

EAU
PROJECT ID: 7863-00-71
WITH: N/A

COUNTY: CHIPPEWA

FEBRUARY 2019
ORDER OF SHEETS

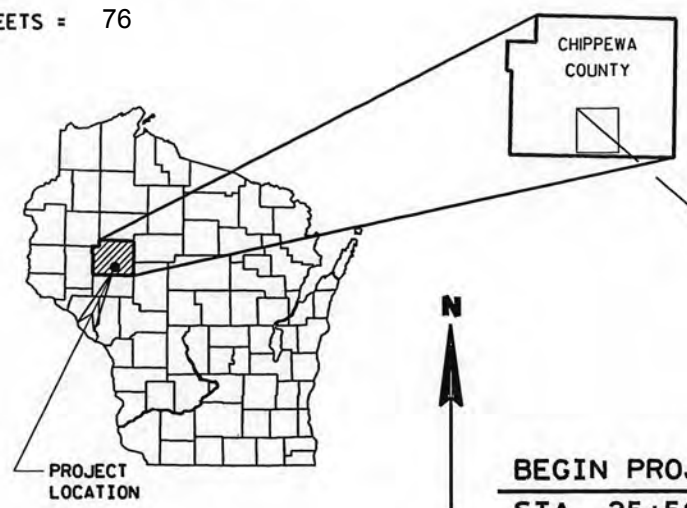
- Section No. 1 Title
- Section No. 2 Typical Sections and Details
(Includes Erosion Control Plans)
- Section No. 3 Estimate of Quantities
- Section No. 3 Miscellaneous Quantities
- Section No. 4 Right of Way Plat
- Section No. 5 Plan and Profile
- Section No. 6 Standard Detail Drawings
- Section No.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

TOTAL SHEETS = 76

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
T LAFAYETTE, 195th STREET
PAINT CREEK BRIDGE B090305
LOCAL STREET
CHIPPEWA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7863-00-71		

23



STATE PROJECT NUMBER
7863-00-71

END PROJECT
STA. 28+00
Y = 124256.16
X = 201570.09

BEGIN PROJECT
STA. 25+50
Y = 124020.83
X = 201485.76

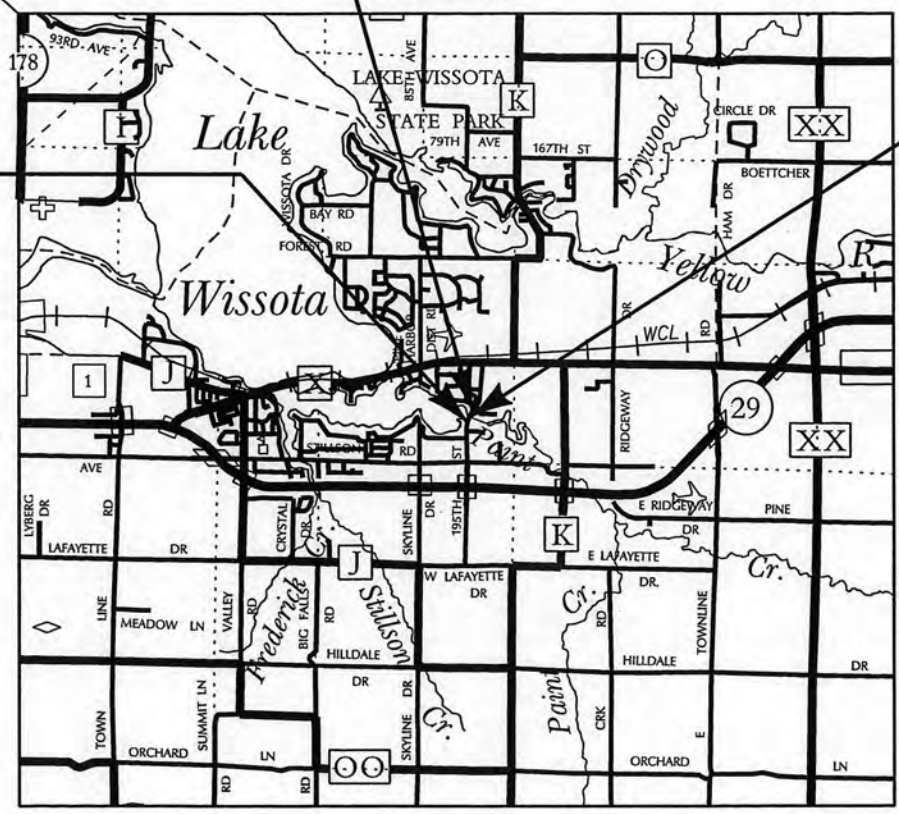
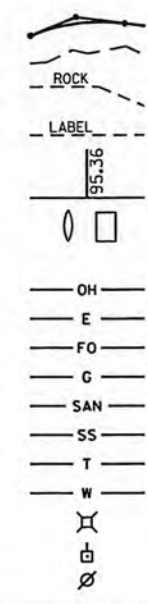
DESIGN DESIGNATION

- A.D.T. (2019) = 860
- A.D.T. (2039) = 1,160
- D.H.V. = 90
- D. = 50/50
- T. = 5%
- DESIGN SPEED = 35 MPH
- ESALS = 94,900

CONVENTIONAL SYMBOLS
PLAN

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

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



STRUCTURE B-9-305

T-29-N
T-28-N

R-8-W | R-7-W

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.047 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), CHIPPEWA COUNTY

ACCEPTED FOR
County of Chippewa
Date 10-24-18
County Highway Commissioner

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54601
www.AyresAssociates.com

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

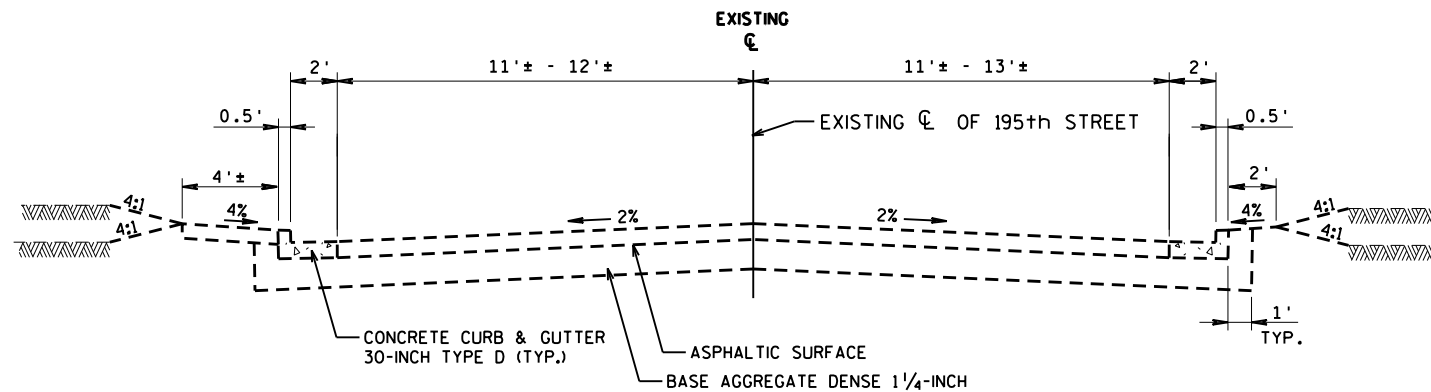
DATE 10/25/18

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

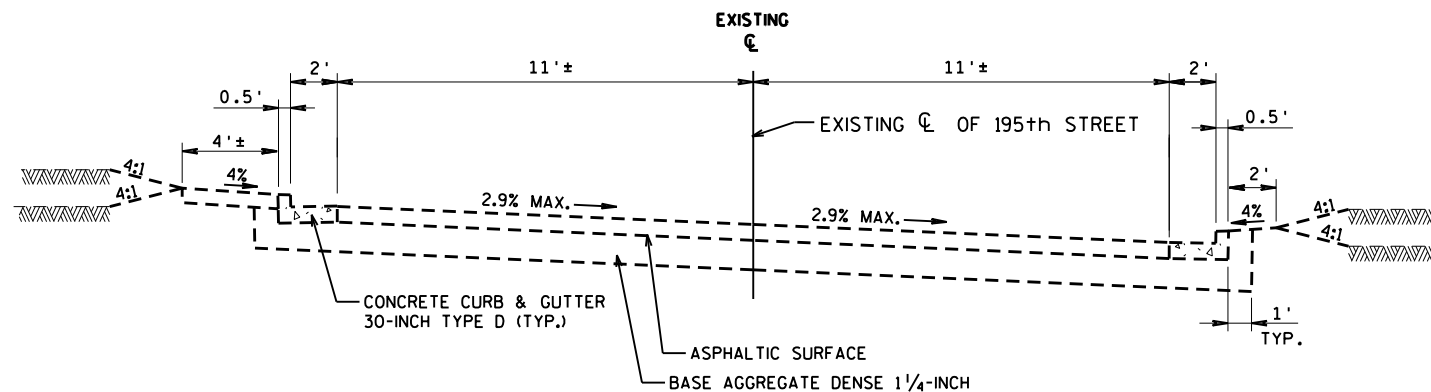
PREPARED BY
Surveyor AYRES ASSOCIATES INC
Designer AYRES ASSOCIATES INC

Regional Examiner NORTHWEST REGION
Regional Supervisor ANDREW STENSLAND

APPROVED FOR THE DEPARTMENT
DATE 10/30/18
(Signature)



EXISTING TYPICAL SECTION
(SOUTH APPROACH)



EXISTING TYPICAL SECTION
(NORTH APPROACH)

* * DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

DIGGERS HOTLINE

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

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.

EXCAVATION FOR STRUCTURES SHALL INCLUDE FURNISHING, PLACEMENT AND COMPACTION OF ANY FILL MATERIAL REQUIRED TO PROVIDE A SUITABLE FOUNDATION FOR SUBSTRUCTURE UNITS.

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

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

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

ASPHALTIC REMOVAL IS INCLUDED IN THE ITEM EXCAVATION COMMON.

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

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE DATUM NAVD88 (2012).

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

UTILITIES

XCEL ENERGY
1414 W. HAMILTON AVE.
EAU CLAIRE, WI 54702-0008
ATTN: CORISSA SEELY
715-737-4097
corissa.e.seely@xcelenergy.com
ATTN: BRADY GARDOW (GAS)
715-737-1450
brady.p.gardow@xcelenergy.com
ATTN: TYSON KALIEN (ELECTRIC)
715-737-1474
tyson.kalien@xcelenergy.com

AT&T
304 S. DEWEY STREET
EAU CLAIRE, WI 54701
ATTN: RICK PODOLAK
715-839-5565
rp4514@att.com

CHARTER COMMUNICATIONS
1201 McCANN DR.
ALTOONA, WI 54720
ATTN: SHANE YODER
715-831-8940 ext. 51113
shane.yoder@charter.com

TOWN OF LaFAYETTE
5765 197th STREET
CHIPPEWA FALLS, WI 54729
ATTN: DAVID STABER, CHAIRMAN
715-723-7692
lafayette@lafayetteetownship.org

TOWN

TOWN OF LaFAYETTE, CHAIRMAN
5765 197th STREET
CHIPPEWA FALLS, WI 54729
ATTN: DAVID STABER
715-723-7692
dstaber@charter.net

COUNTY

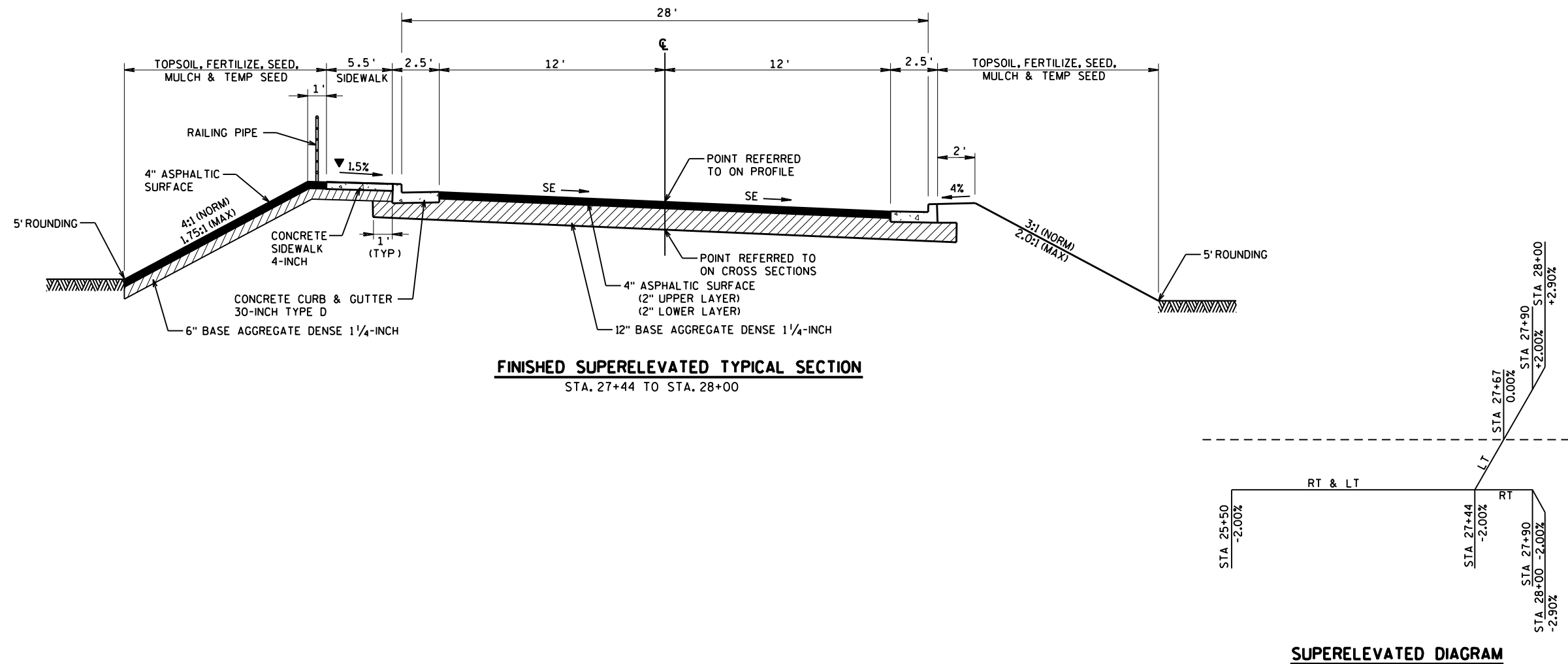
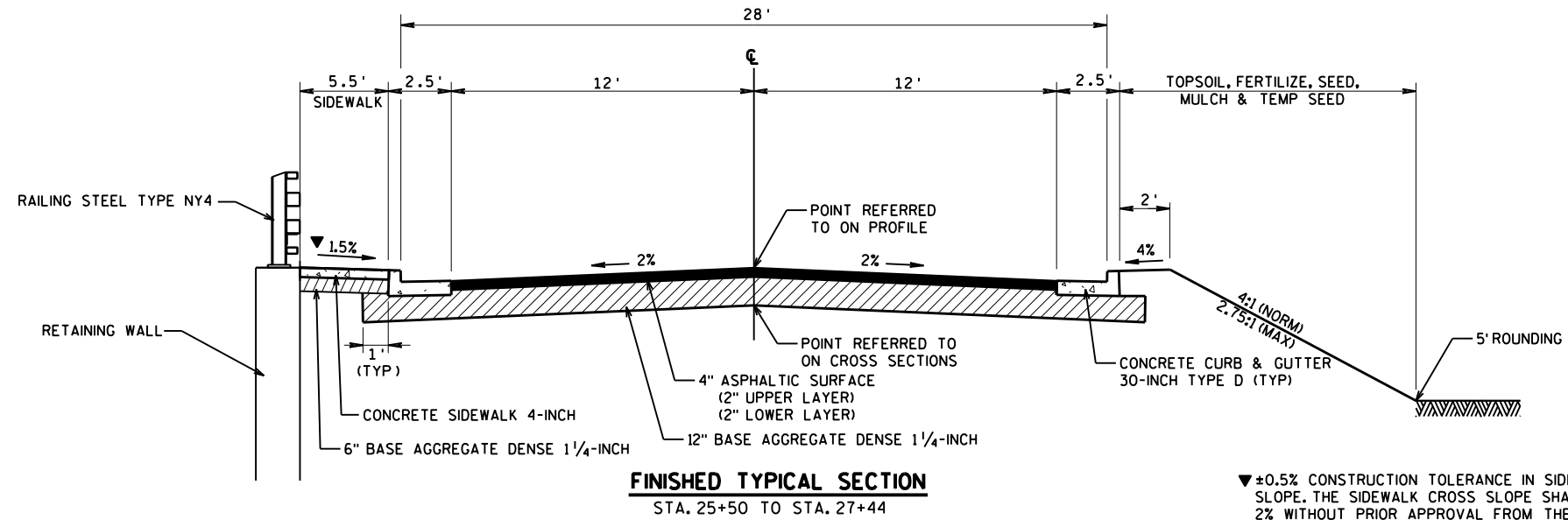
CHIPPEWA COUNTY HIGHWAY DEPT.
801 EAST GRANT AVENUE
CHIPPEWA FALLS, WI 54729
ATTN: FRED ANDERSON, PE
715-738-2610
fanderson@co.chippewa.wi.us

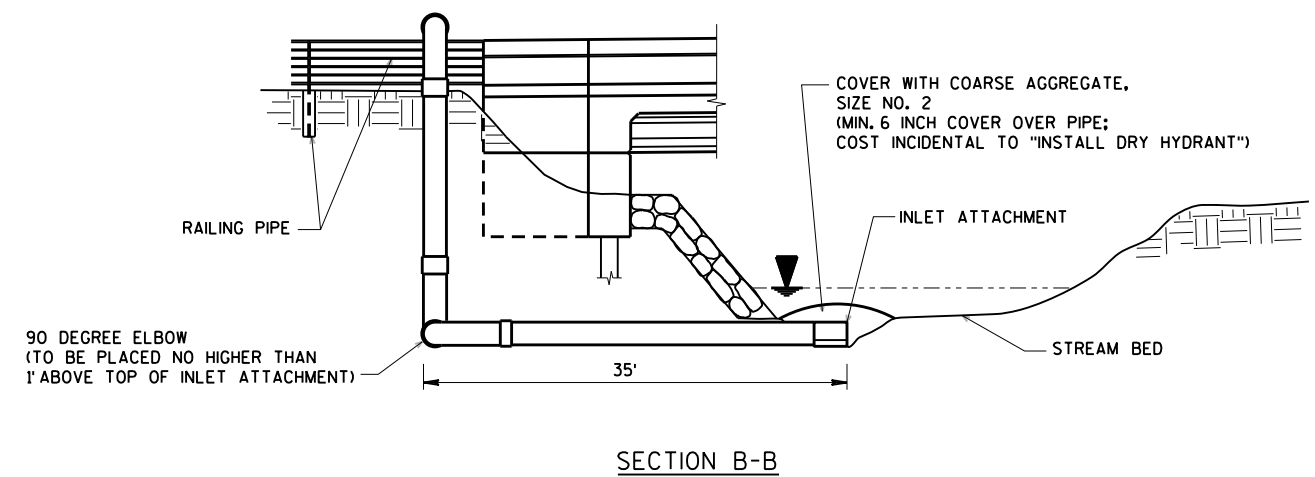
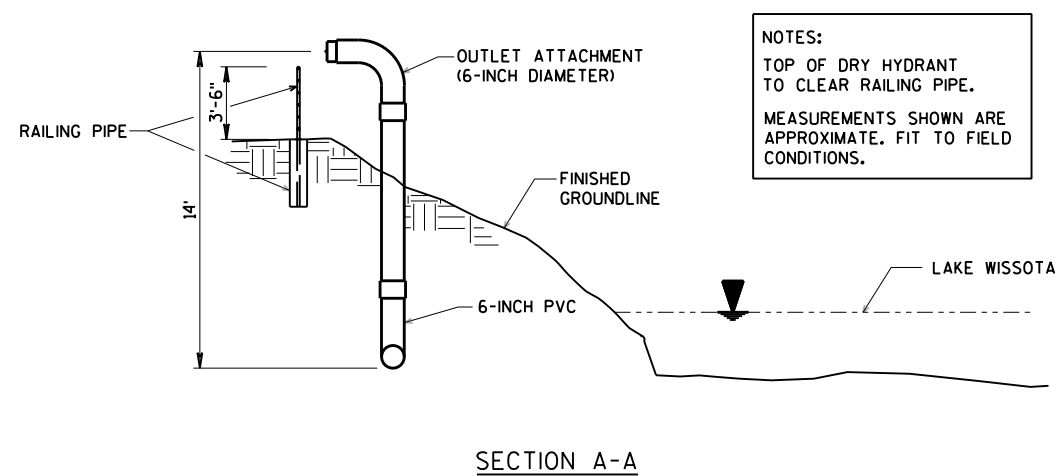
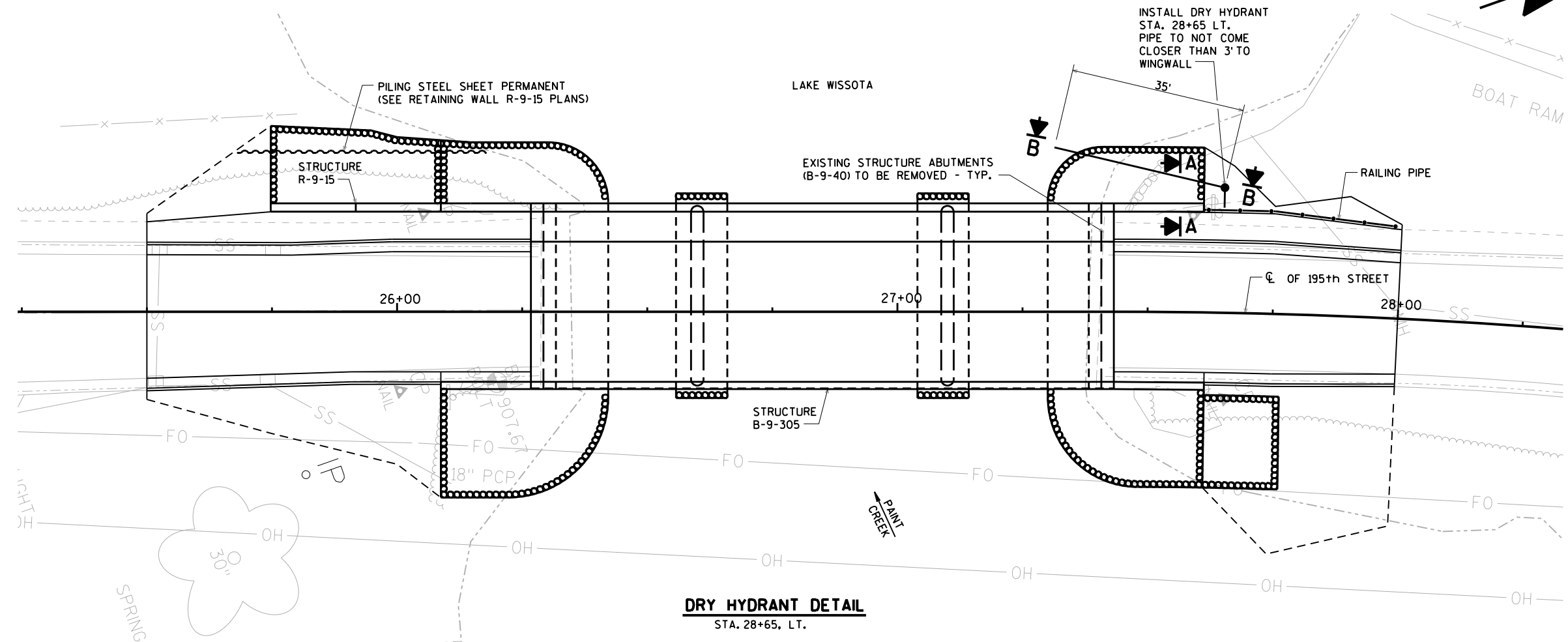
DESIGNER

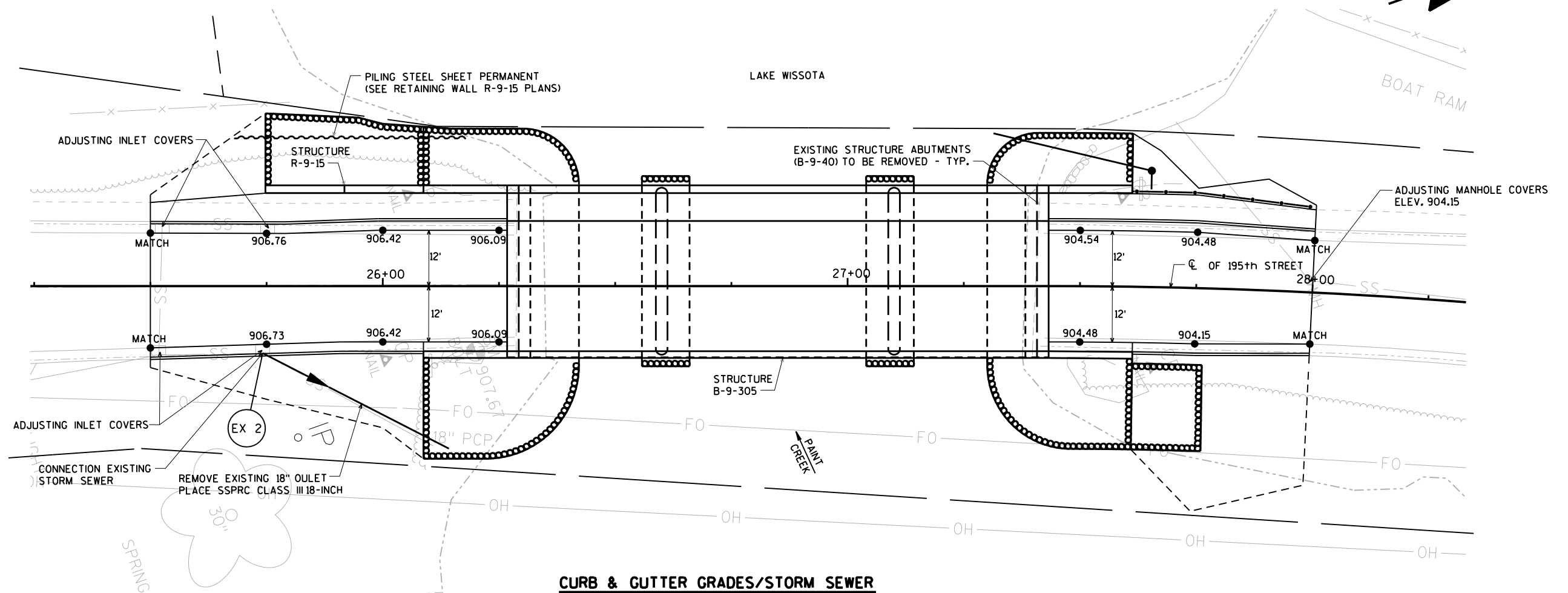
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: CHRIS McMAHON, PE
715-834-3161
mcmahonc@ayresassociates.com

WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONTACT:

LEAH NICOL
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
715-934-9014
leah.nicol@wisconsin.gov



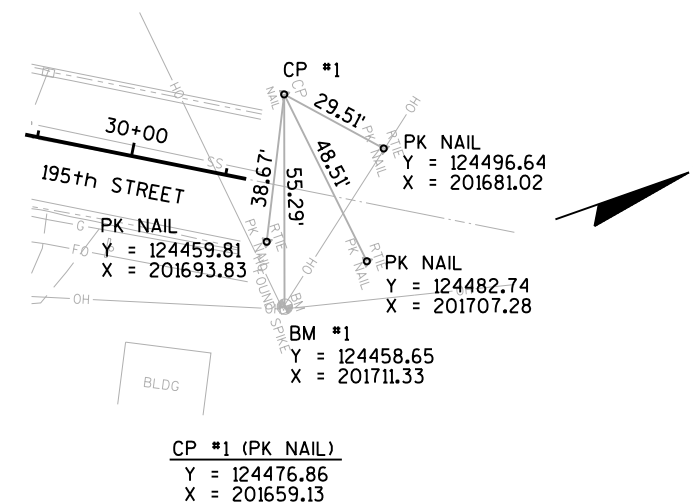
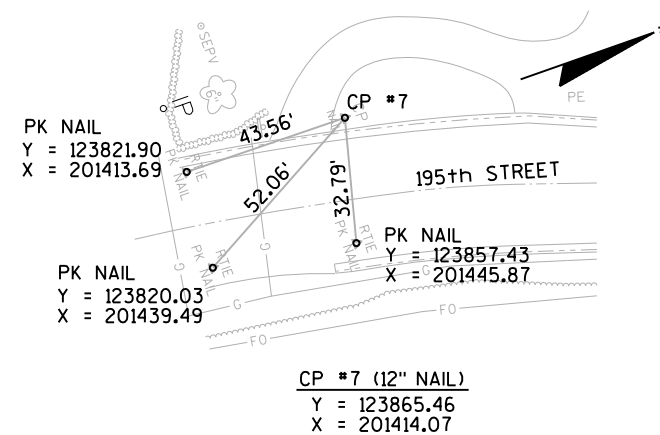
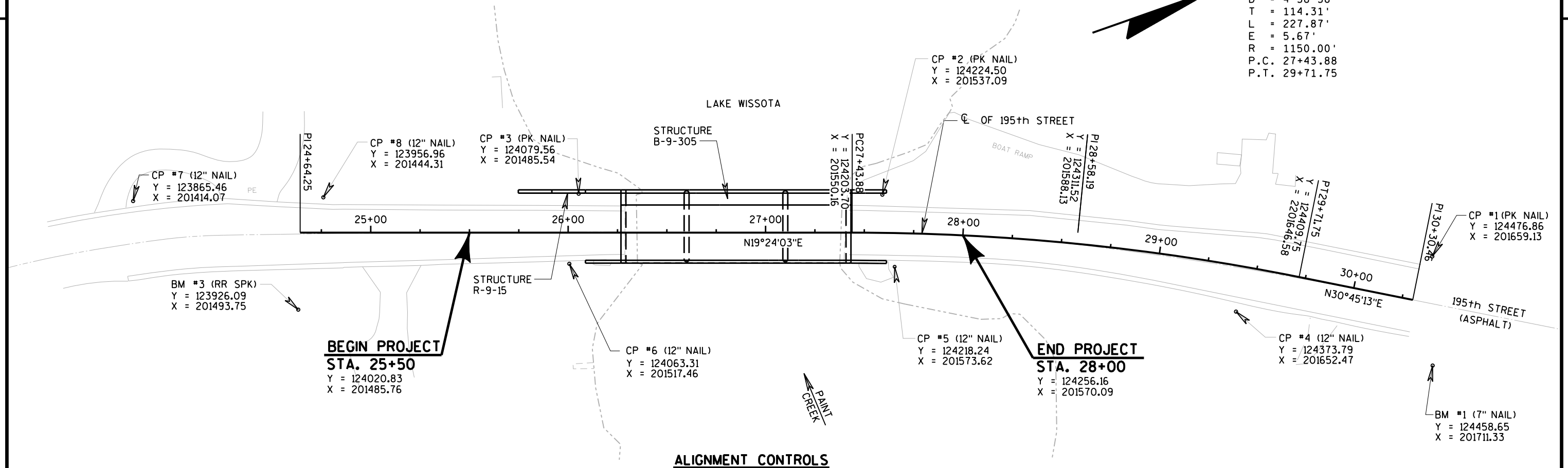


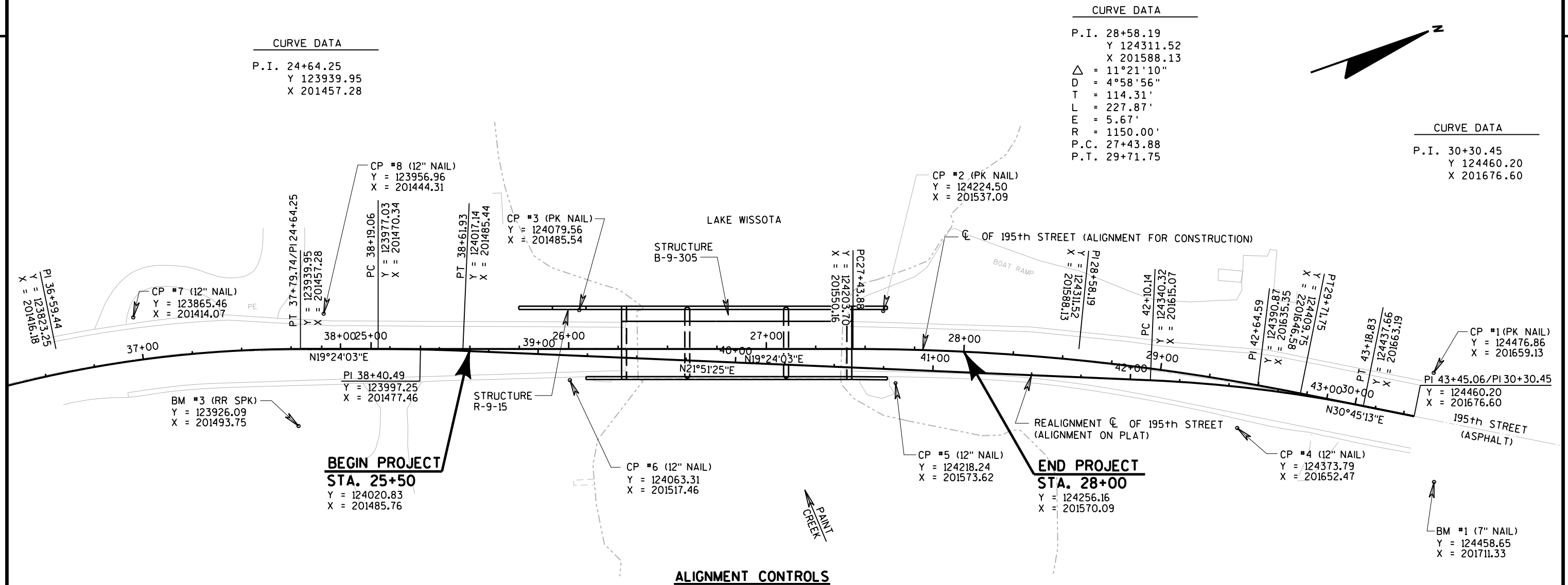


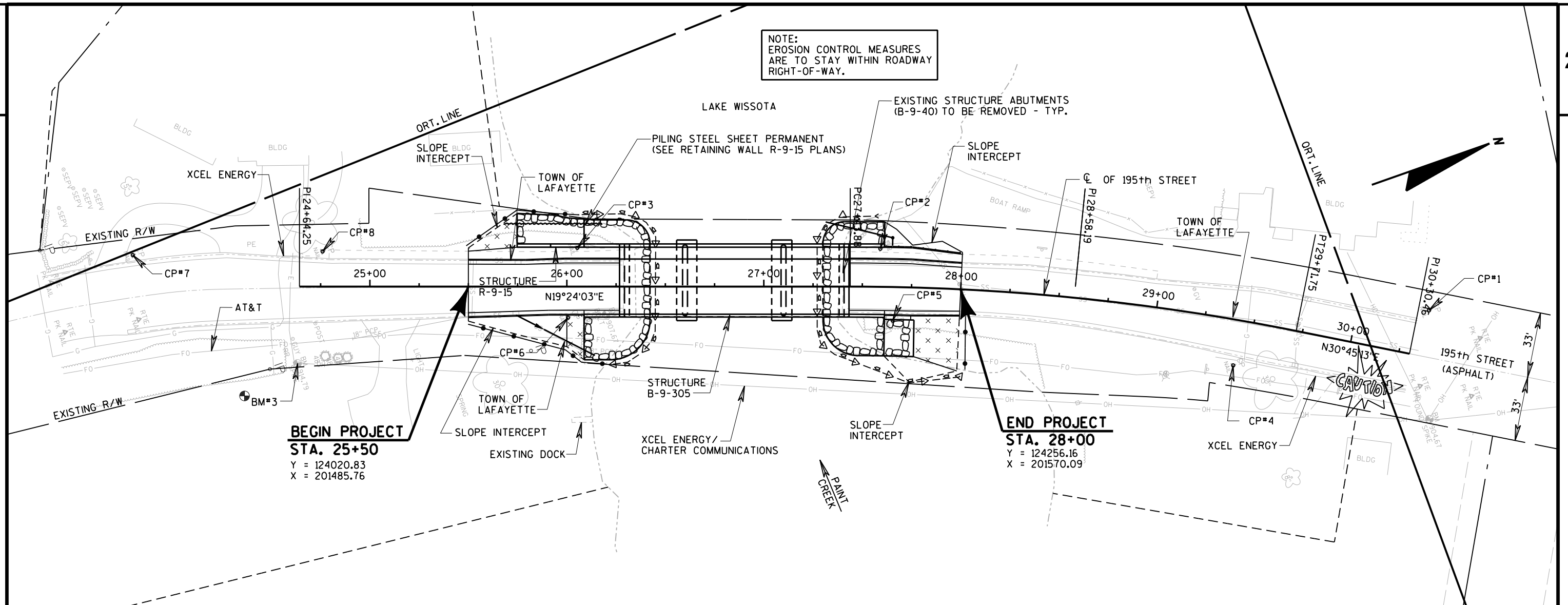
CURVE DATA
P.I. 24+64.25
Y 123939.95
X 201457.28

CURVE DATA
P.I. 28+58.19
Y 124311.52
X 201588.13
 $\Delta = 11^\circ 21' 10''$
D = 4°58'56"
T = 114.31'
L = 227.87'
E = 5.67'
R = 1150.00'
P.C. 27+43.88
P.T. 29+71.75

CURVE DATA
P.I. 30+30.45
Y 124460.20
X 201676.60







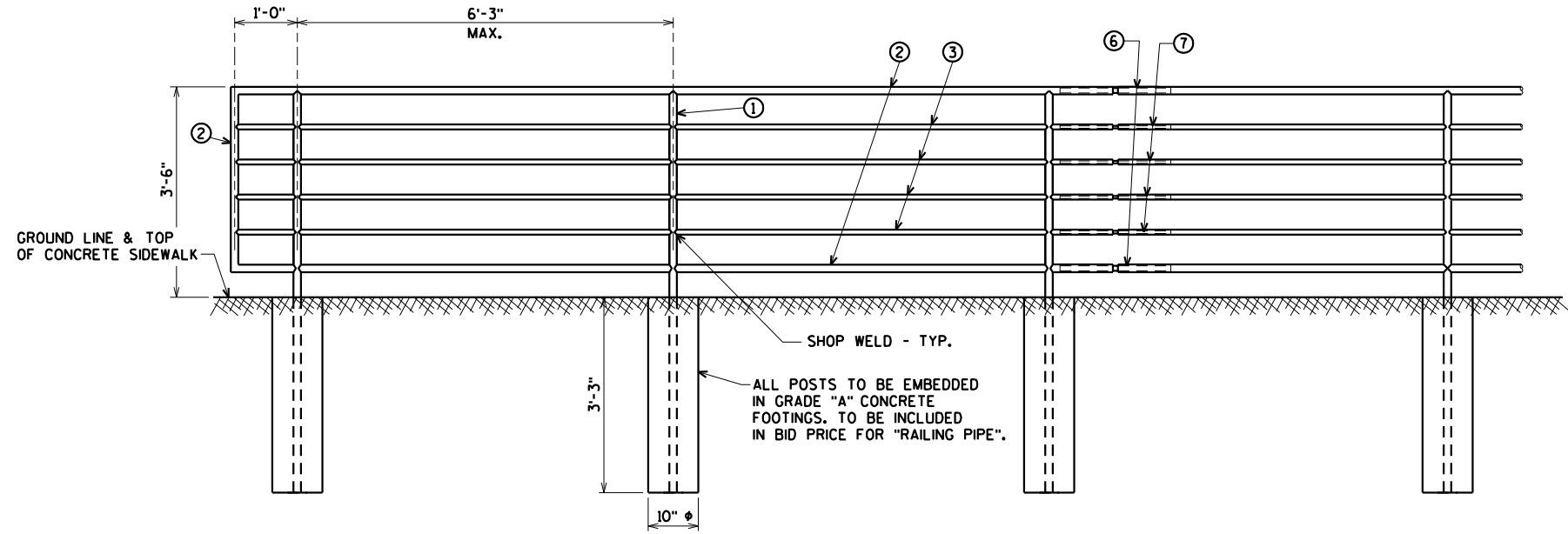
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .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 = 0.446 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.237 ACRES

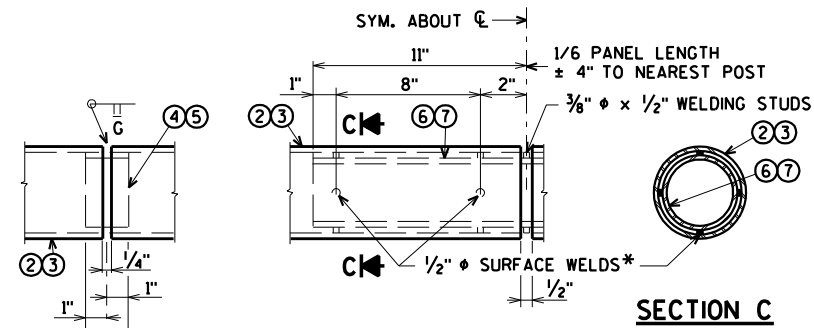
HIGH WATER 2 EL. 897.2

LEGEND

- x x x EROSION MAT CLASS II TYPE C
- SILT FENCE
- ▢ RIPRAP HEAVY
- ← B ← TURBIDITY BARRIER



SECTION THRU RAILING



SECTION C

SHOP RAIL
SPLICE DETAIL

(LOCATION MUST BE SHOWN
ON THE SHOP DRAWINGS)

*MIN. 5/8" FLAT SURFACE DIA.
PUNCHINGS OR STUDS MAY
BE USED AS AN ALTERNATE.

BID ITEM SHALL BE "RAILING PIPE", WHICH INCLUDES ALL ITEMS SHOWN.

STEEL RAILING POSTS AND STEEL TUBING WILL BE PAINTED BLACK (FEDERAL #27038).

ALL MATERIAL SHALL BE PAINTED WITH A THREE-COAT ZINC RICH EPOXY SYSTEM. PRIOR TO PAINTING, ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A NO. 11 NEAR WHITE BLAST CLEANING BY SSPC SPECIFICATIONS.

ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM A709 GRADE 36 UNLESS NOTED OTHERWISE.

ALL RAILS, POSTS AND SLEEVES ARE STANDARD WEIGHT PIPE, SCHEDULE 40.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

- ① 1½" ϕ STEEL PIPE FOR POST. CUT BOTTOM OF POST TO MATCH TOP OF CONCRETE. PLACE POSTS VERTICAL.
- ② 1½" ϕ STEEL PIPE FOR TOP & BOT. RAIL. WELD TO NO. 1.
- ③ 1" ϕ STEEL PIPE FOR INTERMEDIATE RAILS. WELD TO NO. 1.
- ④ 1" ϕ PIPE SLEEVE FOR NO. 2. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 1⅞".
- ⑤ ½" ϕ ROD SLEEVE FOR NO. 3. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 1⅞".
- ⑥ 1" ϕ PIPE SLEEVE $\times$ 1'-10" LONG FOR NO. 2. PROVIDE ½" ϕ SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 2. PROVIDE ⅝" ϕ $\times$ ½" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.
- ⑦ ½" ϕ ROD SLEEVE $\times$ 1'-10" LONG FOR NO. 3. PROVIDE ½" ϕ SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 3. PROVIDE ⅝" ϕ $\times$ ½" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

Estimate Of Quantities

7863-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0200	Removing Old Structure (station) 01. 26+85	LS	1.000	1.000
0008	204.0150	Removing Curb & Gutter	LF	272.000	272.000
0010	204.0155	Removing Concrete Sidewalk	SY	63.000	63.000
0012	204.0245	Removing Storm Sewer (size) 01. 18-inch	LF	42.000	42.000
0014	205.0100	Excavation Common	CY	219.000	219.000
0016	206.1000	Excavation for Structures Bridges (structure) 01. B-9-305	LS	1.000	1.000
0018	206.3000	Excavation for Structures Retaining Walls (structure) 01. R-9-15	LS	1.000	1.000
0020	206.5000	Cofferdams (structure) 01. B-9-305	LS	1.000	1.000
0022	208.0100	Borrow	CY	6.000	6.000
0024	210.1500	Backfill Structure Type A	TON	1,235.000	1,235.000
0026	213.0100	Finishing Roadway (project) 01. 7863-00-71	EACH	1.000	1.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	340.000	340.000
0030	455.0605	Tack Coat	GAL	28.000	28.000
0032	465.0105	Asphaltic Surface	TON	95.000	95.000
0034	502.0100	Concrete Masonry Bridges	CY	402.000	402.000
0036	502.1100	Concrete Masonry Seal	CY	190.000	190.000
0038	502.3200	Protective Surface Treatment	SY	510.000	510.000
0040	502.3210	Pigmented Surface Sealer	SY	65.000	65.000
0042	503.0128	Prestressed Girder Type I 28-Inch	LF	573.000	573.000
0044	504.0500	Concrete Masonry Retaining Walls	CY	30.000	30.000
0046	505.0400	Bar Steel Reinforcement HS Structures	LB	12,480.000	12,480.000
0048	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	45,150.000	45,150.000
0050	506.0105	Structural Steel Carbon	LB	550.000	550.000
0052	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	20.000	20.000
0054	506.4000	Steel Diaphragms (structure) 01. B-9-305	EACH	12.000	12.000
0056	512.0500	Piling Steel Sheet Permanent Delivered	SF	1,005.000	1,005.000
0058	512.0600	Piling Steel Sheet Permanent Driven	SF	1,005.000	1,005.000
0060	513.2001	Railing Pipe	LF	39.000	39.000
0062	513.7084	Railing Steel Type NY4	LF	189.000	189.000
0064	513.7093	Railing Steel Type 3T	LF	153.000	153.000
0066	516.0500	Rubberized Membrane Waterproofing	SY	25.000	25.000
0068	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0070	550.0500	Pile Points	EACH	34.000	34.000
0072	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	1,120.000	1,120.000
0074	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	232.000	232.000

Estimate Of Quantities

7863-00-71

Line	Item	Item Description	Unit	Total	Qty
0076	602.0405	Concrete Sidewalk 4-Inch	SF	721.000	721.000
0078	606.0300	Riprap Heavy	CY	440.000	440.000
0080	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	45.000	45.000
0082	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0084	611.8115	Adjusting Inlet Covers	EACH	4.000	4.000
0086	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	230.000	230.000
0088	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	2.000	2.000
0090	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7863-00-71	EACH	1.000	1.000
0092	619.1000	Mobilization	EACH	1.000	1.000
0094	624.0100	Water	MGAL	12.000	12.000
0096	625.0100	Topsoil	SY	335.000	335.000
0098	627.0200	Mulching	SY	175.000	175.000
0100	628.1504	Silt Fence	LF	210.000	210.000
0102	628.1520	Silt Fence Maintenance	LF	735.000	735.000
0104	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0106	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0108	628.2027	Erosion Mat Class II Type C	SY	155.000	155.000
0110	628.6005	Turbidity Barriers	SY	300.000	300.000
0112	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0114	629.0210	Fertilizer Type B	CWT	0.200	0.200
0116	630.0120	Seeding Mixture No. 20	LB	9.000	9.000
0118	630.0200	Seeding Temporary	LB	9.000	9.000
0120	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0122	637.2210	Signs Type II Reflective H	SF	3.000	3.000
0124	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0126	638.2602	Removing Signs Type II	EACH	7.000	7.000
0128	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0130	642.5001	Field Office Type B	EACH	1.000	1.000
0132	643.0420	Traffic Control Barricades Type III	DAY	1,980.000	1,980.000
0134	643.0705	Traffic Control Warning Lights Type A	DAY	3,080.000	3,080.000
0136	643.0900	Traffic Control Signs	DAY	1,540.000	1,540.000
0138	643.5000	Traffic Control	EACH	1.000	1.000
0140	645.0111	Geotextile Type DF Schedule A	SY	70.000	70.000
0142	645.0120	Geotextile Type HR	SY	700.000	700.000
0144	646.1020	Marking Line Epoxy 4-Inch	LF	525.000	525.000
0146	650.4000	Construction Staking Storm Sewer	EACH	1.000	1.000
0148	650.4500	Construction Staking Subgrade	LF	135.000	135.000
0150	650.5000	Construction Staking Base	LF	135.000	135.000

Estimate Of Quantities

7863-00-71					
Line	Item	Item Description	Unit	Total	Qty
0152	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	232.000	232.000
0154	650.6500	Construction Staking Structure Layout (structure) 01. B-9-305	LS	1.000	1.000
0156	650.6500	Construction Staking Structure Layout (structure) 02. R-9-15	LS	1.000	1.000
0158	650.9910	Construction Staking Supplemental Control (project) 01. 7863-00-71	LS	1.000	1.000
0160	650.9920	Construction Staking Slope Stakes	LF	135.000	135.000
0162	690.0150	Sawing Asphalt	LF	92.000	92.000
0164	690.0250	Sawing Concrete	LF	18.000	18.000
0166	715.0502	Incentive Strength Concrete Structures	DOL	3,732.000	3,732.000
0168	SPV.0060	Special 01. Connection to Existing Storm Sewer	EACH	1.000	1.000
0170	SPV.0105	Special 01. Install Dry Hydrant	LS	1.000	1.000

195TH STREET EARTHWORK SUMMARY									
From/To Station	Location	Excavation Common (1) (item # 205.0100)	Salvaged / Unuseable Pavement Material (5)	Unexpanded Fill	Expanded Fill (2)	Mass Ordinate +/- (3)	Waste	Borrow (item #208.0100)	Comment:
		Cut			Factor 1.30				
25+50 - 28+00	195TH STREET	219	48	75	98	73	78	6	

- 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.
- 6) Retaining Wall Excavation and Structural Backfill not included in earthwork quantities.

CLEARING AND GRUBBING					
STATION	TO	STATION	OFFSET	201.0105 CLEARING	201.0205 GRUBBING
				STA	STA
25+50	-	26+50	LT & RT	1	1
27+00	-	28+00	RT	1	1
TOTALS				2	2

REMOVALS							
STATION	TO	STATION	LOC	204.0150 REMOVING CURB & GUTTER	204.0155 REMOVING CONCRETE SIDEWALK	204.0245 REMOVING STORM SEWER 18-INCH	NOTES
				LF	SY	LF	
25+50	-	26+28	LT	78	37	--	--
25+50	-	26+28	RT	78	--	--	--
27+42	-	28+00	LT	58	26	--	--
27+42	-	28+00	RT	58	--	--	--
25+74	-	26+11	RT	--	--	42	PCP
TOTALS				272	63	42	

PAVING AND BASE QUANTITIES					
FINISHING ROADWAY (ID 7863-00-71)			305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	455.0605 TACK COAT	465.0105 ASPHALTIC SURFACE
LOCATION	213.0100.01 EACH	STA	TO	STA	TON
195TH ST.	1	25+50	-	26+26.75	185
		27+43.25	-	28+00	140
		UNDISTRIBUTED			15
TOTAL					340
					28
					95

RAILING PIPE (NEAR B-9-305)				
STATION	TO	STATION	LOCATION	513.2001 LF
27+61	-	27+99	LT	39
TOTAL				39

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

APRON ENDWALLS FOR
CULVERT PIPE REINFORCED CONCRETE

		522.1018
		18-INCH
LOCATION		EACH
OUTLET (26+14)		1
TOTAL		1

STORM SEWER PIPE REINFORCED CONCRETE CLASS III

		608.0318				
		18-INCH	INLET	DISCHARGE	SLOPE	
FROM	-	TO	LF	ELEVATION	ELEVATION	FT/FT
EX 2 (25+74)	-	OUTLET (26+14)	45	900.06	898.30	0.0391
TOTAL			45			

MAINTENANCE AND REPAIR
OF HAUL ROADS
ID 7863-00-71

		618.0100.01
CATEGORY		EACH
0040		1
TOTAL		1

MOBILIZATION

		619.1000
CATEGORY		EACH
0010		0.1
0020		0.8
0030		0.1
TOTAL		1

CONCRETE

				601.0411	602.0405
				CONCRETE	CONCRETE
				CURB & GUTTER	SIDEWALK
				30-INCH TYPE D	4-INCH
STATION	TO	STATION	LOC	LF	SF
25+50	-	26+26.75	LT	77	422
25+50	-	26+08.75	RT	59	--
27+43.25	-	28+00	LT	57	299
27+61.46	-	28+00	RT	39	--
TOTALS				232	721

MISCELLANEOUS STORM SEWER

		611.8110	611.8115	SPV.0060.01	
		ADJUSTING	ADJUSTING	CONNECTION TO	
		MANHOLE	INLET	EXISTING STORM	
		COVERS	COVERS	SEWER	
STATION	LOC	EACH	EACH	EACH	NOTES
25+52	RT	--	1	--	CONNECT TO EX 2
25+53	LT	--	1	--	
25+74	RT	--	1	1	
25+75	LT	--	1	--	
27+99	2.6' LT	1	--	--	
TOTALS		1	4	1	

WATER

		624.0100
		WATER
		MGAL
COMPACTION		6
DUST CONTROL		6
TOTAL		12

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

EROSION CONTROL ITEMS

				625.0100	627.0200	628.1504	628.1520	628.2027	629.0210	630.0120	630.0200
				TOPSOIL	MULCHING	SILT FENCE	SILT FENCE	EROSION MAT	FERTILIZER	SEEDING	SEEDING
							MAINTENANCE	CLASS II	TYPE B	MIXTURE	TEMPORARY
								TYPE C		NO. 20	
STA	TO	STA	LOCATION	SY	SY	LF	LF	SY	CWT	LB	LB
25+50	--	26+20	RT	110	90	75	263	20	0.1	3	3
25+50	--	26+05	LT	30	--	65	228	30	0.0	1	1
27+61.46	--	28+00	RT	130	50	30	105	75	0.1	3	3
UNDISTRIBUTED				65	35	40	140	30	0.0	2	2
TOTALS				335	175	210	735	155	0.2	9	9

EROSION CONTROL MOBILIZATION ITEMS

628.1905		628.1910	
MOBILIZATIONS		MOBILIZATIONS	
EROSION		EMERGENCY	
CONTROL		EROSION	
		CONTROL	
LOCATION	EACH	EACH	
ID 7863-00-71	4	4	
TOTALS	4	4	

TURBIDITY BARRIERS

LOCATION	628.6005
	SY
SOUTH ABUTMENT	105
NORTH ABUTMENT	135
UNDISTRIBUTED	60
TOTAL	300

TEMPORARY DITCH CHECKS

628.7504	
LOCATION	LF
UNDISTRIBUTED	50
TOTAL	50

SIGNS

		634.0612	637.2210	637.2230	638.2602	638.3000	
		POSTS WOOD	SIGNS TYPE II	SIGNS TYPE II	REMOVING	REMOVING	
		4X6-INCH X 12-FT	REFLECTIVE H	REFLECTIVE F	SIGNS TYPE II	SMALL SIGN	
						SUPPORTS	
STATION	LOCATION	EACH	SF	SF	EACH	EACH	SIGNAGE TYPE
26+11	RT	--	--	--	2	1	WEIGHT LIMIT 18 TONS & NO PARKING
26+20	LT	--	--	--	1	1	
26+20	RT	--	--	--	1	1	W5-52R
27+52	LT	--	--	--	1	1	W5-52R
27+52	RT	--	--	--	1	1	W5-52L
27+62	LT	--	--	--	1	1	WEIGHT LIMIT 18 TONS
25+74	LT	1	--	3	--	--	
26+08	RT	1	3	3	--	--	R7-1D, W5-52R
27+62	LT	1	--	3	--	--	W5-52R
27+62	RT	1	--	3	--	--	W5-52L
TOTALS		4	3	12	7	6	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

FIELD OFFICE TYPE B

642.5001	
CATEGORY	EACH
0010	0.1
0020	0.8
0030	0.1
TOTAL	
1	

TRAFFIC CONTROL ITEMS

LOCATION	DURATION DAYS	643.0420		643.0705		643.0900		643.5000
		BARRICADES		WARNING LIGHTS		SIGNS		TRAFFIC
		TYPE III NO.	DAY	TYPE A NO.	DAY	NO.	DAY	CONTROL EACH
PER SDD 15C2	110	18	1,980	28	3,080	14	1,540	--
195TH STREET	--	--	--	--	--	--	--	1
TOTALS		1,980		3,080		1,540		1

TRAFFIC CONTROL PLACEMENT SUBJECT TO ENGINEER APPROVAL

MARKING LINE EPOXY 4-INCH

STA	TO	STA	DESCRIPTION	646.1020
				YELLOW LF
25+50	-	28+00	DOUBLE CENTERLINE	500
UNDISTRIBUTED				25
TOTAL				525

STAKING ITEMS

CATEGORY	LOCATION	650.4000	650.4500	650.5000	650.5500	650.6500.01	650.6500.02	650.9910.01	650.9920
		CONSTRUCTION STAKING STORM SEWER	CONSTRUCTION STAKING SUBGRADE	CONSTRUCTION STAKING BASE	CURB GUTTER AND CURB & GUTTER	CONSTRUCTION STAKING STRUCTURE LAYOUT (B-9-305)	CONSTRUCTION STAKING STRUCTURE LAYOUT (R-9-15)	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (ID 7863-00-71)	CONSTRUCTION STAKING SLOPE STAKES
0010	25+50 - 28+00	1	135	135	232	--	--	1	135
0020	B-9-305	--	--	--	--	1	--	--	--
0030	R-9-15	--	--	--	--	--	1	--	--
TOTALS		1	135	135	232	1	1	1	135

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

SAWING				
		690.0150	690.0250	NOTES
		ASPHALT	CONCRETE	
STATION	LOCATION	LF	LF	
25+50	LT & RT	25	--	ROADWAY
28+00	LT & RT	22	--	ROADWAY
25+50	LT & RT	--	5	CURB & GUTTER
28+00	LT & RT	--	5	CURB & GUTTER
25+50	LT	--	4	SIDEWALK
28+00	LT	--	4	SIDEWALK
27+61 -28+00	LT	45	--	BOAT RAMP
TOTAL		92	18	

INSTALL DRY HYDRANT				
		SPV.0105.01		
CATEGORY	STATION	LOCATION	LS	
0040	27+65	LT	1	
TOTAL			1	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

SCHEDULE OF LANDS AND INTERESTS REQUIRED

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

PARCEL NO.	OWNERSHIP	INTEREST REQUIRED	TOTAL ACRES	R/W (ACRES)			TOTAL ACRES REMAINING	TLE ACRES
				NEW	EXISTING	TOTAL		
1	PETER T. AND DEBRA L. THOMPSON	FEE	0.661	0.036	0.000	0.036	0.625	-
2	MICHAEL J. LEDUC AND RICHARD A. LEDUC	FEE & TLE	1.963	0.009	0.000	0.009	1.954	0.000
3	RONALD J. AND DONNA M. KURNEN	FEE & TLE	1.001	0.023	0.000	0.023	1.008	0.001
50	AT&T	RELEASE OF RIGHTS						

CONVENTIONAL ABBREVIATIONS

FOUND IRON PIPE/PIN
R/W MONUMENT
R/W STANDARD
SIGN
SECTION CORNER MONUMENT
SECTION CORNER SYMBOL
FEE (HATCH VARIES)
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE
LOT & TIE
CORPORATE LIMITS
TEMPORARY LIMITED EASEMENT
FENCE
SLOPE INTERCEPTS
PERMANENT LIMITED EASEMENT
NO ACCESS (BY STATUTORY AUTHORITY)
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (NEW HIGHWAY)

CONVENTIONAL ABBREVIATIONS

ACRES
BUILDING
CENTERLINE
CERTIFIED SURVEY MAP
CORNER
DOCUMENT
EASEMENT
LAND CONTRACT
MONUMENT
PAGE
PERMANENT LIMITED EASEMENT
PROPERTY LINE
RECORDED AS
REFERENCE LINE
RELEASE OF RIGHTS
RIGHT-OF-WAY
SECTION
STATION
TEMPORARY LIMITED EASEMENT
VOLUME

PARCEL 2 TLE COURSE TABLE

COURSE	BEARING	DISTANCE
100-101	N02°28'00"W	202.84'
101-102	N02°16'48"E	28.58'
102-103	N08°16'32"E	68.00'
103-104	S74°31'22"E	70.32'
104-105	N07°22'39"E	24.28'
105-106	S69°06'40"E	14.03'
106-107	SEE CURVE TABLE	
107-108	S02°24'03"W	3.06'
108-109	N70°35'57"W	13.31'
109-110	N05°22'39"E	9.95'

PI STA = 36+59.44
Y = 123823.250
X = 20446.381
DELTA = 23°28'09"
D = 9°32'57"
T = 123.72'
L = 244.02'
R = 600.00'
PC STA = 35+35.72
PT STA = 37+79.74

PI STA = 38+40.49
Y = 123997.248
X = 20477.458
DELTA = 2°27'23"
D = 5°43'46"
T = 21.43'
L = 42.87'
R = 1000.00'
PC STA = 38+19.06
PT STA = 38+61.93

PARCEL 3 TLE COURSE TABLE

COURSE	BEARING	DISTANCE
100-101	N02°28'00"W	202.84'
101-102	N02°16'48"E	28.58'
102-103	N08°16'32"E	68.00'
103-104	S74°31'22"E	70.32'
104-105	N07°22'39"E	24.28'
105-106	S69°06'40"E	14.03'
106-107	SEE CURVE TABLE	
107-108	S02°24'03"W	3.06'
108-109	N70°35'57"W	13.31'
109-110	N05°22'39"E	9.95'

PARCEL 2 TLE CURVE TABLE

CURVE	LENGTH	RADIUS	LONG CHORD	LONG CHORD BEARING
101-102	24.65'	950.00'	24.65'	S02°08'38"W

R/W CURVE TABLE

CURVE	LENGTH	RADIUS	LONG CHORD	LONG CHORD BEARING
101-102	24.65'	950.00'	24.65'	S02°08'38"W
102-103	32.87'	660.00'	32.87'	S23°07'02"W

R/W COURSE TABLE

COURSE	BEARING	DISTANCE
100-101	N02°28'00"W	202.84'
101-102	N02°16'48"E	28.58'
102-103	N08°16'32"E	68.00'
103-104	S74°31'22"E	70.32'
104-105	N07°22'39"E	24.28'
105-106	S69°06'40"E	14.03'
106-107	SEE CURVE TABLE	
107-108	S02°24'03"W	3.06'
108-109	N70°35'57"W	13.31'
109-110	N05°22'39"E	9.95'
110-111	SEE CURVE TABLE	
111-112	S21°50'29"W	31.47'
112-113	S21°52'29"W	20.00'
113-114	S23°03'56"W	22.32'
114-115	S22°58'58"W	20.00'
115-116	S22°58'58"W	51.69'
116-117	S05°22'39"W	43.71'
117-118	N74°37'22"W	38.09'
118-119	N74°37'22"W	32.22'

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, CHIPPWA COUNTY ZONE, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" x 24" REBAR) W/PLASTIC CAP, UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

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

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

EXISTING 195TH RIGHT-OF-WAY SHOWN HEREIN IS BASED ON FOUND MONUMENTATION AS SHOWN HEREON, RECORDED CSM NO. 658, ALLENDALE SECOND ADDITION SUBDIVISION, ALLENDALE SUBDIVISION AND DELLWOOD SHORE SUBDIVISION PLAT.

END RELOCATION ORDER
PROJECT 7863-00-01
STA. 43+25
Y=124442.961
X=201665.345

LOCATED 2562.56 FEET NORTH AND 168.44 FEET EAST OF THE SOUTH QUARTER CORNER OF SEC. 7, T. 28 N. R. 7 W. ALLENDALE

E-W QUARTER SECTION LINE

LOT 15 ALLENDALE

LOT 17 ALLENDALE

LOT 3 CSM 3387 V.15 P.271

LOT 16 ALLENDALE

LOT 14 ALLENDALE

LOT 13 ALLENDALE

LOT 12 ALLENDALE

LOT 11 ALLENDALE

LOT 10 ALLENDALE

LOT 9 ALLENDALE

LOT 8 ALLENDALE

LOT 7 ALLENDALE

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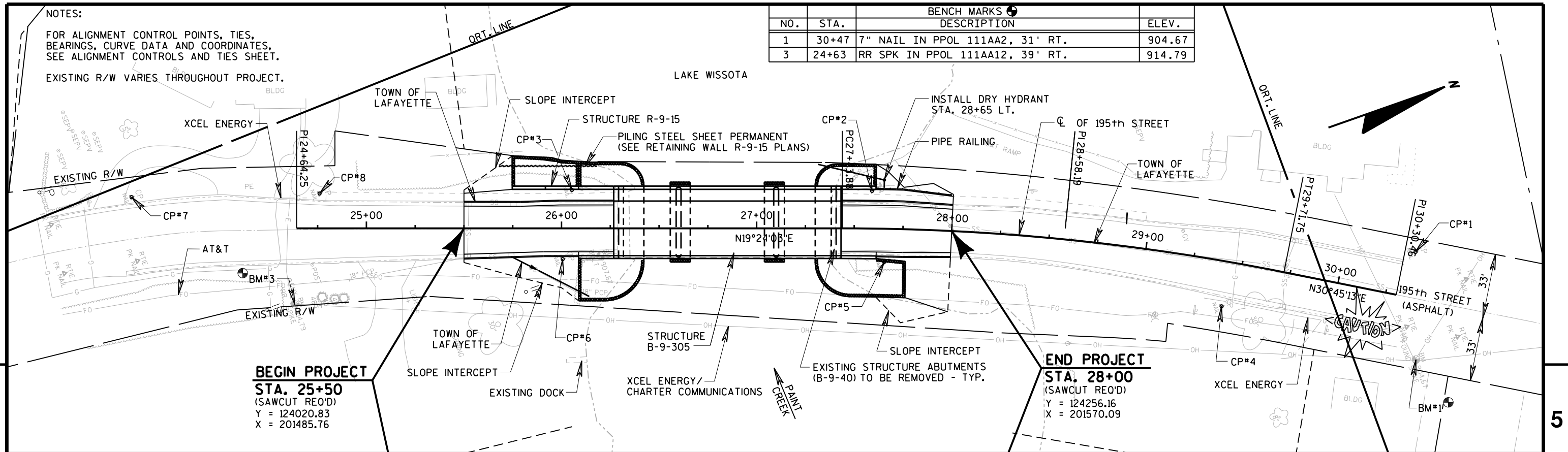
LOT 15 ALLENDALE

NOTES:

FOR ALIGNMENT CONTROL POINTS, TIES, BEARINGS, CURVE DATA AND COORDINATES, SEE ALIGNMENT CONTROLS AND TIES SHEET.

EXISTING R/W VARIES THROUGHOUT PROJECT.

BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
1	30+47	7" NAIL IN PPOL 111AA2, 31' RT.	904.67
3	24+63	RR SPK IN PPOL 111AA12, 39' RT.	914.79



BEGIN PROJECT
STA. 25+50
 (SAWCUT REQ'D)
 Y = 124020.83
 X = 201485.76

END PROJECT
STA. 28+00
 (SAWCUT REQ'D)
 Y = 124256.16
 X = 201570.09

EARTHWORK SUMMARY

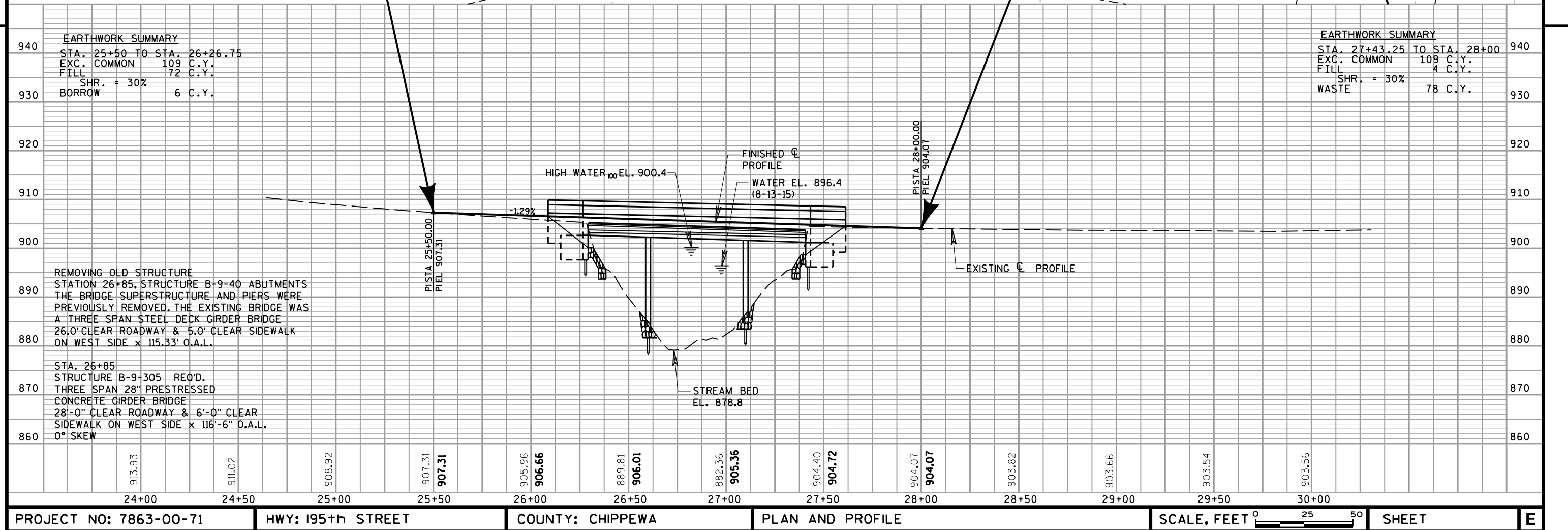
STA. 25+50 TO STA. 26+26.75
 EXC. COMMON 109 C.Y.
 FILL 72 C.Y.
 SHR. = 30%
 BORROW 6 C.Y.

EARTHWORK SUMMARY

STA. 27+43.25 TO STA. 28+00
 EXC. COMMON 109 C.Y.
 FILL 4 C.Y.
 SHR. = 30%
 WASTE 78 C.Y.

REMOVING OLD STRUCTURE
 STATION 26+85, STRUCTURE B-9-40 ABUTMENTS
 THE BRIDGE SUPERSTRUCTURE AND PIERS WERE
 PREVIOUSLY REMOVED. THE EXISTING BRIDGE WAS
 A THREE SPAN STEEL DECK GIRDER BRIDGE
 26'-0" CLEAR ROADWAY & 5'-0" CLEAR SIDEWALK
 ON WEST SIDE x 115.33' O.A.L.

STA. 26+85
 STRUCTURE B-9-305 REQ'D.
 THREE SPAN 28" PRESTRESSED
 CONCRETE GIRDER BRIDGE
 28'-0" CLEAR ROADWAY & 6'-0" CLEAR
 SIDEWALK ON WEST SIDE x 116'-6" O.A.L.
 0° SKEW



PROJECT NO: 7863-00-71

HWY: 195th STREET

COUNTY: CHIPPEWA

PLAN AND PROFILE

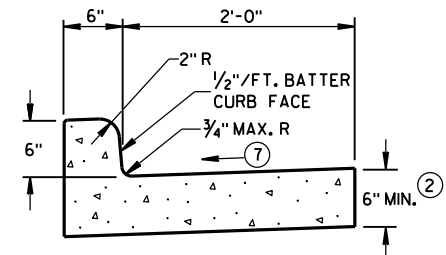
SCALE, FEET 0 25 50

SHEET

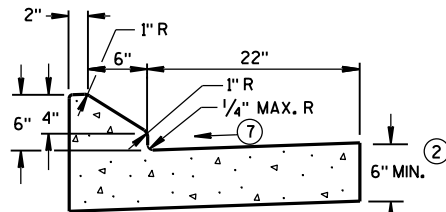
E

Standard Detail Drawing List

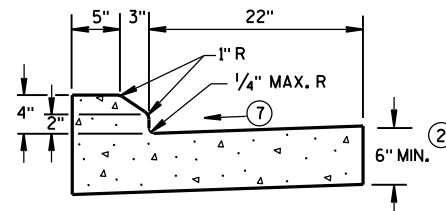
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



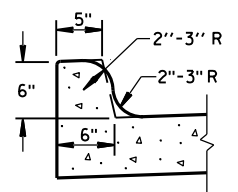
TYPES A^① & D



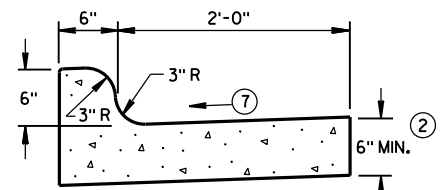
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

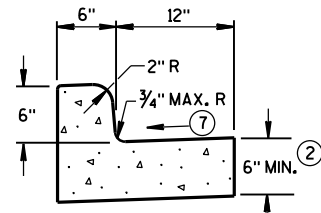


TYPES K^① & L
(OPTIONAL CURB SHAPE)



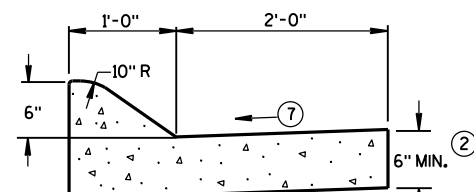
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

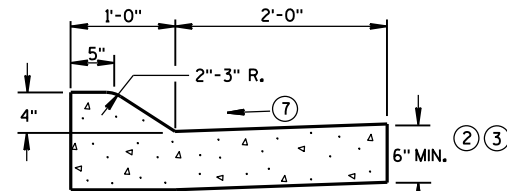


TYPES A^① & D

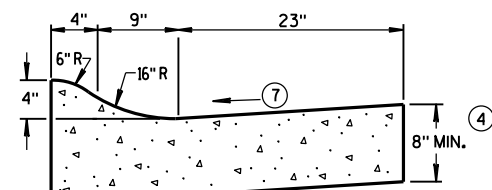
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

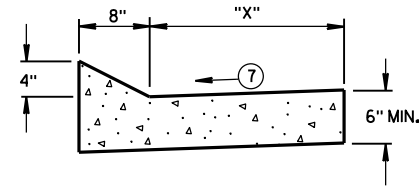


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

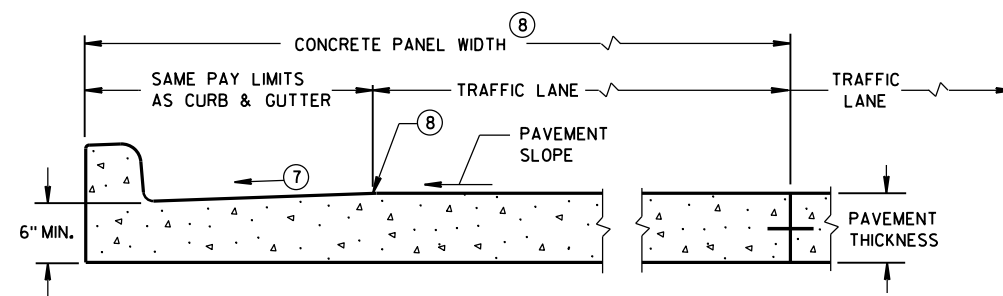
CONCRETE CURB & GUTTER 36"



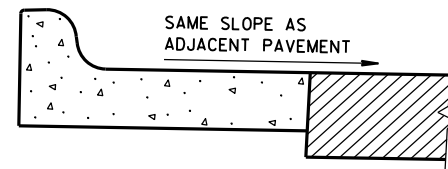
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS 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 & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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 GUTTER 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.

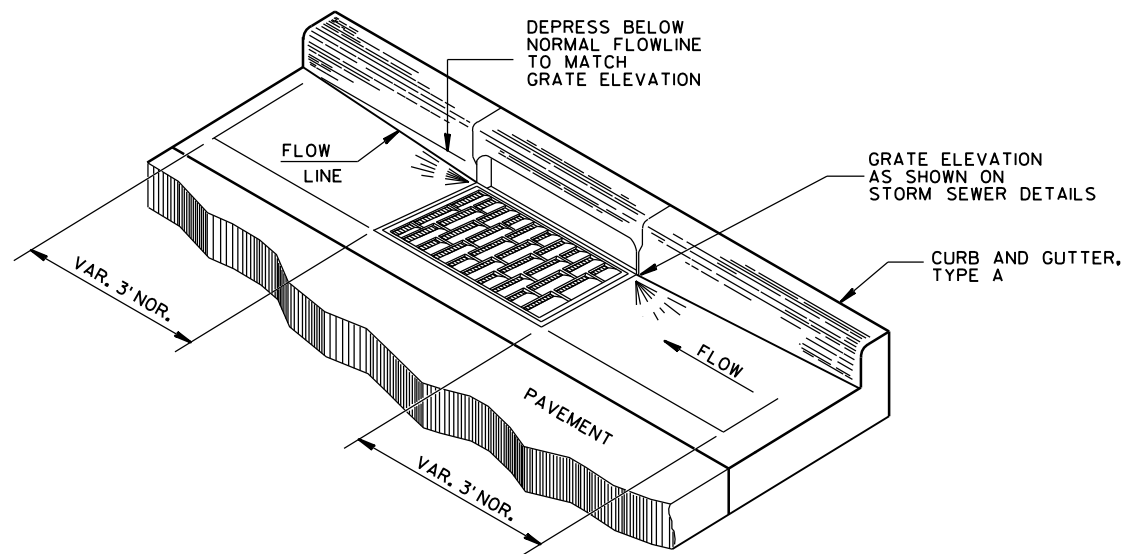
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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

* BIKE LANE IS NOT SHOWN.

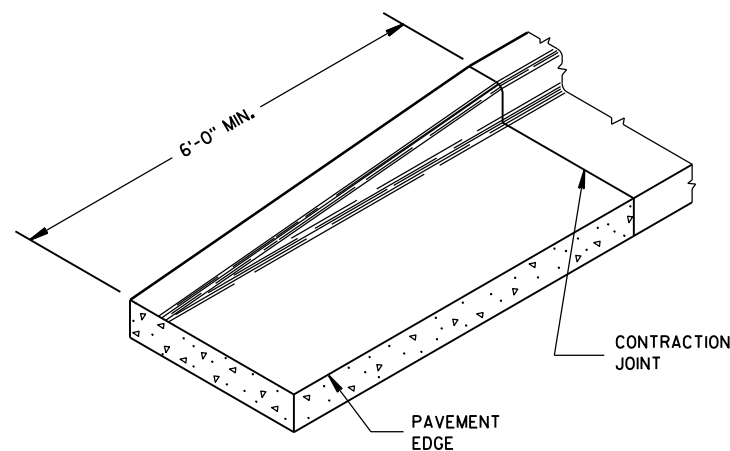
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

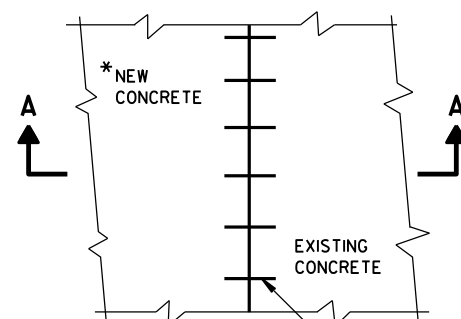


DETAIL OF CURB AND GUTTER AT INLETS

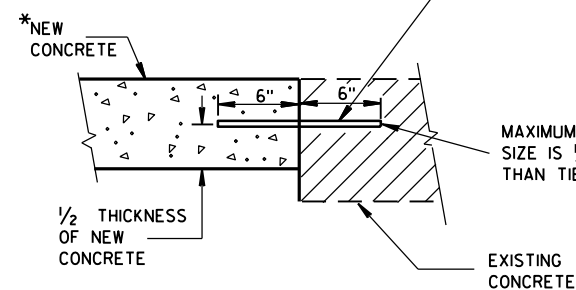
(TYPE H INLET COVER SHOWN)



END SECTION CURB & GUTTER



PLAN VIEW



**SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT**

*NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

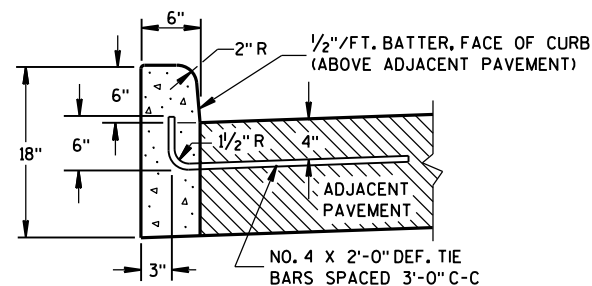
GENERAL NOTES

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

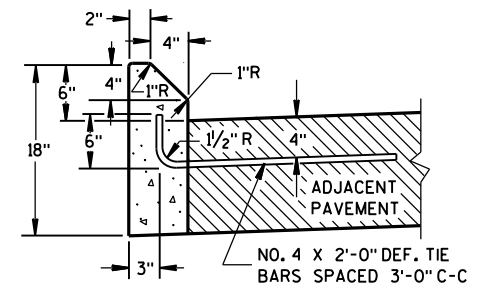
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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 GUTTER 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 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

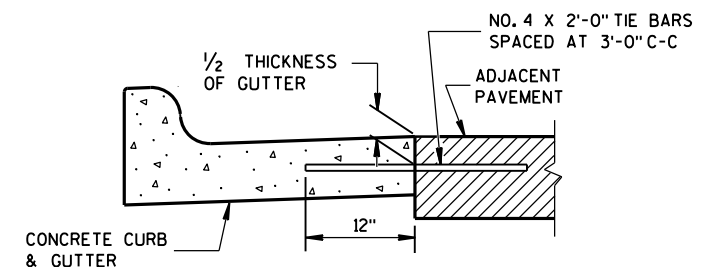


TYPES A^① & D

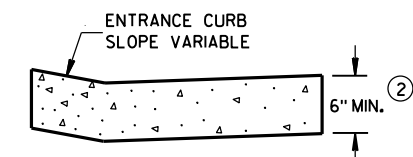


TYPES G^① & J

CONCRETE CURB



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

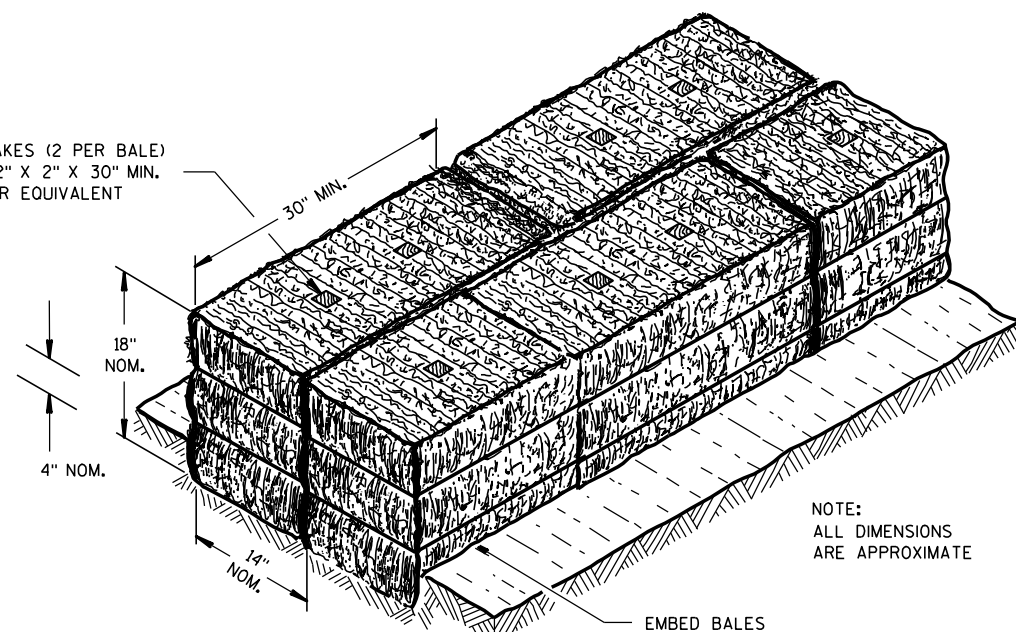
June, 2017

DATE

FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

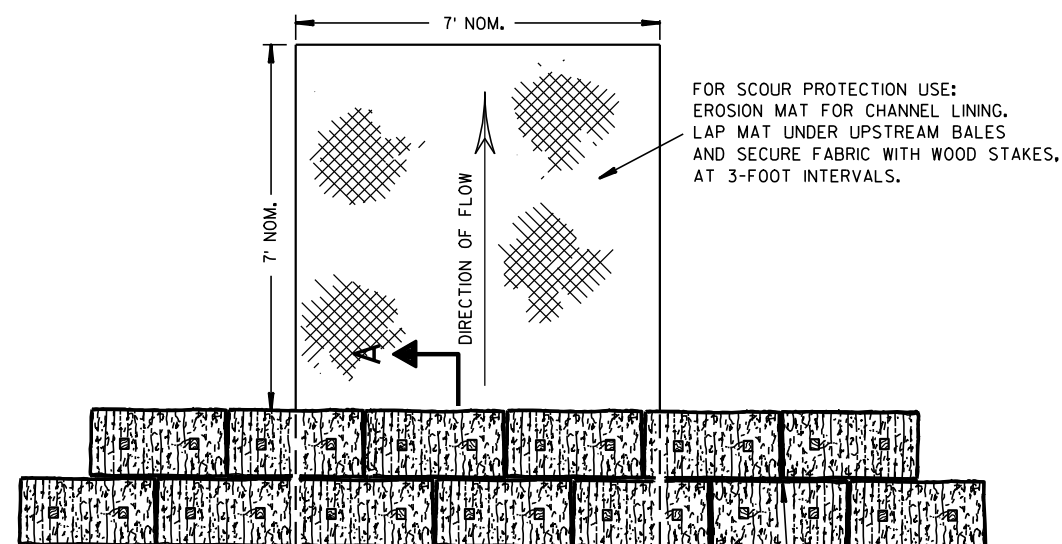
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

SECTION A-A

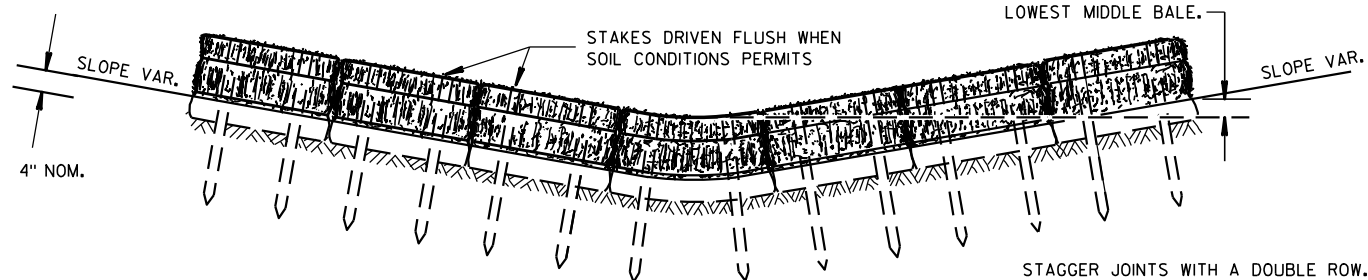


FOR SCOUR PROTECTION USE:
EROSION MAT FOR CHANNEL LINING.
LAP MAT UNDER UPSTREAM BALES
AND SECURE FABRIC WITH WOOD STAKES,
AT 3-FOOT INTERVALS.

PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



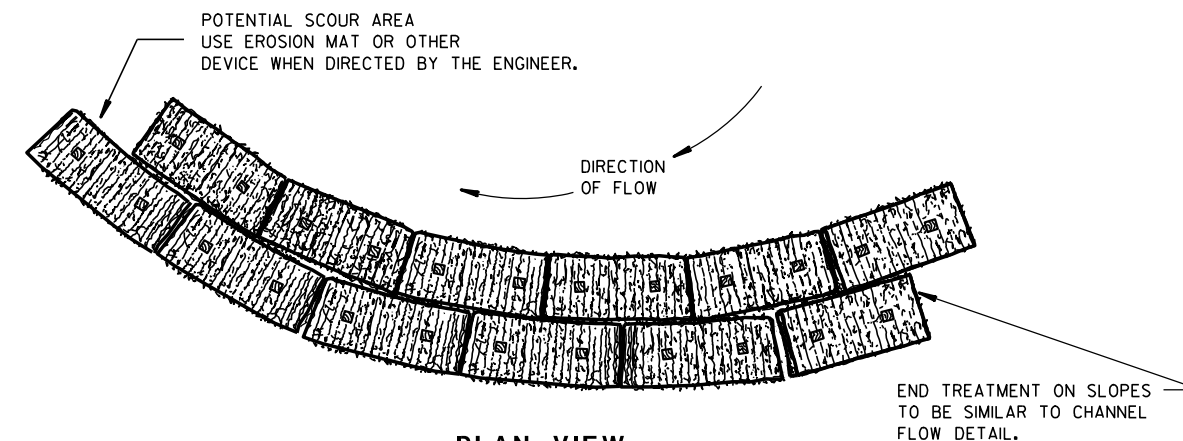
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

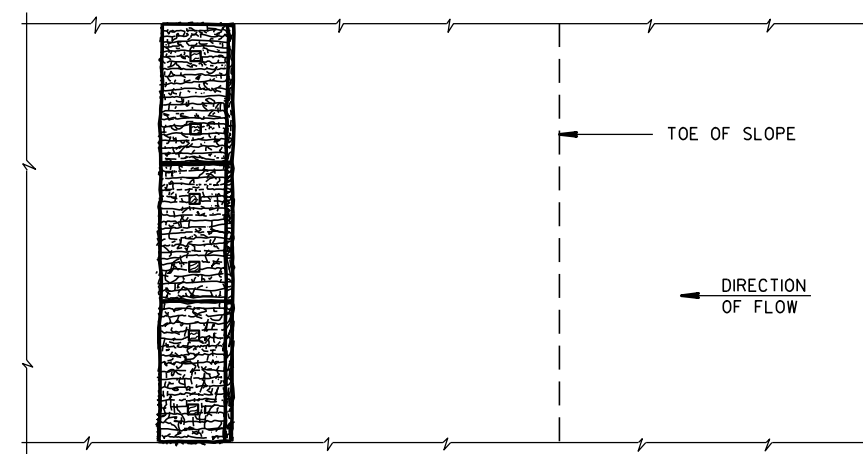
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

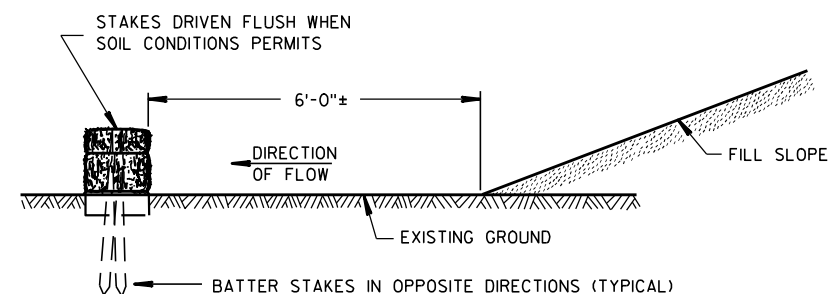


PLAN VIEW

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

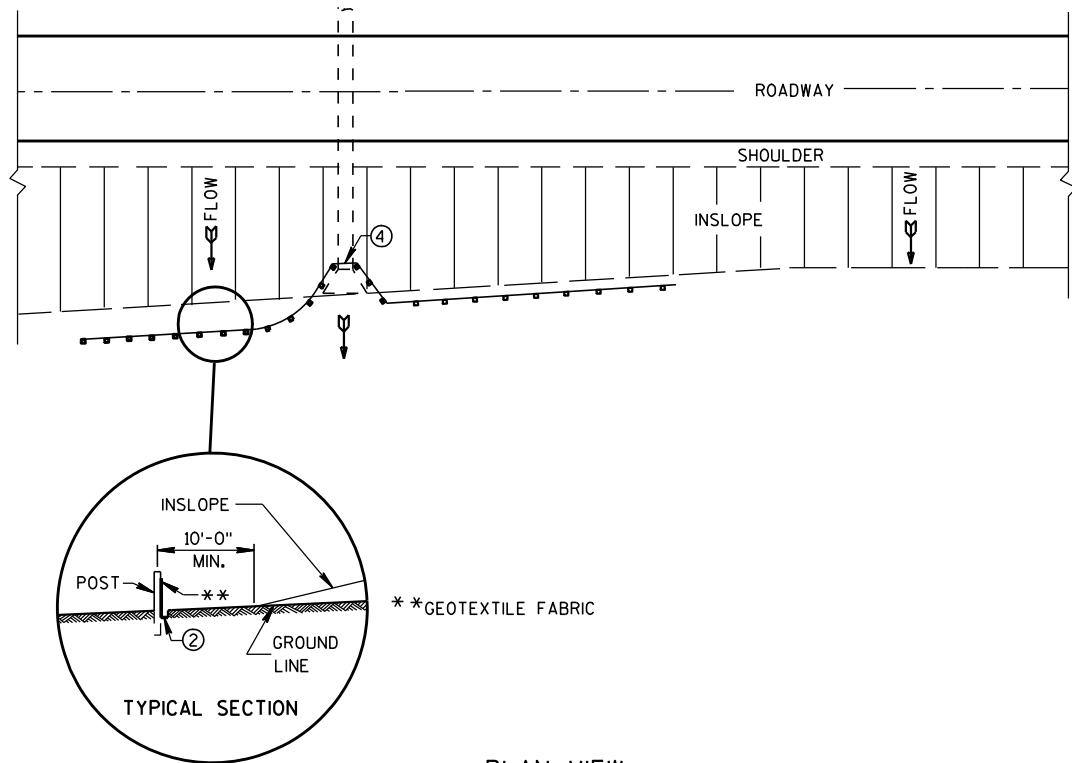
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

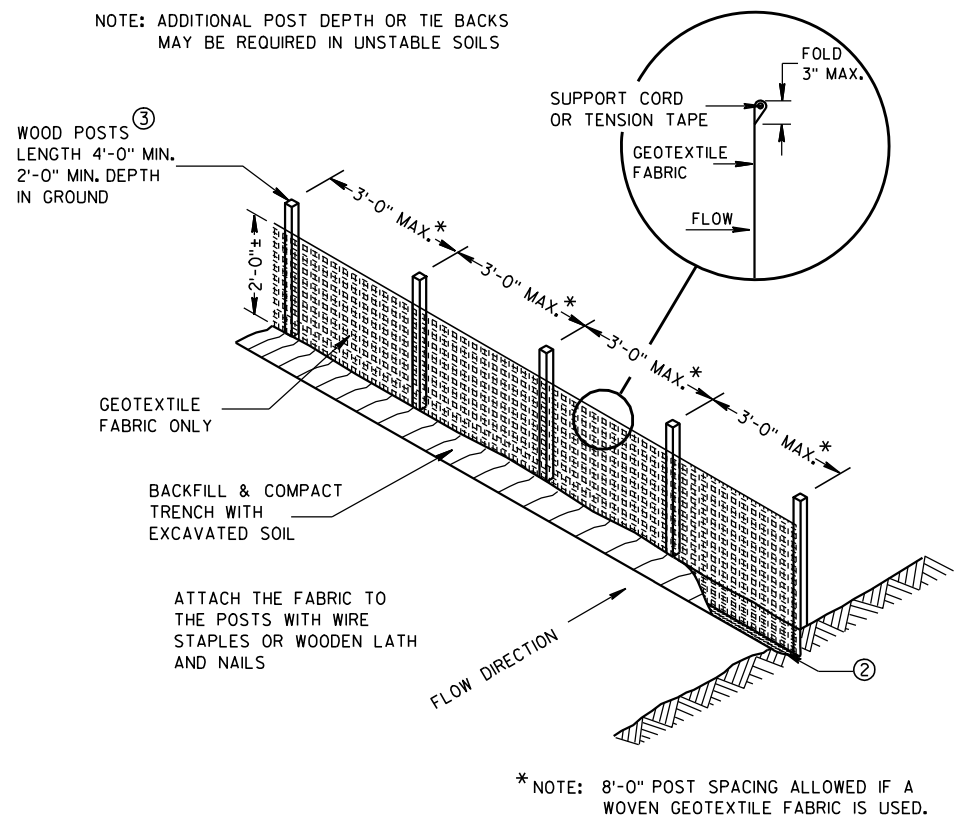
6/04/02
DATE

FHWA

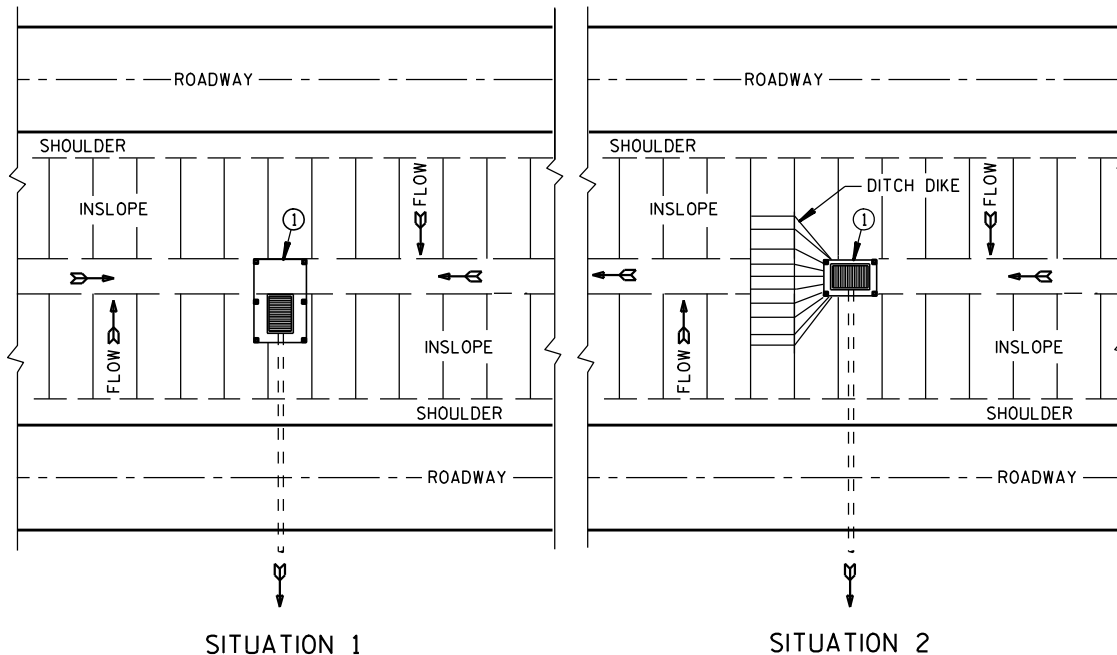
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



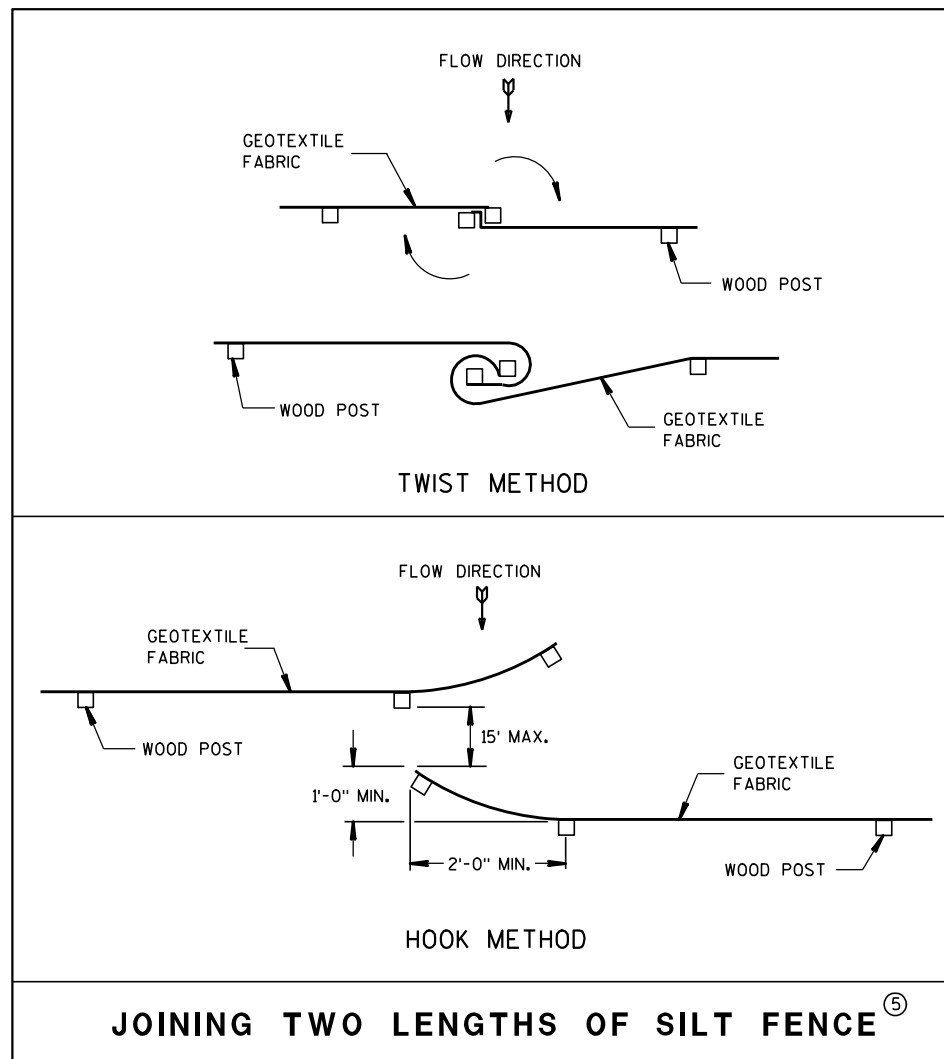
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

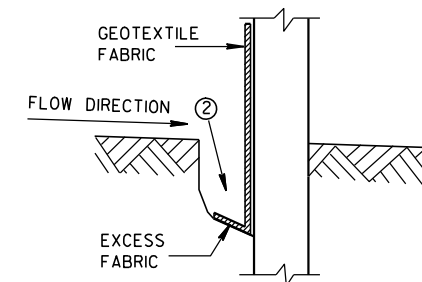


JOINING TWO LENGTHS OF SILT FENCE (5)

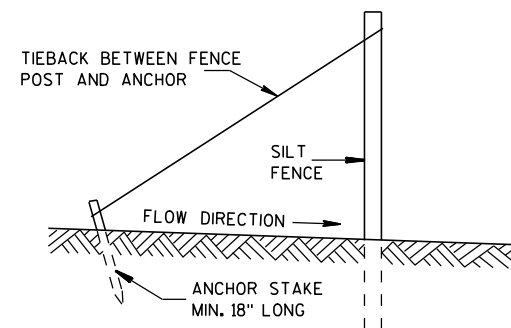
GENERAL NOTES

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 1 1/8" X 1 1/8" 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.

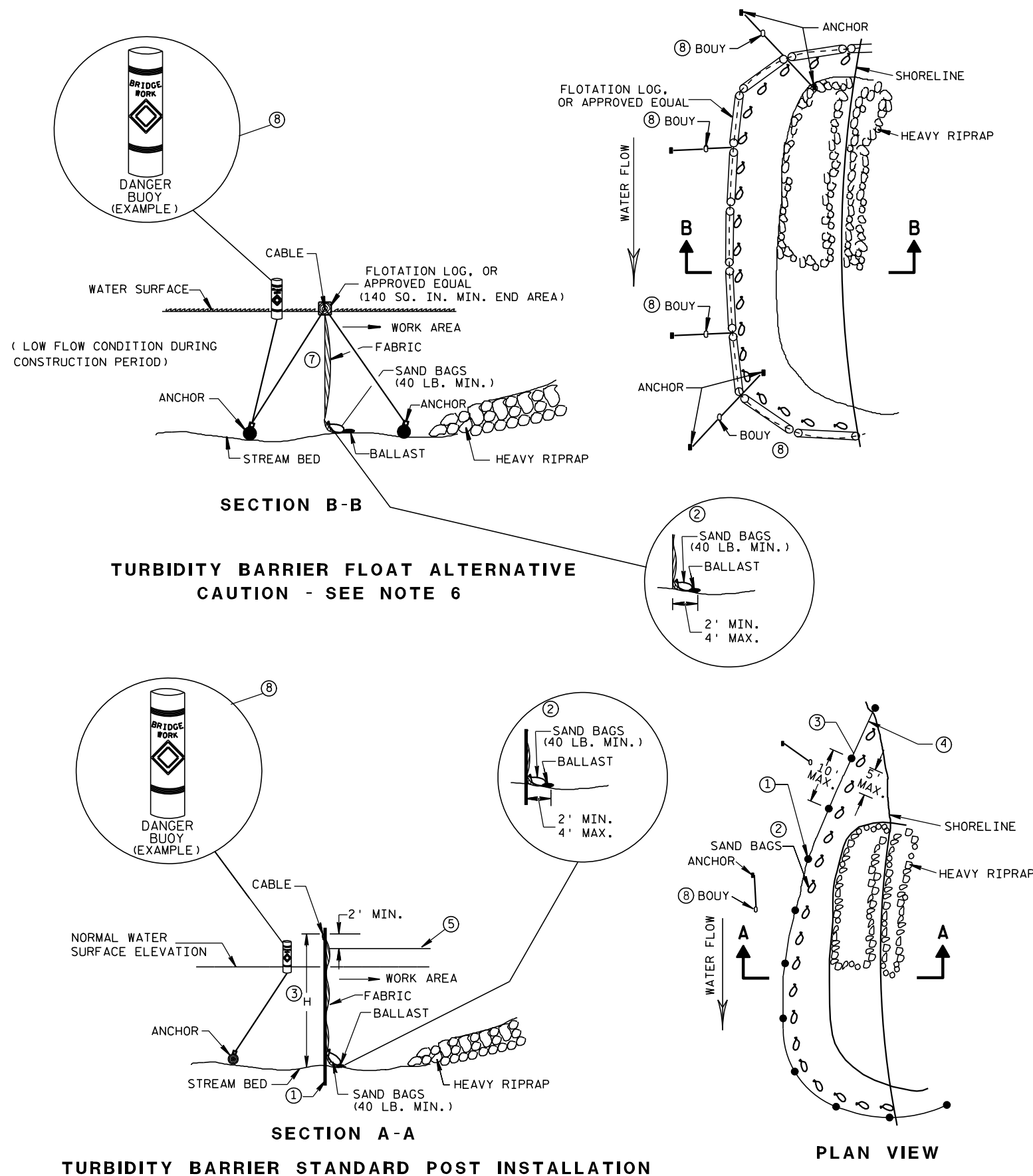


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

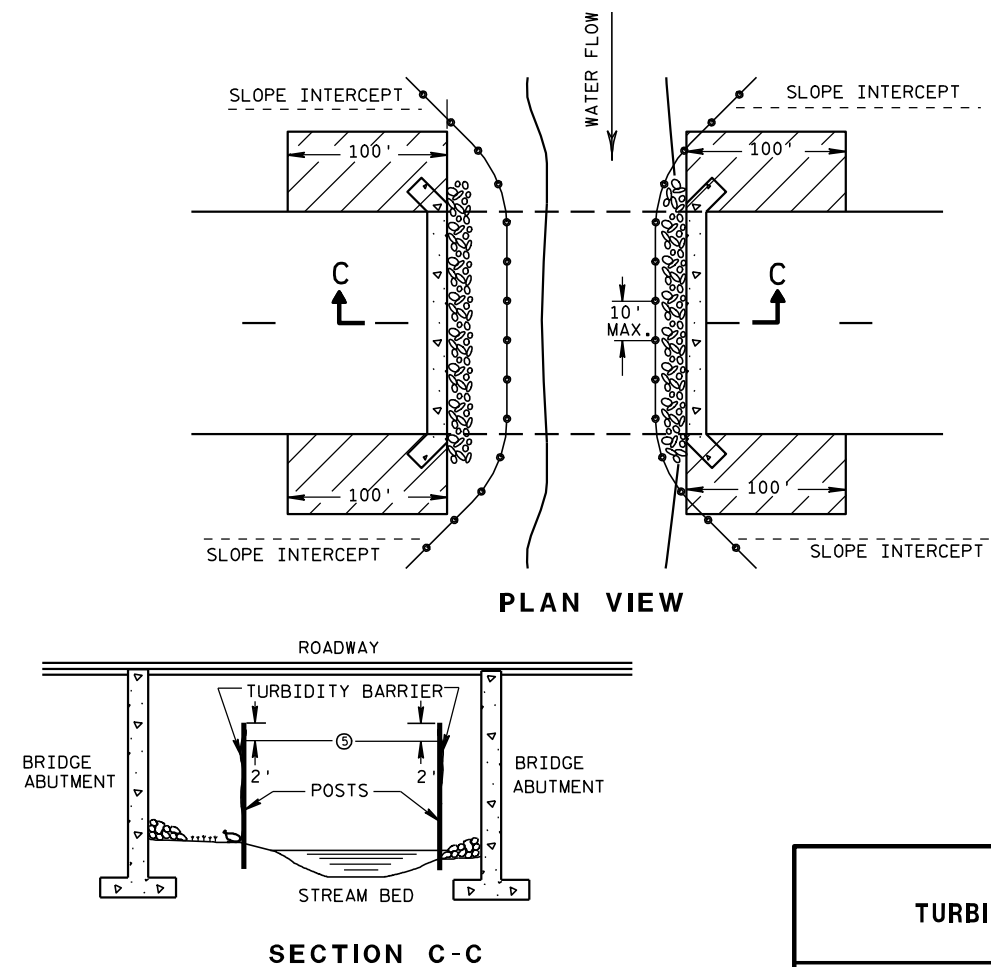


GENERAL NOTES

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

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

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



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

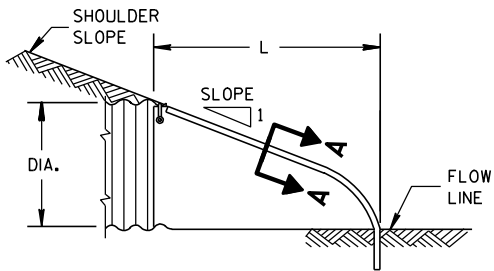
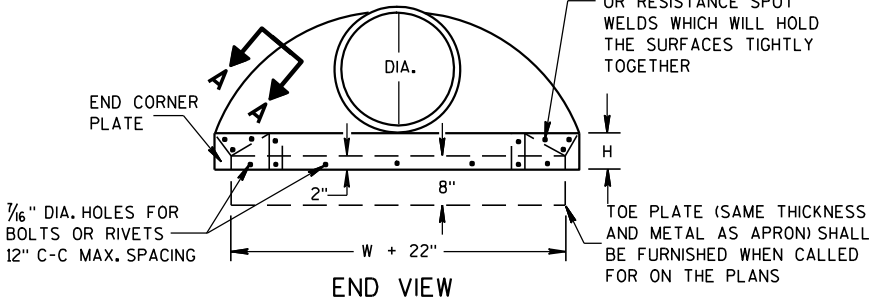
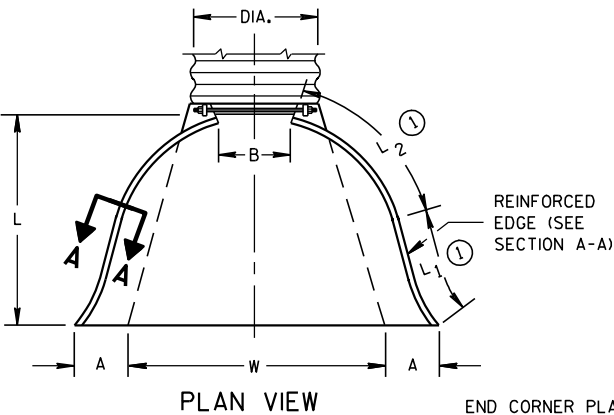
6/04/02
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

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

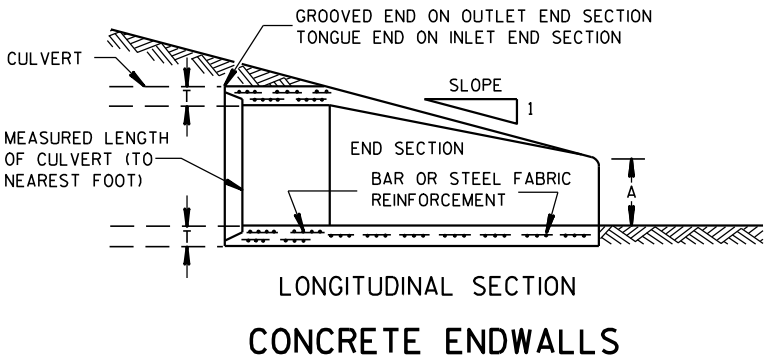
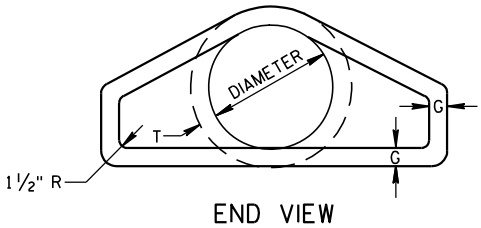
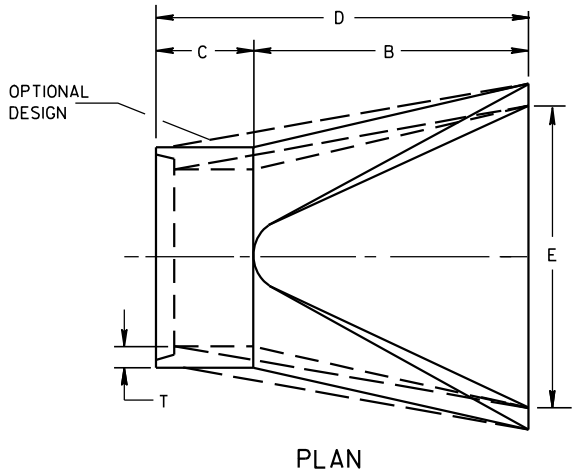
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



METAL ENDWALLS

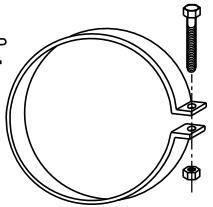
REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43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

* MINIMUM
** MAXIMUM

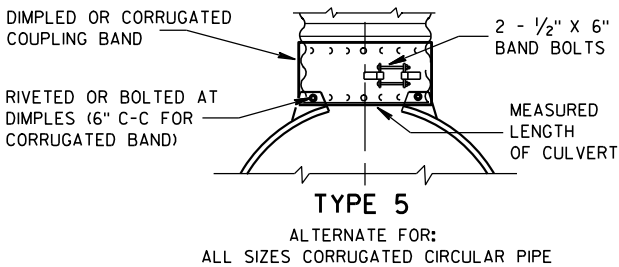
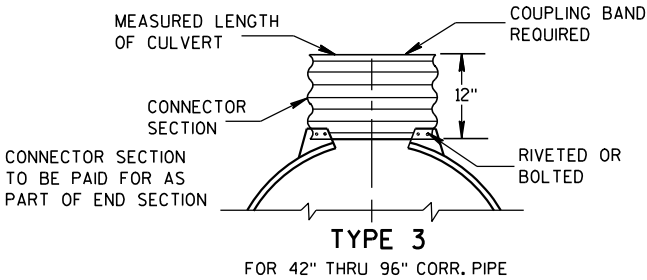
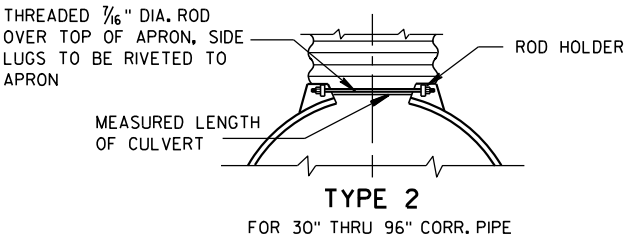
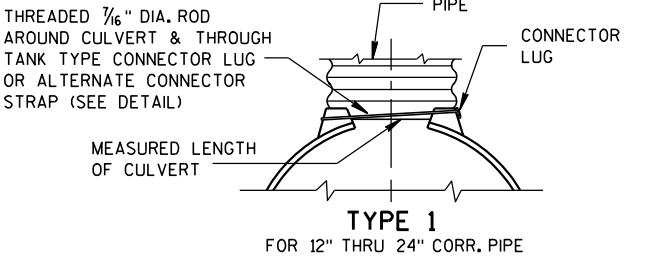


CONCRETE ENDWALLS

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



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



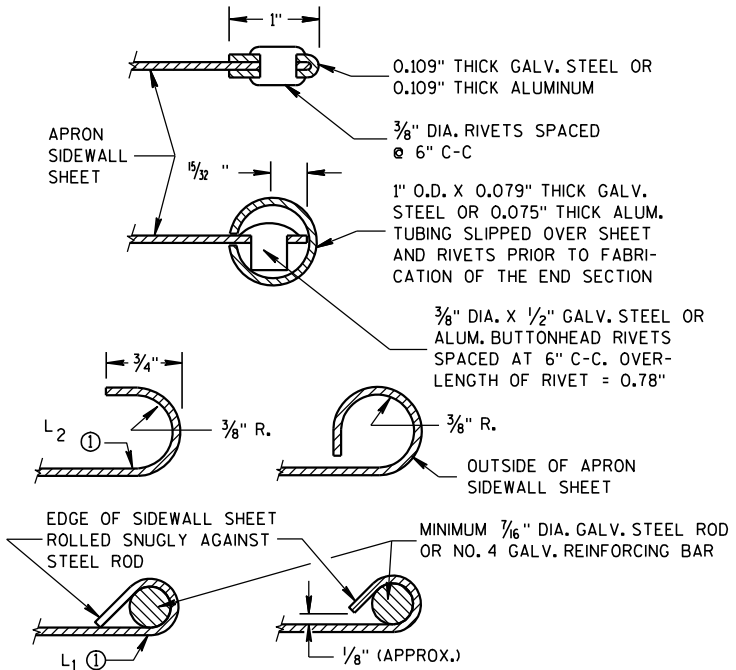
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

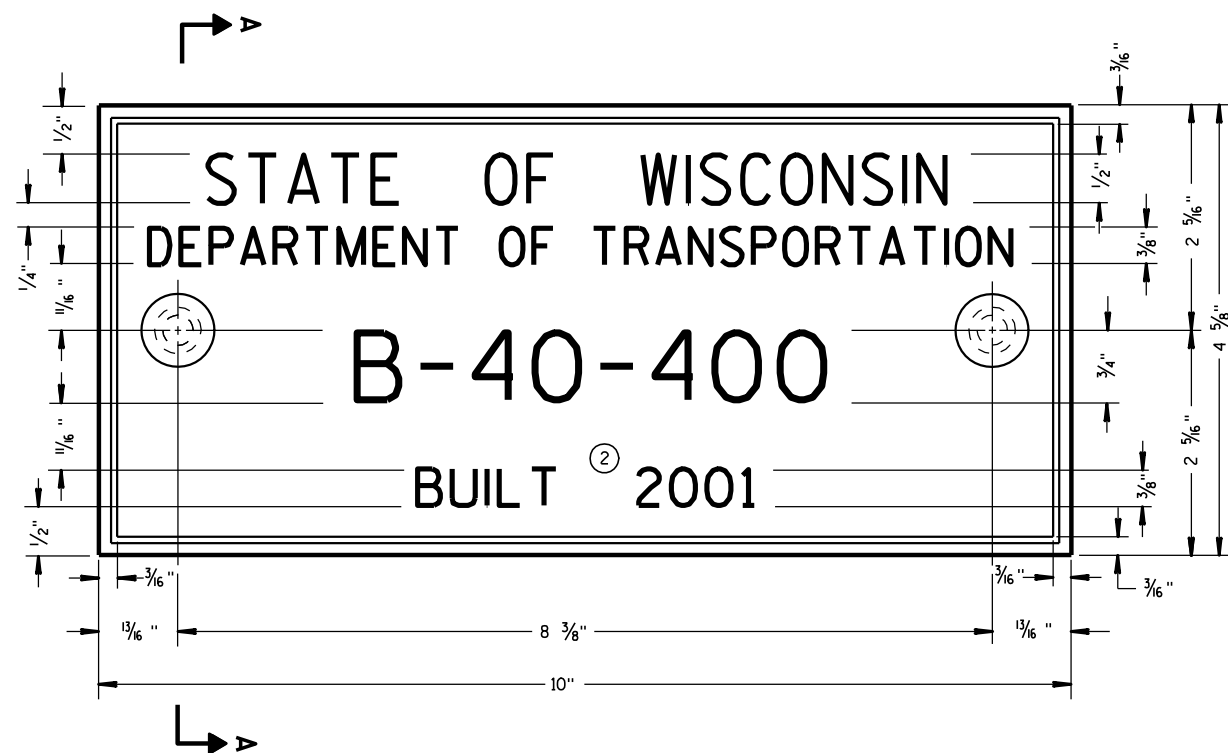
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

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

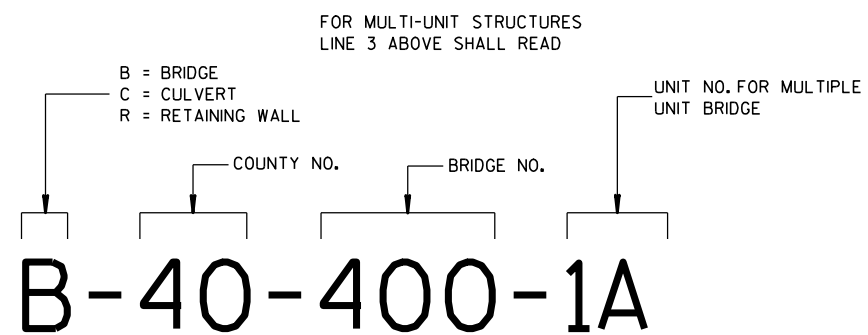
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



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



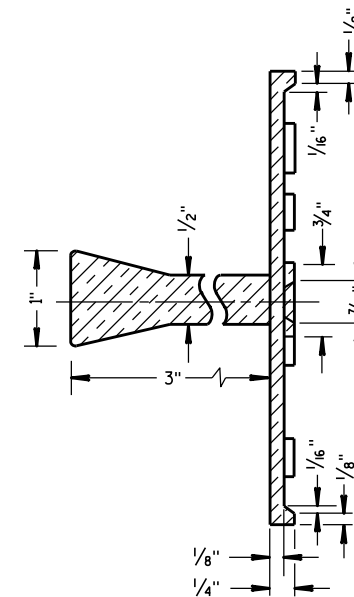
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

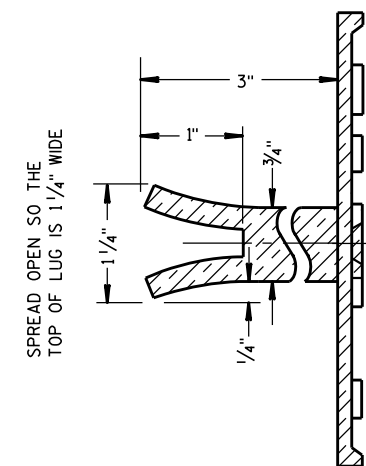
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

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

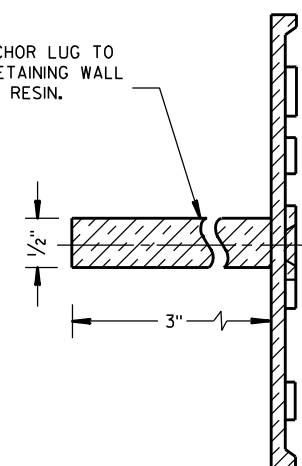


SECTION A-A



ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

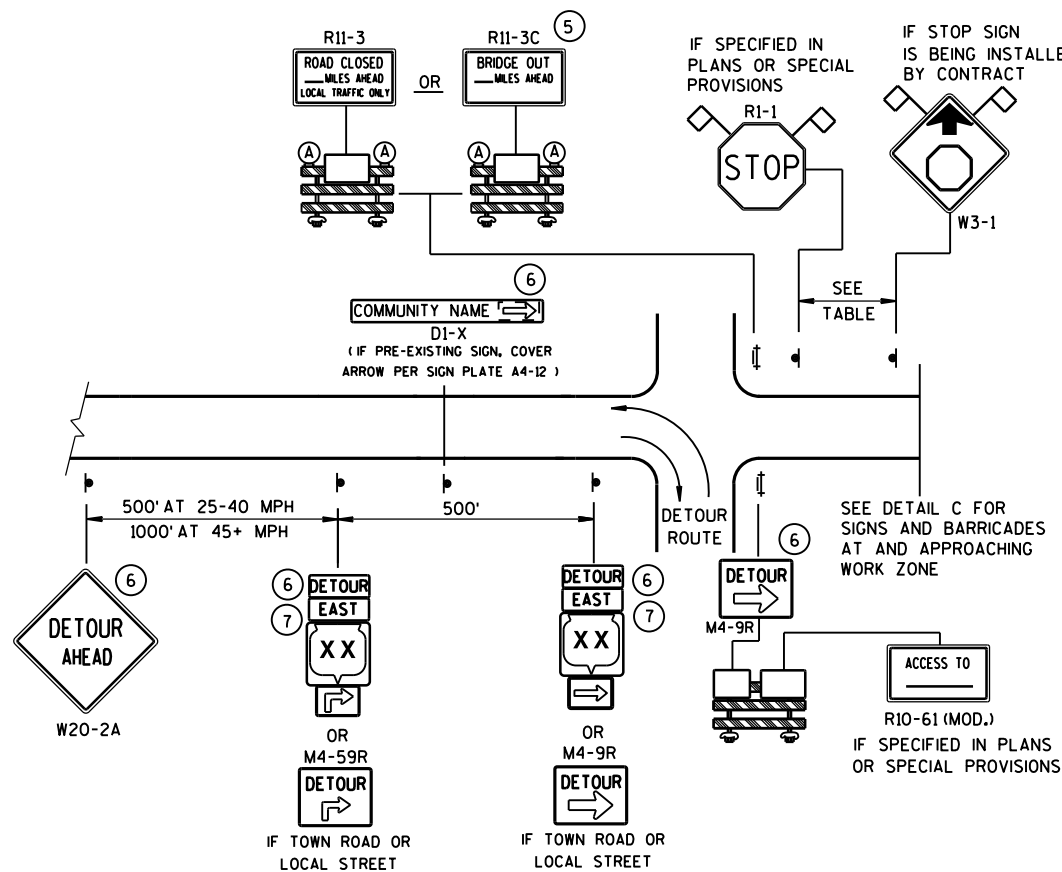
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

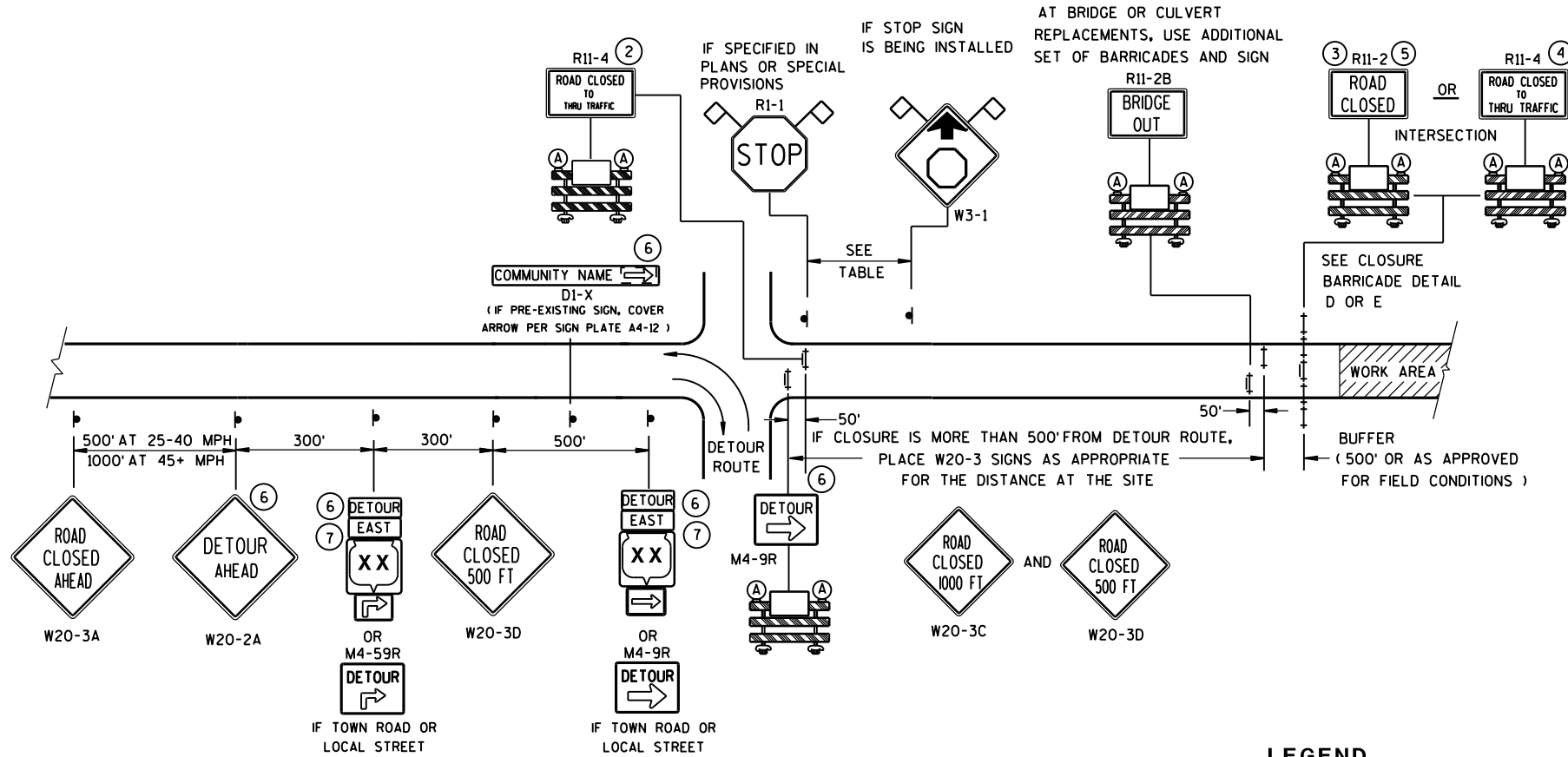
3/26/10
DATE

FHWA

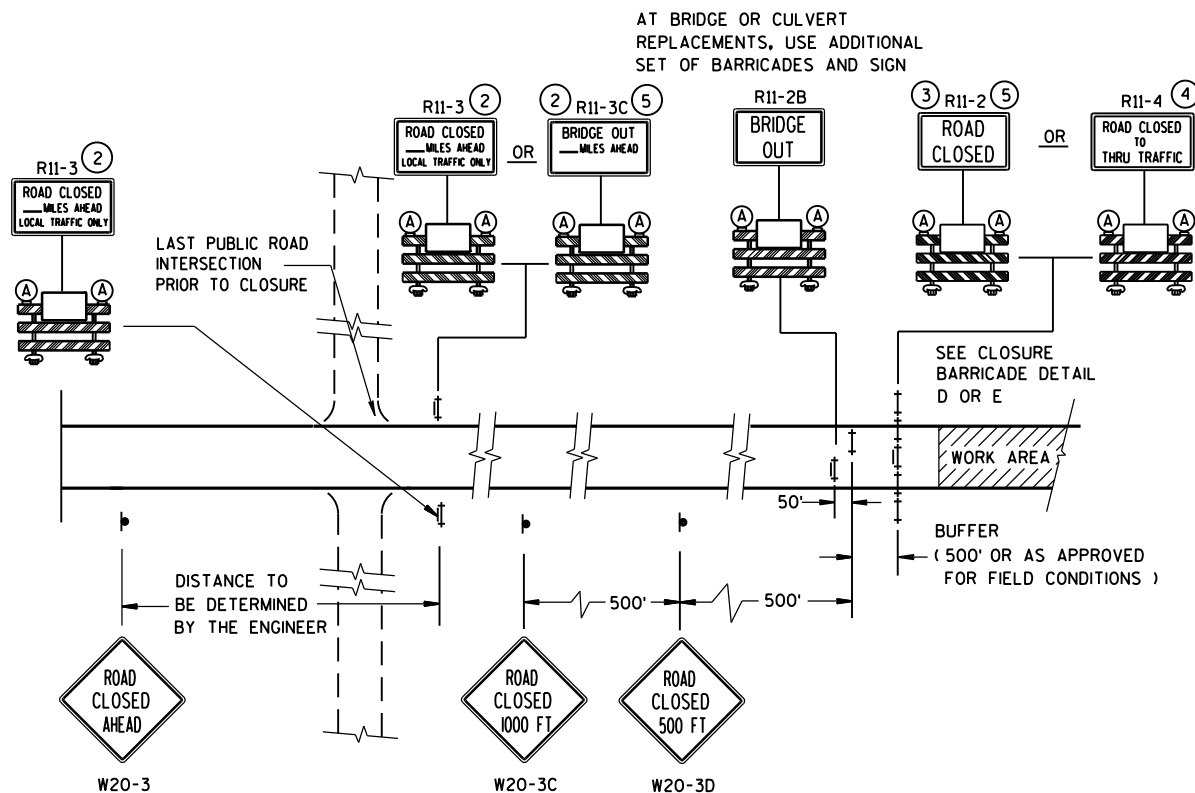
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



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



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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

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

WORK AREA

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

M05-1 OR M06-1

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

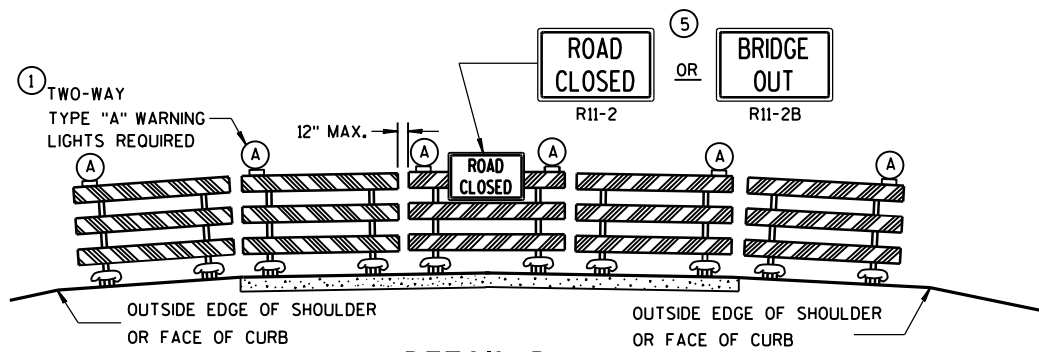
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

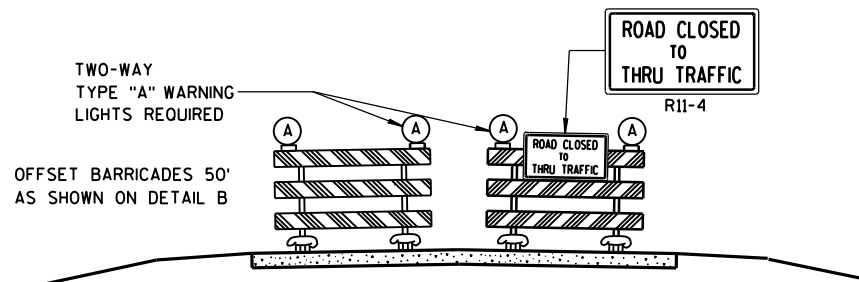
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

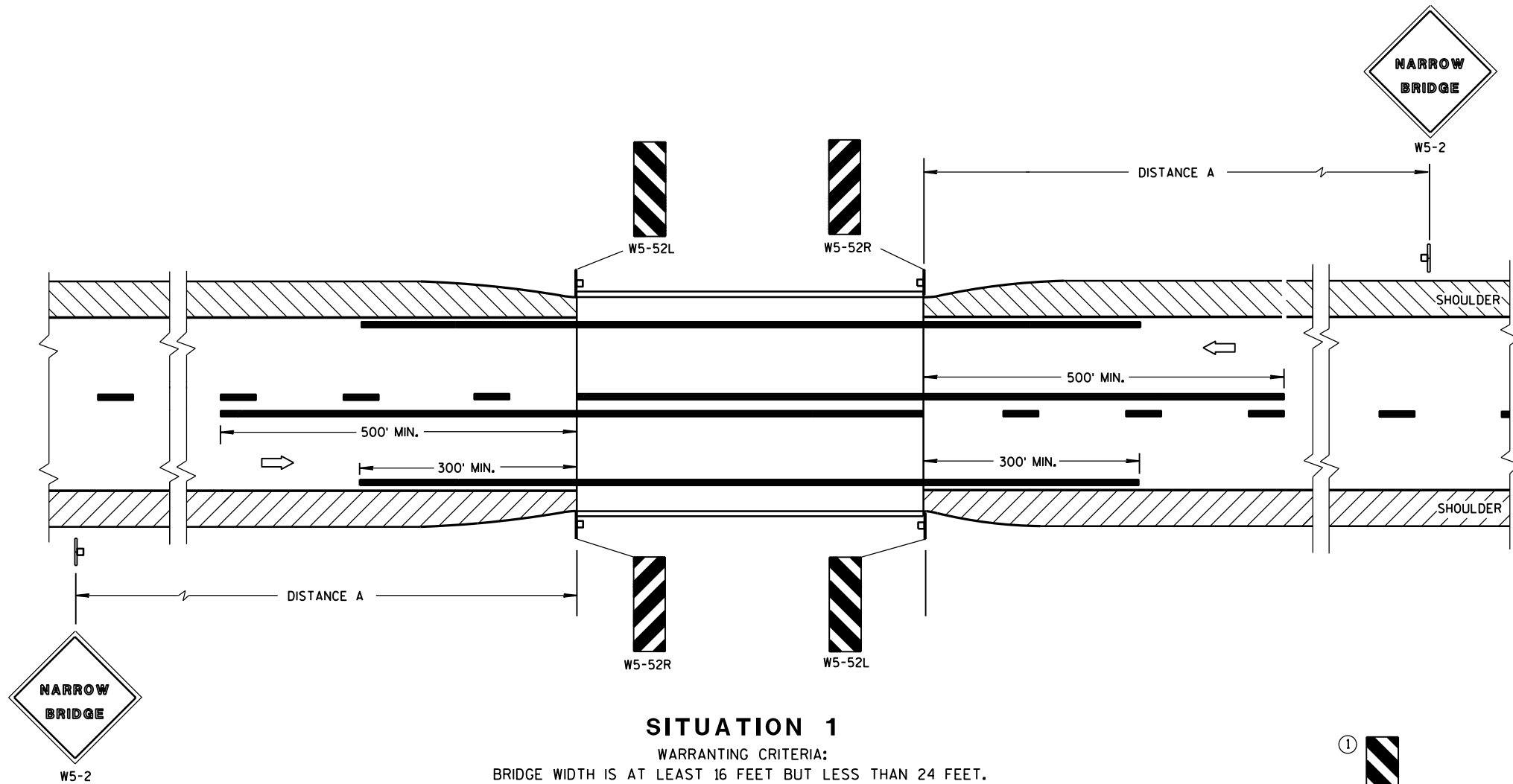
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

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



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

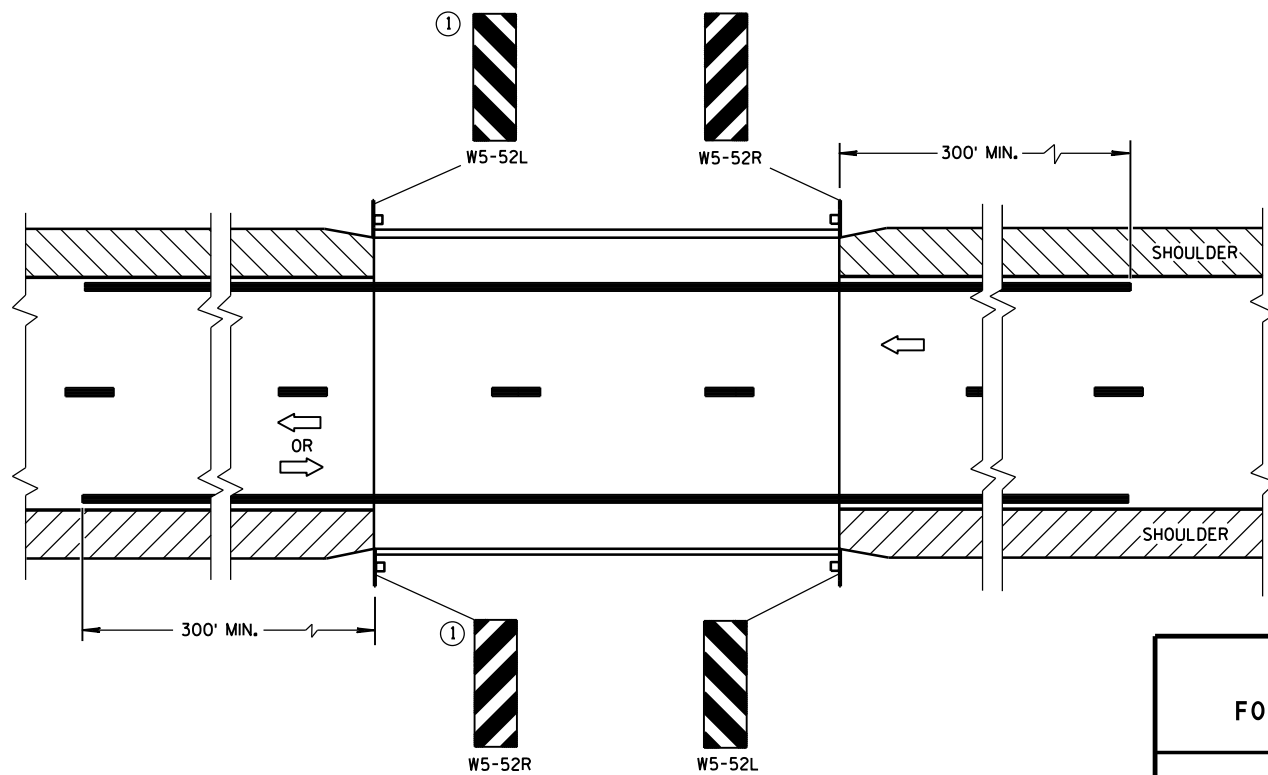
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

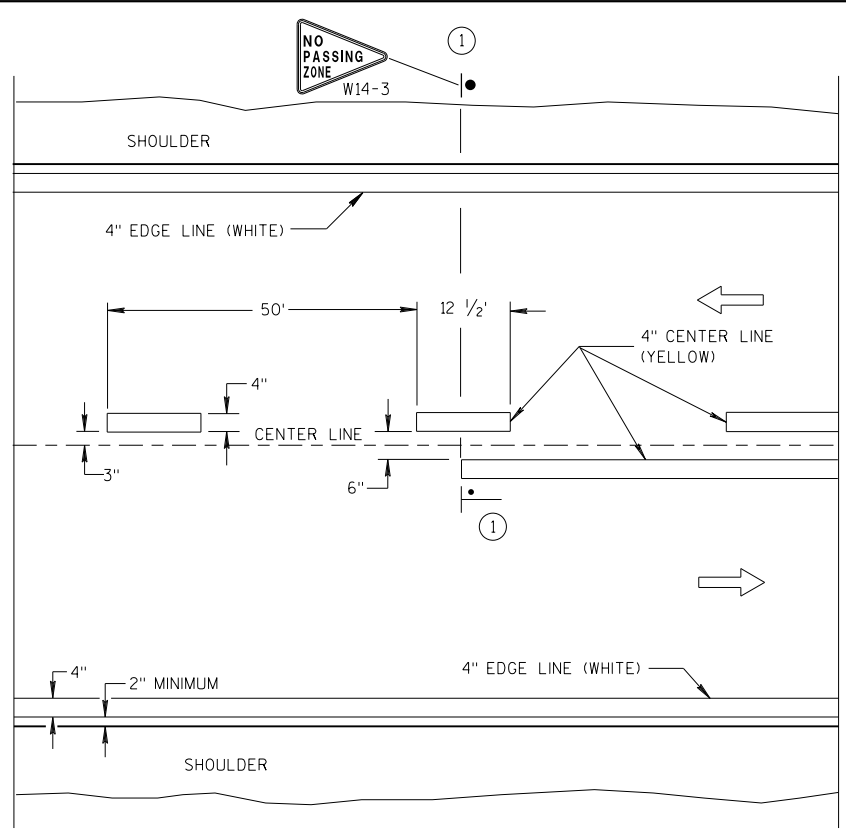
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

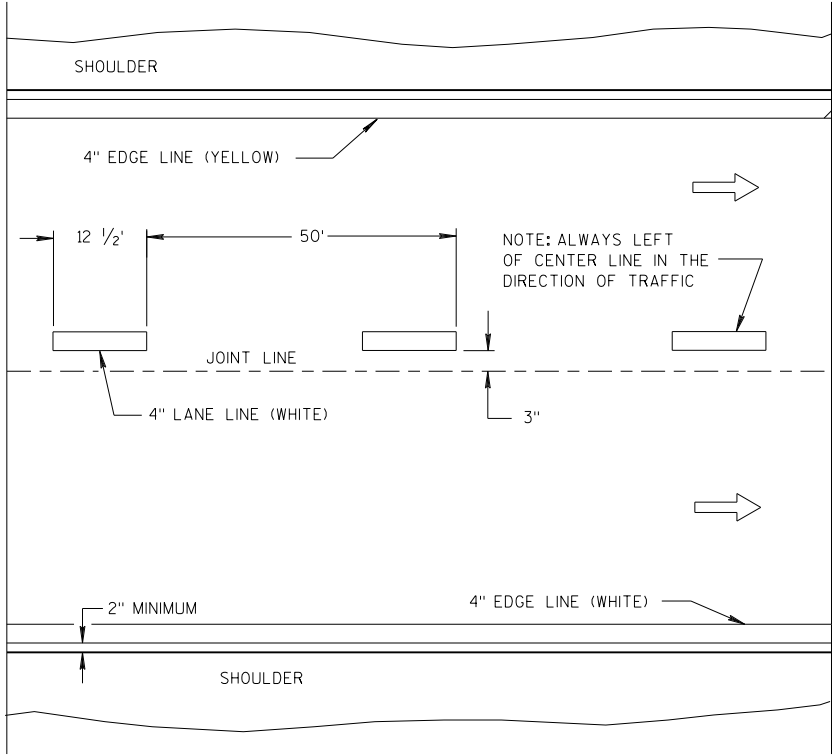
June 2017
DATE

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

FHWA

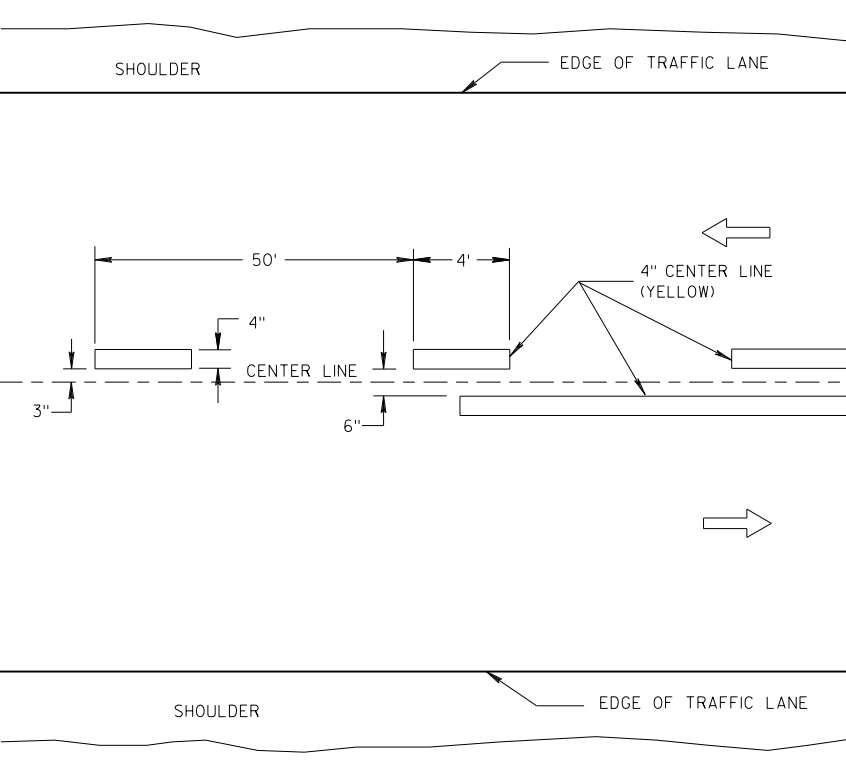


TWO WAY TRAFFIC

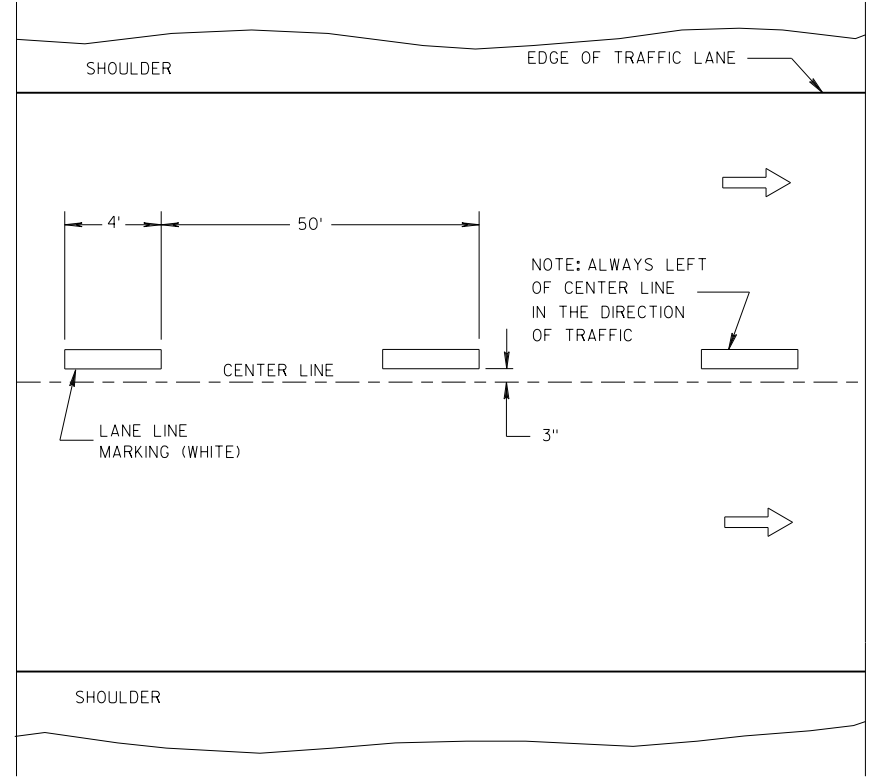


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

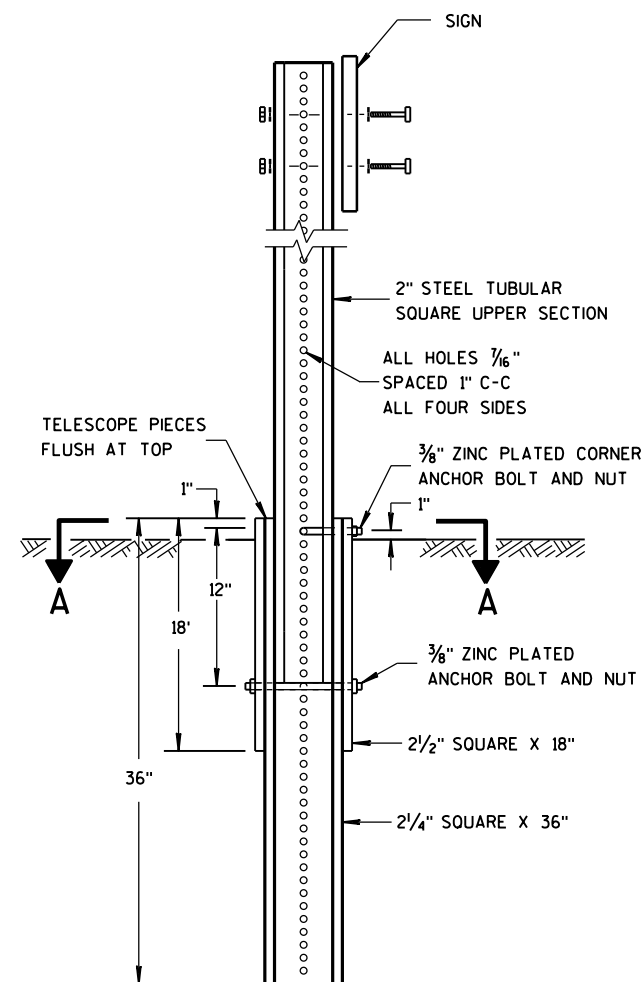
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



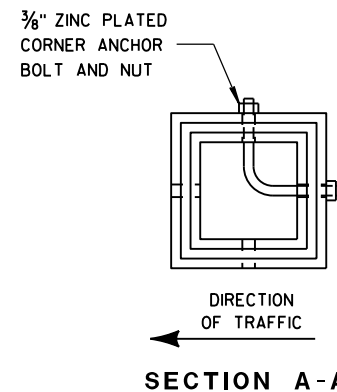
DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

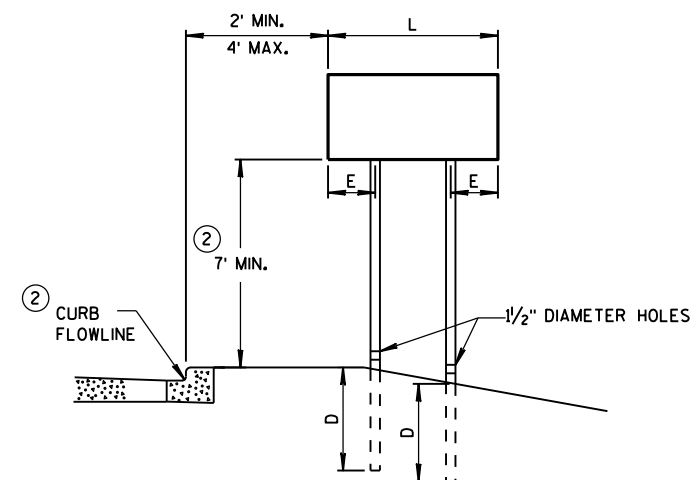
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

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

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



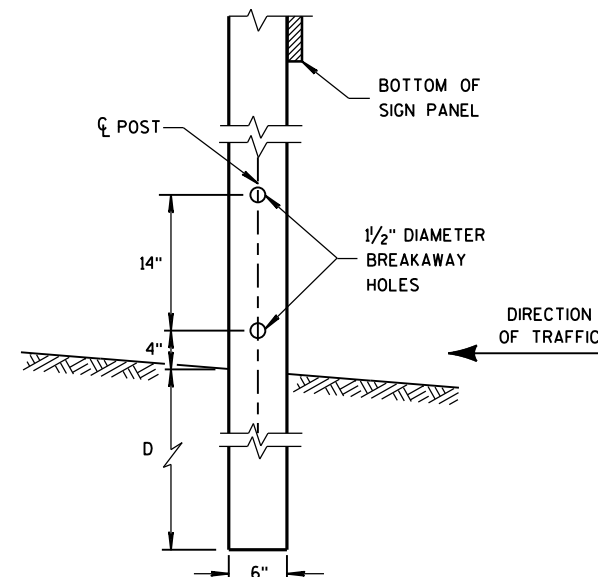
SECTION A-A



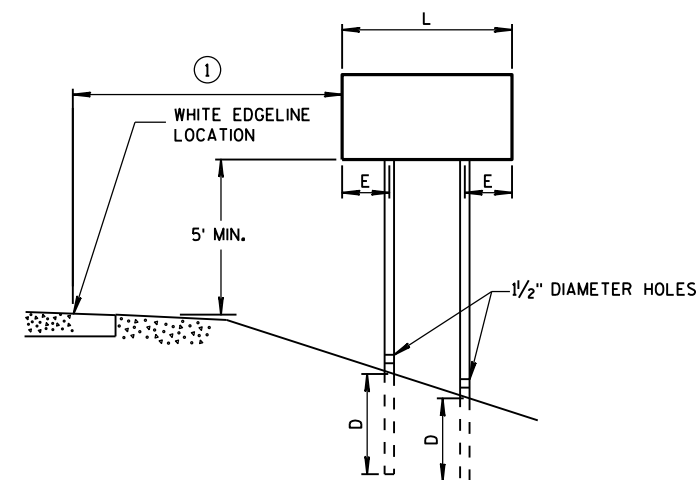
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

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

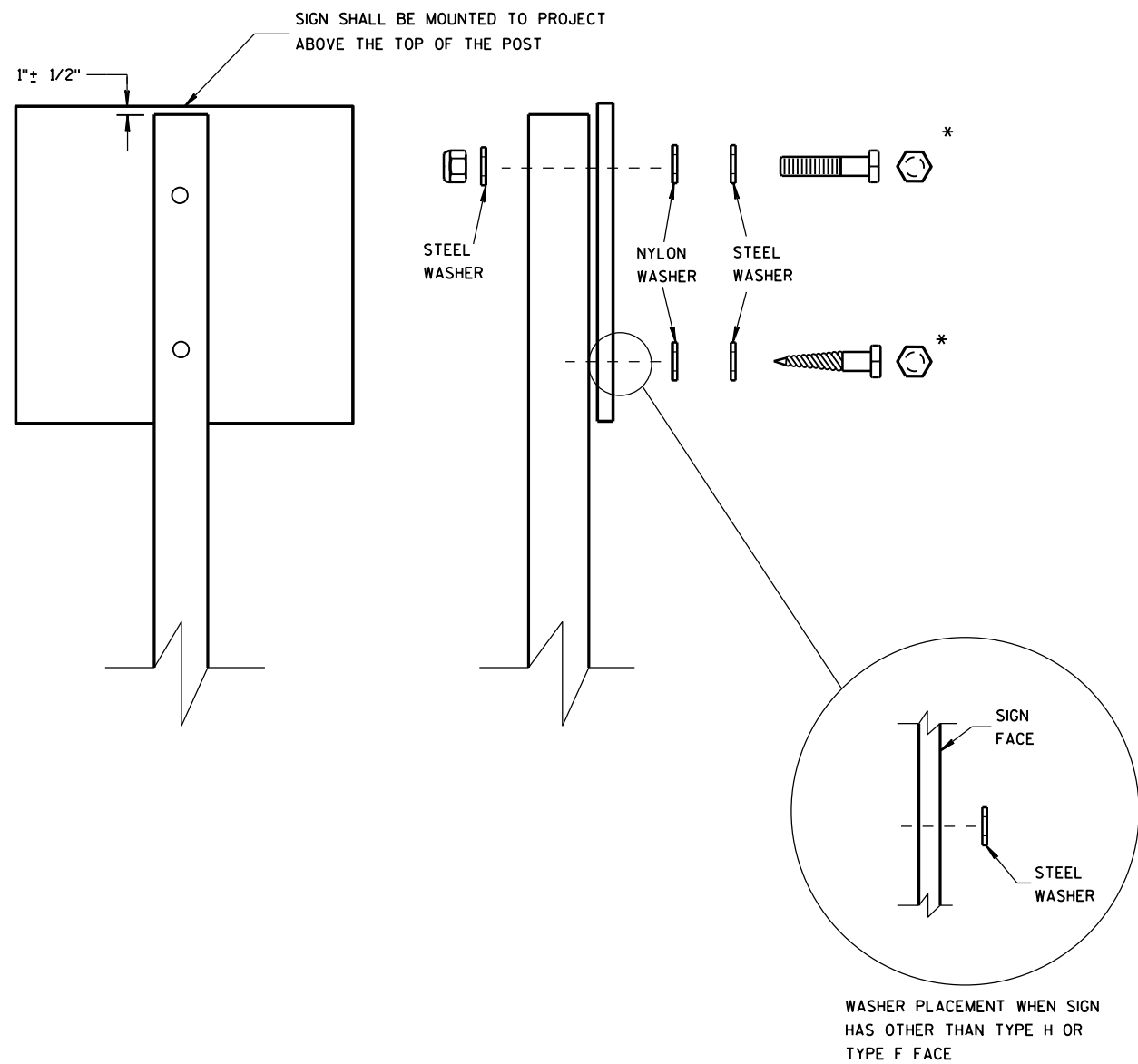
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

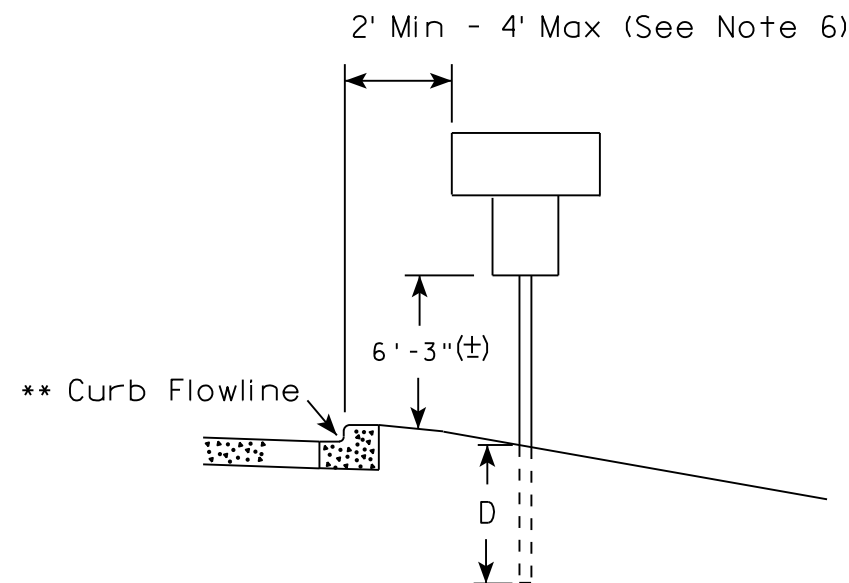
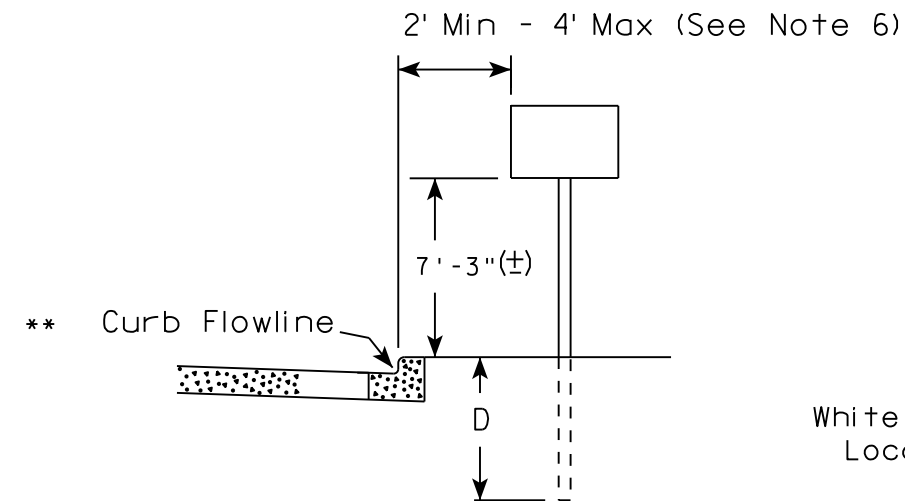
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

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

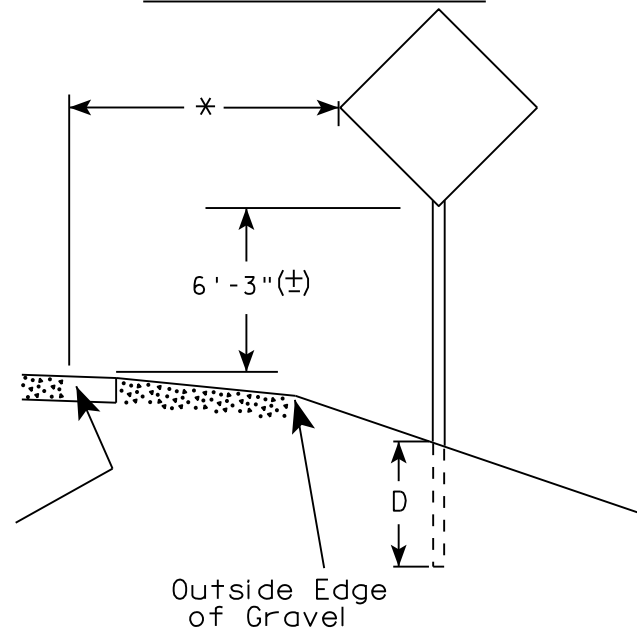
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA

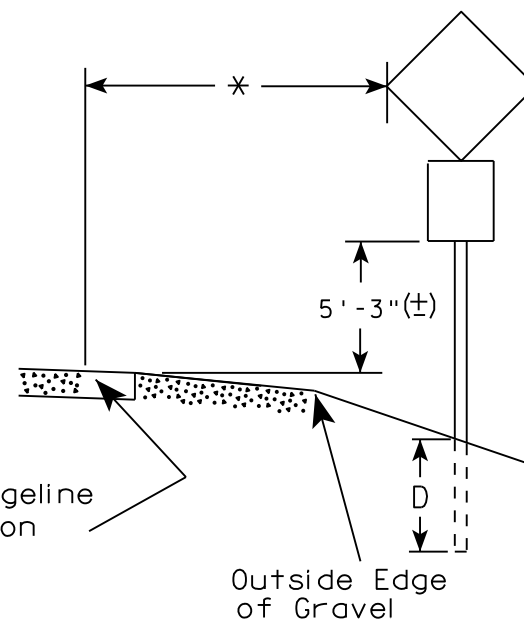


White Edgeline
Location

RURAL AREA (See Note 2)



White Edgeline
Location



Outside Edge
of Gravel

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

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

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

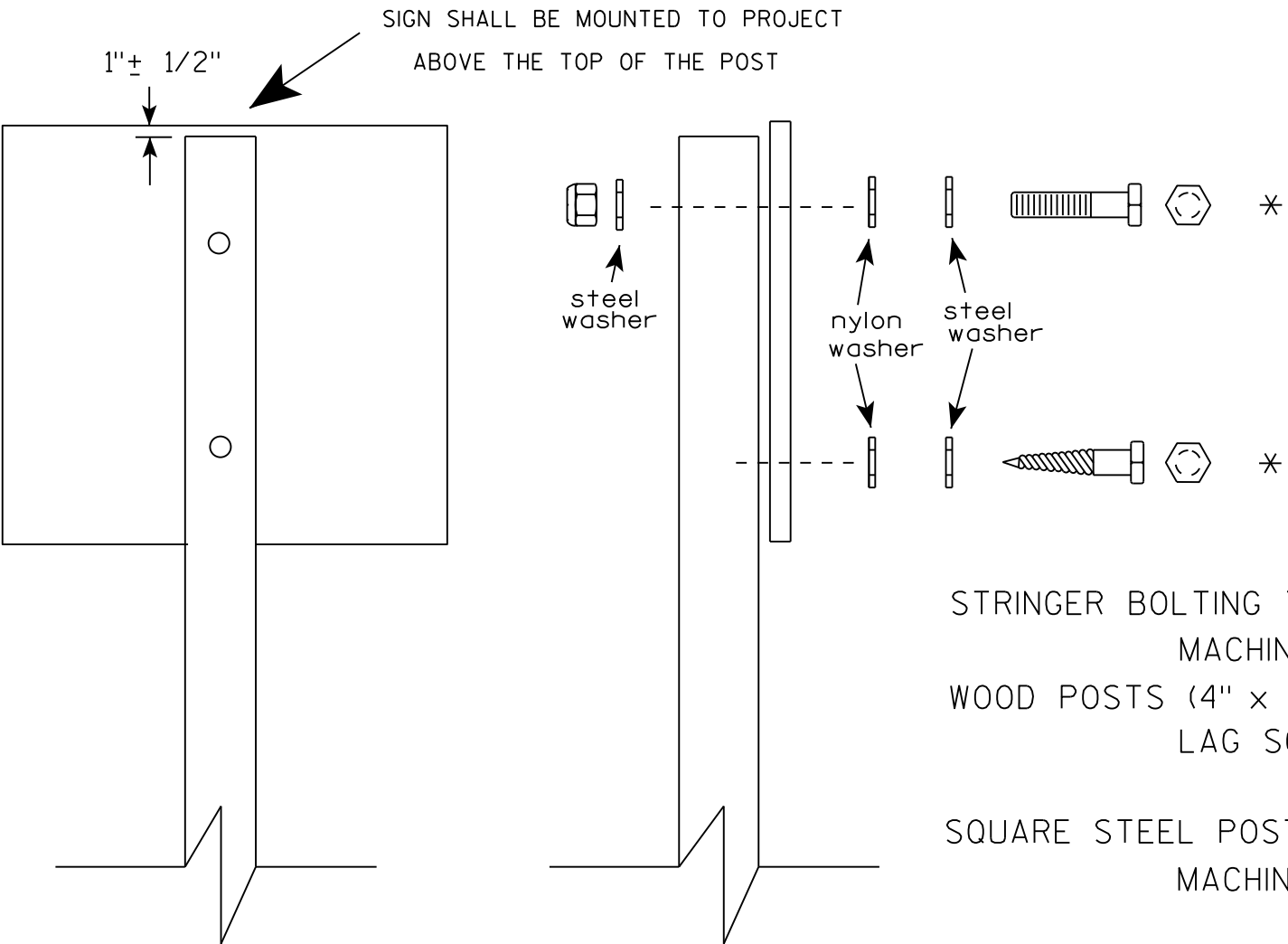
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 8/21/17

PLATE NO. A4-3.21



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

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

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

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
 - 3/8" X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - 3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

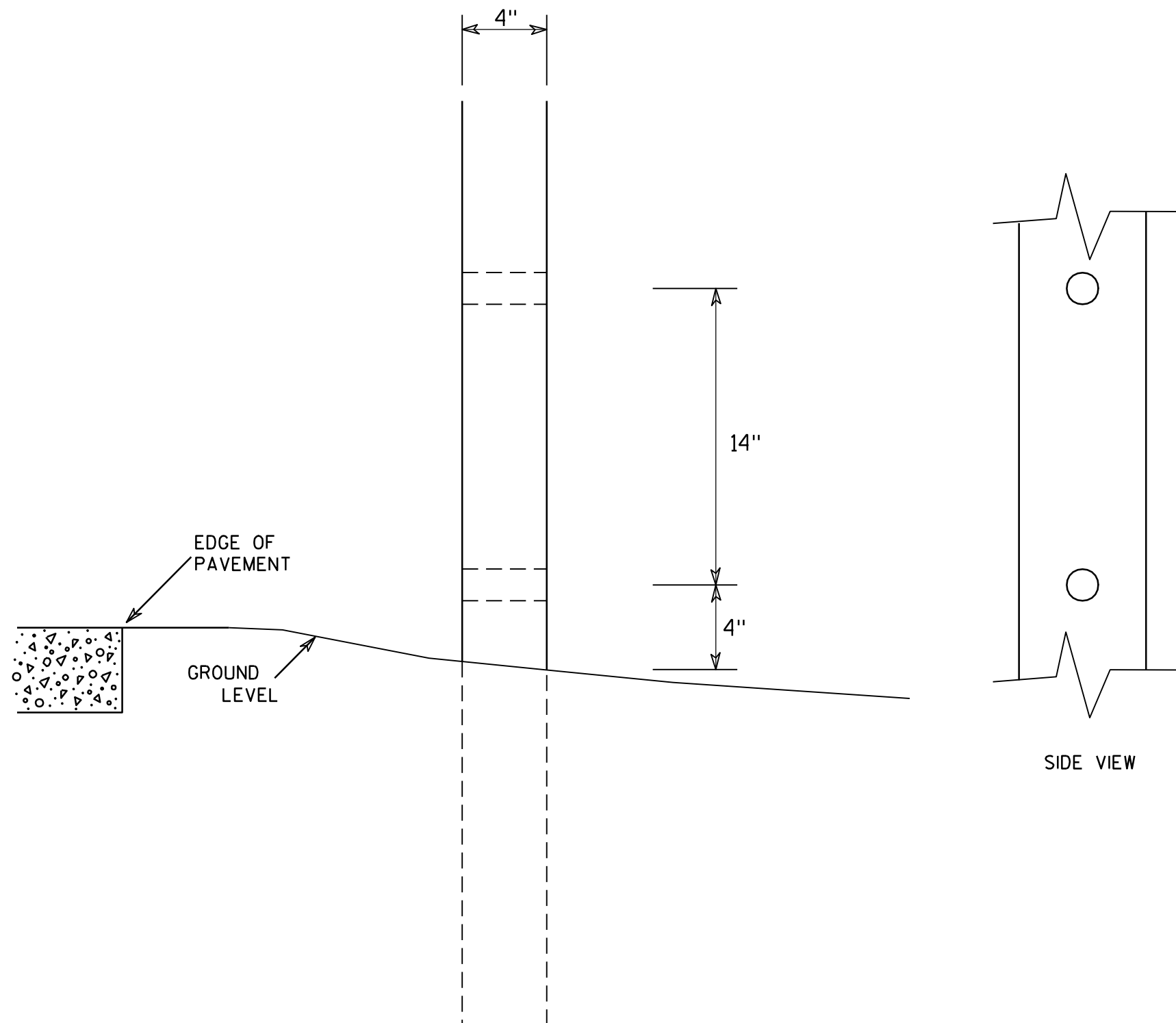
ATTACHMENT OF SIGNS
TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

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

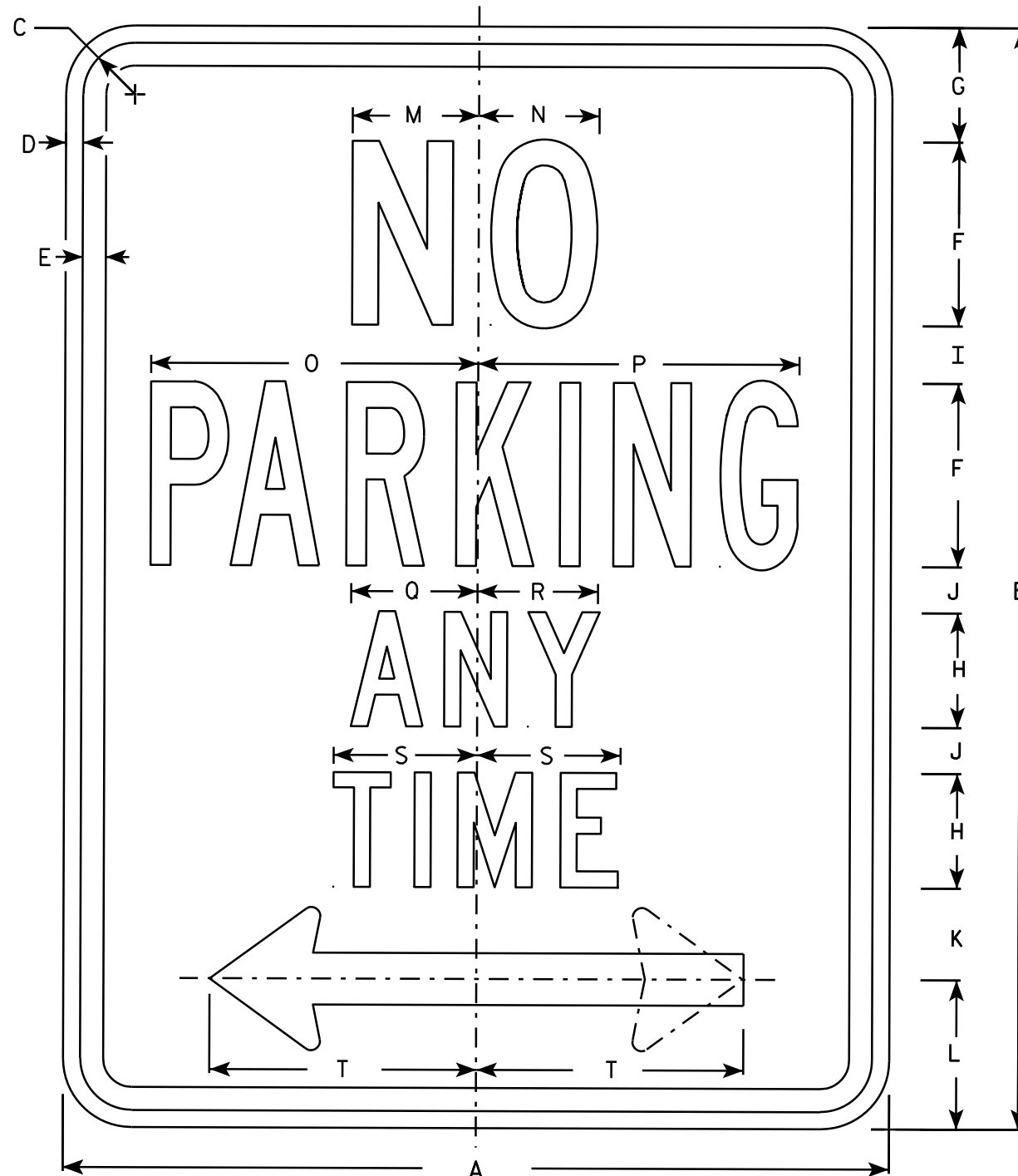
PROJECT NO: 7863-00-71

HWY: 195TH STREET

COUNTY: CHIPPEWA

SHEET NO:

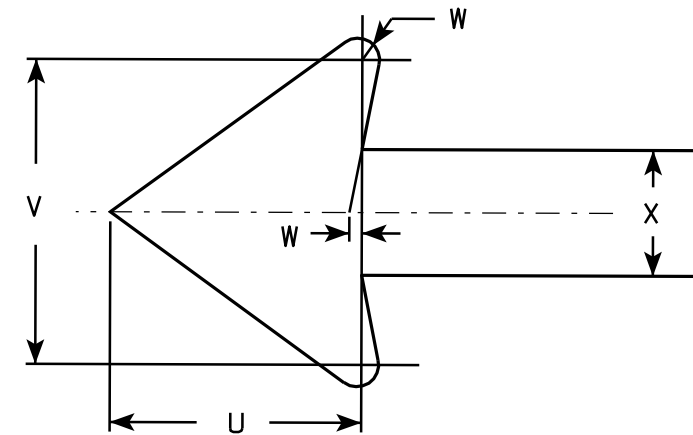
E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN

R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

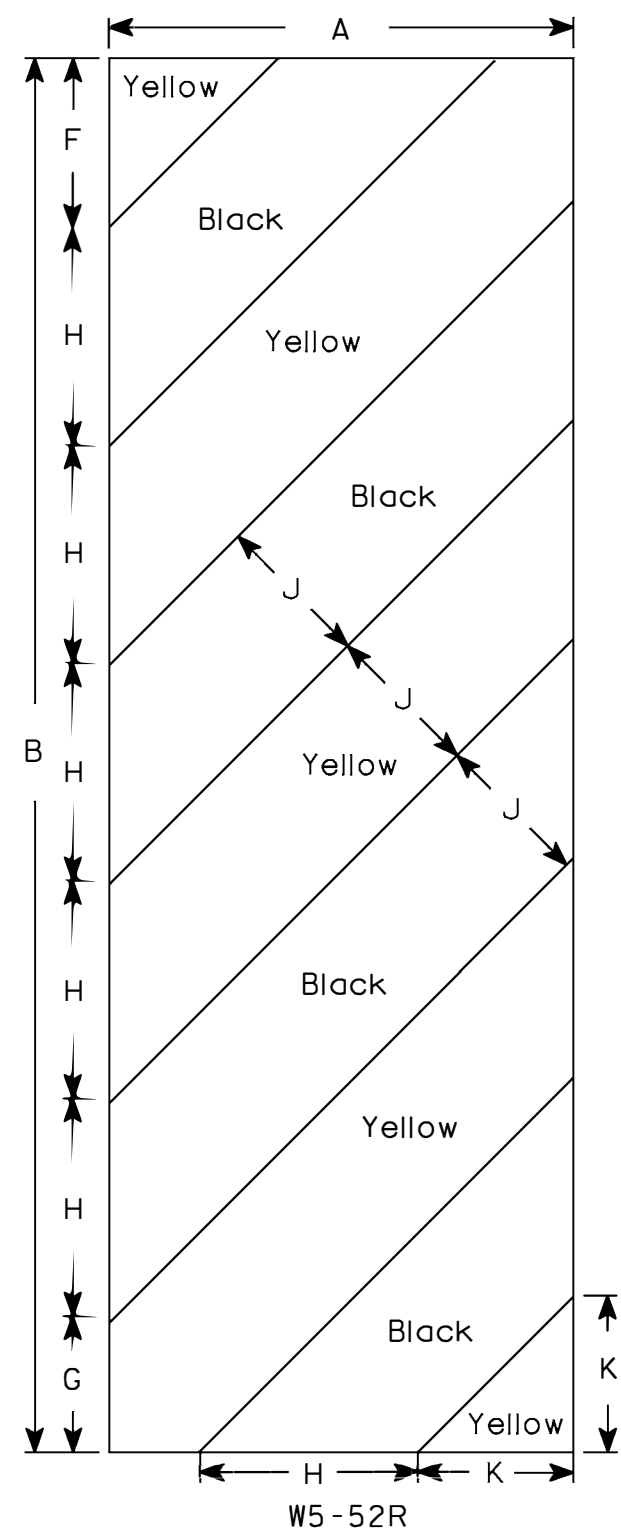
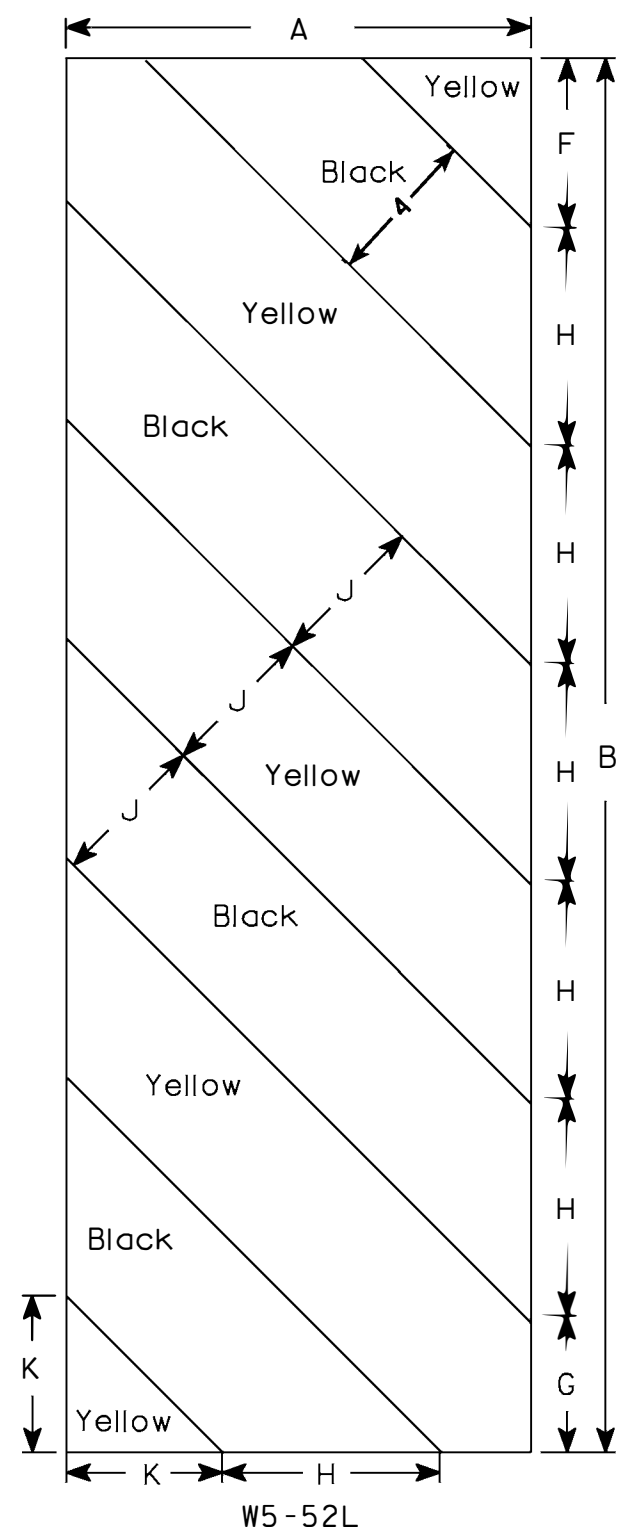
PROJECT NO: 7863-00-71

HWY: 195TH STREET

COUNTY: CHIPPEWA

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. 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 5/16																6.75
4																											
5																											

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

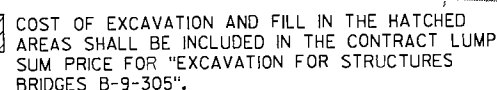
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

⊙ PROTECTION ANGLE AT
END OF DECK - TYP.

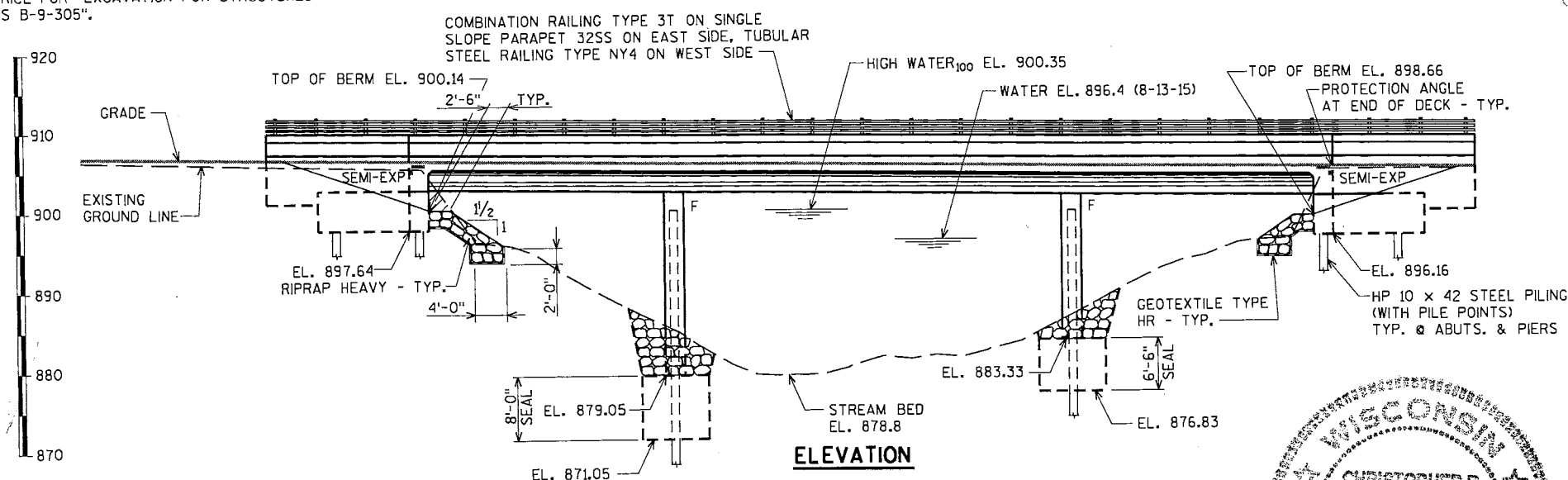
■ RIPRAP HEAVY LIMITS

P.I. STA. 28+58.19
 $\Delta = 112^{\circ}21'10''$
 $D = 4^{\circ}58'56''$
 $R = 1,150'$
 $T = 114.31'$
 $L = 227.89'$
 $E = 5.67'$
 $S.E. = 2.9\%$
 P.C. STA. 27+43.88
 P.T. STA. 29+71.75



PLAN

THREE SPAN, 28" PRESTRESSED CONCRETE GIRDER BRIDGE



LIST OF DRAWINGS

- | | |
|---|------------------------------------|
| 1. GENERAL PLAN | 9. NORTH ABUTMENT |
| 2. TYPICAL SECTION, DESIGN DATA AND NOTES | 10. NORTH ABUTMENT DETAILS |
| 3. QUANTITIES AND DETAILS | 11. NORTH ABUTMENT WING 3 DETAILS |
| 4. SUBSURFACE EXPLORATION | 12. NORTH ABUTMENT WING 4 DETAILS |
| 5. SOUTH ABUTMENT | 13. ABUTMENT BILL OF BARS |
| 6. SOUTH ABUTMENT DETAILS | 14. PIER 1 |
| 7. SOUTH ABUTMENT WING 1 DETAILS | 15. PIER 2 |
| 8. SOUTH ABUTMENT WING 2 DETAILS | 16. 28" PRESTRESSED GIRDER DETAILS |
| | 17. STEEL DIAPHRAGM |

18. SUPERSTRUCTURE
19. SUPERSTRUCTURE PLAN
20. SUPERSTRUCTURE DETAILS
21. SUPERSTRUCTURE DETAILS
22. SINGLE SLOPE PARAPET 32SS
23. COMBINATION RAILING 3T
24. COMBINATION RAILING 3T
25. TUBULAR STEEL RAILING TYPE NY4
26. END POST DETAILS FOR TUBULAR
STEEL RAILING TYPE NY4

FOR TYPICAL SECTION, DESIGN
DATA AND GENERAL NOTES
SEE SHEET 2

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY  3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dierker</i> ^{SDR} CHIEF STRUCTURES DESIGN ENGINEER		11/07/18 DATE
STRUCTURE B-9-305			
195TH STREET OVER PAINT CREEK			
COUNTY	CHIPPewa	TOWN/CITY/VILLAGE	LA FAYETTE
DESIGN SPEC.			
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	JLB	DESIGN CK'D.	AEB
DRAWN BY	CLS	PLANS CK'D.	CMB
GENERAL PLAN			SHEET 1 OF 2

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

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

GENERAL PLAN

SHEET 1 OF 26

11/1/2018

black.tbl

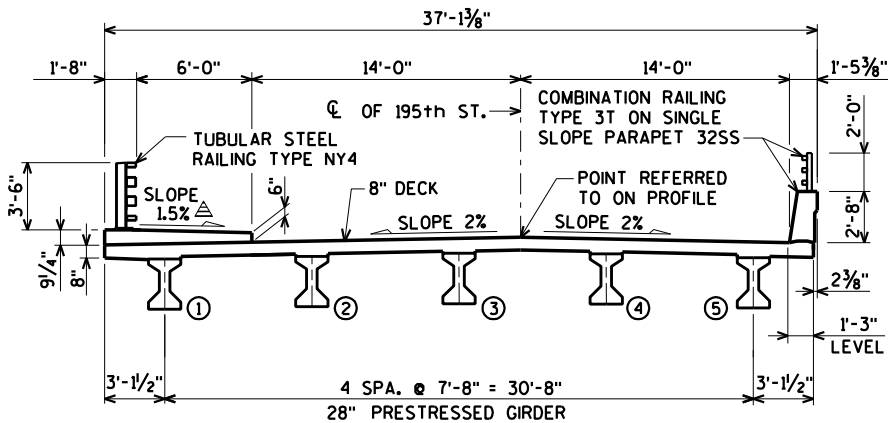
I.D.

DATE: _____

\$PRNAME\$
U:\42-0995.00 - Chippewa Co - Trn LaFayette - 195th St±BRIDGE RE-DO JUNE 2018±420995 gp ty qn.dgn

STATE PROJECT NUMBER

7863-00-71



CROSS SECTION THRU BRIDGE
(LOOKING NORTH)

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.76
OPERATING RATING FACTOR: 2.30
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 220 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #5/F.

MATERIAL PROPERTIES:

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

28" 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

Q100 = 5,000 c.f.s.
VEL. = 4.0 f.p.s.
HW100 = EL. 900.35
WATERWAY AREA = 1,258 sq. ft.
DRAINAGE AREA = 58.0 sq. mi.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5
DATUM = NAVD88 (2012)

2 YEAR FREQUENCY

Q2 = 1,730 c.f.s.
VEL. = 1.8 f.p.s.
HW2 = EL. 897.2

FOUNDATION DATA:

SOUTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ± PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 35'-0".

NORTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ± PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 25'-0".

PIERS 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 40'-0" AT PIER 1 AND 30'-0" AT PIER 2.

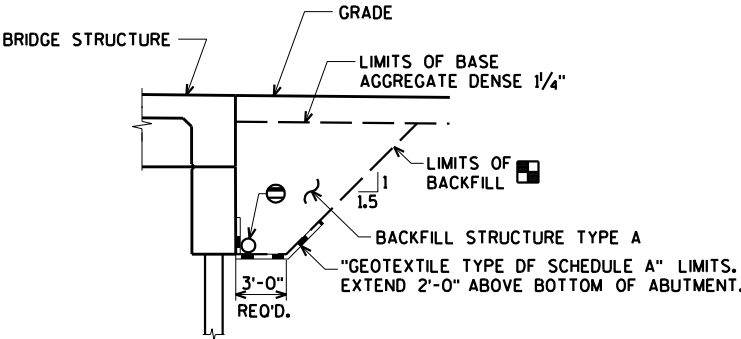
*THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA:

A.A.D.T. = 860 (2019)
A.A.D.T. = 1,160 (2039)
R.D.S. = 35 M.P.H.

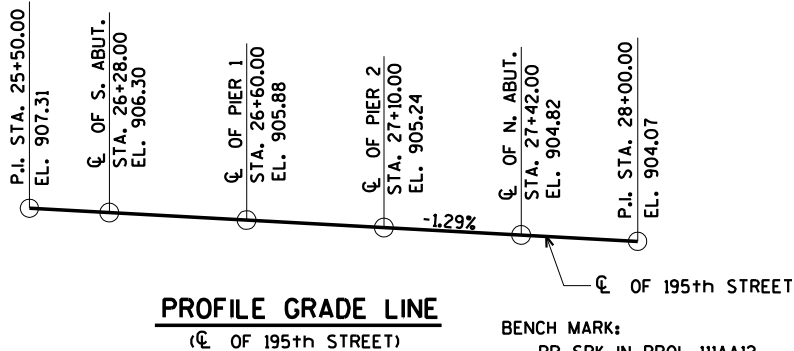
GENERAL NOTES

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.
PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER IS TO BE APPLIED AS SHOWN IN DETAILS ON SHEET 3.
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.
THE EXISTING STRUCTURE, B-9-40, ABUTMENTS ARE TO BE REMOVED. THE BRIDGE SUPERSTRUCTURE AND PIERS WERE PREVIOUSLY REMOVED. THE EXISTING BRIDGE WAS A THREE SPAN STEEL DECK GIRDER BRIDGE, 115.33 FT. LONG WITH A 26 FT. CLEAR ROADWAY WIDTH AND A 5 FT. CLEAR SIDEWALK ON THE WEST SIDE.
AT THE BACKFACE OF THE WALLS AND ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE WALL AND ABUTMENT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEETS, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.
BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.



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 6.

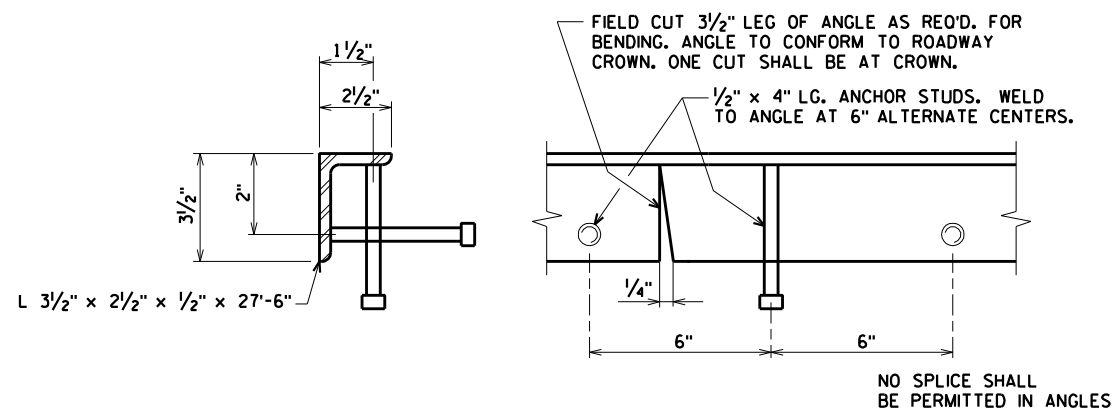


PROFILE GRADE LINE
(C. OF 195th STREET)

BENCH MARK:
RR SPK IN PPOL 111AA12
STA. 24+63, 39' RT.
EL. 914.79

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
TYPICAL SECTION, DESIGN DATA, AND NOTES			SHEET 2 OF 26

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

[illegible]

(ANGLE AND STUDS TO BE PAID FOR AT THE UNIT PRICE
BID FOR "STRUCTURAL STEEL CARBON". (NO PAINT REQ'D.)
SANDBLAST PROTECTION ANGLE AFTER FABRICATION
IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL
BLAST CLEANING". AFTER BLAST CLEANING, THE
PROTECTION ANGLE SHALL BE HOT DIPPED GALVANIZED.

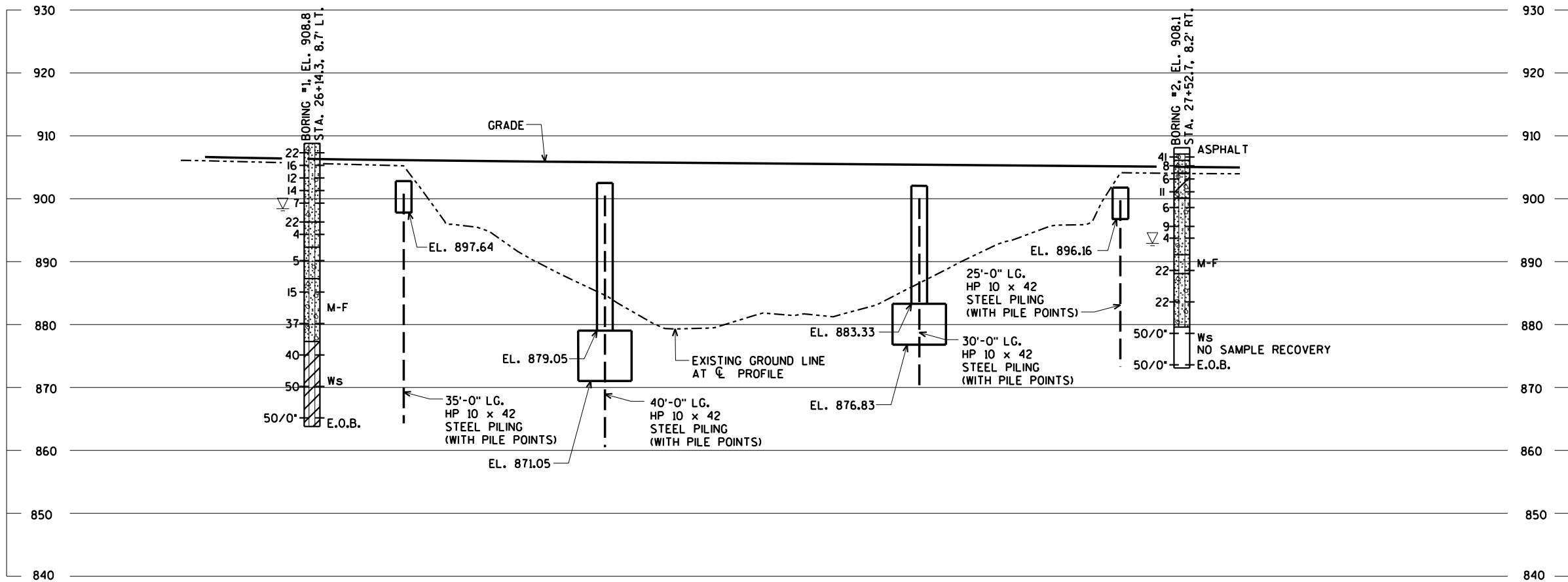
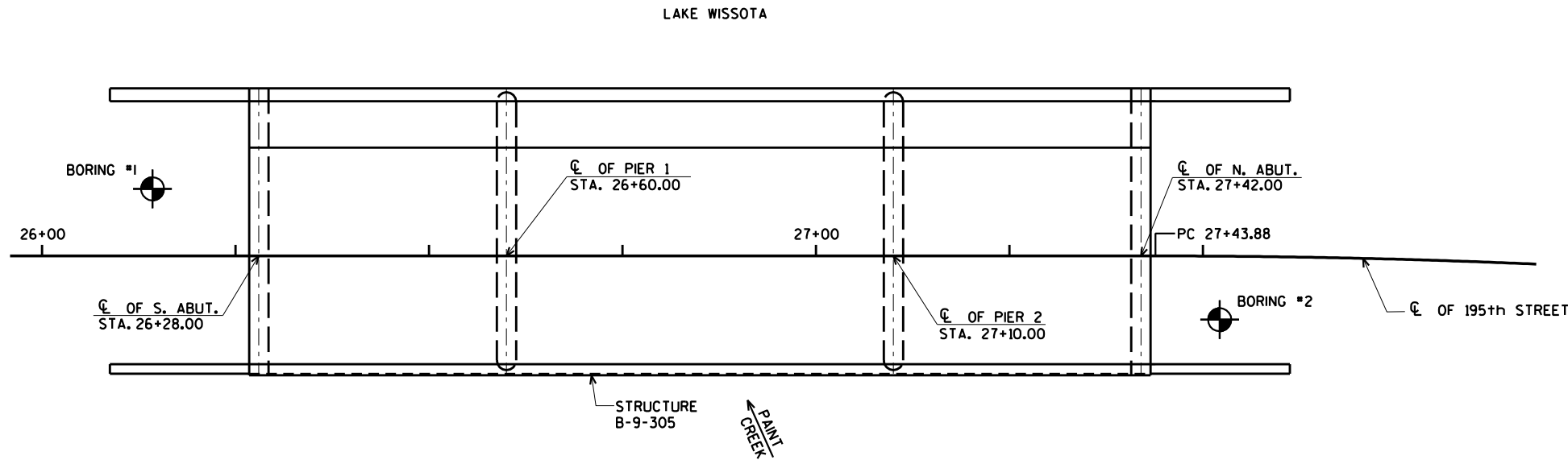
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
		DRAWN BY	CLB
		PLANS CK'D.	CBM
QUANTITIES AND DETAILS		SHEET 3 OF 20	

\$PRNAME\$
U:\42-0995.00 - Chippewa Co - In LaFayette - 195th St+BRIDGE RE-DO JUNE 2018\420995 soils.dgn

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	DECEMBER 17, 2015	124084.37	201498.91
2	DECEMBER 17, 2015	124209.29	201560.83

BORINGS COMPLETED BY: GEOTECHNICAL DRILLING CONTRACTORS, LLC
REPORT COMPLETED BY: RIVER VALLEY TESTING, INC.
ALL COORDINATES REFERENCED TO WCCS NAD 83(9) CHIPPEWA COUNTY



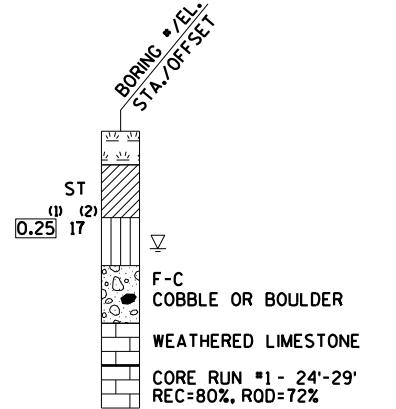
STATE PROJECT NUMBER

7863-00-71

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

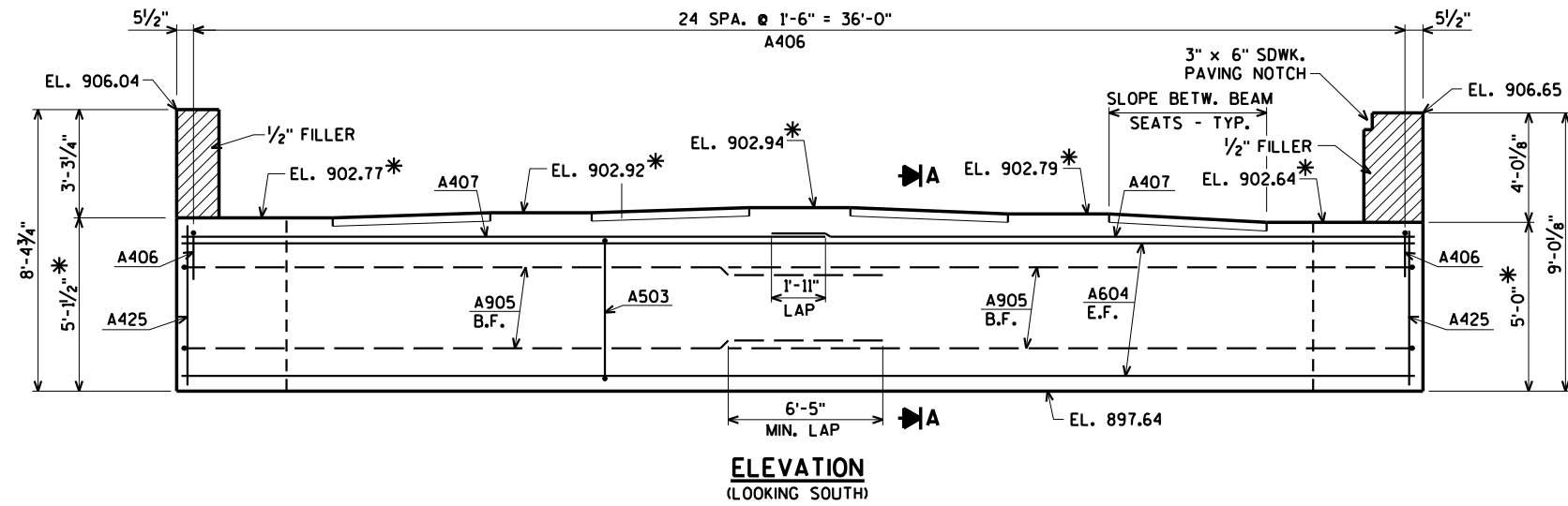
8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
SUBSURFACE EXPLORATION		SHEET 4 OF 26	

\$PRNAME\$
U:\42-0995.00 - Chippewa Co - Tn LaFayette - 195th St+BRIDGE RE-DO JUNE 2018+420995 so.dgn

STATE PROJECT NUMBER

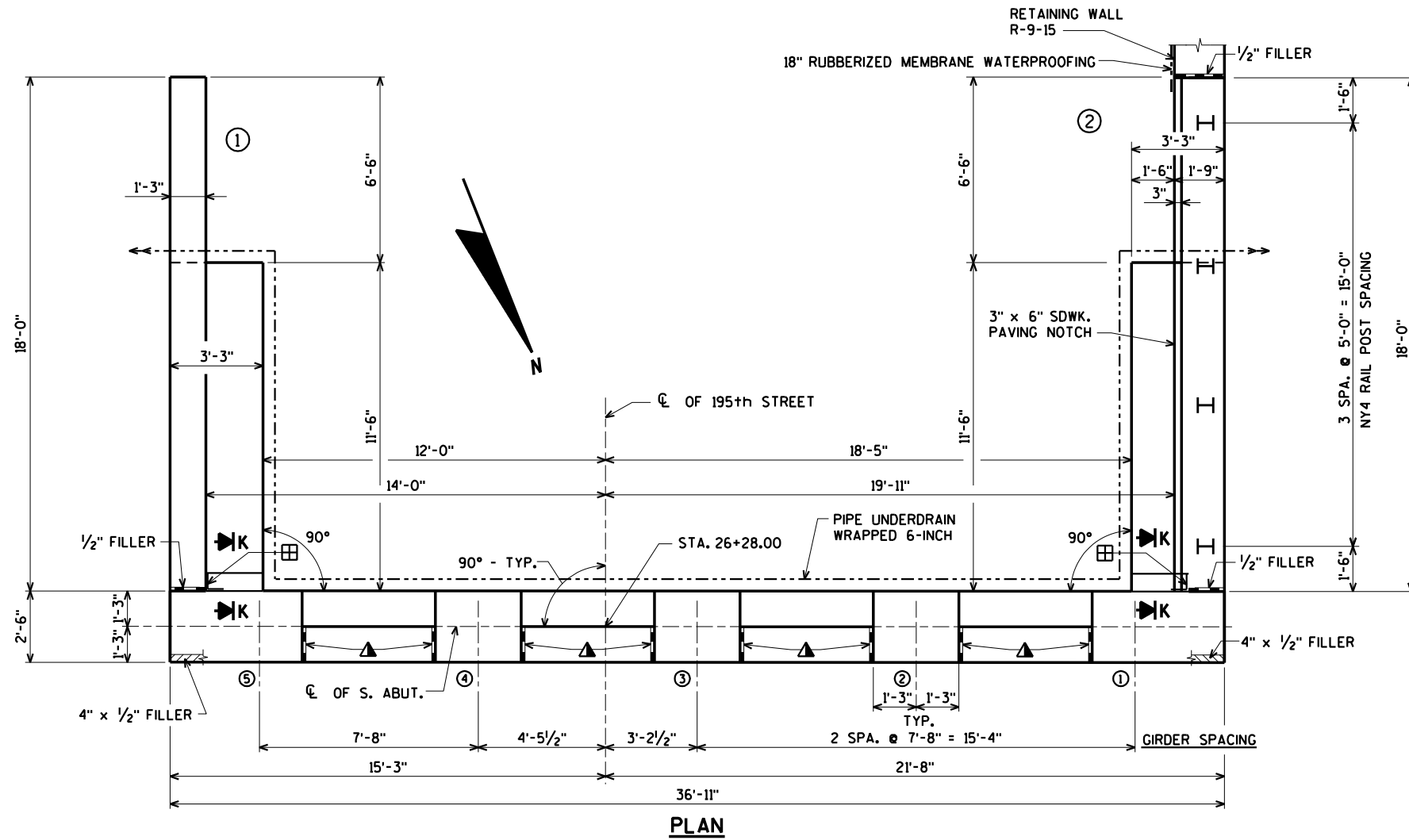
7863-00-71



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

* ELEVATIONS AND DIMENSIONS TAKEN AT C OF ABUT.

FOR SECTION A SEE SHEET 6.



B.F. OF ABUTMENT
18" RUBBERIZED MEMBRANE WATERPROOFING BETWEEN WINGWALLS
SUPERSTRUCTURE
ABUTMENT

SECTION K

▲ 3/4" CORK FILLER ON VERTICAL FACE ONLY.

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

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

8

8

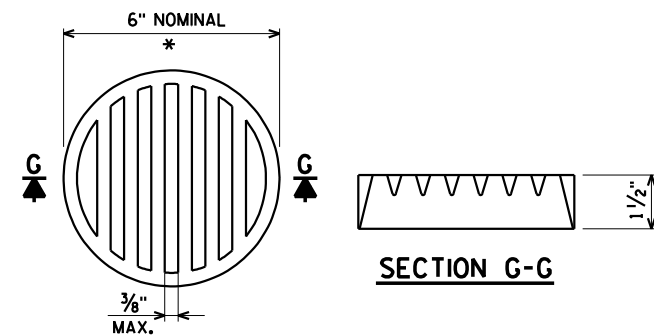
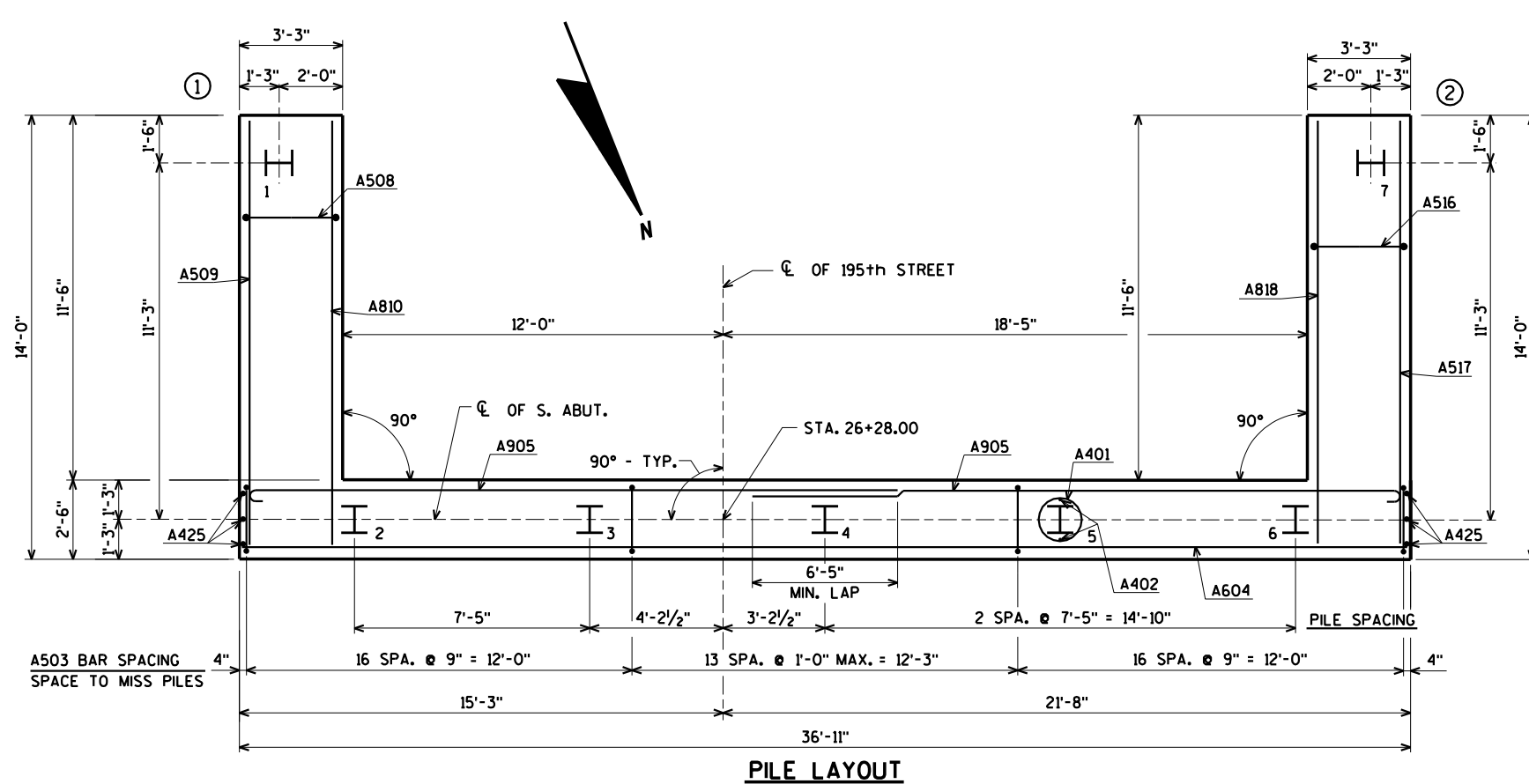
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
SOUTH ABUTMENT			SHEET 5 OF 26

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

\$PRNAME\$
U:\42-0995,00 - Chippewa Co - In LaFayette - 195th St±BRIDGE RE-DO JUNE 2018±420995 sa.dgn

STATE PROJECT NUMBER

7863-00-71

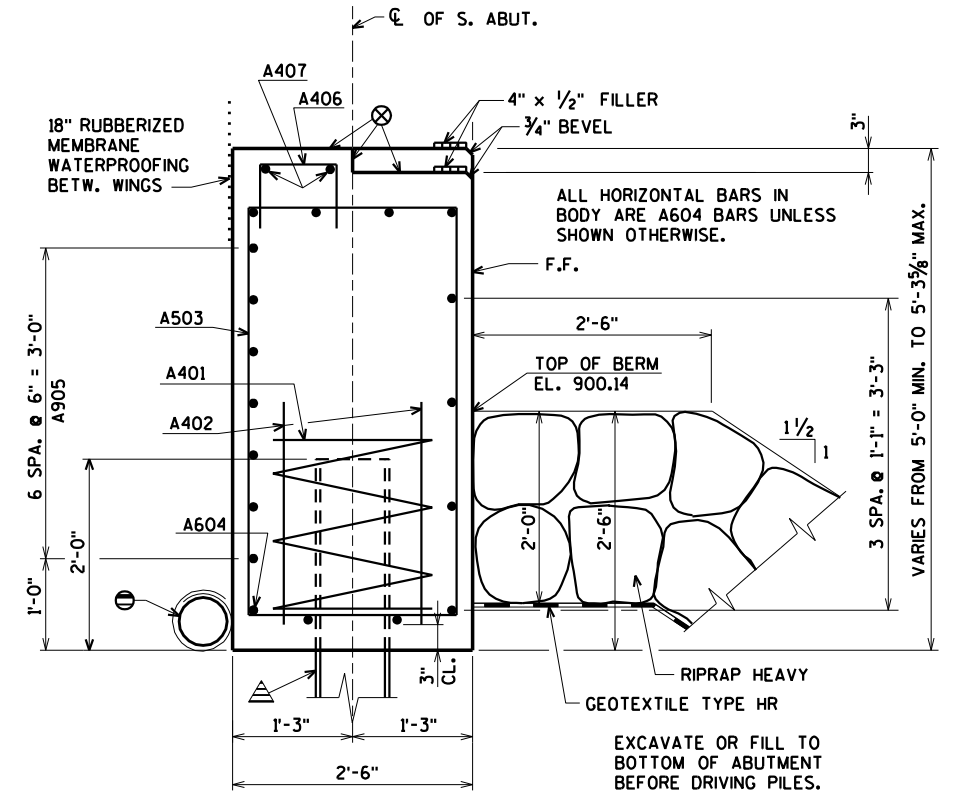
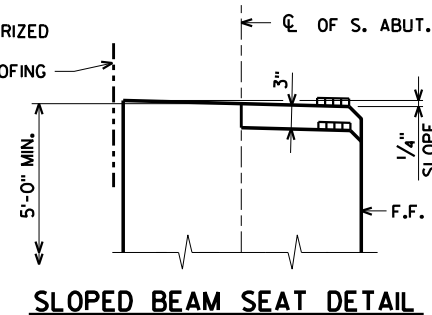


* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

RODENT SHIELD DETAIL



SECTION A

ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQ'D. DRIVING RESISTANCE OF 150 TONS PER PILE. ESTIMATED LENGTH 35'-0".

PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAIL ON THIS SHEET.

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".

FOR PILE SPLICE DETAIL SEE SHEET 3.

FOR LOCATION OF SECTION A SEE SHEET 5.

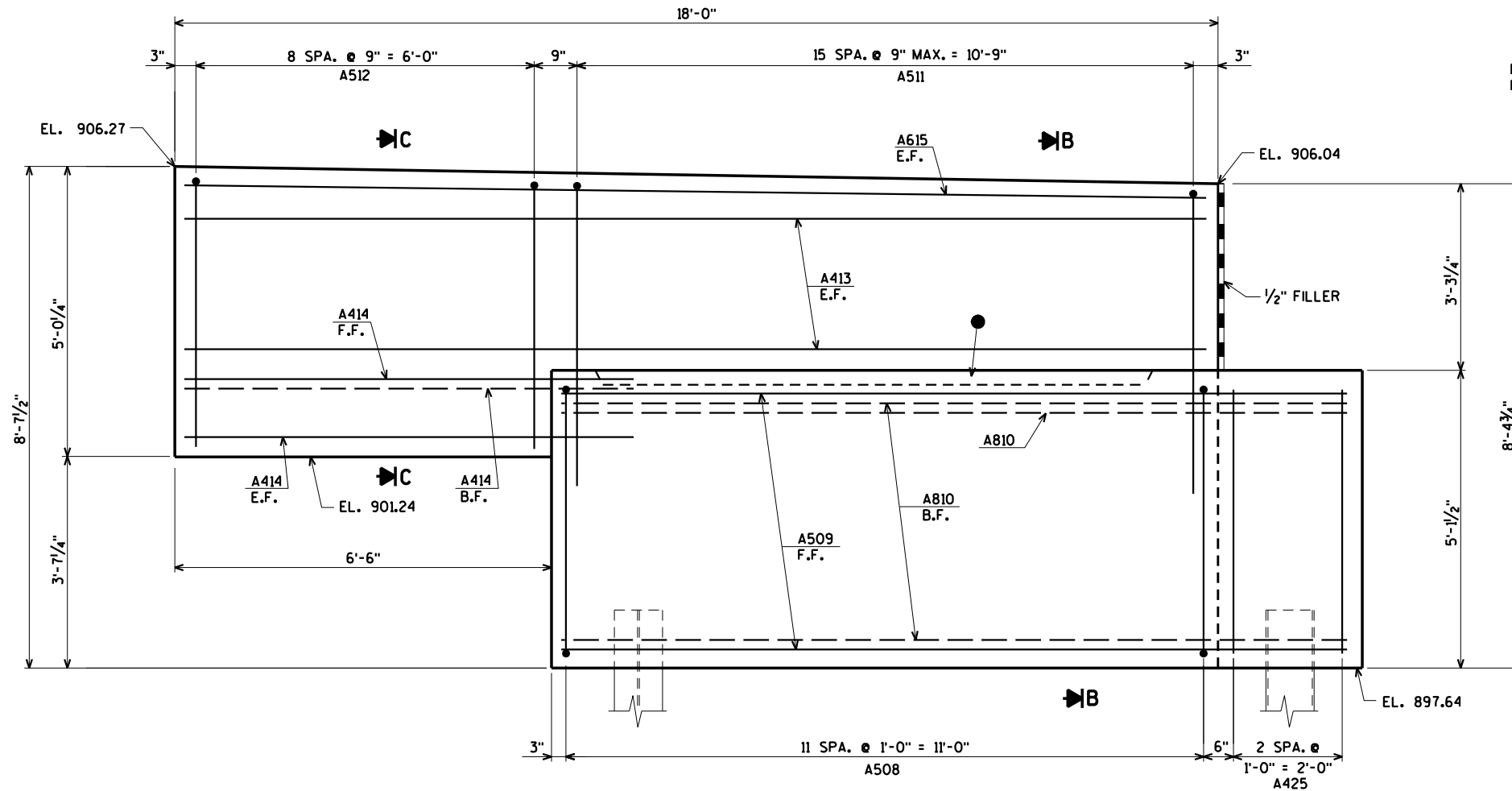
F.F. DENOTES FRONT FACE.

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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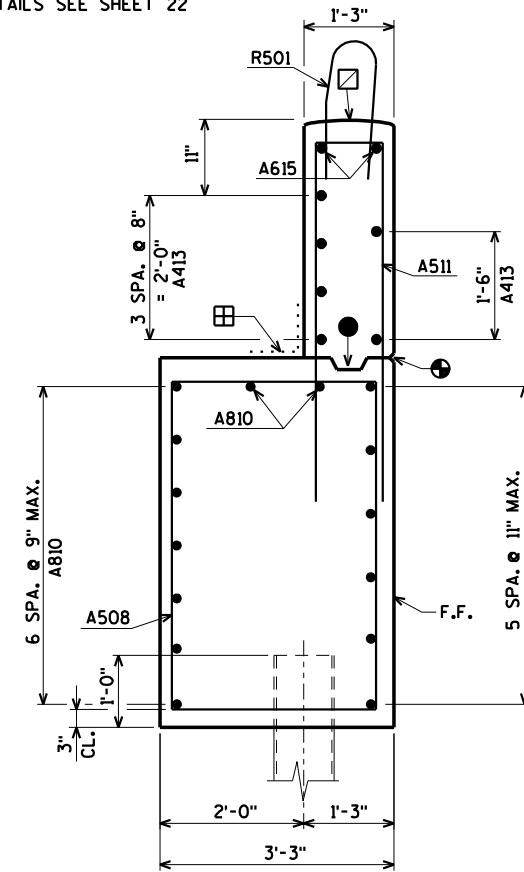
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
SOUTH ABUTMENT DETAILS			SHEET 6 OF 26

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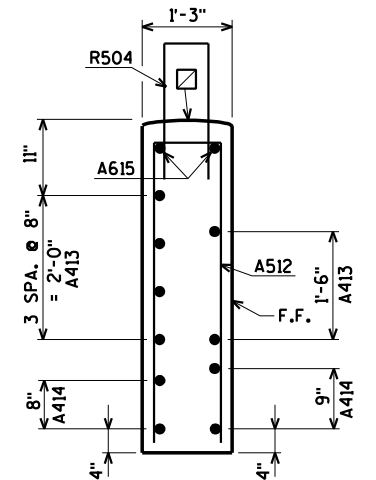
8



ELEVATION - WING 1



SECTION B



SECTION C

- ☑ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.
 - ⊕ 3/4" "V" GROOVE ON FRONT FACE OF WINGWALL.
 - OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
 - ☒ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- FOR PILE SPLICE DETAIL SEE SHEET 3.
- B.F. DENOTES BACK FACE.
- F.F. DENOTES FRONT FACE.
- E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY
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STRUCTURE B-9-305			
DRAWN BY	CLS	PLANS CK'D.	CBM
SOUTH ABUTMENT WING 1 DETAILS			SHEET 7 OF 26

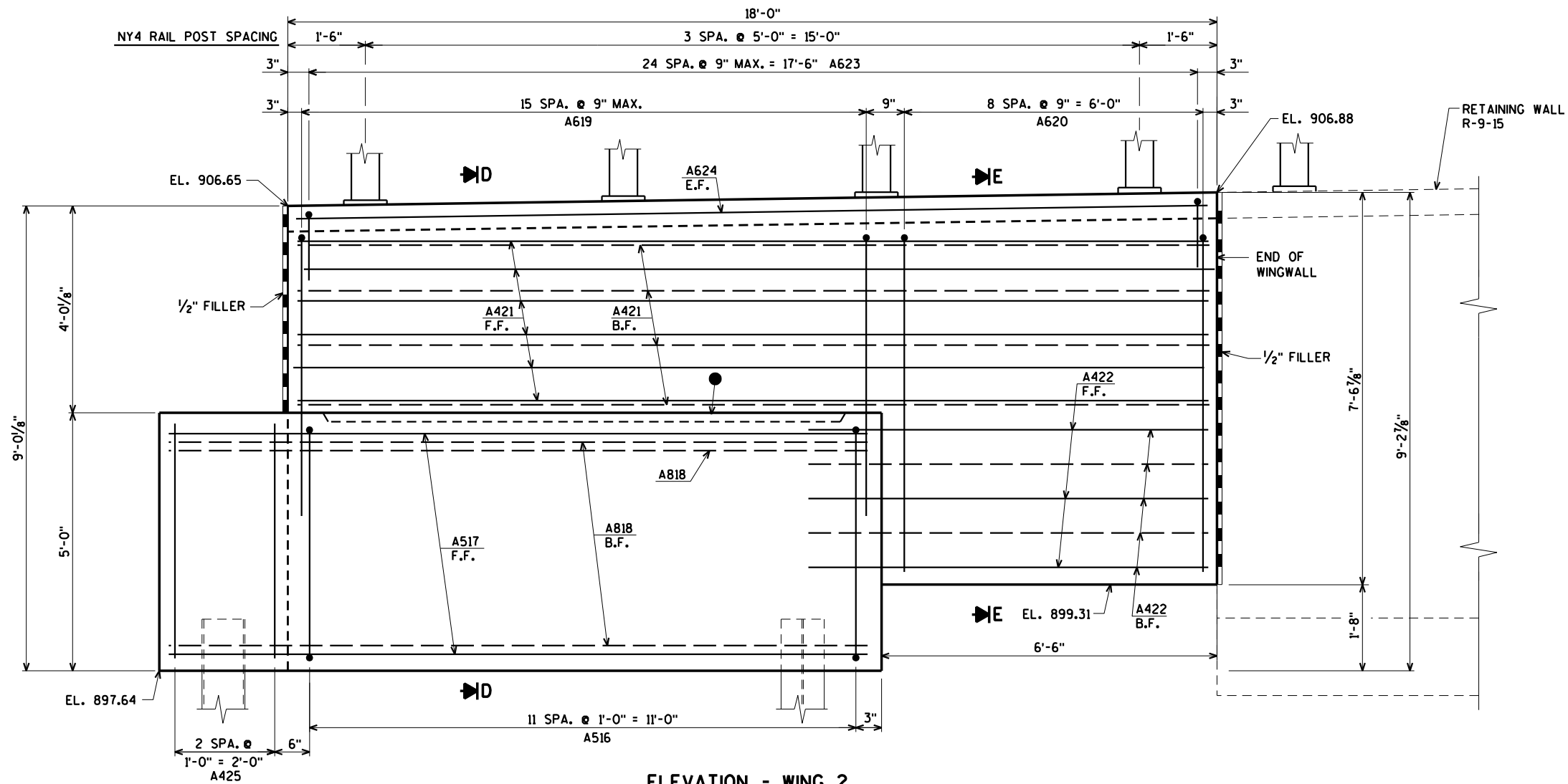
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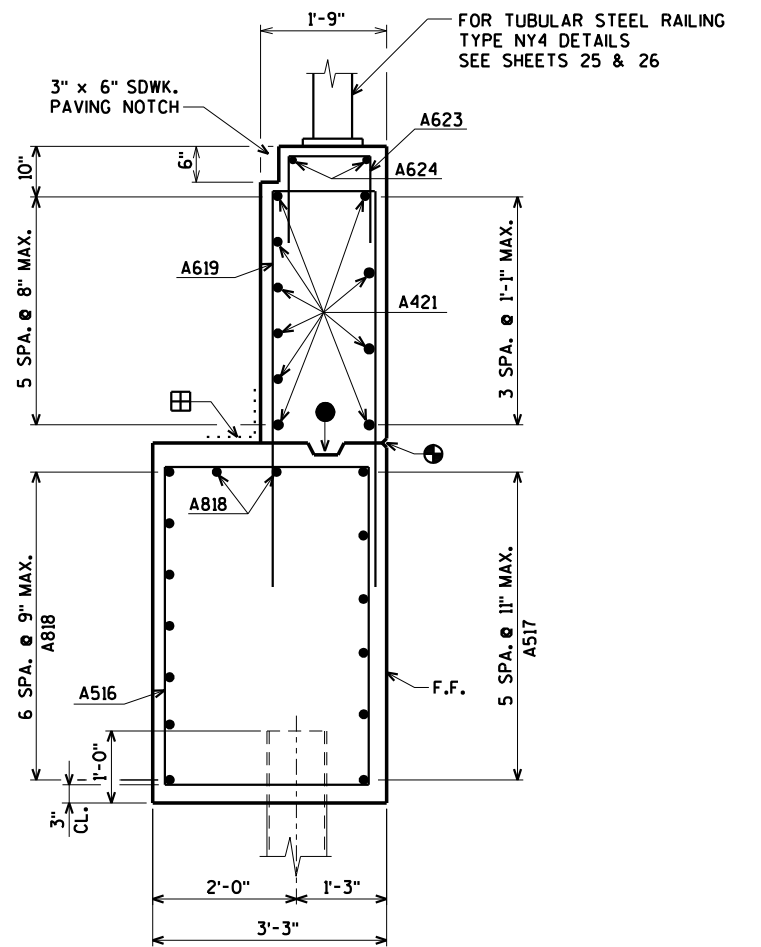
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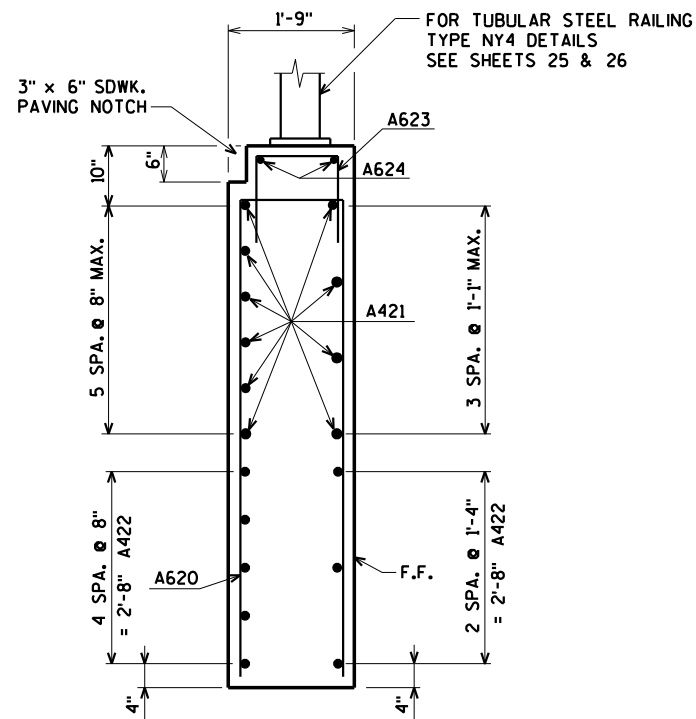
7863-00-71



ELEVATION - WING 2



SECTION D



SECTION E

- 3/4" V GROOVE ON FRONT FACE OF WINGWALL.
 - OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
 - 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- B.F. DENOTES BACK FACE.
F.F. DENOTES FRONT FACE.
E.F. DENOTES EACH FACE.

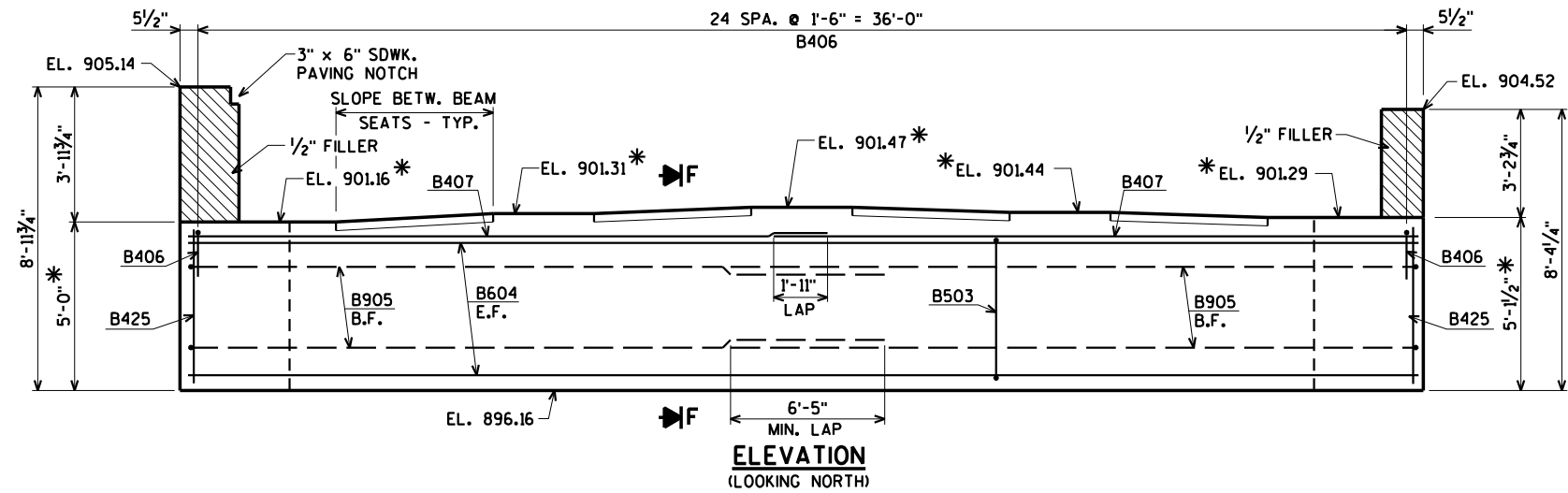
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STRUCTURE B-9-305			
DRAWN BY	CLS	PLANS CK'D.	CBM
SOUTH ABUTMENT WING 2 DETAILS			SHEET 8 OF 26

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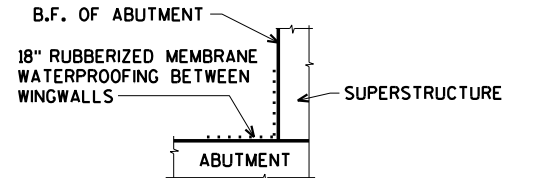
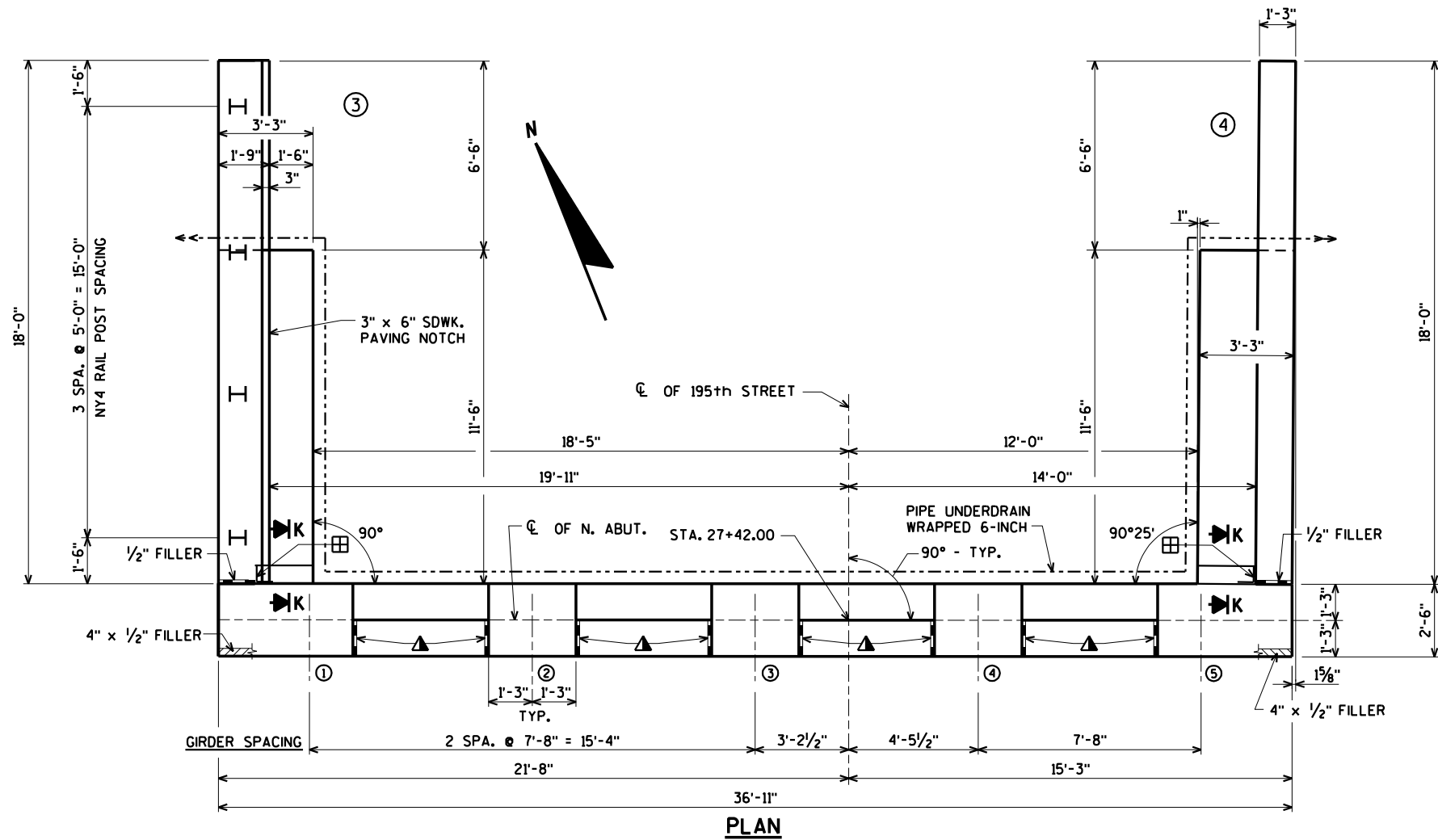
7863-00-71



NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2\"/>

* ELEVATIONS AND DIMENSIONS TAKEN AT C OF ABUT.

FOR SECTION F SEE SHEET 10.



SECTION K

▲ 3/4\"/>

▣ 18\"/>

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

8

8

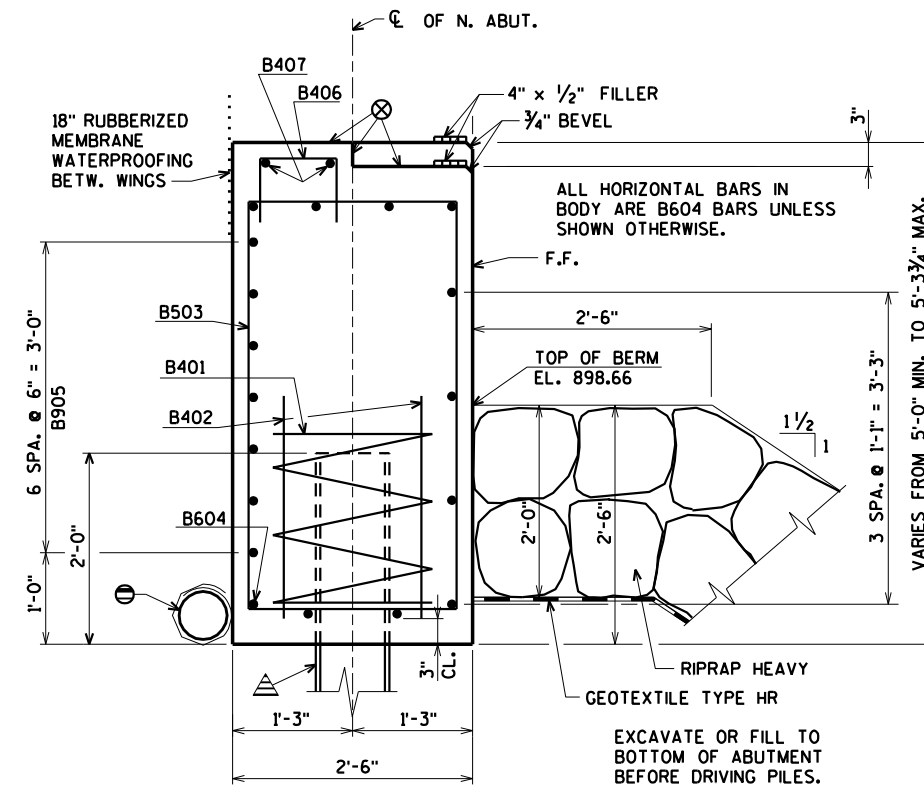
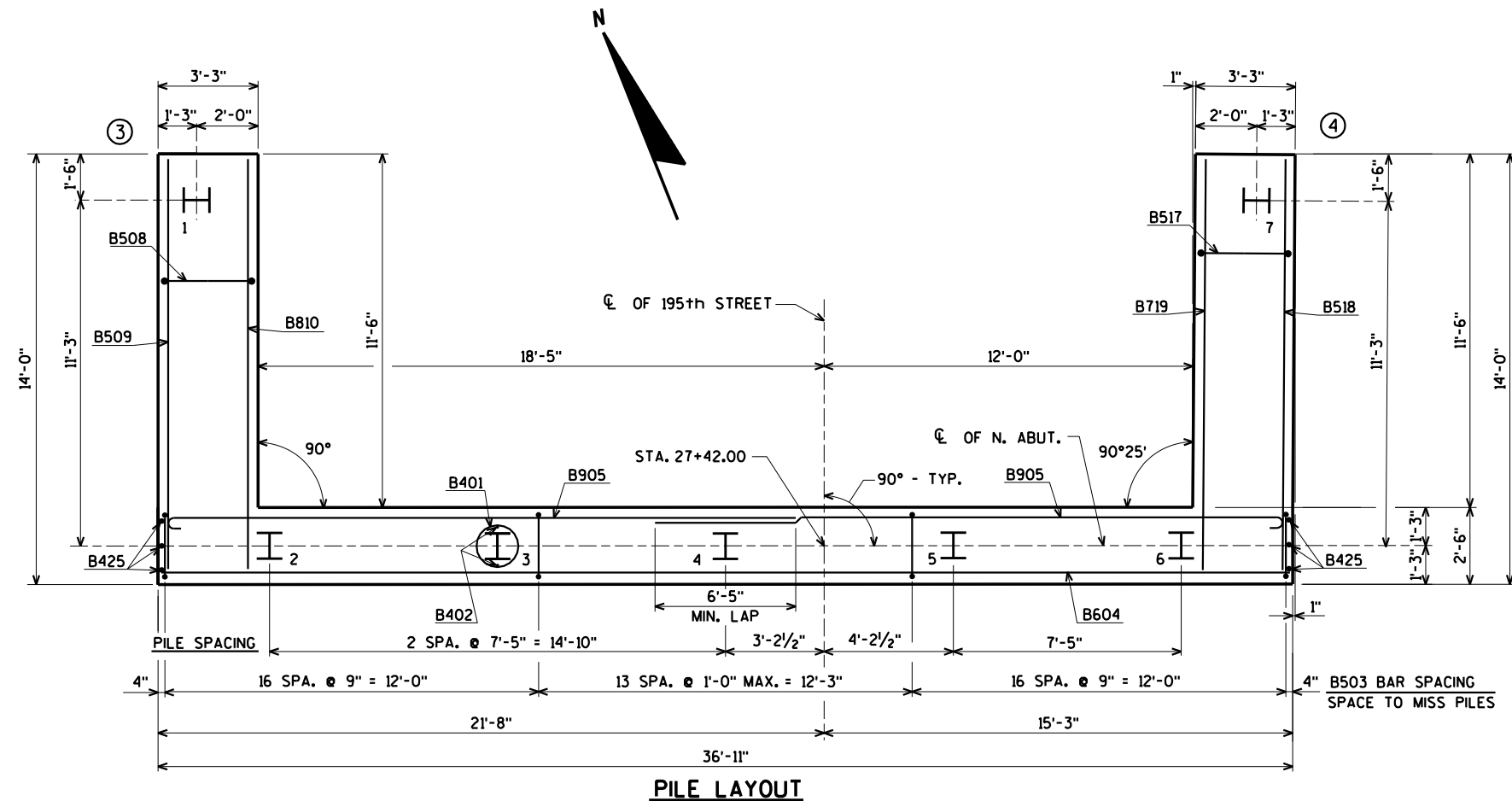
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY	CLS	PLANS CK'D.	CBM
NORTH ABUTMENT			SHEET 9 OF 26

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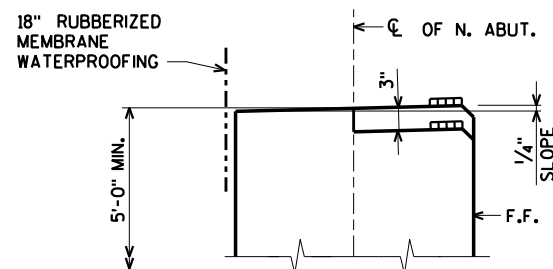
STATE PROJECT NUMBER

7863-00-71



SECTION F

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



SLOPED BEAM SEAT DETAIL

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5%
MIN. TO SUITABLE DRAINAGE. ATTACH RODENT
SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAIL
ON SHEET 6.

⊗ 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".

FOR PILE SPLICE DETAIL SEE SHEET 3.

FOR LOCATION OF SECTION F
SEE SHEET 9.

F.F. DENOTES FRONT FACE.

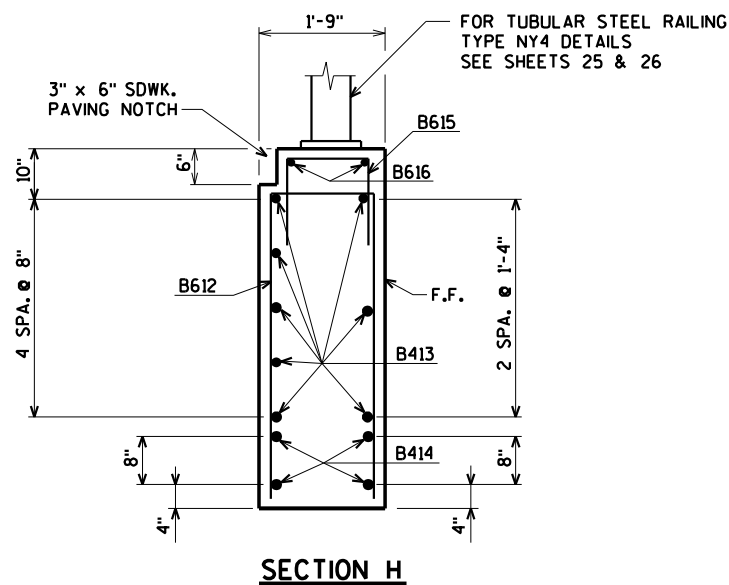
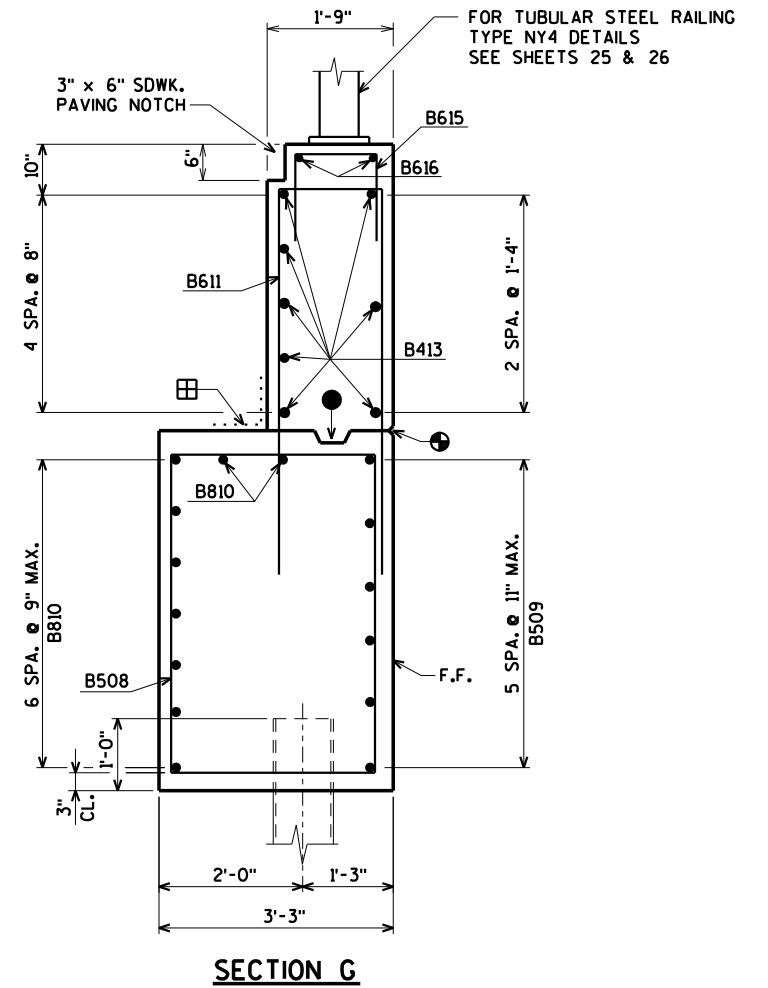
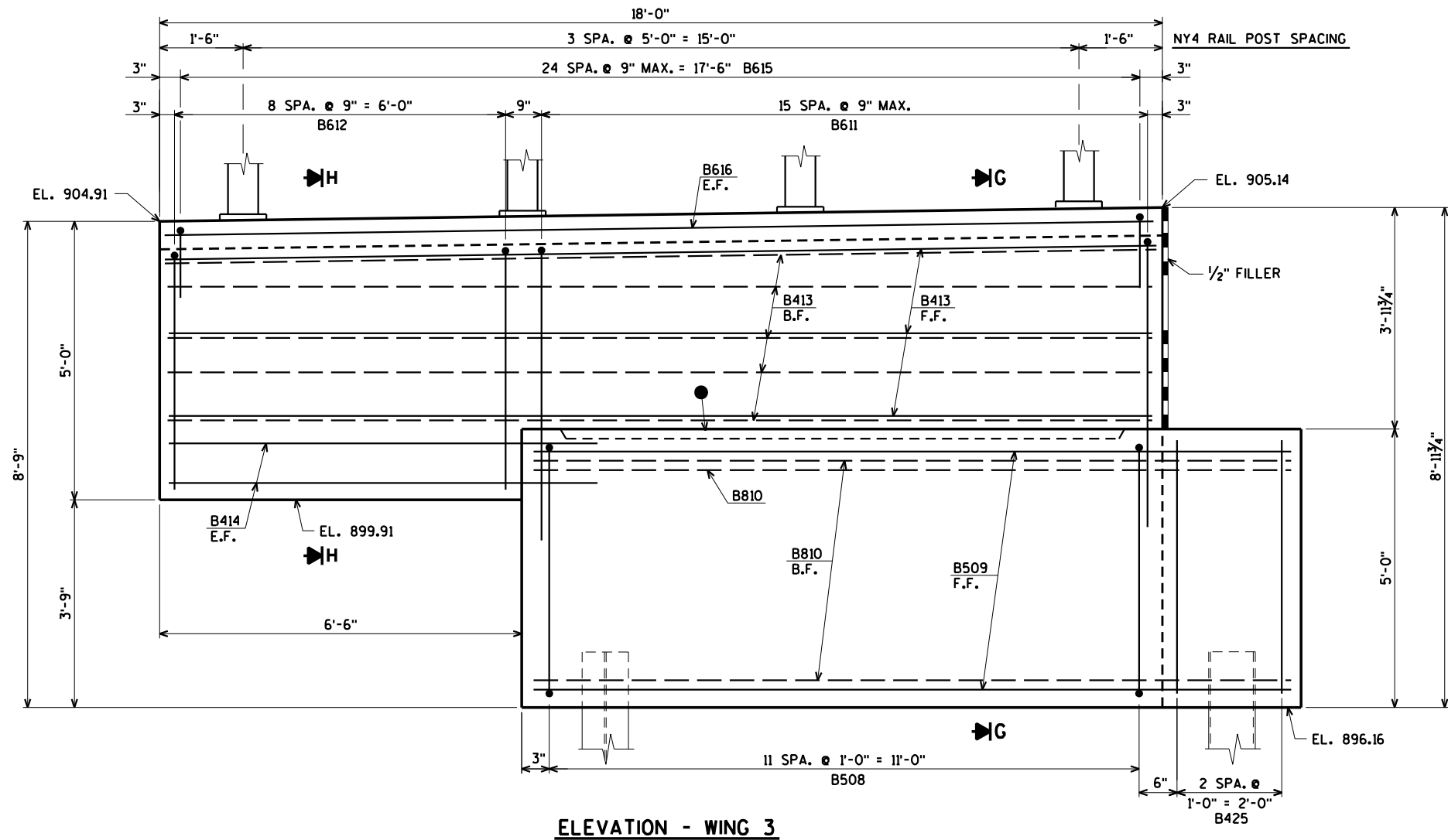
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STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
NORTH ABUTMENT DETAILS			SHEET 10 OF 26

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STATE PROJECT NUMBER

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- ⊕ 3/4" "V" GROOVE ON FRONT FACE OF WINGWALL.
 - OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
 - ⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- B.F. DENOTES BACK FACE.
F.F. DENOTES FRONT FACE.
E.F. DENOTES EACH FACE.

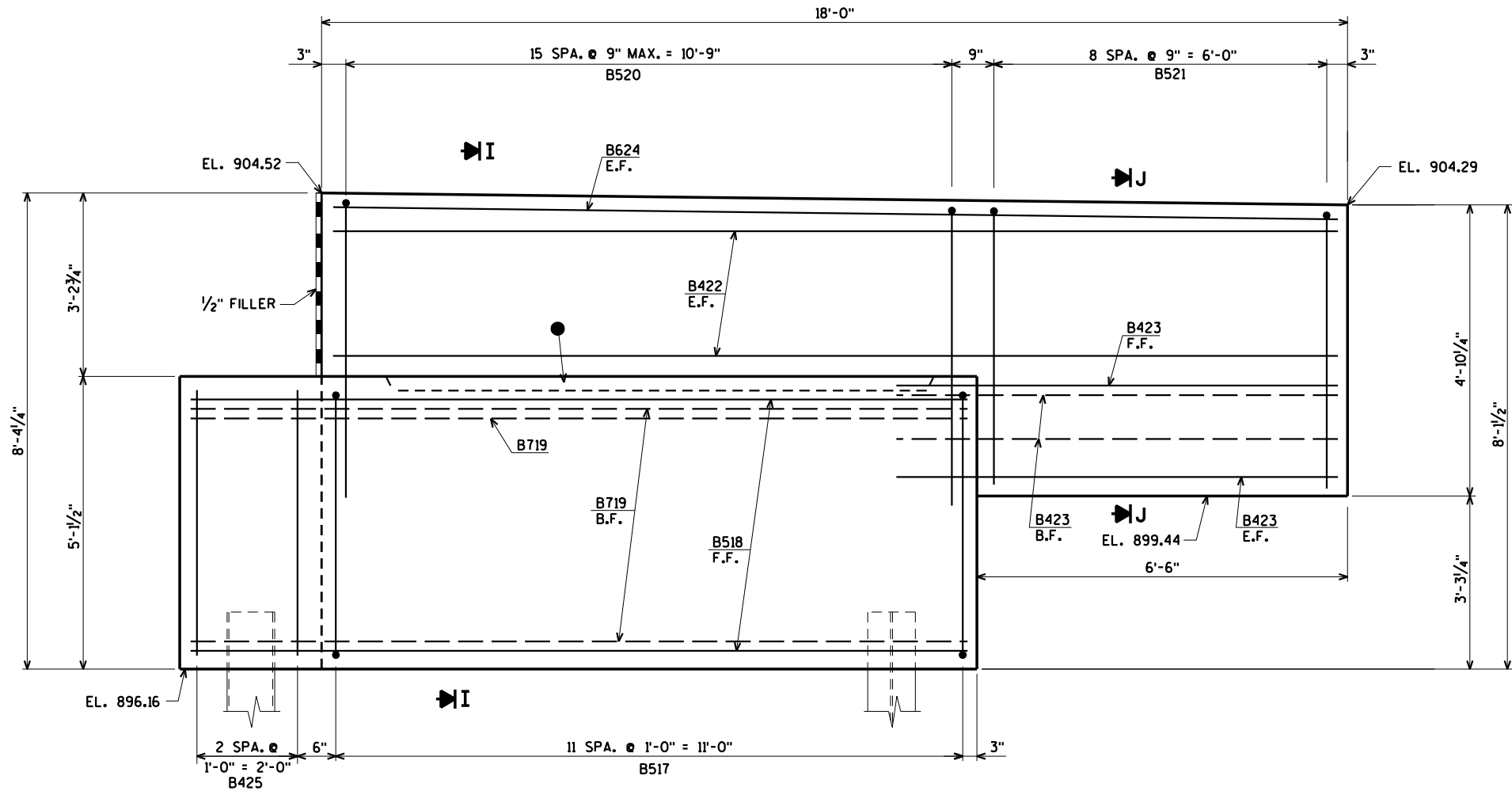
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
NORTH ABUTMENT WING 3 DETAILS			SHEET 11 OF 26

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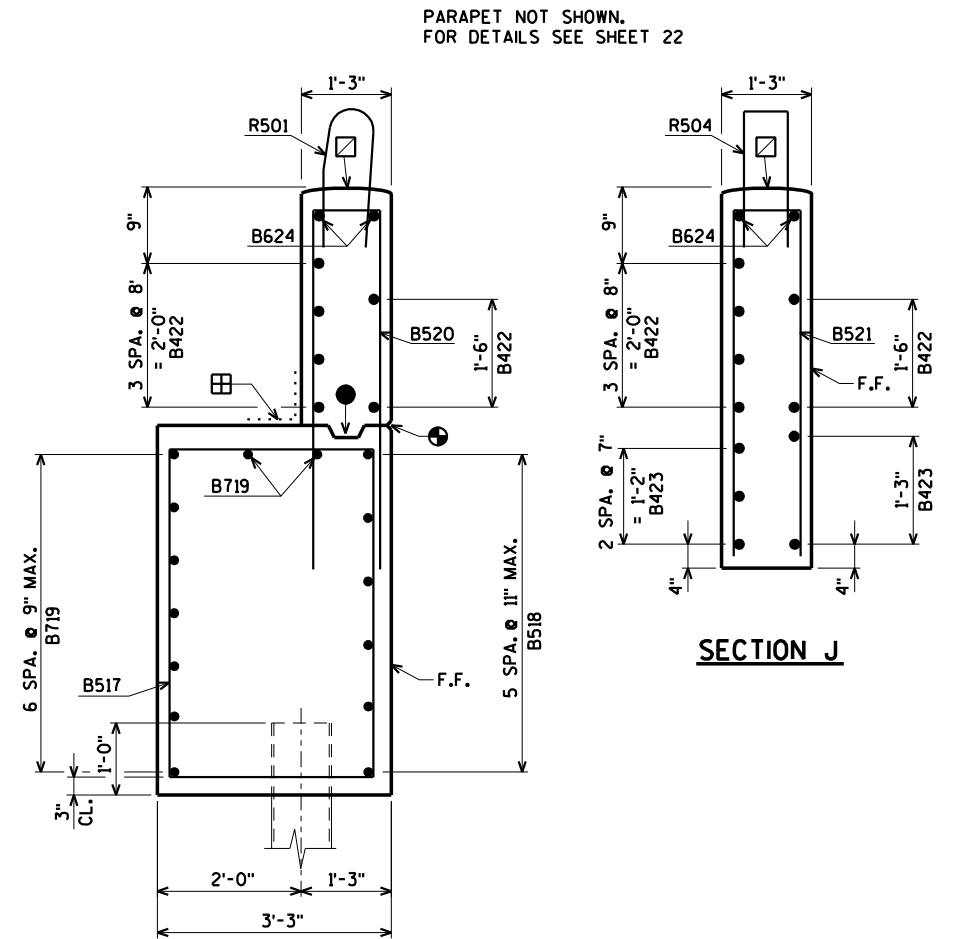
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STATE PROJECT NUMBER

7863-00-71



ELEVATION - WING 4



- ☑ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.
 - ⊕ 3/4" "V" GROOVE ON FRONT FACE OF WINGWALL.
 - OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
 - ☒ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- FOR PILE SPLICE DETAIL SEE SHEET 3.
- B.F. DENOTES BACK FACE.
- F.F. DENOTES FRONT FACE.
- E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
NORTH ABUTMENT WING 4 DETAILS			SHEET 12 OF 26

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WEIGHT INCLUDES PARAPET
STEEL SHOWN ON SHEET 22.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

WEIGHT INCLUDES PARAPET
STEEL SHOWN ON SHEET 22.

Technical drawing showing dimensions and material specifications for a hook and a plate.

Hook Dimensions:

- Overall length: 21'-6"
- Hook end dimensions: 4 1/2" (width) and 6" (height)
- Material: A401 / B401

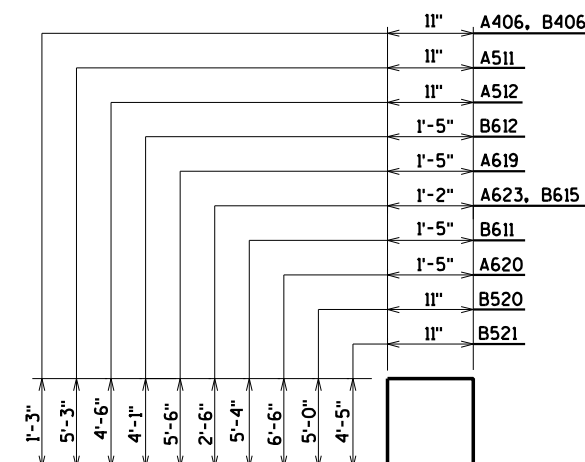
Plate Dimensions:

- Overall width: 2'-2"
- Overall height: 4'-3"
- Internal dimensions: 2'-11" (width), 4'-8" (height), 2'-11" (width), 4'-7" (height)
- Material: A503, B503, A508, B517, A516, B508

ST'D. 180° HOOK

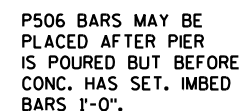
Material Specifications:

- A401 / B401
- A503, B503
- A508, B517
- A516, B508
- A905 / B905

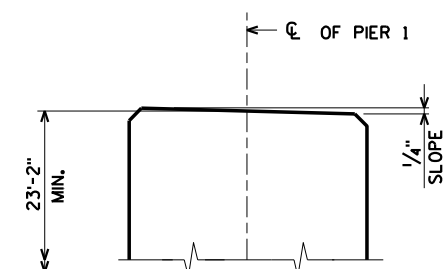
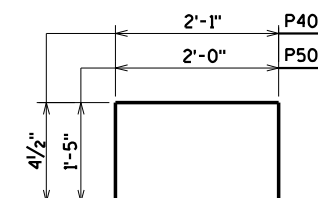
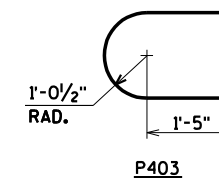


B.F. DENOTES BACK FACE

NO.	DATE	REVISION	BY
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STRUCTURE B-9-305			
		DRAWN BY	CLS PLANS CK'D. CBM
ABUTMENT BILL OF BARS		SHEET 13 OF 20	

[illegible]

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



SLOPED BEAM SEAT DETAIL
(LOOKING WEST)

★ PIER TO BE SUPPORTED ON
HP 10 x 42 STEEL PILING (WITH PILE POINTS)
DRIVEN TO A REQUIRED DRIVING RESISTANCE
OF 180 TONS PER PILE.
ESTIMATED LENGTH 40'-0".

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

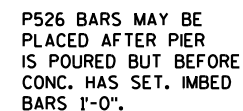
FOR PILE SPLICE DETAIL SEE SHEET 3.

E.F. DENOTES EACH FACE

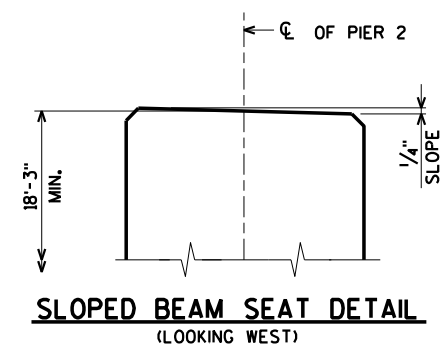
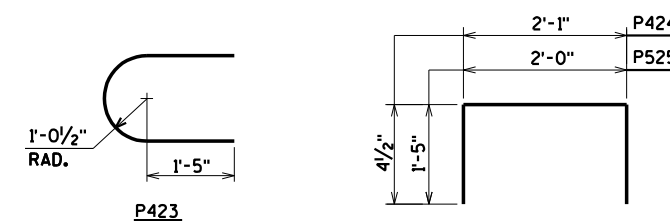
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ASSOCIATES

NO.	DATE	REVISION	BY
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STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBT
PIER 1		SHEET 14 OF 1	

[illegible]

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



★ PIER TO BE SUPPORTED ON
HP 10 x 42 STEEL PILING (WITH PILE POINTS)
DRIVEN TO A REQUIRED DRIVING RESISTANCE
OF 180 TONS PER PILE.
ESTIMATED LENGTH 30'-0".

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

FOR PILE SPLICE DETAIL SEE SHEET 3.

E.F. DENOTES EACH FACE

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STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBT
PIER 2		SHEET 15 OF 1	

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

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

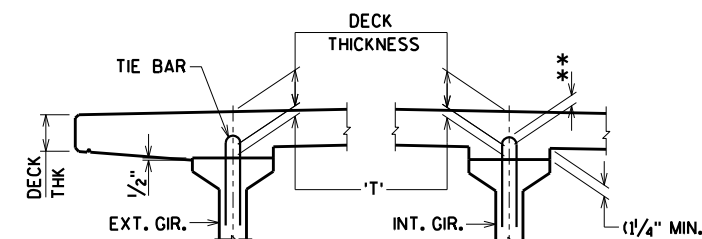
STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS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

SPACING SHOWN FOR #5 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

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

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



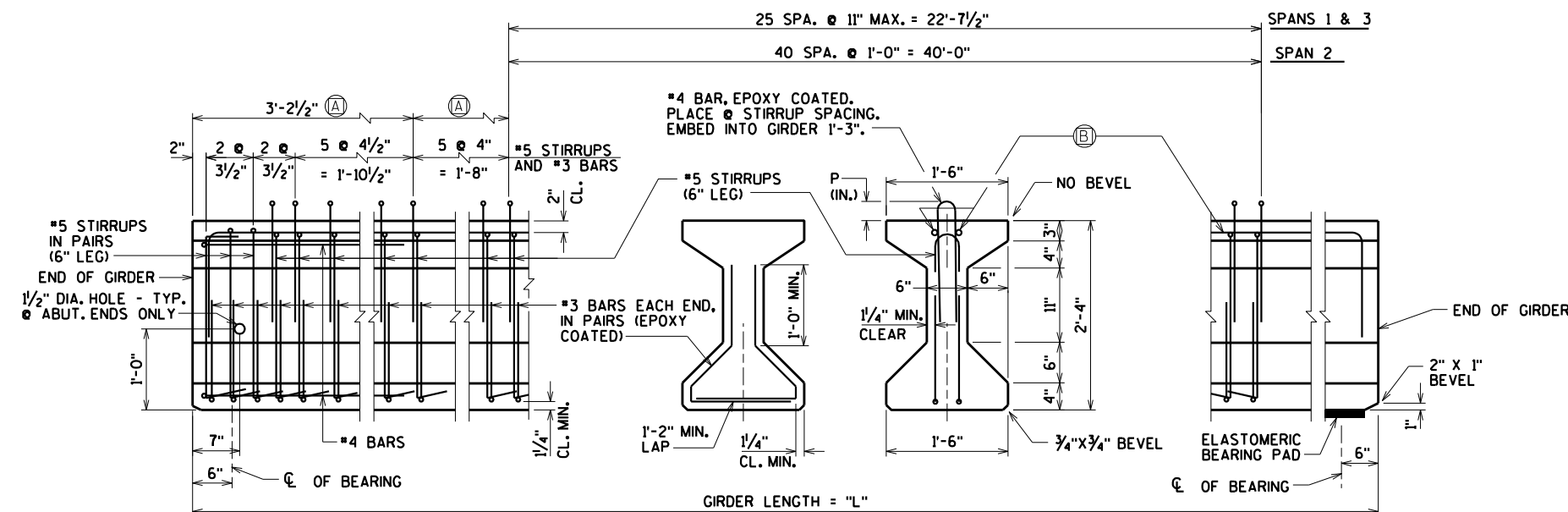
IF 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD, NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, ** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT $\frac{1}{4}$ 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

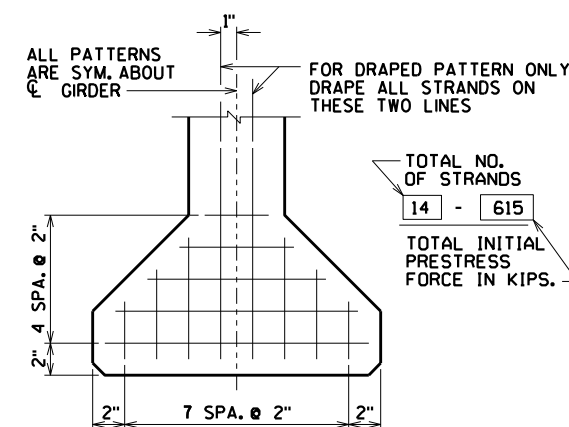
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2 1/2" WAS USED IN THE QUANTITY
"CONCRETE MASONRY BRIDGES".



Ⓐ DETAIL TYP. AT EACH END

2-#4 BARS. BEND DOWN 16 BAR DIA. AT ENDS



3'-0"

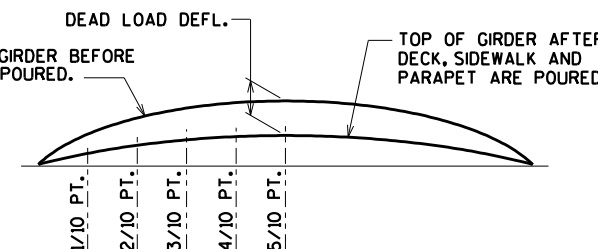
1'-6"

#4 BAR AT TOP OF GIRDER

#4 BAR AT BOTTOM OF GIRDER

TOP VIEW OF GIRDER ENDS

DEAD LOAD DEFLECTION DIAGRAM

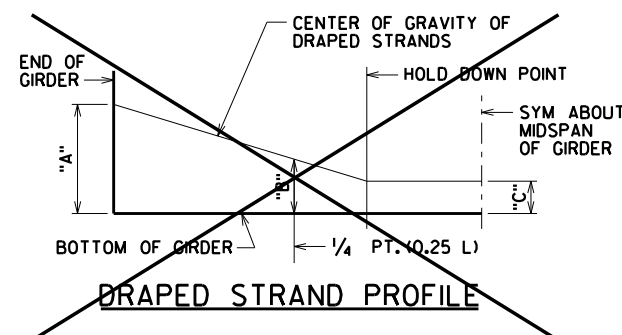


* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.)
1	0.8
2	1.6
3	0.8

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

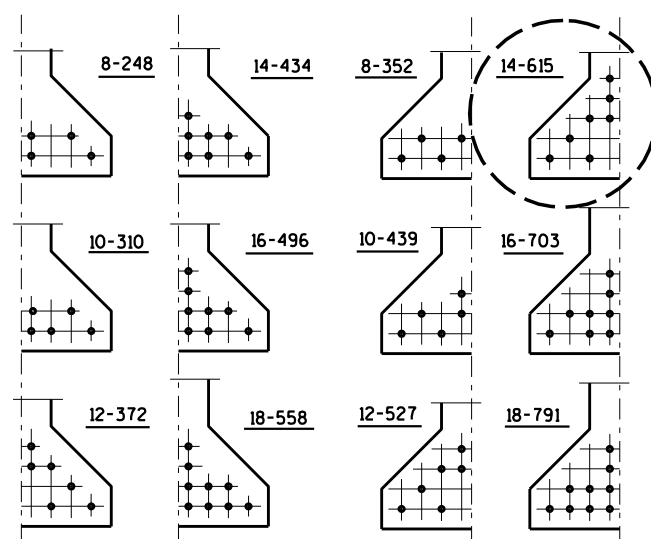
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

~~DRAPED STRAND PROFILE~~

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

[illegible]

GIRDER DATA



DRAPED PATTERN

0.5" ϕ STRANDS

UNDRAPED PATTERN

0.6"φ STRANDS

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STATE PROJECT NUMBER

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NOTES

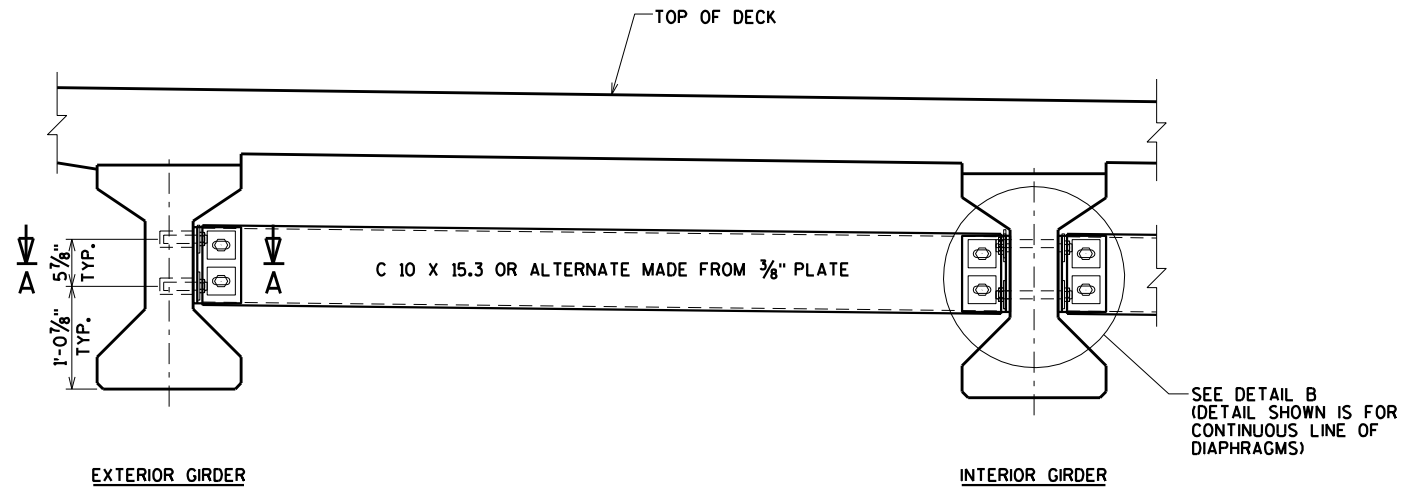
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-9-305", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

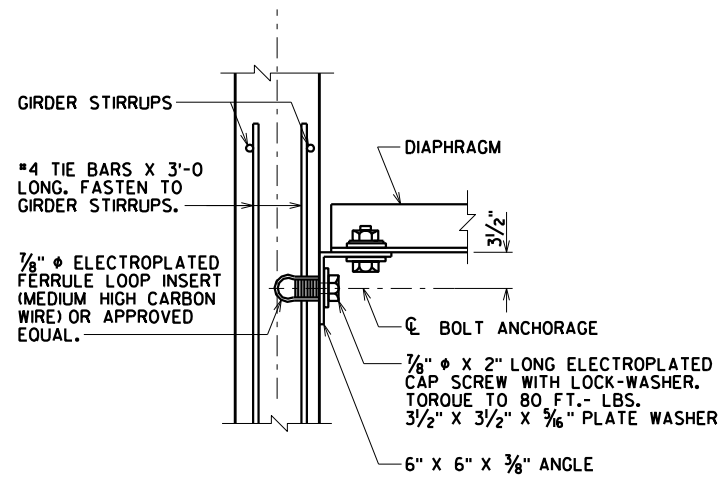
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

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

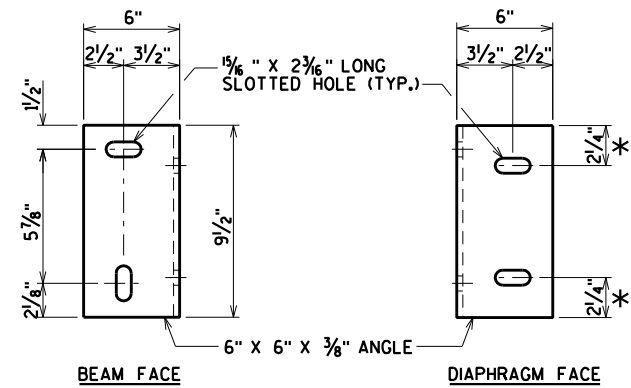
STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



PART TRANSVERSE SECTION AT DIAPHRAGM

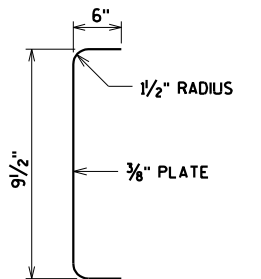


SECTION A-A
(FOR EXTERIOR ATTACHMENT)

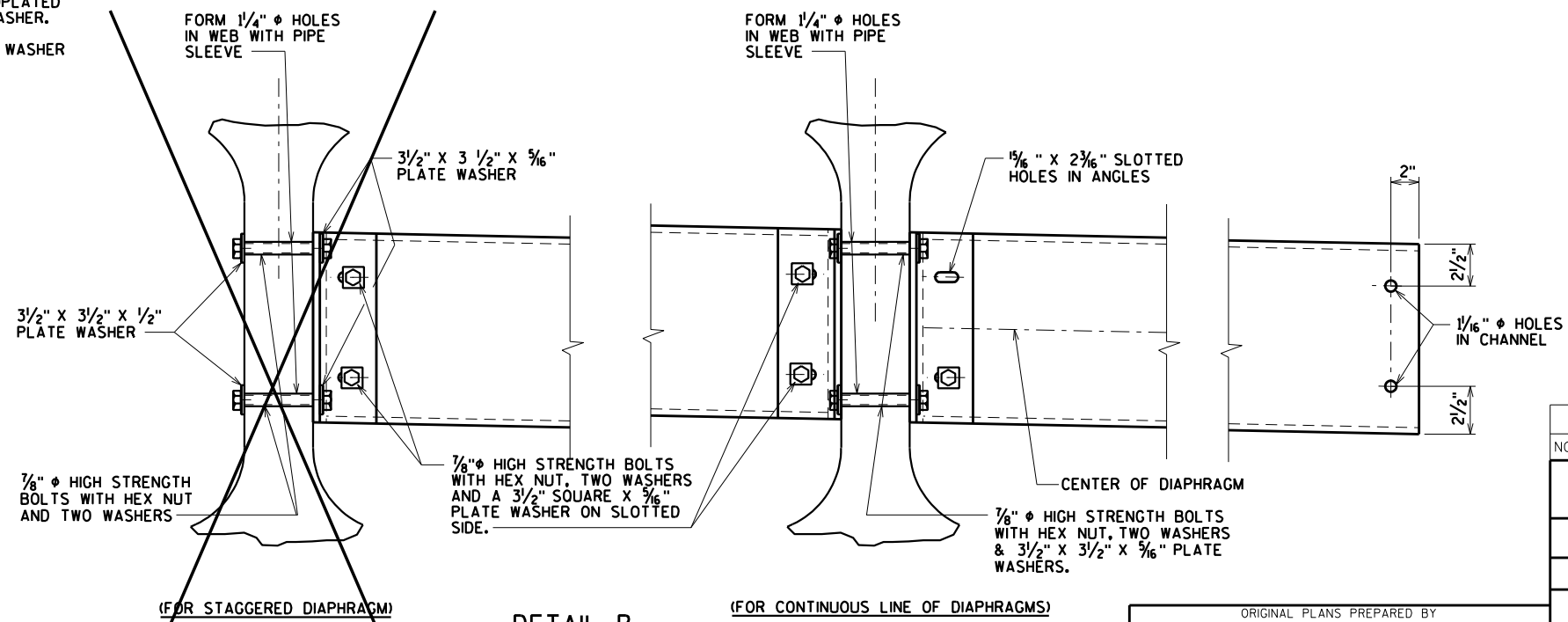


DIAPHRAGM SUPPORT

* 2 1/2\"



SECTION THRU
ALTERNATE DIAPHRAGM



DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

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NO.	DATE	REVISION	BY
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STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
STEEL DIAPHRAGM		SHEET 17 OF 26	

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	37,180# COATED
							LOCATION
S401	X	40	3-3	X			DIAPH. @ ABUT. VERT. @ NOTCH
S402	X	16	4-10				DIAPH. @ ABUT. HORIZ. @ NOTCH
S503	X	88	9-10	X			DIAPH. @ ABUT. VERT.
S604	X	10	36-7				DIAPH. @ ABUT. HORIZ.
S605	X	12	2-0				DIAPH. @ ABUT. HORIZ. @ EXT. GDRS.
S606	X	24	5-10				DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S507	X	20	6-0				DIAPH. @ ABUT. HORIZ. THRU GDRS.
S508	X	56	8-2	X			DIAPH. @ PIER VERT.
S409	X	56	8-7	X			DIAPH. @ PIER VERT.
S410	X	80	5-10				DIAPH. @ PIER HORIZ.
S511	X	373	36-7				DECK TRANS. TOP & BOT.
S412	X	212	30-4				DECK LONG. BOT.
S413	X	52	21-4				DECK LONG. TOP SPANS 1 & 3
S414	X	52	27-9				DECK LONG. TOP SPANS 1 & 3
S415	X	52	33-5				DECK LONG. TOP SPAN 2
S716	X	104	20-2				DECK LONG. TOP @ PIER
S417	X	372	4-6	X			DECK TRANS. TOP @ EDGES
S418	X	233	2-10	X			DECK @ SDWK. @ EDGE OF SLAB
S419	X	233	2-7	X			DECK @ SDWK. @ CURB
S420	X	44	30-4				SDWK. LONG. TOP
S521	X	233	7-10	X			SDWK. TRANS. TOP
S622	X	32	12-0	X			SDWK. @ RAIL POSTS
S623	X	56	6-0				SDWK. @ INT. RAIL POSTS
S624	X	8	6-0	X			SDWK. @ END RAIL POSTS
S525	X	175	4-5	X			DECK @ PARAPET VERT.
S526	X	175	5-0	X			PARAPET VERT.
S527	X	18	40-6				PARAPET HORIZ.
S428	X	8	3-3	X			PILASTER
S429	X	8	2-5	X			PILASTER
S330	X	8	3-3	X			PILASTER

37'-1 1/8"

1'-8" 6'-0" 14'-0" 14'-0" 1'-5 3/8"

1'-8" SIDEWALK

7 1/4" 51 SPA. @ 8 1/2" MAX. = 35'-8 1/2" S716

RAILING STEEL TYPE NY4 FOR DETAILS SEE SHEETS 25 & 26

S417 @ 7 1/2" MAX. SLOPE 1.5%

S418 @ 6" S419 @ 6"

8" DECK

CL OF 195th STREET

SLOPE 2% SLOPE 2%

S511 S417 @ 7 1/2" MAX. S525 @ 8"

7 1/4" FROM BOTH E. & W. EDGES OF DECK

7 1/4" FROM E. EDGE OF DECK

1'-3 3/4" FROM W. EDGE OF DECK

1'-3 3/4" FROM E. EDGE OF DECK

7 1/4" FROM W. EDGE OF DECK

COMBINATION RAILING TYPE 3T ON SINGLE SLOPE PARAPET 32SS FOR DETAILS SEE SHEETS 22 THRU 24

2'-0" 2'-8"

9 1/4" 8" 1/2" MIN. COVER

1 2 3 4 5

3'-2 1/2" 4'-5 1/2"

CONCRETE INSERTS TO BE CAST IN GIRDERS. SEE SHEET 17 FOR DETAILS.

C 10 x 15.3 STEEL DIAPHRAGM. SEE SHEET 17 FOR DETAILS.

1'-0" 6 SPA. @ 1'-0" MAX. = 5'-8" S508, S409 TYP. BETWEEN GIRDERS

PILASTER - SEE DETAIL ON SHEET 20

AT PIER IN SPAN

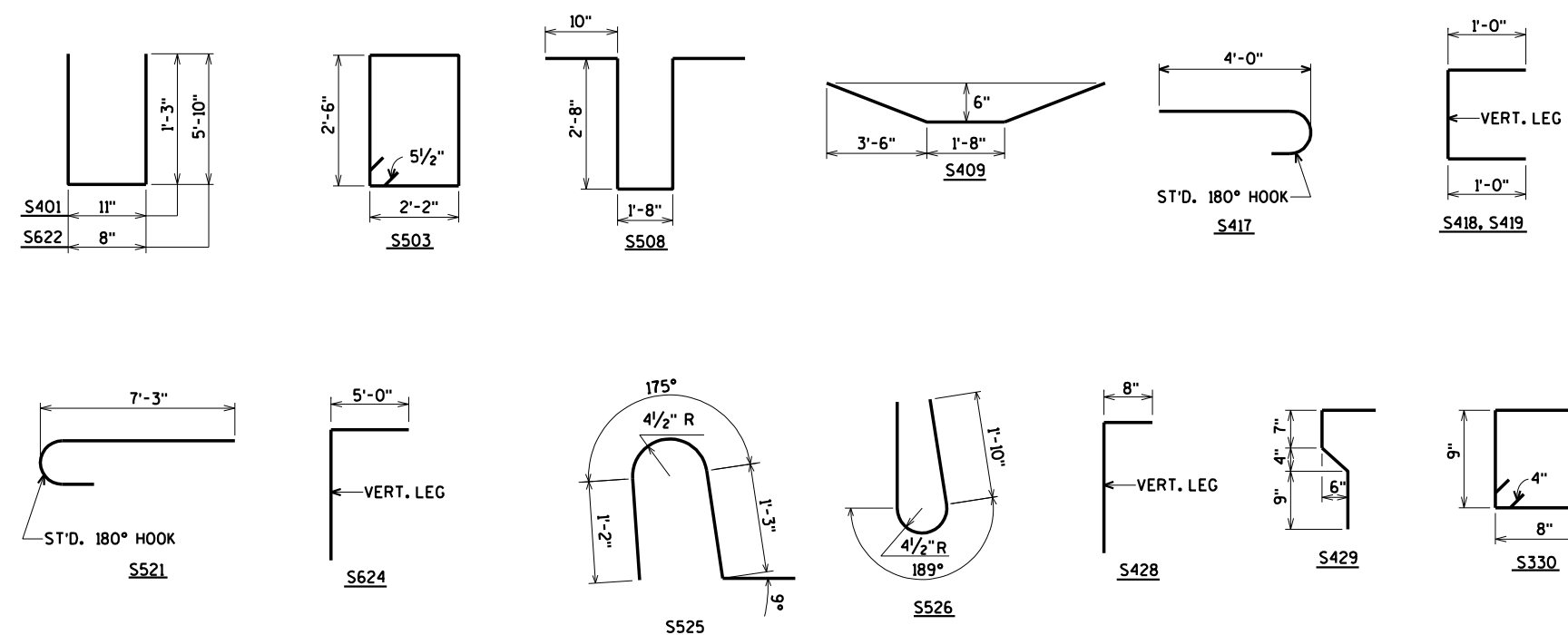
52 SPA. @ 8 1/2" MAX. = 36'-5" S412

4 SPA. @ 7'-8" = 30'-8"

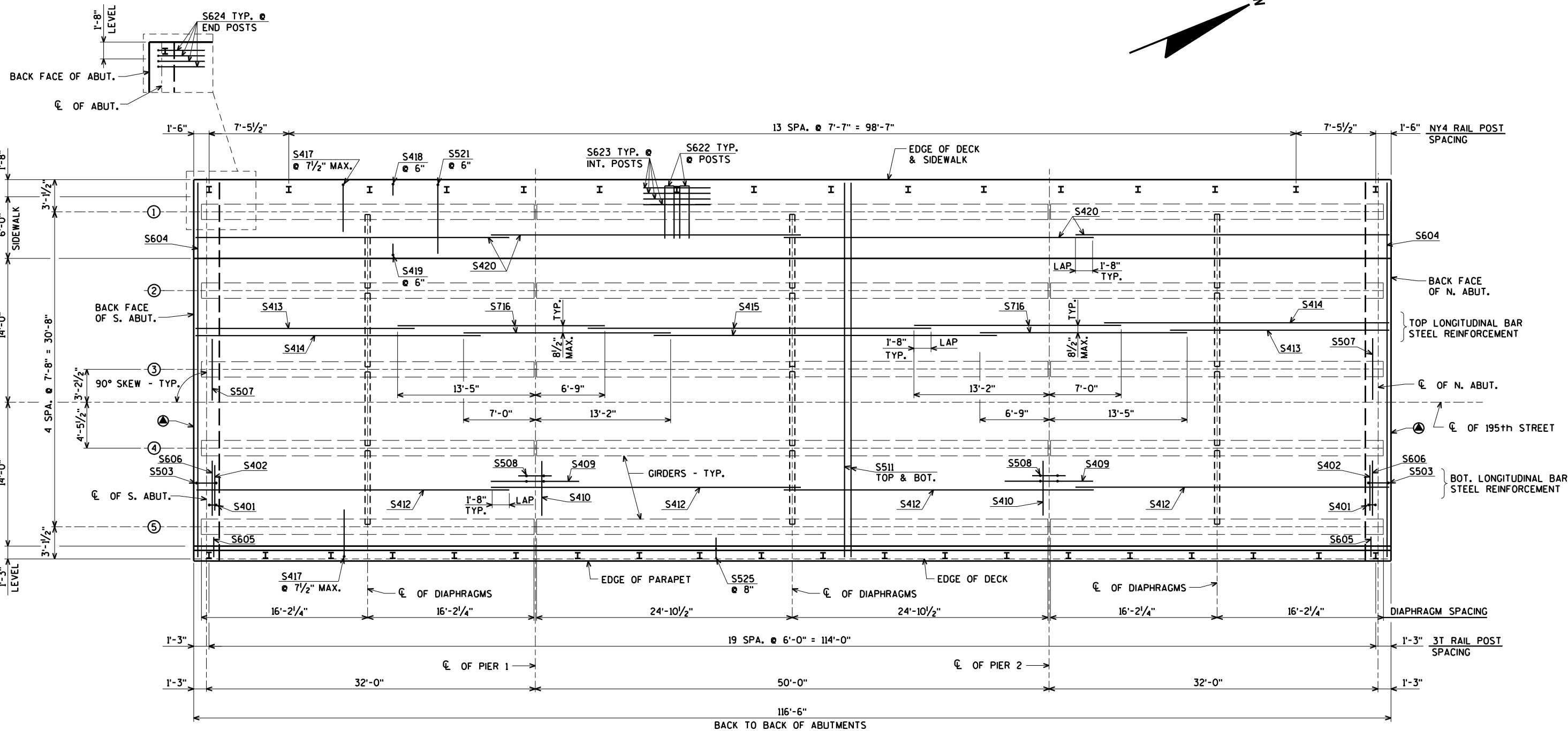
28" PRESTRESSED CONCRETE GIRDERS

3" 3'-1 1/2" 3" 3'-1 1/2"

◆ 3/4" V-GROOVE. EXTEND V-GROOVE
TO 6" FROM FRONT FACE OF ABUTMENT
DIAPHRAGMS - TYP.



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U:\42-0995.00 - Chippewa Co - In LaFayette - 195th St+BRIDGE RE-DO JUNE 2018\420995 super.dgn



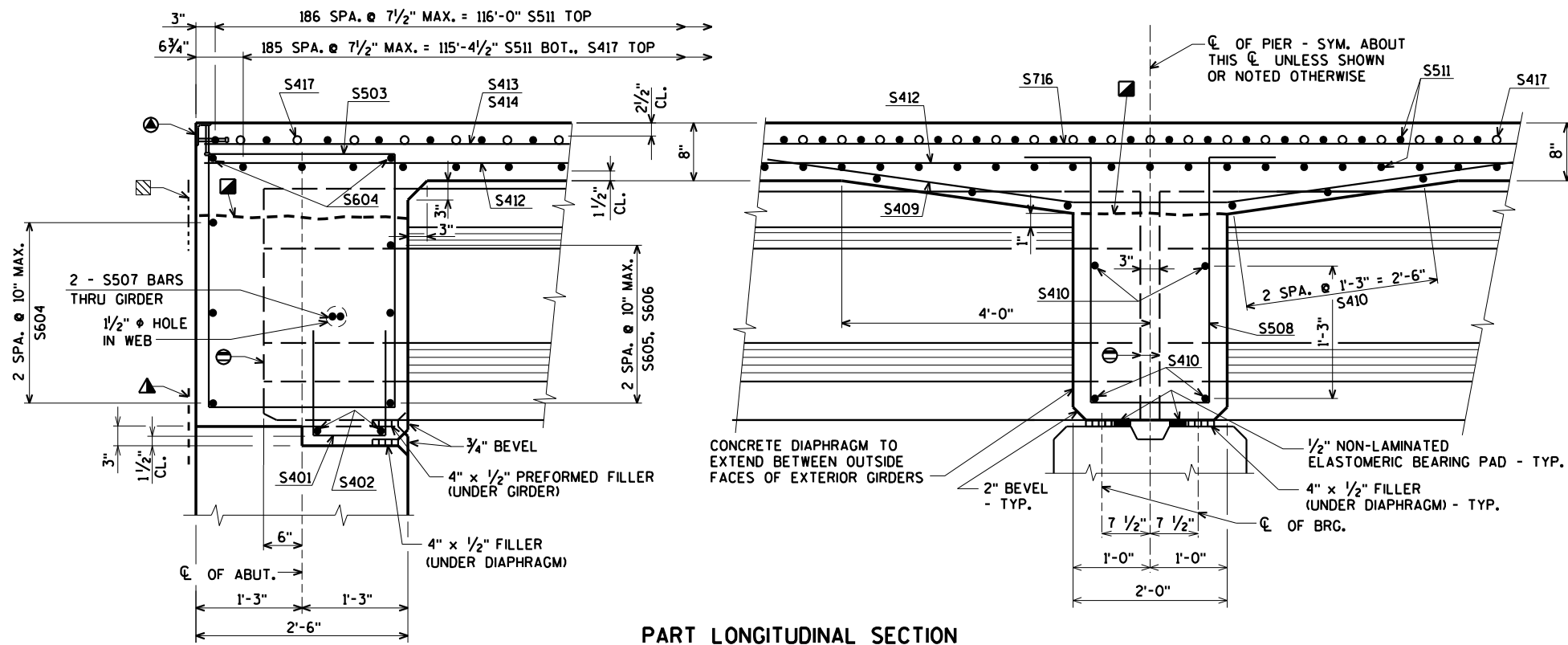
⊙ PROTECTION ANGLE AT
END OF DECK - TYP.

8

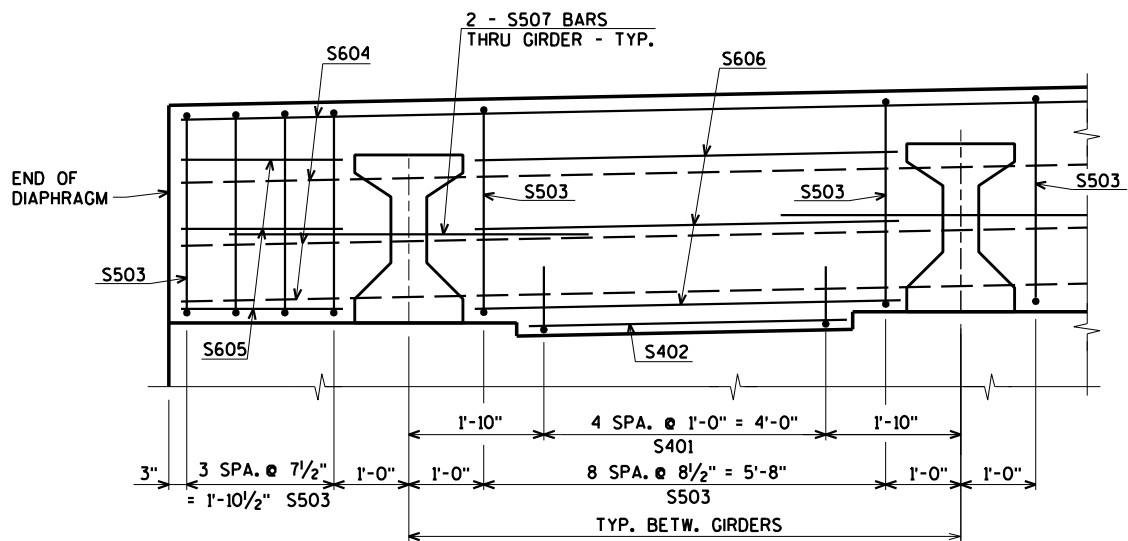
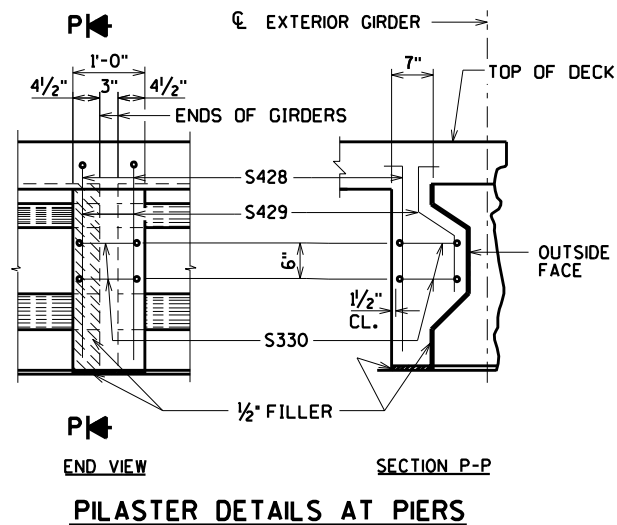
8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
SUPERSTRUCTURE PLAN			SHEET 19 OF 26

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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PART LONGITUDINAL SECTION

PART SECTION AT ABUTMENT
(PARAPET & SIDEWALK NOT SHOWN FOR CLARITY)

END OF GIRDER

18" RUBBERIZED MEMBRANE WATERPROOFING

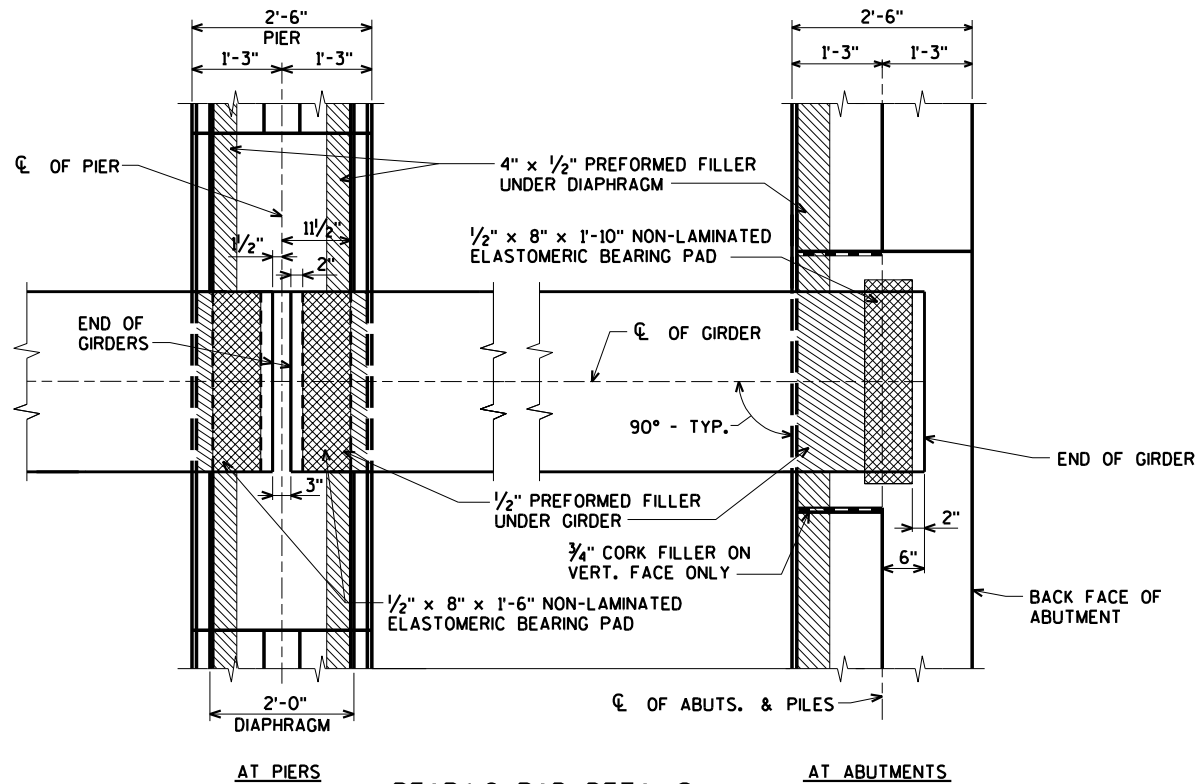
OPTIONAL CONSTRUCTION JOINT.
IF USED, DECK POUR MUST BE WITHIN
2 WEEKS FROM THE TIME OF THE
DIAPHRAGM POUR.18" RUBBERIZED MEMBRANE WATERPROOFING
IF CONST. JT. IS USED, COST INCIDENTAL
TO BID ITEM "CONCRETE MASONRY BRIDGES"PROTECTION ANGLE AT END
OF DECK - TYP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
SUPERSTRUCTURE DETAILS			SHEET 20 OF 26

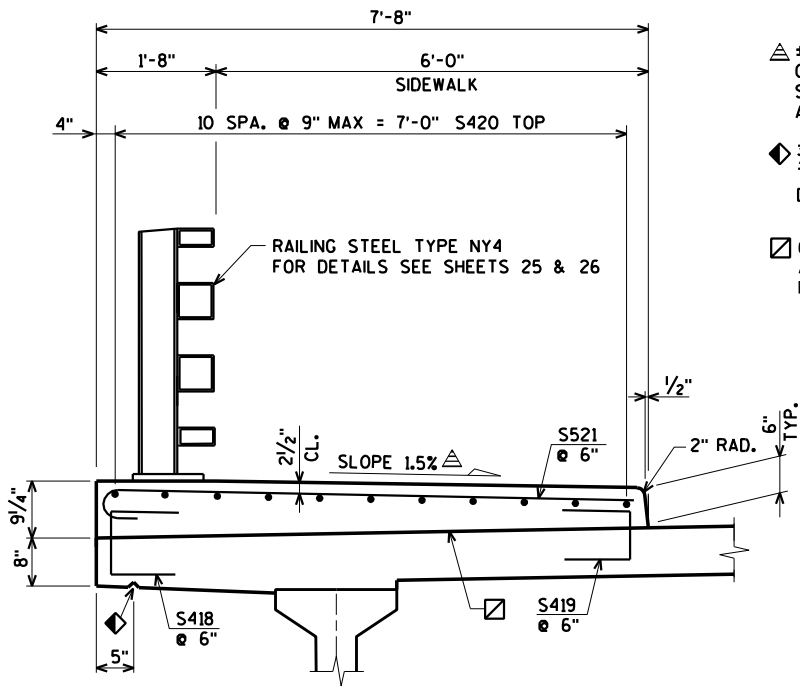
\$PRNAME\$
U:\42-0995.00 - Chippewa Co - Tn LaFayette - 195th St+BRIDGE RE-DO JUNE 2018+420995 super.dgn

STATE PROJECT NUMBER

7863-00-71



BEARING PAD DETAILS



TYPICAL SECTION THRU SIDEWALK

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

3/4" V-GROOVE. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGMS - TYP.

CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

TOP OF DECK ELEVATIONS

	CL OF 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.	CL PIER 1	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.	CL PIER 2
W. EDGE OF DECK	905.87	905.82	905.78	905.74	905.70	905.66	905.62	905.58	905.53	905.49	905.45	905.39	905.32	905.26	905.19	905.13	905.06	905.00	904.93	904.87	904.80
GIRDER 1	905.93	905.89	905.85	905.80	905.76	905.72	905.68	905.64	905.60	905.56	905.51	905.45	905.38	905.32	905.25	905.19	905.12	905.06	905.00	904.93	904.87
GIRDER 2	906.08	906.04	906.00	905.96	905.92	905.87	905.83	905.79	905.75	905.71	905.67	905.60	905.54	905.47	905.41	905.34	905.28	905.21	905.15	905.08	905.02
GIRDER 3	906.23	906.19	906.15	906.11	906.07	906.03	905.99	905.94	905.90	905.86	905.82	905.76	905.69	905.63	905.56	905.50	905.43	905.37	905.30	905.24	905.17
CL OF ROAD	906.30	906.26	906.22	906.17	906.13	906.09	906.05	906.01	905.97	905.93	905.88	905.82	905.75	905.69	905.63	905.56	905.50	905.43	905.37	905.30	905.24
GIRDER 4	906.21	906.17	906.13	906.09	906.04	906.00	905.96	905.92	905.88	905.84	905.80	905.73	905.67	905.60	905.54	905.47	905.41	905.34	905.28	905.21	905.15
GIRDER 5	906.06	906.02	905.97	905.93	905.89	905.85	905.81	905.77	905.72	905.68	905.64	905.58	905.51	905.45	905.38	905.32	905.25	905.19	905.12	905.06	904.99
E. EDGE OF DECK	906.02	905.98	905.94	905.89	905.85	905.81	905.77	905.73	905.69	905.65	905.60	905.54	905.47	905.41	905.35	905.28	905.22	905.15	905.09	905.02	904.96

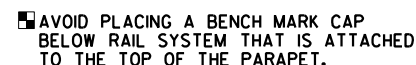
	CL PIER 2	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	CL OF N. ABUT.
W. EDGE OF DECK	904.80	904.76	904.72	904.68	904.64	904.60	904.55	904.51	904.47	904.43	904.39
GIRDER 1	904.87	904.82	904.78	904.74	904.70	904.66	904.62	904.58	904.53	904.49	904.45
GIRDER 2	905.02	904.98	904.94	904.89	904.85	904.81	904.77	904.73	904.69	904.65	904.60
GIRDER 3	905.17	905.13	905.09	905.05	905.01	904.96	904.92	904.88	904.84	904.80	904.76
CL OF ROAD	905.24	905.19	905.15	905.11	905.07	905.03	904.99	904.95	904.90	904.86	904.82
GIRDER 4	905.15	905.11	905.06	905.02	904.98	904.94	904.90	904.86	904.82	904.77	904.73
GIRDER 5	904.99	904.95	904.91	904.87	904.83	904.79	904.75	904.70	904.66	904.62	904.58
E. EDGE OF DECK	904.96	904.91	904.87	904.83	904.79	904.75	904.71	904.67	904.62	904.58	904.54

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
SUPERSTRUCTURE DETAILS			SHEET 21 OF 26

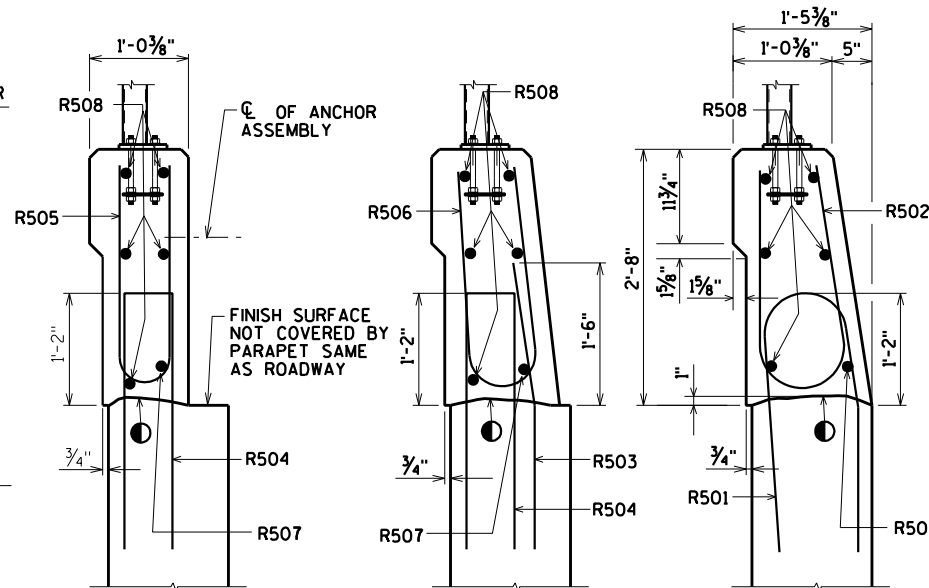
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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490* COATED SOUTH ABUTMENT
490* COATED NORTH ABUTMENT

BAR MARK	COAT	SOUTH ABUT.	NORTH ABUT.	LENGTH	BENT	LOCATION
R501	X	14	14	5-10	X	PARAPET VERT.
R502	X	14	14	5-0	X	PARAPET VERT.
R503	X	12	12	3-0	X	PARAPET VERT.
R504	X	17	17	5-7	X	PARAPET VERT.
R505	X	11	11	4-9	X	PARAPET VERT.
R506	X	6	6	4-10	X	PARAPET VERT.
R507	X	1	1	17-8	X	PARAPET HORIZ.
R508	X	5	5	17-8		PARAPET HORIZ.



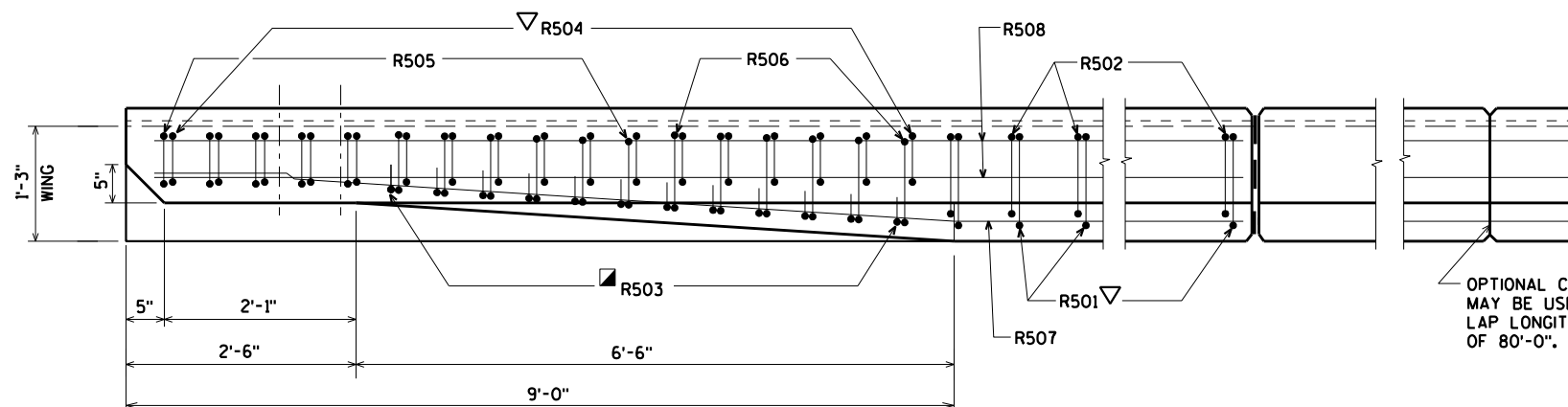
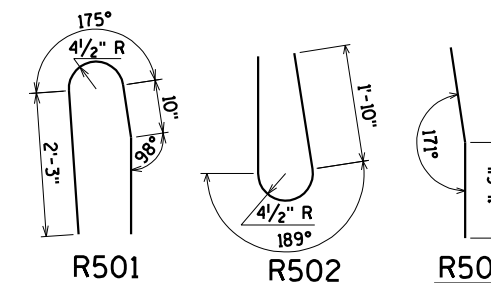
INSIDE ELEVATION
(WING 4 SHOWN, WING 1 SIMILAR)



SECTION A

SECTION B

SECTION C



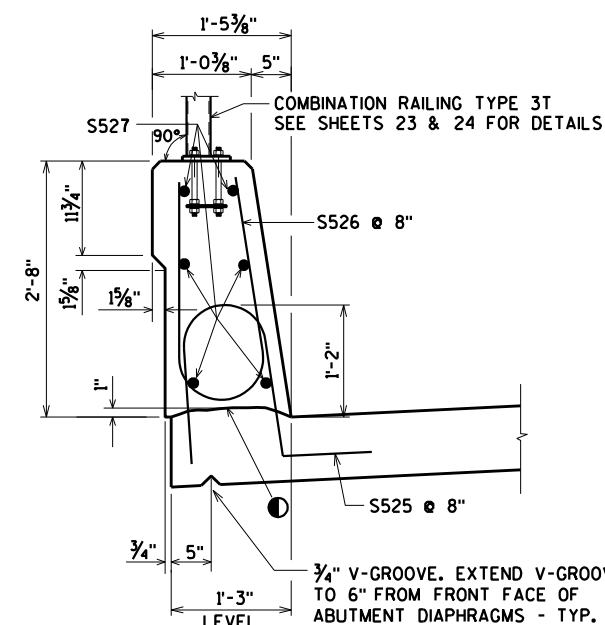
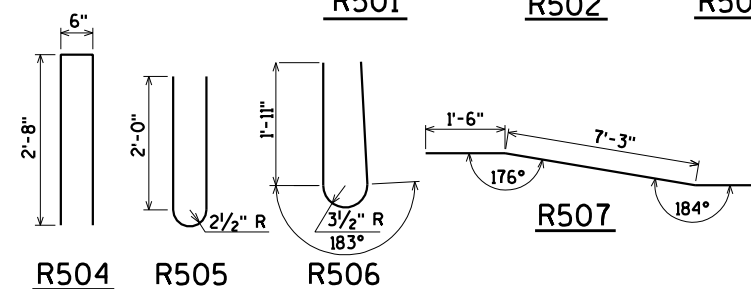
PLAN
(WING 4 SHOWN, WING 1 SIMILAR)



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

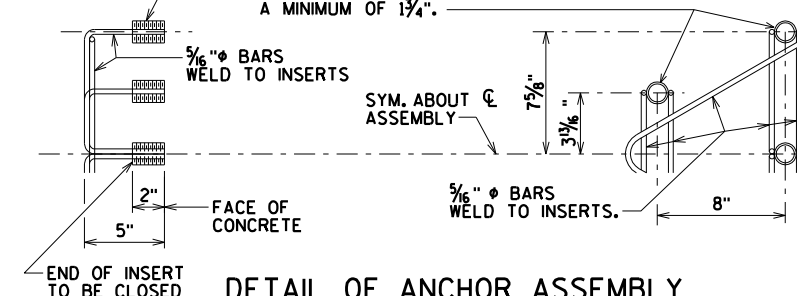
▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS
MAY BE USED. RUN BAR REINF. THRU THE JOINT.
LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING
OF 80'-0". DEFINE CONST. JOINT WITH A $\frac{3}{4}$ "-'V' GROOVE.



SECTION THRU PARAPET ON BRIDGE

THREADED INSERTS FOR $\frac{7}{8}$ " ϕ X 2" LONG GALVANIZED HEX HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF $\frac{1}{8}$ " AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF $\frac{3}{4}$ ".



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-305

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SINGLE SLOPE
PARAPET 32SS

SHEET 22 OF 26

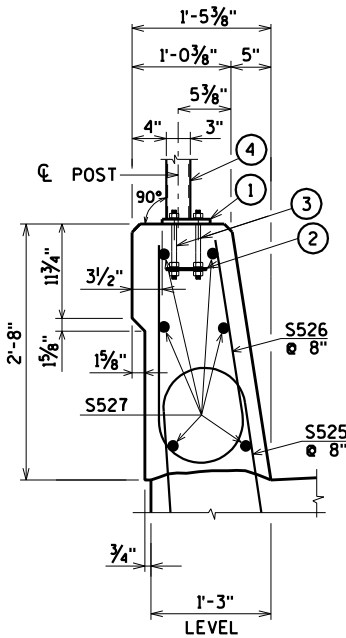
CLOSURE ENDS ON
STEEL RAILING SHALL
BE 3/16" PLATE. WELD
AND GRIND SMOOTH.

BACK FACE OF ABUT.
OR END OF WING

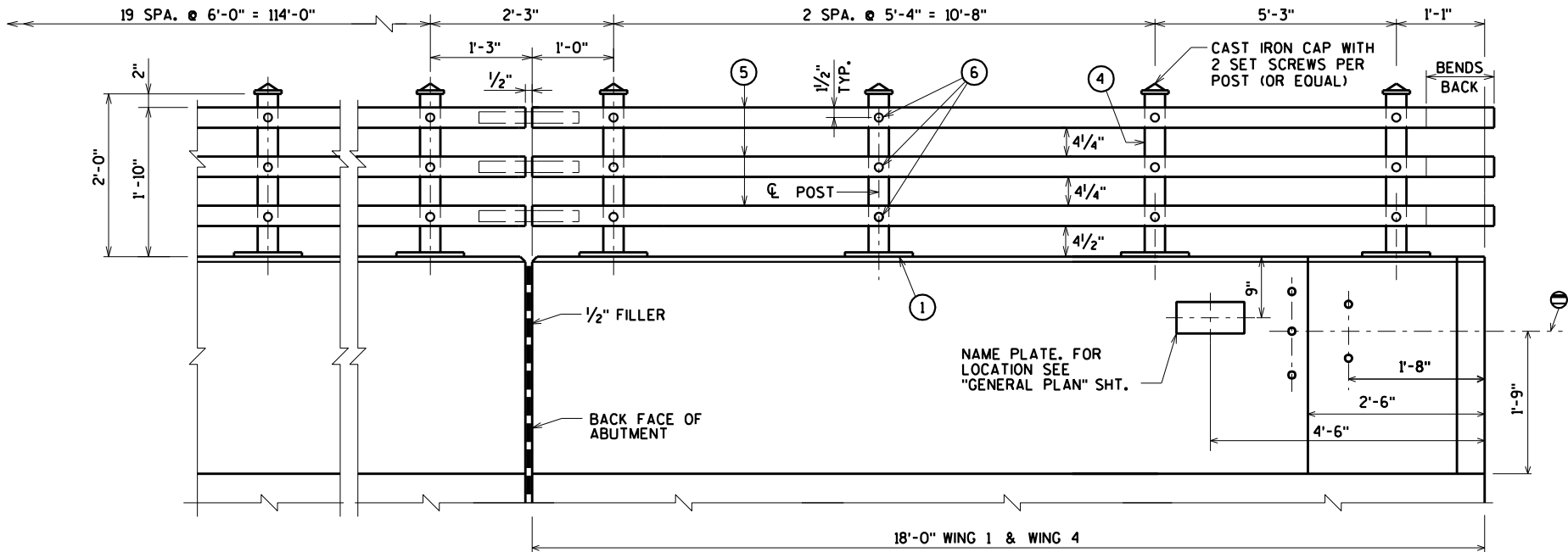
⊗ 3/4" DIA. DRAIN HOLE IN
BOTTOM OF ALL TUBES.

⊖ CL OF ANCHOR ASSEMBLY
FOR THRIE BEAM. SEE
"GENERAL PLAN" SHT.
FOR LOCATIONS.

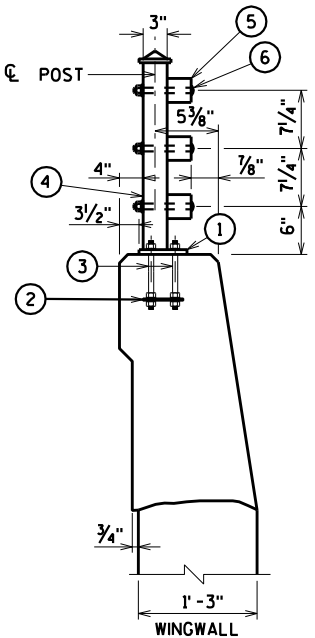
PLAN OF PARAPET
(WING 4 SHOWN, WING 1 SIMILAR)



SECTION THRU PARAPET



ELEVATION OF PARAPET
(LOOKING EAST AT WING 1, WING 4 SIMILAR)



END VIEW
OF RAILING

WORK THIS SHEET WITH SHEET 24

ORIGINAL PLANS PREPARED BY
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
COMBINATION RAILING TYPE 3T			SHEET 23 OF 26



NOTE: ANCHOR PLATE NOT REQUIRED
WHEN ADHESIVE ANCHORS ARE USED.



(2 SETS PER POST)



FIELD ERECTION JOINT DETAIL

☆ MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

- ① BASE PLATE $\frac{1}{2}$ " X 6" X 10" WITH $\frac{1}{4}$ " X $\frac{1}{2}$ " SLOTTED HOLES FOR THRD. RODS NO. 3. WELD TO NO. 4 AS SHOWN. SLOTS PARALLEL TO LONG SIDE OF PLATE.
- ② $\frac{1}{4}$ " X 5" X 9" ANCHOR PLATE (GALVANIZED) WITH $\frac{1}{8}$ " DIA. HOLES FOR THRD. RODS NO. 3.
- ③ $\frac{5}{8}$ " DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP.
(ALTERNATE RAIL POST ANCHORAGE: 4 EQUIVALENT STAINLESS STEEL CONCRETE ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.)
- ④ STRUCTURAL TUBING 3" X 3" X $\frac{3}{16}$ " POSTS, PLACE VERTICAL. WELD TO NO. 1, AND USE 1" DIA. HOLES (FRONT AND BACK) FOR BOLT NO. 6.
- ⑤ STRUCTURAL TUBING 3" X 3" X $\frac{3}{16}$ " RAILS, WITH $\frac{1}{8}$ " DIA. HOLES (FRONT AND BACK) FOR BOLT NO. 6. BOLT TO NO. 4.
- ⑥ $\frac{5}{8}$ " DIA. A325 SLOTTED ROUND HEAD BOLT WITH HEX NUT, $\frac{3}{16}$ " X $\frac{1}{2}$ " X $\frac{1}{2}$ " WASHER, AND LOCK WASHER.
- ⑦ RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. PROVIDE "SLIDING FIT".
- ⑧ RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. (1'-4" @ FIELD ERECTION JTS.)

BID ITEM SHALL BE "RAILING STEEL TYPE 3T", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

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.

ENDS OF STRUCTURAL TUBING SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES.
ALL CUT ENDS SHALL BE TRUE AND SMOOTH.

ALL PLATES, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B. ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING, SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATE NO.1, WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS
 IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

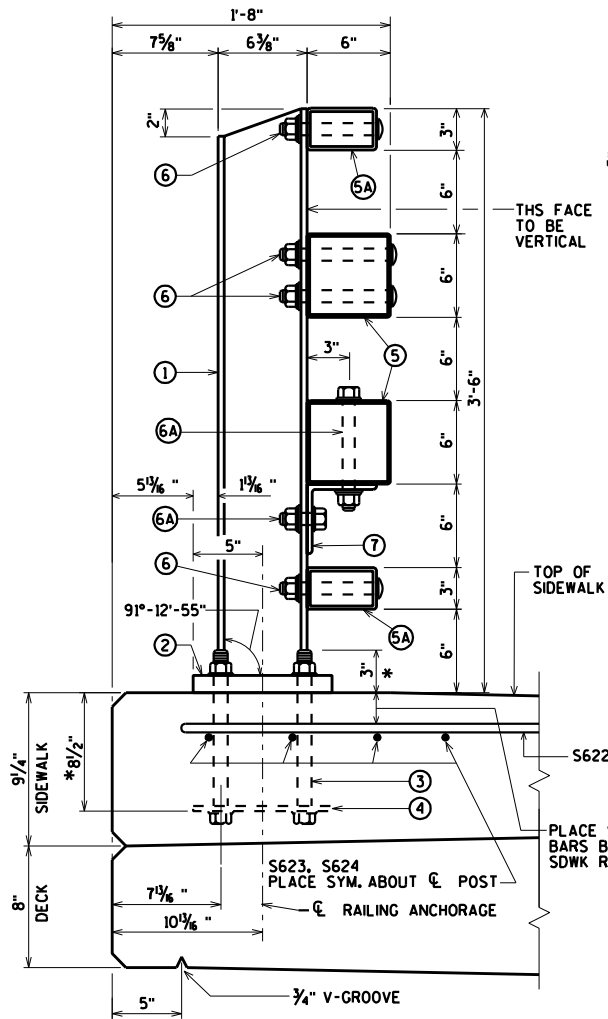
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
		DRAWN BY	CLS
		PLANS CK'D.	CBM
COMBINATION RAILING TYPE 3T		SHEET 24 OF 24	

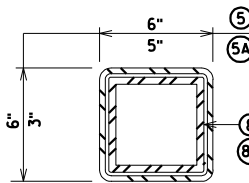
LEGEND

- ① W6 X 25 WITH 1/8" X 1/8" HORIZONTAL SLOTTED HOLES ON EACH SIDE OF POST FOR BOLT NO. 6 AT TOP TWO RAILS. USE 1" DIA. HOLES FOR BOLTS NO. 6 AT BOTTOM NO. 5A & FOR BOLT NO. 6A AT NO. 7. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF SIDEWALK. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1/4" X 10" X 1'-2" WITH 1/8" X 1/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
- ③ ASTM A449 - 1" DIA. ANCHOR BOLTS WITH HEAVY HEX NUT AND 2" O.D. HARDENED WASHER (ALL GALVANIZED). 4 REQUIRED PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 11/2" LONG BOLT. USE 1'-9" LONG IN ABUTMENT WINGS (AN EQUIVALENT THREADED ROD WITH HEAVY HEX NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQUIRED FOR CONSTRUCTABILITY.)
- ④ 3/8" X 10" X 1'-2" ANCHOR PLATE (GALVANIZED) WITH 1/8" DIA. HOLES FOR ANCHOR BOLTS NO. 3.
- ⑤ TS 6 X 6 X 3/8" STRUCTURAL TUBING. USE 1" DIA. HOLES FOR BOLT NO. 6 (FRONT & BACK) & 3/8" DIA. HOLES FOR BOLT NO. 6A (TOP & BOTTOM).
- ⑤A TS 5 X 3 X 1/4" STRUCTURAL TUBING. USE 1" DIA. HOLES FOR BOLT NO. 6 IN TOP RAIL (FRONT & BACK). USE 1/8" X 1/8" HORIZONTAL SLOTTED HOLES FOR BOLT NO. 6 IN BOTTOM RAIL (FRONT & BACK) AND A 2" O.D. WASHER UNDER BOLT HEAD.
- ⑥ 3/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH HEX NUT, 3/8" X 1 1/4" X 1 1/4" WASHER, AND SPRING LOCK WASHER (2 REQUIRED AT RAIL TO POST LOCATIONS SHOWN).
- ⑥A 3/4" DIA. A325 BOLT WITH HEX NUT AND SPRING LOCK WASHER (1 REQUIRED AT RAIL TO ANGLE AND 2 REQUIRED AT ANGLE TO POST LOCATIONS SHOWN WITH 3/8" X 1 1/4" WASHER).
- ⑦ L 5 X 5 X 5/8" STRUCTURAL ANGLE. ATTACH TO NO. 1 AND NO. 5 AS SHOWN.
- ⑧ TS 5 X 5 X 3/8" X 2'-4" LONG SPLICE TUBE. 1 PER RAIL. USED IN NO. 5.
- ⑧A 4/4" X 2/8" X 2'-4" LONG SPLICE BAR. 1 PER RAIL. USED IN NO. 5A.
- ⑨ 3/4" DIA. A325 FULLY THREADED BOLTS, 7/2" LONG, WITH 2 WASHERS AND HEAVY HEX NUT ON EACH BOLT. NUT TO BE FINGER TIGHT. (4 REQUIRED PER SPLICE). USE 1" X 4" SLOTTED HOLES IN TOP AND BOTTOM OF NO. 5.
- ⑨A 3/4" DIA. A325 FULLY THREADED BOLTS, 4 1/2" LONG, WITH 2 WASHERS AND HEAVY HEX NUT ON EACH BOLT. NUT TO BE FINGER TIGHT. (4 REQUIRED PER SPLICE). USE 1" X 4" SLOTTED HOLES IN TOP AND BOTTOM OF NO. 5A.
- ⑩ SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- 1/2" OPENING FOR ABUTMENT. 1/2" AT FIXED JOINTS.
- ▲ PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE RAILS, SPLICE TUBES AND FILL PLATES.
- TIE TO TOP MAT OF STEEL.

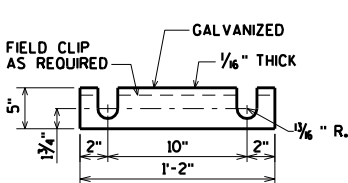
FOR NOTES AND
PART ELEVATION OF RAILING AT POST DETAIL
SEE SHEET 26



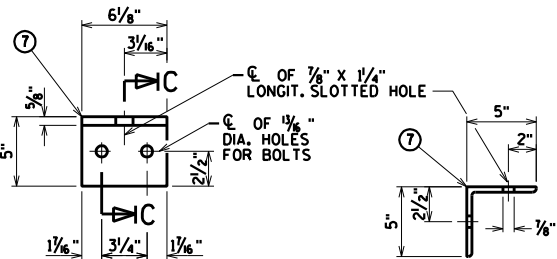
SECTION THRU RAILING ON DECK
*NORMAL TO BASE PLATE



SECTION D-D

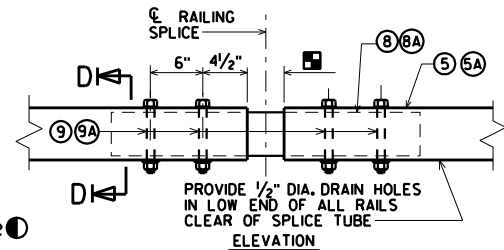
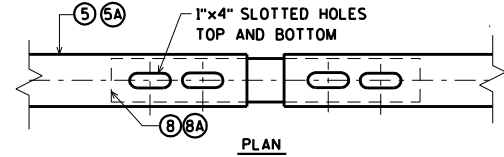


POST SHIM DETAIL

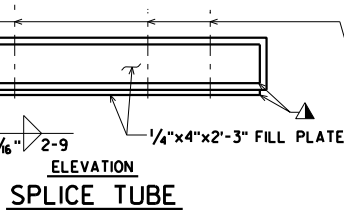
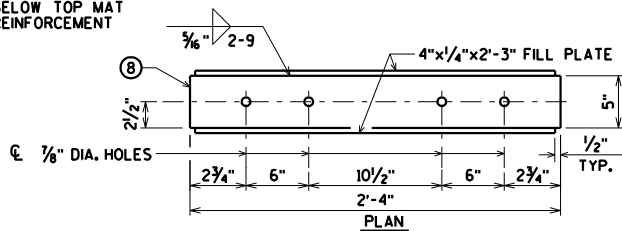


RAILING ANGLE DETAIL
INTERIOR ELEVATION

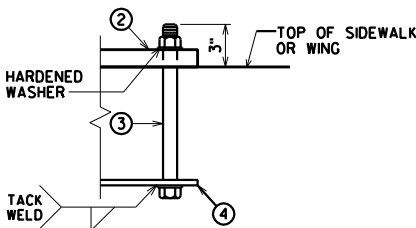
SECTION C-C
ANGLE SECTION



FIELD ERECTION JOINT DETAIL

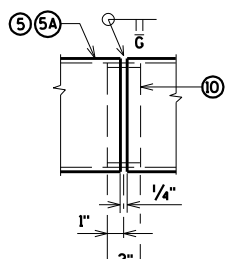


SPLICE TUBE



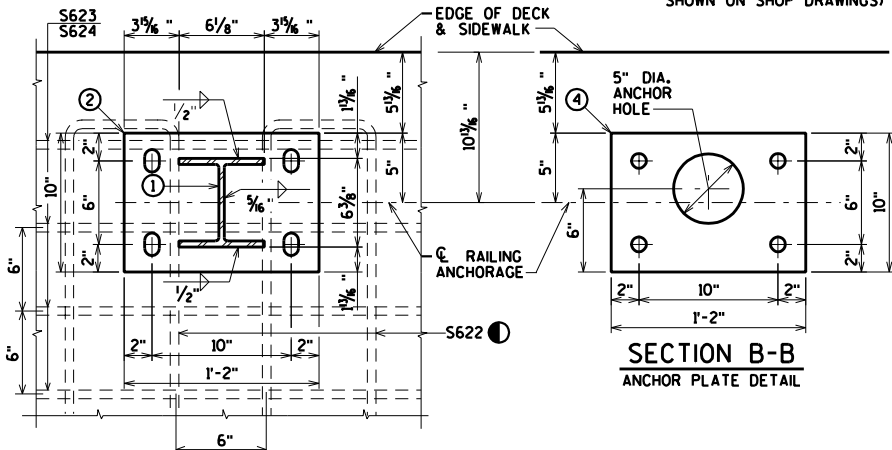
ANCHOR BOLTS

FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

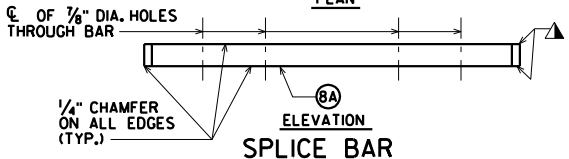
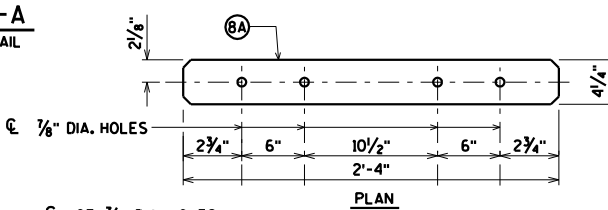


SHOP RAIL
SPLICE DETAIL

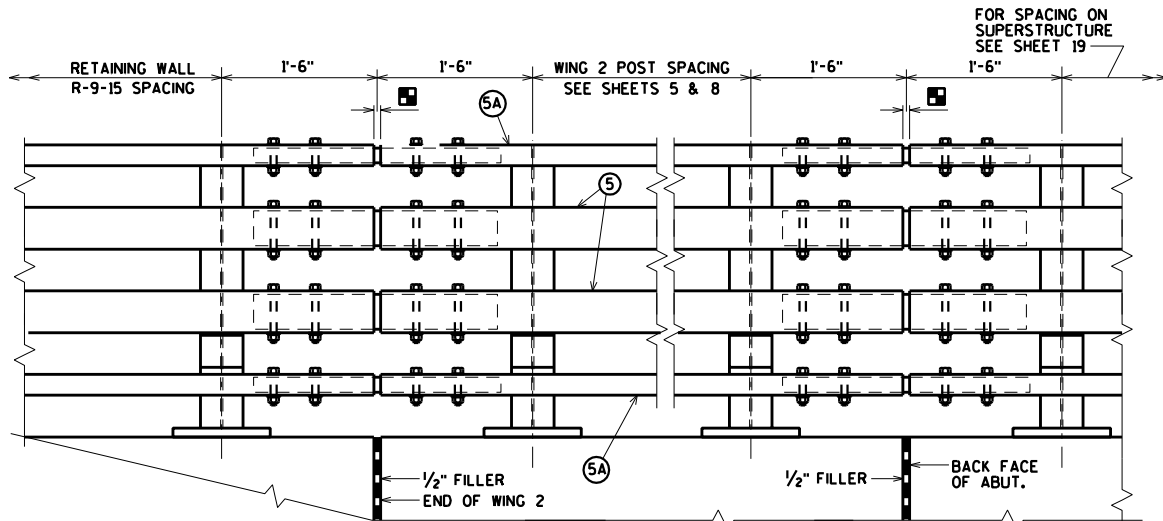
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



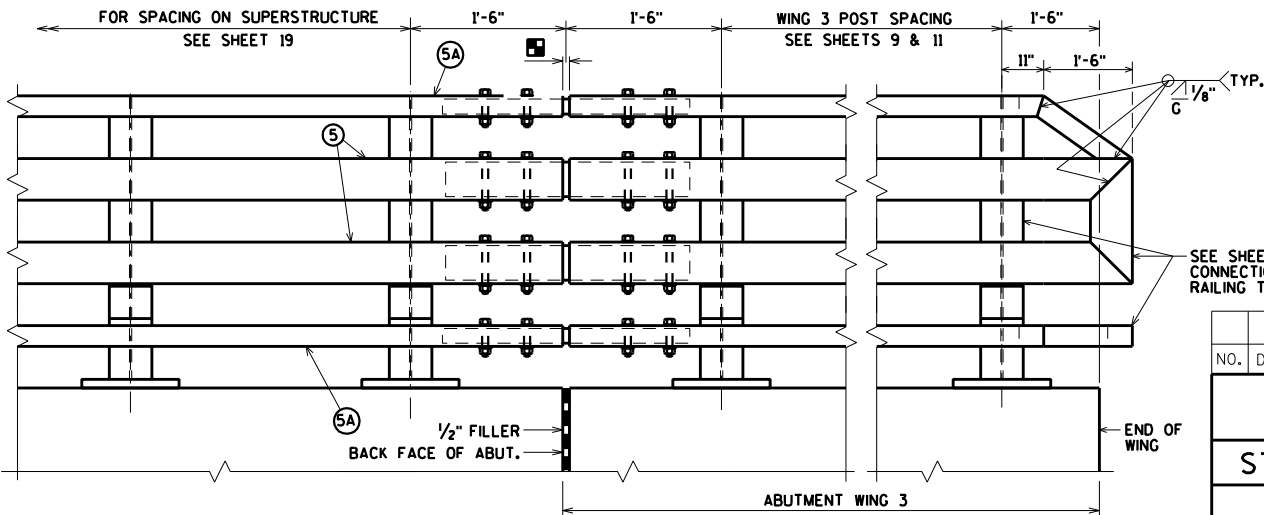
SECTION A-A
BASE PLATE DETAIL



SPLICE BAR



PART ELEVATION OF RAILING
INTERIOR ELEVATION

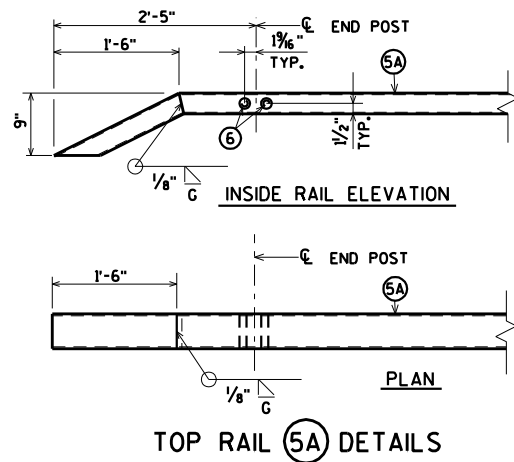
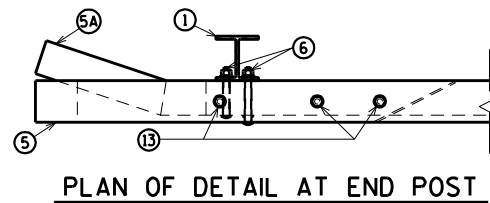
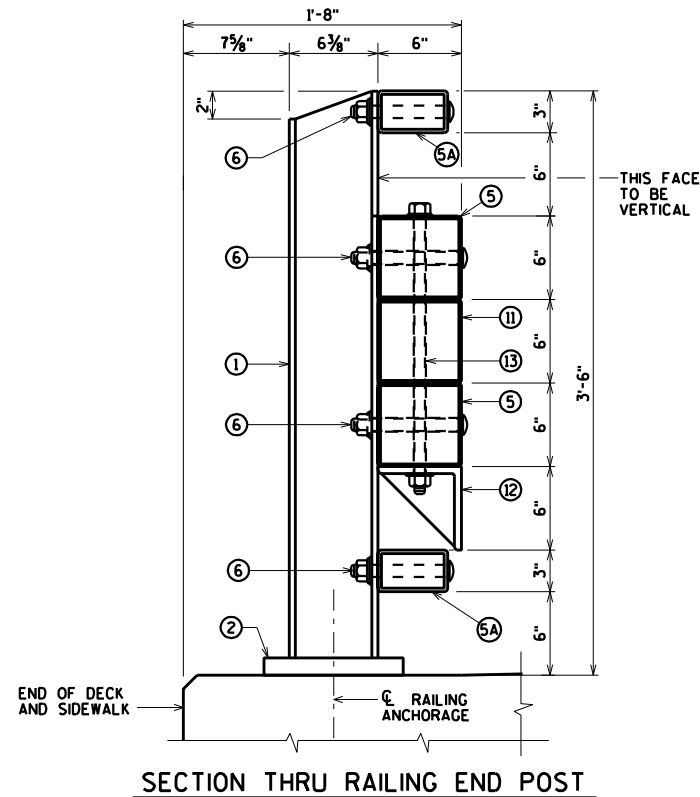
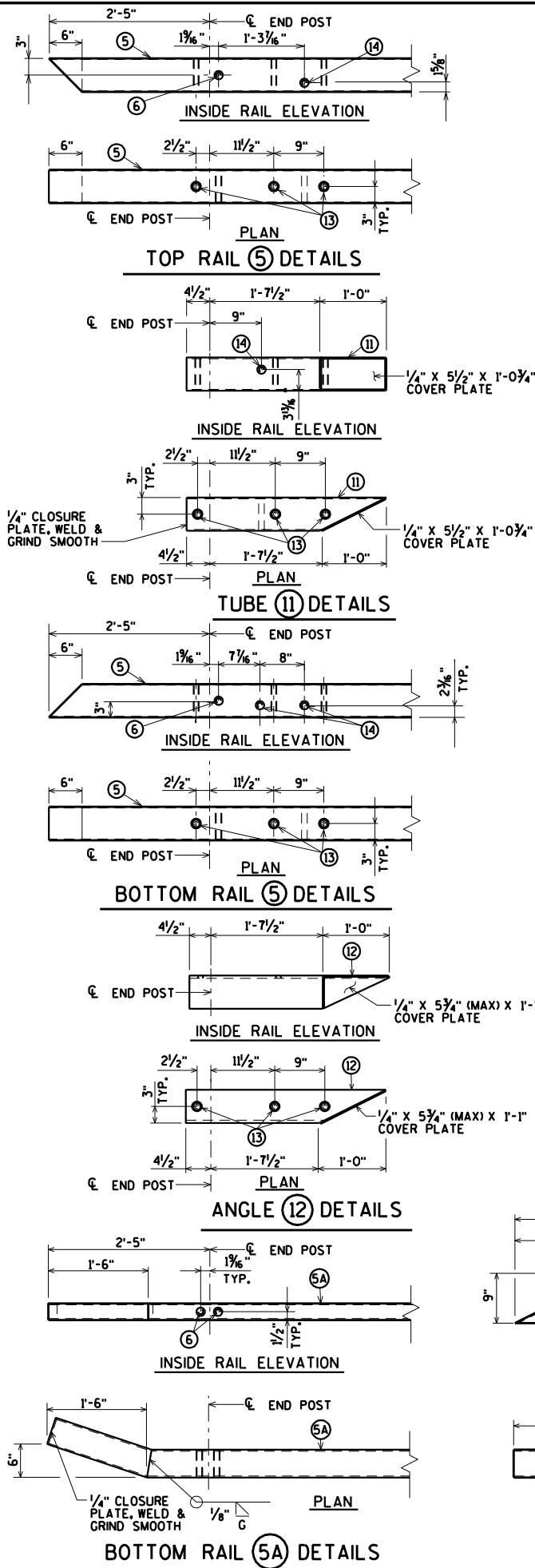


ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
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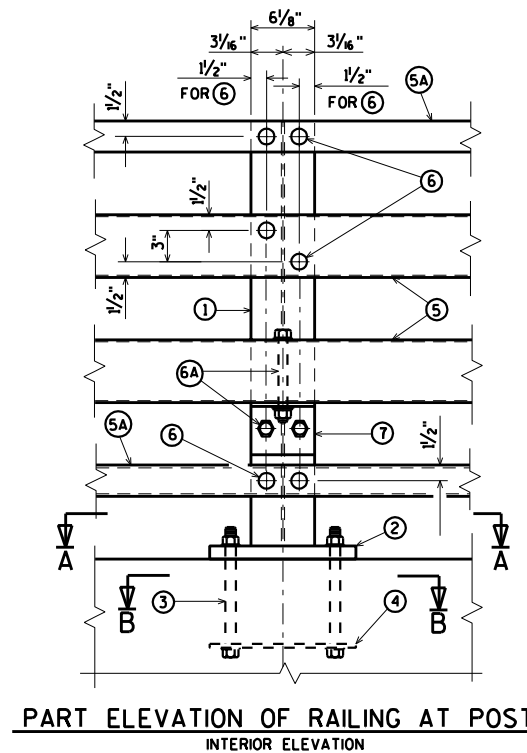
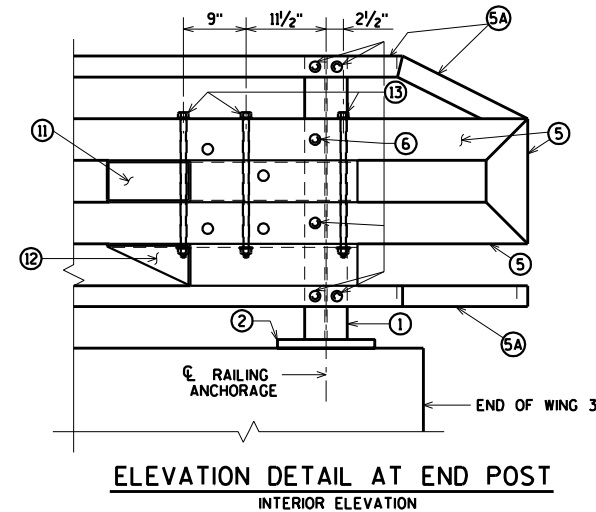
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
TUBULAR STEEL RAILING TYPE NY4		SHEET 25 OF 26	

\$PRNAME\$
U:\42-0995,00 - Chippewa Co - In LaFayette - 195th St±BRIDGE RE-DO JUNE 2018±420995 NY4 rail.dgn

8



THIS FACE TO BE VERTICAL



NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE NY4", WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.

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.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS, ANGLES, SPLICE TUBES, SPLICE BARS AND STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

RAIL POST, BASE PLATES, SPLICE BAR, ANGLES AND SPLICE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED $f_y = 50$ KSI. ANCHOR PLATES & SHIMS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.

THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.

FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. CAULK AROUND PERIMETER OF NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER PLATE NO. 2 WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

WORK THIS SHEET WITH "END POST DETAILS FOR TUBULAR STEEL RAILING TYPE NY4" SHEET.

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

STATE PROJECT NUMBER

7863-00-71

LEGEND

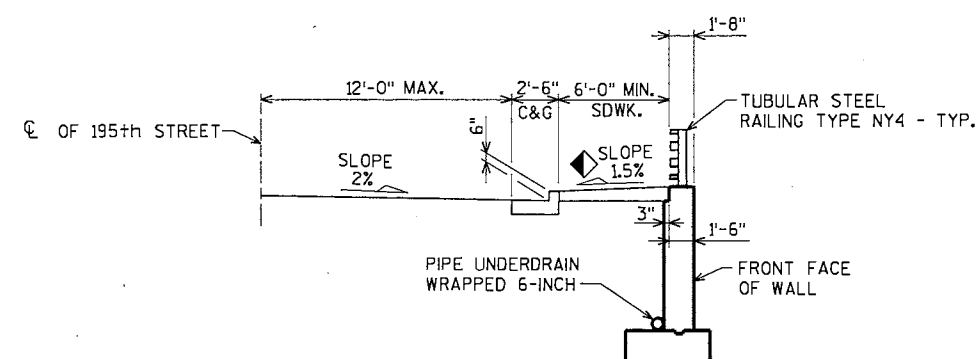
- W6 X 25 WITH 1/8" X 1 3/8" HORIZONTAL SLOTTED HOLES ON SIDE OF POST FOR BOLT NO. 6 AT NO. 5 & AT TOP RAIL NO. 5A. USE 1" DIA. HOLE FOR BOLT NO. 6 AT NO. 5A BOTTOM RAIL. CUT BOTTOM OF POST LEVEL. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- PLATE 1/4" X 10" X 1'-2". SEE SHEET "TUBULAR STEEL RAILING NY4" FOR MORE INFORMATION.
- TS 6 X 6 X 3/8" STRUCTURAL TUBING. USE 7/8" DIA. HOLES IN TOP AND BOTTOM OF RAILS FOR BOLT NO. 13 AS SHOWN IN PLAN DETAILS. USE 1" DIA. HOLES IN FRONT AND BACK OF RAILS FOR BOLTS NO. 6 AS SHOWN IN ELEVATION DETAILS.
- TS 5 X 3 X 1/4" STRUCTURAL TUBING. USE 1" DIA. HOLES FOR BOLT NO. 6 IN TOP RAIL (FRONT & BACK). USE 1/8" X 1 3/8" HORIZONTAL SLOTTED HOLES FOR BOLT NO. 6 IN BOTTOM RAIL (FRONT & BACK) AND A 2" O.D. WASHER UNDER BOLT HEAD.
- 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH HEX NUT, 3/8" X 1 3/4" X 1 3/4" WASHER, AND SPRING LOCK WASHER (1 REQUIRED AT RAIL NO. 5 TO POST NO. 1 CONNECTION LOCATIONS SHOWN, 2 REQUIRED AT RAIL NO. 5A TO POST NO. 1 CONNECTION LOCATIONS SHOWN).
- TS 6 X 6 X 3/8" STRUCTURAL TUBING. USE 7/8" DIA. HOLES IN TOP AND BOTTOM FOR BOLT NO. 13.
- L 6 X 6 X 1/2" STRUCTURAL ANGLE. USE 7/8" DIA. HOLES IN TOP FLANGE FOR BOLT NO. 13.
- 3/4" DIA. A325 FULLY THREADED BOLTS, 2 WASHERS AND A HEAVY HEX NUT, ON EACH BOLT. NUT TO BE FINGER TIGHT. 3 BOLTS AT EACH END POST.

NOTES

STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED $f_y = 50$ KSI. STRUCTURAL ANGLE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50.

WORK THIS SHEET WITH "TUBULAR STEEL RAILING TYPE NY4" SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-305			
DRAWN BY		CLS	PLANS CK'D. CBM
END POST DETAILS FOR TUBULAR STEEL RAILING TYPE NY4			SHEET 26 OF 26



TYPICAL SECTION THRU RETAINING WALL
(LOOKING SOUTH)

◆ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

DESIGN DATA

MATERIAL PROPERTIES:

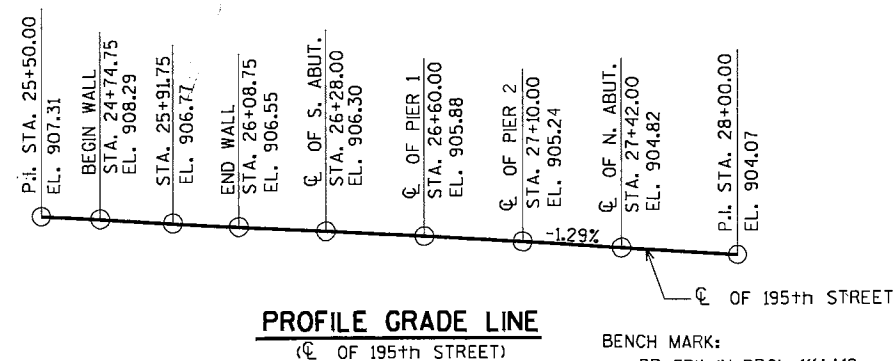
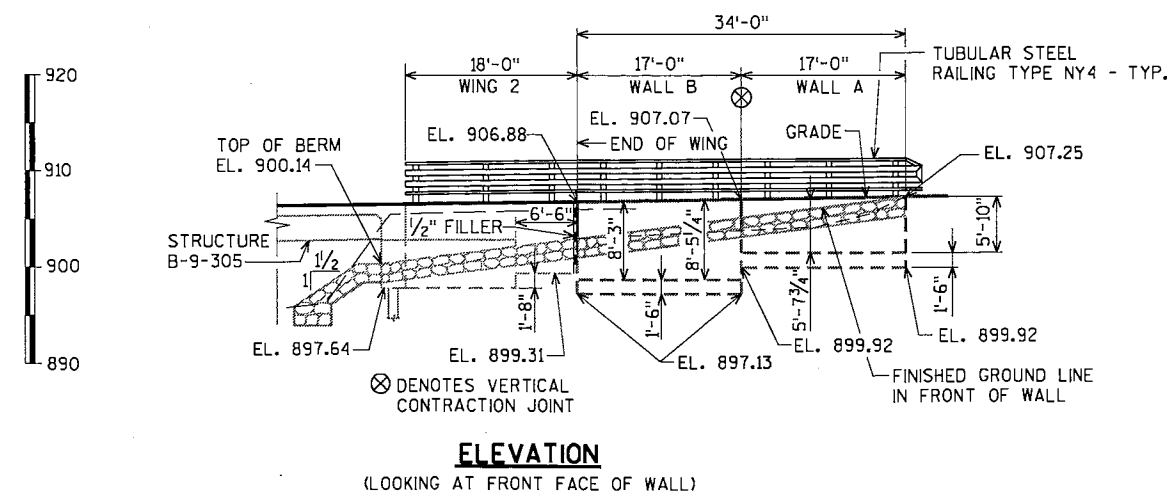
CONCRETE MASONRY _____ $f'_c =$ 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) _____ $f_y =$ 60,000 p.s.i.

FOUNDATION DATA:

RETAINING WALL TO BE SUPPORTED ON A SPREAD FOOTING WITH
A DESIGN BEARING PRESSURE OF 1.0 TONS PER SQUARE FOOT.

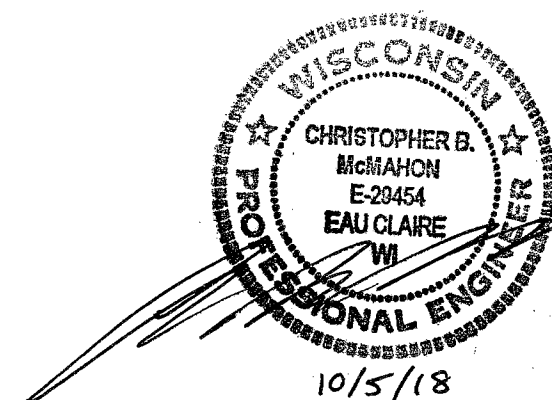
TRAFFIC DATA:

A.A.D.T. = 860 (2019)
A.A.D.T. = 1,160 (2039)
R.D.S. = 35 M.P.H.



LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. RETAINING WALLS A & B
4. RETAINING WALL DETAILS AND BILL OF BARS
5. TUBULAR STEEL RAILING TYPE NY4
6. END POST DETAILS FOR TUBULAR STEEL RAILING TYPE NY4



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

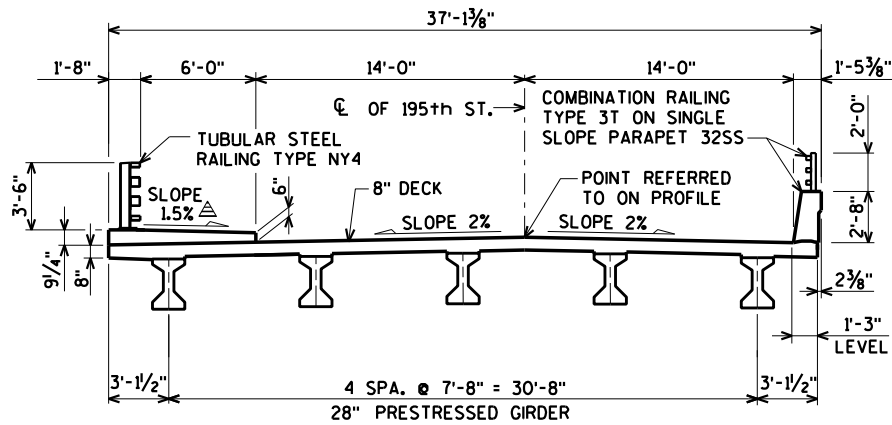
CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Diehn</i> ^{SOR} CHIEF STRUCTURES DESIGN ENGINEER		11/08/18 DATE
STRUCTURE R-9-15			
195TH STREET OVER PAINT CREEK			
COUNTY	CHIPPEWA	TOWN/CITY/VILLAGE	LAFAYETTE
DESIGN SPEC.			
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	CJM	DESIGN CK'D.	JLB
DRAWN BY	CLS	PLANS CK'D.	CBM
GENERAL PLAN			SHEET 1 OF 6

\$PRNAME\$
U:\42-0995.00 - Chippewa Co - Tr LaFayette - 195th St+ B RETAINING WALL\420995 wall.gp.dgn

STATE PROJECT NUMBER

7863-00-71



CROSS SECTION THRU BRIDGE
(LOOKING NORTH)

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL SHALL BE EMBEDDED 2 INCHES 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.

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

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF THE WALL AS SHOWN IN DETAIL ON THIS SHEET.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-9-15" SHALL BE THE EXISTING GROUNDLINE.

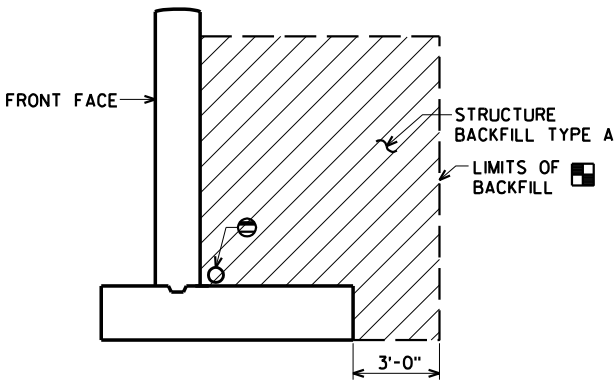
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.

SECTION MODULAS OF PILING STEEL SHEET PERMANENT SHOULD BE A MINIMUM OF 24.2 IN³/FT.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
206.3000.01	EXCAVATION FOR STRUCTURES RETAINING WALLS R-9-15	LS	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	885
502.3200	PROTECTIVE SURFACE TREATMENT	SY	10
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	30
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,130
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,930
512.0500	PILING STEEL SHEET PERMANENT DELIVERED	SF	1,005
512.0600	PILING STEEL SHEET PERMANENT DRIVEN	SF	1,005
513.7084	RAILING STEEL TYPE NY4 R-9-15	LF	35
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	3
606.0300	RIPRAP HEAVY	CY	50
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	60
645.0120	GEOTEXTILE TYPE HR	SY	95
	NON-BID ITEMS		
	FILLER	SIZE	1/2"

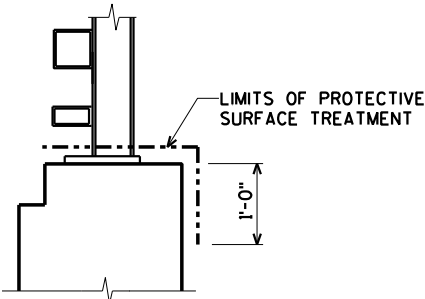


BACKFILL STRUCTURE LIMITS

SEE SHEET 4 FOR DETAILS OF BACKFILL STRUCTURE UNDER THE FOOTING

BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO "EXCAVATION FOR STRUCTURES RETAINING WALLS R-9-15". 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 4.



PROTECTIVE SURFACE TREATMENT DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE R-9-15			
	DRAWN BY	CLS	PLANS CK'D. CBM
QUANTITIES AND NOTES			SHEET 2 OF 6

ORIGINAL PLANS PREPARED BY
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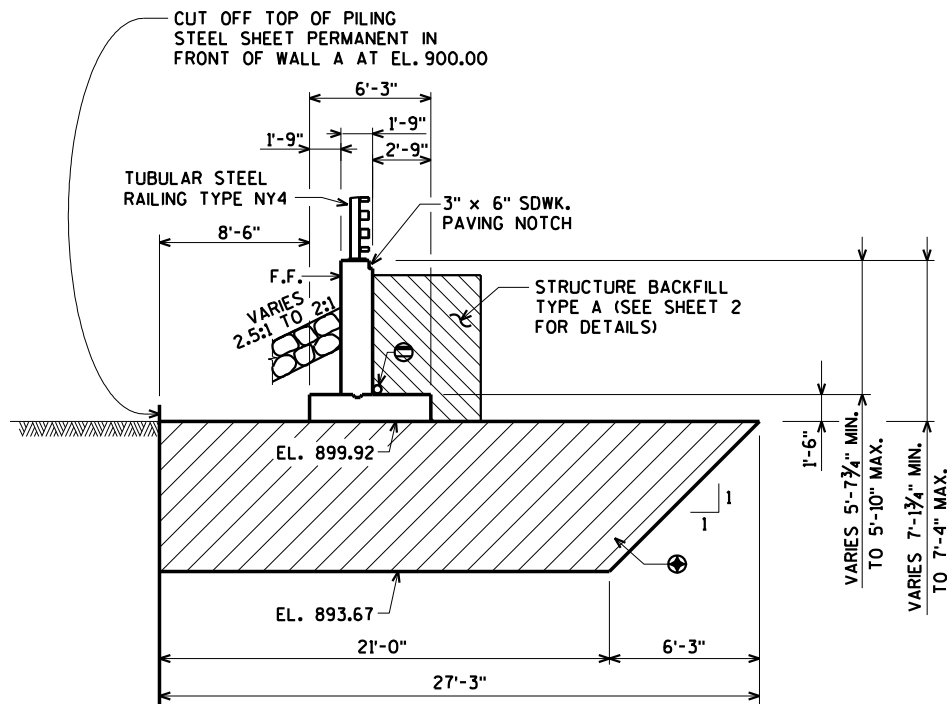
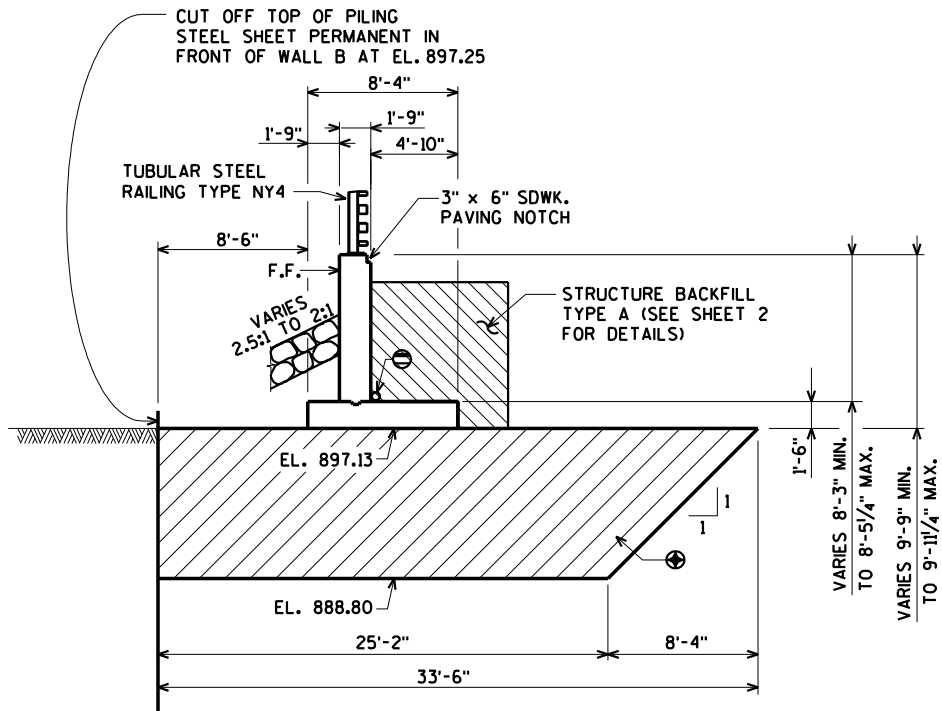


- | | | | |
|--|------|--------------|---------------------------|
| | | | |
| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE R-9-15 | | | |
| | | DRAWN
BY | CLS
PLANS
CK'D. CMB |
| RETAINING
WALLS A & B | | SHEET 3 OF 6 | |

\$PRNAME\$
U:\42-0995,00 - Chippewa Co - Tn LaFayette - 195th St+B RETAINING WALL+420995 wall details.dgn

STATE PROJECT NUMBER

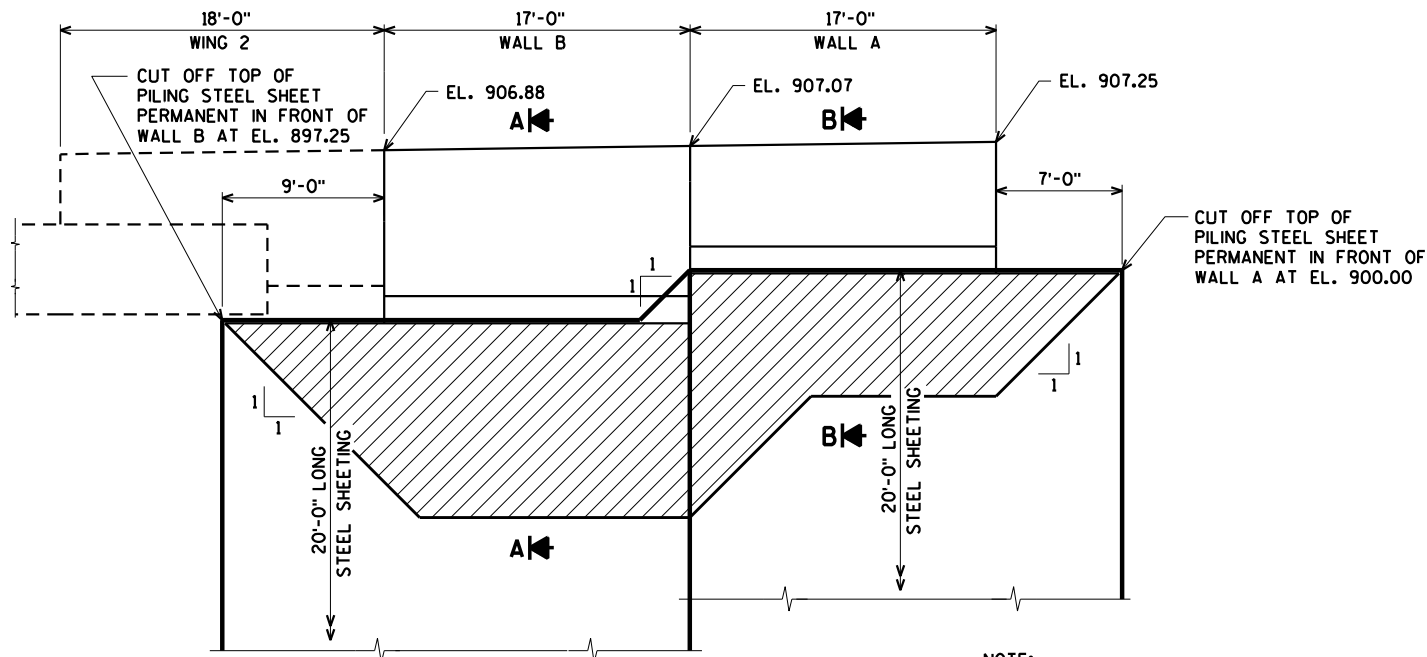
7863-00-71



BILL OF BARS

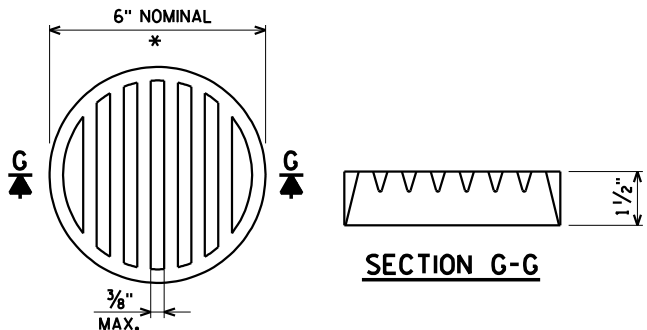
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	1,930# COATED 1,130# UNCOATED
							LOCATION
A501		28	16-8				RETAINING WALL FOOTING TOP & BOT.
A402		18	8-0				RETAINING WALL FOOTING BOT. WALL B
A603		23	8-0				RETAINING WALL FOOTING TOP WALL B
A404		18	5-11				RETAINING WALL FOOTING BOT. WALL A
A605		23	5-11				RETAINING WALL FOOTING TOP WALL A
A406	X	36	3-5	X			RETAINING WALL DOWELS F.F. WALLS A & B
A507	X	36	4-6	X			RETAINING WALL DOWELS B.F. WALLS A & B
A408	X	18	8-1				RETAINING WALL VERT. F.F. WALL B
A509	X	18	7-7				RETAINING WALL VERT. B.F. WALL B
A410	X	18	5-3				RETAINING WALL VERT. F.F. WALL A
A511	X	18	4-9				RETAINING WALL VERT. B.F. WALL A
A512	X	24	16-8				RETAINING WALL HORIZ. E.F. WALLS A & B
A613	X	46	5-2	X			RETAINING WALL VERT. TOP WALLS A & B
A614	X	4	16-8				RETAINING WALL HORIZ. TOP E.F. WALLS A & B
A615	X	46	4-6	X			RETAINING WALL VERT. TOP WALLS A & B
A616	X	4	16-8				RETAINING WALL HORIZ. TOP WALLS A & B

BENDING DIMENSIONS ARE OUT TO OUT OF BARS



ELEVATION OF PILING STEEL SHEETING
(LOOKING AT FRONT FACE OF WALL)

NOTE:
SECTION MODULAS OF PILING STEEL
SHEET PERMANENT SHOULD BE A
MINIMUM OF 24.2 IN³/FT.



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

RODENT SHIELD DETAIL

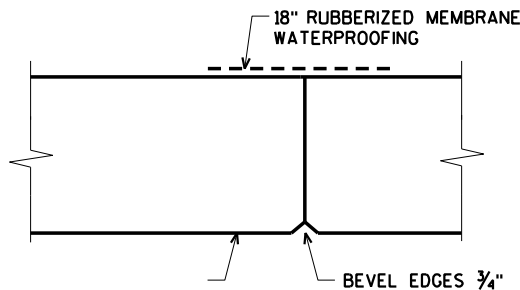
⊕ REMOVE LOOSE MATERIAL AND REPLACE WITH
STRUCTURE BACKFILL TYPE A AS SHOWN.
COST TO REMOVE LOOSE MATERIAL AS SHOWN IS
INCLUDED IN THE BID ITEM "EXCAVATION FOR
STRUCTURES RETAINING WALLS R-9-15".

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5%
MIN. TO SUITABLE DRAINAGE. ATTACH RODENT
SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAIL
ON THIS SHEET.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.



VERTICAL CONTRACTION JOINT DETAIL
DO NOT RUN ANY BAR STEEL THRU JOINT

ORIGINAL PLANS PREPARED BY
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE R-9-15			
DRAWN BY		CLS	PLANS CK'D. CBM
RETAINING WALL DETAILS AND BILL OF BARS		SHEET 4 OF 6	

LEGEND

- ① W6 X 25 WITH 1/8" X 1/8" HORIZONTAL SLOTTED HOLES ON EACH SIDE OF POST FOR BOLT NO. 6 AT TOP TWO RAILS. USE 1" DIA. HOLES FOR BOLTS NO. 6 AT BOTTOM NO. 5A & FOR BOLT NO. 6A AT NO. 7. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF SIDEWALK. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1/4" X 10" X 1'-2" WITH 1/8" X 1/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
- ③ ASTM A449 - 1" DIA. ANCHOR BOLTS WITH HEAVY HEX NUT AND 2" O.D. HARDENED WASHER (ALL GALVANIZED). 4 REQUIRED PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 11/2" LONG BOLT. USE 1'-9" LONG IN ABUTMENT WINGS AND RETAINING WALLS. (AN EQUIVALENT THREADED ROD WITH HEAVY HEX NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQUIRED FOR CONSTRUCTABILITY.)
- ④ 3/8" X 10" X 1'-2" ANCHOR PLATE (GALVANIZED) WITH 1/8" DIA. HOLES FOR ANCHOR BOLTS NO. 3.
- ⑤ TS 6 X 6 X 3/8" STRUCTURAL TUBING. USE 1" DIA. HOLES FOR BOLT NO. 6 (FRONT & BACK) & 7/8" DIA. HOLES FOR BOLT NO. 6A (TOP & BOTTOM).
- ⑤A TS 5 X 3 X 1/4" STRUCTURAL TUBING. USE 1" DIA. HOLES FOR BOLT NO. 6 IN TOP RAIL (FRONT & BACK). USE 1/8" X 1 3/8" HORIZONTAL SLOTTED HOLES FOR BOLT NO. 6 IN BOTTOM RAIL (FRONT & BACK) AND A 2" O.D. WASHER UNDER RAIL HEAD.
- ⑥ 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH HEX NUT, 3/8" X 1 3/4" X 1 3/4" WASHER, AND SPRING LOCK WASHER (2 REQUIRED AT RAIL TO POST LOCATIONS SHOWN).
- ⑥A 7/8" DIA. A325 BOLT WITH HEX NUT AND SPRING LOCK WASHER (1 REQUIRED AT RAIL TO ANGLE AND 2 REQUIRED AT ANGLE TO POST LOCATIONS SHOWN WITH 3/8" X 1 3/4" WASHER).
- ⑦ L 5 X 5 X 5/8" STRUCTURAL ANGLE. ATTACH TO NO. 1 AND NO. 5 AS SHOWN.
- ⑧ TS 5 X 5 X 3/8" X 2'-4" LONG SPLICE TUBE. 1 PER RAIL. USED IN NO. 5.
- ⑧A 4/4" X 2/8" X 2'-4" LONG SPLICE BAR. 1 PER RAIL. USED IN NO. 5A.
- ⑨ 7/8" DIA. A325 FULLY THREADED BOLTS, 7/2" LONG, WITH 2 WASHERS AND HEAVY HEX NUT ON EACH BOLT. NUT TO BE FINGER TIGHT. (4 REQUIRED PER SPLICE). USE 1" X 4" SLOTTED HOLES IN TOP AND BOTTOM OF NO. 5.
- ⑨A 7/8" DIA. A325 FULLY THREADED BOLTS, 4/2" LONG, WITH 2 WASHERS AND HEAVY HEX NUT ON EACH BOLT. NUT TO BE FINGER TIGHT. (4 REQUIRED PER SPLICE). USE 1" X 4" SLOTTED HOLES IN TOP AND BOTTOM OF NO. 5A.
- ⑩ SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- 1/2" OPENING FOR AT ABUTMENT. 1/2" AT FIXED JOINTS. SPLICES ARE REQUIRED IN ANY RAILING SPAN BETWEEN POSTS THAT CONTAINS A SUPERSTRUCTURE EXPANSION JOINT.
- ▲ PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE RAILS, SPLICE TUBES AND FILL PLATES.

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE NY4", WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.

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.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS, ANGLES, SPLICE TUBES, SPLICE BARS AND STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

RAIL POST, BASE PLATES, SPLICE BAR, ANGLES AND SPLICE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED 75-50 KSI. ANCHOR PLATES & SHIMS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.

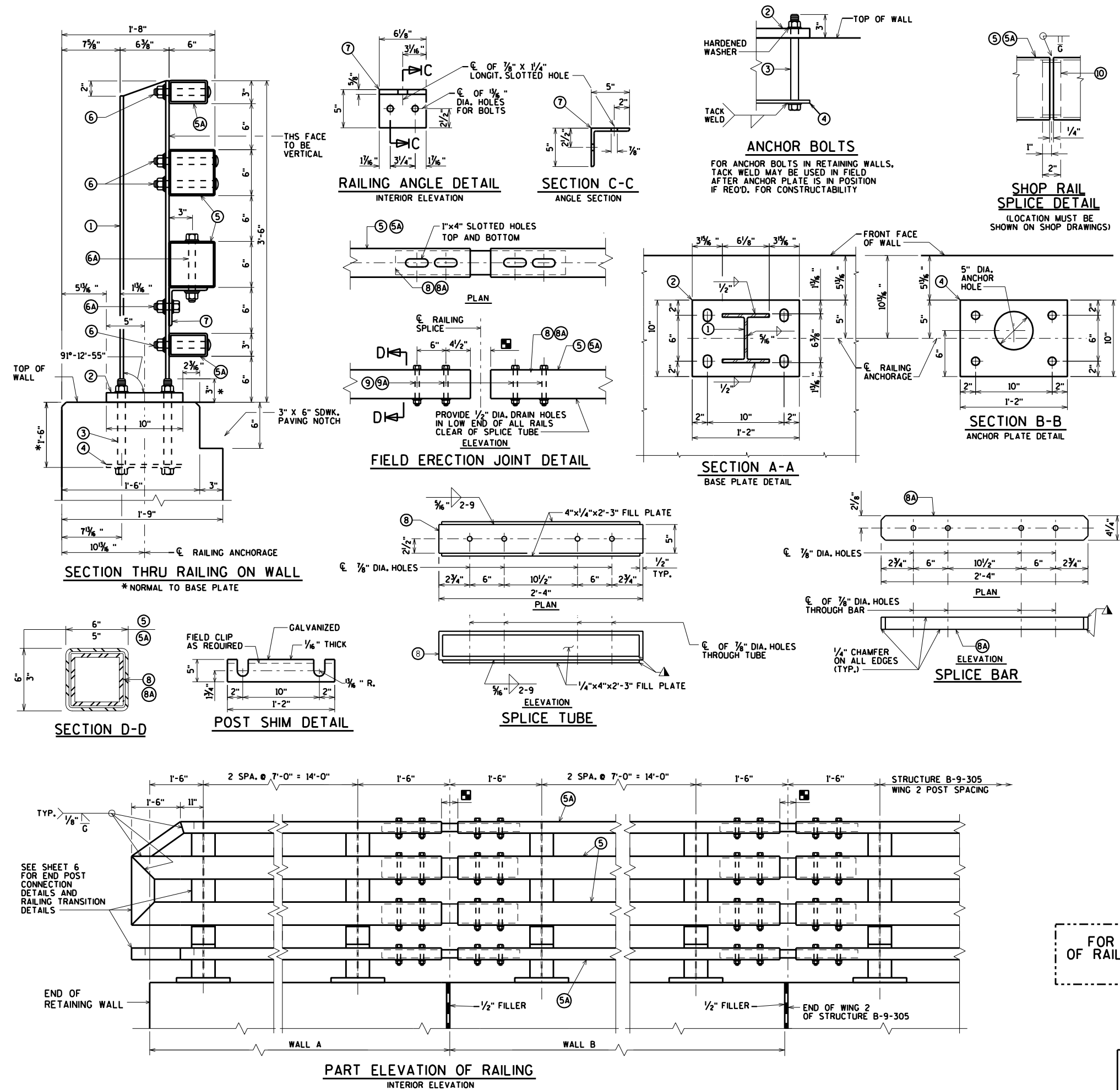
THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.

FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. CAULK AROUND PERIMETER OF NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER PLATE NO. 2 WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

WORK THIS SHEET WITH "END POST DETAILS FOR TUBULAR STEEL RAILING TYPE NY4" SHEET.

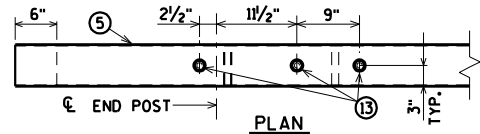
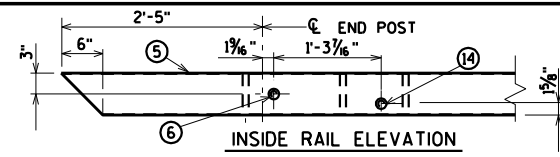


FOR PART ELEVATION
OF RAILING AT POST DETAIL
SEE SHEET 6

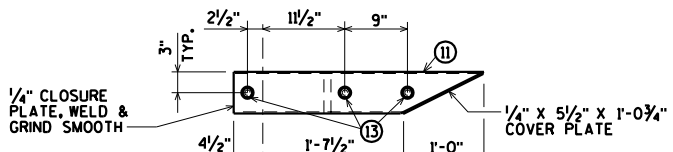
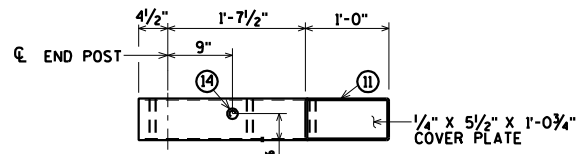
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE R-9-15			
DRAWN BY		CLS	PLANS CK'D. CBM
TUBULAR STEEL RAILING TYPE NY4		SHEET 5 OF 6	

\$PRNAME\$
U:\42-0995,00 - Chippewa Co - In LaFayette - 195th St+B RETAINING WALL+420995 wall NY4 rail.dgn

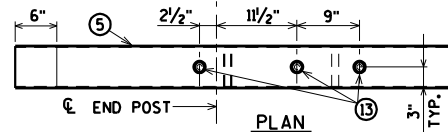
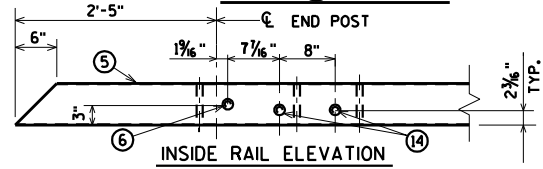
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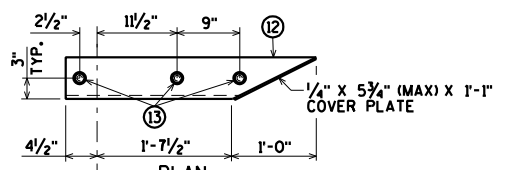
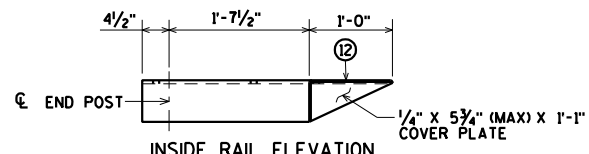
TOP RAIL ⑤ DETAILS



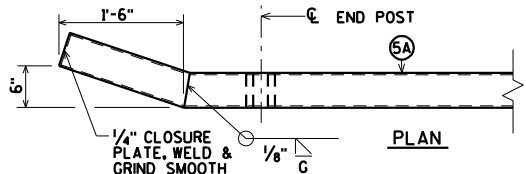
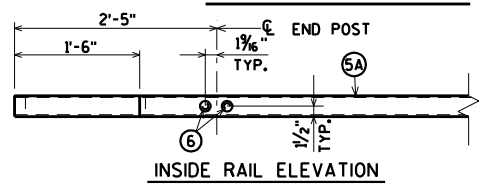
TUBE ⑪ DETAILS



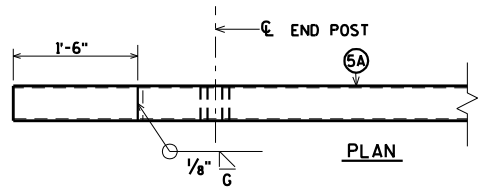
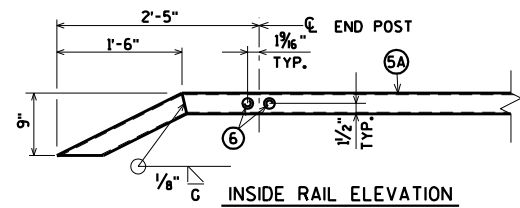
BOTTOM RAIL ⑤ DETAILS



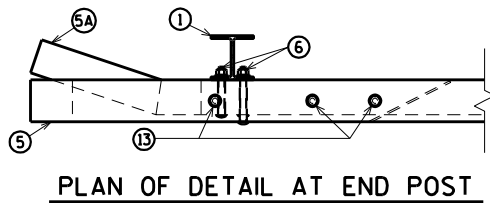
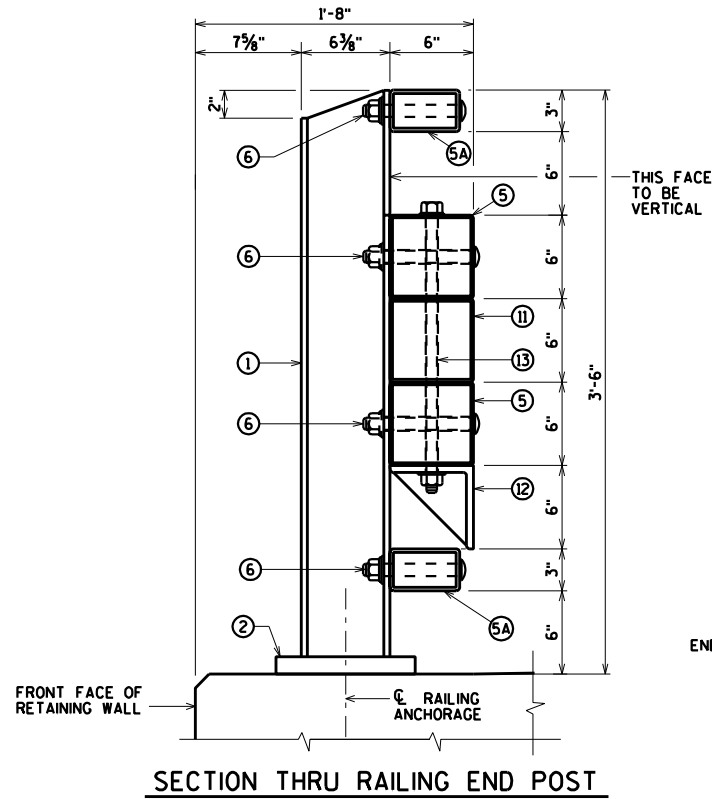
ANGLE ⑫ DETAILS



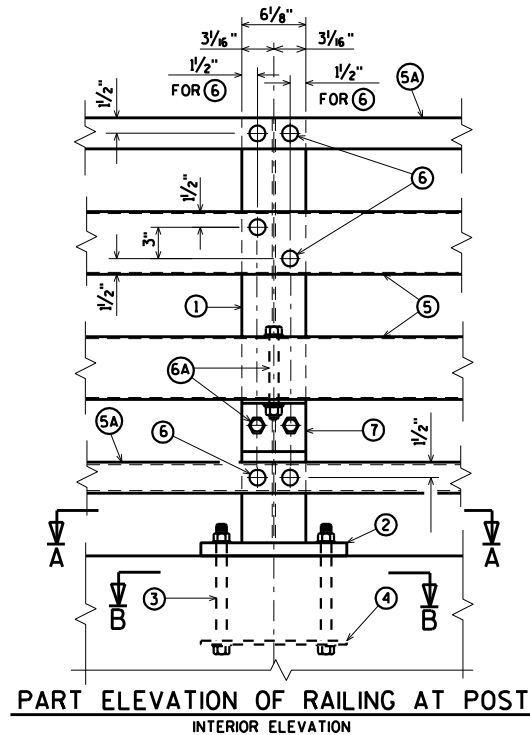
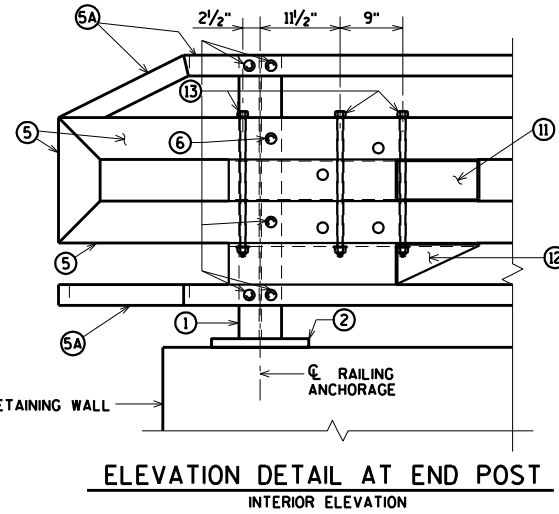
BOTTOM RAIL ⑤A DETAILS



TOP RAIL ⑤A DETAILS



THIS FACE
TO BE
VERTICAL



LEGEND

- ① W6 X 25 WITH 1/8" X 1 3/8" HORIZONTAL SLOTTED HOLES ON SIDE OF POST FOR BOLT NO. 6 AT NO. 5 & AT TOP RAIL NO. 5A. USE 1" DIA. HOLE FOR BOLT NO. 6 AT NO. 5A BOTTOM RAIL. CUT BOTTOM OF POST LEVEL. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1/4" X 10" X 1'-2". SEE SHEET "TUBULAR STEEL RAILING NY4" FOR MORE INFORMATION.
- ③ TS 6 X 6 X 3/8" STRUCTURAL TUBING. USE 3/8" DIA. HOLES IN TOP AND BOTTOM OF RAILS FOR BOLT NO. 13 AS SHOWN IN PLAN DETAILS. USE 1" DIA. HOLES IN FRONT AND BACK OF RAILS FOR BOLTS NO. 6 AS SHOWN IN ELEVATION DETAILS.
- ④ TS 5 X 3 X 1/4" STRUCTURAL TUBING. USE 1" DIA. HOLES FOR BOLT NO. 6 IN TOP RAIL (FRONT & BACK). USE 1/8" X 1 3/8" HORIZONTAL SLOTTED HOLES FOR BOLT NO. 6 IN BOTTOM RAIL (FRONT & BACK) AND A 2" O.D. WASHER UNDER BOLT HEAD.
- ⑤ 3/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH HEX NUT, 3/8" X 1 3/4" X 1 3/4" WASHER, AND SPRING LOCK WASHER (1 REQUIRED AT RAIL NO. 5 TO POST NO. 1 CONNECTION LOCATIONS SHOWN, 2 REQUIRED AT RAIL NO. 5A TO POST NO. 1 CONNECTION LOCATIONS SHOWN).
- ⑥ TS 6 X 6 X 3/8" STRUCTURAL TUBING. USE 3/8" DIA. HOLES IN TOP AND BOTTOM FOR BOLT NO. 13.
- ⑦ L 6 X 6 X 1/2" STRUCTURAL ANGLE. USE 3/8" DIA. HOLES IN TOP FLANGE FOR BOLT NO. 13.
- ⑧ 3/4" DIA. A325 FULLY THREADED BOLTS, 2 WASHERS AND A HEAVY HEX NUT, ON EACH BOLT. NUT TO BE FINGER TIGHT. 3 BOLTS AT EACH END POST.

NOTES

STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED $f_y = 50$ KSI. STRUCTURAL ANGLE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50.

WORK THIS SHEET WITH "TUBULAR STEEL RAILING TYPE NY4" SHEET.

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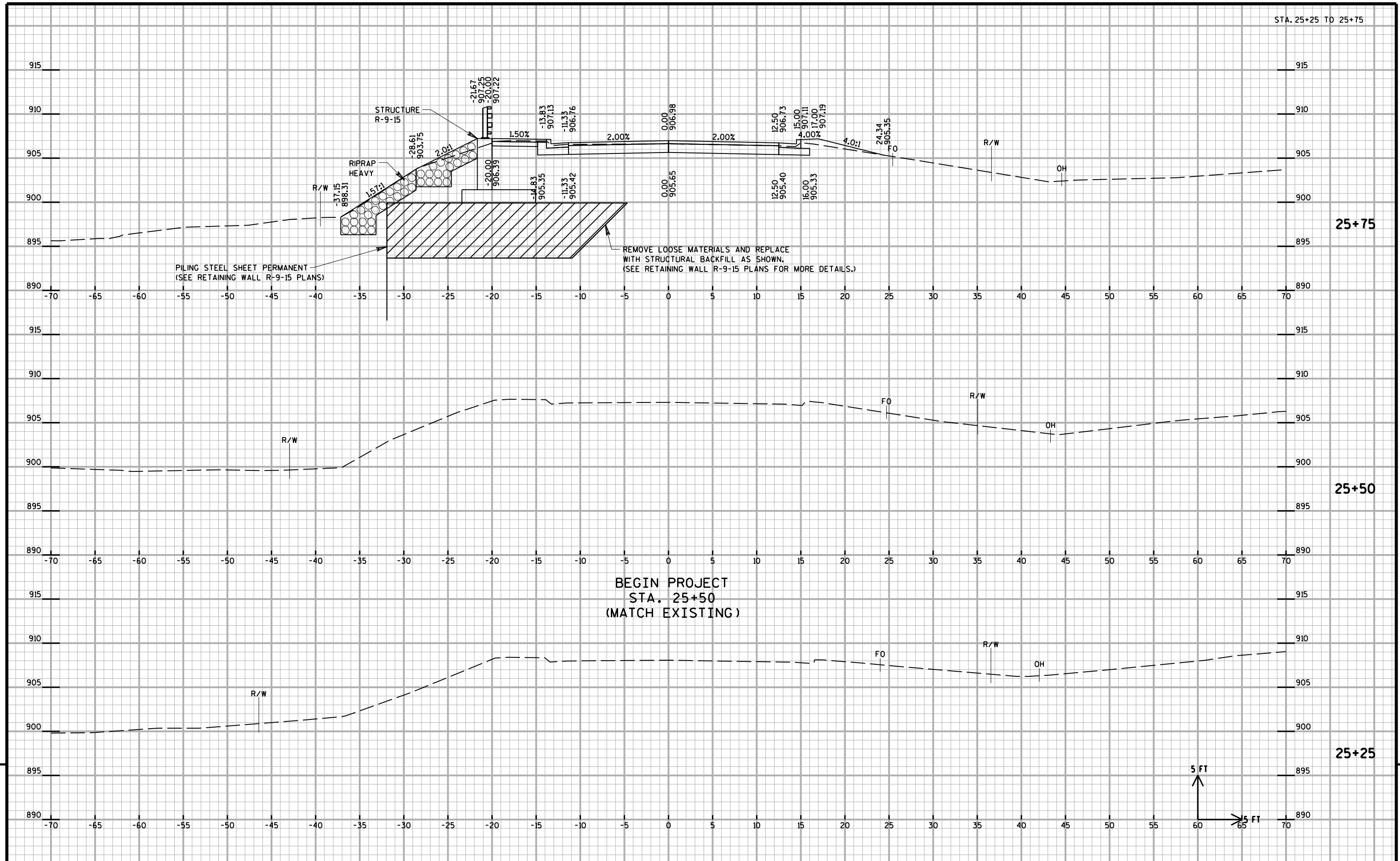
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE R-9-15			
DRAWN BY		CLS	PLANS CK'D. CBM
END POST DETAILS FOR TUBULAR STEEL RAILING TYPE NY4			SHEET 6 OF 6

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

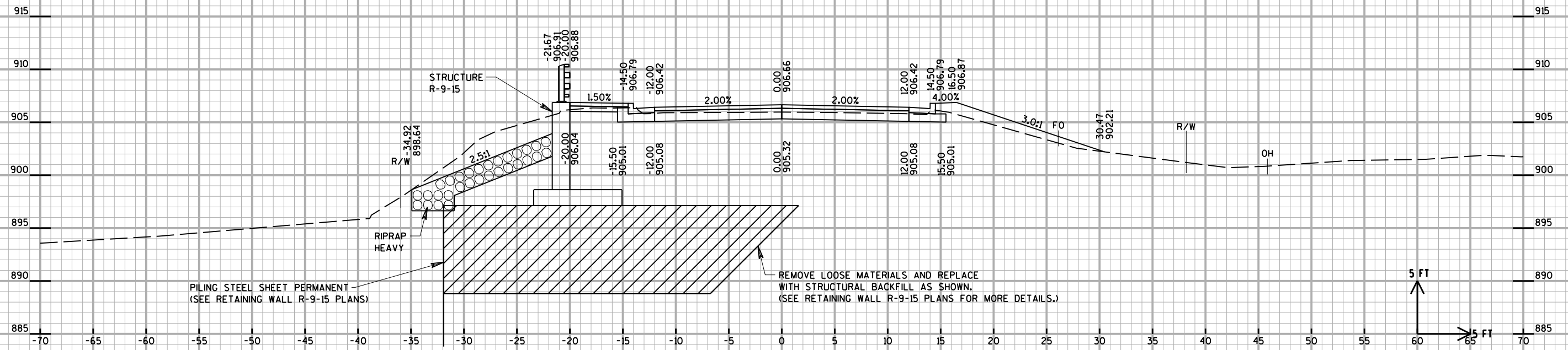
195TH STREET COMPUTER EARTHWORK

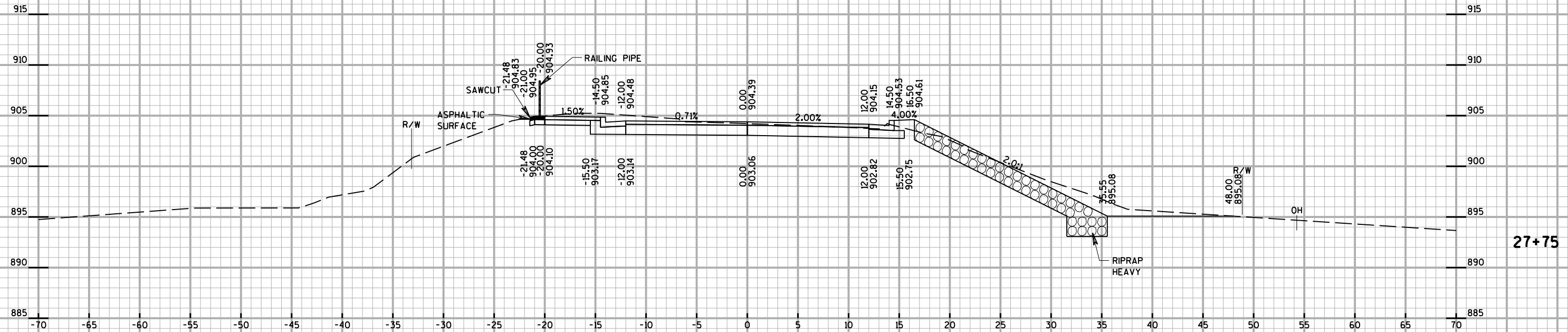
Station	Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged / Unuseable Pavement Material	Fill	Cut	Salvaged / Unuseable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.30	
Note 1	Note 4	Note 2	Note 5	Note 3						
25+50	--	42.1	8.2	1.0						
25+75	25	31.8	8.0	30.5	34	7	15	27	19	8
26+00	25	41.7	7.6	36.4	34	7	31	53	59	-6
26+26.75	27	41.7	7.6	26.2	41	8	26	87	93	-6
B-9-305	--	--		--	--		--	--	--	--
27+43.25	--	55.8	7.5	2.0	--		--	--	--	--
27+75	32	55.8	7.5	2.0	66	15	2	137	96	47
28+00	25	38.8	7.4	1.0	44	11	1	170	98	78
					219	48	75			

Note 1 - Cut	Cut includes existing asphalt pavement.
Note 2 - Fill	Volume needed to be filled.
Note 3 - Mass Ordinate	(Cut) - (Fill * 1.30)
Note 4 - Salvaged / Unuseable Pavement Material	Existing existing asphalt pavement to be removed from Cut.
Note 5 - Cut	Cut reduced by salvaged/unuseable asphaltic pavement
Note 6 - Retaining Wall Excavation and Structural Backfill not included in earthwork quantities.	

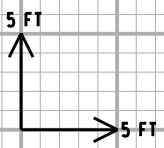


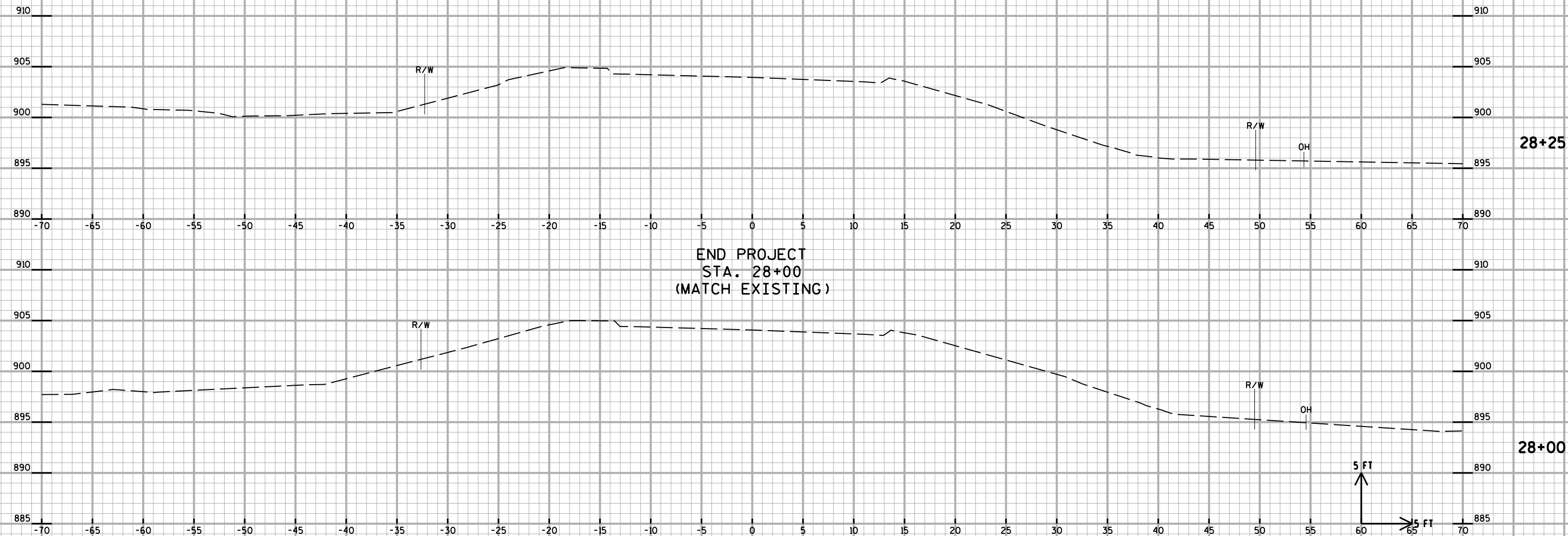
STRUCTURE B-9-305

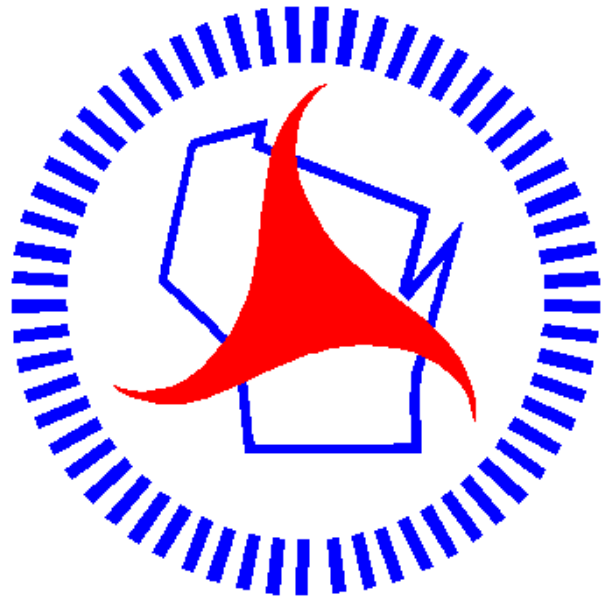




STRUCTURE B-9-305







Wisconsin Department of Transportation

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