EAU

PROJECT ID: 7859-00-70

WITH: N/A

COUNTY: CLARK

39

DECEMBER 2019

ORDER OF SHEETS



TOTAL SHEETS = 46

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

# T WASHBURN, PRAY AVENUE

CUNNINGHAM CREEK BRIDGE B100237

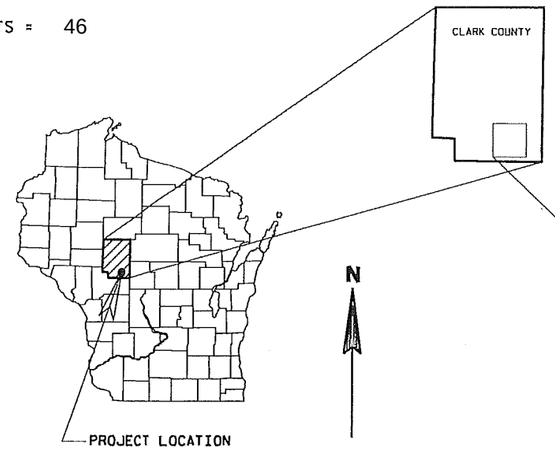
## LOCAL STREET

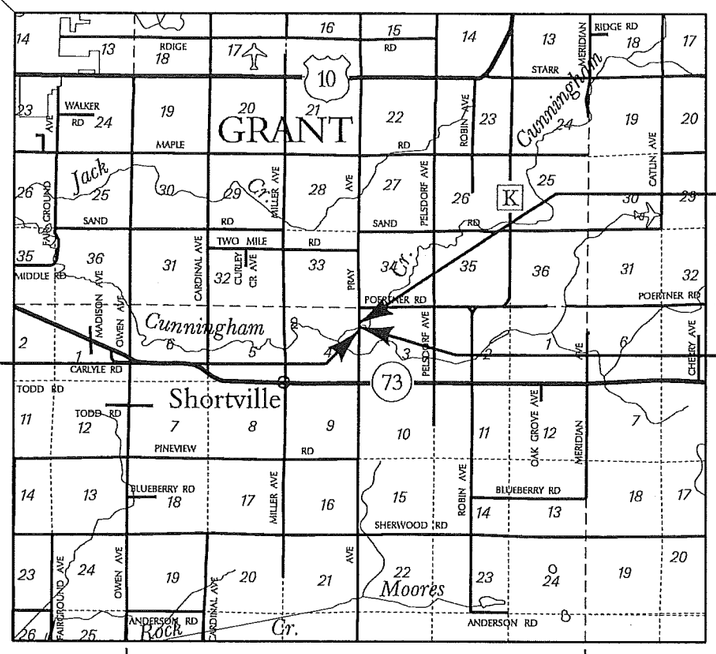
## CLARK COUNTY

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 7859-00-70 | ——— | —— |
| | | |
| | | |
| | | |

STATE PROJECT NUMBER

**7859-00-70**




LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.032 MI.

SURVEY PERFORMED IN 2018.
COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), CLARK COUNTY.

## DESIGN DESIGNATION

| | | |
|---|---|---|
| A.A.D.T. (2020) | = | <100 |
| A.A.D.T. (2040) | = | <100 |
| D.H.V. | = | 10 |
| D. | = | 50/50 |
| T. | = | 5% |
| DESIGN SPEED | = | 55 MPH |
| ESALS | = | N/A |

## CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- HIGH VOLTAGE (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

ACCEPTED FOR

Town of Washburn

7-19-19 Date — Town Chairman

ORIGINAL PLANS PREPARED BY


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


WISCONSIN — DANIEL N. SYDOW E-38363 WI — PROFESSIONAL ENGINEER

DATE 7/12/2019

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

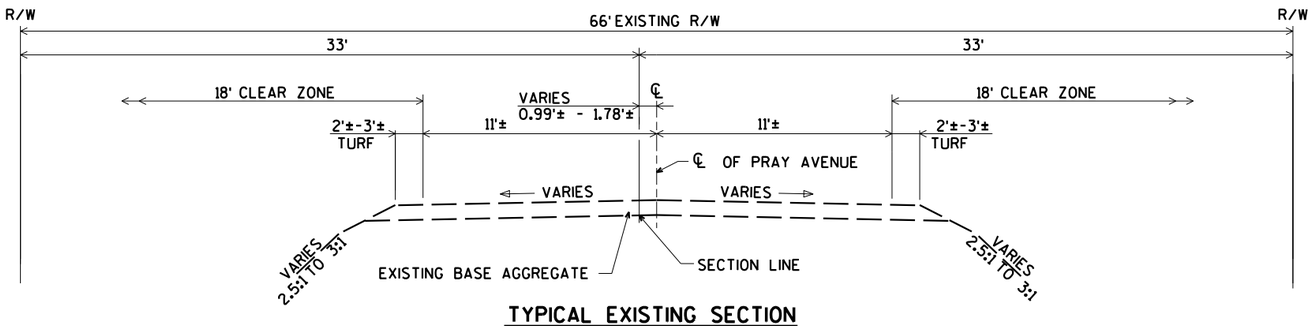
PREPARED BY

| | |
|---|---|
| Surveyor | AYRES ASSOCIATES INC |
| Designer | AYRES ASSOCIATES INC |
| Project Manager | MATTHEW THORNSEN |
| Regional Examiner | NORTHWEST REGION |
| Regional Supervisor | ANDREW STENSLAND |

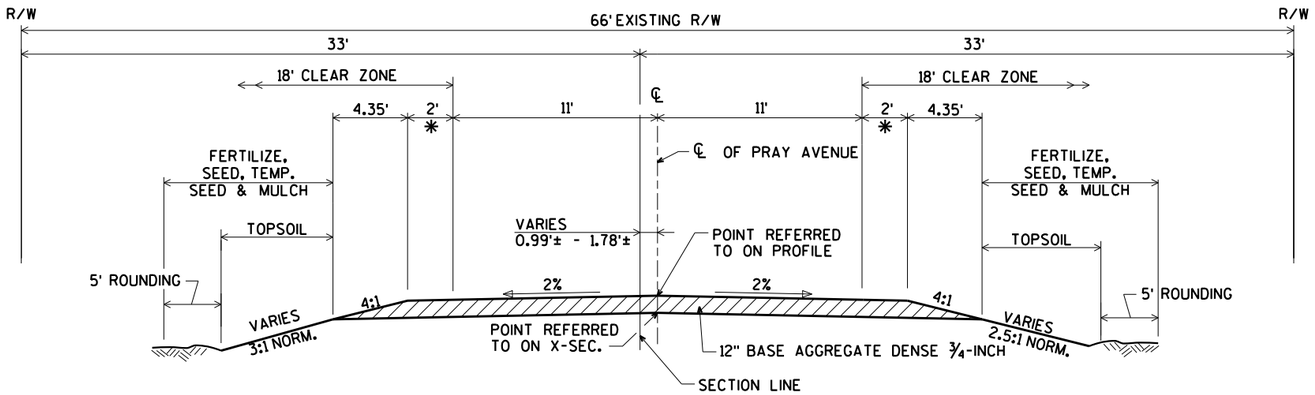
APPROVED FOR THE DEPARTMENT

DATE: 7/31/19 (Signature)

E




**TYPICAL EXISTING SECTION**




**TYPICAL FINISHED SECTION**

STA. 9+15 TO STA. 10+85

* BASE AGGREGATE SHOULDER SHALL BE 4.25 FEET WIDE AT THE ENDS OF THE BRIDGE WINGWALLS AND TAPER TO 2 FEET AT THE PROJECT LIMITS.

## GENERAL NOTES

EROSION CONTROL ITEMS TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

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

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

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING AND FIELD LOCATING ALL UTILITIES.

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCLUSIVE OF THE ROADBED, SHALL BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.

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

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

WETLANDS EXIST IN THE PROJECT AREA. NO DISTURBANCE IS ALLOWED OUTSIDE THE SLOPE INTERCEPTS.

WHEN THE QUANTITY OF THE ITEM OF BASE LAYER OR SURFACE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER AS SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

## UTILITIES

CLARK ELECTRIC COOPERATIVE
1209 W. DALL-BERG ROAD
P.O. BOX 190
GREENWOOD, WI 54437
ATTN: RICK SUDA
715-267-6188
715-797-0081 (cell)
rsuda@cecoop.com

TDS TELECOM
202 E. OGDEN STREET
MEDFORD, WI 54451
ATTN: JEFF SHAW
715-748-6970
715-323-8464 (cell)
jeff.shaw@tsdtelecom.com

** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

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

WISCONSIN DEPARTMENT OF TRANSPORTATION CONTACT:
MATT THORNSEN
718 W CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
715-225-4159
matthew.thornsen@dot.wi.gov

WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONTACT:
LEAH NICOL
1300 W CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
715-934-9014
leah.nicol@wisconsin.gov

TOWN CONTACT
TOWN OF WASHBURN, CHAIRMAN
N2140 PRAY AVENUE
NEILLSVILLE, WI 54456
ATTN: DALE REINART
715-743-4106
chair@townofwashburn.net

DESIGNER
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: DANIEL N. SYDOW
715-834-3161
sydowd@AyresAssociates.com

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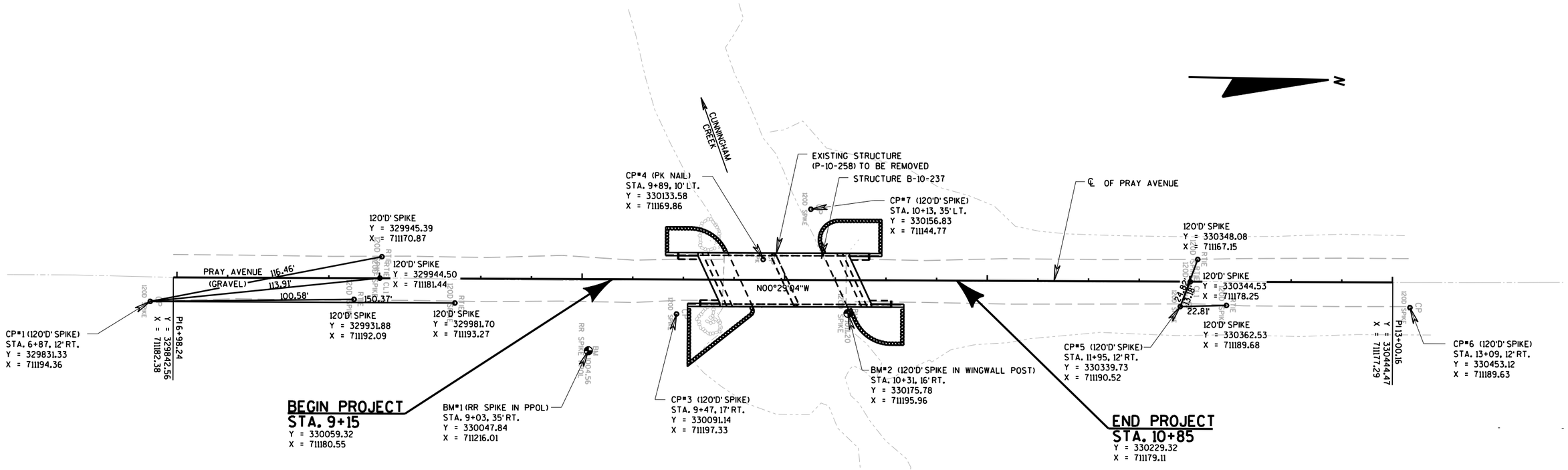
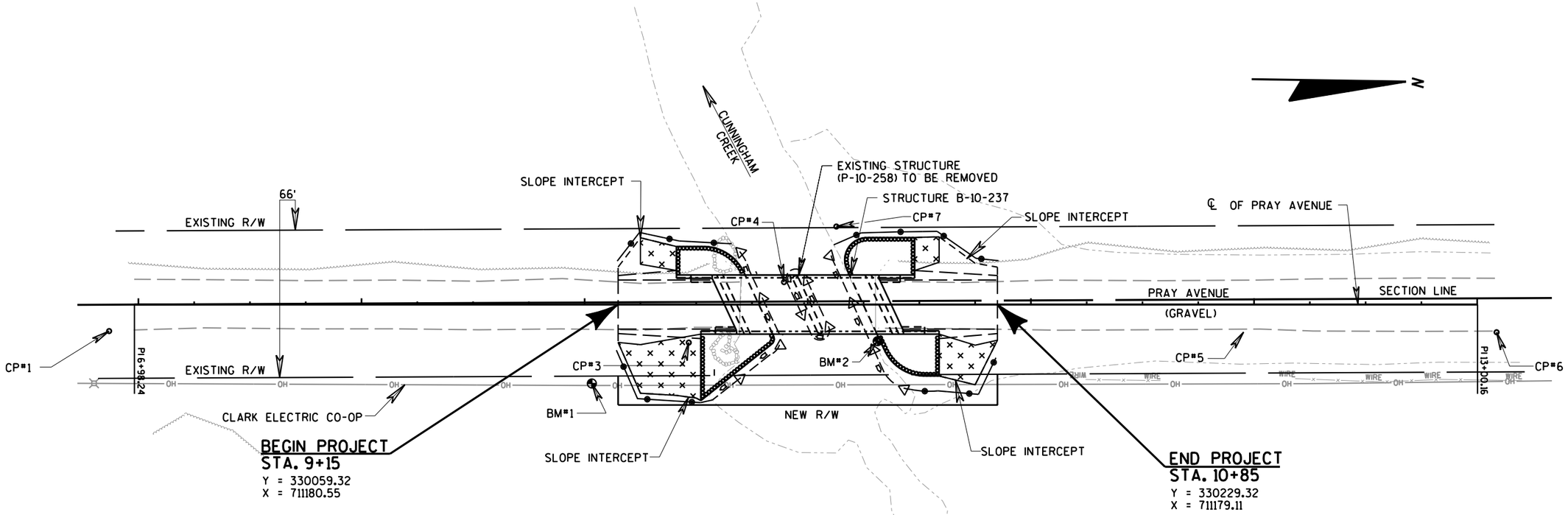



| PROJECT NO: 7859-00-70 | HWY: PRAY AVENUE | COUNTY: CLARK | ALIGNMENT CONTROLS & TIES | SCALE, FEET 0 25 50 | SHEET 3 | E |
|---|---|---|---|---|---|---|




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

TOTAL PROJECT AREA = 0.310 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.183 ACRES

HIGH WATER 2 EL. 1005.7

NOTE:
NO DISTURBANCE OR TOPSOIL STOCKPILING IS ALLOWED OUTSIDE OF THE SLOPE INTERCEPTS. WETLANDS EXIST IN THE PROJECT AREA.

LEGEND

- EROSION MAT CLASS II TYPE C
- SILT FENCE
- TURBIDITY BARRIER
- RIPRAP HEAVY

| PROJECT NO: 7859-00-70 | HWY: PRAY AVENUE | COUNTY: CLARK | EROSION CONTROL | SCALE, FEET 0 25 50 | SHEET 4 | E |
|---|---|---|---|---|---|---|

7859-00-70

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 201.0105 | Clearing | STA | 1.000 | 1.000 |
| 0004 | 201.0205 | Grubbing | STA | 1.000 | 1.000 |
| 0006 | 203.0600.S | Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00 | LS | 1.000 | 1.000 |
| 0008 | 205.0100 | Excavation Common | CY | 106.000 | 106.000 |
| 0010 | 206.1000 | Excavation for Structures Bridges (structure) 01. B-10-237 | LS | 1.000 | 1.000 |
| 0012 | 210.1500 | Backfill Structure Type A | TON | 400.000 | 400.000 |
| 0014 | 213.0100 | Finishing Roadway (project) 01. 7859-00-70 | EACH | 1.000 | 1.000 |
| 0016 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 230.000 | 230.000 |
| 0018 | 502.0100 | Concrete Masonry Bridges | CY | 251.000 | 251.000 |
| 0020 | 502.3200 | Protective Surface Treatment | SY | 265.000 | 265.000 |
| 0022 | 505.0400 | Bar Steel Reinforcement HS Structures | LB | 6,120.000 | 6,120.000 |
| 0024 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 32,090.000 | 32,090.000 |
| 0026 | 506.0105 | Structural Steel Carbon | LB | 510.000 | 510.000 |
| 0028 | 513.4061 | Railing Tubular Type M | LF | 210.000 | 210.000 |
| 0030 | 516.0500 | Rubberized Membrane Waterproofing | SY | 18.000 | 18.000 |
| 0032 | 550.0500 | Pile Points | EACH | 18.000 | 18.000 |
| 0034 | 550.1100 | Piling Steel HP 10-Inch X 42 Lb | LF | 480.000 | 480.000 |
| 0036 | 606.0300 | Riprap Heavy | CY | 190.000 | 190.000 |
| 0038 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 150.000 | 150.000 |
| 0040 | 618.0100 | Maintenance And Repair of Haul Roads (project) 01. 7859-00-70 | EACH | 1.000 | 1.000 |
| 0042 | 619.1000 | Mobilization | EACH | 1.000 | 1.000 |
| 0044 | 624.0100 | Water | MGAL | 6.000 | 6.000 |
| 0046 | 625.0100 | Topsoil | SY | 200.000 | 200.000 |
| 0048 | 627.0200 | Mulching | SY | 225.000 | 225.000 |
| 0050 | 628.1504 | Silt Fence | LF | 310.000 | 310.000 |
| 0052 | 628.1520 | Silt Fence Maintenance | LF | 620.000 | 620.000 |
| 0054 | 628.1905 | Mobilizations Erosion Control | EACH | 4.000 | 4.000 |
| 0056 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 4.000 | 4.000 |
| 0058 | 628.2027 | Erosion Mat Class II Type C | SY | 215.000 | 215.000 |
| 0060 | 628.6005 | Turbidity Barriers | SY | 395.000 | 395.000 |
| 0062 | 628.7504 | Temporary Ditch Checks | LF | 50.000 | 50.000 |
| 0064 | 629.0210 | Fertilizer Type B | CWT | 0.300 | 0.300 |
| 0066 | 630.0120 | Seeding Mixture No. 20 | LB | 10.000 | 10.000 |
| 0068 | 630.0200 | Seeding Temporary | LB | 10.000 | 10.000 |
| 0070 | 630.0500 | Seed Water | MGAL | 10.000 | 10.000 |
| 0072 | 634.0612 | Posts Wood 4x6-Inch X 12-FT | EACH | 4.000 | 4.000 |
| 0074 | 637.2230 | Signs Type II Reflective F | SF | 12.000 | 12.000 |

7859-00-70

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0076 | 638.2602 | Removing Signs Type II | EACH | 6.000 | 6.000 |
| 0078 | 638.3000 | Removing Small Sign Supports | EACH | 6.000 | 6.000 |
| 0080 | 642.5001 | Field Office Type B | EACH | 1.000 | 1.000 |
| 0082 | 643.0420 | Traffic Control Barricades Type III | DAY | 1,350.000 | 1,350.000 |
| 0084 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 2,100.000 | 2,100.000 |
| 0086 | 643.0900 | Traffic Control Signs | DAY | 1,050.000 | 1,050.000 |
| 0088 | 643.5000 | Traffic Control | EACH | 1.000 | 1.000 |
| 0090 | 645.0111 | Geotextile Type DF Schedule A | SY | 100.000 | 100.000 |
| 0092 | 645.0120 | Geotextile Type HR | SY | 370.000 | 370.000 |
| 0094 | 650.4500 | Construction Staking Subgrade | LF | 96.000 | 96.000 |
| 0096 | 650.6500 | Construction Staking Structure Layout (structure) 01. B-10-237 | LS | 1.000 | 1.000 |
| 0098 | 650.9910 | Construction Staking Supplemental Control (project) 01.7859-00-70 | LS | 1.000 | 1.000 |
| 0100 | 650.9920 | Construction Staking Slope Stakes | LF | 96.000 | 96.000 |
| 0102 | 715.0502 | Incentive Strength Concrete Structures | DOL | 1,506.000 | 1,506.000 |

3

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PRAY AVENUE EARTHWORK SUMMARY

| From/To Station | Location | Excavation Common (1) (item # 205.0100) Cut | Unexpanded Fill | Expanded Fill (2) Factor 1.30 | Mass Ordinate +/- (3) | Waste | Borrow (item #208.0100) | Comment: |
|---|---|---|---|---|---|---|---|---|
| 9+15 - 10+85 | PRAY AVENUE | 106 | 67 | 87 | 19 | 19 | 0 | |

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

CLEARING AND GRUBBING

| STATION | TO | STATION | OFFSET | 201.0105 CLEARING STA | 201.0205 GRUBBING STA |
|---|---|---|---|---|---|
| 9+00 | - | 11+00 | LT & RT | 1 | 1 |
| TOTALS | | | | 1 | 1 |

BASE QUANTITIES

| STA | TO | STA | 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON |
|---|---|---|---|
| 9+15 | -- | 9+62.62 | 110 |
| 10+37.38 | -- | 10+85 | 110 |
| UNDISTRIBUTED | | | 10 |
| TOTALS | | | 230 |

WATER

| PURPOSE | 624.0100 WATER MGAL |
|---|---|
| COMPACTION | 3 |
| DUST CONTROL | 3 |
| TOTAL | 6 |

EROSION CONTROL MOBILIZATION ITEMS

| LOCATION | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH |
|---|---|---|
| ID 7859-00-70 | 4 | 4 |
| TOTALS | 4 | 4 |

TURBIDITY BARRIERS

| LOCATION | 628.6005 SY |
|---|---|
| WEST ABUTMENT | 115 |
| PIER | 100 |
| EAST ABUTMENT | 100 |
| UNDISTRIBUTED | 80 |
| TOTAL | 395 |

TEMPORARY DITCH CHECKS

| LOCATION | 628.7504 LF |
|---|---|
| UNDISTRIBUTED | 50 |
| TOTAL | 50 |

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

## EROSION CONTROL ITEMS

| STA | TO | STA | LOCATION | 625.0100 TOPSOIL SY | 627.0200 MULCHING SY | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF | 628.2027 EROSION MAT CLASS II TYPE C SY | 629.0210 FERTILIZER TYPE B CWT | 630.0120 SEEDING MIXTURE NO. 20 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9+15 | -- | 9+62.62 | RT | 70 | 45 | 60 | 120 | 95 | 0.1 | 4 | 4 | 3 |
| 9+15 | -- | 9+62.62 | LT | 25 | 40 | 60 | 120 | 20 | 0.0 | 2 | 2 | 1 |
| 10+37.38 | -- | 10+85 | RT | 40 | 35 | 50 | 100 | 45 | 0.1 | 2 | 2 | 2 |
| 10+37.38 | -- | 10+85 | LT | 25 | 60 | 80 | 160 | 15 | 0.0 | 2 | 2 | 2 |
| UNDISTRIBUTED | | | | 40 | 45 | 60 | 120 | 40 | 0.1 | 2 | 2 | 2 |
| TOTALS | | | | 200 | 225 | 310 | 620 | 215 | 0.3 | 10 | 10 | 10 |

## SIGNING ITEMS

| STATION | LOC | 634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | SIGNAGE TYPE |
|---|---|---|---|---|---|---|
| 9+68 | RT | -- | -- | 1 | 1 | WEIGHT LIMIT 40 TONS |
| 9+41 | LT | 1 | 3 | -- | -- | W5-52L |
| 9+51 | RT | 1 | 3 | -- | -- | W5-52R |
| 9+68 | LT | -- | -- | 1 | 1 | W5-52L |
| 9+68 | RT | -- | -- | 1 | 1 | W5-52R |
| 10+32 | LT | -- | -- | 1 | 1 | W5-52R |
| 10+32 | RT | -- | -- | 1 | 1 | W5-52L |
| 10+49 | LT | 1 | 3 | -- | -- | W5-52R |
| 10+60 | RT | 1 | 3 | -- | -- | W5-52L |
| 10+32 | RT | -- | -- | 1 | 1 | WEIGHT LIMIT 40 TONS |
| TOTALS | | 4 | 12 | 6 | 6 | |

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

## MAINTENANCE AND REPAIR OF HAUL ROADS

| CATEGORY | PROJECT | 618.0100 EACH |
|---|---|---|
| 0030 | 7859-00-70 | 1 |
| TOTAL | | 1 |

## FIELD OFFICE TYPE B

| CATEGORY | 642.5001 EACH |
|---|---|
| 0010 | 0.1 |
| 0020 | 0.9 |
| TOTAL | 1 |

## TRAFFIC CONTROL ITEMS

| LOCATION | DURATION DAYS | 643.0420 BARRICADES TYPE III NO. | 643.0420 BARRICADES TYPE III DAY | 643.0705 WARNING LIGHTS TYPE A NO. | 643.0705 WARNING LIGHTS TYPE A DAY | 643.0900 SIGNS NO. | 643.0900 SIGNS DAY | 643.5000 TRAFFIC CONTROL EACH |
|---|---|---|---|---|---|---|---|---|
| PER SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" | 75 | 18 | 1,350 | 28 | 2,100 | 14 | 1,050 | -- |
| PRAY AVENUE | -- | -- | -- | -- | -- | -- | -- | 1 |
| TOTALS | | | 1,350 | | 2,100 | | 1,050 | 1 |

TRAFFIC CONTROL PLACEMENT SUBJECT TO ENGINEER APPROVAL

## STAKING ITEMS

| CATEGORY | LOCATION | 650.4500 CONSTRUCTION STAKING SUBGRADE LF | 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF |
|---|---|---|---|
| 0010 | 9+15 - 10+85 | 96 | 96 |
| TOTALS | | 96 | 96 |

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

## SCHEDULE OF LANDS AND INTERESTS REQUIRED

| PARCEL NO. | OWNER(S) | INTEREST REQUIRED | R/W (ACRES) | | |
|---|---|---|---|---|---|
| | | | FEE | EXISTING | TOTAL |
| 1 | DENNIS AND MARILYN SPIEGEL REVOCABLE LIVING TRUST | FEE | 0.052 | 0.129 | 0.181 |

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN.

| UTILITY EASEMENT INFORMATION | | |
|---|---|---|
| UTILITY | RECORDING INFORMATION | PARCEL(S) |
| TDS TELCOM | NO EASEMENTS OF RECORD | 1 |

### CONVENTIONAL SYMBOLS

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

PARCEL NUMBER (25)
SECTION CORNER
NOTATION FOR COMBUSTABLE FLUIDS
NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES
UTILITY NUMBER (40)
R/W MONUMENT
NON-MONUMENTED R/W POINT
FOUND IRON PIN
VALVE (GAS, WATER, ETC.)
SIGN
OFF-PREMISE SIGN

ACCESS CONTROLLED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
NATIONAL GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
PARALLEL OFFSETS

### CONVENTIONAL ABBREVIATIONS

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

| COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 100-101 | S89°30'56"W | 33.00' |
| 101-102 | N00°45'00"W | 170.00' |
| 102-103 | N89°30'56"E | 33.00' |
| 103-104 | N89°30'56"E | 1.78' |
| 104-105 | N89°30'56"E | 31.22' |
| 105-106 | N89°30'56"E | 13.78' |
| 106-107 | S00°29'04"E | 170.00' |
| 107-108 | S89°30'56"W | 12.99' |
| 108-109 | S89°30'56"W | 32.01' |
| 109-100 | S89°30'56"W | 0.99' |

| POINT TABLE | | |
|---|---|---|
| POINT NAME | NORTHING | EASTING |
| 100 | 330059.313 | 711179.556 |
| 101 | 330059.026 | 711146.557 |
| 102 | 330229.022 | 711144.332 |
| 103 | 330229.301 | 711177.331 |
| 104 | 330229.316 | 711179.111 |
| 105 | 330229.580 | 711210.330 |
| 106 | 330229.696 | 711224.110 |
| 107 | 330059.702 | 711225.547 |
| 108 | 330059.592 | 711212.555 |
| 109 | 330059.322 | 711180.549 |

### CONVENTIONAL UTILITY SYMBOLS

| | NON-COMPENSABLE | COMPENSABLE |
|---|---|---|
| WATER | | W |
| GAS | | G |
| TELEPHONE | | T |
| OVERHEAD TRANSMISSION LINES | | OH |
| ELECTRIC | | E |
| CABLE TELEVISION | | TV |
| FIBER OPTIC | | FO |
| SANITARY SEWER | | SAN |
| STORM SEWER | | SS |
| ELECTRIC TOWER | | ⊠ |
| POWER POLE | △ | ▲ |
| TELEPHONE POLE | ∅ | ∅ |
| TELEPHONE PEDESTAL | ⊠ | ⊠ |

### NOTES:

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

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (¾"x24" CAPPED IRON REBAR WEIGHING 1.50 LBS./LIN. FT.) AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

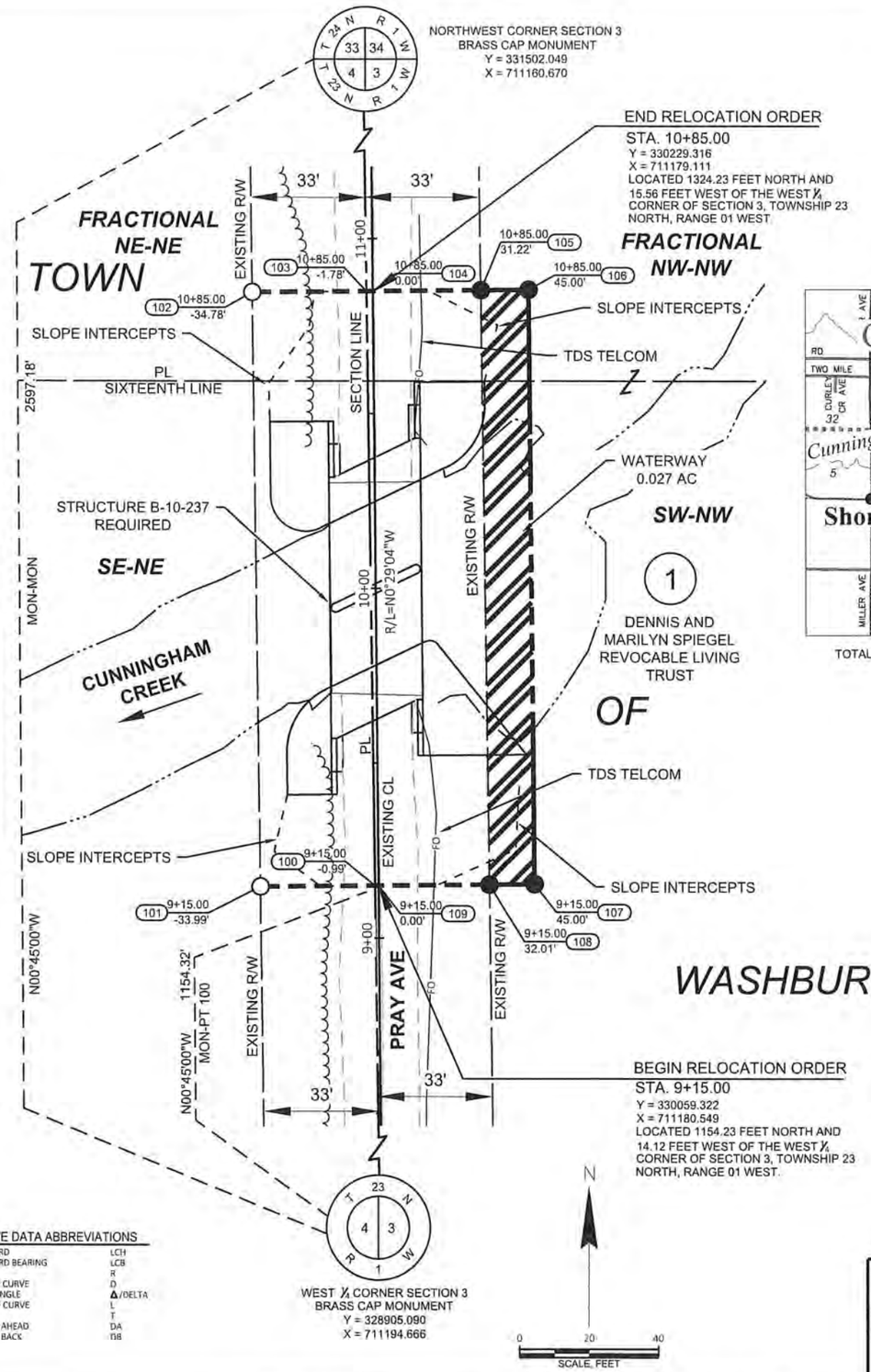
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

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

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINT OF REFERENCE:

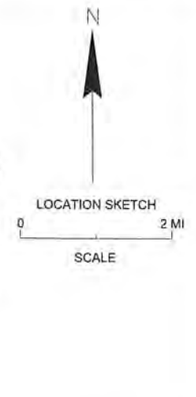
EXISTING HIGHWAY RIGHT-OF-WAY FOR PRAY AVENUE SHOWN HEREIN IS PRESUMED TO BE 66 FEET IN WIDTH CENTERED ON THE SECTION LINE BETWEEN SECTIONS 3 AND 4 PER STATE STATUTE 82.31(2).




### CURVE DATA ABBREVIATIONS

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


TOTAL NET LENGTH OF CENTERLINE = 0.032 MI.




| R/W PROJECT NUMBER 7859-00-00 | SHEET NUMBER | TOTAL SHEETS |
|---|---|---|
| CONSTRUCTION PROJECT NUMBER | 4.01 | 1 |

PLAT OF RIGHT OF WAY REQUIRED FOR

TOWN OF WASHBURN, PRAY AVENUE

CUNNINGHAM CREEK BRIDGE B-10-0237

LOCAL ROAD | CLARK COUNTY

APPROVED FOR TOWN OF WASHBURN

6-24-19 DATE — TOWN CHAIRMAN

PLAT PREPARED BY
AYRES ASSOCIATES

THE SURVEY IS PREPARED AT THE REQUEST OF THE TOWN OF WASHBURN.

THE FIELD SURVEY WAS PERFORMED IN AUGUST 2018.

THIS SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.


06-19-2019

CHRISTOPHER R. BADTKE — DATE
S-3150

REVISION DATE

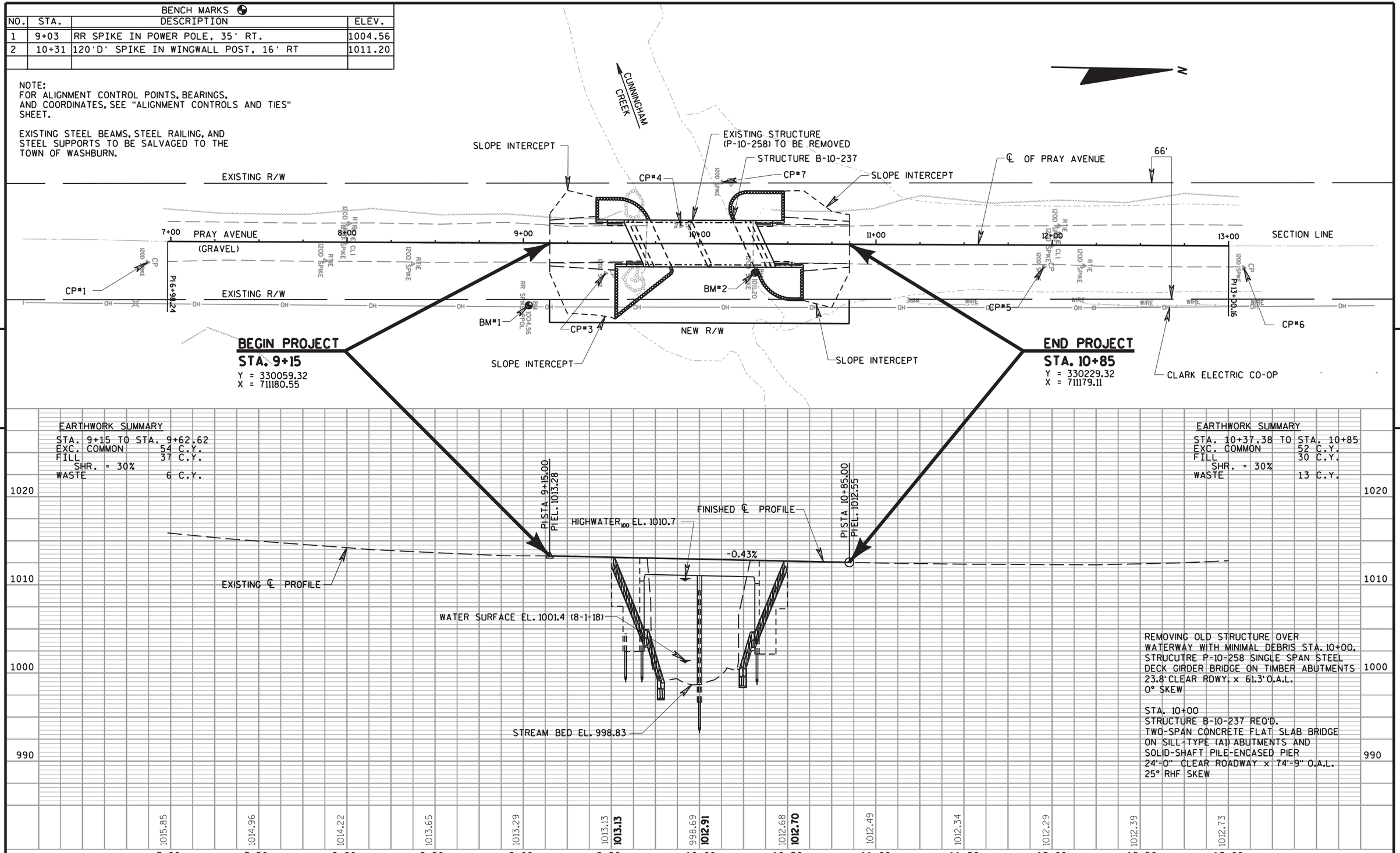


FILE NAME : V:\SURVEY\EC\05URVEY\00GN\421140.00 CLARK CO TN WASHBURN\CADD\C3D\RW PLAT\421140 RWPL.DWG
PLOT DATE : 6/19/2019 10:03 AM
PLOT BY : BADTKE, CHRISTOPHER
PLOT NAME :

| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STA. | DESCRIPTION | ELEV. |
| 1 | 9+03 | RR SPIKE IN POWER POLE, 35' RT. | 1004.56 |
| 2 | 10+31 | 120'D' SPIKE IN WINGWALL POST, 16' RT | 1011.20 | |

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

EXISTING STEEL BEAMS, STEEL RAILING, AND STEEL SUPPORTS TO BE SALVAGED TO THE TOWN OF WASHBURN.




EARTHWORK SUMMARY
STA. 9+15 TO STA. 9+62.62
EXC. COMMON 54 C.Y.
FILL 37 C.Y.
SHR. = 30%
WASTE 6 C.Y.

EARTHWORK SUMMARY
STA. 10+37.38 TO STA. 10+85
EXC. COMMON 52 C.Y.
FILL 30 C.Y.
SHR. = 30%
WASTE 13 C.Y.

REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 10+00.
STRUCUTRE P-10-258 SINGLE SPAN STEEL DECK GIRDER BRIDGE ON TIMBER ABUTMENTS
23.8' CLEAR RDWY. x 61.3' O.A.L.
0° SKEW

STA. 10+00
STRUCTURE B-10-237 REO'D.
TWO-SPAN CONCRETE FLAT SLAB BRIDGE ON SILL-TYPE (A1) ABUTMENTS AND SOLID-SHAFT PILE-ENCASED PIER
24'-0" CLEAR ROADWAY x 74'-9" O.A.L.
25° RHF SKEW

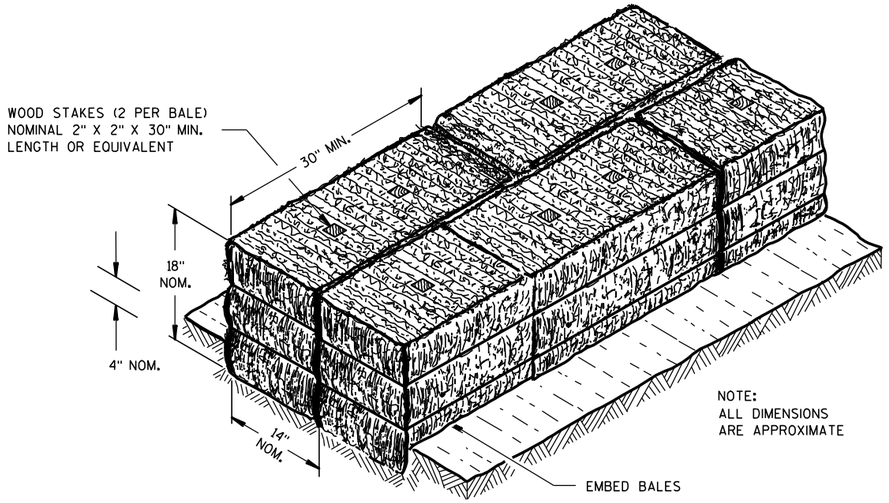
| PROJECT NO: 7859-00-70 | HWY: PRAY AVENUE | COUNTY: CLARK | PLAN AND PROFILE | SCALE, FEET 0 25 50 | SHEET 11 | E |
|---|---|---|---|---|---|---|

# Standard Detail Drawing List

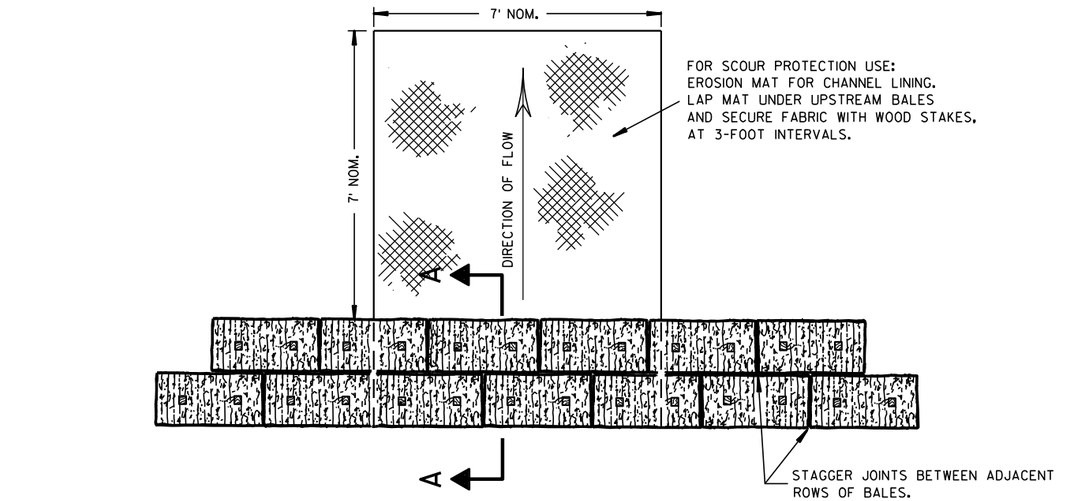
| | |
|---|---|
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E11-02 | TURBIDITY BARRIER |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 15C02-07A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-07B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C06-09 | SIGNING & MARKING FOR TWO LANE BRIDGES |
| 15D38-02A | TEMPORARY TRAFFIC CONTROL SIGN MOUNTING |
| 15D38-02B | ATTACHMENT OF SIGNS TO POSTS |

6

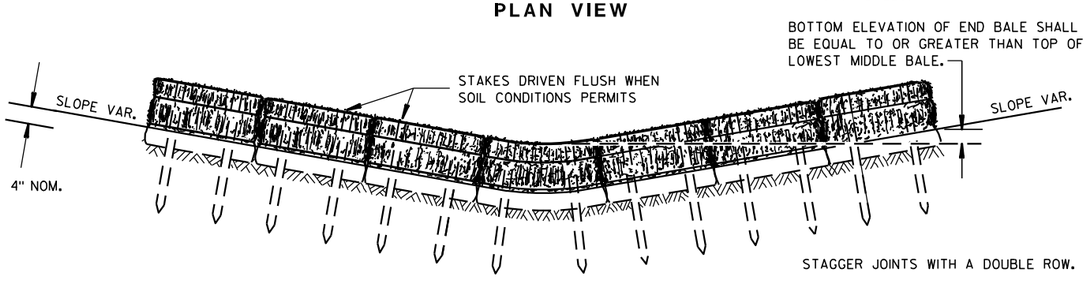
6




**SECTION A-A**




**PLAN VIEW**



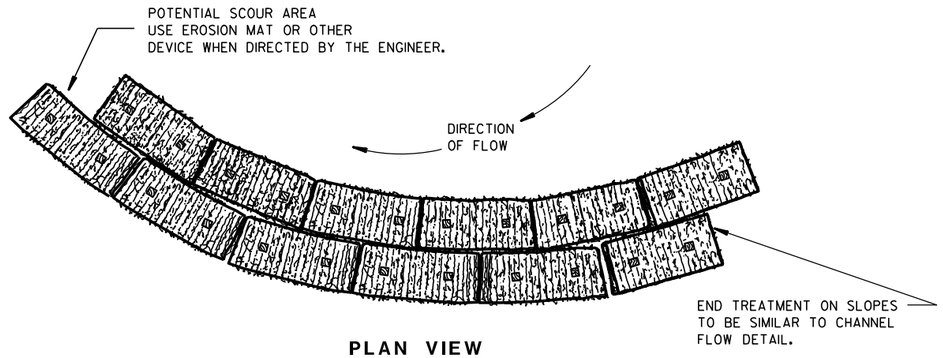

**FRONT ELEVATION**

## TEMPORARY DITCH CHECK USING EROSION BALES (1)

## GENERAL NOTES

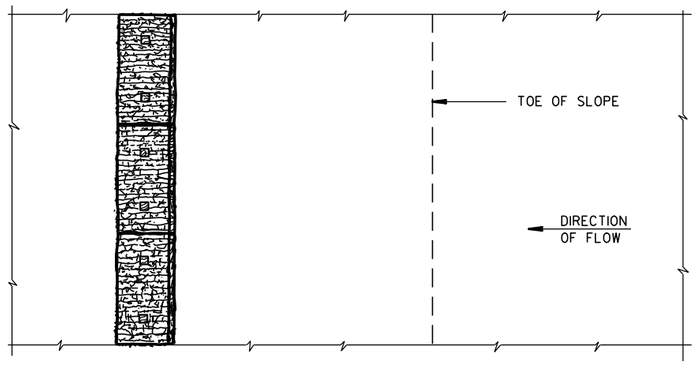
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

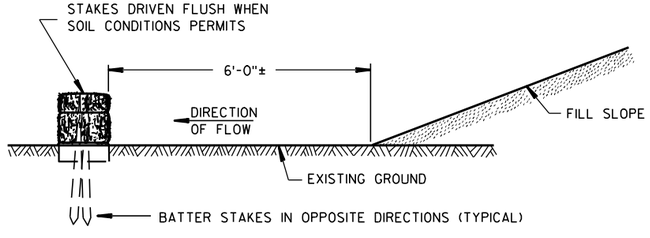



**PLAN VIEW**

WHEN ALTERING THE DIRECTION OF FLOW




**PLAN VIEW**




**FRONT ELEVATION**

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

## EROSION BALES FOR SHEET FLOW

## TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

FHWA

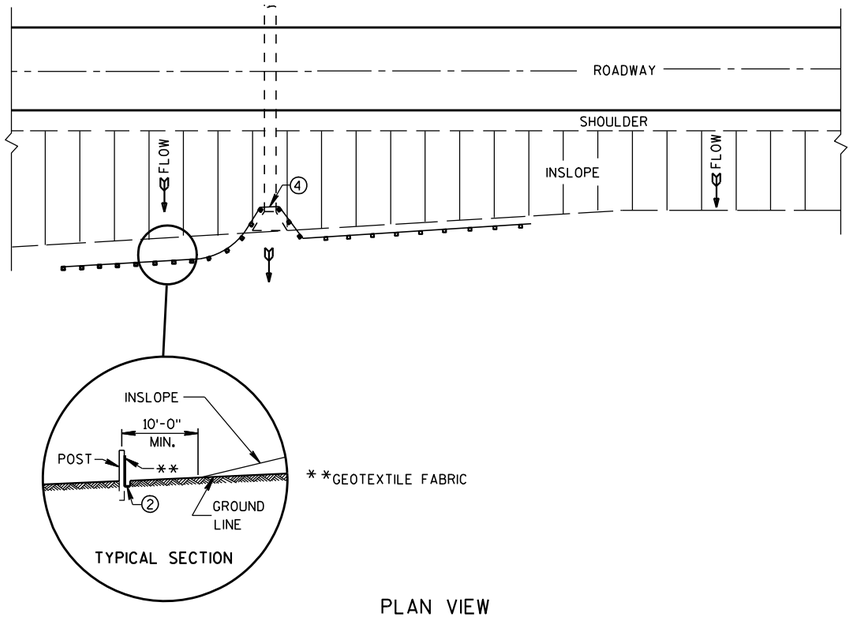


6

S.D.D. 8 E 8-3

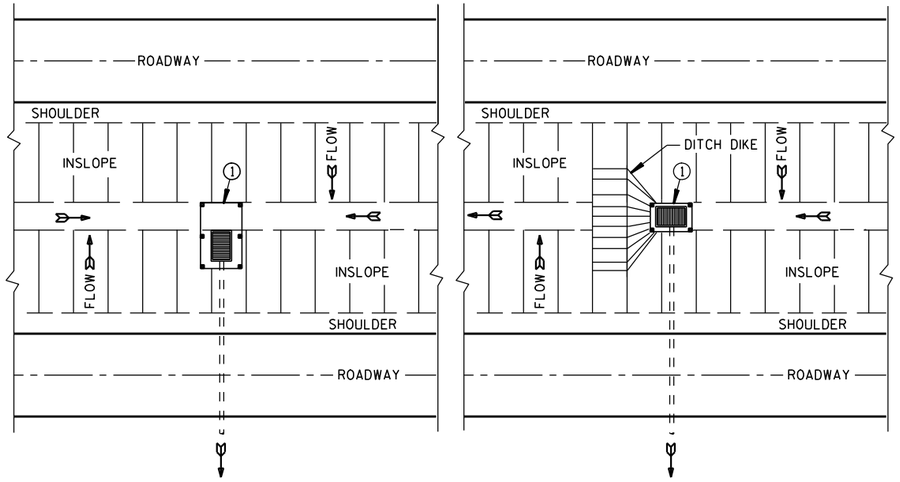
6

S.D.D. 8 E 8-3




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE




PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

## GENERAL NOTES

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

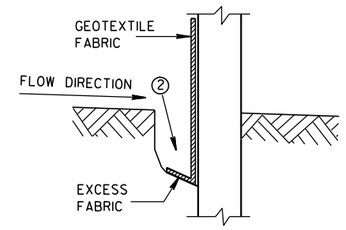
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

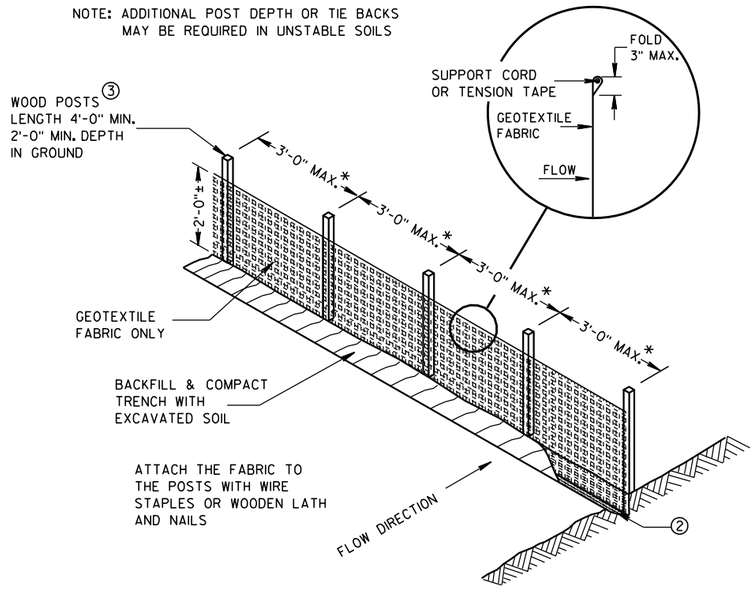
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

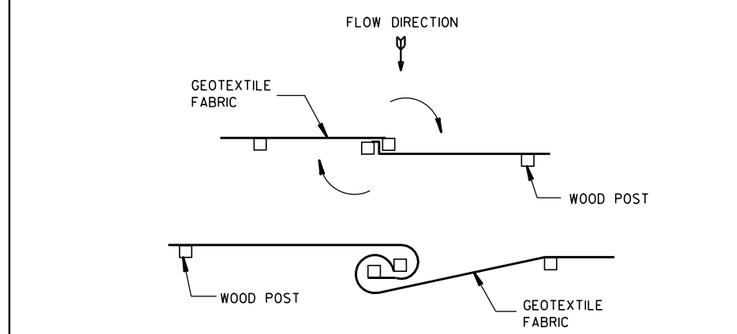
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



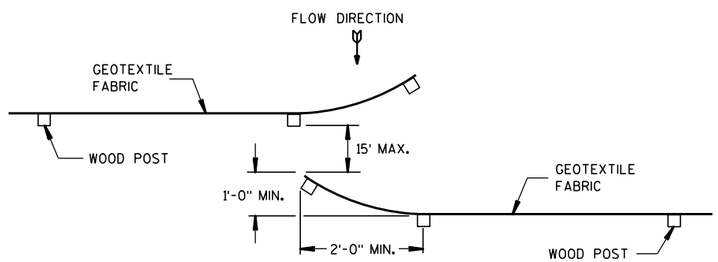

## TRENCH DETAIL




## SILT FENCE

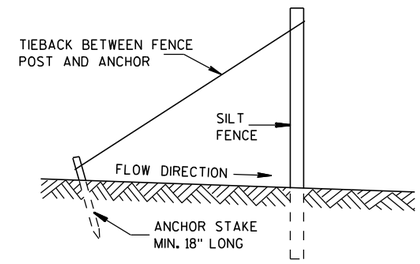



TWIST METHOD




HOOK METHOD

## JOINING TWO LENGTHS OF SILT FENCE ⑤




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

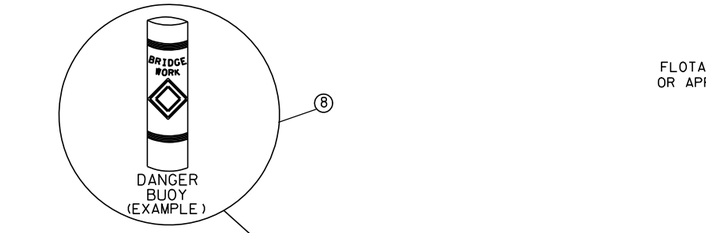


6

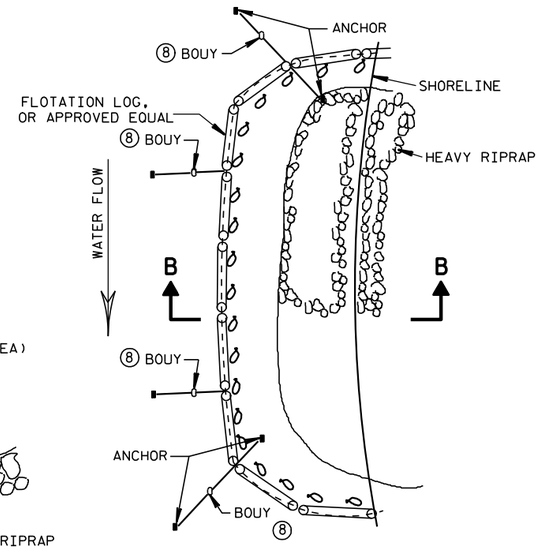
S.D.D. 8 E 9-6

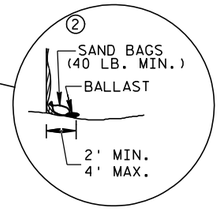
6

S.D.D. 8 E 9-6

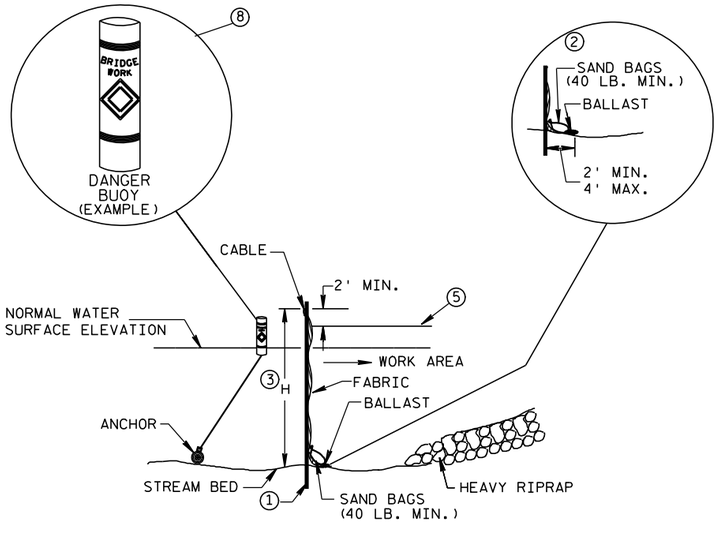



**SECTION B-B**



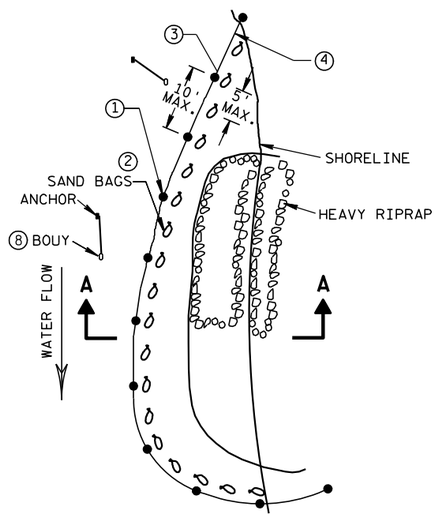




**TURBIDITY BARRIER FLOAT ALTERNATIVE**
**CAUTION - SEE NOTE 6**




**SECTION A-A**




**PLAN VIEW**

**TURBIDITY BARRIER STANDARD POST INSTALLATION**

**TURBIDITY BARRIER PLACEMENT DETAILS**

## GENERAL NOTES

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

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

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

② SANDBAGS 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 FT., POST SPACING MAY NEED TO BE DECREASED.

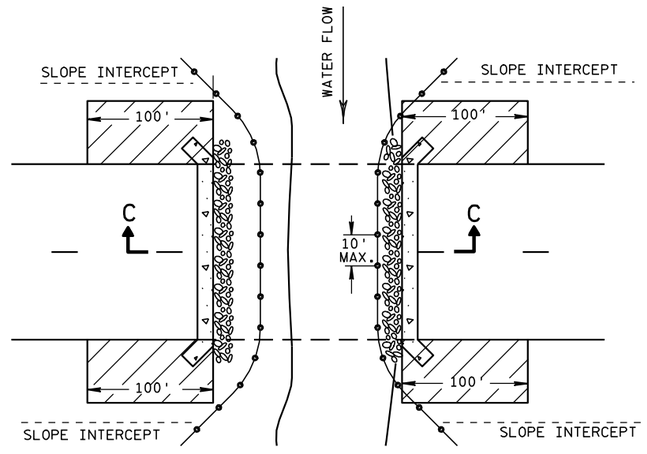
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

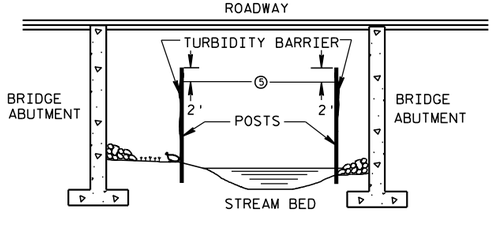
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

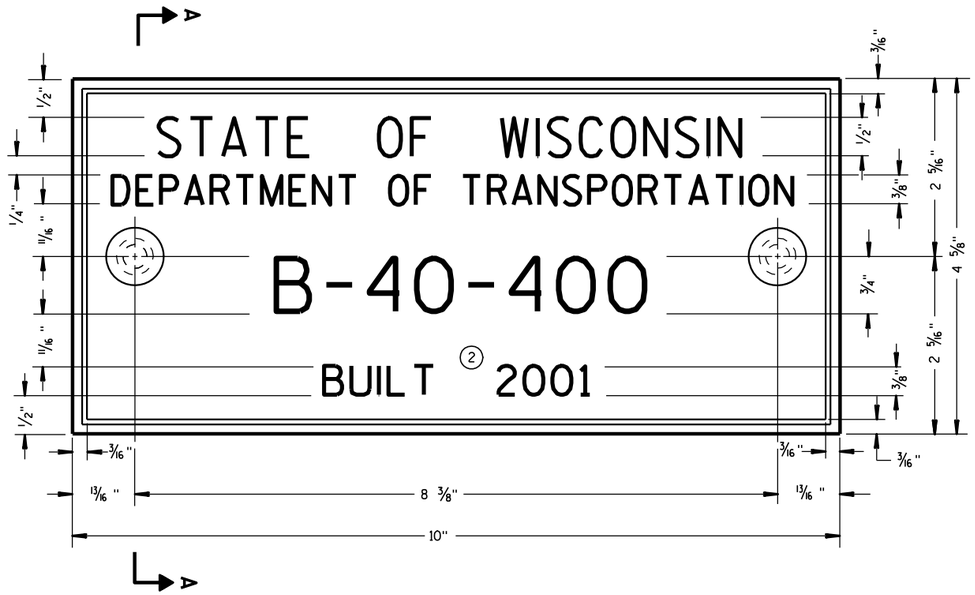
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



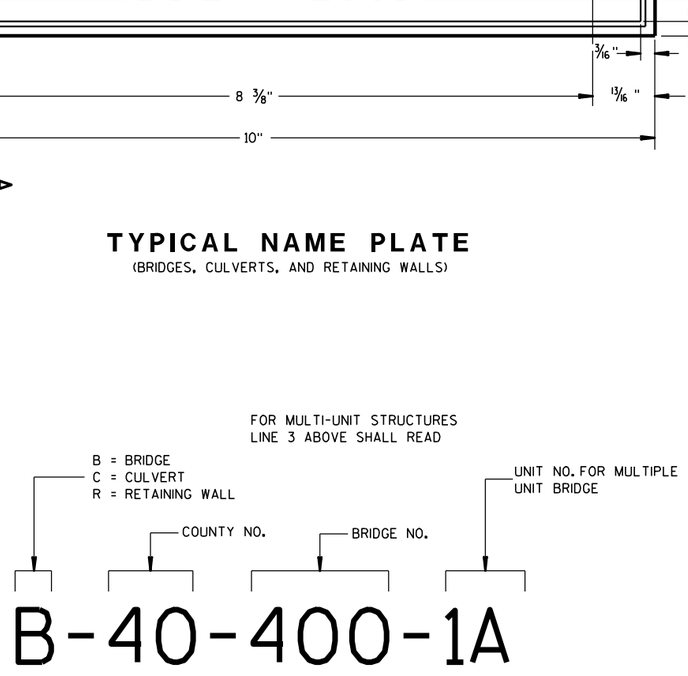
6

S.D.D. 8 E 11-2

S.D.D. 8 E 11-2




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




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

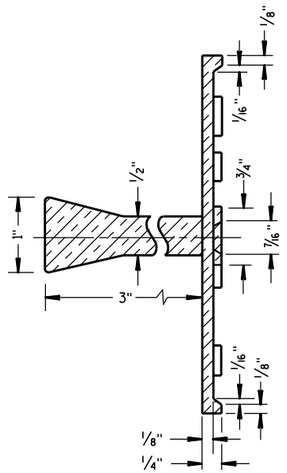
## GENERAL NOTES

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

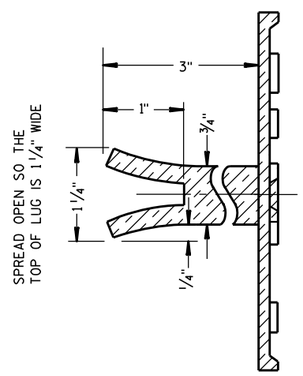
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

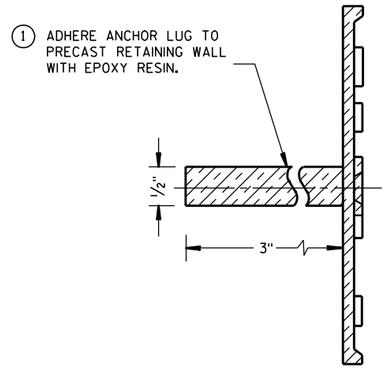
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.




**SECTION A-A**




**ALTERNATE LUG**




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

**NAME PLATE (STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

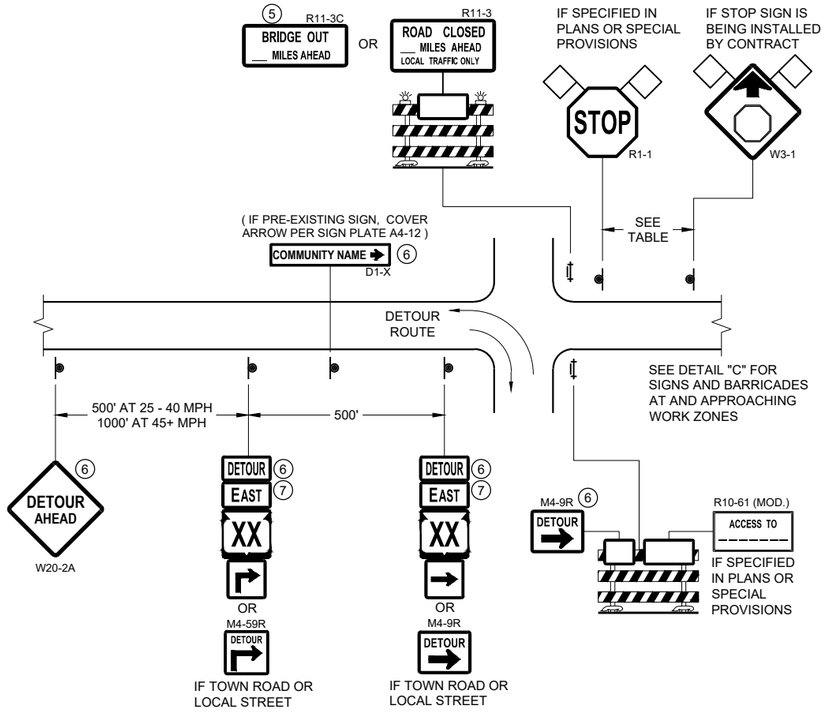


6

S.D.D. 12 A 3-10

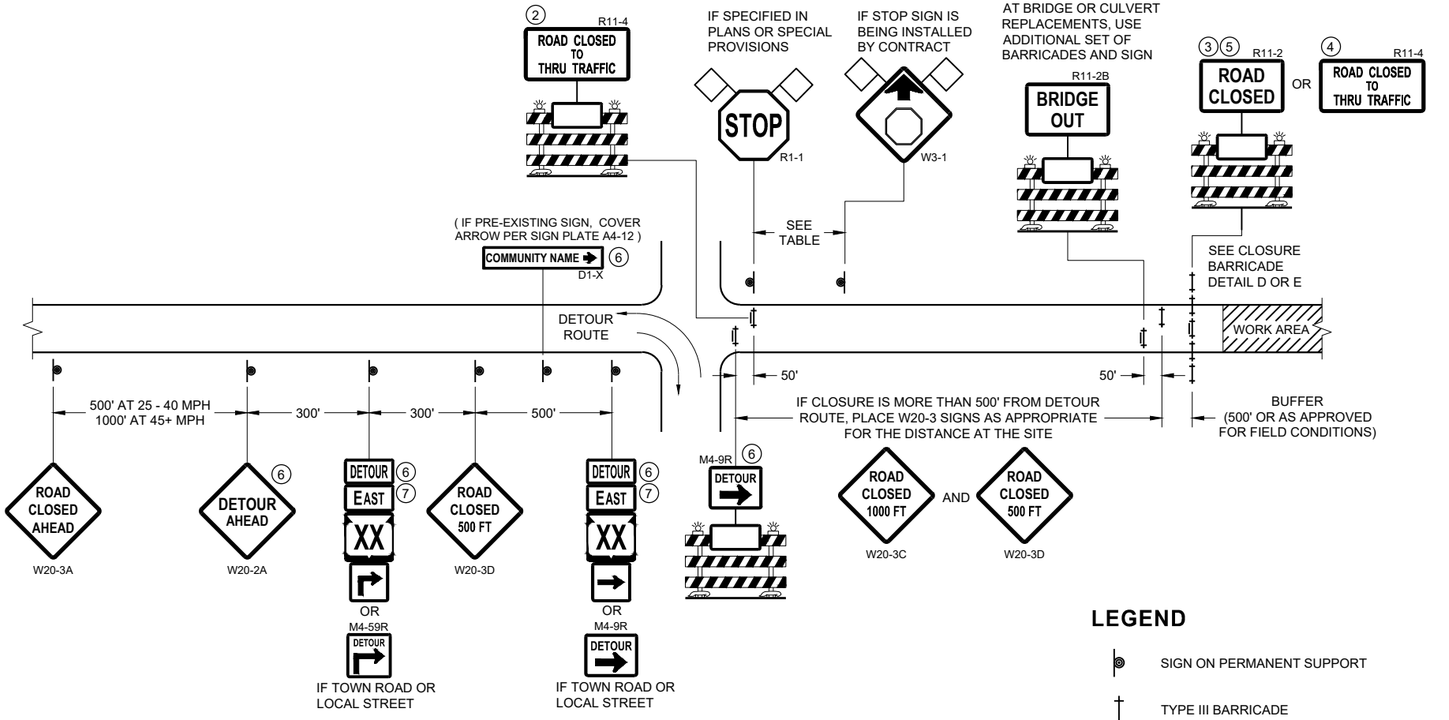
6

S.D.D. 12 A 3-10



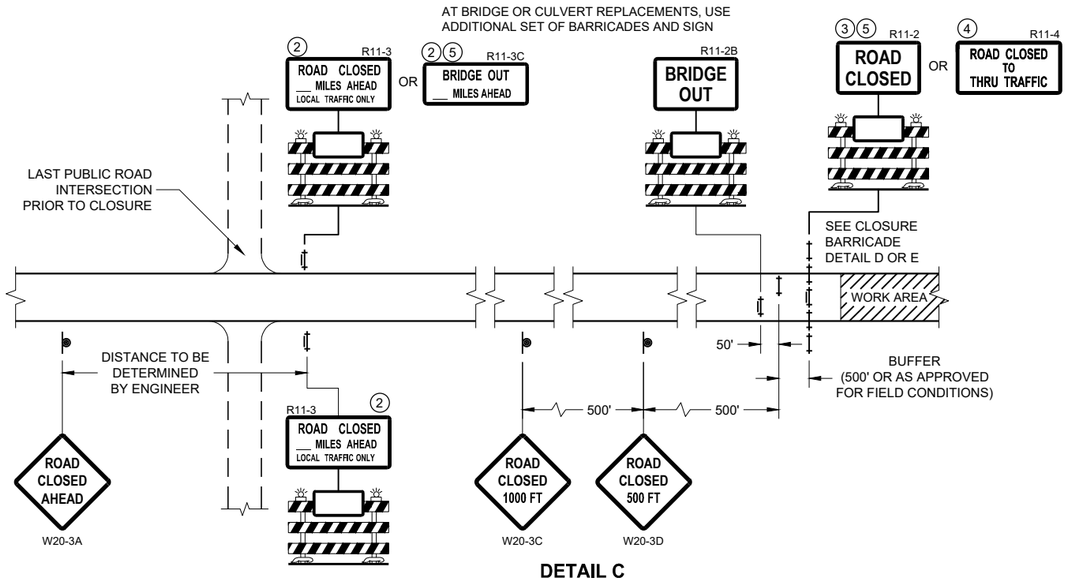

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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




## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

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




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

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

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

## LEGEND

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

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

# BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



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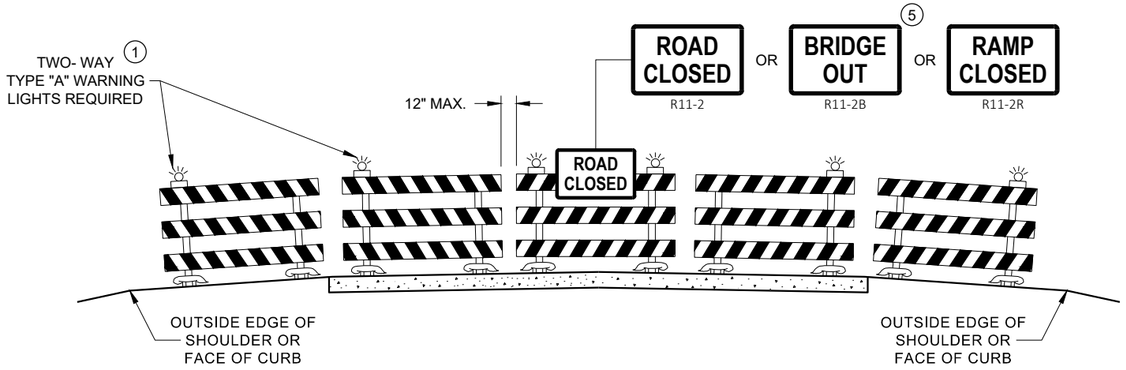
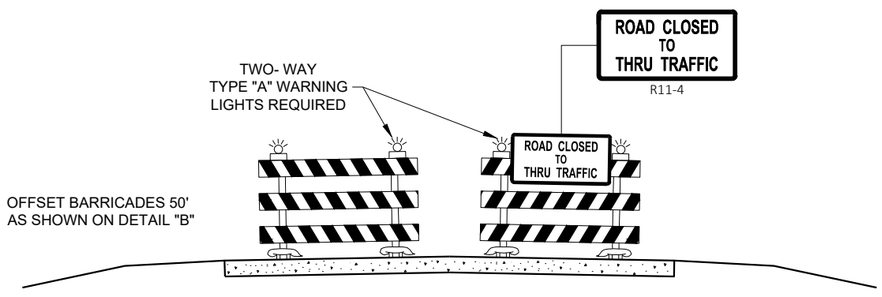
SDD 15C02 - 07a

SDD 15C02 - 07a




**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
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA



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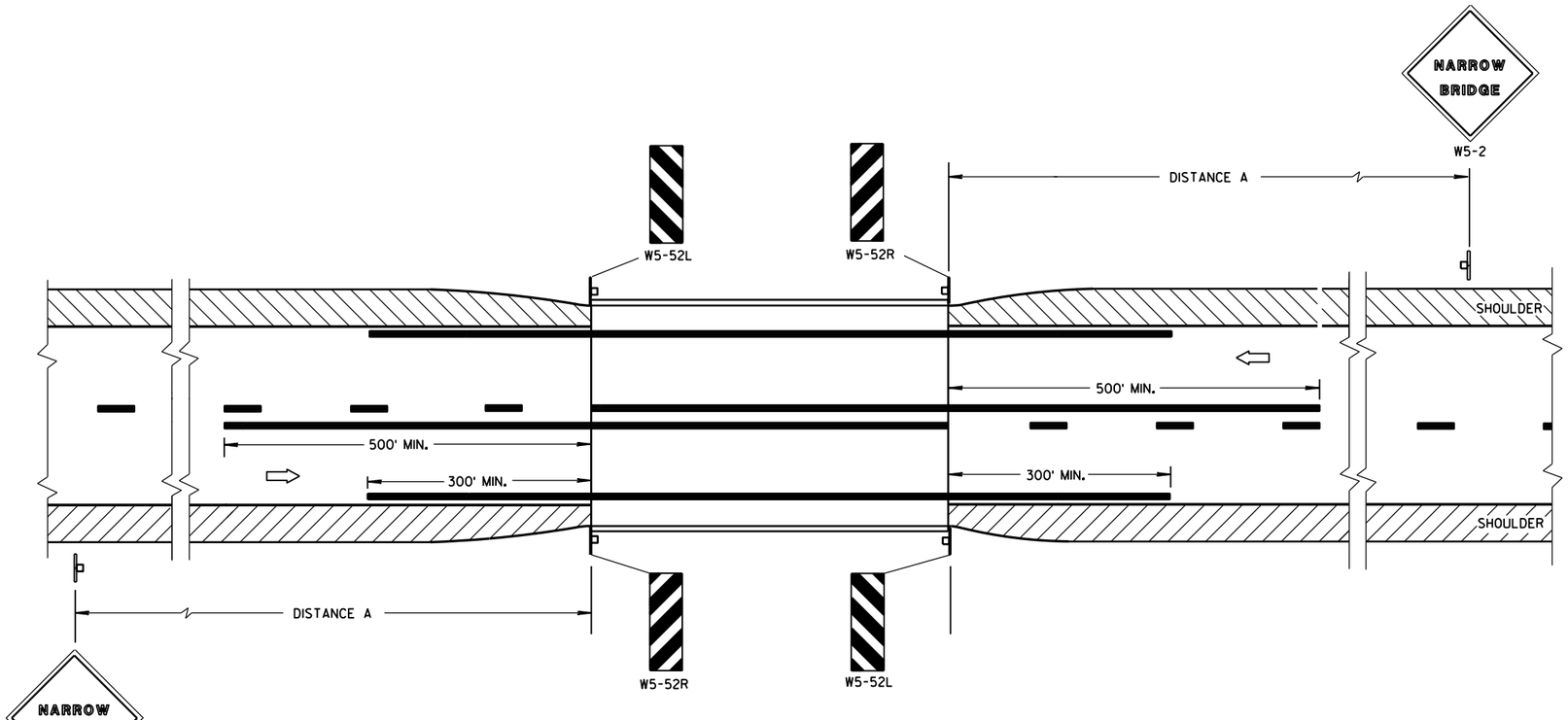
SDD 15C02 - 07b




## SITUATION 1

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

### DISTANCE TABLE

| POSTED OR 85th PERCENTILE SPEED | DISTANCE "A" |
|---|---|
| 25 | 150' |
| 30 | 200' |
| 35 | 250' |
| 40 | 300' |
| 45 | 400' |
| 50 | 550' |
| 55 | 750' |

## GENERAL NOTES

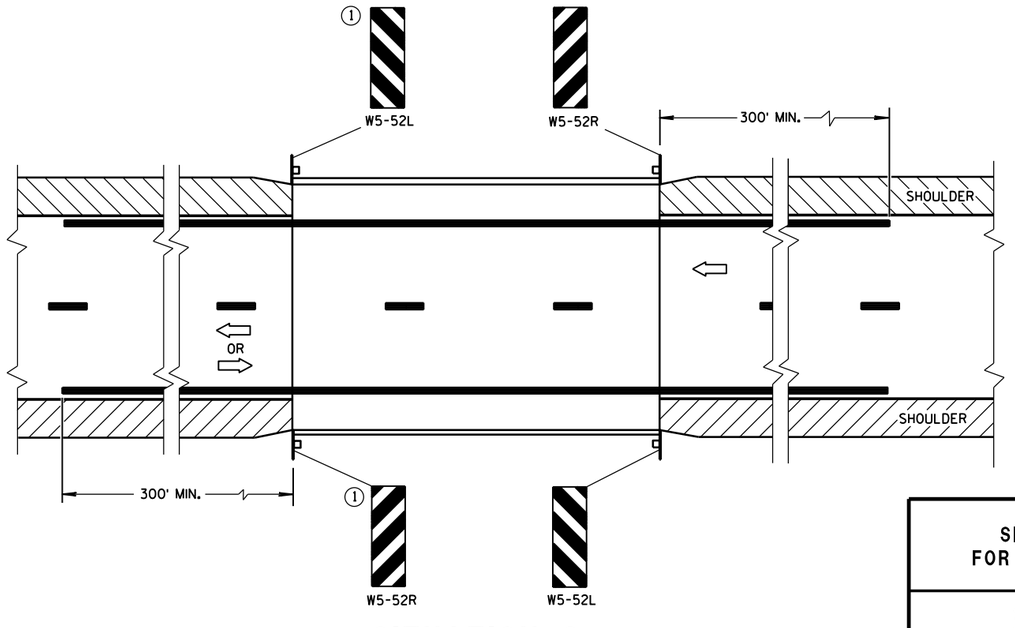
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC




## SITUATION 2

WARRANTING CRITERIA:

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

**SIGNING & MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER
FHWA

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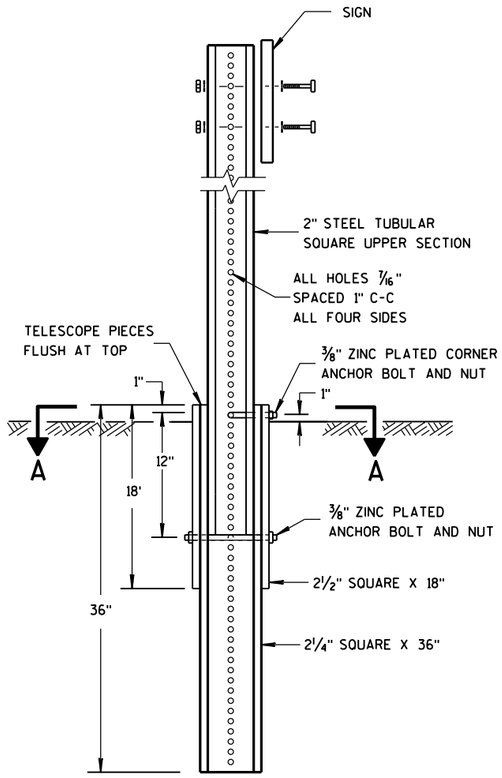
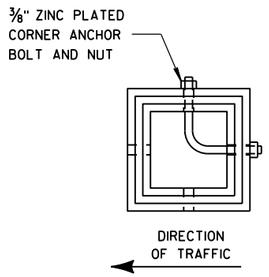
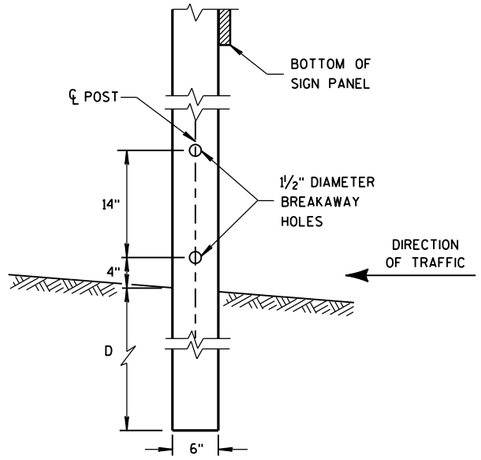
S.D.D. 15 C 6-9




## DETAIL OF TUBULAR STEEL SIGN POST




## SECTION A-A



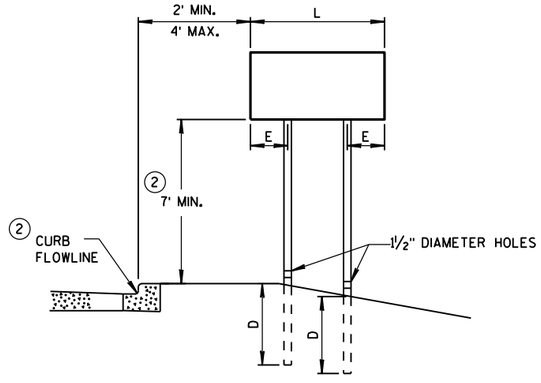

## 4"x6" WOOD POST MODIFICATION

## GENERAL NOTES

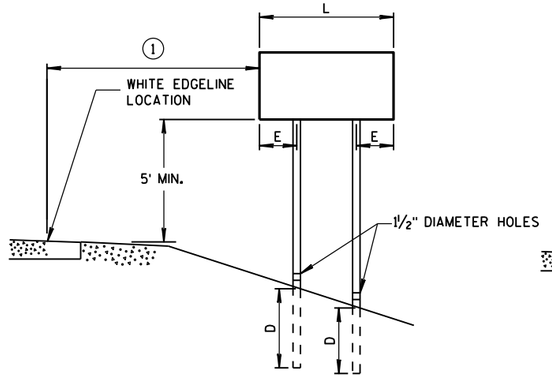
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

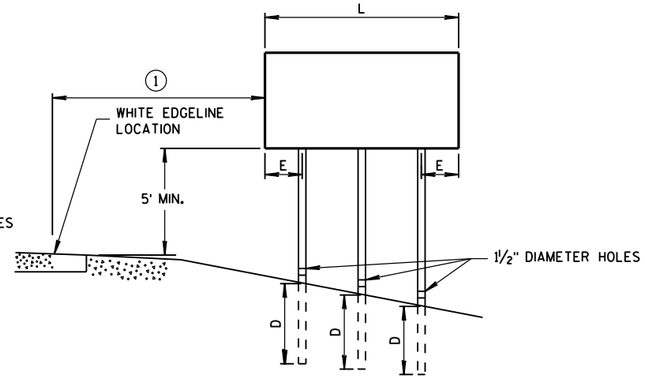
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.




## URBAN AREA




## RURAL AREA

## POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

### TUBULAR STEEL POSTS

| AREA OF SIGN INSTALLATION (SQ. FT.) | NUMBER OF REQUIRED TUBULAR STEEL POSTS |
|---|---|
| 9 OR LESS | 1 |
| GREATER THAN 9 LESS THAN OR EQUAL TO 18 | 2 |
| GREATER THAN 18 LESS THAN OR EQUAL TO 27 | 3 |

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

### WOOD POST EMBEDMENT DEPTH

| AREA OF SIGN INSTALLATION (SQ. FT.) | D (MIN) |
|---|---|
| 20 OR LESS | 4' |
| GREATER THAN 20 | 5' |

### 4" X 6" WOOD POST

| POST SPACING REQUIREMENTS | | NUMBER OF WOOD POSTS REQUIRED |
|---|---|---|
| L | E | |
| 48" OR LESS AND LESS THAN 20 SQ. FT. | - | 1 |
| LESS THAN 60" | 12" | 2 |
| 60" TO 120" | L/5 | 2 |
| GREATER THAN 120" LESS THAN 168" | 12" | 3 |
| 168" AND GREATER | 12" | 4 |

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR





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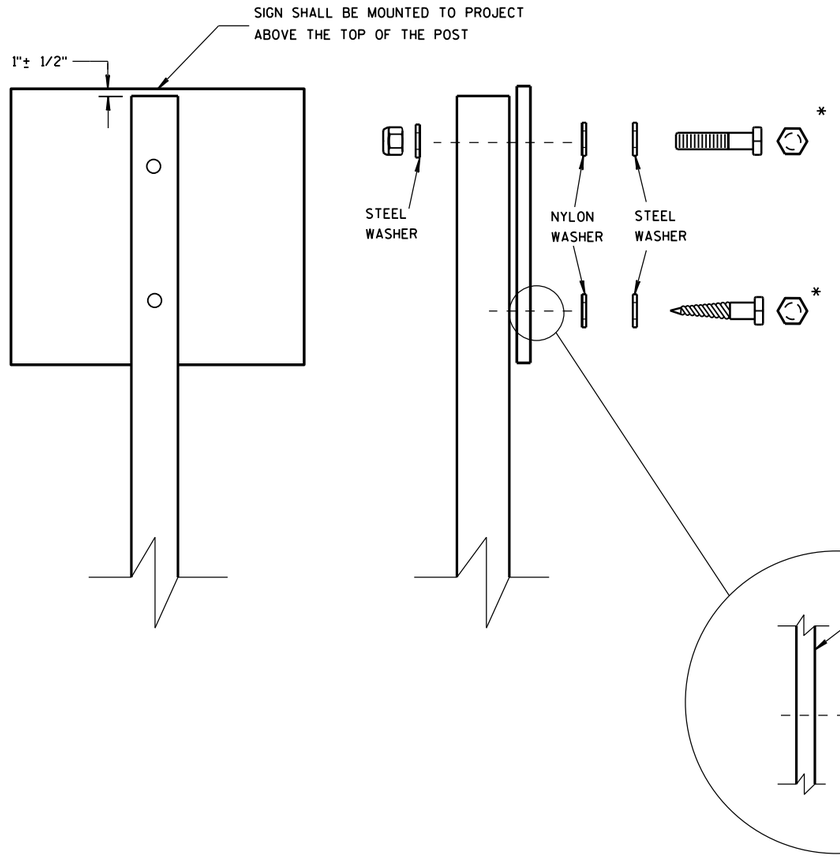
S.D.D. 15 D 38-2a




WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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

WASHERS (ALL POSTS) -

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

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

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S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

# ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

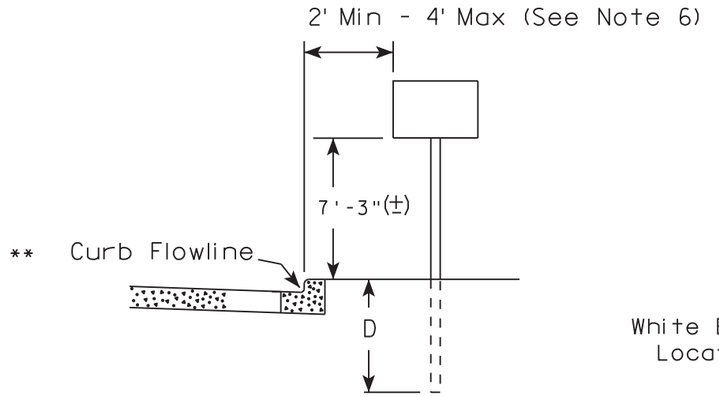
APPROVED

June 2017
DATE

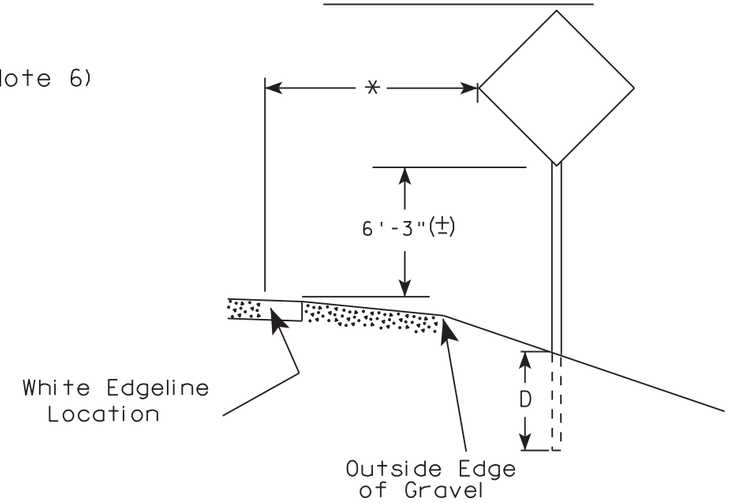
/S/ Andrew Heldtke
WORK ZONE ENG

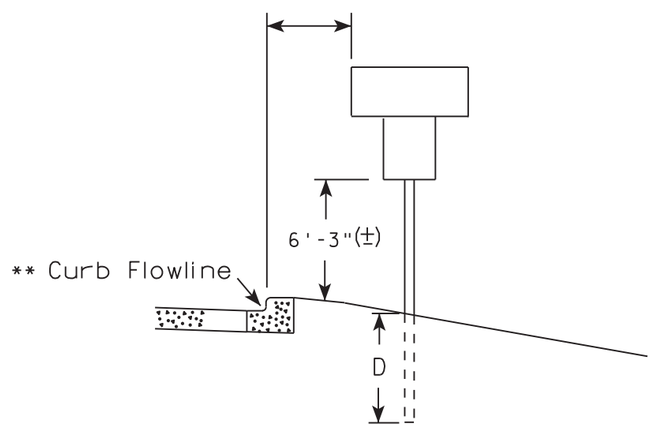
FHWA

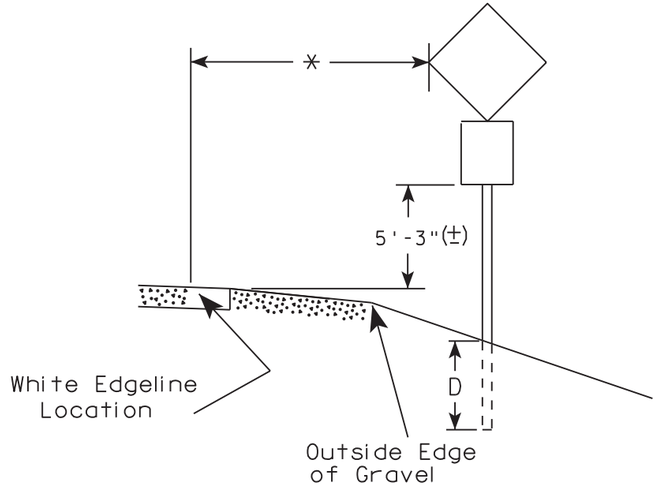
## URBAN AREA




## RURAL AREA (See Note 2)




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

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

### POST EMBEDMENT DEPTH

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

### GENERAL NOTES

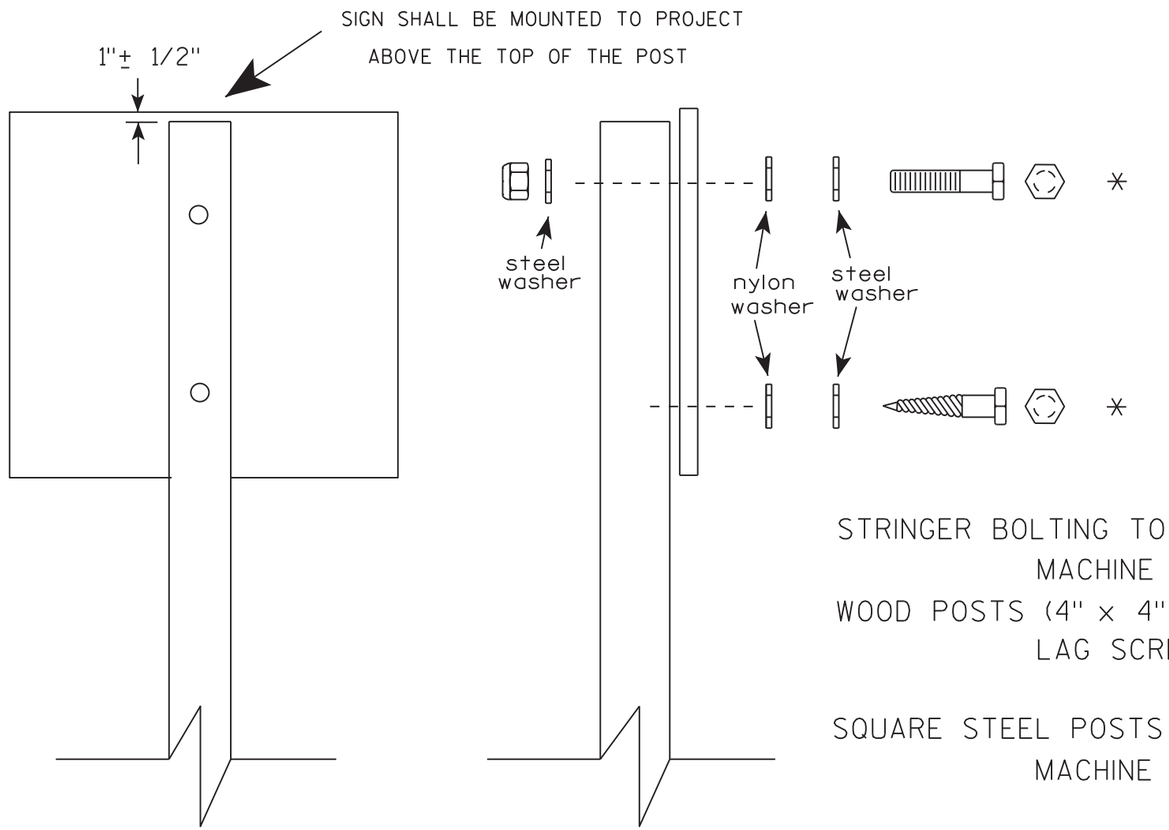
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies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

**TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS**

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21







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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

WOOD POSTS (4" x 4" or 4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

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

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

# ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

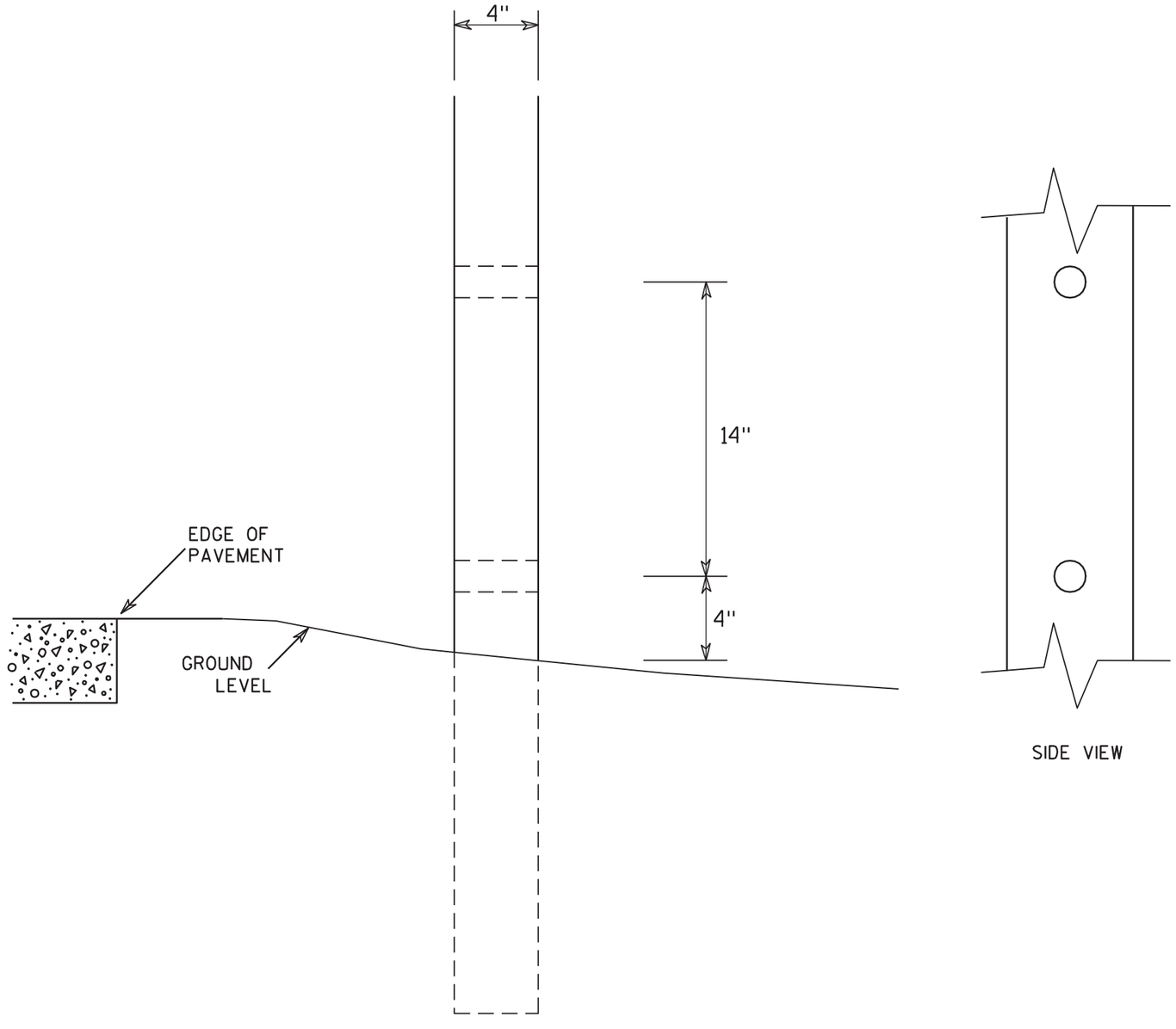
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8



| PROJECT NO: 7859-00-70 | HWY: PRAY AVENUE | COUNTY: CLARK | | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$






SIDE VIEW

GENERAL NOTES

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

7

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# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

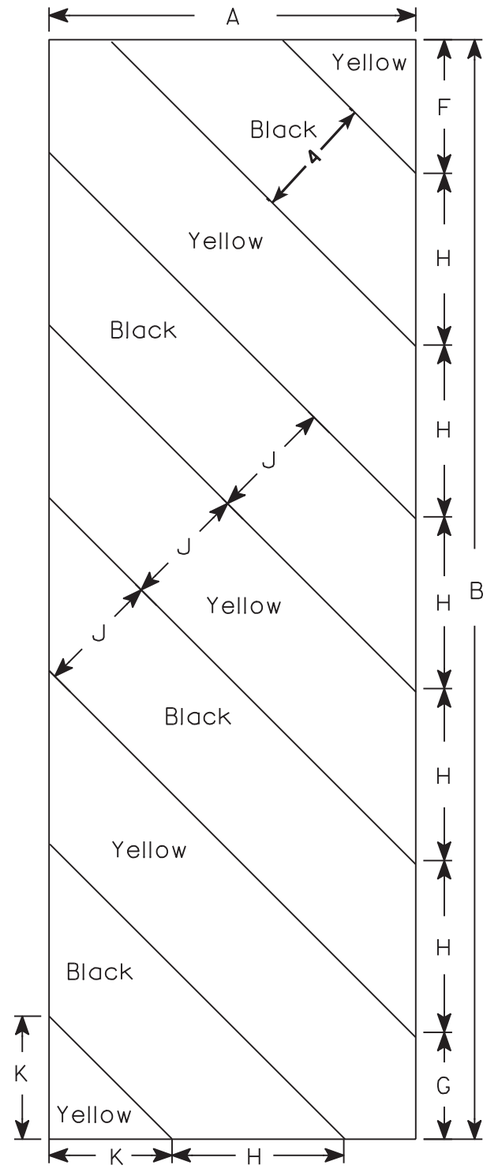
APPROVED Chester J Spang for State Traffic Engineer

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

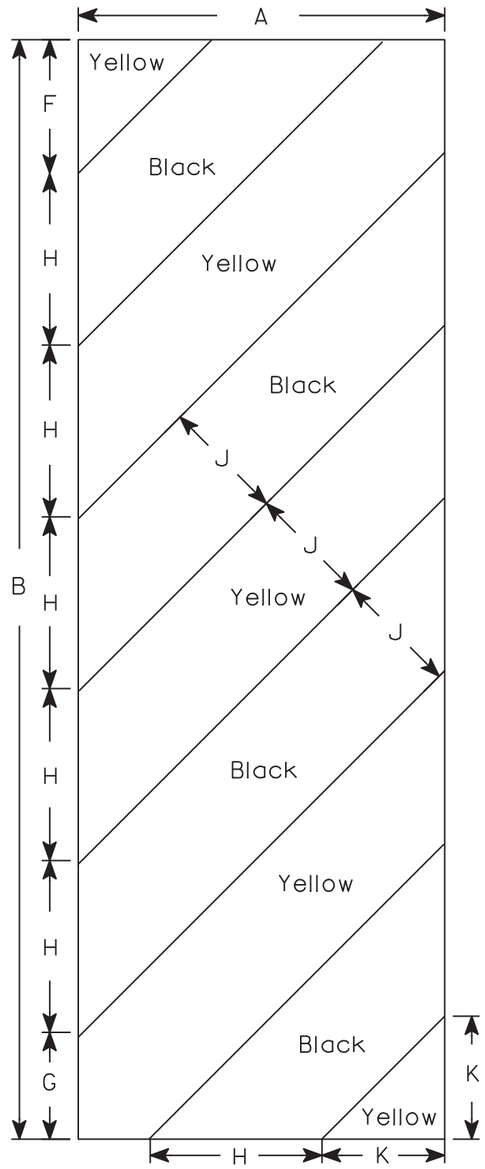
| PROJECT NO: 7859-00-70 | HWY: PRAY AVENUE | COUNTY: CLARK | | SHEET NO: 24 | E |
|---|---|---|---|---|---|

FILE NAME : C:\Users\Projects\tr_stdplate\A411.DGN PLOT DATE : 10-NOV-2005 10:09 PLOT BY : DOTSJA PLOT NAME : PLOT SCALE : 6.207338:1.000000

WISDOT/CADDS SHEET 42




W5-52L




W5-52R

NOTES

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

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

STANDARD SIGN

W5-52L & W5-52R

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: 7859-00-70 | HWY: PRAY AVENUE | COUNTY: CLARK | SHEET NO: 25 | E

$PRFNAME$
U:\42-1140.00 - Clark Co, Tn Washburn, Pray Ave\Structures\FINAL\421140_GP.dgn

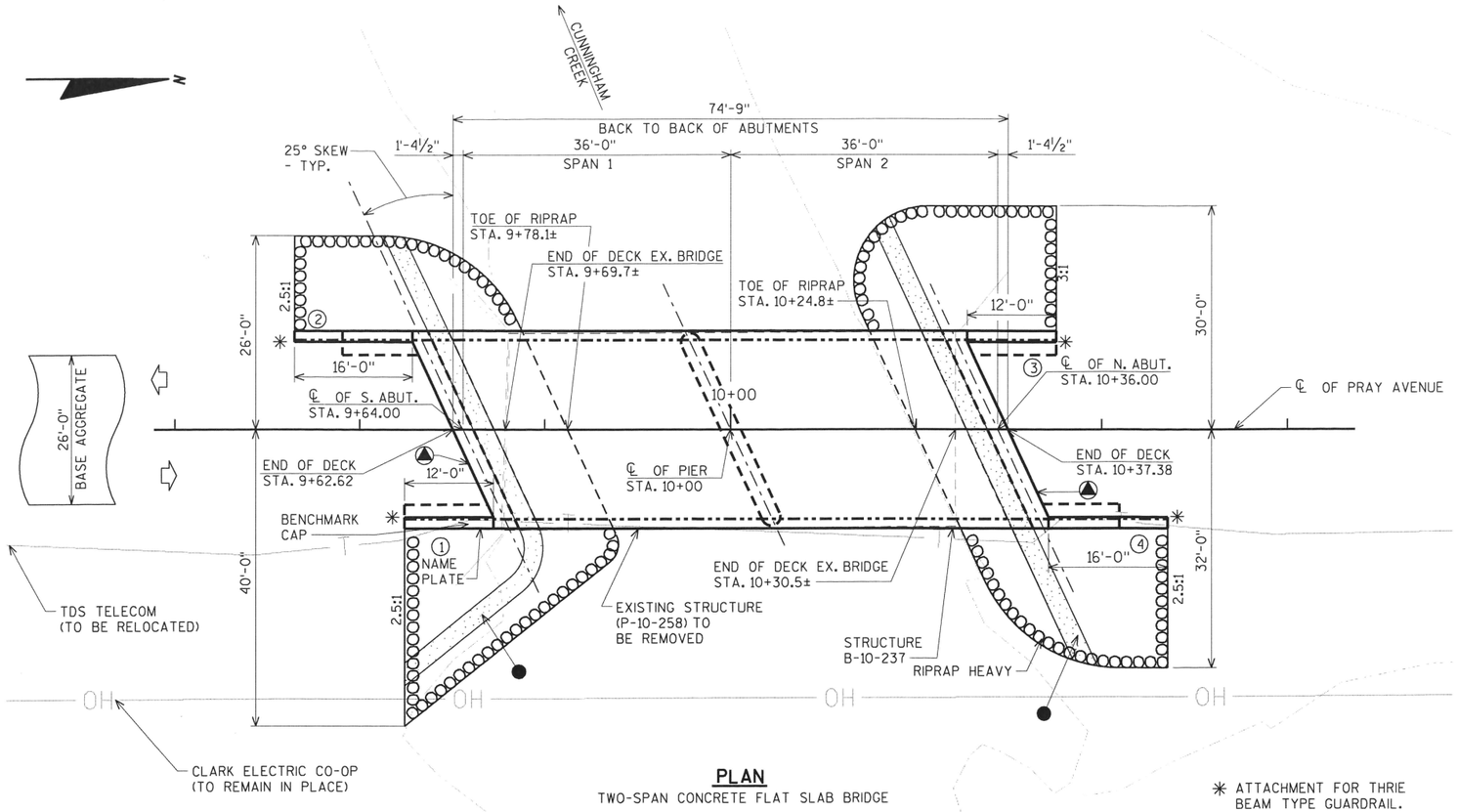
DATE:
DATE:
DATE:

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8

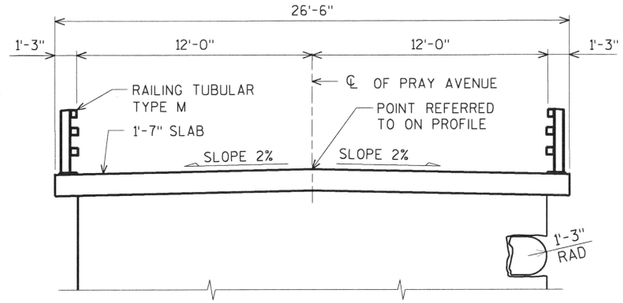
STATE PROJECT NUMBER

7859-00-70




**PLAN**

TWO-SPAN CONCRETE FLAT SLAB BRIDGE



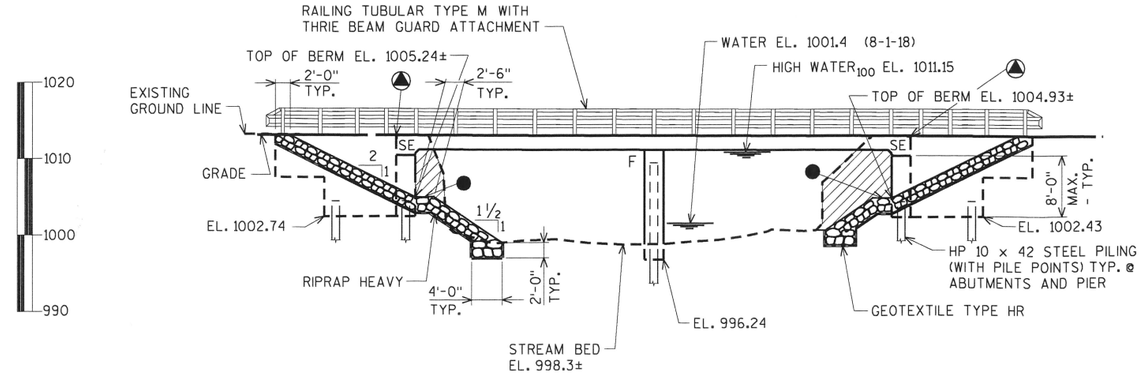

**TYPICAL SECTION THRU BRIDGE**

✳ ATTACHMENT FOR THRIE BEAM TYPE GUARDRAIL.

◯ DENOTES WING NUMBER.

◬ PROTECTION ANGLE AT END OF DECK.

● ECO-PASSAGE. SEE DETAIL ON SHEET 2.




**ELEVATION**

(NORMAL TO ℄ OF CREEK)

▨ COST OF EXCAVATION IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-10-237".

## DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.04
OPERATING RATING FACTOR : 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

MATERIAL PROPERTIES:

| | | | |
|---|---|---|---|
| CONCRETE MASONRY | SUPERSTRUCTURE | $f'_c$ = | 4,000 p.s.i. |
| | ALL OTHER | $f'_c$ = | 3,500 p.s.i. |
| HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) | | $f_y$ = | 60,000 p.s.i. |

HYDRAULIC DATA:

| 100 YEAR FREQUENCY | 2 YEAR FREQUENCY |
|---|---|
| $Q_{100}$ = 4,740 c.f.s. | $Q_2$ = 1,180 c.f.s. |
| VEL.= 10.4 f.p.s. | VEL.= 5.4 f.p.s. |
| $HW_{100}$ = EL. 1011.15 | $HW_2$ = EL. 1005.78 |

WATERWAY AREA = 458 sq. ft.
DRAINAGE AREA = 20.8 sq. mi.
SCOUR CRITICAL CODE = 5
DATUM = NAVD88 (2012)

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS ‡ PER PILE. ESTIMATED LENGTH OF 25'-0".

PIER TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) WITH A REQUIRED DRIVING RESISTANCE OF 160 TONS ‡ PER PILE. ESTIMATED LENGTH OF 30'-0".

‡ 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.

## LIST OF DRAWINGS



TRAFFIC DATA:

A.D.T. = <100 (2020)
A.D.T. = <100 (2040)
R.D.S. = 55 M.P.H.

WISCONSIN PROFESSIONAL ENGINEER
DANIEL N. SYDOW
E-38363
WI
5/30/19


BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161


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

ORIGINAL PLANS PREPARED BY


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


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/05/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-10-237

PRAY AVENUE OVER CUNNINGHAM CREEK

| COUNTY | TOWN/~~CITY/VILLAGE~~ |
|---|---|
| CLARK | WASHBURN |

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

| DESIGNED BY | DESIGN CK'D. | DRAWN BY | PLANS CK'D. |
|---|---|---|---|
| ZSS | JLB | JLB | BNS |

GENERAL PLAN

SHEET 26 15

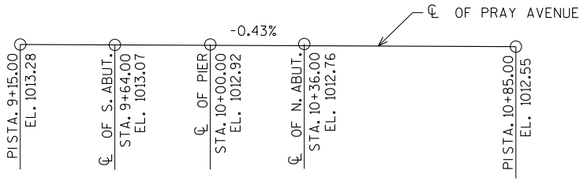
8

5/28/2019
PENTABLE:Wisdot_sbd.tbl
LD
DATE:

## TOTAL ESTIMATED QUANTITIES

| BID ITEM NUMBER | BID ITEMS | UNIT | S. ABUT. | PIER 1 | N. ABUT. | SUPER. | TOTAL |
|---|---|---|---|---|---|---|---|
| ● 203.0600.S | REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00 | LS | ----- | ----- | ----- | ----- | 1 |
| 206.1000 | EXCAVATION FOR STRUCTURES BRIDGES B-10-237 | LS | ----- | ----- | ----- | ----- | 1 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | 200 | ----- | 200 | ----- | 400 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 46 | 38 | 46 | 121 | 251 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | ----- | ----- | ----- | 265 | 265 |
| 505.0400 | BAR STEEL REINFORCEMENT HS STRUCTURES | LB | 2,220 | 1,680 | 2,220 | ----- | 6,120 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 1,860 | 60 | 1,860 | 28,310 | 32,090 |
| 506.0105 | STRUCTURAL STEEL CARBON | LB | ----- | ----- | ----- | 510 | 510 |
| 513.4061 | RAILING TUBULAR TYPE M | LF | 30 | ----- | 30 | 150 | 210 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | 9 | ----- | 9 | ----- | 18 |
| 550.0500 | PILE POINTS | EACH | 6 | 6 | 6 | ----- | 18 |
| 550.1100 | PILING STEEL HP 10-INCH x 42 LB | LF | 150 | 180 | 150 | ----- | 480 |
| 606.0300 | RIPRAP HEAVY | CY | 100 | ----- | 90 | ----- | 190 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | 75 | ----- | 75 | ----- | 150 |
| 645.0111 | GEOTEXTILE TYPE DF SCHEDULE A | SY | 50 | ----- | 50 | ----- | 100 |
| 645.0120 | GEOTEXTILE TYPE HR | SY | 190 | ----- | 180 | ----- | 370 |
| | | | | | | | |
| | | | | | | | |
| | NON-BID ITEMS | | | | | | |
| | FILLER | SIZE | ----- | ----- | ----- | ----- | ½" & ¾" |
| | | | | | | | |
| | | | | | | | |

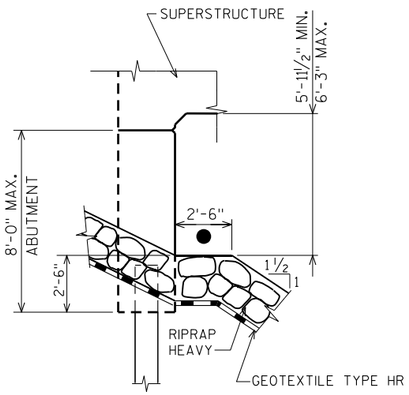
● EXISTING STEEL BEAMS, STEEL RAILING, AND STEEL SUPPORTS NEAR ABUTMENTS TO BE SALVAGED TO THE TOWN OF WASHBURN




BENCH MARK:
120'D' SPIKE IN WINGWALL POST
STA. 10+31. 16' RT.
EL. 1011.20

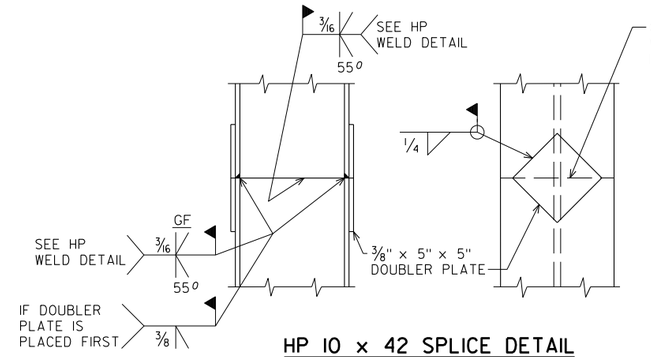
### PROFILE GRADE LINE

(PRAY AVENUE)

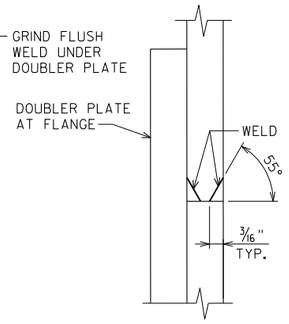



### ECO-PASSAGE DETAIL

● ECO-PASSAGE.
FILL VOIDS IN RIPRAP HEAVY WITH TRAFFIC BOND LIMESTONE SCREENINGS ⅜-INCH TO FULLY FILL ALL VOIDS AND LEAVE, ON AVERAGE, TWO INCHES ABOVE THE LOWEST ROCK POINTS WHERE THEY ABUT EACH OTHER. PROVIDE LEVEL SURFACE OF THE ECO-PASSAGE. THE TRANSITIONS OF THE AT-GRADE ECO PASSAGE TO THE EDGES OF THE RIPRAP HEAVY SHALL BE GRADUAL WITH NO MORE THAN 2:1 SLOPE. TRAFFIC BOND LIMESTONE SHALL BE COMPACTED ONCE IN PLACE. TRAFFIC BOND LIMESTONE TO BE INCIDENTAL IN THE WORK ITEM "RIPRAP HEAVY".

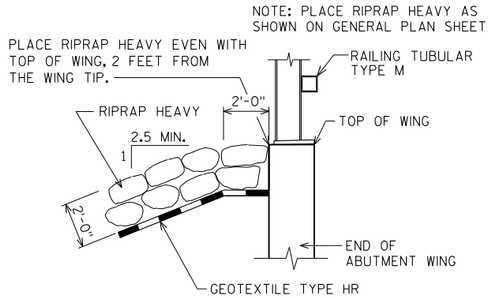



### HP 10 x 42 SPLICE DETAIL

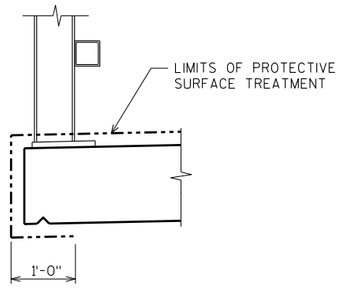



### HP WELD DETAIL

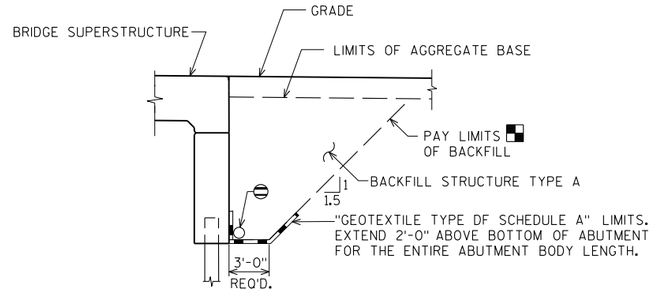
FLANGE SHOWN, WEB SIMILAR




### TYPICAL FILL SECTION AT WING TIPS




### PROTECTIVE SURFACE TREATMENT DETAIL




### BACKFILL STRUCTURE LIMITS THRU ABUTMENT

■ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL 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 AS DETAILED ON SHEET 7.

### GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-10-237" SHALL BE THE EXISTING GROUNDLINE.

THE EXISTING STRUCTURE, P-10-258, TO BE REMOVED, IS A SINGLE-SPAN STEEL DECK GIRDER BRIDGE ON TIMBER ABUTMENTS AND ADDITIONAL STEEL SUPPORTS NEAR THE ABUTMENTS THAT IS 61.3-FT. LONG WITH A 23.8-FT. CLEAR ROADWAY WIDTH.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQURIED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

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.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

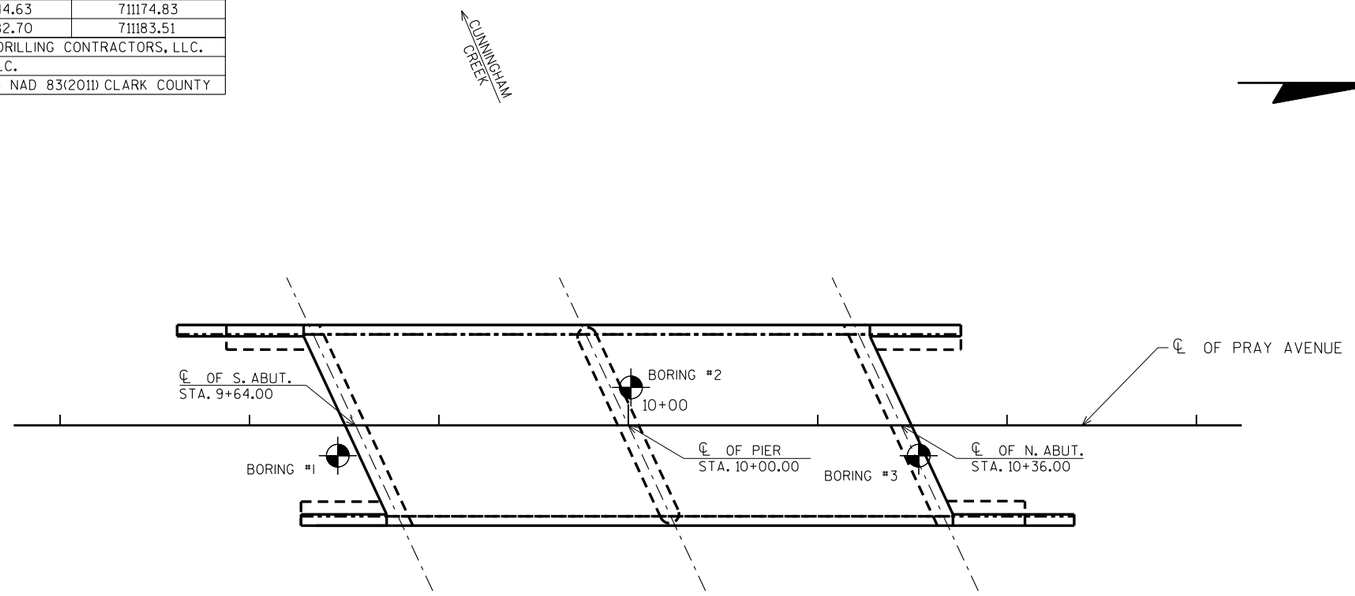
DRAWN BY JLB | PLANS CK'D. ZSS

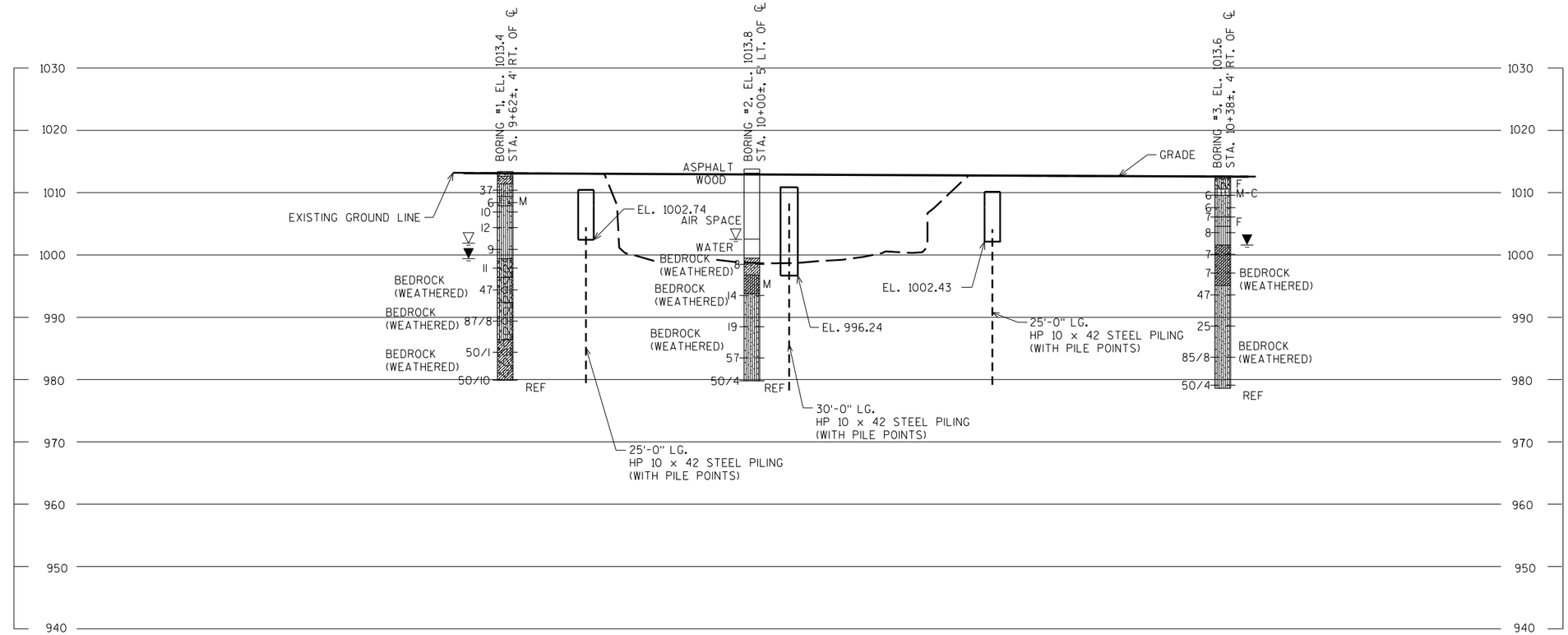
QUANTITIES AND NOTES

SHEET 2 OF 15
27

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| 1 | 10/30/18 | 330106.00 | 711184.15 |
| 2 | 10/30/18 | 330144.63 | 711174.83 |
| 3 | 10/30/18 | 330182.70 | 711183.51 |
| BORINGS COMPLETED BY: GEOTECHNICAL DRILLING CONTRACTORS, LLC. | | | |
| REPORT COMPLETED BY: ECS MIDWEST, LLC. | | | |
| ALL COORDINATES REFERENCED TO WCCS NAD 83(2011) CLARK COUNTY | | | |



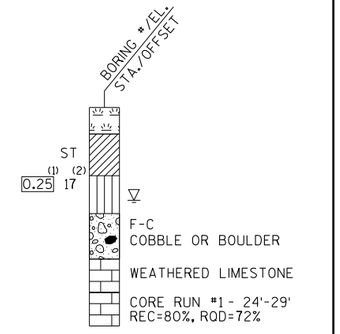

STATE PROJECT NUMBER

7859-00-70

MATERIAL SYMBOLS

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

LEGEND OF BORING




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

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

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▼ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

SUBSURFACE EXPLORATION

SHEET 3 OF 15
28

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$PRFNAME$
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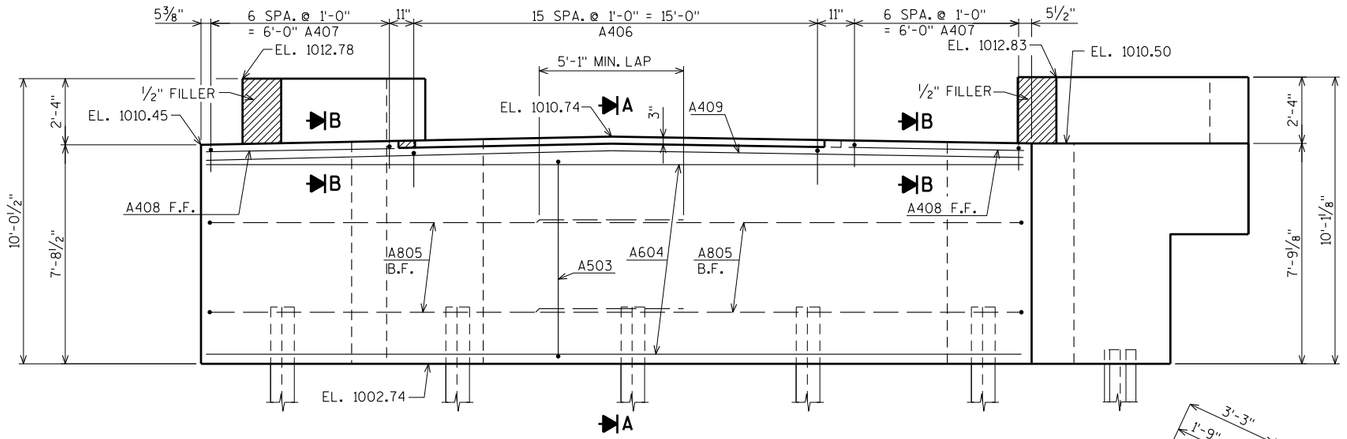
5/24/2019

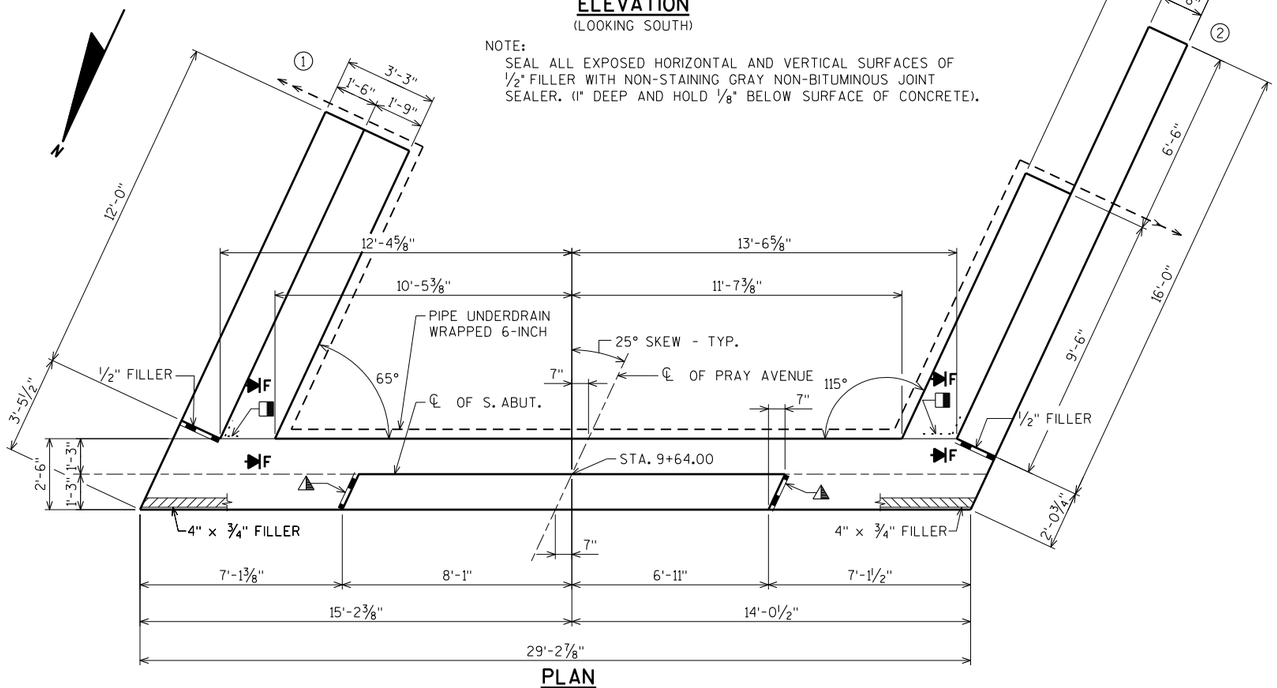
PENTABLE:Wisdot_shd.tbl

| STATE PROJECT NUMBER |
|---|
| 7859-00-70 |

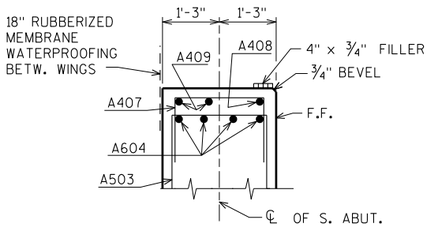



## ELEVATION
(LOOKING SOUTH)

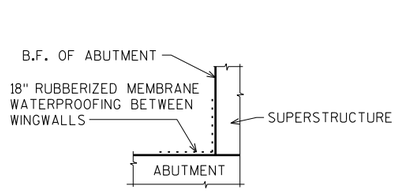
NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (I" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



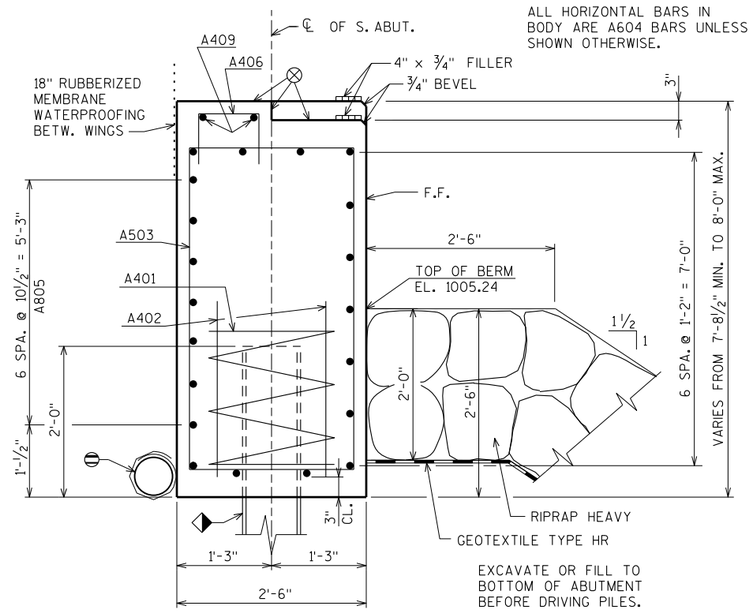

## PLAN




## SECTION B




## SECTION F




## SECTION A

◆ ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQ'D. DRIVING RESISTANCE OF 150 TONS PER PILE ESTIMATED LENGTH 25'-0".

◨ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

⚠ ¾" CORK FILLER ON VERTICAL FACE ONLY.

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHELENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING FILLER AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 7. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

SOUTH ABUTMENT

SHEET 4 OF 15
29

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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5/23/2019
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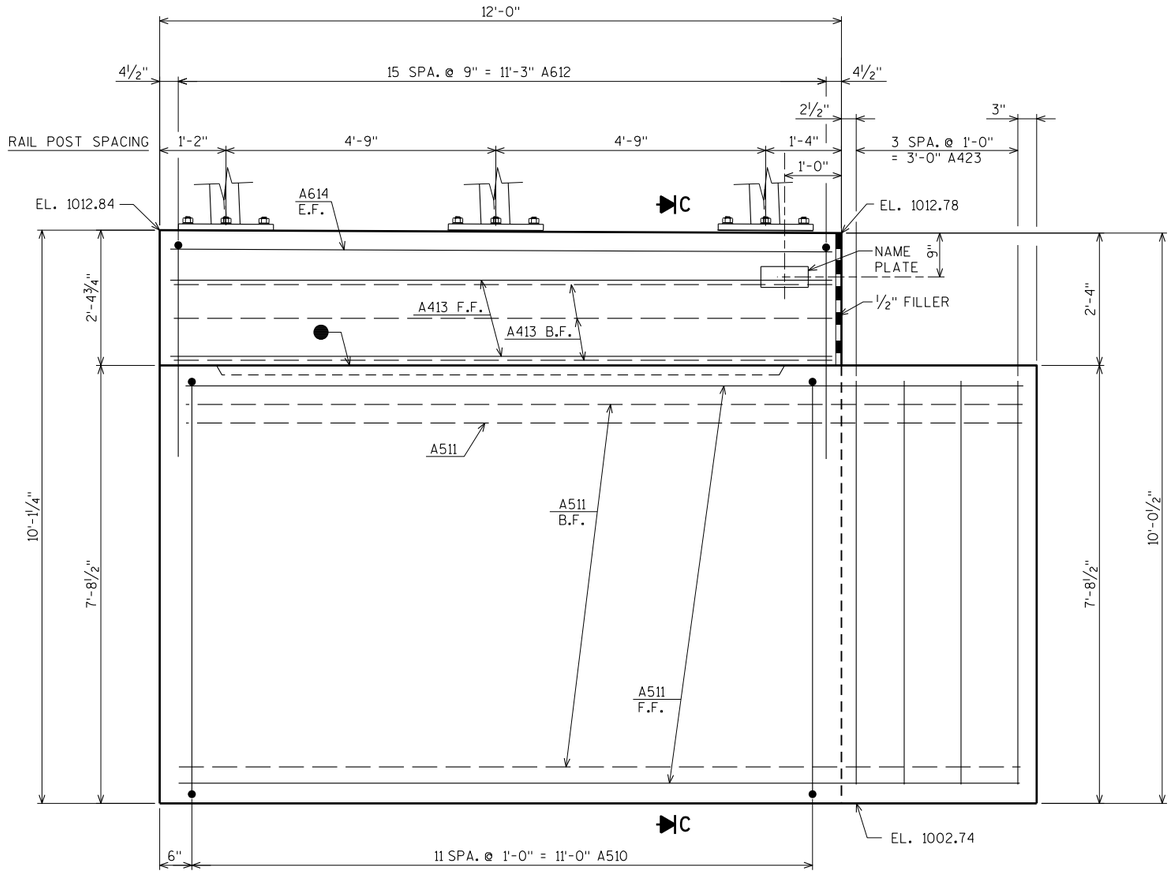
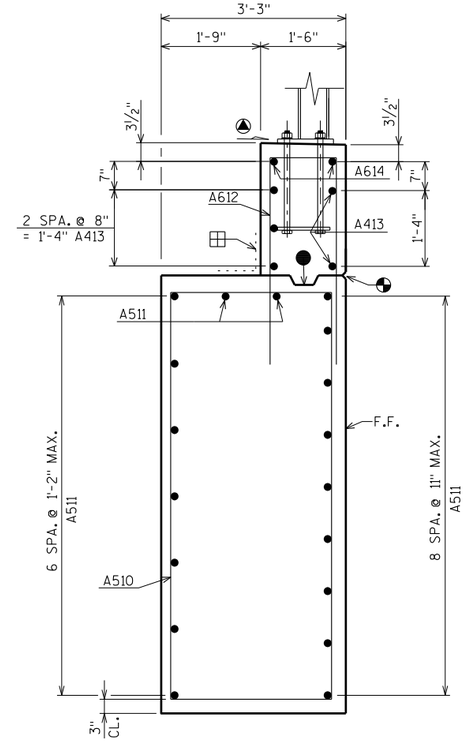
STATE PROJECT NUMBER

7859-00-70




ELEVATION - WING 1




SECTION C

- SLOPE SAME AS SUPERSTRUCTURE.
- ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

WING 1
DETAILS

SHEET 5 OF 15
30

ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
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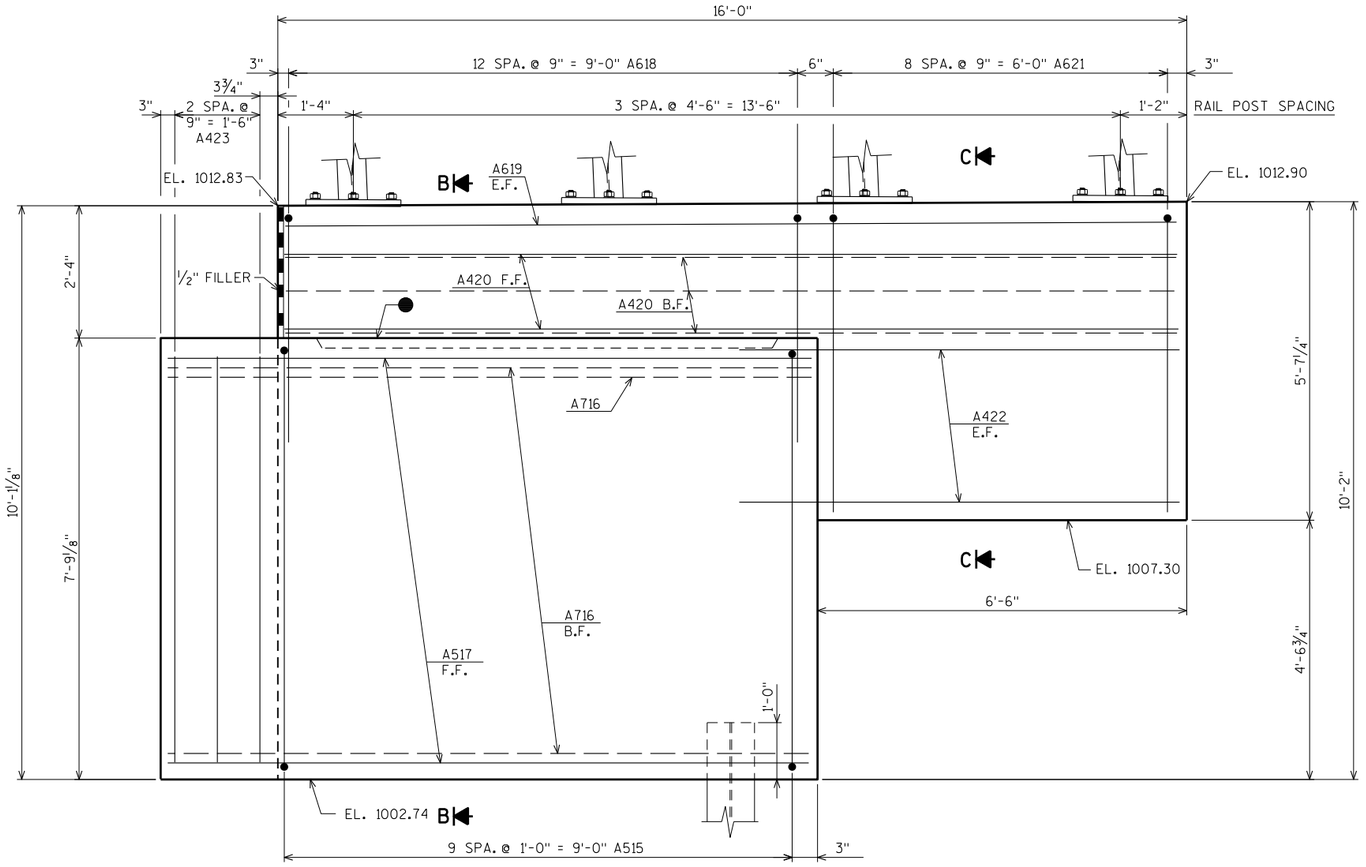
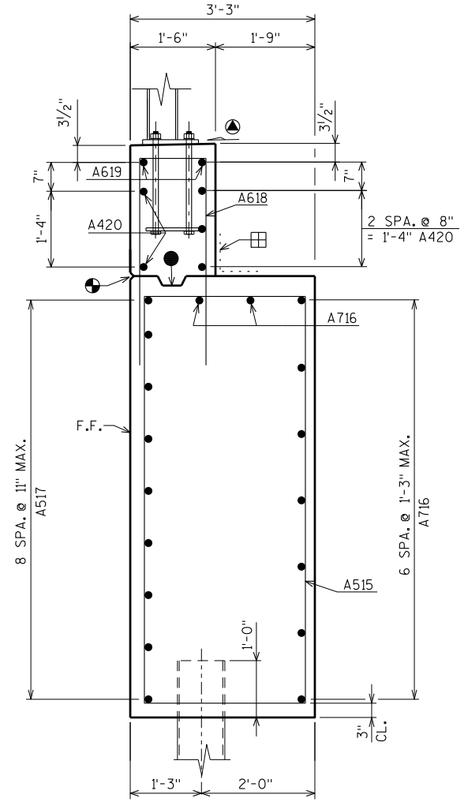
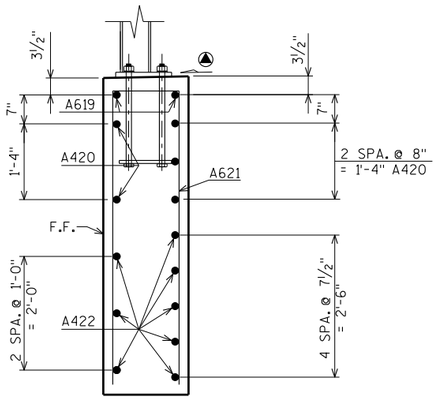
| STATE PROJECT NUMBER |
|---|
| 7859-00-70 |




ELEVATION - WING 2




SECTION B




SECTION C

- SLOPE SAME AS SUPERSTRUCTURE.
- ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

FOR PILE SPLICE DETAIL SEE SHEET 2.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

WING 2 DETAILS

SHEET 6 OF 15
31

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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Eau Claire, WI 54701
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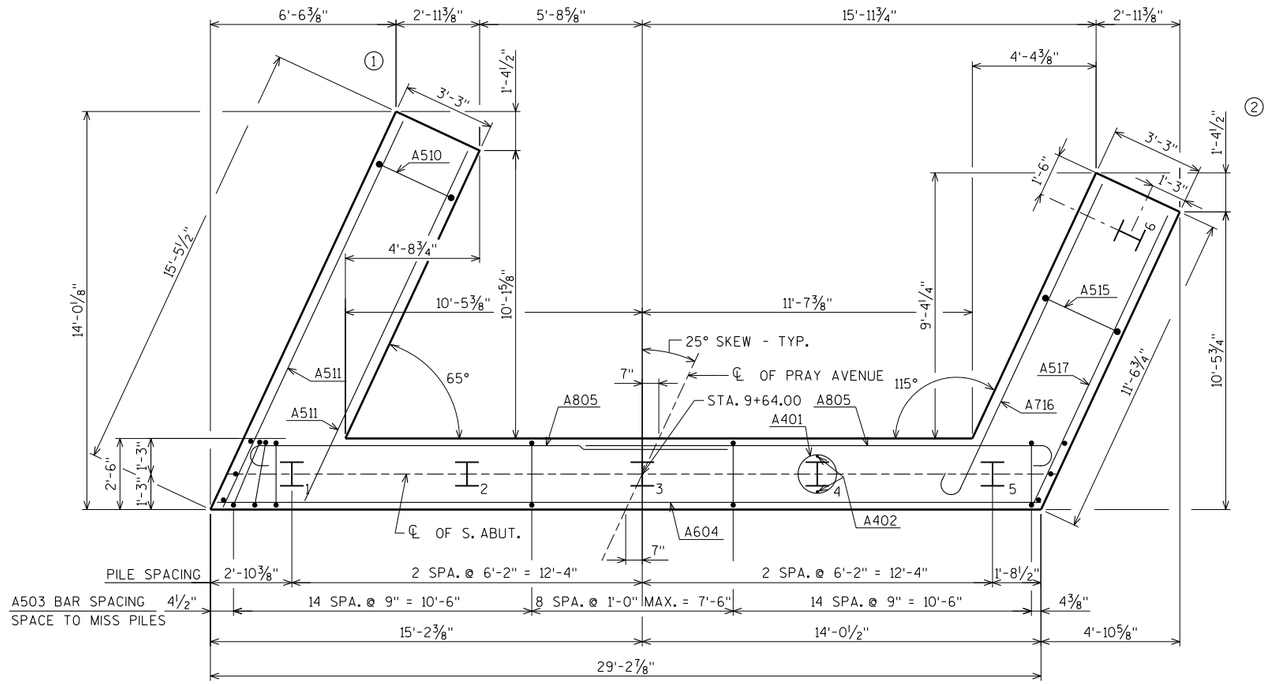
| STATE PROJECT NUMBER |
|---|
| 7859-00-70 |

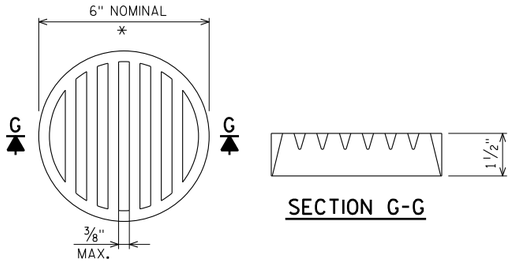
## BILL OF BARS

| BAR NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED BAR SERIES | 1,870# COATED 2,220# UNCOATED LOCATION |
|---|---|---|---|---|---|---|
| A401 | | 5 | 28-0 | X | | BODY @ PILES |
| A402 | | 10 | 2-3 | | | BODY @ PILES |
| A503 | | 37 | 18-11 | X | | BODY VERT. |
| A604 | | 13 | 28-10 | | | BODY HORIZ. |
| A805 | | 14 | 17-11 | X | | BODY HORIZ. B.F. |
| A406 | | 16 | 2-9 | X | | BODY VERT. TOP |
| A407 | | 14 | 4-6 | X | | BODY VERT. TOP @ WINGS |
| A408 | | 2 | 6-9 | | | BODY HORIZ. TOP F.F @ WINGS |
| A409 | | 2 | 28-10 | | | BODY HORIZ. TOP |
| A510 | X | 12 | 21-0 | X | | WING 1 BODY VERT. |
| A511 | X | 18 | 15-1 | | | WING 1 BODY HORIZ. |
| A612 | X | 16 | 9-4 | X | | WING 1 VERT. TOP |
| A413 | X | 5 | 11-8 | | | WING 1 TOP HORIZ. E.F. |
| A614 | X | 2 | 11-8 | | | WING 1 TOP HORIZ. E.F. |
| A515 | X | 10 | 21-2 | X | | WING 2 BODY VERT. |
| A716 | X | 9 | 12-0 | X | | WING 2 BODY HORIZ. F.F. |
| A517 | X | 9 | 11-2 | | | WING 2 BODY HORIZ. B.F. & TOP |
| A618 | X | 13 | 9-4 | X | | WING 2 TOP VERT. |
| A619 | X | 2 | 15-8 | | | WING 2 TOP HORIZ. E.F. |
| A420 | X | 5 | 15-8 | | | WING 2 TOP HORIZ. E.F. |
| A621 | X | 9 | 11-2 | X | | WING 2 VERT. @ END |
| A422 | X | 8 | 7-9 | | | WING 2 HORIZ. @ END |
| A423 | | 7 | 7-3 | | | BODY VERT @ ENDS |
| | | | | | | |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.




## PILE LAYOUT



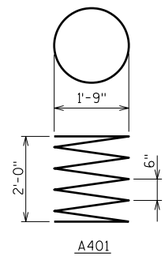

## SECTION G-G

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

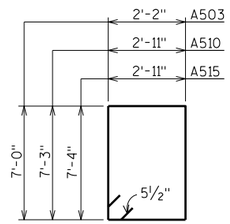
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

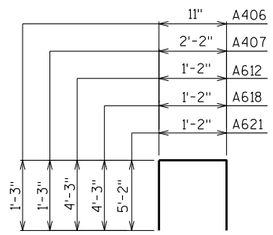
THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH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

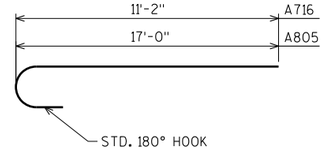
## RODENT SHIELD DETAIL




A401




FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

SOUTH ABUTMENT PILE LAYOUT & BILL OF BARS

SHEET 7 OF 15
32


ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
www.AyresAssociates.com


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5/28/2019
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| STATE PROJECT NUMBER |
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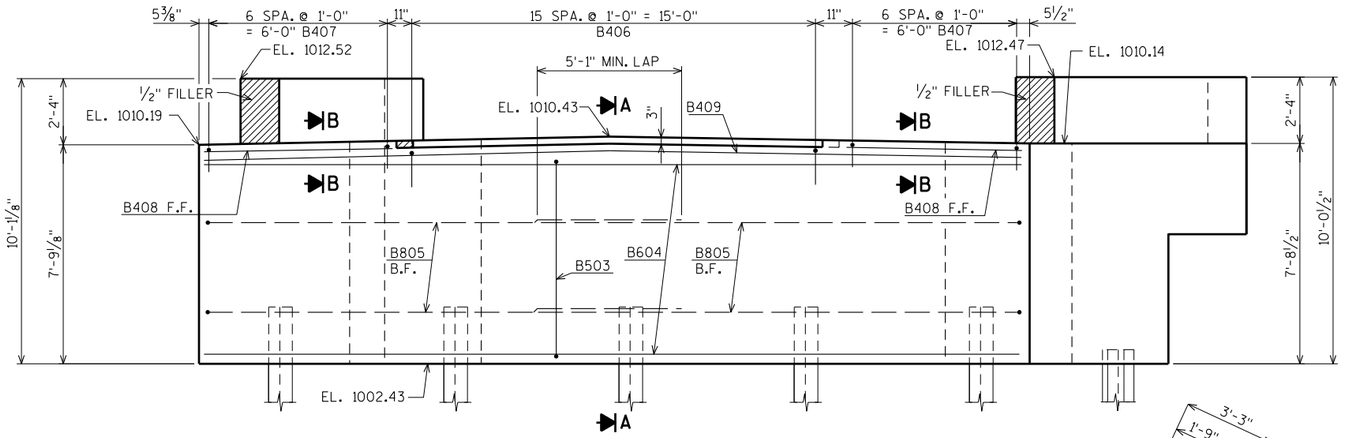
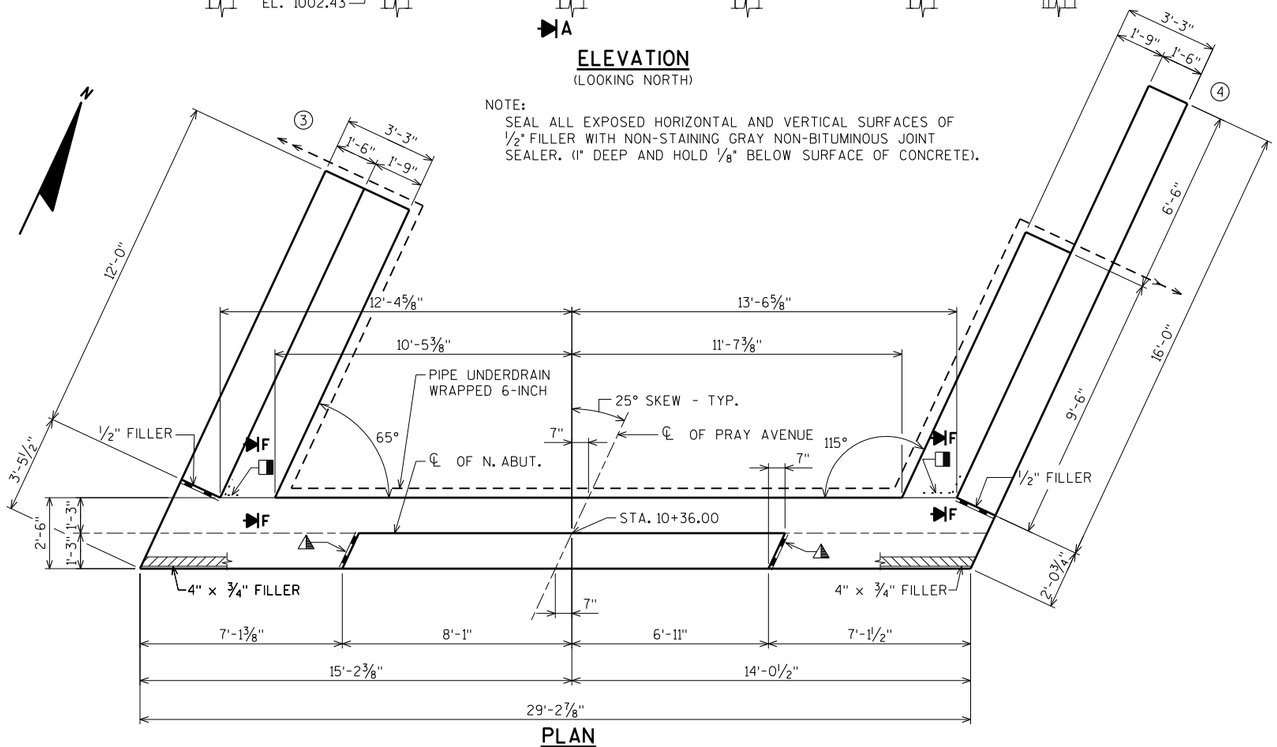
| 7859-00-70 |

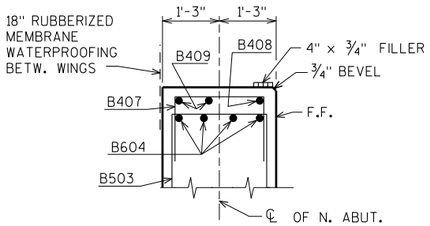



## ELEVATION
(LOOKING NORTH)

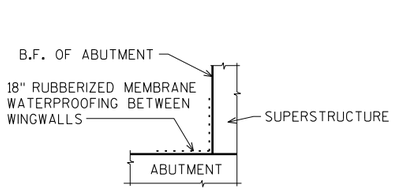
NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (I" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



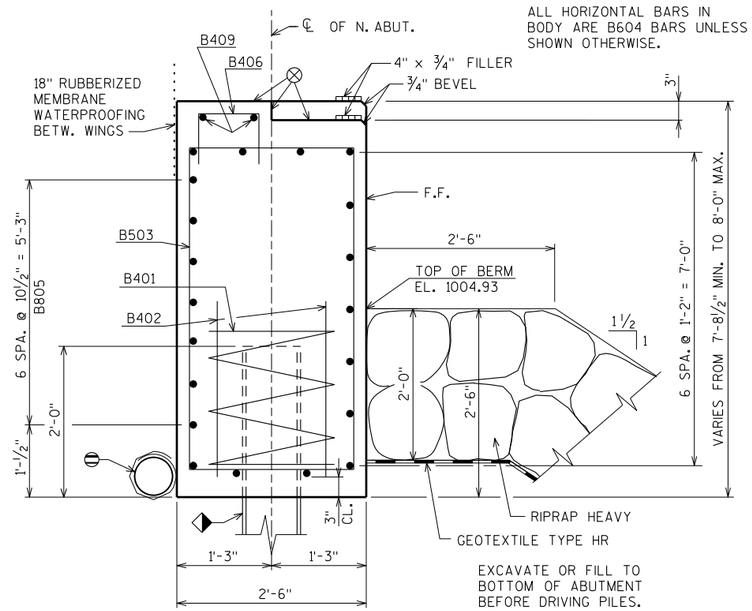

## PLAN




## SECTION B




## SECTION F




## SECTION A

◆ ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQ'D. DRIVING RESISTANCE OF 150 TONS PER PILE ESTIMATED LENGTH 25'-0".

◨ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

⚠ ¾" CORK FILLER ON VERTICAL FACE ONLY.

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHELENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING FILLER AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 7. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

NORTH ABUTMENT

SHEET 8 OF 15
33

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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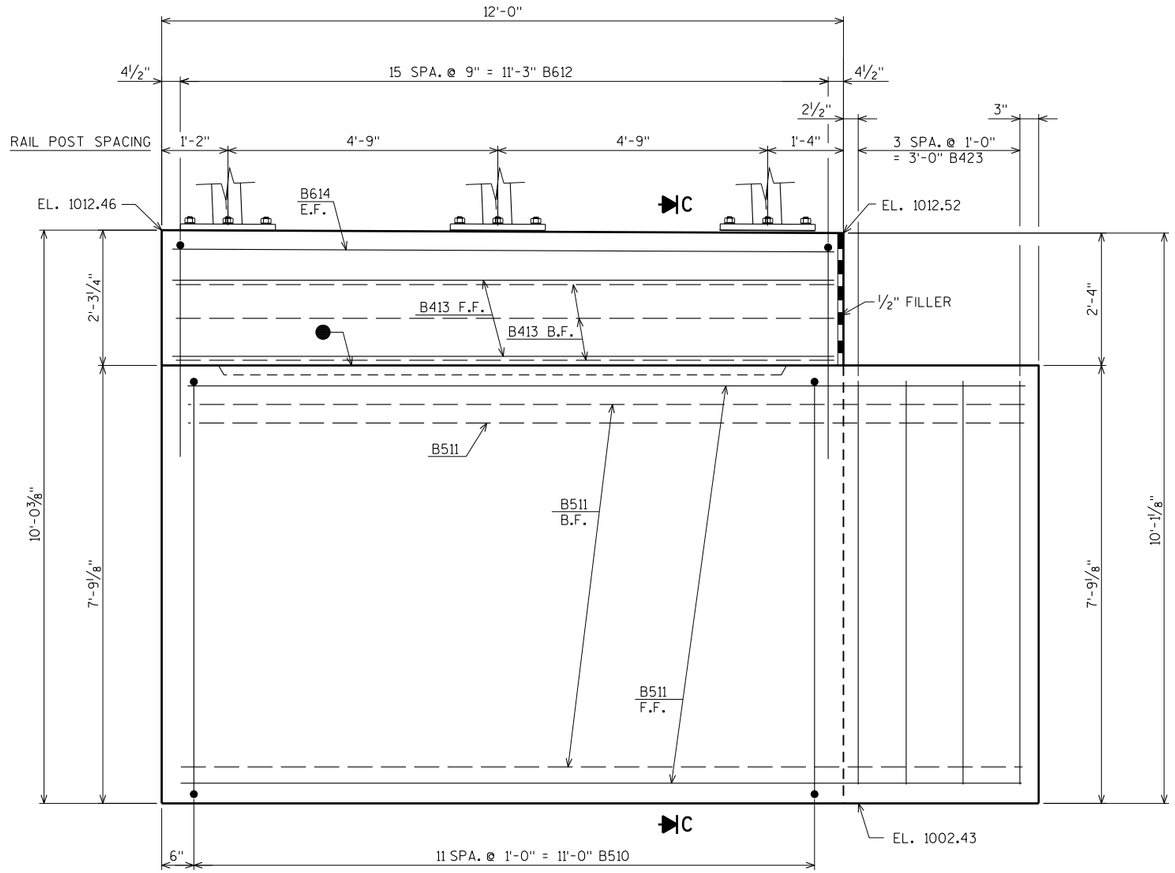
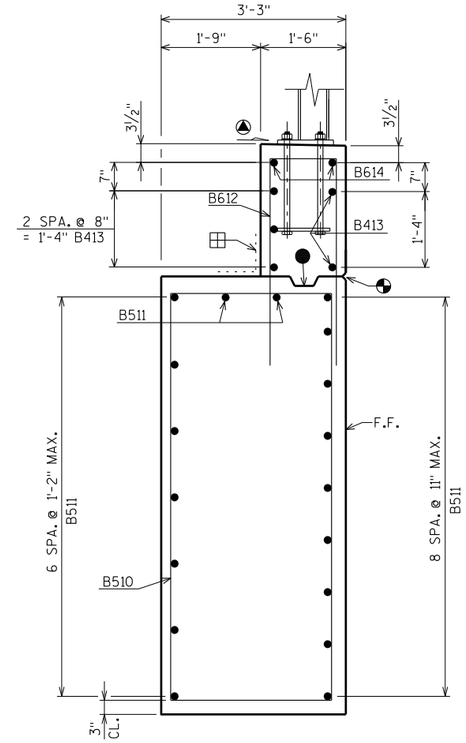



ELEVATION - WING 3




SECTION C

- SLOPE SAME AS SUPERSTRUCTURE
- ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

WING 3
DETAILS

SHEET 9 OF 15
34

ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER

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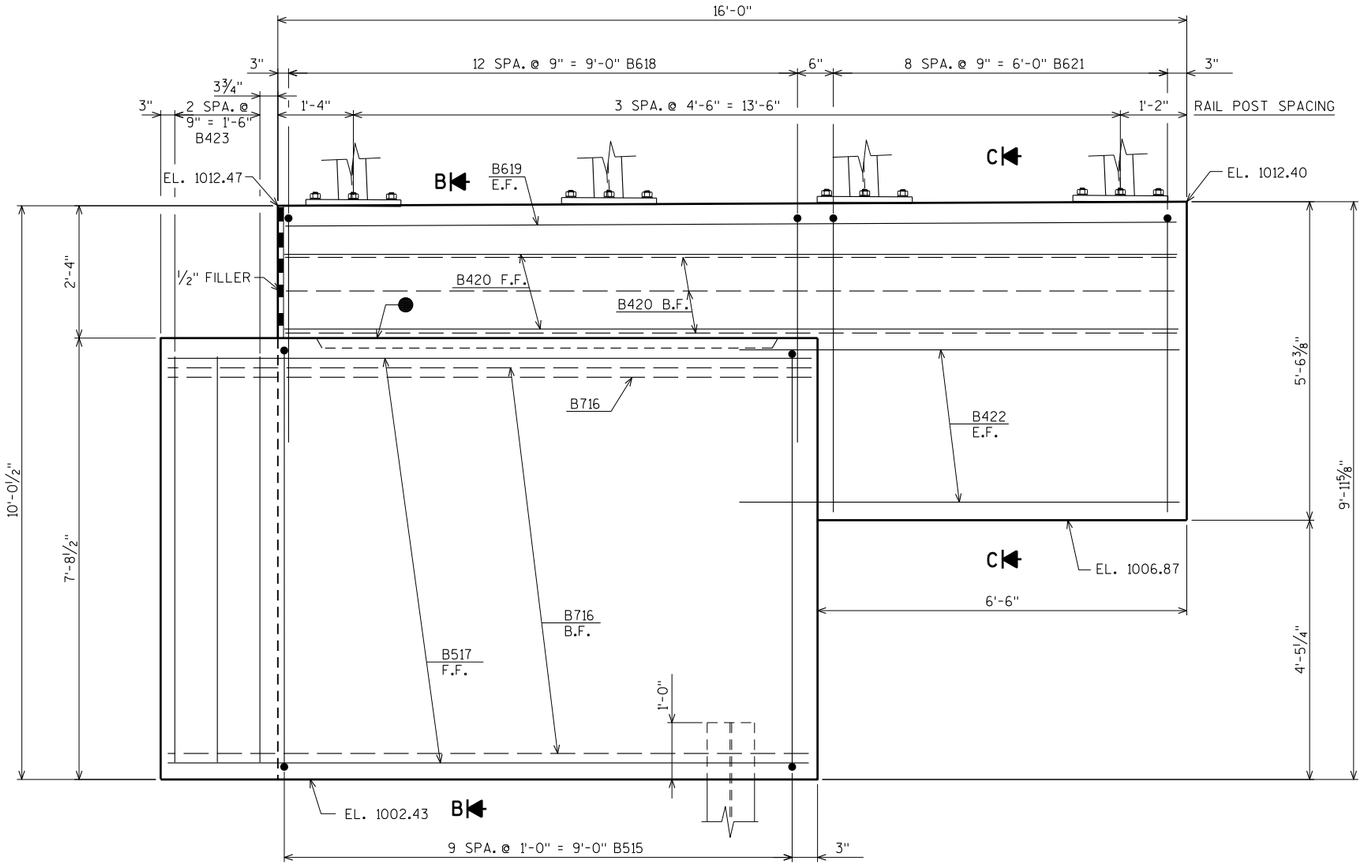
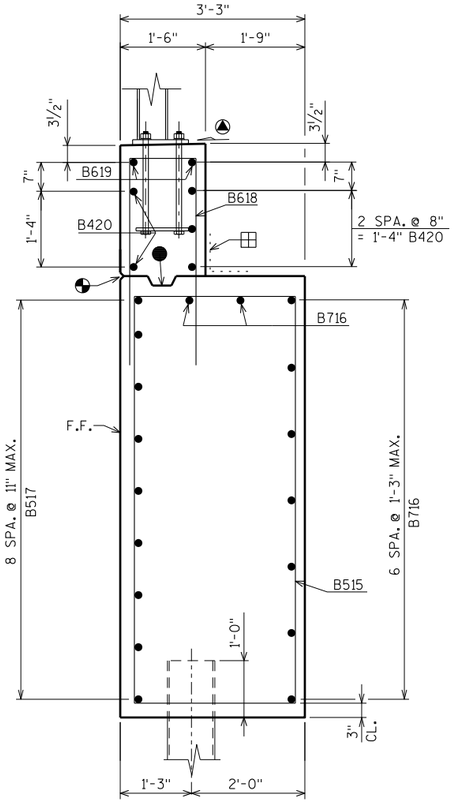
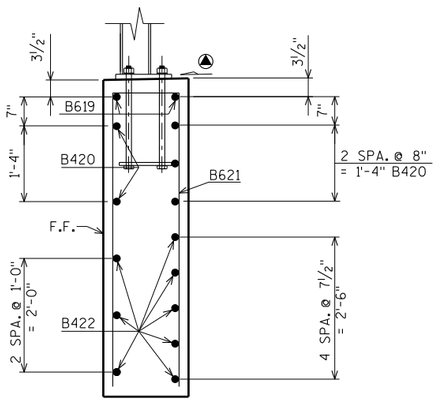



ELEVATION - WING 4




SECTION B




SECTION C

- SLOPE SAME AS SUPERSTRUCTURE
- ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

FOR PILE SPLICE DETAIL SEE SHEET 2.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

WING 4 DETAILS

SHEET 10 OF 15
35

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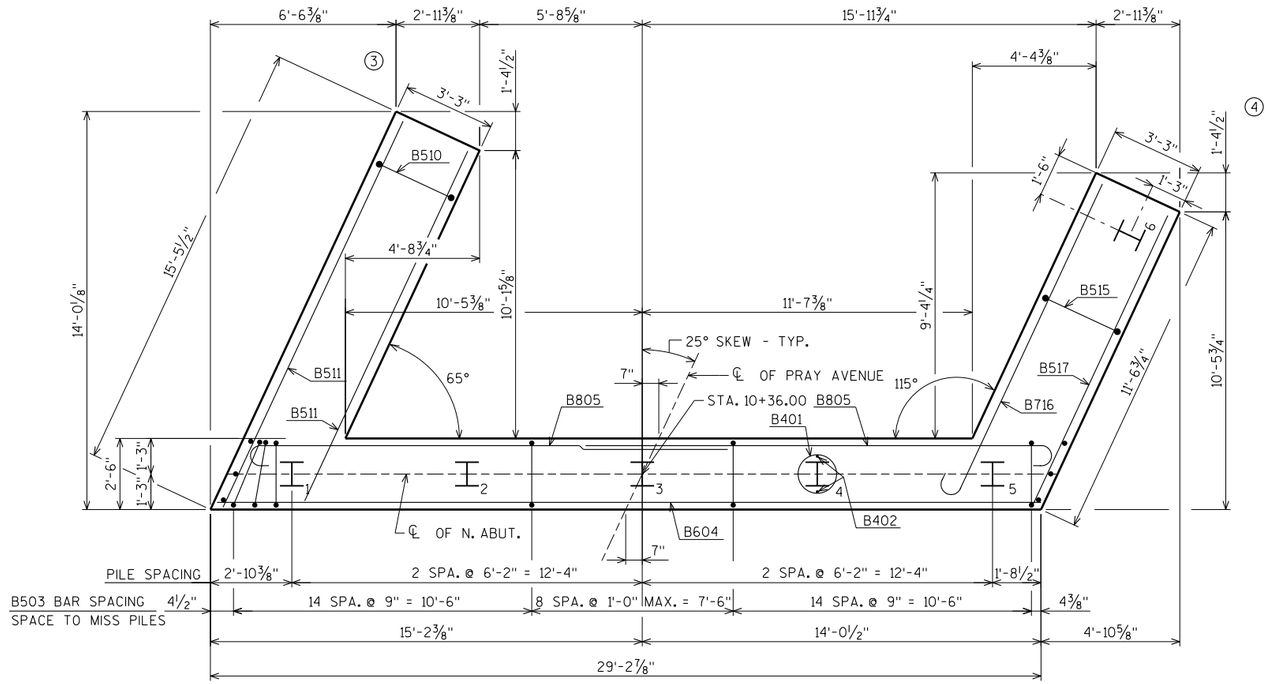
| STATE PROJECT NUMBER |
|---|
| 7859-00-70 |

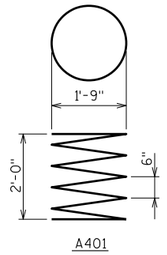
## BILL OF BARS

| BAR NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED BAR SERIES | 1,860# COATED 2,220# UNCOATED LOCATION |
|---|---|---|---|---|---|---|
| B401 | | 5 | 28-0 | X | | BODY @ PILES |
| B402 | | 10 | 2-3 | | | BODY @ PILES |
| B503 | | 37 | 18-11 | X | | BODY VERT. |
| B604 | | 13 | 28-10 | | | BODY HORIZ. |
| B805 | | 14 | 17-11 | X | | BODY HORIZ. B.F. |
| B406 | | 16 | 2-9 | X | | BODY VERT. TOP |
| B407 | | 14 | 4-6 | X | | BODY VERT. TOP @ WINGS |
| B408 | | 2 | 6-9 | | | BODY HORIZ. TOP F.F @ WINGS |
| B409 | | 2 | 28-10 | | | BODY HORIZ. TOP |
| B510 | X | 12 | 21-2 | X | | WING 3 BODY VERT. |
| B511 | X | 18 | 15-1 | | | WING 3 BODY HORIZ. |
| B612 | X | 16 | 9-2 | X | | WING 3 VERT. TOP |
| B413 | X | 5 | 11-8 | | | WING 3 TOP HORIZ. E.F. |
| B614 | X | 2 | 11-8 | | | WING 3 TOP HORIZ. E.F. |
| B515 | X | 10 | 21-0 | X | | WING 4 BODY VERT. |
| B716 | X | 9 | 12-0 | X | | WING 4 BODY HORIZ. F.F. |
| B517 | X | 9 | 11-2 | | | WING 4 BODY HORIZ. B.F. & TOP |
| B618 | X | 13 | 9-2 | X | | WING 4 TOP VERT. |
| B619 | X | 2 | 15-8 | | | WING 4 TOP HORIZ. E.F. |
| B420 | X | 5 | 15-8 | | | WING 4 TOP HORIZ. E.F. |
| B621 | X | 9 | 11-0 | X | | WING 4 VERT. @ END |
| B422 | X | 8 | 7-9 | | | WING 4 HORIZ. @ END |
| B423 | | 7 | 7-3 | | | BODY VERT @ ENDS |
| | | | | | | |

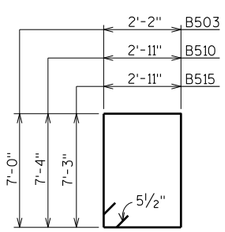
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

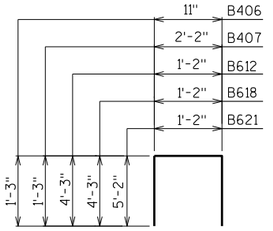


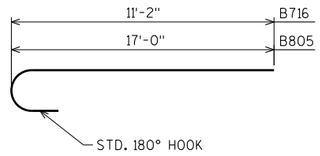

## PILE LAYOUT




A401




FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

ORIGINAL PLANS PREPARED BY

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

NORTH ABUTMENT
PILE LAYOUT
& BILL OF BARS

SHEET 11 OF 15
36

8

8

5/28/2019
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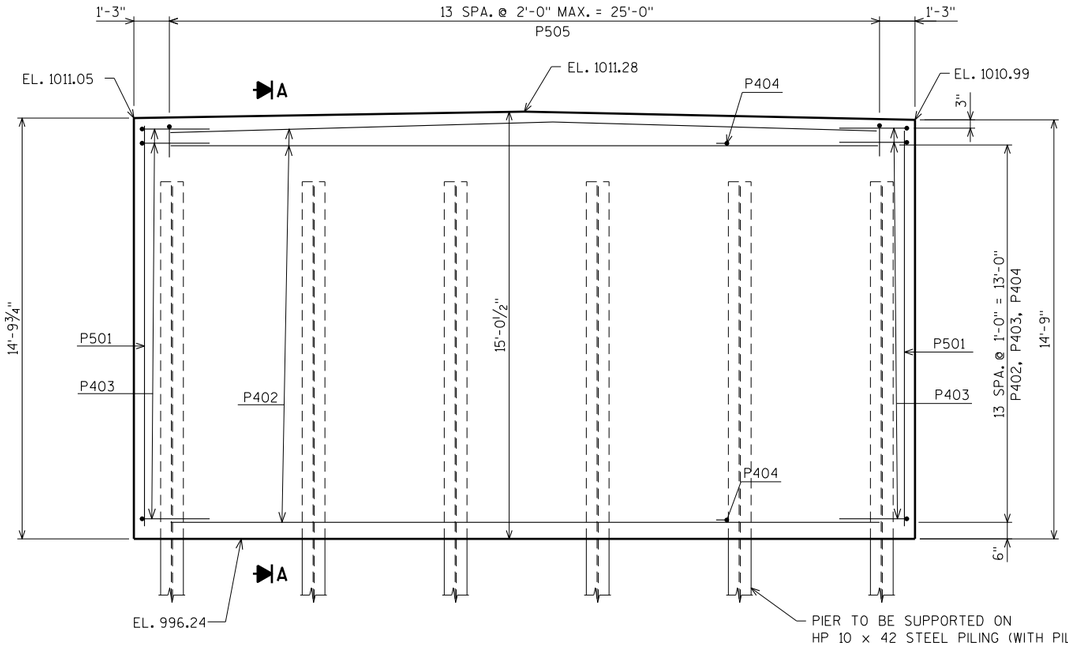
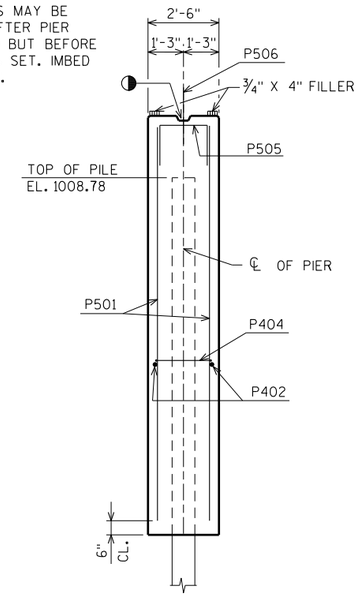
| STATE PROJECT NUMBER |
|---|
| 7859-00-70 |




ELEVATION
(LOOKING NORTH)

P506 BARS MAY BE PLACED AFTER PIER IS POURED BUT BEFORE CONC. HAS SET. IMBED BARS 1'-0".

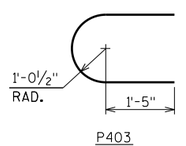



SECTION A

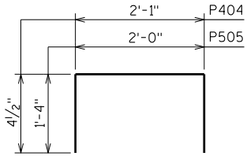
## BILL OF BARS

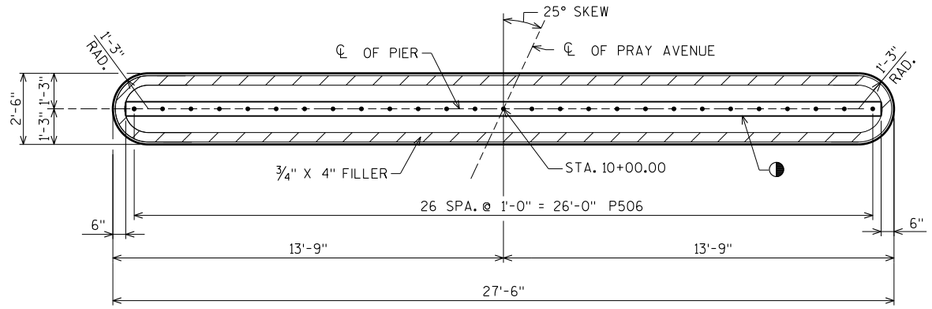
| BAR NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED BAR SERIES | 60# COATED 1,680# UNCOATED LOCATION |
|---|---|---|---|---|---|---|
| P501 | | 58 | 14-0 | | | COLUMN VERT. |
| P402 | | 30 | 25-0 | | | COLUMN HORIZ. |
| P403 | | 30 | 6-1 | X | | COLUMN HORIZ. @ ENDS |
| P404 | | 84 | 2-8 | X | | COLUMN TIES |
| P505 | | 14 | 4-5 | X | | COLUMN TOP |
| P506 | X | 27 | 2-0 | | | COLUMN DOWELS |
| | | | | | | |
| | | | | | | |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

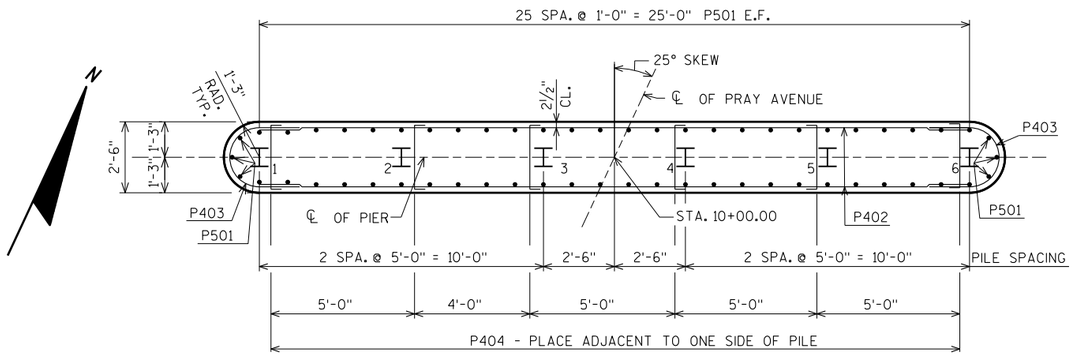



P403




PLAN




PILE LAYOUT

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

FOR PILE SPLICE DETAIL SEE SHEET 2.

E.F. DENOTES EACH FACE

ORIGINAL PLANS PREPARED BY
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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PIER

SHEET 12 OF 15
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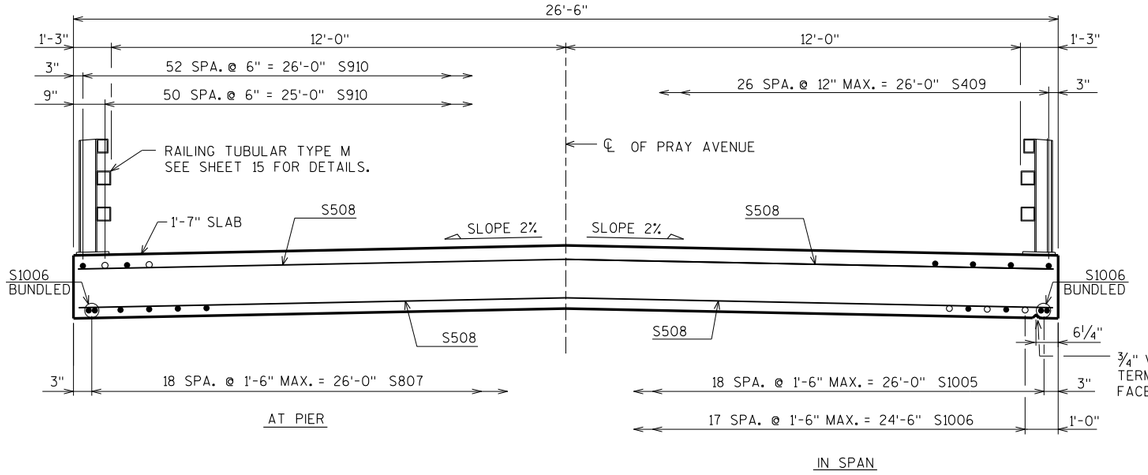
8

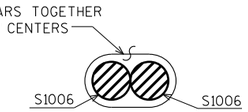
8




## TYPICAL SECTION THRU BRIDGE

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 (+).

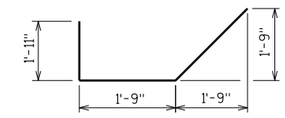



## BUNDLING DETAIL

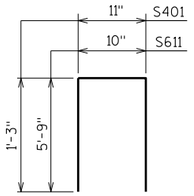
## BILL OF BARS

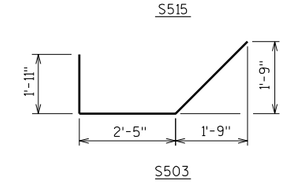
| BAR NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED BAR SERIES | 28,310# COATED LOCATION |
|---|---|---|---|---|---|---|
| S401 | X | 30 | 3-3 | X | | SLAB @ ABUT. NOTCH |
| S402 | X | 4 | 16-0 | | | SLAB @ ABUT. NOTCH |
| S503 | X | 52 | 6-8 | X | | SLAB @ ABUT. |
| S504 | X | 54 | 3-4 | X | | SLAB @ ABUT. |
| S1005 | X | 42 | 34-1 | | | SLAB LONG. BOT. |
| S1006 | X | 36 | 25-0 | | | SLAB LONG. BOT. |
| S807 | X | 19 | 17-0 | X | | SLAB LONG. BOT. @ PIER |
| S508 | X | 154 | 28-10 | | | SLAB TRANS. BOT. & TOP |
| S409 | X | 54 | 20-9 | | | SLAB LONG. TOP |
| S910 | X | 104 | 26-10 | | | SLAB LONG. TOP @ PIER |
| S611 | X | 48 | 12-0 | X | | SLAB @ RAIL POSTS |
| S612 | X | 88 | 6-0 | | | SLAB @ INT. RAIL POSTS |
| S613 | X | 16 | 6-0 | X | | SLAB @ END RAIL POSTS |
| S614 | X | 4 | 12-0 | X | | SLAB @ END RAIL POSTS |
| S515 | X | 2 | 6-0 | X | | SLAB @ ABUT. WINGS 2 & 4 |
| | | | | | | |
| | | | | | | |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.




S515

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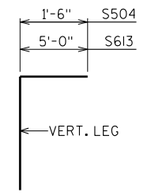
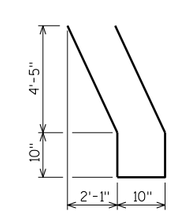
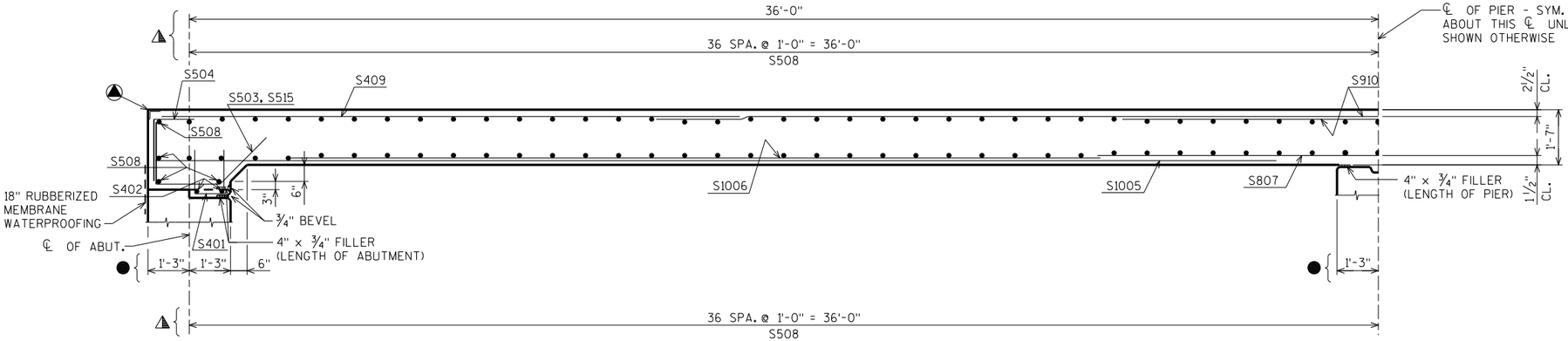



S614

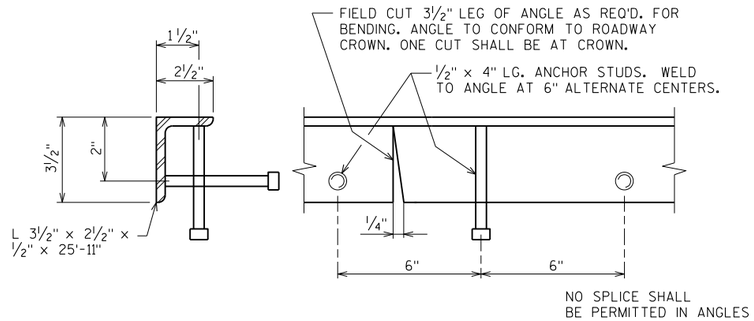



## PART LONGITUDINAL SECTION

● DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE.

⚠ DIMENSIONS MEASURED ALONG ℄ OF PRAY AVENUE

⚠ PROTECTION ANGLE AT END OF DECK.




## ⚠ PROTECTION ANGLE DETAIL

(ANGLE AND STUDS TO BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL STEEL CARBON". (NO PAINT REQ'D.)

SANDBLAST PROTECTION ANGLE AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PROTECTION ANGLE SHALL BE HOT DIPPED GALVANIZED.

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STATE OF WISCONSIN
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STRUCTURE B-10-237

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SUPERSTRUCTURE

SHEET 13 OF 15
38

ORIGINAL PLANS PREPARED BY
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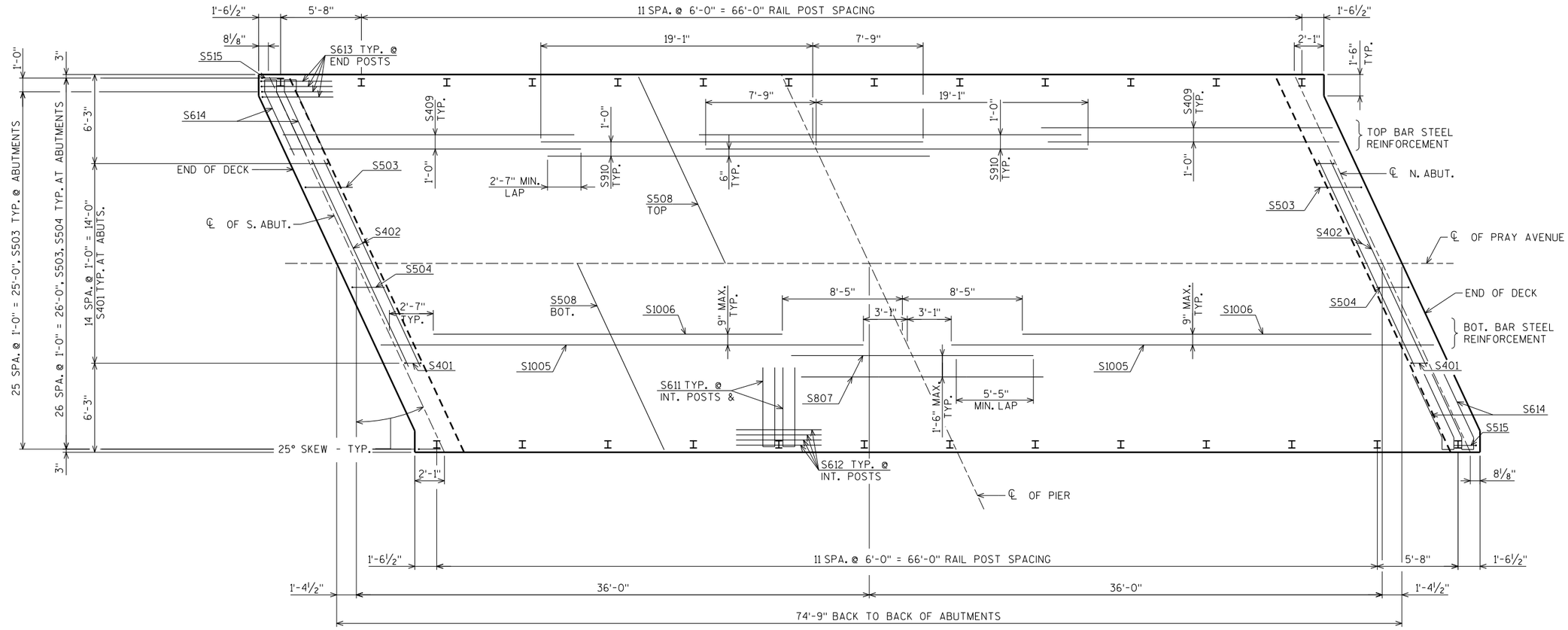
| STATE PROJECT NUMBER |
|---|
| 7859-00-70 |

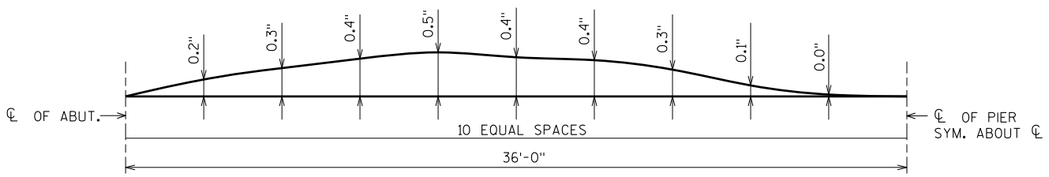



## PLAN

## TOP OF DECK ELEVATIONS

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

| LOCATION | ℄ OF S. ABUT. | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | ℄ OF PIER | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | ℄ OF N. ABUT. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W. EDGE OF SLAB | 1012.83 | 1012.82 | 1012.80 | 1012.78 | 1012.77 | 1012.75 | 1012.74 | 1012.72 | 1012.71 | 1012.69 | 1012.68 | 1012.66 | 1012.65 | 1012.63 | 1012.61 | 1012.60 | 1012.58 | 1012.57 | 1012.55 | 1012.54 | 1012.52 |
| ℄ OF STRUCTURE | 1013.07 | 1013.05 | 1013.04 | 1013.02 | 1013.01 | 1012.99 | 1012.98 | 1012.96 | 1012.95 | 1012.93 | 1012.92 | 1012.90 | 1012.88 | 1012.87 | 1012.85 | 1012.84 | 1012.82 | 1012.81 | 1012.79 | 1012.78 | 1012.76 |
| E. EDGE OF SLAB | 1012.78 | 1012.76 | 1012.75 | 1012.73 | 1012.72 | 1012.70 | 1012.69 | 1012.67 | 1012.65 | 1012.64 | 1012.62 | 1012.61 | 1012.59 | 1012.58 | 1012.56 | 1012.55 | 1012.53 | 1012.52 | 1012.50 | 1012.48 | 1012.47 |




## CAMBER DIAGRAM

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

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, ℄ OF PIER AND ½ POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄.

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STATE OF WISCONSIN
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STRUCTURE B-10-237

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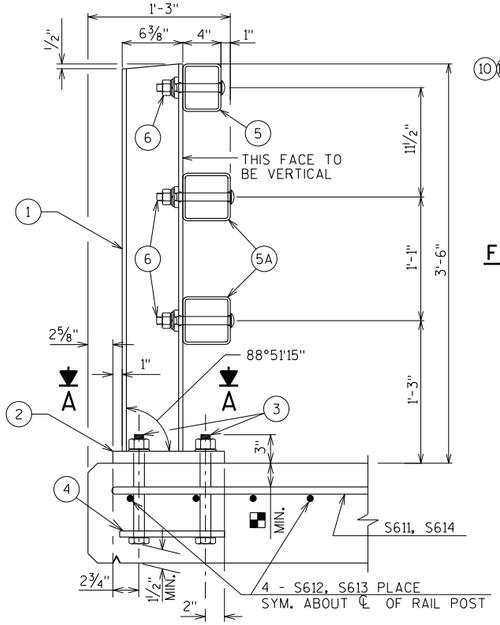
SUPERSTRUCTURE DETAILS

SHEET 14 OF 15
39

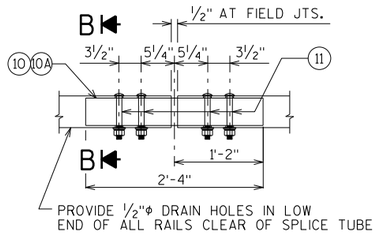
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER

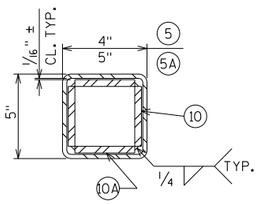
7859-00-70



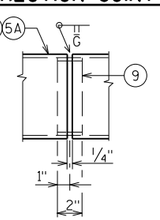

## SECTION THRU RAILING ON DECK




## FIELD ERECTION JOINT DETAIL

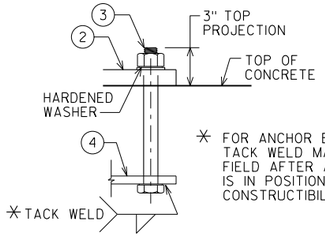



## SECTION B

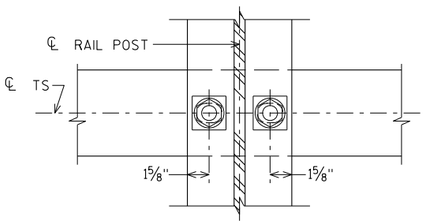



## SHOP RAIL SPLICE DETAIL

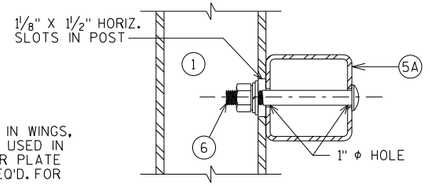
(LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)




## ANCHOR BOLTS



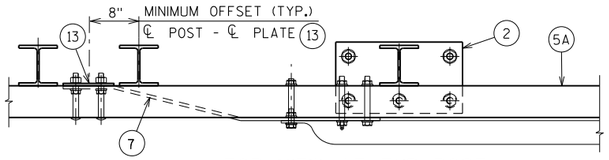

## SECTION THRU POST WEB




## SECTION THRU RAIL

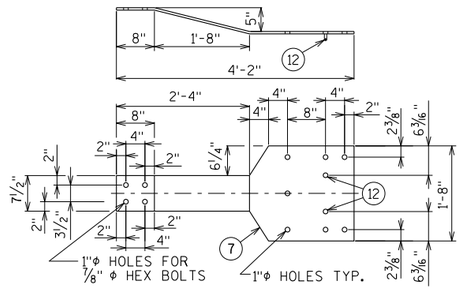
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

## TYPICAL RAIL TO POST CONNECTIONS




## TOP VIEW AT END POST

(THRIE BEAM RAIL ATTACHMENT)

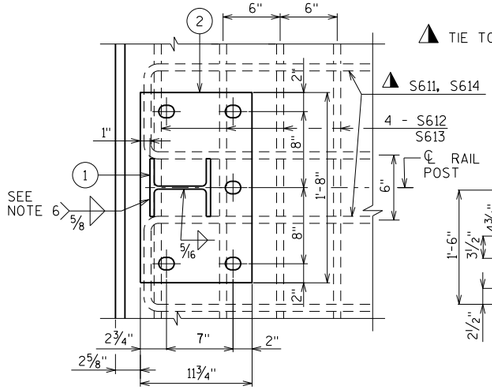



## BACK-UP PLATE DETAIL

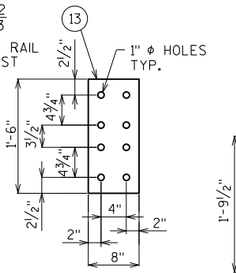
(AT BEAM GUARD ATTACHMENT)

PLACE BELOW TOP MAT SLAB REINFORCEMENT.

TIE TO TOP MAT OF STEEL.

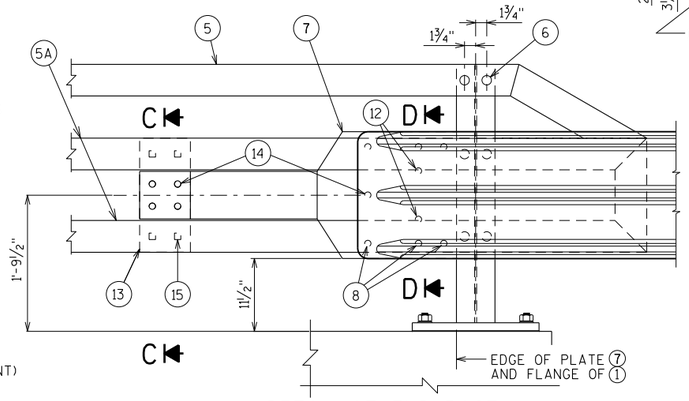



## SECTION A



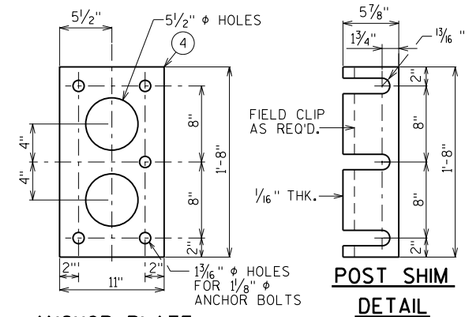

## ANCHOR PLATE

(AT BEAM GUARD ATTACHMENT)




## DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

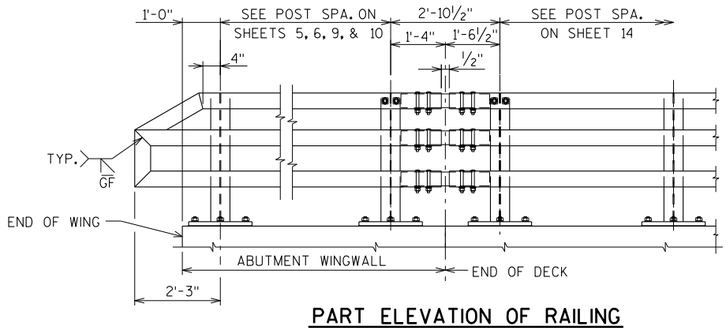



## ANCHOR PLATE

(AT RAIL TO DECK CONNECTION)




## POST SHIM DETAIL




## PART ELEVATION OF RAILING

## LEGEND

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

② PLATE 1¼" x 11¾" x 1'-8" WITH 1⅜6" X 1⅜" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

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

④ ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1⅜6" DIA. HOLES FOR ANCHOR BOLTS NO. 3

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

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

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

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

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

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

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

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

⑪ ⅞" φ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15⁄16 " X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS ~~AND 15⁄16 " X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS~~ IN PLATE NO. 10A.

⑫ ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

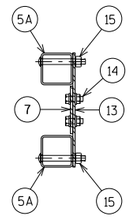
⑬ ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

⑭ ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

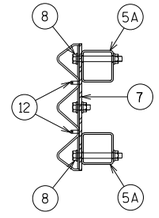
⑮ 1" φ HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

## GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. ~~RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.~~
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. ~~WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.~~




## SECTION C




## SECTION D

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-237

DRAWN BY JLB | PLANS CK'D. ZSS

RAILING TUBULAR TYPE M

SHEET 15 OF 15
40

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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5/24/2019

PENTABLE:Wisdot_shd.tbl

PRAY AVENUE COMPUTER EARTHWORK

| Station | Distance | Area (SF) | | Incremental Vol (CY) (Unadjusted) | | Cumulative Vol (CY) | | Mass Ordinate |
|---|---|---|---|---|---|---|---|---|
| | | Cut | Fill | Cut | Fill | Cut | Expanded Fill | |
| | | | | | | 1.00 | 1.30 | |
| | | | | Note 1 | Note 2 | Note 1 | | Note 3 |
| 9+15 | -- | 34.3 | 0.0 | -- | -- | -- | -- | -- |
| 9+25 | 10 | 30.2 | 21.7 | 12 | 4 | 12 | 5 | 7 |
| 9+50 | 25 | 29.8 | 24.7 | 28 | 21 | 40 | 32 | 8 |
| 9+62.62 | 13 | 29.8 | 24.7 | 14 | 12 | 54 | 48 | 6 |
| B-10-0237 | -- | -- | -- | -- | -- | -- | -- | -- |
| 10+37.38 | -- | 30.0 | 20.9 | -- | -- | -- | -- | -- |
| 10+50 | 13 | 30.0 | 20.9 | 14 | 10 | 68 | 61 | 7 |
| 10+75 | 25 | 28.2 | 16.3 | 27 | 17 | 95 | 83 | 12 |
| 10+85 | 10 | 28.6 | 0.0 | 11 | 3 | 106 | 87 | 19 |
| | | | | 106 | 67 | | | |

| | |
|---|---|
| Note 1 - Cut | Cut includes existing asphalt pavement. Assumed to be reused as fill outside the 1:1 road core. |
| Note 2 - Fill | Volume needed to be filled. |
| Note 3 - Mass Ordinate | (Cut) - (Fill * 1.30) |

STA. 9+15 TO 9+50

STRUCTURE B-10-237

9+50

9+25

9+15

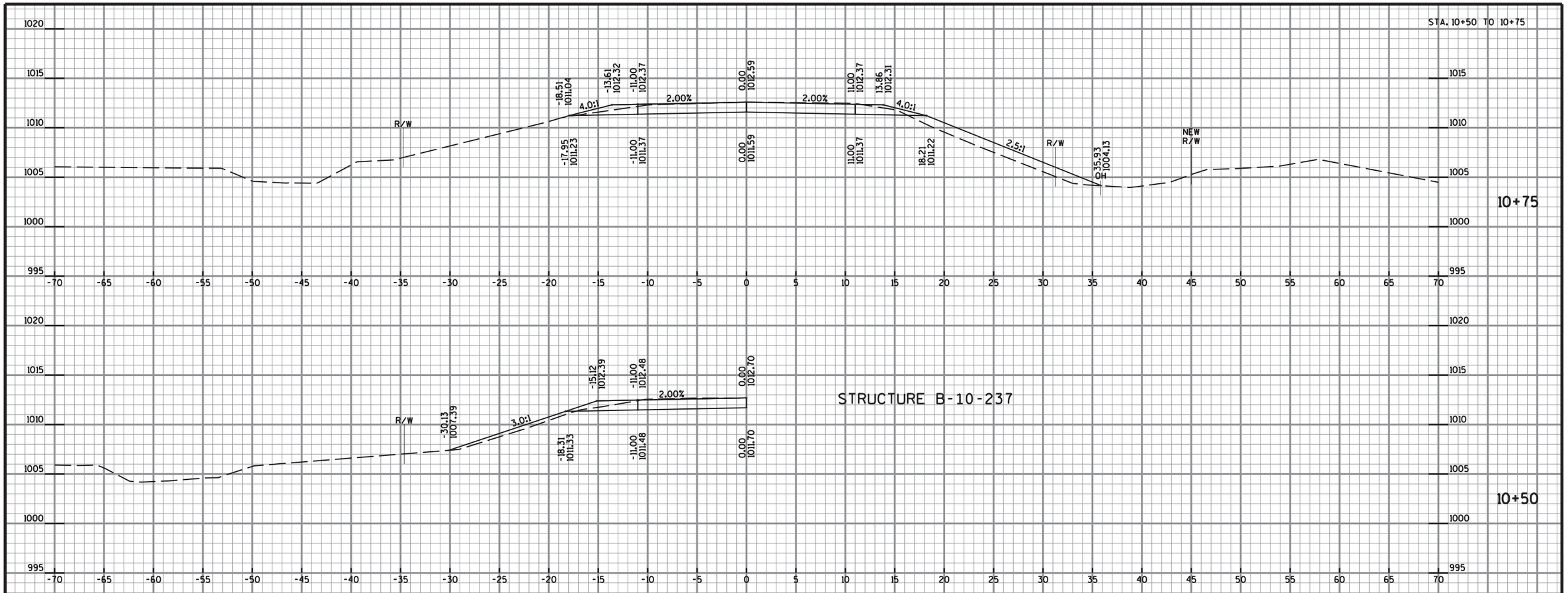
BEGIN PROJECT
STA. 9+15
(MATCH EXISTING)

| PROJECT NO: 7859-00-70 | HWY: PRAY AVENUE | COUNTY: CLARK | CROSS SECTIONS | SHEET 42 | E |
|---|---|---|---|---|---|

FILE NAME : V:\Structures-EC\42-1140.00 - Clark Co, Tn Washburn, Pray Ave\Roadway\421140_xs.dgn PLOT DATE : 7/29/2019 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 10+50 TO 10+75




STRUCTURE B-10-237

STRUCTURE B-10-237

5 FT

5 FT

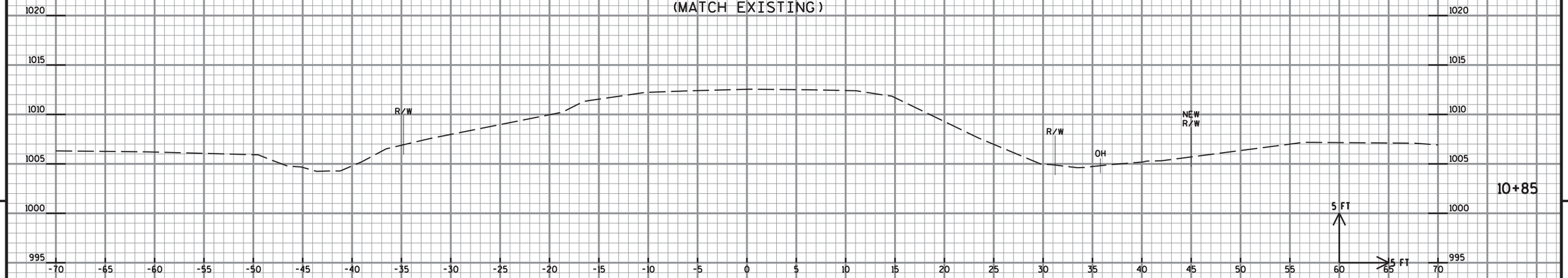
9

9

| PROJECT NO: 7859-00-70 | HWY: PRAY AVENUE | COUNTY: CLARK | CROSS SECTIONS | SHEET | E |
|---|---|---|---|---|---|

STA. 10+85 TO 10+85

END PROJECT
STA. 10+85
(MATCH EXISTING)




10+85

9

9

| PROJECT NO: 7859-00-70 | HWY: PRAY AVENUE | COUNTY: CLARK | CROSS SECTIONS | SHEET 44 | E |
|---|---|---|---|---|---|

FILE NAME : V:\Structures-EC\42-1140.00 - Clark Co, Tn Washburn, Pray Ave\Roadway\421140_xs.dgn PLOT DATE : 7/29/2019 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

Notes

**Wisconsin Department of Transportation**

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