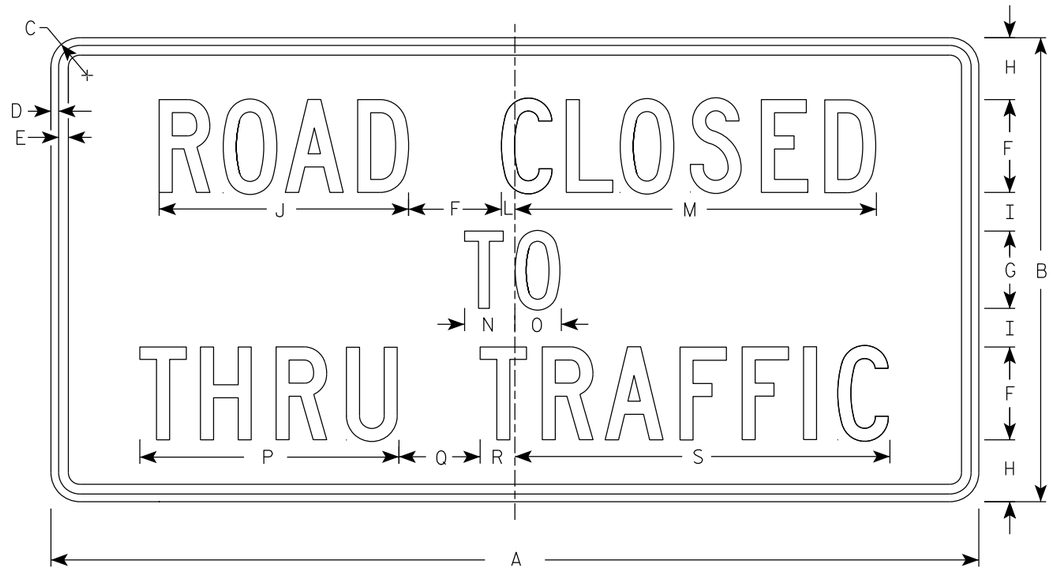
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 38 E




R11-4

NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 | | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 | | | | | | | | 12.5 |
| 2M | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 | | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 | | | | | | | | 12.5 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

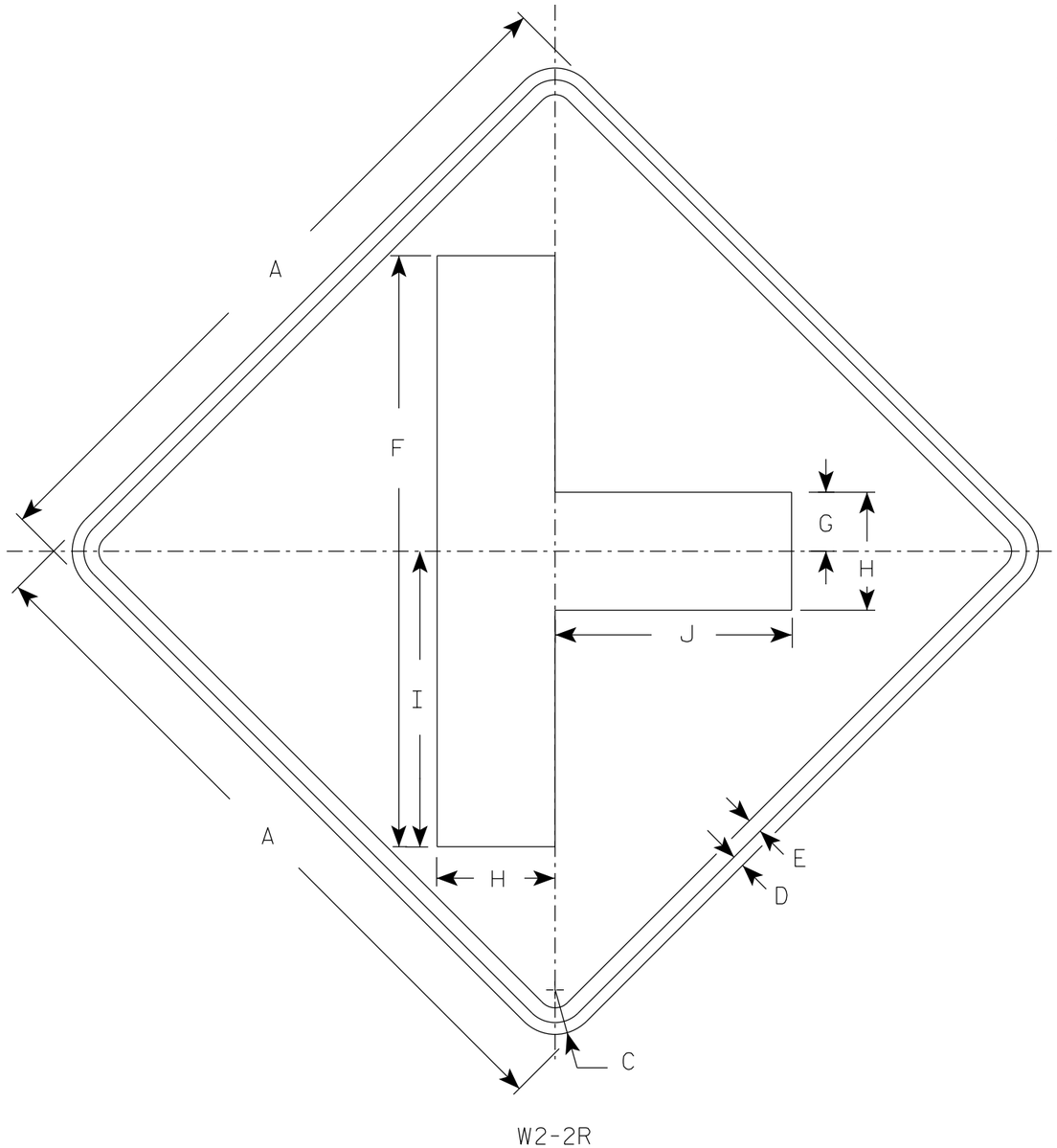
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 39 | E




W2-2R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W2-2L same as W2-2R but is rotated 180° when mounted.

| 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 | 20 | 2 | 4 | 10 | 8 | | | | | | | | | | | | | | | | | 4.0 |
| 2S | 30 | | 1 7/8 | 1/2 | 5/8 | 25 | 2 1/2 | 5 | 12 1/2 | 10 | | | | | | | | | | | | | | | | | 6.25 |
| 2M | 30 | | 1 7/8 | 1/2 | 5/8 | 25 | 2 1/2 | 5 | 12 1/2 | 10 | | | | | | | | | | | | | | | | | 6.25 |
| 3 | 36 | | 2 1/4 | 5/8 | 3/4 | 30 | 3 | 6 | 15 | 12 | | | | | | | | | | | | | | | | | 9.0 |
| 4 | 48 | | 3 | 3/4 | 1 | 40 | 4 | 8 | 20 | 16 | | | | | | | | | | | | | | | | | 16.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

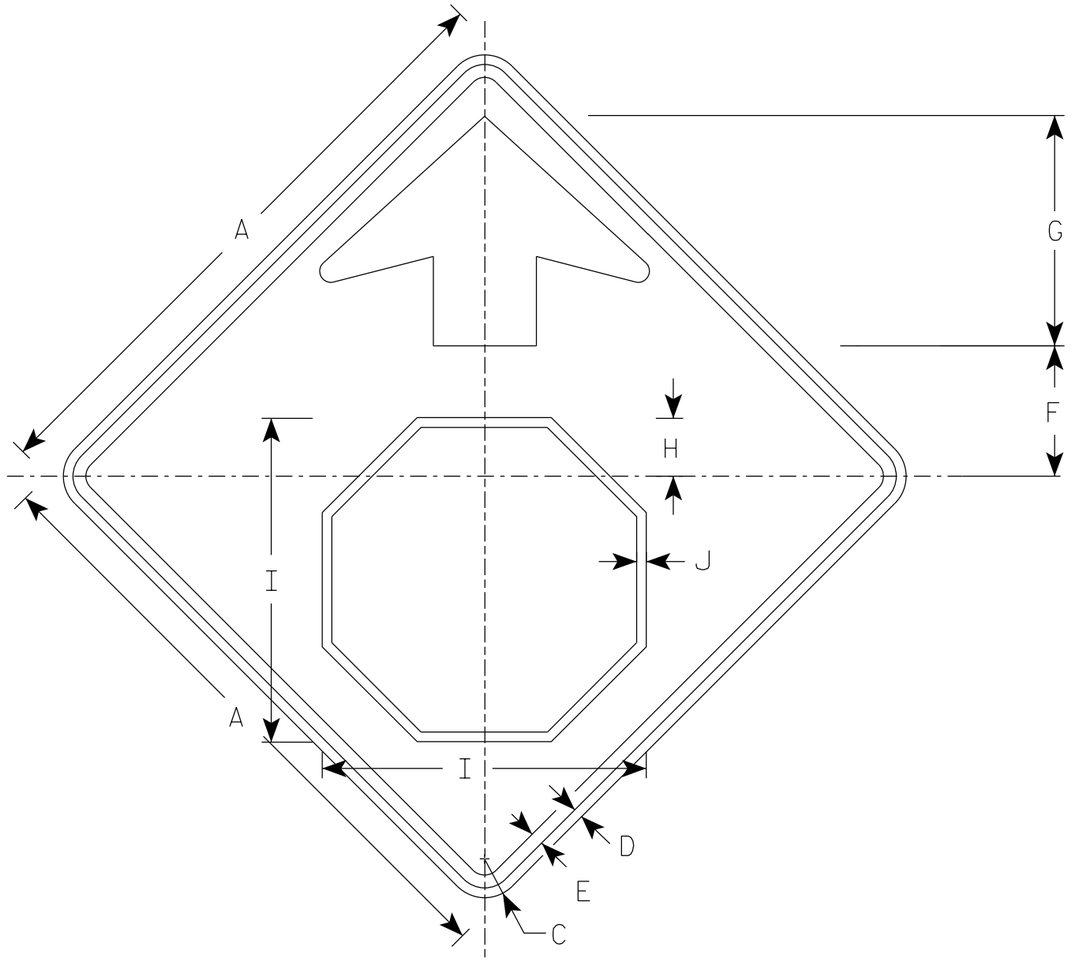
STANDARD SIGN
W2-2 L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/16/2023 PLATE NO. W2-2.8

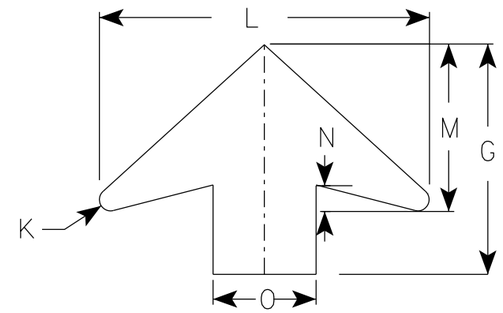
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 40 | E




W3-1

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Arrow & Border - Black
   Stop Symbol - White Border on Red Background




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | | 1 7/8 | 1/2 | 5/8 | 6 1/4 | 11 1/4 | 2 7/8 | 15 3/4 | 1/2 | 1/2 | 16 | 8 | 1 1/4 | 5 | | | | | | | | | | | | 6.25 |
| 2S | 36 | | 2 1/4 | 5/8 | 3/4 | 7 1/2 | 13 1/2 | 3 1/2 | 19 | 5/8 | 5/8 | 19 1/4 | 9 3/4 | 1 5/8 | 6 | | | | | | | | | | | | 9.0 |
| 2M | 36 | | 2 1/4 | 5/8 | 3/4 | 7 1/2 | 13 1/2 | 3 1/2 | 19 | 5/8 | 5/8 | 19 1/4 | 9 3/4 | 1 5/8 | 6 | | | | | | | | | | | | 9.0 |
| 3 | 36 | | 2 1/4 | 5/8 | 3/4 | 7 1/2 | 13 1/2 | 3 1/2 | 19 | 5/8 | 5/8 | 19 1/4 | 9 3/4 | 1 5/8 | 6 | | | | | | | | | | | | 9.0 |
| 4 | 48 | | 3 | 3/4 | 1 | 10 | 17 7/8 | 4 1/2 | 25 1/8 | 3/4 | 7/8 | 25 5/8 | 13 | 2 | 8 | | | | | | | | | | | | 16.0 |
| 5 | 48 | | 3 | 3/4 | 1 | 10 | 17 7/8 | 4 1/2 | 25 1/8 | 3/4 | 7/8 | 25 5/8 | 13 | 2 | 8 | | | | | | | | | | | | 16.0 |

STANDARD SIGN
W3-1

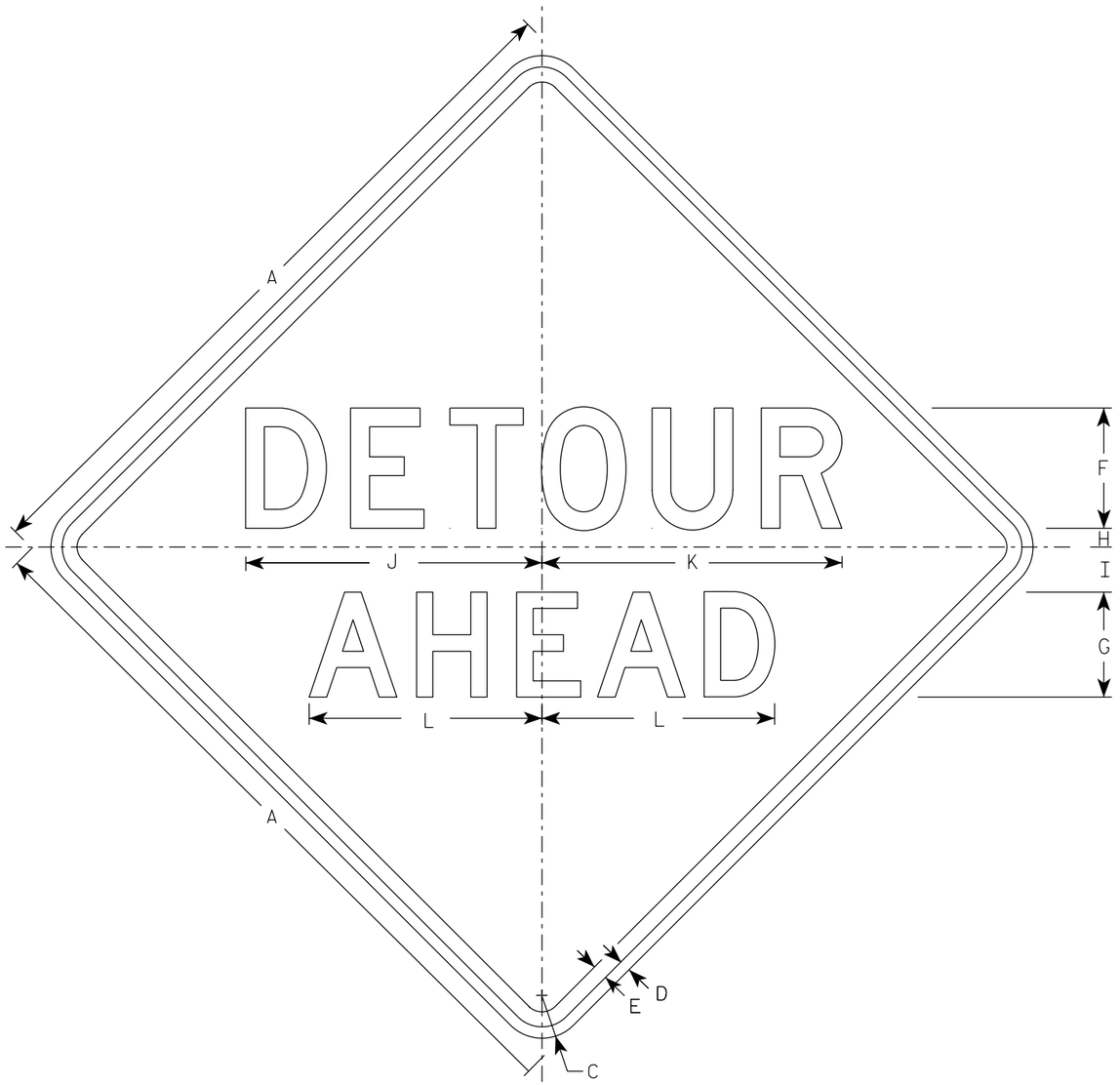
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

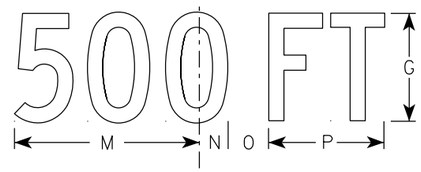
DATE 8/17/2023 PLATE NO. W3-1.13

PROJECT NO:

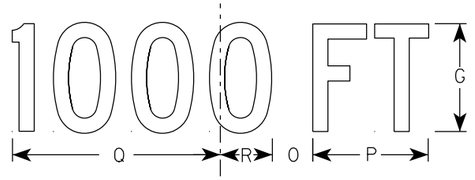
SHEET NO: 41 E



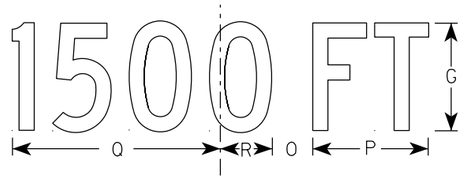

W20-2A



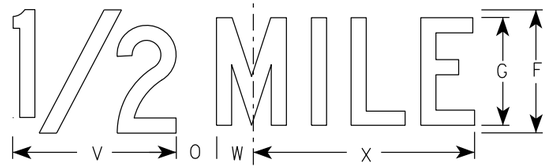

W20-2D



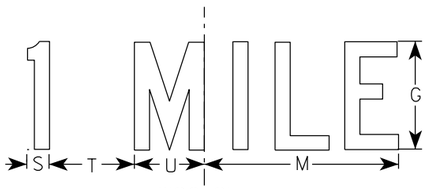

W20-2C




W20-2B




W20-2G




W20-2F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | | 2 1/4 | 5/8 | 3/4 | 6 | 5 | 1 | 2 1/4 | 14 3/4 | 15 | 11 5/8 | 9 | 1 3/8 | 1 7/8 | 5 5/8 | 10 1/8 | 2 1/2 | 1 1/8 | 4 1/2 | 3 1/2 | 8 | 1 3/4 | 10 3/4 | | | 9.0 |
| 2S | 48 | | 3 | 3/4 | 1 | 8 | 7 | 1 1/4 | 3 | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6 | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 | | | 16.0 |
| 2M | 48 | | 3 | 3/4 | 1 | 8 | 7 | 1 1/4 | 3 | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6 | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 | | | 16.0 |
| 3 | 48 | | 3 | 3/4 | 1 | 8 | 7 | 1 1/4 | 3 | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6 | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 | | | 16.0 |
| 4 | 48 | | 3 | 3/4 | 1 | 8 | 7 | 1 1/4 | 3 | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6 | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 | | | 16.0 |
| 5 | 48 | | 3 | 3/4 | 1 | 8 | 7 | 1 1/4 | 3 | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6 | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 | | | 16.0 |

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

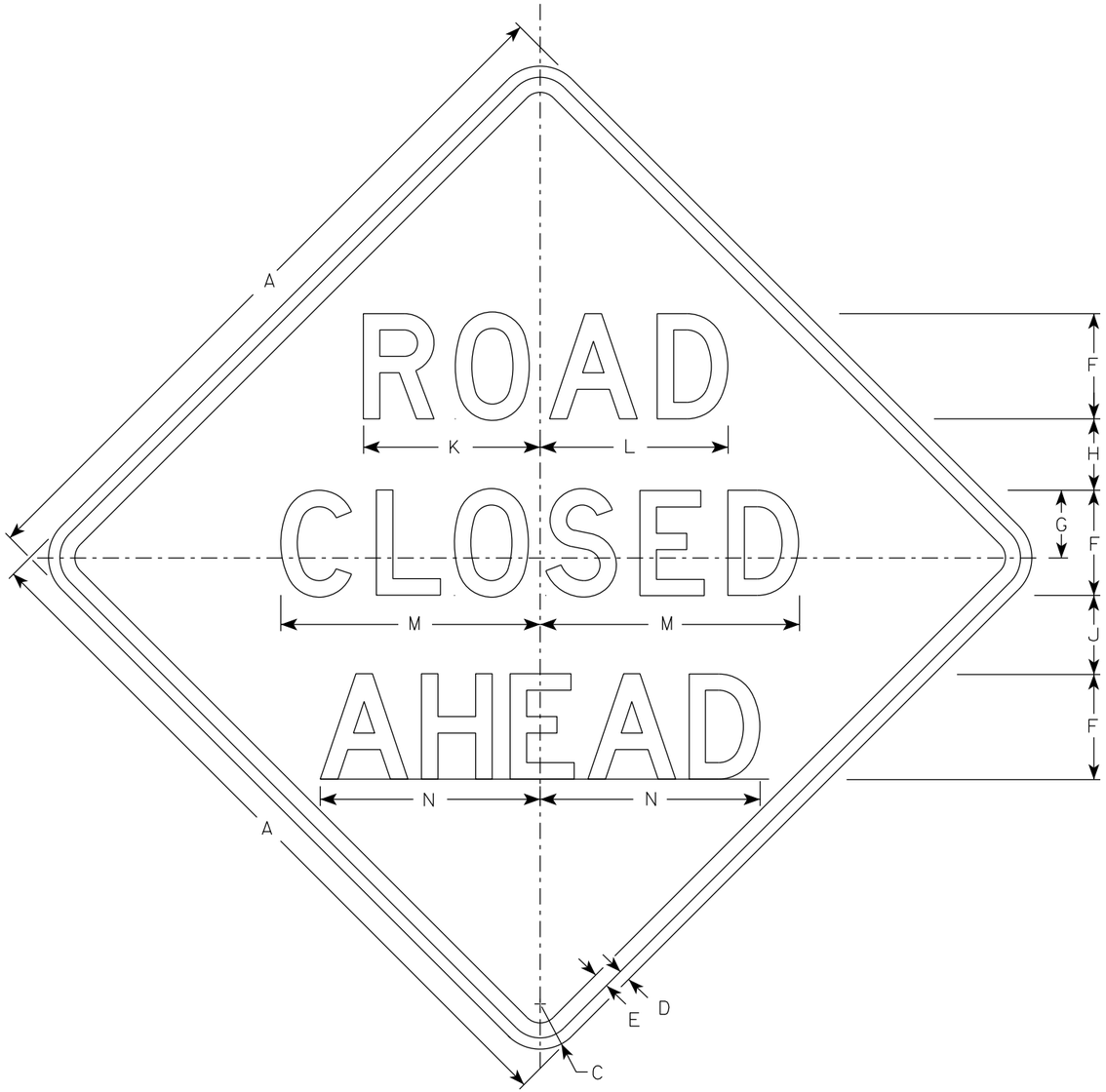
APPROVED Matthew R Rauch
For State Traffic Engineer

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

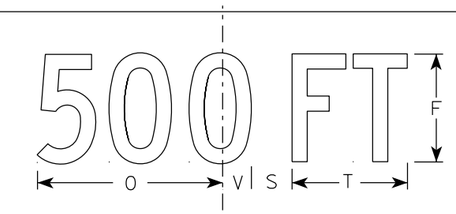
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



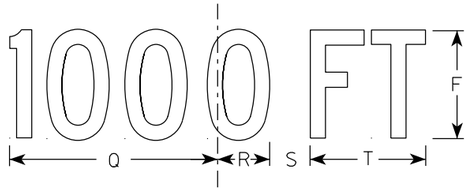
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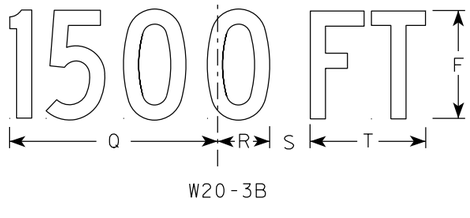

W20-3A



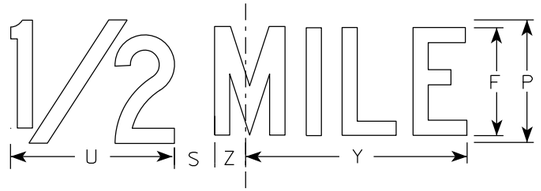

W20-3D



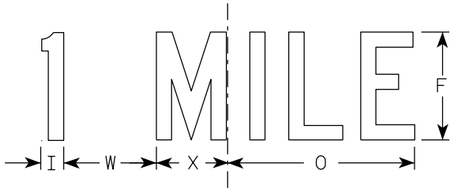

W20-3C




W20-3B




W20-3G




W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | | 2 1/4 | 5/8 | 3/4 | 5 | 3 3/8 | 3 1/2 | 1 1/8 | 4 | 8 3/8 | 8 7/8 | 12 1/2 | 11 | 9 | 6 | 10 1/8 | 2 1/2 | 1 7/8 | 5 5/8 | 8 | 1 3/8 | 4 1/2 | 3 1/2 | 10 3/4 | 1 3/4 | 9.0 |
| 2S | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |
| 2M | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |
| 3 | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |
| 4 | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |
| 5 | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

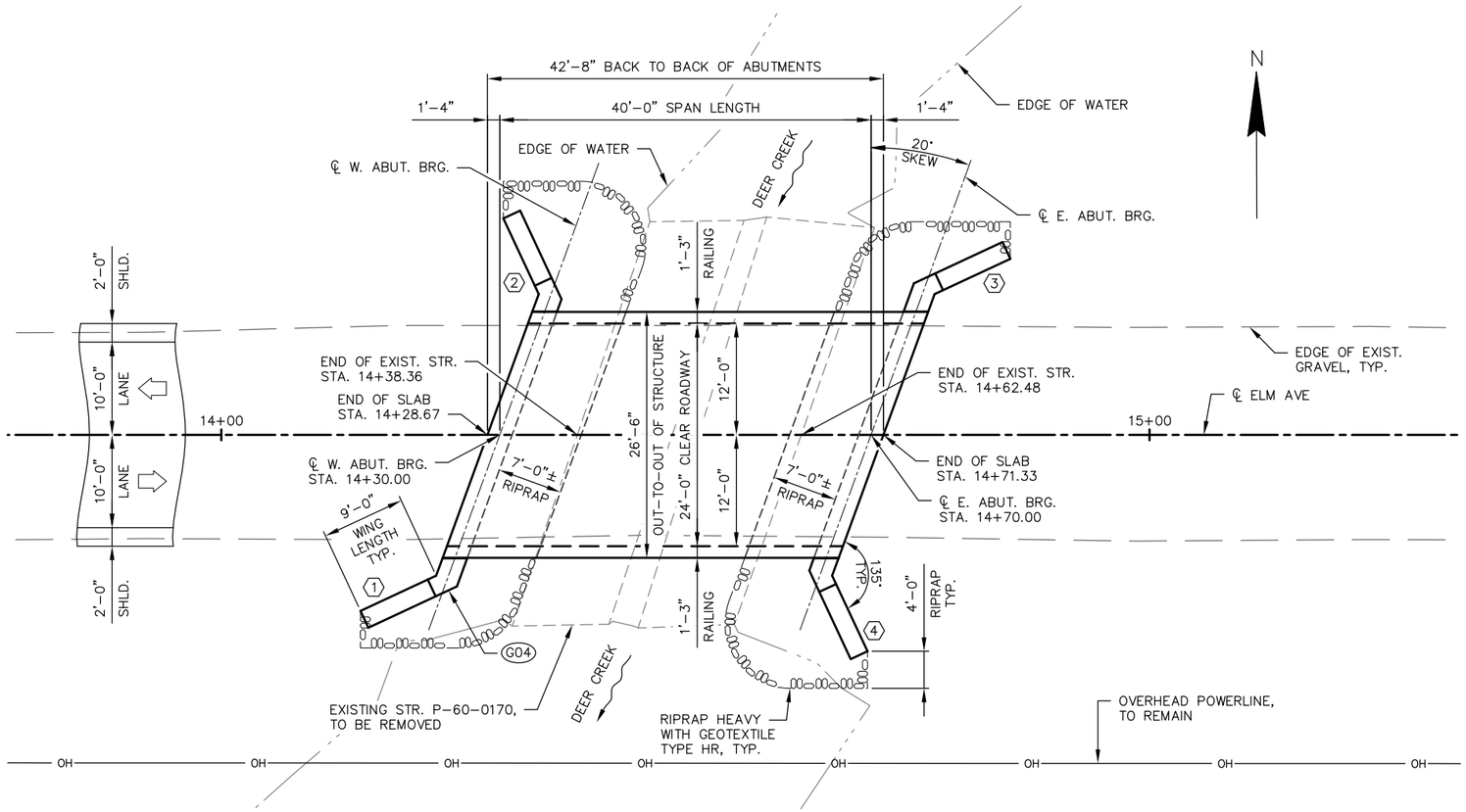
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8

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

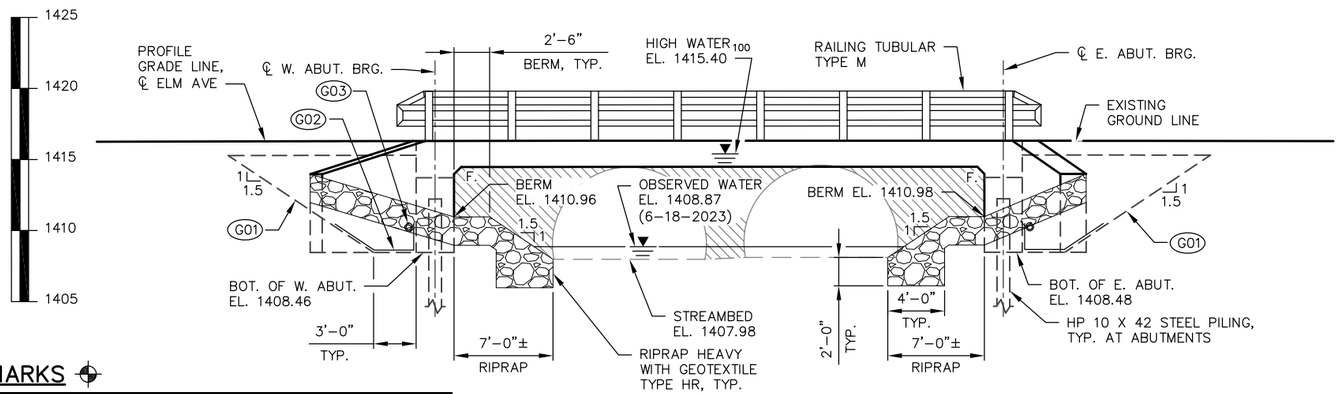


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## PLAN B-60-162

(SINGLE SPAN CONCRETE FLAT SLAB BRIDGE)




## ELEVATION

(THRU DEER CREEK, LOOKING NORTH)

## BENCH MARKS

| NO. | STATION/OFFSET | DESCRIPTION | ELEVATION |
|---|---|---|---|
| BM #1 | 10+41.31, 33.32' RT. | RR SPIKE IN POWER POLE | 1413.80 |
| BM #2 | 15+96.67, 35.69' RT. | RR SPIKE IN POWER POLE | 1412.20 |

HORIZONTAL DATUM AND ADJUSTMENT: NAD 83 (2011)
VERTICAL DATUM AND ADJUSTMENT: NAVD 88 (2012)
COORDINATE REFERENCE SYSTEM: WISCRS TAYLOR CO.

## NOTES

EXCAVATION AS INDICATED IN THE HATCH AREAS, TO BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-60-162".

(G01) BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-60-162". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

(G02) "GEOTEXTILE TYPE DF SCHEDULE A" LIMITS. EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT FOR THE ENTIRE ABUTMENT BODY LENGTH.

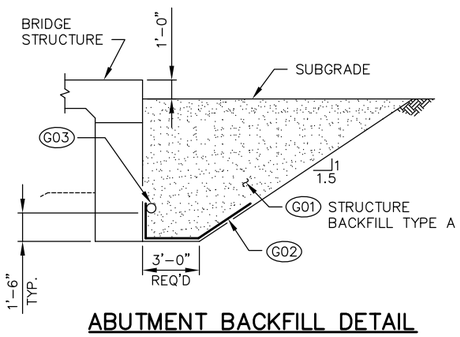
(G03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "ABUTMENT DETAILS" SHEET.

(G04) NAME PLATE REQUIRED AND BENCH MARK CAP (WHEN SUPPLIED). FOR LOCATION SEE "ABUTMENTS" SHEET.

⬡ INDICATES WING NUMBER

## LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, GENERAL NOTES & QUANTITIES
3. SUBSURFACE EXPLORATION
4. ABUTMENTS
5. ABUTMENT DETAILS
6. SUPERSTRUCTURE
7. SUPERSTRUCTURE DETAILS
8. RAILING TUBULAR TYPE M




## ABUTMENT BACKFILL DETAIL

(TYPICAL AT BOTH ABUTMENTS)

WISCONSIN
ANDREW C. KNUTSON
E-34662
SPRING GREEN, WI
5-30-24
PROFESSIONAL ENGINEER

STATE PROJECT NUMBER
9549-00-70

## DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.11
OPERATING RATING FACTOR — RF=1.45
WISCONSIN STANDARD PERMIT VEHICLE RATING (WIS.-SPV): — 250 KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB — $f'c$ = 4,000 P.S.I.
ALL OTHER — $f'c$ = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT — $fy$ = 60,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE** AT W. ABUT. AND 150 TONS PER PILE** AT E. ABUT. AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 40 FT PILE LENGTHS AT W. ABUT. AND 35 FT PILE LENGTHS AT E. ABUT.

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

HYDRAULIC DATA:

$Q_{100}$ — 1,160 C.F.S.
$Q_{100}$ (THRU BRIDGE) — 1,160 C.F.S.
$Q_{100}$ (ROAD) — N/A
DRAINAGE AREA — 10.2 SQ. MI.
BRIDGE WATER AREA — 182 SQ. FT.
BRIDGE VELOCITY — 6.36 F.P.S.
HIGH $WATER_{100}$ EL. — 1415.40 FT.
OVERTOPPING Q FREQ. — N/A
SCOUR CRITICAL CODE — 5
$Q_2$ — 361 C.F.S.
$Q_2$ ELEVATION — 1411.76 FT.
$Q_2$ VELOCITY — 3.91 F.P.S.

TRAFFIC DATA:

ELM AVENUE
A.A.D.T. (2025) — 64
A.A.D.T. (2045) — 78
DESIGN SPEED — 60 M.P.H.


BRIDGE OFFICE CONTACT
AARON BONK, P.E.
(608) 261-0261

CONSULTANT CONTACT
ANDY KNUTSON, P.E., S.E.
(608) 588-7866


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


WESTBROOK Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WI 53588
PHONE (608) 588-7866
FAX (608) 588-7954


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/06/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

# STRUCTURE B-60-162

ELM AVENUE OVER DEER CREEK

COUNTY: TAYLOR
TOWN/~~CITY/VILLAGE~~: DEER CREEK
DESIGN SPEC.: AASHTO LRFD DESIGN SPEC.

| DESIGNED BY | DESIGN CK'D. | DRAWN BY | PLANS CK'D. |
|---|---|---|---|
| CDS | JDO | CDS | ACK |

GENERAL PLAN

SHEET 1 OF 8

44

8

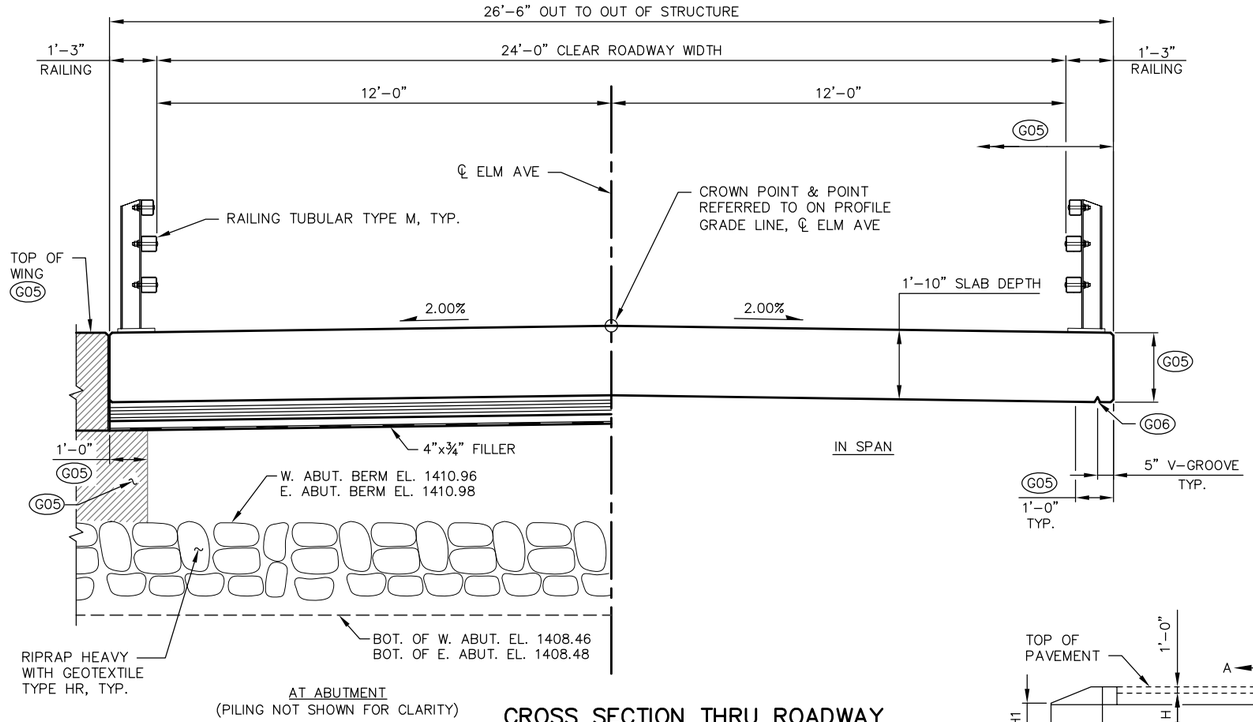
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FILE: B600162_01_gen.dwg
PLOT SCALE:

I.D. 9549-00-70

PLOT DATE: May 21, 2024

| STATE PROJECT NUMBER |
|---|
| 9549-00-70 |




AT ABUTMENT
(PILING NOT SHOWN FOR CLARITY)

## CROSS SECTION THRU ROADWAY

(LOOKING EAST)

## NOTES

(G05) COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE EXPOSED TOP OF SLAB, INCLUDING THE SLAB EDGES AND 1'-0" UNDER THE SLAB, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE FRONT FACE OF THE ABUTMENTS TO 1'-0" PAST THE EDGE OF SLAB.

(G06) ¾" V-GROOVE REQ'D. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT.

## TOTAL ESTIMATED QUANTITIES

| ITEM NO. | BID ITEMS | UNIT | W. ABUT. | E. ABUT. | SUPER. | TOTALS |
|---|---|---|---|---|---|---|
| 203.0220 | REMOVING STRUCTURE P-60-170 | EACH | --- | --- | --- | 1 |
| 206.1001 | EXCAVATION FOR STRUCTURES BRIDGES B-60-162 | EACH | --- | --- | --- | 1 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | 140 | 140 | --- | 280 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 26.2 | 26.2 | 81.1 | 134 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | 17 | 17 | 150 | 184 |
| 505.0400 | BAR STEEL REINFORCEMENT HS STRUCTURES | LB | 2100 | 2100 | --- | 4200 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 1420 | 1420 | 15240 | 18080 |
| 513.4061 | RAILING TUBULAR TYPE M | LF | --- | --- | 90 | 90 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | 6 | 6 | --- | 12 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | 280 | 245 | --- | 525 |
| 606.0300 | RIPRAP HEAVY | CY | 50 | 50 | --- | 100 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | 75 | 75 | --- | 150 |
| 645.0111 | GEOTEXTILE TYPE DF SCHEDULE A | SY | 31 | 31 | --- | 62 |
| 645.0120 | GEOTEXTILE TYPE HR | SY | 83 | 83 | --- | 166 |
| | | | | | | |
| (NON-BID ITEM) | FILLER | SIZE | | | | ½" & ¾" |

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

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

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WING FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCLUDED WITH "EXCAVATION FOR STRUCTURES BRIDGES B-60-162".

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-60-162" SHALL BE THE EXISTING GROUND LINE.

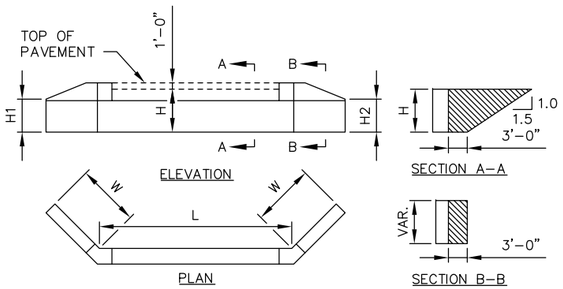
AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

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

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

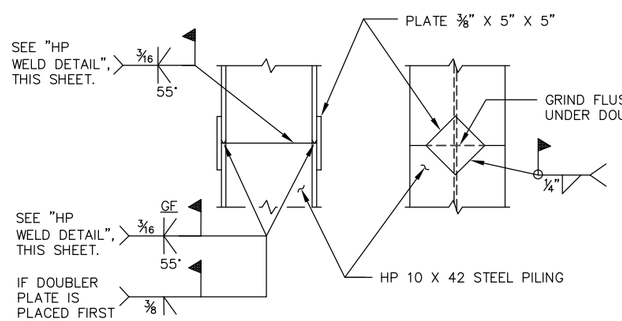
DO NOT PLACE FILL ABOVE 3'-0" FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

THE EXISTING STRUCTURE (P-60-170) IS A TWIN CELL PIPE ARCH CULVERT WITH AN OVERALL LENGTH OF 24-FT AND BARREL LENGTHS OF 46-FT AND IS TO BE REMOVED PER BID ITEM "REMOVING STRUCTURE P-60-170".

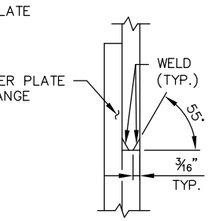



## ABUTMENT BACKFILL DIAGRAM

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

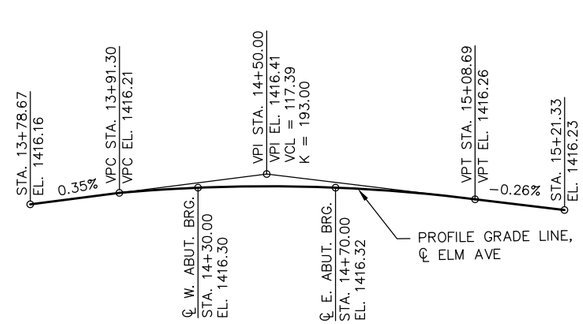



## PILE SPLICE DETAILS




## HP WELD DETAIL

(FLANGE SHOWN, WEB SIMILAR)




## PROFILE GRADE LINE, ℄ ELM AVE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-162

DRAWN BY JDO | PLANS CK'D ACK

CROSS SECTION, GENERAL NOTES & QUANTITIES

SHEET 2 OF 8

45

8

8

I.D. 9549-00-70

PLOT DATE: May 30, 2024

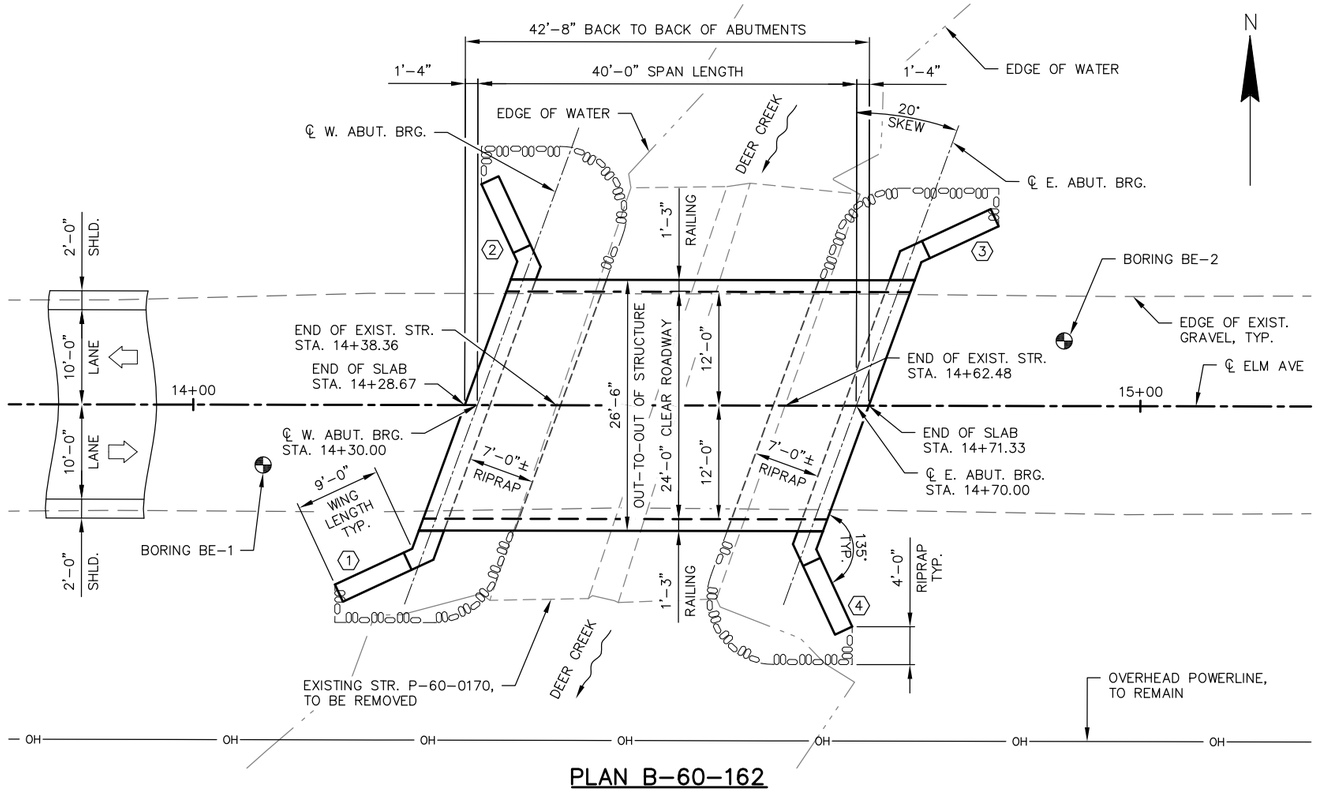
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PLOT SCALE:

## B-60-162 BORINGS

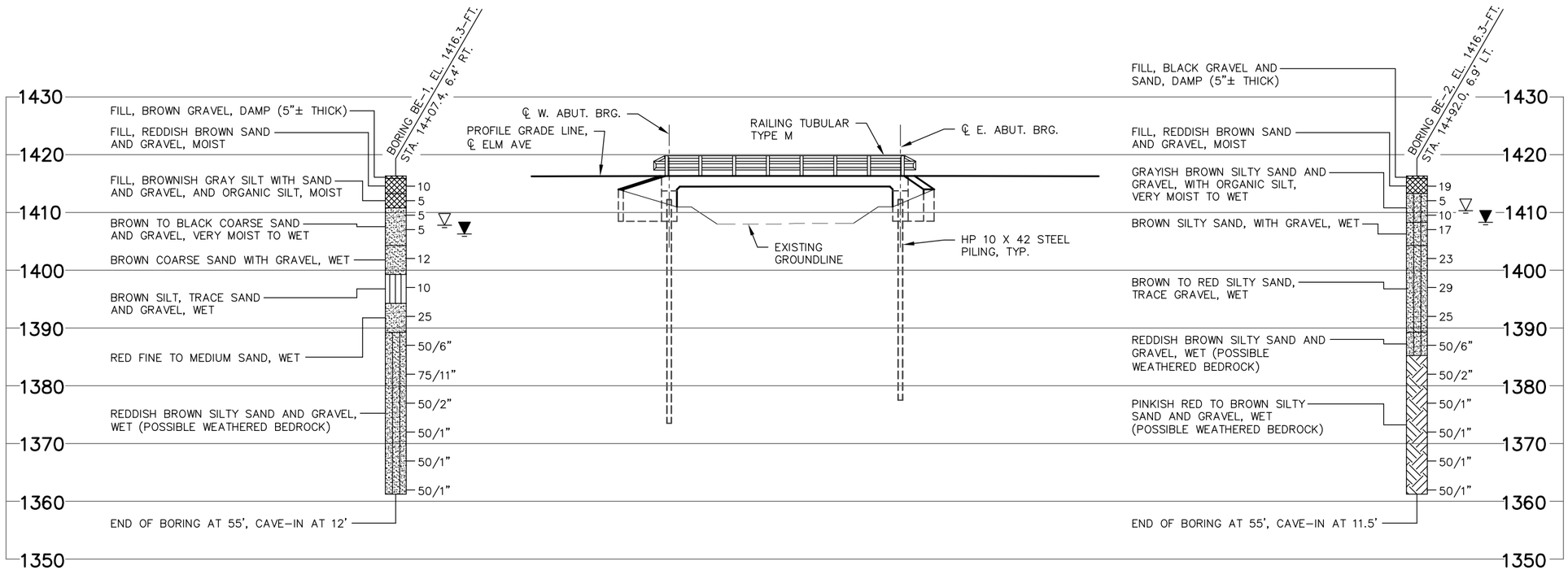
| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| BORING BE-1 | 6/15/2023 | 306309.1 | 669867.8 |
| BORING BE-2 | 6/15/2023 | 306322.2 | 669952.4 |
| BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC. | | | |
| SUBSURFACE INVESTIGATION REPORT: PROFESSIONAL SERVICE INDUSTRIES, INC. | | | |
| ALL COORDINATES REFERENCED TO WISCRS, TAYLOR COUNTY | | | |

**NOTE**

⬡ INDICATES WING NUMBER




## PLAN B-60-162



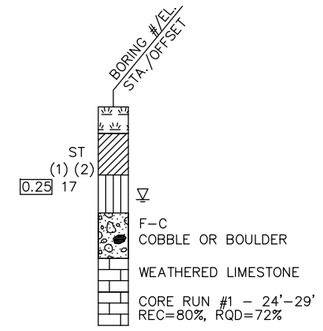

STATE PROJECT NUMBER

**9549-00-70**

MATERIAL SYMBOLS

| | | |
|---|---|---|
| ASPHALT | TOPSOIL | PEAT |
| CONCRETE | FILL | GRAVEL |
| SAND | CLAY | SILT |
| BOULDERS OR COBBLES | LIMESTONE | BEDROCK (UNKNOWN) |
| SHALE | SANDSTONE | IGNEOUS/ META |

LEGEND OF BORING




(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-162**

DRAWN BY JDO | PLANS CK'D ACK

**SUBSURFACE EXPLORATION**

SHEET 3 OF 8

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8

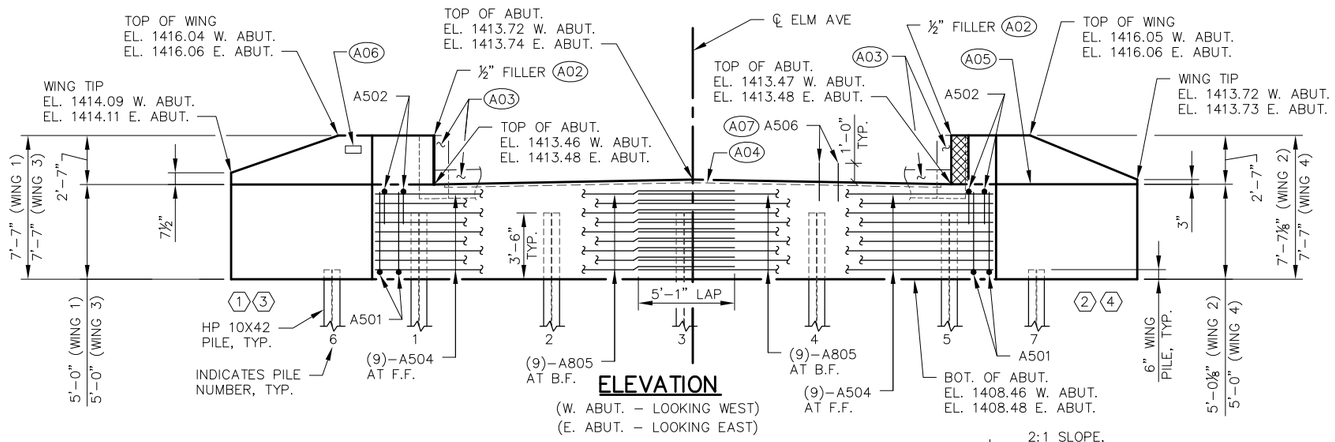
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I.D. 9549-00-70 PLOT DATE: May 21, 2024

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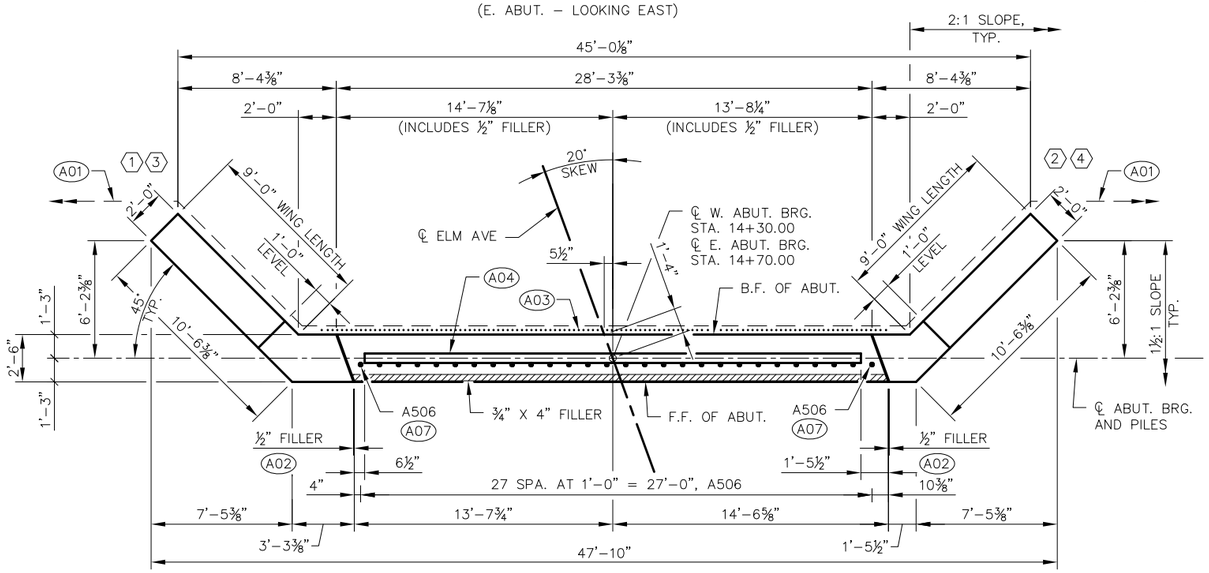
STATE PROJECT NUMBER

9549-00-70

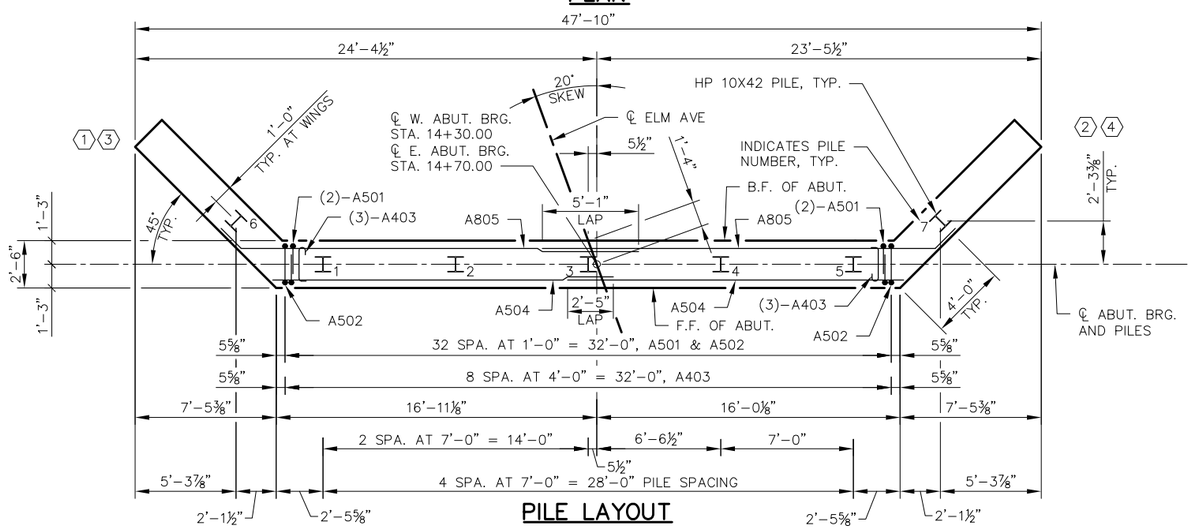



## ELEVATION

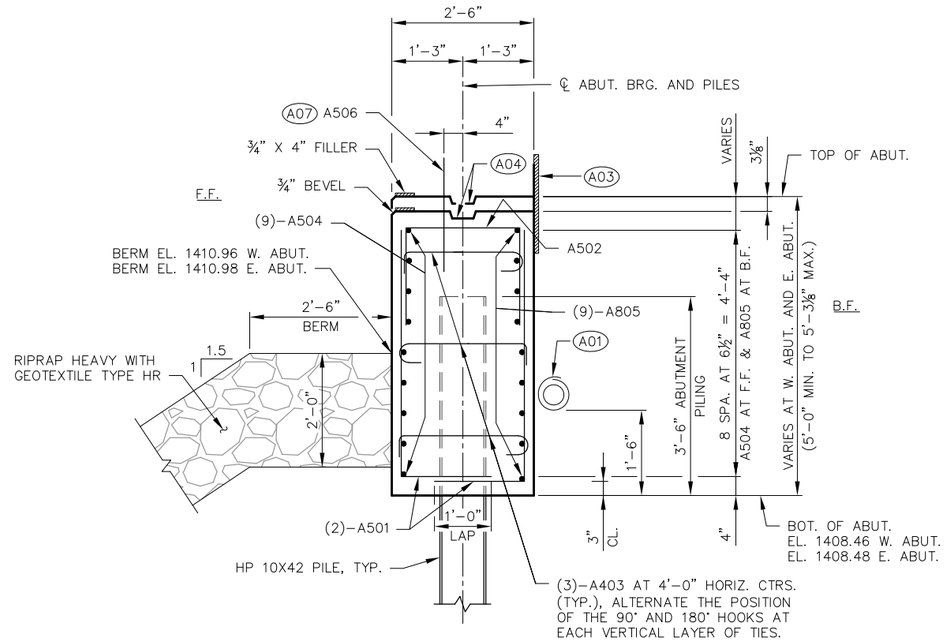
(W. ABUT. – LOOKING WEST)
(E. ABUT. – LOOKING EAST)




## PLAN




## PILE LAYOUT




## TYPICAL SECTION THRU ABUTMENT

## NOTES

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

WEST AND EAST ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AT THE WEST ABUTMENT AND 150 TONS PER PILE AT THE EAST ABUTMENT AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 40 FT PILE LENGTHS AT THE WEST ABUTMENT AND 35 FT PILE LENGTHS AT THE EAST ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

(A01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "ABUTMENT DETAILS" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

(A03) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

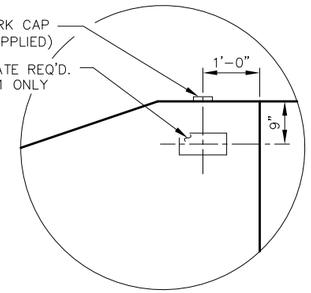
(A04) KEYED CONST. JT. FORMED BY BEVELED 2 X 6

(A05) OPTIONAL KEYED CONST. JT. FORMED BY BEVELED 2 X 6, TYP.

(A06) NAME PLATE & BENCHMARK CAP (WHEN SUPPLIED) AT WING 1 ONLY. SEE "NAME PLATE DETAIL", THIS SHEET.

(A07) A506 BARS MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED 1'-0" INTO ABUTMENT BODY.

⬡ INDICATES WING NUMBER




## NAME PLATE DETAIL

F.F. – FRONT FACE
B.F. – BACK FACE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-162

DRAWN BY JDO | PLANS CK'D ACK

ABUTMENTS

SHEET 4 OF 8

47

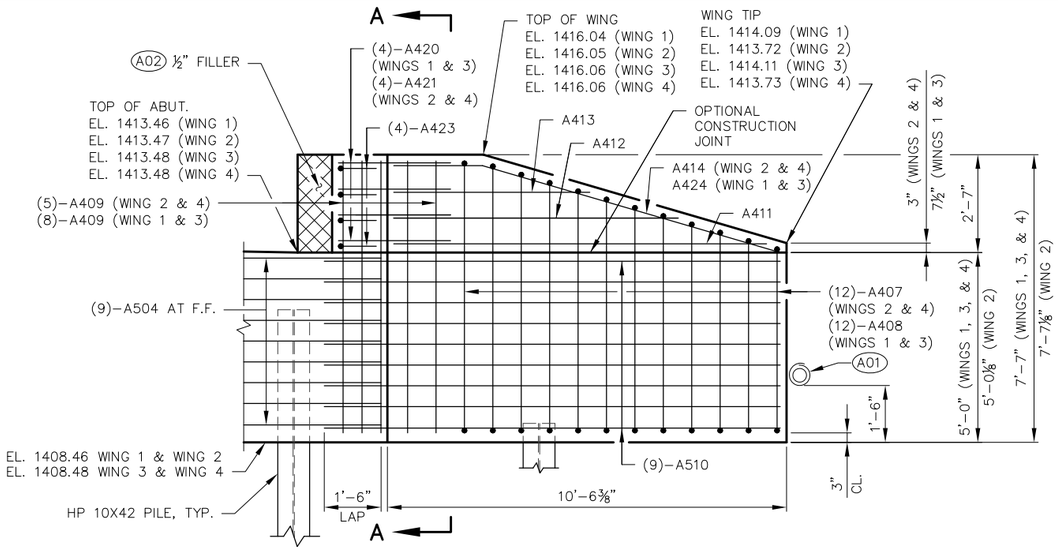
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I.D. 9549-00-70

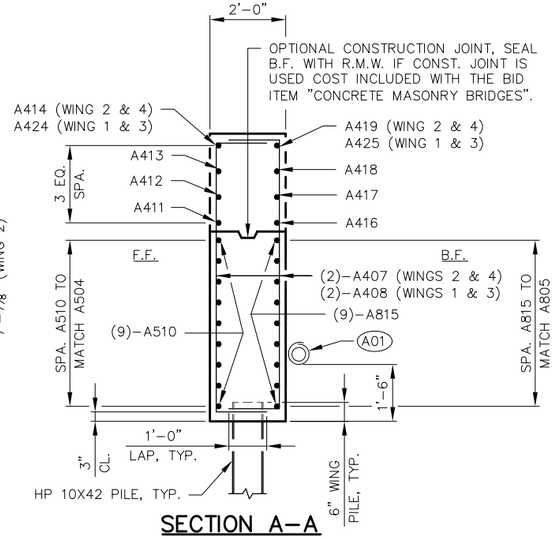
PLOT DATE: May 21, 2024

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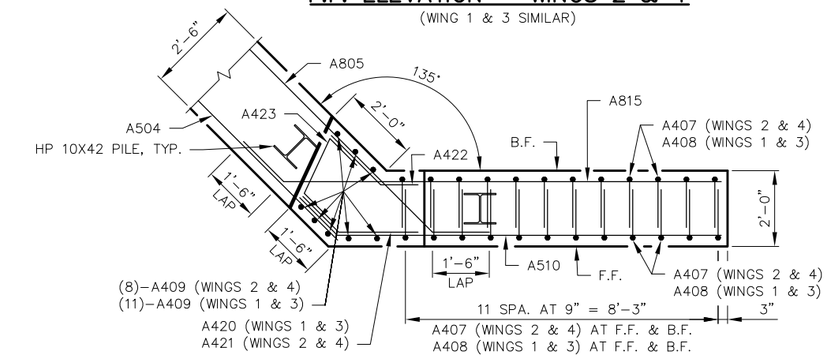



## F.F. ELEVATION – WINGS 2 & 4

(WING 1 & 3 SIMILAR)

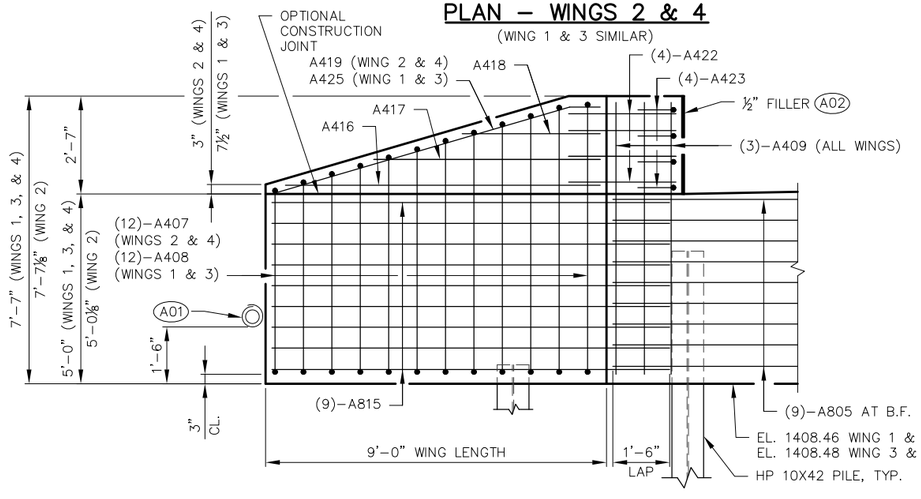



## SECTION A–A



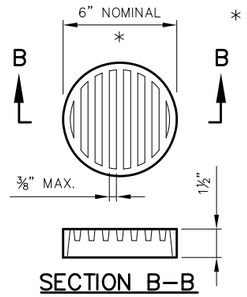

## PLAN – WINGS 2 & 4

(WING 1 & 3 SIMILAR)




## B.F. ELEVATION – WINGS 2 & 4

(WING 1 & 3 SIMILAR)



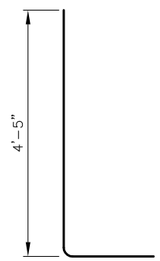

## SECTION B–B

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

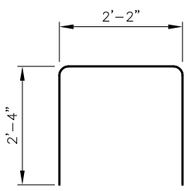
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X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

THE RODENT SHIELD. PIPE COUPLING AND SCREWS SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

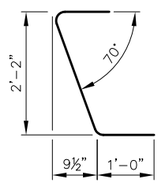
## RODENT SHIELD DETAIL



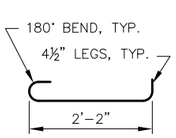

## A501



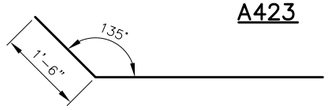

## A502



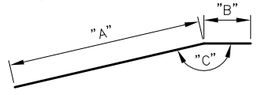

## A423




## A403



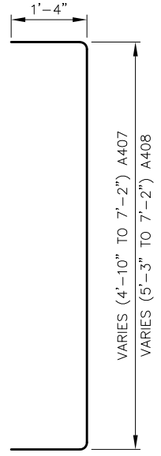

## A805, A510 & A815



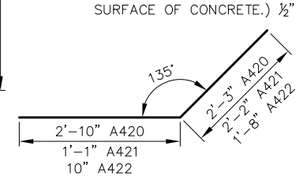

## A414, A419, A424, & A425

## BAR BEND DIMENSIONS

| MARK | "A" | "B" | "C" |
|---|---|---|---|
| A414 | 8'–2" | 2'–4" | 164° |
| A419 | 8'–2" | 0'–9" | 164° |
| A424 | 8'–1" | 2'–4" | 166° |
| A425 | 8'–1" | 0'–9" | 166° |




## A407 & A408




## A420, A421, & A422

## BAR SERIES TABLE

| MARK | NO. REQ'D | LENGTH |
|---|---|---|
| A407 | 4 SERIES OF 12 | 7'–4" TO 9'–8" |
| A408 | 4 SERIES OF 12 | 7'–9" TO 9'–8" |

BUNDLE AND TAG EACH SERIES SEPARATELY.

STATE PROJECT NUMBER

9549–00–70

## BILL OF BARS
## BOTH ABUTMENTS

COATED = 2,840 LBS.
UNCOATED = 4,200 LBS.

| MARK | COATED | NUMBER W. ABUT. | NUMBER E. ABUT. | LENGTH | BENT | BAR SERIES | LOCATION | |
|---|---|---|---|---|---|---|---|---|
| A501 | | 66 | 66 | 5'–11" | X | | BODY – STIRRUP – F.F. & B.F. | VERT. |
| A502 | | 33 | 33 | 6'–7" | X | | BODY – STIRRUP – TOP | VERT. |
| A403 | | 27 | 27 | 3'–1" | X | | BODY – TIES | HORIZ. |
| A504 | | 18 | 18 | 17'–8" | | | BODY – F.F. | HORIZ. |
| A805 | | 18 | 18 | 22'–6" | X | | BODY – B.F. | HORIZ. |
| A506 | X | 28 | 28 | 2'–0" | | | BODY – TOP DOWELS | VERT. |
| A407 | X | 24 | 24 | 8'–6" | X | ⚠ | WINGS 2 & 4 – STIRRUP – F.F. & B.F. | VERT. |
| A408 | X | 24 | 24 | 8'–9" | X | ⚠ | WINGS 1 & 3 – STIRRUP – F.F. & B.F. | VERT. |
| A409 | X | 19 | 19 | 7'–2" | | | WINGS 1 THRU 4 – F.F. & B.F. | VERT. |
| A510 | X | 18 | 18 | 11'–9" | X | | WINGS 1 THRU 4 – F.F. | HORIZ. |
| A411 | X | 2 | 2 | 9'–10" | | | WINGS 1 THRU 4 – F.F. | HORIZ. |
| A412 | X | 2 | 2 | 7'–6" | | | WINGS 1 THRU 4 – F.F. | HORIZ. |
| A413 | X | 2 | 2 | 5'–2" | | | WINGS 1 THRU 4 – F.F. | HORIZ. |
| A414 | X | 1 | 1 | 10'–6" | X | | WINGS 2 & 4 – F.F. – TOP | HORIZ. |
| A815 | X | 18 | 18 | 13'–3" | X | | WINGS 1 THRU 4 – B.F. | HORIZ. |
| A416 | X | 2 | 2 | 8'–3" | | | WINGS 1 THRU 4 – B.F. | HORIZ. |
| A417 | X | 2 | 2 | 5'–11" | | | WINGS 1 THRU 4 – B.F. | HORIZ. |
| A418 | X | 2 | 2 | 3'–7" | | | WINGS 1 THRU 4 – B.F. | HORIZ. |
| A419 | X | 1 | 1 | 8'–11" | X | | WINGS 2 & 4 – B.F. – TOP | HORIZ. |
| A420 | X | 4 | 4 | 5'–0" | X | | WINGS 1 AND 3 – F.F. CORNER | HORIZ. |
| A421 | X | 4 | 4 | 3'–2" | X | | WINGS 2 AND 4 – F.F. CORNER | HORIZ. |
| A422 | X | 8 | 8 | 2'–5" | X | | WINGS 1 THRU 4 – B.F. CORNER | HORIZ. |
| A423 | X | 8 | 8 | 4'–2" | X | | WINGS 1 THRU 4 – TOP CORNER | HORIZ. |
| A424 | X | 1 | 1 | 10'–5" | X | | WINGS 1 & 3 – F.F. – TOP | HORIZ. |
| A425 | X | 1 | 1 | 8'–10" | X | | WINGS 1 & 3 – B.F. – TOP | HORIZ. |

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

BUNDLE EACH ABUTMENT BARS SEPARATELY.

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

## NOTES

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

WEST AND EAST ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AT THE WEST ABUTMENT AND 150 TONS PER PILE AT THE EAST ABUTMENT AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 40 FT PILE LENGTHS AT THE WEST ABUTMENT AND 35 FT PILE LENGTHS AT THE EAST ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

(A01) PIPE UNDERDRAIN WRAPPED (6–INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

(A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON–STAINING GRAY NON–BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

F.F. – FRONT FACE
B.F. – BACK FACE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–60–162

DRAWN BY JDO | PLANS CK'D ACK

ABUTMENT DETAILS

SHEET 5 OF 8

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8

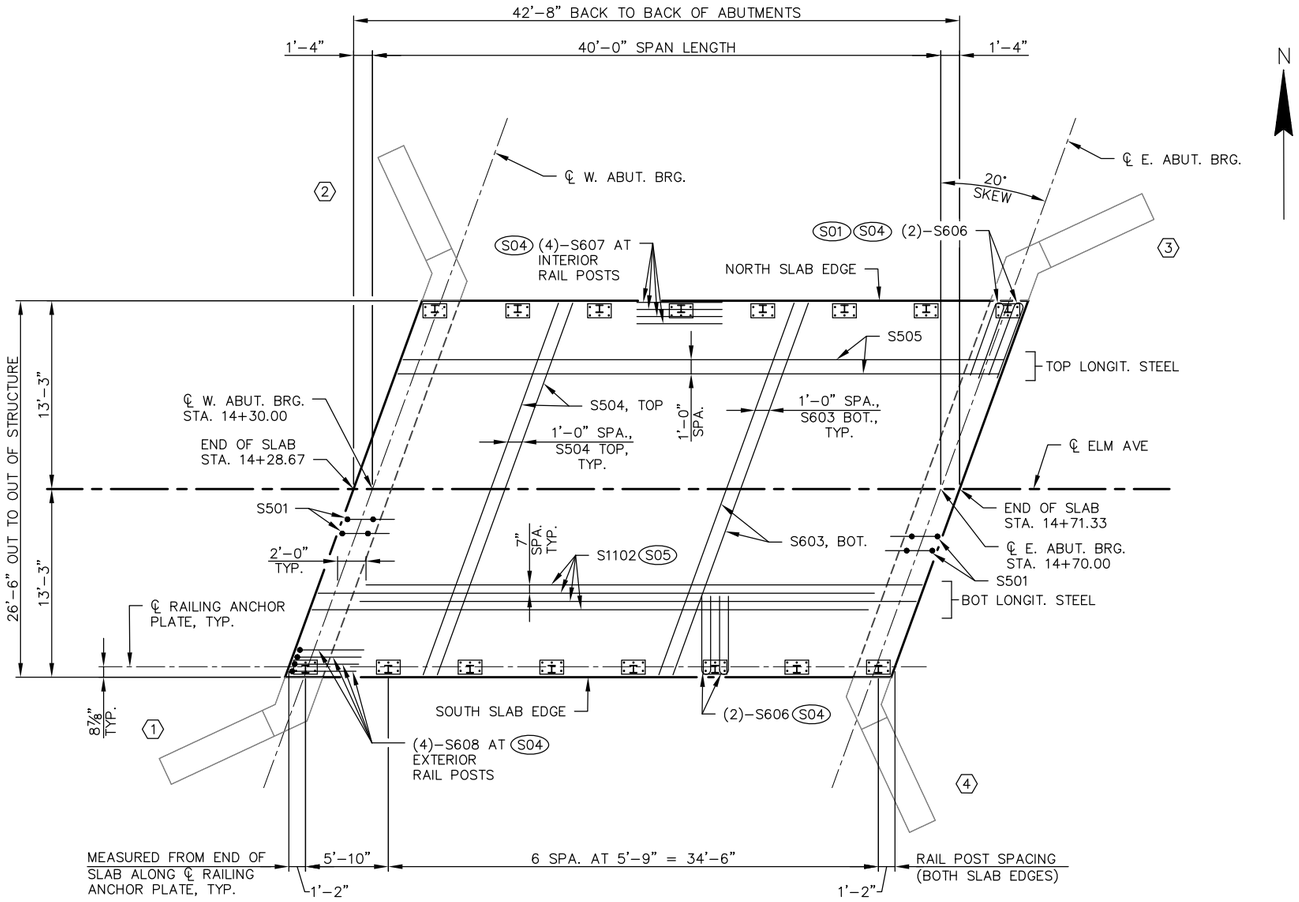
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I.D. 9549–00–70

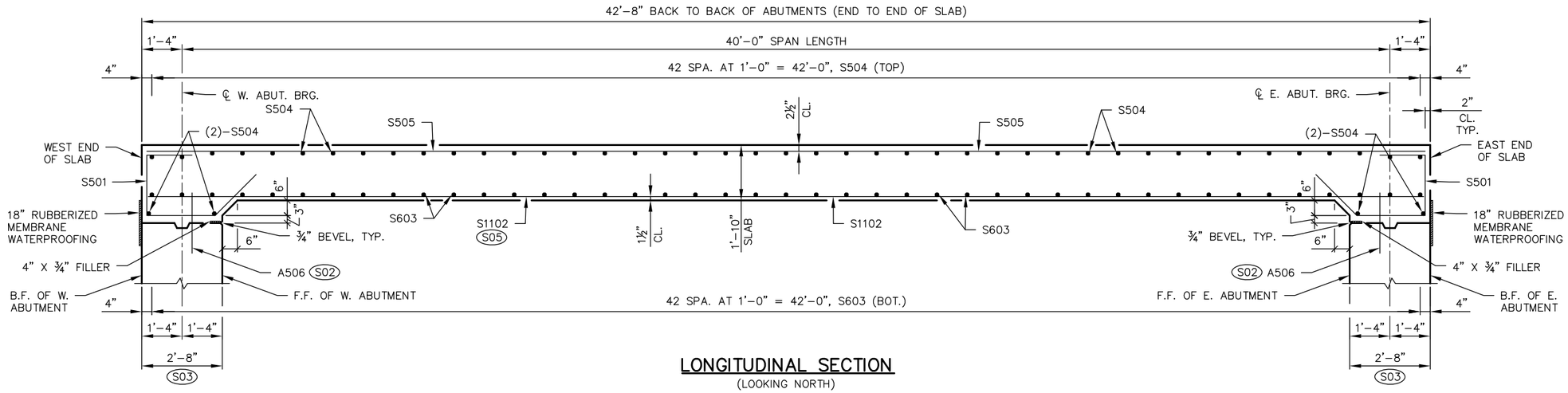
PLOT DATE: May 21, 2024

FILE: B600162_04–05_abut.dwg
PLOT SCALE:

| STATE PROJECT NUMBER |
|---|
| 9549–00–70 |




## PLAN VIEW




## LONGITUDINAL SECTION

(LOOKING NORTH)

F.F. – FRONT FACE
B.F. – BACK FACE

## NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'–0" CENTERS EACH WAY.

BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'–0" CENTERS.

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

RAILING TO BE INSTALLED ON THE SLAB AFTER FALSEWORK HAS BEEN RELEASED.

(S01) ADJUST ORIENTATION OF S606 BAR AT END POST NEAR WINGS 1 & 3 TO ENSURE CLEAR COVER AT END OF SLAB.

(S02) SEE "ABUTMENTS" SHEET FOR PLACEMENT OF A506 BARS

(S03) DIMENSION IS TAKEN PARALLEL TO ℄ ELM AVE

(S04) SEE "RAILING TUBULAR TYPE M" SHEET FOR PLACEMENT OF RAIL POST REINFORCEMENT.

(S05) EXTEND ONE END OF THE S1102 BAR TO 2" CLEAR OF ONE BACK FACE OF ABUTMENT. ALTERNATE BETWEEN WEST AND EAST ABUTMENTS ACROSS ENTIRE SLAB.

⬡ INDICATES WING NUMBER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

# STRUCTURE B–60–162

DRAWN BY JDO | PLANS CK'D ACK

SUPERSTRUCTURE

SHEET 6 OF 8

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I.D. 9549–00–70

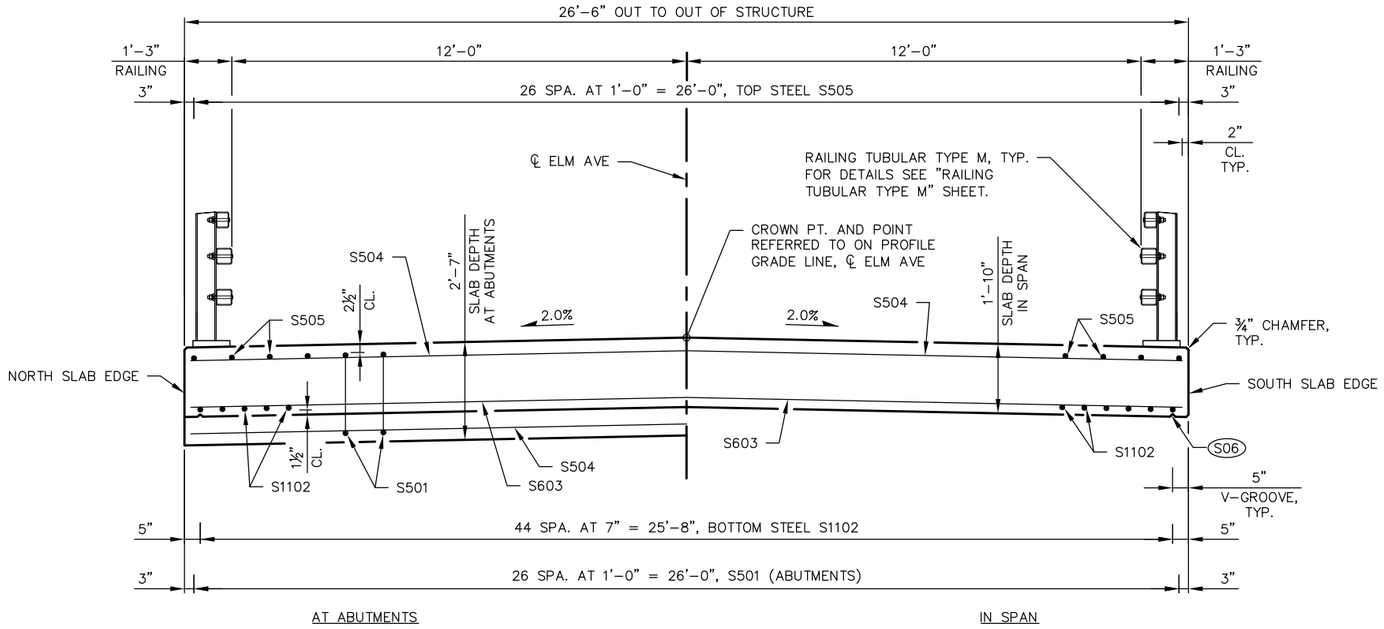
PLOT DATE: May 21, 2024

FILE: B600162_06_07_super.dwg
PLOT SCALE:

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| STATE PROJECT NUMBER |
|---|
| 9549–00–70 |




## CROSS SECTION THRU ROADWAY

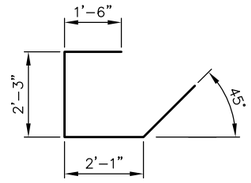
(LOOKING EAST)

## BILL OF BARS
## SUPERSTRUCTURE — COATED = 15,240 LBS.

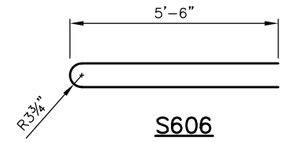
| MARK | NUMBER COATED | NUMBER UNCOATED | LENGTH | BENT | BAR SERIES | LOCATION | |
|---|---|---|---|---|---|---|---|
| S501 | 54 | | 7'–9" | X | | SLAB AT ABUTMENT – TIES | LONGIT. |
| S1102 | 45 | | 39'–1" | | | SLAB – BOTTOM | LONGIT. |
| S603 | 43 | | 27'–10" | | | SLAB – BOTTOM | TRANS. |
| S504 | 47 | | 27'–10" | | | SLAB – TOP & ABOVE ABUTMENTS | TRANS. |
| S505 | 27 | | 42'–3" | | | SLAB – TOP | LONGIT. |
| S606 | 32 | | 11'–6" | X | | SLAB – TOP AT RAIL POSTS | TRANS. |
| S607 | 48 | | 6'–0" | | | SLAB – TOP AT INTERIOR RAIL POSTS | LONGIT. |
| S608 | 16 | | 4'–8" | X | | SLAB – TOP AT EXTERIOR RAIL POSTS | LONGIT. |

THE FIRST OR FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

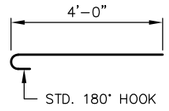
ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.




S501




S606




S608

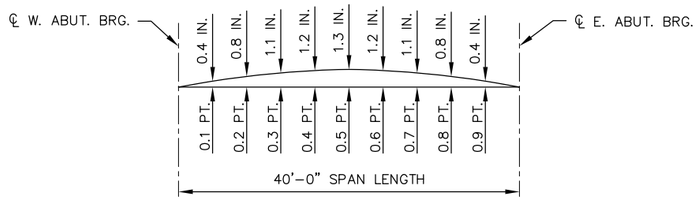
## SURVEY TOP OF SLAB ELEVATIONS

| | ℄ W. ABUT. BRG. | 5/10 PT. | ℄ E. ABUT. BRG. |
|---|---|---|---|
| NORTH SLAB EDGE | | | |
| ℄ ELM AVE | | | |
| SOUTH SLAB EDGE | | | |

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND REFERENCE LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

## TOP OF SLAB ELEVATIONS

| SPAN PT | NORTH SLAB EDGE | ℄ ELM AVE | SOUTH SLAB EDGE |
|---|---|---|---|
| ℄ W. ABUT. | 1416.05 | 1416.30 | 1416.04 |
| 0.1 | 1416.05 | 1416.31 | 1416.04 |
| 0.2 | 1416.06 | 1416.31 | 1416.05 |
| 0.3 | 1416.06 | 1416.32 | 1416.05 |
| 0.4 | 1416.06 | 1416.32 | 1416.06 |
| 0.5 | 1416.06 | 1416.32 | 1416.06 |
| 0.6 | 1416.06 | 1416.32 | 1416.06 |
| 0.7 | 1416.06 | 1416.32 | 1416.06 |
| 0.8 | 1416.06 | 1416.32 | 1416.06 |
| 0.9 | 1416.06 | 1416.32 | 1416.06 |
| ℄ E. ABUT. | 1416.06 | 1416.32 | 1416.06 |




## SLAB CAMBER DIAGRAM

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

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

## NOTES

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

(S06) ¾" V–GROOVE. EXTEND V–GROOVE TO 6" FROM FRONT FACE OF ABUTMENT BODY. V–GROOVES ARE REQUIRED.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–60–162

DRAWN BY JDO | PLANS CK'D ACK

SUPERSTRUCTURE DETAILS

SHEET 7 OF 8

50

8

8

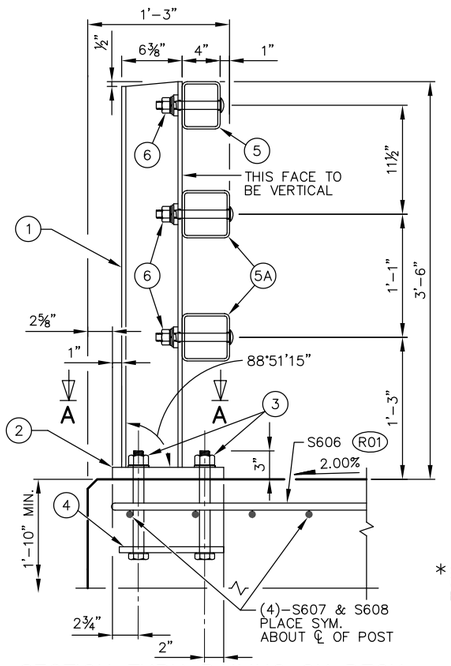
I.D. 9549–00–70

PLOT DATE: May 21, 2024

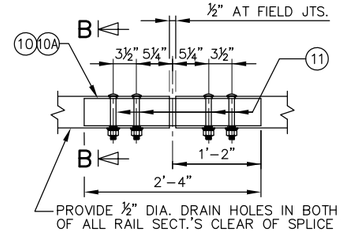
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PLOT SCALE:

STATE PROJECT NUMBER

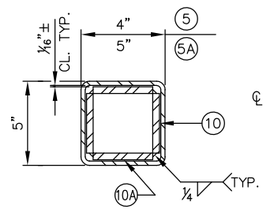
9549-00-70



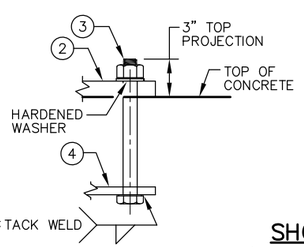

SECTION THRU RAILING ON DECK




FIELD ERECTION JOINT DETAIL

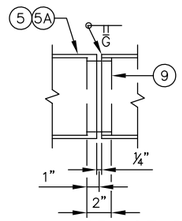



SECTION B-B



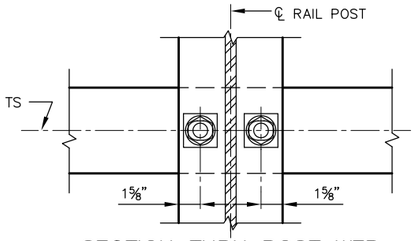

ANCHOR BOLTS

* ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.

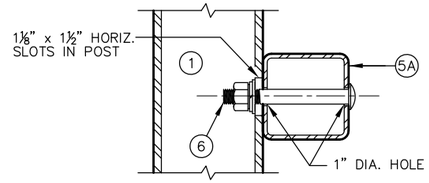



SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)




SECTION THRU POST WEB




SECTION THRU RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

## LEGEND

(1) W6 x 25 WITH 1⅛" x 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

(2) PLATE 1¼" x 11¾" x 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.

(3) ASTM A449 – 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)

(4) ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(6) ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" x 1⅝" x 1⅝" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(7) ½" THK. BACK-UP PLATE WITH 2 – ⅞" x 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

(8) 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

(9) SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

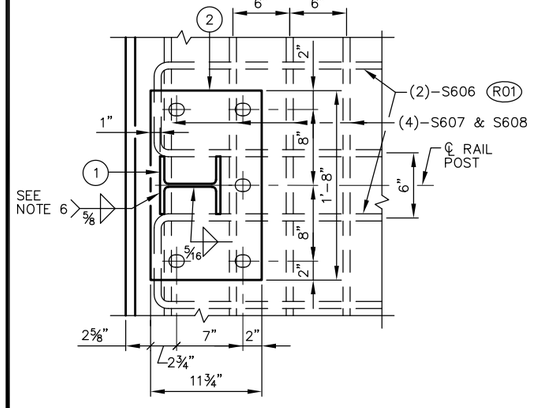
(10) ⅜" x 3⅝" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(10A) ⅜" x 2⅝" x 2'-4" PLATE USED IN NO. 5, ⅜" x 3⅝" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

(11) ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER. USE 15/16" x 1¼" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 15/16" x 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.

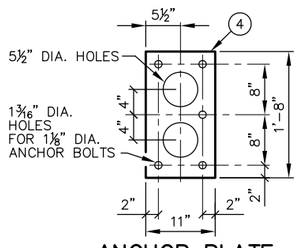
## NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

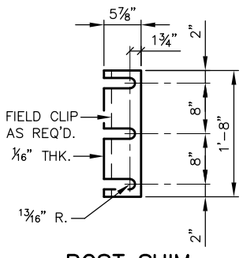



SECTION A-A

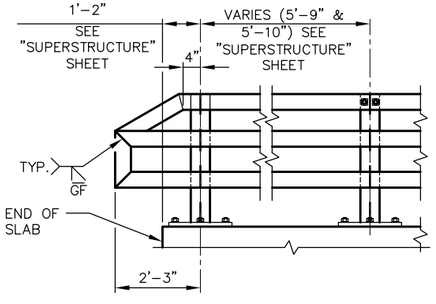
R01 TIE TO TOP MAT OF STEEL.




ANCHOR PLATE
AT RAIL TO DECK CONNECTION




POST SHIM DETAIL




PART ELEVATION OF RAILING

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-162

DRAWN BY JDO | PLANS CK'D ACK

RAILING TUBULAR TYPE M

SHEET 8 OF 8

51

8

8

I.D. 9549-00-70

PLOT DATE: May 21, 2024

FILE: B600162_08_mrail.dwg
PLOT SCALE:

## DIVISION 1 - WEST APPROACH

| STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 4 |
| 13+78.67 | 0.00 | 32.34 | 0.00 | 14.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14+00.00 | 21.33 | 35.31 | 0.00 | 29.31 | 27 | 0 | 17 | 27 | 21 | 6 |
| 14+14.99 | 14.99 | 34.91 | 0.00 | 55.67 | 19 | 0 | 24 | 46 | 51 | -5 |
| 14+30.39 | 15.40 | 16.69 | 0.00 | 3.41 | 15 | 0 | 17 | 61 | 73 | -12 |
| STRUCTURE B-60-0162 | | | | | | | | | | |
| DIVISION 1 TOTAL | | | | | 61 | 0 | 58 | | | |

## DIVISION 2 - EAST APPROACH

| STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 4 |
| STRUCTURE B-60-0162 | | | | | | | | | | |
| 14+69.61 | 0.00 | 8.62 | 0.00 | 47.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14+85.01 | 15.40 | 33.35 | 0.00 | 63.20 | 12 | 0 | 32 | 12 | 40 | -28 |
| 15+00.00 | 14.99 | 33.47 | 0.00 | 51.85 | 19 | 0 | 32 | 31 | 80 | -49 |
| 15+21.33 | 21.33 | 32.09 | 0.00 | 23.02 | 26 | 0 | 30 | 57 | 118 | -61 |
| DIVISION 2 TOTAL | | | | | 57 | 0 | 94 | | | |
| PROJECT TOTAL | | | | | 118 | 0 | 152 | | | |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS |
| 3 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 4 - MASS ORDINATE | [(CUT - SALVAGED/UNUSABLE PAVEMENT) - (FILL* FILL FACTOR)] |
| | PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. |




9

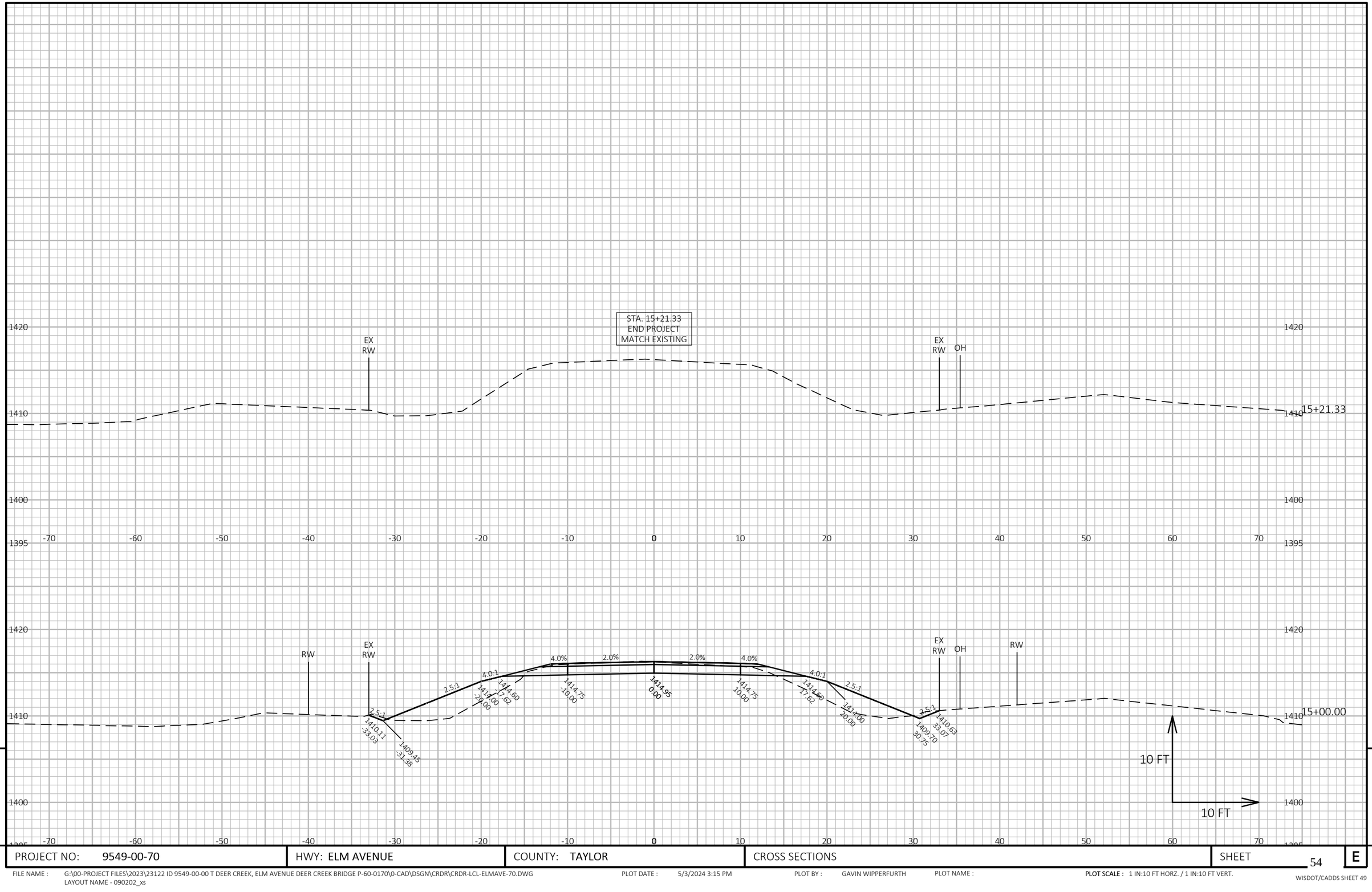
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| PROJECT NO: 9549-00-70 | HWY: ELM AVENUE | COUNTY: TAYLOR | CROSS SECTIONS | SHEET 53 | E |
|---|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23122 ID 9549-00-00 T DEER CREEK, ELM AVENUE DEER CREEK BRIDGE P-60-0170\0-CAD\DSGN\CRDR\CRDR-LCL-ELMAVE-70.DWG
LAYOUT NAME - 090201_xs

PLOT DATE : 5/3/2024 3:15 PM PLOT BY : GAVIN WIPPERFURTH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 9549-00-70 | HWY: ELM AVENUE | COUNTY: TAYLOR | CROSS SECTIONS | SHEET 54 | E |
|---|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23122 ID 9549-00-00 T DEER CREEK, ELM AVENUE DEER CREEK BRIDGE P-60-0170\0-CAD\DSGN\CRDR\CRDR-LCL-ELMAVE-70.DWG
LAYOUT NAME - 090202_xs

PLOT DATE : 5/3/2024 3:15 PM

PLOT BY : GAVIN WIPPERFURTH

PLOT NAME :

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

Notes

**Wisconsin Department of Transportation**

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

EAU

PROJECT ID: **9549-00-71**

WITH: 9549-00-70, 9549-00-72, 9549-00-73

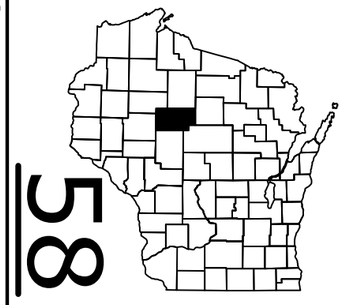
COUNTY: **TAYLOR**

NOVEMBER 2024

ORDER OF SHEETS


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


TOTAL SHEETS = 44







DESIGN DESIGNATION 9549-00-01

| | | | |
|---|---|---|---|
| A.A.D.T. | 2025 | = | 64 |
| A.A.D.T. | 2045 | = | 78 |
| D.H.V. | | = | 12 |
| D.D. | | = | 62/38 |
| T. | | = | 7.7% |
| DESIGN SPEED | | = | 60 MPH |
| ESALS | | = | 9745 |

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

**PLAN OF PROPOSED IMPROVEMENT**

# T DEER CREEK, ROBIN DRIVE

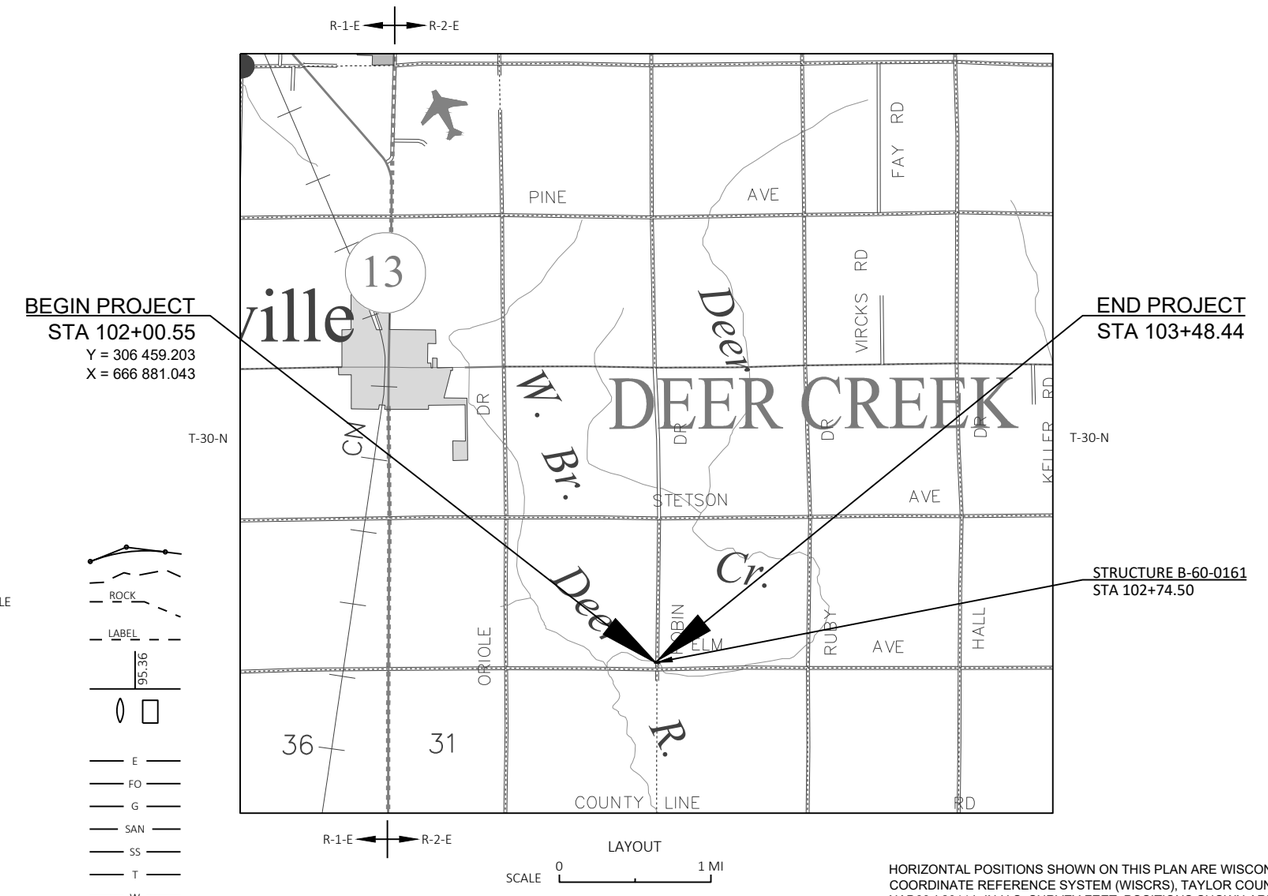
**DEER CREEK BRIDGE B-60-0161**

## LOC STR

## TAYLOR COUNTY

| STATE PROJECT NUMBER |
|---|
| 9549-00-71 |

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 9549-00-71 | WISC 2025072 | 1 |
| | | |
| | | |
| | | |




BEGIN PROJECT
STA 102+00.55
Y = 306 459.203
X = 666 881.043

END PROJECT
STA 103+48.44

STRUCTURE B-60-0161
STA 102+74.50

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.0280 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), TAYLOR 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

*TAYLOR COUNTY*

7/29/2024 (Date)

*Benjamin Stanfley* (Signature and Title of Official)

Highway Commissioner

ORIGINAL PLANS PREPARED BY


WESTBROOK
Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WISCONSIN 53588
PHONE (608) 588-7866
FAX (608) 588-7954


WISCONSIN PROFESSIONAL ENGINEER
AARON B. PALMER
E-35695
RICHLAND CENTER, WI

DATE: 7/26/24 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

| | |
|---|---|
| Surveyor | WESTBROOK ASSOCIATED ENGINEERS, INC. |
| Designer | WESTBROOK ASSOCIATED ENGINEERS, INC. |
| Project Manager | MATT BERG, P.E. |
| Regional Examiner | NW REGION |
| Regional Supervisor | TOU YANG, P.E. |

APPROVED FOR THE DEPARTMENT

DATE: 7/30/2024 (Signature)

E

## STANDARD ABBREVIATIONS

| | | | |
|---|---|---|---|
| ABUT | ABUTMENT | ML OR M/L | MATCH LINE |
| AC | ACRE | NOM | NOMINAL |
| AGG | AGGREGATE | NC | NORMAL CROWN |
| ∠ | ANGLE | NO | NUMBER |
| AADT | ANNUAL AVERAGE DAILY TRAFFIC | PAVT | PAVEMENT |
| ASPH | ASPHALTIC | PLE | PERMANENT LIMITED EASEMENT |
| BK | BACK | PC | POINT OF CURVATURE |
| BAD | BASE AGGREGATE DENSE | PI | POINT OF INTERSECTION |
| BL OR B/L | BASE LINE | PT | POINT OF TANGENCY |
| BM | BENCH MARK | PCC | PORTLAND CEMENT CONCRETE |
| CL OR C/L | CENTER LINE | LB | POUND |
| Δ | CENTRAL ANGLE OR DELTA | PSI | POUNDS PER SQUARE INCH |
| CONC | CONCRETE | PE | PRIVATE ENTRANCE |
| CONST | CONSTRUCTION | PROJ | PROJECT |
| CP | CONTROL POINT | PL | PROPERTY LINE |
| CO | COUNTY | PRW | PROPOSED RIGHT OF WAY |
| CY | CUBIC YARD | R | RADIUS |
| D | DEGREE OF CURVE | RL OR R/L | REFERENCE LINE |
| DHV | DESIGN HOUR VOLUME | REQD | REQUIRED |
| DIA | DIAMETER | RT | RIGHT |
| DD | DIRECTIONAL DISTRIBUTION | R/W | RIGHT OF WAY |
| DWY | DRIVEWAY | RD | ROAD |
| EA | EACH | RDWY | ROADWAY |
| EL OR ELEV | ELEVATION | SHLDR | SHOULDER |
| EMB | EMBANKMENT | SPECS | SPECIFICATIONS |
| ESALS | EQUIVALENT SINGLE AXLE LOADS | SF | SQUARE FEET |
| EXC | EXCAVATION | SY | SQUARE YARD |
| EXIST | EXISTING | SDD | STANDARD DETAIL DRAWINGS |
| FERT | FERTILIZER | STH | STATE TRUNK HIGHWAY |
| FE | FIELD ENTRANCE | STA | STATION |
| FL OR F/L | FLOW LINE | SL OR S/L | SURVEY LINE |
| FT | FOOT | TEMP | TEMPORARY |
| CWT | HUNDRED WEIGHT | TLE | TEMPORARY LIMITED EASEMENT |
| IN DIA | INCH DIAMETER | TL OR T/L | TRANSIT LINE |
| INTERS | INTERSECTION | T | TRUCKS (PERCENT OF) |
| JT | JOINT | TYP | TYPICAL |
| LT | LEFT | VAR | VARIABLE |
| L | LENGTH OF CURVE | VC | VERTICAL CURVE |
| LF | LINEAR FOOT | VPC | VERTICAL POINT OF CURVATURE |
| LC | LONG CHORD OF CURVE | VPI | VERTICAL POINT OF INTERSECTION |
| LS | LUMP SUM | VPT | VERTICAL POINT OF TANGENCY |
| MGAL | ONE THOUSAND GALLONS | W | WEST |

## WISCONSIN DNR LIAISON

WENDY HENNIGES
DNR NORTHERN REGION HEADQUARTERS
810 W MAPLE STREET
SPOONER, WI 54801
PHONE: (715) 499-1608
EMAIL: wendy.henniges@wisconsin.gov

## CONSULTANT LIAISON

AARON PALMER, P.E.
WESTBROOK ASSOCIATED ENGINEERS, INC.
619 EAST HOXIE ST
SPRING GREEN, WI 53588
PHONE: (608) 588-7866
EMAIL: apalmer@westbrookeng.com

## COUNTY HIGHWAY COMMISSIONER

BENJAMIN STANFLEY, E.I.T.
TAYLOR COUNTY
208 N 8TH STREET
MEDFORD, WI 54451
PHONE: (715) 785-8326
EMAIL: ben.stanfley@co.taylor.wi.us

## WISDOT DESIGN PROJECT MANAGER

MATTHEW BERG, P.E.
WISDOT LOCAL PROGRAM PROJECT MANAGER
718 W CLAIREMONT AVE
EAU CLAIRE, WI 54701
PHONE: (920) 366-4750
EMAIL: matthew.berg@dot.wi.gov

## UTILITIES CONTACTS

TAYLOR ELECTRIC COOPERATIVE
ELECTRIC
WADE MATYKA
N 1831 STATE HWY 13
MEDFORD, WI 54451
PHONE: (715) 678-2411
EMAIL: wade@taylorelectric.org

TDS TELECOM
COMMUNICATIONS
RODNEY LINDEMANN
9508 S WASHINGTON AVE
MARSHFIELD, WI 54449
PHONE: (715) 743-5933
EMAIL: rodney.lindemann@tdstelecom.com

## 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.

THE CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

APPLY TACK COAT BETWEEN LAYERS OF HMA PAVEMENT AT A RATE OF 0.07 GAL/SY.

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

RIGHT OF WAY INFORMATION, AS SHOWN ON THE PLANS, IS APPROXIMATE.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE DONE WITH THE APPROVAL OF THE ENGINEER.

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

THE CONTRACTOR SHALL PREPARE AN EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND SUBMIT THE PLAN TO WISDOT AND WDNR FOR REVIEW AT LEAST 14 DAYS PRIOR TO THE PRECONSTRUCTION CONFERENCE.

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

BIODEGRADABLE NON-NETTED MATTING SHALL BE USED ALONG STREAM CORRIDORS.

APPLY SEED, MULCH OR EROSION MAT, AND FERTILIZER TO ALL DISTURBED AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETE.

SLOPES STEEPER THAN 3:1 REQUIRE EROSION MAT.

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

THE CONTRACTOR'S PAVING OPERATION SHALL BE CONSISTENT WITH THE TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PAVING OPERATIONS REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAYS SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER OPERATIONS ARE COMPLETED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.

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

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

D.O.T. MONUMENT IS TO BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR IN THE SAME WING THAT THE PROPOSED NAME PLATE WILL BE PLACED, AS DIRECTED BY THE ENGINEER.

## 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 = 0.27 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.18 ACRES

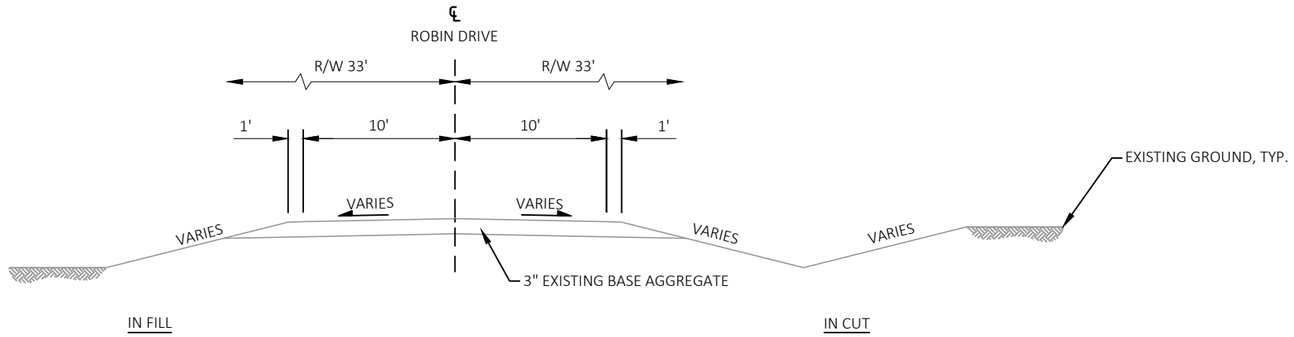
## ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PERMANENT SIGNING
ALIGNMENT DETAILS AND CONTROL POINTS

| ROBIN DRIVE | | |
|---|---|---|
| LAYER | THICKNESS | TYPE |
| UPPER | 1.75-INCHES | 4 LT 58-34 S |
| LOWER | 2.25-INCHES | 3 LT 58-34 S |

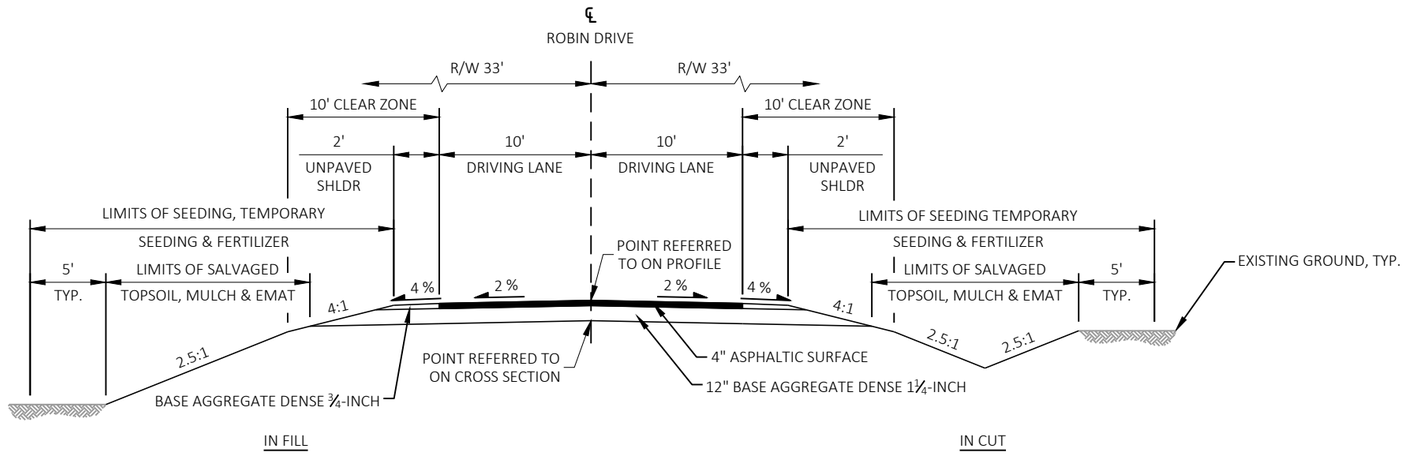
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

2




## EXISTING TYPICAL SECTION

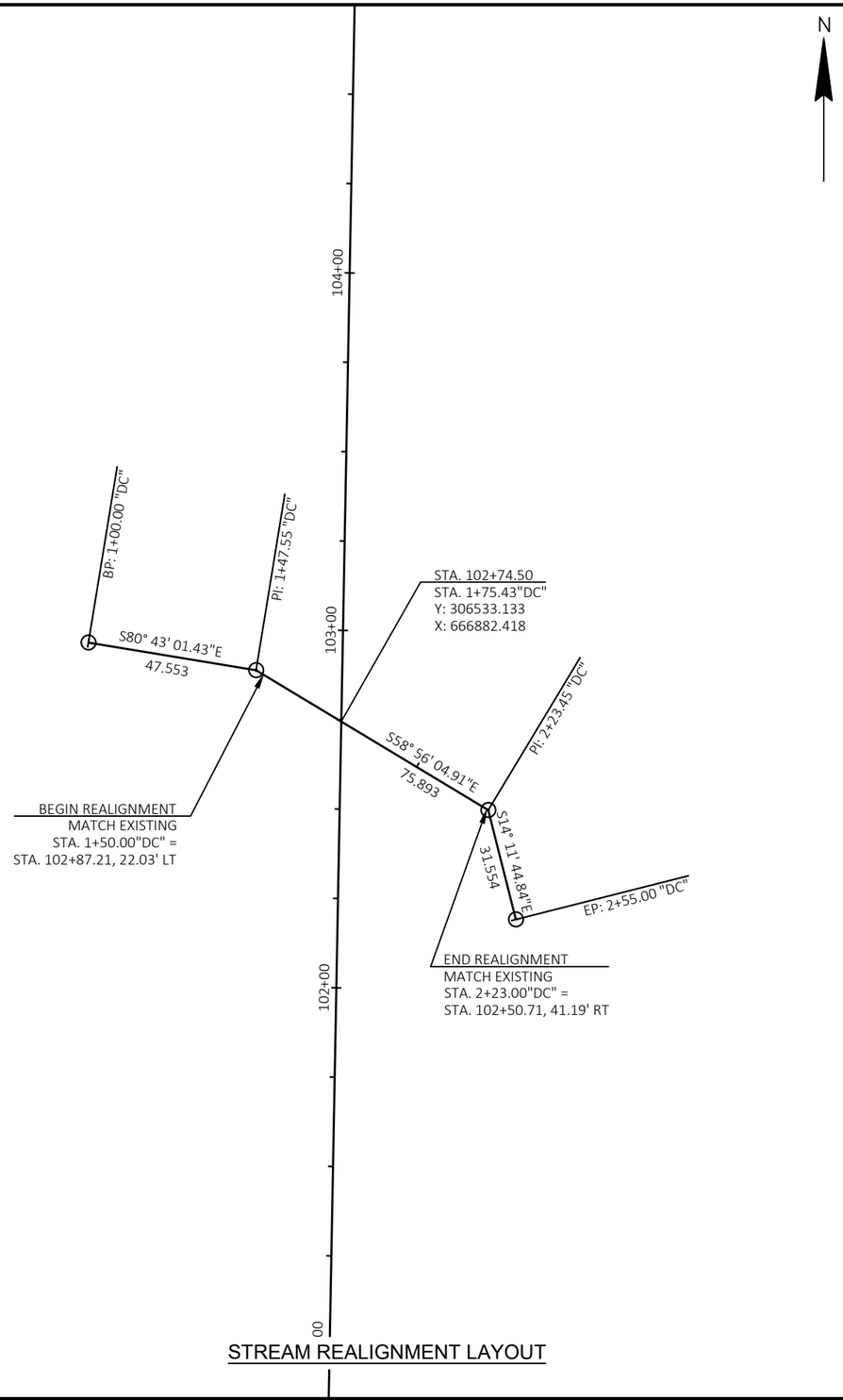
STA 102+00.55 - 103+48.44



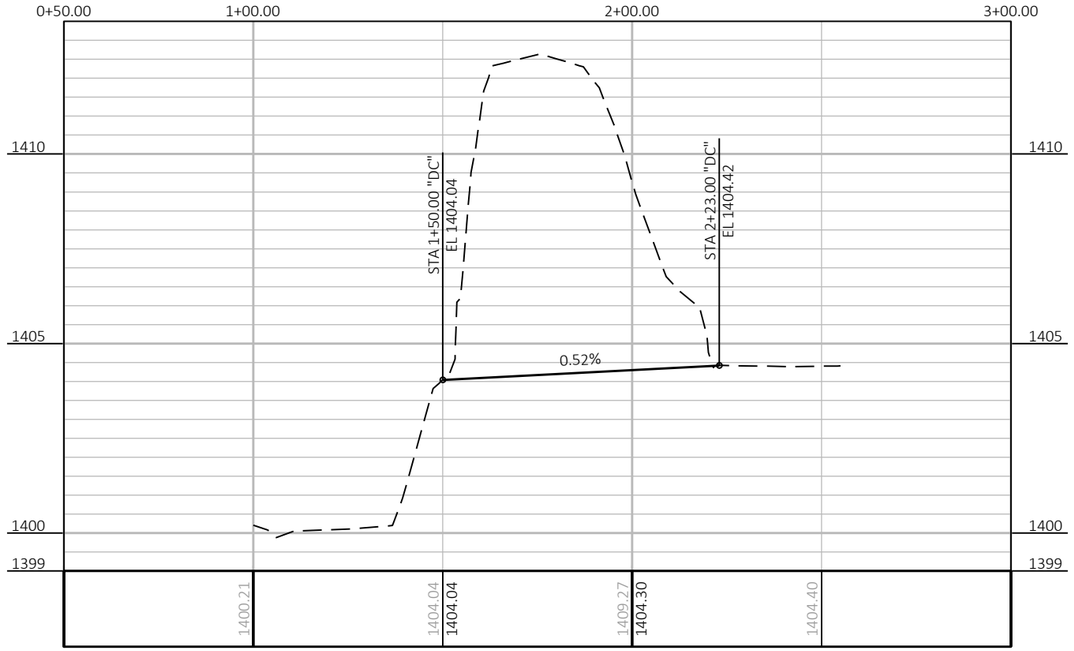

## FINISHED TYPICAL SECTION

STA 102+00.55 - 102+30.55
STA 103+18.44 - 103+48.44

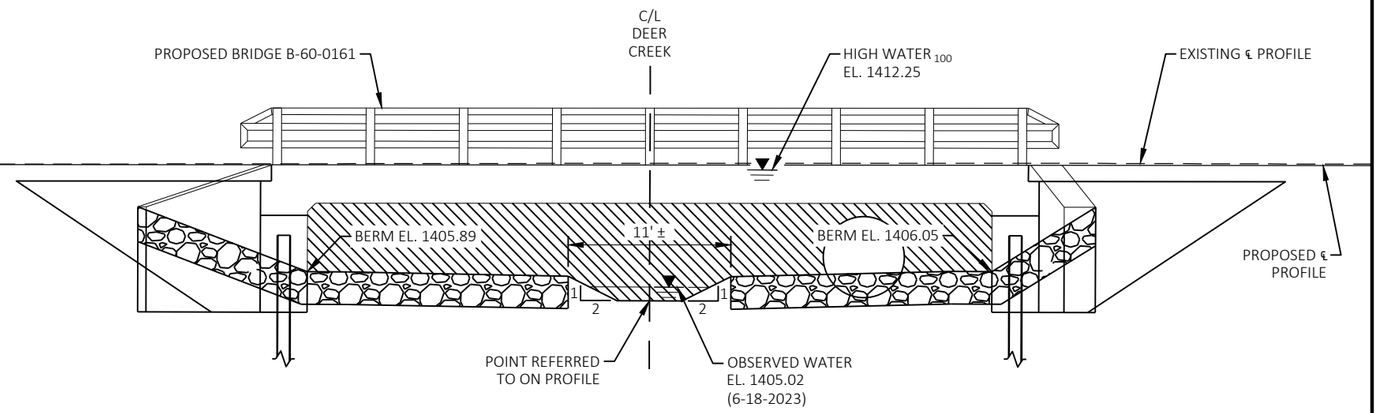
| PROJECT NO: 9549-00-71 | HWY: ROBIN DRIVE | COUNTY: TAYLOR | TYPICAL SECTIONS | SHEET 3 | E |
|---|---|---|---|---|---|




STREAM REALIGNMENT LAYOUT




STREAM REALIGNMENT PROFILE
DEER CREEK




DEER CREEK TYPICAL SECTION
(LOOKING WEST)

| PROJECT NO: 9549-00-71 | HWY: ROBIN DRIVE | COUNTY: TAYLOR | CONSTRUCTION DETAILS | SHEET 4 | E |
|---|---|---|---|---|---|

NOTE:
CONSTRUCT IN ACCORDANCE WITH SDD "SIGNING AND MARKING FOR TWO LANE BRIDGES"

N

BP: 300+00.00

301+00

BP: 100+00.00

101+00

ROBIN DR

102+00

103+00

104+00

105+00

EP: 105+00.00

W5-52L
12"X36"
2

W5-52R
12"X36"
4

O BORE

O BORE

302+00

ELM AVE

PI: 302+50.00

1

W5-52R
12"X36"

3

W5-52L
12"X36"

O BORE

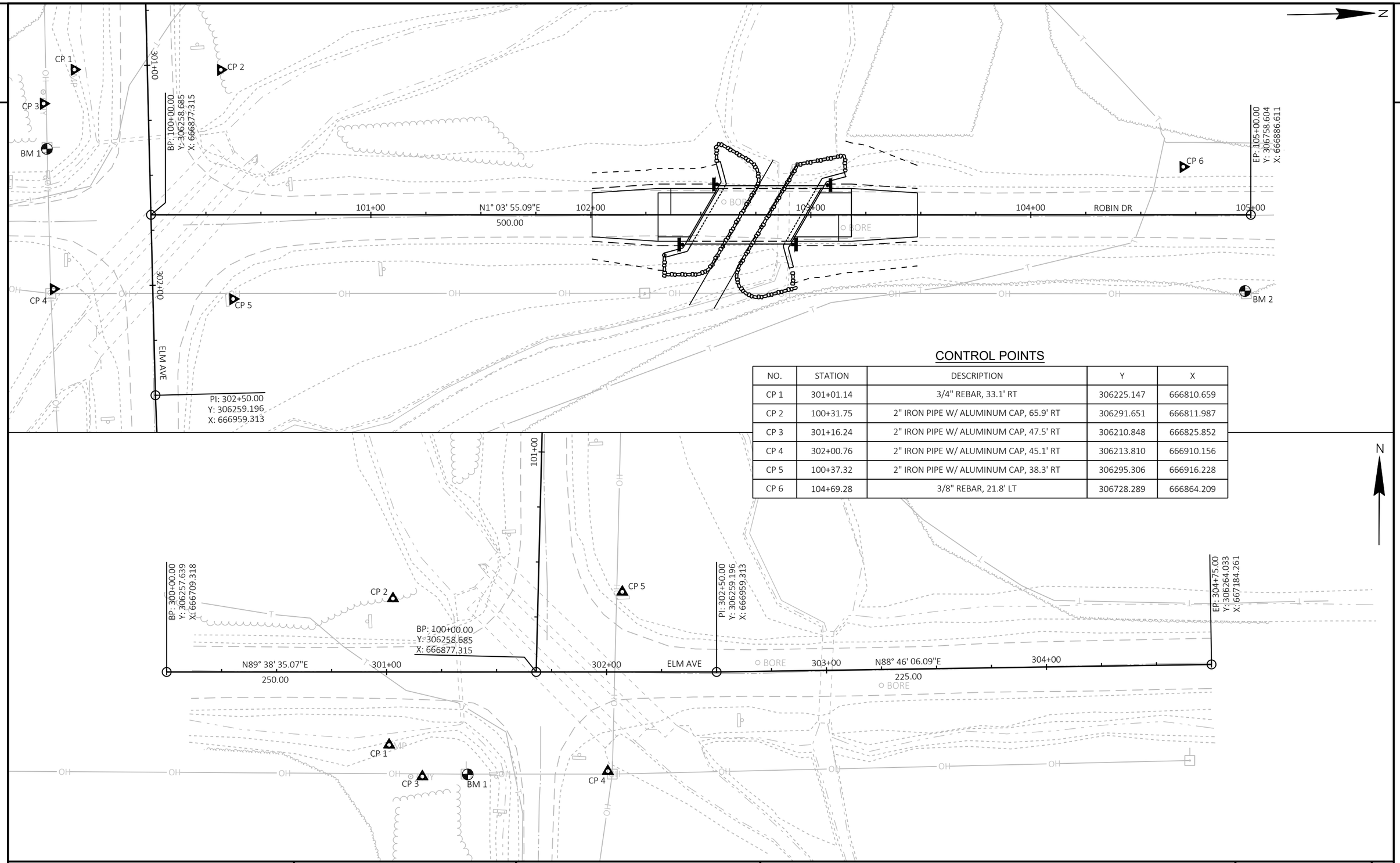
303+00

O BORE

| PROJECT NO: 9549-00-71 | HWY: ROBIN DRIVE | COUNTY: TAYLOR | PERMANENT SIGNING | SHEET 5 E |
|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23123 ID 9549-00-01 T DEER CREEK, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\SHEETS\023201_PS.DWG
LAYOUT NAME - 023201_ps

PLOT DATE : 5/6/2024 10:38 AM PLOT BY : GAVIN WIPPERFURTH PLOT NAME : PLOT SCALE : 1 IN:40 FT




## CONTROL POINTS

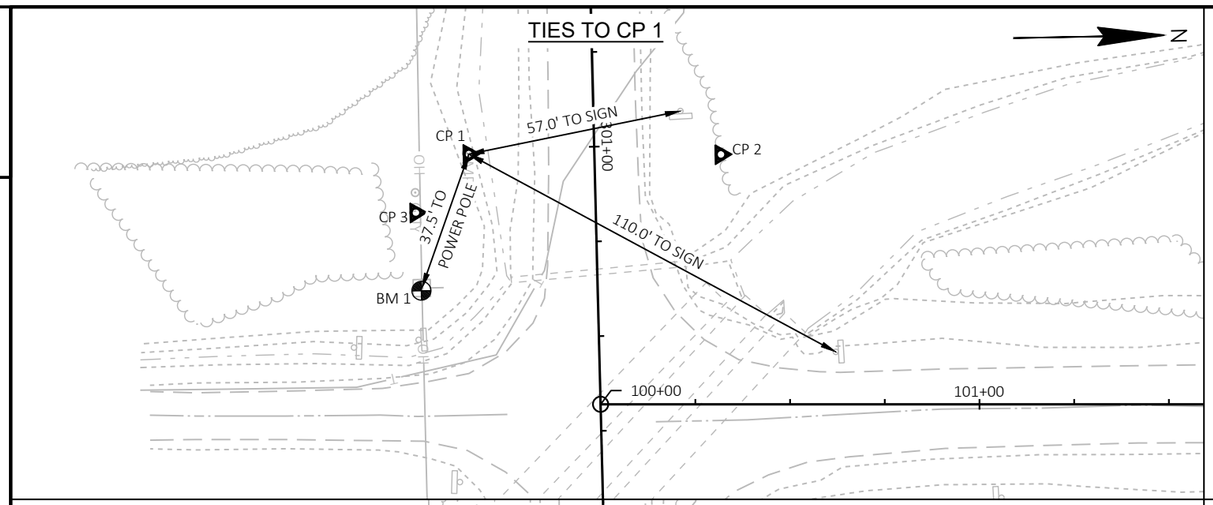
| NO. | STATION | DESCRIPTION | Y | X |
|---|---|---|---|---|
| CP 1 | 301+01.14 | 3/4" REBAR, 33.1' RT | 306225.147 | 666810.659 |
| CP 2 | 100+31.75 | 2" IRON PIPE W/ ALUMINUM CAP, 65.9' RT | 306291.651 | 666811.987 |
| CP 3 | 301+16.24 | 2" IRON PIPE W/ ALUMINUM CAP, 47.5' RT | 306210.848 | 666825.852 |
| CP 4 | 302+00.76 | 2" IRON PIPE W/ ALUMINUM CAP, 45.1' RT | 306213.810 | 666910.156 |
| CP 5 | 100+37.32 | 2" IRON PIPE W/ ALUMINUM CAP, 38.3' RT | 306295.306 | 666916.228 |
| CP 6 | 104+69.28 | 3/8" REBAR, 21.8' LT | 306728.289 | 666864.209 |

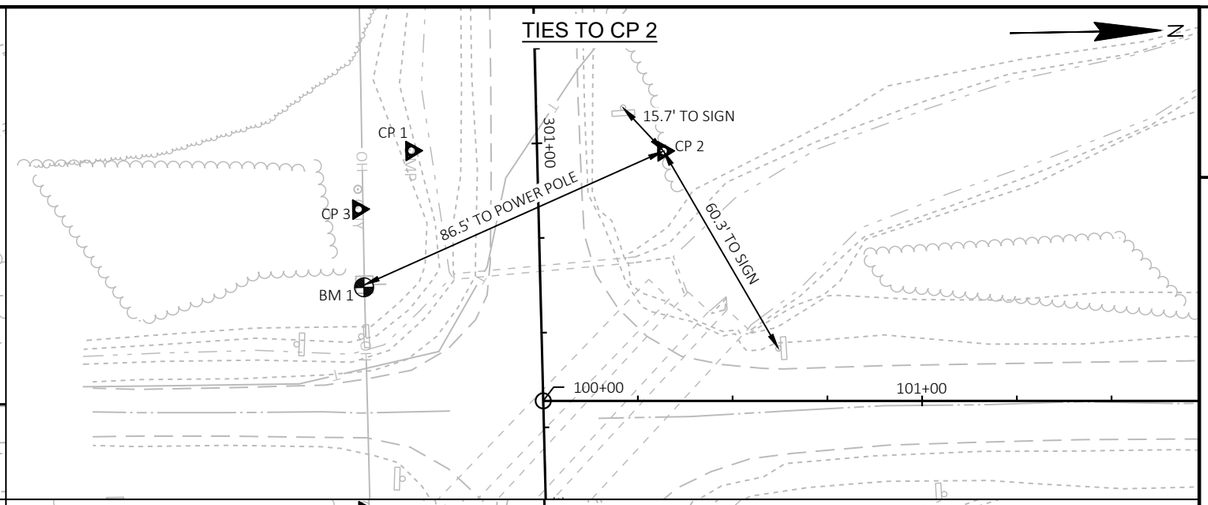
| PROJECT NO: 9549-00-71 | HWY: ROBIN DRIVE | COUNTY: TAYLOR | ALIGNMENT DETAILS AND CONTROL POINTS | SHEET 6 | E |
|---|---|---|---|---|---|

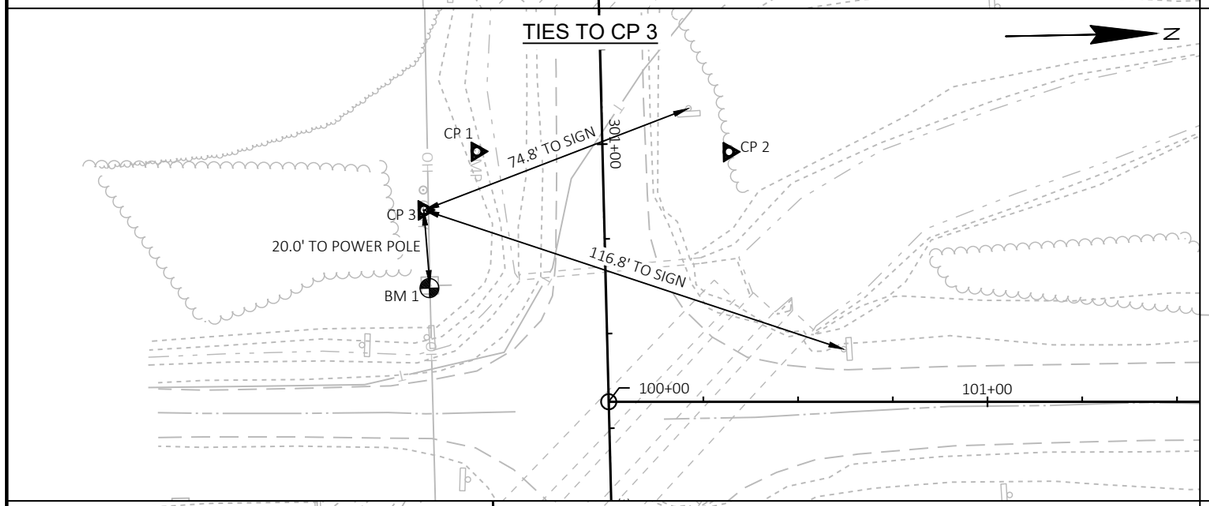
FILE NAME : G:\00-PROJECT FILES\2023\23123 ID 9549-00-01 T DEER CREEK, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\SHEETS\027201_AD.DWG
LAYOUT NAME - 027201_ad

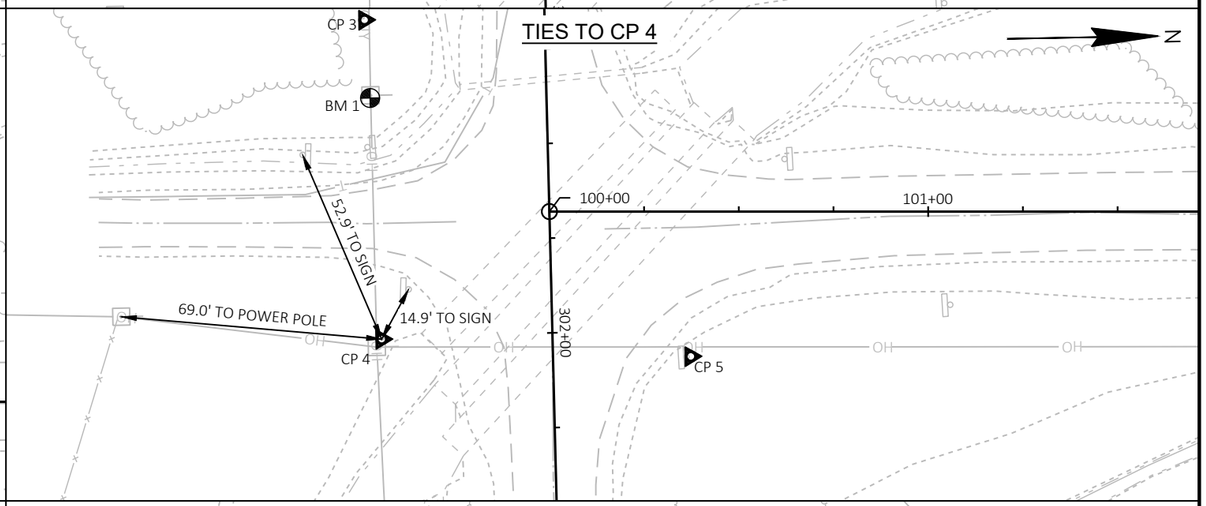
PLOT DATE : 7/11/2024 1:16 PM PLOT BY : ERICA BAUER PLOT NAME : PLOT SCALE : 1 IN:40 FT

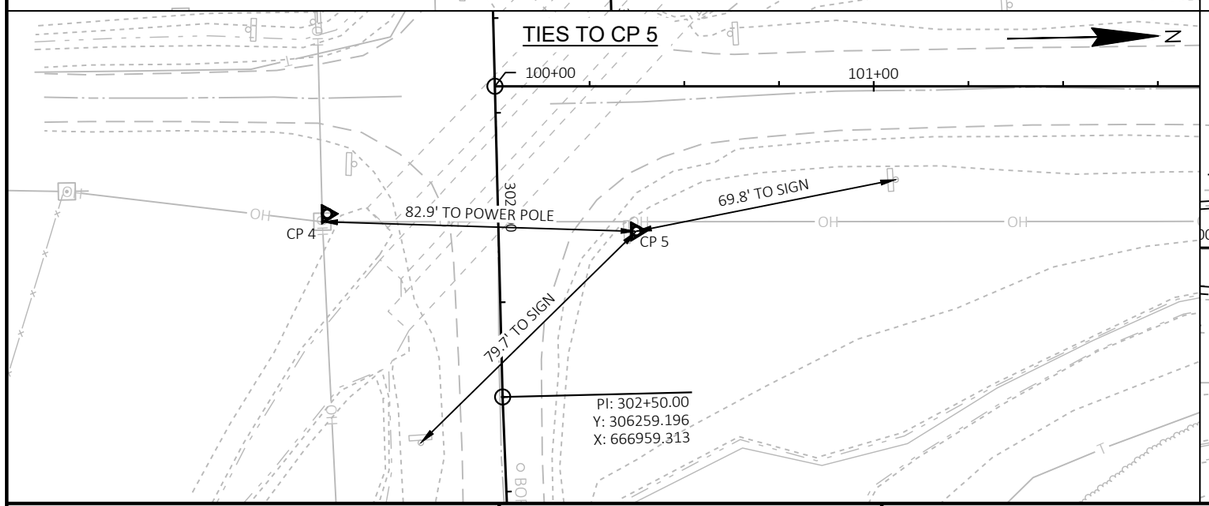
2

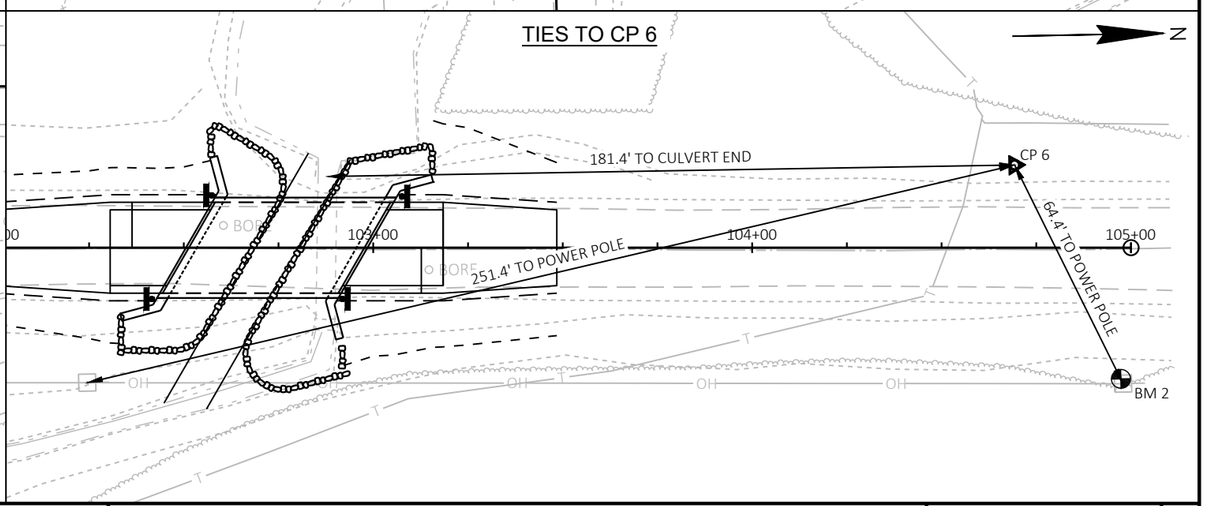



| PROJECT NO: 9549-00-71 | HWY: ROBIN DRIVE | COUNTY: TAYLOR | ALIGNMENT DETAILS AND CONTROL POINTS | SHEET 7 | E |
|---|---|---|---|---|---|


FILE NAME : G:\00-PROJECT FILES\2023\23123 ID 9549-00-01 T DEER CREEK, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\SHEETS\027201_AD.DWG
LAYOUT NAME - 027202_ad
PLOT DATE : 7/11/2024 1:16 PM PLOT BY : ERICA BAUER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

9549-00-71

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0006 | 203.0220 | Removing Structure (structure) 02. 5-FT Dia. Culvert | EACH | 1.000 | 1.000 |
| 0014 | 205.0100 | Excavation Common | CY | 139.000 | 139.000 |
| 0018 | 206.1001 | Excavation for Structures Bridges (structure) 02. B-60-0161 | EACH | 1.000 | 1.000 |
| 0026 | 210.1500 | Backfill Structure Type A | TON | 400.000 | 400.000 |
| 0030 | 213.0100 | Finishing Roadway (project) 02. 9549-00-71 | EACH | 1.000 | 1.000 |
| 0036 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 14.000 | 14.000 |
| 0038 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 220.000 | 220.000 |
| 0040 | 415.0060 | Concrete Pavement 6-Inch | SY | 16.000 | 16.000 |
| 0042 | 415.0410 | Concrete Pavement Approach Slab | SY | 94.000 | 94.000 |
| 0044 | 455.0605 | Tack Coat | GAL | 12.000 | 12.000 |
| 0046 | 465.0105 | Asphaltic Surface | TON | 34.000 | 34.000 |
| 0048 | 502.0100 | Concrete Masonry Bridges | CY | 163.000 | 163.000 |
| 0050 | 502.3200 | Protective Surface Treatment | SY | 211.000 | 211.000 |
| 0052 | 505.0400 | Bar Steel Reinforcement HS Structures | LB | 4,590.000 | 4,590.000 |
| 0054 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 21,920.000 | 21,920.000 |
| 0056 | 513.4061 | Railing Tubular Type M | LF | 101.000 | 101.000 |
| 0058 | 516.0500 | Rubberized Membrane Waterproofing | SY | 14.000 | 14.000 |
| 0066 | 550.1100 | Piling Steel HP 10-Inch X 42 Lb | LF | 560.000 | 560.000 |
| 0068 | 606.0300 | Riprap Heavy | CY | 160.000 | 160.000 |
| 0070 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 150.000 | 150.000 |
| 0074 | 618.0100 | Maintenance and Repair of Haul Roads (project) 02. 9549-00-71 | EACH | 1.000 | 1.000 |
| 0080 | 619.1000 | Mobilization | EACH | 0.250 | 0.250 |
| 0084 | 624.0100 | Water | MGAL | 2.400 | 2.400 |
| 0088 | 625.0500 | Salvaged Topsoil | SY | 140.000 | 140.000 |
| 0092 | 628.1504 | Silt Fence | LF | 320.000 | 320.000 |
| 0094 | 628.1520 | Silt Fence Maintenance | LF | 510.000 | 510.000 |
| 0096 | 628.1905 | Mobilizations Erosion Control | EACH | 3.000 | 3.000 |
| 0098 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 2.000 | 2.000 |
| 0100 | 628.2008 | Erosion Mat Urban Class I Type B | SY | 140.000 | 140.000 |
| 0104 | 628.6005 | Turbidity Barriers | SY | 300.000 | 300.000 |
| 0110 | 629.0210 | Fertilizer Type B | CWT | 0.300 | 0.300 |
| 0114 | 630.0130 | Seeding Mixture No. 30 | LB | 10.000 | 10.000 |
| 0116 | 630.0200 | Seeding Temporary | LB | 15.000 | 15.000 |
| 0118 | 630.0500 | Seed Water | MGAL | 9.000 | 9.000 |
| 0122 | 634.0612 | Posts Wood 4x6-Inch X 12-FT | EACH | 4.000 | 4.000 |
| 0128 | 637.2230 | Signs Type II Reflective F | SF | 12.000 | 12.000 |
| 0138 | 642.5001 | Field Office Type B | EACH | 0.250 | 0.250 |
| 0140 | 643.0420 | Traffic Control Barricades Type III | DAY | 1,610.000 | 1,610.000 |
| 0142 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 3,220.000 | 3,220.000 |
| 0144 | 643.0900 | Traffic Control Signs | DAY | 1,260.000 | 1,260.000 |
| 0146 | 643.5000 | Traffic Control | EACH | 0.250 | 0.250 |
| 0148 | 645.0111 | Geotextile Type DF Schedule A | SY | 68.000 | 68.000 |
| 0150 | 645.0120 | Geotextile Type HR | SY | 315.000 | 315.000 |
| 0152 | 650.4500 | Construction Staking Subgrade | LF | 100.000 | 100.000 |
| 0154 | 650.5000 | Construction Staking Base | LF | 100.000 | 100.000 |
| 0160 | 650.6501 | Construction Staking Structure Layout (structure) 02. B-60-0161 | EACH | 1.000 | 1.000 |
| 0168 | 650.9911 | Construction Staking Supplemental Control (project) 02. 9549-00-71 | EACH | 1.000 | 1.000 |
| 0174 | 650.9920 | Construction Staking Slope Stakes | LF | 100.000 | 100.000 |
| 0178 | 715.0502 | Incentive Strength Concrete Structures | DOL | 978.000 | 978.000 |

9549-00-71

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0180 | 715.0720 | Incentive Compressive Strength Concrete Pavement | DOL | 500.000 | 500.000 |
| 0188 | SPV.0060 | Special 01. Stream Realignment Structure B-60-0161 | EACH | 1.000 | 1.000 |

| DIVISION | FROM/TO STATION | 205.0100 EXCAVATION COMMON (1) CUT (2) | SALVAGED/UNUSABLE PAVEMENT MATERIAL (3) | AVAILABLE MATERIAL (4) | UNEXPANDED FILL | EXPANDED FILL (5) FACTOR 1.25 | MASS ORDINATE +/- (6) | WASTE |
|---|---|---|---|---|---|---|---|---|
| DIVISION 1 | | | | | | | | |
| SOUTH APPROACH | 102+00.55/102+56.89 | 72 | 0 | 72 | 2 | 3 | 70 | 70 |
| DIVISION 1 SUBTOTAL | | 72 | 0 | 72 | 2 | 3 | 70 | 70 |
| DIVISION 2 | | | | | | | | |
| NORTH APPROACH | 102+92.10/103+48.44 | 67 | 0 | 67 | 48 | 60 | 7 | 7 |
| DIVISION 2 SUBTOTAL | | 67 | 0 | 67 | 48 | 60 | 7 | 7 |
| GRAND TOTAL | | 139 | 0 | 139 | 50 | 63 | 77 | 77 |

NOTES:
(1) EXCAVATION COMMON IS THE SUM OF THE CUT COLUMN. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES EXISTING PAVEMENT.
(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(5) EXPANDED FILL FACTOR = 1.25
(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
(7) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

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 | 624.0100 WATER MGAL |
|---|---|---|---|---|---|---|
| 102+00.55 | - | 102+50.55 | SOUTH APPROACH | 7 | 110 | 1.2 |
| 102+98.45 | - | 103+48.44 | NORTH APPROACH | 7 | 110 | 1.2 |
| | | | TOTAL | 14 | 220 | 2.4 |

ASPHALTIC SURFACE

| STATION | TO | STATION | LOCATION | 455.0605 TACK COAT GAL | 465.0105 ASPHALTIC SURFACE TON |
|---|---|---|---|---|---|
| 102+00.55 | - | 102+50.55 | SOUTH APPROACH | 6 | 17 |
| 102+98.45 | - | 103+48.44 | NORTH APPROACH | 6 | 17 |
| | | | TOTAL | 12 | 34 |

CONCRETE PAVEMENT

| STATION | TO | STATION | LOCATION | 415.0060 CONCRETE PAVEMENT 6-INCH SY | 415.0410 CONCRETE PAVEMENT APPROACH SLAB SY |
|---|---|---|---|---|---|
| 102+30.55 | - | 102+51.32 | SOUTH APPROACH | 8 | 47 |
| 102+97.67 | - | 103+18.44 | NORTH APPROACH | 8 | 47 |
| | | | TOTAL | 16 | 94 |

SILT FENCE

| STATION | TO | STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF |
|---|---|---|---|---|---|
| 102+00 | - | 102+66 | SOUTH APPROACH, LT | 69 | 138 |
| 102+00 | - | 102+42 | SOUTH APPROACH, RT | 47 | 94 |
| 102+53 | - | 103+49 | NORTH APPROACH, RT | 98 | 196 |
| 103+11 | - | 103+50 | NORTH APPROACH, LT | 41 | 82 |
| | | | UNDISTRIBUTED | 65 | --- |
| | | | TOTAL | 320 | 510 |

3

3

## FINISHING ITEMS

| STATION | TO | STATION | LOCATION | 625.0500 SALVAGED TOPSOIL SY | 628.2008 EROSION MAT URBAN CLASS I TYPE B SY | 629.0210 FERTILIZER TYPE B CWT | 630.0130 SEEDING MIXTURE NO. 30 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|---|---|
| 102+00 | - | 102+59 | SOUTH APPROACH, LT | 10 | 10 | 0.05 | 2 | 3 | 1.8 |
| 102+00 | - | 102+42 | SOUTH APPROACH, RT | 15 | 15 | 0.04 | 1 | 2 | 1.3 |
| 102+90 | - | 103+49 | NORTH APPROACH, RT | 46 | 46 | 0.08 | 3 | 4 | 2.6 |
| 103+07 | - | 103+49 | NORTH APPROACH, LT | 36 | 36 | 0.05 | 2 | 3 | 1.7 |
| | | | UNDISTRIBUTED | 33 | 33 | 0.08 | 2 | 3 | 1.6 |
| | | | TOTAL | 140 | 140 | 0.30 | 10 | 15 | 9.0 |

## MOBILIZATIONS EROSION CONTROL

| LOCATION | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH |
|---|---|---|
| PROJECT | 3 | 2 |
| TOTAL | 3 | 2 |

## TURBIDITY BARRIERS

| LOCATION | 628.6005 SY |
|---|---|
| SOUTH ABUTMENT | 121 |
| NORTH ABUTMENT | 114 |
| UNDISTRIBUTED | 65 |
| TOTAL | 300 |

## PERMANENT SIGNING

| STATION | LOCATION | SIGN NUMBER | SIGN CODE | 634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH | 637.2230 SIGNS TYPE II REFLECTIVE F SF | REMARKS |
|---|---|---|---|---|---|---|
| 102+41 | SOUTH APPROACH, RT | 1 | W5-52R | 1 | 3 | BRIDGE HASH MARKS |
| 102+57 | SOUTH APPROACH, LT | 2 | W5-52L | 1 | 3 | BRIDGE HASH MARKS |
| 102+92 | NORTH APPROACH, RT | 3 | W5-52L | 1 | 3 | BRIDGE HASH MARKS |
| 103+07 | NORTH APPROACH, LT | 4 | W5-52R | 1 | 3 | BRIDGE HASH MARKS |
| | | | TOTAL | 4 | 12 | |

## TRAFFIC CONTROL

| LOCATION | DURATION DAY | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY | 643.0900 TRAFFIC CONTROL SIGNS NO. | 643.0900 TRAFFIC CONTROL SIGNS DAY |
|---|---|---|---|---|---|---|---|
| SOUTH APPROACH | 70 | 9 | 630 | 18 | 1,260 | 7 | 490 |
| NORTH APPROACH | 70 | 9 | 630 | 18 | 1,260 | 7 | 490 |
| UNDISTRIBUTED | 70 | 5 | 350 | 10 | 700 | 4 | 280 |
| PROJECT | --- | --- | --- | --- | --- | --- | --- |
| | TOTAL | 23 | 1,610 | 46 | 3,220 | 18 | 1,260 |

## CONSTRUCTION STAKING

| STATION | TO | STATION | LOCATION | 650.4500 CONSTRUCTION STAKING SUBGRADE LF | 650.5000 CONSTRUCTION STAKING BASE LF | 650.6501 CONSTRUCTION STAKING STRUCTURE LAYOUT 01. B-60-0161 EACH | 650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 01. 9549-00-71 EACH | 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF |
|---|---|---|---|---|---|---|---|---|
| 102+00.55 | - | 102+50.55 | SOUTH APPROACH | 50 | 50 | --- | --- | 50 |
| 102+98.45 | - | 103+48.44 | NORTH APPROACH | 50 | 50 | --- | --- | 50 |
| | | | PROJECT | --- | --- | 1 | 1 | --- |
| | | | TOTAL | 100 | 100 | 1* | 1 | 100 |

*CATEGORY 0020

## CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
TO BE REMOVED
BRIDGE
CULVERT

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) IP
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN

| | COMPENSABLE | NON-COMPENSABLE |
|---|---|---|
| ELECTRIC POLE | | |
| TELEPHONE POLE | | |
| PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.) | | |

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25
UTILITY NUMBER 40
PARALLEL OFFSETS

## CONVENTIONAL UTILITY SYMBOLS

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

## CONVENTIONAL ABBREVIATIONS

| | | | |
|---|---|---|---|
| ACCESS RIGHTS | AR | POINT OF COMPOUND CURVE | PCC |
| ACRES | AC | POINT OF INTERSECTION | PI |
| AHEAD | AH | PROPERTY LINE | PL |
| ALUMINUM | ALUM | RECORDED AS | (100') |
| AND OTHERS | ET AL | REEL / IMAGE | R/I |
| BACK | BK | REFERENCE LINE | R/L |
| BLOCK | BLK | REMAINING | REM |
| CENTERLINE | C/L | RESTRICTIVE DEVELOPMENT EASEMENT | RDE |
| CERTIFIED SURVEY MAP | CSM | RIGHT | RT |
| CONCRETE | CONC | RIGHT OF WAY | R/W |
| COUNTY | CO | SECTION | SEC |
| COUNTY TRUNK HIGHWAY | CTH | SEPTIC VENT | SEPV |
| DISTANCE | DIST | SQUARE FEET | SF |
| CORNER | COR | STATE TRUNK HIGHWAY | STH |
| DOCUMENT NUMBER | DOC | STATION | STA |
| EASEMENT | EASE | TELEPHONE PEDESTAL | TP |
| EXISTING | EX | TEMPORARY LIMITED EASEMENT | TLE |
| GAS VALVE | GV | TRANSPORTATION PROJECT PLAT | TPP |
| GRID NORTH | GN | UNITED STATES HIGHWAY | USH |
| HIGHWAY EASEMENT | HE | VOLUME | V |
| IDENTIFICATION | ID | | |
| LAND CONTRACT | LC | | |
| LEFT | LT | | |
| MONUMENT | MON | | |
| NATIONAL GEODETIC SURVEY | NGS | | |
| NUMBER | NO | | |
| OUTLOT | OL | | |
| PAGE | P | | |
| POINT OF TANGENCY | PT | | |
| PERMANENT LIMITED EASEMENT | PLE | | |
| POINT OF BEGINNING | POB | | |
| POINT OF CURVATURE | PC | | |

## CURVE DATA ABBREVIATIONS

| | |
|---|---|
| LONG CHORD | LCH |
| LONG CHORD BEARING | LCB |
| RADIUS | R |
| DEGREE OF CURVE | D |
| CENTRAL ANGLE | Δ/DELTA |
| LENGTH OF CURVE | L |
| TANGENT | T |
| DIRECTION AHEAD | DA |
| DIRECTION BACK | DB |

## NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), TAYLOR COUNTY, NAD83 (2011)IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

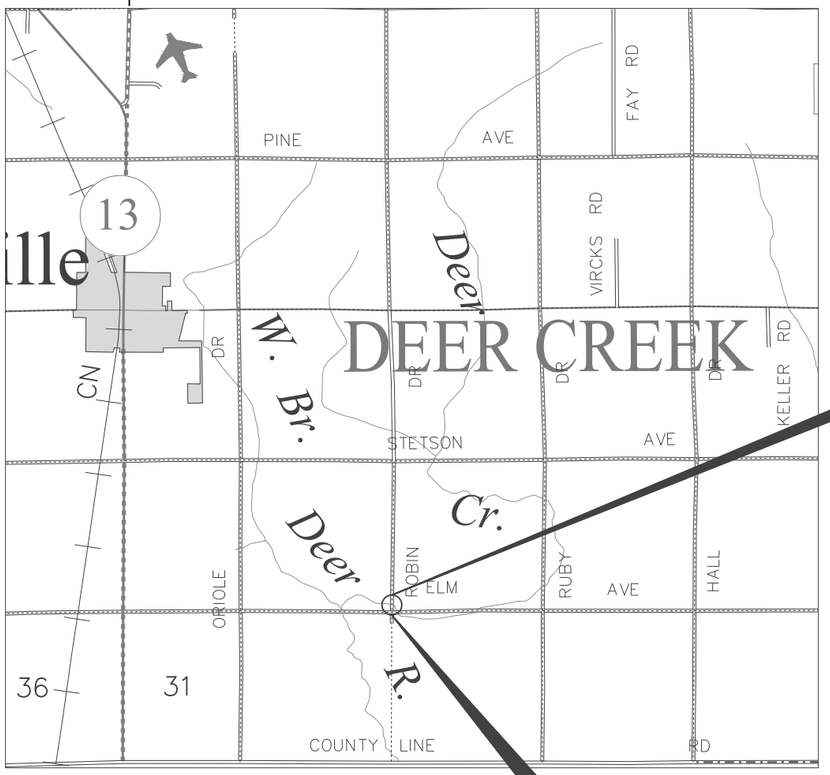
FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE TOWN OF DEER CREEK.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE DETAIL PAGES.

R-1-E R-2-E

T30N




END RELOCATION ORDER
STA 103+55.00
Y = 306 613.624
X = 666 883.915

BEGIN RELOCATION ORDER
STA 102+28.00
Y = 306 486.646
X = 666 881.554

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.024 MI

| R/W PROJECT NUMBER 9549-00-01 | SHEET NUMBER | TOTAL SHEETS |
|---|---|---|
| FEDERAL PROJECT NUMBER | 4.01 | 2 |

PLAT OF RIGHT OF WAY REQUIRED FOR

# T DEER CREEK, ROBIN DRIVE DEER CREEK BRIDGE B-60-0161

| LOC STR | TAYLOR |
|---|---|

CONSTRUCTION PROJECT NUMBER
9549-00-71

THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

ACCEPTED FOR TOWN OF DEER CREEK

DATE: 2-28-24 TOWN CHAIR

ORIGINAL PLANS PREPARED BY


WESTBROOK
Associated Engineers, Inc.
619 East Hoxie St. | P.O. Box 429 | Spring Green, WI 53588
P: (608) 588-7866 | F: (608) 588-7954 | www.westbrookeng.com


WISCONSIN
NICHOLAS J. BREY
S-3145
LAVALLE
WISCONSIN
LAND SURVEYOR
02-23-2024

REVISION DATE

DATE: 02-23-2024 {Signatur



FILE NAME : G:\00-PROJECT FILES\2023\23123 ID 9549-00-01 T DEER CREEK, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\RW\DWG\040101_RP.DWG PLOT DATE : 2/23/2024 3:12 PM PLOT BY : ERICA BAUER PLOT NAME :

# TOWN OF DEER CREEK

EXISTING RIGHT-OF-WAY FOR ELM AVE AND ROBIN DRIVE ARE BASED ON THE SOUTH AND WEST LINE OF THE SW1/4-SW1/4 OF SECTION 28, T30N, R02E PER CSM 2484, VOL 12, PAGE 285, RECORDED AS DOCUMENT *368136, AND CSM 2486, VOL 12, PAGE 289, RECORDED AS DOCUMENT *368273.

GN

SE 1/4 - SE 1/4
SEC. 29

TDS TELECOM

① BACH PROPERTIES LLC
DOC*294593

STREAM EDGE, TYP.

DEER CREEK

DEER CREEK

BEGIN RELOCATION ORDER
102+28.00
229.28' NORTH AND 4.99' EAST OF THE SE CORNER OF SECTION 29, T30N, R02E, TOWN OF DEER CREEK, TAYLOR COUNTY, WI
Y = 306 486.646
X = 666 881.554

END RELOCATION ORDER
103+55.00
356.26' NORTH AND 7.35' EAST OF THE SE CORNER OF SECTION 29, T30N, R02E, TOWN OF DEER CREEK, TAYLOR COUNTY, WI
Y = 306 613.624
X = 666 883.915

EXISTING R/W

PROPOSED TLE

BP: 100+00.00

EP: 105+00.00

ROBIN DR

101+00 102+00 103+00 104+00 105+00

NO1°02'46"E 229.33'
MONUMENT TO POINT

NO1°02'46"E 2,621.92' SW CORNER SEC. 28 TO W ¼ CORNER SEC. 28

N1°03'55"E (R/L)

COTTON GIN SPIKE 8" BELOW SURFACE
Y=306 257.365
X=666 876.565

1" IRON ROD WITH TAYLOR COUNTY CAP
Y=308 878.845
X=666 924.438

T30N R2E Sec 29 28 32 33

TAYLOR ELECTRIC COOPERATIVE

EXISTING R/W

SLOPE INTERCEPT, TYP

PROPOSED R/W

CHANNEL REALIGNMENT

TDS TELECOM

ELM AVE

② DARYL L. NEUENSCHWANDER AND DARIA L. NEUENSCHWANDER, HUSBAND AND WIFE
DOC*368432

SW 1/4 - SW 1/4
SEC. 28

## TLE TABLE

| TLE POINT | STATION | OFFSET |
|---|---|---|
| T1 | 102+40.00 | −33.81 |
| T2 | 102+40.00 | −38.00 |
| T3 | 103+55.00 | −38.00 |
| T4 | 103+55.00 | −33.84 |

## POINT TABLE

| | FROM ROAD REFERENCE LINE | | COORDINATES | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | NORTHING | EASTING |
| 1 | 102+28.00 | −0.80' | 306 486.661 | 666 880.753 |
| 2 | 102+28.00 | 32.20' | 306 486.047 | 666 913.747 |
| 3 | 102+35.00 | 48.00' | 306 492.752 | 666 929.676 |
| 4 | 102+85.00 | 48.00' | 306 542.744 | 666 930.605 |
| 5 | 103+15.00 | 32.17' | 306 573.033 | 666 915.336 |
| 6 | 103+15.00 | −0.83' | 306 573.646 | 666 882.341 |

## COURSE TABLE

| COURSE | BEARING | DISTANCE |
|---|---|---|
| 1 – 2 | S88°56'05"E | 33.00' |
| 2 – 3 | N67°10'17"E | 17.28' |
| 3 – 4 | N1°03'55"E | 50.00' |
| 4 – 5 | N26°45'14"W | 33.92' |
| 5 – 6 | N88°56'05"W | 33.00' |
| 6 – 1 | S1°02'46"W | 87.00' |

## SCHEDULE OF LANDS AND INTERESTS REQUIRED

| PARCEL NUMBER | OWNER(S) | INTEREST REQUIRED | R/W ACRES REQUIRED | | | TLE ACRES REQUIRED |
|---|---|---|---|---|---|---|
| | | | NEW | EXISTING | TOTAL | |
| 1 | BACH PROPERTIES LLC | TLE | 0.000 | 0.000 | 0.000 | 0.011 |
| 2 | DARYL L NEUENSCHWANDER & DARIA L NEUENSCHWANDER | FEE | 0.025 | 0.066 | 0.091 | 0.000 |
| 100 | TAYLOR ELECTRIC COOPERATIVE | RELEASE OF RIGHTS | --- | --- | --- | --- |

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN OF DEER CREEK.

| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE | DATE 02/23/2024 | SCALE, FEET 0 20 40 | HWY: ROBIN DRIVE | STATE R/W PROJECT NUMBER 9549-00-01 | PLAT SHEET 4.02 |
| | GRID FACTOR N/A | | COUNTY: TAYLOR | CONSTRUCTION PROJECT NUMBER 9549-00-71 | PS&E SHEET 13 E |

FILE NAME : 040102_RP.DWG
LAYOUT NAME - 040102_rp

PLOT DATE : 2/26/2024 7:47 AM PLOT BY : ERICA BAUER PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 75

DARYL L HUGH & MARY HILDERBRANDT TRUST

BACH PROPERTIES LLC

BACH PROPERTIES LLC

TIMOTHY J FOX

DARYL L NEUENSCHWANDER

N

## LEGEND

- SLOPE INTERCEPT
- SILT FENCE
- SURFACE WATER FLOW
- TURBIDITY BARRIER
- STREAM EDGE
- EXISTING SIGN
- DELINEATED WETLANDS
- PROPOSED SIGN

STREAM EDGE, TYP.

DEER CREEK

DEER CREEK

CP 1

CP 2

CP 3

CP 4

CP 5

CP 6

BM 1

BM 2

BP: 100+00.00

EP: 105+00.00

301+00

302+00

100+00

101+00

102+00

103+00

104+00

105+00

EXISTING R/W

PROPOSED TLE

SLOPE INTERCEPT, TYP.

CONCRETE PAVEMENT APPROACH SLAB

CONCRETE PAVEMENT APPROACH SLAB

SECTION LINE, TYP.

ROBIN DR (ASPHALT)

TDS TELECOM

TAYLOR ELECTRIC COOPERATIVE

CHANNEL REALIGNMENT (SEE DETAIL)

PROPOSED R/W

TDS TELECOM

ELM AVE

PI: 302+50.00

BEGIN PROJECT
STA 102+00.55
MATCH EXISTING

END PROJECT
STA 103+48.44
MATCH EXISTING

| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| BM 1 | 301+36.87 | 1413.18 | RAILROAD SPIKE IN POWER POLE, 46.56' RT |
| BM 2 | 104+97.32 | 1413.48 | RAILROAD SPIKE IN POWER POLE, 34.61' RT |

99+00.00 100+00.00 101+00.00 102+00.00 103+00.00 104+00.00 105+00.00

1415 1410 1405 1402

STA 102+00.55
EL 1412.25

STA 103+48.44
EL 1412.77

PROPOSED ℄ PROFILE

0.35%

EXISTING ℄ PROFILE

HIGH WATER 100
EL. = 1411.65

OBSERVED WATER
EL. = 1405.02
(6-18-2023)

PROP. STREAMBED
EL. = 1404.12

PROPOSED ℄ ELEVATION

EXISTING ℄ ELEVATION

1413.47 1412.44 1411.86 1411.90 1412.24 1412.51 1412.42 1412.73 1412.60 1412.77 1412.89 1413.28 1413.89

STA. 102+87.65
REMOVE EXISTING 5-FT DIA. BY 40.5-FT LONG STEEL CULVERT PIPE

STA. 102+74.50
STRUCTURE B-60-0161 REQUIRED
47.90-FT OVERALL LENGTH AND
24-FT CLEAR ROADWAY WIDTH
SINGLE SPAN REINFORCED CONCRETE FLAT SLAB STRUCTURE

| PROJECT NO: 9549-00-71 | HWY: ROBIN DRIVE | COUNTY: TAYLOR | PLAN AND PLOT | SHEET 14 | E |
|---|---|---|---|---|---|

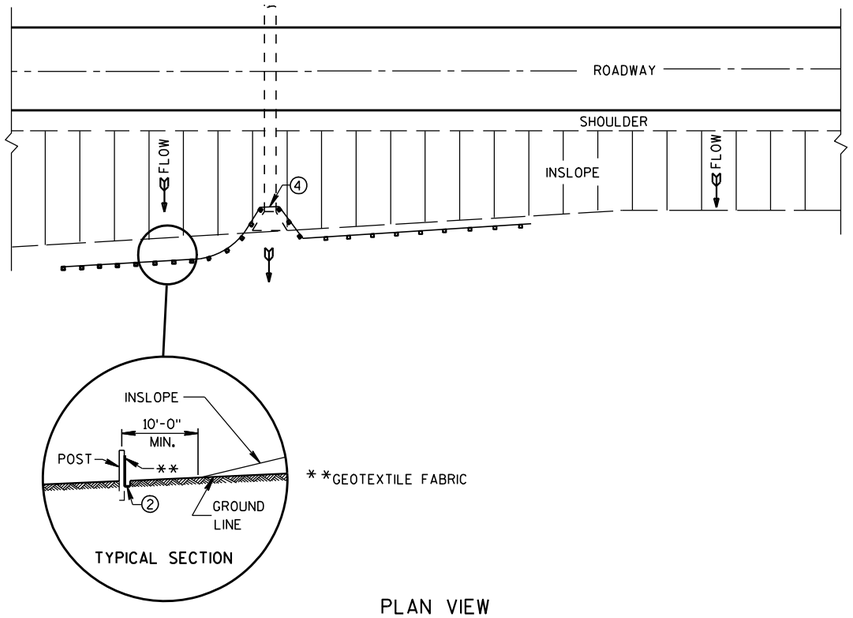
FILE NAME : G:\00-PROJECT FILES\2023\23123 ID 9549-00-01 T DEER CREEK, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\SHEETS\050101_PP.DWG
LAYOUT NAME - 050101_pp

PLOT DATE : 7/24/2024 10:44 AM PLOT BY : GAVIN WIPPERFURTH PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

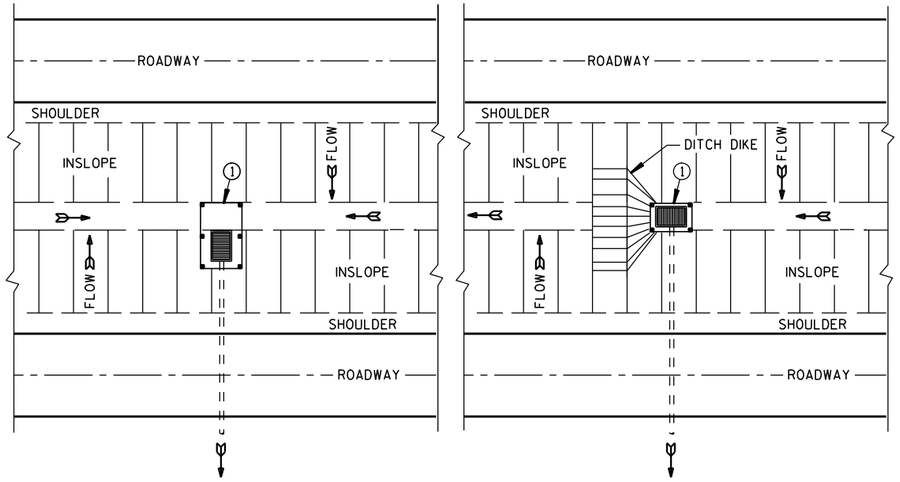
# Standard Detail Drawing List

| | |
|---|---|
| 08E09-06 | SILT FENCE |
| 08E11-02 | TURBIDITY BARRIER |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 13C19-03 | HMA LONGITUDINAL JOINTS |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C06-12 | SIGNING & MARKING FOR TWO LANE BRIDGES |




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE




PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

## GENERAL NOTES

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

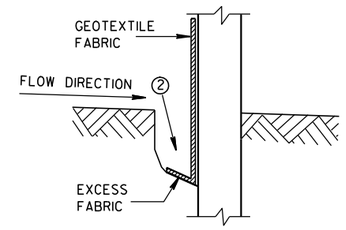
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

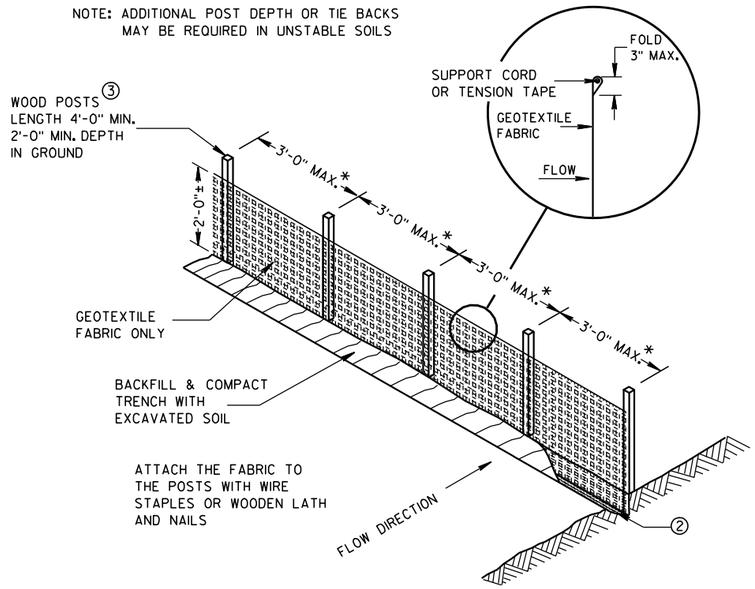
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

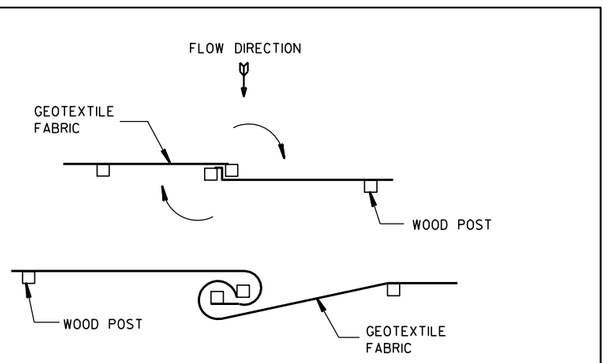
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



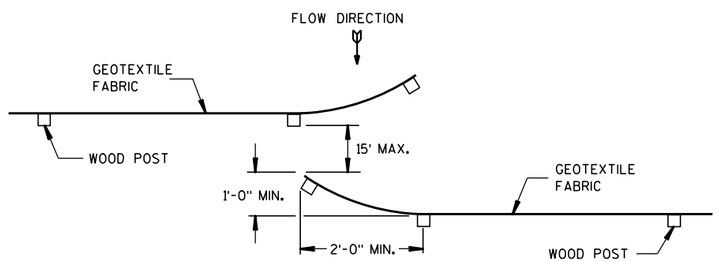

## TRENCH DETAIL




## SILT FENCE

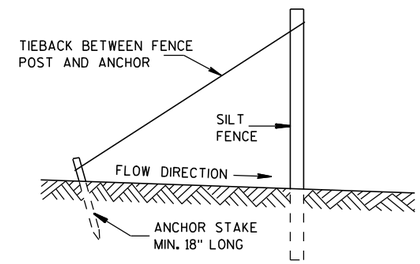



TWIST METHOD




HOOK METHOD

## JOINING TWO LENGTHS OF SILT FENCE ⑤




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

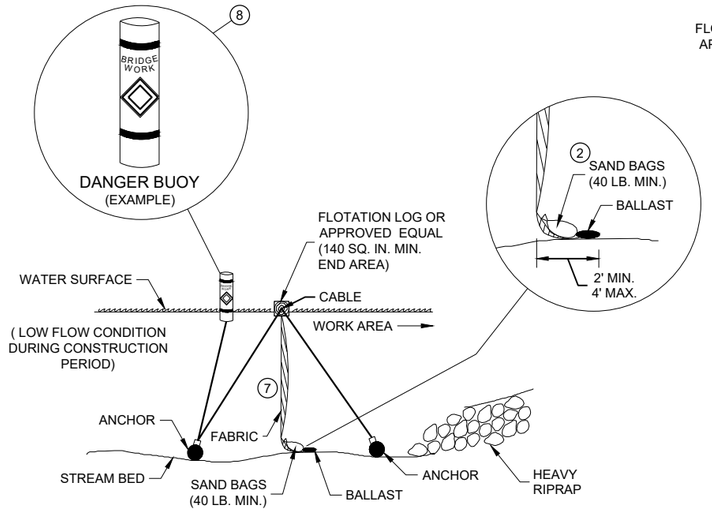


6

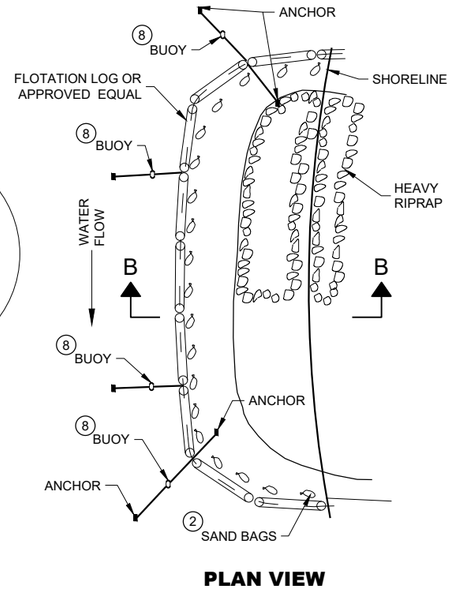
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

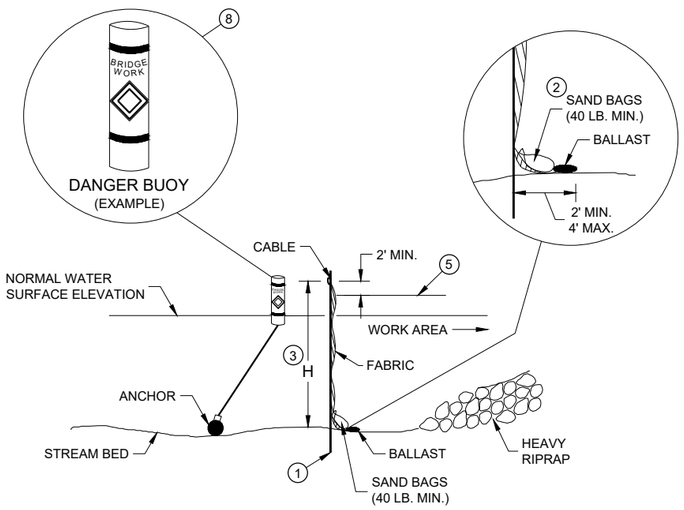



**SECTION B - B**

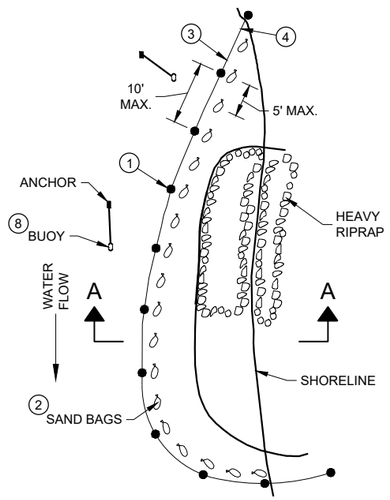



**PLAN VIEW**

**TURBIDITY BARRIER - FLOAT ALTERNATIVE**
**CAUTION - SEE NOTE 6**




**SECTION A - A**




**PLAN VIEW**

**TURBIDITY BARRIER - STANDARD POST INSTALLATION**

**TURBIDITY BARRIER PLACEMENT DETAILS**

## GENERAL NOTES

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

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

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

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

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

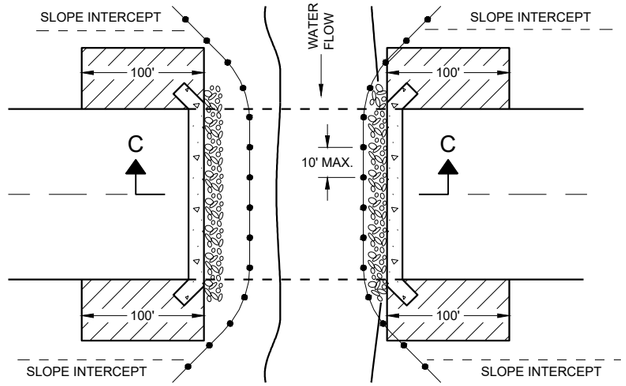
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

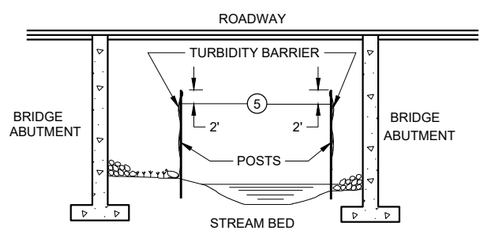
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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




**PLAN VIEW**




**SECTION C - C**

**TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES**

**TURBIDITY BARRIER**

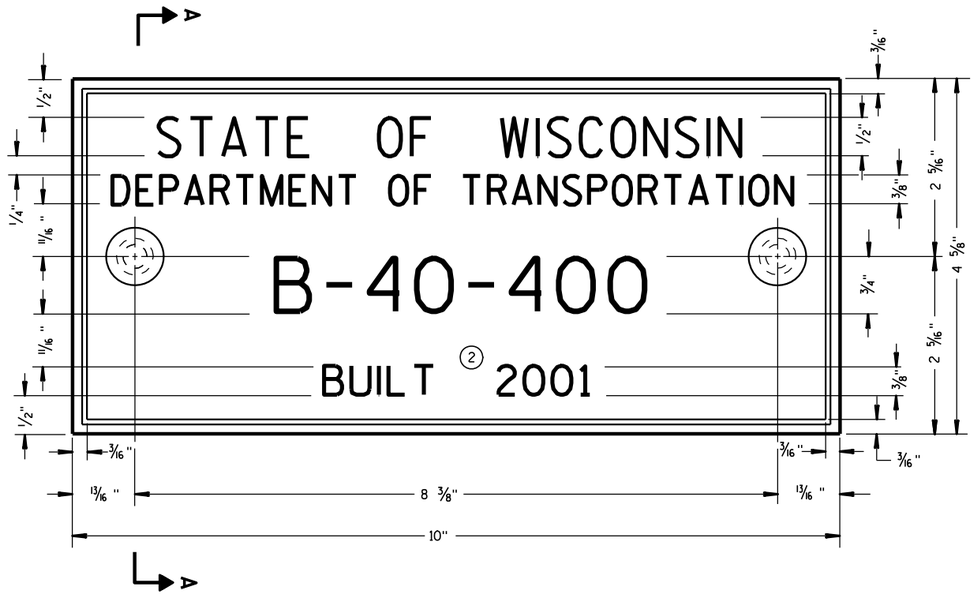
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

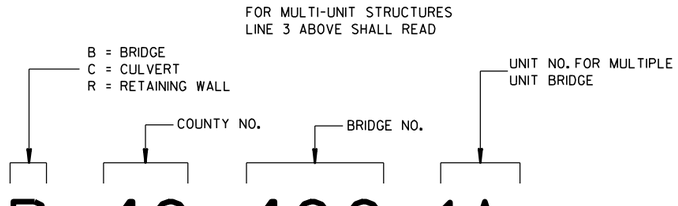
FHWA




6
SDD 08E11 - 02




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




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

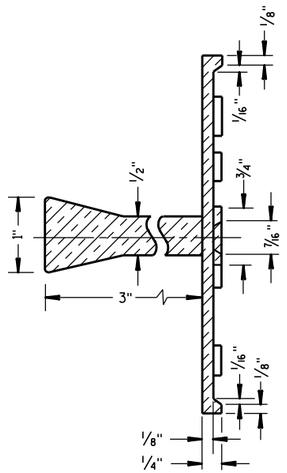
## GENERAL NOTES

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

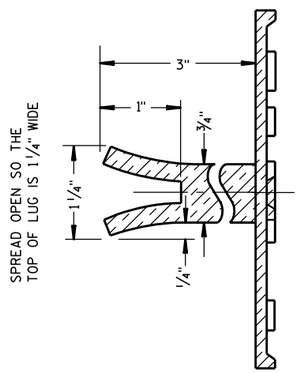
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

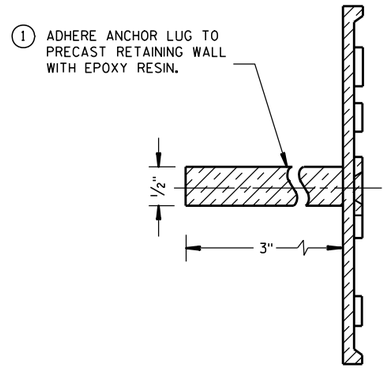
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.




**SECTION A-A**




**ALTERNATE LUG**




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

**NAME PLATE (STRUCTURES)**

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DEPARTMENT OF TRANSPORTATION

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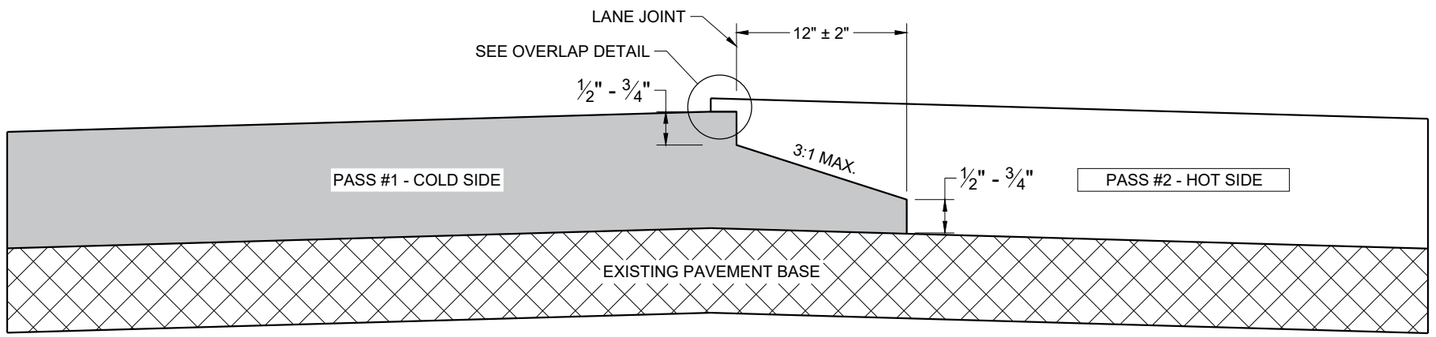
3/26/10 DATE — /S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

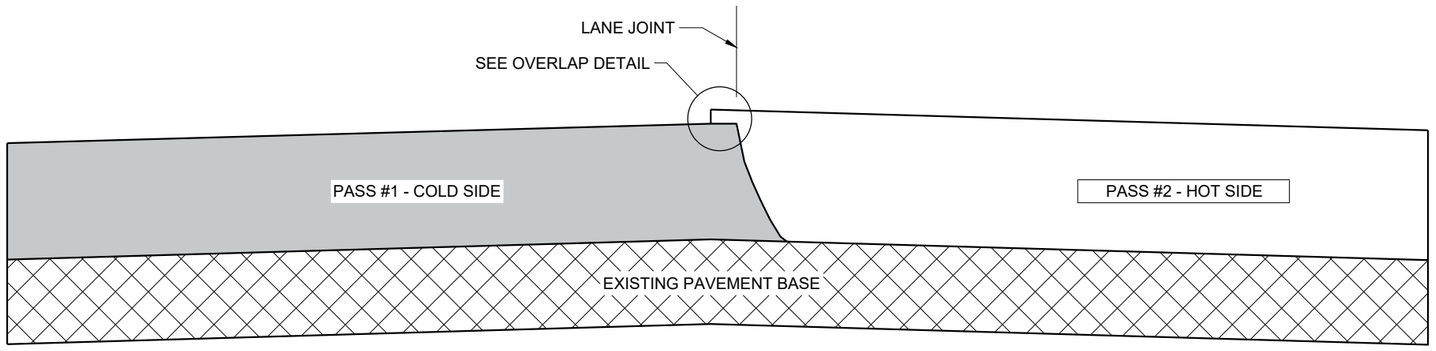


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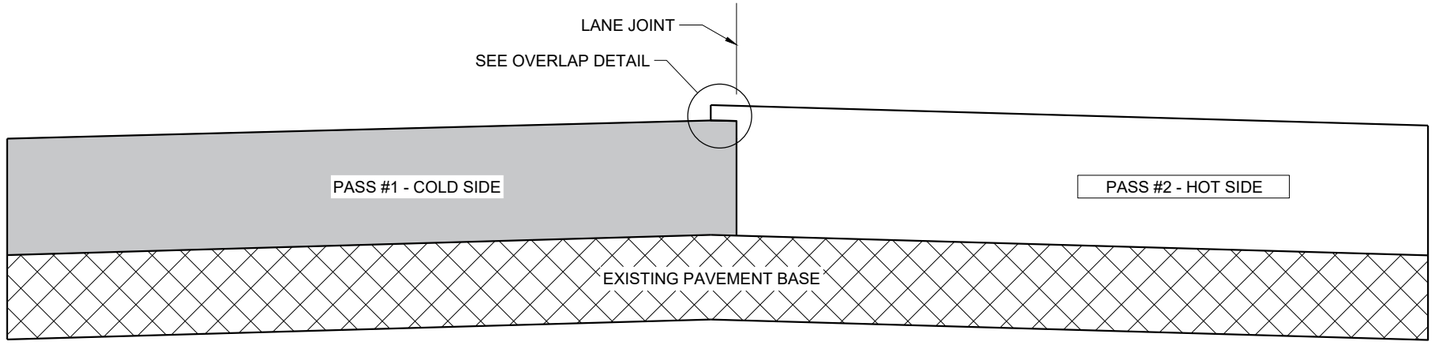
S.D.D. 12 A 3-10




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




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




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

## GENERAL NOTES

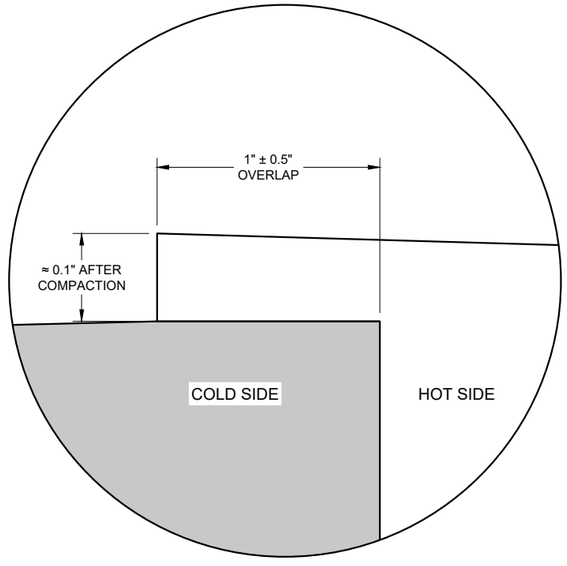
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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




**OVERLAP DETAIL (TYPICAL)**

**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

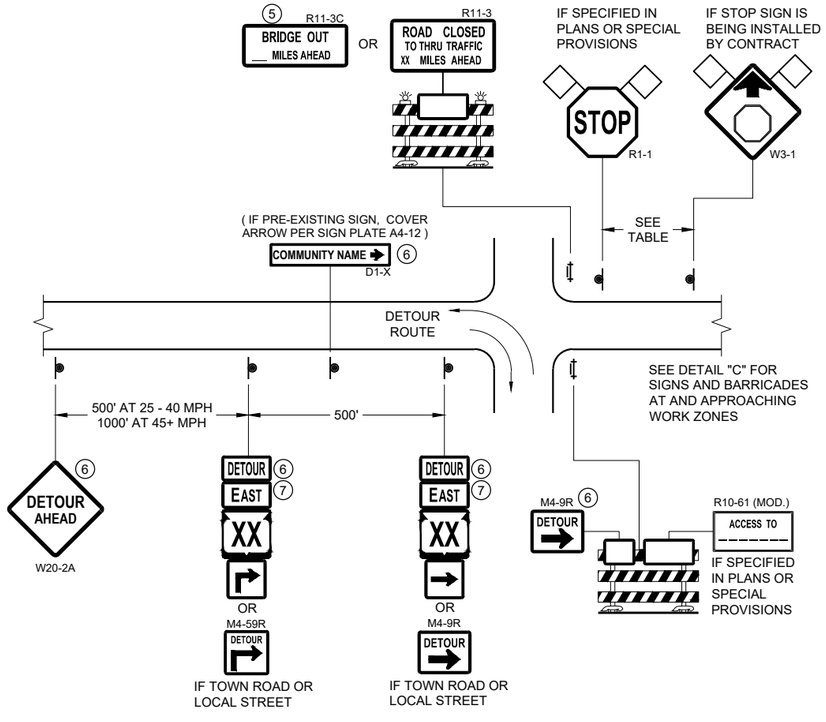


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SDD 13C19 - 03

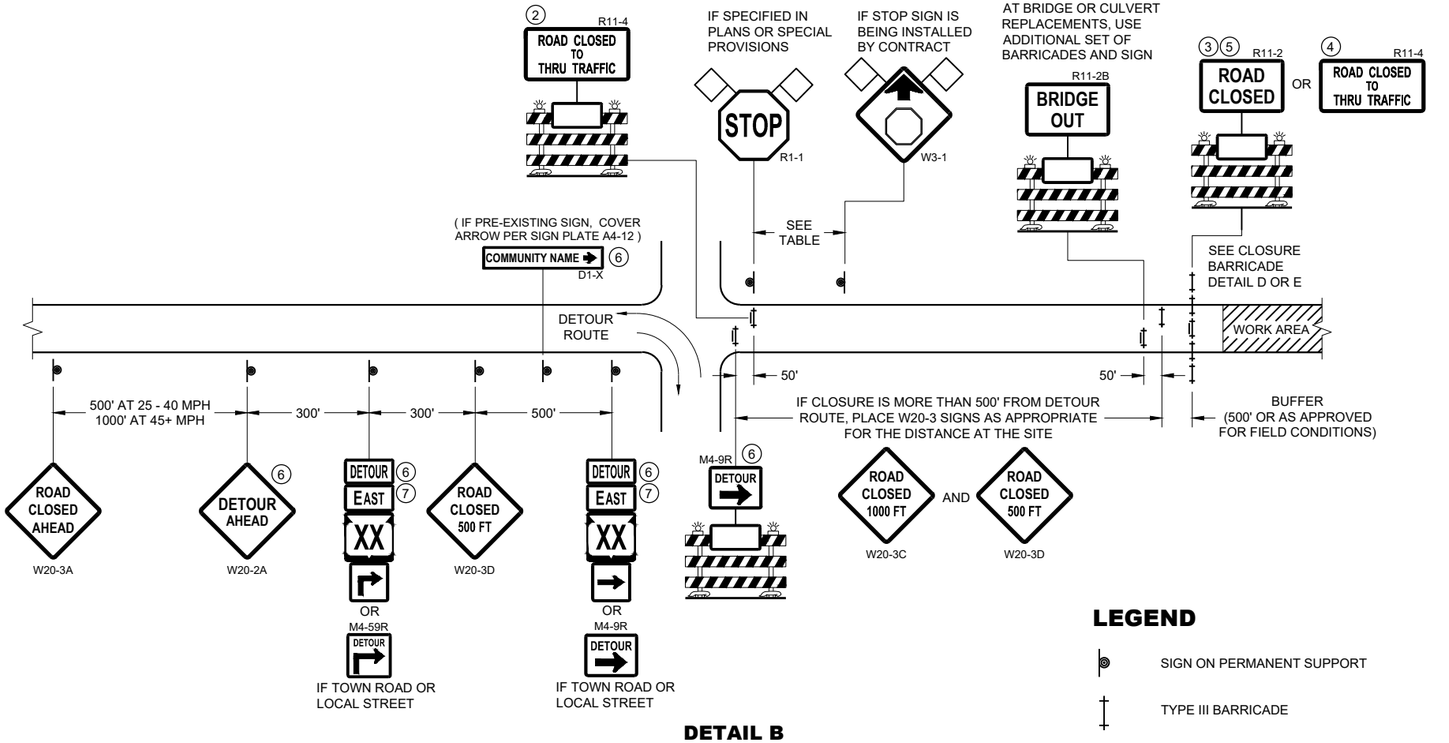
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SDD 13C19 - 03



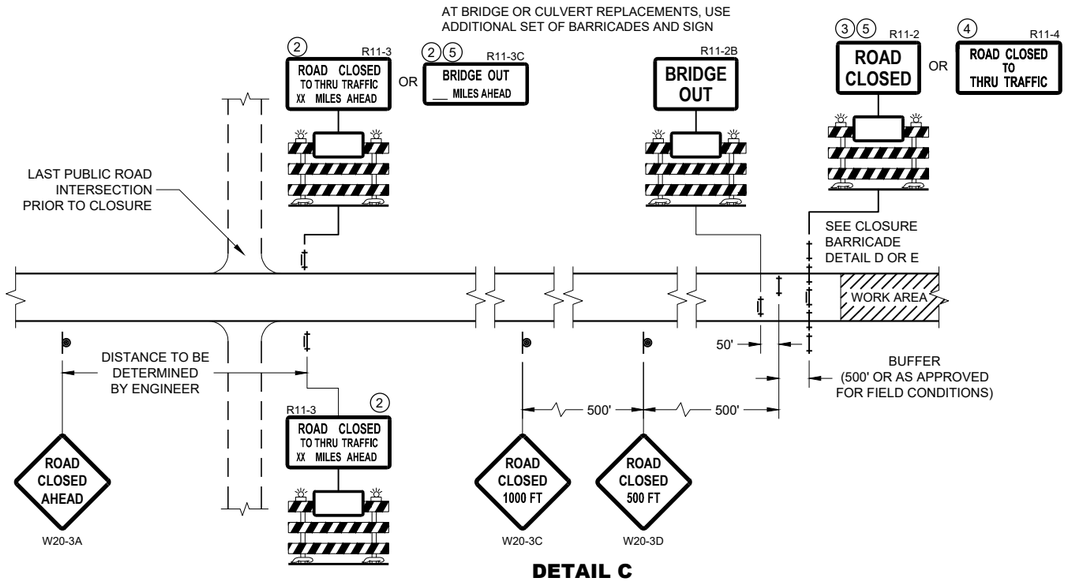

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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




## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

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




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

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

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

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

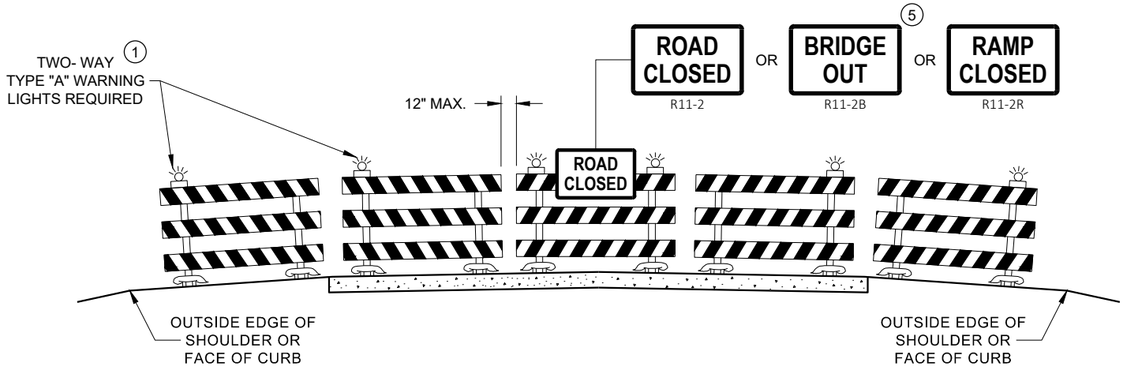
FHWA



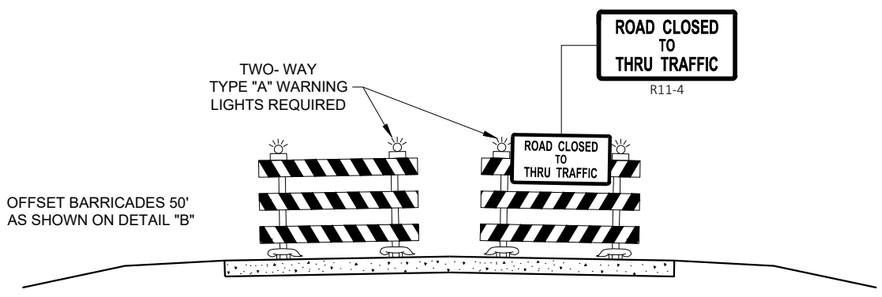
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SDD 15C02 - 09a

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 ENGINEER
FHWA

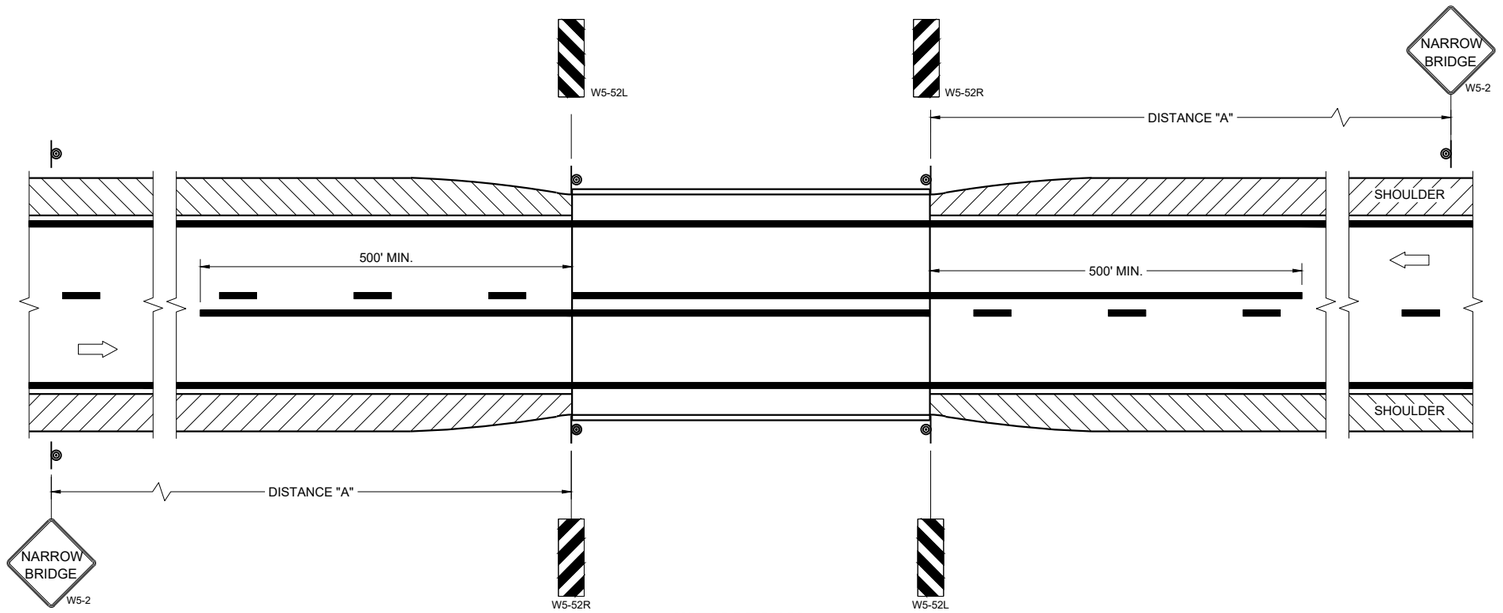


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SDD 15C02 - 09b

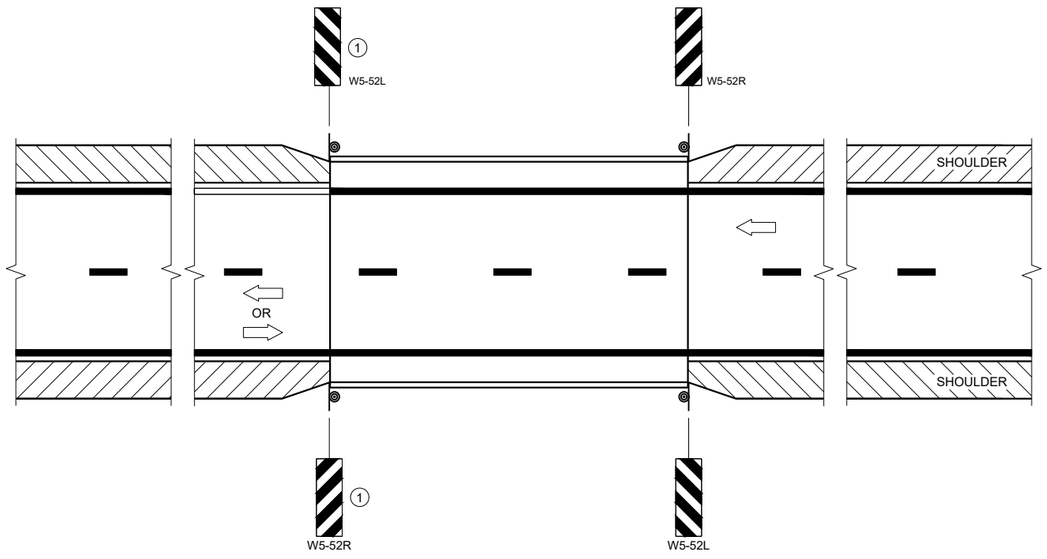
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SDD 15C02 - 09b




## 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' |

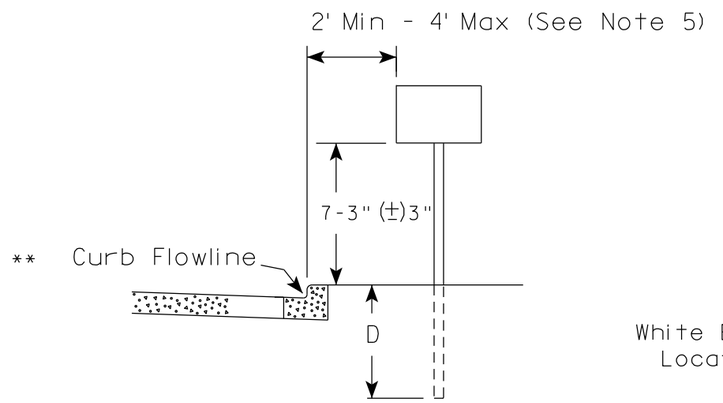
**SIGNING AND MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

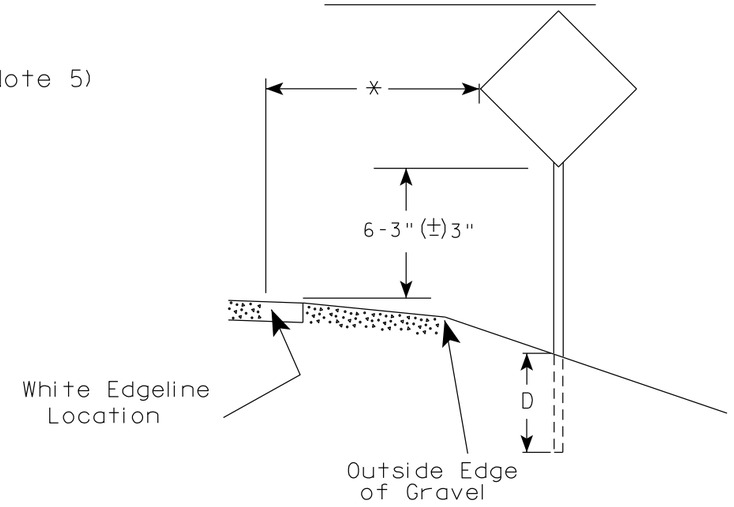
APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

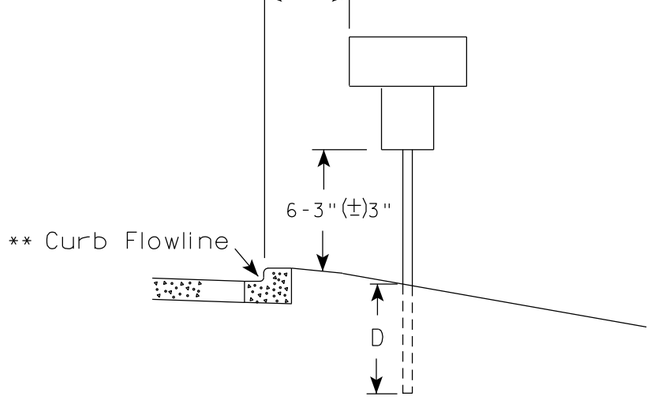

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SDD 15C06-12

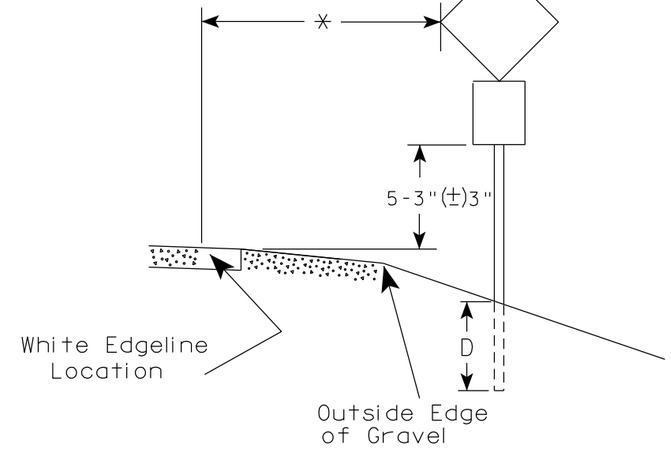
## URBAN AREA




## 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.

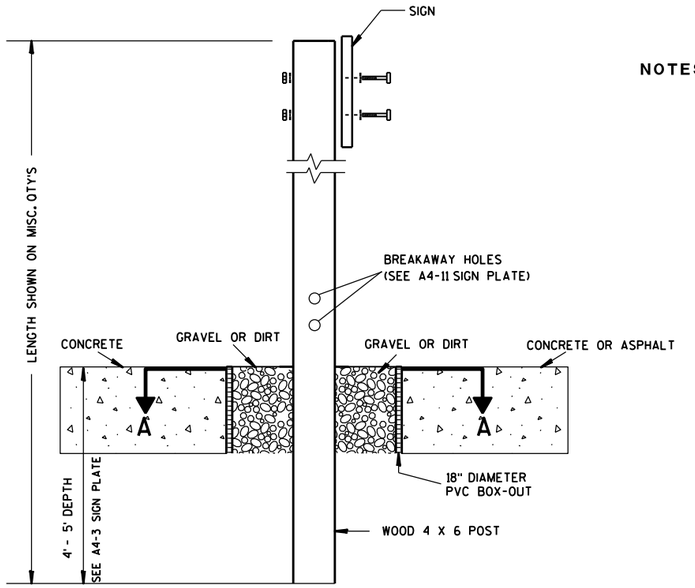
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

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

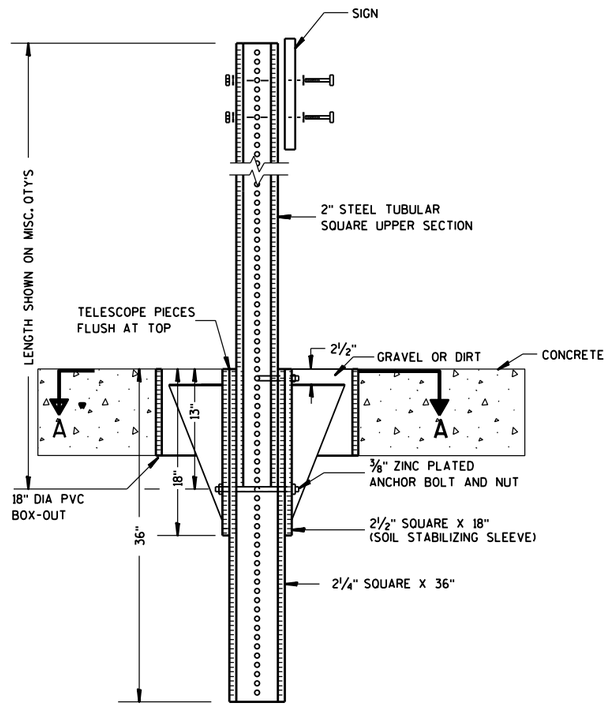
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 23 | E |
|---|---|---|---|---|---|




**ELEVATION VIEW**

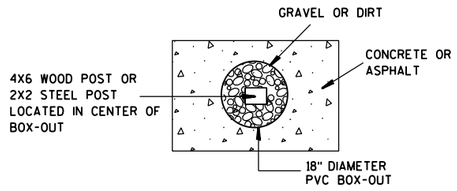
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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

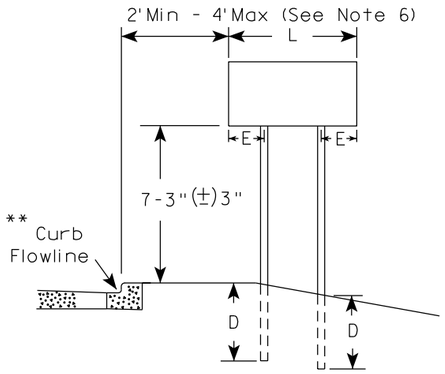
DATE 1/27/14 PLATE NO. A4-3B.1



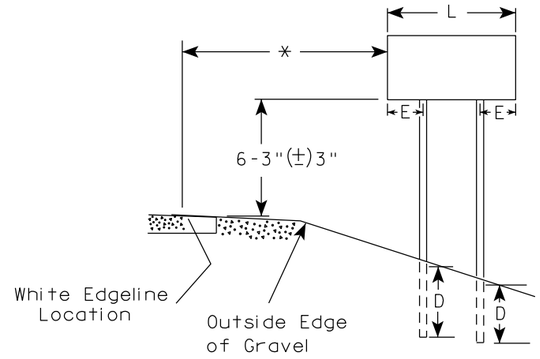
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

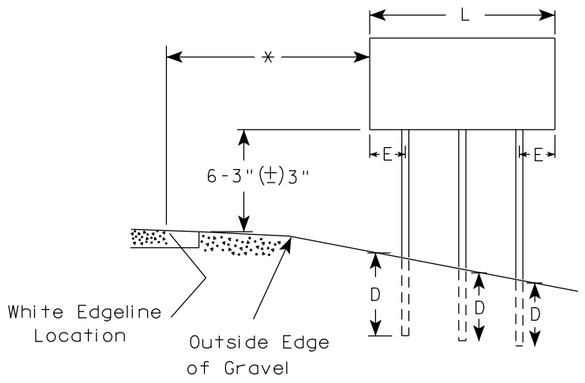
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

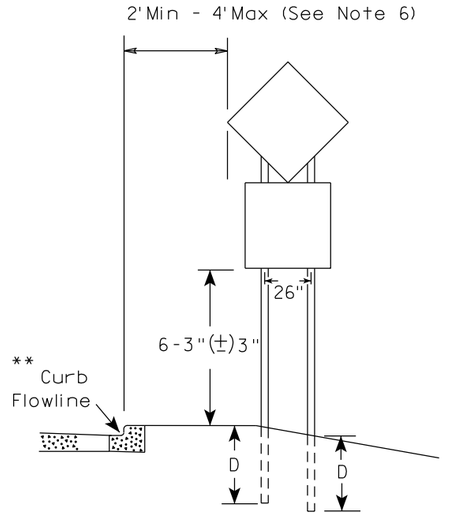
## URBAN AREA



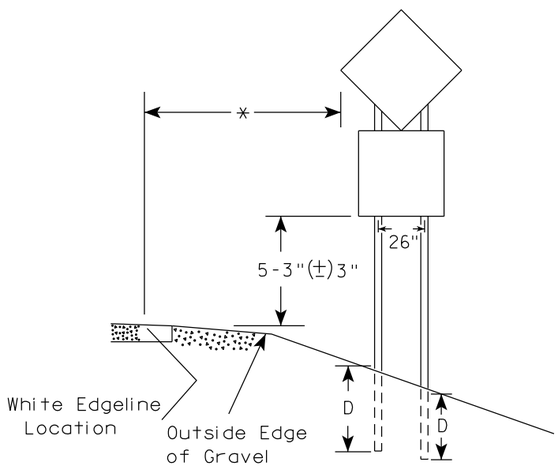

## RURAL AREA (See Note 3)




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' |

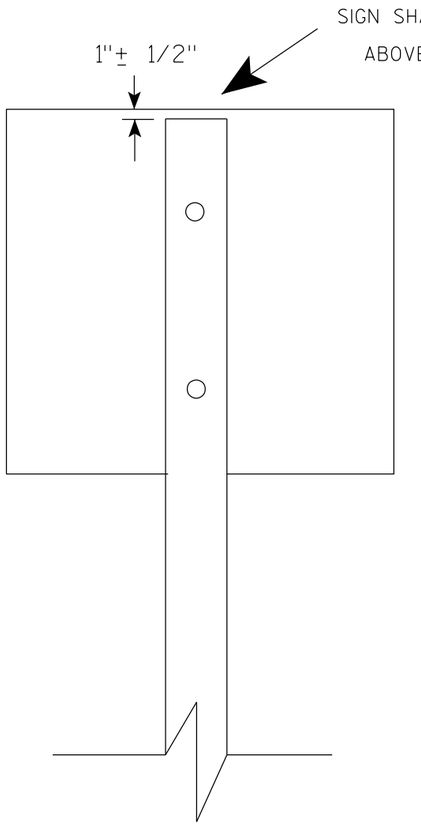
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

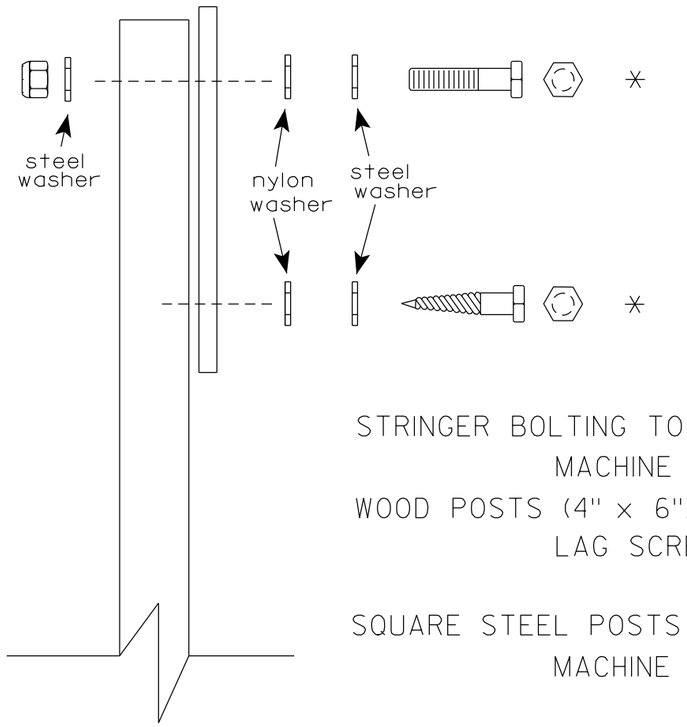
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 25 | E |
|---|---|---|---|---|---|




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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

# ATTACHMENT OF SIGNS TO POSTS

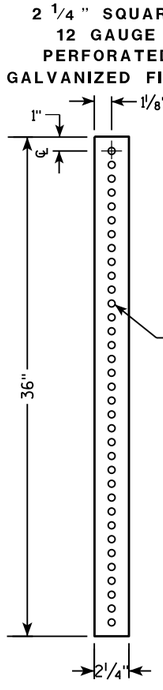
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

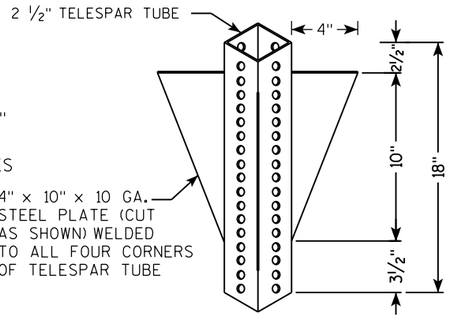
DATE 4/1/2020 PLATE NO. A4-8.9

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

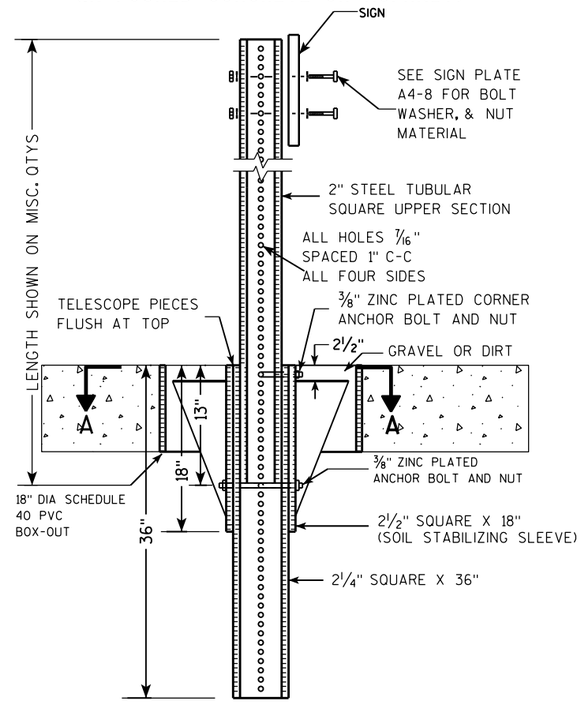
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



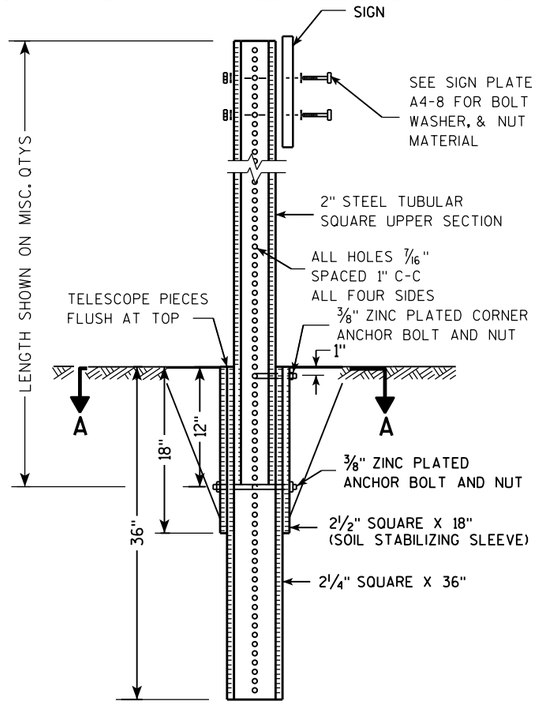

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

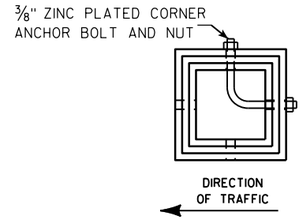



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




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




**SECTION A-A**

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

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

TUBULAR STEEL
SIGN POST
A4-9

*WISCONSIN DEPT OF TRANSPORTATION*

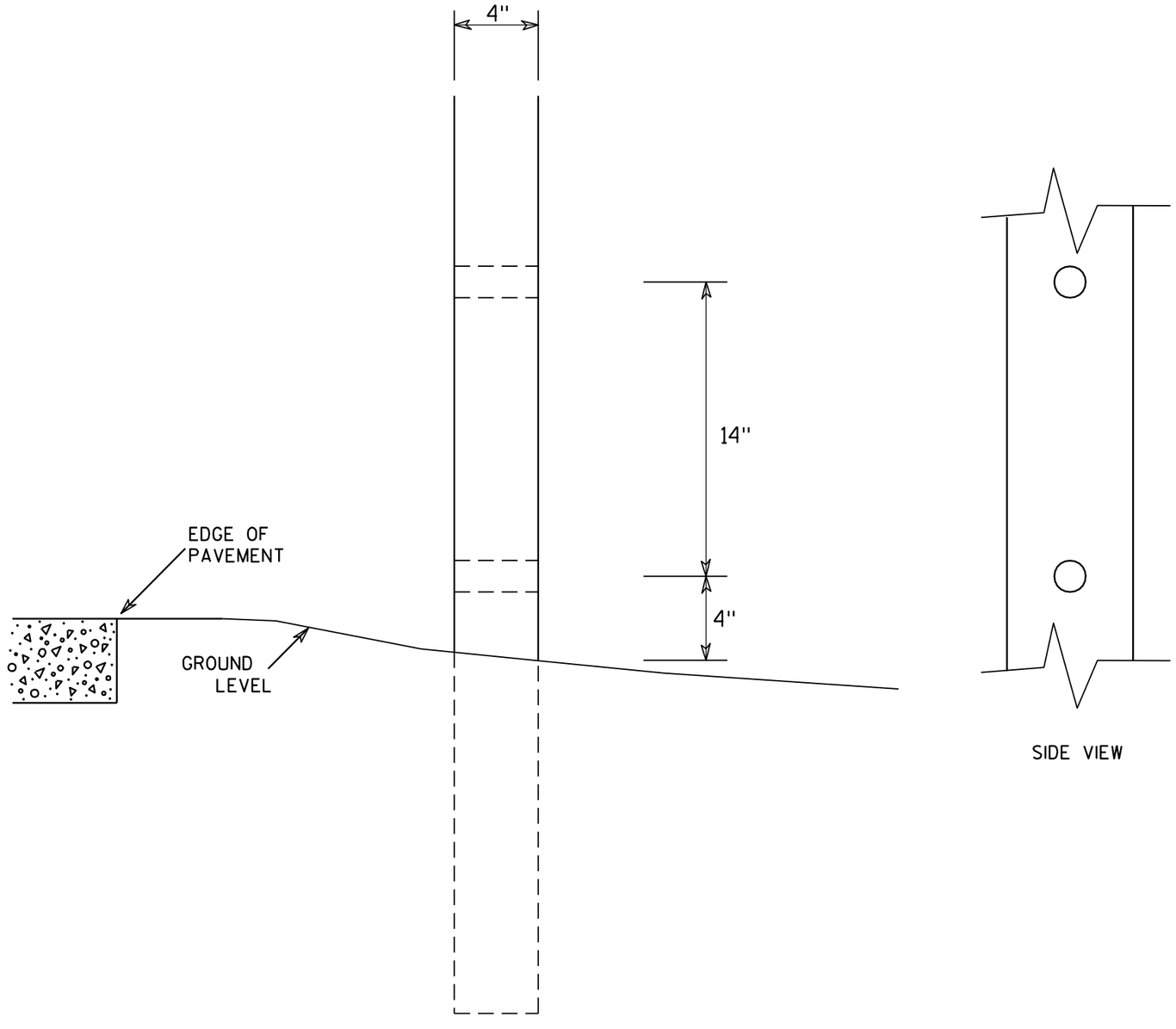
APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/05/15 PLATE 27 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

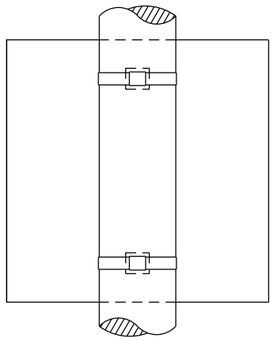
APPROVED Chester J Spang
for State Traffic Engineer

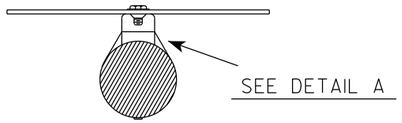
DATE 3/27/97 PLATE NO. A4-11.2

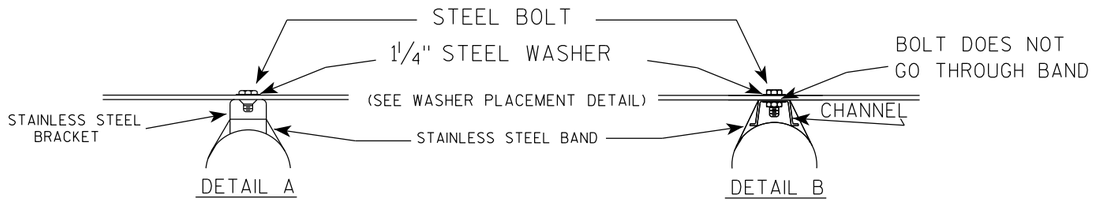
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 28 | E |
|---|---|---|---|---|---|

# BANDING

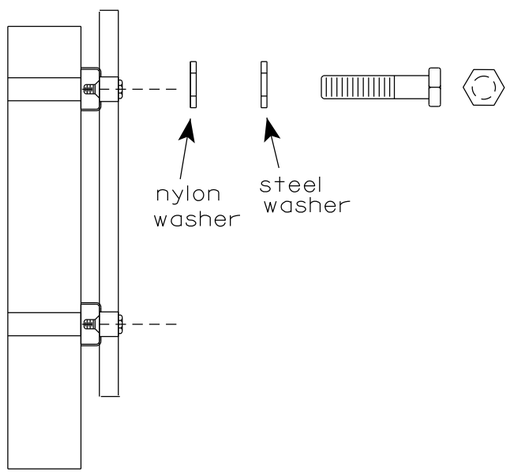
SINGLE SIGN






WASHER PLACEMENT

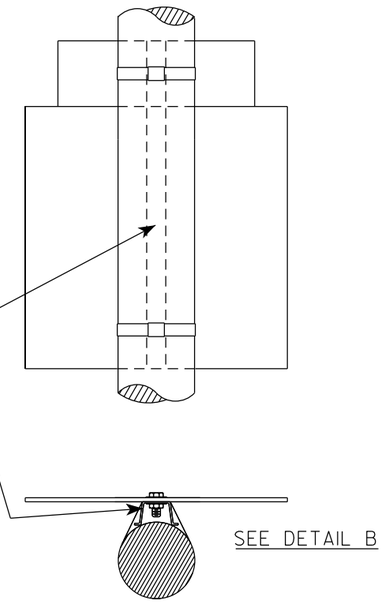



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY




STANDARD SIGN
SIGN BANDING DETAILS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

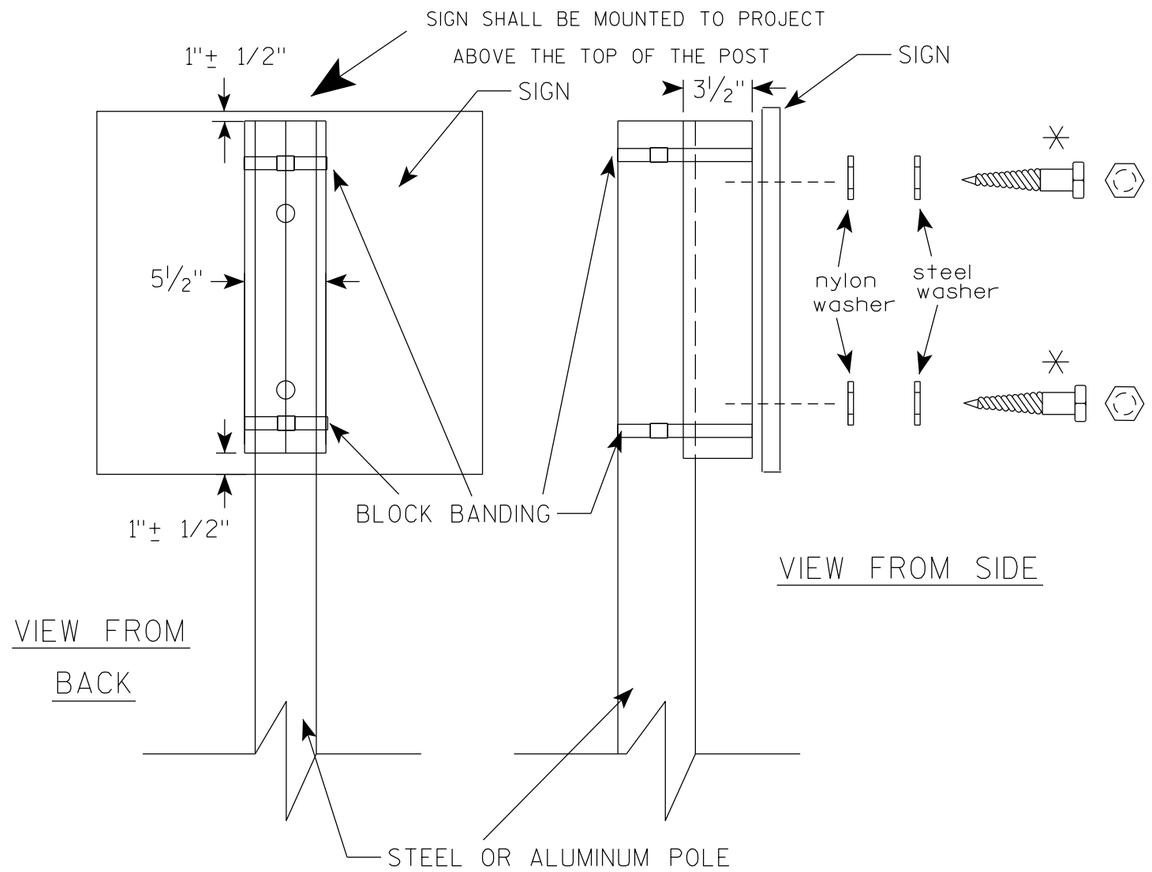
DATE 6/10/19 PLATE NO. A5-9.4

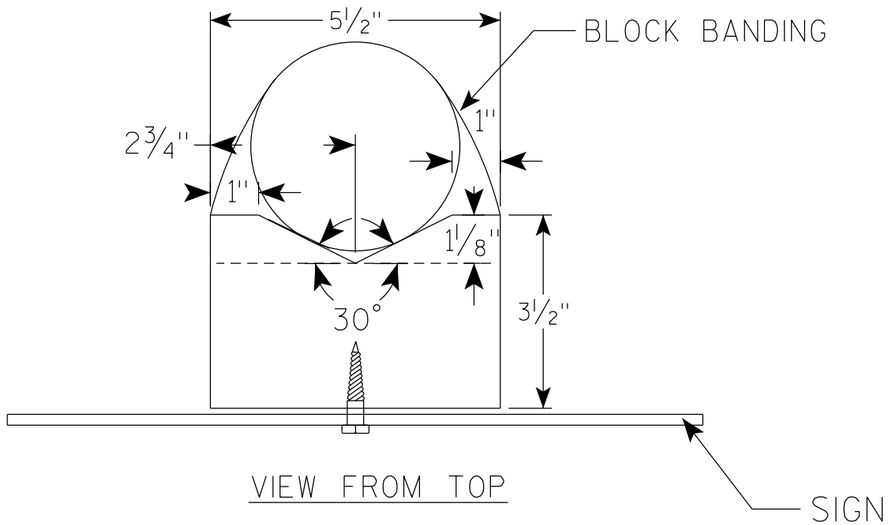
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 29 | E |
|---|---|---|---|---|---|

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

7

7




## GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

# BLOCK BANDING DETAIL ( V-BLOCK OPTION )

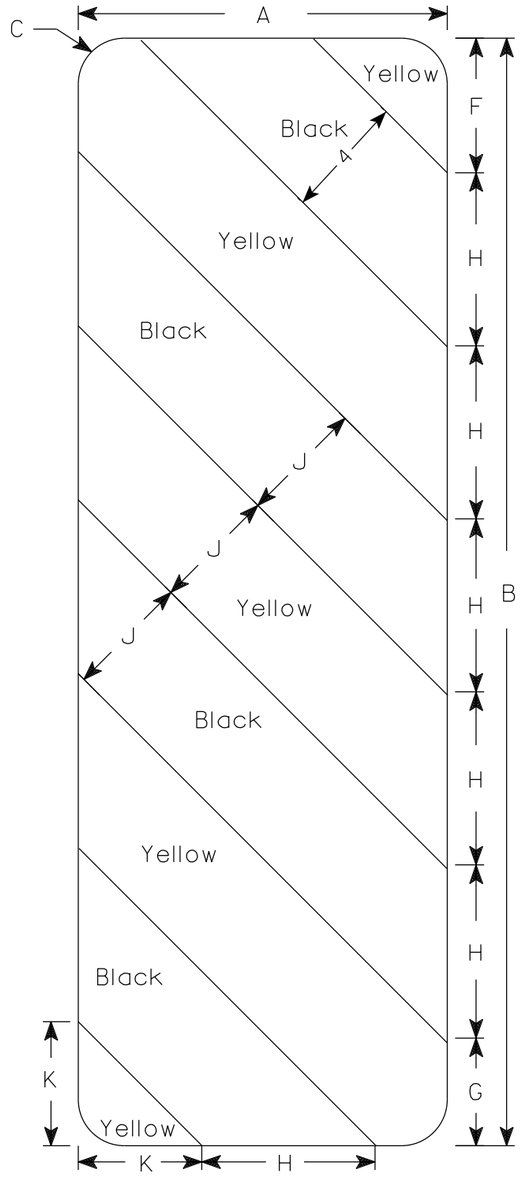
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

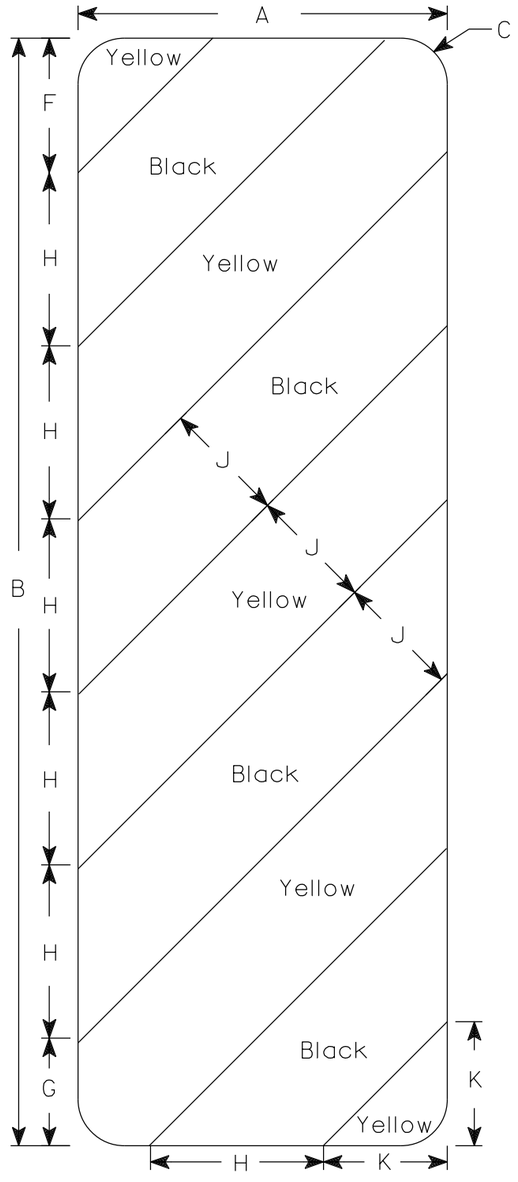
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 30 E




W5-52L




W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Alternate colors of stripes as shown.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 12 | 36 | 1 1/2 | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 2M | 12 | 36 | 1 1/2 | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 3 | 18 | 54 | 1 1/2 | | | 6 | 5 1/2 | 8 1/2 | 45° | 6 | 6 9/16 | | | | | | | | | | | | | | | | 6.75 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

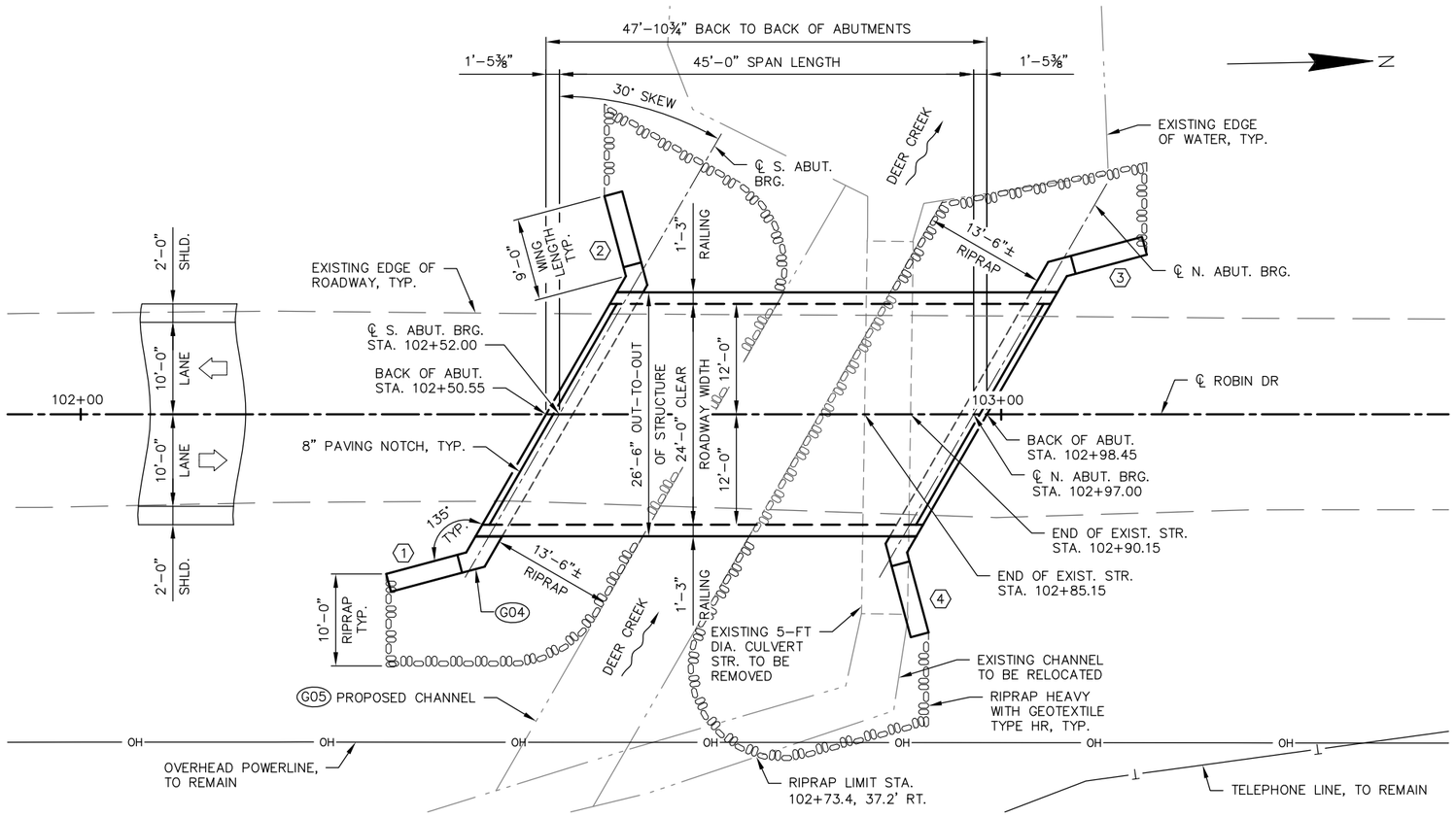
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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

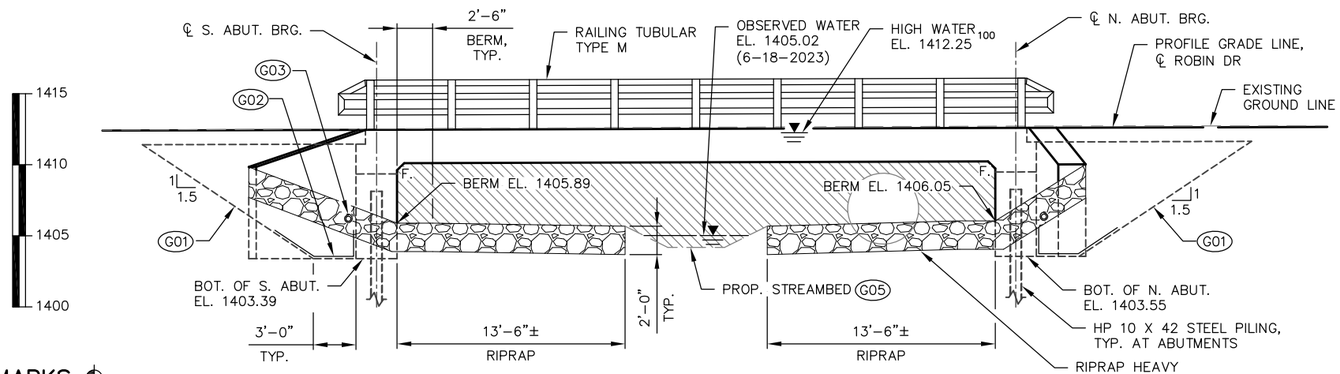


FILE NAME : C:\CAEfiles\Projects\tr_stdplate_W552.dgn PLOT DATE : 4-MARCH 2024 11:57 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42




## PLAN B-60-161

(SINGLE SPAN CONCRETE FLAT SLAB BRIDGE)




## ELEVATION

(THRU DEER CREEK, LOOKING WEST)

## BENCH MARKS

| NO. | STATION/OFFSET | DESCRIPTION | ELEVATION |
|---|---|---|---|
| BM #1 | 301+36.87, 46.56' RT. | RR SPIKE IN POWER POLE | 1413.18 |
| BM #2 | 104+97.32, 34.61' RT. | RR SPIKE IN POWER POLE | 1413.48 |

HORIZONTAL DATUM AND ADJUSTMENT: NAD 83 (2011)
VERTICAL DATUM AND ADJUSTMENT: NAVD 88 (2012)
COORDINATE REFERENCE SYSTEM: WISCRS TAYLOR CO.

## NOTES

EXCAVATION AS INDICATED IN THE HATCH AREAS, TO BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-60-161".

(G01) BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-60-161". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

(G02) "GEOTEXTILE TYPE DF SCHEDULE A" LIMITS. EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT FOR THE ENTIRE ABUTMENT BODY LENGTH.

(G03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "WINGS 1 & 3 DETAILS" SHEET.

(G04) NAME PLATE REQUIRED AND BENCH MARK CAP (WHEN SUPPLIED). FOR LOCATION SEE "ABUTMENTS" SHEET.

(G05) SEE ROADWAY PLANS FOR STREAM RE-ALIGNMENT PLAN AND DETAILS.

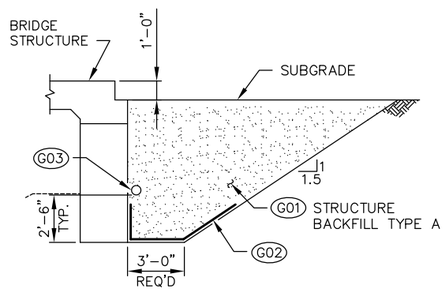
⬡ INDICATES WING NUMBER

## LIST OF DRAWINGS


1. GENERAL PLAN
2. CROSS SECTION, GENERAL NOTES & QUANTITIES
3. SUBSURFACE EXPLORATION
4. ABUTMENTS
5. WINGS 1 & 3 DETAILS
6. WINGS 2 & 4 DETAILS & ABUT. REINFORCEMENT
7. SUPERSTRUCTURE
8. SUPERSTRUCTURE DETAILS
9. RAILING TUBULAR TYPE M








## ABUTMENT BACKFILL DETAIL

(TYPICAL AT BOTH ABUTMENTS)

STATE PROJECT NUMBER

9549-00-71

## DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.15
OPERATING RATING FACTOR — RF=1.50
WISCONSIN STANDARD PERMIT VEHICLE RATING (WIS.-SPV): — 250 KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB — $f'c$ = 4,000 P.S.I.
ALL OTHER — $f'c$ = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT — $fy$ = 60,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE** AT S. ABUT. AND 170 TONS PER PILE** AT N. ABUT. AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 40 FT PILE LENGTHS AT S. ABUT. AND 40 FT PILE LENGTHS AT N. ABUT.

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

HYDRAULIC DATA:

$Q_{100}$ — 1,210 C.F.S.
$Q_{100}$ (THRU BRIDGE) — 1,210 C.F.S.
$Q_{100}$ (ROAD) — N/A
DRAINAGE AREA — 10.6 SQ. MI.
BRIDGE WATER AREA — 136 SQ. FT.
BRIDGE VELOCITY — 8.87 F.P.S.
HIGH WATER$_{100}$ EL. — 1412.25 FT.
OVERTOPPING Q FREQ. — N/A
SCOUR CRITICAL CODE — 5
$Q_2$ — 375 C.F.S.
$Q_2$ ELEVATION — 1408.65 FT.
$Q_2$ VELOCITY — 4.50 F.P.S.

TRAFFIC DATA:

ROBIN DRIVE
A.A.D.T. (2025) — 64
A.A.D.T. (2045) — 78
DESIGN SPEED — 60 M.P.H.


BRIDGE OFFICE CONTACT
AARON BONK, P.E.
(608) 261-0261

CONSULTANT CONTACT
ANDY KNUTSON, P.E., S.E.
(608) 588-7866


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


WESTBROOK Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WI 53588
PHONE (608) 588-7866
FAX (608) 588-7954


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/06/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

# STRUCTURE B-60-161

ROBIN DRIVE OVER DEER CREEK

COUNTY: TAYLOR
TOWN/~~CITY/VILLAGE~~: DEER CREEK
DESIGN SPEC: AASHTO LRFD DESIGN SPEC.
DESIGNED BY: CDS | DESIGN CK'D.: JDO | DRAWN BY: CDS | PLANS CK'D.: ACK

GENERAL PLAN

SHEET 1 OF 9

32

8

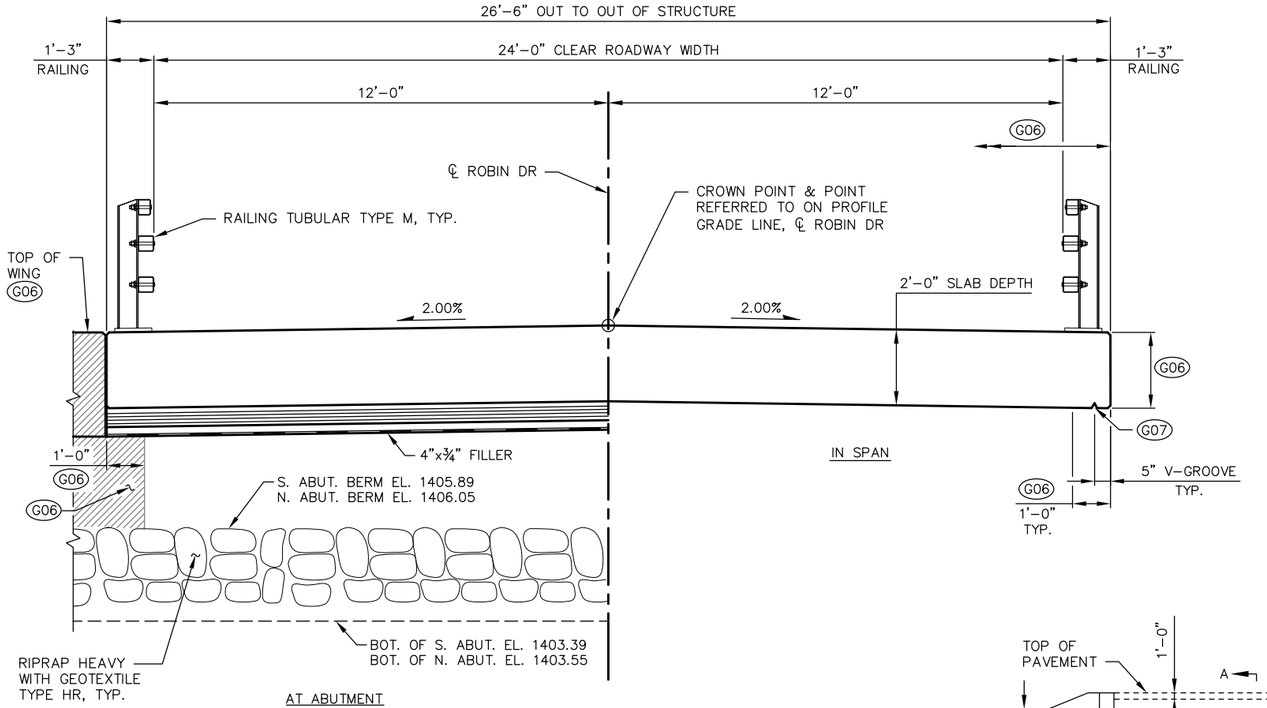
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FILE: B600161_01_gen.dwg
PLOT SCALE:

I.D. 9549-00-71

PLOT DATE: May 30, 2024

| STATE PROJECT NUMBER |
|---|
| 9549-00-71 |




AT ABUTMENT
(PILING NOT SHOWN FOR CLARITY)

## CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

## NOTES

(G06) COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE EXPOSED TOP OF SLAB, INCLUDING THE SLAB EDGES AND 1'-0" UNDER THE SLAB, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE FRONT FACE OF THE ABUTMENTS TO 1'-0" PAST THE EDGE OF SLAB. ALSO APPLY PROTECTIVE SURFACE TREATMENT TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES.

(G07) ¾" V-GROOVE REQ'D. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT.

## TOTAL ESTIMATED QUANTITIES

| ITEM NO. | BID ITEMS | UNIT | S. ABUT. | N. ABUT. | SUPER. | TOTALS |
|---|---|---|---|---|---|---|
| 203.0220 | REMOVING STRUCTURE 5-FT DIA. CULVERT | EACH | --- | --- | --- | 1 |
| 206.1001 | EXCAVATION FOR STRUCTURES BRIDGES B-60-161 | EACH | --- | --- | --- | 1 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | 200 | 200 | --- | 400 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 32.7 | 32.7 | 97.6 | 163 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | 18 | 18 | 175 | 211 |
| 505.0400 | BAR STEEL REINFORCEMENT HS STRUCTURES | LB | 2295 | 2295 | --- | 4590 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 1485 | 1485 | 18950 | 21920 |
| 513.4061 | RAILING TUBULAR TYPE M | LF | --- | --- | 101 | 101 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | 7 | 7 | --- | 14 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | 280 | 280 | --- | 560 |
| 606.0300 | RIPRAP HEAVY | CY | 70 | 90 | --- | 160 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | 75 | 75 | --- | 150 |
| 645.0111 | GEOTEXTILE TYPE DF SCHEDULE A | SY | 34 | 34 | --- | 68 |
| 645.0120 | GEOTEXTILE TYPE HR | SY | 143 | 172 | --- | 315 |
| | | | | | | |
| (NON-BID ITEM) | FILLER | SIZE | | | | ½" & ¾" |

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

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

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WING FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCLUDED WITH "EXCAVATION FOR STRUCTURES BRIDGES B-60-161".

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-60-161" SHALL BE THE EXISTING GROUND LINE.

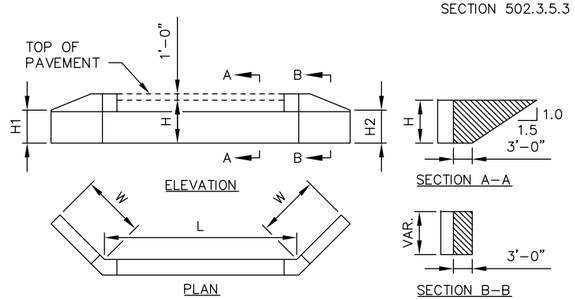
AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

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

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

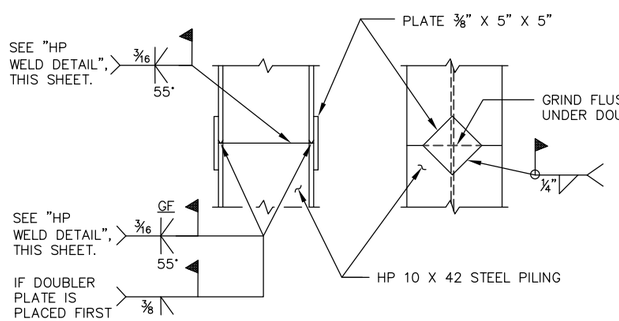
DO NOT PLACE FILL ABOVE 3'-0" FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

THE EXISTING STRUCTURE IS A SINGLE PIPE CULVERT WITH A DIAMETER OF 5-FT AND BARREL LENGTH OF 42-FT AND IS TO BE REMOVED PER BID ITEM "REMOVING STRUCTURE 5-FT DIA. CULVERT"

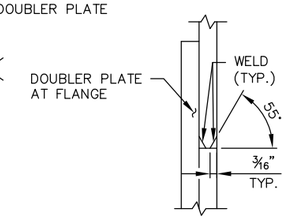



## ABUTMENT BACKFILL DIAGRAM

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

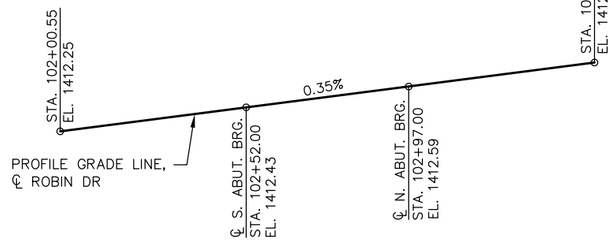



## PILE SPLICE DETAILS




## HP WELD DETAIL

(FLANGE SHOWN, WEB SIMILAR)




## PROFILE GRADE LINE, ℄ ROBIN DR

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-161**

DRAWN BY JDO | PLANS CK'D ACK

CROSS SECTION, GENERAL NOTES & QUANTITIES

SHEET 2 OF 9

33

8

8

I.D. 9549-00-71

PLOT DATE: May 30, 2024

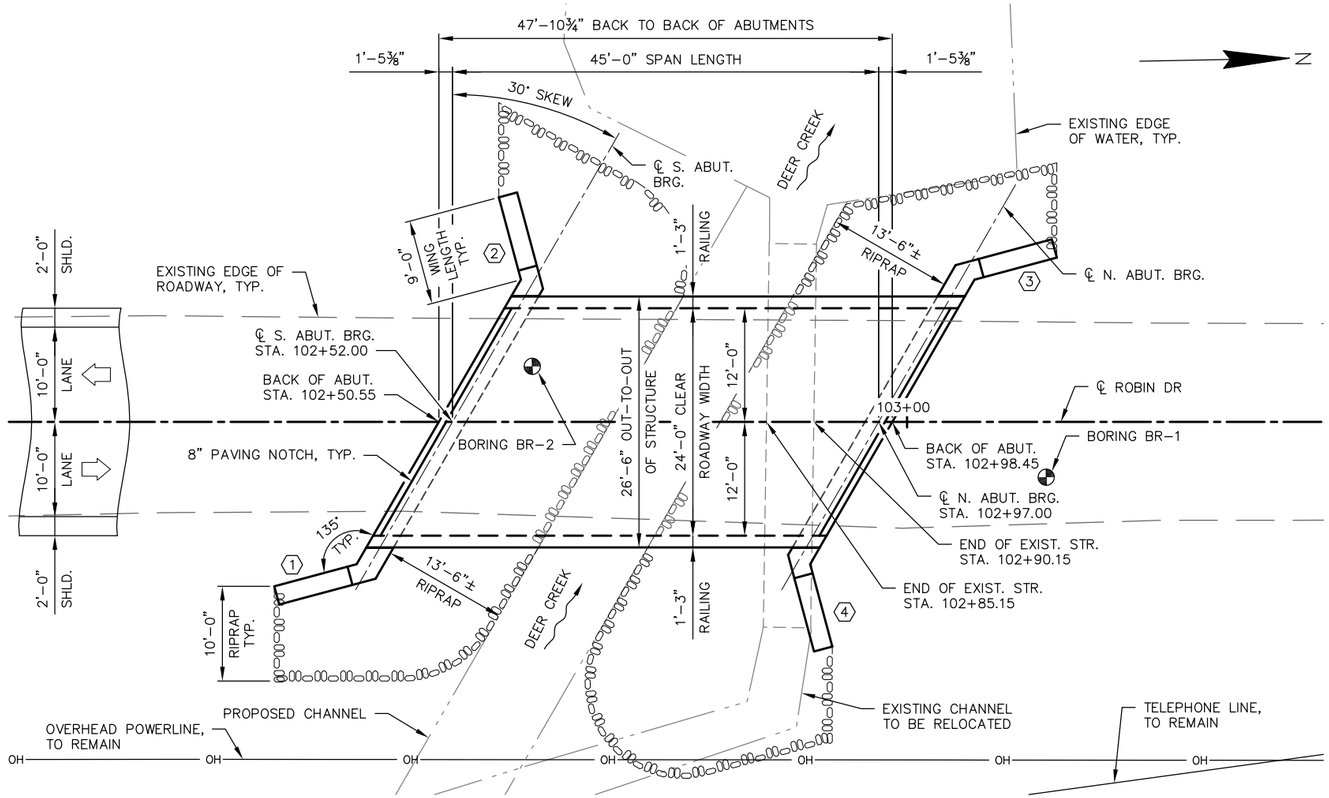
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PLOT SCALE:

## B-60-161 BORINGS

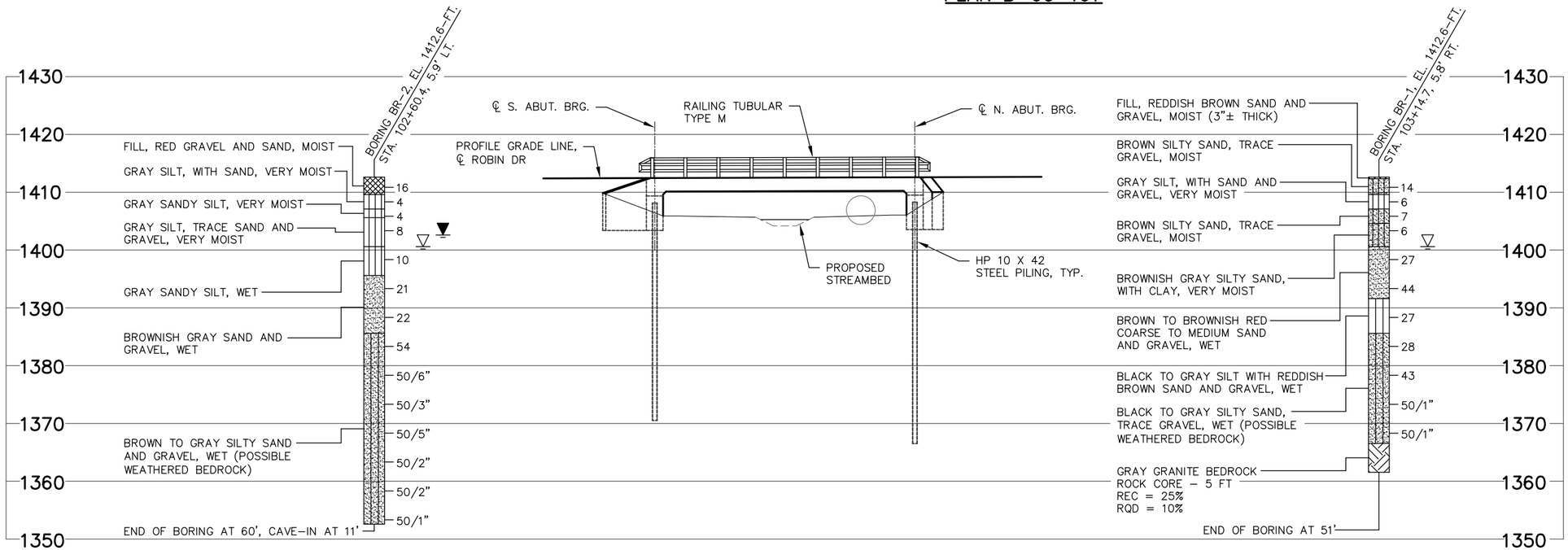
| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| BORING BR-1 | 6/14/2023 | 306573.2 | 666889.0 |
| BORING BR-2 | 6/13/2023 | 306519.2 | 666876.3 |
| BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC. | | | |
| SUBSURFACE INVESTIGATION REPORT: PROFESSIONAL SERVICE INDUSTRIES, INC. | | | |
| ALL COORDINATES REFERENCED TO WISCRS, TAYLOR COUNTY | | | |

**NOTE**

⬡ INDICATES WING NUMBER




PLAN B-60-161



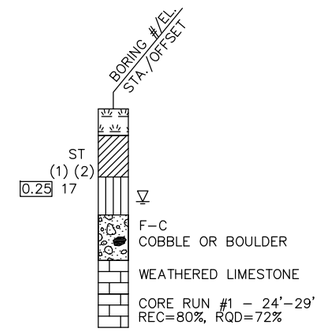

STATE PROJECT NUMBER

**9549-00-71**

MATERIAL SYMBOLS

| | | |
|---|---|---|
| ASPHALT | TOPSOIL | PEAT |
| CONCRETE | FILL | GRAVEL |
| SAND | CLAY | SILT |
| BOULDERS OR COBBLES | LIMESTONE | BEDROCK (UNKNOWN) |
| SHALE | SANDSTONE | IGNEOUS/ META |

LEGEND OF BORING




(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-161**

DRAWN BY JDO | PLANS CK'D ACK

**SUBSURFACE EXPLORATION**

SHEET 3 OF 9

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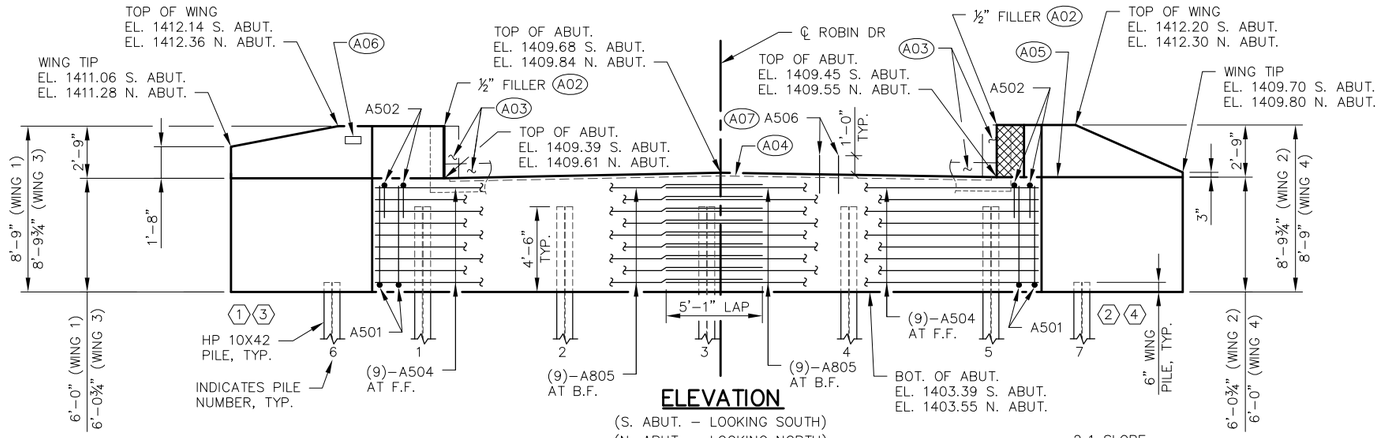
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PLOT SCALE:

I.D. 9549-00-71 PLOT DATE: May 30, 2024

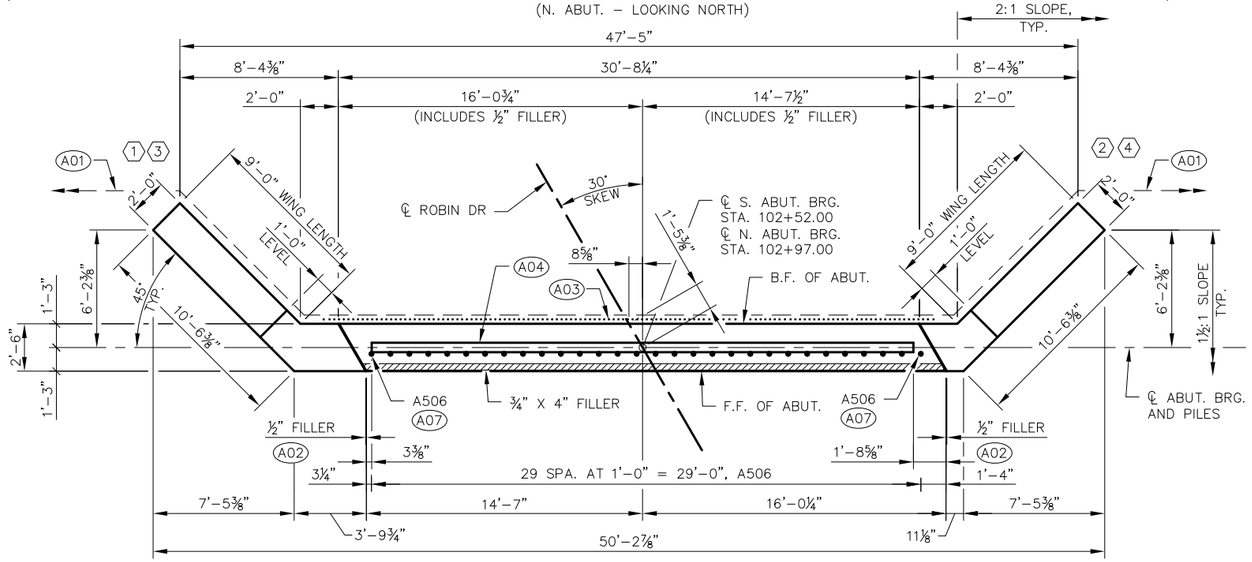
STATE PROJECT NUMBER

9549-00-71

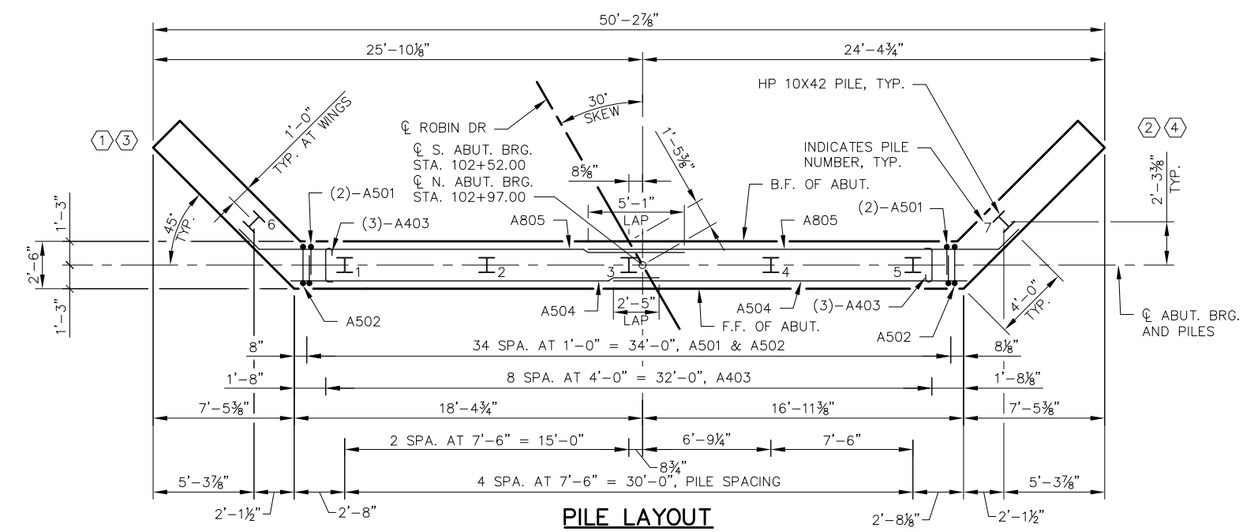



## ELEVATION

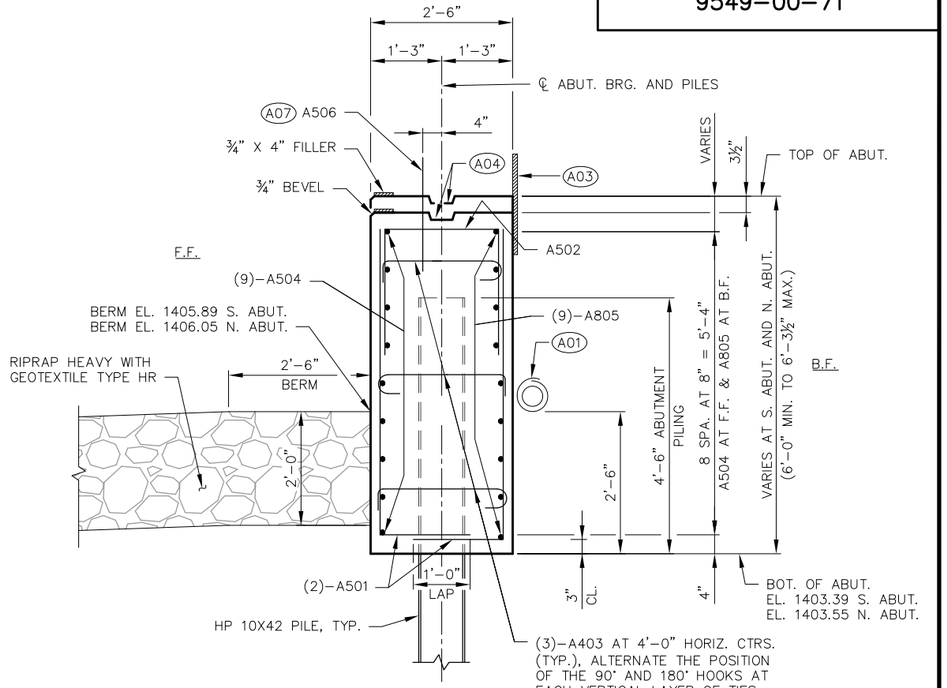
(S. ABUT. – LOOKING SOUTH)
(N. ABUT. – LOOKING NORTH)




## PLAN




## PILE LAYOUT




## TYPICAL SECTION THRU ABUTMENT

## NOTES

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

SOUTH AND NORTH ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE AT THE SOUTH ABUTMENT AND 170 TONS PER PILE AT THE NORTH ABUTMENT AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 40 FT PILE LENGTHS AT THE SOUTH ABUTMENT AND AT THE NORTH ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

(A01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "WINGS 1 & 3 DETAILS" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

(A03) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

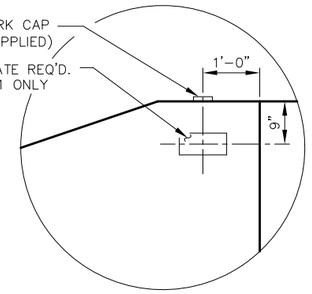
(A04) KEYED CONST. JT. FORMED BY BEVELED 2 X 6

(A05) OPTIONAL KEYED CONST. JT. FORMED BY BEVELED 2 X 6, TYP.

(A06) NAME PLATE & BENCHMARK CAP (WHEN SUPPLIED) AT WING 1 ONLY. SEE "NAME PLATE DETAIL", THIS SHEET.

(A07) A506 BARS MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED 1'-0" INTO ABUTMENT BODY.

⬡ INDICATES WING NUMBER




## NAME PLATE DETAIL

F.F. – FRONT FACE
B.F. – BACK FACE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-161

DRAWN BY JDO | PLANS CK'D ACK

ABUTMENTS

SHEET 4 OF 9

35

I.D. 9549-00-71

PLOT DATE: May 30, 2024

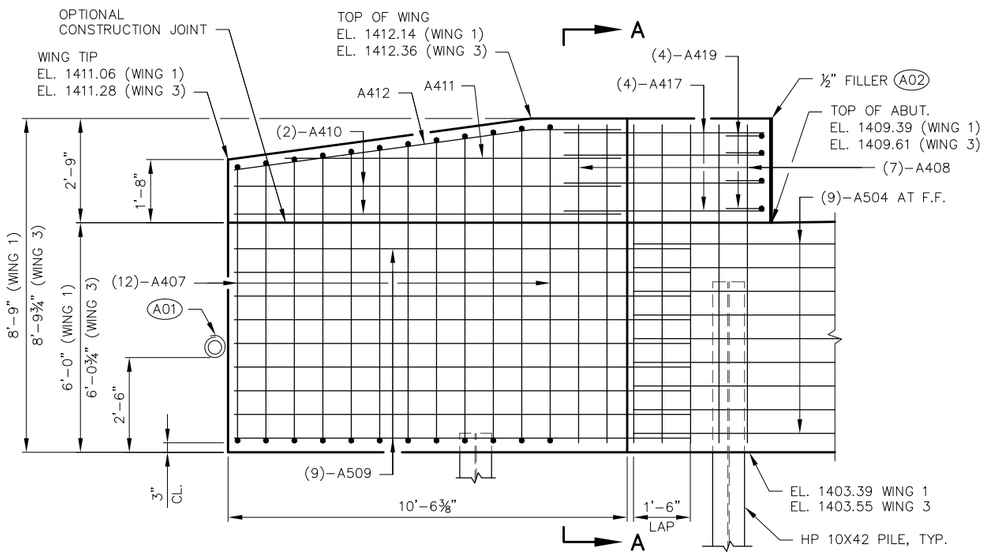
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PLOT SCALE:

8

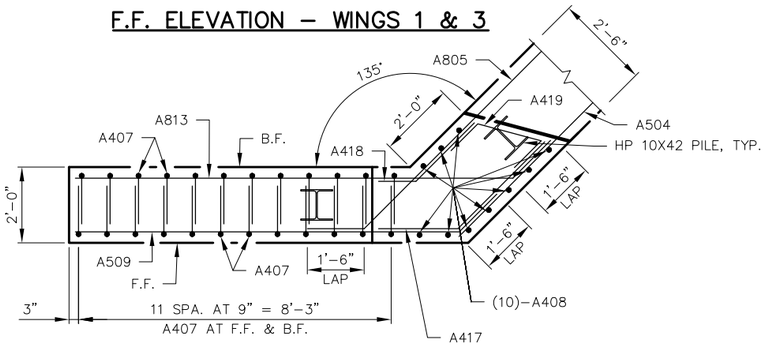
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STATE PROJECT NUMBER

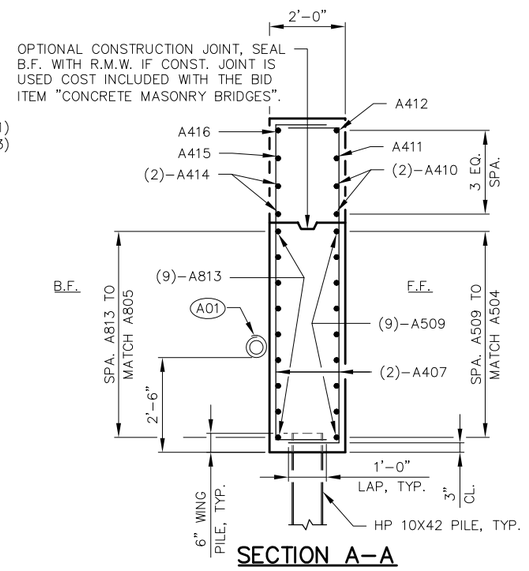
9549-00-71




F.F. ELEVATION – WINGS 1 & 3




PLAN – WINGS 1 & 3




SECTION A–A

## NOTES

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

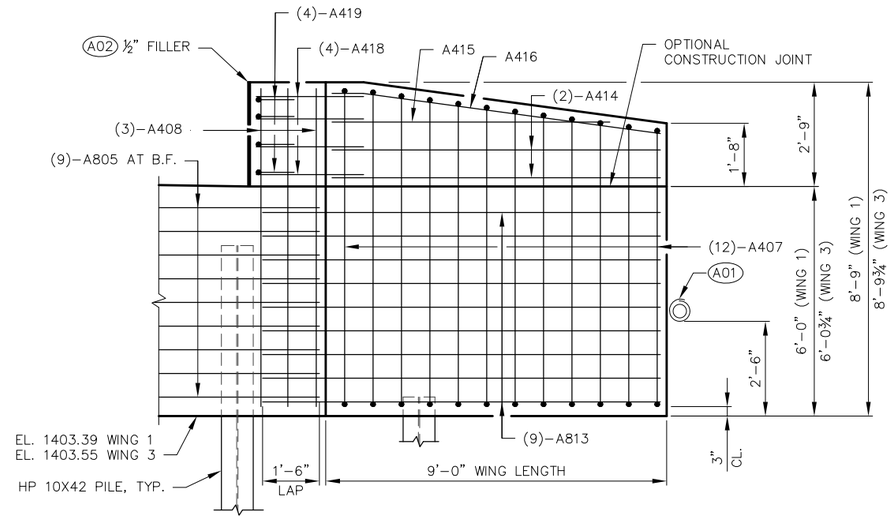
SOUTH AND NORTH ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE AT THE SOUTH ABUTMENT AND 170 TONS PER PILE AT THE NORTH ABUTMENT AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 40 FT PILE LENGTHS AT THE SOUTH ABUTMENT AND AT THE NORTH ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

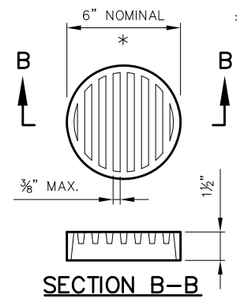
(A01) PIPE UNDERDRAIN WRAPPED (6–INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

(A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON–STAINING GRAY NON–BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

F.F. – FRONT FACE
B.F. – BACK FACE




B.F. ELEVATION – WINGS 1 & 3




SECTION B–B

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

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE 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.

THE RODENT SHIELD. PIPE COUPLING AND SCREWS SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

RODENT SHIELD DETAIL

8

8

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–60–161

DRAWN BY JDO | PLANS CK'D ACK

WINGS 1 & 3 DETAILS

SHEET 5 OF 9

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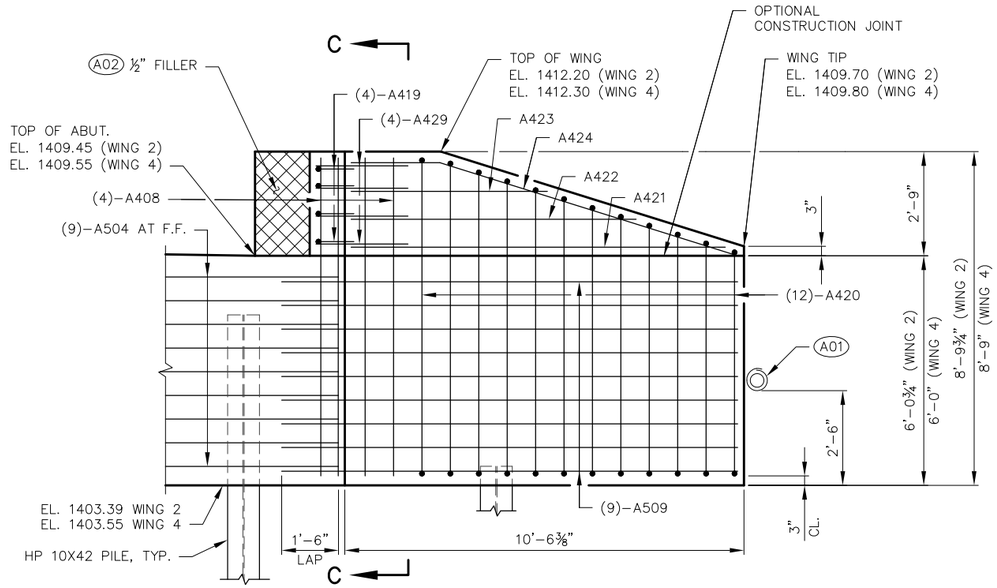
I.D. 9549–00–71

PLOT DATE: May 30, 2024

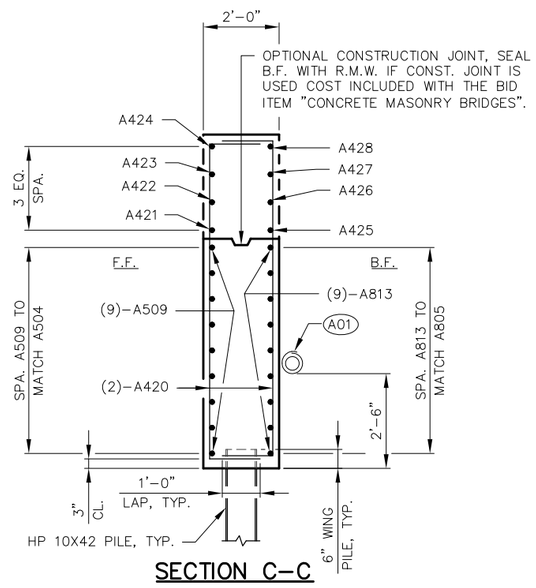
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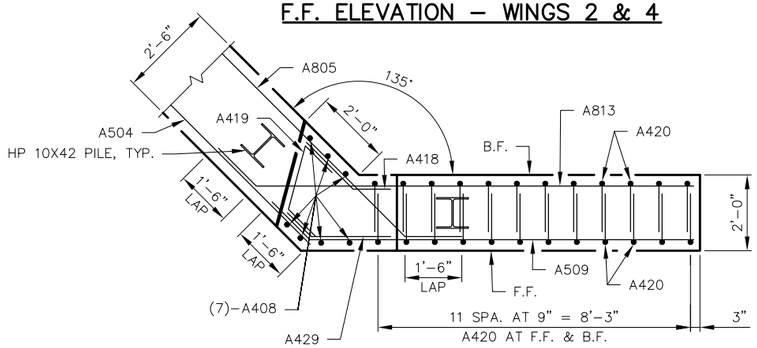
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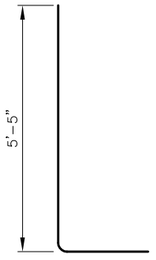

F.F. ELEVATION – WINGS 2 & 4



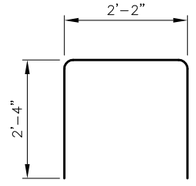

SECTION C-C



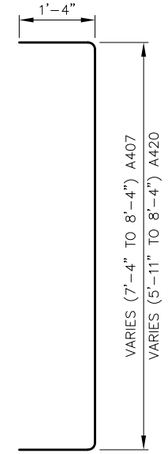

PLAN – WINGS 2 & 4



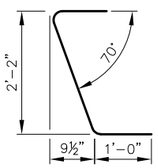

A501



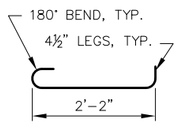

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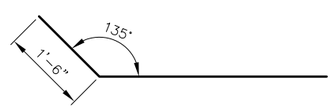

A407 & A420



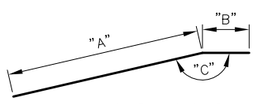

A419



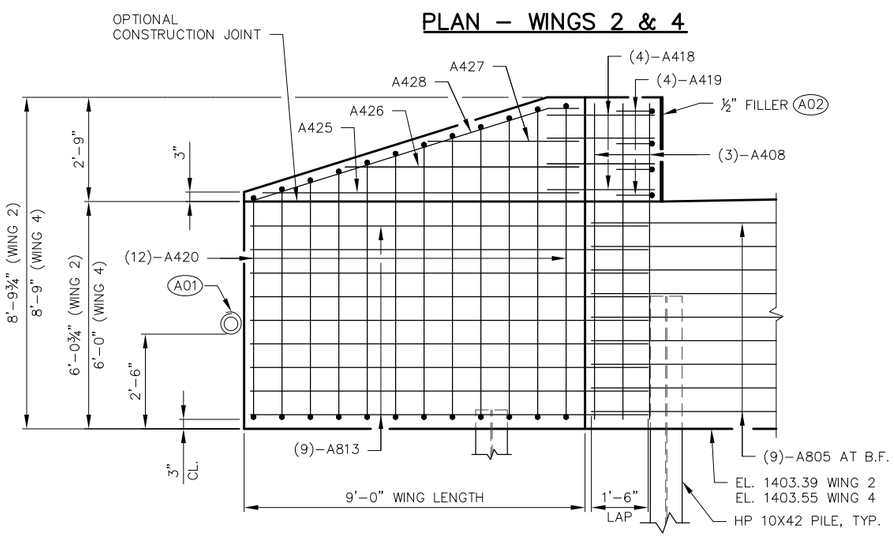

A403




A805, A509 & A813




A412, A416, A424, & A428




B.F. ELEVATION – WINGS 2 & 4

## BILL OF BARS
## BOTH ABUTMENTS

COATED = 2,970 LBS.
UNCOATED = 4,590 LBS.

| MARK | COATED | NUMBER S. ABUT. | NUMBER N. ABUT. | LENGTH | BENT | BAR SERIES | LOCATION | |
|---|---|---|---|---|---|---|---|---|
| A501 | | 70 | 70 | 6'-11" | X | | BODY – STIRRUP – F.F. & B.F. | VERT. |
| A502 | | 35 | 35 | 6'-7" | X | | BODY – STIRRUP – TOP | VERT. |
| A403 | | 27 | 27 | 3'-1" | X | | BODY – TIES | HORIZ. |
| A504 | | 18 | 18 | 18'-11" | | | BODY – F.F. | HORIZ. |
| A805 | | 18 | 18 | 23'-9" | X | | BODY – B.F. | HORIZ. |
| A506 | X | 30 | 30 | 2'-0" | | | BODY – TOP DOWELS | VERT. |
| A407 | X | 24 | 24 | 10'-4" | X | ⚠ | WINGS 1 & 3 – STIRRUP – F.F. & B.F. | VERT. |
| A408 | X | 17 | 17 | 8'-4" | | | WINGS 1 THRU 4 – F.F. & B.F. | VERT. |
| A509 | X | 18 | 18 | 11'-9" | X | | WINGS 1 THRU 4 – F.F. | HORIZ. |
| A410 | X | 2 | 2 | 10'-2" | | | WINGS 1 AND 3 – F.F. | HORIZ. |
| A411 | X | 1 | 1 | 8'-10" | | | WINGS 1 AND 3 – F.F. | HORIZ. |
| A412 | X | 1 | 1 | 10'-3" | X | | WINGS 1 AND 3 – F.F. – TOP | HORIZ. |
| A813 | X | 18 | 18 | 13'-3" | X | | WINGS 1 THRU 4 – B.F. | HORIZ. |
| A414 | X | 2 | 2 | 8'-8" | | | WINGS 1 AND 3 – B.F. | HORIZ. |
| A415 | X | 1 | 1 | 7'-4" | | | WINGS 1 AND 3 – B.F. | HORIZ. |
| A416 | X | 1 | 1 | 8'-8" | X | | WINGS 1 AND 3 – B.F. – TOP | HORIZ. |
| A417 | X | 4 | 4 | 5'-7" | X | | WINGS 1 AND 3 – F.F. CORNER | HORIZ. |
| A418 | X | 8 | 8 | 2'-10" | X | | WINGS 1 THRU 4 – B.F. CORNER | HORIZ. |
| A419 | X | 8 | 8 | 4'-2" | X | | WINGS 1 THRU 4 – TOP CORNER | HORIZ. |
| A420 | X | 24 | 24 | 9'-8" | X | ⚠ | WINGS 2 AND 4 – STIRRUP – F.F. & B.F. | VERT. |
| A421 | X | 1 | 1 | 9'-10" | | | WINGS 2 AND 4 – F.F. | HORIZ. |
| A422 | X | 1 | 1 | 7'-6" | | | WINGS 2 AND 4 – F.F. | HORIZ. |
| A423 | X | 1 | 1 | 5'-2" | | | WINGS 2 AND 4 – F.F. | HORIZ. |
| A424 | X | 1 | 1 | 10'-6" | X | | WINGS 2 AND 4 – F.F. – TOP | HORIZ. |
| A425 | X | 1 | 1 | 8'-4" | | | WINGS 2 AND 4 – B.F. | HORIZ. |
| A426 | X | 1 | 1 | 6'-1" | | | WINGS 2 AND 4 – B.F. | HORIZ. |
| A427 | X | 1 | 1 | 3'-11" | | | WINGS 2 AND 4 – B.F. | HORIZ. |
| A428 | X | 1 | 1 | 8'-11" | X | | WINGS 2 AND 4 – B.F. – TOP | HORIZ. |
| A429 | X | 4 | 4 | 2'-11" | X | | WINGS 2 AND 4 – F.F. CORNER | HORIZ. |

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

BUNDLE EACH ABUTMENT BARS SEPARATELY.

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

## NOTES

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

SOUTH AND NORTH ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE AT THE SOUTH ABUTMENT AND 170 TONS PER PILE AT THE NORTH ABUTMENT AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 40 FT PILE LENGTHS AT THE SOUTH ABUTMENT AND AT THE NORTH ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

(A01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "WINGS 1 & 3 DETAILS" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

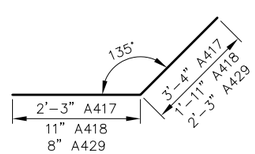
## BAR SERIES TABLE

| MARK | NO. REQ'D | LENGTH |
|---|---|---|
| A407 | 4 SERIES OF 12 | 9'-10" TO 10'-10" |
| A420 | 4 SERIES OF 12 | 8'-5" TO 10'-10" |

BUNDLE AND TAG EACH SERIES SEPARATELY.

## BAR BEND DIMENSIONS

| MARK | "A" | "B" | "C" |
|---|---|---|---|
| A412 | 7'-11" | 2'-4" | 172° |
| A416 | 7'-11" | 0'-9" | 172° |
| A424 | 8'-2" | 2'-4" | 163° |
| A428 | 8'-2" | 0'-9" | 163° |




A417, A418, & A429

F.F. – FRONT FACE
B.F. – BACK FACE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-161

DRAWN BY JDO | PLANS CK'D ACK

WINGS 2 & 4 DETAILS & ABUT. REINFORCEMENT

SHEET 6 OF 9

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I.D. 9549-00-71

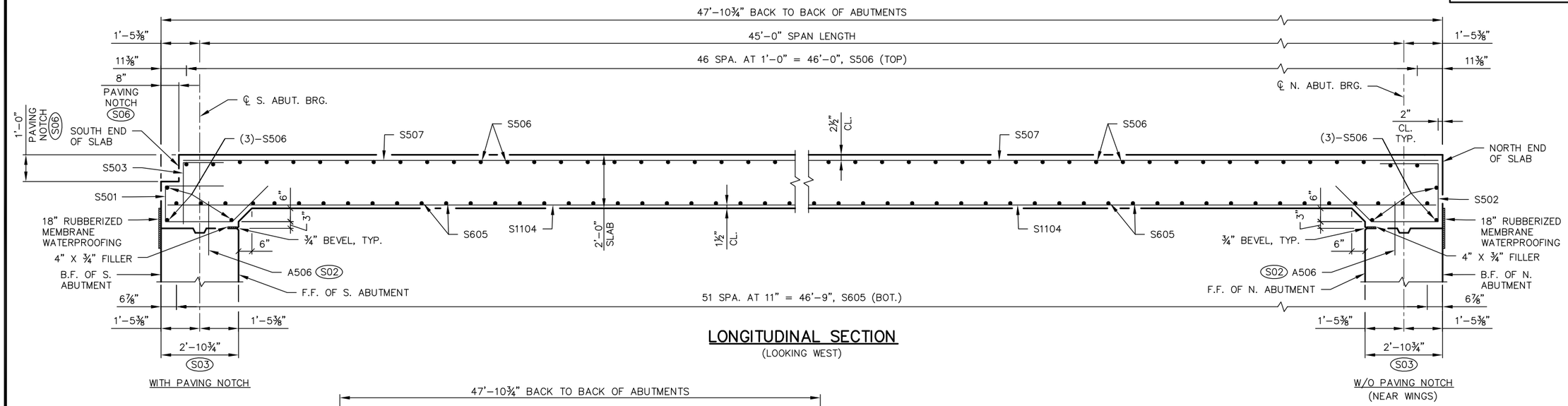
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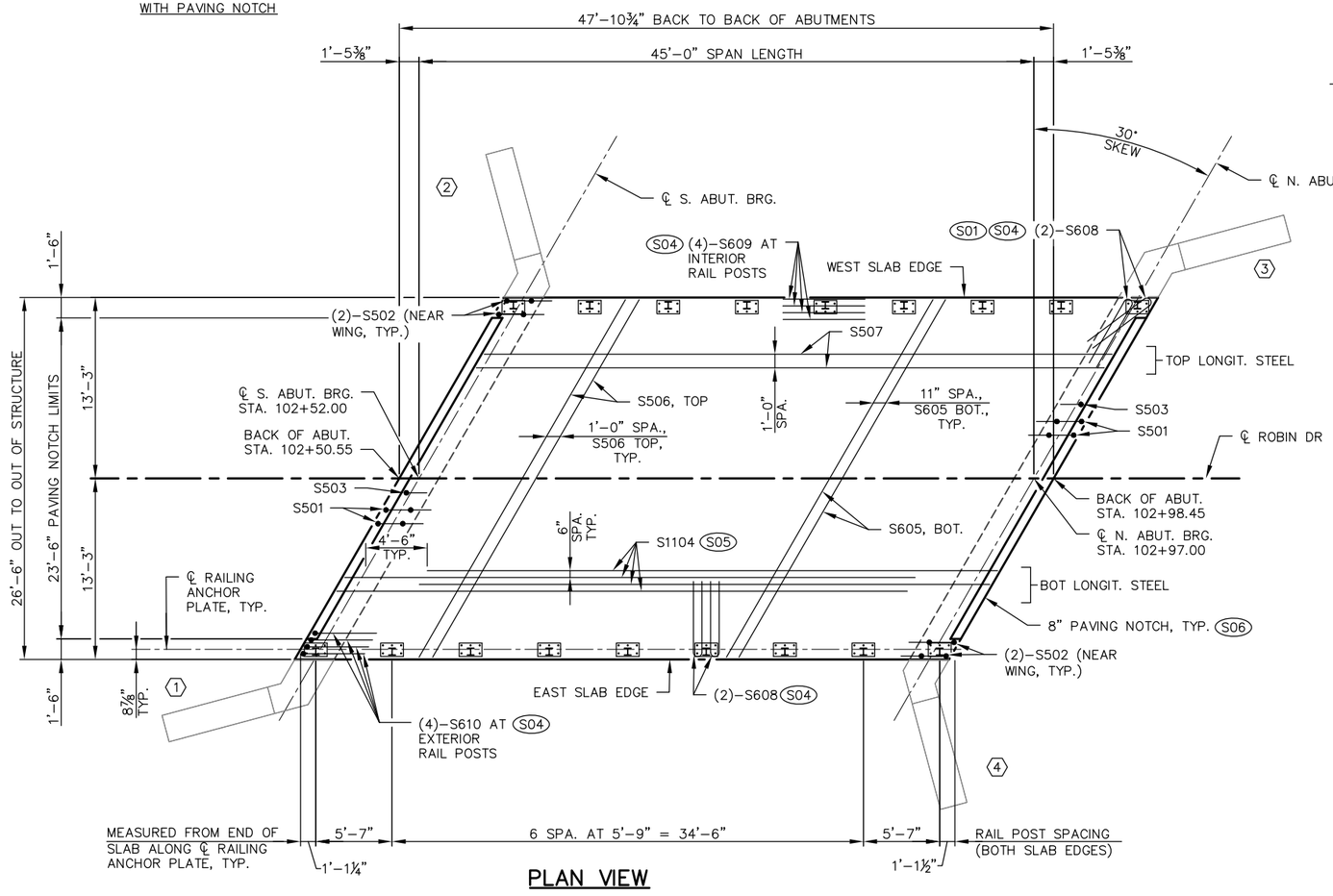
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| STATE PROJECT NUMBER |
|---|
| 9549–00–71 |




## LONGITUDINAL SECTION
(LOOKING WEST)




## PLAN VIEW

## NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'–0" CENTERS EACH WAY.

BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'–0" CENTERS.

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

RAILING TO BE INSTALLED ON THE SLAB AFTER FALSEWORK HAS BEEN RELEASED.

(S01) ADJUST ORIENTATION OF S608 BAR AT END POST NEAR WINGS 1 & 3 TO ENSURE CLEAR COVER AT END OF SLAB AND PAVING NOTCH.

(S02) SEE "ABUTMENTS" SHEET FOR PLACEMENT OF A506 BARS

(S03) DIMENSION IS TAKEN PARALLEL TO ℄ ROBIN DR

(S04) SEE "RAILING TUBULAR TYPE M" SHEET FOR PLACEMENT OF RAIL POST REINFORCEMENT.

(S05) EXTEND ONE END OF THE S1104 BAR TO 2" CLEAR OF ONE BACK FACE OF ABUTMENT. ALTERNATE BETWEEN NORTH AND SOUTH ABUTMENTS ACROSS ENTIRE SLAB.

(S06) APPLY PROTECTIVE SURFACE TREATMENT TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES.

⬡ INDICATES WING NUMBER

F.F. – FRONT FACE
B.F. – BACK FACE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–60–161

| DRAWN BY | JDO | PLANS CK'D | ACK |
|---|---|---|---|

SUPERSTRUCTURE

SHEET 7 OF 9

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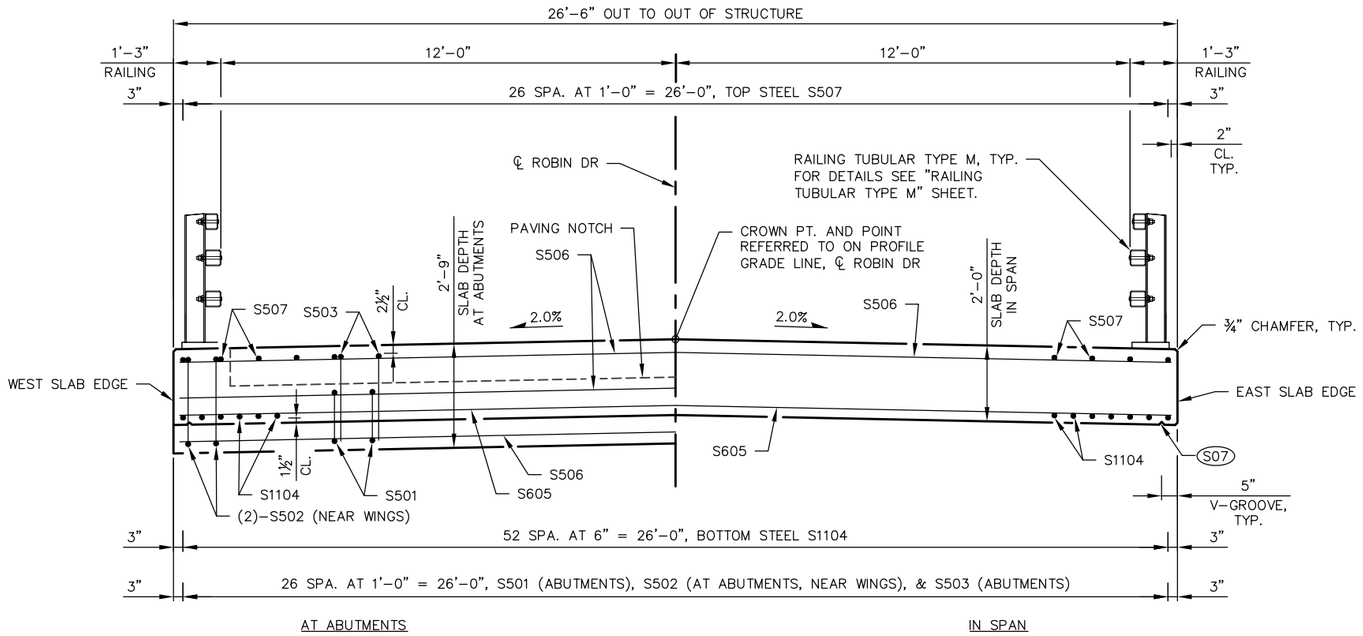
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I.D. 9549–00–71

PLOT DATE: May 30, 2024

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## CROSS SECTION THRU ROADWAY

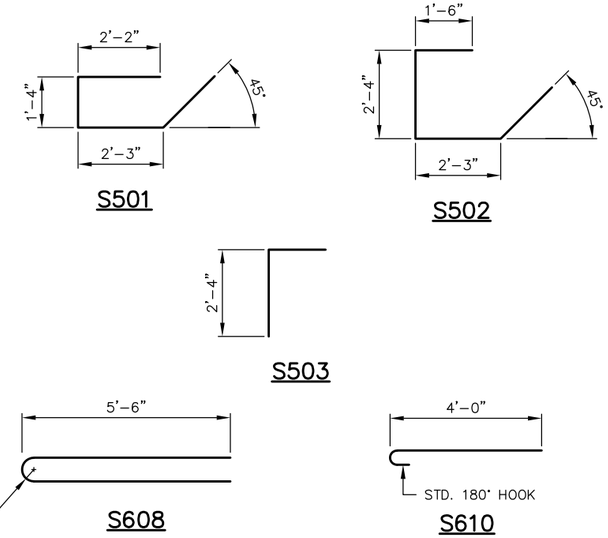
(LOOKING NORTH)

## BILL OF BARS
## SUPERSTRUCTURE — COATED = 18,950 LBS.

| MARK | NUMBER COATED | NUMBER UNCOATED | LENGTH | BENT | BAR SERIES | LOCATION | |
|---|---|---|---|---|---|---|---|
| S501 | 46 | | 7'–6" | X | | SLAB AT ABUTMENT – TIES | LONGIT. |
| S502 | 8 | | 7'–10" | X | | SLAB AT ABUTMENT WINGS – TIES | LONGIT. |
| S503 | 54 | | 3'–9" | X | | SLAB AT ABUTMENT – TIES | LONGIT. |
| S1104 | 53 | | 41'–9" | | | SLAB – BOTTOM | LONGIT. |
| S605 | 52 | | 30'–2" | | | SLAB – BOTTOM | TRANS. |
| S506 | 53 | | 30'–2" | | | SLAB – TOP & OVER ABUTMENTS | TRANS. |
| S507 | 27 | | 45'–11" | | | SLAB – TOP | LONGIT. |
| S608 | 36 | | 11'–6" | X | | SLAB – TOP AT RAIL POSTS | TRANS. |
| S609 | 56 | | 6'–0" | | | SLAB – TOP AT INTERIOR RAIL POSTS | LONGIT. |
| S610 | 16 | | 4'–8" | X | | SLAB – TOP AT EXTERIOR RAIL POSTS | LONGIT. |

THE FIRST OR FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.



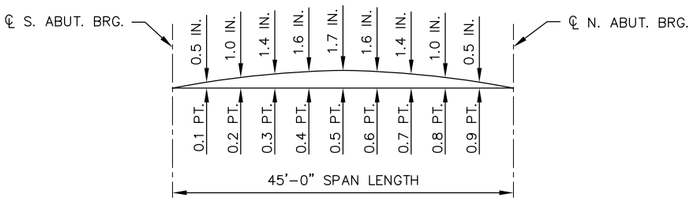

## SURVEY TOP OF SLAB ELEVATIONS

| | ℄ S. ABUT. BRG. | 5/10 PT. | ℄ N. ABUT. BRG. |
|---|---|---|---|
| WEST SLAB EDGE | | | |
| ℄ ROBIN DR | | | |
| EAST SLAB EDGE | | | |

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND REFERENCE LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

## TOP OF SLAB ELEVATIONS

| SPAN PT | WEST SLAB EDGE | ℄ ROBIN DR | EAST SLAB EDGE |
|---|---|---|---|
| ℄ S. ABUT. | 1412.20 | 1412.43 | 1412.14 |
| 0.1 | 1412.21 | 1412.45 | 1412.16 |
| 0.2 | 1412.23 | 1412.46 | 1412.18 |
| 0.3 | 1412.25 | 1412.48 | 1412.19 |
| 0.4 | 1412.26 | 1412.49 | 1412.21 |
| 0.5 | 1412.28 | 1412.51 | 1412.22 |
| 0.6 | 1412.29 | 1412.53 | 1412.24 |
| 0.7 | 1412.31 | 1412.54 | 1412.25 |
| 0.8 | 1412.32 | 1412.56 | 1412.27 |
| 0.9 | 1412.34 | 1412.57 | 1412.29 |
| ℄ N. ABUT. | 1412.36 | 1412.59 | 1412.30 |




## SLAB CAMBER DIAGRAM

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

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

## NOTES

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

(S07) ¾" V–GROOVE. EXTEND V–GROOVE TO 6" FROM FRONT FACE OF ABUTMENT BODY. V–GROOVES ARE REQUIRED.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–60–161

DRAWN BY JDO | PLANS CK'D ACK

SUPERSTRUCTURE DETAILS

SHEET 8 OF 9

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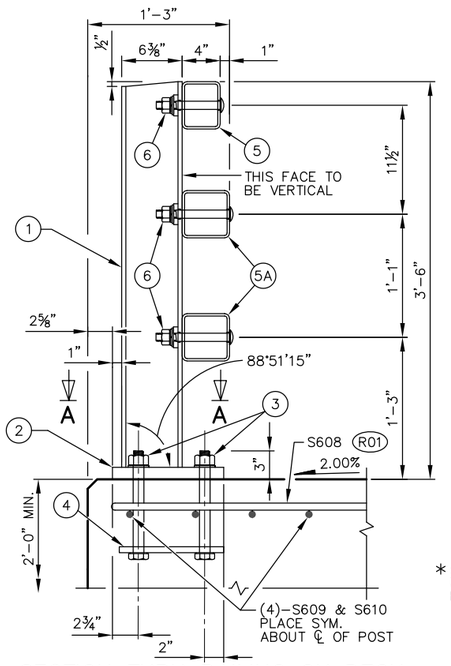
I.D. 9549–00–71

PLOT DATE: May 30, 2024

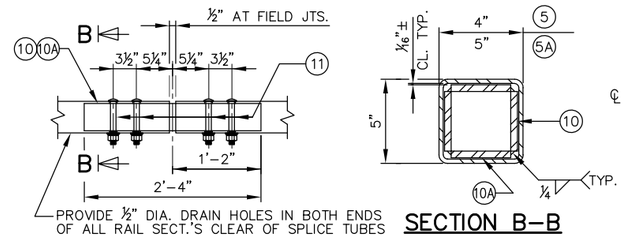
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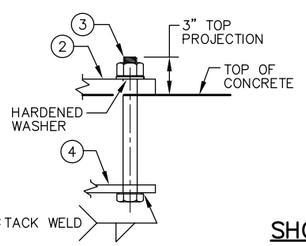

SECTION THRU RAILING ON DECK




FIELD ERECTION JOINT DETAIL

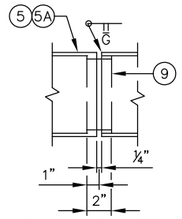



SECTION B-B



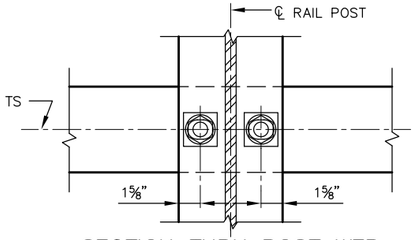

ANCHOR BOLTS

* ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.

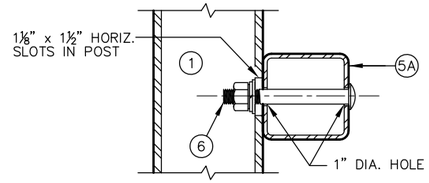



SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)




SECTION THRU POST WEB




SECTION THRU RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

## LEGEND

(1) W6 x 25 WITH 1⅛" x 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

(2) PLATE 1¼" x 11¾" x 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.

(3) ASTM A449 – 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)

(4) ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(6) ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" x 1⅝" x 1⅝" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(7) ½" THK. BACK-UP PLATE WITH 2 – ⅞" x 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

(8) 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

(9) SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

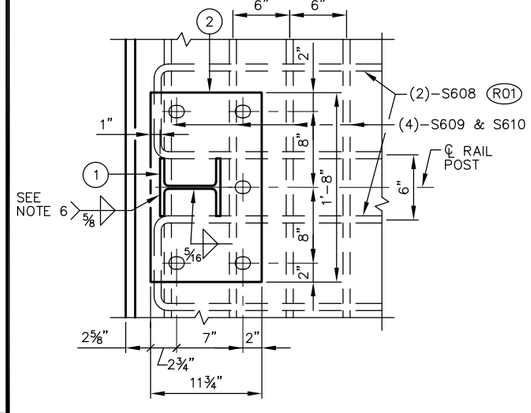
(10) ⅜" x 3⅝" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(10A) ⅜" x 2⅝" x 2'-4" PLATE USED IN NO. 5, ⅜" x 3⅝" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

(11) ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER. USE 15/16" x 1¼" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 15/16" x 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.

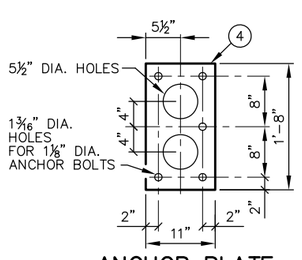
## NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

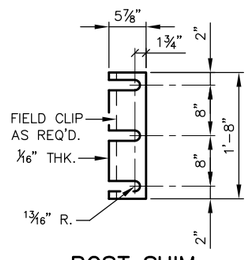



SECTION A-A

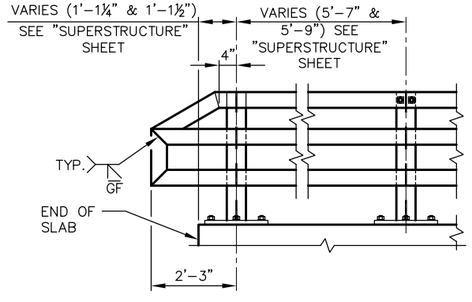
R01 TIE TO TOP MAT OF STEEL.




ANCHOR PLATE
AT RAIL TO DECK CONNECTION




POST SHIM DETAIL




PART ELEVATION OF RAILING

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-161

DRAWN BY JDO | PLANS CK'D ACK

RAILING TUBULAR TYPE M

SHEET 9 OF 9

40

8

8

I.D. 9549-00-71

PLOT DATE: May 30, 2024

FILE: B600161_09_mrail.dwg
PLOT SCALE:

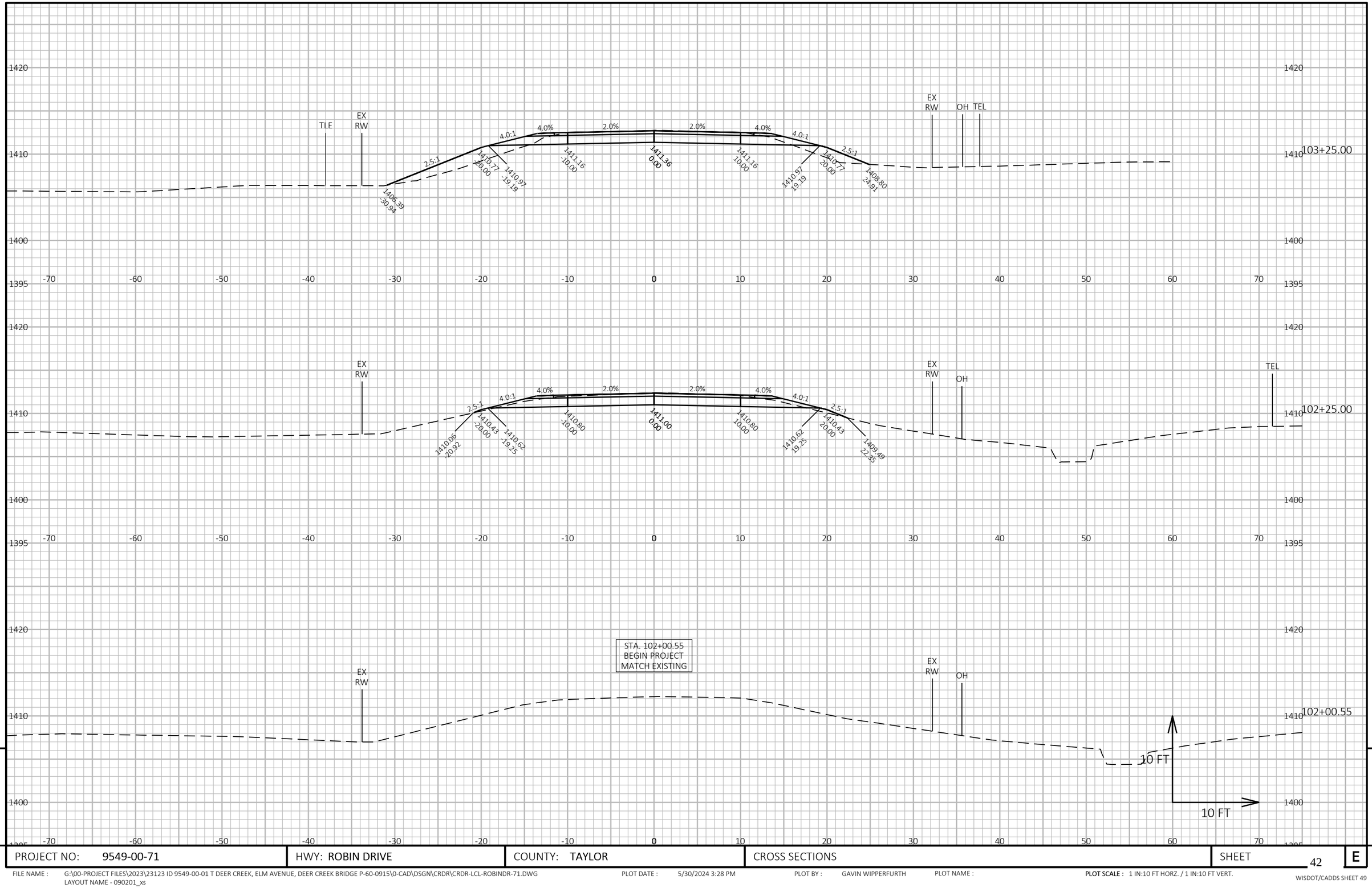
## DIVISION 1 - SOUTH APPROACH

| STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 4 |
| 102+00.55 | 0.00 | 38.77 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 102+25.00 | 24.45 | 38.28 | 0.00 | 1.27 | 35 | 0 | 1 | 35 | 1 | 34 |
| 102+33.19 | 8.19 | 43.35 | 0.00 | 1.86 | 12 | 0 | 0 | 47 | 1 | 46 |
| 102+50.00 | 16.81 | 23.27 | 0.00 | 0.55 | 21 | 0 | 1 | 68 | 3 | 66 |
| 102+56.89 | 6.89 | 4.91 | 0.00 | 2.92 | 4 | 0 | 0 | 72 | 3 | 70 |
| STRUCTURE B-60-0161 | | | | | | | | | | |
| | | | DIVISION 1 TOTAL | | 72 | 0 | 2 | | | |

## DIVISION 2 - NORTH APPROACH

| STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 4 |
| STRUCTURE B-60-0161 | | | | | | | | | | |
| 102+92.10 | 0.00 | 4.11 | 0.00 | 29.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103+00.00 | 7.90 | 25.94 | 0.00 | 17.15 | 4 | 0 | 7 | 4 | 9 | -5 |
| 103+15.80 | 15.80 | 40.97 | 0.00 | 42.11 | 20 | 0 | 17 | 24 | 30 | -6 |
| 103+25.00 | 9.20 | 35.84 | 0.00 | 21.74 | 13 | 0 | 11 | 37 | 44 | -7 |
| 103+48.44 | 23.44 | 34.29 | 0.00 | 7.11 | 30 | 0 | 13 | 67 | 60 | 7 |
| | | | DIVISION 2 TOTAL | | 67 | 0 | 48 | | | |
| | | | PROJECT TOTAL | | 139 | 0 | 50 | | | |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS |
| 3 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 4 - MASS ORDINATE | [(CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL) - (FILL* FILL FACTOR)] |
| | PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. |

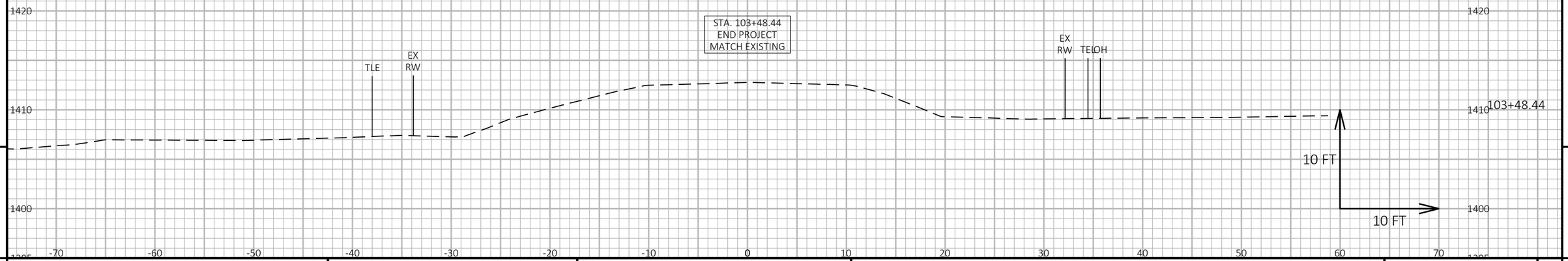



| | | | | | |
|---|---|---|---|---|---|
| PROJECT NO: 9549-00-71 | HWY: ROBIN DRIVE | COUNTY: TAYLOR | CROSS SECTIONS | SHEET 42 | E |

FILE NAME : G:\00-PROJECT FILES\2023\23123 ID 9549-00-01 T DEER CREEK, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\DSGN\CRDR\CRDR-LCL-ROBINDR-71.DWG
LAYOUT NAME - 090201_xs

PLOT DATE : 5/30/2024 3:28 PM PLOT BY : GAVIN WIPPERFURTH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 9549-00-71 | HWY: ROBIN DRIVE | COUNTY: TAYLOR | CROSS SECTIONS | SHEET 43 | E |
|---|---|---|---|---|---|


FILE NAME : G:\00-PROJECT FILES\2023\23123 ID 9549-00-01 T DEER CREEK, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\DSGN\CRDR\CRDR-LCL-ROBINDR-71.DWG
LAYOUT NAME - 090202_xs

PLOT DATE : 5/30/2024 3:28 PM PLOT BY : GAVIN WIPPERFURTH 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.

http://www.dot.wisconsin.gov

EAU

PROJECT ID: **9549-00-72**

WITH: 9549-00-70, 9549-00-71, 9549-00-73

COUNTY: **TAYLOR**

NOVEMBER 2024

ORDER OF SHEETS


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


TOTAL SHEETS = 50




N

DESIGN DESIGNATION

| | | | |
|---|---|---|---|
| A.A.D.T. | (2025) | = | <100 |
| A.A.D.T. | (2045) | = | <100 |
| D.H.V. | | = | 10 |
| D.D. | | = | 50/50 |
| T. | | = | 5% |
| DESIGN SPEED | | = | 50 MPH |
| ESALS | | = | 36,500 |

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

**PLAN OF PROPOSED IMPROVEMENT**

# T DEER CREEK, ELM AVENUE (2)

**W BR BIG EAU PLEINE RVR BR B-60-0159**

## LOC STR

## TAYLOR COUNTY

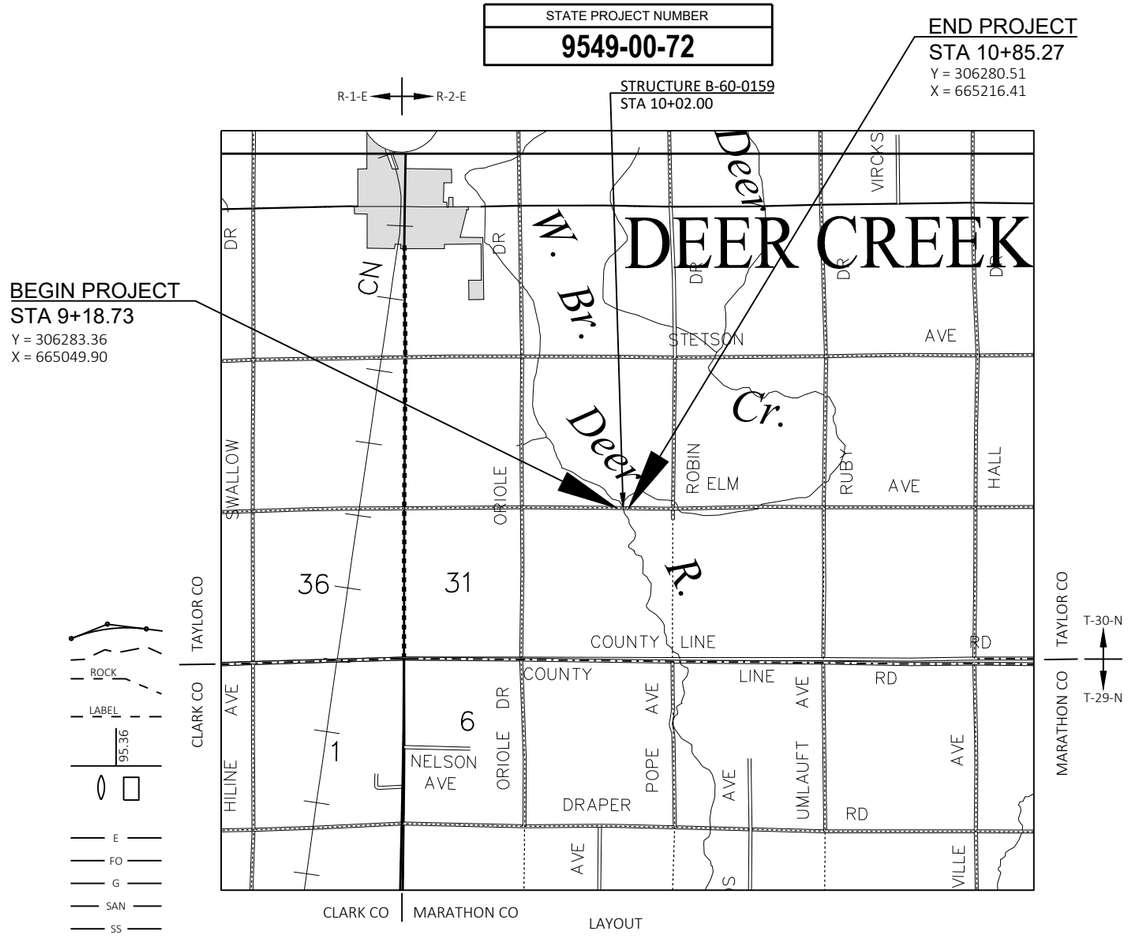
| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 9549-00-72 | WISC 2025073 | 1 |
| | | |
| | | |
| | | |

STATE PROJECT NUMBER **9549-00-72**

BEGIN PROJECT
STA 9+18.73
Y = 306283.36
X = 665049.90

STRUCTURE B-60-0159
STA 10+02.00

END PROJECT
STA 10+85.27
Y = 306280.51
X = 665216.41




LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.032 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), TAYLOR 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 ( 2018 ). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

ACCEPTED FOR

COUNTY of TAYLOR

7/17/2024 (Date)

Benjamin Stanfley (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

AYRES




07/18/2024

(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

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

APPROVED FOR THE DEPARTMENT

DATE: 7/30/2024 (Signature)

E

FILE NAME : I:\42\42-1381.00 - TAYLOR CO, TN DEER CREEK, ELM DRIVE\C3D\SHEETS\010101-TI.DWG PLOT DATE : 6/4/2024 10:42 AM PLOT BY : RESHESKE, CARRIE PLOT NAME :

## UTILITIES CONTACTS

TAYLOR ELECTRIC COOPERATIVE
ELECTRIC LINE
WADE MATYKA
N1831 HWY 13
MEDFORD, WI 54451
PHONE: 715-678-2411
CELL: 715-965-1312
EMAIL: wade@taylorelectric.org

TDS TELECOM
COMMUNICATION LINE
JEFF OLSON
171 PAOLI STREET
VERONA, WI 53594
PHONE: 608-444-6208
CELL: 608-845-2219
EMAIL: jeffrey.olson@tdstelecom.com

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

## WISCONSIN DNR LIAISON

WENDY HENNIGES
WDNR NORTHERN REGION HQ
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
CELL: 715-499-1608
EMAIL: Wendy.Henniges@wisconsin.gov

## TOWN OF CONTACT

RAY SACKMANN, CHAIRMAN
TOWN OF DEER CREEK
W4765 ROBIN DRIVE
MEDFORD, WI 54451
PHONE: 715-748-4742
EMAIL: deercreektownshop@tds.net

## DESIGN PROJECT MANAGER

MATTHEW BERG, PE
WISDOT NW REGION LPPM
718 CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 920-366-4750
EMAIL: Matthew.Berg@dot.wi.gov

## DESIGN PROJECT LEADER

DANIEL SYDOW, PE
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
PHONE: 715-834-3161
EMAIL: sydowd@AyresAssociates.com

## COUNTY HIGHWAY COMMISSIONER

BENJAMIN STANFLEY, COMMISSIONER
TAYLOR COUNTY
208 N. 8TH STREET
MEDFORD, WI 54451
PHONE: 715-785-8326
EMAIL: ben.stanfley@co.taylor.wi.us

## 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 EROSION MAT 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 USE 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.

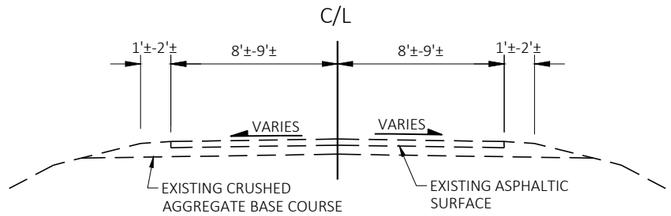
DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

## 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 | | | | | | | | | | | |

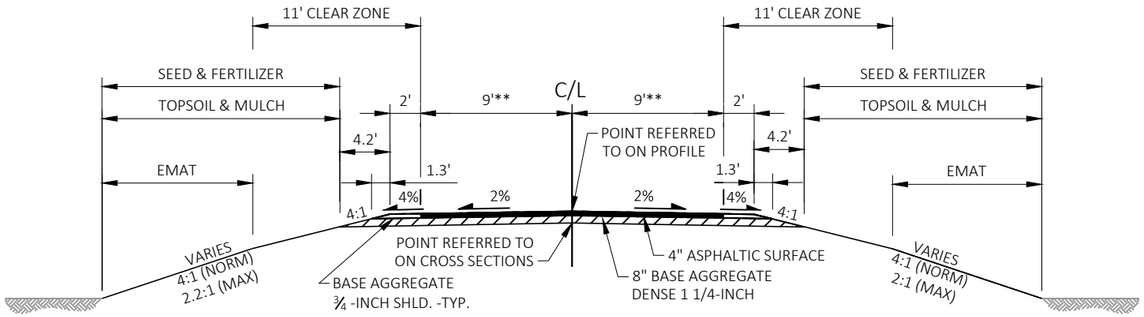
TOTAL PROJECT AREA = 0.252 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.185 ACRES

2




## EXISTING TYPICAL SECTION

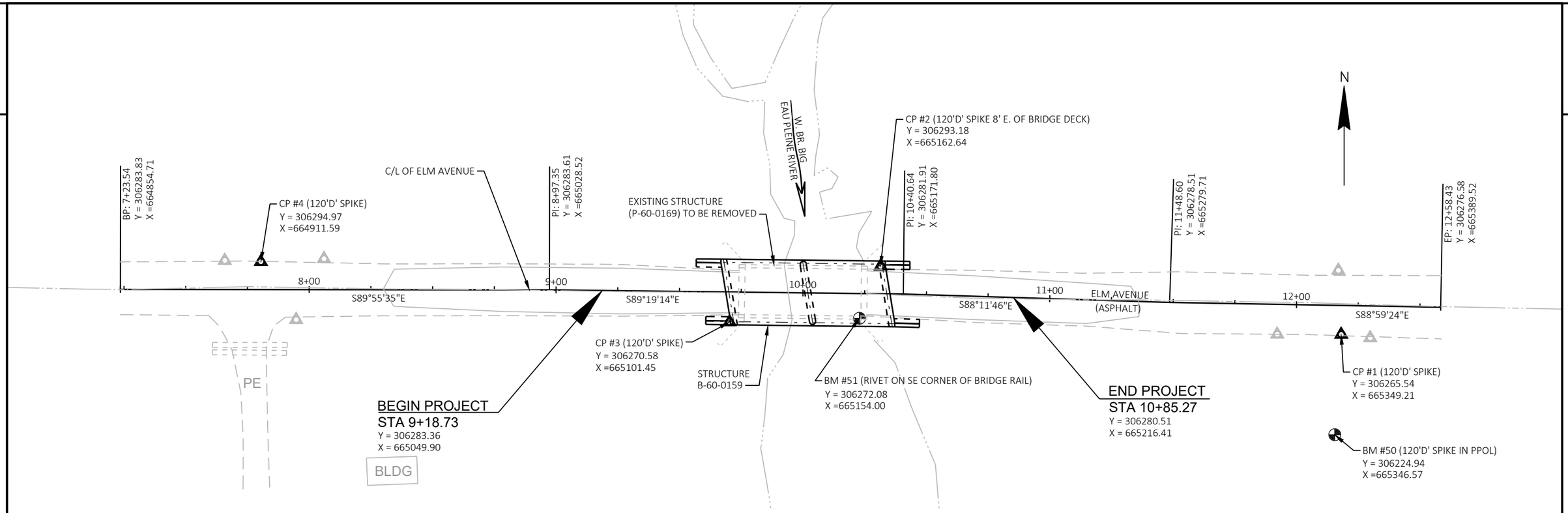
ELM AVENUE



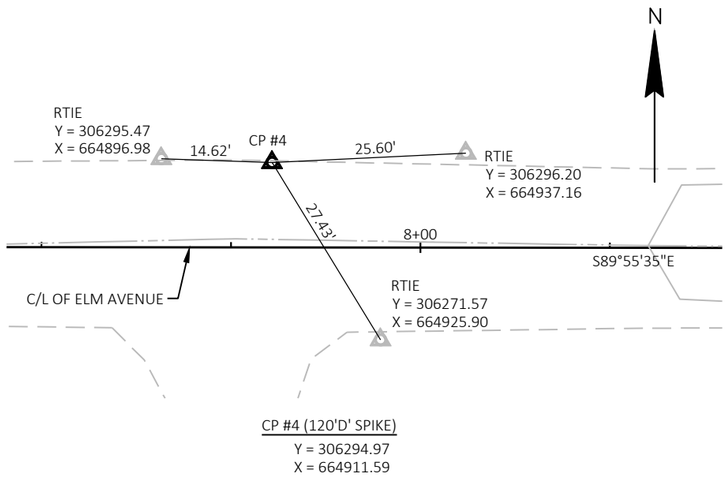

## FINISHED TYPICAL SECTION

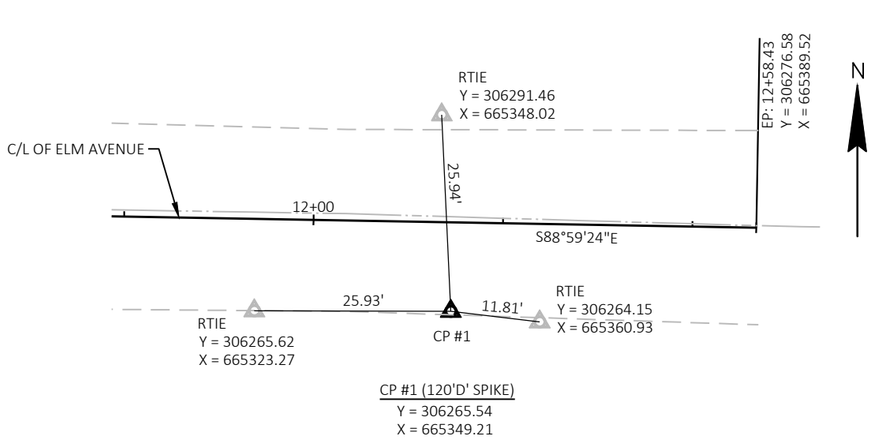
ELM AVENUE
STA. 9+18.73 TO STA. 9+68.73
STA. 10+35.27 TO STA. 10+85.27

** THE ASPHALTIC SURFACE LANE SHALL TAPER FROM 13.25 FEET WIDE AT THE ENDS OF THE WINGS TO 9 FEET WIDE AT 50 FEET FROM THE END OF BRIDGE AND MATCH INTO EXISTING AT THE ENDS OF PROJECT.




## ALIGNMENT CONTROLS

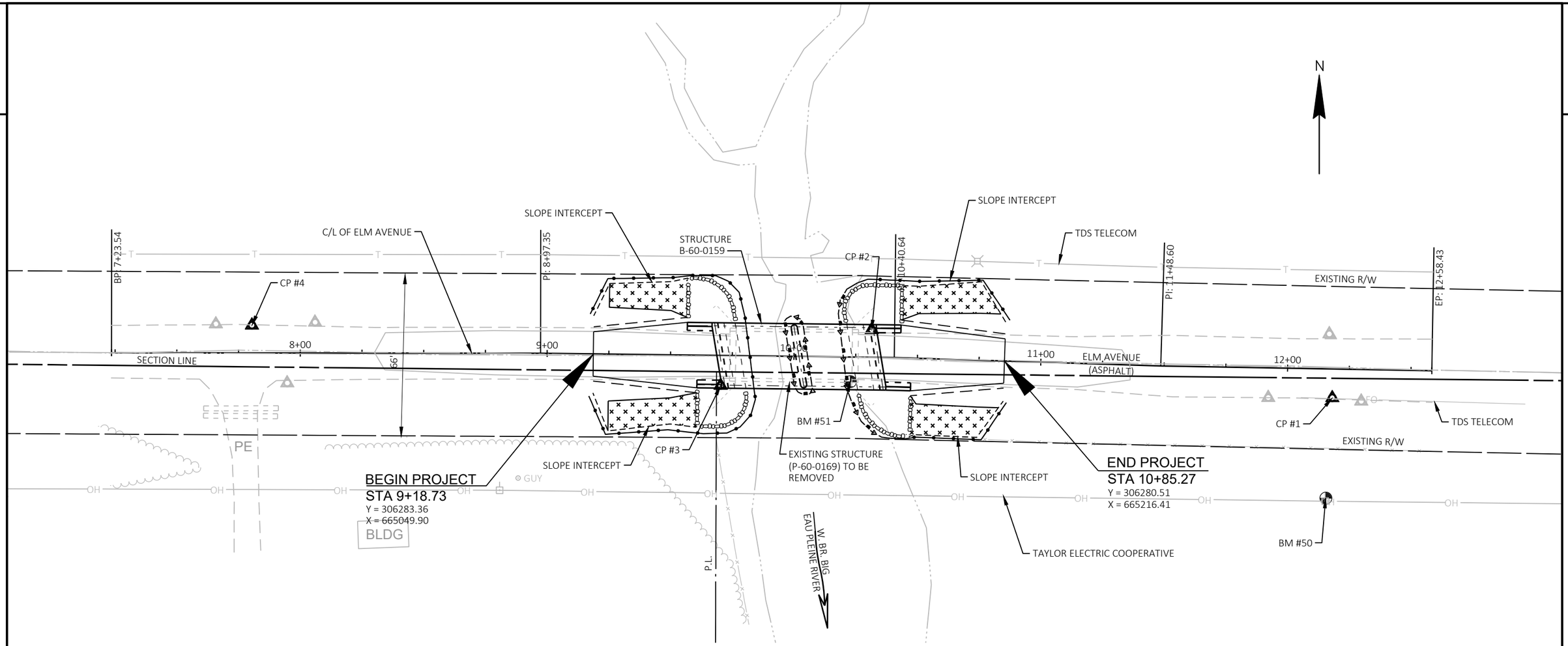



## ALIGNMENT TIES

| PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUNTY: TAYLOR | ALIGNMENT CONTROLS | SHEET 4 | E |
|---|---|---|---|---|---|

2




LEGEND

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

HIGHWATER $_2$ EL. 1406.73

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.

| PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUNTY: TAYLOR | EROSION CONTROL | SHEET 5 | E |
|---|---|---|---|---|---|

9549-00-72

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0012 | 203.0250 | Removing Structure Over Waterway Remove Debris (structure) 01. P-60-0115 | EACH | 1.000 | 1.000 |
| 0014 | 205.0100 | Excavation Common | CY | 122.000 | 122.000 |
| 0020 | 206.1001 | Excavation for Structures Bridges (structure) 03. B-60-0159 | EACH | 1.000 | 1.000 |
| 0024 | 208.0100 | Borrow | CY | 10.000 | 10.000 |
| 0026 | 210.1500 | Backfill Structure Type A | TON | 200.000 | 200.000 |
| 0032 | 213.0100 | Finishing Roadway (project) 03. 9549-00-72 | EACH | 1.000 | 1.000 |
| 0036 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 20.000 | 20.000 |
| 0038 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 150.000 | 150.000 |
| 0044 | 455.0605 | Tack Coat | GAL | 17.000 | 17.000 |
| 0046 | 465.0105 | Asphaltic Surface | TON | 60.000 | 60.000 |
| 0048 | 502.0100 | Concrete Masonry Bridges | CY | 178.000 | 178.000 |
| 0050 | 502.3200 | Protective Surface Treatment | SY | 420.000 | 420.000 |
| 0052 | 505.0400 | Bar Steel Reinforcement HS Structures | LB | 4,430.000 | 4,430.000 |
| 0054 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 22,760.000 | 22,760.000 |
| 0056 | 513.4061 | Railing Tubular Type M | LF | 178.100 | 178.100 |
| 0058 | 516.0500 | Rubberized Membrane Waterproofing | SY | 16.000 | 16.000 |
| 0064 | 550.0020 | Pre-Boring Rock or Consolidated Materials | LF | 355.000 | 355.000 |
| 0066 | 550.1100 | Piling Steel HP 10-Inch X 42 Lb | LF | 415.000 | 415.000 |
| 0068 | 606.0300 | Riprap Heavy | CY | 125.000 | 125.000 |
| 0070 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 180.000 | 180.000 |
| 0076 | 618.0100 | Maintenance and Repair of Haul Roads (project) 03. 9549-00-72 | EACH | 1.000 | 1.000 |
| 0080 | 619.1000 | Mobilization | EACH | 0.250 | 0.250 |
| 0082 | 623.0200 | Dust Control Surface Treatment | SY | 240.000 | 240.000 |
| 0084 | 624.0100 | Water | MGAL | 2.000 | 2.000 |
| 0086 | 625.0100 | Topsoil | SY | 490.000 | 490.000 |
| 0090 | 627.0200 | Mulching | SY | 250.000 | 250.000 |
| 0092 | 628.1504 | Silt Fence | LF | 420.000 | 420.000 |
| 0094 | 628.1520 | Silt Fence Maintenance | LF | 1,260.000 | 1,260.000 |
| 0096 | 628.1905 | Mobilizations Erosion Control | EACH | 4.000 | 4.000 |
| 0098 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 4.000 | 4.000 |
| 0102 | 628.2027 | Erosion Mat Class II Type C | SY | 240.000 | 240.000 |
| 0104 | 628.6005 | Turbidity Barriers | SY | 190.000 | 190.000 |
| 0106 | 628.7504 | Temporary Ditch Checks | LF | 50.000 | 50.000 |
| 0110 | 629.0210 | Fertilizer Type B | CWT | 0.500 | 0.500 |
| 0112 | 630.0120 | Seeding Mixture No. 20 | LB | 23.000 | 23.000 |
| 0116 | 630.0200 | Seeding Temporary | LB | 8.000 | 8.000 |
| 0118 | 630.0500 | Seed Water | MGAL | 13.000 | 13.000 |
| 0124 | 634.0614 | Posts Wood 4x6-Inch X 14-FT | EACH | 4.000 | 4.000 |
| 0128 | 637.2230 | Signs Type II Reflective F | SF | 12.000 | 12.000 |
| 0132 | 638.2602 | Removing Signs Type II | EACH | 6.000 | 6.000 |
| 0134 | 638.3000 | Removing Small Sign Supports | EACH | 6.000 | 6.000 |
| 0138 | 642.5001 | Field Office Type B | EACH | 0.250 | 0.250 |
| 0140 | 643.0420 | Traffic Control Barricades Type III | DAY | 1,260.000 | 1,260.000 |
| 0142 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 1,960.000 | 1,960.000 |
| 0144 | 643.0900 | Traffic Control Signs | DAY | 980.000 | 980.000 |
| 0146 | 643.5000 | Traffic Control | EACH | 0.250 | 0.250 |
| 0148 | 645.0111 | Geotextile Type DF Schedule A | SY | 60.000 | 60.000 |
| 0150 | 645.0120 | Geotextile Type HR | SY | 270.000 | 270.000 |
| 0152 | 650.4500 | Construction Staking Subgrade | LF | 100.000 | 100.000 |

9549-00-72

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0154 | 650.5000 | Construction Staking Base | LF | 100.000 | 100.000 |
| 0162 | 650.6501 | Construction Staking Structure Layout (structure) 03. B-60-0159 | EACH | 1.000 | 1.000 |
| 0170 | 650.9911 | Construction Staking Supplemental Control (project) 03. 9549-00-72 | EACH | 1.000 | 1.000 |
| 0174 | 650.9920 | Construction Staking Slope Stakes | LF | 100.000 | 100.000 |
| 0176 | 690.0150 | Sawing Asphalt | LF | 36.000 | 36.000 |
| 0178 | 715.0502 | Incentive Strength Concrete Structures | DOL | 1,068.000 | 1,068.000 |
| 0182 | 999.2000.S | Installing and Maintaining Bird Deterrent System (station) 01. 10+00 | EACH | 1.000 | 1.000 |

3

## FINISHING ROADWAY

| LOCATION | 213.0100.01 FINISHING ROADWAY (PROJECT) (01. 9549-00-72) EACH |
|---|---|
| PROJECT LIMITS | 1 |
| **TOTAL 0010** | **1** |

## 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 | 623.0200 DUST CONTROL SURFACE TREATMENT SY | 624.0100 WATER MGAL |
|---|---|---|---|---|---|---|---|
| 9+19 | - | 9+69 | ELM | 10 | 75 | 120 | 1 |
| 10+35 | - | 10+85 | ELM | 10 | 75 | 120 | 1 |
| | | | **TOTAL 0010** | **20** | **150** | **240** | **2** |

## ASPHALTIC SURFACE

| STATION | TO | STATION | LOCATION | 455.0605 TACK COAT GAL | 465.0105 ASPHALTIC SURFACE TON |
|---|---|---|---|---|---|
| 9+19 | - | 9+69 | ELM | 9 | 30 |
| 10+35 | - | 10+85 | ELM | 8 | 30 |
| | | | **TOTAL 0010** | **17** | **60** |

## MAINTENANCE AND REPAIR OF HAUL ROADS

| CATEGORY | LOCATION | 618.0100.01 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) (01. 9549-00-72) EACH |
|---|---|---|
| 0030 | PROJECT LIMITS | 1 |
| | **TOTAL 0030** | **1** |

## ELM AVENUE EARTHWORK SUMMARY

| From/To Station | Location | Common Excavation (1) (Item 205.0100) Cut | Unexpanded Fill | Expanded Fill (2) Factor 1.30 | Mass Ordinate +/- (3) | Waste | Borrow (Item 208.0100) |
|---|---|---|---|---|---|---|---|
| 9+19 - 9+69 | MAINLINE | 59 | 37 | 48 | 11 | 11 | 0 |
| 10+35 - 10+85 | MAINLINE | 63 | 56 | 73 | -10 | 0 | 10 |
| | | **122** | | | | | **10** |

## MOBILIZATION EROSION CONTROL

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

## EROSION CONTROL ITEMS

| STATION | TO | STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF | 628.2027 EROSION MAT CLASS II TYPE C SY | 628.6005 TURBIDITY BARRIERS SY | 628.7504 TEMPORARY DITCH CHECKS LF |
|---|---|---|---|---|---|---|---|---|
| 9+19 | - | 9+69 | ELM | 205 | 615 | 90 | -- | -- |
| 10+35 | - | 10+85 | ELM | 130 | 390 | 100 | 150 | -- |
| UNDISTRIBUTED | | | | 85 | 255 | 50 | 40 | 50 |
| | | | **TOTAL 0010** | **420** | **1,260** | **240** | **190** | **50** |

## RESTORATION ITEMS

| STATION | TO | STATION | LOCATION | 625.0100 TOPSOIL SY | 627.0200 MULCHING SY | 629.0205 FERTILIZER TYPE A CWT | 630.0120 SEEDING MIXTURE NO. 20 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|---|---|
| 9+19 | - | 9+69 | ELM | 190 | 100 | 0.2 | 9 | 3 | 5 |
| 10+35 | - | 10+85 | ELM | 200 | 100 | 0.2 | 9 | 3 | 5 |
| UNDISTRIBUTED | | | | 100 | 50 | 0.1 | 5 | 2 | 3 |
| | | | **TOTAL 0010** | **490** | **250** | **0.5** | **23** | **8** | **13** |

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

## SIGNS

| STATION | LOCATION | SIGN CODE | SIGN SIZE (WxL) INCHES | 634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH |
|---|---|---|---|---|---|---|---|
| 9+57 | LT | W5-52L | 12x36 | 1 | 3 | - | - |
| 9+60 | RT | W5-52R | 12x36 | 1 | 3 | - | - |
| 9+70 | RT | R12-1 | | - | - | 1 | 1 |
| 9+73 | LT | W5-52L | | - | - | 1 | 1 |
| 9+73 | RT | W5-52R | | - | - | 1 | 1 |
| 10+27 | LT | W5-52R | | - | - | 1 | 1 |
| 10+27 | RT | W5-52L | | - | - | 1 | 1 |
| 10+30 | LT | R12-1 | | - | - | 1 | 1 |
| 10+44 | LT | W5-52R | 12x36 | 1 | 3 | - | - |
| 10+49 | RT | W5-52L | 12x36 | 1 | 3 | - | - |
| **TOTAL 0010** | | | | **4** | **12** | **6** | **6** |

## TRAFFIC CONTROL ITEMS

| LOCATION | DAYS | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY | 643.0900 TRAFFIC CONTROL SIGNS DAY |
|---|---|---|---|---|
| PROJECT LIMITS | 70 | 1,260 | 1,960 | 980 |
| **TOTAL 0010** | | **1,260** | **1,960** | **980** |

## 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 |
|---|---|---|---|---|---|---|
| 9+19 | - | 10+85 | ELM AVENUE | 100 | 100 | 100 |
| | | | **TOTAL 0010** | **100** | **100** | **100** |

## CONSTRUCTION STAKING STRUCTURE LAYOUT

| CATEGORY | STRUCTURE | 650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-60-0159) EACH |
|---|---|---|
| 0020 | B-60-0159 | 1 |
| | **TOTAL 0020** | **1** |

## CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

| LOCATION | 650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 9549-00-72) EACH |
|---|---|
| PROJECT LIMITS | 1 |
| **TOTAL 0010** | **1** |

## SAWING ASPHALT

| STATION | LOCATION | 690.0150 SAWING ASPHALT LF |
|---|---|---|
| 9+19 | ELM | 18 |
| 10+85 | ELM | 18 |
| | **TOTAL 0010** | **36** |

## INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM

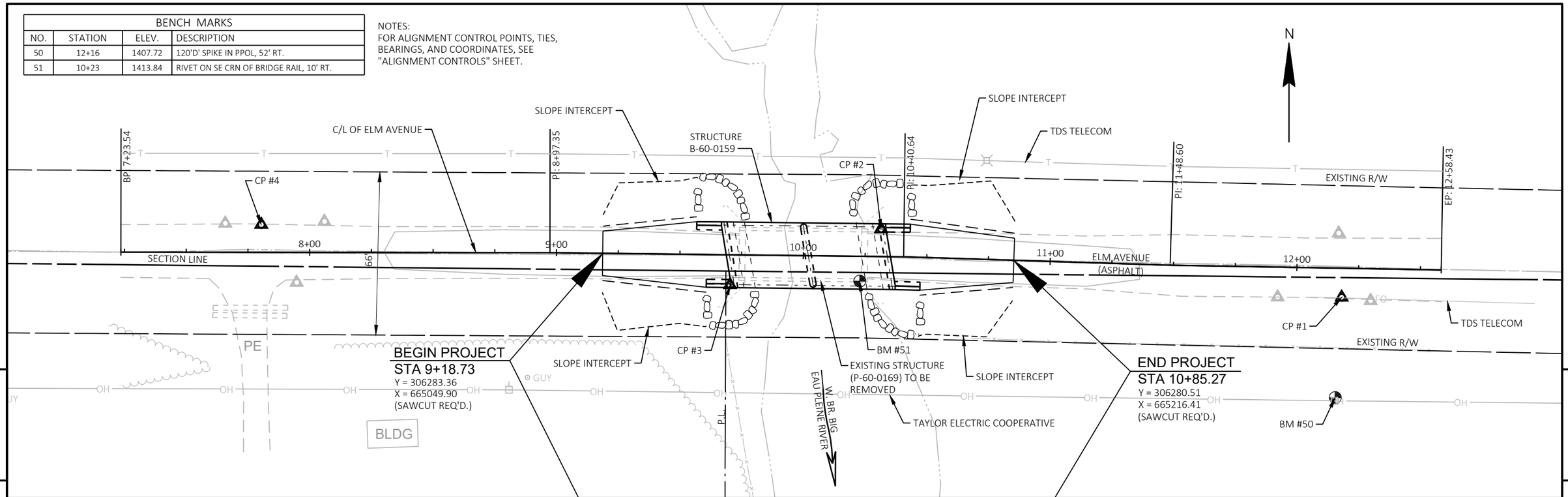
| STATION | LOCATION | 999.2000.S.01 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. STA 10+00) EACH |
|---|---|---|
| 10+00 | ELM | 1 |
| **TOTAL 0010** | | **1** |

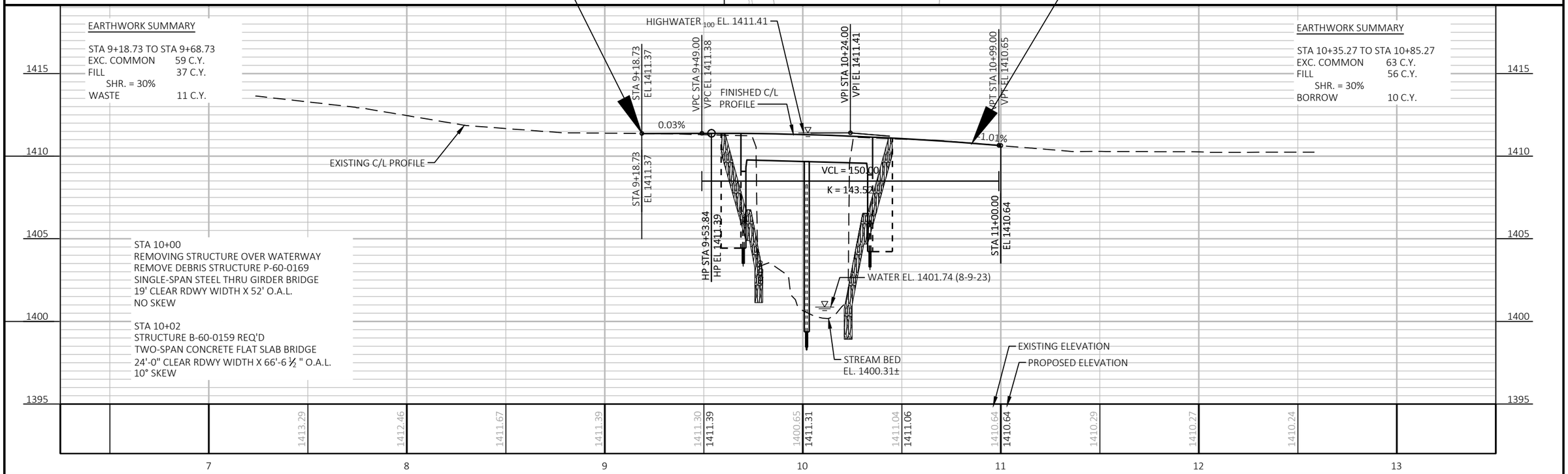
3

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| 50 | 12+16 | 1407.72 | 120'D' SPIKE IN PPOL, 52' RT. |
| 51 | 10+23 | 1413.84 | RIVET ON SE CRN OF BRIDGE RAIL, 10' RT. |

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

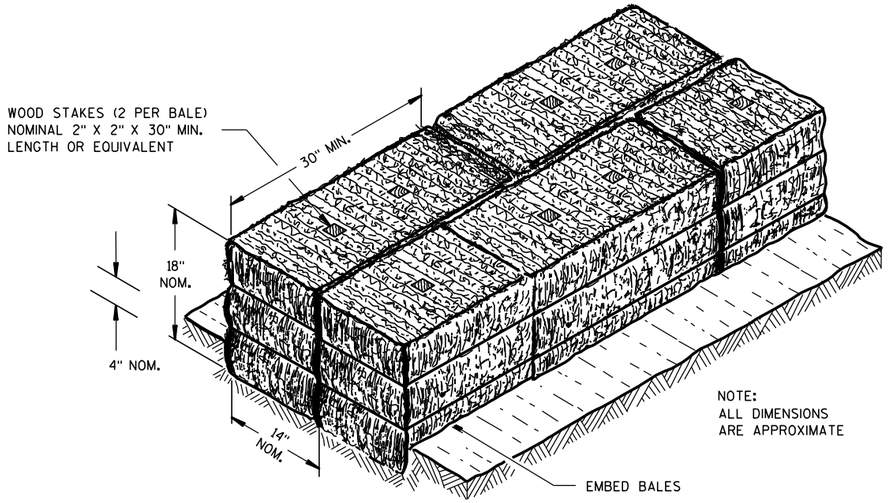


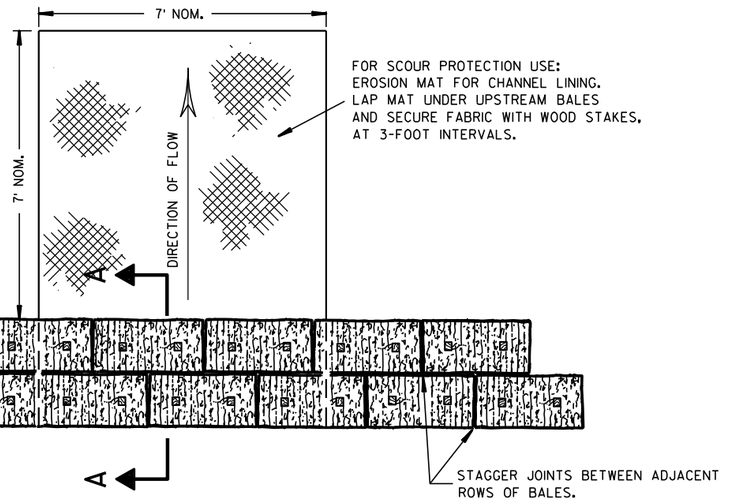

| PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUNTY: TAYLOR | PLAN AND PROFILE: | SHEET 10 | E |
|---|---|---|---|---|---|

# Standard Detail Drawing List

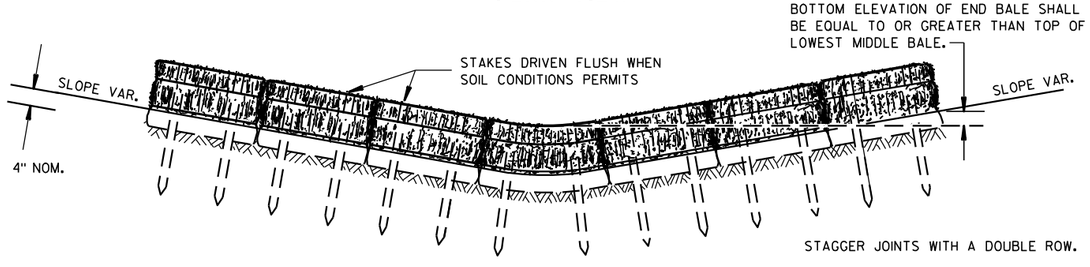
| | |
|---|---|
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E11-02 | TURBIDITY BARRIER |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C06-12 | SIGNING & MARKING FOR TWO LANE BRIDGES |




**SECTION A-A**




**PLAN VIEW**



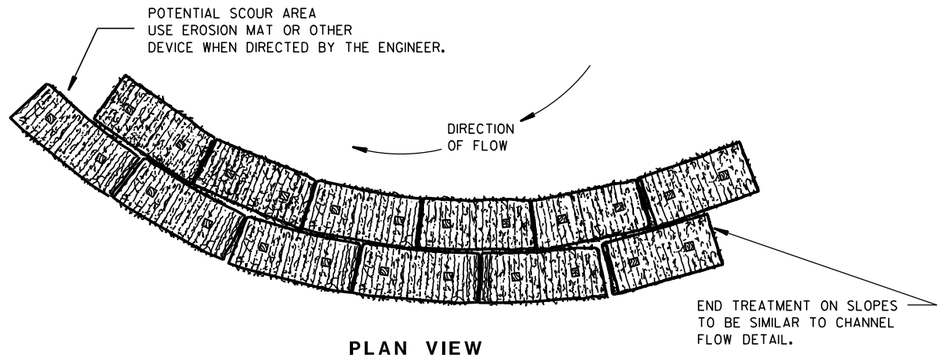

**FRONT ELEVATION**

## TEMPORARY DITCH CHECK USING EROSION BALES (1)

## GENERAL NOTES

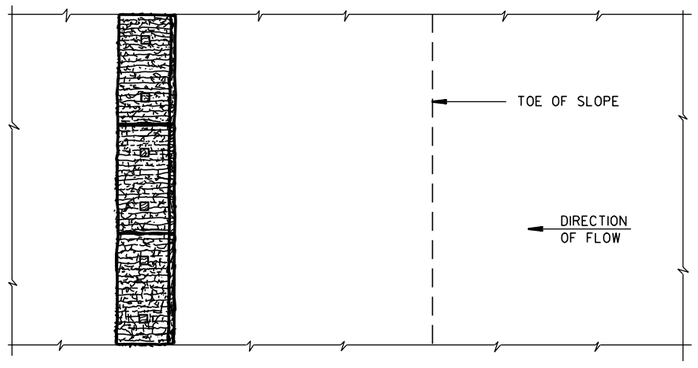
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

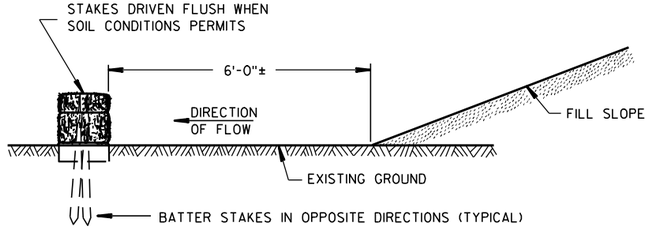



**PLAN VIEW**

WHEN ALTERING THE DIRECTION OF FLOW




**PLAN VIEW**




**FRONT ELEVATION**

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

## EROSION BALES FOR SHEET FLOW

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

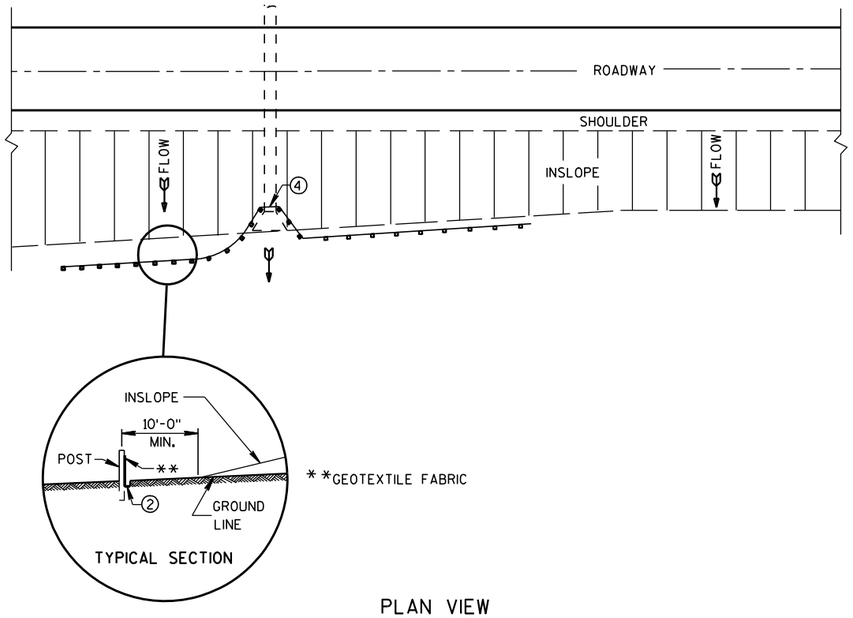


6

S.D.D. 8 E 8-3

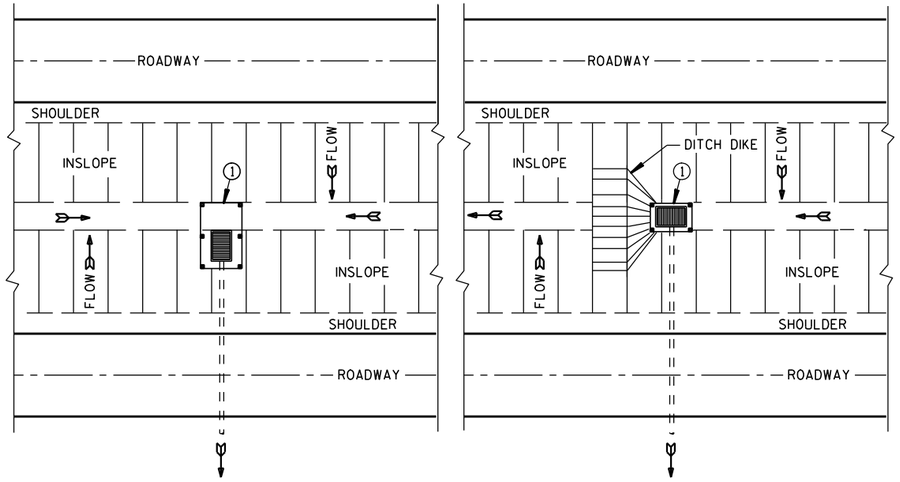
6

S.D.D. 8 E 8-3




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE




PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

## GENERAL NOTES

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

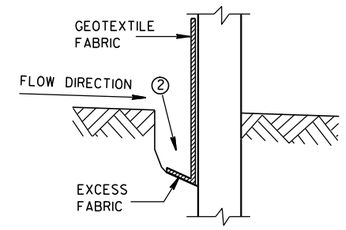
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

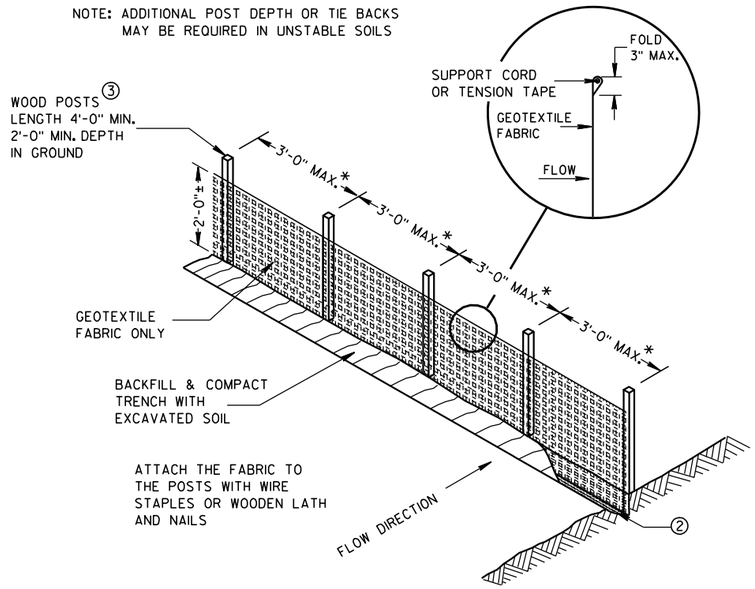
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

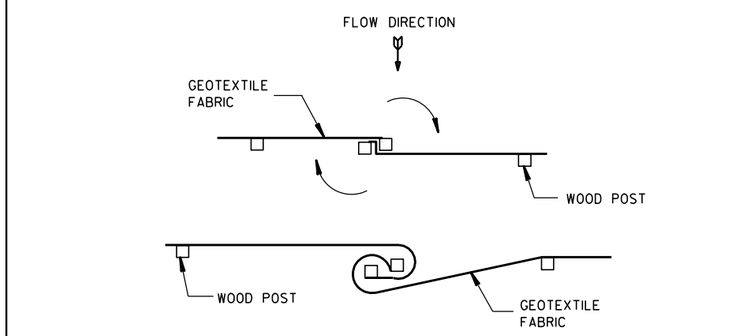
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



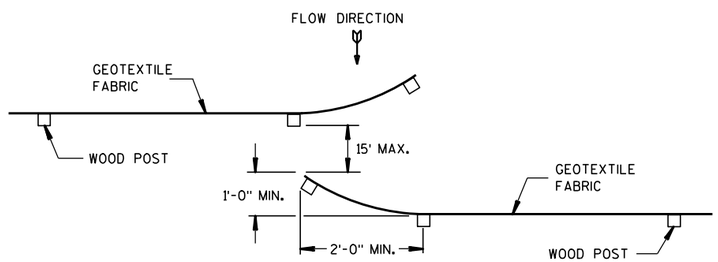

## TRENCH DETAIL




## SILT FENCE

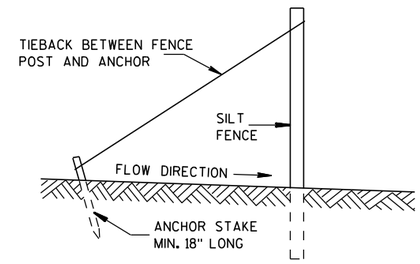



TWIST METHOD




HOOK METHOD

## JOINING TWO LENGTHS OF SILT FENCE ⑤




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

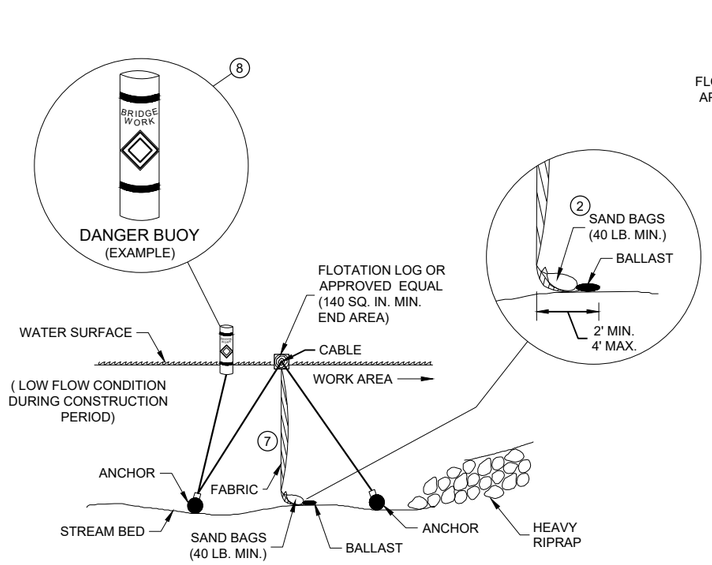


6

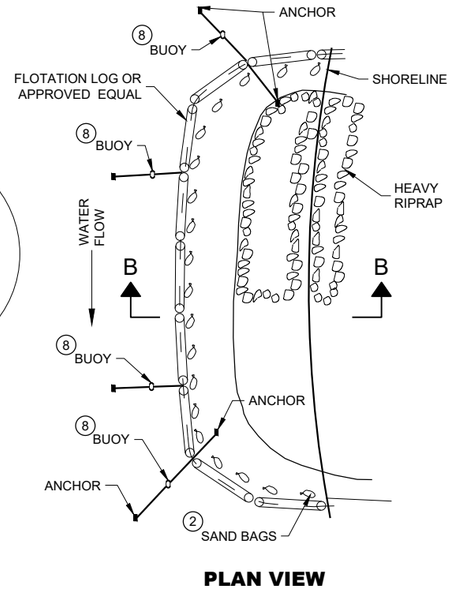
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

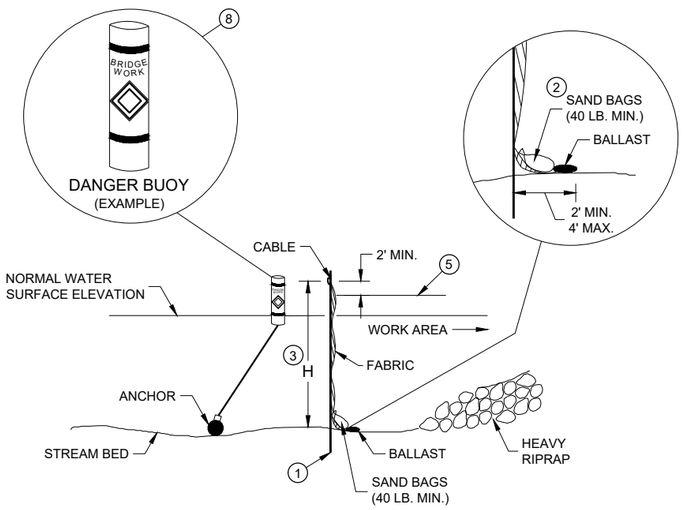



**SECTION B - B**

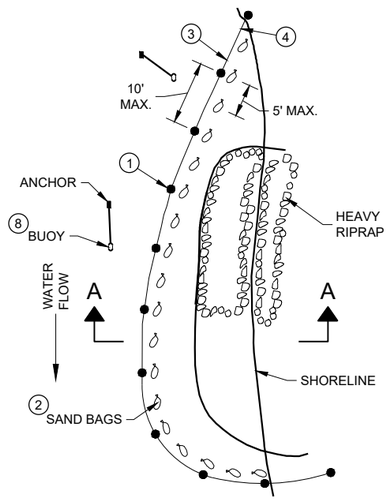



**PLAN VIEW**

**TURBIDITY BARRIER - FLOAT ALTERNATIVE**
**CAUTION - SEE NOTE 6**




**SECTION A - A**




**PLAN VIEW**

**TURBIDITY BARRIER - STANDARD POST INSTALLATION**

**TURBIDITY BARRIER PLACEMENT DETAILS**

## GENERAL NOTES

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

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

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

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

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

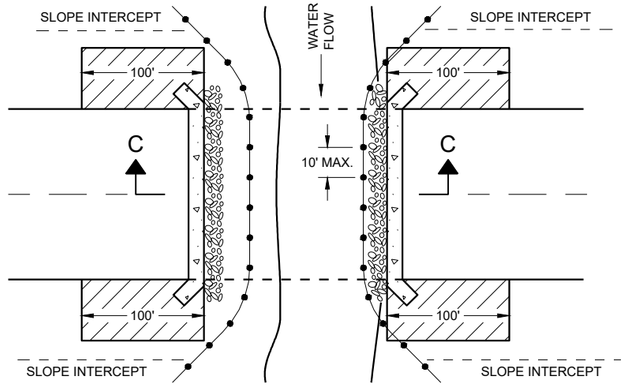
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

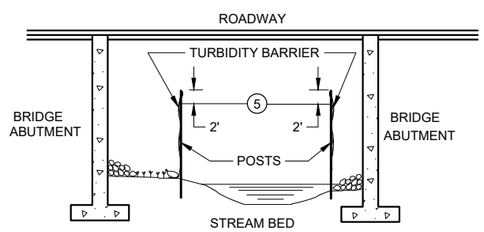
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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




**PLAN VIEW**




**SECTION C - C**

**TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES**

**TURBIDITY BARRIER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

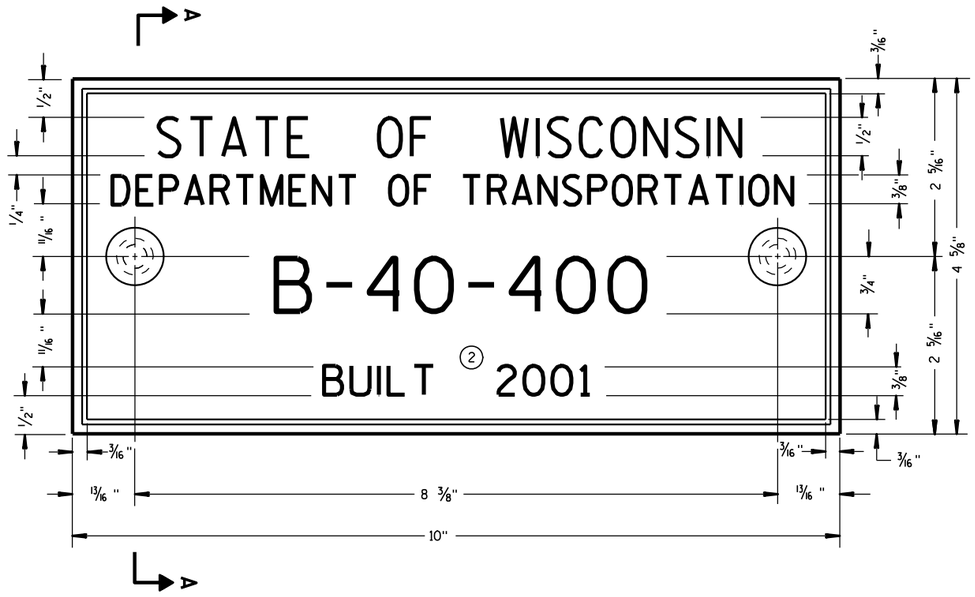
APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA





6
SDD 08E11 - 02




## TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

## NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

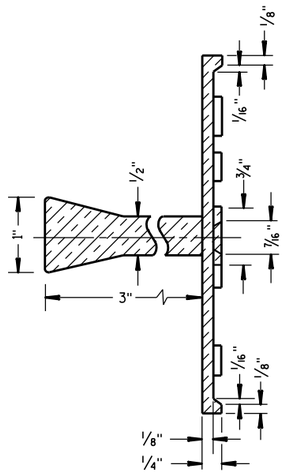
## GENERAL NOTES

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

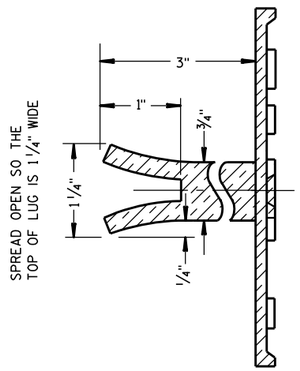
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

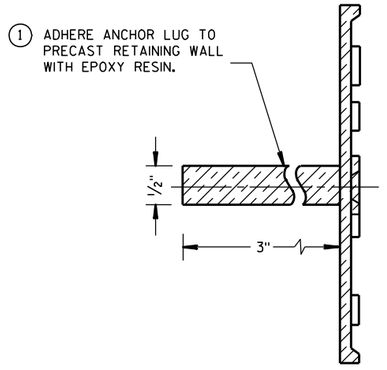
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.




SECTION A-A




ALTERNATE LUG




## ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

## NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

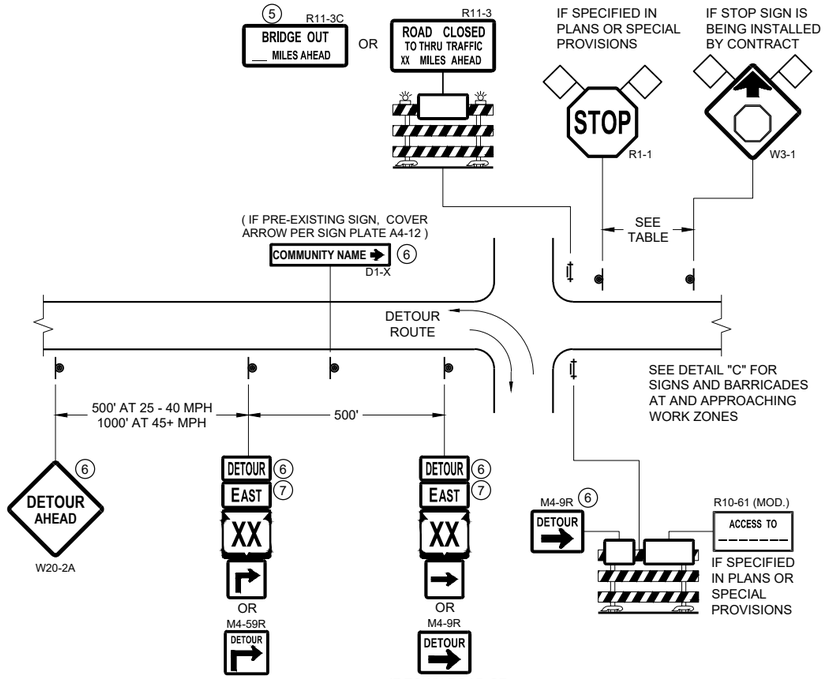
/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

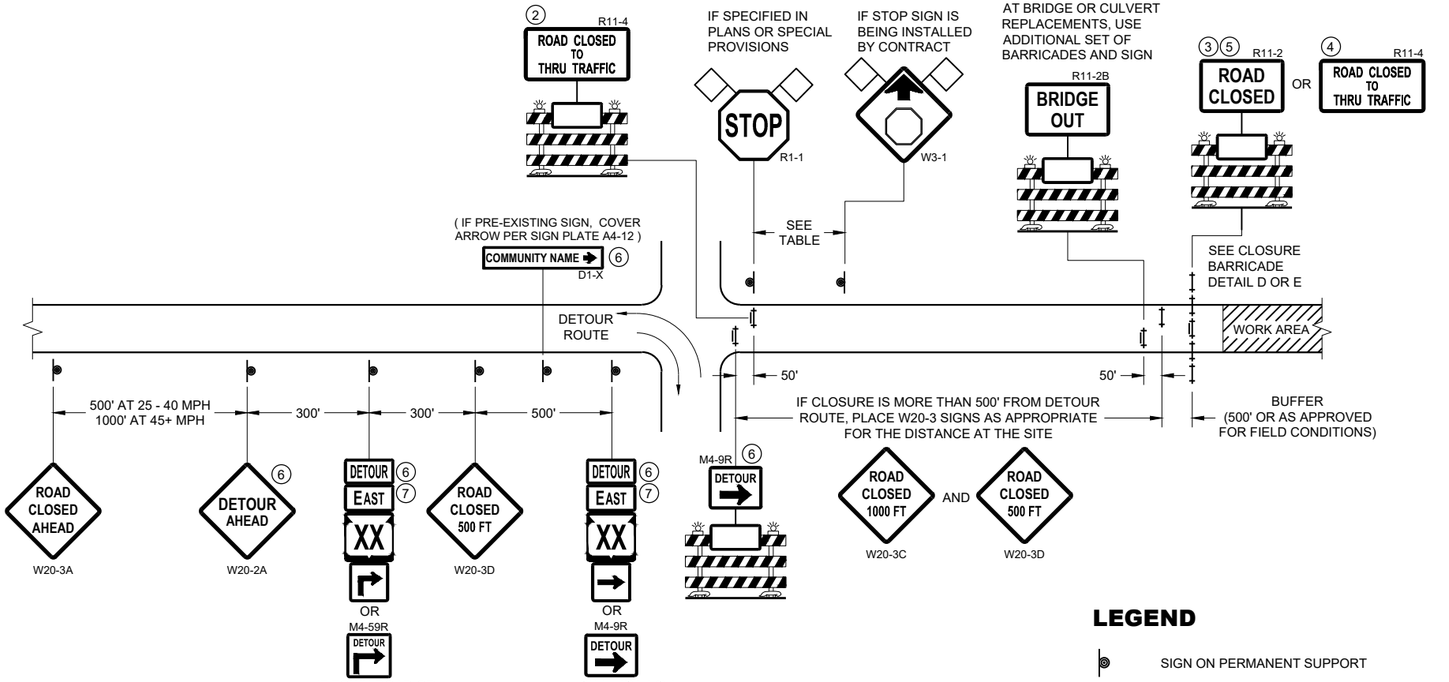
FHWA



6

S.D.D. 12 A 3-10



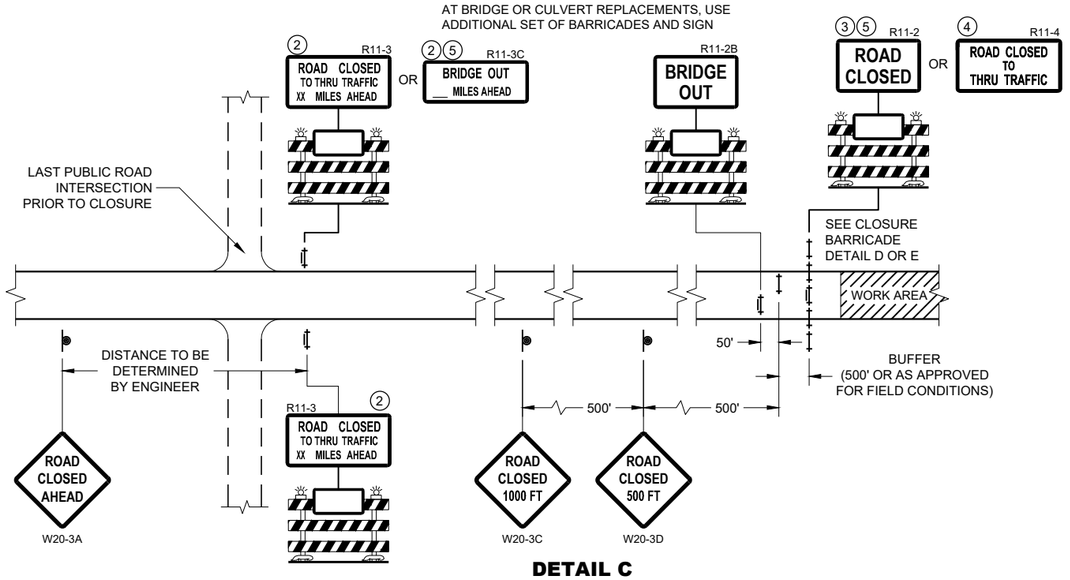




## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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

## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

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




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

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

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

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

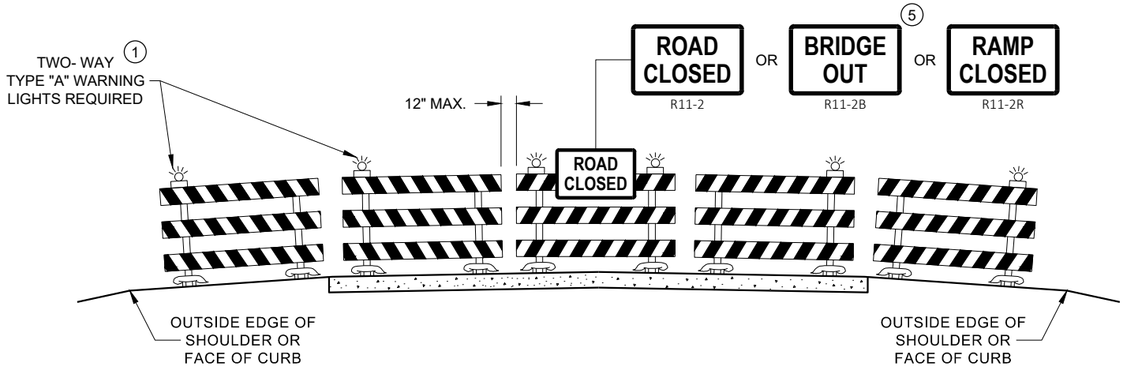
FHWA



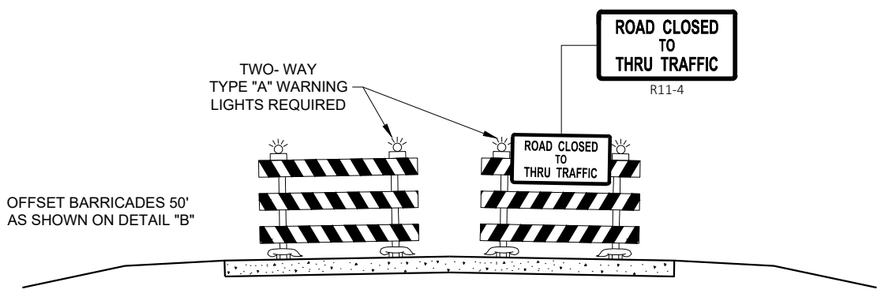


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SDD 15C02 - 09a




**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

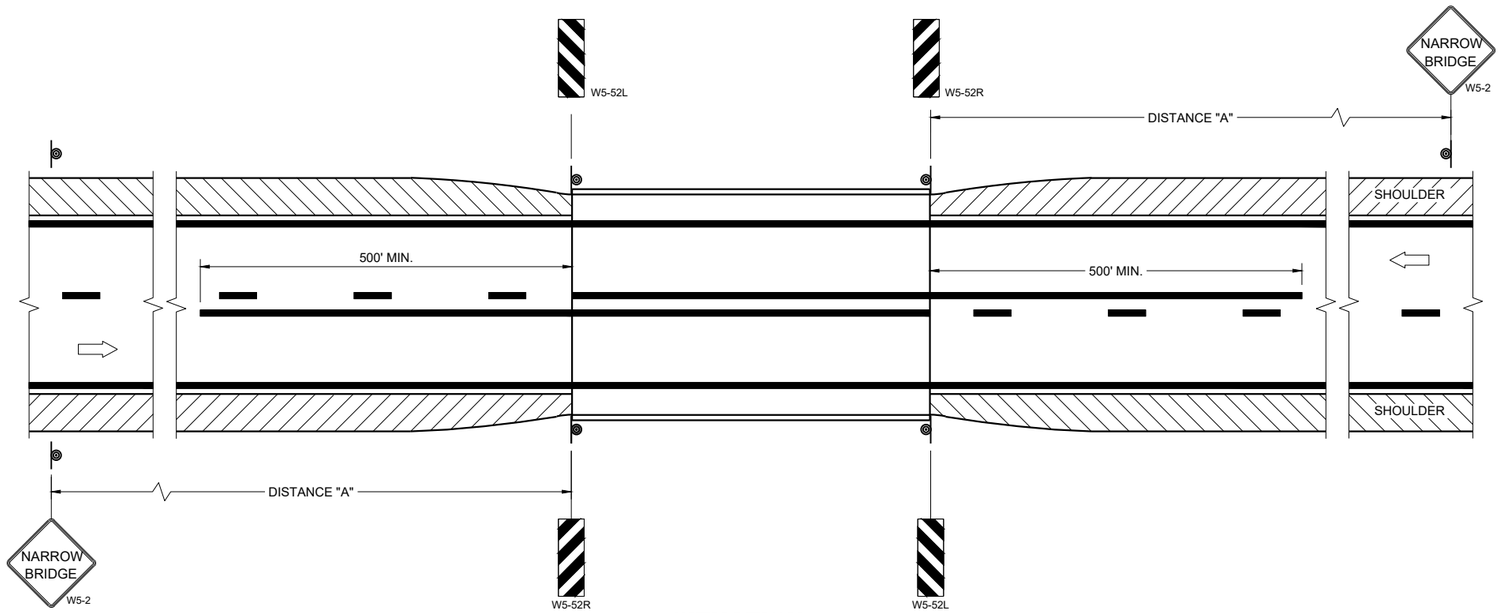


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SDD 15C02 - 09b

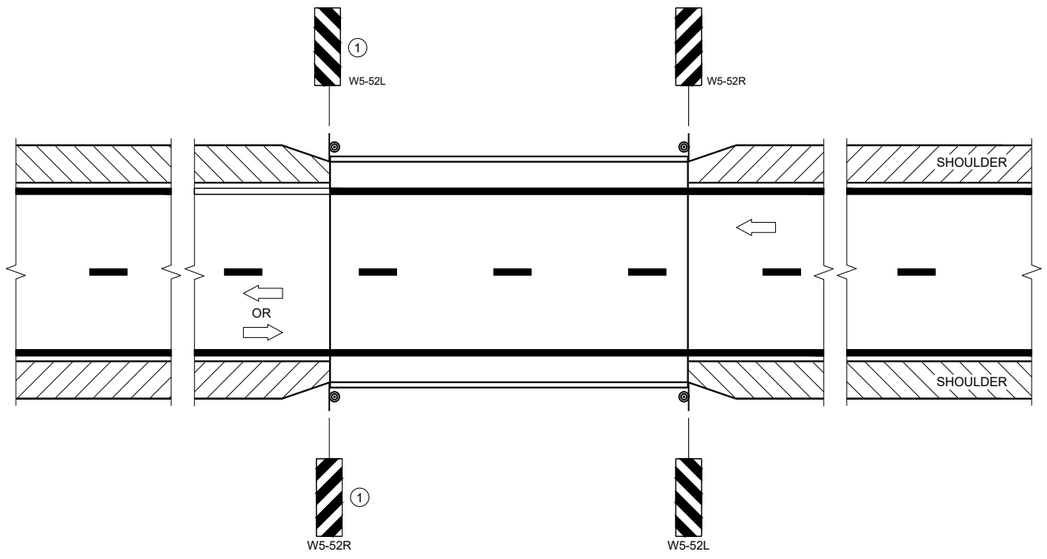
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SDD 15C02 - 09b




## 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' |

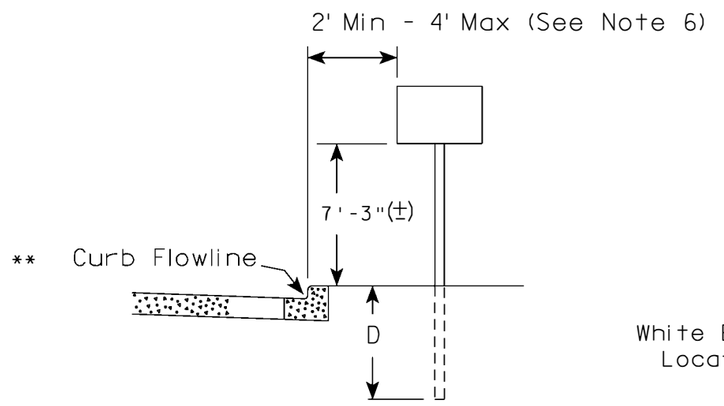
**SIGNING AND MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

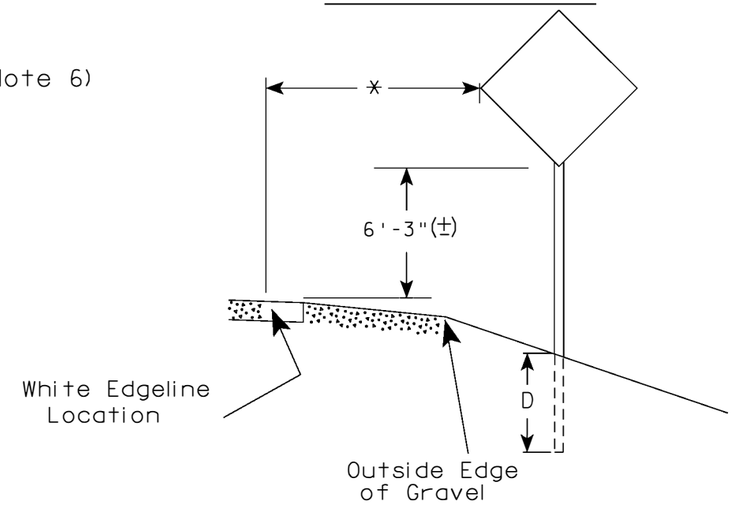
APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

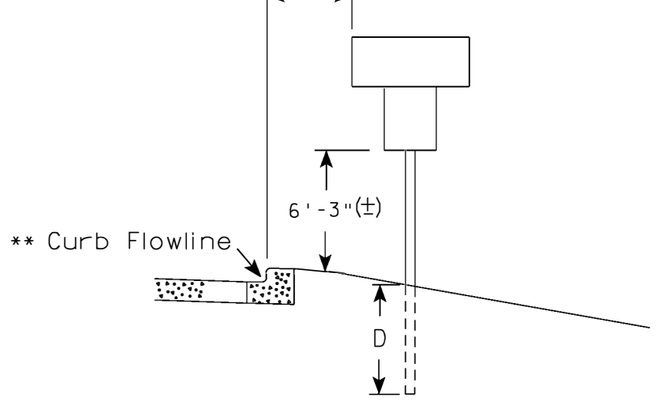

6
SDD 15C06-12

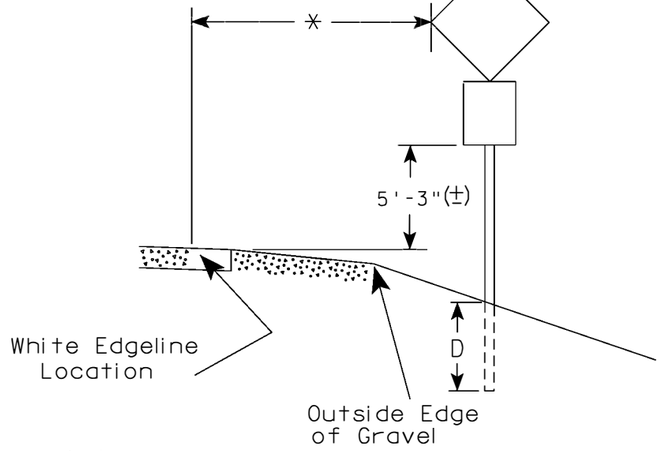
## URBAN AREA




## RURAL AREA (See Note 2)




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

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

### GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). 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. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

### POST EMBEDMENT DEPTH

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

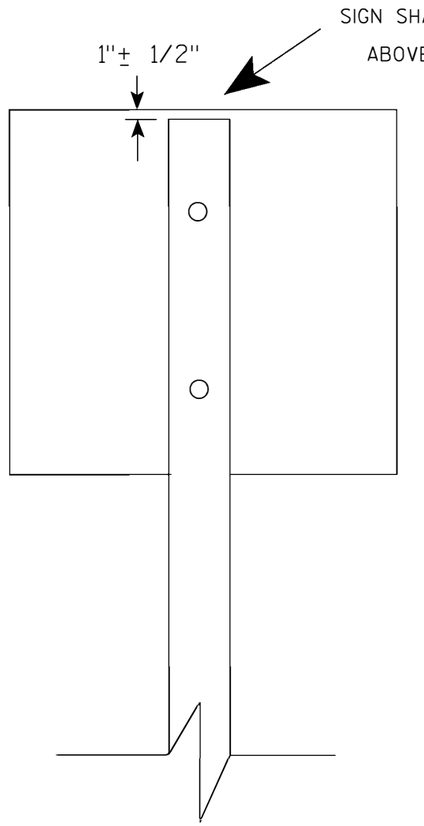
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

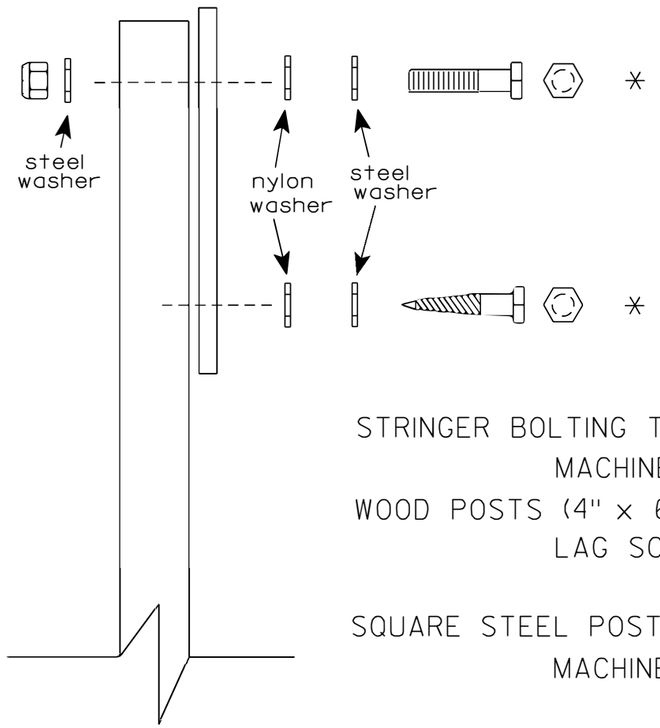
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

| PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUNTY: TAYLOR | | SHEET NO: 19 | 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

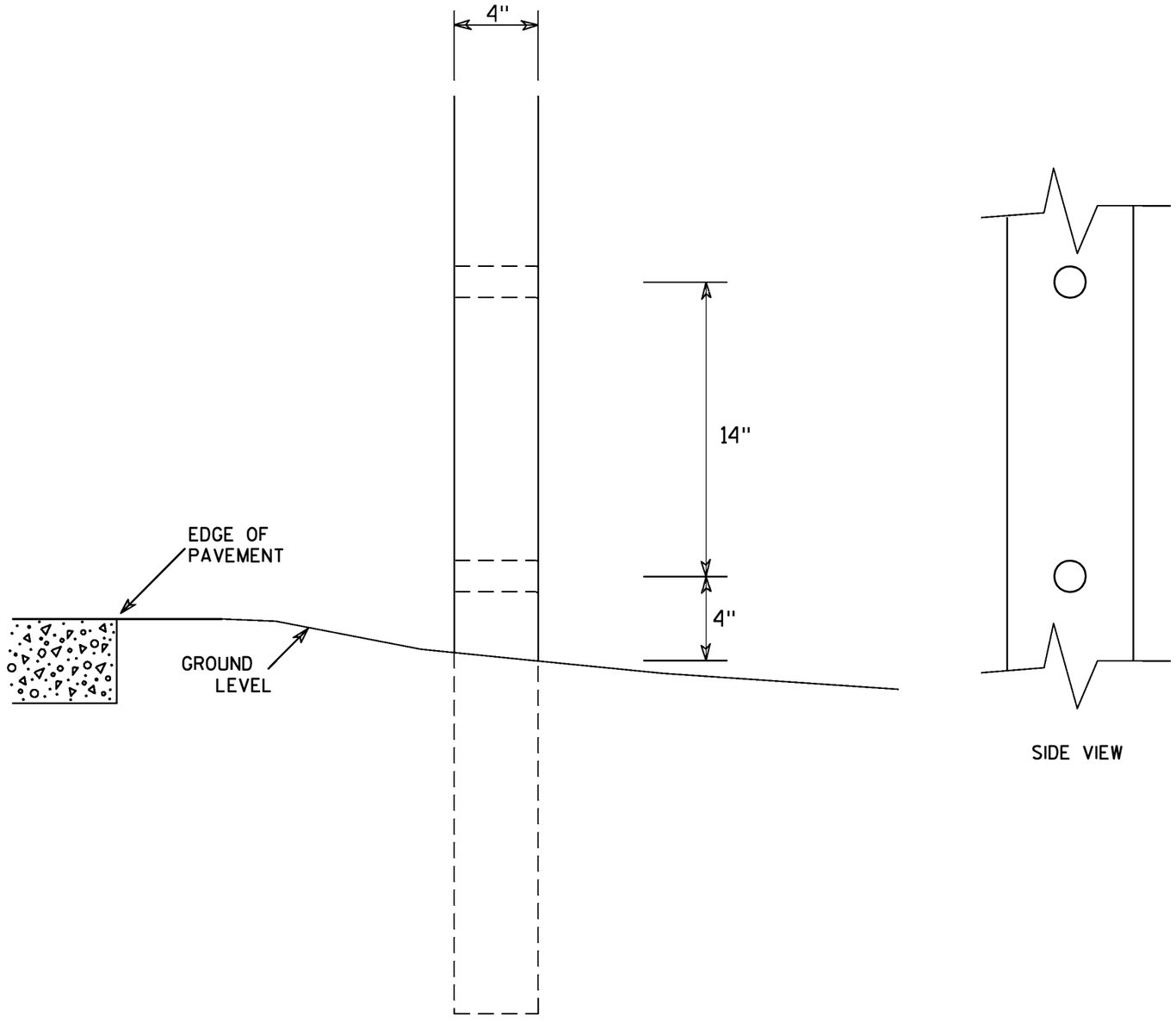
| PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUTNY: TAYLOR | | SHEET NO: 20 | E |
|---|---|---|---|---|---|

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

7

7






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

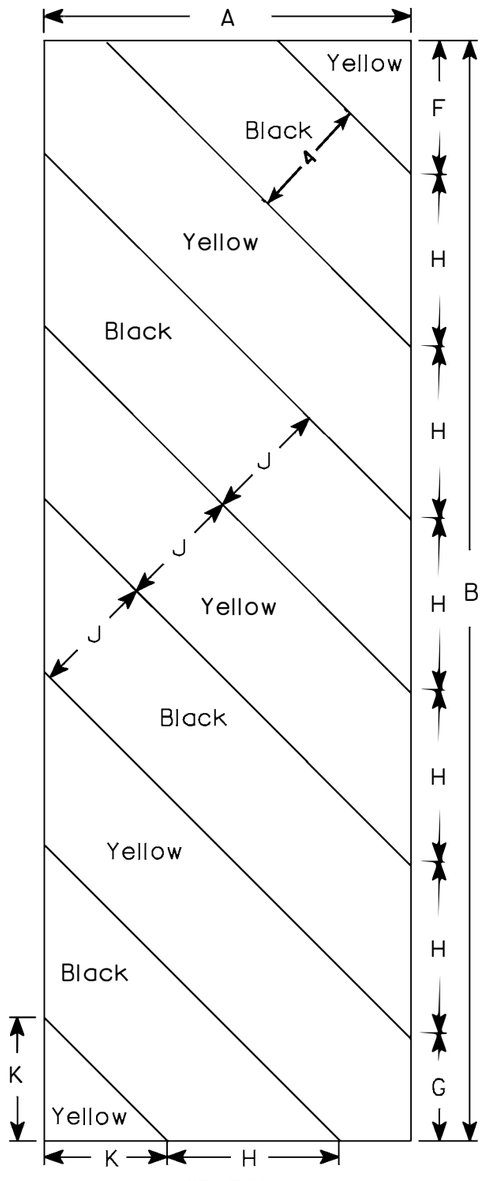
# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

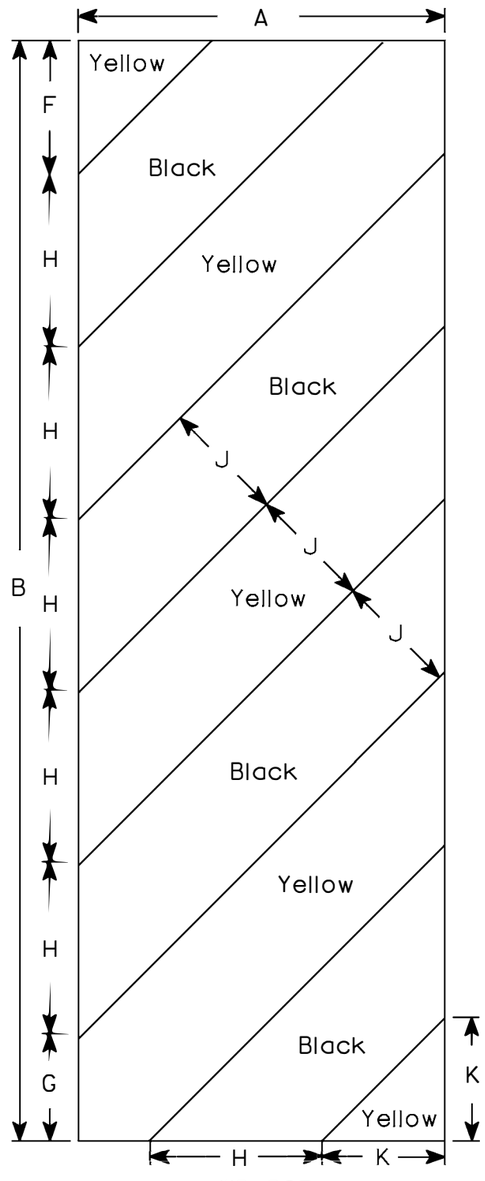
APPROVED Chester J Spang for State Traffic Engineer

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

| PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUNTY: TAYLOR | | SHEET NO: 21 | E |
|---|---|---|---|---|---|




W5-52L




W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 12 | 36 | | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 2M | 12 | 36 | | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 3 | 18 | 54 | | | | 6 | 5 1/2 | 8 1/2 | 45° | 6 | 6 9/16 | | | | | | | | | | | | | | | | 6.75 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

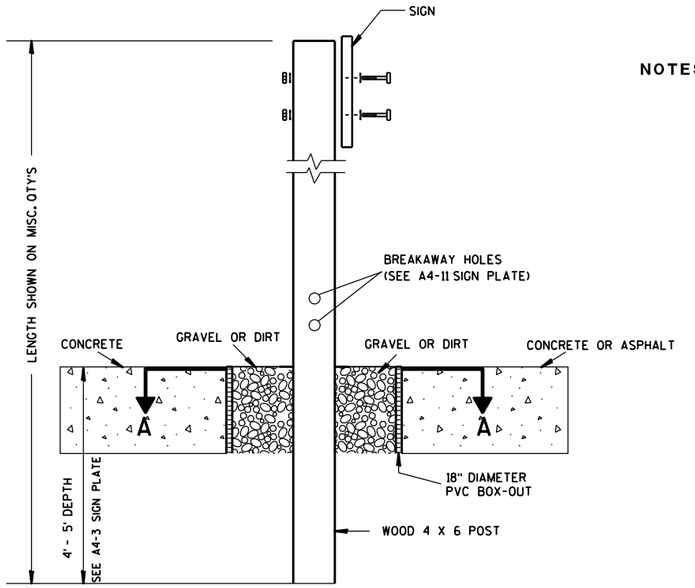
STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

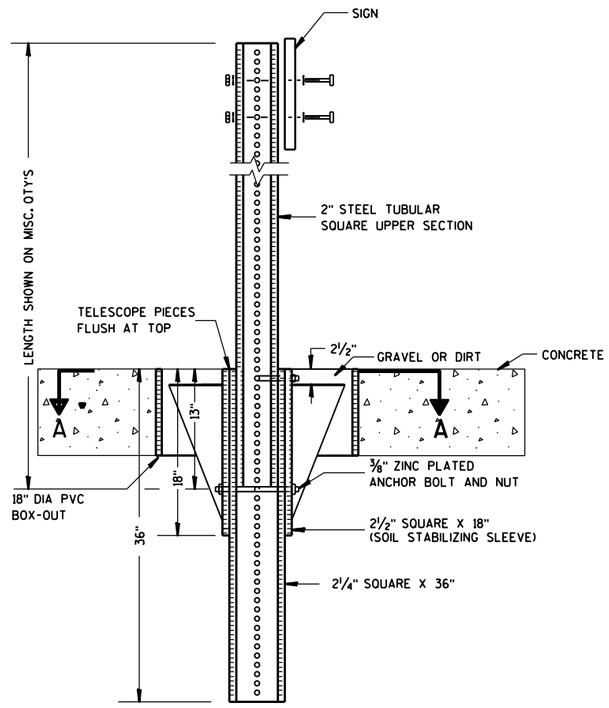
PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUNTY: TAYLOR | SHEET NO: 22 | E




**ELEVATION VIEW**

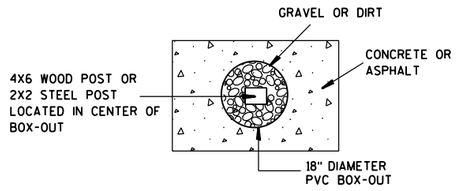
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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




**ELEVATION VIEW**

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




**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

# SIGN POST BOX-OUTS A4-3B

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

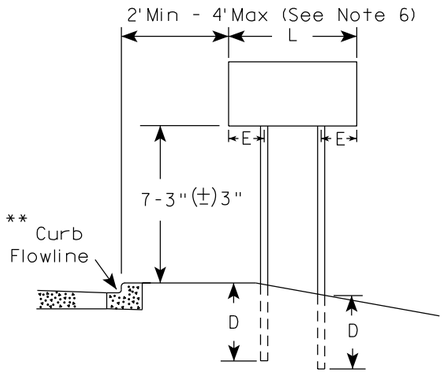
DATE 1/27/14 PLATE NO. A4-3B.1

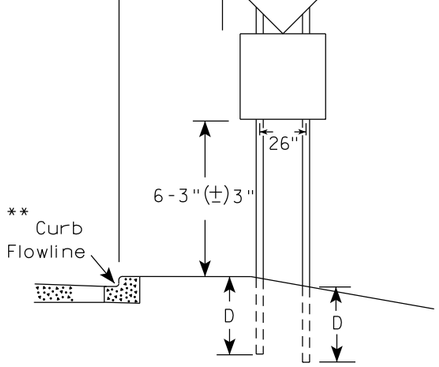


| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

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

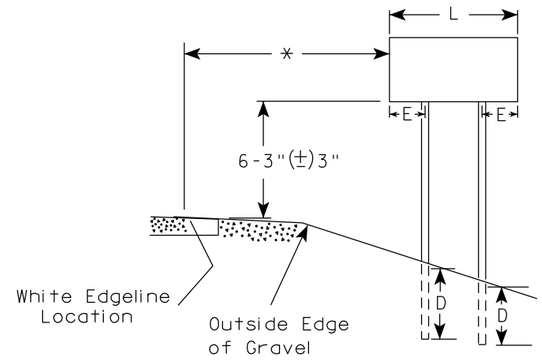
## URBAN AREA

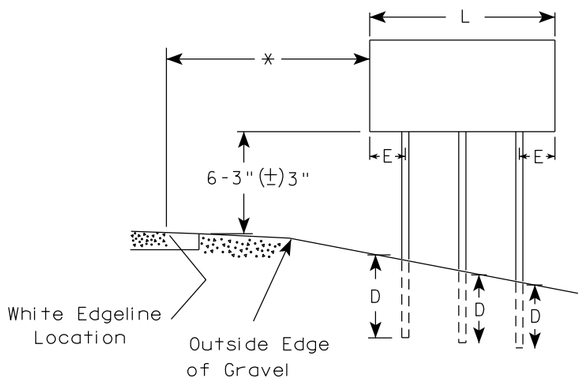


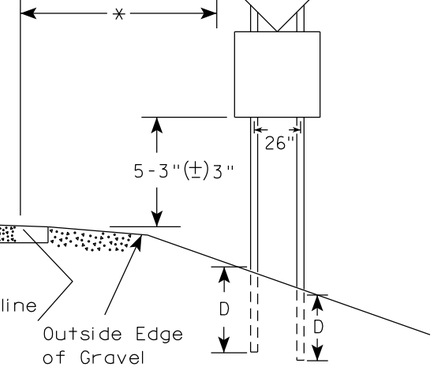




48" DIAMOND WARNING SIGN

## RURAL AREA (See Note 3)




48" DIAMOND WARNING SIGN

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

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

### GENERAL NOTES

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

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

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

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

### POST EMBEDMENT DEPTH

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

**TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS**

*WISCONSIN DEPT OF TRANSPORTATION*

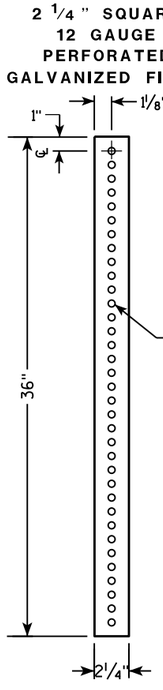
APPROVED Matthew R Rauch
for State Traffic Engineer

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

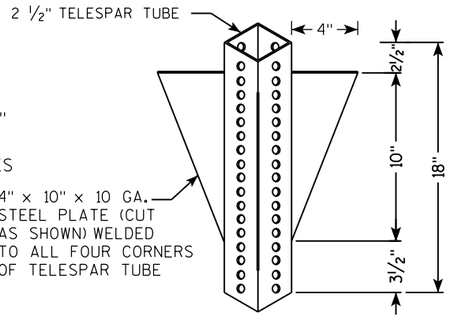
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 24 | E |
|---|---|---|---|---|---|

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

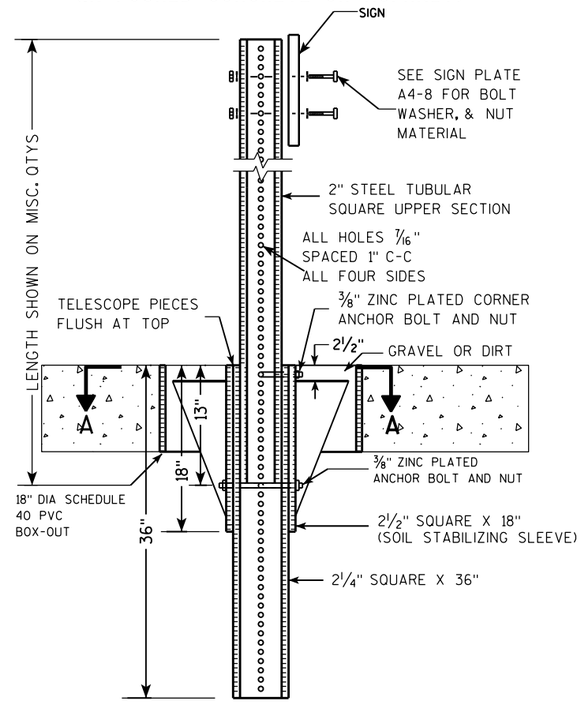
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



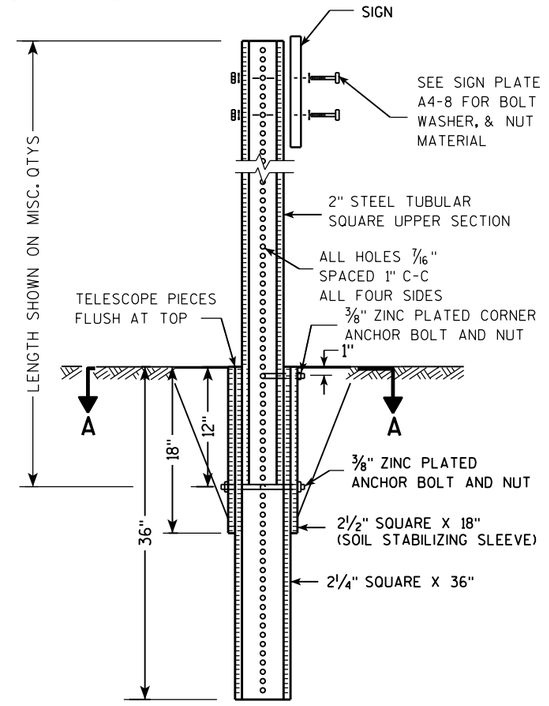

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

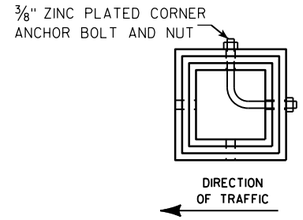



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




## 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*

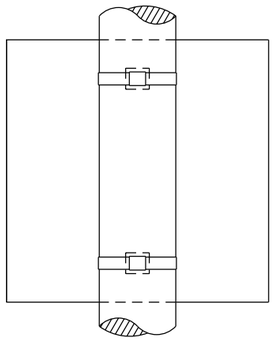
APPROVED Matthew R Rauch
*for* State Traffic Engineer

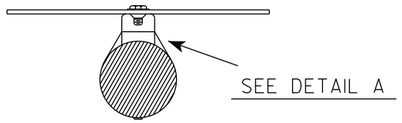
DATE 2/05/15 PLATE 25 A4-9.9

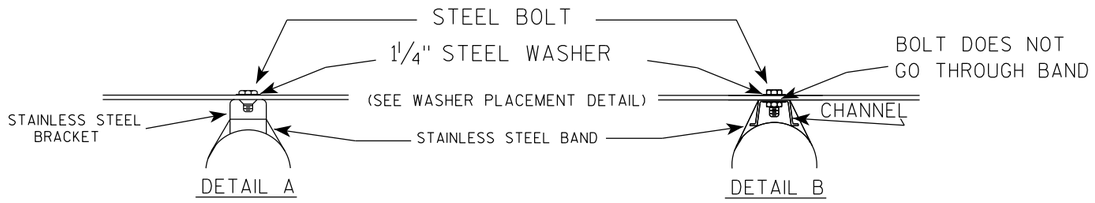
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

# BANDING

SINGLE SIGN



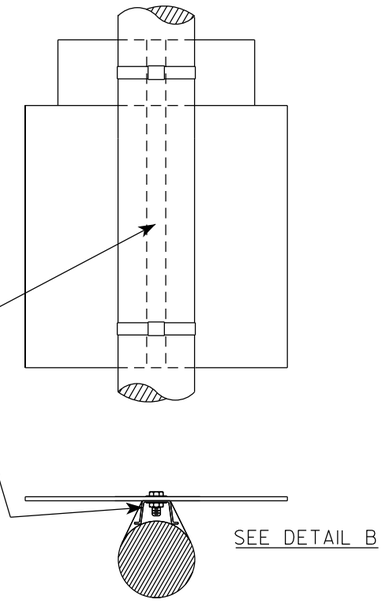


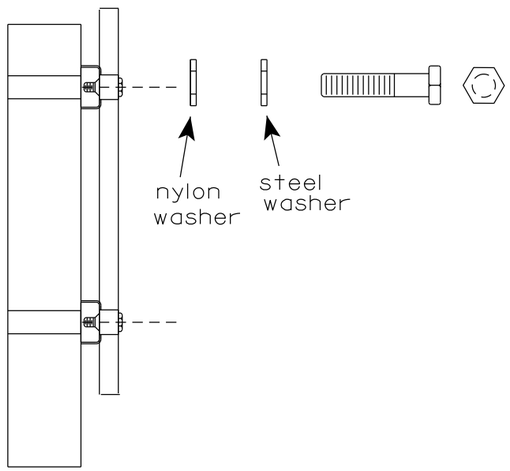

## GENERAL NOTES

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

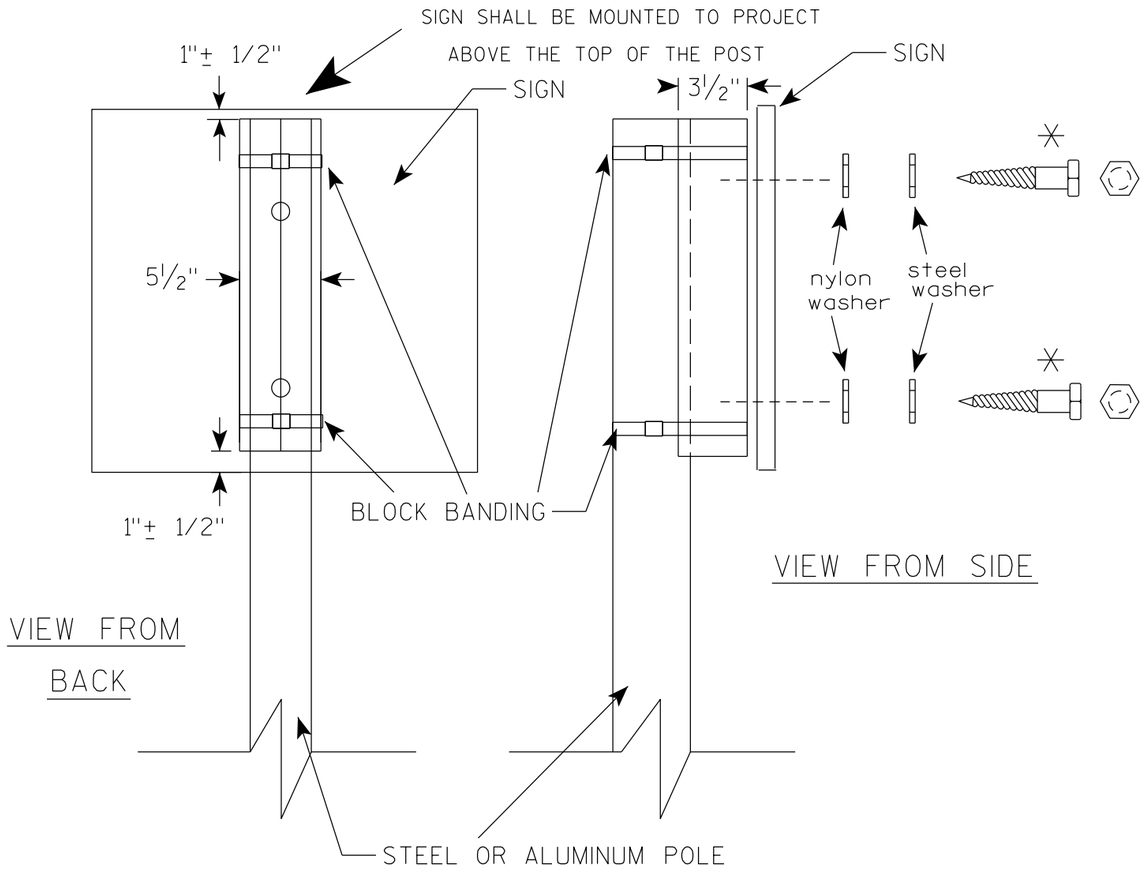
DATE 6/10/19 PLATE NO. A5-9.4

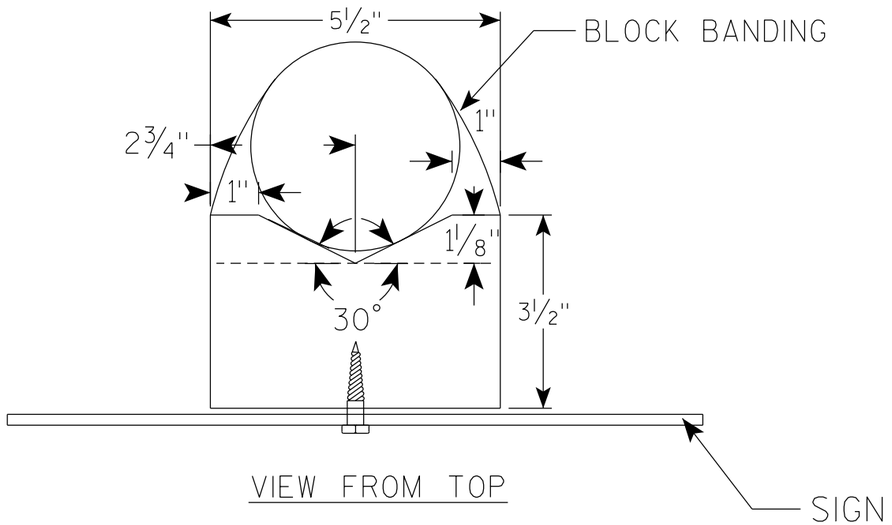
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 26 | E |
|---|---|---|---|---|---|

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

7

7




## GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

# BLOCK BANDING DETAIL ( V-BLOCK OPTION )

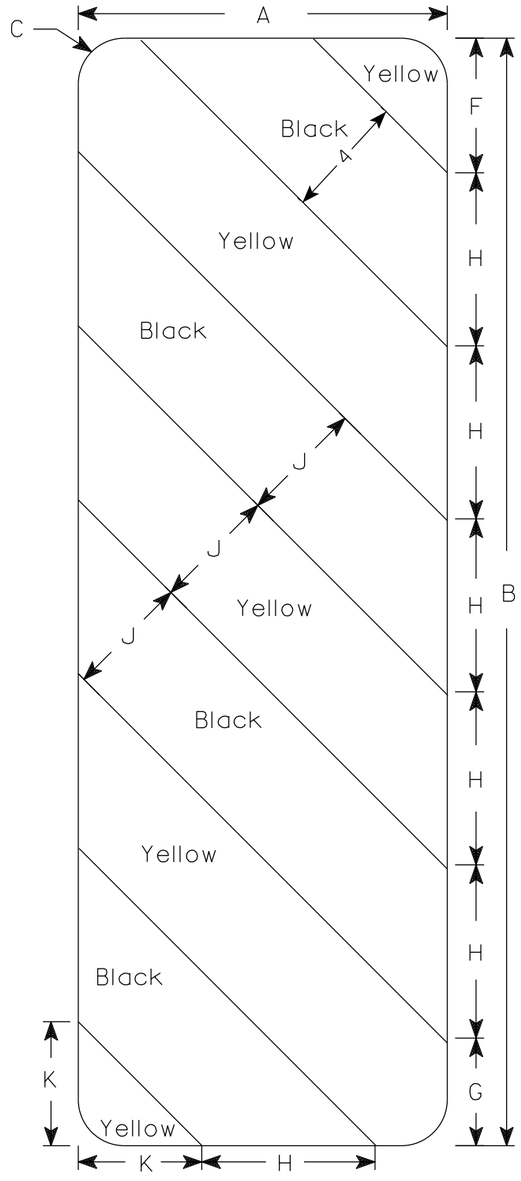
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

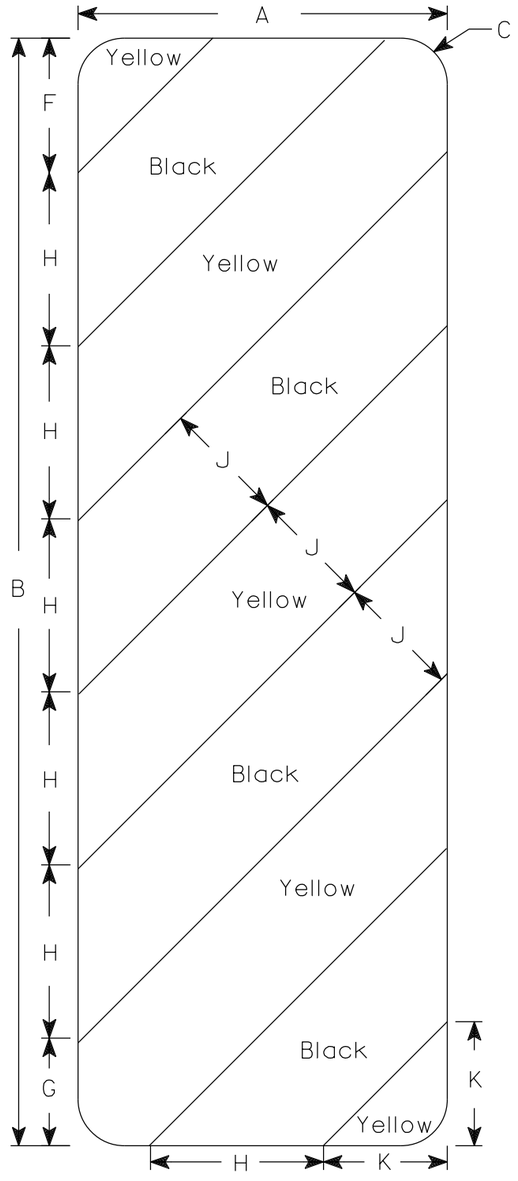
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 27 E




W5-52L




W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Alternate colors of stripes as shown.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 12 | 36 | 1 1/2 | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 2M | 12 | 36 | 1 1/2 | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 3 | 18 | 54 | 1 1/2 | | | 6 | 5 1/2 | 8 1/2 | 45° | 6 | 6 9/16 | | | | | | | | | | | | | | | | 6.75 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

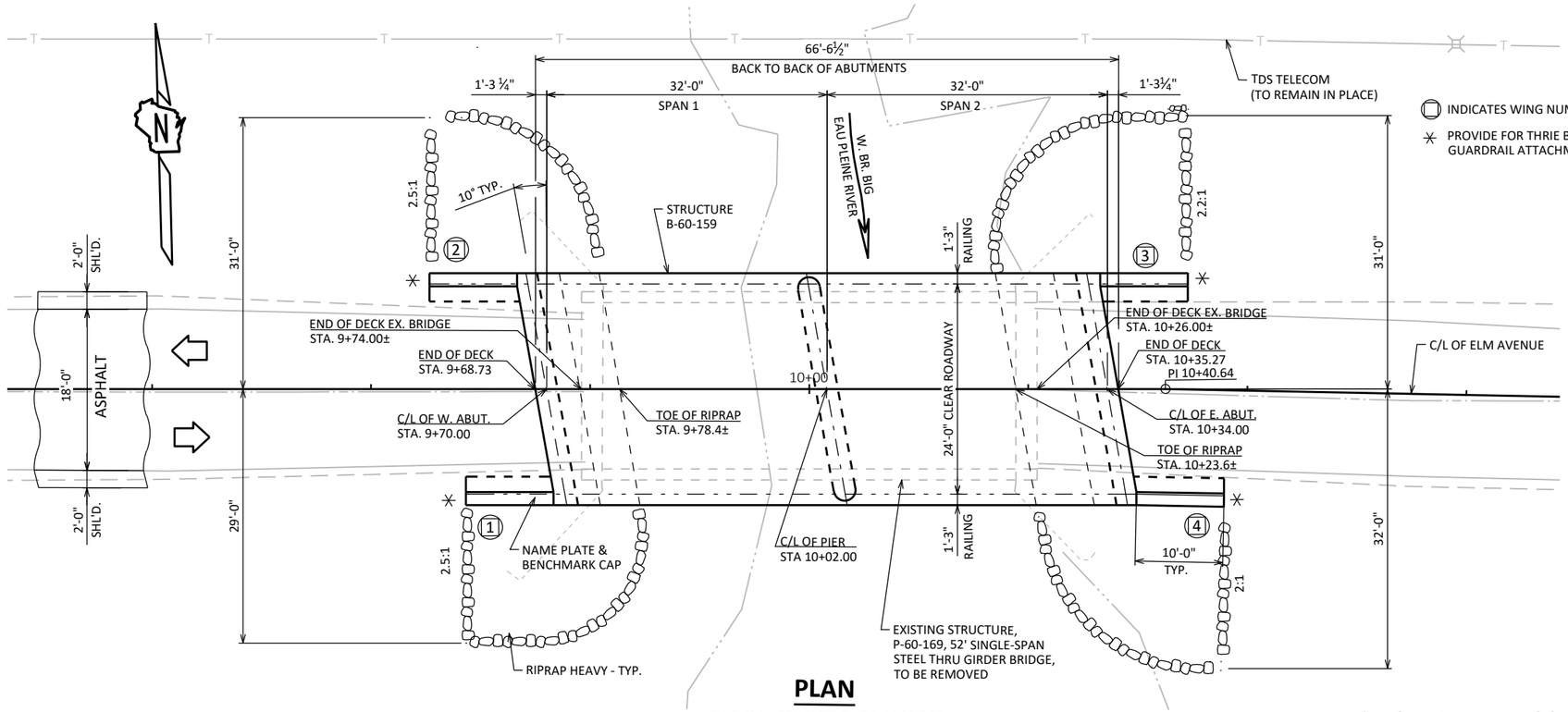
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



FILE NAME : C:\CAEfiles\Projects\tr_stdplate_W552.dgn PLOT DATE : 4-MARCH 2024 11:57 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

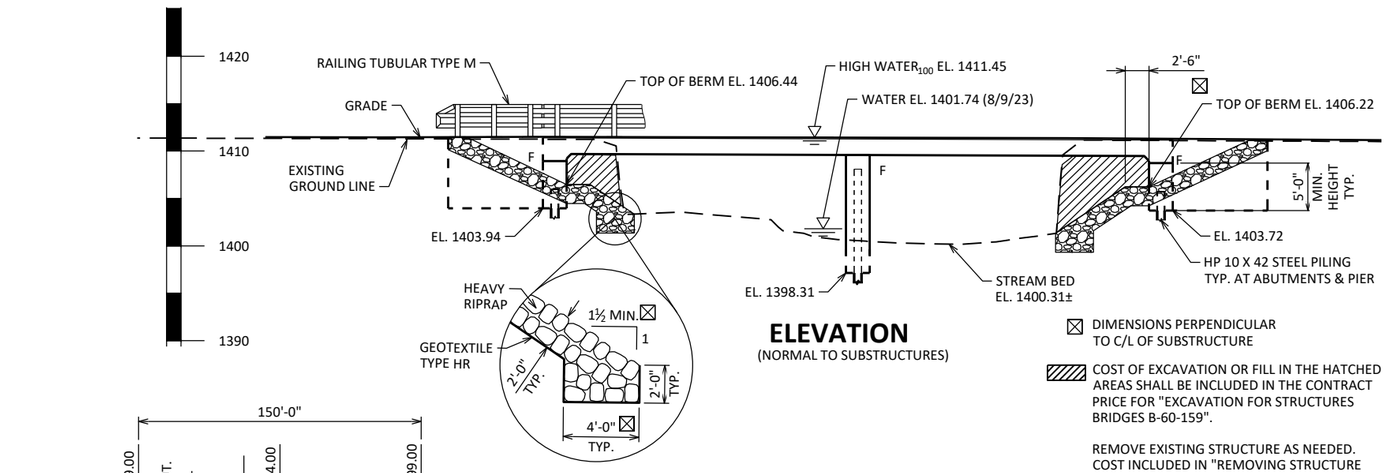
STATE PROJECT NUMBER

**9549-00-72**




## PLAN

TWO-SPAN CONCRETE FLAT SLAB BRIDGE



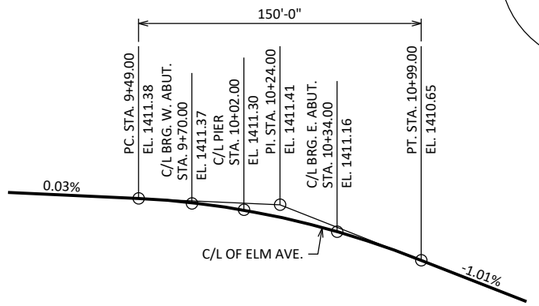

## ELEVATION

(NORMAL TO SUBSTRUCTURES)

DIMENSIONS PERPENDICULAR TO C/L OF SUBSTRUCTURE

COST OF EXCAVATION OR FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-60-159".

REMOVE EXISTING STRUCTURE AS NEEDED. COST INCLUDED IN "REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS" ITEM. TYPICAL AT ALL SUBSTRUCTURES.




## PROFILE GRADE LINE

## BENCH MARK

| NO. | STATION | DESCRIPTION | ELEV. |
|---|---|---|---|
| 50 | 12+16 | 120'D' SPIKE IN PPOL, 52' RT | 1407.72 |
| 51 | 10+23 | RIVET ON SE CRN OF BRIDGE RAIL, 10' RT. | 1413.84 |

## LIST OF DRAWINGS:

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES AND NOTES
3. STRUCTURE DETAILS
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT WING 1 DETAILS
7. WEST ABUTMENT WING 2 DETAILS
8. WEST ABUTMENT PILE LAYOUT AND BILL OF BARS
9. EAST ABUTMENT
10. EAST ABUTMENT WING 3 DETAILS
11. EAST ABUTMENT WING 4 DETAILS
12. EAST ABUTMENT PILE LAYOUT AND BILL OF BARS
13. PIER
14. SUPERSTRUCTURE
15. SUPERSTRUCTURE PLAN
16. TUBULAR RAILING STEEL TYPE "M"

## DESIGN DATA

**LIVE LOAD:**

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.11
OPERATING RATING: RF = 1.44
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

**MATERIAL PROPERTIES:**

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

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

## FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10x42 PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED.
ESTIMATED 30'-0" LONG AT WEST ABUTMENT.
ESTIMATED 30'-0" LONG AT EAST ABUTMENT.

PIER TO BE SUPPORTED ON HP 10x42 PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED.
ESTIMATED 35'-0" LONG AT PIER.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 120 TONS AT ABUTMENTS AND 180 TONS AT PIER MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

## HYDRAULIC DATA

**100-YEAR FREQUENCY:**

$Q_{100}$= 4,170 C.F.S.
$Q_{BRIDGE}$ = 3,498 C.F.S.
$Q_{ROADWAY}$ = 672 C.F.S.
$V_{100}$= 8.2 F.P.S.
$HW_{100}$= EL. 1411.45
WATERWAY AREA = 428 SQ. FT.
DRAINAGE AREA = 20.1 SQ. MI.
SCOUR CRITICAL CODE = 5

**ROADWAY OVERTOPPING**

FREQUENCY = 28 YEARS
Q = 3,090 C.F.S.
HW. = EL. 1410.24

**2-YEAR FREQUENCY:**

$Q_2$= 985 C.F.S.
$V_2$= 4.5 F.P.S.
$HW_2$= EL. 1406.40

## TRAFFIC DATA

**FEATURE ON:**

ADT = <100 (2025)
ADT= <100 (2045)
R.D.S. = 50 MPH




06/03/2024

**STRUCTURE DESIGN CONTACTS:**

AARON BONK 608-261-0261
DANIEL SYDOW 715-834-3161

| 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 SDR 08/14/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

**STRUCTURE B-60-159**

ELM AVENUE OVER W. BR. BIG EAU PLEINE RIVER

| COUNTY | TOWN |
|---|---|
| TAYLOR | DEER CREEK |

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

| DESIGNED BY | DESIGNED CK'D | DRAWN BY | PLANS CK'D |
|---|---|---|---|
| DRS | NBE | CLP | DNS |

**GENERAL PLAN**

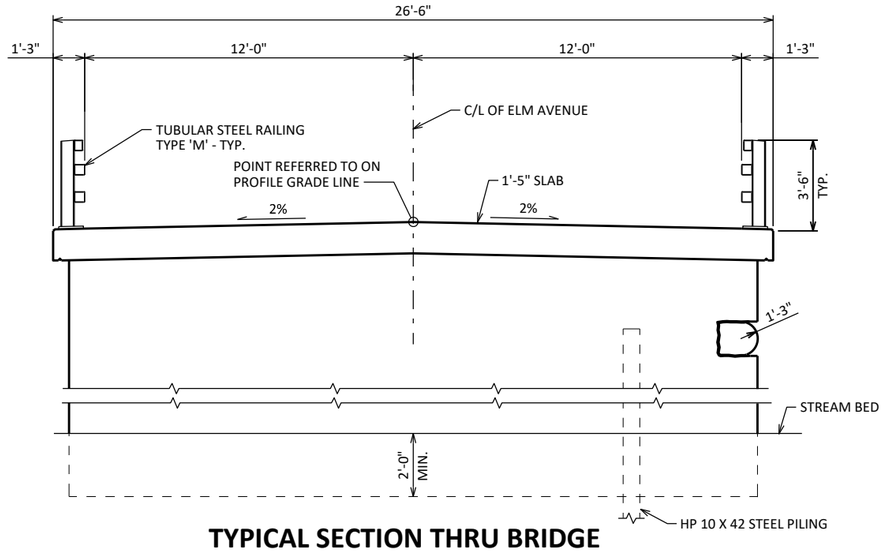
SHEET 1 OF 16
29

I.D. DATE:

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| STATE PROJECT NUMBER |
|---|
| 9549-00-72 |




## TYPICAL SECTION THRU BRIDGE

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR COVER 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.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF JOINT FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW THE SURFACE OF CONCRETE.

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

SLAB FALSE WORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-60-159" SHALL BE THE EXISTING GROUNDLINE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET AND APPLY TO THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENTS.

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

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

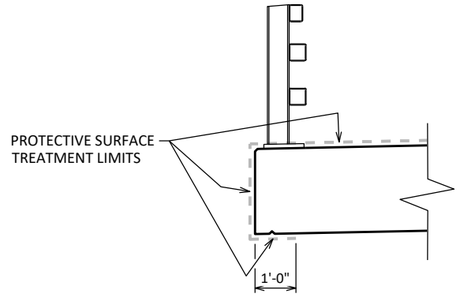
AT PIER CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3. OF THE STANDARD SPECIFICATIONS.

EXISTING SUBSTRUCTURE LOCATIONS ARE BASED ON SURVEY. EXTENT OF BELOW GRADE SUBSTRUCTURES ARE NOT KNOWN. REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE" BID ITEM.

BOTTOM 3-FEET OR TO TOP OF ROCK, WHICHEVER IS GREATER, OF PRE-BORED PILE SHALL BE BACKFILLED WITH CONCRETE. CLEAN SAND MAY BE USED TO FILL REMAINDER.

## TOTAL ESTIMATED QUANTITIES

| BID ITEM NUMBER | BID ITEMS | UNIT | SUPER | W. ABUT. | PIER | E. ABUT. | TOTALS |
|---|---|---|---|---|---|---|---|
| 203.0250 | REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS (P-60-169) | EACH | --- | --- | --- | --- | 1 |
| 206.1001 | EXCAVATION FOR STRUCTURES BRIDGES B-60-159 | EACH | --- | --- | --- | --- | 1 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | --- | 100 | --- | 100 | 200 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 96.8 | 27.4 | 26.4 | 27.4 | 178 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | 400 | 10 | --- | 10 | 420 |
| 505.0400 | BAR STEEL REINFORCEMENT HS STRUCTURES | LB | --- | 1,600 | 1,230 | 1,600 | 4,430 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 20,070 | 1,320 | 50 | 1,320 | 22,760 |
| 513.4061 | RAILING TUBULAR TYPE M | LF | 133.1 | 22.5 | --- | 22.5 | 178.1 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | --- | 8 | --- | 8 | 16 |
| 550.0020 | PRE-BORING ROCK OR CONSOLIDATED MATERIALS | LF | --- | 112 | 131 | 112 | 355 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | --- | 120 | 175 | 120 | 415 |
| 606.0300 | RIPRAP HEAVY | CY | --- | 60 | --- | 65 | 125 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6 - INCH | LF | --- | 90 | --- | 90 | 180 |
| 645.0111 | GEOTEXTILE TYPE DF SCHEDULE A | SY | --- | 30 | --- | 30 | 60 |
| 645.0120 | GEOTEXTILE TYPE HR | SY | --- | 130 | --- | 140 | 270 |
| | | | | | | | |
| | | | | | | | |
| | NON-BID ITEMS | | | | | | |
| | FILLER | SIZE | --- | --- | | --- | ½", ¾" |
| | | | | | | | |




## PROTECTIVE SURFACE TREATMENT DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**TYPICAL SECTION, QUANTITIES AND NOTES**

SHEET 2 OF 16

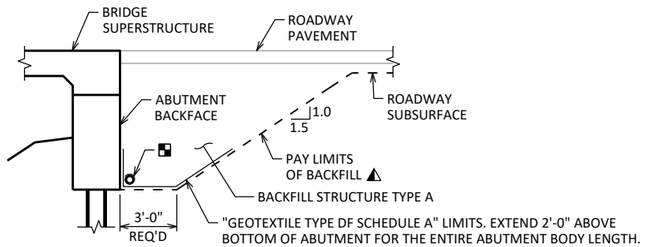


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STATE PROJECT NUMBER

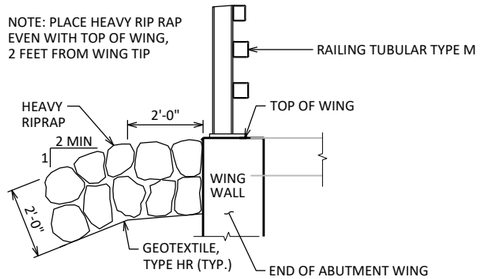
**9549-00-72**



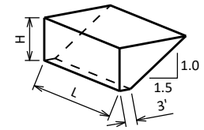

## TYPICAL SECTION THRU ABUTMENT

⚠ 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.

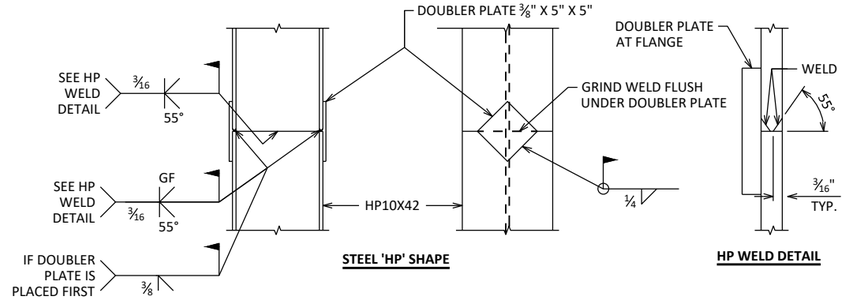



## TYPICAL FILL SECTION AT WING TIPS

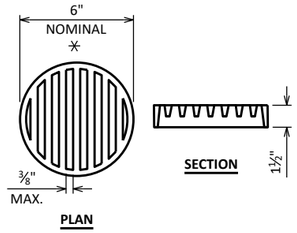



## ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
$V_{CF}$ = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
$V_{CY}$ = $V_{CF}$(EF)/27
$V_{TON}$ = $V_{CY}$(2.0)




## 'HP' PILE DETAILS




## 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.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**STRUCTURE DETAILS**

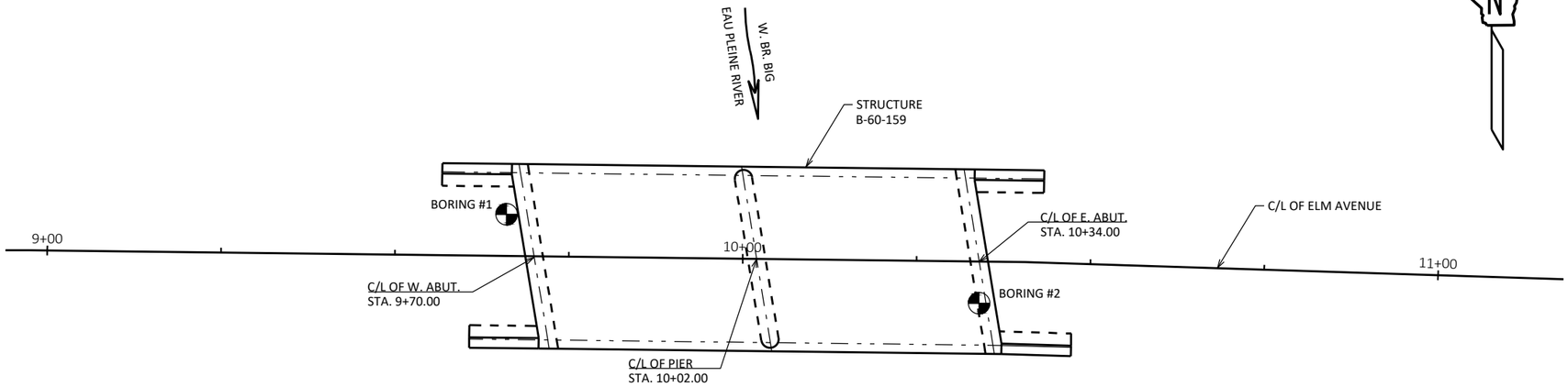
SHEET 3 OF 16

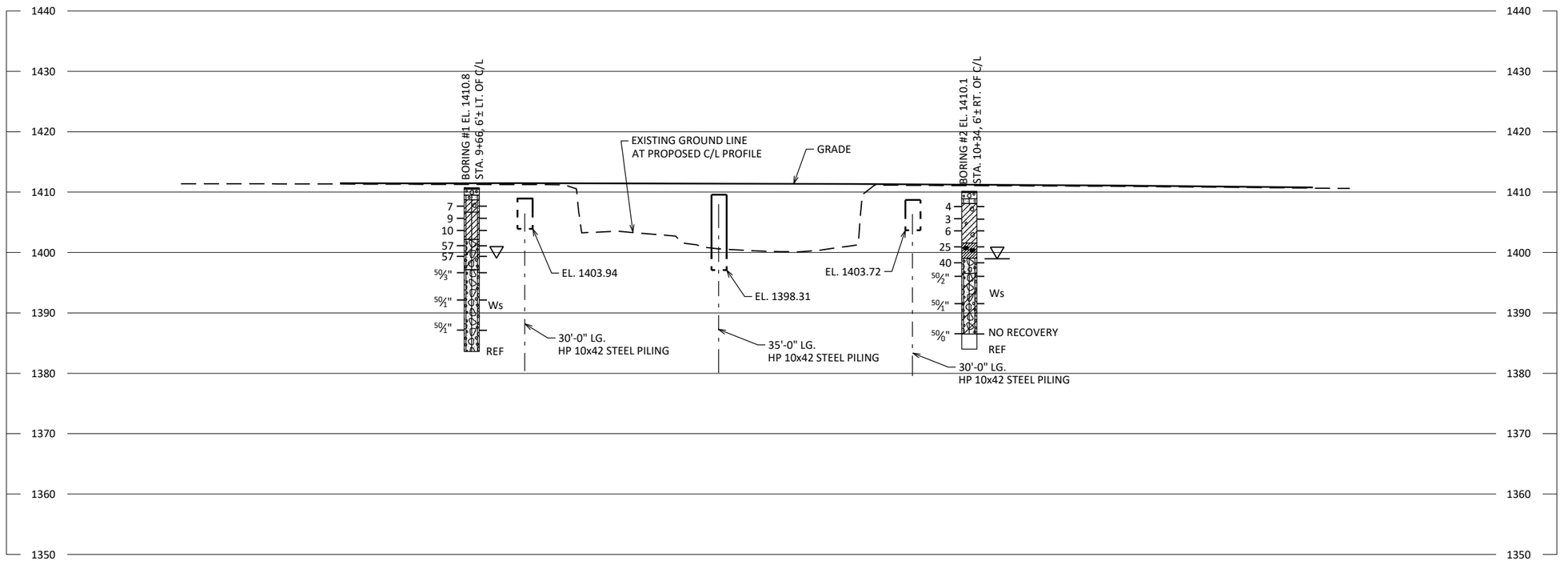


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| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| 1 | DECEMBER 12, 2023 | 306288.75 | 665097.19 |
| 2 | DECEMBER 12, 2023 | 306275.99 | 665165.16 |
| BORINGS COMPLETED BY: GEOTECHNICAL DRILLING CONTRACTORS, LLC | | | |
| REPORT COMPLETED BY: ECS MIDWEST, LLC | | | |
| ALL COORDINATES REFERENCED TO WCCS NAD 83(91) TAYLOR COUNTY | | | |



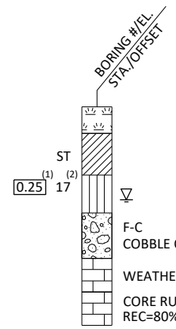

STATE PROJECT NUMBER

**9549-00-72**

**MATERIAL SYMBOLS**

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/ META

**LEGEND OF BORING**




(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

**GROUND WATER ELEVATION**

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

**ABBREVIATIONS**

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**SUBSURFACE EXPLORATION**

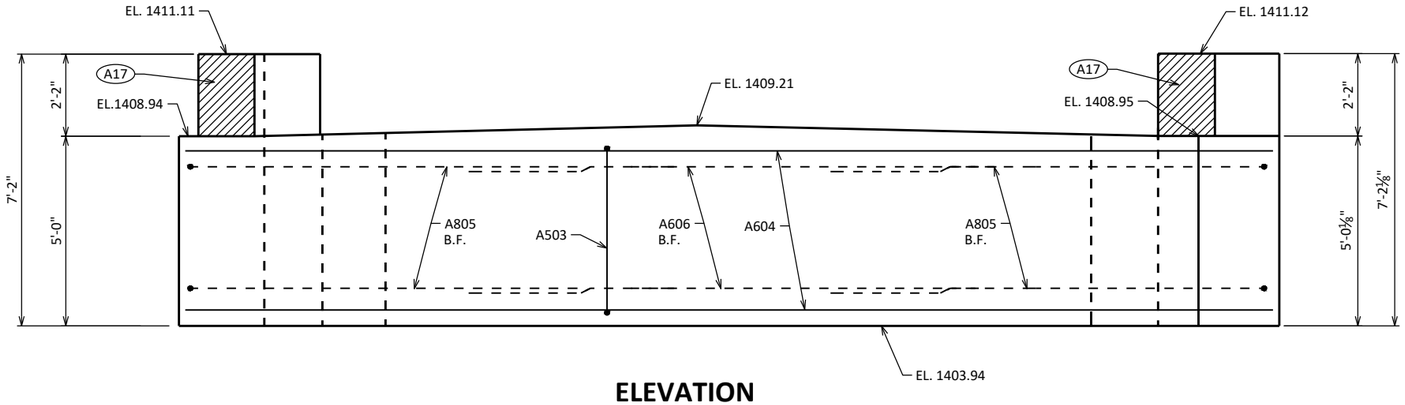
SHEET 4 OF 16

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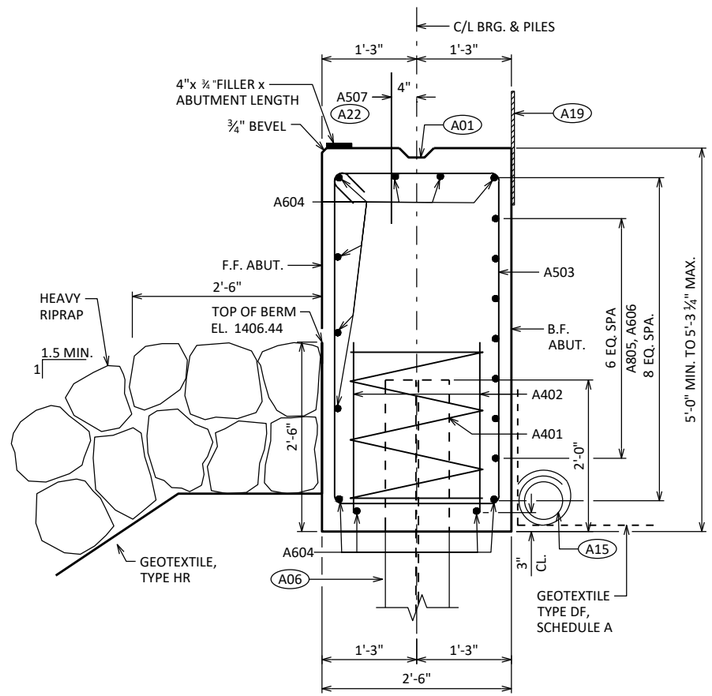
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| STATE PROJECT NUMBER |
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| **9549-00-72** |

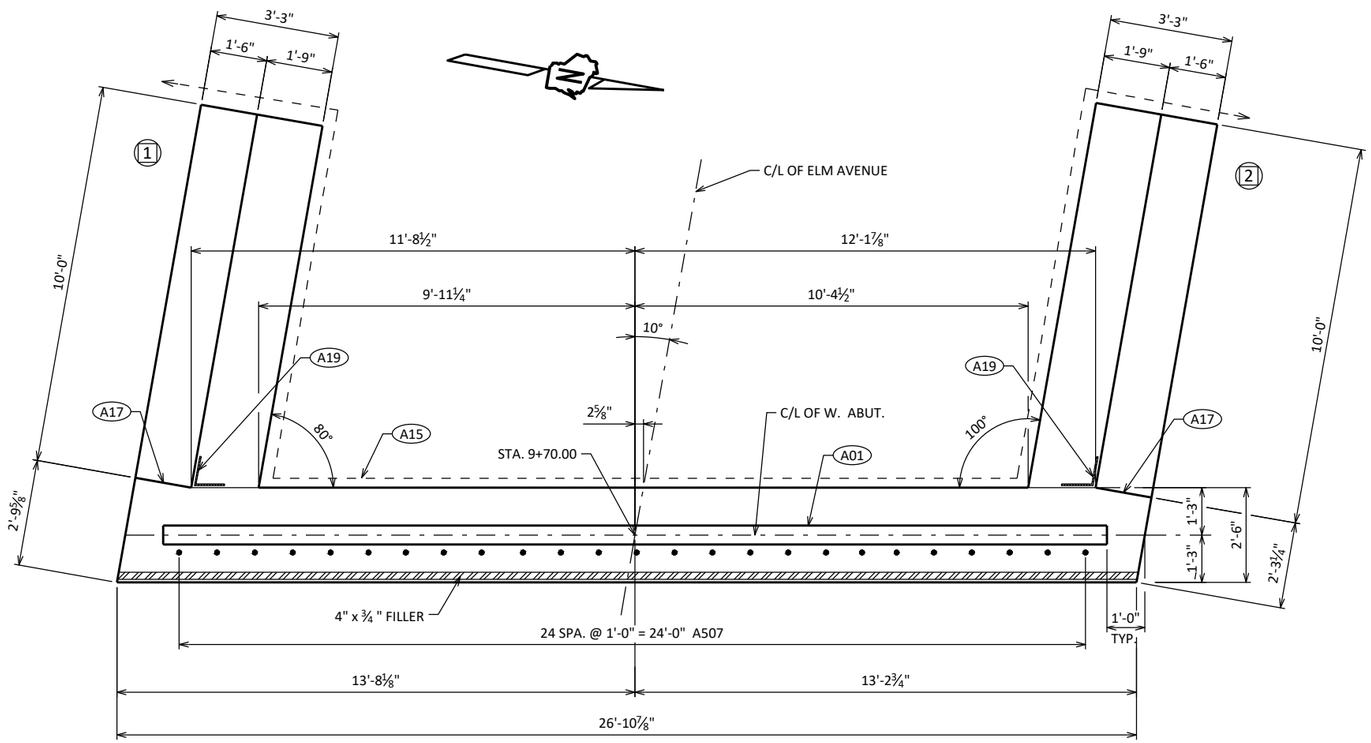



## ELEVATION

(LOOKING WEST)




## SECTION THRU BODY




## PLAN

A01 CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

A06 SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 30'-0" LONG WITH A FACTORED AXIAL RESISTANCE OF 120 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" 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.

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

A22 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**WEST ABUTMENT**

SHEET 5 OF 16

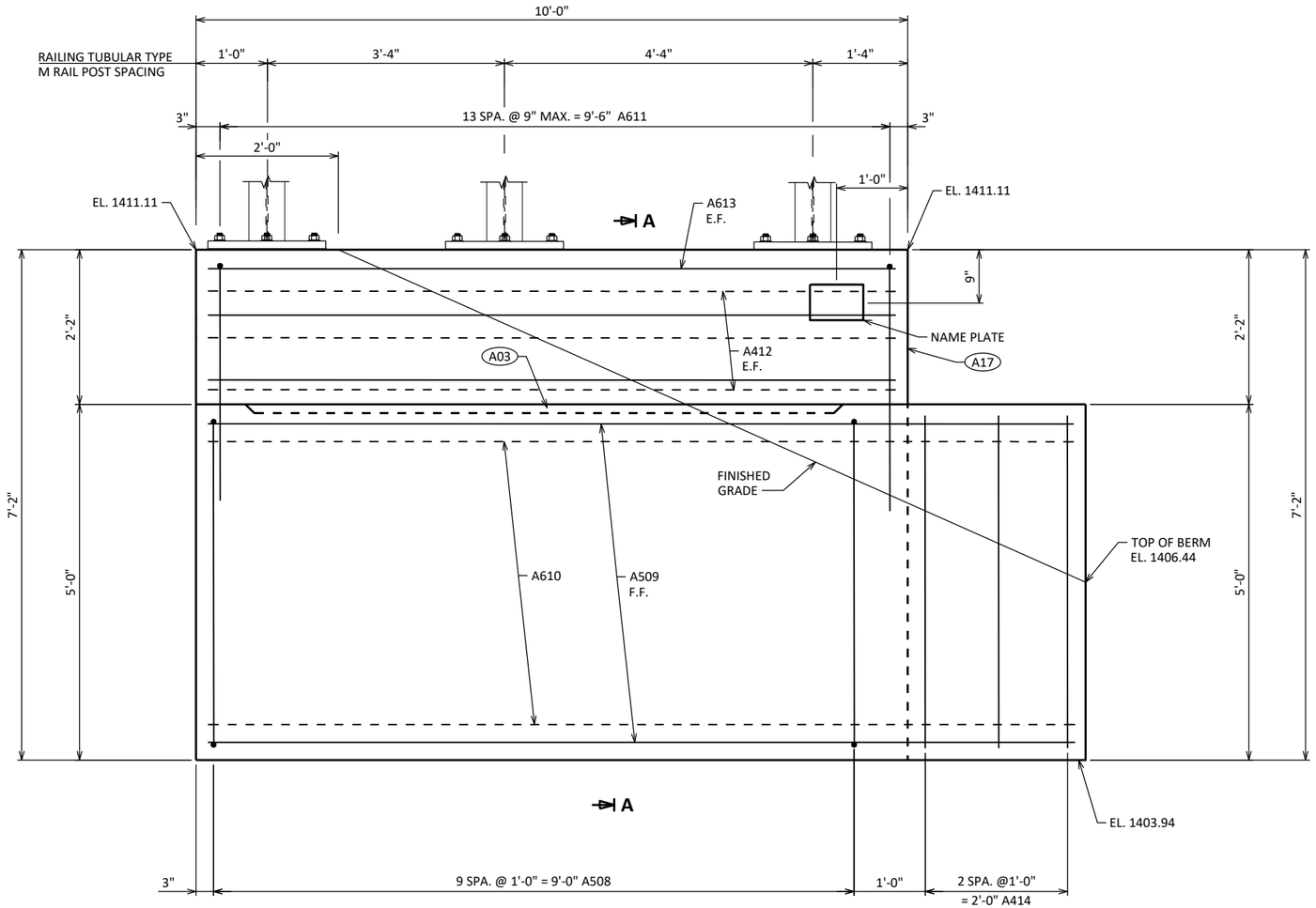
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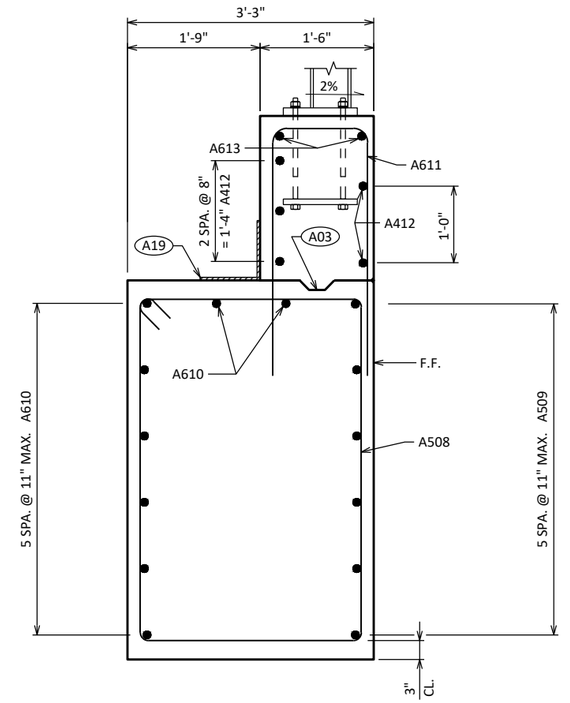
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STATE PROJECT NUMBER

**9549-00-72**




## ELEVATION - WING 1




## SECTION A

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

A17 ½" 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.

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

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**WEST ABUTMENT WING 1 DETAILS**

SHEET 6 OF 16

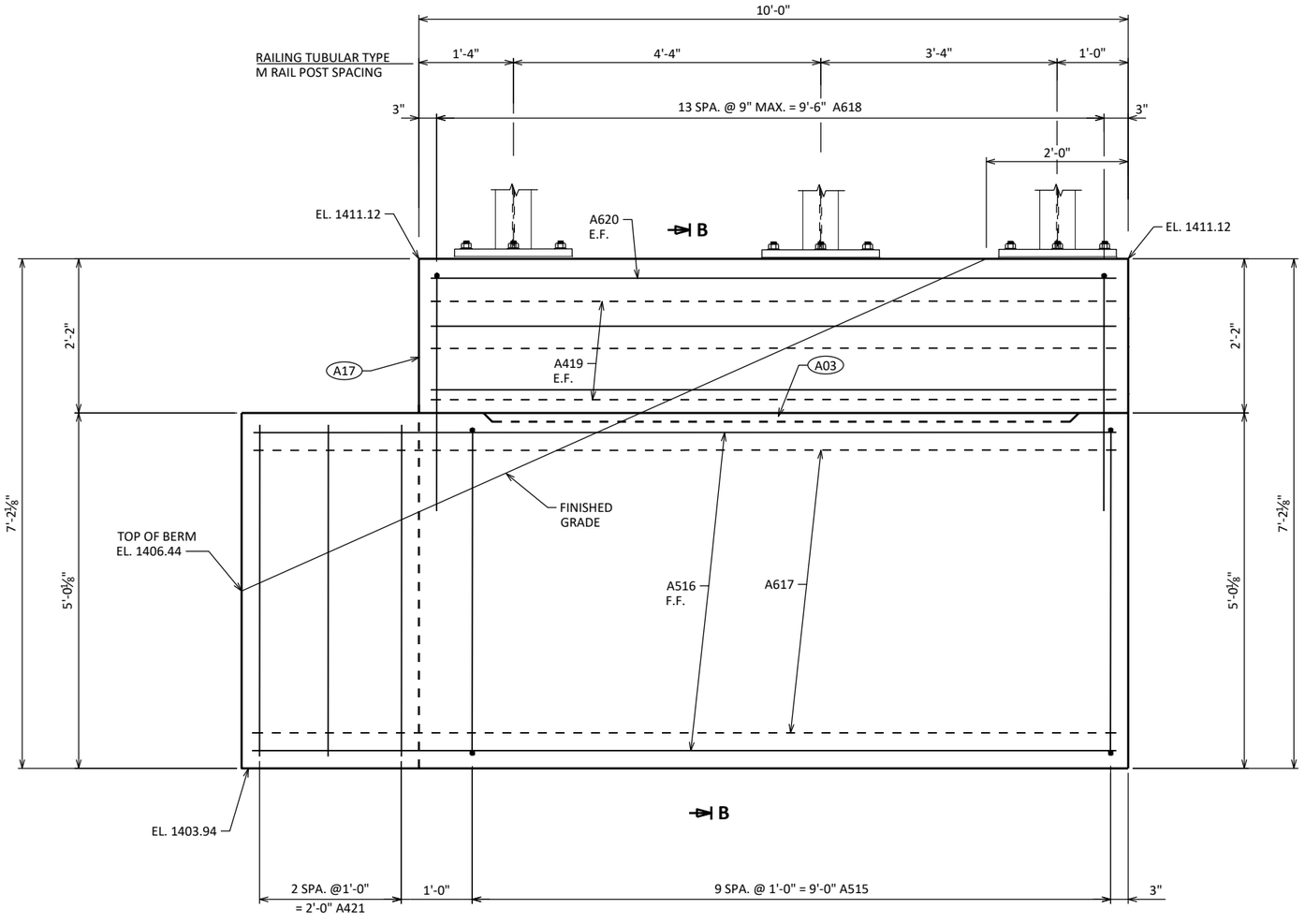
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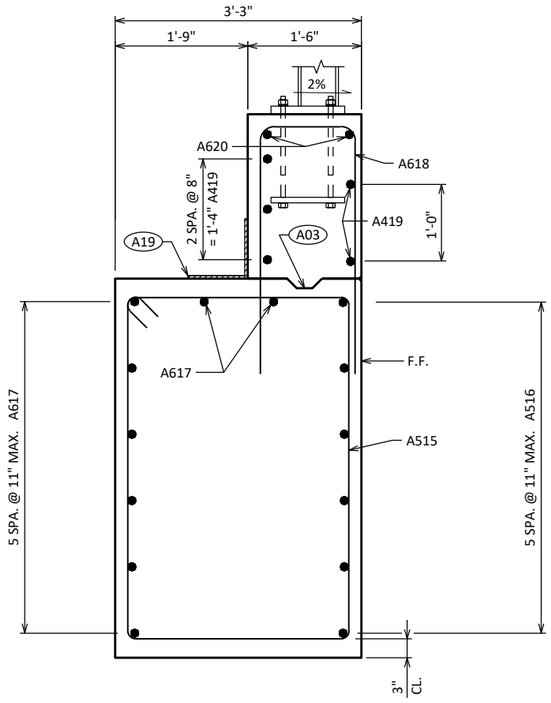
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## ELEVATION - WING 2




## SECTION B

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

A17 ½" 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.

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

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**WEST ABUTMENT WING 2 DETAILS**

SHEET 7 OF 16

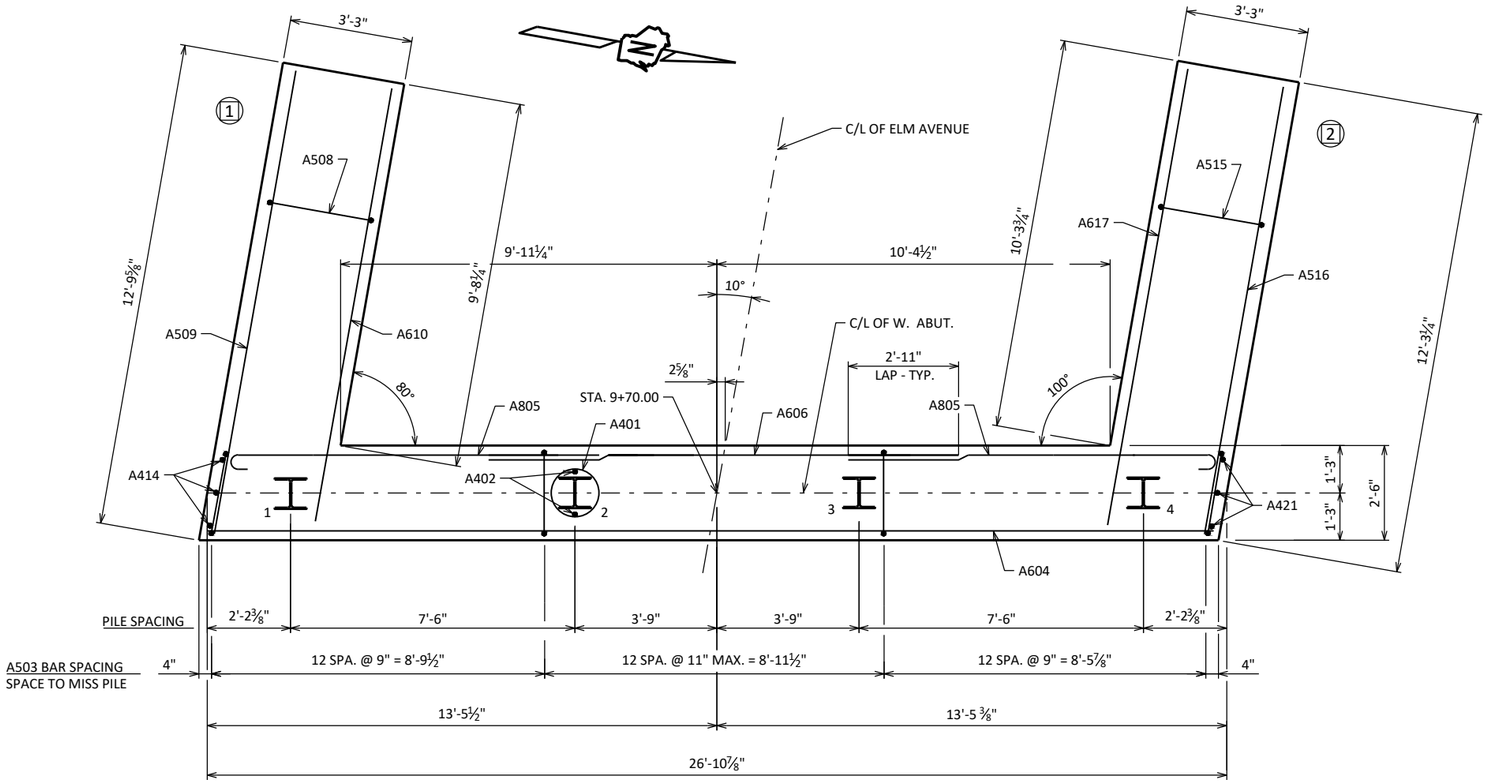
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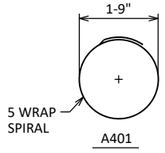

## PILE LAYOUT

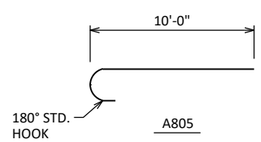
## BILL OF BARS

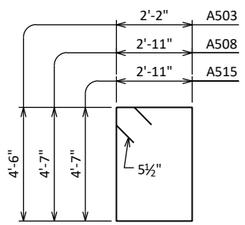
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

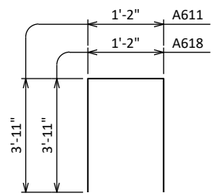
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|
| A401 | | 4 | 28'-0" | X | | BODY @ PILES |
| A402 | | 8 | 2'-3" | | | BODY @ PILES |
| A503 | | 37 | 14'-0" | X | | BODY VERT. |
| A604 | | 11 | 26'-6" | | | BODY HORIZ. |
| A805 | | 14 | 10'-11" | X | | BODY HORIZ. @ WINGS 1 & 2 B.F. |
| A606 | | 7 | 12'-5" | | | BODY HORIZ. BETWEEN WINGS 1 & 2 B.F. |
| A507 | X | 25 | 2'-0" | | | BODY DOWELS |
| A508 | X | 10 | 15'-8" | X | | WING 1 VERT. |
| A509 | X | 6 | 12'-5" | | | WING 1 HORIZ. F.F. |
| A610 | X | 8 | 11'-7" | | | WING 1 HORIZ. B.F. & TOP |
| A611 | X | 14 | 8'-8" | X | | WING 1 VERT. |
| A412 | X | 5 | 9'-8" | | | WING 1 HORIZ. E.F. |
| A613 | X | 2 | 9'-8" | | | WING 1 HORIZ. E.F. TOP |
| A414 | X | 3 | 4'-7" | | | BODY VERT. END @ WING 1 |
| A515 | X | 10 | 15'-8" | X | | WING 2 VERT. |
| A516 | X | 6 | 11'-11" | | | WING 2 HORIZ. F.F. |
| A617 | X | 8 | 12'-2" | | | WING 2 HORIZ. B.F. & TOP |
| A618 | X | 14 | 8'-8" | X | | WING 2 VERT. |
| A419 | X | 5 | 9'-8" | | | WING 2 HORIZ. E.F. |
| A620 | X | 2 | 9'-8" | | | WING 2 HORIZ. E.F. TOP |
| A421 | X | 3 | 4'-7" | | | BODY VERT. END @ WING 2 |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.




| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**WEST ABUTMENT PILE LAYOUT AND BILL OF BARS**

SHEET 8 OF 16

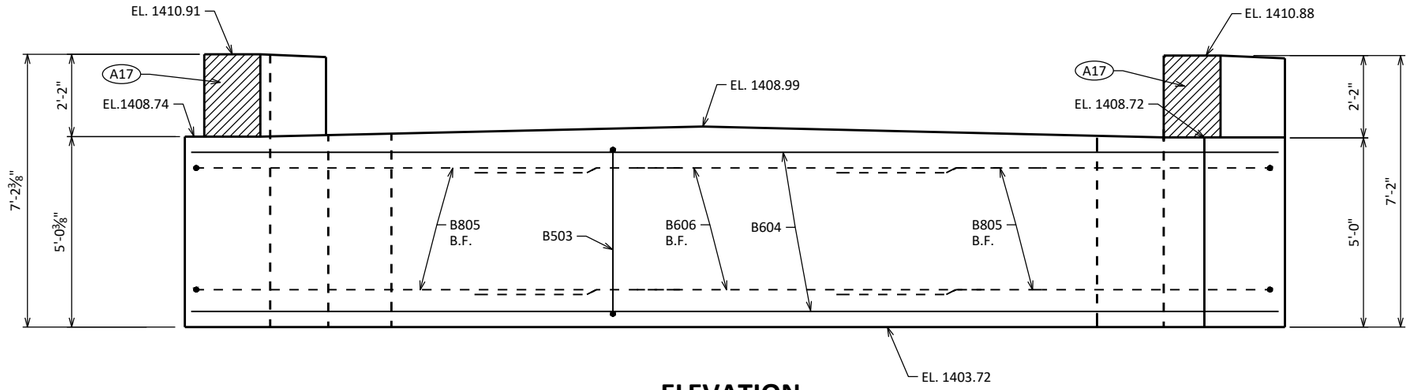
36

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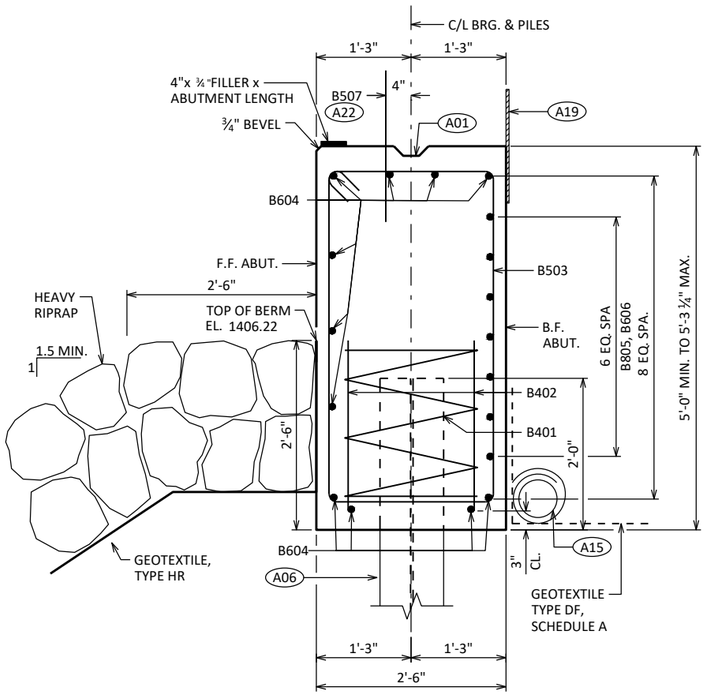
STATE PROJECT NUMBER

**9549-00-72**

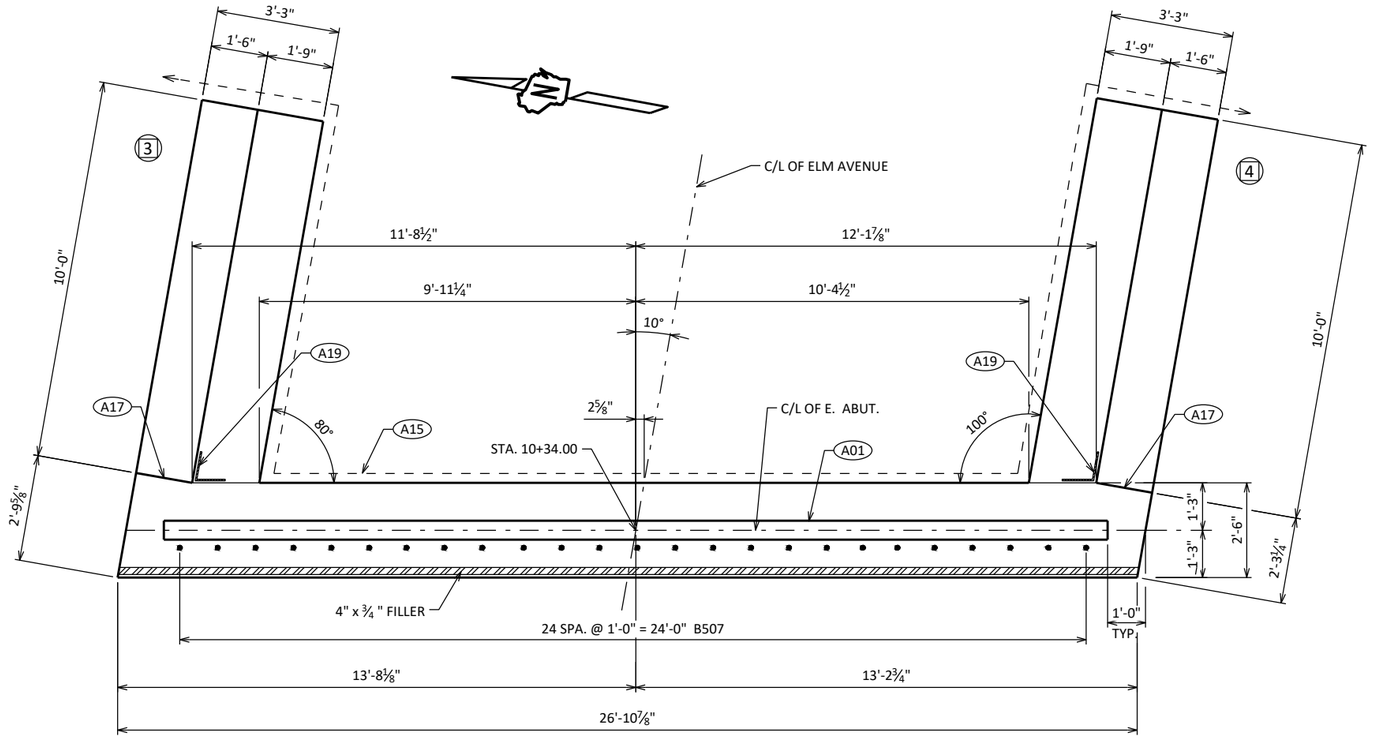



## ELEVATION

(LOOKING EAST)




## SECTION THRU BODY




## PLAN

A01 CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

A06 SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 30'-0" LONG WITH A FACTORED AXIAL RESISTANCE OF 120 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" 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.

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

A22 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

| NO. | DATE | REVISION | BY |
|---|---|---|---|
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**EAST ABUTMENT**

SHEET 9 OF 16

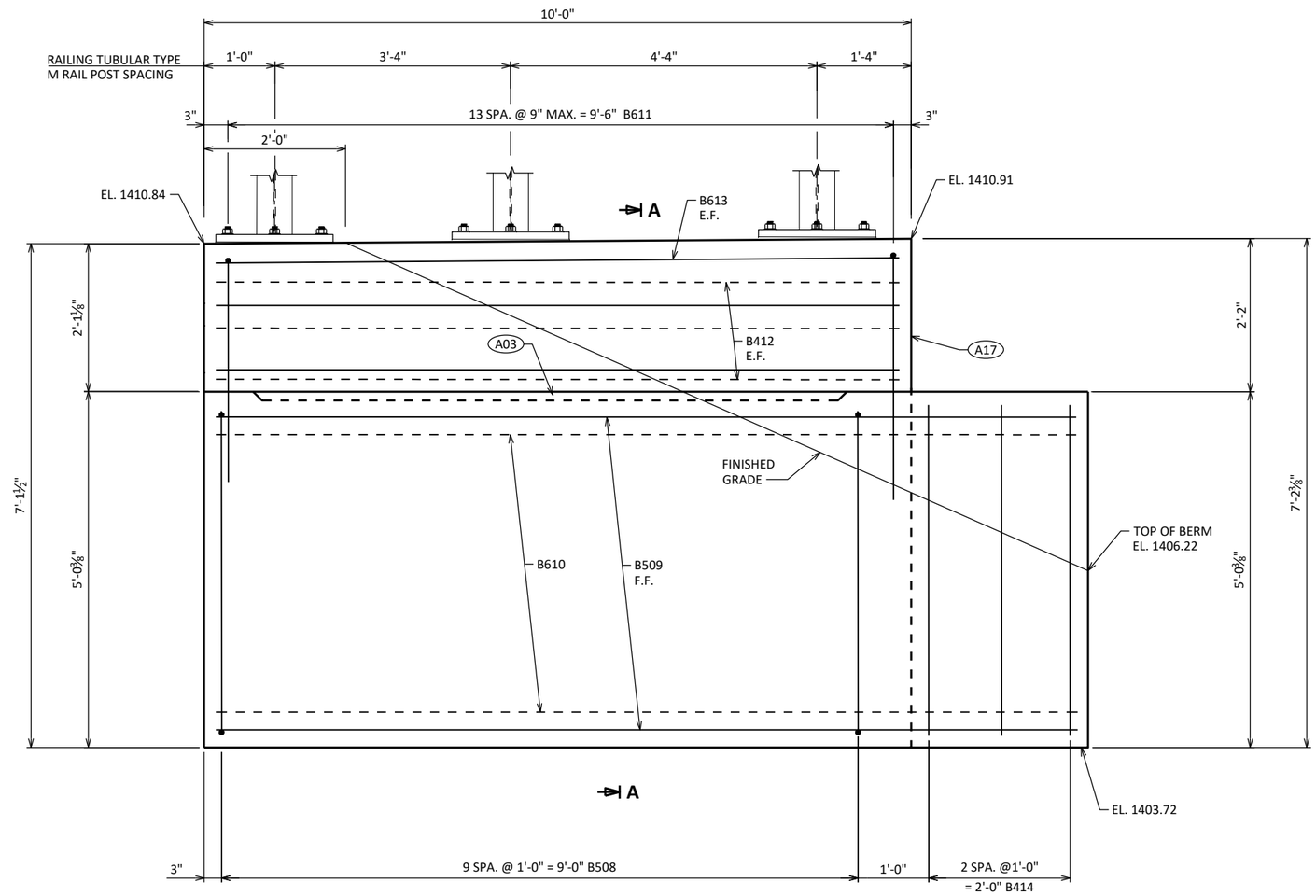
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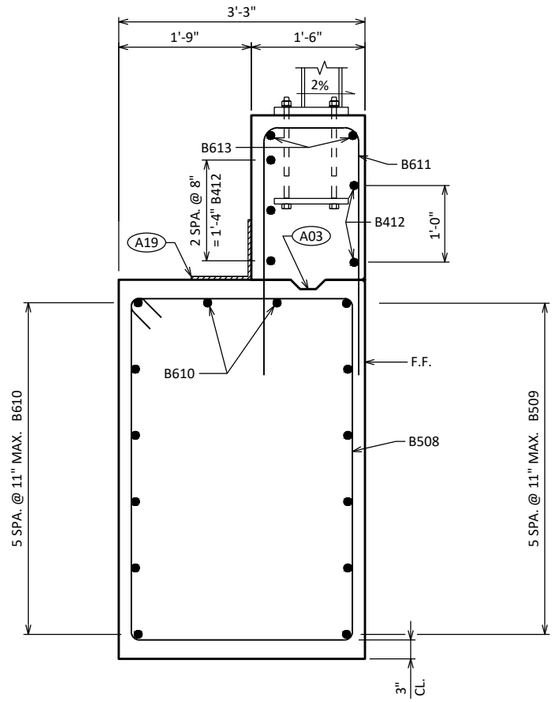
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STATE PROJECT NUMBER

**9549-00-72**




## ELEVATION - WING 3




## SECTION A

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

A17 ½" 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.

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

| NO. | DATE | REVISION | BY |
|---|---|---|---|
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**EAST ABUTMENT WING 3 DETAILS**

SHEET 10 OF 16

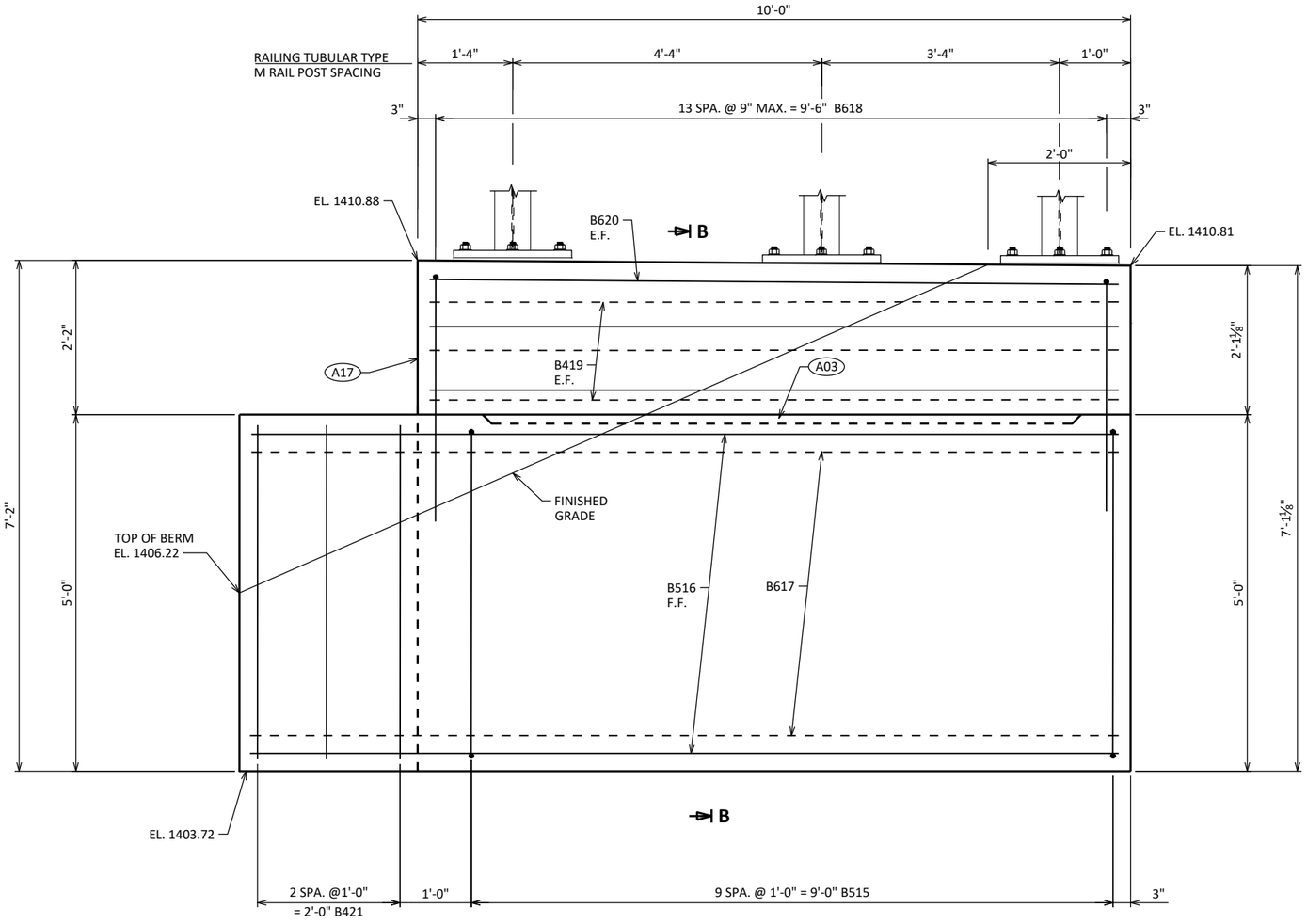
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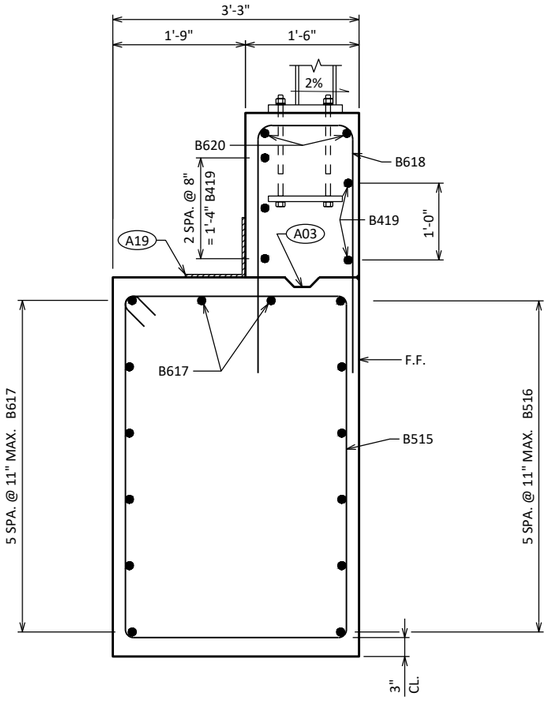
8

STATE PROJECT NUMBER

**9549-00-72**




## ELEVATION - WING 4




## SECTION B

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

A17 ½" 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.

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

| NO. | DATE | REVISION | BY |
|---|---|---|---|
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**EAST ABUTMENT WING 4 DETAILS**

SHEET 11 OF 16

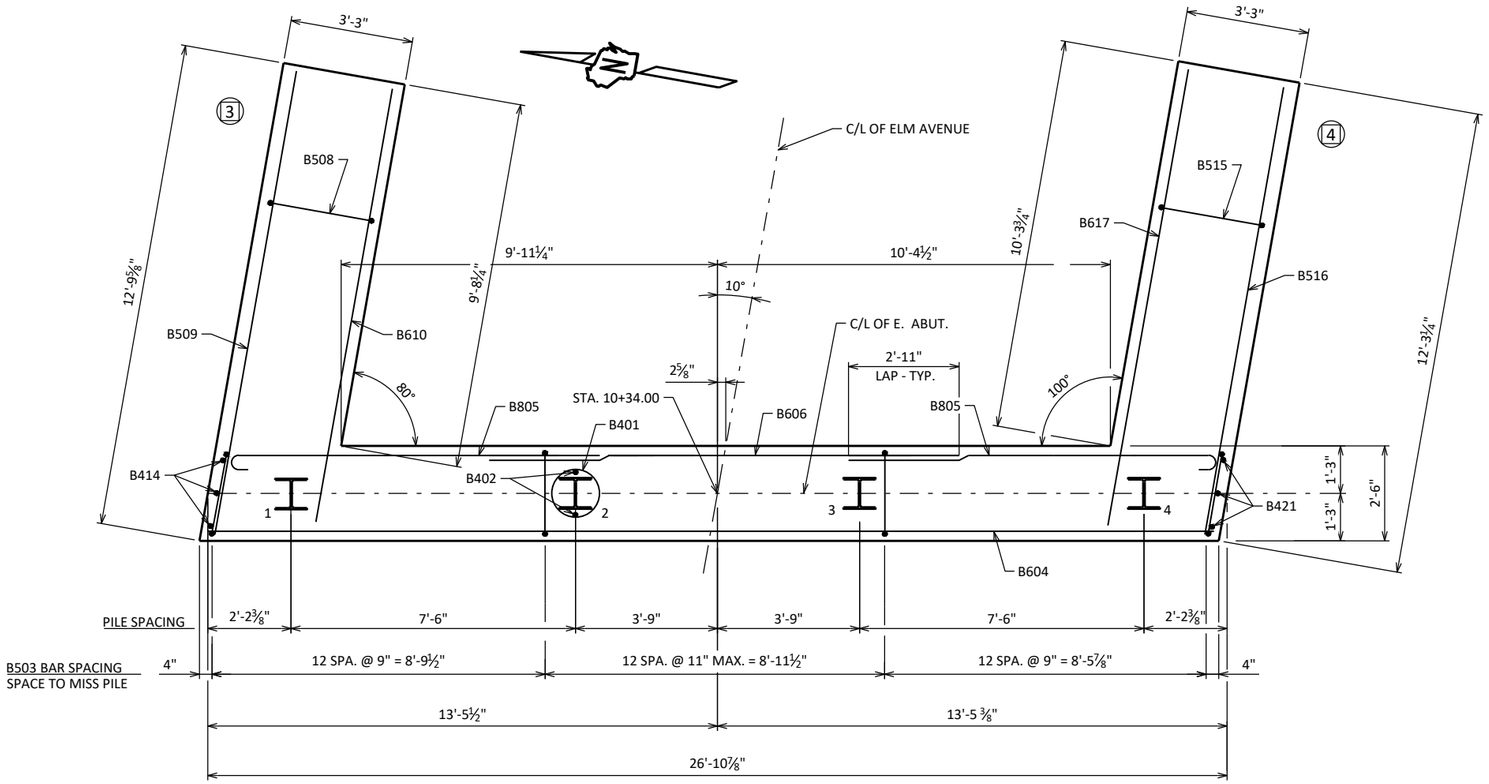
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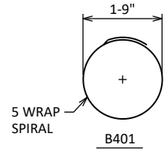

**PILE LAYOUT**

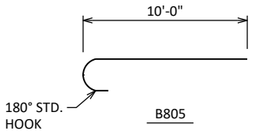
## BILL OF BARS

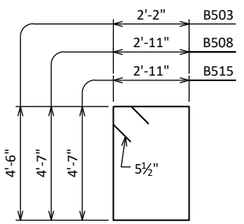
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

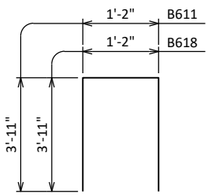
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|
| B401 | | 4 | 28'-0" | X | | BODY @ PILES |
| B402 | | 8 | 2'-3" | | | BODY @ PILES |
| B503 | | 37 | 14'-0" | X | | BODY VERT. |
| B604 | | 11 | 26'-6" | | | BODY HORIZ. |
| B805 | | 14 | 10'-11" | X | | BODY HORIZ. @ WINGS 3 & 4 B.F. |
| B606 | | 7 | 12'-5" | | | BODY HORIZ. BETWEEN WINGS 3 & 4 B.F. |
| B507 | X | 25 | 2'-0" | | | BODY DOWELS |
| B508 | X | 10 | 15'-8" | X | | WING 3 VERT. |
| B509 | X | 6 | 12'-5" | | | WING 3 HORIZ. F.F. |
| B610 | X | 8 | 11'-7" | | | WING 3 HORIZ. B.F. & TOP |
| B611 | X | 14 | 8'-8" | X | | WING 3 VERT. |
| B412 | X | 5 | 9'-8" | | | WING 3 HORIZ. E.F. |
| B613 | X | 2 | 9'-8" | | | WING 3 HORIZ. E.F. TOP |
| B414 | X | 3 | 4'-7" | | | BODY VERT. END @ WING 3 |
| B515 | X | 10 | 15'-8" | X | | WING 4 VERT. |
| B516 | X | 6 | 11'-11" | | | WING 4 HORIZ. F.F. |
| B617 | X | 8 | 12'-2" | | | WING 4 HORIZ. B.F. & TOP |
| B618 | X | 14 | 8'-8" | X | | WING 4 VERT. |
| B419 | X | 5 | 9'-8" | | | WING 4 HORIZ. E.F. |
| B620 | X | 2 | 9'-8" | | | WING 4 HORIZ. E.F. TOP |
| B421 | X | 3 | 4'-7" | | | BODY VERT. END @ WING 4 |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.




| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**EAST ABUTMENT PILE LAYOUT AND BILL OF BARS**

SHEET 12 OF 16

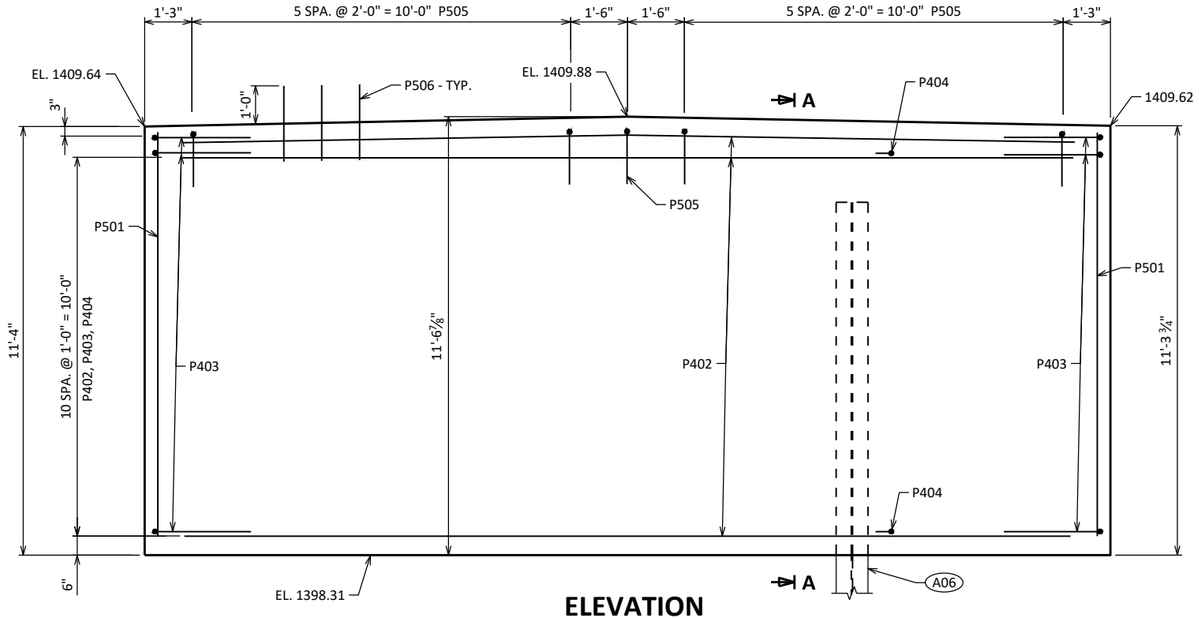
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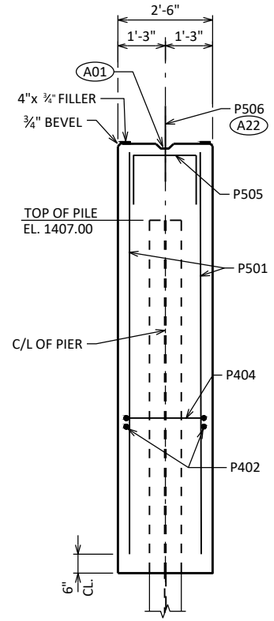
STATE PROJECT NUMBER

**9549-00-72**

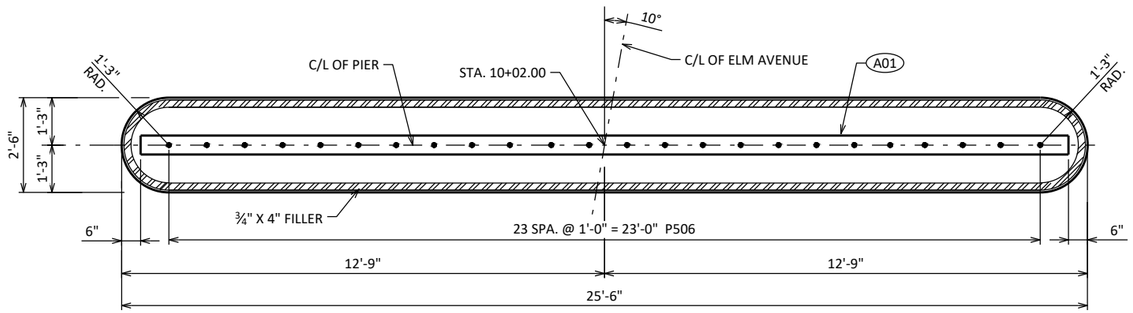



## ELEVATION

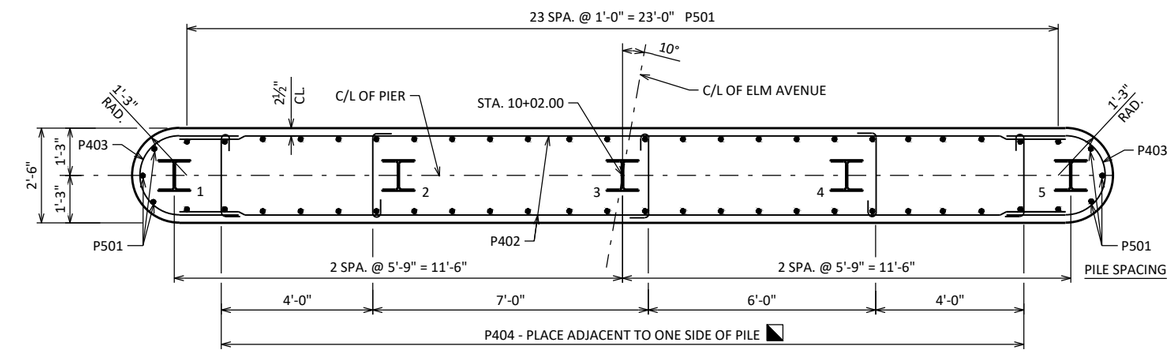
(LOOKING EAST)




## SECTION A




## PLAN



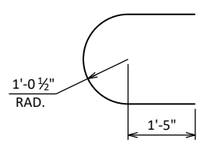

## PILE LAYOUT

## BILL OF BARS

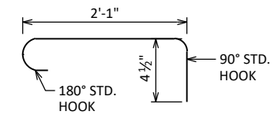
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|
| P501 | | 54 | 10'-7" | | | COLUMN VERT. |
| P402 | | 24 | 23'-0" | | | COLUMN HORIZ. |
| P403 | | 24 | 6'-1" | X | | COLUMN HORIZ. |
| P404 | | 55 | 2'-10" | X | | COLUMN TIES |
| P505 | | 13 | 4'-7" | X | | COLUMN TOP |
| P506 | x | 24 | 2'-0" | | | COLUMN DOWELS |
| | | | | | | |
| | | | | | | |

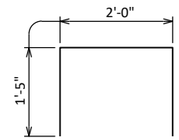
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.




**P403**




**P404**




**P505**

A01 CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

A06 SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 35'-0" LONG WITH A FACTORED AXIAL RESISTANCE OF 180 TONS PER PILE.

A22 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

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

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**PIER**

SHEET 13 OF 16

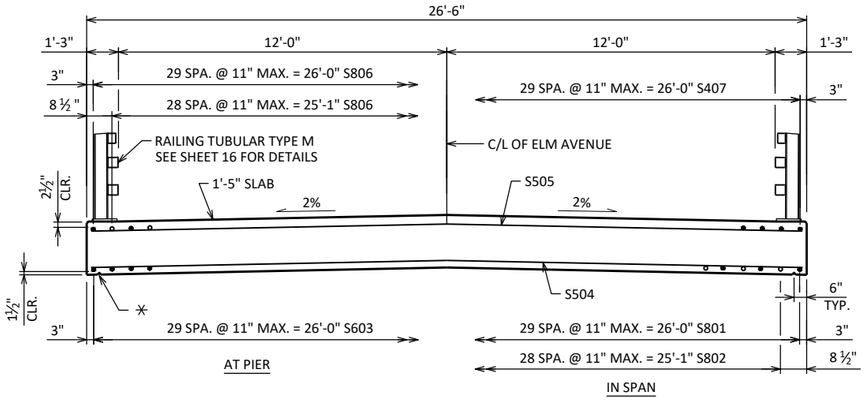


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## TYPICAL SECTION THRU BRIDGE

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

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

✳ ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT.

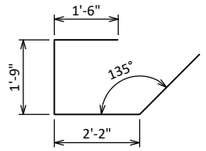
V-GROOVES ARE REQUIRED.

## BILL OF BARS

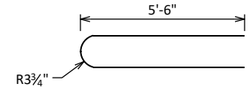
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|
| S801 | X | 60 | 31'-5" | | | SLAB LONG. BOT. |
| S802 | X | 58 | 21'-8" | | | SLAB LONG. BOT. |
| S603 | X | 30 | 9'-2" | | | SLAB LONG. BOT. @ PIER |
| S504 | X | 67 | 26'-7" | | | SLAB TRANS. BOT. |
| S505 | X | 67 | 26'-7" | | | SLAB TRANS. TOP |
| S806 | X | 59 | 31'-5" | | | SLAB LONG. TOP @ PIER |
| S407 | X | 60 | 11'-11" | | | SLAB LONG. TOP |
| S508 | X | 60 | 6'-11" | X | | SLAB @ ABUT. DIAPHRAGM STIRRUPS |
| S509 | X | 4 | 26'-7" | | | SLAB @ ABUT. DIAPHRAGM TRANS. |
| S610 | X | 44 | 12'-0" | X | | SLAB @ RAIL POSTS |
| S611 | X | 72 | 6'-0" | | | SLAB @ INT. RAIL POSTS |
| S612 | X | 16 | 4'-8" | X | | SLAB @ END RAIL POSTS |
| | | | | | | |

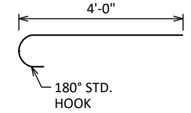
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



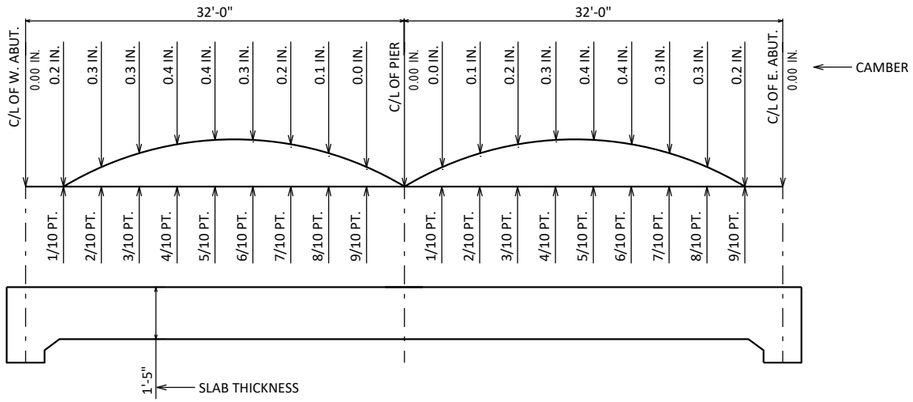

**S508**




**S610**




**S612**




## CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

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

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

## SURVEY TOP OF SLAB ELEVATIONS

| | ABUTMENT | 5/10 PT. | PIER | 5/10 PT. | ABUTMENT |
|---|---|---|---|---|---|
| N. EDGE OF SLAB | | | | | |
| C/L OF ELM AVE | | | | | |
| S. EDGE OF SLAB | | | | | |

PRIOR TO RELEASING SLAB FORMWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF SUBSTRUCTURES, AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND C/L. . RECORD ELEVATIONS IN THE TABLE ABOVE FOR THE "AS BUILT" PLANS.

## TOP OF SLAB ELEVATIONS

| LOCATION | C/L W. ABUT. | 1/10 PT. | 2/10 PT. | 3/10 PT. | 4/10 PT. | 5/10 PT. | 6/10 PT. | 7/10 PT. | 8/10 PT. | 9/10 PT. | C/L PIER | 1/10 PT. | 2/10 PT. | 3/10 PT. | 4/10 PT. | 5/10 PT. | 6/10 PT. | 7/10 PT. | 8/10 PT. | 9/10 PT. | C/L E. ABUT. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N. EDGE OF SLAB | 1411.11 | 1411.11 | 1411.10 | 1411.10 | 1411.09 | 1411.09 | 1411.08 | 1411.07 | 1411.06 | 1411.05 | 1411.05 | 1411.03 | 1411.02 | 1411.01 | 1411.00 | 1410.99 | 1410.97 | 1410.96 | 1410.94 | 1410.93 | 1410.91 |
| C/L OF ELM AVENUE | 1411.37 | 1411.37 | 1411.36 | 1411.36 | 1411.35 | 1411.35 | 1411.34 | 1411.33 | 1411.32 | 1411.31 | 1411.30 | 1411.29 | 1411.28 | 1411.27 | 1411.25 | 1411.24 | 1411.23 | 1411.21 | 1411.19 | 1411.18 | 1411.16 |
| S. EDGE OF SLAB | 1411.11 | 1411.10 | 1411.10 | 1411.09 | 1411.08 | 1411.08 | 1411.07 | 1411.06 | 1411.05 | 1411.04 | 1411.03 | 1411.02 | 1411.01 | 1410.99 | 1410.98 | 1410.96 | 1410.95 | 1410.93 | 1410.92 | 1410.90 | 1410.88 |

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**SUPERSTRUCTURE**

SHEET 14 OF 16

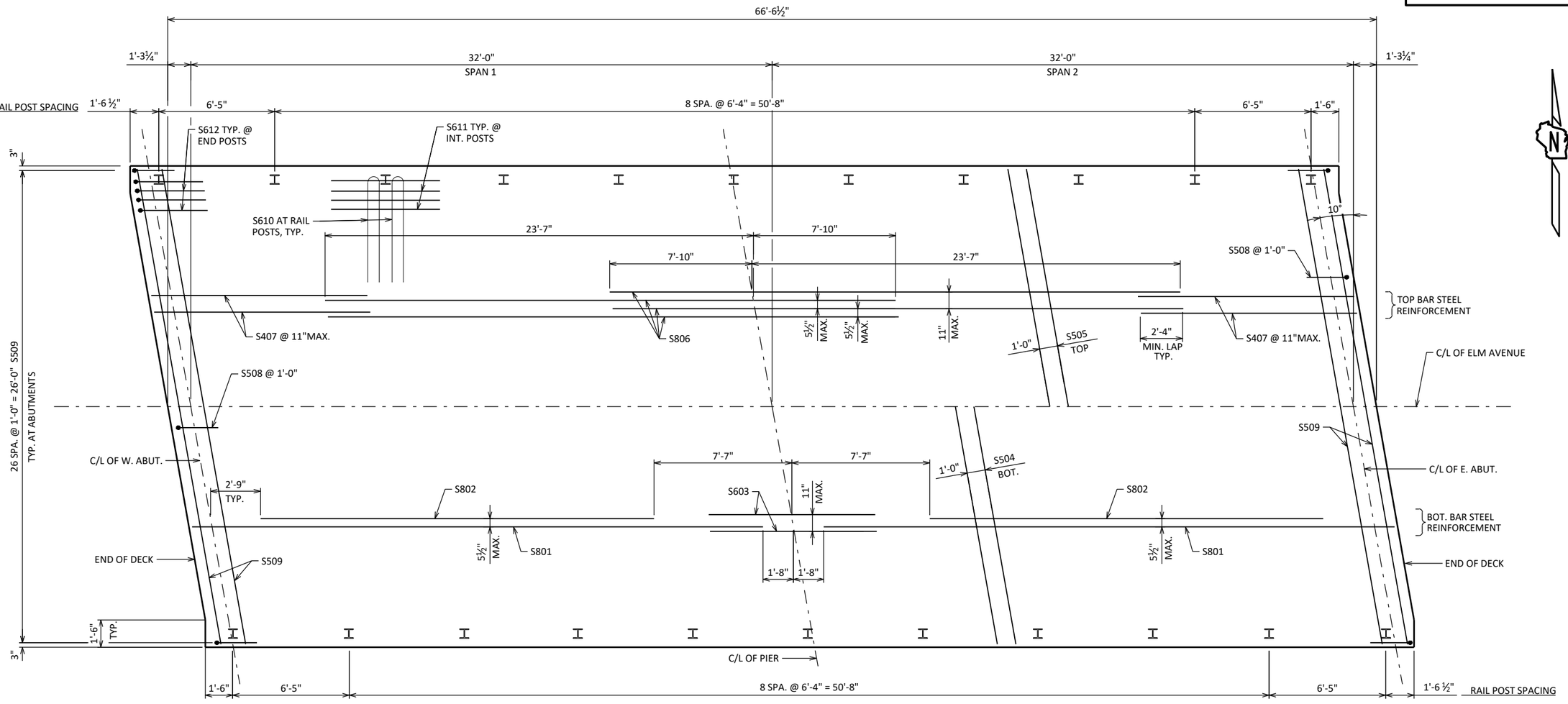
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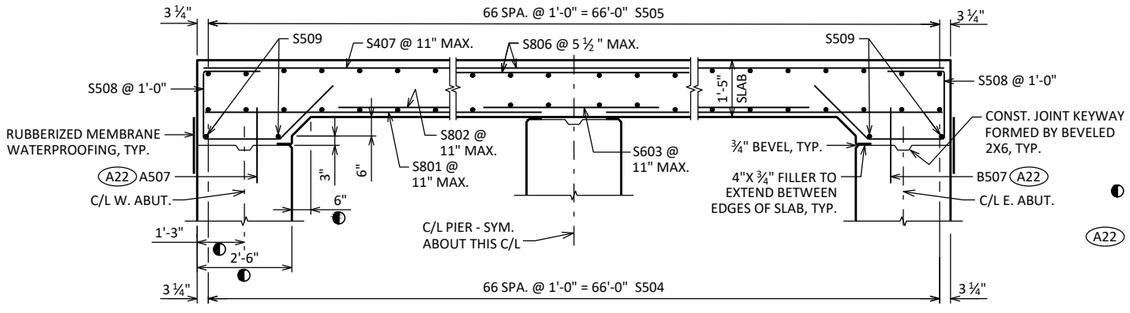
8

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## PLAN




## LONGITUDINAL SECTION

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

◐ MEASURED NORMAL TO THE C/L OF ABUTMENT. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.

A22 A507, B507 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

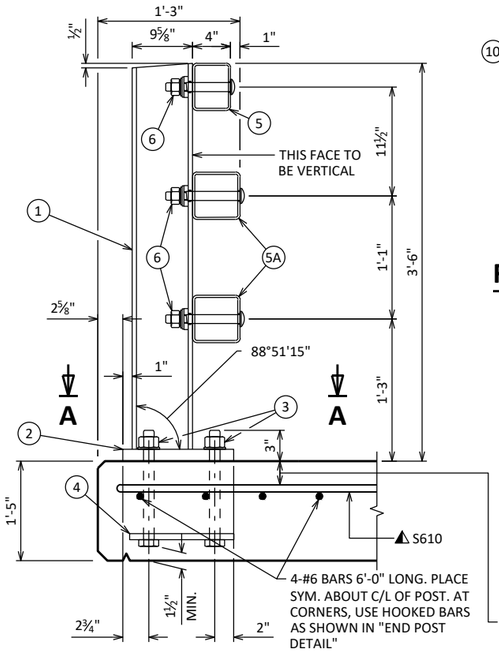
**SUPERSTRUCTURE PLAN**

SHEET 15 OF 16

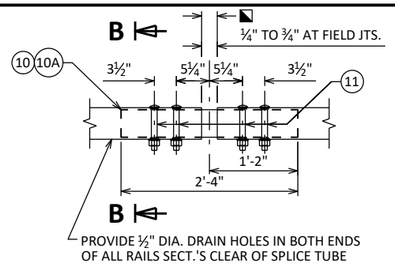
43

STATE PROJECT NUMBER

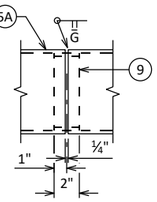
**9549-00-72**




## SECTION THRU RAILING ON DECK

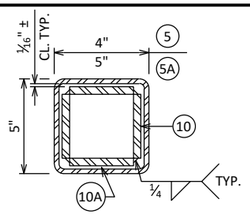



## FIELD ERECTION JOINT DETAIL

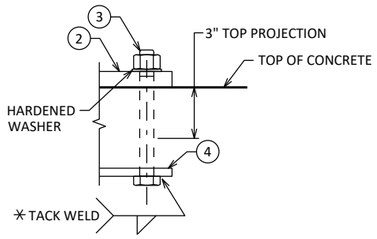



## SHOP RAIL SPLICE DETAIL

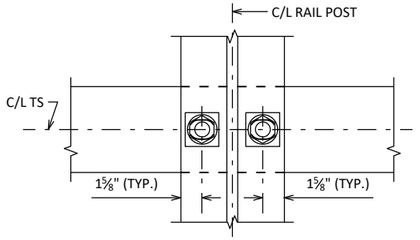
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



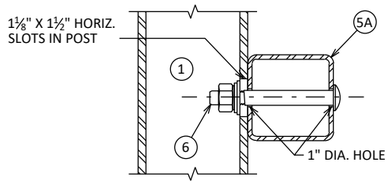

## SECTION B-B




## ANCHOR BOLTS



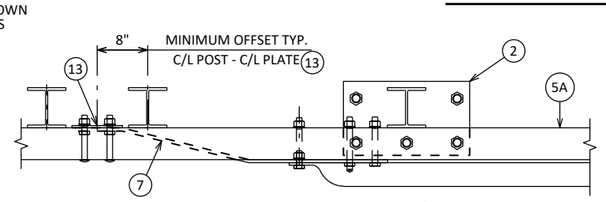

SECTION THRU POST WEB




SECTION THRU RAIL

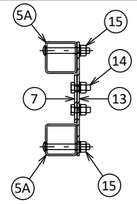
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

## TYPICAL RAIL TO POST CONNECTIONS

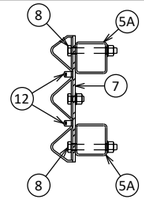



## TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



## SECTION C-C



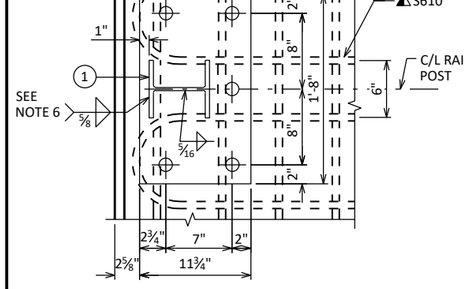
## SECTION D-D

## LEGEND

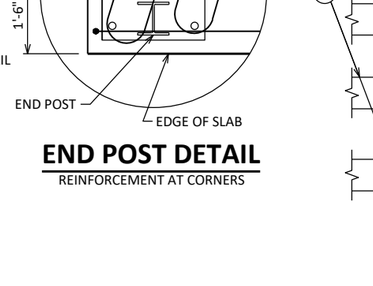
1. W6 X 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" X 11¾" X 1'-8" WITH 1⁷⁄₁₆" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
4. ⅝" X 11" X 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1³⁄₁₆" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 X 4 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 X 5 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ³⁄₁₆" X 1⅝" X 1⅝" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE ¹⁵⁄₁₆" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND ¹⁵⁄₁₆" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

## GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.

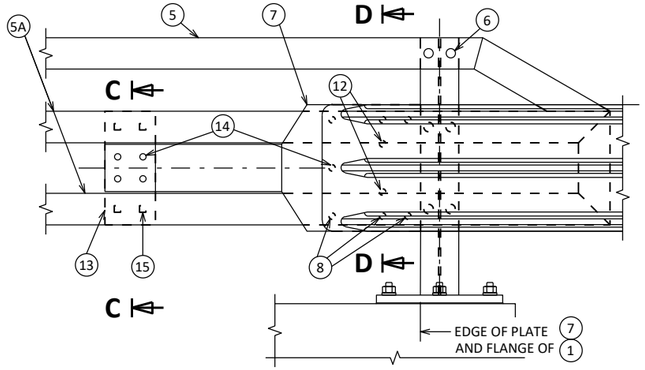



## SECTION A-A



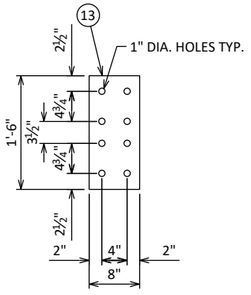

## END POST DETAIL

REINFORCEMENT AT CORNERS



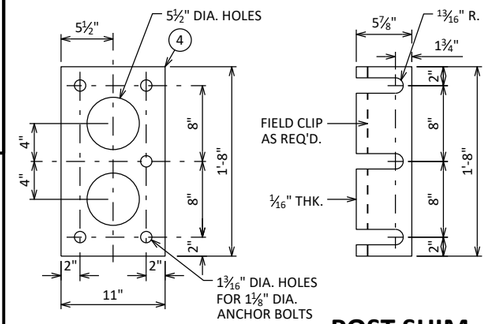

## DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT




## ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

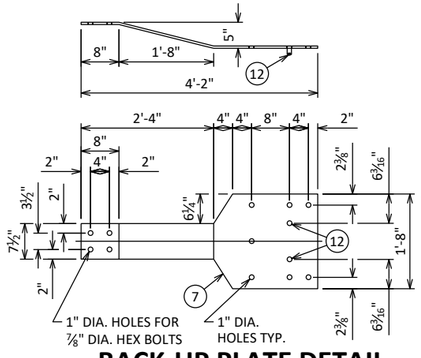



## ANCHOR PLATE

AT RAIL TO DECK CONNECTION

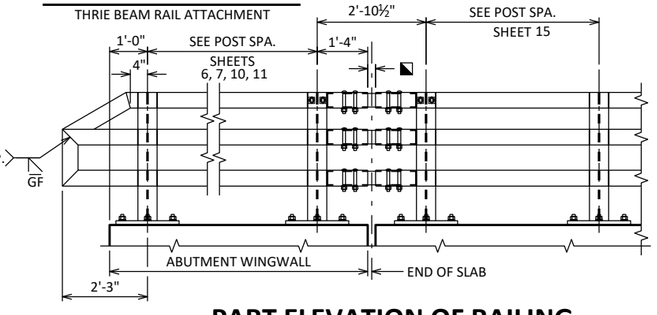



## POST SHIM DETAIL




## BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT




## PART ELEVATION OF RAILING

▲ TIE TO TOP MAT OF STEEL.

✳ ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.

◥ ¼" TO ¾" OPENING FOR A1 ABUTMENT.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-159**

DRAWN BY CLP | PLANS CK'D NBE

**TUBULAR STEEL RAILING TYPE "M"**

SHEET 16 OF 16

44

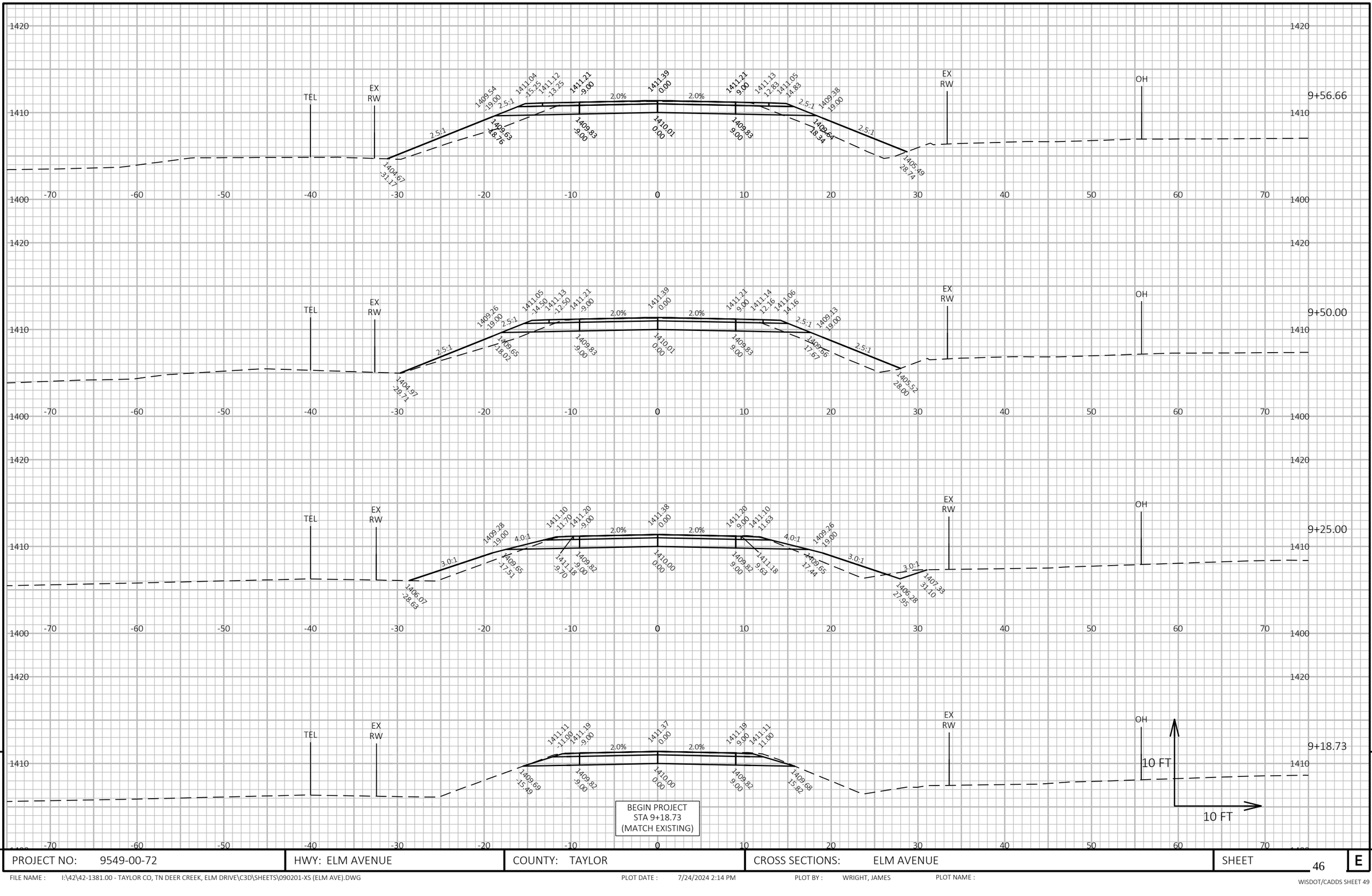
8

8

**ELM AVENUE COMPUTER EARTHWORK**

| Station | Distance | Area (SF) | | Incremental Vol (CY) (Unadjusted) | | Cumulative Vol (CY) | | Mass Ordinate |
|---|---|---|---|---|---|---|---|---|
| | | Cut | Fill | Cut | Fill | Cut | Expanded Fill | |
| | | | | | | 1.00 | 1.30 | |
| | | | | Note 1 | Note 2 | Note 1 | | Note 3 |
| 9+19. | -- | 38.3 | 0.0 | | | | | |
| 9+25. | 6 | 37.6 | 19.8 | 8 | 2 | 8 | 3 | 6 |
| 9+50. | 25 | 34.3 | 23.3 | 33 | 20 | 42 | 29 | 13 |
| 9+56.66 | 7 | 33.4 | 34.5 | 8 | 7 | 50 | 38 | 12 |
| 9+60.79 | 4 | 16.6 | 21.1 | 4 | 4 | 54 | 44 | 10 |
| 9+69. | 8 | 16.6 | 0.0 | 5 | 3 | 59 | 48 | 11 |
| BRIDGE | -- | -- | -- | -- | -- | -- | -- | -- |
| 10+35. | -- | 18.0 | 0.0 | -- | -- | -- | -- | -- |
| 10+42.94 | 8 | 18.0 | 20.1 | 5 | 3 | 64 | 52 | 13 |
| 10+47.58 | 5 | 35.4 | 56.4 | 5 | 7 | 69 | 60 | 9 |
| 10+50. | 2 | 35.8 | 50.0 | 3 | 5 | 72 | 66 | 6 |
| 10+75. | 25 | 40.5 | 29.1 | 35 | 37 | 107 | 114 | -7 |
| 10+85. | 10 | 40.5 | 0.0 | 15 | 5 | 122 | 121 | 1 |
| | | | | 122 | 93 | | | |

| | |
|---|---|
| Note 1 - Cut | Volume need to be cut. |
| Note 2 - Fill | Volume needed to be filled. |
| Note 3 - Mass Ordinate | (Cut) - (Fill * 1.30) |

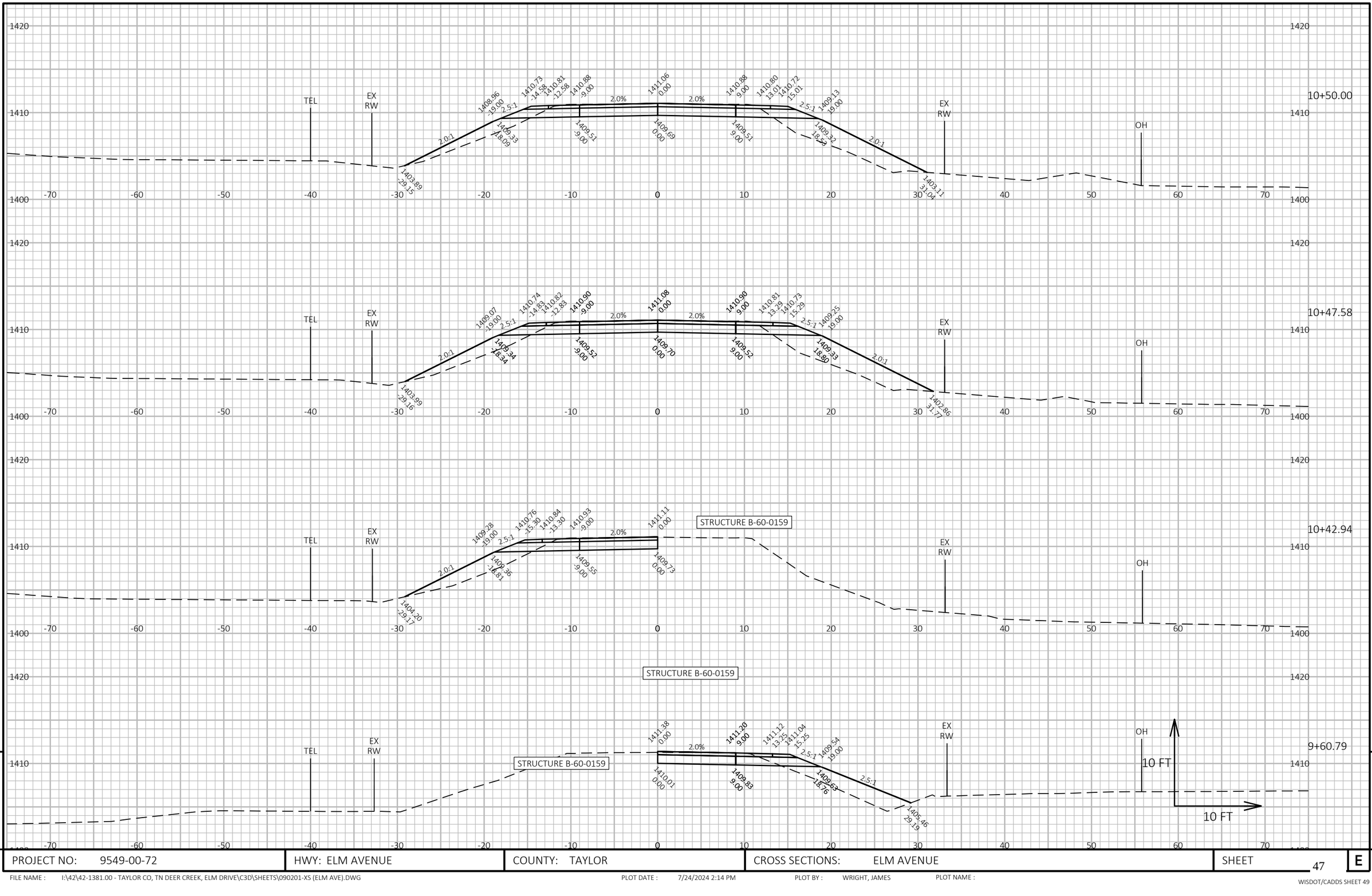



9

9

| PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUNTY: TAYLOR | CROSS SECTIONS: ELM AVENUE | SHEET 46 | E |
|---|---|---|---|---|---|

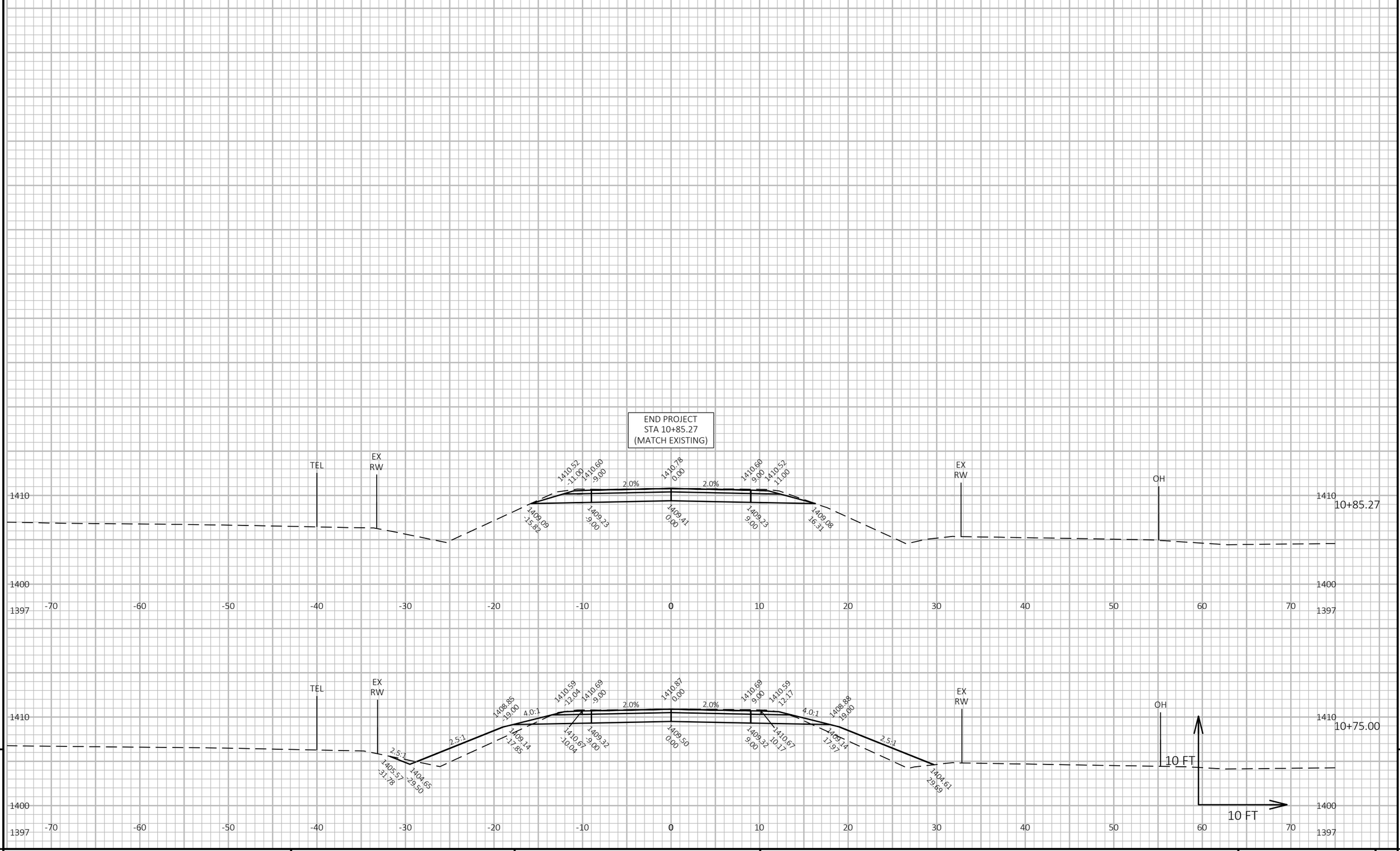
FILE NAME : I:\42\42-1381.00 - TAYLOR CO, TN DEER CREEK, ELM DRIVE\C3D\SHEETS\090201-XS (ELM AVE).DWG PLOT DATE : 7/24/2024 2:14 PM PLOT BY : WRIGHT, JAMES PLOT NAME :




| | | | | |
|---|---|---|---|---|
| PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUNTY: TAYLOR | CROSS SECTIONS: ELM AVENUE | SHEET 47 E |

FILE NAME : I:\42\42-1381.00 - TAYLOR CO, TN DEER CREEK, ELM DRIVE\C3D\SHEETS\090201-XS (ELM AVE).DWG PLOT DATE : 7/24/2024 2:14 PM PLOT BY : WRIGHT, JAMES PLOT NAME :

END PROJECT
STA 10+85.27
(MATCH EXISTING)




| PROJECT NO: 9549-00-72 | HWY: ELM AVENUE | COUNTY: TAYLOR | CROSS SECTIONS: ELM AVENUE | SHEET 48 | E |
|---|---|---|---|---|---|

Notes

**Wisconsin Department of Transportation**

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

EAU

PROJECT ID: **9549-00-73**

WITH: 9549-00-70, 9549-00-71, 9549-00-72

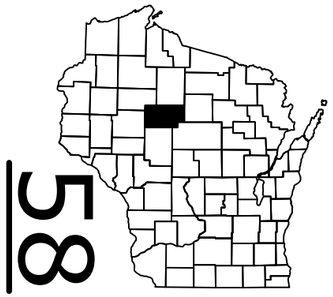
COUNTY: **TAYLOR**

NOVEMBER 2024

ORDER OF SHEETS


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


TOTAL SHEETS = 64







DESIGN DESIGNATION 9549-00-03

| | | | |
|---|---|---|---|
| A.A.D.T. | 2025 | = | 64 |
| A.A.D.T. | 2045 | = | 78 |
| D.H.V. | | = | 12 |
| D.D. | | = | 62/38 |
| T. | | = | 7.7% |
| DESIGN SPEED | | = | 60 MPH |
| ESALS | | = | 9745 |

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

**PLAN OF PROPOSED IMPROVEMENT**

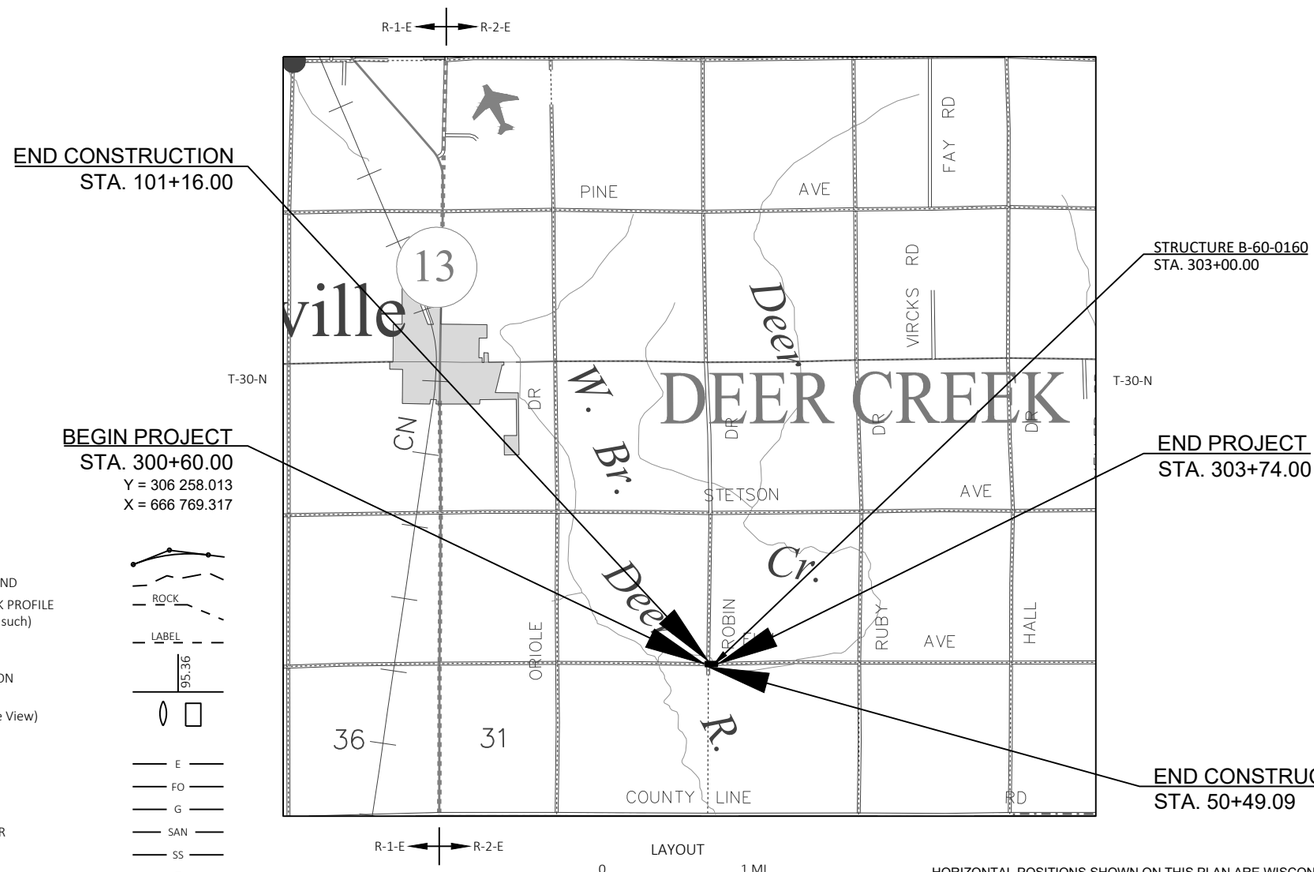
# T DEER CREEK, ELM AVENUE (3)

**DEER CREEK BRIDGE B-60-0160**

## LOC STR
## TAYLOR

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 9549-00-73 | WISC 2025074 | 1 |
| | | |
| | | |
| | | |

STATE PROJECT NUMBER
**9549-00-73**




END CONSTRUCTION
STA. 101+16.00

BEGIN PROJECT
STA. 300+60.00
Y = 306 258.013
X = 666 769.317

STRUCTURE B-60-0160
STA. 303+00.00

END PROJECT
STA. 303+74.00

END CONSTRUCTION
STA. 50+49.09

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.0594 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), TAYLOR 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

*TAYLOR COUNTY*

7/29/2024 (Date)

*Benjamin Stanfley* (Signature and Title of Official)

Highway Commissioner

ORIGINAL PLANS PREPARED BY


WESTBROOK
Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WISCONSIN 53588
PHONE (608) 588-7866
FAX (608) 588-7954


WISCONSIN
AARON B. PALMER
E-35695
RICHLAND CENTER, WI
PROFESSIONAL ENGINEER

DATE: 7/26/24 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

| | |
|---|---|
| Surveyor | WESTBROOK ASSOCIATED ENGINEERS, INC. |
| Designer | WESTBROOK ASSOCIATED ENGINEERS, INC. |
| Project Manager | MATT BERG, P.E. |
| Regional Examiner | NW REGION |
| Regional Supervisor | TOU YANG, P.E. |

APPROVED FOR THE DEPARTMENT

DATE: 7/30/2024 (Signature)

E

## STANDARD ABBREVIATIONS

| | | | |
|---|---|---|---|
| ABUT | ABUTMENT | ML OR M/L | MATCH LINE |
| AC | ACRE | NOM | NOMINAL |
| AGG | AGGREGATE | NC | NORMAL CROWN |
| ∠ | ANGLE | NO | NUMBER |
| AADT | ANNUAL AVERAGE DAILY TRAFFIC | PAVT | PAVEMENT |
| ASPH | ASPHALTIC | PLE | PERMANENT LIMITED EASEMENT |
| BK | BACK | PC | POINT OF CURVATURE |
| BAD | BASE AGGREGATE DENSE | PI | POINT OF INTERSECTION |
| BL OR B/L | BASE LINE | PT | POINT OF TANGENCY |
| BM | BENCH MARK | PCC | PORTLAND CEMENT CONCRETE |
| CL OR C/L | CENTER LINE | LB | POUND |
| Δ | CENTRAL ANGLE OR DELTA | PSI | POUNDS PER SQUARE INCH |
| CONC | CONCRETE | PE | PRIVATE ENTRANCE |
| CONST | CONSTRUCTION | PROJ | PROJECT |
| CP | CONTROL POINT | PL | PROPERTY LINE |
| CO | COUNTY | PRW | PROPOSED RIGHT OF WAY |
| CY | CUBIC YARD | R | RADIUS |
| D | DEGREE OF CURVE | RL OR R/L | REFERENCE LINE |
| DHV | DESIGN HOUR VOLUME | REQD | REQUIRED |
| DIA | DIAMETER | RT | RIGHT |
| DD | DIRECTIONAL DISTRIBUTION | R/W | RIGHT OF WAY |
| DWY | DRIVEWAY | RD | ROAD |
| EA | EACH | RDWY | ROADWAY |
| EL OR ELEV | ELEVATION | SHLDR | SHOULDER |
| EMB | EMBANKMENT | SPECS | SPECIFICATIONS |
| ESALS | EQUIVALENT SINGLE AXLE LOADS | SF | SQUARE FEET |
| EXC | EXCAVATION | SY | SQUARE YARD |
| EXIST | EXISTING | SDD | STANDARD DETAIL DRAWINGS |
| FERT | FERTILIZER | STH | STATE TRUNK HIGHWAY |
| FE | FIELD ENTRANCE | STA | STATION |
| FL OR F/L | FLOW LINE | SL OR S/L | SURVEY LINE |
| FT | FOOT | TEMP | TEMPORARY |
| CWT | HUNDRED WEIGHT | TLE | TEMPORARY LIMITED EASEMENT |
| IN DIA | INCH DIAMETER | TL OR T/L | TRANSIT LINE |
| INTERS | INTERSECTION | T | TRUCKS (PERCENT OF) |
| JT | JOINT | TYP | TYPICAL |
| LT | LEFT | VAR | VARIABLE |
| L | LENGTH OF CURVE | VC | VERTICAL CURVE |
| LF | LINEAR FOOT | VPC | VERTICAL POINT OF CURVATURE |
| LC | LONG CHORD OF CURVE | VPI | VERTICAL POINT OF INTERSECTION |
| LS | LUMP SUM | VPT | VERTICAL POINT OF TANGENCY |
| MGAL | ONE THOUSAND GALLONS | W | WEST |

## WISCONSIN DNR LIAISON

WENDY HENNIGES
DNR NORTHERN REGION HEADQUARTERS
810 W MAPLE STREET
SPOONER, WI 54801
PHONE: (715) 499-1608
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## CONSULTANT LIAISON

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EMAIL: apalmer@westbrookeng.com

## COUNTY HIGHWAY COMMISSIONER

BENJAMIN STANFLEY, E.I.T.
TAYLOR COUNTY
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PHONE: (715) 785-8326
EMAIL: ben.stanfley@co.taylor.wi.us

## WISDOT DESIGN PROJECT MANAGER

MATTHEW BERG, P.E.
WISDOT LOCAL PROGRAM PROJECT MANAGER
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## UTILITIES CONTACTS

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ELECTRIC
WADE MATYKA
N 1831 STATE HWY 13
MEDFORD, WI 54451
PHONE: (715) 678-2411
EMAIL: wade@taylorelectric.org

TDS TELECOM
COMMUNICATIONS
RODNEY LINDEMANN
9508 S WASHINGTON AVE
MARSHFIELD, WI 54449
PHONE: (715) 743-5933
EMAIL: rodney.lindemann@tdstelecom.com

## 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.

THE CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

APPLY TACK COAT BETWEEN LAYERS OF HMA PAVEMENT AT A RATE OF 0.07 GAL/SY.

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

RIGHT OF WAY INFORMATION, AS SHOWN ON THE PLANS, IS APPROXIMATE.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE DONE WITH THE APPROVAL OF THE ENGINEER.

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

THE CONTRACTOR SHALL PREPARE AN EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND SUBMIT THE PLAN TO WISDOT AND WDNR FOR REVIEW AT LEAST 14 DAYS PRIOR TO THE PRECONSTRUCTION CONFERENCE.

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

BIODEGRADABLE NON-NETTED MATTING SHALL BE USED ALONG STREAM CORRIDORS.

APPLY SEED, MULCH OR EROSION MAT, AND FERTILIZER TO ALL DISTURBED AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETE.

SLOPES STEEPER THAN 3:1 REQUIRE EROSION MAT.

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

THE CONTRACTOR'S PAVING OPERATION SHALL BE CONSISTENT WITH THE TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PAVING OPERATIONS REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAYS SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER OPERATIONS ARE COMPLETED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.

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

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

D.O.T. MONUMENT IS TO BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR IN THE SAME WING THAT THE PROPOSED NAME PLATE WILL BE PLACED, AS DIRECTED BY THE ENGINEER.

## 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 = 0.75 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.59 ACRES

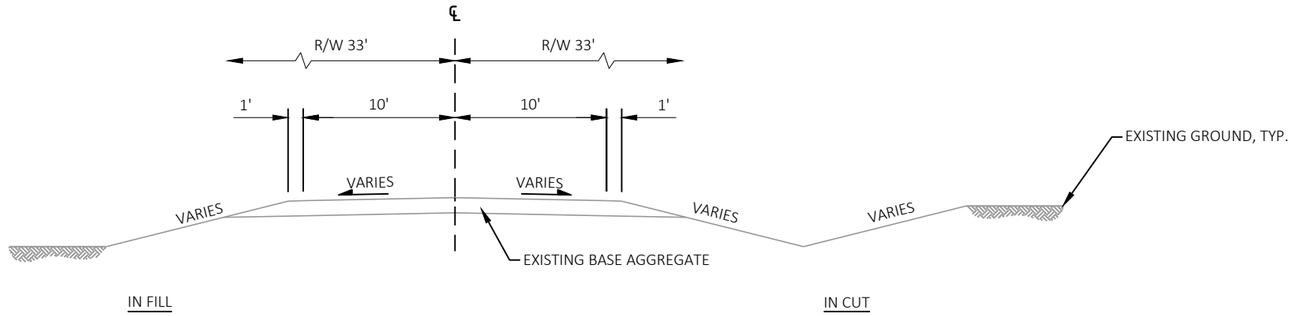
## ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
STREAM REALIGNMENT
INTERSECTION DETAILS
PERMANENT SIGNING
ALIGNMENT DETAILS AND CONTROL POINTS

| ELM AVENUE 4-INCHES | | |
|---|---|---|
| LAYER | THICKNESS | TYPE |
| UPPER | 1.75-INCHES | 4 LT 58-34 S |
| LOWER | 2.25-INCHES | 3 LT 58-34 S |

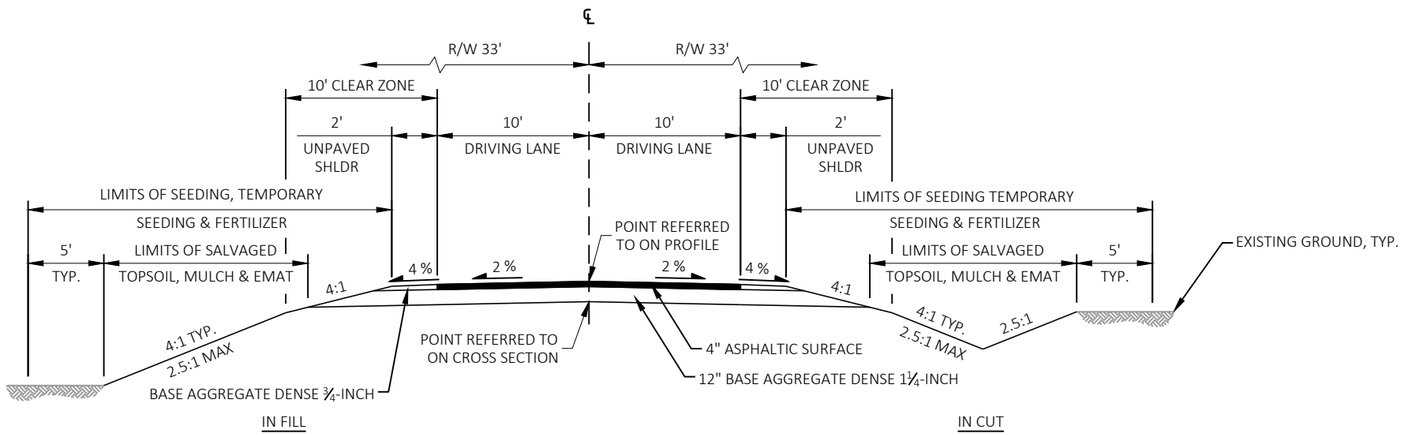
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

2




## EXISTING TYPICAL SECTION

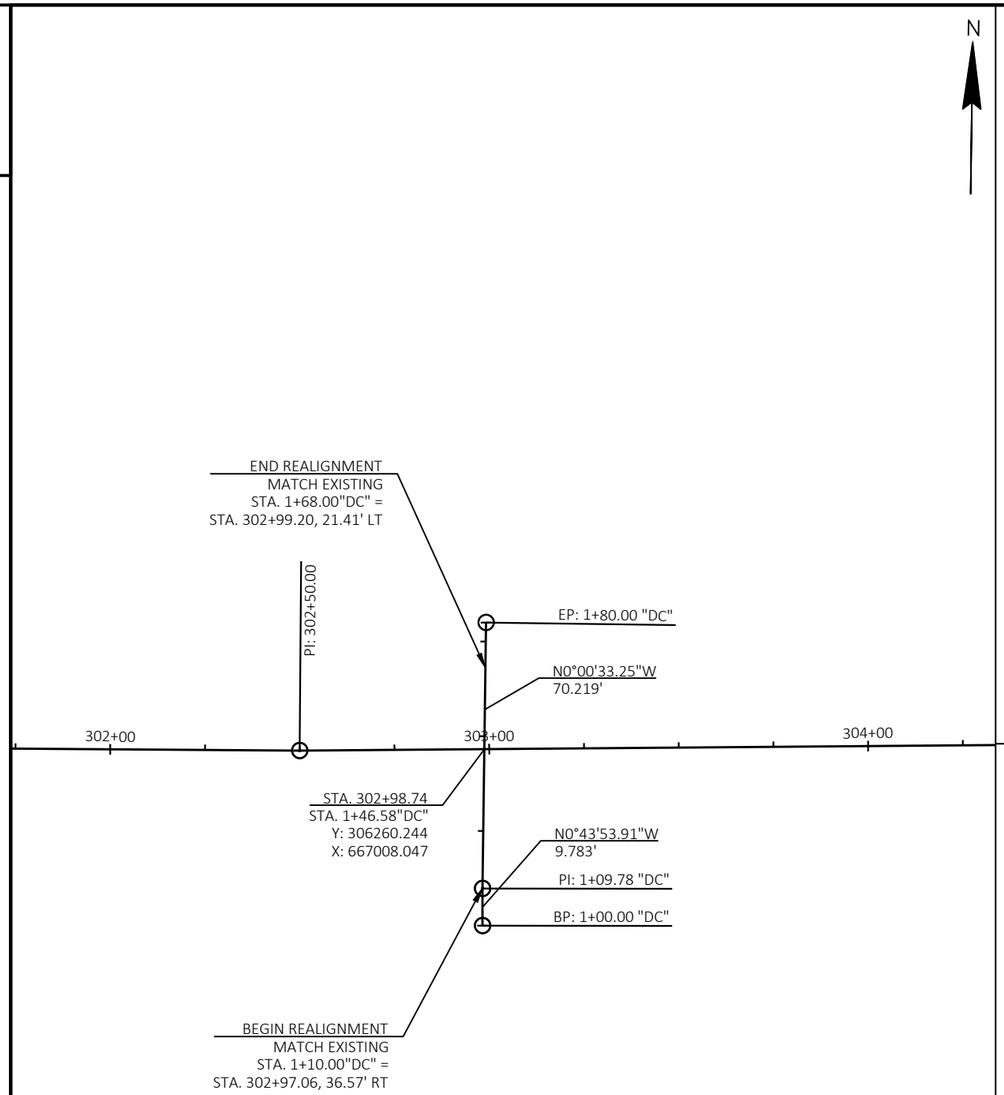
STA 100+17 - 101+16
STA 300+60 - 303+74

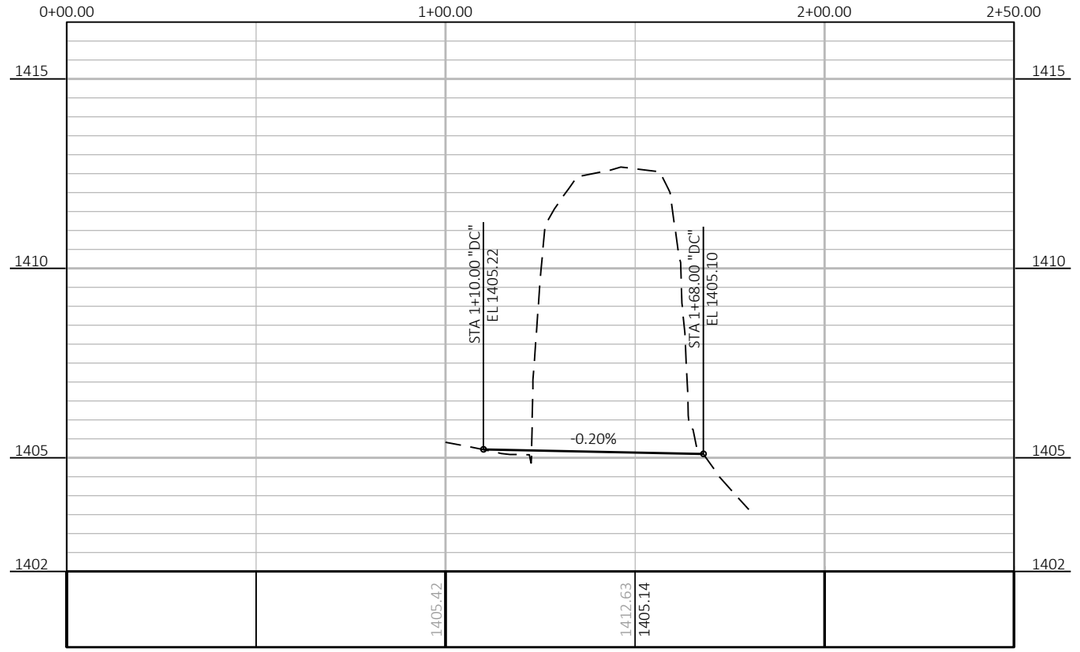



## FINISHED TYPICAL SECTION

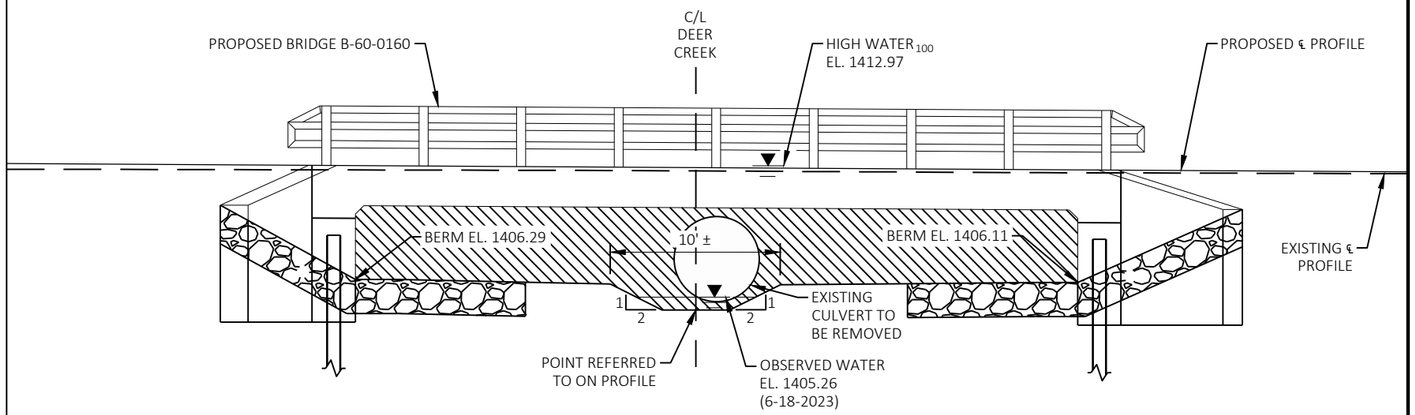
STA 100+17 - 101+16
STA 303+60 - 303+74

| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | TYPICAL SECTIONS | SHEET 3 | E |
|---|---|---|---|---|---|




STREAM REALIGNMENT PROFILE
DEER CREEK

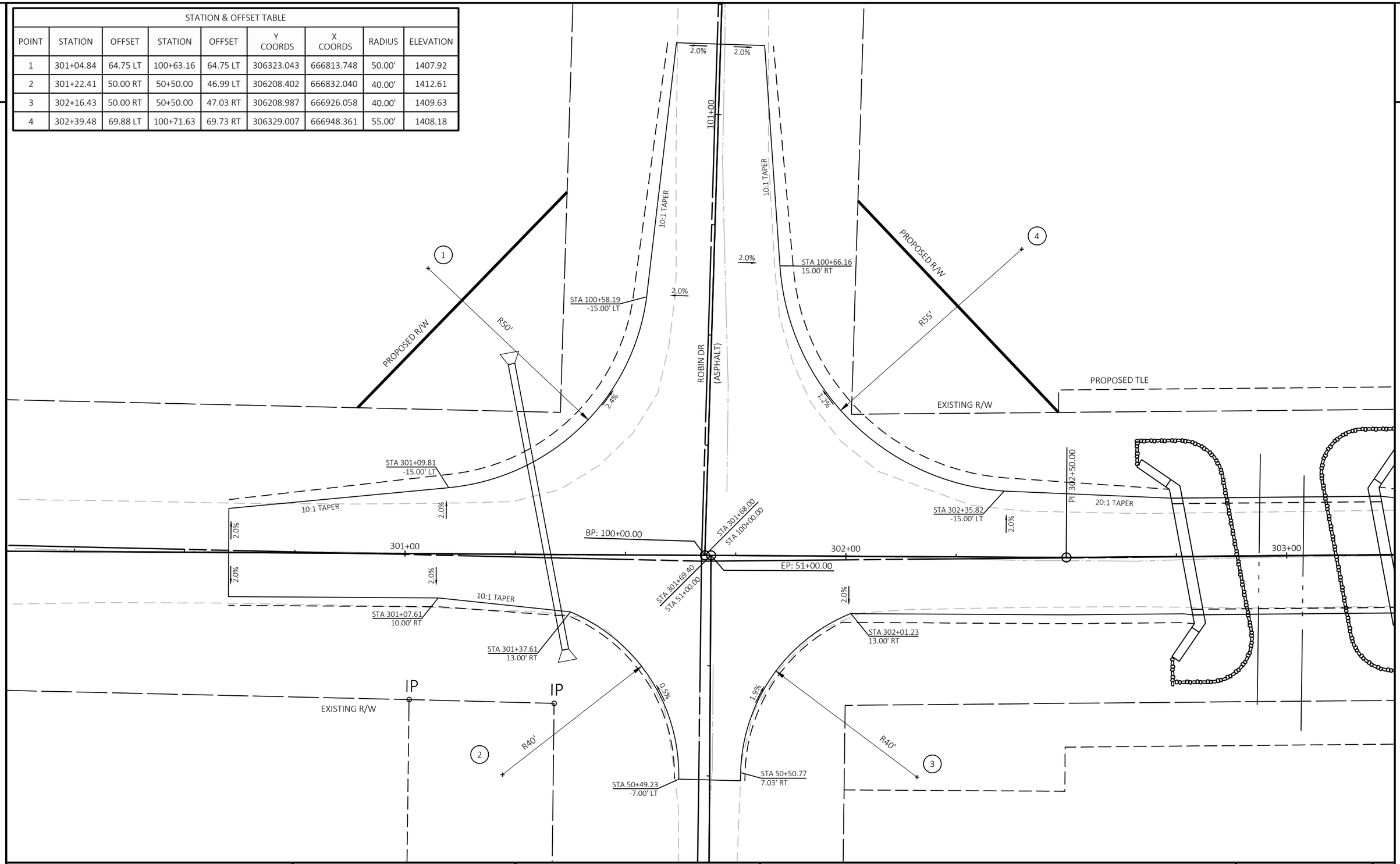



DEER CREEK TYPICAL SECTION
(LOOKING NORTH)

| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | STREAM REALIGNMENT | SHEET 4 | E |
|---|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23124 ID 9549-00-03 T DEER, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\SHEETS\021001_CD.DWG
LAYOUT NAME - 021001_cd
PLOT DATE : 5/30/2024 4:11 PM
PLOT BY : GAVIN WIPPERFURTH
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

| STATION & OFFSET TABLE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| POINT | STATION | OFFSET | STATION | OFFSET | Y COORDS | X COORDS | RADIUS | ELEVATION |
| 1 | 301+04.84 | 64.75 LT | 100+63.16 | 64.75 LT | 306323.043 | 666813.748 | 50.00' | 1407.92 |
| 2 | 301+22.41 | 50.00 RT | 50+50.00 | 46.99 LT | 306208.402 | 666832.040 | 40.00' | 1412.61 |
| 3 | 302+16.43 | 50.00 RT | 50+50.00 | 47.03 RT | 306208.987 | 666926.058 | 40.00' | 1409.63 |
| 4 | 302+39.48 | 69.88 LT | 100+71.63 | 69.73 RT | 306329.007 | 666948.361 | 55.00' | 1408.18 |




| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | INTERSECTION DETAILS | SHEET 5 | E |
|---|---|---|---|---|---|


FILE NAME : G:\00-PROJECT FILES\2023\23124 ID 9549-00-03 T DEER, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\SHEETS\021101_ID.DWG
LAYOUT NAME - 021101_id
PLOT DATE : 6/4/2024 4:49 PM PLOT BY : ERIK MEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

NOTE:
CONSTRUCT IN ACCORDANCE WITH SDD "SIGNING AND MARKING FOR TWO LANE BRIDGES"

N

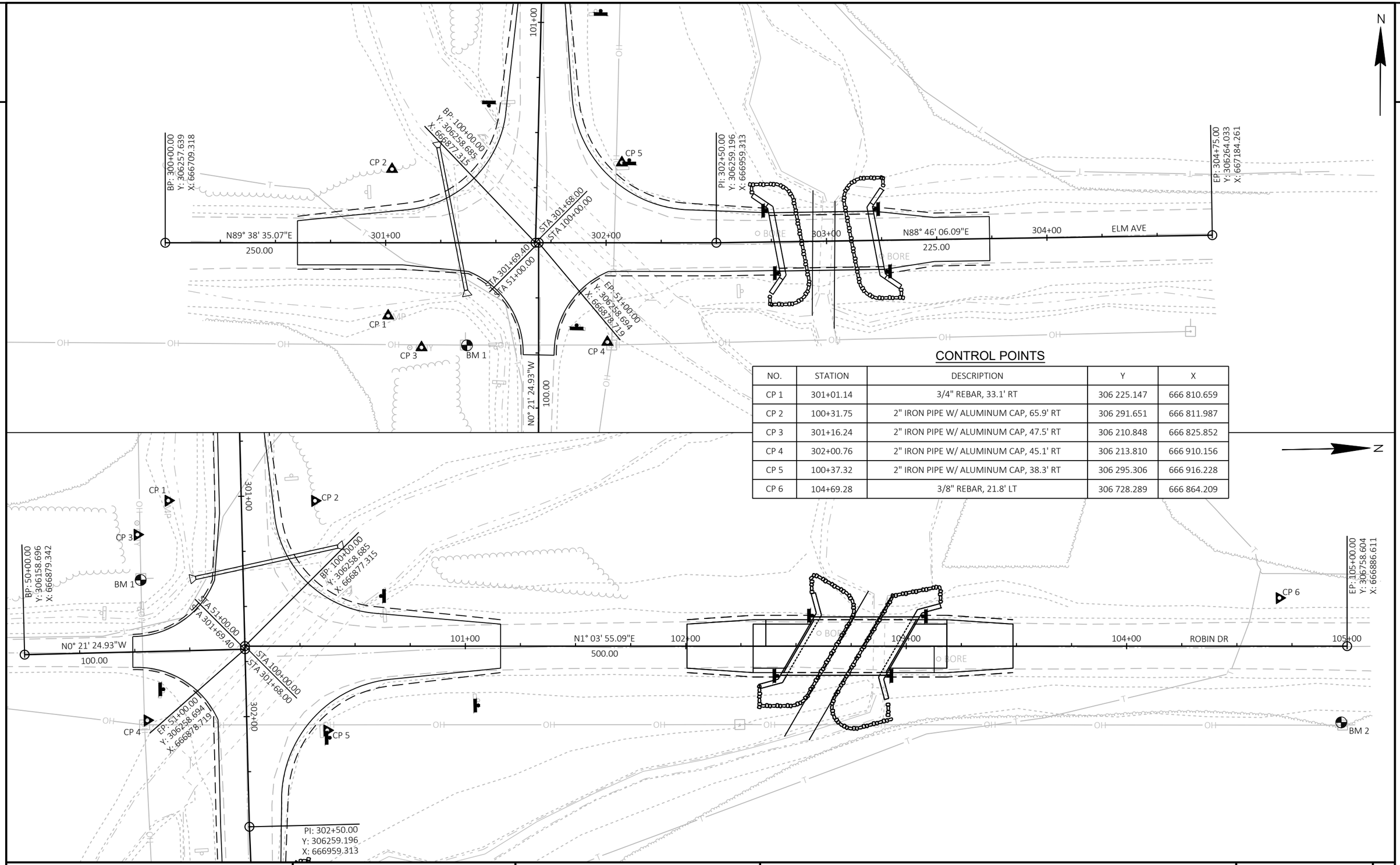
ROBIN DR
101+00
STOP
REMOVE
STOP
R1-1
30"X30"
7
7R
20 TON BRIDGE
0.3 MILES AHEAD
REMOVE
TO BE REMOVED
WITH PROJECT
ID 9549-00-72
ATV ROUTE
REMOVE
ATV ROUTE
D11-10
24"X18"
8R
8
ROBIN DR
ELM AV
2M
W5-52L
12"X36"
3
W5-52R
12"X36"
5
BP: 300+00.00
PI: 302+50.00
EP: 304+75.00
301+00
302+00
303+00
304+00
ELM AVE
STA 301+68.00
STA 100+00.00
STA 301+69.40
STA 51+00.00
BORE
BORE
MP
OH
GUY
BM 1
TO BE REMOVED
WITH PROJECT
ID 9549-00-70
4
6
20 TON BRIDGE
0.5 MILES AHEAD
REMOVE
W5-52R
12"X36"
W5-52L
12"X36"
1
STOP
R1-1
30"X30"
BP: 50+00.00
1R
STOP
REMOVE
ROBIN DR

LEGEND: PERMANENT SIGNING

- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING SIGN
- 0X DENOTES SIGN NUMBER
  - WORK CODE: R=REMOVE, M=MOVE
  - SIGN COUNT SEQUENCE

| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | PERMANENT SIGNING | SHEET 6 | E |
|---|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23124 ID 9549-00-03 T DEER, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\SHEETS\023201_PS.DWG
LAYOUT NAME - 023201_ps
PLOT DATE : 9/26/2024 10:04 AM PLOT BY : GAVIN WIPPERFURTH PLOT NAME : PLOT SCALE : 1 IN:40 FT

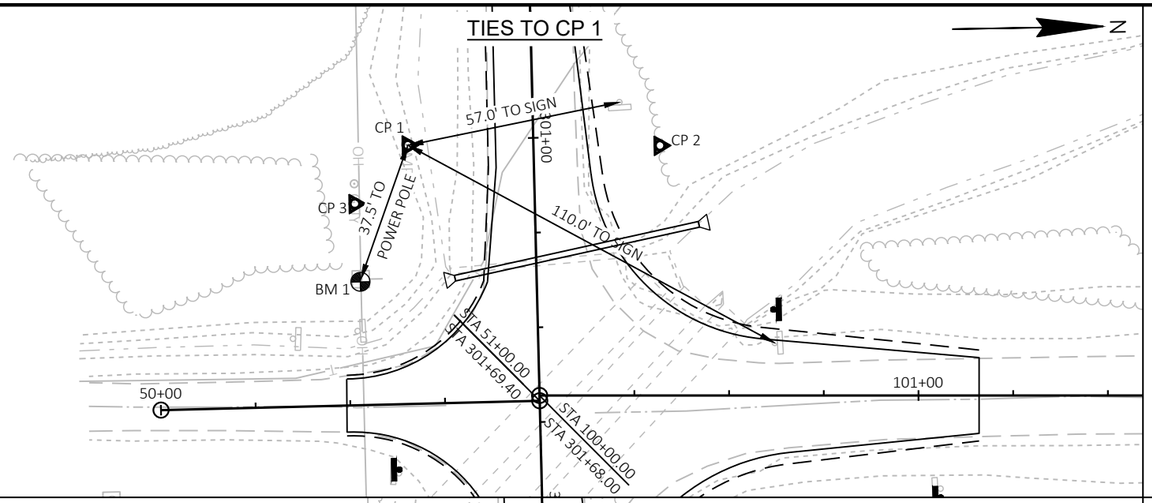


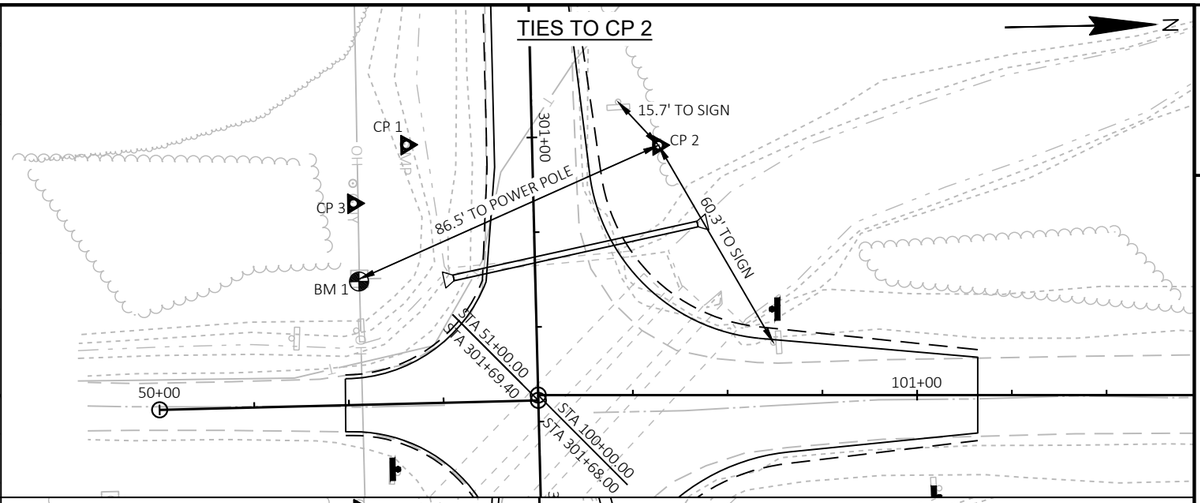

## CONTROL POINTS

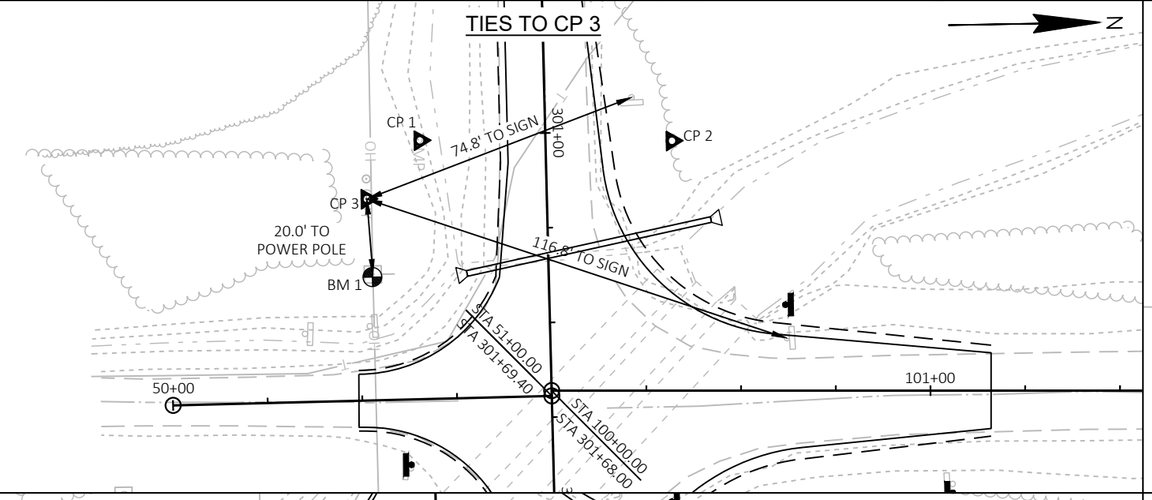
| NO. | STATION | DESCRIPTION | Y | X |
|---|---|---|---|---|
| CP 1 | 301+01.14 | 3/4" REBAR, 33.1' RT | 306 225.147 | 666 810.659 |
| CP 2 | 100+31.75 | 2" IRON PIPE W/ ALUMINUM CAP, 65.9' RT | 306 291.651 | 666 811.987 |
| CP 3 | 301+16.24 | 2" IRON PIPE W/ ALUMINUM CAP, 47.5' RT | 306 210.848 | 666 825.852 |
| CP 4 | 302+00.76 | 2" IRON PIPE W/ ALUMINUM CAP, 45.1' RT | 306 213.810 | 666 910.156 |
| CP 5 | 100+37.32 | 2" IRON PIPE W/ ALUMINUM CAP, 38.3' RT | 306 295.306 | 666 916.228 |
| CP 6 | 104+69.28 | 3/8" REBAR, 21.8' LT | 306 728.289 | 666 864.209 |

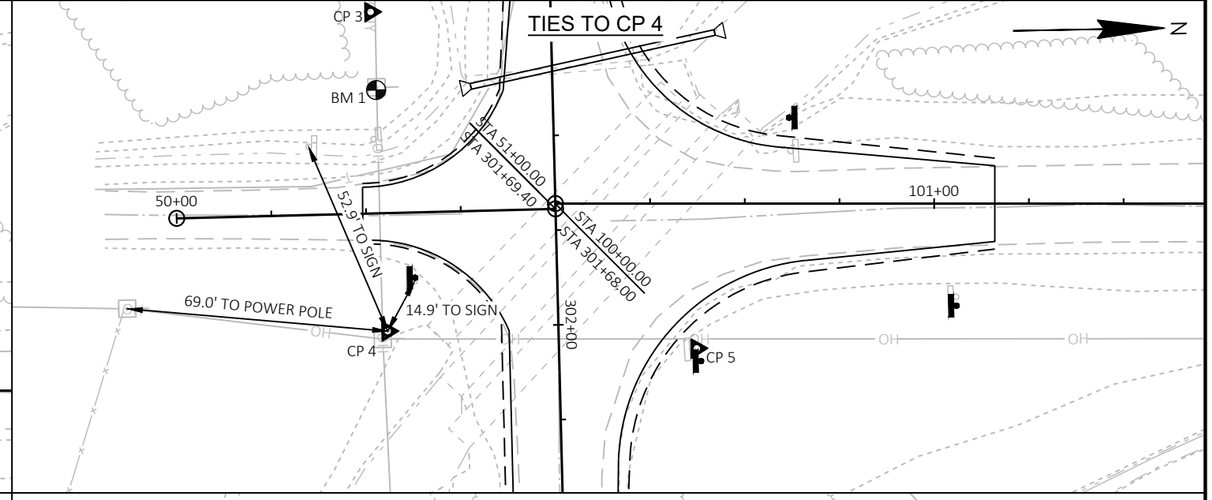
| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | ALIGNMENT DETAILS AND CONTROL POINTS | SHEET 7 | E |
|---|---|---|---|---|---|

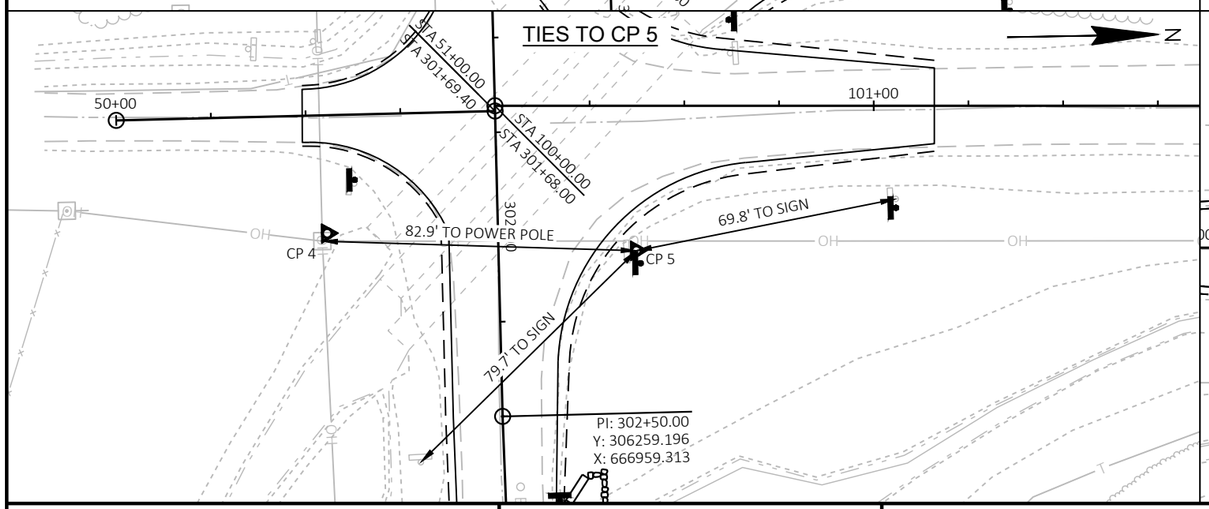
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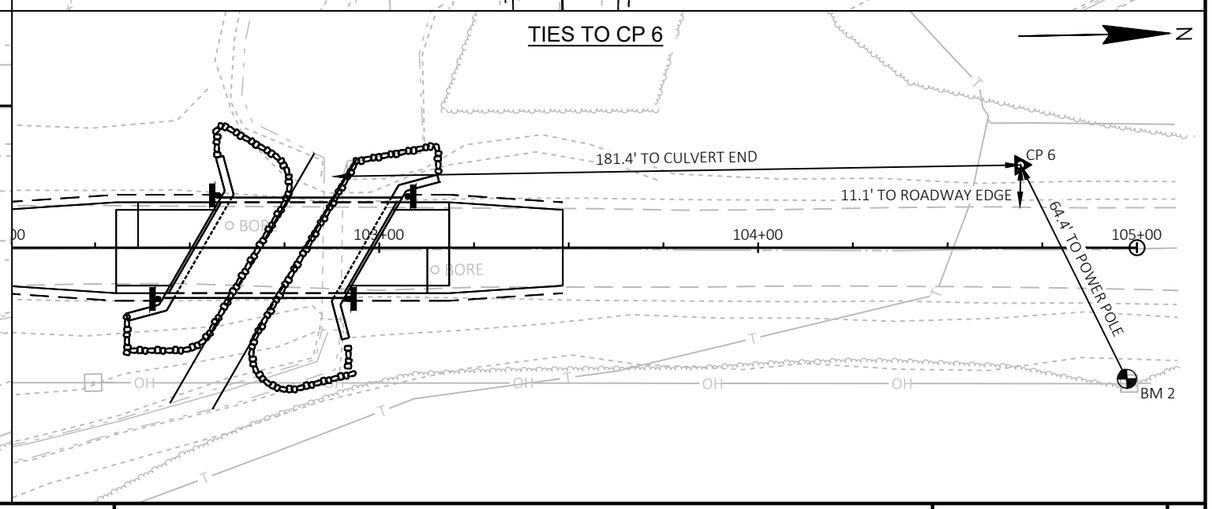



| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | ALIGNMENT DETAILS AND CONTROL POINTS | SHEET 8 | E |
|---|---|---|---|---|---|

9549-00-73

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 203.0100 | Removing Small Pipe Culverts | EACH | 1.000 | 1.000 |
| 0008 | 203.0220 | Removing Structure (structure) 03. 5-Ft Dia. Culvert | EACH | 1.000 | 1.000 |
| 0010 | 203.0220 | Removing Structure (structure) 04. P-60-0915 | EACH | 1.000 | 1.000 |
| 0014 | 205.0100 | Excavation Common | CY | 860.000 | 860.000 |
| 0022 | 206.1001 | Excavation for Structures Bridges (structure) 04. B-60-0160 | EACH | 1.000 | 1.000 |
| 0024 | 208.0100 | Borrow | CY | 193.000 | 193.000 |
| 0026 | 210.1500 | Backfill Structure Type A | TON | 360.000 | 360.000 |
| 0034 | 213.0100 | Finishing Roadway (project) 04. 9549-00-73 | EACH | 1.000 | 1.000 |
| 0036 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 52.000 | 52.000 |
| 0038 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 1,170.000 | 1,170.000 |
| 0044 | 455.0605 | Tack Coat | GAL | 94.000 | 94.000 |
| 0046 | 465.0105 | Asphaltic Surface | TON | 295.000 | 295.000 |
| 0048 | 502.0100 | Concrete Masonry Bridges | CY | 158.000 | 158.000 |
| 0050 | 502.3200 | Protective Surface Treatment | SY | 205.000 | 205.000 |
| 0052 | 505.0400 | Bar Steel Reinforcement HS Structures | LB | 4,200.000 | 4,200.000 |
| 0054 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 21,020.000 | 21,020.000 |
| 0056 | 513.4061 | Railing Tubular Type M | LF | 100.000 | 100.000 |
| 0058 | 516.0500 | Rubberized Membrane Waterproofing | SY | 12.000 | 12.000 |
| 0060 | 520.1018 | Apron Endwalls for Culvert Pipe 18-Inch | EACH | 2.000 | 2.000 |
| 0062 | 520.3418 | Culvert Pipe Class III-A Non-metal 18-Inch | LF | 66.000 | 66.000 |
| 0064 | 550.0020 | Pre-Boring Rock or Consolidated Materials | LF | 245.000 | 245.000 |
| 0066 | 550.1100 | Piling Steel HP 10-Inch X 42 Lb | LF | 315.000 | 315.000 |
| 0068 | 606.0300 | Riprap Heavy | CY | 100.000 | 100.000 |
| 0070 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 150.000 | 150.000 |
| 0078 | 618.0100 | Maintenance and Repair of Haul Roads (project) 04. 9549-00-73 | EACH | 1.000 | 1.000 |
| 0080 | 619.1000 | Mobilization | EACH | 0.250 | 0.250 |
| 0084 | 624.0100 | Water | MGAL | 12.400 | 12.400 |
| 0088 | 625.0500 | Salvaged Topsoil | SY | 880.000 | 880.000 |
| 0090 | 627.0200 | Mulching | SY | 740.000 | 740.000 |
| 0092 | 628.1504 | Silt Fence | LF | 650.000 | 650.000 |
| 0094 | 628.1520 | Silt Fence Maintenance | LF | 1,044.000 | 1,044.000 |
| 0096 | 628.1905 | Mobilizations Erosion Control | EACH | 3.000 | 3.000 |
| 0098 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 2.000 | 2.000 |
| 0100 | 628.2008 | Erosion Mat Urban Class I Type B | SY | 140.000 | 140.000 |
| 0104 | 628.6005 | Turbidity Barriers | SY | 270.000 | 270.000 |
| 0108 | 628.7555 | Culvert Pipe Checks | EACH | 3.000 | 3.000 |
| 0110 | 629.0210 | Fertilizer Type B | CWT | 1.100 | 1.100 |
| 0114 | 630.0130 | Seeding Mixture No. 30 | LB | 40.000 | 40.000 |
| 0116 | 630.0200 | Seeding Temporary | LB | 50.000 | 50.000 |
| 0118 | 630.0500 | Seed Water | MGAL | 38.000 | 38.000 |
| 0120 | 633.5200 | Markers Culvert End | EACH | 2.000 | 2.000 |
| 0122 | 634.0612 | Posts Wood 4x6-Inch X 12-FT | EACH | 4.000 | 4.000 |
| 0124 | 634.0614 | Posts Wood 4x6-Inch X 14-FT | EACH | 3.000 | 3.000 |
| 0126 | 637.2210 | Signs Type II Reflective H | SF | 13.360 | 13.360 |
| 0128 | 637.2230 | Signs Type II Reflective F | SF | 12.000 | 12.000 |
| 0130 | 638.2102 | Moving Signs Type II | EACH | 1.000 | 1.000 |
| 0132 | 638.2602 | Removing Signs Type II | EACH | 3.000 | 3.000 |
| 0134 | 638.3000 | Removing Small Sign Supports | EACH | 3.000 | 3.000 |
| 0136 | 638.4000 | Moving Small Sign Supports | EACH | 1.000 | 1.000 |

9549-00-73

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0138 | 642.5001 | Field Office Type B | EACH | 0.250 | 0.250 |
| 0140 | 643.0420 | Traffic Control Barricades Type III | DAY | 1,295.000 | 1,295.000 |
| 0142 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 2,590.000 | 2,590.000 |
| 0144 | 643.0900 | Traffic Control Signs | DAY | 1,036.000 | 1,036.000 |
| 0146 | 643.5000 | Traffic Control | EACH | 0.250 | 0.250 |
| 0148 | 645.0111 | Geotextile Type DF Schedule A | SY | 60.000 | 60.000 |
| 0150 | 645.0120 | Geotextile Type HR | SY | 214.000 | 214.000 |
| 0152 | 650.4500 | Construction Staking Subgrade | LF | 366.000 | 366.000 |
| 0154 | 650.5000 | Construction Staking Base | LF | 366.000 | 366.000 |
| 0156 | 650.6000 | Construction Staking Pipe Culverts | EACH | 1.000 | 1.000 |
| 0164 | 650.6501 | Construction Staking Structure Layout (structure) 04. B-60-0160 | EACH | 1.000 | 1.000 |
| 0172 | 650.9911 | Construction Staking Supplemental Control (project) 04. 9549-00-73 | EACH | 1.000 | 1.000 |
| 0174 | 650.9920 | Construction Staking Slope Stakes | LF | 366.000 | 366.000 |
| 0178 | 715.0502 | Incentive Strength Concrete Structures | DOL | 948.000 | 948.000 |
| 0190 | SPV.0060 | Special 02. Stream Realignment Structure B-60-0160 | EACH | 1.000 | 1.000 |

| DIVISION | FROM/TO STATION | 205.0100 EXCAVATION COMMON (1) CUT (2) | SALVAGED/UNUSABLE PAVEMENT MATERIAL (3) | AVAILABLE MATERIAL (4) | UNEXPANDED FILL | EXPANDED FILL (5) FACTOR 1.25 | MASS ORDINATE +/- (6) | WASTE | 208.0100 BORROW |
|---|---|---|---|---|---|---|---|---|---|
| DIVISION 1 | | | | | | | | | |
| ELM AVE WEST APPROACH | 300+60.00/302+76.26 | 446 | 0 | 446 | 147 | 184 | 262 | 262 | 0 |
| DIVISION 1 SUBTOTAL | | 446 | 0 | 446 | 147 | 184 | 262 | 262 | 0 |
| DIVISION 2 | | | | | | | | | |
| ELM AVE EAST APPROACH | 303+23.77/303+74.00 | 65 | 0 | 65 | 75 | 94 | -29 | 0 | 0 |
| DIVISION 2 SUBTOTAL | | 65 | 0 | 65 | 75 | 94 | -29 | 0 | 0 |
| DIVISION 3 | | | | | | | | | |
| P-60-0915 | 301+75.00/301+75.00 | 0 | 0 | 0 | 497 | 621 | -621 | 0 | 0 |
| DIVISION 3 SUBTOTAL | | 0 | 0 | 0 | 497 | 621 | -621 | 0 | 0 |
| DIVISION 4 | | | | | | | | | |
| ROBIN DR SOUTH | 50+49.09/50+87.00 | 91 | 0 | 91 | 0 | 0 | 91 | 91 | 0 |
| DIVISION 4 SUBTOTAL | | 91 | 0 | 91 | 0 | 0 | 91 | 91 | 0 |
| DIVISION 5 | | | | | | | | | |
| ROBIN DR NORTH | 100+00.00/101+16.00 | 258 | 0 | 258 | 123 | 154 | 104 | 104 | 0 |
| DIVISION 5 SUBTOTAL | | 258 | 0 | 258 | 123 | 154 | 104 | 104 | 0 |
| GRAND TOTAL | | 860 | 0 | 860 | 842 | 1,053 | -193 | 457 | 193 |

NOTES:
(1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES EXISTING PAVEMENT.
(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(5) EXPANDED FILL FACTOR = 1.25
(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
(7) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

ALL ITEMS CATEGORY 0010 UNLESS NOTED OTHERWISE

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 | 624.0100 WATER MGAL |
|---|---|---|---|---|---|---|
| 300+60.00 | - | 302+76.23 | WEST APPROACH | 19 | 560 | 5.8 |
| 303+23.77 | - | 303+74.00 | EAST APPROACH | 7 | 120 | 1.3 |
| 50+49.09 | - | 50+87.00 | ROBIN DRIVE SOUTH | 4 | 110 | 1.2 |
| 100+15.00 | - | 101+16.00 | ROBIN DRIVE NORTH | 22 | 380 | 4.1 |
| | | | TOTAL | 52 | 1,170 | 12.4 |

ASPHALTIC SURFACE

| STATION | TO | STATION | LOCATION | 455.0605 TACK COAT GAL | 465.0105 ASPHALTIC SURFACE TON |
|---|---|---|---|---|---|
| 300+60.00 | - | 302+76.23 | WEST APPROACH | 45 | 143 |
| 303+23.77 | - | 303+74.00 | EAST APPROACH | 9 | 28 |
| 50+49.09 | - | 50+87.00 | ROBIN DRIVE SOUTH | 9 | 26 |
| 100+15.00 | - | 101+16.00 | ROBIN DRIVE NORTH | 31 | 98 |
| | | | TOTAL | 94 | 295 |

CULVERT PIPE

| STATION | LOCATION | 203.0100 REMOVING SMALL PIPE CULVERTS EACH | 520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH | 520.3418 CULVERT PIPE CLASS III-A NON-METAL 18-INCH LF |
|---|---|---|---|---|
| 301+31 | WEST APPROACH | 1 | 2 | 66 |
| | TOTAL | 1 | 2 | 66 |

SILT FENCE

| STATION | TO | STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF |
|---|---|---|---|---|---|
| 300+54.00 | - | 302+79.00 | WEST APPROACH, LT | 121 | 242 |
| 301+83.00 | - | 302+93.00 | WEST APPROACH, RT | 103 | 206 |
| 303+03.00 | - | 303+77.00 | EAST APPROACH, RT | 73 | 146 |
| 303+19.00 | - | 303+77.00 | EAST APPROACH, LT | 31 | 62 |
| 100+33.00 | - | 101+20.00 | ROBIN DRIVE, RT | 102 | 204 |
| 100+75.00 | - | 101+19.00 | ROBIN DRIVE, LT | 92 | 184 |
| | | | UNDISTRIBUTED | 128 | --- |
| | | | TOTAL | 650 | 1,044 |

FINISHING ITEMS

| STATION | TO | STATION | LOCATION | 625.0500 SALVAGED TOPSOIL SY | 627.0200 MULCHING SY | 628.2008 EROSION MAT URBAN CLASS I TYPE B SY | 629.0210 FERTILIZER TYPE B CWT | 630.0130 SEEDING MIXTURE NO. 30 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|---|---|---|
| 300+60 | - | 302+74 | WEST APPROACH, LT | 42 | 42 | --- | 0.08 | 3 | 4 | 2.9 |
| 300+60 | - | 302+79 | WEST APPROACH, RT | 285 | 285 | --- | 0.32 | 10 | 14 | 11.3 |
| 303+21 | - | 303+74 | EAST APPROACH, LT | 65 | 65 | --- | 0.08 | 3 | 4 | 2.6 |
| 303+26 | - | 303+74 | EAST APPROACH, RT | 67 | 45 | 23 | 0.08 | 3 | 4 | 2.6 |
| 100+17 | - | 101+16 | ROBIN DRIVE, LT | 142 | 52 | 90 | 0.17 | 5 | 8 | 6.0 |
| 100+20 | - | 101+16 | ROBIN DRIVE, RT | 102 | 102 | --- | 0.14 | 4 | 6 | 4.9 |
| | | | UNDISTRIBUTED | 177 | 149 | 27 | 0.23 | 12 | 10 | 7.7 |
| | | | TOTAL | 880 | 740 | 140 | 1.10 | 40 | 50 | 38.0 |

MOBILIZATIONS EROSION CONTROL

| LOCATION | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH |
|---|---|---|
| PROJECT | 3 | 2 |
| TOTAL | 3 | 2 |

ALL ITEMS CATEGORY 0010 UNLESS NOTED OTHERWISE

## CULVERT PIPE CHECKS

| STATION | LOCATION | 628.7555 EACH |
|---|---|---|
| 301+31 | WEST APPROACH, RT | 3 |
| | TOTAL | 3 |

## TURBIDITY BARRIERS

| LOCATION | 628.6005 SY |
|---|---|
| P-60-0915 WEST | 16 |
| P-60-0915 EAST | 15 |
| WEST ABUTMENT | 85 |
| EAST ABUTMENT | 87 |
| UNDISTRIBUTED | 67 |
| TOTAL | 270 |

## PERMANENT SIGNING

| STATION | LOCATION | SIGN NUMBER | SIGN CODE | 634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH | 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 | 638.2102 MOVING SIGNS TYPE II EACH | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | 638.4000 MOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 301+88 | ELM AVE, RT | 1R | R1-1 | --- | --- | --- | --- | --- | 1 | 1 | --- | STOP |
| 301+88 | ELM AVE, RT | 1 | R1-1 | --- | 1 | 5.18 | --- | --- | --- | --- | --- | STOP |
| 302+07 | ELM AVE, LT | 2M | M1-94 | --- | --- | --- | --- | 1 | --- | --- | 1 | ROBIN DR & ELM AVE |
| 302+73 | ELM AVE, LT | 3 | W5-52L | 1 | --- | --- | 3 | --- | --- | --- | --- | BRIDGE HASH MARKS |
| 302+78 | ELM AVE, RT | 4 | W5-52R | 1 | --- | --- | 3 | --- | --- | --- | --- | BRIDGE HASH MARKS |
| 302+22 | ELM AVE, LT | 5 | W5-52R | 1 | --- | --- | 3 | --- | --- | --- | --- | BRIDGE HASH MARKS |
| 303+27 | ELM AVE, RT | 6 | W5-52L | 1 | --- | --- | 3 | --- | --- | --- | --- | BRIDGE HASH MARKS |
| 100+62 | ROBIN DR, LT | 7R | R1-1 | --- | --- | --- | --- | --- | 1 | 1 | --- | STOP |
| 100+62 | ROBIN DR, LT | 7 | R1-1 | --- | 1 | 5.18 | --- | --- | --- | --- | --- | STOP |
| 101+06 | ROBIN DR, RT | 8R | D11-10 | --- | --- | --- | --- | --- | --- | 1 | --- | ATV ROUTE |
| 101+06 | ROBIN DR, RT | 8 | D11-10 | --- | 1 | 3 | --- | --- | --- | --- | --- | ATV ROUTE |
| | | | TOTAL | 4 | 3 | 13.36 | 12 | 1 | 3 | 3 | 1 | |

## TRAFFIC CONTROL

| LOCATION | DURATION DAY | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY | 643.0900 TRAFFIC CONTROL SIGNS NO. | 643.0900 TRAFFIC CONTROL SIGNS DAY |
|---|---|---|---|---|---|---|---|
| WEST APPROACH | 37 | 9 | 333 | 18 | 666 | 7 | 259 |
| EAST APPROACH | 37 | 9 | 333 | 18 | 666 | 7 | 259 |
| ROBIN DRIVE SOUTH | 37 | 5 | 185 | 10 | 370 | 4 | 148 |
| ROBIN DRIVE NORTH | 37 | 5 | 185 | 10 | 370 | 4 | 148 |
| UNDISTRIBUTED | --- | 7 | 259 | 14 | 518 | 6 | 222 |
| PROJECT | --- | --- | --- | --- | --- | --- | --- |
| TOTAL | | 35 | 1,295 | 70 | 2,590 | 28 | 1,036 |

## CONSTRUCTION STAKING

| STATION | TO | STATION | LOCATION | 650.4500 CONSTRUCTION STAKING SUBGRADE LF | 650.5000 CONSTRUCTION STAKING BASE LF | 650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT 01. B-60-0160 EACH | 650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 01. 9549-00-73 EACH | 650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH | 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF |
|---|---|---|---|---|---|---|---|---|---|
| 300+60.00 | - | 302+76.23 | WEST APPROACH | 217 | 217 | --- | --- | 1 | 217 |
| 303+23.77 | - | 303+74.00 | EAST APPROACH | 51 | 51 | --- | --- | --- | 51 |
| 100+18.00 | - | 101+16.00 | ROBIN DRIVE NORTH | 98 | 98 | --- | --- | --- | 98 |
| | | | PROJECT | --- | --- | 1 | 1 | --- | --- |
| | | | TOTAL | 366 | 366 | 1* | 1 | 1 | 366 |

* CATEGORY 0020

| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | MISCELLANEOUS QUANTITIES | SHEET 12 | E |
|---|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23124 ID 9549-00-03 T DEER, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\SHEETS\030201_MQ.DWG
LAYOUT NAME - 030202_mq
PLOT DATE : 9/25/2024 1:29 PM PLOT BY : GAVIN WIPPERFURTH PLOT NAME : PLOT SCALE : 1" = 1'
WISDOT/CADDS SHEET 42

## CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
TO BE REMOVED
BRIDGE
CULVERT

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)
OFF-PREMISE SIGN

| | COMPENSABLE | NON-COMPENSABLE |
|---|---|---|
| ELECTRIC POLE | | |
| TELEPHONE POLE | | |
| PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.) | | |

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25
UTILITY NUMBER 40
PARALLEL OFFSETS

## CONVENTIONAL UTILITY SYMBOLS

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

## CONVENTIONAL ABBREVIATIONS

| | | | |
|---|---|---|---|
| ACCESS RIGHTS | AR | POINT OF COMPOUND CURVE | PCC |
| ACRES | AC | POINT OF INTERSECTION | PI |
| AHEAD | AH | PROPERTY LINE | PL |
| ALUMINUM | ALUM | RECORDED AS | (100') |
| AND OTHERS | ET AL | REEL / IMAGE | R/I |
| BACK | BK | REFERENCE LINE | R/L |
| BLOCK | BLK | REMAINING | REM |
| CENTERLINE | C/L | RESTRICTIVE DEVELOPMENT EASEMENT | RDE |
| CERTIFIED SURVEY MAP | CSM | | |
| CONCRETE | CONC | RIGHT | RT |
| COUNTY | CO | RIGHT OF WAY | R/W |
| COUNTY TRUNK HIGHWAY | CTH | SECTION | SEC |
| DISTANCE | DIST | SEPTIC VENT | SEPV |
| CORNER | COR | SQUARE FEET | SF |
| DOCUMENT NUMBER | DOC | STATE TRUNK HIGHWAY | STH |
| EASEMENT | EASE | STATION | STA |
| EXISTING | EX | TELEPHONE PEDESTAL | TP |
| GAS VALVE | GV | TEMPORARY LIMITED EASEMENT | TLE |
| GRID NORTH | GN | | |
| HIGHWAY EASEMENT | HE | TRANSPORTATION PROJECT PLAT | TPP |
| IDENTIFICATION | ID | UNITED STATES HIGHWAY | USH |
| LAND CONTRACT | LC | VOLUME | V |
| LEFT | LT | | |
| MONUMENT | MON | | |
| NATIONAL GEODETIC SURVEY | NGS | | |
| NUMBER | NO | | |
| OUTLOT | OL | | |
| PAGE | P | | |
| POINT OF TANGENCY | PT | | |
| PERMANENT LIMITED EASEMENT | PLE | | |
| POINT OF BEGINNING | POB | | |
| POINT OF CURVATURE | PC | | |

## CURVE DATA ABBREVIATIONS

| | |
|---|---|
| LONG CHORD | LCH |
| LONG CHORD BEARING | LCB |
| RADIUS | R |
| DEGREE OF CURVE | D |
| CENTRAL ANGLE | Δ/DELTA |
| LENGTH OF CURVE | L |
| TANGENT | T |
| DIRECTION AHEAD | DA |
| DIRECTION BACK | DB |

## NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), TAYLOR COUNTY, NAD83 (2011)IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

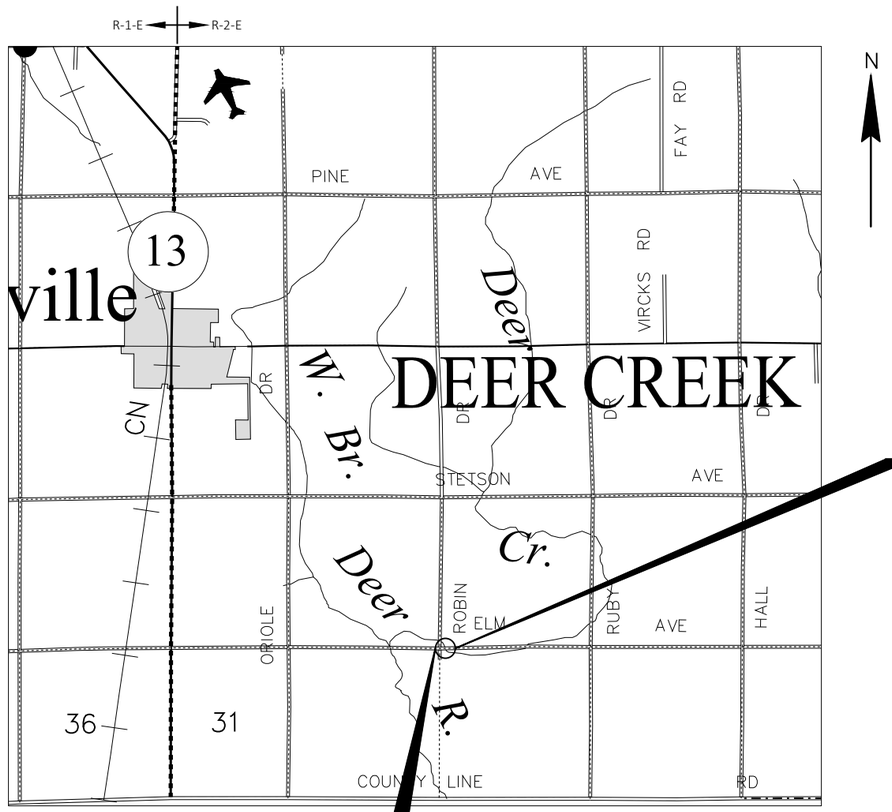
DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

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

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE TOWN OF DEER CREEK.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE DETAIL PAGES.




END RELOCATION ORDER
STA 303+75.00
Y = 306 261.883
X = 667 084.284

BEGIN RELOCATION ORDER
STA 300+89.06
Y = 306 258.194
X = 666 798.377

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.054 MI

| R/W PROJECT NUMBER 9549-00-03 | SHEET NUMBER | TOTAL SHEETS |
|---|---|---|
| FEDERAL PROJECT NUMBER | 4.01 | 2 |

PLAT OF RIGHT OF WAY REQUIRED FOR

# T DEER CREEK, ELM AVENUE (3)
# DEER CREEK BRIDGE B-60-0160

| LOC STR | TAYLOR |
|---|---|

CONSTRUCTION PROJECT NUMBER
9549-00-73

THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

ACCEPTED FOR TOWN OF DEER CREEK

DATE: 2-28-24 Reg Lakowske
TOWN CHAIR

ORIGINAL PLANS PREPARED BY


WESTBROOK
Associated Engineers, Inc.
619 East Hoxie St. | P.O. Box 429 | Spring Green, WI 53588
P: (608) 588-7866 | F: (608) 588-7954 | www.westbrookeng.com


WISCONSIN
NICHOLAS J. BREY
S-3145
LAVALLE
WISCONSIN
LAND SURVEYOR
02-23-2024

DATE: 02-23-2024 (Signatur

REVISION DATE

# TOWN OF DEER CREEK

## COURSE TABLE

| COURSE | BEARING | DISTANCE |
|---|---|---|
| 1–2 | N88°57'14"W | 33.00' |
| 2–3 | S43°27'30"W | 68.20' |
| 3–4 | S0°21'25"E | 33.00' |
| 4–SE 29 | S89°23'39"E | 78.19' |
| SE 29–1 | N1°02'46"E | 82.75' |
| 1–SW 28 | S1°02'46"W | 82.75' |
| SW 28–5 | N88°46'50"E | 80.83' |
| 5–6 | N0°21'25"W | 33.00' |
| 6–7 | N44°12'07"W | 66.13' |
| 7–1 | N88°57'14"W | 33.00' |

EXISTING RIGHT-OF-WAY FOR ELM AVE AND ROBIN DRIVE ARE BASED ON THE SOUTH AND WEST LINE OF THE SW1/4-SW1/4 OF SECTION 28, T30N, R02E PER CSM 2484, VOL 12, PAGE 285, RECORDED AS DOCUMENT #368136, AND CSM 2486, VOL 12, PAGE 289, RECORDED AS DOCUMENT #368273.

GN

## TLE TABLE

| TLE POINT | STATION | OFFSET |
|---|---|---|
| T1 | 302+48.07 | –38.00' |
| T2 | 303+50.00 | –38.00' |
| T3 | 303+50.00 | –32.91' |
| T4 | 302+00.04 | 33.83' |
| T5 | 301+99.92 | 53.00' |
| T6 | 302+50.00 | 53.00' |
| T7 | 302+50.00 | 43.00' |
| T8 | 303+75.00 | 43.00' |
| T9 | 303+75.00 | 33.07' |

SE ¼ - SE ¼ SEC 29

1" IRON ROD WITH TAYLOR COUNTY CAP
Y = 308 878.845
X = 666 924.438

SW ¼ - SW ¼ SEC 28

DEER CREEK

STREAM EDGE, TYP.

① BACH PROPERTIES LLC DOC #294593

② DARYL L NEUNSCHWANDER AND DARIA L NEUENSCHWANDER, HUSBAND AND WIFE DOC #368432

S01°02'46"W 2539.17' MON TO POINT

N1°03'55"E

101+00

PROPOSED R/W

TDS TELECOM

S01°02'46"W 2621.92' MON TO MON

ROBIN DR

DEER CREEK

PROPOSED TLE

EXISTING R/W

BP: 300+00.00

EP: 304+75.00

PT: 302+50.00

33'

N89°38'35"E

301+00

302+00

303+00

304+00

N88°46'06"E

ELM AVE

BORE

BEGIN RELOCATION ORDER
STA 300+89.06
0.829' NORTH AND 78.188' WEST OF THE SE CORNER OF SECTION 29, T30N, R02E, TOWN OF DEER CREEK, TAYLOR COUNTY, WI
Y = 306 258.194
X = 666 798.377

SLOPE INTERCEPT, TYP.

HUGH & MARY HILDERBRANDT TRUST DOC #368336

COTTON GIN SPIKE
8" BELOW SURFACE
Y = 306 257.365
X = 666 876.565

TAYLOR ELECTRIC COOPERATIVE

GUY

PROPOSED TLE

CHANNEL REALIGNMENT

END RELOCATION ORDER
STA 303+75.00
4.518' NORTH AND 207.719' EAST OF THE SW CORNER OF SECTION 28, T30N, R02E, TOWN OF DEER CREEK, TAYLOR COUNTY, WI
Y = 306 261.883
X = 667 084.284

③ TIMOTHY J FOX AND LISA M FOX, HUSBAND AND WIFE CSM 2484, VOL 12 PAGE 285 DOC #368136

NE ¼ - NE ¼ SEC 32

NW ¼ - NW ¼ SEC 33

BACH PROPERTIES LLC CSM 2486 VOL 12, PAGE 289 DOC #368273

33' 33'

## POINT TABLE

| | FROM ROAD REFERENCE LINE (ELM AVE) | | COORDINATES | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | NORTHING | EASTING |
| 1 | 301+69.27 | –81.40' | 306 340.099 | 666 878.076 |
| 2 | 301+36.28 | –82.22' | 306 340.701 | 666 845.082 |
| 3 | 300+89.06 | –33.00' | 306 291.196 | 666 798.171 |
| 4 | 300+89.06 | 0.00' | 306 258.192 | 666 798.377 |
| 5 | 302+48.07 | 0.10' | 306 259.085 | 666 957.382 |
| 6 | 302+48.07 | –32.91' | 306 292.088 | 666 957.176 |
| 7 | 302+02.26 | –80.60' | 306 339.496 | 666 911.071 |

## SCHEDULE OF LANDS AND INTERESTS REQUIRED

| PARCEL NUMBER | OWNER(S) | INTEREST REQUIRED | R/W ACRES REQUIRED | | | TLE ACRES REQUIRED |
|---|---|---|---|---|---|---|
| | | | NEW | EXISTING | TOTAL | |
| 1 | BACH PROPERTIES LLC | FEE | 0.026 | 0.097 | 0.123 | 0.000 |
| 2 | DARYL L NEUENSCHWANDER & DARIA L NEUENSCHWANDER | FEE & TLE | 0.026 | 0.098 | 0.124 | 0.012 |
| 3 | TIMOTHY J FOX & LISA M FOX | TLE | 0.000 | 0.000 | 0.000 | 0.051 |
| 100 | TAYLOR ELECTRIC COOPERATIVE | REALEASE OF RIGHTS | --- | --- | --- | --- |

OWNERS NAMES ARE SHOWN FOR REFERANCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN OF DEER CREEK.

REVISION DATE

DATE 02/23/2024

GRID FACTOR N/A

SCALE, FEET 0 20 40

HWY: ELM AVENUE

COUNTY: TAYLOR

STATE R/W PROJECT NUMBER 9549-00-03

CONSTRUCTION PROJECT NUMBER 9549-00-73

PLAT SHEET 4.02

PS&E SHEET 14

E

FILE NAME : 040102_RP.DWG
LAYOUT NAME - 040102_rp

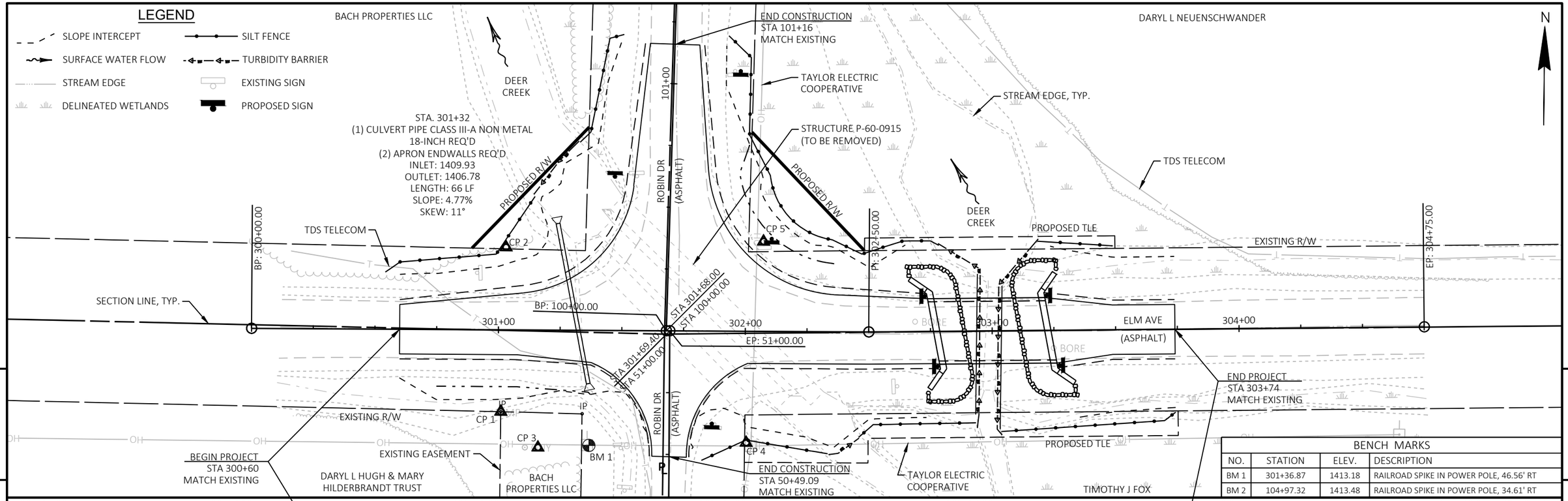
PLOT DATE : 2/27/2024 1:22 PM

PLOT BY : ERICA BAUER

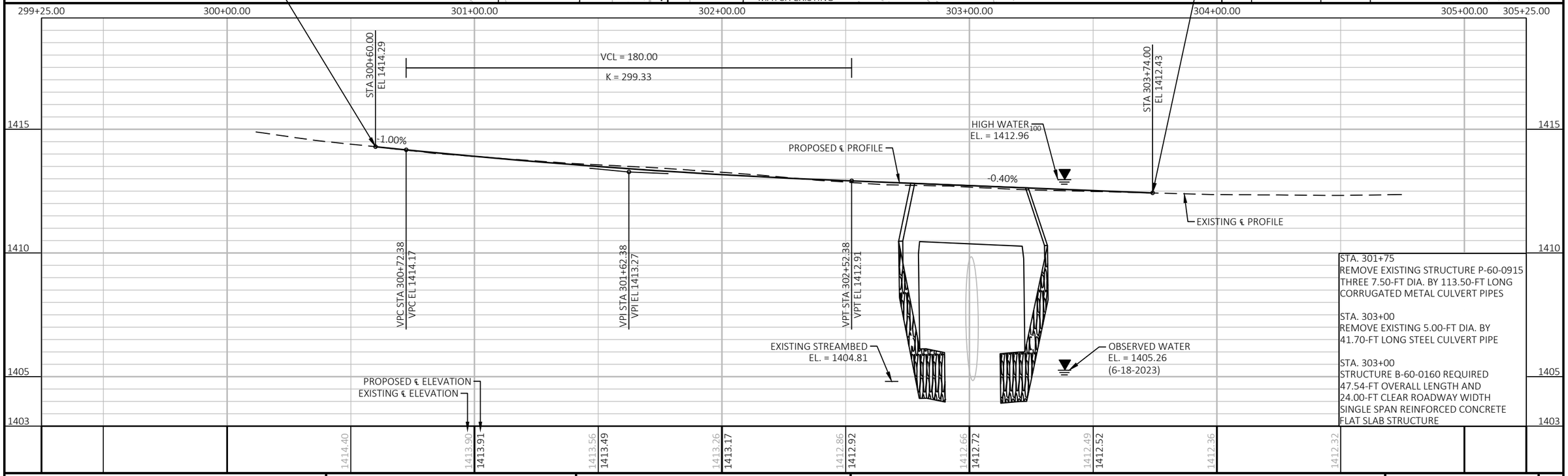
PLOT NAME :

PLOT SCALE :

WISDOT/CADDS SHEET 75




| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| BM 1 | 301+36.87 | 1413.18 | RAILROAD SPIKE IN POWER POLE, 46.56' RT |
| BM 2 | 104+97.32 | 1413.48 | RAILROAD SPIKE IN POWER POLE, 34.61' RT |

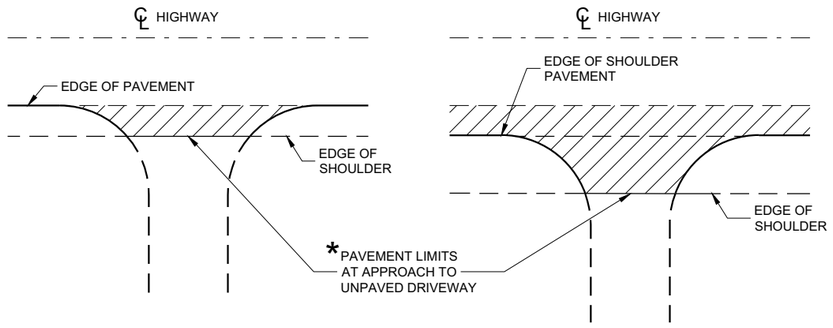



| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | PLAN AND PROFILE: | SHEET 15 | E |
|---|---|---|---|---|---|


FILE NAME : G:\00-PROJECT FILES\2023\23124 ID 9549-00-03 T DEER, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\SHEETS\050101_PP.DWG
LAYOUT NAME - 050101_pp
PLOT DATE : 7/29/2024 11:28 AM PLOT BY : GAVIN WIPPERFURTH PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

# Standard Detail Drawing List

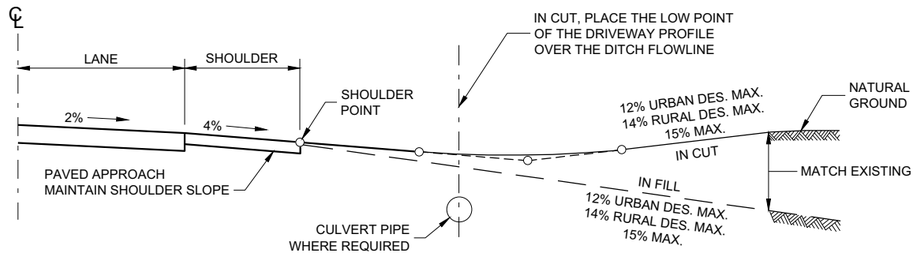
| | |
|---|---|
| 08E09-06 | SILT FENCE |
| 08E11-02 | TURBIDITY BARRIER |
| 08F01-11 | APRON ENDWALLS FOR CULVERT PIPE |
| 08F04-08 | JOINT TIES FOR CONCRETE PIPE  AND CONCRETE COLLAR DETAIL |
| 09A01-14A | AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND  D AND TEE INTERSECTION BYPASS LANE |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 13C19-03 | HMA LONGITUDINAL JOINTS |
| 15A03-02A | FLEXIBLE MARKER POST FOR CULVERT END |
| 15A03-02B | FLEXIBLE MARKER POST FOR CULVERT END |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C06-12 | SIGNING & MARKING FOR TWO LANE BRIDGES |



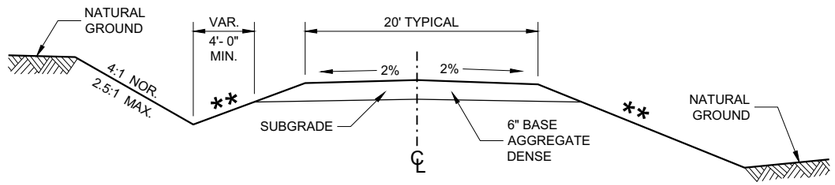

**PLAN VIEW**
(UNPAVED SHOULDER ON HIGHWAY)

**PLAN VIEW**
(PAVED SHOULDER ON HIGHWAY)

## RURAL DRIVEWAY INTERSECTION DETAIL
## (NO CURB AND GUTTER OR SIDEWALK)




## TYPICAL DRIVEWAY PROFILES

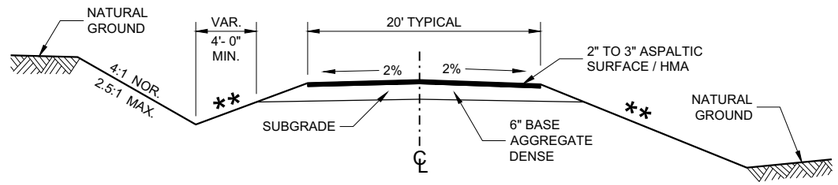



**IN CUT** **IN FILL**

## TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

| POSTED SPEED MPH | MAX. SLOPE |
|---|---|
| <35 | 4:1 |
| ≥ 35 TO < 60 | 6:1 |
| ≥60 | 10:1 |




**IN CUT** **IN FILL**

## TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

6

SDD 08D21 - 01

## DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

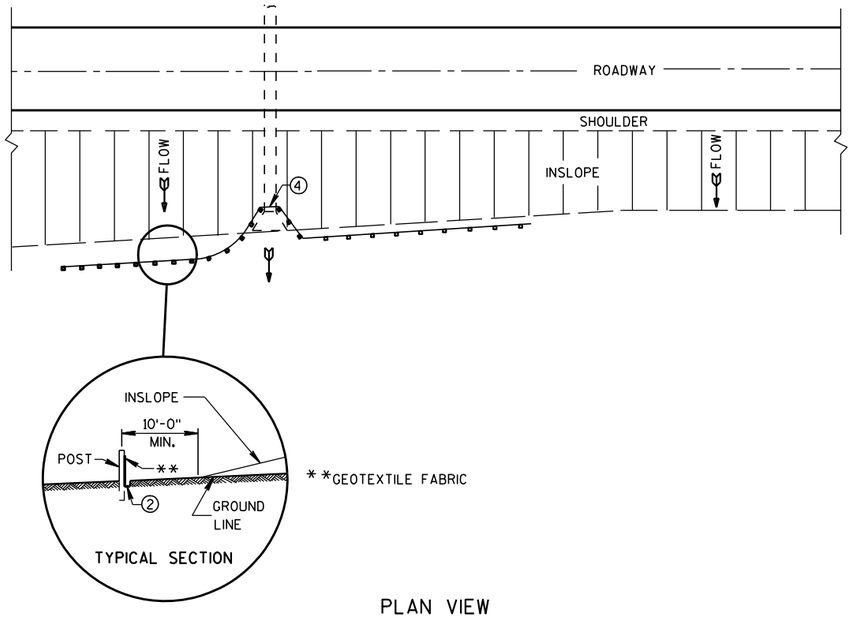
APPROVED
December 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA



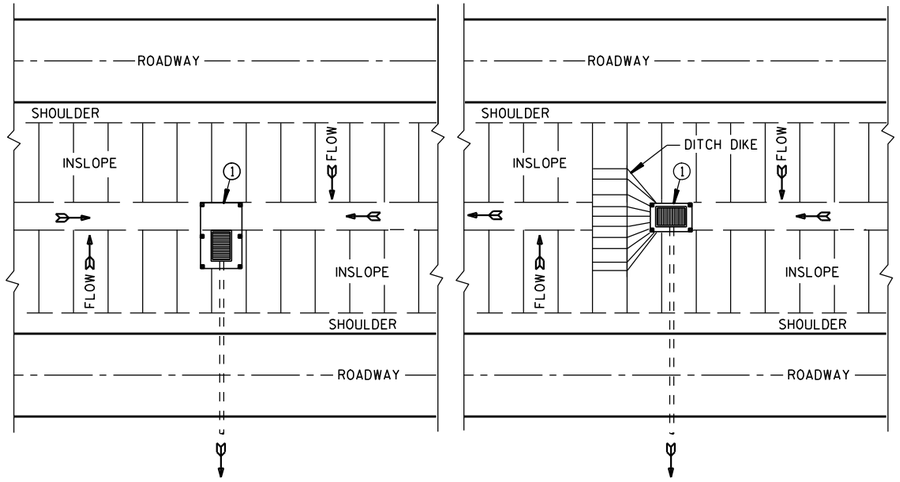
6

SDD 08D21 - 01




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE



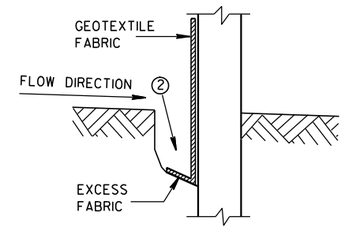

PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

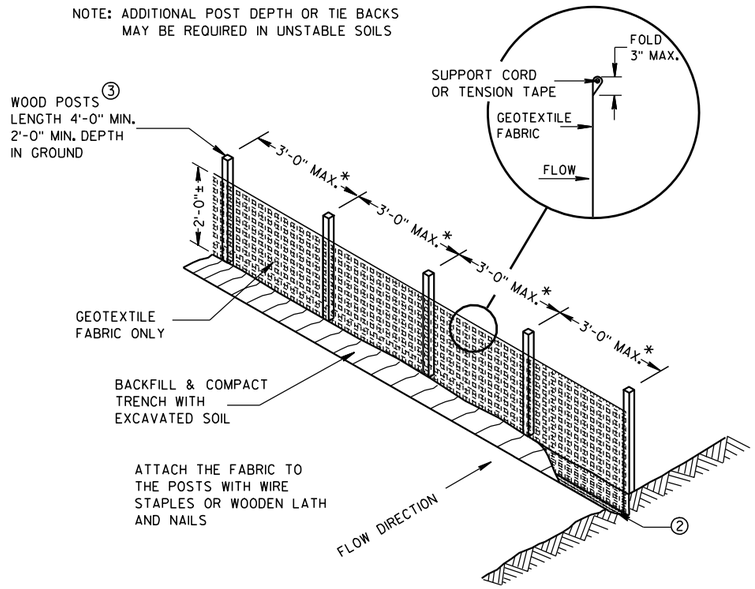
## GENERAL NOTES

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

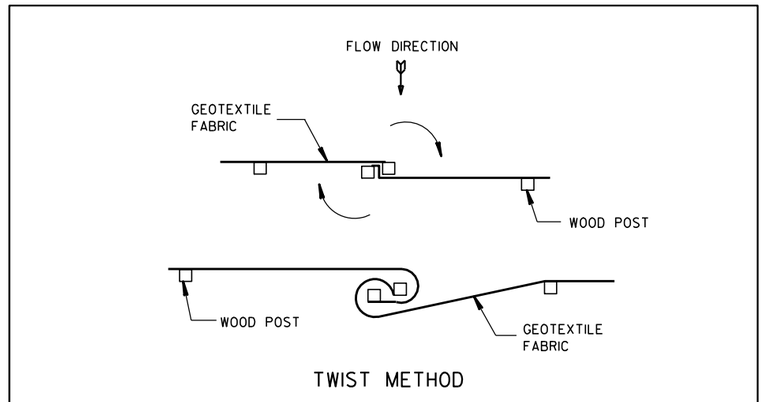
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



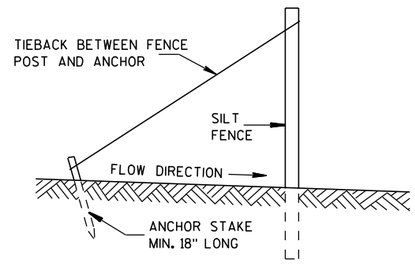

## TRENCH DETAIL




## 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

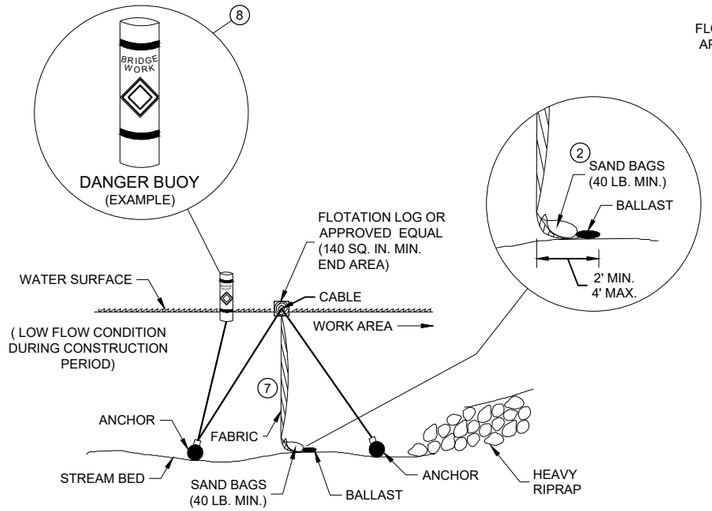


6

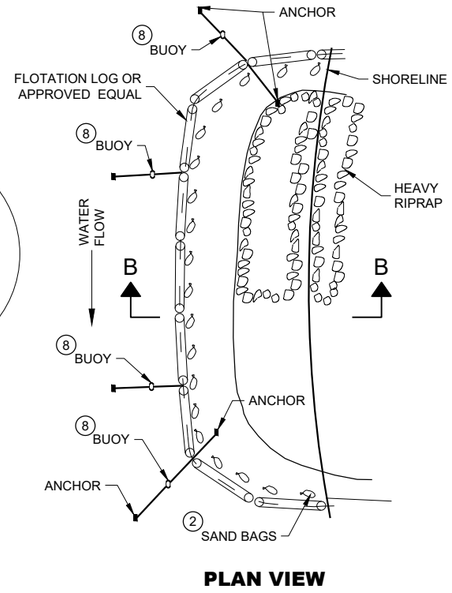
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

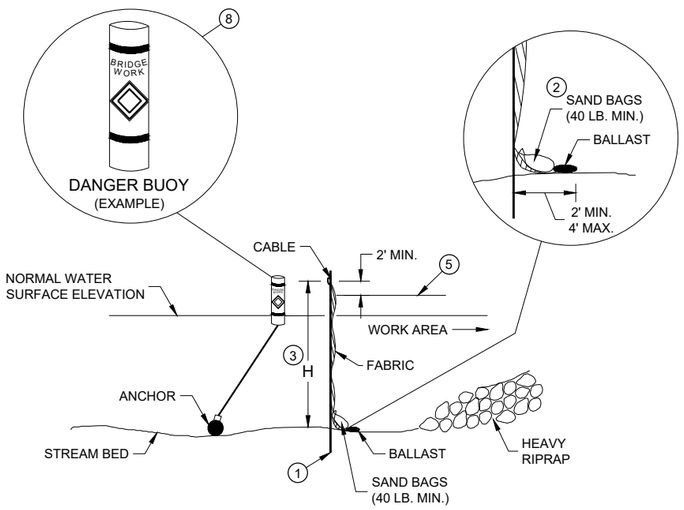



**SECTION B - B**

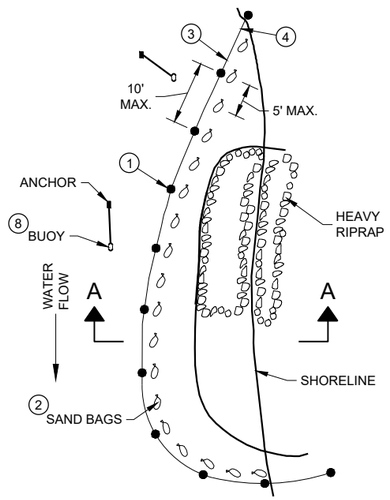



**PLAN VIEW**

**TURBIDITY BARRIER - FLOAT ALTERNATIVE**
**CAUTION - SEE NOTE 6**




**SECTION A - A**




**PLAN VIEW**

**TURBIDITY BARRIER - STANDARD POST INSTALLATION**

**TURBIDITY BARRIER PLACEMENT DETAILS**

## GENERAL NOTES

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

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

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

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

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

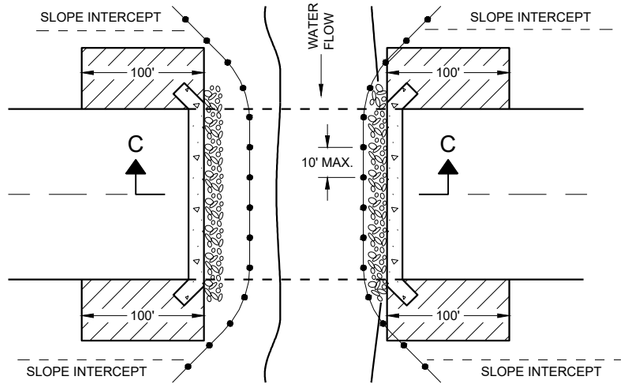
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

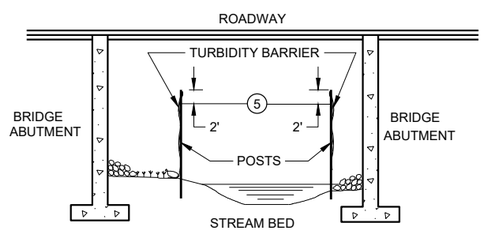
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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




**PLAN VIEW**




**SECTION C - C**

**TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES**

**TURBIDITY BARRIER**

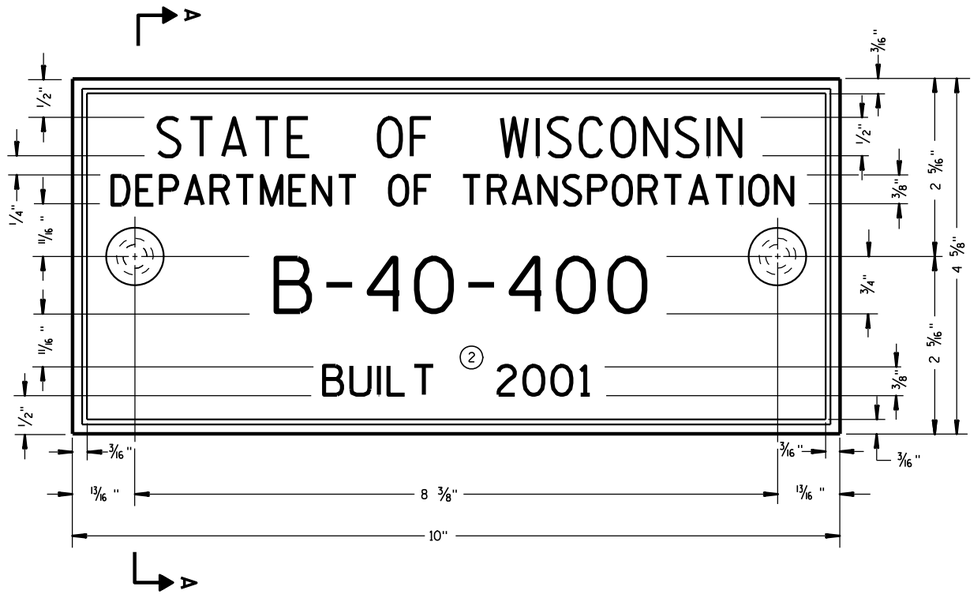
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA




6
SDD 08E11 - 02




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

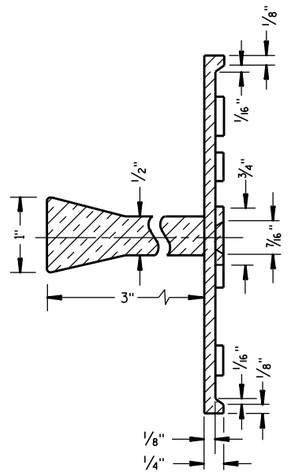
## GENERAL NOTES

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.

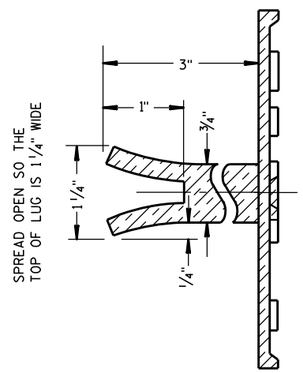
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(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**

FOR MULTI-UNIT STRUCTURES LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

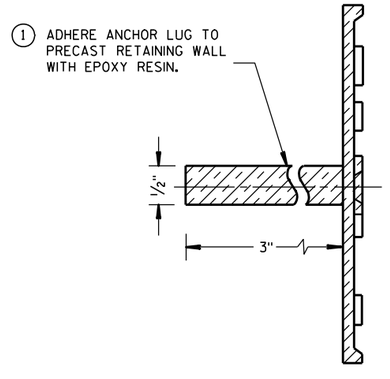
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

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




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

**NAME PLATE (STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

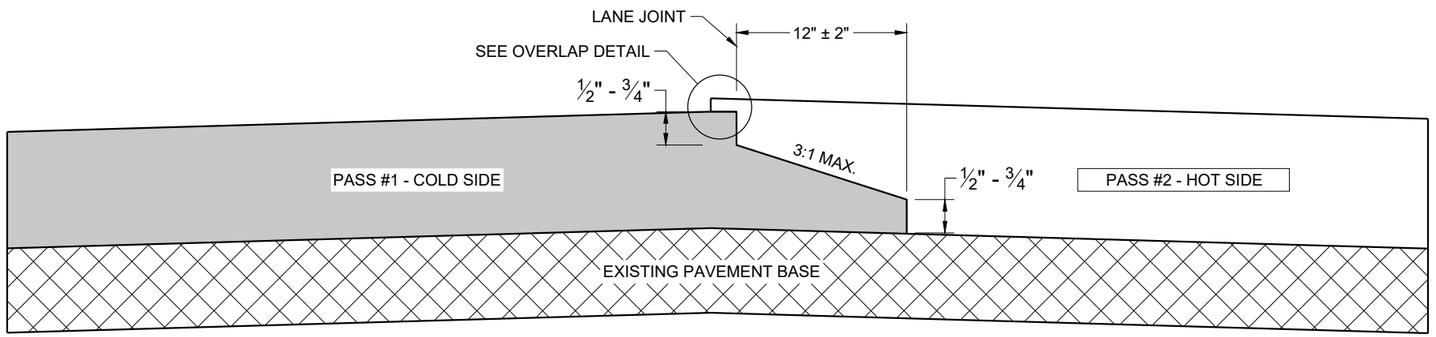
/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

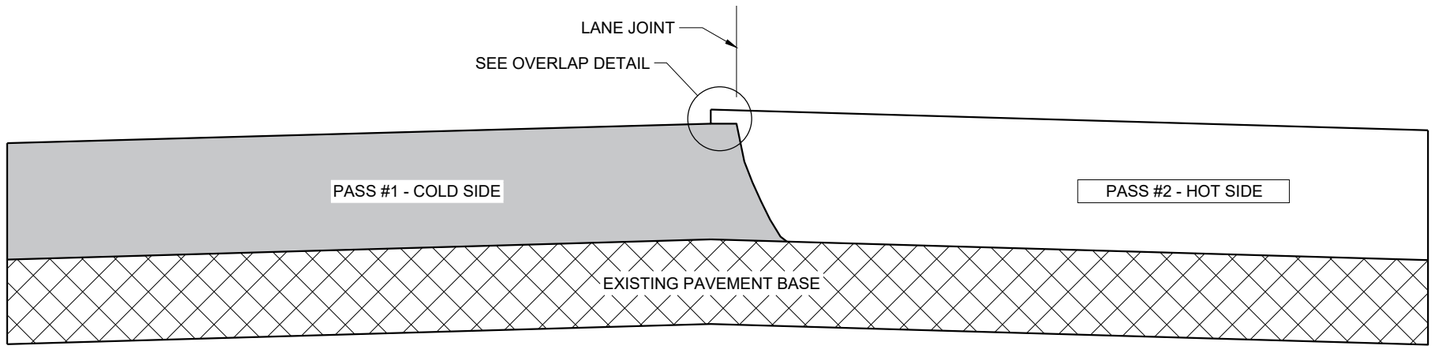


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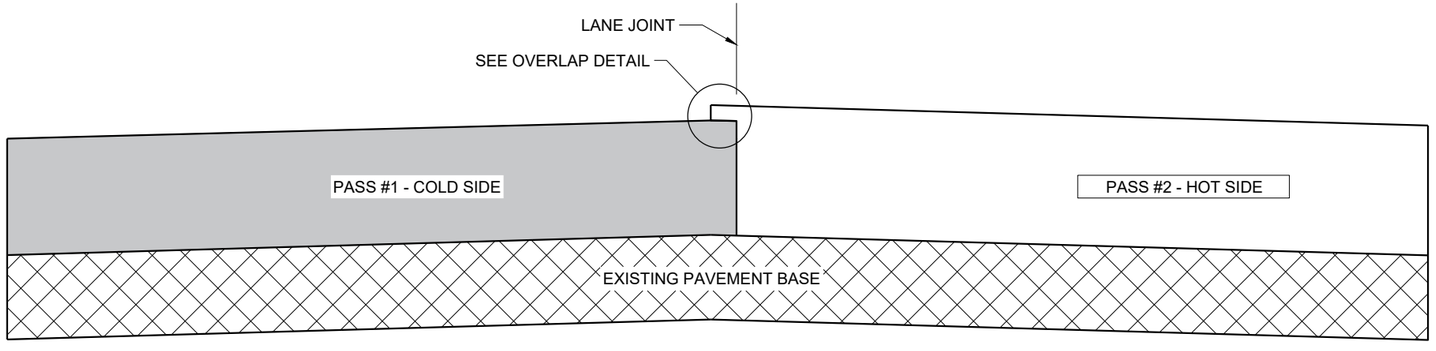
S.D.D. 12 A 3-10




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




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




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

## GENERAL NOTES

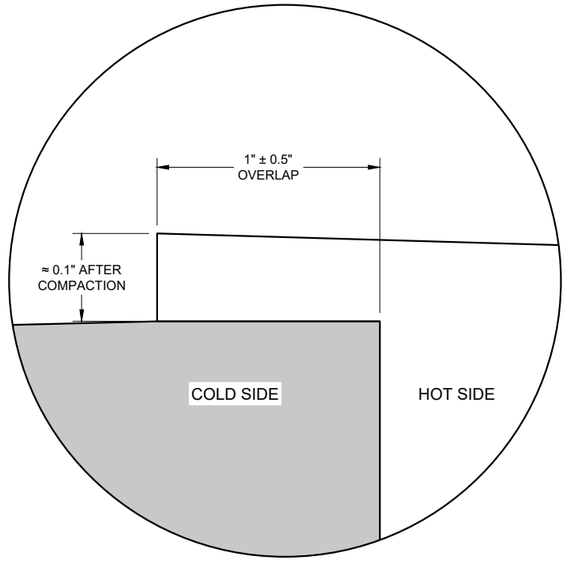
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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




**OVERLAP DETAIL (TYPICAL)**

**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



6

SDD 13C19 - 03

6

SDD 13C19 - 03

(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.

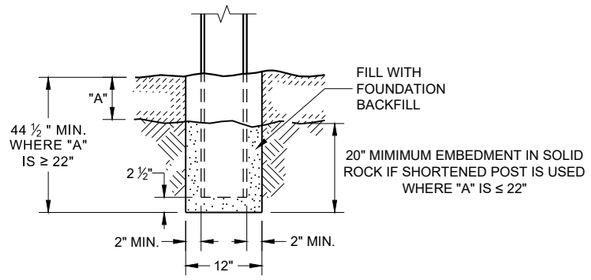
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

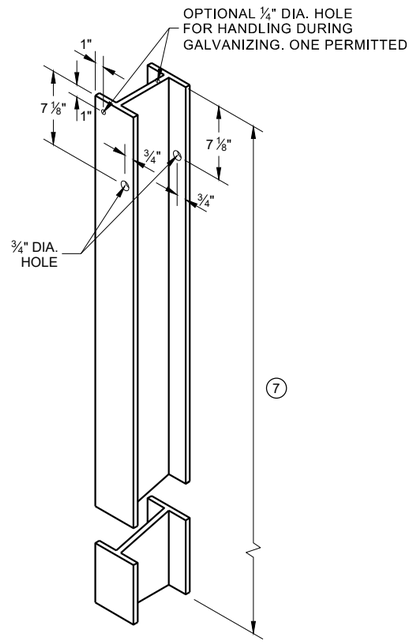
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

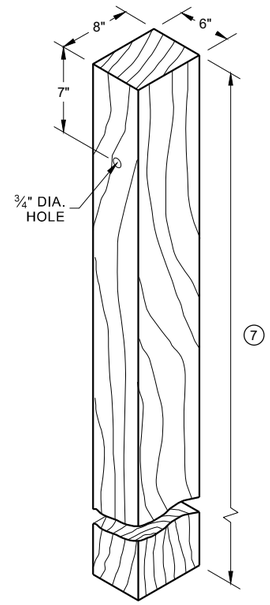
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



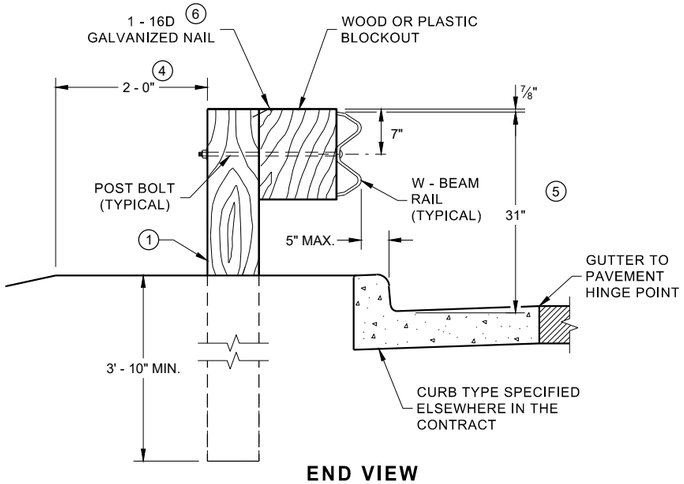

END VIEW
**SETTING STEEL OR WOOD POST IN ROCK** (3)



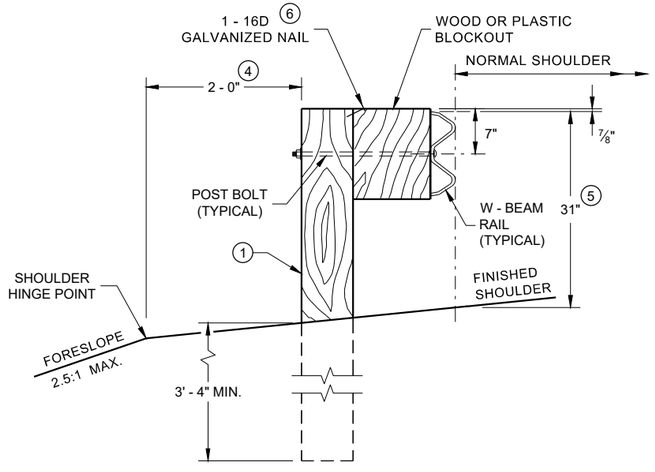

**STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9)** (1)



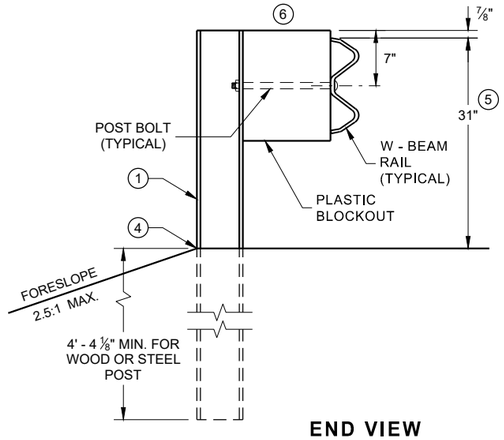

**WOOD POST (6" X 8") NOMINAL** (1)



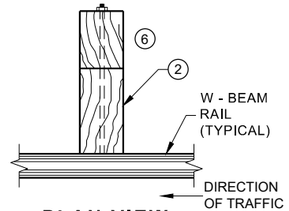

END VIEW
**LOCATED ALONG A CURBED ROADWAY**



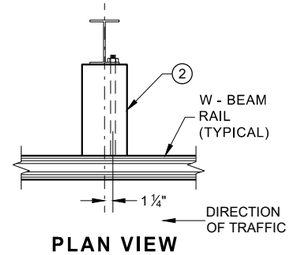

END VIEW
**LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION**



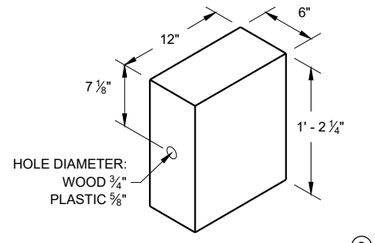

END VIEW
**MGS LONGER POST AT HALFPOST SPACING W BEAM (K)**




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

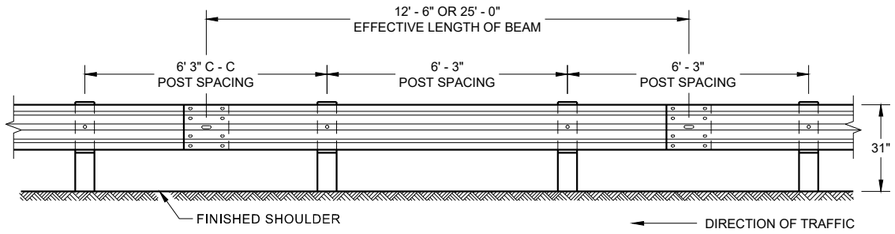


6

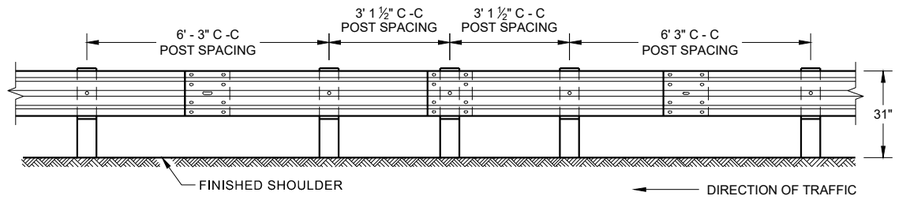
SDD 14B42 - 07a

6

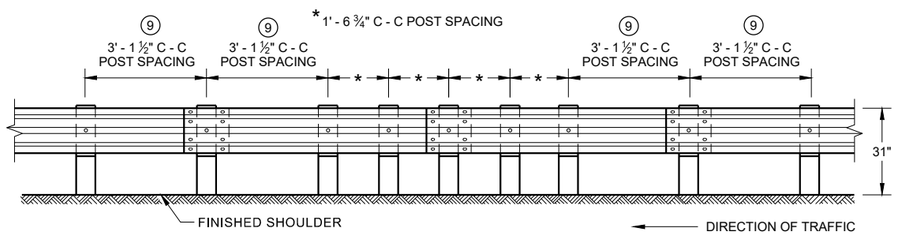
SDD 14B42 - 07a



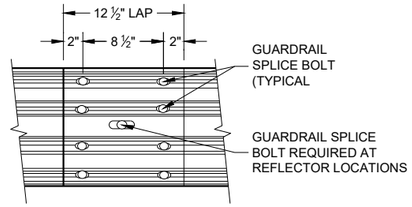

**FRONT VIEW**
## POST SPACING STANDARD INSTALLATION



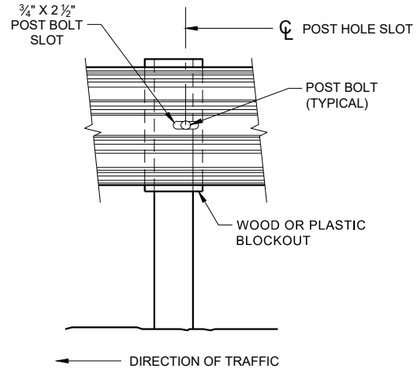

**FRONT VIEW**
## HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



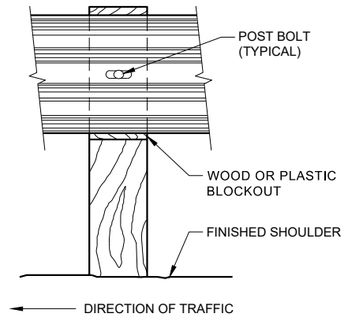

**FRONT VIEW**
## QUARTER POST SPACING (QS)



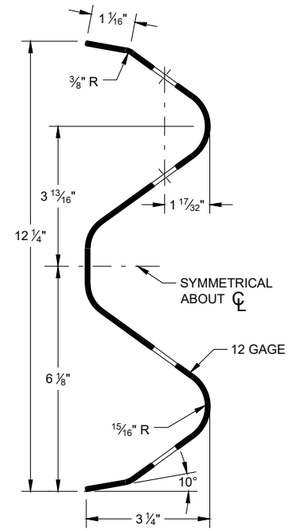

**FRONT VIEW**
## MID-SPAN BEAM SPLICE



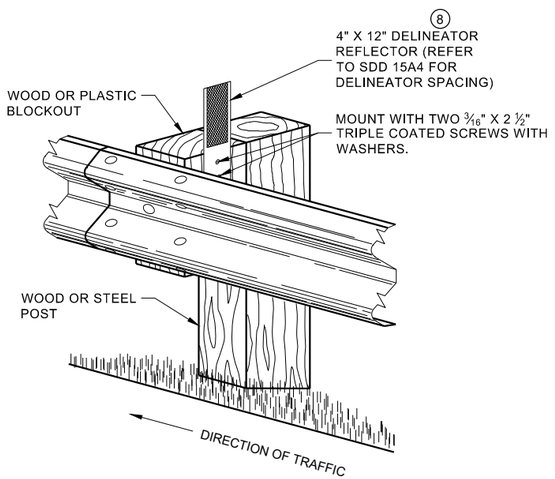

## FRONT VIEW AT STEEL POST




## 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.

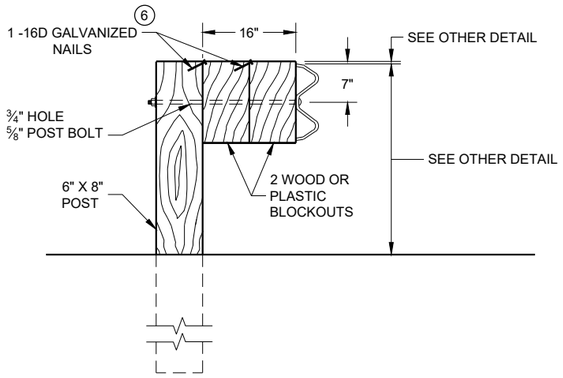
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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**

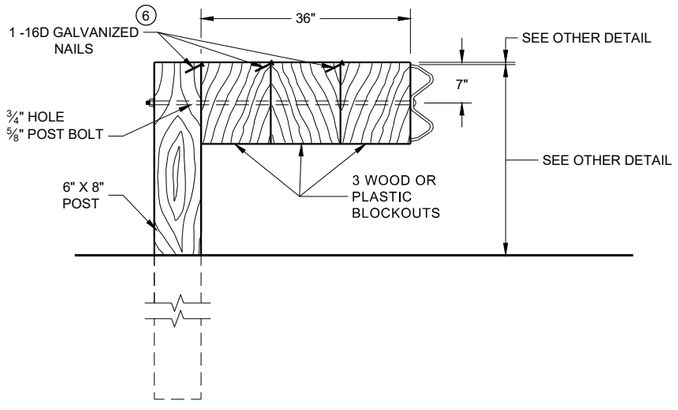
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION


6
SDD 14B42 - 07b




## DETAIL FOR 16" BLOCKOUT DEPTH

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



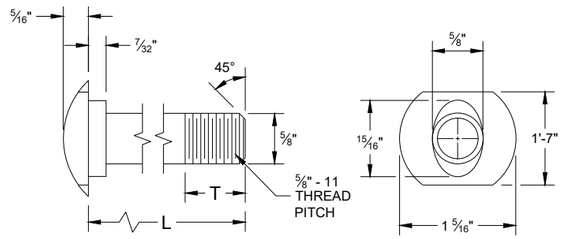

## DETAIL FOR 36" BLOCKOUT DEPTH

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

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

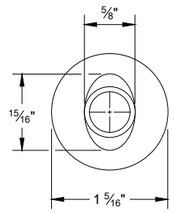
NOTE:

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

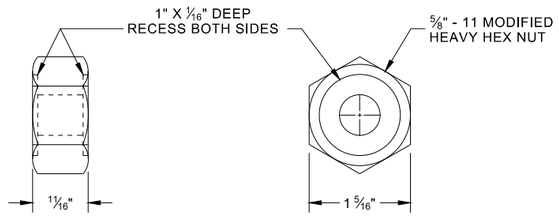



## POST BOLT TABLE

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

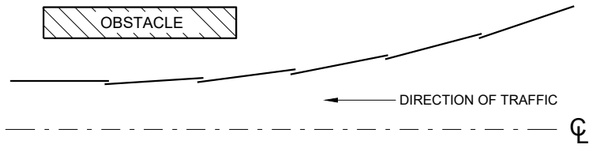



## ALTERNATE BOLT HEAD

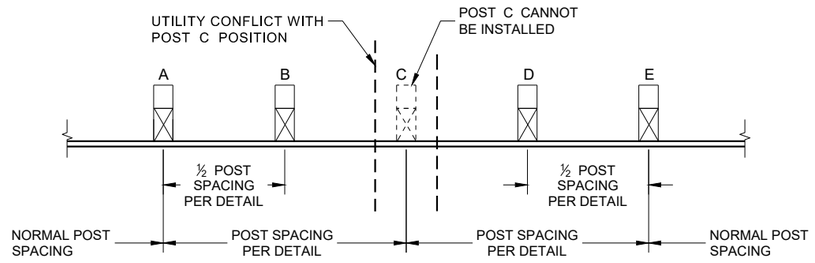



## POST BOLT, SPLICE BOLT AND RECESS NUT

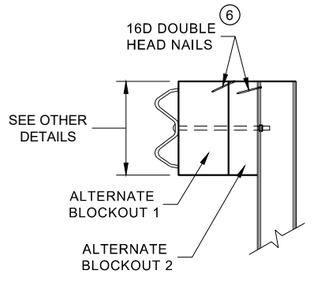
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



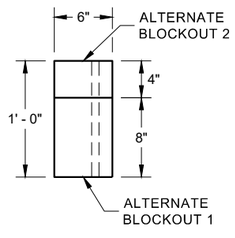

## PLAN VIEW
## BEAM LAPPING DETAIL




## POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION




SIDE VIEW




PLAN VIEW

## ALTERNATE WOOD BLOCKOUT DETAIL

6

SDD 14B42 - 07c

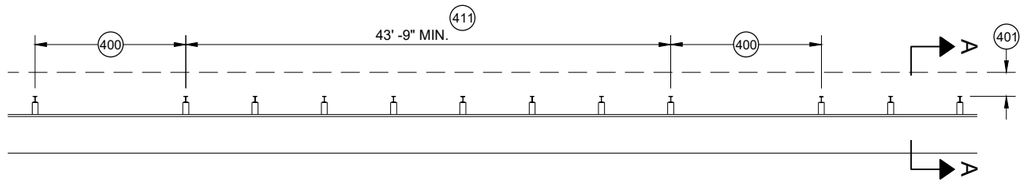
**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

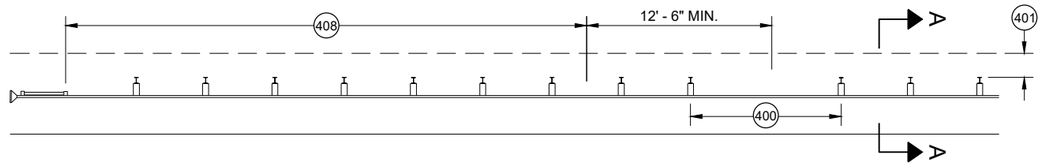


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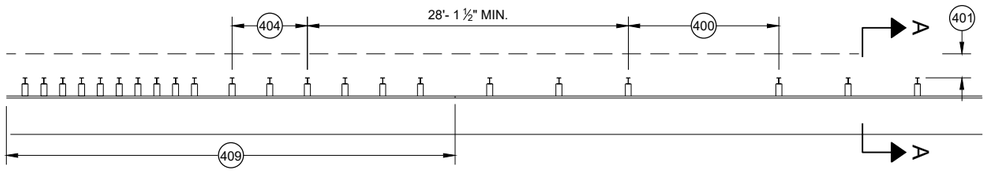
SDD 14B42 - 07c



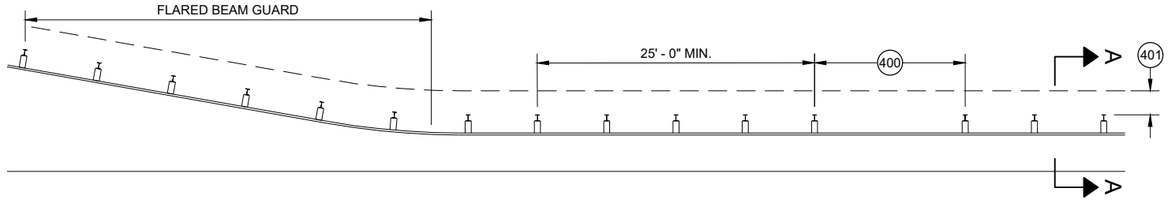

**MISSING POST IN MGS GUARDRAIL**



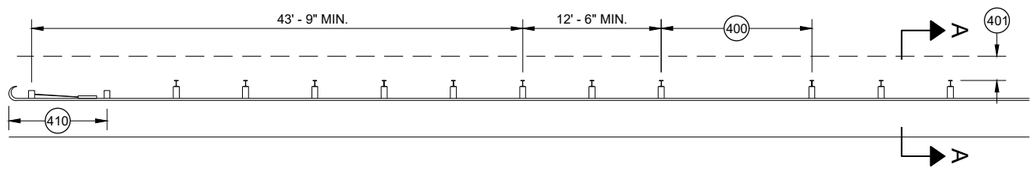

**MISSING POST IN MGS GUARDRAIL NEAR EAT**



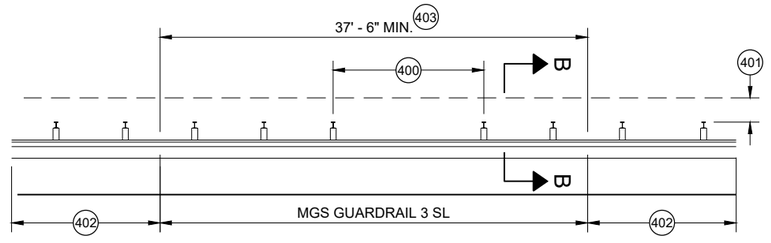

**MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION**




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

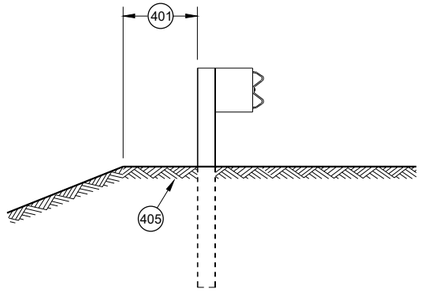



**MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL**

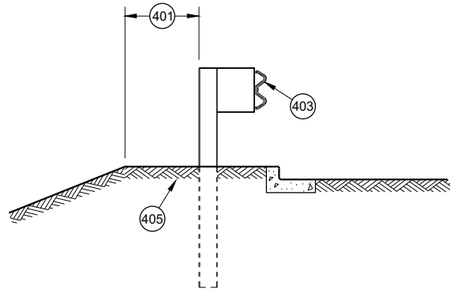



**MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)** 407

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




**SECTION A - A** 406




**SECTION B - B** 406

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA




6


SDD 14B42 - 07d

## GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

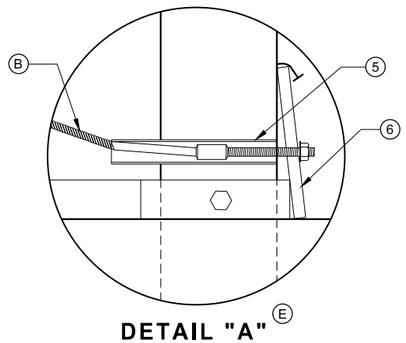
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

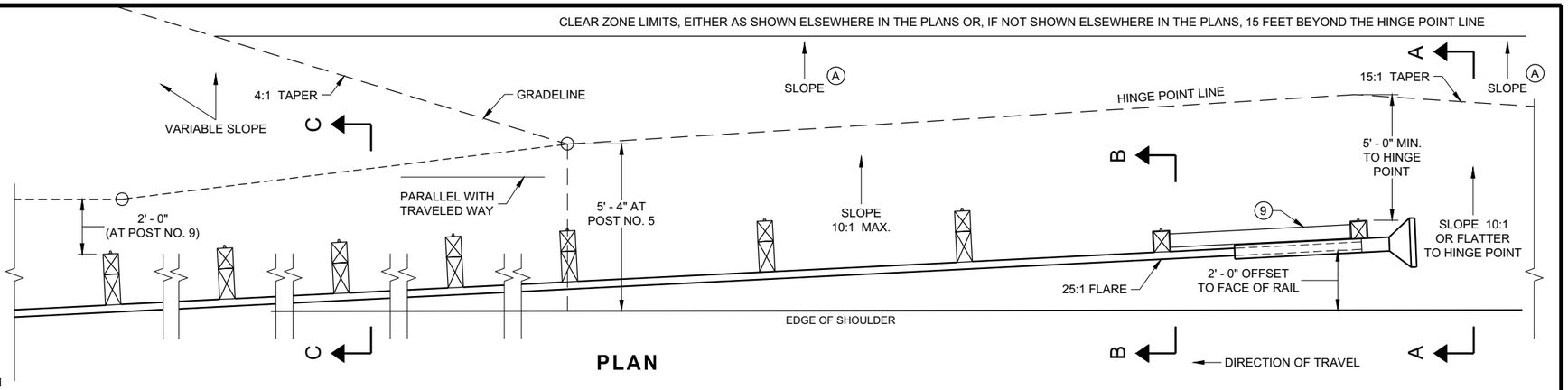
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

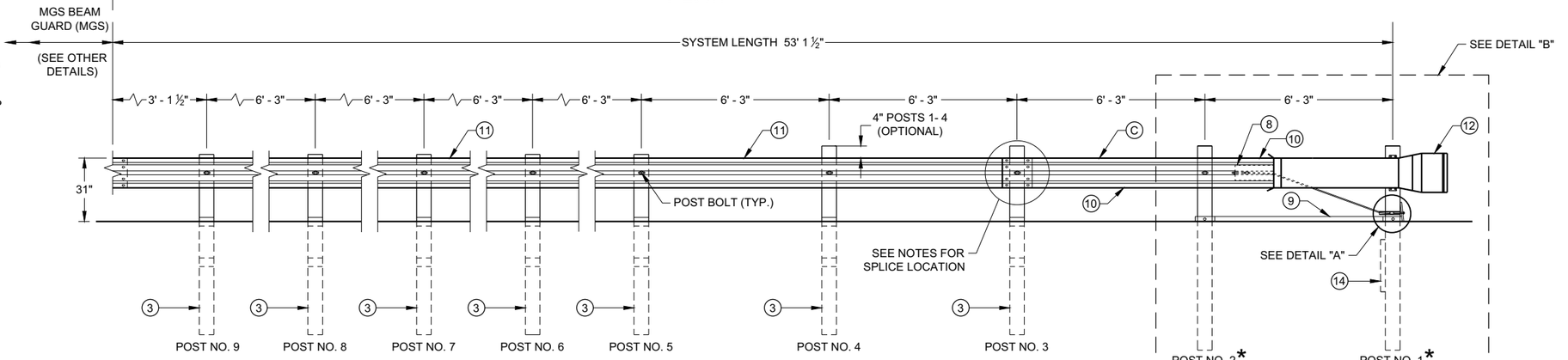
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



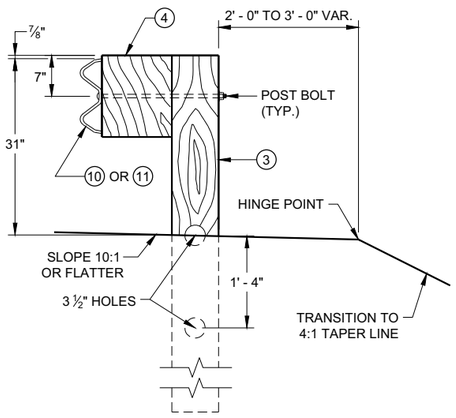

DETAIL "A" (E)



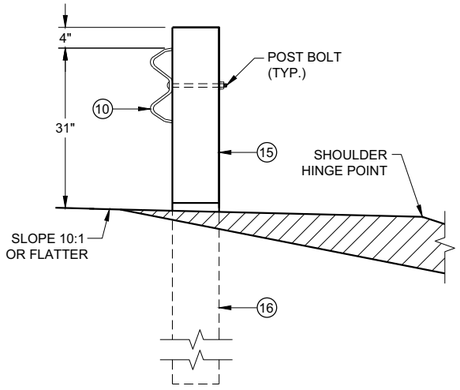

PLAN



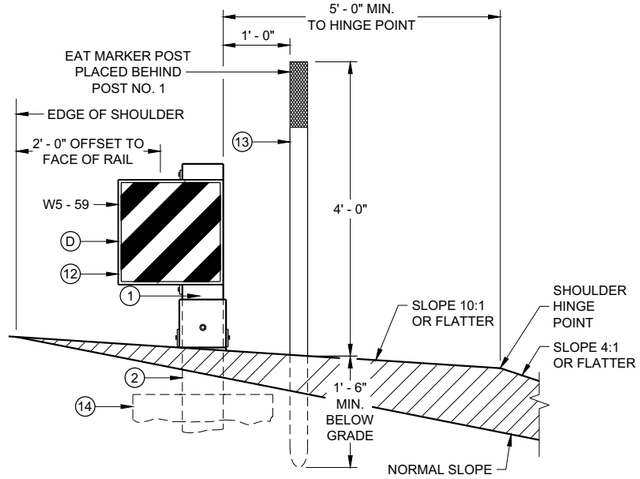

ELEVATION



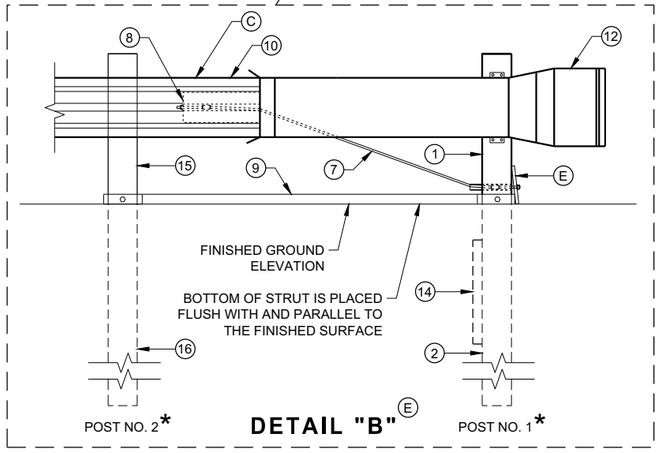

SECTION C - C
TYPICAL AT POST NOS. 3 - 9




SECTION B - B
TYPICAL AT POST NO. 2*




SECTION A - A
TYPICAL AT POST NO. 1*




DETAIL "B" (E)

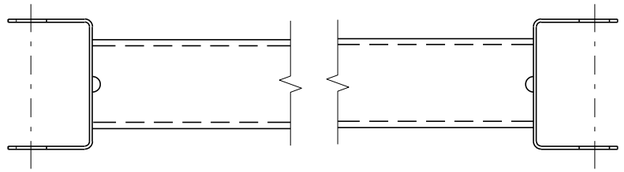
**MIDWEST GUARDRAIL SYSTEM**
**ENERGY ABSORBING TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SDD 14B44 - 04a

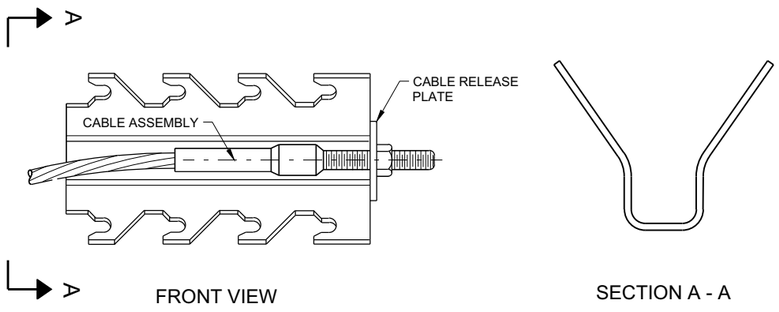
SDD 14B44 - 04a



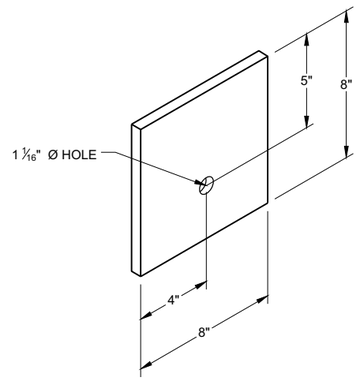
## GENERIC GROUND STRUT ⑨ Ⓔ

## 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 ⑧ Ⓔ




## BEARING PLATE ⑥ Ⓔ

6

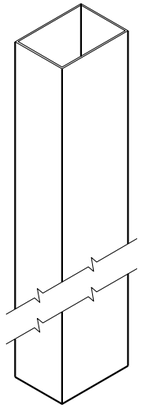
6

SDD 14B44 - 04b

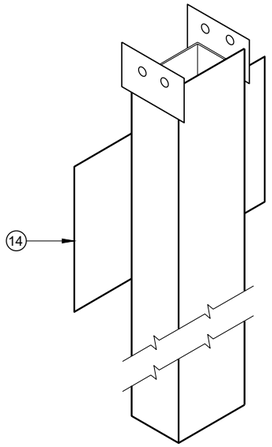
SDD 14B44 - 04b

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

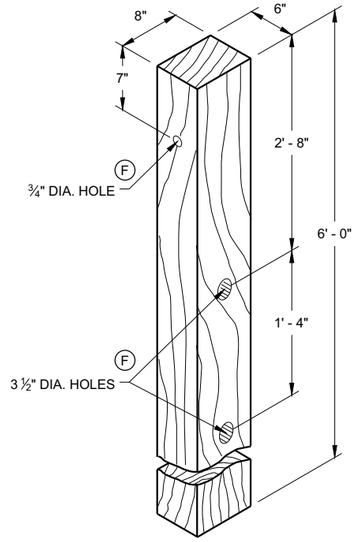
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



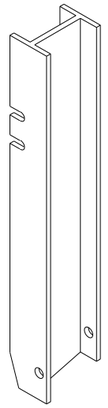
**UPPER POST NO. 1** (1) (E)



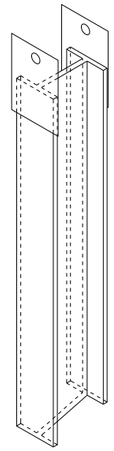

**LOWER POST NO. 1** (2) (E)



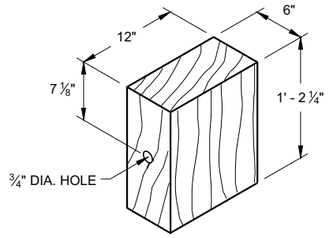

**WOOD CRT POST** (3) (E)
POSTS NUMBER 3-9



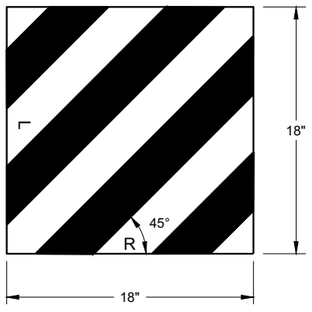
**UPPER POST NO. 2** (15) (E)



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

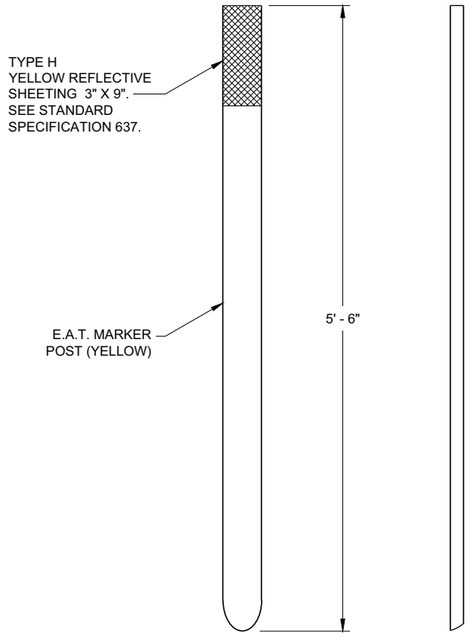



**WOOD BLOCKOUT** (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



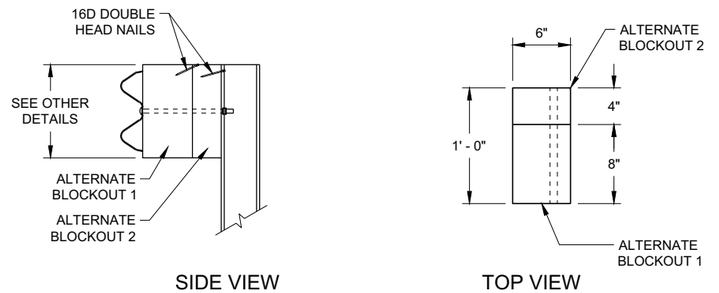

W5 - 59

**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)**

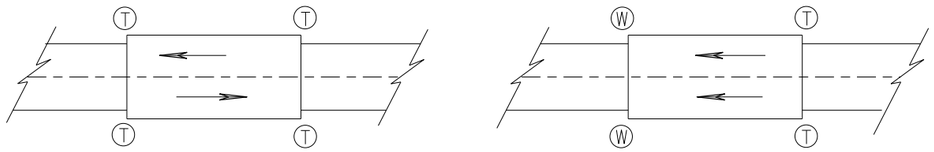
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

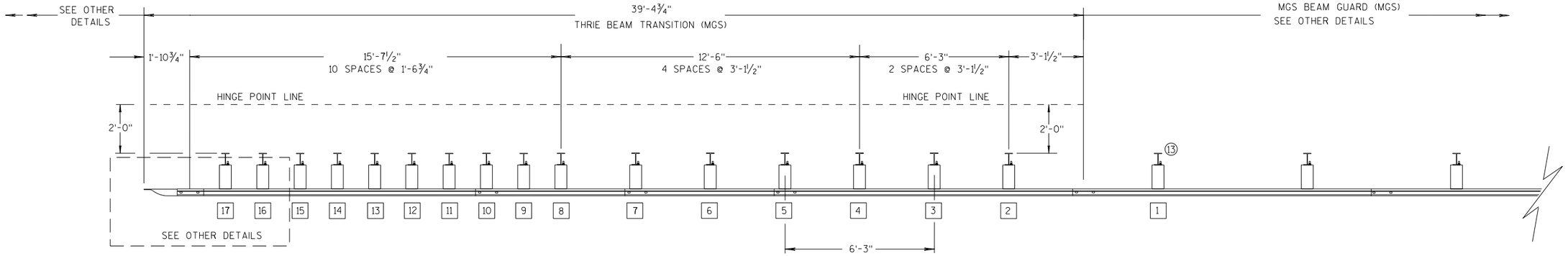
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

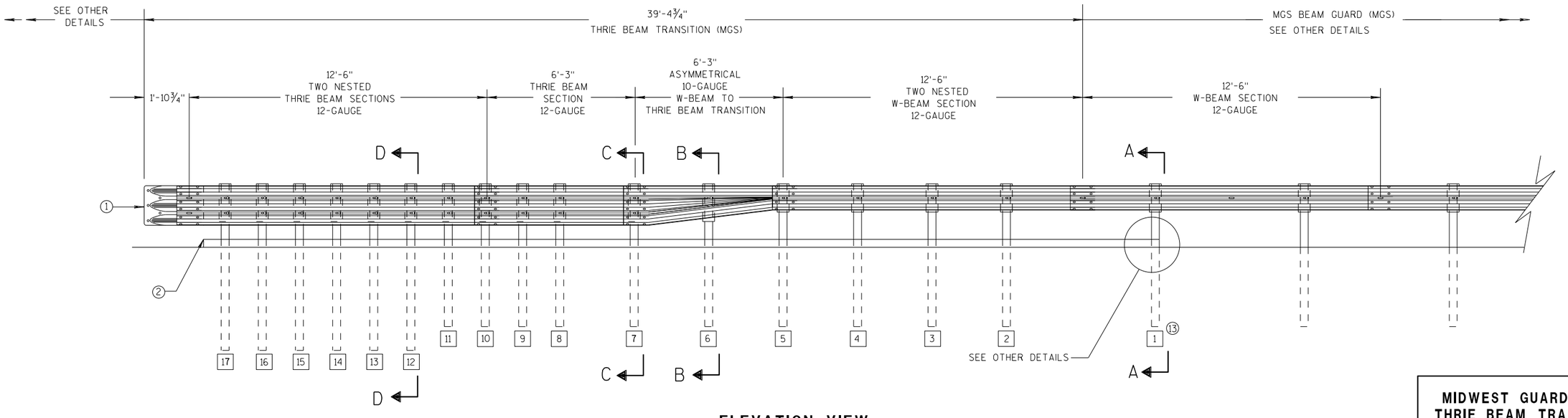
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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

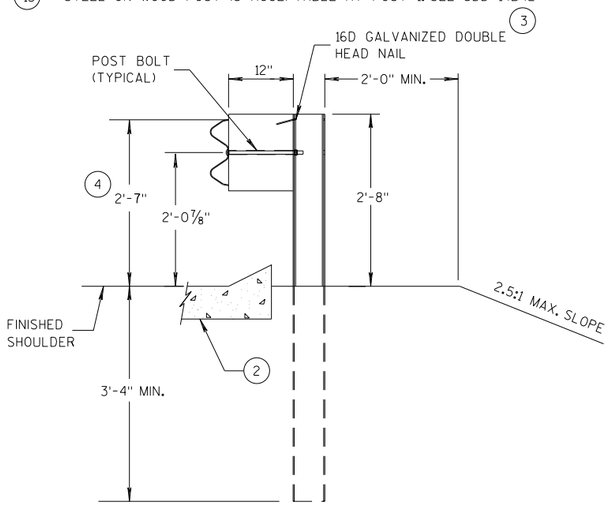
## GENERAL NOTES

(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.

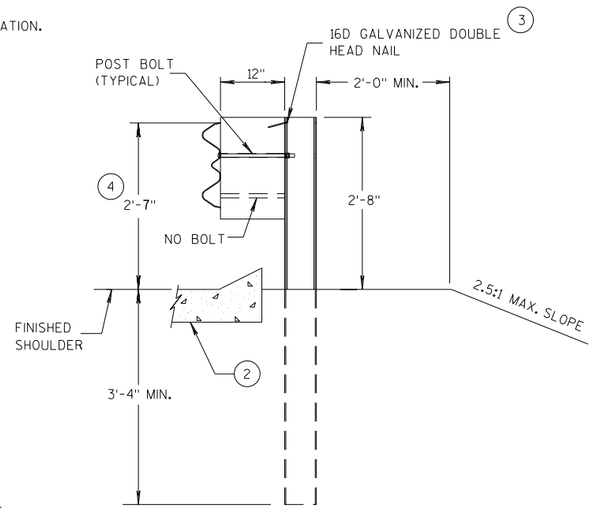
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



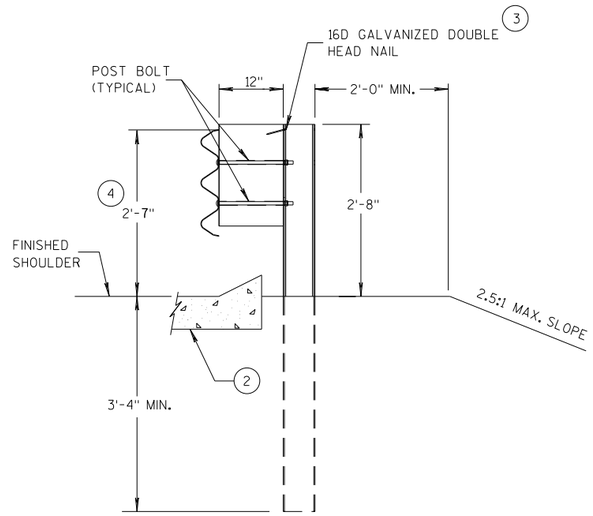

SECTION A-A (13)

**POSTS 1-5**



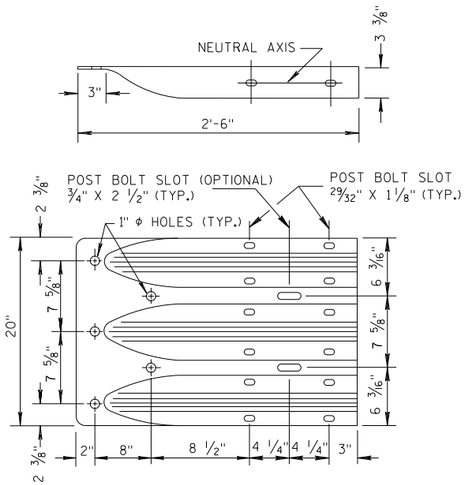

SECTION B-B

**POST 6**

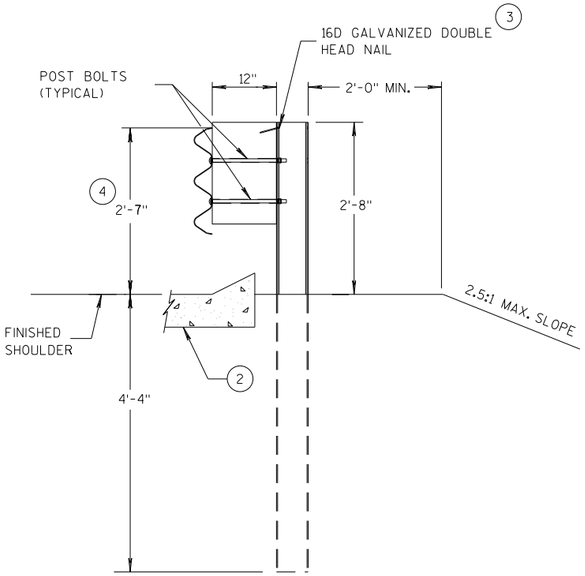



SECTION C-C

**POSTS 7-11**

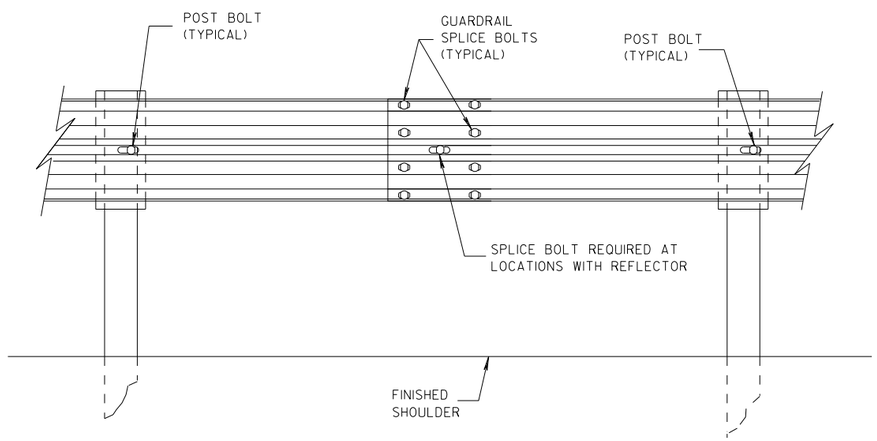



**THRIE BEAM TERMINAL CONNECTOR**




SECTION D-D

**POSTS 12-17**




**SPLICE DETAIL**

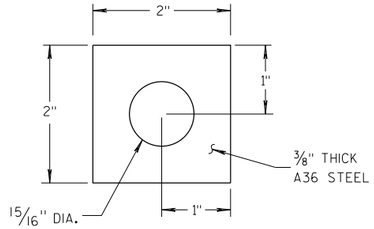
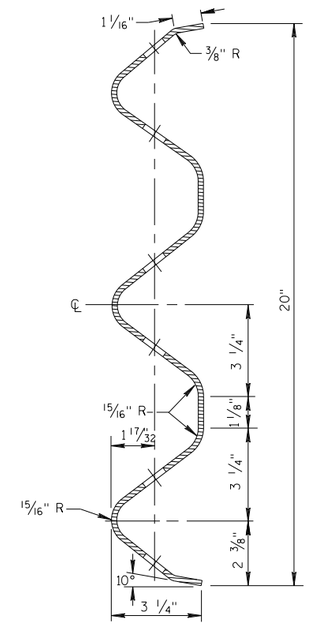



**PLATE WASHER DETAIL**




**SECTION THRU THRIE BEAM RAIL ELEMENT**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

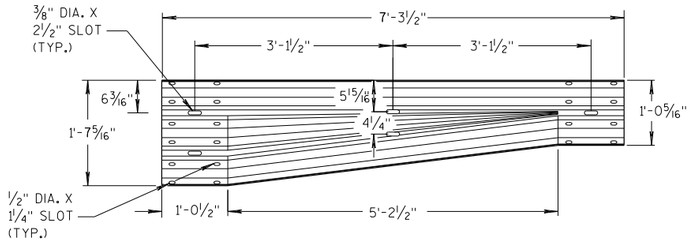




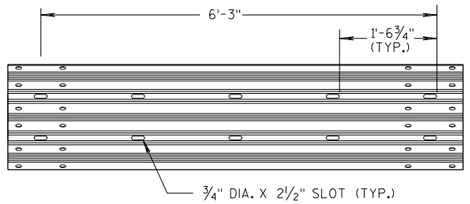


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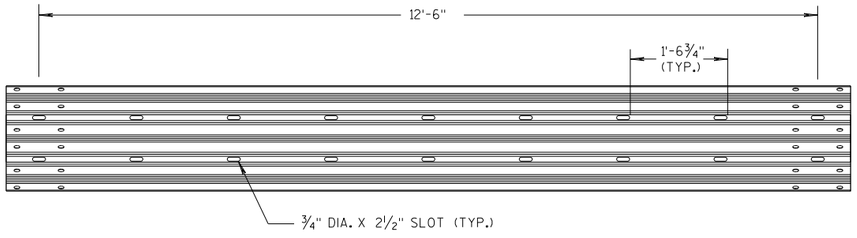
S.D.D. 14 B 45-5b



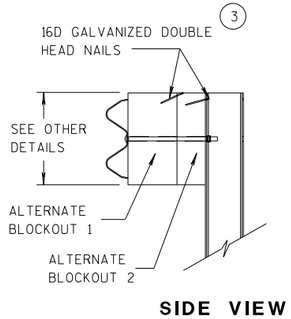

## W-BEAM TO THRIE BEAM TRANSITION SECTION



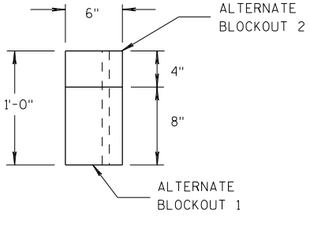

## 6'-3" THRIE BEAM SECTION




## 12'-6" THRIE BEAM SECTION

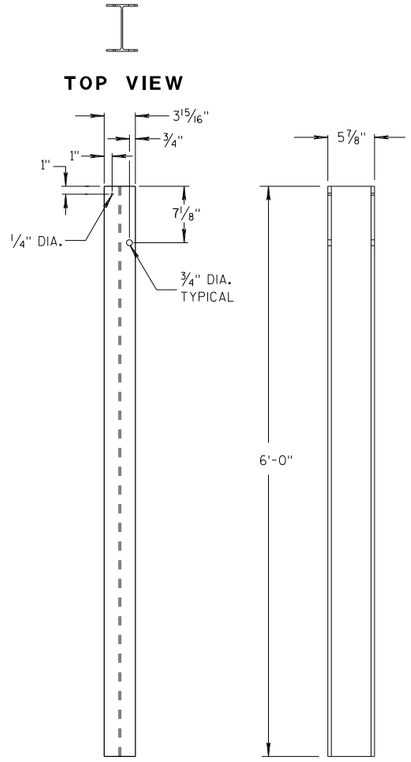



SIDE VIEW



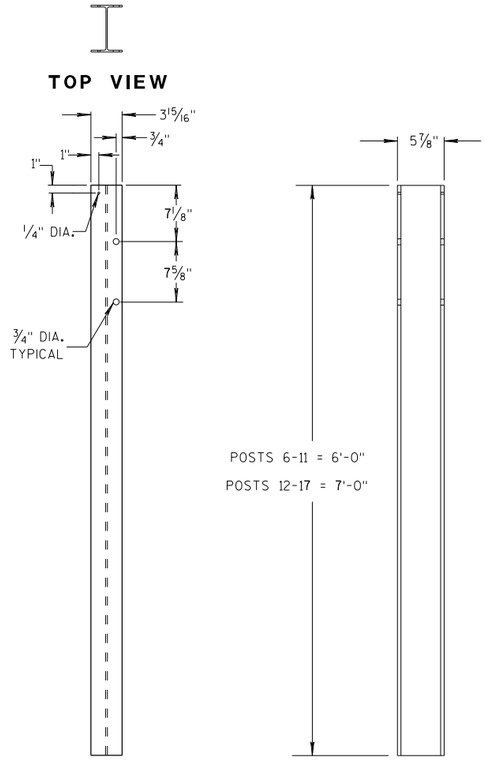

TOP VIEW

## ALTERNATE WOOD BLOCKOUT DETAIL



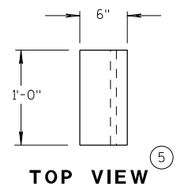

FRONT VIEW SIDE VIEW

## STEEL POSTS 1-5 (13)

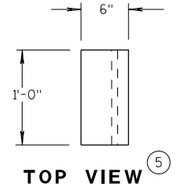



FRONT VIEW SIDE VIEW

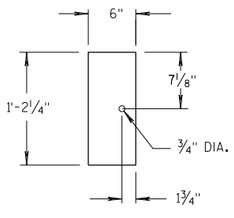
## STEEL POSTS 6-17




TOP VIEW (5)

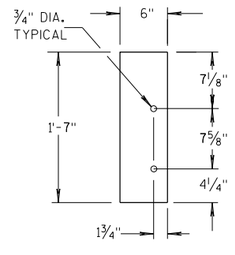



TOP VIEW (5)




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

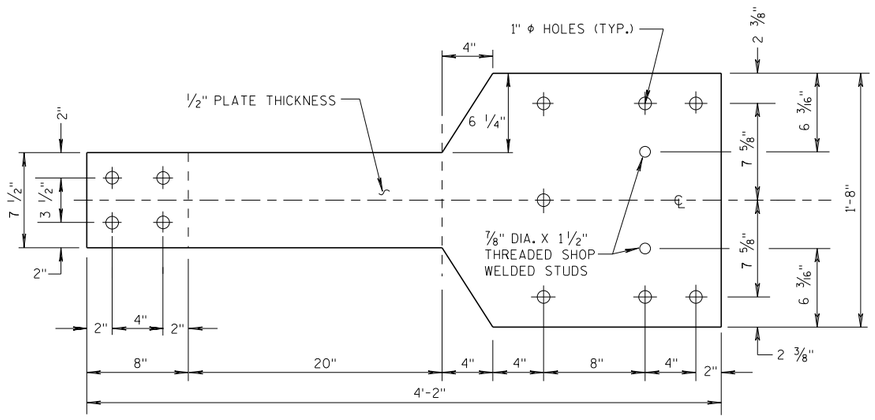



6

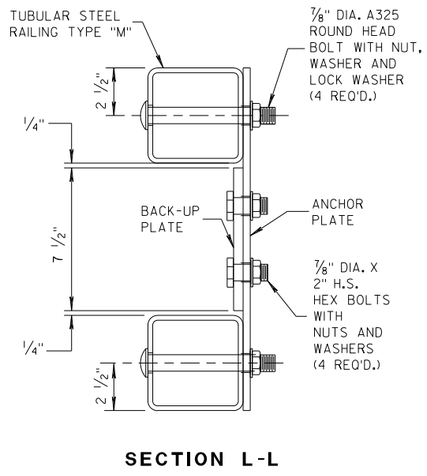
S.D.D. 14 B 45-5c

## GENERAL NOTES

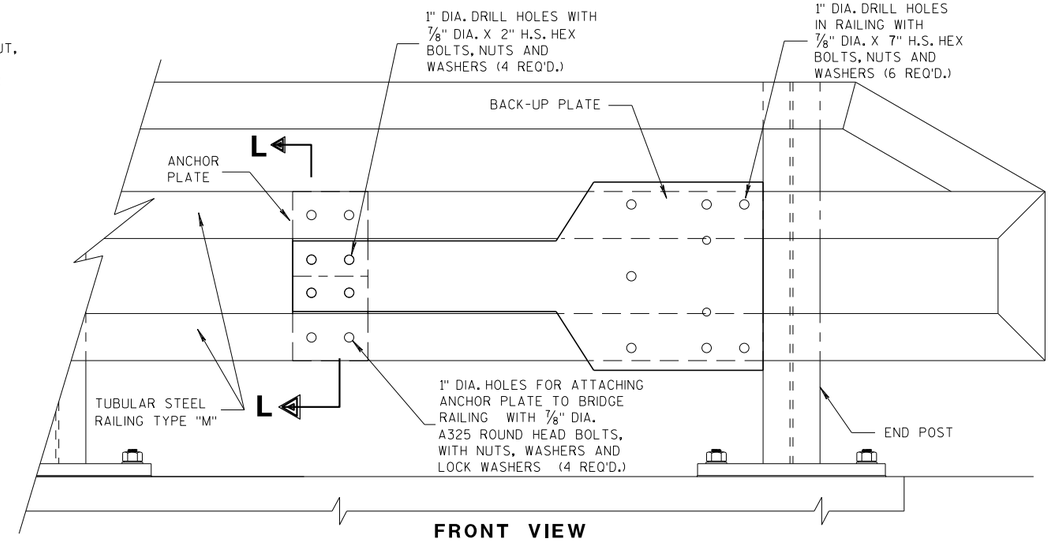
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".




FRONT VIEW

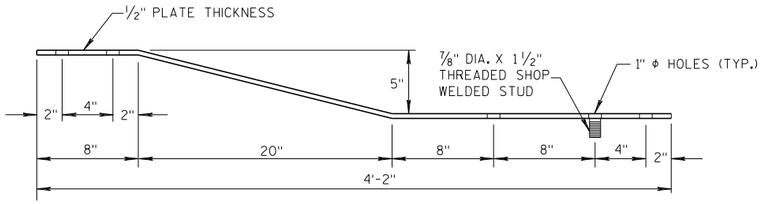



SECTION L-L



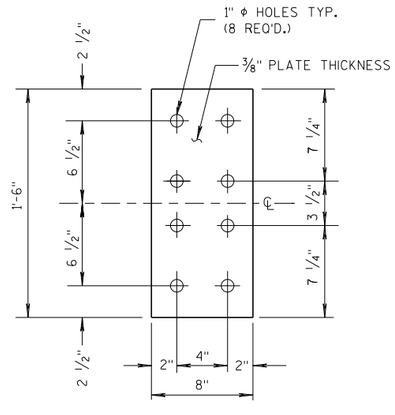

FRONT VIEW

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



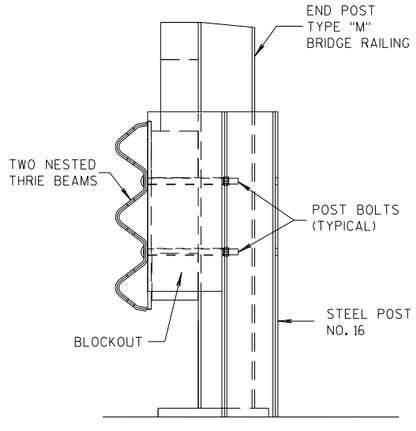

PLAN VIEW

## BACK-UP PLATE DETAIL, TYPE "M"

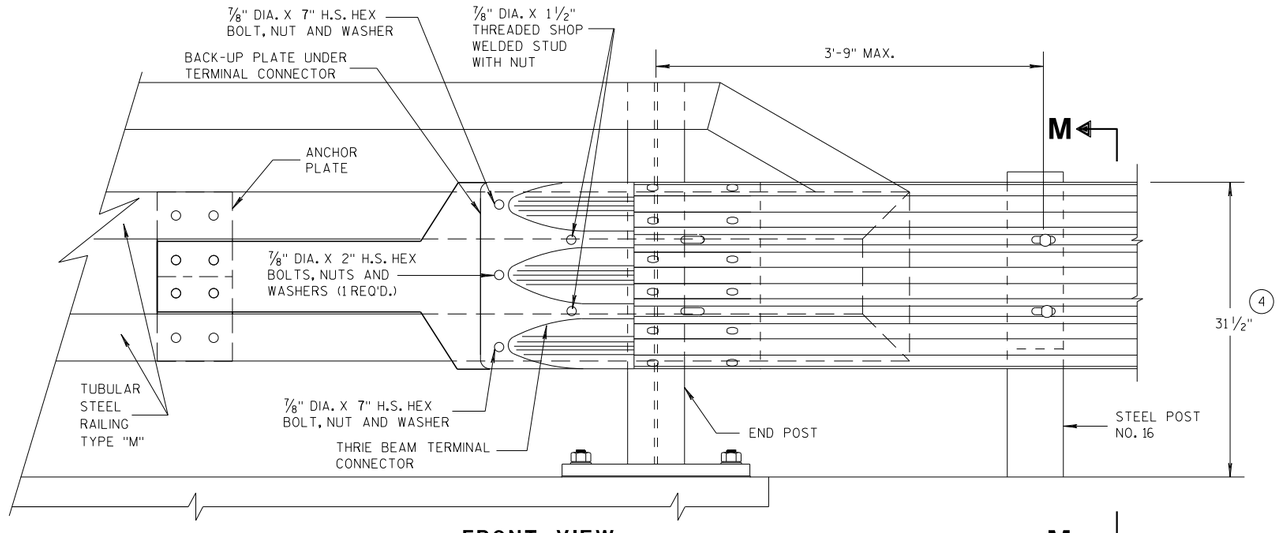



FRONT VIEW

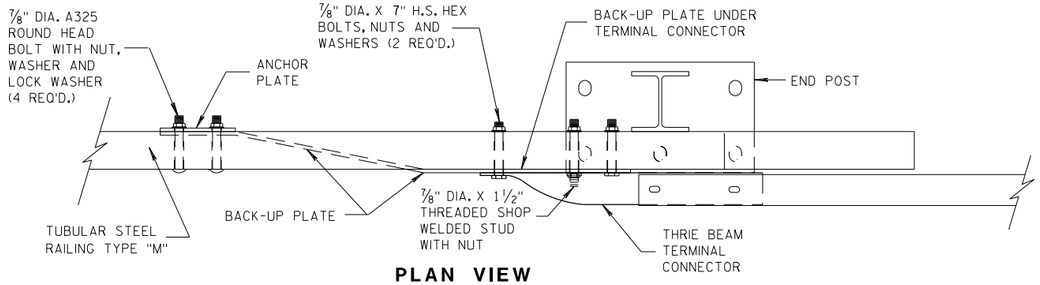
## ANCHOR PLATE DETAIL, TYPE "M"




SECTION M-M




FRONT VIEW




PLAN VIEW

## THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

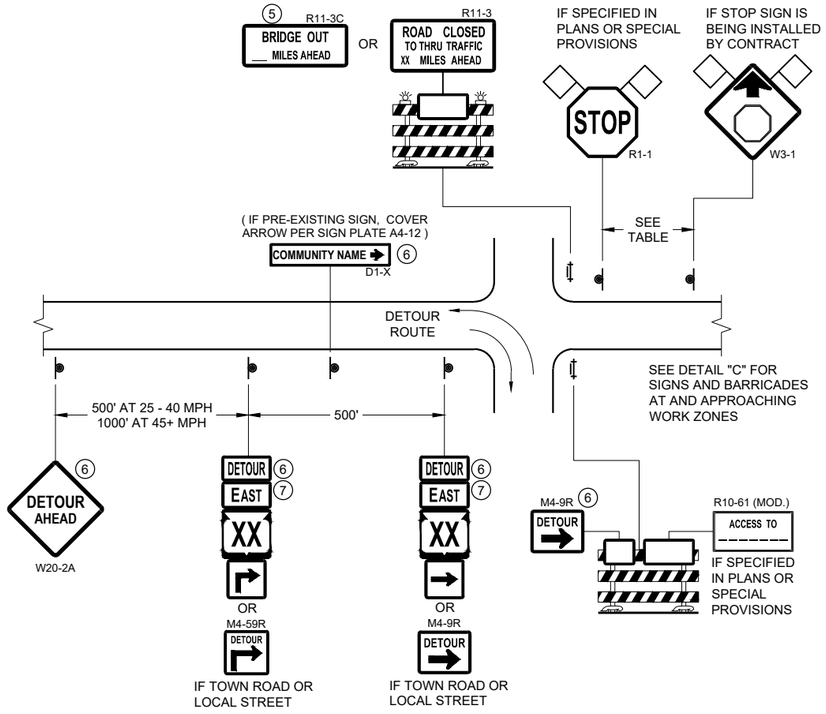


6

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

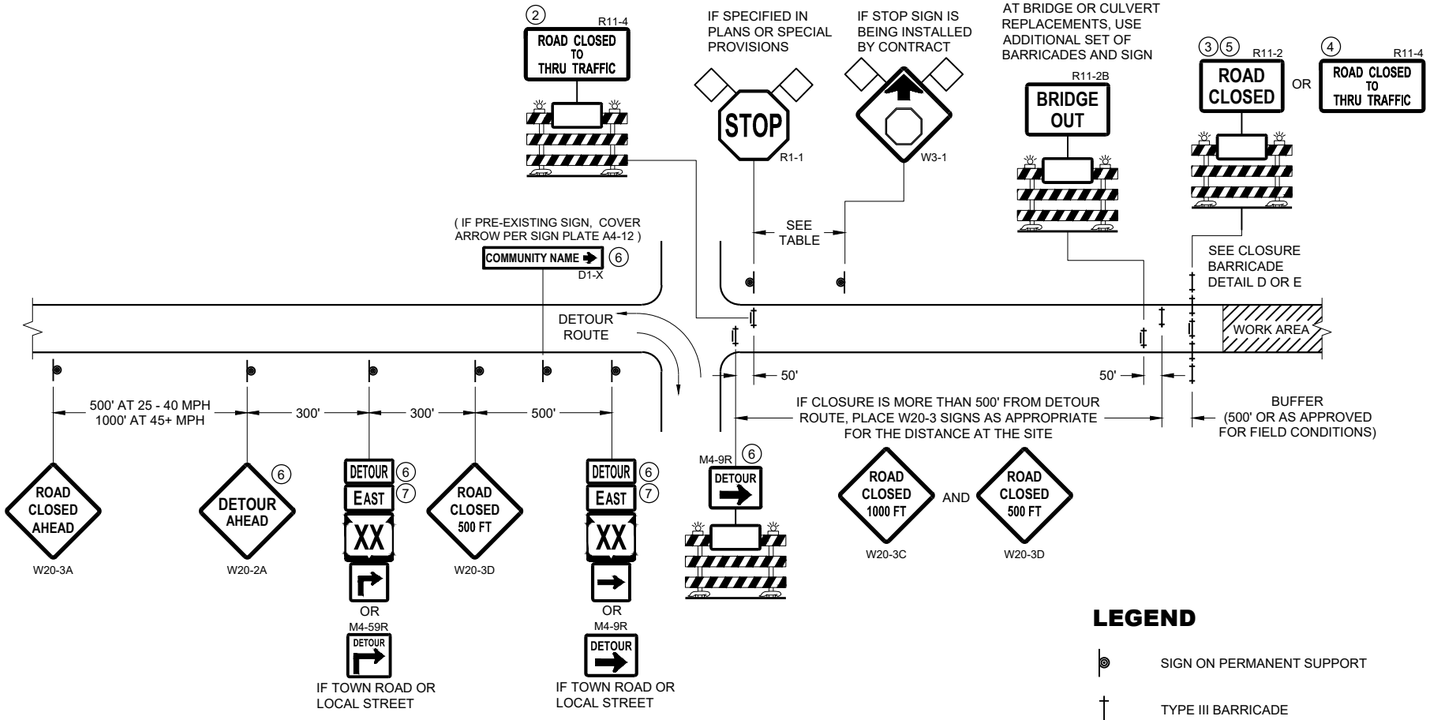
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S.D.D. 14 B 45-5h



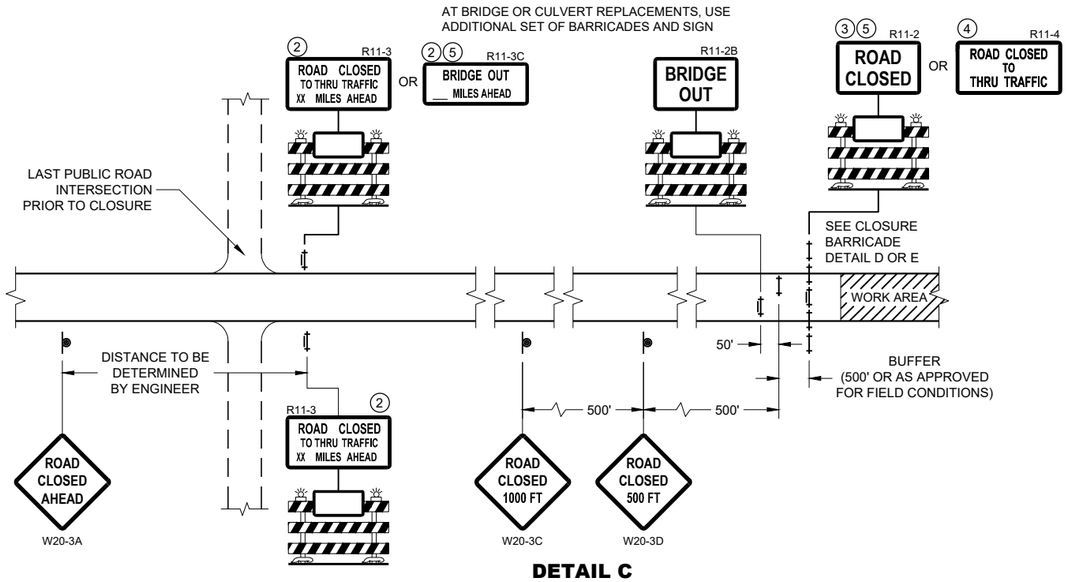

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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




## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

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




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

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

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

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

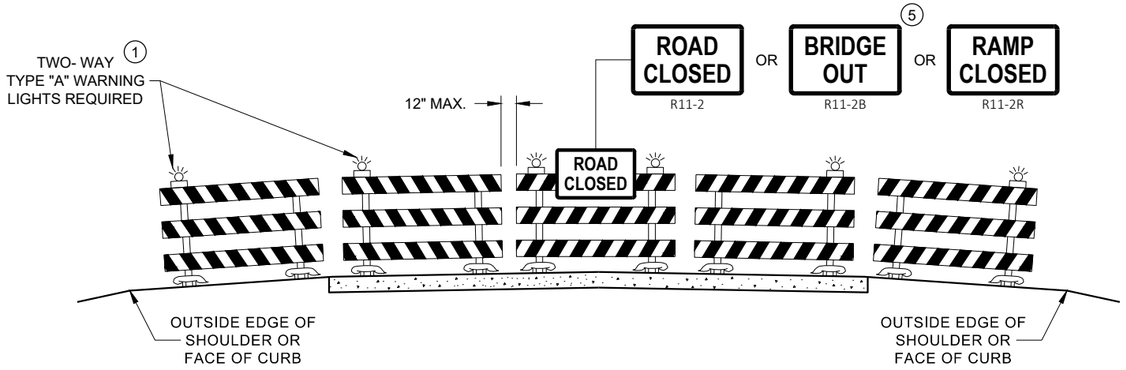
FHWA



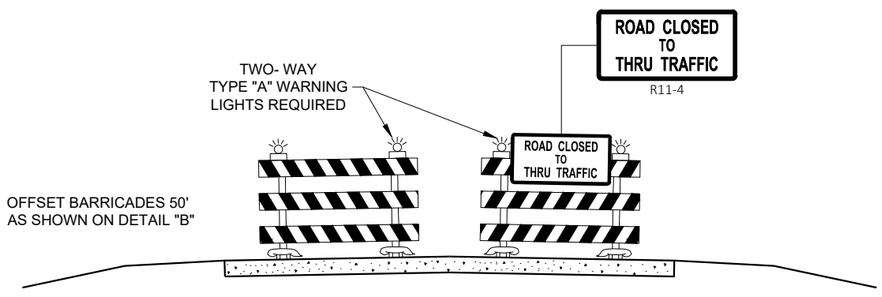




SDD 15C02 - 09a




**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 ENGINEER
FHWA

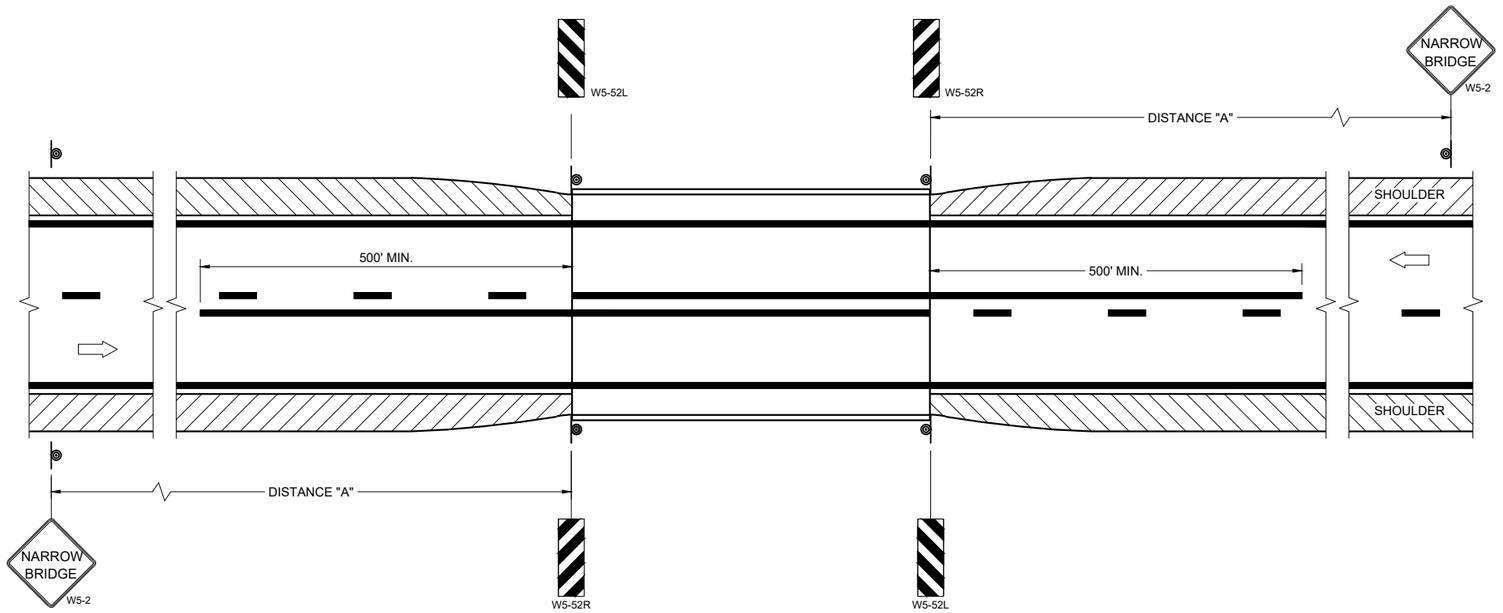


6

SDD 15C02 - 09b

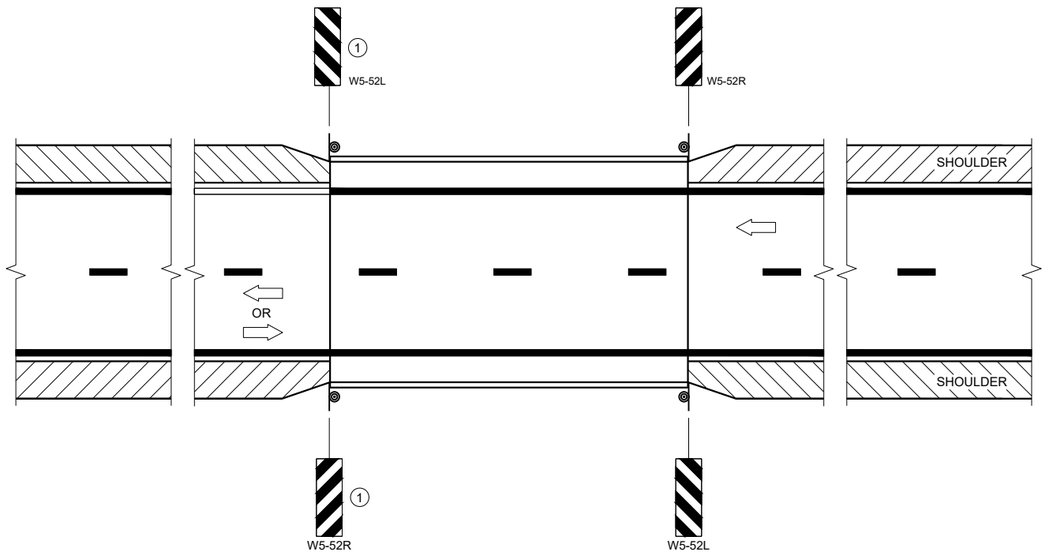
6

SDD 15C02 - 09b




## 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.

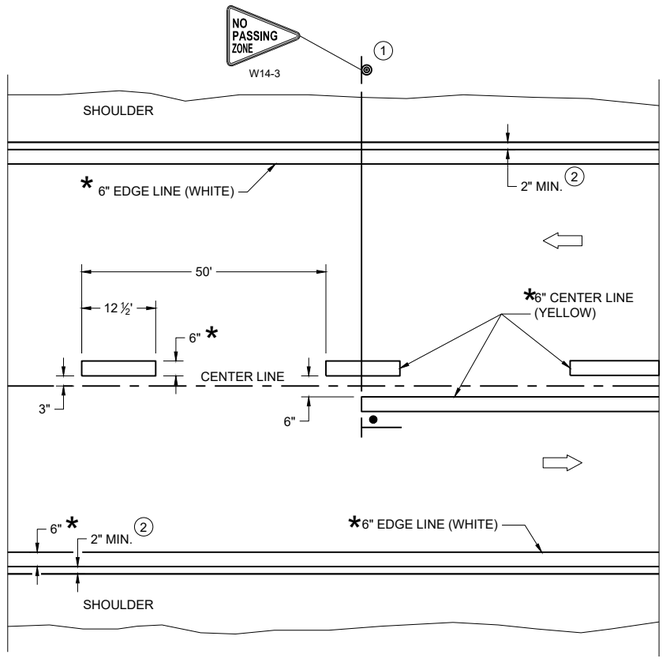
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

## LEGEND

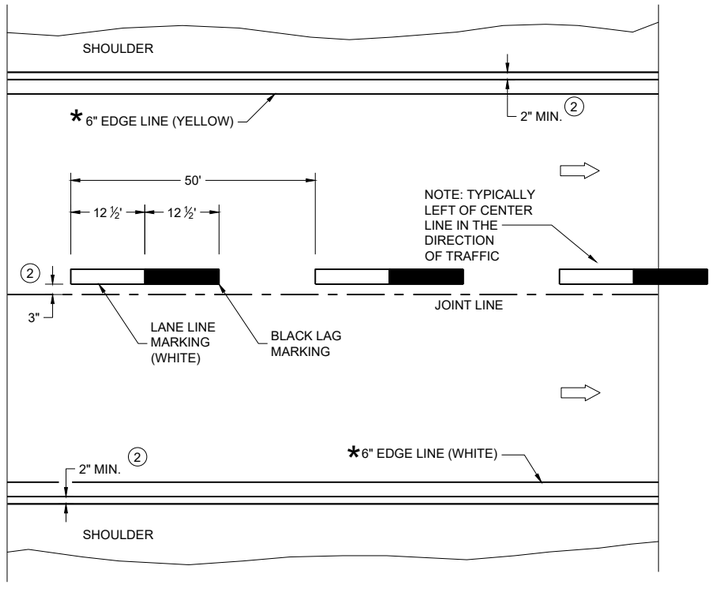
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC




TWO WAY TRAFFIC




ONE WAY TRAFFIC

**PERMANENT PAVEMENT MARKING**

6

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

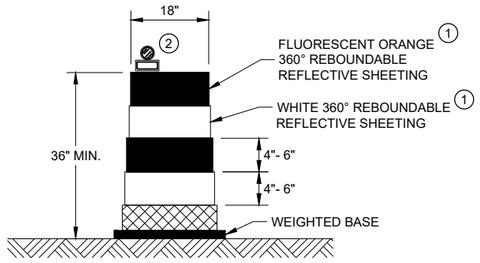




SDD 15C08-23a

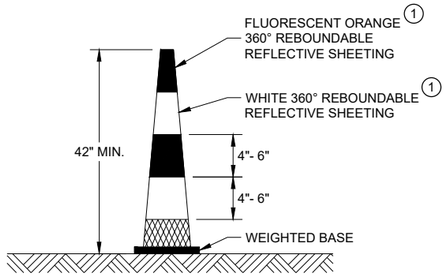
## GENERAL NOTES

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

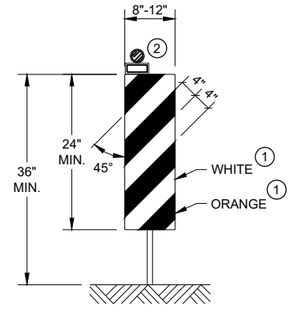
BALLAST WIDTHS
RANGE FROM 24"-36"




### 42" CONE

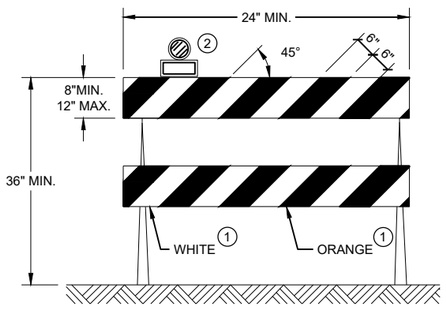
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



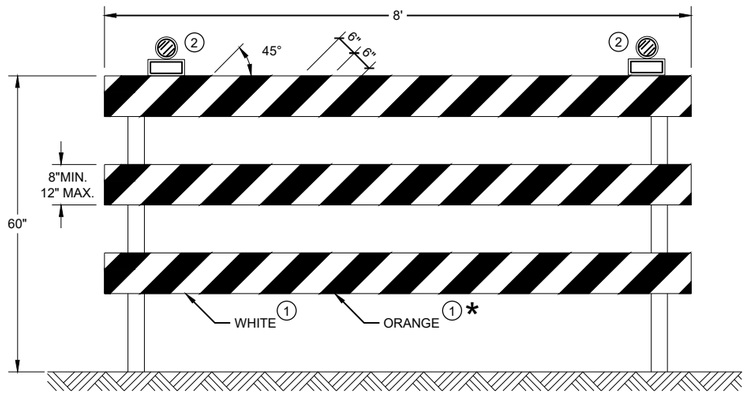

### VERTICAL PANEL

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



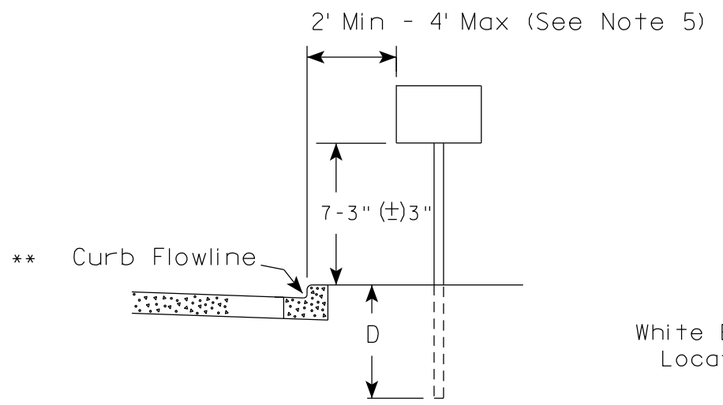
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SDD 15C11 - 10b

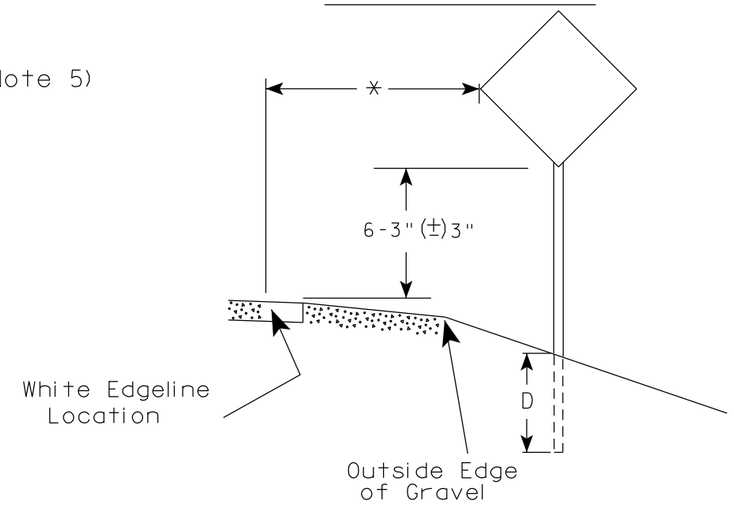
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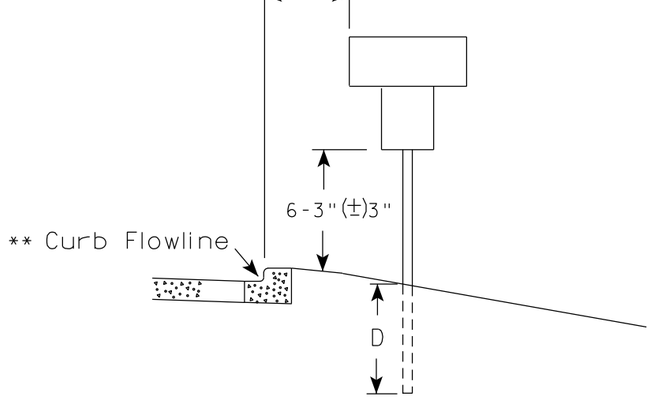
SDD 15C11 - 10b

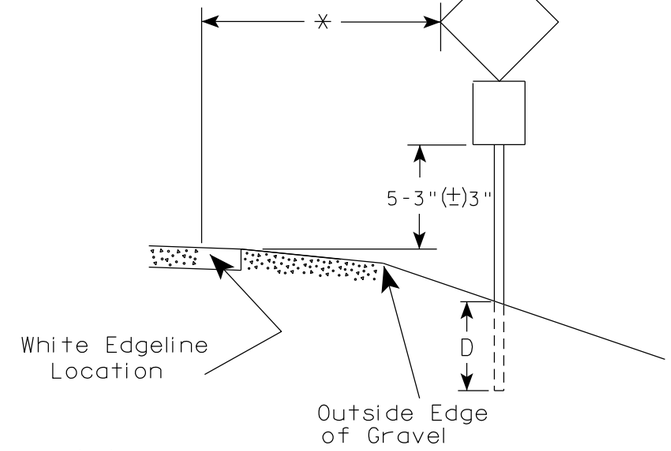
## URBAN AREA




## 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.

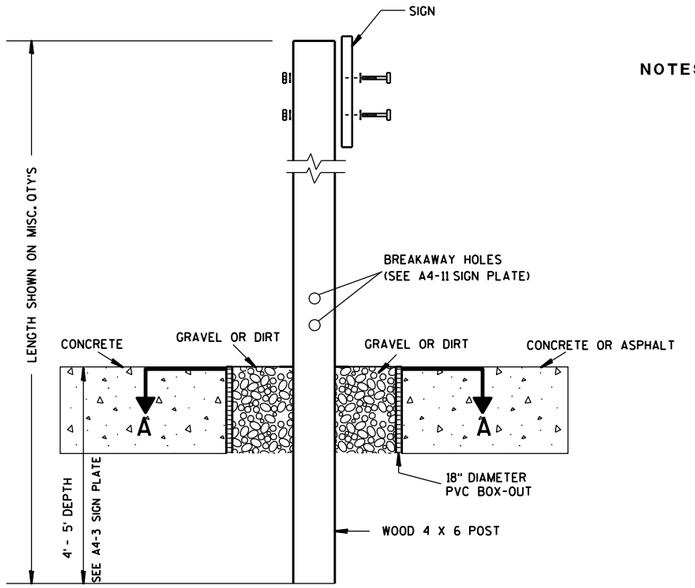
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

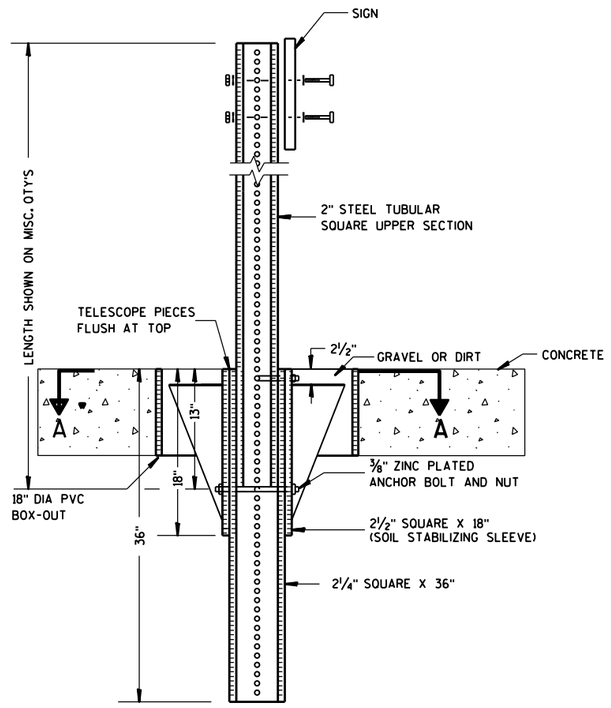
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 38 | E |
|---|---|---|---|---|---|




**ELEVATION VIEW**

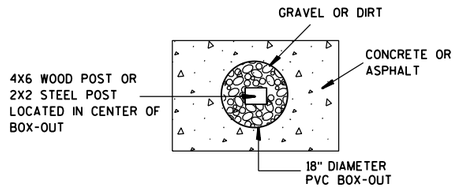
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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

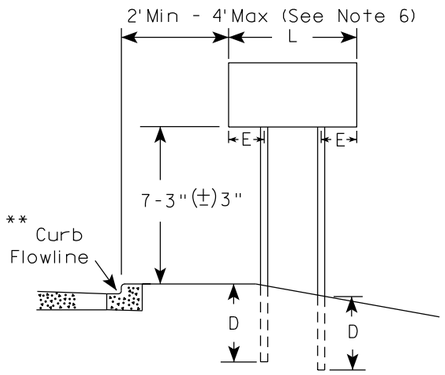
DATE 1/27/14 PLATE NO. A4-3B.1



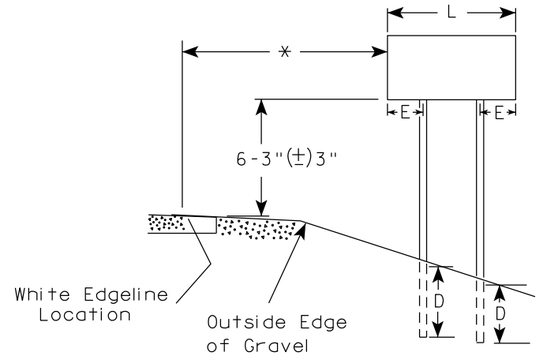
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

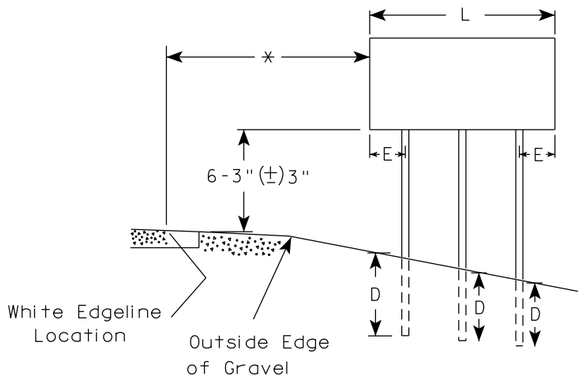
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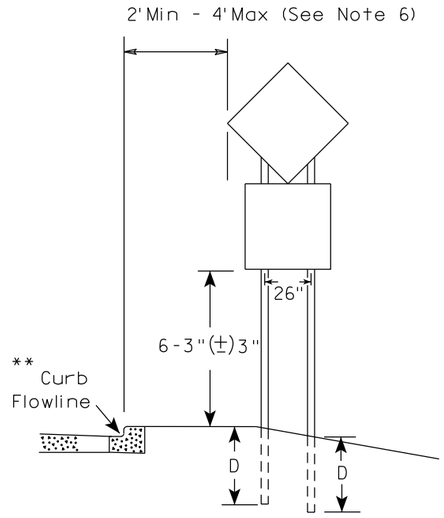
## URBAN AREA



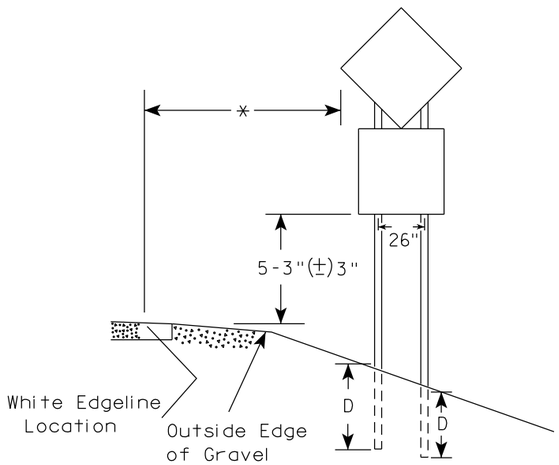

## RURAL AREA (See Note 3)




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' |

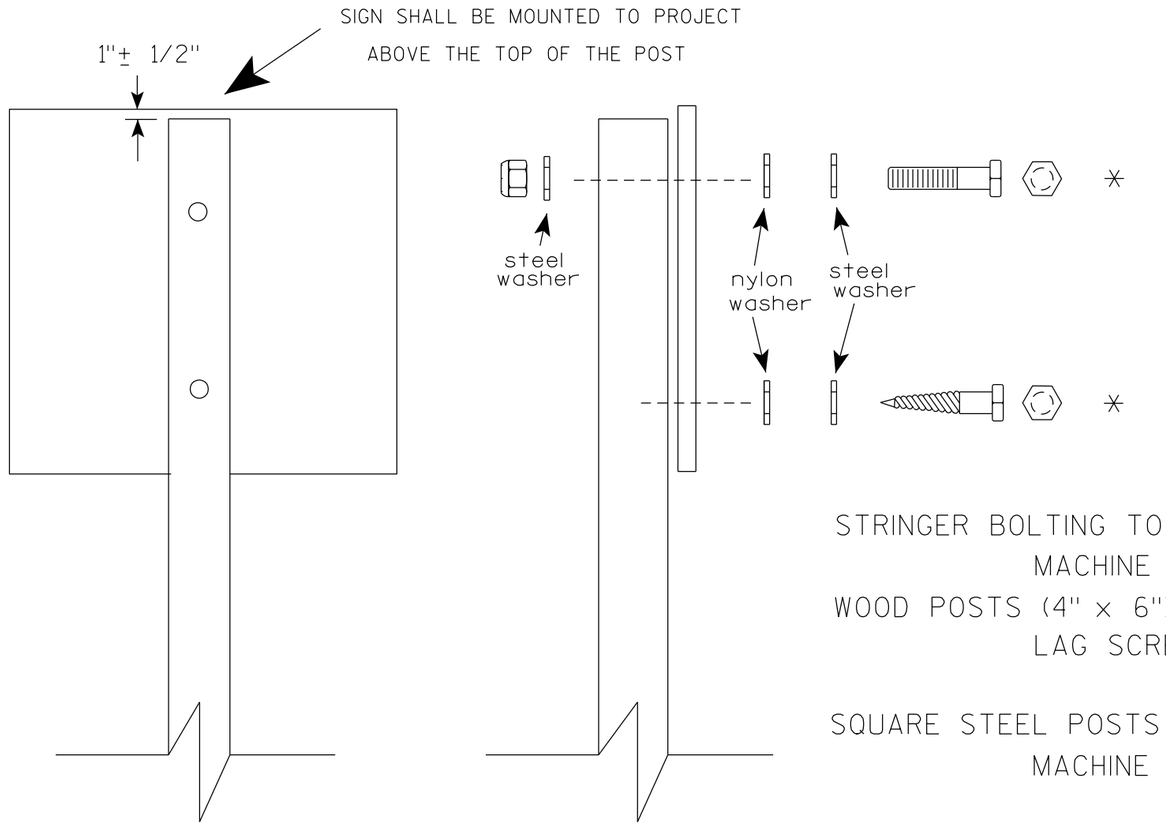
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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

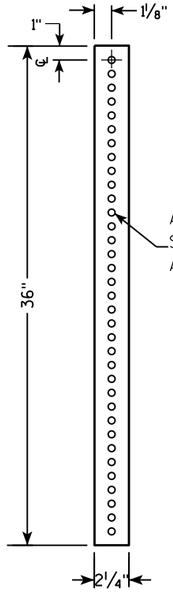
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

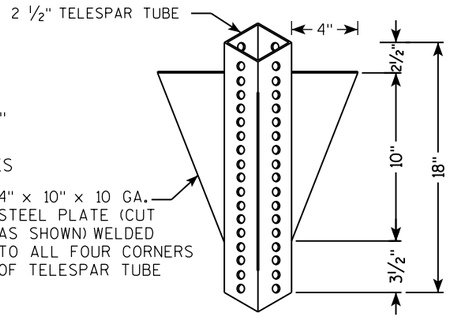
SHEET NO: 41 E

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

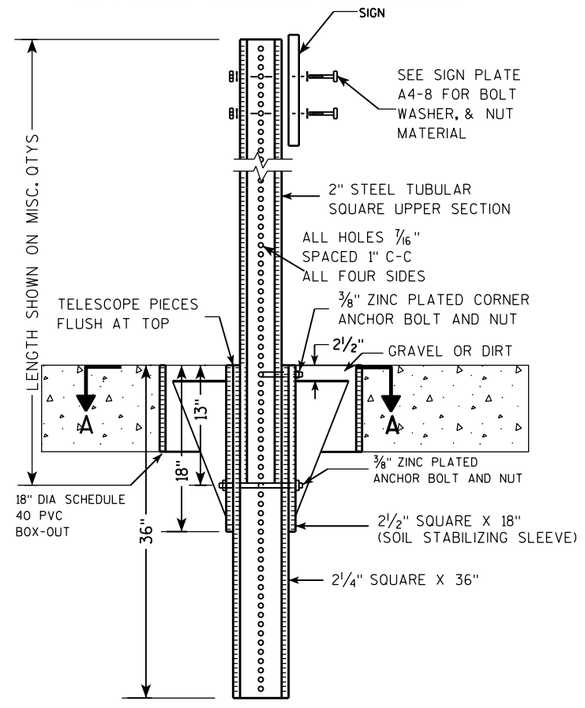
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



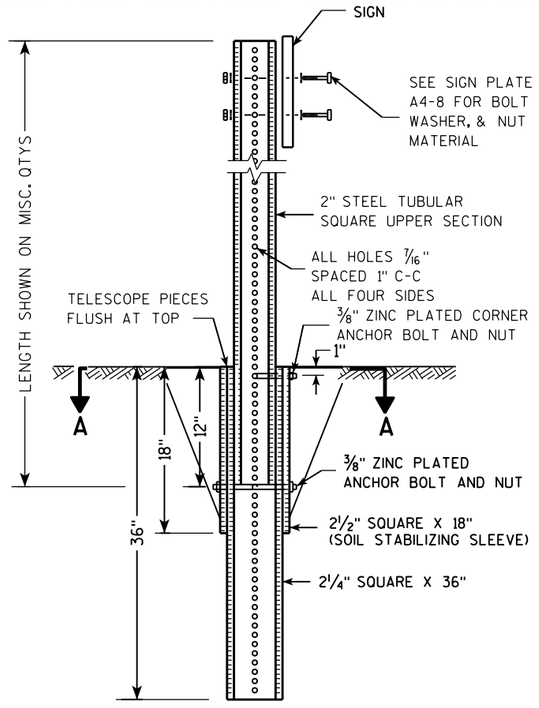

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

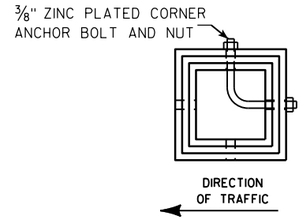



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




## 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*

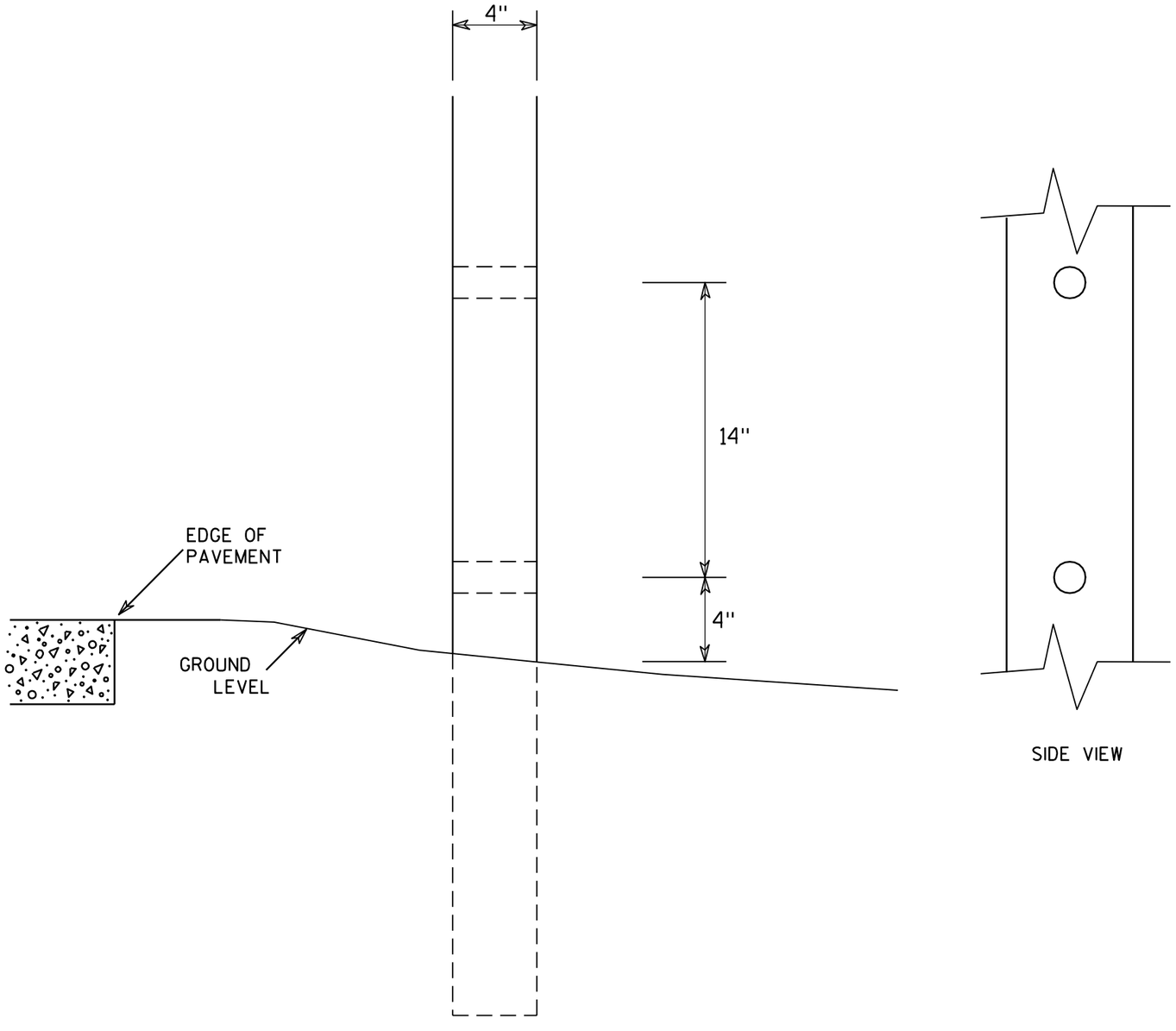
APPROVED Matthew R Rauch
*for* State Traffic Engineer

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

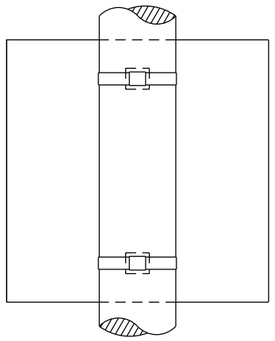
APPROVED Chester J Spang for State Traffic Engineer

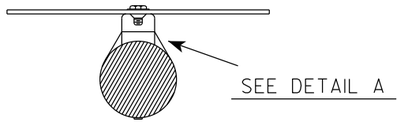
DATE 3/27/97 PLATE NO. A4-11.2

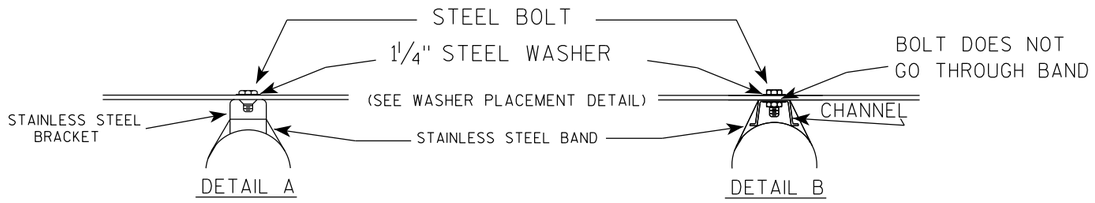
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 43 | E |
|---|---|---|---|---|---|

# BANDING

SINGLE SIGN



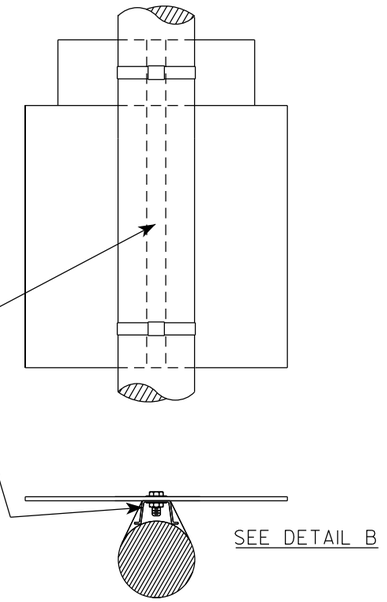


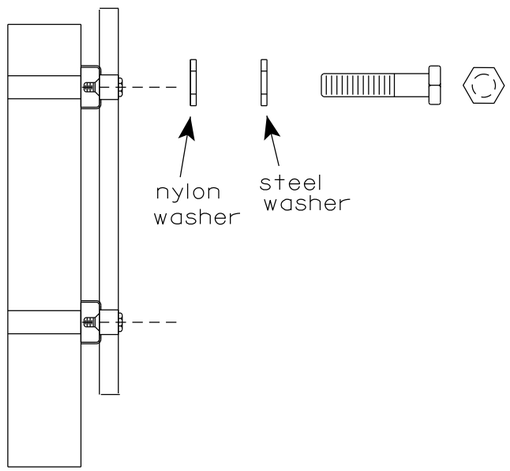

## GENERAL NOTES

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

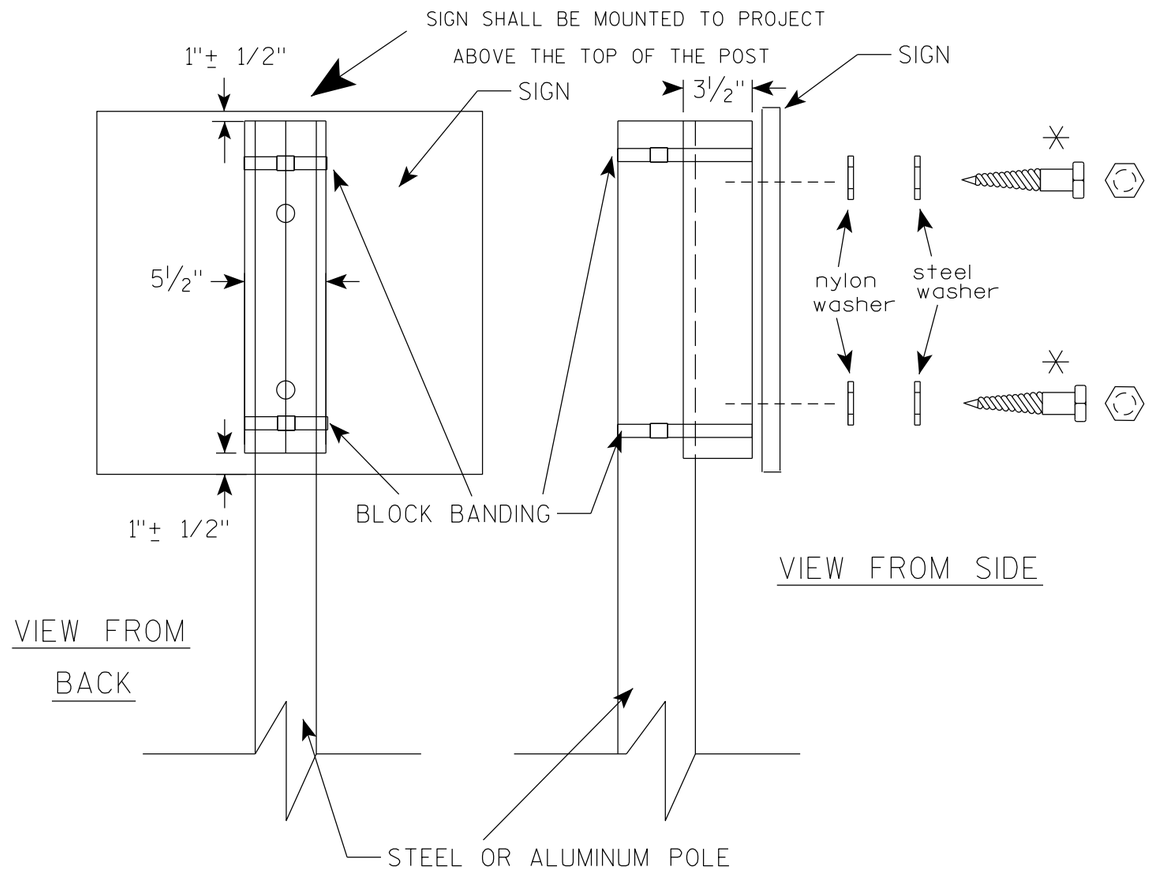
*WISCONSIN DEPT OF TRANSPORTATION*

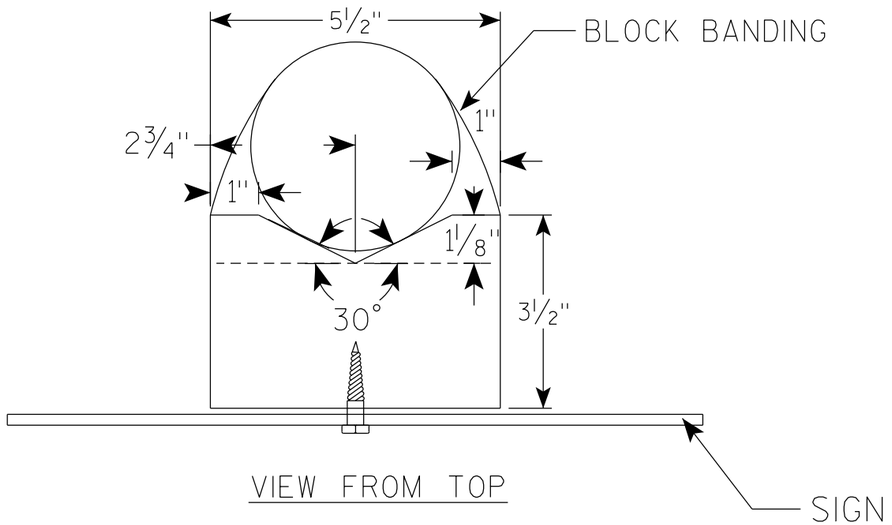
APPROVED Matthew R Rauch
for State Traffic Engineer

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 )

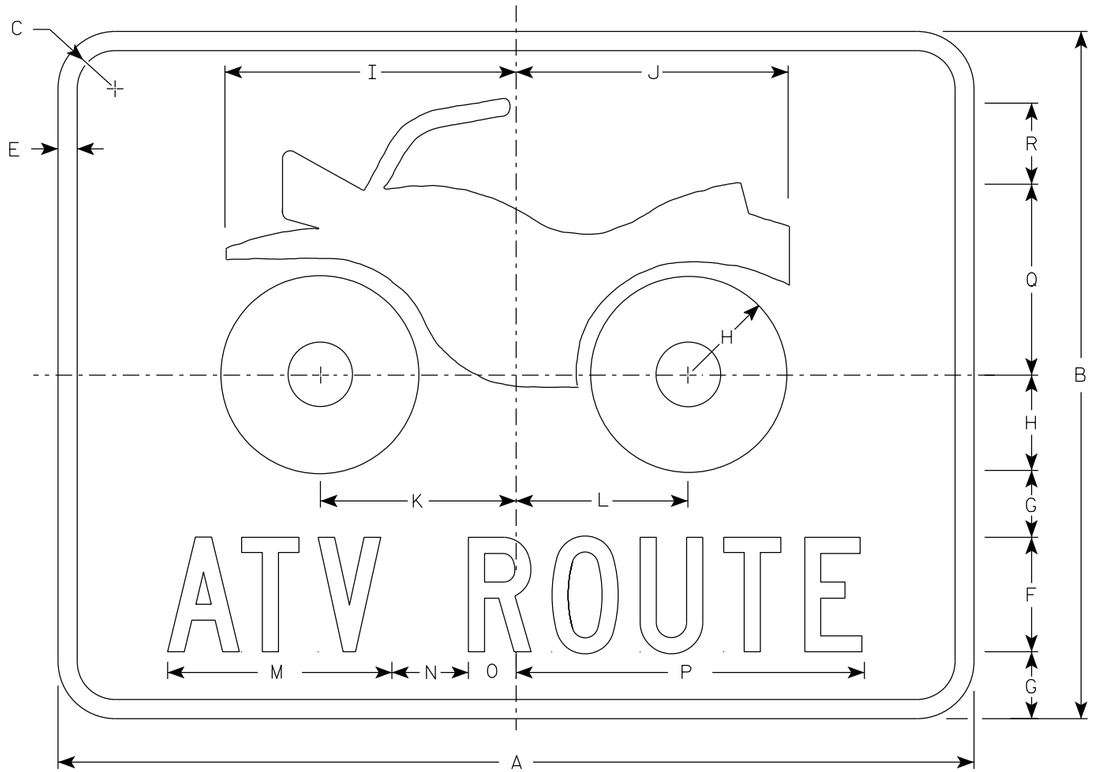
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 45 E




D11-10

NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 24 | 18 | 1 ½ | | ½ | 3 | 1 ¾ | 2 ½ | 7 ⅝ | 7 ⅛ | 5 ⅛ | 5 ½ | 5 ⅞ | 2 | 1 ¼ | 9 ⅛ | 5 | 2 ⅛ | | | | | | | | | 3.0 |
| 2M | 24 | 18 | 1 ½ | | ½ | 3 | 1 ¾ | 2 ½ | 7 ⅝ | 7 ⅛ | 5 ⅛ | 5 ½ | 5 ⅞ | 2 | 1 ¼ | 9 ⅛ | 5 | 2 ⅛ | | | | | | | | | 3.0 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
D11-10

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/25/2023 PLATE NO. D11-10.6

PROJECT NO:

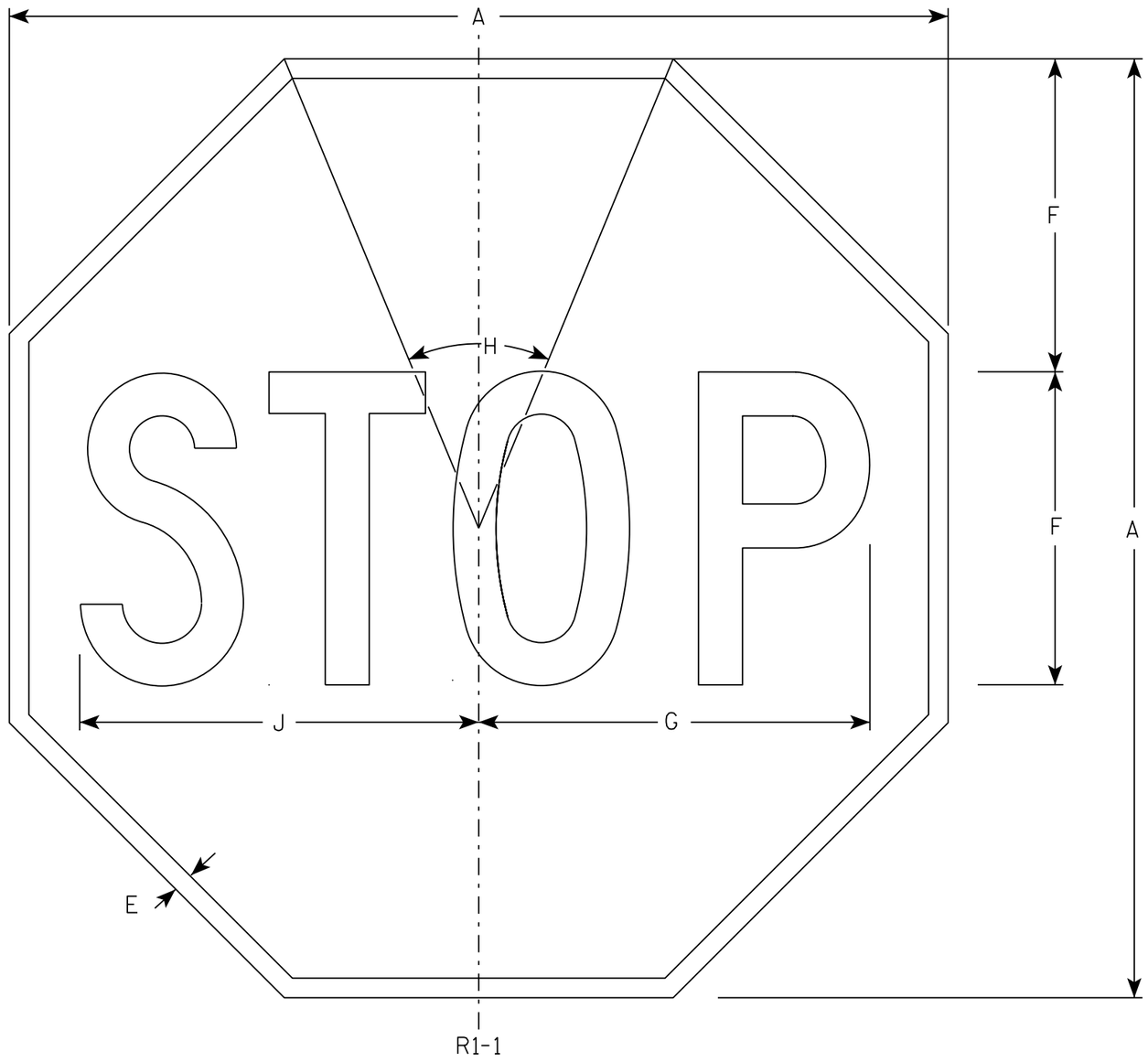
SHEET NO: 46 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\D1110.DGN PLOT DATE : 25-JAN 2023 2:36 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

7

7




NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | | | | 5/8 | 10 | 12 1/2 | 45° | | 12 3/4 | | | | | | | | | | | | | | | | | 5.18 |
| 2S | 30 | | | | 5/8 | 10 | 12 1/2 | 45° | | 12 3/4 | | | | | | | | | | | | | | | | | 5.18 |
| 2M | 36 | | | | 3/4 | 12 | 15 | 45° | | 15 3/8 | | | | | | | | | | | | | | | | | 7.46 |
| 3 | 36 | | | | 3/4 | 12 | 15 | 45° | | 15 3/8 | | | | | | | | | | | | | | | | | 7.46 |
| 4 | 48 | | | | 1 | 16 | 20 | 45° | | 20 1/2 | | | | | | | | | | | | | | | | | 13.25 |
| 5 | 48 | | | | 1 | 16 | 20 | 45° | | 20 1/2 | | | | | | | | | | | | | | | | | 13.25 |
| 6 | 18 | | | | 3/8 | 6 | 7 3/4 | 45° | | 7 3/4 | | | | | | | | | | | | | | | | | 1.86 |
| 7 | 12 | | | | 1/4 | 4 | 5 | 45° | | 5 1/8 | | | | | | | | | | | | | | | | | 0.78 |

STANDARD SIGN

R1-1

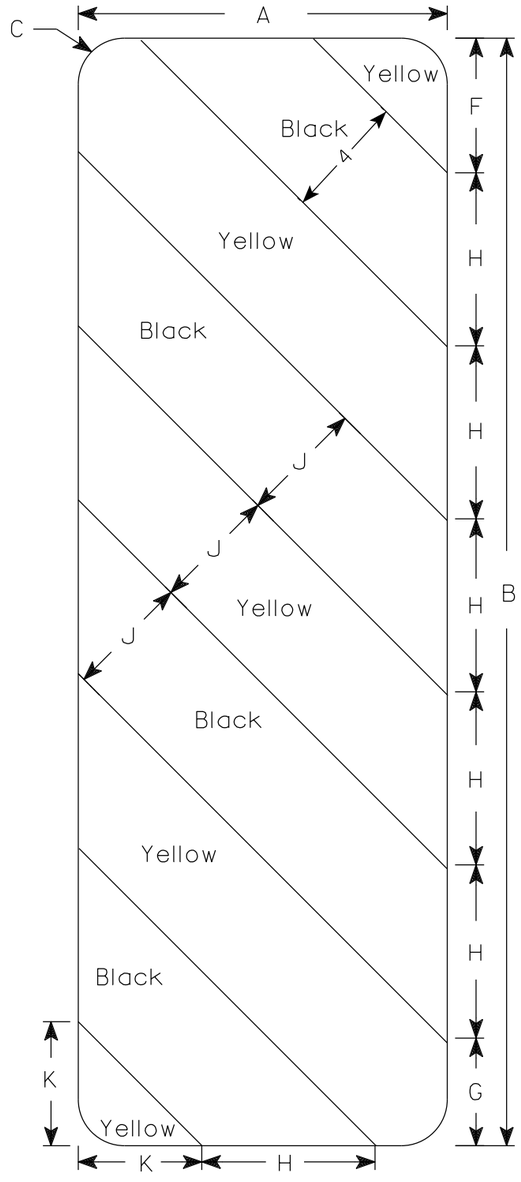
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch

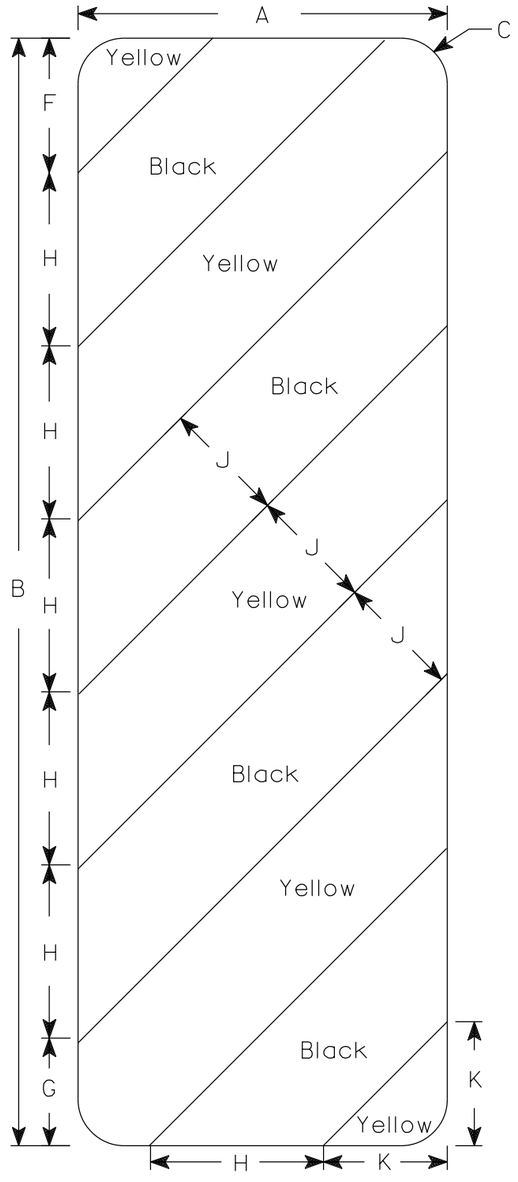
*for* State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 47 | E |
|---|---|---|---|---|---|




W5-52L




W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Alternate colors of stripes as shown.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 12 | 36 | 1 1/2 | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 2M | 12 | 36 | 1 1/2 | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 3 | 18 | 54 | 1 1/2 | | | 6 | 5 1/2 | 8 1/2 | 45° | 6 | 6 9/16 | | | | | | | | | | | | | | | | 6.75 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN

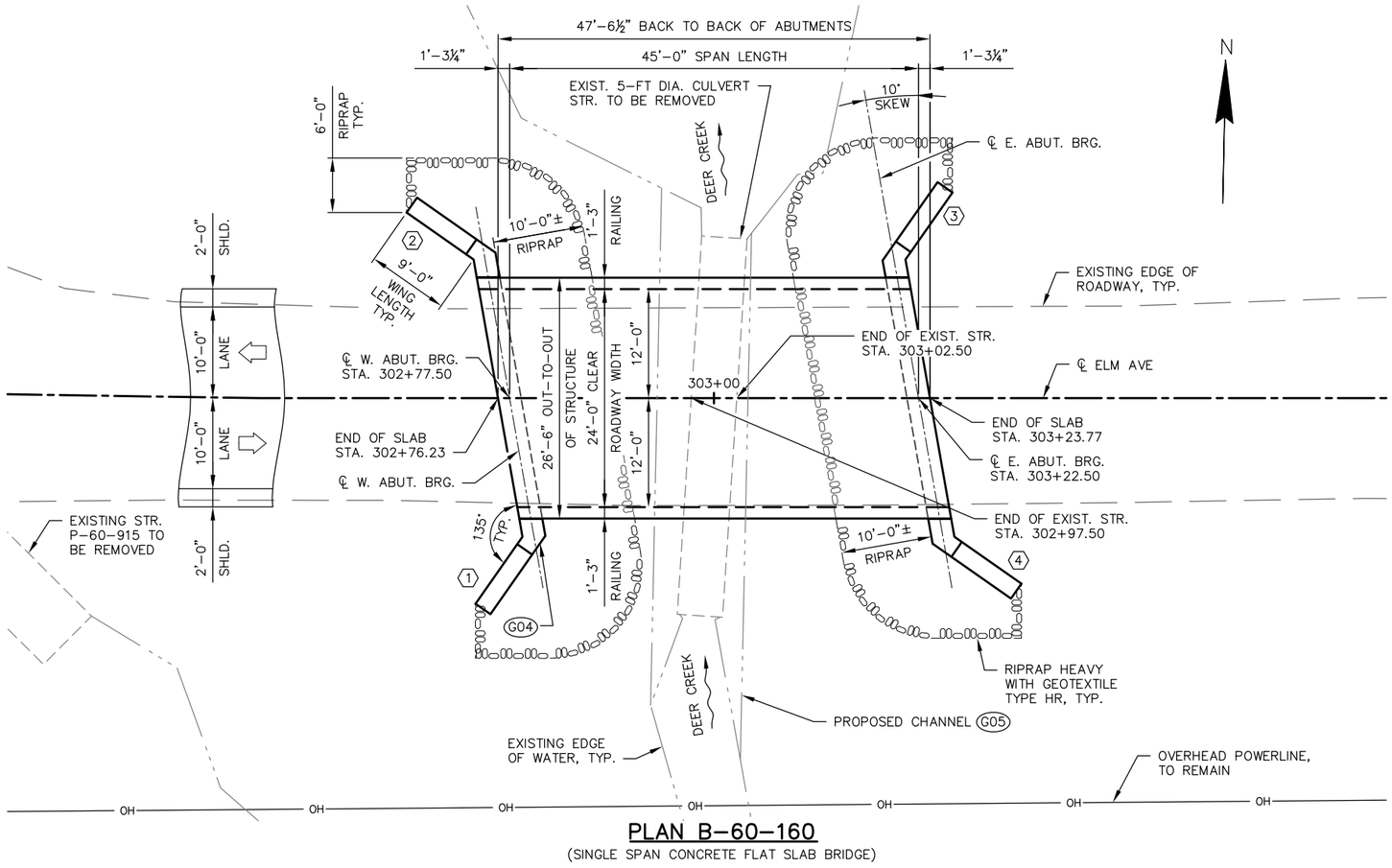
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

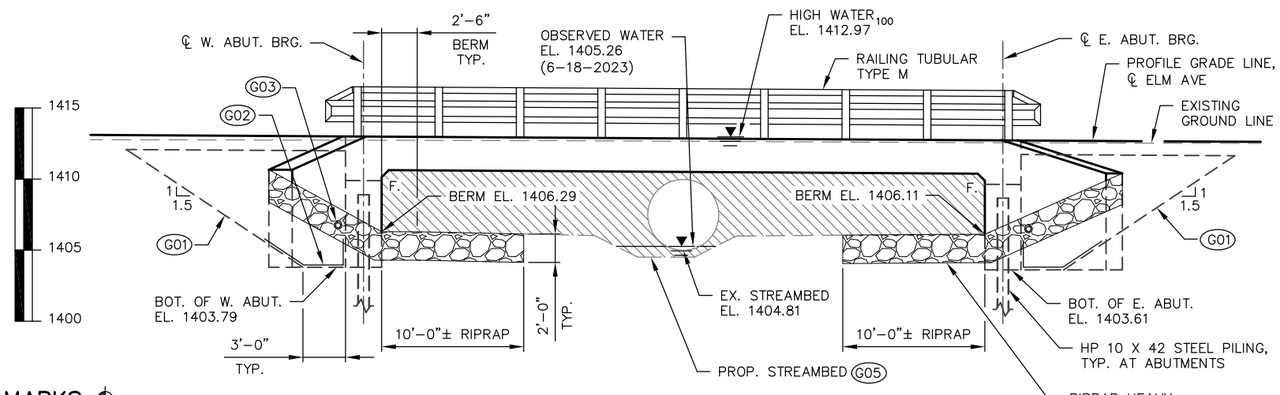
DATE 3/4/2024 PLATE NO. W5-52.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 48 E




## PLAN B-60-160

(SINGLE SPAN CONCRETE FLAT SLAB BRIDGE)




## ELEVATION

(THRU DEER CREEK, LOOKING NORTH)

## BENCH MARKS

| NO. | STATION/OFFSET | DESCRIPTION | ELEVATION |
|---|---|---|---|
| BM #1 | 301+36.87, 46.56' RT. | RR SPIKE IN POWER POLE | 1413.18 |
| BM #2 | 104+97.32, 34.61' RT. | RR SPIKE IN POWER POLE | 1413.48 |

HORIZONTAL DATUM AND ADJUSTMENT: NAD 83 (2011)
VERTICAL DATUM AND ADJUSTMENT: NAVD 88 (2012)
COORDINATE REFERENCE SYSTEM: WISCRS TAYLOR CO.

## NOTES

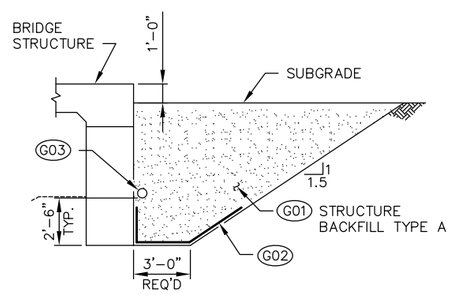
- EXCAVATION AS INDICATED IN THE HATCH AREAS, TO BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-60-160".
- (G01) BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-60-160". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- (G02) "GEOTEXTILE TYPE DF SCHEDULE A" LIMITS. EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT FOR THE ENTIRE ABUTMENT BODY LENGTH.
- (G03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "ABUTMENT DETAILS" SHEET.
- (G04) NAME PLATE REQUIRED AND BENCH MARK CAP (WHEN SUPPLIED). FOR LOCATION SEE "ABUTMENTS" SHEET.
- (G05) SEE ROADWAY PLANS FOR STREAM RE-ALIGNMENT PLAN AND DETAILS.
- ⬡ INDICATES WING NUMBER

## LIST OF DRAWINGS


1. GENERAL PLAN
2. CROSS SECTION, GENERAL NOTES & QUANTITIES
3. SUBSURFACE EXPLORATION
4. ABUTMENTS
5. ABUTMENT DETAILS
6. SUPERSTRUCTURE
7. SUPERSTRUCTURE DETAILS
8. RAILING TUBULAR TYPE M


TRAFFIC DATA:

ELM AVENUE
A.A.D.T. (2025) — 64
A.A.D.T. (2045) — 78
DESIGN SPEED — 60 M.P.H.




## ABUTMENT BACKFILL DETAIL

(TYPICAL AT BOTH ABUTMENTS)

WISCONSIN
ANDREW C. KNUTSON
E-34662
SPRING GREEN, WI
7-25-24
PROFESSIONAL ENGINEER

## DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.15
OPERATING RATING FACTOR — RF=1.50
WISCONSIN STANDARD PERMIT VEHICLE RATING (WIS.-SPV): — 250 KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB — $f'c$ = 4,000 P.S.I.
ALL OTHER — $f'c$ = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT — $fy$ = 60,000 P.S.I.

FOUNDATION DATA:

WEST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 150 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 15 FT PILE LENGTHS AT W. ABUT.

EAST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED DOWN TO EL. 1380.00. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 150 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 ESTIMATED 30 FT PILE LENGTHS AT E. ABUT.

HYDRAULIC DATA:

$Q_{100}$ — 1,210 C.F.S.
$Q_{100}$ (THRU BRIDGE) — 896 C.F.S.
$Q_{100}$ (ROAD) — 314 C.F.S.
DRAINAGE AREA — 10.6 SQ. MI.
BRIDGE WATER AREA — 178 SQ. FT.
BRIDGE VELOCITY — 5.04 F.P.S.
HIGH WATER$_{100}$ EL. — 1412.97 FT.
OVERTOPPING Q FREQ. — 32 YRS
SCOUR CRITICAL CODE — 5
$Q_2$ — 375 C.F.S.
$Q_2$ ELEVATION — 1409.56 FT.
$Q_2$ VELOCITY — 2.79 F.P.S.

STATE PROJECT NUMBER
9549-00-73


BRIDGE OFFICE CONTACT
AARON BONK, P.E.
(608) 261-0261

CONSULTANT CONTACT
ANDY KNUTSON, P.E., S.E.
(608) 588-7866


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


WESTBROOK Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WI 53588
PHONE (608) 588-7866
FAX (608) 588-7954


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/06/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

# STRUCTURE B-60-160

ELM AVENUE OVER DEER CREEK

| COUNTY | TOWN/~~CITY/VILLAGE~~ |
|---|---|
| TAYLOR | DEER CREEK |

DESIGN SPEC.: AASHTO LRFD DESIGN SPEC.

| DESIGNED BY | DESIGN CK'D. | DRAWN BY | PLANS CK'D. |
|---|---|---|---|
| CDS | JDO | CDS | ACK |

GENERAL PLAN

SHEET 1 OF 8

49

FILE: B600160_01_gen.dwg
PLOT SCALE:

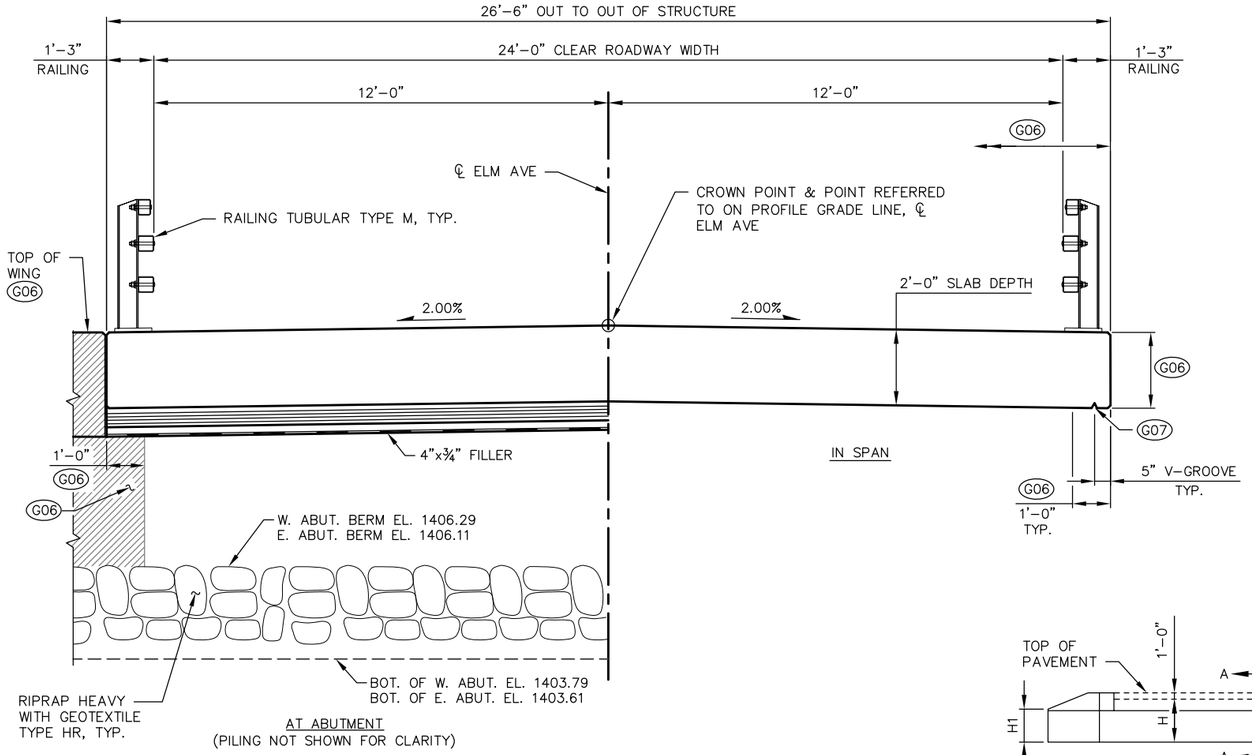
8

8

I.D. 9549-00-73

PLOT DATE: Jul 24, 2024

| STATE PROJECT NUMBER |
|---|
| 9549-00-73 |




AT ABUTMENT
(PILING NOT SHOWN FOR CLARITY)

## CROSS SECTION THRU ROADWAY

(LOOKING EAST)

## NOTES

(G06) COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE EXPOSED TOP OF SLAB, INCLUDING THE SLAB EDGES AND 1'-0" UNDER THE SLAB, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE FRONT FACE OF THE ABUTMENTS TO 1'-0" PAST THE EDGE OF SLAB.

(G07) ¾" V-GROOVE REQ'D. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT.

## TOTAL ESTIMATED QUANTITIES

| ITEM NO. | BID ITEMS | UNIT | W. ABUT. | E. ABUT. | SUPER. | TOTALS |
|---|---|---|---|---|---|---|
| 203.0220.01 | REMOVING STRUCTURE 01. P-60-915 | EACH | --- | --- | --- | 1 |
| 203.0220.02 | REMOVING STRUCTURE 02. 5-FT DIA. CULVERT | EACH | --- | --- | --- | 1 |
| 206.1001 | EXCAVATION FOR STRUCTURES BRIDGES B-60-160 | EACH | --- | --- | --- | 1 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | 180 | 180 | --- | 360 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 30.1 | 30.1 | 97.5 | 158 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | 18 | 18 | 169 | 205 |
| 505.0400 | BAR STEEL REINFORCEMENT HS STRUCTURES | LB | 2100 | 2100 | --- | 4200 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 1460 | 1460 | 18100 | 21020 |
| 513.4061 | RAILING TUBULAR TYPE M | LF | --- | --- | 100 | 100 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | 6 | 6 | --- | 12 |
| 550.0020 | PRE-BORING ROCK OR CONSOLIDATED MATERIALS | LF | 70 | 175 | --- | 245 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | 105 | 210 | --- | 315 |
| 606.0300 | RIPRAP HEAVY | CY | 50 | 50 | --- | 100 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | 75 | 75 | --- | 150 |
| 645.0111 | GEOTEXTILE TYPE DF SCHEDULE A | SY | 30 | 30 | --- | 60 |
| 645.0120 | GEOTEXTILE TYPE HR | SY | 107 | 107 | --- | 214 |
| | | | | | | |
| (NON-BID ITEM) | FILLER | SIZE | | | | ½" & ¾" |

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

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

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WING FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCLUDED WITH "EXCAVATION FOR STRUCTURES BRIDGES B-60-160".

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-60-160" SHALL BE THE EXISTING GROUND LINE.

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

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

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

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

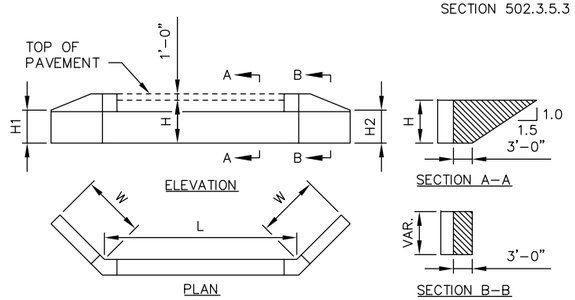
SHALLOW BEDROCK (LESS THAN 10-FT BELOW ABUTMENT) WAS ENCOUNTERED IN THE BORING FOR THE WEST ABUTMENT. A MINIMUM OF 3-FEET OF PRE-BORE AT THE ABUTMENT INTO SUITABLE BEDROCK IS REQUIRED.

DUE TO POTENTIAL SCOUR DEPTH AT THE EAST ABUTMENT, ALL PILES SHALL BE PREBORED TO EL. 1380.00 AT THE EAST ABUTMENT.

PILES PLACED IN PREBORED HOLES CORED INTO ROCK DO NOT REQUIRE DRIVING. PILES SHALL BE "FIRMLY SEATED" ON ROCK AFTER PLACEMENT IN PREBORED HOLES.

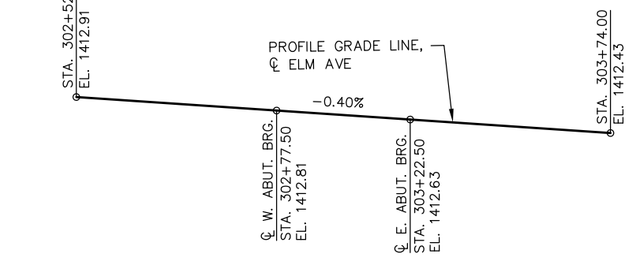
THE EXISTING STRUCTURE (P-60-915) IS THREE PIPE CULVERTS WITH AN OVERALL LENGTH OF 38.5-FT AND BARREL LENGTHS OF 113.5-FT AND IS TO BE REMOVED PER BID ITEM "REMOVING STRUCTURE 01. P-60-915".

THE EXISTING STRUCTURE UNDER ELM AVENUE IS A SINGLE PIPE CULVERT WITH A DIAMETER OF 5-FT AND BARREL LENGTH OF 42.5-FT AND IS TO BE REMOVED PER BID ITEM "REMOVING STRUCTURE 02. 5-FT DIA. CULVERT".

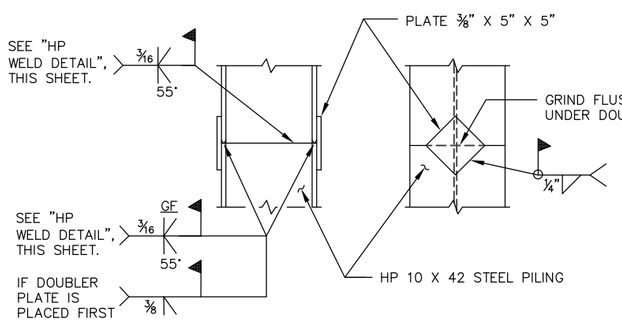



## ABUTMENT BACKFILL DIAGRAM

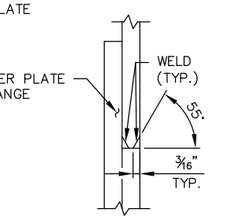
L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
$V_{CF}$ = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)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




## PROFILE GRADE LINE, ℄ ELM AVE




## PILE SPLICE DETAILS




## HP WELD DETAIL

(FLANGE SHOWN, WEB SIMILAR)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-60-160**

DRAWN BY JDO | PLANS CK'D ACK

CROSS SECTION, GENERAL NOTES & QUANTITIES

SHEET 2 OF 8

50

8

8

I.D. 9549-00-73

PLOT DATE: Jul 24, 2024

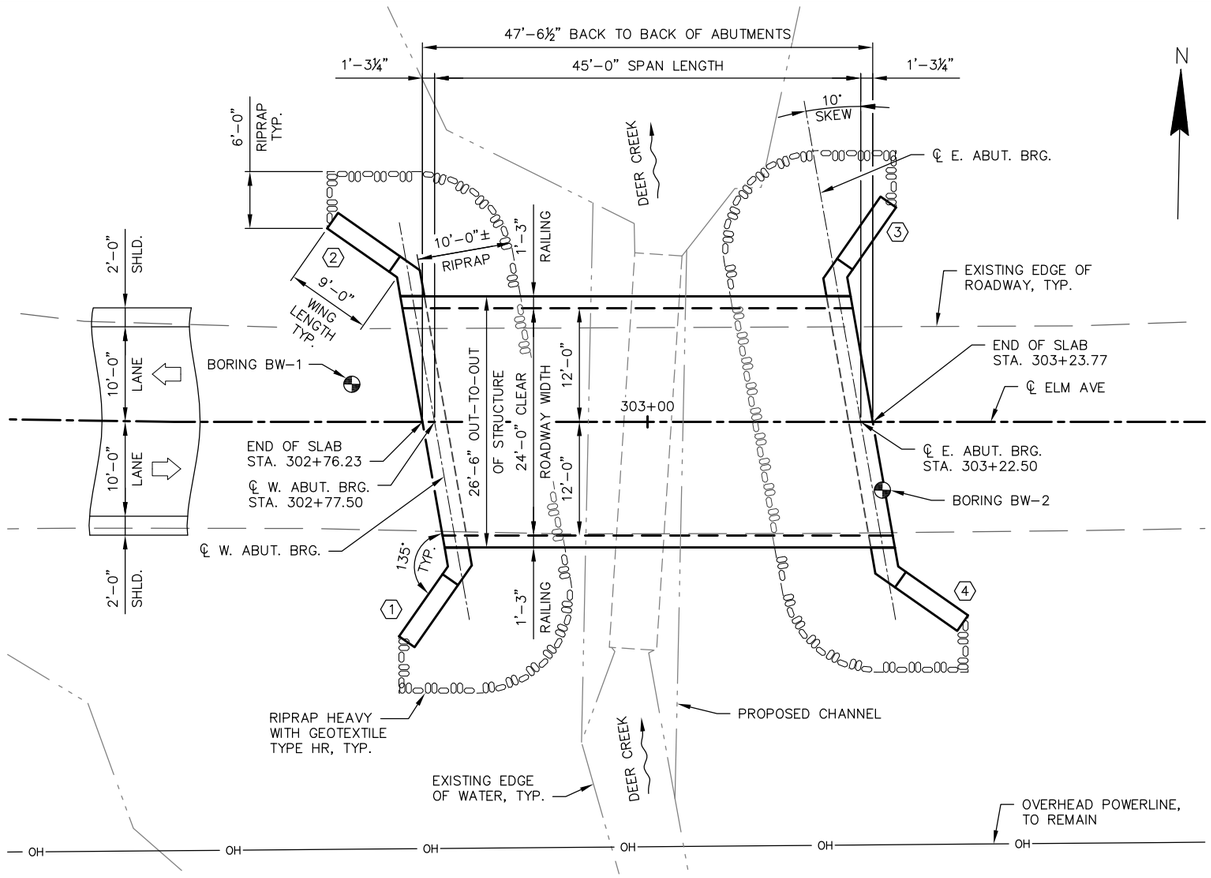
FILE: B600160_02_qty.dwg
PLOT SCALE:

## B-60-160 BORINGS

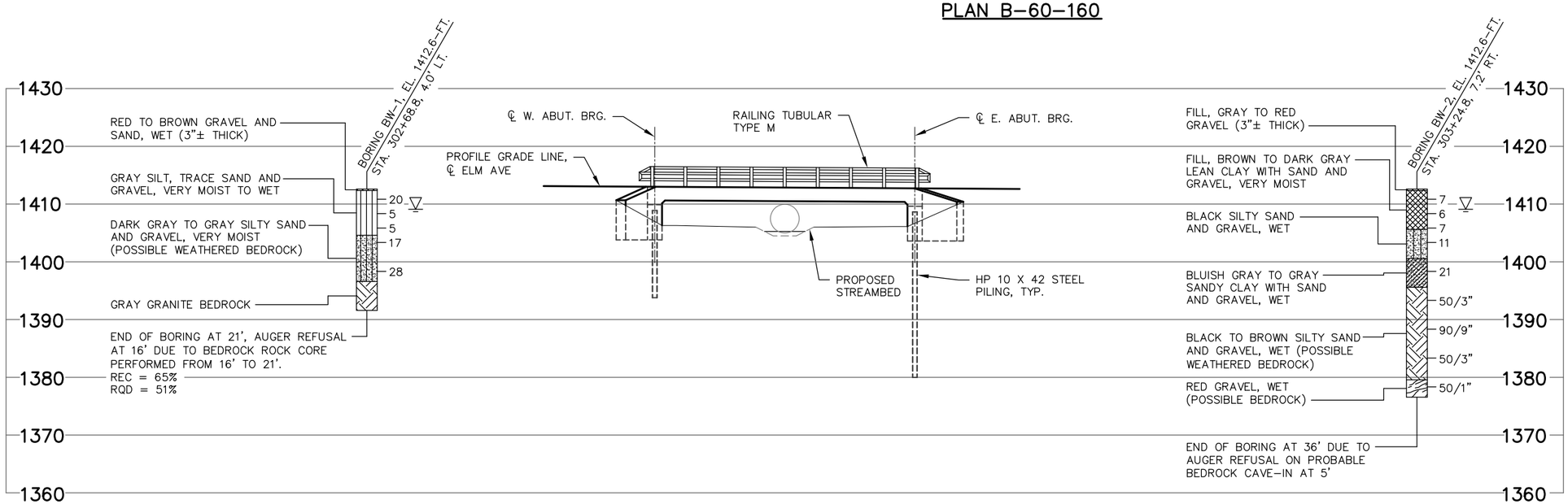
| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| BORING BW-1 | 6/13/2023 | 306263.6 | 666978.0 |
| BORING BW-2 | 6/12/2023 | 306253.6 | 667034.3 |
| BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC. | | | |
| SUBSURFACE INVESTIGATION REPORT: PROFESSIONAL SERVICE INDUSTRIES, INC. | | | |
| ALL COORDINATES REFERENCED TO WISCRS, TAYLOR COUNTY | | | |

**NOTE**

⬡ INDICATES WING NUMBER




PLAN B-60-160



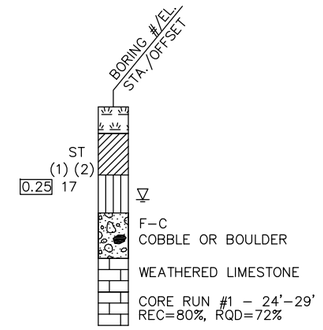

STATE PROJECT NUMBER

**9549-00-73**

MATERIAL SYMBOLS

| | | |
|---|---|---|
| ASPHALT | TOPSOIL | PEAT |
| CONCRETE | FILL | GRAVEL |
| SAND | CLAY | SILT |
| BOULDERS OR COBBLES | LIMESTONE | BEDROCK (UNKNOWN) |
| SHALE | SANDSTONE | IGNEOUS/ META |

LEGEND OF BORING




(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-160

DRAWN BY JDO | PLANS CK'D ACK

SUBSURFACE EXPLORATION

SHEET 3 OF 8

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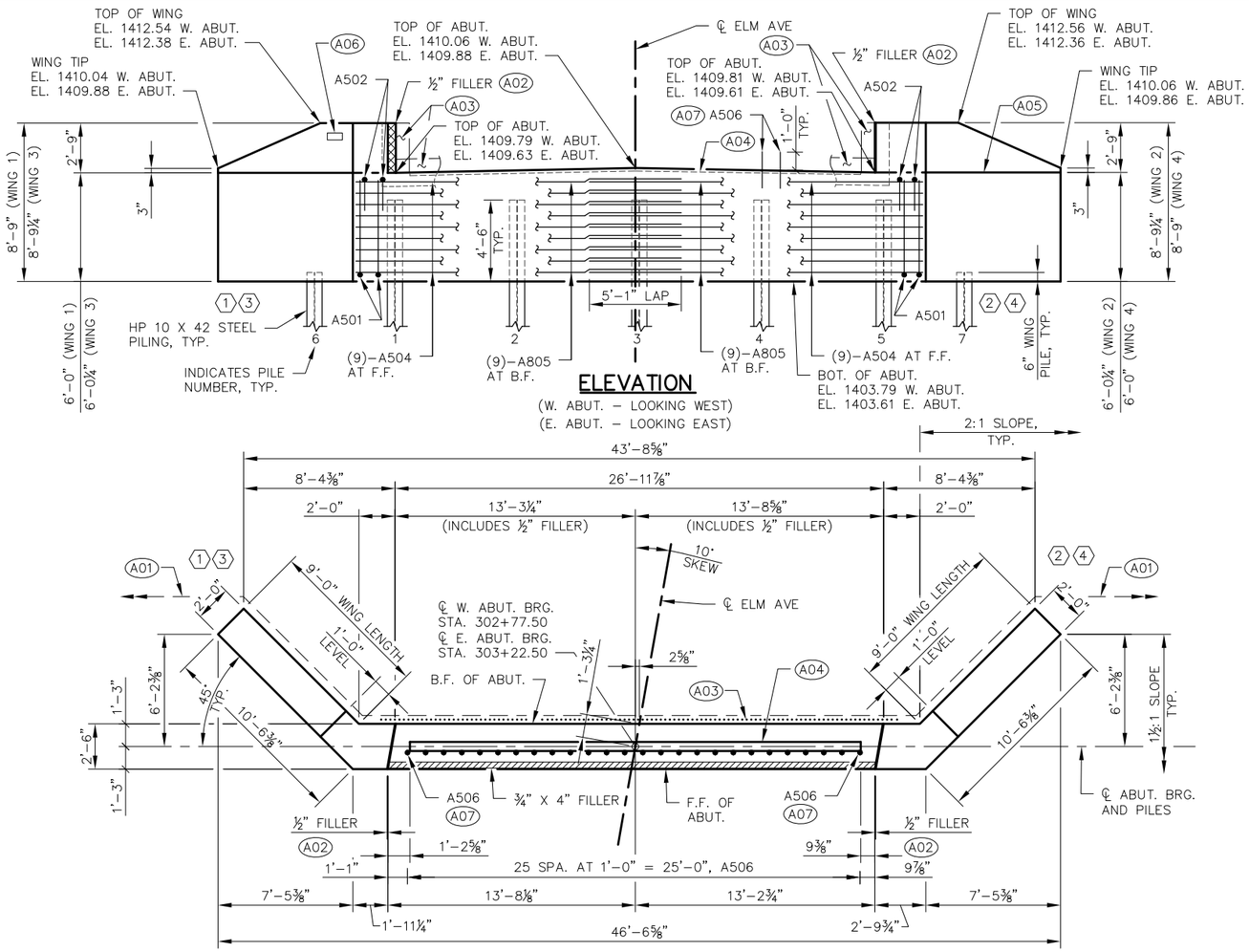
8

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I.D. 9549-00-73

PLOT DATE: Jul 24, 2024

FILE: B60160_03_bor.dwg
PLOT SCALE:

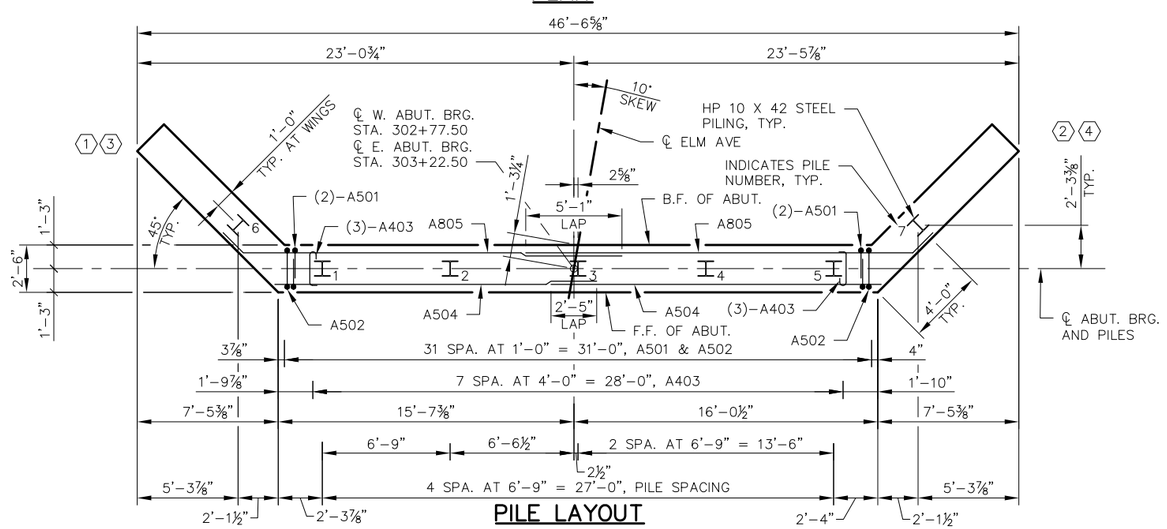



## ELEVATION

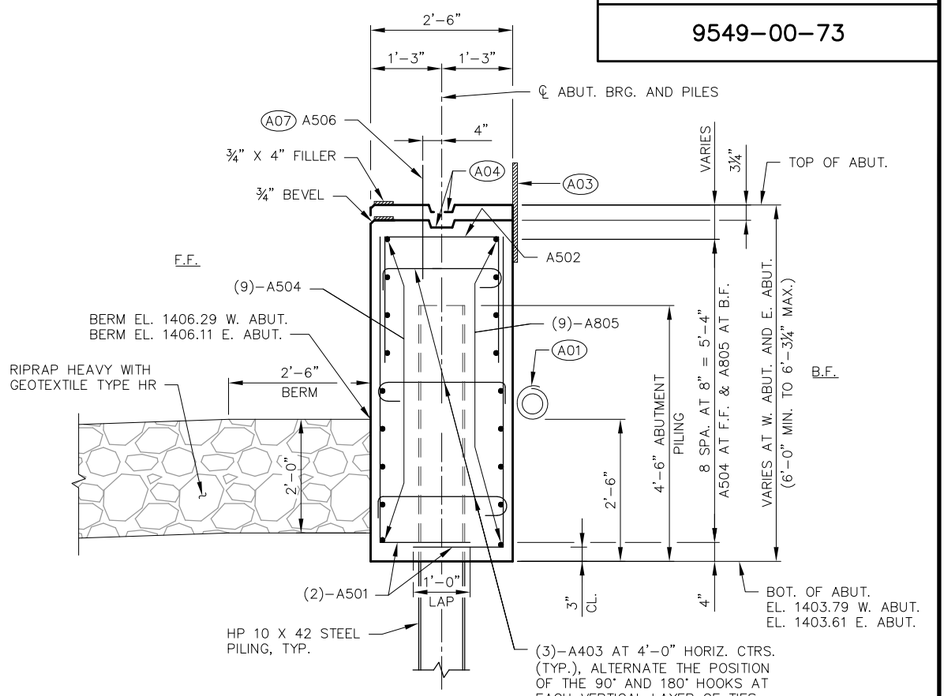
(W. ABUT. – LOOKING WEST)
(E. ABUT. – LOOKING EAST)




## PLAN




## PILE LAYOUT




## TYPICAL SECTION THRU ABUTMENT

## NOTES

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

WEST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 150 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 15 FT PILE LENGTHS AT WEST ABUTMENT.

EAST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED DOWN TO EL. 1380.00. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 150 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 30 FT PILE LENGTHS AT THE EAST ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

(A01) PIPE UNDERDRAIN WRAPPED (6–INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "ABUTMENT DETAILS" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

(A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON–STAINING GRAY NON–BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

(A03) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

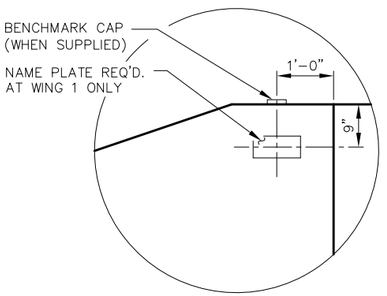
(A04) KEYED CONST. JT. FORMED BY BEVELED 2 X 6

(A05) OPTIONAL KEYED CONST. JT. FORMED BY BEVELED 2 X 6, TYP.

(A06) NAME PLATE & BENCHMARK CAP (WHEN SUPPLIED) AT WING 1 ONLY. SEE "NAME PLATE DETAIL", THIS SHEET.

(A07) A506 BARS MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED 1'–0" INTO ABUTMENT BODY.

⬡ INDICATES WING NUMBER




## NAME PLATE DETAIL

F.F. – FRONT FACE
B.F. – BACK FACE

STATE PROJECT NUMBER
9549–00–73

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–60–160

DRAWN BY JDO | PLANS CK'D ACK

ABUTMENTS

SHEET 4 OF 8

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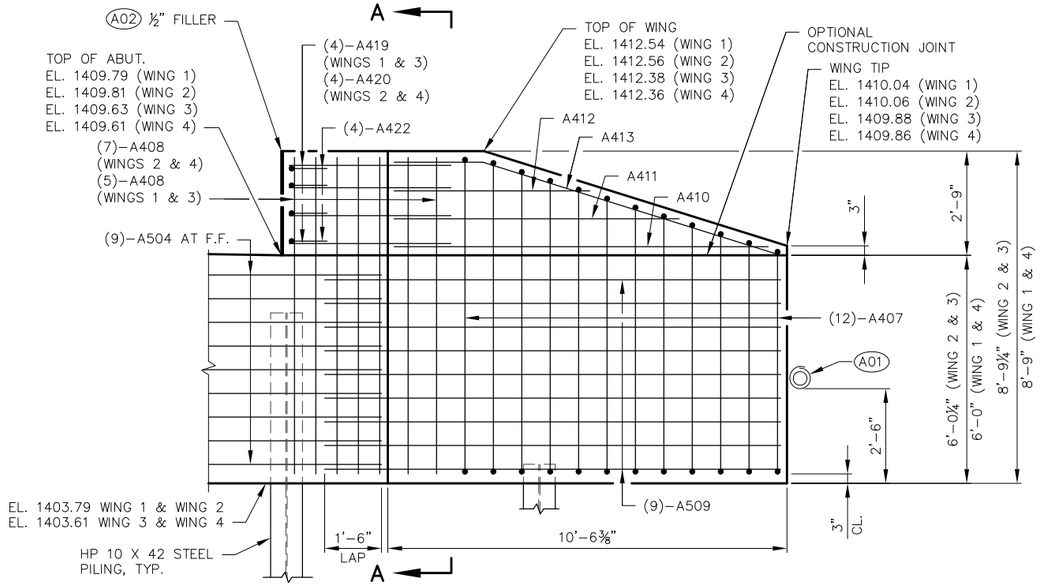
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I.D. 9549–00–73

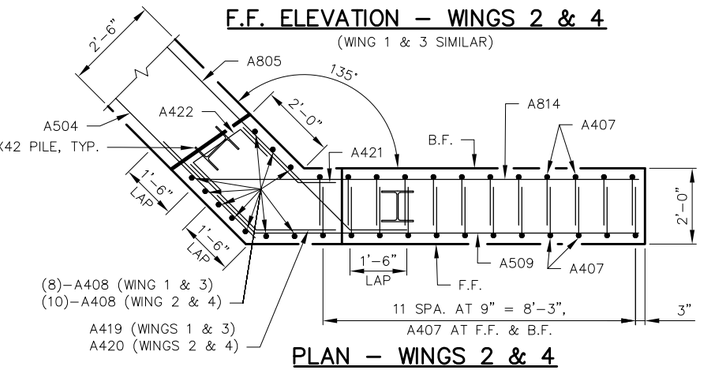
PLOT DATE: Jul 24, 2024

FILE: B600160_04–05_abut.dwg
PLOT SCALE:



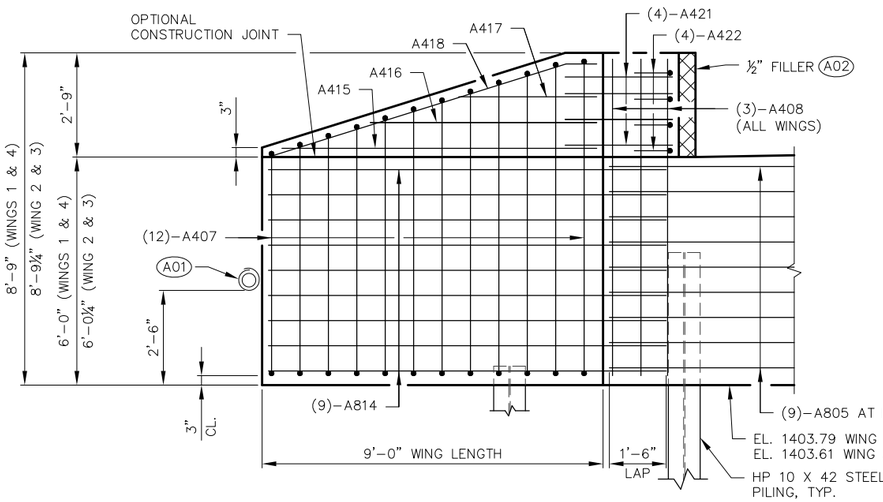

## F.F. ELEVATION – WINGS 2 & 4

(WING 1 & 3 SIMILAR)



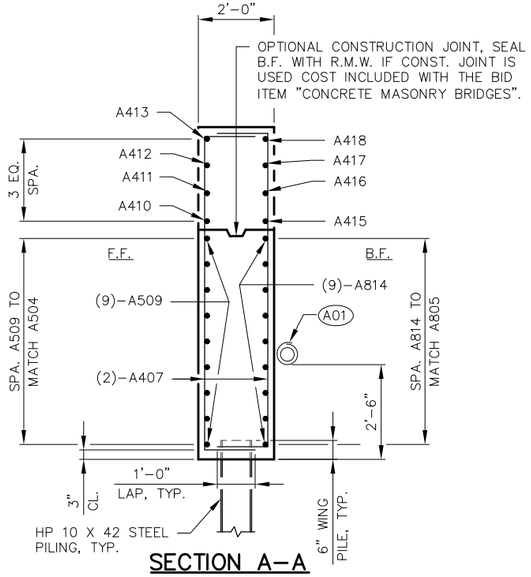

## PLAN – WINGS 2 & 4

(WING 1 & 3 SIMILAR)

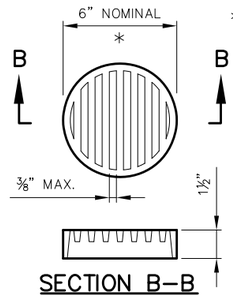



## B.F. ELEVATION – WINGS 2 & 4

(WING 1 & 3 SIMILAR)




## SECTION A–A



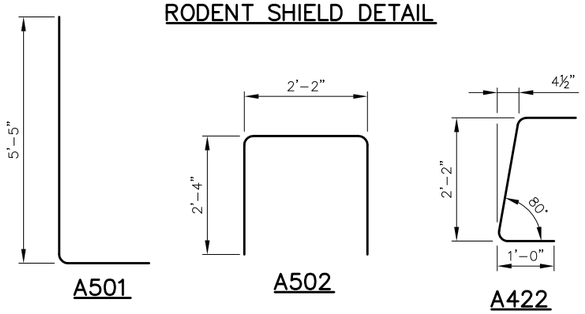

## SECTION B–B

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

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE 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.

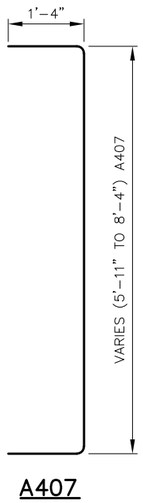
THE RODENT SHIELD. PIPE COUPLING AND SCREWS SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

## RODENT SHIELD DETAIL




## BAR BEND DIMENSIONS

| MARK | "A" | "B" |
|---|---|---|
| A413 | 8'–2" | 2'–4" |
| A418 | 8'–2" | 0'–9" |

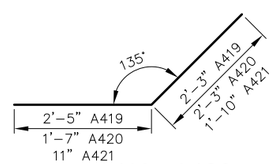



A407

## BAR SERIES TABLE

| MARK | NO. REQ'D | LENGTH |
|---|---|---|
| A407 | 8 SERIES OF 12 | 8'–5" TO 10'–10" |

BUNDLE AND TAG EACH SERIES SEPARATELY.




A419, A420, & A421

F.F. – FRONT FACE
B.F. – BACK FACE

STATE PROJECT NUMBER

9549–00–73

## BILL OF BARS
## BOTH ABUTMENTS

COATED = 2,920 LBS.
UNCOATED = 4,200 LBS.

| MARK | COATED | NUMBER W. ABUT. | NUMBER E. ABUT. | LENGTH | BENT | BAR SERIES | LOCATION | |
|---|---|---|---|---|---|---|---|---|
| A501 | | 64 | 64 | 6'–11" | X | | BODY – STIRRUP – F.F. & B.F. | VERT. |
| A502 | | 32 | 32 | 6'–7" | X | | BODY – STIRRUP – TOP | VERT. |
| A403 | | 24 | 24 | 3'–1" | X | | BODY – TIES | HORIZ. |
| A504 | | 18 | 18 | 17'–1" | | | BODY – F.F. | HORIZ. |
| A805 | | 18 | 18 | 21'–11" | X | | BODY – B.F. | HORIZ. |
| A506 | X | 26 | 26 | 2'–0" | | | BODY – TOP DOWELS | VERT. |
| A407 | X | 48 | 48 | 9'–8" | X | ⚠ | WINGS 1 THRU 4 – STIRRUP – F.F. & B.F. | VERT. |
| A408 | X | 18 | 18 | 8'–4" | | | WINGS 1 THRU 4 – F.F. & B.F. | VERT. |
| A509 | X | 18 | 18 | 11'–9" | X | | WINGS 1 THRU 4 – F.F. | HORIZ. |
| A410 | X | 2 | 2 | 9'–10" | | | WINGS 1 THRU 4 – F.F. | HORIZ. |
| A411 | X | 2 | 2 | 7'–6" | | | WINGS 1 THRU 4 – F.F. | HORIZ. |
| A412 | X | 2 | 2 | 5'–2" | | | WINGS 1 THRU 4 – F.F. | HORIZ. |
| A413 | X | 2 | 2 | 10'–6" | X | | WINGS 1 THRU 4 – F.F. – TOP | HORIZ. |
| A814 | X | 18 | 18 | 13'–3" | X | | WINGS 1 THRU 4 – B.F. | HORIZ. |
| A415 | X | 2 | 2 | 8'–3" | | | WINGS 1 THRU 4 – B.F. | HORIZ. |
| A416 | X | 2 | 2 | 5'–11" | | | WINGS 1 THRU 4 – B.F. | HORIZ. |
| A417 | X | 2 | 2 | 3'–7" | | | WINGS 1 THRU 4 – B.F. | HORIZ. |
| A418 | X | 2 | 2 | 8'–11" | X | | WINGS 1 THRU 4 – B.F. – TOP | HORIZ. |
| A419 | X | 4 | 4 | 4'–7" | X | | WINGS 1 AND 3 – F.F. CORNER | HORIZ. |
| A420 | X | 4 | 4 | 3'–9" | X | | WINGS 2 AND 4 – F.F. CORNER | HORIZ. |
| A421 | X | 8 | 8 | 2'–8" | X | | WINGS 1 THRU 4 – B.F. CORNER | HORIZ. |
| A422 | X | 8 | 8 | 4'–0" | X | | WINGS 1 THRU 4 – TOP CORNER | HORIZ. |

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

BUNDLE EACH ABUTMENT BARS SEPARATELY.

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

## NOTES

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

WEST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 150 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 15 FT PILE LENGTHS AT WEST ABUTMENT.

EAST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED TO EL. 1380.00. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 150 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 30 FT PILE LENGTHS AT THE EAST ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

(A01) PIPE UNDERDRAIN WRAPPED (6–INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

(A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON–STAINING GRAY NON–BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–60–160

DRAWN BY JDO | PLANS CK'D ACK

ABUTMENT DETAILS

SHEET 5 OF 8

53

8

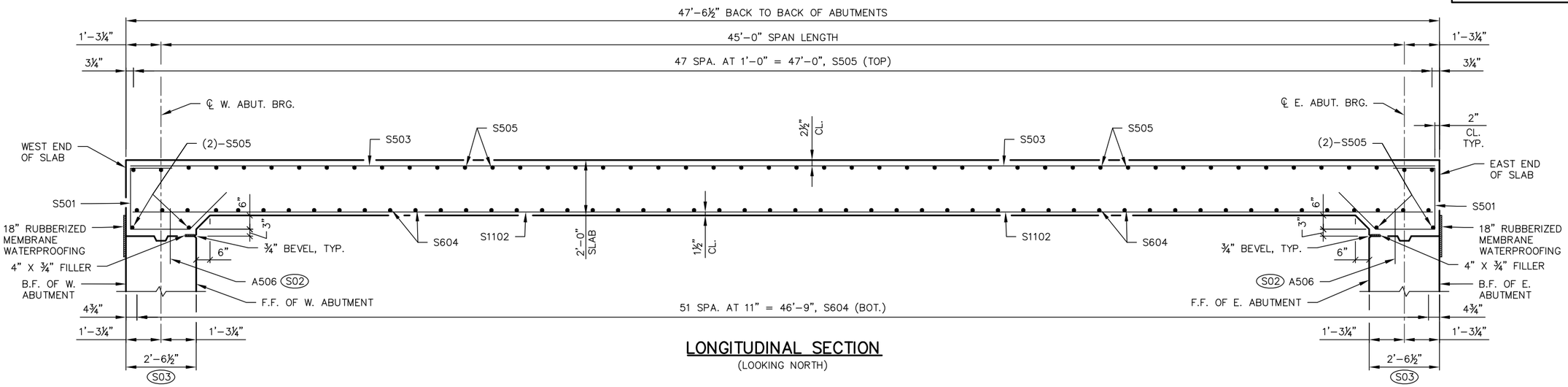
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I.D. 9549–00–73

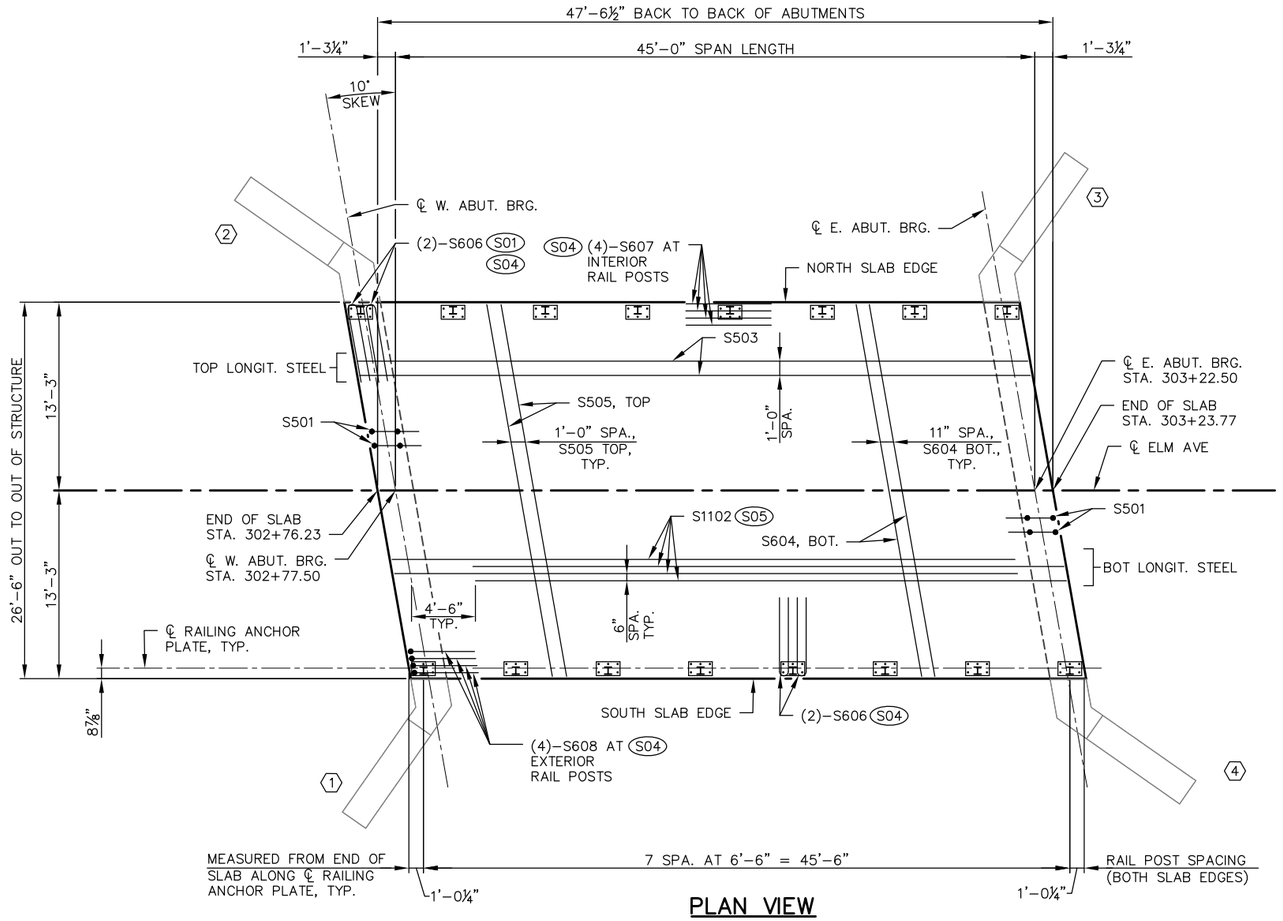
PLOT DATE: Jul 24, 2024

FILE: B600160_04–05_abut.dwg
PLOT SCALE:

| STATE PROJECT NUMBER |
|---|
| 9549–00–73 |




## LONGITUDINAL SECTION
(LOOKING NORTH)




## PLAN VIEW

## NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'–0" CENTERS EACH WAY.

BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'–0" CENTERS.

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

RAILING TO BE INSTALLED ON THE SLAB AFTER FALSEWORK HAS BEEN RELEASED.

(S01) ADJUST ORIENTATION OF S606 BAR AT END POST NEAR WINGS 2 & 4 TO ENSURE CLEAR COVER AT END OF SLAB.

(S02) SEE "ABUTMENTS" SHEET FOR PLACEMENT OF A506 BARS

(S03) DIMENSION IS TAKEN PARALLEL TO ℄ ELM AVE

(S04) SEE "RAILING TUBULAR TYPE M" SHEET FOR PLACEMENT OF RAIL POST REINFORCEMENT.

(S05) EXTEND ONE END OF THE S1102 BAR TO 2" CLEAR OF ONE BACK FACE OF ABUTMENT. ALTERNATE BETWEEN WEST AND EAST ABUTMENTS ACROSS ENTIRE SLAB.

⬡ INDICATES WING NUMBER

F.F. – FRONT FACE
B.F. – BACK FACE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–60–160

DRAWN BY JDO | PLANS CK'D ACK

SUPERSTRUCTURE

SHEET 6 OF 8

54

8

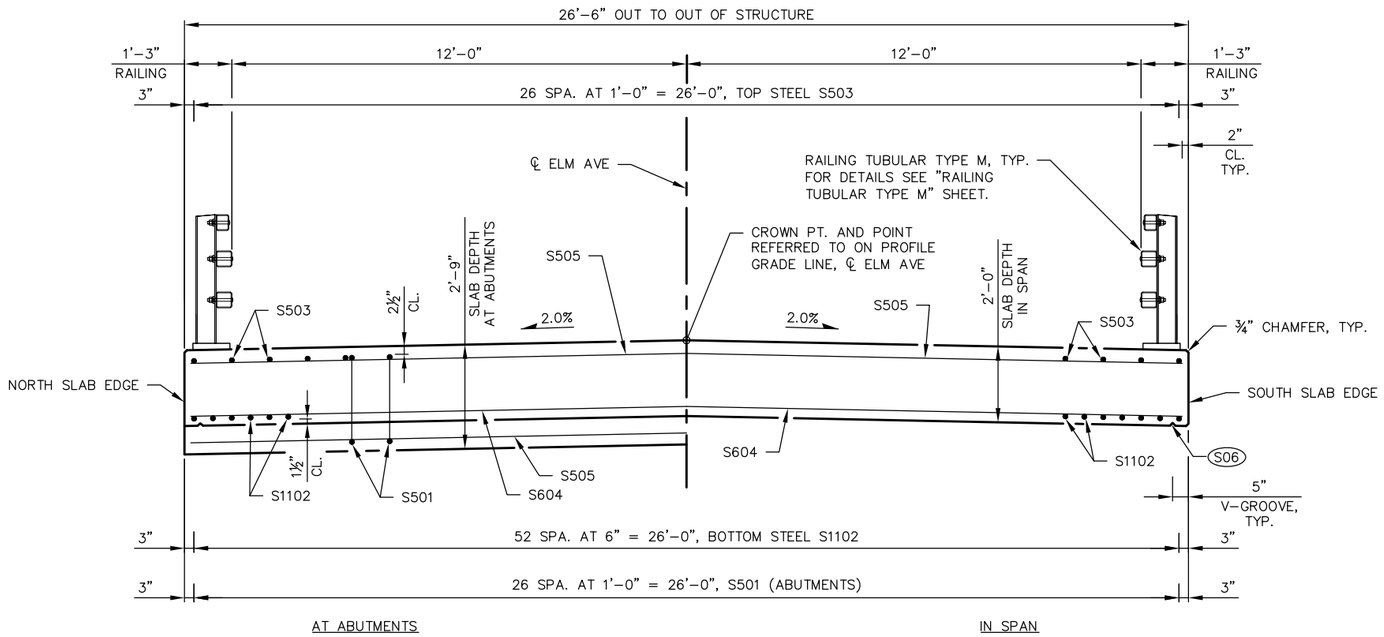
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I.D. 9549–00–73

PLOT DATE: Jul 24, 2024

FILE: B600160_06_07_super.dwg
PLOT SCALE:

| STATE PROJECT NUMBER |
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| 9549–00–73 |




## CROSS SECTION THRU ROADWAY

(LOOKING EAST)

## BILL OF BARS
## SUPERSTRUCTURE — COATED = 18,100 LBS.

| MARK | NUMBER COATED | NUMBER UNCOATED | LENGTH | BENT | BAR SERIES | LOCATION | |
|---|---|---|---|---|---|---|---|
| S501 | 54 | | 7'–7" | X | | SLAB AT ABUTMENT – TIES | LONGIT. |
| S1102 | 53 | | 41'–8" | | | SLAB – BOTTOM | LONGIT. |
| S503 | 27 | | 47'–2" | | | SLAB – TOP | LONGIT. |
| S604 | 52 | | 26'–6" | | | SLAB – BOTTOM | TRANS. |
| S505 | 52 | | 26'–6" | | | SLAB – TOP & OVER ABUTMENTS | TRANS. |
| S606 | 32 | | 11'–6" | X | | SLAB – TOP AT RAIL POSTS | TRANS. |
| S607 | 48 | | 6'–0" | | | SLAB – TOP AT INTERIOR RAIL POSTS | LONGIT. |
| S608 | 16 | | 4'–8" | X | | SLAB – TOP AT EXTERIOR RAIL POSTS | LONGIT. |

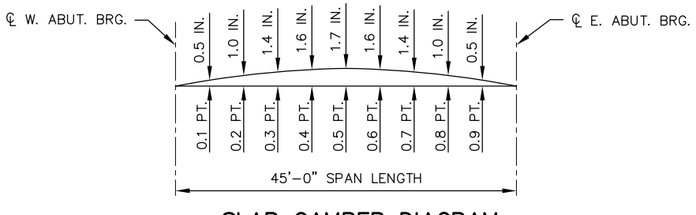
THE FIRST OR FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

## SURVEY TOP OF SLAB ELEVATIONS

| | ℄ W. ABUT. BRG. | 5/10 PT. | ℄ E. ABUT. BRG. |
|---|---|---|---|
| NORTH SLAB EDGE | | | |
| ℄ ELM AVE | | | |
| SOUTH SLAB EDGE | | | |

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND REFERENCE LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.



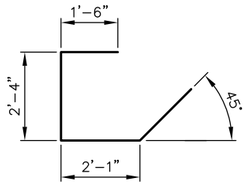

## SLAB CAMBER DIAGRAM

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

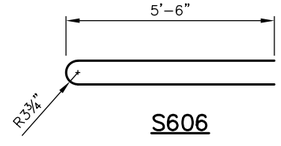
| | |
|---|---|
| | TOP OF SLAB ELEVATION AT FINAL GRADE |
| LESS | SLAB THICKNESS |
| PLUS | CAMBER |
| PLUS | FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR) |
| EQUALS | TOP OF SLAB FALSEWORK ELEVATION. |

## TOP OF SLAB ELEVATIONS

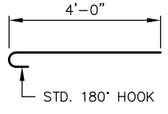
| SPAN PT | NORTH SLAB EDGE | ℄ ELM AVE | SOUTH SLAB EDGE |
|---|---|---|---|
| ℄ W. ABUT. | 1412.56 | 1412.81 | 1412.54 |
| 0.1 | 1412.54 | 1412.79 | 1412.52 |
| 0.2 | 1412.52 | 1412.78 | 1412.51 |
| 0.3 | 1412.51 | 1412.76 | 1412.49 |
| 0.4 | 1412.49 | 1412.74 | 1412.47 |
| 0.5 | 1412.47 | 1412.72 | 1412.45 |
| 0.6 | 1412.45 | 1412.70 | 1412.44 |
| 0.7 | 1412.44 | 1412.69 | 1412.42 |
| 0.8 | 1412.42 | 1412.67 | 1412.40 |
| 0.9 | 1412.40 | 1412.65 | 1412.38 |
| ℄ E. ABUT. | 1412.38 | 1412.63 | 1412.36 |




S501




S606




S608

## NOTES

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

(S06) ¾" V–GROOVE. EXTEND V–GROOVE TO 6" FROM FRONT FACE OF ABUTMENT BODY. V–GROOVES ARE REQUIRED.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–60–160

DRAWN BY JDO | PLANS CK'D ACK

SUPERSTRUCTURE DETAILS

SHEET 7 OF 8

55

8

8

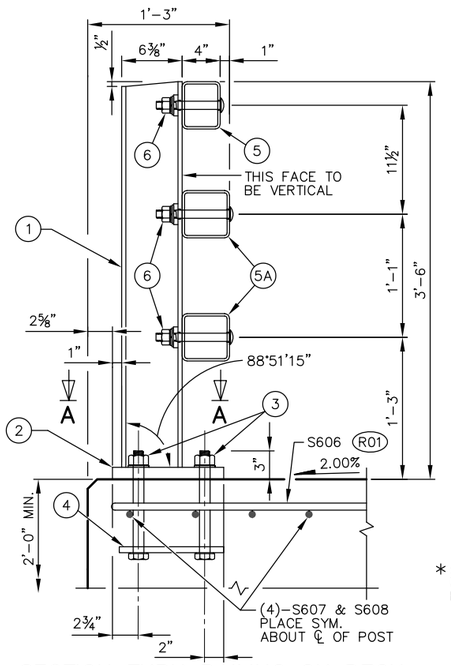
I.D. 9549–00–73

PLOT DATE: Jul 24, 2024

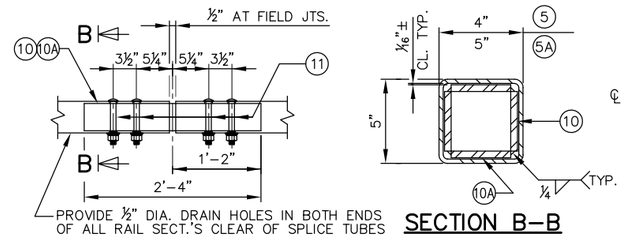
FILE: B600160_06_07_super.dwg
PLOT SCALE:

STATE PROJECT NUMBER

9549-00-73



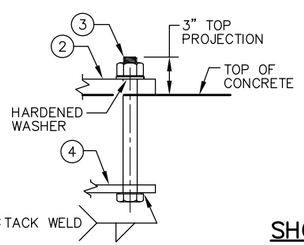

SECTION THRU RAILING ON DECK




FIELD ERECTION JOINT DETAIL

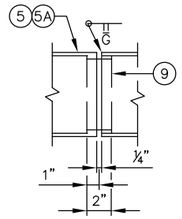



SECTION B-B



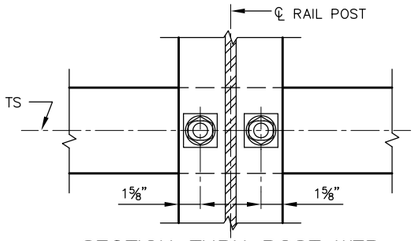

ANCHOR BOLTS

* ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.

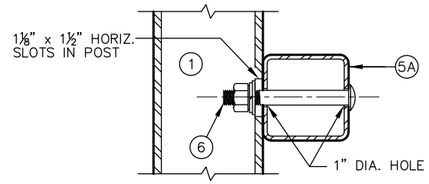



SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)




SECTION THRU POST WEB




SECTION THRU RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

## LEGEND

(1) W6 x 25 WITH 1⅛" x 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

(2) PLATE 1¼" x 11¾" x 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.

(3) ASTM A449 – 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)

(4) ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(6) ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" x 1⅝" x 1⅝" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(7) ½" THK. BACK-UP PLATE WITH 2 – ⅞" x 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

(8) 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

(9) SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

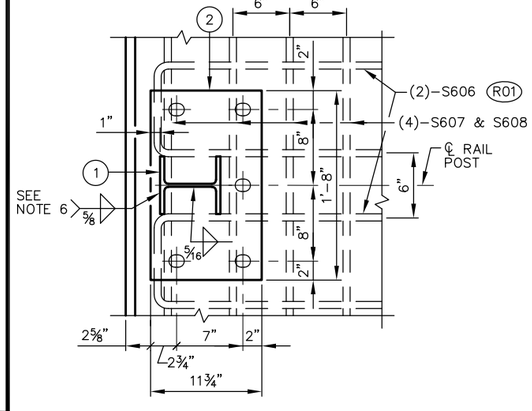
(10) ⅜" x 3⅝" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(10A) ⅜" x 2⅝" x 2'-4" PLATE USED IN NO. 5, ⅜" x 3⅝" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

(11) ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER. USE 15/16" x 1¼" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 15/16" x 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.

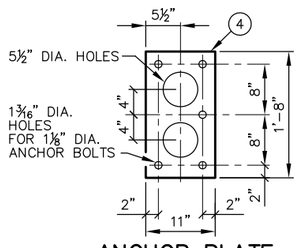
## NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

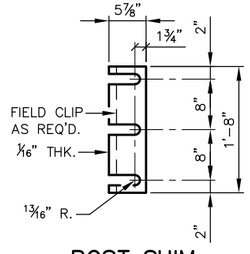



SECTION A-A

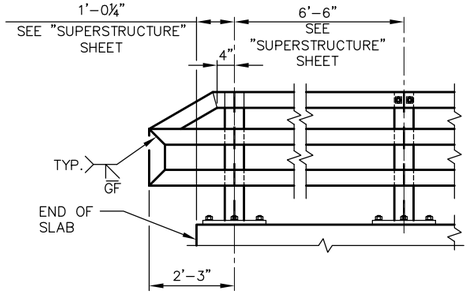
R01 TIE TO TOP MAT OF STEEL.




ANCHOR PLATE
AT RAIL TO DECK CONNECTION




POST SHIM DETAIL




PART ELEVATION OF RAILING

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-160

DRAWN BY JDO | PLANS CK'D ACK

RAILING TUBULAR TYPE M

SHEET 8 OF 8

56

8

8

I.D. 9549-00-73

PLOT DATE: Jul 24, 2024

FILE: B600160_08_mrail.dwg
PLOT SCALE:

## DIVISION 1 - WEST APPROACH

| STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 4 |
| 300+60.00 | 0.00 | 39.04 | 0.00 | 3.80 | 0 | 0 | 0 | 0 | 0 | 0 |
| 301+00.00 | 40.00 | 45.21 | 0.00 | 1.45 | 62 | 0 | 4 | 62 | 5 | 57 |
| 301+09.80 | 9.80 | 44.09 | 0.00 | 0.38 | 16 | 0 | 0 | 78 | 5 | 73 |
| 301+10.00 | 0.20 | 44.03 | 0.00 | 1.02 | 0 | 0 | 0 | 78 | 5 | 73 |
| 301+15.00 | 5.00 | 43.80 | 0.00 | 4.43 | 8 | 0 | 1 | 86 | 6 | 80 |
| 301+20.00 | 5.00 | 45.72 | 0.00 | 9.46 | 8 | 0 | 1 | 94 | 8 | 87 |
| 301+25.00 | 5.00 | 46.66 | 0.00 | 41.75 | 9 | 0 | 5 | 103 | 14 | 89 |
| 301+30.00 | 5.00 | 50.10 | 0.00 | 80.61 | 9 | 0 | 11 | 112 | 28 | 85 |
| 301+35.00 | 5.00 | 57.73 | 0.00 | 65.98 | 10 | 0 | 14 | 122 | 45 | 77 |
| 301+40.00 | 5.00 | 66.40 | 0.00 | 20.03 | 11 | 0 | 8 | 133 | 55 | 78 |
| 301+45.00 | 5.00 | 73.10 | 0.00 | 0.06 | 13 | 0 | 2 | 146 | 58 | 89 |
| 301+50.00 | 5.00 | 58.57 | 0.00 | 0.00 | 12 | 0 | 0 | 158 | 58 | 101 |
| 301+55.00 | 5.00 | 52.63 | 0.00 | 0.00 | 10 | 0 | 0 | 168 | 58 | 111 |
| 301+60.00 | 5.00 | 45.31 | 0.00 | 0.00 | 9 | 0 | 0 | 177 | 58 | 120 |
| 301+65.00 | 5.00 | 37.99 | 0.00 | 0.00 | 8 | 0 | 0 | 185 | 58 | 128 |
| 301+70.00 | 5.00 | 36.29 | 0.00 | 0.00 | 7 | 0 | 0 | 192 | 58 | 135 |
| 301+75.00 | 5.00 | 42.23 | 0.00 | 0.00 | 7 | 0 | 0 | 199 | 58 | 142 |
| 301+80.00 | 5.00 | 51.46 | 0.00 | 0.00 | 9 | 0 | 0 | 208 | 58 | 151 |
| 301+85.00 | 5.00 | 63.33 | 0.00 | 0.00 | 11 | 0 | 0 | 219 | 58 | 162 |
| 301+90.00 | 5.00 | 78.02 | 0.00 | 0.00 | 13 | 0 | 0 | 232 | 58 | 175 |
| 301+95.00 | 5.00 | 94.01 | 0.00 | 0.00 | 16 | 0 | 0 | 248 | 58 | 191 |
| 302+00.00 | 5.00 | 100.59 | 0.00 | 0.90 | 18 | 0 | 0 | 266 | 58 | 209 |
| 302+05.00 | 5.00 | 102.67 | 0.00 | 10.18 | 19 | 0 | 1 | 285 | 59 | 226 |
| 302+10.00 | 5.00 | 104.58 | 0.00 | 6.26 | 19 | 0 | 2 | 304 | 61 | 243 |
| 302+15.00 | 5.00 | 99.05 | 0.00 | 23.89 | 19 | 0 | 3 | 323 | 65 | 258 |
| 302+20.00 | 5.00 | 88.90 | 0.00 | 39.25 | 17 | 0 | 6 | 340 | 73 | 268 |
| 302+25.00 | 5.00 | 76.12 | 0.00 | 42.55 | 15 | 0 | 8 | 355 | 83 | 273 |
| 302+30.00 | 5.00 | 64.71 | 0.00 | 47.57 | 13 | 0 | 8 | 368 | 93 | 276 |
| 302+35.00 | 5.00 | 55.22 | 0.00 | 49.06 | 11 | 0 | 9 | 379 | 104 | 275 |
| 302+35.82 | 0.82 | 54.20 | 0.00 | 46.73 | 2 | 0 | 1 | 381 | 105 | 276 |
| 302+50.00 | 14.18 | 43.86 | 0.00 | 12.49 | 26 | 0 | 16 | 407 | 125 | 282 |
| 302+76.26 | 26.26 | 35.72 | 0.00 | 84.35 | 39 | 0 | 47 | 446 | 184 | 262 |
| STRUCTURE B-60-0160 | | | | | | | | | | |
| DIVISION 1 TOTAL | | | | | 446 | 0 | 147 | | | |

## DIVISION 2 - EAST APPROACH

| STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 8 |
| STRUCTURE B-60-0160 | | | | | | | | | | |
| 303+23.77 | 0.00 | 33.73 | 0.00 | 70.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 303+50.00 | 26.23 | 34.92 | 0.00 | 30.65 | 33 | 0 | 49 | 33 | 61 | -28 |
| 303+74.00 | 24.00 | 37.27 | 0.00 | 27.09 | 32 | 0 | 26 | 65 | 94 | -29 |
| DIVISION 2 TOTAL | | | | | 65 | 0 | 75 | | | |

## DIVISION 3 - P-60-0915

| STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 4 |
| 301+75.00 | 88.92 | 0.00 | 0.00 | 44.18 | 0 | 0 | 145 | 0 | 182 | -182 |
| 301+75.00 | 101.26 | 0.00 | 0.00 | 44.18 | 0 | 0 | 166 | 0 | 389 | -389 |
| 301+75.00 | 113.37 | 0.00 | 0.00 | 44.18 | 0 | 0 | 186 | 0 | 621 | -621 |
| DIVISION 3 TOTAL | | | | | 0 | 0 | 497 | | | |

## DIVISION 4 - ROBIN DRIVE SOUTH

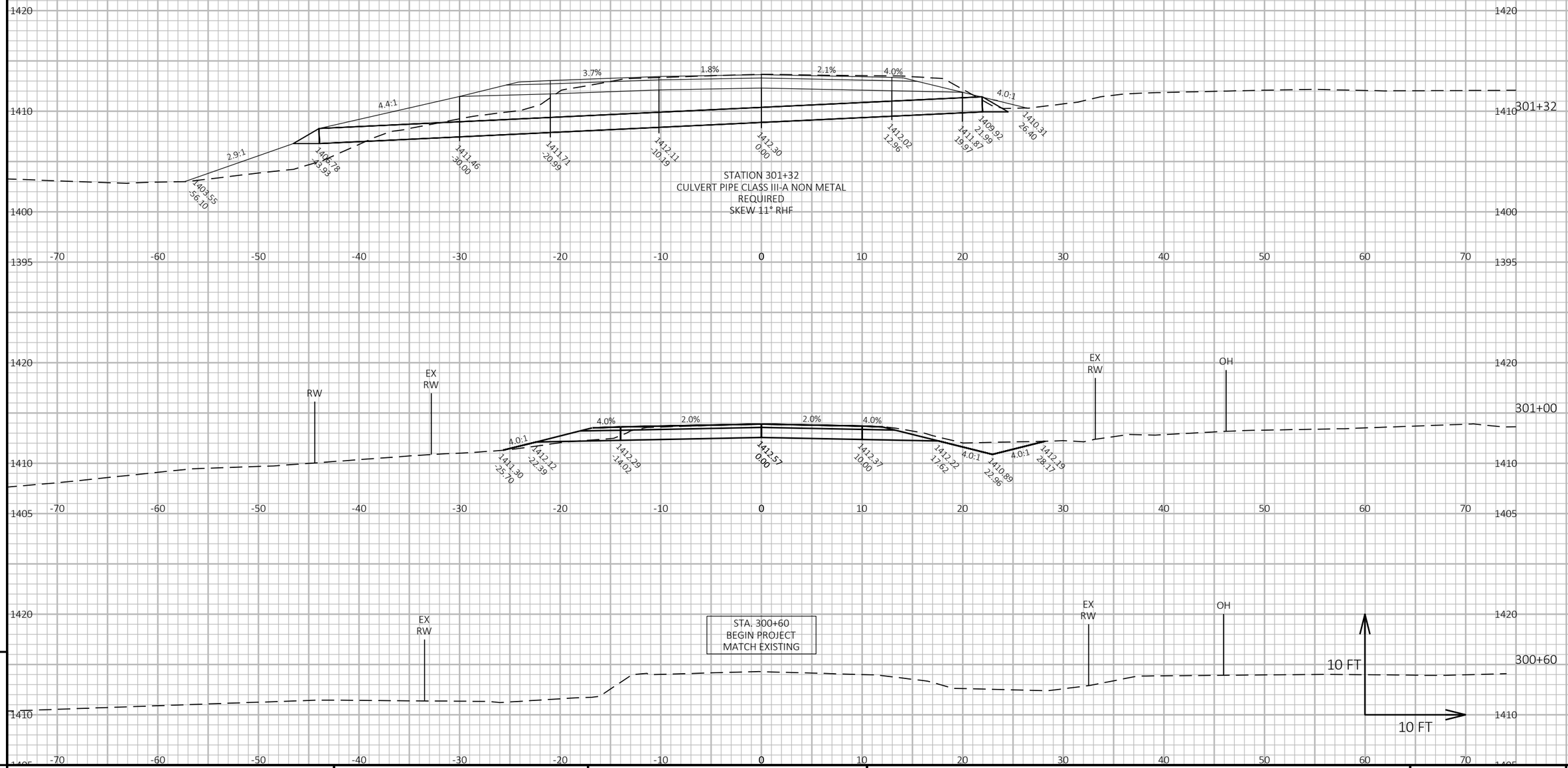
| STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 4 |
| 50+49.09 | 0.00 | 33.28 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50+50.00 | 0.91 | 33.27 | 0.00 | 0.00 | 1 | 0 | 0 | 1 | 0 | 1 |
| 50+87.00 | 37.00 | 98.69 | 0.00 | 0.00 | 90 | 0 | 0 | 91 | 0 | 91 |
| | | | DIVISION 4 TOTAL | | 91 | 0 | 0 | | | |

## DIVISION 5 - ROBIN DRIVE NORTH

| STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 4 |
| 100+00.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100+05.00 | 5.00 | 15.06 | 0.00 | 0.00 | 1 | 0 | 0 | 1 | 0 | 1 |
| 100+10.00 | 5.00 | 29.59 | 0.00 | 0.00 | 4 | 0 | 0 | 5 | 0 | 5 |
| 100+15.00 | 5.00 | 46.71 | 0.00 | 0.00 | 7 | 0 | 0 | 12 | 0 | 12 |
| 100+20.00 | 5.00 | 61.44 | 0.00 | 0.00 | 10 | 0 | 0 | 22 | 0 | 22 |
| 100+25.00 | 5.00 | 75.04 | 0.00 | 0.00 | 13 | 0 | 0 | 35 | 0 | 35 |
| 100+30.00 | 5.00 | 81.66 | 0.00 | 0.25 | 15 | 0 | 0 | 50 | 0 | 50 |
| 100+35.00 | 5.00 | 85.40 | 0.00 | 24.54 | 15 | 0 | 2 | 65 | 3 | 63 |
| 100+40.00 | 5.00 | 90.25 | 0.00 | 75.30 | 16 | 0 | 9 | 81 | 14 | 67 |
| 100+45.00 | 5.00 | 92.60 | 0.00 | 96.52 | 17 | 0 | 16 | 98 | 34 | 64 |
| 100+50.00 | 5.00 | 82.63 | 0.00 | 97.61 | 16 | 0 | 18 | 114 | 56 | 58 |
| 100+55.00 | 5.00 | 73.19 | 0.00 | 99.06 | 14 | 0 | 18 | 128 | 79 | 49 |
| 100+60.00 | 5.00 | 72.10 | 0.00 | 75.84 | 13 | 0 | 16 | 141 | 99 | 42 |
| 100+65.00 | 5.00 | 70.37 | 0.00 | 54.01 | 13 | 0 | 12 | 154 | 114 | 40 |
| 100+66.16 | 1.16 | 69.71 | 0.00 | 48.08 | 3 | 0 | 2 | 157 | 116 | 41 |
| 101+00.00 | 33.84 | 48.71 | 0.00 | 0.00 | 74 | 0 | 30 | 231 | 154 | 77 |
| 101+16.00 | 16.00 | 43.90 | 0.00 | 0.00 | 27 | 0 | 0 | 258 | 154 | 104 |
| | | | DIVISION 5 TOTAL | | 258 | 0 | 123 | | | |
| | | | PROJECT TOTAL | | 860 | 0 | 842 | | | |

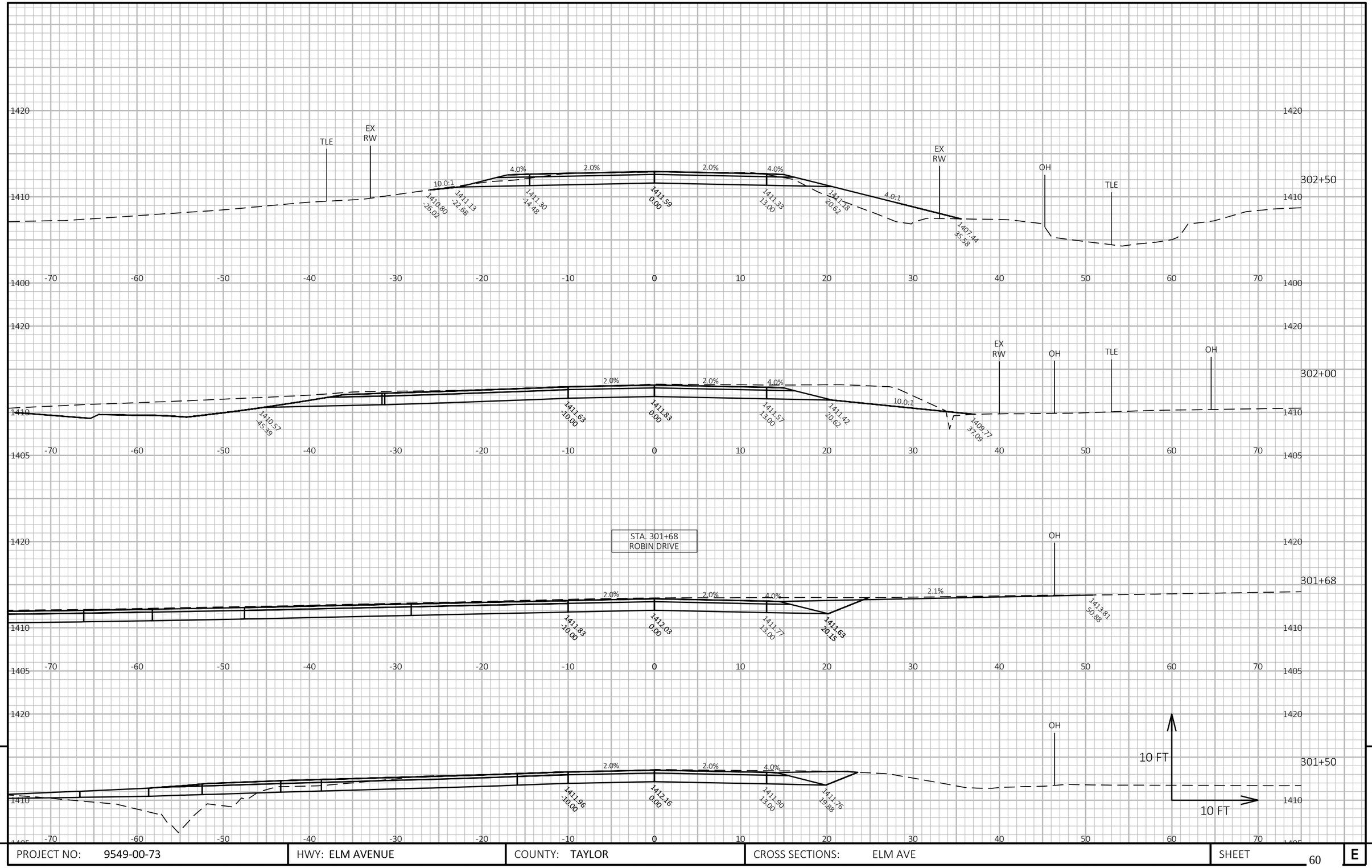
| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS |
| 3 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 4 - MASS ORDINATE | [(CUT - SALVAGED/UNUSABLE PAVEMENT) - (FILL* FILL FACTOR)] |
| | PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. |

SKEWED WITH PIPE
FOR INFORMATIONAL PURPOSES ONLY




| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | CROSS SECTIONS: ELM AVE | SHEET 59 | E |
|---|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23124 ID 9549-00-03 T DEER, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\DSGN\CRDR\CRDR-LCL-ELMAVE-ROBINDR-73-UPDINT.DWG
LAYOUT NAME - 090201_xs
PLOT DATE : 6/4/2024 5:15 PM
PLOT BY : ERIK MEYER
PLOT NAME :
**PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

9

| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | CROSS SECTIONS: ELM AVE | SHEET 60 | E |
|---|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23124 ID 9549-00-03 T DEER, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\DSGN\CRDR\CRDR-LCL-ELMAVE-ROBINDR-73-UPDINT.DWG
LAYOUT NAME - 090202_xs

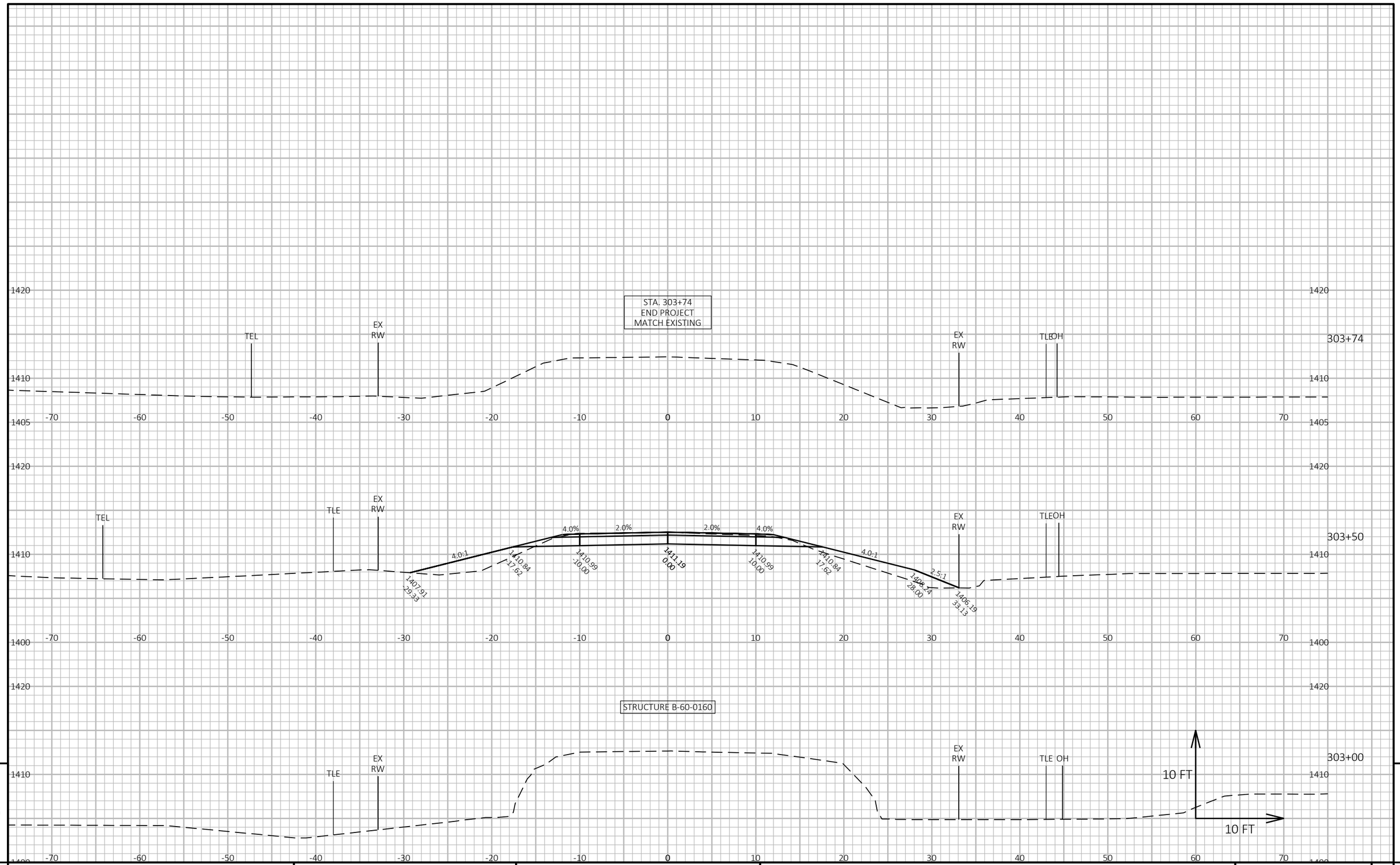
PLOT DATE : 6/4/2024 5:15 PM

PLOT BY : ERIK MEYER

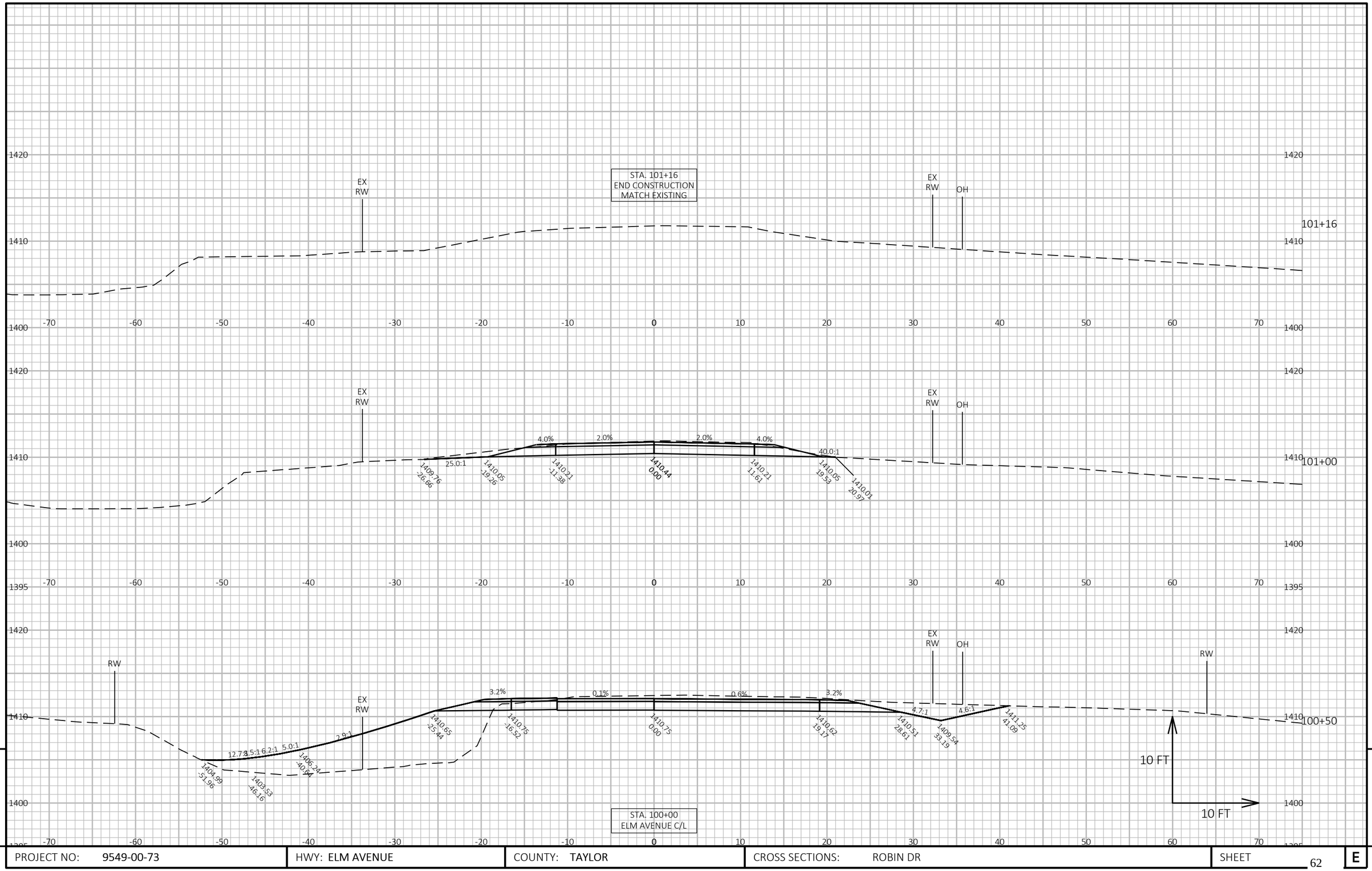
PLOT NAME :

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

WISDOT/CADDS SHEET 49




| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | CROSS SECTIONS: ELM AVE | SHEET 61 | E |
|---|---|---|---|---|---|




9

9

| PROJECT NO: 9549-00-73 | HWY: ELM AVENUE | COUNTY: TAYLOR | CROSS SECTIONS: ROBIN DR | SHEET 62 | E |
|---|---|---|---|---|---|

FILE NAME : G:\00-PROJECT FILES\2023\23124 ID 9549-00-03 T DEER, ELM AVENUE, DEER CREEK BRIDGE P-60-0915\0-CAD\DSGN\CRDR\CRDR-LCL-ELMAVE-ROBINDR-73-UPDINT.DWG
LAYOUT NAME - 090204_xs

PLOT DATE : 6/4/2024 5:15 PM

PLOT BY : ERIK MEYER

PLOT NAME :

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

WISDOT/CADDS SHEET 49

Notes

**Wisconsin Department of Transportation**

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov