

GRE
WITH: N/A

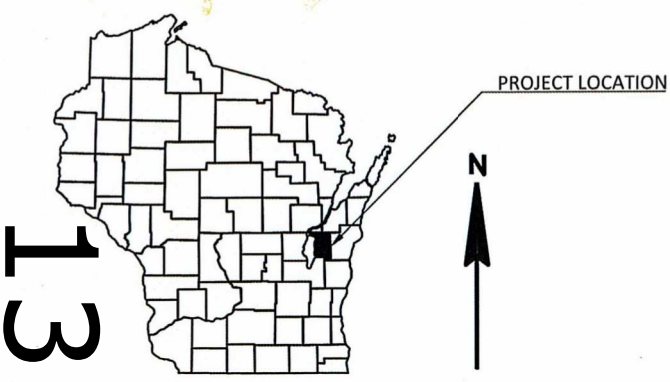
PROJECT ID:
4472-05-71

COUNTY:
CALUMET

AUGUST 2025
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 = 46



| | | |
|--------------------|------|----------|
| DESIGN DESIGNATION | | |
| A.A.D.T. | 2026 | = 46 |
| A.A.D.T. | 2046 | = 56 |
| D.H.V. | | = - |
| D.D. | | = 50/50 |
| T. | | = 3.5% |
| DESIGN SPEED | | = 40 MPH |
| ESALS | | = 5,026 |

CONVENTIONAL SYMBOLS

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

| | |
|---------------------------------------------|--|
| PROFILE | |
| GRADE LINE | |
| ORIGINAL GROUND | |
| MARSH OR ROCK PROFILE (To be noted as such) | |
| SPECIAL DITCH | |
| GRADE ELEVATION | |
| CULVERT (Profile View) | |
| UTILITIES | |
| ELECTRIC | |
| FIBER OPTIC | |
| GAS | |
| SANITARY SEWER | |
| STORM SEWER | |
| TELEPHONE | |
| WATER | |
| UTILITY PEDESTAL | |
| POWER POLE | |
| TELEPHONE POLE | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CHILTON - CHARLESTOWN

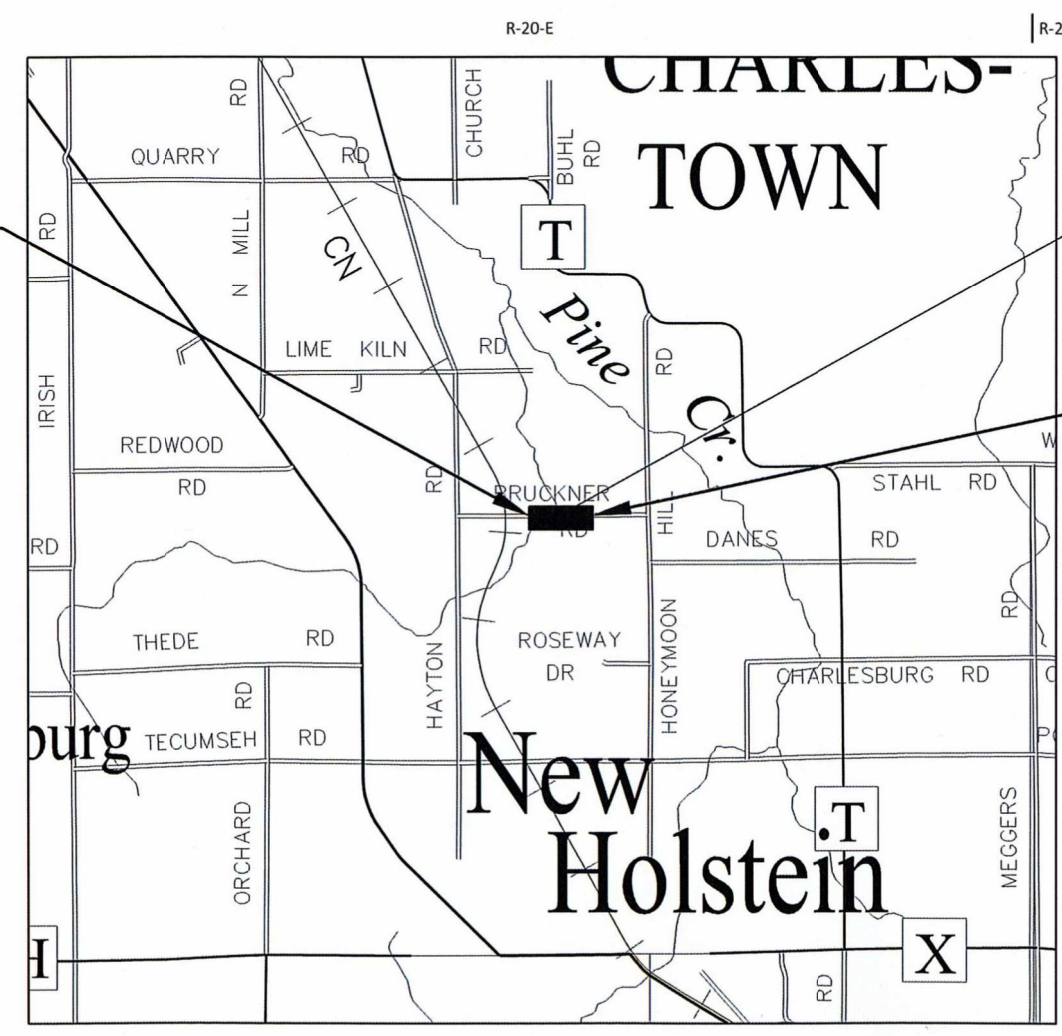
BRANCH OF PINE CREEK BRIDGE

LOC STR

CALUMET COUNTY

| |
|----------------------|
| STATE PROJECT NUMBER |
| 4472-05-71 |

BEGIN PROJECT
STA 9+10
Y = 460749.539
X = 910330.903



STRUCTURE B-08-0122
STA 10+00

END PROJECT
STA 10+50

LAYOUT
SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 0.027 MI

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

| STATE PROJECT | FEDERAL PROJECT | |
|---------------|-----------------|----------|
| | PROJECT | CONTRACT |
| 4472-05-71 | WISC 2025574 | 1 |
| | | |
| | | |
| | | |

ACCEPTED FOR
TOWN OF CHARLESTOWN

3-13-25 *Dan Brattlund*
DATE TOWN CHAIRMAN

ORIGINAL PLANS PREPARED BY
AYRES

3-7-2025
(DATE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor AYRES
Designer AYRES
Project Manager ERIK BRATTLUND, PE
Regional Supervisor KIMBERLY SLEZAK, PE

APPROVED FOR THE DEPARTMENT
DATE: 04/16/2025 *Erik Brattlund*
(Signature)

E

GENERAL NOTES

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

CONSTRUCT ASPHALTIC SURFACE WITH A 1 3/4" UPPER LAYER AND A 2 1/4" LOWER LAYER.

PROPERTY LINES AS SHOWN ARE APPROXIMATE.

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

BEARINGS SHOWN ON THIS PLAN ARE TRUE BEARINGS TO THE NEAREST SECOND.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

WISDOT WILL FURNISH A BENCHMARK MONUMENT TO BE SET BY THE CONTRACTOR.

UTILITIES

* AMERICAN TRANSMISSION CO - ELECTRIC

CELL 984-218-3109

N5342 RIVER ROAD
FOUND DU LAC, WI 54937
ATTENTION: CRAIG HENDRICKS
E-MAIL: chendricks@atcllc.com

*NON-MEMBER OF DIGGERS HOTLINE



DEPARTMENT OF NATURAL RESOURCES

WDNR

TELEPHONE 920-366-1544

2984 SHAWANO AVENUE
GREEN BAY, WISCONSIN 54313
ATTENTION: MATT SCHAEVE
E-MAIL: MATTHEW.SCHAEVE@WISCONSIN.GOV

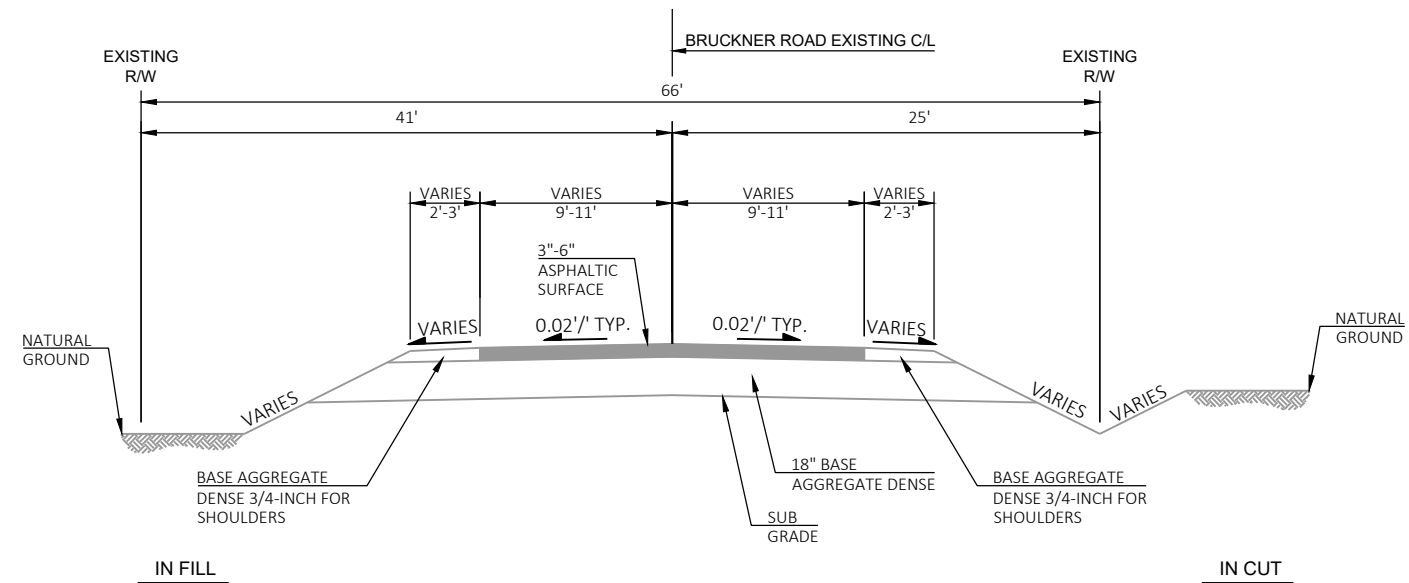
RUNOFF COEFFICIENT TABLE

| | 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 | .16 | .22 | .12 | .20 | .27 | .15 | .24 | .33 | .19 | .28 | .38 |
| | .22 | .30 | .38 | .26 | .34 | .44 | .30 | .37 | .50 | .34 | .41 | .56 |
| MEDIAN STRIP-TURF | .19 | .20 | .24 | .19 | .22 | .26 | .20 | .23 | .30 | .20 | .25 | .30 |
| | .24 | .26 | .30 | .25 | .28 | .33 | .26 | .30 | .37 | .27 | .32 | .40 |
| SIDE SLOPE-TURF | | | .25 | | | .27 | | | .28 | | | .30 |
| | | | .32 | | | .34 | | | .36 | | | .38 |
| PAVEMENT: | | | | | | | | | | | | |
| ASPHALT | | | | | | .70 - .95 | | | | | | |
| CONCRETE | | | | | | .80 - .95 | | | | | | |
| BRICK | | | | | | .70 - .80 | | | | | | |
| DRIVES, WALKS | | | | | | .75 - .85 | | | | | | |
| ROOFS | | | | | | .75 - .95 | | | | | | |
| GRAVEL ROADS, SHOULDERS | | | | | | .40 - .60 | | | | | | |

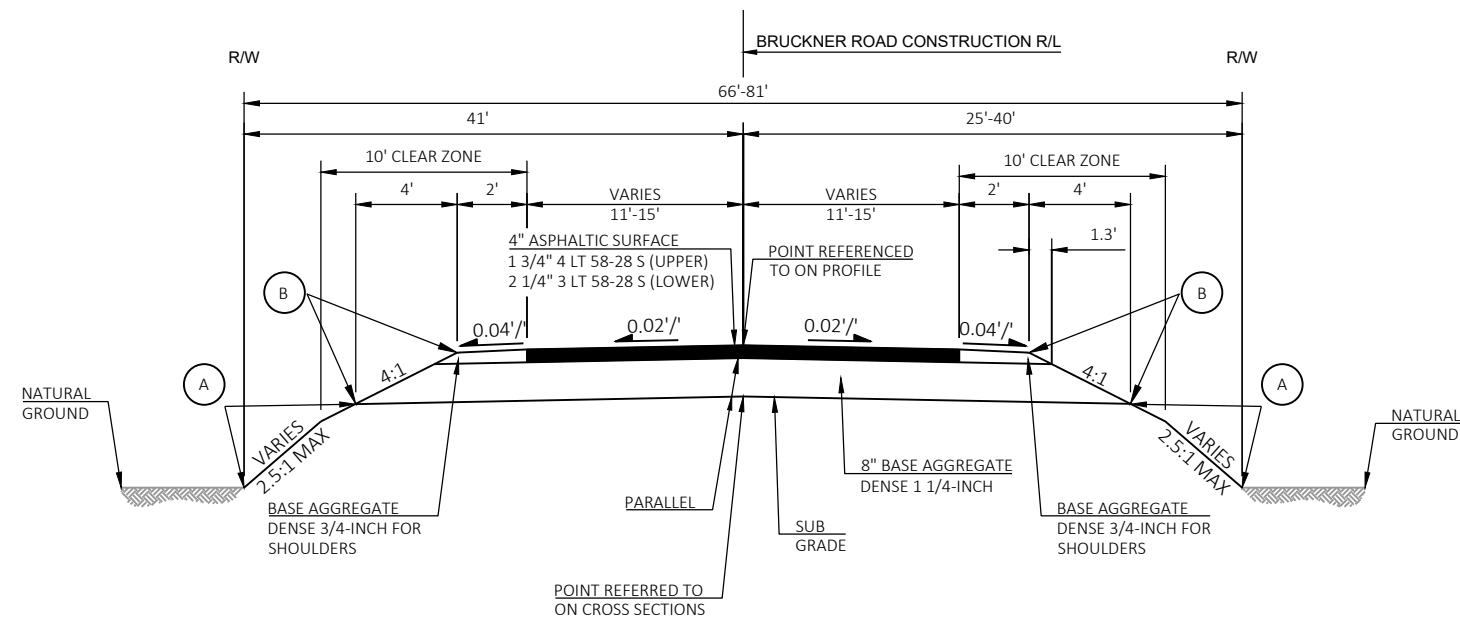
TOTAL PROJECT AREA = 0.212 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.189 ACRES
SOIL GROUP A/D.

STANDARD ABBREVIATIONS

| | | | |
|-------|------------------------------|-----------|--------------------------------------|
| ADT | AVERAGE DAILY TRAFFIC | NC | NORMAL CROWN |
| AC | ASPHALT CEMENT | PT | POINT OF TANGENCY |
| AGG | AGGREGATE | PC | POINT OF CURVATURE |
| ASPH | ASPHALT | PI | POINT OF INTERSECTION |
| BM | BENCH MARK | PE | PRIVATE ENTRANCE |
| C/L | CENTERLINE | R | RADIUS |
| CONC | CONCRETE | REM | REMOVE |
| CMP | CORRUGATED METAL PIPE | R/L OR RL | REFERENCE LINE |
| CR. | CREEK | RCCP | REINFORCED CONCRETE CULVERT PIPE |
| D | DEGREE OF CURVE | RCPSS | REINFORCED CONCRETE PIPE STORM SEWER |
| DHV | DESIGN HOUR VOLUME | R.O. | RUNOUT |
| ESALS | EQUIVALENT SINGLE AXIS LOADS | R/W | RIGHT-OF-WAY |
| EXIST | EXISTING | STA | STATION |
| FE | FIELD ENTRANCE | SE | SUPER ELEVATION |
| HYD | HYDRANT | SS | STORM SEWER |
| IP | IRON PIPE OR PIN | T | TANGENT |
| L | LENGTH OF CURVE | TEL | TELEPHONE |
| LC | LONG CHORD OF CURVE | TLE | TEMPORARY LIMITED EASEMENT |
| LR | LENGTH OF RUNOFF | T | TRUCKS |
| MH | MANHOLE | VC | VERTICAL CURVE |
| | | W | WELL |

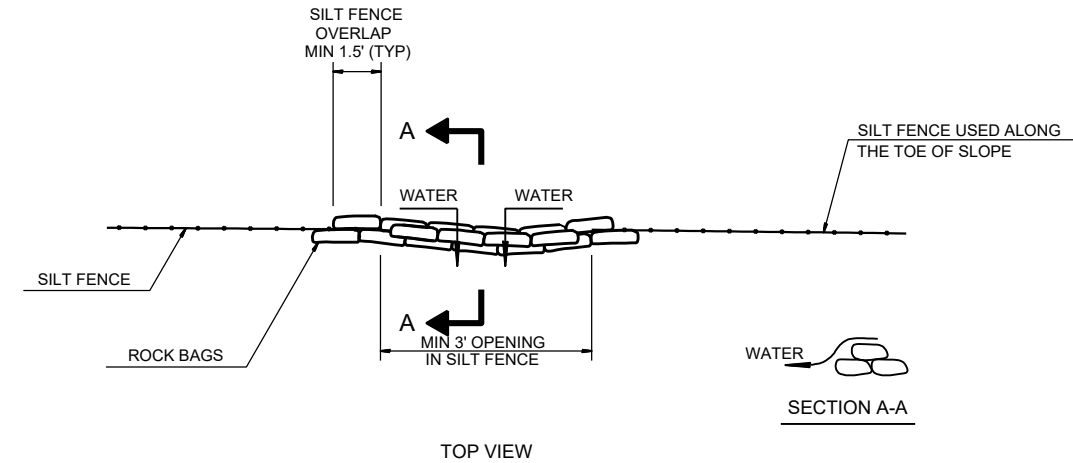
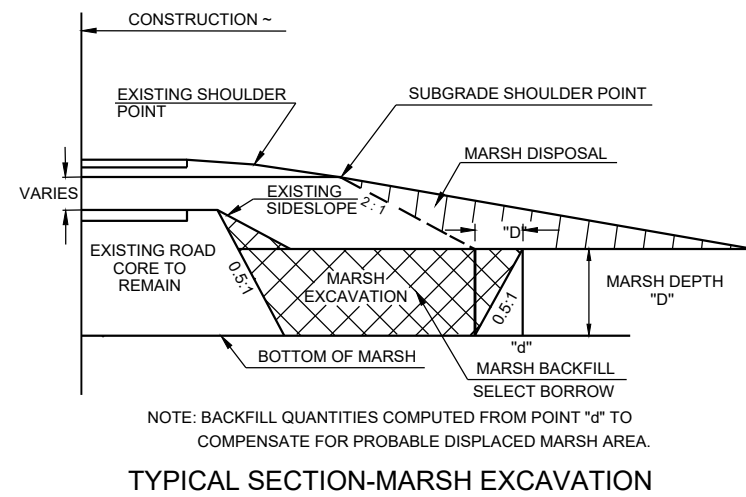


EXISTING TYPICAL SECTION FOR BRUCKNER ROAD
STA 9+10 - STA 10+50



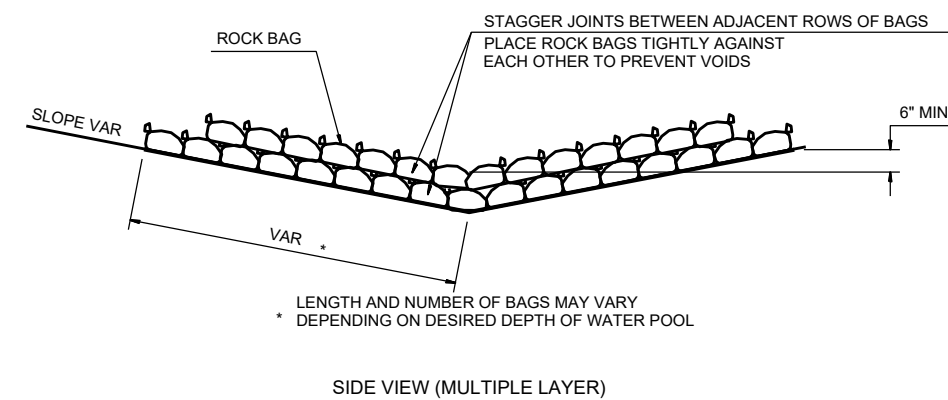
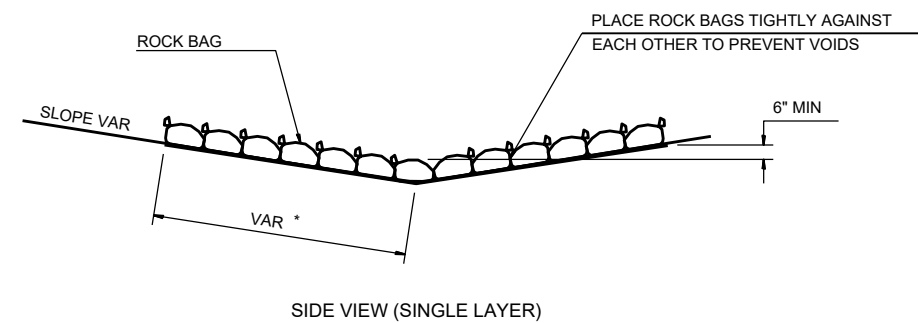
FINISHED TYPICAL SECTION FOR BRUCKNER ROAD
STA 9+10 - STA 9+76.75
STA 10+23.25 - 10+50

- (A) TOPSOIL, FERTILIZE, SEED, AND EROSION MAT
(B) SEED AND FERTILIZE



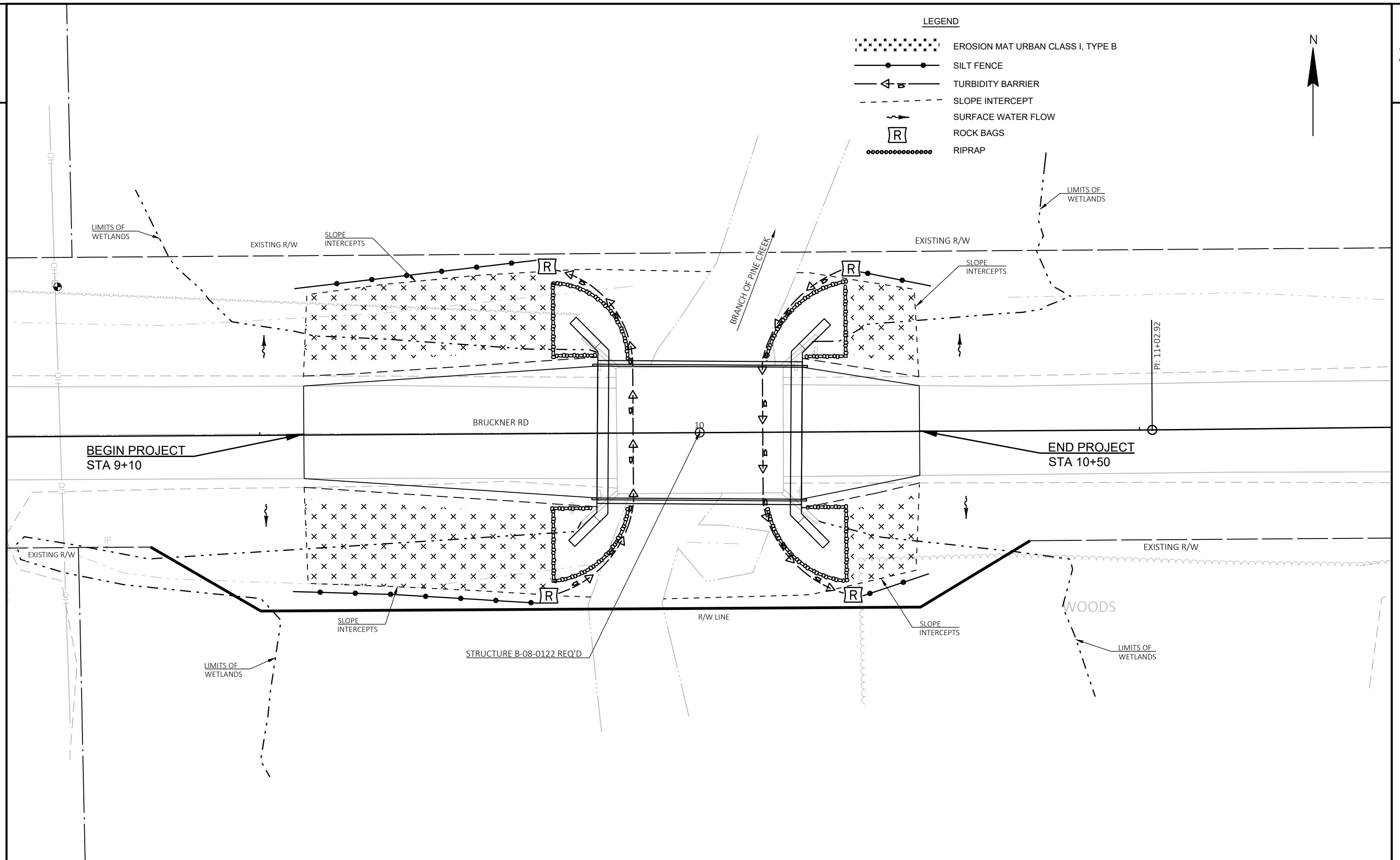
ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

PAID AS ROCK BAGS
(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



ROCK BAGS DITCH CHECK

PAID AS ROCK BAGS
(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



| | | | | | |
|------------------------|------------------|-----------------|-----------------|-------|---|
| PROJECT NO: 4472-05-71 | HWY: BRUCKNER RD | COUNTY: CALUMET | EROSION CONTROL | SHEET | E |
|------------------------|------------------|-----------------|-----------------|-------|---|

Estimate Of Quantities

4472-05-71

| Line | Item | Item Description | Unit | Total | Qty |
|------|------------|---------------------------------------------------------------------------|------|------------|------------|
| 0002 | 201.0205 | Grubbing | STA | 2.000 | 2.000 |
| 0004 | 203.0211.S | Abatement of Asbestos Containing Material (structure) 01. P-08-0036 | EACH | 1.000 | 1.000 |
| 0006 | 203.0270 | Removing Structure Over Waterway Debris Capture (structure) 01. P-08-0036 | EACH | 1.000 | 1.000 |
| 0008 | 205.0100 | Excavation Common | CY | 93.000 | 93.000 |
| 0010 | 205.0400 | Excavation Marsh | CY | 91.000 | 91.000 |
| 0012 | 206.1001 | Excavation for Structures Bridges (structure) 01. B-08-0122 | EACH | 1.000 | 1.000 |
| 0014 | 208.0100 | Borrow | CY | 187.000 | 187.000 |
| 0016 | 208.1100 | Select Borrow | CY | 138.000 | 138.000 |
| 0018 | 210.1500 | Backfill Structure Type A | TON | 342.000 | 342.000 |
| 0020 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 20.000 | 20.000 |
| 0022 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 170.000 | 170.000 |
| 0024 | 455.0605 | Tack Coat | GAL | 17.000 | 17.000 |
| 0026 | 465.0105 | Asphaltic Surface | TON | 62.000 | 62.000 |
| 0028 | 502.0100 | Concrete Masonry Bridges | CY | 163.000 | 163.000 |
| 0030 | 502.3200 | Protective Surface Treatment | SY | 224.000 | 224.000 |
| 0032 | 505.0400 | Bar Steel Reinforcement HS Structures | LB | 4,620.000 | 4,620.000 |
| 0034 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 26,160.000 | 26,160.000 |
| 0036 | 513.4061 | Railing Tubular Type M | LF | 98.000 | 98.000 |
| 0038 | 516.0500 | Rubberized Membrane Waterproofing | SY | 12.000 | 12.000 |
| 0040 | 550.0020 | Pre-Boring Rock or Consolidated Materials | LF | 280.000 | 280.000 |
| 0042 | 550.1100 | Piling Steel HP 10-Inch X 42 Lb | LF | 350.000 | 350.000 |
| 0044 | 606.0300 | Riprap Heavy | CY | 145.000 | 145.000 |
| 0046 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 150.000 | 150.000 |
| 0048 | 618.0100 | Maintenance and Repair of Haul Roads (project) 01. 4472-05-71 | EACH | 1.000 | 1.000 |
| 0050 | 619.1000 | Mobilization | EACH | 1.000 | 1.000 |
| 0052 | 624.0100 | Water | MGAL | 5.000 | 5.000 |
| 0054 | 625.0100 | Topsoil | SY | 350.000 | 350.000 |
| 0056 | 628.1504 | Silt Fence | LF | 300.000 | 300.000 |
| 0058 | 628.1520 | Silt Fence Maintenance | LF | 600.000 | 600.000 |
| 0060 | 628.1905 | Mobilizations Erosion Control | EACH | 5.000 | 5.000 |
| 0062 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 3.000 | 3.000 |
| 0064 | 628.2008 | Erosion Mat Urban Class I Type B | SY | 350.000 | 350.000 |
| 0066 | 628.6005 | Turbidity Barriers | SY | 170.000 | 170.000 |
| 0068 | 628.7570 | Rock Bags | EACH | 75.000 | 75.000 |
| 0070 | 629.0210 | Fertilizer Type B | CWT | 0.400 | 0.400 |
| 0072 | 630.0120 | Seeding Mixture No. 20 | LB | 17.000 | 17.000 |
| 0074 | 630.0200 | Seeding Temporary | LB | 8.000 | 8.000 |
| 0076 | 630.0300 | Seeding Borrow Pit | LB | 8.000 | 8.000 |
| 0078 | 630.0500 | Seed Water | MGAL | 11.000 | 11.000 |
| 0080 | 634.0612 | Posts Wood 4x6-Inch X 12-FT | EACH | 4.000 | 4.000 |
| 0082 | 637.2230 | Signs Type II Reflective F | SF | 12.000 | 12.000 |
| 0084 | 638.2602 | Removing Signs Type II | EACH | 8.000 | 8.000 |
| 0086 | 638.3000 | Removing Small Sign Supports | EACH | 8.000 | 8.000 |
| 0088 | 642.5001 | Field Office Type B | EACH | 1.000 | 1.000 |
| 0090 | 643.0420 | Traffic Control Barricades Type III | DAY | 3,996.000 | 3,996.000 |
| 0092 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 6,216.000 | 6,216.000 |
| 0094 | 643.0900 | Traffic Control Signs | DAY | 3,108.000 | 3,108.000 |
| 0096 | 643.5000 | Traffic Control | EACH | 1.000 | 1.000 |
| 0098 | 645.0111 | Geotextile Type DF Schedule A | SY | 96.000 | 96.000 |

Estimate Of Quantities

4472-05-71

| Line | Item | Item Description | Unit | Total | Qty |
|------|----------|--------------------------------------------------------------------|------|---------|---------|
| 0100 | 645.0120 | Geotextile Type HR | SY | 280.000 | 280.000 |
| 0102 | 646.1020 | Marking Line Epoxy 4-Inch | LF | 280.000 | 280.000 |
| 0104 | 650.4500 | Construction Staking Subgrade | LF | 94.000 | 94.000 |
| 0106 | 650.5000 | Construction Staking Base | LF | 94.000 | 94.000 |
| 0108 | 650.6501 | Construction Staking Structure Layout (structure) 01. B-08-0122 | EACH | 1.000 | 1.000 |
| 0110 | 650.9911 | Construction Staking Supplemental Control (project) 01. 4472-05-71 | EACH | 1.000 | 1.000 |
| 0112 | 650.9920 | Construction Staking Slope Stakes | LF | 94.000 | 94.000 |
| 0114 | 690.0150 | Sawing Asphalt | LF | 42.000 | 42.000 |
| 0116 | 715.0502 | Incentive Strength Concrete Structures | DOL | 978.000 | 978.000 |
| 0118 | ASP.1T0A | On-the-Job Training Apprentice at \$5.00/HR | HRS | 300.000 | 300.000 |
| 0120 | ASP.1T0G | On-the-Job Training Graduate at \$5.00/HR | HRS | 600.000 | 600.000 |
| 0122 | SPV.0090 | Special 01. Flashing Stainless Steel | LF | 83.000 | 83.000 |
| 0124 | SPV.0195 | Special 01. Select Crushed Material For Travel Corridor | TON | 18.000 | 18.000 |

| BASE AGGREGATE DENSE AND WATER | | | | | | | | | | | |
|--------------------------------|----|---------|---------------|---|----------------|--|--|------------------|----|-----------|---|
| GRUBBING | | | | | 305.0110 | | | 305.0120 | | 624.0100 | |
| 201.0205 | | | | | BASE | | | BASE | | | |
| GRUBBING | | | | | AGGREGATE | | | AGGREGATE | | 455.0605 | |
| STA | | | | | DENSE 3/4-INCH | | | DENSE 1 1/4-INCH | | 465.0105 | |
| STATION | TO | STATION | LOCATION | | TON | | | TON | | ASPHALTIC | |
| | | | | | | | | | | SURFACE | |
| | | | | | | | | | | TON | |
| 9+00 | - | 11+00 | BRUCKNER ROAD | 2 | | | | | | | |
| TOTAL | | | | 2 | TOTALS | | | | 20 | 170 | 5 |

| ASPHALTIC SURFACE | | | | | | | |
|-------------------|---|-------|------------------------|-----|----|-----|--|
| TACK COAT | | | | GAL | | TON | |
| 9+10 | - | 9+77 | BRUCKNER ROAD, LT & RT | 12 | 44 | | |
| 10+23 | - | 10+50 | BRUCKNER ROAD, LT & RT | 5 | 18 | | |
| TOTALS | | | | 17 | 62 | | |

| SILT FENCE | | | | | |
|---------------|---|-------|------------------------|------------|-----|
| 628.1504 | | | | 628.1520 | |
| SILT FENCE | | | | SILT FENCE | |
| LF | | | | LF | |
| 9+10 | - | 9+77 | BRUCKNER ROAD, LT & RT | 180 | 360 |
| 10+23 | - | 10+50 | BRUCKNER ROAD, LT & RT | 80 | 160 |
| UNDISTRIBUTED | | | | 40 | 80 |
| TOTALS | | | | 300 | 600 |

| MOBILIZATIONS EROSION CONTROL | | | | | |
|-------------------------------|---|-------|------------------------|---------------|---|
| 628.1905 | | | | 628.1910 | |
| MOBILIZATIONS | | | | MOBILIZATIONS | |
| EROSION | | | | EROSION | |
| CONTROL | | | | CONTROL | |
| EACH | | | | EACH | |
| 9+10 | - | 10+50 | BRUCKNER ROAD, LT & RT | 5 | 3 |
| TOTALS | | | | 5 | 3 |

| Division | From/To Station | Location | Common Excavation (Item #205.0100) | Unusable Pavement Material (4) | Available Material (5) | Excavation Marsh (6) | Expanded Marsh Backfill (10) (Item #209.2100) | Expanded Fill (13) | Mass Ordinate +/- | Borrow (Item #208.0100) |
|-------------------|-----------------|---------------|---------------------------------------|-----------------------------------|---------------------------|-------------------------|--------------------------------------------------|-----------------------|----------------------|----------------------------|
| | | | CUT (2) | | | (Item #205.0400) | Factor 1.50 | Factor 1.30 | | |
| 1 | 9+10 - 10+50 | BRUCKNER ROAD | 93 | 25 | 68 | 91 | 138 | 255 | -187 | 187 |
| Division 1 Totals | | | 93 | 25 | 68 | 91 | 138 | 255 | -187 | 187 |

| | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes: | |
| 2-Cut | Unusable Pavement Material is included in Cut |
| 4-Salvaged/Unusable Pavement Material | This does not show up in cross sections. Unusable Pavement Material = Existing Asphaltic Pavement. Backfill any areas below subgrade with Borrow material. Item Number 208.0100. |
| 5-Available Material | Available Material = Cut - Unusable Pavement Material |
| 6-Excavation Marsh | Excavation Marsh too be backfilled with Backfill Granular Grade 2 as shown in cross sections. |
| 10-Expanded Marsh Backfill | Expanded Marsh Backfill will be backfilled with Select Borrow Material. Marsh Backfill Factor = 1.5. Expanded Marsh Backfill = Excavation Marsh x Marsh Backfill Factor. Item Number 208.1100. |
| 13-Expanded Fill | Expanded Fill Factor = 1.3. Expanded Fill = Unexpanded Fill x Expanded Fill Factor. |
| 14-Mass Ordinate | Cut - Unusable Pavement Material - (Unexpanded Fill * Expanded Fill Factor) |

| | | | | | | | | | | |
|------------------------|--|--|--------------------|--|--|-----------------|--|--|--------------------------|--|
| PROJECT NO: 4472-05-71 | | | HWY: BRUCKNER ROAD | | | COUNTY: CALUMET | | | MISCELLANEOUS QUANTITIES | |
| SHEET: | | | E | | | | | | | |

TURBIDITY BARRIERS

| 628.6005 TURBIDITY BARRIERS | | | | |
|-----------------------------------|----|---------|------------------------|-----|
| STATION | TO | STATION | LOCATION | SY |
| 9+10 | - | 10+00 | BRUCKNER ROAD, LT & RT | 86 |
| 10+00 | - | 10+50 | BRUCKNER ROAD, LT & RT | 84 |
| TOTAL | | | | 170 |

EROSION MAT

| 628.2008 EROSION MAT URBAN CLASS I TYPE B | | | | |
|----------------------------------------------------|----|---------|------------------------|-----|
| STATION | TO | STATION | LOCATION | SY |
| 9+10 | - | 9+77 | BRUCKNER ROAD, LT & RT | 222 |
| 10+23 | - | 10+50 | BRUCKNER ROAD, LT & RT | 58 |
| UNDISTRIBUTED | | | | 70 |
| TOTALS | | | | 350 |

ROCKBAGS

| 628.7570 ROCK BAGS EACH | | | | |
|-------------------------------|----|---------|------------------------|------|
| STATION | TO | STATION | LOCATION | EACH |
| 9+10 | - | 10+00 | BRUCKNER ROAD, LT & RT | 30 |
| 10+00 | - | 10+50 | BRUCKNER ROAD, LT & RT | 30 |
| UNDISTRIBUTED | | | | 15 |
| TOTAL | | | | 75 |

TOPSOIL, FERTILIZER, AND SEED

| | | | | 625.0100 | 629.0210 | 630.0120 | 630.0200 | 630.0300 | 630.0500 |
|---------------|----|---------|------------------------|----------|-----------------|----------------|-----------|------------|------------|
| | | | | | FERTILIZER TYPE | SEEDING | SEEDING | SEEDING | |
| STATION | TO | STATION | LOCATION | TOPSOIL | B | MIXTURE NO. 20 | TEMPORARY | BORROW PIT | SEED WATER |
| | | | | SY | CWT | LB | LB | LB | MGAL |
| 9+10 | - | 9+77 | BRUCKNER ROAD, LT & RT | 222 | 0.2 | 10 | 4 | 4 | 7 |
| 10+23 | - | 10+50 | BRUCKNER ROAD, LT & RT | 58 | 0.1 | 3 | 2 | 2 | 2 |
| UNDISTRIBUTED | | | | 70 | 0.1 | 4 | 2 | 2 | 2 |
| TOTALS | | | | 350 | 0.4 | 17 | 8 | 8 | 11 |

REMOVING SIGNS

| | | 638.2602 | 638.3000 | |
|------------------------------------|----------------------------|---------------|------------|--------------------------------|
| | | REMOVING | REMOVING | |
| | | SIGNS TYPE II | SMALL SIGN | |
| STATION | LOCATION | EACH | EACH | REMARKS |
| | BRUCKNER ROAD, HAYTON ROAD | 1 | 1 | "25 TON BRIDGE 1/2 MILE AHEAD" |
| 9+70 | BRUCKNER ROAD, RT | 1 | 1 | "BRIDGE WEIGHT TIMIT 5 TONS" |
| 9+77 | BRUCKNER ROAD, LT & RT | 2 | 2 | OBJECT MARKER |
| 10+23 | BRUCKNER ROAD, LT & RT | 2 | 2 | OBJECT MARKER |
| 10+27 | BRUCKNER ROAD, LT | 1 | 1 | "BRIDGE WEIGHT TIMIT 5 TONS" |
| BRUCKNER ROAD, HONEYMOON HILL ROAD | | 1 | 1 | "25 TON BRIDGE 1/2 MILE AHEAD" |
| TOTALS | | 8 | 8 | |

SIGNS AND SIGN POSTS

| TRAFFIC CONTROL | | | | | | | | | |
|-----------------------------|------------------------|-----------------------|-------|-----------------------|-------|----------------|-------|------------------------------------------------------------------------|--|
| 643.0420 | | 643.0705 | | 643.0900 | | | | | |
| TRAFFIC CONTROL | | TRAFFIC CONTROL | | TRAFFIC CONTROL | | | | | |
| BARRICADES TYPE III | | WARNING LIGHTS TYPE A | | TRAFFIC CONTROL SIGNS | | | | | |
| LOCATION | APPROX. SERVICE PERIOD | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | REMARKS | |
| BRUCKNER ROAD WEST APPROACH | 222 | 9 | 1,998 | 14 | 3,108 | 7 | 1,554 | REFER TO SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C & D" | |
| BRUCKNER ROAD EAST APPROACH | 222 | 9 | 1,998 | 14 | 3,108 | 7 | 1,554 | REFER TO SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C & D" | |
| TOTALS | | 3,996 | | 6,216 | | 3,108 | | | |

| | | 634.0612 | 637.2230 | |
|----------|-------------------|----------------------|-------------------------------|-----------|
| | | POSTS WOOD | | |
| | | 4X6-INCH X 12- FT | SIGNS TYPE II REFLECTIVE F | |
| QUADRANT | LOCATION | EACH | W5-52L SF | W5-52R SF |
| SW | BRUCKNER ROAD, RT | 1 | - | 3 |
| NW | BRUCKNER ROAD, LT | 1 | 3 | - |
| SE | BRUCKNER ROAD, RT | 1 | 3 | - |
| NE | BRUCKNER ROAD, LT | 1 | - | 3 |
| TOTALS | | 4 | 12 | |

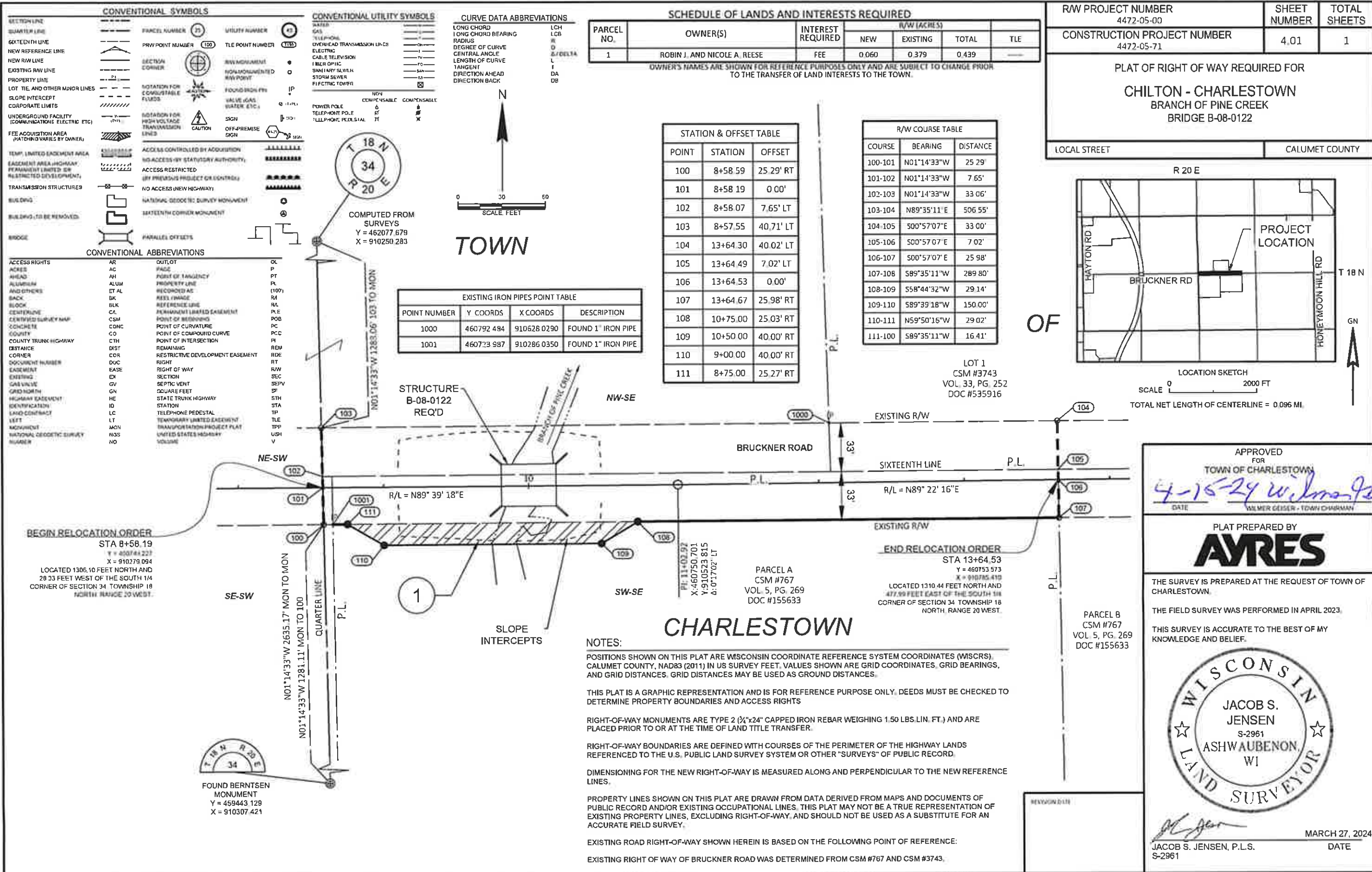
ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE STATED.

| SAWING ASPHALT | | |
|----------------|---------------|-------------------------------------|
| STATION | LOCATION | 690.0150 SAWING ASPHALT LF |
| 9+10 | BRUCKNER ROAD | 21 |
| 10+50 | BRUCKNER ROAD | 21 |
| TOTAL | | 42 |

| CONSTRUCTION STAKING | | | | | | | | | |
|----------------------|-----------|----|---------|------------------------|--------------|--------------|--------------|--------------|--------------|
| | | | | | 650.4500 | 650.5000 | 650.6501.01 | 650.9911.01 | 650.9920 |
| | | | | | CONSTRUCTION | | CONSTRUCTION | CONSTRUCTION | |
| | | | | | STAKING | CONSTRUCTION | STAKING | STAKING | |
| | | | | | SUBGRADE | STAKING BASE | STRUCTURE | SUPPLEMENTAL | CONSTRUCTION |
| CATEGORY | STATION | TO | STATION | LOCATION | LF | LF | LAYOUT | CONTROL | SLOPE |
| | | | | | | | (B-08-0122) | (B-08-0122) | STAKES |
| | | | | | LF | LF | EACH | EACH | LF |
| 0010 | 9+10 | - | 9+77 | BRUCKNER ROAD, LT & RT | 67 | 67 | - | - | 67 |
| 0010 | 10+23 | - | 10+50 | BRUCKNER ROAD, LT & RT | 27 | 27 | - | - | 27 |
| 0010 | PROJECT | | | BRUCKNER ROAD | - | - | - | 1 | - |
| TOTAL 0010 | | | | | 94 | 94 | 0 | 1 | 94 |
| 0020 | B-08-0122 | | | | - | - | 1 | - | - |
| TOTAL 0020 | | | | | 0 | 0 | 1 | 0 | 0 |
| PROJECT TOTAL | | | | | 94 | 94 | 1 | 1 | 94 |

| MARKING LINE | | | | | | |
|--------------|----|---------|---------------|------------------------------------------------|---------------|--|
| STATION | TO | STATION | LOCATION | 646.1020 MARKING LINE EPOXY 4-INCH LF | REMARKS | |
| 9+10 | - | 10+50 | BRUCKNER ROAD | 280 | DOUBLE-YELLOW | |
| TOTAL | | | | 280 | | |

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE STATED.



Standard Detail Drawing List

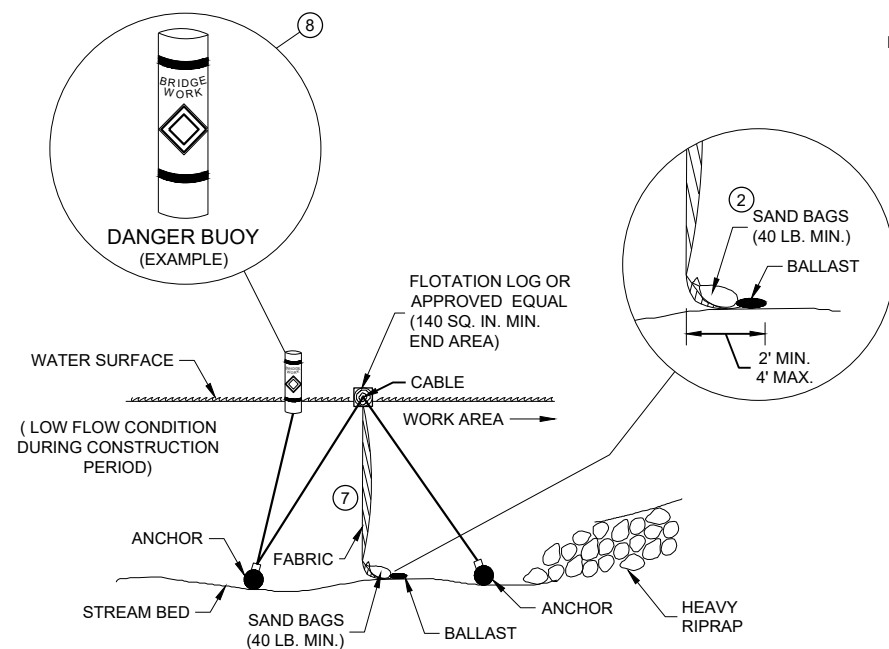
| | |
|-----------|--------------------------------------------|
| 08E09-06 | SILT FENCE |
| 08E11-02 | TURBIDITY BARRIER |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 13C19-03 | HMA LONGITUDINAL JOINTS |
| 14B29-01 | SAFETY EDGE |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C06-12 | SIGNING & MARKING FOR TWO LANE BRIDGES |
| 15C08-23A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS |



- 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 1½" X 1½" 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.

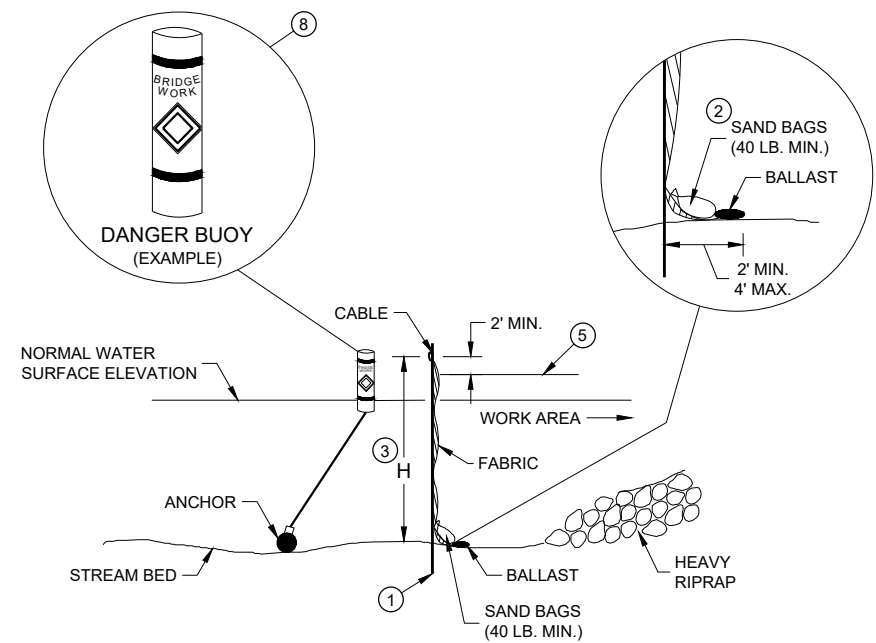


| | |
|------------------------------------------------------------|------------------------------------------------------------------------|
| SILT FENCE | |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED <u>4-29-05</u> DATE | <u>/S/ Beth Cannestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER |



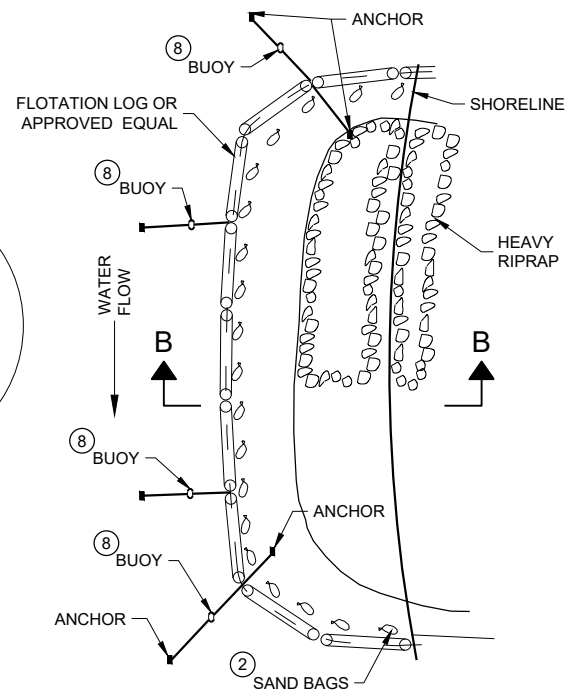
SECTION B - B

TURBIDITY BARRIER - FLOAT ALTERNATIVE CAUTION - SEE NOTE 6

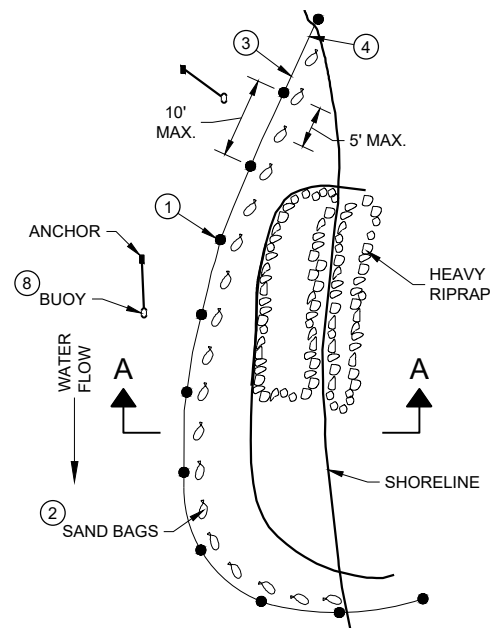


SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW



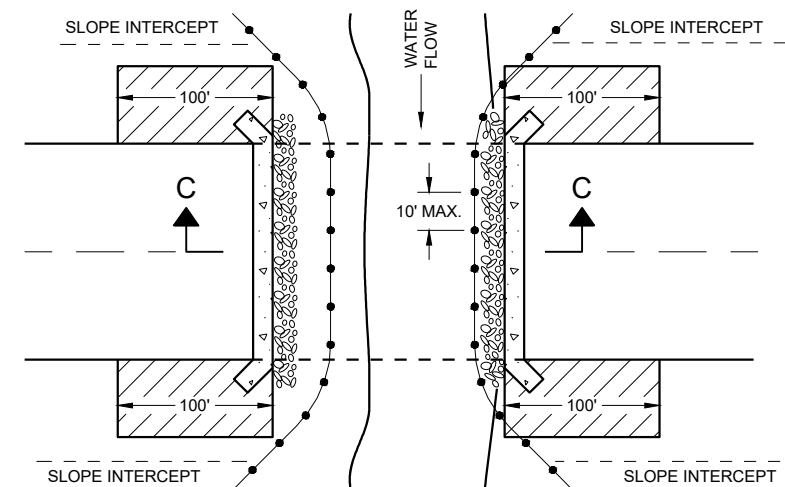
PLAN VIEW

GENERAL NOTES

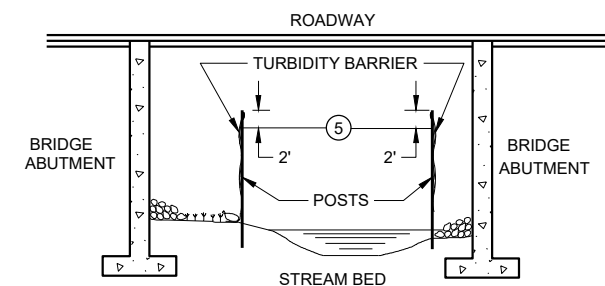
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

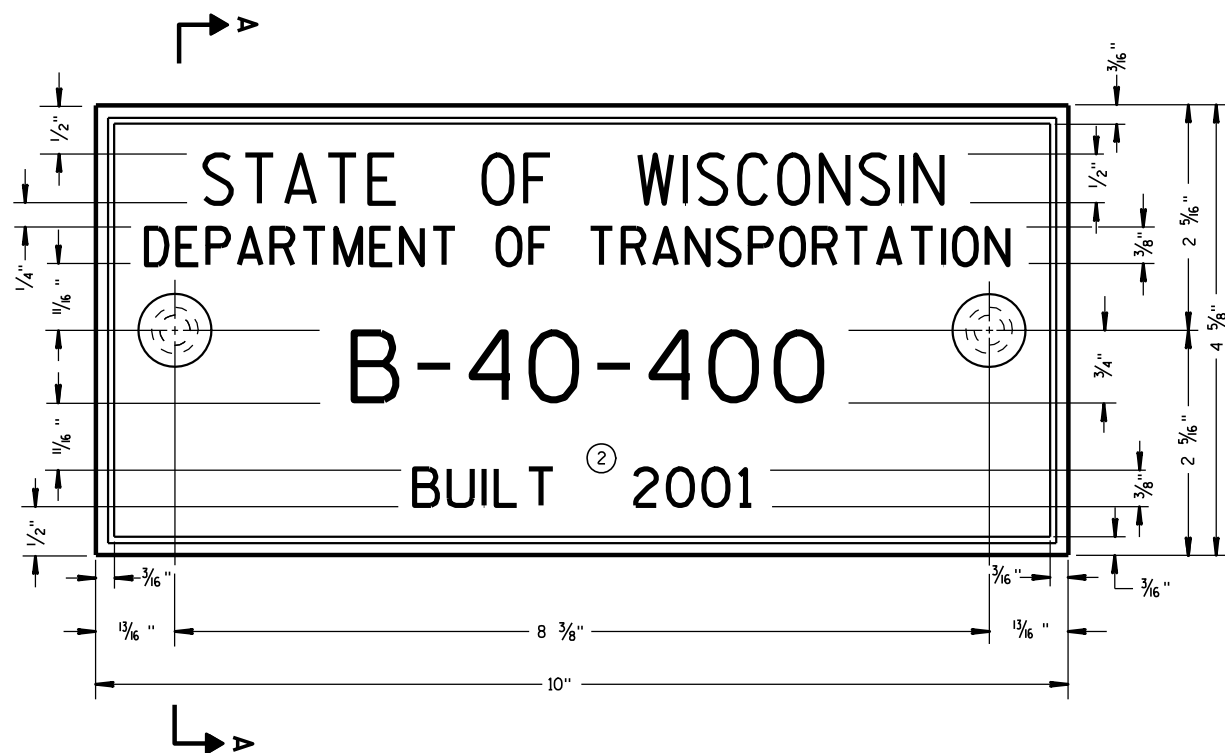
APPROVED

6/4/02

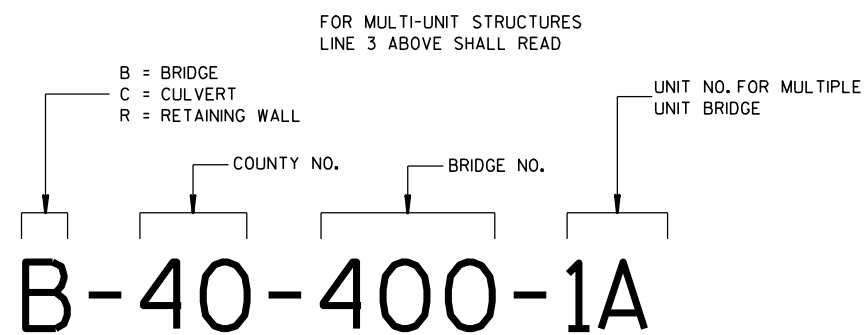
DATE

FHWA

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT
ENGINEER



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



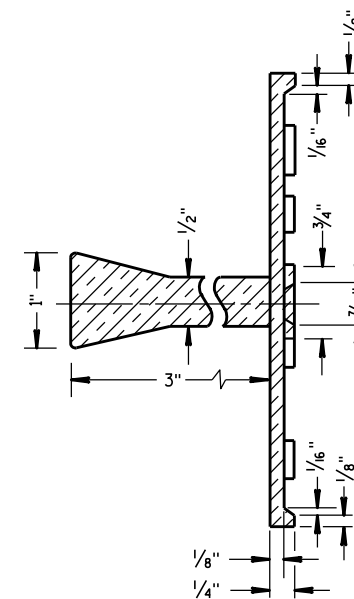
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

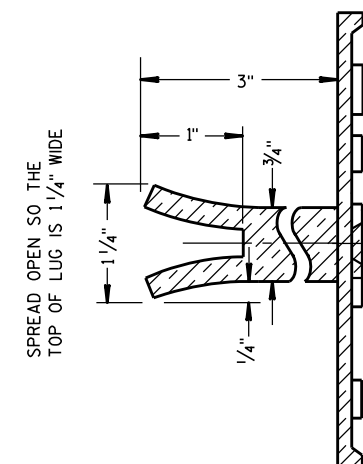
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

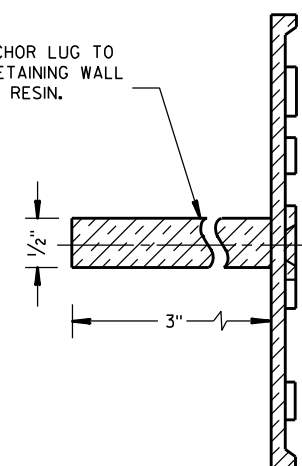


SECTION A-A



ALTERNATE LUG

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

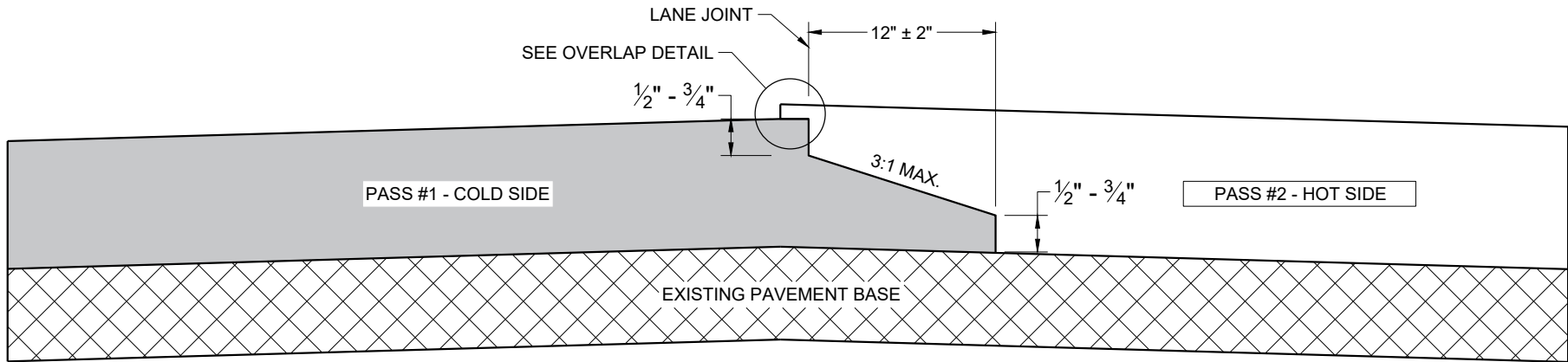
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

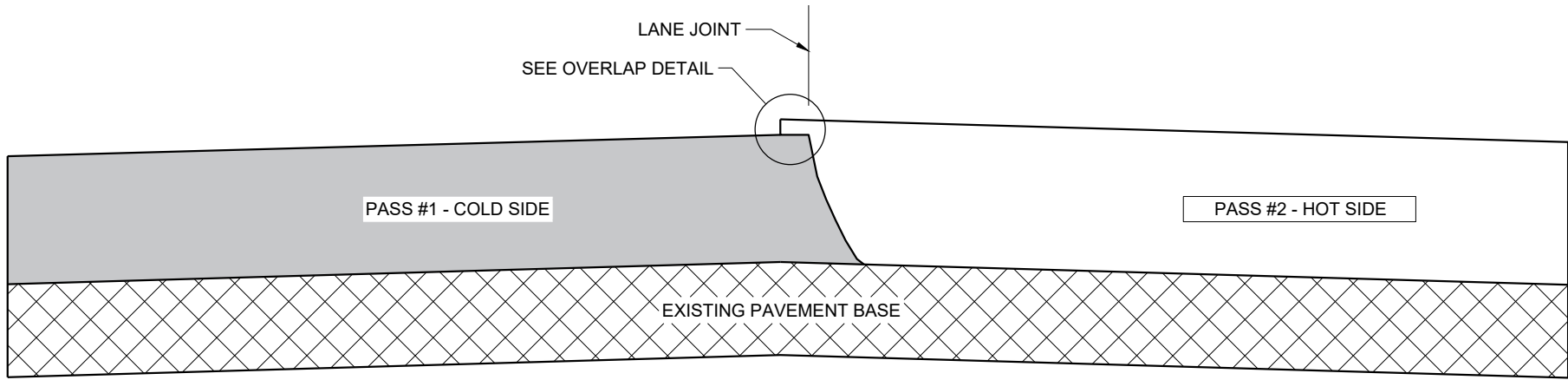
3/26/10
DATE

FHWA

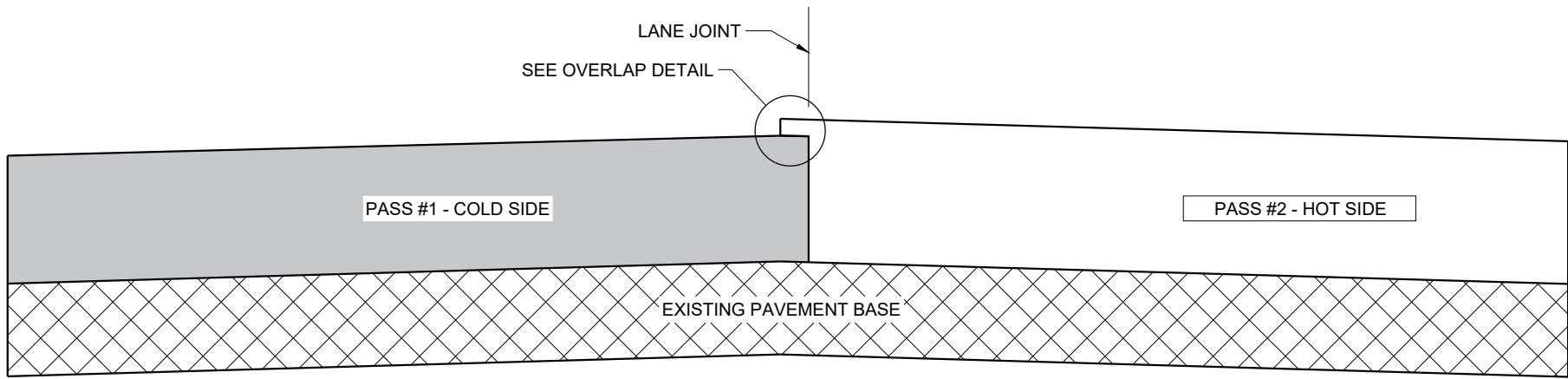
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

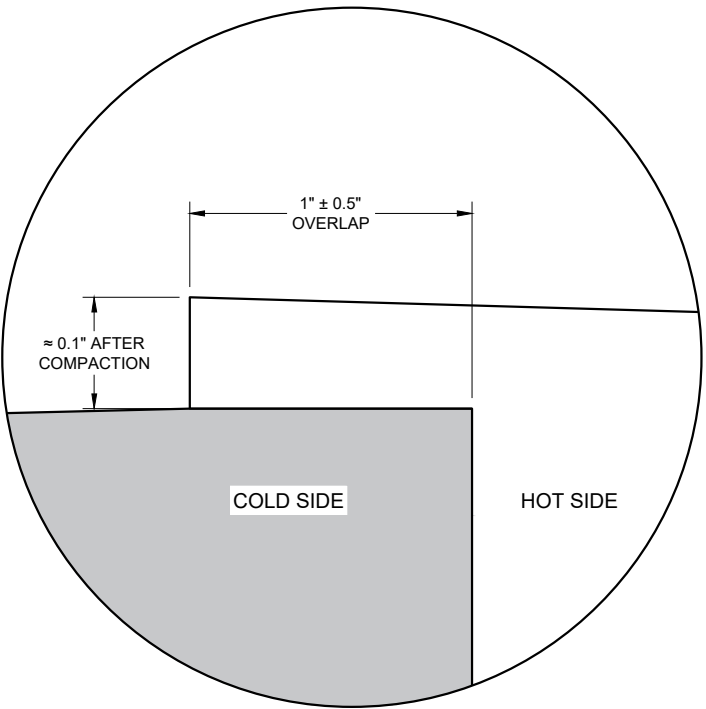
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ 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.

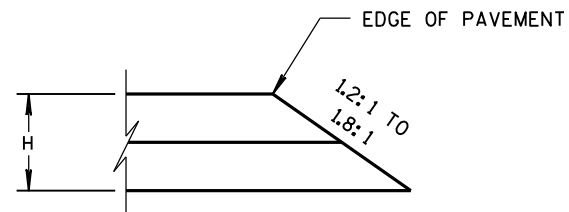


OVERLAP DETAIL (TYPICAL)

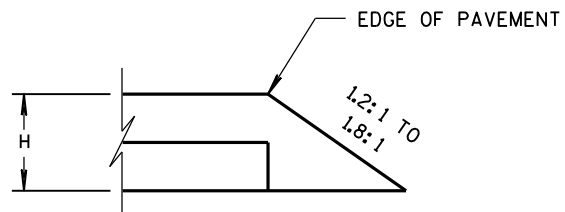
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

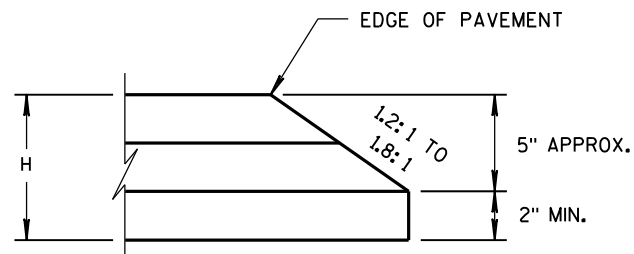
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA



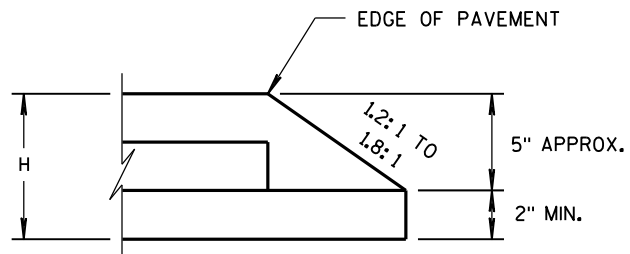
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

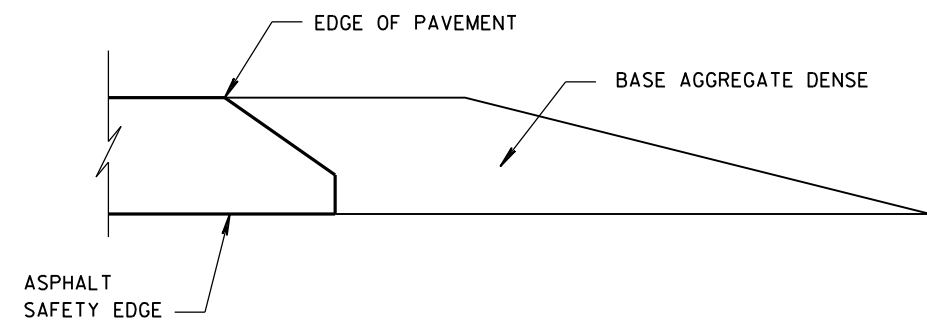


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



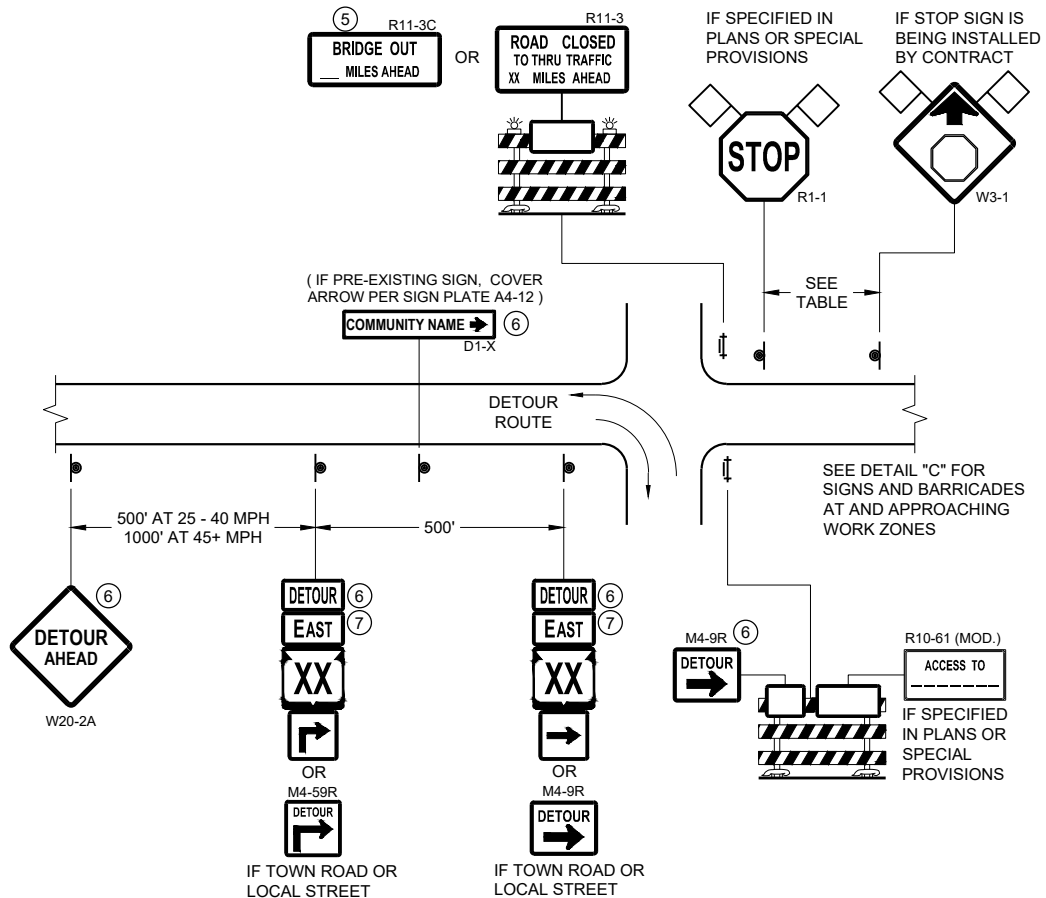
FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

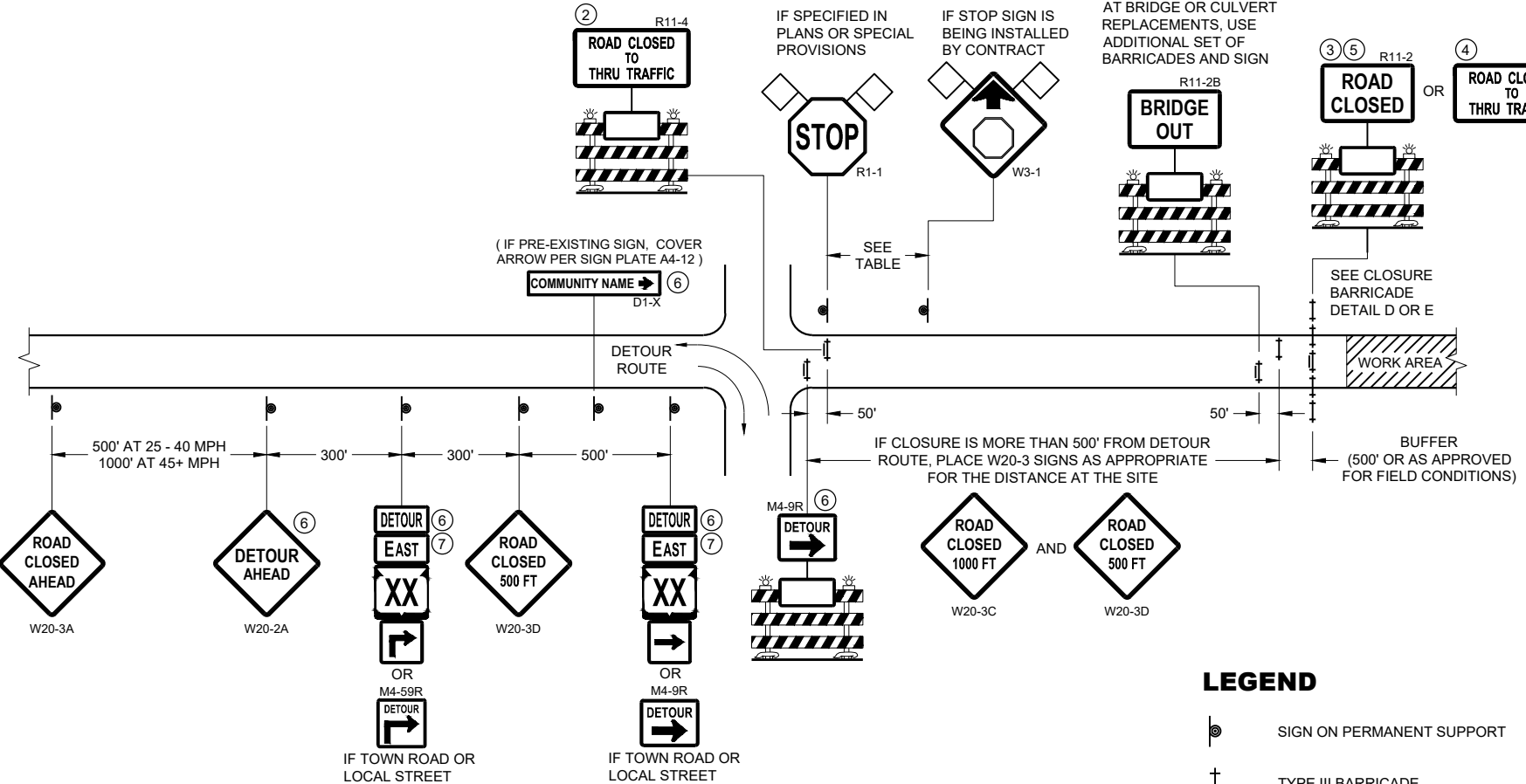
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE
FHWA

/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



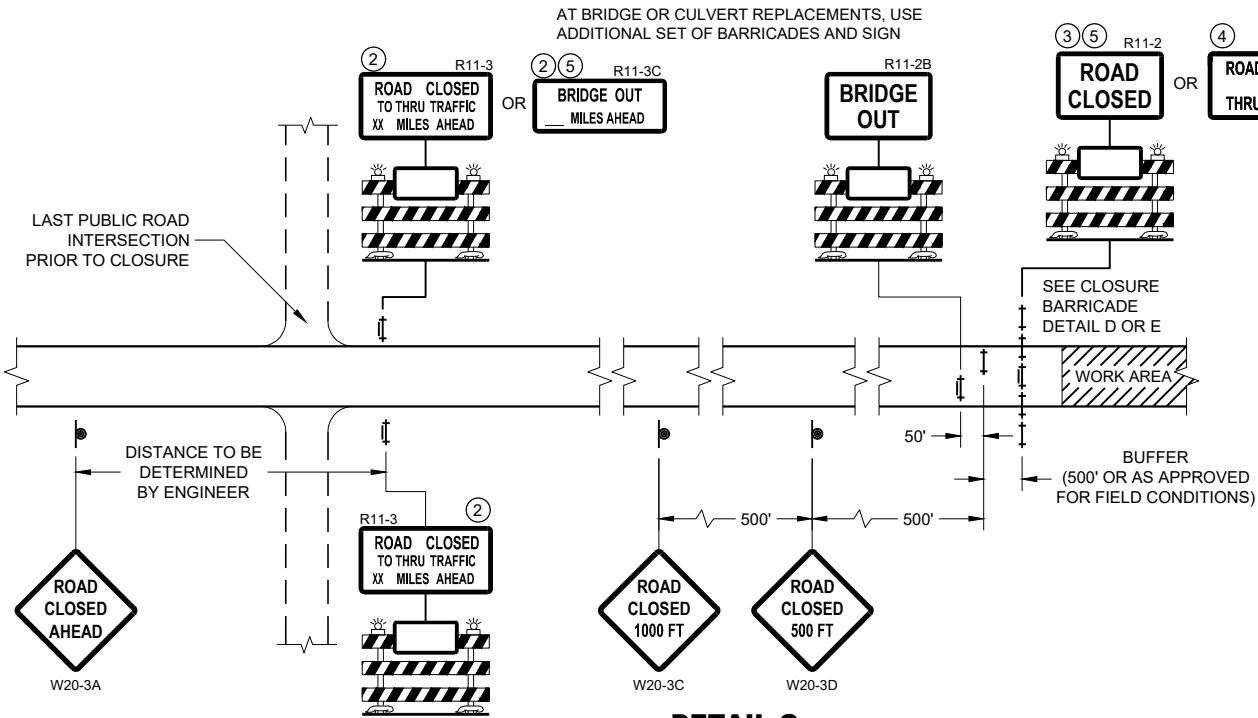
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

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

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

| 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



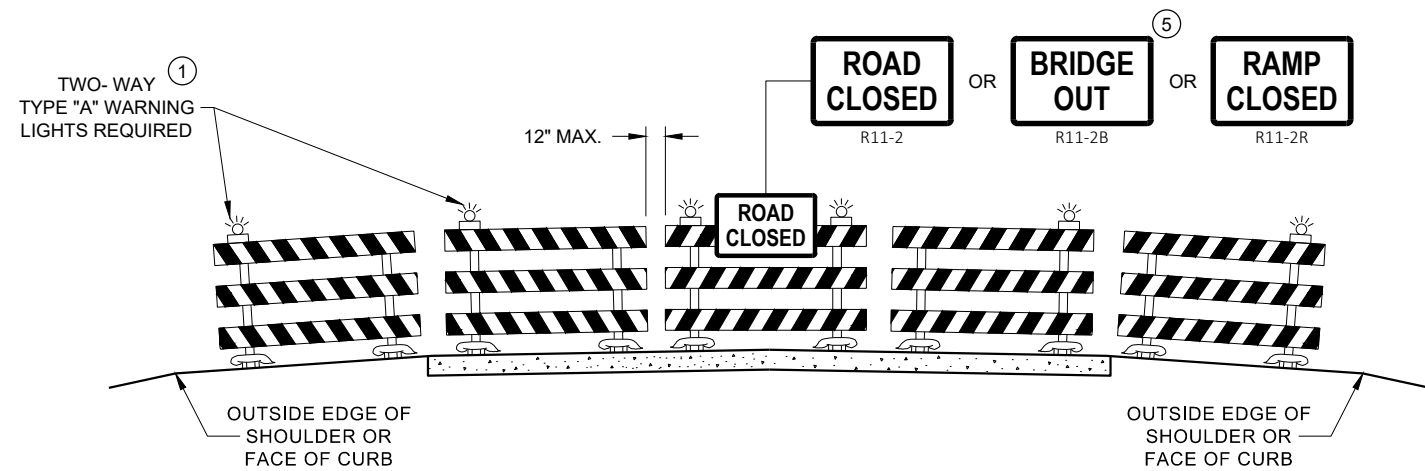
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

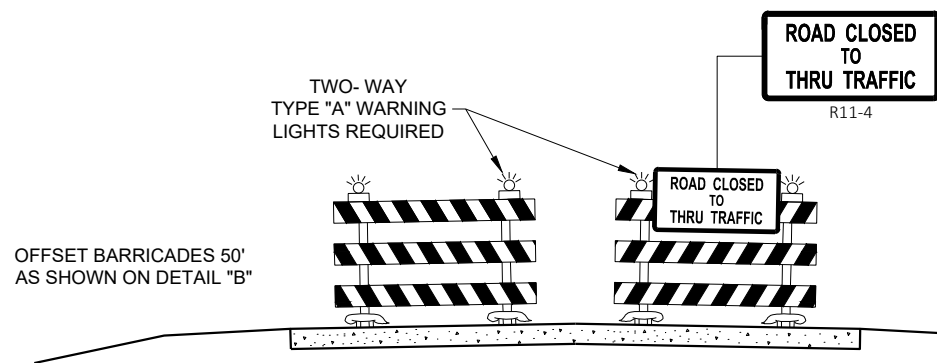
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



**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"

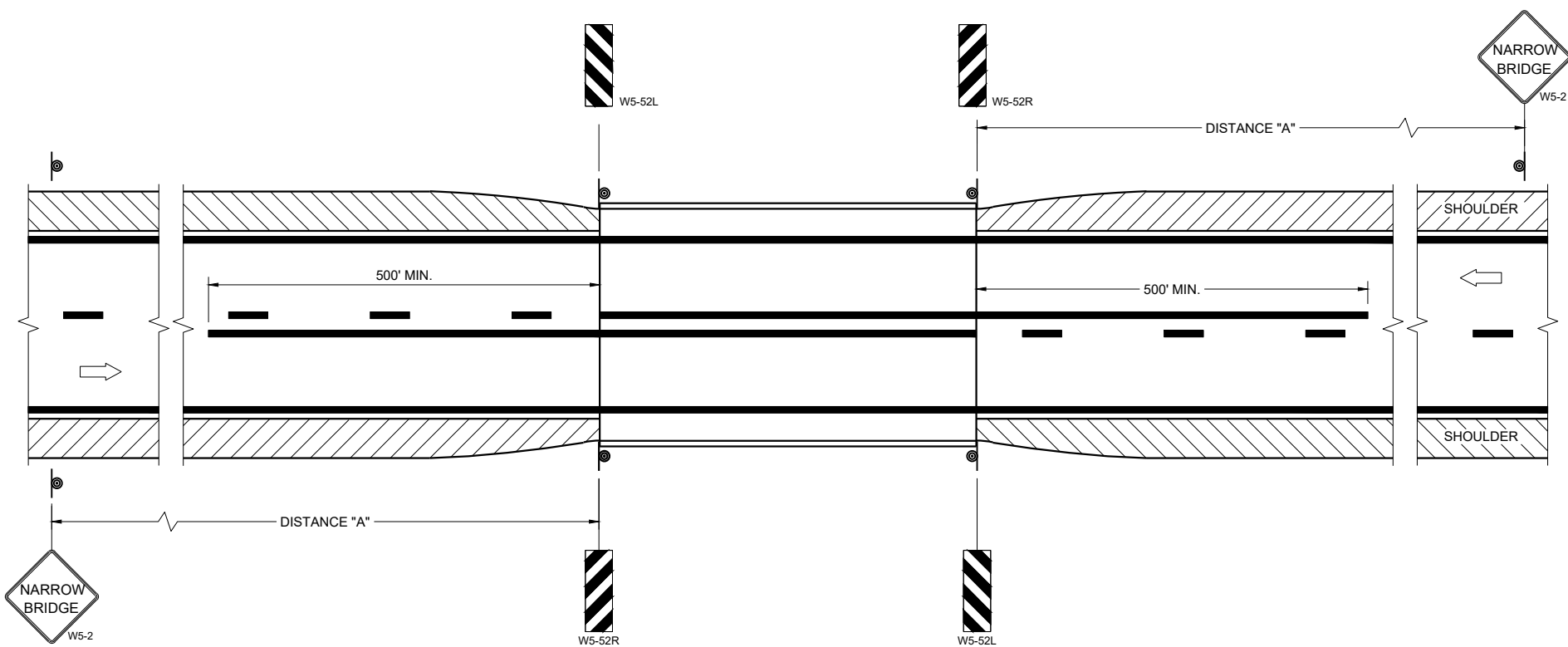
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS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

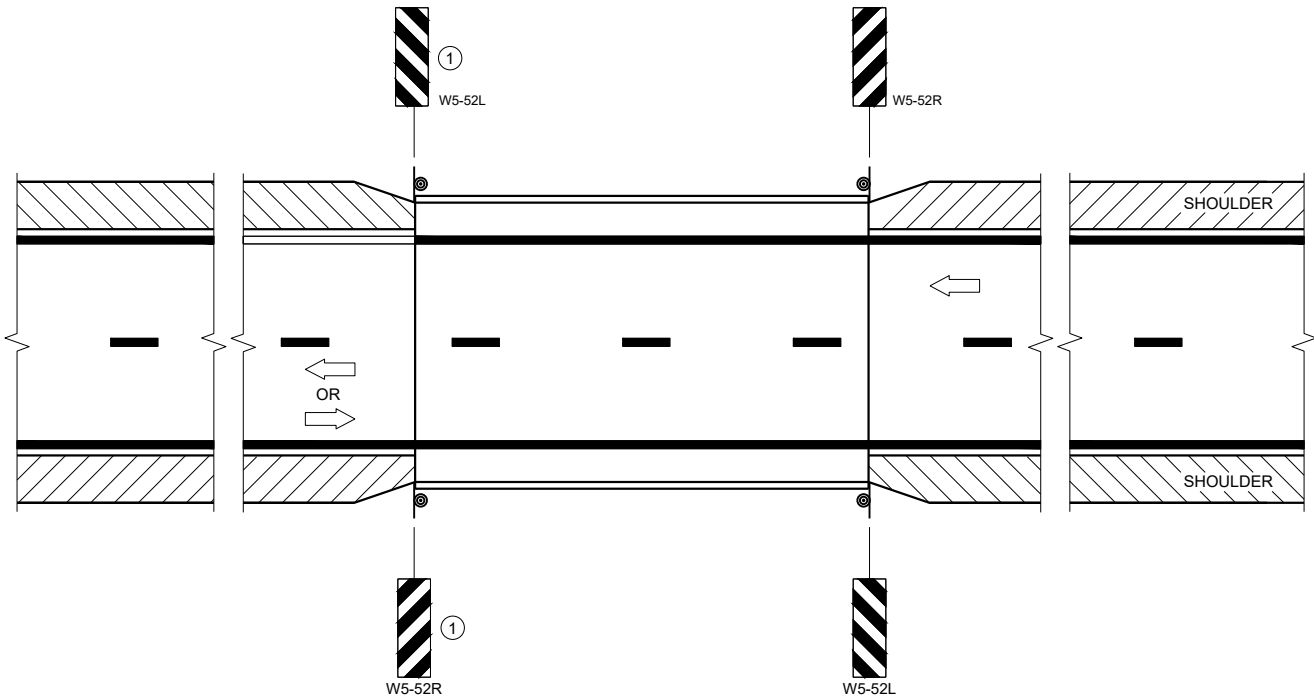
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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

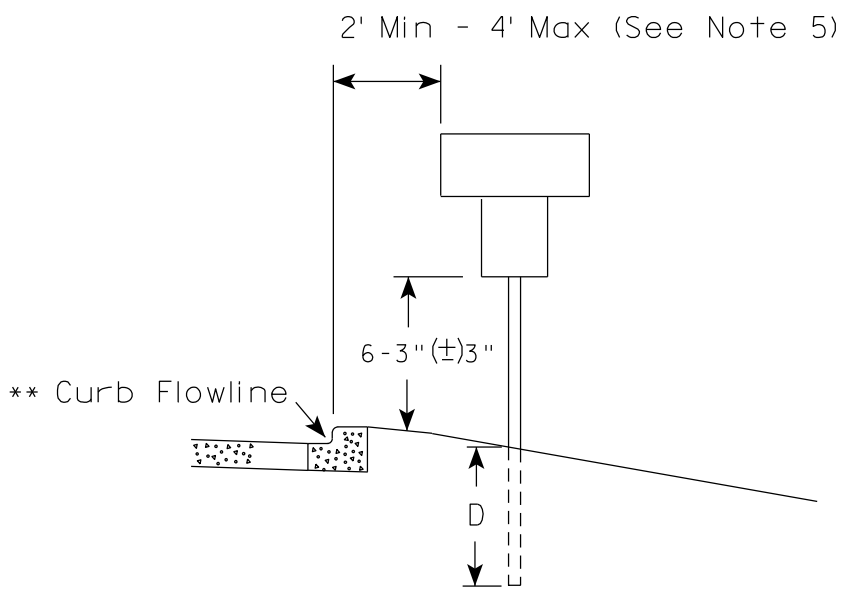
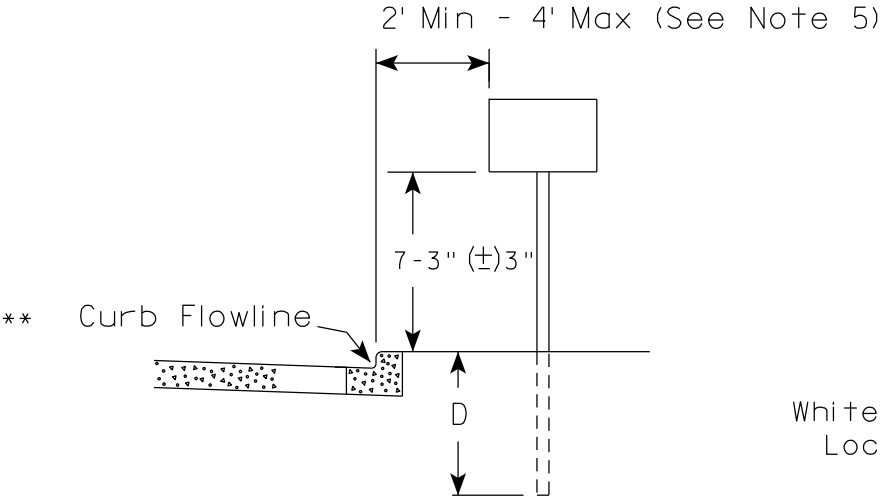


PERMANENT PAVEMENT MARKING

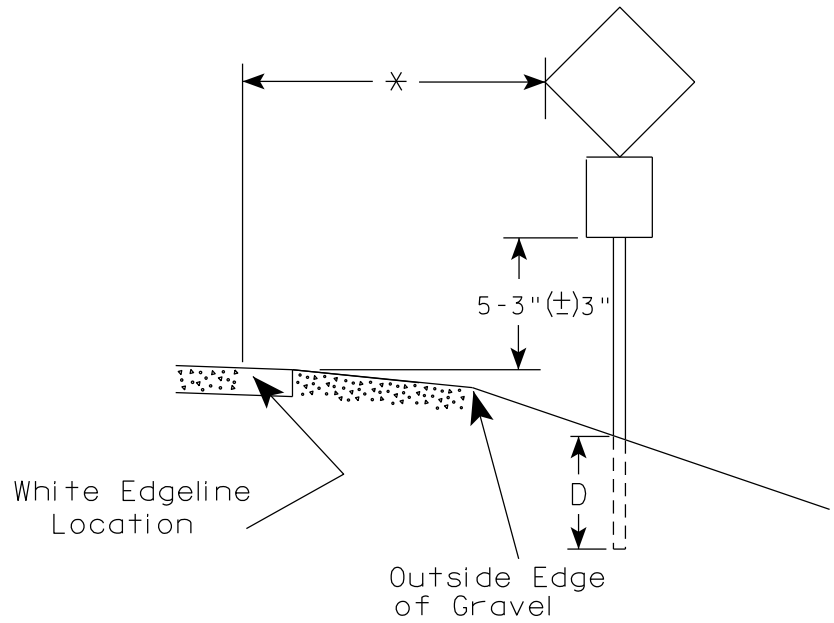
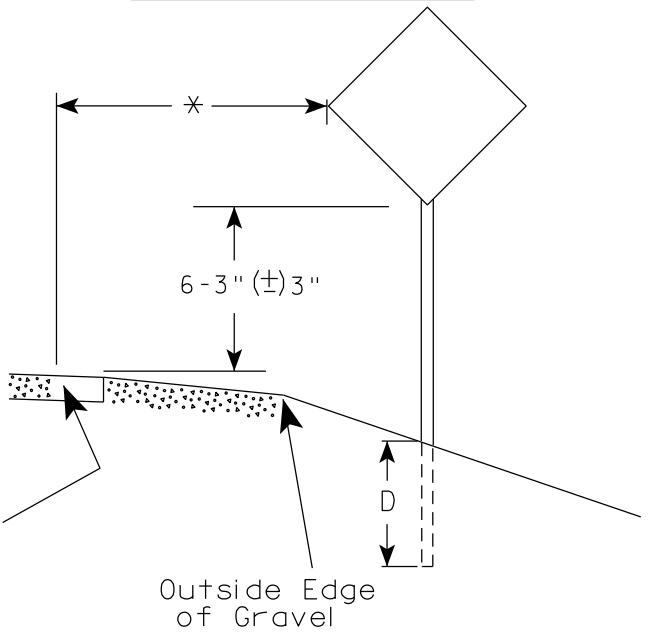
APPROVED
May 2023
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

URBAN AREA



RURAL AREA (See Note 2)



| 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 directed by the 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.

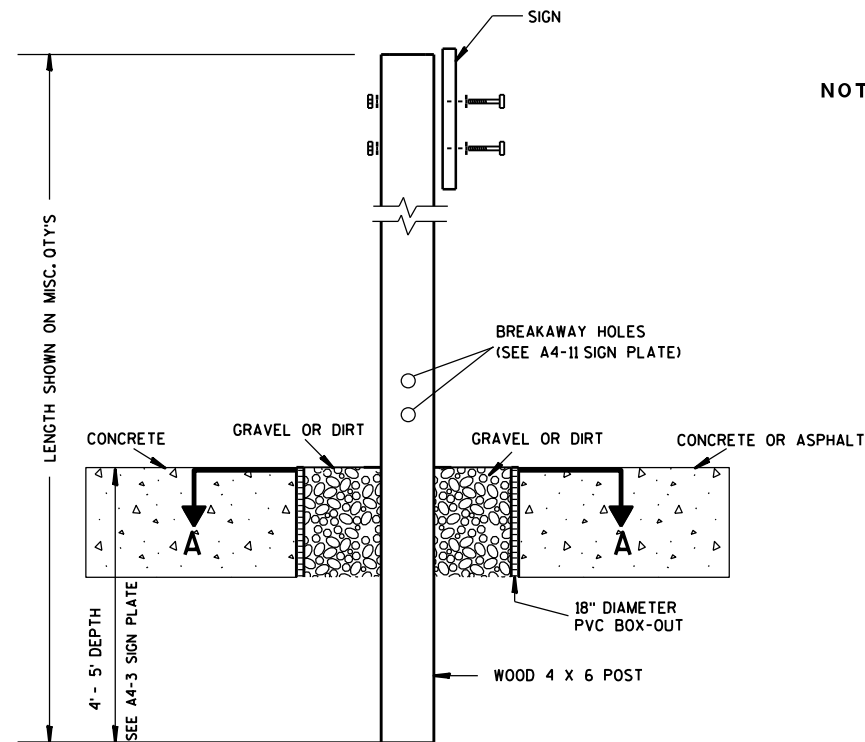
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED 
for State Traffic Engineer

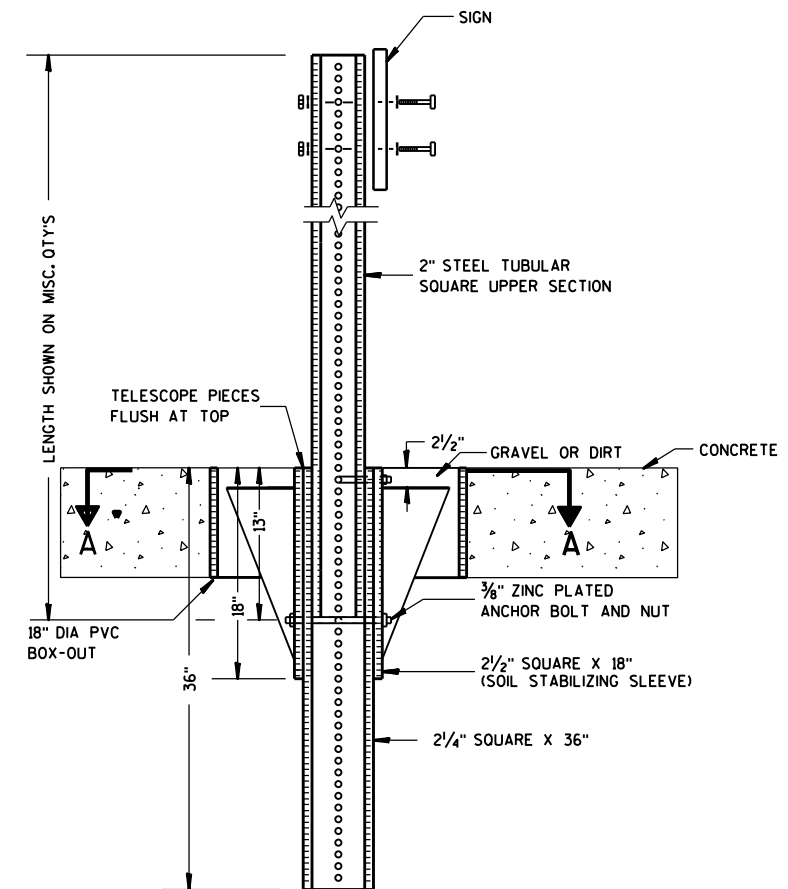
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

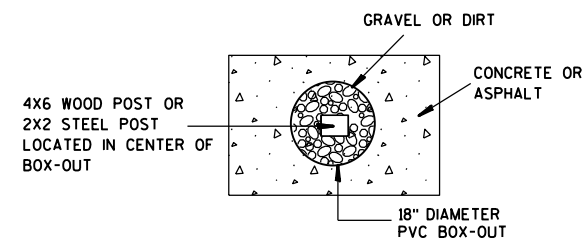
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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:

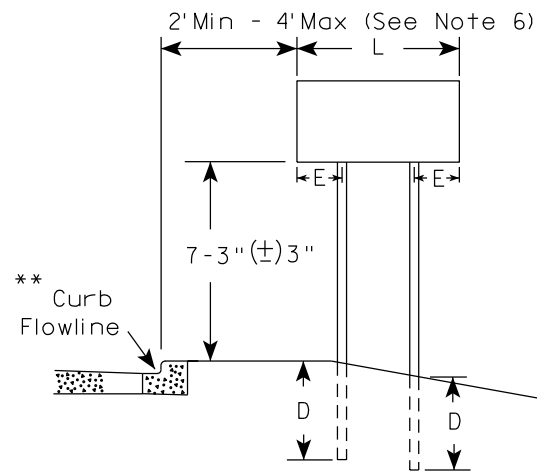
HWY:

COUNTY:

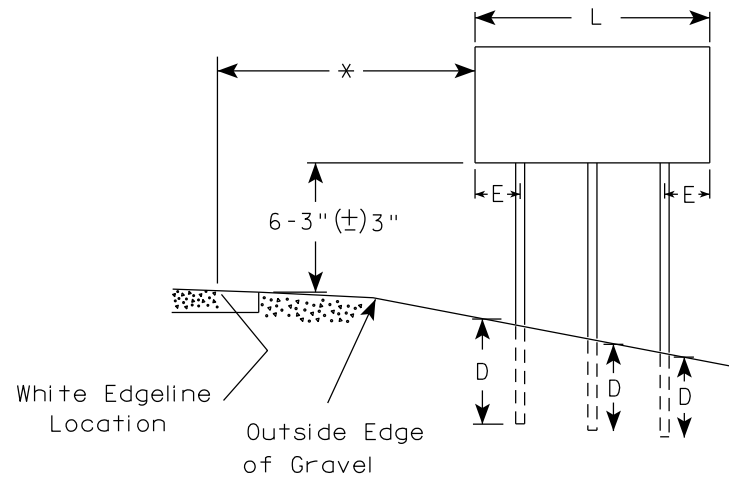
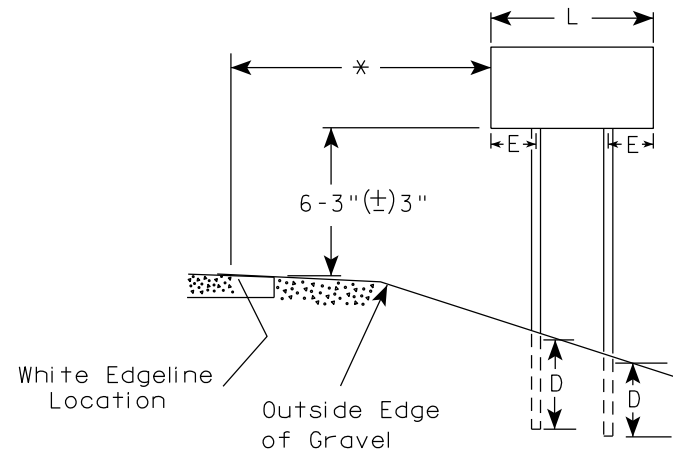
SHEET NO:

E

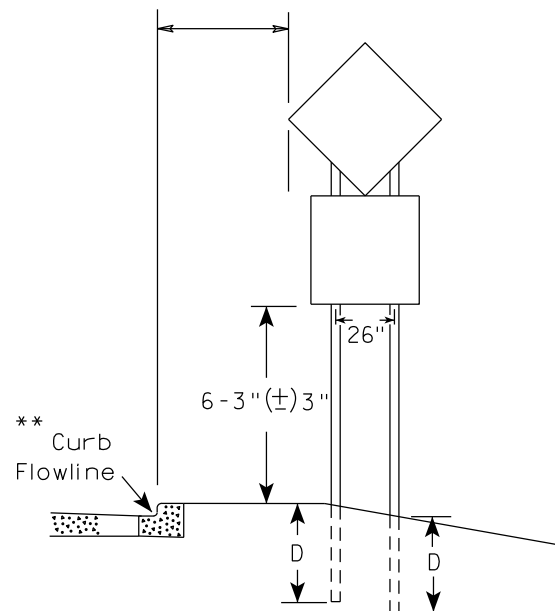
URBAN AREA



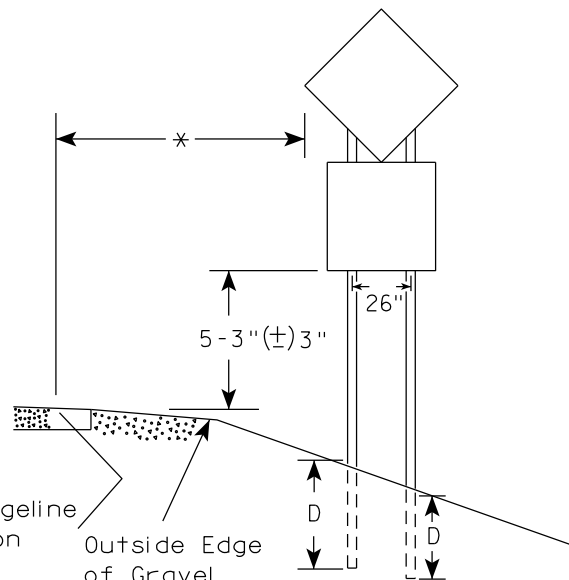
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



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" |

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

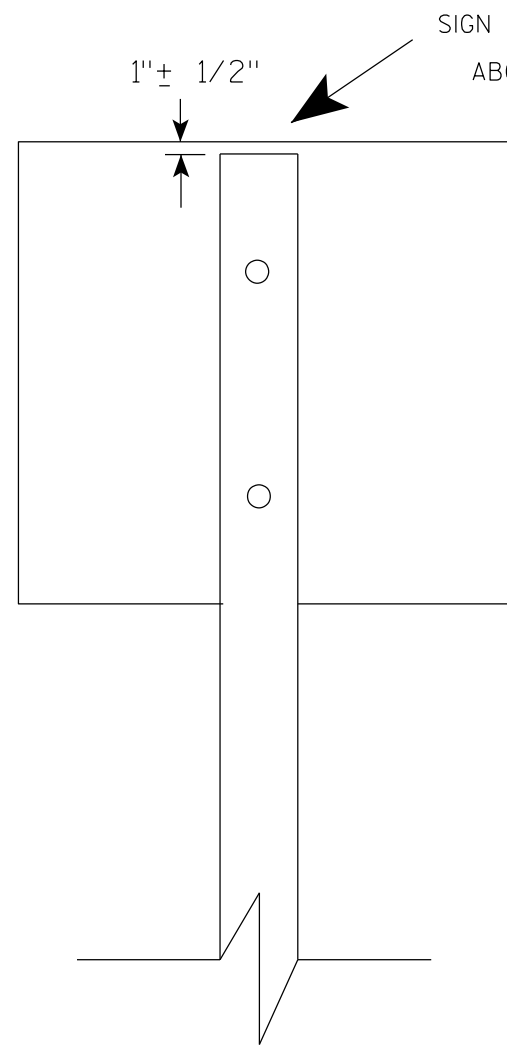
PROJECT NO:

HWY:

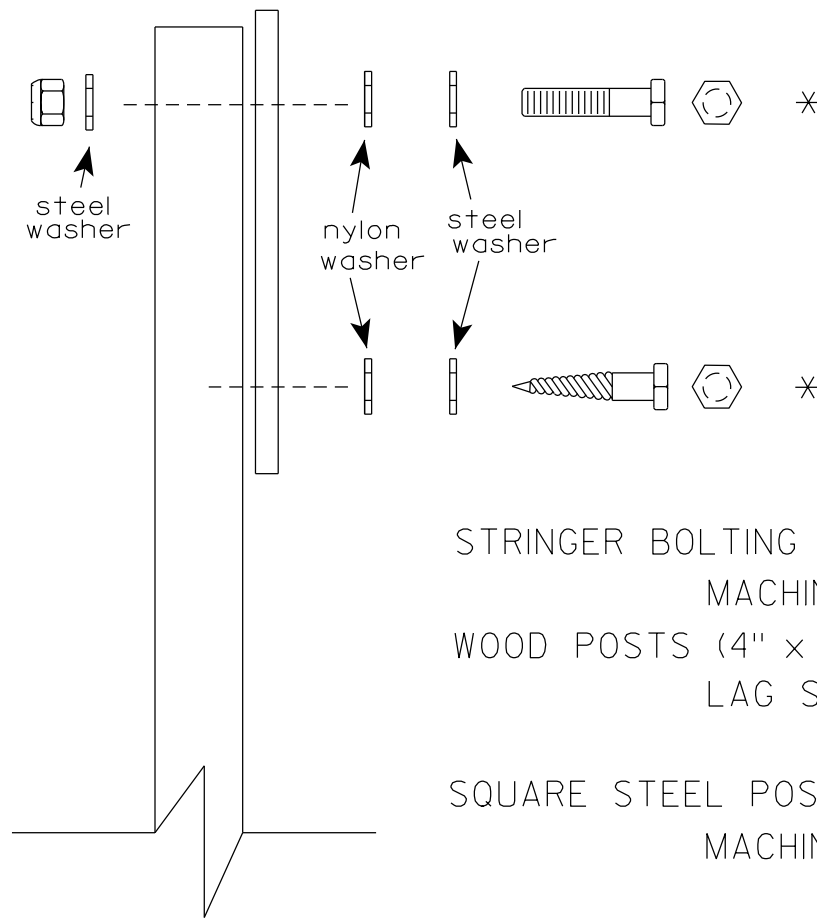
COUNTY:

SHEET NO:

E



SIGN SHALL BE MOUNTED TO PROJECT
ABOVE THE TOP OF THE POST



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.

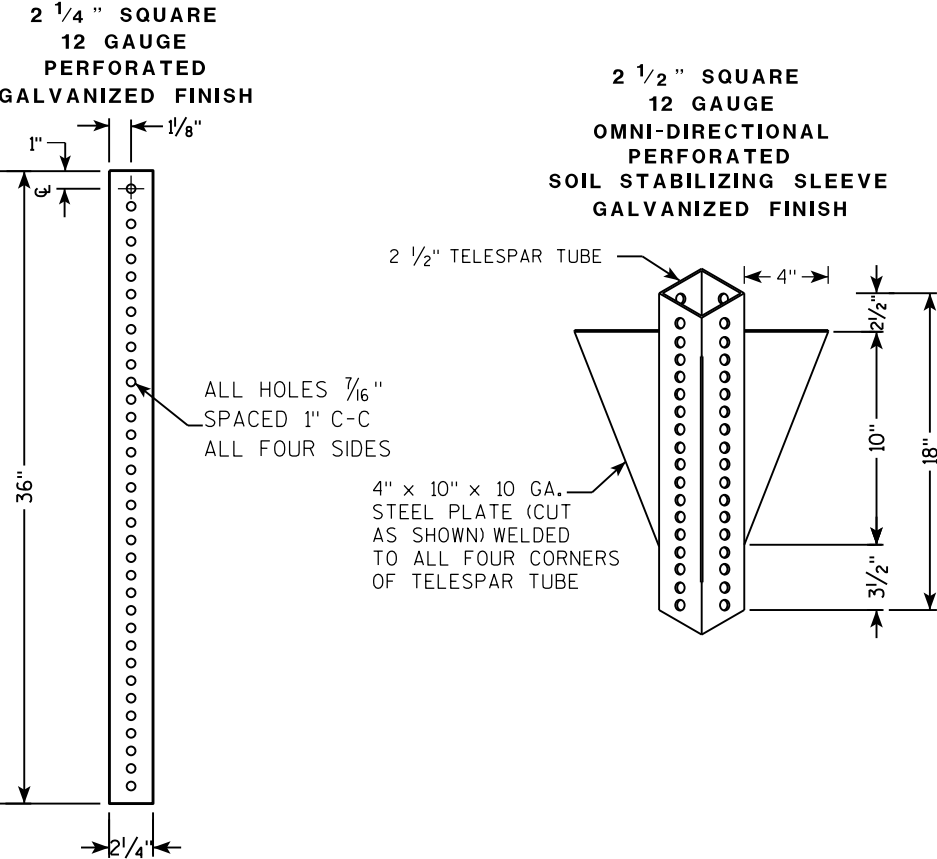
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

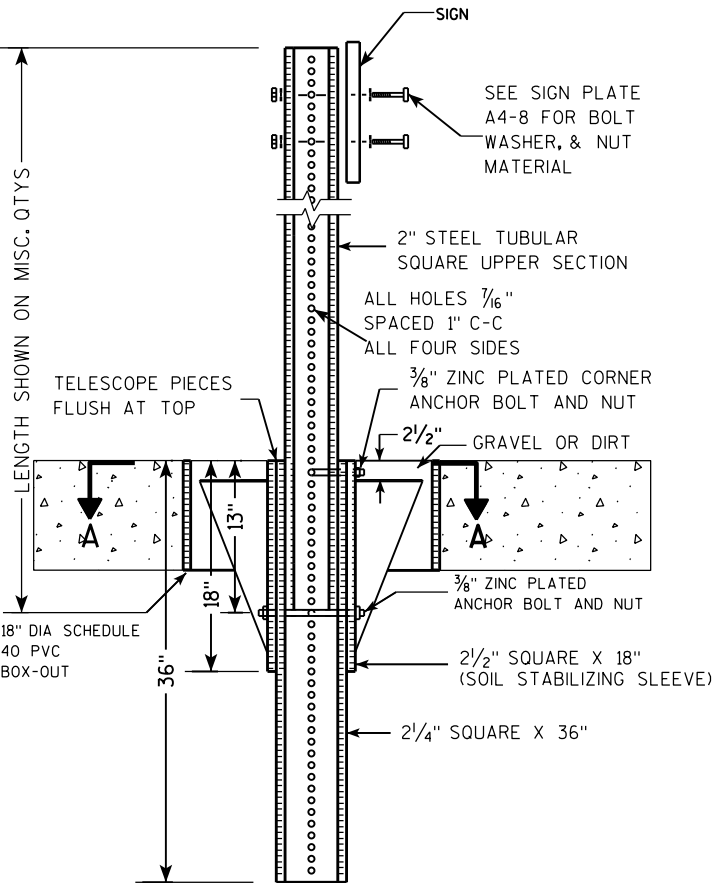
APPROVED Matthew R. Rauch
For State Traffic Engineer

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

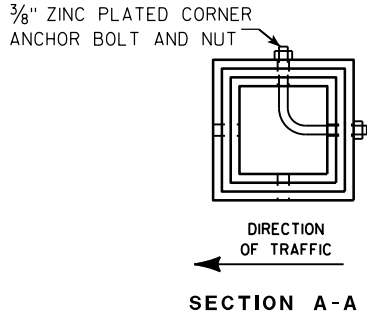
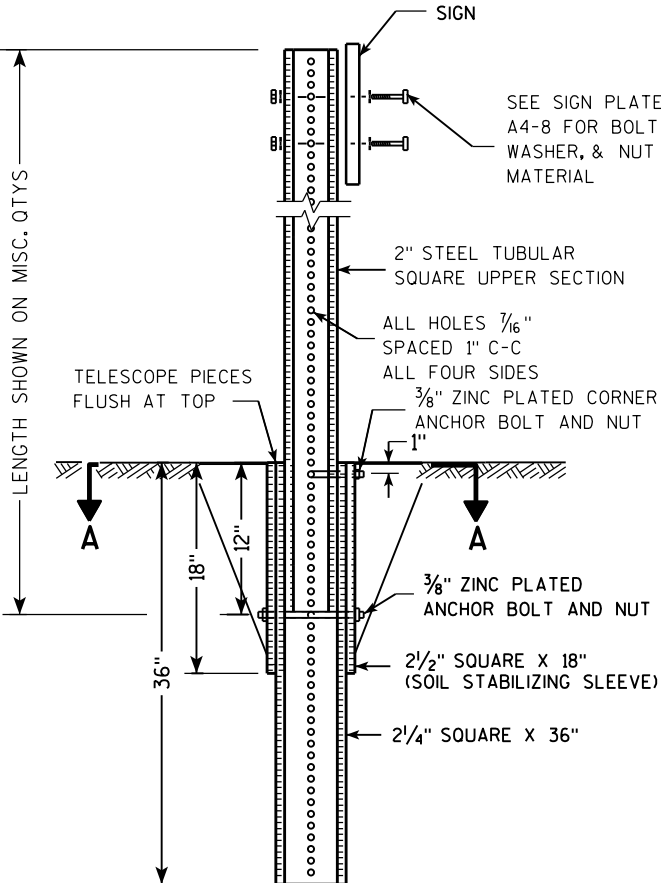
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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)



| 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).

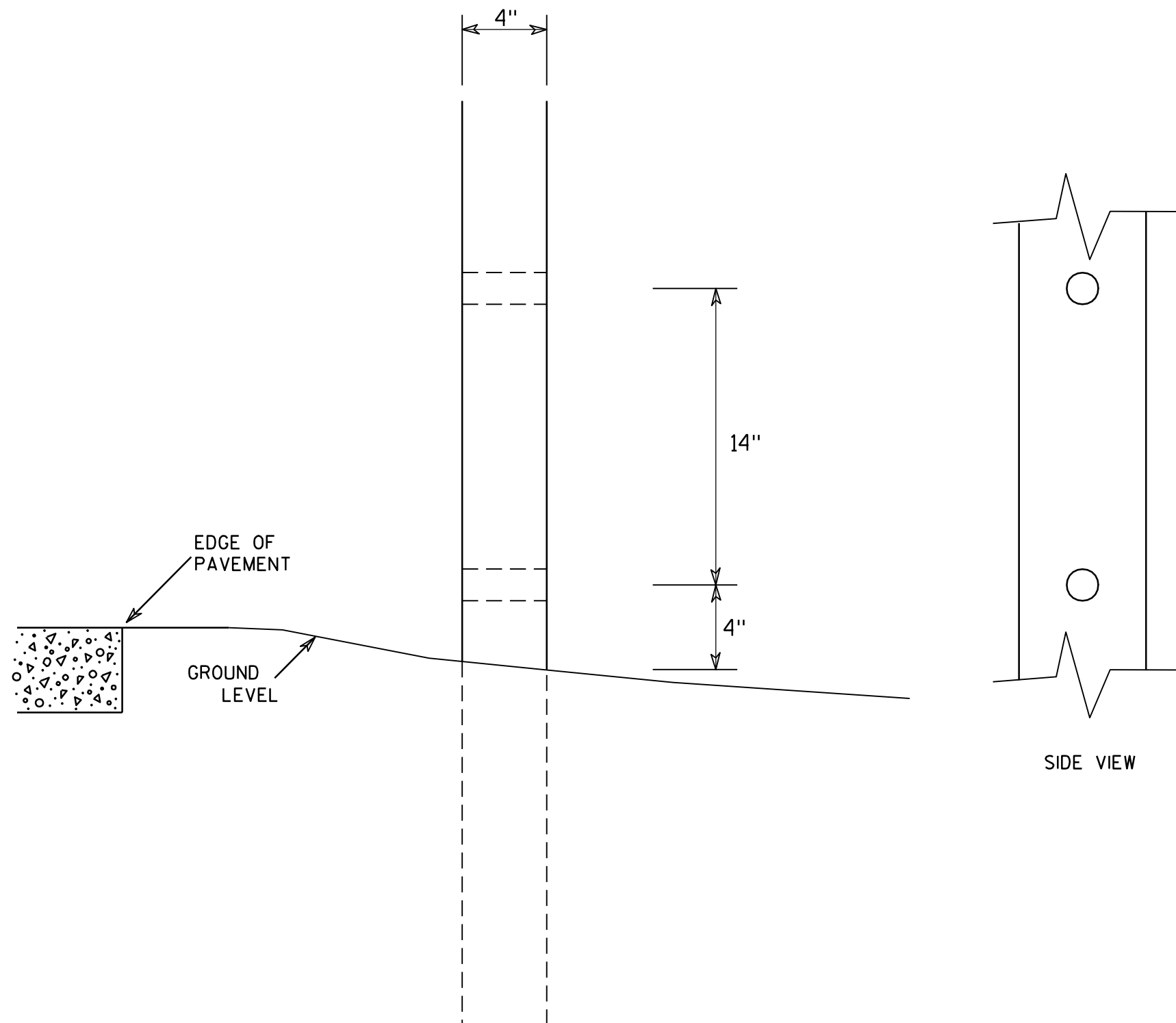
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

7



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

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:

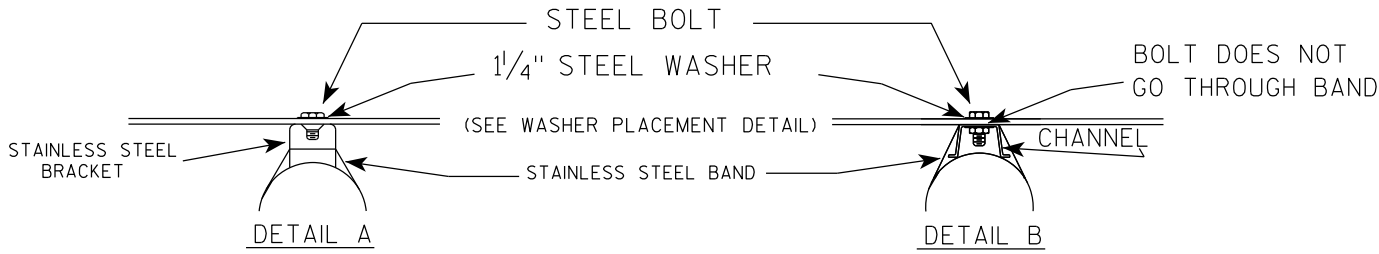
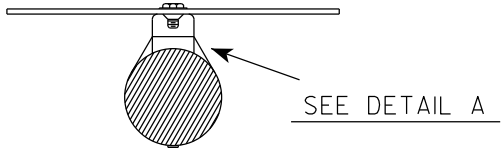
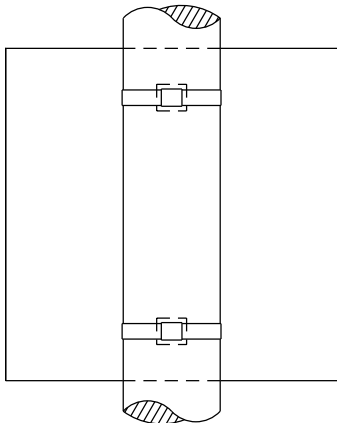
COUNTY:

SHEET NO:

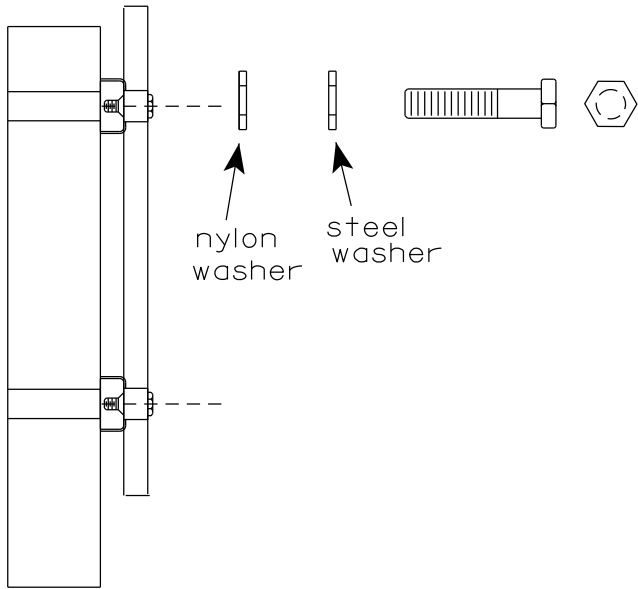
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

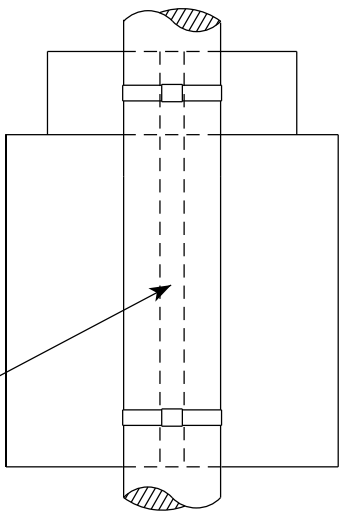


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

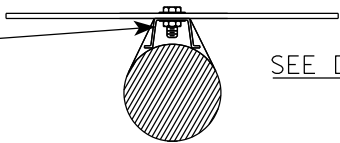
GENERAL NOTES

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 3/4" 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



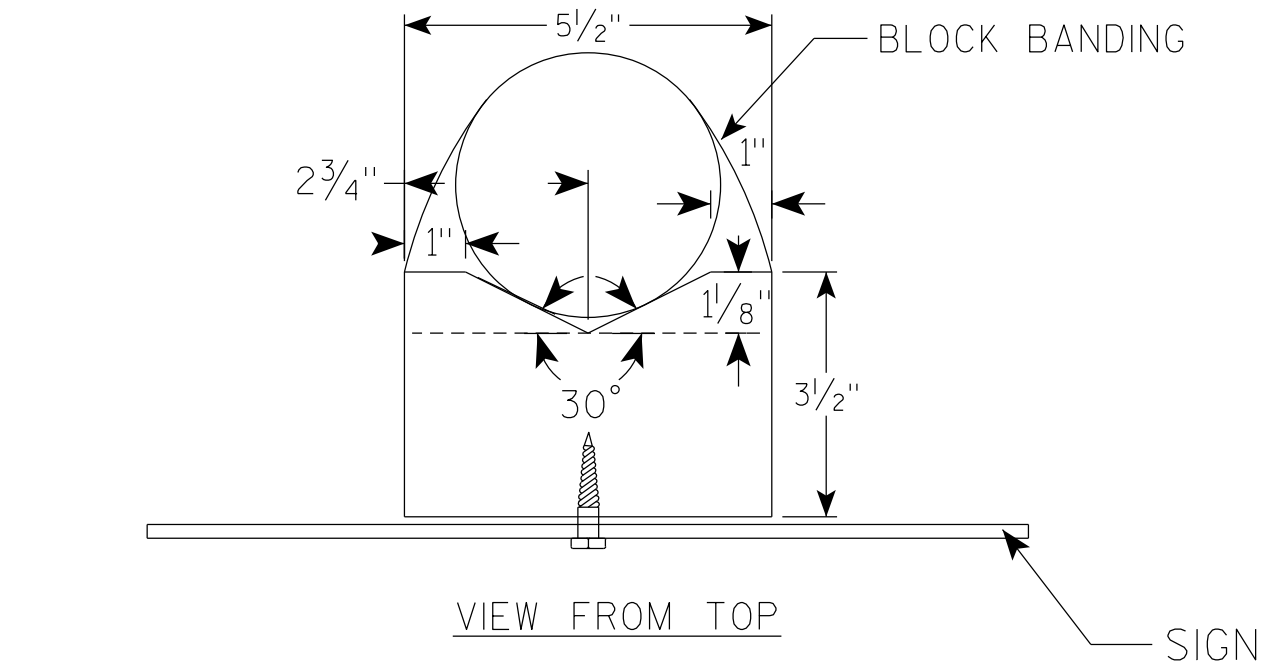
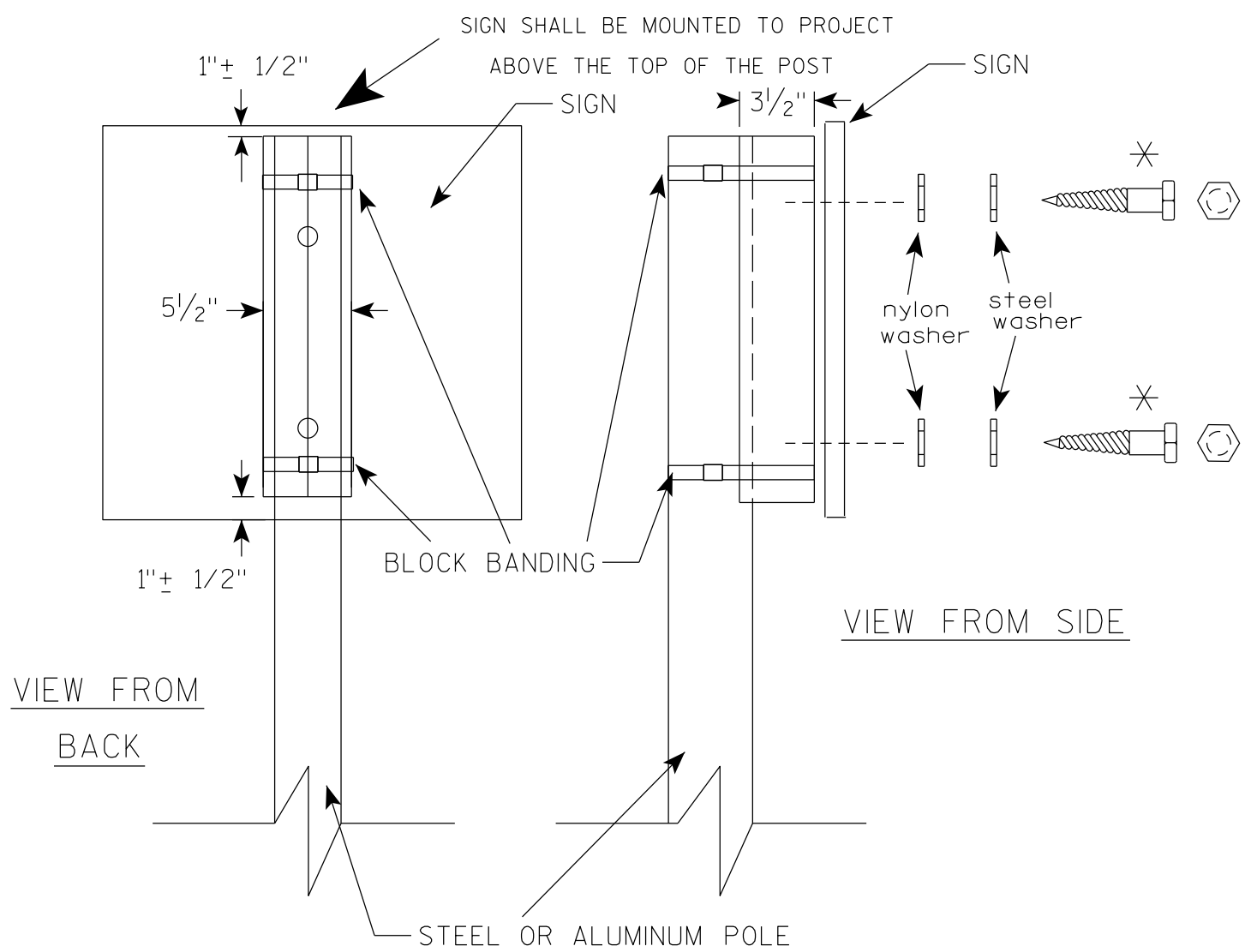
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



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

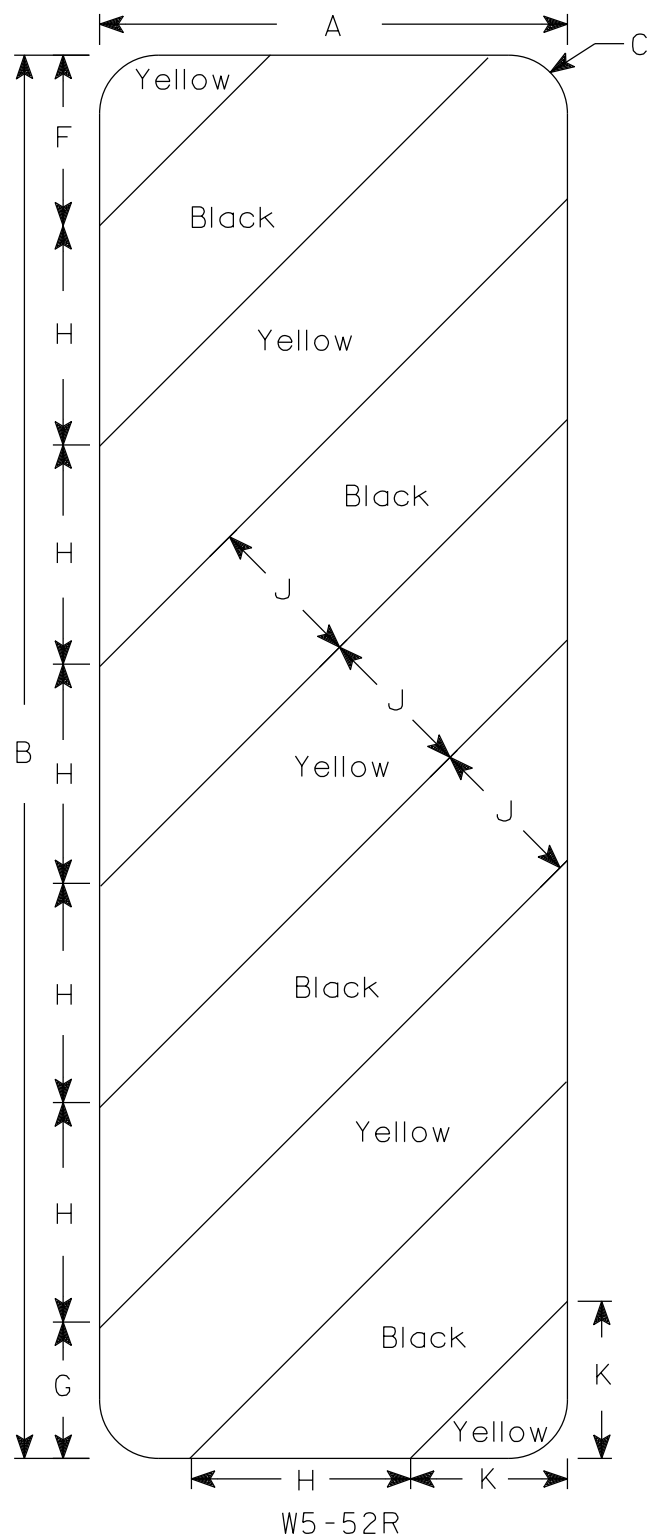
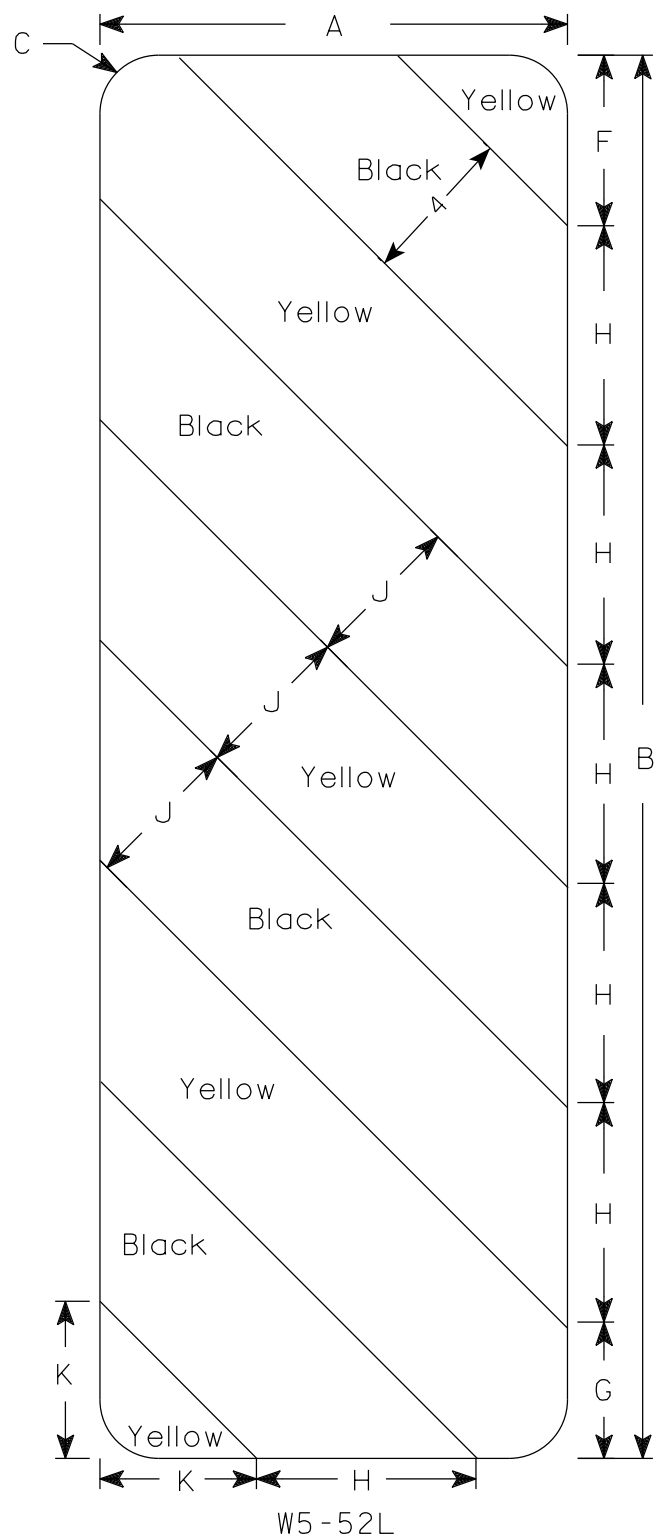


GENERAL NOTES

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, $\frac{3}{4}$ " 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 NORMALLY 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 $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

| | |
|--------------------------------------------|-------------------------------------------------------|
| BLOCK BANDING DETAIL (V-BLOCK OPTION) | |
| WISCONSIN DEPT OF TRANSPORTATION | |
| APPROVED | <i>Matthew R. Rauch</i> for State Traffic Engineer |
| DATE <u>4/19/2022</u> | PLATE NO. <u>A5-10.3</u> |



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

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.07
OPERATING RATING FACTOR: RF = 1.39
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: _____ f'c = 4,000 P.S.I.
SUPERSTRUCTURE _____ f'c = 3,500 P.S.I.
ALL OTHER _____
BAR STEEL REINFORCEMENT: _____ fy = 60,000 P.S.I.
GRADE 60

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING. PREBORE ALL PILES TO EL. 832 AND THEN DRIVE TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ++ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 25 FEET LONG AT WEST ABUTMENT WITH PREBORING. ESTIMATED 25 FEET LONG AT EAST ABUTMENT WITH PREBORING.

++ 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 TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

FEATURE ON BRUCKNER ROAD
ADT = 46 (2026)
ADT = 56 (2046)
R.D.S. = 40 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
Q₁₀₀ = 1,500 C.F.S.
VEL. = 6.6 F.P.S.
HW₁₀₀ = EL. 855.64
WATERWAY AREA = 227 SQ. FT.
DRAINAGE AREA = 10.2 SQ. MI.
ROADWAY OVERTOPPING = NA
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q₂ = 200 C.F.S.
VEL. = 3.8 F.P.S.
HW₂ = EL. 850.65

LIST OF DRAWINGS:

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. STRUCTURE DETAILS
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT DETAILS
7. EAST ABUTMENT
8. EAST ABUTMENT DETAILS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE DETAILS
11. TUBULAR STEEL RAILING TYPE 'M'

STRUCTURE DESIGN CONTACTS:

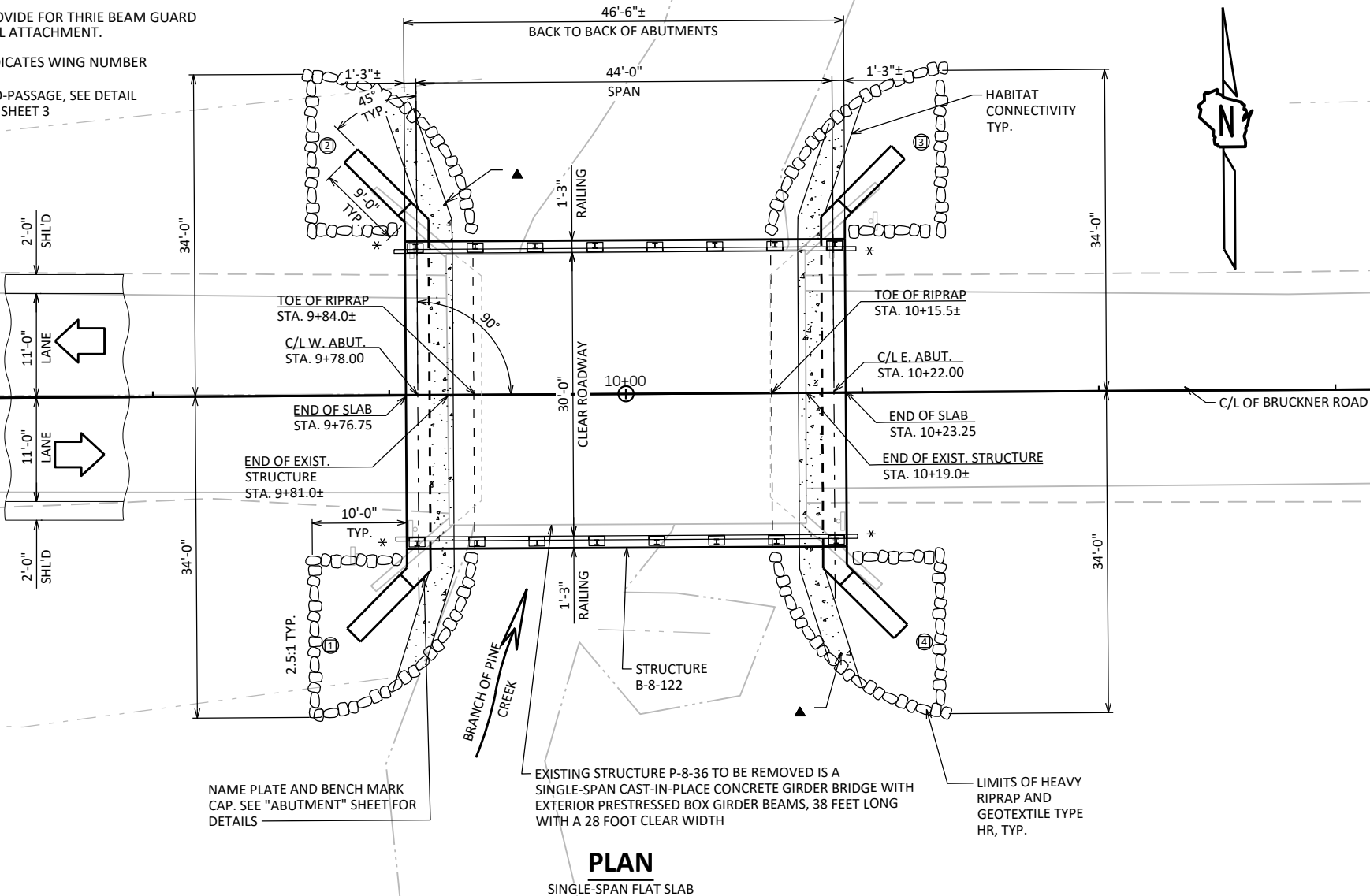
KRISTOFER OLSON 920-498-1200
AARON BONK 608-261-0261

THESE PLANS ARE BASED UPON STANDARD BRIDGE PLANS DEVELOPED AND MAINTAINED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION THROUGH THE USE OF THE WISDOT STANDARD BRIDGE DESIGN TOOL. THE UNDERSIGNED DESIGNER CERTIFIES THE ACCURACY OF THE BRIDGE TYPE, SIZE AND LOCATION, HYDRAULICS AND FOUNDATION SUPPORT, AND INFORMATION IN THE PLANS THAT IS NOT PART OF THE STANDARD PLANS SUPPLIED BY THE DEPARTMENT. THE DESIGNER FURTHER CERTIFIES THAT USE OF THE STANDARD BRIDGE DESIGN TOOL FOR DEVELOPMENT OF THIS PLAN IS CONSISTENT WITH THE GUIDANCE PROVIDED IN THE WISDOT BRIDGE MANUAL.



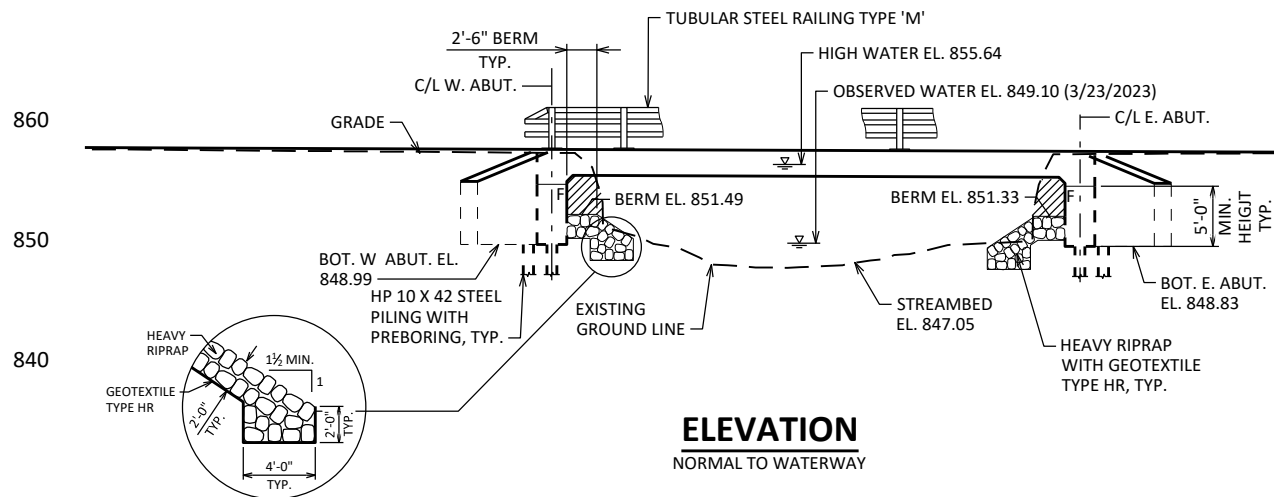
| NO. | DATE | REVISION | BY |
|-------------------------------------------------------------------------------------------|--------------------|---------------|---------------|
| ORIGINAL PLANS PREPARED BY | | | |
| AYRES 700 PILGRIM WAY, SUITE 180 GREEN BAY, WI 54304 www.AyresAssociates.com | | | |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | | | |
| ACCEPTED | <i>[Signature]</i> | JLR | 06/30/25 |
| CHIEF STRUCTURES DESIGN ENGINEER DATE | | | |
| STRUCTURE B-8-122 | | | |
| BRUCKNER ROAD OVER BRANCH OF PINE CREEK | | | |
| COUNTY | CALUMET | TOWN | CHARLESTOWN |
| DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION | | | |
| DESIGNED BY | JMC | DESIGNED CK'D | NBE |
| DRAWN BY | JMC | PLANS CK'D | NBE |
| GENERAL PLAN | | | SHEET 1 OF 11 |

- * PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT.
- INDICATES WING NUMBER
- ▲ ECO-PASSAGE, SEE DETAIL ON SHEET 3



PLAN

SINGLE-SPAN FLAT SLAB



ELEVATION

NORMAL TO WATERWAY

COST OF EXCAVATION OR FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-8-122"

REMOVE EXISTING STRUCTURE AS NEEDED. COST INCLUDED IN "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS" ITEM. TYPICAL AT ALL SUBSTRUCTURES.

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 UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-8-122" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE 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.

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 QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

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 SHEET 1 AND THE ABUTMENT DETAILS.

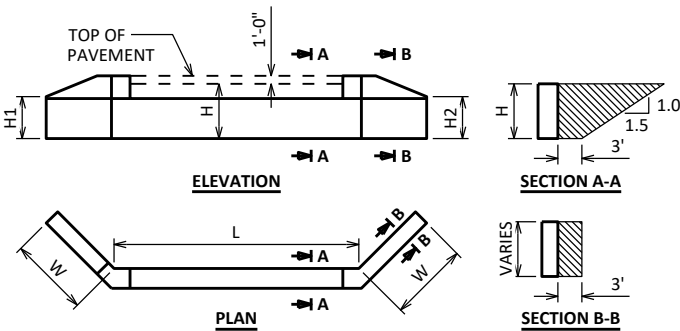
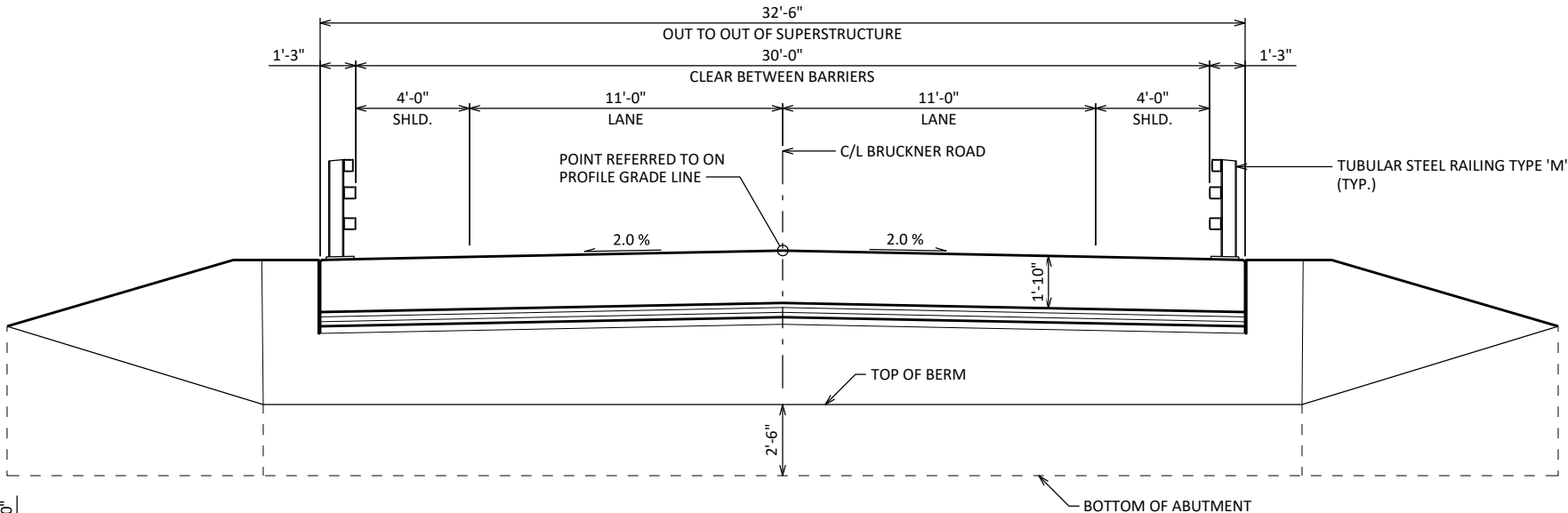
AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE EXPOSED TOP OF SLAB, INCLUDING THE SLAB EDGE AND 1'-0" UNDER THE SLAB, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS AND FRONT FACE OF ABUTMENT TO 1'-0" PAST THE EDGE OF SLAB.

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.

ASBESTOS CONTAINING MATERIAL WAS DETECTED IN THE BLACK TAR GASKET BETWEEN THE ORIGINAL DECK AND THE BOX BEAMS. SEE PROVISION "ABATEMENT OF ASBESTOS CONTAINING MATERIAL P-8-36 FOR DETAILS AND QUANTITY.

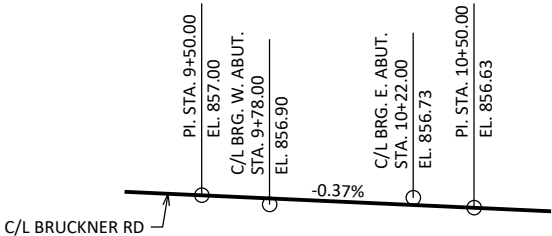


ABUTMENT BACKFILL DIAGRAM

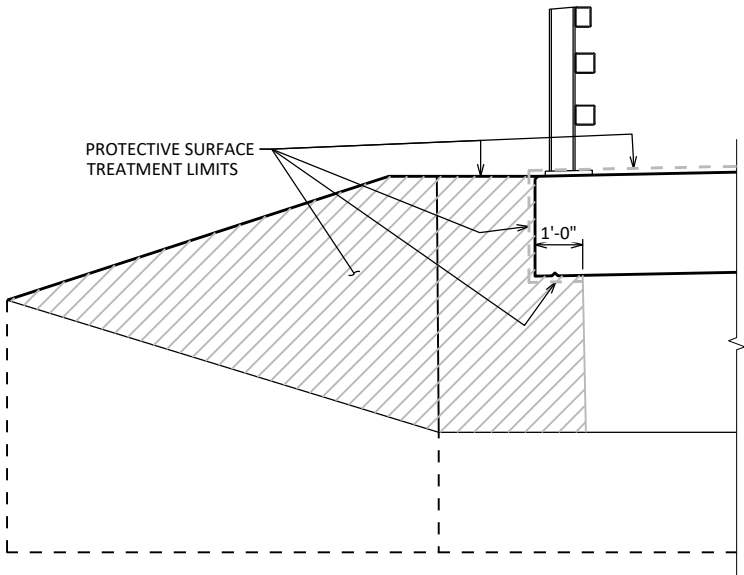
L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)$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

CROSS SECTION THRU ROADWAY

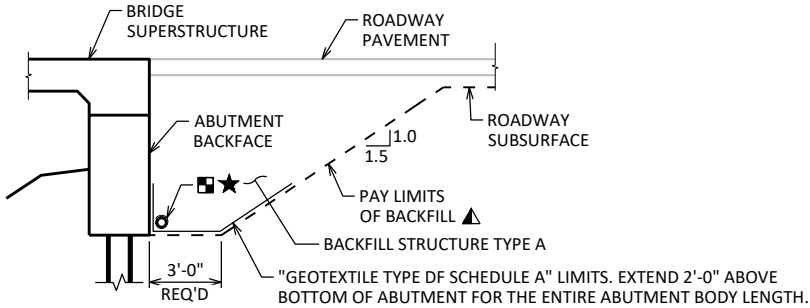
LOOKING UPSTATION
(PILING NOT SHOWN FOR CLARITY)



PROFILE GRADE LINE



PROTECTIVE SURFACE TREATMENT DETAILS



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.

★ FOR BOTTOM OF ABUTMENTS LOCATED BELOW NORMAL WATER, PLACE DRAIN ABOVE NORMAL WATER. SEE BRIDGE MANUAL 12.6.1 FOR ADDITIONAL GUIDANCE.

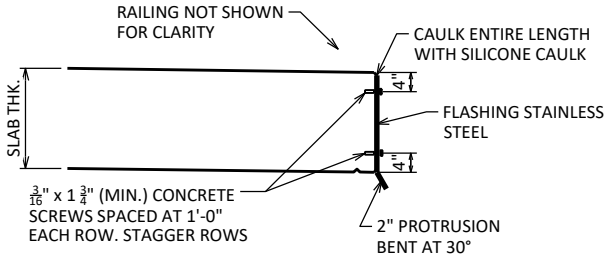
BENCH MARK

| NO. | STATION | DESCRIPTION | ELEV. |
|-----|---------|------------------------------------------|--------|
| 800 | 13+66 | RR SPIKE IN N SIDE PPOL #ON1853 - 31' RT | 866.56 |
| 801 | 8+54 | RR SPIKE IN S SIDE PPOL #936 - 34' LT | 855.74 |

TOTAL ESTIMATED QUANTITIES

| BID ITEM NUMBER | BID ITEMS | UNIT | SUPER | W. ABUT. | E. ABUT. | TOTALS |
|-----------------|----------------------------------------------------------|------|--------|----------|----------|--------|
| 203.0211.S | ABATEMENT OF ASBESTOS CONTAINING MATERIAL P-8-36 | EACH | --- | --- | --- | 1 |
| 203.0270 | REMOVING STRUCTURE OVER WATERWAY DEBRIS CAPTURE (P-8-36) | EACH | --- | --- | --- | 1 |
| 206.1001 | EXCAVATION FOR STRUCTURES BRIDGES (B-8-122) | EACH | --- | --- | --- | 1 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | --- | 171 | 171 | 342 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 107 | 28 | 28 | 163 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | 194 | 15 | 15 | 224 |
| 505.0400 | BAR STEEL REINFORCEMENT HS STRUCTURES | LB | --- | 2,310 | 2,310 | 4,620 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 23,140 | 1,510 | 1,510 | 26,160 |
| 513.4061 | RAILING TUBULAR TYPE M | LF | 98 | --- | --- | 98 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | --- | 6 | 6 | 12 |
| 550.0020 | PRE-BORING UNCONSOLIDATED MATERIALS | LF | --- | 140 | 140 | 280 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | --- | 175 | 175 | 350 |
| 606.0300 | RIPRAP HEAVY | CY | --- | 70 | 75 | 145 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | --- | 75 | 75 | 150 |
| 645.0111 | GEOTEXTILE TYPE DF SCHEDULE A | SY | --- | 48 | 48 | 96 |
| 645.0120 | GEOTEXTILE TYPE HR | SY | --- | 140 | 140 | 280 |
| SPV.0090 | FLASHING STAINLESS STEEL | LF | 83 | --- | --- | 83 |
| SPV.0195 | SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR | TON | --- | 9 | 9 | 18 |
| | | | | | | |
| | | | | | | |
| | NON-BID ITEMS | | | | | |
| | FILLER | SIZE | --- | --- | --- | ½", ¾" |

| | | | |
|----------------------------------------------------|------|----------------|----|
| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE B-8-122 | | | |
| DRAWN BY JMC | | PLANS CK'D NBE | |
| CROSS SECTION & QUANTITIES | | SHEET 2 OF 11 | |



FLASHING DETAIL FOR NEW BRIDGES WITH OPEN RAILING

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK, 3/16" CONCRETE SCREWS AND CLEANING THE EDGE OF THE SLAB PRIOR TO ATTACHMENT OF THE FLASHING.

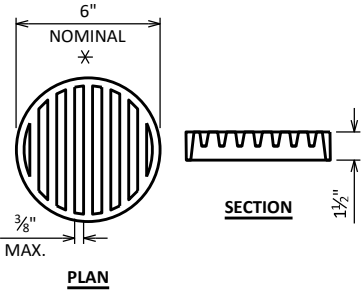
FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

EXTEND FLASHING TO BACK FACE OF ABUTMENT.

TOP OF FLASHING TO BEGIN APPROX. 1-INCH BELOW TOP OF SLAB SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST SLAB DEPTH OVER THE BRIDGE LENGTH.

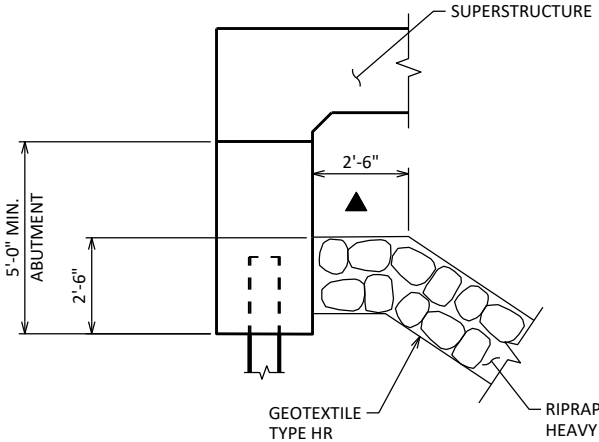


RODENT SHIELD DETAIL

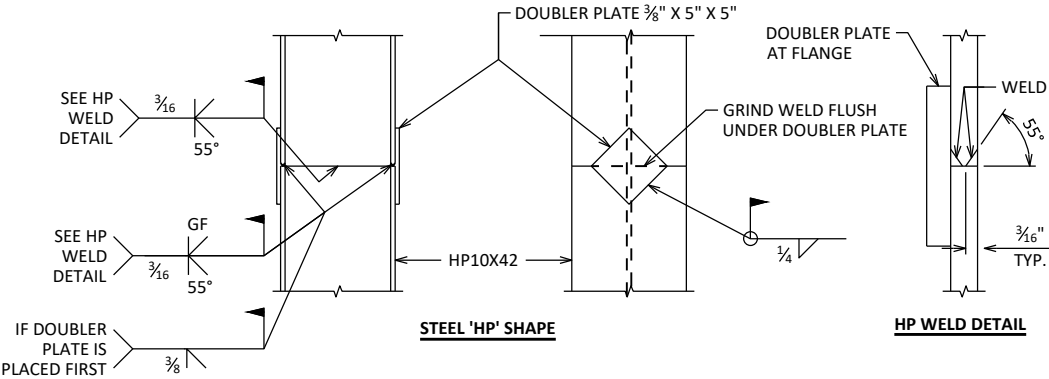
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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 COMMERCIALY 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.



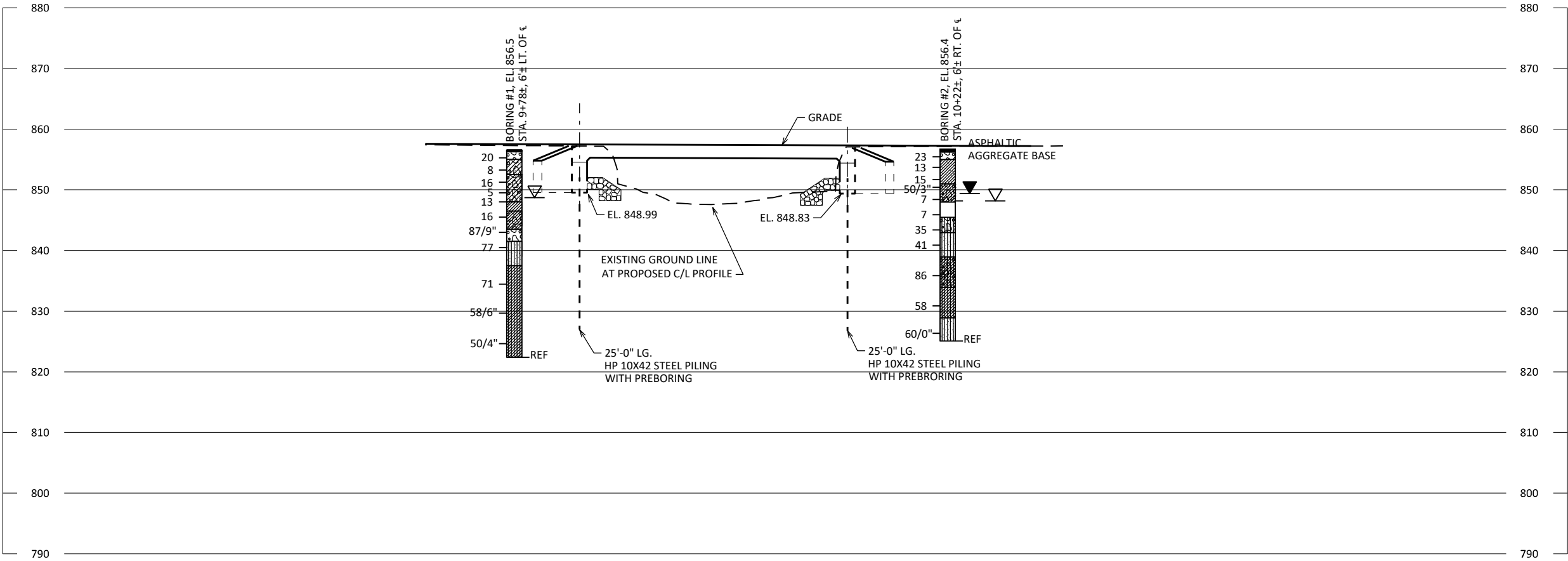
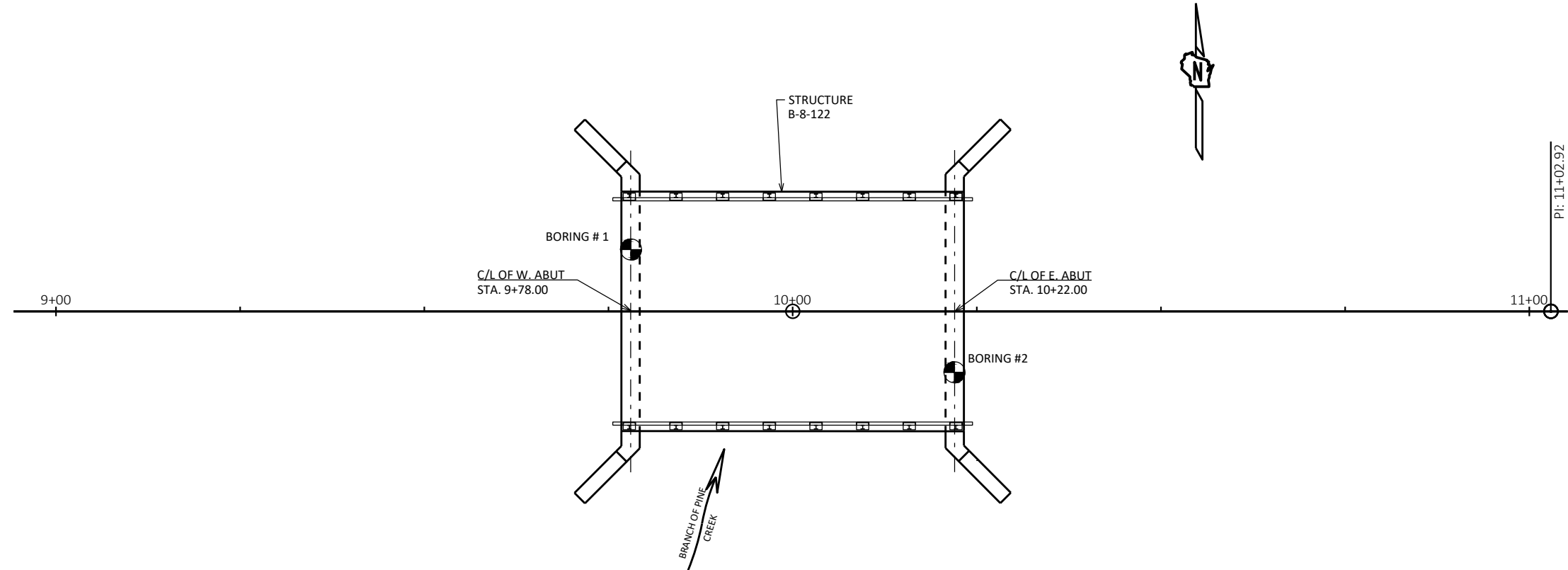
ECO-PASSAGE DETAIL



'HP' PILE DETAILS

| NO. | DATE | REVISION | BY |
|----------------------------------------------------|------|---------------|----------------|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE B-8-122 | | | |
| DRAWN BY | | JMC | PLANS CK'D NBE |
| STRUCTURE DETAILS | | SHEET 3 OF 11 | |

| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|--------------------------------------------------------------|-----------------|--------------|-------------|
| 1 | AUGUST 15, 2023 | 460755.948 | 910398.833 |
| 2 | AUGUST 15, 2023 | 460744.254 | 910442.937 |
| BORINGS COMPLETED BY: ECS MIDWEST, LLC | | | |
| REPORT COMPLETED BY: ECS MIDWEST, LLC | | | |
| ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CALUMET COUNTY | | | |



STATE PROJECT NUMBER

4472-05-71

MATERIAL SYMBOLS

ASPHALT

CONCRETE

SAND

BOULDERS OR COBBLES

SHALE

TOPSOIL

FILL

CLAY

LIMESTONE

SANDSTONE

PEAT

GRAVEL

SILT

BEDROCK (UNKNOWN)

IGNEOUS/META

LEGEND OF BORING

BORING #/EL STA./OFFSET

ST

0.25

17

F-C

COBBLE OR BOULDER

WEATHERED LIMESTONE

CORE RUN #1 - 24'-29'

REC=80%, RQD=72%

(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-8-122 | | | |
| DRAWN BY JMC | | PLANS CK'D NBE | |
| SUBSURFACE EXPLORATION | | SHEET 4 OF 11 | |

8

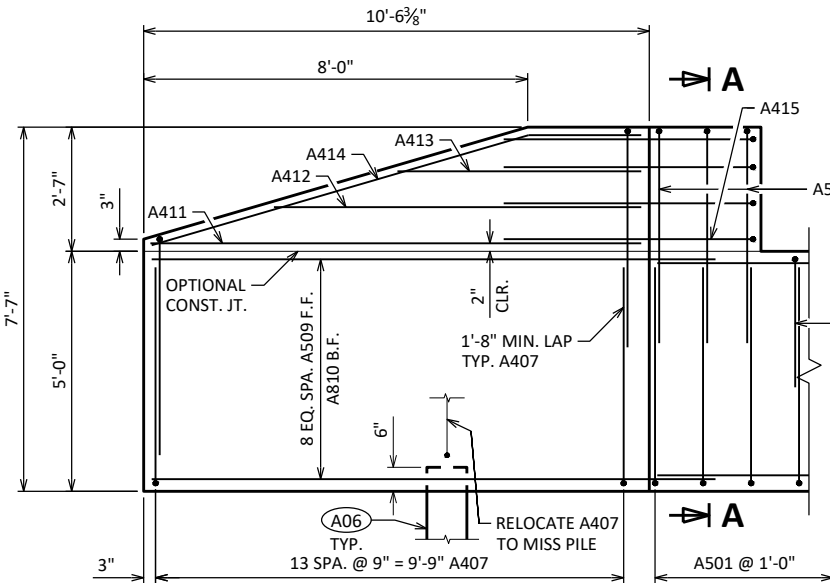
8



BILL OF BARS

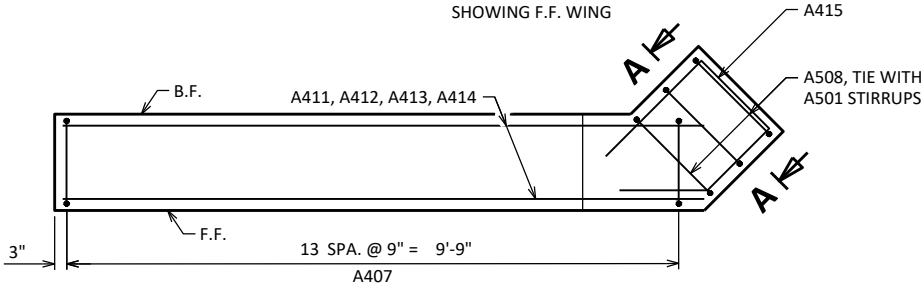
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION |
|----------|------|------------|--------|------|------------|--------------------------------|
| A501 | | 76 | 6'-0" | X | | ABUT BODY STIRRUPS |
| A502 | | 32 | 7'-3" | X | | ABUT BODY STIRRUPS - TOP U-BAR |
| A503 | | 9 | 37'-3" | | | ABUT BODY HORIZ. - F.F. |
| A804 | | 18 | 24'-7" | X | | ABUT BODY HORIZ. - B.F. |
| A405 | | 30 | 3'-0" | X | | ABUT BODY TIE BARS |
| A506 | X | 31 | 2'-0" | | | ABUT BODY DOWEL BARS |
| A407 | X | 56 | 10'-6" | X | | WING STIRRUPS |
| A508 | X | 6 | 10'-9" | X | | WING CORNER STIRRUPS |
| A509 | X | 18 | 11'-9" | X | | WING LOWER HORIZ. - F.F. |
| A810 | X | 18 | 13'-3" | X | | WING LOWER HORIZ. - B.F. |
| A411 | X | 4 | 10'-1" | | | WING UPPER HORIZ. |
| A412 | X | 4 | 7'-7" | | | WING UPPER HORIZ. |
| A413 | X | 4 | 5'-0" | | | WING UPPER HORIZ. |
| A414 | X | 4 | 9'-9" | X | | WING TOP HORIZ. |
| A415 | X | 4 | 8'-3" | X | | WING 1 UPPER HORIZ. CORNER |
| A416 | X | 4 | 8'-4" | X | | WING 2 UPPER HORIZ. CORNER |



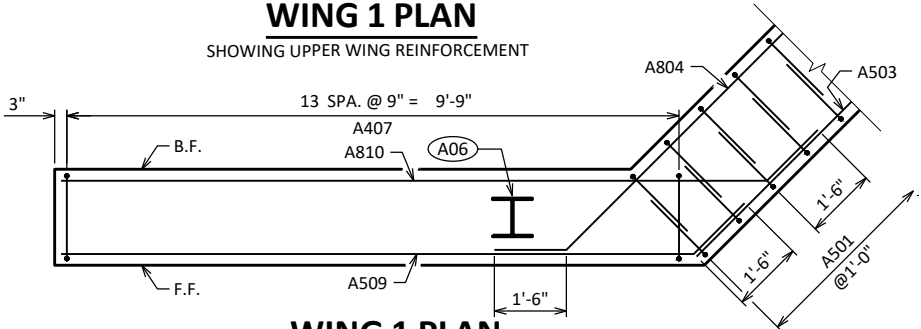
WING 1 ELEVATION

SHOWING F.F. WING



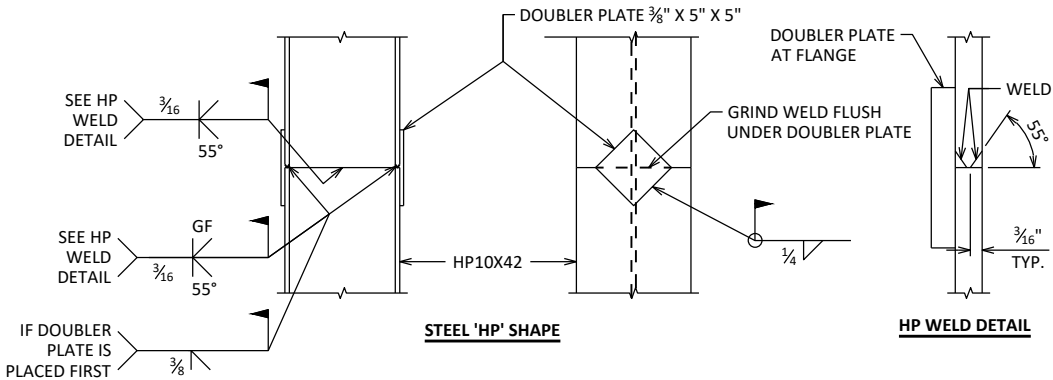
WING 1 PLAN

SHOWING UPPER WING REINFORCEMENT



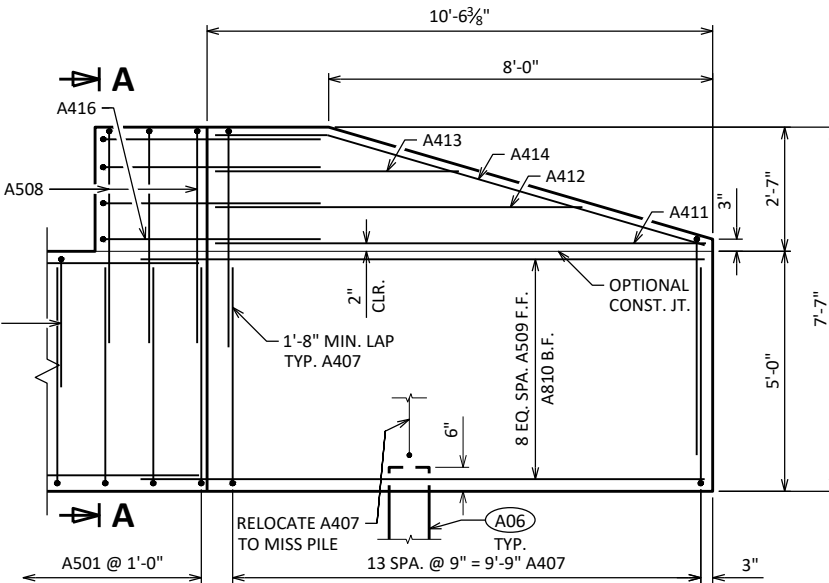
WING 1 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 2 SIMILAR



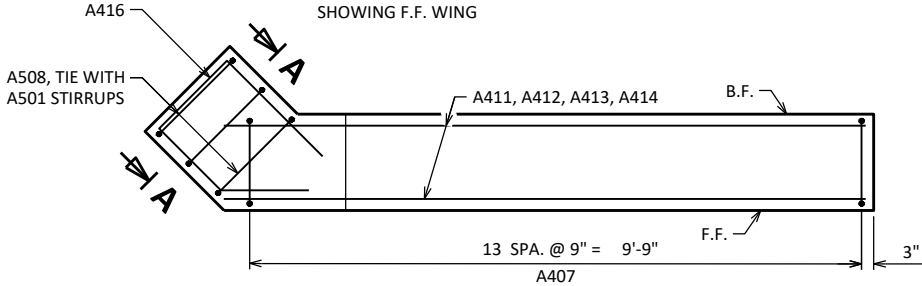
'HP' PILE DETAILS

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0



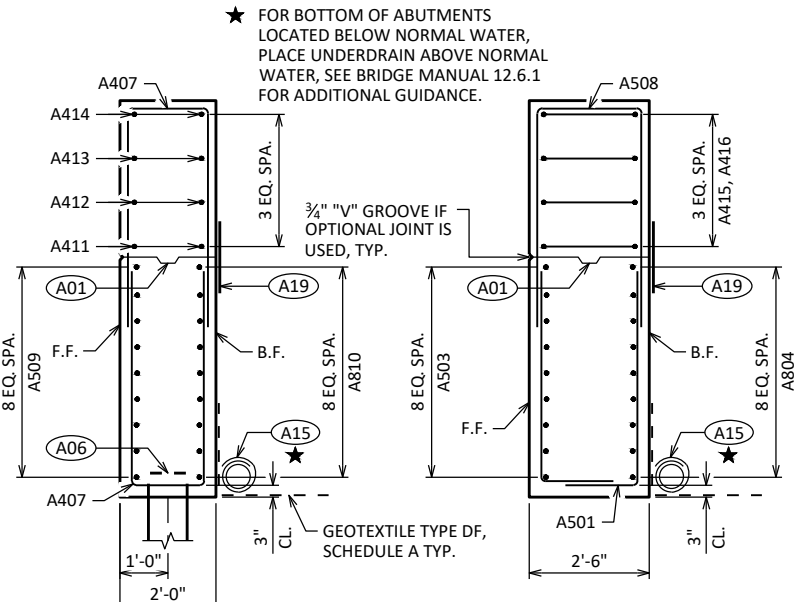
WING 2 ELEVATION

SHOWING F.F. WING



WING 2 PLAN

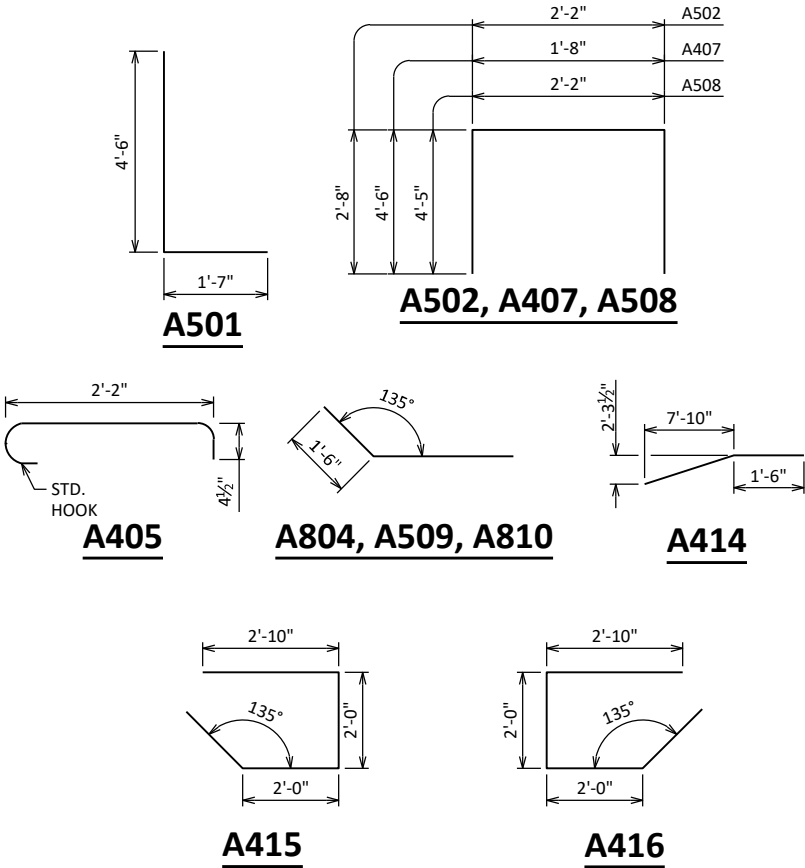
SHOWING UPPER WING REINFORCEMENT



SECTION THRU WING 1

TYPICAL BOTH WINGS

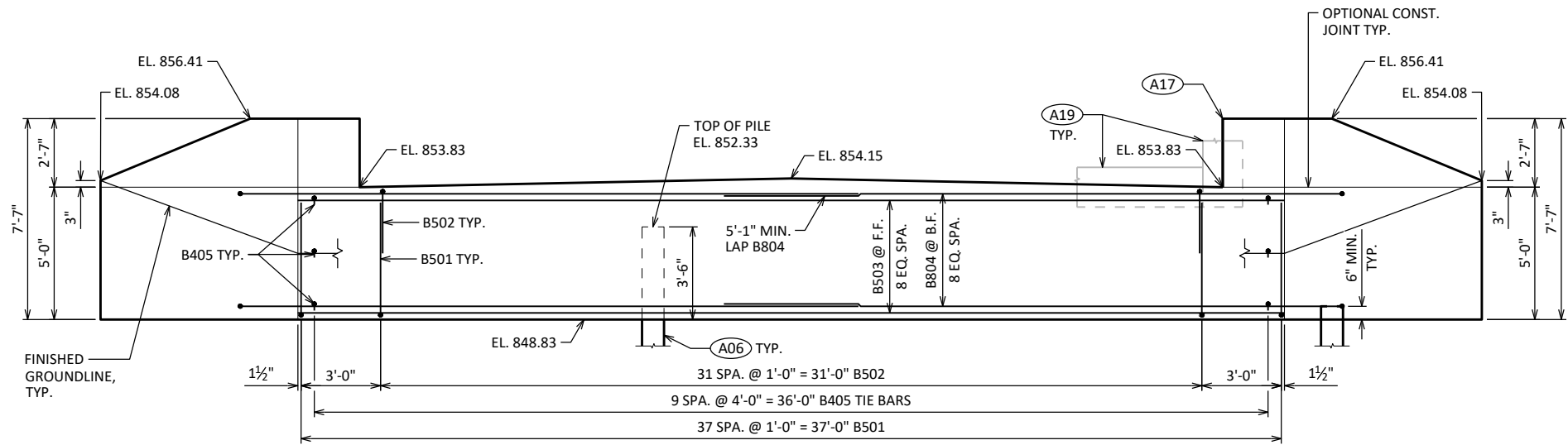
SECTION A-A



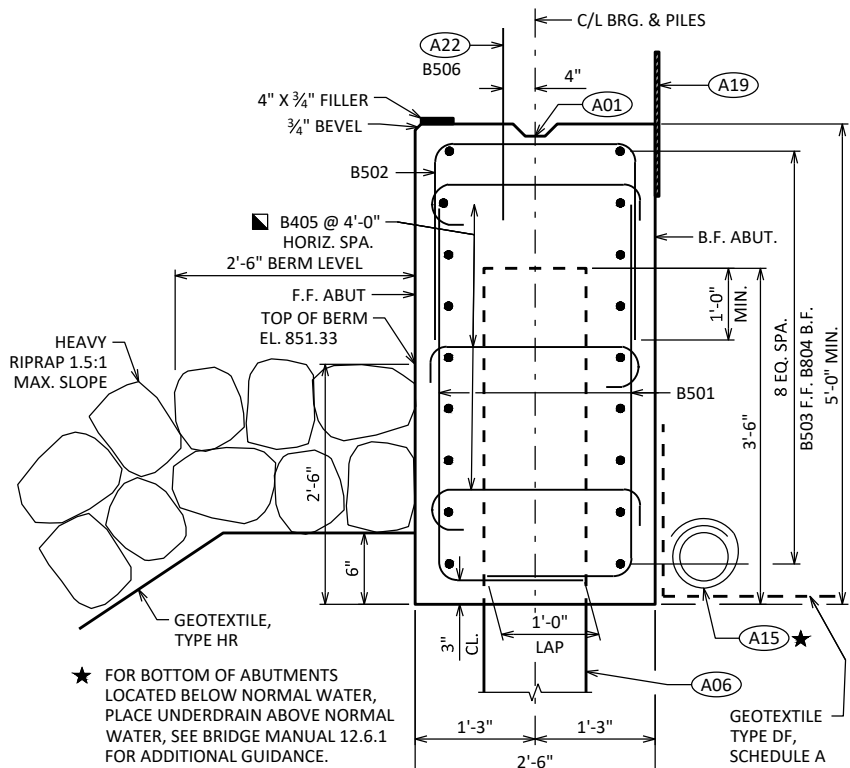
- (A01) OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE 3/4" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.
- (A06) SUPPORT ABUTMENT ON HP 10 x 42 PILING, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 140TONS PER PILE AND PRE-BORING.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A19) 18" RUBBERIZED MEMBRANE WATERPROOFING, ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY STRUCTURES".

| NO. | DATE | REVISION | BY |
|----------------------------------------------------|------|----------------|----|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE B-8-122 | | | |
| DRAWN BY JMC | | PLANS CK'D NBE | |
| WEST ABUTMENT DETAILS | | SHEET 6 OF 11 | |

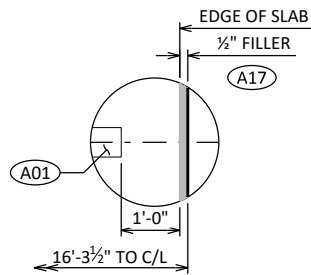
SCALE =



ELEVATION
LOOKING UPSTATION

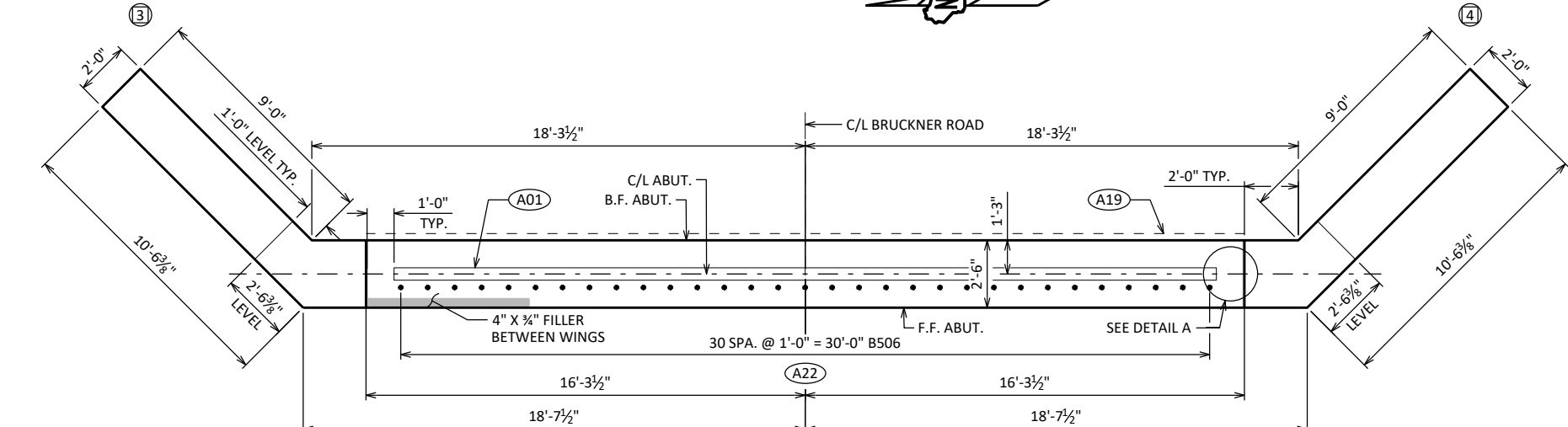


SECTION THRU BODY

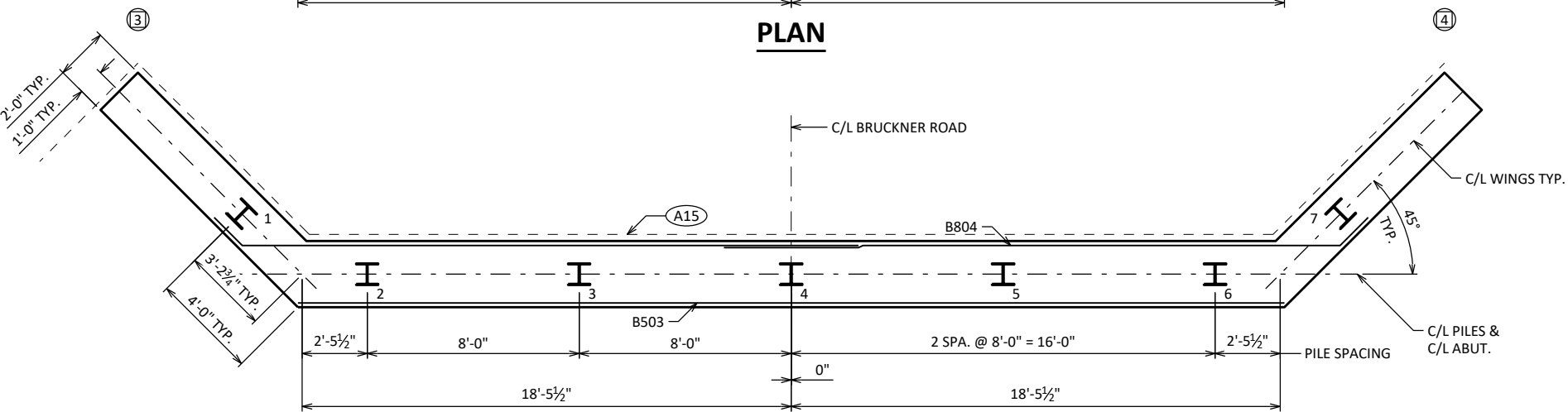


DETAIL A

- A01 CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6.
 - A06 SUPPORT ABUTMENT ON HP 10 x 42 PILING, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 140TONS PER PILE AND PRE-BORE.
 - A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
 - A17 1/2" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 3/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
 - A19 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
 - A22 BARS SPACED @ 1'-0" CNTRS. 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.



PLAN



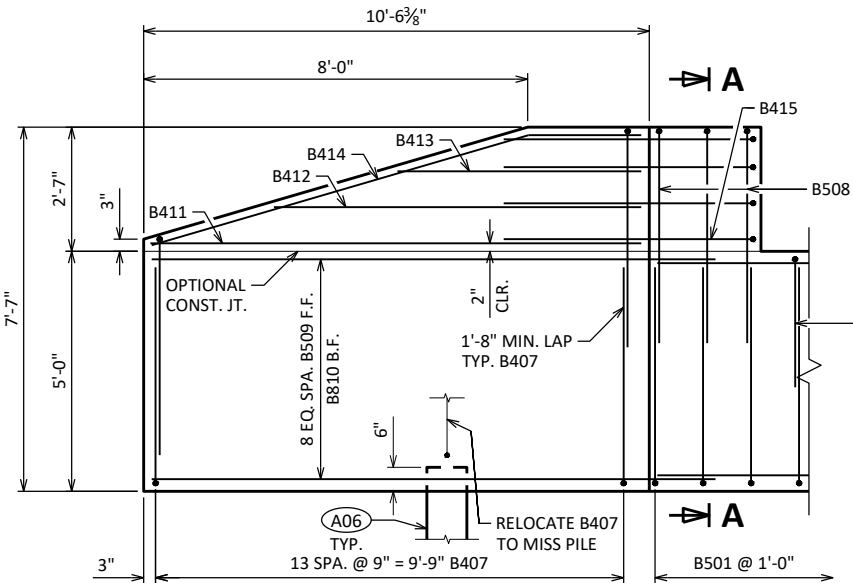
PILE PLAN

| NO. | DATE | REVISION | BY |
|----------------------------------------------------|------|----------------|----|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE B-8-122 | | | |
| DRAWN BY JMC | | PLANS CK'D NBE | |
| EAST ABUTMENT | | SHEET 7 OF 11 | |

BILL OF BARS

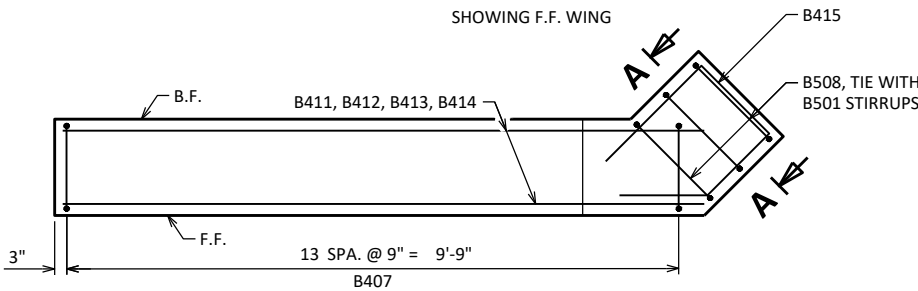
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION |
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| B407 | X | 56 | 10'-6" | X | | WING STIRRUPS |
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| B509 | X | 18 | 11'-9" | X | | WING LOWER HORIZ. - F.F. |
| B810 | X | 18 | 13'-3" | X | | WING LOWER HORIZ. - B.F. |
| B411 | X | 4 | 10'-1" | | | WING UPPER HORIZ. |
| B412 | X | 4 | 7'-7" | | | WING UPPER HORIZ. |
| B413 | X | 4 | 5'-0" | | | WING UPPER HORIZ. |
| B414 | X | 4 | 9'-9" | X | | WING TOP HORIZ. |
| B415 | X | 4 | 8'-3" | X | | WING 3 UPPER HORIZ. CORNER |
| B416 | X | 4 | 8'-4" | X | | WING 4 UPPER HORIZ. CORNER |



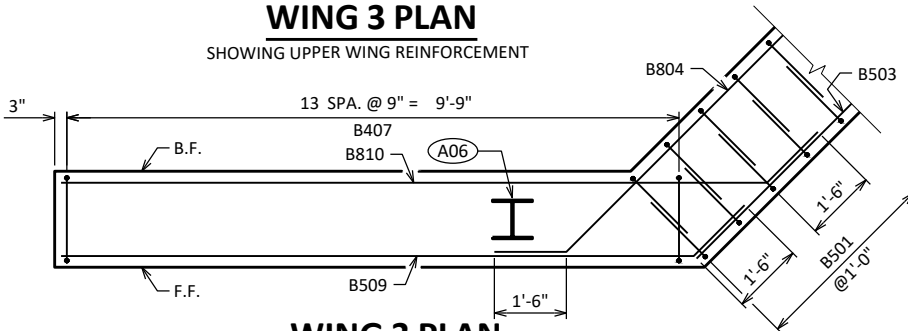
WING 3 ELEVATION

SHOWING F.F. WING



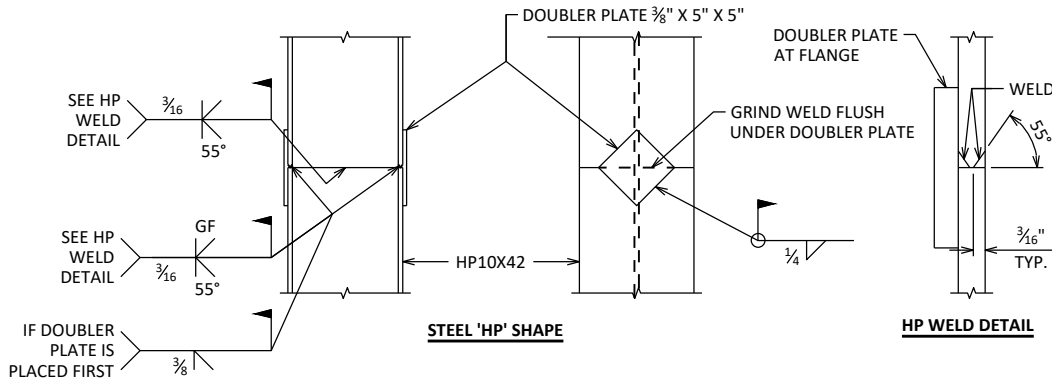
WING 3 PLAN

SHOWING UPPER WING REINFORCEMENT



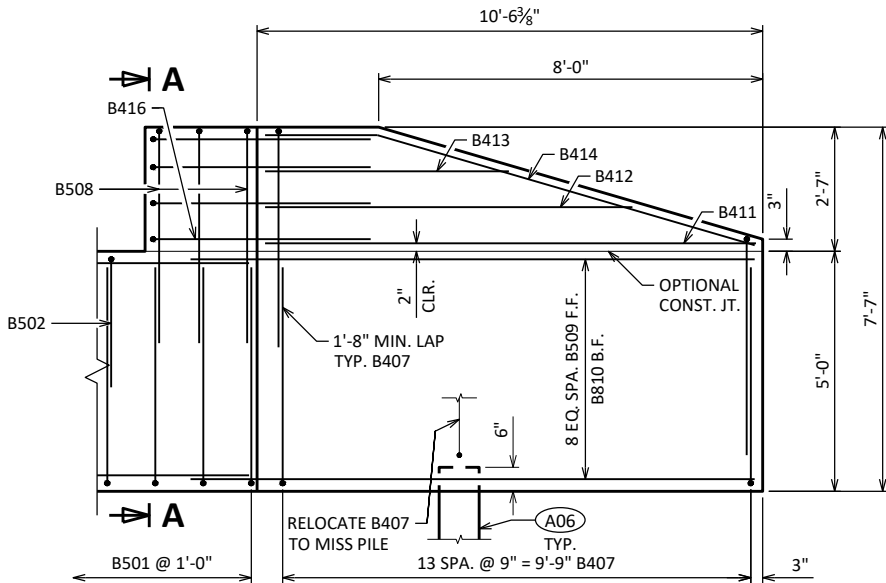
WING 3 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 4 SIMILAR



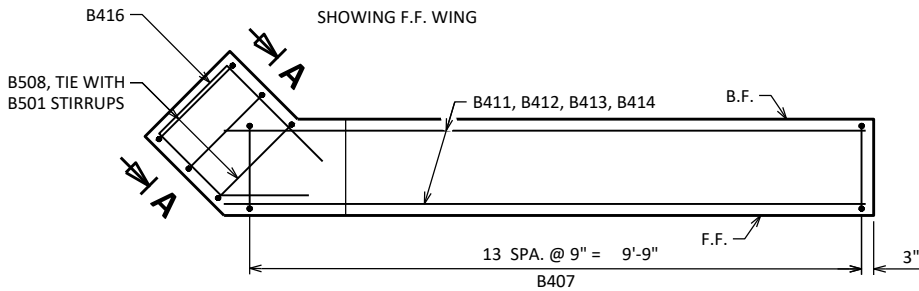
'HP' PILE DETAILS

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0



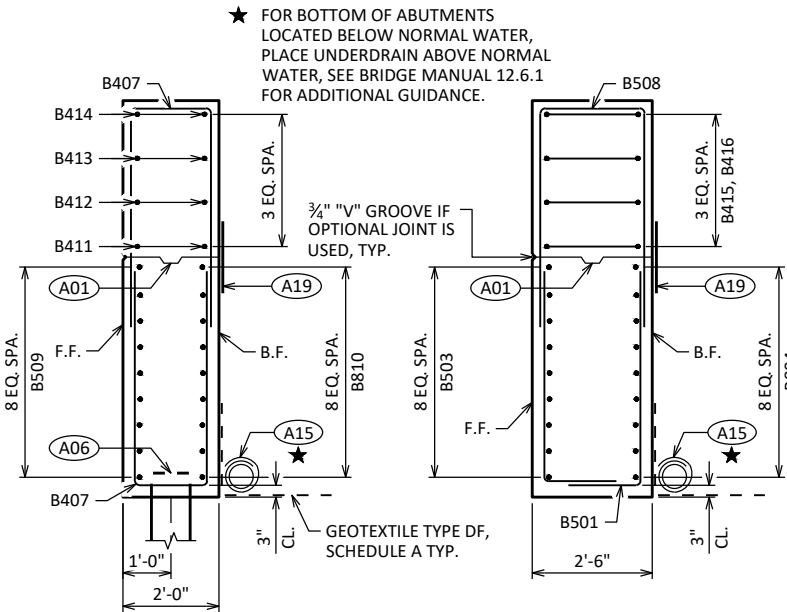
WING 4 ELEVATION

SHOWING F.F. WING



WING 4 PLAN

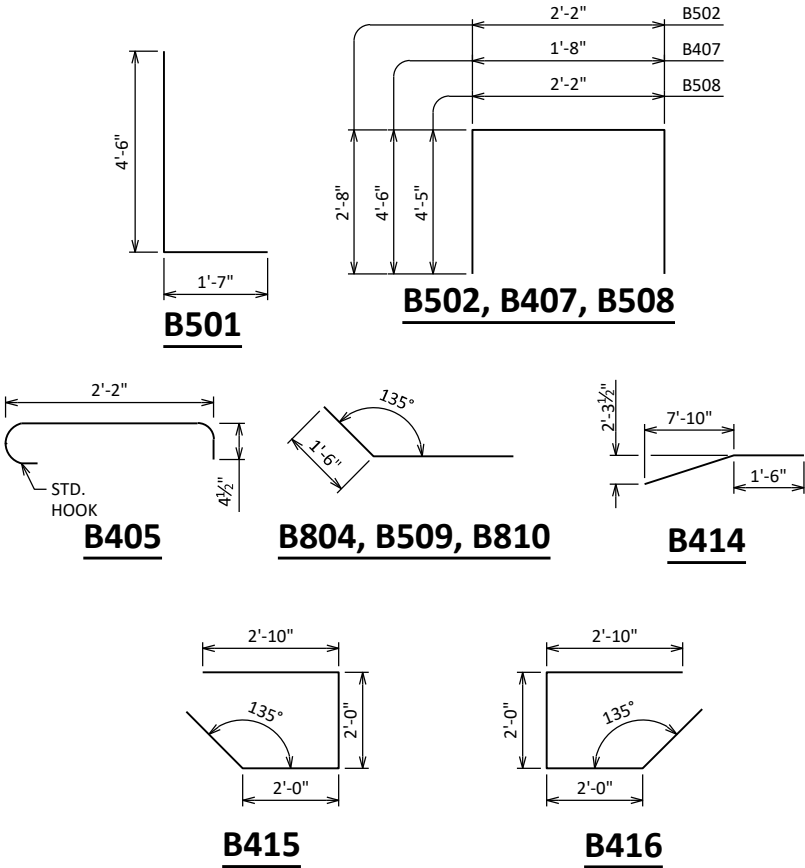
SHOWING UPPER WING REINFORCEMENT



SECTION THRU WING 3

TYPICAL BOTH WINGS

SECTION A-A



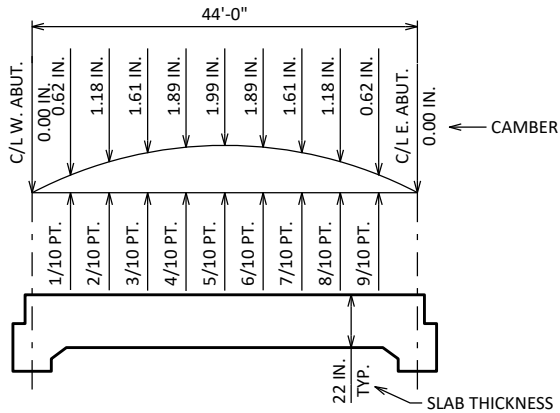
- A01 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE 3/4" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.
- A06 SUPPORT ABUTMENT ON HP 10 x 42 PILING, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 140TONS PER PILE AND PRE-BORING.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A19 18" RUBBERIZED MEMBRANE WATERPROOFING, ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY STRUCTURES".

| NO. | DATE | REVISION | BY |
|----------------------------------------------------|------|----------------|----|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE B-8-122 | | | |
| DRAWN BY JMC | | PLANS CK'D NBE | |
| EAST ABUTMENT DETAILS | | SHEET 8 OF 11 | |

SCALE =



| | | | |
|----------------------------------------------------|------|-----------------|-------------------|
| | | | |
| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE B-8-122 | | | |
| | | DRAWN BY JMC | PLANS CK'D NBE |
| SUPERSTRUCTURE | | SHEET 9 OF 11 | |
| | | | |



CAMBER AND SLAB THICKNESS DIAGRAM

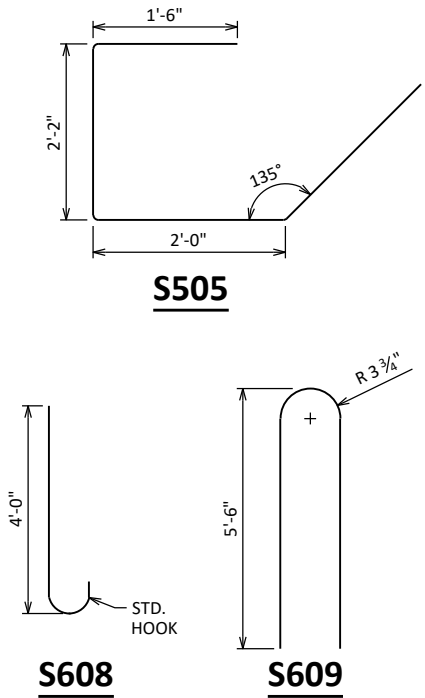
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED, EXCEPT FOR STAGED CONSTRUCTION.

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

| | |
|--------|-------------------------------------------------------------------------------------------------|
| LESS | TOP OF SLAB ELEVATION AT FINAL GRADE |
| PLUS | 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

| LOCATION | C/L BRG. 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 BRG. E. ABUT. |
|-----------------|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------------|
| N. EDGE OF DECK | 856.57 | 856.56 | 856.54 | 856.52 | 856.51 | 856.49 | 856.47 | 856.46 | 856.44 | 856.42 | 856.41 |
| CROWN OR R/L | 856.90 | 856.88 | 856.86 | 856.85 | 856.83 | 856.82 | 856.80 | 856.78 | 856.77 | 856.75 | 856.73 |
| S. EDGE OF DECK | 856.57 | 856.56 | 856.54 | 856.52 | 856.51 | 856.49 | 856.47 | 856.46 | 856.44 | 856.42 | 856.41 |



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 |
|----------|------|------------|--------|------|------------|---------------------------------------|
| S1001 | X | 78 | 46'-2" | | | SLAB BOTTOM LONGITUDINAL |
| S702 | X | 47 | 32'-2" | | | SLAB BOTTOM TRANSVERSE |
| S503 | X | 47 | 32'-2" | | | SLAB TOP TRANSVERSE |
| S504 | X | 26 | 46'-2" | | | SLAB TOP LONGITUDINAL |
| S505 | X | 66 | 7'-5" | X | | ABUTMENT DIAPHRAGM STIRRUPS |
| S506 | X | 4 | 32'-2" | | | ABUTMENT DIAPHRAGM LONGITUDINAL |
| S607 | X | 48 | 6'-0" | | | SLAB TOP LONGIT. UNDER RAIL POSTS |
| S608 | X | 16 | 4'-8" | X | | SLAB TOP LONGIT. UNDER RAIL END POSTS |
| S609 | X | 32 | 11'-3" | X | | SLAB TOP HOOKS UNDER RAIL POSTS |
| | | | | | | |

SURVEY TOP OF SLAB ELEVATIONS

| LOCATION | ABUTMENT | 5/10 PT. | ABUTMENT |
|--------------|----------|----------|----------|
| N. GUTTER | | | |
| CROWN OR R/L | | | |
| S. GUTTER | | | |

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF ABUTMENTS, THE C/L OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR R/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NOTES

FILL IN THE TABLE OF "SURVEY TOP OF SLAB ELEVATIONS" FOR EACH SPAN ON AS BUILT PLANS.

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 (+).

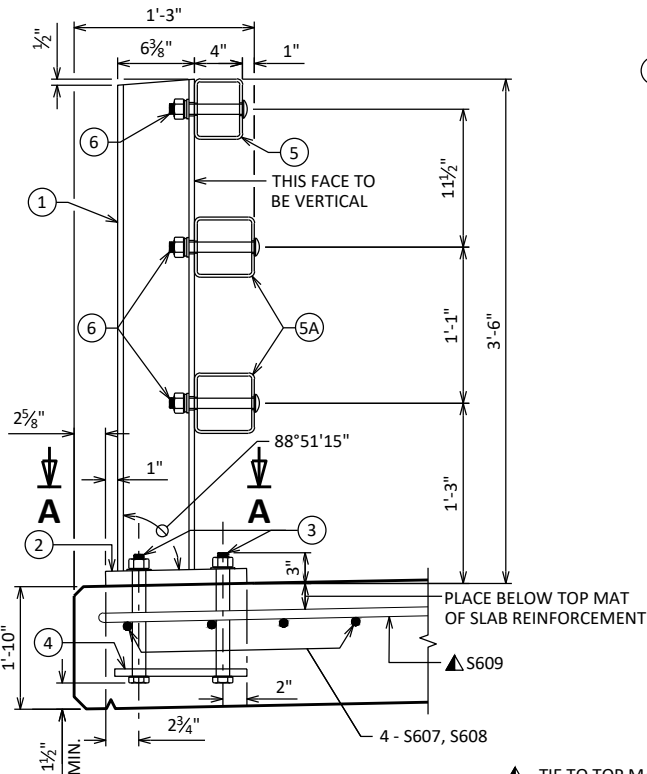
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| | | | |
| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE B-8-122 | | | |
| DRAWN BY JMC | | PLANS CK'D NBE | |
| SUPERSTRUCTURE DETAILS | | SHEET 10 OF 11 | |

LEGEND

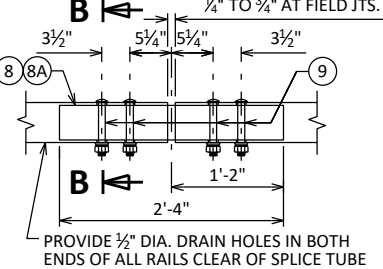
- 1 W6 x 25 WITH 1 1/2" x 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- 2 PLATE 1 1/4" x 11 3/4" x 1'-8" WITH 1 1/16" OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- 3 ASTM A449 - 1 1/8" 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 10 3/4" 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 CONSTRUCTIBILITY.)
- 4 5/8" 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 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" x 1 5/8" x 1 5/8" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
- 7 SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- 8 3/8" x 3 5/8" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- 8A 3/8" x 2 5/8" x 2'-4" PLATE USED IN NO. 5, 3/8" x 3 5/8" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- 9 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/16" x 1 1/4" LONGIT. SLOTTED HOLES IN PLATE NO. 10A AT FIELD JOINTS AND 1 5/16" x 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 8A. PROVIDE 1 5/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
- 10 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" x 1 1/2" 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.
- 11 1" DIA. HOLES IN PLATE NO. 10 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 10.
- 12 7/8" DIA. x 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
- 13 3/8" 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 7/8" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
- 15 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

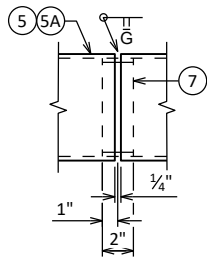
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, 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 1/2 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 SSPC SPECIFICATIONS.



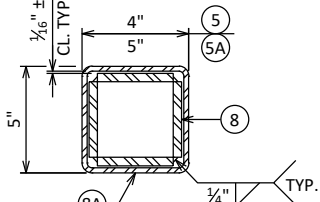
SECTION THRU RAILING ON DECK



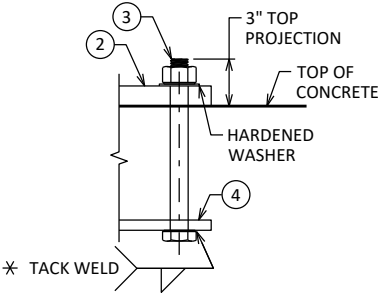
FIELD ERECTION JOINT DETAIL



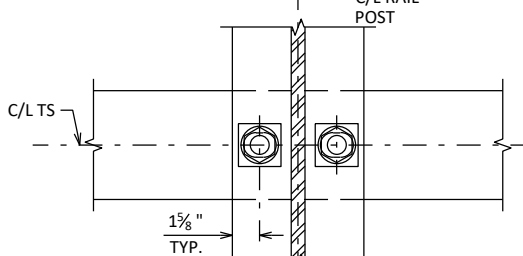
SHOP RAIL SPLICE DETAIL
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



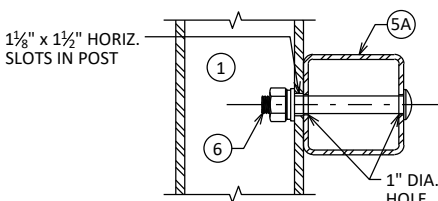
SECTION B-B



ANCHOR BOLTS

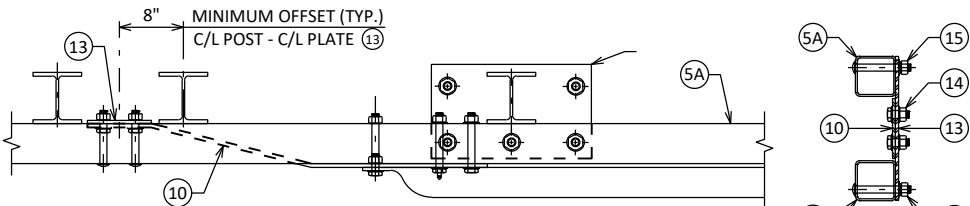


SECTION THRU POST WEB

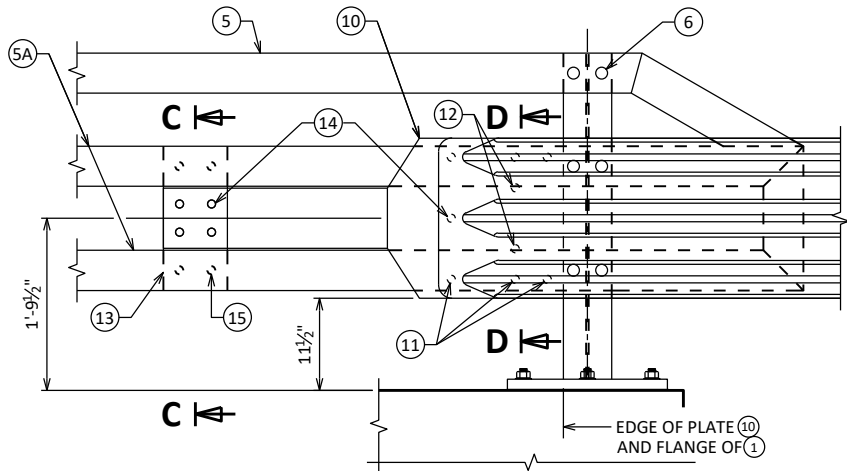


SECTION THRU RAIL
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

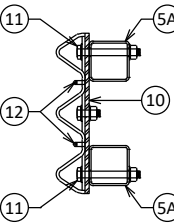
TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST
THRIE BEAM RAIL ATTACHMENT

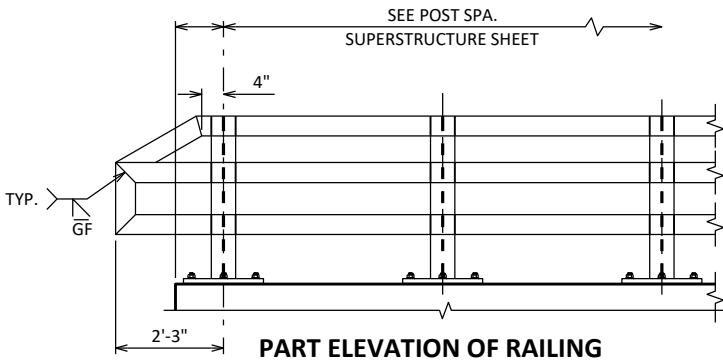


SECTION C-C

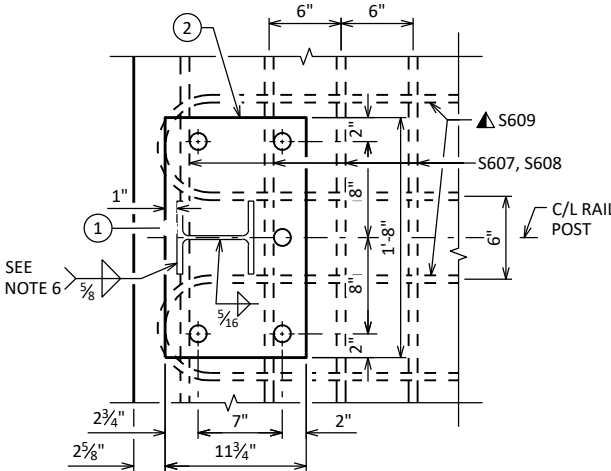


SECTION D-D

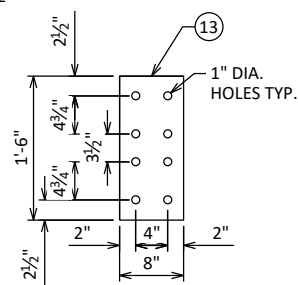
DETAIL AT END POST
THRIE BEAM RAIL ATTACHMENT



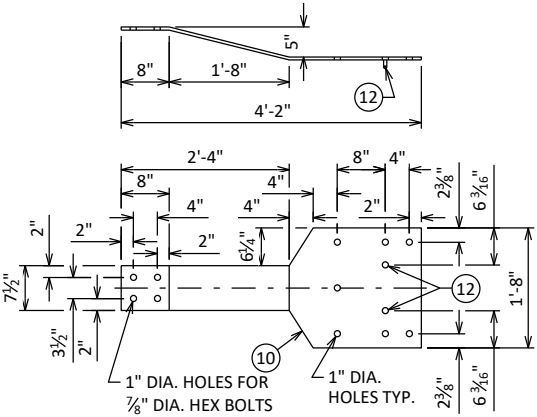
PART ELEVATION OF RAILING



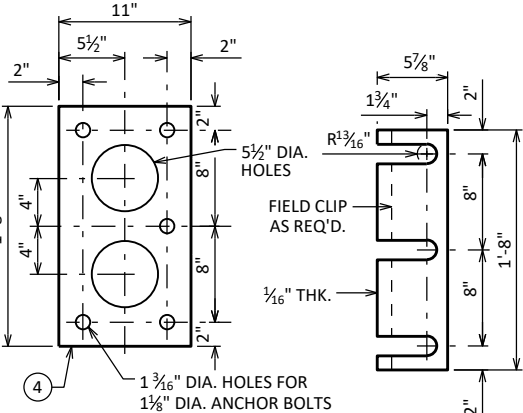
SECTION A-A



ANCHOR PLATE
AT BEAM GUARD ATTACHMENT



BACK-UP PLATE DETAIL
AT BEAM GUARD ATTACHMENT



ANCHOR PLATE
AT RAIL TO DECK CONNECTION

POST SHIM
DETAIL

| NO. | DATE | REVISION | BY |
|----------------------------------------------------|------|----------------|----|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE B-8-122 | | | |
| DRAWN BY JMC | | PLANS CK'D NBE | |
| TUBULAR STEEL RAILING TYPE 'M' | | SHEET 11 OF 11 | |

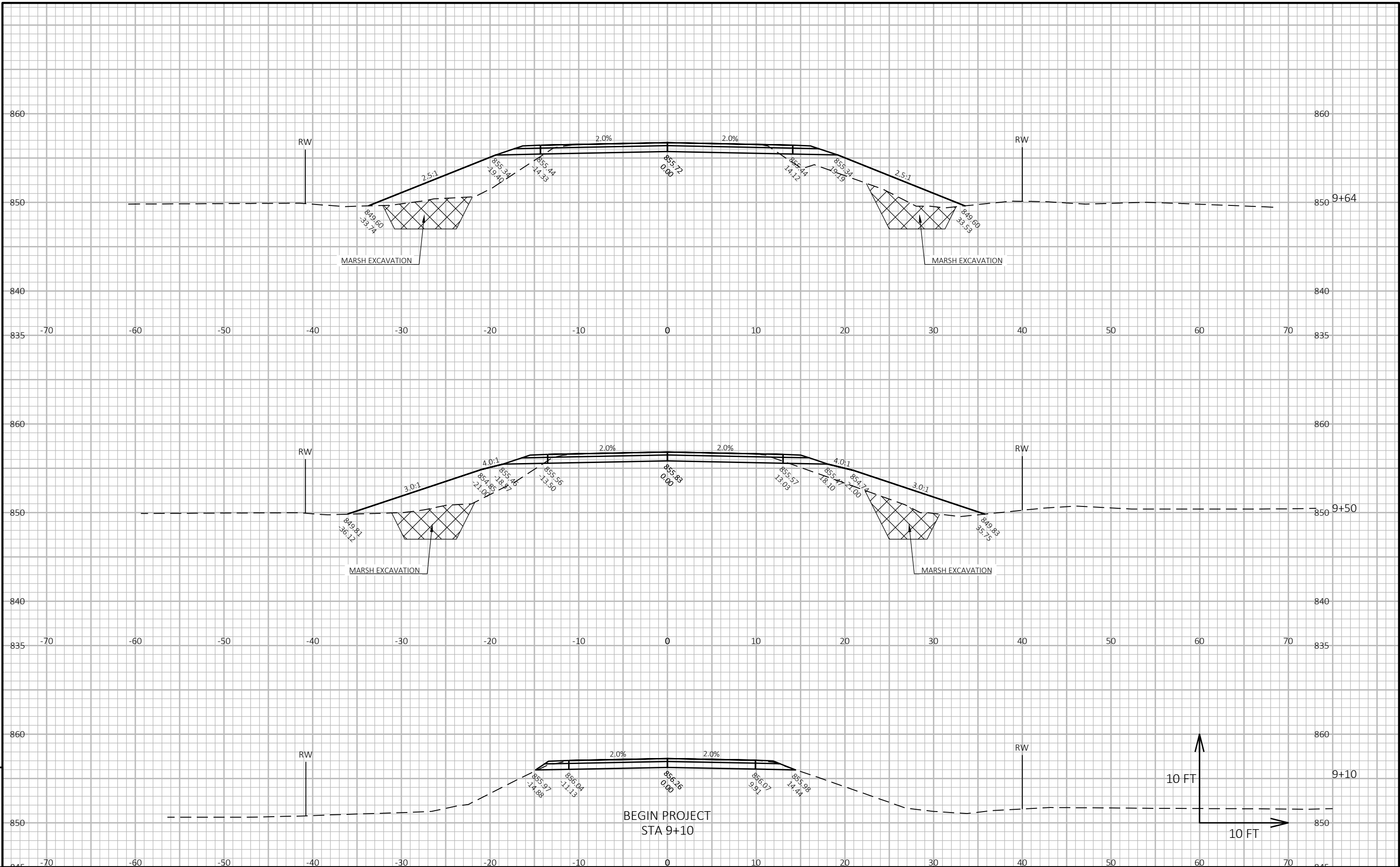
| EARTHWORK-BRUCKNER RD | | | | | | | | | | | | |
|-----------------------|-----------|----------------------------------------|-------|-----------|-----------------------------------|----------------------------------------|--------|-----------|---------------------|---------------|----------------------------|---------------|
| STATION | AREA (SF) | | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | | CUMULATIVE VOL (CY) | | | |
| | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | MARSH EXC | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | MARSH EXC | CUT | EXPANDED FILL | EXPANDED MARSH BACKFILL | MASS ORDINATE |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | NOTE 1 | NOTE 2 | NOTE 3 | | 1.00 | 1.30 | 1.50 | |
| | | | | | | | | | NOTE 1 | | NOTE 4 | NOTE 8 |
| 9+10 | 26.06 | 7.00 | 10.90 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9+50 | 24.90 | 7.00 | 75.50 | 50.42 | 38 | 10 | 64 | 37 | 38 | 84 | 56 | -56 |
| 9+64 | 27.33 | 7.00 | 72.87 | 52.39 | 14 | 4 | 38 | 27 | 52 | 134 | 97 | -96 |
| 9+77 | 27.33 | 7.00 | 72.87 | 52.39 | 14 | 4 | 38 | 27 | 66 | 184 | 138 | -136 |
| B-08-0122 | | | | | | | | | | | | |
| 10+23 | 27.27 | 7.00 | 62.75 | 0.00 | 0 | 0 | 0 | 0 | 66 | 184 | 138 | -136 |
| 10+34 | 27.27 | 7.00 | 62.75 | 0.00 | 12 | 3 | 28 | 0 | 78 | 221 | 138 | -164 |
| 10+50 | 23.56 | 7.00 | 25.20 | 0.00 | 15 | 4 | 26 | 0 | 93 | 255 | 138 | -187 |

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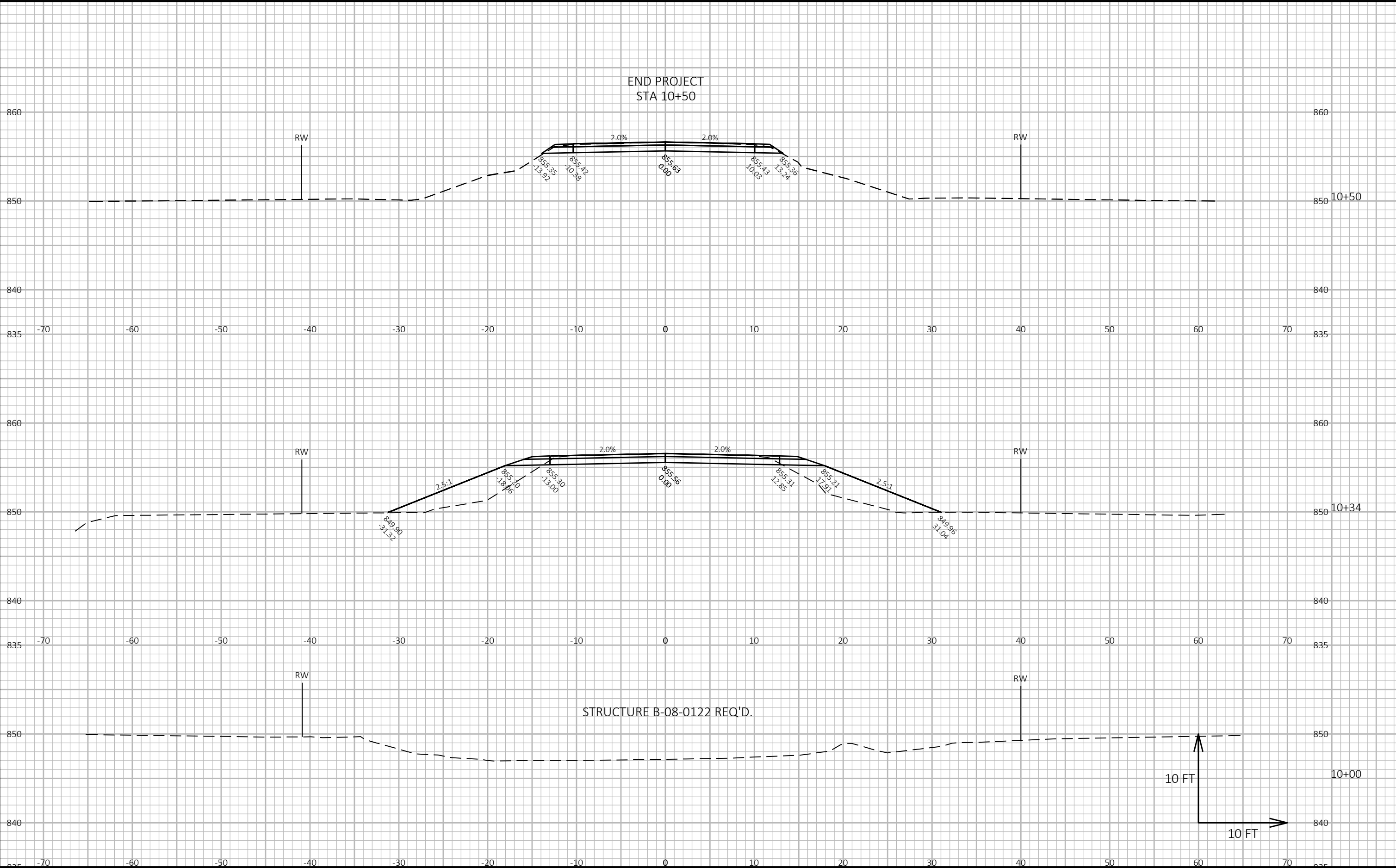
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|------------------------|------------------|-----------------|-------------------------------|---------|
| PROJECT NO: 4472-05-71 | HWY: BRUCKNER RD | COUNTY: CALUMET | CROSS SECTIONS: BRUCKNER ROAD | SHEET E |
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| PROJECT NO: 4472-05-71 | HWY: BRUCKNER RD | COUNTY: CALUMET | CROSS SECTIONS: BRUCKNER ROAD | SHEET | E |
|------------------------|------------------|-----------------|-------------------------------|-------|---|



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