EAU

MARCH 2021

PROJECT ID: 7823-03-70
WITH: N/A

COUNTY: EAU CLAIRE

23

ORDER OF SHEETS

TOTAL SHEETS = 86

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

FALL CREEK - NORTH COUNTY LINE

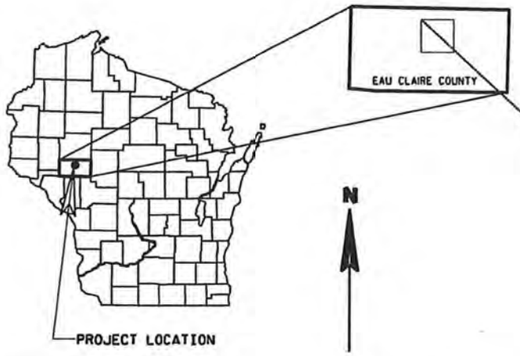
FALL CREEK BRIDGE B-18-0237

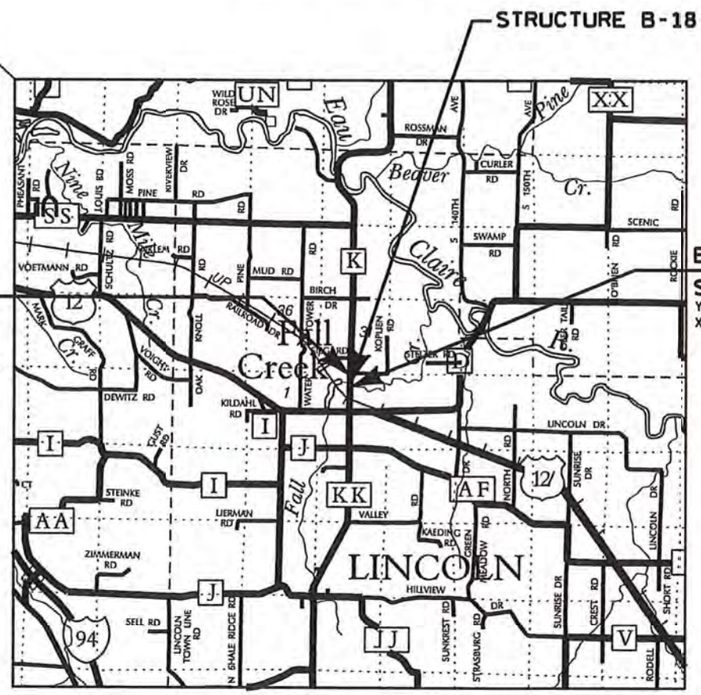
CTH K

EAU CLAIRE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7823-03-70	WISC 2021237	1

STATE PROJECT NUMBER
7823-03-70





DESIGN DESIGNATION

A.A.D.T. (2021)	=	1,500
A.A.D.T. (2041)	=	2,020
D.H.V.	=	120
D.	=	50/50
T.	=	5.0%
DESIGN SPEED	=	40 MPH
ESALS	=	170,000

CONVENTIONAL SYMBOLS

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

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

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

TOTAL NET LENGTH OF CENTERLINE = 0.035 MI.

SURVEY PERFORMED IN 2019.
COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), EAU CLAIRE COUNTY

ACCEPTED FOR
County of Eau Claire
10/21/2020 Date
Highway Commissioner

ORIGINAL PLANS PREPARED BY

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

WISCONSIN
CHRISTOPHER B. McMAHON
E-29454
EAU CLAIRE
WI
PROFESSIONAL ENGINEER

DATE 10/20/2020

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES ASSOCIATES INC
Designer	AYRES ASSOCIATES INC
Project Manager	MATTHEW THORNSEN, PE
Regional Examiner	TOU YANG, PE
Regional Supervisor	ANDREW STENSLAND, PE

APPROVED FOR THE DEPARTMENT
DATE: 11/02/2020
(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.

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

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

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

SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLAN, OR AS DIRECTED BY THE ENGINEER. SILT FENCE TO BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO BRIDGE REMOVAL.

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

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

SHRINKAGE IS ESTIMATED AT 30%

WETLANDS EXIST IN THE PROJECT AREA AND THE CONTRACTOR SHALL NOT DISTURB OUTSIDE OF THE SLOPE INTERCEPTS IN THESE AREAS

UTILITIES

XCEL ENERGY
1414 W. HAMILTON AVE.
P.O. BOX 8
EAU CLAIRE, WI 54702-0008
ATTN: CORRISA SEELY
715-737-4097
corrisa.seely@xcelenergy.com
ATTN: BRADY GARDOW (GAS)
715-737-1450
715-563-4081 (cell)
brady.p.gardow@xcelenergy.com
ATTN: JOHN KELSER (ELECTRIC DISTRIBUTION)
715-737-1431
715-491-7518 (cell)
john.kelser@xcelenergy.com
ATTN: MITCHELL DIENGER (ELECTRIC TRANSMISSION)
612-321-3109
608-386-2233 (cell)
mitchell.a.dienger@xcelenergy.com

CENTURYLINK
311 SOUTH COURT STREET
SPARTA, WI 54656
P.O. BOX 6256
ATTN: BRET CLARK
608-269-0819
bret.clark@centurylink.com

CINC
105 GARFIELD AVE.
EAU CLAIRE, WI 54701
ATTN: DAREN BAUER
715-836-5286
bauerdp@uwec.edu

** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

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

COUNTY CONTACT
EAU CLAIRE COUNTY, COMMISSIONER
2000 SPOONER AVENUE
ALTOONA, WI 54720
ATTN: JON JOHNSON
715-839-2952
jon.johnson@co.eau-claire.wi.us

DESIGNER
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: CHRIS MCMAHON, PE
715-834-3161
mcmahonc@ayresassociates.com

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

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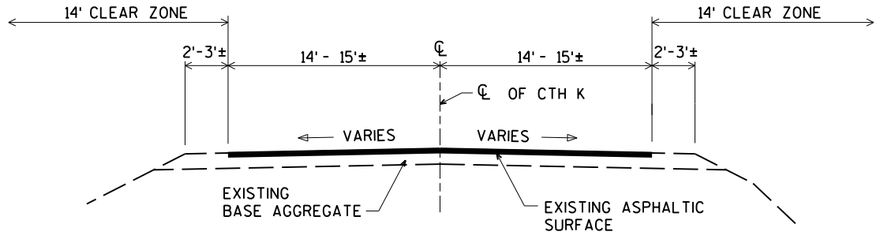
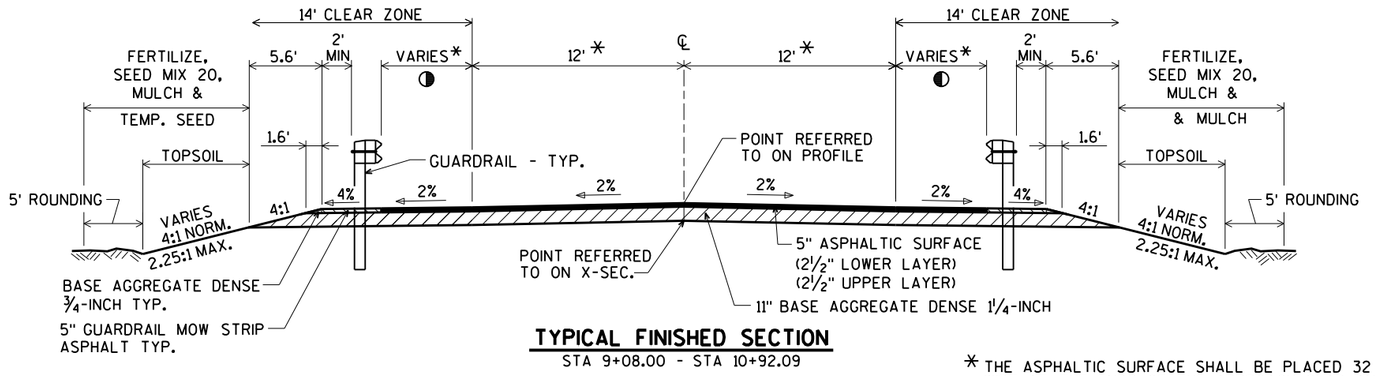


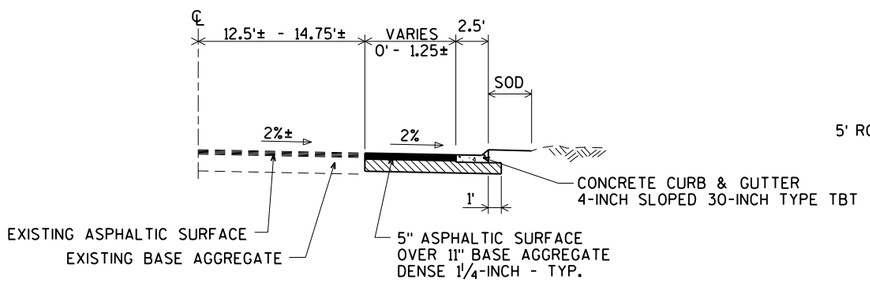
TYPICAL EXISTING SECTION
(CTH K)
STA. 9+00 - STA. 10+95



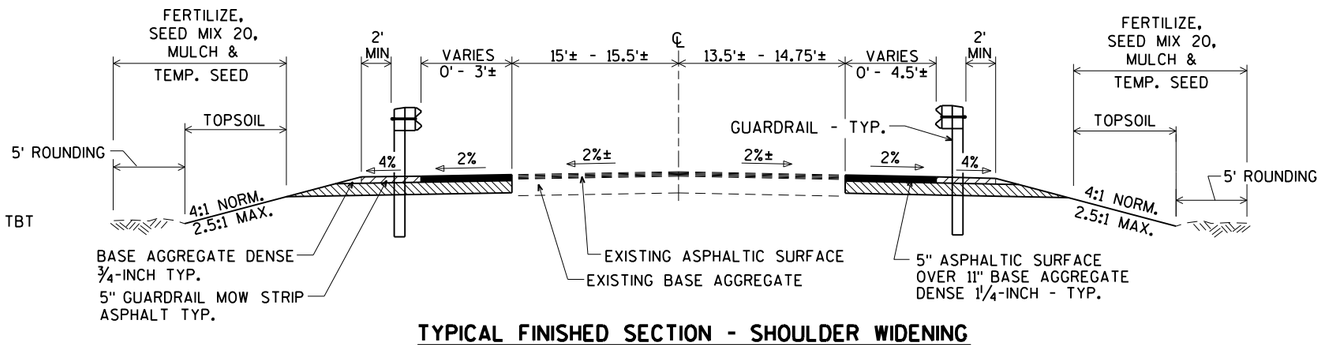
TYPICAL FINISHED SECTION
STA 9+08.00 - STA 10+92.09

* THE ASPHALTIC SURFACE SHALL BE PLACED 32 FEET WIDE AT THE ENDS OF THE APPROACH SLAB AND FOLLOW THE FACE OF GUARDRAIL, AND TAPER TO 32 FEET AT THE ENDS OF THE PROJECT.

◑ 4' NORMAL
4' MIN. (AT END OF BRIDGE)
6' MAX. (AT END TERMINAL)

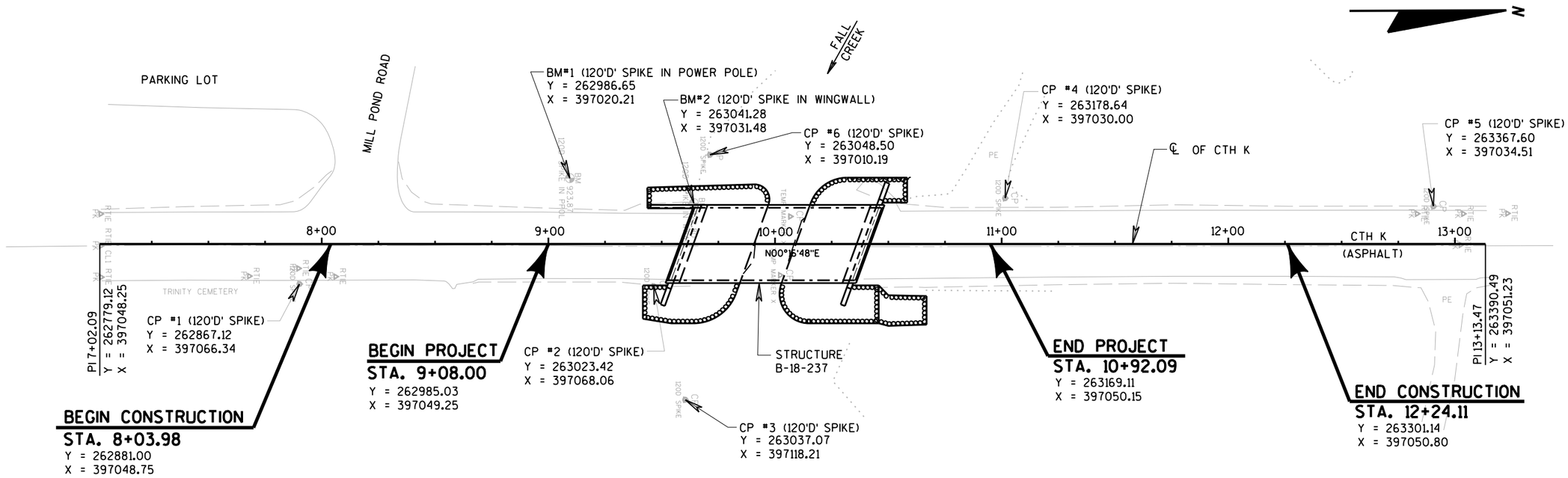


TYPICAL FINISHED SECTION - SHOULDER WIDENING
STA 8+03.98 - STA 8+63.24, RT.

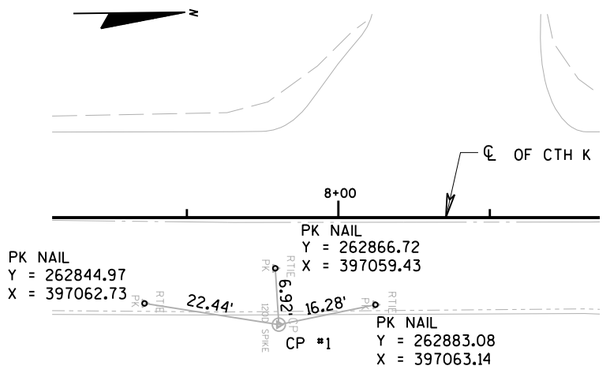


TYPICAL FINISHED SECTION - SHOULDER WIDENING
STA 8+63.24 - STA 9+08.00, RT.
STA 8+35.55 - STA 9+08.00, LT.
STA 10+92.09 - STA 12+24.11, RT.
STA 10+92.09 - STA 11+25, LT.

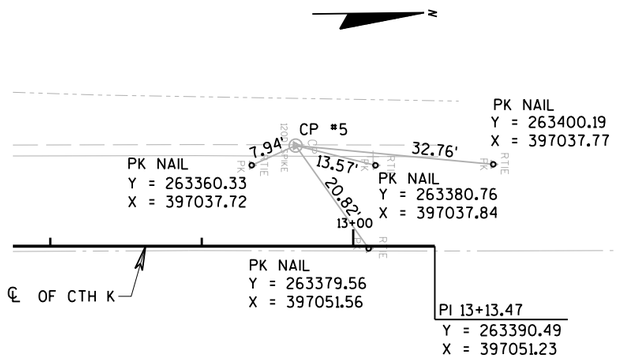
PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	TYPICAL SECTIONS	SHEET 3	E



ALIGNMENT CONTROLS



CP #1 (120'D' SPIKE)
Y = 262867.12
X = 397066.34



CP #5 (120'D' SPIKE)
Y = 263367.60
X = 397034.51

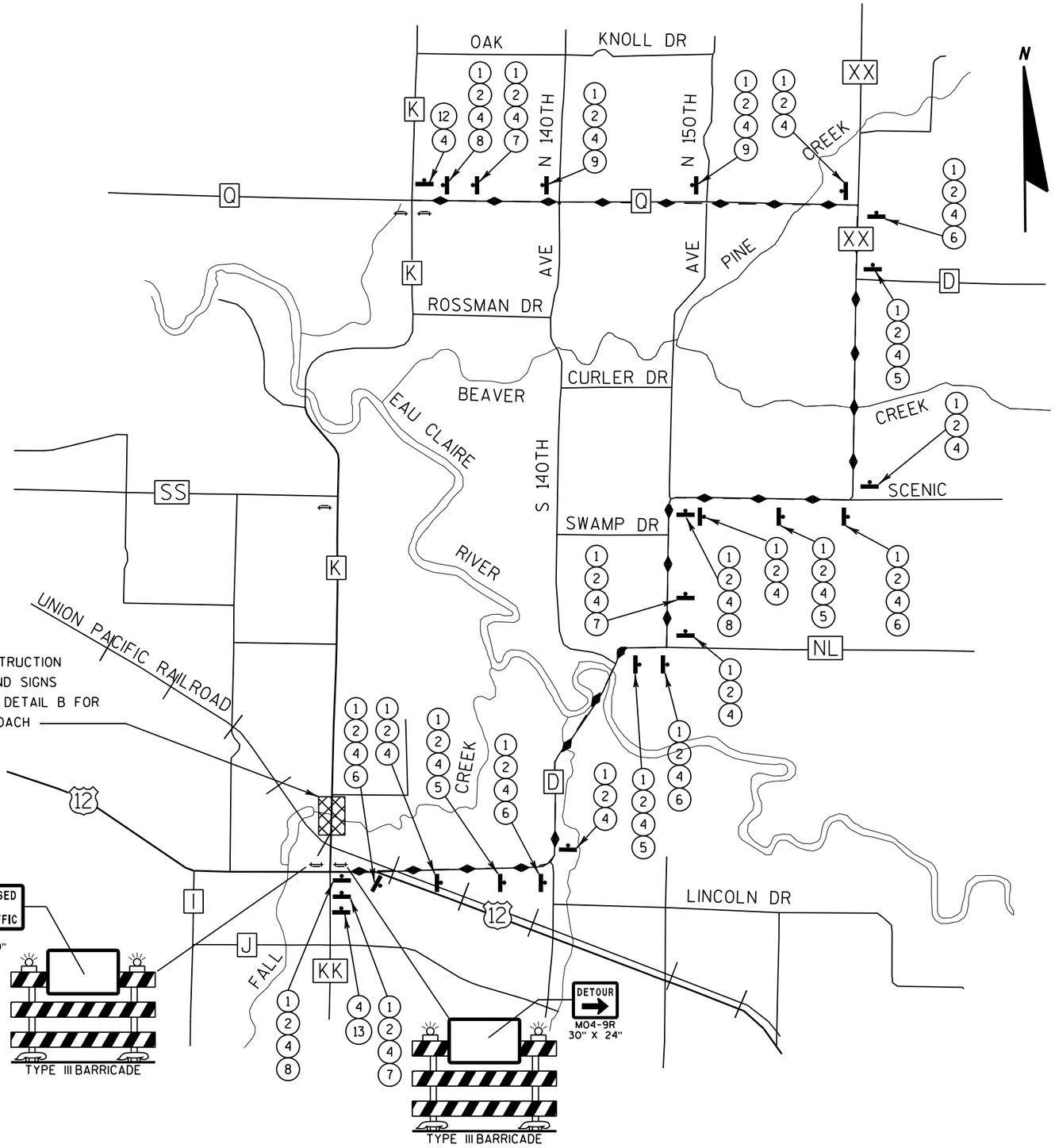
CONTROL POINT TIES

PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	ALIGNMENT CONTROLS AND TIES	SCALE, FEET 0 25 50	SHEET 4	E

2

1 — DETOUR — M04-8 — 24" X 12"
2 — NORTH — M03-1 — 24" X 12"
3 — SOUTH — M03-3 — 24" X 12"
4 — COUNTY K — M01-5A — 24" X 24"
5 — M05-1L — 21" X 21"
6 — M06-1L — 21" X 21"
7 — M05-1R — 21" X 21"
8 — M06-1R — 21" X 21"
9 — M06-1 — 21" X 21"
10 — M06-2L — 21" X 21"
11 — M06-2R — 21" X 21"
12 — END DETOUR — M04-8A — 24" X 18"

13 — DETOUR AHEAD — W020-2A



BRIDGE CLOSED TO CONSTRUCTION
SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL B FOR SIGNING AT BRIDGE APPROACH

— ◆ — DETOUR ROUTE

GENERAL NOTES
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL B FOR SIGNING AT BRIDGE APPROACH AND ADVANCED AREAS LEADING TO THE WORK ZONE.

PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	TRAFFIC CONTROL	SHEET 5	E

1 — M04-8 — DETOUR — 24" X 12"
2 — M03-1 — NORTH — 24" X 12"
3 — M03-3 — SOUTH — 24" X 12"
4 — M01-5A — COUNTY K — 24" X 24"
5 — M05-1L — 21" X 21"
6 — M06-1L — 21" X 21"
7 — M05-1R — 21" X 21"
8 — M06-1R — 21" X 21"
9 — M06-1 — 21" X 21"
10 — M06-2L — 21" X 21"
11 — M06-2R — 21" X 21"
12 — M04-8A — END DETOUR — 24" X 18"

13 — DETOUR AHEAD — W020-2A

— ◆ — DETOUR ROUTE

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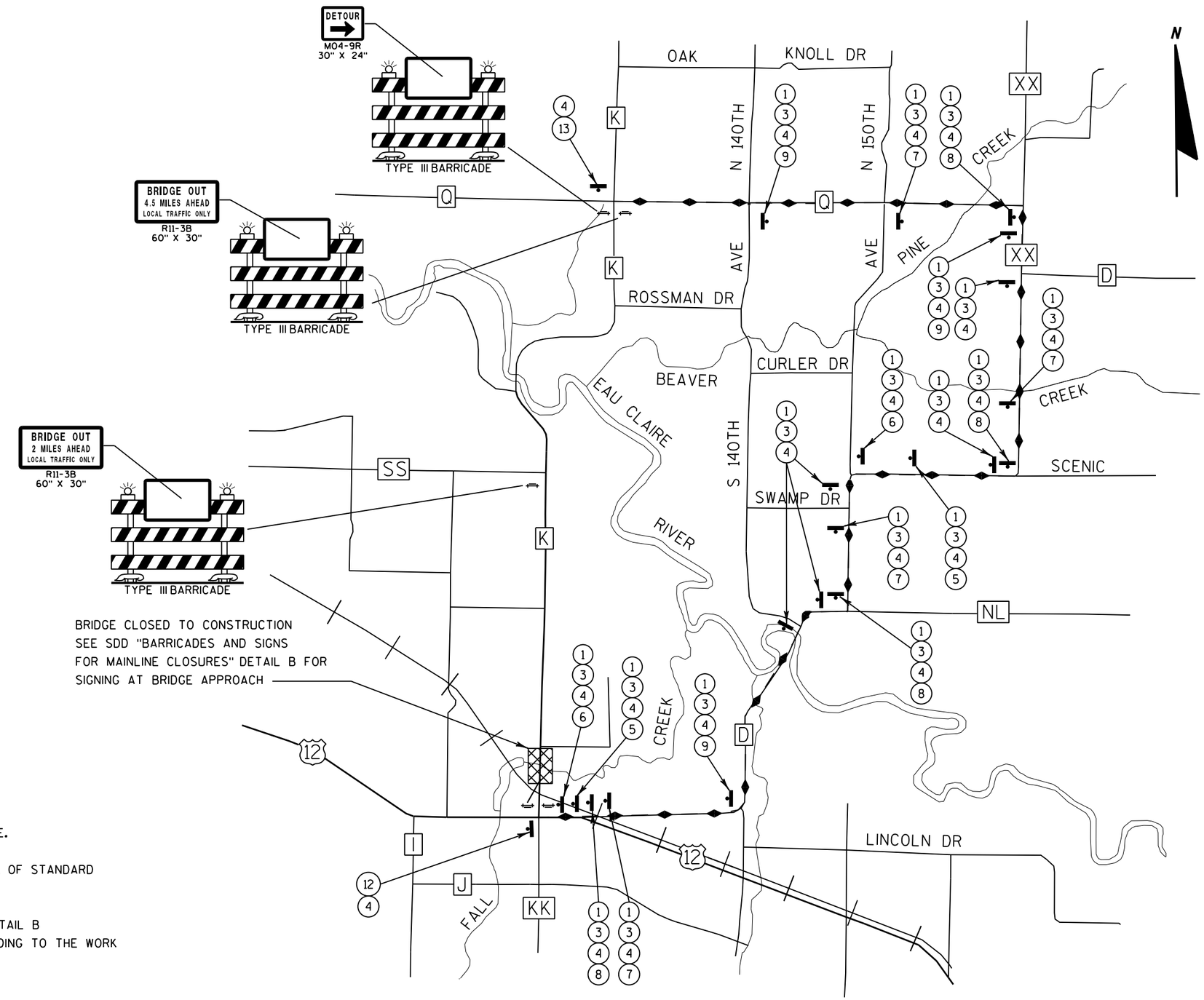

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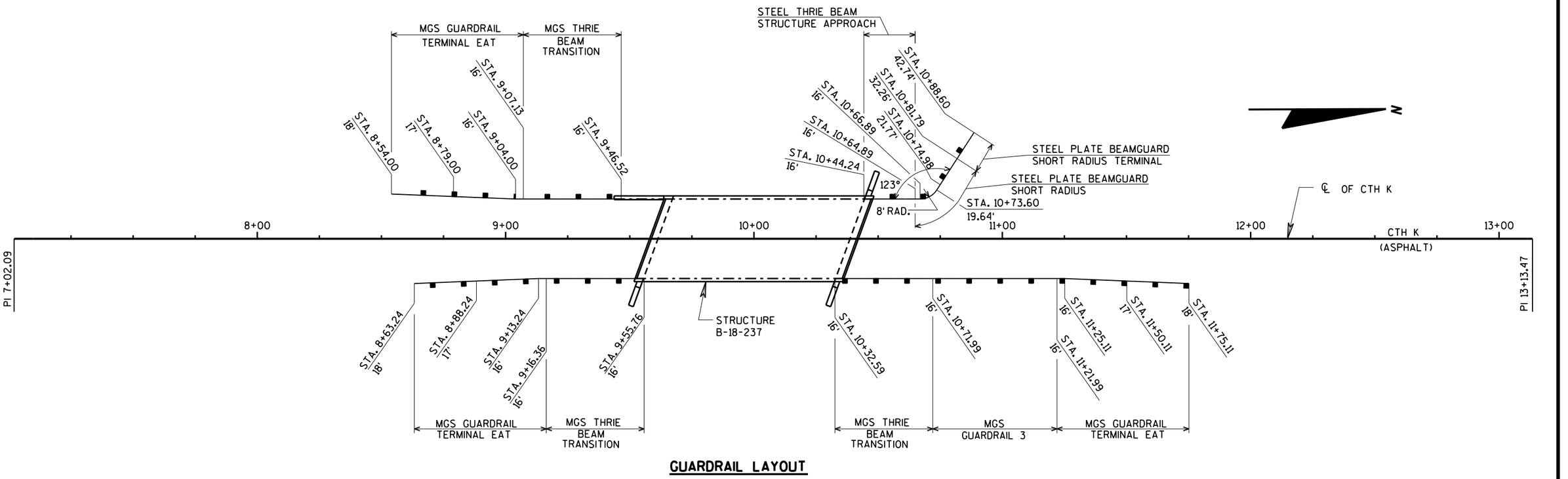
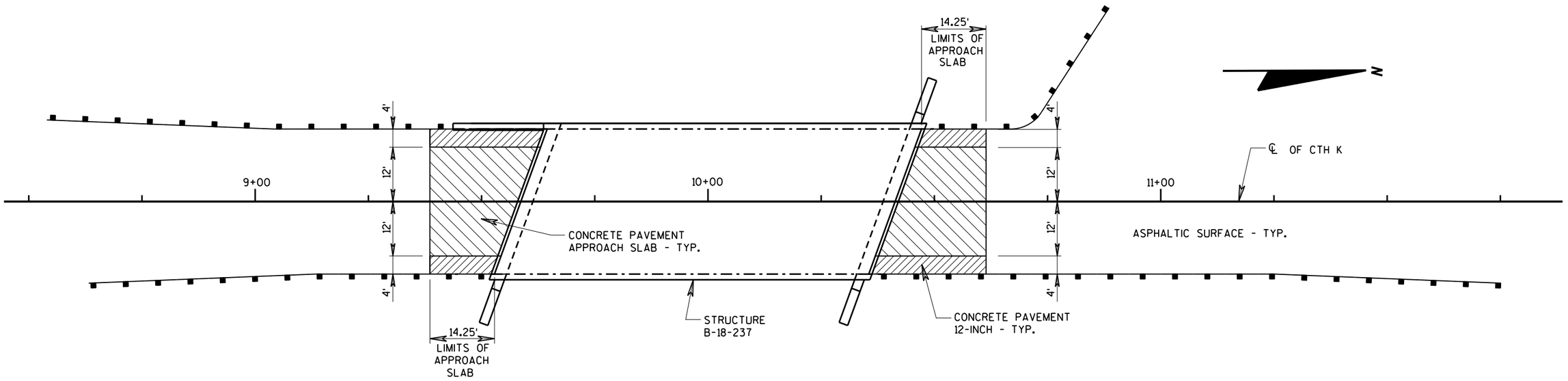


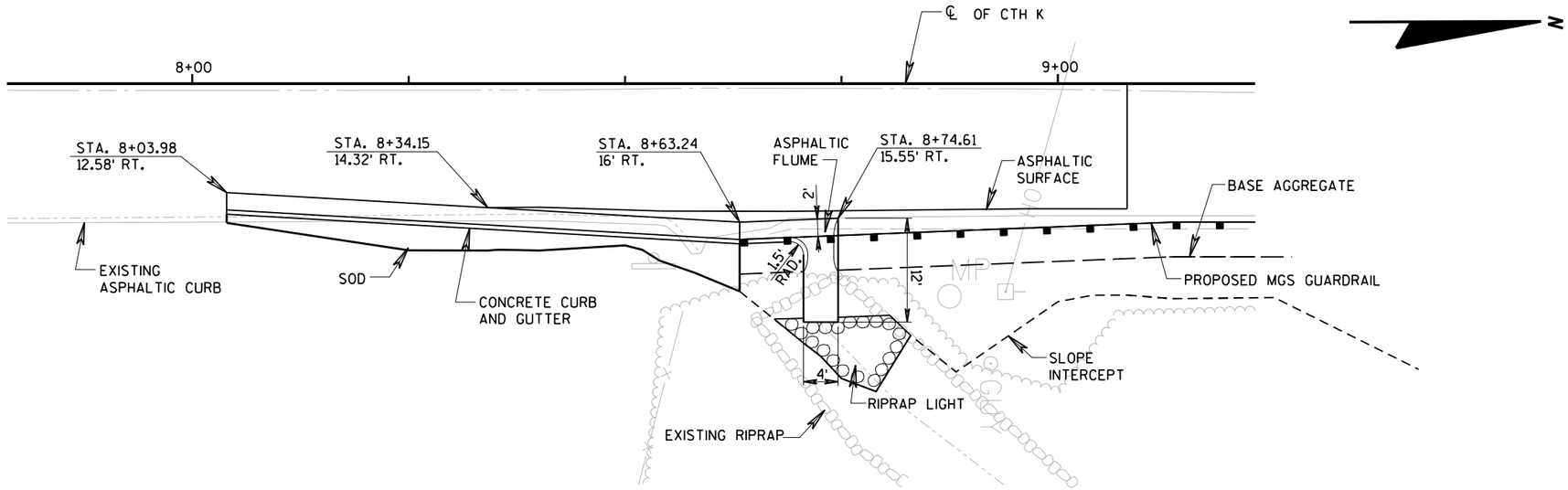
GUARDRAIL LAYOUT

PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	GUARDRAIL LAYOUT	SHEET 7	E

2

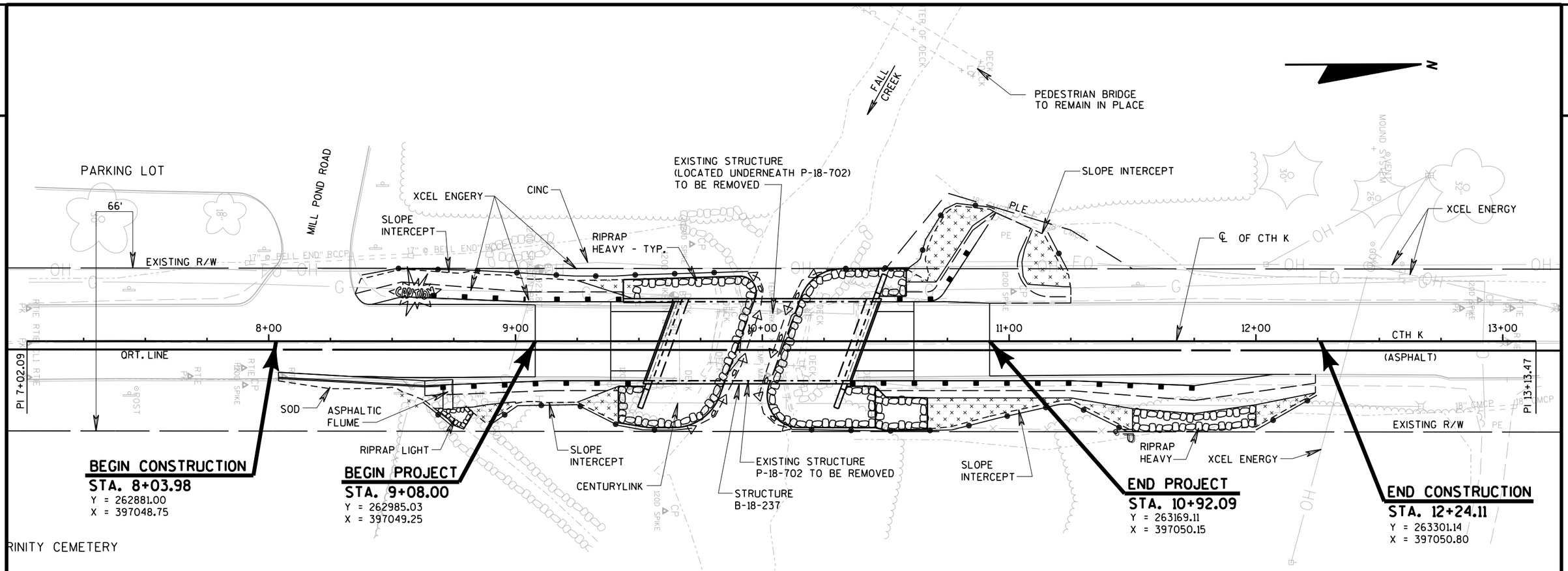


APPROACH SLAB DETAIL



ASPHALTIC FLUME DETAIL

PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	APPROACH SLAB AND ASPHALTIC FLUME DETAILS	SHEET 8	E



	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .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 = 0.681 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.418 ACRES

HIGH WATER $_2$ EL. 902.2

NOTE:
MULCH TO BE PLACED ON SIDE SLOPES NOT PROTECTED BY EROSION MAT.

LEGEND

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

PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 9	E

7823-03-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	4.000	4.000
0004	201.0205	Grubbing	STA	4.000	4.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01.10+00	LS	1.000	1.000
0008	204.0165	Removing Guardrail	LF	122.000	122.000
0010	205.0100	Excavation Common	CY	313.000	313.000
0012	206.1000	Excavation for Structures Bridges (structure) 01.B-18-237	LS	1.000	1.000
0014	210.1500	Backfill Structure Type A	TON	690.000	690.000
0016	213.0100	Finishing Roadway (project) 01.7823-03-70	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	115.000	115.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	460.000	460.000
0022	415.0120	Concrete Pavement 12-Inch	SY	37.000	37.000
0024	415.0410	Concrete Pavement Approach Slab	SY	115.000	115.000
0026	455.0605	Tack Coat	GAL	20.000	20.000
0028	465.0105	Asphaltic Surface	TON	95.000	95.000
0030	465.0315	Asphaltic Flumes	SY	9.000	9.000
0032	502.0100	Concrete Masonry Bridges	CY	232.000	232.000
0034	502.3200	Protective Surface Treatment	SY	350.000	350.000
0036	503.0137	Prestressed Girder Type I 36W-Inch	LF	324.000	324.000
0038	505.0400	Bar Steel Reinforcement HS Structures	LB	5,260.000	5,260.000
0040	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	22,860.000	22,860.000
0042	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0044	506.4000	Steel Diaphragms (structure) 01.B-18-237	EACH	3.000	3.000
0046	511.1100	Temporary Shoring	SF	180.000	180.000
0048	513.4061	Railing Tubular Type M	LF	190.000	190.000
0050	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0052	550.0020	Pre-Boring Rock or Consolidated Materials	LF	70.000	70.000
0054	550.0500	Pile Points	EACH	8.000	8.000
0056	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	245.000	245.000
0058	601.0584	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBT	LF	60.000	60.000
0060	606.0100	Riprap Light	CY	5.000	5.000
0062	606.0300	Riprap Heavy	CY	445.000	445.000
0064	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0066	614.0200	Steel Thrie Beam Structure Approach	LF	21.000	21.000
0068	614.0345	Steel Plate Beam Guard Short Radius	LF	25.000	25.000
0070	614.0390	Steel Plate Beam Guard Short Radius Terminal	EACH	1.000	1.000
0072	614.2300	MGS Guardrail 3	LF	50.000	50.000
0074	614.2500	MGS Thrie Beam Transition	LF	120.000	120.000

7823-03-70

Line	Item	Item Description	Unit	Total	Qty
0076	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0078	618.0100	Maintenance And Repair of Haul Roads (project) 01.7823-03-70	EACH	1.000	1.000
0080	619.1000	Mobilization	EACH	1.000	1.000
0082	624.0100	Water	MGAL	16.000	16.000
0084	625.0100	Topsoil	SY	180.000	180.000
0086	627.0200	Mulching	SY	190.000	190.000
0088	628.1504	Silt Fence	LF	675.000	675.000
0090	628.1520	Silt Fence Maintenance	LF	1,350.000	1,350.000
0092	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0094	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0096	628.2027	Erosion Mat Class II Type C	SY	240.000	240.000
0098	628.6005	Turbidity Barriers	SY	170.000	170.000
0100	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0102	629.0210	Fertilizer Type B	CWT	0.300	0.300
0104	630.0120	Seeding Mixture No. 20	LB	13.000	13.000
0106	630.0200	Seeding Temporary	LB	13.000	13.000
0108	630.0500	Seed Water	MGAL	11.000	11.000
0110	631.0300	Sod Water	MGAL	4.000	4.000
0112	631.1000	Sod Lawn	SY	20.000	20.000
0114	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0116	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0118	638.2102	Moving Signs Type II	EACH	3.000	3.000
0120	638.2602	Removing Signs Type II	EACH	4.000	4.000
0122	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0124	638.4000	Moving Small Sign Supports	EACH	1.000	1.000
0126	642.5001	Field Office Type B	EACH	1.000	1.000
0128	643.0420	Traffic Control Barricades Type III	DAY	1,425.000	1,425.000
0130	643.0705	Traffic Control Warning Lights Type A	DAY	2,250.000	2,250.000
0132	643.0900	Traffic Control Signs	DAY	13,875.000	13,875.000
0134	643.5000	Traffic Control	EACH	1.000	1.000
0136	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0138	645.0120	Geotextile Type HR	SY	840.000	840.000
0140	645.0130	Geotextile Type R	SY	15.000	15.000
0142	646.1020	Marking Line Epoxy 4-Inch	LF	445.000	445.000
0144	650.4500	Construction Staking Subgrade	LF	340.000	340.000
0146	650.5000	Construction Staking Base	LF	340.000	340.000
0148	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	60.000	60.000
0150	650.6500	Construction Staking Structure Layout (structure) 01.B-18-237	LS	1.000	1.000

7823-03-70

Line	Item	Item Description	Unit	Total	Qty
0152	650.9910	Construction Staking Supplemental Control (project) 01.7823-03-70	LS	1.000	1.000
0154	650.9920	Construction Staking Slope Stakes	LF	340.000	340.000
0156	690.0150	Sawing Asphalt	LF	126.000	126.000
0158	715.0502	Incentive Strength Concrete Structures	DOL	1,392.000	1,392.000
0160	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0162	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0164	SPV.0090	Special 01.Flashing Stainless Steel	LF	160.000	160.000

3

3

CTH K EARTHWORK SUMMARY

From/To Station	Location	Excavation Common (1) (item # 205.0100) Cut	Salvaged / Unuseable Pavement Material (5)	Unexpanded Fill	Expanded Fill (2) Factor 1.30	Mass Ordinate +/- (3)	Waste	Borrow (item #208.0100)	Comment:
8+03.98 - 12+24.11	CTH K	313	37	106	138	139	139	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.

CLEARING AND GRUBBING

STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA
8+03.98	-	12+24.11	LT & RT	4	4
TOTALS				4	4

ASPHALTIC FLUME

STA	LOC	465.0315 ASPHALTIC FLUMES SY	606.0100 RIPRAP LIGHT CY	645.0130 GEOTEXTILE FABRIC TYPE R SY
8+73	RT	9	5	15
TOTALS		9	5	15

PAVING AND BASE QUANTITIES

STA	TO	STA	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
8+03.98	--	9+57.96	35	210	9	50
10+42.04	--	12+24.11	75	230	10	40
UNDISTRIBUTED			5	20	1	5
TOTALS			115	460	20	95

CONCRETE PAVEMENT

STA	TO	STA	LOCATION	415.0120 CONCRETE PAVEMENT 12-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
9+38.59	--	9+64.49	LT	11	-
9+38.59	--	9+54.3	RT	7	-
9+38.59	--	9+58.67	-	-	55
10+45.7	--	10+61.41	LT	7	-
10+35.51	--	10+61.41	RT	11	-
10+41.33	--	10+61.41	-	-	55
UNDISTRIBUTED				2	5
TOTALS				37	115

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

MGS GUARDRAIL

STA	TO	STA	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF	614.0345 STEEL PLATE BEAM GUARD SHORT RADIUS LF	614.0390 STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL EACH	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
8+54	--	9+07.13	LT	--	--	--	--	--	--	1
8+63.24	--	9+16.36	RT	--	--	--	--	--	--	1
9+07.13	--	9+46.52	LT	--	--	--	--	--	40	--
9+16.36	--	9+55.76	RT	--	--	--	--	--	40	--
9+30	--	9+66	RT	36	--	--	--	--	--	--
9+41	--	9+66	LT	25	--	--	--	--	--	--
10+38	--	10+63	RT	25	--	--	--	--	--	--
10+38	--	10+74	LT	36	--	--	--	--	--	--
10+32.59	--	10+71.99	RT	--	--	--	--	--	40	--
10+44.24	--	10+64.89	LT	--	21	--	--	--	--	--
10+64.89	--	10+81.79	LT	--	--	25	--	--	--	--
10+71.99	--	11+21.99	RT	--	--	--	--	50	--	--
10+81.79	--	10+88.6	LT	--	--	--	1	--	--	--
11+21.99	--	11+75.11	RT	--	--	--	--	--	--	1
TOTALS				122	21	25	1	50	120	3

CONCRETE CURB AND GUTTER

STATION	TO	STATION	LOC	601.0584 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBT LF
8+03.98	-	8+63.24	RT	60
TOTALS				60

RIPRAP

STA	TO	STA	LOC	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
11+50	--	12+00	RT	35	80
TOTALS				35	80

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

WATER

PURPOSE	624.0100 WATER MGAL
COMPACTION	8
DUST CONTROL	8
TOTAL	16

EROSION CONTROL MOBILIZATION ITEMS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
ID 7823-03-70	4	4
TOTALS	4	4

EROSION CONTROL ITEMS

STA	TO	STA	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	631.1000 SOD LAWN SY	631.0300 SOD WATER MGAL
8+03.98	--	9+57.96	RT	15	30	105	210	25	0.0	2	1	1		
8+03.98	--	9+57.96	LT	0	60	155	310	10	0.0	2	2	2	15	3
10+42.04	--	12+24.11	RT	50	40	180	360	80	0.1	3	3	3		
10+42.04	--	12+24.11	LT	80	60	100	200	75	0.1	4	4	3		
UNDISTRIBUTED				35	--	135	270	50	0.1	3	3	2	5	1
TOTALS				180	190	675	1,350	240	0.3	13	13	11	20	4

TURBIDITY BARRIERS

LOCATION	628.6005 SY
SOUTH ABUTMENT	65
NORTH ABUTMENT	70
UNDISTRIBUTED	35
TOTAL	170

TEMPORARY DITCH CHECKS

LOCATION	628.7504 LF
UNDISTRIBUTED	50
TOTAL	50

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

SIGNAGE

STATION	LOCATION	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	SIGNAGE TYPE
8+53	RT	--	--	3	--	--	1	"BEAVER CREEK RESERVE" SIGNS
9+46	LT	1	3	--	--	--	--	W5-52L
9+50	RT	1	3	--	--	--	--	W5-52R
9+64	LT	--	--	--	1	1	--	W5-52L
9+64	RT	--	--	--	1	1	--	W5-52R
10+39	LT	--	--	--	1	1	--	W5-52R
10+39	RT	--	--	--	1	1	--	W5-52L
10+49	LT	1	3	--	--	--	--	W5-52R
10+37	RT	1	3	--	--	--	--	W5-52L
TOTALS		4	12	3	4	4	1	

NOTE: EAU CLAIRE COUNTY TO REMOVE THE PLOW UP AND PLOW DOWN SIGNS AT THE ENDS OF THE GUARDRAIL PRIOR TO CONSTRUCTION.

TRAFFIC CONTROL ITEMS

LOCATION	DURATION DAYS	643.0420 BARRICADES TYPE III NO.	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A NO.	643.0705 WARNING LIGHTS TYPE A DAY	643.0900 SIGNS NO.	643.0900 SIGNS DAY
PER SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"	75	19	1,425	30	2,250	15	1,125
PER DETOUR PLAN	75	--	--	--	--	170	12,750
TOTALS			1,425		2,250		13,875

TRAFFIC CONTROL PLACEMENT SUBJECT TO ENGINEER APPROVAL

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

MARKING LINE EPOXY 4-INCH

STA	TO	STA	LOCATION	DESCRIPTION	646.1020 YELLOW LF	646.1020 WHITE LF
9+08	-	10+92.09	LT	EDGE LINE	--	184
9+08	-	10+92.09	RT	EDGE LINE	--	184
9+08	-	10+92.09		DASHED CENTER LINE	50	--
UNDISTRIBUTED					5	22
SUBTOTALS					55	390
TOTAL						445

STAKING ITEMS

CATEGORY	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	8+03.98 - 12+24.11	340	340	60	340
TOTALS		340	340	60	340

SAWING ASPHALT

STATION	LOCATION	690.0150 LF
8+03.98 - 8+68.47	RT	67
9+08	LT & RT	29
10+92.09	LT & RT	30
TOTAL		126

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

VOL 1-188 PAGE 84-b

TRANSPORTATION PROJECT PLAT NO: 7823-03-00-4.01

THAT PART OF OUTLOT 6 AND OUTLOT 7, ASSESSORS PLAT TO THE VILLAGE OF FALL CREEK LOCATED IN THE FRACTIONAL NORTHEAST ¼ OF THE NORTHWEST ¼ OF SECTION 6, IN TOWNSHIP 26 NORTH, RANGE 7 WEST, VILLAGE OF FALL CREEK, EAU CLAIRE COUNTY, WISCONSIN.

RELOCATION ORDER CTH K - FALL CREEK - NORTH COUNTY LINE, FALL CREEK BRIDGE B-18-0237 - EAU CLAIRE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, EAU CLAIRE COUNTY 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, EAU CLAIRE COUNTY 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 COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF EAU CLAIRE COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:

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

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.

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.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGE.

ALL EXISTING IRON PINS ARE 1" IRON PIPES UNLESS OTHERWISE NOTED.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
CTH K: CSM 2308 AND ASSESSOR'S PLAT TO THE VILLAGE OF FALL CREEK.
MILL RD.: PLAT OF SURVEYS S00330 AND U00097.

NOTES:

A PERMANENT LIMITED EASEMENT (PLE) FOR THE RIGHT OF CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, 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 DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES WITHIN THE RIGHT OF WAY.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE EAU CLAIRE COUNTY HIGHWAY DEPARTMENT IN ALTOONA, WI.

1196916
TINA K. POMMER
EAU CLAIRE COUNTY WI
REGISTER OF DEEDS
RECORDED ON
08/26/2020 01:40 PM
REC FEE: 25.00
TRANS FEE:
EXEMPT #:
PAGES: 1

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 7823-03-00-4.01
AMENDMENT NO:___

UTILITY INTERESTS REQUIRED

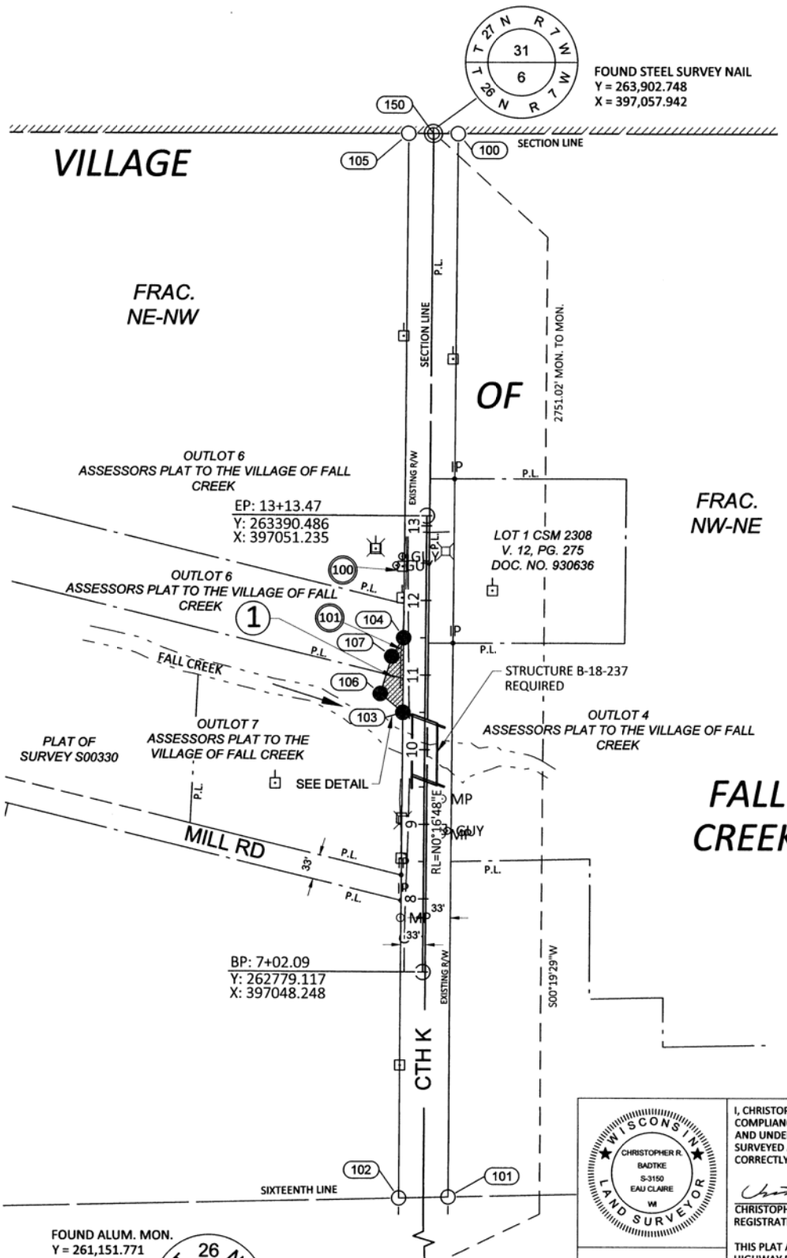
UTILITY NO.	OWNER(S)	INTEREST REQUIRED	EASEMENTS
100	NORTHERN STATES POWER	RELEASE OF RIGHTS	V. 819, P. 444, DOC. NO. 632650 PARCEL 1
101	CINC	RELEASE OF RIGHTS	NO EASEMENTS OF RECORD

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNER(S)	INTEREST REQUIRED	R/W (ACRES) PLE
1	VILLAGE OF FALL CREEK	PLE	0.04

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

GN
0 100 200
SCALE, FEET



PLE STATION & OFFSET TABLE		
POINT	STATION	OFFSET
103	10+50.00	29.40'
104	11+50.00	29.33'
106	10+75.00	60.00'
107	11+25.00	45.00'

EXISTING R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
150-100	S89°40'31"E	33.00'
100-101	S00°19'29"W	1424.80'
101-102	S88°46'59"W	66.02'
102-103	N00°19'29"E	650.80'
103-104	N00°19'29"E	100.00'
104-105	N00°19'29"E	675.78'
105-150	S89°40'31"E	33.00'

PLE COURSE TABLE		
COURSE	BEARING	DISTANCE
103-106	N50°28'05"W	39.51'
106-107	N16°58'45"E	52.20'
107-104	N32°22'01"E	29.51'
104-103	S00°19'29"W	100.00'

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM.
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.		
EASEMENT	EASE.		
HIGHWAY EASEMENT	H.E.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	PL		
RECORDED AS	(100')		
REFERENCE LINE	R/L		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

FOUND IRON PIPE/PIN	
R/W MONUMENT	
R/W STANDARD	
SIGN	
SECTION CORNER MONUMENT	
SECTION CORNER SYMBOL	
FEE (HATCH VARIES)	
TEMPORARY LIMITED EASEMENT	
PERMANENT LIMITED EASEMENT	
R/W BOUNDARY POINT	
PARCEL NUMBER	
UTILITY PARCEL NUMBER	
SIGN NUMBER (OFF PREMISE)	
BUILDING	

CONVENTIONAL SYMBOLS

LP (1" UNLESS NOTED)	PROPOSED R/W LINE
•(SET)	EXISTING H.E. LINE
▲(SET)	PROPERTY LINE
I SIGN	LOT & TIE LINES
	SLOPE INTERCEPTS
	CORPORATE LIMITS
	NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
	NO ACCESS (BY ACQUISITION)
	NO ACCESS (BY STATUTORY AUTHORITY)
RWB20	SECTION LINE
103	QUARTER LINE
92	SIXTEENTH LINE
21-1	EXISTING CENTERLINE
	PROPOSED REFERENCE LINE
	PARALLEL OFFSET

CONVENTIONAL UTILITY SYMBOLS

	NON COMPENSABLE	COMPENSABLE
WATER — W		
GAS — G		
TELEPHONE — T		
OVERHEAD TRANSMISSION LINES — OH		
ELECTRIC — E		
CABLE TELEVISION — TV		
FIBER OPTIC — FO		
SANITARY SEWER — SAN		
STORM SEWER — SS		
POWER POLE	○	●
TELEPHONE POLE	⌀	⌀
TELEPHONE PEDESTAL	⌑	⌑
ELECTRIC TOWER	⊠	

I, CHRISTOPHER R. BADTKE, 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 EAU CLAIRE COUNTY HIGHWAY DEPARTMENT, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

CHRISTOPHER R. BADTKE
REGISTRATION NUMBER: S-3150

08/18/2020
DATE

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE EAU CLAIRE COUNTY HIGHWAY DEPARTMENT.

JON JOHNSON

8/25/2020
DATE

AYRES

BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
1	9+09	120'D' SPIKE IN POWER POLE, 30' LT.	923.87
2	9+64	120'D' SPIKE IN WINGWALL, 19' LT.	922.80

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

FOR GUARDRAIL LAYOUT, SEE "GUARDRAIL LAYOUT" SHEET.

FOR APPROACH SLAB AND ASPHALTIC FLUME DETAILS, SEE "APPROACH SLAB AND ASPHALTIC FLUME DETAILS" SHEET.

N

PEDESTRIAN BRIDGE TO REMAIN IN PLACE

FALL CREEK

ADDITIONAL STRUCTURE (LOCATED UNDERNEATH P-18-702) TO BE REMOVED

SLOPE INTERCEPT

PARKING LOT

MILL POND ROAD

66'

EXISTING R/W

XCEL ENERGY

BM#1

BM#2

SLOPE INTERCEPT

CINC

℄ OF CTH K

CTH K

(ASPHALT)

8+00

9+00

10+00

11+00

12+00

13+00

N00°56'48"E

ASPHALTIC FLUME

XCEL ENERGY

PI 7+02.09

PI 13+13.47

EXISTING R/W

SLOPE INTERCEPT

CENTURYLINK

STRUCTURE B-18-237

EXISTING STRUCTURE P-18-702 TO BE REMOVED

SLOPE INTERCEPT

BEGIN CONSTRUCTION
STA. 8+03.98
Y = 262881.00
X = 397048.75

TRINITY CEMETERY

BEGIN PROJECT
STA. 9+08.00
SAWCUT REQ'D
Y = 262985.03
X = 397049.25

END PROJECT
STA. 10+92.09
SAWCUT REQ'D
Y = 263169.11
X = 397050.15

END CONSTRUCTION
STA. 12+24.11
Y = 263301.14
X = 397050.80

EARTHWORK SUMMARY
STA. 8+03.98 TO STA. 9+57.96
EXC. COMMON 170 C.Y.
FILL 5 C.Y.
SHR. = 30%
WASTE 145 C.Y.

EARTHWORK SUMMARY
STA. 10+42.04 TO STA. 12+24.11
EXC. COMMON 144 C.Y.
FILL 101 C.Y.
SHR. = 30%
BORROW 6 C.Y.

140.00' VC
K = 60.61

FINISHED ℄ PROFILE

EXISTING ℄ PROFILE

-1.23%

1.08%

PI STA 9+08.00
PI EL 925.69

PC STA 9+10.00
PC EL 925.67

PI STA 9+80.00
PI EL 924.80

PT STA 10+50.00
PT EL 925.56

PI STA 10+92.09
PI EL 926.02

HIGH WATER$_{100}$ EL. 905.09

WATER EL. 900.0 (4-16-2019)

EXISTING ELEVATION

PROPOSED ELEVATION

STREAM BED EL. 899.1±

930
920
910
900

927.89 927.27 926.56 925.77 925.26 925.31 899.12 925.23 925.28 925.56 926.16 927.28 928.75 930.60 932.91

7+50 8+00 8+50 9+00 9+50 10+00 10+50 11+00 11+50 12+00 12+50 13+00

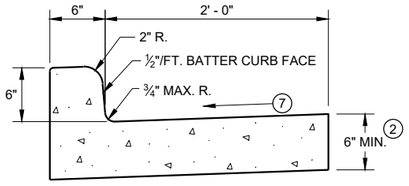
REMOVING OLD STRUCTURE OVER WATERWAY
WITH MINIMAL DEBRIS STA. 10+00, STRUCTURE P-18-702
SINGLE SPAN PRESTRESSED CONCRETE CHANNEL BRIDGE
ON TIMBER ABUTMENTS
30' CLEAR RDWY. x 72.5' O.A.L.
0° SKEW
INCLUDE EXISTING STRUCTURE UNDERNEATH SINGLE-SPAN STEEL DECK GIRDER BRIDGE ON CONCRETE MASONRY ABUTMENTS AND CONCRETE FOOTINGS

STA. 10+00
STRUCTURE B-18-237 REQ'D.
SINGLE SPAN 36W" PRESTRESSED CONCRETE GIRDER
ON SILL-TYPE (A1) ABUTMENTS
32'-0" CLEAR ROADWAY x 84'-1" O.A.L.
20° LHF SKEW

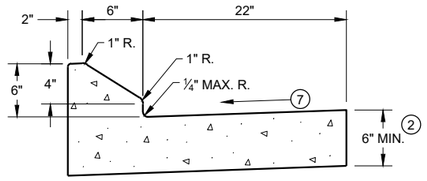
PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	PLAN AND PROFILE	SCALE, FEET 0 25 50	SHEET 19	E

Standard Detail Drawing List

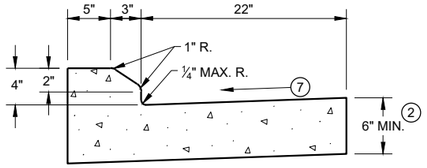
08D01-21A	CONCRETE CURB & GUTTER
08D01-21B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11F	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
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)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



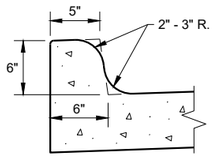
TYPES A[1] & D



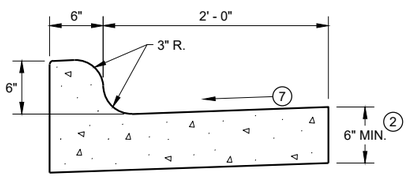
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

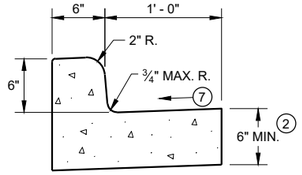


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



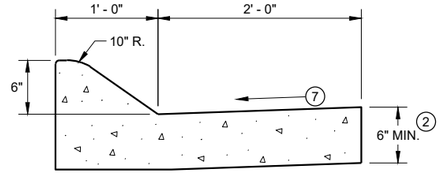
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"

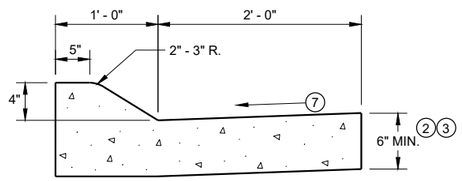


TYPES A[1] & D

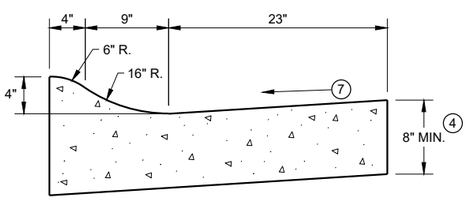
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D



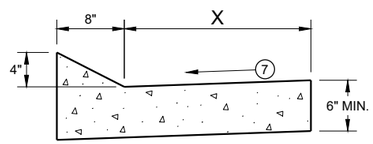
4" SLOPED CURB TYPES A[1] & D



4" SLOPED CURB TYPES R[1] & T[5]

CONCRETE CURB AND GUTTER 36"

TBT & TBTT	X
30"	22"
36"	28"

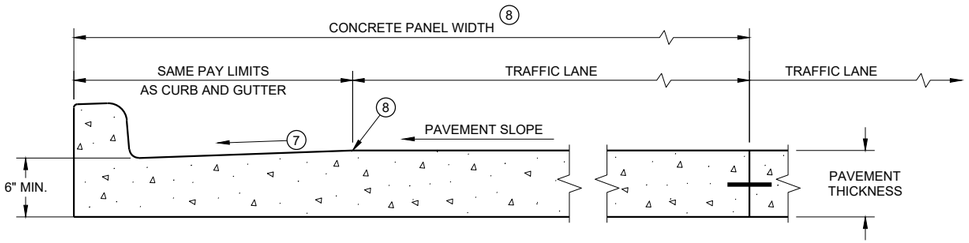


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

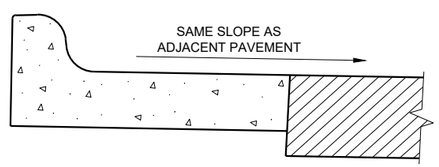
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER[6]
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

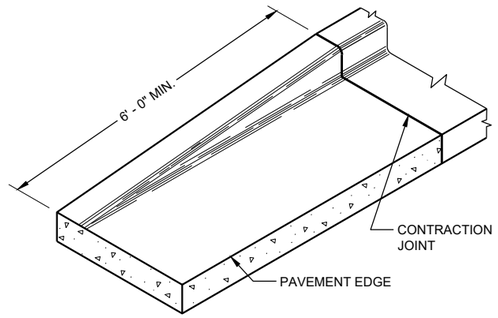
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

1. TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
3. USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
4. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
5. THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
6. WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
7. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
8. INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

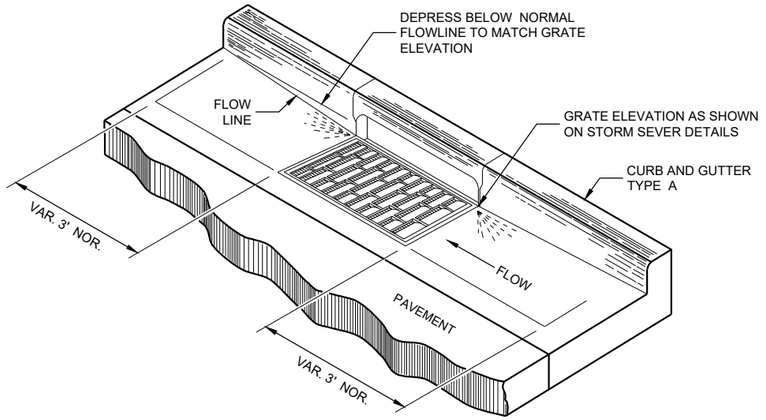
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 21a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

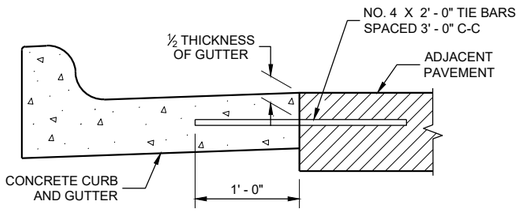
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

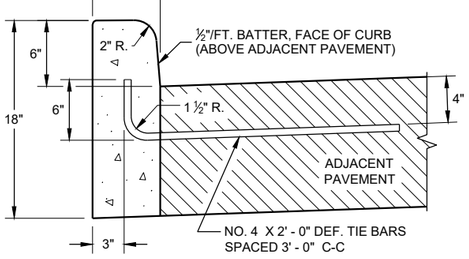
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

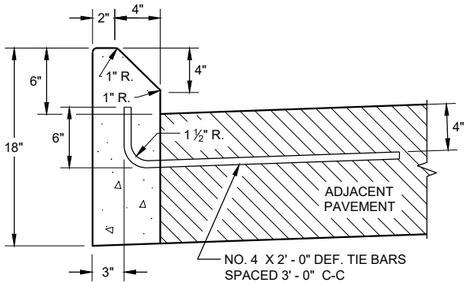
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

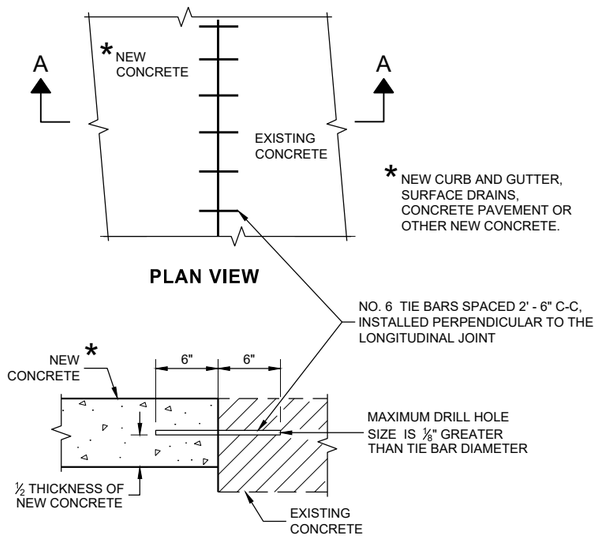


TYPES A (1) & D

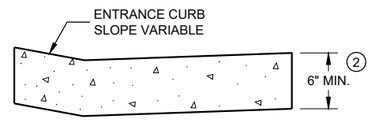


TYPES G (1) & J

CONCRETE CURB



TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

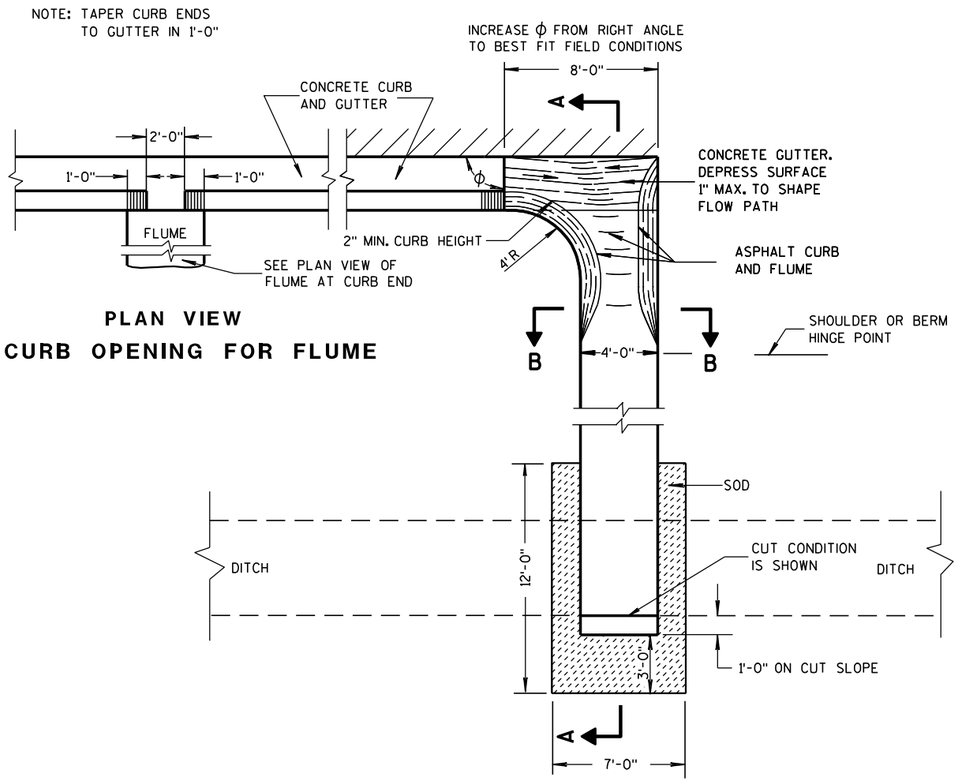
APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

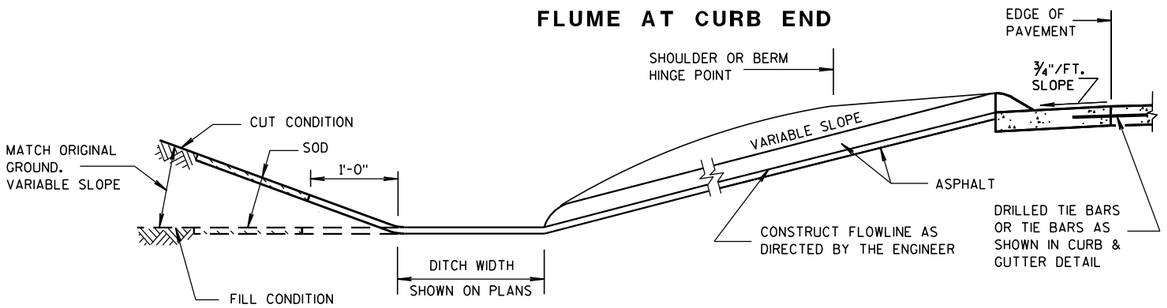
SDD08D01 - 21b

ASPHALTIC FLUME

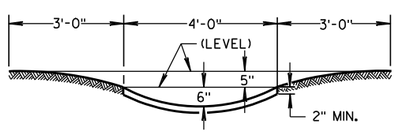


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

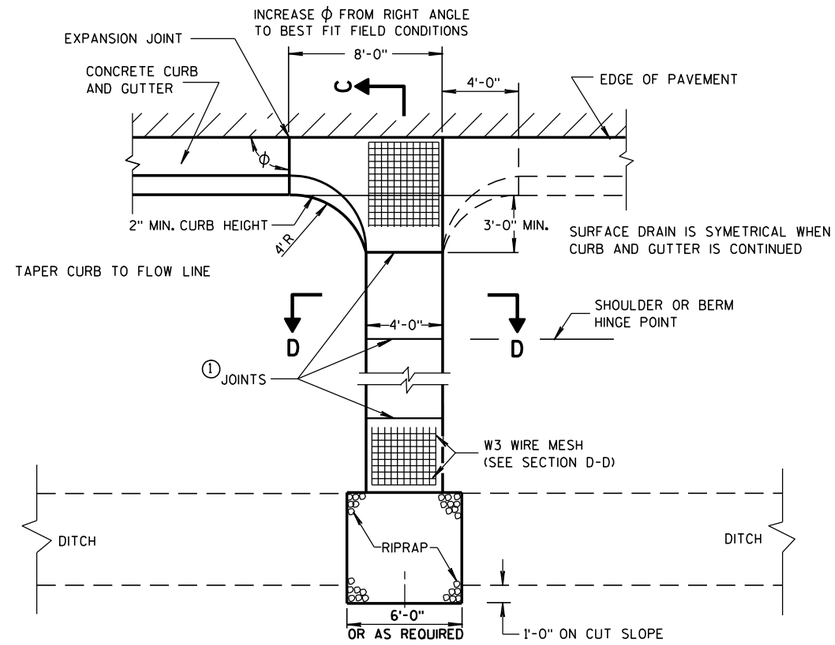
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

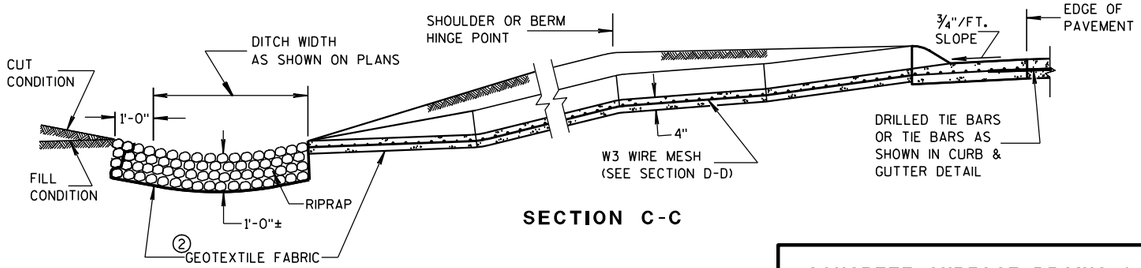
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

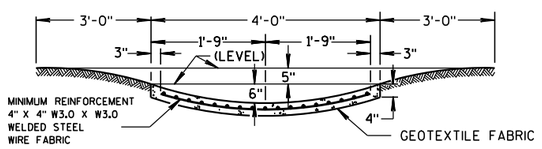
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT

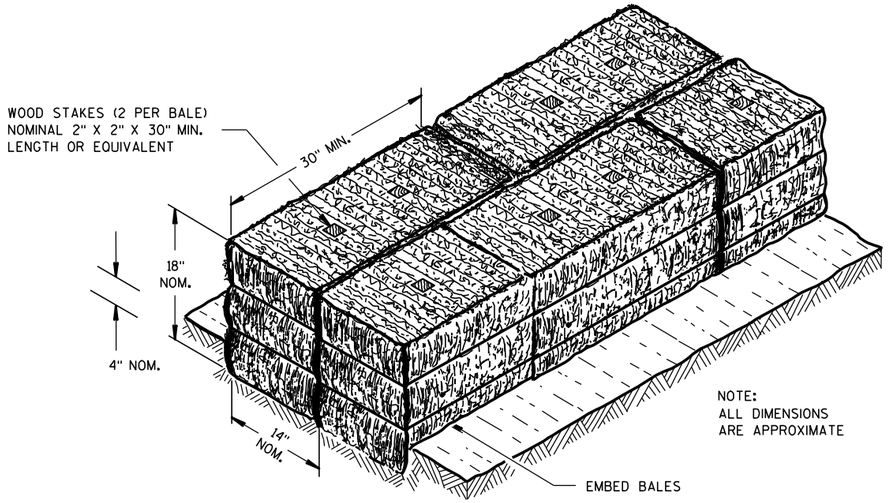
FHWA

6

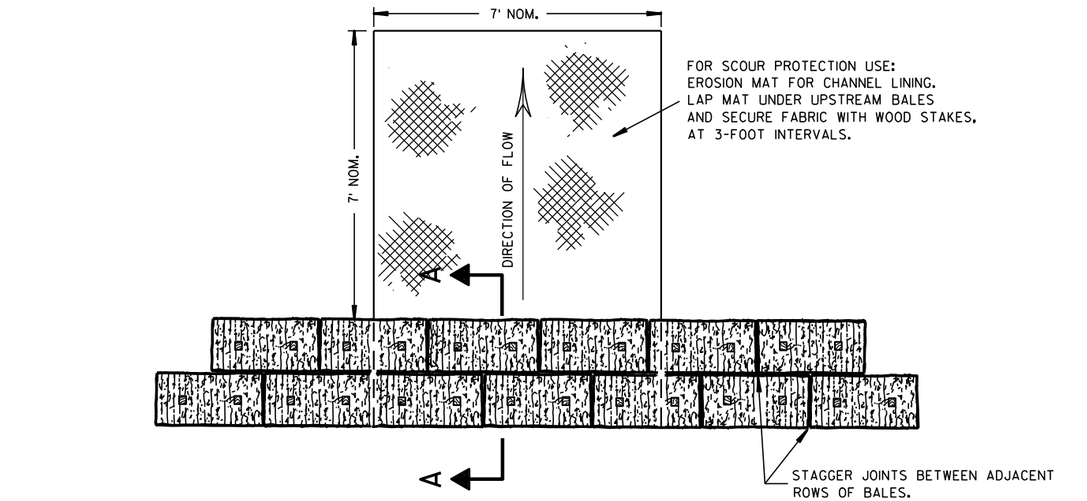
S.D.D. 8 D 4-5

6

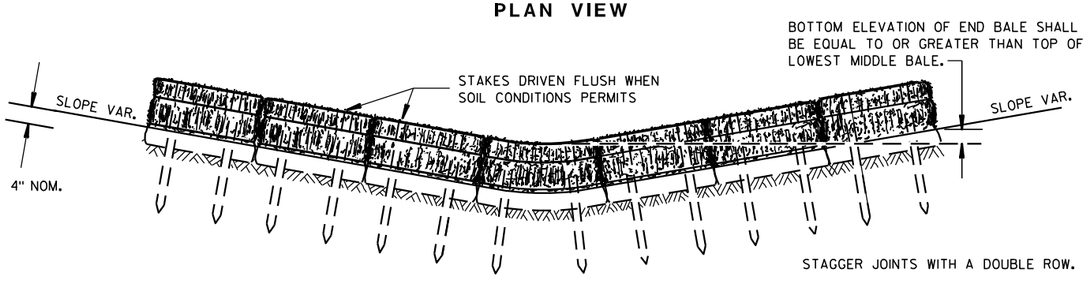
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



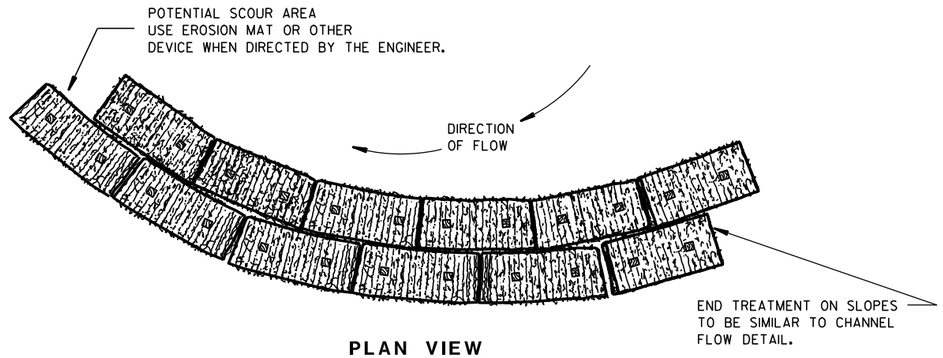
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

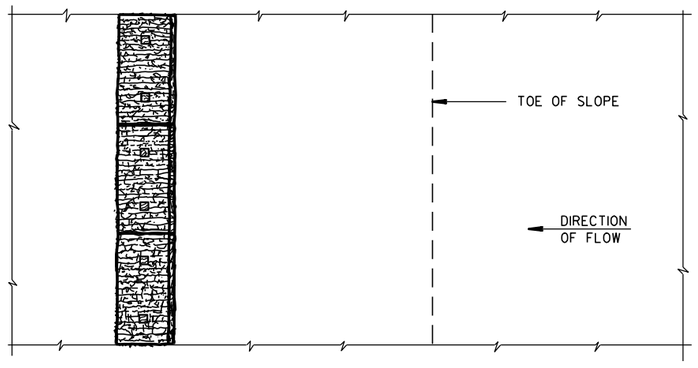
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

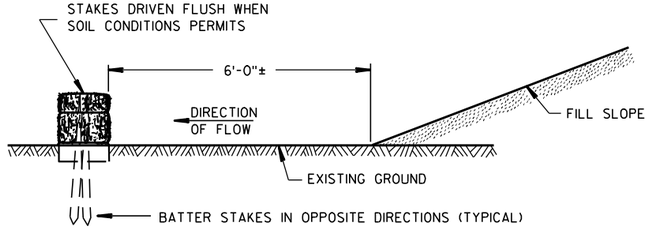


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

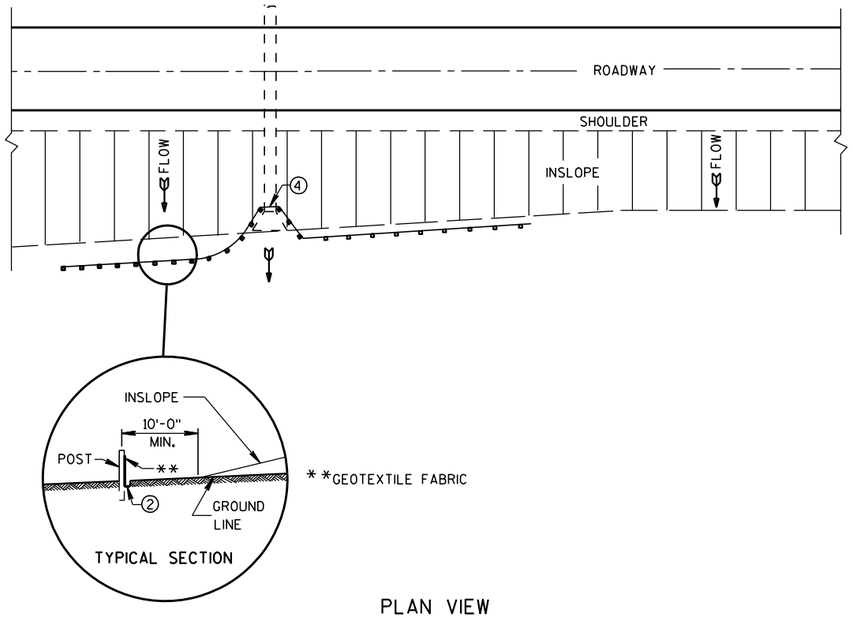
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

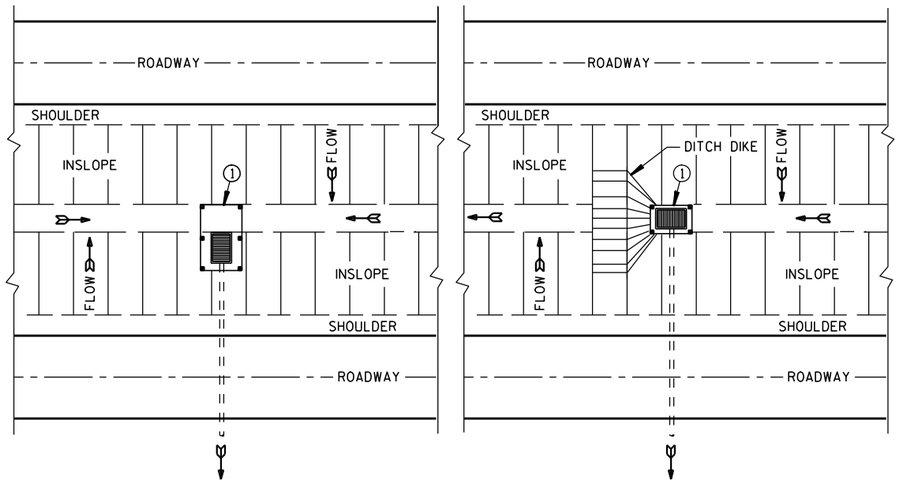
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



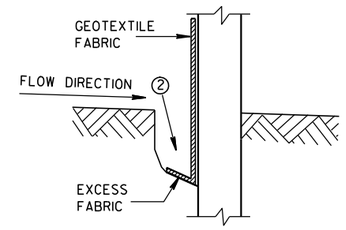
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

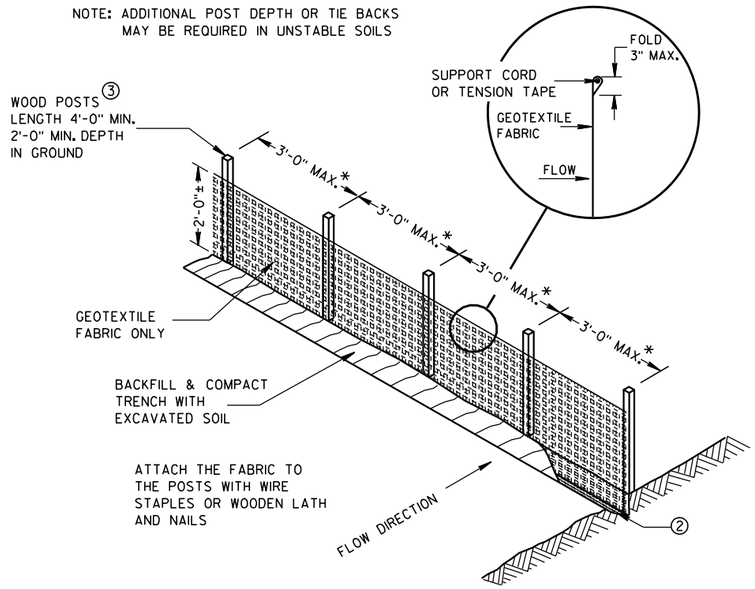
GENERAL NOTES

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

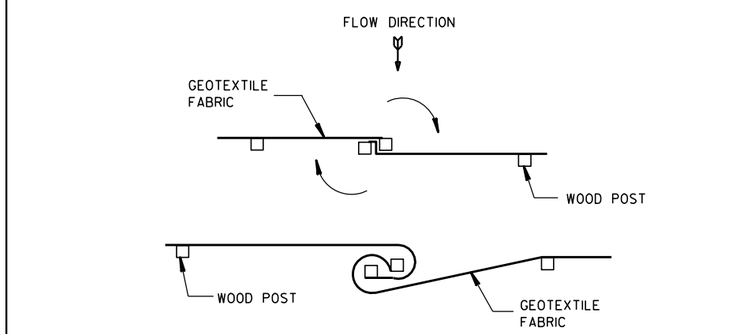
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



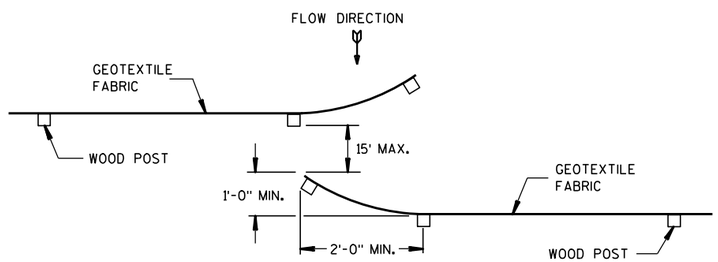
TRENCH DETAIL



SILT FENCE

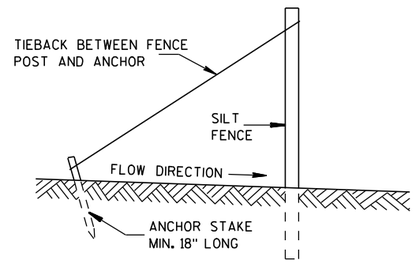


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

25

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S.D.D. 8 E 9-6

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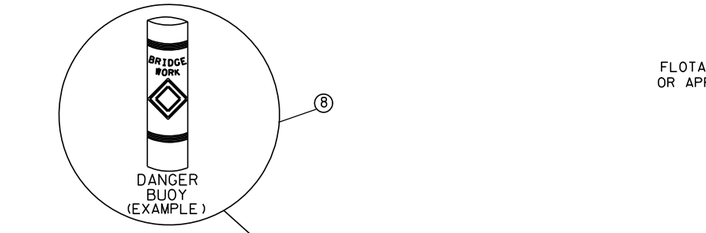
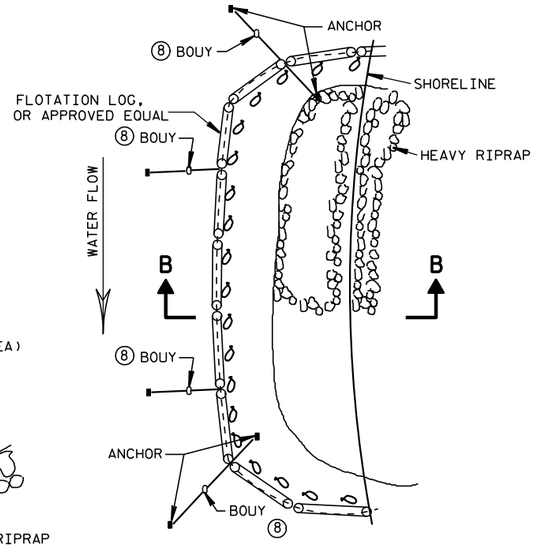
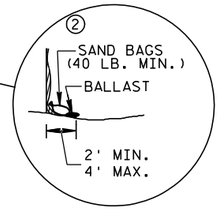
S.D.D. 8 E 9-6

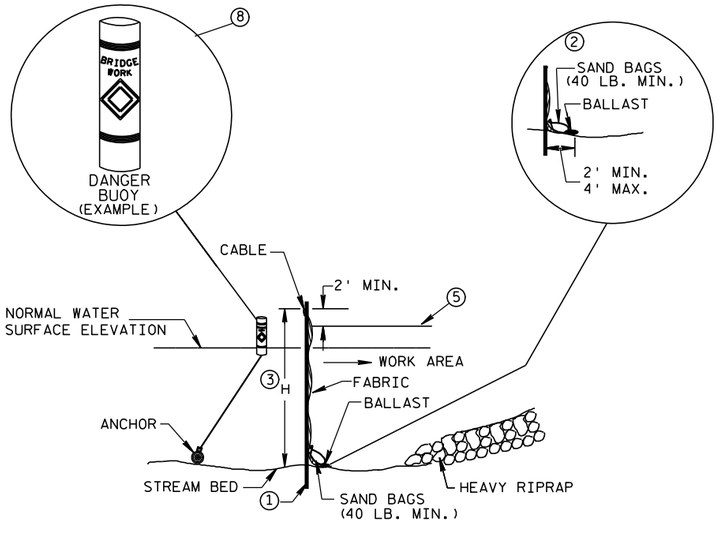


SECTION B-B

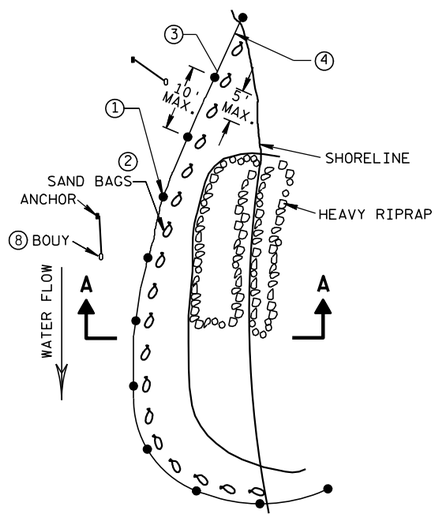




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

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

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

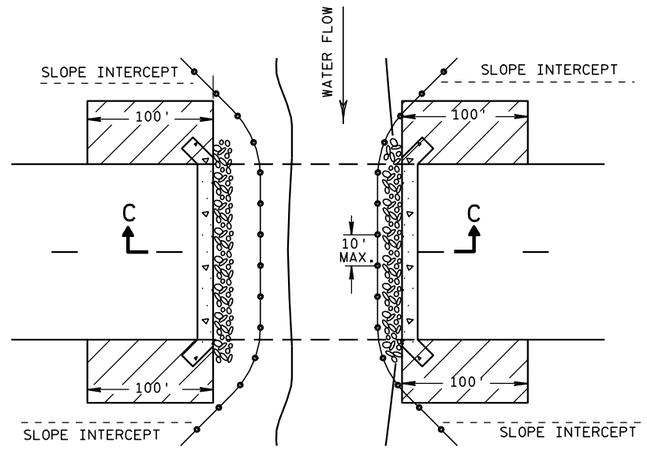
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

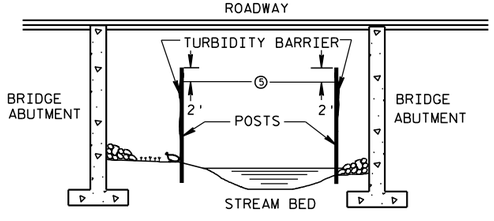
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



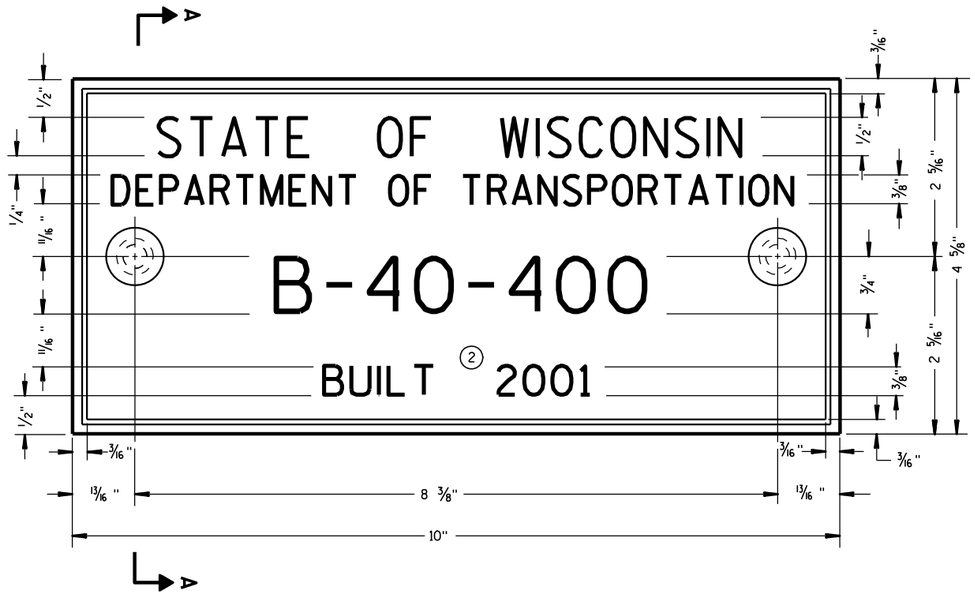
SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
6/04/02 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

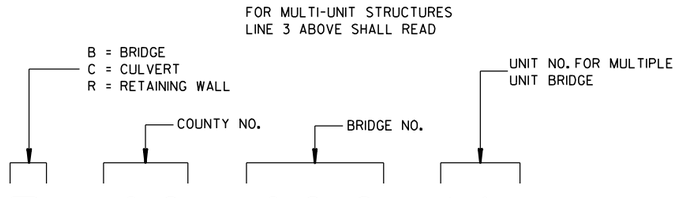
6

S.D.D. 8 E 11-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

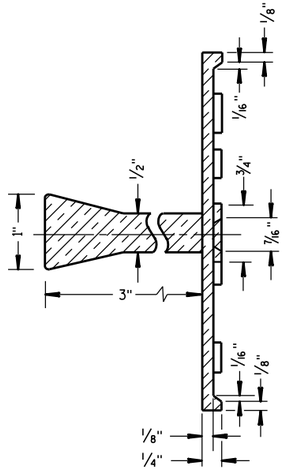
GENERAL NOTES

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.

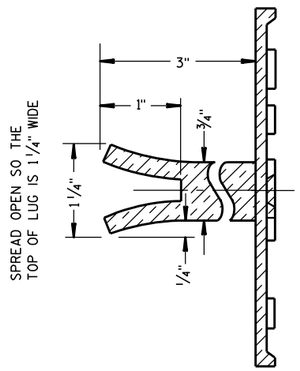
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

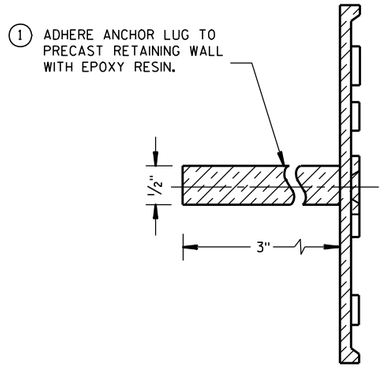
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



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	

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S.D.D. 12 A 3-10

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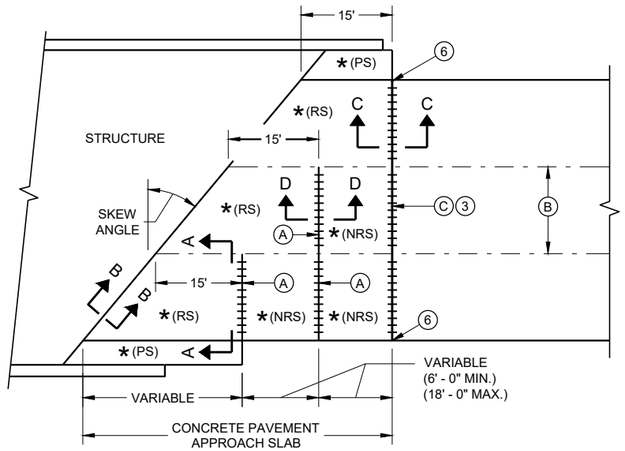
S.D.D. 12 A 3-10



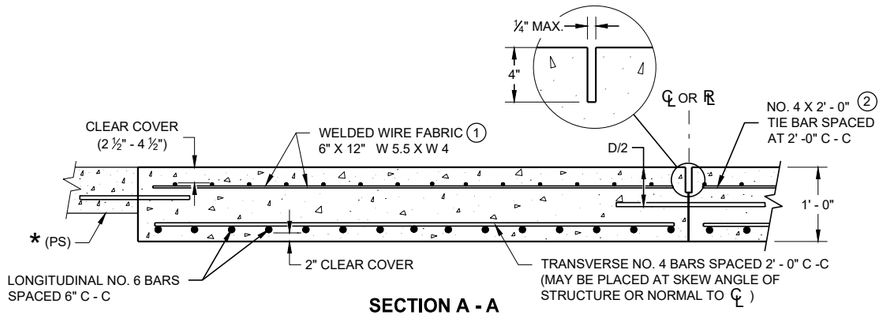
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

(RS) = REINFORCED CONCRETE SLAB

(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

(NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

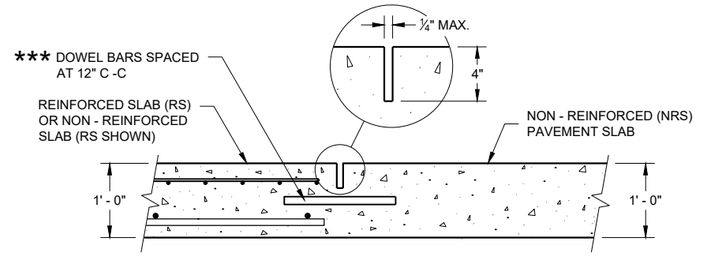
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

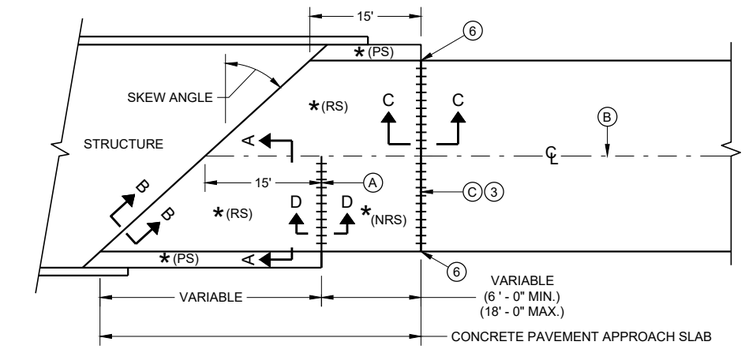
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .

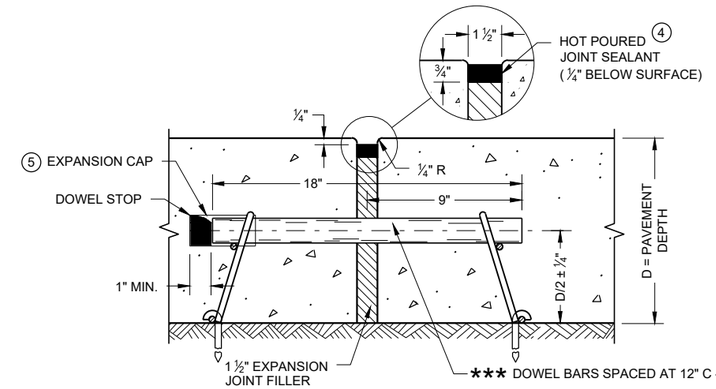


SECTION D - D
CONTRACTION JOINT

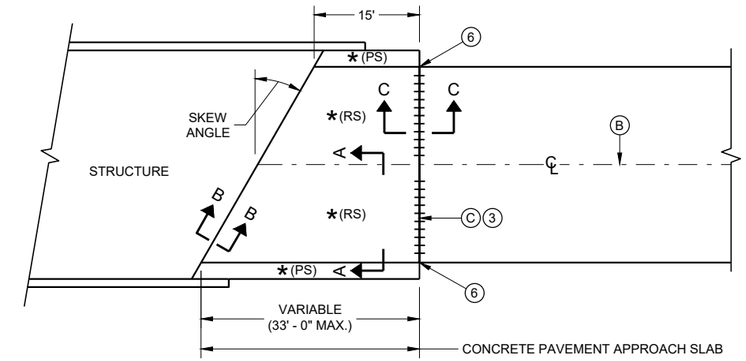


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

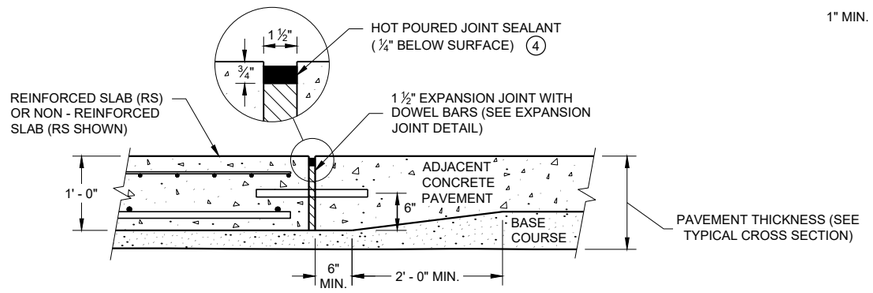


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISO

FHWA

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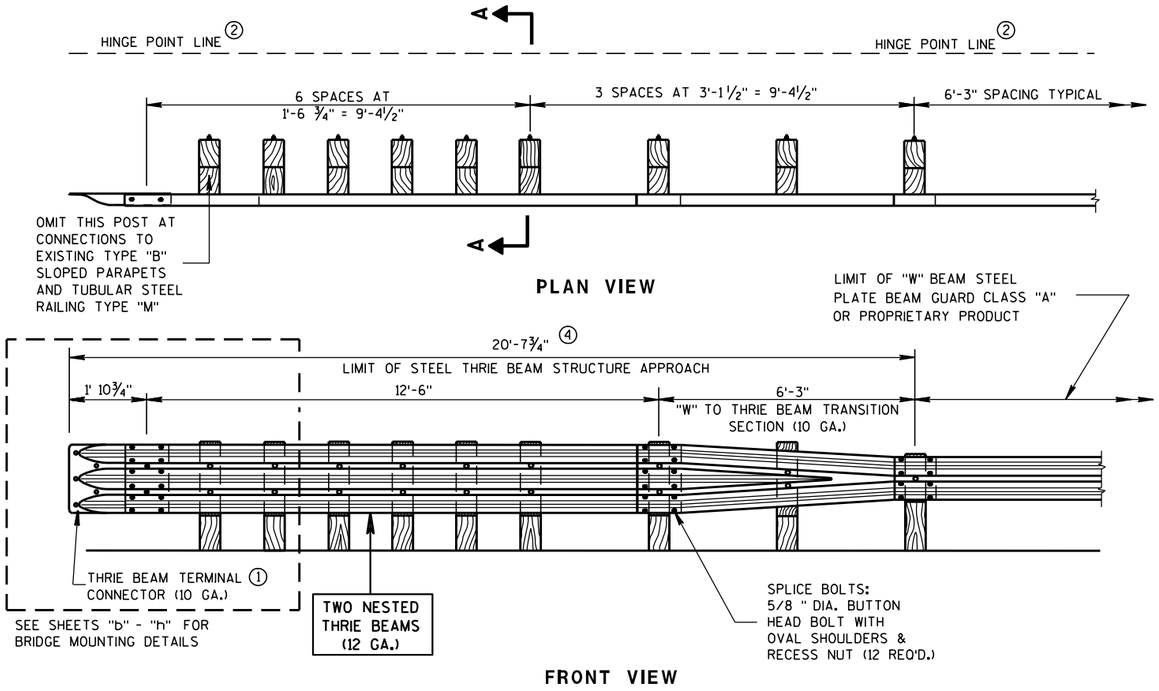
SDD 13B02 - 09a



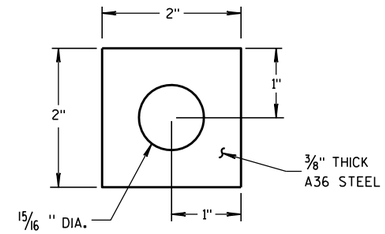


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

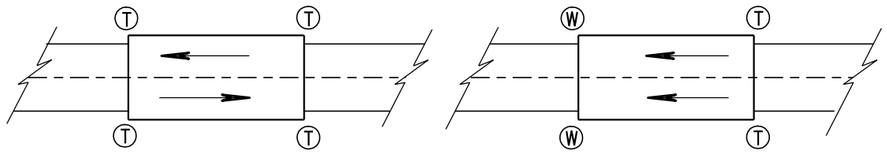
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



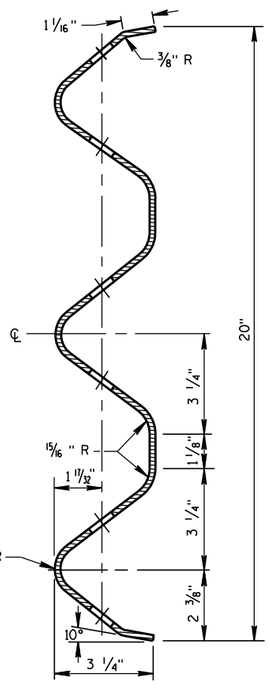
TWO WAY TRAFFIC

ONE WAY TRAFFIC

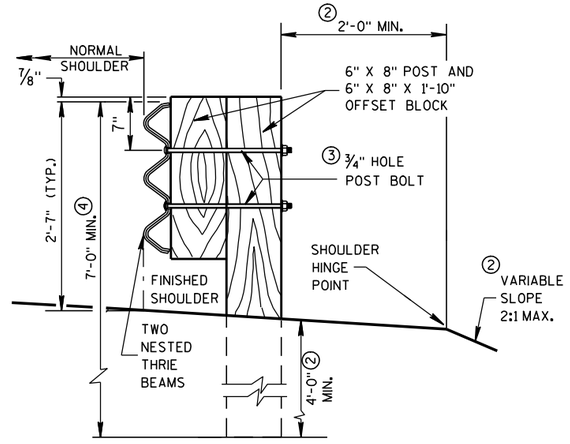
Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

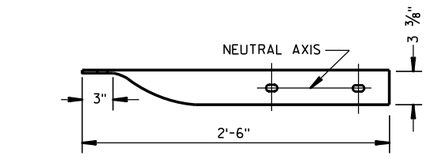
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

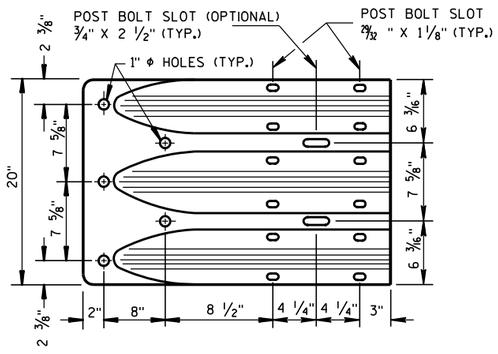


SECTION THRU THRIE BEAM RAIL ELEMENT

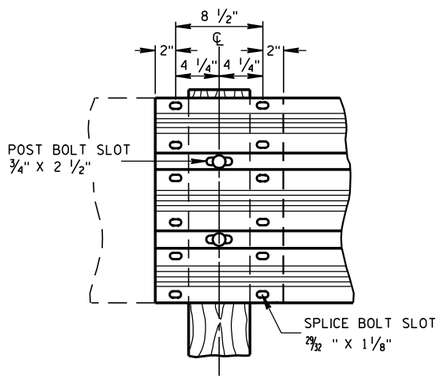


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

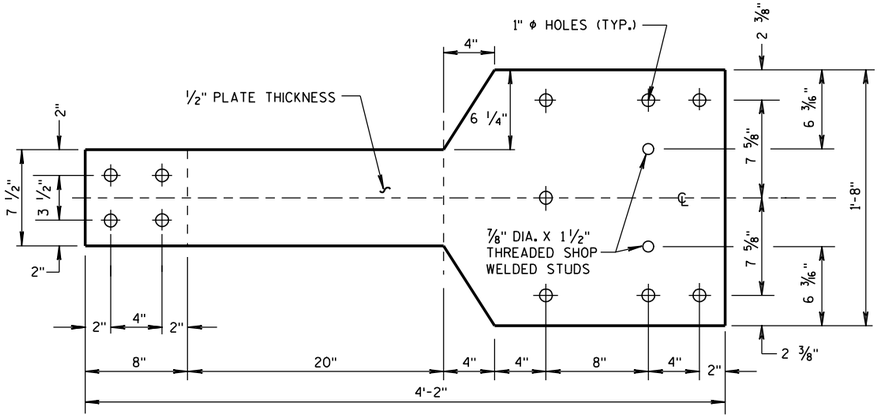
8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

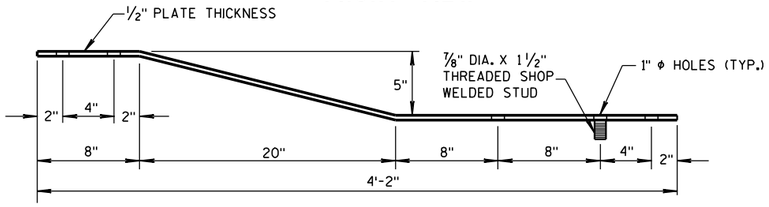
FHWA

GENERAL NOTES

① VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.

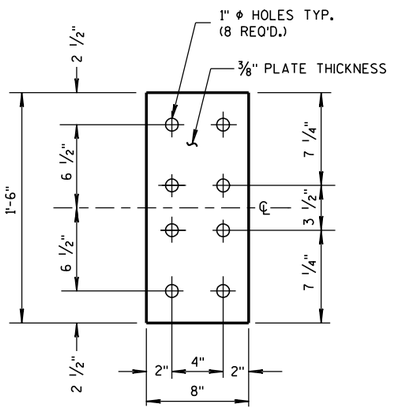


FRONT VIEW



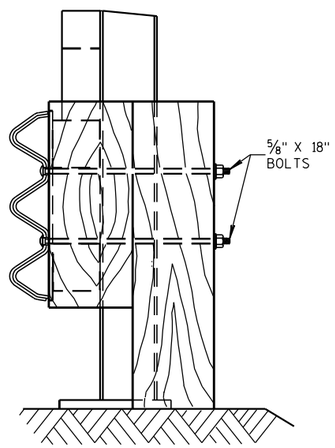
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

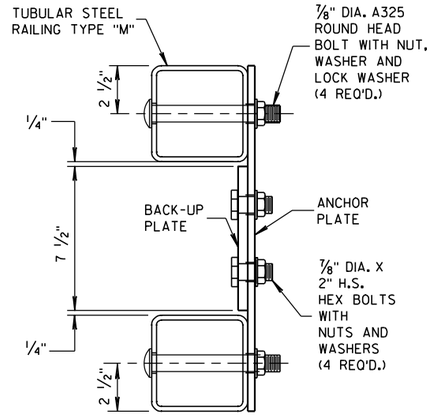


FRONT VIEW

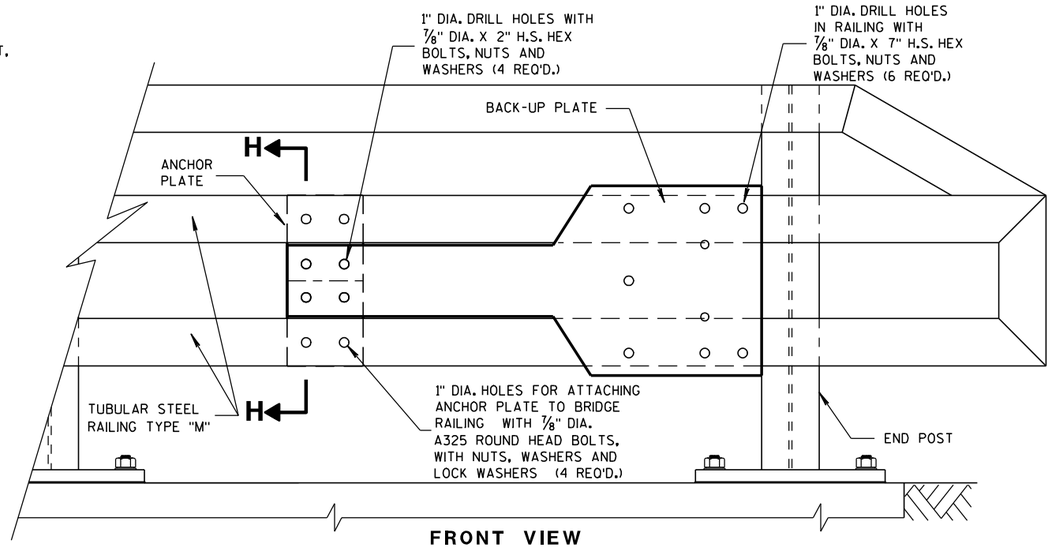
ANCHOR PLATE DETAIL, TYPE "M"



SECTION I-I

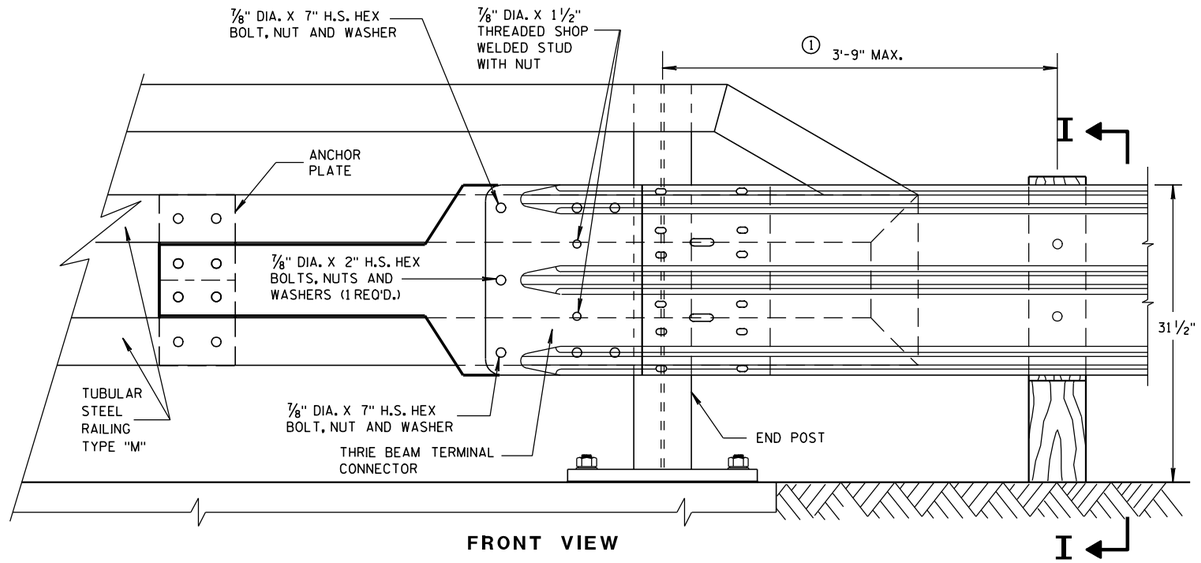


SECTION H-H

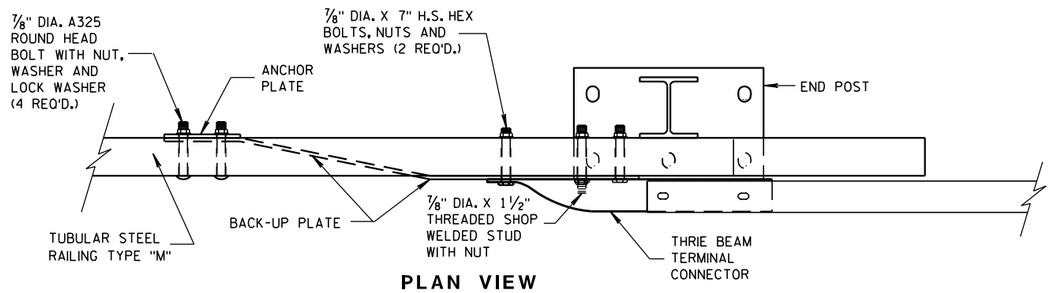


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

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S.D.D. 14 B 20-11f

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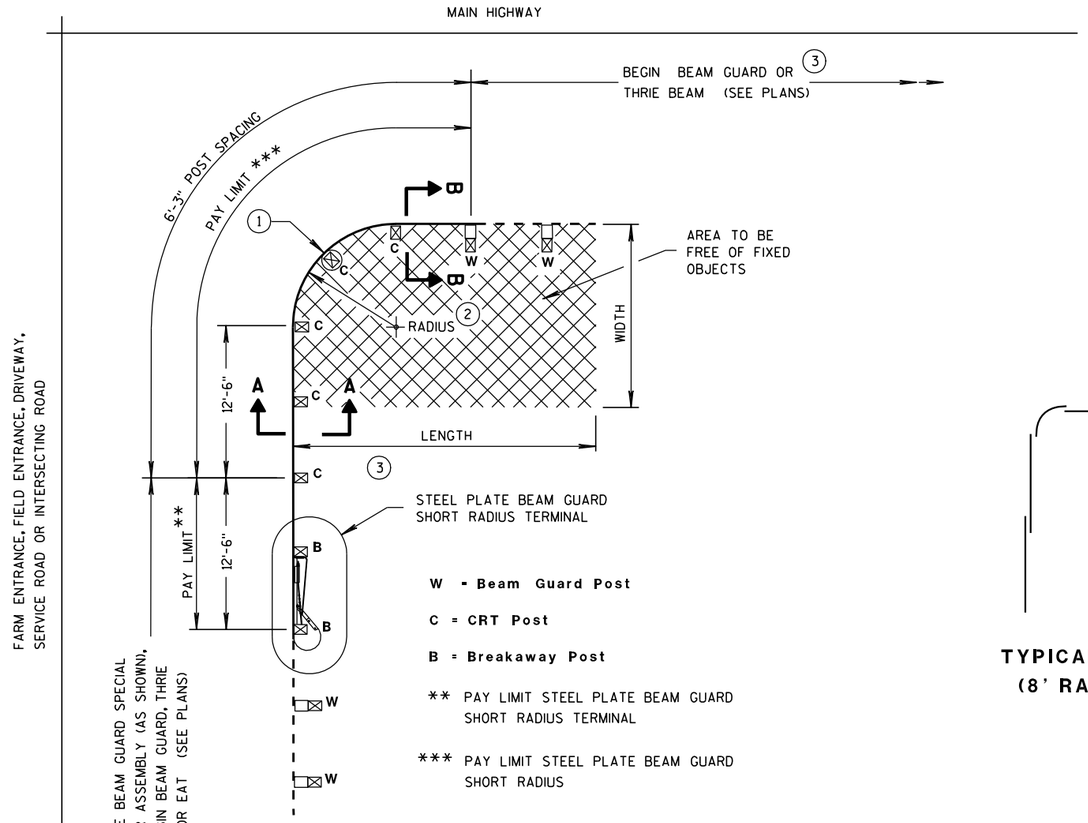
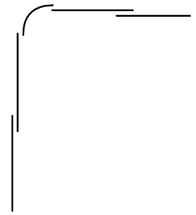


TYPICAL LAYOUT
(8' RADIUS SHOWN)



TYPICAL LAP SPLICES
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2. UNLESS NOTED OTHERWISE.

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

(1) ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.

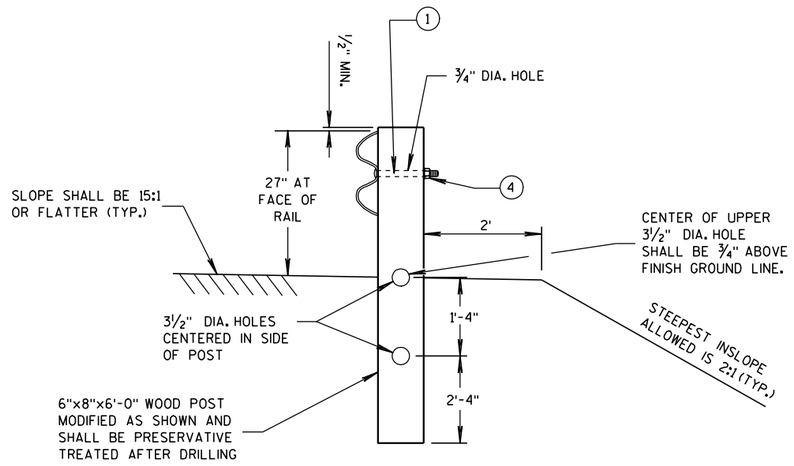
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

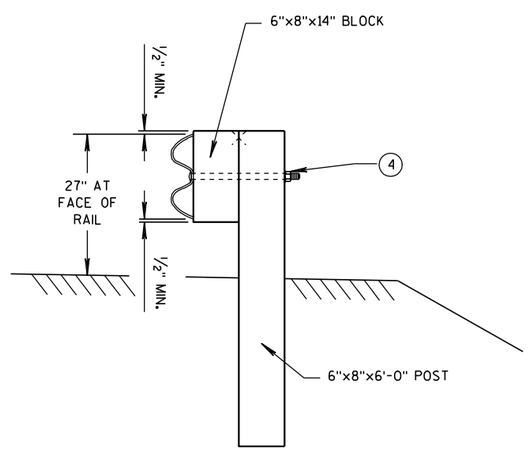
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



SECTION A-A
(CRT POST)



SECTION B-B
(BEAM GUARD POST)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

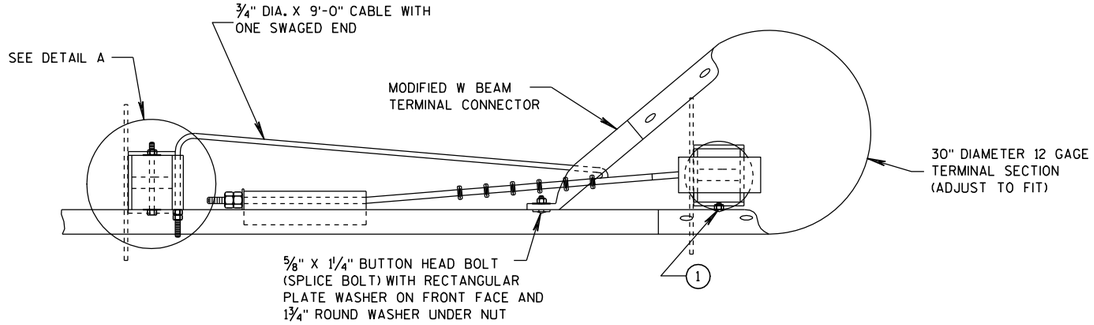
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

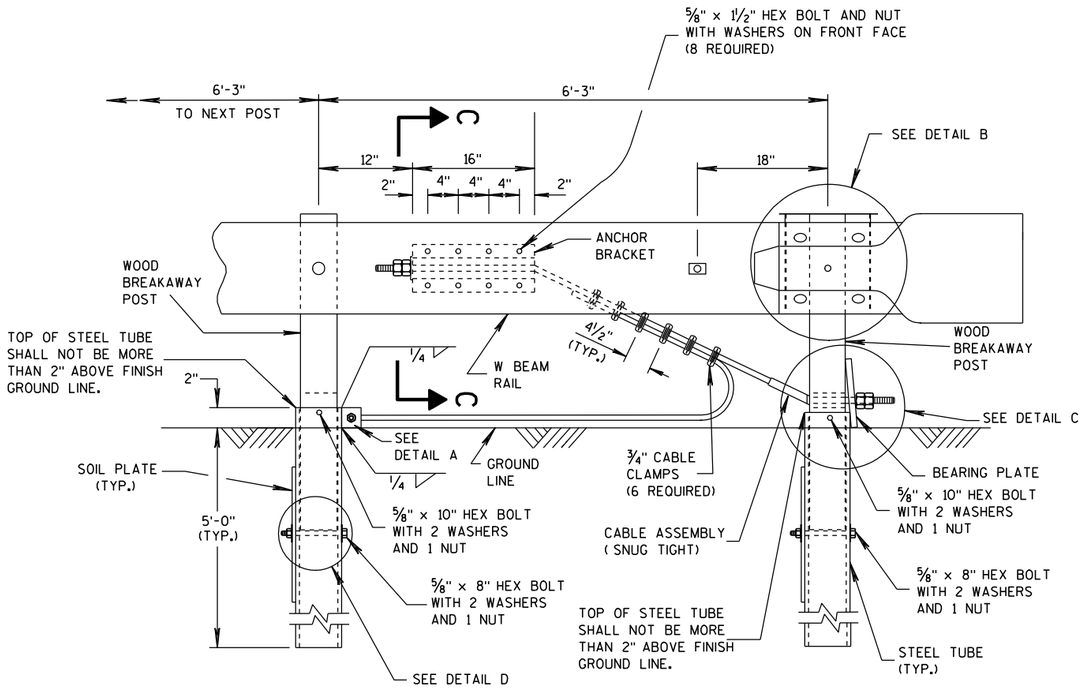
S.D.D. 14 B 27-1a

6

S.D.D. 14 B 27-1a



PLAN VIEW



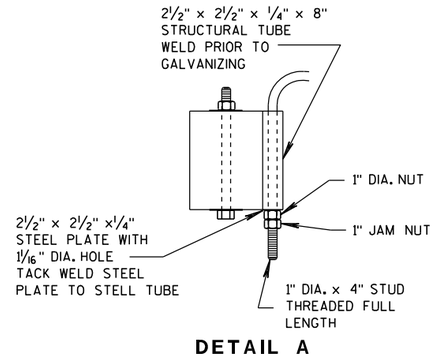
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

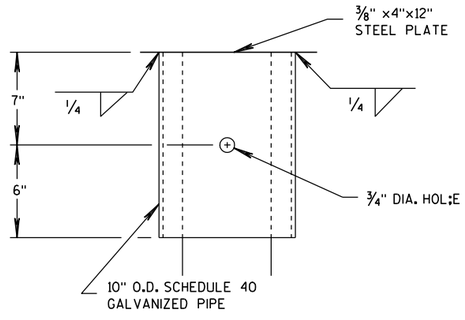
GENERAL NOTES

(1) ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A ⅝" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.

INSTALL GALVANIZED ¾" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



DETAIL A



DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

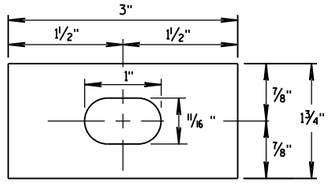
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

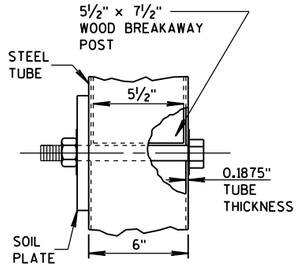
S.D.D. 14 B 27-1b

6

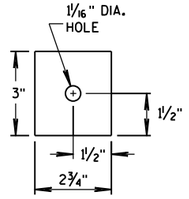
S.D.D. 14 B 27-1b



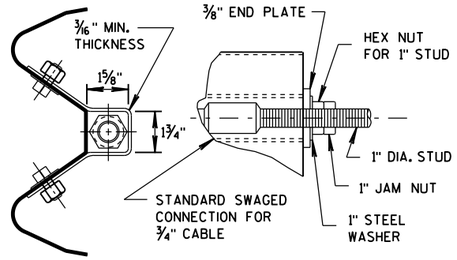
RECTANGULAR PLATE WASHER



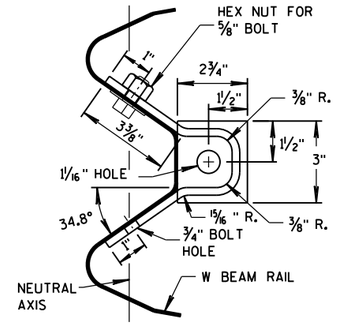
DETAIL D



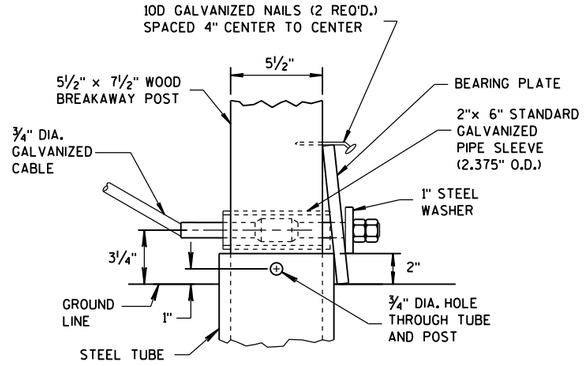
END PLATE



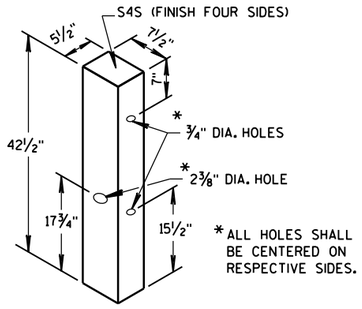
SECTION C-C
(END PLATE REMOVED)



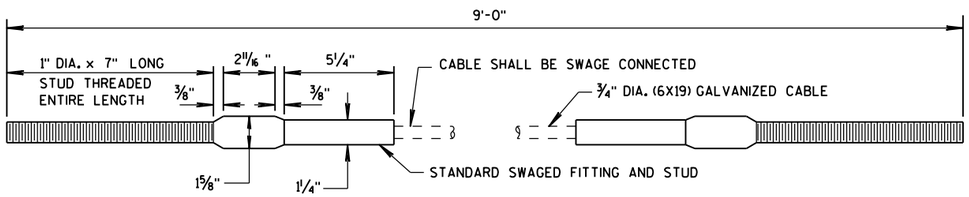
ANCHOR BRACKET



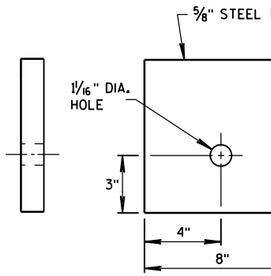
DETAIL C



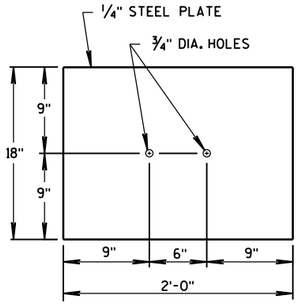
WOOD BREAKAWAY POST



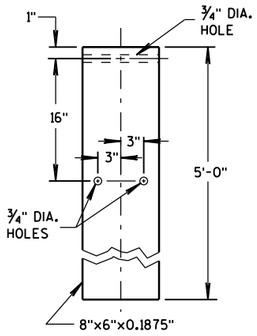
CABLE ASSEMBLY



BEARING PLATE



SOIL PLATE



STEEL TUBE

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 27-1c

6

S.D.D. 14 B 27-1c

(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.

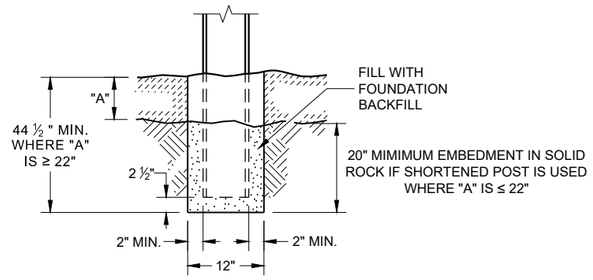
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

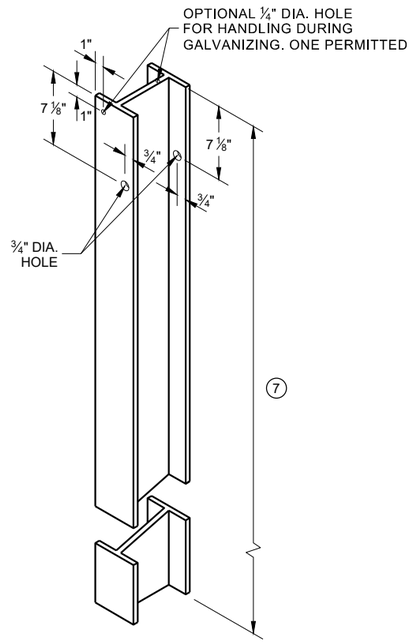
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

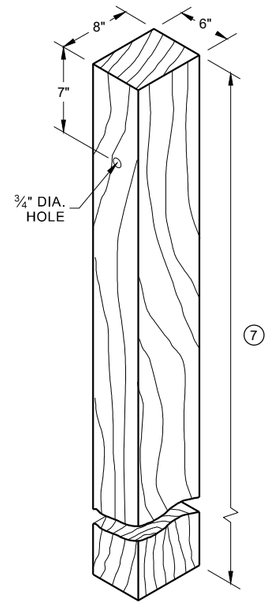
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



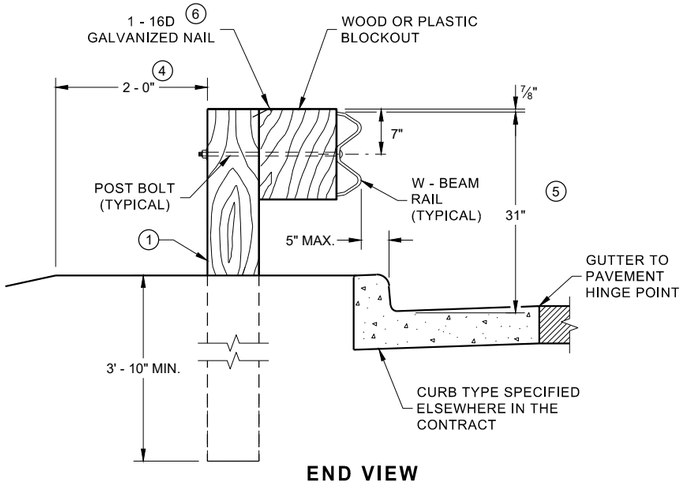
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



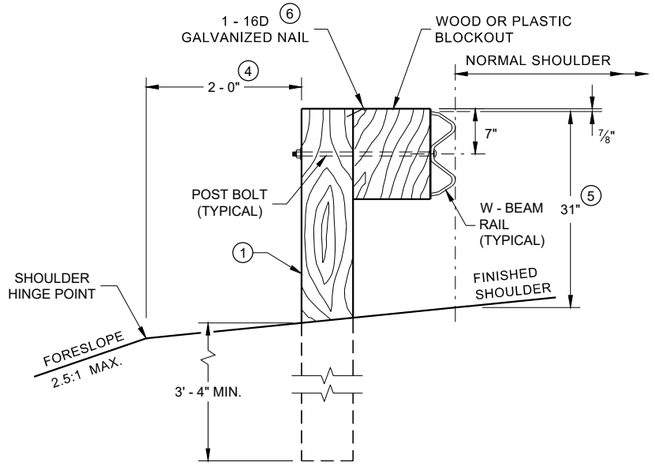
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



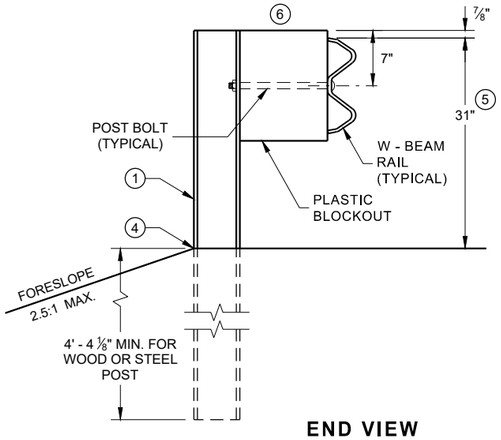
WOOD POST (6" X 8") NOMINAL (1)



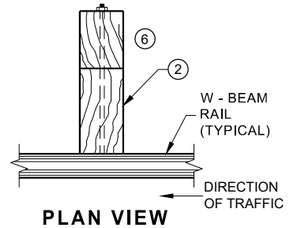
END VIEW
LOCATED ALONG A CURBED ROADWAY



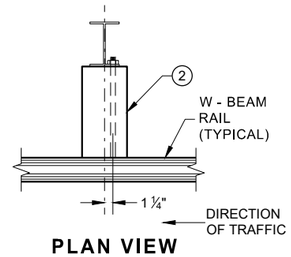
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



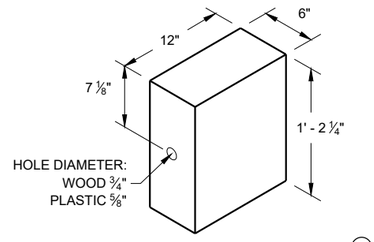
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

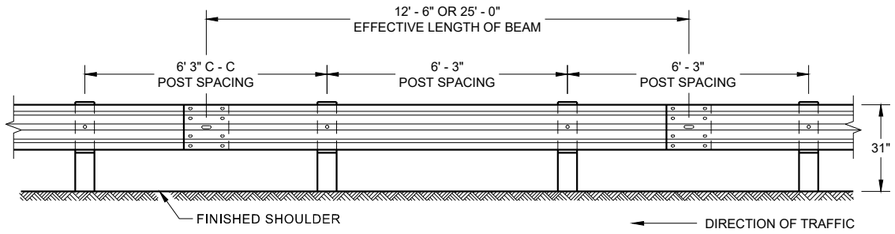
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

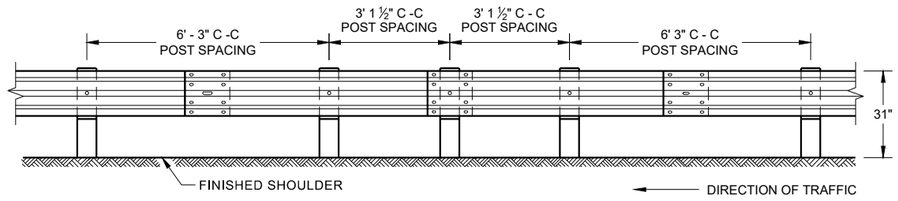
SDD 14B42 - 06a

6

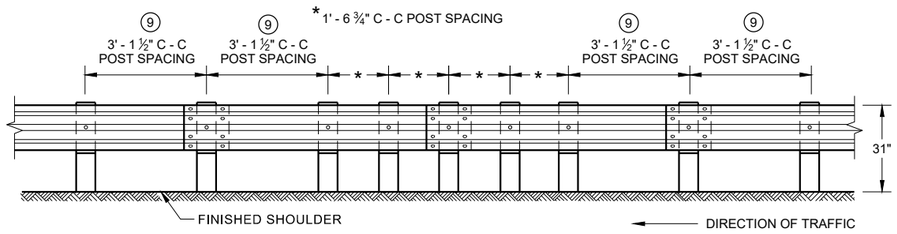
SDD 14B42 - 06a



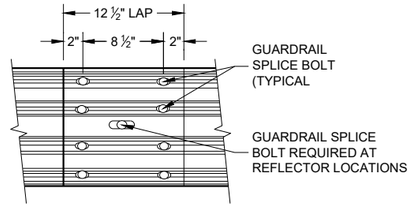
FRONT VIEW
POST SPACING STANDARD INSTALLATION



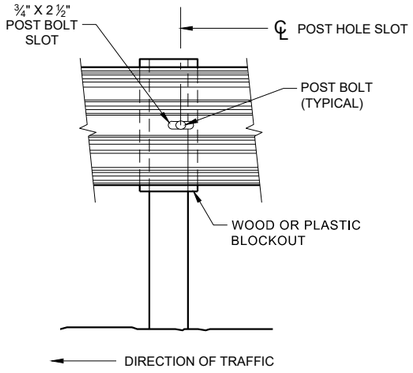
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



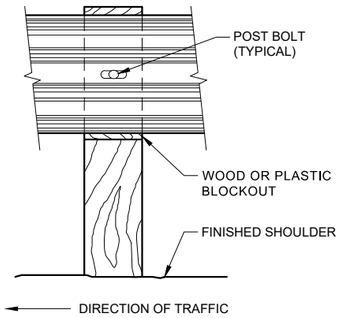
FRONT VIEW
QUARTER POST SPACING (QS)



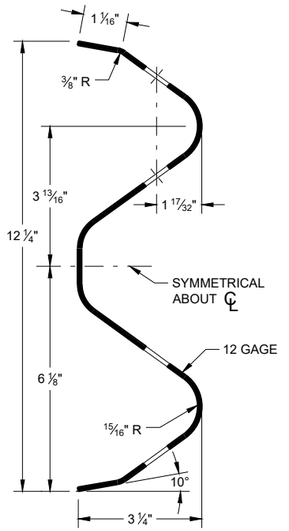
FRONT VIEW
MID-SPAN BEAM SPLICE



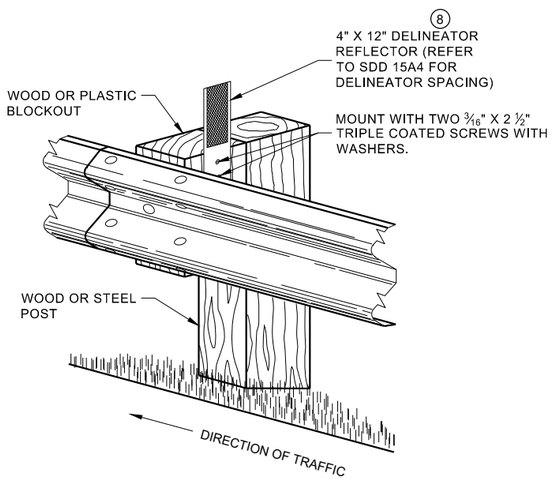
FRONT VIEW AT STEEL POST



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.

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

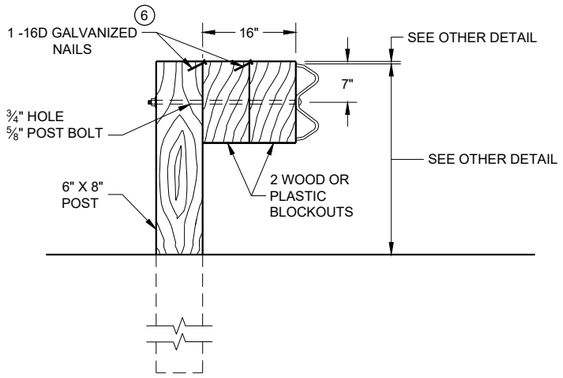
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

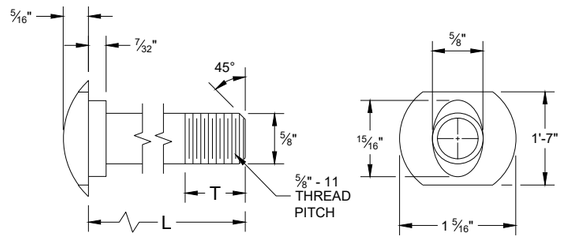


DETAIL FOR 16" BLOCKOUT DEPTH

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.

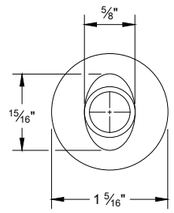
NOTE:

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.

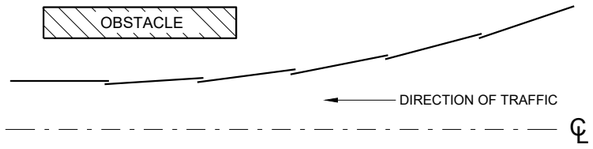


POST BOLT TABLE

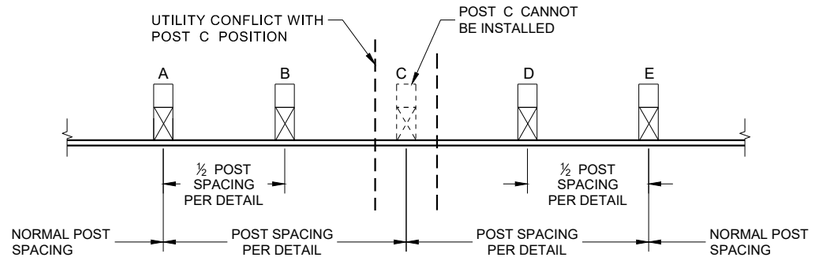
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



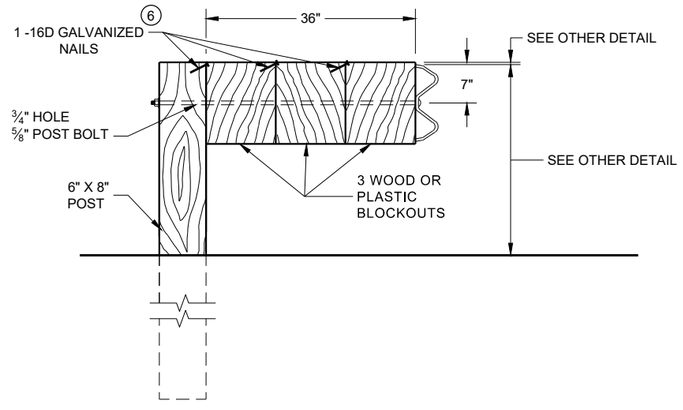
ALTERNATE BOLT HEAD



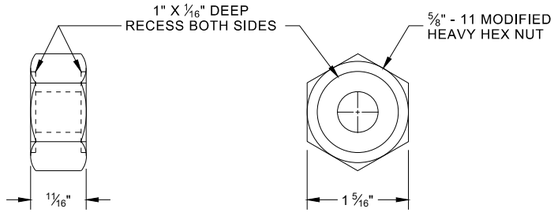
PLAN VIEW
BEAM LAPPING DETAIL



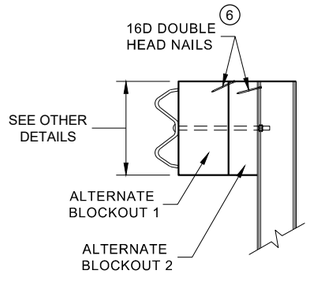
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



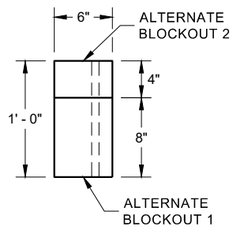
DETAIL FOR 36" BLOCKOUT DEPTH



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.

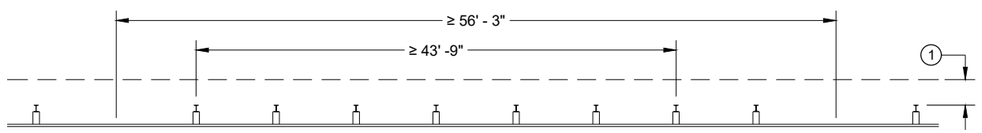
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

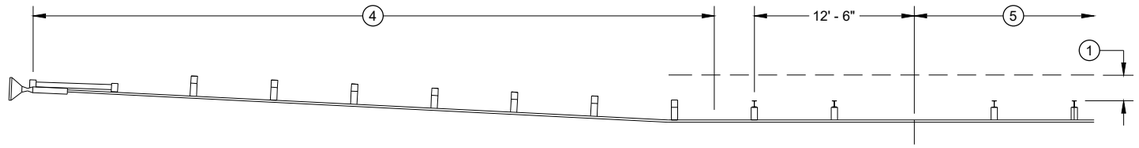
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

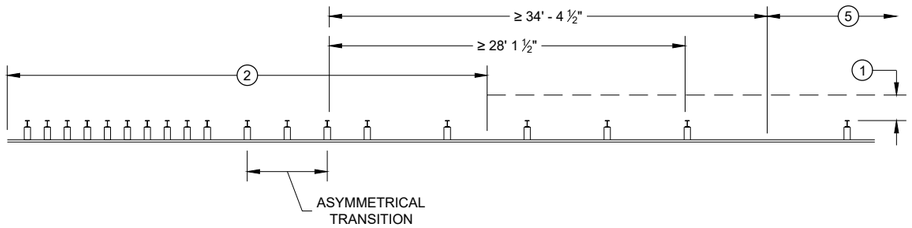
SDD 14B42 - 06c



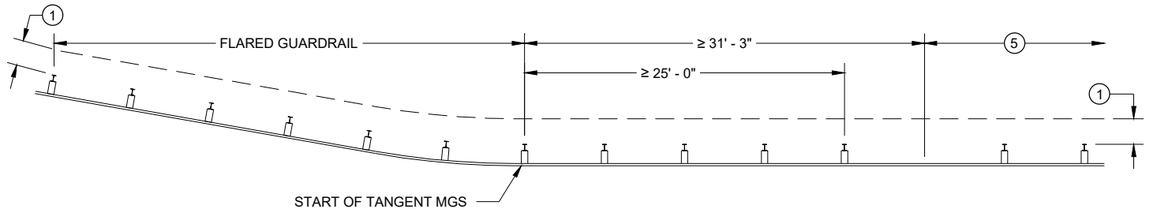
MISSING POST IN NORMAL BEAM GUARD RUN



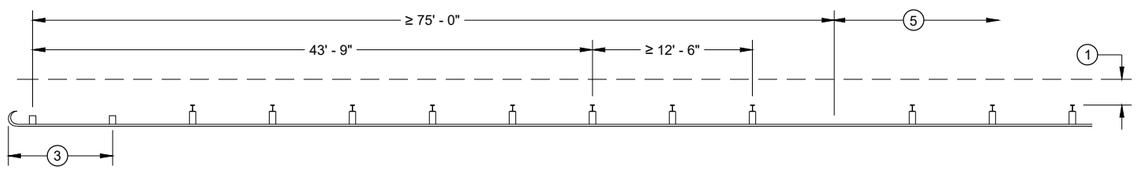
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



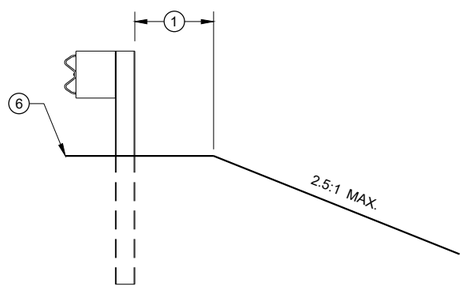
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



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

SDD 14B42 - 06d

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.

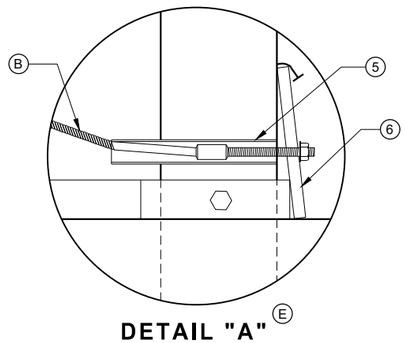
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

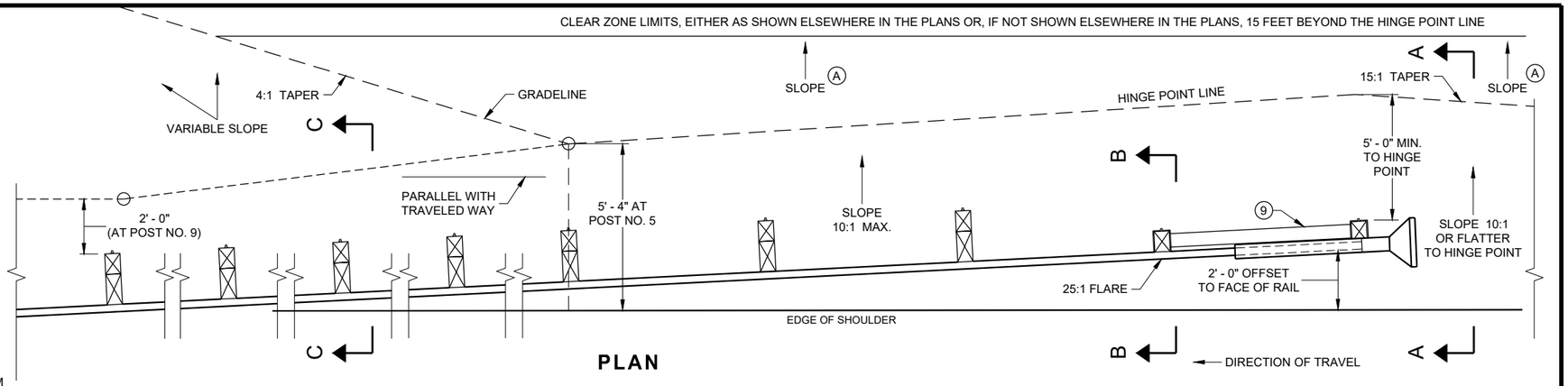
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

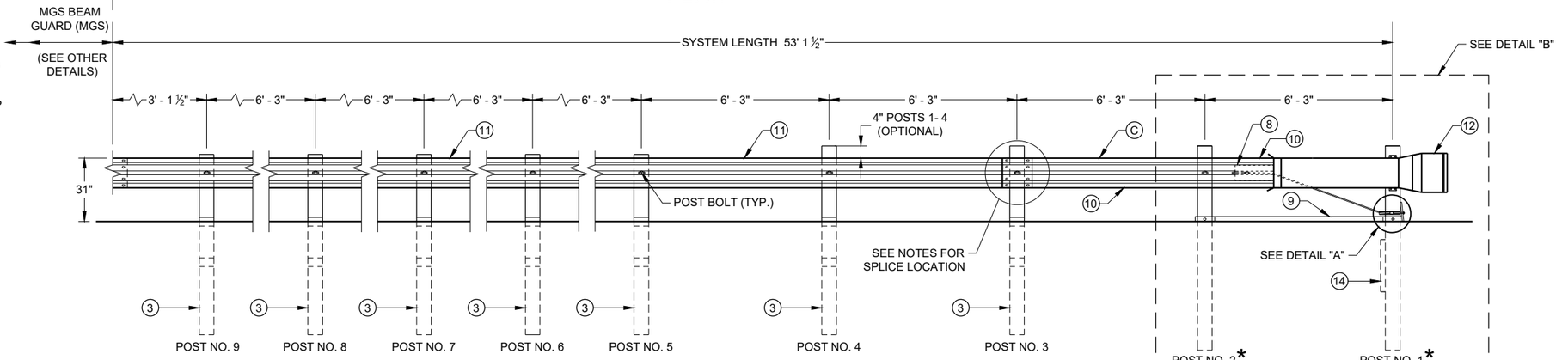
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



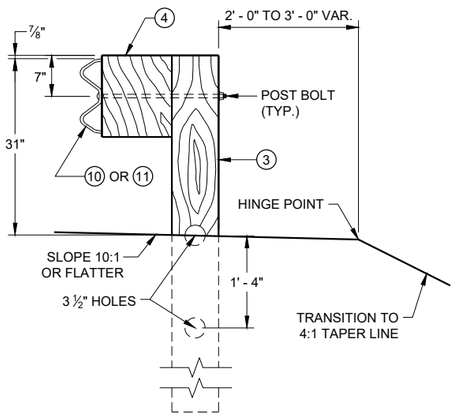
DETAIL "A" (E)



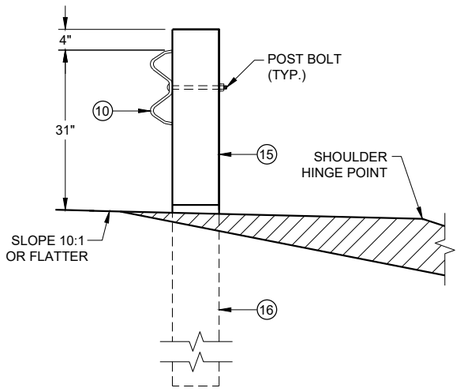
PLAN



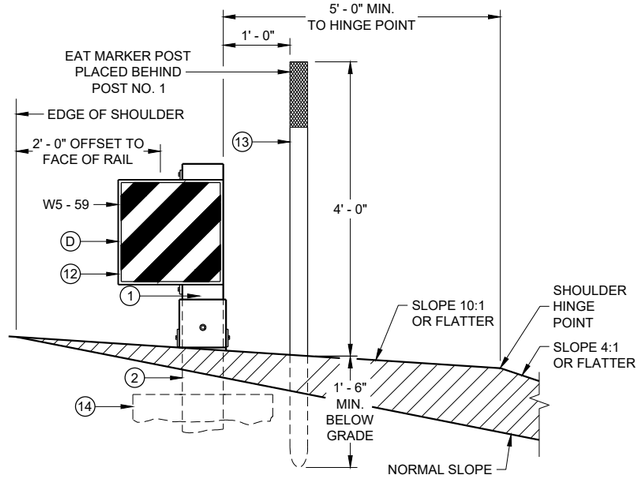
ELEVATION



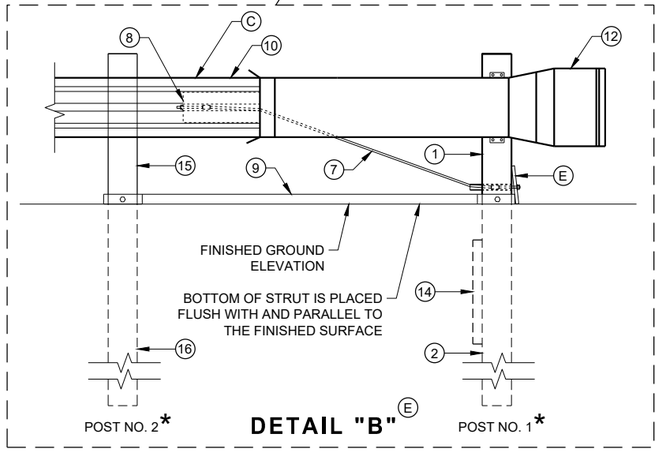
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



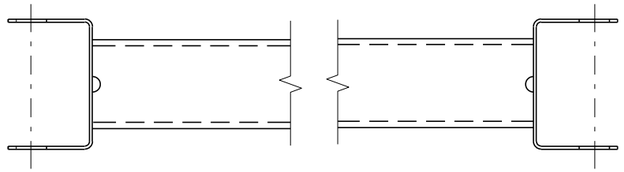
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

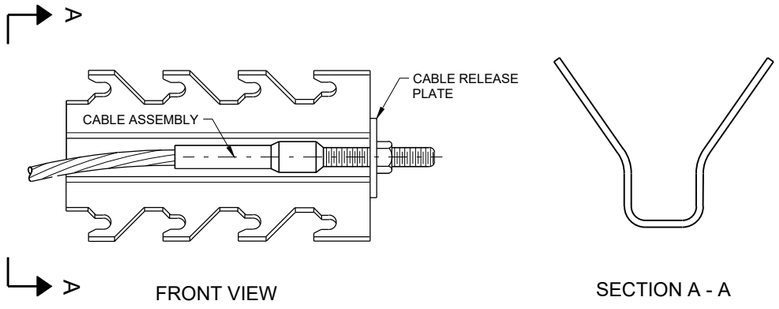
SDD 14B44 - 04a



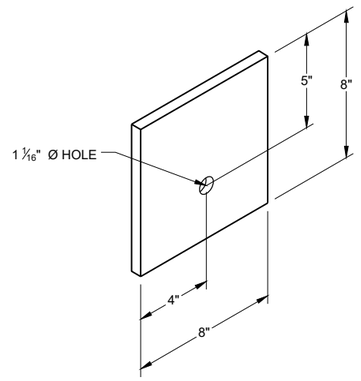
GENERIC GROUND STRUT ⑨ Ⓔ

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

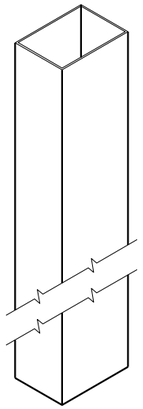
6

SDD 14B44 - 04b

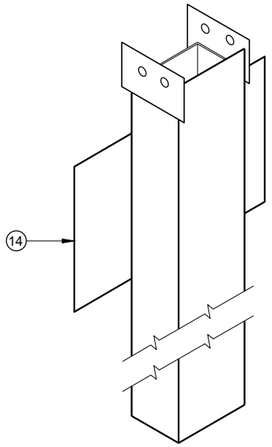
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

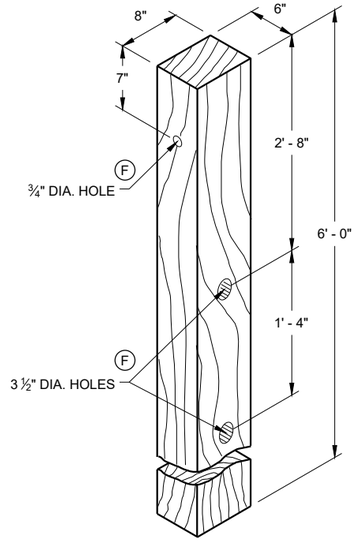
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



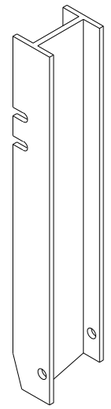
UPPER POST NO. 1 (1) (E)



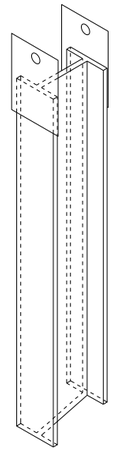
LOWER POST NO. 1 (2) (E)



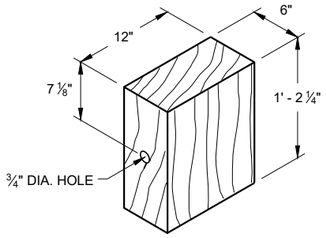
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



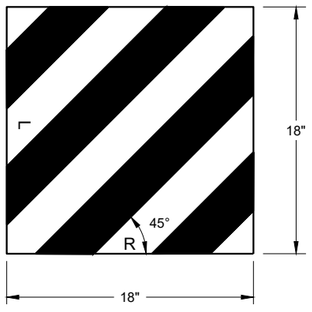
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

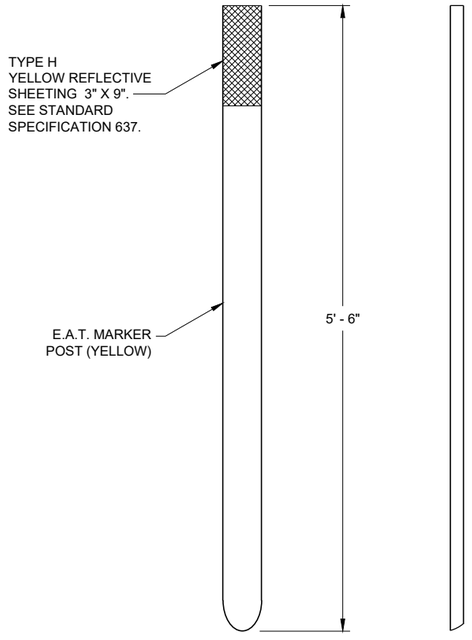


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



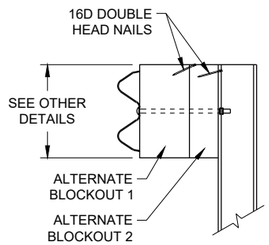
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

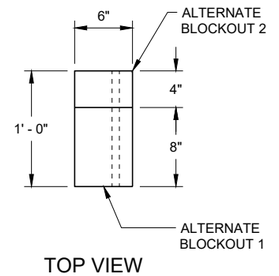


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

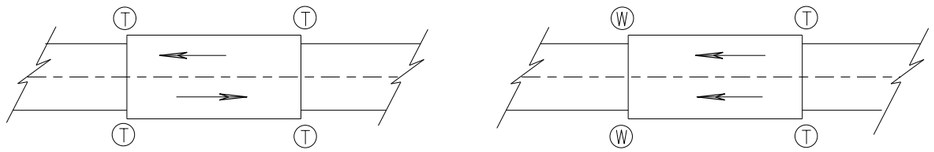
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

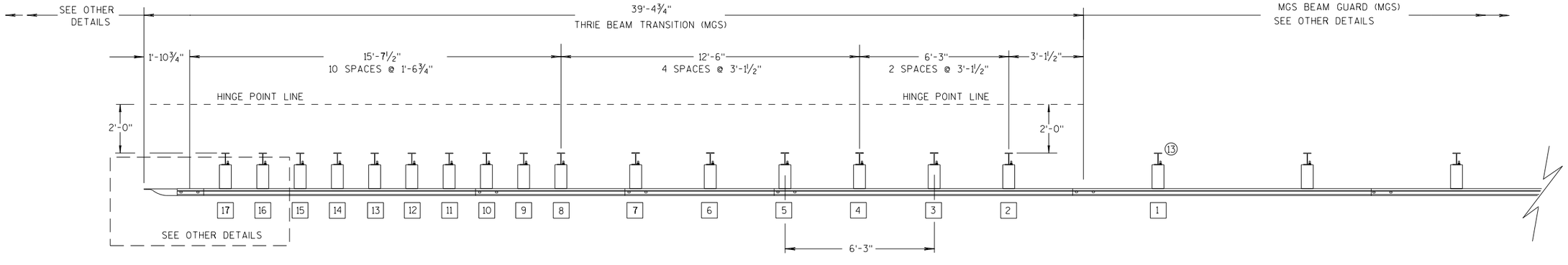
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

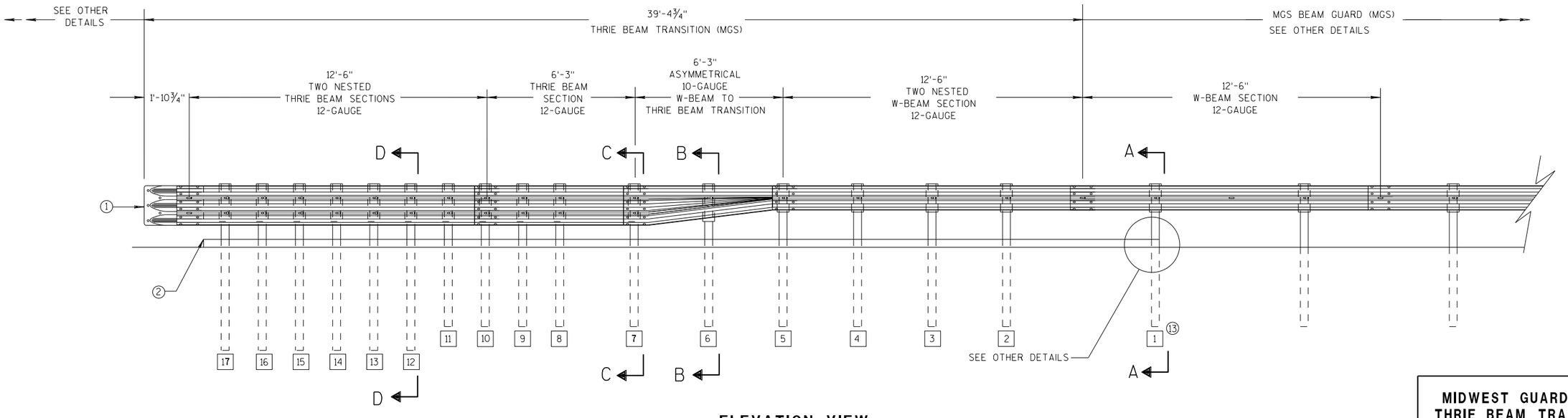
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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

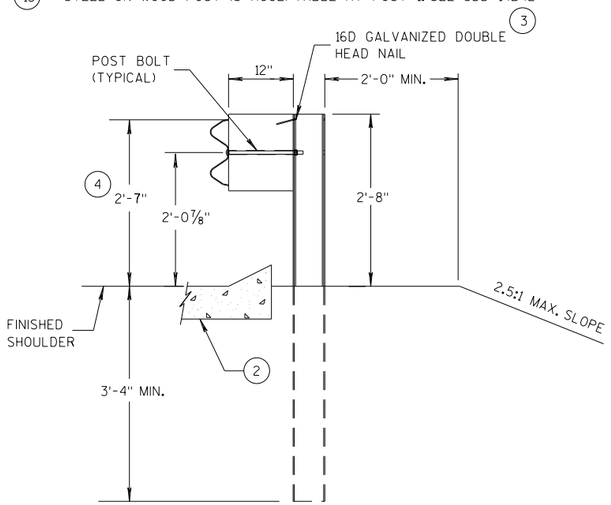
GENERAL NOTES

(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.

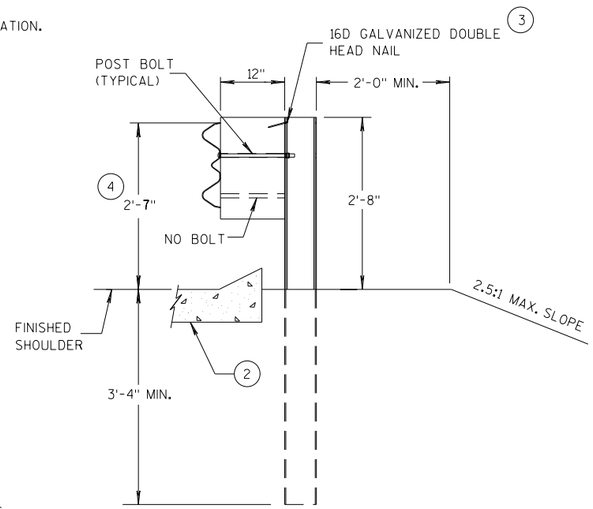
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



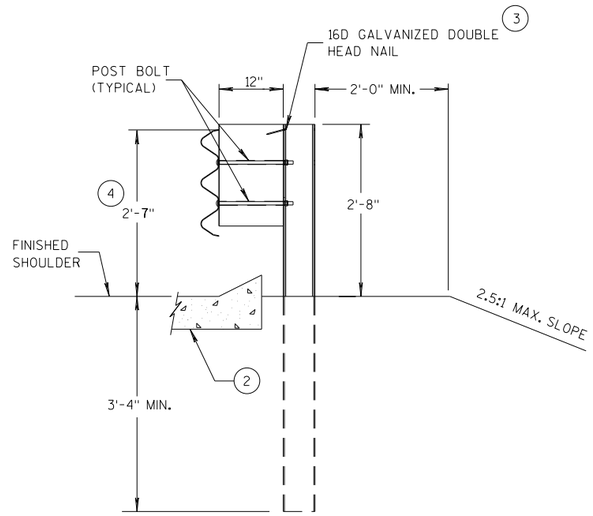
SECTION A-A (13)

POSTS 1-5



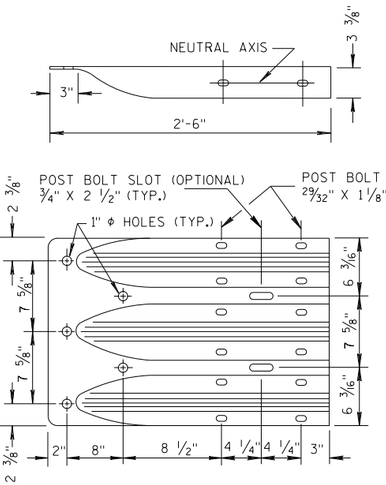
SECTION B-B

POST 6

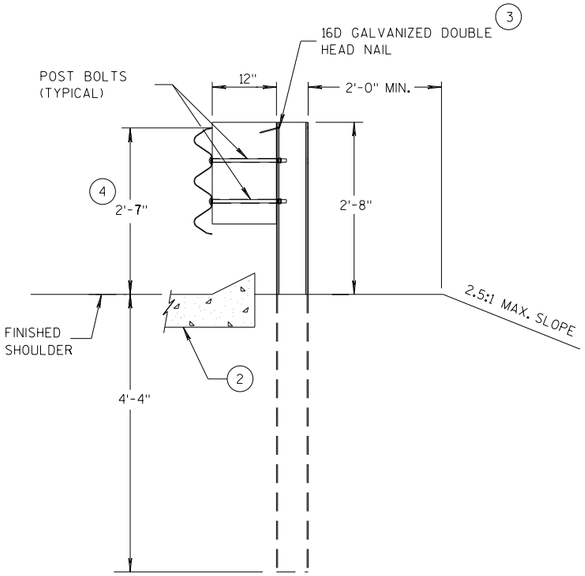


SECTION C-C

POSTS 7-11

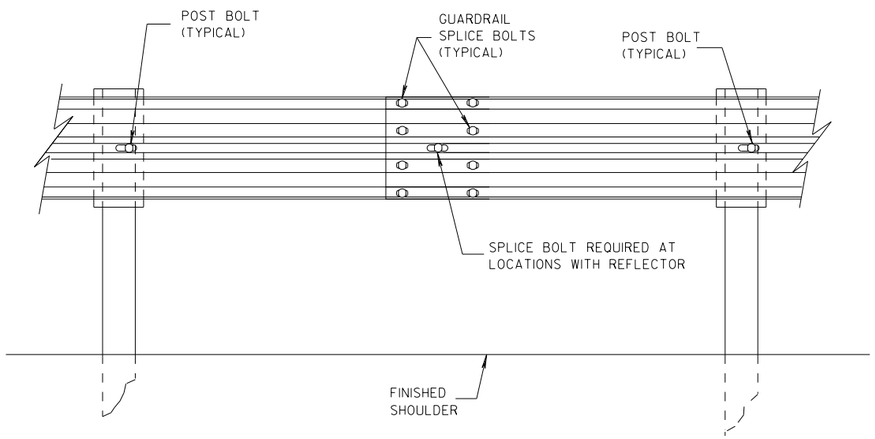


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

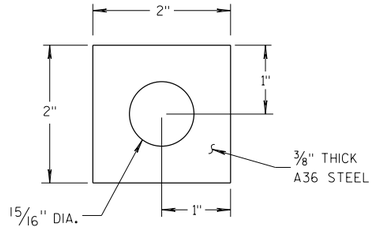
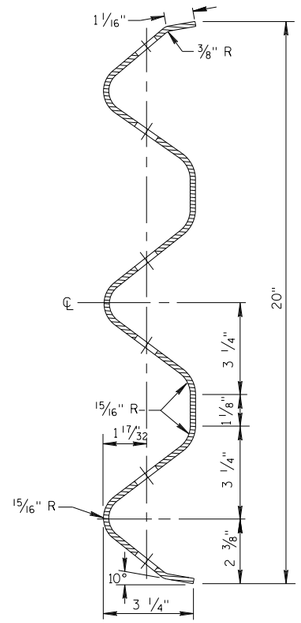


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

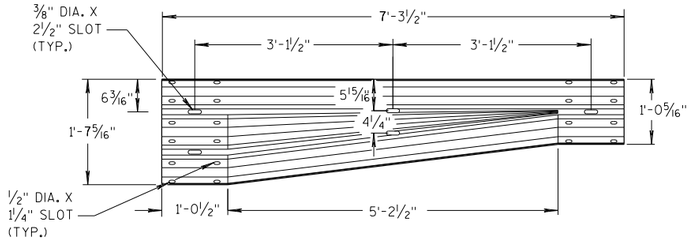
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 42

6

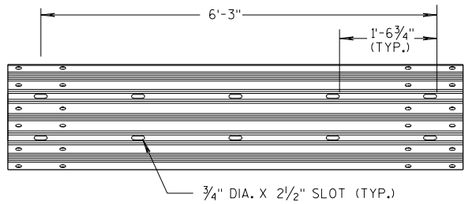
S.D.D. 14 B 45-5b

6

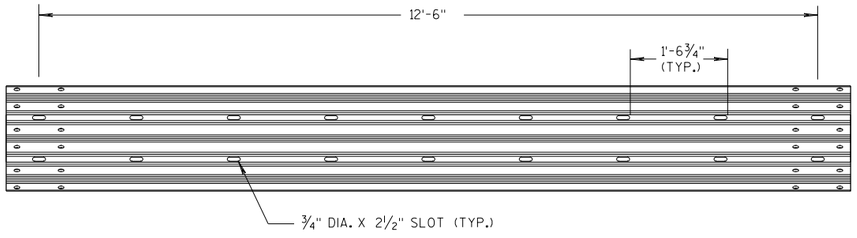
S.D.D. 14 B 45-5b



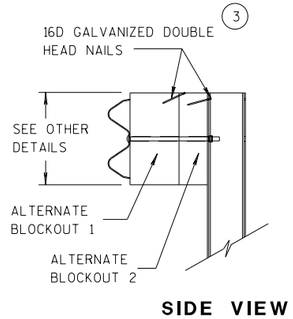
W-BEAM TO THRIE BEAM TRANSITION SECTION



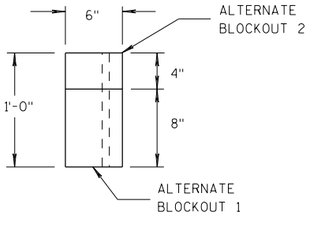
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

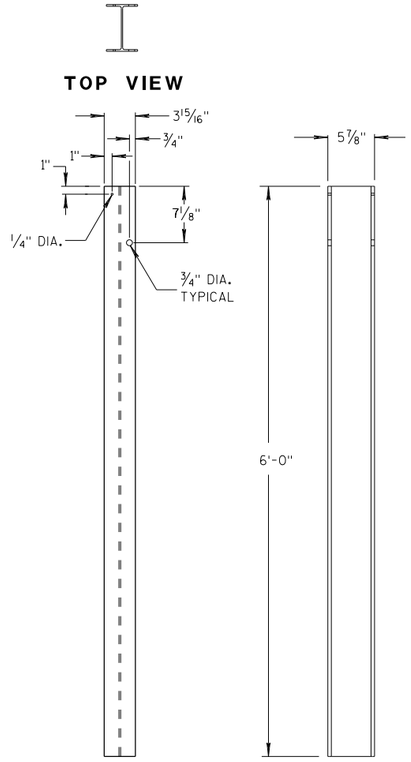


SIDE VIEW



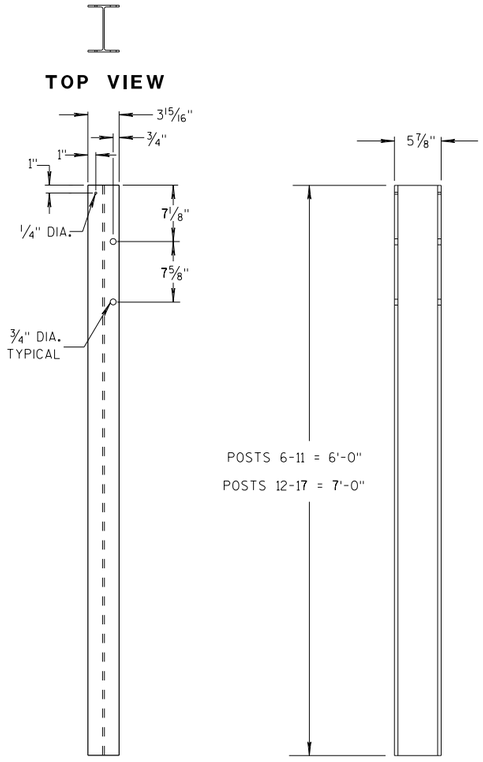
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



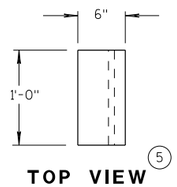
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

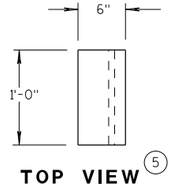


FRONT VIEW SIDE VIEW

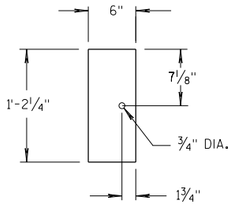
STEEL POSTS 6-17



TOP VIEW (5)

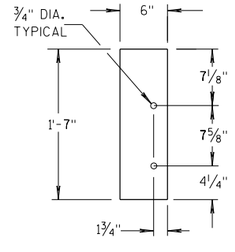


TOP VIEW (5)



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.

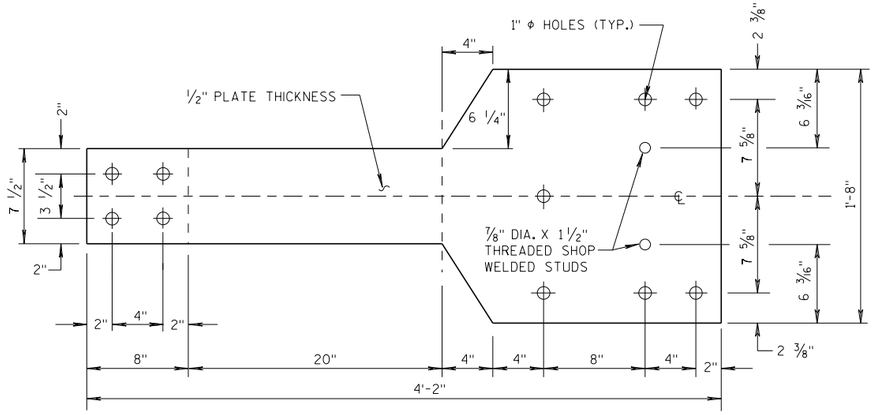
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

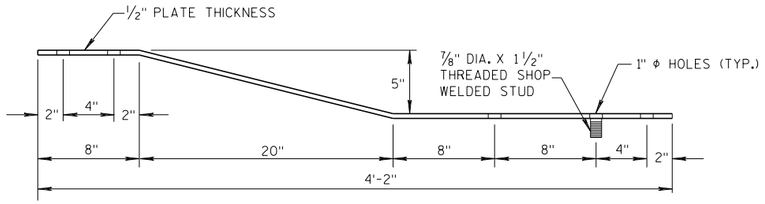
6
S.D.D. 14 B 45-5c

GENERAL NOTES

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

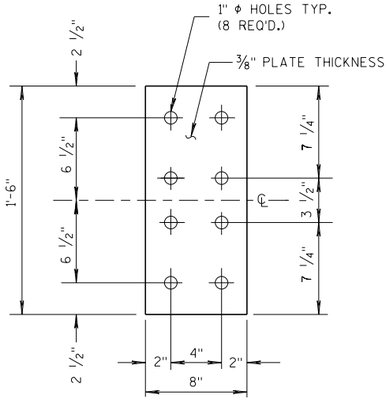


FRONT VIEW



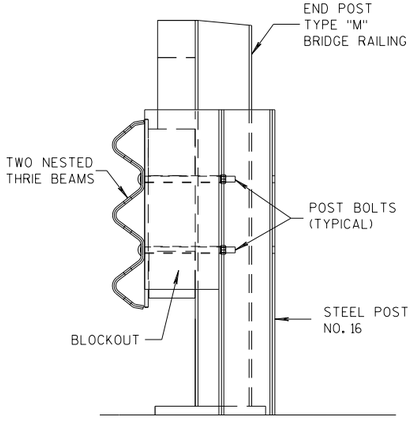
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

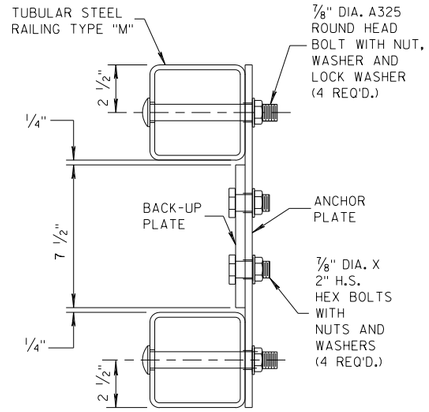


FRONT VIEW

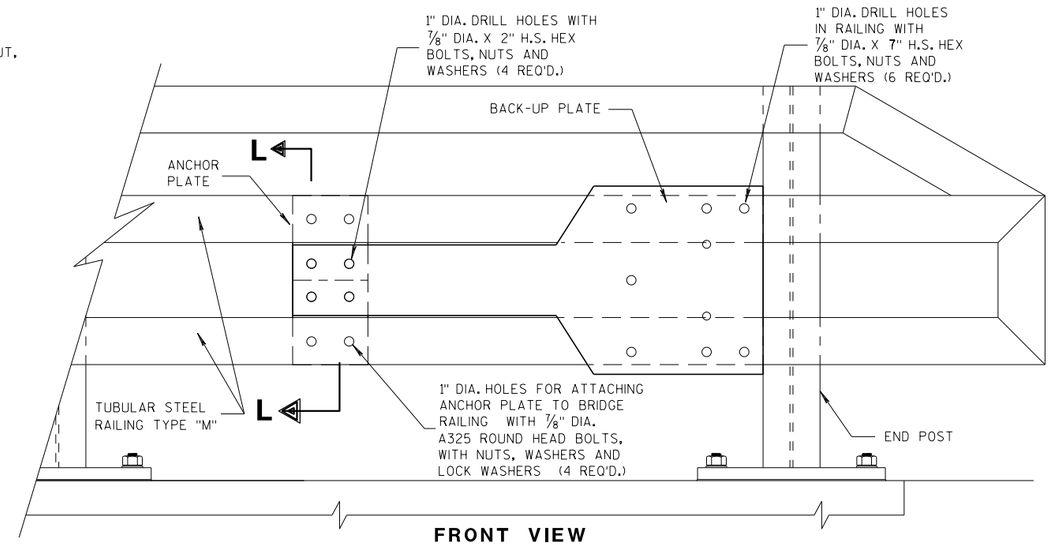
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

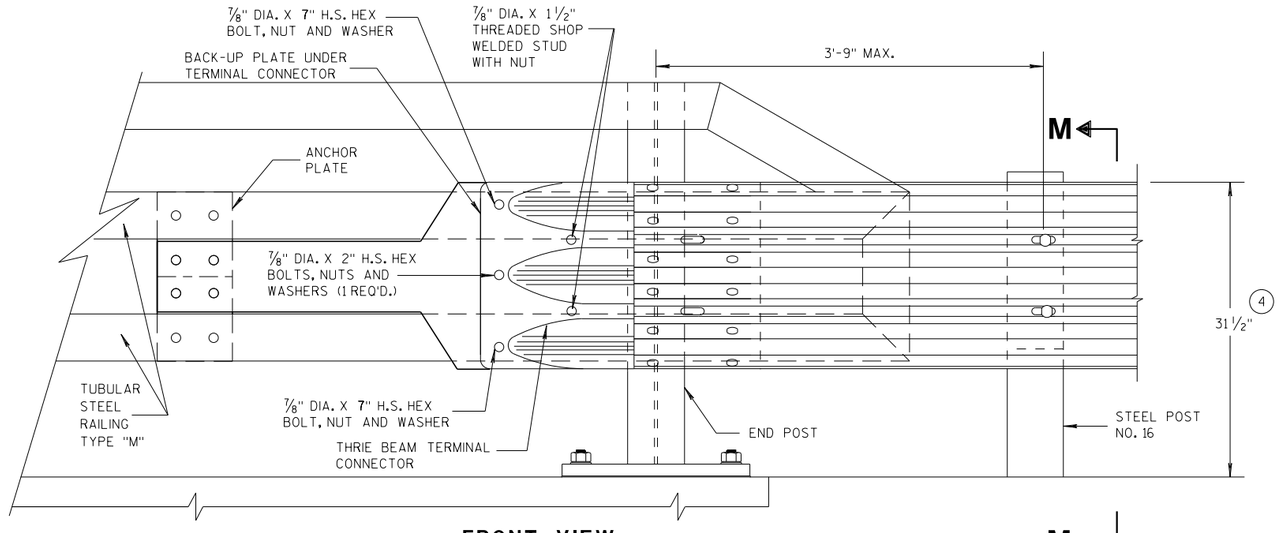


SECTION L-L

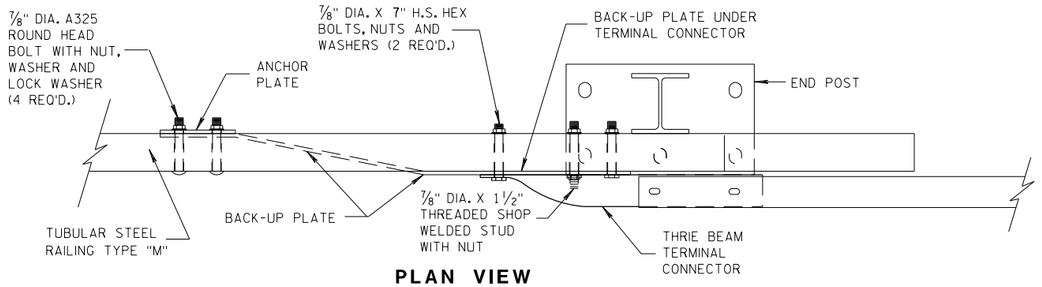


FRONT VIEW

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

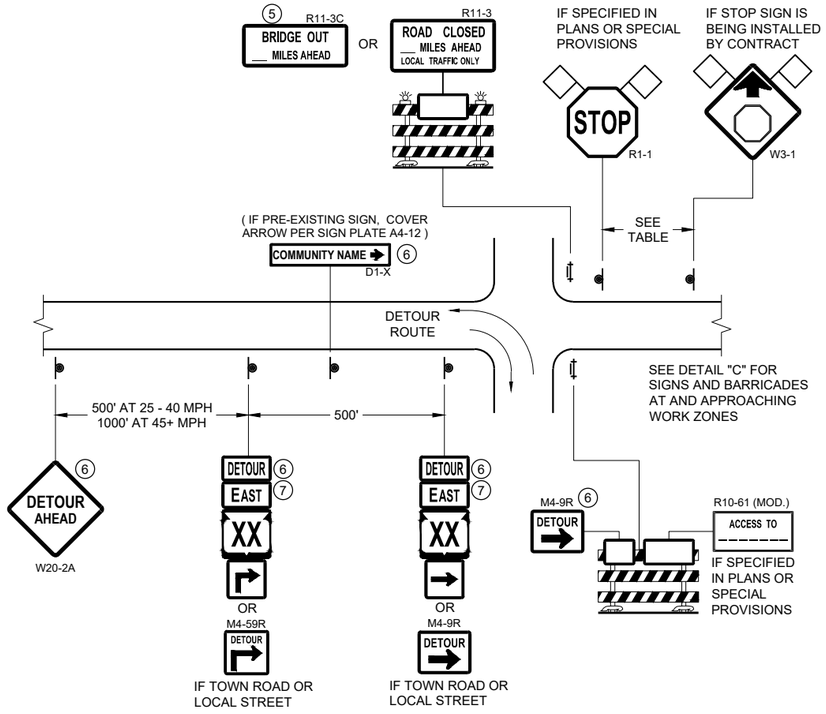
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

6

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

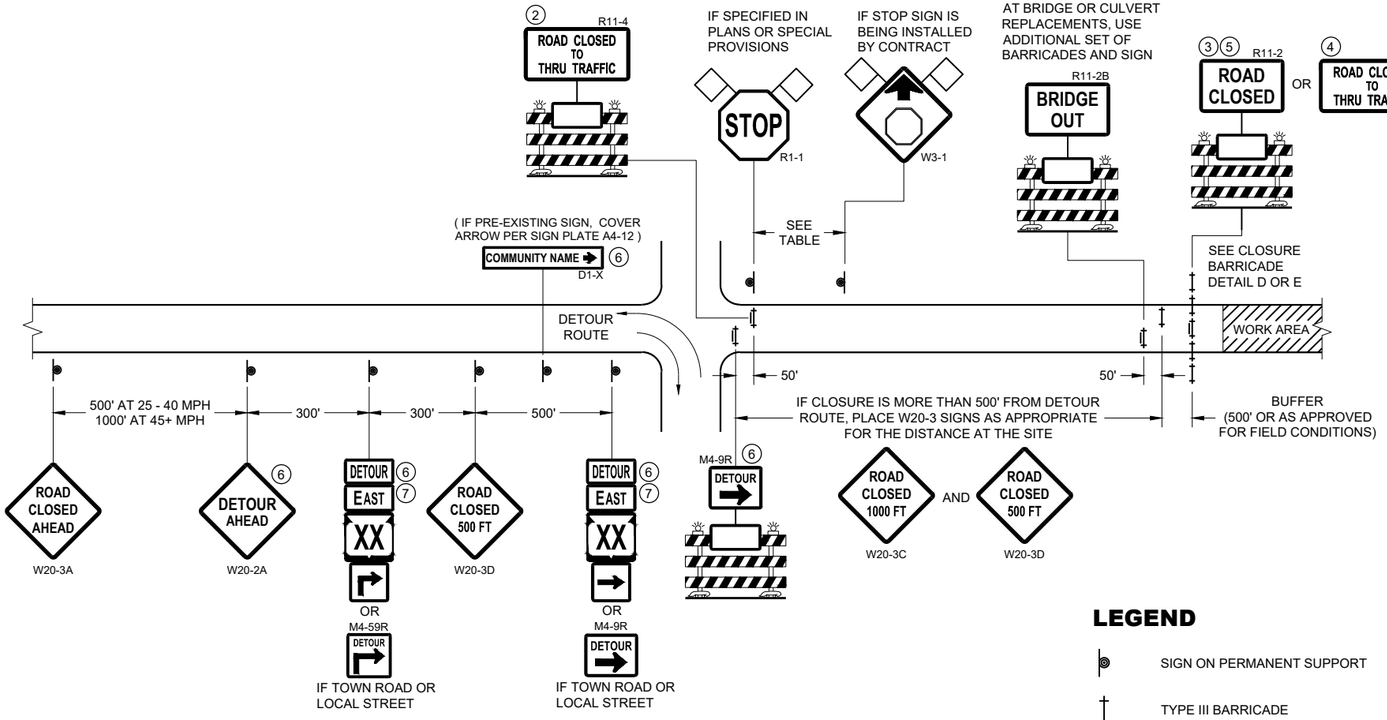
6

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



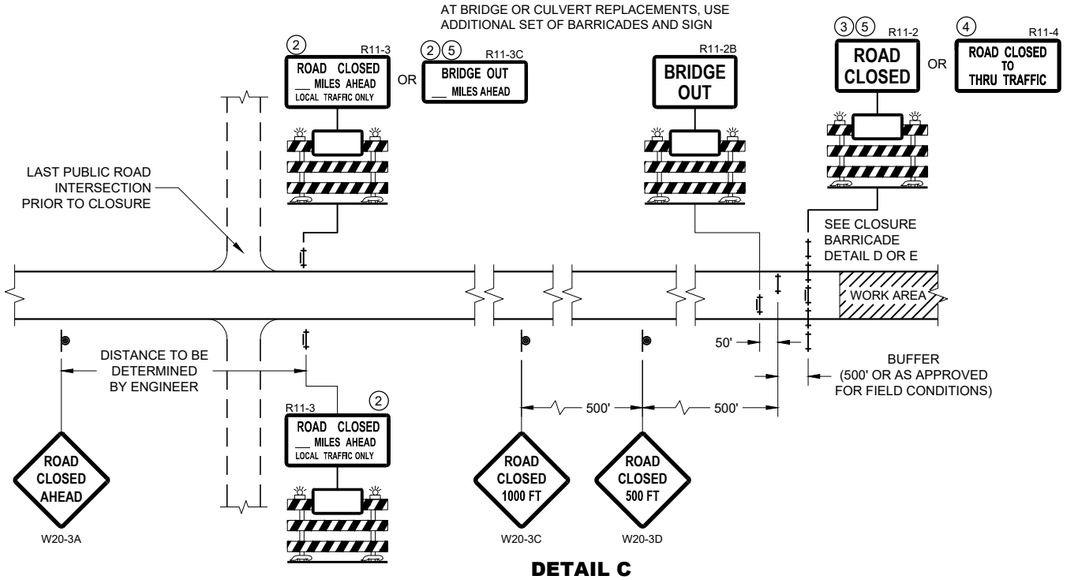
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

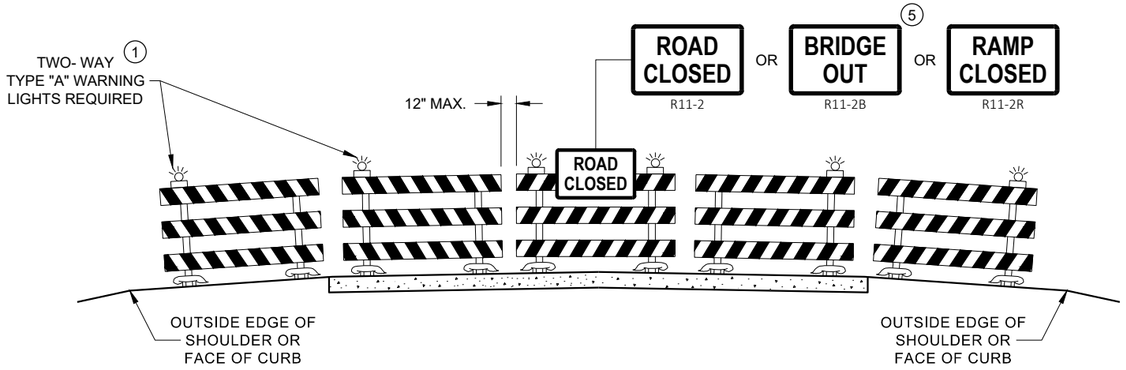
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

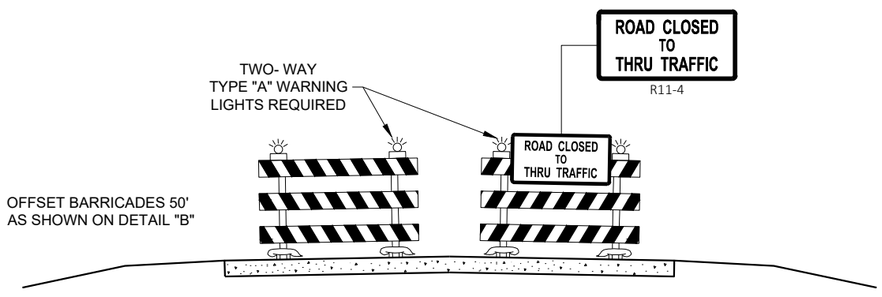
6

SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

6

SDD 15C02 - 08b

6

SDD 15C02 - 08b

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.

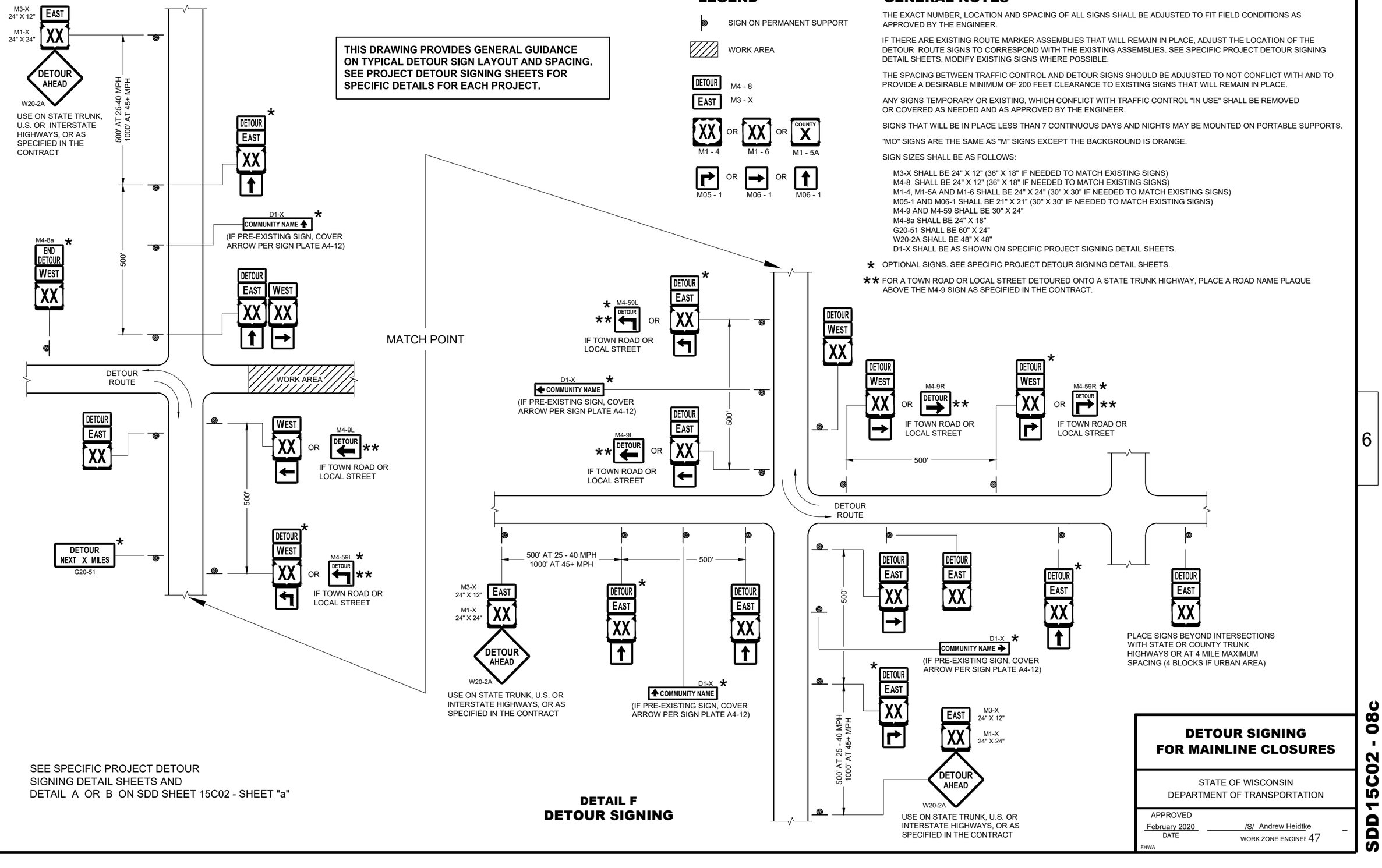
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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.



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

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

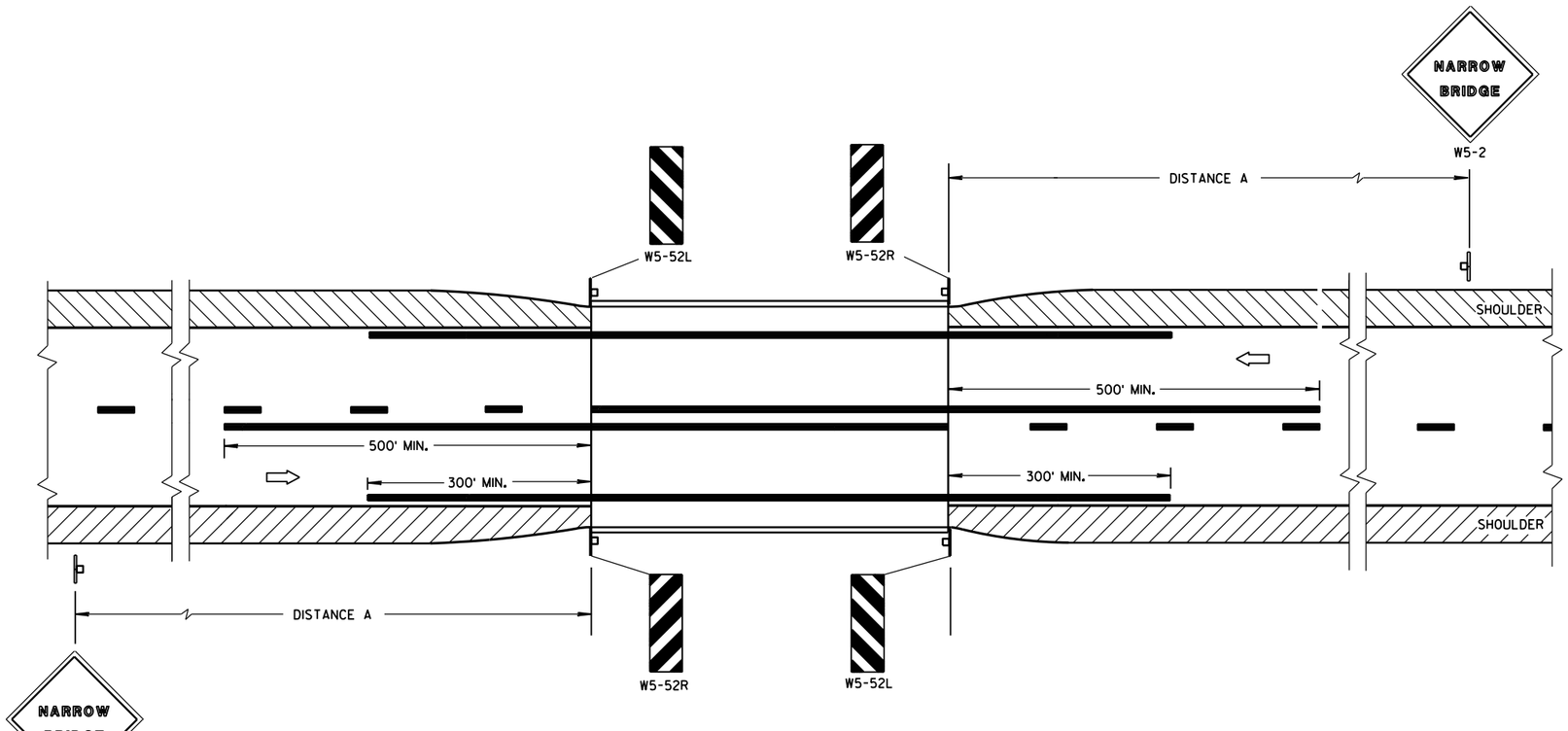
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 08c

6



SITUATION 1

WARRANTING CRITERIA:

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

DISTANCE TABLE

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

GENERAL NOTES

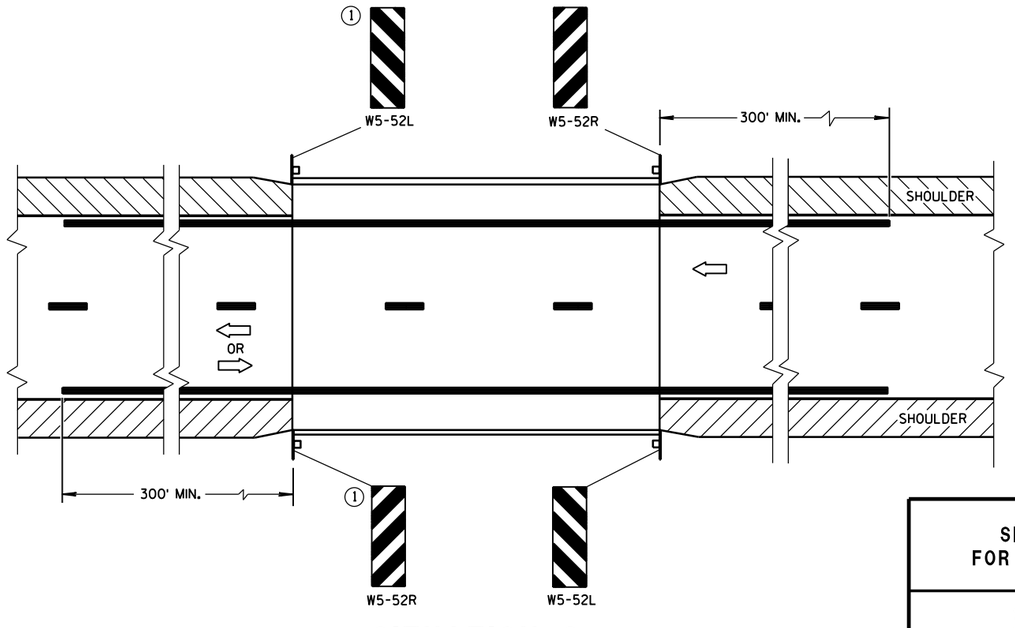
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

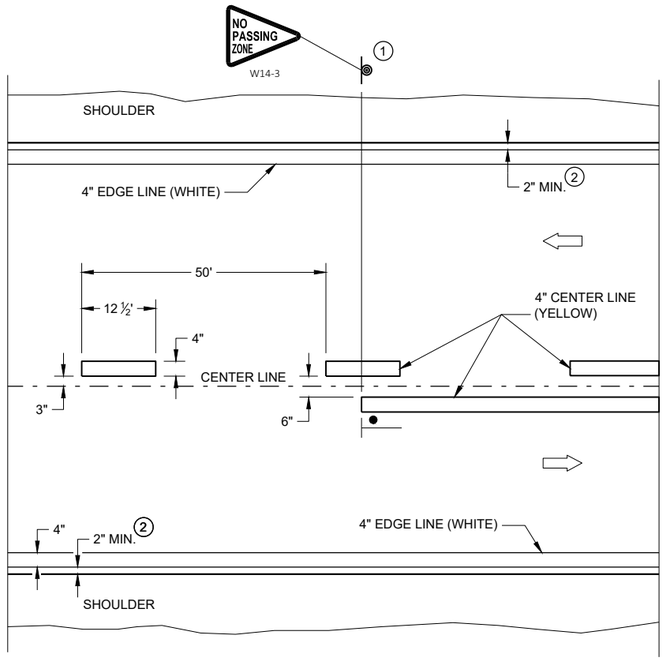
SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

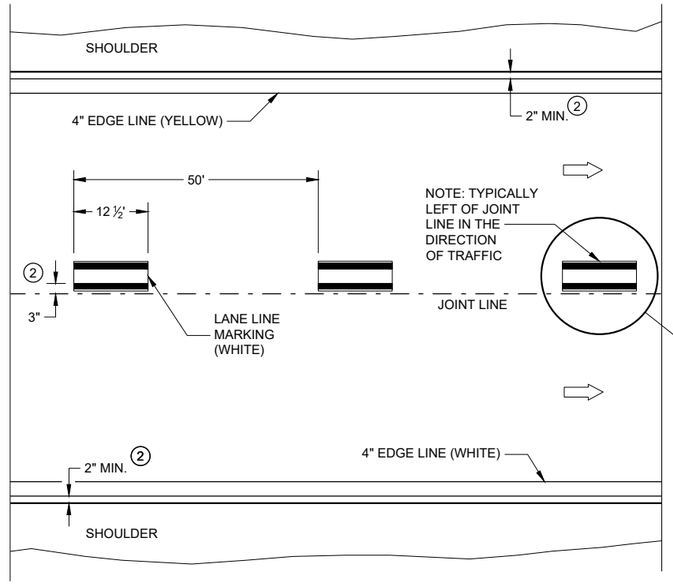
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

S.D.D. 15 C 6-9

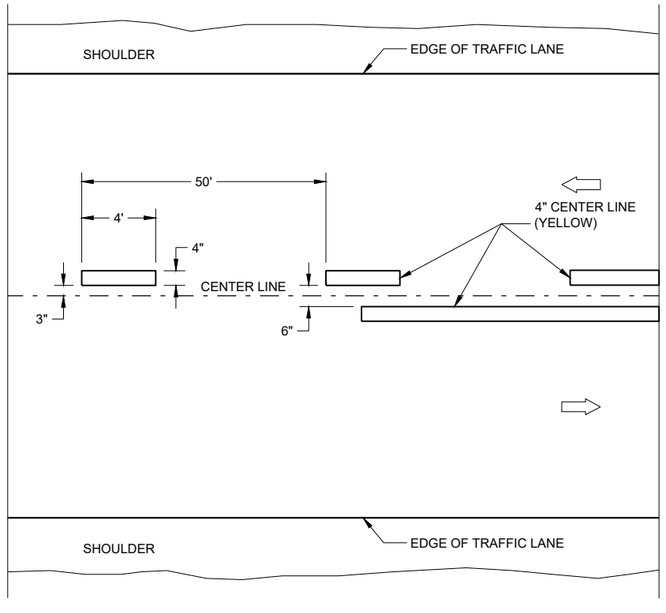


TWO WAY TRAFFIC

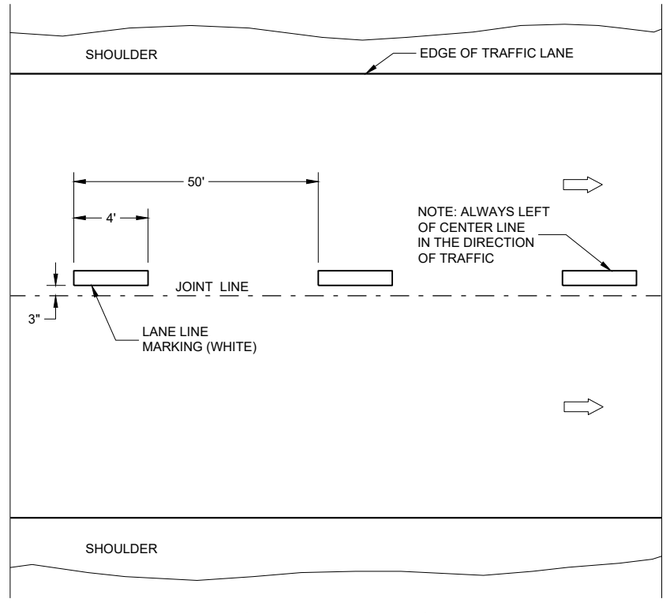


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

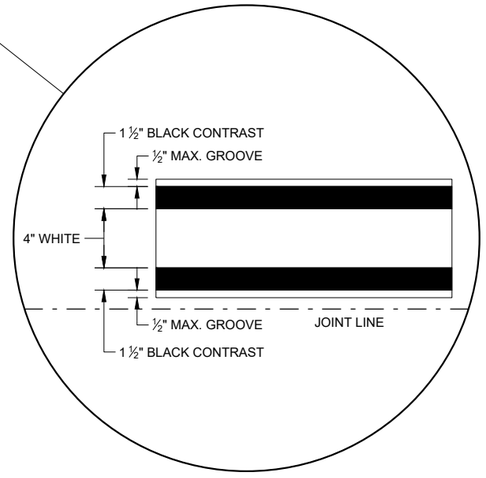
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

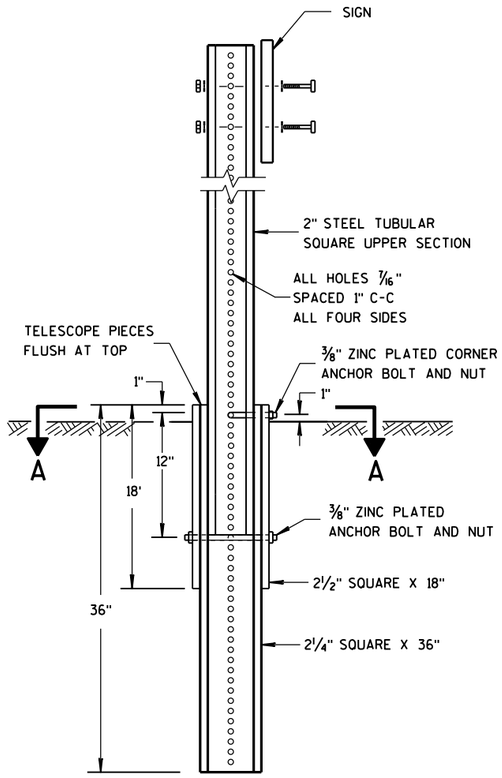
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND M
ENGINEER

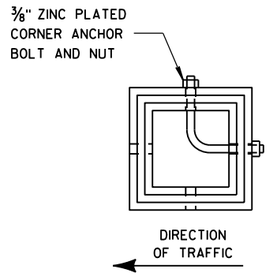
FHWA

SDD 15C08 - 20a

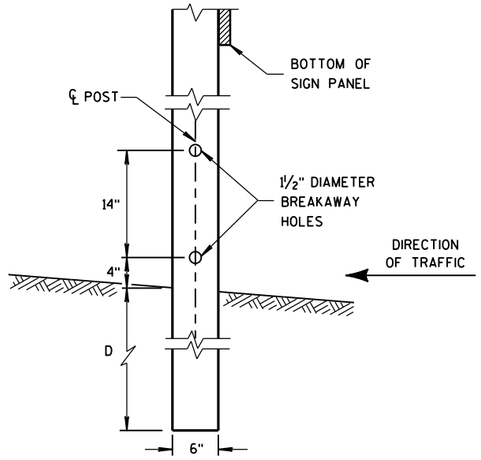
SDD 15C08 - 20a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



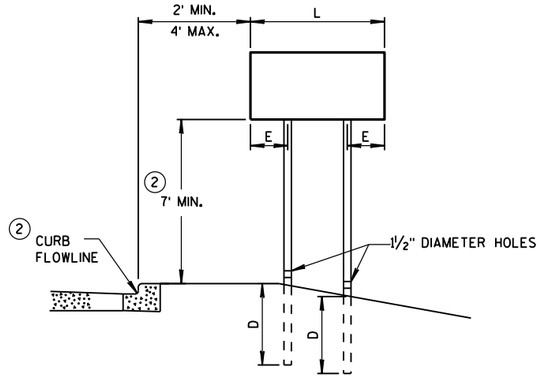
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

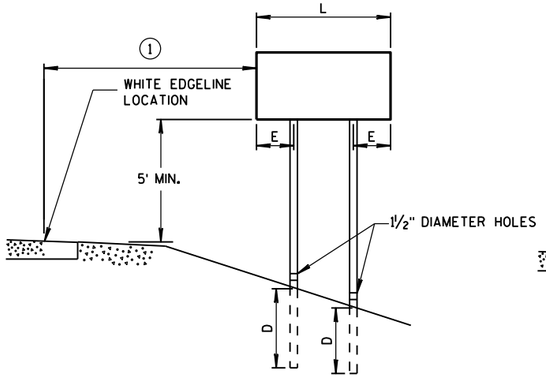
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

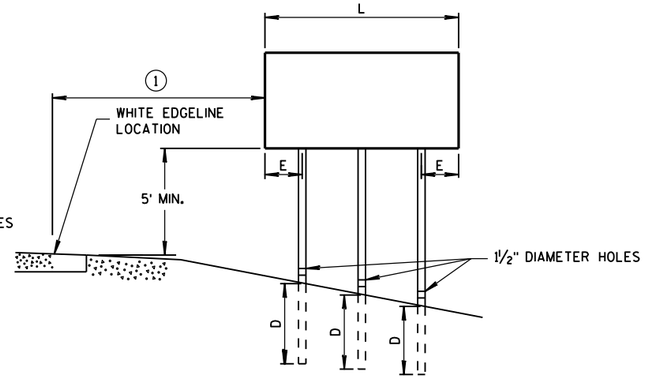
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

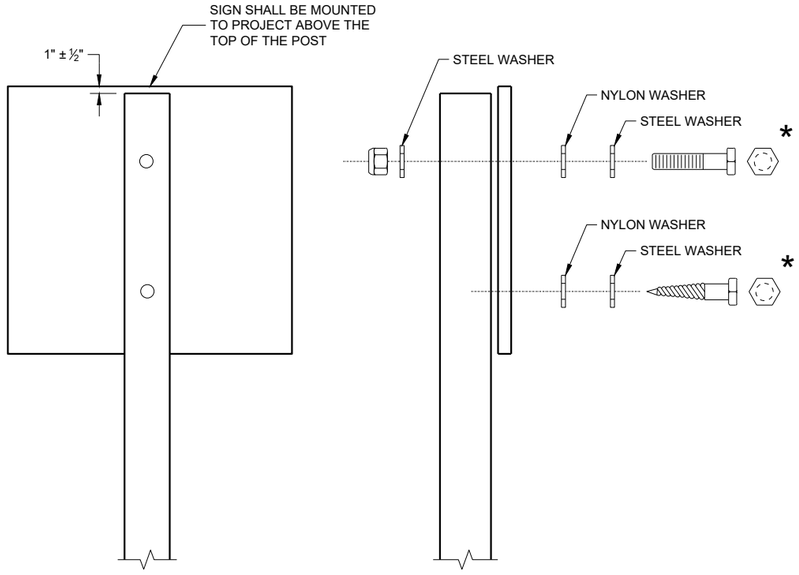
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

6

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



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 POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

SDD 15D38 - 02b

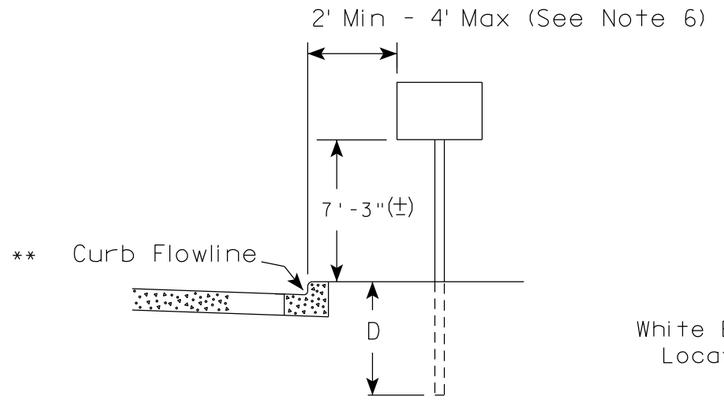
SDD15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

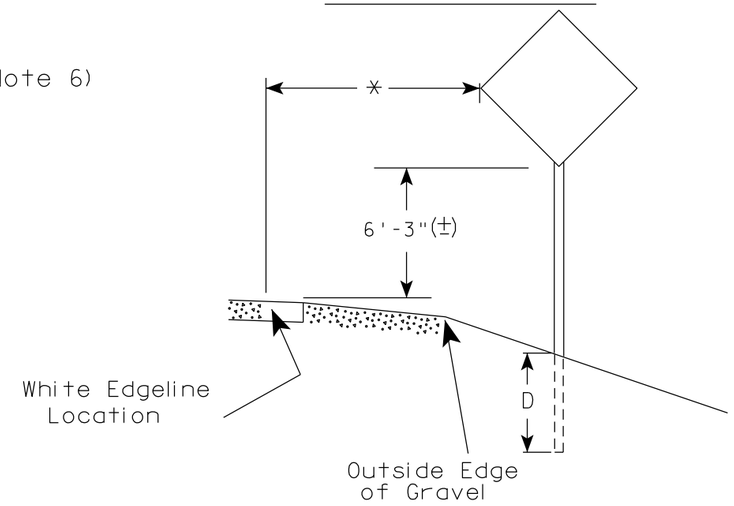
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

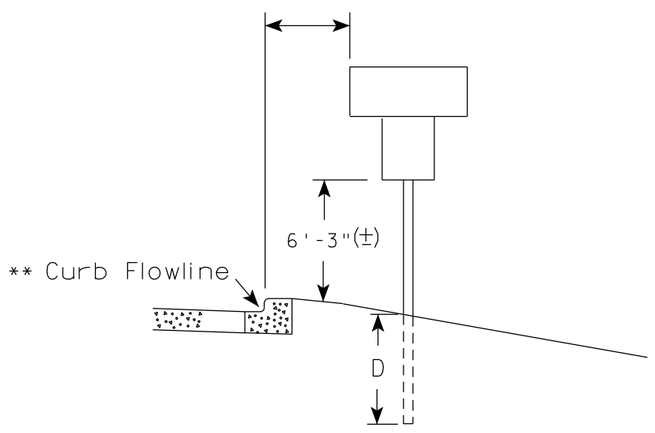
APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

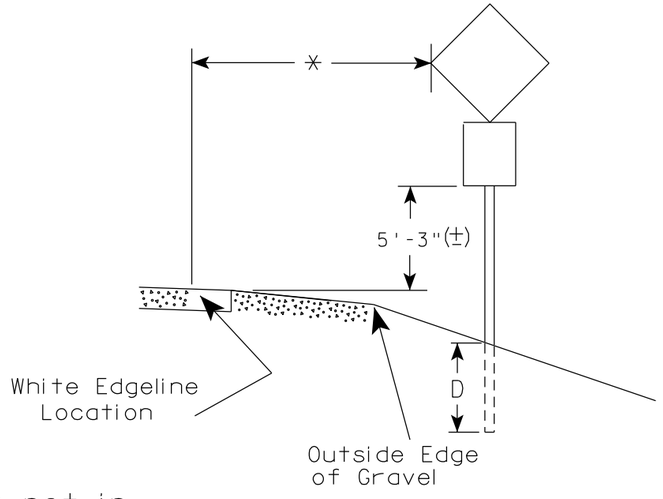
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

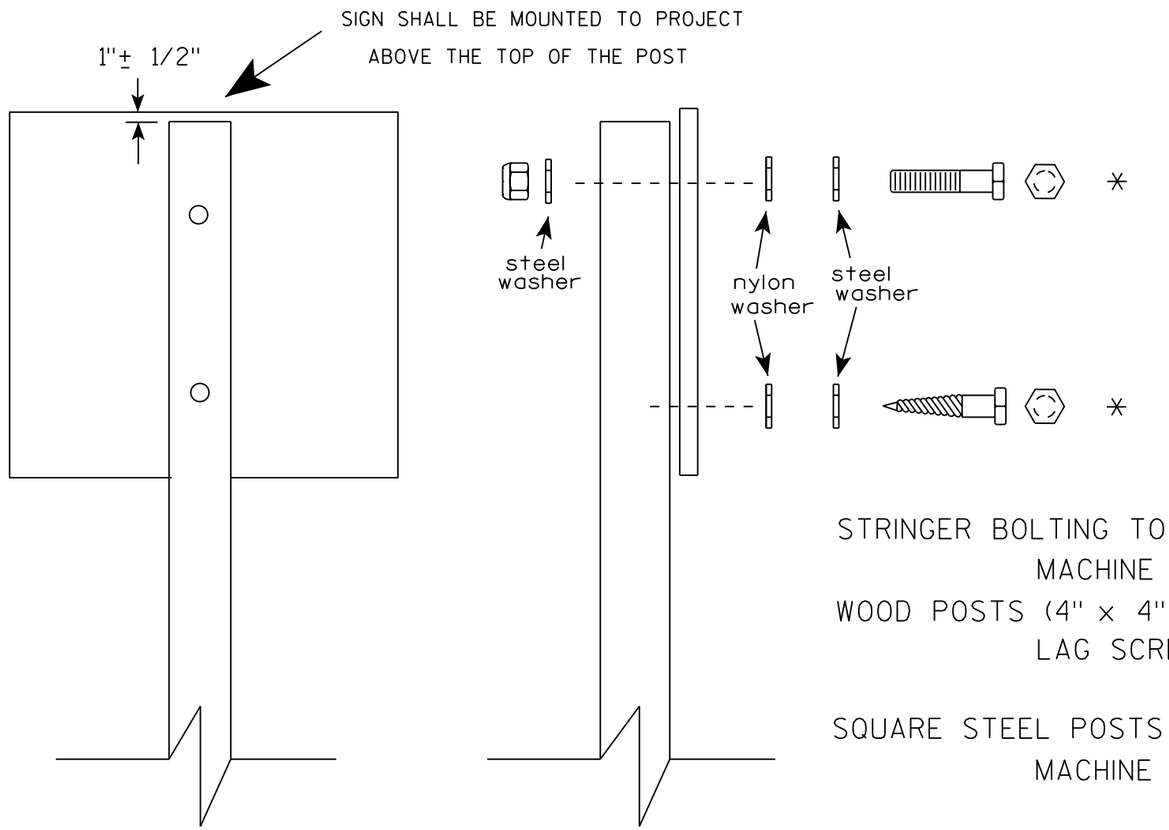
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 52	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.

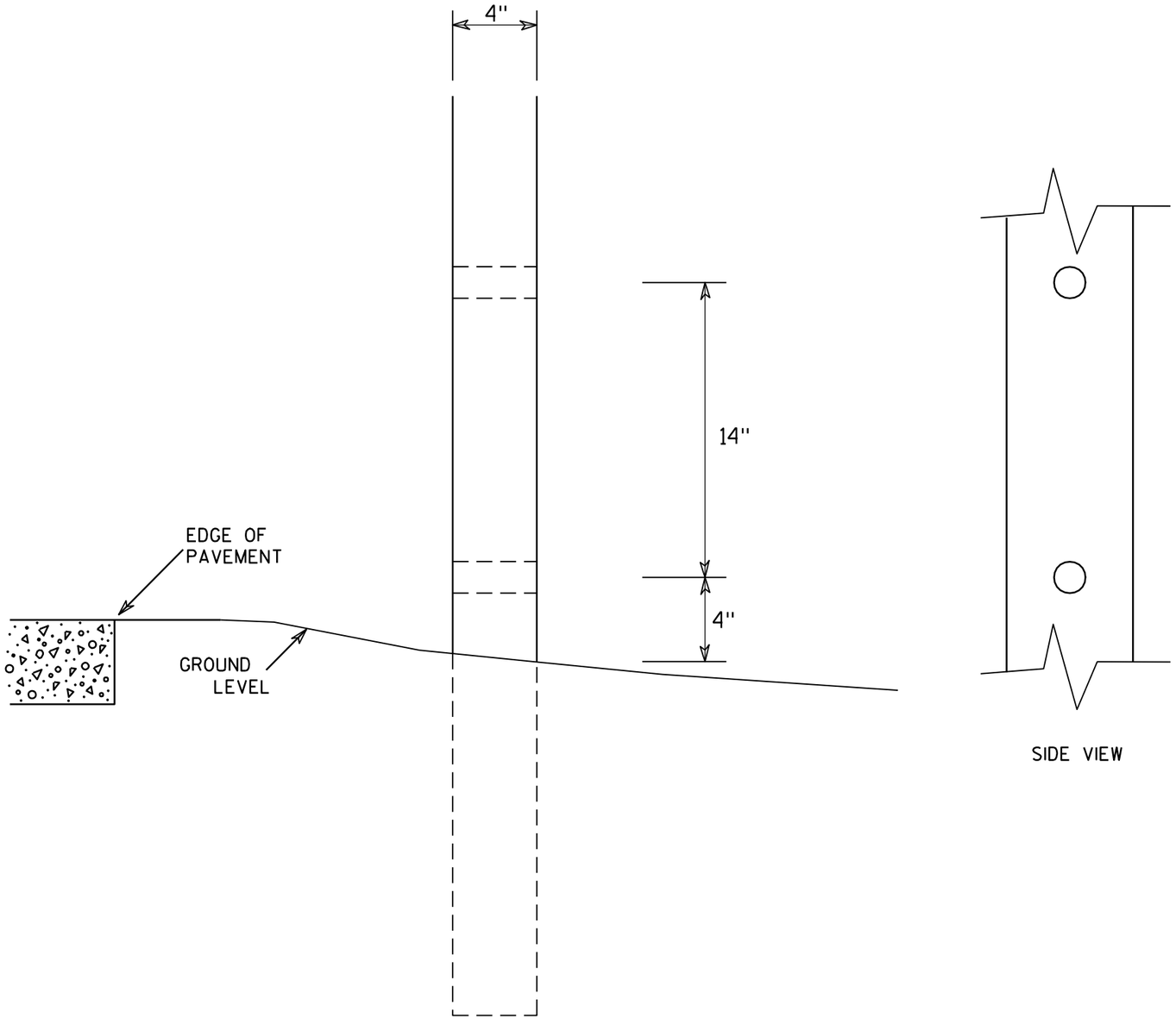
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: SHEET NO: E



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

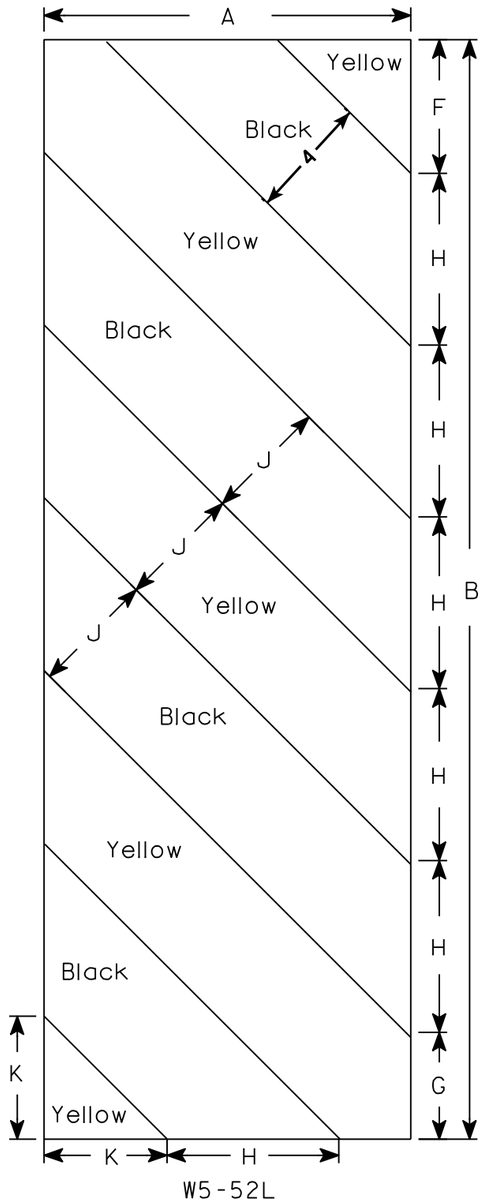
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

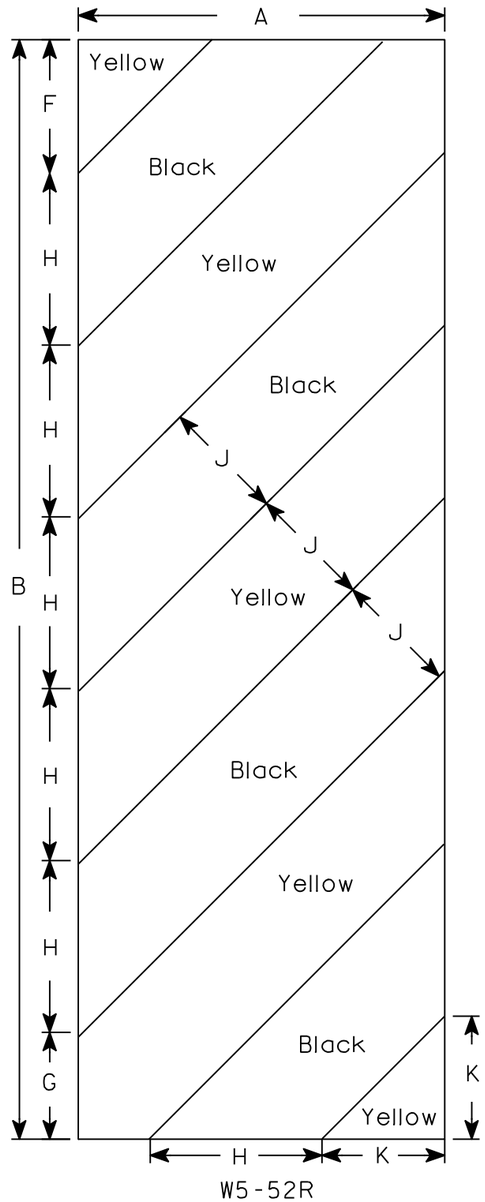
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 54	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

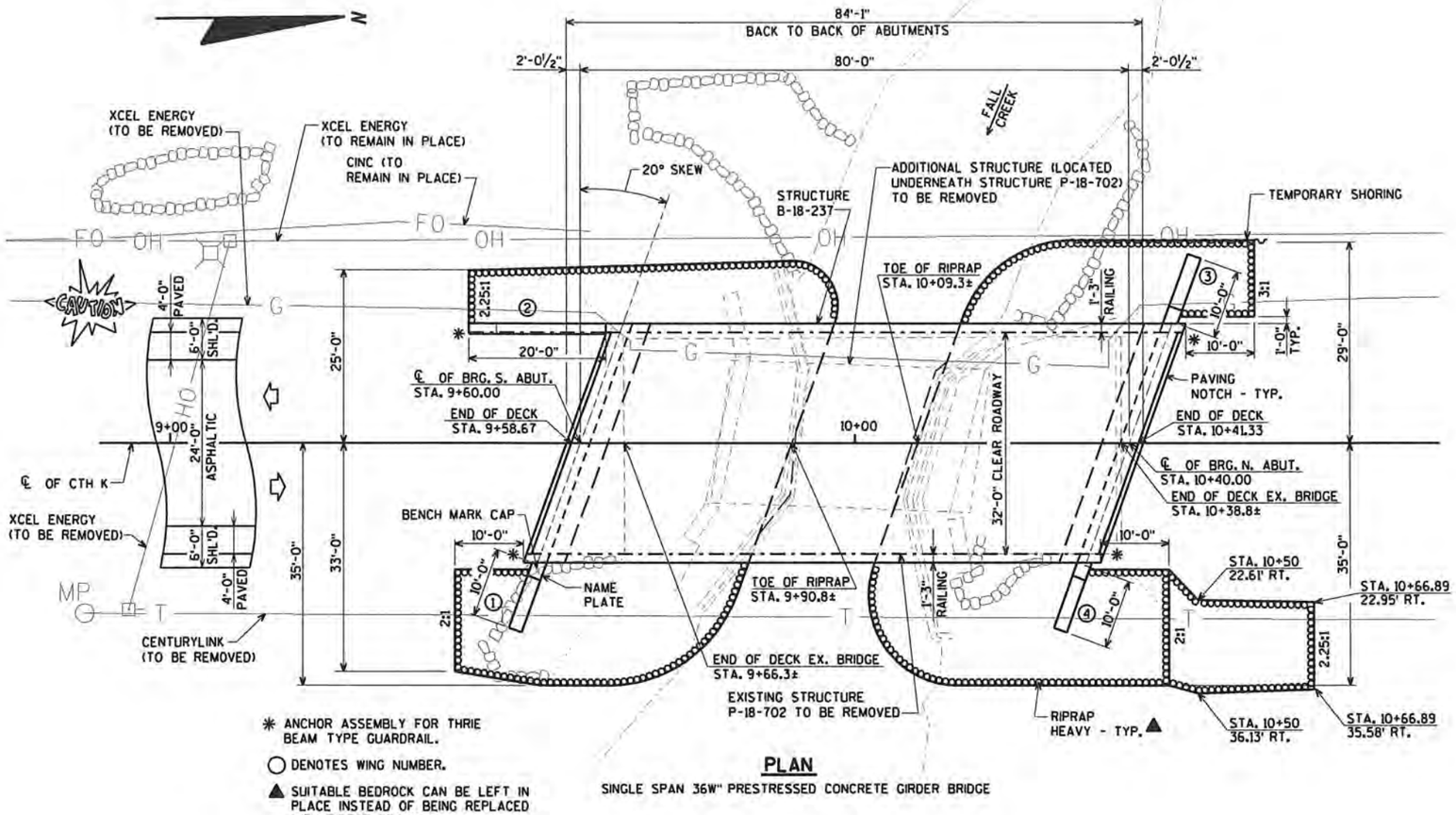
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 55 | E

STATE PROJECT NUMBER

7823-03-70

10/27/2020
PENTABLE:tBReou_snd_utl1.tbl



✱ ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

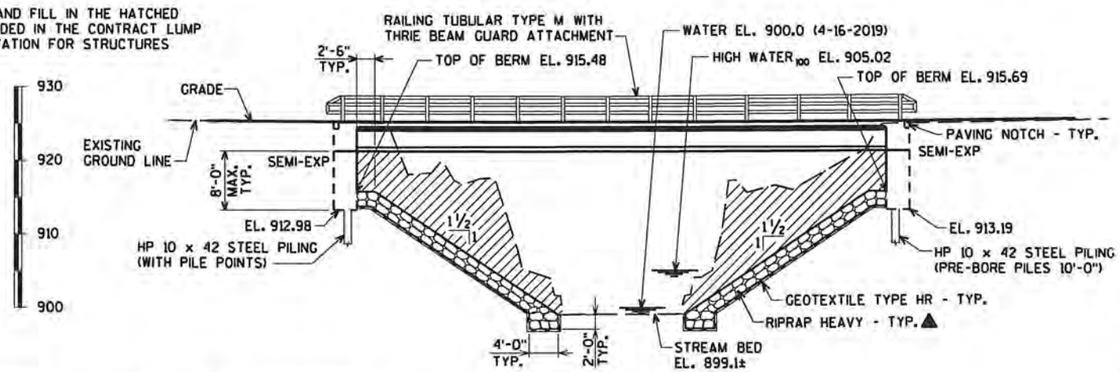
○ DENOTES WING NUMBER.

▲ SUITABLE BEDROCK CAN BE LEFT IN PLACE INSTEAD OF BEING REPLACED WITH RIPRAP HEAVY

PLAN

SINGLE SPAN 36W" PRESTRESSED CONCRETE GIRDER BRIDGE

COST OF EXCAVATION AND FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-18-237".



ELEVATION

(NORMAL TO ℄ OF CREEK)

NOTE:
THE ADDITIONAL STRUCTURE (INCLUDING SUPERSTRUCTURE, ABUTMENTS, FOOTING, AND PAVED BOTTOM) LOCATED UNDER STRUCTURE P-18-702 WILL ALSO BE REMOVED AS PART OF THIS PROJECT. (GAS LINE IS ATTACHED TO THE SIDE OF THIS BRIDGE). COST FOR REMOVING THE ADDITIONAL STRUCTURE SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00".

LIST OF DRAWINGS

FOR TYPICAL SECTION AND DESIGN DATA SEE SHEET 2

WISCONSIN CHRISTOPHER D. MCMAHON E-29177 EAU CLAIRE WI PROFESSIONAL ENGINEER

10/27/2020

BRIDGE OFFICE CONTACT:
AARON BONK
(608)-261-0261

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/06/20
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-18-237

CTH K OVER FALL CREEK

COUNTY EAU CLAIRE | ~~TOWN/CITY~~/VILLAGE FALL CREEK

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	JLB	DESIGN CK'D.	AEB	DRAWN BY	CLP	PLANS CK'D.	CBM

GENERAL PLAN

SHEET 1 OF 18

56

DATE:
DATE:
DATE:

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8

8

I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Structures\FINAL 80ft Sept\421174 gp 80ft.dgn

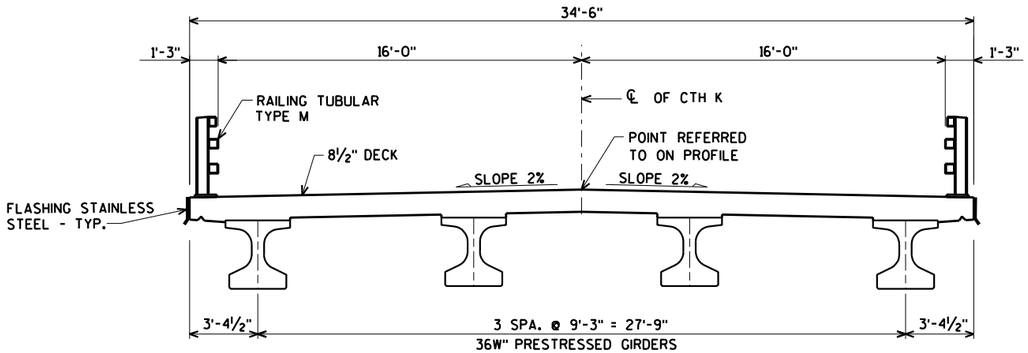
I.D.

DATE:

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL
● 203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-18-237	LS	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	335	355	-----	690
502.0100	CONCRETE MASONRY BRIDGES	CY	58	51	123	232
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	350	350
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	-----	-----	324	324
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,860	2,400	-----	5,260
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,230	1,030	19.600	22,860
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	-----	8	8
506.4000	STEEL DIAPHRAGMS B-18-237	EACH	-----	-----	3	3
511.1100	TEMPORARY SHORING	SF	-----	-----	-----	180
513.4061	RAILING TUBULAR TYPE M	LF	21	-----	169	190
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	8	-----	18
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	-----	70	-----	70
550.0500	PILE POINTS	EACH	8	-----	-----	8
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	160	85	-----	245
606.0300	RIPRAP HEAVY	CY	190	220	-----	410
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	80	-----	160
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	45	55	-----	100
645.0120	GEOTEXTILE TYPE HR	SY	355	405	-----	760
SPV.0090.01	FLASHING STAINLESS STEEL	LF	-----	-----	160	160
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	1/2" & 3/4"

● THE ADDITIONAL STRUCTURE (INCLUDING SUPERSTRUCTURE, ABUTMENTS, FOOTING, AND PAVED BOTTOM) LOCATED UNDER STRUCTURE P-18-702 WILL ALSO BE REMOVED AS PART OF THIS PROJECT. (GAS LINE IS ATTACHED TO THE SIDE OF THIS BRIDGE). COST FOR REMOVING THE ADDITIONAL STRUCTURE SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00".



TYPICAL SECTION THRU BRIDGE

(FOR ELEVATION OF ABUTMENTS, SEE SHEETS 5 AND 9)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.14
OPERATING RATING FACTOR: 1.65
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 240 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.
CONCRETE MASONRY { ALL OTHER ____ f'_c = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) ____ f_y = 60,000 p.s.i.

36W" PRESTRESSED GIRDER
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	2 YEAR FREQUENCY
Q_{100} = 1,130 c.f.s.	Q_2 = 340 c.f.s.
VEL.= 10.6 f.p.s.	VEL.= 7.7 f.p.s.
HW_{100} = EL. 905.02	HW_2 = EL. 902.28

WATERWAY AREA = 107.0 sq. ft.
DRAINAGE AREA = 15.6 sq. mi.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8
DATUM = NAVD88 (2012)

FOUNDATION DATA:

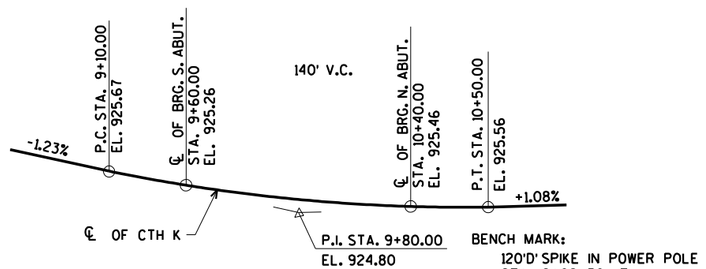
SOUTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 20'-0".

NORTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING PLACED IN PRE-BORED HOLES AND DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 12'-0". (PRE-BORE PILES 10'-0" MAX. OR 3'-0" MIN. INTO SOUND ROCK, WHICHEVER IS LESS).

‡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. = 1,500 (2021)
A.A.D.T. = 2,020 (2041)
R.D.S. = 40 M.P.H.



PROFILE GRADE LINE

(CTH K)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

DRAWN BY CJM/CLP | PLANS CK'D. CBM

TYPICAL SECTION, QUANTITIES AND DESIGN DATA

SHEET 2 OF 18
57

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

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-18-237" SHALL BE THE EXISTING GROUNDLINE.

THE EXISTING STRUCTURE, P-18-702, TO BE REMOVED, IS A SINGLE SPAN PRESTRESSED CONCRETE CHANNEL BRIDGE, 72.5 FT. LONG WITH A 30.0 FT. CLEAR ROADWAY WIDTH.

AN ADDITIONAL STRUCTURE IS LOCATED UNDERNEATH STRUCTURE P-18-702. THIS STRUCTURE IS A 37.8 FT. LONG SINGLE SPAN STEEL GIRDER BRIDGE, THAT IS 28.7 FT. LONG BETWEEN ABUTMENT FACES. STRUCTURE HAS A PAVED BOTTOM.

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

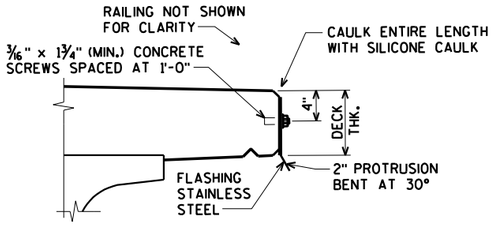
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.

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

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

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH DEPTH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.



FLASHING DETAIL FOR NEW BRIDGES WITH OPEN RAILING

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

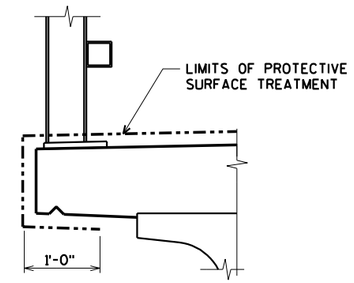
FLASHING TO BE NSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

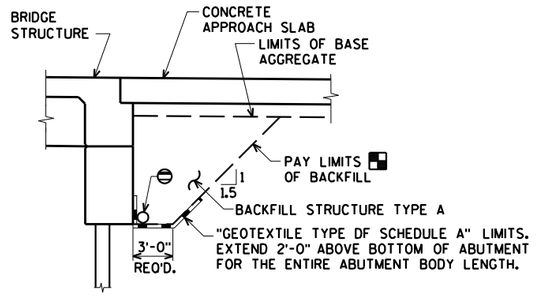
EXTEND FLASHING TO F.F. OF ABUTMENT DIAPHRAGM.

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

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



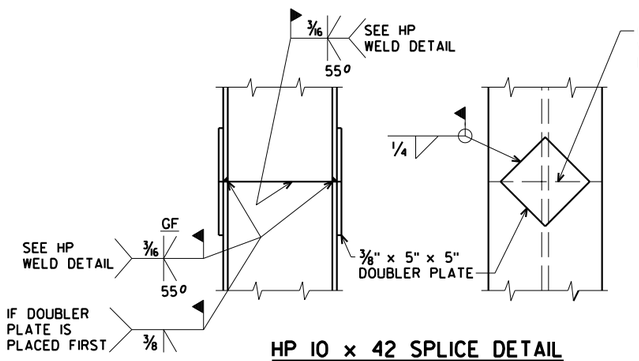
PROTECTIVE SURFACE TREATMENT DETAIL



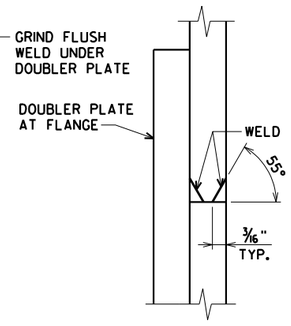
BACKFILL STRUCTURE LIMITS

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 8.



HP 10 x 42 SPLICE DETAIL



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

DRAWN BY CLP | PLANS CK'D. CBM

STRUCTURE DETAILS AND NOTES

SHEET 3 OF 18
58

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
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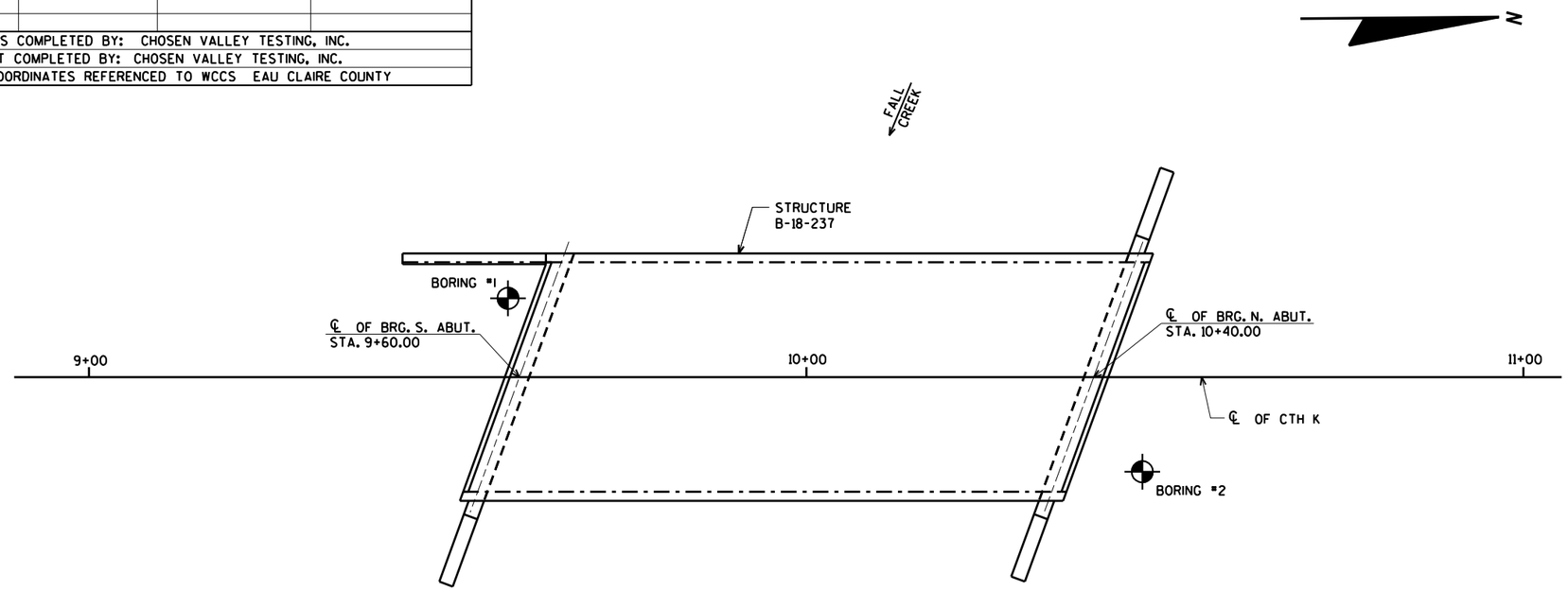
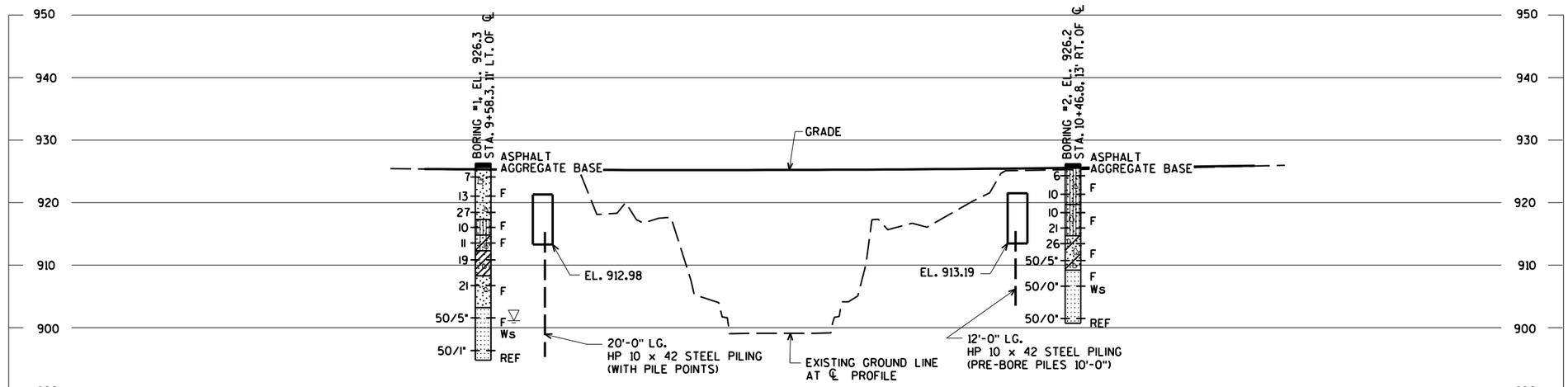
8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	AUGUST 27, 2019	263035.48	397038.50
2	AUGUST 27, 2019	263123.76	397062.93
BORINGS COMPLETED BY: CHOSEN VALLEY TESTING, INC.			
REPORT COMPLETED BY: CHOSEN VALLEY TESTING, INC.			
ALL COORDINATES REFERENCED TO WCCS EAU CLAIRE COUNTY			





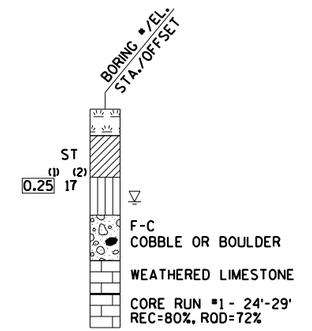
STATE PROJECT NUMBER

7823-03-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

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SUBSURFACE EXPLORATION

SHEET 4 OF 18
59

8

8

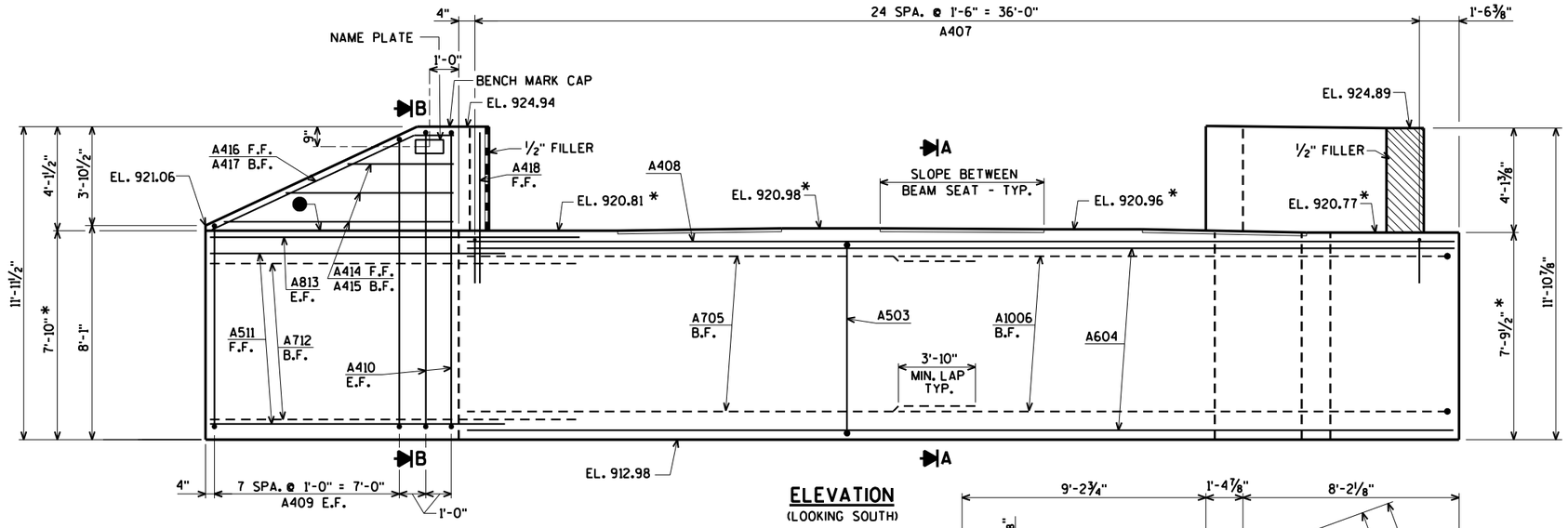
9/22/2020
PENTABLE:BReau_shd_util.tbl

I:±42±42-1174.00 - Eau Claire Co. CTH K over Fall Creek±Structures±FINAL 80ft Sept±421174 soils 80ft.dgn

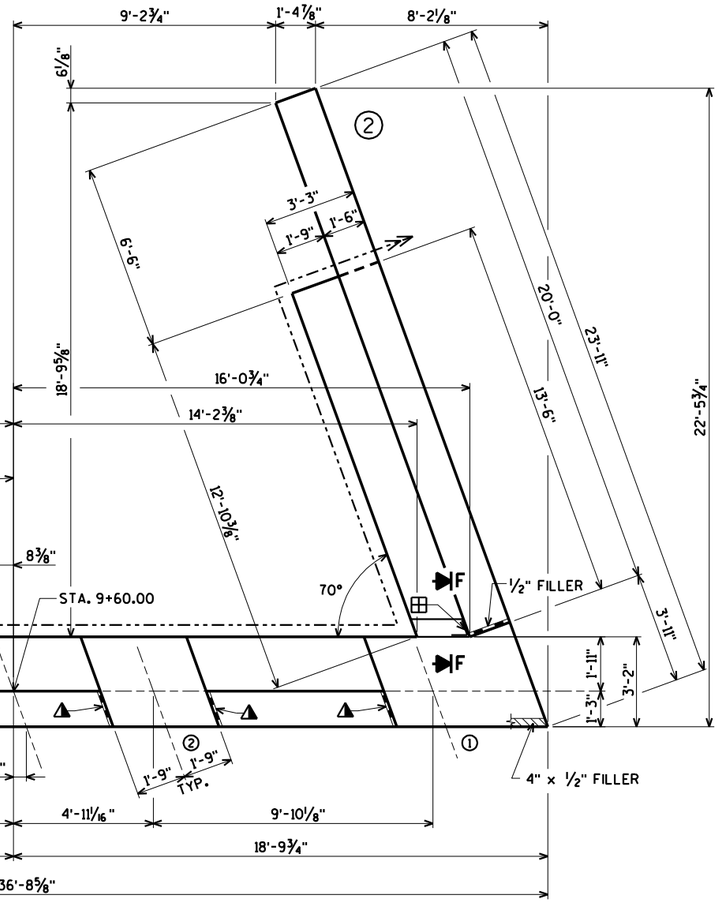
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER

7823-03-70



ELEVATION
(LOOKING SOUTH)



PLAN

*ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES S. ABUT.

FOR SECTIONS A & B SEE SHEET 8

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 8. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

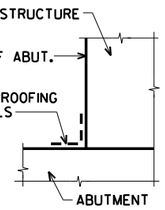
● OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F. (RUBBERIZED MEMBRANE WATERPROOFING INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES" IF CONST. JOINT IS USED).

▲ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE



SECTION F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

DRAWN BY CLP | PLANS CK'D. CBM

SOUTH ABUTMENT

SHEET 5 OF 18
60

ORIGINAL PLANS PREPARED BY
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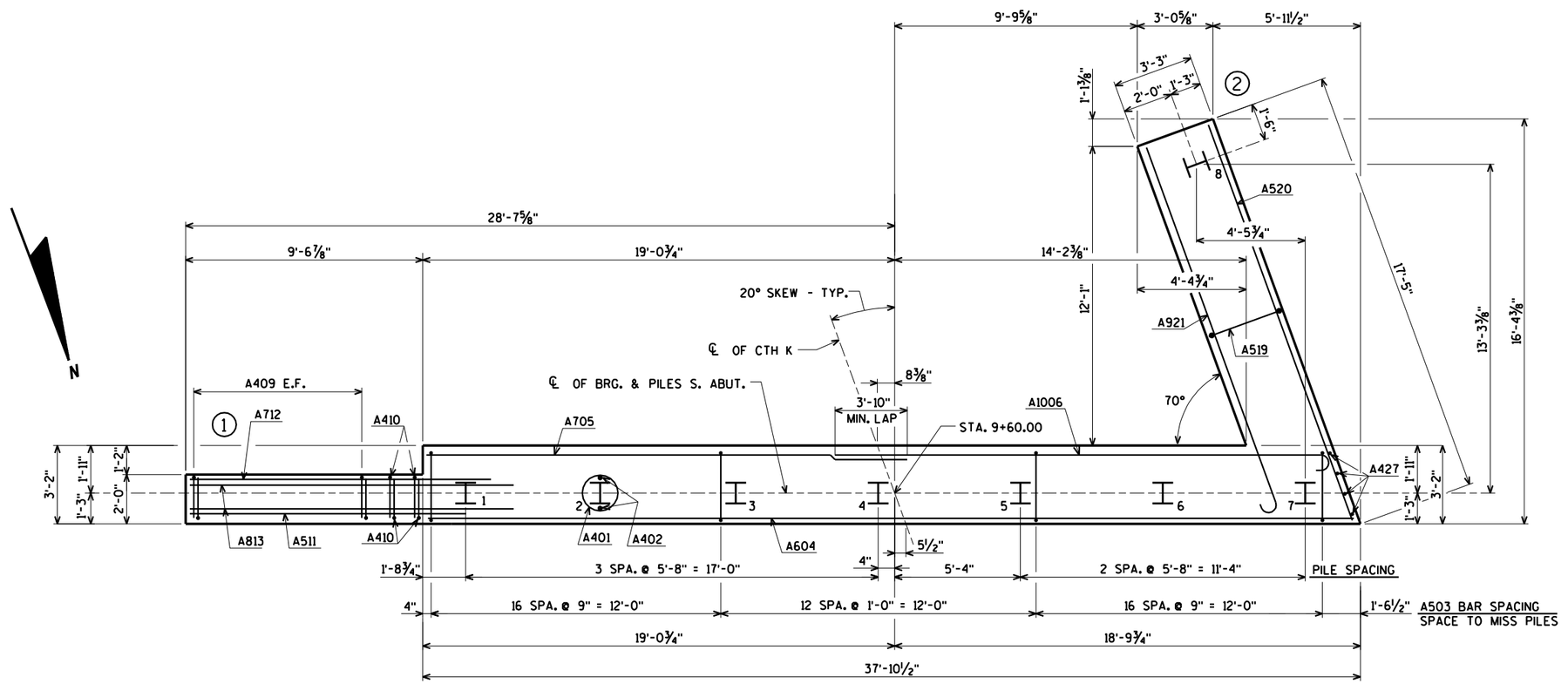
9/22/2020
PENTABLE:BReau_shd_util.tbl

I:±42±42-1174.00 - Eau Claire Co. CTH K over Fall Creek±Structures±FINAL 80ft Sept±421174 sa 80ft.dgn

STATE PROJECT NUMBER
7823-03-70



PILE LAYOUT

FOR PILE SPLICE DETAIL SEE SHEET 3.

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

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SOUTH ABUTMENT
PILE LAYOUT

SHEET 6 OF 18
61

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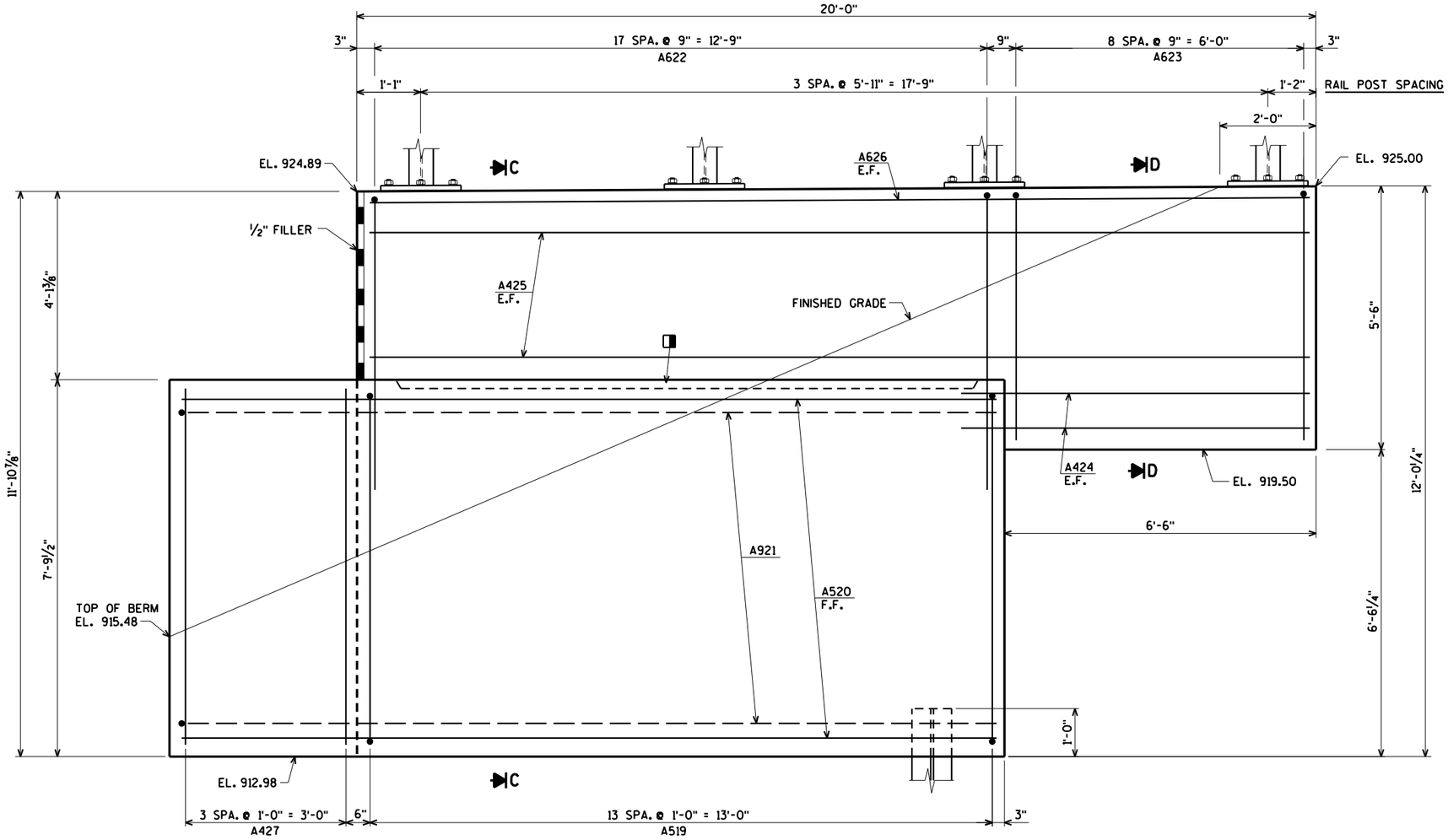
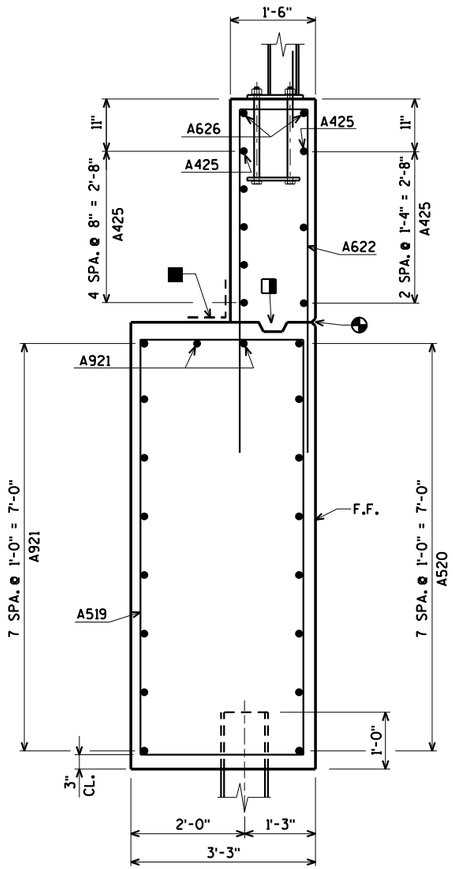
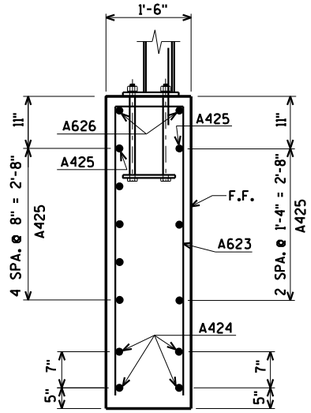


ELEVATION - WING 2



SECTION C



SECTION D

FOR PILE SPLICE DETAIL SEE SHEET 3.

OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED 2" x 6" WITH MEMBRANE ON B.F.

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

¾" 'V' GROOVE ON F.F. 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-18-237

DRAWN BY CLP | PLANS CK'D. CBM

SOUTH ABUTMENT WING 2 DETAILS

SHEET 7 OF 18
62

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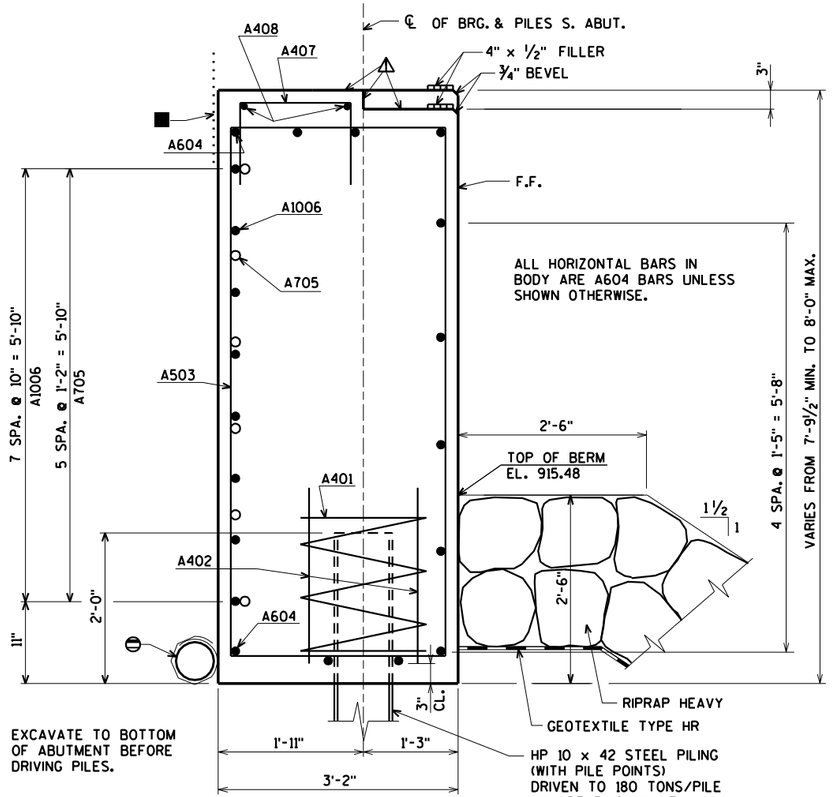
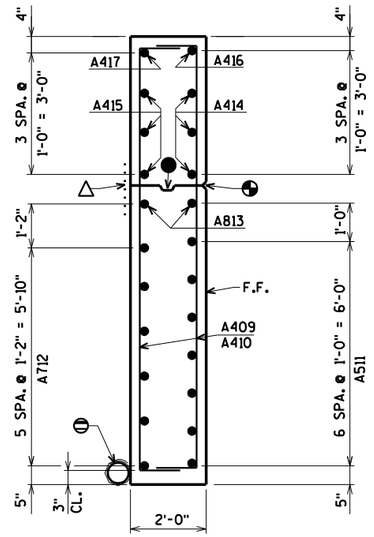


SECTION A



SECTION B

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
A409	2 SERIES OF 8	10'-2" TO 13'-6"
A414	1 SERIES OF 3	4'-9" TO 8'-11"
A415	1 SERIES OF 3	4'-2" TO 8'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

STATE PROJECT NUMBER

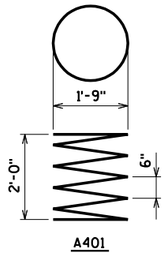
7823-03-70

BILL OF BARS

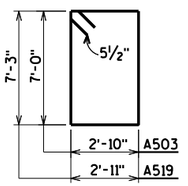
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	2,230# COATED 2,860# UNCOATED LOCATION
A401		7	28-0	X		BODY @ PILES
A402		14	2-3			BODY @ PILES
A503		45	20-2	X		BODY VERT.
A604		12	36-4			BODY HORIZ.
A705		6	20-3			BODY HORIZ. B.F. @ WING 1
A1006		8	21-5	X		BODY HORIZ. B.F. @ WING 2
A407		25	4-5	X		BODY VERT. TOP
A408		2	36-4			BODY HORIZ. TOP
A409	X	16	11-10	X	⊗	WING 1 VERT. E.F.
A410	X	4	13-11	X		WING 1 VERT. E.F.
A511	X	7	11-2			WING 1 HORIZ. F.F.
A712	X	6	12-2			WING 1 HORIZ. B.F.
A813	X	2	13-1			WING 1 HORIZ. E.F.
A414	X	3	6-10		⊗	WING 1 HORIZ. F.F.
A415	X	3	6-3		⊗	WING 1 HORIZ. B.F.
A416	X	1	11-1	X		WING 1 DIAG. F.F.
A417	X	1	10-6	X		WING 1 DIAG. B.F.
A418	X	1	5-3			WING 1 VERT. F.F.
A519	X	14	20-10	X		WING 2 VERT.
A520	X	8	17-0			WING 2 HORIZ. F.F.
A921	X	10	16-9	X		WING 2 HORIZ.
A622	X	18	13-0	X		WING 2 VERT.
A623	X	9	10-10	X		WING 2 VERT.
A424	X	4	7-9			WING 2 HORIZ. E.F.
A425	X	8	19-8			WING 2 HORIZ. E.F.
A626	X	2	19-8			WING 2 HORIZ. TOP E.F.
A427	X	4	7-4			BODY VERT. END @ WING 2

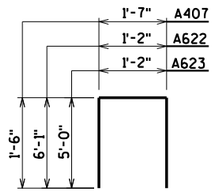
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

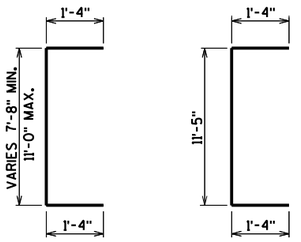
⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

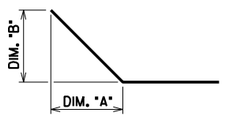


A401

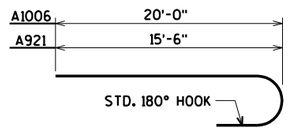


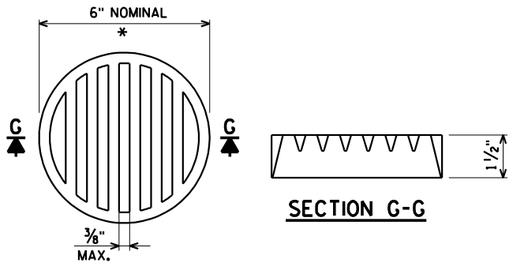






BAR NO.	DIM. "A"	DIM. "B"
A416	8'-0"	3'-11"
A417	8'-0"	3'-11"





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

RODENT SHIELD DETAIL

FOR LOCATIONS OF SECTIONS A & B SEE SHEET 5

■ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

⚠ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

● OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED 2" x 6"

⊕ ¾" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.

⊖ 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 INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

△ RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").

FOR PILE SPLICE DETAIL SEE SHEET 3.

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-18-237

DRAWN BY CLP | PLANS CK'D. CBM

SOUTH ABUTMENT DETAILS AND BILL OF BARS

SHEET 8 OF 18
63

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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9/23/2020
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8

8

NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

* ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES N. ABUT.

STATE PROJECT NUMBER

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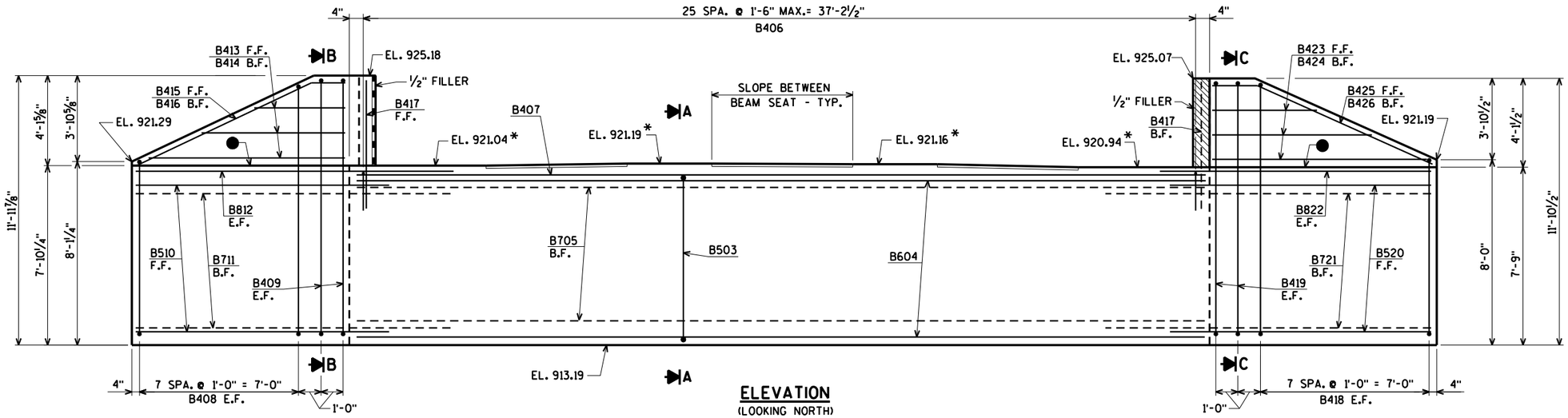
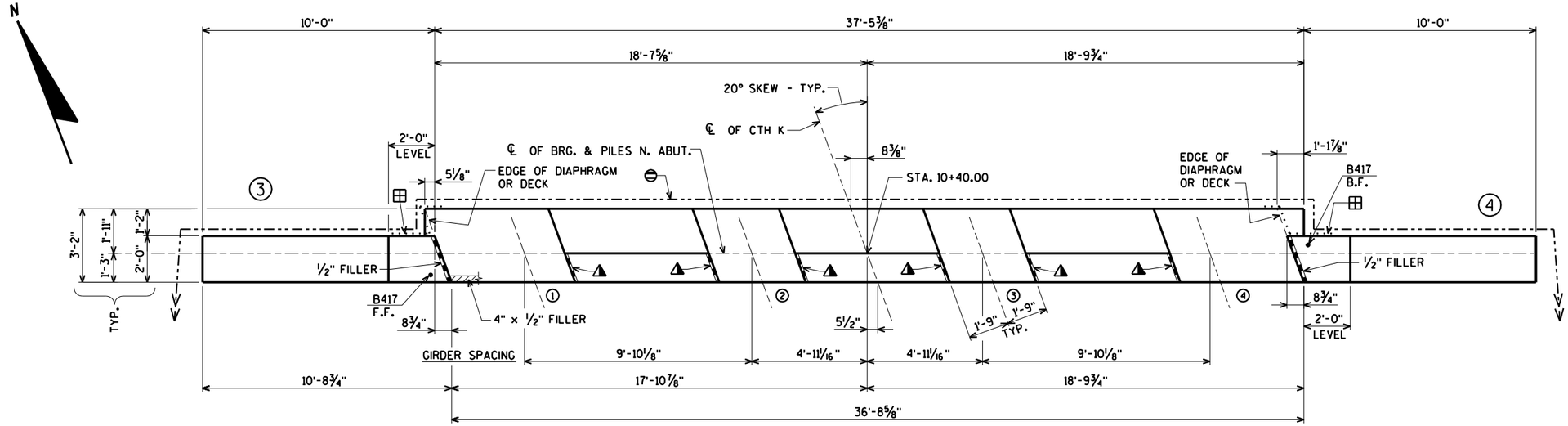


ELEVATION
(LOOKING NORTH)



PLAN

FOR SECTIONS A, B & C SEE SHEET 11

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 8. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

● OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F. (RUBBERIZED MEMBRANE WATERPROOFING INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES" IF CONST. JOINT IS USED).

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

◭ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

DRAWN BY CLP | PLANS CK'D. CBM

NORTH ABUTMENT

SHEET 9 OF 18
64

ORIGINAL PLANS PREPARED BY
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www.AyresAssociates.com

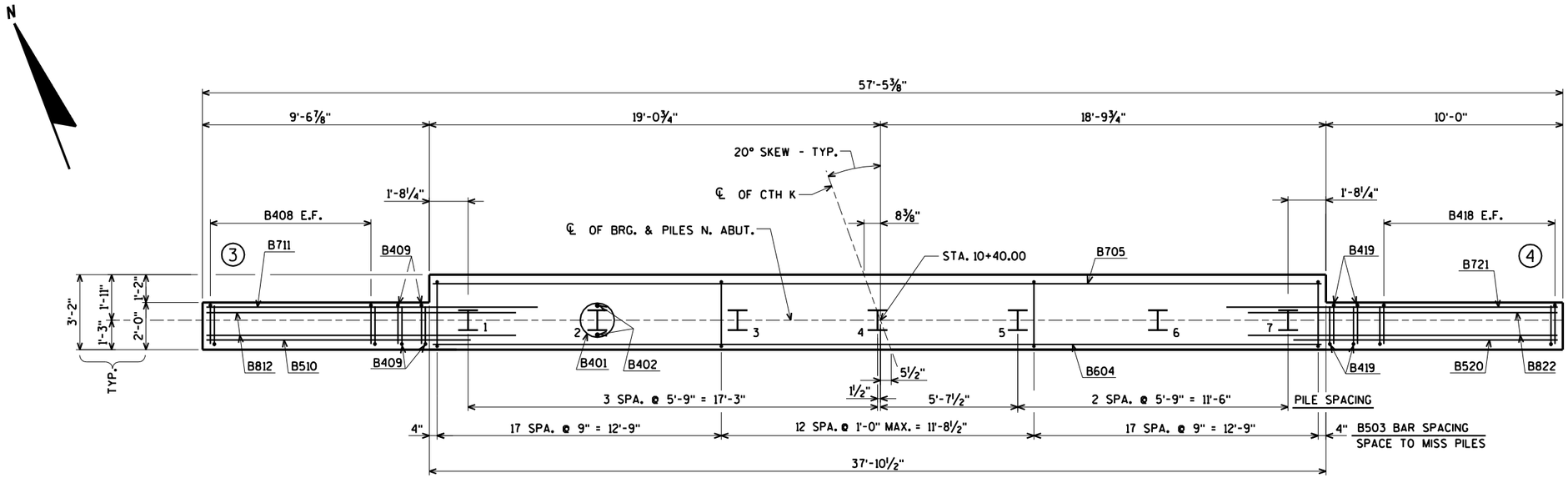
9/22/2020
PENTABLE:tBReau_shd_util.tbl

8

8

I:±42±42-1174.00 - Eau Claire Co. CTH K over Fall Creek±Structures±FINAL 80ft Sept±421174 na 80ft.dgn

STATE PROJECT NUMBER
7823-03-70



PILE LAYOUT

FOR PILE SPLICE DETAIL SEE SHEET 3.

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

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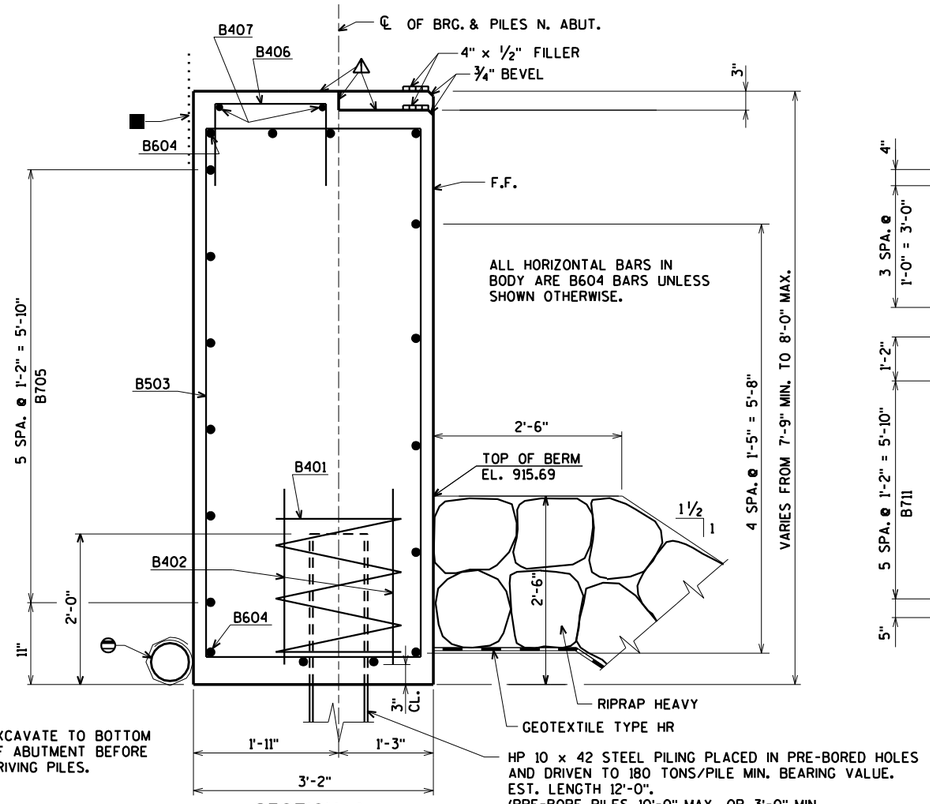
NORTH ABUTMENT
PILE LAYOUT

SHEET 10 OF 18
65

9/22/2020
PENTABLE:BRdet_shd_util.tbl

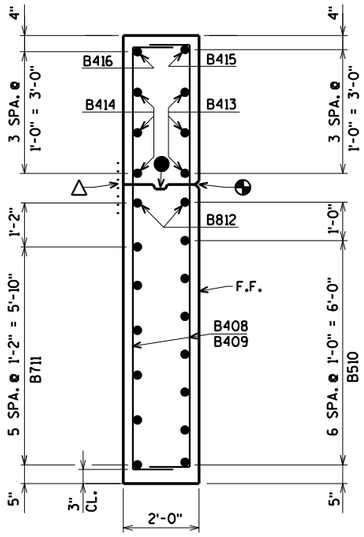
I:±42±42-1174.00 - Eau Claire Co. CTH K over Fall Creek±Structures±FINAL 80ft Sept±421174 na 80ft.dgn

STATE PROJECT NUMBER
7823-03-70

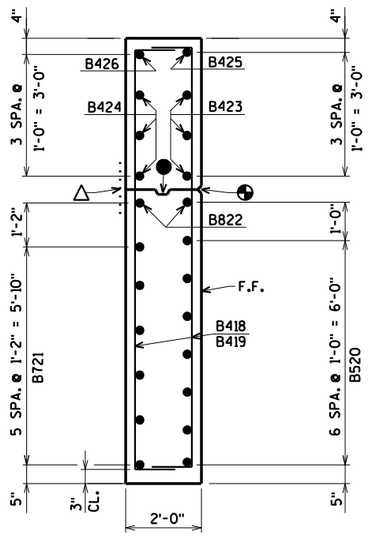


SECTION A

HP 10 x 42 STEEL PILING PLACED IN PRE-BORED HOLES AND DRIVEN TO 180 TONS/PILE MIN. BEARING VALUE. EST. LENGTH 12'-0". (PRE-BORE PILES 10'-0" MAX. OR 3'-0" MIN. INTO SOUND ROCK, WHICHEVER IS LESS)



SECTION B



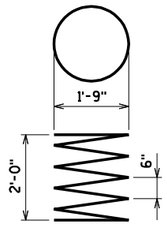
SECTION C

BILL OF BARS

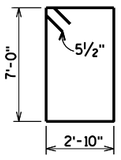
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1.030" COATED 2.400" UNCOATED LOCATION
B401		7	28-0	X		BODY @ PILES
B402		14	2-3			BODY @ PILES
B503		47	20-2	X		BODY VERT.
B604		12	37-6			BODY HORIZ.
B705		6	37-6			BODY HORIZ. B.F.
B406		26	4-5	X		BODY VERT. TOP
B407		2	37-6			BODY HORIZ. TOP
B408	X	16	11-10	X	⊗	WING 3 VERT. E.F.
B409	X	4	13-11	X		WING 3 VERT. E.F.
B510	X	7	11-2			WING 3 HORIZ. F.F.
B711	X	6	12-2			WING 3 HORIZ. B.F.
B812	X	2	13-1			WING 3 HORIZ. E.F.
B413	X	3	6-10		⊗	WING 3 HORIZ. F.F.
B414	X	3	6-3		⊗	WING 3 HORIZ. B.F.
B415	X	1	11-1	X		WING 3 DIAG. F.F.
B416	X	1	10-6	X		WING 3 DIAG. B.F.
B417	X	2	5-3			WING 3 VERT. F.F., WING 4 VERT. B.F.
B418	X	16	11-9	X	⊗	WING 4 VERT. E.F.
B419	X	4	13-10	X		WING 4 VERT. E.F.
B520	X	7	11-7			WING 4 HORIZ. F.F.
B721	X	6	12-7			WING 4 HORIZ. B.F.
B822	X	2	13-6			WING 4 HORIZ. E.F.
B423	X	3	6-3		⊗	WING 4 HORIZ. F.F.
B424	X	3	6-10		⊗	WING 4 HORIZ. B.F.
B425	X	1	10-6	X		WING 4 DIAG. F.F.
B426	X	1	11-1	X		WING 4 DIAG. B.F.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

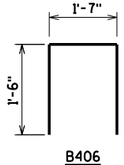
⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



B401



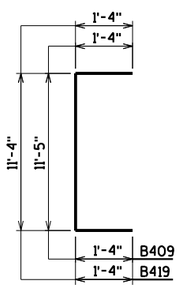
B503



B406

B408

B418



FOR LOCATIONS OF SECTIONS A, B & C SEE SHEET 9

■ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

⚠ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

● OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED 2" x 6"

◒ ¾" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 8. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

△ RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").

FOR PILE SPLICE DETAIL SEE SHEET 3.

B.F. DENOTES BACK FACE

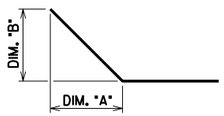
E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
B408	2 SERIES OF 8	10'-2" TO 13'-6"
B413	1 SERIES OF 3	4'-9" TO 8'-11"
B414	1 SERIES OF 3	4'-2" TO 8'-4"
B418	2 SERIES OF 8	10'-1" TO 13'-5"
B423	1 SERIES OF 3	4'-2" TO 8'-4"
B424	1 SERIES OF 3	4'-9" TO 8'-11"

BUNDLE AND TAG EACH SERIES SEPARATELY.



BAR NO.	DIM. "A"	DIM. "B"
B415	8'-0"	3'-11"
B416	8'-0"	3'-11"
B425	8'-0"	3'-11"
B426	8'-0"	3'-11"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

DRAWN BY CLP | PLANS CK'D. CBM

NORTH ABUTMENT DETAILS AND BILL OF BARS

SHEET 11 OF 18
66

ORIGINAL PLANS PREPARED BY
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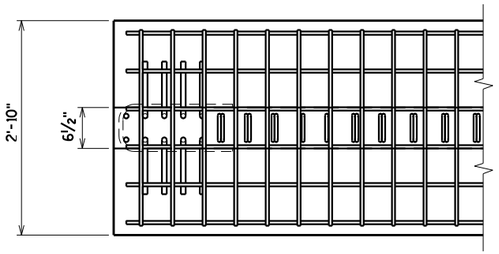
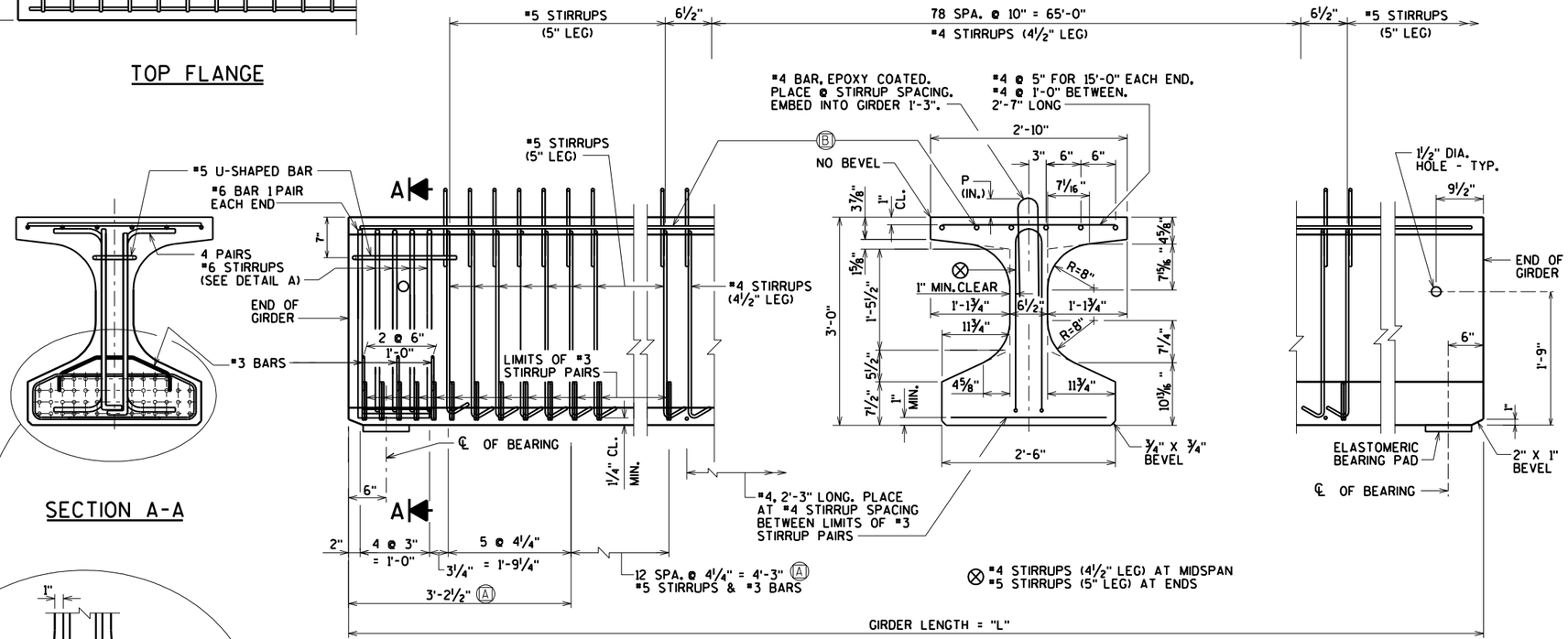


TOP FLANGE

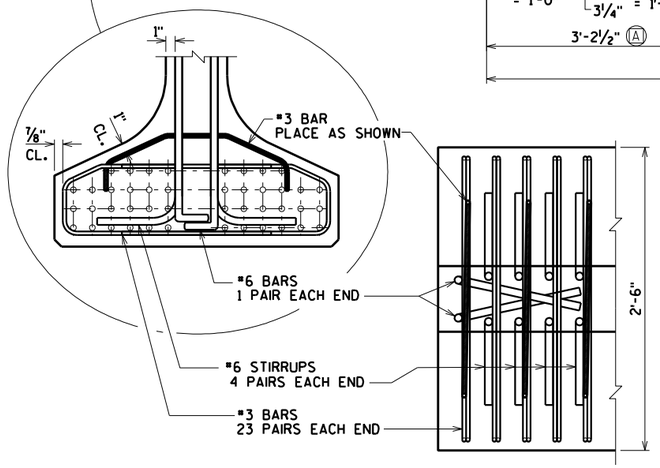


SECTION A-A

SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 *4 BARS, FULL LENGTH, MIN. LAP = 2'-4"



DETAIL A
BOTTOM FLANGE

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" 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 SECTION 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.~~

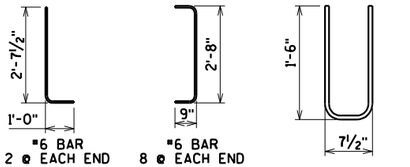
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

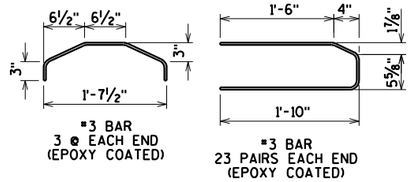
SPACING SHOWN FOR *4 AND *5 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO THE SHOP DRAWING SUBMITTAL.

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.





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

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	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 & 4	81'-0"	0.5	0.9	1.3	1.5	1.6	1.5	1.3	0.9	0.5	8,000	11"	8"	11"	0.60	32	6,400	31	11.5	14.5	5		
1	2 & 3	81'-0"	0.5	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.5	8,000	11"	8"	11"	0.60	32	6,400	31	11.5	14.5	5		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

DRAWN BY CLP | PLANS CK'D. CBM

36W" PRESTRESSED GIRDER DETAILS

SHEET 12 OF 18
67

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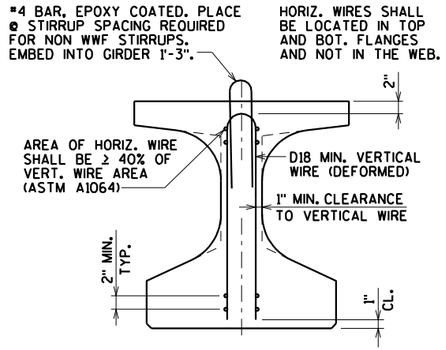
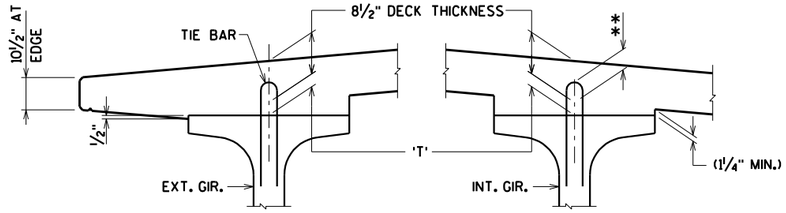


SECTION THRU GIRDER

SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS
ASTM A1064 (FY = 70 KSI)



DECK HAUNCH DETAIL

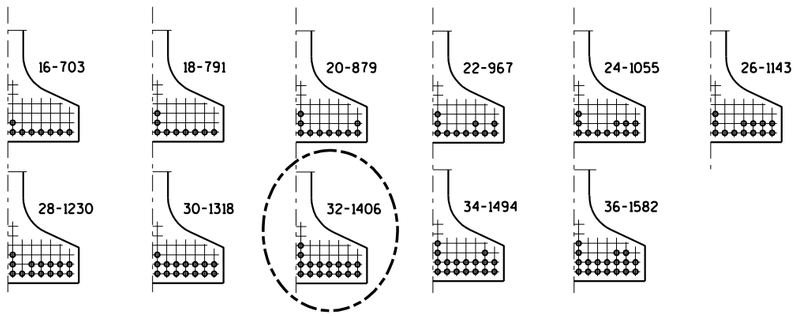
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** 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:

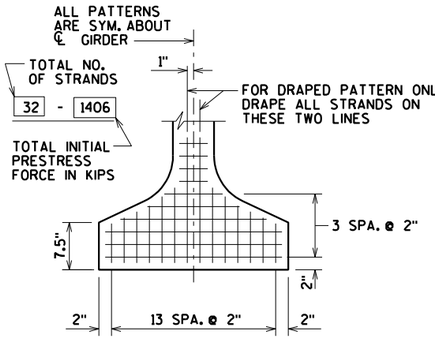
TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4¼" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

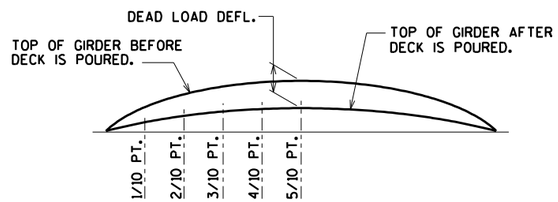


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

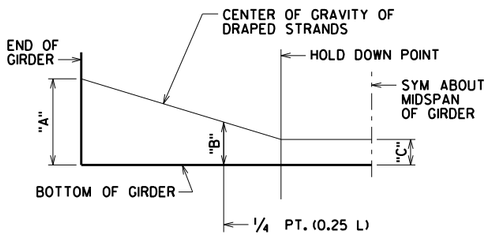
0.6"ø STRANDS



TYP. STRAND PATTERN



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

* 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	1.8

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

DRAWN BY CLP | PLANS CK'D. CBM

36W" PRESTRESSED GIRDER DETAILS

SHEET 13 OF 18
68

ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER

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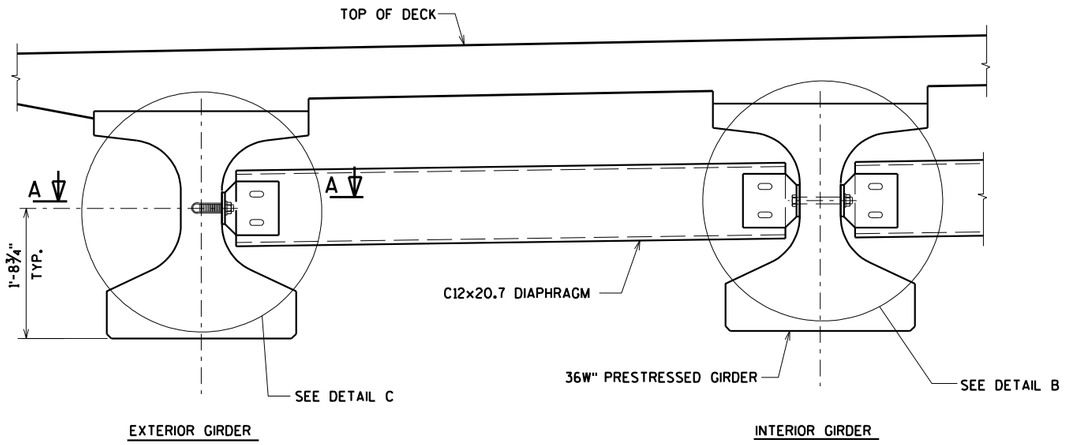
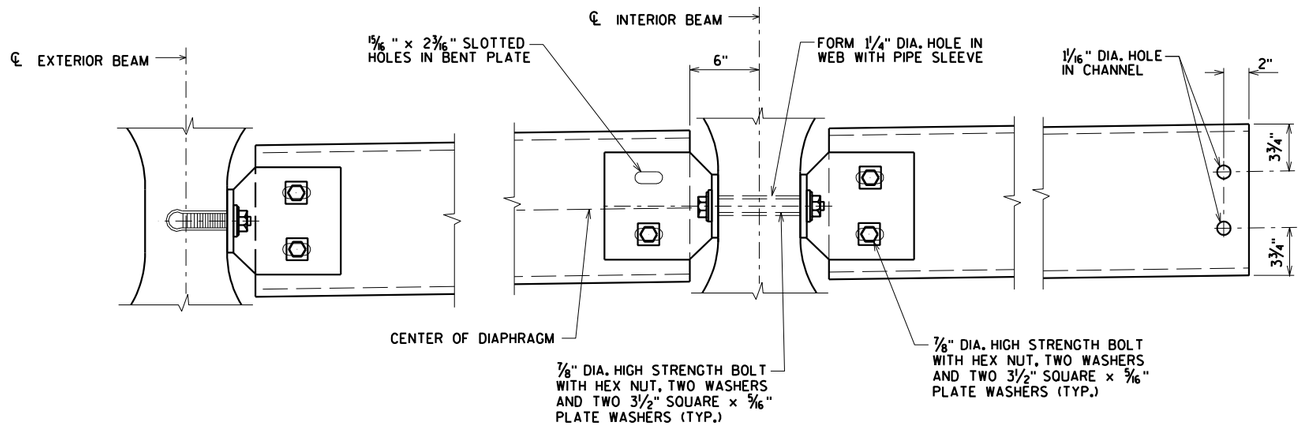


PART TRANSVERSE SECTION AT DIAPHRAGM



NOTES

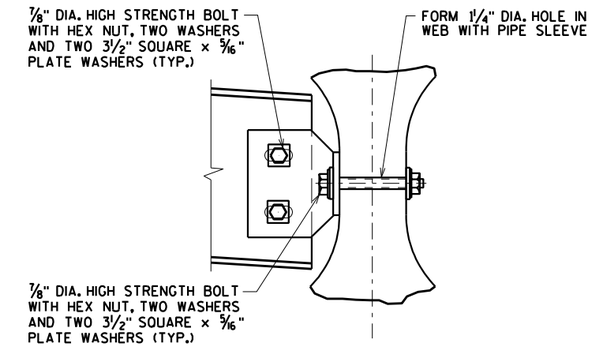
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-18-237", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

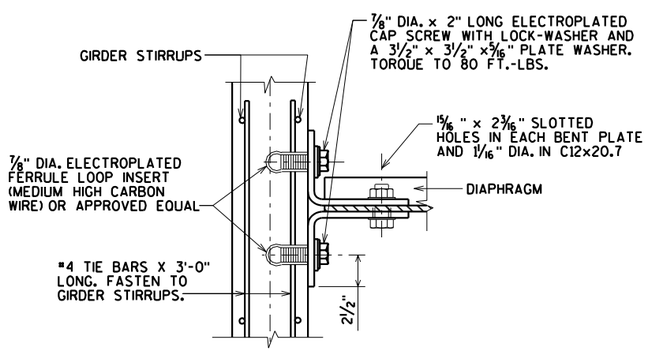
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

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 AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°

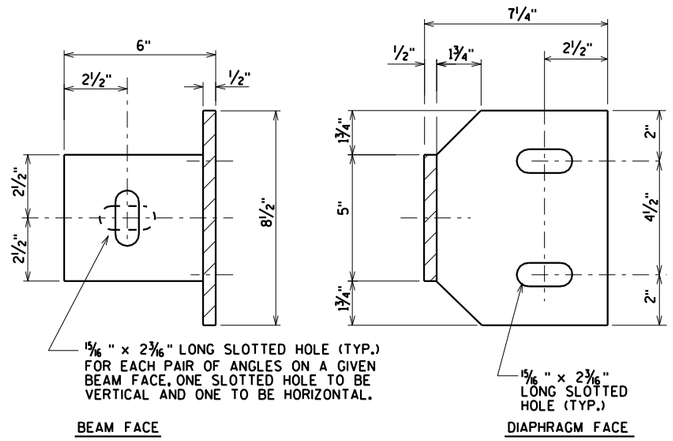
DETAIL C



SECTION A-A

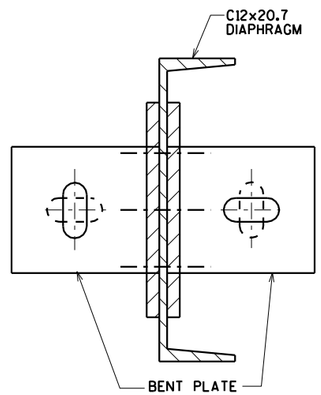
(FOR EXTERIOR ATTACHMENT)

DETAIL B



BEAM FACE

DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

DRAWN BY CLP | PLANS CK'D. CBM

STEEL DIAPHRAGM

SHEET 14 OF 18

69

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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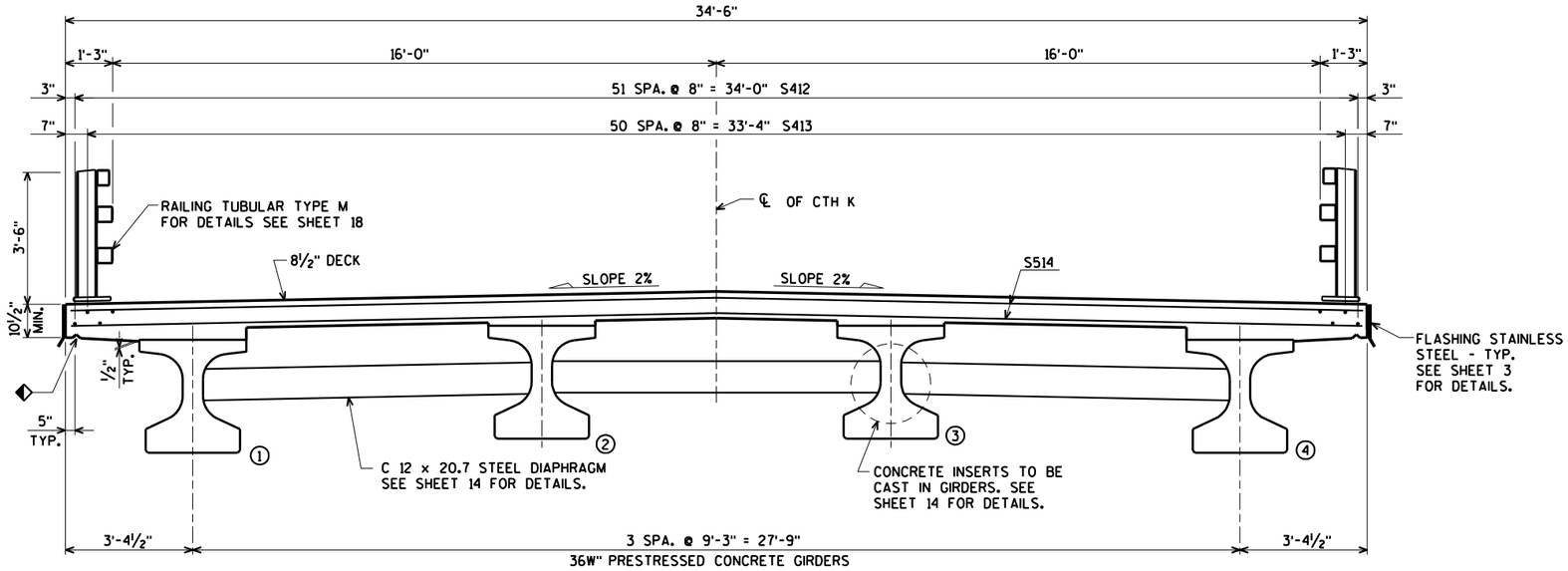
8

STATE PROJECT NUMBER

7823-03-70



TYPICAL SECTION THRU BRIDGE

(LOOKING NORTH)

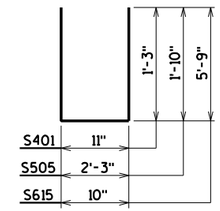
◆ ¾" V - GROOVE. EXTEND V - GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGMS - TYP.

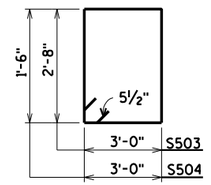
BILL OF BARS

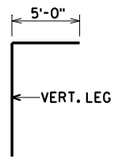
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	19,600# COATED LOCATION
S401	X	42	3-3	X		DIAPH. @ ABUT. VERT. @ NOTCH
S402	X	12	5-9			DIAPH. @ ABUT. HORIZ. @ NOTCH
S503	X	66	11-11	X		DIAPH. @ ABUT. VERT.
S504	X	16	9-6	X		DIAPH. @ ABUT. VERT. & GIRDERS
S505	X	66	5-8	X		DIAPH. @ ABUT. VERT.
S606	X	10	36-4			DIAPH. @ ABUT. HORIZ.
S607	X	24	5-2			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S608	X	6	6-7			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S609	X	4	1-9			DIAPH. @ ABUT. HORIZ. @ EXT. GDRS.
S610	X	8	2-7			DIAPH. @ ABUT. HORIZ. @ EXT. GDRS.
S511	X	16	6-0			DIAPH. @ ABUT. HORIZ. THRU GDRS.
S412	X	104	42-0			DECK LONG. BOT.
S413	X	102	42-0			DECK LONG. TOP
S514	X	247	36-4			DECK TRANS. TOP & BOTTOM
S615	X	52	12-0	X		DECK @ RAIL POSTS
S616	X	96	6-0			DECK @ INT. RAIL POSTS
S617	X	16	6-0	X		DECK @ END RAIL POSTS
S618	X	4	12-0	X		DECK @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

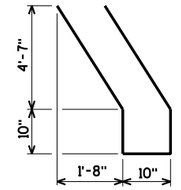
BEARING PAD DETAIL







S617



S618

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

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SUPERSTRUCTURE

SHEET 15 OF 18
70

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
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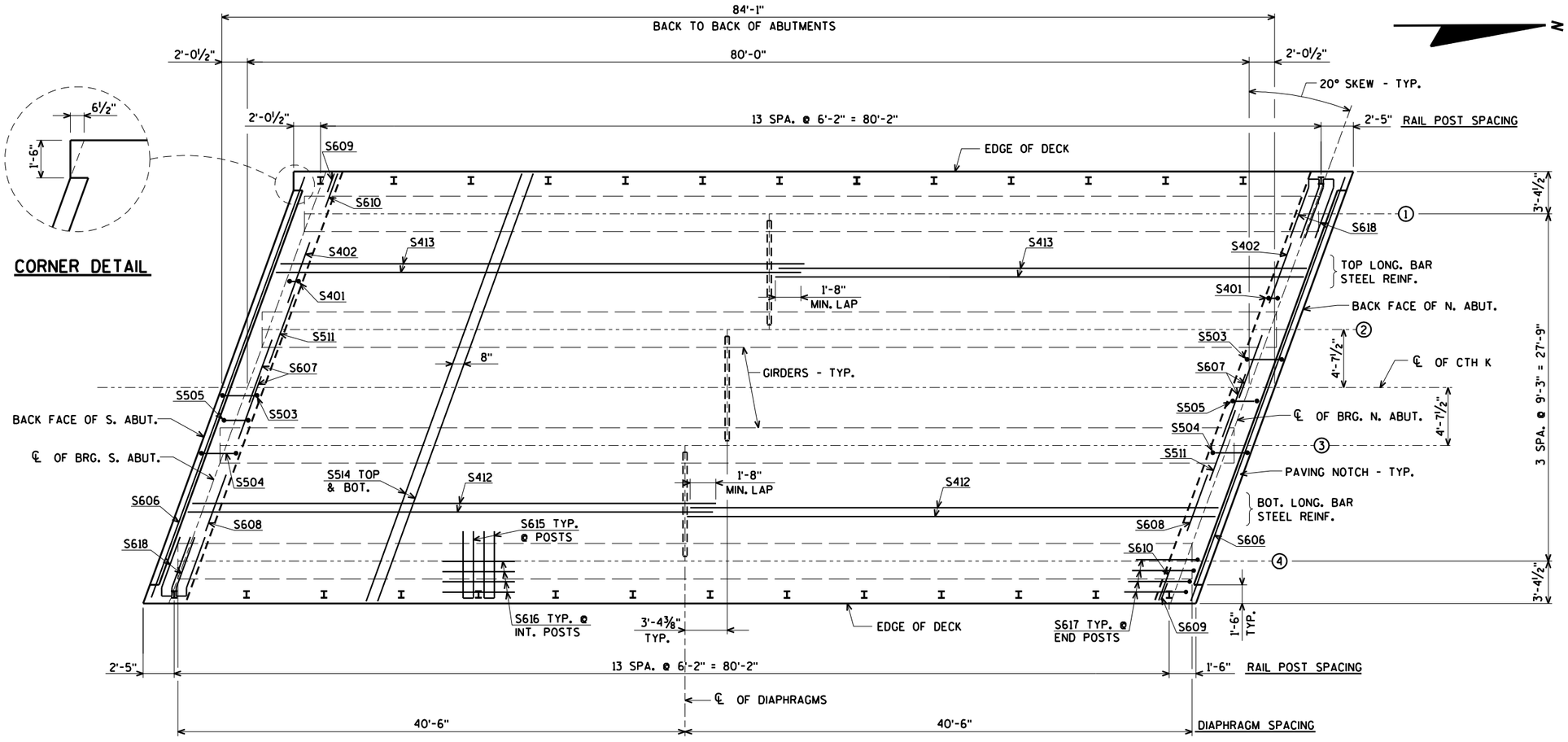
9/23/2020
PENTABLE:BReau_shd_util.tbl

I:±42±42-1174.00 - Eau Claire Co. CTH K over Fall Creek±Structures±FINAL 80ft Sept±421174 sup 80ft.dgn

STATE PROJECT NUMBER

7823-03-70



PLAN

TOP OF DECK ELEVATIONS

LOCATION	℄ OF BRG. S. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	℄ OF BRG. N. ABUT.
WEST EDGE OF DECK	924.89	924.88	924.87	924.87	924.88	924.91	924.94	924.98	925.04	925.10	925.18
GIRDER 1	924.97	924.94	924.94	924.94	924.95	924.97	925.00	925.04	925.10	925.16	925.24
GIRDER 2	925.16	925.14	925.12	925.12	925.13	925.14	925.17	925.21	925.26	925.32	925.39
℄ OF CTH K	925.26	925.23	925.22	925.21	925.22	925.23	925.26	925.29	925.34	925.40	925.46
GIRDER 3	925.18	925.15	925.13	925.12	925.12	925.13	925.16	925.19	925.24	925.29	925.36
GIRDER 4	925.01	924.97	924.95	924.94	924.93	924.94	924.96	924.99	925.03	925.08	925.14
EAST EDGE OF DECK	924.94	924.91	924.88	924.87	924.87	924.87	924.89	924.92	924.96	925.01	925.07

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES FOR DEAD LOAD DEFLECTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

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SUPERSTRUCTURE PLAN

SHEET 16 OF 18
71

ORIGINAL PLANS PREPARED BY
AYRES
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Eau Claire, WI 54701
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I:±42±42-1174.00 - Eau Claire Co. CTH K over Fall Creek±Structures±FINAL 80ft Sept±421174 sup 80ft.dgn

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STATE PROJECT NUMBER

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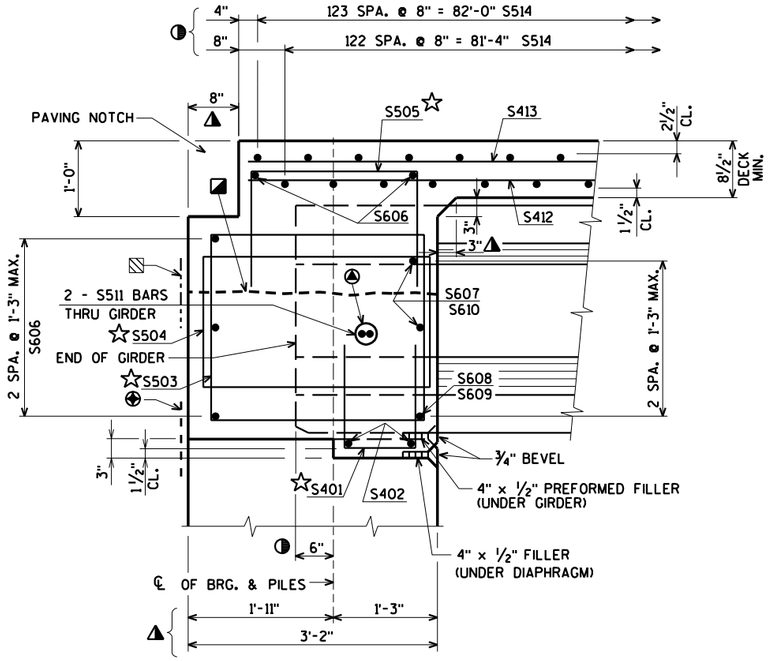
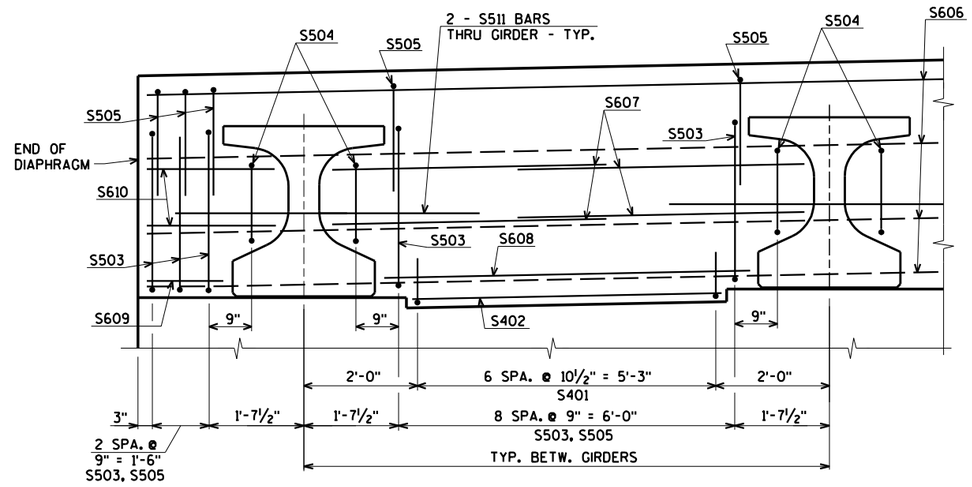


PART LONGITUDINAL SECTION



PART TRANSVERSE SECTION AT ABUTMENT DIAPHRAGM

⊕ 18" RUBBERIZED MEMBRANE WATERPROOFING

◑ DIMENSIONS MEASURED ALONG ℄ OF GIRDER.

◭ DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

◪ OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

▨ 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES"

◭ 1½" DIA. HOLE IN WEB FOR S511 BARS. PLACE S511 BARS SYM. ABOUT ℄ OF GIRDERS. FIELD BEND ALONG SKEW.

☆ BARS PLACED PARELLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ OF GIRDERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

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SUPERSTRUCTURE DETAILS

SHEET 17 OF 18
72

ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER

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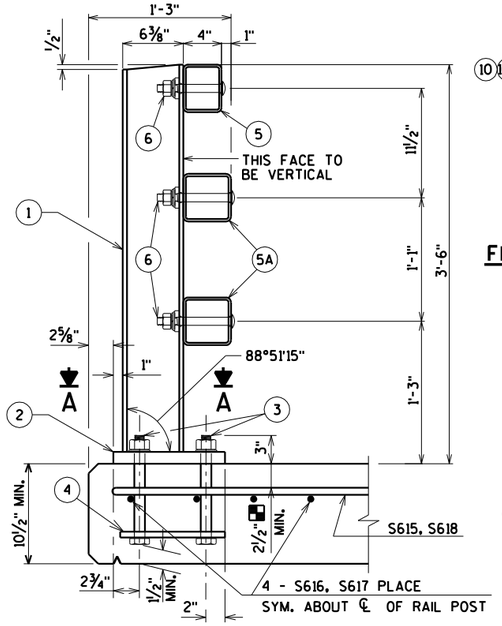
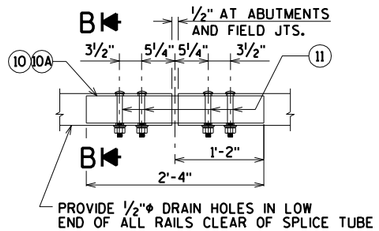
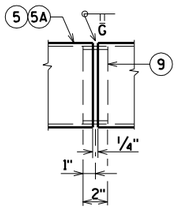


SECTION THRU RAILING ON DECK

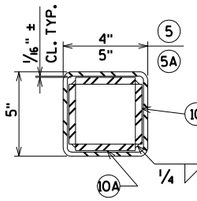


FIELD ERECTION JOINT DETAIL

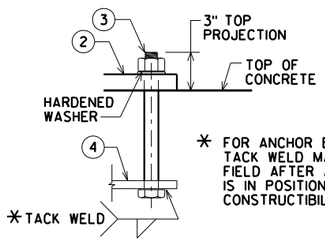


SHOP RAIL SPLICE DETAIL

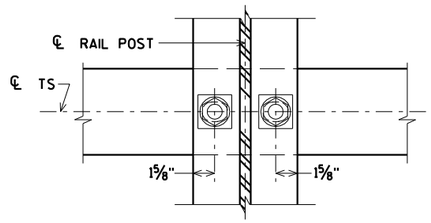
(LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)



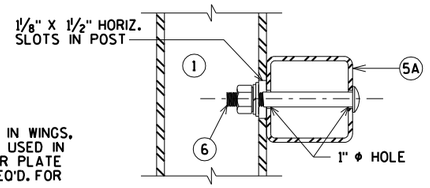
SECTION B



ANCHOR BOLTS



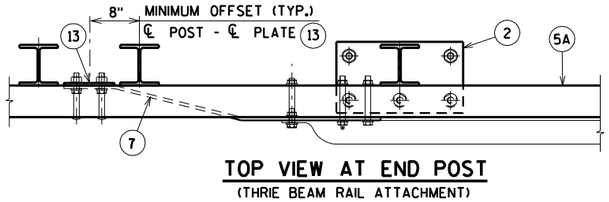
SECTION THRU POST WEB



SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

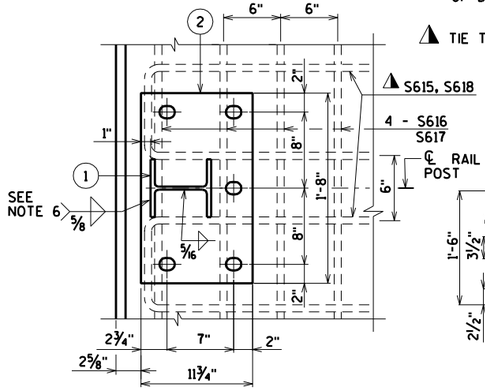


TOP VIEW AT END POST

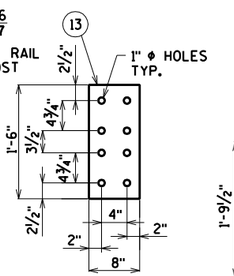
(THRIE BEAM RAIL ATTACHMENT)

PLACE BELOW TOP MAT OF DECK REINFORCEMENT

TIE TO TOP MAT OF STEEL.

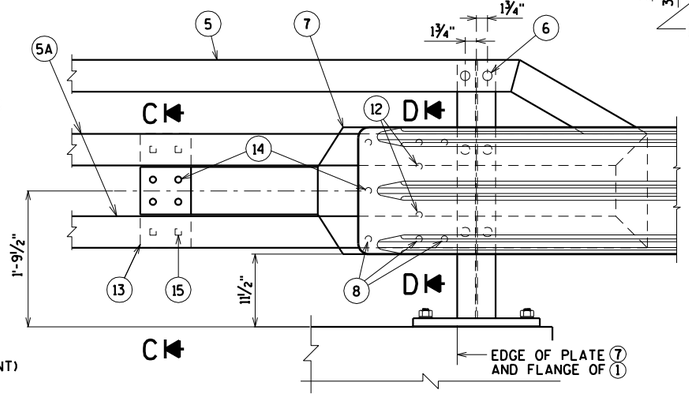


SECTION A



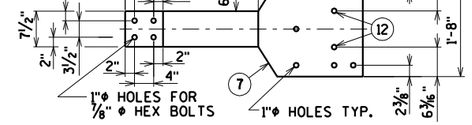
ANCHOR PLATE

(AT BEAM GUARD ATTACHMENT)



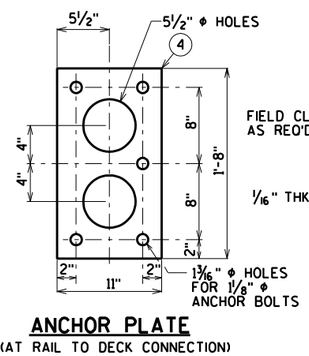
DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)



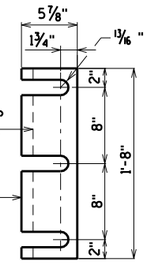
BACK-UP PLATE DETAIL

(AT BEAM GUARD ATTACHMENT)

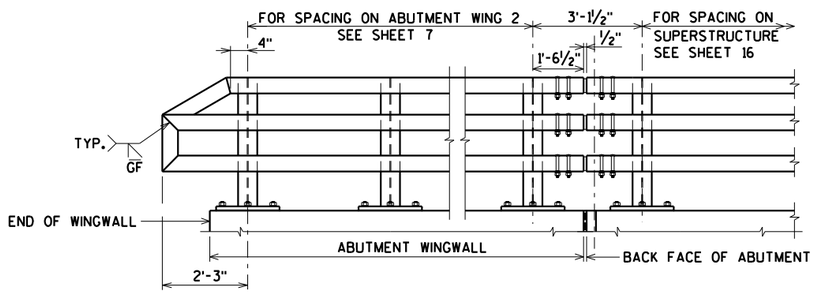


ANCHOR PLATE

(AT RAIL TO DECK CONNECTION)



POST SHIM DETAIL



PART ELEVATION OF RAILING

LEGEND

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

(2) PLATE 1¼" x 11¾" x 1'-8" WITH 1⅝" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

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

(4) ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1¾6" DIA. HOLES FOR ANCHOR BOLTS NO. 3

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

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

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

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

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

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

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

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

(11) ⅞" φ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1⅝" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS ~~AND 1⅝" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS~~ IN PLATE NO. 10A.

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

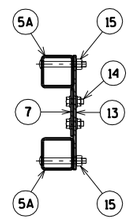
(13) ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

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

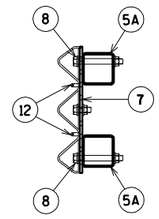
(15) 1" φ HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

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



SECTION C



SECTION D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-237

DRAWN BY CLP | PLANS CK'D. CBM

RAILING TUBULAR TYPE M

SHEET 18 OF 18
73

ORIGINAL PLANS PREPARED BY

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

9/22/2020
PENTABLE:BReau_shd_util.tbl

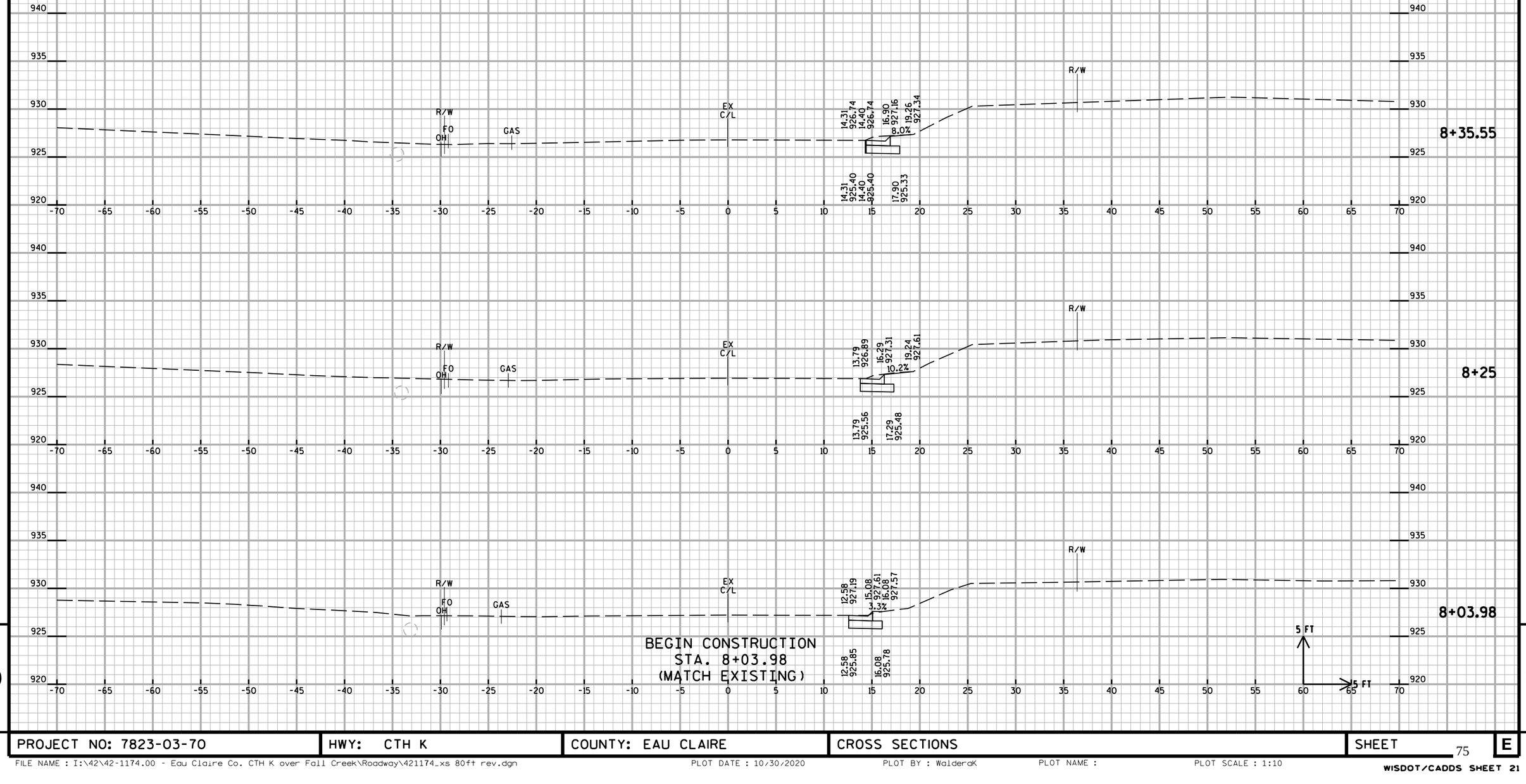
I:±42±42-1174.00 - Eau Claire Co. CTH K over Fall Creek±Structures±FINAL 80ft Sept±421174 Mrail.dgn

CTH K COMPUTER EARTHWORK

Station	Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	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
8+03.98	--	5.2	0.0	1.0						
8+25	21.02	6.0	0.0	1.1	4	0	1	4	1	3
8+35.55	10.55	6.3	0.0	1.0	2	0	0	7	2	5
8+50	14.45	21.1	0.0	1.0	7	0	1	14	2	12
8+54	4.00	20.2	0.0	1.2	3	0	0	17	2	15
8+63.24	9.24	20.7	0.0	2.9	7	0	1	24	3	21
8+72.61	9.37	19.7	0.0	1.1	7	0	1	31	4	27
8+75	2.39	19.5	0.0	0.7	2	0	0	33	4	28
8+79	4.00	19.2	0.0	0.3	3	0	0	36	4	31
8+88.24	9.24	18.6	0.0	3.0	6	0	1	42	5	37
9+00	11.76	17.6	0.0	0.0	8	0	1	50	6	44
9+04	4.00	17.2	0.0	0.0	3	0	0	53	6	47
9+08	4.00	17.0	0.0	0.0	3	0	0	55	6	49
9+08	8.00	56.4	9.7	0.0	8	1	0	62	6	56
9+13.24	5.24	60.2	9.7	0.0	11	2	0	72	6	66
9+25	11.76	57.0	9.7	0.0	26	4	0	93	6	87
9+57.96	32.96	57.0	9.7	0.0	70	12	0	151	6	145
B-18-237	--	--	--	--	--	--	--	--	--	--
10+42.04	--	53.0	10.0	39.7	--	--	--	--	--	--
10+50	7.96	53.0	10.0	39.7	16	3	12	164	21	142
10+75	25.00	53.8	9.9	43.5	49	9	39	204	71	133
10+92.08	17.08	63.1	9.8	8.4	37	6	16	235	93	142
10+92.08	--	23.6	0.0	8.4						
11+00	7.92	19.2	0.0	5.5	6	0	2	241	95	146
11+25	25.00	12.4	0.0	0.0	15	0	3	256	99	157
11+25.11	0.11	7.7	0.0	0.0	0	0	0	256	99	157
11+50	24.89	5.6	0.0	8.5	6	0	4	262	104	158
11+50.11	0.11	5.6	0.0	8.6	0	0	0	262	104	158
11+75	24.89	4.8	0.0	11.8	5	0	9	267	116	151
11+75.11	0.11	4.8	0.0	11.7	0	0	0	267	116	151
12+00	24.89	5.5	0.0	12.6	5	0	11	271	131	141
12+24.11	24.11	6.3	0.0	0.0	5	0	6	277	138	139
					313	37	106			

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 asphalt pavement to be removed from Cut.
Note 5 - Cut	Cut reduced by salvaged/unuseable asphaltic pavement

STA. 8+03.98 TO 8+35.55



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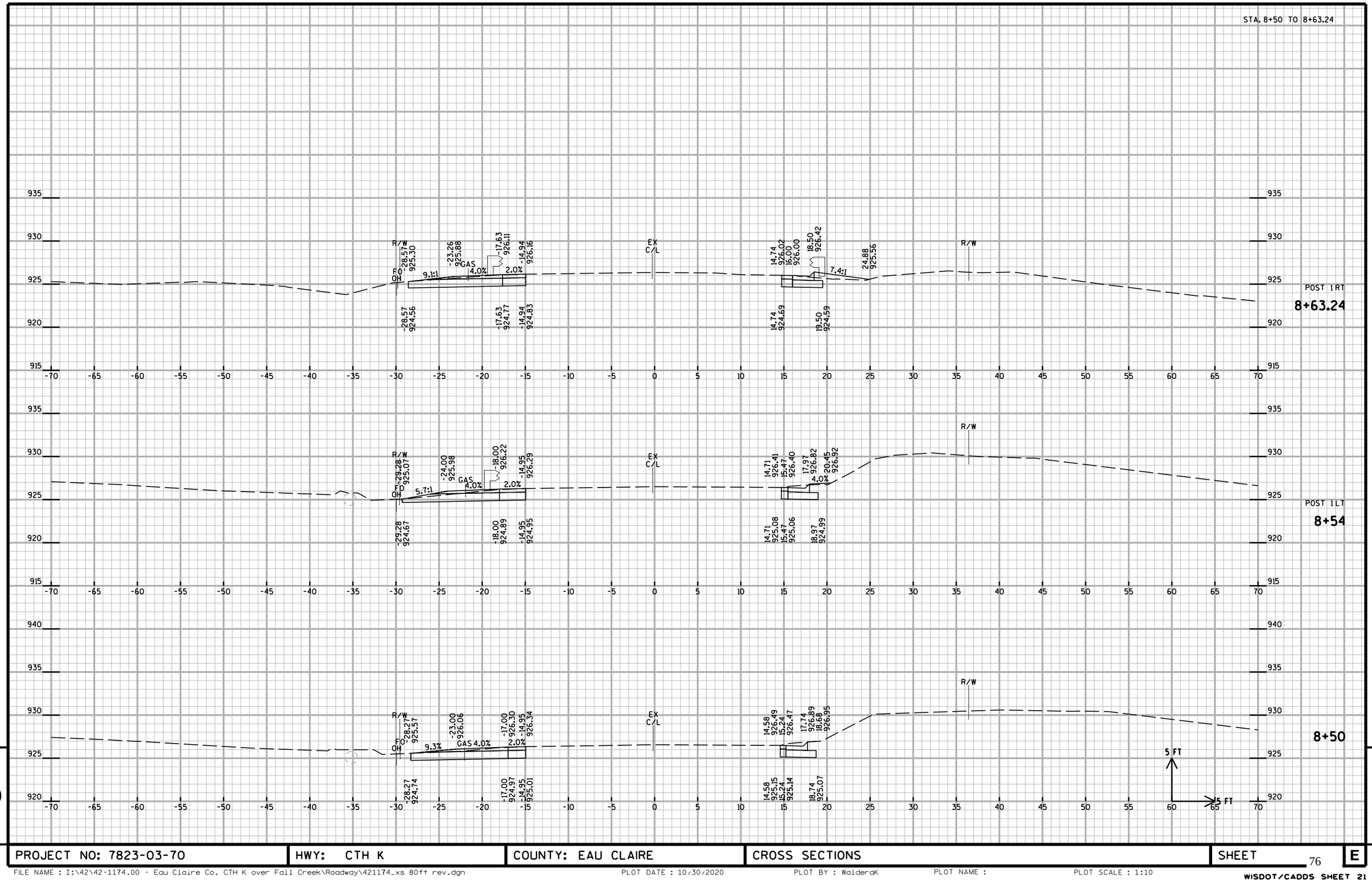
PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn PLOT DATE : 10/30/2020 PLOT BY : WalderaK PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 8+50 TO 8+63.24

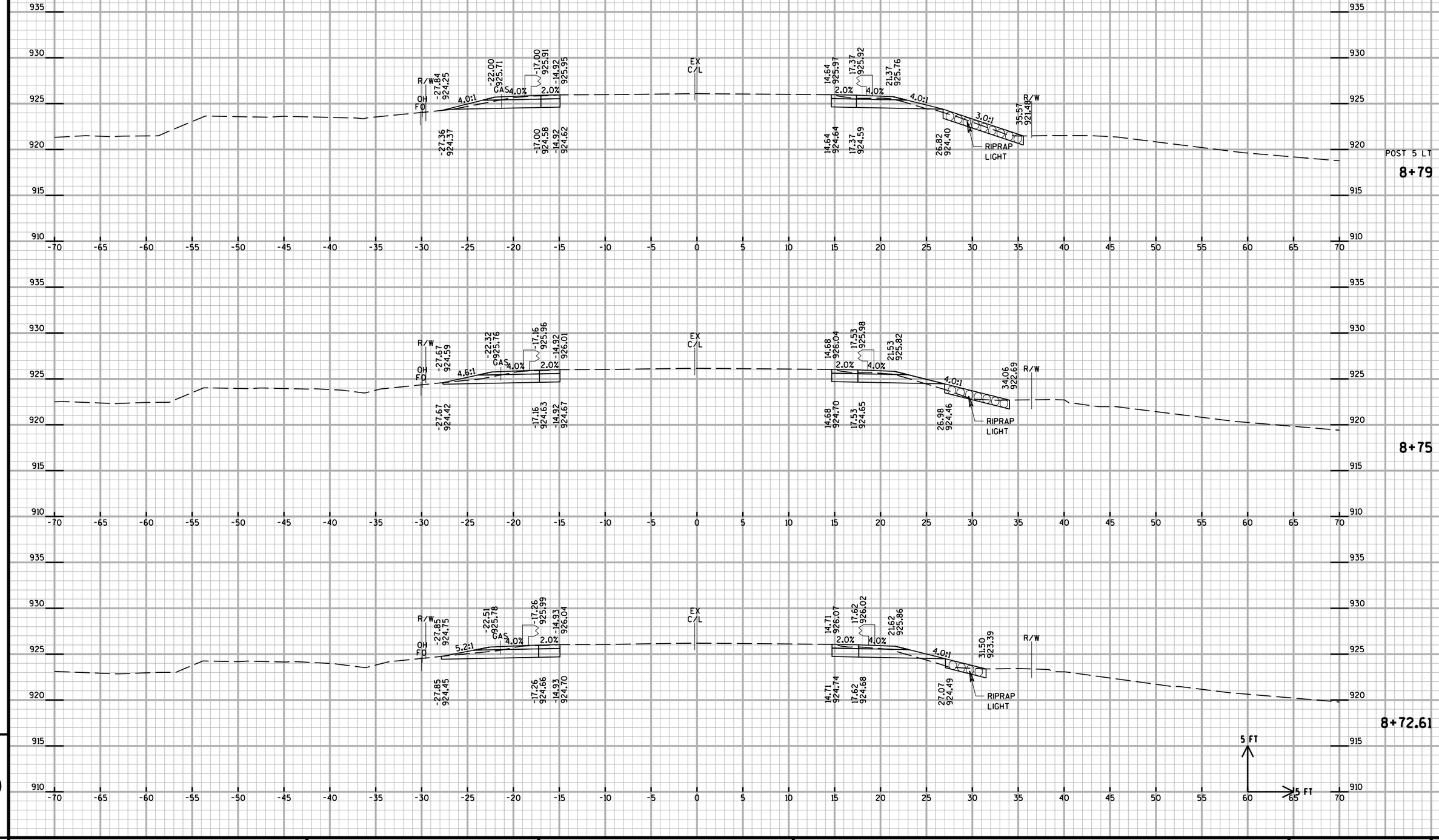


PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn PLOT DATE : 10/30/2020 PLOT BY : WalderaK PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 8+72.61 TO 8+79

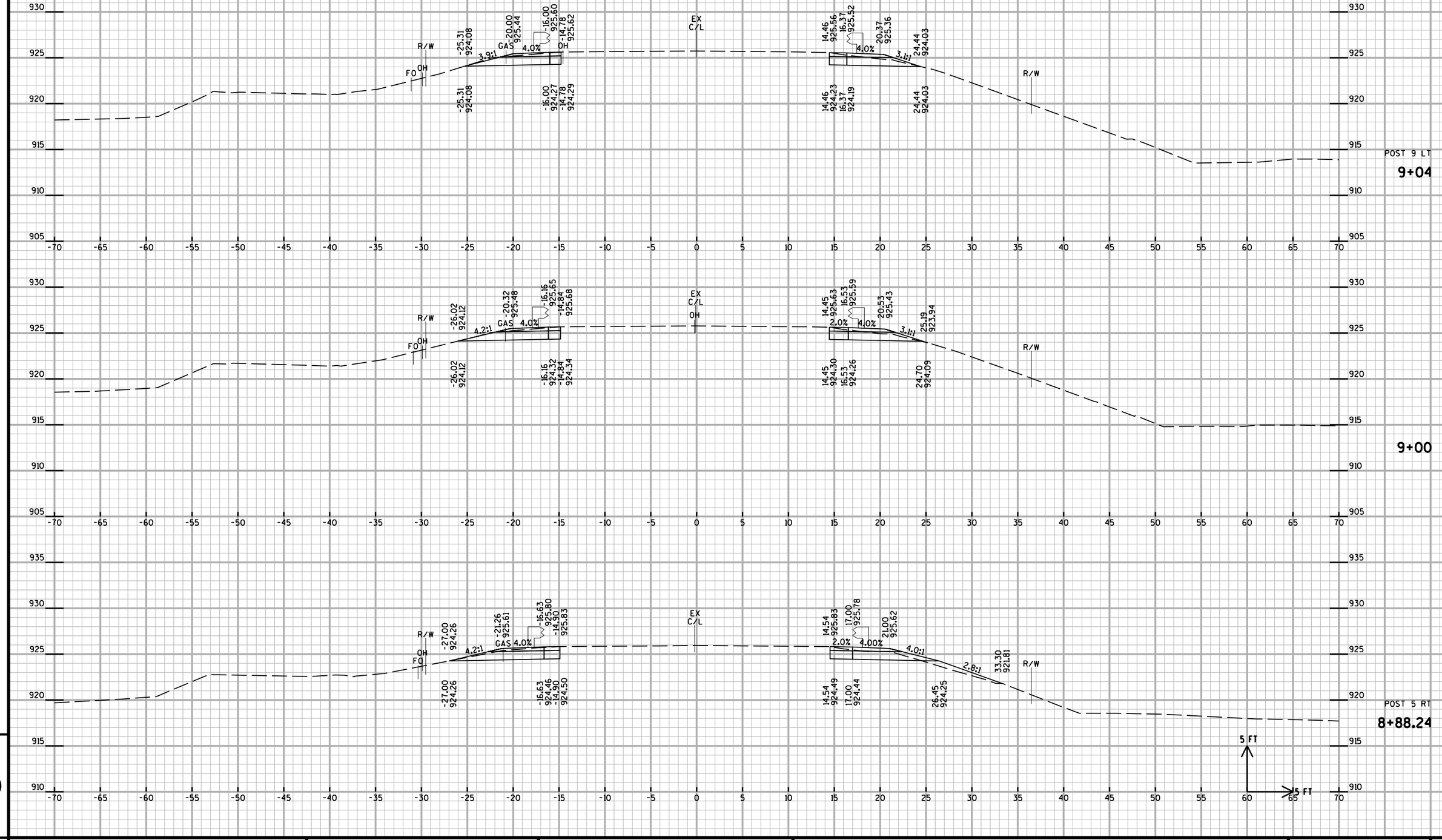


PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn PLOT DATE : 9/17/2020 PLOT BY : WalderaK PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 8+88.24 TO 9+04



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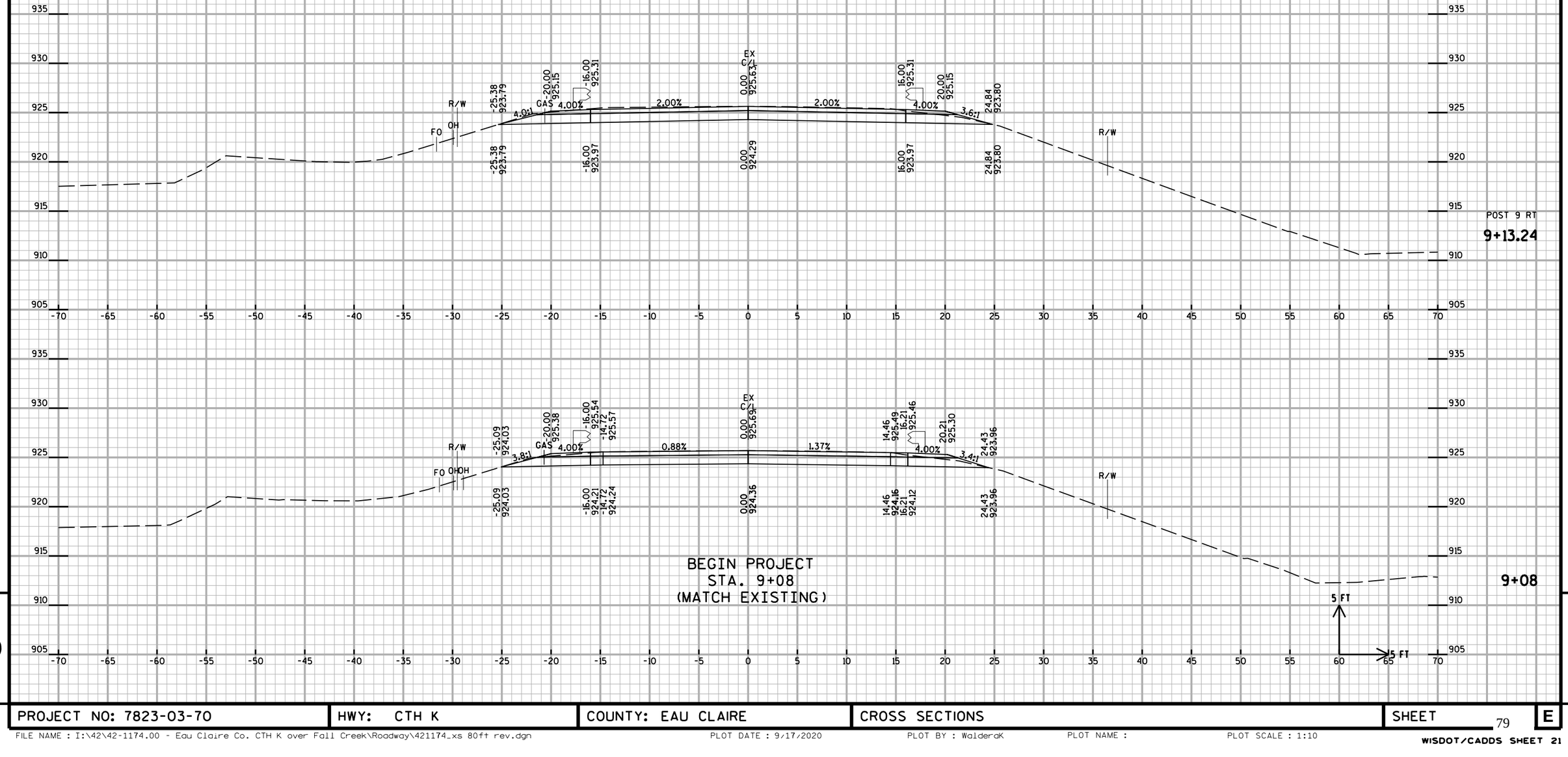
PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn | PLOT DATE : 9/17/2020 | PLOT BY : WalderaK | PLOT NAME : | PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 9+08 TO 9+13.24



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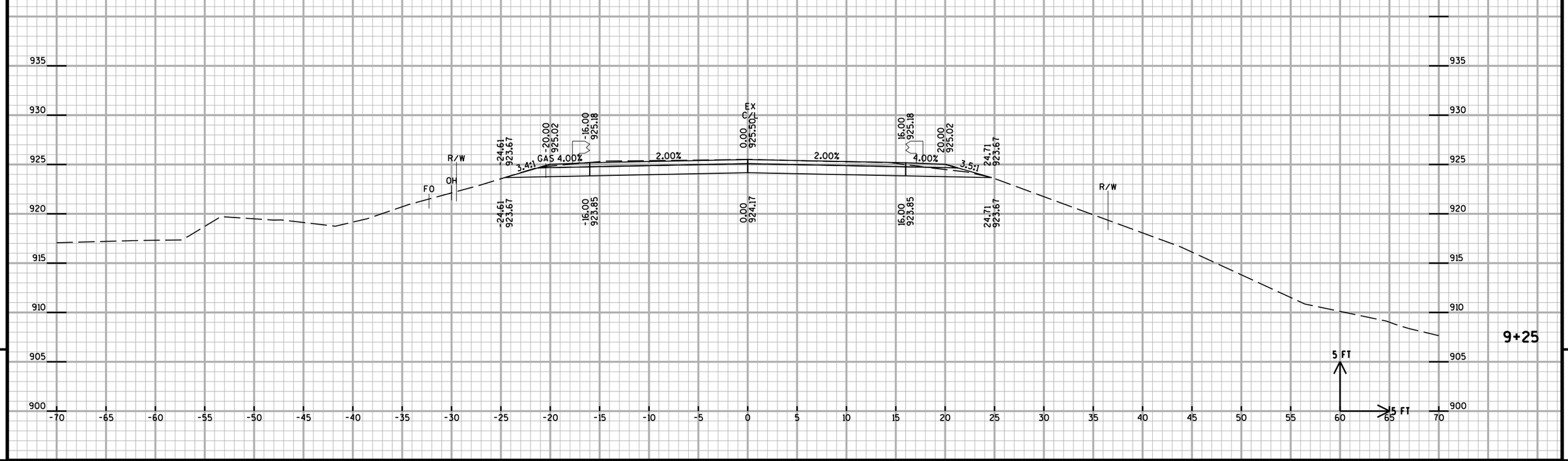
PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn PLOT DATE : 9/17/2020 PLOT BY : WalderaK PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 9+25 TO 9+25

STRUCTURE B-18-237



9 9

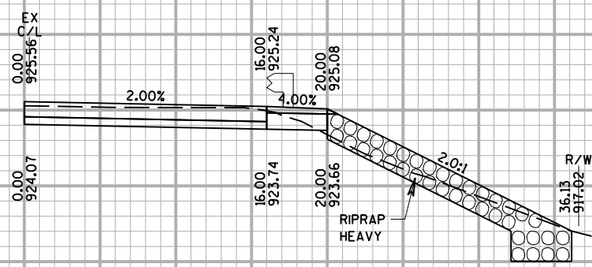
PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET 80	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn PLOT DATE : 9/17/2020 PLOT BY : WalderaK PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 10+25 TO 10+50

STRUCTURE B-18-237



10+50

STRUCTURE B-18-237

5 FT
5 FT

9

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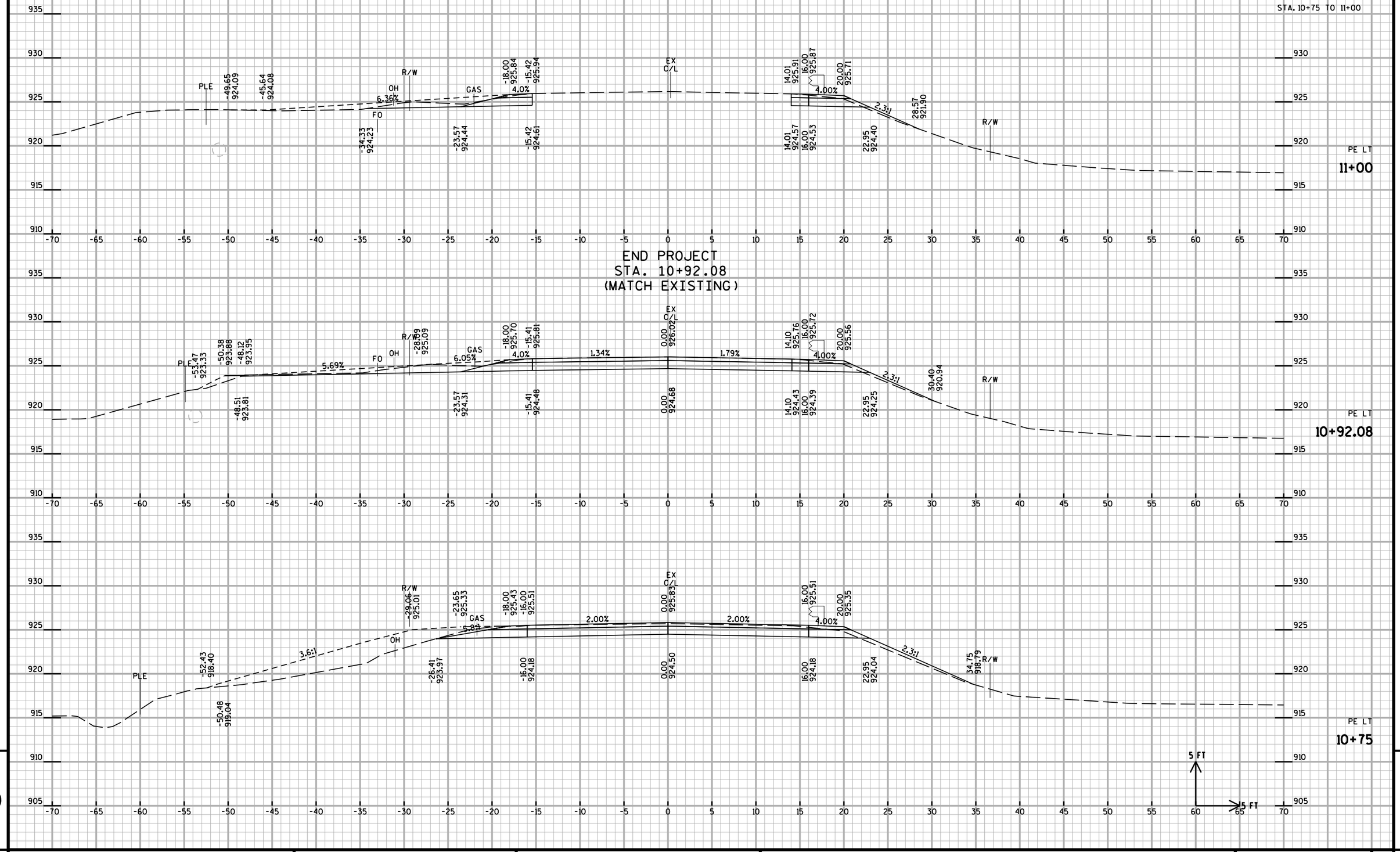
PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn PLOT DATE : 9/17/2020 PLOT BY : WalderaK PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 10+75 TO 11+00

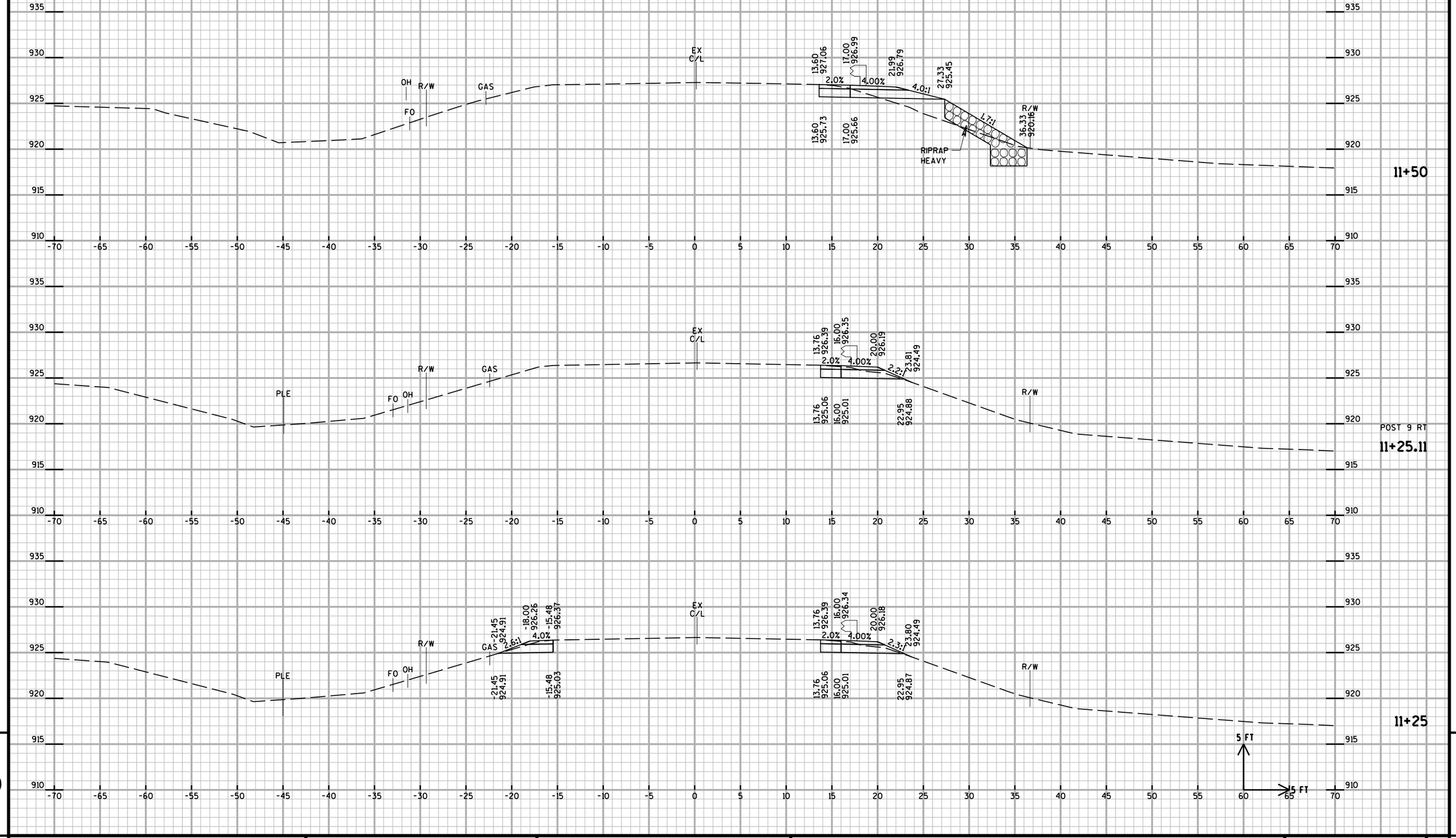


PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn PLOT DATE : 9/17/2020 PLOT BY : WalderaK PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 11+25 TO 11+50



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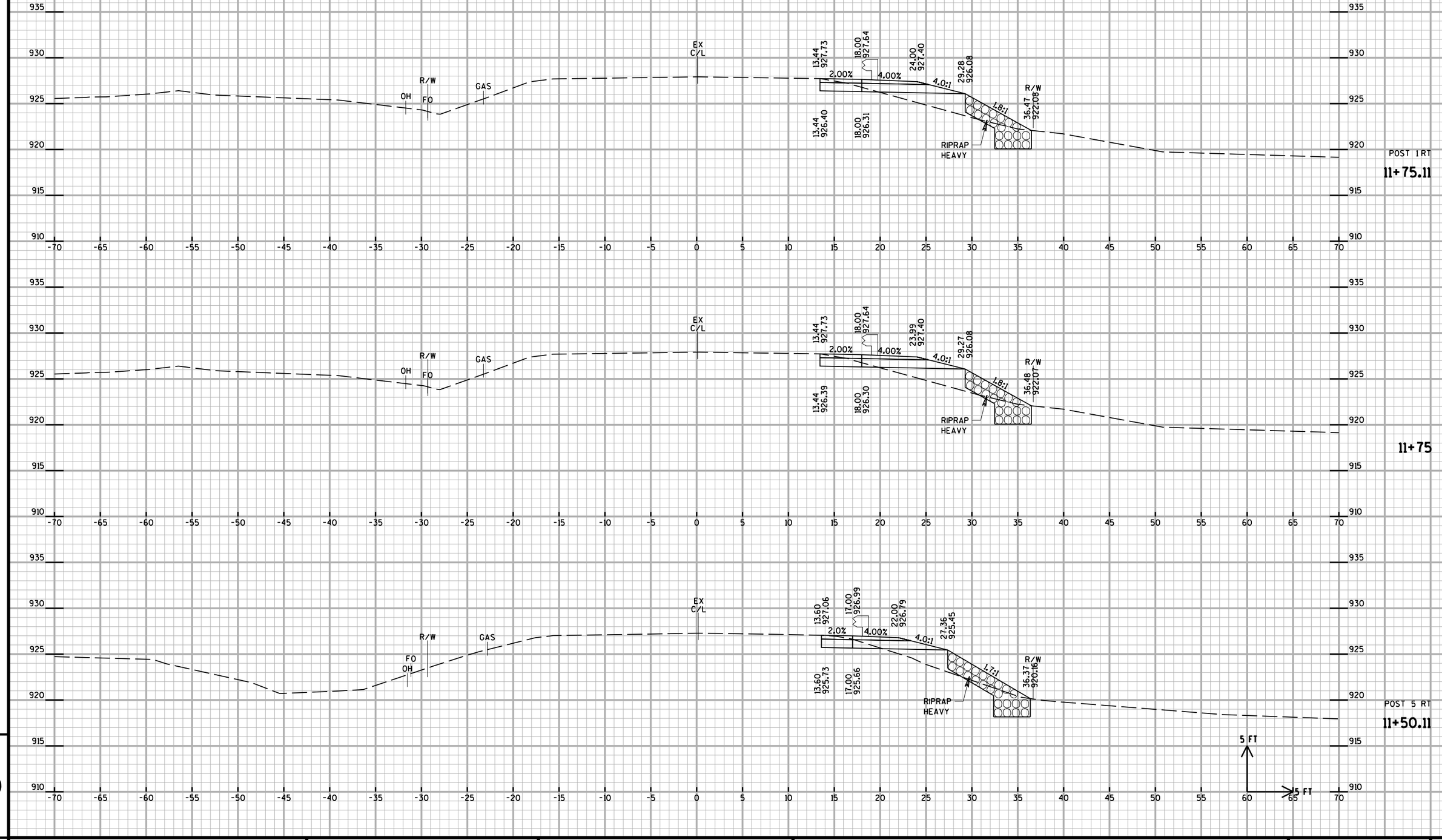
PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn | PLOT DATE : 9/17/2020 | PLOT BY : WalderaK | PLOT NAME : | PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 11+50.11 TO 11+75.11



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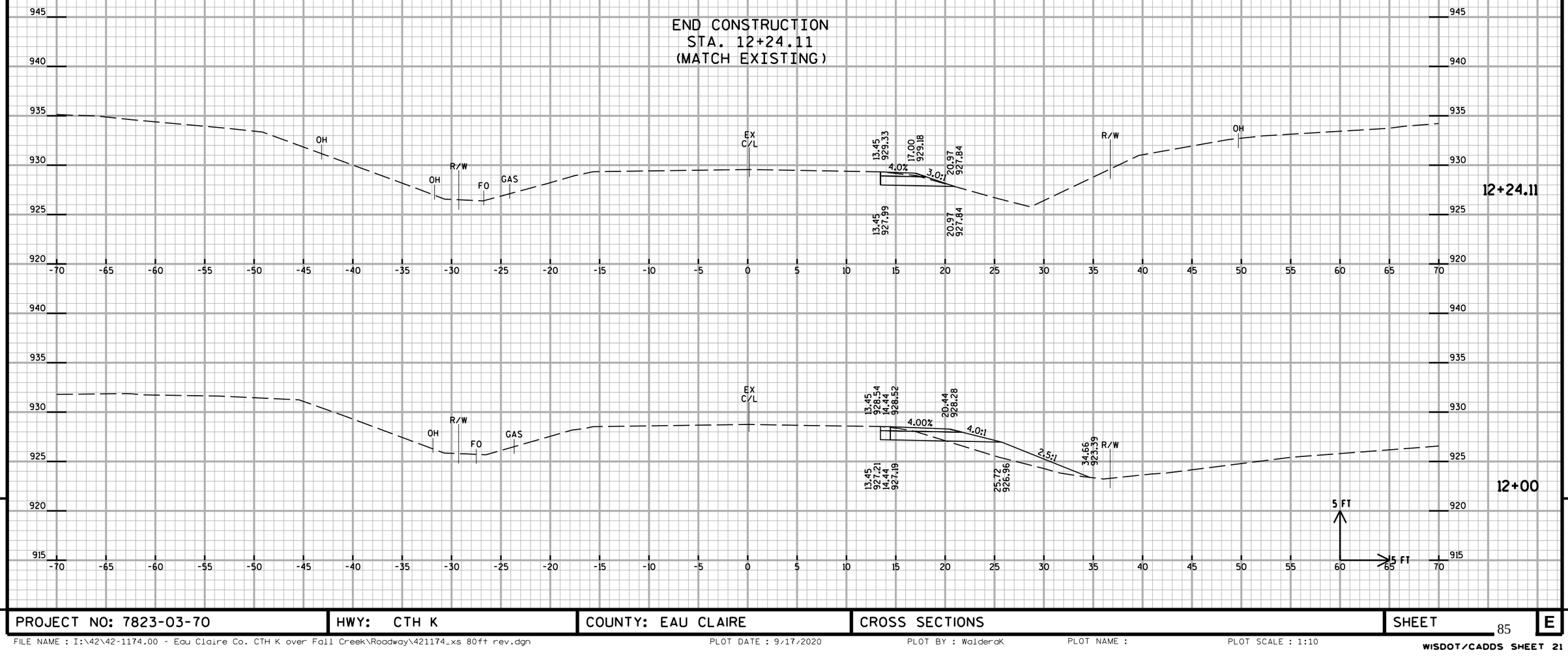
PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn PLOT DATE : 9/17/2020 PLOT BY : WalderaK PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 12+00 TO 12+24.11

END CONSTRUCTION
STA. 12+24.11
(MATCH EXISTING)



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PROJECT NO: 7823-03-70	HWY: CTH K	COUNTY: EAU CLAIRE	CROSS SECTIONS	SHEET	E

FILE NAME : I:\42\42-1174.00 - Eau Claire Co. CTH K over Fall Creek\Roadway\421174_xs 80ft rev.dgn PLOT DATE : 9/17/2020 PLOT BY : WalderaK PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

Wisconsin Department of Transportation

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