

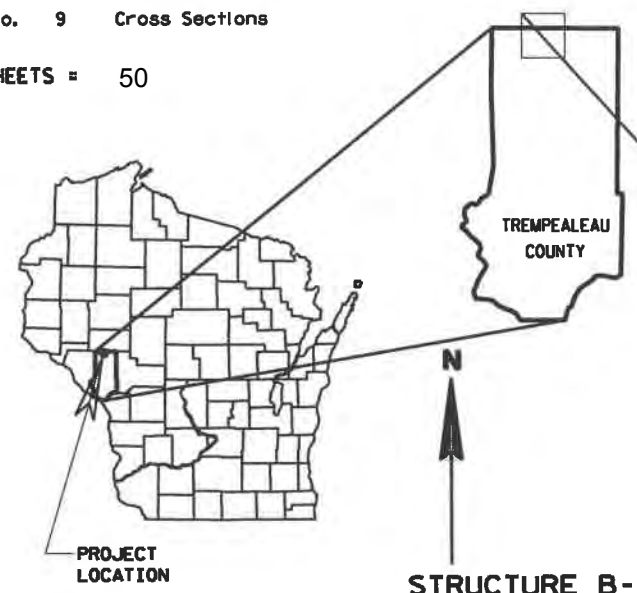
EAU
PROJECT ID: 7275-00-70
WITH: N/A
COUNTY: TREMPEALEAU

FEBRUARY 2019
ORDER OF SHEETS

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

TOTAL SHEETS = 50

22



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
ELEVA - NCL
BIG CREEK BRIDGE B610231
CTH I
TREMPEALEAU COUNTY

STATE PROJECT NUMBER
7275-00-70

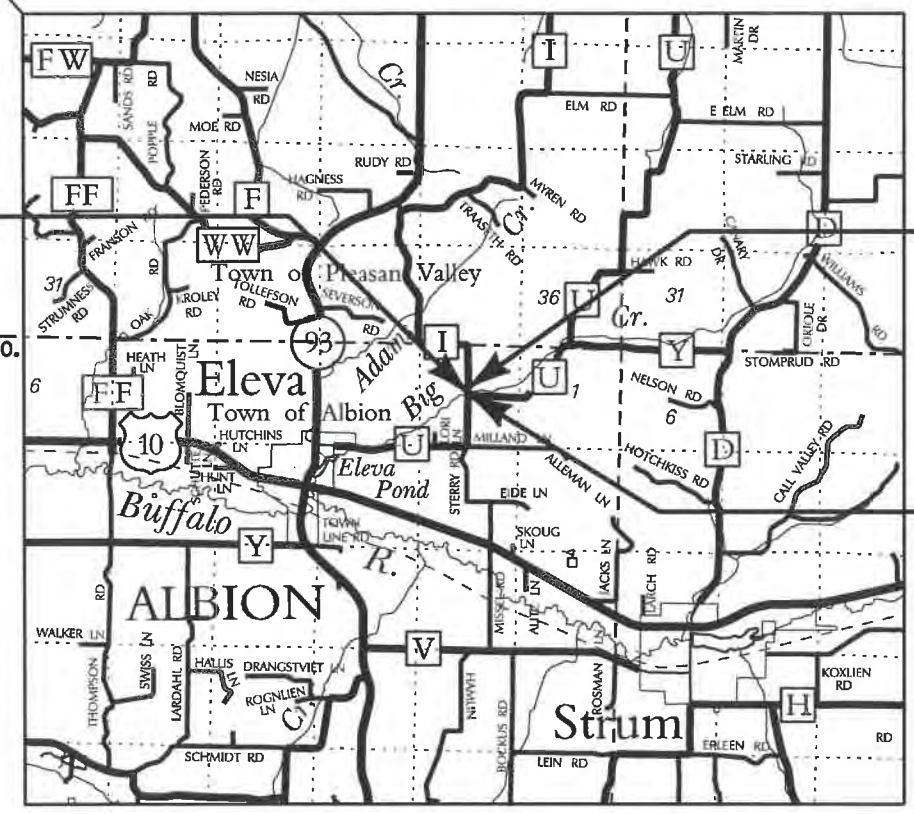
DESIGN DESIGNATION
A.A.D.T. (2019) = 200
A.A.D.T. (2039) = 270
D.H.V. = 20
D. = 50/50
T. = 5%
DESIGN SPEED = 35 MPH
ESALS = 36,500

CONVENTIONAL SYMBOLS
PLAN

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

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

EAU CLAIRE CO.
TREMPEALEAU CO.



R-9-W | R-8-W

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.026 MI.

END PROJECT
STA. 10+70.25
Y = 520701.87
X = 824407.36

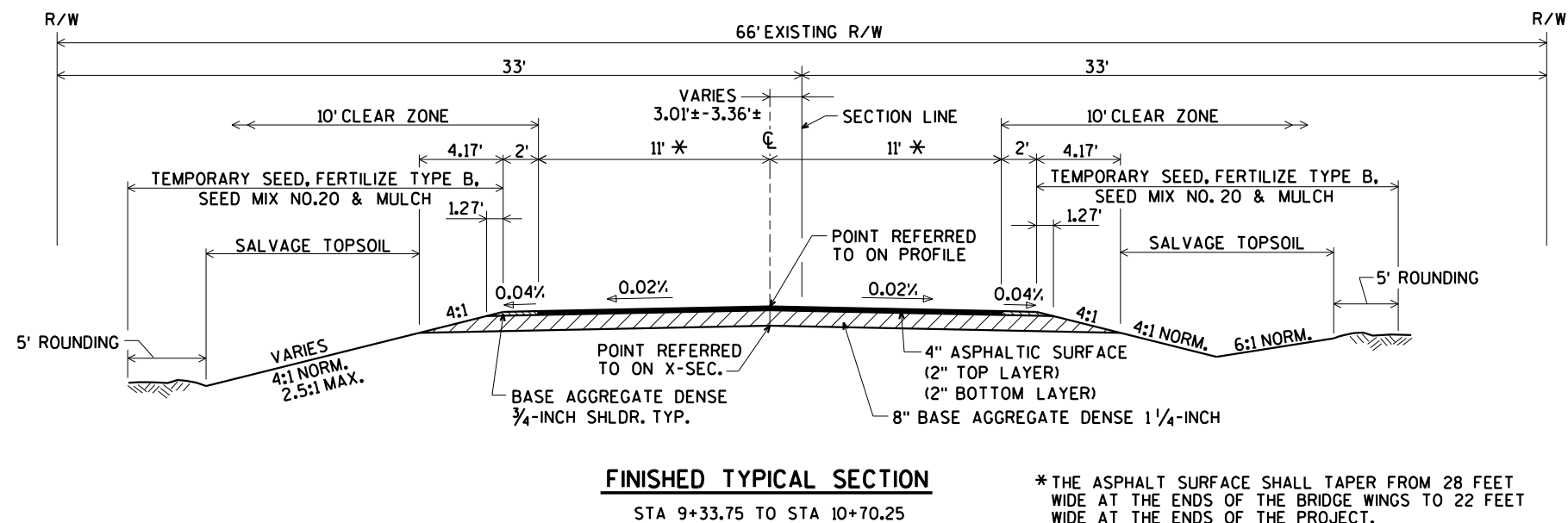
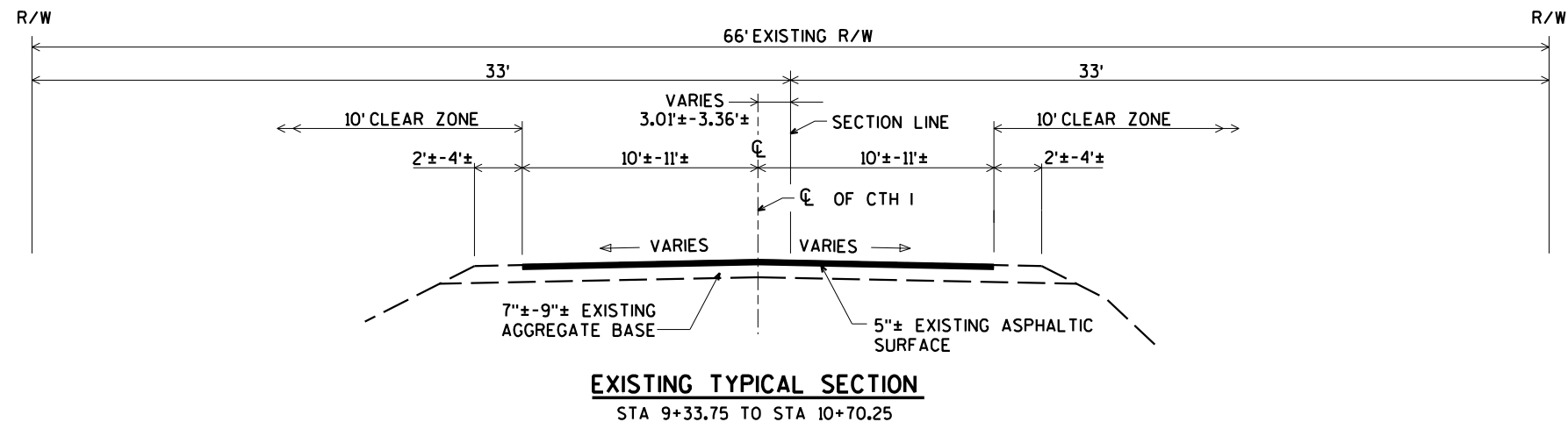
T-25-N
T-24-N

BEGIN PROJECT
STA. 9+33.75
Y = 520565.37
X = 824407.38

SURVEY PERFORMED IN 2017.
COORDINATES ON THIS PLAN ARE REFERENCED TO
THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS),
TREMPEALEAU COUNTY, NAD 83.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7275-00-70		

ACCEPTED FOR
County Trempealeau
Date 7/16/18 Highway Commissioner
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com
WISCONSIN PROFESSIONAL ENGINEER
DANIEL N. SYDOW E-38363 WI
DATE 7/18/2018
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor AYRES ASSOCIATES INC
Designer AYRES ASSOCIATES INC
Management Consultant KNIGHT EA
APPROVED FOR THE DEPARTMENT
DATE 7/31/18 Management Consultant Signature
E

**GENERAL NOTES**

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

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

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

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

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

ASPHALTIC REMOVAL IS INCLUDED IN THE ITEM EXCAVATION COMMON.

SALVAGE TOPSOIL SHALL BE PLACED ON THE SLOPES, TO THE POINT OF INTERCEPT WITH THE ORIGINAL GROUND SHOWN ON THE CROSS SECTIONS.

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

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

ASPHALT SURFACE SHALL USE 1/2" NOMINAL AGGREGATE SIZE.

UTILITIES

TRI-COUNTY COMMUNICATIONS COOP.
23451 WHITEHALL ROAD
PO BOX 727
INDEPENDENCE, WI 54747
ATTN: BRIAN MELSNESS
715-695-2691
715-530-0081 (CELL)
bmelsness@tccpro.net

RIVERLAND ENERGY COOPERATIVE
PO BOX 277
ARCADIA, WI 54612
ATTN. ROB SOSALLA
608-863-2377
rsosalla@riverlandenergy.com

DIGGERSHOTLINE

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

**WISCONSIN DEPARTMENT OF
NATURAL RESOURCES CONTACT:**

AMY LESIK
1300 W. CLAIREMONT AVE.
EAU CLAIRE, WI. 54702
715-836-6571
amyl.lesik@wisconsin.gov

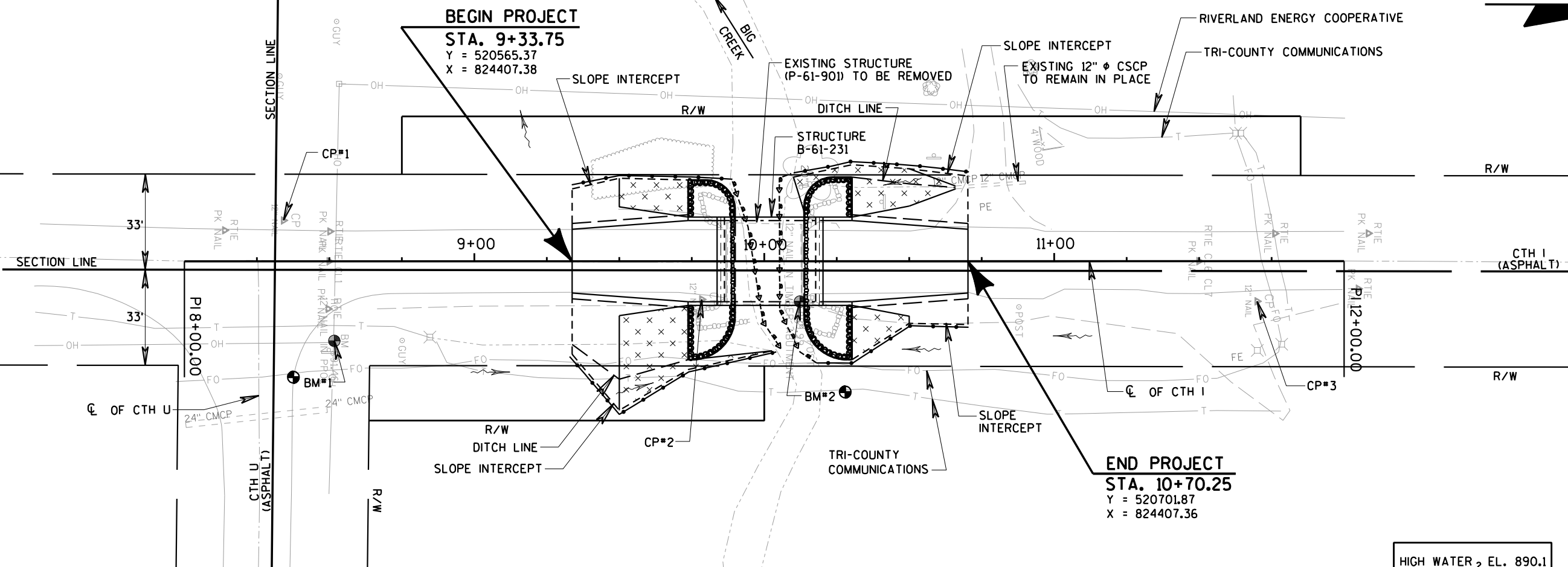
DESIGNER

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

COUNTY CONTACT:

TREMPEALEAU COUNTY COMMISSIONER
PO BOX 97
N36258 COUNTY ROAD 00
WHITEHALL, WI 54773
ATTN: AL RINKA
715-538-4799





RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .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 = 0.64 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.18 ACRES

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

LEGEND

- × × × EROSION MAT CLASS II TYPE C
- ⊙ ⊙ SILT FENCE
- ← ← ← ← ← TURBIDITY BARRIER
- ⊞ ⊞ ⊞ ⊞ ⊞ RIPRAP HEAVY
- ↖ ↗ DRAINAGE ARROW



Estimate Of Quantities

7275-00-70					
Line	Item	Item Description	Unit	Total	Qty
0002	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0004	205.0100	Excavation Common	CY	154.000	154.000
0006	206.1000	Excavation for Structures Bridges (structure) 01. B-61-231	LS	1.000	1.000
0008	210.1500	Backfill Structure Type A	TON	240.000	240.000
0010	213.0100	Finishing Roadway (project) 01. 7275-00-70	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	10.000	10.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	170.000	170.000
0016	455.0605	Tack Coat	GAL	20.000	20.000
0018	465.0105	Asphaltic Surface	TON	65.000	65.000
0020	502.0100	Concrete Masonry Bridges	CY	134.000	134.000
0022	502.3200	Protective Surface Treatment	SY	145.000	145.000
0024	505.0400	Bar Steel Reinforcement HS Structures	LB	3,780.000	3,780.000
0026	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,280.000	15,280.000
0028	513.4061	Railing Tubular Type M	LF	117.000	117.000
0030	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0032	550.0500	Pile Points	EACH	10.000	10.000
0034	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	400.000	400.000
0036	606.0300	Riprap Heavy	CY	135.000	135.000
0038	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	142.000	142.000
0040	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7275-00-70	EACH	1.000	1.000
0042	619.1000	Mobilization	EACH	1.000	1.000
0044	624.0100	Water	MGAL	6.000	6.000
0046	625.0500	Salvaged Topsoil	SY	340.000	340.000
0048	627.0200	Mulching	SY	290.000	290.000
0050	628.1504	Silt Fence	LF	335.000	335.000
0052	628.1520	Silt Fence Maintenance	LF	670.000	670.000
0054	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0056	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0058	628.2027	Erosion Mat Class II Type C	SY	245.000	245.000
0060	628.6005	Turbidity Barriers	SY	190.000	190.000
0062	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0064	629.0210	Fertilizer Type B	CWT	0.400	0.400
0066	630.0120	Seeding Mixture No. 20	LB	16.000	16.000
0068	630.0200	Seeding Temporary	LB	16.000	16.000
0070	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	5.000	5.000
0072	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	1.000	1.000
0074	637.2210	Signs Type II Reflective H	SF	18.000	18.000

Estimate Of Quantities

7275-00-70					
Line	Item	Item Description	Unit	Total	Qty
0076	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0078	638.2602	Removing Signs Type II	EACH	6.000	6.000
0080	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0082	642.5001	Field Office Type B	EACH	1.000	1.000
0084	643.0420	Traffic Control Barricades Type III	DAY	1,134.000	1,134.000
0086	643.0705	Traffic Control Warning Lights Type A	DAY	1,512.000	1,512.000
0088	643.0900	Traffic Control Signs	DAY	882.000	882.000
0090	643.5000	Traffic Control	EACH	1.000	1.000
0092	645.0111	Geotextile Type DF Schedule A	SY	90.000	90.000
0094	645.0120	Geotextile Type HR	SY	255.000	255.000
0096	646.1020	Marking Line Epoxy 4-Inch	LF	598.000	598.000
0098	650.4500	Construction Staking Subgrade	LF	100.000	100.000
0100	650.5000	Construction Staking Base	LF	100.000	100.000
0102	650.6500	Construction Staking Structure Layout (structure) 01. B-61-231	LS	1.000	1.000
0104	650.9910	Construction Staking Supplemental Control (project) 01. 7275-00-70	LS	1.000	1.000
0106	650.9920	Construction Staking Slope Stakes	LF	100.000	100.000
0108	690.0150	Sawing Asphalt	LF	45.000	45.000
0110	715.0502	Incentive Strength Concrete Structures	DOL	804.000	804.000

CTH I EARTHWORK SUMMARY									
From/To Station	Location	Excavation Common (1) (item # 205.0100)	Salvaged / Unuseable Pavement Material (5)	Unexpanded Fill	Expanded Fill (2)	Mass Ordinate +/- (3)	Waste	Borrow (item #208.0100)	Comment:
		Cut			Factor 1.30				
9+33.75 - 10+70.25	CTH I	154	39	52	68	47	47	0	

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

FINISHING ROADWAY
(ID 7275-00-70)

213.0100.01	
LOCATION	EACH
CTH I	1
TOTAL	
	1

PAVING AND BASE QUANTITIES

			305.0110	305.0120	455.0605	465.0105
			BASE AGGREGATE	BASE AGGREGATE	TACK	ASPHALTIC SURFACE
			DENSE 3/4-INCH	DENSE 1 1/4-INCH	COAT	
STA	TO	STA	TON	TON	GAL	TON
9+33.75	--	9+83.75	5	80	10	30
10+20.25	--	10+70.25	5	80	10	30
UNDISTRIBUTED			0	10	0	5
TOTALS			10	170	20	65

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

MAINTENANCE AND REPAIR
OF HAUL ROADS
ID 7275-00-70

618.0100.01	
CATEGORY	EACH
0030	1
TOTAL	
1	

MOBILIZATION

619.1000	
CATEGORY	EACH
0010	0.2
0020	0.8
TOTAL	
1	

WATER

624.0100	
PURPOSE	WATER MGAL
COMPACTION	2
DUST CONTROL	4
TOTAL	
6	

EROSION CONTROL ITEMS

				625.0500 SALVAGED TOPSOIL	627.0200 MULCHING	628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.2027 EROSION MAT CLASS II TYPE C	629.0210 FERTILIZER TYPE B	630.0120 SEEDING MIXTURE NO. 20	630.0200 SEEDING TEMPORARY
STA	TO	STA	LOCATION	SY	SY	LF	LF	SY	CWT	LB	LB
8+75	--	9+83.75	RT	130	115	90	180	80	0.1	5	5
8+75	--	9+83.75	LT	40	55	60	120	30	0.1	2	2
10+20.25	--	11+25	RT	30	50	60	120	25	0.0	2	2
10+20.25	--	11+75	LT	70	70	60	120	60	0.1	3	3
UNDISTRIBUTED				70	--	65	130	50	0.1	3	3
TOTALS				340	290	335	670	245	0.4	16	16

EROSION CONTROL MOBILIZATION ITEMS

		628.1905 MOBILIZATIONS EROSION CONTROL	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL
LOCATION	EACH	EACH	EACH
ID 7275-00-70	4	4	4
TOTALS		4	4

TURBIDITY BARRIERS

628.6005	
LOCATION	SY
SOUTH ABUTMENT	70
NORTH ABUTMENT	80
UNDISTRIBUTED	40
TOTAL	
190	

TEMPORARY DITCH CHECKS

628.7504	
LOCATION	LF
UNDISTRIBUTED	50
TOTAL	
50	

FIELD OFFICE TYPE B

642.5001	
CATEGORY	EACH
0010	0.2
0020	0.8
TOTAL	
1	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

SIGNAGE

SIGN NO.	STATION	LOCATION	EXISTING	SIGN CODE	634.0612	634.0614	637.2210	637.2230	638.2602	638.3000	COMMENT
			SIGN LOCATION		POSTS WOOD 4X6-INCH X 12-FT	POSTS WOOD 4X6-INCH X 14-FT	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE F	REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	
					EACH	EACH	SF	SF	EACH	EACH	
1	9+25	RT	9+76	M1-5A	1	--	4	--	1	1	CTH I
2	9+25	LT	10+40	J13-1	--	1	7.5	--	1	1	CTH U, ARROW
				J1-1	--	--	6.5	--	--	--	END, CTH I (SHARES POST)
3	9+73	LT	9+86	W5-52L	1	--	--	3	1	1	
4	9+73	RT	9+86	W5-52R	1	--	--	3	1	1	
5	10+31	LT	10+14	W5-52R	1	--	--	3	1	1	
6	10+31	RT	10+14	W5-52L	1	--	--	3	1	1	
TOTALS					5	1	18	12	6	6	

TRAFFIC CONTROL ITEMS

LOCATION	DURATION DAYS	643.0420		643.0705		643.0900		643.5000
		BARRICADES		WARNING LIGHTS		SIGNS		TRAFFIC
		TYPE III	TYPE A	TYPE A	TYPE A	TYPE A	TYPE A	CONTROL
		NO.	DAY	NO.	DAY	NO.	DAY	EACH
PER SDD 15C2	63	18	1,134	24	1,512	14	882	--
CTH I	--	--	--	--	--	--	--	1
TOTALS			1,134		1,512		882	1

TRAFFIC CONTROL PLACEMENT SUBJECT TO ENGINEER APPROVAL

MARKING LINE EPOXY 4-INCH

STA	TO	STA	LOCATION	DESCRIPTION	646.1020	
					YELLOW	WHITE
					LF	LF
9+33.75	-	10+70.25	LT	EDGE LINE	--	137
9+33.75	-	10+70.25	RT	EDGE LINE	--	137
9+33.75	-	10+70.25		DOUBLE SOLID CENTER LINES	274	--
UNDISTRIBUTED					25	25
SUBTOTALS					299	299
TOTAL					598	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

STAKING ITEMS						
		650.4500 CONSTRUCTION STAKING SUBGRADE	650.5000 CONSTRUCTION STAKING BASE	650.6500.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (B-61-0231)	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (ID 7275-00-70)	650.9920 CONSTRUCTION STAKING SLOPE STAKES
CATEGORY	LOCATION	LF	LF	LS	LS	LF
0010	8+75 - 11+25	100	100	--	1	100
0020	B-61-231	--	--	1	--	--
TOTALS		100	100	1	1	100

SAWING ASPHALT		
690.0150		
STATION	LOCATION	LF
9+33.75	LT & RT	22
10+70.25	LT & RT	23
TOTAL		45

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN (1" UNLESS NOTED) EASEMENT

R/W MONUMENT

R/W STANDARD SIGN

SECTION CORNER MONUMENT

SECTION CORNER SYMBOL

FEE (HATCH VARIES)

SECTION LINE

QUARTER LINE

SIXTEENTH LINE

NEW REFERENCE LINE

NEW R/W LINE

EXISTING R/W LINE

PROPERTY LINE

LOT & TIE

CORPORATE LIMITS

TEMPORARY LIMITED EASEMENT

FENCE

SLOPE INTERCEPTS

PERMANENT LIMITED EASEMENT

NO ACCESS (BY STATUTORY AUTHORITY)

NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)

ACCESS CONTROL BY ACQUISITION

ACCESS RESTRICTED (BY PREVIOUS PROJECT/CONTROL)

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION

ACCESS RIGHTS

ACRES

AND OTHERS

CENTERLINE

CERTIFIED SURVEY MAP

CORNER

DOCUMENT

EASEMENT

FIELD ENTRANCE

LAND CONTRACT

MONUMENT

PAGE

PERMANENT LIMITED EASEMENT

PROPERTY LINE

RECORDED AS

AP

AR

AC

ET AL.

C/L

CSM

COR.

DOC.

EASE.

F.E.

LC

MON.

P.

PLE

PL

TAN

BUILDING

REFERENCE LINE

RELEASE OF RIGHTS

REMAINING

RIGHT-OF-WAY

SECTION

STATION

TEMPORARY LIMITED EASEMENT

VOLUME

CURVE DATA

LONG CHORD

LONG CHORD BEARING

RADIUS

DEGREE OF CURVE

CENTRAL ANGLE OR DELTA

LENGTH OF CURVE

TANGENT

BLDG

R/L

ROR

REM.

R/W

SEC.

STA.

TLE

V.

LCH

LCB

R

D

DELTA

L

TAN

CONVENTIONAL UTILITY SYMBOLS

WATER

GAS

TELEPHONE

OVERHEAD

TRANSMISSION LINES

ELECTRIC

W

G

T

OH

E

SAN

SS

TV

FO

R/W POINT TABLE			
POINT	Y	X	
100	520,495.473	824,410.389	
101	520,495.515	824,377.389	
102	520,506.612	824,377.403	
103	520,506.609	824,357.389	
104	520,816.609	824,357.343	
105	520,816.612	824,377.797	
106	520,816.622	824,443.797	
107	520,631.622	824,443.562	
108	520,631.625	824,462.370	
109	520,495.275	824,462.390	
110	520,495.477	824,443.389	

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNER(S)	INTEREST REQUIRED	R/W (ACRES)		
			FEE	EXISTING	TOTAL
1	GARY L. AND DIANE R. HILLESTAD	FEE	0.15	0.24	0.39
2	ANDREW J. AND KIMBERLY S. PEDERSEN	FEE	0.06	0.24	0.30
50	TRI-COUNTY COMMUNICATIONS COOPERATIVE, INC.	RELEASE OF RIGHTS			

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

TRI-COUNTY COMMUNICATIONS COOPERATIVE, INC.
NO RECORD EASEMENT PARCELS 1

NOTES:

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

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" CAPPED IRON BARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

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

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

EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH I AND CTH U SHOWN HEREIN IS PRESUMED TO BE 66 FEET IN WIDTH CENTERED ON THE NORTH AND SOUTH QUARTER LINE AND THE EAST AND WEST QUARTER LINE, RESPECTIVELY, OF SECTION 2 PER STATE STATUTE 82.3(2).

BEGIN RELOCATION ORDER
PROJECT 7275-00-00
STA. 8+50.00
Y = 520,481.617
X = 824,407.392
LOCATED 2,650.24' NORTH AND 0.39' EAST OF THE SOUTH QUARTER CORNER OF SECTION 2, T 24 N, R 9 W.

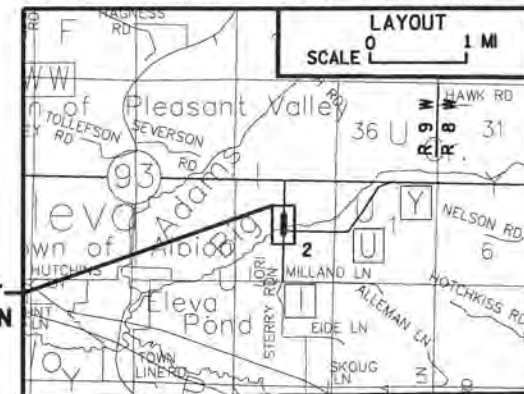
BP: 8+00.00
Y = 520,431.616
X = 824,407.400

FOUND ALUMINUM COUNTY MONUMENT
Y = 523,118.808
X = 824,413.727

END RELOCATION ORDER

PROJECT 7275-00-00
STA. 12+00.00
Y = 520,831.617
X = 824,407.341
LOCATED 3,000.24' NORTH AND 0.34' EAST OF THE SOUTH QUARTER CORNER OF SECTION 2, T 24 N, R 9 W.

NET CENTERLINE LENGTH = 0.066 MILES



ACCEPTED FOR
TREMPLEAU COUNTY

7/16/18
(Date)

County Highway Commissioner

ORIGINAL PLAT PREPARED BY

AYRES ASSOCIATES

THIS SURVEY IS PREPARED AT THE REQUEST OF TREMPLEAU COUNTY.

THE FIELD SURVEY WAS PERFORMED IN AUGUST 2017.

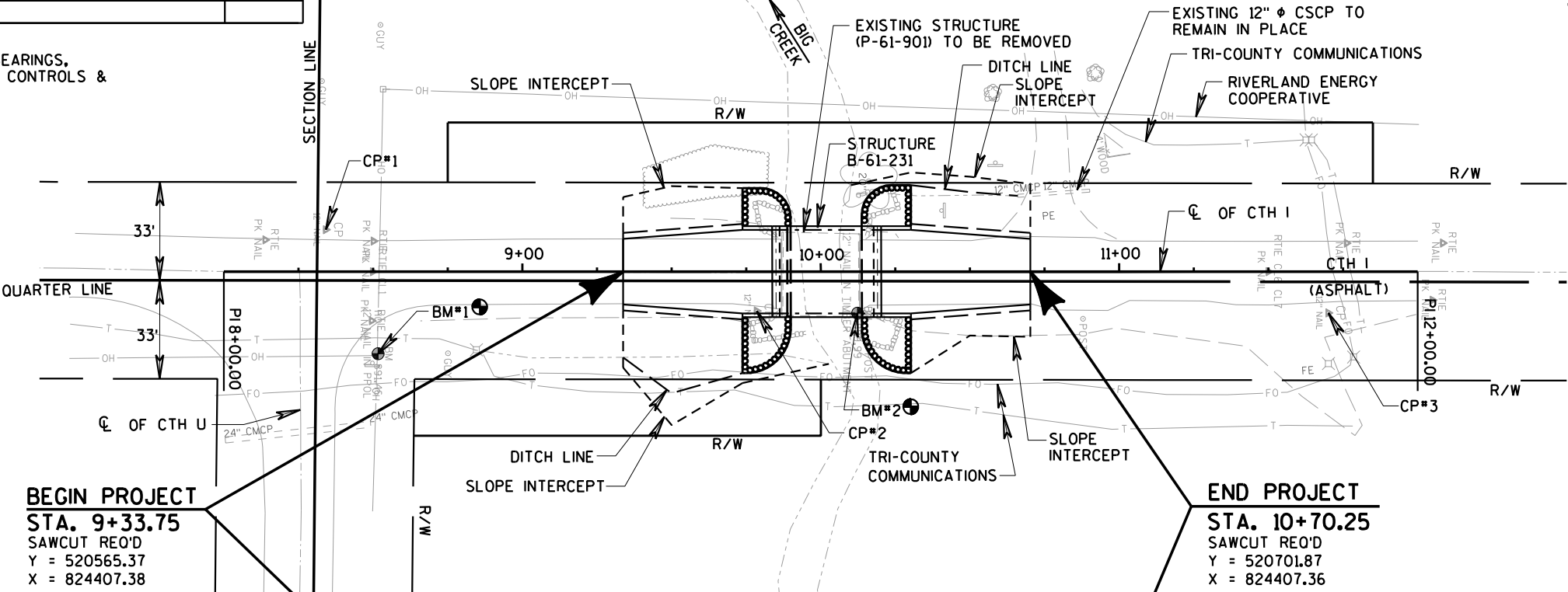
THIS SURVEY IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



(SIGNATURE) *James R. Cappeart*
DATE: 7/13/2018
(PRINTED NAME) JAMES R. CAPPEART
(REGISTRATION NUMBER) S-3044

BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
1	8+52	12" NAIL IN PPOL, 27.5' RT	891.46
2	10+12	12" NAIL IN TIMBER ABUTMENT, 13.9' RT	889.99

NOTE:
FOR ALIGNMENT CONTROL POINTS, BEARINGS,
AND COORDINATES, SEE "ALIGNMENT CONTROLS &
TIES" SHEET.
NOTE:
EXISTING STEEL BEAMS TO BE
SALVAGED TO TREMPLEAU
COUNTY

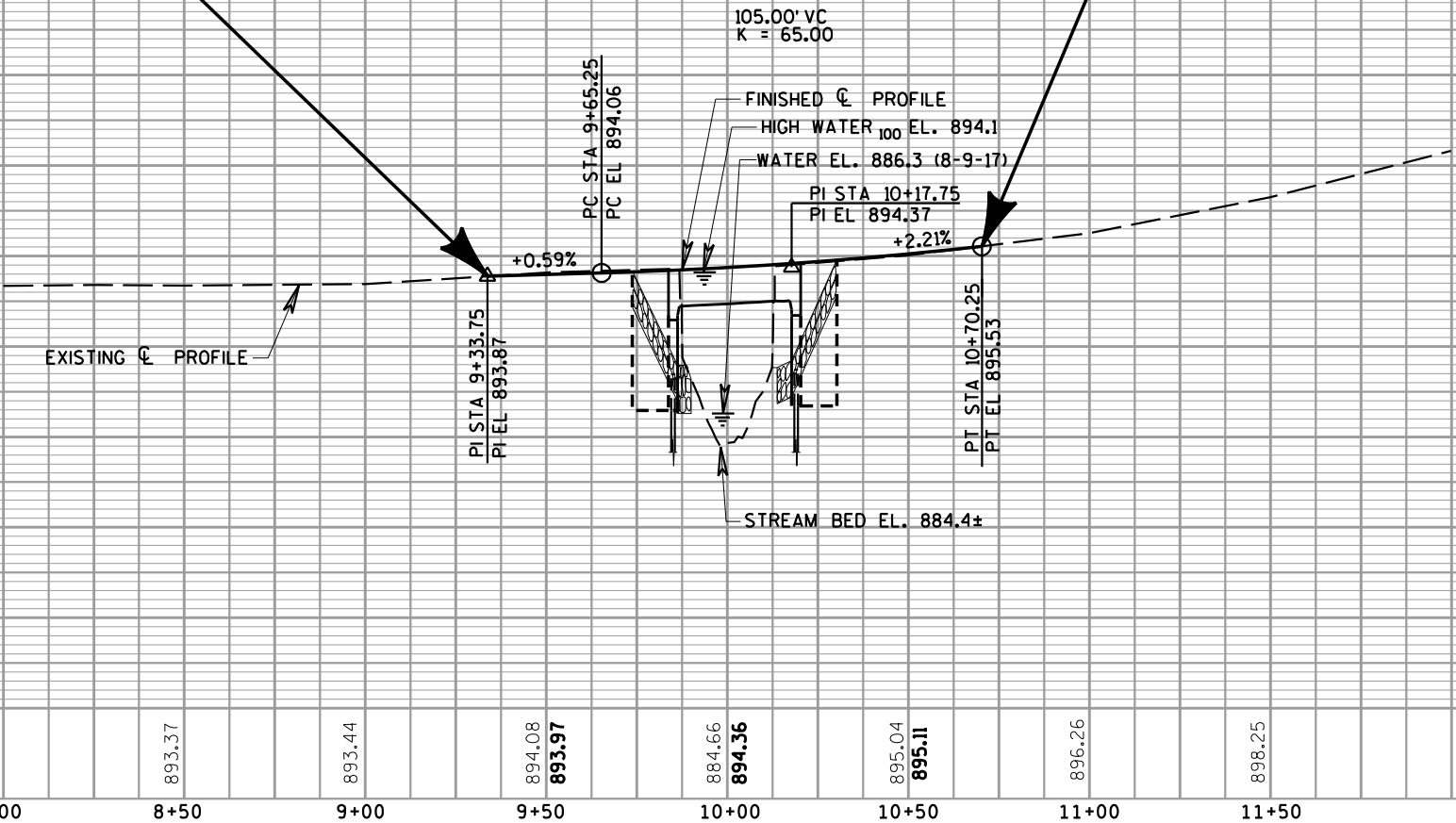


EARTHWORK SUMMARY

STA. 9+33.75 TO STA. 9+83.75
EXC. COMMON 90 C.Y.
FILL 52 C.Y.
SHR. = 30%
WASTE 6 C.Y.

EARTHWORK SUMMARY

STA. 10+20.25 TO STA. 10+70.25
EXC. COMMON 64 C.Y.
FILL 0 C.Y.
SHR. = 30%
WASTE 41 C.Y.



REMOVING OLD STRUCTURE OVER
WATERWAY WITH MINIMAL DEBRIS
STA. 10+00 (P-61-901)
SINGLE-SPAN STEEL DECK GIRDER BRIDGE
ON VERTICAL TIMBER ABUTMENTS
23' CLEAR ROADWAY x 26.5' O.A.L.
0° SKEW
STA. 10+02
STRUCTURE B-61-231 REQ'D.
SINGLE SPAN CONCRETE FLAT SLAB BRIDGE
ON SILL-TYPE (A) ABUTMENTS
28'-0" CLEAR ROADWAY x 36'-6" O.A.L.
0° SKEW

PROJECT NO: 7275-00-70

HWY: CTH I

COUNTY: TREMPLEAU

PLAN AND PROFILE

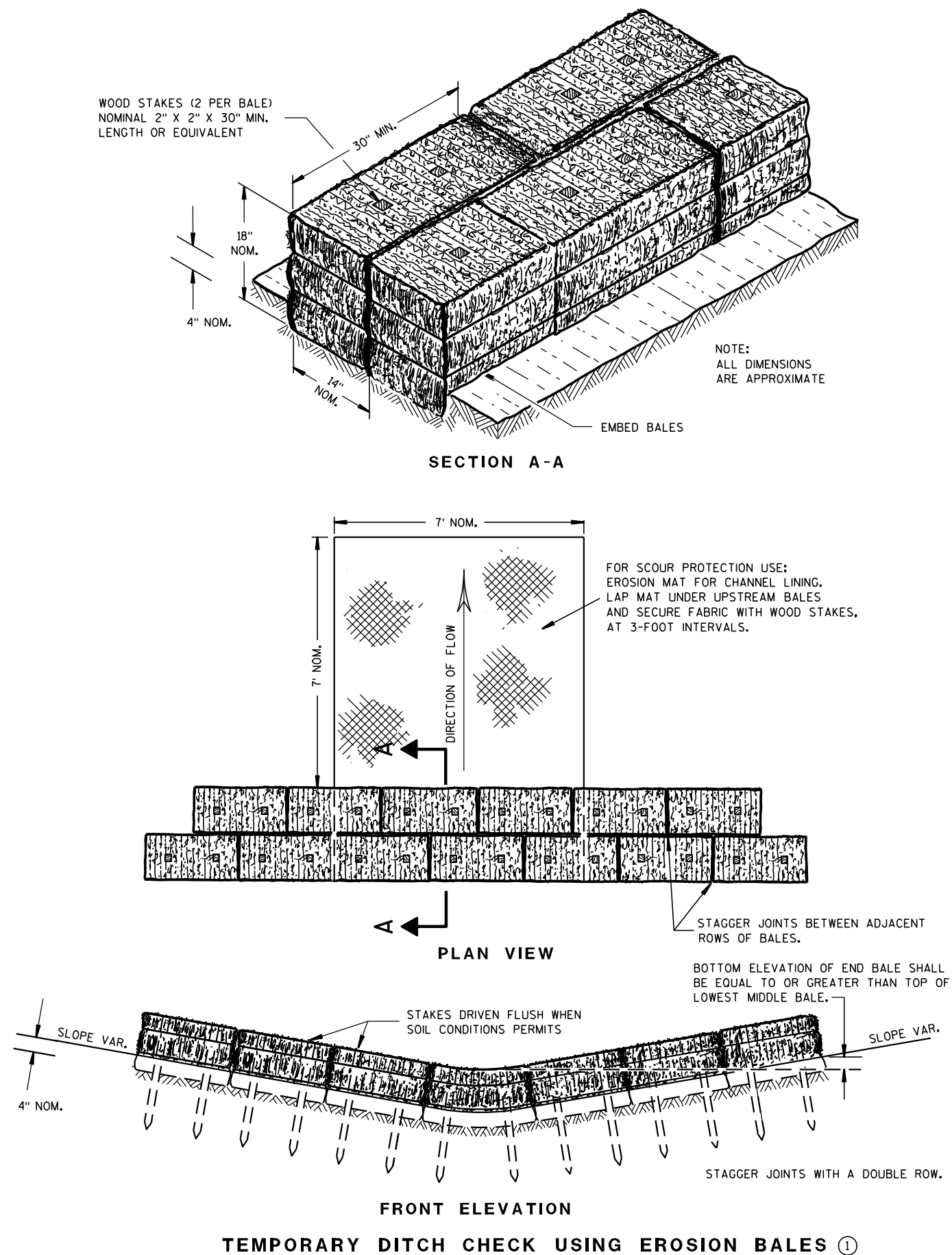
SCALE, FEET

SHEET

E

Standard Detail Drawing List

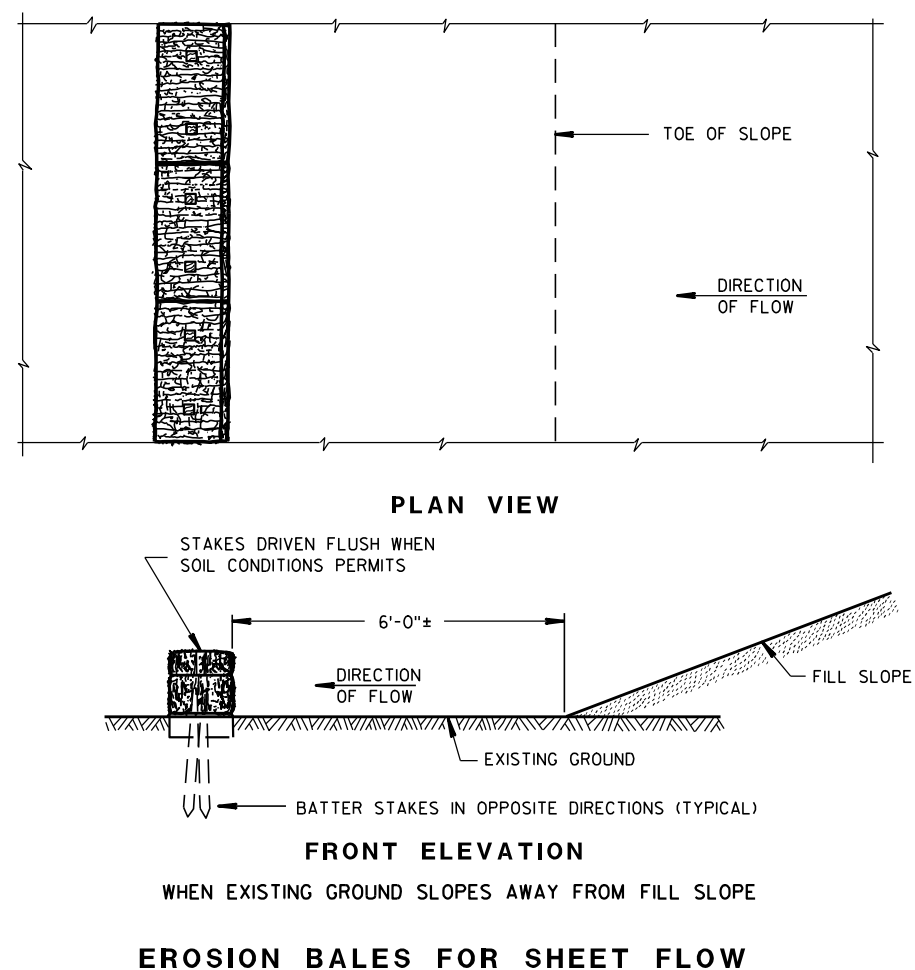
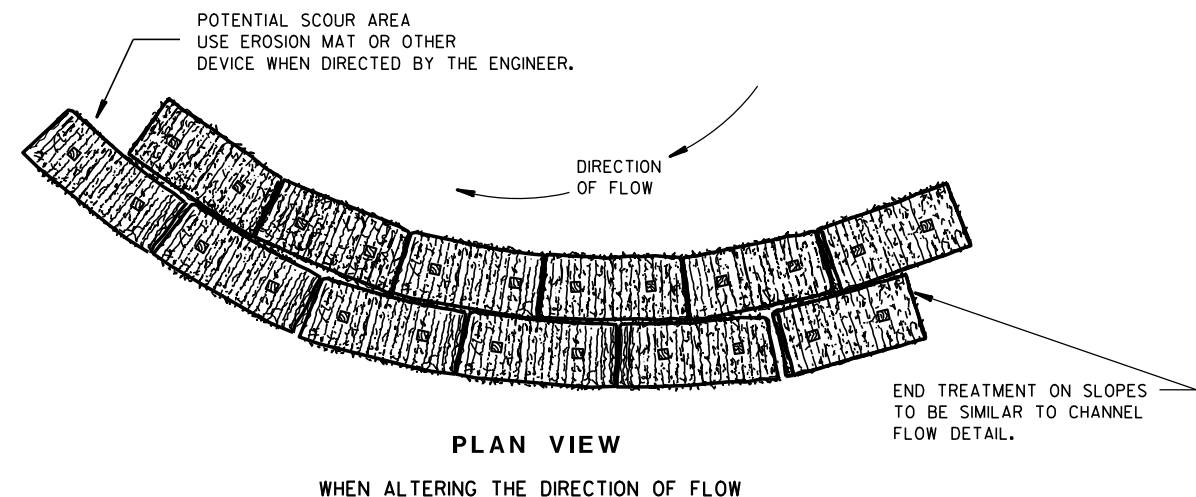
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-09	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



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.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

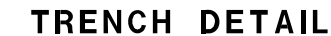
APPROVED

6/04/02
DATE/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

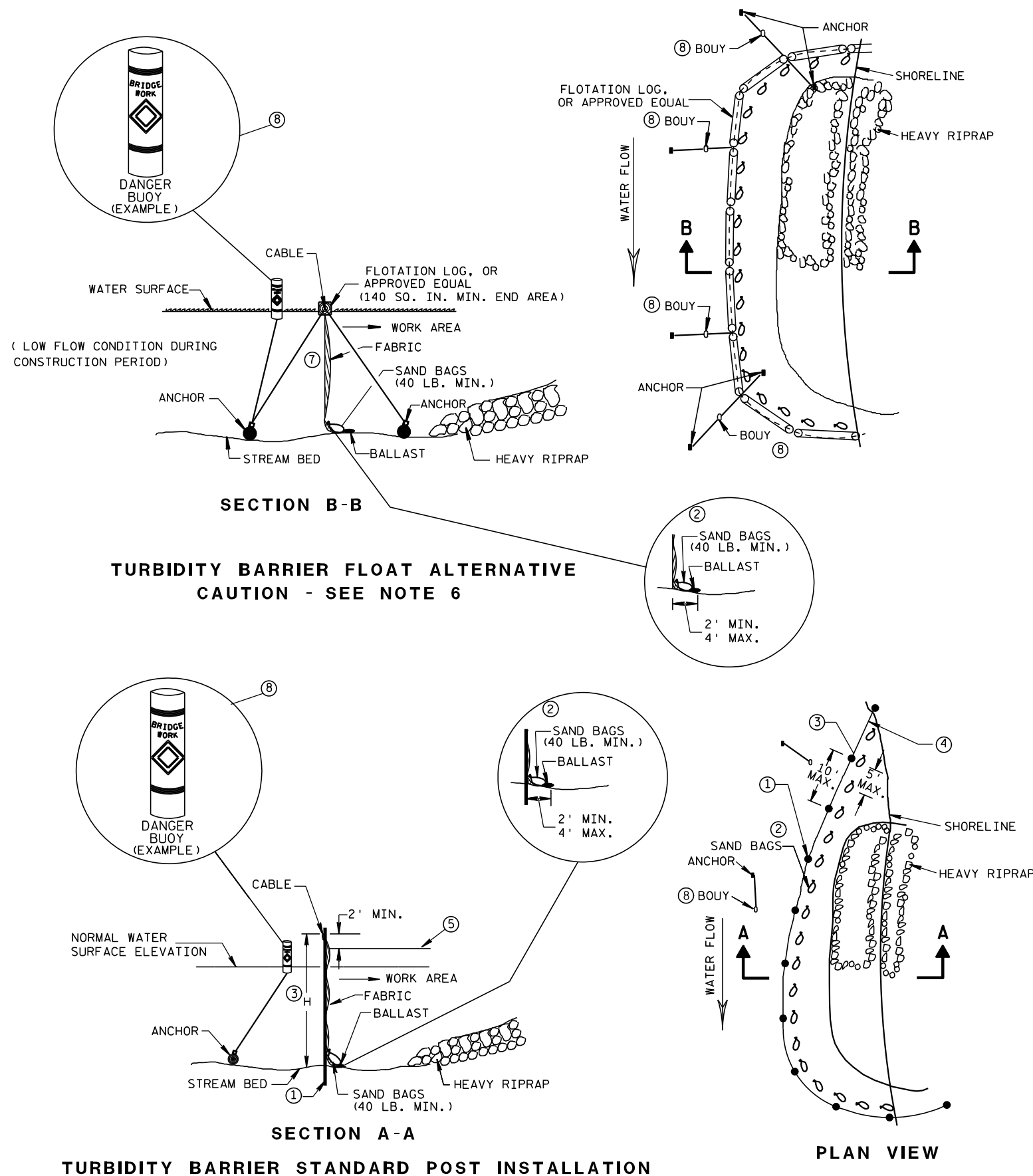
FHWA



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



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

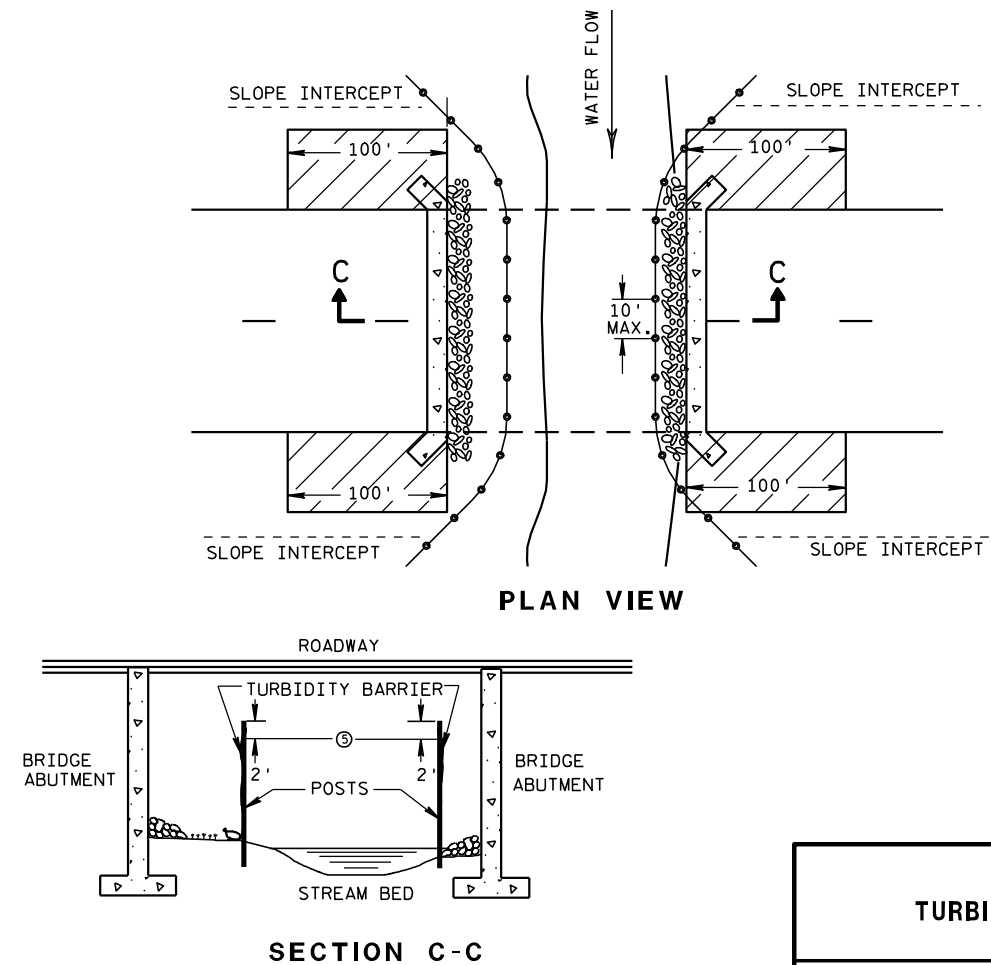


GENERAL NOTES

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

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

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

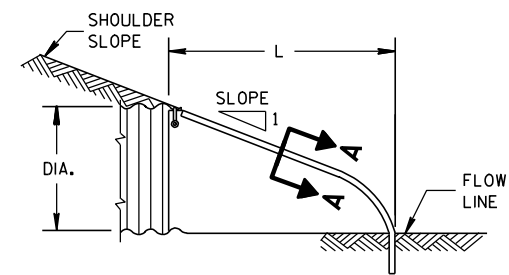
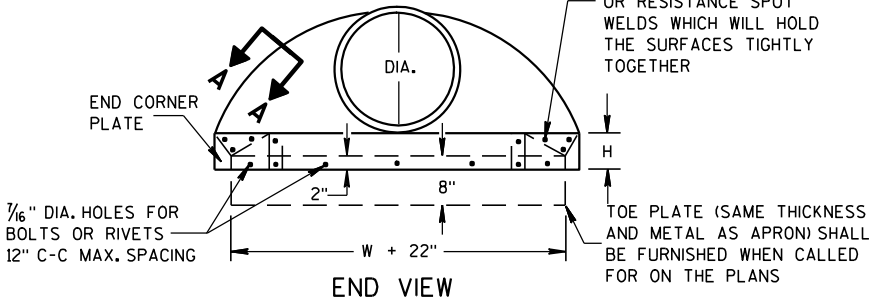
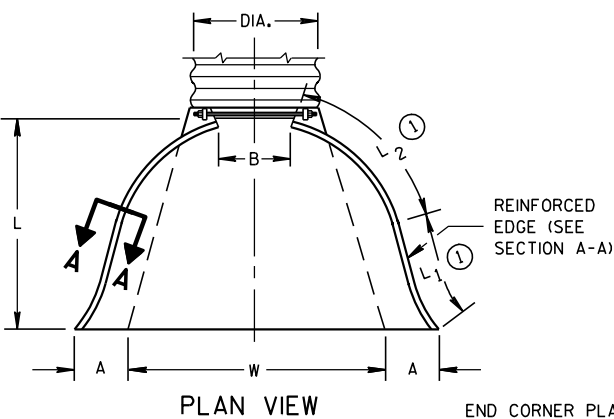
6/04/02
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

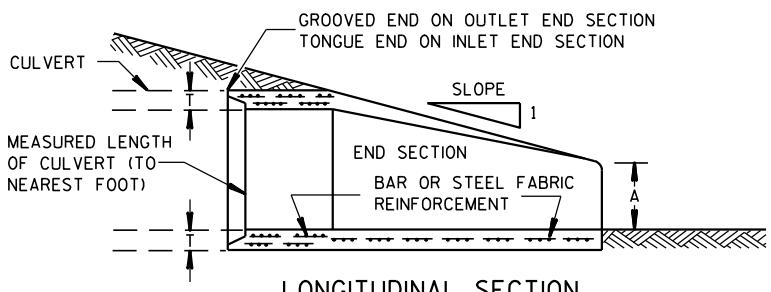
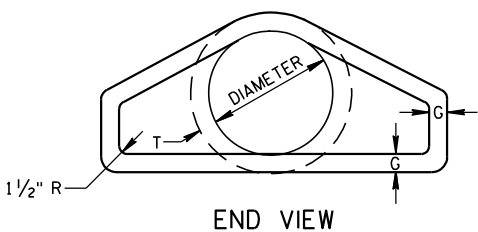
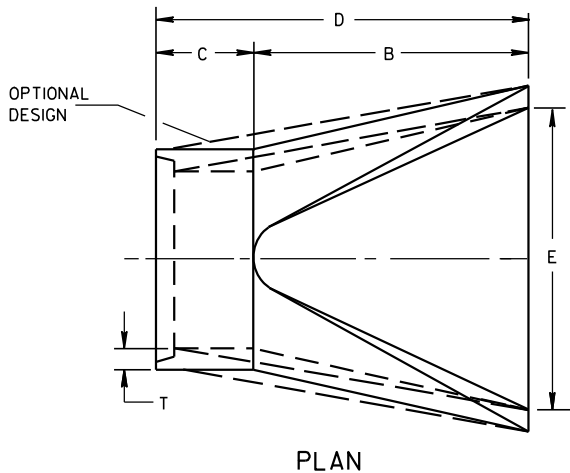
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



METAL ENDWALLS

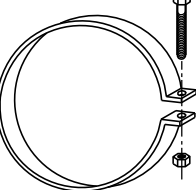
REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1			
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1			
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1			
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1			
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1			
48	5	24	72	26	98	84	5	3 to 1			
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1			
60	6	30-35	60	39	99	96	5	2 to 1			
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1			
72	7	24-36	78	21	99	108	6	2 to 1			
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1			
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1			
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1			

* MINIMUM
** MAXIMUM

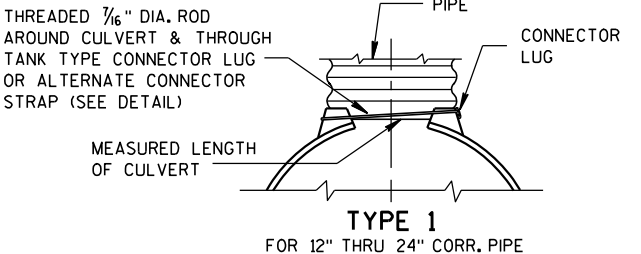


CONCRETE ENDWALLS

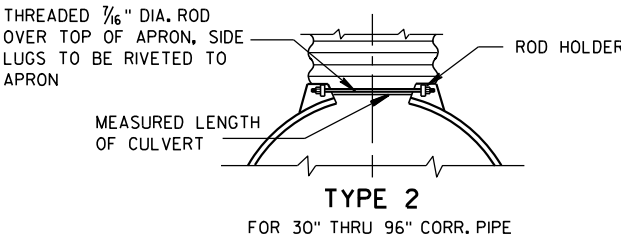
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



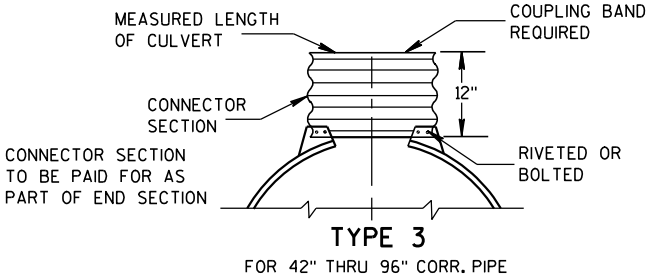
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



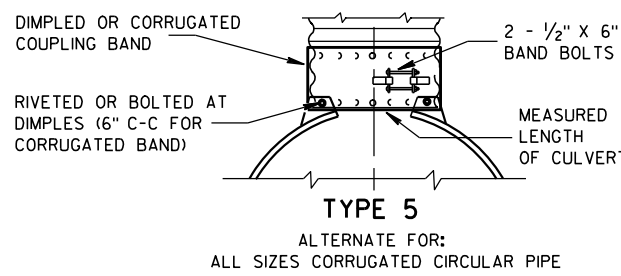
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

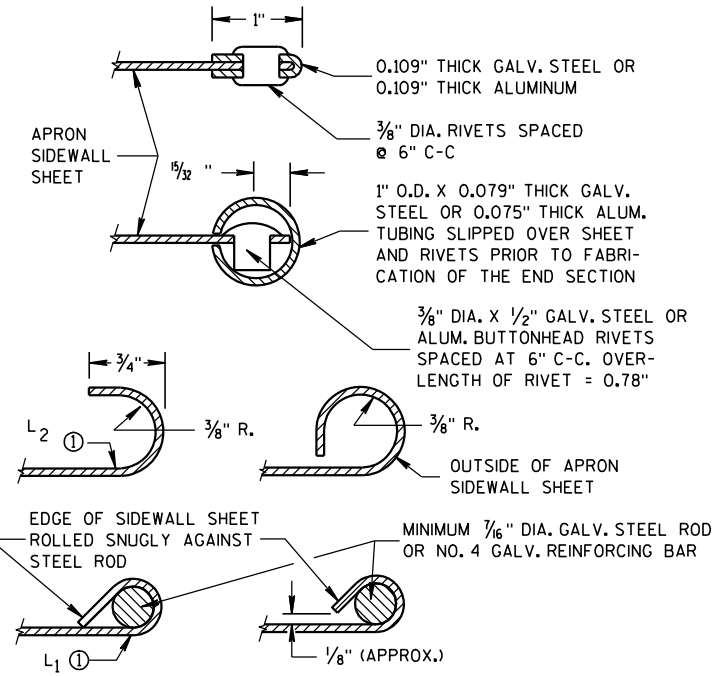
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

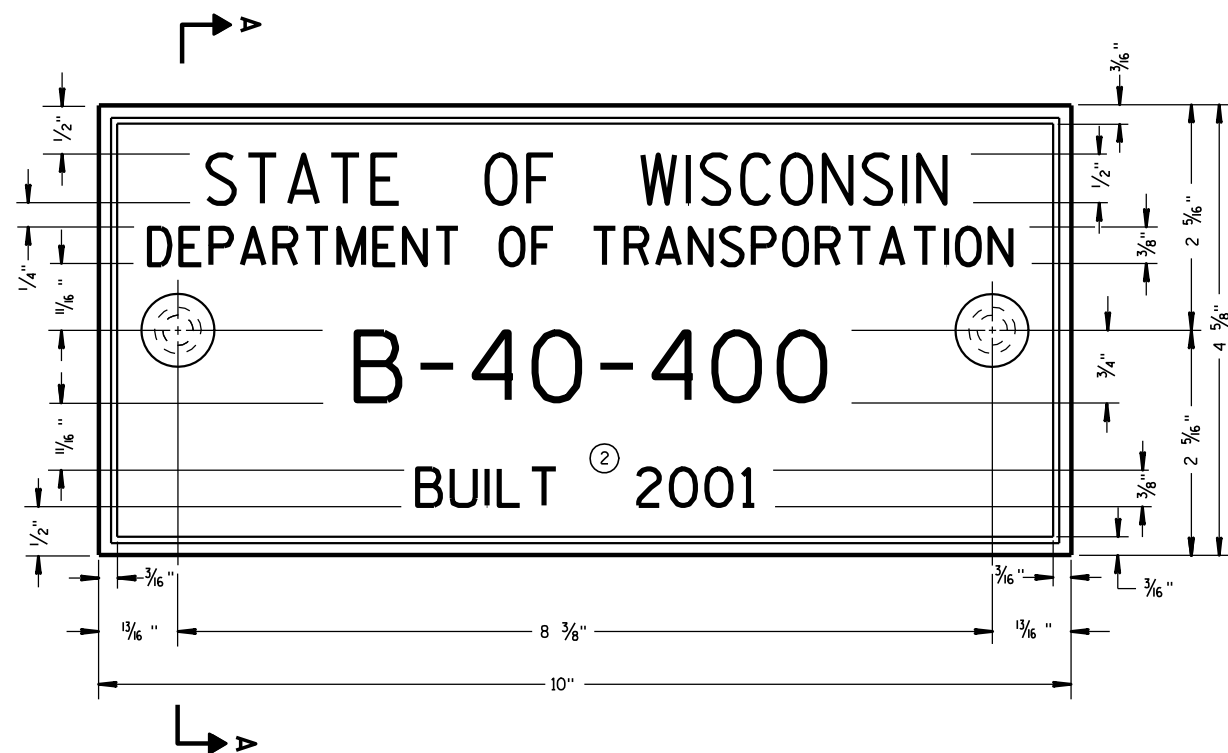
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

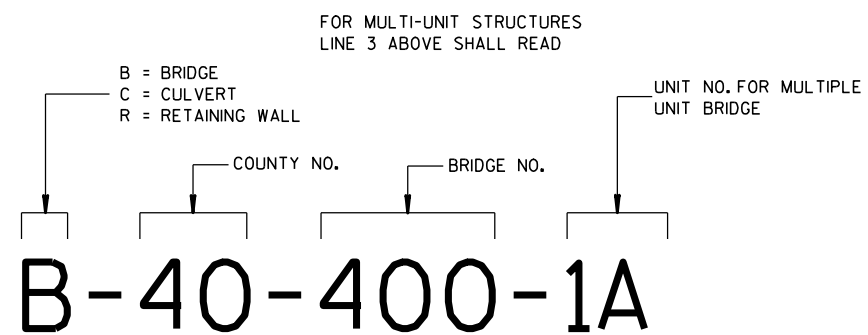
APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



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



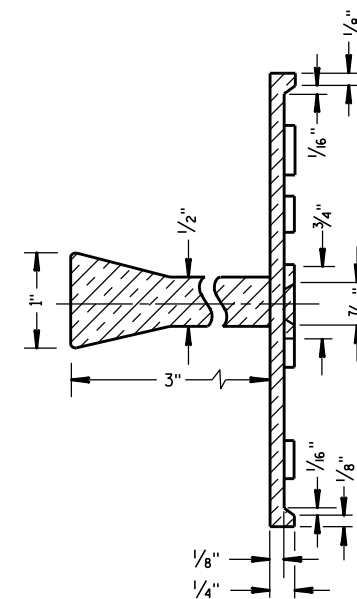
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

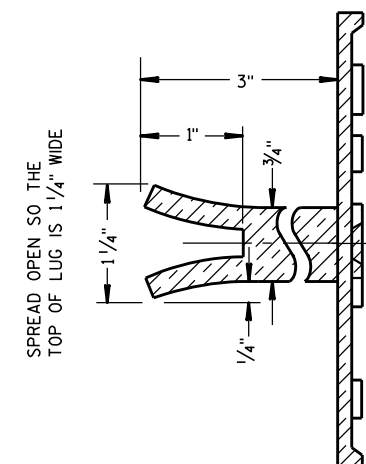
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

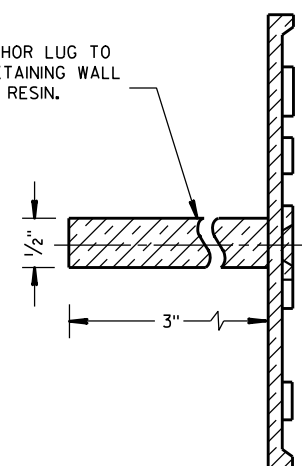


SECTION A-A



ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

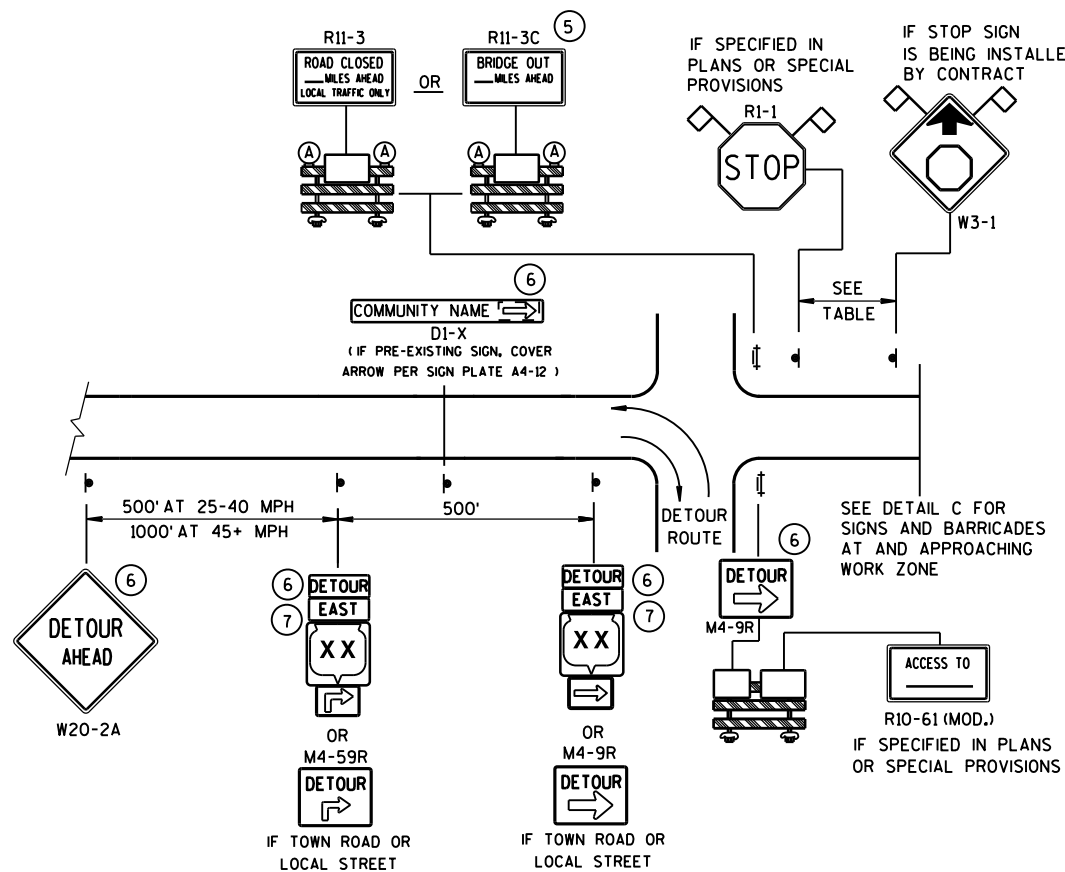
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

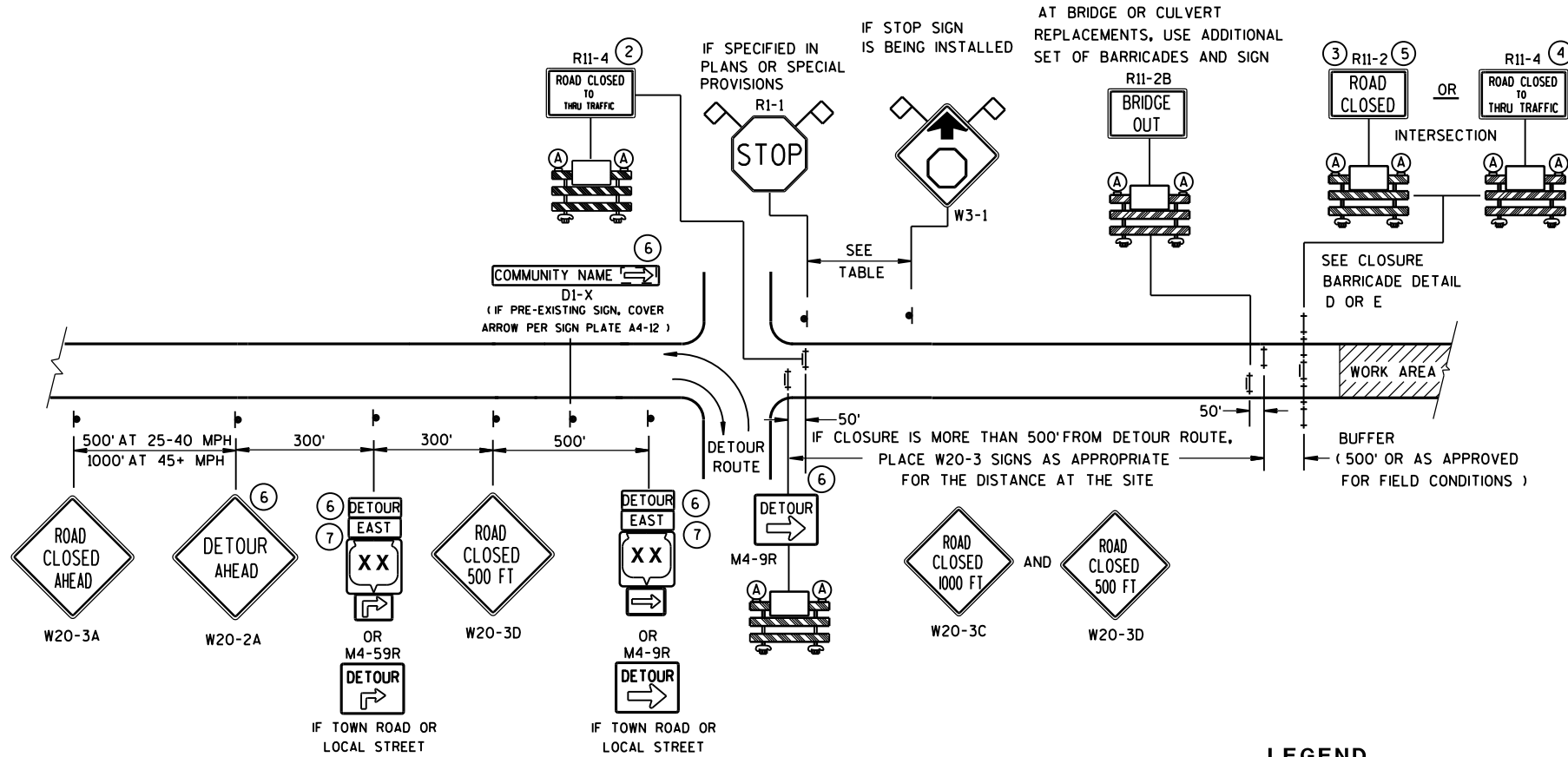
3/26/10
DATE

FHWA

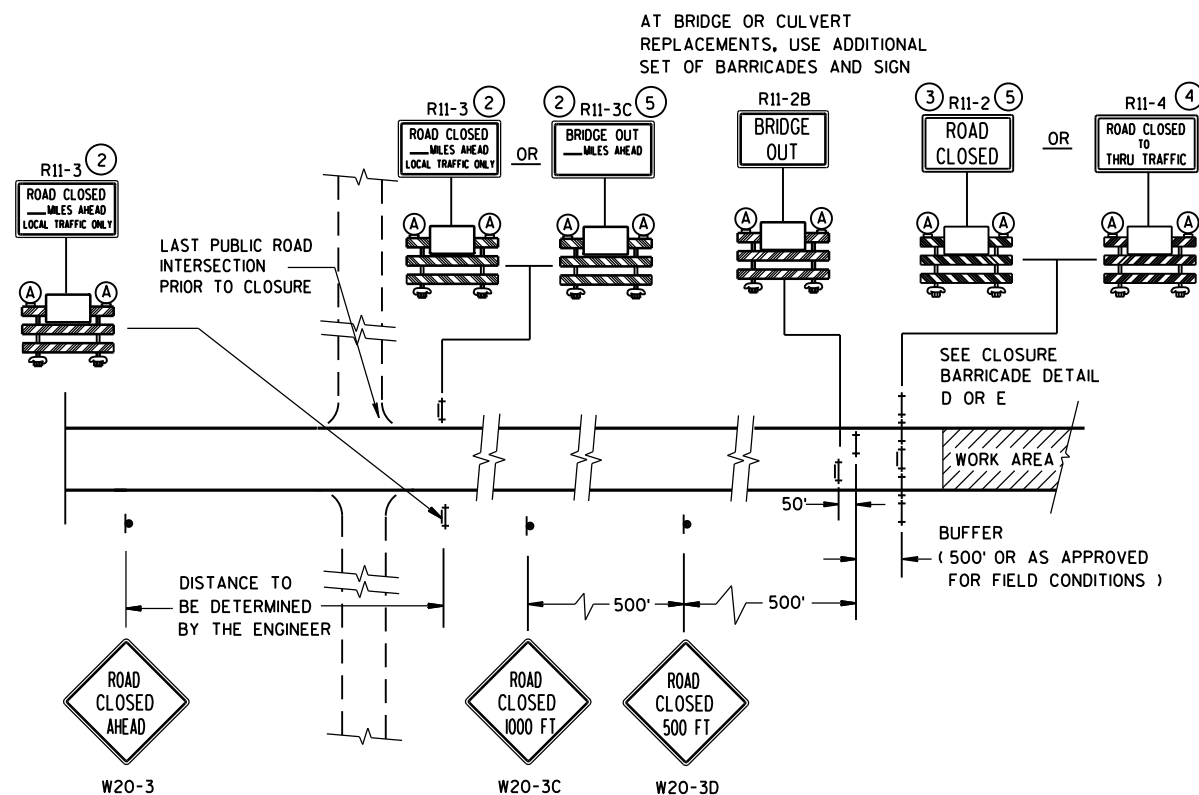
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

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

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

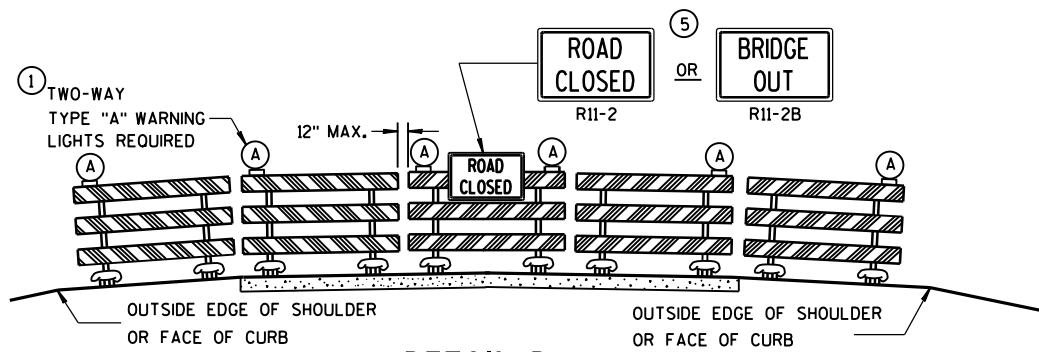
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

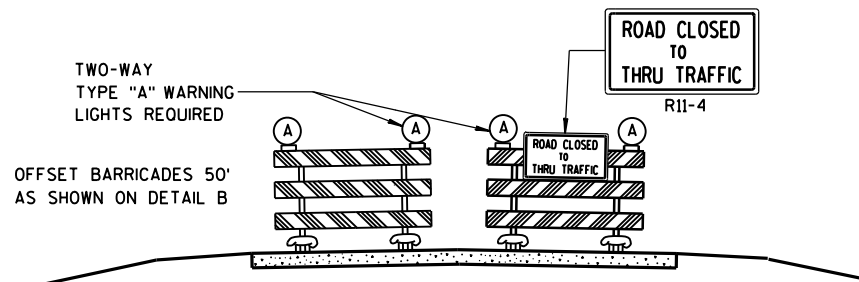
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)

M05-1 AND M06-1 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.

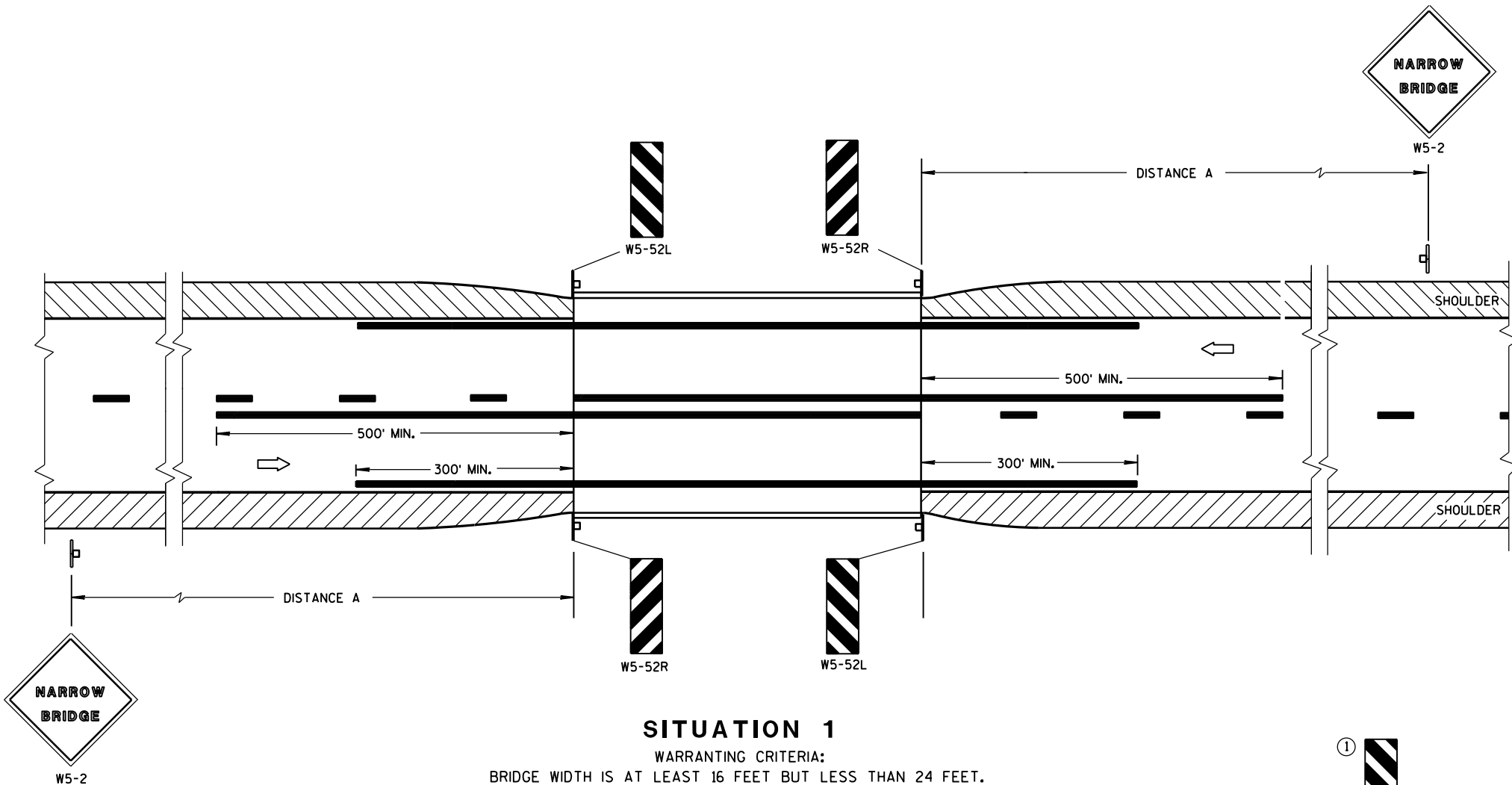
R1-1 SHALL BE 36" X 36".

- 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 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 LANE 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 MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

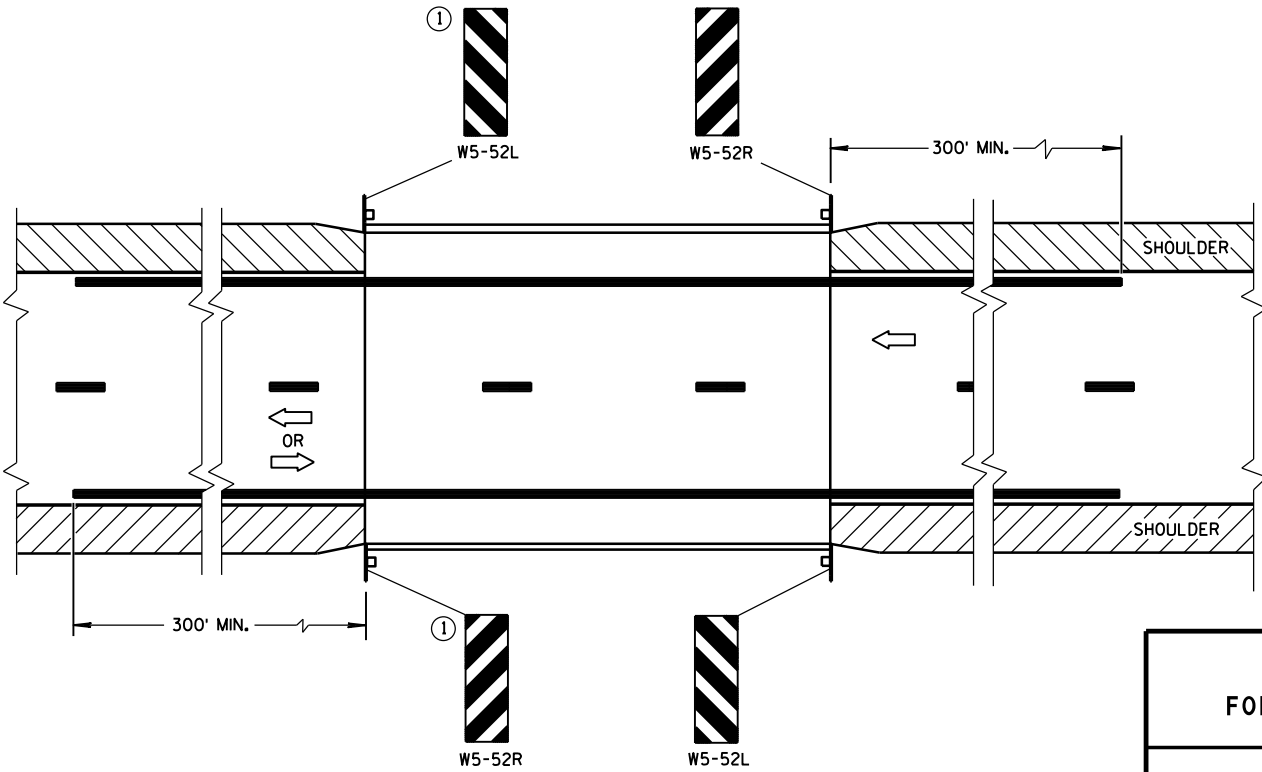


SITUATION 1

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'



SITUATION 2

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

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON 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.

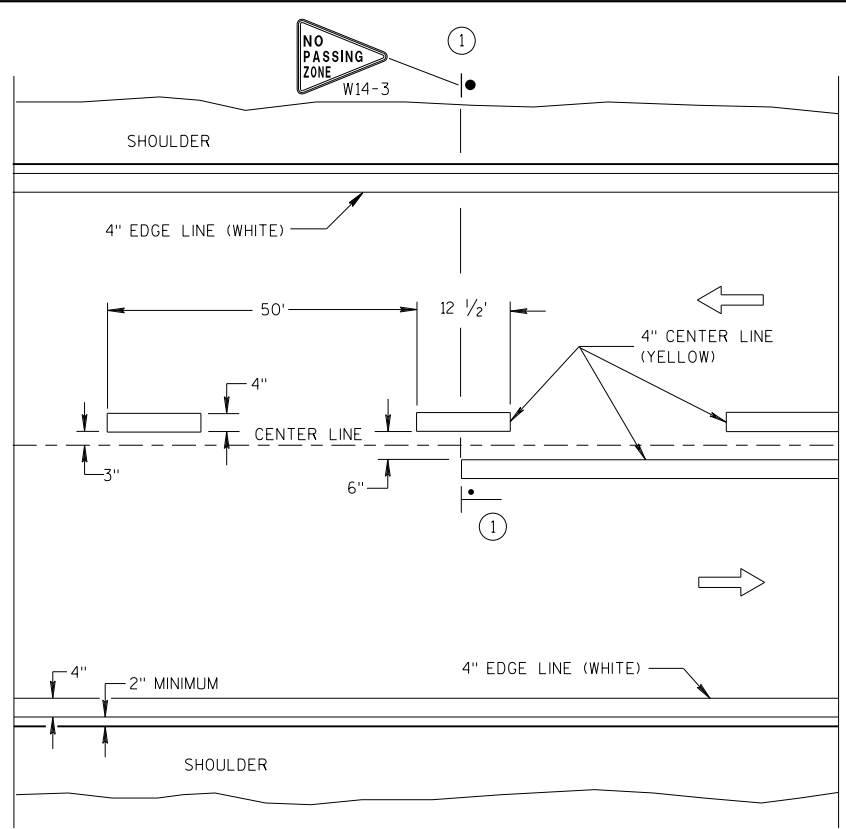
① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC

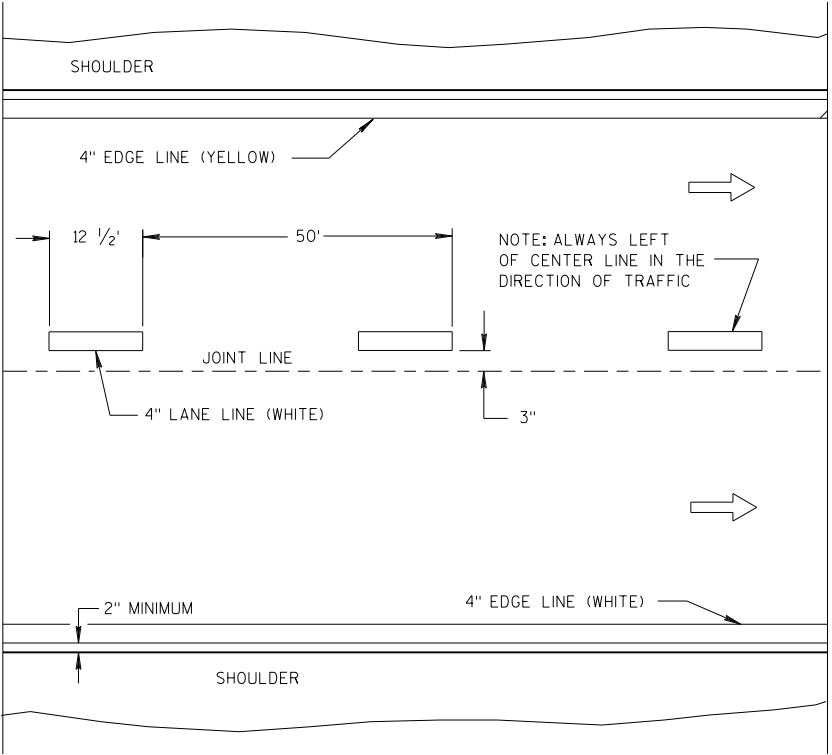
**SIGNING & MARKING
FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

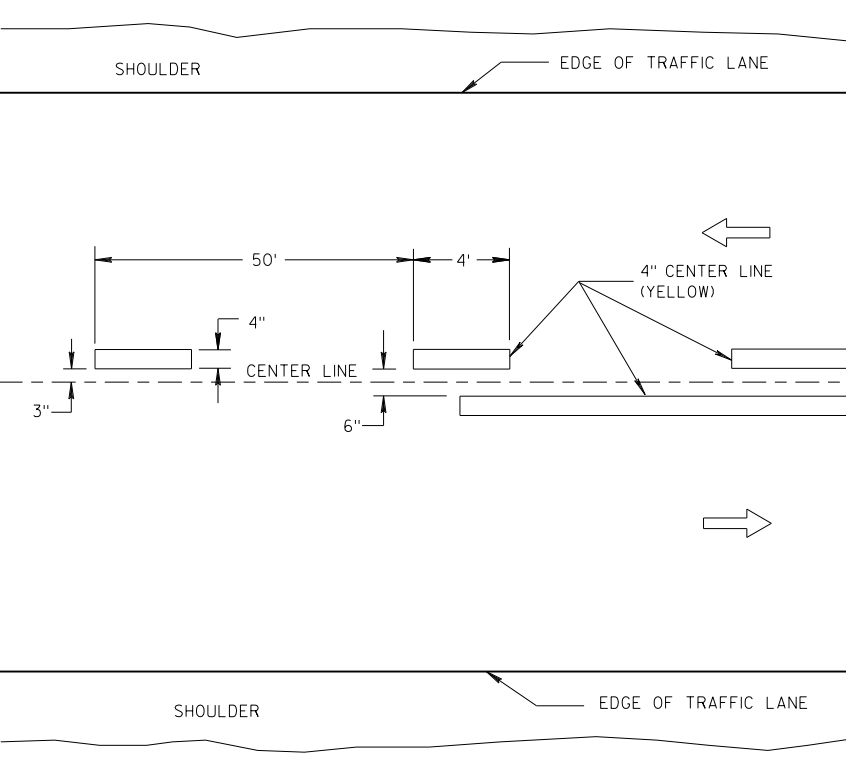


TWO WAY TRAFFIC

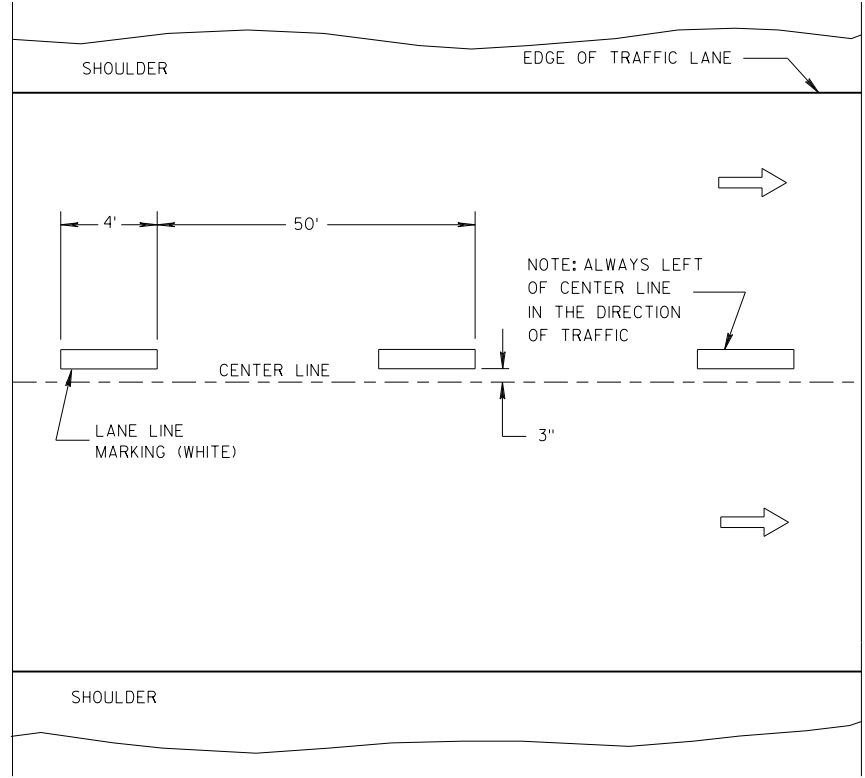


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY 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

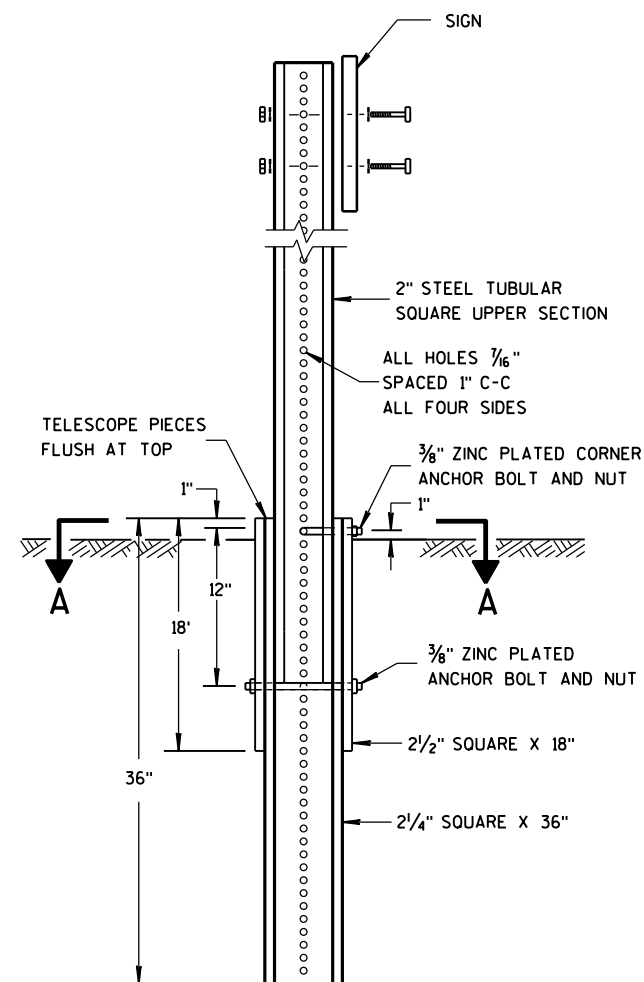
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

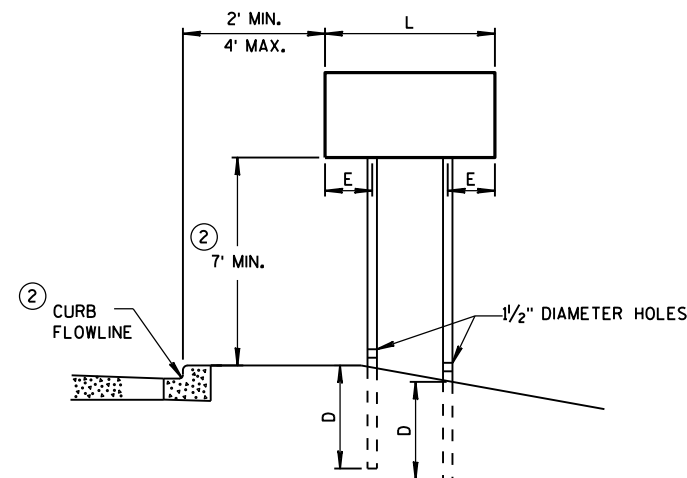
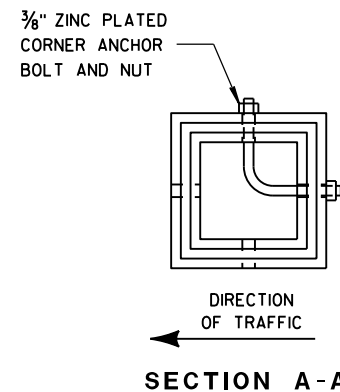


DETAIL OF TUBULAR
STEEL SIGN POST

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

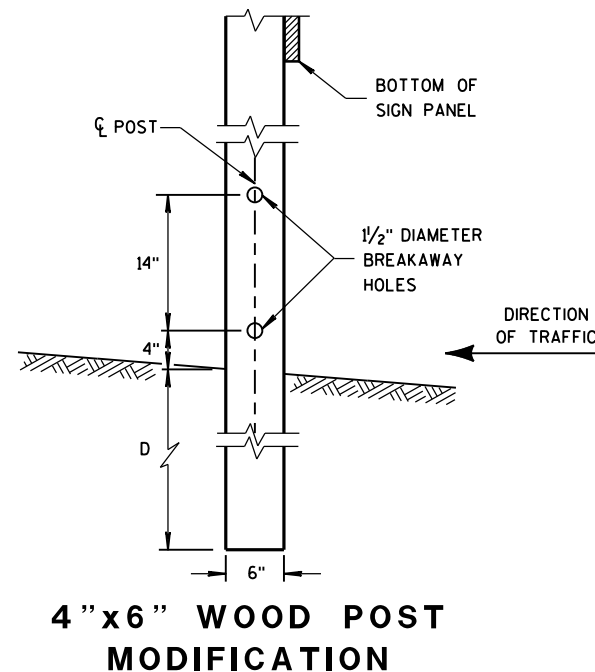
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



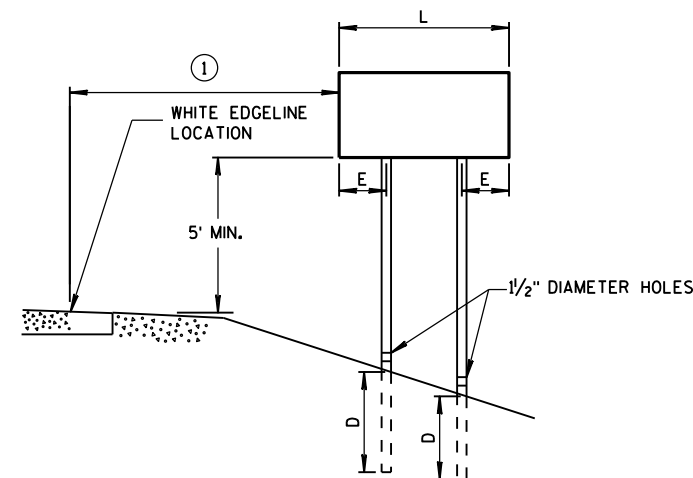
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

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

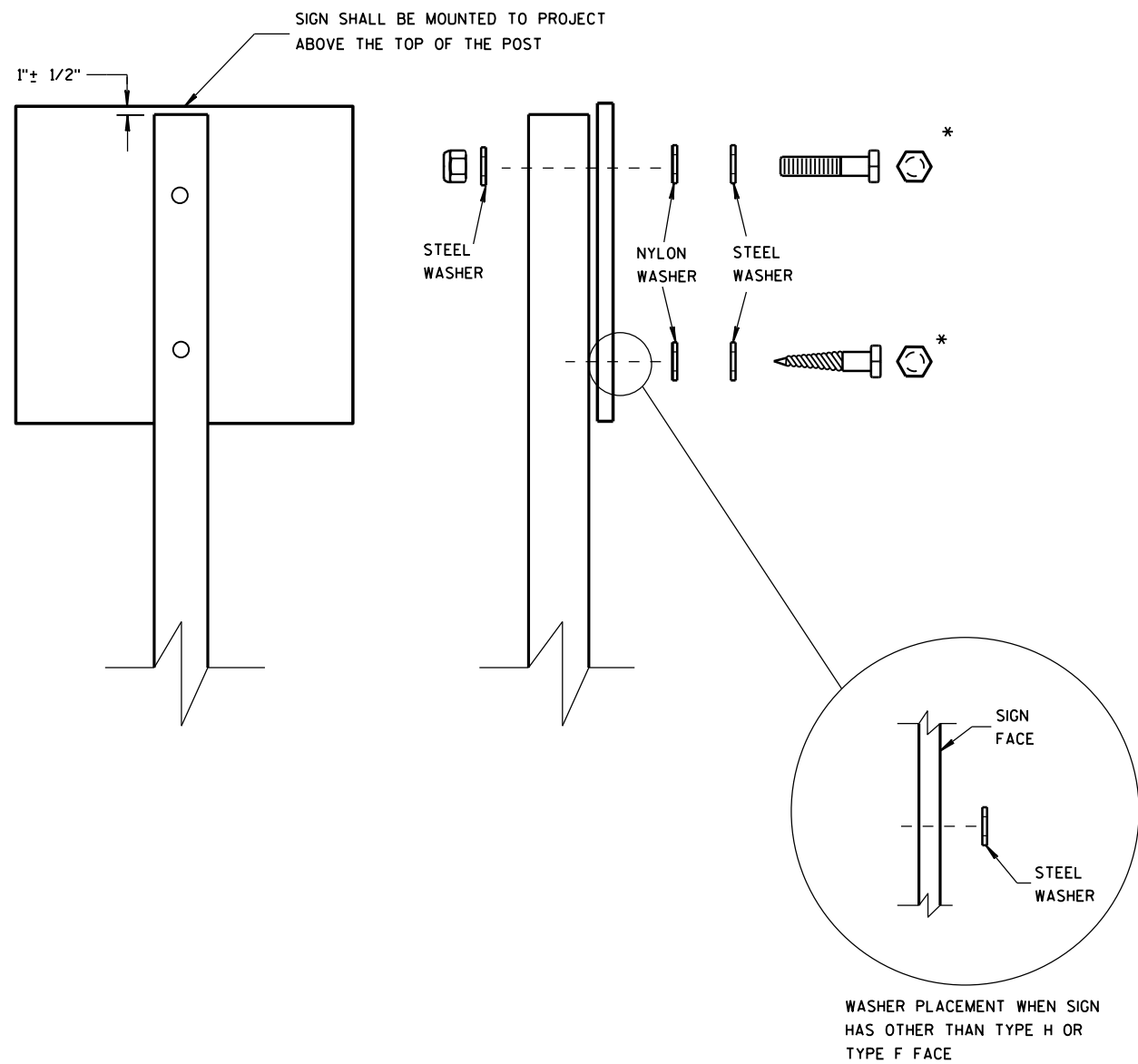
SEE NOTE ③

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.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

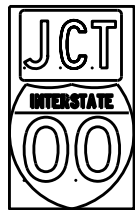
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

- 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

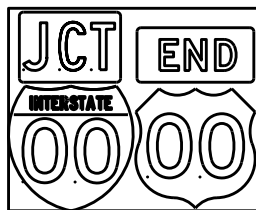
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGINEER
FHWA	

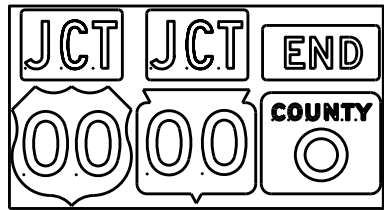
TYPICAL ASSEMBLIES



J1-1



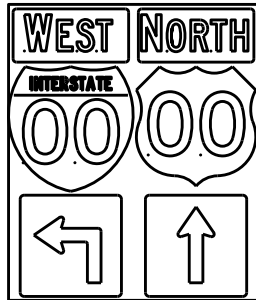
J1-2



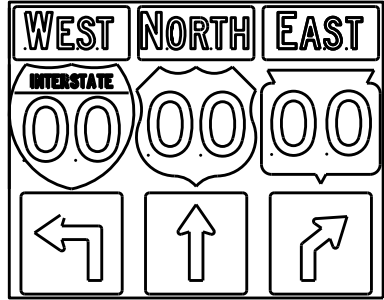
J1-3



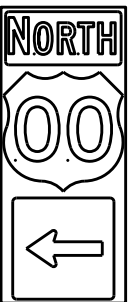
J2-1



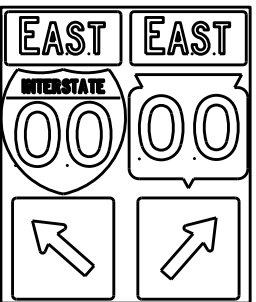
J2-2



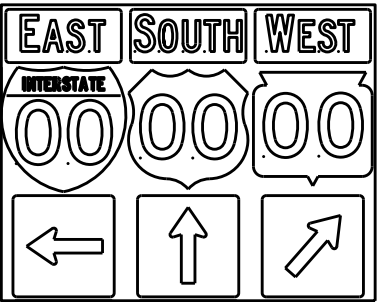
J2-3



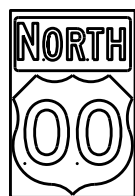
J3-1



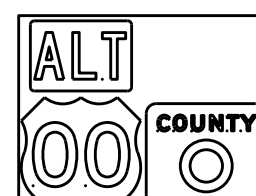
J3-2



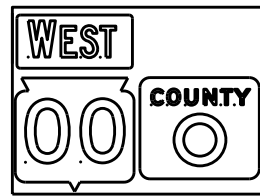
J3-3



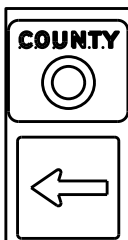
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

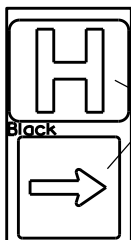


J22-1



JV

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

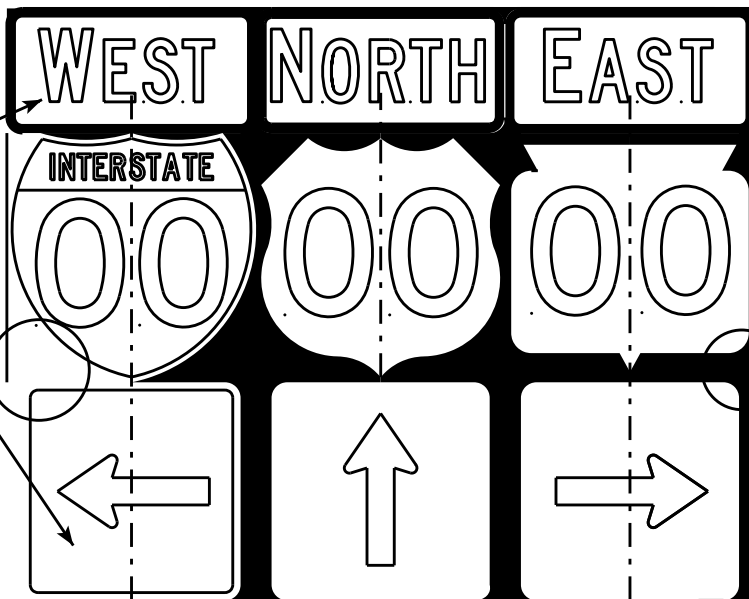
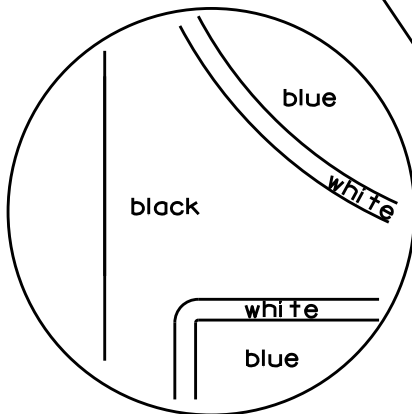


JH-1

Blue Background

Black

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

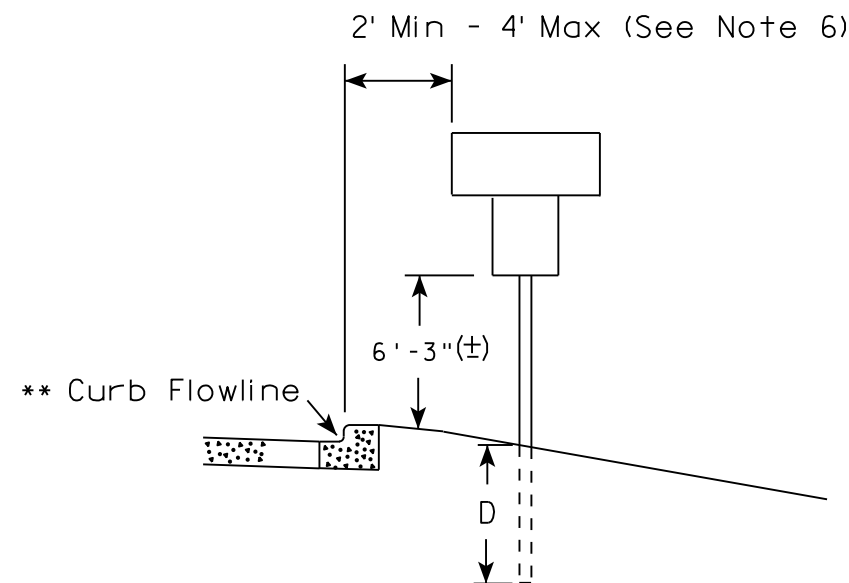
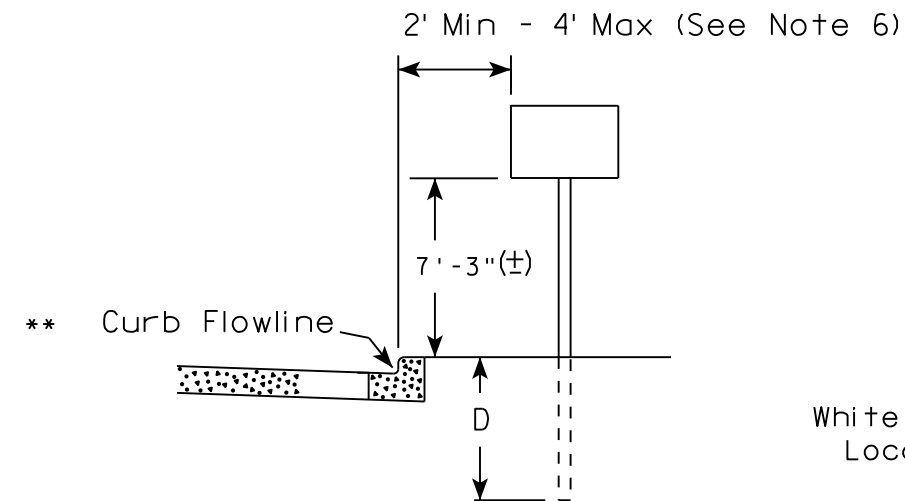
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

NOTES

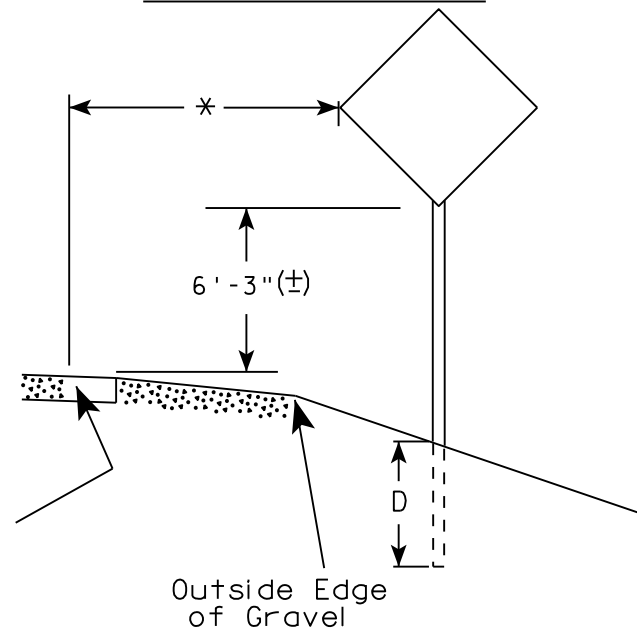
1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. 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 inches (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.

URBAN AREA

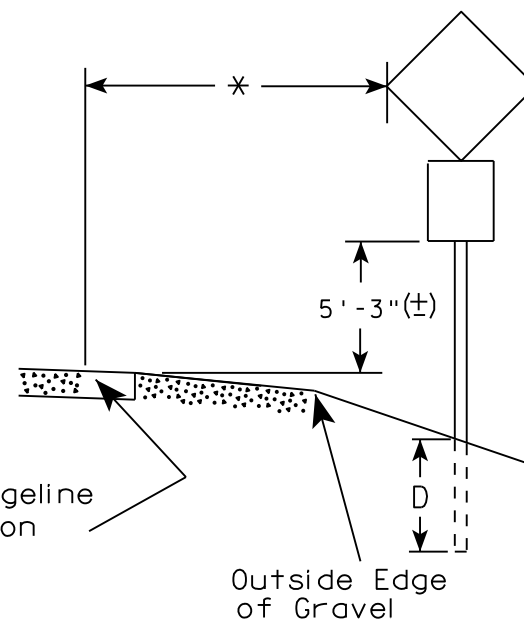


White Edgeline
Location

RURAL AREA (See Note 2)



White Edgeline
Location



Outside Edge
of Gravel

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 directed 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" (±).

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

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

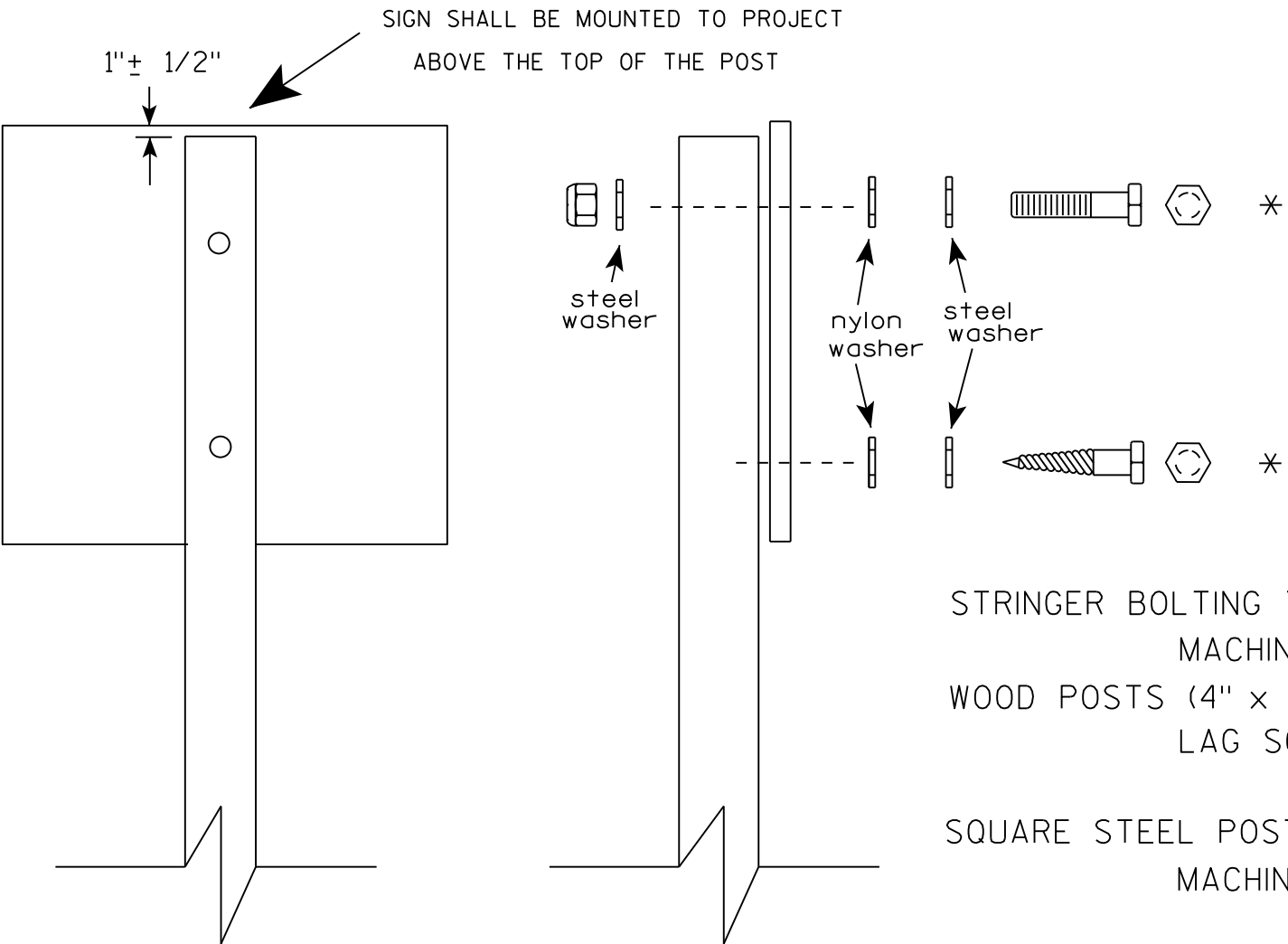
PROJECT NO: 7275-00-70

HWY: CTH I

COUNTY: TREMPEALEAU

SHEET NO:

E



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

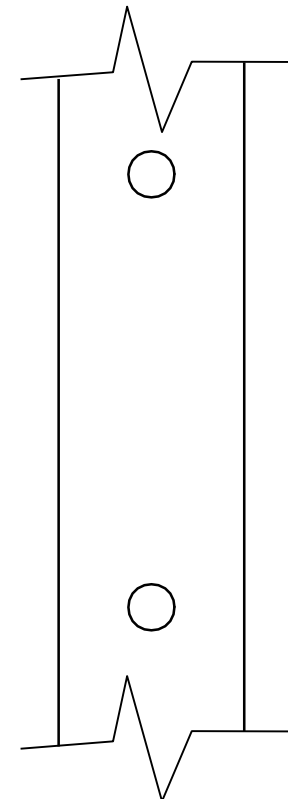
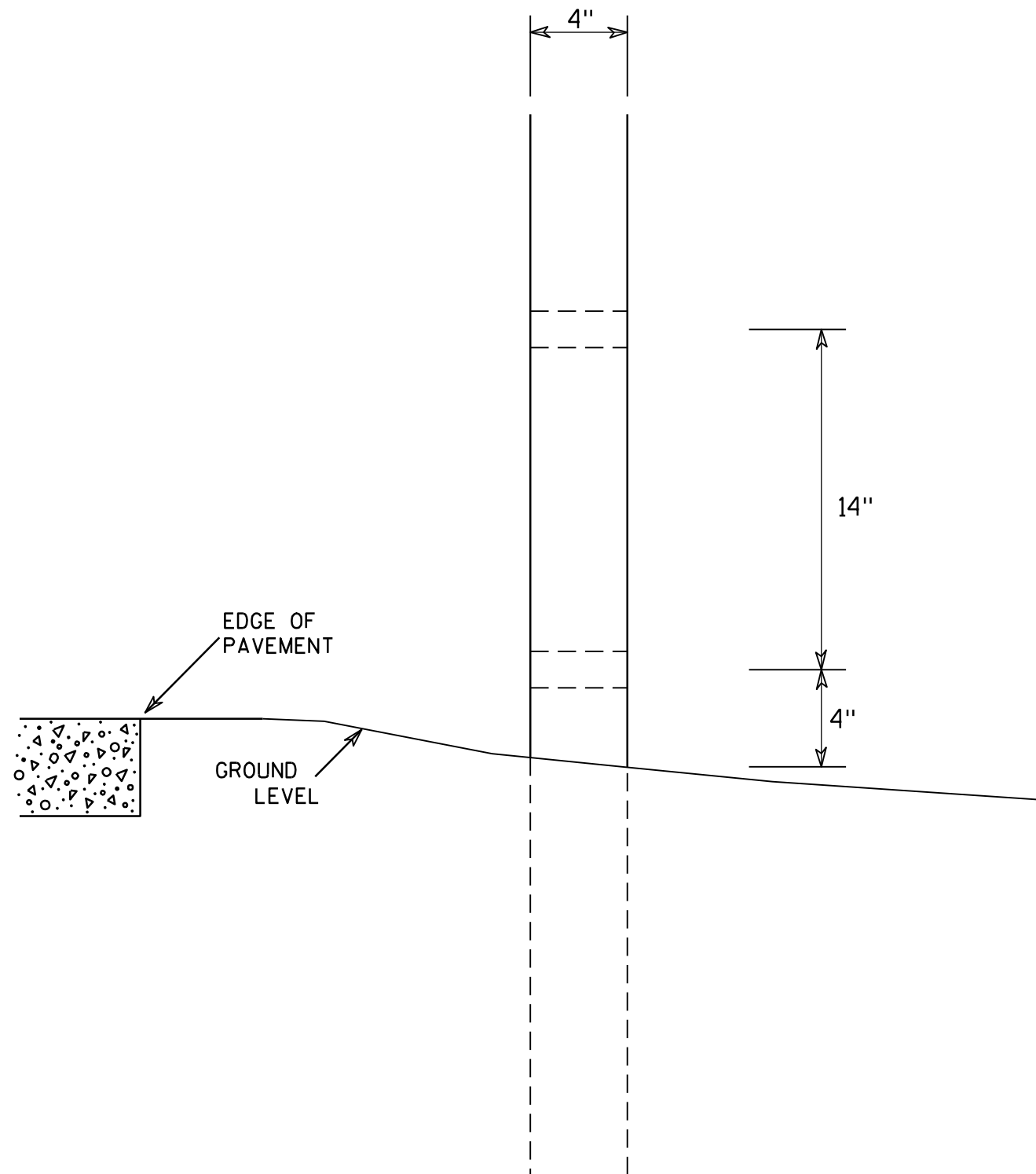
- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 8/11/16	PLATE NO. A4-8.8



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO: 7275-00-70

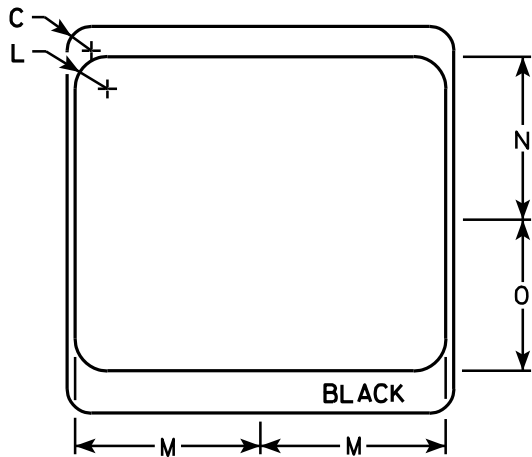
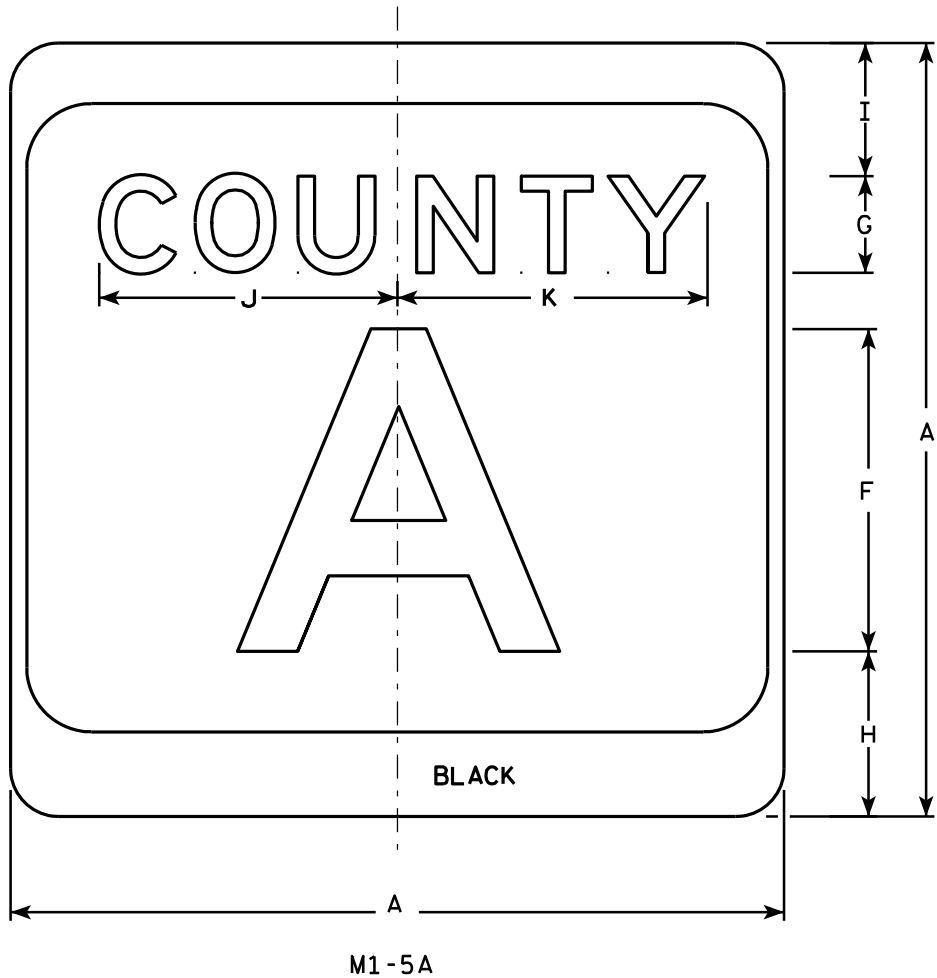
HWY: CTH I

COUNTY: TREMPEALEAU

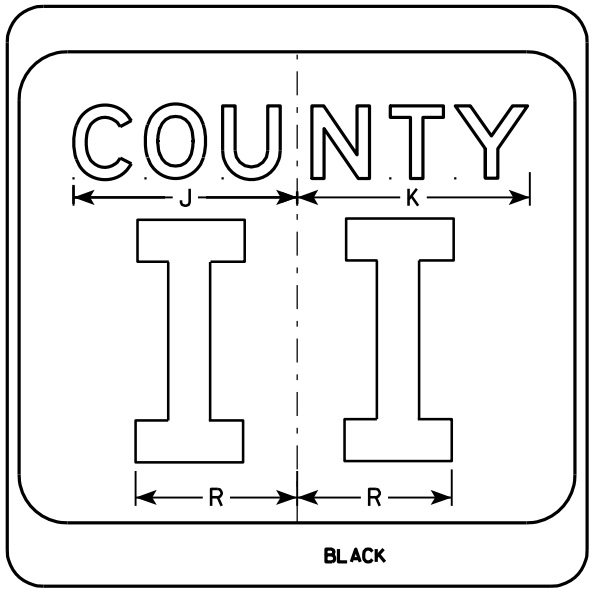
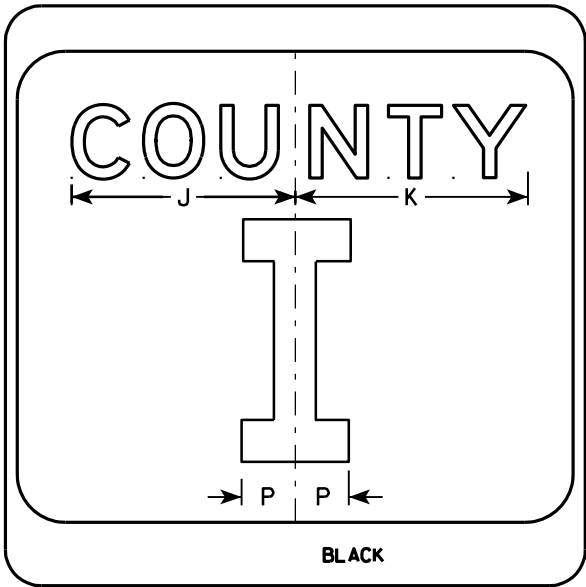
SHEET NO:

E

7



- NOTES**
- Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 - Color:
Background - White & Black - See Note 7
Message - Black
 - Message Series - see Note 5
 - 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.
 - 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.
 - Substitute appropriate letters & optically center to achieve proper balance.
 - 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

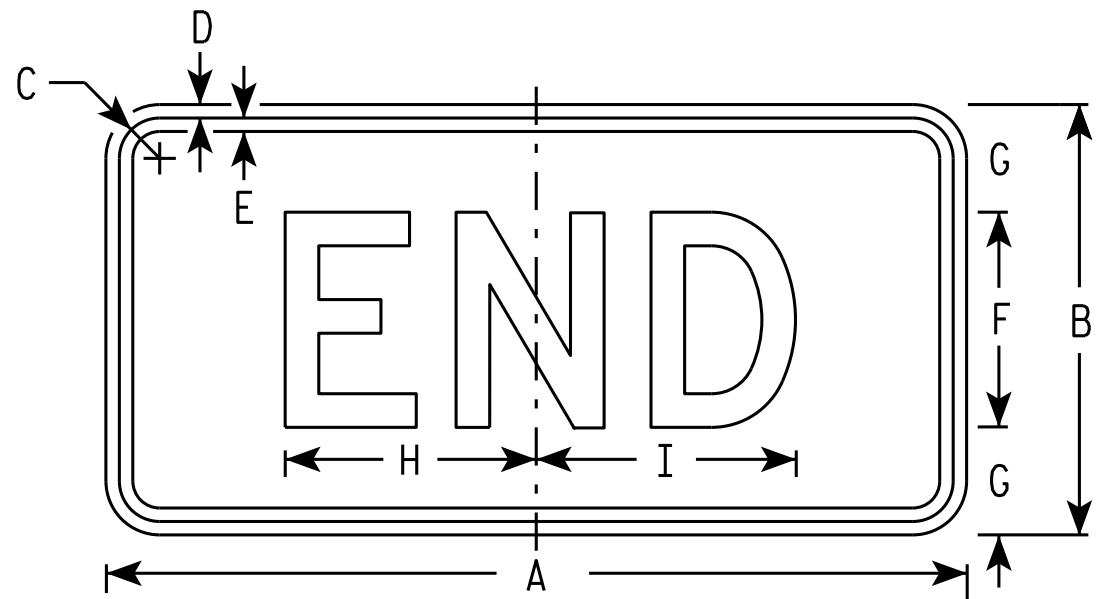
CTH MARKER

M1-5A FOR ASSEMBLIES

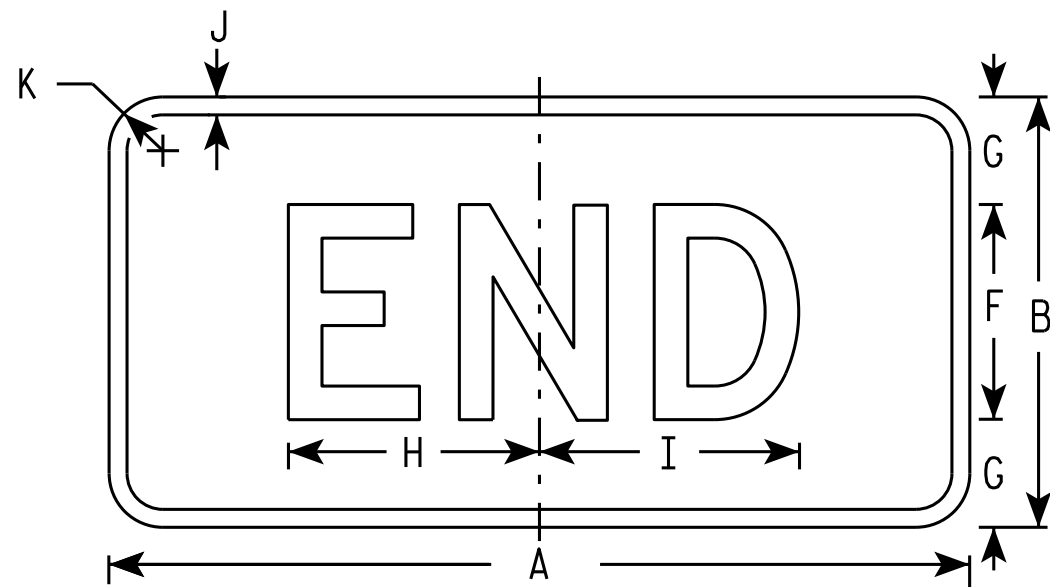
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

- Sign is Type II - Type H
- Color:
Background - See note 5
Message - See note 5
- Message Series - D
- 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.
- M4-6 Background - White
Message - Black
MB4-6 Background - Blue
Message - White
MK4-6 Background - Green
Message - White
MM4-6 Background - White
Message - Green
MN4-6 Background - Brown
Message - White
MP4-6 Background - White
Message - Blue
MR4-6 Background - Brown
Message - Yellow

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																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

PROJECT NO: 7275-00-70

HWY: CTH I

COUNTY: TREMPEALEAU

SHEET NO:

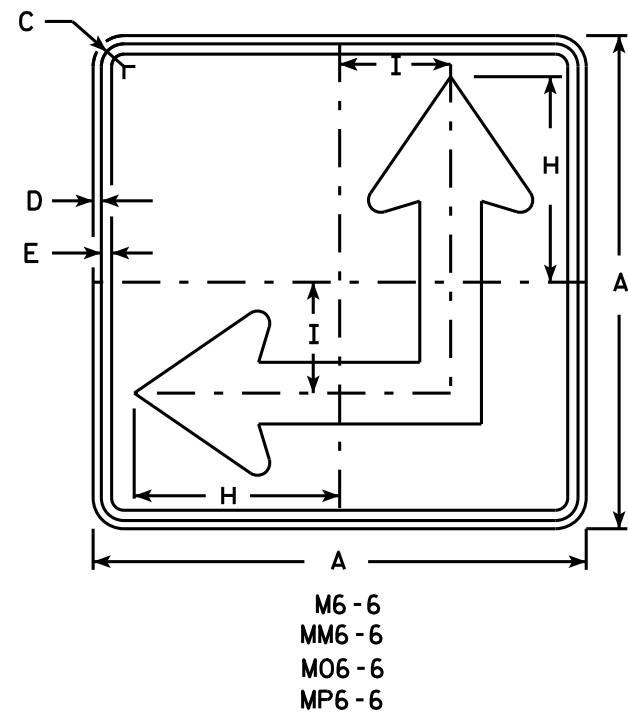
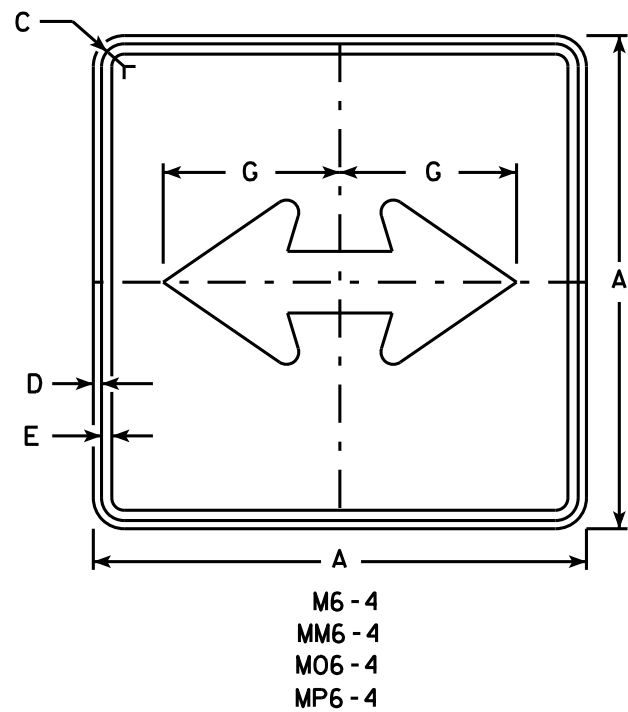
E

STANDARD SIGN
M4-6

WISCONSIN DEPT OF TRANSPORTATION

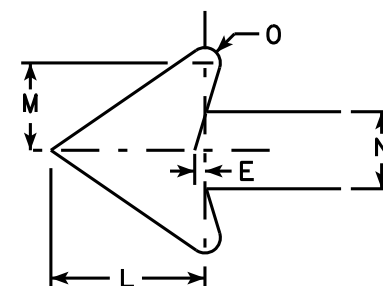
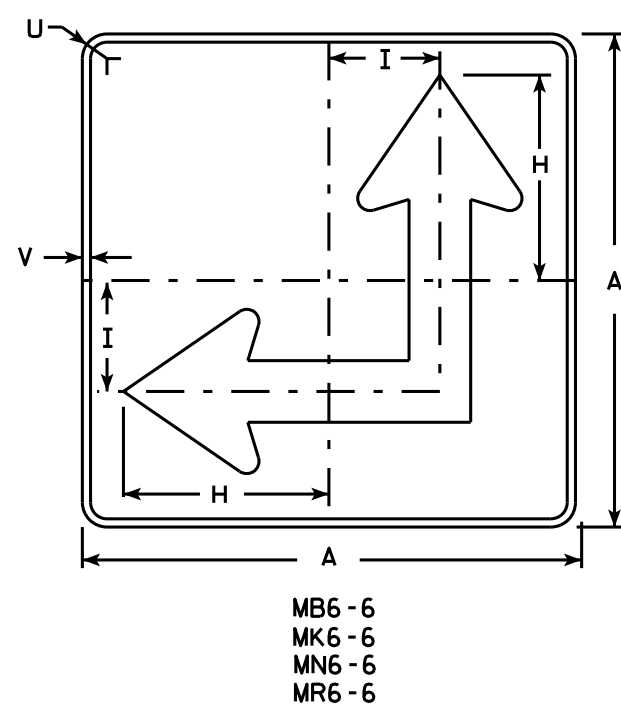
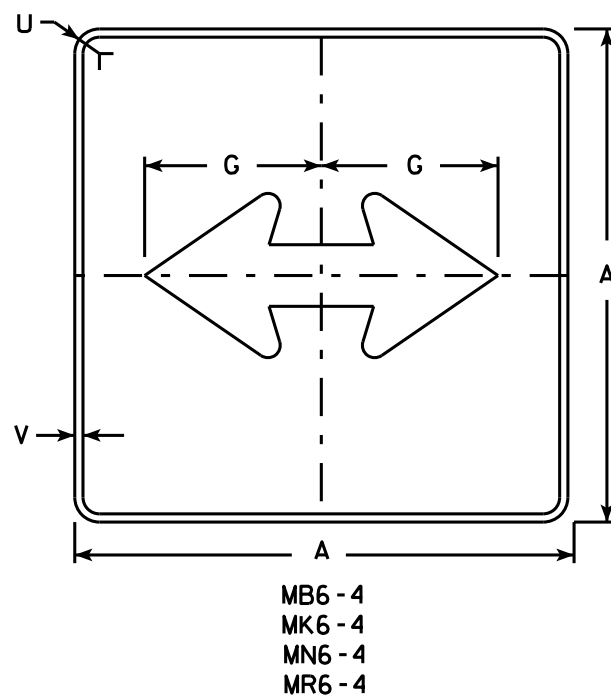
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M4-7.9



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
M06-4 and M06-6 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.



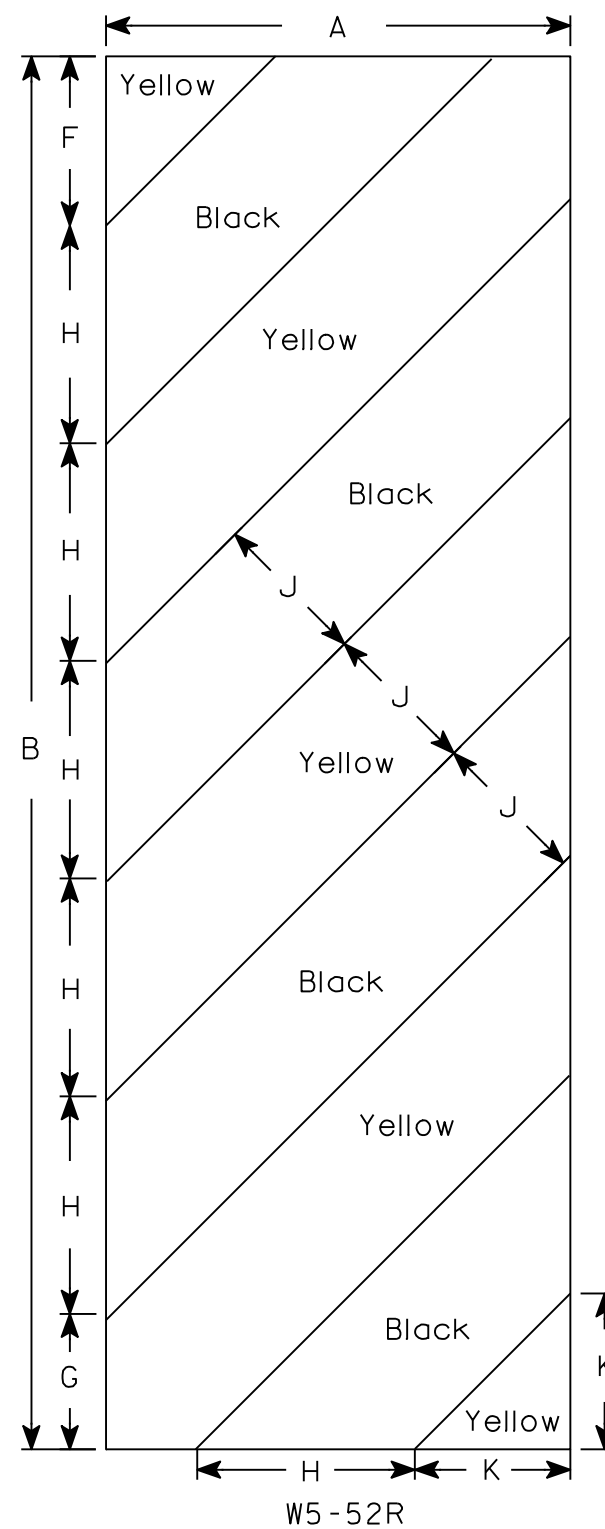
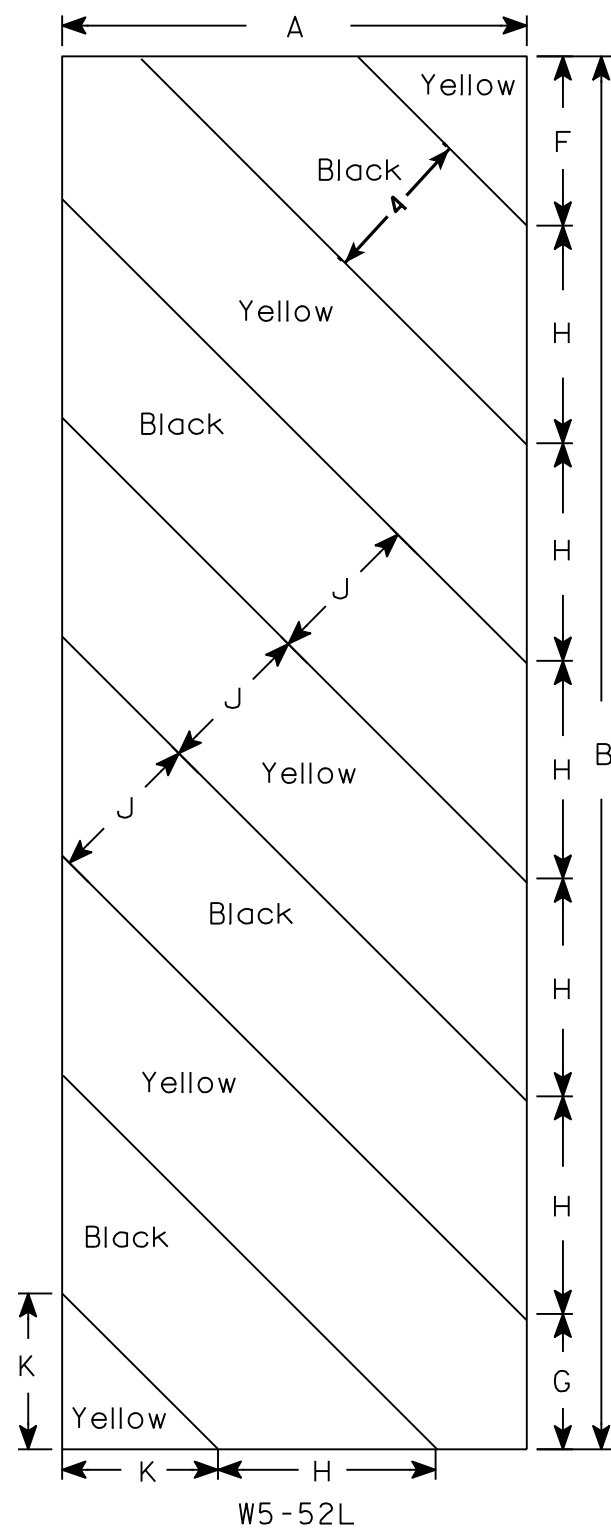
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 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 NO. M6-4.10



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.

[illegible]

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: 7275-00-70

HWY: CTH I

COUNTY: TREMPEALEAU

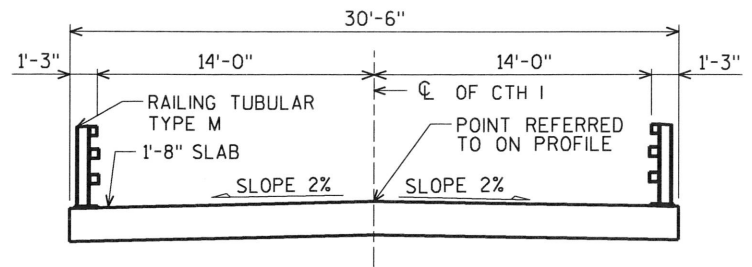
SHEET NO:

E

\$PRNAME\$ U:\42-1101.00 - Trempealeau Co. CTH 1 over Big Creek+Structures+Final+421101.gp final.dgn

STATE PROJECT NUMBER

7275-00-70



TYPICAL SECTION THRU BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.14
OPERATING RATING FACTOR: 1.48
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

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

MATERIAL PROPERTIES:

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

HYDRAULIC DATA:

100 YEAR FREQUENCY
 Q_{100} = 1,450 c.f.s.
VEL. = 7.6 f.p.s.
HW₁₀₀ = EL. 894.1
BRIDGE = 1,213 c.f.s.
OVERFLOW = 237 c.f.s.
2 YEAR FREQUENCY
 Q_2 = 420 c.f.s.
VEL. = 8.7 f.p.s.
HW₂ = EL. 890.1
FREQUENCY OF OVERTOPPING
 Q_5 = 930 c.f.s.
WATR SURFACE EL. = EL. 893.3
FREQUENCY = 15 YEARS

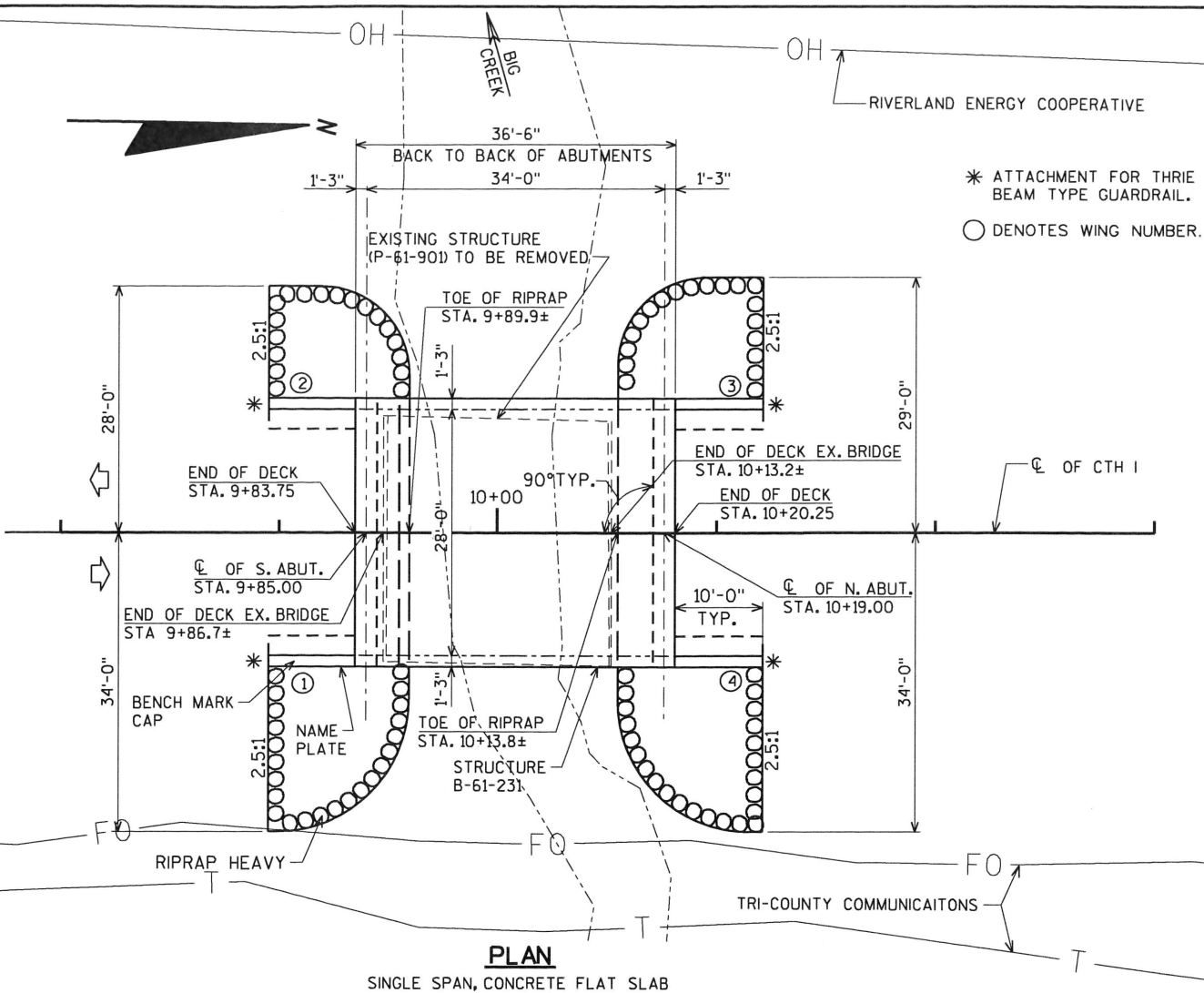
FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) WITH A REQUIRED DRIVING RESISTANCE OF 130 TONS ± PER PILE. ESTIMATED LENGTH OF 40'-0".

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

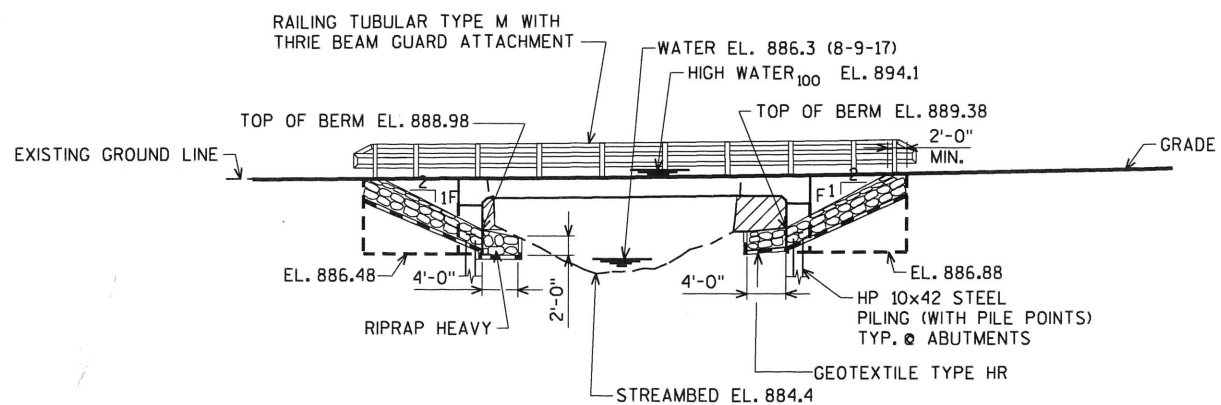
TRAFFIC DATA:

A.A.D.T. = 200 (2019)
A.A.D.T. = 270 (2039)
R.D.S. = 35 M.P.H.



PLAN

SINGLE SPAN, CONCRETE FLAT SLAB



ELEVATION

COST OF EXCAVATION IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-61-231".

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. SOUTH ABUTMENT DETAILS AND BILL OF BARS
7. NORTH ABUTMENT
8. NORTH ABUTMENT DETAILS
9. NORTH ABUTMENT DETAILS AND BILL OF BARS
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE DETAILS
12. RAILING TUBULAR TYPE M

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

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



NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
AYRES ASSOCIATES			
3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> SDR 08/30/18 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-61-231			
CTH 1 OVER BIG CREEK			
COUNTY	TREMPEALEAU	TOWN/CITY/VILLAGE	ALBION
DESIGN SPEC.			
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	ZSS	DESIGN CK'D.	AEB
DRAWN BY	JLB	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 12

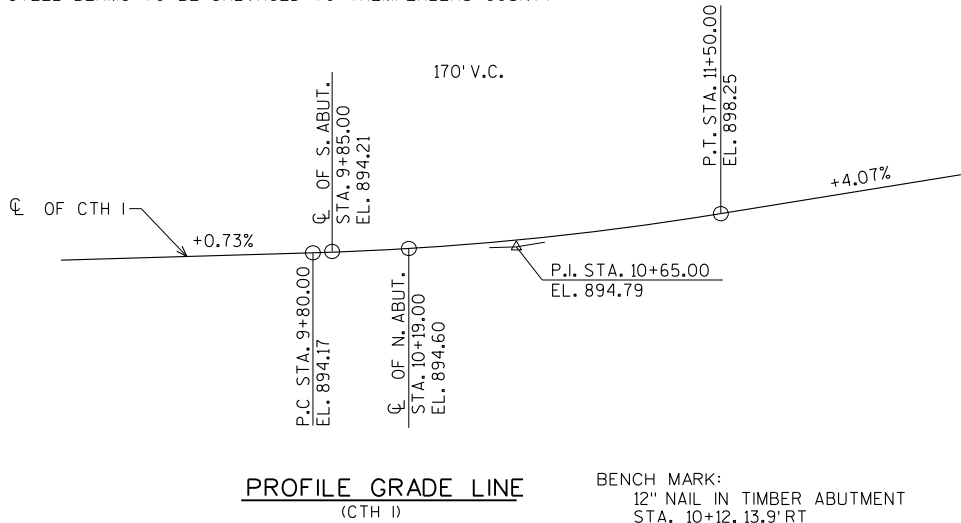
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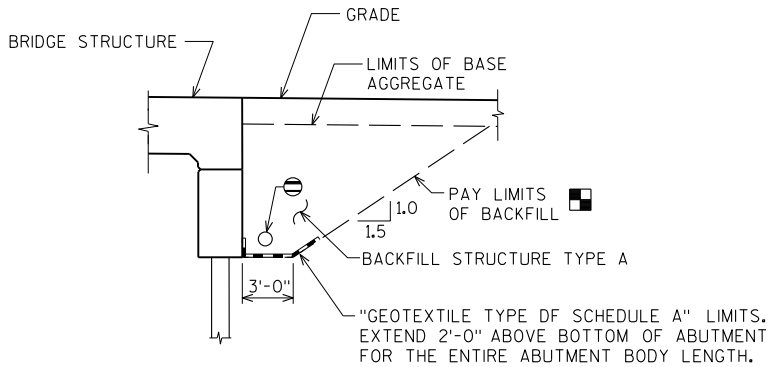
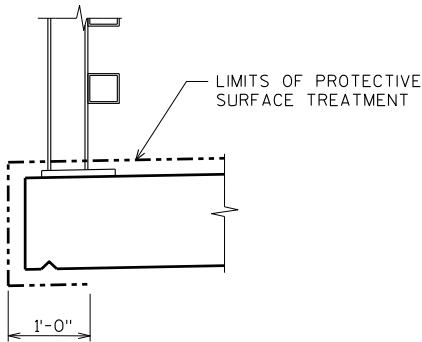
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL	CATEGORY 20	CATEGORY 30
① 203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	1	1	-----
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-61-231	LS	-----	-----	-----	1	1	-----
210.1500	BACKFILL STRUCTURE TYPE A	TON	120	120	-----	240	240	-----
502.0100	CONCRETE MASONRY BRIDGES	CY	30	30	74	134	127	7
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	145	145	145	-----
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,890	1,890	-----	3,780	3,530	250
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,350	1,350	12,580	15,280	14,450	830
513.4061	RAILING TUBULAR TYPE M B-61-231	LF	22	22	73	117	117	-----
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	-----	12	12	-----
550.0500	PILE POINTS	EACH	5	5	-----	10	10	-----
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	200	200	-----	400	400	-----
606.0300	RIPRAP HEAVY	CY	65	70	-----	135	135	-----
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	71	71	-----	142	142	-----
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	45	45	-----	90	90	-----
645.0120	GEOTEXTILE TYPE HR	SY	125	130	-----	255	255	-----
	NON-BID ITEMS							
	FILLER	SIZE	-----	-----	-----	1/2" & 3/4"	-----	-----

① EXISTING STEEL BEAMS TO BE SALVAGED TO TREMPEALEAU COUNTY

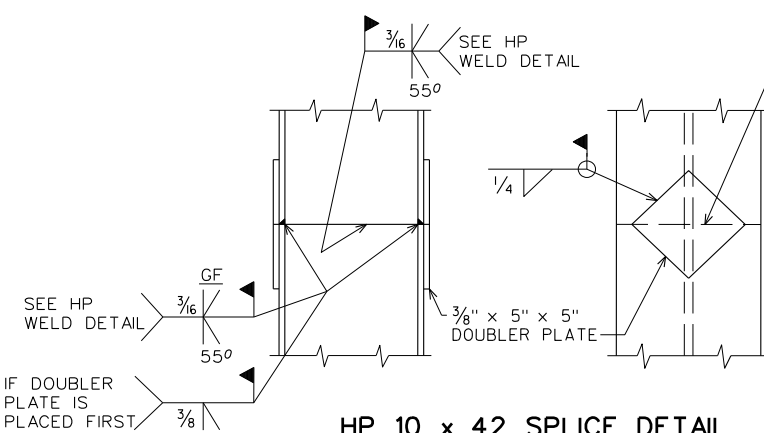


PROTECTIVE SURFACE TREATMENT DETAIL

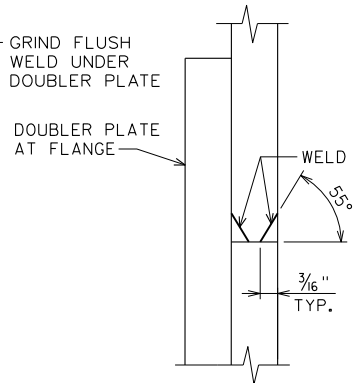


BACKFILL STRUCTURE LIMITS

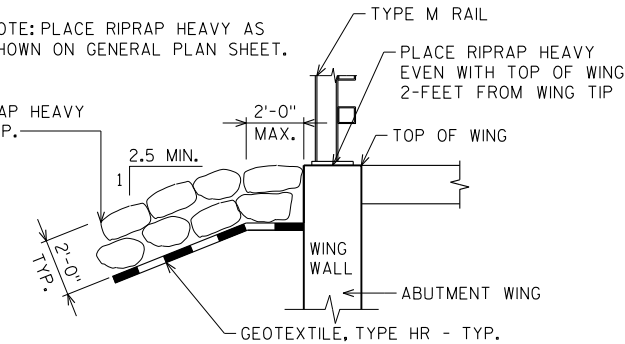
- BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 5.



HP 10 x 42 SPLICE DETAIL



HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR



TYPICAL FILL SECTION AT WING TIPS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.
THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY, AND GEOTEXTILE TYPE HR AS SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER.
THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-61-231" SHALL BE THE EXISTING GROUNDLINE.
THE EXISTING STRUCTURE, P-61-901, TO BE REMOVED, IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE ON VERTICAL TIMBER ABUTMENTS, 26.5 FT LONG WITH A 23.0 FT CLEAR ROADWAY WIDTH.
AT THE BACK FACE OF ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.
BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-61-231			
	DRAWN BY	JLB	PLANS CK'D. ZSS
QUANTITIES AND NOTES		SHEET 2 OF 12	

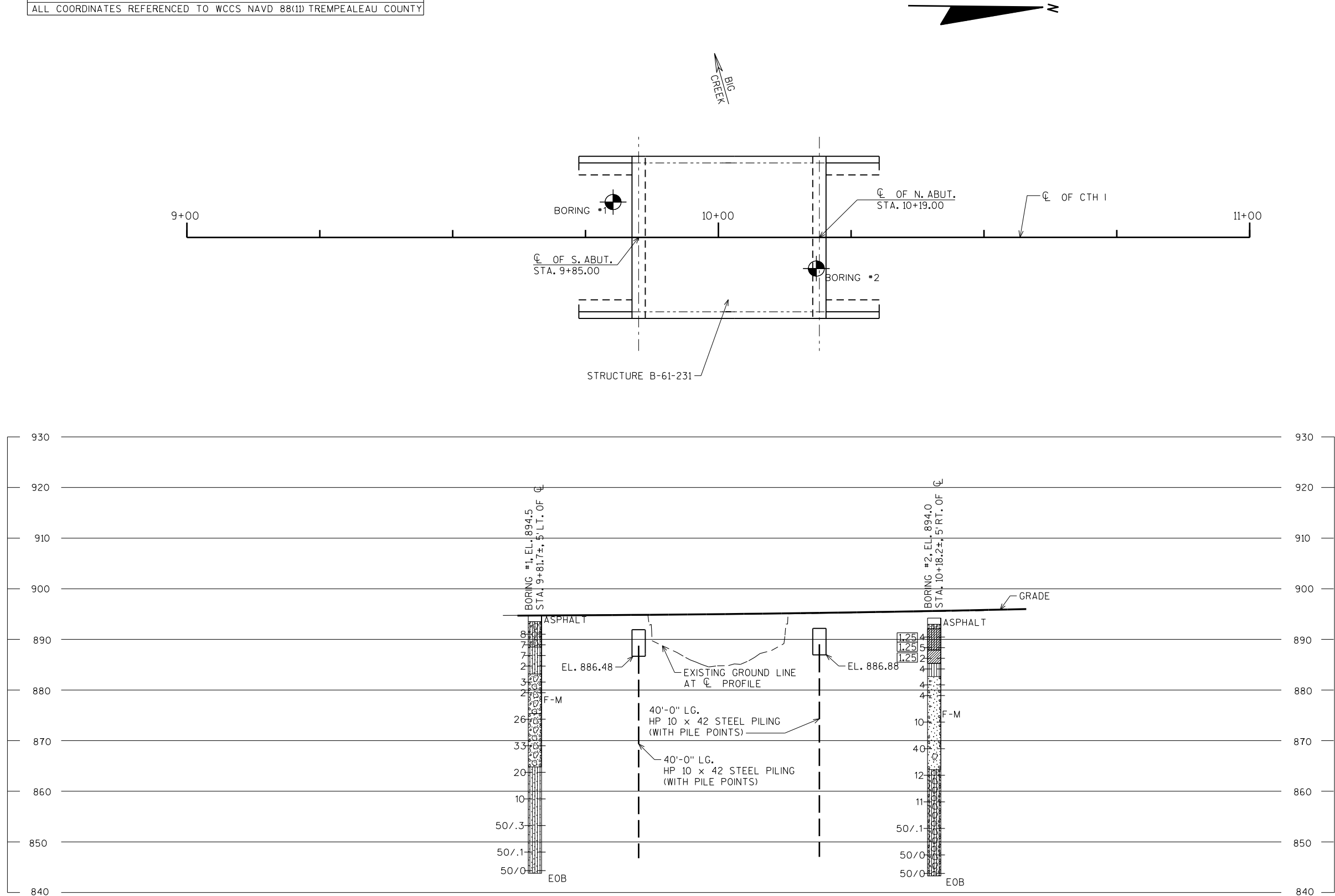
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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\$PRNAME\$
U:\42-1101.00 - Trempealeau Co. CTH I over Big Creek\Structures\Final\421101 soils final.dgn

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	11/15/2017	520613.35	824402.37
2	11/15/2017	520649.67	824412.37
BORINGS COMPLETED BY: GEOTECHNICAL DRILLING CONTRATCORS, LLC			
REPORT COMPLETED BY: RIVER VALLEY TESTING CORP.			
ALL COORDINATES REFERENCED TO WCCS NAVD 88(11) TREMPEALEAU COUNTY			



5/14/2018

PENTABLE:Wisdot_shd.tbl

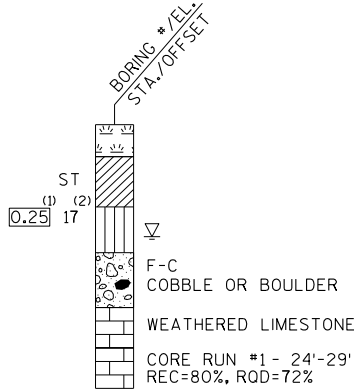
STATE PROJECT NUMBER

7275-00-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

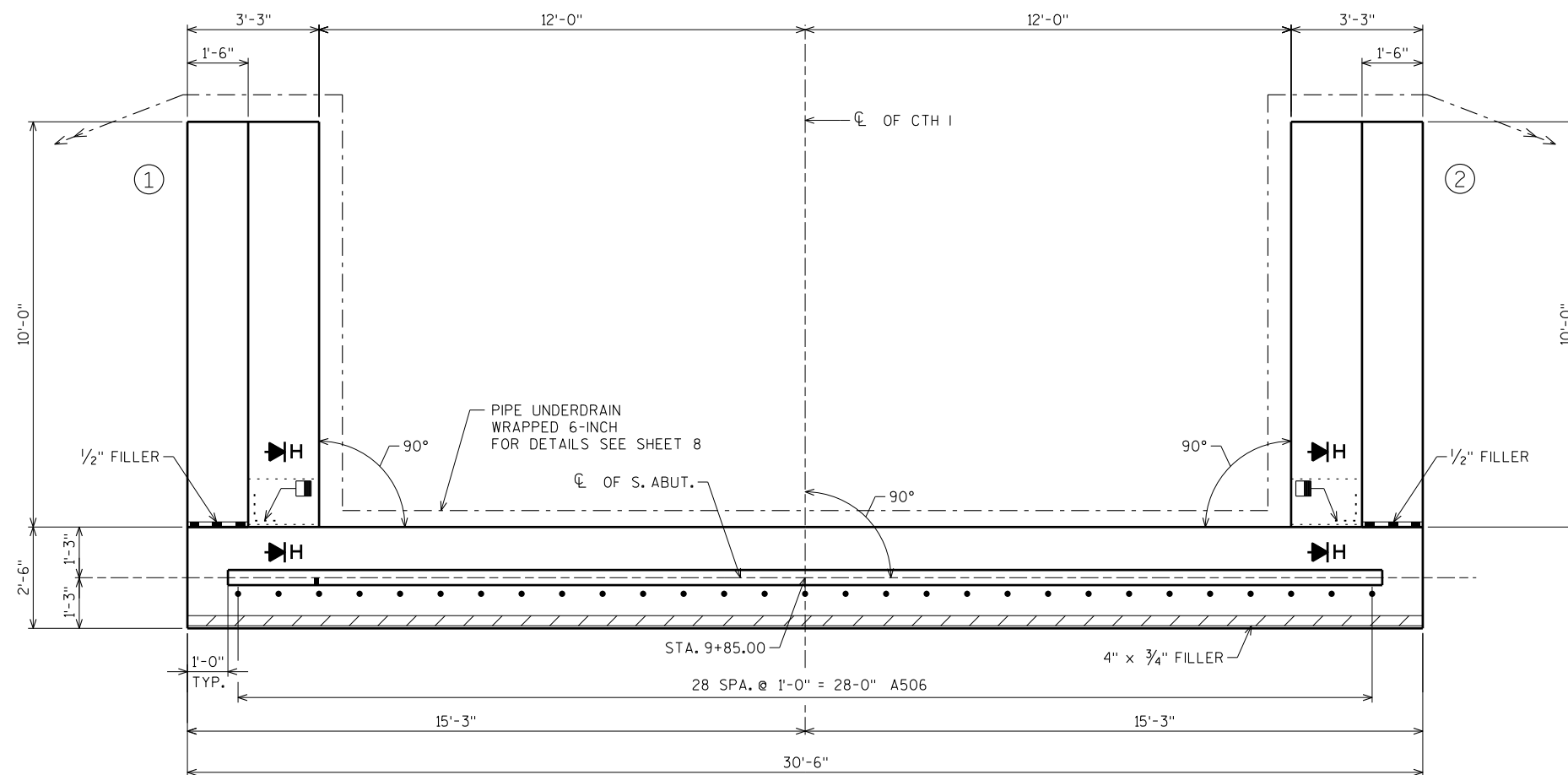
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-61-231			
DRAWN BY		JLB	PLANS CKD. ZSS
SUBSURFACE EXPLORATION		SHEET 3 OF 12	



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

B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE
F.F. DENOTES FRONT FACE

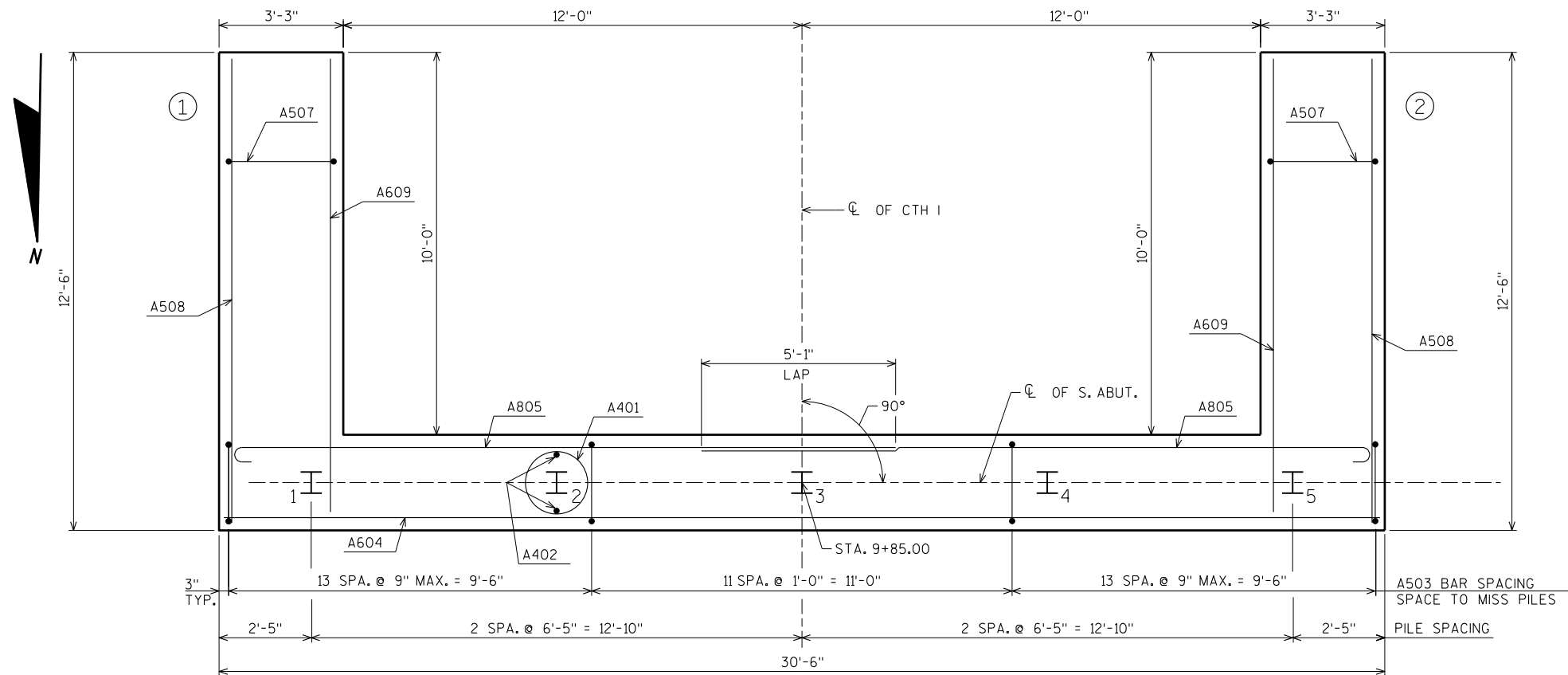
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-61-231			
DRAWN BY		JLB	PLANS CK'D. ZSS
SOUTH ABUTMENT		SHEET 4 OF 12	

\$PRNAME\$
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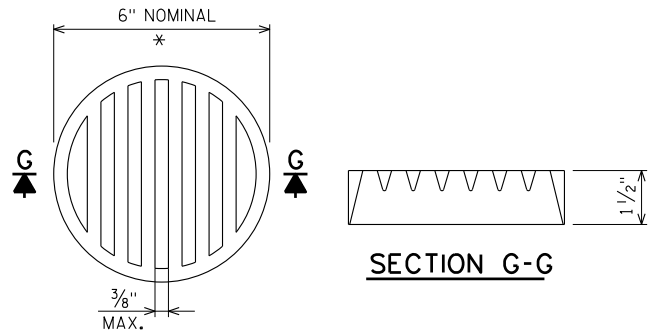
8

STATE PROJECT NUMBER

7275-00-70



PILE LAYOUT



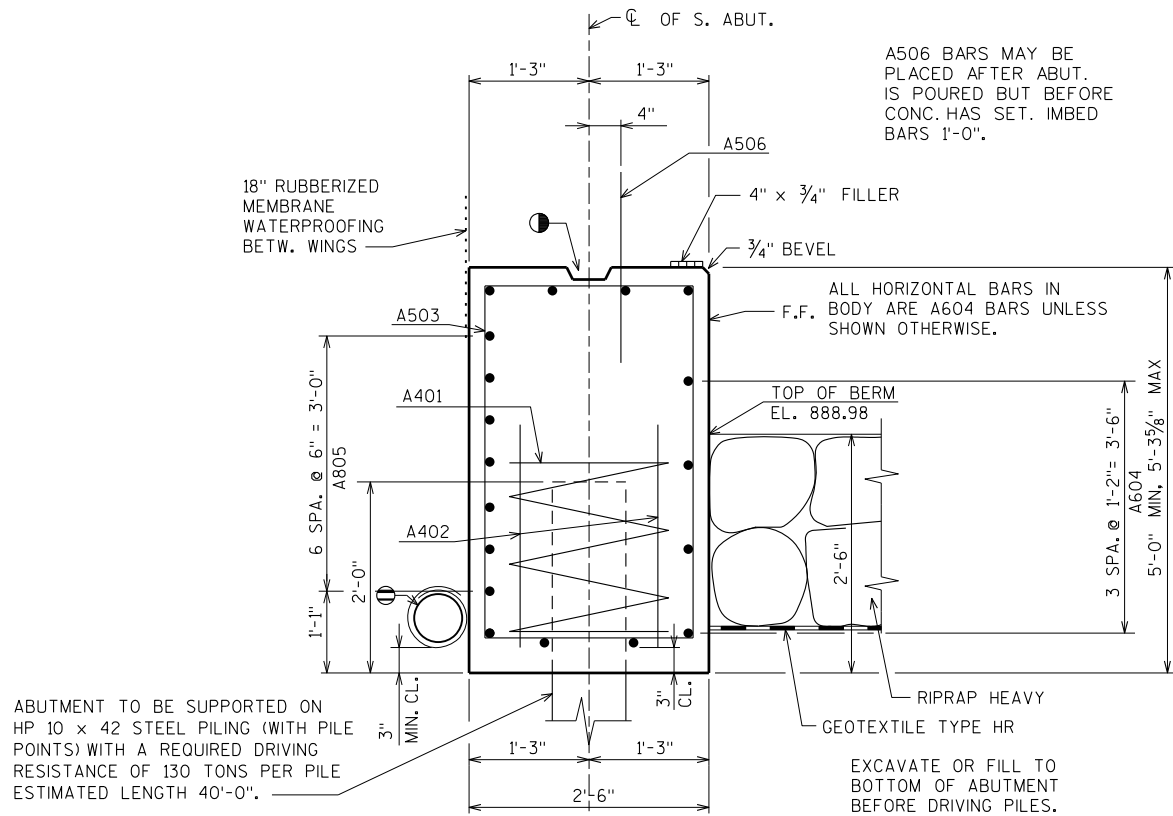
SECTION G-G

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

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

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

RODENT SHIELD DETAIL



SECTION A

SEE SHEET 4 FOR LOCATION OF SECTION A

- PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) WITH A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE ESTIMATED LENGTH 40'-0".

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

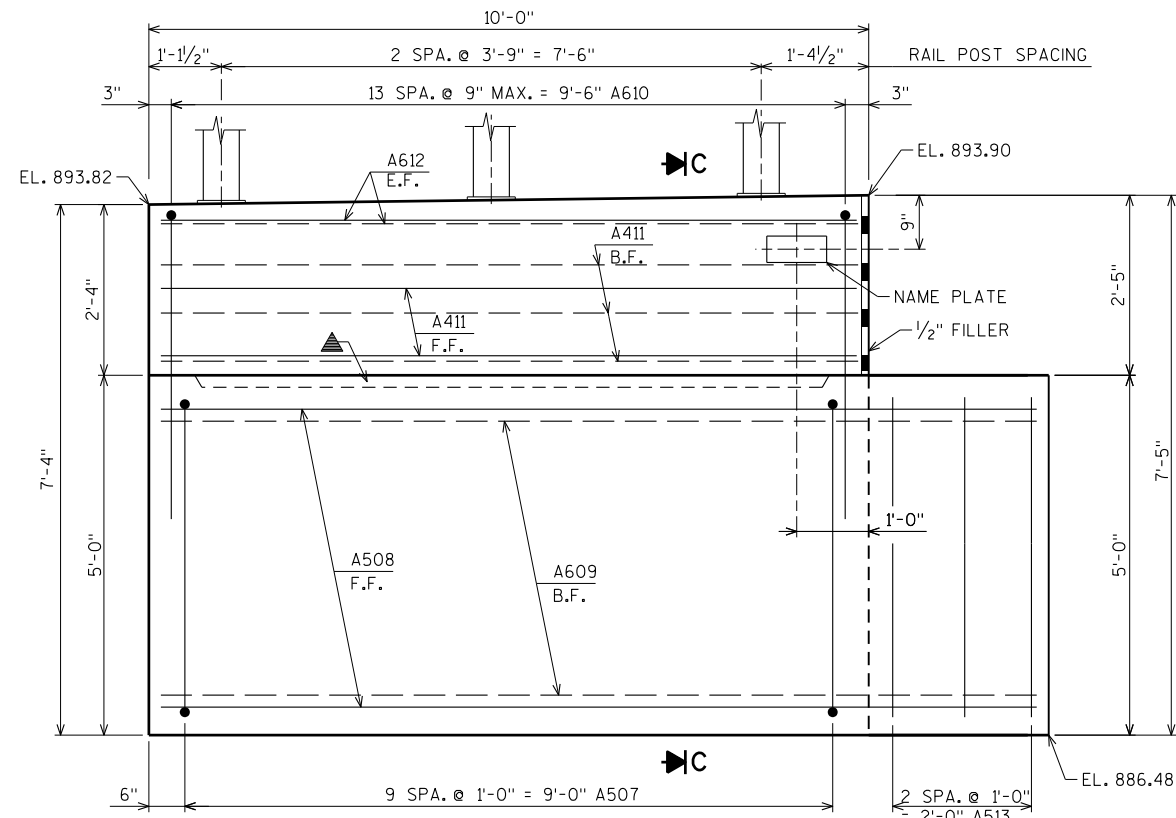
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-61-231			
DRAWN BY JLB		PLANS CK'D. ZSS	
SOUTH ABUTMENT DETAILS		SHEET 5 OF 12	

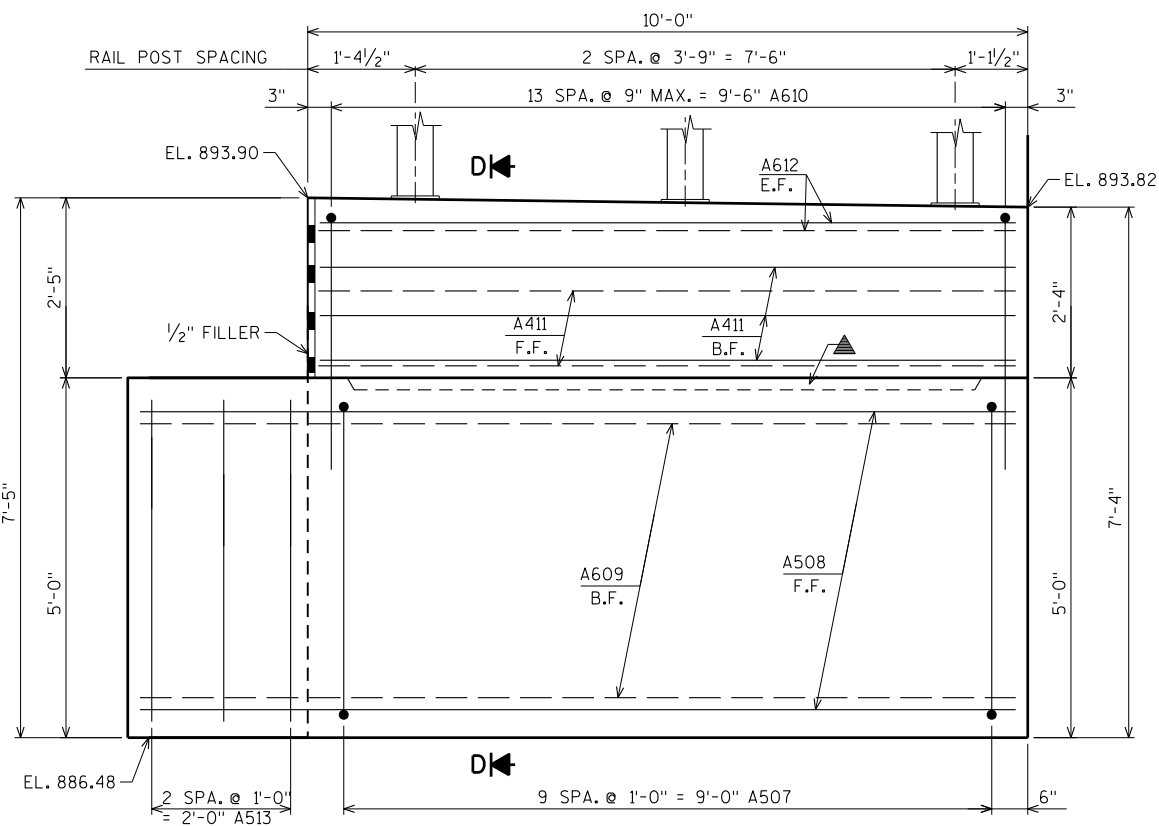
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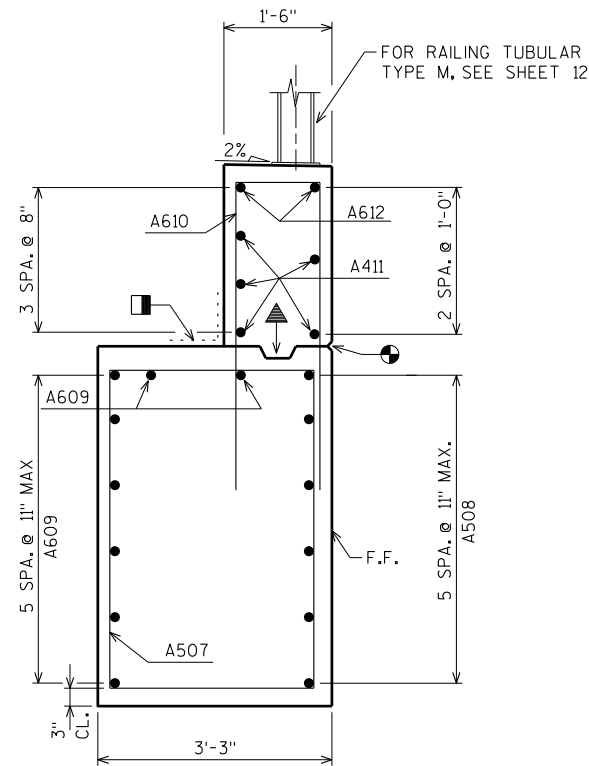
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ELEVATION - WING 1

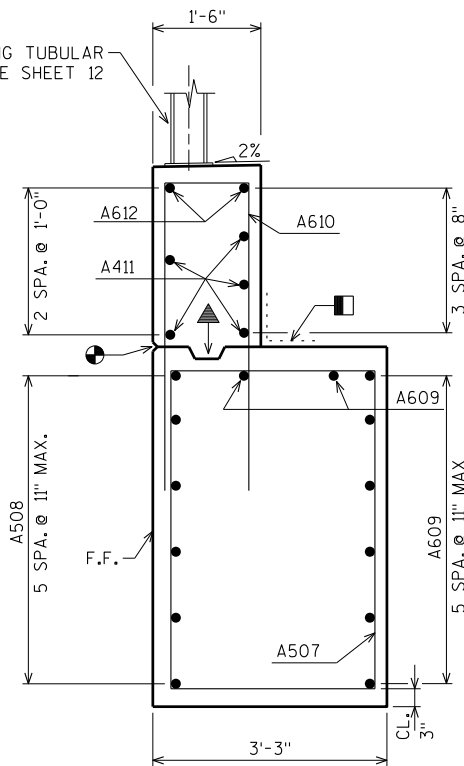


ELEVATION - WING 2



SECTION C

FOR RAILING TUBULAR TYPE M, SEE SHEET 12

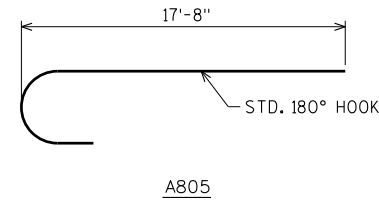
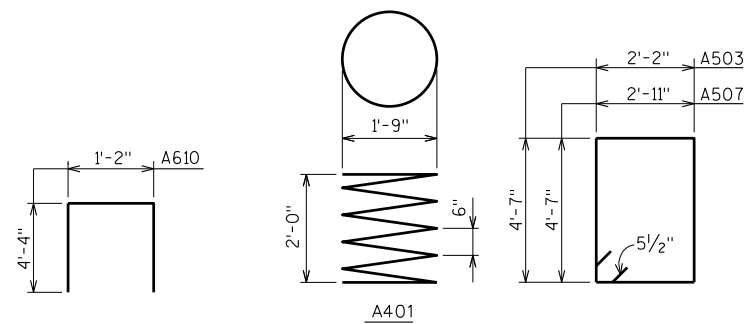


SECTION D

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	1,890# UNCOATED 1,350# COATED
							LOCATION
A401		5	28-0	X			BODY @ PILES
A402		10	2-3				BODY @ PILES
A503		38	14-2	X			BODY VERTS.
A604		11	30-2				BODY HORIZ. E.F.
A805		14	18-7	X			BODY HORIZ. B.F.
A506	X	29	2-0				BODY DOWELS
A507	X	20	15-8	X			WINGS 1 & 2 VERT.
A508	X	12	12-2				WINGS 1 & 2 HORIZ. F.F.
A609	X	16	11-11				WINGS 1 & 2 HORIZ. B.F. AND TOP
A610	X	28	9-6	X			WINGS 1 & 2 VERT.
A411	X	10	9-7				WINGS 1 & 2 HORIZ. E.F.
A612	X	4	9-7				WINGS 1 & 2 HORIZ. TOP
A513		6	4-7				BODY VERT. ENDS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JOINT IS NOT USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

OPT. CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY.

3/4" V-GROOVE ON FRONT FACE ONLY.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE

B.F. DENOTES BACK FACE

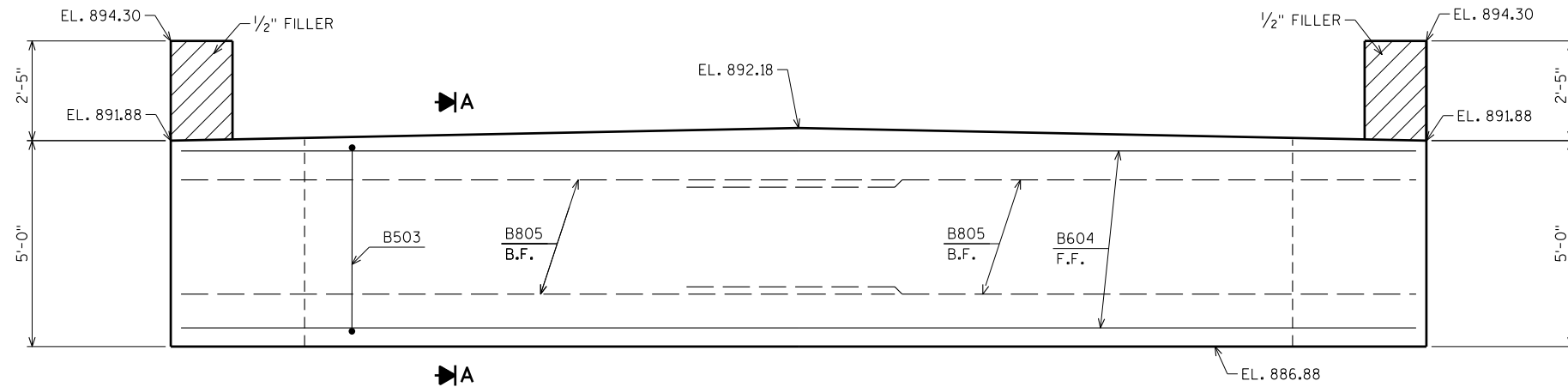
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-61-231			
DRAWN BY JLB		PLANS CK'D. ZSS	
SOUTH ABUTMENT DETAILS AND BILL OF BARS			SHEET 6 OF 12

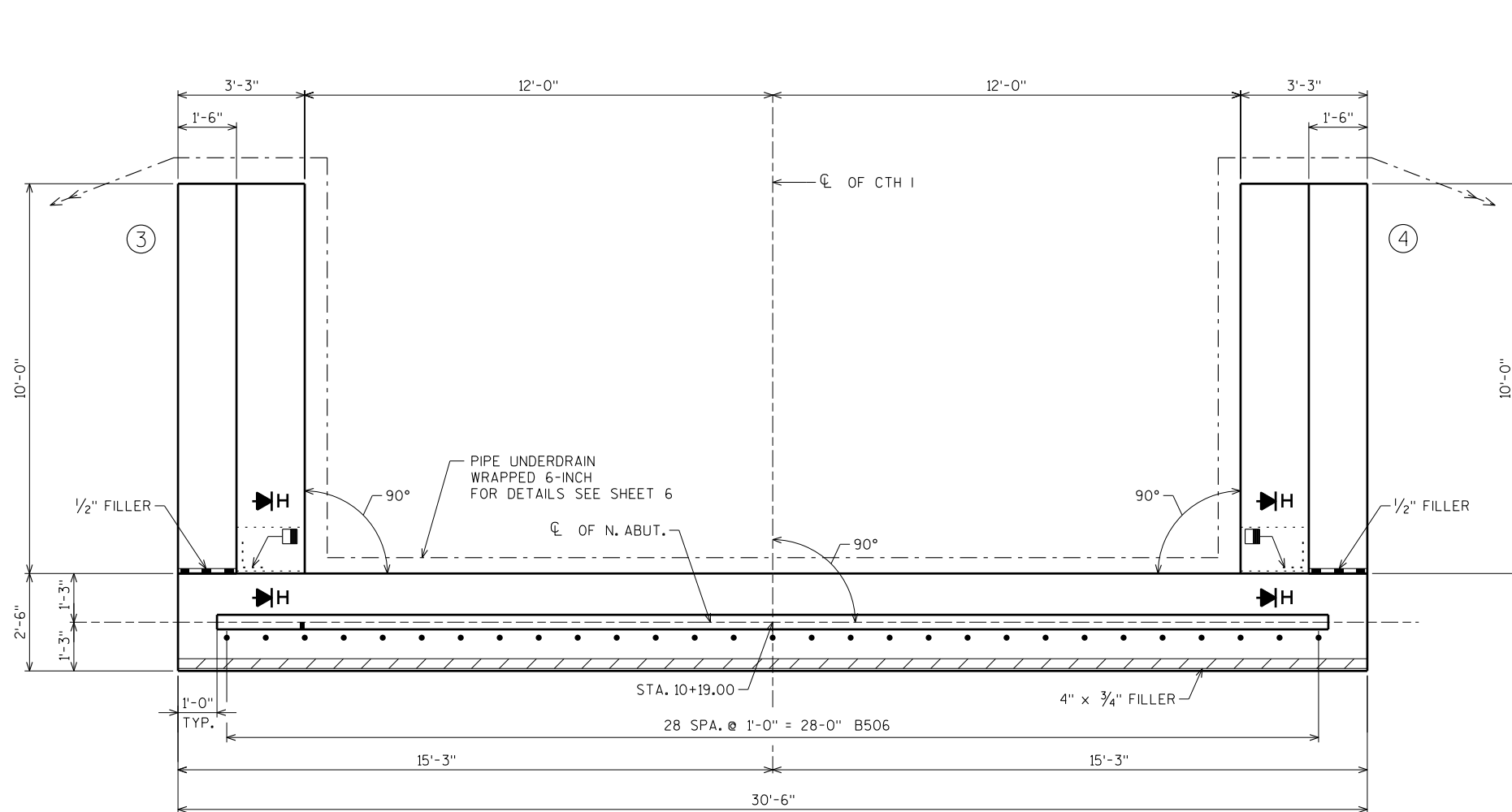
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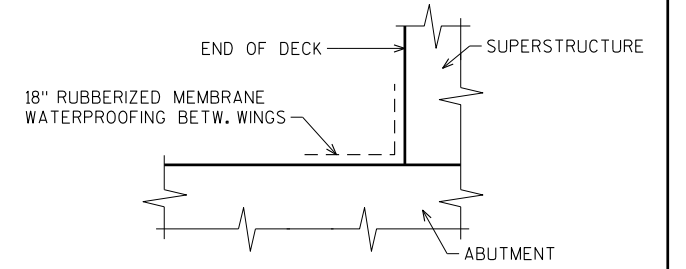
NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF
1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT
SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).



ELEVATION
(LOOKING NORTH)
FOR SECTION A SEE SHEET 8



PLAN



SECTION H

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

B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE
F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-61-231			
DRAWN BY		JLB	PLANS CK'D. ZSS
NORTH ABUTMENT		SHEET 7 OF 12	

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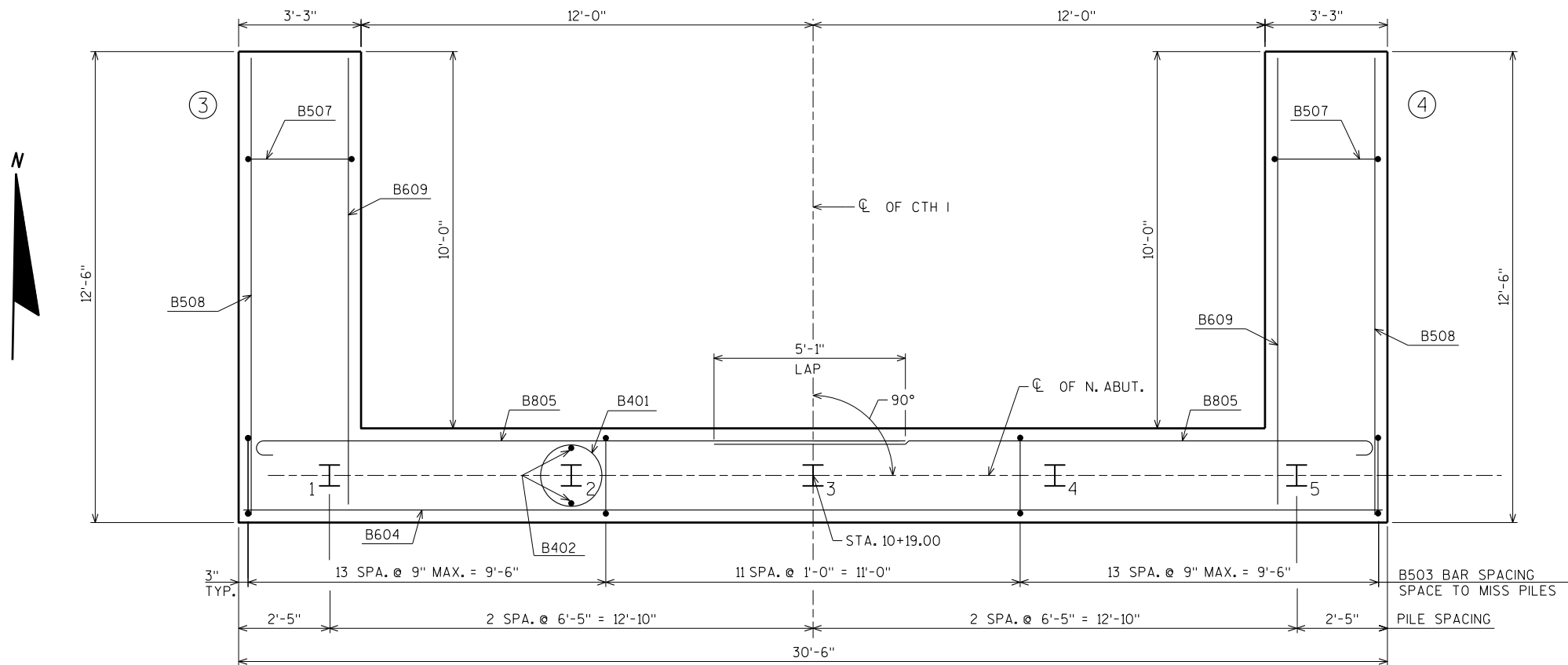
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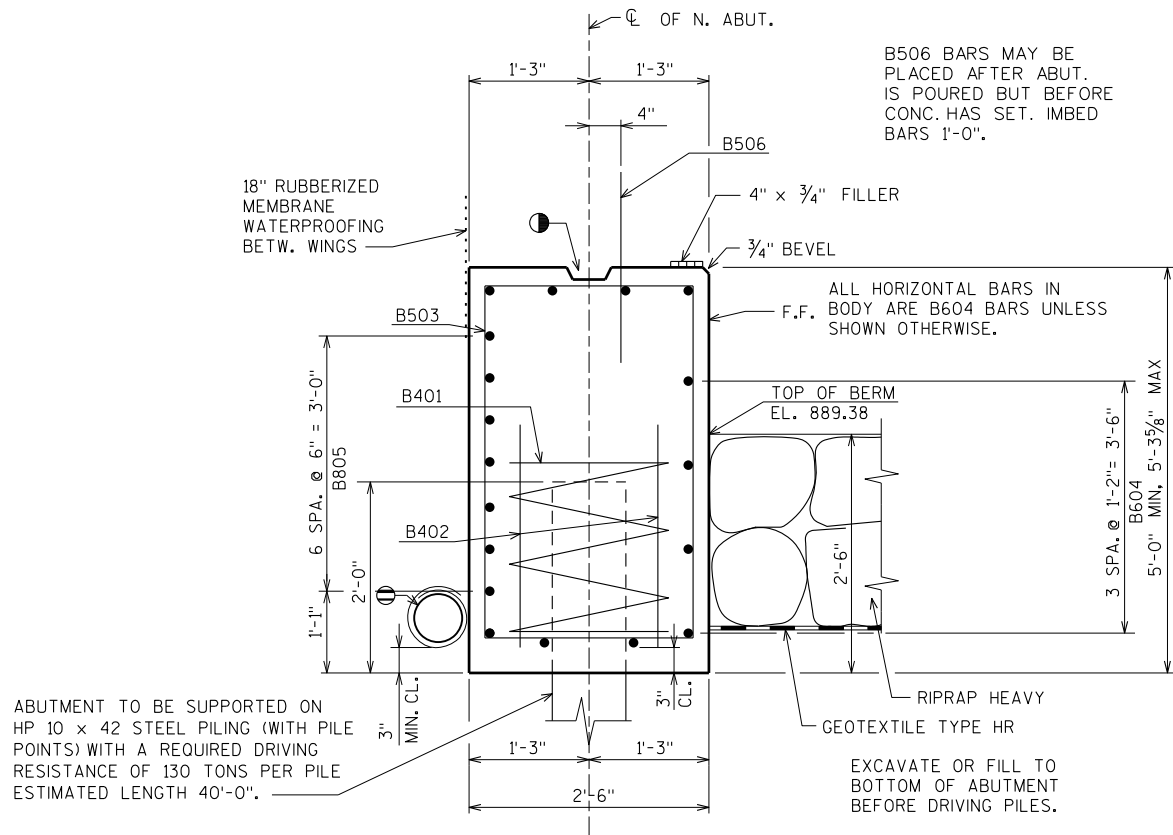
8

STATE PROJECT NUMBER

7275-00-70



PILE LAYOUT



SECTION A

SEE SHEET 7 FOR LOCATION OF SECTION A

- PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

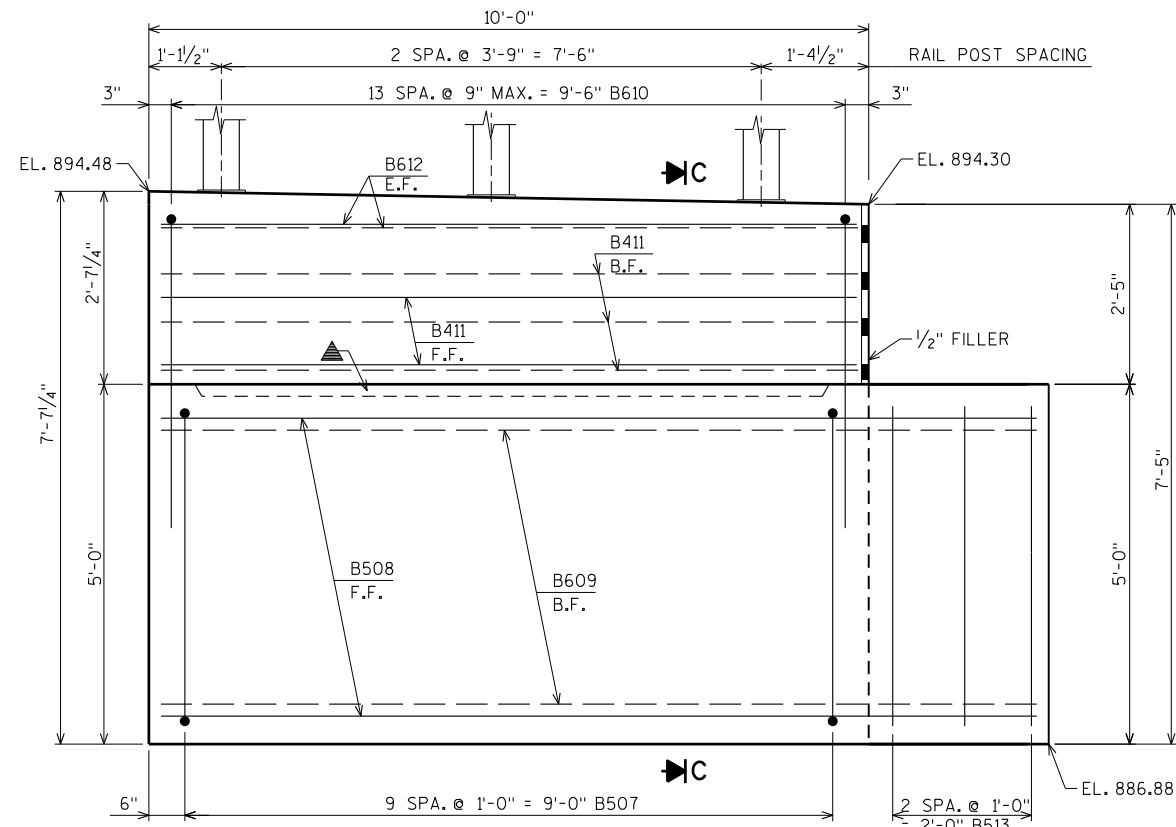
F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-61-231			
DRAWN BY		JLB	PLANS CK'D. ZSS
NORTH ABUTMENT DETAILS		SHEET 8 OF 12	

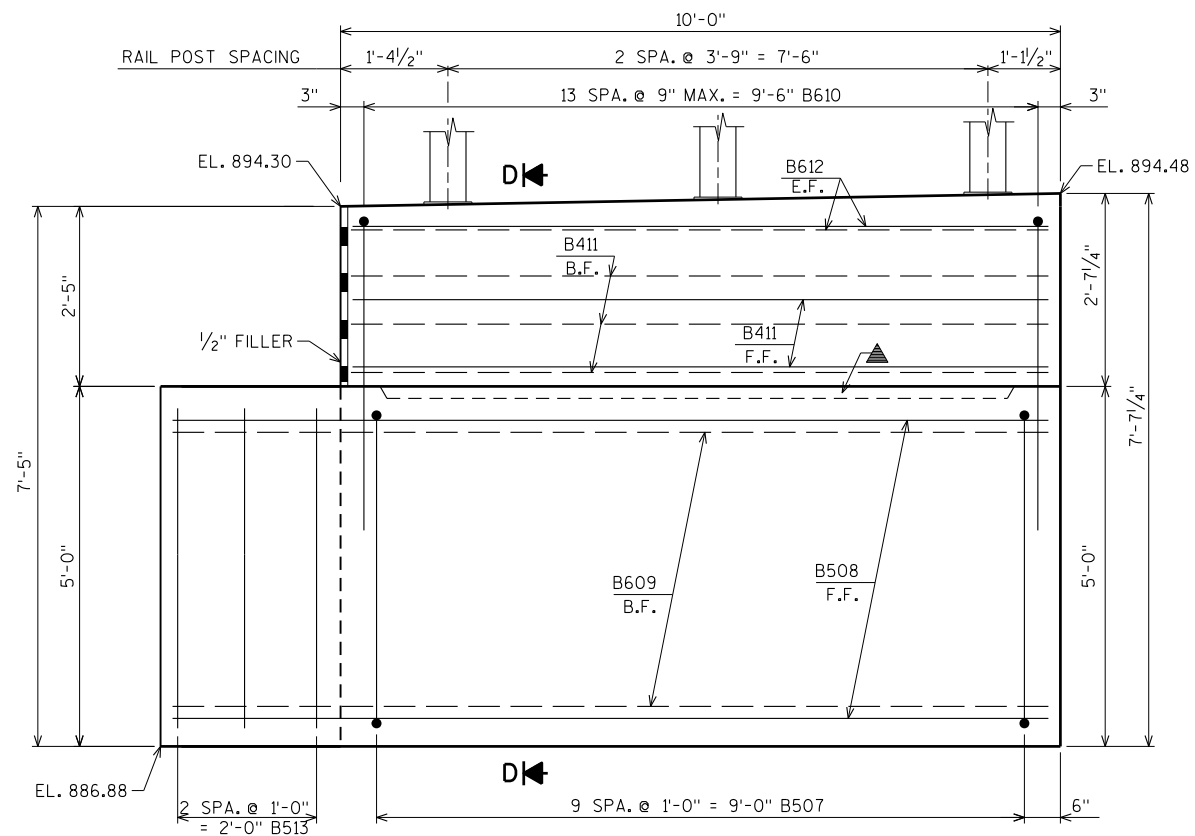
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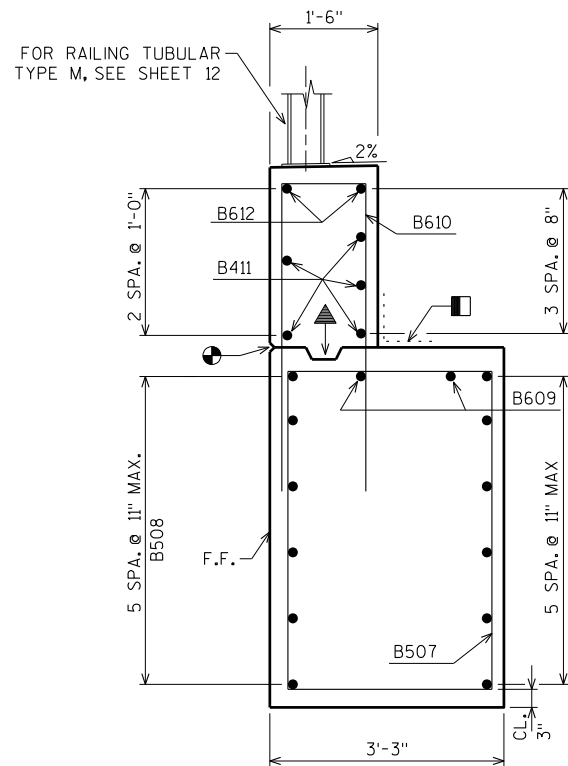
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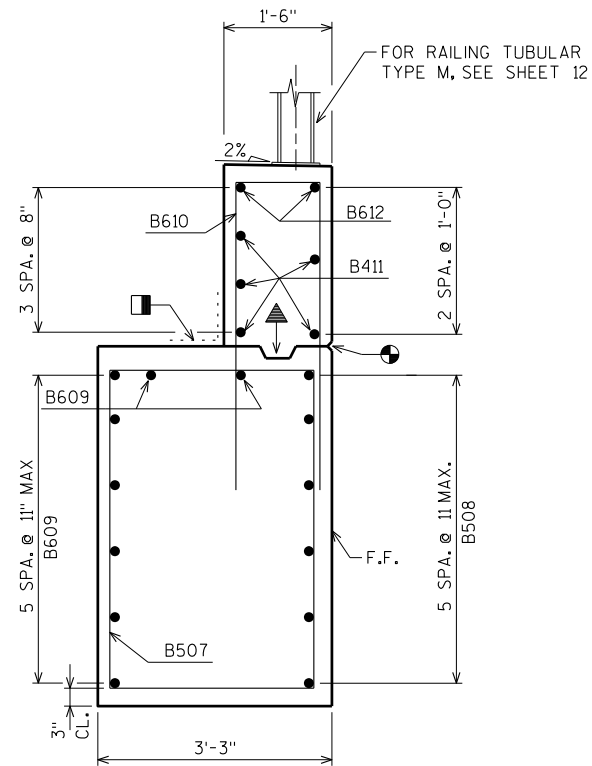
ELEVATION - WING 3



ELEVATION - WING 4



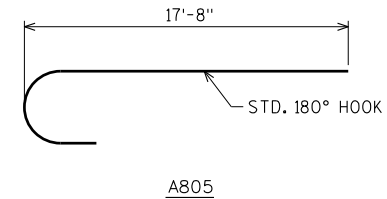
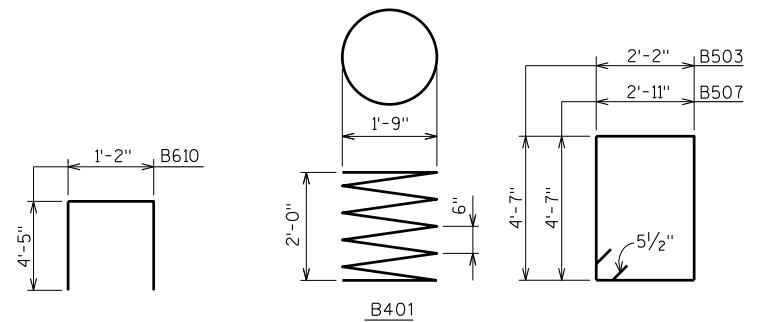
SECTION C



BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLE	BAR SERIES	1,890# UNCOATED 1,350# COATED
							LOCATION
B401		5	28-0	X			BODY @ PILES
B402		10	2-3				BODY @ PILES
B503		38	14-2	X			BODY VERTS.
B604		11	30-2				BODY HORIZ. E.F.
B805		14	18-7	X			BODY HORIZ. B.F.
B506	X	29	2-0				BODY DOWELS
B507	X	20	15-8	X			WINGS 3 & 4 VERT.
B508	X	12	12-2				WINGS 3 & 4 HORIZ. F.F.
B609	X	16	11-11				WINGS 3 & 4 HORIZ. B.F. AND TOP
B610	X	28	9-8	X			WING 3 & 4 VERT.
B411	X	10	9-7				WINGS 3 & 4 HORIZ. E.F.
B612	X	4	9-7				WINGS 3 & 4 HORIZ. TOP
B513		6	4-7				BODY VERT. ENDS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JOINT IS NOT USED.

OPT. CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY.

3/4" V-GROOVE ON FRONT FACE ONLY.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE

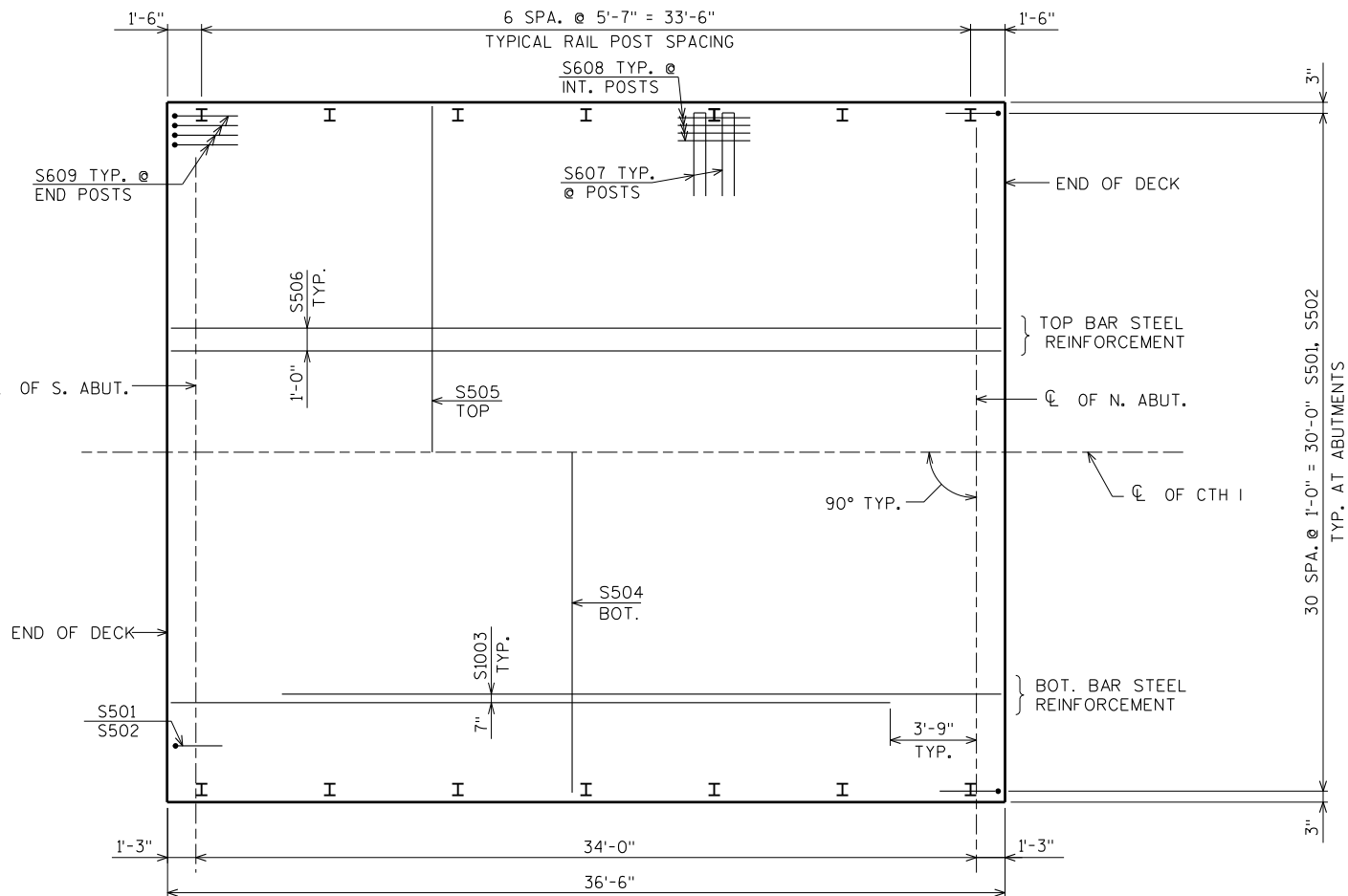
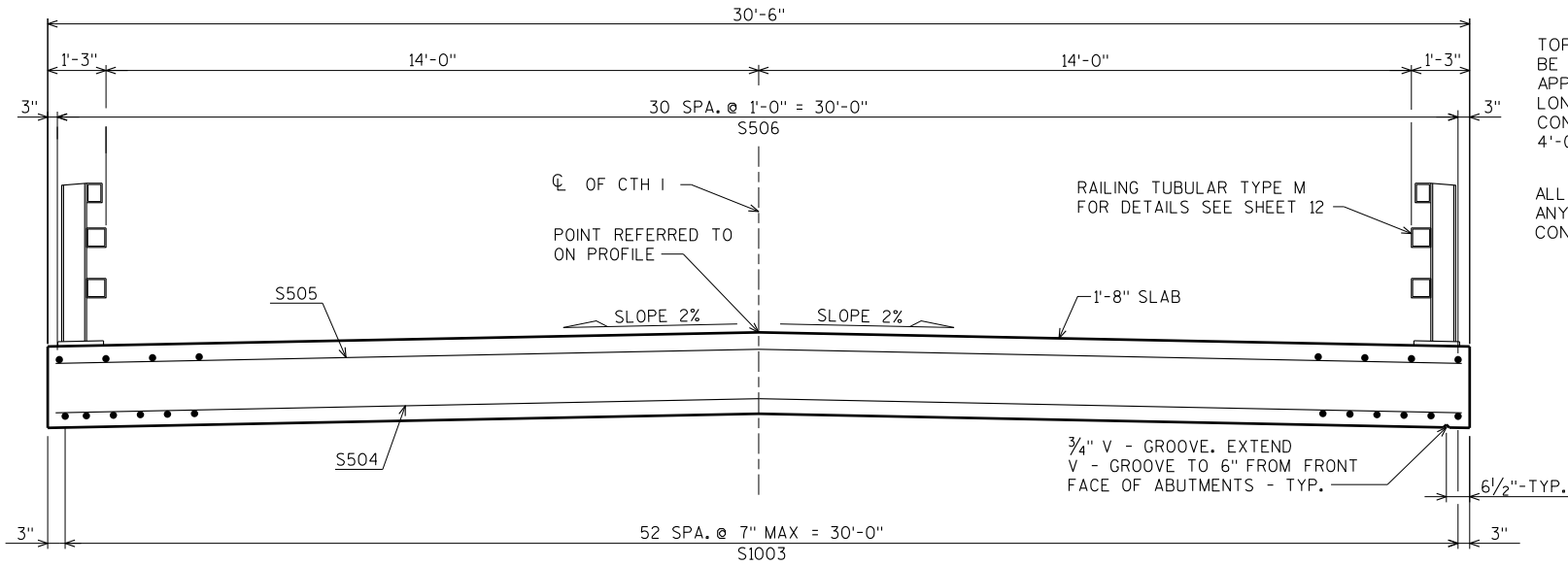
B.F. DENOTES BACK FACE

ORIGINAL PLANS PREPARED BY
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NO.	DATE	REVISION	BY
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STRUCTURE B-61-231			
		DRAWN BY JLB	PLANS CK'D. ZSS
NORTH ABUTMENT DETAILS AND BILL OF BARS		SHEET 9 OF 12	

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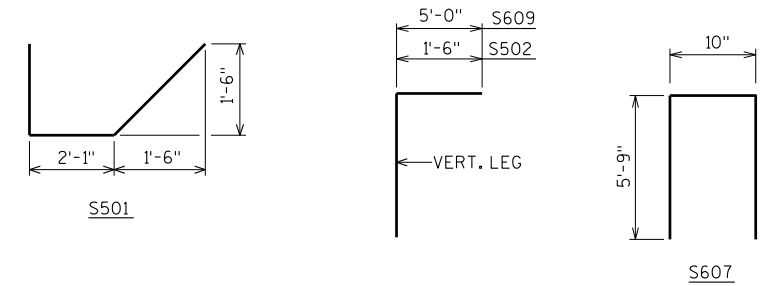
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

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

BILL OF BARS

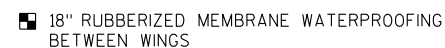
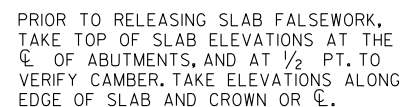
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	12,580# COATED
							LOCATION
S501	X	62	5-6	X			SLAB @ ABUT.
S502	X	62	3-6	X			SLAB @ ABUT.
S1003	X	53	31-4				SLAB LONG. BOT.
S504	X	48	30-2				SLAB TRANS. BOT.
S505	X	37	30-2				SLAB TRANS. TOP
S506	X	31	36-2				SLAB LONG. TOP
S607	X	28	12-0	X			SLAB @ RAIL POSTS
S608	X	40	6-0				SLAB @ INT. RAIL POSTS
S609	X	16	6-0	X			SLAB @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-61-231			
DRAWN BY JLB		PLANS CK'D. ZSS	
SUPERSTRUCTURE			SHEET 10 OF 12



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

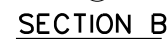
SUPERSTRUCTURE DETAILS

- ① W6 x 25 WITH 1/8" x 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR POST NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1/4" x 11 3/4" x 1'-8" WITH 1 5/8" x 1 5/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
- ③ ASTM A449 - 1/6" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. ~~USE 10 3/4" LONG AT ALL OTHER LOCATIONS.~~ (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)
- ④ 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/8" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- ⑤ TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑤A TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑥ 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/8" x 1 5/8" x 1 5/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- ⑦ 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" x 1/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- ⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
- ⑨ SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- ⑩ 3/8" x 3 5/8" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- ⑩A 3/8" x 2 5/8" x 2'-4" PLATE USED IN NO. 5, 3/8" x 3 5/8" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- ⑪ 7/8" φ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/8" x 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND ~~1 5/8" x 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS~~ IN PLATE NO. 10A.
- ⑫ 7/8" DIA. x 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
- ⑬ 3/8" x 8" x 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- ⑭ 7/8" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
- ⑮ 1" φ HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-61-231" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL $\frac{1}{8}$ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. ~~RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.~~
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO.2 AND CAULK AROUND PERIMETER OF PLATE NO.2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. ~~WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED THE COAT AND TOP COAT.~~



(LOCATION MUST BE SHOWN
ON THE SHOP DRAWINGS)



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

TYPICAL RAIL TO POST CONNECTIONS



(THREE BEAM RAIL ATTACHMENT)



(AT BEAM GUARD ATTACHMENT)



(AT BEAM GUARD ATTACHMENT)



(THREE BEAM RAIL ATTACHMENT)



(AT RAIL TO DECK CONNECTION)

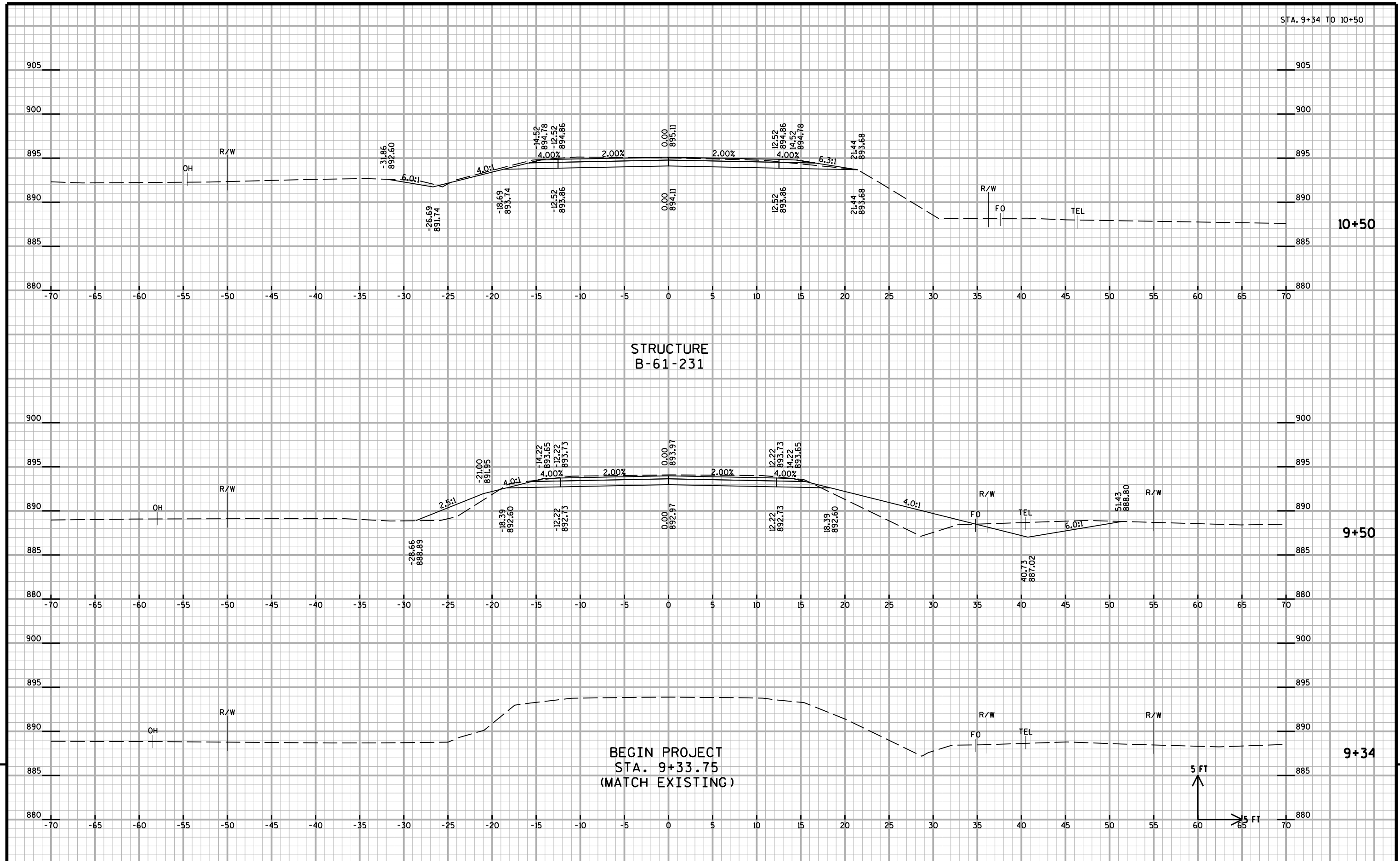


DETAIL

CTH I COMPUTER EARTHWORK

Station	Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged / Unuseable Pavement Material	Fill	Cut	Salvaged / Unuseable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.30	
Note 1	Note 4	Note 2	Note 5	Note 3						
9+33.75	--	30.1	9.0	0.0						
9+50	16.25	51.9	9.0	33.5	25	5	10	20	13	7
9+83.75	33.75	51.9	9.0	33.5	65	11	42	74	68	6
B-61-231	--	--	--	--	--		--	--	--	--
10+20.25	--	35.5	8.9	0.2	--		--	--	--	--
10+50	29.75	35.5	8.9	0.2	39	12	0	101	68	33
10+70.25	20.25	31.5	9.4	0.0	25	11	0	115	68	47
					154	39	52			

Note 1 - Cut	Cut includes existing asphalt pavement.
Note 2 - Fill	Volume needed to be filled.
Note 3 - Mass Ordinate	(Cut) - (Fill * 1.30)
Note 4 - Salvaged / Unuseable Pavement Material	Existing existing asphalt pavement to be removed from Cut.
Note 5 - Cut	Cut reduced by salvaged/unuseable asphaltic pavement



END PROJECT
STA. 10+70.25
(MATCH EXISTING)

EXISTING 12" Ø CS. CULVERT PIPE
TO REMAIN IN PLACE

R/W

OH

R/W

FO

TEL

10+70

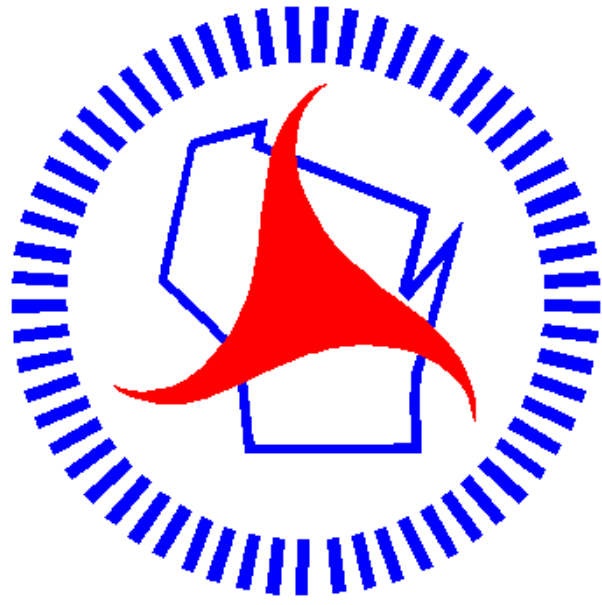
5 FT

5 FT

9

9

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>