LAX

PROJECT ID: 5728-00-73
WITH: N/A

COUNTY: DANE

DECEMBER 2021

**ORDER OF SHEETS**



TOTAL SHEETS = 52

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

# TOWN OF PERRY, DRAMMEN VALLEY RD

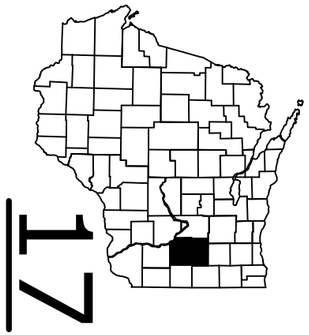
(PLEASANT VALLEY BR BRIDGE, B-13-0691)

## LOCAL STREET

## DANE COUNTY

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 5728-00-73 | ——— | ——— |
| | | |
| | | |
| | | |

STATE PROJECT NUMBER
**5728-00-73**

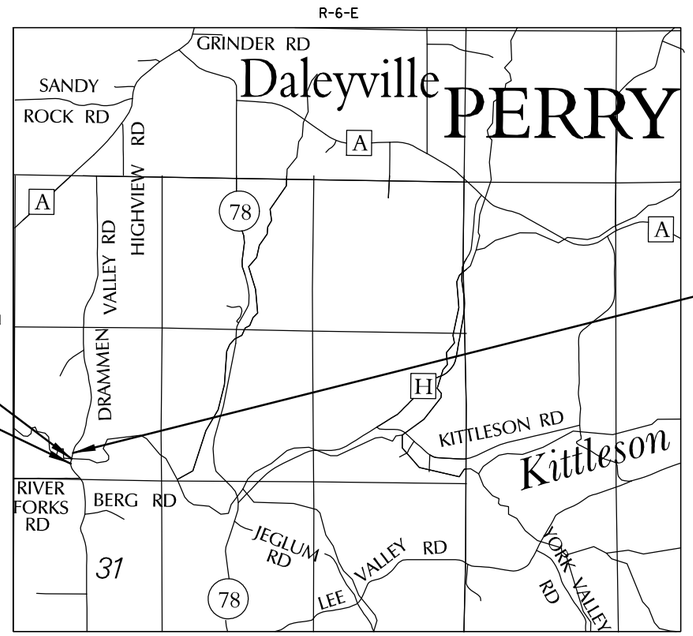


17

N

**DESIGN DESIGNATION**

| | | | |
|---|---|---|---|
| A.A.D.T. | (2022) | = | 60 |
| A.A.D.T. | (2042) | = | 65 |
| D.H.V. | (2042) | = | 10 |
| D.D. | | = | 62/38 |
| T. | | = | 7.7% |
| DESIGN SPEED | | = | 30 MPH |
| ESALS | | = | 9,000 |




STRUCTURE
B-13-0691

BEGIN PROJECT
STA. 10+52.47
X=701,501.95
Y=409,785.08

END PROJECT
STA. 11+81.80

**CONVENTIONAL SYMBOLS**

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

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

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

**LAYOUT**
SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.024 MI.

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Dane County Zone, NAD 83 (2011)

Elevations shown on this plan are referenced to the North American Vertical Datum of 1988 NAVD 88 (2012).

ACCEPTED FOR
TOWN OF PERRY
Date: 7/23/21 Mary Prisk CLERK
SIGNATURE AND TITLE OF OFFICAL

ORIGINAL PLANS PREPARED BY:

STRAND ASSOCIATES®
910 WEST WINGRA DRIVE
MADISON, WISCONSIN 53715
(608) 251-4843

WISCONSIN
KEITH R. BEHREND
E-42073
MADISON
WI
PROFESSIONAL ENGINEER
Keith Behrend
7/23/2021

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

| | |
|---|---|
| Surveyor | STRAND ASSOCIATES, INC. |
| Designer | STRAND ASSOCIATES, INC. |
| Regional Examiner | TRAVIS BUROS, P.E. |
| Regional Supervisor | OSCAR WINGER, P.E. |

APPROVED FOR THE DEPARTMENT
DATE: 7/26/2021 Travis G Buros
(Signature)

E

2

## GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT 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.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

THE LOCATION OF PROPOSED SIGNS AS SHOWN ON THE PLANS ARE APPROXIMATE. THE EXACT NUMBER OF SIGNS AND SIGN LOCATIONS ARE TO BE APPROVED BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.
SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION.

WETLANDS EXIST IN THE PROJECT AREA. DO NOT DISTURB AREAS OUTSIDE THE SLOPE INTERCEPTS.

## UTILITIES

### ALLIANT ENERGY **

CURTIS VACHA
490 SHAKERAG STREET
MINERAL POINT, WI 53565
PH: (608) 341-9623
curtisvacha@alliantenergy.com

### TDS TELECOM **

JERRY MYERS
525 JUNCTION ROAD
MADISON, WI 53717
PH: (608) 664-4404
jerry.myers@tdstelecom.com

** DENOTES DIGGERS HOTLINE MEMBER

## OTHER CONTACTS

### DESIGN CONSULTANT

KEITH BEHREND
STRAND ASSOCIATES, INC.
910 W WINGRA DR
MADISON, WI 53715
PH: (608) 251-4843
keith.behrend@strand.com

### TOWN OF PERRY

ROGER KITTLESON, TOWN CHAIRMAN
10084 COUNTY HIGHWAY A
MOUNT HOREB, WI 53572
PH: (608) 523-4379
kittlesonroger@gmail.com

### WISDNR

ERIC HEGGELUND
DNR SOUTH CENTRAL REGION
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PH: (608) 275-3301
eric.heggelund@wisconsin.gov

2

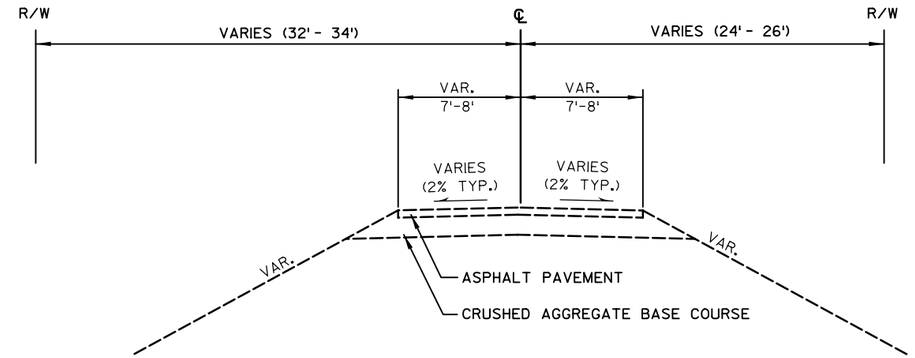
ASPHALT BID/MIX SPECIFICATIONS

| | THICKNESS | BID/MIX SPECIFICATIONS |
|---|---|---|
| UPPER LAYER | 1.75 INCHES | 4 LT 58-28S |
| LOWER LAYER | 2.25 INCHES | 3 LT 58-28S |

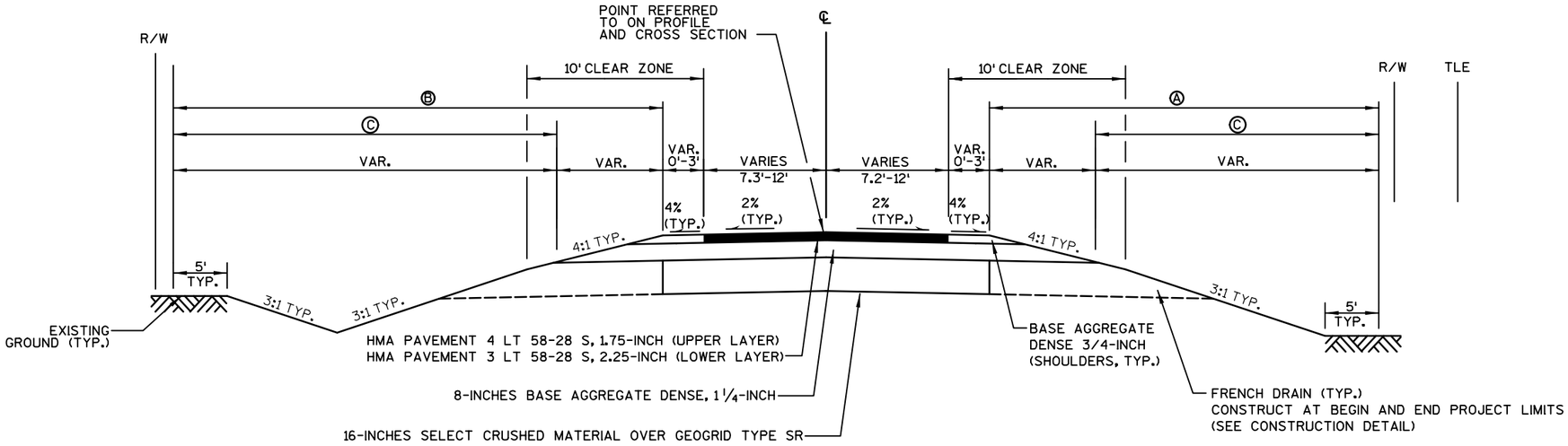
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | GENERAL NOTES | SHEET 2 | E |
|---|---|---|---|---|---|

FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\020101_gn.dgn PLOT DATE : 10/18/2021 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$




## EXISTING TYPICAL SECTION
## DRAMMEN VALLEY ROAD




## PROPOSED TYPICAL SECTION
## DRAMMEN VALLEY ROAD
## STA. 10+52.47 - STA. 11+81.80

Ⓐ SEEDING MIXTURE NO. 20 OR
SEEDING MIXTURE NO. 60;
AND FERTILIZER TYPE A.

Ⓑ SEEDING MIXTURE NO. 20 OR
SEEDING MIXTURE NO. 60.

Ⓒ SALVAGED TOPSOIL;
AND MULCHING OR EROSION MAT CLASS III
TYPE B AND SOIL STABILIZER TYPE A.

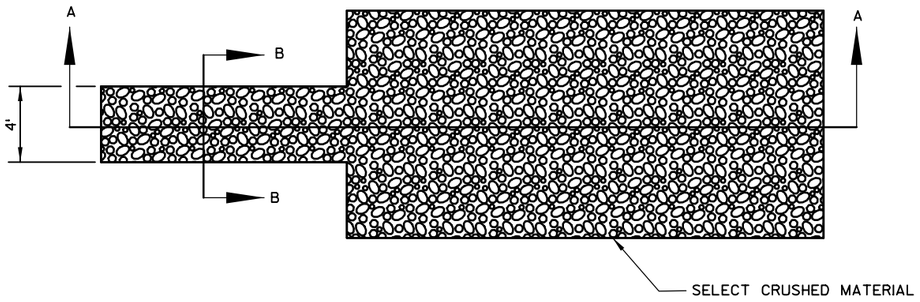
| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY RD | COUNTY: DANE | TYPICAL SECTIONS | SHEET 3 | E |
|---|---|---|---|---|---|

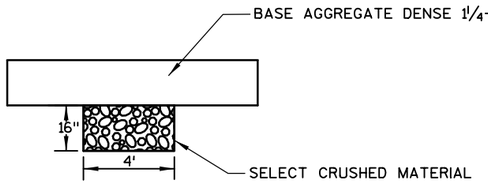
2

## RUNOFF COEFFICIENT TABLE

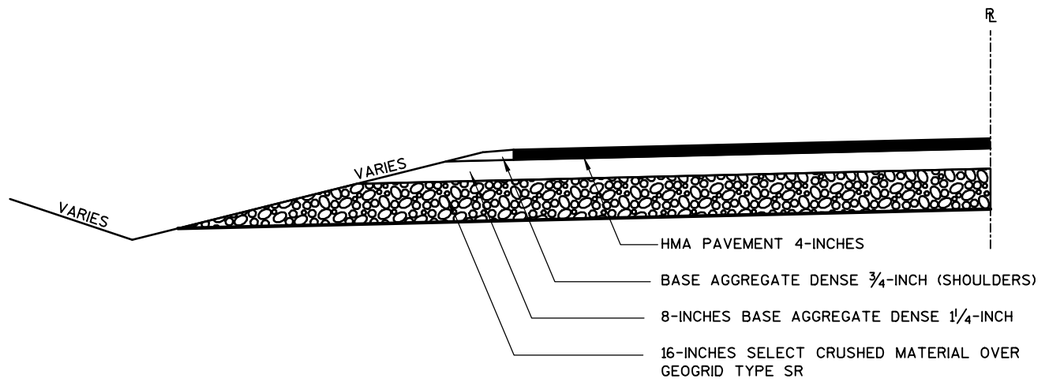
| | HYDROLOGIC SOIL GROUP | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | | B | | | C | | | D | | |
| | SLOPE RANGE (PERCENT) | | | SLOPE RANGE (PERCENT) | | | SLOPE RANGE (PERCENT) | | | SLOPE RANGE (PERCENT) | | |
| LAND USE: | 0-2 | 2-6 | 6 & OVER | 0-2 | 2-6 | 6 & OVER | 0-2 | 2-6 | 6 & OVER | 0-2 | 2-6 | 6 & OVER |
| ROW CROPS | .08<br>.22 | .16<br>.30 | .22<br>.38 | .12<br>.26 | .20<br>.34 | .27<br>.44 | .15<br>.30 | .24<br>.37 | .33<br>.50 | .19<br>.34 | .28<br>.41 | .38<br>.56 |
| MEDIAN 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 = 0.22 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.15 ACRES




**SECTION B-B**



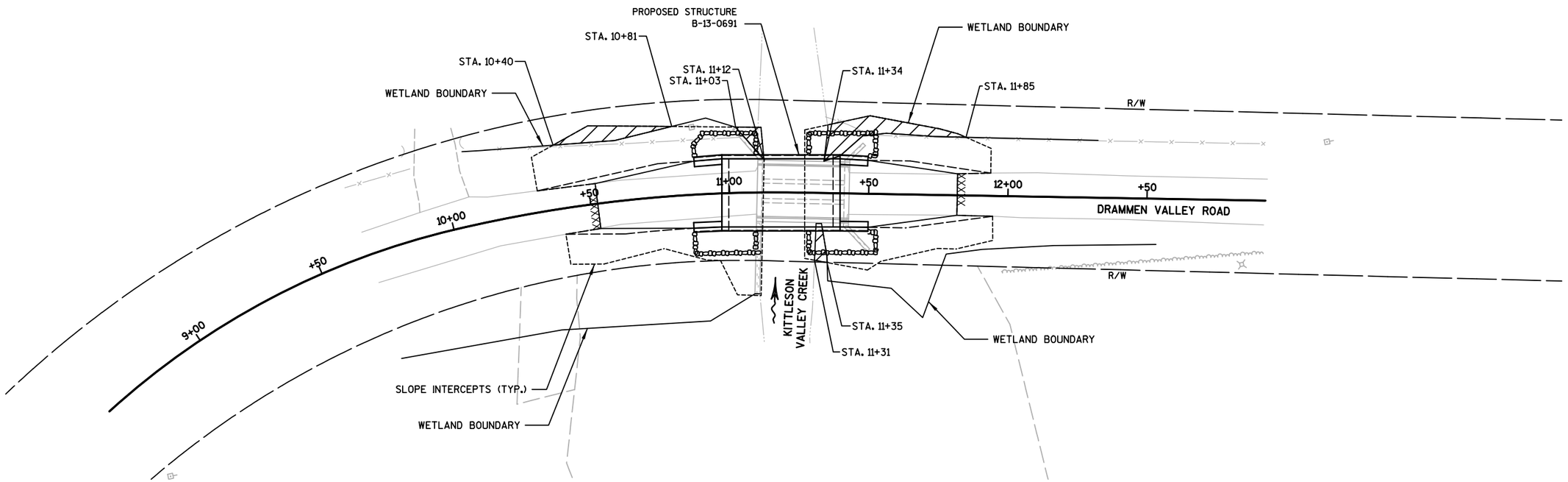

**SECTION A-A**

**FRENCH DRAIN DETAIL**

CONSTRUCT AT PROJECT LIMITS.

EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL BE INCLUDED WITH THE ITEM SELECT CRUSHED MATERIAL.

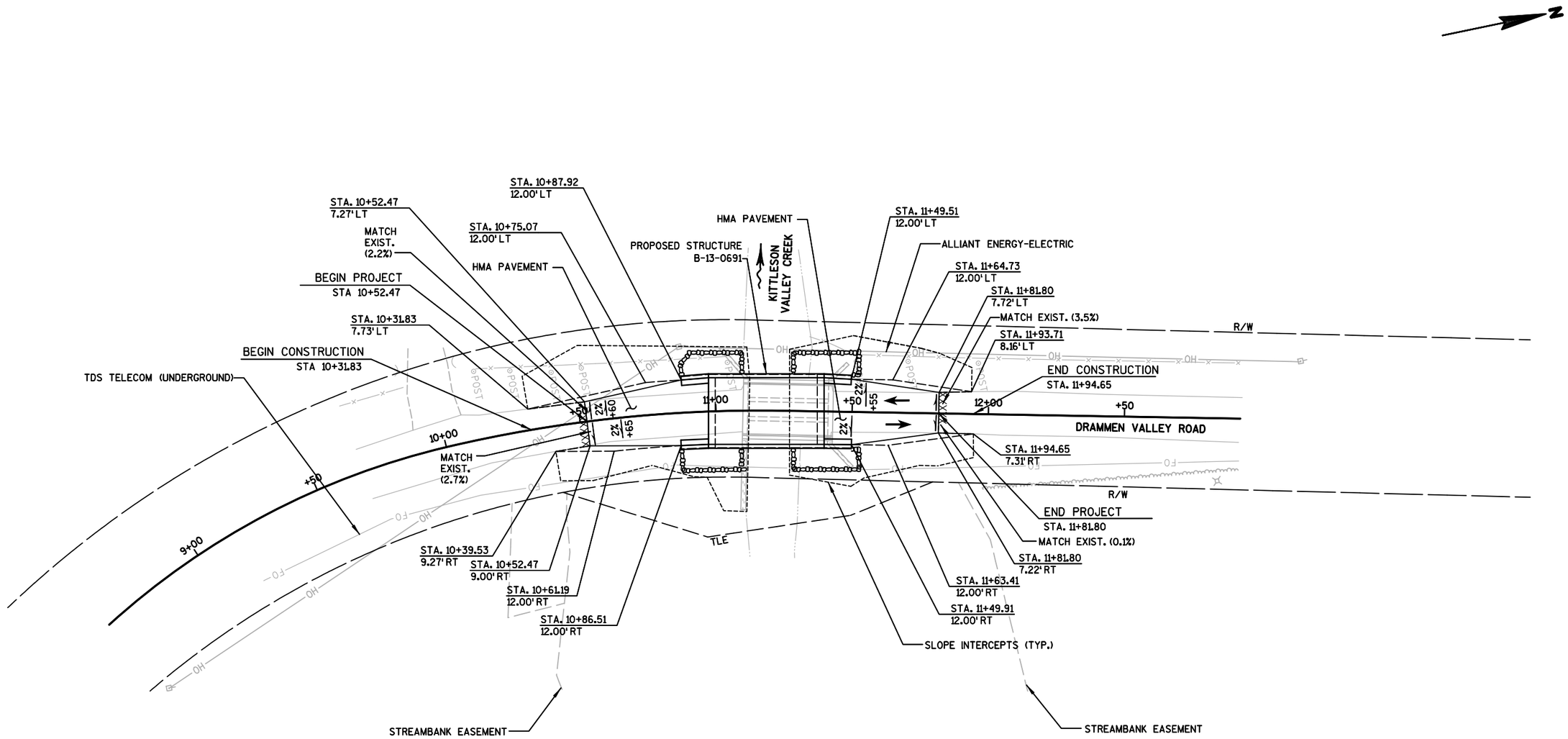
2




WETLAND IMPACTS

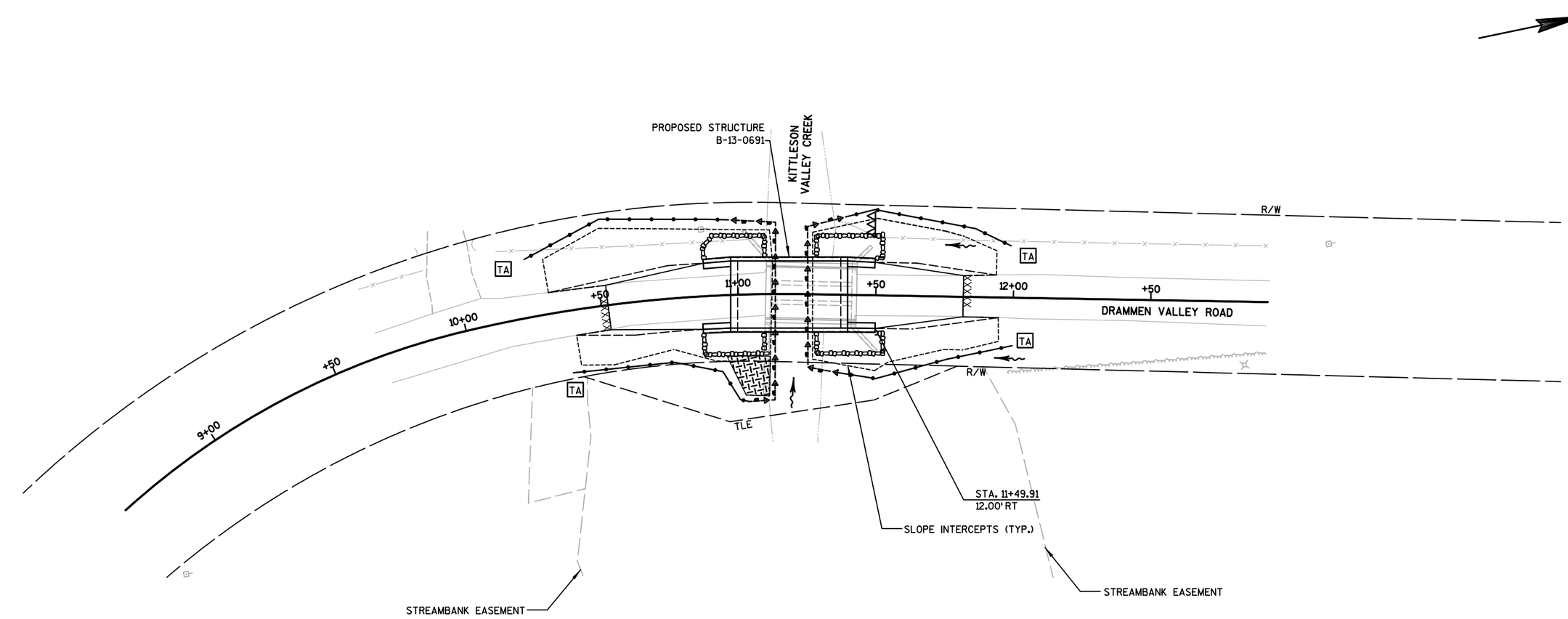
| IMPACT LOCATION STATION | IMPACT TYPE | AREA ACRES |
|---|---|---|
| 10+40 - 10+81 LT | M | 0.003 |
| 11+03 - 11+12 LT | M | 0.001 |
| 11+31 - 11+35 RT | M | 0.001 |
| 11+34 - 11+85 LT | M | 0.007 |

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | WETLAND DETAIL | SHEET 5 | E |
|---|---|---|---|---|---|



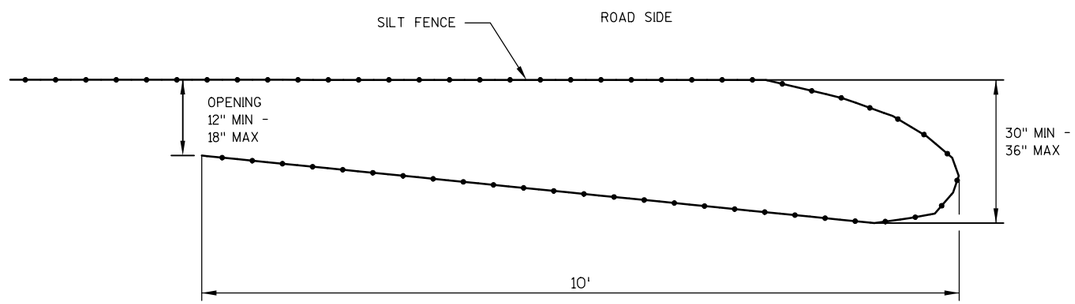

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | LAYOUT DETAIL | SHEET 6 | E |
|---|---|---|---|---|---|

2




## LEGEND

- TURBIDITY BARRIERS
- SLOPE INTERCEPT
- EROSION MAT CLASS III TYPE B AND SOIL STABILIZER TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECKS
- RIPRAP HEAVY
- TA — TEMPORARY TURTLE TURN-AROUND




## TEMPORARY TURTLE TURN-AROUND

NOTE:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

TURN-AROUND TO BE PAID AS "SILT FENCE."

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | EROSION CONTROL | SHEET 7 | E |
|---|---|---|---|---|---|

2

N

107 W5-52L 12" X 36"

102 REMOVE

104 REMOVE

109 W5-52R 12" X 36"

111 WEIGHT LIMIT 20 TONS REMOVE

ONE LANE BRIDGE 105 REMOVE

110 WEIGHT LIMIT 20 TONS REMOVE

R/W

10+00 +50 11+00 +50 12+00 +50

DRAMMEN VALLEY ROAD

R/W

9+00

KITTLESON VALLEY CREEK

108 W5-52L 12" X 36"

103 REMOVE

106 W5-52R 12" X 36"

101 REMOVE

ONE LANE BRIDGE 100 REMOVE

PROPOSED SIGN ON WOOD POST

EXISTING SIGN ON POST

(XXX) DESIGNATES SIGN ITEM NUMBER

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | PERMANENT SIGNING | SHEET 8 | E |
|---|---|---|---|---|---|

2

2

## LEGEND

| | |
|---|---|
| PCMS | TRAFFIC CONTROL SIGNS PCMS |
| | TYPE III BARRICADE WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D) |
| | TYPE III BARRICADE WITHOUT SIGN (TWO WARNING LIGHTS TYPE A REQ'D) |
| | TYPE III BARRICADE WITHOUT SIGN (ONE WARNING LIGHT TYPE A REQ'D) |
| | TRAFFIC CONTROL SIGN ON POST |
| C | SEE SDD BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C FOR ADDITIONAL INFORMATION |
| D | SEE SDD BARRICADES AND SIGNS FOR VARIOUS MAINLINE CLOSURES DETAIL D FOR ADDITIONAL INFORMATION |

N

WORK ZONE

KITTLESON VALLEY CREEK

BRIDGE OUT
R11-2B
48" X 30"

PREWARN ONLY
FRAME 1 ROAD CLOSED
FRAME 2 BEGIN (DATE)

PCMS

ROAD CLOSED AHEAD W20-3

ROAD CLOSED 500 FT W20-3

ROAD CLOSED 1000 FT W20-3

C 500'

C 500'

C 500'

D

D

9+00

10+00

11+00

12+00

RIVER FORKS ROAD

DRAMMEN VALLEY ROAD

BRIDGE OUT
R11-2B
48" X 30"

PCMS

PREWARN ONLY
ROAD CLOSED FRAME 1
BEGIN (DATE) FRAME 2

BRIDGE OUT
0.1 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3B
60" X 30"

BRIDGE OUT
R11-2B
48" X 30"

BRIDGE OUT
R11-2B
48" X 30"

PLACE TWO TYPE III BARRICADES WITH ATTACHED R11-3B SIGN AND TWO WARNING LIGHTS, TYPE A, AT DRAMMEN VALLEY ROAD INTERSECTION WITH CTH A. SEE SDD BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C FOR ADDITIONAL INFORMATION.

ROAD CLOSED 500 FT W20-3

ROAD CLOSED 1000 FT W20-3

ROAD CLOSED AHEAD W20-3

C 500'

* 500-FOOT SPACING (OR AS DETERMINED BY ENGINEER). C

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | TRAFFIC CONTROL | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\025001_tc.dgn PLOT DATE : 7/23/2021 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

5728-00-73

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 203.0260 | Removing Structure Over Waterway Minimal Debris (structure) 01. P-13-224 | EACH | 1.000 | 1.000 |
| 0004 | 204.9060.S | Removing (item description) 01. Concrete Posts | EACH | 6.000 | 6.000 |
| 0006 | 205.0100 | Excavation Common | CY | 187.000 | 187.000 |
| 0008 | 206.1000 | Excavation for Structures Bridges (structure) 01. B-13-691 | LS | 1.000 | 1.000 |
| 0010 | 210.1500 | Backfill Structure Type A | TON | 216.000 | 216.000 |
| 0012 | 213.0100 | Finishing Roadway (project) 01. 5728-00-73 | EACH | 1.000 | 1.000 |
| 0014 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 10.000 | 10.000 |
| 0016 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 118.000 | 118.000 |
| 0018 | 312.0110 | Select Crushed Material | TON | 204.000 | 204.000 |
| 0020 | 455.0605 | Tack Coat | GAL | 10.000 | 10.000 |
| 0022 | 460.2000 | Incentive Density HMA Pavement | DOL | 30.000 | 30.000 |
| 0024 | 460.5223 | HMA Pavement 3 LT 58-28 S | TON | 25.000 | 25.000 |
| 0026 | 460.5224 | HMA Pavement 4 LT 58-28 S | TON | 19.000 | 19.000 |
| 0028 | 502.0100 | Concrete Masonry Bridges | CY | 154.000 | 154.000 |
| 0030 | 502.3200 | Protective Surface Treatment | SY | 116.000 | 116.000 |
| 0032 | 502.3210 | Pigmented Surface Sealer | SY | 62.000 | 62.000 |
| 0034 | 505.0400 | Bar Steel Reinforcement HS Structures | LB | 3,160.000 | 3,160.000 |
| 0036 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 22,070.000 | 22,070.000 |
| 0038 | 516.0500 | Rubberized Membrane Waterproofing | SY | 18.000 | 18.000 |
| 0040 | 550.0500 | Pile Points | EACH | 8.000 | 8.000 |
| 0042 | 550.1100 | Piling Steel HP 10-Inch X 42 Lb | LF | 220.000 | 220.000 |
| 0044 | 606.0300 | Riprap Heavy | CY | 129.000 | 129.000 |
| 0046 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 134.000 | 134.000 |
| 0048 | 618.0100 | Maintenance And Repair of Haul Roads (project) 01. 5728-00-73 | EACH | 1.000 | 1.000 |
| 0050 | 619.1000 | Mobilization | EACH | 1.000 | 1.000 |
| 0052 | 624.0100 | Water | MGAL | 3.000 | 3.000 |
| 0054 | 625.0500 | Salvaged Topsoil | SY | 390.000 | 390.000 |
| 0056 | 627.0200 | Mulching | SY | 610.000 | 610.000 |
| 0058 | 628.1504 | Silt Fence | LF | 405.000 | 405.000 |
| 0060 | 628.1520 | Silt Fence Maintenance | LF | 615.000 | 615.000 |
| 0062 | 628.1905 | Mobilizations Erosion Control | EACH | 3.000 | 3.000 |
| 0064 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 3.000 | 3.000 |
| 0066 | 628.2033 | Erosion Mat Class III Type B | SY | 24.000 | 24.000 |
| 0068 | 628.6005 | Turbidity Barriers | SY | 164.000 | 164.000 |
| 0070 | 628.6505 | Soil Stabilizer Type A | ACRE | 0.010 | 0.010 |
| 0072 | 628.7504 | Temporary Ditch Checks | LF | 15.000 | 15.000 |
| 0074 | 628.7560 | Tracking Pads | EACH | 2.000 | 2.000 |
| 0076 | 629.0205 | Fertilizer Type A | CWT | 0.300 | 0.300 |
| 0078 | 630.0120 | Seeding Mixture No. 20 | LB | 10.000 | 10.000 |
| 0080 | 630.0160 | Seeding Mixture No. 60 | LB | 3.000 | 3.000 |
| 0082 | 630.0300 | Seeding Borrow Pit | LB | 6.000 | 6.000 |
| 0084 | 630.0500 | Seed Water | MGAL | 16.000 | 16.000 |
| 0086 | 634.0612 | Posts Wood 4x6-Inch X 12-FT | EACH | 4.000 | 4.000 |
| 0088 | 637.2230 | Signs Type II Reflective F | SF | 12.000 | 12.000 |
| 0090 | 638.2602 | Removing Signs Type II | EACH | 8.000 | 8.000 |
| 0092 | 638.3000 | Removing Small Sign Supports | EACH | 8.000 | 8.000 |
| 0094 | 642.5001 | Field Office Type B | EACH | 1.000 | 1.000 |
| 0096 | 643.0420 | Traffic Control Barricades Type III | DAY | 528.000 | 528.000 |
| 0098 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 968.000 | 968.000 |

5728-00-73

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0100 | 643.0900 | Traffic Control Signs | DAY | 616.000 | 616.000 |
| 0102 | 643.1050 | Traffic Control Signs PCMS | DAY | 14.000 | 14.000 |
| 0104 | 643.5000 | Traffic Control | EACH | 1.000 | 1.000 |
| 0106 | 645.0111 | Geotextile Type DF Schedule A | SY | 70.000 | 70.000 |
| 0108 | 645.0120 | Geotextile Type HR | SY | 244.000 | 244.000 |
| 0110 | 645.0220 | Geogrid Type SR | SY | 240.000 | 240.000 |
| 0112 | 650.4500 | Construction Staking Subgrade | LF | 120.000 | 120.000 |
| 0114 | 650.5000 | Construction Staking Base | LF | 120.000 | 120.000 |
| 0116 | 650.6500 | Construction Staking Structure Layout (structure) 01. B-13-0691 | LS | 1.000 | 1.000 |
| 0118 | 650.9910 | Construction Staking Supplemental Control (project) 01. 5728-00-73 | LS | 1.000 | 1.000 |
| 0120 | 650.9920 | Construction Staking Slope Stakes | LF | 120.000 | 120.000 |
| 0122 | 690.0150 | Sawing Asphalt | LF | 31.000 | 31.000 |
| 0124 | 715.0502 | Incentive Strength Concrete Structures | DOL | 924.000 | 924.000 |
| 0126 | 999.2000.S | Installing and Maintaining Bird Deterrent System (station) 01. Sta. 11+26 | EACH | 1.000 | 1.000 |

## REMOVING CONCRETE POSTS

| CATEGORY | STATION | LOCATION | 204.9060.S 01. CONCRETE POSTS EACH |
|---|---|---|---|
| 0010 | 10+42 | LT | 1 |
| | 10+53 | LT | 1 |
| | 11+05 | LT | 1 |
| | 11+51 | LT | 1 |
| | 11+70 | LT | 1 |
| | 11+96 | LT | 1 |
| | TOTAL | | 6 |

## FINISHING ROADWAY

| CATEGORY | PROJECT | 213.0100.01 EACH |
|---|---|---|
| 0010 | 5728-00-73 | 1 |

## BASE AGGREGATE SUMMARY

| CATEGORY | STATION - STATION | 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON | 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON | * 312.0110 SELECT CRUSHED MATERIAL TON |
|---|---|---|---|---|
| 0010 | 10+32 - 10+97 | 5 | 62 | 96 |
| | 11+40 - 11+95 | 5 | 56 | 88 |
| | TOTALS | 10 | 118 | 184 |

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

## ASPHALTIC ITEMS

| CATEGORY | STATION - STATION | 460.5223 HMA PAVEMENT 3 LT 58-28 S TON | 460.5224 HMA PAVEMENT 4 LT 58-28 S TON | 455.0605 TACK COAT GAL |
|---|---|---|---|---|
| 0010 | 10+52 - 10+97 | 13 | 10 | 5 |
| | 11+40 - 11+82 | 12 | 9 | 5 |
| | TOTALS | 25 | 19 | 10 |

NOTE: HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LB/SY/IN.

## MAINTENANCE AND REPAIR OF HAUL ROADS

| CATEGORY | PROJECT | 618.0100.01 EACH |
|---|---|---|
| 0030 | 5728-00-73 | 1 |

## MOBILIZATION

| CATEGORY | PROJECT | 619.1000 EACH |
|---|---|---|
| 0010 | 5728-00-73 | 1.00 |

## EARTHWORK

| CATEGORY | LOCATION | STATION | - | STATION | 205.0100 EXCAVATION COMMON (1) CUT (2) 5% OF CUT CY | 205.0100 EXCAVATION COMMON (1) EBS EXCAVATION (3) CY | STRUCTURE EXCAVATION (4) CY | AVAILABLE MATERIAL (4) CY | EXPANDED EBS BACKFILL (5) FACTOR 1.25 CY | UNEXPANDED FILL CY | EXPANDED FILL (6) FACTOR 1.25 CY | MASS ORDINATE +/- (7) CY | WASTE (8) CY | * 312.0110 SELECT CRUSHED MATERIAL (9) TON |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | DRAMMEN VALLEY ROAD | 10+52.47 | - | 11+81.80 | 178 | 9 | 183 | 361 | 11 | 25 | 31 | 330 | 330 | 20 |
| | ITEM TOTALS | | | | | 187 | | | | | | | | |

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100.
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL.
4) AVAILABLE STRUCTURE EXCAVATION IS FOR INFORMATION ONLY AND IS INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES B-13-0691"
5) EXPANDED EBS BACKFILL: THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. EBS BACKFILL EXPANSION FACTOR = 1.25.
6) EXPANDED FILL = (UNEXPANDED FILL)* EXPANDED FILL FACTOR. EXPANDED FILL FACTOR = 1.25.
7) MASS ORDINATE: MASS ORDINATE = CUT + AVAILABLE STRUCTURE EXCAVATION - EXPANDED FILL
PLUS MASS ORDINATE QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS MASS ORDINATE QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
8) WASTE = POSITIVE MASS ORDINATE, BORROW = NEGATIVE MASS ORDINATE
9) SELECT CRUSHED MATERIAL IS USED FOR BACKFILL OF EBS.

3

3

WATER

| CATEGORY | STATION - STATION | 624.0100 MGAL | REMARKS |
|---|---|---|---|
| 0010 | 10+32 - 11+95 | 1 | DUST CONTROL |
| | | 2 | COMPACTION |
| | TOTAL | 3 | |

MOBILIZATIONS EROSION CONTROL

| CATEGORY | PROJECT | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH |
|---|---|---|---|
| 0010 | 5728-00-73 | 3 | 3 |

TRACKING PADS

| CATEGORY | LOCATION | 628.7560 EACH |
|---|---|---|
| 0010 | UNDISTRIBUTED | 2 |

EROSION CONTROL

| CATEGORY | STATION - STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF | 628.2033 EROSION MAT CLASS III TYPE B SY | 628.6005 TURBIDITY BARRIERS SY | 628.7504 TEMPORARY DITCH CHECKS LF |
|---|---|---|---|---|---|---|---|
| 0010 | 10+32 - 11+15 | LT/RT | 175 | 260 | 19 | 71 | 12 |
| | 11+25 - 11+95 | LT/RT | 150 | 230 | --- | 60 | --- |
| | | UNDISTRIBUTED | 80 | 125 | 5 | 33 | 3 |
| | TOTALS | | 405 | 615 | 24 | 164 | 15 |

FINISHING ITEMS

| CATEGORY | STATION - STATION | LOCATION | 625.0500 SALVAGED TOPSOIL SY | 627.0200 MULCHING SY | 628.6505 SOIL STABILIZER TYPE A ACRE | 629.0205 FERTILIZER TYPE A CWT | 630.0120 SEEDING MIXTURE NO. 20 LB | 630.0160 SEEDING MIXTURE NO. 60 LB | 630.0300 SEEDING BORROW PIT LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 10+32 - 10+97 | LT/RT | 180 | 160 | 0.01 | 0.1 | 5 | 1 | --- | 5 |
| | 11+40 - 11+95 | LT/RT | 130 | 130 | --- | --- | 3 | 1 | --- | 4 |
| | | WASTE SITE | --- | 200 | --- | 0.1 | --- | --- | 5 | 4 |
| | | UNDISTRIBUTED | 80 | 120 | --- | 0.1 | 2 | 1 | 1 | 3 |
| | | TOTALS | 390 | 610 | 0.01 | 0.3 | 10 | 3 | 6 | 16 |

FIELD OFFICE TYPE B

| CATEGORY | PROJECT | 642.5001 EACH |
|---|---|---|
| 0010 | 5728-00-73 | 1 |

TRAFFIC CONTROL

| CATEGORY | PROJECT | 643.5000 EACH |
|---|---|---|
| 0010 | 5728-00-73 | 1 |

TRAFFIC CONTROL

| CATEGORY | TRAFFIC CONTROL OPERATIONS | DURATION (DAYS) | 643.0900 SIGNS EACH | 643.0900 SIGNS DAY | 643.1050 SIGNS PCMS EACH | 643.1050 SIGNS PCMS DAY | 643.0420 BARRICADES TYPE III EACH | 643.0420 BARRICADES TYPE III DAY | 643.0705 WARNING LIGHTS TYPE A EACH | 643.0705 WARNING LIGHTS TYPE A DAY |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | PRE WARNING | 7 | --- | --- | 2 | 14 | --- | --- | --- | --- |
| | CLOSURE | 44 | 14 | 616 | --- | --- | 12 | 528 | 22 | 968 |
| | | TOTALS | | 616 | | 14 | | 528 | | 968 |

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | MISCELLANEOUS QUANTITIES | SHEET 13 | E |
|---|---|---|---|---|---|

## SIGNING SUMMARY

| CATEGORY | SIGN NO. | APPROX. STA. | LOC. | SIGN CODE | SIGN MESSAGE | SIGN SIZE (W x H) IN | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 634.0612 POSTS WOOD 4x6-INCH x 12-FT EACH | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 100 | --- | RT | W5-3 | ONE LANE BRIDGE | --- x --- | --- | --- | 1 | 1 | REMOVE |
| | 101 | 11+09 | RT | W5-52R | CLEARANCE STRIPER DOWN LEFT | --- x --- | --- | --- | 1 | 1 | REMOVE |
| | 102 | 11+09 | LT | W5-52L | CLEARANCE STRIPER DOWN RIGHT | --- x --- | --- | --- | 1 | 1 | REMOVE |
| | 103 | 11+44 | RT | W5-52R | CLEARANCE STRIPER DOWN LEFT | --- x --- | --- | --- | 1 | 1 | REMOVE |
| | 104 | 11+44 | LT | W5-52L | CLEARANCE STRIPER DOWN RIGHT | --- x --- | --- | --- | 1 | 1 | REMOVE |
| | 105 | --- | LT | W5-3 | ONE LANE BRIDGE | --- x --- | --- | --- | 1 | 1 | REMOVE |
| | 106 | 10+85 | RT | W5-52R | CLEARANCE STRIPER DOWN LEFT | 12 x 36 | 3.00 | 1 | --- | --- | |
| | 107 | 10+86 | LT | W5-52L | CLEARANCE STRIPER DOWN RIGHT | 12 x 36 | 3.00 | 1 | --- | --- | |
| | 108 | 11+52 | RT | W5-52L | CLEARANCE STRIPER DOWN RIGHT | 12 x 36 | 3.00 | 1 | --- | --- | |
| | 109 | 11+52 | LT | W5-52R | CLEARANCE STRIPER DOWN LEFT | 12 x 36 | 3.00 | 1 | --- | --- | |
| | 110 | 10+26 | RT | R12-1 | WEIGHT LIMIT 20 TONS | --- x --- | --- | --- | 1 | 1 | REMOVE |
| | 111 | 12+38 | LT | R12-1 | WEIGHT LIMIT 20 TONS | --- x --- | --- | --- | 1 | 1 | REMOVE |
| | | | | | TOTALS | | 12.00 | 4 | 8 | 8 | |

## GEOGRID TYPE SR

| CATEGORY | STATION - STATION | 645.0220 SY |
|---|---|---|
| 0010 | 10+52 - 10+97 | 125 |
| | 11+40 - 11+82 | 115 |
| | TOTAL | 240 |

## CONSTRUCTION STAKING

| CATEGORY | STATION - STATION | LOCATION | 650.4500 SUBGRADE LF | 650.5000 BASE LF | 650.9920 SLOPE STAKES LF |
|---|---|---|---|---|---|
| 0010 | 10+32 - 10+97 | LT/RT | 65 | 65 | 65 |
| | 11+40 - 11+95 | LT/RT | 55 | 55 | 55 |
| | TOTALS | | 120 | 120 | 120 |

## SAWING

| CATEGORY | LOCATION | 690.0150 ASPHALT LF |
|---|---|---|
| 0010 | 10+52 | 16 |
| | 11+82 | 15 |
| | TOTAL | 31 |

## INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM

| CATEGORY | LOCATION | 999.2000.S EACH |
|---|---|---|
| 0010 | STA. 11+26 | 1 |

## SCHEDULE OF LANDS & INTERESTS REQUIRED

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

| PARCEL NUMBER | OWNER(S) | INTEREST REQUIRED | R/W S.F. REQUIRED NEW | R/W S.F. REQUIRED EXISTING | R/W S.F. REQUIRED TOTAL | TLE S.F. |
|---|---|---|---|---|---|---|
| 1 | LARRY C. & BARBARA S. LANGE LIVING TRUST | TLE | --- | --- | --- | 1744 |

## UTILITY INTERESTS REQUIRED

| UTILITY NUMBER | UTILITY OWNER(S) | INTEREST REQUIRED |
|---|---|---|
| 100 | ALLIANT ENERGY | RELEASE OF RIGHTS |
| 101 | TDS TELECOM | RELEASE OF RIGHTS |

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), DANE COUNTY, NAD 83(2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

EXISTING DRAMMEN VALLEY ROAD R/W BASED ON CSM 11673, CSM 11674, CSM 14784 AND DANE COUNTY HIGHWAY REGISTRY-TOWN OF PERRY PAGE 201.

(100) ALLIANT ENERGY (WISCONSIN POWER & LIGHT) BLANKET EASEMENT SE-SW SEC. 30 DOC. 594378 V.128, P.39

(101) TDS TELECOM (UNITED TELEPHONE COMPANY) BLANKET EASEMENT SE-SW EAST OF HIGHWAY DOC. 1456489 V.647, P.439

| STATION & OFFSET TABLE | | |
|---|---|---|
| RW1 | 11+12.32 | 24.48' |
| TLE1 | 10+39.81 | 24.52' |
| TLE2 | 11+80.00 | 25.20' |
| TLE3 | 11+50.00 | 38.00' |
| TLE4 | 10+95.00 | 46.00' |

JONATHAN & MAEGEN HUFTON
LOT 1
CSM 14784
V.103, P.158-160
DOC.5404871

TOWN OF PERRY

SE-SW SEC.30

BRADLEY & LAURA TISCH
LOT 1
CSM 11673
V.71, P.201-203
DOC.4162200

**CURVE 1**
P.I. = 9+30.84
Y = 409,660.43
X = 701,502.55
DELTA = 28° 56' 02" (RT)
D = 20° 27' 46"
T = 72.24'
L = 141.40'
R = 280.00'
P.C. = 8+58.60
Y = 409,598.17
X = 701,539.19
P.C.C. = 10+00.00
Y = 409,732.65
X = 701,500.61

**CURVE 2**
P.I. = 10+62.64
Y = 409,795.26
X = 701,498.92
DELTA = 14° 16' 51" (RT)
D = 11° 27' 33"
T = 62.64'
L = 124.62'
R = 500.00'
P.C.C. = 10+00.00
Y = 409,732.65
X = 701,500.61
P.T. = 11+24.62
Y = 409,856.35
X = 701,512.73

**CURVE RW1**
R=325.25'
L=69.02'
LC=68.90'
LCB=N 7° 08' 34" E

REMOVING CONCRETE POSTS REQ'D
SLOPE INTERCEPTS (TYP.)
EXISTING STRUCTURE P-13-224 TO BE REMOVED
PROPOSED STRUCTURE B-13-0691
REMOVING CONCRETE POSTS REQ'D
REMOVING FENCE REQ'D
ALLIANT ENERGY-ELECTRIC

BEGIN CONSTRUCTION
STA 10+31.83

BEGIN RELOCATION ORDER
STA 10+00.00
520.56 FEET NORTH AND
540.91 FEET WEST
OF THE SOUTH 1/4 CORNER
SEC.30, T.5N., R.6E.

END RELOCATION ORDER
STA 12+00.00
717.79 FEET NORTH AND
512.17 FEET WEST
OF THE SOUTH 1/4 CORNER
SEC.30, T.5N., R.6E.

BM 1
BM 2
BM 3
CP 5
CP 10
P.I. 10+62.64
P.I. 9+30.84
PCC 10+00.00
PT 11+24.62
POT 12+92.48
CURVE 1
CURVE 2
CURVE RW1
RW1
P.L.
R/W
9+00
10+00
11+00
12+00
+50
N 12° 44' 14" E
N 13° 13' 21" E
67.08'
DRAMMEN VALLEY ROAD
33'
24.75'

BEGIN PROJECT
STA 10+52.47
SAWING ASPHALT REQ'D
X=701,501.95
Y=409,785.08

END CONSTRUCTION
STA. 11+94.65

END PROJECT
STA. 11+81.80
SAWING ASPHALT REQ'D

TDS TELECOM (UNDERGROUND)

TLE1
TLE2
TLE3
TLE4
S 28° 52' 50" W 55.58'
S 3° 10' 57" W 52.99'
S 10° 22' 37" E 32.62'
S 89° 14' 48" W 508.52'
20'X40' PARKING AREA EASEMENT DOC. 5181542
1 TLE-SLOPES 1744 S.F.

KITTLESON VALLEY CREEK

LARRY C. & BARBARA S. LANGE LIVING TRUST

FISHERIES STREAMBANK CORRIDOR EASEMENT 66' FROM EACH BANK OF CREEK DOC. 5181542

FOUND 1-1/4" BAR
Y=409212.087
X=702041.517

FOUND 1-1/4" BAR
Y=414506.368
X=701971.896

N 0° 45' 12" W 565.80'
S 0° 45' 12" E 4728.94'

PC 8+58.60

## CONTROL POINTS

| NO. | STATION | OFFSET | Y | X | DESCRIPTION |
|---|---|---|---|---|---|
| CP 5 | STA. 9+23.61 | 11.85' RT | 701,524.31 | 409,661.00 | MAG NAIL |
| CP 10 | --- | --- | 701,551.54 | 410,065.33 | MAG NAIL |

## BENCH MARKS

| NO. | STATION | DESCRIPTION | ELEV. |
|---|---|---|---|
| BM 1 | 8+59.15/32.07' RT | RAILROAD SPIKE IN POWERPOLE | 854.63 |
| BM 2 | 10+87.24/23.92' LT | RAILROAD SPIKE IN POWERPOLE | 855.69 |
| BM 3 | Y: 410,046.17 X: 701,533.96 | RAILROAD SPIKE IN POWERPOLE | 856.95 |

PROPOSED ℄ PROFILE
VPI 10+52.47 EL 856.92
VPI 11+28.00 EL 857.30
VPI 11+81.80 EL 855.35
+0.50%
-3.63%
VPC 10+83.00 EL 857.08
VPT 11+73.00 EL 855.67
K = 22
L = 90'
EXISTING ℄ PROFILE

STA. 11+18
STRUCTURE B-13-0691 REQ'D
SINGLE SPAN FLAT SLAB STRUCTURE
24'-5" CLEAR ROADWAY WIDTH

STA. 11+26
REMOVE STRUCTURE P-13-224
SINGLE SPAN CONCRETE DECK GIRDER STRUCTURE
33' OVERALL LENGTH
22' OVERALL WIDTH

EXISTING ℄ ELEVATION
PROPOSED ℄ ELEVATION

856.52 856.90 857.00 857.09 856.49 856.38 854.92 854.24

865 860 855 850 845 840 835 830

9+50 10+00 10+50 11+00 11+50 12+00 12+50 13+00

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | PLAN AND PROFILE | SHEET | E |
|---|---|---|---|---|---|



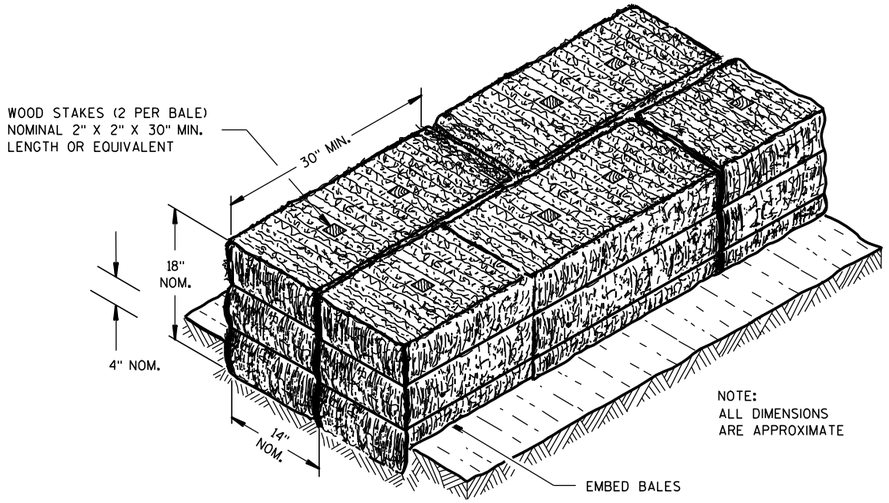
FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\050101_pp.dgn PLOT DATE : 7/23/2021 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 40

# Standard Detail Drawing List

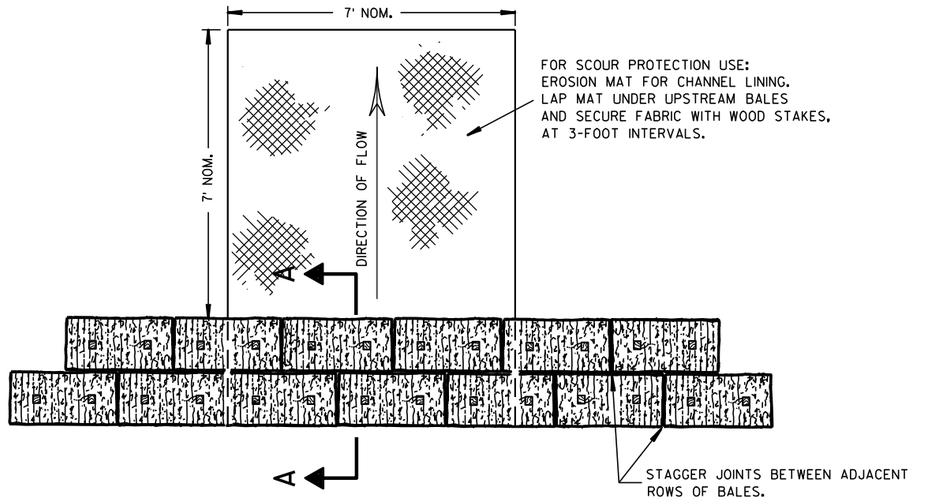
| | |
|---|---|
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E11-02 | TURBIDITY BARRIER |
| 08E14-01 | TRACKING PAD |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 13C19-03 | HMA LONGITUDINAL JOINTS |
| 15C02-08A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-08B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C06-09 | SIGNING & MARKING FOR TWO LANE BRIDGES |
| 15C11-09B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS |

6

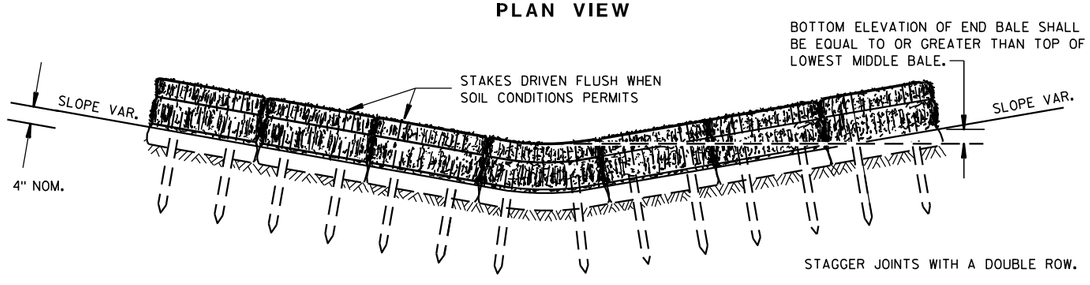
6




SECTION A-A




PLAN VIEW



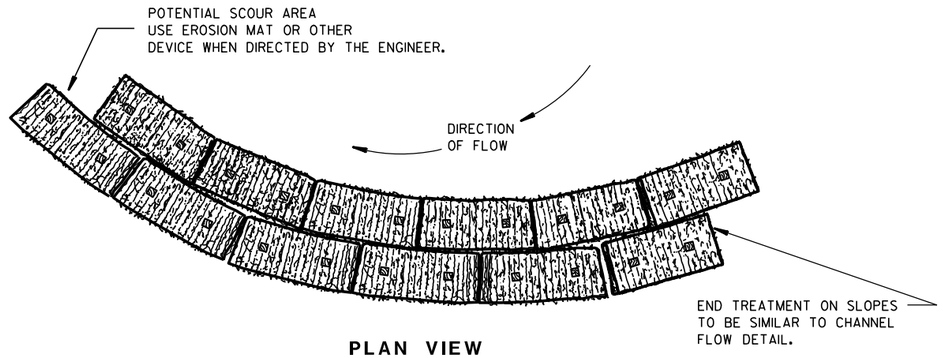

FRONT ELEVATION

## TEMPORARY DITCH CHECK USING EROSION BALES (1)

## GENERAL NOTES

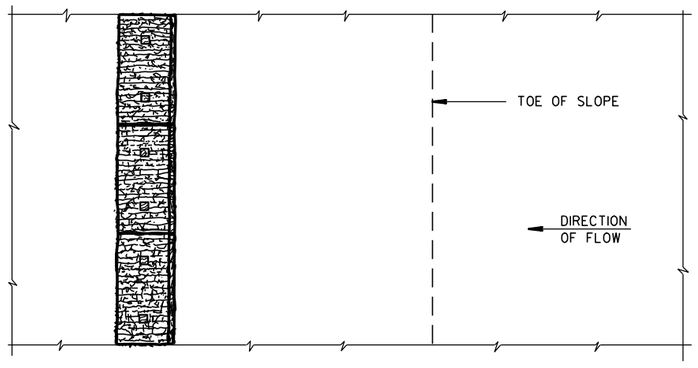
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

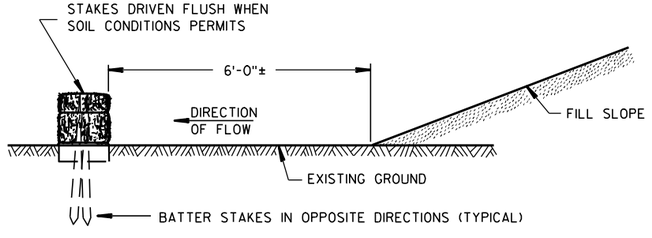



PLAN VIEW

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

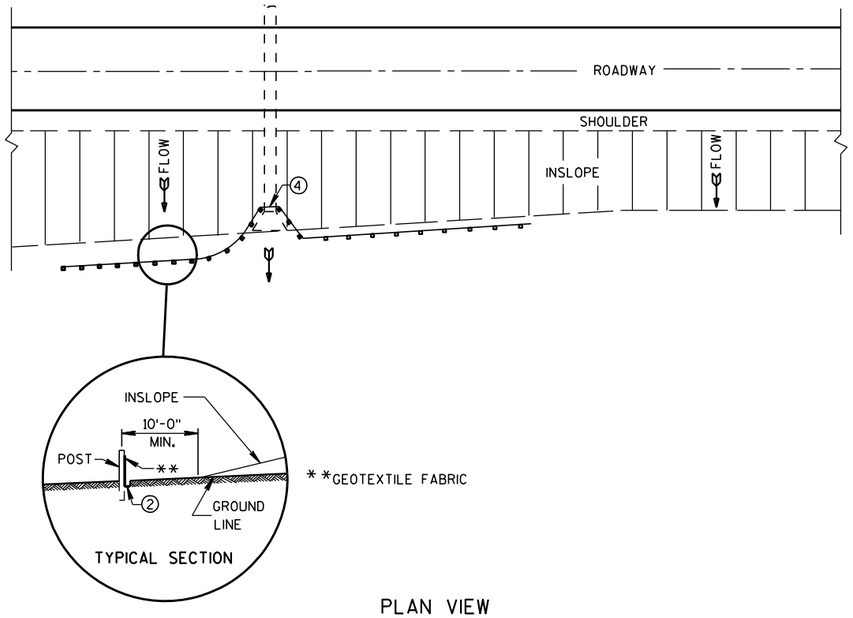


6

S.D.D. 8 E 8-3

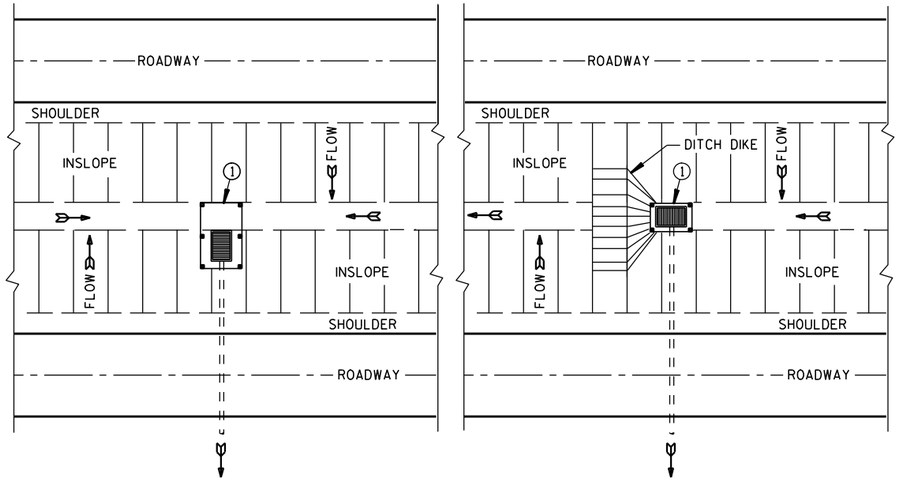
6

S.D.D. 8 E 8-3




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE



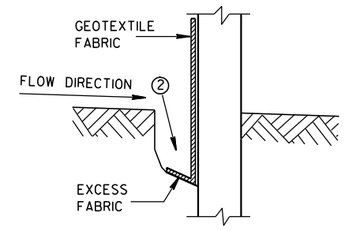

PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

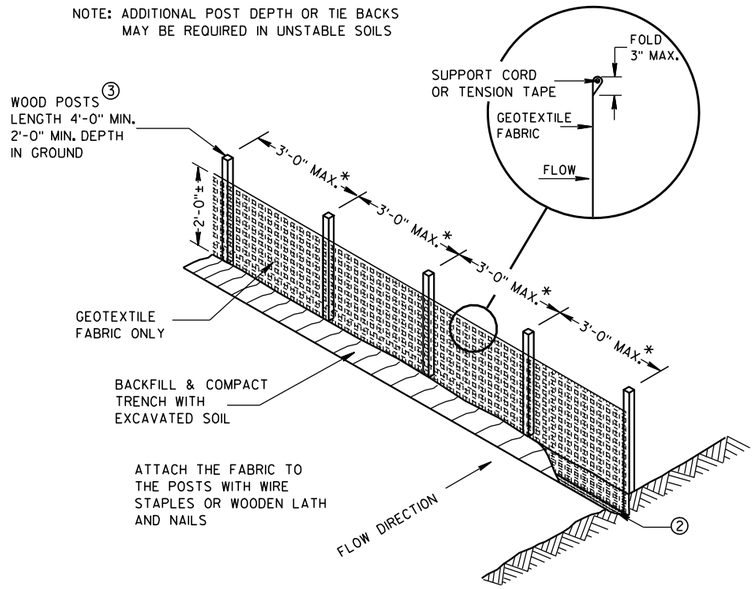
## GENERAL NOTES

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

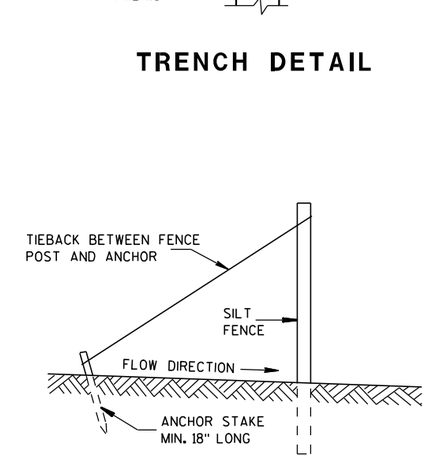
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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

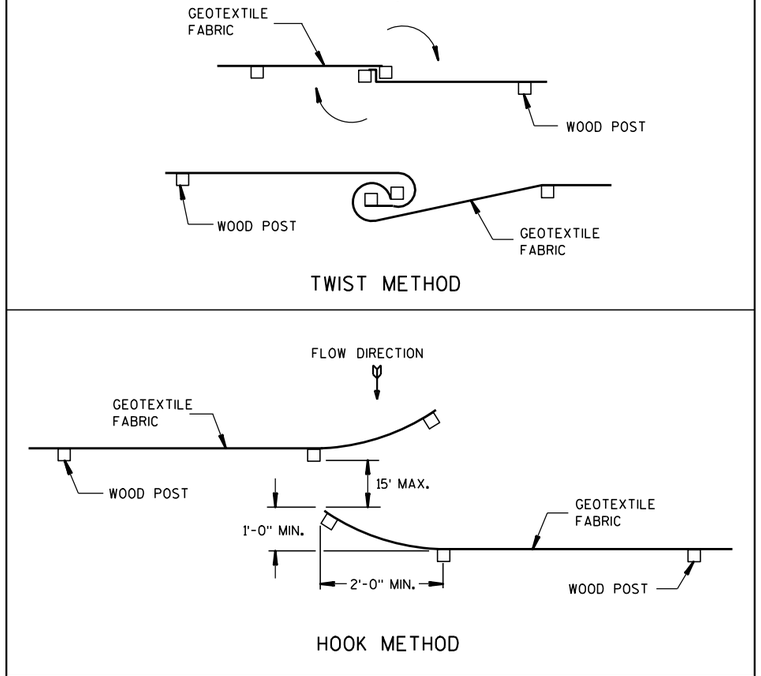



## SILT FENCE




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)




## JOINING TWO LENGTHS OF SILT FENCE 5

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

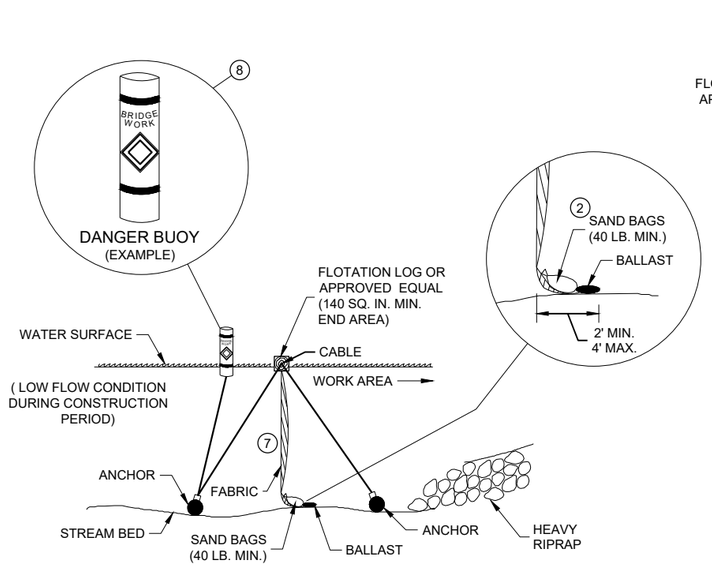


6

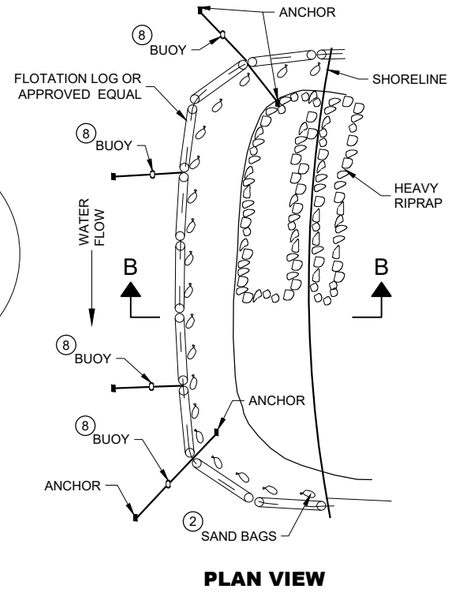
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

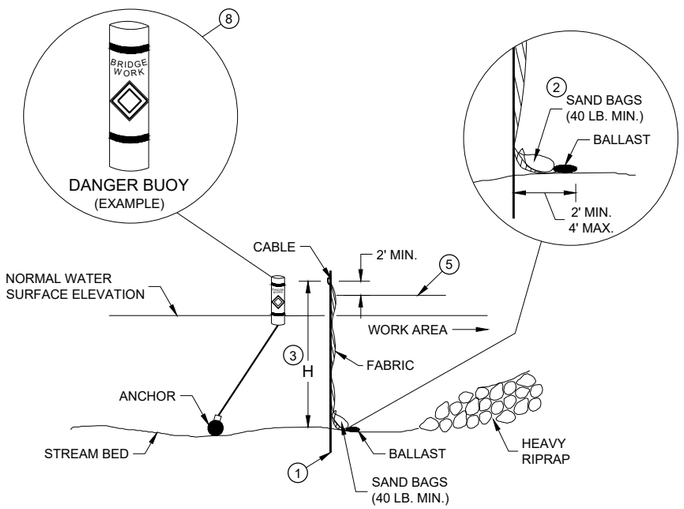



**SECTION B - B**

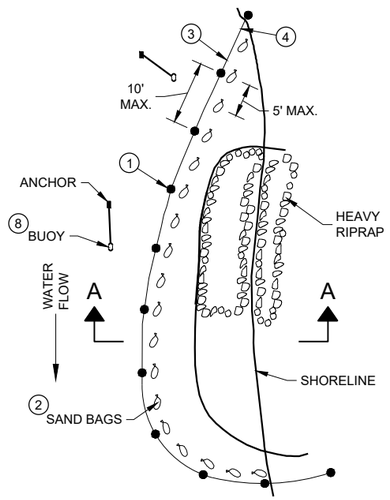



**PLAN VIEW**

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




**SECTION A - A**




**PLAN VIEW**

**TURBIDITY BARRIER - STANDARD POST INSTALLATION**

**TURBIDITY BARRIER PLACEMENT DETAILS**

## GENERAL NOTES

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

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

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

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

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

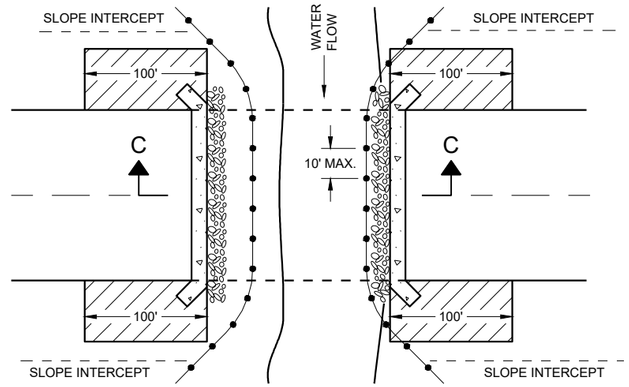
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

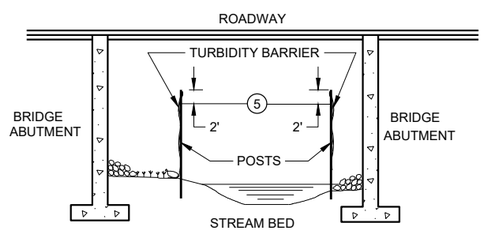
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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




**PLAN VIEW**




**SECTION C - C**

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

**TURBIDITY BARRIER**

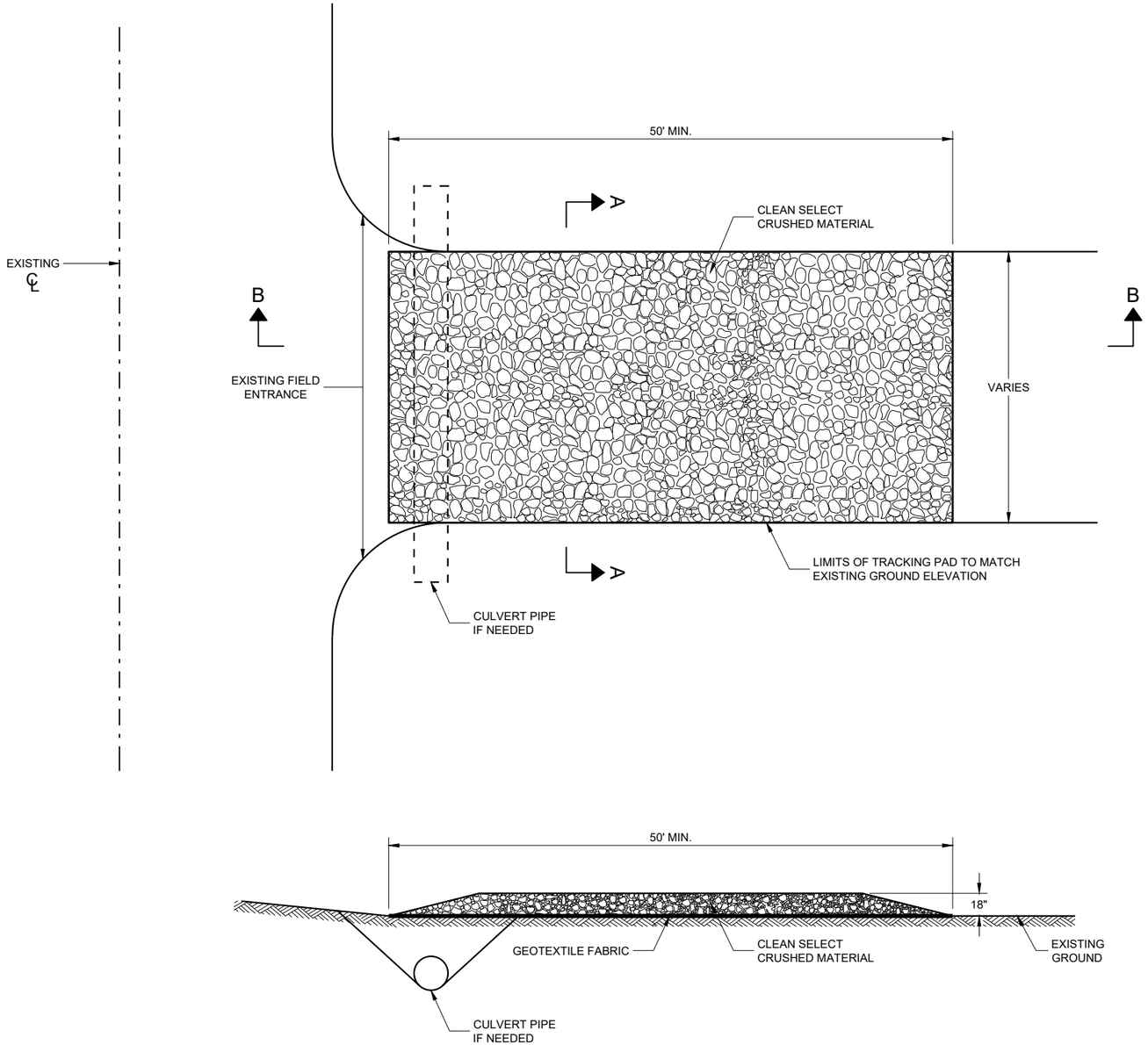
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA




6
SDD 08E11 - 02







**SECTION B - B**

## 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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

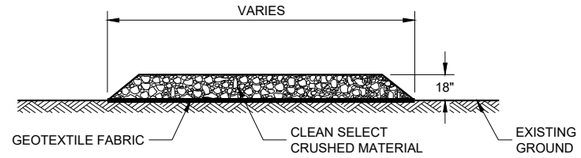
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.




**SECTION A - A**

# TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

FHWA



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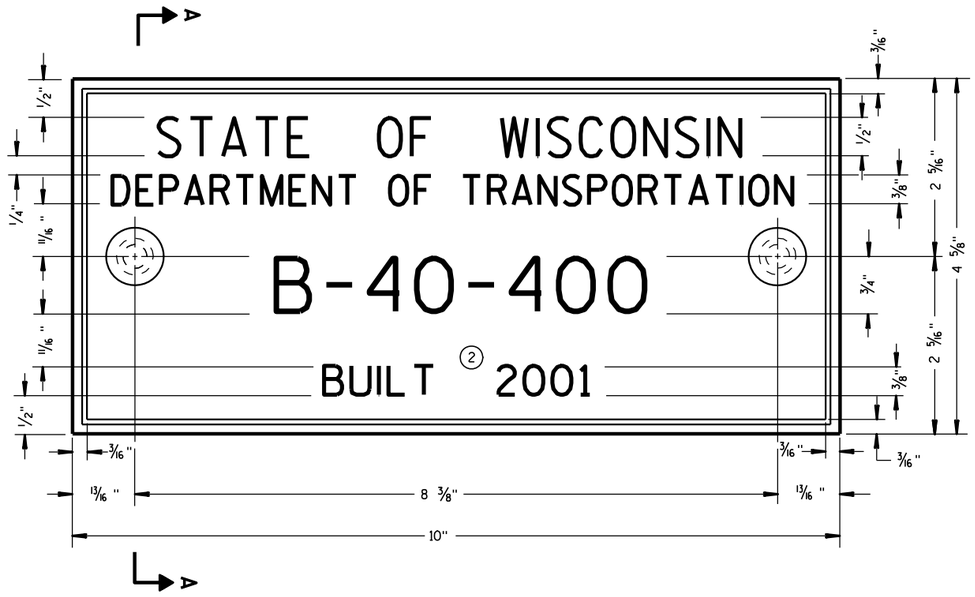
SDD 08E14 - 01

SDD 08E14 - 01




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

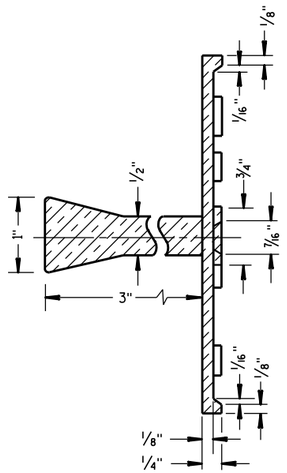
## GENERAL NOTES

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

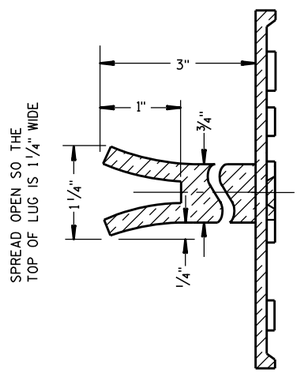
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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




**SECTION A-A**




**ALTERNATE LUG**

FOR MULTI-UNIT STRUCTURES LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

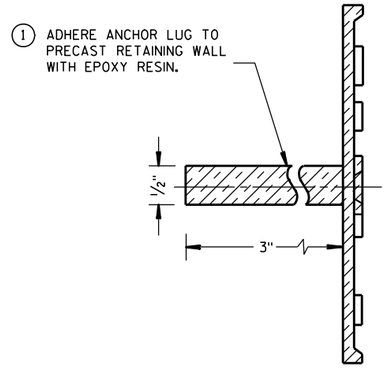
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

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




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

**NAME PLATE (STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

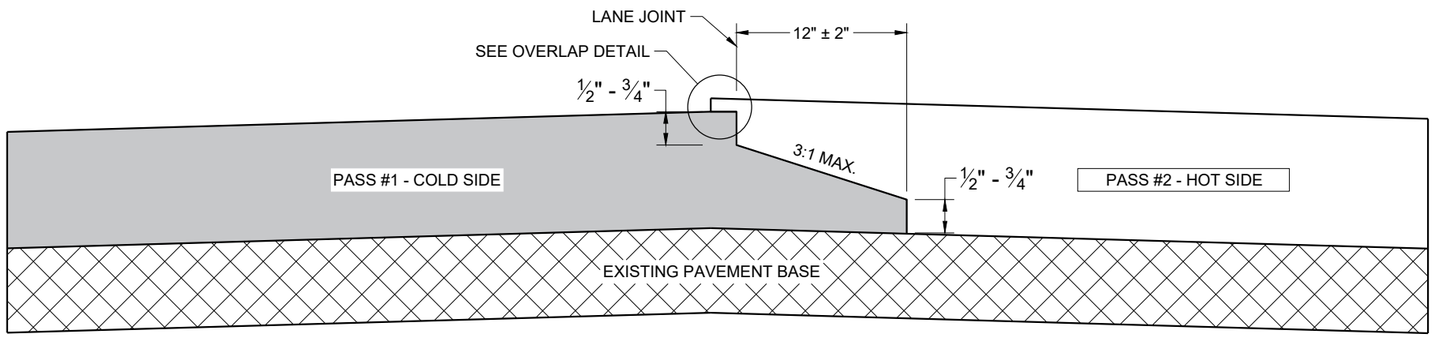
/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

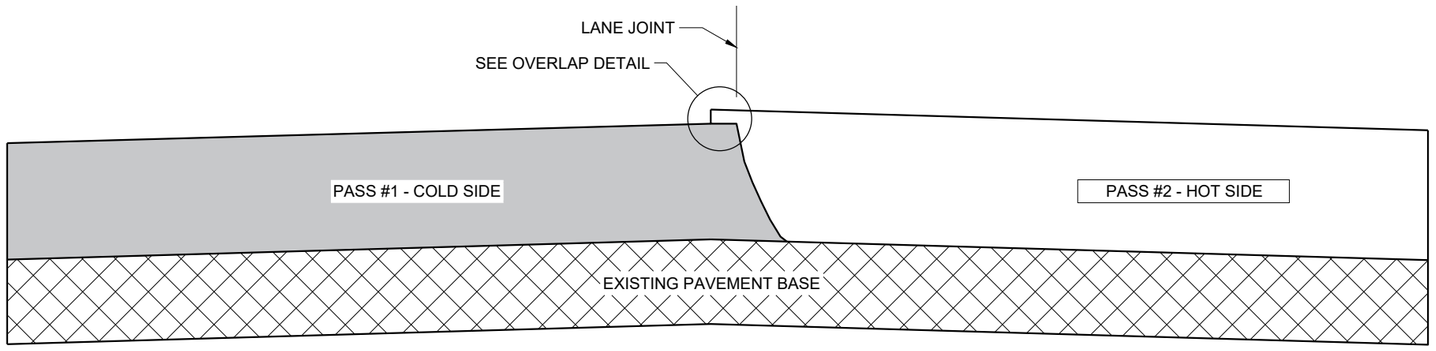


6

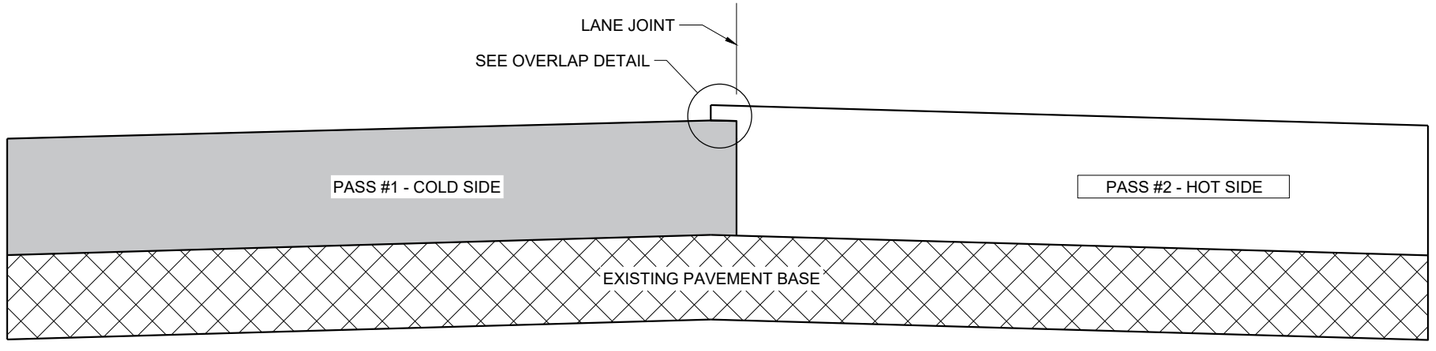
S.D.D. 12 A 3-10




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




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




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

## GENERAL NOTES

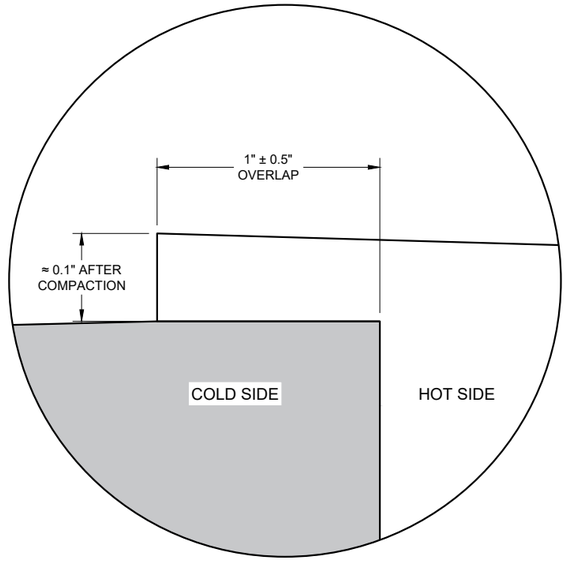
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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




**OVERLAP DETAIL (TYPICAL)**

6

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SDD 13C19 - 03

SDD 13C19 - 03

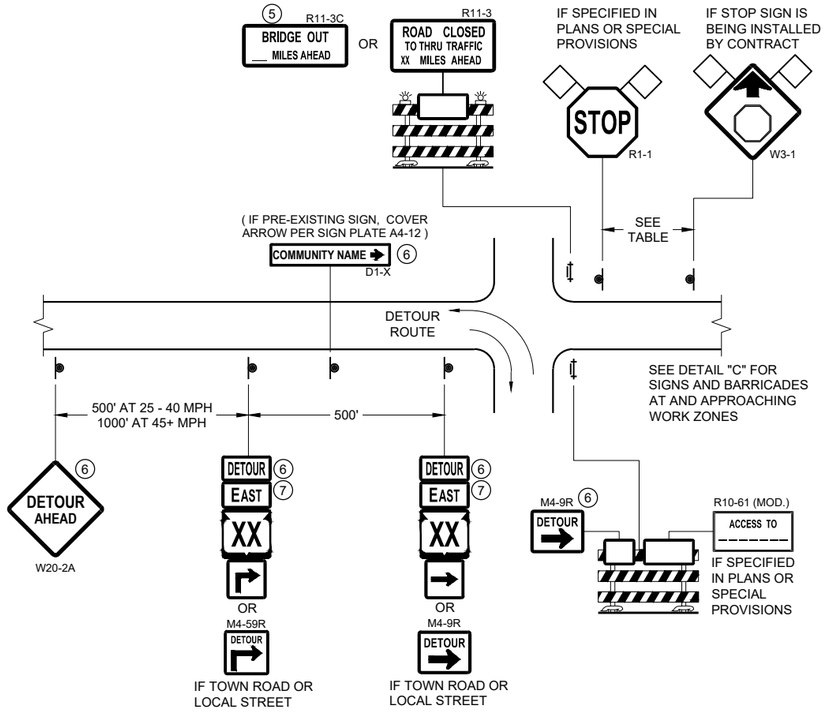
**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

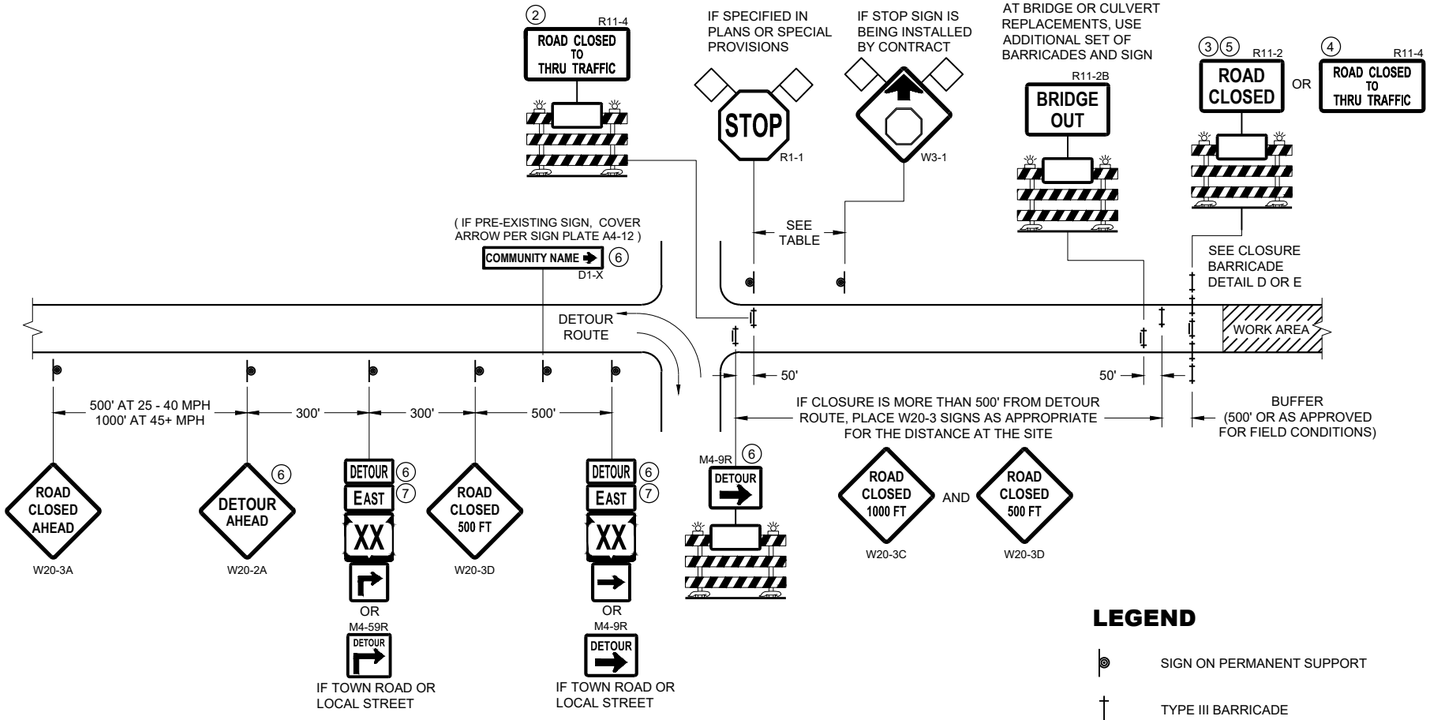
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



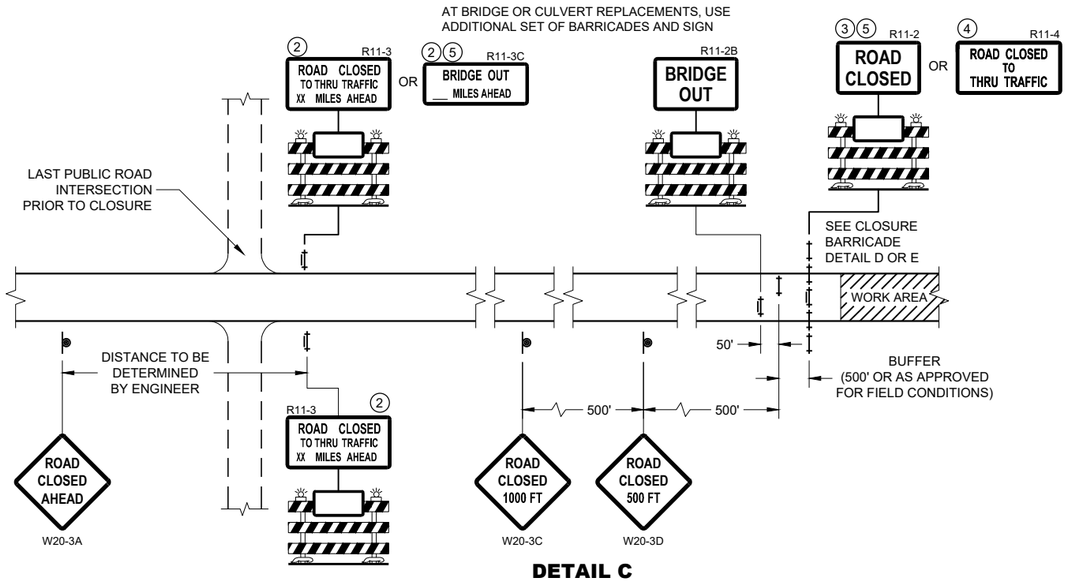

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



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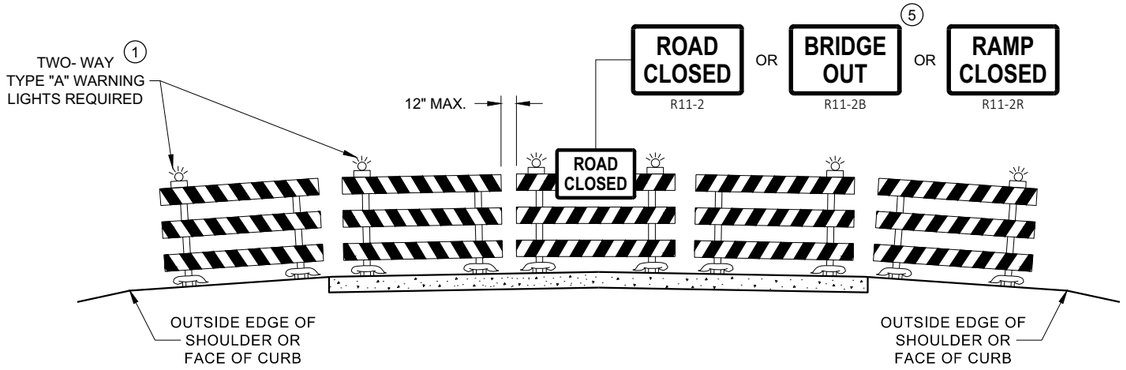
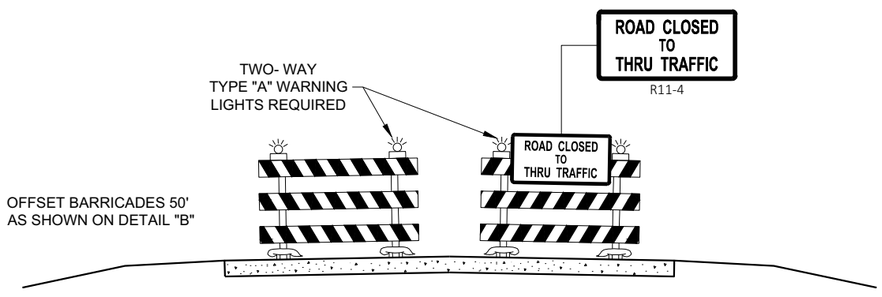
SDD 15C02 - 08a

SDD 15C02 - 08a




**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
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA



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SDD 15C02 - 08b

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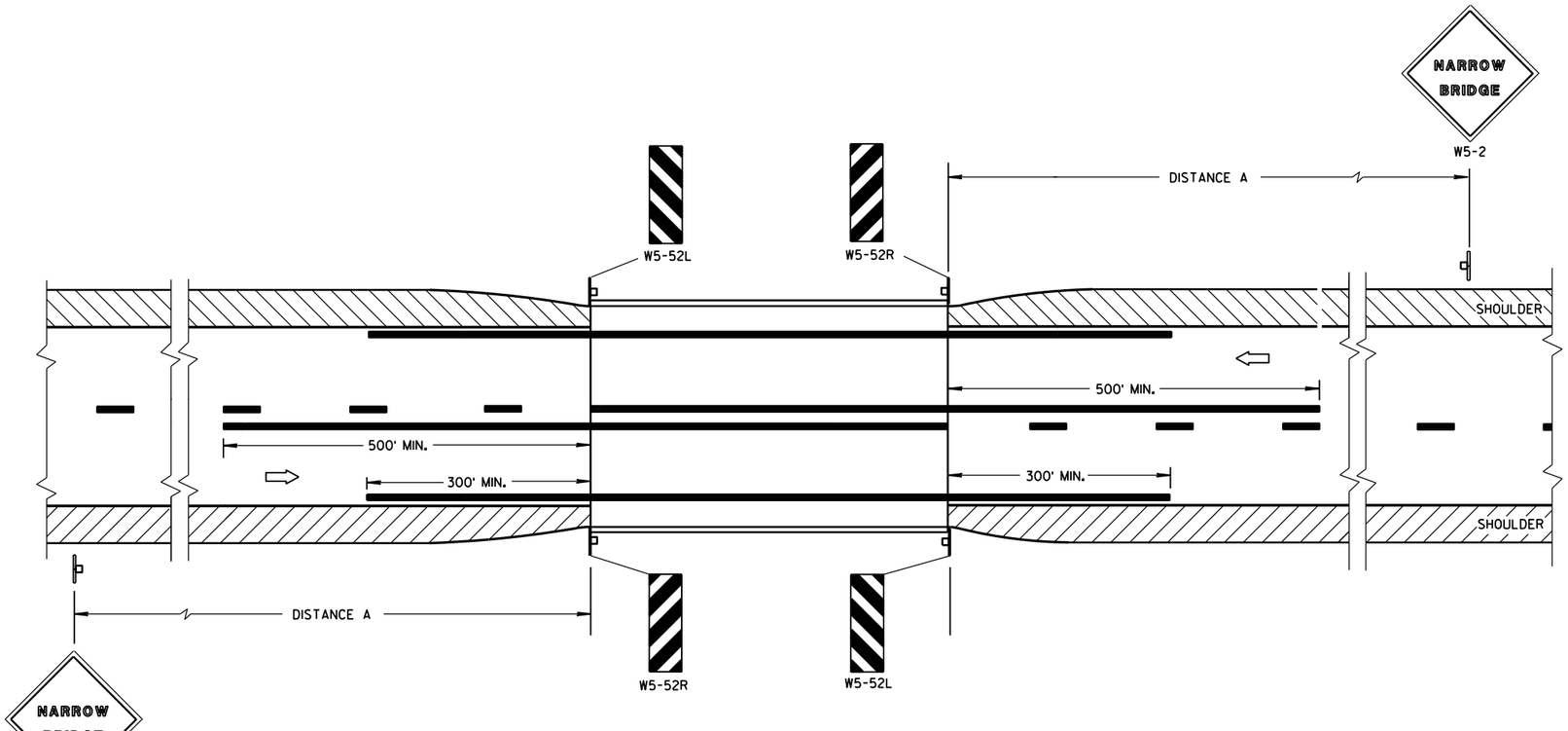
SDD 15C02 - 08b




## 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

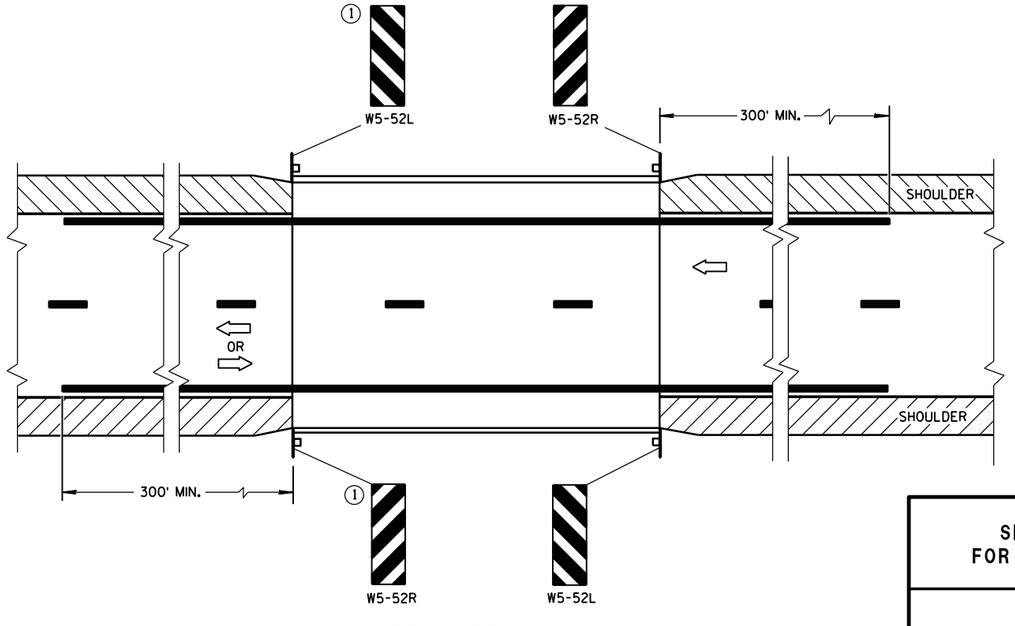
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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 MARKING ENGINEER

FHWA



6

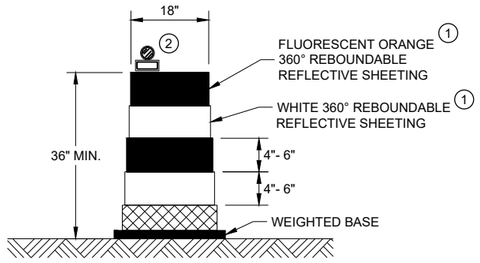
S.D.D. 15 C 6-9

6

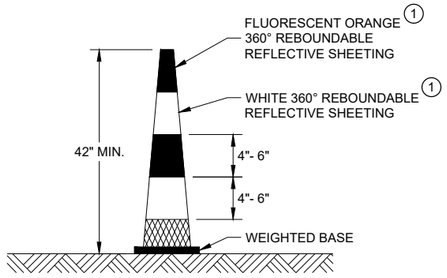
S.D.D. 15 C 6-9

## GENERAL NOTES

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

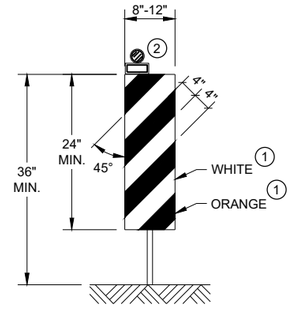



### DRUM



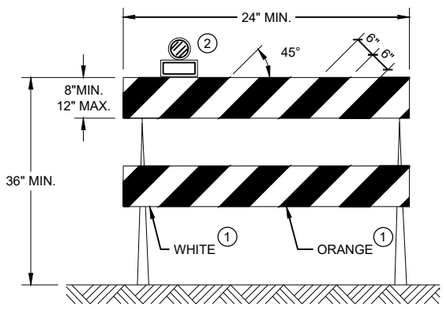

### 42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



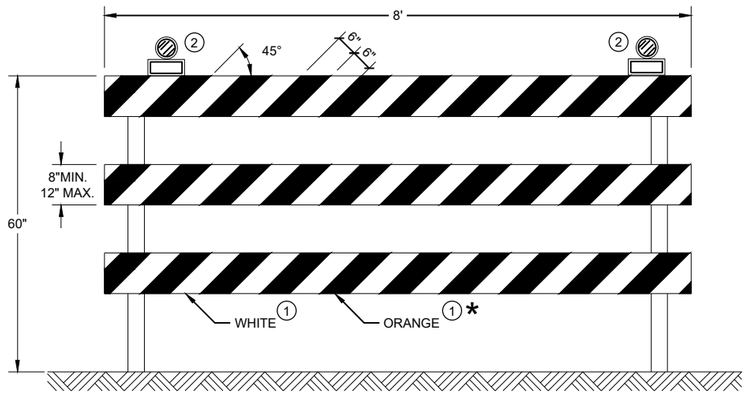

### VERTICAL PANEL

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




### TYPE II BARRICADE

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




### TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE
FHWA



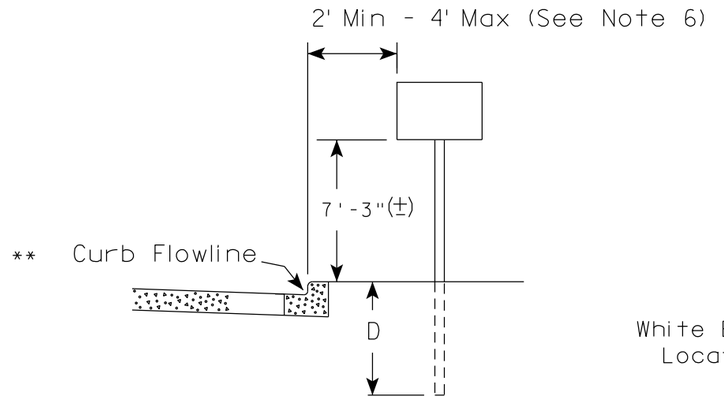
6

SDD15C11 - 09b

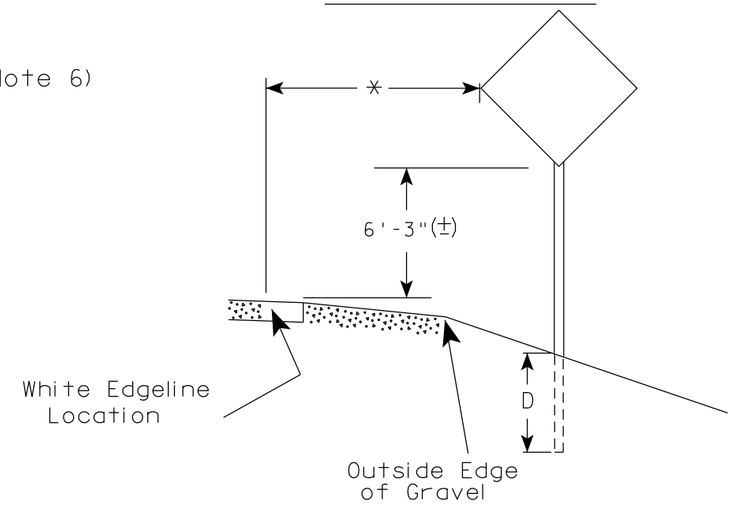
6

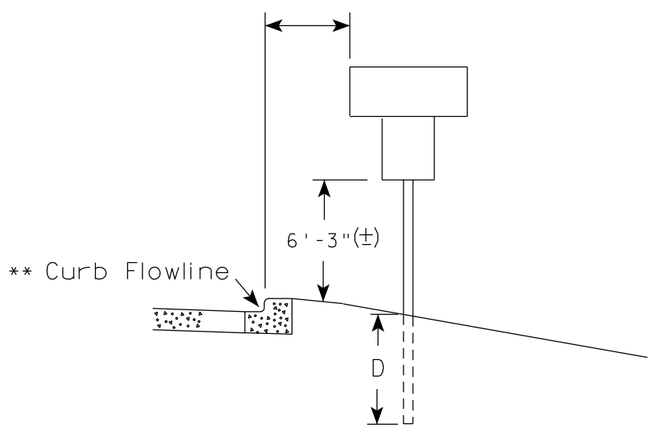
SDD15C11 - 09b

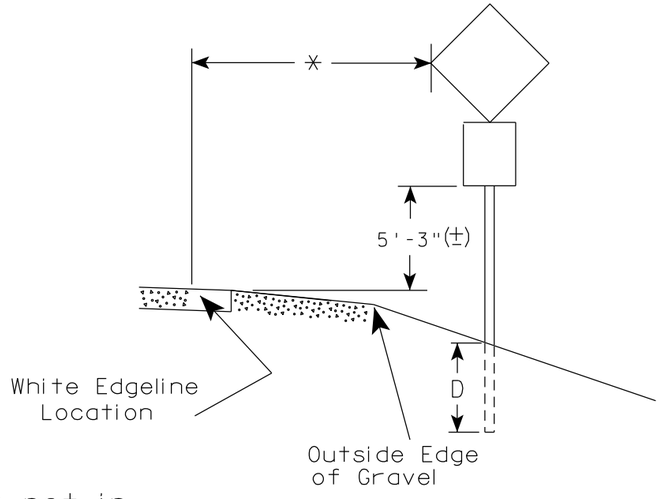
## URBAN AREA




## RURAL AREA (See Note 2)




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

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

### POST EMBEDMENT DEPTH

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

### GENERAL NOTES

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

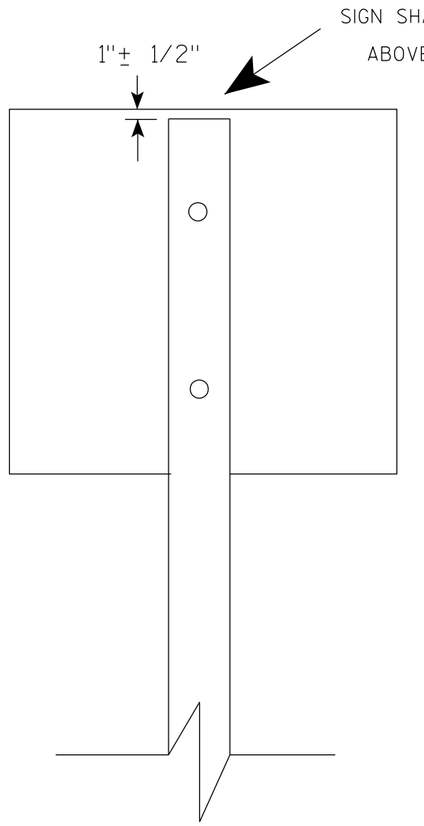
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

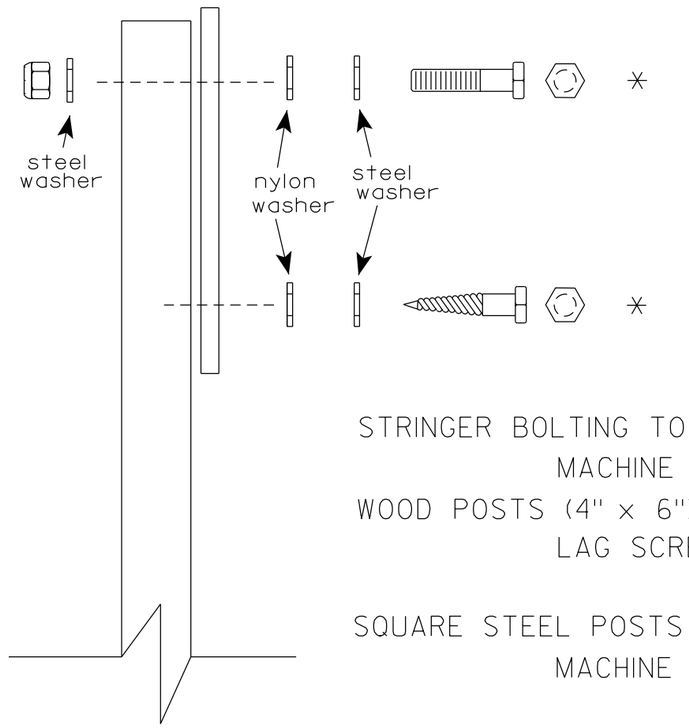
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 27 | E |
|---|---|---|---|---|---|




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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

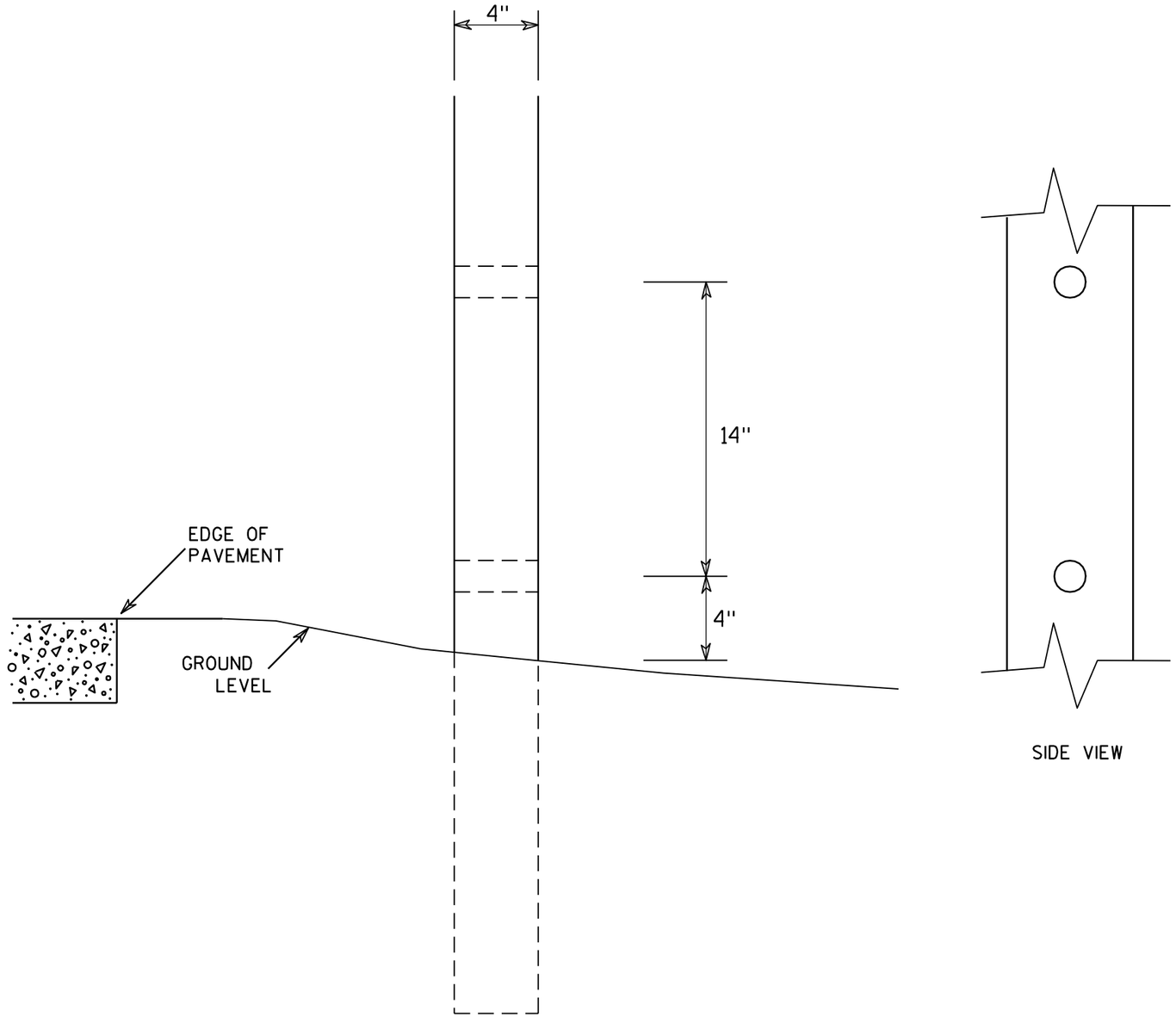
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

# ATTACHMENT OF SIGNS TO POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

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






SIDE VIEW

GENERAL NOTES

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

7

7

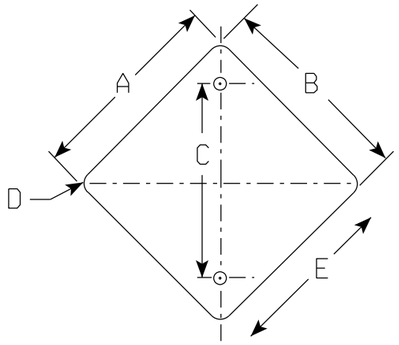
# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

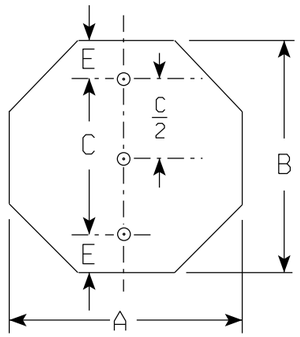
APPROVED Chester J Spang
for State Traffic Engineer

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

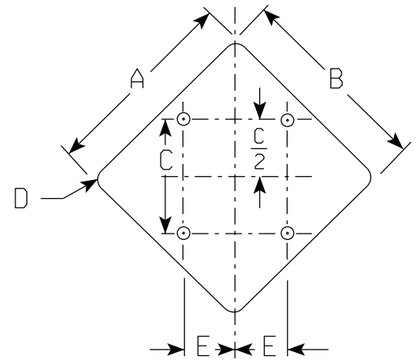
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 29 | E |
|---|---|---|---|---|---|




1




2

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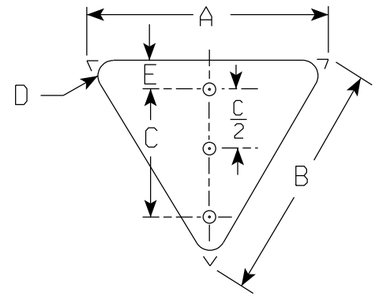
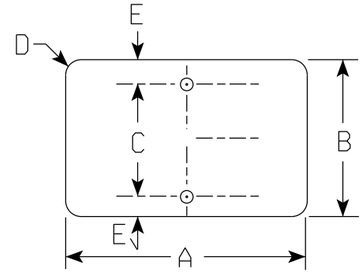



4




5

| TYPE 1 | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft. | Mounting Holes |
| 18 | 18 | 18 | 1 1/2 | 14 | 2.25 | 2 |
| 24 | 24 | 24 | 1 1/2 | 20 | 4.0 | 2 |
| 30 | 30 | 30 | 1 7/8 | 22 | 6.25 | 2 |
| 36 | 36 | 36 | 2 1/4 | 26 | 9.0 | 2 |

| TYPE 2 | | | | | |
|---|---|---|---|---|---|
| A | B | C | E | Area Sq. Ft. | Mounting Holes |
| 24 | 24 | 20 | 2 | 3.31 | 2 |
| 30 | 30 | 24 | 3 | 5.18 | 2 |
| 36 | 36 | 28 | 4 | 7.46 | 2 |
| 48 | 48 | 36 | 6 | 13.25 | 3 |

| TYPE 3 | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft. | Mounting Holes |
| 48 | 48 | 26 | 3 | 13 | 16.0 | 4 |

| TYPE 4 | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft. | Mounting Holes |
| 18 | 18 | 14 | 1 | 2 | 1.95 | 2 |
| 36 | 36 | 24 | 2 | 2 | 3.9 | 2 |
| 48 | 48 | 32 | 3 | 3 | 7.0 | 2 |

| TYPE 5 | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft. | Mounting Holes |
| 8 | 8 | 6 | 1 1/2 | 1 | 0.44 | 2 |
| 12 | 12 | 9 | 1 1/2 | 1 1/2 | 1.00 | 2 |
| 18 | 18 | 14 | 1 1/2 | 2 | 2.25 | 2 |
| 21 | 15 | 11 | 1 1/2 | 2 | 2.19 | 2 |
| 21 | 21 | 17 | 1 1/2 | 2 | 3.06 | 2 |
| 24 | 12 | 8 | 1 1/2 | 2 | 2.0 | 2 |
| 24 | 18 | 14 | 1 1/2 | 2 | 3.0 | 2 |
| 24 | 24 | 20 | 1 1/2 | 2 | 4.0 | 2 |
| 30 | 12 | 8 | 1 1/2 | 2 | 2.5 | 2 |
| 30 | 15 | 11 | 1 1/2 | 2 | 3.13 | 2 |
| 30 | 18 | 14 | 1 1/2 | 2 | 3.75 | 2 |
| 30 | 21 | 17 | 1 1/2 | 2 | 4.37 | 2 |
| 30 | 24 | 20 | 1 1/2 | 2 | 5.0 | 2 |

| TYPE 5 CONT'D. | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft. | Mounting Holes |
| 30 | 30 | 22 | 1 7/8 | 4 | 6.25 | 2 |
| 36 | 12 | 8 | 1 1/2 | 2 | 3.0 | 2 |
| 36 | 18 | 14 | 1 1/2 | 2 | 4.5 | 2 |
| 36 | 24 | 20 | 1 1/2 | 2 | 6.0 | 2 |
| 36 | 36 | 26 | 2 1/4 | 5 | 9.0 | 2 |
| 40 | 18 | 14 | 1 1/2 | 2 | 5.00 | 2 |
| 42 | 21 | 17 | 1 7/8 | 2 | 6.125 | 2 |
| 42 | 30 | 22 | 1 7/8 | 4 | 8.75 | 2 |
| 48 | 24 | 20 | 1 7/8 | 2 | 8.0 | 2 |

NOTES

1. All sign blanks shall have 7/16" Diameter mounting hole.

ALUMINUM THICKNESS

| SIGN WIDTH | NOMINAL THICKNESS |
|---|---|
| 30 inches and under | 0.080 inch |
| Greater than 30-36 inches | 0.100 inch |
| Over 36 inches | 0.125 inch |

STOP SIGN THICKNESS

| SIGN WIDTH | NOMINAL THICKNESS |
|---|---|
| 30 inches | 0.100 inch |
| 36-48 inches | 0.125 inch |

# STANDARD LAYOUT OF ALUMINUM SIGN BLANKS

SHEET 1 OF 3

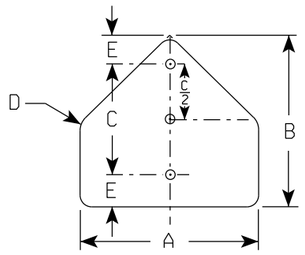
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/23/18

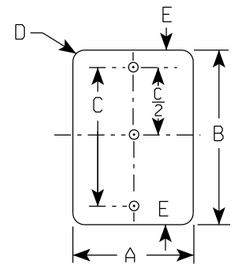
PLATE NO. A5-3.24

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 30 | E




6

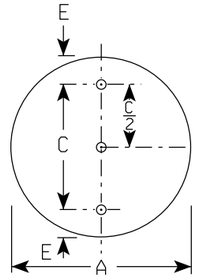
| TYPE 6 | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft | Mounting Holes |
| 30 | 30 | 24 | 1 3/8 | 3 | 4.68 | 2 |
| 36 | 36 | 26 | 1 5/8 | 5 | 6.75 | 2 |
| 48 | 48 | 32 | 1 7/8 | 8 | 12.0 | 3 |




7

| TYPE 7 ✳ | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft. | Mounting Holes |
| 12 | 18 | 15 | 1 1/2 | 1 1/2 | 1.5 | 2 |
| 12 | 24 | 20 | 1 1/2 | 2 | 2.0 | 2 |
| 12 | 36 | 24 | 1 1/2 | 6 | 3.0 | 2 |
| 12 | 48 | 32 | 1 1/2 | 8 | 4.0 | 3 |
| 15 | 21 | 18 | 1 1/2 | 1 1/2 | 2.19 | 2 |
| 18 | 24 | 20 | 1 1/2 | 2 | 3.0 | 2 |
| 18 | 36 | 24 | 1 1/2 | 6 | 4.5 | 2 |
| 18 | 54 | 36 | 2 1/2 | 9 | 6.75 | 3 |
| 21 | 60 | 40 | 1 1/2 | 10 | 8.75 | 3 |
| 21 | 72 | 52 | 1 1/2 | 10 | 10.5 | 3 |
| 24 | 30 | 22 | 1 1/2 | 4 | 5.0 | 2 |
| 24 | 36 | 24 | 1 1/2 | 6 | 6.0 | 2 |
| 24 | 39 | 27 | 1 1/2 | 6 | 6.5 | 3 |
| 24 | 45 | 33 | 1 7/8 | 6 | 7.5 | 3 |
| 24 | 48 | 32 | 1 7/8 | 8 | 8.0 | 3 |
| 24 | 57 | 37 | 1 7/8 | 10 | 9.5 | 3 |
| 36 | 48 | 32 | 1 7/8 | 8 | 12.0 | 3 |
| 30 | 36 | 24 | 1 7/8 | 6 | 7.5 | 2 |
| 36 | 54 | 36 | 2 1/4 | 9 | 12.75 | 3 |
| 36 | 57 | 37 | 1 7/8 | 10 | 14.25 | 3 |
| 48 | 39 | 27 | 1 7/8 | 10 | 13.0 | 3 |
| 48 | 45 | 32 | 1 7/8 | 10 | 14.0 | 3 |
| 48 | 57 | 37 | 3 | 10 | 19.0 | 3 |

✳ FOR SIGNS OVER 57" IN HEIGHT, PROVIDE 3 MOUNTING HOLES AT 10" FROM THE TOP AND BOTTOM OF SIGN AND IN THE CENTER OF SIGN.




8

| TYPE 8 | | | | | |
|---|---|---|---|---|---|
| A | B | C | E | Area Sq.Ft. | Mounting Holes |
| 30 | — | 24 | 3 | 4.91 | 2 |
| 36 | — | 26 | 5 | 7.07 | 2 |
| 48 | — | 32 | 8 | 12.5 | 3 |

NOTES

1. All sign blanks shall have 7/16" Diameter mounting holes.

# STANDARD LAYOUT OF ALUMINUM SIGN BLANKS

SHEET 2 OF 3

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch

*for* State Traffic Engineer

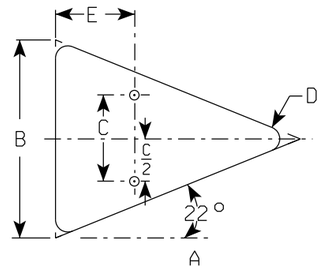
DATE 8/23/18 PLATE NO. A5-3.24

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

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

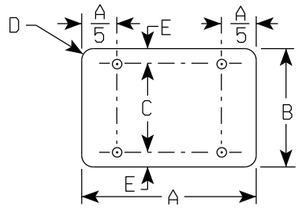
7




10

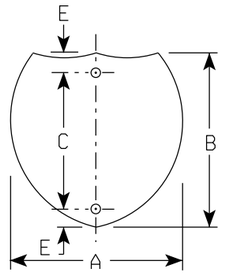
| TYPE 10 (NOTE 1) | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft. | Mounting Holes |
| 48 | 36 | 14 | 2 1/4 | 16 | 6.0 | 2 |

| TYPE 11 | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft. | Mounting Holes |
| 66 | 12 | 8 | 3 | 2 | 5.5 | 4 |
| 66 | 18 | 14 | 3 | 2 | 8.25 | 4 |
| 66 | 24 | 20 | 3 | 2 | 11.0 | 4 |
| 66 | 30 | 22 | 3 | 4 | 13.75 | 4 |
| 66 | 36 | 28 | 3 | 4 | 16.5 | 4 |
| 66 | 42 | 34 | 3 | 4 | 19.25 | 4 |
| 66 | 48 | 40 | 3 | 4 | 22.0 | 4 |
| 72 | 12 | 8 | 3 | 2 | 6.0 | 4 |
| 72 | 18 | 14 | 3 | 2 | 9.0 | 4 |
| 72 | 24 | 20 | 3 | 2 | 12.0 | 4 |
| 72 | 30 | 22 | 3 | 4 | 15.0 | 4 |
| 72 | 36 | 28 | 3 | 4 | 18.0 | 4 |
| 72 | 42 | 34 | 3 | 4 | 21.0 | 4 |
| 72 | 48 | 40 | 3 | 4 | 24.0 | 4 |



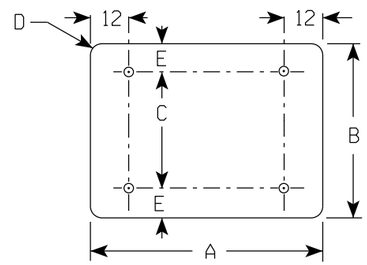

11

| TYPE 12 (NOTE 2) | | | | | |
|---|---|---|---|---|---|
| A | B | C | E | Area Sq. Ft. | Mounting Holes |
| 24 | 24 | 18 | 3 | 3.13 | 2 |
| 30 | 24 | 18 | 3 | 3.91 | 2 |
| 36 | 36 | 28 | 4 | 7.03 | 2 |
| 45 | 36 | 28 | 4 | 8.79 | 2 |




12

| TYPE 13 | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | Area Sq. Ft. | Mounting Holes |
| 48 | 60 | 40 | 3 | 10 | 20.0 | 4 |
| 54 | 12 | 8 | 1 1/2 | 2 | 4.5 | 4 |
| 54 | 15 | 11 | 1 1/2 | 2 | 5.63 | 4 |
| 54 | 18 | 14 | 1 1/2 | 2 | 6.75 | 4 |
| 54 | 21 | 17 | 1 1/2 | 2 | 7.88 | 4 |
| 54 | 24 | 20 | 1 7/8 | 2 | 9.0 | 4 |
| 54 | 36 | 28 | 1 7/8 | 4 | 13.5 | 4 |
| 54 | 48 | 40 | 1 7/8 | 4 | 18.0 | 4 |
| 60 | 12 | 8 | 1 1/2 | 2 | 5.0 | 4 |
| 60 | 18 | 14 | 1 1/2 | 2 | 7.5 | 4 |
| 60 | 24 | 20 | 1 7/8 | 2 | 10.0 | 4 |
| 60 | 30 | 22 | 1 7/8 | 4 | 12.5 | 4 |
| 60 | 36 | 28 | 1 7/8 | 4 | 15.0 | 4 |
| 60 | 42 | 34 | 1 7/8 | 4 | 17.5 | 4 |
| 60 | 48 | 40 | 3 | 4 | 20.0 | 4 |




13

NOTES

1. Dimension A on type #10 is measured to the theoretical intersections of the edges.
2. Shape of type #12 shall conform to FHWA standard for Interstate route markers.
3. All signs over 60" in width shall have 3" radius on the outside corners of the aluminum blank.
4. For signs over 60" in width see sign plate A4-18 for hole placement.

7

7

# STANDARD LAYOUT OF ALUMINUM SIGN BLANKS

SHEET 3 OF 3

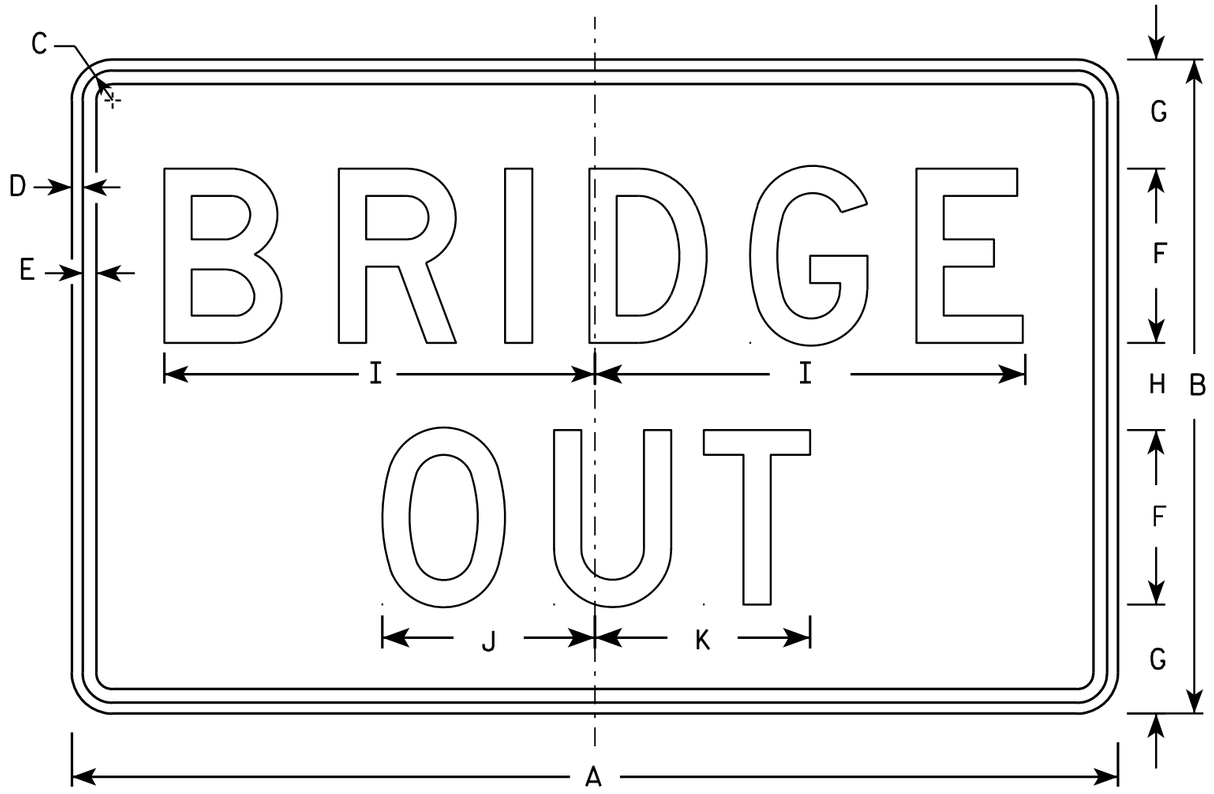
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 8/23/18 PLATE NO. A5.3.24

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




R11-2B

NOTES

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

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

STANDARD SIGN
R11-2B

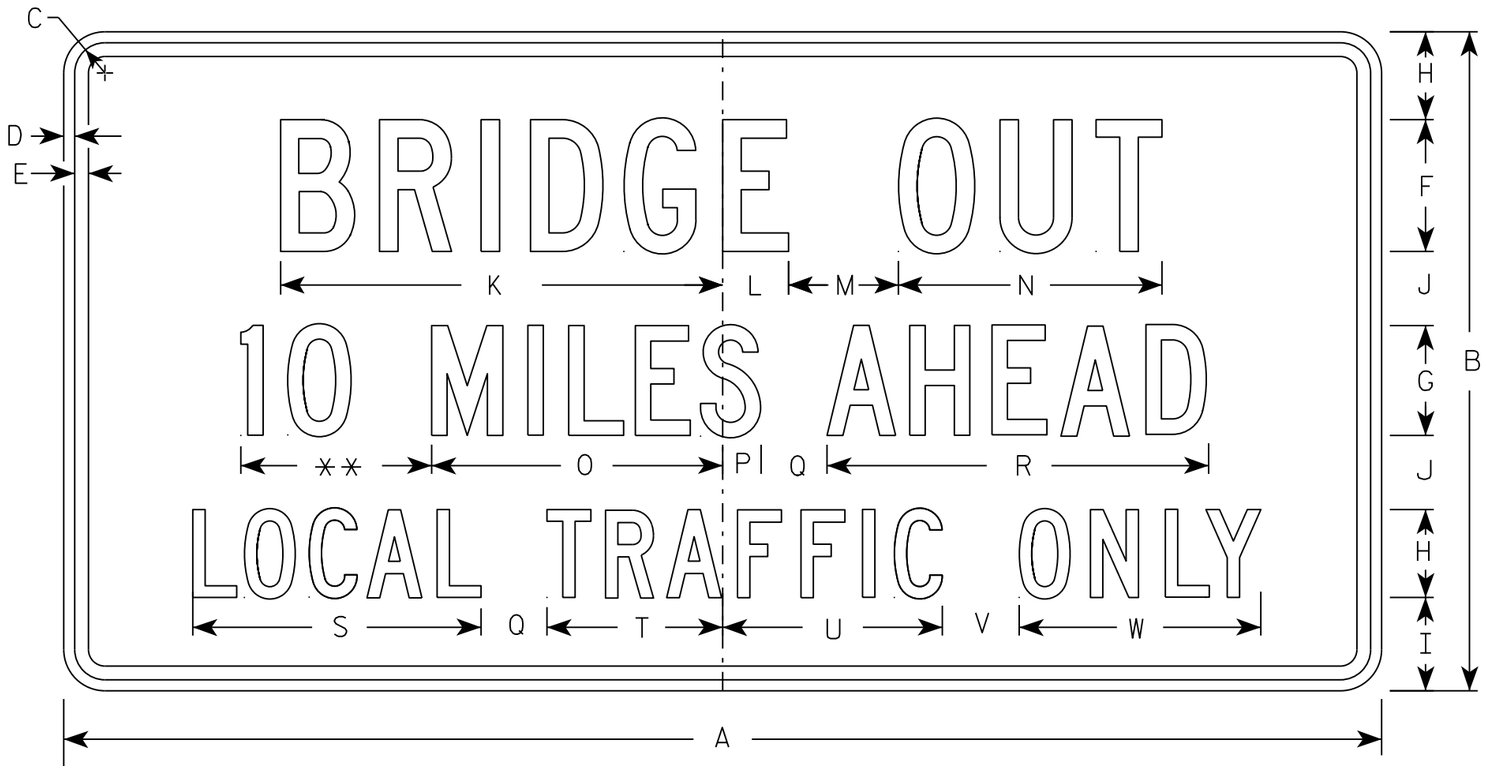
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

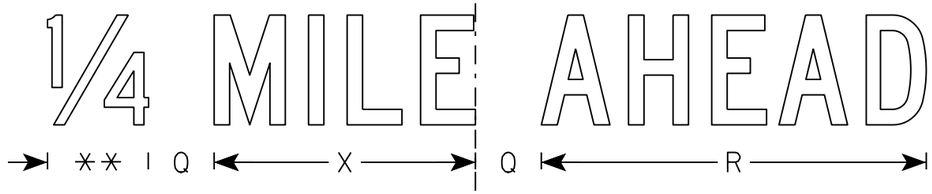
PROJECT NO:

SHEET NO: 33 E




R11-3B

** See Note 5




NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | 18 | 1 3/8 | 1/2 | 5/8 | 4 | 3 | 2 1/2 | 2 | 2 | 13 1/4 | 2 1/4 | 3 | 8 | 8 | 1 1/2 | 2 | 10 3/4 | 8 3/8 | 4 3/4 | 6 1/2 | 2 | 6 3/4 | 7 1/8 | | | 4.5 |
| 2S | 60 | 30 | 1 3/8 | 1/2 | 5/8 | 6 | 5 | 4 | 4 1/4 | 3 3/8 | 20 1/8 | 3 | 5 | 12 | 13 1/4 | 1 3/4 | 3 | 17 3/8 | 13 1/8 | 8 | 10 | 3 1/2 | 11 | 11 7/8 | | | 12.5 |
| 2M | 60 | 30 | 1 3/8 | 1/2 | 5/8 | 6 | 5 | 4 | 4 1/4 | 3 3/8 | 20 1/8 | 3 | 5 | 12 | 13 1/4 | 1 3/4 | 3 | 17 3/8 | 13 1/8 | 8 | 10 | 3 1/2 | 11 | 11 7/8 | | | 12.5 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

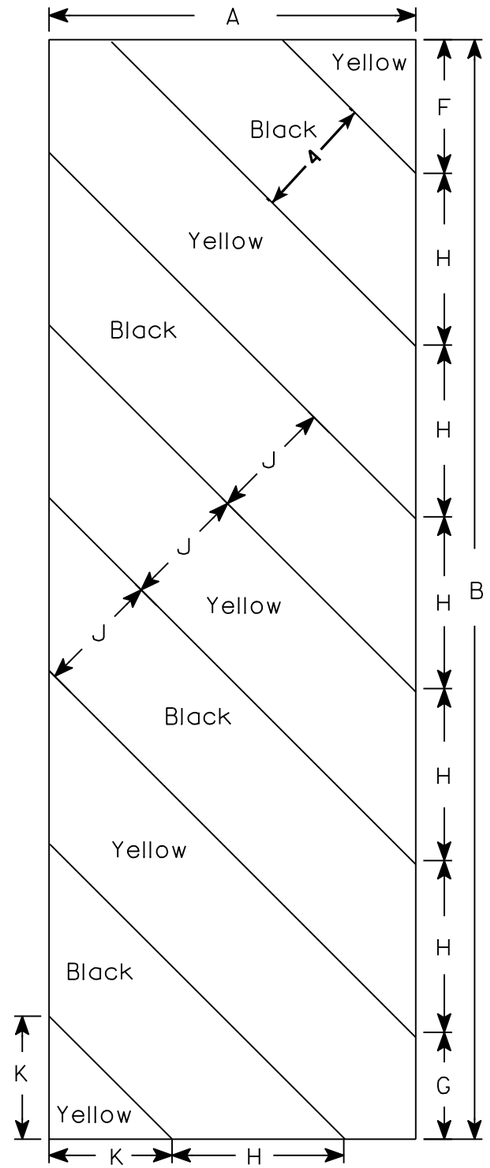
STANDARD SIGN
R11-3B

WISCONSIN DEPT OF TRANSPORTATION

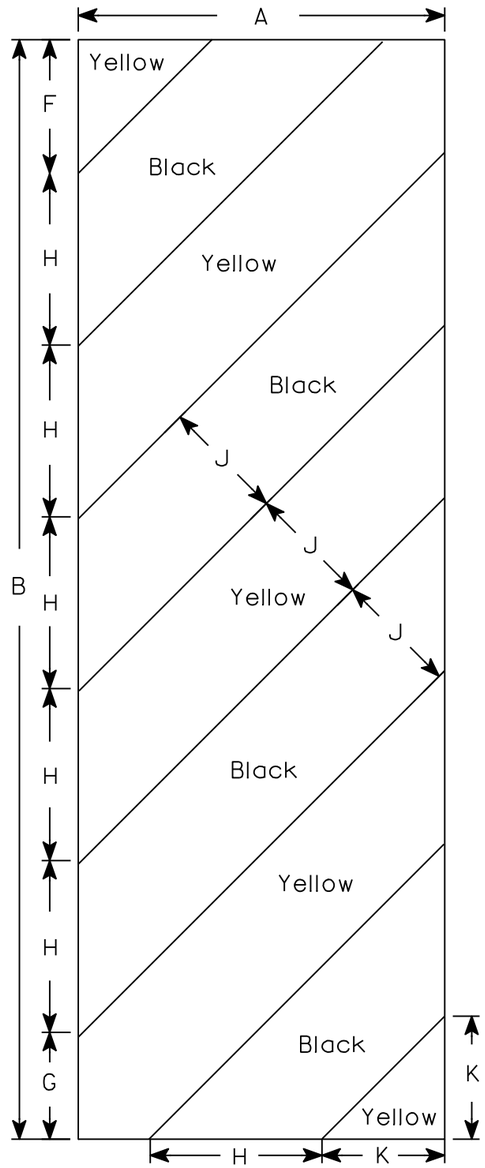
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. R11-3B.3

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




W5-52L




W5-52R

NOTES

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

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

STANDARD SIGN

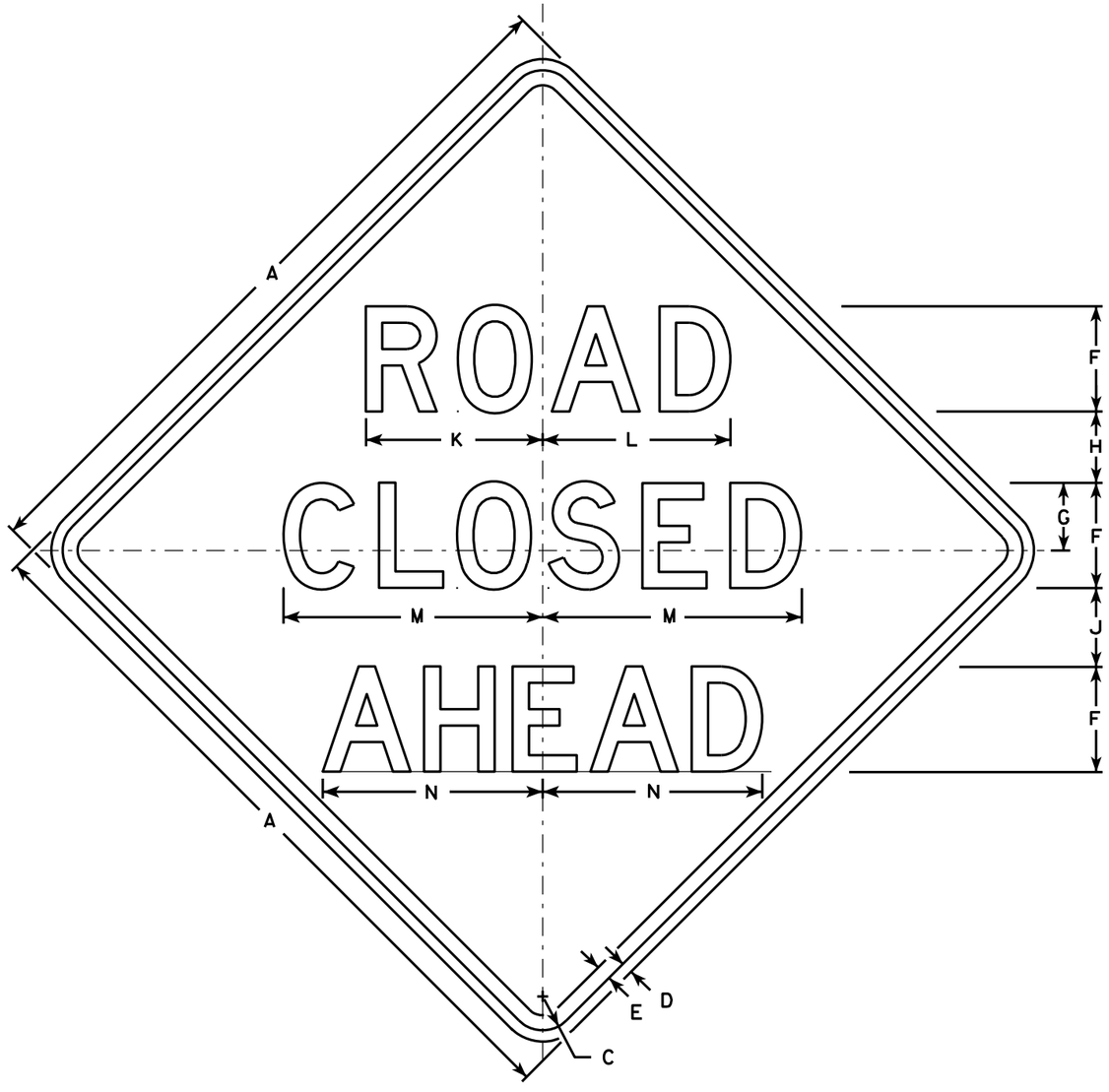
W5-52L & W5-52R

*WISCONSIN DEPT OF TRANSPORTATION*

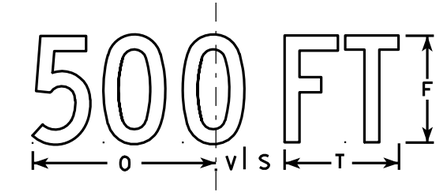
APPROVED Matthew R Rauch
for State Traffic Engineer

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

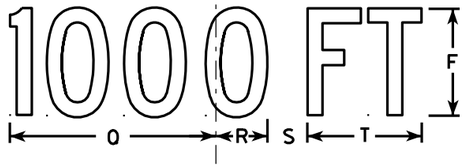
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 35 | E |
|---|---|---|---|---|---|



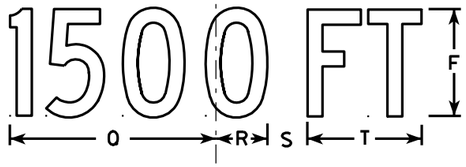

W20-3A



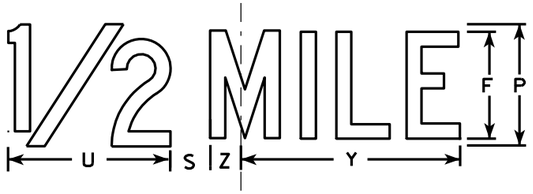

W20-3D



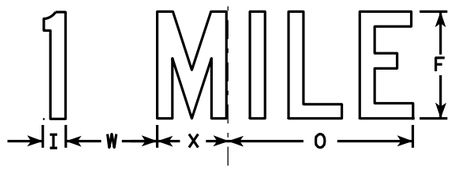

W20-3C




W20-3B




W20-3G




W20-3F

NOTES

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

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

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

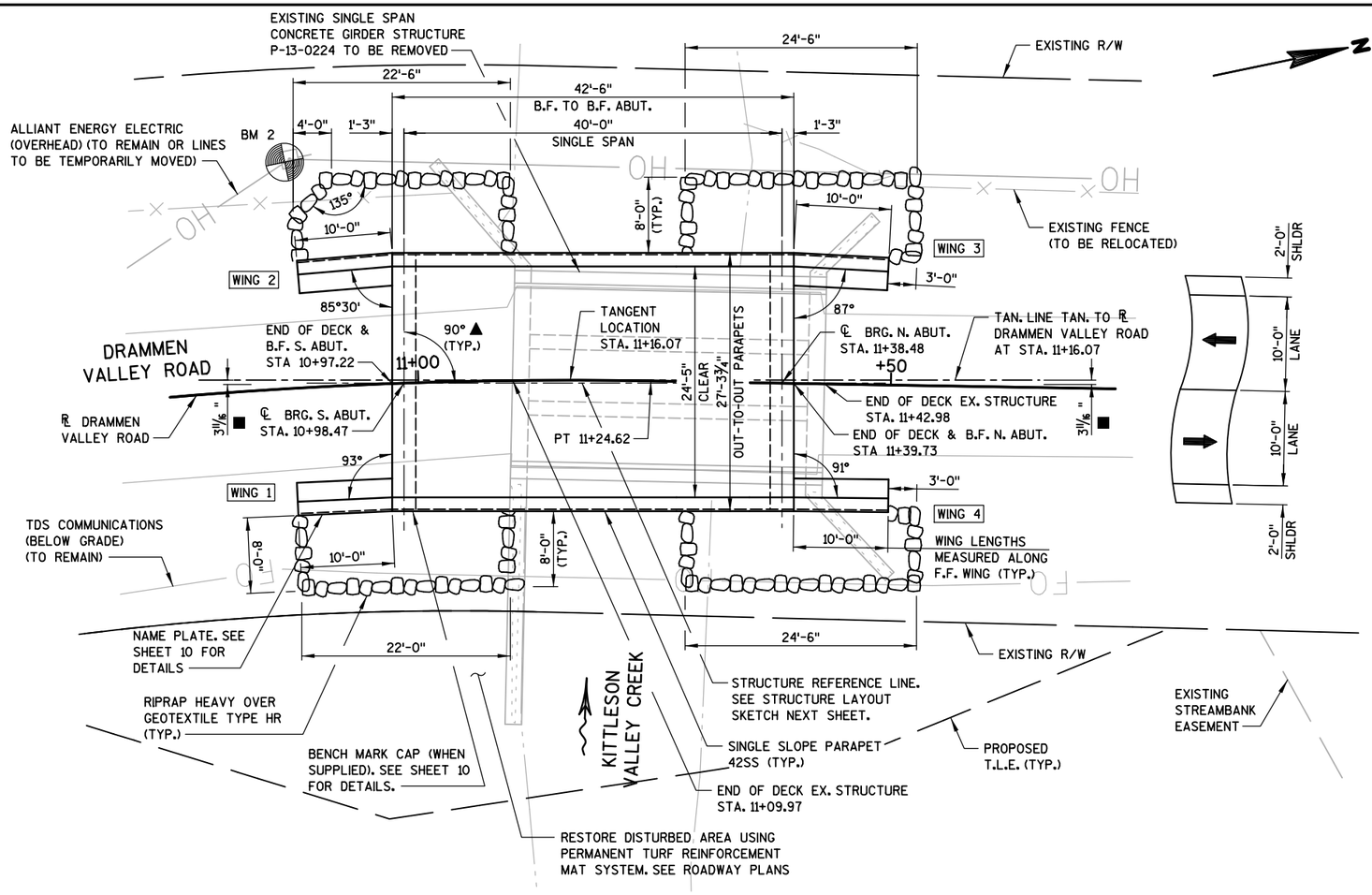
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

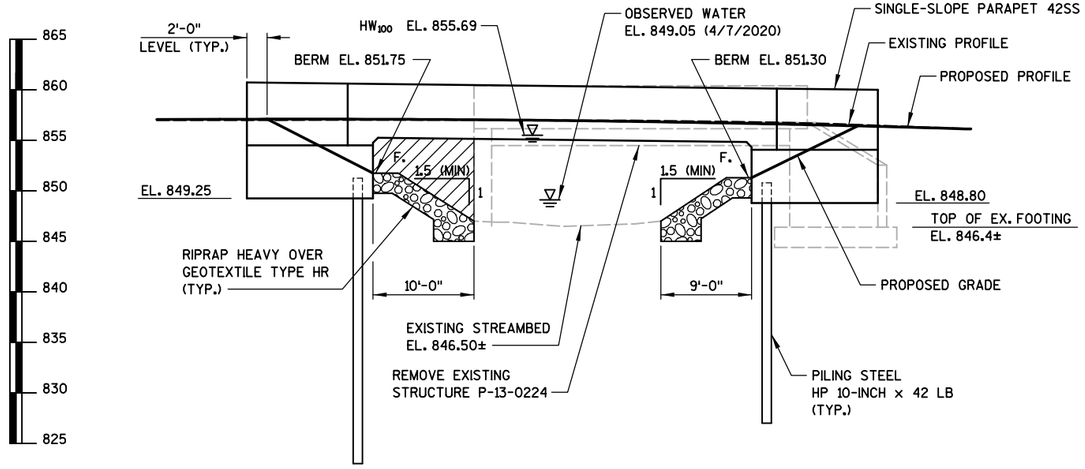
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 36 | E


7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42




## PLAN
(SINGLE SPAN CONCRETE FLAT SLAB)




## ELEVATION
(NORMAL TO SUBSTRUCTURES, LOOKING DOWNSTREAM)

## HYDRAULIC DATA

100 YEAR FREQUENCY

| | |
|---|---|
| $Q_{100}$ | 2,411 C.F.S. |
| $Q_{100\_BRIDGE}$ | 1,184 C.F.S. |
| $Q_{100\_ROAD}$ | 1,227 C.F.S. |
| VEL. | 4.92 F.P.S. |
| $HW_{100}$ | EL. 855.69 |
| WATERWAY AREA | 242.27 SQ. FT. |
| DRAINAGE AREA | 29.8 SQ. MI. |
| SCOUR CRITICAL CODE | 5 |

2 YEAR FREQUENCY

| | |
|---|---|
| $Q_2$ | 360 C.F.S. |
| VEL. | 2.82 F.P.S |
| $HW_2$ | EL. 851.71 |

ROADWAY OVERTOPPING FREQUENCY

| | |
|---|---|
| FREQUENCY | 10 YEARS |
| $Q_{25}$ | 943 C.F.S. |
| $HW_{25}$ | EL. 854.29 |

## LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, QUANTITIES, NOTES & DETAILS
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. SINGLE-SLOPE PARAPET 42SS

## HORIZONTAL CURVE DATA

P.I. = 10+62.64
Y = 409,795.26
X = 701,498.92
DELTA = 14°16'51" (RT)
D = 11°27'33"
T = 62.64'
L = 124.62'
R = 500.00'
P.C.C. = 10+00.00
P.T. = 11+24.62

## LEGEND

COST OF EXCAVATION IN HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-13-691".

▲ ANGLE SHOWN IS FROM CENTERLINE OF ABUTMENT TO TAN. LINE AND STRUCTURE REFERENCE LINE.

■ DISTANCE BETWEEN TAN. LINE AND ℞ DRAMMEN VALLEY ROAD MEASURED ALONG ℄ SUBSTRUCTURE UNITS.

WISCONSIN
KEITH R. BEHREND
E-42073
MADISON
WI
PROFESSIONAL ENGINEER
Keith R. Behrend
6/1/21

## BENCHMARKS

| NO. | STATION | DESCRIPTION | ELEV. |
|---|---|---|---|
| BM 2 | STA. 10+87.24, OFFSET 23.92' LT | RAILROAD SPIKE IN POLE #5-6-30 20/6 | 855.69 |

SEE ROADWAY PLANS FOR ADDITIONAL BENCHMARKS.

STATE PROJECT NUMBER

5728-00-73

## DESIGN DATA

STRUCTURE DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF

LIVE LOAD:

| | |
|---|---|
| DESIGN LOADING | HL-93 |
| INVENTORY RATING FACTOR | RF = 1.38 |
| OPERATING RATING FACTOR | RF = 1.79 |
| WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) | 250 KIPS |

MATERIAL PROPERTIES:

| | |
|---|---|
| CONCRETE SUPERSTRUCTURE | f'c = 4,000 PSI |
| CONCRETE SUBSTRUCTURE | f'c = 3,500 PSI |
| HIGH STRENGTH BAR STEEL REINFORCEMENT | fy = 60,000 PSI |

## TRAFFIC DATA

A.D.T. (2022): 60
A.D.T. (2042): 65
DESIGN SPEED: 30 MPH

## FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH x 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. PROVIDE PILE POINTS.

* 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.

ESTIMATED PILE LENGTHS:

| | |
|---|---|
| SOUTH ABUTMENT | 30 FEET EACH |
| NORTH ABUTMENT | 25 FEET EACH |

## STRUCTURE DESIGN CONTACTS

DESIGN CONSULTANT CONTACT:
KEITH BEHREND (608) 251-4843

BUREAU OF STRUCTURES CONTACT:
AARON BONK (608) 261-0261

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


STRAND ASSOCIATES®
910 WEST WINGRA DRIVE
MADISON, WISCONSIN 53715
(608)-251-4843
(608) 251-8655 FAX
WWW.STRAND.COM


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED SDR 08/23/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

# STRUCTURE B-13-691

DRAMMEN VALLEY RD OVER KITTLESON VALLEY CREEK

| | |
|---|---|
| COUNTY: DANE | TOWN/~~CITY/VILLAGE~~: PERRY |
| DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS | |
| DESIGNED BY: KRB | DESIGN CK'D.: BMO |
| DRAWN BY: DTH | PLANS CK'D.: BMO |

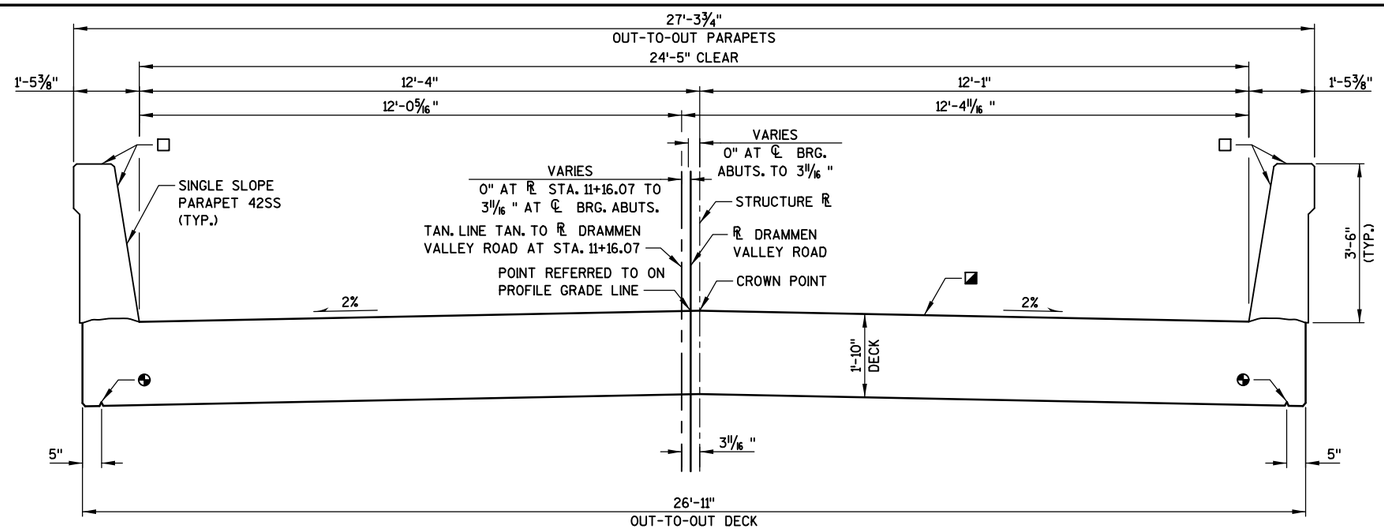
GENERAL PLAN

SHEET 1 OF 10
37

8

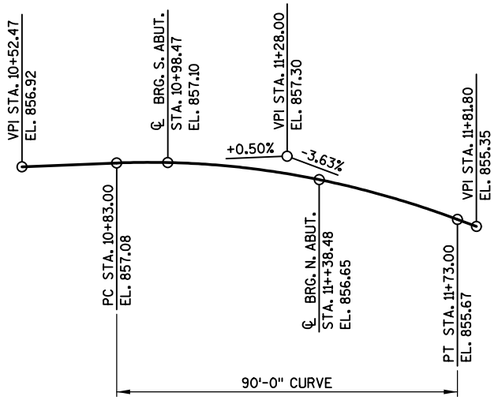
8

FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\080101_gp.dgn

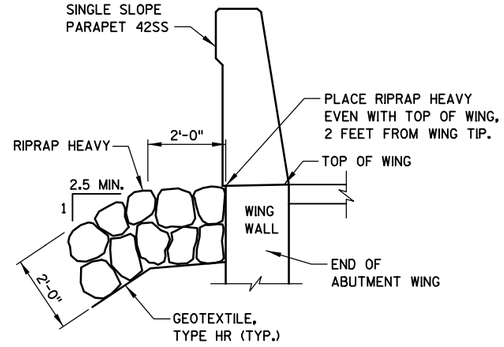



## CROSS SECTION THRU SUPERSTRUCTURE

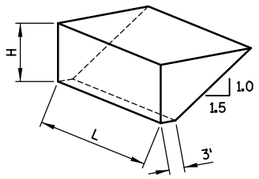
(LOOKING NORTH)




## PROFILE GRADE LINE - DRAMMEN VALLEY RD.

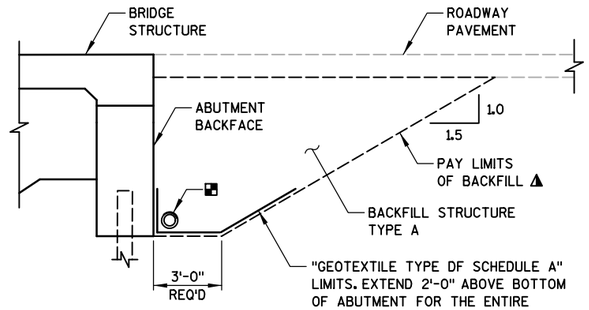



## TYPICAL FILL SECTION AT WING TIPS

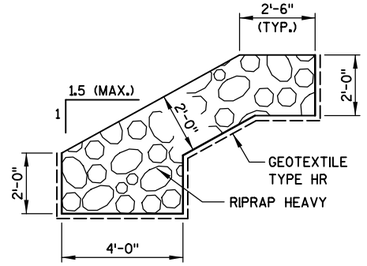



## ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

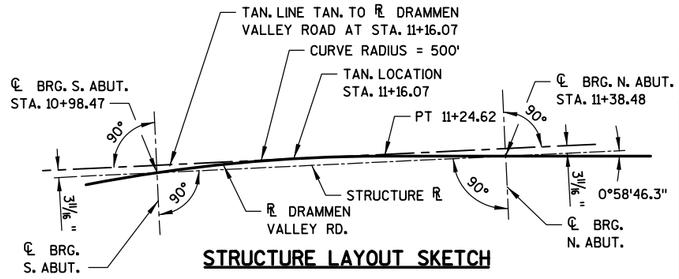
L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
$V_{CF}$ = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
$V_{CY}$ = $V_{CF}$ (EF)/27
$V_{TON}$ = $V_{CY}$ (2.0)




## TYPICAL SECTION THRU ABUTMENT




## RIPRAP HEAVY DETAIL




## STRUCTURE LAYOUT SKETCH

## TOTAL ESTIMATED QUANTITIES

| BID ITEM NUMBER | BID ITEMS | UNIT | SOUTH ABUT. | NORTH ABUT. | SUPERS. | TOTAL |
|---|---|---|---|---|---|---|
| 203.0260 | REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-13-224 | EACH | --- | --- | --- | 1 |
| 206.1000 | EXCAVATION FOR STRUCTURES BRIDGES B-13-691 | LS | --- | --- | --- | 1 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | 108 | 108 | --- | 216 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 30 | 30 | 94 | 154 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | --- | --- | 116 | 116 |
| 502.3210 | PIGMENTED SURFACE SEALER | SY | 10 | 10 | 42 | 62 |
| 505.0400 | BAR STEEL REINFORCEMENT HS STRUCTURES | LB | 1,580 | 1,580 | --- | 3,160 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 1,960 | 1,960 | 18,150 | 22,070 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | 9 | 9 | --- | 18 |
| 550.0500 | PILE POINTS | EACH | 4 | 4 | --- | 8 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | 120 | 100 | --- | 220 |
| 606.0300 | RIPRAP HEAVY | CY | 64 | 65 | --- | 129 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | 67 | 67 | --- | 134 |
| 645.0111 | GEOTEXTILE TYPE DF SCHEDULE A | SY | 35 | 35 | --- | 70 |
| 645.0120 | GEOTEXTILE TYPE HR | SY | 120 | 124 | --- | 244 |
| | NON-BID ITEMS | | | | | |
| | FILLER | SIZE | | | | 1/2" & 3/4" |

STATE PROJECT NUMBER

5728-00-73

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

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

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

BAR DIMENSIONS FOR BENDING ARE OUT-TO-OUT OF BARS.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-13-691" SHALL BE THE EXISTING GROUND LINE.

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 SHEET 1 AND IN THE ABUTMENT DETAILS.

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

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

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

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

THE EXISTING STRUCTURE P-13-224, A SINGLE-SPAN CONCRETE GIRDER BRIDGE, IS TO BE REMOVED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

## LEGEND

- ◓ ¾" V-GROOVE REQ'D. EXTEND TO 6" FROM F.F. OF ABUTMENT DIAPHRAGMS.
- ◪ PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF DECK.
- ▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH 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. SEE DETAIL ON "SOUTH ABUTMENT" SHEET.
- □ PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE AND TOP FACES OF THE PARAPETS.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-691

DRAWN BY DTH | PLANS CK'D. BMO

CROSS SECTION, QUANTITIES, NOTES & DETAILS

SHEET 2
38

8

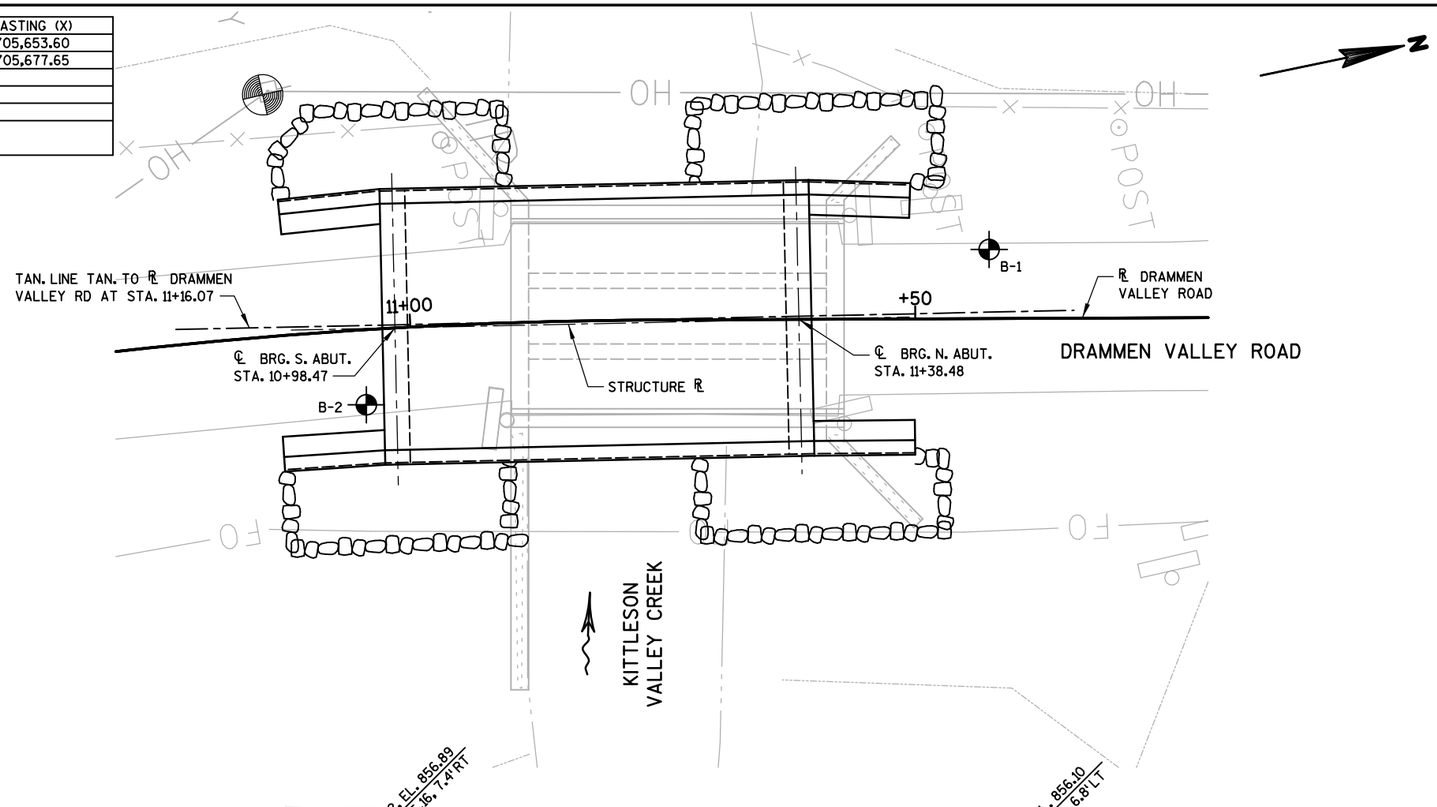
8

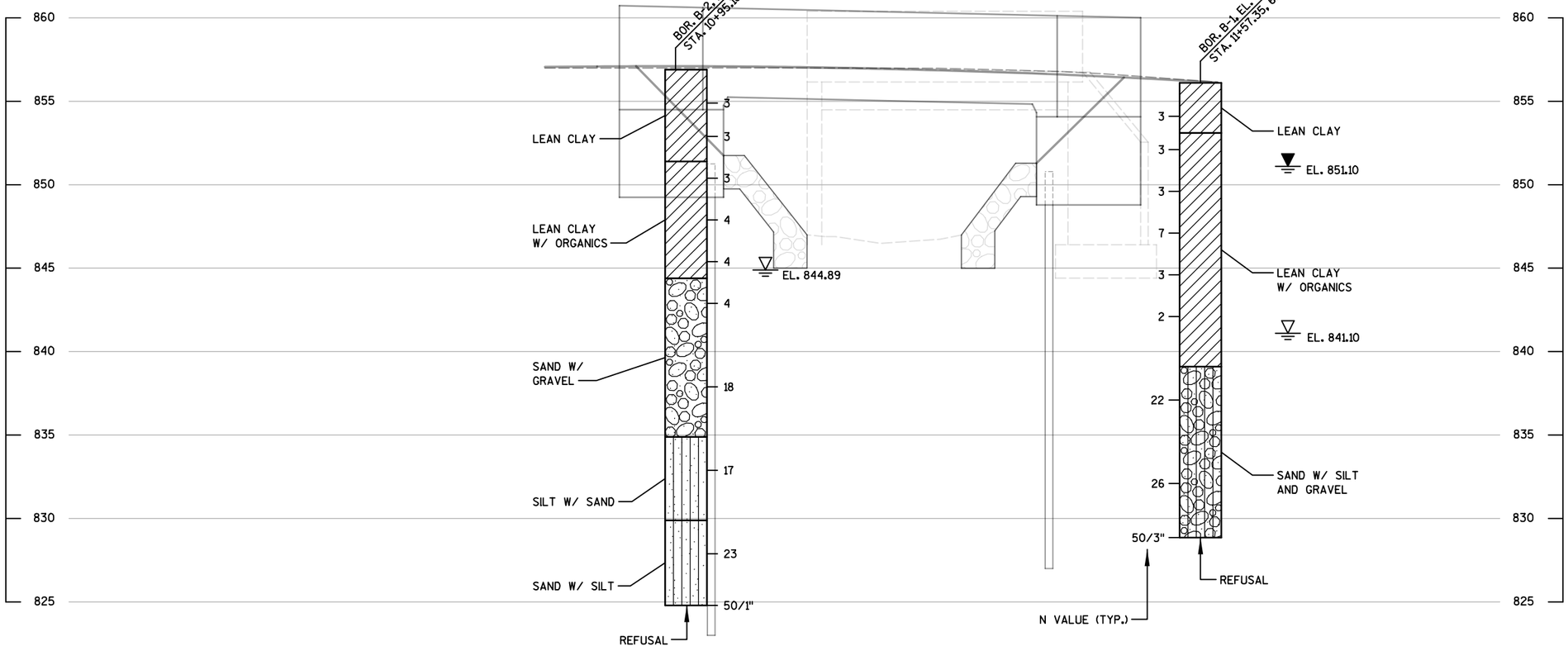
FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\080102_cs.dgn

| BORING | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| 1 | 4/24/2020 | 495,104.16 | 705,653.60 |
| 2 | 4/24/2020 | 495,125.31 | 705,677.65 |
| | | | |
| BORINGS COMPLETED BY: ECS MIDWEST, LLC | | | |
| REPORT COMPLETED BY: ECS MIDWEST, LLC | | | |
| ALL COORDINATES REFERENCED TO DANE COUNTY COORDINATE SYSTEM | | | |

BORINGS PERFORMED AND REPORT COMPLETED BY:
ECS MIDWEST, LLC
3695 N. 126TH STREET, UNIT C
BROOKFIELD, WI 53005

BORINGS WERE PERFORMED ON 4/24/2020.



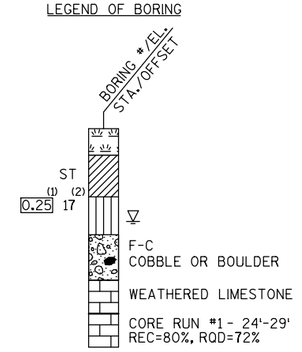

STATE PROJECT NUMBER

5728-00-73

MATERIAL SYMBOLS

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

LEGEND OF BORING




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

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

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-691

| DRAWN BY | DTH | PLANS CK'D. | BMO |
|---|---|---|---|

SUBSURFACE EXPLORATION

SHEET 3
39

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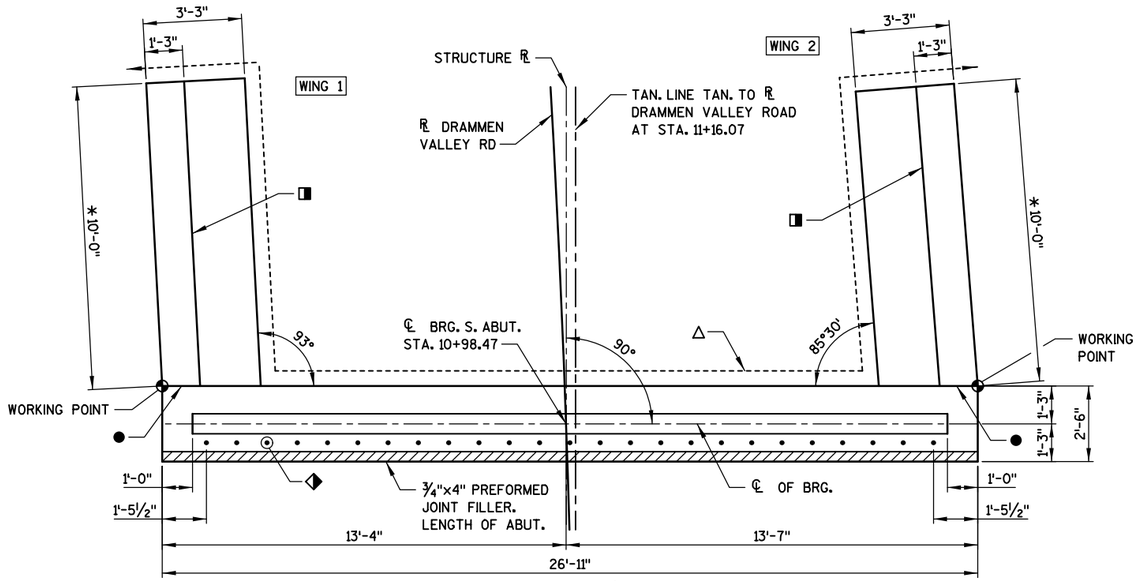
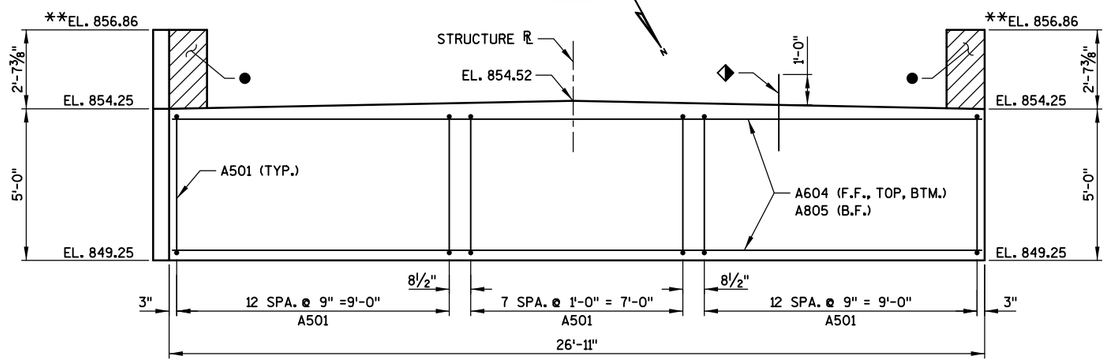
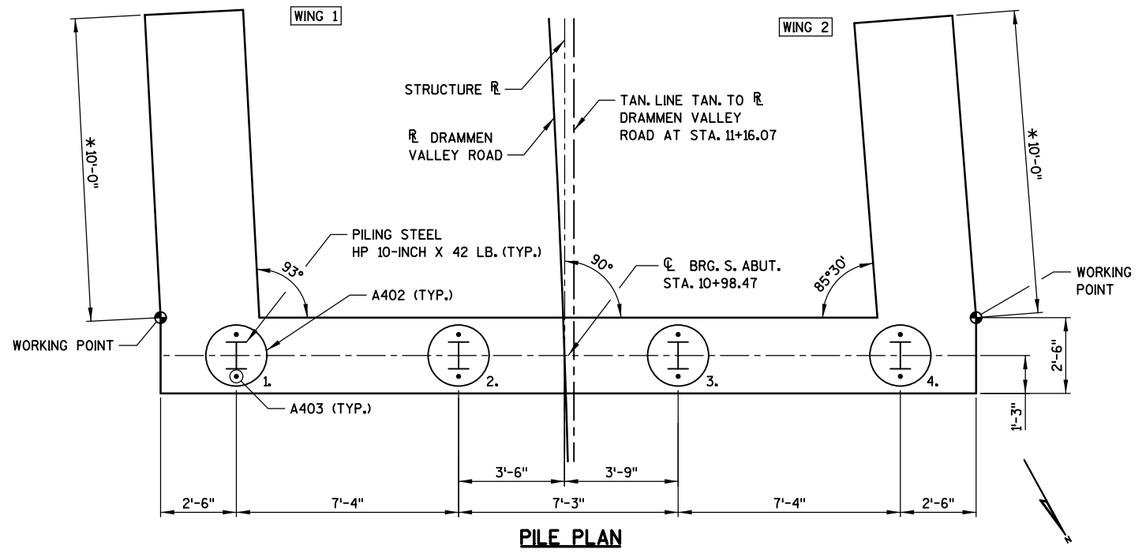
FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\080103_sx.dgn



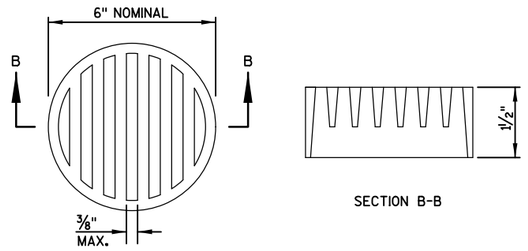

## PLAN




## ELEVATION
(LOOKING SOUTH)




## PILE PLAN




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

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

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

## RODENT SHIELD DETAIL

STATE PROJECT NUMBER

5728-00-73

## NOTES

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER 1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW FINISHED ROADWAY SURFACE AT INSIDE FACE.

ADJUST A501 BARS INTERFERING WITH PILES.

SEE SHEET 6 FOR PILE SPLICE DETAILS.

SEE SHEET 5 FOR REINFORCING DETAILS.

SOUTH ABUTMENT TO BE SUPPORTED ON PILING STEEL 10-INCH X 42 LB WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED 30 FEET LONG EACH. PROVIDE PILE POINTS.

## LEGEND

- ● ½" FILLER, EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH.
- ◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- * DIMENSION MEASURED PARALLEL TO ABUT. WING, ALONG FRONT FACE.
- ** ELEVATION GIVEN AT B.F. ABUTMENT.
- △ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 851.00 AT ℄. ATTACH RODENT SHIELD AT ENDS OF PIPE. SEE DETAIL THIS SHEET.
- ◆ A506 BARS AT 1'-0" O.C. THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-691

DRAWN BY DTH | PLANS CK'D. BMO

SOUTH ABUTMENT

SHEET 4
40

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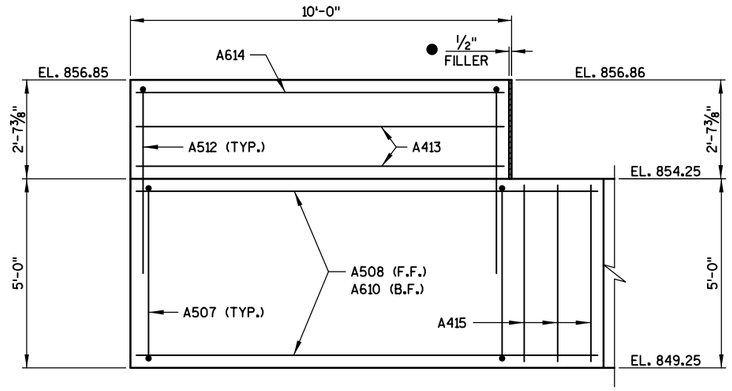
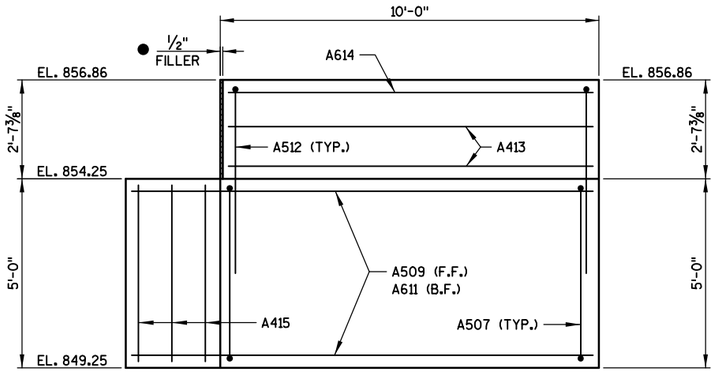
STATE PROJECT NUMBER

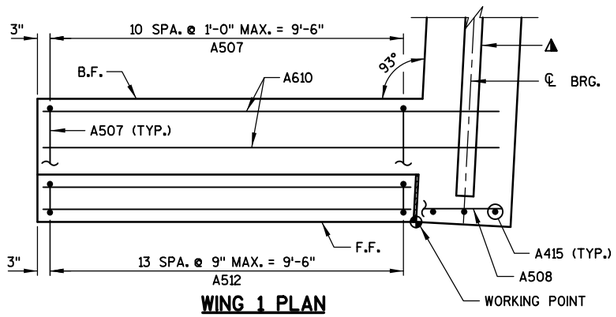
5728-00-73



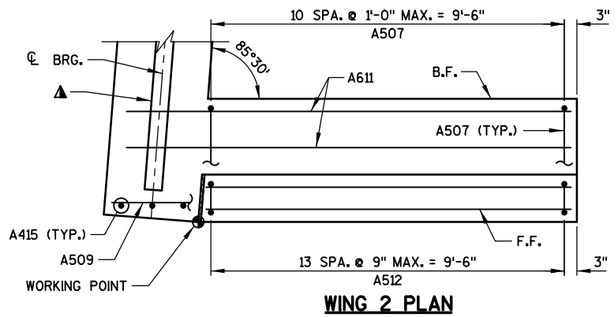

**WING 1 ELEVATION**
(FRONT FACE)




**WING 2 ELEVATION**
(FRONT FACE)




**WING 1 PLAN**




**WING 2 PLAN**

## SOUTH ABUTMENT BILL OF BARS

**UNCOATED: 1,580 LBS**
**COATED: 1,280 LBS**

| BAR MARK | NO. REQ'D | LENGTH | BENT | COAT | LOCATION |
|---|---|---|---|---|---|
| A501 | 34 | 14'-0" | X | | LOWER BODY - VERT. |
| A402 | 4 | 28'-0" | X | | LOWER BODY - PILES - SPIRAL |
| A403 | 8 | 2'-3" | | | LOWER BODY - PILES - VERT. |
| A604 | 11 | 26'-7" | | | LOWER BODY - TOP, BOT., & F.F. - HORIZ. |
| A805 | 7 | 28'-10" | X | | LOWER BODY - B.F. - HORIZ. |
| A506 | 25 | 2'-0" | | X | LOWER BODY - VERT. |
| A507 | 22 | 15'-8" | X | X | LOWER WING - VERT. - WING 1 & 2 |
| A508 | 6 | 12'-2" | | X | LOWER WING - F.F. - HORIZ. - WING 1 |
| A509 | 6 | 12'-2" | X | X | LOWER WING - F.F. - HORIZ. - WING 2 |
| A610 | 8 | 12'-2" | | X | LOWER WING - B.F. - HORIZ. - WING 1 |
| A611 | 8 | 11'-10" | | X | LOWER WING - B.F. - HORIZ. - WING 2 |
| A512 | 28 | 9'-8" | X | X | UPPER WING - VERT. - WING 1 & 2 |
| A413 | 14 | 9'-7" | | X | UPPER WING - HORIZ. - WING 1 & 2 |
| A614 | 4 | 9'-7" | | X | UPPER WING - HORIZ. - WING 1 & 2 |
| A415 | 6 | 4'-7" | | | LOWER BODY - ENDS - VERT. |

## LEGEND

◑ OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY WITH MEMBRANE ON BACKFACE.

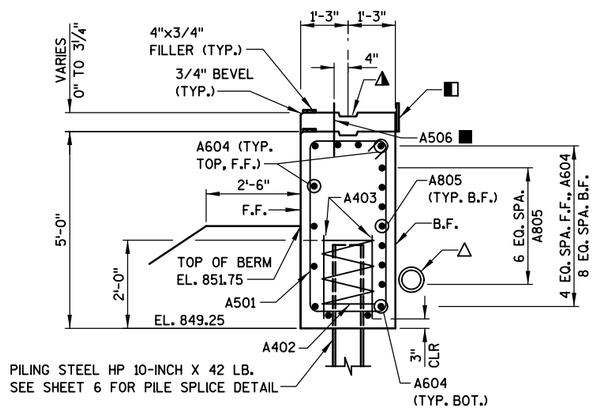
● 1/2" FILLER TO EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW FINISHED ROADWAY SURFACE AT INNER FACE.

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

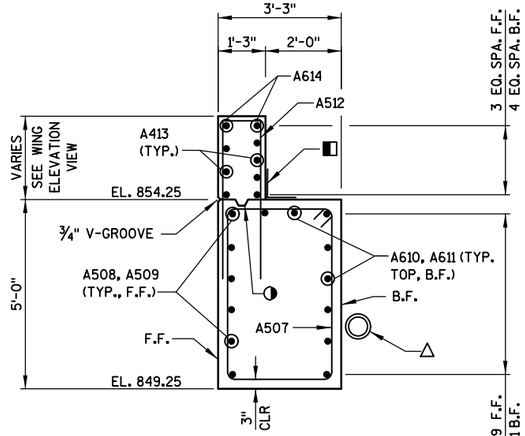
▲ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"X6".

△ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 851.00 AT ℄. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN PER DETAIL ON "SOUTH ABUTMENT" SHEET.

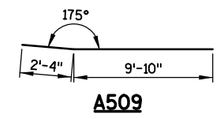
■ THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.



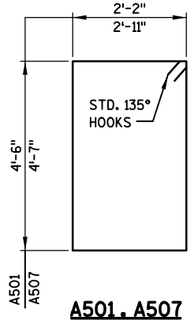

**TYPICAL ABUTMENT SECTION**



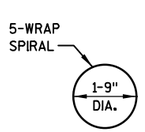

**TYPICAL WING SECTION**



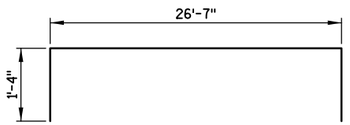

**A509**



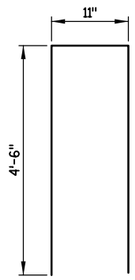

**A501, A507**




**A402**




**A805**




**A512**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-691

DRAWN BY DTH | PLANS CK'D. BMO

SOUTH ABUTMENT DETAILS

SHEET 5
41

8

8

FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\080105_sa.dgn

STATE PROJECT NUMBER

5728-00-73

## NOTES

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER 1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW FINISHED ROADWAY SURFACE AT INSIDE FACE.

ADJUST B501 BARS INTERFERING WITH PILES.

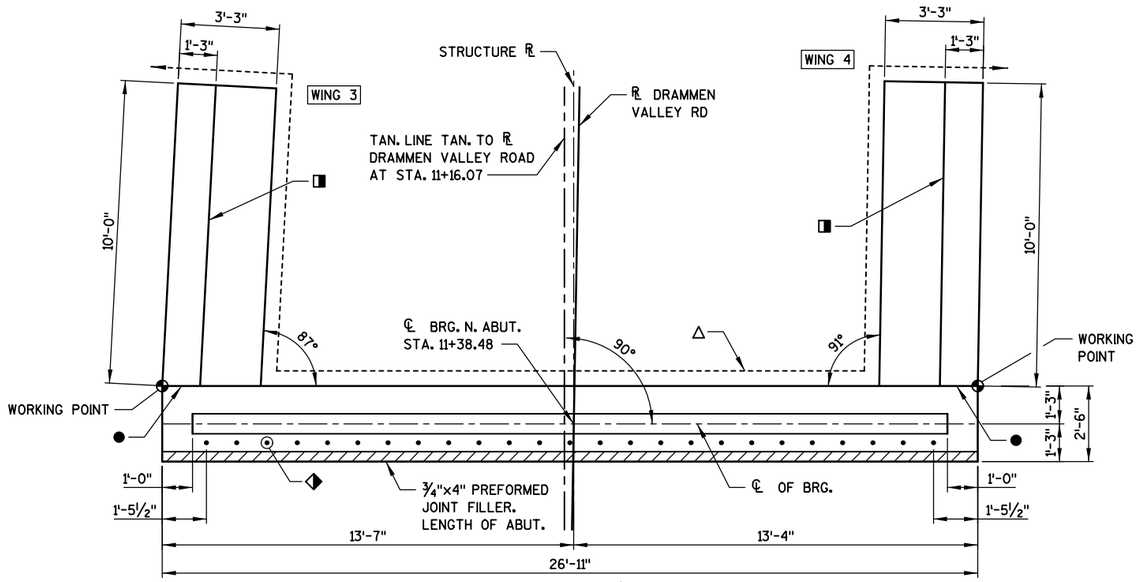
SEE THIS SHEET FOR PILE SPLICE DETAILS.

SEE SHEET 7 FOR REINFORCING DETAILS.

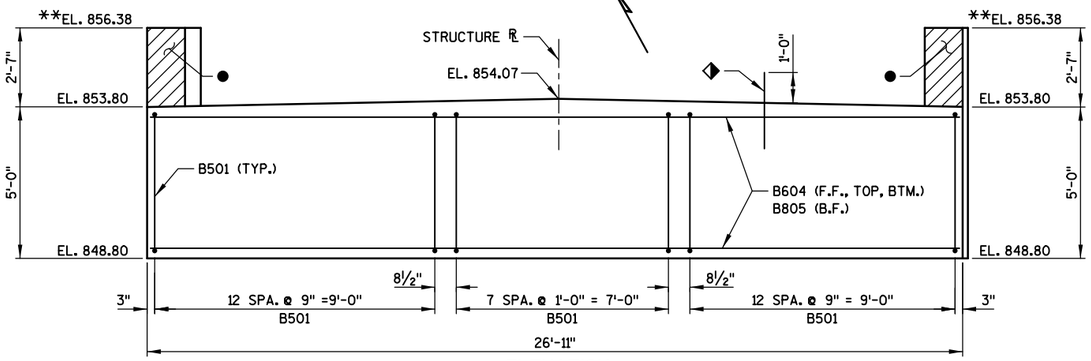
NORTH ABUTMENT TO BE SUPPORTED ON PILING STEEL 10-INCH X 42 LB WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED 25 FEET LONG EACH. PROVIDE PILE POINTS.

## LEGEND

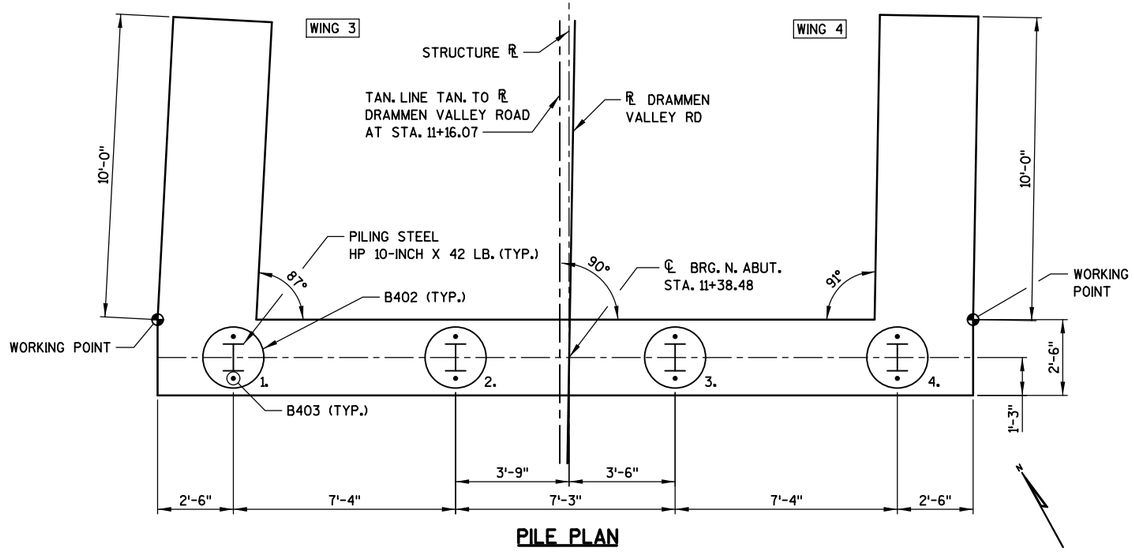
- ● ½" FILLER, EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH.
- ◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- * DIMENSION MEASURED PARALLEL TO ABUT. WING, ALONG FRONT FACE.
- ** ELEVATION GIVEN AT B.F. ABUTMENT.
- △ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 851.00 AT ℄. ATTACH RODENT SHIELD AT ENDS OF PIPE. SEE DETAIL THIS SHEET.
- ◆ B506 BARS AT 1'-0" O.C. THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.




PLAN




ELEVATION
(LOOKING SOUTH)

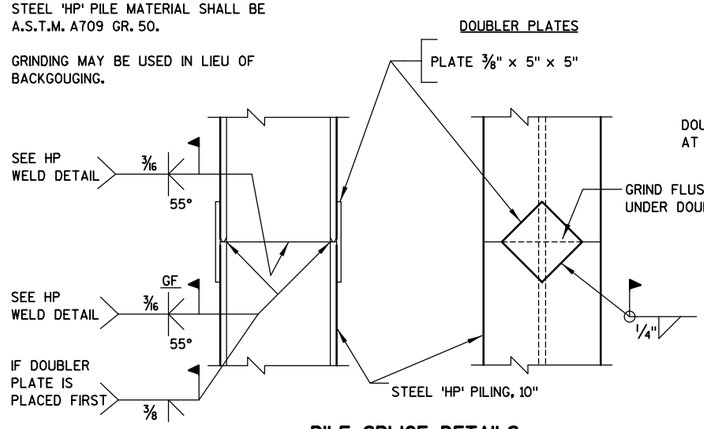



PILE PLAN

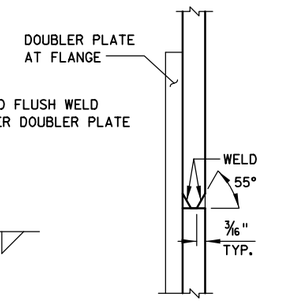
## PILE SPLICE NOTES

STEEL 'HP' PILE MATERIAL SHALL BE A.S.T.M. A709 GR. 50.

GRINDING MAY BE USED IN LIEU OF BACKGOUGING.




PILE SPLICE DETAILS




HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-691

DRAWN BY DTH | PLANS CK'D. BMO

NORTH ABUTMENT

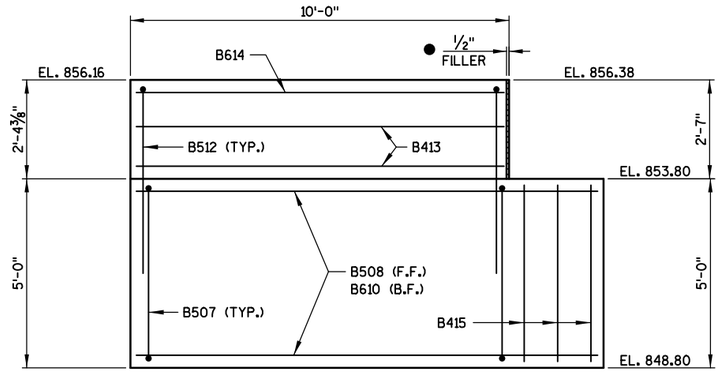
SHEET 6
42

8

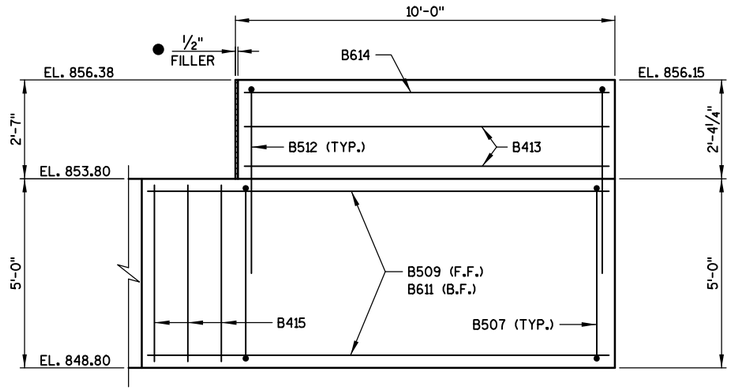
8

FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\080106_na.dgn

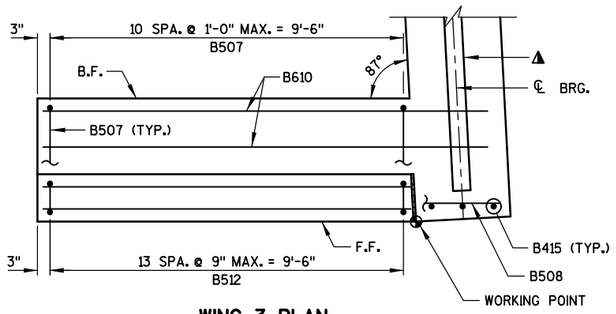
| STATE PROJECT NUMBER |
|---|
| 5728-00-73 |



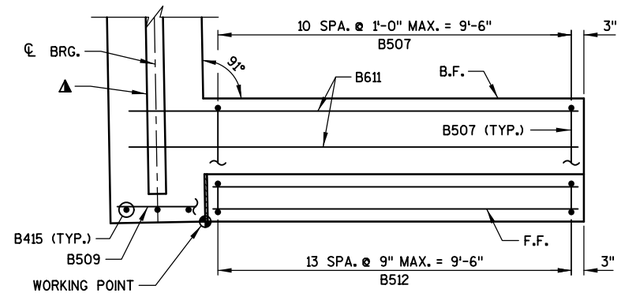

**WING 3 ELEVATION**
(FRONT FACE)




**WING 4 ELEVATION**
(FRONT FACE)




**WING 3 PLAN**




**WING 4 PLAN**

## NORTH ABUTMENT BILL OF BARS

**UNCOATED: 1,580 LBS**
**COATED: 1,280 LBS**

| BAR MARK | NO. REQ'D | LENGTH | BENT | COAT | LOCATION |
|---|---|---|---|---|---|
| B501 | 34 | 14'-0" | X | | LOWER BODY - VERT. |
| B402 | 4 | 28'-0" | X | | LOWER BODY - PILES - SPIRAL |
| B403 | 8 | 2'-3" | | | LOWER BODY - PILES - VERT. |
| B604 | 11 | 26'-7" | | | LOWER BODY - TOP, BOT., & F.F. - HORIZ. |
| B805 | 7 | 28'-10" | X | | LOWER BODY - B.F. - HORIZ. |
| B506 | 25 | 2'-0" | | X | LOWER BODY - VERT. |
| B507 | 22 | 15'-8" | X | X | LOWER WING - VERT. - WING 3 & 4 |
| B508 | 6 | 12'-2" | X | X | LOWER WING - F.F. - HORIZ. - WING 3 |
| B509 | 6 | 12'-2" | | X | LOWER WING - F.F. - HORIZ. - WING 4 |
| B610 | 8 | 11'-11" | | X | LOWER WING - B.F. - HORIZ. - WING 3 |
| B611 | 8 | 12'-1" | | X | LOWER WING - B.F. - HORIZ. - WING 4 |
| B512 | 28 | 9'-8" | X | X | UPPER WING - VERT. - WING 1 & 2 |
| B413 | 14 | 9'-7" | | X | UPPER WING - HORIZ. - WING 1 & 2 |
| B614 | 4 | 9'-7" | | X | UPPER WING - HORIZ. - WING 1 & 2 |
| B415 | 6 | 4'-7" | | | LOWER BODY - ENDS - VERT. |

## LEGEND

◑ OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY WITH MEMBRANE ON BACKFACE.

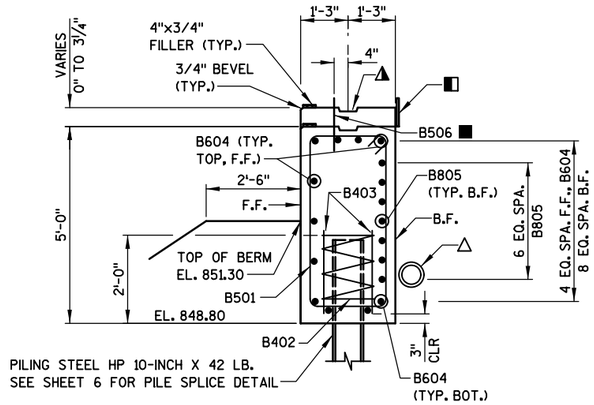
● ½" FILLER TO EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW FINISHED ROADWAY SURFACE AT INNER FACE.

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

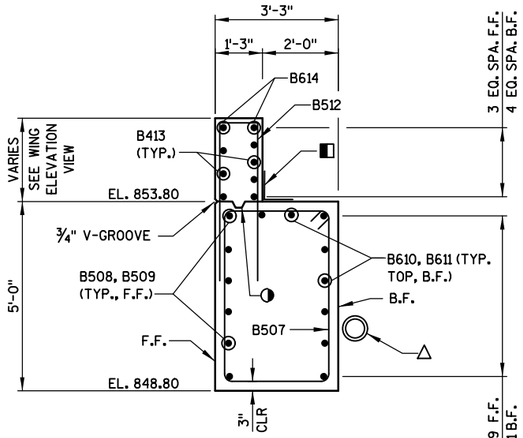
▲ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"X6".

△ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 851.00 AT ℄. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN PER DETAIL ON "SOUTH ABUTMENT" SHEET.

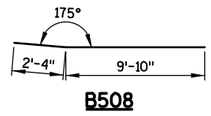
■ THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.



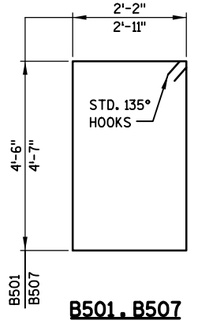

**TYPICAL ABUTMENT SECTION**



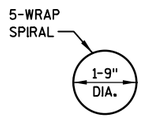

**TYPICAL WING SECTION**




**B508**




**B501, B507**

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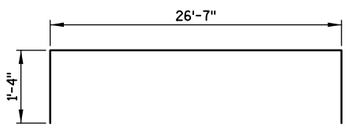


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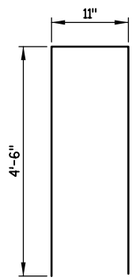



**B512**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-691

DRAWN BY DTH | PLANS CK'D. BMO

NORTH ABUTMENT DETAILS

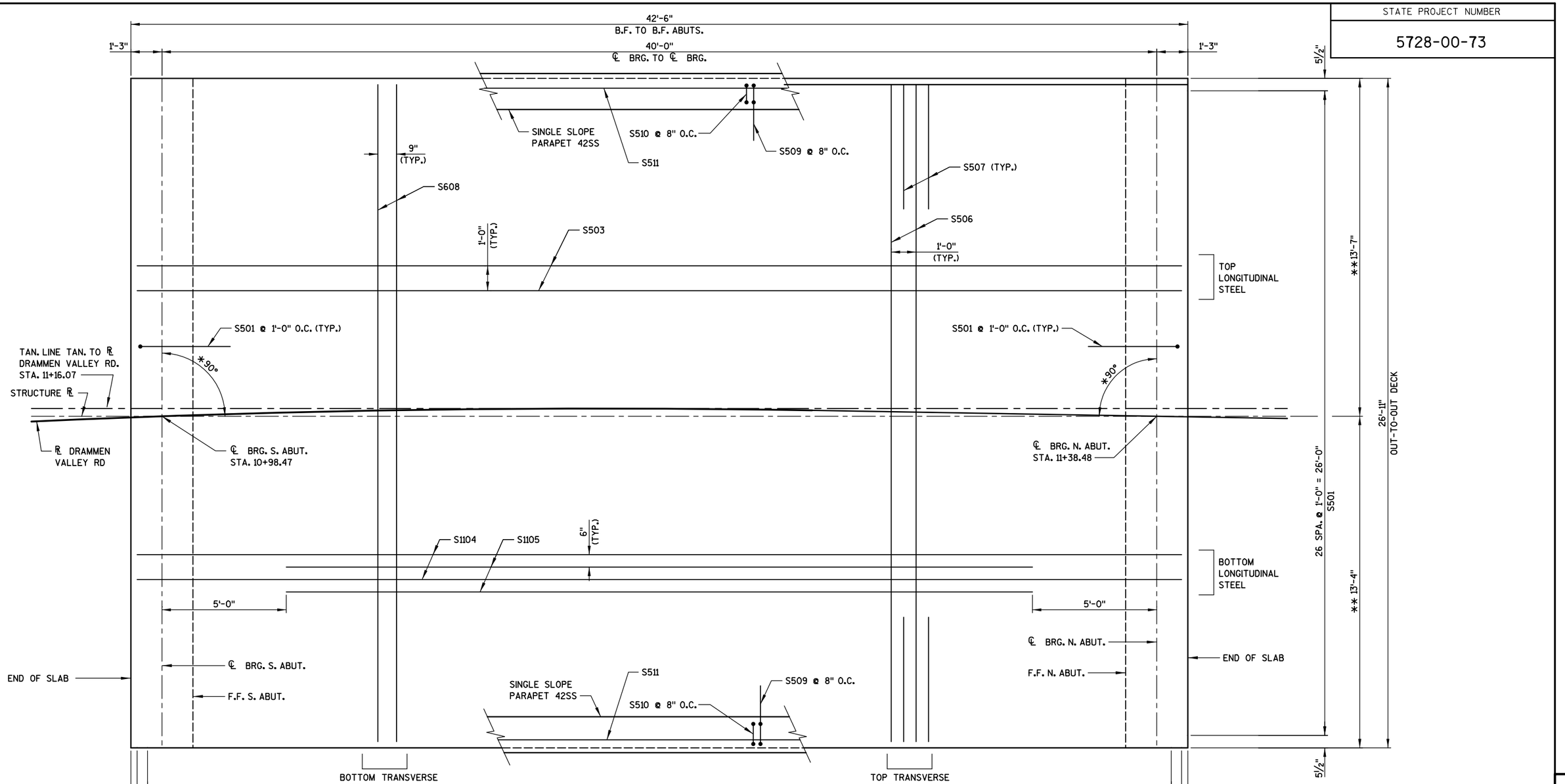
SHEET 7
43

8

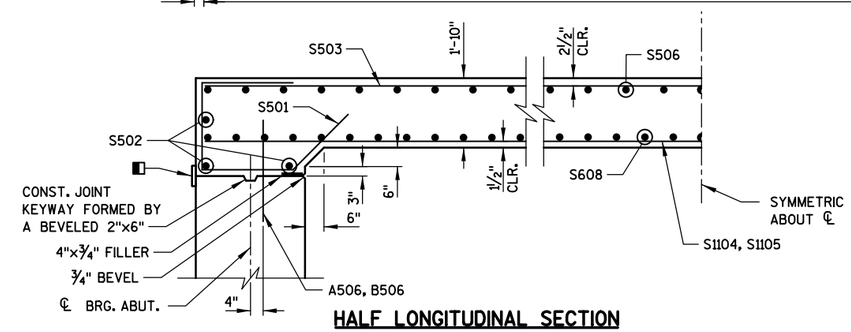
8

FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\080107_na.dgn

| STATE PROJECT NUMBER |
|---|
| 5728-00-73 |




## PLAN




## HALF LONGITUDINAL SECTION

**LEGEND**

* ANGLE MEASURED TO STRUCTURE ℞.

** DIMENSION MEASURED TO STRUCTURE ℞.

◧ 18" RUBBERIZED MEMBRANE WATERPROOFING.

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| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-691

| DRAWN BY | DTH | PLANS CK'D. | BMO |
|---|---|---|---|

SUPERSTRUCTURE

SHEET 8
44

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| STATE PROJECT NUMBER |
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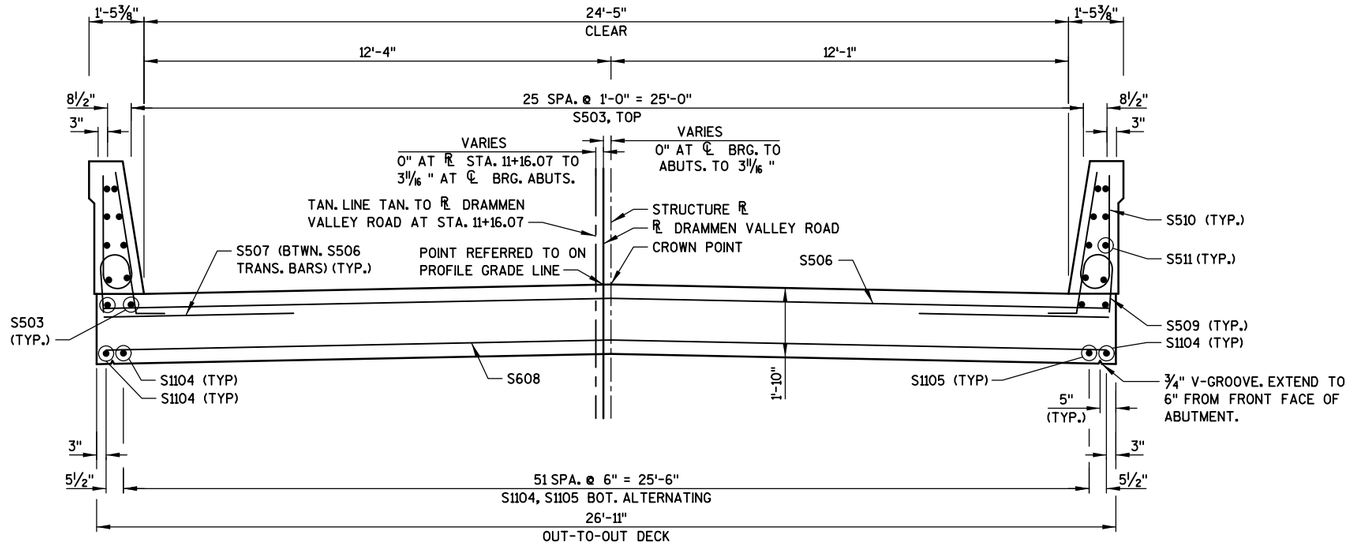
| 5728-00-73 |




## CROSS SECTION THRU SUPERSTRUCTURE

(LOOKING NORTH)

## NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIAMTELY 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 (+).

## SURVEY TOP OF SLAB ELEVATIONS

| | S. ABUT. | 5/10 PT. | N. ABUT. |
|---|---|---|---|
| WEST GUTTER | | | |
| CROWN ON STRUCTURE ℞ | | | |
| EAST GUTTER | | | |

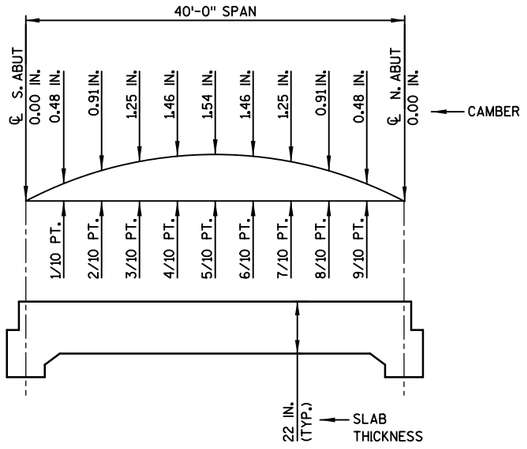
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 PT. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℞. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

## TOP OF DECK ELEVATIONS

| LOCATION | WEST EDGE OF DECK * 13.58' LT | | STRUCTURE R/L - | | EAST EDGE OF DECK * 13.33' RT | |
|---|---|---|---|---|---|---|
| | STATION | ELEV. | STATION | ELEV. | STATION | ELEV. |
| C/L S. ABUT. | 10+98.89 | 856.85 | 10+98.47 | 857.10 | 10+98.03 | 856.86 |
| 0.1L POINT | 11+02.83 | 856.84 | 11+02.47 | 857.09 | 11+02.10 | 856.85 |
| 0.2L POINT | 11+06.77 | 856.82 | 11+06.47 | 857.07 | 11+06.16 | 856.83 |
| 0.3L POINT | 11+10.71 | 856.80 | 11+10.47 | 857.04 | 11+10.23 | 856.80 |
| 0.4L POINT | 11+14.64 | 856.76 | 11+14.47 | 857.01 | 11+14.29 | 856.77 |
| 0.5L POINT | 11+18.58 | 856.72 | 11+18.48 | 856.97 | 11+18.36 | 856.73 |
| 0.6L POINT | 11+22.52 | 856.67 | 11+22.48 | 856.92 | 11+22.42 | 856.68 |
| 0.7L POINT | 11+26.46 | 856.62 | 11+26.48 | 856.86 | 11+26.49 | 856.62 |
| 0.8L POINT | 11+30.39 | 856.55 | 11+30.48 | 856.80 | 11+30.55 | 856.56 |
| 0.9L POINT | 11+34.33 | 856.49 | 11+34.48 | 856.73 | 11+34.62 | 856.49 |
| C/L N. ABUT. | 11+38.27 | 856.41 | 11+38.48 | 856.65 | 11+38.68 | 856.41 |

ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS.

* DECK ELEVATIONS AT FACE OF PARAPET (12.33'LT & 12.08'RT) ARE THE SAME AS AT THE EDGE OF DECK (DECK LEVEL UNDER PARAPET, SEE "SINGLE SLOPE PARAPET 42SS" SHEET FOR DETAIL).



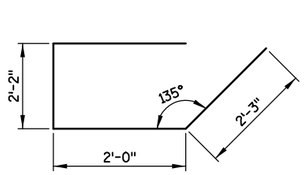

## CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

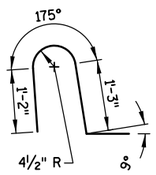
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

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

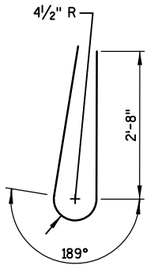
| | |
|---|---|
| | TOP OF SLAB ELEVATION AT FINAL GRADE |
| LESS | SLAB THICKNESS |
| PLUS | CAMBER |
| PLUS | FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR) |
| EQUALS | TOP OF SLAB FALSEWORK ELEVATION. |




S501




S509




S510

## SUPERSTRUCTURE BILL OF BARS

COATED: 18.150

| BAR MARK | NO. REQ'D | LENGTH | BENT | COAT | LOCATION |
|---|---|---|---|---|---|
| S501 | 54 | 8'-2" | X | X | SLAB AT ABUT. - VERT. |
| S502 | 6 | 26'-7" | | X | SLAB AT ABUT. - HORIZ. |
| S503 | 28 | 42'-2" | | X | SLAB - LONG. - TOP |
| S1104 | 28 | 42'-2" | | X | SLAB - LONG. - BOTTOM |
| S1105 | 26 | 30'-0" | | X | SLAB - LONG. - BOTTOM |
| S506 | 43 | 26'-7" | | X | SLAB - TRANSVERSE - TOP |
| S507 | 42 | 5'-0" | | X | SLAB - TRANSVERSE - TOP - EDGES |
| S608 | 57 | 26'-7" | | X | SLAB - TRANSVERSE - BOTTOM |
| S509 | 128 | 4'-5" | X | X | PARAPET - VERT. |
| S510 | 128 | 6'-8" | X | X | PARAPET - VERT. |
| S511 | 16 | 42'-2" | | X | PARAPET - HORIZ. |

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

STRUCTURE B-13-691

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SUPERSTRUCTURE DETAILS

SHEET 9
45

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FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\080109_ss.dgn

| STATE PROJECT NUMBER |
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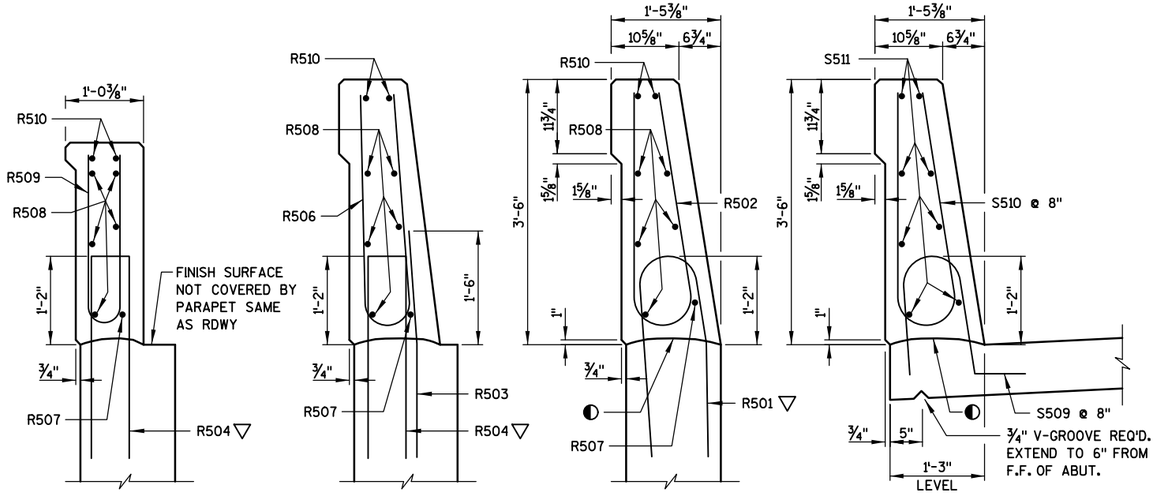
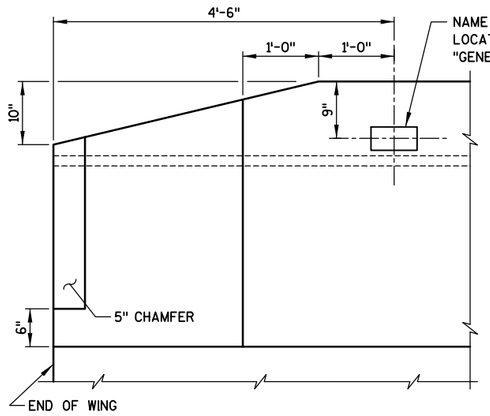



SECTION A-A | SECTION B-B | SECTION C-C | SECTION THRU PARAPET ON DECK




## PARAPET END TREATMENT DETAIL
LOOKING AT INSIDE FACE OF PARAPET

## SINGLE SLOPE PARAPET 42SS BILL OF BARS

**COATED. S. ABUT.: 680 LBS**
**COATED. N. ABUT.: 680 LBS**

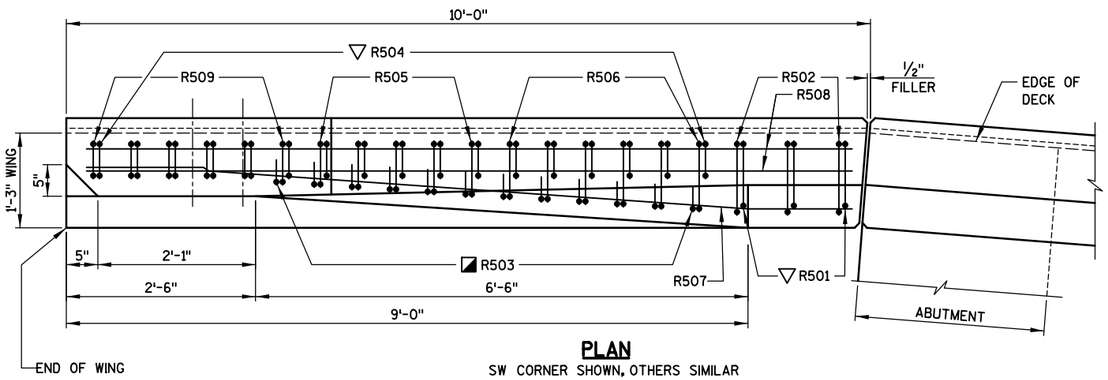
| MARK | NO. REQ'D | | LENGTH | BENT | COAT | LOCATION |
|---|---|---|---|---|---|---|
| | S. ABUT. | N. ABUT. | | | | |
| R501 | 6 | 6 | 5'-10" | X | X | PARAPET - VERT. |
| R502 | 6 | 6 | 6'-8" | X | X | PARAPET - VERT. |
| R503 | 22 | 22 | 3'-0" | X | X | PARAPET - VERT. |
| R504 | 34 | 34 | 5'-7" | X | X | PARAPET - VERT. |
| R505 | 10 | 10 | 6'-5" | X | X | PARAPET - VERT. |
| R506 | 12 | 12 | 6'-6" | X | X | PARAPET - VERT. |
| R507 | 2 | 2 | 9'-6" | X | X | PARAPET - HORIZ. |
| R508 | 10 | 10 | 9'-6" | | X | PARAPET - HORIZ. |
| ⚠ R509 | 12 | 12 | 5'-5" | X | X | PARAPET - VERT. |
| R510 | 4 | 4 | 9'-6" | X | X | PARAPET - HORIZ. |

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

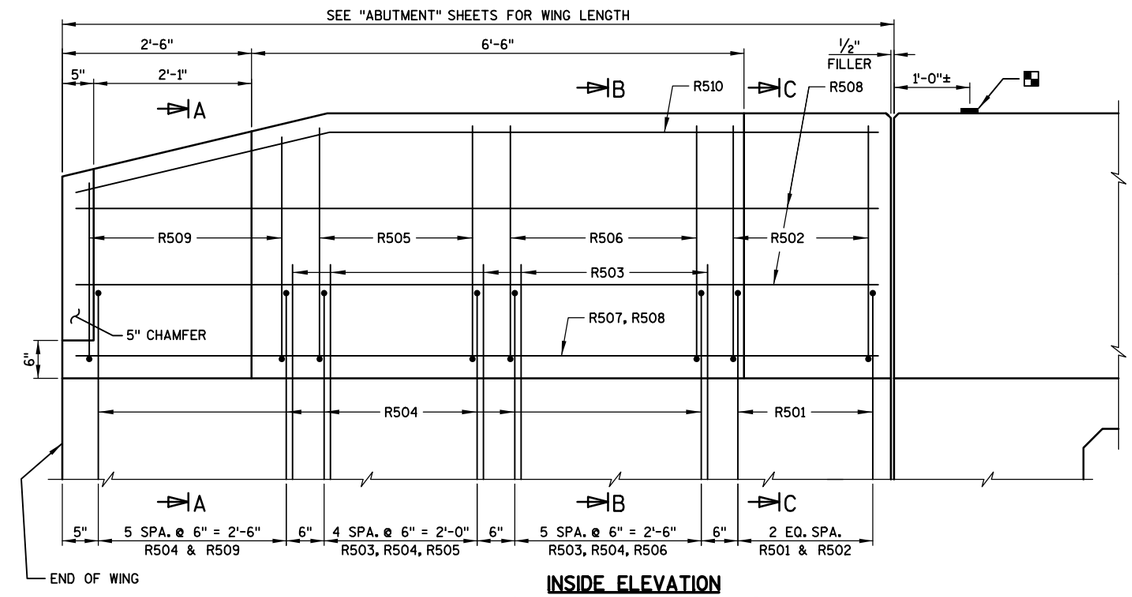
## BAR SERIES TABLE

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

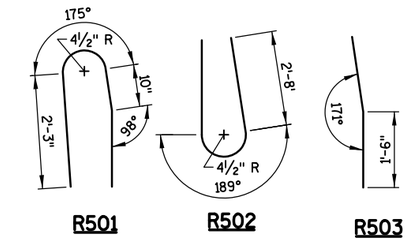
BUNDLE AND TAG EACH SERIES SEPARATELY.



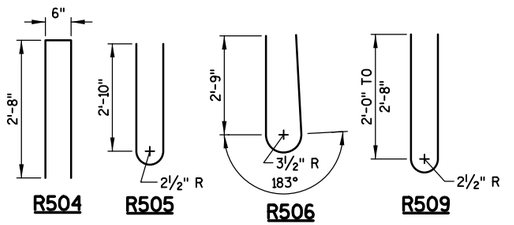

PLAN
SW CORNER SHOWN, OTHERS SIMILAR



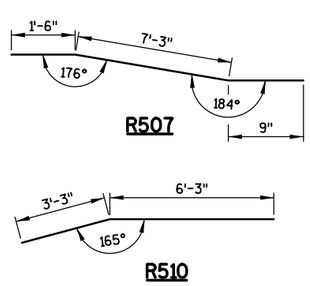

INSIDE ELEVATION
SW CORNER SHOWN, OTHERS SIMILAR




R501 | R502 | R503




R504 | R505 | R506 | R509




R507 | R510

## LEGEND

- ◐ CONSTRUCTION JOINT - STRIKE OFF AS SHOWN.
- ◆ SLOPE FOR DRAINAGE.
- ◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE, USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ R501, AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.
- ◾ BENCH MARK CAP (WHEN SUPPLIED).

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-691

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SINGLE SLOPE PARAPET 42SS

SHEET 10
46

8

8

FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\080110_sp.dgn

| DRAMMEN VALLEY RD | | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STATION | DISTANCE | CUT NOTE 1 | FILL NOTE 2 | EBS (5% OF CUT) | CUT NOTE 1 | FILL NOTE 2 | EBS | CUT 1.00 NOTE 1 | EXPANDED FILL 1.25 | STRUCTURE EXCAVATION 1.00 | MASS ORDINATE NOTE 3 |
| 10+52 | | 71.4 | 1.4 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10+75 | 23 | 55.0 | 3.3 | 2.6 | 53 | 2 | 3 | 53 | 2 | 0 | 48 |
| 10+97 | 22 | 55.0 | 3.3 | 2.6 | 45 | 3 | 2 | 97 | 6 | 0 | 87 |
| 11+39 | --- | 57.8 | 21.9 | 2.8 | 0 | 0 | 0 | 97 | 6 | 0 | 87 |
| 11+50 | 11 | 57.8 | 21.9 | 2.8 | 24 | 9 | 1 | 121 | 17 | 0 | 98 |
| 11+75 | 25 | 51.9 | 2.2 | 2.5 | 51 | 11 | 2 | 172 | 31 | 0 | 133 |
| 11+82 | 7 | 70.3 | 0.5 | 3.3 | 15 | 0 | 1 | 187 | 31 | 0 | 147 |
| | | | COLUMN TOTALS | | 187 | 25 | 9 | | | | |

NOTES:

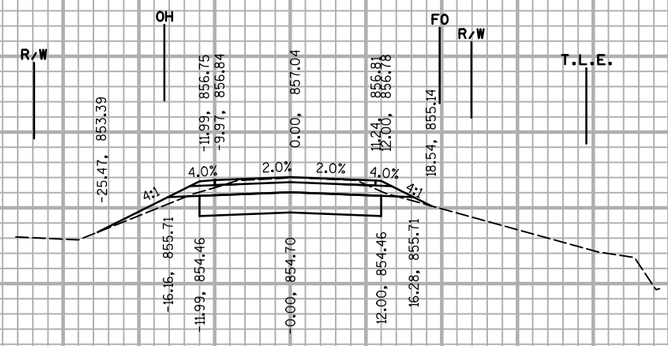
1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL.
2) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
3) MASS ORDINATE: MASS ORDINATE = (CUT) - (FILL * FILL FACTOR)

9

9

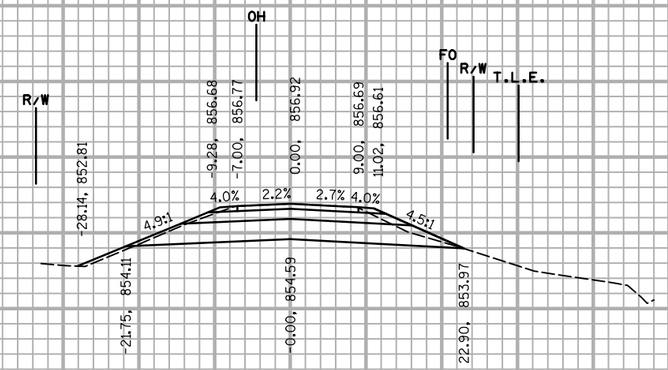
STA. 10+97.22 TO STA. 11+39.73

B-13-691




10+75.00

10+75.00




10+52.47

10+52.47

5 FT

10 FT

BEGIN PROJECT STA. 10+52.47

BEGIN CONSTRUCTION STA. 10+31.83

9

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| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | CROSS SECTIONS | SHEET | E |
|---|---|---|---|---|---|



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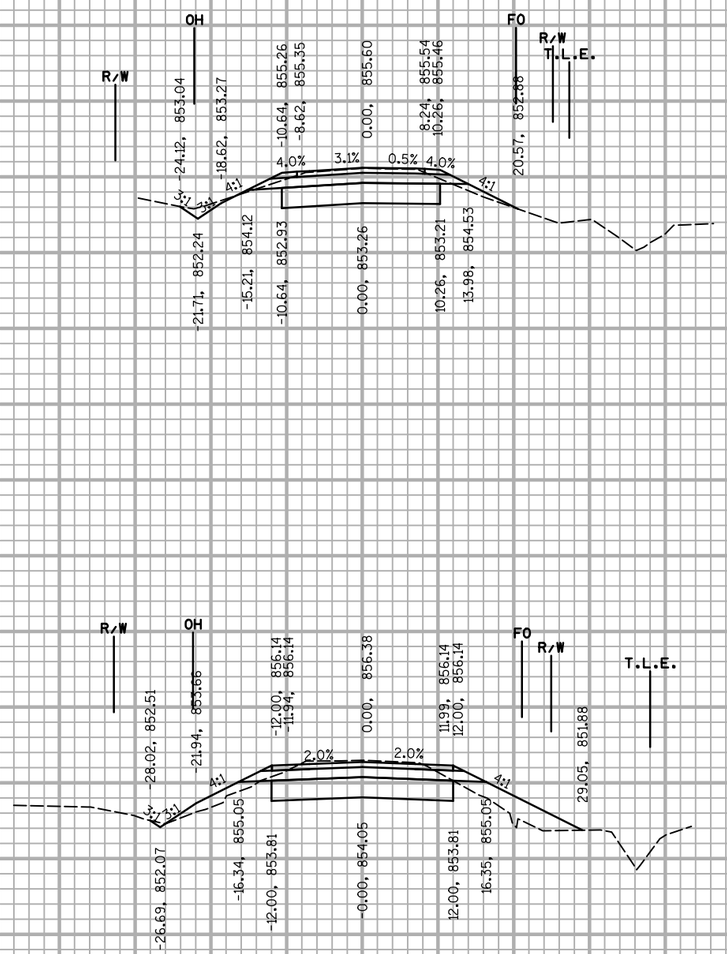
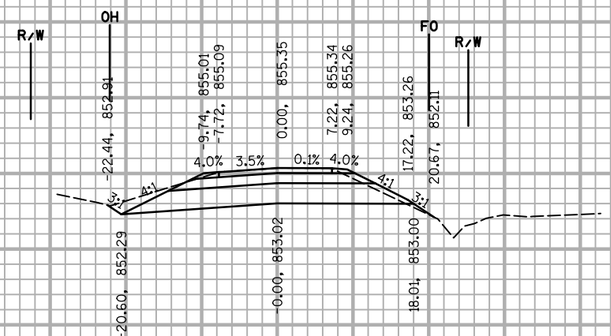



9

9

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | CROSS SECTIONS | SHEET 49 | E |
|---|---|---|---|---|---|

END CONSTRUCTION STA. 11+94.65
END PROJECT STA. 11+81.80




11+81.80

11+81.80

5 FT
10 FT

| PROJECT NO: 5728-00-73 | HWY: DRAMMEN VALLEY ROAD | COUNTY: DANE | CROSS SECTIONS | SHEET 50 | E |
|---|---|---|---|---|---|

FILE NAME : S:\MAD\4500--4599\4599\003\Drawings\CAD\Micros\PLAN\090201_xs.dgn PLOT DATE : 4/29/2021 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21

Notes

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