EAU

DECEMBER 2019

PROJECT ID: 7105-00-72

WITH: N/A

COUNTY: DUNN

34

ORDER OF SHEETS

TOTAL SHEETS = 128

N

DESIGN DESIGNATION

A.A.D.T.	2020	= 1500
A.A.D.T.	2040	= 1700
D.H.V.		= 135
D.D.		= 60/40
T.		= 6.3%
DESIGN SPEED		= 60 M.P.H.
ESALS		= 220,000

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ELLSWORTH - DOWNSVILLE

EAU GALLE RIVER BRIDGE B-17-0227

STH 72

DUNN COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7105-00-72	WISC 2019773	1

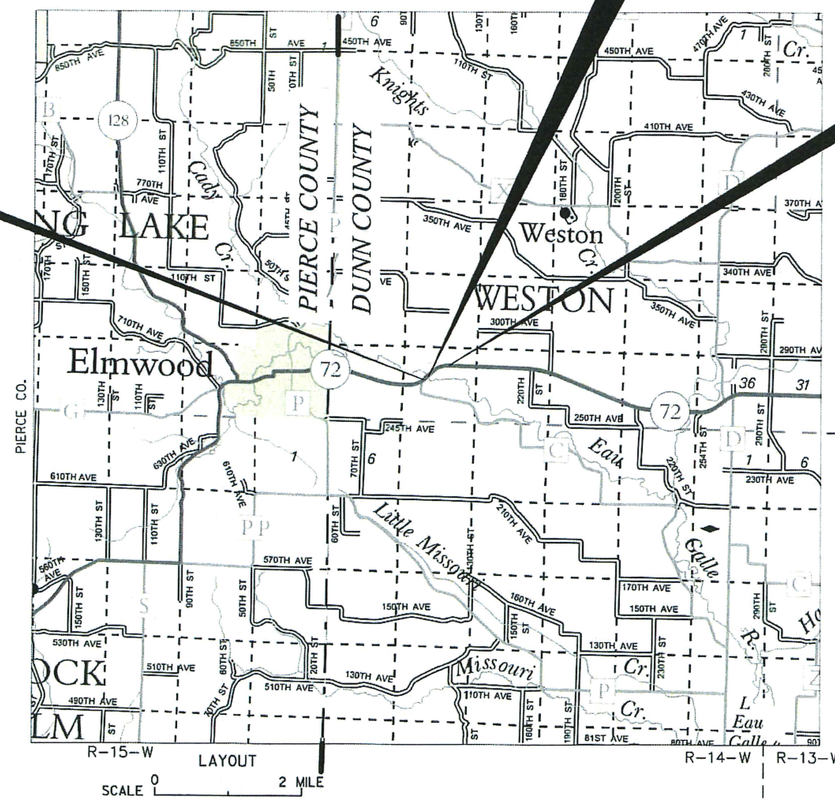
STATE PROJECT NUMBER

7105-00-72

STRUCTURE B-17-0227

BEGIN PROJECT
STA. 92+50
Y = 135,672.87
X = 114,175.00

END PROJECT
STA. 97+00



TOTAL NET LENGTH OF CENTERLINE = 0.085 MI.

COORDINATES AND BEARINGS ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DUNN COUNTY.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc.
Engineers · Architects · Surveyors

WISCONSIN
FREDERICK G GRUBER
E-28971
SPRING GREEN, WI
PROFESSIONAL ENGINEER

7/24/18 (Date) Frederick G Gruber (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Project Manager	TYLER RONGSTAD, P.E.
Regional Examiner	TOU YANG, P.E.
Regional Supervisor	JAMES KOENIG, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 7/27/18 (Signature) Tyler Rongstad

E

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment
AC	Acre
AGG	Aggregate
AH	Ahead
<	Angle
ASPH	Asphaltic
AVG	Average
ADT	Average Daily Traffic
BAD	Base Aggregate Dense
BK	Back
BF	Back Face
BM	Bench Mark
BR	Bridge
C or C/L	Center Line
CC	Center to Center
CTH	County Trunk Highway
CR	Creek
CR	Crushed
CY or CU YD	Cubic Yard
CP	Culvert Pipe
C & G	Curb and Gutter
D	Degree of Curve
DHV	Design Hour Volume
DIA	Diameter
E	East
X	East Grid Coordinate
ELEC	Electric (al)
EL or ELEV	Elevation
ESALS	Equivalent Single Axle Loads
EBS	Excavation Below Subgrade
FF	Face to Face
FE	Field Entrance
F	Fill
FG	Finished Grade
FL or F/L	Flow Line
FT	Foot
FTG	Footing
GN	Grid North
HT	Height
CWT	Hundredweight
HYD	Hydrant
INL	Inlet
ID	Inside Diameter
INV	Invert
IP	Iron Pipe or Pin
IRS	Iron Rod Set
JT	Joint
JCT	Junction
LHF	Left–Hand Forward
L	Length of Curve
LIN FT or LF	Linear Foot
LC	Long Chord of Curve
MH	Manhole
MB	Mailbox
ML or M/L	Match Line
N	North
Y	North Grid Coordinate
OD	Outside Diameter
PLE	Permanent Limited Easement
PT	Point
PC	Point of Curvature
PI	Point of Intersection
PRC	Point of Reverse Curvature
PT	Point of Tangency
POC	Point On Curve
POT	Point on Tangent
PVC	Polyvinyl Chloride
PCC	Portland Cement Concrete
LB	Pound
PSI	Pounds Per Square Inch
PE	Private Entrance
R	Radius
RR	Railroad
R	Range
RL or R/L	Reference Line
RP	Reference Point
RCCP	Reinforced Concrete Culvert Pipe
REQD	Required
RES	Residence or Residential
RW	Retaining Wall
RT	Right
RHF	Right–Hand Forward
R/W	Right–of–Way
R	River
RD	Road
RDWY	Roadway
SALV	Salvaged
SAN S	Sanitary Sewer
SEC	Section
SHLDR	Shoulder
SHR	Shrinkage
SW	Sidewalk
S	South
SQ	Square
SF or SQ FT	Square Feet
SY or SQ YD	Square Yard
STD	Standard
SDD	Standard Detail Drawings
STH	State Trunk Highways
STA	Station
SS	Storm Sewer
SG	Subgrade
SE	Superelevation
SL or S/L	Survey Line
SV	Septic Vent
T	Tangent
TEL	Telephone
TEMP	Temporary
TI	Temporary Interest
TLE	Temporary Limited Easement
t	Ton
T or TN	Town
TRANS	Transition
TL or T/L	Transit Line
T	Trucks (percent of)
TYP	Typical
UNCL	Unclassified
UG	Underground Cable
USH	United States Highway
VAR	Variable
V	Velocity or Design Speed
VERT	Vertical
VC	Vertical Curve
VOL	Volume
WM	Water Main
WV	Water Valve
W	West
WB	Westbound
YD	Yard

ORDER OF SECTION 2 SHEETS:

- WRITTEN MATERIAL
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- EROSION CONTROL DETAILS
- PERMANENT SIGNING DETAILS
- PAVEMENT MARKING DETAILS
- TRAFFIC CONTROL/DETOUR DETAILS
- ALIGNMENT DETAILS

UTILITIES

COMMUNICATION LINE
CENTURYLINK
ATTN: MICHAEL VANDEN BOS
2426 75TH AVENUE
OSCEOLA, WI 54020
OFFICE (715) 294-2463
EMAIL: mike.vandenbos@centurylink.com

ELECTRIC
DUNN ENERGY COOPERATIVE
ATTN: MIKE ANDRASCHKO
PO BOX 220
MENOMONIE, WI 54751
OFFICE (715) 232-6240
EMAIL: mandra@dunnenergy.com

COMMUNICATION LINE
AT&T DISTRIBUTION
ATTN: RICK PODOLAK
304 SOUTH DEWEY ST., 4TH FL.
EAU CLAIRE, WI 54701
OFFICE (715) 839-5565
cell: (715) 410-0656
EMAIL: rp4514@att.com

COMMUNICATION LINE
WEST WISCONSIN TELCOM COOPERATIVE
ATTN: BRADLEY SCHMIDTKNECHT
5808 OLD MILL PLAZA
EAU CLAIRE, WI 54703
OFFICE (715) 231-0504
EMAIL: brads@wwt.coop

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

* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

CONTACTS

DESIGN CONSULTANT:
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SPRING GREEN, WI 53588
ATTN: FRED GRUBER, P.E., P.L.S.
PH: (608) 588–7484
E–MAIL: fred.gruber@jewellassoc.com

WISDOT:
WISCONSIN DEPARTMENT OF TRANSPORTATION
718 W. CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
ATTN: TYLER RONGSTAD, P.E.
PH: (715) 461–0372
E–MAIL: tyler.rongstad@dot.wi.gov

DNR LIAISON:
STATE OF WISCONSIN DNR
WEST CENTRAL REGION HQ
1300 W. CLAIREMONT AVENUE
EAU CLAIRE, WI 54702
ATTN: CHRIS WILLGER
PH: (715) 839–1609
E–MAIL: christopherj.willger@wisconsin.gov

DUNN COUNTY HIGHWAY DEPARTMENT:
3303 US HIGHWAY 12 EAST
MENOMONIE, WI 54751
PH: (715) 232–2181
SHOP PH: (715) 232–3888
E–MAIL: hwy@co.dunn.wi.us

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE, AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION. EXACT LOCATIONS OF EBS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS SHOWN WITHIN THE RIGHT–OF–WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE SEEDED (USE SEED MIX NO. 20), FERTILIZED (TYPE B), AND COVERED WITH E–MAT OR MULCHED AS DIRECTED BY THE ENGINEER IN THE FIELD. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEED MIX NO. 60.

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

SILT FENCE AND TEMPORARY DITCH CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND SHALL BE IN PLACE PRIOR TO EXISTING STRUCTURE REMOVAL.

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

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

THE EXACT LOCATION OF FIELD ENTRANCES TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

EXISTING ENTRANCES SHALL BE RESTORED IN KIND AND THEIR LOCATION VERIFIED BY THE ENGINEER IN THE FIELD.

5–INCHES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH A 3–INCH (4 MT 58–34 S) LOWER LAYER AND A 2–INCH (4 MT 58–34 S) UPPER LAYER.

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE EQUIPMENT BEYOND THE SLOPE INTERCEPTS FROM STA 93+10 – STA 94+25, LT & RT.

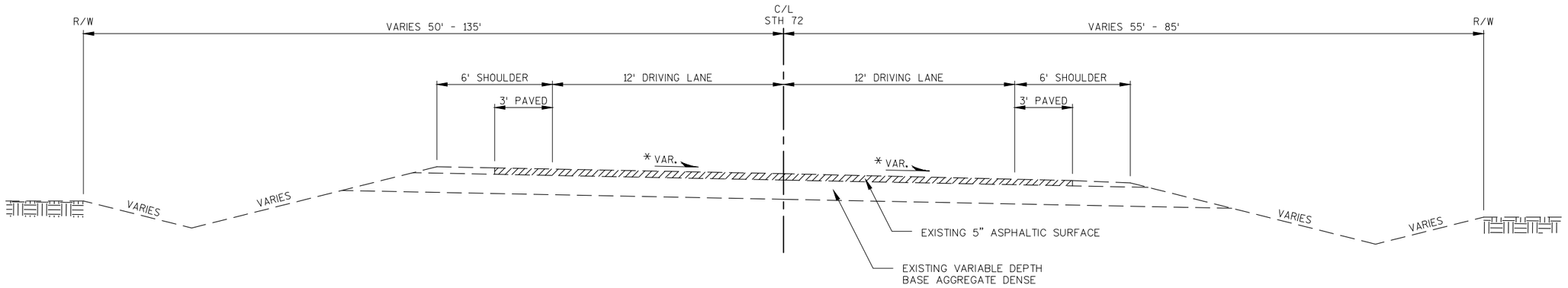
ADJUST DITCH GRADING AS NECESSARY TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER IN THE FIELD.

CURVE DATA IS BASED ON THE ARC DEFINITION.

MULCH OR COVER WITH E–MAT ALL MAINLINE SLOPES AS DIRECTED BY ENGINEER IN FIELD.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

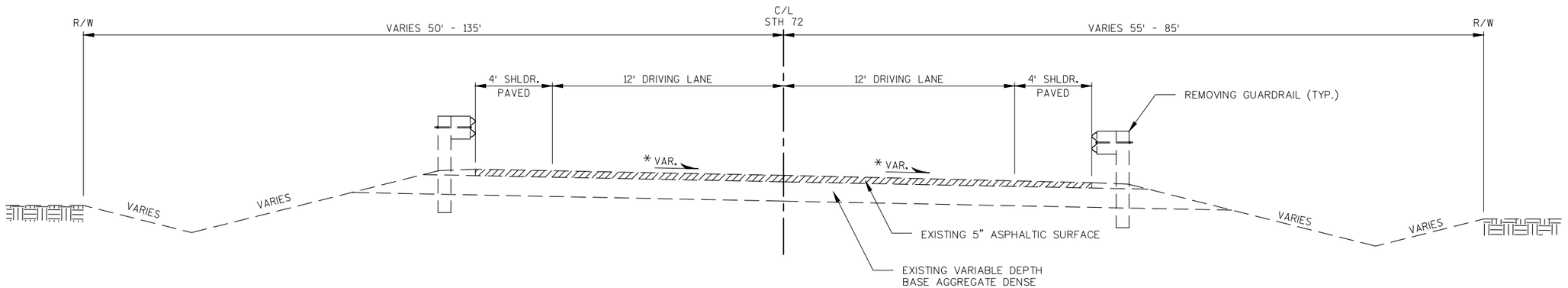
2



TYPICAL EXISTING SUPERELEVATED SECTION

STH 72
STA. 85+20 - STA. 85+33, LT
STA. 85+20 - STA. 88+03, RT
STA. 90+72 - STA. 92+06, LT
STA. 99+18 - STA. 99+25, LT
STA. 96+82 - STA. 99+25, RT

* CROSS SLOPE VARIES 0.91% TO 1.84%,
SUPERELEVATION MAX. VARIES 5.4% TO 6.1%



TYPICAL EXISTING SUPERELEVATED SECTION - WITH GUARDRAIL

STH 72
STA. 85+33 - STA. 90+72, LT
STA. 88+03 - STA. 92+68, RT
STA. 92+06 - STA. 92+68, LT
STA. 96+21 - STA. 99+18, LT
STA. 96+21 - STA. 96+82, RT

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	TYPICAL EXISTING SECTIONS	SHEET 3	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\TYPICALS\EXISTING AND PROP TYPICALS.DWG
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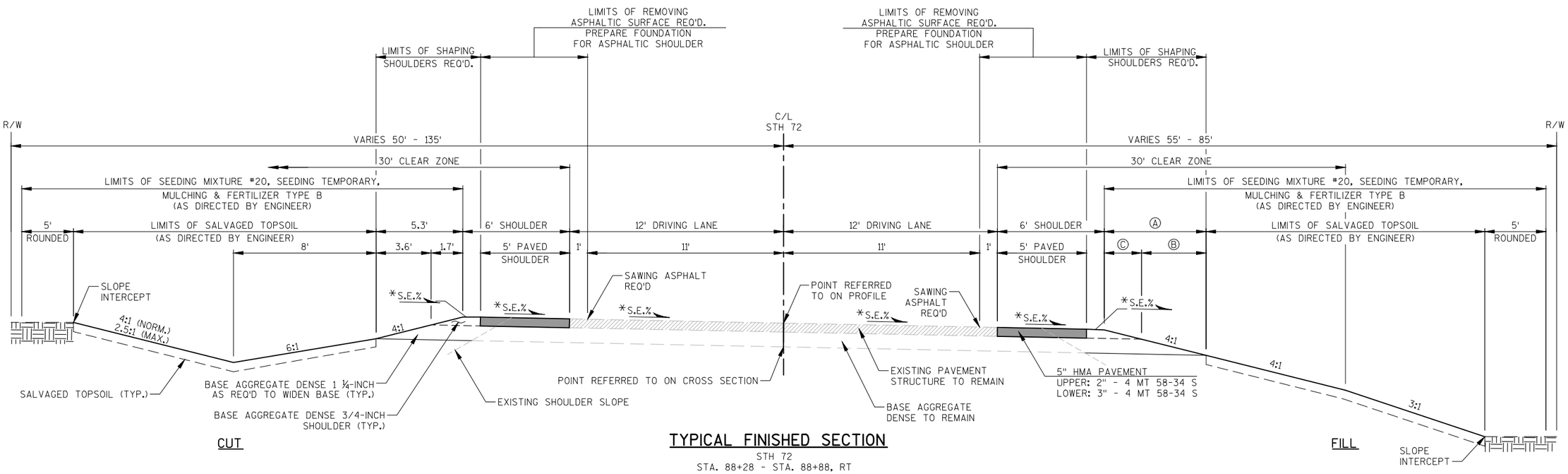
PLOT TIME : 2:46:32 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



TYPICAL FINISHED SECTION

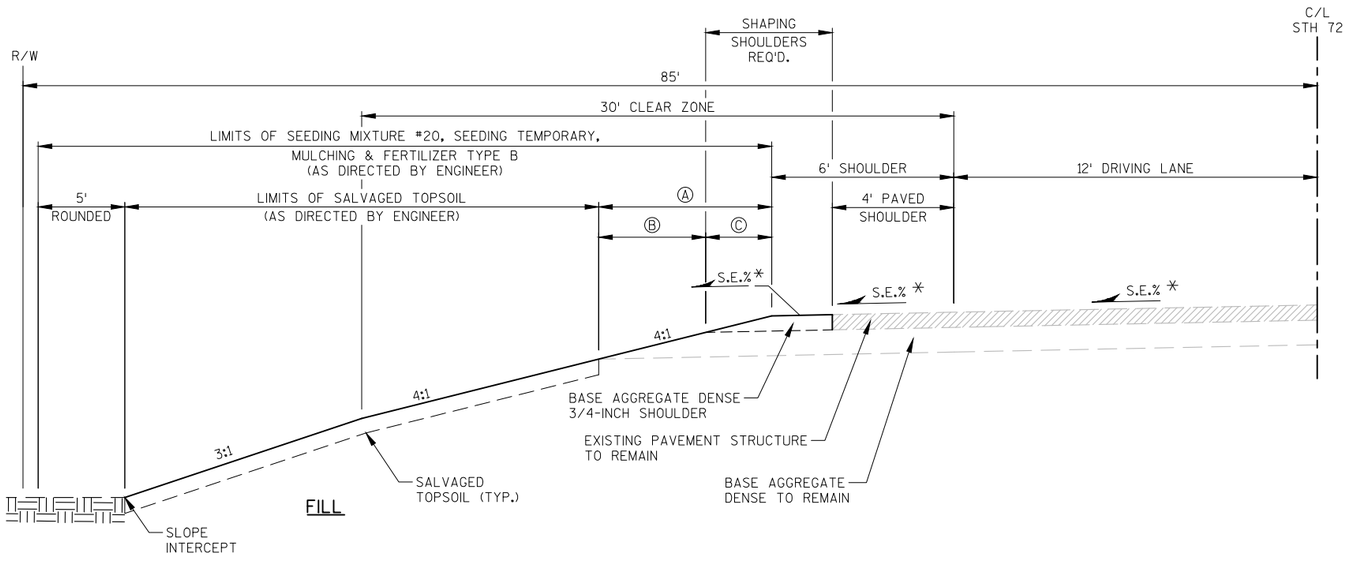
STH 72
STA. 88+28 - STA. 88+88, RT
STA. 90+90 - STA. 91+59, LT
STA. 98+02 - STA. 98+75, LT
STA. 98+04 - STA. 98+75, RT

*SEE SUPERELEVATION TABLE

SUPERELEVATION TABLE

STATION	LEFT	RIGHT	A	B	C	STATION	LEFT	RIGHT	A	B	C
85+20	5.5	5.5	6.4	4.3	2.1	92+75	2.0	2.0	--	--	--
85+50	5.3	5.3	6.3	4.2	2.1	93+00	2.0	2.0	--	--	--
86+00	5.2	5.2	6.3	4.2	2.1	93+50	2.0	2.0	--	--	--
86+50	5.1	5.1	6.3	4.2	2.1	94+00	2.0	2.0	--	--	--
87+00	5.4	5.4	6.4	4.3	2.1	94+50	2.0	2.0	--	--	--
87+50	5.6	5.6	6.4	4.3	2.1	95+00	2.0	2.0	--	--	--
88+00	5.6	5.6	6.4	4.3	2.1	95+50	2.0	2.0	--	--	--
88+50	5.6	5.6	6.4	4.3	2.1	96+00	2.0	2.0	--	--	--
89+00	5.7	5.7	6.5	4.3	2.2	96+50	2.0	2.0	--	--	--
89+50	5.7	5.7	6.5	4.3	2.2	96+70	2.0	2.0	--	--	--
90+00	5.4	5.4	6.4	4.3	2.1	97+00	0.9	2.0	--	--	--
90+50	4.4	4.4	6.1	4.0	2.0	97+23	0.0	2.0	--	--	--
90+90	MATCH EXIST.	MATCH EXIST.				97+50	1.0	2.0	--	--	--
91+00	4.6	4.6	6.1	4.1	2.0	97+76	2.0	2.0	--	--	--
91+50	2.7	2.7	5.6	3.7	1.9	98+00	2.9	2.9	5.7	3.8	1.9
91+69	2.0	2.0	--	--	--	98+50	4.8	4.8	6.2	4.1	2.1
92+00	2.0	0.8	--	--	--	98+75	MATCH EXISTING	MATCH EXISTING			
92+22	2.0	0.0	--	--	--	99+00	5.1	5.1	6.3	4.2	2.1
92+50	2.0	1.1	--	--	--	99+25	5.2	5.2	6.3	4.2	2.1

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATION IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDER SLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION.



TYPICAL FINISHED PARTIAL SECTION BEAM GUARD REMOVAL

STH 72
STA. 85+20 - STA. 90+90, LT
STA. 87+96 - STA. 88+28, RT
STA. 98+75 - STA. 99+25, LT

*SEE SUPERELEVATION TABLE

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	TYPICAL FINISHED SECTIONS	SHEET 4	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\TYPICALS\EXISTING AND PROP TYPICALS.DWG
LAYOUT : SUPER
PLOT DATE : 7/23/2018
PLOT TIME : 2:46:33 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

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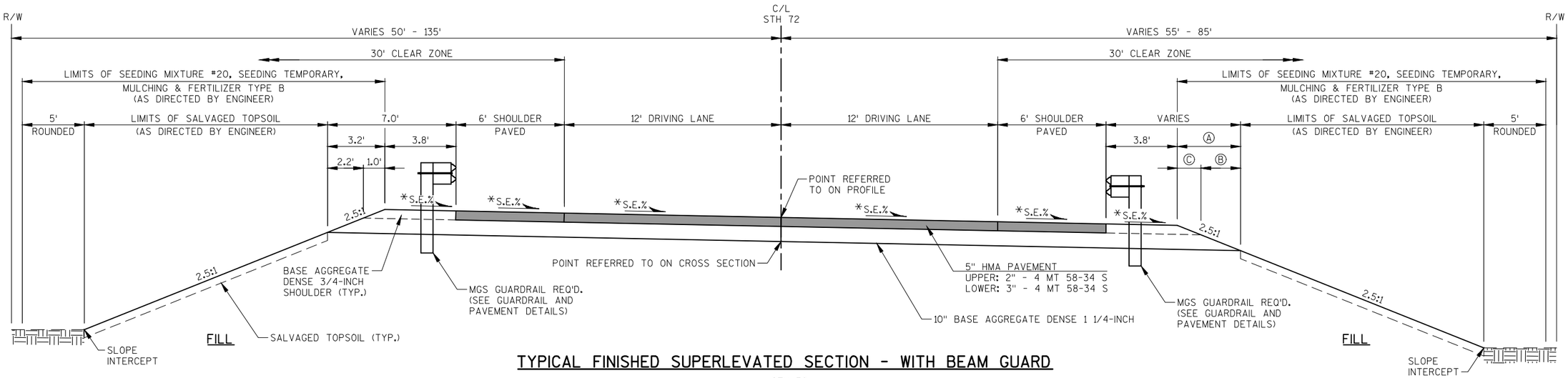
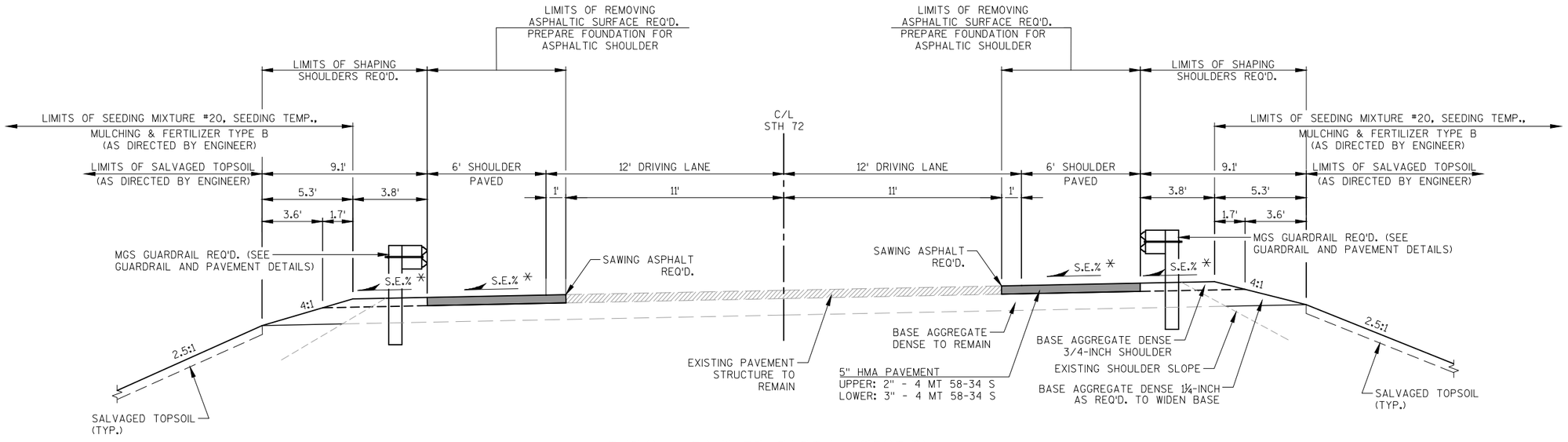


* SEE SUPERELEVATION TABLE

TYPICAL FINISHED SUPERLEVATED SECTION - WITH BEAM GUARD

STH 72
STA. 92+50 - STA. 93+03
STA. 96+59 - STA. 97+00



* SEE SUPERELEVATION TABLE

TYPICAL FINISHED PARTIAL SECTION
BEAM GUARD REPLACEMENT

STH 72
STA. 88+88 - STA. 92+50, RT
STA. 91+59 - STA. 92+50, LT
STA. 97+00 - STA. 98+02, LT
STA. 97+00 - STA. 98+04, RT

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	TYPICAL FINISHED SECTIONS	SHEET 5	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\TYPICALS\EXISTING AND PROP TYPICALS.DWG
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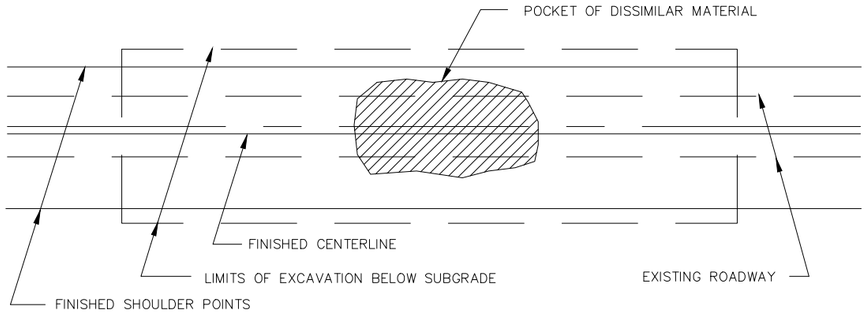
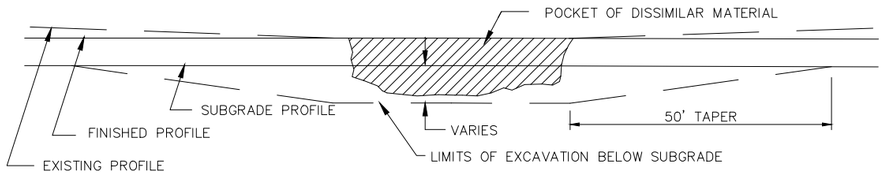
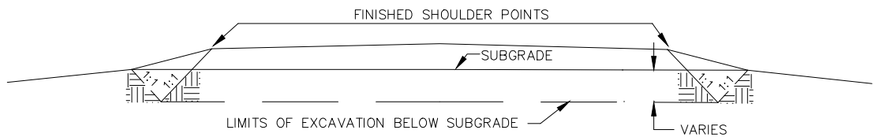
PLOT TIME : 2:46:35 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PLAN VIEW



PROFILE VIEW



CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.

3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

EXCAVATION BELOW SUBGRADE (E.B.S.)

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

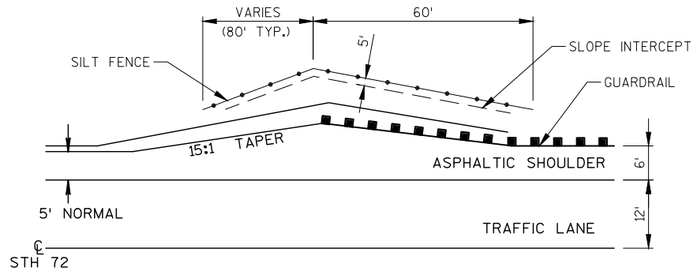
TOTAL PROJECT AREA= 5.38 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.94 ACRES

2

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CONSTRUCTION DETAILS, HSG CHART	SHEET 6	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\DETAILS\W11554_CONSTRUCTION DETAILS.DWG
LAYOUT :
PLOT DATE : 7/24/2018
PLOT TIME : 7:40:16 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'
WISDOT/CADDS SHEET 42

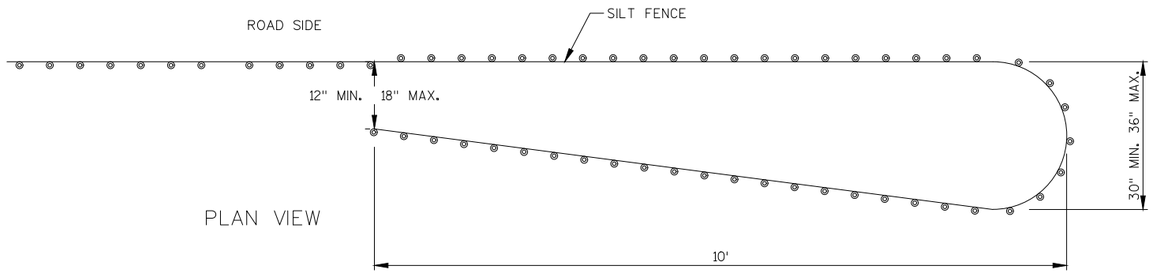
2



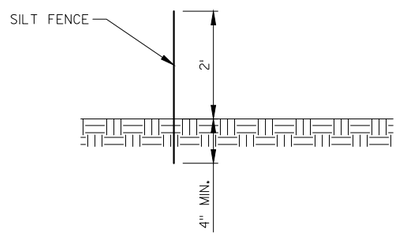
DETAIL FOR ASPHALTIC SHOULDER AND SILT FENCE AT BEAM GUARD

STH 72

SEE SDD "MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)" FOR GRADING DETAILS

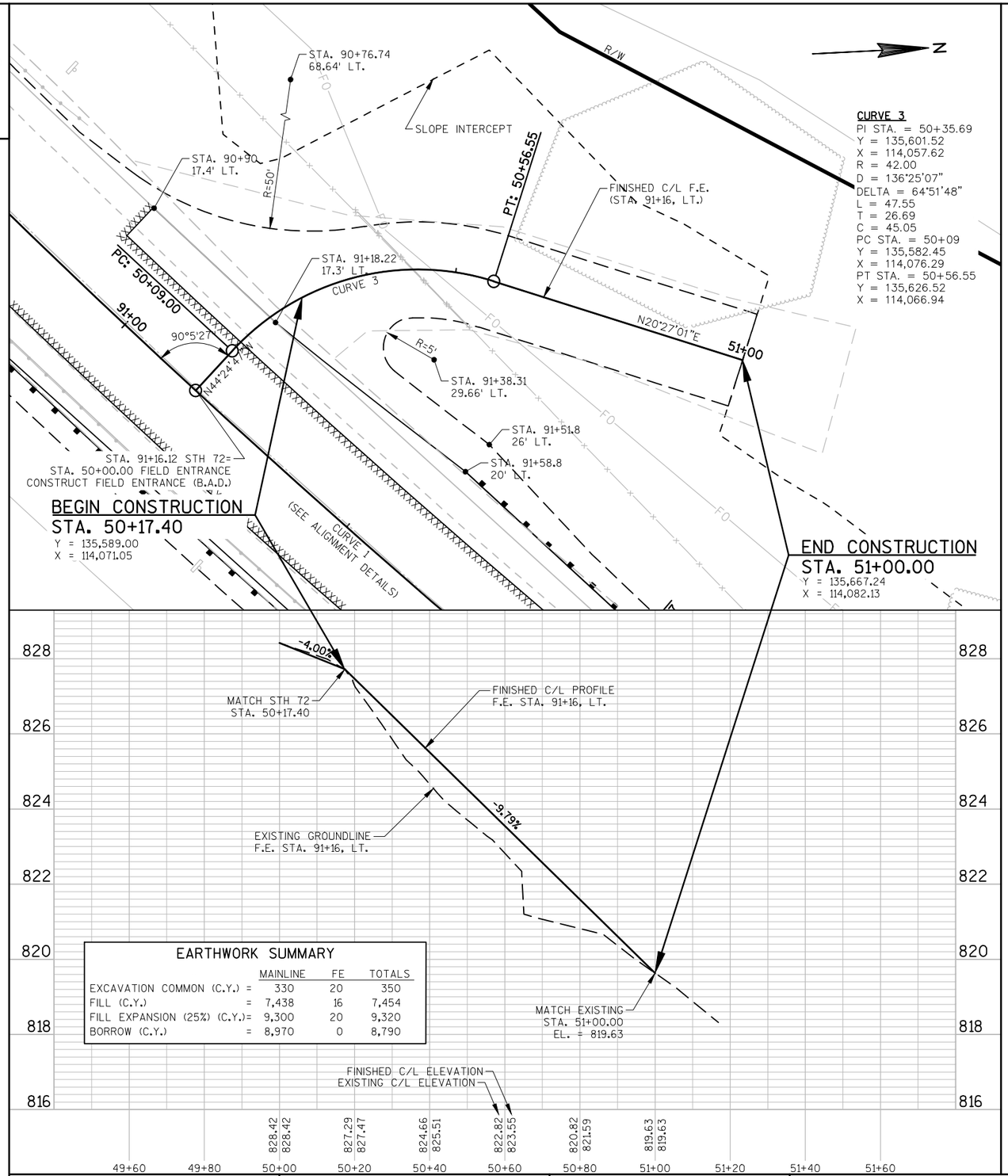


NOTE: SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND



CROSS SECTION

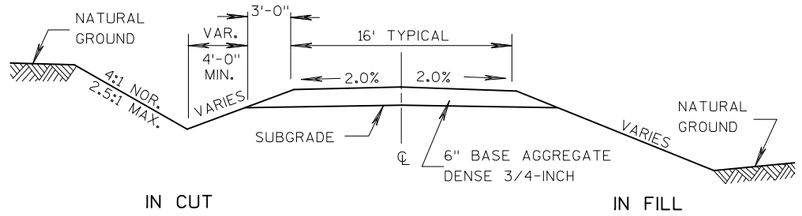
SILT FENCE TURN–AROUND DETAIL



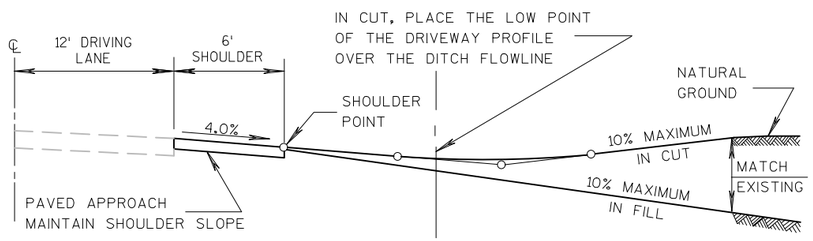
CURVE 3
PI STA. = 50+35.69
Y = 135,601.52
X = 114,057.62
R = 42.00
D = 136°25'07"
DELTA = 64°51'48"
L = 47.55
T = 26.69
C = 45.05
PC STA. = 50+09
Y = 135,582.45
X = 114,076.29
PT STA. = 50+56.55
Y = 135,626.52
X = 114,066.94

EARTHWORK SUMMARY

	MAINLINE	FE	TOTALS
EXCAVATION COMMON (C.Y.) =	330	20	350
FILL (C.Y.) =	7,438	16	7,454
FILL EXPANSION (25%) (C.Y.)=	9,300	20	9,320
BORROW (C.Y.) =	8,970	0	8,790



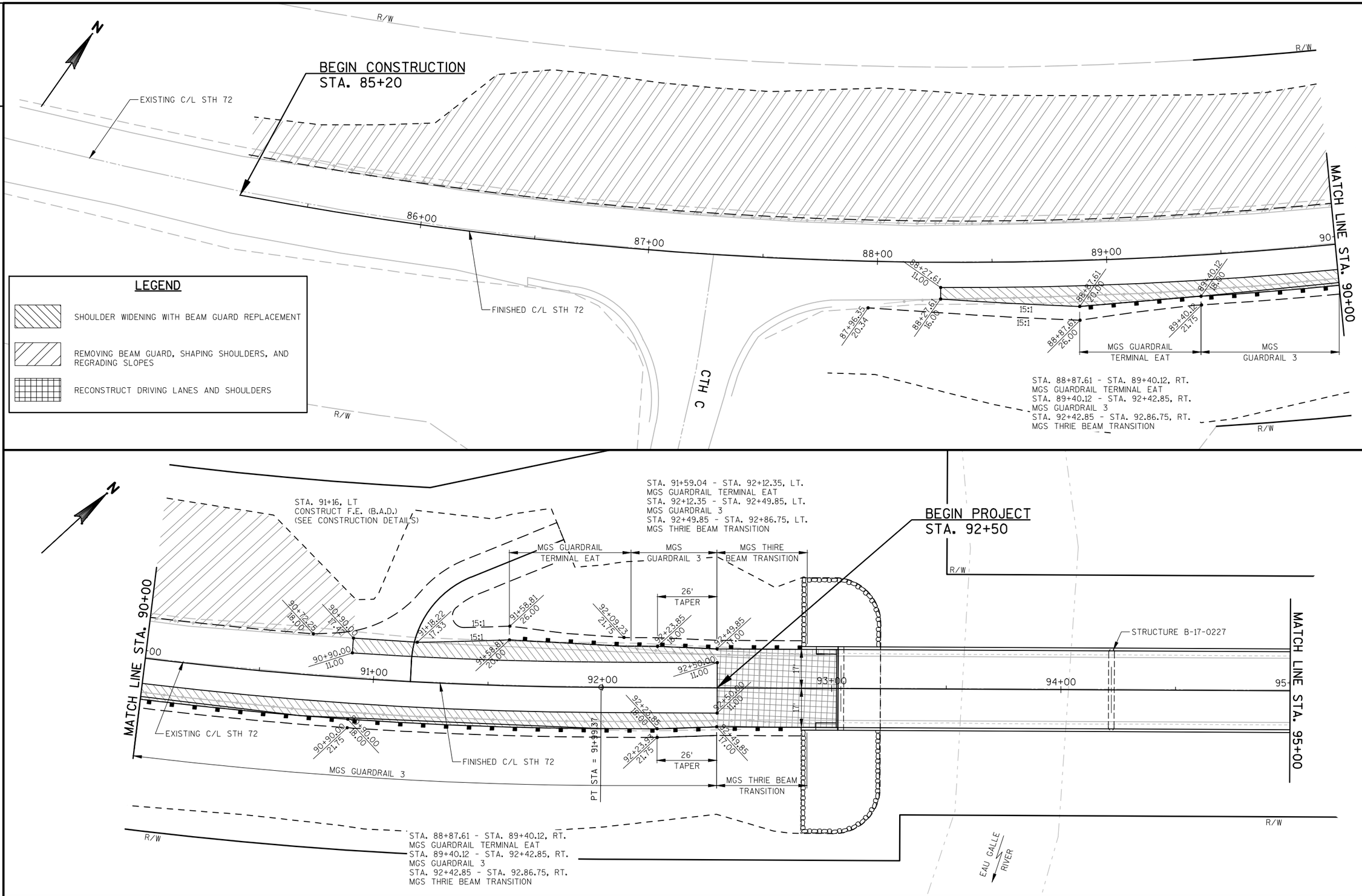
TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE



TYPICAL DRIVEWAY PROFILES

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\DETAILS\W11554_CONSTRUCTION DETAILS_DRIVEWAY DETAIL.DWG
LAYOUT : CONSTRUCTION DETAILS
PLOT DATE : 7/24/2018
PLOT TIME : 7:43:11 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

2



PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CONSTRUCTION DETAILS	SHEET 9	E

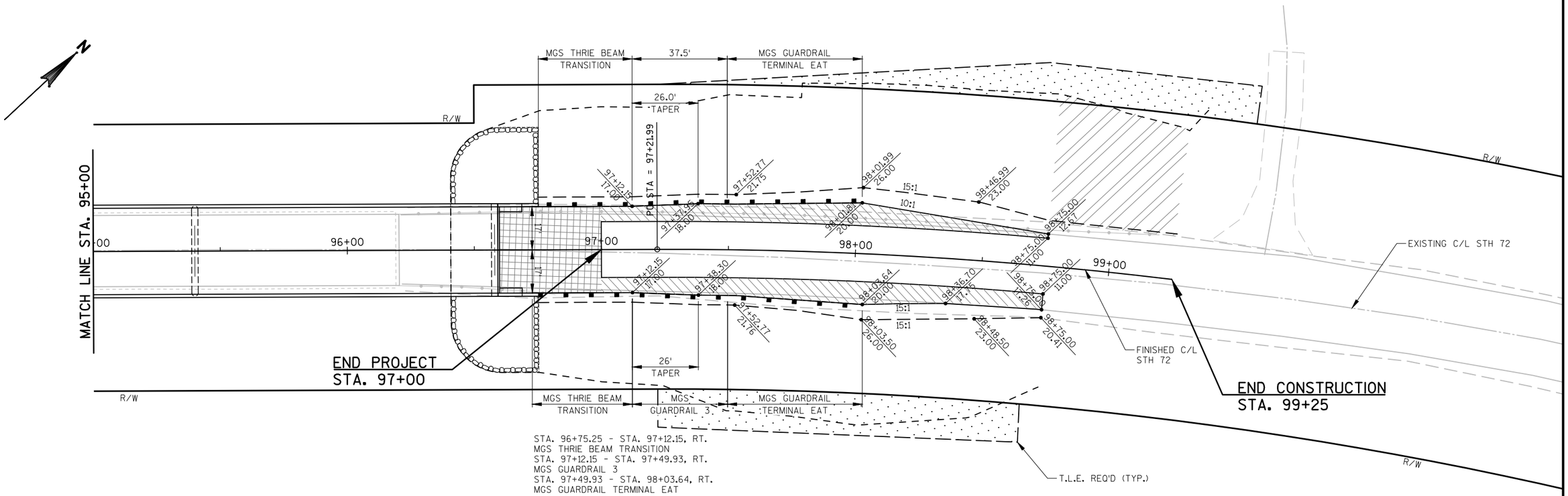
FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\DETAILS\W11554_PAVEMENT LAYOUT.DWG
PLOT DATE : 7/24/2018
PLOT TIME : 7:48:53 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

2

LEGEND

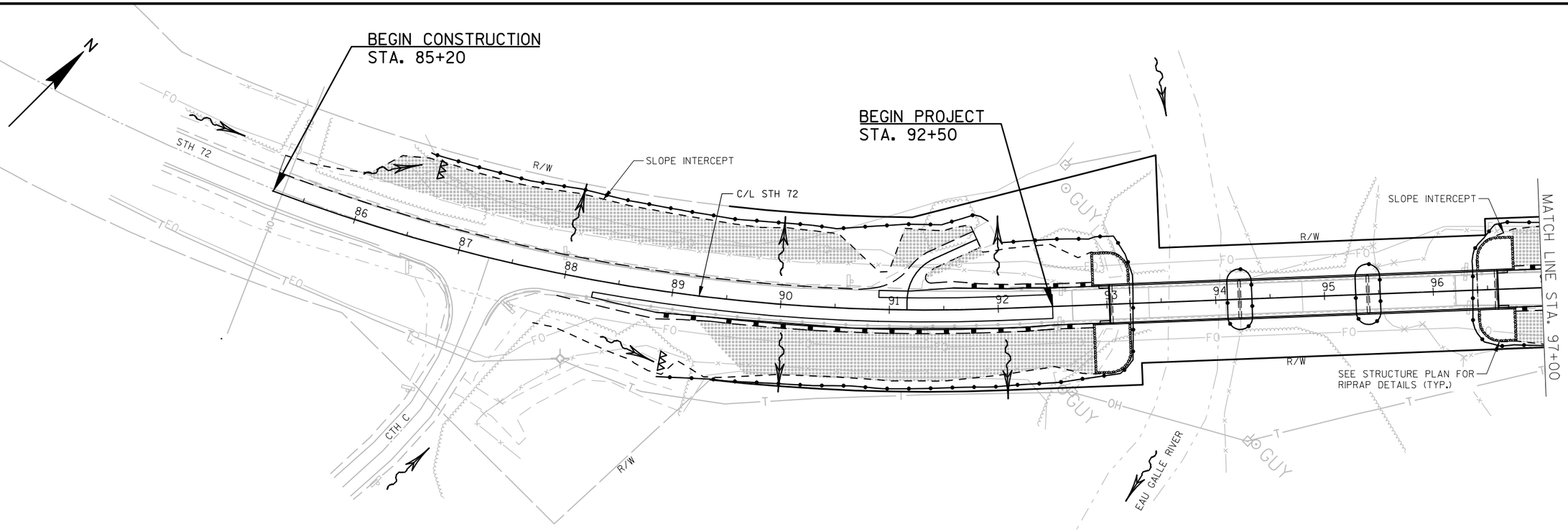
- SHOULDER WIDENING WITH BEAM GUARD REPLACEMENT
- REMOVING BEAM GUARD, SHAPING SHOULDERS, AND REGRADING SLOPES
- RECONSTRUCT DRIVING LANES AND SHOULDERS

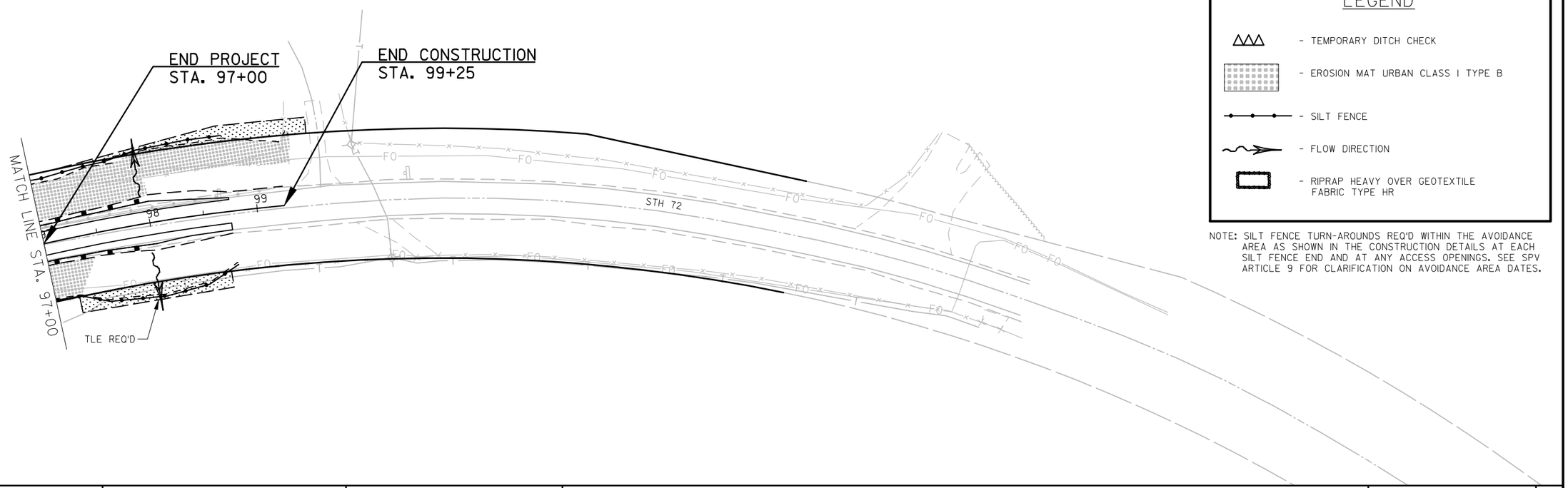
STA. 96+75.25 - STA. 97+12.15, LT.
MGS THRIE BEAM TRANSITION
STA. 97+12.15 - STA. 97+49.33, LT.
MGS GUARDRAIL 3
STA. 97+49.33 - STA. 98+01.81, LT.
MGS GUARDRAIL TERMINAL EAT



PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CONSTRUCTION DETAILS	SHEET 10	E

2



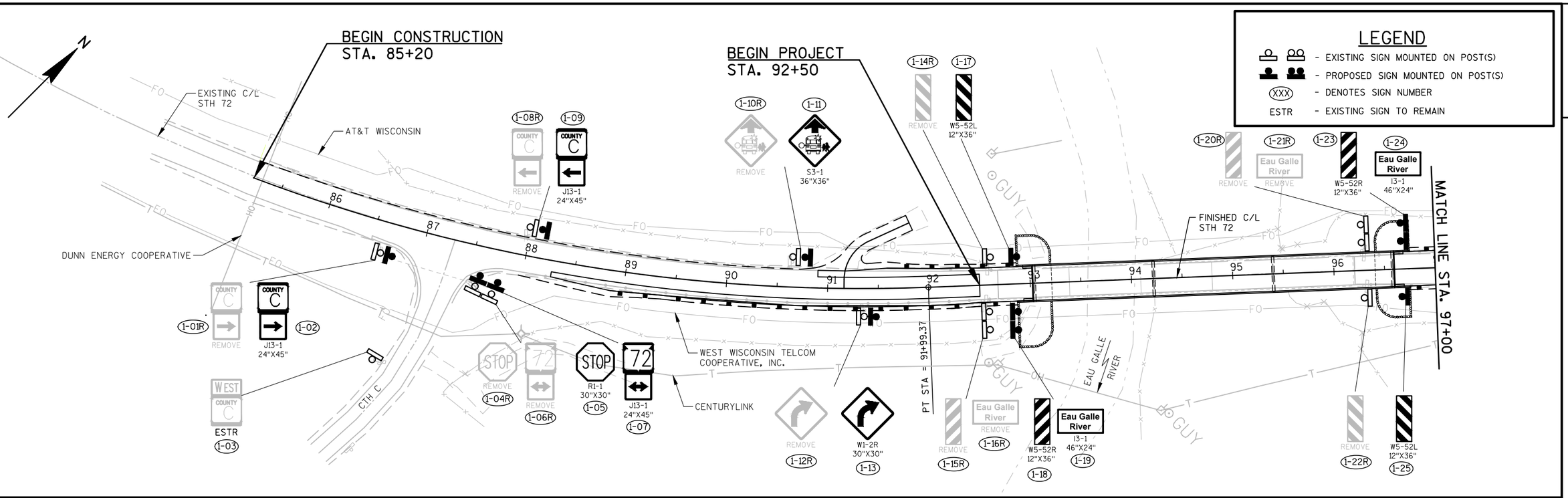


LEGEND

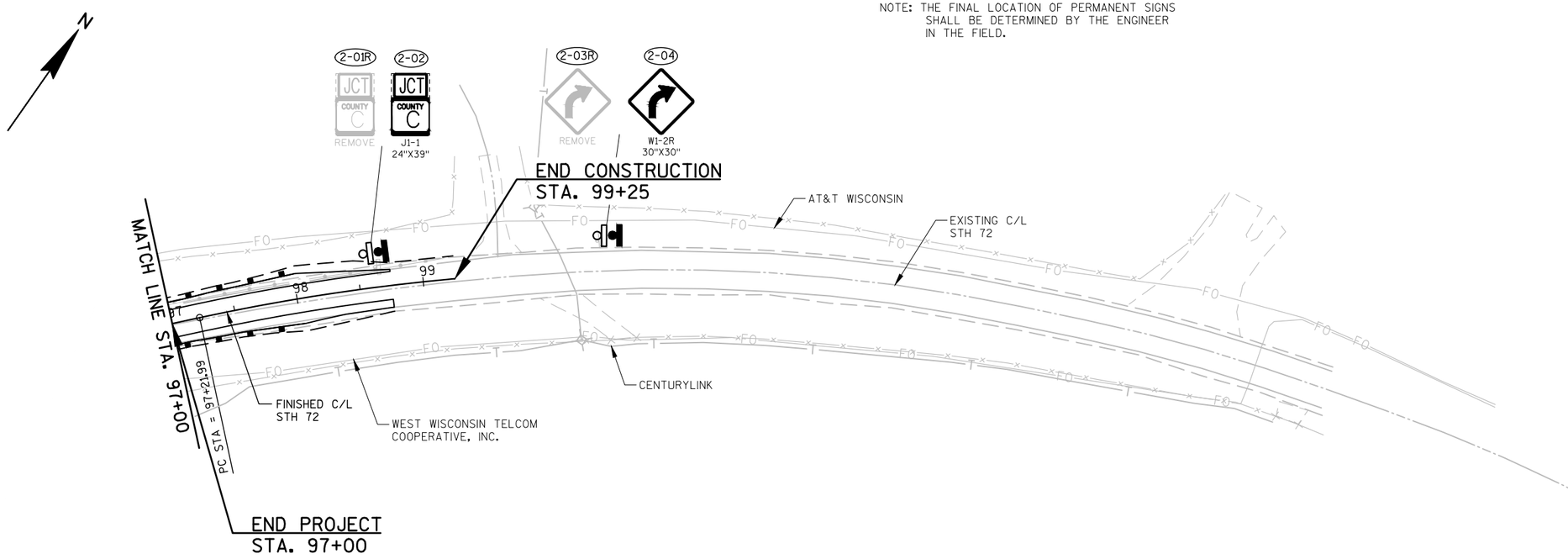
- TEMPORARY DITCH CHECK
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW DIRECTION
- RIPRAP HEAVY OVER GEOTEXTILE FABRIC TYPE HR

NOTE: SILT FENCE TURN-AROUNDS REQ'D WITHIN THE AVOIDANCE AREA AS SHOWN IN THE CONSTRUCTION DETAILS AT EACH SILT FENCE END AND AT ANY ACCESS OPENINGS. SEE SPV ARTICLE 9 FOR CLARIFICATION ON AVOIDANCE AREA DATES.

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	EROSION CONTROL PLAN	SHEET 11	E

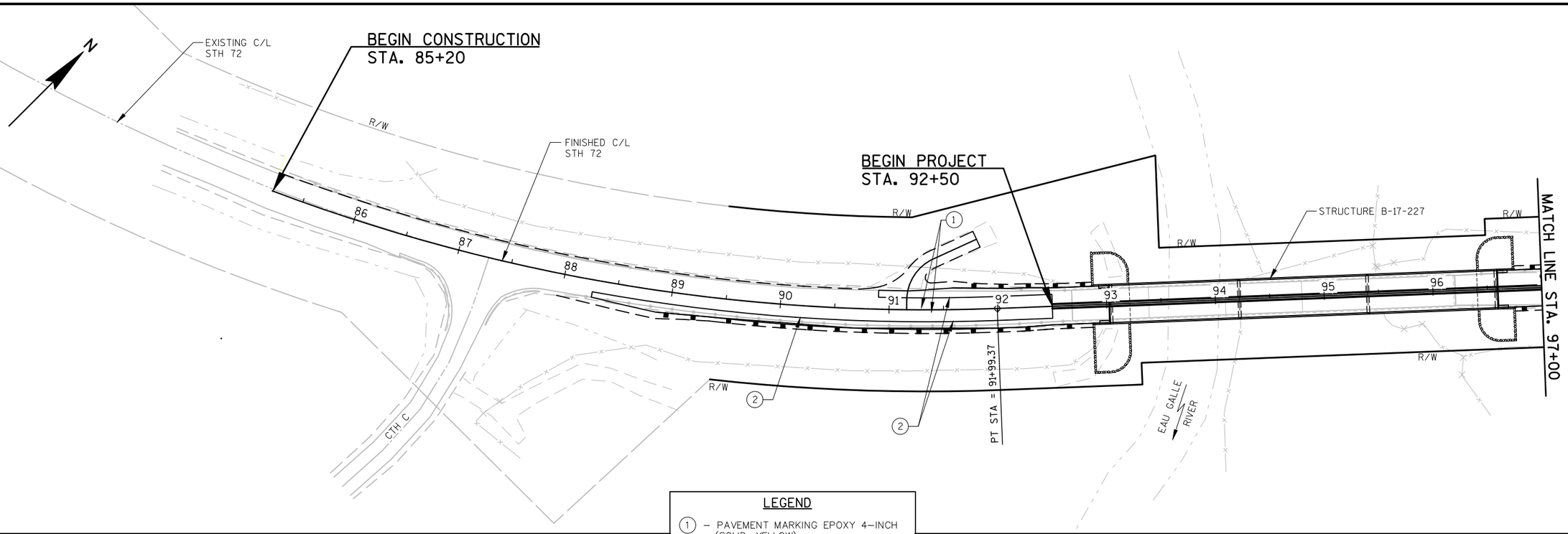


NOTE: THE FINAL LOCATION OF PERMANENT SIGNS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.



PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	PERMANENT SIGNING DETAILS	SHEET 12	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\DETAILS\W11554_PERMANENT SIGNING.DWG
PLOT DATE : 7/23/2018
PLOT TIME : 2:52:53 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

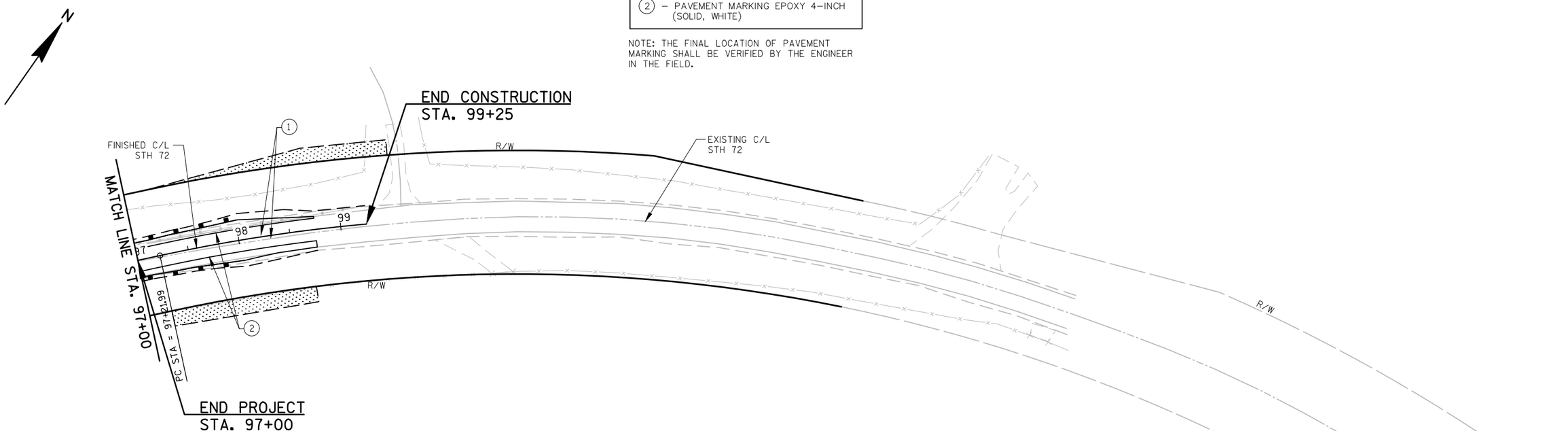


LEGEND

(1) – PAVEMENT MARKING EPOXY 4–INCH (SOLID, YELLOW)

(2) – PAVEMENT MARKING EPOXY 4–INCH (SOLID, WHITE)

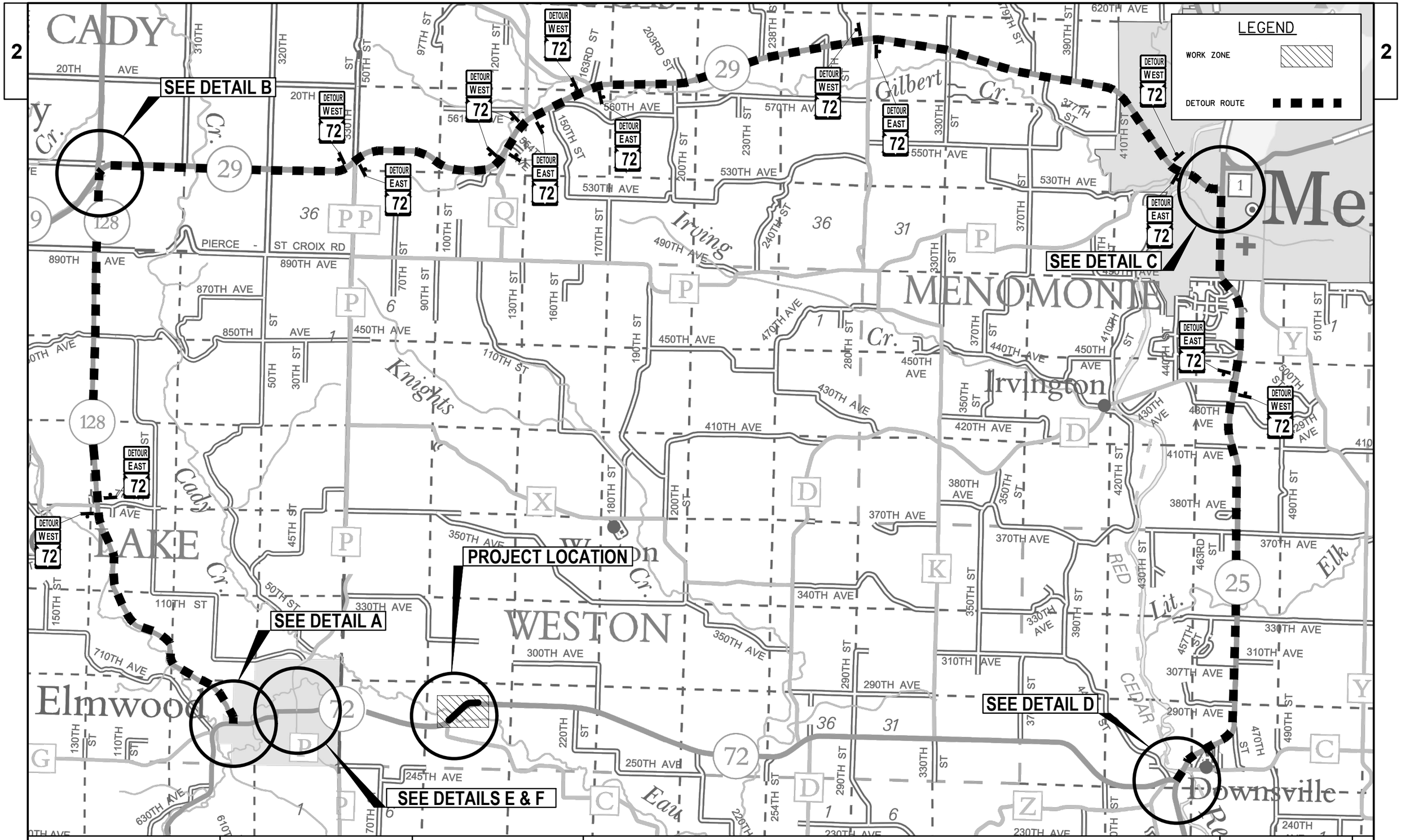
NOTE: THE FINAL LOCATION OF PAVEMENT MARKING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.



PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	PAVEMENT MARKING DETAILS	SHEET 13	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\DETAILS\W11554_PAVEMENT MARKING DETAILS.DWG
LAYOUT : PAVEMENT MARKING DETAILS
PLOT DATE : 7/23/2018
PLOT TIME : 2:53:42 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 42



PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	TRAFFIC CONTROL: DETOUR PLAN OVERVIEW	SHEET 14 E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\DETAILS\W11554_DETOUR.DWG
LAYOUT : 1
PLOT DATE : 7/23/2018
PLOT TIME : 2:54:36 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

LEGEND

WORK ZONE

COVER SIGN

DETOUR ROUTE

Ⓐ 72 — M1-6 24"X24"

Ⓑ M06-1 21"X21"

Ⓒ M06-1 21"X21"

Ⓓ M06-1 21"X21"

Ⓔ M05-1L 21"X21"

Ⓕ M05-1R 21"X21"

Ⓖ END DETOUR — M04-8A 24"X18"

Ⓗ DETOUR — M04-8 24"X12"

Ⓘ DETOUR AHEAD — W20-2-A

Ⓙ BRIDGE OUT XX MILES AHEAD — R11-3-C 60"X24"

Ⓚ DETOUR — M04-9R 30"X24"

Ⓛ DETOUR — M04-9L 30"X24"

Ⓜ EAST — M3-2 24"X12"

Ⓝ WEST — M3-4 24"X12"

SIGN ON PERMANENT SUPPORT

EXISTING SIGN ON SINGLE POST

EXISTING SIGN ON DOUBLE POST

TYPE III BARRICADE WITH ATTACHED SIGN AND WITH TRAFFIC CONTROL LIGHTS TYPE A

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) — PCMS

* SIGN READS "BRIDGE OUT 3 MILES AHEAD"

** SIGN READS "BRIDGE OUT 9 MILES AHEAD"

*** SIGN READS "BRIDGE OUT 2 MILES AHEAD"

GENERAL NOTES:

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

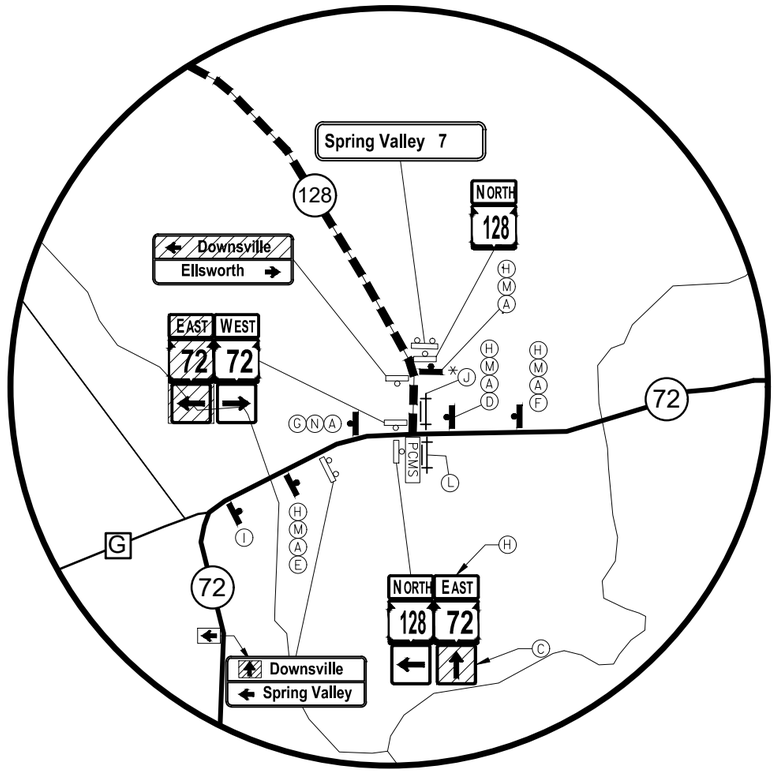
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

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

ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

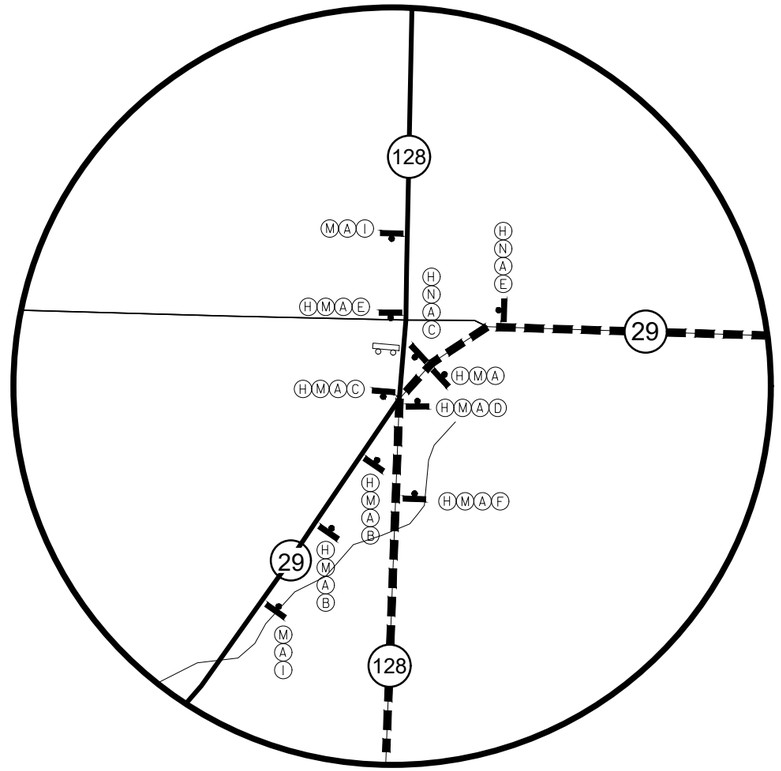
THE EXACT LOCATION OF CHANGEABLE PORTABLE MESSAGE BOARD SHALL BE DETERMINED IN FIELD AND APPROVED BY THE ENGINEER.

VILLAGE OF ELMWOOD



DETAIL A

TOWN OF CADY



DETAIL B

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	TRAFFIC CONTROL: DETOUR DETAILS	SHEET 15	E

LEGEND

WORK ZONE

COVER SIGN

DETOUR ROUTE

Ⓐ 72 — M1-6 24"X24"

Ⓑ M06-1 21"X21"

Ⓒ M06-1 21"X21"

Ⓓ M06-1 21"X21"

Ⓔ M05-1L 21"X21"

Ⓕ M05-1R 21"X21"

Ⓖ END DETOUR — M04-8A 24"X18"

Ⓗ DETOUR — M04-8 24"X12"

Ⓘ DETOUR AHEAD — W20-2-A

Ⓙ BRIDGE OUT XX MILES AHEAD — R11-3-C 60"X24"

Ⓚ DETOUR — M04-9R 30"X24"

Ⓛ DETOUR — M04-9L 30"X24"

Ⓜ EAST — M3-2 24"X12"

Ⓝ WEST — M3-4 24"X12"

SIGN ON PERMANENT SUPPORT

EXISTING SIGN ON SINGLE POST

EXISTING SIGN ON DOUBLE POST

TYPE III BARRICADE WITH ATTACHED SIGN AND WITH TRAFFIC CONTROL LIGHTS TYPE A

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) — PCMS

* SIGN READS "BRIDGE OUT 3 MILES AHEAD"

** SIGN READS "BRIDGE OUT 9 MILES AHEAD"

*** SIGN READS "BRIDGE OUT 2 MILES AHEAD"

GENERAL NOTES:

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

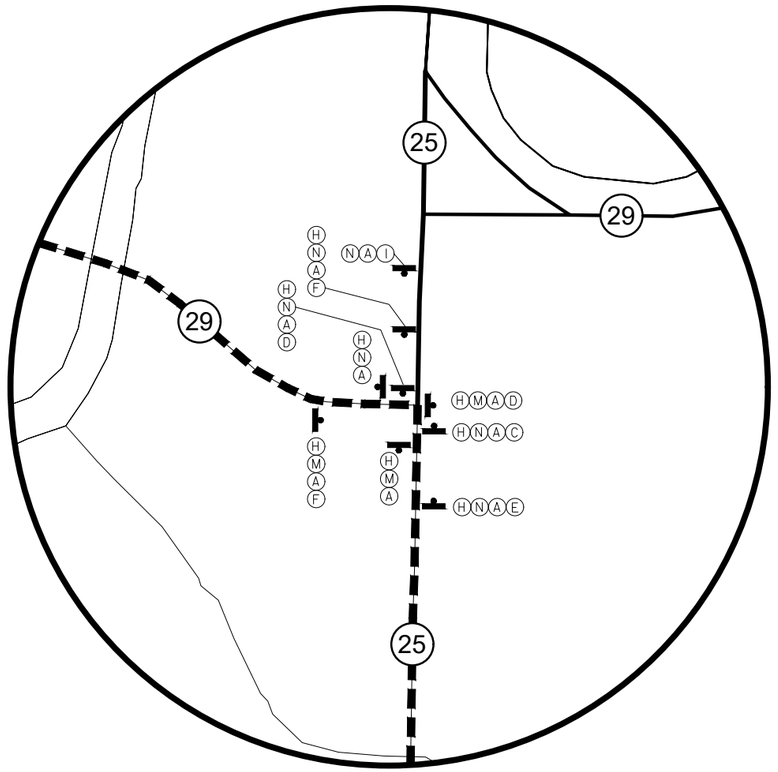
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

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

ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

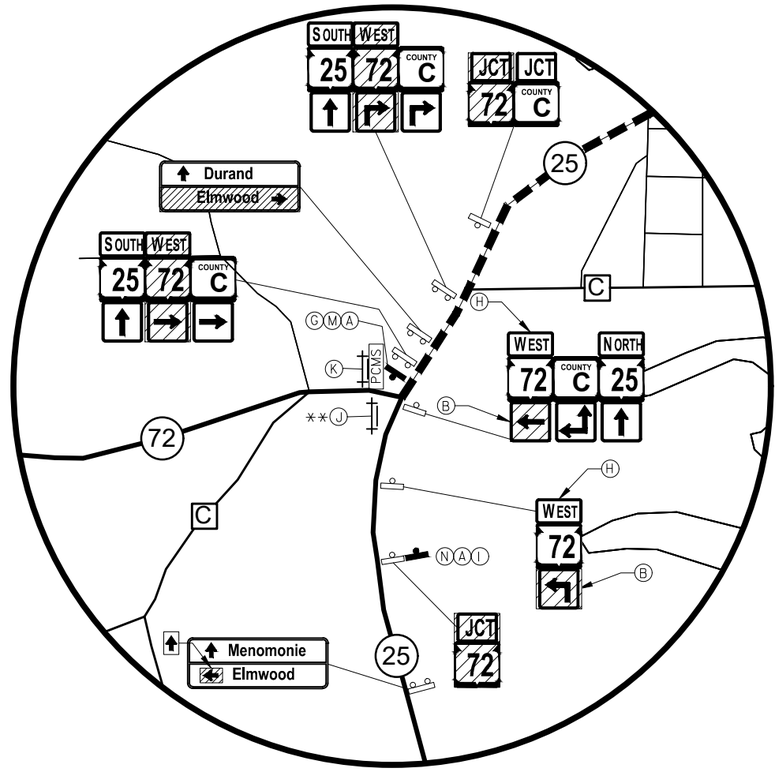
THE EXACT LOCATION OF CHANGEABLE PORTABLE MESSAGE BOARD SHALL BE DETERMINED IN FIELD AND APPROVED BY THE ENGINEER.

CITY OF MENOMONIE



DETAIL C

DOWNSVILLE



DETAIL D

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	TRAFFIC CONTROL: DETOUR DETAILS	SHEET 16	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\DETAILS\W11554_DETOUR.DWG
LAYOUT : 3
PLOT DATE : 9/16/2019
PLOT TIME : 3:19:56 PM
PLOT BY : THEODORE HERBERS
PLOT SCALE : 1" = 1'
WISDOT/CADDS SHEET 42

LEGEND

WORK ZONE

COVER SIGN

DETOUR ROUTE

Ⓐ 72 — M1-6 24"X24"

Ⓑ M06-1 21"X21"

Ⓒ M06-1 21"X21"

Ⓓ M06-1 21"X21"

Ⓔ M05-1L 21"X21"

Ⓕ M05-1R 21"X21"

Ⓖ END DETOUR — M04-8A 24"X18"

Ⓗ DETOUR — M04-8 24"X12"

Ⓘ DETOUR AHEAD — W20-2-A

Ⓙ BRIDGE OUT XX MILES AHEAD — R11-3-C 60"X24"

Ⓚ DETOUR — M04-9R 30"X24"

Ⓛ DETOUR — M04-9L 30"X24"

Ⓜ EAST — M3-2 24"X12"

Ⓝ WEST — M3-4 24"X12"

SIGN ON PERMANENT SUPPORT

EXISTING SIGN ON SINGLE POST

EXISTING SIGN ON DOUBLE POST

TYPE III BARRICADE WITH ATTACHED SIGN AND WITH TRAFFIC CONTROL LIGHTS TYPE A

PORTABLE CHANGEALBE MESSAGE SIGN (PCMS) — PCMS

*	SIGN READS "BRIDGE OUT 3 MILES AHEAD"
**	SIGN READS "BRIDGE OUT 9 MILES AHEAD"
***	SIGN READS "BRIDGE OUT 2 MILES AHEAD"

GENERAL NOTES:

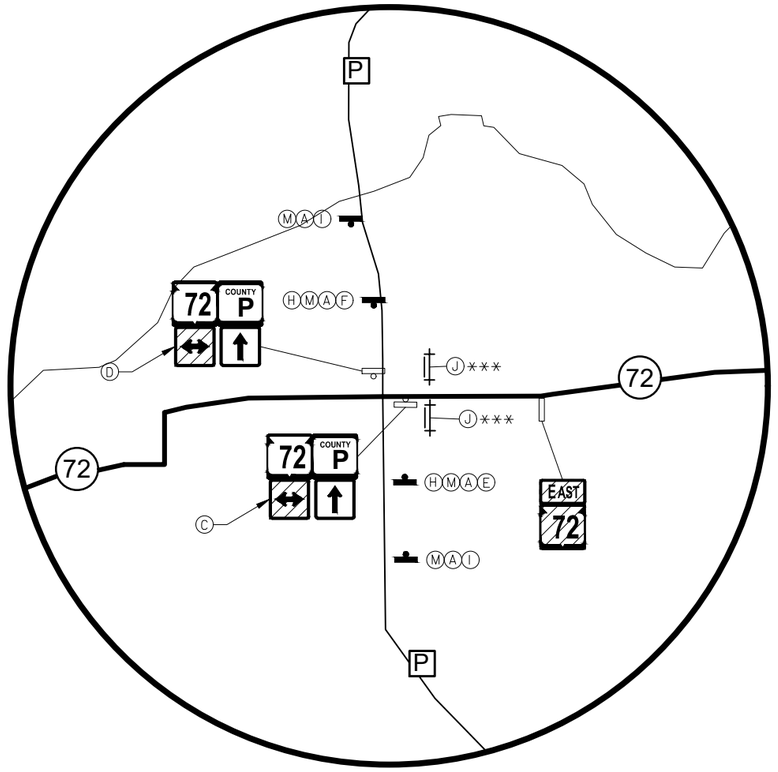
THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

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

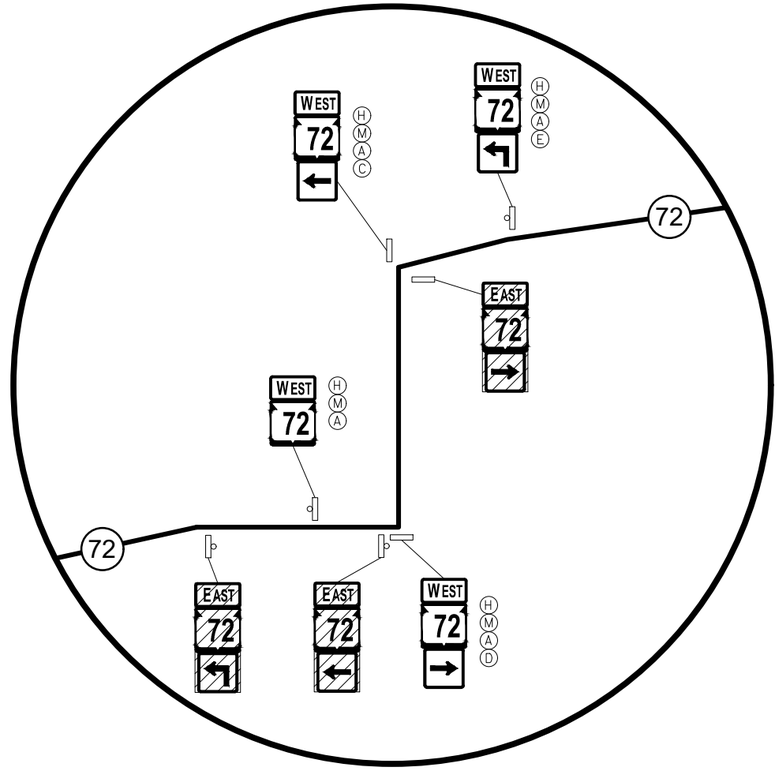
ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

THE EXACT LOCATION OF CHANGEABLE PORTABLE MESSAGE BOARD SHALL BE DETERMINED IN FIELD AND APPROVED BY THE ENGINEER.



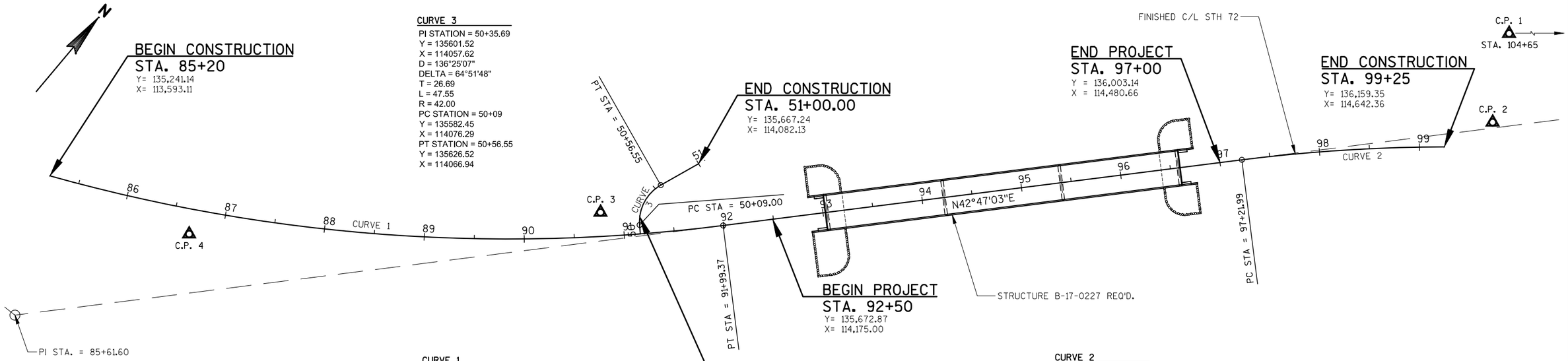
DETAIL E

VILLAGE OF ELMWOOD



DETAIL F

2



CURVE 1

PI STATION = 85+61.60
Y = 135112.03
X = 113655.94
D = 3°22'00"
DELTA = 45°29'41"
T = 713.55
L = 1351.33
R = 1701.85
PC STATION = 78+48.04
Y = 135090.60
X = 112942.70
PT STATION = 91+99.37
Y = 135635.72
X = 114140.61

CURVE 2

PI STATION = 104+48.42
Y = 136552.41
X = 114989.01
D = 3°30'00"
DELTA = 47°51'30"
T = 726.42
L = 1367.38
R = 1637.02
PC STATION = 97+21.99
Y = 136019.28
X = 114495.60
PT STATION = 110+89.37
Y = 136544.27
X = 115715.39

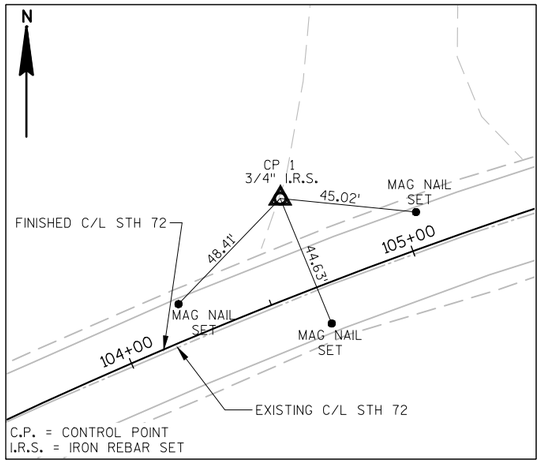
▲ CONTROL POINTS/ ⊕ BENCH MARKS

NO.	STATION	DESCRIPTION	Y	X	ELEV.
1	104+65	3/4" REBAR SET 31.7' LT.	136,463.16	115,093.72	821.69
2	99+73	3/4" REBAR SET 25.2' LT.	136,209.21	114,663.53	824.44
3	90+78	3/4" REBAR SET 24.1' LT.	135,566.96	114,038.30	827.15
4	86+68	3/4" REBAR SET 25.0' RT.	135,286.04	113,737.22	832.90

C/L STH 72 STATION LAYOUT

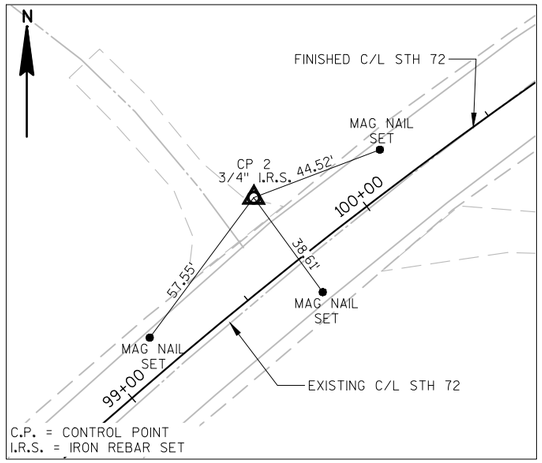
STATION	Y	X	COMMENTS
85+20	135,241.14	113,593.11	BEGIN CONSTRUCTION
85+50	135,253.75	113,620.33	–
86+00	135,275.82	113,665.19	–
86+50	135,299.20	113,709.39	–
87+00	135,323.86	113,752.88	–
87+50	135,349.80	113,795.63	–
88+00	135,376.98	113,837.59	–
88+50	135,405.38	113,878.74	–
89+00	135,434.97	113,919.04	–
89+50	135,465.74	113,958.45	–
90+00	135,497.65	113,996.94	–
90+50	135,530.68	114,034.47	–
91+00	135,564.80	114,071.02	–
91+50	135,599.97	114,106.55	–
92+00	135,636.18	114,141.04	–
92+50	135,672.87	114,175.00	BEGIN PROJECT
93+00	135,709.57	114,208.96	–
93+02.75	135,711.59	114,210.83	END OF DECK
93+50	135,746.27	114,242.92	–
94+00	135,782.96	114,276.89	–
94+50	135,819.66	114,310.85	–
95+00	135,856.35	114,344.81	–
95+50	135,893.05	114,378.77	–
96+00	135,929.74	114,412.73	–
96+50	135,966.44	114,446.69	–
96+59.25	135,973.23	114,452.98	END OF DECK
97+00	136,003.14	114,480.66	END OF PROJECT
97+50	136,039.67	114,514.79	–
98+00	136,075.24	114,549.92	–
98+50	136,109.73	114,586.13	–
99+00	136,143.10	114,623.36	–
99+25	136,159.35	114,642.36	END CONSTRUCTION

2



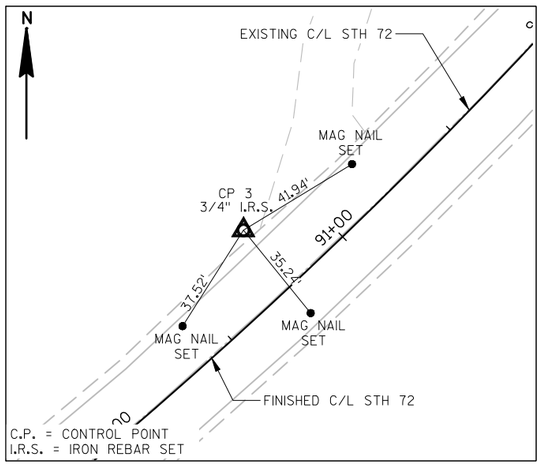
TIES TO C.P.#1

STA. 104+65; 31.7' LT.
Y = 136,463.16
X = 115,093.72



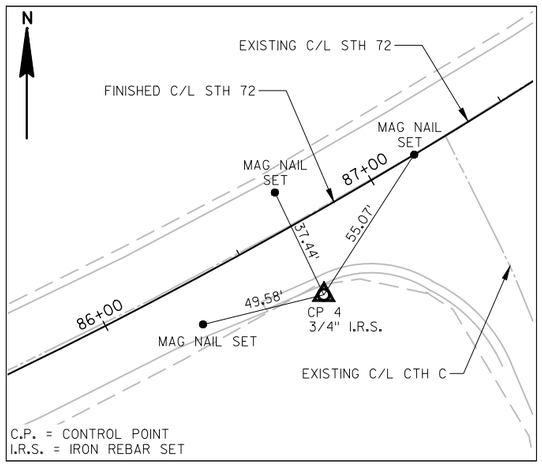
TIES TO C.P.#2

STA. 99+73; 25.2' LT.
Y = 136,209.21
X = 114,663.53



TIES TO C.P.#3

STA. 90+78; 24.1' LT.
Y = 135,566.96
X = 114,038.30



TIES TO C.P.#4

STA. 86+68; 25.0' RT.
Y = 135,286.04
X = 113,737.22

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	ALIGNMENT DETAILS	SHEET 19	E

7105-00-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	12.000	12.000
0004	201.0205	Grubbing	STA	12.000	12.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 95+00	LS	1.000	1.000
0008	204.0110	Removing Asphaltic Surface	SY	440.000	440.000
0010	204.0165	Removing Guardrail	LF	1,430.000	1,430.000
0012	205.0100	Excavation Common	CY	350.000	350.000
0014	206.1000	Excavation for Structures Bridges (structure) 01. B-17-227	LS	1.000	1.000
0016	206.5000	Cofferdams (structure) 01. B-17-227	LS	1.000	1.000
0018	208.0100	Borrow	CY	8,950.000	8,950.000
0020	210.1500	Backfill Structure Type A	TON	534.000	534.000
0022	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	7.000	7.000
0024	213.0100	Finishing Roadway (project) 01. 7105-00-72	EACH	1.000	1.000
0026	305.0110	Base Aggregate Dense 3/4-Inch	TON	370.000	370.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	520.000	520.000
0030	305.0500	Shaping Shoulders	STA	10.000	10.000
0032	455.0605	Tack Coat	GAL	60.000	60.000
0034	460.2000	Incentive Density HMA Pavement	DOL	220.000	220.000
0036	460.6244	HMA Pavement 4 MT 58-34 S	TON	330.000	330.000
0038	502.0100	Concrete Masonry Bridges	CY	783.000	783.000
0040	502.3200	Protective Surface Treatment	SY	1,347.000	1,347.000
0042	502.3210	Pigmented Surface Sealer	SY	383.000	383.000
0044	503.0155	Prestressed Girder Type I 54W-Inch	LF	1,773.000	1,773.000
0046	505.0400	Bar Steel Reinforcement HS Structures	LB	11,270.000	11,270.000
0048	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	127,840.000	127,840.000
0050	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	30.000	30.000
0052	506.4000	Steel Diaphragms (structure) 01. B-17-227	EACH	24.000	24.000
0054	516.0500	Rubberized Membrane Waterproofing	SY	22.000	22.000
0056	550.1140	Piling Steel HP 14-Inch X 73 Lb	LF	2,200.000	2,200.000
0058	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	2,600.000	2,600.000
0060	606.0300	Riprap Heavy	CY	495.000	495.000
0062	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	138.000	138.000
0064	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0066	614.2300	MGS Guardrail 3	LF	430.000	430.000
0068	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0070	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0072	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7105-00-72	EACH	1.000	1.000
0074	619.1000	Mobilization	EACH	1.000	1.000

7105-00-72

Line	Item	Item Description	Unit	Total	Qty
0076	624.0100	Water	MGAL	7.000	7.000
0078	625.0500	Salvaged Topsoil	SY	9,000.000	9,000.000
0080	627.0200	Mulching	SY	11,000.000	11,000.000
0082	628.1504	Silt Fence	LF	2,500.000	2,500.000
0084	628.1520	Silt Fence Maintenance	LF	12,500.000	12,500.000
0086	628.1905	Mobilizations Erosion Control	EACH	8.000	8.000
0088	628.1910	Mobilizations Emergency Erosion Control	EACH	7.000	7.000
0090	628.2008	Erosion Mat Urban Class I Type B	SY	7,200.000	7,200.000
0092	628.7504	Temporary Ditch Checks	LF	32.000	32.000
0094	629.0210	Fertilizer Type B	CWT	7.000	7.000
0096	630.0120	Seeding Mixture No. 20	LB	140.000	140.000
0098	630.0160	Seeding Mixture No. 60	LB	5.000	5.000
0100	630.0200	Seeding Temporary	LB	70.000	70.000
0102	630.0300	Seeding Borrow Pit	LB	90.000	90.000
0104	633.5100	Markers Row	EACH	15.000	15.000
0106	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	14.000	14.000
0108	637.2210	Signs Type II Reflective H	SF	49.520	49.520
0110	637.2230	Signs Type II Reflective F	SF	33.500	33.500
0112	638.2602	Removing Signs Type II	EACH	14.000	14.000
0114	638.3000	Removing Small Sign Supports	EACH	14.000	14.000
0116	642.5001	Field Office Type B	EACH	1.000	1.000
0118	643.0420	Traffic Control Barricades Type III	DAY	3,200.000	3,200.000
0120	643.0705	Traffic Control Warning Lights Type A	DAY	3,520.000	3,520.000
0122	643.0900	Traffic Control Signs	DAY	36,160.000	36,160.000
0124	643.0920	Traffic Control Covering Signs Type II	EACH	10.000	10.000
0126	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0128	643.5000	Traffic Control	EACH	1.000	1.000
0130	645.0111	Geotextile Type DF Schedule A	SY	70.000	70.000
0132	645.0120	Geotextile Type HR	SY	865.000	865.000
0134	646.1020	Marking Line Epoxy 4-Inch	LF	2,735.000	2,735.000
0136	650.4500	Construction Staking Subgrade	LF	1,130.000	1,130.000
0138	650.5000	Construction Staking Base	LF	772.000	772.000
0140	650.6500	Construction Staking Structure Layout (structure) 01. B-17-227	LS	1.000	1.000
0142	650.9910	Construction Staking Supplemental Control (project) 01. 7105-00-72	LS	1.000	1.000
0144	650.9920	Construction Staking Slope Stakes	LF	1,130.000	1,130.000
0146	690.0150	Sawing Asphalt	LF	1,173.000	1,173.000
0148	715.0502	Incentive Strength Concrete Structures	DOL	4,698.000	4,698.000
0150	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000

7105-00-72

Line	Item	Item Description	Unit	Total	Qty
0152	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0154	SPV.0060	Special 01. Pile Dynamic Analyzer (PDA) Testing	EACH	4.000	4.000
0156	SPV.0060	Special 02. Pile Dynamic Analyzer (PDA) Restrikes	EACH	4.000	4.000
0158	SPV.0060	Special 03. CAse Pile Wave Analysis Program (CAPWAP) Evaluation	EACH	2.000	2.000

CLEARING & GRUBBING

STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
87+80 - 89+30	MAINLINE, RT.	3	3
91+00 - 92+00	F.E., LT.	1	1
92+60 - 95+20	MAINLINE, LT. & RT.	4	4
96+60 - 99+20	MAINLINE, LT.	4	4
	TOTALS =	12	12

REMOVING ASPHALTIC SURFACE

STATION	LOCATION	204.0110 (SY)
88+28 - 92+50	MAINLINE, SHLDRS RT.	190
90+90 - 92+50	MAINLINE, SHLDRS LT.	95
97+00 - 98+75	MAINLINE, SHLDRS LT.	35
97+00 - 98+75	MAINLINE, SHLDRS RT.	120
	TOTAL =	440

REMOVING GUARDRAIL

STATION	LOCATION	204.0165 (LF)
85+33 - 90+73	MAINLINE, LT.	540
88+03 - 92+69	MAINLINE, RT.	466
92+05 - 92+69	MAINLINE, LT.	64
96+20 - 99+18	MAINLINE, LT.	298
96+20 - 96+82	MAINLINE, RT.	62
	TOTAL =	1,430

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION	LOCATION	211.0400 (STA)
88+28 - 92+50	MAINLINE	5
97+00 - 98+75	MAINLINE	2
	TOTAL =	7

ALL ITEMS CATEGORY 010 UNLESS OTHERWISE NOTED

SHAPING SHOULDERS

STATION	LOCATION	305.0500 (STA.)
85+20 - 88+28	MAINLINE, LT.	3
88+28 - 92+50	MAINLINE	4
97+00 - 98+75	MAINLINE	2
98+75 - 99+25	MAINLINE, LT.	1
	TOTALS =	10

EARTHWORK SUMMARY

STATION	LOCATION	205.0100 EXCAVATION COMMON CUT (CY) (1)	UNEXPANDED FILL (CY)	FILL (25%) (2)	MASS ORDINATE +/- (CY) (3)	208.0100 BORROW (CY)
85+20 - 88+00	MAINLINE, LT.	0	1265	1582	-1582	1582
88+00 - 90+90	MAINLINE	4	3395	4245	-4241	4241
90+90 - 93+50	MAINLINE	178	525	656	-478	478
96+60 - 98+75	MAINLINE	148	1907	2384	-2236	2236
98+75 - 99+25	MAINLINE, LT.	0	330	413	-413	413
50+17 - 51+00	F.E.	20	16	20	0	0
	TOTALS =	350	7,438	9,300		8,950

NOTES:
1.) AVAILABLE MATERIAL = CUT (INCLUDES SALVAGED PAVEMENT MATERIAL)
2.) FILL 25%: (UNEXPANDED FILL)*1.25
3.) THE MASS ORDINATE+ OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

FINISHING ITEMS

STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0160 SEEDING MIXTURE NO. 60 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0300 SEEDING BORROW PIT (LB)
85+20 - 88+00	MAINLINE, LT.	1,190	770	770	0.5	21	--	10	--
88+00 - 90+90	MAINLINE	2,875	1,275	2,210	0.8	34	--	17	--
90+90 - 98+75	MAINLINE	3,090	1,720	2,505	1.1	46	*3	23	--
98+75 - 99+25	MAINLINE, LT.	240	145	150	0.1	4	--	2	--
50+17 - 51+00	FE	100	--	245	0.2	7	--	3	--
	BORROW PIT	--	4,915	--	3.1	--	--	--	73
	UNDISTRIBUTED	1,505	2,175	1,320	1.2	28	2	15	17
	TOTALS =	9,000	11,000	7,200	7.0	140	5	70	90

*STA. 93+32 - 94+22

HMA PAVEMENT

STATION	LOCATION	455.0605 TACK COAT (GAL)	460.6244 HMA PAVEMENT 4MT 58-34S (TON)
88+28 - 92+50	MAINLINE, RT.	17	95
90+90 - 92+50	MAINLINE, LT.	7	37
92+50 - 93+03	MAINLINE	10	57
96+60 - 97+00	MAINLINE	8	44
97+00 - 98+75	MAINLINE, LT.	7	40
97+00 - 98+75	MAINLINE, RT.	7	40
	UNDISTRIBUTED	4	17
	TOTALS =	60	330

MGS GUARDRAIL

STATION	LOCATION	614.2300 MGS GUARDRAIL 3 (LF)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
91+59 - 92+89	MAINLINE, LT.	40	40	1
88+88 - 92+89	MAINLINE, RT.	310	40	1
96+73 - 98+02	MAINLINE, LT.	40	40	1
96+73 - 98+04	MAINLINE, RT.	40	40	1
	TOTALS =	430	160	4

BASE AGGREGATE DENSE

STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
85+20 - 90+90	MAINLINE, LT.	107	--
88+28 - 92+50	MAINLINE, RT.	68	68
90+90 - 92+50	MAINLINE, LT.	28	52
92+50 - 93+03	MAINLINE	11	150
96+60 - 97+00	MAINLINE	7	113
97+00 - 98+75	MAINLINE	60	113
98+75 - 99+25	MAINLINE, LT.	10	--
50+17 - 51+00	F.E.	60	--
	UNDISTRIBUTED	19	24
	TOTALS =	370	520

WATER

PROJECT	624.0100 (MGAL)
7105-00-72	7
TOTAL =	7

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
86+60	MAINLINE, LT.	8
15+00	MAINLINE, RT.	8
	UNDISTRIBUTED	16
	TOTAL =	32

PAVEMENT MARKING EPOXY 4-INCH

STATION	LOCATION	646.1020 (LF)	DESCRIPTION
88+28 - 98+75	MAINLINE	1050	WHITE EDGELINE
92+50 - 97+00	MAINLINE	900	DOUBLE YELLOW
90+90 - 98+75	MAINLINE	785	WHITE EDGELINE
	TOTAL =	2,735	

MARKERS ROW

STATION	LOCATION	633.5100 (EACH)
89+43.27	MAINLINE, 85.08' LT.	1
91+20.38	MAINLINE, 85.02' LT.	1
93+50.00	MAINLINE, 135.00' LT.	1
93+50.00	MAINLINE, 50.00' LT.	1
96+50.00	MAINLINE, 50.00' LT.	1
96+50.00	MAINLINE, 65.00' LT.	1
97+21.99	MAINLINE, 65.00' LT.	1
102+00.00	MAINLINE, 65.00' LT.	1
104+00.00	MAINLINE, 50.00' LT.	1
104+00.00	MAINLINE, 55.00' RT.	1
97+21.99	MAINLINE, 55.00' RT.	1
93+30.00	MAINLINE, 55.00' RT.	1
93+30.00	MAINLINE, 75.00' RT.	1
91+99.37	MAINLINE, 75.00' RT.	1
89+43.27	MAINLINE, 75.00' RT.	1
	TOTALS =	15

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
7105-00-72	8	7
TOTALS =	8	7

SILT FENCE

STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
86+50 - 91+94	MAINLINE, LT.	530	2,650
92+06 - 93+08	MAINLINE, LT.	100	500
88+96 - 93+10	MAINLINE, RT.	430	2,150
93+08 - 93+25	MAINLINE	90	450
94+10 - 94+33	MAINLINE	140	700
95+28 - 95+51	MAINLINE	140	700
96+36 - 96+59	MAINLINE	70	350
96+59 - 98+74	MAINLINE, LT.	225	1,125
96+45 - 98+77	MAINLINE, RT.	230	1,150
	UNDISTRIBUTED	545	2,725
	TOTALS =	2,500	12,500

CONSTRUCTION STAKING

STATION	LOCATION	CONSTRUCTION STAKING 650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	**650.6500 STRUCTURE LAYOUT (B-17-0227) (LS)	650.9910 SUPPLEMENTAL CONTROL (LS)	650.9920 SLOPE STAKES (LF)
85+20 - 88+00	MAINLINE, LT.	280	--	--	--	280
88+00 - 90+90	MAINLINE	290	262	--	--	290
90+90 - 98+75	MAINLINE	427	427	--	--	427
98+75 - 99+25	MAINLINE	50	--			50
50+17 - 51+00	FE	83	83	--	--	83
	PROJECT	--	--	1	1	--
	TOTALS =	1,130	772	1	1	1,130

** INDICATES BID ITEM CATEGORY 020

SAWING ASPHALT

STATION	LOCATION	690.0150 (L.F.)
88+28	MAINLINE, RT.	7
88+28 - 92+50	MAINLINE, RT.	425
90+90	MAINLINE, LT.	5
90+90 - 92+50	MAINLINE, LT.	160
92+50	MAINLINE	22
97+00	MAINLINE	22
97+00 - 98+75	MAINLINE, LT.	264
97+00 - 98+75	MAINLINE, RT.	258
98+75	MAINLINE, LT.	3
98+75	MAINLINE, RT.	7
	TOTAL =	1173

3

PERMANENT SIGNING

SIGN NUMBER	APPROX. STATION	LOCATION	POSITION	SIGN CODE	SIGN DESCRIPTION	ORDER LINES	SIGN SIZE	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	634.0616 POSTS WOOD 4X6-INCH 16-FT	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS	COMMENT
1-01R	86+61	Mainline	Right	J13-1	Directional Without Cardinal	[County C] [ARROW RIGHT]	24X45	--	--	--	1	1	
1-02	86+61	Mainline	Right	J13-1	Directional Without Cardinal	[County C] [ARROW - RIGHT]	24X45	7.50	--	1	--	--	
1-03	86+87	CTH C	Right	J4-1		[WEST] [County C]		--	--	--	--	--	Existing to remain
1-04R	87+55	CTH C	Right	R1-1	Stop		30X30	--	--	--	1	1	
1-05	87+55	CTH C	Right	R1-1	Stop		30X30	5.18	--	1	--	--	
1-06R	87+58	CTH C	Right	J13-1	Directional Without Cardinal	[72] [DIRECTIONAL ARROWS LEFT-RIGHT]	24X45	--	--	--	1	1	
1-07	87+58	CTH C	Right	J13-1	Directional Without Cardinal	[72] [DIRECTIONAL ARROWS LEFT-RIGHT]	24X45	7.50	--	1	--	--	
1-08R	87+99	Mainline	Left	J13-1	Directional Without Cardinal	[County C] [ARROW LEFT]	24X45	--	--	--	1	1	
1-09	87+99	Mainline	Left	J13-1	Directional Without Cardinal	[County C] [ARROW LEFT]	24X45	7.50	--	1	--	--	
1-10R	90+64	Mainline	Left	S3-1	School Bus Stop Ahead		36X36	--	--	--	1	1	
1-11	90+64	Mainline	Left	S3-1	School Bus Stop Ahead		36x36	--	9.00	1	--	--	
1-12R	91+36	Mainline	Right	W1-2R	Right Curve		30X30	--	--	--	1	1	
1-13	91+36	Mainline	Right	W1-2R	Right Curve		30X30	--	6.25	1	--	--	
1-14R	92+61	Mainline	Left	W5-52L	Clearance Striper Down Right		12X36	--	--	--	1	1	
1-15R	92+59	Mainline	Right	W5-52R	Clearance Striper Down Left		12X36	--	--	--	1	1	
1-16R	92+55	Mainline	Right	I3-1	Lake or River Name	Eau Galle	46X24	--	--	--	1	1	
						River		--	--	--	--	--	
1-17	92+86	Mainline	Left	W5-52L	Clearance Striper Down Right		12X36	--	3.00	1	--	--	
1-18	92+86	Mainline	Right	W5-52R	Clearance Striper Down Left		12X36	--	3.00	1	--	--	
1-19	92+86	Mainline	Right	I3-1	Lake or River Name	Eau Galle	46X24	7.67	--	1	--	--	
						River		--	--	--	--	--	
1-20R	96+28	Mainline	Left	W5-52R	Clearance Striper Down Left		12X36	--	--	--	1	1	
1-21R	96+28	Mainline	Left	I3-1	Lake or River Name	Eau Galle	46X24	--	--	--	1	1	
						River		--	--	--	--	--	
1-22R	96+29	Mainline	Right	W5-52L	Clearance Striper Down Right		12X36	--	--	--	1	1	
1-23	96+76	Mainline	Left	W5-52R	Clearance Striper Down Left		12X36	--	3.00	1	--	--	
1-24	96+76	Mainline	Left	I3-1	Lake or River Name	Eau Galle	46X24	7.67	--	1	--	--	
						River		--	--	--	--	--	
1-25	96+76	Mainline	Right	W5-52L	Clearance Striper Down Right		12X36	--	3.00	1	--	--	
2-01R	98+64	Mainline	Left	J1-1	Junction Assembly	[JCT] [County C]	24X39	--	--	--	1	1	
2-02	98+64	Mainline	Left	J1-1	Junction Assembly	[JCT] [County C]	24X39	6.50	--	1	--	--	
2-03R	100+37	Mainline	Left	W1-2R	Right Curve		30X30	--	--	--	1	1	
2-04	100+37	Mainline	Left	W1-2R	Right Curve		30X30	--	6.25	1	--	--	
						TOTALS =		49.52	33.50	14	14	14	

TRAFFIC CONTROL

	LOCATION	*643.0420 BARRICADES TYPE III (DAYS)	*643.0705 WARNING LIGHTS TYPE A (DAYS)	*643.0900 SIGNS (DAYS)	*643.0920 COVERING SIGNS TYPE II (EACH)	NO. OF CYCLES (COVER/ UNCOVER)	*643.1050 SIGNS PCMS (DAYS)	*643.5000 TRAFFIC CONTROL (EACH)	COMMENT
									VILLAGE OF ELMWOOD (STH 72/STH 128 INTERSECTION)
DETAIL A	STH 72 (E.B.)	--	--	320	--	--	--	--	M1-6 [72]; W20-2-A
	STH 72 (E.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO5-1L
	STH 72 (E.B.)	--	--	160	--	--	--	--	A1-2 (LEFT), COVER PORTION OF D1-2 (COVER ARROW AHEAD WITH ARROW LEFT)
	STH 72 (W.B.)	--	--	480	--	--	--	--	M3-4; M1-6 [72]; MO4-8A
	STH 72 (E.B.)	--	--	320	--	--	--	--	MO4-8; MO6-1 (LEFT), COVER PORTION OF J3-2 (COVER ARROW AHEAD WITH ARROW LEFT)
	STH 128 (S.B.)	--	--	160	--	--	--	--	MO4-8A; COVER PORTION OF J3-2 (EAST, 72, ARROW LEFT)
	STH 128 (S.B.)	--	--	--	1	1	--	--	COVER PORTION OF D1-2 (ARROW LEFT, DOWNSVILLE)
	STH 128 (N.B.)	--	--	480	--	--	--	--	MO4-8; M3-2; M1-6 [72]
	STH 72 (E.B.)	160	320	160	--	--	14	--	MO4-9L, PLACE PCMS TWO WEEKS BEFORE CLOSURE
	STH 72 (E.B.)	160	320	160	--	--	--	--	R11-3-C [3 MILES]
	STH 72 (W.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO6-1 (RIGHT)
	STH 72 (W.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO5-1R
	SUBTOTALS =	320	640	4,160	1	1	14	0	

*MORE LISTED ELSEWHERE

3

TRAFFIC CONTROL (CONTINUED)

	LOCATION	*643.0420 BARRICADES TYPE III (DAYS)	*643.0705 WARNING LIGHTS TYPE A (DAYS)	*643.0900 SIGNS (DAYS)	*643.0920 COVERING SIGNS TYPE II (EACH)	NO. OF CYCLES (COVER/ UNCOVER)	*643.1050 SIGNS PCMS (DAYS)	*643.5000 TRAFFIC CONTROL (EACH)	COMMENT
									TOWN OF CADY (STH 128/STH 29 INTERSECTION)
DETAIL B	STH 29 (E.B.)	--	--	320	--	--	--	--	M1-6 [72]; W20-2-A
	STH 29 (E.B.)	--	--	1,280	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO6-1 (AHEAD); MO4-8; M3-4; M1-6 [72]; MO5-1R
	STH 29 (E.B.)	--	--	1,280	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO6-1 (AHEAD); MO4-8; M3-4; M1-6 [72]; MO6-1 (RIGHT)
	STH 128 (S.B.)	--	--	480	--	--	--	--	MO4-8; M3-4; M1-6 [72]
	STH 128 (N.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO5-1R
	STH 128 (N.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO6-1 (RIGHT)
	STH 128 (S.B.)	--	--	1,280	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO6-1 (LEFT); MO4-8; M3-4; M1-6 [72]; MO6-1 (AHEAD)
	STH 29 (W.B.)	--	--	640	--	--	--	--	MO4-8; M3-4; M1-6 [72]; MO6-1 (LEFT)
	STH 29 (E.B.)	--	--	480	--	--	--	--	MO4-8; M3-2; M1-6 [72]
	STH 128 (S.B.)	--	--	1,280	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO5-1L; MO4-8; M3-4; M1-6 [72]; MO6-1 (AHEAD)
	STH 128 (S.B.)	--	--	320	--	--	--	--	M1-6 [72]; W20-2-A
	STH 29 (W.B.)	--	--	640	--	--	--	--	MO4-8; M3-4; M1-6 [72]; MO5-1L
									CITY OF MENOMINIE (STH 29/STH 25 INTERSECTION)
DETAIL C	STH 29 (E.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO5-1R
	STH 29 (W.B.)	--	--	480	--	--	--	--	MO4-8; M3-4; M1-6 [72]
	STH 25 (S.B.)	--	--	320	--	--	--	--	M1-6 [72]; W20-2-A
	STH 25 (S.B.)	--	--	1,280	--	--	--	--	MO4-8; M3-4; M1-6 [72]; MO5-1R; MO4-8; M3-2; M1-6 [72]; MO6-1 (AHEAD)
	STH 25 (S.B.)	--	--	1,280	--	--	--	--	MO4-8; M3-4; M1-6 [72]; MO6-1 (RIGHT); MO4-8; M3-2, M1-6 [72]; MO6-1 (AHEAD)
	STH 29 (E.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO6-1 (RIGHT)
	STH 25 (N.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO6-1 (LEFT)
	STH 25 (S.B.)	--	--	480	--	--	--	--	MO4-8; M3-2; M1-6 [72]
	STH 25 (N.B.)	--	--	640	--	--	--	--	MO4-8; M3-4; M1-6 [72]; MO5-1L
									DOWNSVILLE (STH 25/STH 72 INTERSECTION)
DETAIL D	STH 25 (S.B.)	--	--	--	1	1	--	--	COVER PORTION OF J1-2 (JCT, 72)
	STH 25 (S.B.)	--	--	--	1	1	--	--	COVER PORTION OF J2-3 (WEST, 72, ADVANCE ARROW RIGHT)
	STH 25 (S.B.)	--	--	--	1	1	--	--	COVER PORTION OF D1-2 (ELMWOOD, ARROW RIGHT)
	STH 25 (S.B.)	--	--	--	1	1	--	--	COVER PORTION OF J3-3 (WEST, 72, ARROW RIGHT)
	STH 25 (N.B.)	--	--	320	--	--	--	--	MO4-8; MO6-1 (AHEAD), (COVER ARROW LEFT WITH ARROW AHEAD)
	STH 25 (S.B.)	--	--	480	--	--	--	--	M3-2; M1-6 [72]; MO4-8A
	STH 25 (N.B.)	--	--	320	--	--	--	--	MO4-8; MO6-1 (AHEAD), (COVER ADVANCE ARROW LEFT WITH ARROW AHEAD)
	STH 25 (N.B.)	--	--	--	1	1	--	--	COVER J1-1 (JCT, 72)
	STH 25 (N.B.)	--	--	480	--	--	--	--	M3-4; M1-6 [72]; W20-2-A
	STH 25 (N.B.)	--	--	160	--	--	--	--	A1-2 (AHEAD), COVER PORTION OF D1-2 (COVER ARROW LEFT WITH ARROW AHEAD)
	STH 72 (W.B.)	160	320	160	--	--	14	--	MO4-9R, PLACE PCMS TWO WEEKS BEFORE CLOSURE
	STH 72 (W.B.)	160	320	160	--	--	--	--	R11-3-C [9 MILES]
									VILLAGE OF ELMWOOD (CTH P/STH 72 INTERSECTION)
DETAIL E	CTH P (N.B.)	--	--	480	--	--	--	--	M3-2; M1-6 [72]; W20-2-A
	CTH P (N.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO5-1L
	CTH P (N.B.)	--	--	160	--	--	--	--	MO6-1 (LEFT), (COVER DIRECTIONAL ARROW LEFT-RIGHT WITH ARROW LEFT)
	CTH P (S.B.)	--	--	160	--	--	--	--	MO6-1 (RIGHT), (COVER DIRECTIONAL ARROW LEFT-RIGHT WITH ARROW RIGHT)
	CTH P (S.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO5-1R
	CTH P (S.B.)	--	--	480	--	--	--	--	M3-2; M1-6 [72]; W20-2-A
	STH 72 (E.B.)	160	320	160	--	--	--	--	R11-3-C [2 MILES]
	STH 72 (E.B.)	160	320	160	--	--	--	--	R11-3-C [2 MILES]
	STH 72 (E.B.)	--	--	--	1	1	--	--	COVER J4-1 (EAST, 72)
	SUBTOTALS =	640	1,280	20,640	6	6	14	0	

*MORE LISTED ELSEWHERE

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\DETAILS\MISC QUANT.DWG
LAYOUT : LAYOUT3
PLOT DATE : 9/17/2019
PLOT TIME : 7:53:09 AM
PLOT BY : THEODORE HERBERS
PLOT SCALE : 1" = 1'
WISDOT/CADDS SHEET 42

3

TRAFFIC CONTROL (CONTINUED)

	STH 72 (E.B.)	*643.0420 BARRICADES TYPE III (DAYS)	*643.0705 WARNING LIGHTS TYPE A (DAYS)	*643.0900 SIGNS (DAYS)	*643.0920 COVERING SIGNS TYPE II (EACH)	NO. OF CYCLES (COVER/ UNCOVER)	*643.1050 SIGNS PCMS (DAYS)	*643.5000 TRAFFIC CONTROL (EACH)	COMMENT	
									VILLAGE OF ELMWOOD	
DETAIL F	STH 72 (E.B.)	--	--	--	1	1	--	--	COVER J2-1 (EAST, 72, ADVANCE ARROW LEFT)	
	STH 72 (W.B.)	--	--	480	--	--	--	--	MO4-8; M3-2; M1-6 [72]	
	STH 72 (E.B.)	--	--	--	1	1	--	--	COVER J3-1 (EAST, 72, ARROW LEFT)	
	STH 72 (W.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO6-1 (RIGHT)	
	STH 72 (W.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO6-1 (LEFT)	
	STH 72 (E.B.)	--	--	--	1	1	--	--	COVER J3-1 (EAST, 72, ARROW RIGHT)	
	STH 72 (W.B.)	--	--	640	--	--	--	--	MO4-8; M3-2; M1-6 [72]; MO5-1L	
									ALONG DETOUR ROUTE	LOCATION
	STH 128 (S.B.)	--	--	480	--	--	--	--	MO4-8; M3-4, M1-A [72]	NEAR CTH B INTERSECTION
	STH 128 (N.B.)	--	--	480	--	--	--	--	MO4-8; M3-2, M1-A [72]	NEAR CTH B INTERSECTION
	STH 29 (W.B.)	--	--	480	--	--	--	--	MO4-8; M3-4, M1-A [72]	NEAR CTH PP INTERSECTION
	STH 29 (E.B.)	--	--	480	--	--	--	--	MO4-8; M3-2, M1-A [72]	NEAR CTH PP INTERSECTION
	STH 29 (W.B.)	--	--	480	--	--	--	--	MO4-8; M3-4, M1-A [72]	NEAR CTH Q (S.B.) INTERSECTION
	STH 29 (E.B.)	--	--	480	--	--	--	--	MO4-8; M3-2, M1-A [72]	NEAR CTH Q (S.B.) INTERSECTION
	STH 29 (W.B.)	--	--	480	--	--	--	--	MO4-8; M3-4, M1-A [72]	NEAR CTH Q (N.B.) INTERSECTION
	STH 29 (E.B.)	--	--	480	--	--	--	--	MO4-8; M3-2, M1-A [72]	NEAR CTH Q (N.B.) INTERSECTION
	STH 29 (W.B.)	--	--	480	--	--	--	--	MO4-8; M3-4, M1-A [72]	NEAR CTH N INTERSECTION
	STH 29 (E.B.)	--	--	480	--	--	--	--	MO4-8; M3-2, M1-A [72]	NEAR CTH N INTERSECTION
	STH 29 (W.B.)	--	--	480	--	--	--	--	MO4-8; M3-4, M1-A [72]	NEAR CTH K INTERSECTION
	STH 29 (E.B.)	--	--	480	--	--	--	--	MO4-8; M3-2, M1-A [72]	NEAR CTH K INTERSECTION
	STH 29 (W.B.)	--	--	480	--	--	--	--	MO4-8; M3-4, M1-A [72]	NEAR CTH P INTERSECTION
	STH 29 (E.B.)	--	--	480	--	--	--	--	MO4-8; M3-2, M1-A [72]	NEAR CTH P INTERSECTION
	STH 25 (N.B.)	--	--	480	--	--	--	--	MO4-8; M3-4, M1-A [72]	NEAR CTH D INTERSECTION
	STH 25 (S.B.)	--	--	480	--	--	--	--	MO4-8; M3-2, M1-A [72]	NEAR CTH D INTERSECTION
									MAINLINE CLOSURE	
	STH 72	2,240	1,600	1,280	--	--	--	--	SEE STANDARD DETAIL, BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
	PROJECT	--	--	--	--	--	--	1		
	SUBTOTALS =	2,240	1,600	11,360	3	3	0	1		
	PROJECT TOATLS =	3,200	3,520	36,160	10	10	28	1		

*MORE LISTED ELSEWHERE

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\DETAILS\MISC QUANT.DWG
LAYOUT : LAYOUT4
PLOT DATE : 9/17/2019
PLOT TIME : 7:54:44 AM
PLOT BY : THEODORE HERBERS
PLOT SCALE : 1" = 1'
WISDOT/CADDS SHEET 42

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
PROJECT NO. 7105-00-22
ELLSWORTH - DOWNSVILLE
(EAU GALLE RIVER BRIDGE B-17-227)
STH 72
DUNN COUNTY

THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 7105-00-22

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), DUNN 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.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4"x 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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

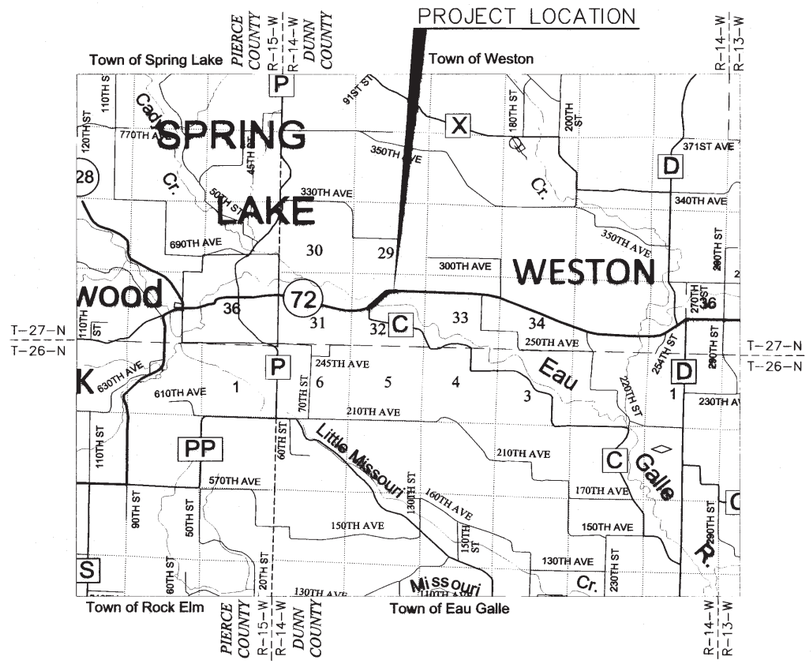
PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. EXCLUDING RIGHT-OF-WAY LINES, THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD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

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION REGION OFFICE IN EAU CLAIRE.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLE'S EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

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

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: DIVISION JOB NO. 6514.



N

SCALE, FEET

0 1 MI. 2 MI.

CONVENTIONAL SYMBOLS

SECTION LINE		SECTION CORNER SYMBOL	R/W MONUMENT (TO BE SET)
QUARTER LINE			NON-MONUMENTED R/W POINT
SIXTEENTH LINE		SECTION CORNER MONUMENT	FOUND IRON PIN (1-INCH UNLESS NOTED)
NEW REFERENCE LINE			GEODETIC SURVEY MONUMENT
NEW R/W LINE			SIXTEENTH CORNER MONUMENT
EXISTING R/W OR HE LINE		SIGN	OFF-PREMISE SIGN
PROPERTY LINE	P.L.		
LOT, TIE & OTHER MINOR LINES			COMPENSABLE / NON-COMPENSABLE
SLOPE INTERCEPT		ELECTRIC POLE	
CORPORATE LIMITS		TELEPHONE POLE	
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	W (TYPE)	PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)		ACCESS RESTRICTED BY ACQUISITION	
TEMPORARY LIMITED EASEMENT AREA		NO ACCESS (BY STATUTORY AUTHORITY)	
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)		ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)	
TRANSMISSION STRUCTURES		NO ACCESS (NEW HIGHWAY)	
BUILDING	TO BE REMOVED	PARCEL NUMBER 25	UTILITY NUMBER 40
BRIDGE		PARALLEL OFFSETS	

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

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

CONVENTIONAL UTILITY SYMBOLS

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

PROJECT NUMBER: 7105-00-22 - 4.01
SHEET 2 OF 2

TRANSPORTATION PROJECT PLAT NO: 7105-00-22 - 4.01

PART OF THE SE¼-NW¼, SECTION 32, TOWNSHIP 27 NORTH, RANGE 14 WEST, TOWN OF WESTON, DUNN COUNTY, WISCONSIN.

RELOCATION ORDER STH 72, ELLSWORTH - DOWNSVILLE, DUNN COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET WHICH IS SHEET 2 OF 2 OF THIS TRANSPORTATION PROJECT PLAT.

NOTE: EXISTING STH 72 RIGHT-OF-WAY SHOWN HEREON IS BASED ON DIVISION JOB NO. 6514.

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNER (S)	INTEREST REQUIRED
201	WISCONSIN BELL, INC. D/B/A AT&T WISCONSIN	RELEASE OF RIGHTS
202	TELEPHONE USA OF WISCONSIN, LLC D/B/A CENTURYLINK	RELEASE OF RIGHTS

EASEMENT TABLE

UTILITY NUMBER	OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #
201	WISCONSIN BELL, INC. D/B/A AT&T WISCONSIN	NO RECORD OF EASEMENT	1
202	TELEPHONE USA OF WISCONSIN, LLC D/B/A CENTURYLINK	DOC. #464942, VOL.938 PG.1	1

COORDINATE TABLE - MONUMENTED R/W POINTS

PT.#	STATION	OFFSET	Y	X
1	89+43.27	85.08' LT.	135528.030	113900.128
2	91+20.38	85.02' LT.	135639.594	114025.976
3	93+50.00	135.00' LT.	135837.963	114143.844
4	93+50.00	50.00' LT.	135780.227	114206.227
5	96+50.00	50.00' LT.	136000.403	114409.999
6	96+50.00	65.00' LT.	136010.591	114398.990
7	97+21.99	65.00' LT.	136063.428	114447.891
8	102+00.00	65.00' LT.	136374.078	114833.562
9	104+00.00	50.00' LT.	136454.619	115024.726
10	104+00.00	0.00' RT.	136408.760	115044.652
11	104+00.00	55.00' RT.	136358.317	115066.570
12	97+21.99	55.00' RT.	135981.919	114535.961
13	93+30.00	55.00' RT.	135694.229	114269.704
14	93+30.00	75.00' RT.	135680.644	114284.382
15	91+99.37	75.00' RT.	135584.774	114195.655
16	89+43.27	75.00' RT.	135402.915	113999.984
17	89+43.27	0.00' LT.	135461.534	113953.199

COORDINATE TABLE - TLE POINTS

PT.#	STATION	OFFSET	Y	X
50	98+70.00	80.00' LT.	136182.631	114547.330
51	99+75.00	80.00' LT.	136253.701	114631.436
52	99+75.00	65.00' LT.	136241.940	114640.745
53	98+70.00	55.00' RT.	136082.363	114637.725
54	98+70.00	70.00' RT.	136071.222	114647.769
55	97+21.99	70.00' RT.	135971.731	114546.970

6225397
DUNN COUNTY WI
REGISTER OF DEEDS
HEATHER M. KUHN
RECORDED ON
10/31/2017 12:36PM
REC FEE: 25.00
PAGES: 2
VOL. 9 PLATS PG 33

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 7105-00-22-4.01
SHEET 1 OF 2

PRWC 7-8 CURVE DATA
RADIUS=1702.02'
DELTA ANGLE=16°43'49"
ARC LENGTH=496.99'
TANGENT=250.27'
CHORD LENGTH=495.22'
CHORD BEARING=N51°08'58"E

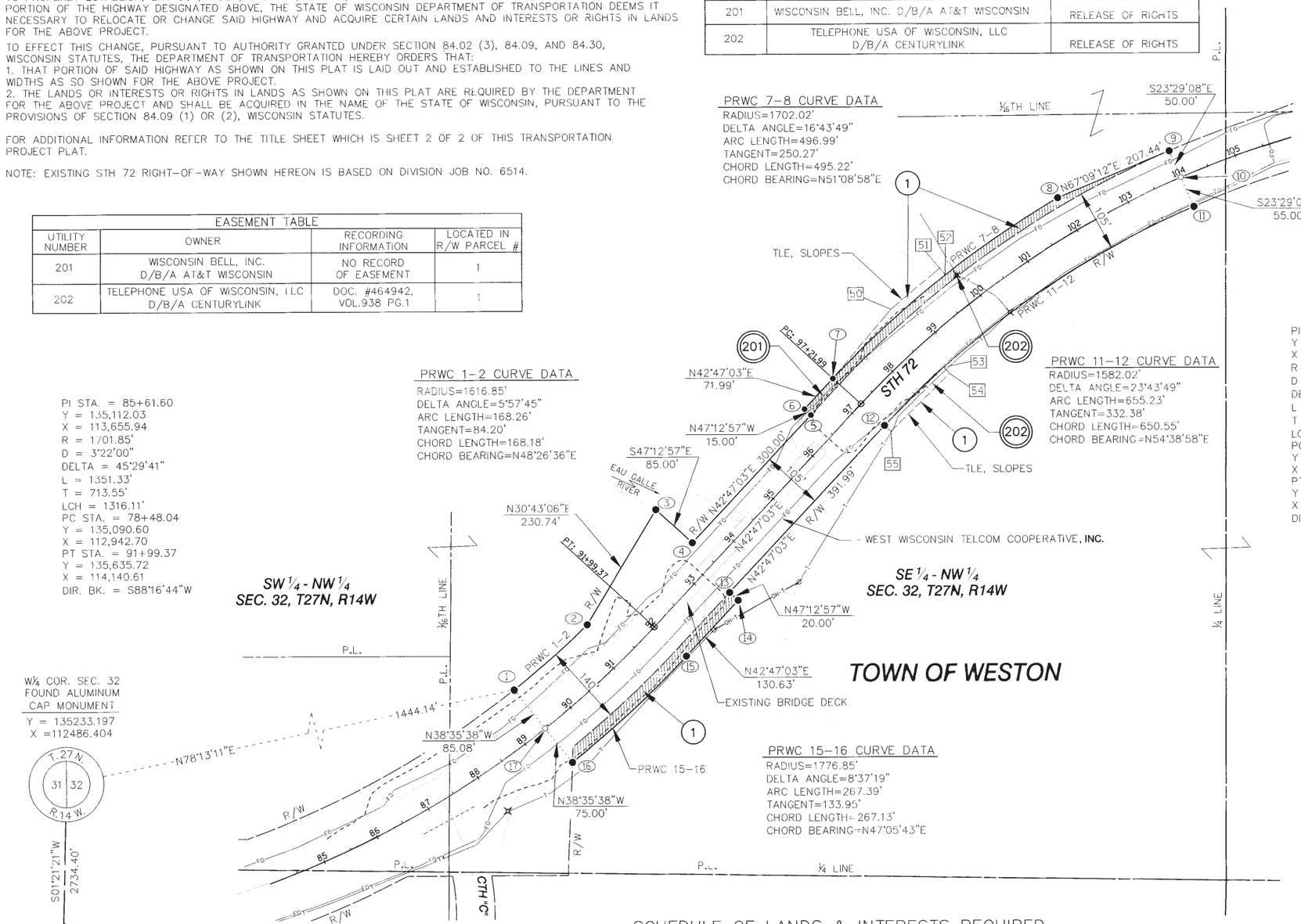
PRWC 1-2 CURVE DATA
RADIUS=1616.85'
DELTA ANGLE=5°57'45"
ARC LENGTH=168.26'
TANGENT=84.20'
CHORD LENGTH=168.18'
CHORD BEARING=N48°26'36"E

PRWC 11-12 CURVE DATA
RADIUS=1582.02'
DELTA ANGLE=23°43'49"
ARC LENGTH=655.23'
TANGENT=332.38'
CHORD LENGTH=650.55'
CHORD BEARING=N54°38'58"E

PRWC 15-16 CURVE DATA
RADIUS=1776.85'
DELTA ANGLE=8°37'19"
ARC LENGTH=267.39'
TANGENT=133.95'
CHORD LENGTH=267.13'
CHORD BEARING=N47°05'43"E

PI STA. = 85+61.60
Y = 135,112.03
X = 113,655.94
R = 1701.85'
D = 3°22'00"
DELTA = 45°29'41"
L = 1351.33'
T = 713.55'
LCH = 1316.11'
PC STA. = 78+48.04
Y = 135,090.60
X = 112,942.70
PT STA. = 91+99.37
Y = 135,635.72
X = 114,140.61
DIR. BK. = S88°16'44"W

PI STA. = 104+48.42
Y = 136,552.41
X = 114,989.01
R = 1637.02'
D = 3°30'00"
DELTA = 47°51'30"
L = 1367.38'
T = 726.42'
LCH = 1327.97'
PC STA. = 97+21.99
Y = 136,019.28
X = 114,495.60
PT STA. = 110+89.37
Y = 136,544.27
X = 115,715.39
DIR. AH. = S89°21'27"E



SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			T.L.E. ACRES
			NEW	EXISTING	TOTAL	
1	DANIEL D. VIVODA ESTATE TRUST	FEE, TLE	0.400	3.965	4.365	0.111

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

N

SCALE, FEET
0 100' 200'

JEWELL
associates engineers, inc.
Engineers - Planners - Surveyors

I, SCOTT D. WARNER, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN SCOTT D. WARNER S-2524 RICHLAND CENTER, WI LAND SURVEYOR

(SIGNATURE) _____ DATE 10/24/17
(PRINTED NAME) SCOTT D. WARNER
(REGISTRATION NUMBER) S-2524

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

(SIGNATURE) _____ DATE 10/24/17
(PRINTED NAME) MICHAEL PILLER

LEGEND

RIPRAP HEAVY OVER GEOTEXTILE FABRIC TYPE HR HR

DIRECTION OF FLOW

XXXXXXXXX SAWING ASPHALT

N

EX. R/W

DANIEL D VIVODA

DUNN ENERGY COOPERATIVE

AT&T WISCONSIN

SLOPE INTERCEPTS

LIMITS OF AGRICULTURAL FIELD

REMOVING FENCE (BY OTHERS)

REMOVING GUARDRAIL REQ'D

EXISTING C/L STH 72

DANIEL D VIVODA ESTATE TRUST

EX. R/W

85'

MATCHLINE STA. 89+00

(ASPHALT)

CURVE 1
PI STA. = 85+61.60
Y = 135,112.03
X = 113,655.94
R = 1701.85
D = 3°22'00"
DELTA = 45°29'41"
L = 1351.33
T = 713.55
C = 1316.11
PC STA. = 78+48.04
Y = 135,090.60
X = 112,942.70
PT STA. = 91+99.37
Y = 135,635.72
X = 114,140.61
SE = 5.9%
RO = 157'
TRANS = 210'
(SEE SUPERELEVATION TABLE)

86+00

87+00

88+00

STA. 88+28

CURVE 1

FINISHED C/L STH 72

BM 4

DANIEL D VIVODA

WEST WISCONSIN TELCOM COOPERATIVE

EXISTING C/L CTH C

CENTURYLINK

EX. R/W

REMOVING FENCE (BY OTHERS)

DANIEL D VIVODA ESTATE TRUST

BEGIN CONSTRUCTION
STA. 85+20
Y= 135,241.14
X= 113,593.11

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
4	86+68	3/4" IRON REBAR SET, 25.0' RT	832.90

EXISTING C/L PROFILE STH 72

EXISTING C/L ELEVATION

EARTHWORK SUMMARY

	MAINLINE	FE	TOTALS
EXCAVATION COMMON (C.Y.) =	330	20	350
FILL (C.Y.) =	7,438	16	7,454
FILL EXPANSION (25%) (C.Y.)=	9,300	20	9,320
BORROW (C.Y.) =	8,970	0	8,790

838
836
834
832
830
828
826
824
822

835.09 834.90 834.78 834.60 834.41 834.16 833.90 833.68 833.44 833.19 833.02 832.83 832.67 832.52 832.35 832.19 832.02 831.87 831.72 831.56 831.44 831.33 831.19 831.05 830.89 830.76 830.61 830.43 830.22

83+40 83+60 83+80 84+00 84+20 84+40 84+60 84+80 85+00 85+20 85+40 85+60 85+80 86+00 86+20 86+40 86+60 86+80 87+00 87+20 87+40 87+60 87+80 88+00 88+20 88+40 88+60 88+80 89+00

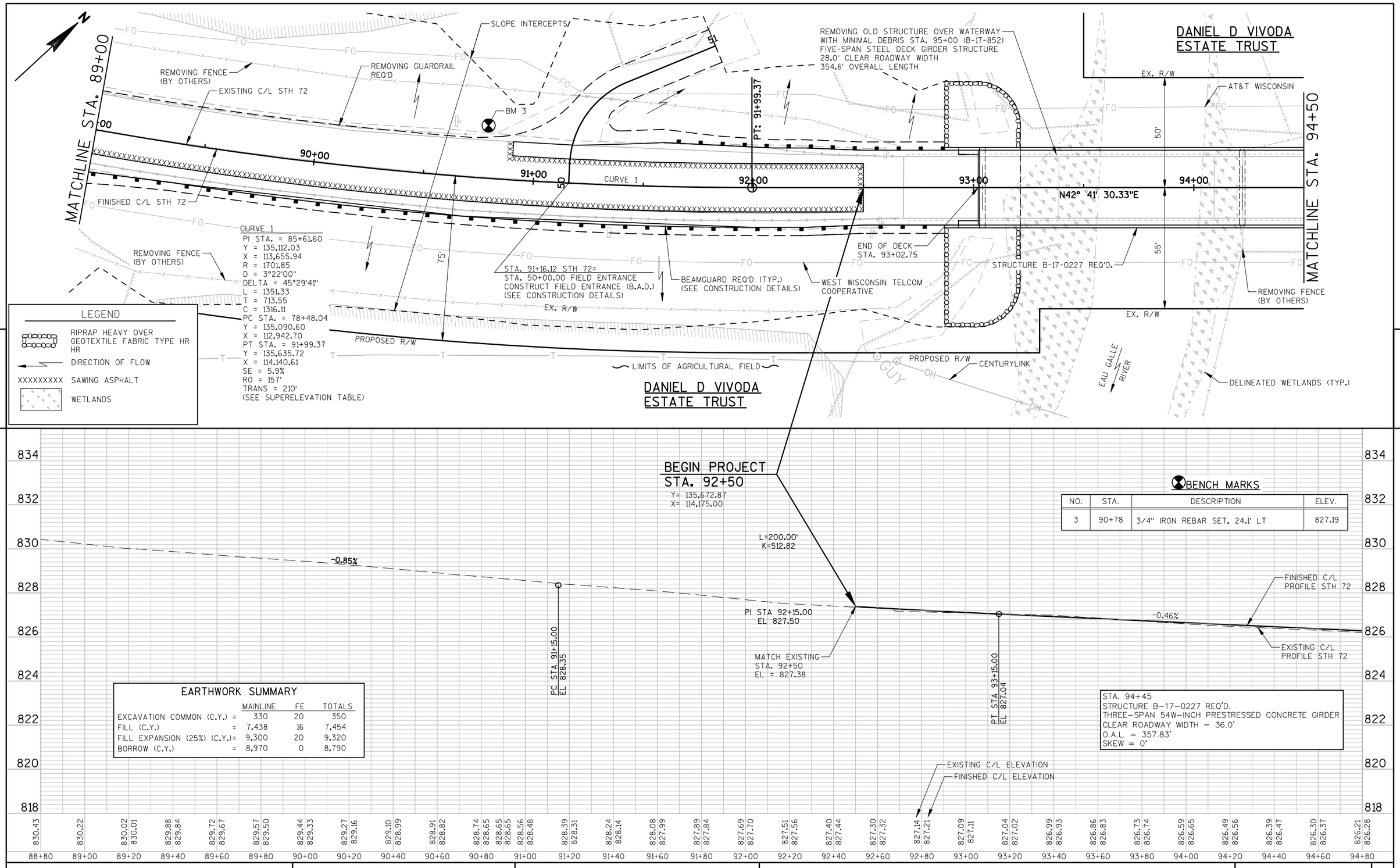
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	PLAN AND PROFILE: STH 72	SHEET 29 E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\PLAN & PROFILE SHEETS\P&P – 1.DWG
LAYOUT : P&P – 1

PLOT DATE : 7/24/2018
PLOT TIME : 7:50:41 AM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 0.215269



PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	PLAN AND PROFILE: STH 72	SHEET 30 E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\PLAN & PROFILE SHEETS\P&P – 2.DWG
LAYOUT : P&P – 2
PLOT DATE : 7/23/2018
PLOT TIME : 3:58:06 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 0.215269

N

DANIEL D VIVODA
ESTATE TRUST

AT&T WISCONSIN

PROPOSED R/W

T.L.E. REQ'D.

P.E. 99+60, LT.
(TO REMAIN)

EX. R/W

REMOVING FENCE
(BY OTHERS)

REMOVING GUARDRAIL

END OF DECK
STA. 96+59.25

PC: 97+21.99

PROPOSED R/W

FINISHED C/L STH 72

BM 2

MATCHLINE STA. 94+50

50'

95+00

N42° 47' 03.09"E

96+00

97+00

98+00

CURVE 2

99+00

79.7'

65'

(ASPHALT)

EXISTING C/L STH 72

71.5'

55'

REMOVING FENCE
(BY OTHERS)

CURVE 2
PI STA. = 104+48.42
Y = 136,552.41
X = 114,989.01
R = 1637.02
D = 3°30'00"
DELTA = 47°51'30"
L = 1367.38
T = 726.42
C = 1327.97
PC STA. = 97+21.99
Y = 136,019.28
X = 114,495.60
PT STA. = 110+89.37
Y = 136,544.27
X = 115,715.39
SE = 5.9%
RO = 157'
TRANS = 210'
(SEE SUPERELEVATION TABLE)

STRUCTURE B-17-0227 REQ'D.

WEST WISCONSIN TELCOM
COOPERATIVE

EX. R/W

SLOPE INTERCEPTS

DANIEL D VIVODA
ESTATE TRUST

T.L.E. REQ'D.

EX. R/W

CENTURYLINK

END CONSTRUCTION
STA. 99+25
Y= 136,159.35
X= 114,642.36

END PROJECT
STA. 97+00
Y= 136,003.14
X= 114,480.66

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
2	99+73	3/4" IRON REBAR SET, 25.2' LT	824.38

EXISTING C/L
PROFILE STH 72

-0.46%

FINISHED C/L
PROFILE STH 72

MATCH EXISTING
STA. 97+00
EL = 825.27

EARTHWORK SUMMARY

	MAINLINE	FE	TOTALS
EXCAVATION COMMON (C.Y.) =	330	20	350
FILL (C.Y.) =	7,438	16	7,454
FILL EXPANSION (25%) (C.Y.)=	9,300	20	9,320
BORROW (C.Y.) =	8,970	0	8,790

EXISTING C/L ELEVATION
FINISHED C/L ELEVATION

832 830 828 826 824 822 820 818 816

826.49 826.56 | 826.39 826.47 | 826.30 826.37 | 826.21 826.28 | 826.10 826.19 | 826.00 826.10 | 825.89 826.01 | 825.79 825.91 | 825.68 825.82 | 825.56 825.73 | 825.45 825.64 | 825.48 825.55 | 825.42 825.45 | 825.34 825.36 | 825.22 825.27 | 825.12 | 825.06 | 824.99 | 824.99 | 824.93 | 824.85 | 824.74 | 824.62 | 824.52 | 824.43 | 824.33 | 824.28 | 824.22 | 824.15 | 824.05 | 823.95

94+20 94+40 94+60 94+80 95+00 95+20 95+40 95+60 95+80 96+00 96+20 96+40 96+60 96+80 97+00 97+20 97+40 97+60 97+80 98+00 98+20 98+40 98+60 98+80 99+00 99+20 99+40 99+60 99+80 100+00 100+20

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	PLAN AND PROFILE: STH 72	SHEET 31	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\SHEETSPLAN\PLAN & PROFILE SHEETS\P&P - 3.DWG
LAYOUT : P&P - 3

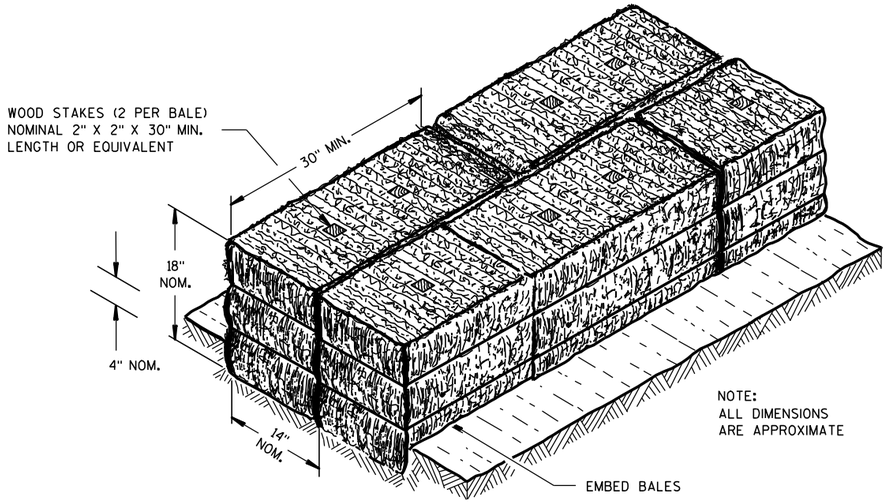
PLOT DATE : 7/23/2018
PLOT TIME : 4:04:44 PM

PLOT BY : STEPHANIE POTTER

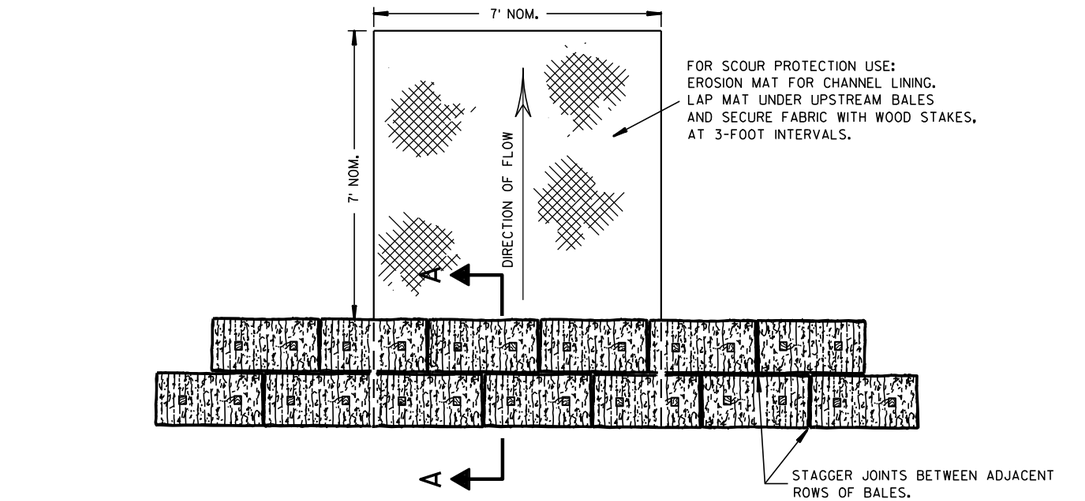
PLOT SCALE : 0.215269

Standard Detail Drawing List

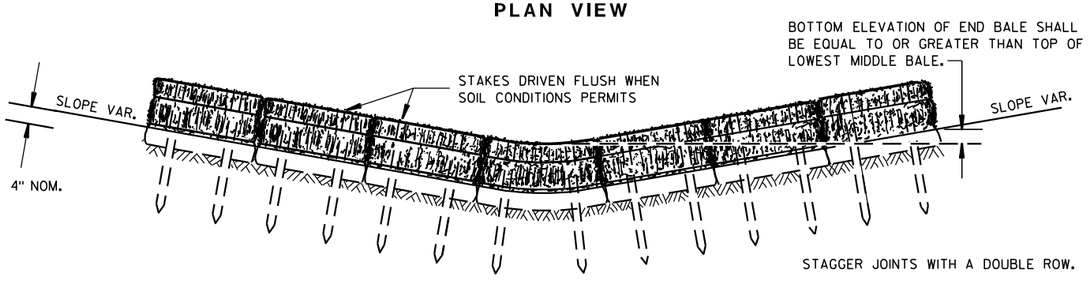
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



SECTION A-A



PLAN VIEW



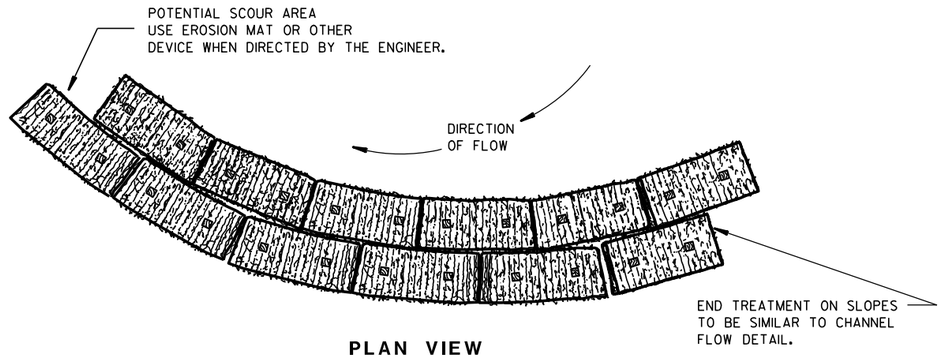
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

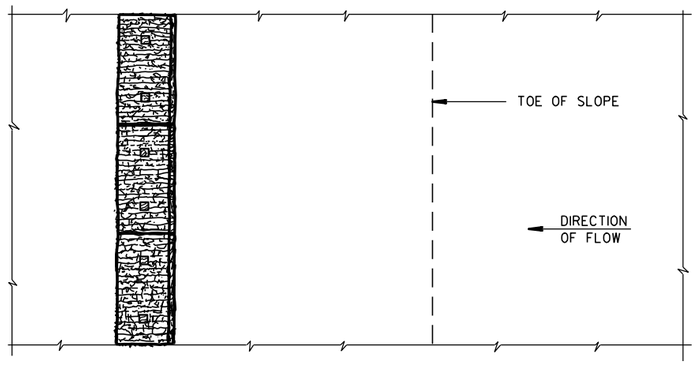
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

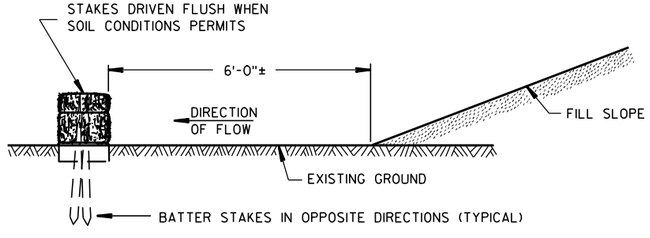


PLAN VIEW

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

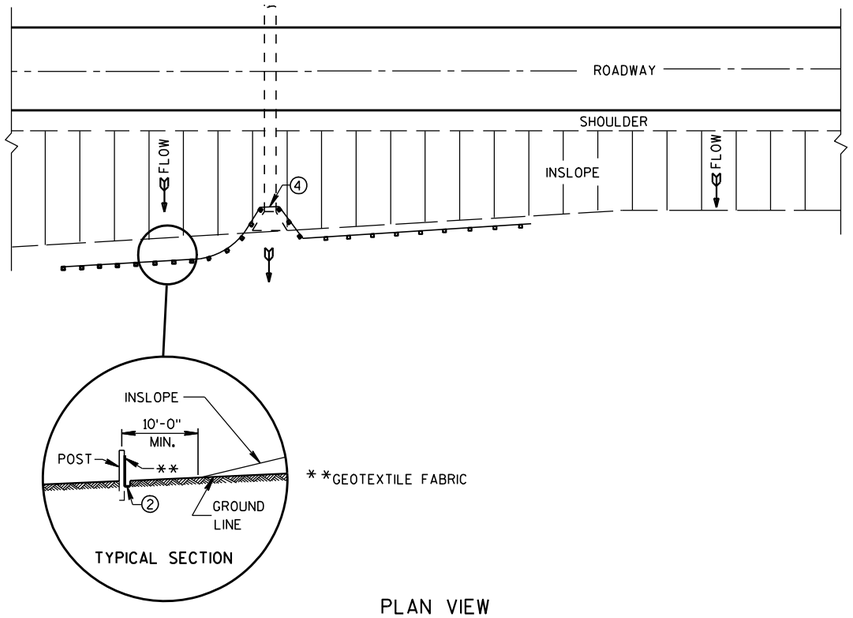
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

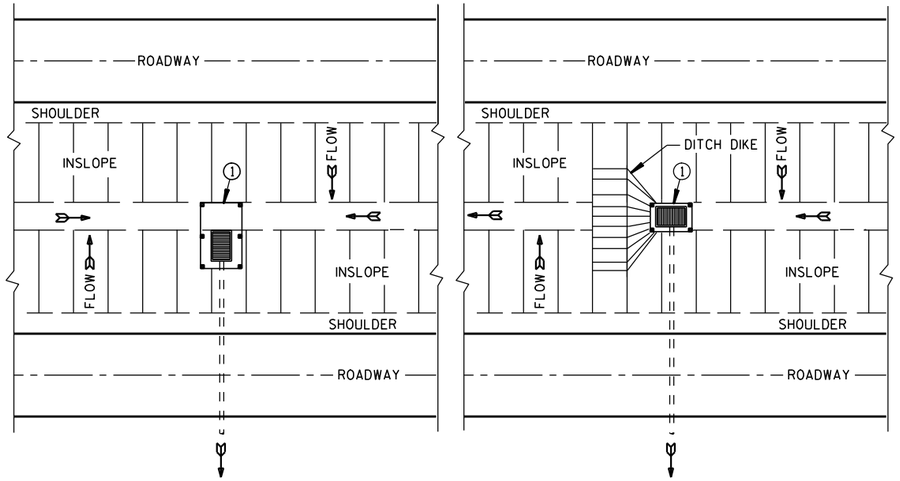
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

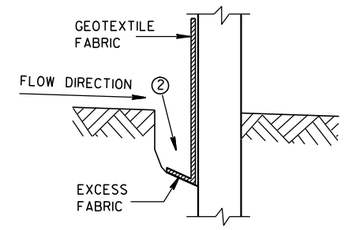
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

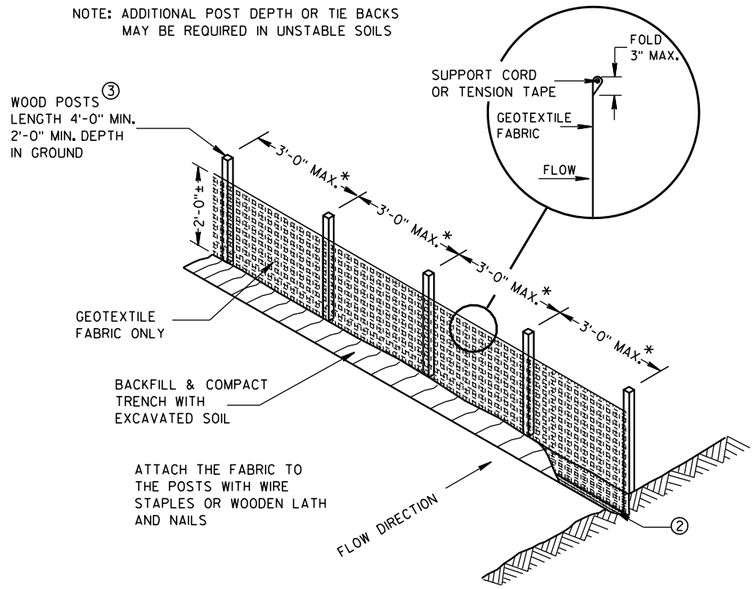
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

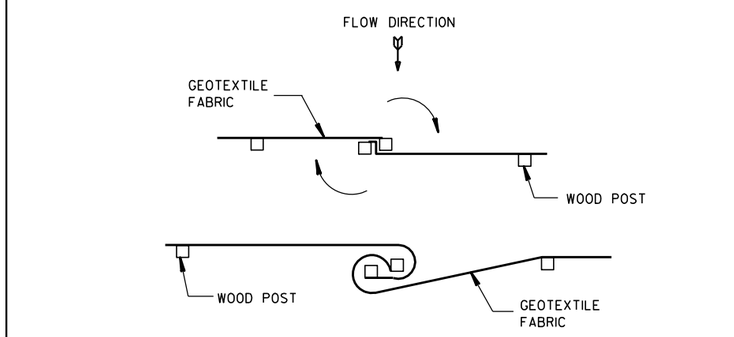
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



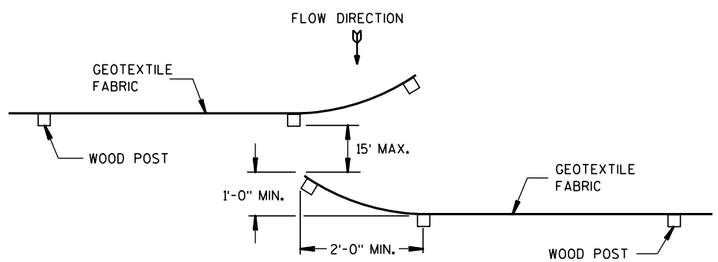
TRENCH DETAIL



SILT FENCE

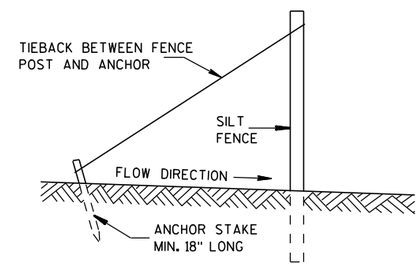


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

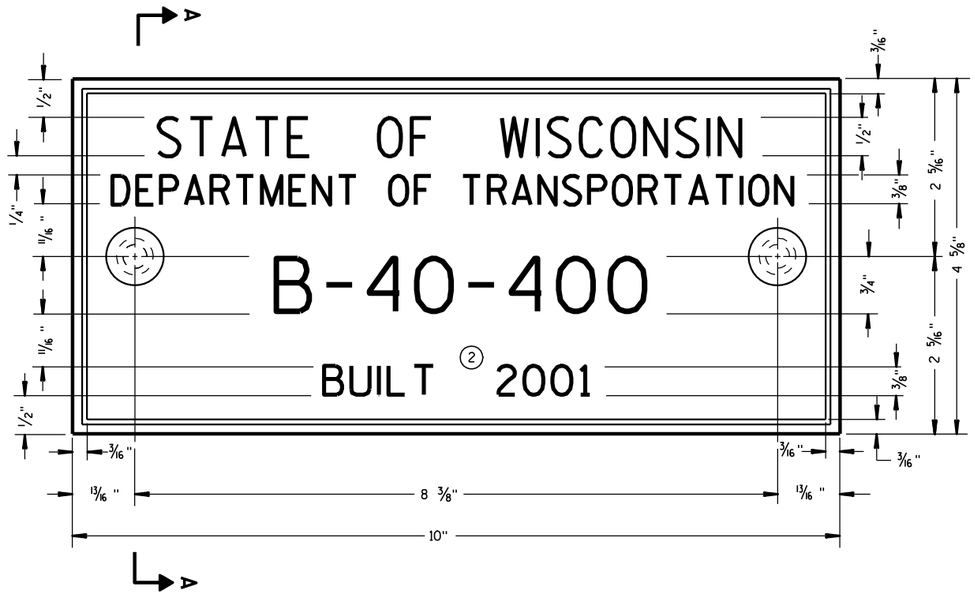
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

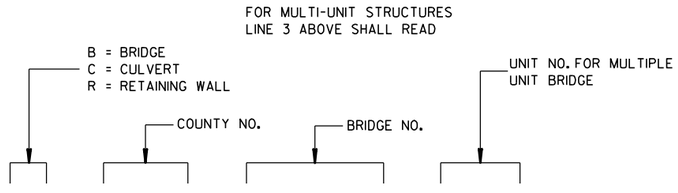
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

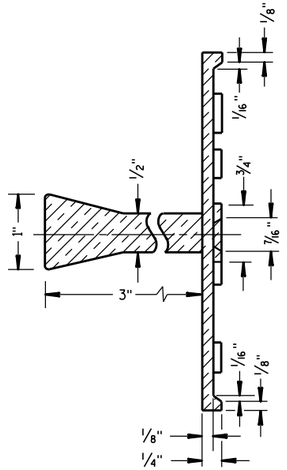
GENERAL NOTES

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

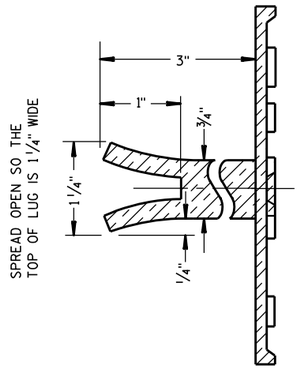
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

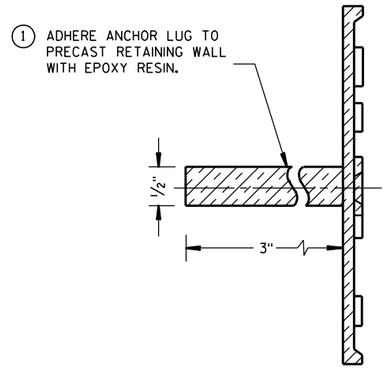
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

FHWA

6

S.D.D. 12 A 3-10

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

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

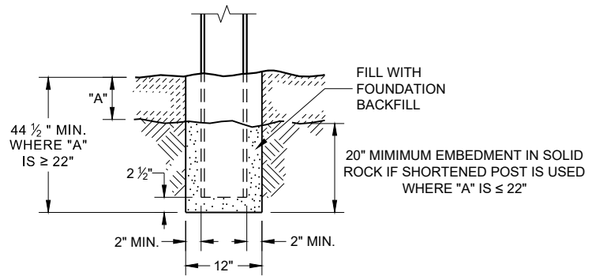
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

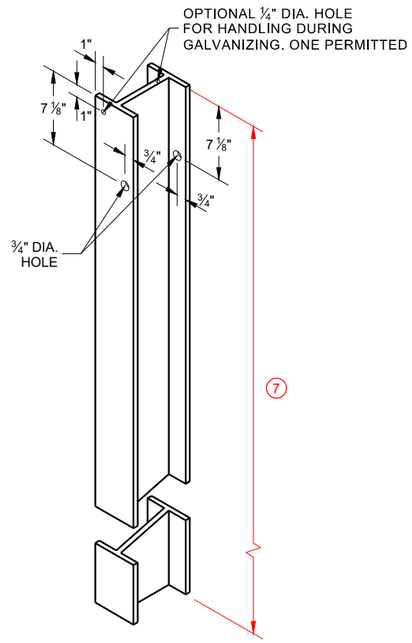
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

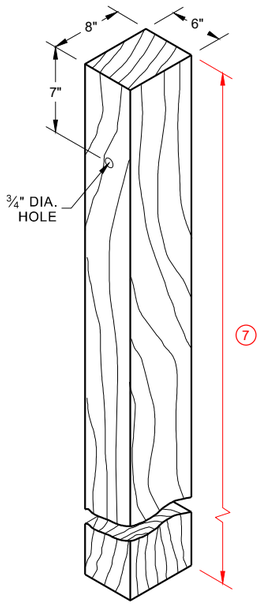
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



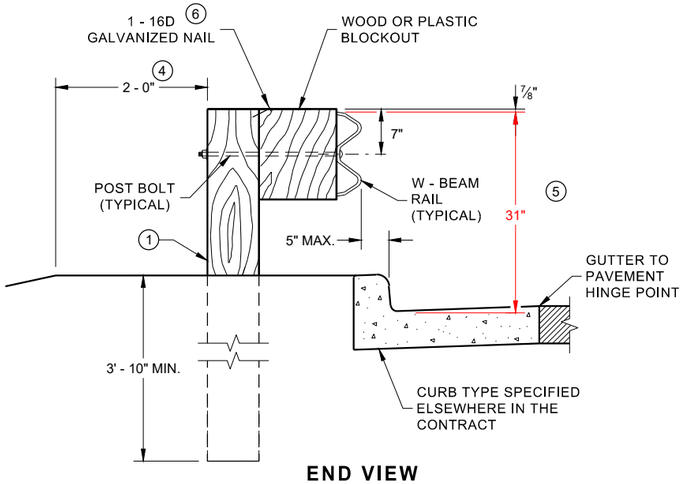
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



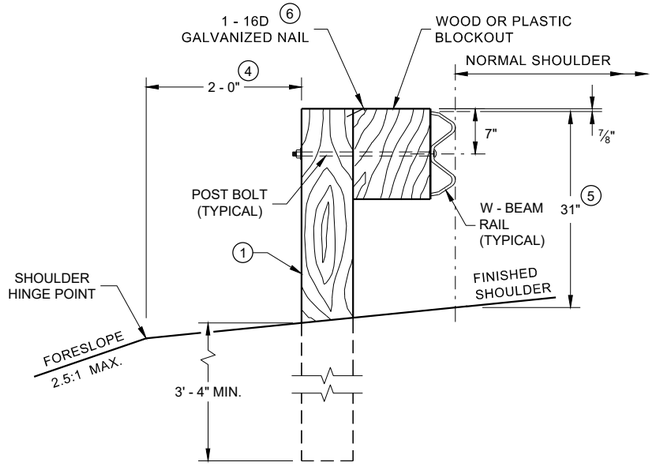
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



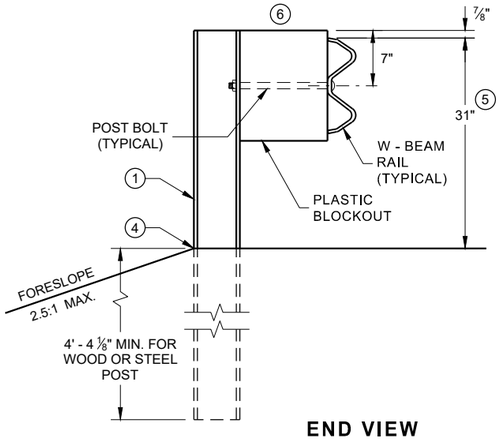
WOOD POST (6" X 8") NOMINAL (1)



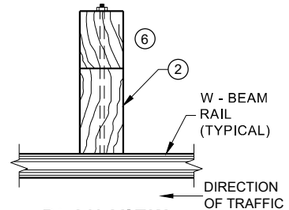
END VIEW
LOCATED ALONG A CURBED ROADWAY



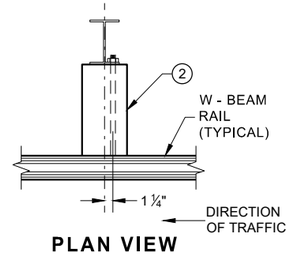
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



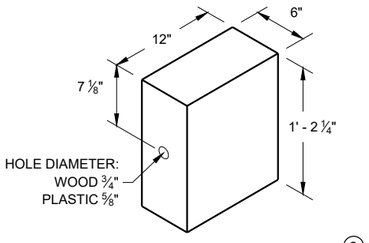
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

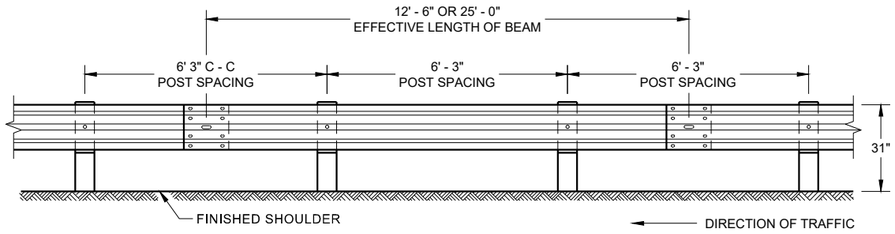
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

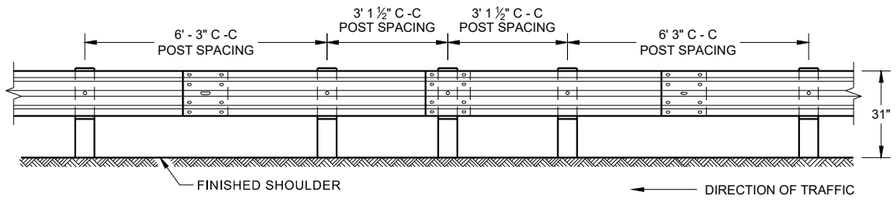
SDD 14B42 - 06a

6

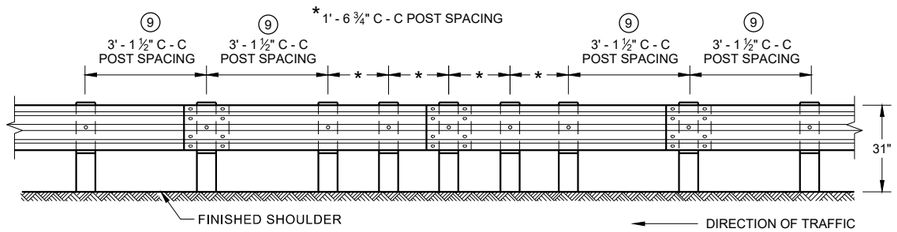
SDD 14B42 - 06a



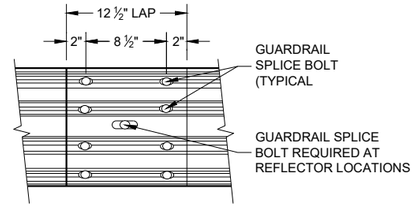
FRONT VIEW
POST SPACING STANDARD INSTALLATION



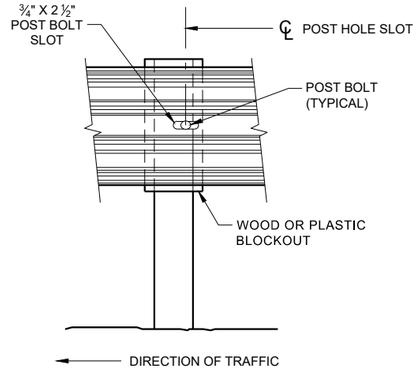
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



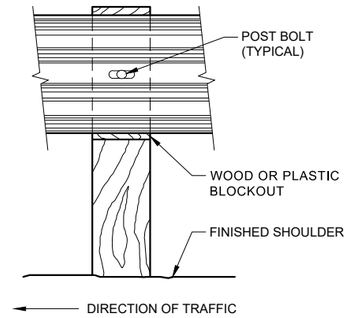
FRONT VIEW
QUARTER POST SPACING (QS)



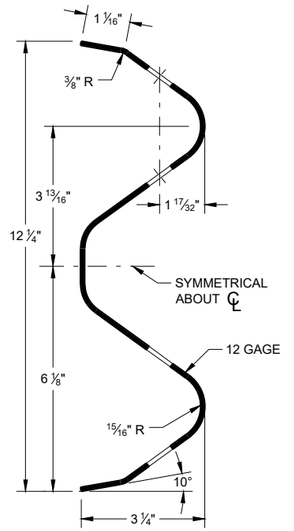
FRONT VIEW
MID-SPAN BEAM SPLICE



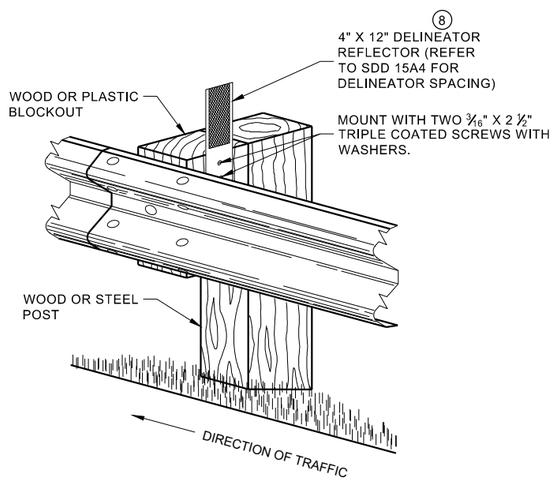
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

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

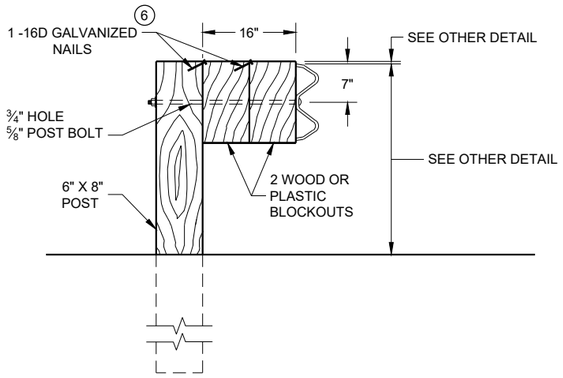
POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

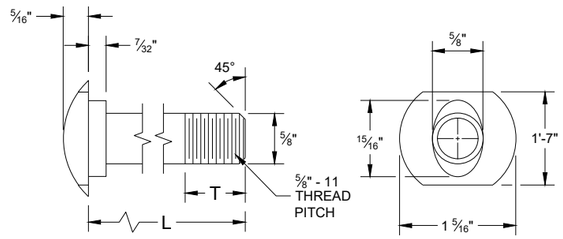


DETAIL FOR 16" BLOCKOUT DEPTH

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

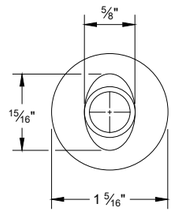
NOTE:

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

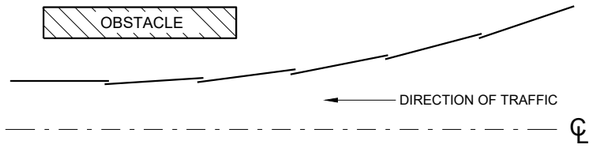


POST BOLT TABLE

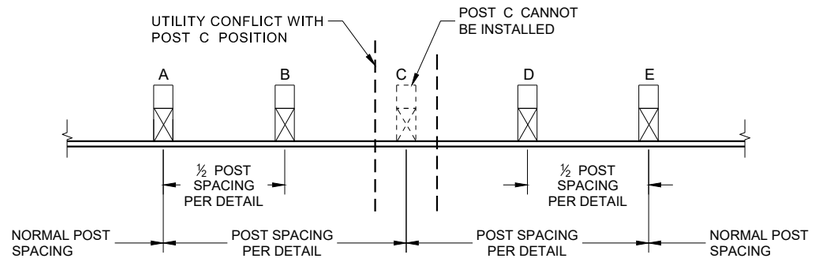
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



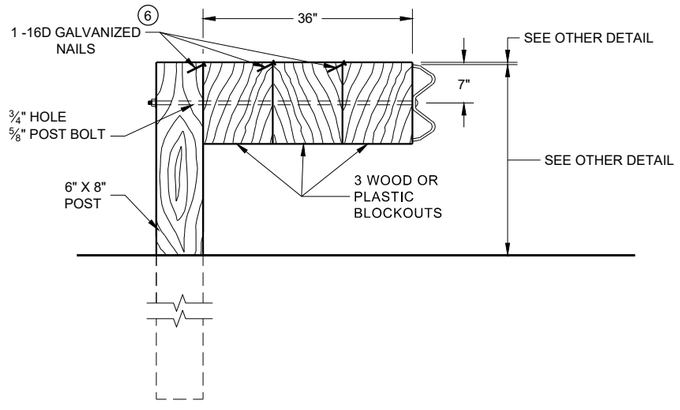
ALTERNATE BOLT HEAD



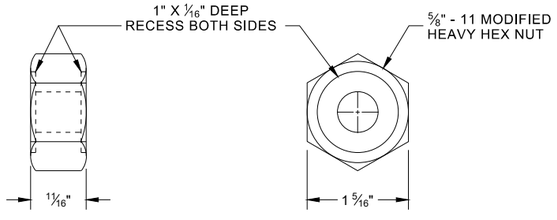
PLAN VIEW
BEAM LAPPING DETAIL



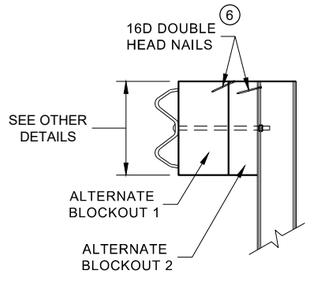
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



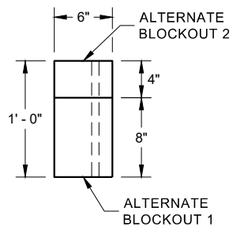
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

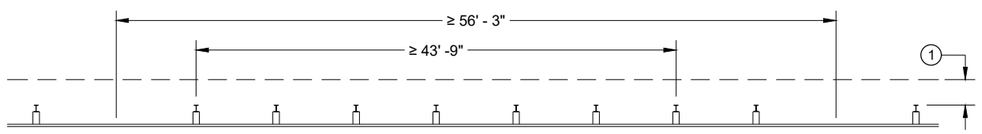
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

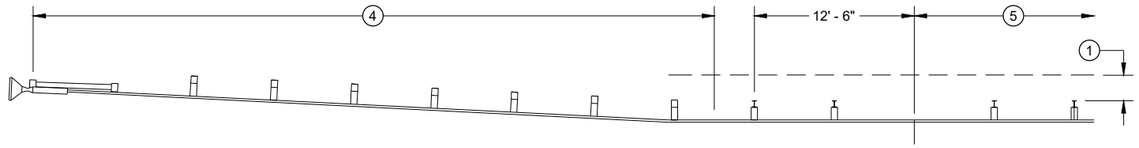
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

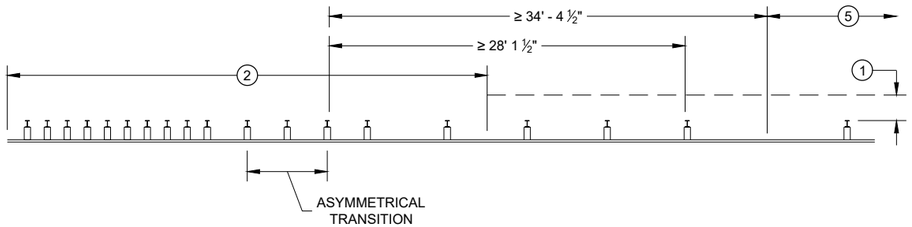
SDD 14B42 - 06c



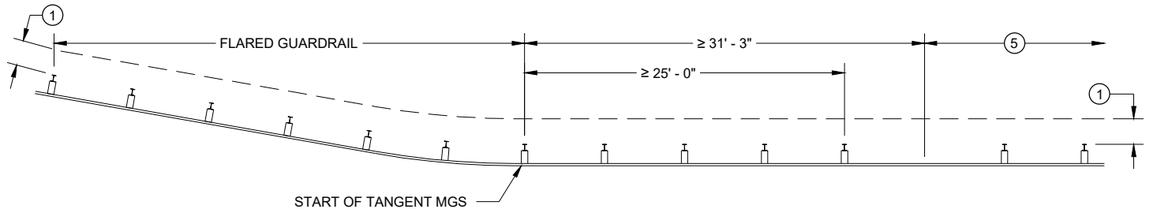
MISSING POST IN NORMAL BEAM GUARD RUN



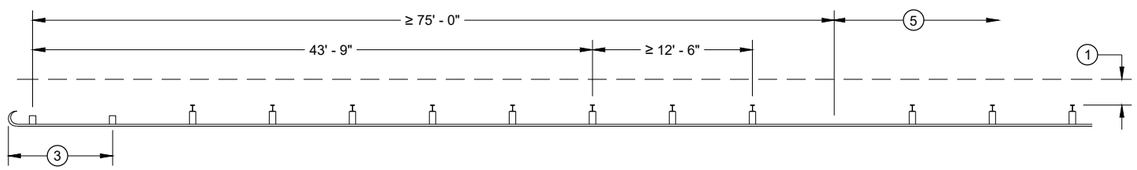
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



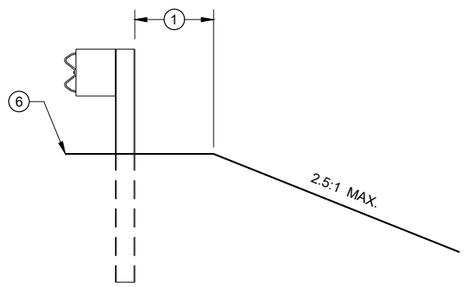
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B42 - 06d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

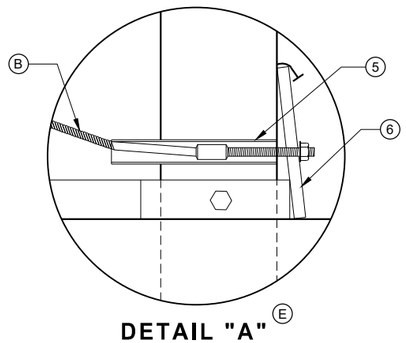
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

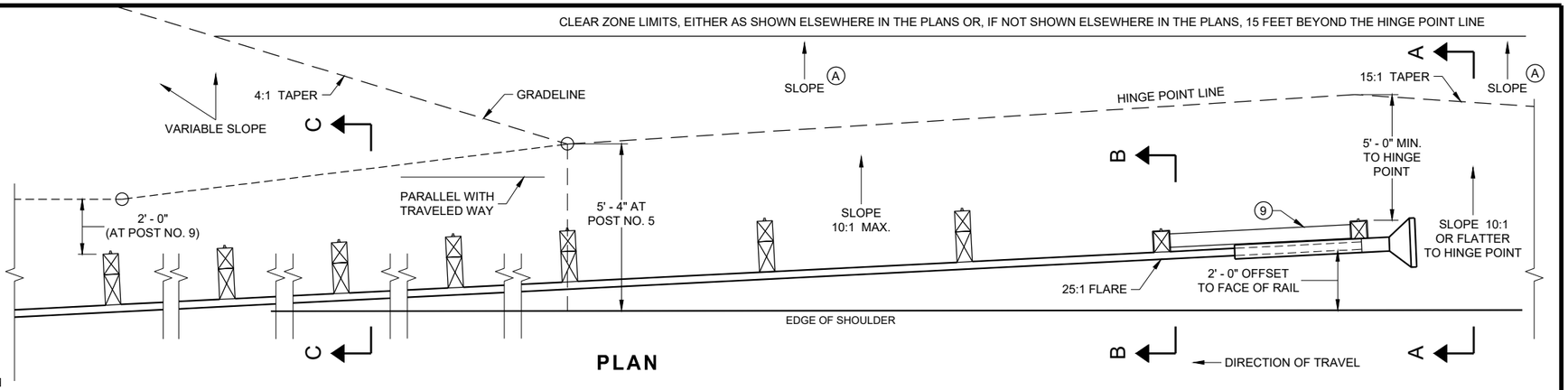
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

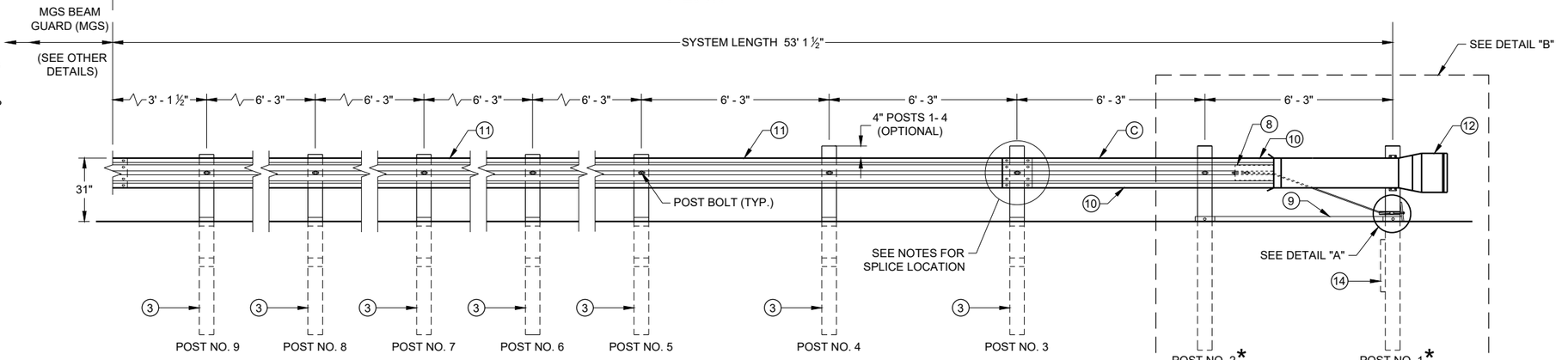
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



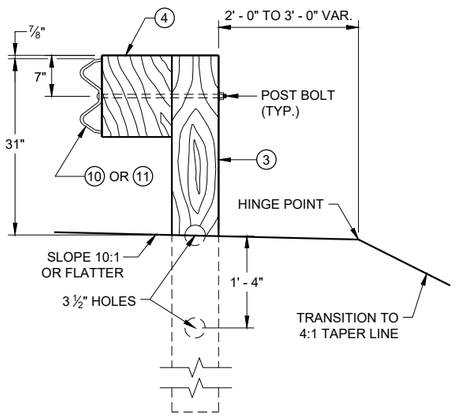
DETAIL "A" (E)



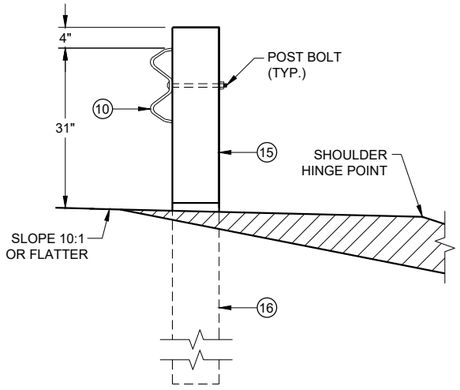
PLAN



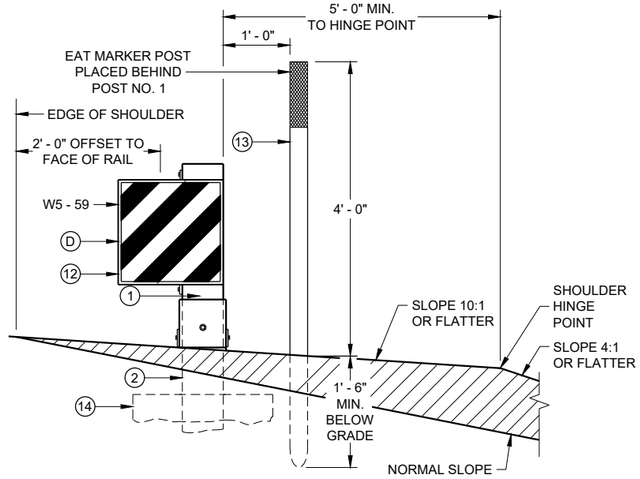
ELEVATION



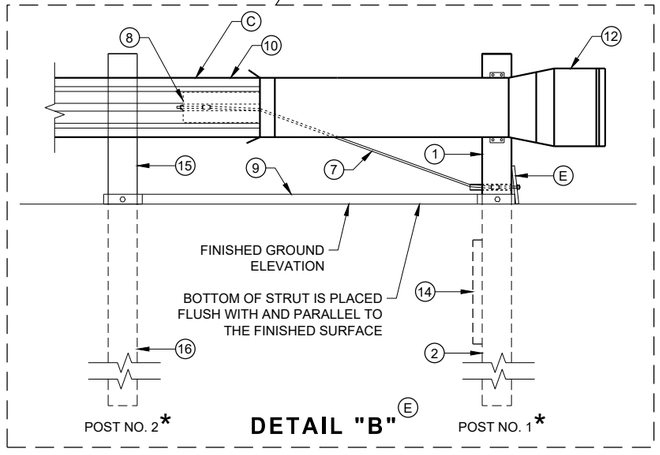
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



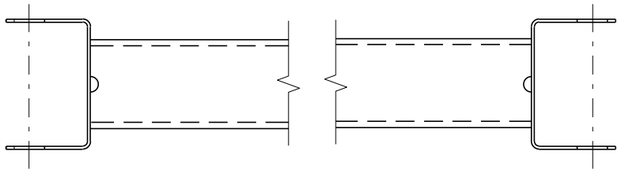
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

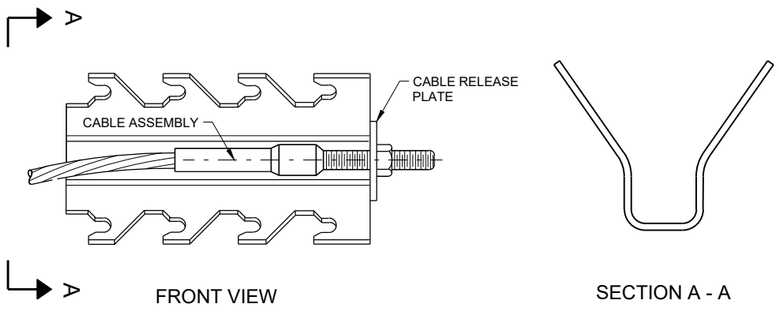
SDD 14B44 - 04a



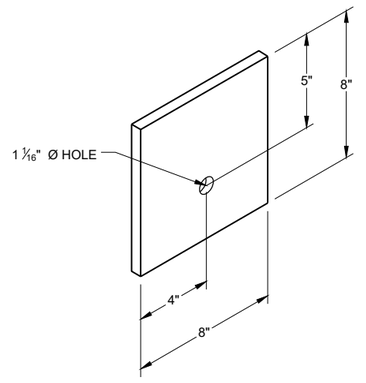
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

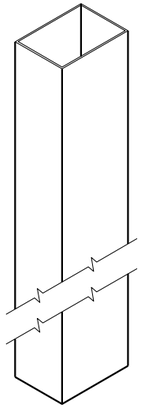
6

SDD 14B44 - 04b

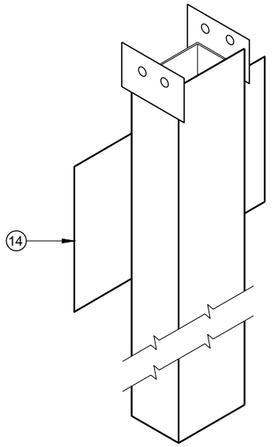
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

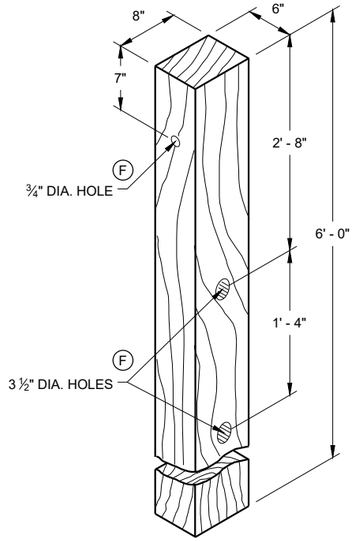
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



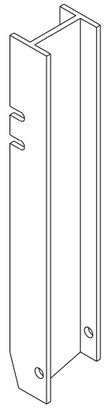
UPPER POST NO. 1 (1) (E)



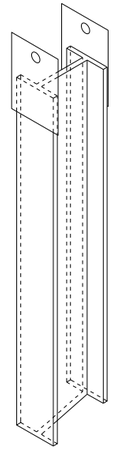
LOWER POST NO. 1 (2) (E)



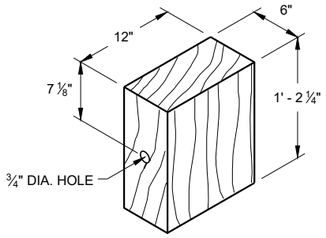
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



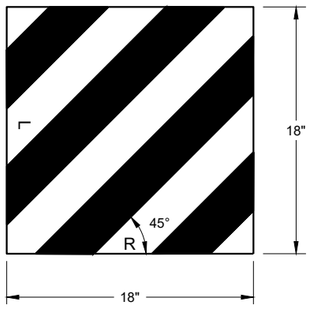
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

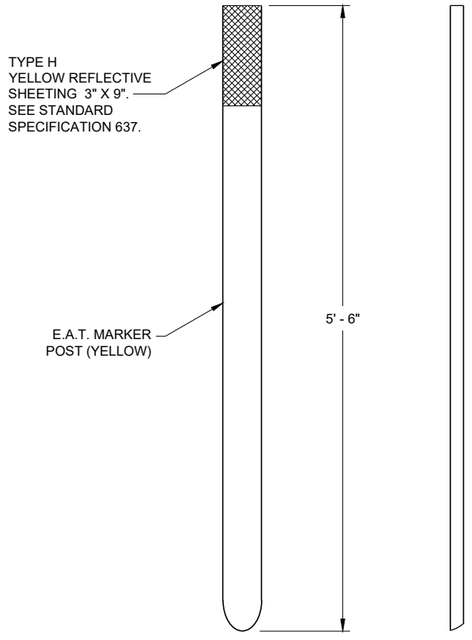


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



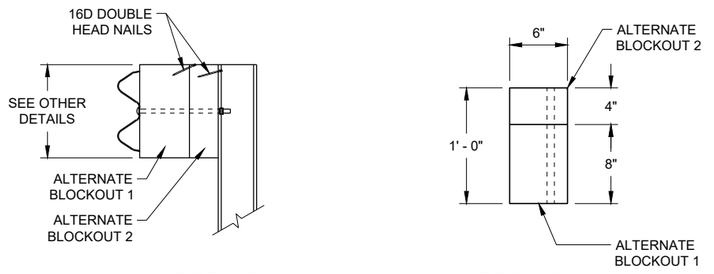
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

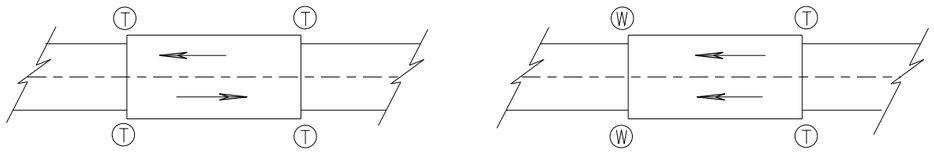
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

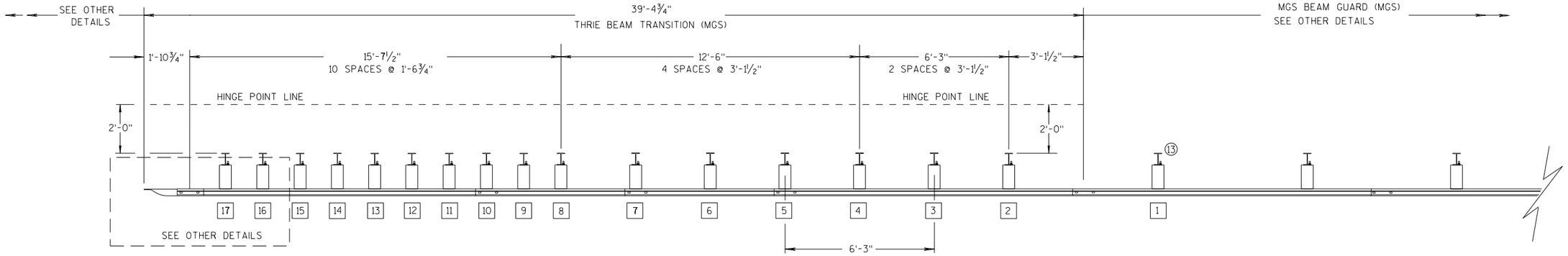
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

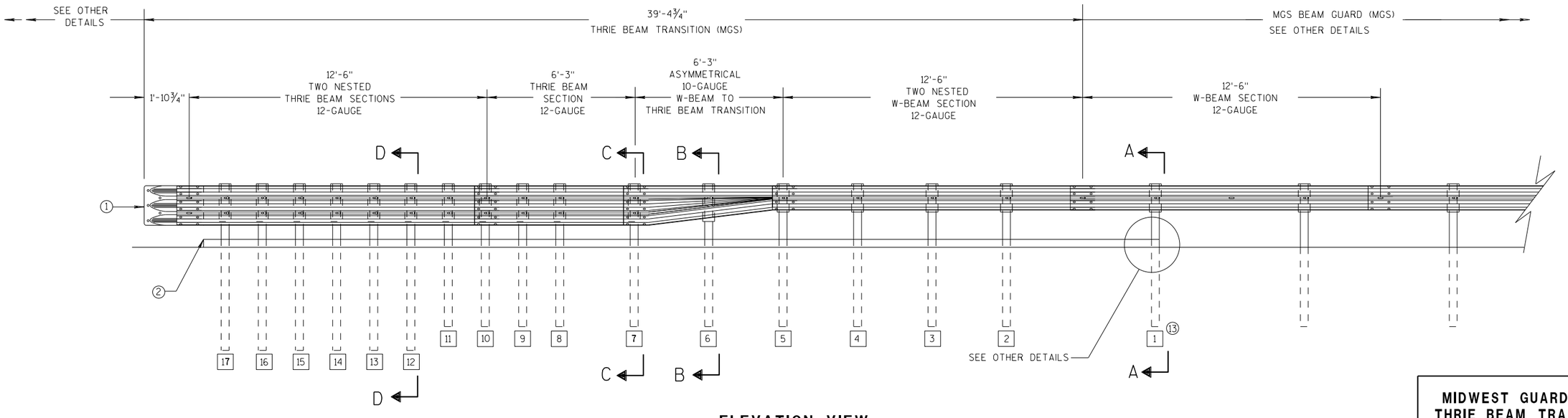
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

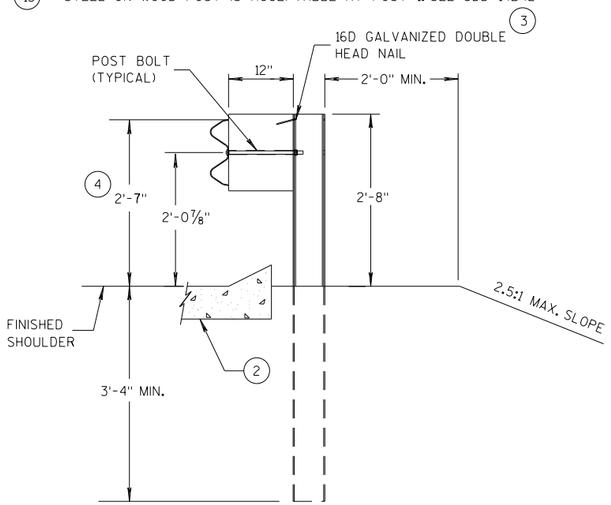
GENERAL NOTES

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

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

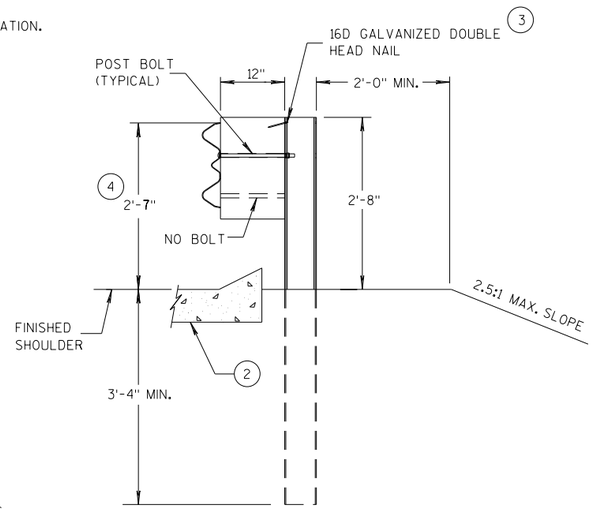
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



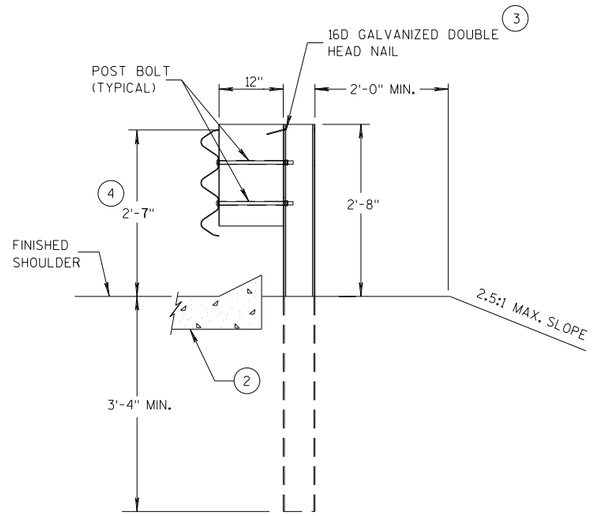
SECTION A-A (13)

POSTS 1-5



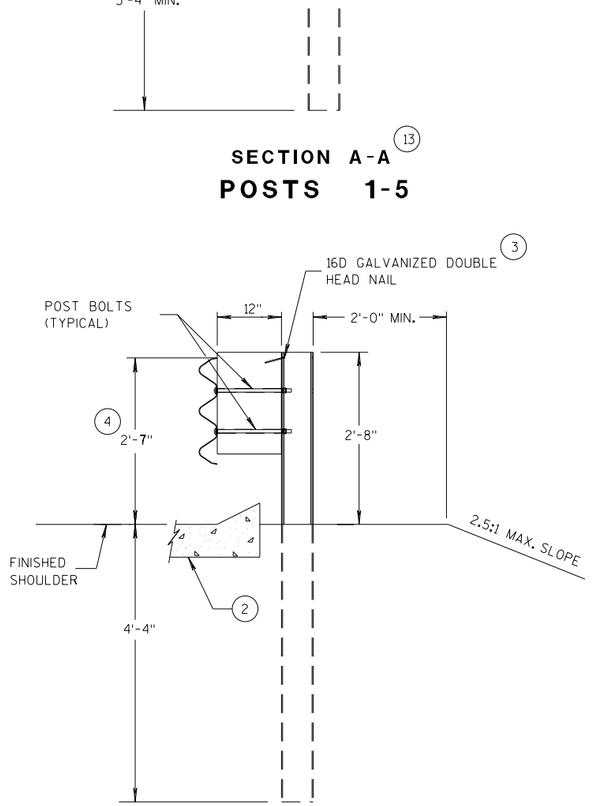
SECTION B-B

POST 6



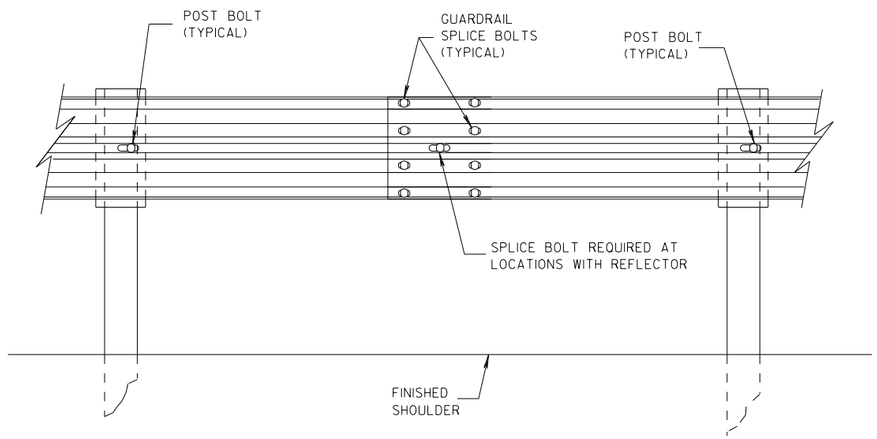
SECTION C-C

POSTS 7-11



SECTION D-D

POSTS 12-17



SPLICE DETAIL

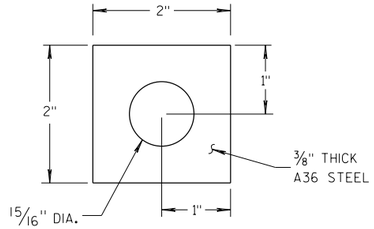
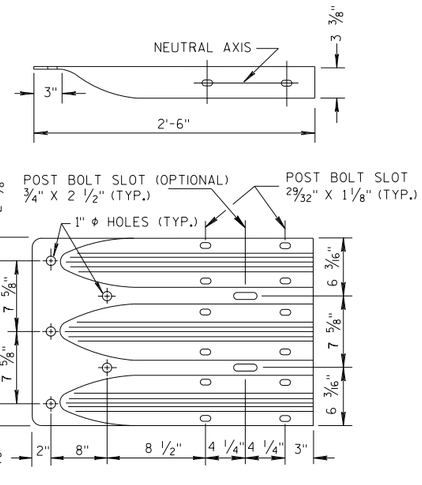
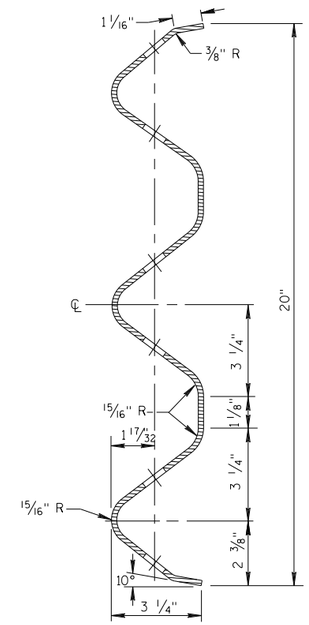


PLATE WASHER DETAIL



THRIE BEAM TERMINAL CONNECTOR



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

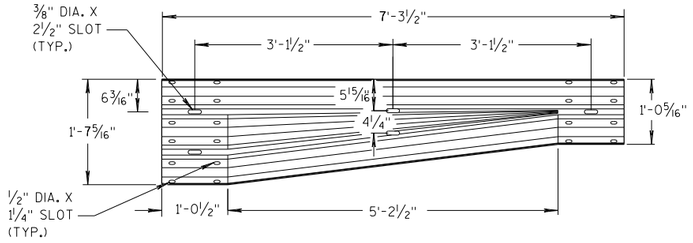
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 44

6

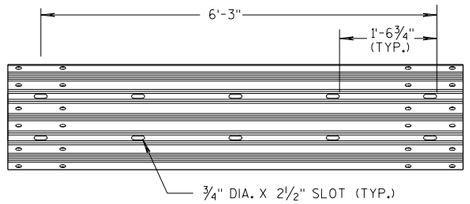
S.D.D. 14 B 45-5b

6

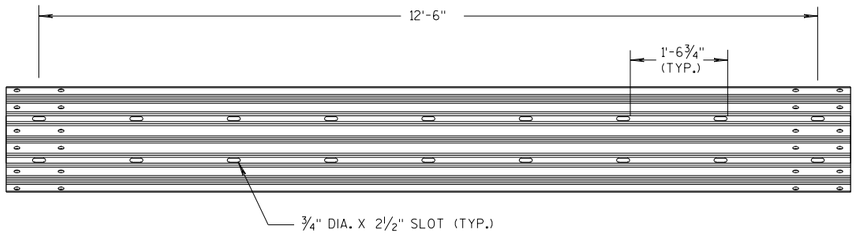
S.D.D. 14 B 45-5b



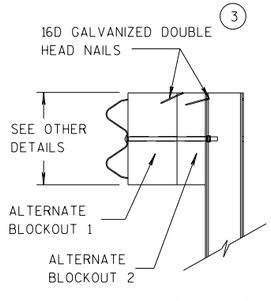
W-BEAM TO THRIE BEAM TRANSITION SECTION



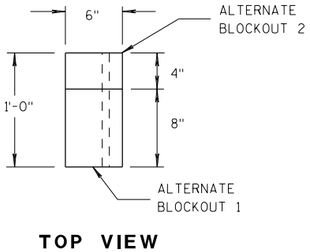
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

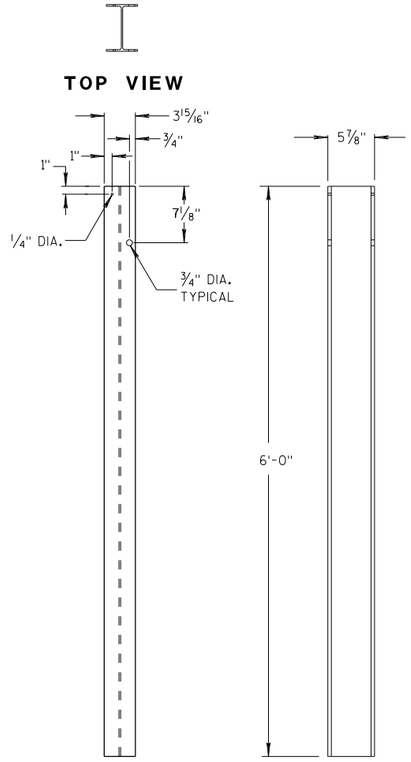


SIDE VIEW



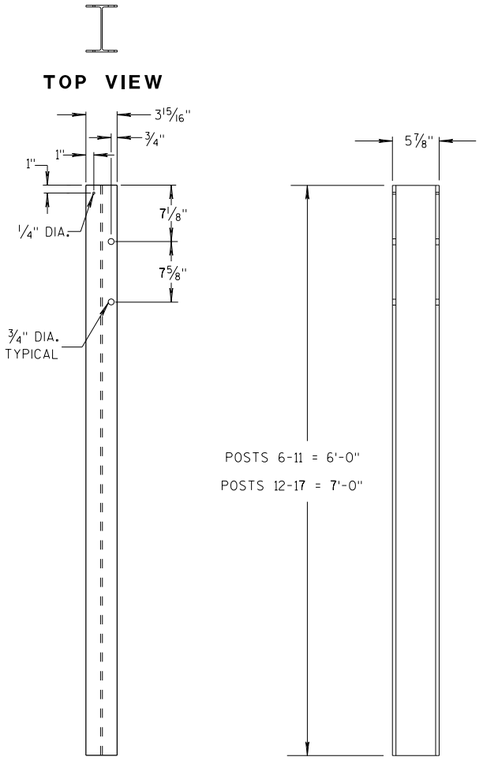
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



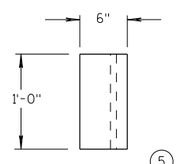
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

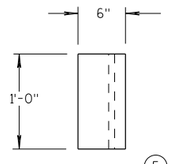


FRONT VIEW SIDE VIEW

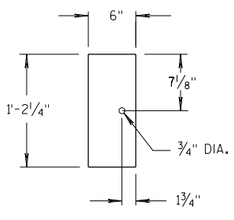
STEEL POSTS 6-17



TOP VIEW (5)

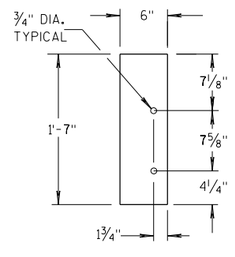


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

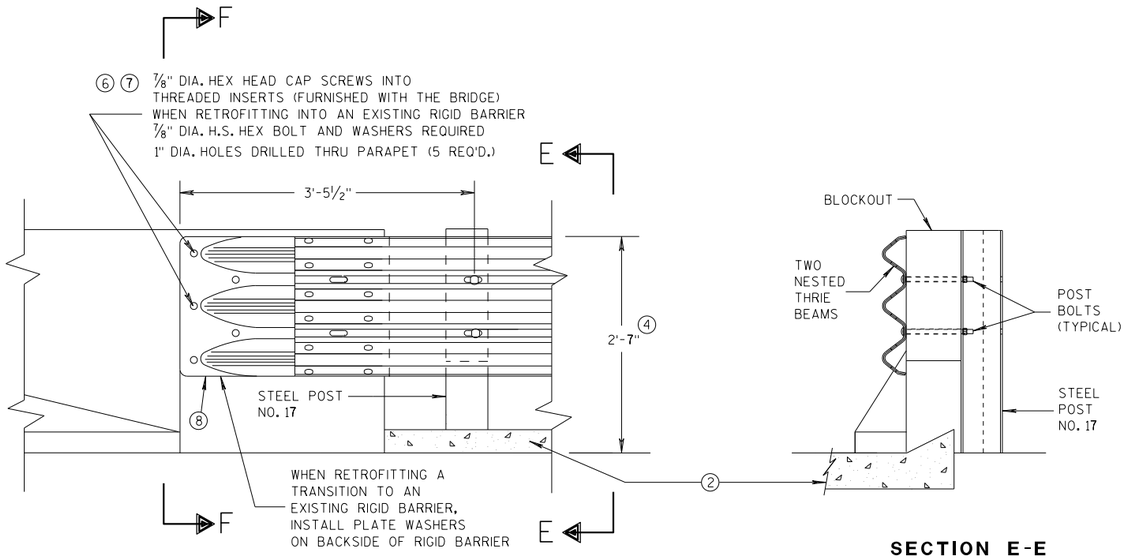
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 45

6
S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

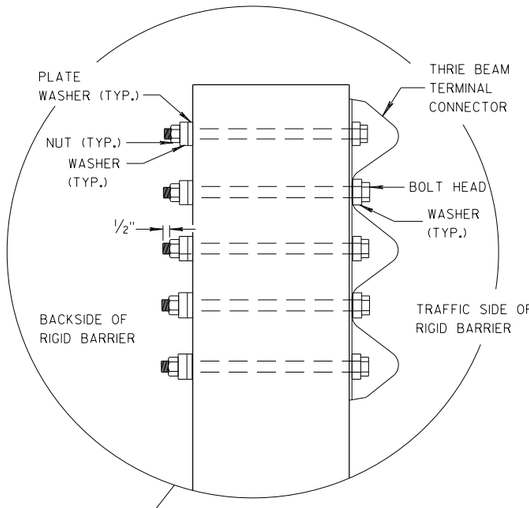
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

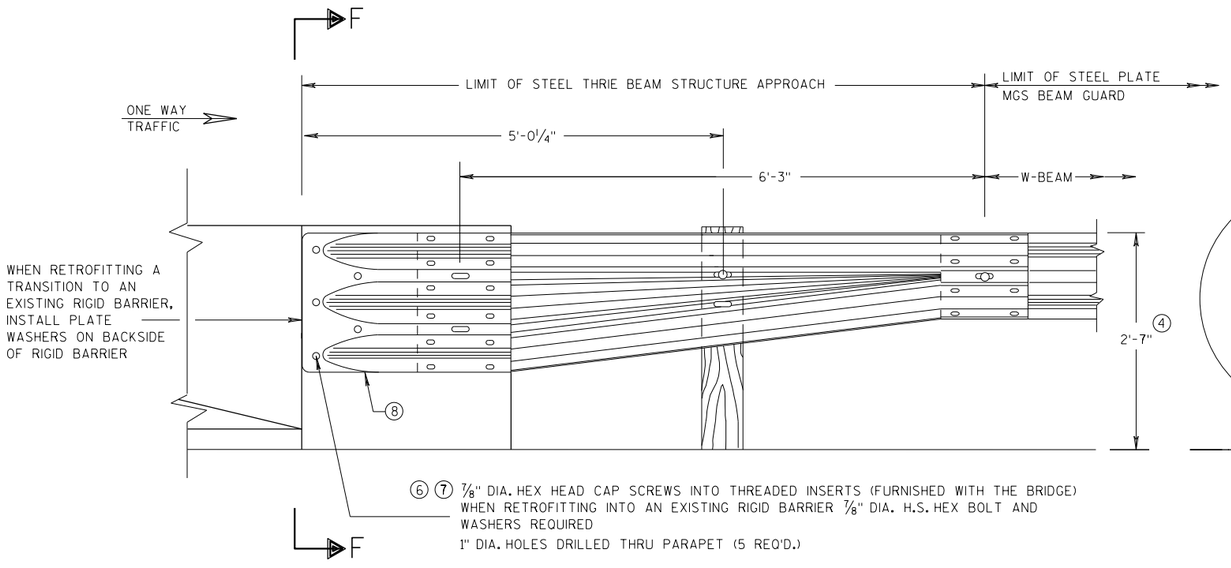
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

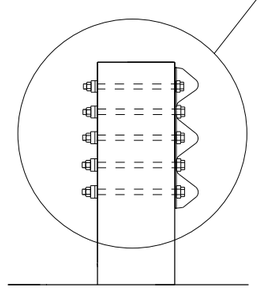
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

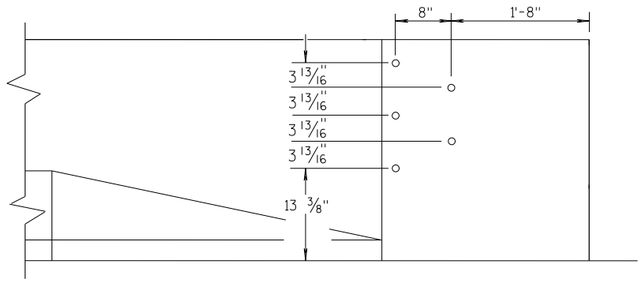




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

6

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

GENERAL NOTES

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

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

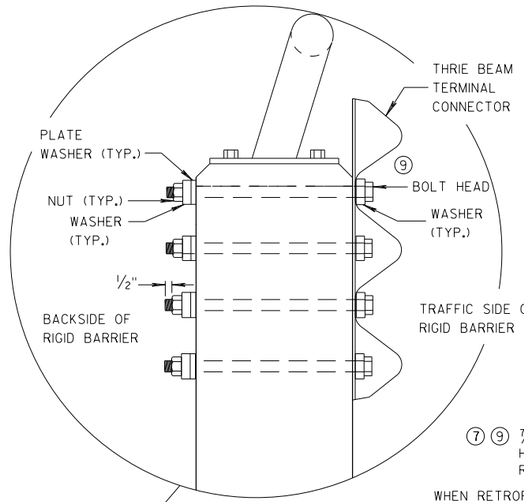
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

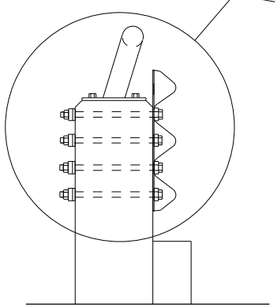
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

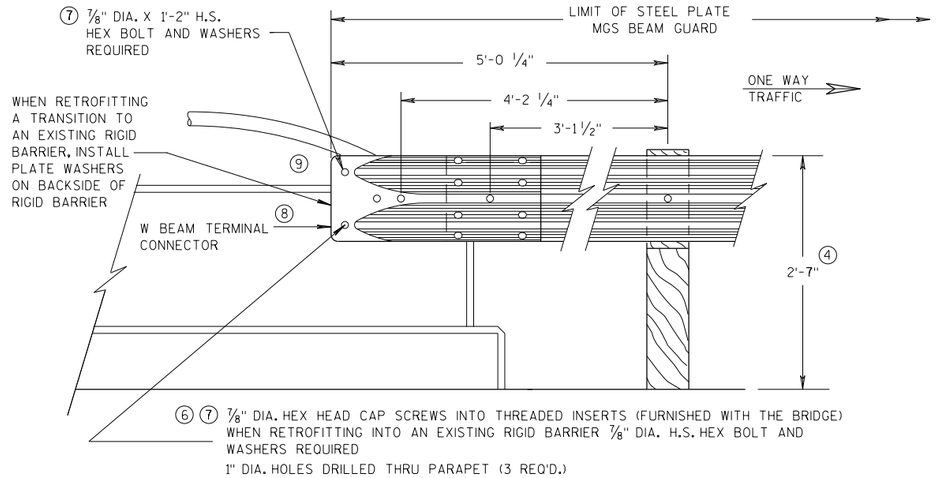
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





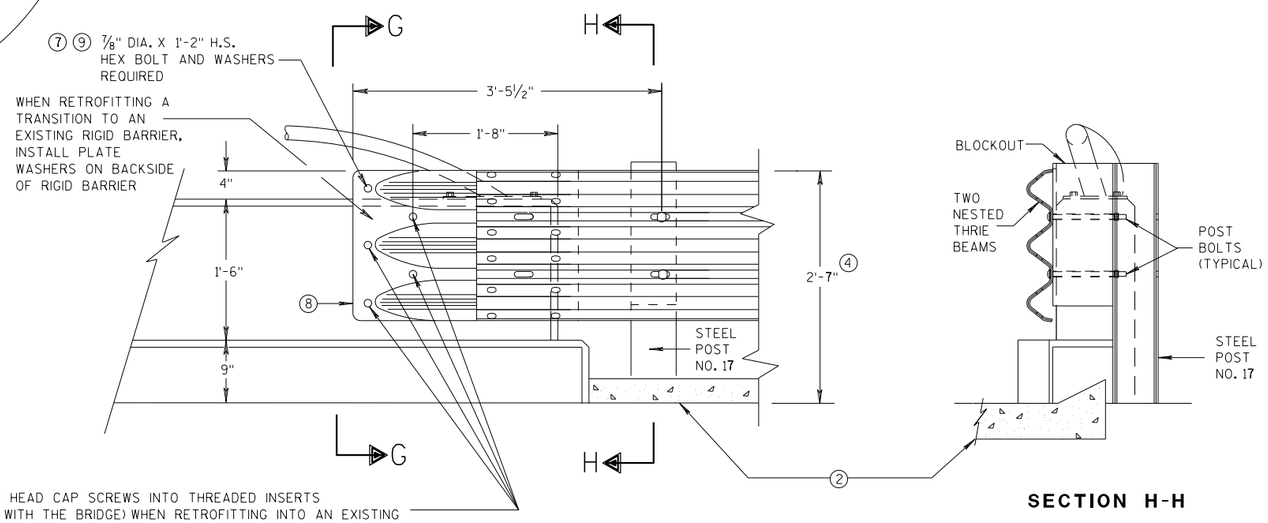
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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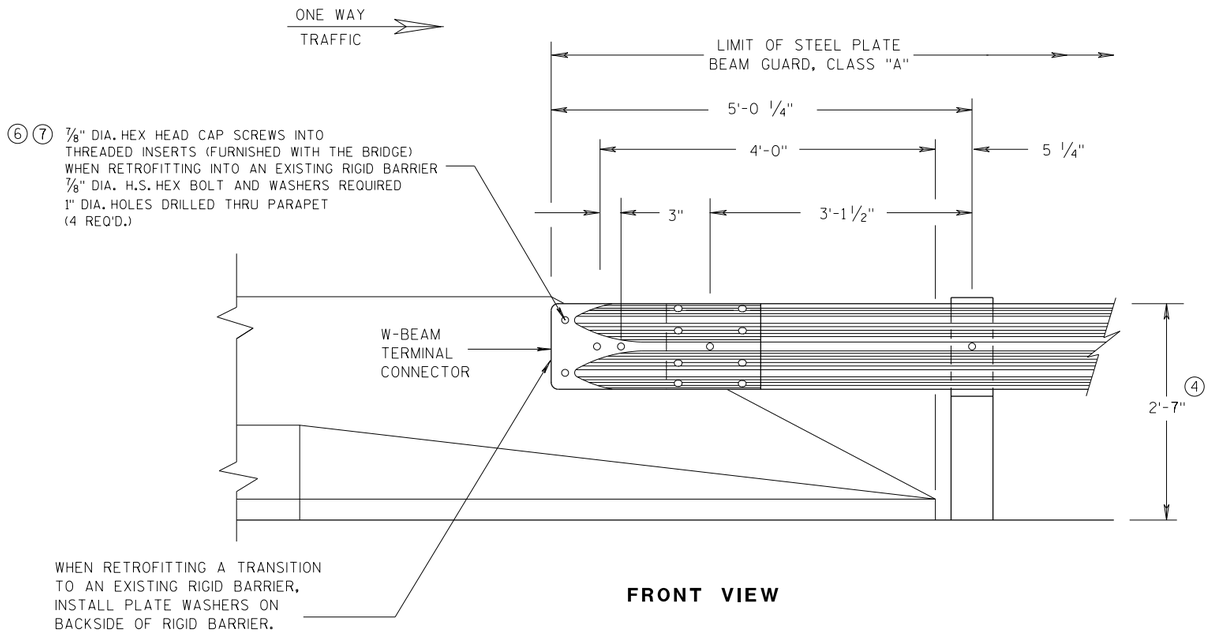
S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

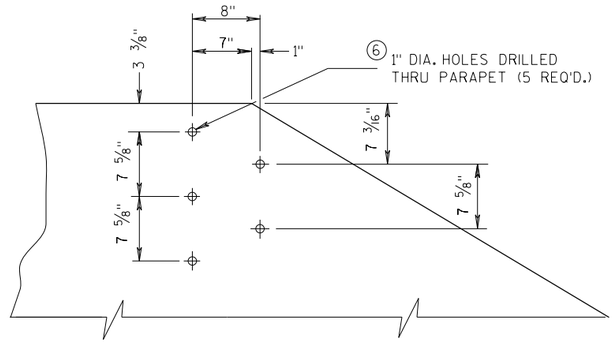
GENERAL NOTES

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

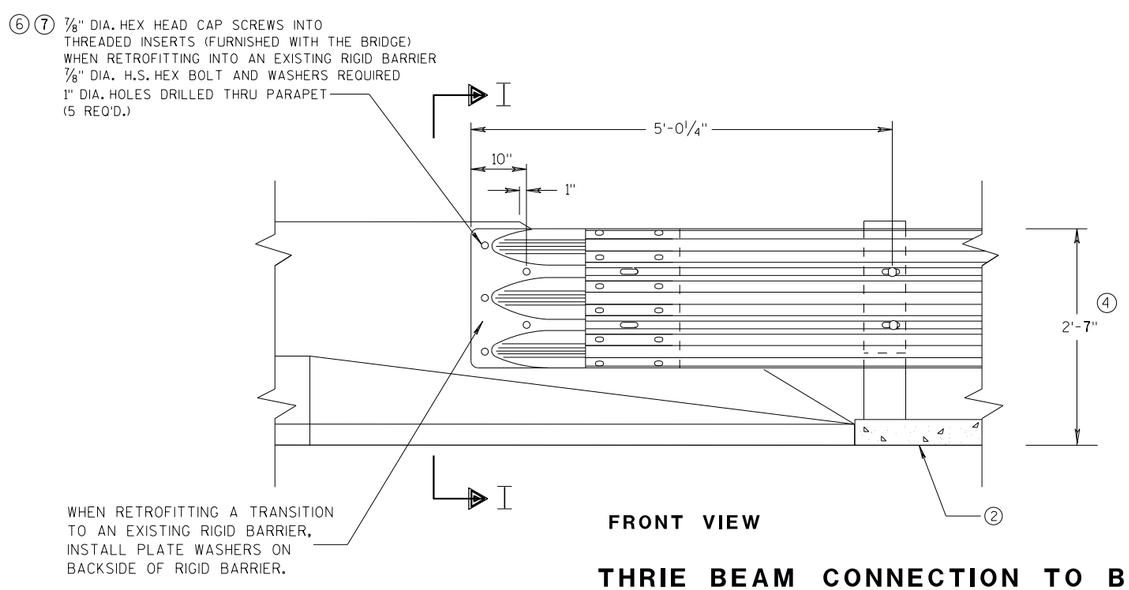
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

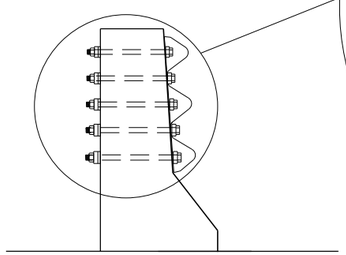
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



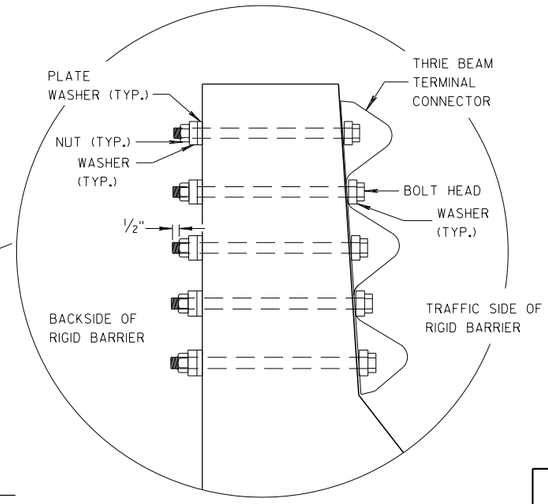
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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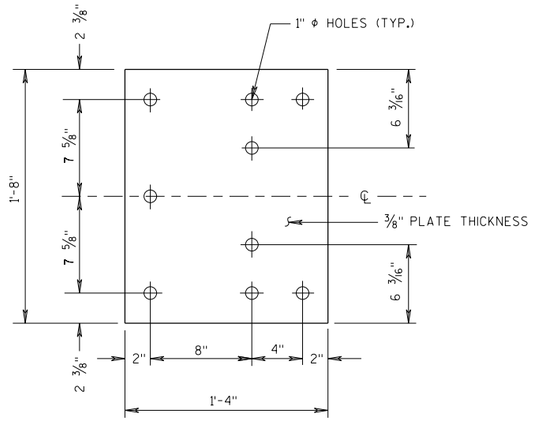
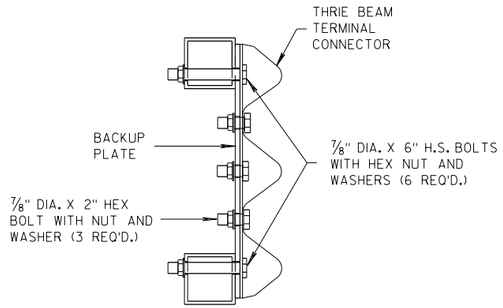
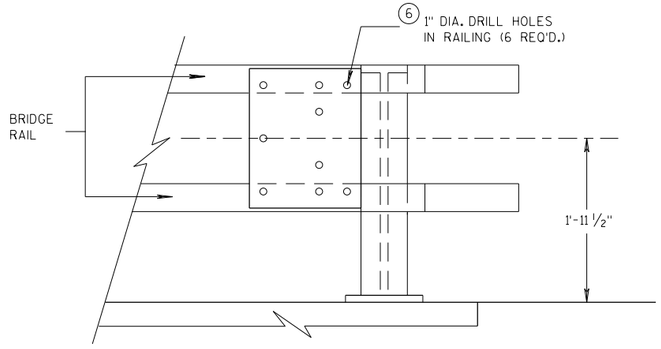


BACK-UP PLATE DETAIL



SECTION J-J

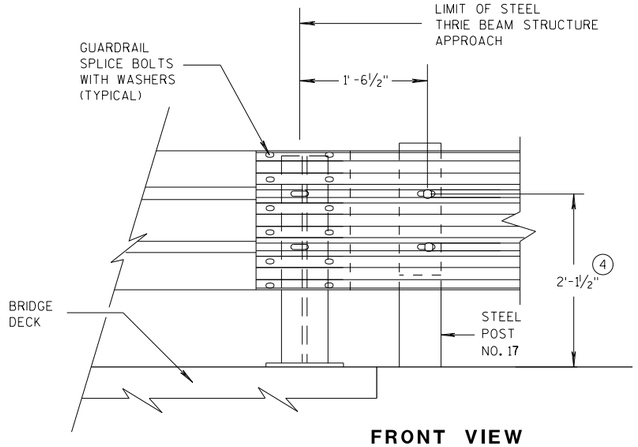


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

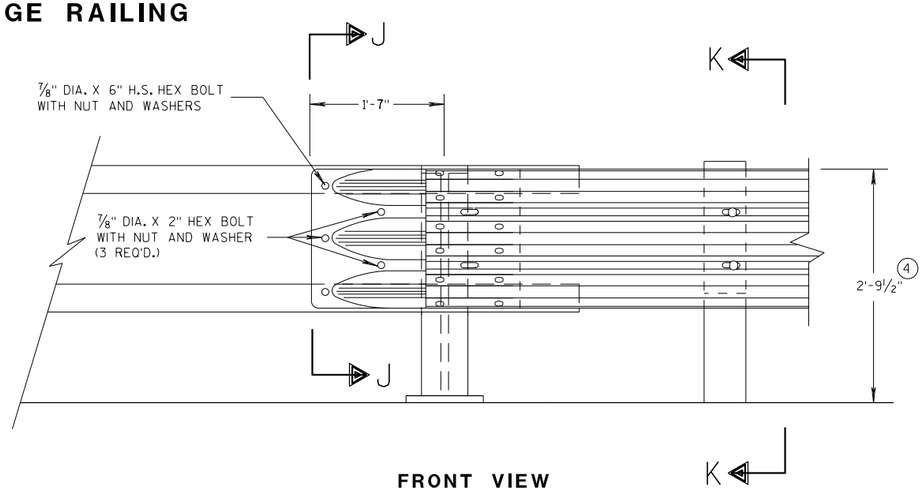
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

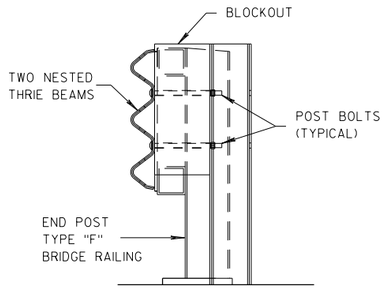


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
FHWA

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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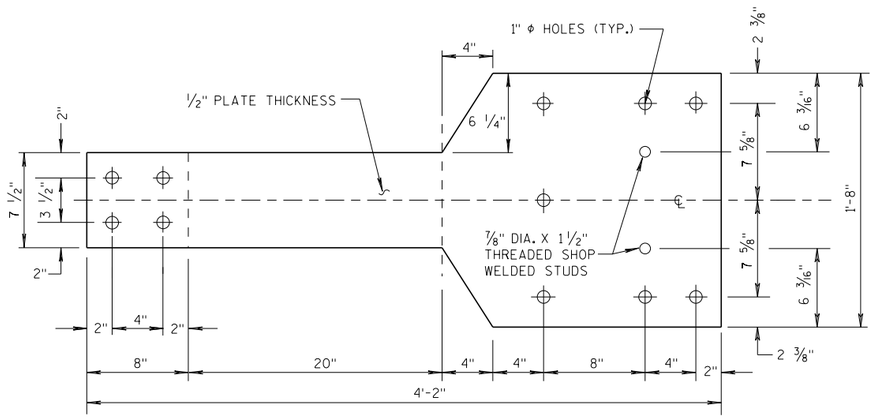
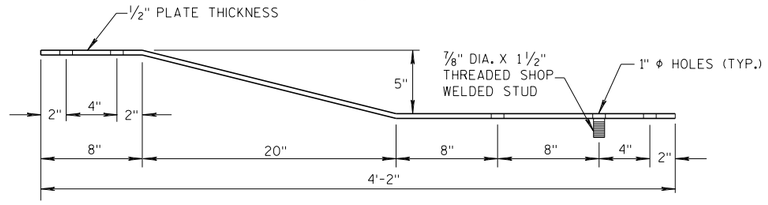
GENERAL NOTES

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

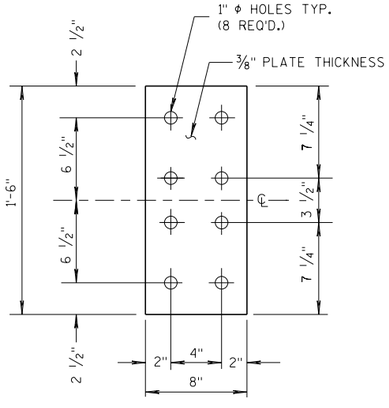


FRONT VIEW



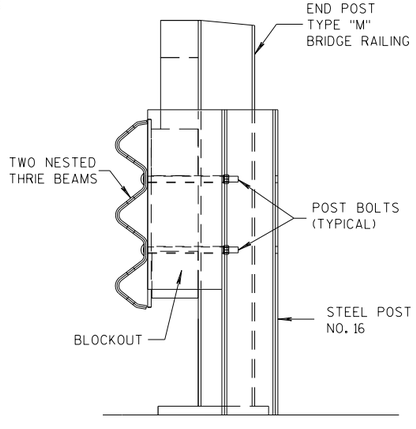
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

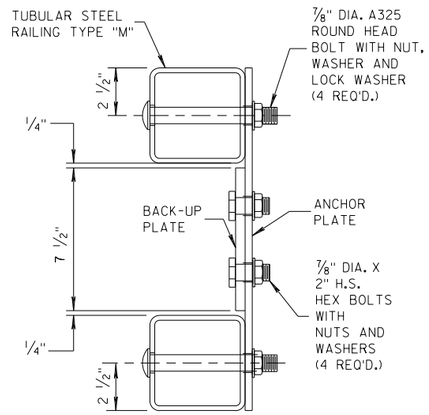


FRONT VIEW

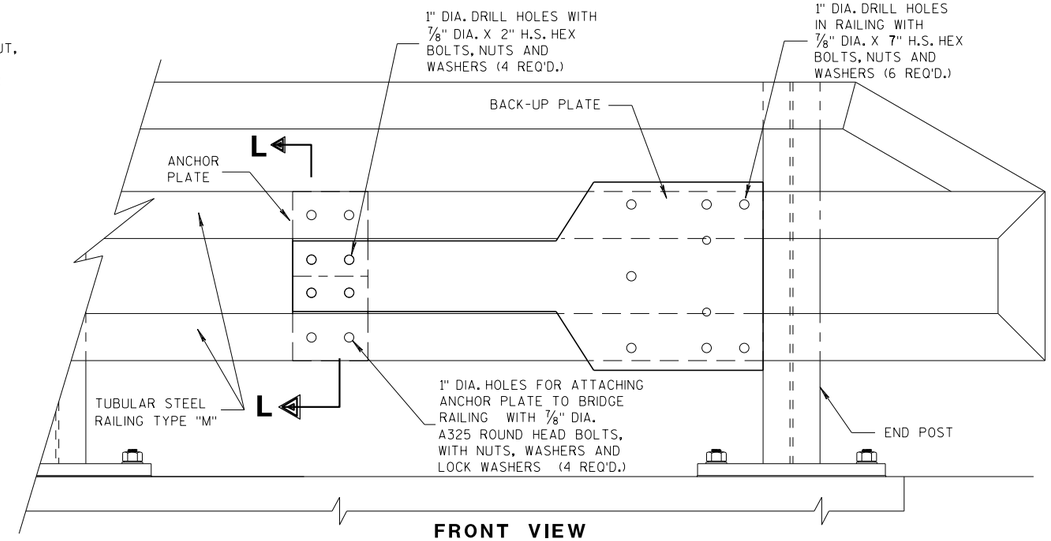
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

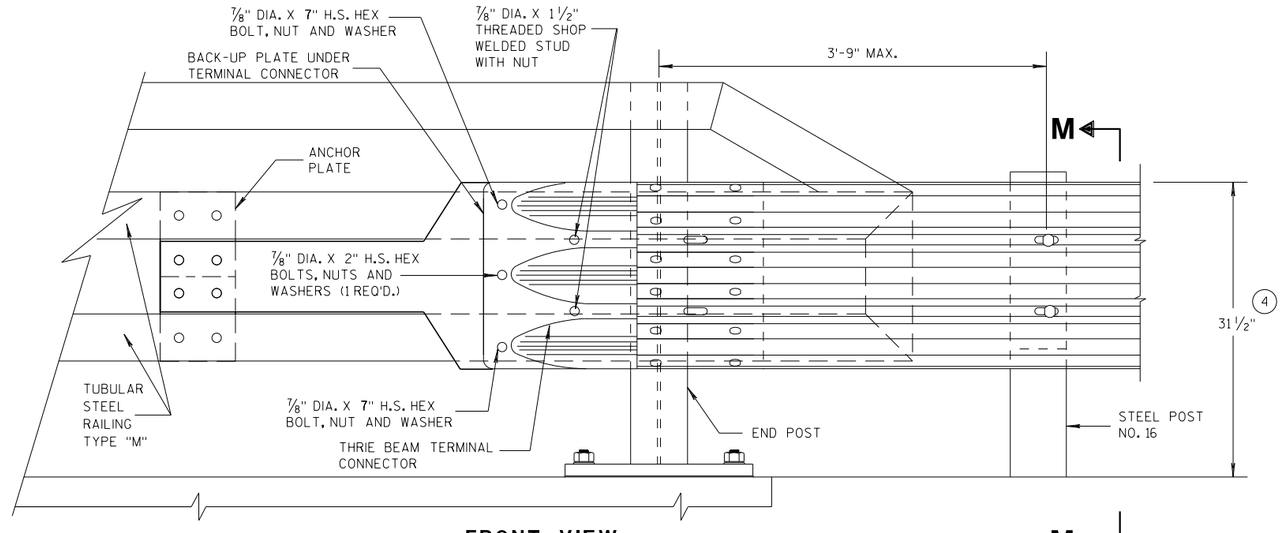


SECTION L-L

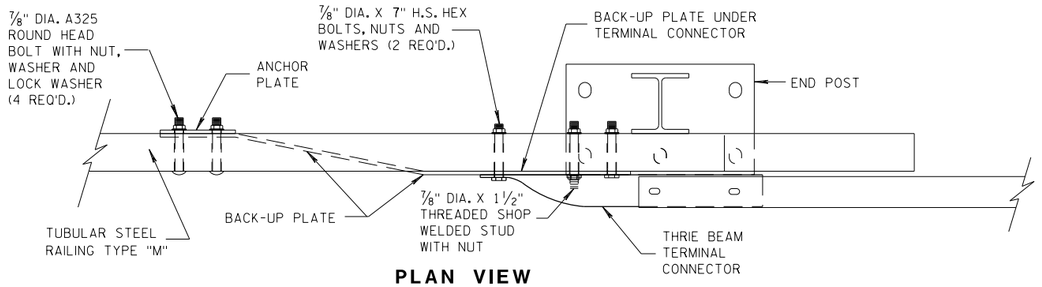


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
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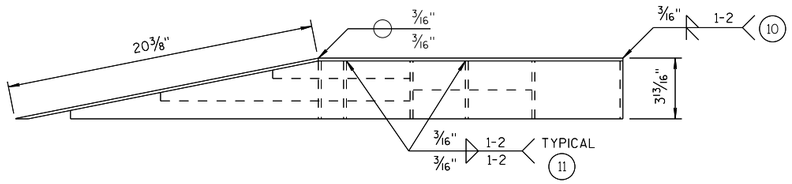

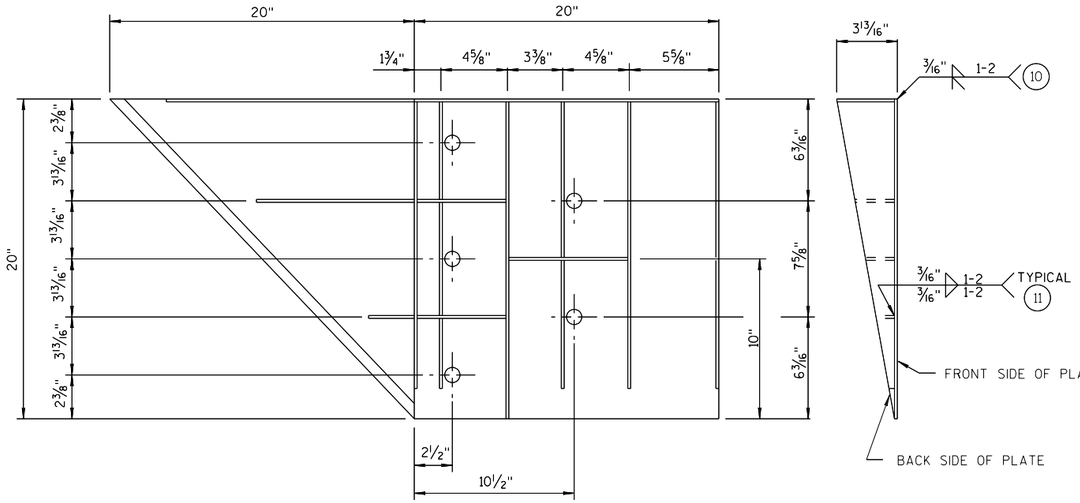

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

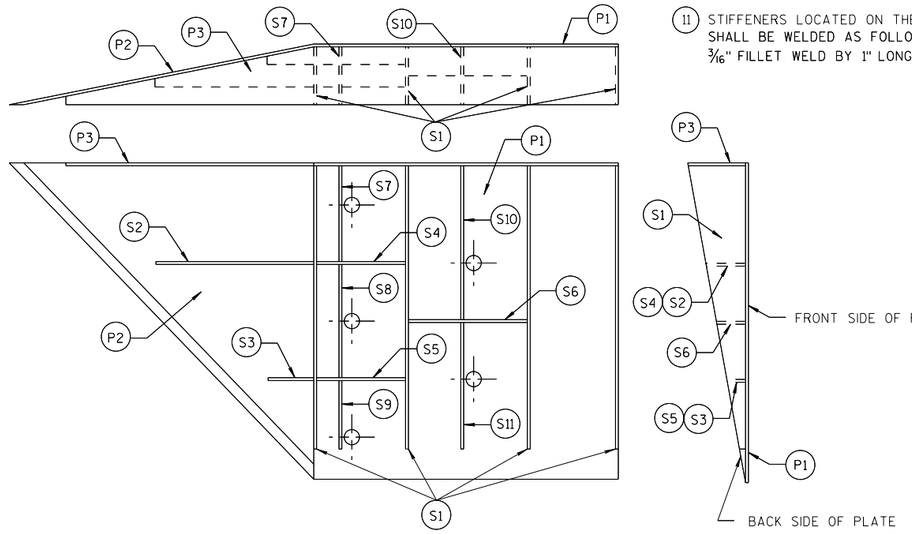

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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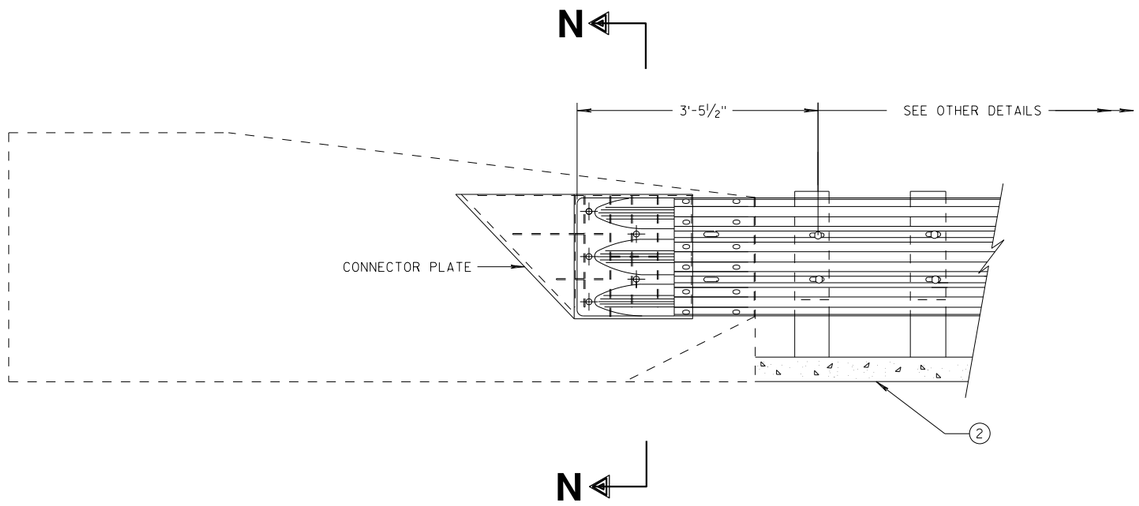
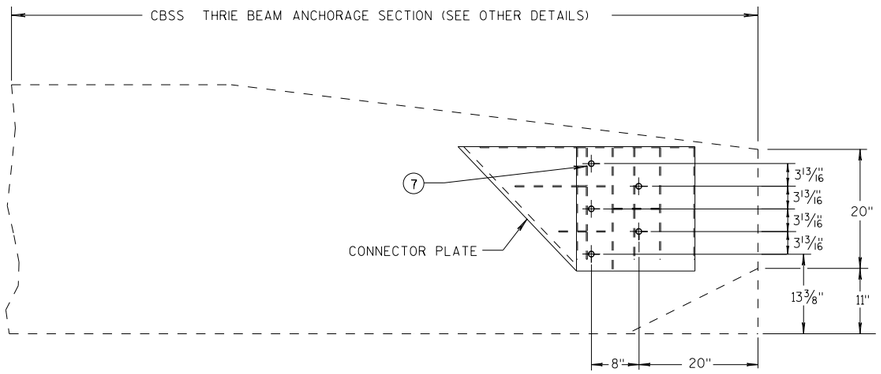


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



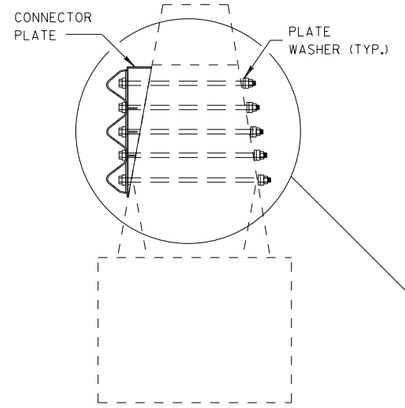
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

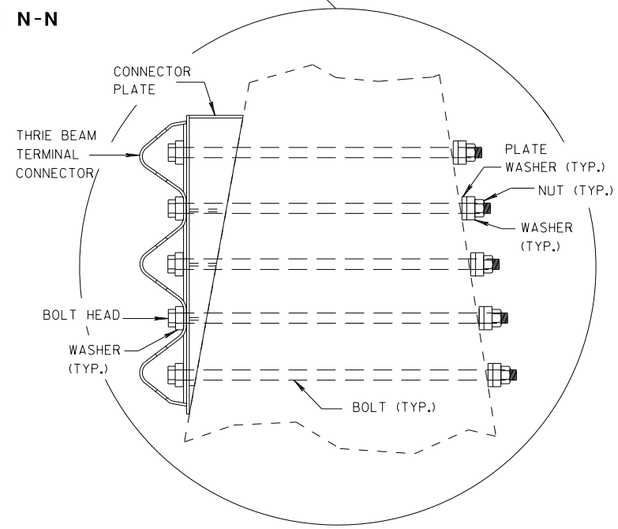
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
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UNIT SUPERVIS
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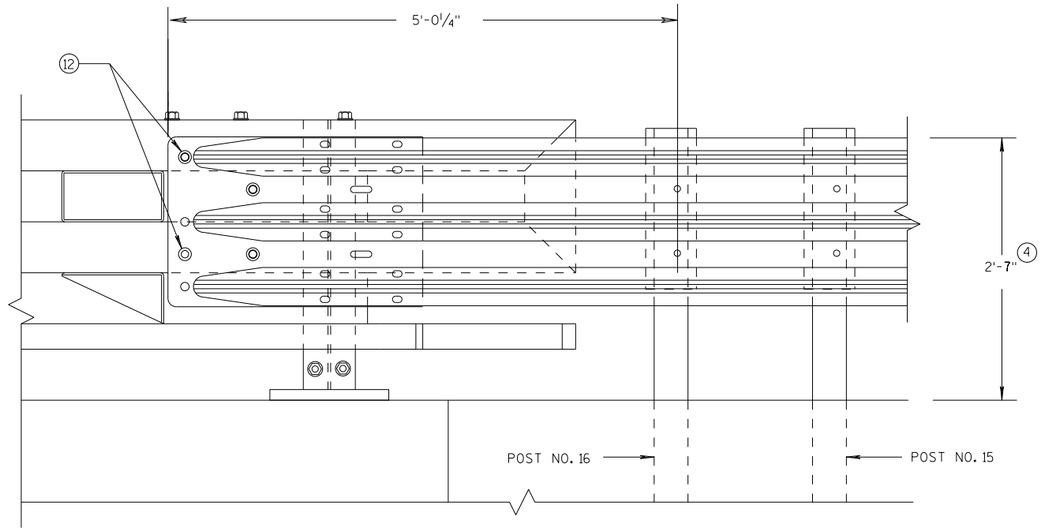
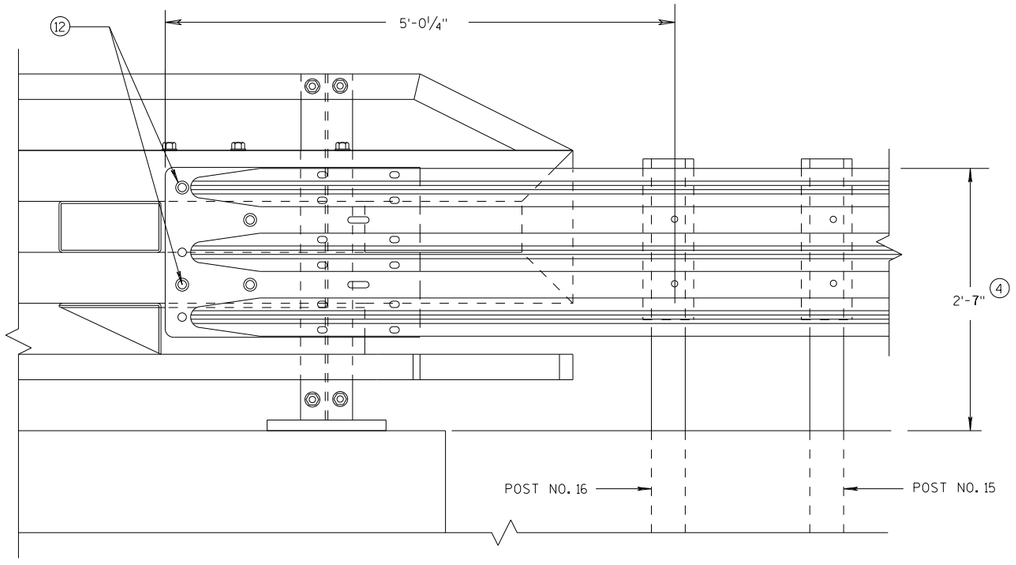


ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

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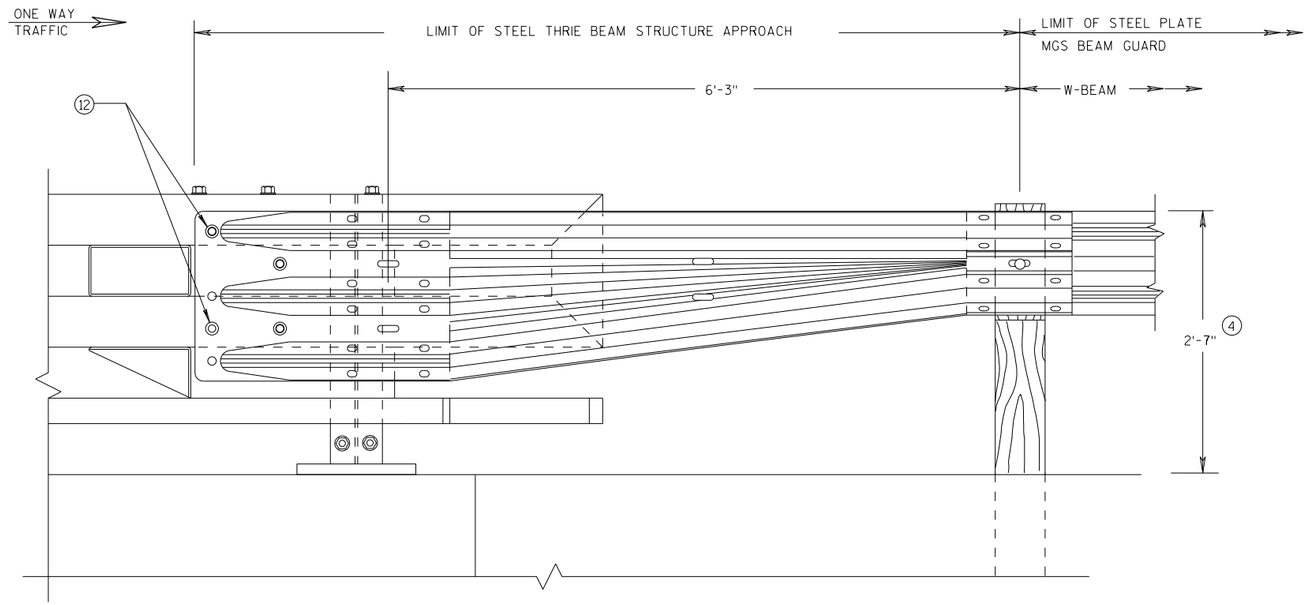


FRONT VIEW

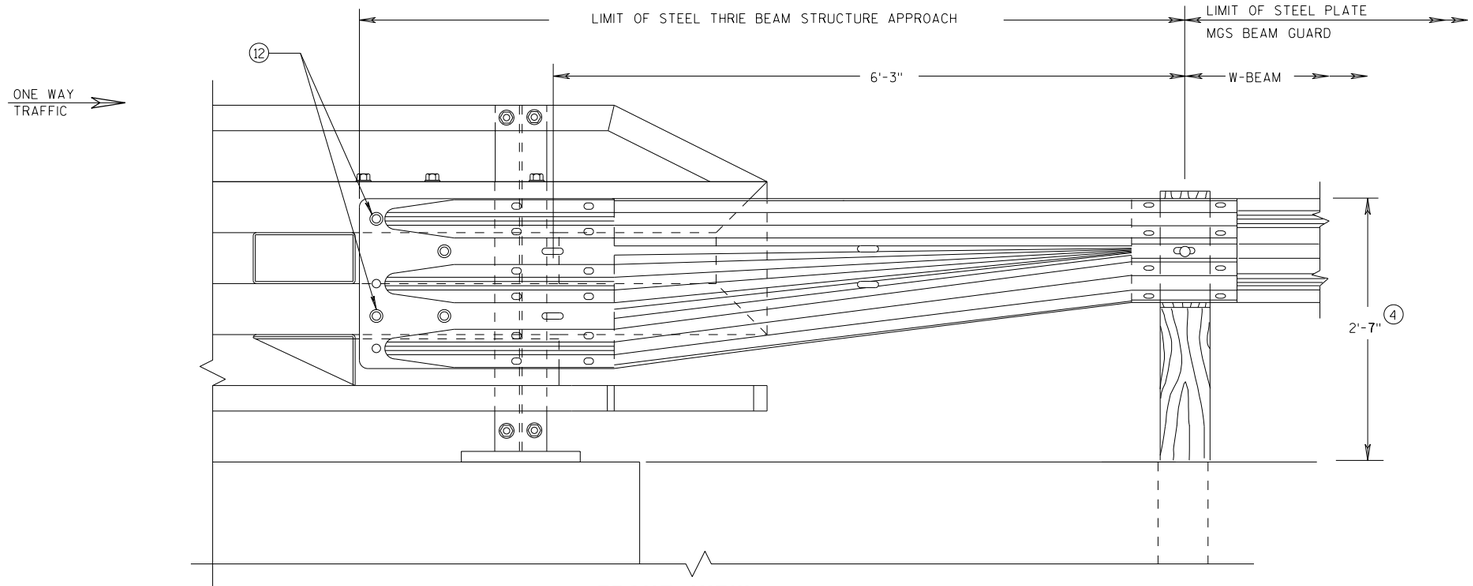
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

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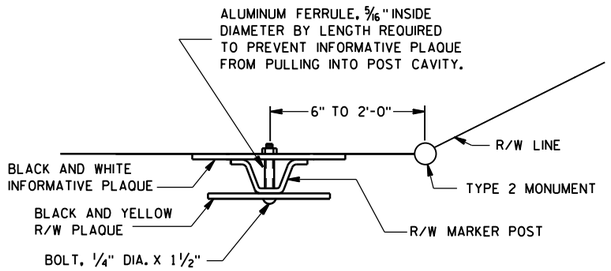
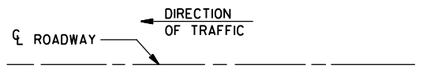
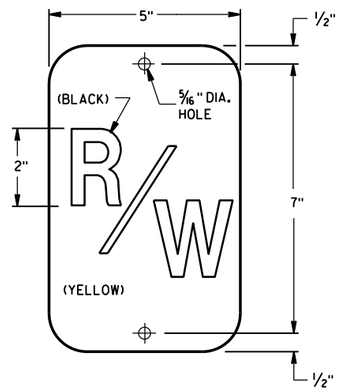


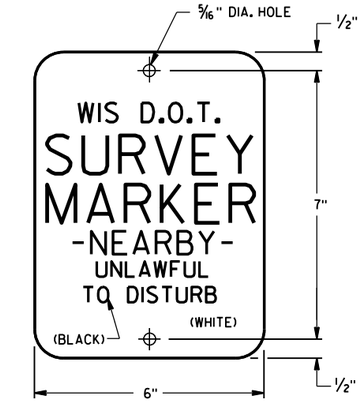


PLAN VIEW



R/W PLAQUE

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



INFORMATIVE PLAQUE

GENERAL NOTES

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

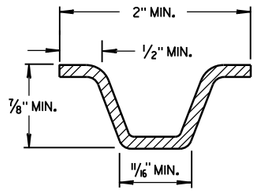
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

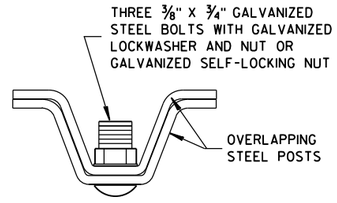
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3'10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.

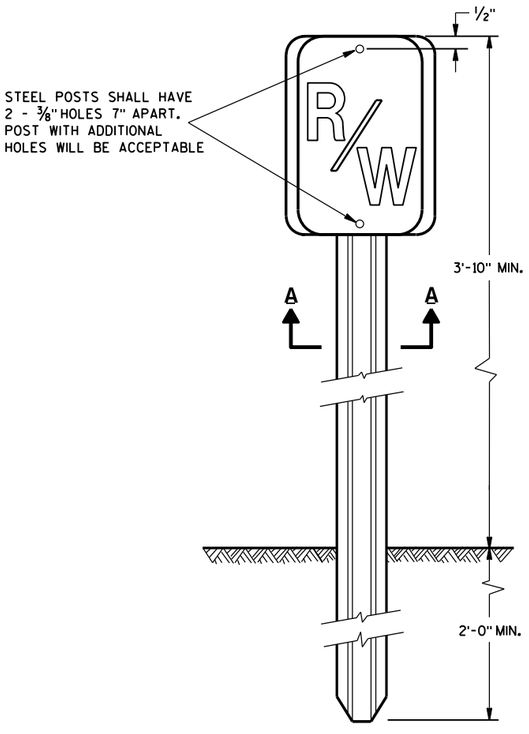


MIN. WEIGHT 1.12 LB./FT.

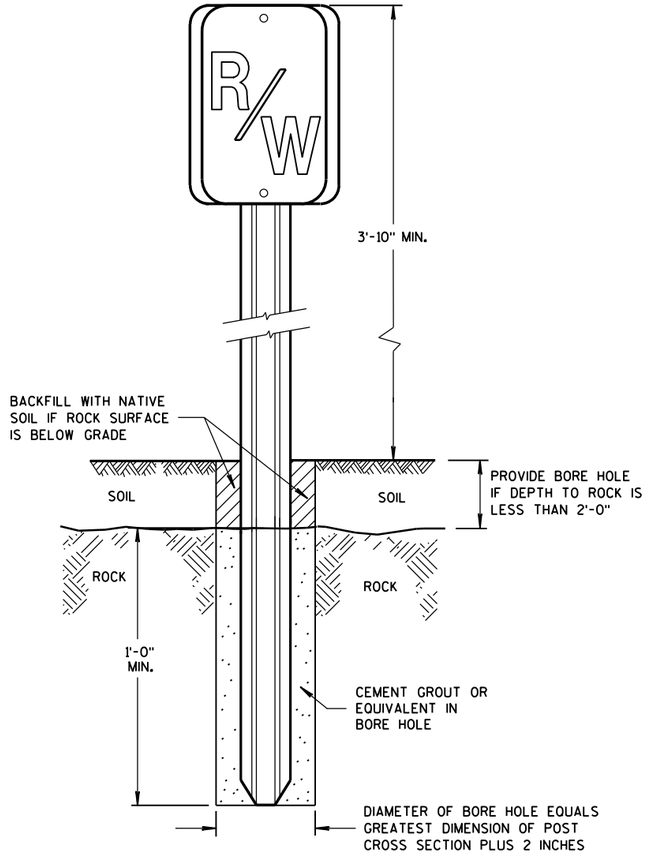
SECTION A-A



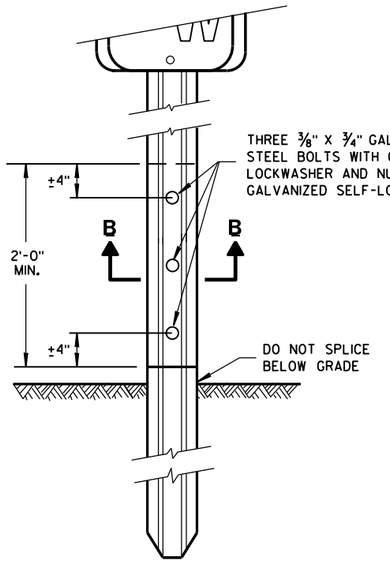
SECTION B-B



FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)



FRONT VIEW
SPLICE DETAIL

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MA[illegible]INEER
FHWA

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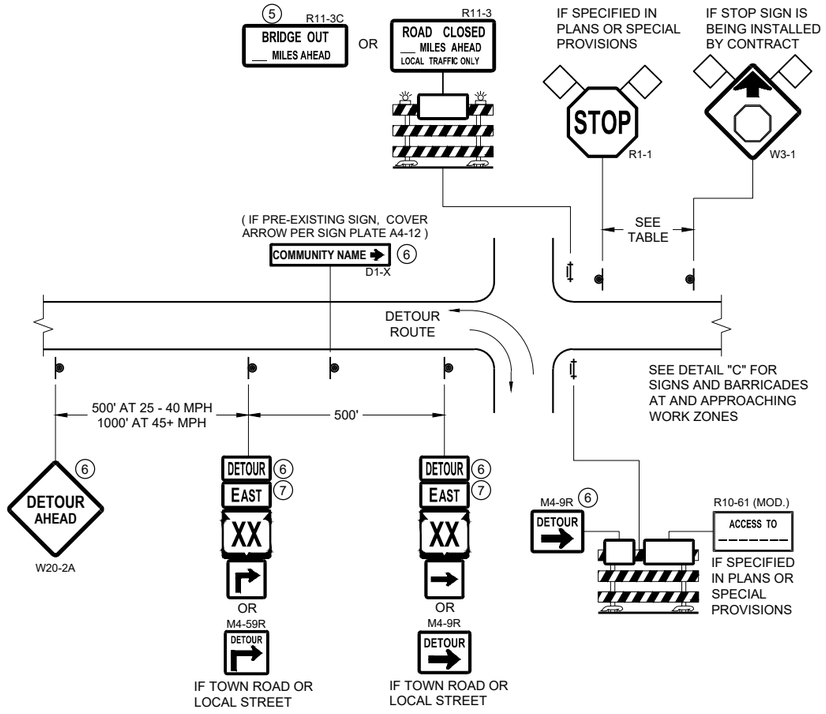
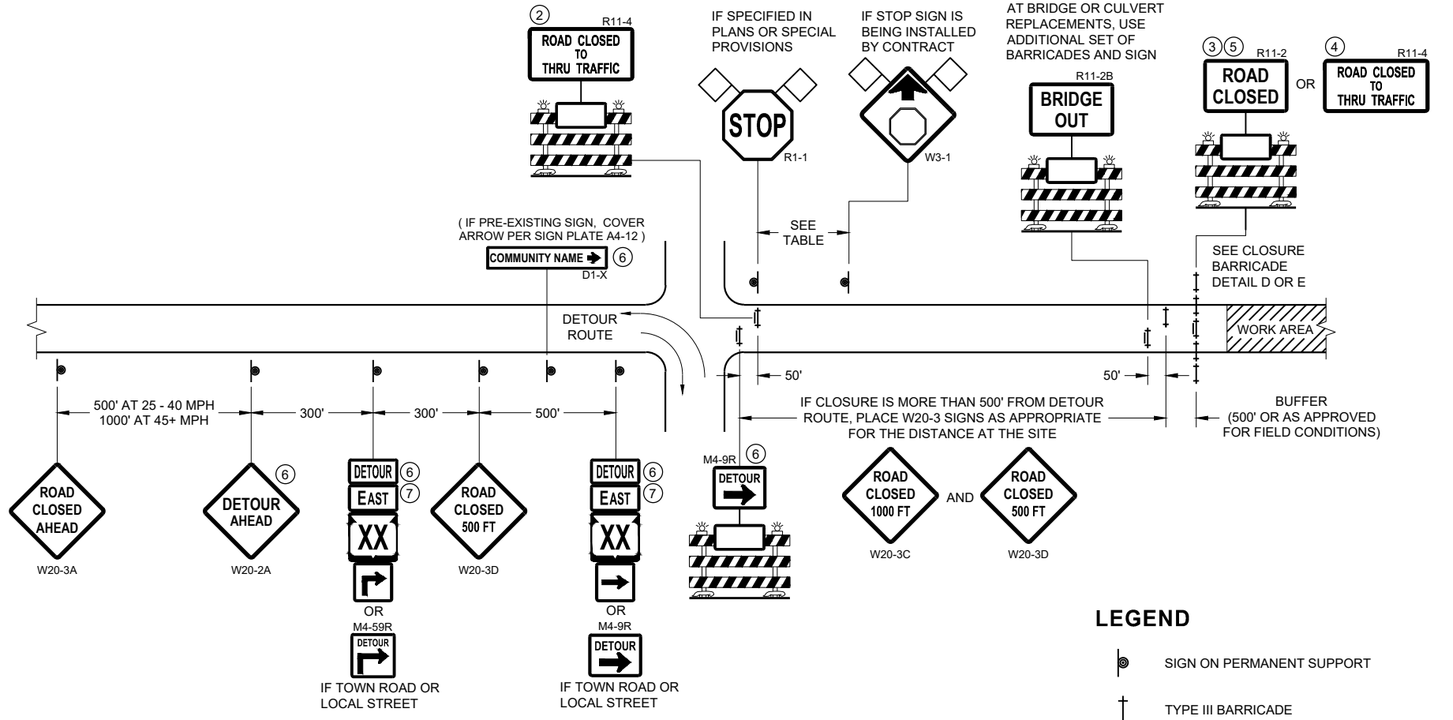




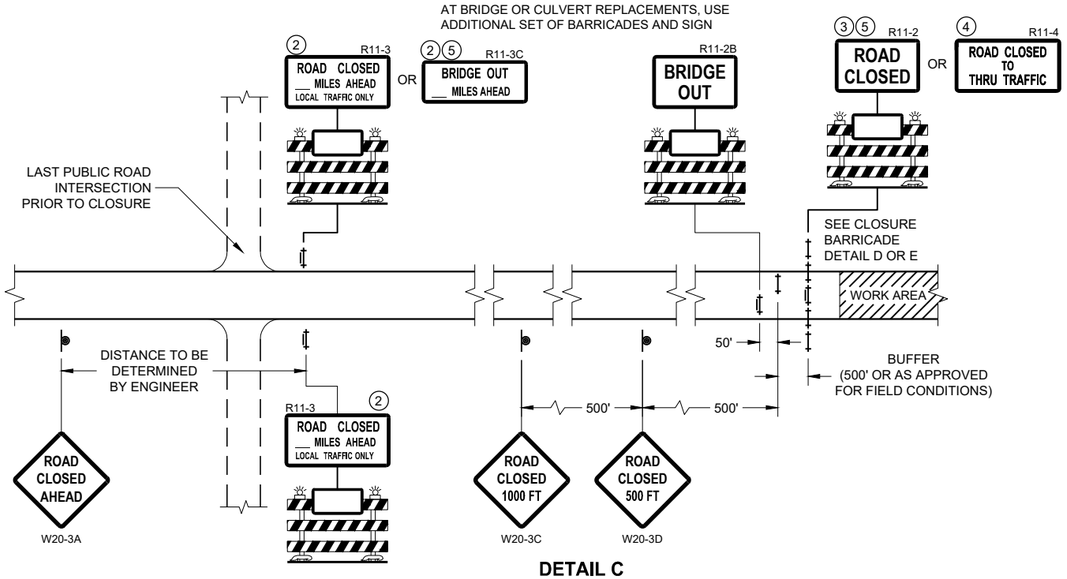
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

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

LEGEND

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

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 15C02 - 07a

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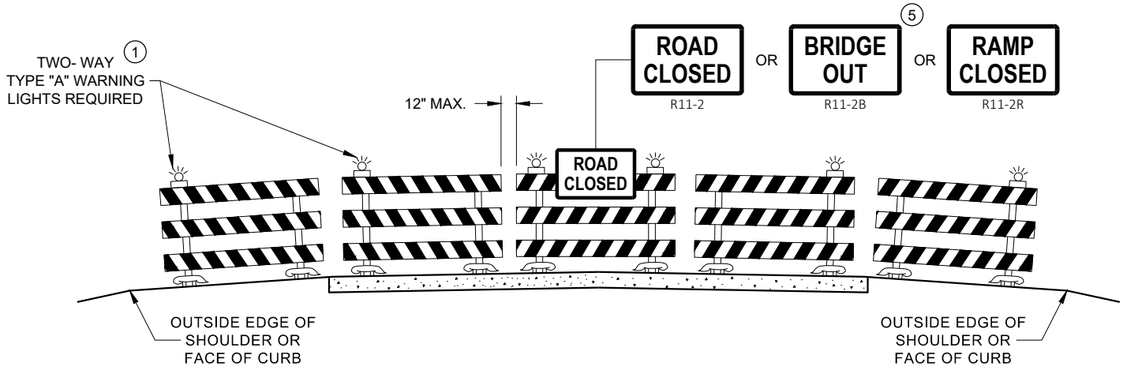
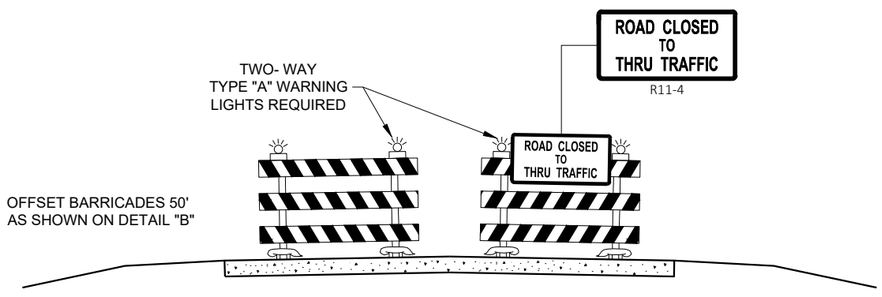


DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

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

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

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

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

500' AT 25-40 MPH
1000' AT 45+ MPH

500'

DETOUR EAST XX *

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-8a END DETOUR WEST XX *

DETOUR EAST XX / WEST XX

DETOUR ROUTE

WORK AREA

DETOUR EAST XX

WEST XX OR M4-9L DETOUR ** IF TOWN ROAD OR LOCAL STREET

500'

DETOUR NEXT X MILES * G20-51

DETOUR WEST XX * OR M4-59L DETOUR ** IF TOWN ROAD OR LOCAL STREET

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

MATCH POINT

* M4-59L DETOUR ** OR DETOUR EAST XX * IF TOWN ROAD OR LOCAL STREET

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

500'

M4-9L DETOUR ** OR DETOUR EAST XX IF TOWN ROAD OR LOCAL STREET

DETOUR WEST XX

DETOUR WEST XX OR M4-9R DETOUR ** IF TOWN ROAD OR LOCAL STREET

DETOUR WEST XX * OR M4-59R * DETOUR ** IF TOWN ROAD OR LOCAL STREET

500'

DETOUR ROUTE

500' AT 25 - 40 MPH
1000' AT 45+ MPH

500'

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

DETOUR EAST XX *

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST XX

500'

DETOUR EAST XX

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST XX *

PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

500' AT 25 - 40 MPH
1000' AT 45+ MPH

DETOUR EAST XX *

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 07c

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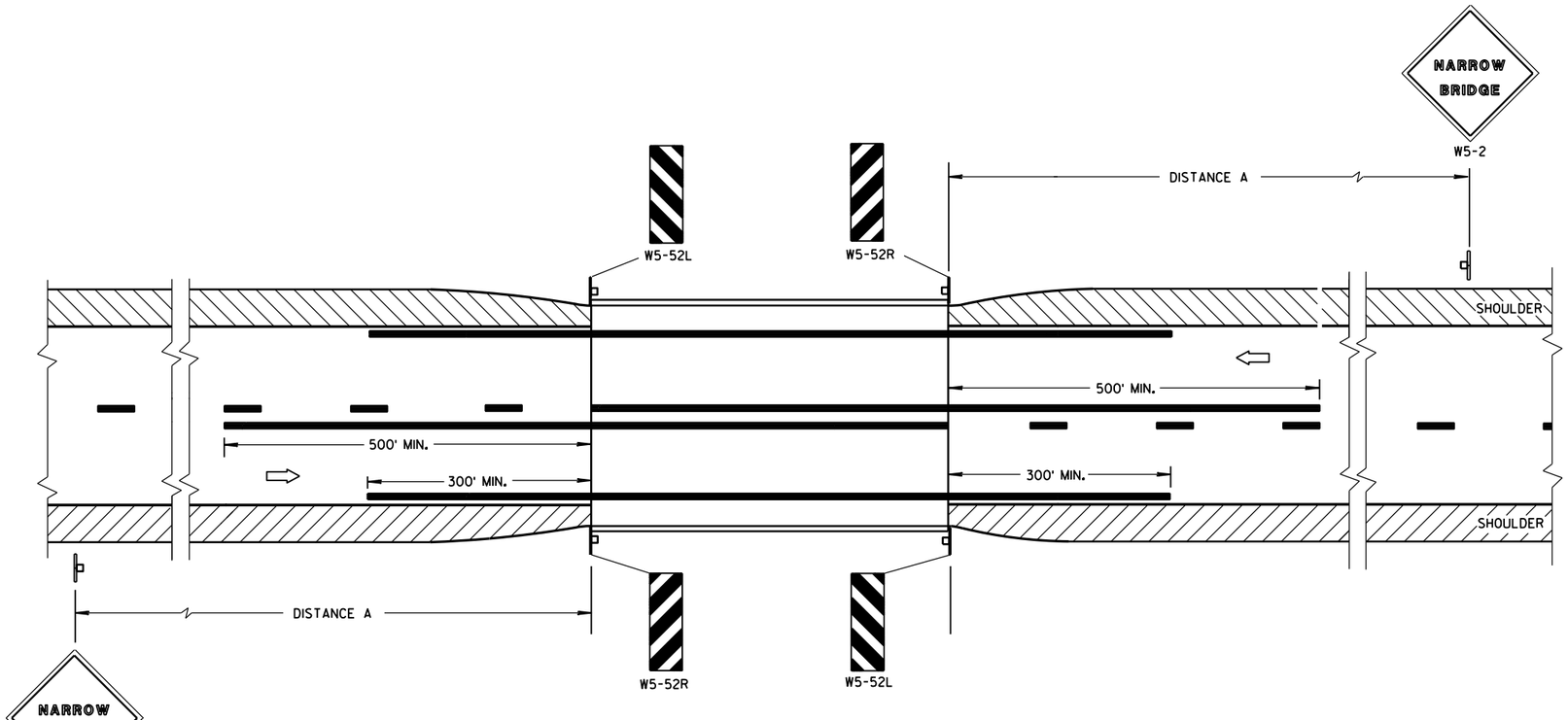


SITUATION 1

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

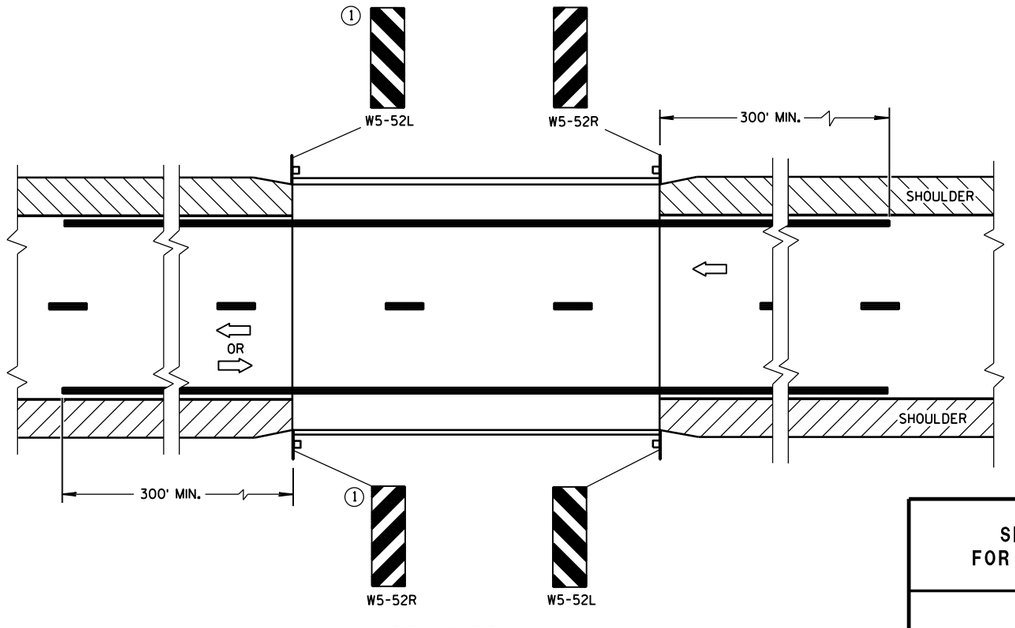
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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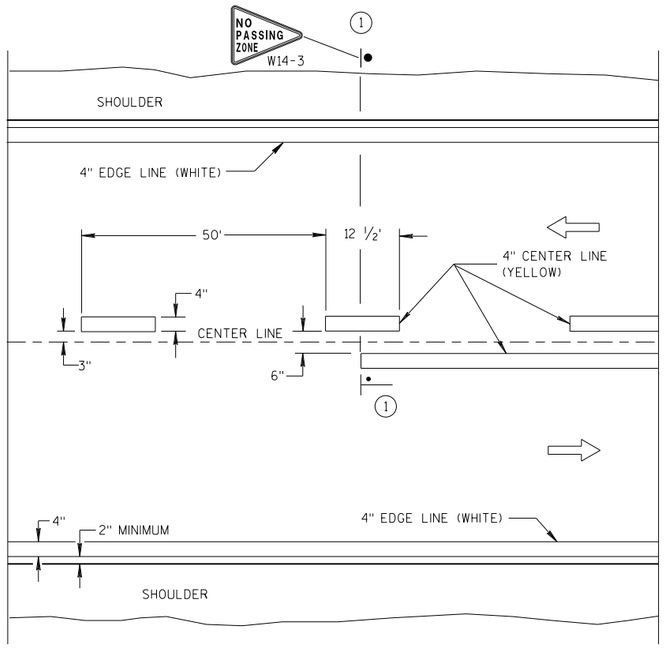
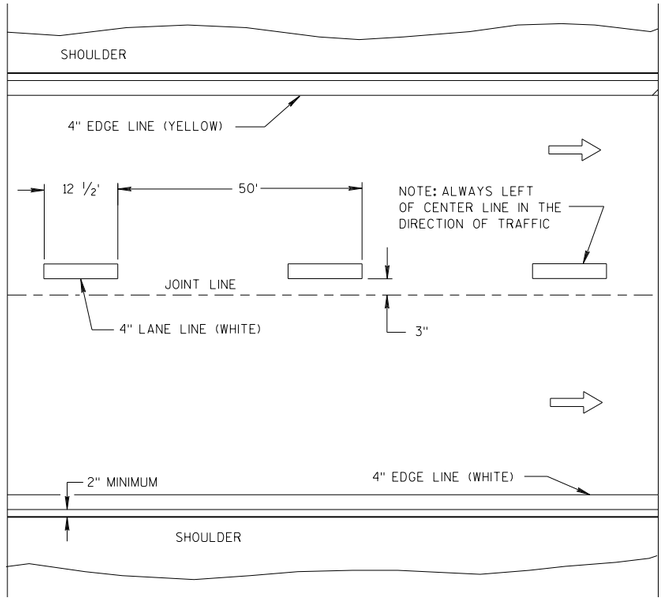
S.D.D. 15 C 6-9



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

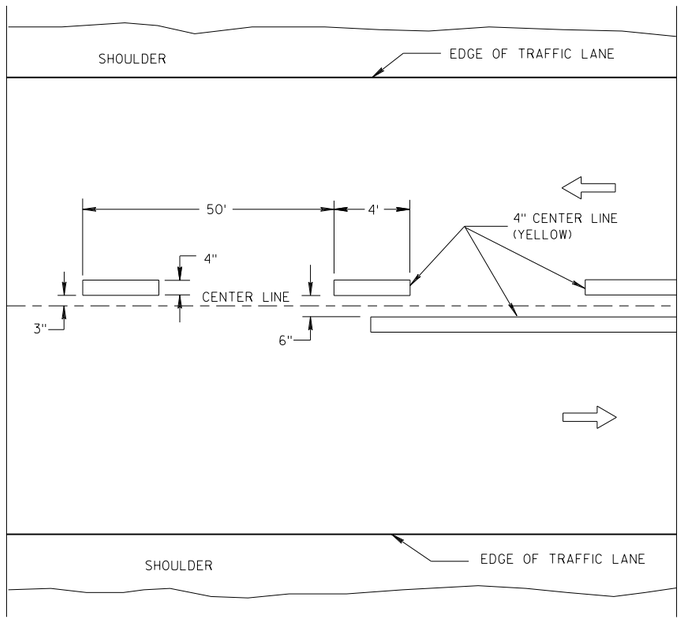
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

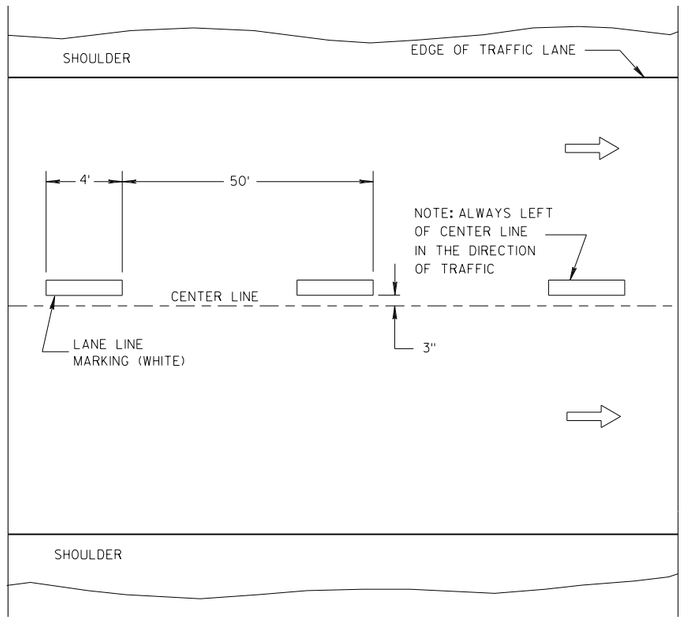
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

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S.D.D. 15 C 8-19a

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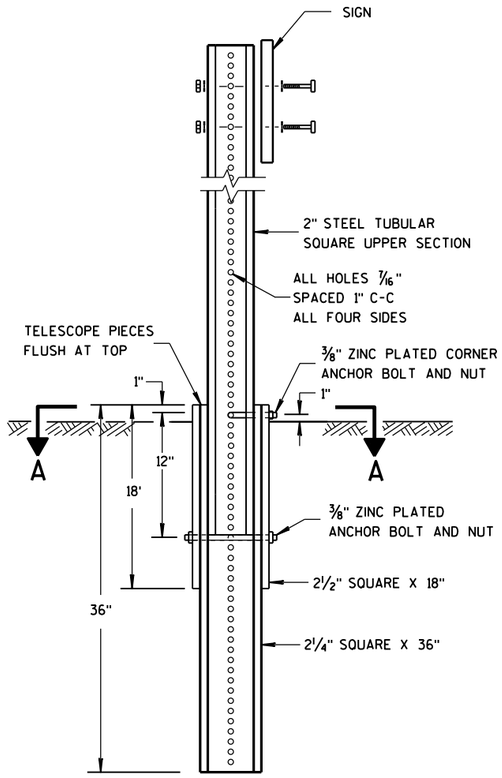
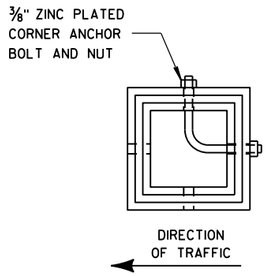
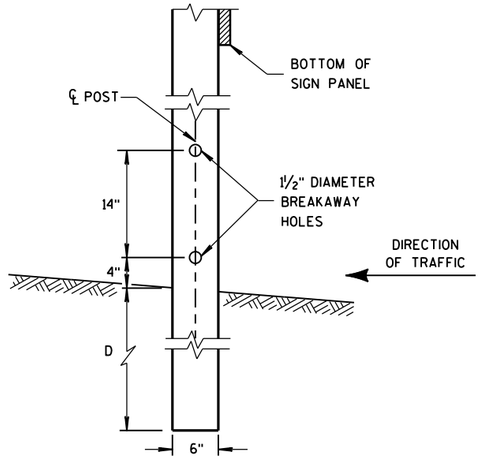
S.D.D. 15 C 8-19a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



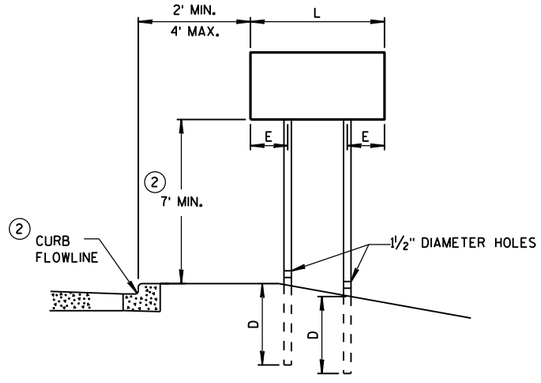
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

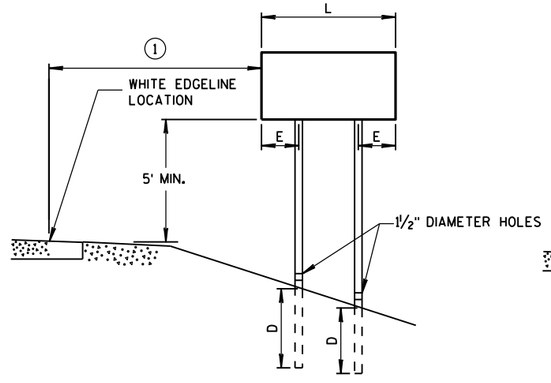
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

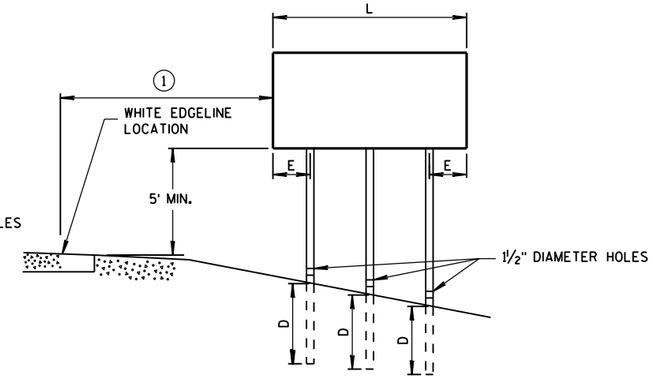
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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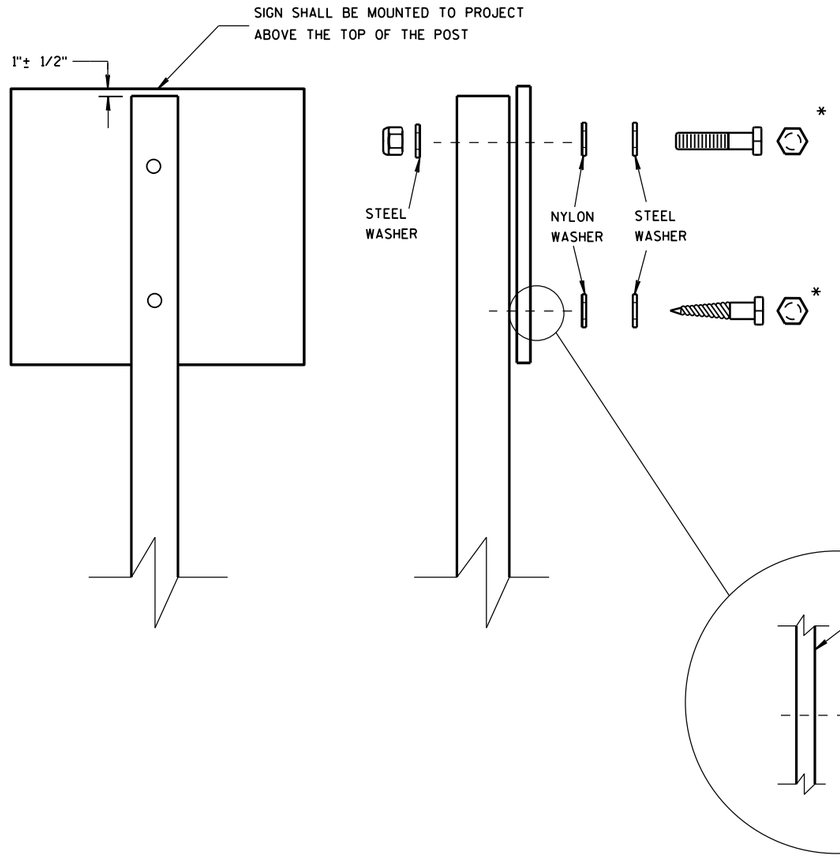
S.D.D. 15 D 38-2a
S.D.D. 15 D 38-2a



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

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

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

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

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

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

LAG SCREWS - 3/8" X 3"

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

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

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

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

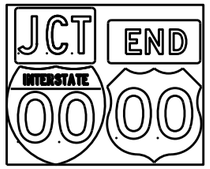
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

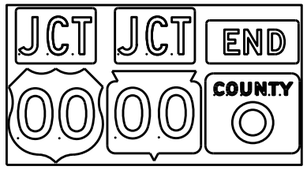
FHWA

TYPICAL ASSEMBLIES

J1-1

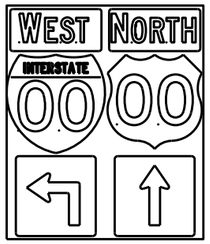


J1-2

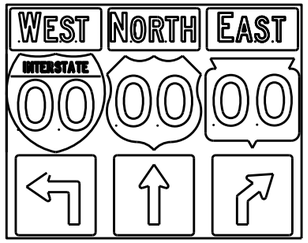


J1-3

J2-1



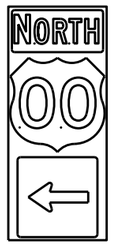
J2-2



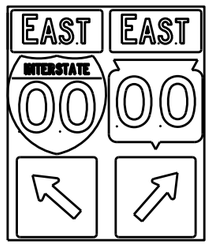
J2-3

JV

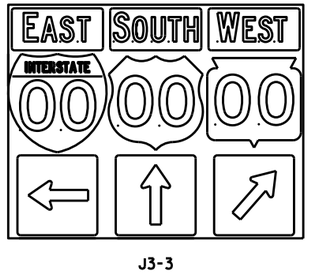
(Typical Vertical J-Assembly
See Note 10 and 11)



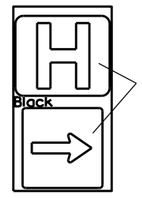
J3-1



J3-2

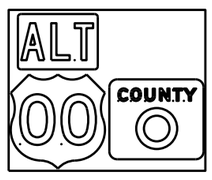


J3-3

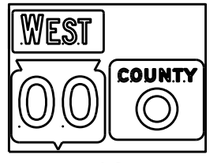


JH-1

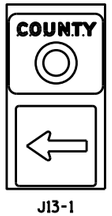
J4-1



J4-2



J4-2



J13-1

J12-1

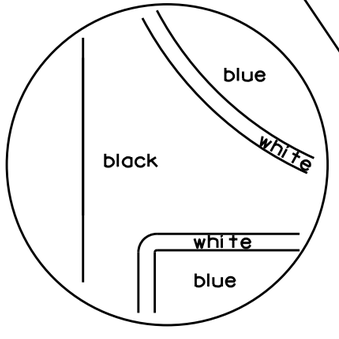
J32-1

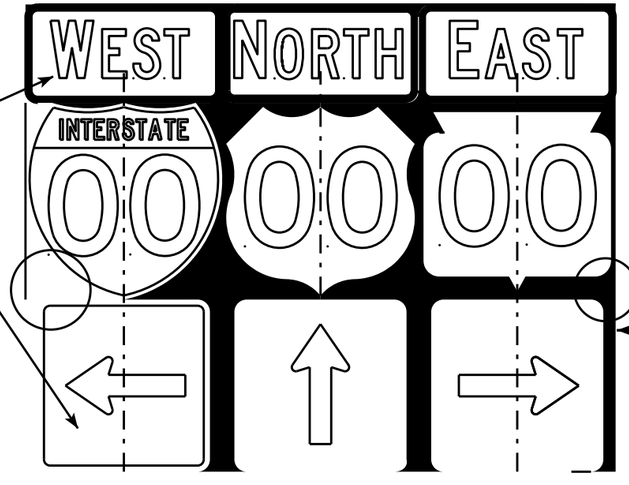
J33-1

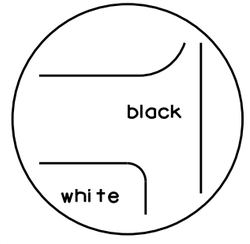
J23-1

J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

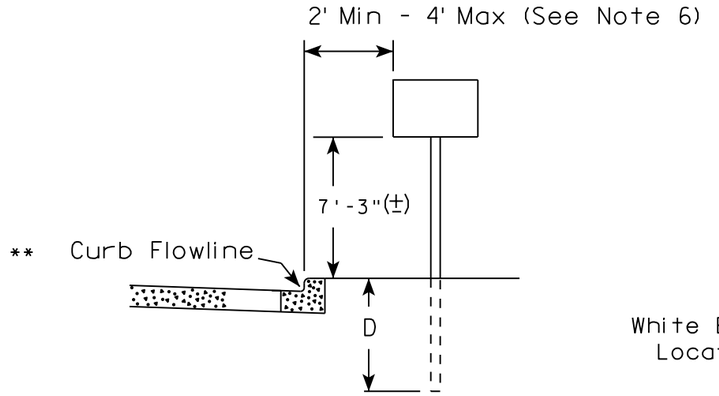
DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

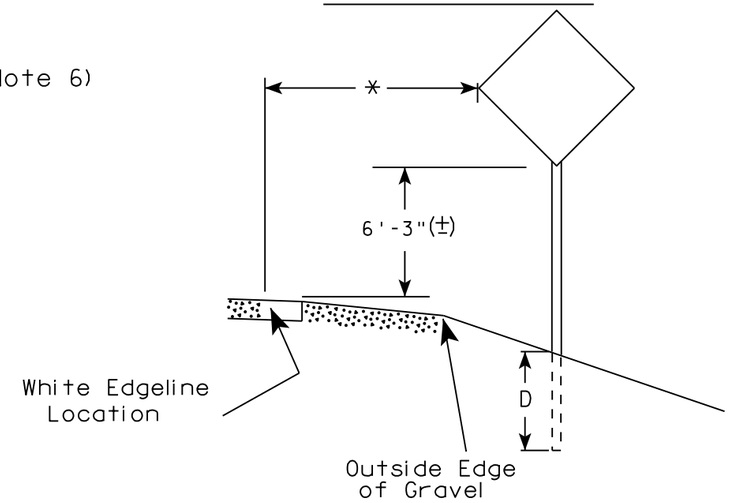
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

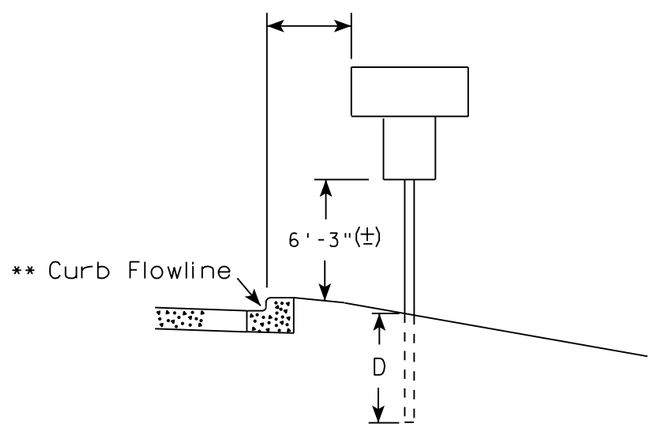
WISDOT/CADDS SHEET 42

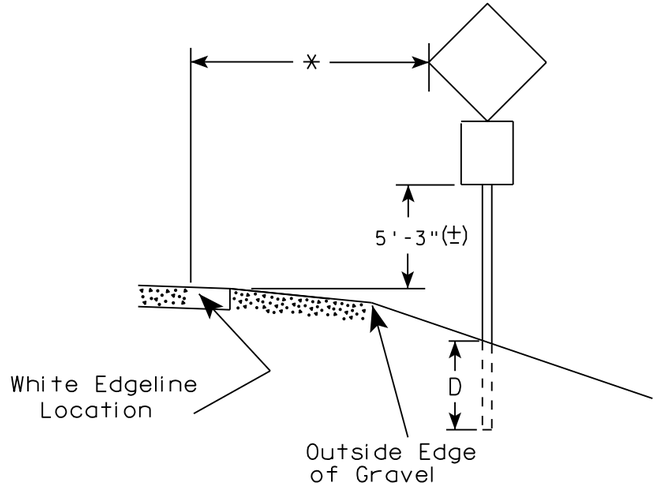
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

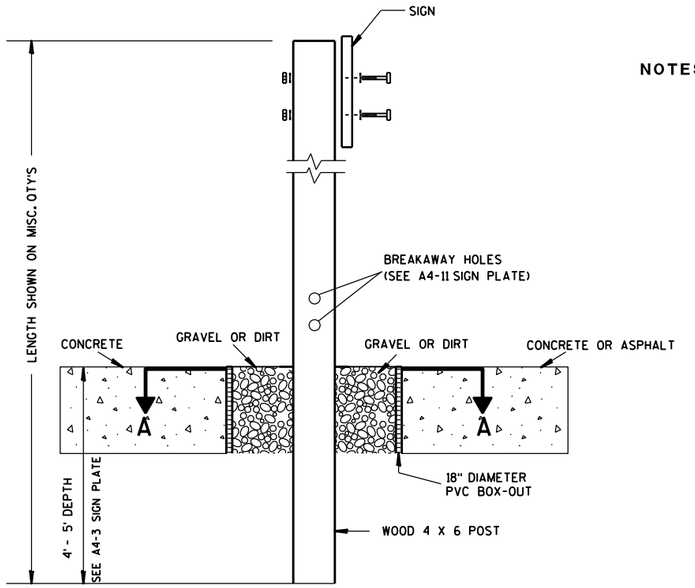
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

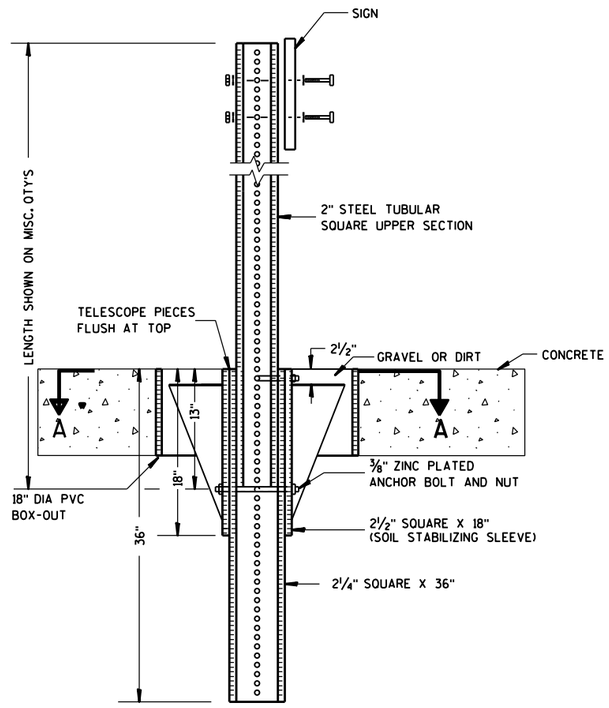
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 64	E



ELEVATION VIEW

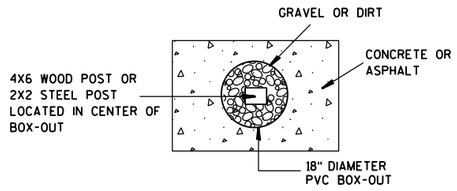
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

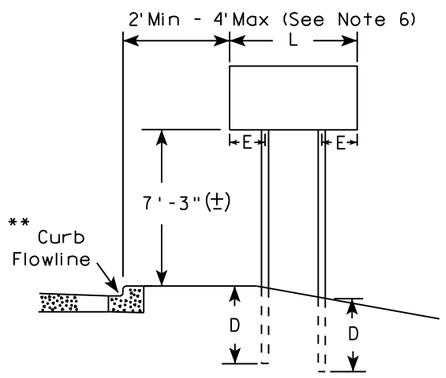
APPROVED Matthew R Rauch
for State Traffic Engineer

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

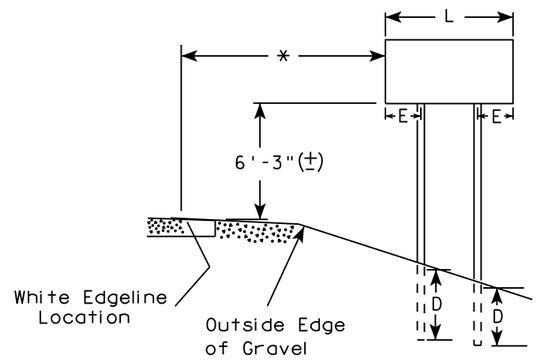
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

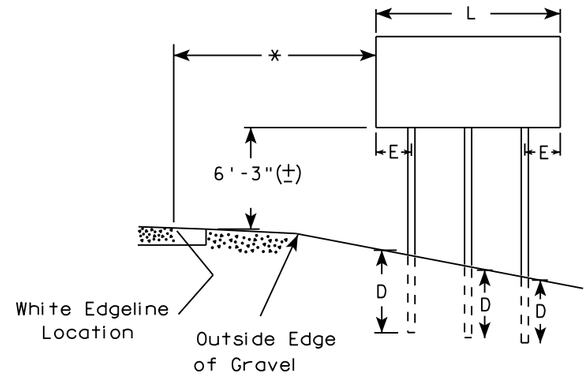
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

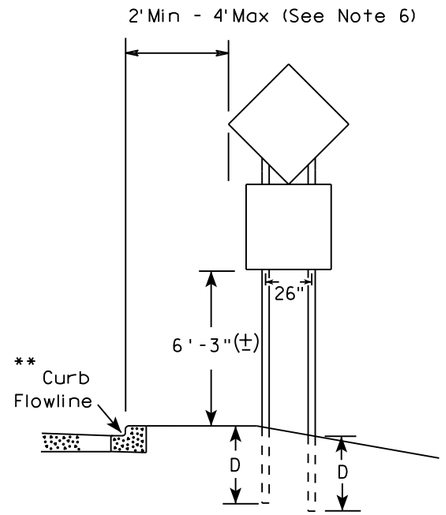
URBAN AREA



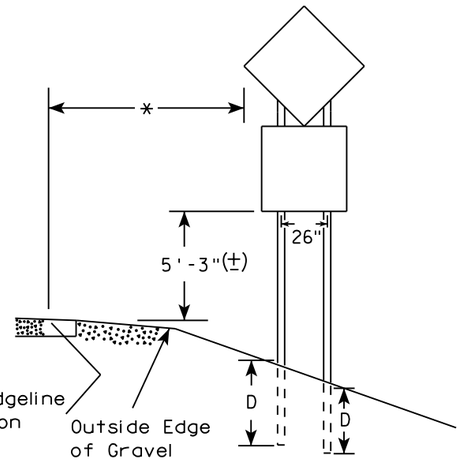
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

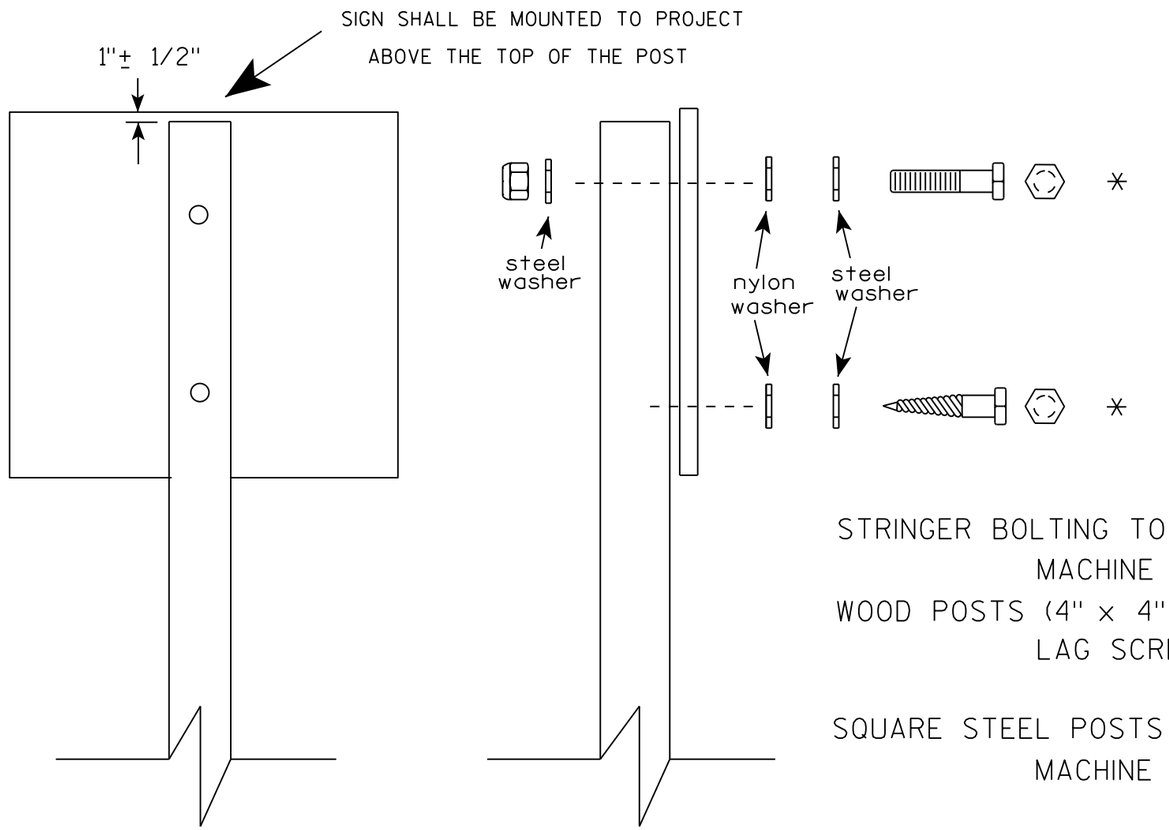
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 66	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 4" or 4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

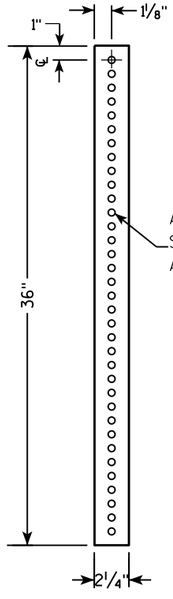
7

PROJECT NO: SHEET NO: E

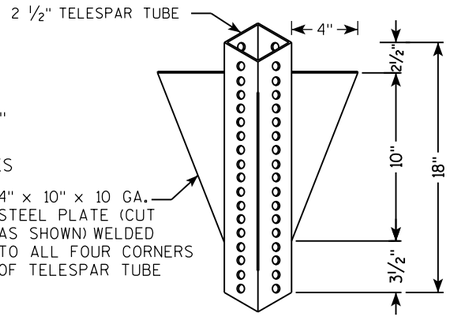
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

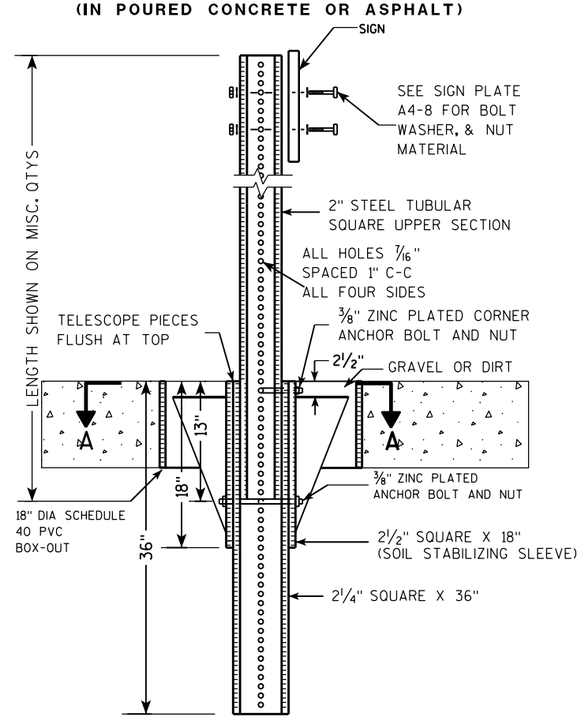
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



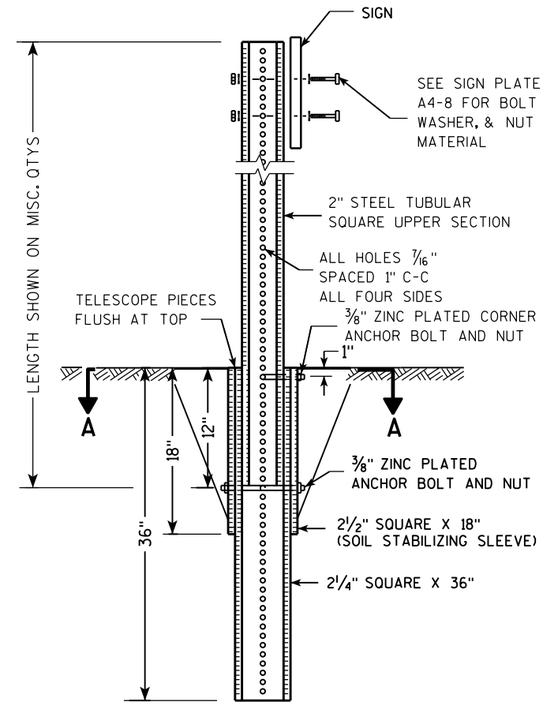
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

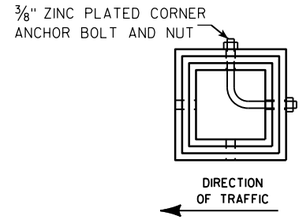


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

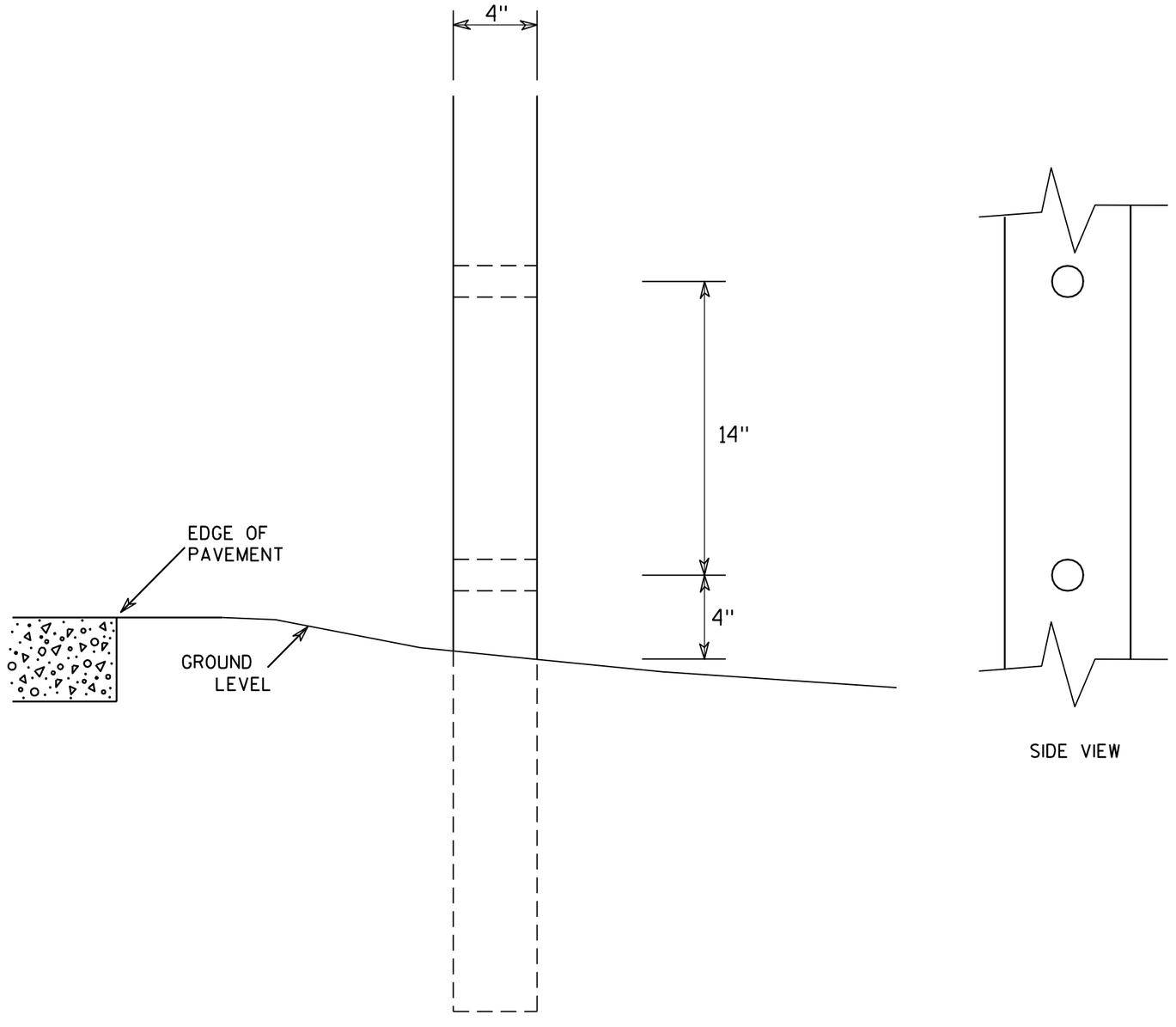
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 68 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

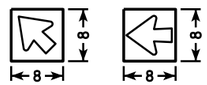
WISCONSIN DEPT OF TRANSPORTATION

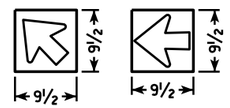
APPROVED Chester J Spang for State Traffic Engineer

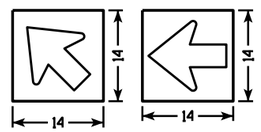
DATE 3/27/97 PLATE NO. A4-11.2

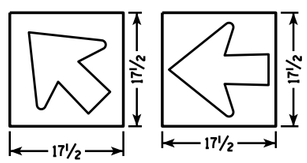
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 69	E

SIGN LAYOUT WITH VARIOUS SIZED MESSAGES







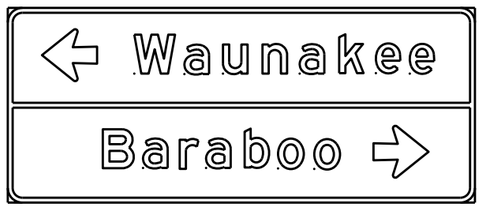


GENERAL NOTES

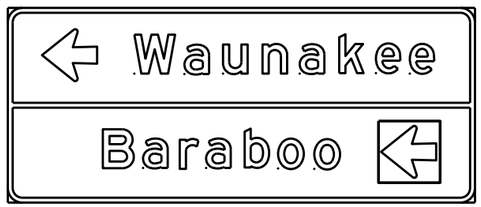
1. Materials shall conform to Standard Specification Section 637.
   Base - Sheet Aluminum 0.040" Thickness
   Sheeting - Orange Type F Reflective
   Arrow - Black Non-Reflective
2. Arrow signs shall be fastened to permanent sign by either aluminum rivets or aluminum self-tapping sheet metal screws. There shall be a minmum of 2 fasteners used per arrow sign.
3. There shall be a spacer consisting of a 0.08" nylon washer between the back of the arrow sign and the face of the permanent sign.
4. Arrows are per standard plate A1-2
5. Use separate arrow sign for each destination
6. Tilt arrow is always at 45 degrees
7. Arrow is centered on arrow sign

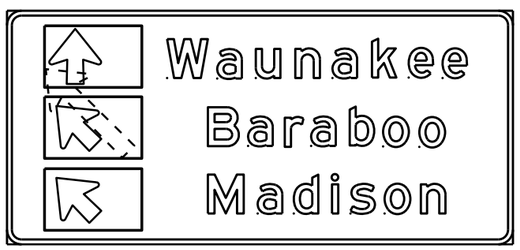
Lower Case Copy Size	Standard Width (Single Arrow)	2 Line Tilt Arrow Cover Width	3 Line Tilt Arrow Cover Width	Height
3¾" Series C	8	9 ½	14 ½	8
4½" Series D & E	9 ½	10	15	9 ½
6" Series D & E	14	16	20 ½	14
8" Series E	17 ½	20 ½	25	17 ½

BEFORE



AFTER





DESTINATION DIRECTIONAL ARROW FOR DETOUR SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/08/14

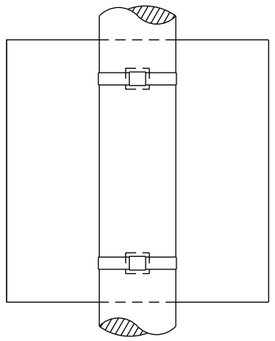
A4-12.2

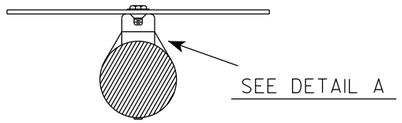
PROJECT NO:

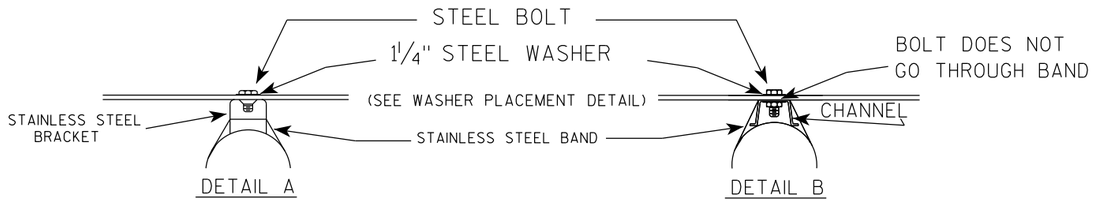
SHEET NO: E

BANDING

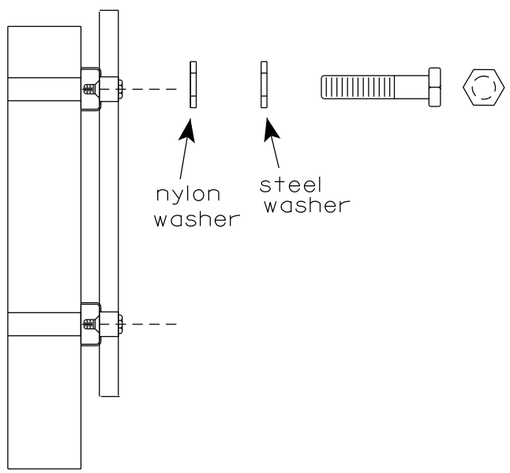
SINGLE SIGN







WASHER PLACEMENT

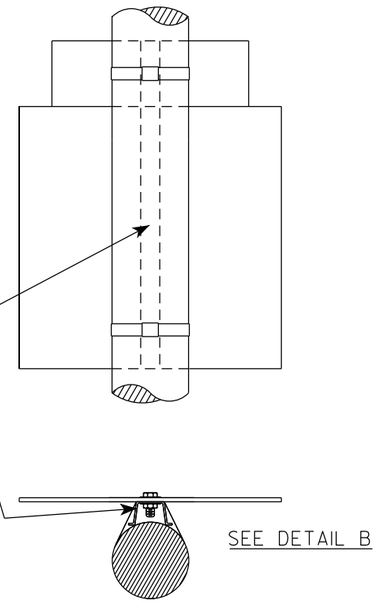


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

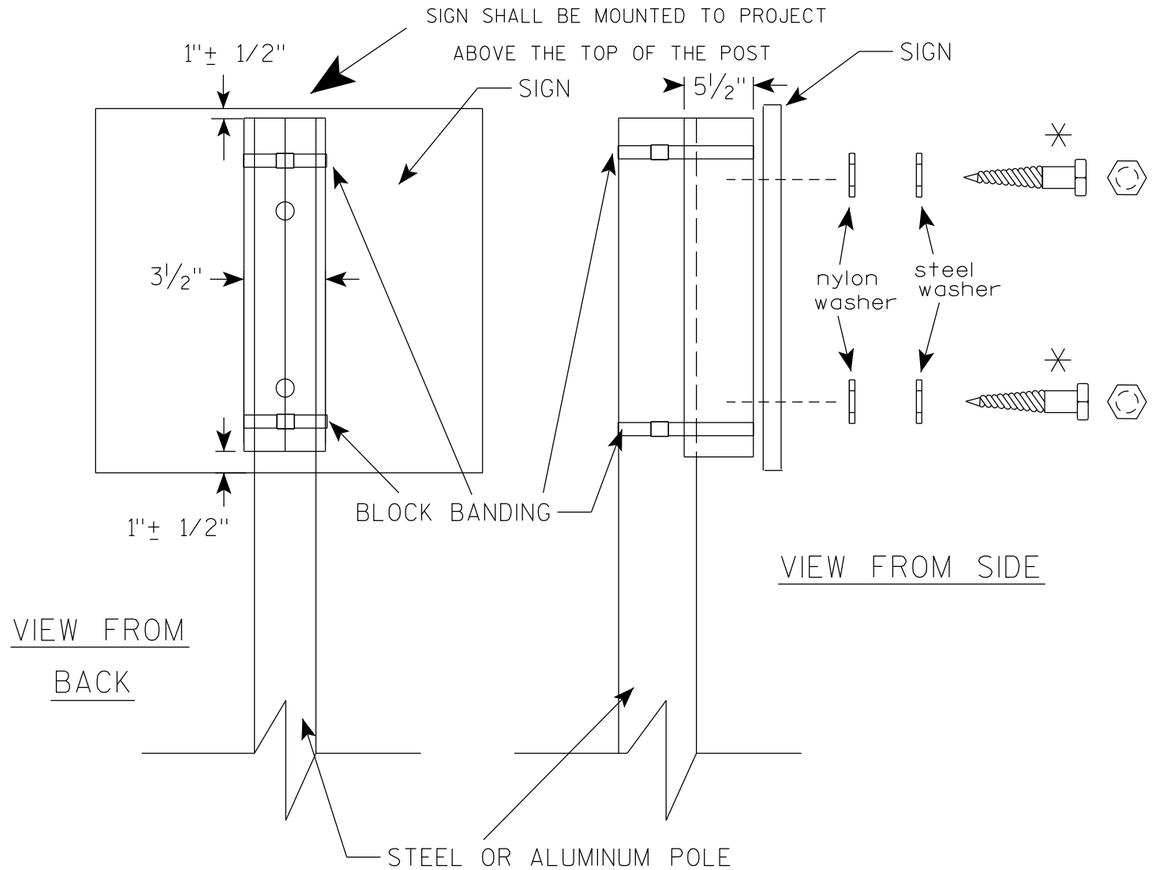
DATE 6/10/19 PLATE NO. A5-9.4

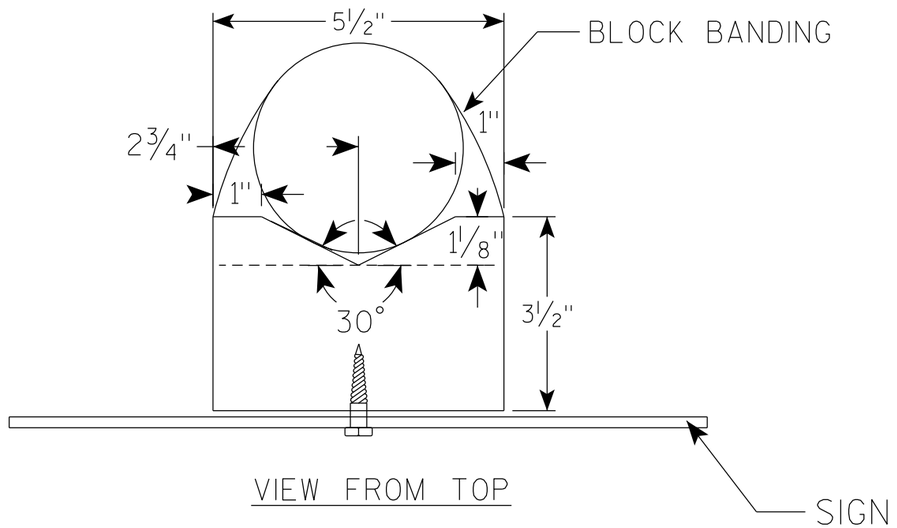
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 71	E

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

7

7





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

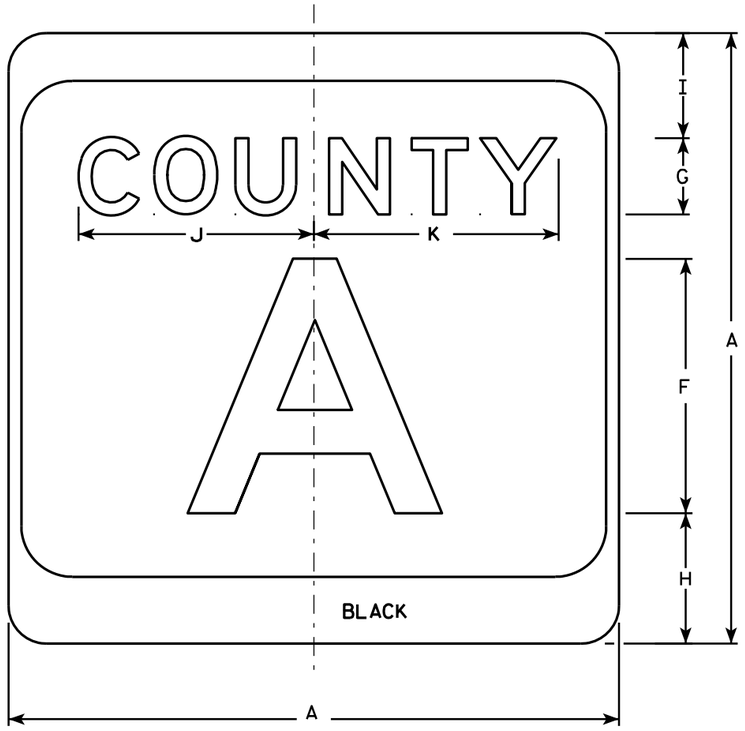
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

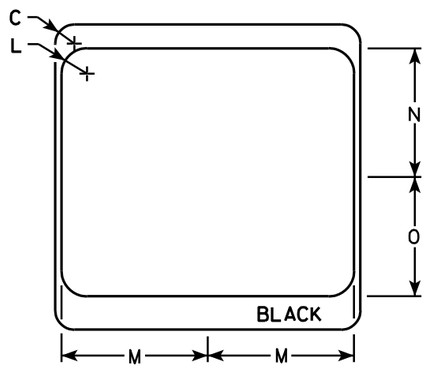
PROJECT NO: | SHEET NO: 72 | E

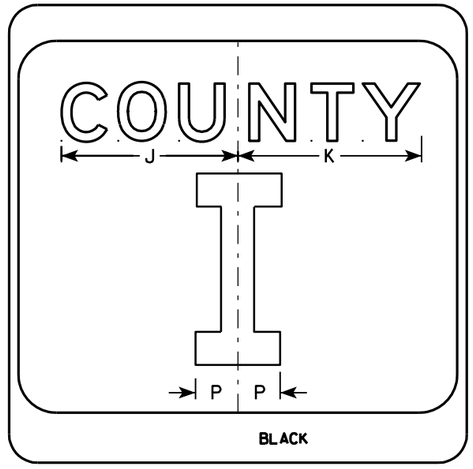
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A510.dgn PLOT DATE : 10-JUN 2019 4:15 PLOT BY : mscj9h

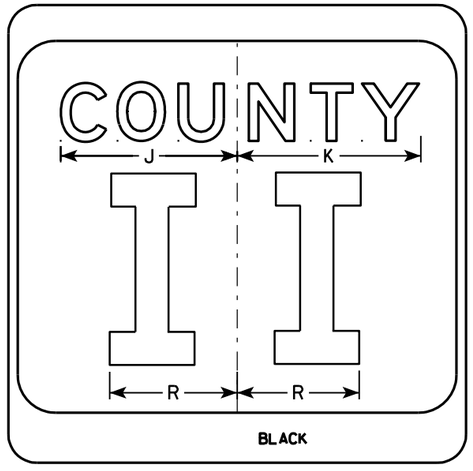
WISDOT/CADDS SHEET 42



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

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

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

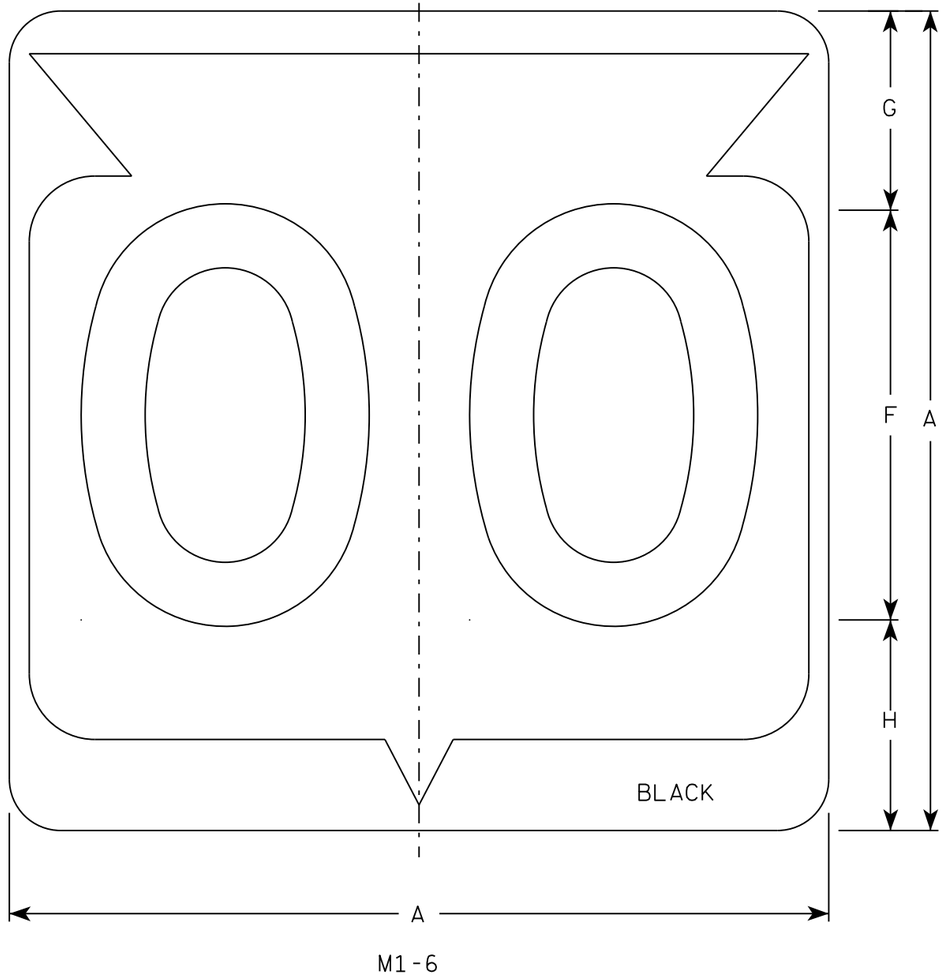
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 73	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\M15A.DGN PLOT DATE : 29-SEP-2011 11:25 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

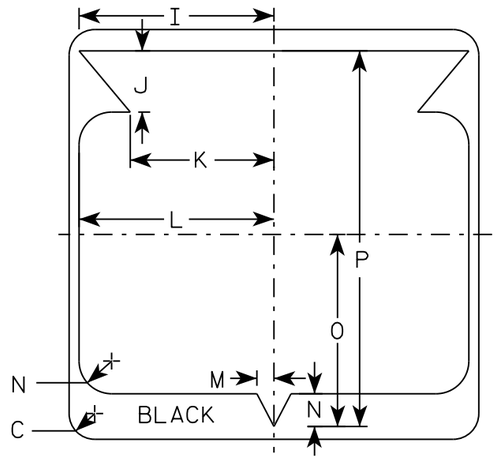
7



M1-6

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

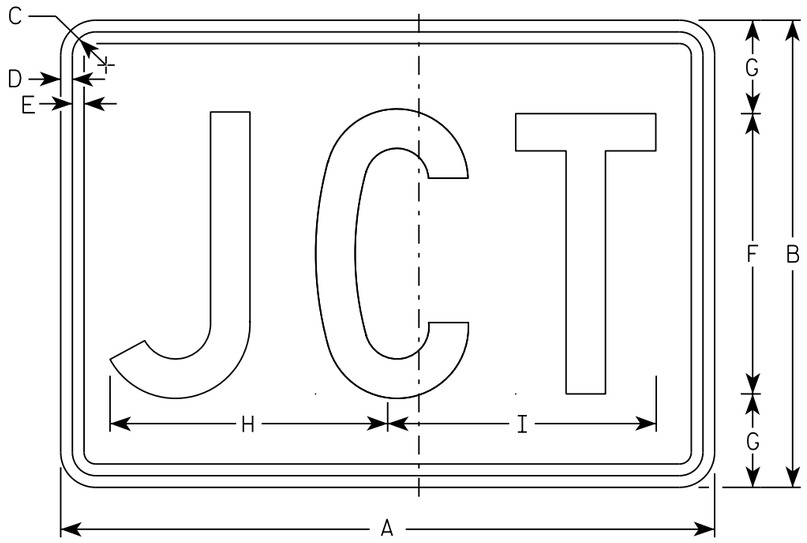
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

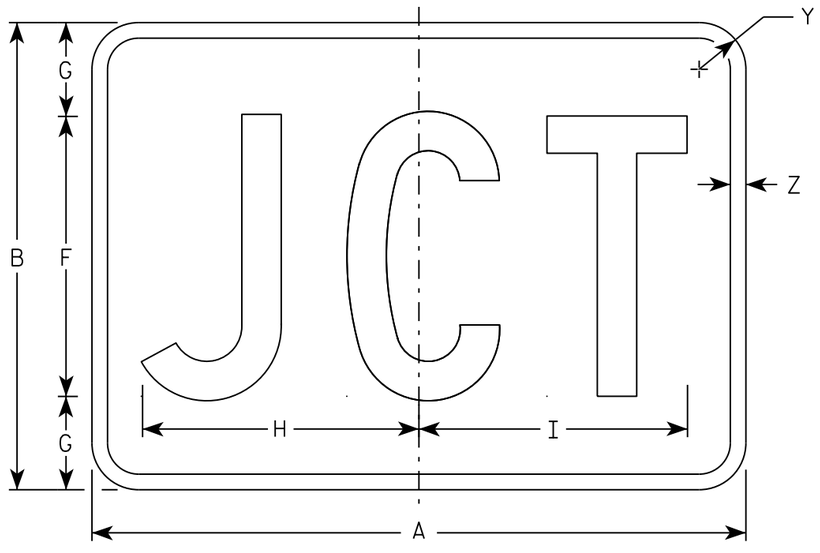
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 74	E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

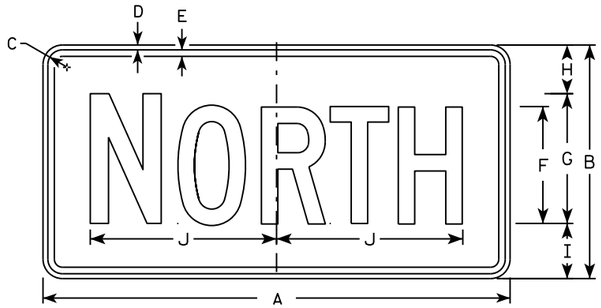
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

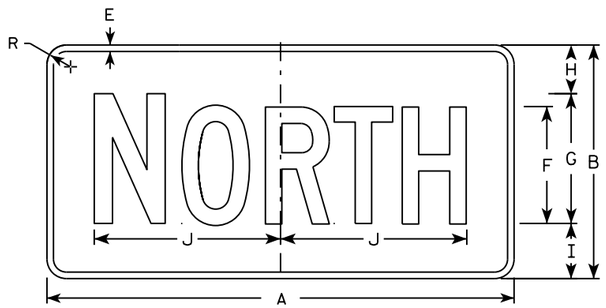
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 75 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



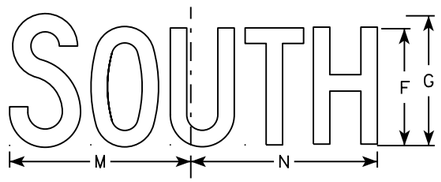
M3-1
MM3-1
MP3-1



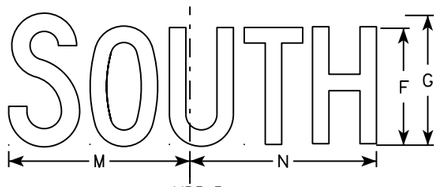
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

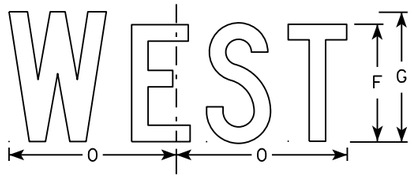
MB3-2
MK3-2
MN3-2



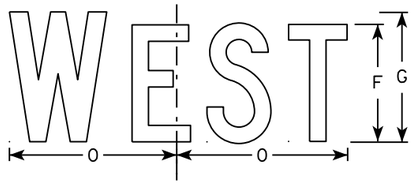
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

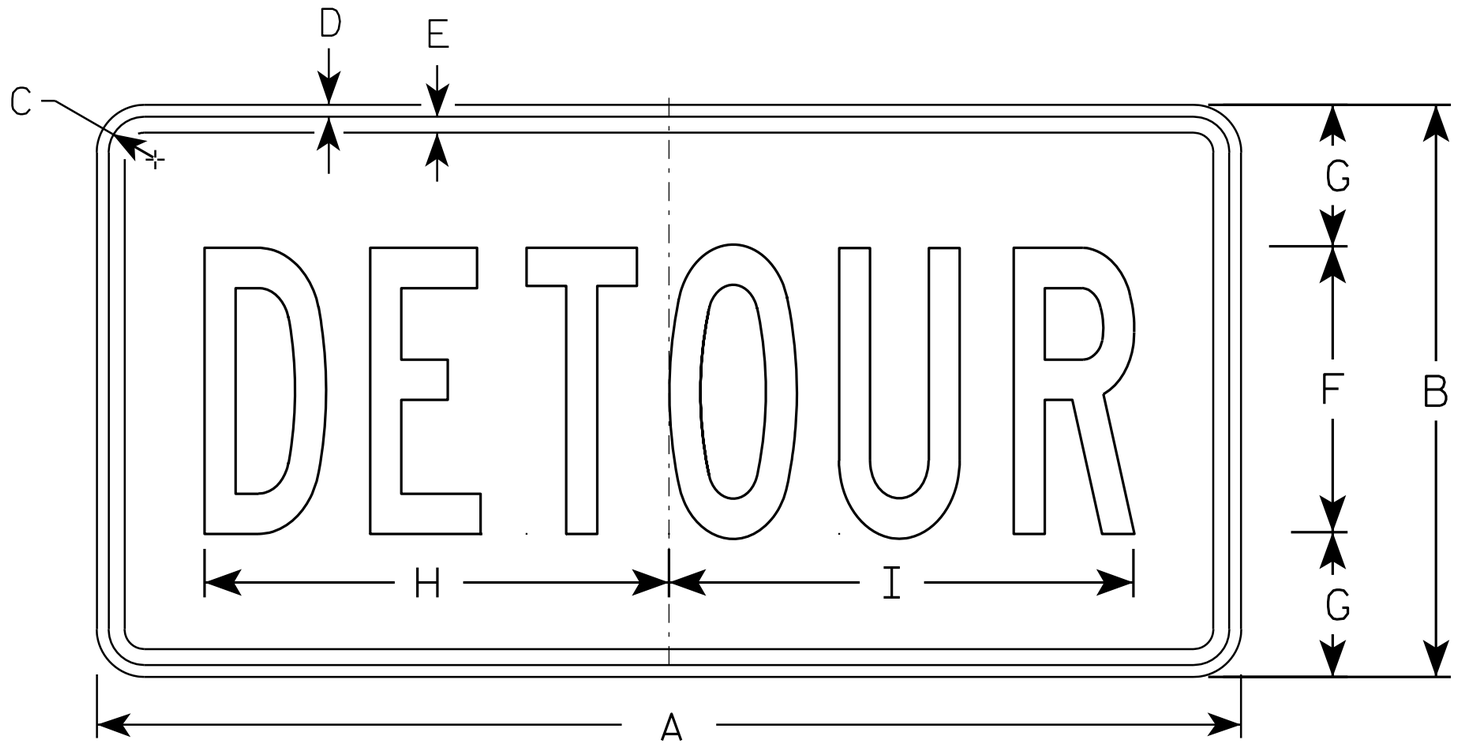
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-8

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 - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

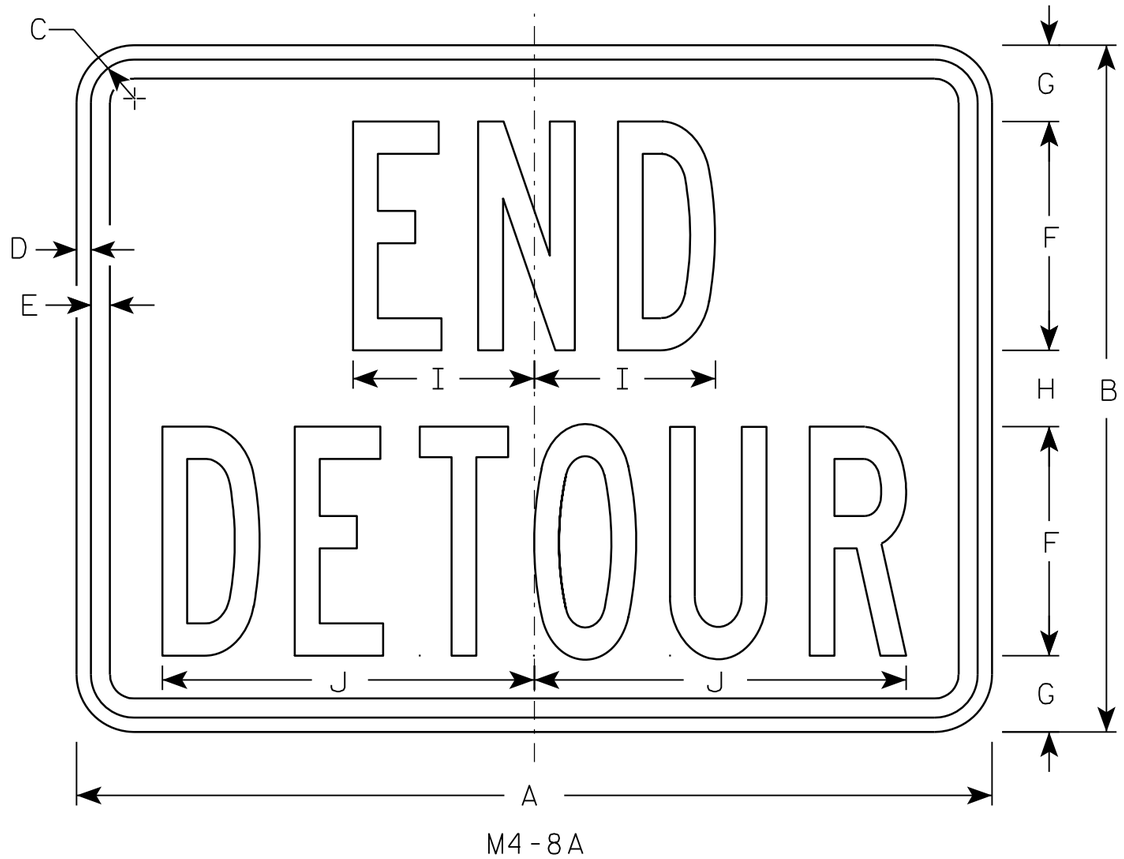
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 77	E



M4-8A

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 - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

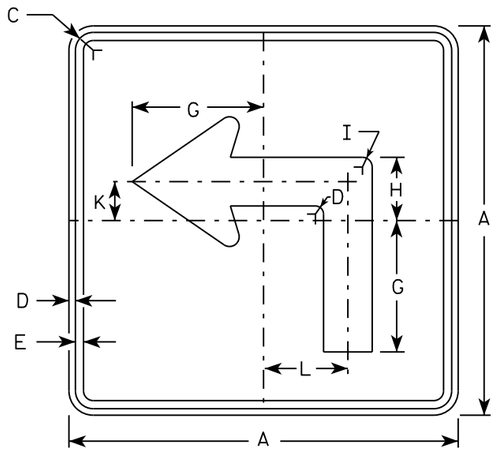
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

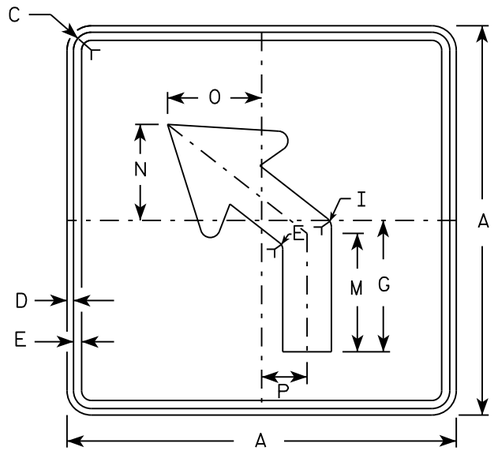
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

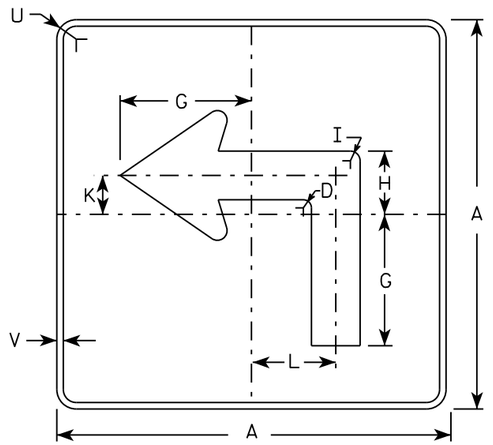
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 78	E



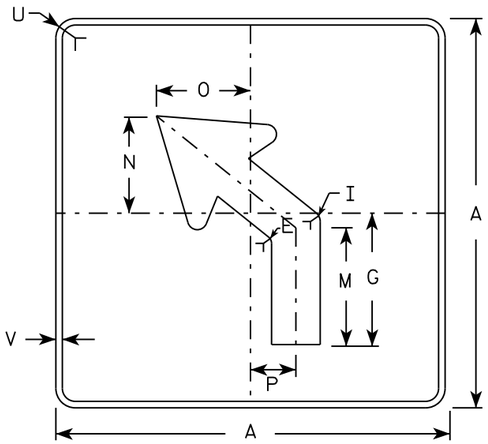
M5-1L
MM5-1L
MO5-1L
MP5-1L



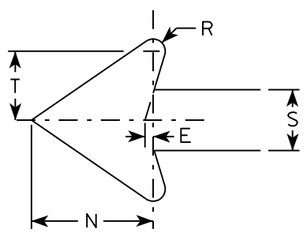
M5-2L
MM5-2L
MO5-2L
MP5-2L



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



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



NOTES

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

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

STANDARD SIGN
M5-1 & M5-2

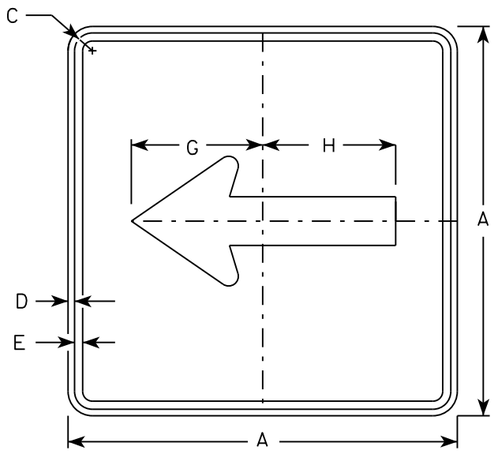
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

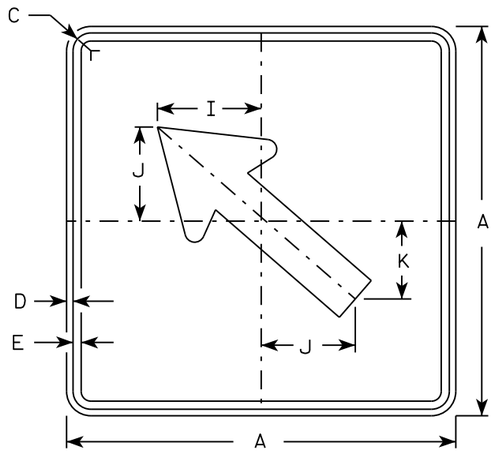
DATE 10/15/15 PLATE NO. M5-1.13

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



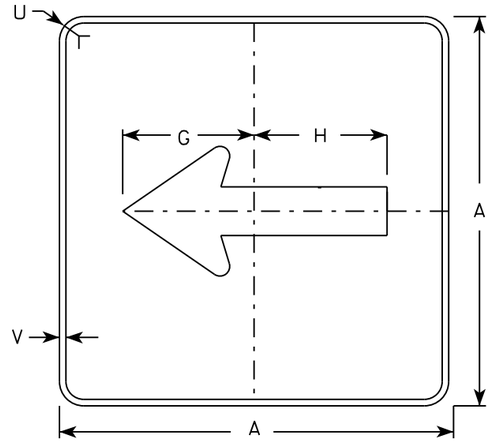
M6-1
MM6-1
MO6-1
MP6-1



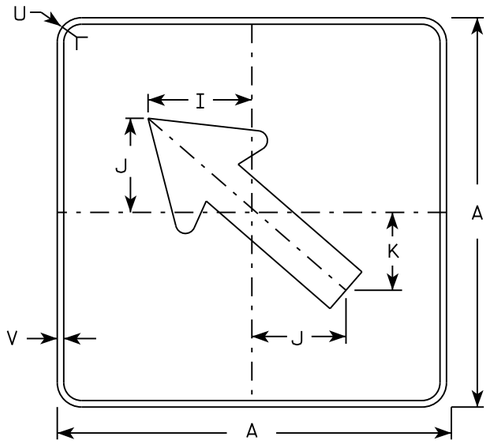
M6-2
MM6-2
MO6-2
MP6-2

NOTES

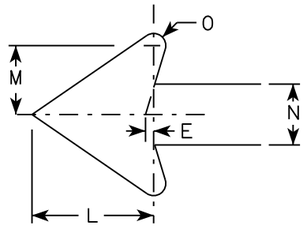
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background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



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



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



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

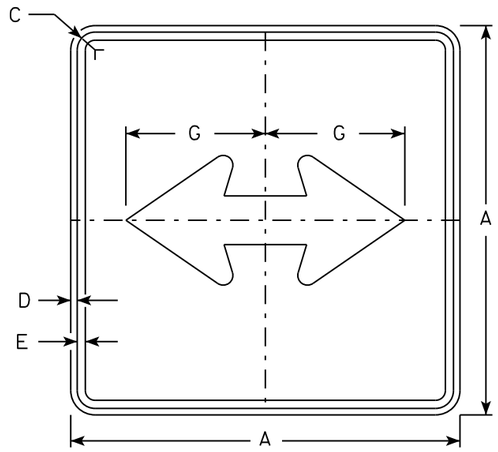
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

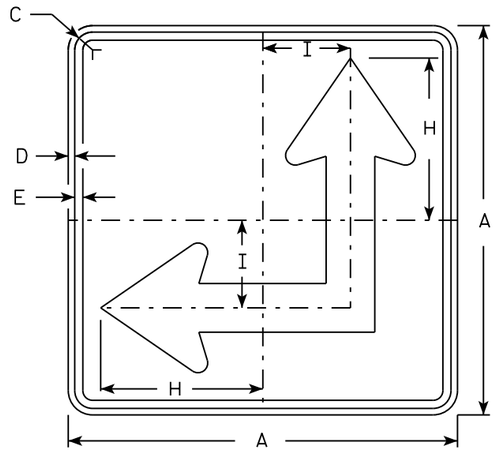
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 80 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



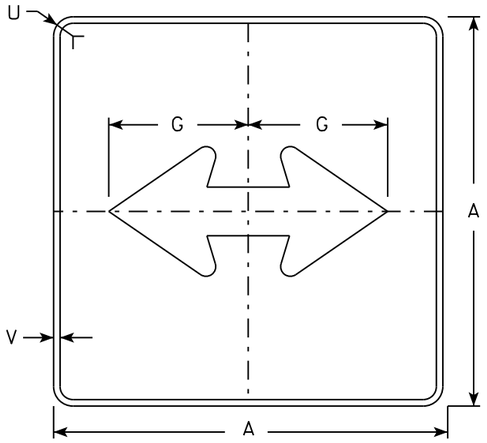
M6-4
MM6-4
MO6-4
MP6-4



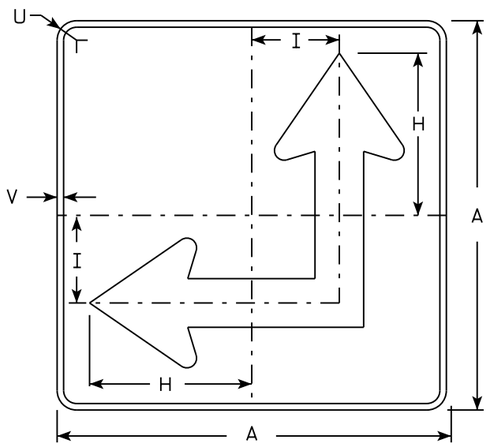
M6-6
MM6-6
MO6-6
MP6-6

NOTES

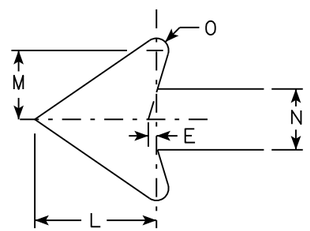
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

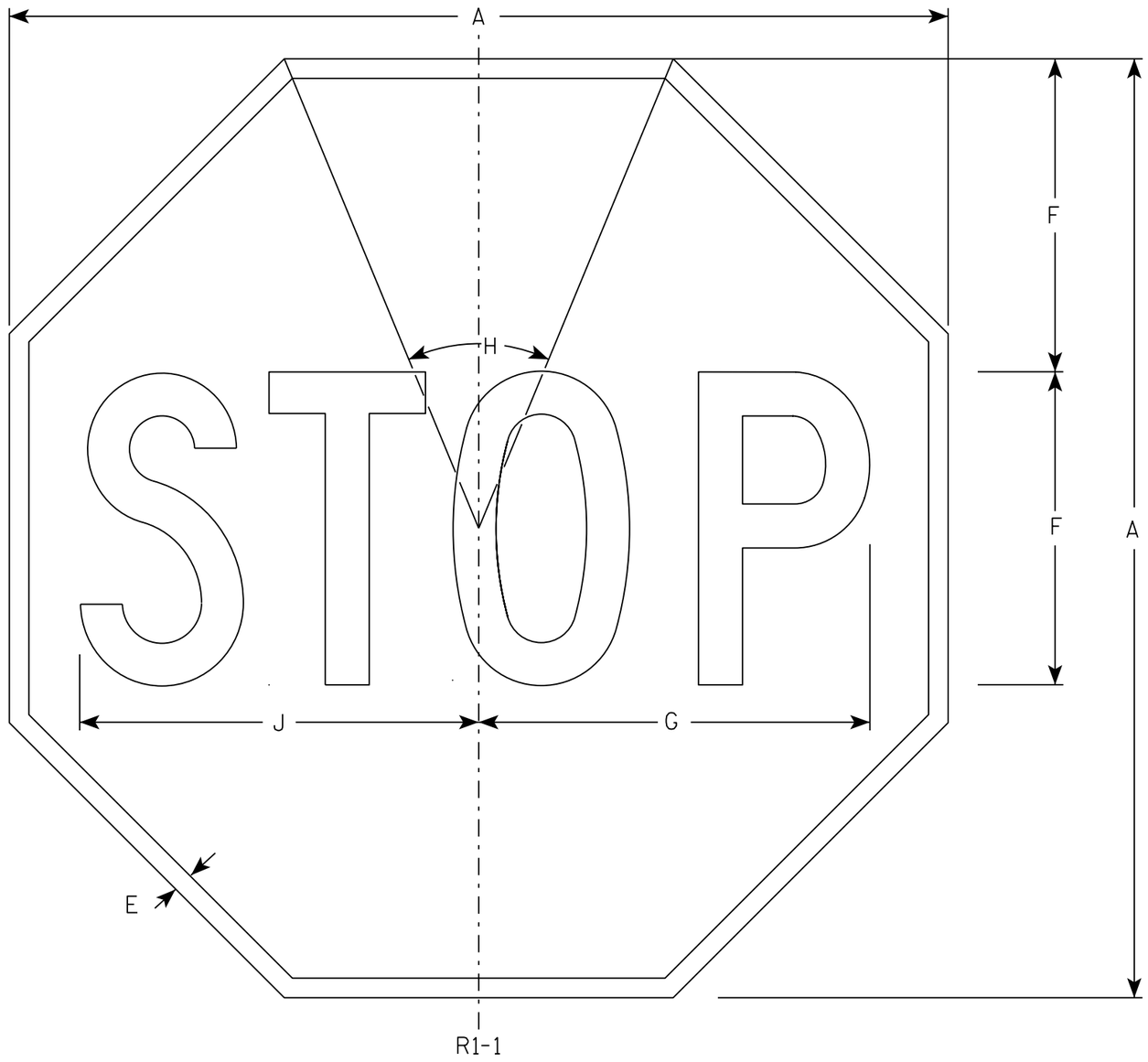
STANDARD SIGN
M6-4 & M6-6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 81 M6-4.10

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



NOTES

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

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

STANDARD SIGN

R1-1

WISCONSIN DEPT OF TRANSPORTATION

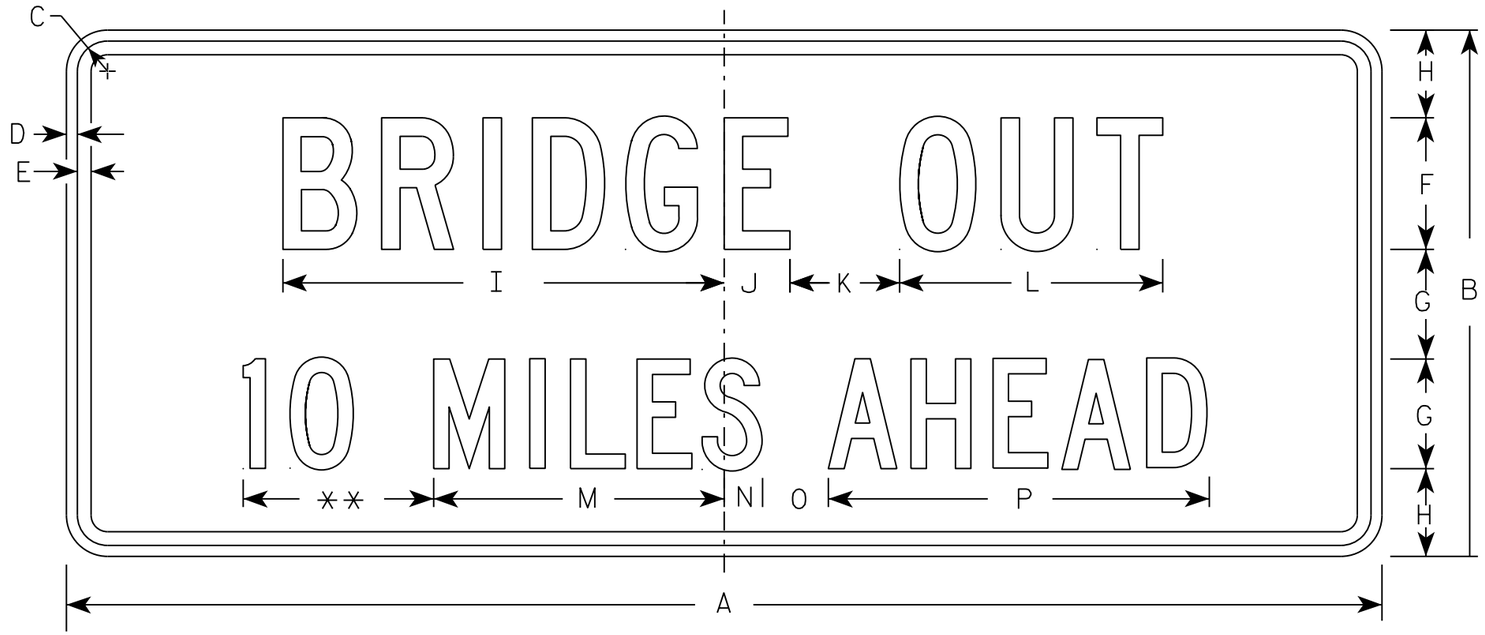
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 82	E

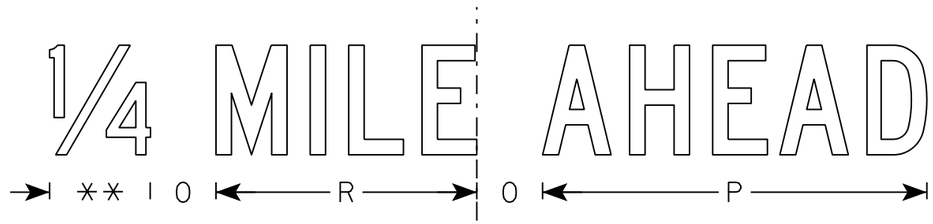
NOTES

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



R11-3C

** See Note 5



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

STANDARD SIGN
R11-3C

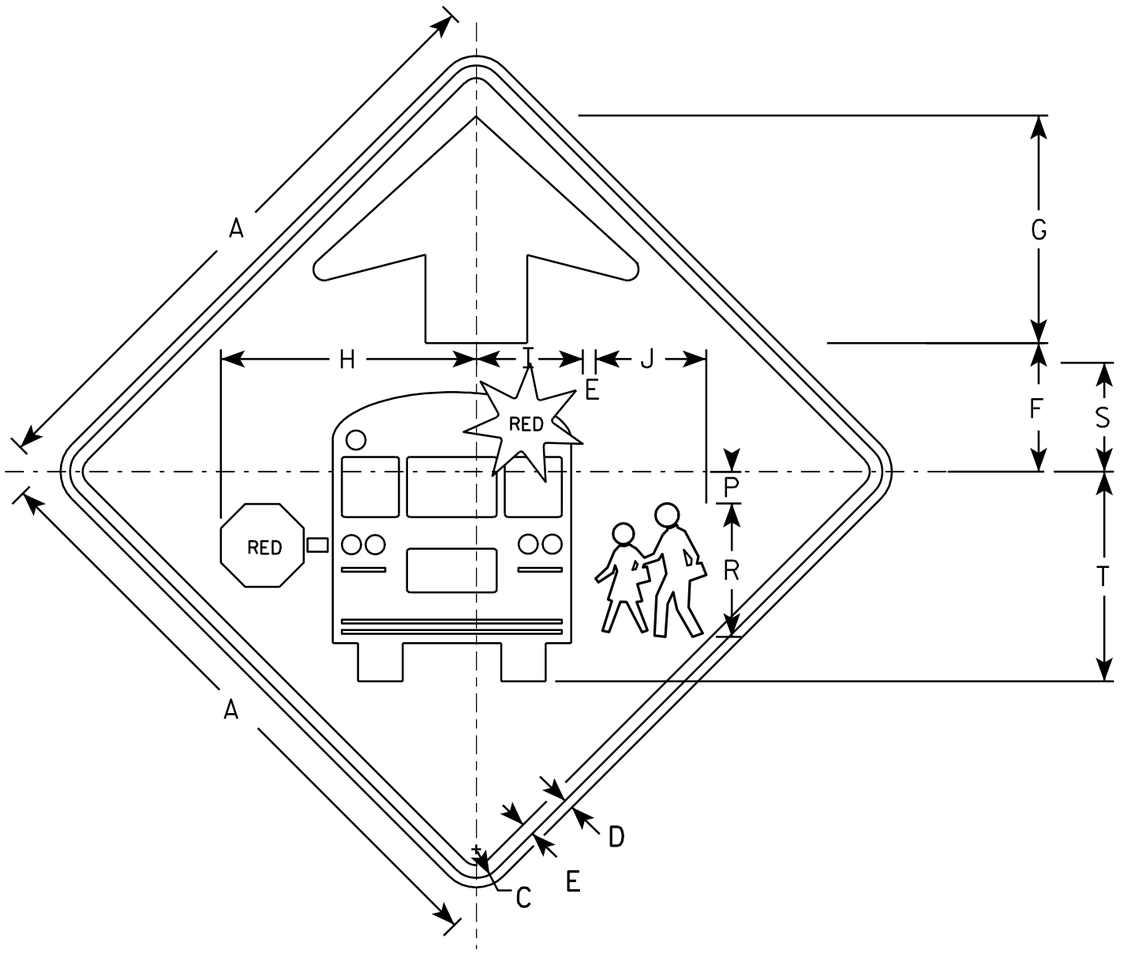
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE NO. R11-3C.3

PROJECT NO:

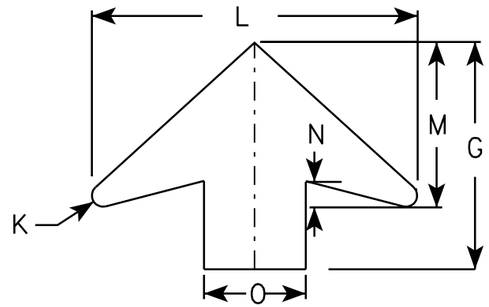
SHEET NO: 83 E



S3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW-GREEN
   Message - BLACK except as noted
   Circles except PEDS- RED BACKGROUND
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.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	12 1/2	5 1/4	5 1/2	1/2	16	8	1 1/4	5	1 1/2		6 5/8	5 3/8	10 3/8							6.25
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	15 1/8	6 1/4	6 1/2	5/8	19 1/4	9 3/4	1 5/8	6	1 7/8		7 7/8	6 3/8	12 3/8							9.0
3	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
4	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
5																											

STANDARD SIGN
S3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

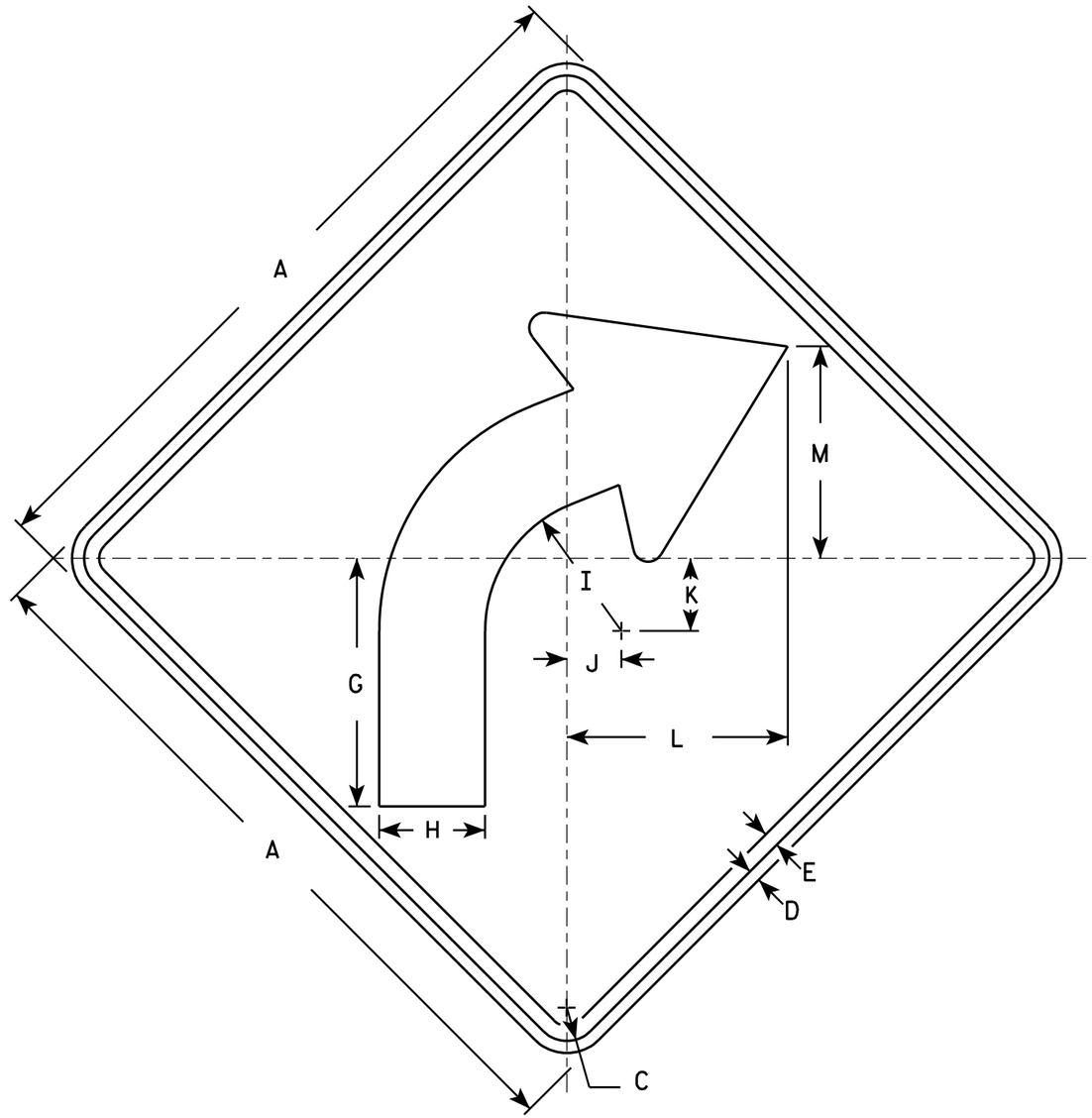
DATE 6/8/10 PLATE NO. S3-1.6

PROJECT NO:

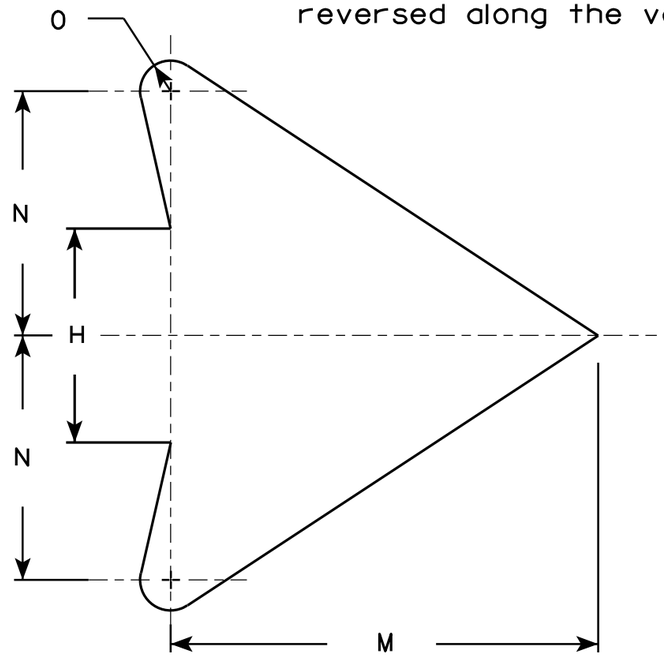
SHEET NO: 84 E

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. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

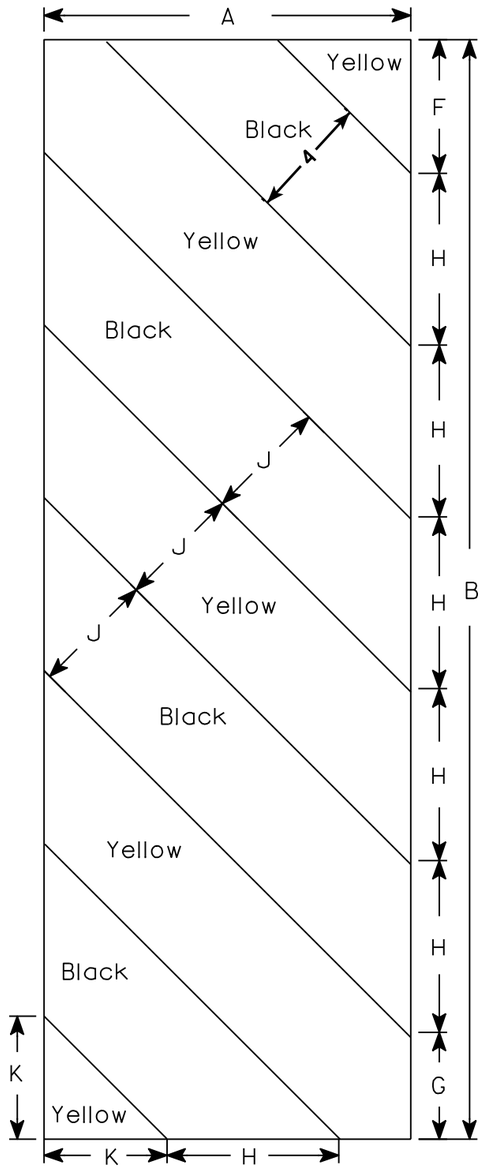
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

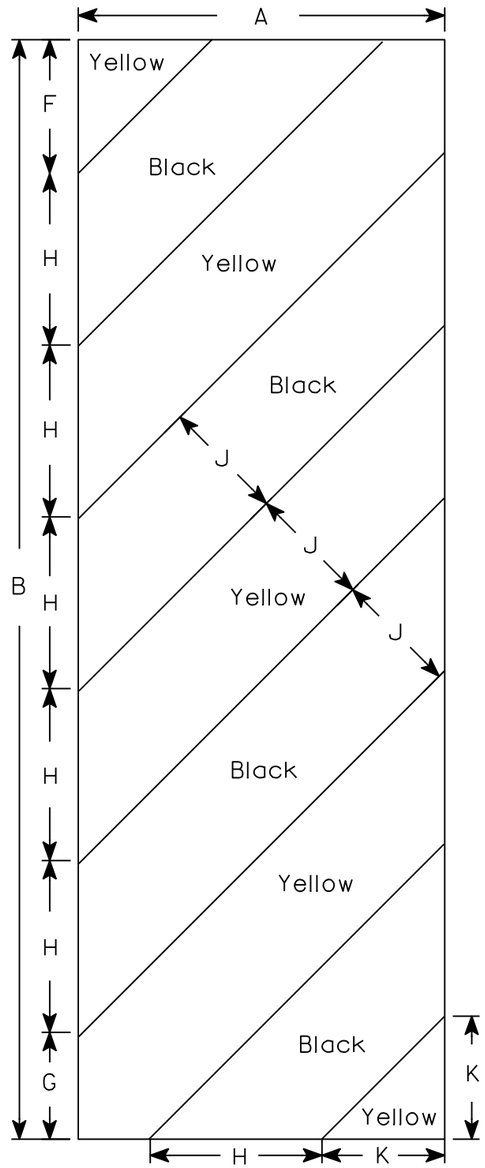
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 85	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

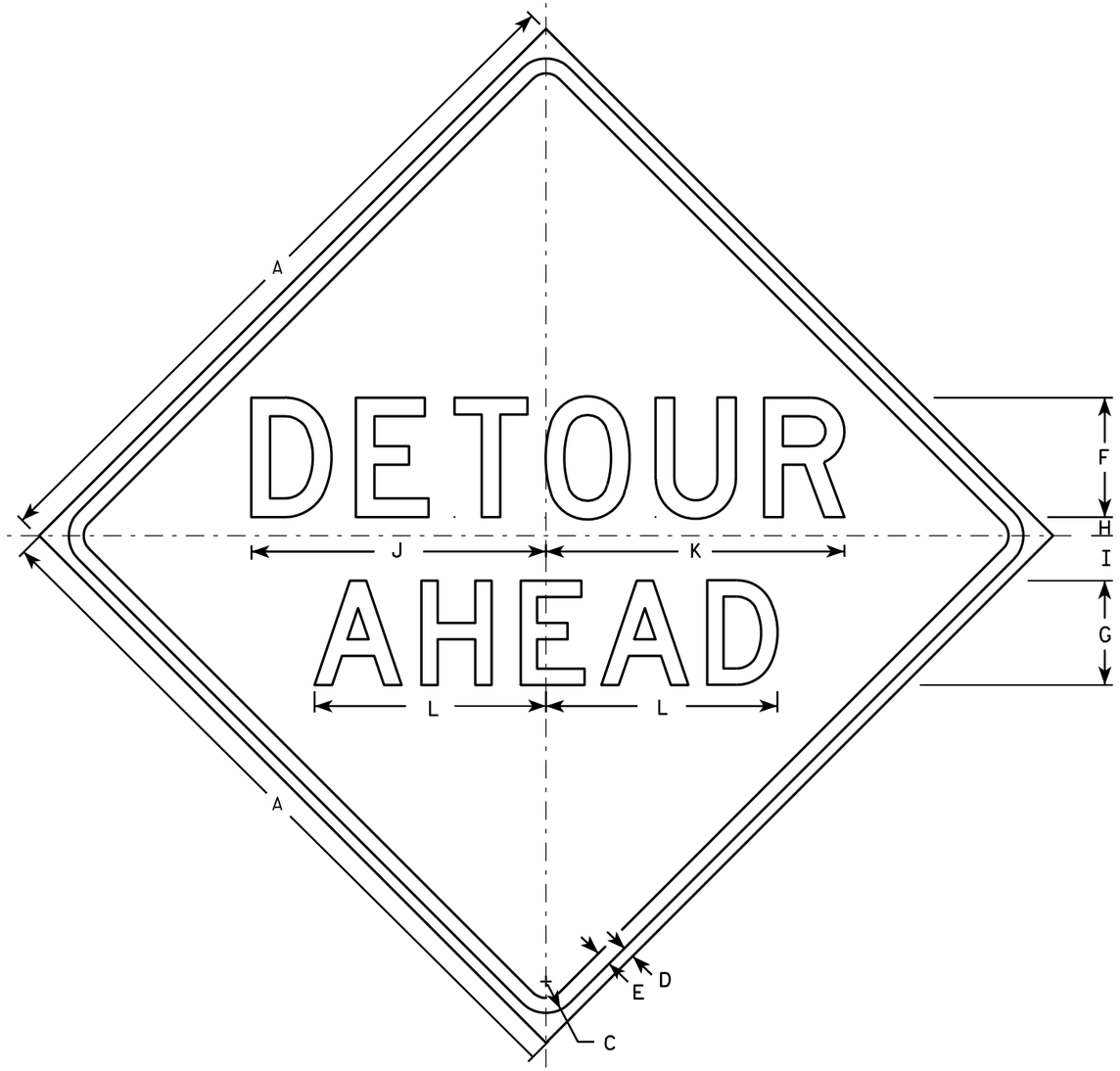
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 86 | E

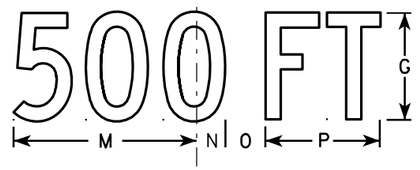
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000

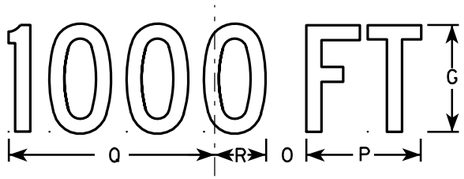
WISDOT/CADDS SHEET 42



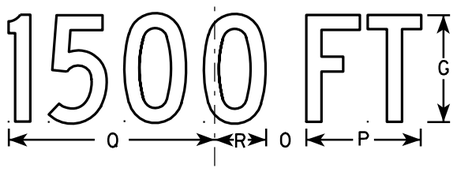
W20-2A



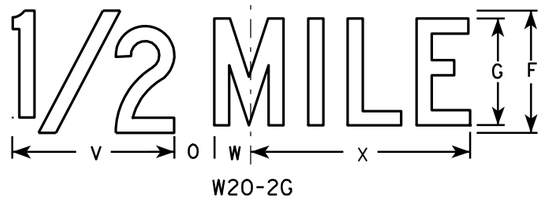
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

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. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

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

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

WISCONSIN DEPT OF TRANSPORTATION

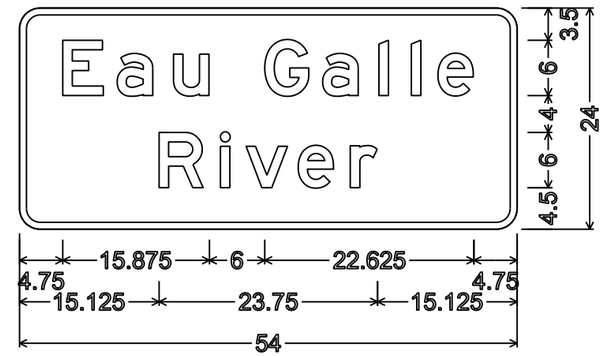
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 87	E

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



I3-1; 2.250" Radius, 0.750" Border

7

7

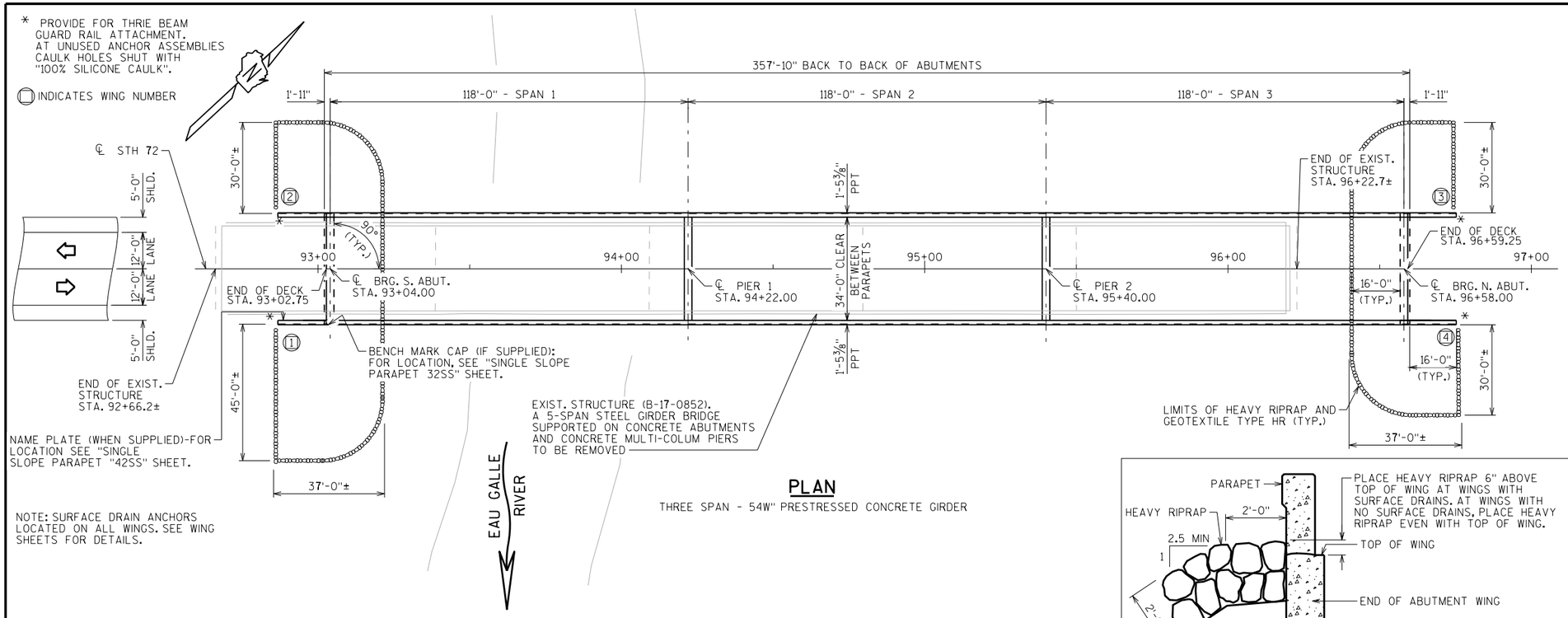
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	PERMANENT SIGNING	SHEET NO: 88	E

STATE PROJECT NUMBER

7105-00-72

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

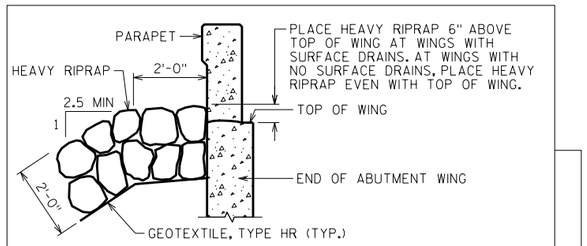
(2) INDICATES WING NUMBER



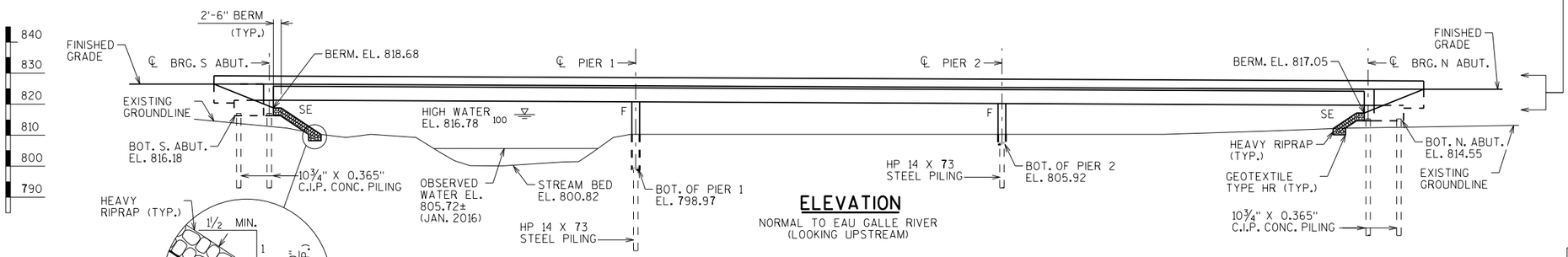
PLAN

THREE SPAN - 54W" PRESTRESSED CONCRETE GIRDER

NOTE: SURFACE DRAIN ANCHORS LOCATED ON ALL WINGS. SEE WING SHEETS FOR DETAILS.



TYPICAL FILL SECTION AT WING TIPS



ELEVATION

NORMAL TO EAU GALLE RIVER (LOOKING UPSTREAM)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.01
OPERATING RATING FACTOR: RF = 1.30
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

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

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.

54W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 10,900 C.F.S.
VEL. = 5.0 F.P.S.
$HW._{100}$ = EL. 816.78
WATERWAY AREA = 2,202 SQ. FT.
DRAINAGE AREA = 125.6 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 3,275 C.F.S.
$HW._2$ = EL. 812.51

TRAFFIC VOLUME

STH 72

ADT = 1700 (2040)
R.D.S. = 60 M.P.H.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 10¾" X .365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 100 FEET LONG.

PIER 1 TO BE SUPPORTED ON HP 14-INCH X 73 LB/FT. STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 250 TONS ** PER PILE AS DETERMINED BY THE PILE DRIVER ANALYZER (PDA). ESTIMATED 105 FEET LONG.

PIER 2 TO BE SUPPORTED ON HP 14-INCH X 73 LB/FT. STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 250 TONS ** PER PILE AS DETERMINED BY THE PILE DRIVER ANALYZER (PDA). ESTIMATED 95 FEET LONG.

* 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.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING PILE DRIVER ANALYZER (PDA), TO DETERMINE DRIVEN PILE CAPACITY.

LIST OF DRAWINGS

STRUCTURE DESIGN CONTACTS:

JOEL MAAS (608) 267-0273
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher ELS 9/12/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-17-227

STH 72 OVER EAU GALLE RIVER

COUNTY	TOWN
DUNN	WESTON

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	JDM	DESIGNED CK'D.	NAR	DRAWN BY	WWR	PLANS CK'D.	JDM

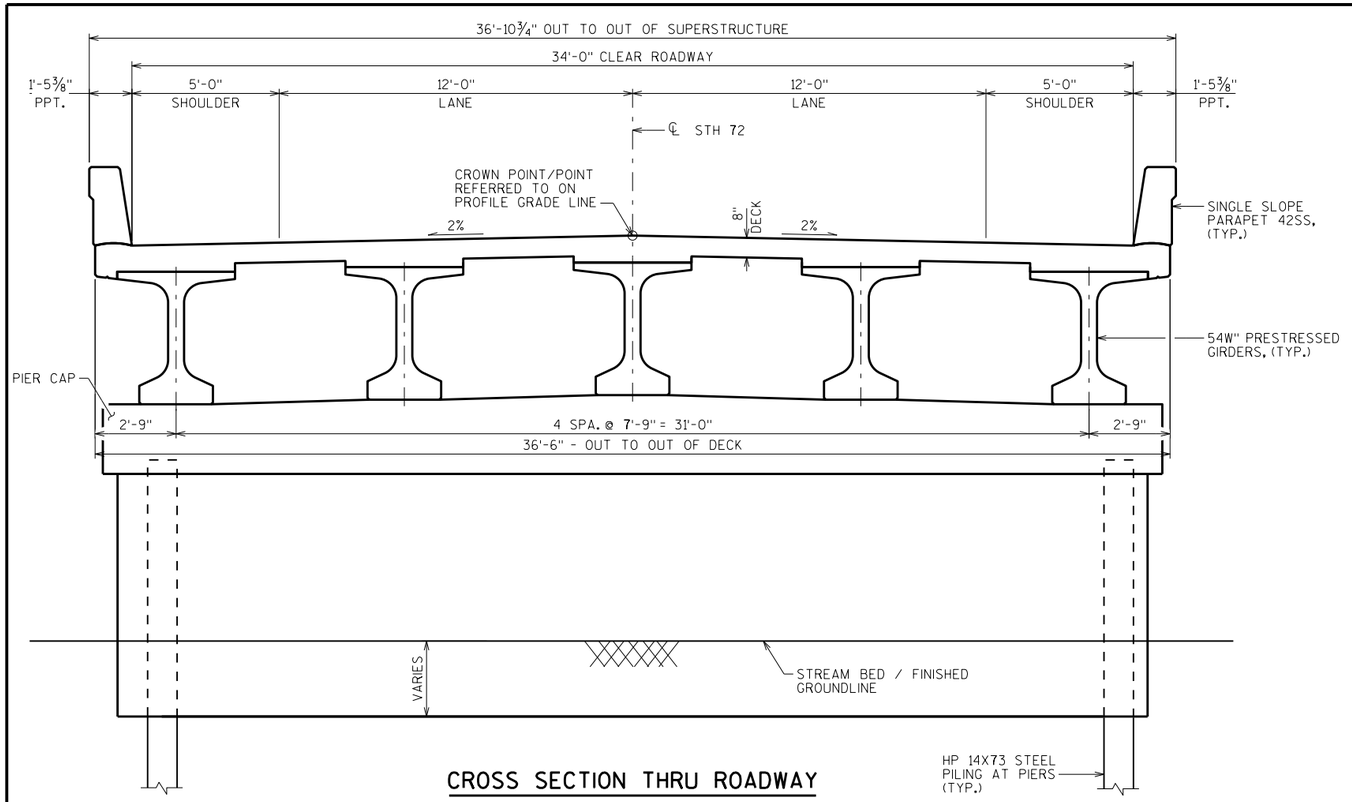
GENERAL PLAN

SHEET 1 OF 18

89

I.D. 7105-00-02A DATE: MAR. 2019

SCALE = 20.00



CROSS SECTION THRU ROADWAY

LOOKING NORTH

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	PIER 1	PIER 2	NORTH ABUT.	TOTALS
	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 95+00	LS	——	——	——	——	——	1
	206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-17-227	LS	——	——	——	——	——	1
*	206.5000	COFFERDAMS B-17-227	LS	——	——	——	——	——	1
	210.1500	BACKFILL STRUCTURE TYPE A	TON	——	267	——	——	267	534
	502.0100	CONCRETE MASONRY BRIDGES	CY	567	47	73	49	47	783
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	1347	——	——	——	——	1347
	502.3210	PIGMENTED SURFACE SEALER	SY	351	16	——	——	16	383
	503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	1773	——	——	——	——	1773
	505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	——	2420	3750	2680	2420	11,270
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	121,310	3270	——	——	3260	127,840
	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	——	5	10	10	5	30
	506.4000	STEEL DIAPHRAGMS B-17-227	EACH	24	——	——	——	——	24
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	——	11	——	——	11	22
	550.1140	PILING STEEL HP 14-INCH X 73 LB	LF	——	——	1155	1045	——	2200
	550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	——	1300	——	——	1300	2600
	606.0300	RIPRAP HEAVY	CY	——	265	——	——	230	495
	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	——	69	——	——	69	138
	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	——	——	——	——	4
	645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	——	35	——	——	35	70
	645.0120	GEOTEXTILE TYPE HR	SY	——	465	——	——	400	865
	SPV.0060	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	——	——	2	2	——	4
	SPV.0060	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	——	——	2	2	——	4
	SPV.0060	CASE PILE WAVE ANALYSIS PROGRAM (CAPWAP) EVALUATION	EACH	——	——	1	1	——	2
		NON-BID ITEMS							
		FILLER	SIZE	——	——	——	——	——	½", ¾", 1½"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-17-227" SHALL BE THE EXISTING GROUNDLINE.

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

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

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

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

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

PIGMENTED PROTECTIVE SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON WINGS.

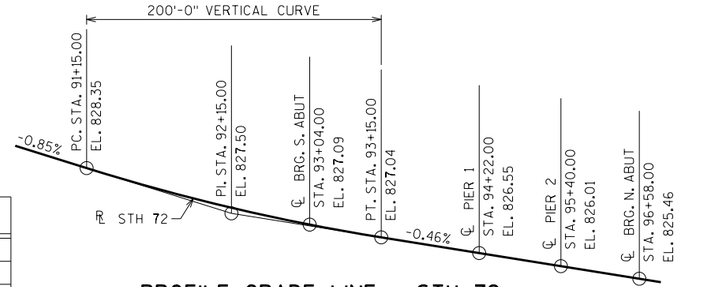
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "54W PRESTRESSED GIRDER DETAILS 2" SHEET.

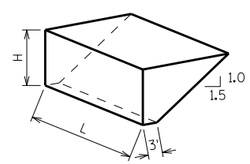
THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

AT PIER 1, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

* INSTALL COFFERDAM AT PIER 1



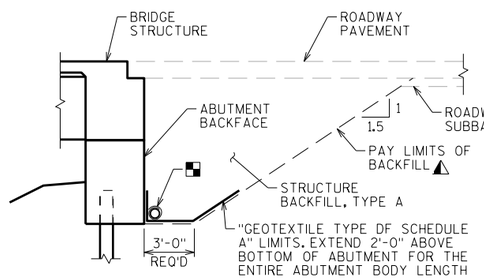
PROFILE GRADE LINE - STH 72



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

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

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

STATE PROJECT NUMBER
7105-00-72

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

CROSS SECTION & QUANTITIES

SHEET 2

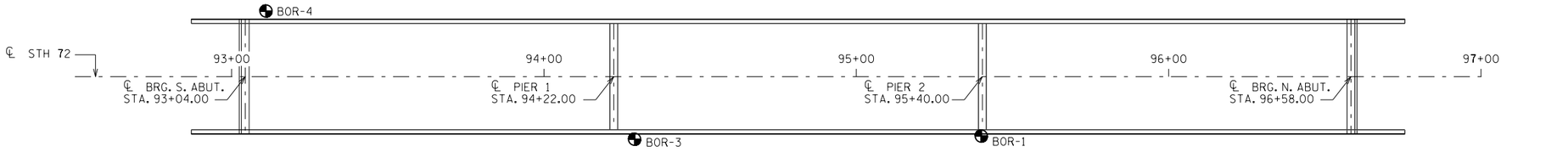
90

8

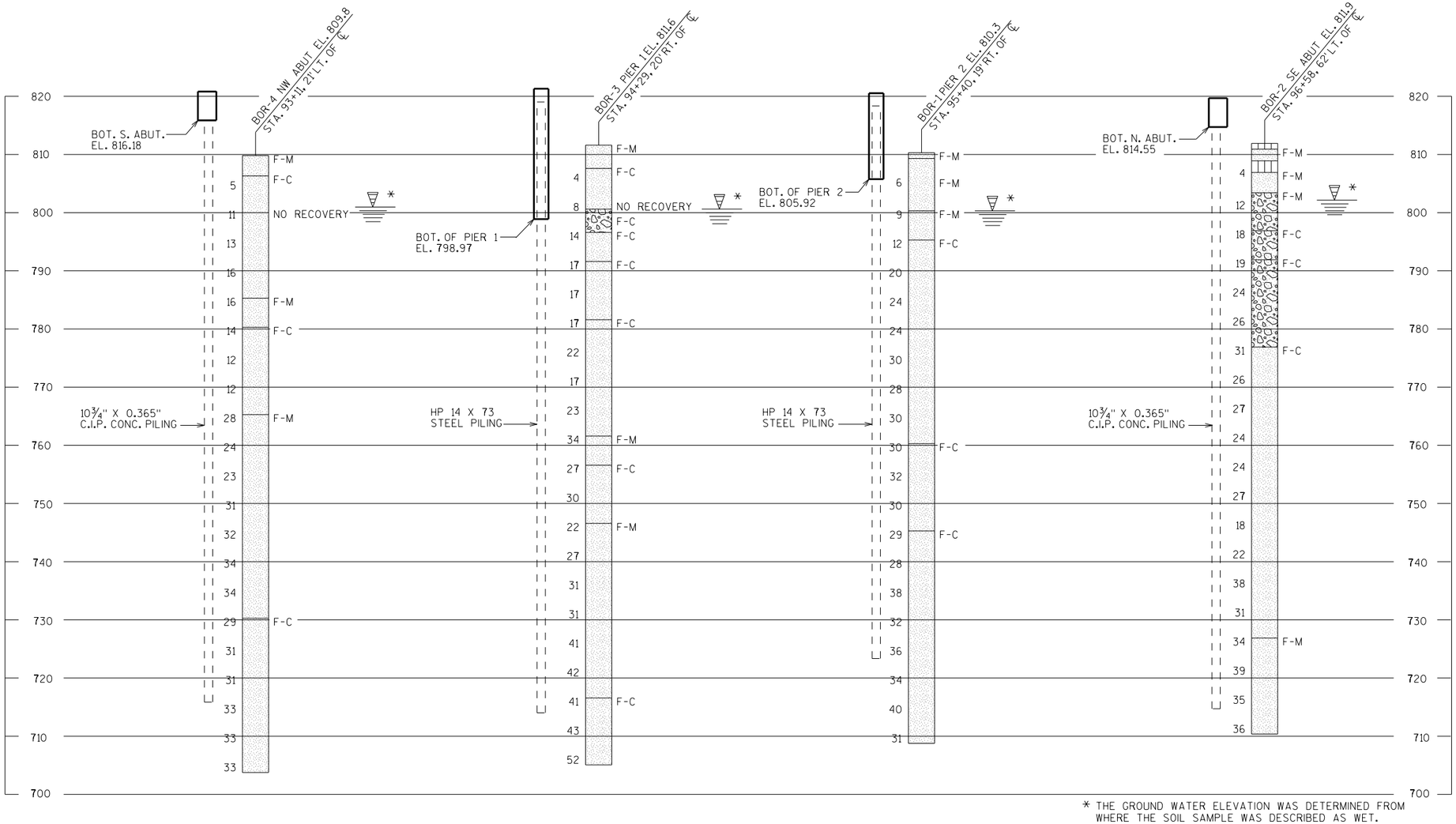
8

SCALE = 2.50

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	11/15/2017	135873	114386
2	11/15/2017	136014	114406
3	11/28/2017	135790	114311
4	11/29/2017	135732	114201
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



PLAN



* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

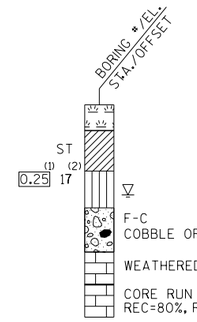
STATE PROJECT NUMBER

7105-00-72

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY TLP/WWR | PLANS CK'D. JDM

SUBSURFACE EXPLORATION

SHEET 3

91

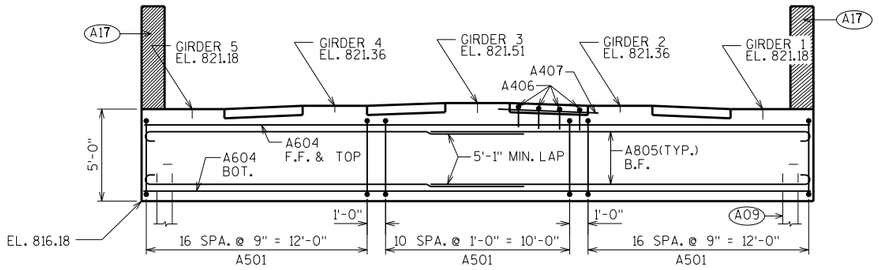
SCALE =

8

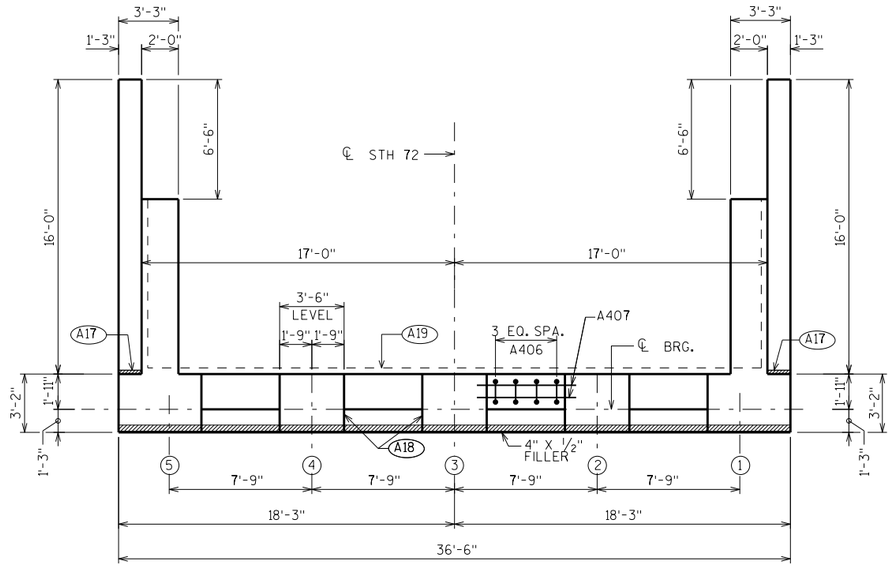
8

STATE PROJECT NUMBER

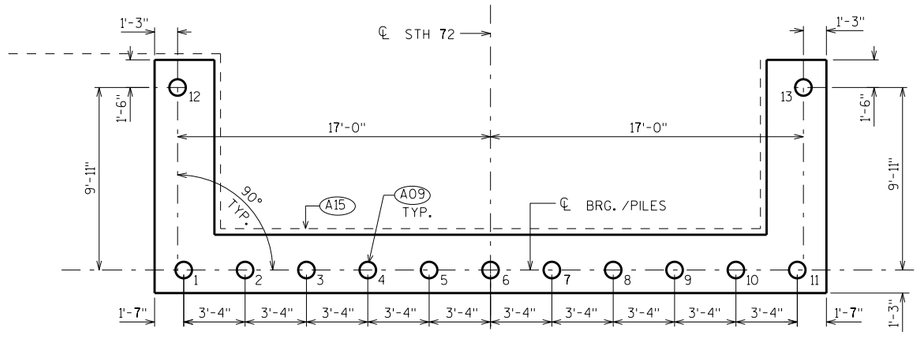
7105-00-72



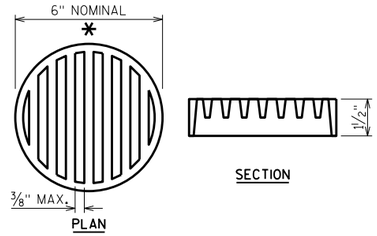
ELEVATION



PLAN



PILE PLAN

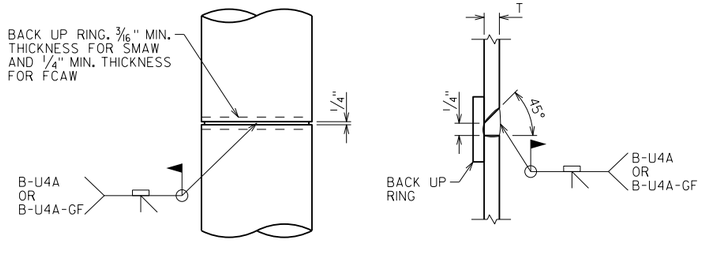


RODENT SHIELD DETAIL

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

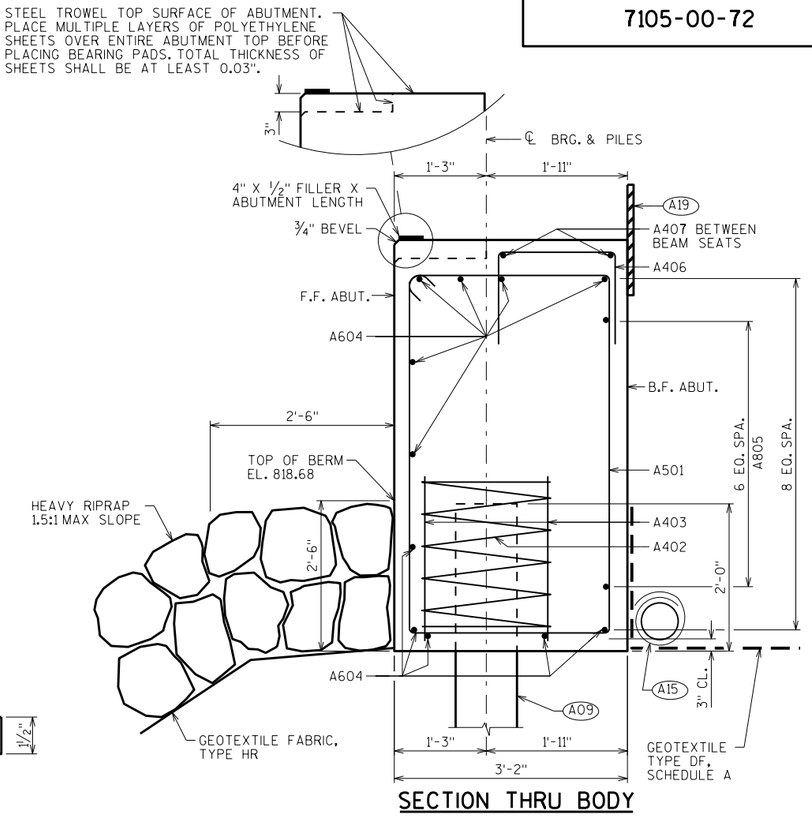
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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



CAST-IN-PLACE 'PIPE PILE' C.I.P. PILE WELD DETAIL

PILE DETAILS



SECTION THRU BODY

(A09) SUPPORT ABUTMENT ON 10¾" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 100'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. 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 GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY	WWR	PLANS CK'D.	JDM

SOUTH ABUTMENT

SHEET 4

92

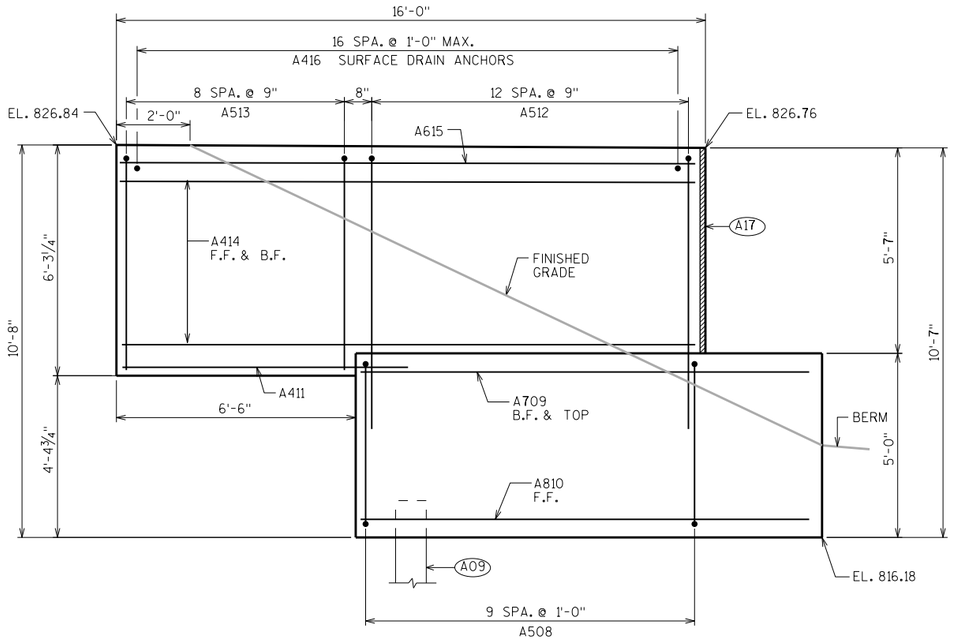
SCALE = 4.00

8

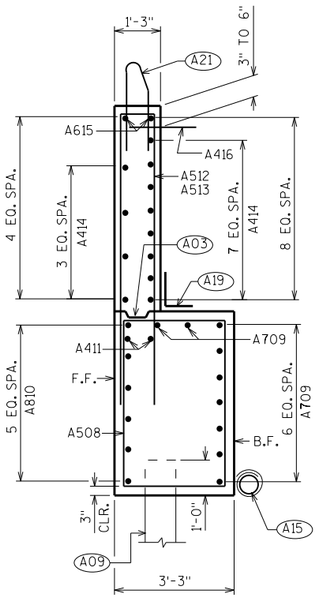
8

STATE PROJECT NUMBER

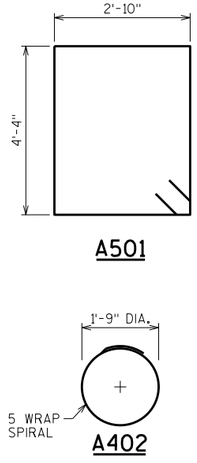
7105-00-72



WING 1 ELEVATION



WING 1 SECTION



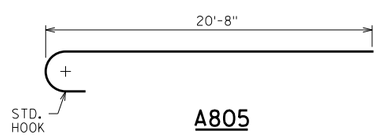
A501

A402

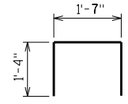
BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		45	15'-0"	X		ABUT. BODY-VERT. STIRRUP
A402		11	28'-0"	X		ABUT. BODY-1 PER BODY PILE
A403		22	2'-3"			ABUT. BODY-2 PER BODY PILE
A604		11	36'-2"			ABUT. BODY-HORIZ.
A805		14	21'-7"	X		ABUT. BODY-HORIZ.-B.F.
A406		16	4'-1"	X		ABUT. BODY--VERT.-TOP
A407		8	6'-3"			ABUT. BODY-HORIZ.-BTWN. BEAM SEATS
A508	X	20	15'-6"	X		WING BODY 1 & 2-VERT.
A709	X	18	12'-4"			WING BODY 1 & 2-HORIZ.
A810	X	12	12'-4"			WING BODY 1 & 2-HORIZ.
A411	X	4	7'-9"			WING WALL 1 & 2-HORIZ.
A512	X	26	15'-8"	X		WING WALL 1 & 2-VERT.
A513	X	18	12'-4"	X		WING WALL 1 & 2-VERT.
A414	X	24	15'-7"			WING WALL 1 & 2-HORIZ.
A615	X	4	15'-7"			WING WALL 1 & 2-HORIZ.-TOP
A416	X	34	2'-0"			WING WALL-TOP-HORIZ.-SURFACE DRAINS



A805



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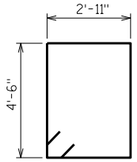

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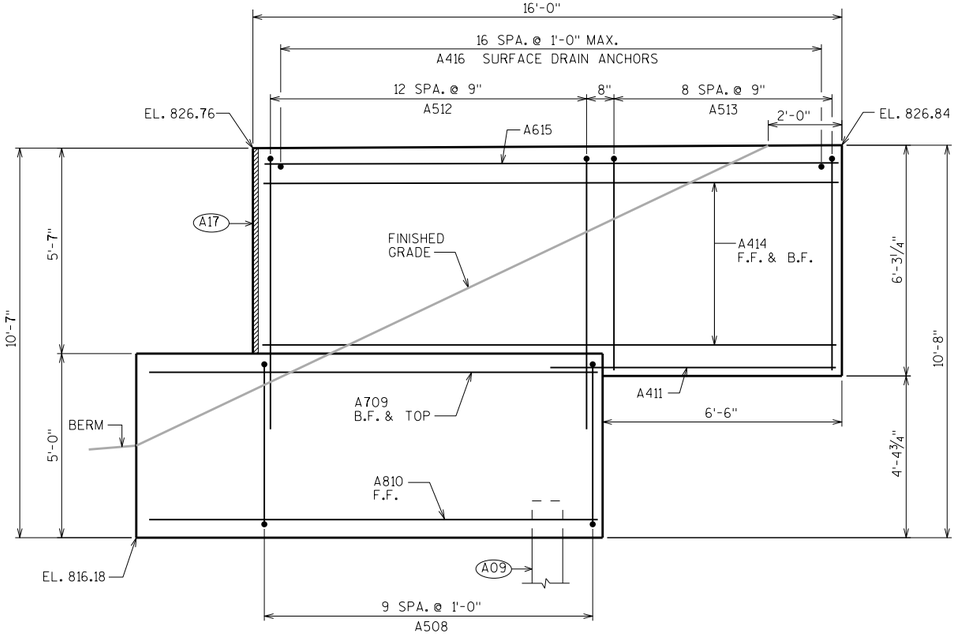
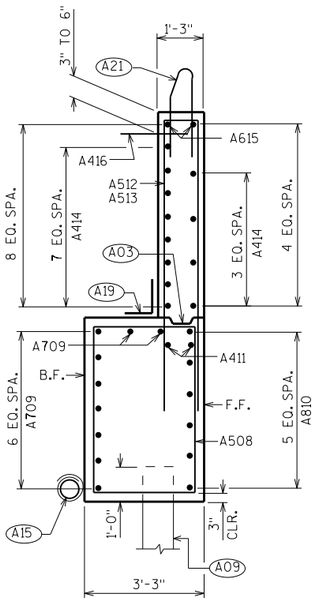
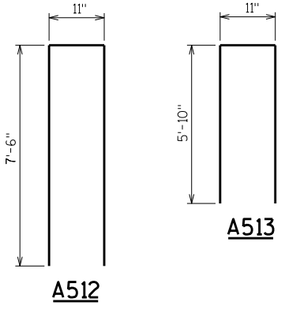


WING 2 ELEVATION



WING 2 SECTION



A512

A513

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A09) SUPPORT ABUTMENT ON 10¾" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 100'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. 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 GUTTER LINE AT INSIDE FACE.

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

(A21) FOR PPT. BARS & DIMENSIONS SEE "SINGLE SLOPE 42SS PARAPET" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

SOUTH ABUTMENT DETAILS

SHEET 5

93

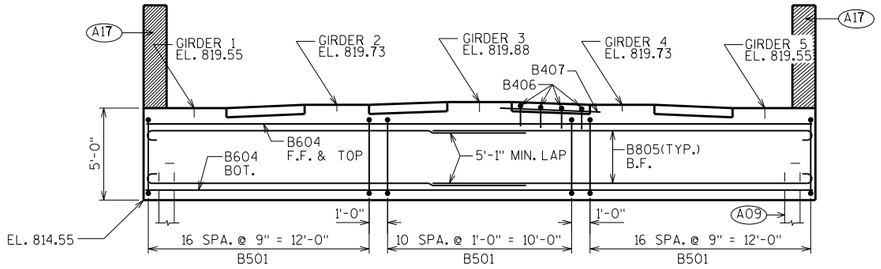
SCALE = 2.00

8

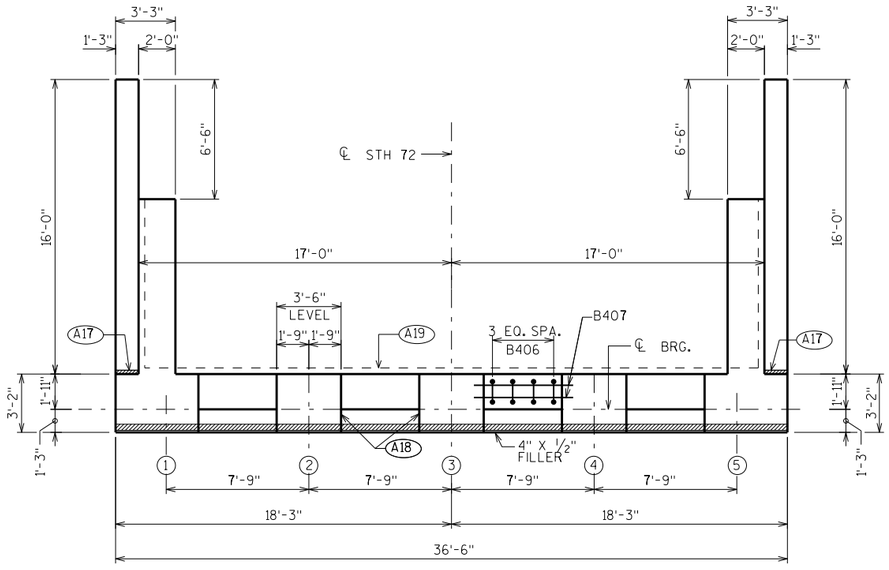
8

STATE PROJECT NUMBER

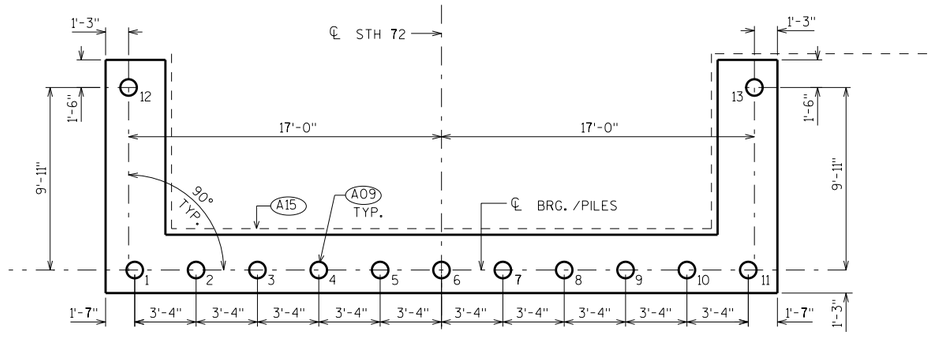
7105-00-72



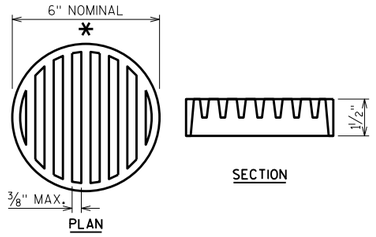
ELEVATION



PLAN



PILE PLAN

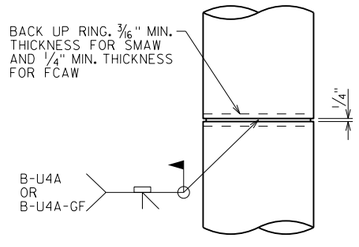


RODENT SHIELD DETAIL

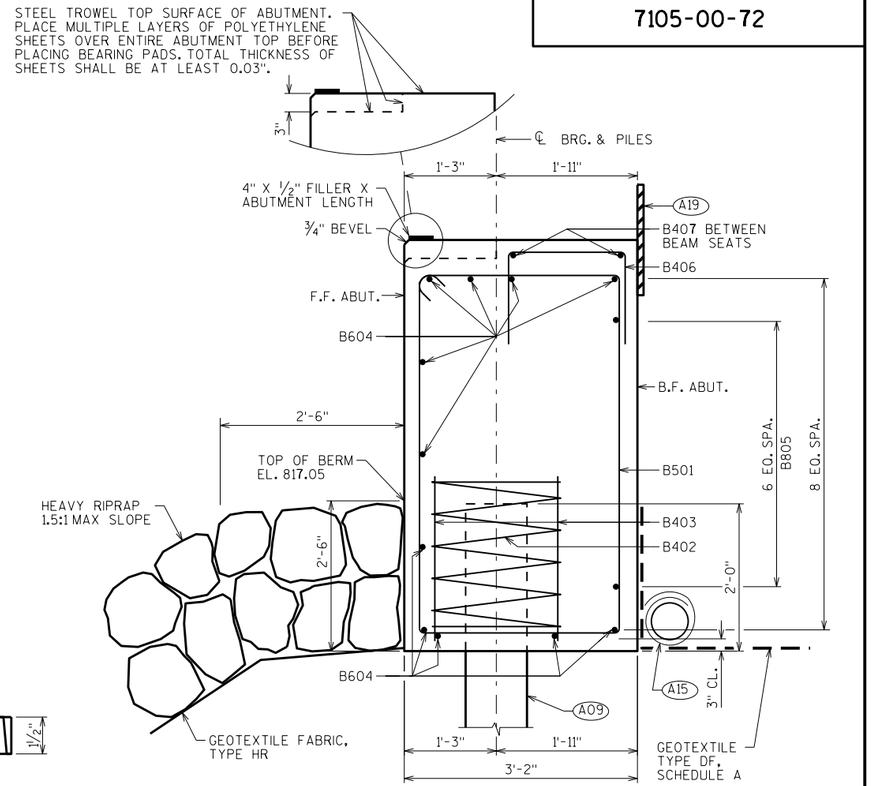
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

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



PILE DETAILS



SECTION THRU BODY

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 100'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. 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 GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY	WWR	PLANS CK'D.	JDM

NORTH ABUTMENT

SHEET 6

94

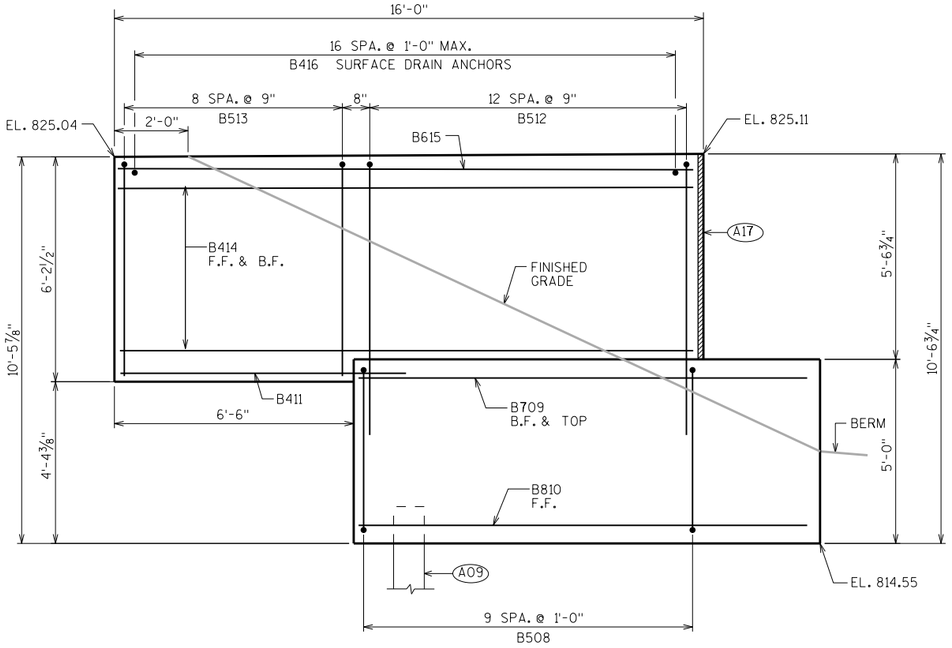
8

8

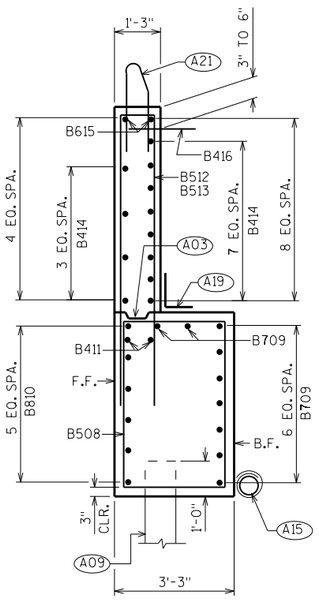
SCALE = 4.00

STATE PROJECT NUMBER

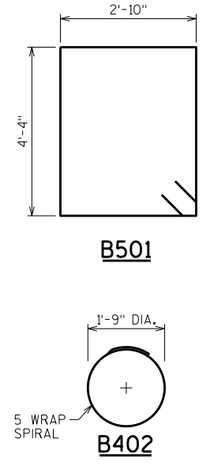
7105-00-72



WING 3 ELEVATION



WING 3 SECTION



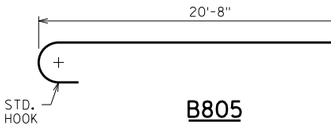
B501

B402

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		45	15'-0"	X		ABUT. BODY-VERT. STIRRUP
B402		11	28'-0"	X		ABUT. BODY-1 PER BODY PILE
B403		22	2'-3"			ABUT. BODY-2 PER BODY PILE
B604		11	36'-2"			ABUT. BODY-HORIZ.
B805		14	21'-7"	X		ABUT. BODY-HORIZ.-B.F.
B406		16	4'-1"	X		ABUT. BODY--VERT.-TOP
B407		8	6'-3"			ABUT. BODY-HORIZ.-BTWN. BEAM SEATS
B508	X	20	15'-6"	X		WING BODY 3 & 4-VERT.
B709	X	18	12'-4"			WING BODY 3 & 4-HORIZ.
B810	X	12	12'-4"			WING BODY 3 & 4-HORIZ.
B411	X	4	7'-9"			WING WALL 3 & 4-HORIZ.
B512	X	26	15'-6"	X		WING WALL 3 & 4-VERT.
B513	X	18	12'-4"	X		WING WALL 3 & 4-VERT.
B414	X	24	15'-7"			WING WALL 3 & 4-HORIZ.
B615	X	4	15'-7"			WING WALL 3 & 4-HORIZ.-TOP
B416	X	34	2'-0"			WING WALL-HORIZ.-TOP SURFACE DRAINS



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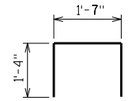

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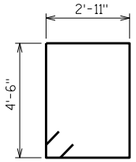

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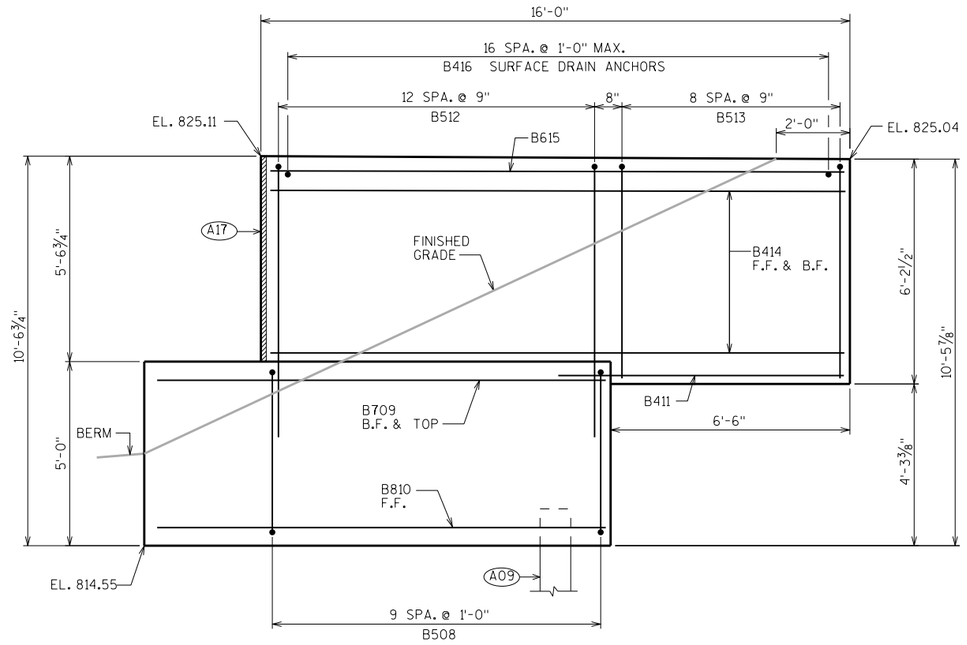
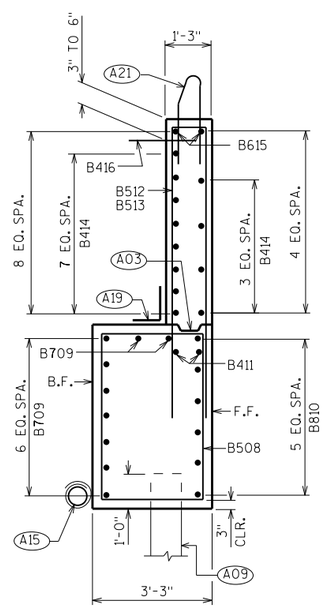
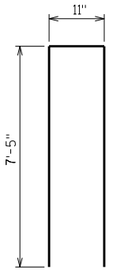


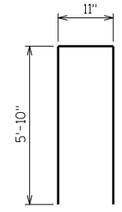
WING 4 ELEVATION



WING 4 SECTION



B512



B513

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

A09 SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 100'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. 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 GUTTER LINE AT INSIDE FACE.

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

A21 FOR PPT. BARS & DIMENSIONS SEE "SINGLE SLOPE 42SS PARAPET" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

NORTH ABUTMENT DETAILS

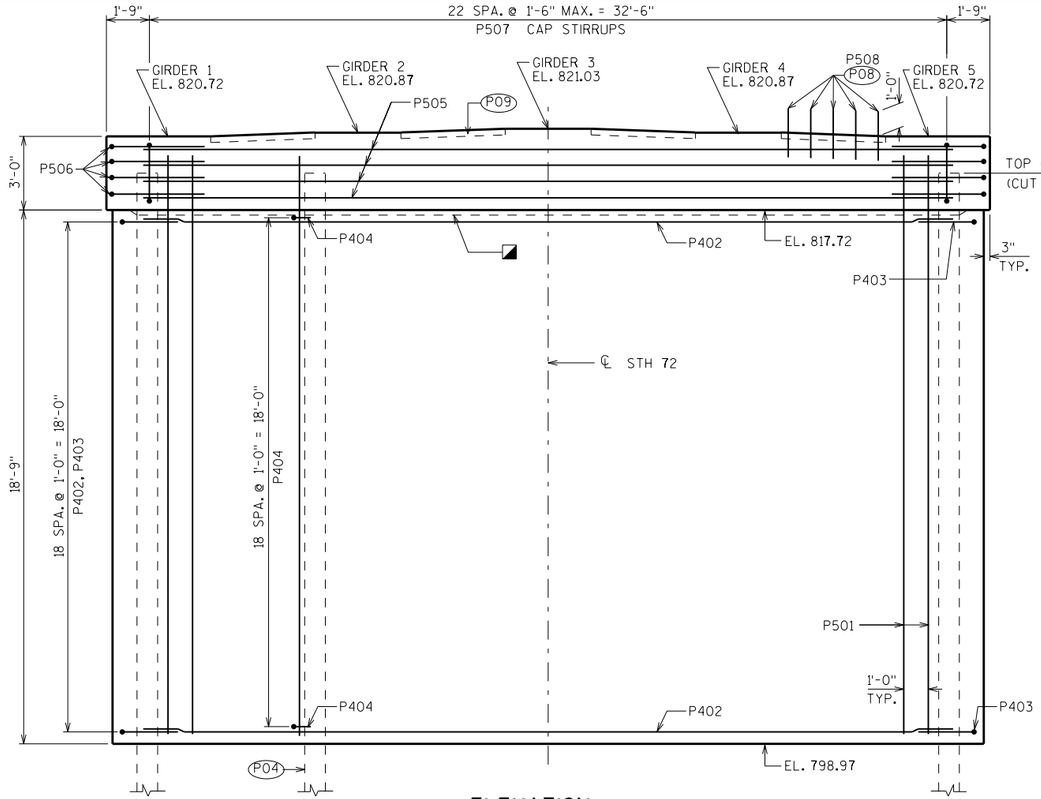
SHEET 7

95

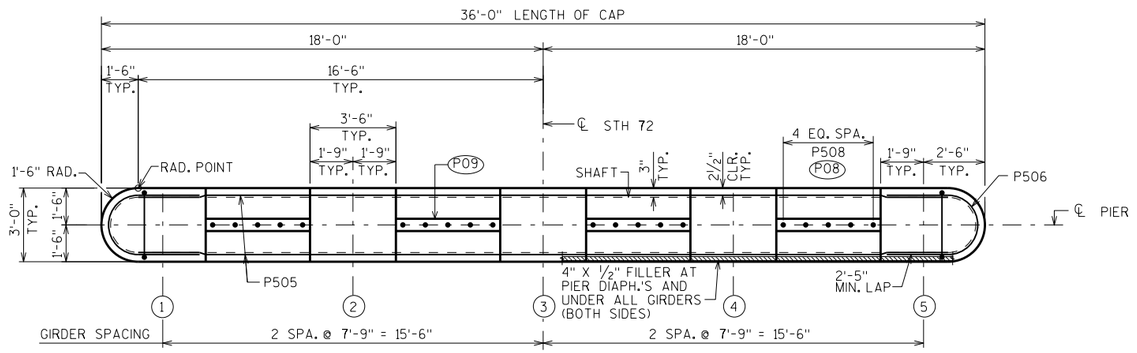
SCALE = 2.00

8

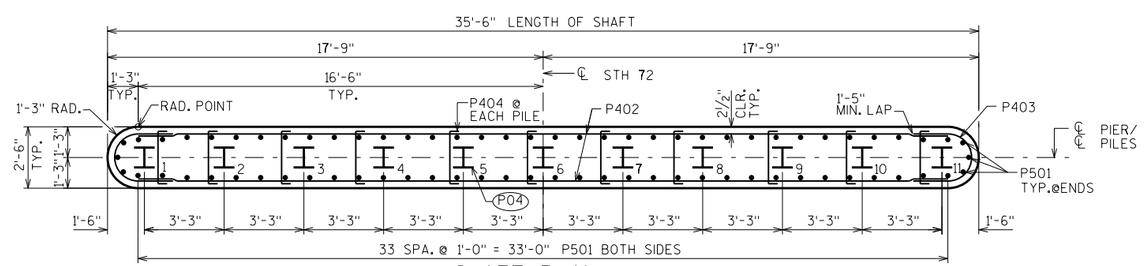
8



ELEVATION
LOOKING UPSTATION

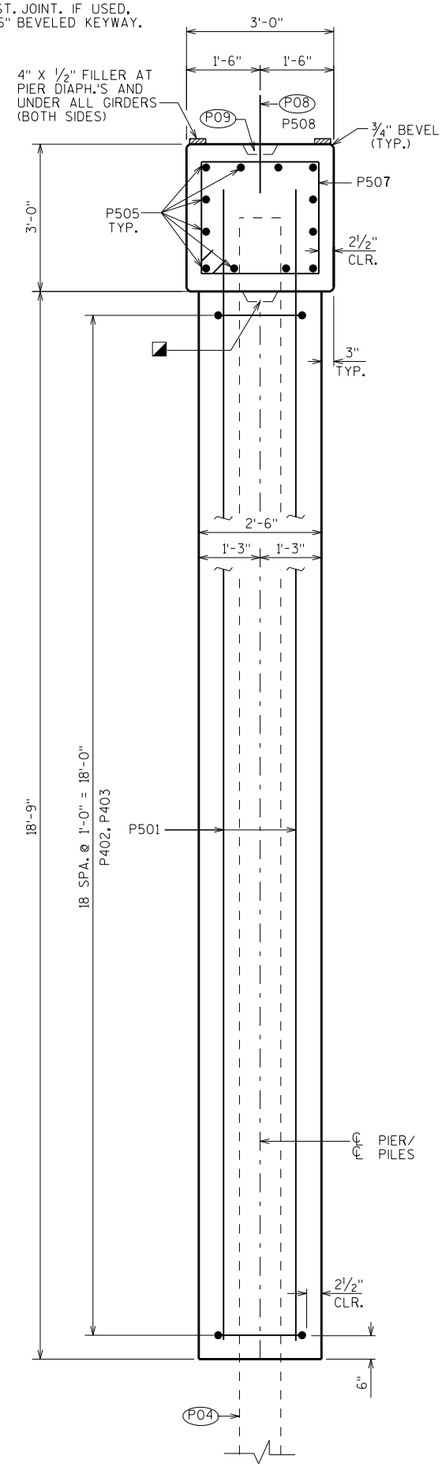


CAP PLAN



SHAFT PLAN

OPTIONAL CONST. JOINT. IF USED, PROVIDE 2" X 6" BEVELED KEYWAY.



SECTION THRU SHAFT & CAP

(P04) SUPPORT PIER ON HP 14 x 73 STEEL PILING, ESTIMATED 105'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE.

(P08) P508 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

STATE PROJECT NUMBER

7105-00-72

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

PIER 1

SHEET 8

96

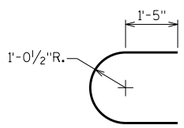
8

8

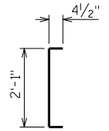
SCALE = 3.00

STATE PROJECT NUMBER

7105-00-72



P403



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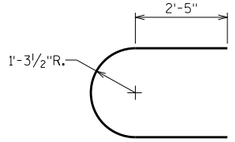
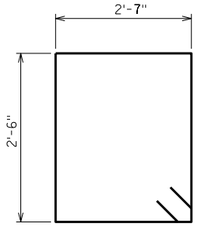


P506

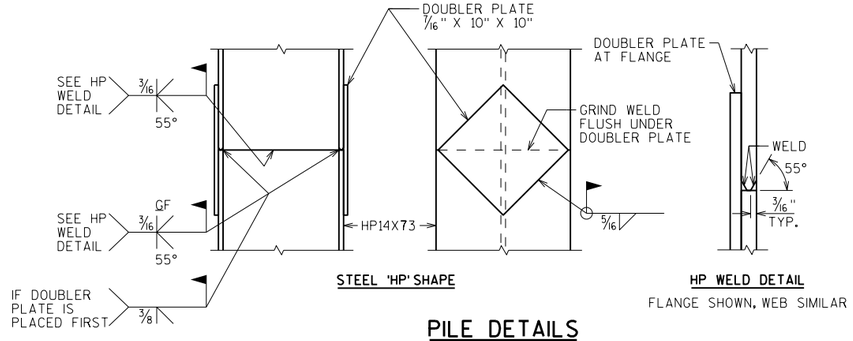


P507

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P501		74	20'-9"			SHAFT/CAP-VERT.
P402		38	33'-0"			SHAFT-HORIZ.
P403		38	6'-2"	X		SHAFT-HORIZ. ENDS
P404		209	2'-8"	X		SHAFT-HORIZ. TIE BARS
P505		12	33'-0"			CAP-HORIZ.
P506		8	8'-11"	X		CAP.-HORIZ.ENDS
P507		23	10'-10"	X		CAP-VERT. STIRRUPS
P508		20	2'-0"			CAP-VERT. DOWELS



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

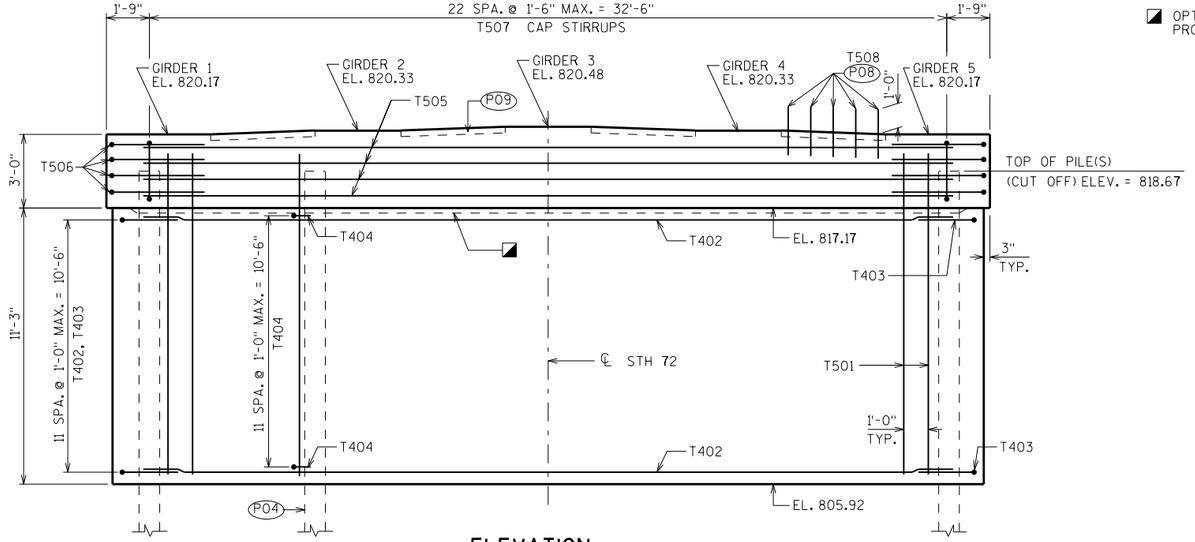
DRAWN BY WWR | PLANS CK'D. JDM

PIER 1
DETAILS

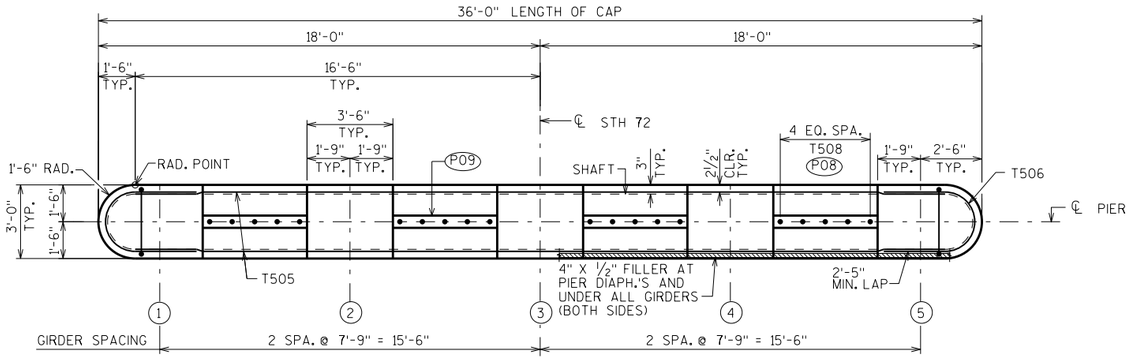
SHEET 9

97

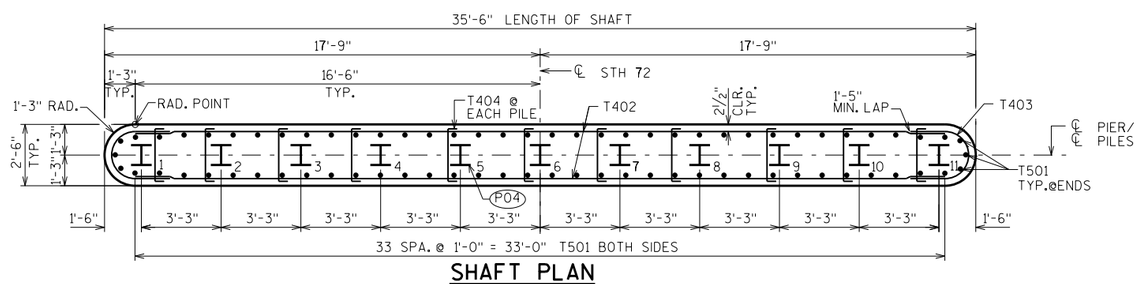
SCALE = 1.00



ELEVATION
LOOKING UPSTATION

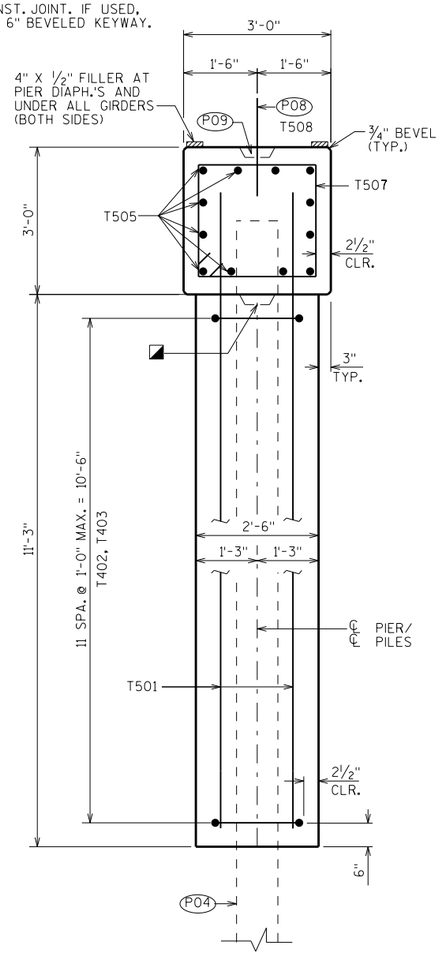


CAP PLAN



SHAFT PLAN

◪ OPTIONAL CONST. JOINT. IF USED, PROVIDE 2" X 6" BEVELED KEYWAY.



SECTION THRU SHAFT & CAP

(P04) SUPPORT PIER ON HP 14 x 73 STEEL PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE.

(P08) T508 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

STATE PROJECT NUMBER

7105-00-72

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

PIER 2

SHEET 10

98

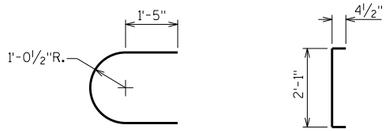
8

8

SCALE = 3.00

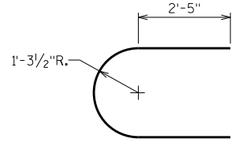
STATE PROJECT NUMBER

7105-00-72

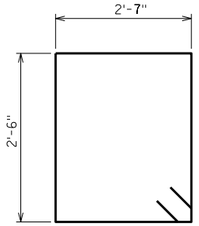


T403

T404



T506

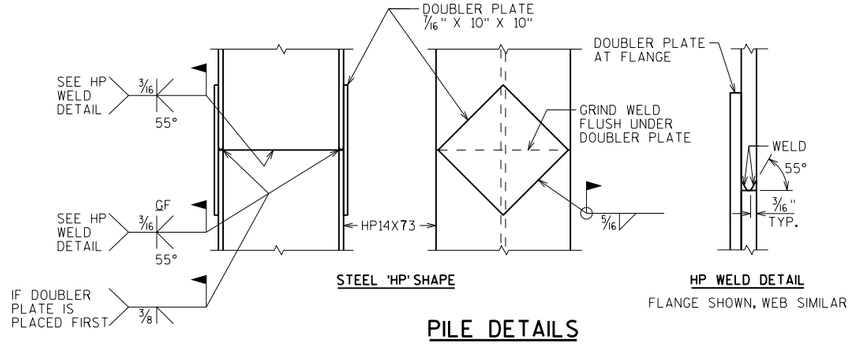


T507

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501		74	13'-3"			SHAFT/CAP-VERT.
T402		24	33'-0"			SHAFT-HORIZ.
T403		24	6'-2"	X		SHAFT-HORIZ. ENDS
T404		132	2'-8"	X		SHAFT-HORIZ. TIE BARS
T505		12	33'-0"			CAP-HORIZ.
T506		8	8'-11"	X		CAP.-HORIZ.ENDS
T507		23	10'-10"	X		CAP-VERT. STIRRUPS
T508		20	2'-0"			CAP-VERT. DOWELS



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

PIER 2 DETAILS

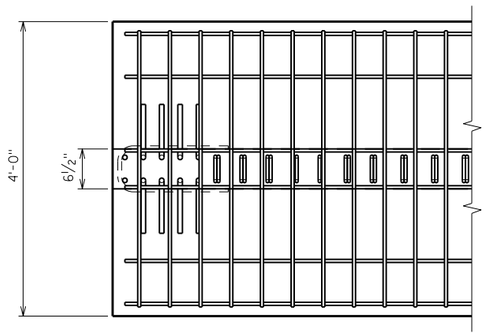
SHEET 11

99

SCALE = 1.00

STATE PROJECT NUMBER

7105-00-72



TOP FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

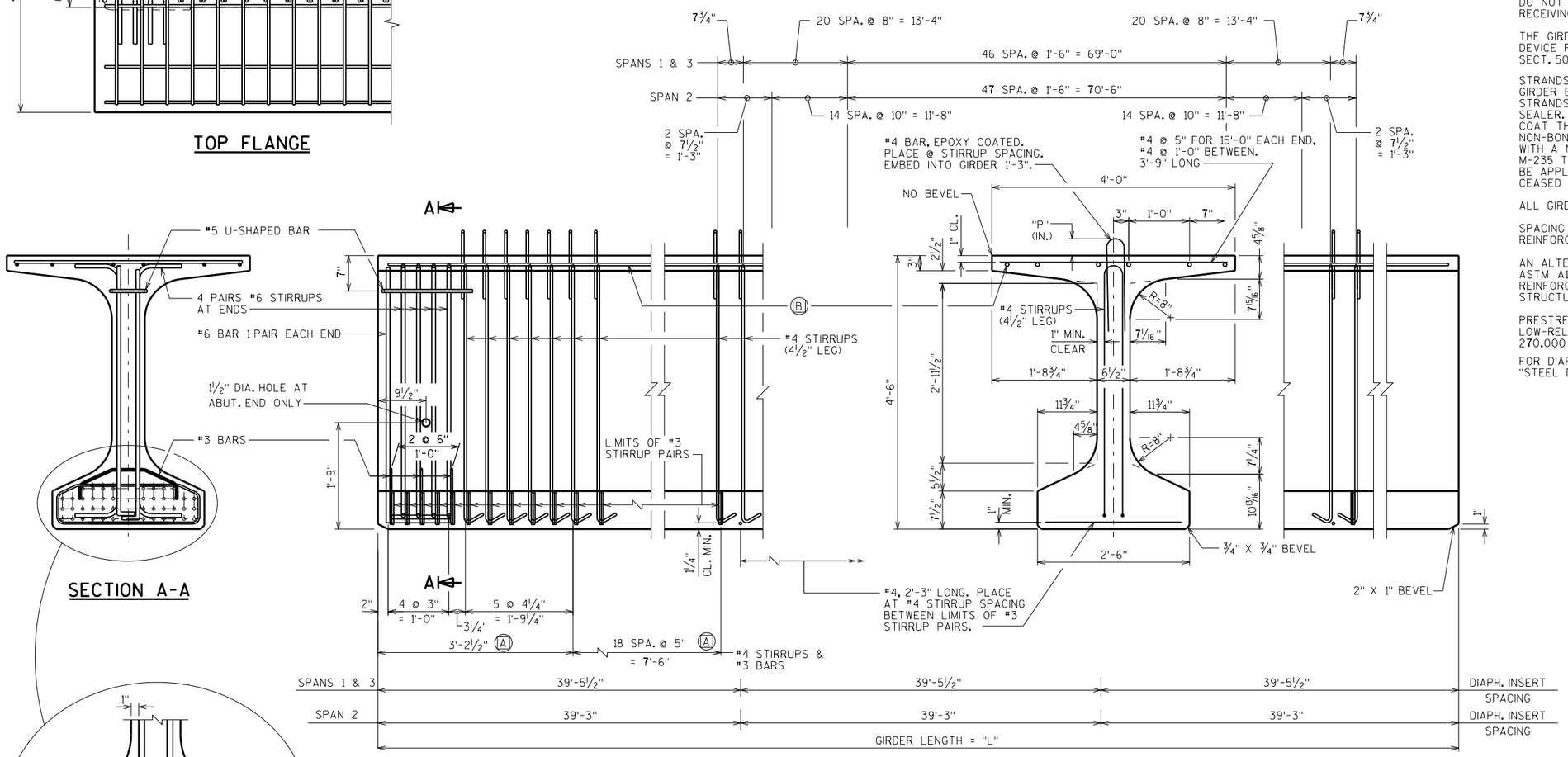
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

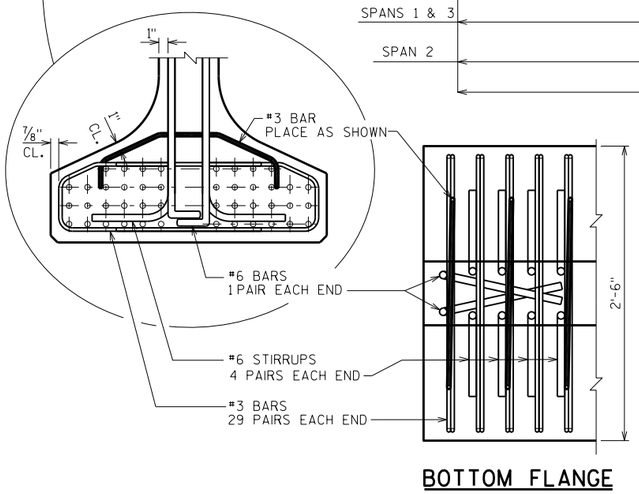
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



SECTION A-A

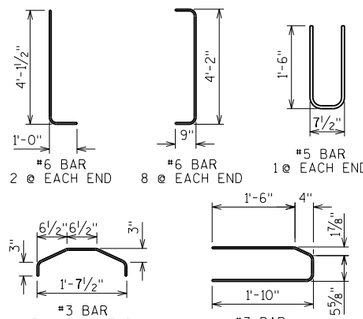


BOTTOM FLANGE

SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) (6) #4 BARS, FULL LENGTH, MIN. LAP = 1'-11" [SPANS 1,2,3]



⚹ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FT.)	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" IST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ⚹	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ⚹
1	1-5	118.375	0.7	1.3	1.7	2.0	2.1	1.8	1.7	1.2	0.7	8,000	8.5	7	8	0.6	36	6400	49	16	19	5		
2	1-5	117.75	0.6	1.1	1.6	1.9	2.0	1.9	1.6	1.2	0.6	8,000	8	7.5	8	0.6	30	6400	50	15.5	18.5	4		
3	1-5	118.375	0.7	1.2	1.7	2.0	2.1	2.0	1.7	1.3	0.7	8,000	8.5	8	9	0.6	36	6400	49	16	19	5		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

54W" PRESTRESSED GIRDER DETAILS 1

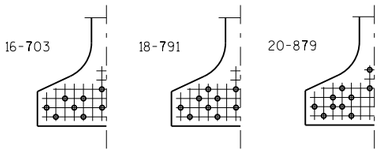
SHEET 12

100

SCALE =

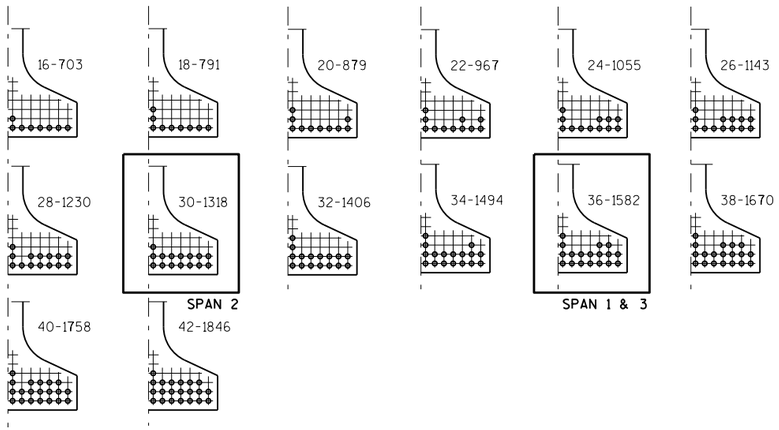
STATE PROJECT NUMBER

7105-00-72



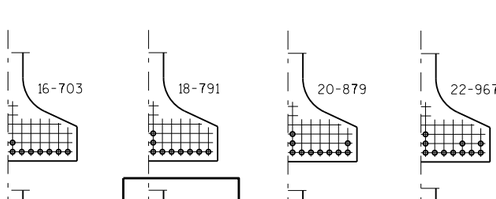
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

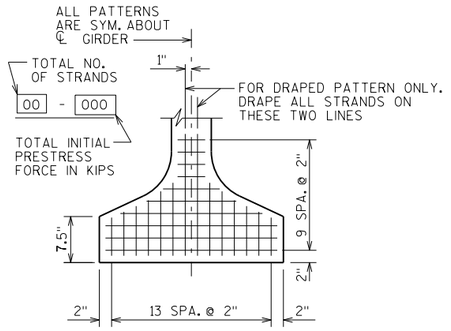


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



DRAPED STRAND PROFILE



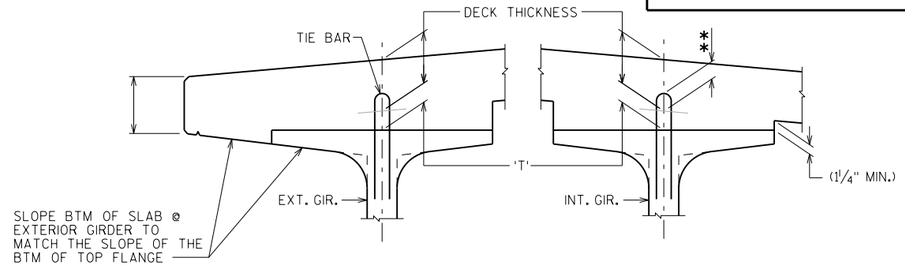
TYP. STRAND PATTERN

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.57
2	2.72
3	3.57

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DECK HAUNCH DETAIL

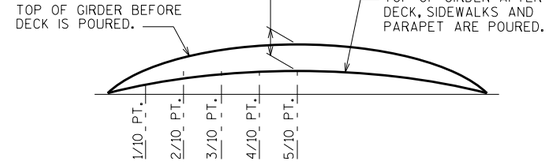
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

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

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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

NOTE: AN AVERAGE HAUNCH ('T') OF 3.25" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

54W" PRESTRESSED GIRDER DETAILS 2

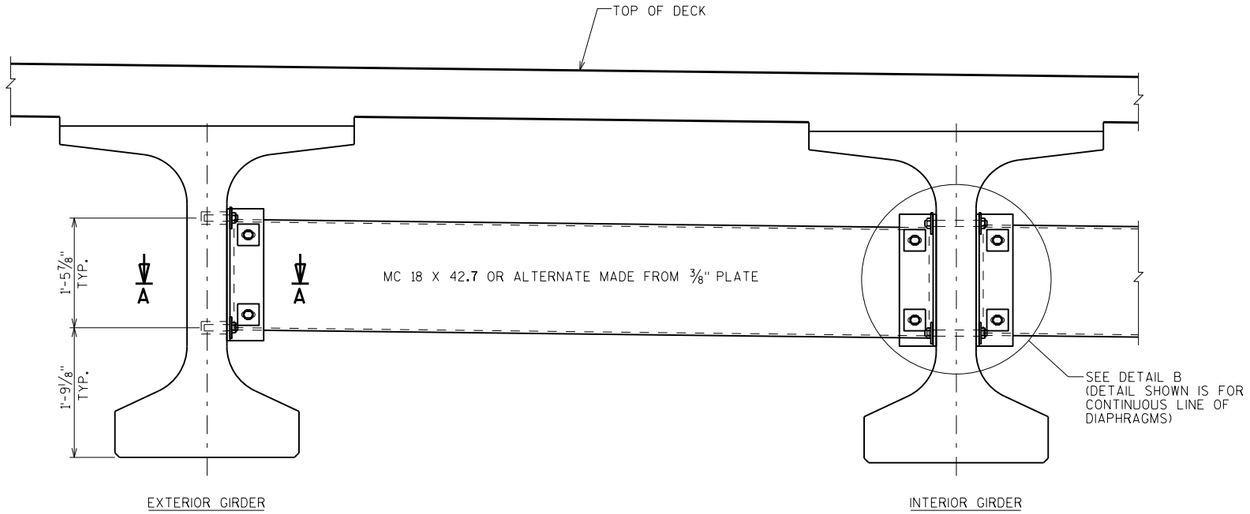
SHEET 13

101

SCALE =

STATE PROJECT NUMBER

7105-00-72



PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

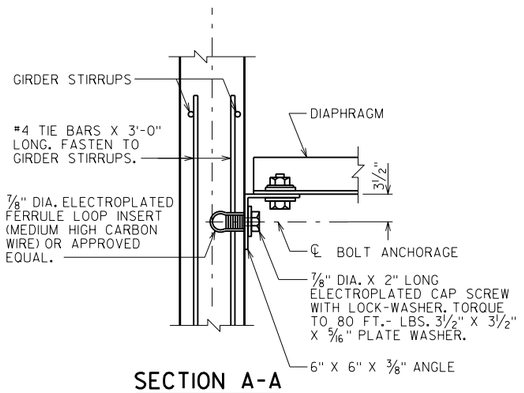
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-17-227", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

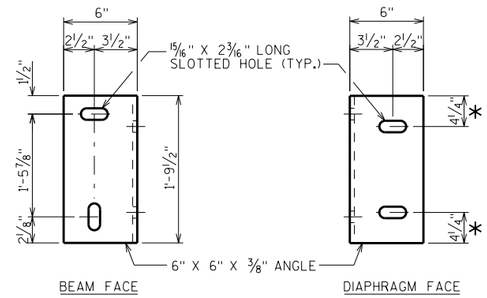
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



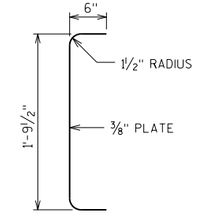
SECTION A-A

(FOR EXTERIOR ATTACHMENT)

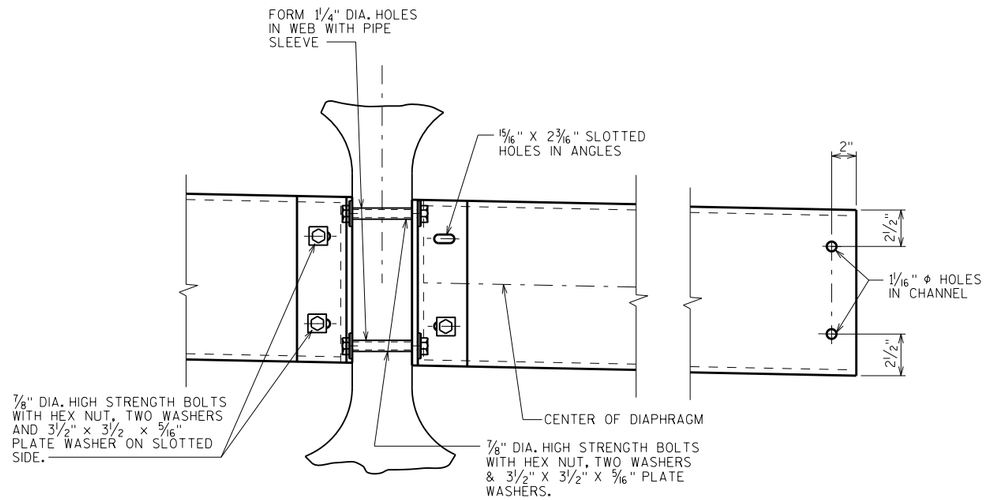


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM



(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

STEEL DIAPHRAGM

SHEET 14

102

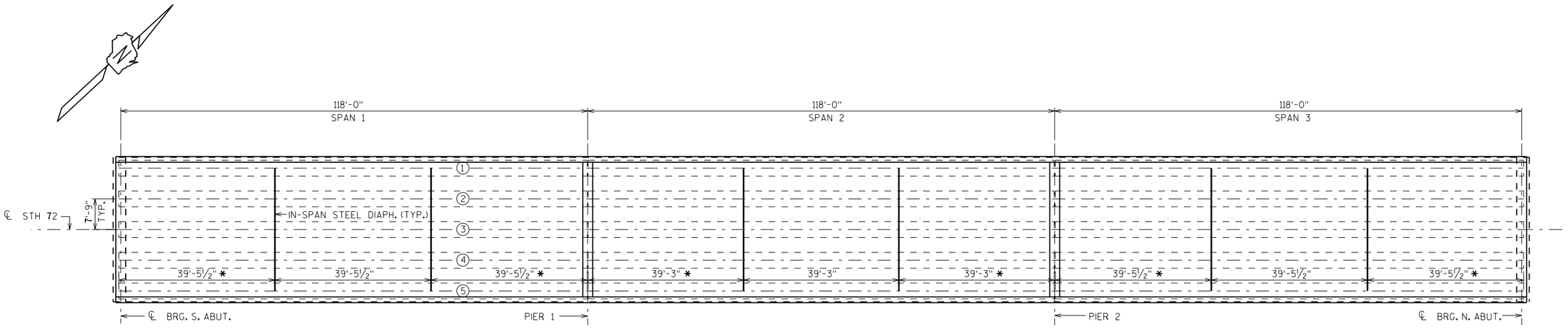
8

8

SCALE = 1.0

STATE PROJECT NUMBER

7105-00-72



FRAMING PLAN

TOP OF DECK ELEVATIONS

	℄ BRG. S. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 2
LEFT EOD	826.75	826.70	826.64	826.59	826.53	826.48	826.42	826.37	826.32	826.26	826.21	826.15	826.10	826.04	825.99	825.94	825.88	825.83	825.77	825.72	825.67
LEFT GL	826.75	826.70	826.64	826.59	826.53	826.48	826.42	826.37	826.32	826.26	826.21	826.15	826.10	826.04	825.99	825.94	825.88	825.83	825.77	825.72	825.67
GIRDER 1	826.78	826.73	826.67	826.62	826.56	826.51	826.45	826.40	826.35	826.29	826.24	826.18	826.13	826.07	826.02	825.97	825.91	825.86	825.80	825.75	825.70
GIRDER 2	826.94	826.88	826.83	826.77	826.72	826.66	826.61	826.56	826.50	826.45	826.39	826.34	826.28	826.23	826.18	826.12	826.07	826.01	825.96	825.90	825.85
GIRDER 3/PGL	827.09	827.04	826.98	826.93	826.87	826.82	826.76	826.71	826.66	826.60	826.55	826.49	826.44	826.38	826.33	826.28	826.22	826.17	826.11	826.06	826.01
GIRDER 4	826.94	826.88	826.83	826.77	826.72	826.66	826.61	826.56	826.50	826.45	826.39	826.34	826.28	826.23	826.18	826.12	826.07	826.01	825.96	825.90	825.85
GIRDER 5	826.78	826.73	826.67	826.62	826.56	826.51	826.45	826.40	826.35	826.29	826.24	826.18	826.13	826.07	826.02	825.97	825.91	825.86	825.80	825.75	825.70
LEFT GL	826.75	826.70	826.64	826.59	826.53	826.48	826.42	826.37	826.32	826.26	826.21	826.15	826.10	826.04	825.99	825.94	825.88	825.83	825.77	825.72	825.67
LEFT EOD	826.75	826.70	826.64	826.59	826.53	826.48	826.42	826.37	826.32	826.26	826.21	826.15	826.10	826.04	825.99	825.94	825.88	825.83	825.77	825.72	825.67

* DIMENSIONS GIVEN ARE FROM END OF GIRDER.

	℄ PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. N. ABUT.
LEFT EOD	825.67	825.61	825.56	825.50	825.45	825.39	825.34	825.29	825.23	825.18	825.12
LEFT GL	825.67	825.61	825.56	825.50	825.45	825.39	825.34	825.29	825.23	825.18	825.12
GIRDER 1	825.70	825.64	825.59	825.53	825.48	825.42	825.37	825.32	825.26	825.21	825.15
GIRDER 2	825.85	825.80	825.74	825.69	825.63	825.58	825.52	825.47	825.42	825.36	825.31
GIRDER 3/PGL	826.01	825.95	825.90	825.84	825.79	825.73	825.68	825.63	825.57	825.52	825.46
GIRDER 4	825.85	825.80	825.74	825.69	825.63	825.58	825.52	825.47	825.42	825.36	825.31
GIRDER 5	825.70	825.64	825.59	825.53	825.48	825.42	825.37	825.32	825.26	825.21	825.15
LEFT GL	825.67	825.61	825.56	825.50	825.45	825.39	825.34	825.29	825.23	825.18	825.12
LEFT EOD	825.67	825.61	825.56	825.50	825.45	825.39	825.34	825.29	825.23	825.18	825.12

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

FRAMING PLAN

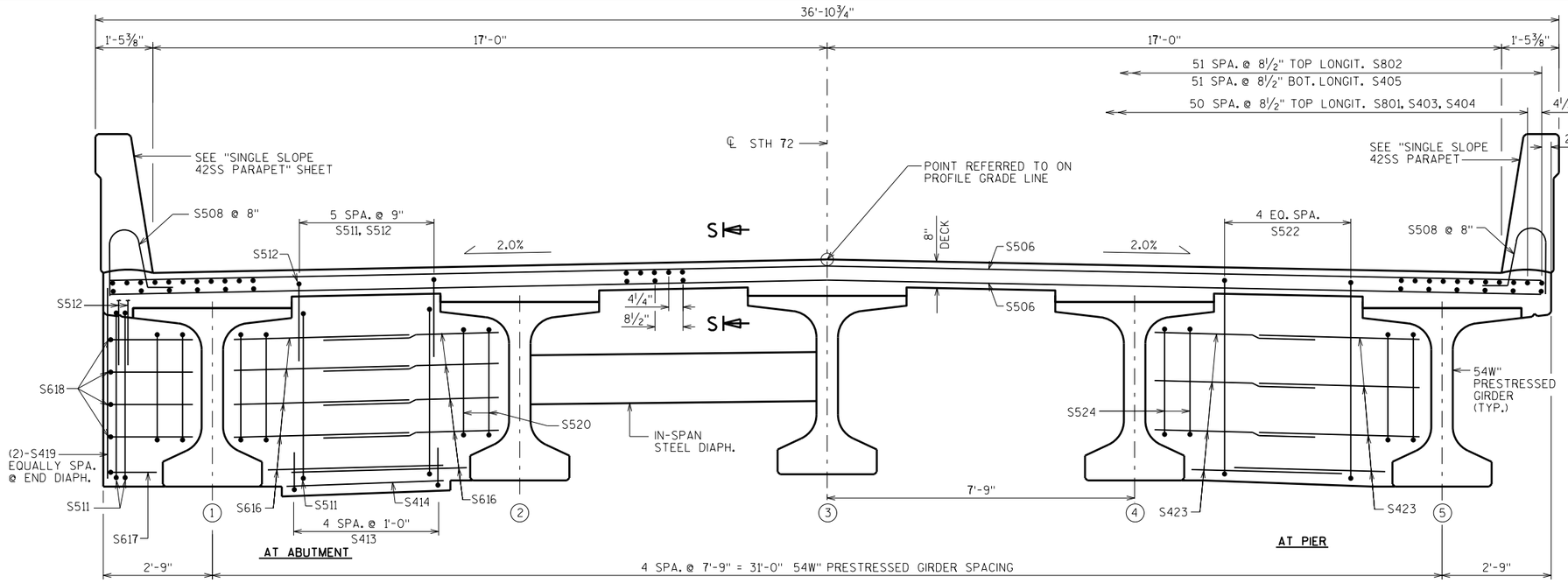
SHEET 15

103

SCALE = 13.00

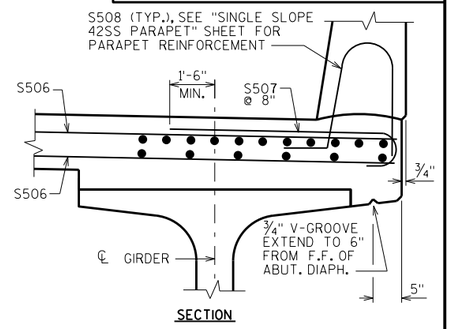
STATE PROJECT NUMBER

7105-00-72

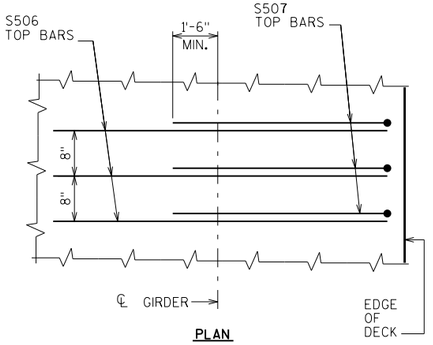


CROSS SECTION THRU SUPERSTRUCTURE

(LOOKING NORTH)



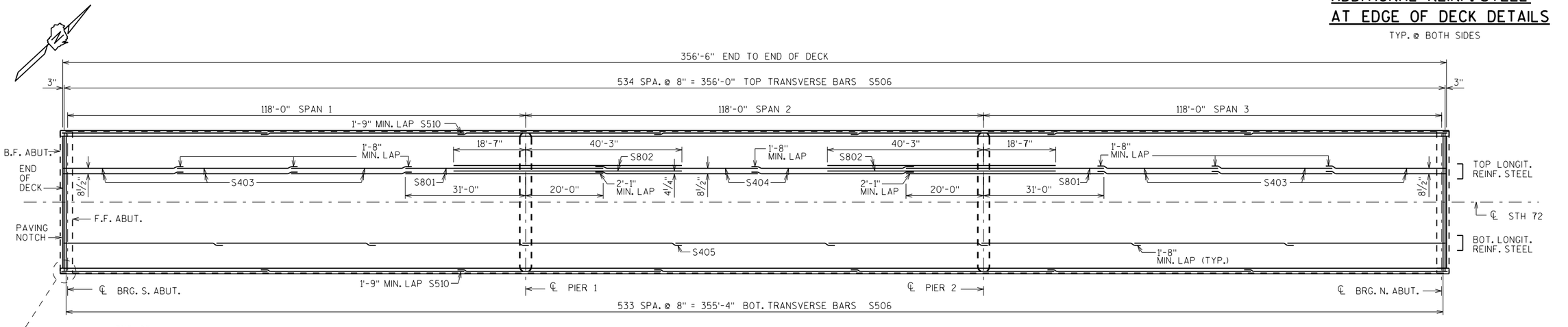
SECTION



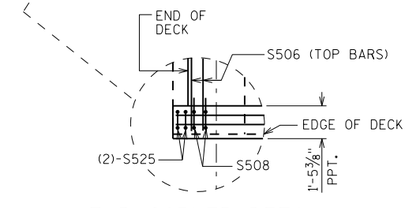
PLAN

ADDITIONAL REINF. STEEL AT EDGE OF DECK DETAILS

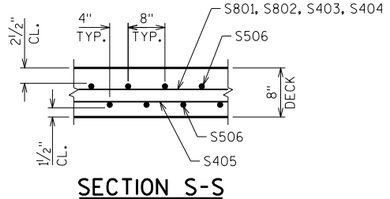
TYP. @ BOTH SIDES



PLAN



TYP. CORNER DETAIL



SECTION S-S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

SUPERSTRUCTURE

SHEET 16

104

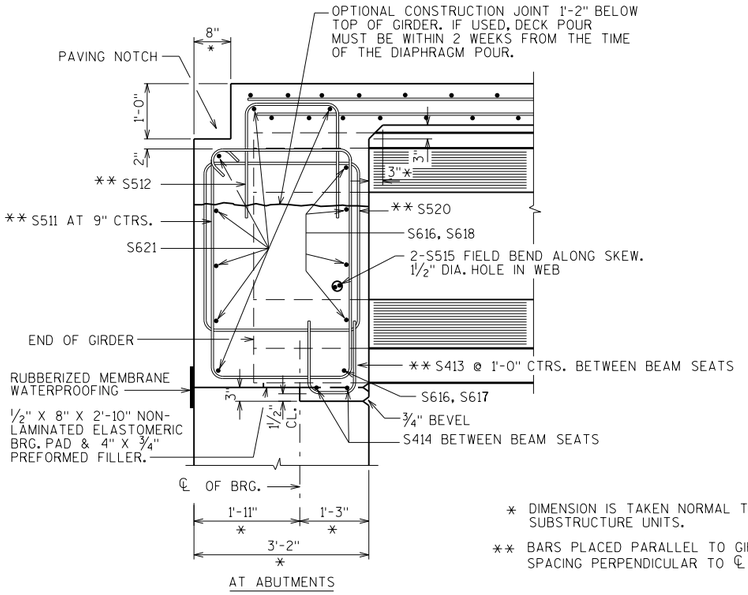
SCALE = 13.00

8

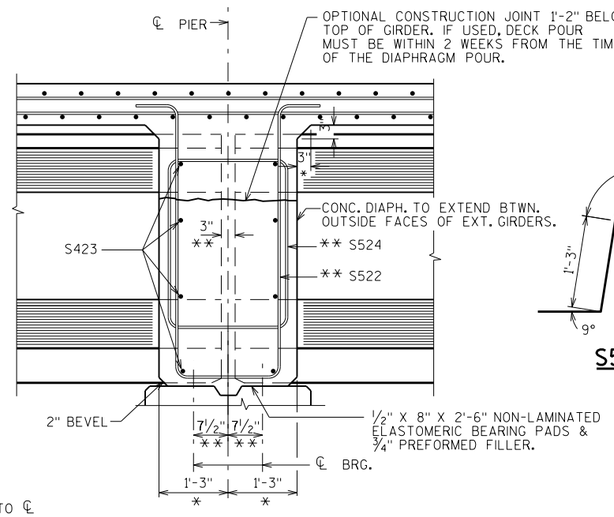
8

STATE PROJECT NUMBER

7105-00-72



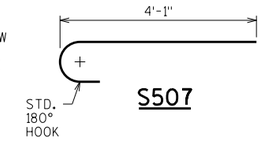
PART LONGIT. SECTION



AT PIER DIAPHRAGM

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS



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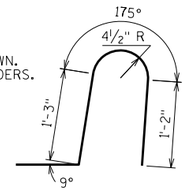

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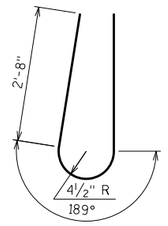

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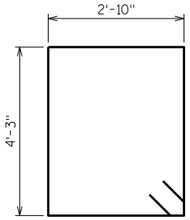
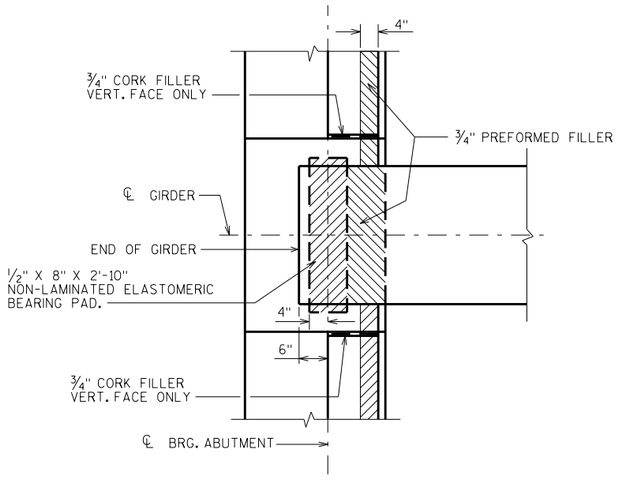


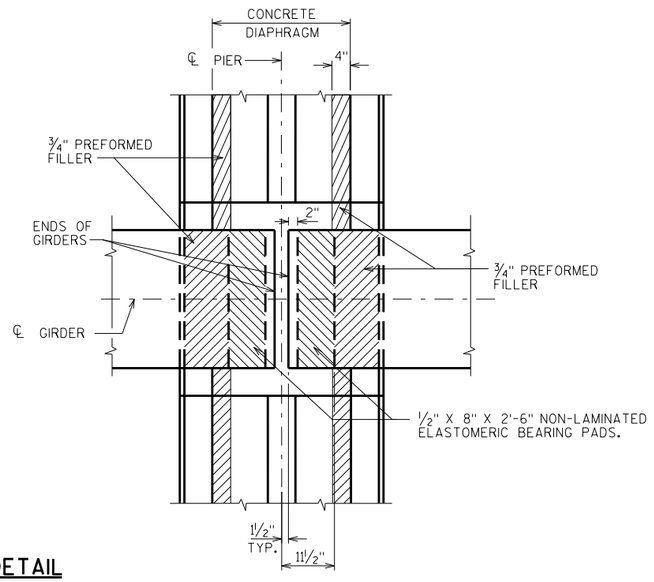
S511

BILL OF BARS

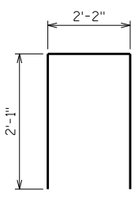
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S801	X	102	51'-0"			DECK-LONGIT.-OVER PIER 1 & 2
S802	X	104	58'-10			DECK-LONGIT.-OVER PIER 1 & 2
S403	X	306	31'-2"			DECK-LONGIT.-TOP
S404	X	102	42'-0"			DECK-LONGIT.-TOP
S405	X	468	41'-2"			DECK-LONGIT.-BOT.
S506	X	1069	36'-2"			DECK-TRANS.-TOP & BOT.
S507	X	1070	4'-8"	X		DECK-TRANS.-TOP EDGE
S508	X	1072	4'-5"	X		DECK/PPT.-VERT.
S509	X	1080	6'-8"	X		PPT.-VERT.
S510	X	112	52'-9"			PPT.-HORIZ.
S511	X	56	14'-10"	X		ABUT. DIAPH.-VERT. STIRRUP
S512	X	56	6'-1"	X		ABUT. DIAPH.-VERT. U-BAR
S413	X	40	3'-3"	X		ABUT. DIAPH.-VERT. U-BAR
S414	X	16	3'-11"			ABUT. DIAPH.-HORIZ. BOT.
S515	X	20	6'-0"			ABUT. DIAPH.-HORIZ. THRU GIRDERS
S616	X	80	4'-6"			ABUT. DIAPH.-HORIZ. BTWN. GIRDERS
S617	X	4	4'-8"	X		ABUT. DIAPH.-HORIZ. U-BAR
S618	X	16	6'-8"	X		ABUT. DIAPH.-HORIZ. U-BAR
S419	X	8	5'-0"			ABUT. DIAPH.-VERT. END
S520	X	40	12'-2"	X		ABUT. DIAPH.-VERT.-STIRRUP
S621	X	14	36'-2"			ABUT. DIAPH.-HORIZ.
S522	X	40	13'-4"	X		PIER DIAPH.-VERT.
S423	X	128	4'-4"			PIER DIAPH.-HORIZ.
S524	X	32	10'-10"	X		PIER DIAPH.-VERT.-STIRRUP
S525	X	8	5'-10"	X		DECK/PARAPET-VERT. @ DECK CORNERS

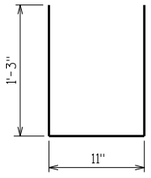




BEARING PAD DETAIL



S512



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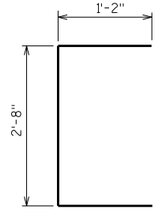
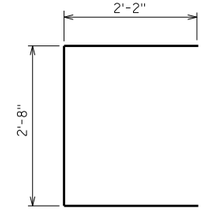


S617



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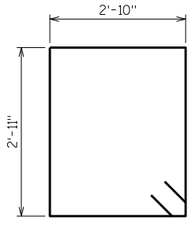

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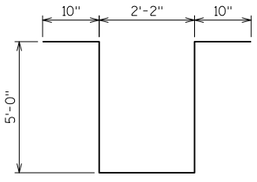

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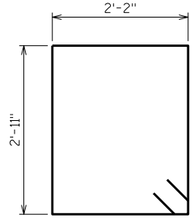

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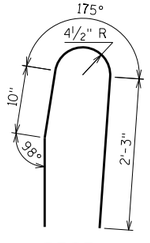


S525

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

SUPERSTRUCTURE DETAILS

SHEET 17

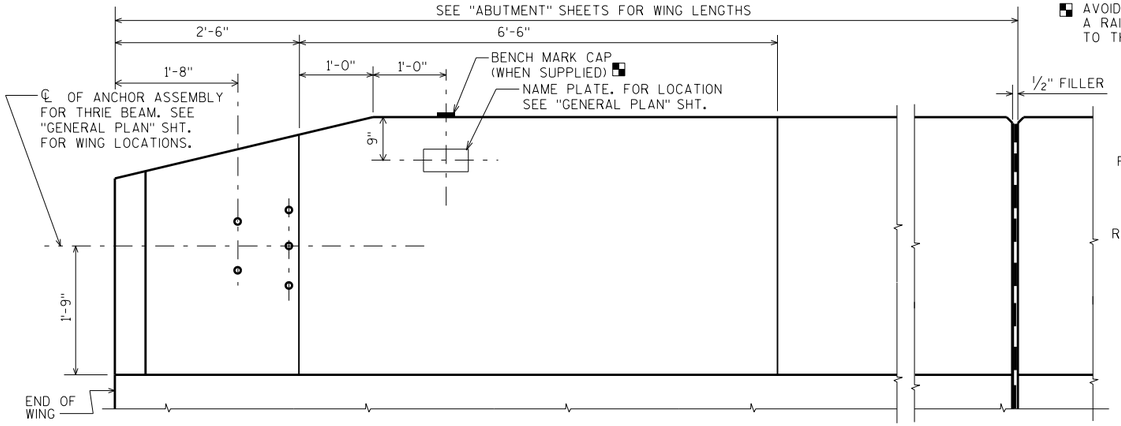
105

G54WDET
7-14

SCALE =

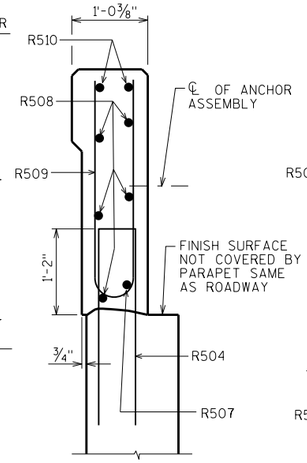
STATE PROJECT NUMBER

7105-00-72

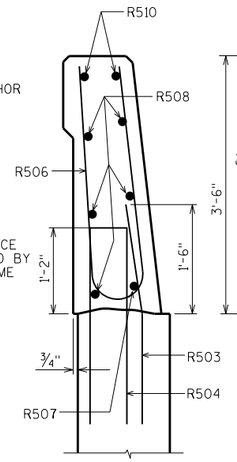


INSIDE ELEVATION

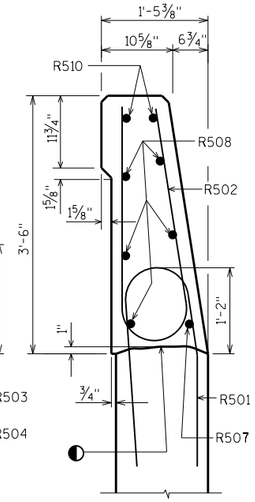
■ AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



SECTION A



SECTION B



SECTION C

BILL OF BARS

FOR ABUTMENT PARAPETS

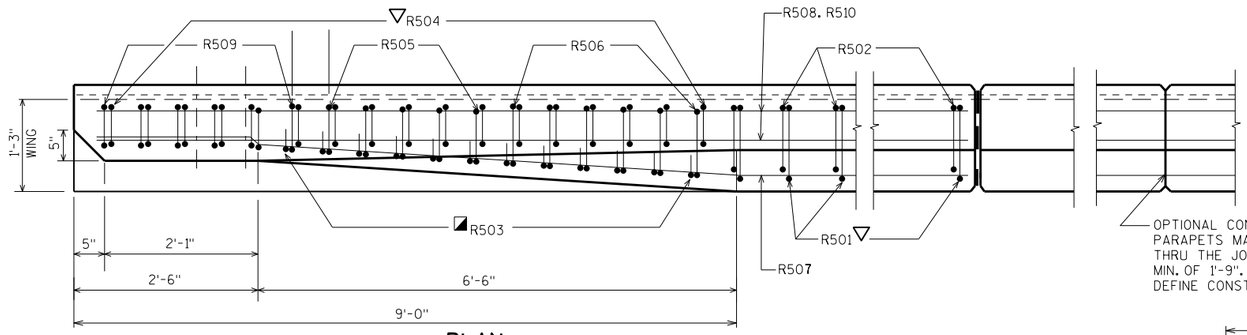
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	22	22	5-10	X		PARAPET VERT.
R502	X	22	22	6-8	X		PARAPET VERT.
R503	X	22	22	3-0	X		PARAPET VERT.
R504	X	34	34	5-7	X		PARAPET VERT.
R505	X	10	10	6-5	X		PARAPET VERT.
R506	X	12	12	6-6	X		PARAPET VERT.
R507	X	2	2	15-8	X		PARAPET HORIZ.
R508	X	10	10	15-8			PARAPET HORIZ.
R509	X	12	12	5-5	X	⚠	PARAPET VERT.
R510	X	4	4	15-8	X		PARAPET HORIZ.

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

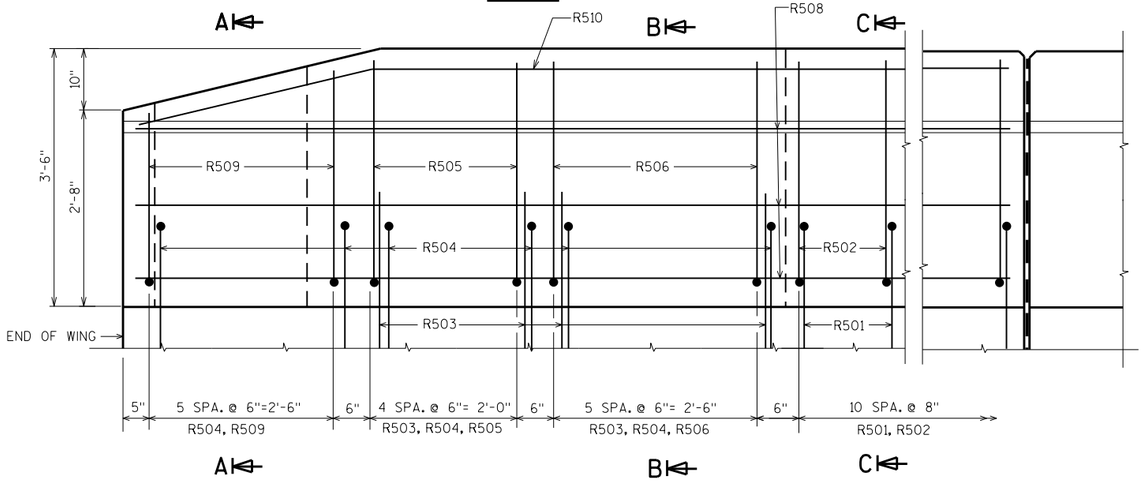
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

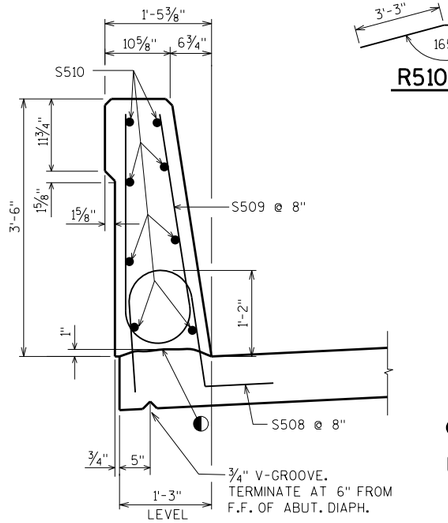


PLAN

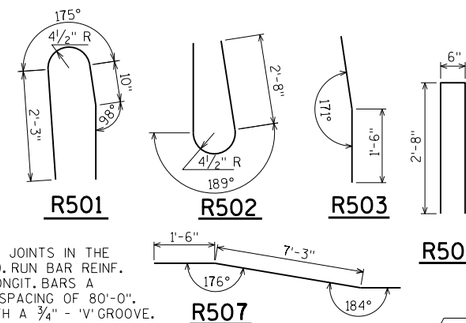


OUTSIDE ELEVATION

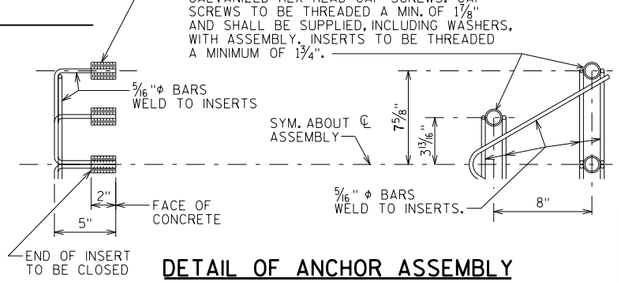
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



SECTION THRU PARAPET ON BRIDGE



R501 R502 R503 R504 R505 R506 R509 R507 R510



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 OR S503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-227

DRAWN BY WWR | PLANS CK'D. JDM

SINGLE SLOPE 42SS PARAPET

SHEET 18

106

42SSWIN

SCALE =

8

8

EARTHWORK - MAINLINE

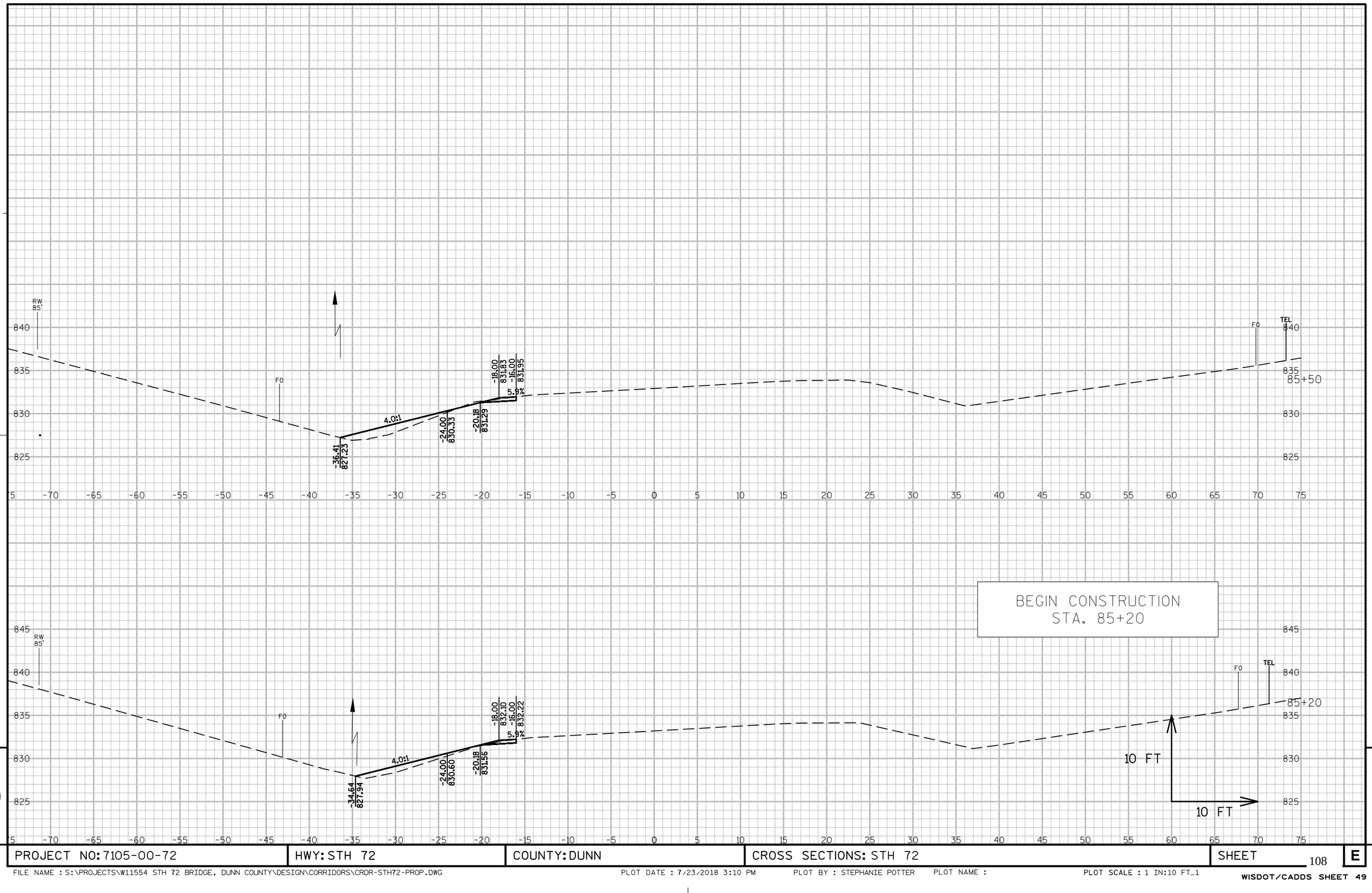
STATION	AREA (SF) CUT	AREA (SF) FILL	INCREMENTAL VOLUME (CY) CUT NOTE 1	INCREMENTAL VOLUME (CY) FILL NOTE 2	INCREMENTAL VOLUME (CY) FILL (25%) NOTE 3	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	CUMMULATIVE VOLUME (CY) FILL	CUMMULATIVE VOLUME (CY) FILL (25%) NOTE 3	CUMMULATIVE VOLUME (CY) MASS ORDINATE NOTE 4
85+20	0	6	0	0	0	0	0	0	0
85+50	0	9	0	8	10	0	8	10	-10
86+00	0	40	0	45	56	0	53	66	-66
86+50	0	196	0	219	274	0	272	340	-340
87+00	0	178	0	346	433	0	618	773	-773
87+50	0	166	0	319	399	0	937	1172	-1172
88+00	0	188	0	328	410	0	1265	1582	-1582
88+00	0	254	0	0	0	0	1265	1582	-1582
88+50	0	315	0	527	659	0	1792	2241	-2241
89+00	0	394	0	656	820	0	2448	3061	-3061
89+50	0	378	0	715	894	0	3163	3955	-3955
90+00	0	334	0	659	824	0	3822	4779	-4779
90+50	0	263	0	553	691	0	4375	5470	-5470
90+90	5	125	4	287	359	4	4662	5829	-5825
91+00	10	118	3	45	56	7	4707	5885	-5878
91+50	5	101	14	203	254	21	4910	6139	-6118
92+00	6	52	10	142	178	31	5052	6317	-6286
92+50	51	30	53	76	95	84	5128	6412	-6328
93+00	51	30	94	56	70	178	5184	6482	-6304
93+02	51	30	4	2	3	182	5186	6485	-6303
93+02	0	0	0	0	0	182	5186	6485	-6303
96+60	0	0	0	0	0	182	5186	6485	-6303
96+60	51	119	0	0	0	182	5186	6485	-6303
97+00	51	119	76	176	220	258	5362	6705	-6447
97+50	5	223	52	317	396	310	5679	7101	-6791
98+00	5	334	9	516	645	319	6195	7746	-7427
98+50	5	339	9	623	779	328	6818	8525	-8197
98+75	0	255	2	275	344	330	7093	8869	-8539
99+00	0	188	0	205	256	330	7298	9125	-8795
99+25	0	114	0	140	175	330	7438	9300	-8970
COLUMN SUBTOTALS =			330	7438	9300				

EARTHWORK - FIELD ENTRANCE

STATION	AREA (SF) CUT	AREA (SF) FILL	INCREMENTAL VOLUME (CY) CUT NOTE 1	INCREMENTAL VOLUME (CY) FILL NOTE 2	INCREMENTAL VOLUME (CY) FILL (25%) NOTE 3	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	CUMMULATIVE VOLUME (CY) FILL	CUMMULATIVE VOLUME (CY) FILL (25%) NOTE 3	CUMMULATIVE VOLUME (CY) MASS ORDINATE NOTE 4
50+17	0	7	0	0	0	0	0	0	0
50+50	2	8	1	9	11	1	9	11	-10
51+00	18	0	19	7	9	20	16	20	0
COLUMN SUBTOTALS =			20	16	20				

MAINLINE	330	7438	9300	330	7438	9300	-8970
FIELD ENTRANCE	20	16	20	350	7454	9320	-8970

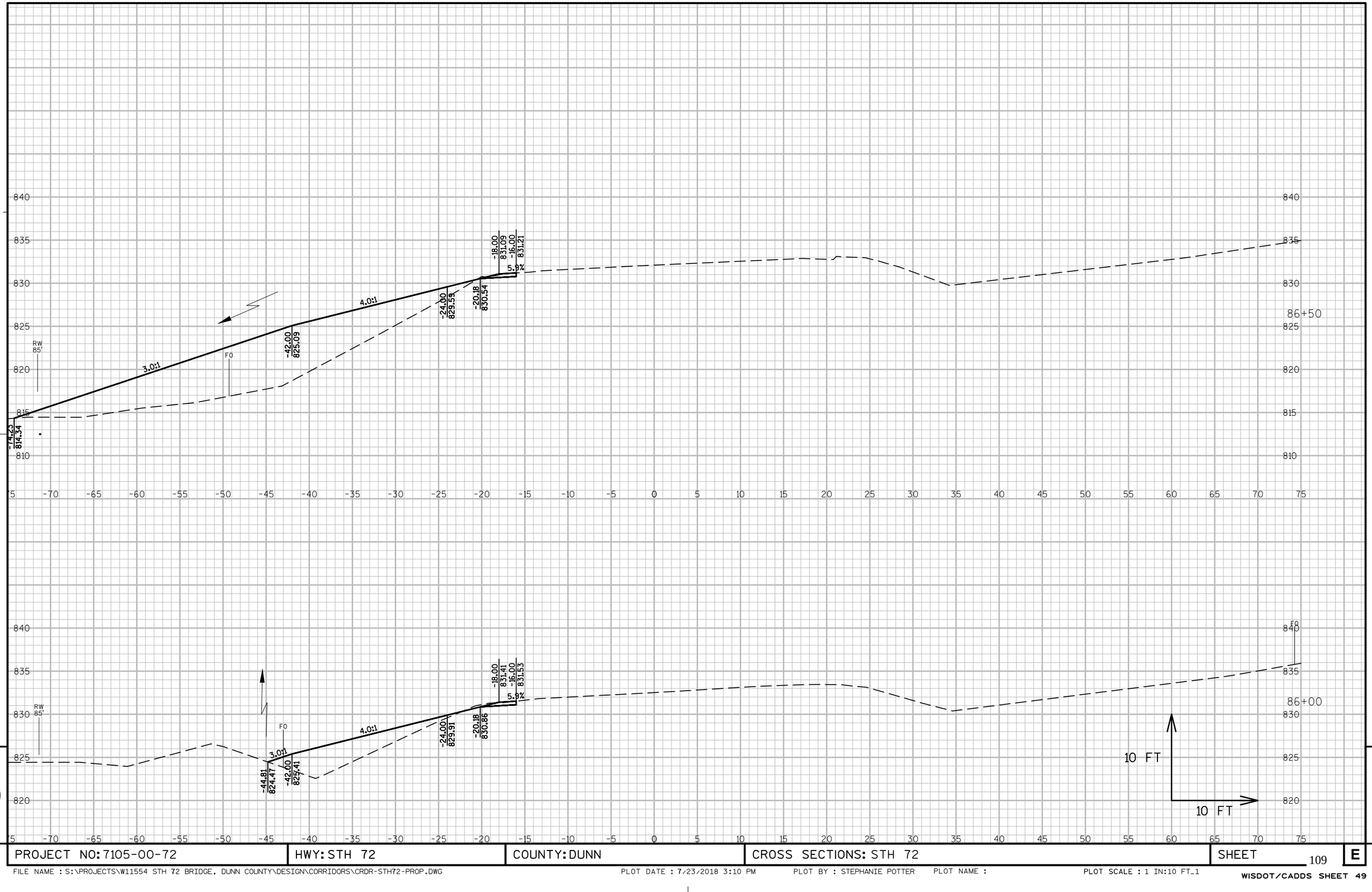
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
3 - FILL (25%)	FILL 25%: (UNEXPANDED FILL)*1.25
4 - MASS ORDINATE	(CUT - FILL (25%))



9

9

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 108	E



9 9

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 109	E

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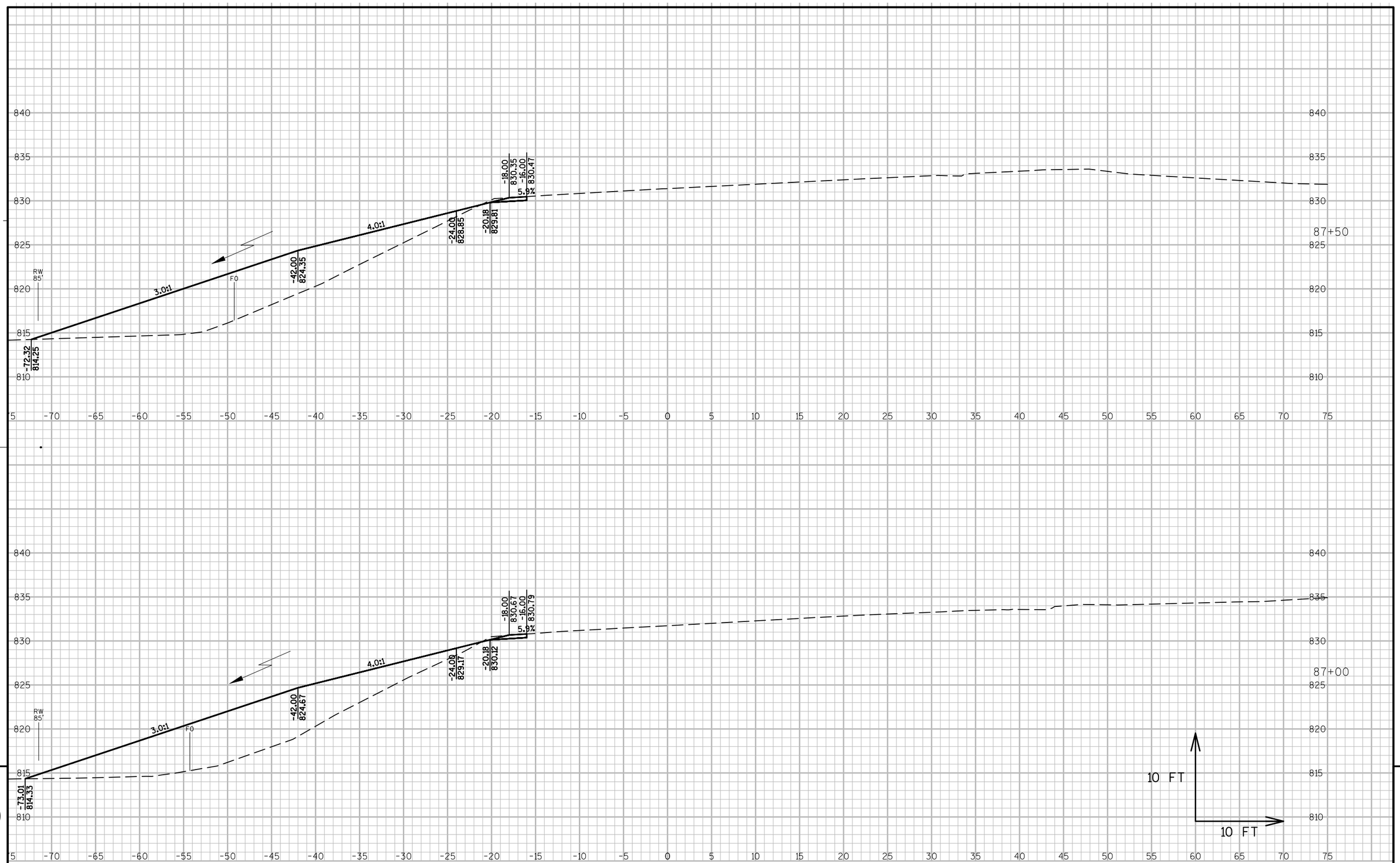
WISDOT/CADDS SHEET 49



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9

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 110	E

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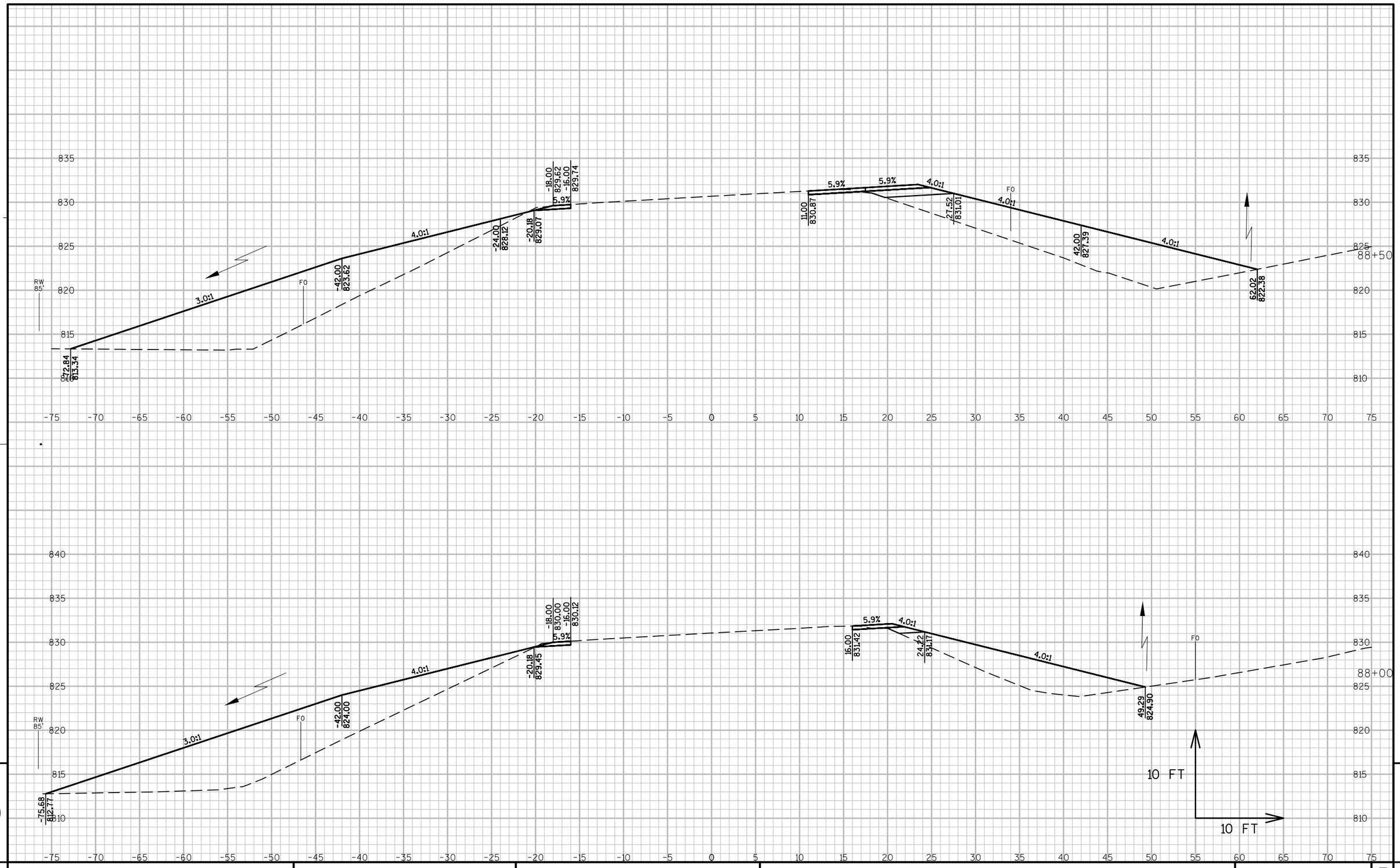
WISDOT/CADDS SHEET 49



PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET	E

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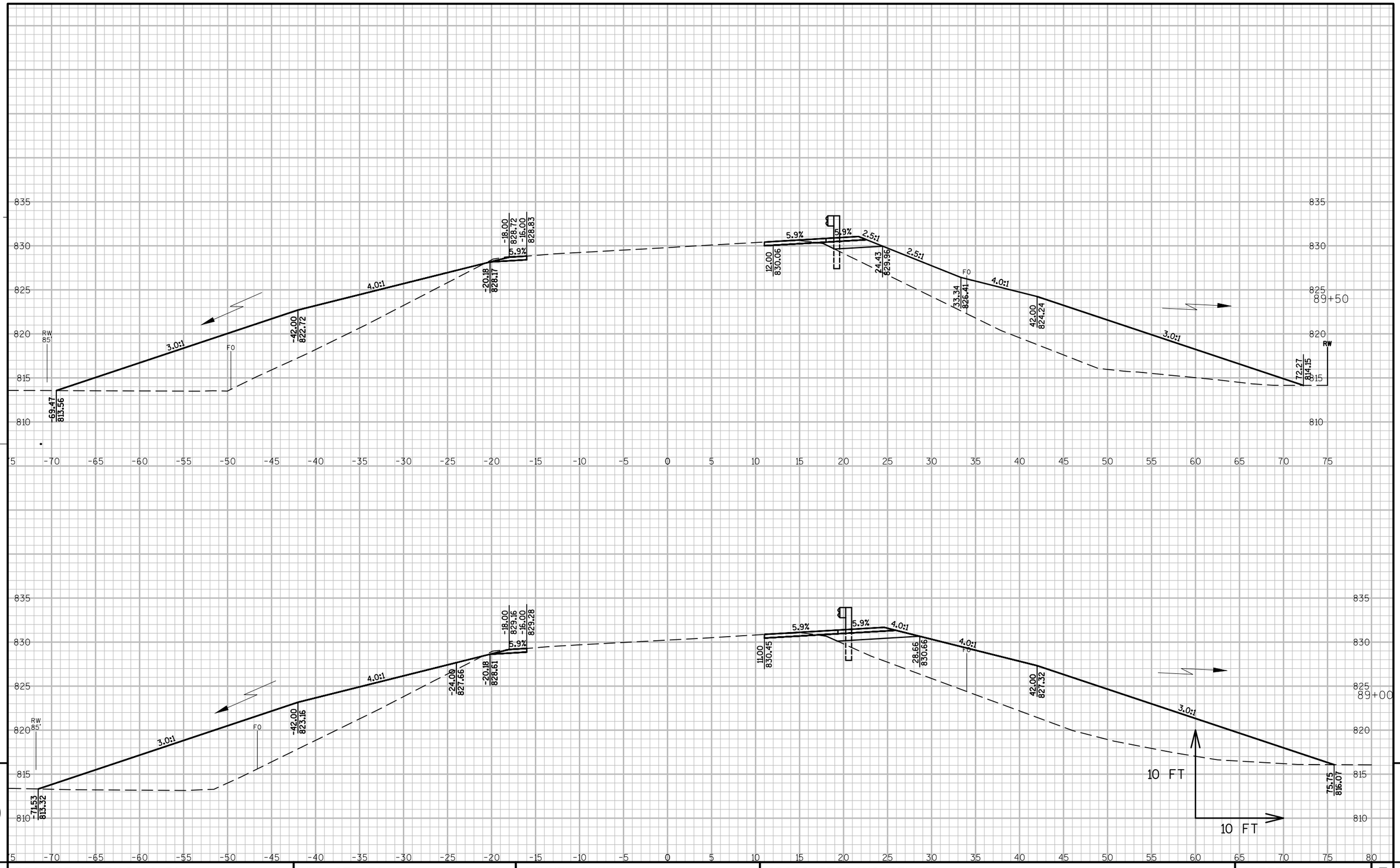
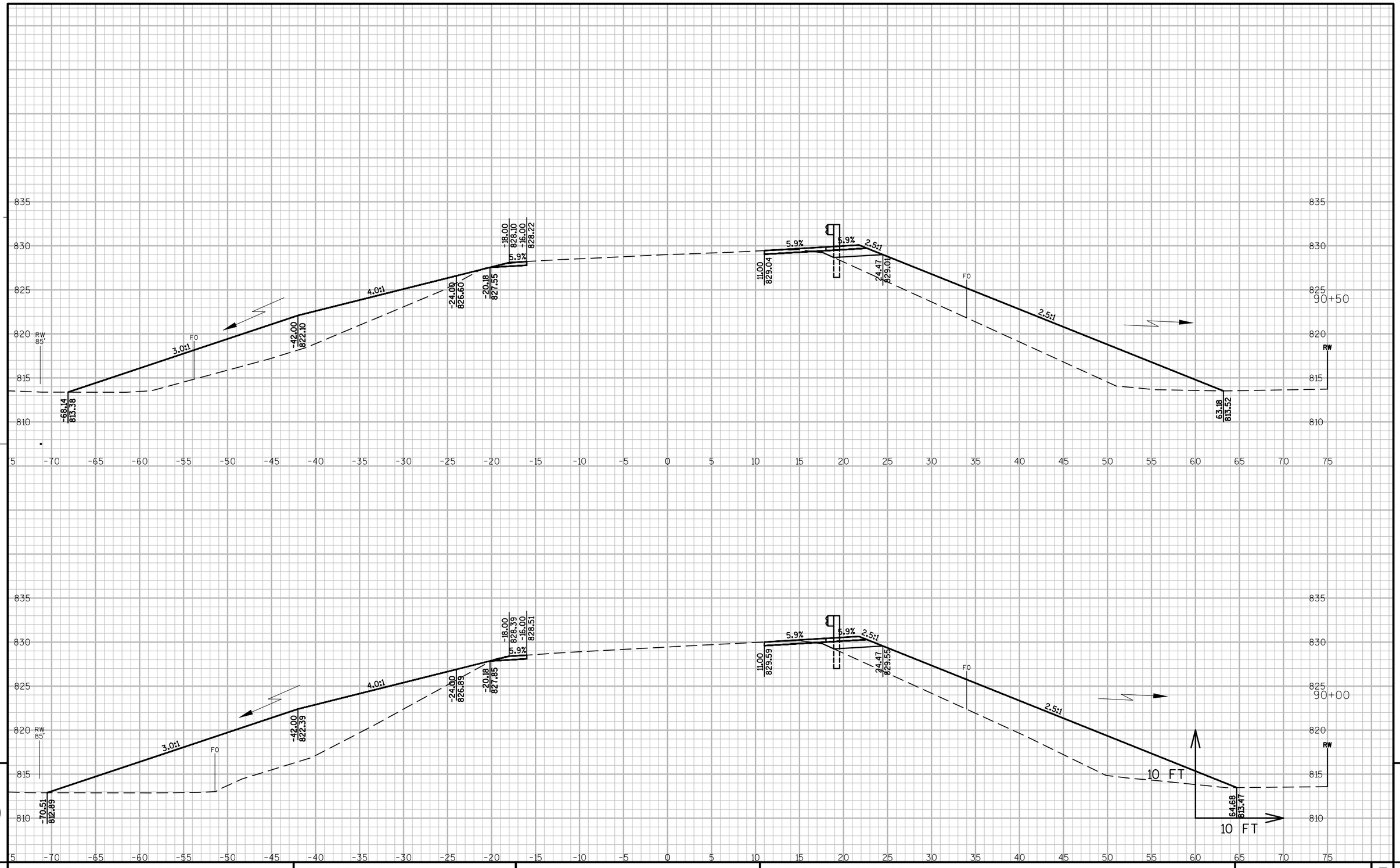


9 9

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 112 E



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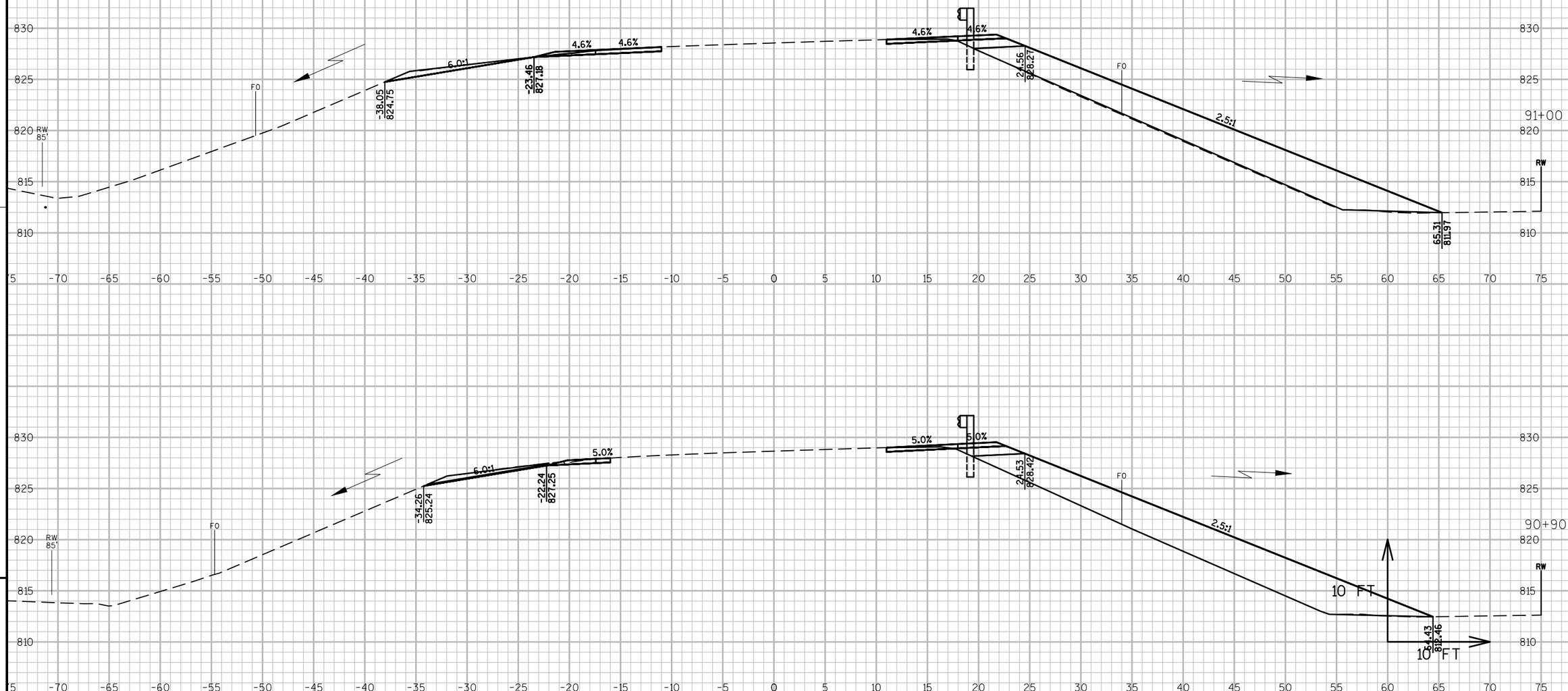
9

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 113	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : **********

STA. 91+16, LT.
F.E. REQ'D (SEE
CONSTRUCTION DETAILS)



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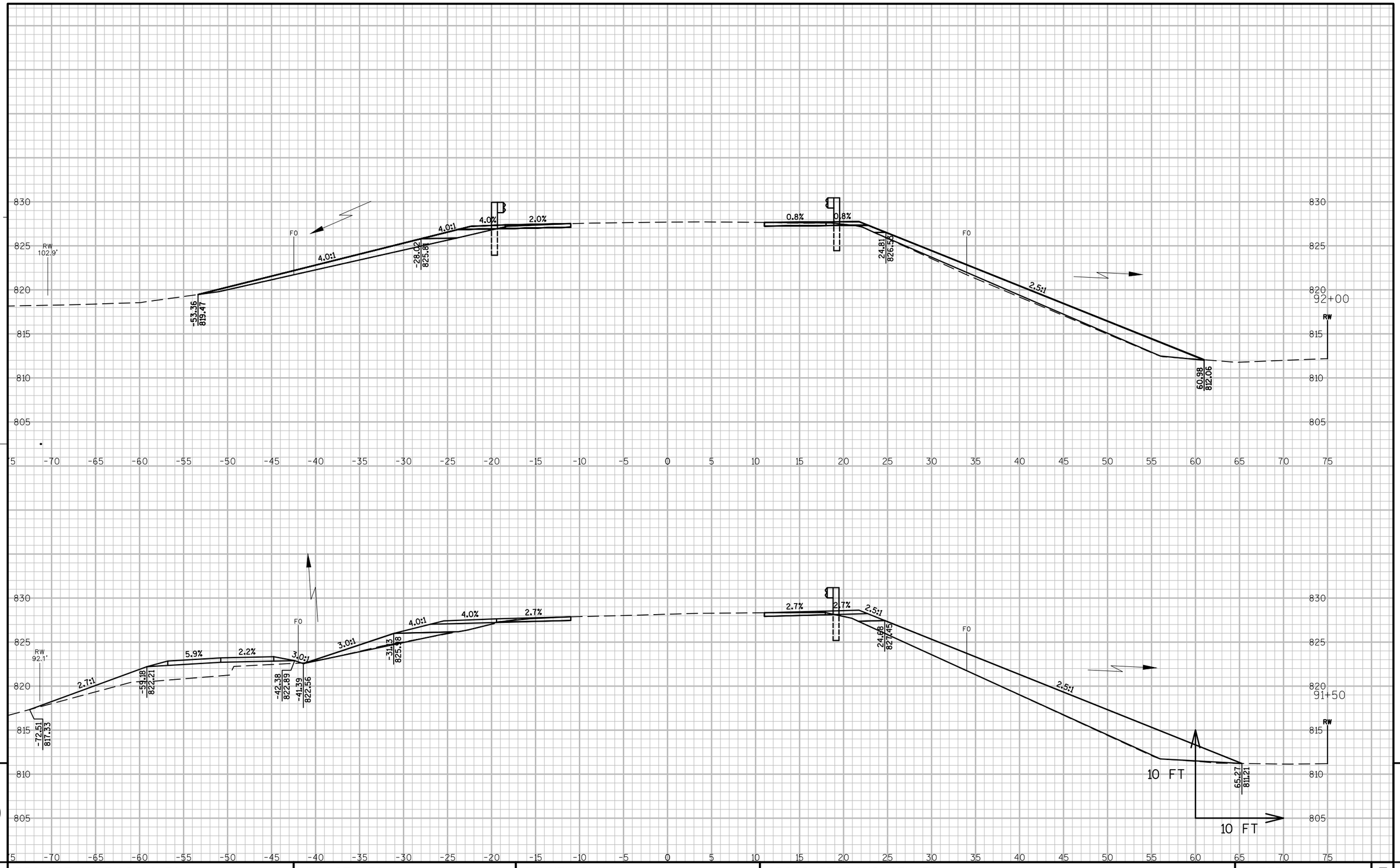
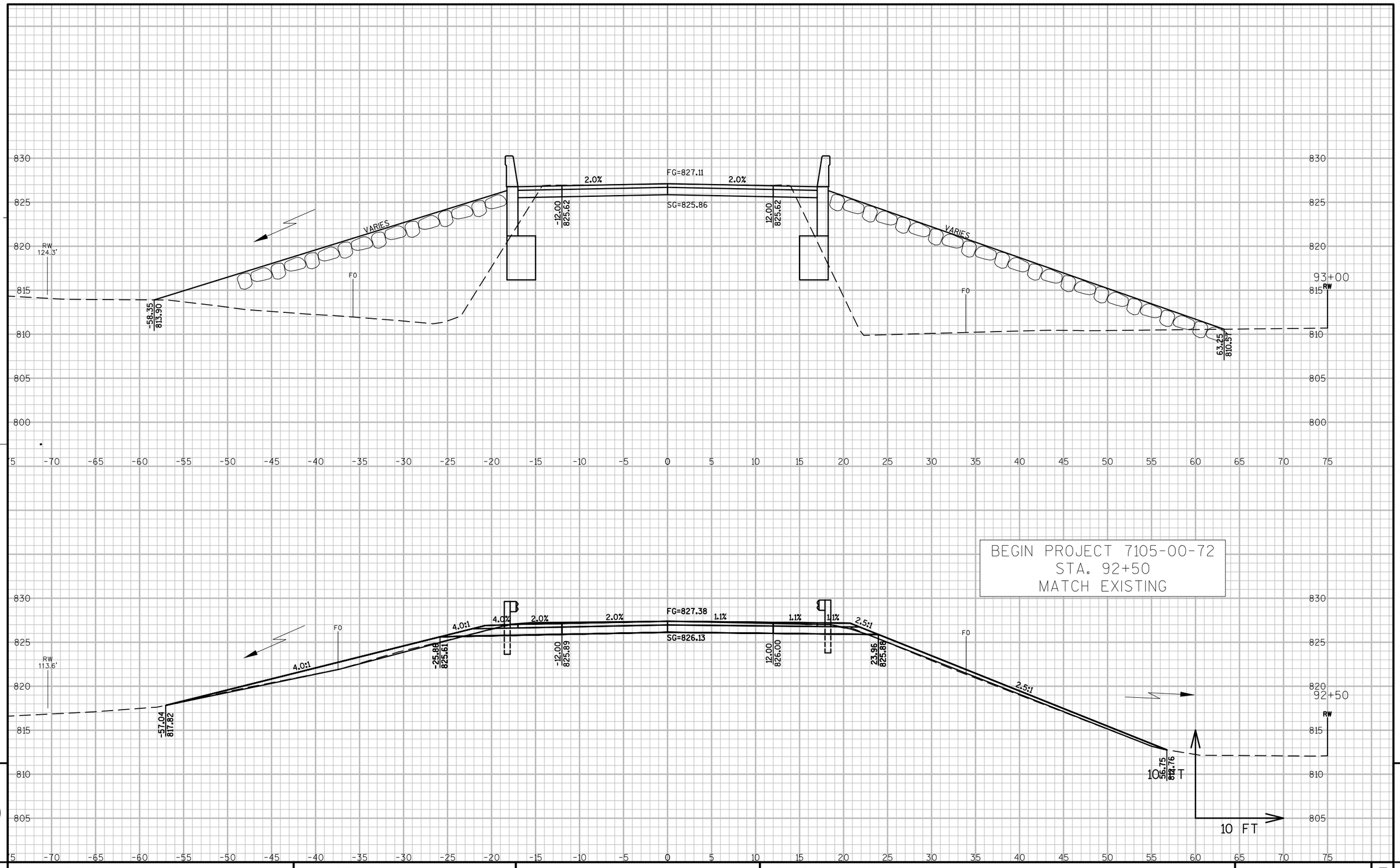
WISDOT/CADDS SHEET 49



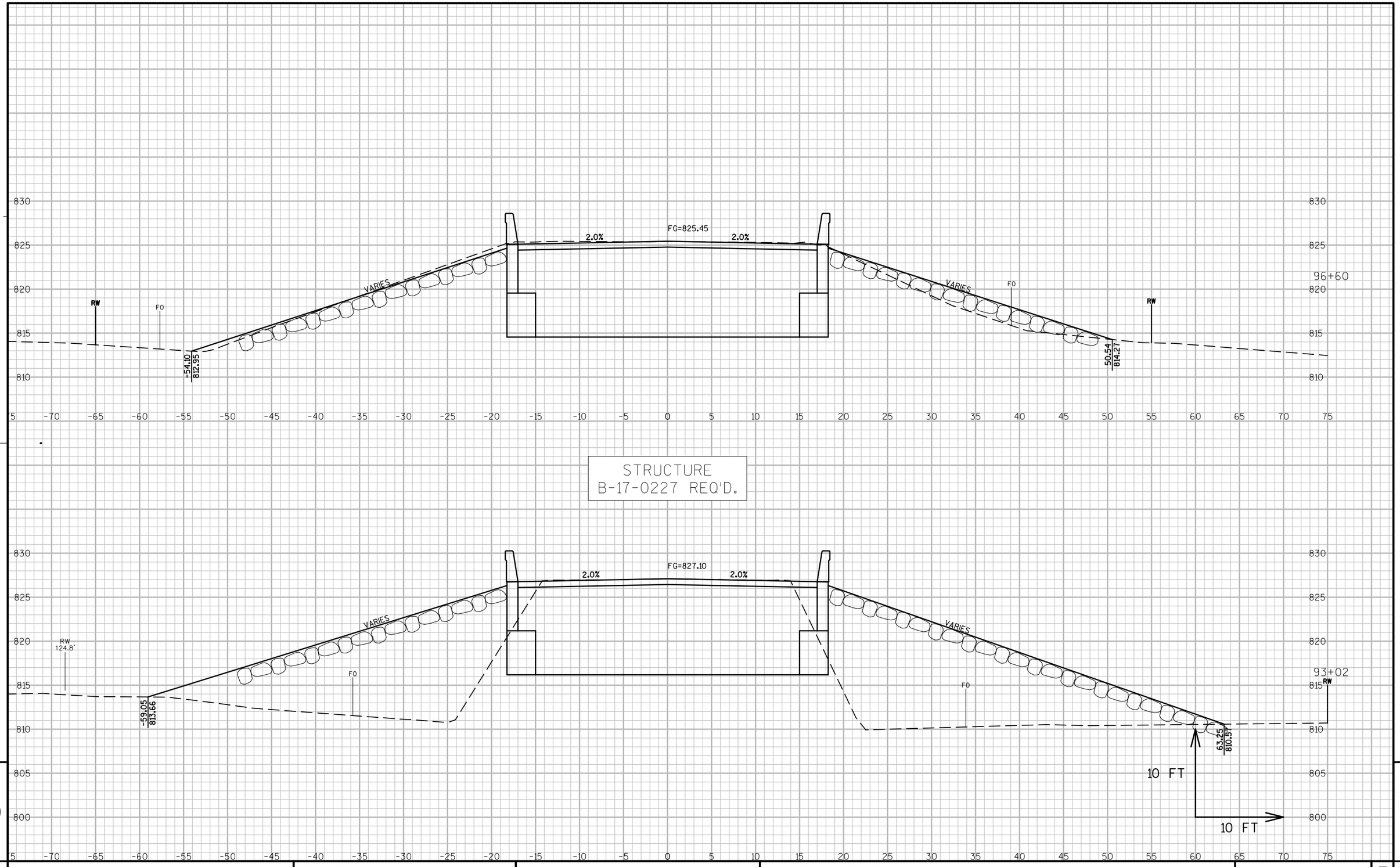
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 115 E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49



PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 116	E



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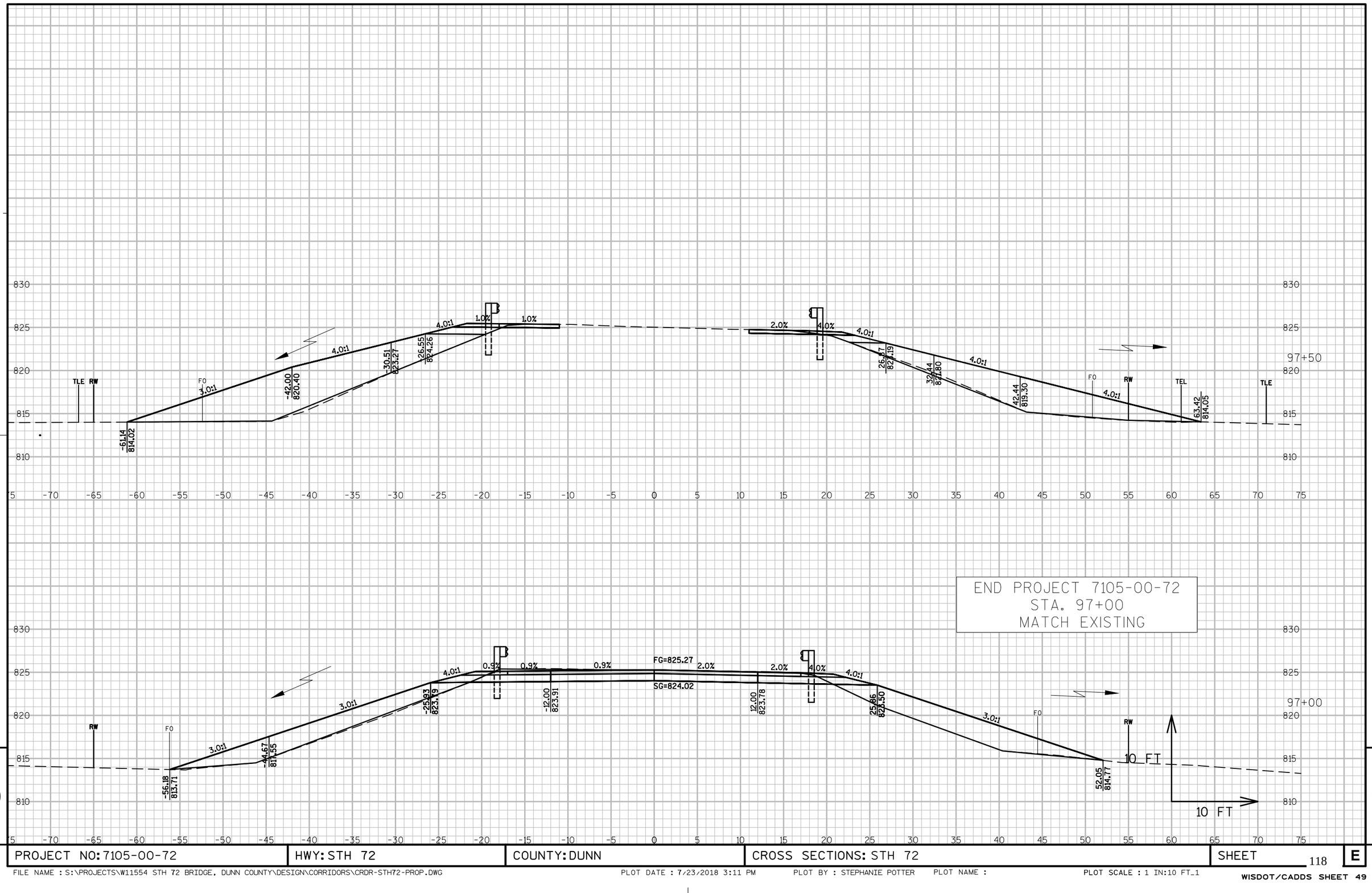
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 117	E

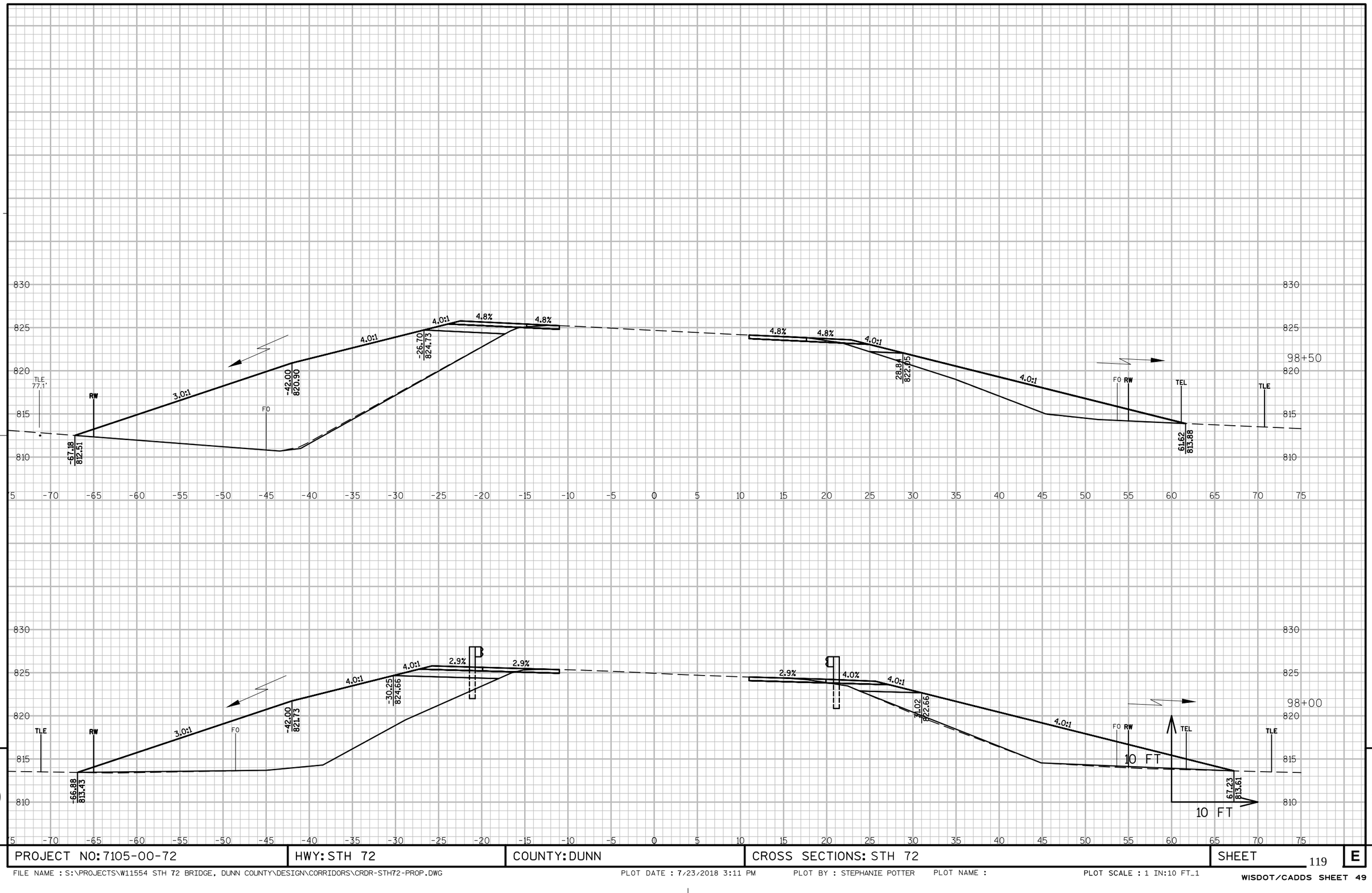
FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1



PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 118	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49



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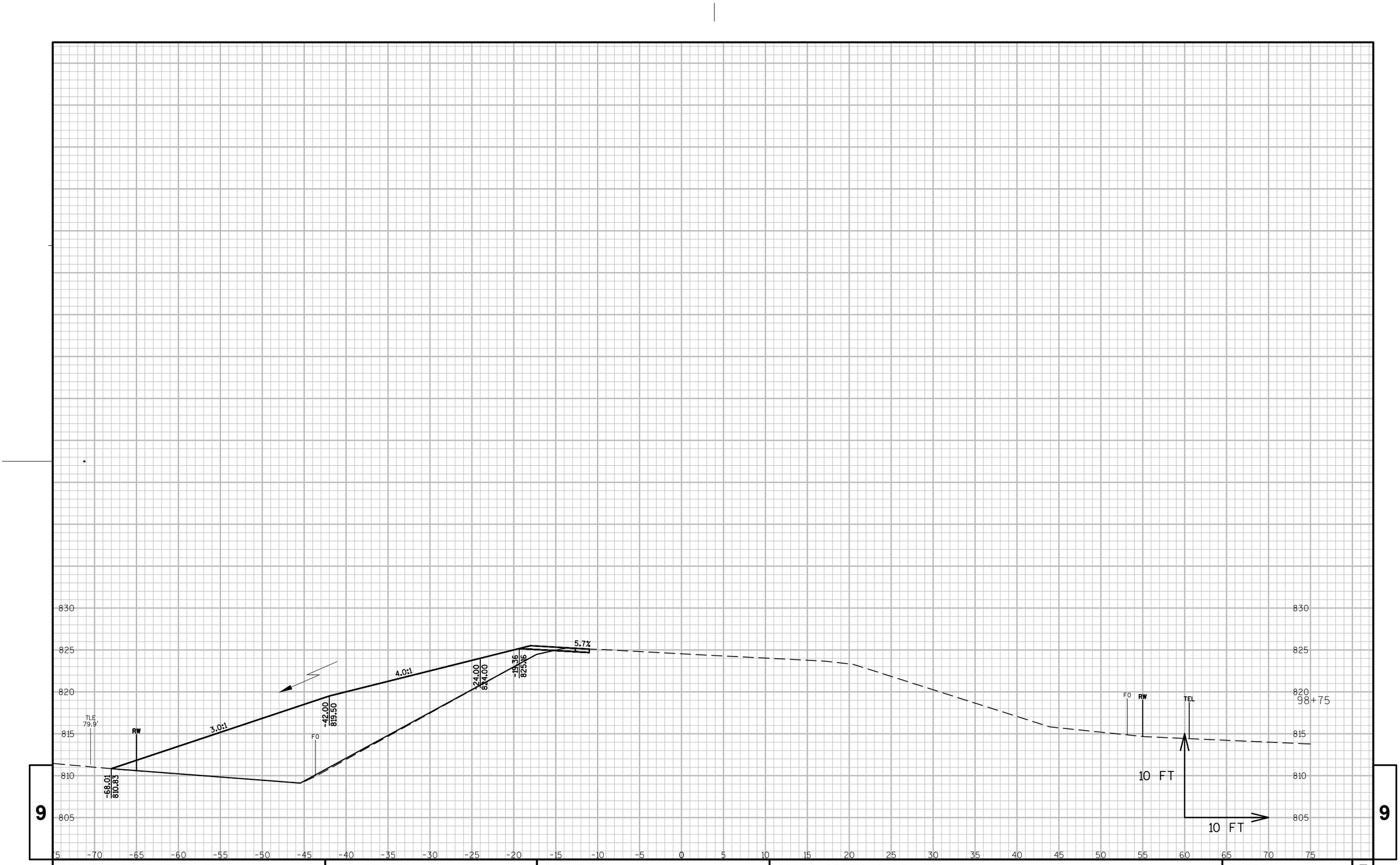
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 119	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1



9

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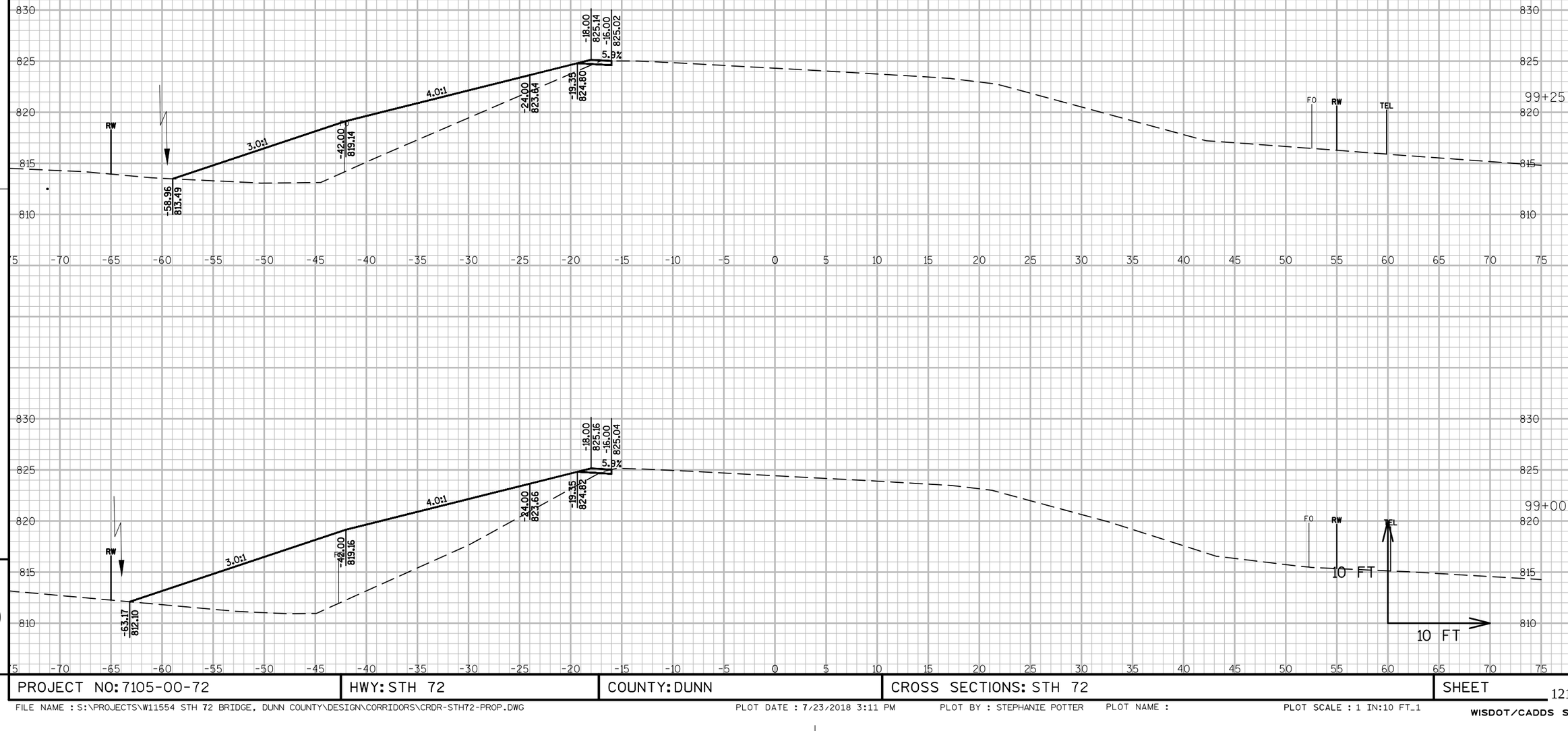
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 120	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

END CONSTRUCTION
STA. 99+25



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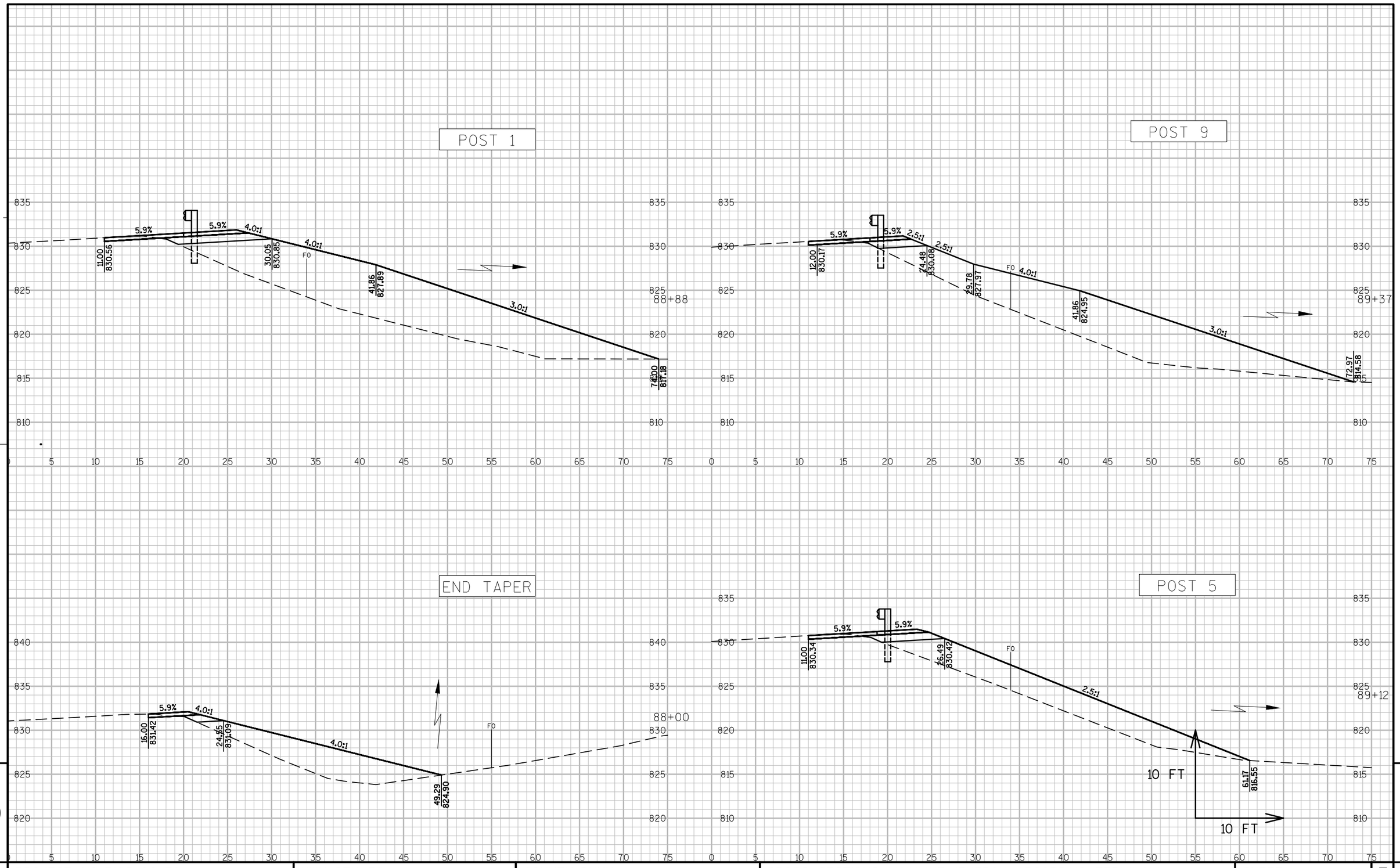
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: STH 72	SHEET 121	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49



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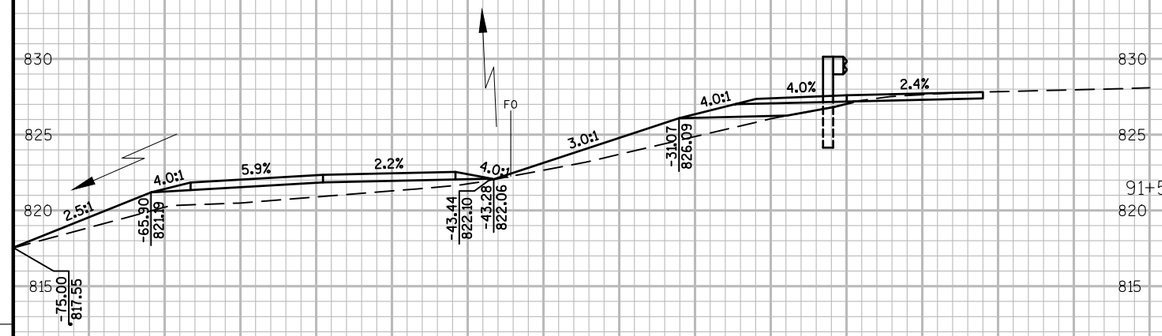
9

PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL)	SHEET	E

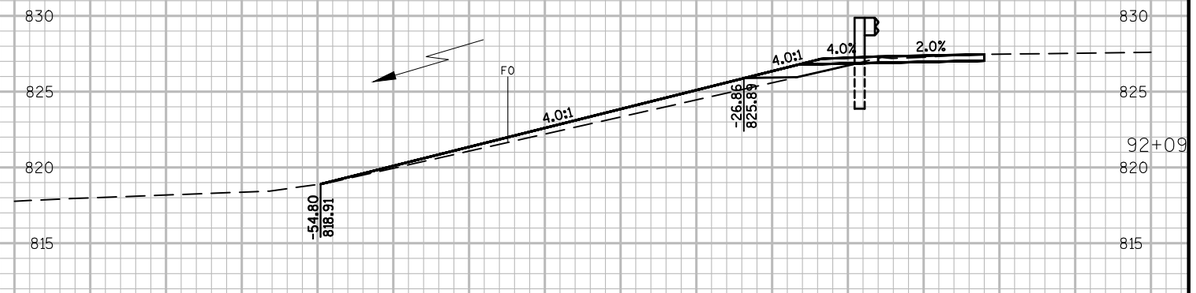
FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49

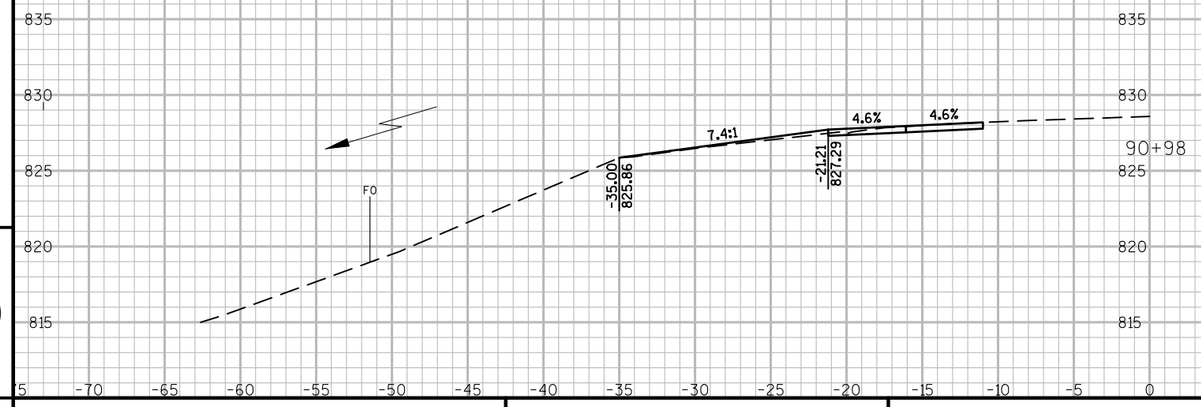
POST 1



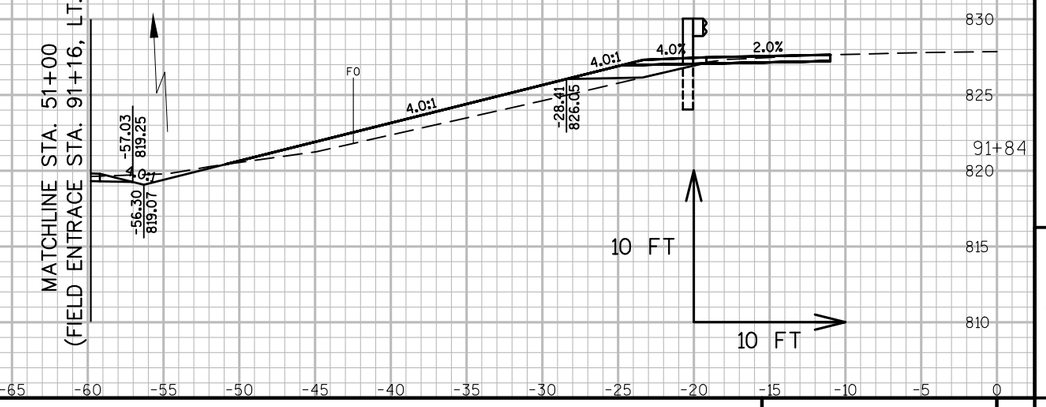
POST 9



END TAPER



POST 5



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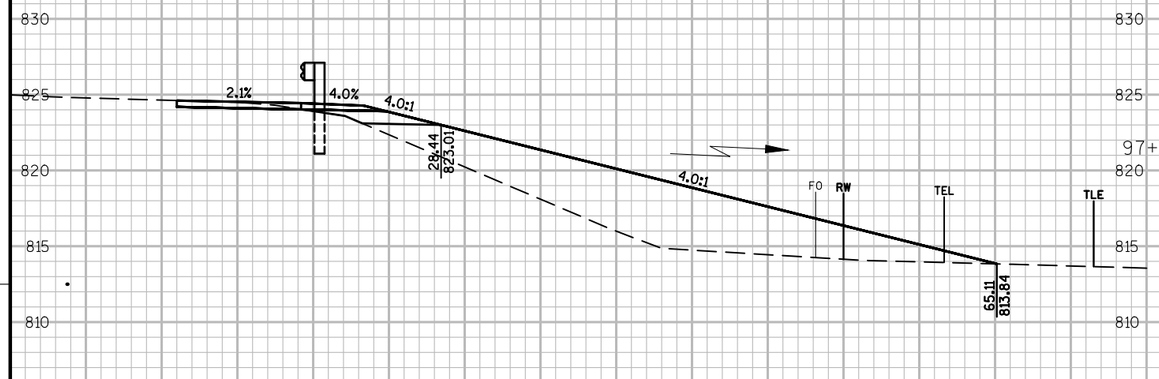
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL)	SHEET 123	E

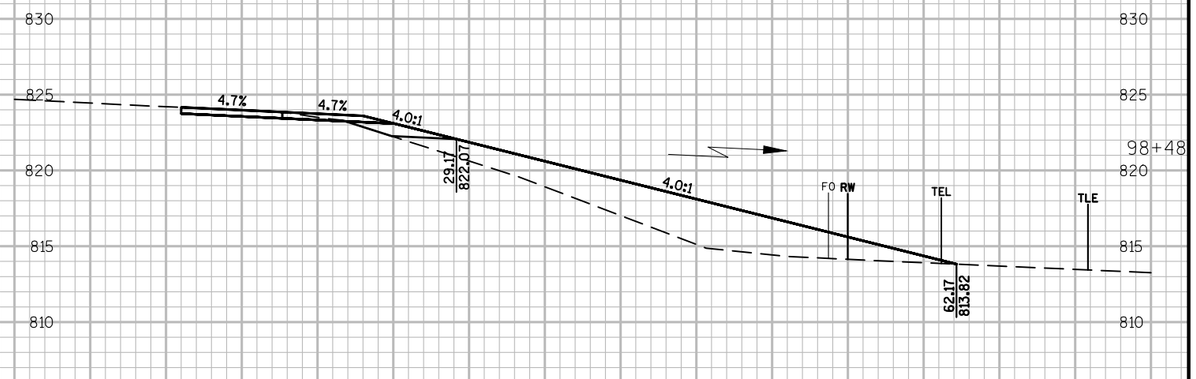
FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49

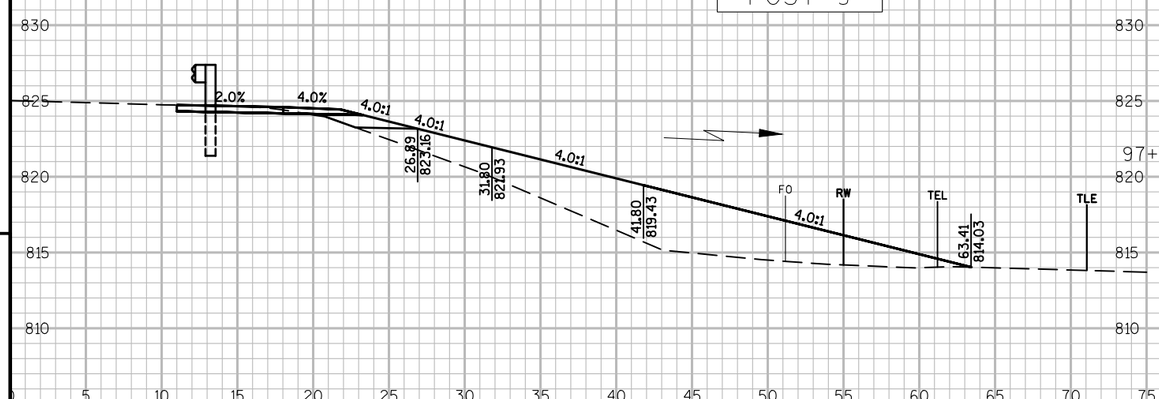
POST 5



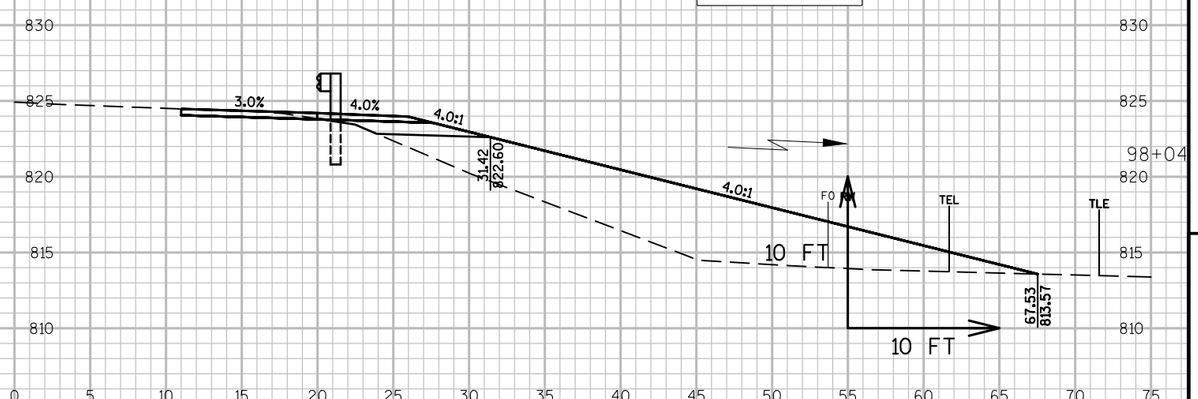
END TAPER



POST 9



POST 1



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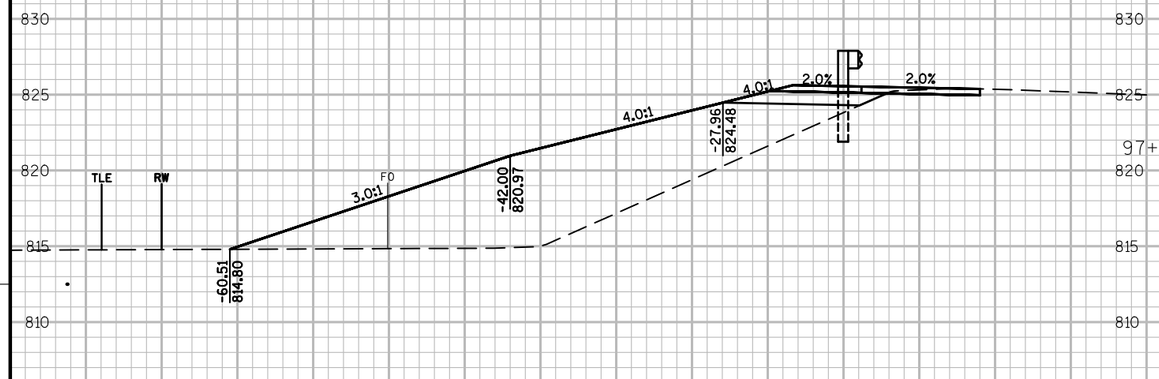
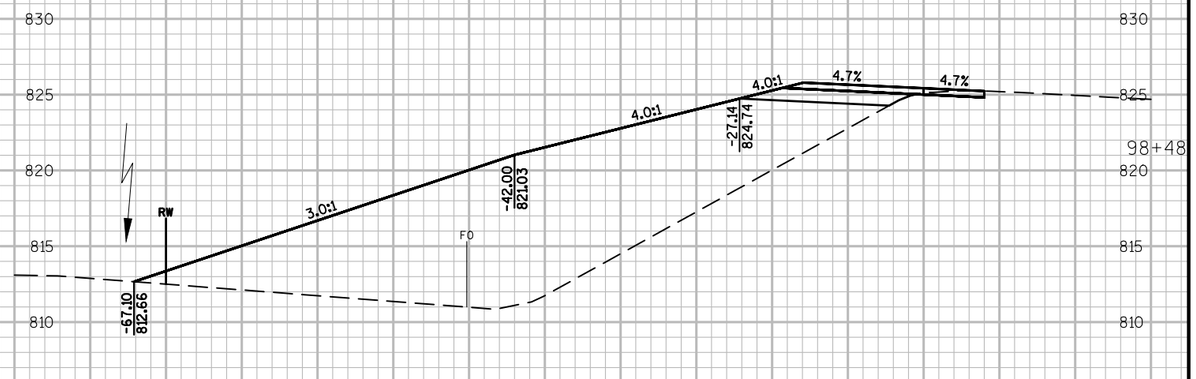
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL)	SHEET 124	E

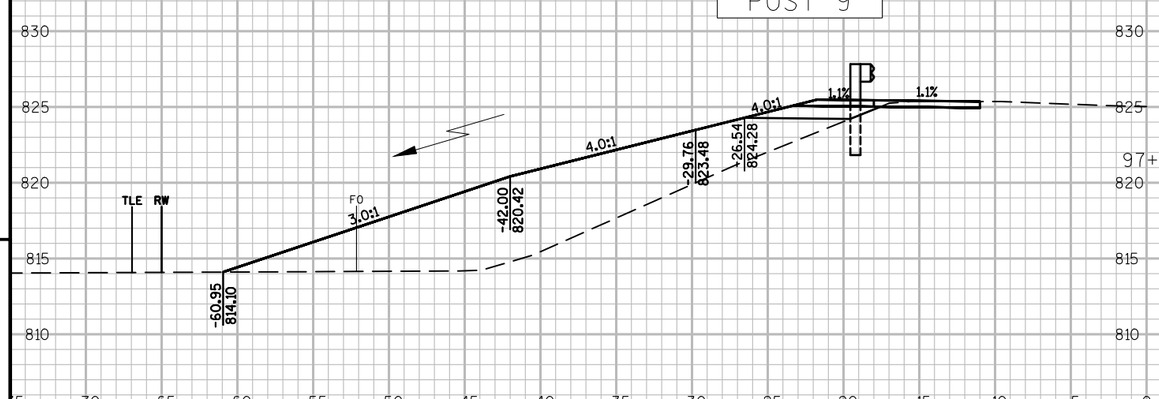
POST 5



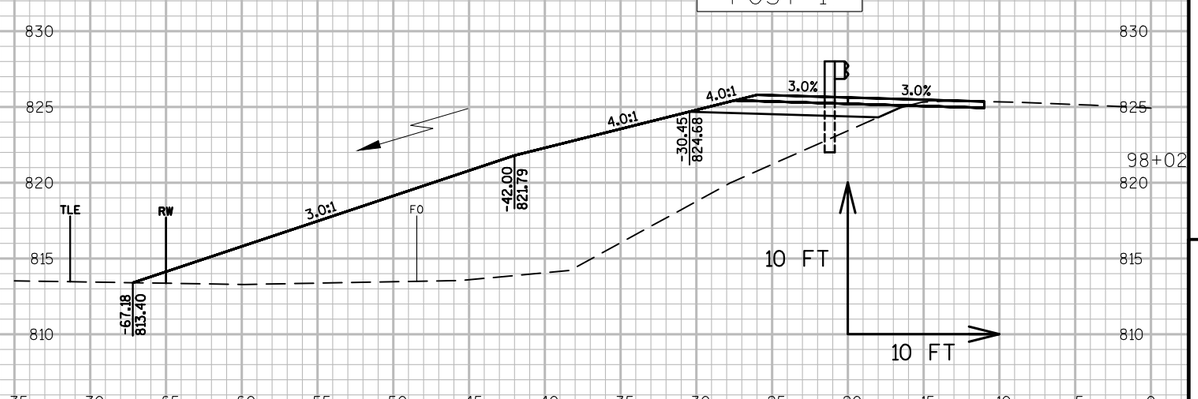
END TAPER



POST 9



POST 1



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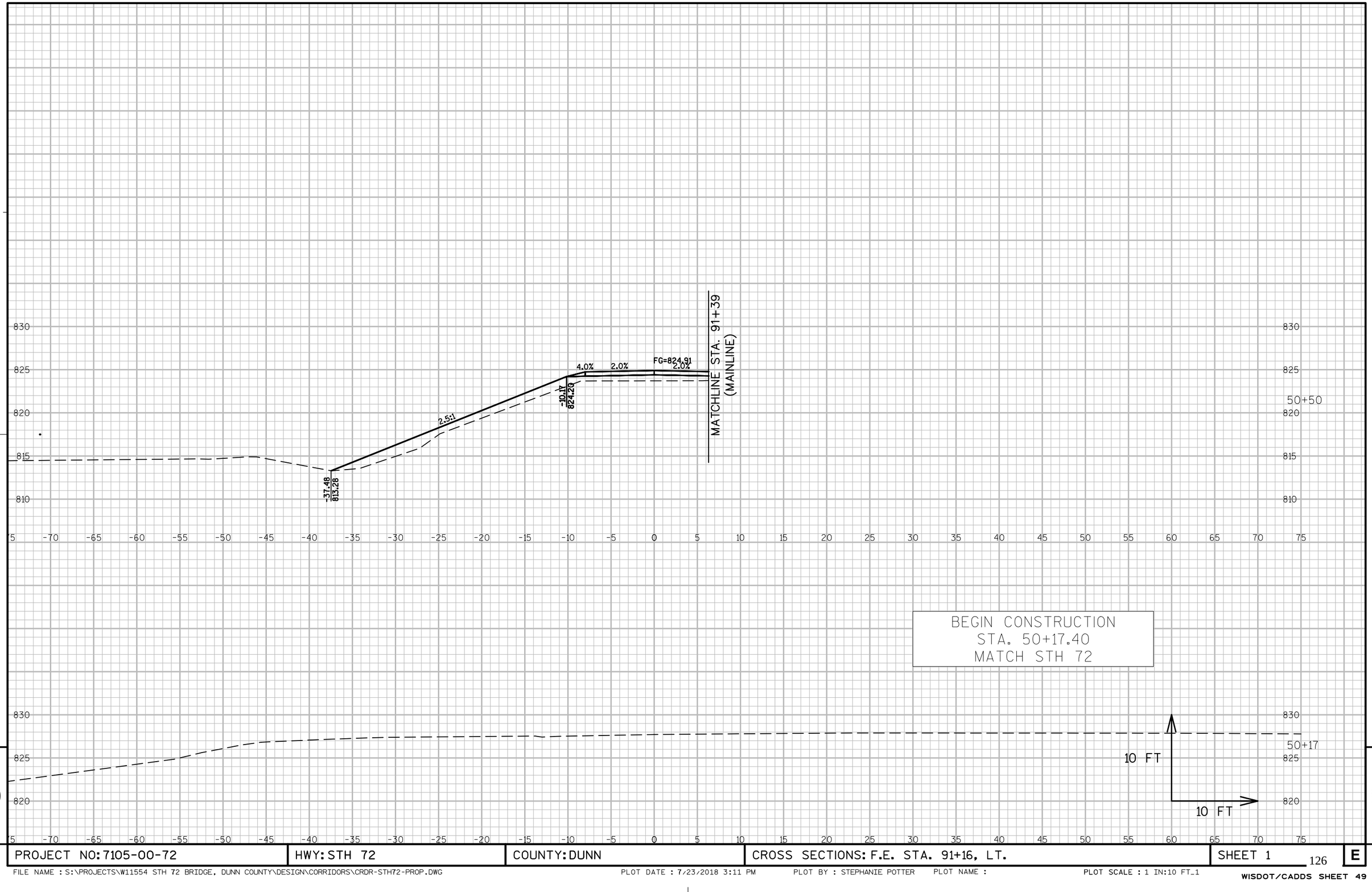
PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL)	SHEET 125	E



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PROJECT NO: 7105-00-72	HWY: STH 72	COUNTY: DUNN	CROSS SECTIONS: F.E. STA. 91+16, LT.	SHEET 1	E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

END CONSTRUCTION
STA. 51+00
MATCH EXISTING

MATCHLINE STA. 91+84
(MAINLINE)

10 FT
10 FT

51+00

830
825
820
815
810

-75 -70 -65 -60 -55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

9

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PROJECT NO: 7105-00-72 | HWY: STH 72 | COUNTY: DUNN | CROSS SECTIONS: F.E. STA. 91+16, LT. | SHEET 2 | E

FILE NAME : S:\PROJECTS\W11554 STH 72 BRIDGE, DUNN COUNTY\DESIGN\CORRIDORS\CRDR-STH72-PROP.DWG PLOT DATE : 7/23/2018 3:11 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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