LAX

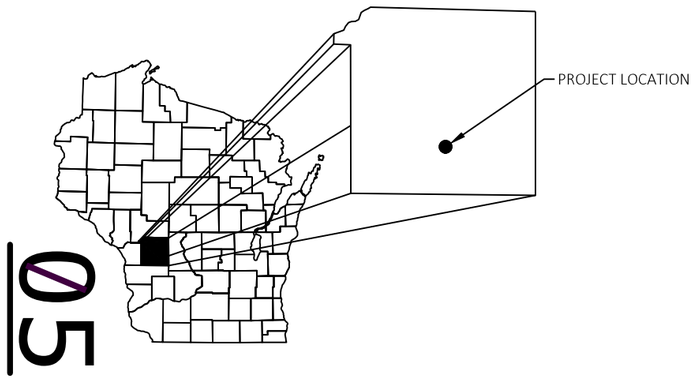
JANUARY 2023

PROJECT ID: 5017-00-70

COUNTY: MONROE

ORDER OF SHEETS

TOTAL SHEETS = 64



DESIGN DESIGNATION

A.A.D.T.	2023	=	114
A.A.D.T.	2043	=	214
D.H.V.		=	32
D.D.		=	62/38
T.		=	7.7
DESIGN SPEED		=	30 MPH
ESALS		=	30,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

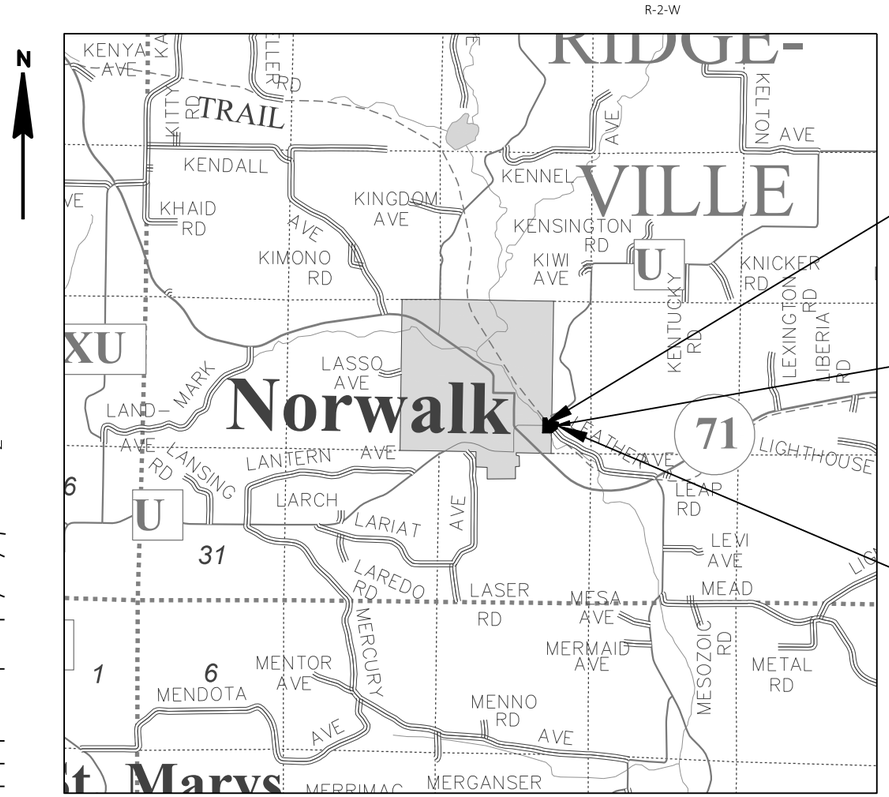
V OF NORWALK - T OF RIDGEVILLE

MOORE CREEK BRIDGE B-41-0319

CTH U
MONROE COUNTY

STATE PROJECT NUMBER
5017-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5017-00-70	WISC 2023139	1



BEGIN PROJECT
STA 11+65.00
N=337 928.845
E=677 257.272

STRUCTURE
B-41-0319

END PROJECT
STA 13+42.75
N=337 936.321
E=677 433.919

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.0337 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), MONROE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ACCEPTED FOR
MONROE COUNTY

07/22/22 (Date) (Signature and Title of Official) HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY

WESTBROOK
Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WISCONSIN 53588
PHONE (608) 588-7866
FAX (608) 588-7954

WISCONSIN PROFESSIONAL ENGINEER
AARON B. PALMER
E-35695
RICHLAND CENTER, WI

DATE: 7/15/22 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WESTBROOK ASSOCIATED ENGINEERS
Designer	WESTBROOK ASSOCIATED ENGINEERS
Project Manager	VALERIE GUIDER, PE
Regional Examiner	SW REGION
Regional Supervisor	KYLE HEMP, PE

APPROVED FOR THE DEPARTMENT

DATE: _____ Valerie Guider, P.E. Digitally signed by Valerie Guider, P.E. Date: 2022.07.25 10:30:01-05'00' (Signature)

E

GENERAL NOTES

EROSION CONTROL ITEMS TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE AND TURBIDITY BARRIER SHALL BE IN PLACE PRIOR TO CONSTRUCTION.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED, TEMPORARY SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.

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

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

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

THE ELROY-SPARTA STATE TRAIL SHALL REMAIN OPEN TO THE PUBLIC FOR THE DURATION OF CONSTRUCTION. NIGHT TIME CLOSURES MAY BE ALLOWED WITH THE APPROVAL FROM THE WDNR ELROY-SPARTA STATE TRAIL PROPERTY MANAGER. IF A DETOUR OR TEMPORARY DIVERSION IS NECESSARY IT SHALL BE DEVELOPED IN COORDINATION WITH THE WDNR ELROY-SPARTA STATE TRAIL PROPERTY MANAGER AND APPROVED BY THE ENGINEER IN THE FIELD. CLEARLY MARK ALL DETOURS OR DIVERSIONS.

D.O.T. MONUMENT IS TO BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR IN THE SAME WING THAT THE PROPOSED NAME PLATE WILL BE PLACED, AS DIRECTED BY THE ENGINEER.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MONROE COUNTY, HORIZONTAL DATUM NAD83 (2011), ELEVATION DATUM NAVD88 (2012).

THE 4-INCH ASPHALTIC SURFACE SHALL BE CONSTRUCTED USING A 2 1/4-INCH LOWER LAYER OF 19 MM NOMINAL SIZE AGGREGATE AND A 1 3/4-INCH UPPER LAYER OF 12.5 MM NOMINAL SIZE AGGREGATE.

ASPHALTIC SURFACE CALCULATIONS ARE BASED ON 112 LB/SY/IN.

RUNOFF COEFFICIENT TABLE

HYDROLOGIC SOIL GROUP										
	A			B			C			
	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	
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36	
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 = 0.29 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.17 ACRES

ORDER OF DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
CURB RAMP & SIDEWALK DETAILS
PERMANENT SIGNING
ALIGNMENT DETAILS
CONTROL POINT TIES

UTILITIES

GAS

MG&E
SHAUN ENDRES
P.O. BOX 1231
MADISON, WI, 53701
PHONE: (608) 252-7224
EMAIL: sendres@mge.com

COMMUNICATION

BRIGHTSPEED
TOM MURRAY
333 N. FRONT STREET
LA CROSSE, WI 54601
PHONE: (608) 780-0895
EMAIL: Tom.L.Murray@brightspeed.com

WATER & SEWER

VILLAGE OF NORWALK
HENRY VIAN
P.O. BOX 230
NORWALK, WI, 54648
PHONE: (608) 823-7760
EMAIL: norwalkutility@centurytel.net

ELECTRIC

XCEL ENERGY
DAVID MELSNESS
PO BOX 8
EAU CLAIRE, WI 54701
PHONE: (715) 737-1495
EMAIL: David.J.Melsness@xcelenergy.com

COMMUNICATION

MEDIACOM - WISCONSIN LLC
CRAIG EGGERT
1240 HIGHWAY 52 SOUTH
CHATFIELD, MN 55923
PHONE: (563) 419-5160
EMAIL: ceggert@mediacomcc.com

DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com
**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

CONTACTS

MONROE COUNTY CONTACT
DAVID H. OHNSTAD
HIGHWAY COMMISSIONER
MONROE COUNTY

803 WASHINGTON STREET
SPARTA, WI 54656
PHONE: (608) 269-8740
EMAIL: david.ohnstad@co.monroe.wi.us

WisDNR LIAISON
KAREN KALVELAGE
ENVIRONMENTAL ANALYSIS
& REVIEW SPECIALIST
WISCONSIN DNR

3550 MORMON COULEE RD
LA CROSSE, WI 54601
PHONE: (262) 623-0194
EMAIL: karen.karvelage@wisconsin.gov

DESIGN CONTACT
AARON PALMER, P.E.
VICE-PRESIDENT
WESTBROOK ASSOCIATED
ENGINEERS, INC.

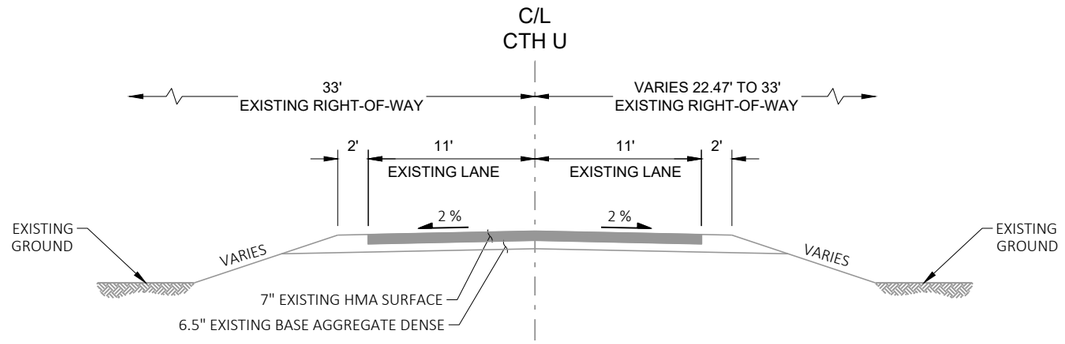
619 E. HOXIE ST.
SPRING GREEN, WI 53588
PHONE: (608) 588-7866
EMAIL: apalmer@westbrookeng.com

WisDNR TRAIL CONTACT
ANDREW HAFFELE
ELROY-SPARTA STATE TRAIL
PROPERTY MANAGER

PO BOX 99
ONTARIO, WI 54651
PHONE: (608) 337-4775
EMAIL: andrew.haffele@wisconsin.gov

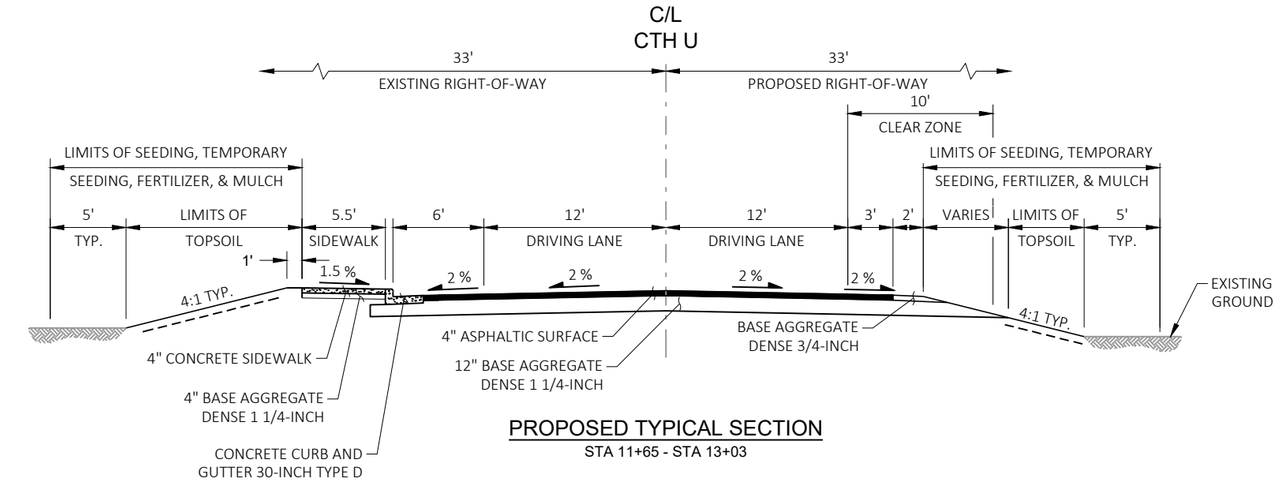
STANDARD ABBREVIATIONS

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



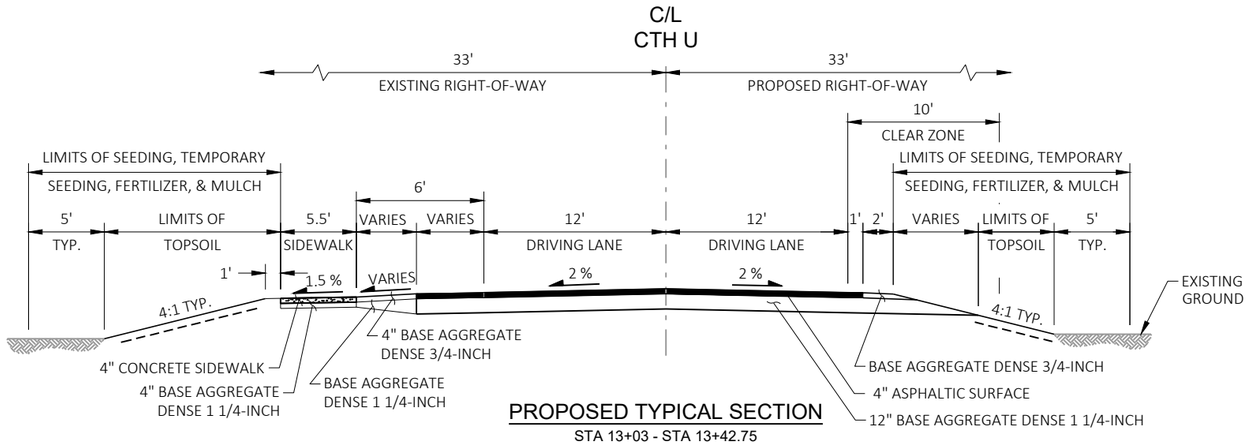
EXISTING TYPICAL SECTION

STA 11+65 - STA 13+42.75



PROPOSED TYPICAL SECTION

STA 11+65 - STA 13+03



PROPOSED TYPICAL SECTION

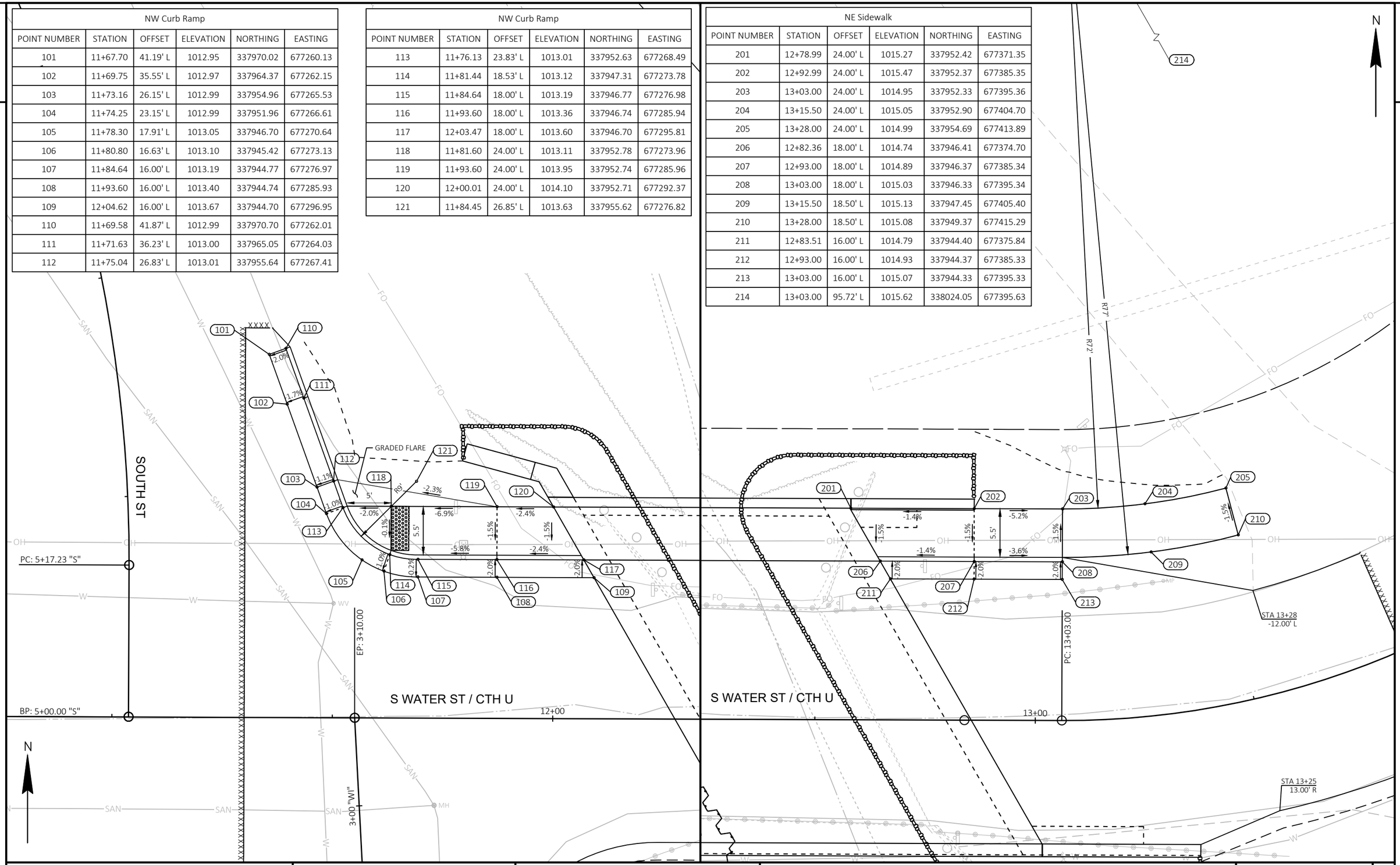
STA 13+03 - STA 13+42.75

PROJECT NO: 5017-00-70	HWY: CTH U	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 3	E

NW Curb Ramp					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
101	11+67.70	41.19' L	1012.95	337970.02	677260.13
102	11+69.75	35.55' L	1012.97	337964.37	677262.15
103	11+73.16	26.15' L	1012.99	337954.96	677265.53
104	11+74.25	23.15' L	1012.99	337951.96	677266.61
105	11+78.30	17.91' L	1013.05	337946.70	677270.64
106	11+80.80	16.63' L	1013.10	337945.42	677273.13
107	11+84.64	16.00' L	1013.19	337944.77	677276.97
108	11+93.60	16.00' L	1013.40	337944.74	677285.93
109	12+04.62	16.00' L	1013.67	337944.70	677296.95
110	11+69.58	41.87' L	1012.99	337970.70	677262.01
111	11+71.63	36.23' L	1013.00	337965.05	677264.03
112	11+75.04	26.83' L	1013.01	337955.64	677267.41

NW Curb Ramp					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
113	11+76.13	23.83' L	1013.01	337952.63	677268.49
114	11+81.44	18.53' L	1013.12	337947.31	677273.78
115	11+84.64	18.00' L	1013.19	337946.77	677276.98
116	11+93.60	18.00' L	1013.36	337946.74	677285.94
117	12+03.47	18.00' L	1013.60	337946.70	677295.81
118	11+81.60	24.00' L	1013.11	337952.78	677273.96
119	11+93.60	24.00' L	1013.95	337952.74	677285.96
120	12+00.01	24.00' L	1014.10	337952.71	677292.37
121	11+84.45	26.85' L	1013.63	337955.62	677276.82

NE Sidewalk					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
201	12+78.99	24.00' L	1015.27	337952.42	677371.35
202	12+92.99	24.00' L	1015.47	337952.37	677385.35
203	13+03.00	24.00' L	1014.95	337952.33	677395.36
204	13+15.50	24.00' L	1015.05	337952.90	677404.70
205	13+28.00	24.00' L	1014.99	337954.69	677413.89
206	12+82.36	18.00' L	1014.74	337946.41	677374.70
207	12+93.00	18.00' L	1014.89	337946.37	677385.34
208	13+03.00	18.00' L	1015.03	337946.33	677395.34
209	13+15.50	18.50' L	1015.13	337947.45	677405.40
210	13+28.00	18.50' L	1015.08	337949.37	677415.29
211	12+83.51	16.00' L	1014.79	337944.40	677375.84
212	12+93.00	16.00' L	1014.93	337944.37	677385.33
213	13+03.00	16.00' L	1015.07	337944.33	677395.33
214	13+03.00	95.72' L	1015.62	338024.05	677395.63



PROJECT NO: 5017-00-70	HWY: CTH U	COUNTY: MONROE	CURB RAMP & SIDEWALK DETAILS	SHEET 4	E

2

N

EP: 6+87.95 "S"

PT: 6+11.63 "S"

"S" 6+00

BP: 10+00.00

PC: 5+17.23 "S"

11+00

CP #1

BP: 5+00.00 "S"

12+00

EP: 3+10.00 "WI"

3+00 "WI"

13+00

CP #3

EP: 14+34.43

14+00

W5-52L
12"X36"

REMOVE

2

2R

REMOVE

6R

WEIGHT LIMIT 10 TONS

REMOVE

7R

W5-52R
12"X36"

6

STOP

TO REMAIN

BM #1

GUY

CP #4

PC: 13+00.00

5R

8R

8

W5-52L
12"X36"

1

STOP

R1-1
30"X30"

1R

STOP

REMOVE

3R

TRAIL CROSSING

REMOVE

3

TRAIL CROSSING

W11-15A
30"X30"

CP #2

4R

WEIGHT LIMIT 10 TONS

REMOVE

5

W5-52R
12"X36"

REMOVE

REMOVE

2+00 "WI"

BP: 1+00.00 "WI"

PROJECT NO: 5017-00-70	HWY: CTH U	COUNTY: MONROE	PERMANENT SIGNING	SHEET 5	E

FILE NAME : G:\00-PROJECT FILES\2020\20163 CTH U BRIDGE REPLACEMENT - MONROE COUNTY ID 5017-00-00\0-CAD\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201_ps

PLOT DATE : 7/13/2022 2:19 PM PLOT BY : ERIK MEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

EP: 6+87.95 "S"
Y = 338 099.939
X = 677 171.301

N32°30'41"W

"S" 0.00

PT: 6+11.63 "S"
Y = 338 035.582
X = 677 218.318

PI STA = 5+65.75
Y = 337994.658
X = 677244.401
DELTA = 32°43'32" LT
D = 34°39'53"
T = 48.53'
L = 94.41'
R = 165.29'
PC STA = 5+17.23
PT STA = 6+11.63

PI STA = 13+81.45
Y = 337928.036
X = 677473.717
DELTA = 78°40'26" LT
D = 59°51'34"
T = 78.45'
L = 131.43'
R = 95.72'
PC STA = 13+03.00
PT STA = 14+34.43

CP #3
NAIL
Y = 338 010.095
X = 677 339.740
ELEV. = 1010.285

EP: 14+34.43
Y = 338 004.897
X = 677 489.411

BP: 10+00.00
Y = 337 929.462
X = 677 092.273

CP #1
GIN SPIKE
Y = 337 928.657
X = 677 224.900
ELEV. = 1012.479

PC: 5+17.23 "S"
Y = 337 946.129
X = 677 244.220

PC: 13+03.00
Y = 337 928.329
X = 677 395.271

14+00

BM #1
RAILROAD SPIKE IN POWER POLE
Y = 337 947.681
X = 677 505.043
ELEV. = 1016.606

CP #4
GIN SPIKE
Y = 337 928.399
X = 677 482.655
ELEV. = 1016.116

N0°12'51"E

STA. 11+51.88

STA. 11+77.53

11+00

12+00

13+00

S89°47'09"E

BP: 5+00.00 "S"
Y = 337 928.904
X = 677 244.155

3+00 "WI"

EP: 3"WI"+10.00
Y = 337 928.798
X = 677 269.804

CP #2
NAIL
Y = 337 870.820
X = 677 326.929
ELEV. = 1010.285

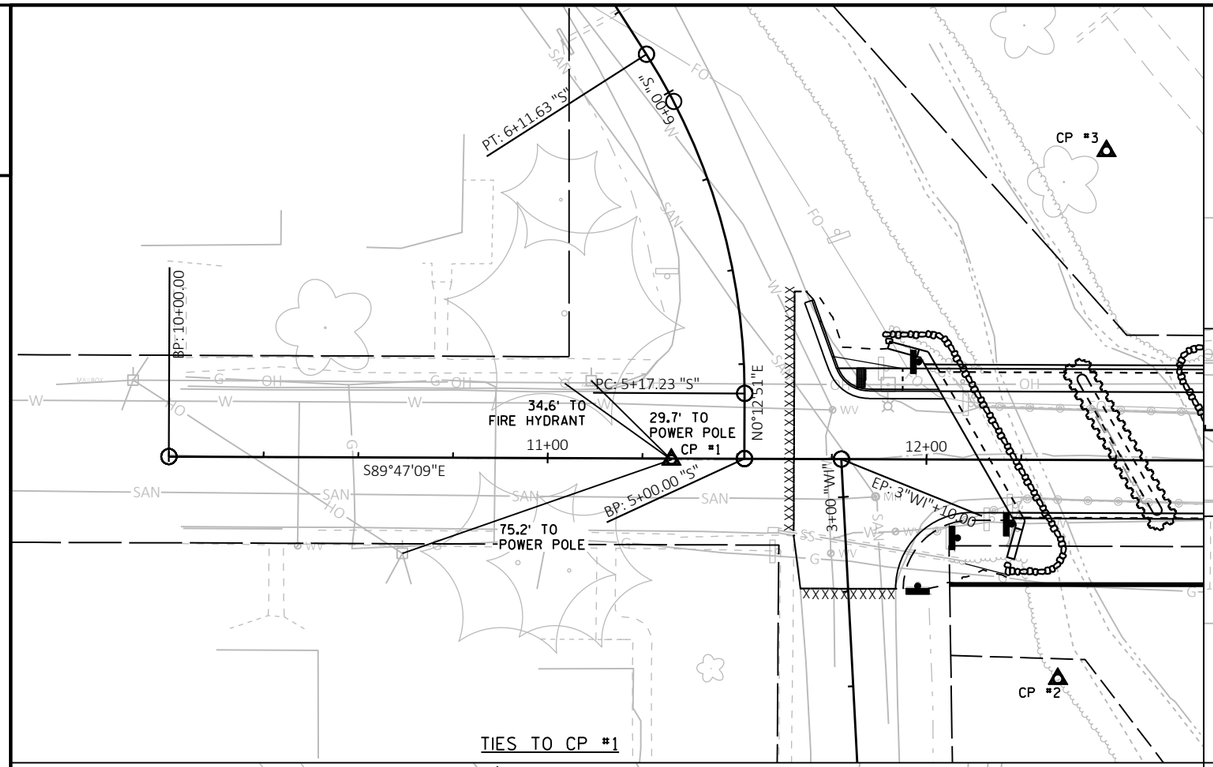
2+00 "WI"

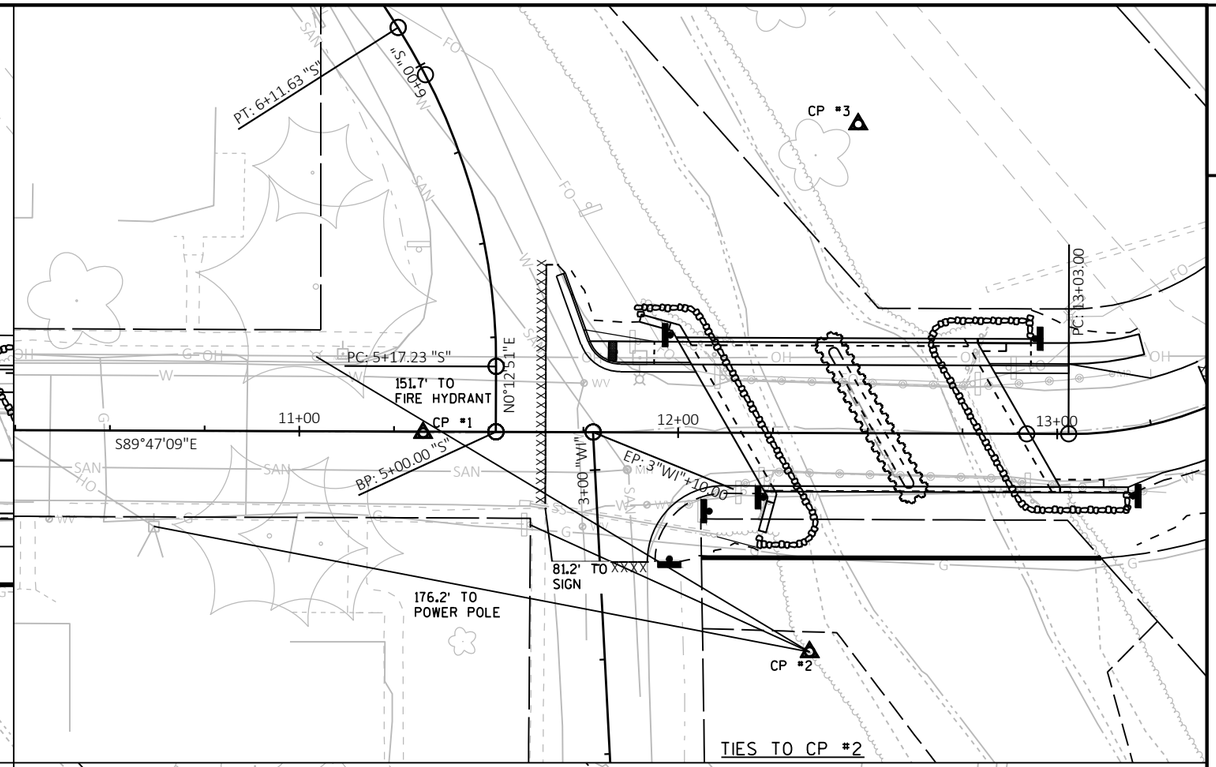
N2°58'21"W

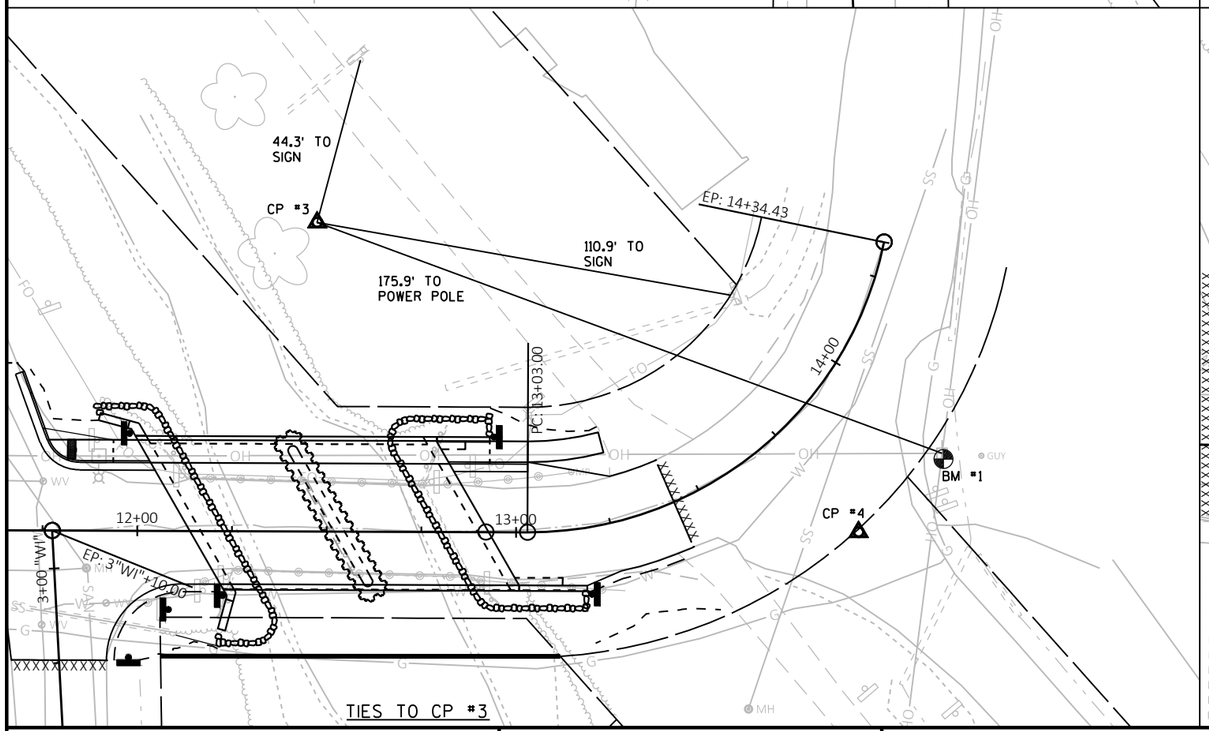
Y = 337 719.081
X = 677 280.694
BP: 1+00.00 "WI"

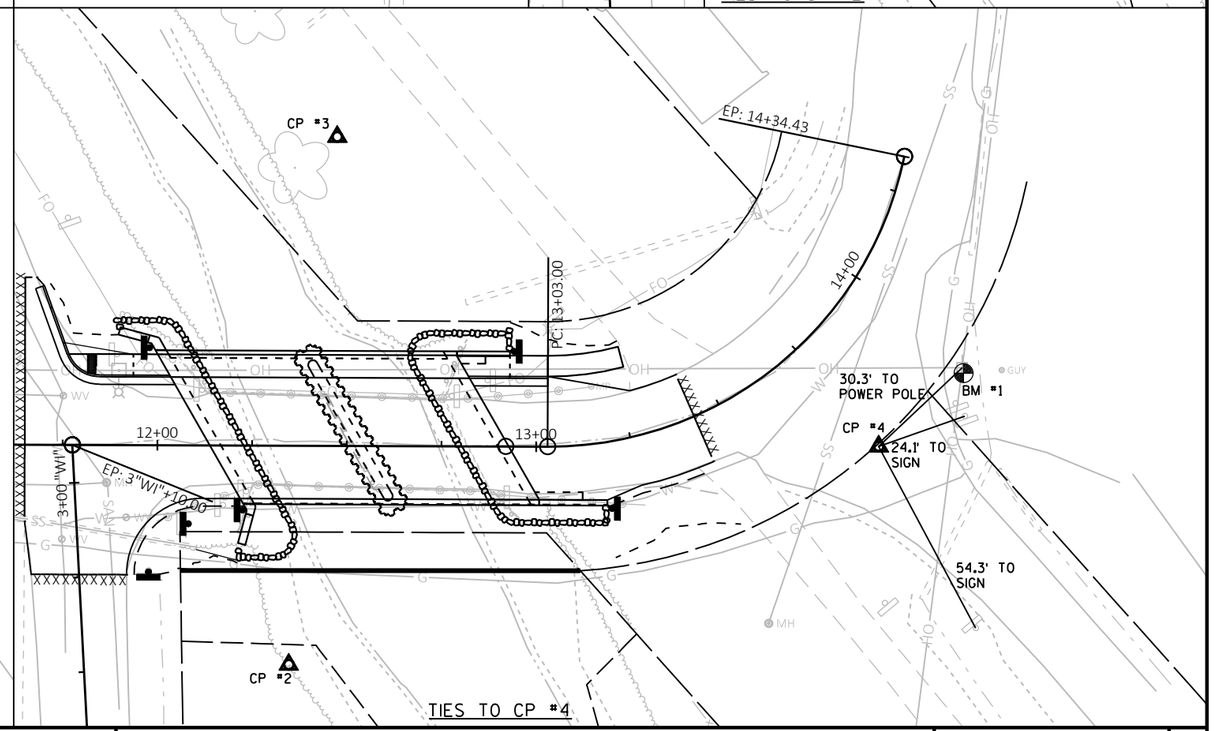
PROJECT NO: 5017-00-70	HWY: CTH U	COUNTY: MONROE	ALIGNMENT DETAILS	SHEET 6	E

FILE NAME : G:\00-PROJECT FILES\2020\20163 CTH U BRIDGE REPLACEMENT - MONROE COUNTY ID 5017-00-00\0-CAD\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad
PLOT DATE : 7/13/2022 2:19 PM PLOT BY : ERIK MEYER PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42









PROJECT NO: 5017-00-70	HWY: CTH U	COUNTY: MONROE	CONTROL POINT TIES	SHEET 7	E

Estimate Of Quantities

5017-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-41-0703	EACH	1.000	1.000
0004	204.0165	Removing Guardrail	LF	107.000	107.000
0006	205.0100	Excavation Common	CY	253.000	253.000
0008	206.1001	Excavation for Structures Bridges (structure) 01. B-41-0319	EACH	1.000	1.000
0010	206.5001	Cofferdams (structure) 01. B-41-0319	EACH	1.000	1.000
0012	210.1500	Backfill Structure Type A	TON	640.000	640.000
0014	213.0100	Finishing Roadway (project) 01. 5017-00-70	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	8.000	8.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	335.000	335.000
0020	455.0605	Tack Coat	GAL	30.000	30.000
0022	465.0105	Asphaltic Surface	TON	93.000	93.000
0024	502.0100	Concrete Masonry Bridges	CY	380.000	380.000
0026	502.3200	Protective Surface Treatment	SY	338.000	338.000
0028	502.3210	Pigmented Surface Sealer	SY	86.000	86.000
0030	502.9000.S	Underwater Substructure Inspection (structure) 01. B-41-0319	EACH	1.000	1.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	10,240.000	10,240.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	59,410.000	59,410.000
0036	513.7021	Railing Steel Type C4	LF	93.000	93.000
0038	516.0500	Rubberized Membrane Waterproofing	SY	21.000	21.000
0040	550.0020	Pre-Boring Rock or Consolidated Materials	LF	90.000	90.000
0042	550.0500	Pile Points	EACH	18.000	18.000
0044	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	405.000	405.000
0046	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	225.000	225.000
0048	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	70.000	70.000
0050	602.0405	Concrete Sidewalk 4-Inch	SF	357.000	357.000
0052	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	10.000	10.000
0054	606.0300	Riprap Heavy	CY	95.000	95.000
0056	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0058	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	200.000	200.000
0060	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5017-00-70	EACH	1.000	1.000
0062	619.1000	Mobilization	EACH	1.000	1.000
0064	624.0100	Water	MGAL	3.500	3.500
0066	625.0100	Topsoil	SY	97.000	97.000
0068	627.0200	Mulching	SY	215.000	215.000
0070	628.1504	Silt Fence	LF	285.000	285.000
0072	628.1520	Silt Fence Maintenance	LF	456.000	456.000
0074	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0076	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0078	628.6005	Turbidity Barriers	SY	149.000	149.000
0080	628.7015	Inlet Protection Type C	EACH	1.000	1.000
0082	629.0210	Fertilizer Type B	CWT	0.150	0.150
0084	630.0130	Seeding Mixture No. 30	LB	5.000	5.000
0086	630.0200	Seeding Temporary	LB	8.000	8.000
0088	630.0500	Seed Water	MGAL	4.000	4.000
0090	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	3.000	3.000
0092	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	3.000	3.000
0094	637.2210	Signs Type II Reflective H	SF	5.180	5.180
0096	637.2230	Signs Type II Reflective F	SF	18.250	18.250
0098	638.2602	Removing Signs Type II	EACH	8.000	8.000

5017-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0102	642.5001	Field Office Type B	EACH	1.000	1.000
0104	643.0420	Traffic Control Barricades Type III	DAY	2,550.000	2,550.000
0106	643.0705	Traffic Control Warning Lights Type A	DAY	5,100.000	5,100.000
0108	643.0900	Traffic Control Signs	DAY	2,244.000	2,244.000
0110	643.5000	Traffic Control	EACH	1.000	1.000
0112	645.0111	Geotextile Type DF Schedule A	SY	87.000	87.000
0114	645.0120	Geotextile Type HR	SY	221.000	221.000
0116	650.4500	Construction Staking Subgrade	LF	99.000	99.000
0118	650.5000	Construction Staking Base	LF	99.000	99.000
0120	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	71.000	71.000
0122	650.6501	Construction Staking Structure Layout (structure) 01. B-41-0319	EACH	1.000	1.000
0124	650.9000	Construction Staking Curb Ramps	EACH	1.000	1.000
0126	650.9911	Construction Staking Supplemental Control (project) 01. 5017-00-70	EACH	1.000	1.000
0128	650.9920	Construction Staking Slope Stakes	LF	99.000	99.000
0130	690.0150	Sawing Asphalt	LF	118.000	118.000
0132	715.0502	Incentive Strength Concrete Structures	DOL	2,280.000	2,280.000
0134	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 12+51	EACH	1.000	1.000
0136	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	375.000	375.000
0138	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	200.000	200.000

NOTE:
ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED.

3

REMOVING GUARDRAIL

STATION	-	STATION	LOCATION	204.0165 REMOVING GUARDRAIL (LF)
12+00	-	12+55	MAINLINE, RT	39
12+77	-	13+17	MAINLINE, LT	41
12+89	-	13+25	MAINLINE, RT	27
			TOTALS	107

EARTHWORK SUMMARY

STATION - STATION	LOCATION	COMMON EXCAVATION (1) (ITEM # 205.0100) CUT (2)	SALVGED / UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5) FACTOR 1.25	MASS ORDINATE +/- (6)
11+65 - 12+21	WEST APPROACH	146	54	92	9	11	81
12+79 - 13+43	EAST APPROACH	107	37	70	6	8	63
	TOTALS	253	91	162	15	19	143

1) COMMON EXCAVATION IS THE CUT. ITEM #205.0100.
2) SALVAGED/UNUSABLE MATERIAL IS INCLUDED IN CUT.
3) SALVAGED/UNUSABLE MATERIAL INCLUDES ASPHATLIC PAVEMENT.
4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE MATERIAL
5) EXPANDED FILL FACTOR = 1.25: EXPANDED FILL = (UNEXPANDED FILL)*1.25
6) THE MASS ORDINATE + OR - CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL IN THE DIVISION.
7) BORROW = ABSOLUTE VALUE OF MASS ORDINATE

3

BASE AGGREGATE DENSE

STATION	-	STATION	LOCATION	305.0110 3/4-INCH BASE (TON)	305.0120 1 1/4-INCH BASE (TON)	624.0100 WATER (MGAL)
11+65	-	12+14	MAINLINE	3	199	2.1
12+93	-	13+43	MAINLINE	5	136	1.4
			TOTALS	8	335	3.5

ASPHALTIC ITEMS

STATION	-	STATION	LOCATION	455.0600 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
11+65	-	12+14	MAINLINE	18	57
12+93	-	13+43	MAINLINE	12	36
			TOTALS	30	93

CONCRETE CURB AND GUTTER

LOCATION	601.0411 CURB & GUTTER 30-INCH TYPE D (LF)
NORTHWEST QUADRANT	49
NORTHEAST QUADRANT	21
	70

SIDEWALK ITEMS

LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH (SF)	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW (SF)
NORTHWEST QUADRANT	126	10
NORTHEAST QUADRANT	231	-
	357	10

ADJUSTING MANHOLE COVERS

STATION	LOCATION	611.8110 (EACH)
11+87	MAINLINE, RT	1
	TOTALS	1

FINISHING ITEMS

STATION	-	STATION	LOCATION	625.0100 TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0130 SEEDING MIX NO. 30 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0500 SEED WATER (MGAL)
11+65	-	12+14	MAINLINE, LT	18	30	0.02	1	1	0.5
11+65	-	12+14	MAINLINE, RT	21	55	0.04	1	2	1.0
12+93		13+43	MAINLINE, LT	13	28	0.02	1	1	0.5
12+93		13+43	MAINLINE, RT	25	60	0.04	1	2	1.0
			UNDISTRIBUTED	20	42	0.03	1	2	1.0
			TOTALS	97	215	0.15	5	8	4.0

NOTE:
ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED.

3

SILT FENCE

STATION	- STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
11+65	- 12+14	MAINLINE, LT	47	94
11+65	- 12+14	MAINLINE, RT	48	96
12+93	- 13+43	MAINLINE, LT	62	124
12+93	- 13+43	MAINLINE, RT	71	142
		UNDISTRIBUTED	57	---
		TOTALS	285	456

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
ID 5017-00-70	2	2
TOTALS	2	2

TURBIDITY BARRIER

LOCATION	628.6005 (SY)
WEST APPROACH	74
EAST APPROACH	75
TOTALS	149

INLET PROTECTION

STATION	628.7015 TYPE C (EACH)
11+60, RT	1
TOTALS	1

3

SIGNING

STATION	LOCATION	SIGN NUMBER	SIGN CODE	634.0614 POSTS WOOD 4X6-INCH X 14-FT (EACH)	634.0616 POSTS WOOD 4X6-INCH X 16-FT (EACH)	637.2210 SIGNS TYPE II REFLECTIVE TYPE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE TYPE F (SF)	638.2602 REMOVING SIGN TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	NOTES
11+98	RT	1R	R1-1	-	-	-	-	1	1	STOP SIGN
11+98	RT	1	R1-1	1	-	5.18	-	-	-	STOP SIGN
11+98	LT	2	W5-52L	-	1	-	3	-	-	BRIDGE HASH MARKS
12+07	RT	3R	W11-15A	-	-	-	-	1	1	TRAIL CROSSING
12+08	RT	3	W11-15A	-	1	-	6.25	-	-	TRAIL CROSSING
12+12	LT	2R	W5-52L	-	-	-	-	1	1	BRIDGE HASH MARKS
12+17	RT	4R	R12-1	-	-	-	-	1	1	LOAD POSTING
12+23	RT	5	W5-52R	1	-	-	3	-	-	BRIDGE HASH MARKS
12+23	RT	5R	W5-52R	-	-	-	-	1	1	BRIDGE HASH MARKS
12+78	LT	6R	W5-52L	-	-	-	-	1	1	BRIDGE HASH MARKS
12+87	LT	7R	R12-1	-	-	-	-	1	1	LOAD POSTING
12+91	RT	8R	W5-52R	-	-	-	-	1	1	BRIDGE HASH MARKS
12+95	LT	6	W5-52L	-	1	-	3	-	-	BRIDGE HASH MARKS
13+18	RT	8	W5-52R	1	-	-	3	-	-	BRIDGE HASH MARKS
			TOTAL	3	3	5.18	18.25	8	8	

TRAFFIC CONTROL

LOCATION	DURATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (NO.)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (NO.)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (NO.)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.5000 TRAFFIC CONTROL (EACH)
WEST APPROACH	102	11	1122	22	2244	10	1020	1
EAST APPROACH	102	9	918	18	1836	7	714	---
UNDISTRIBUTED	102	5	510	10	1020	5	510	---
	TOTAL	25	2550	50	5100	22	2244	1

PLACE TRAFFIC CONTROL IN ACCORDANCE WITH SDD 15C2 "BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTION".

PLACEMENT SUBJECT TO ENGINEER APPROVAL.

CONSTRUCTION STAKING

STATION	- STATION	LOCATION	650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	650.5500 CURB & GUTTER (LF)	650.6501 STRUCTURE LAYOUT 01. B-41-0319 (EACH)	650.9000 CURB RAMPS (EACH)	650.9911 SUPPLEMENTAL CONTROL (EACH)	650.9920 SLOPE STAKES (LF)
11+65	- 12+14	MAINLINE	49	49	50	---	1	---	49
12+93	- 13+43	MAINLINE	50	50	21	---	---	---	50
		PROJECT	---	---	---	1	---	1	---
		TOTALS	99	99	71	1 *	1	1	99

* CATEGORY 0020

SAWING ASPHALT

STATION	LOCATION	690.0150 (LF)
11+65	MAINLINE	93
13+43	MAINLINE	25
	TOTAL	118

PROJECT NO: 5017-00-70	HWY: CTH U	COUNTY: MONROE	MISCELLANEOUS QUANTITIES	SHEET 11	E

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE (P.L.)
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) (W) (TYPE)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING — TO BE REMOVED
BRIDGE — CULVERT

SECTION CORNER SYMBOL (18 13 24 25 30 19)
SECTION CORNER MONUMENT
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) IP
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN — SIGN
OFF-PREMISE SIGN (#1-25) SIGN

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25 — UTILITY NUMBER 40
PARALLEL OFFSETS

CONVENTIONAL UTILITY SYMBOLS

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

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA ABBREVIATIONS

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

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), MONROE COUNTY, NAD83 (2011)IN US SURVEY FEET. VALUES SHOWN 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 ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

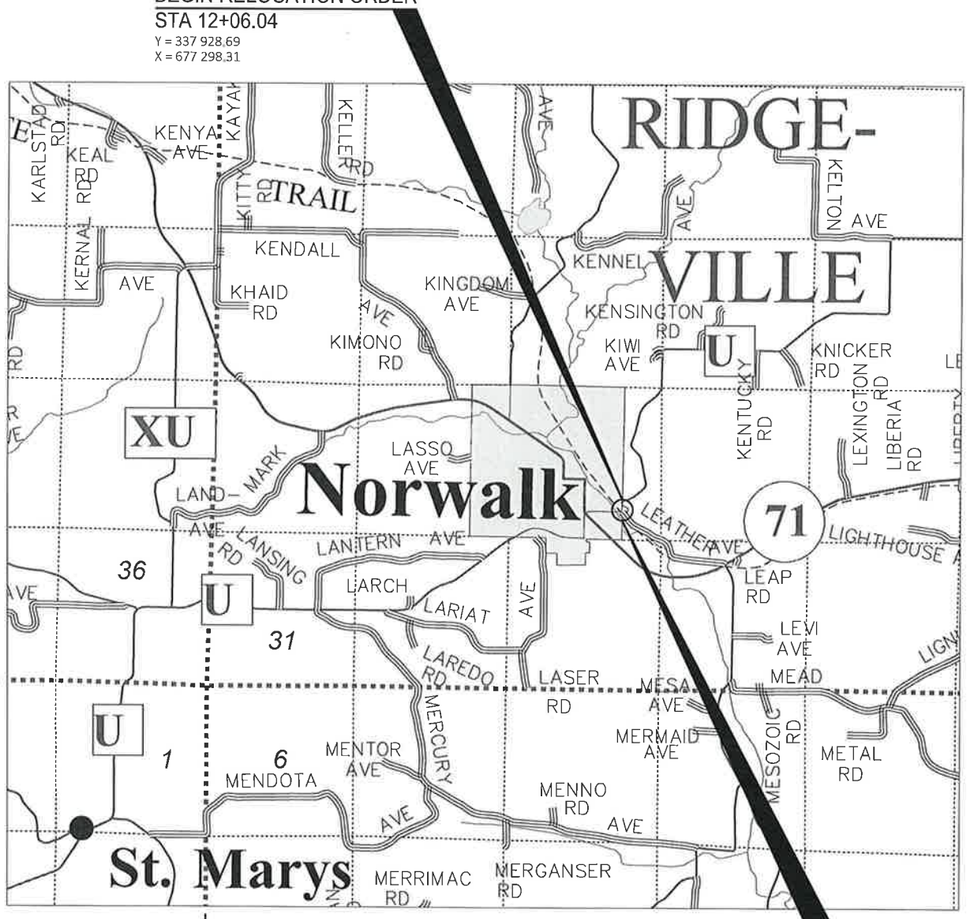
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN MADISON/SW REGION OFFICE

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

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE DETAIL PAGES.

BEGIN RELOCATION ORDER
STA 12+06.04
Y = 337 928.69
X = 677 298.31



END RELOCATION ORDER
STA 13+09.52
Y = 337 928.53
X = 677 401.79

LAYOUT
SCALE 0 0.5 MI 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.0196 MI

R/W PROJECT NUMBER 5017-00-00	SHEET NUMBER	TOTAL SHEETS
FEDERAL PROJECT NUMBER	4.01	2

PLAT OF RIGHT OF WAY REQUIRED FOR

V OF NORWALK - T OF RIDGEVILLE

(MOORE CREEK BRIDGE B-41-0319)

CTH U	MONROE COUNTY

CONSTRUCTION PROJECT NUMBER
5017-00-70

N

CAUTION:
THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

ACCEPTED FOR MONROE COUNTY

DATE: 03/23/2022 [Signature]

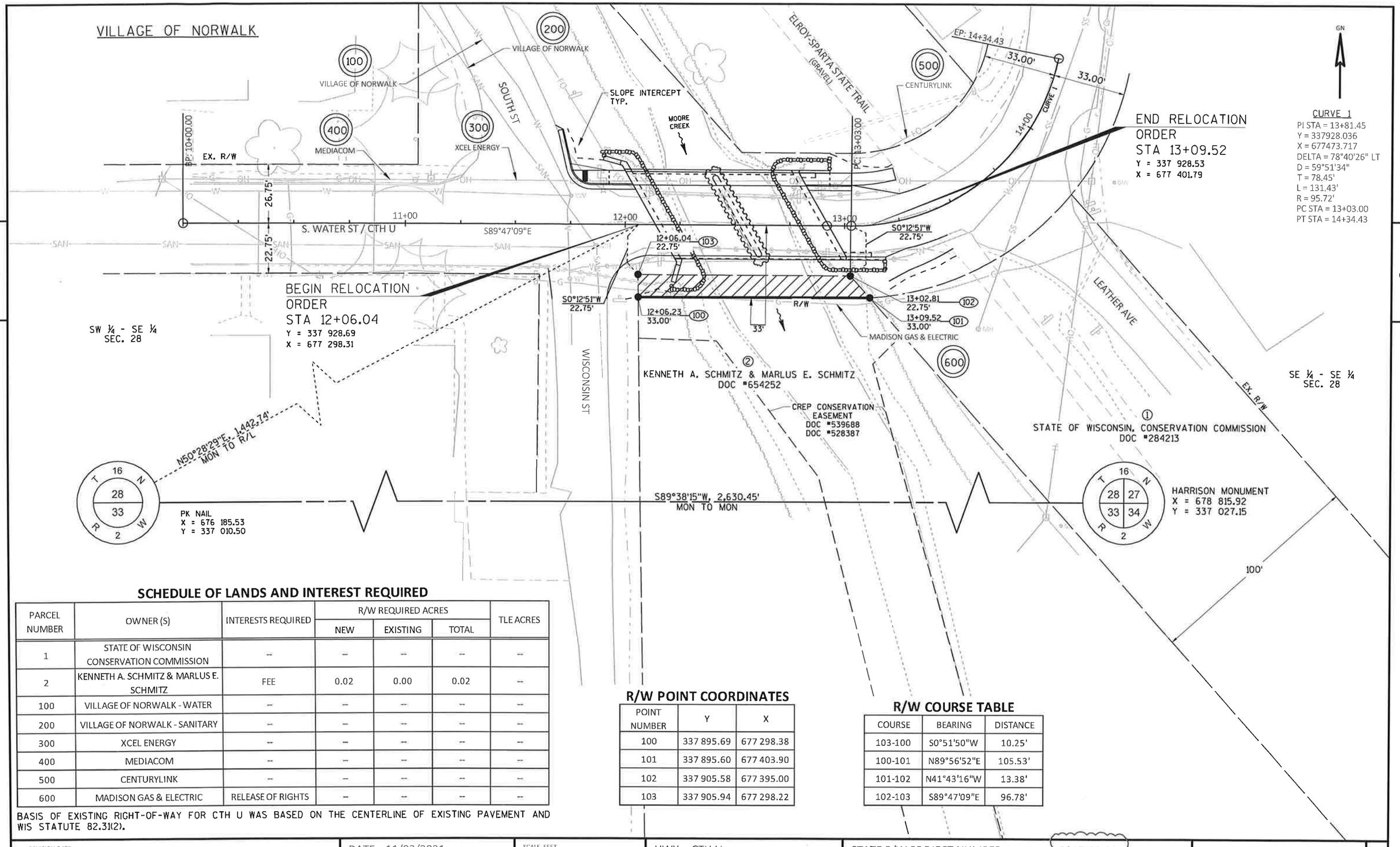
ORIGINAL PLANS PREPARED BY

WESTBROOK
Associated Engineers, Inc.
619 East Hoxie St. | P.O. Box 429 | Spring Green, WI 53588
P: (608) 588-7866 | F: (608) 588-7954 | www.westbrookeng.com

WISCONSIN
NICHOLAS J. BREY
S-3145
LAVALLE, WISCONSIN
LAND SURVEYOR
03-23-2022

DATE: 03-23-2022 [Signature]

REVISION DATE
3/23/2022



4

4

SCHEDULE OF LANDS AND INTEREST REQUIRED

PARCEL NUMBER	OWNER (S)	INTERESTS REQUIRED	R/W REQUIRED ACRES			TLE ACRES
			NEW	EXISTING	TOTAL	
1	STATE OF WISCONSIN CONSERVATION COMMISSION	--	--	--	--	--
2	KENNETH A. SCHMITZ & MARLUS E. SCHMITZ	FEE	0.02	0.00	0.02	--
100	VILLAGE OF NORWALK - WATER	--	--	--	--	--
200	VILLAGE OF NORWALK - SANITARY	--	--	--	--	--
300	XCEL ENERGY	--	--	--	--	--
400	MEDIACOM	--	--	--	--	--
500	CENTURYLINK	--	--	--	--	--
600	MADISON GAS & ELECTRIC	RELEASE OF RIGHTS	--	--	--	--

BASIS OF EXISTING RIGHT-OF-WAY FOR CTH U WAS BASED ON THE CENTERLINE OF EXISTING PAVEMENT AND WIS STATUTE 82.31(2).

R/W POINT COORDINATES

POINT NUMBER	Y	X
100	337 895.69	677 298.38
101	337 895.60	677 403.90
102	337 905.58	677 395.00
103	337 905.94	677 298.22

R/W COURSE TABLE

COURSE	BEARING	DISTANCE
103-100	S0°51'50"W	10.25'
100-101	N89°56'52"E	105.53'
101-102	N41°43'16"W	13.38'
102-103	S89°47'09"E	96.78'

REVISION DATE 03/23/2022	DATE 11/02/2021	SCALE, FEET 0 20 40	HWY: CTH U	STATE R/W PROJECT NUMBER 5017-00-00	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: MONROE	CONSTRUCTION PROJECT NUMBER 5017-00-70	PS&E SHEET 13 E

FILE NAME : 040102_RP.DWG
LAYOUT NAME - RW 1 IN 40 FT

PLOT DATE : 3/23/2022 11:31 AM PLOT BY : ERIK MEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 75

LEGEND
SLOPE INTERCEPT
SURFACE WATER FLOW
SAWCUT
STREAM EDGE
SILT FENCE

N

BRIGHTSPEED
VILLAGE OF NORWALK
VILLAGE OF NORWALK
PT: 6+11.63 "S"
"S" 005.9
SOUTH ST
(ASPHALT)
STREAM EDGE
CP 3
MOORE CREEK
ELROY-SPARTA STATE TRAIL
(B.A.D.)
EP: 14+34.43
BRIGHTSPEED
BP: 10+00.00
EXISTING R/W
XCEL ENERGY
MEDIACOM
PC: 13+03.00
EXISTING R/W
14+00
BM 1
GUY
VILLAGE OF NORWALK
S. WATER ST / CTH U
(ASPHALT)
11+00
PC: 5+17.23 "S"
CP 1
12+00
13+00
CP 5
EXISTING R/W
3+00 "W"
MH
EXISTING R/W
LEATHER AVE
(ASPHALT)
EXISTING 15-INCH CMCP TO REMAIN
CUT DITCH TO MATCH DAYLIGHT
0.02 ACRE PROPOSED FEE R/W
SLOPE INTERCEPT, TYP.
MH
MADISON GAS & ELECTRIC
BEGIN CONSTRUCTION
STA 11+65.00
MATCH EXISTING
SAW CUT REQ'D
DITCH FLOW LINE, TYP.
CP 2
CREP CONSERVATION
EASEMENT
WISCONSIN ST
(ASPHALT)
END CONSTRUCTION
STA 13+42.75
MATCH EXISTING
SAW CUT REQ'D

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
BM 1	13+95.30, 37.89'RT	RAILROAD SPIKE IN POWER POLE	1016.606

PROPOSED ℄ PROFILE
1.42%
2.42%
0.57%
EXISTING ℄ PROFILE
HIGH WATER$_{100}$
EL. = 1013.64
STA 11+65.00
EL 1013.03
STA 12+05.00
EL 1014.00
STA 13+08.00
EL 1015.46
STA 13+42.75
EL 1015.66
OBSERVED WATER
EL. = 1004.07
(09/19/2020)
APPROX. STREAMBED EL. = 1000.66
PROPOSED ℄ ELEVATION
EXISTING ℄ ELEVATION

1015
1010
1005
1000

9+55 10+00 11+00 12+00 13+00 14+00 14+52

1012.81 1012.51 1012.72 1014.39 1013.88 1003.09 1014.64 1015.45 1015.35 1015.66 1015.81

STA. 12+51.42
REMOVE EXISTING STRUCTURE P-41-0703
63-FT OVERALL LENGTH AND
24-FT CLEAR ROADWAY WIDTH
TWO SPAN STEEL DECK GIRDER BRIDGE

STA. 12+53.30
STRUCTURE B-41-0319 REQUIRED
78.9-FT OVERALL LENGTH AND
32-FT CLEAR ROADWAY WIDTH
TWO SPAN REINFORCED CONCRETE
FLAT SLAB BRIDGE

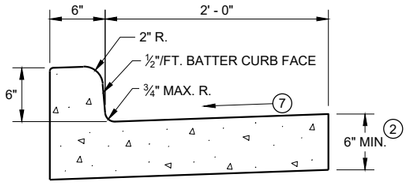
PROJECT NO: 5017-00-70	HWY: CTH U	COUNTY: MONROE	PLAN & PROFILE	SHEET 14	E

FILE NAME : G:\00-PROJECT FILES\2020\20163 CTH U BRIDGE REPLACEMENT - MONROE COUNTY ID 5017-00-00\0-CAD\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp
PLOT DATE : 11/14/2022 12:45 PM PLOT BY : ERIK MEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

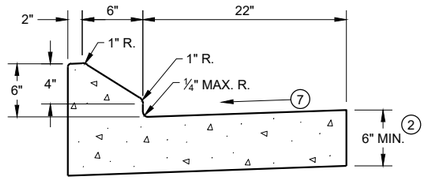
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

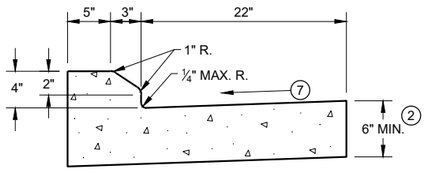
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-10	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-09A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



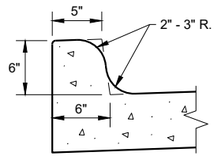
TYPES A (1) & D



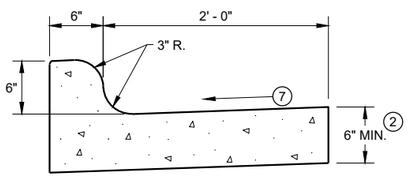
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

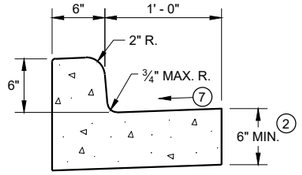


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



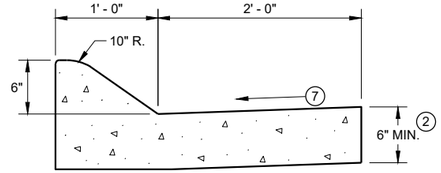
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

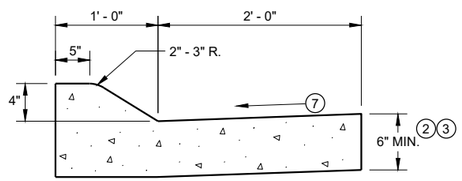


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

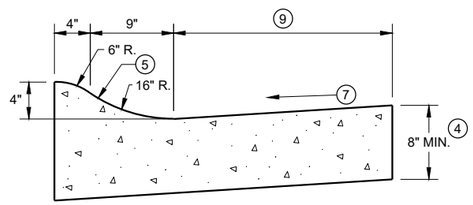


6" SLOPED CURB TYPES A (1) & D



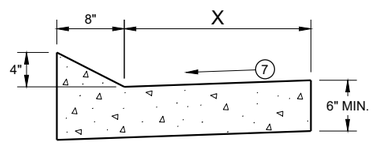
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

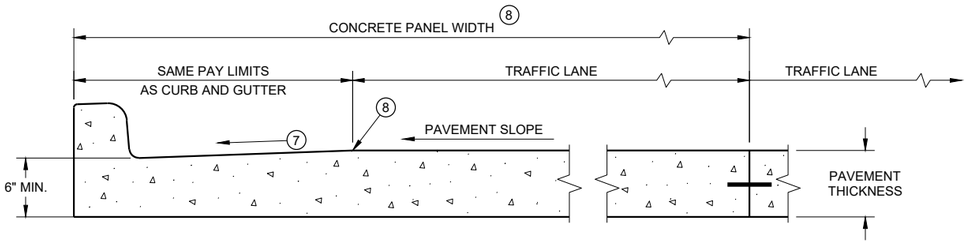


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

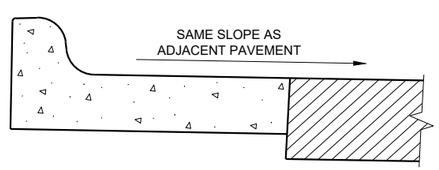
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES 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.

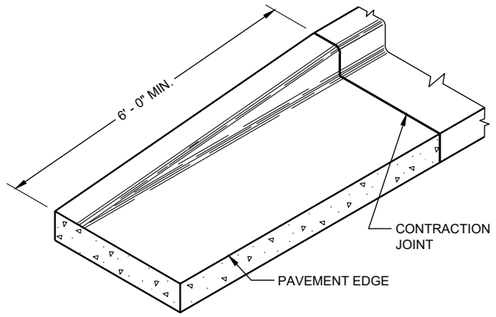
(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

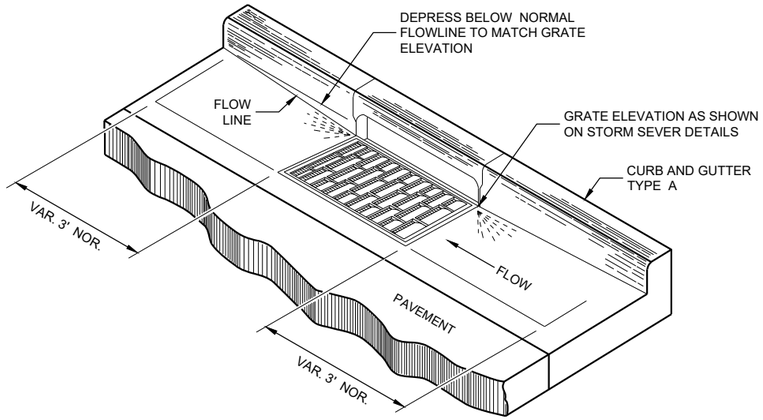
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 22a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

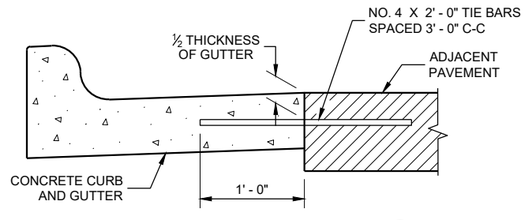
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

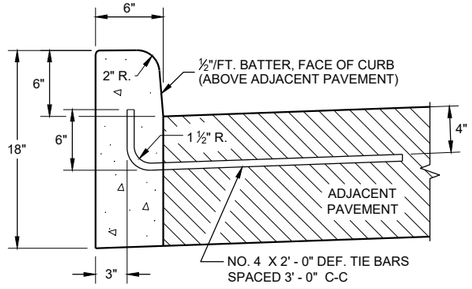
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

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

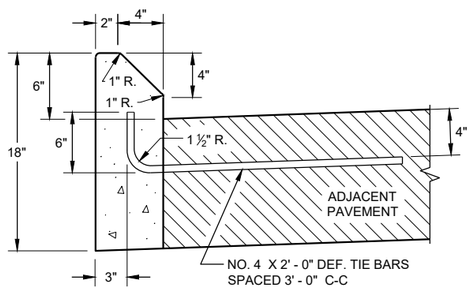
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

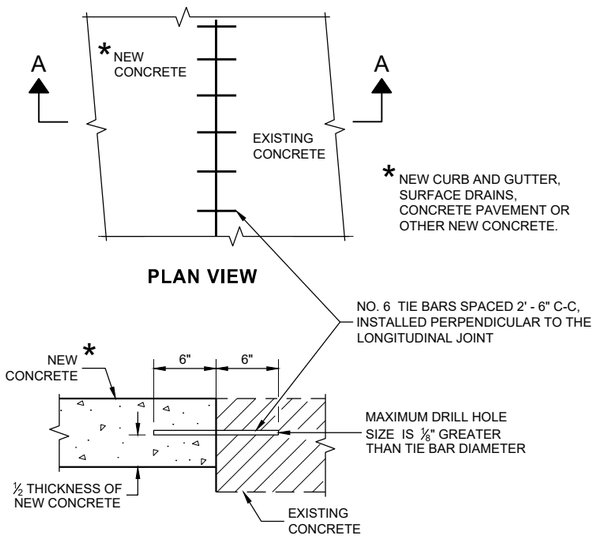


TYPES A (1) & D



TYPES G (1) & J

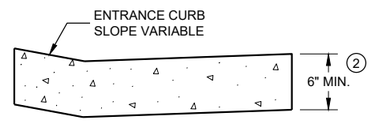
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



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

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

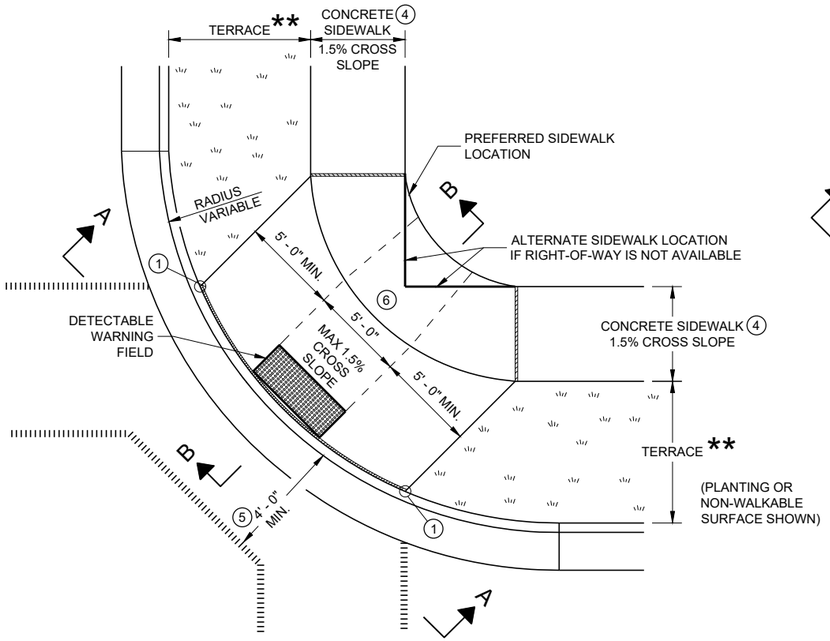
APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD08D01 - 22b

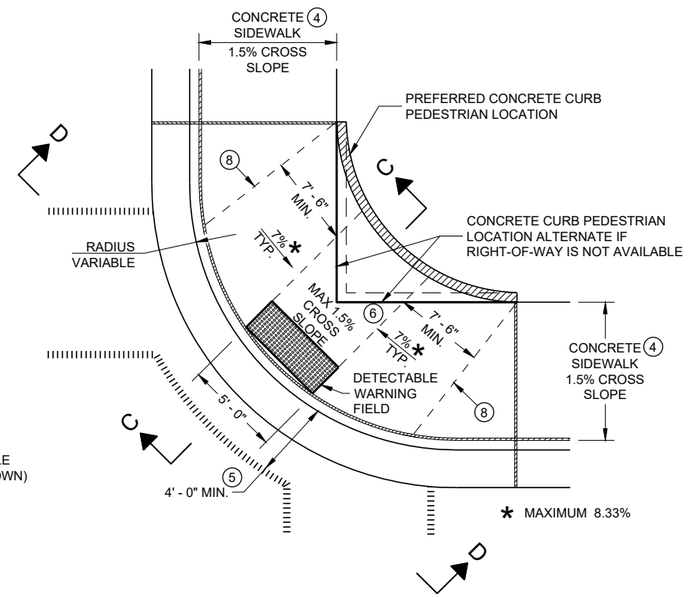
SDD08D01 - 22b



PLAN VIEW

CURB RAMP TYPE 1

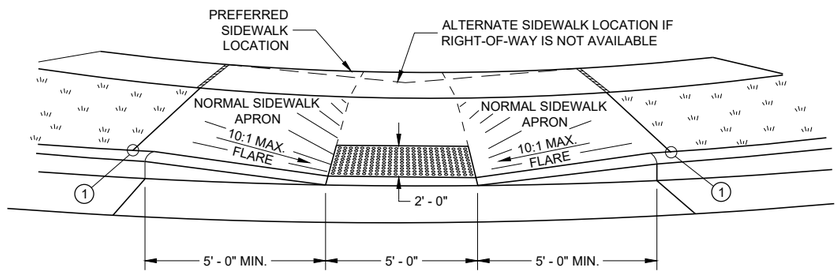
(CENTER OF CORNER RADIUS)



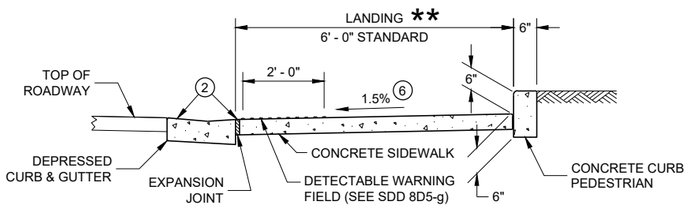
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

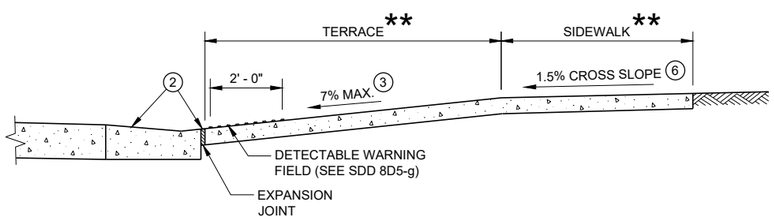


VIEW A - A FOR TYPE 1

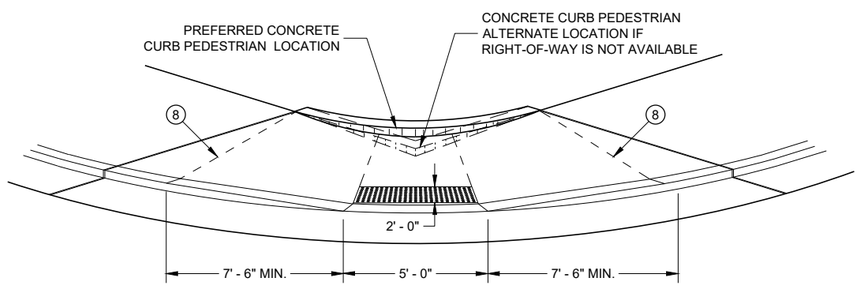


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

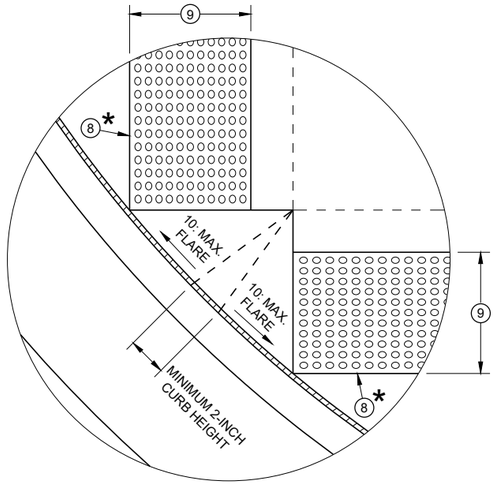
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

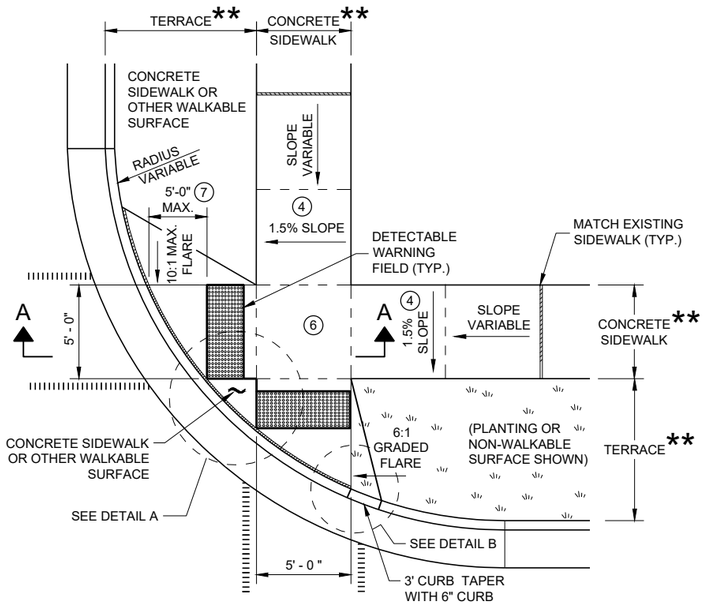
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20a
SDD 08D05 - 20a



DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

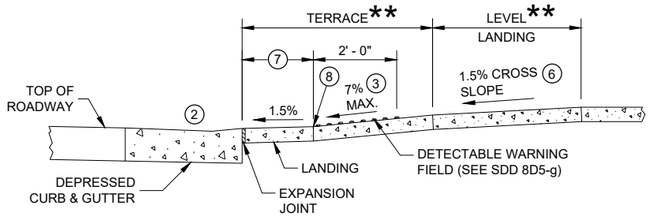
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

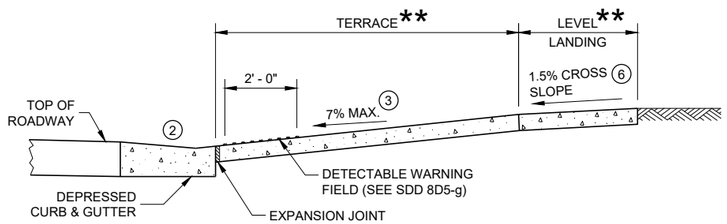
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

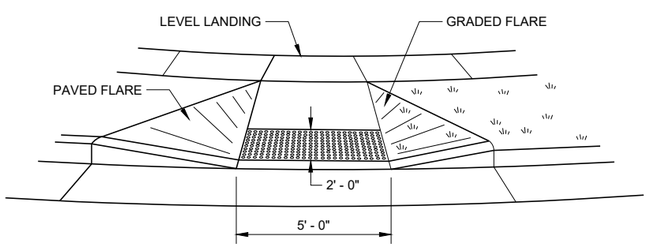
** WIDTH SHOWN ELSEWHERE IN THE PLANS



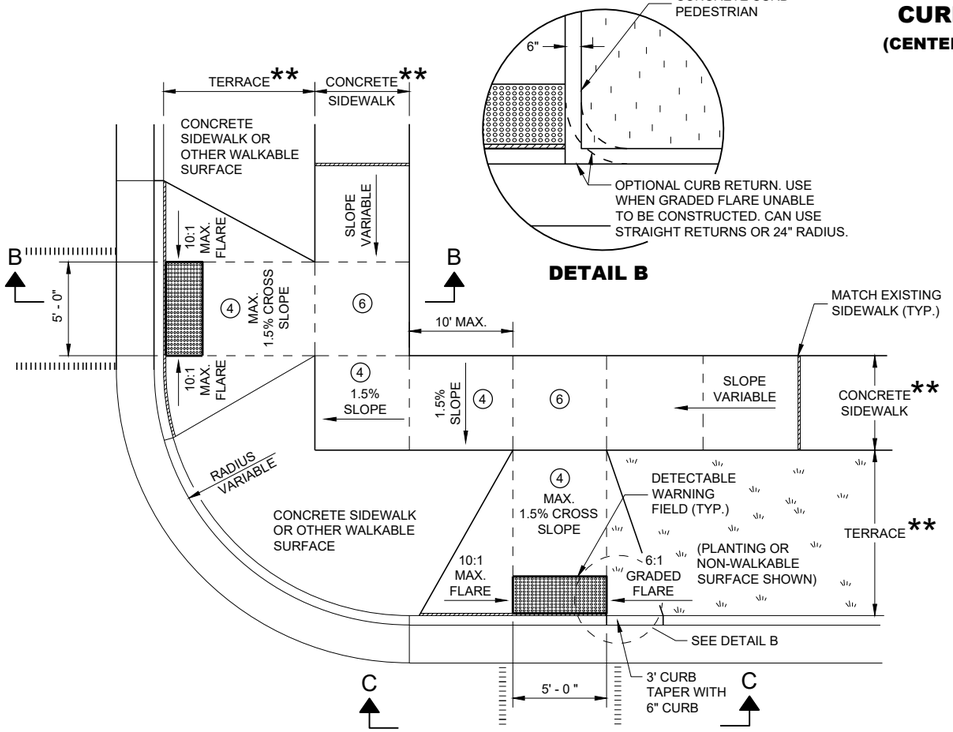
SECTION B - B FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



VIEW C - C FOR TYPE 3



DETAIL B

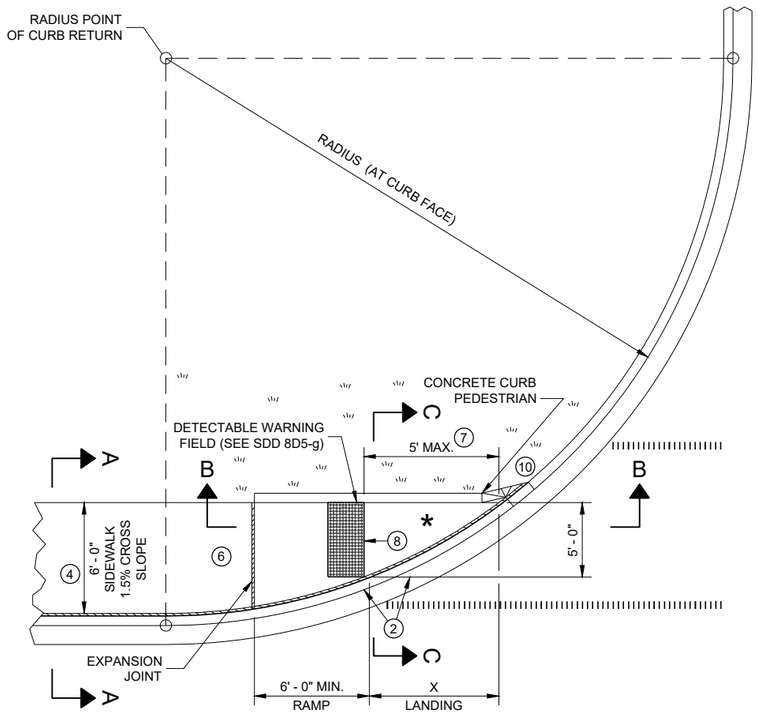
PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20b

SDD 08D05 - 20b

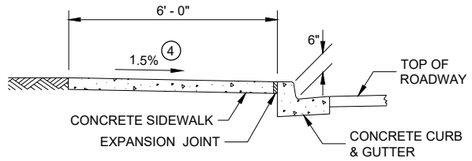


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

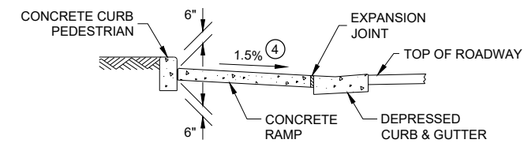
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

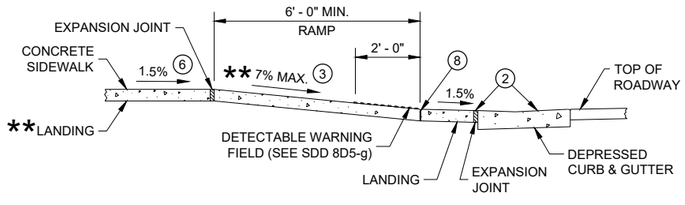
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



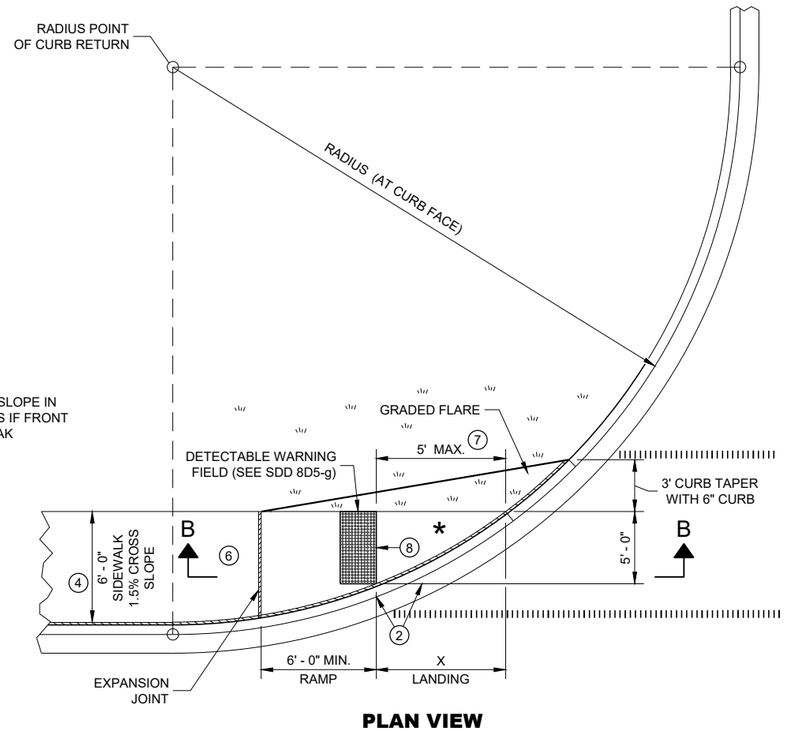
SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

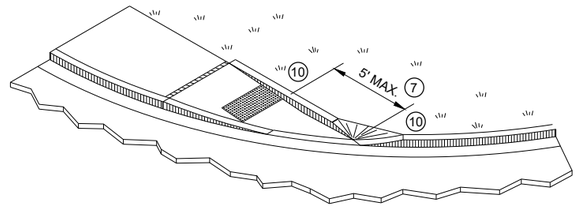
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

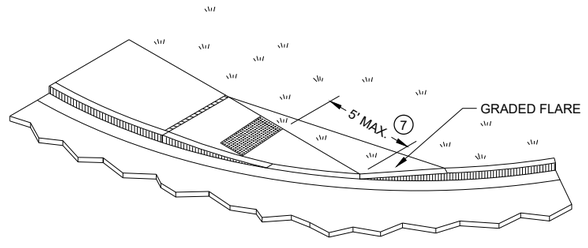


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A

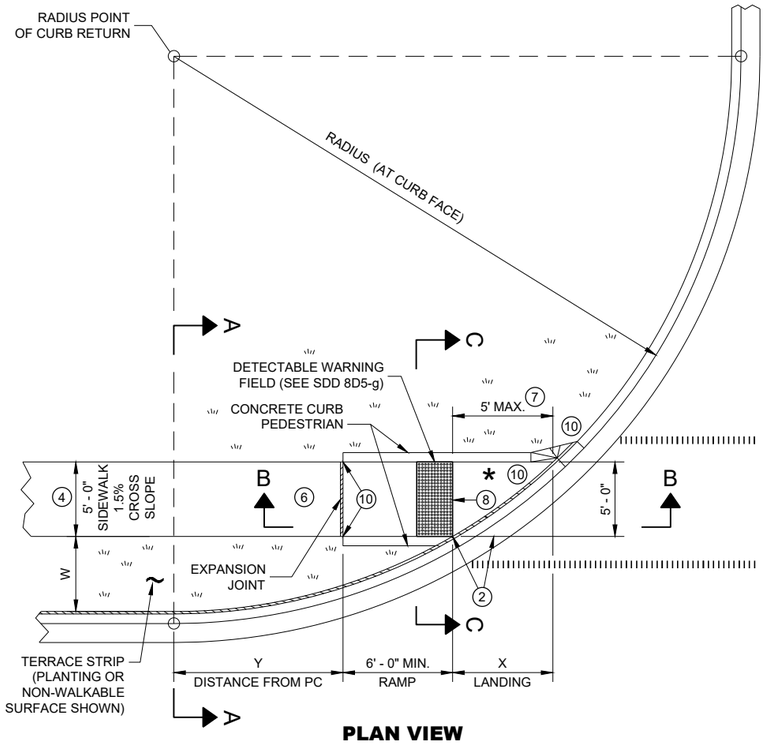


ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D05 - 20c



PLAN VIEW

CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET	5' - 9 ¾"	3' - 6 ½"	4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET			6' - 9 ¼"	7' - 11 ¼"	6' - 0 ¼"	9' - 8"	5' - 5"	11' - 1 ¾"	4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET									6' - 1 ¾"	15' - 8 ½"	5' - 8"	17' - 2"	5' - 3"	18' - 5 ¾"	4' - 10 ¾"	19' - 8 ¼"
50 FEET															5' - 10 ¼"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

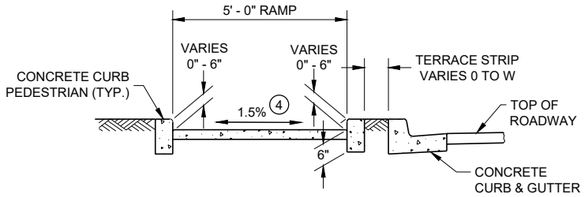
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

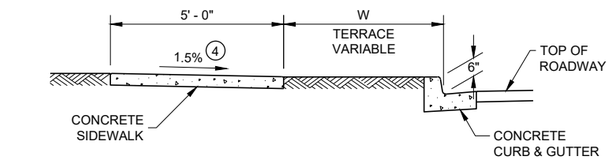
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

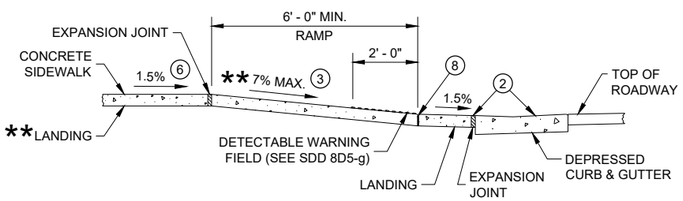
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



SECTION C - C FOR TYPE 4B



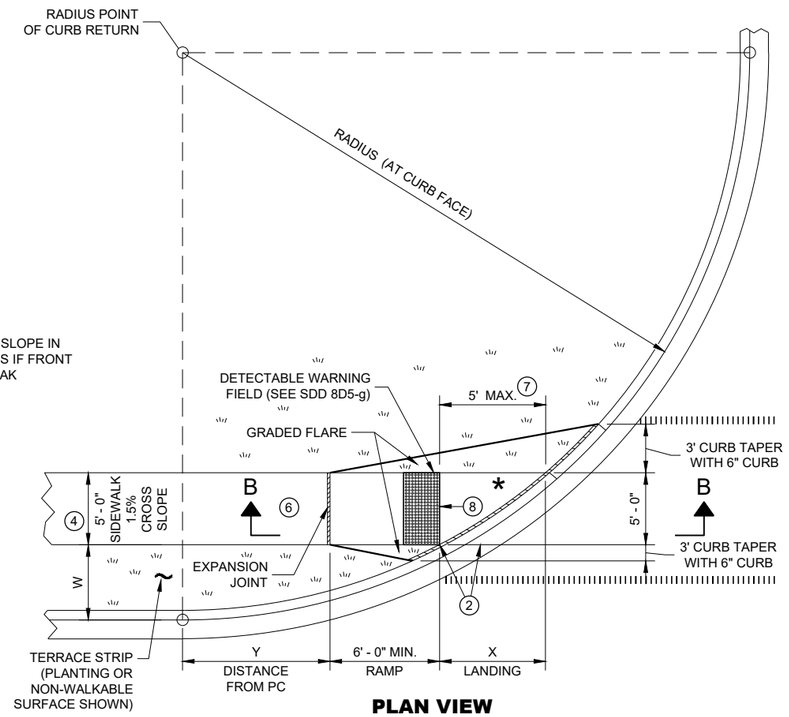
SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

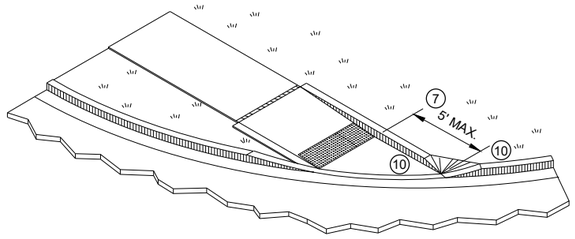
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

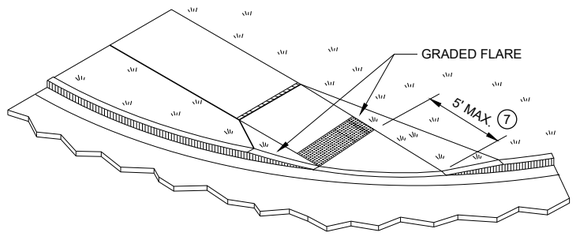


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



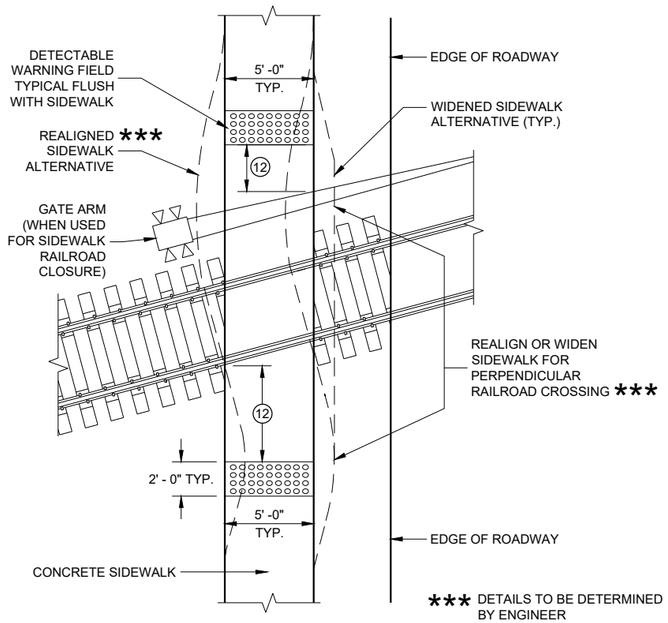
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

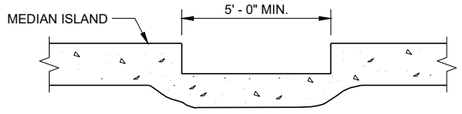
6

SDD 08D05 - 20d

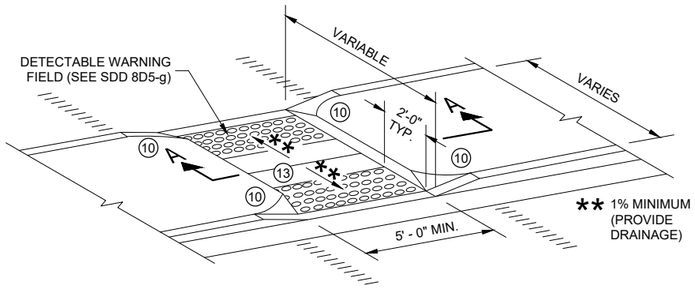


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ½ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

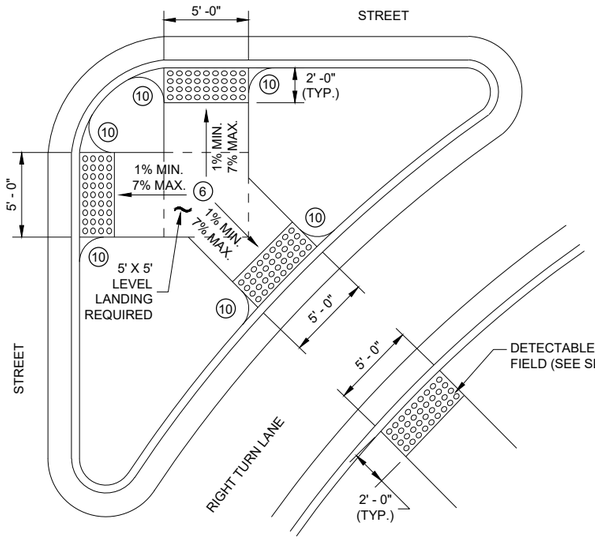
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

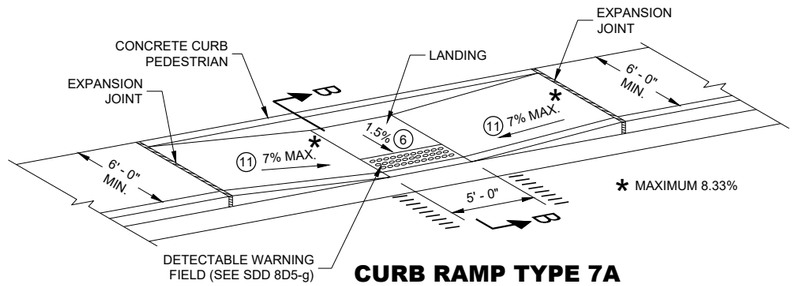
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

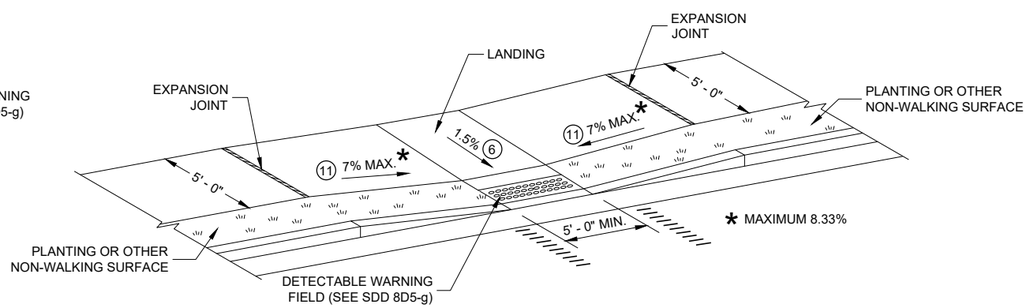
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7A

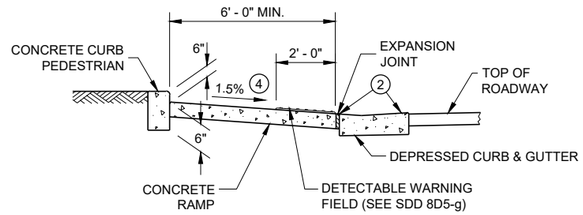
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.



SECTION B - B FOR TYPE 7A

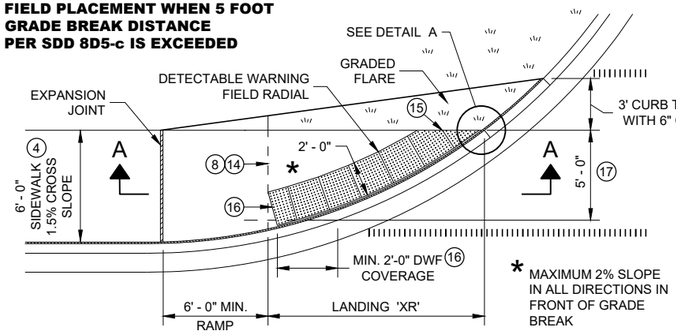
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20e

SDD 08D05 - 20e

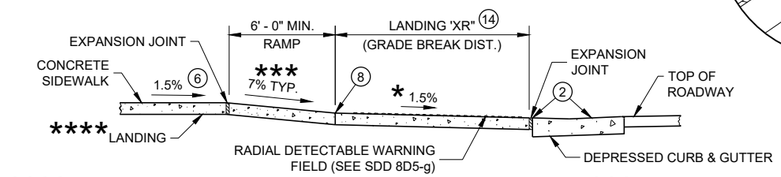
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW

CURB RAMP TYPE 4A1

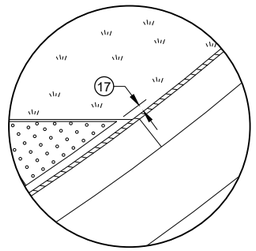
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1



DETAIL A

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AD ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

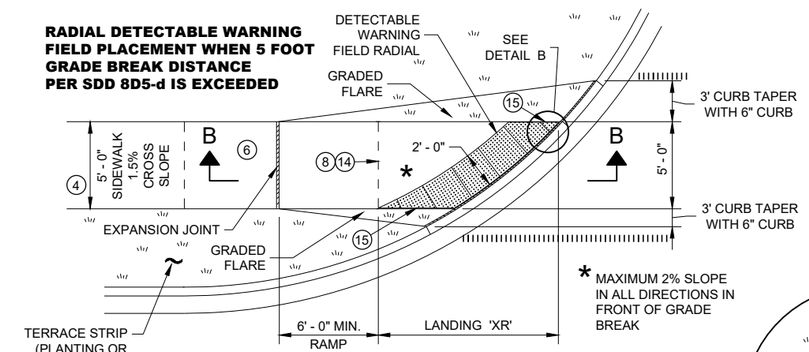
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

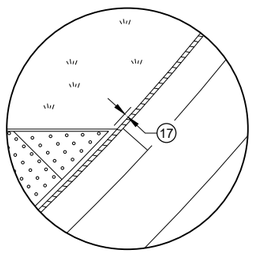
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



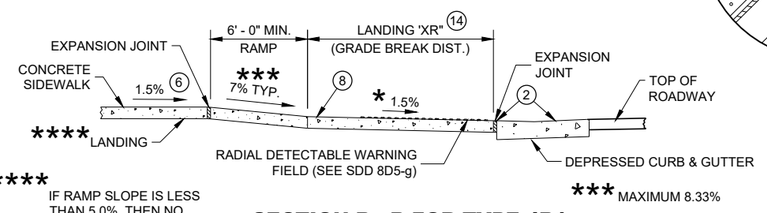
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B

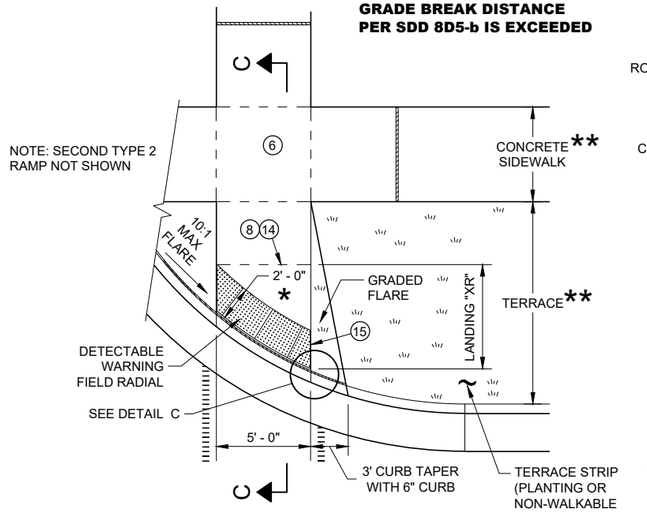


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

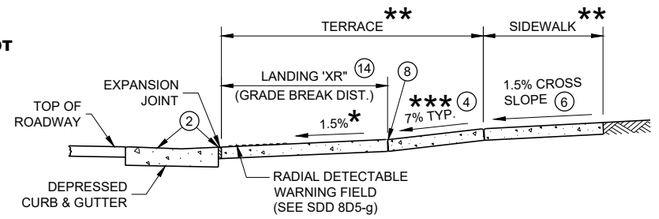


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

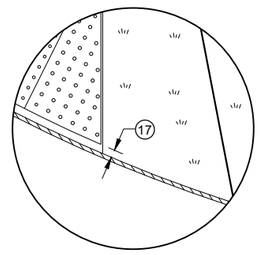


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

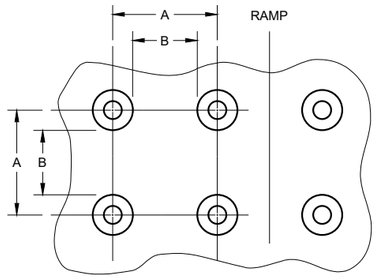
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

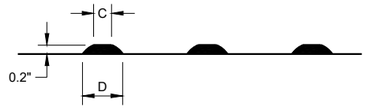
SDD 08D05 - 20f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

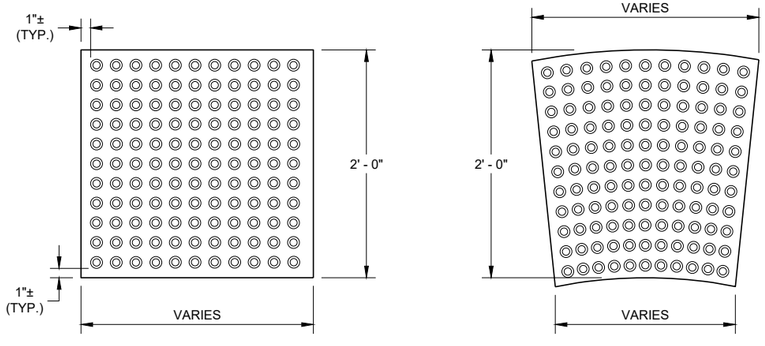


PLAN VIEW



ELEVATION VIEW

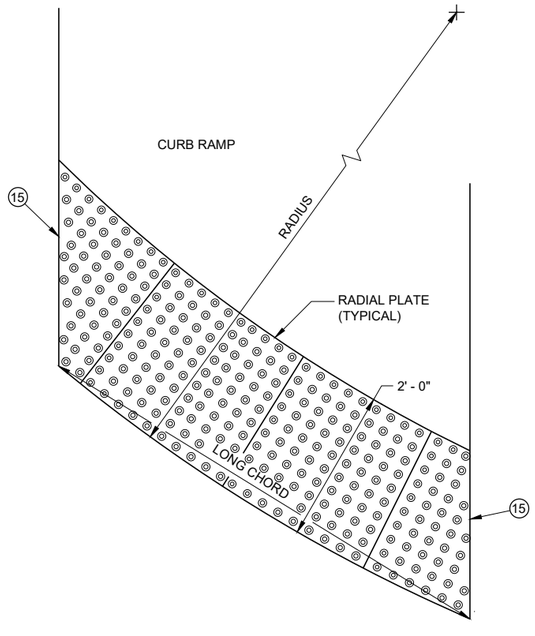
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

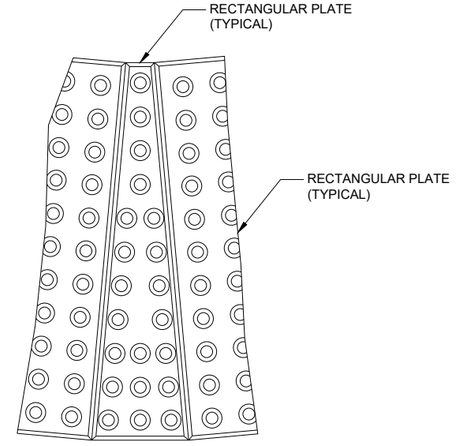
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

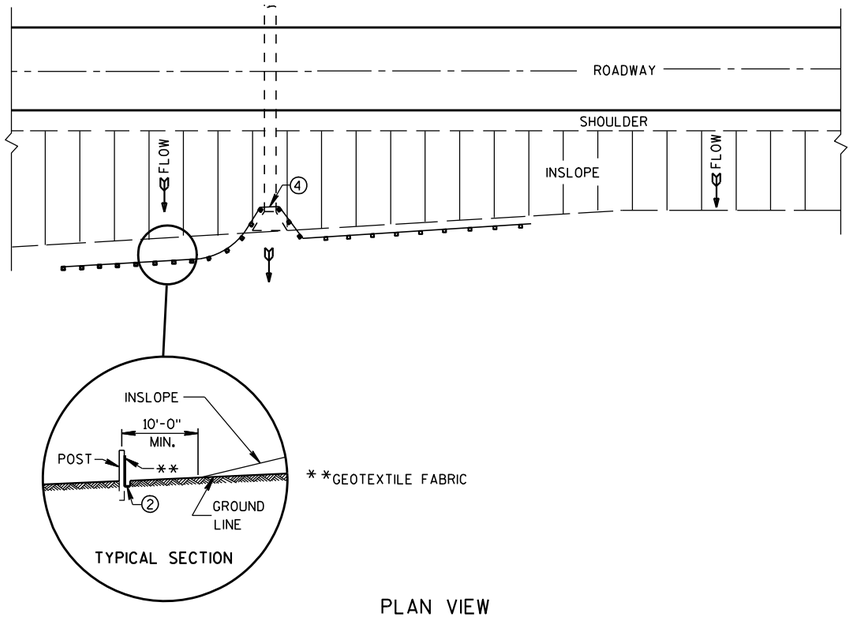
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

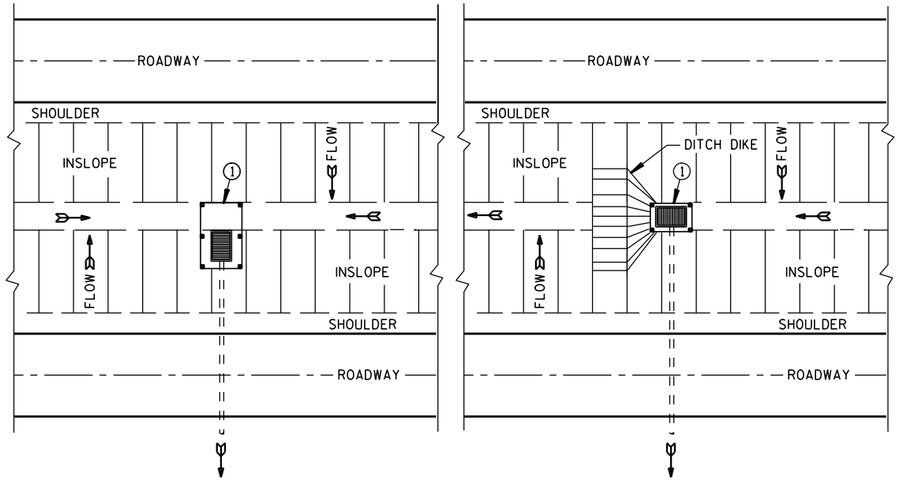
6

SDD 08D05 - 20g



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



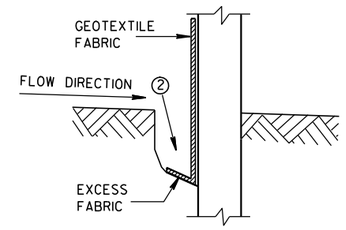
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

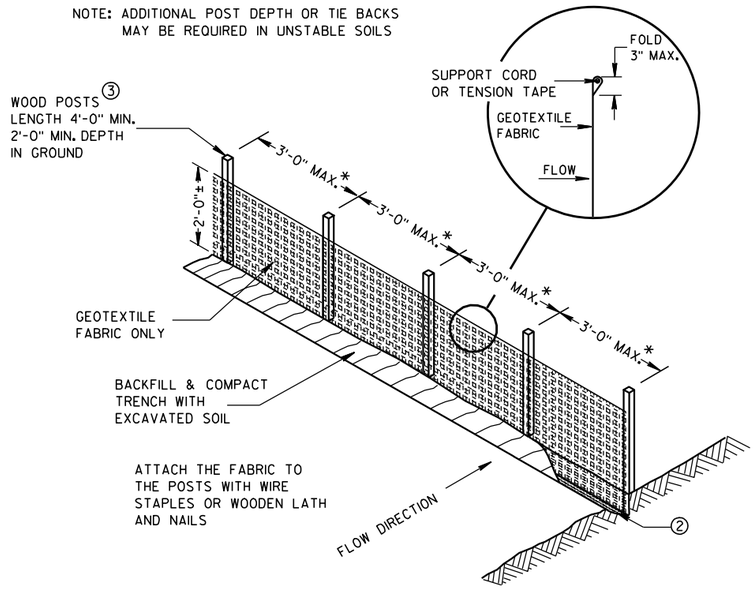
GENERAL NOTES

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

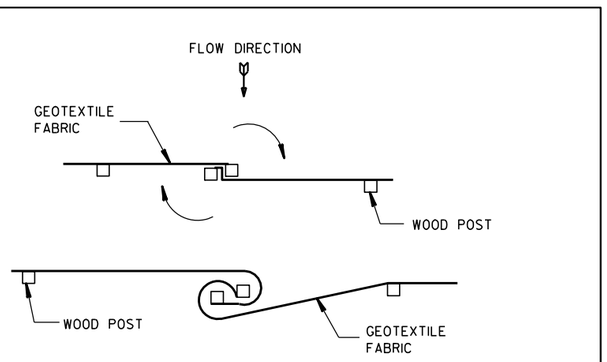
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



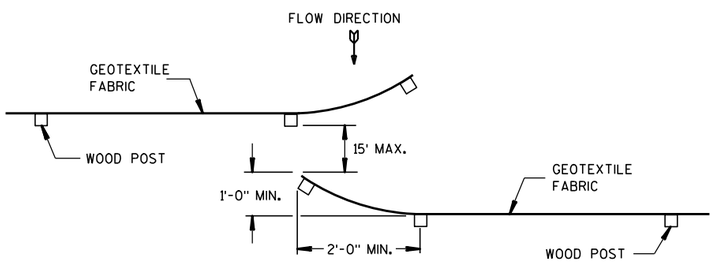
TRENCH DETAIL



SILT FENCE

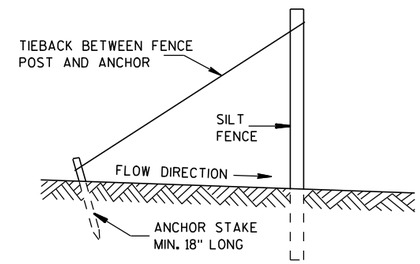


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

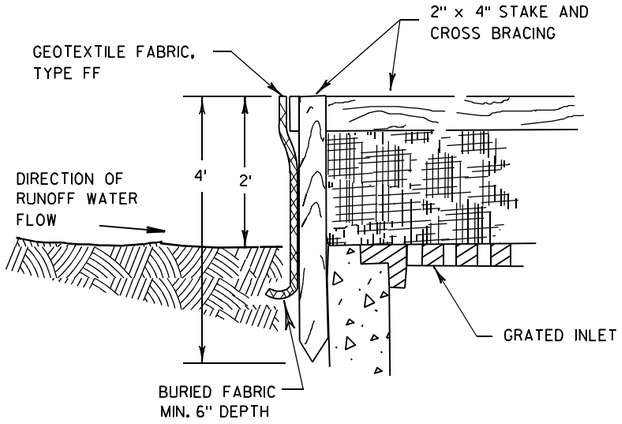
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

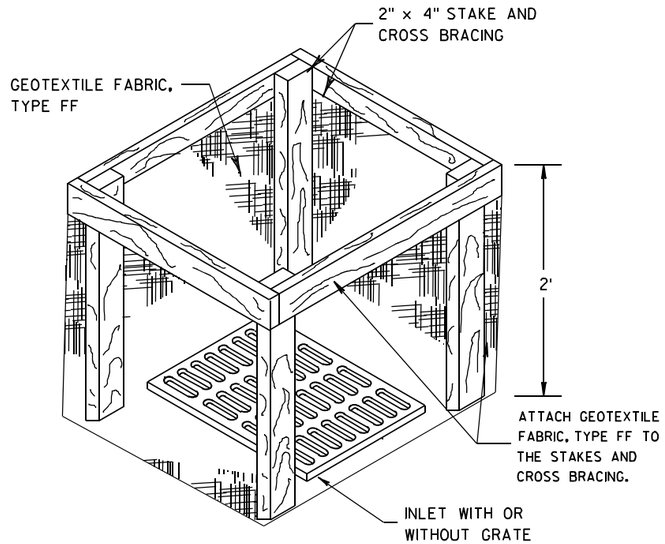
6

S.D.D. 8 E 9-6

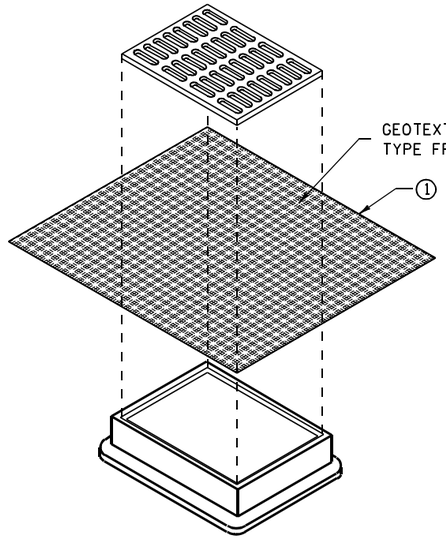
6

S.D.D. 8 E 9-6



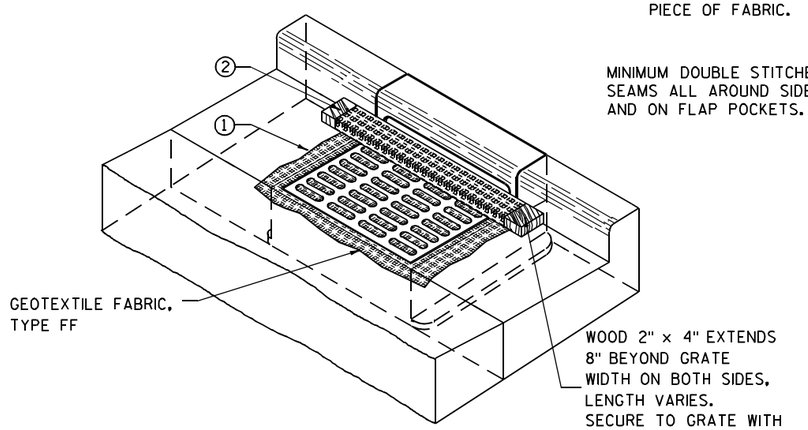


INLET PROTECTION, TYPE A

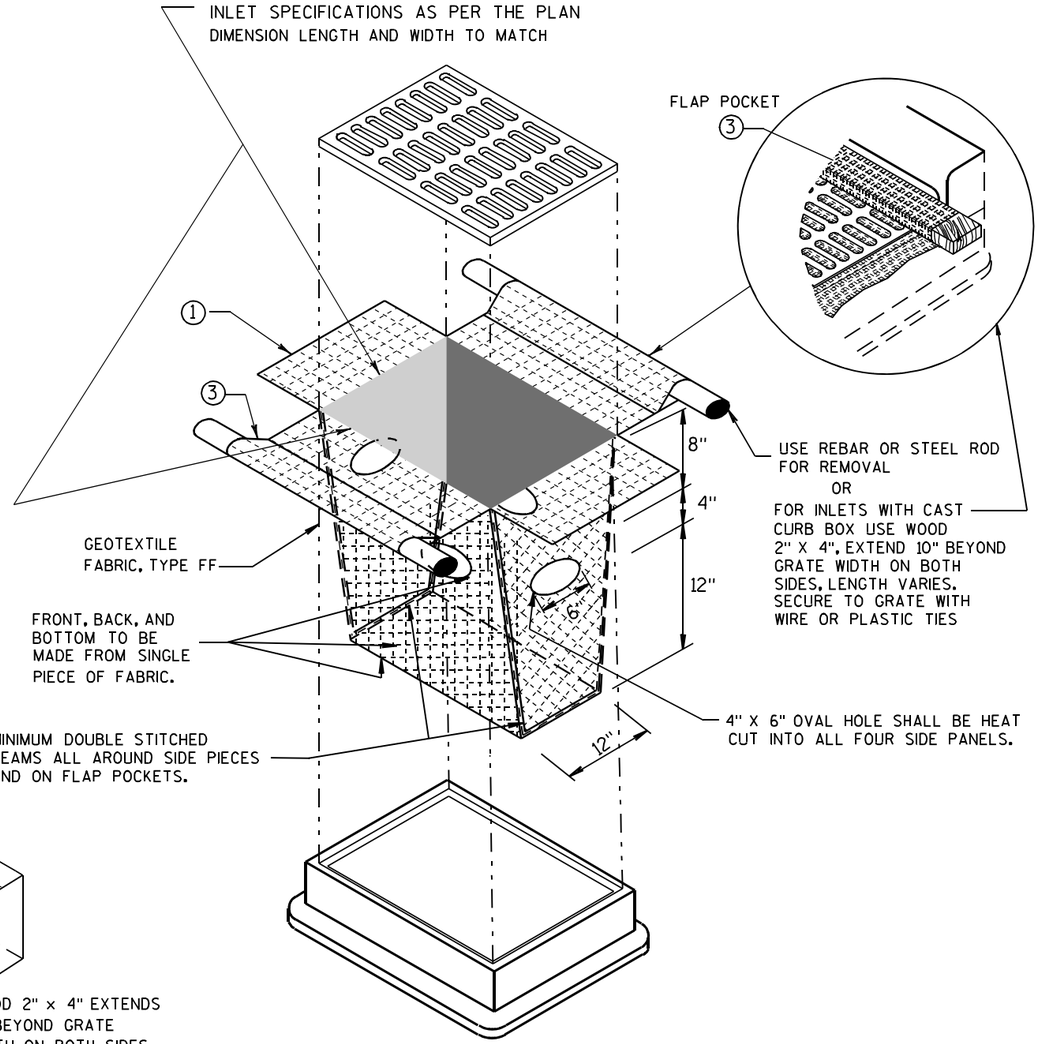


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

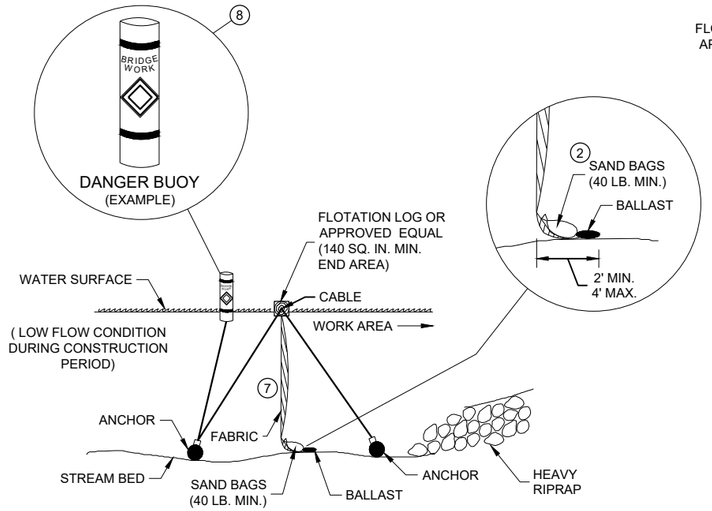
APPROVED

10/16/02
DATE

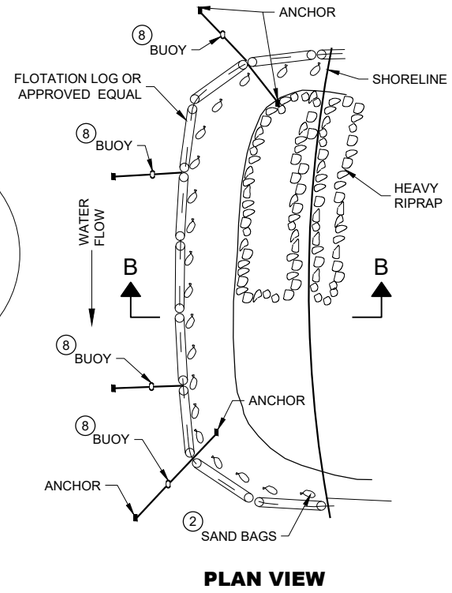
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2

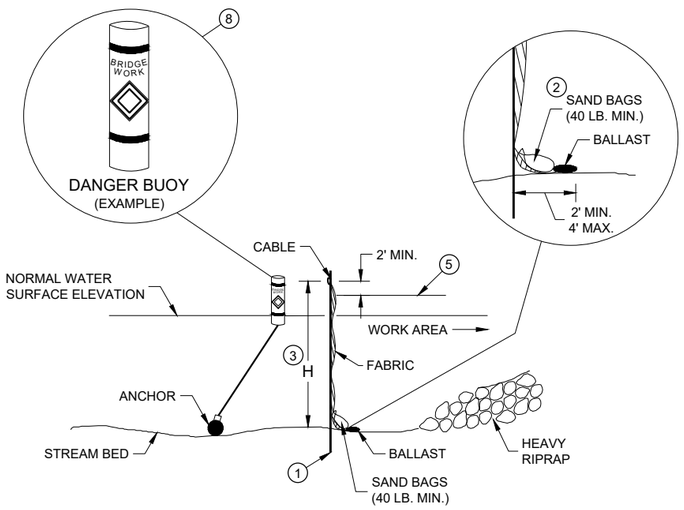


SECTION B - B

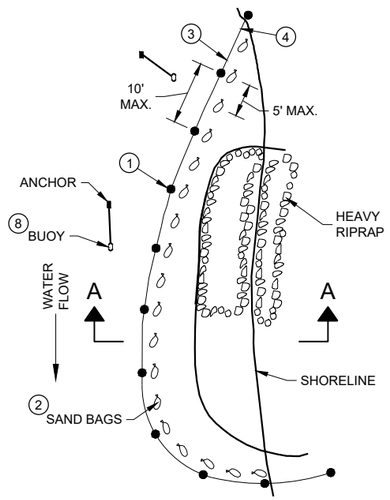


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

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

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

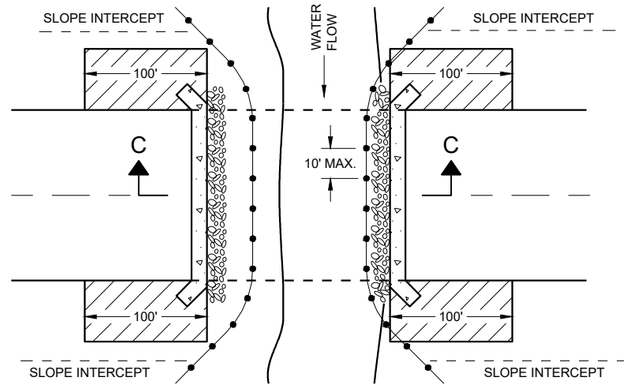
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

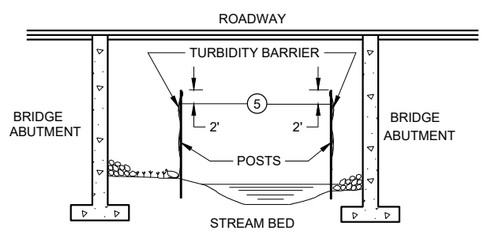
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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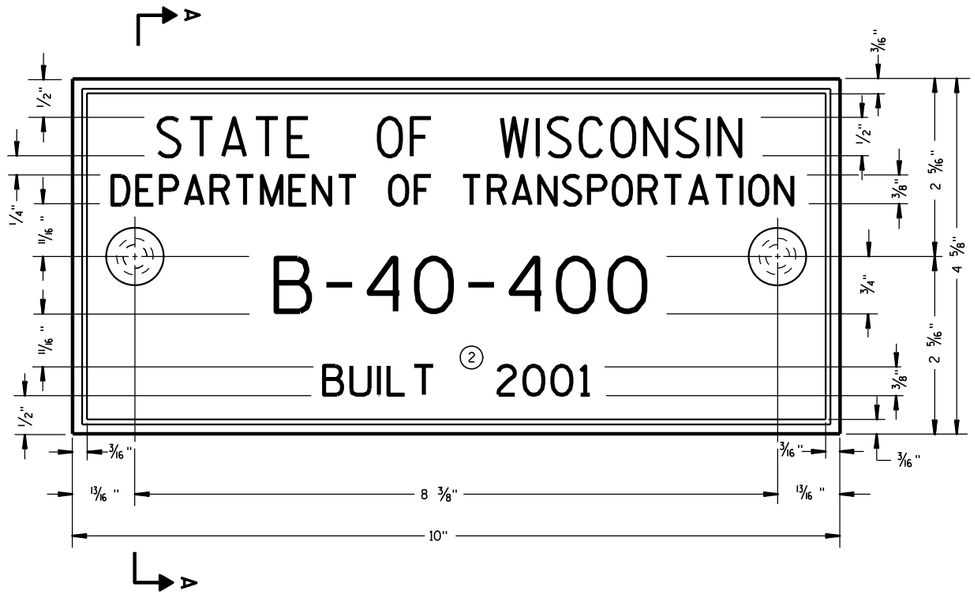
SDD 08E11 - 02



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

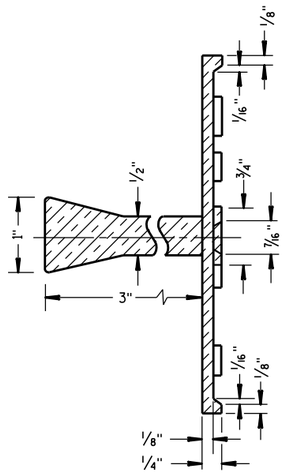
GENERAL NOTES

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

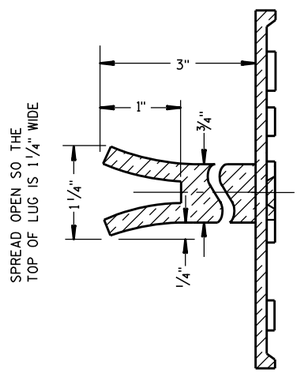
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

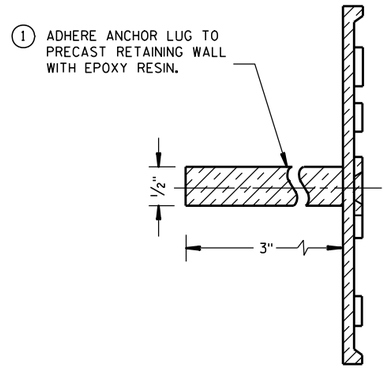
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

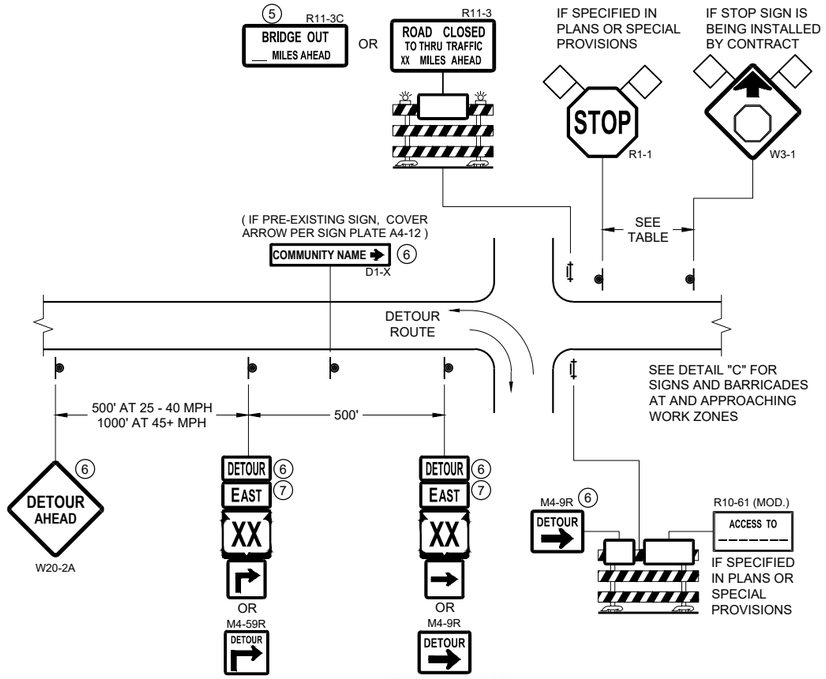
3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

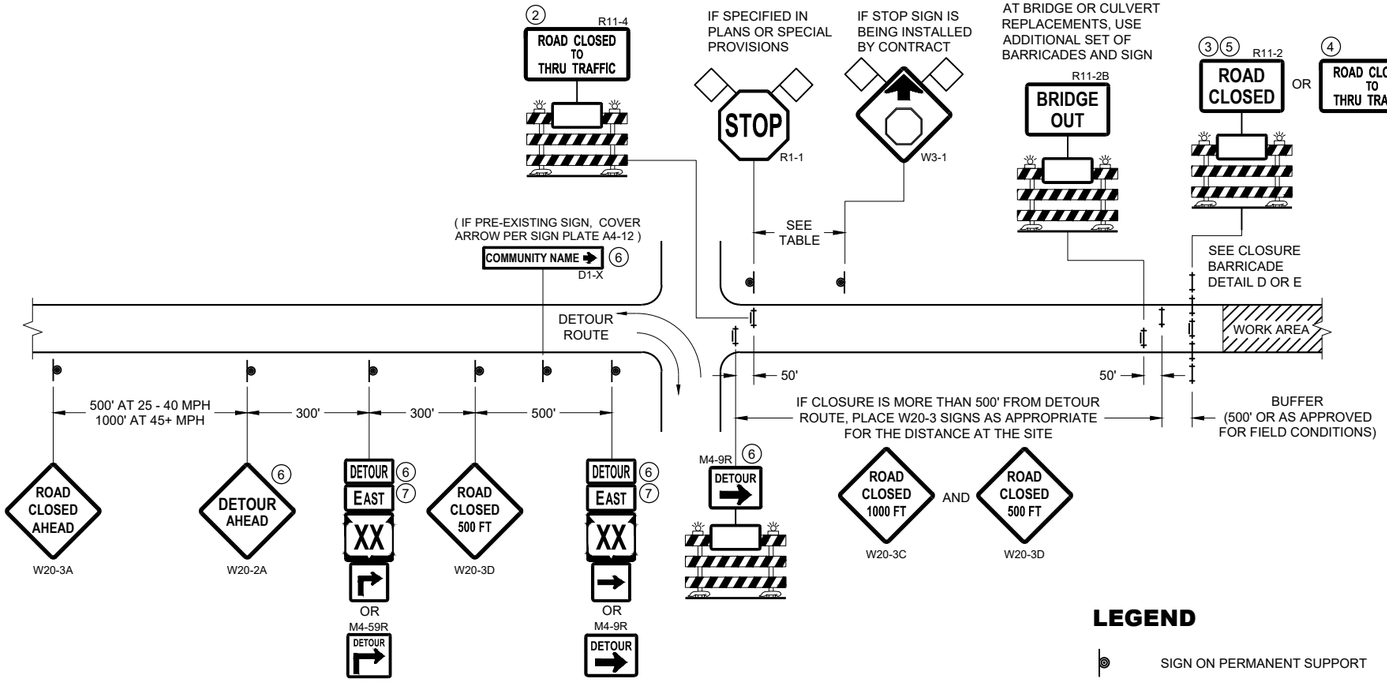
6

S.D.D. 12 A 3-10



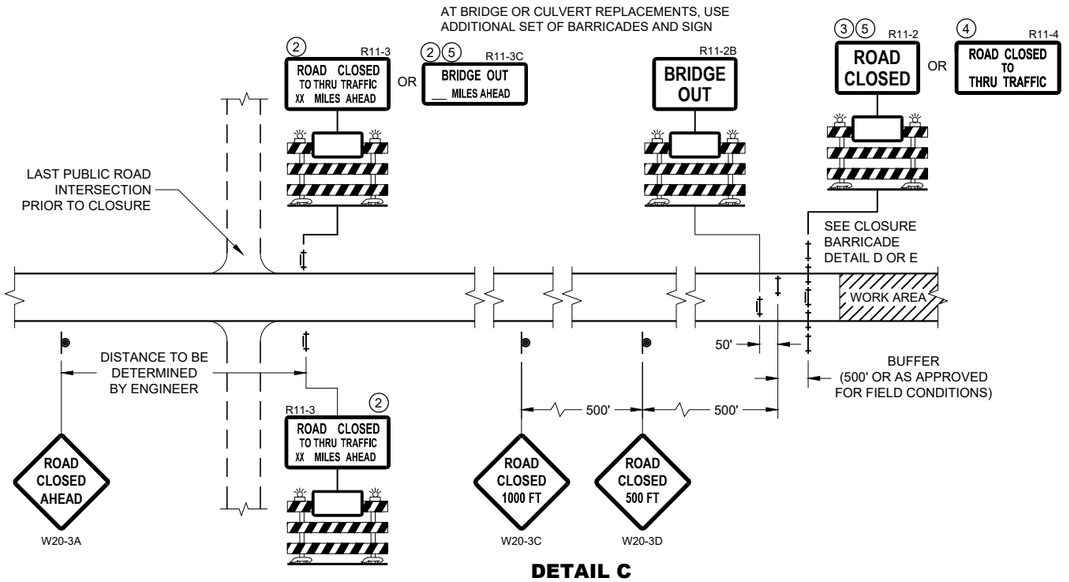
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

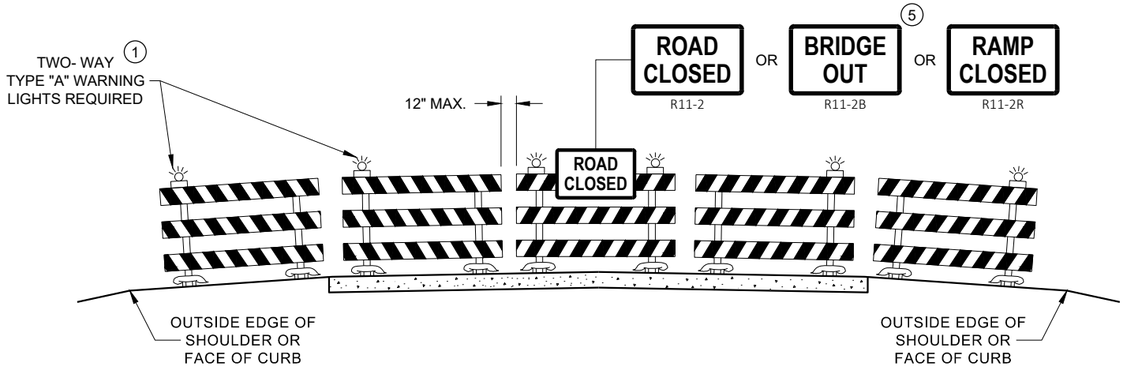
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

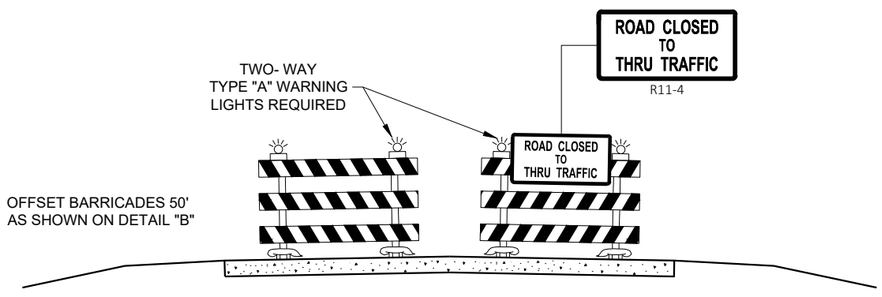
FHWA

SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

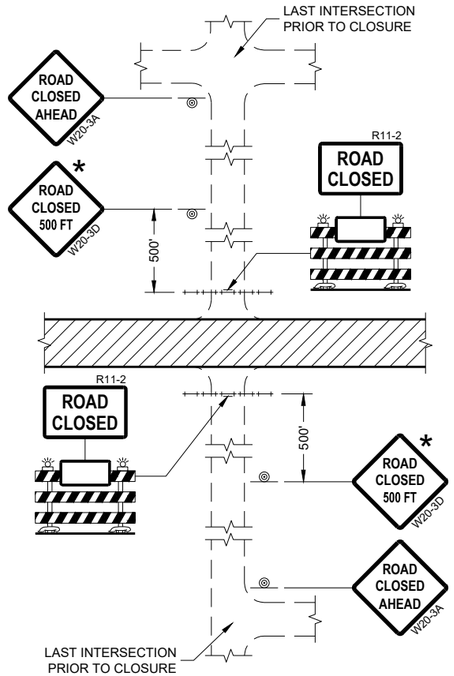
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

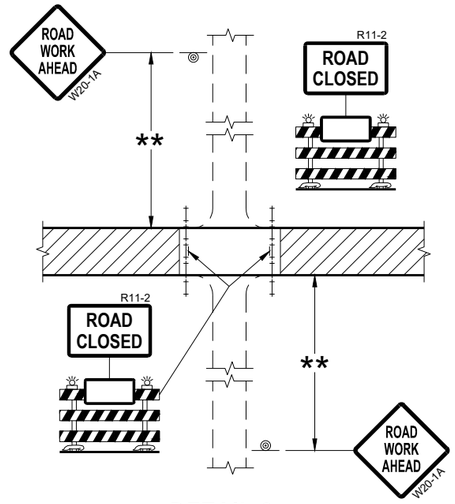
SDD 15C02 - 08b

6

SDD 15C02 - 08b



DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)

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 (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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.

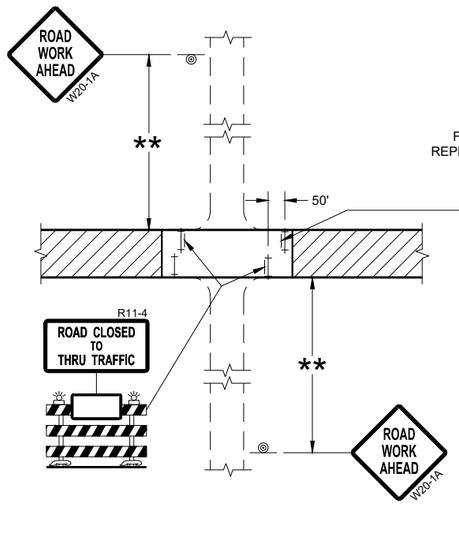
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 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.

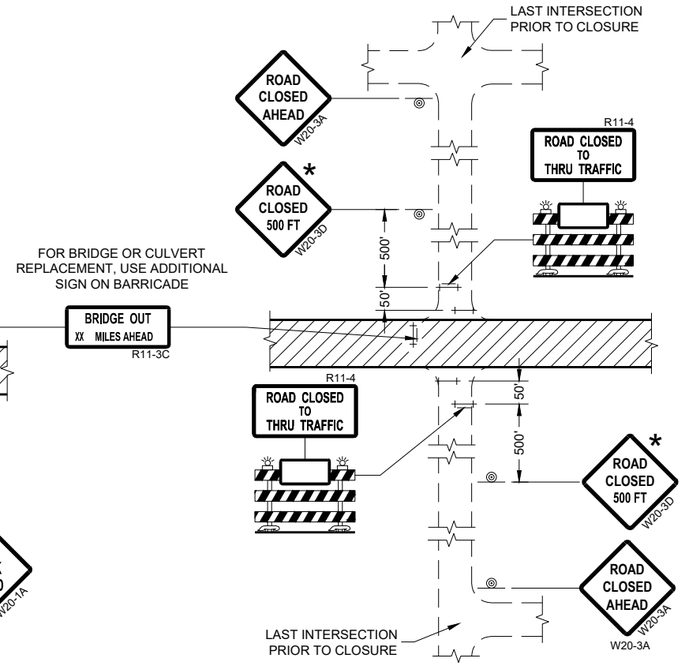
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

LEGEND

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

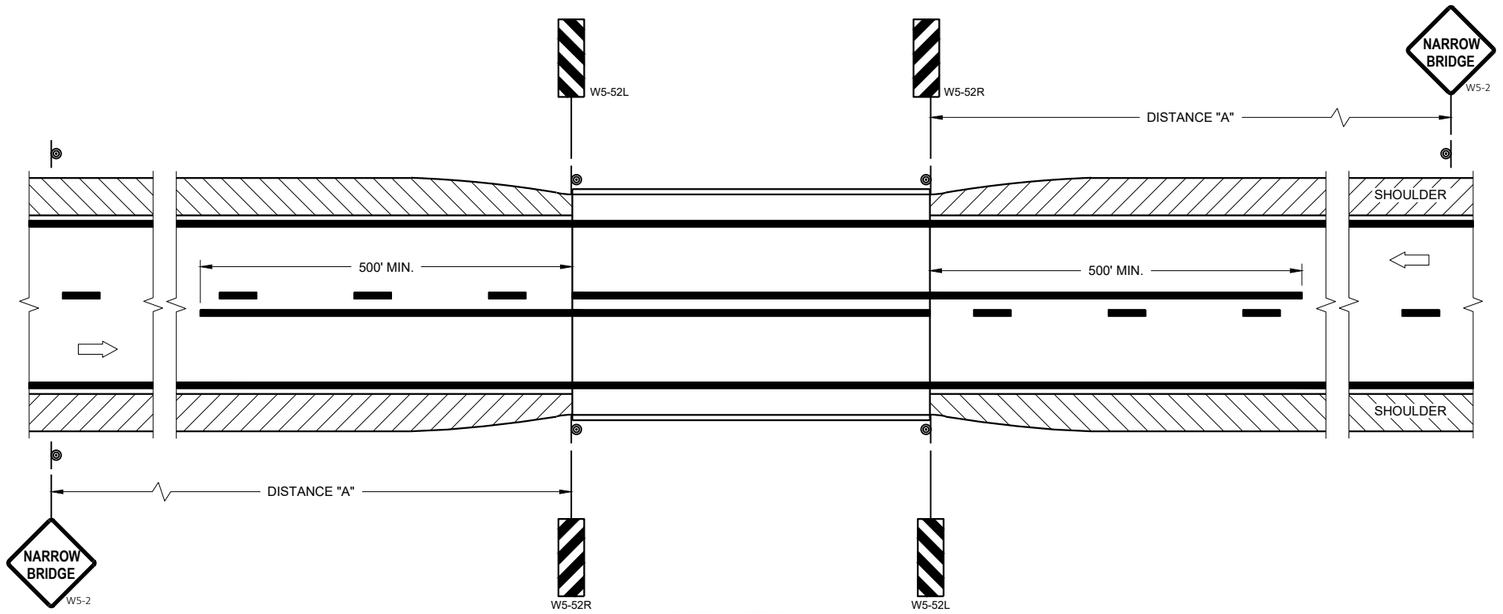
BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

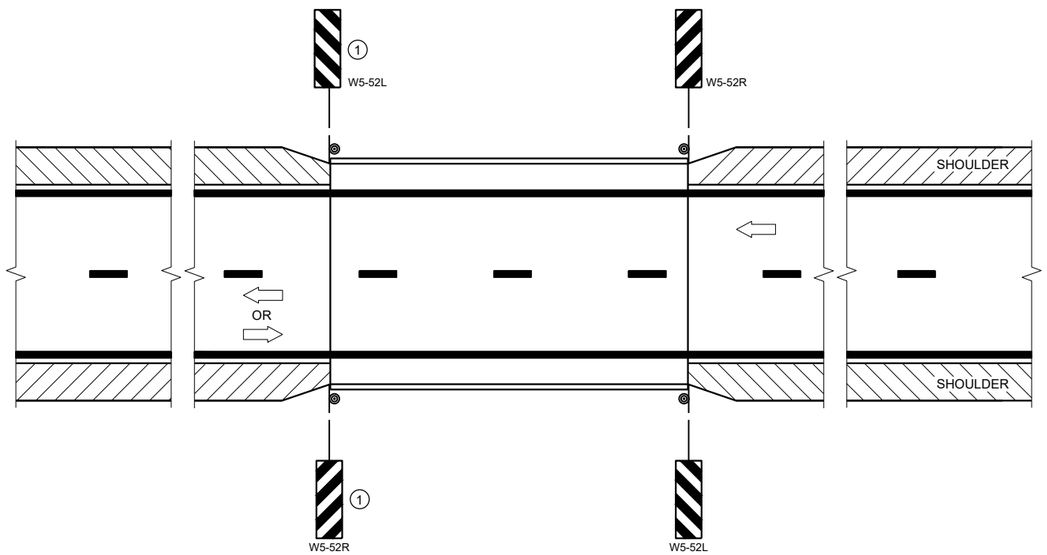
FHWA

6
SDD 15C03 - 05



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THE 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.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

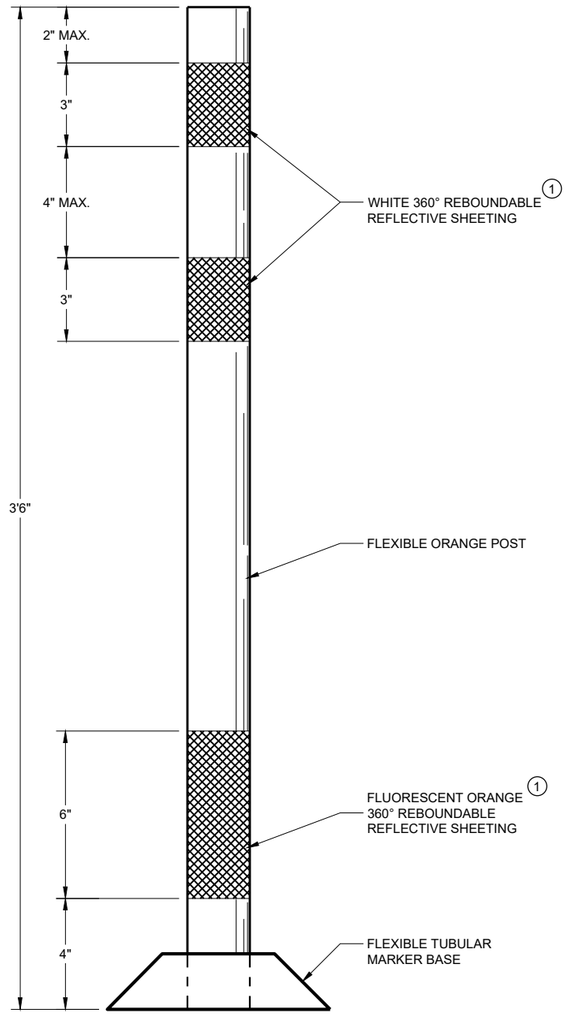
POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER
FHWA

6
SDD 15C06 - 10



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

6

SDD 15C11 - 09a

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

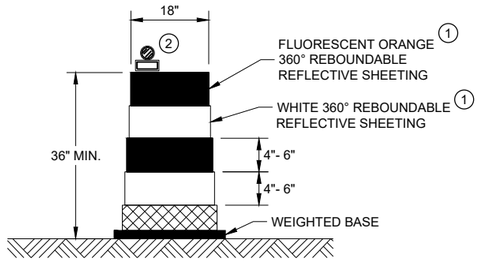
FHWA

6

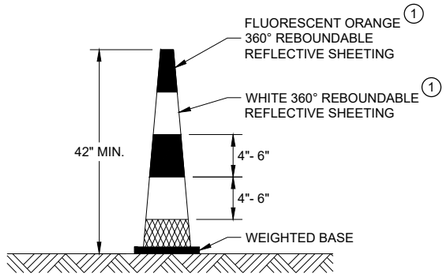
SDD 15C11 - 09a

GENERAL NOTES

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

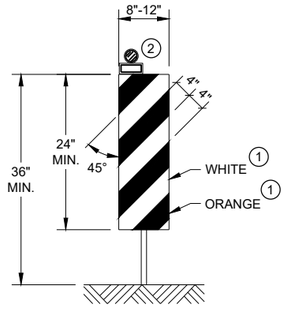


DRUM



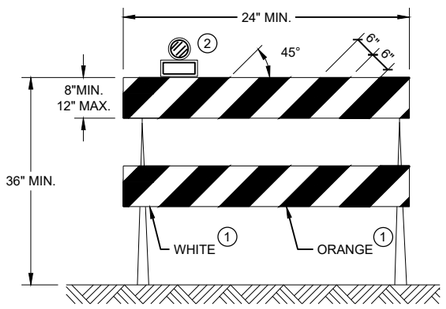
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



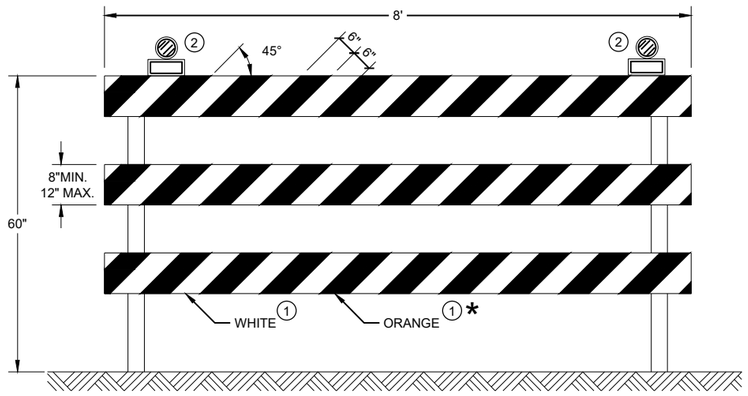
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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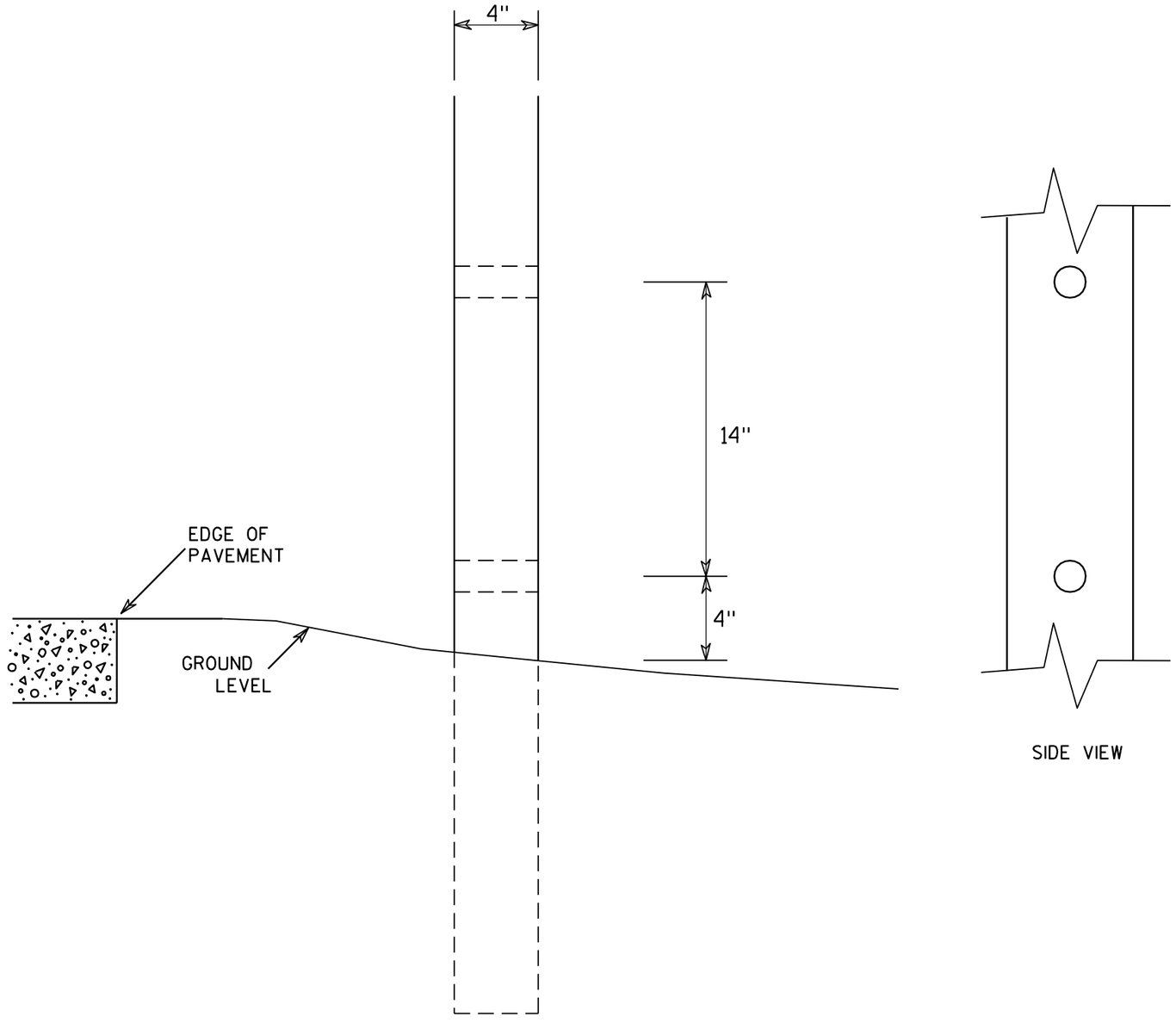
SDD15C11 - 09b

SDD15C11 - 09b



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

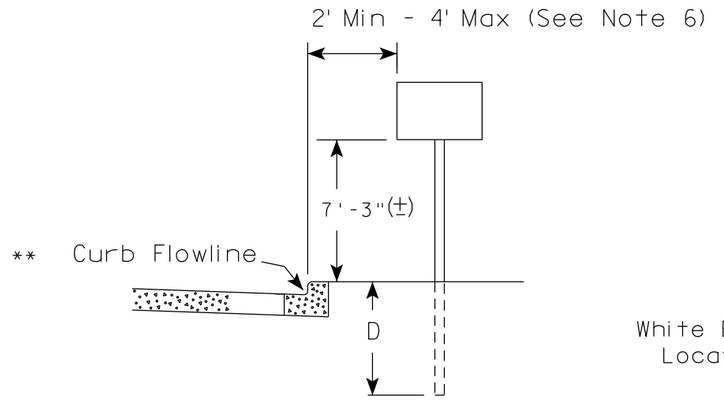
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

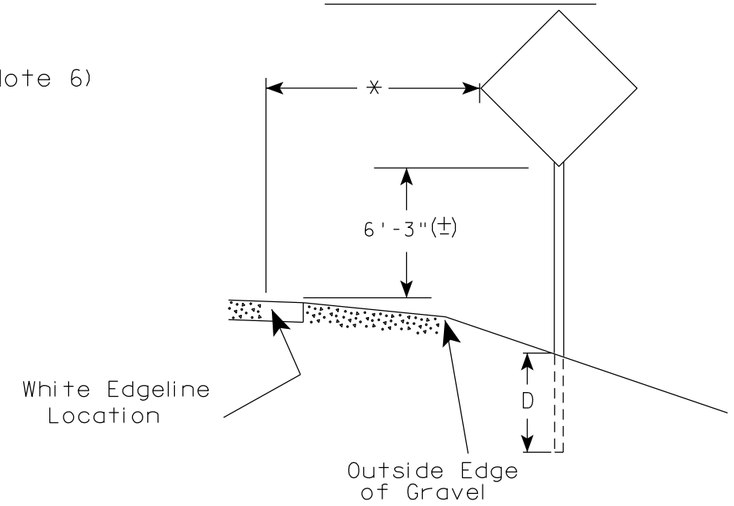
DATE 3/27/97 PLATE NO. A4-11.2

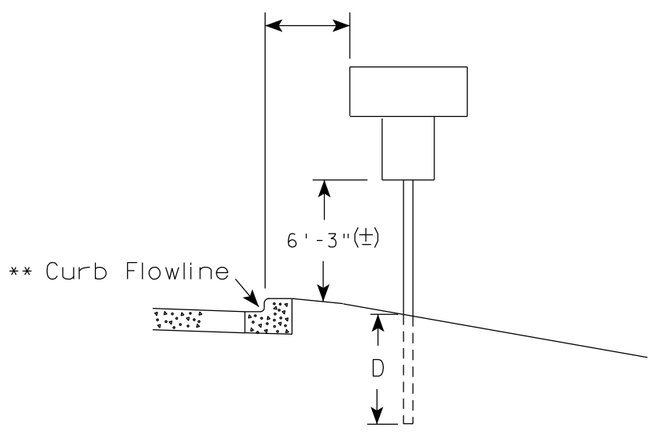
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 35	E

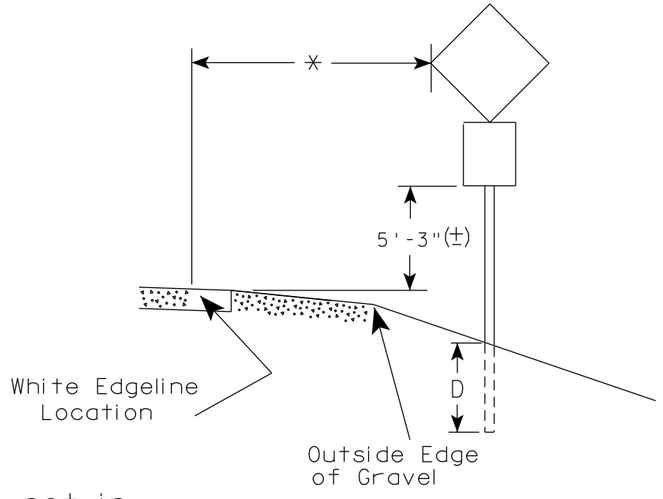
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

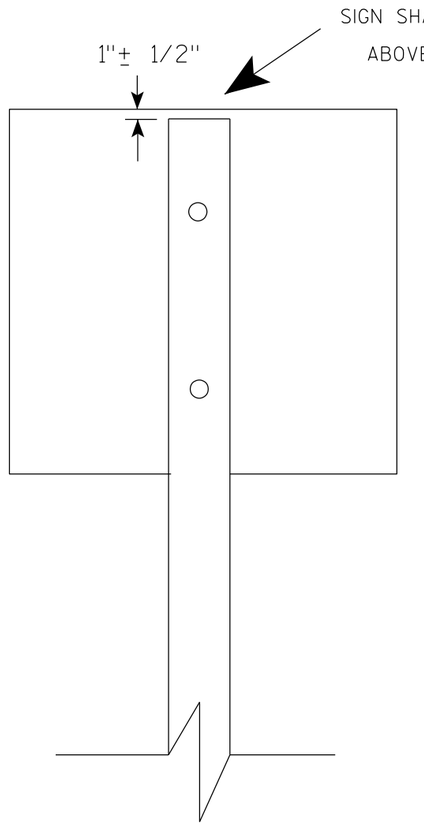
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

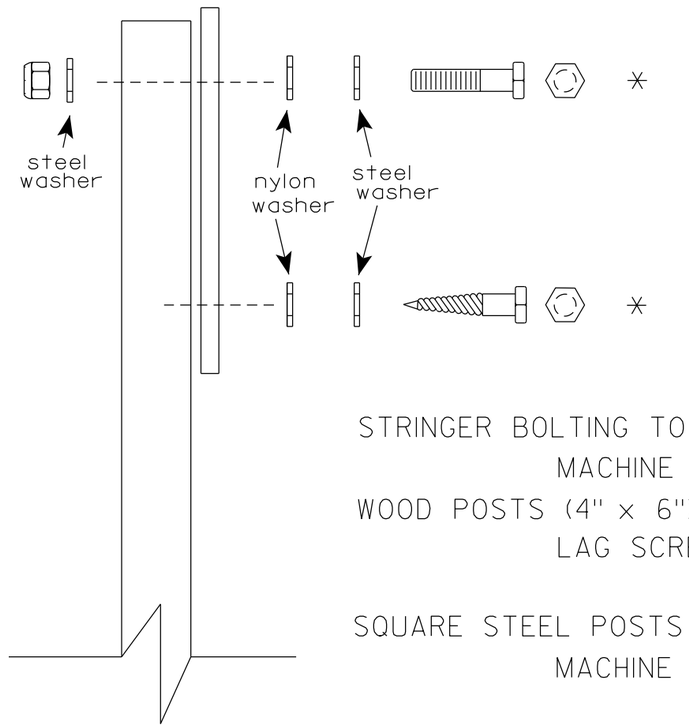
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

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





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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

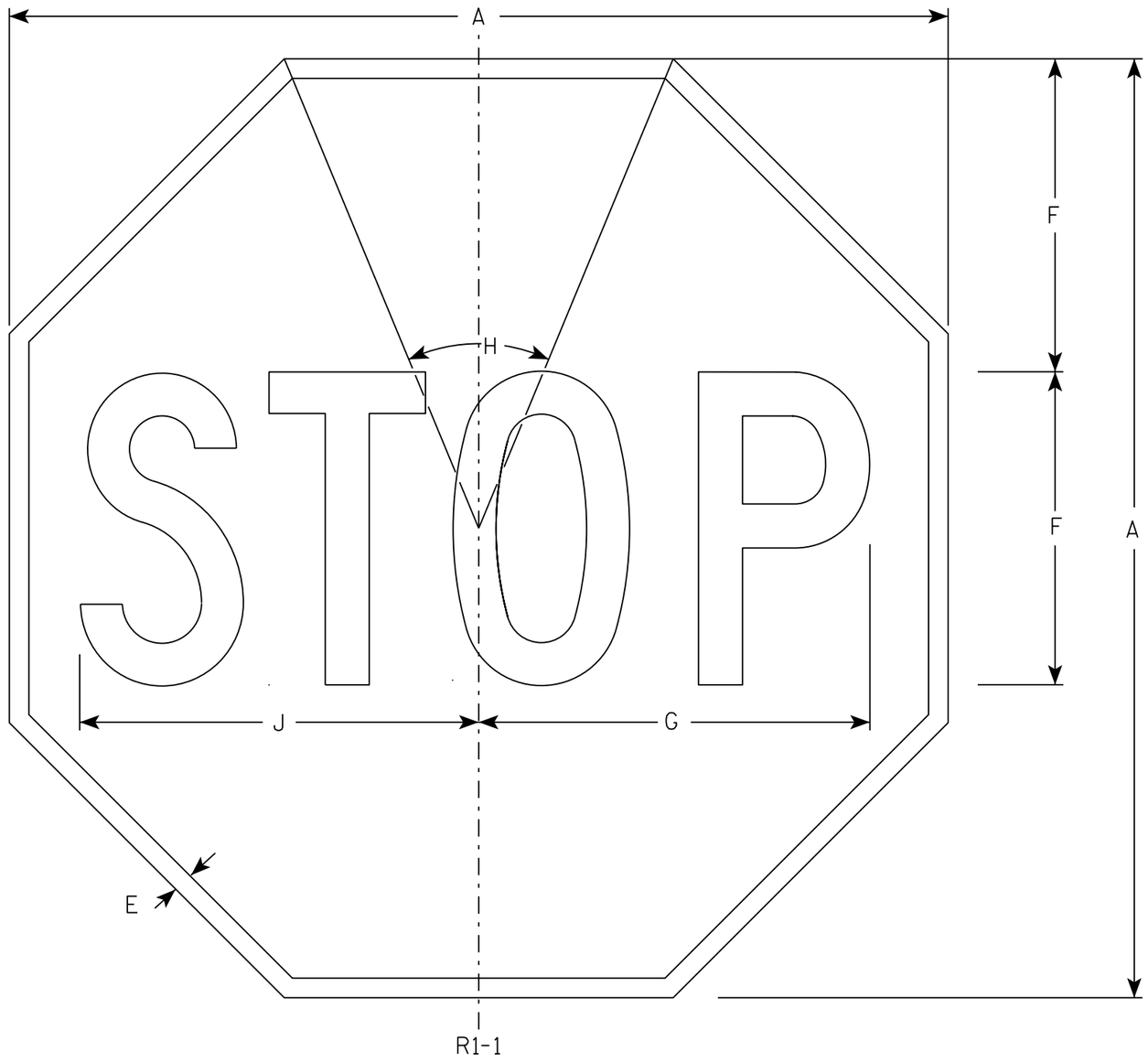
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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



NOTES

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

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

STANDARD SIGN

R1-1

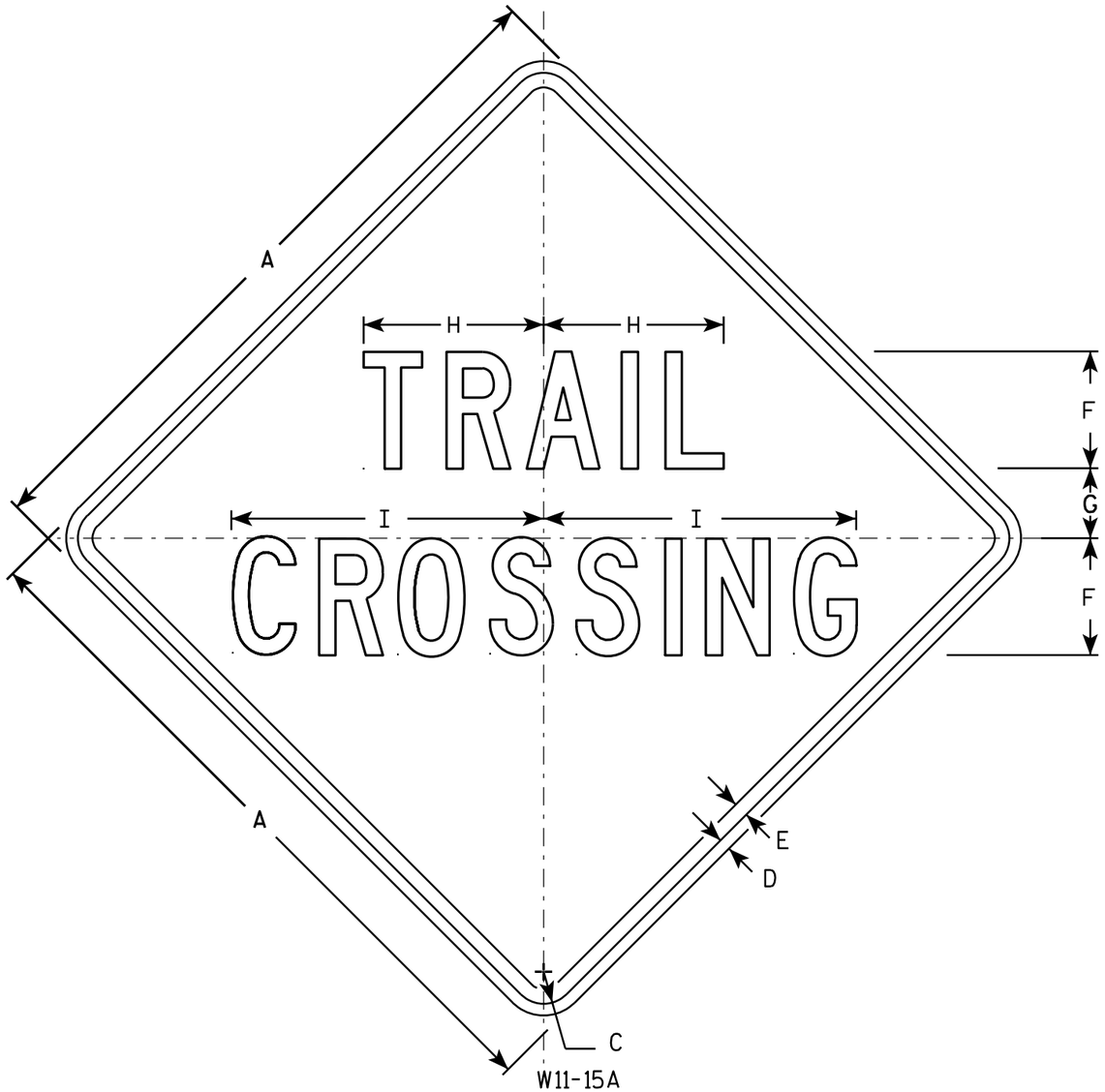
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 38	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. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 3/8	6 1/8	10 3/4																		4.0
2S	30		1 3/8	1/2	5/8	5	3	7 3/4	13 3/8																		6.25
2M	36		1 5/8	5/8	3/4	6	3 1/2	9 1/4	16																		9.0
3	36		1 5/8	5/8	3/4	6	3 1/2	9 1/4	16																		9.0
4	48		2 1/4	3/4	1	8	5	12 7/8	21 1/4																		16.0
5																											

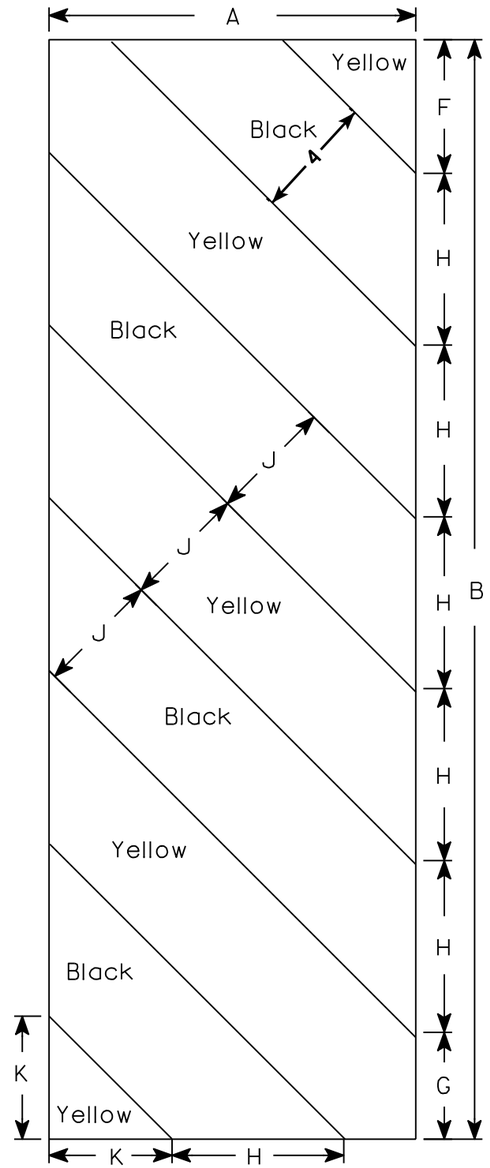
STANDARD SIGN
W11-15A

WISCONSIN DEPT OF TRANSPORTATION

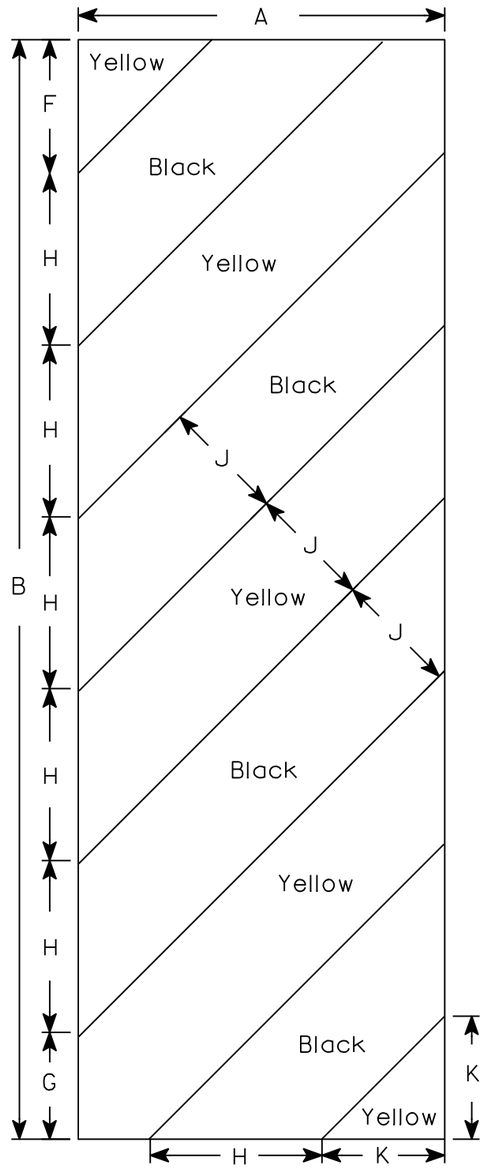
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/21/10 PLATE NO. W11-15A.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 39	E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

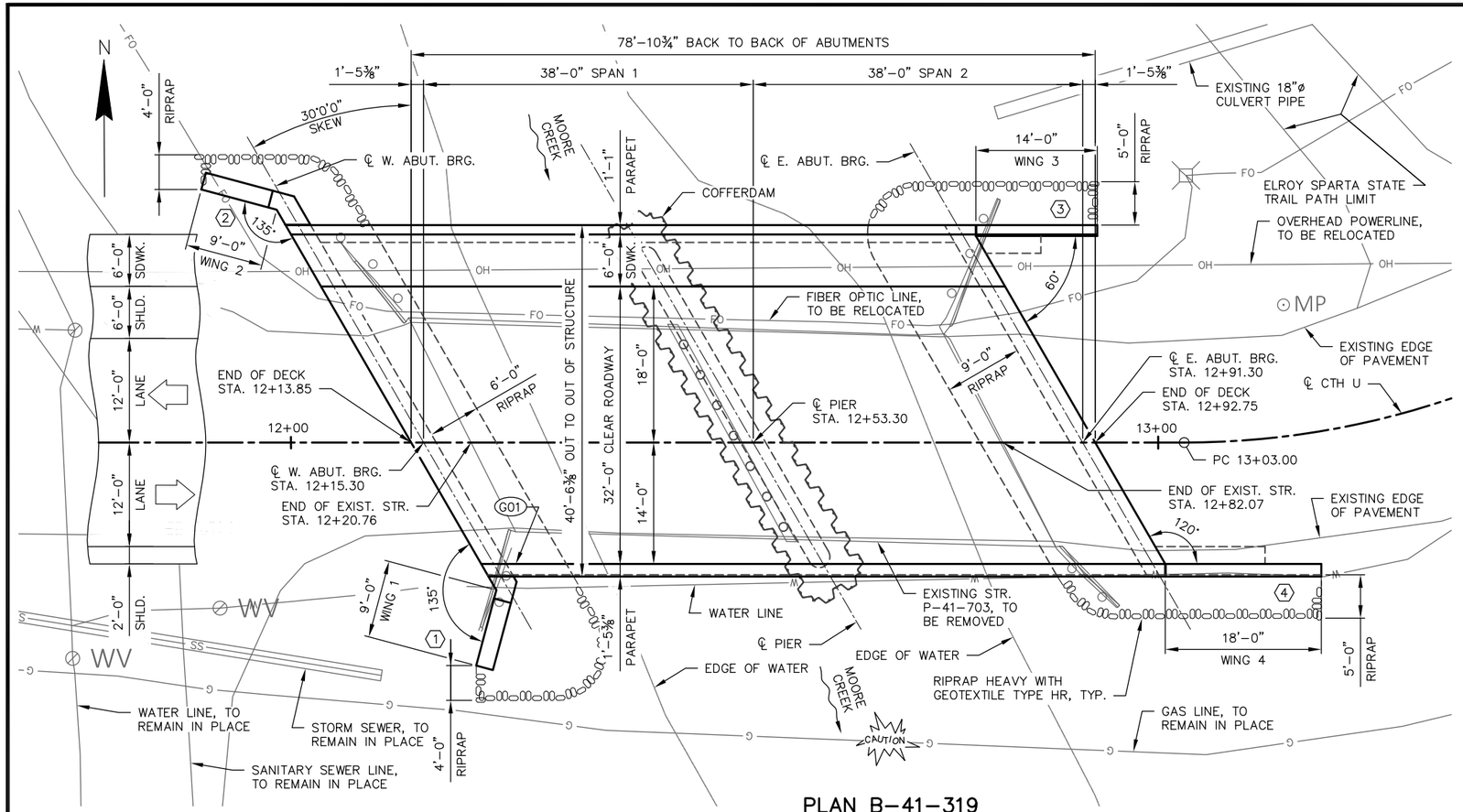
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 40	E



PLAN B-41-319

(TWO SPAN CONCRETE FLAT SLAB BRIDGE)

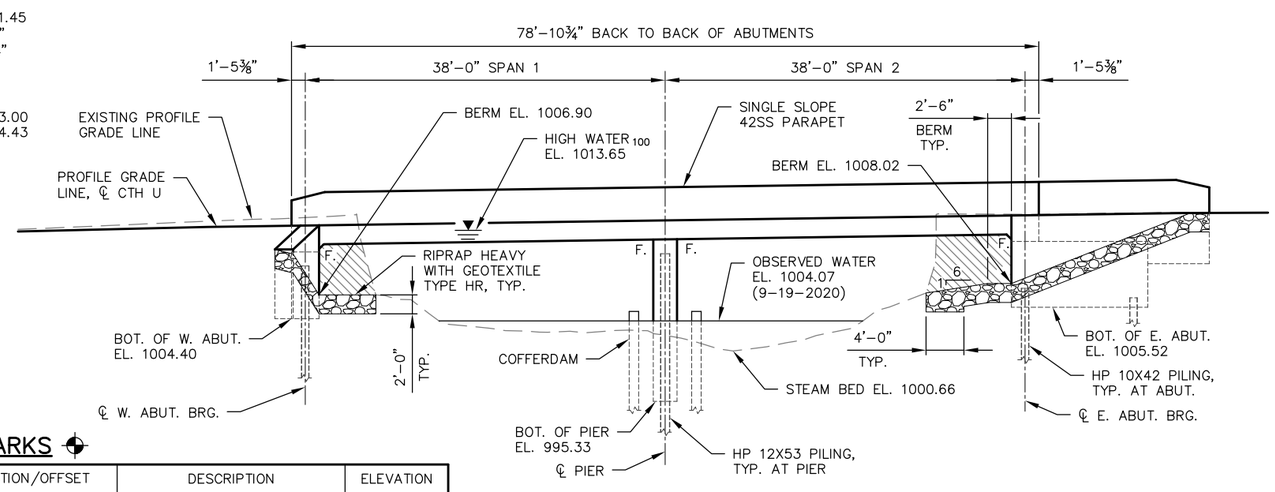
NOTES

- EXCAVATION AS INDICATED IN THE HATCH AREAS, TO BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-41-319".
- (G01) NAME PLATE – FOR LOCATION SEE "VERTICAL FACE PARAPET 'A'" SHEET.
- (G02) BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-41-319". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- (G03) "GEOTEXTILE TYPE DF SCHEDULE A" LIMITS. EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT FOR THE ENTIRE ABUTMENT BODY LENGTH.
- (G04) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "ABUTMENT DETAILS" SHEET.
- ⬡ INDICATES WING NUMBER

LIST OF DRAWINGS

CURVE DATA

℄ CTH U
P.I. STA. 13+81.45
Δ = 78°4026"
D. = 59°51'34"
T. = 78.45'
R. = 95.72'
L. = 131.43'
P.C. STA. 13+03.00
P.D. STA. 14+34.43



ELEVATION

(NORMAL TO MOORE CREEK, LOOKING NORTH)

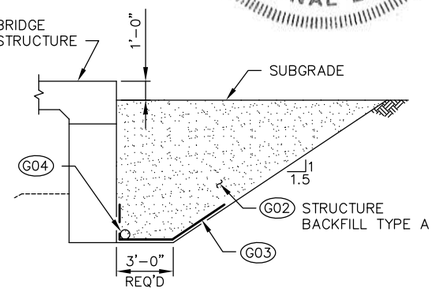
BENCH MARKS

NO.	STATION/OFFSET	DESCRIPTION	ELEVATION
BM1	13+95.30, 37.89' RT.	RAILROAD SPIKE	1016.61
BM2	11+11.25, 21.15' LT.	RAILROAD SPIKE	1013.49

HORIZONTAL DATUM AND ADJUSTMENT: NAD 83 (2011)
VERTICAL DATUM AND ADJUSTMENT: NAVD 88 (2012)
COORDINATE REFERENCE SYSTEM: WCCS MONROE CO.

TRAFFIC DATA:

CTH U
A.A.D.T. (2023) ——— 114
A.A.D.T. (2043) ——— 124
DESIGN SPEED ——— 30 M.P.H.



ABUTMENT BACKFILL DETAIL

(TYPICAL AT BOTH ABUTMENTS)

STATE PROJECT NUMBER

5017-00-70

DESIGN DATA

LIVE LOAD:

DESIGN LOADING ——— HL-93
INVENTORY RATING FACTOR ——— RF=1.22
OPERATING RATING FACTOR ——— RF=1.58
WISCONSIN STANDARD PERMIT VEHICLE RATING (WIS.-SPV): ——— 250 KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB ——— $f'c$ = 4,000 P.S.I.
ALL OTHER ——— $f'c$ = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT ——— fy = 60,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE** AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 25 FT PILE LENGTHS AT W. ABUT. AND 20 FT PILE LENGTHS AT E. ABUT.

THE PIER TO BE SUPPORTED ON HP 12X53 STEEL PILING AND SHALL BE PRE-BORED A MINIMUM OF 3-FT INTO THE BEDROCK. THE MAXIMUM FACTORED AXIAL COMPRESSION DESIGN LOAD IS 110 TONS PER PILE AT THE PIER. ESTIMATED 25 FT PILE LENGTHS AT THE PIER.

** 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 DYNAMIC FORMULA TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA:

Q_{100} ——— 3,740 C.F.S.
Q_{100} (THRU BRIDGE) ——— 3,032 C.F.S.
Q_{100} (ROAD) ——— 708 C.F.S.
DRAINAGE AREA ——— 18.1 SQ. MI.
BRIDGE WATER AREA ——— 463 SQ. FT.
BRIDGE VELOCITY ——— 6.55 F.P.S.
HIGH WATER $_{100}$ EL. ——— 1013.65 FT.
OVERTOPPING Q ——— 3,290 C.F.S.
OVERTOPPING EL. ——— 1012.74 FT.
OVERTOPPING FEQ. ——— 65 YRS
SCOUR CRITICAL CODE ——— 5
Q_2 ——— 495 C.F.S.
Q_2 ELEVATION ——— 1007.91 FT.
Q_2 VELOCITY ——— 2.61 F.P.S.

BRIDGE OFFICE CONTACT
AARON BONK, P.E.
(608) 261-0261

CONSULTANT CONTACT
ANDY KNUTSON, P.E., S.E.
(608) 588-7866

WISCONSIN
ANDREW C. KNUTSON
E-34662
SPRING GREEN, WI
7-25-22
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

WESTBROOK Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WI 53588
PHONE (608) 588-7866
FAX (608) 588-7954

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/01/22
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-41-319

CTH U OVER MOORE CREEK

COUNTY	~~TOWN/CITY~~/VILLAGE
MONROE	NORWALK

DESIGN SPEC. AASHTO LRFD DESIGN SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CDS	JDO	CDS	ACK

GENERAL PLAN

SHEET 1 OF 19

41

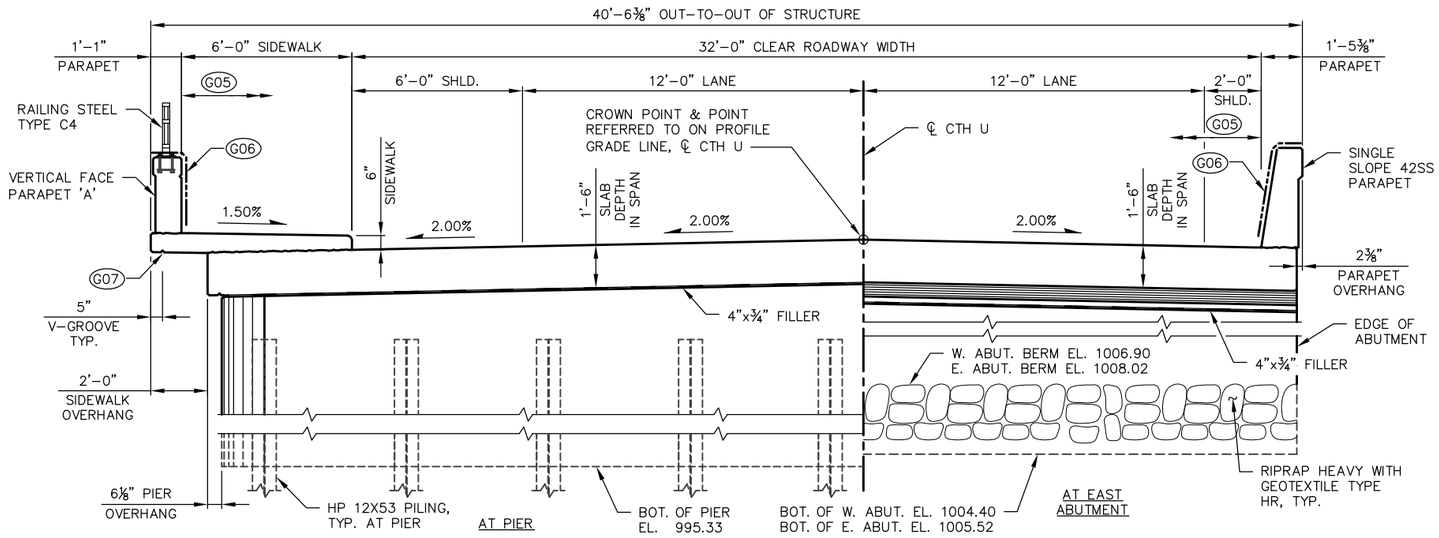
8

8

FILE: B410319_01_gen.dwg
PLOT SCALE:

I.D. 5017-00-70

PLOT DATE: Jul 25, 2022



CROSS SECTION THRU ROADWAY

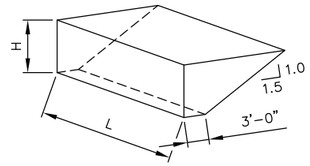
(LOOKING EAST)

NOTES

(G05) COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP SURFACE OF SLAB AND SIDEWALK BETWEEN THE PARAPETS.

(G06) APPLY PIGMENTED SURFACE SEALER TO INSIDE AND TOP FACES OF PARAPET ACROSS THE LENGTH OF THE BRIDGE. TYPICAL FOR EACH PARAPET.

(G07) ¾" V-GROOVE REQ'D. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT.



EAST ABUTMENT BACKFILL DIAGRAM

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

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	W. ABUT.	PIER	E. ABUT.	SUPER.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-41-703	EACH	---	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-41-319	EACH	---	---	---	---	1
206.5001	COFFERDAMS B-41-319	EACH	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	350	---	290	---	640
502.0100	CONCRETE MASONRY BRIDGES	CY	48.1	68.1	56.8	206.8	380
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	---	338	338
502.3210	PIGMENTED SURFACE SEALER	SY	---	---	---	71	86
502.9000.S	UNDERWATER SUBSTRUCTURE INSPECTION B-41-319	EACH	---	---	---	---	1
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	3600	3030	3610	---	10240
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1530	90	3000	54790	59410
513.7021	RAILING STEEL TYPE C4	LF	---	---	---	93	93
◑ 516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	---	12	---	21
◑ 550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	---	90	---	---	90
550.0500	PILE POINTS	EACH	9	---	9	---	18
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	225	---	180	---	405
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	---	225	---	---	225
606.0300	RIPRAP HEAVY	CY	39	---	56	---	95
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100	---	100	---	200
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	49	---	38	---	87
645.0120	GEOTEXTILE TYPE HR	SY	99	---	122	---	221
(NON-BID ITEM)	FILLER	SIZE	---	---	---	---	½" & ¾"

◑ QUANTITIES FOR "PRE-BORING ROCK OR CONSOLIDATED MATERIALS" ASSUMES THAT PILE REFUSAL OCCURS PRIOR TO 10-FT MINIMUM EMBEDMENT BELOW EXISTING GROUND LINE AT THE PIER. DUE TO VARIABLE BEDROCK DEPTHS, IT SHOULD BE ANTICIPATED THAT THERE COULD BE EITHER MORE OR FEWER FEET OF PRE-BORING REQUIRED.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

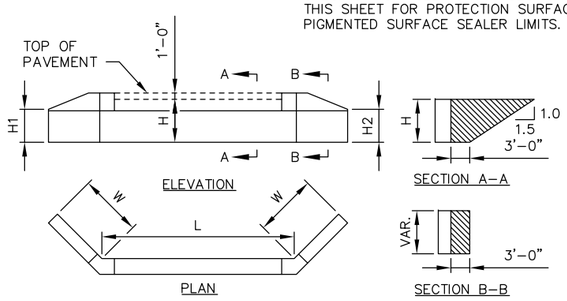
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THE "GENERAL PLAN" SHEET AND THE ABUTMENT SHEETS.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WING FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCLUDED WITH "EXCAVATION FOR STRUCTURES BRIDGES B-41-319".

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

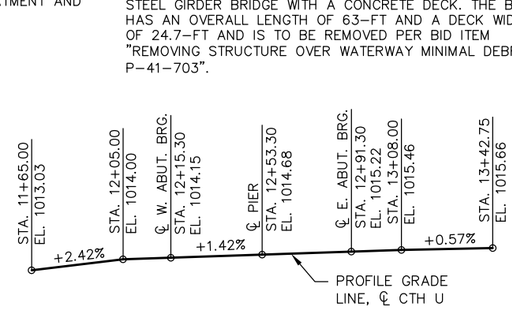
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE SUPERSTRUCTURE SLAB AND SIDEWALK PER THE STANDARD SPECIFICATION. PIGMENTED SURFACE SEALER TO BE APPLIED TO THE PARAPETS PER THE STANDARD SPECIFICATION. SEE "CROSS SECTION THRU ROADWAY", THIS SHEET FOR PROTECTION SURFACE TREATMENT AND PIGMENTED SURFACE SEALER LIMITS.

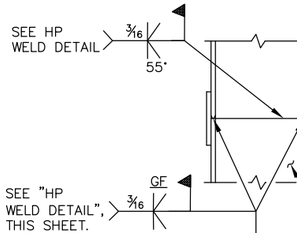


WEST ABUTMENT BACKFILL DIAGRAM

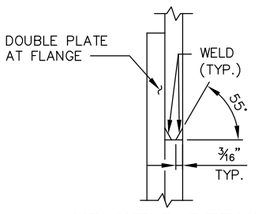
L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)



PROFILE GRADE LINE, ℄ CTH U



PILE SPLICE DETAILS



HP WELD DETAIL

(FLANGE SHOWN, WEB SIMILAR)

STATE PROJECT NUMBER

5017-00-70

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-41-319" SHALL BE THE EXISTING GROUND LINE.

THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIER.

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

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

DO NOT PLACE FILL ABOVE 3'-0" FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

A MINIMUM OF 3-FEET OF PRE-BORE AT THE PIER INTO SUITABLE BEDROCK IS REQUIRED IF THE MINIMUM 10-FEET OF PILE PENETRATION INTO NATURAL GROUND CANNOT BE ACHIEVED. THE CONTRACTOR AND THE CONSTRUCTION ENGINEER SHOULD ANTICIPATE VARIABLE PILE PENETRATION AND POSSIBLE ADDITIONAL LOCATIONS OF PRE-BORING.

DUE TO THE PRESENCE OF WEATHERED SANDSTONE IN THE SUBSTRATA, HARD DRIVING SHOULD BE EXPECTED. PILE POINTS SHALL BE USED TO PROTECT PILES DURING DRIVING.

PILES PLACED IN PRE-BORED HOLES CORED INTO ROCK DO NOT REQUIRE PILE POINTS OR DRIVING. PILES SHALL BE "FIRMLY SEATED" ON ROCK AFTER PLACEMENT IN PRE-BORED HOLES.

THE EXISTING STRUCTURE (P-41-703) IS A TWO SPAN STEEL GIRDER BRIDGE WITH A CONCRETE DECK. THE BRIDGE HAS AN OVERALL LENGTH OF 63-FT AND A DECK WIDTH OF 24.7-FT AND IS TO BE REMOVED PER BID ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-41-703".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-319

DRAWN BY CDS | PLANS CK'D ACK

CROSS SECTION, GENERAL NOTES & QUANTITIES

SHEET 2 OF 19

42

8

8

I.D. 5017-00-70

PLOT DATE: Jul 25, 2022

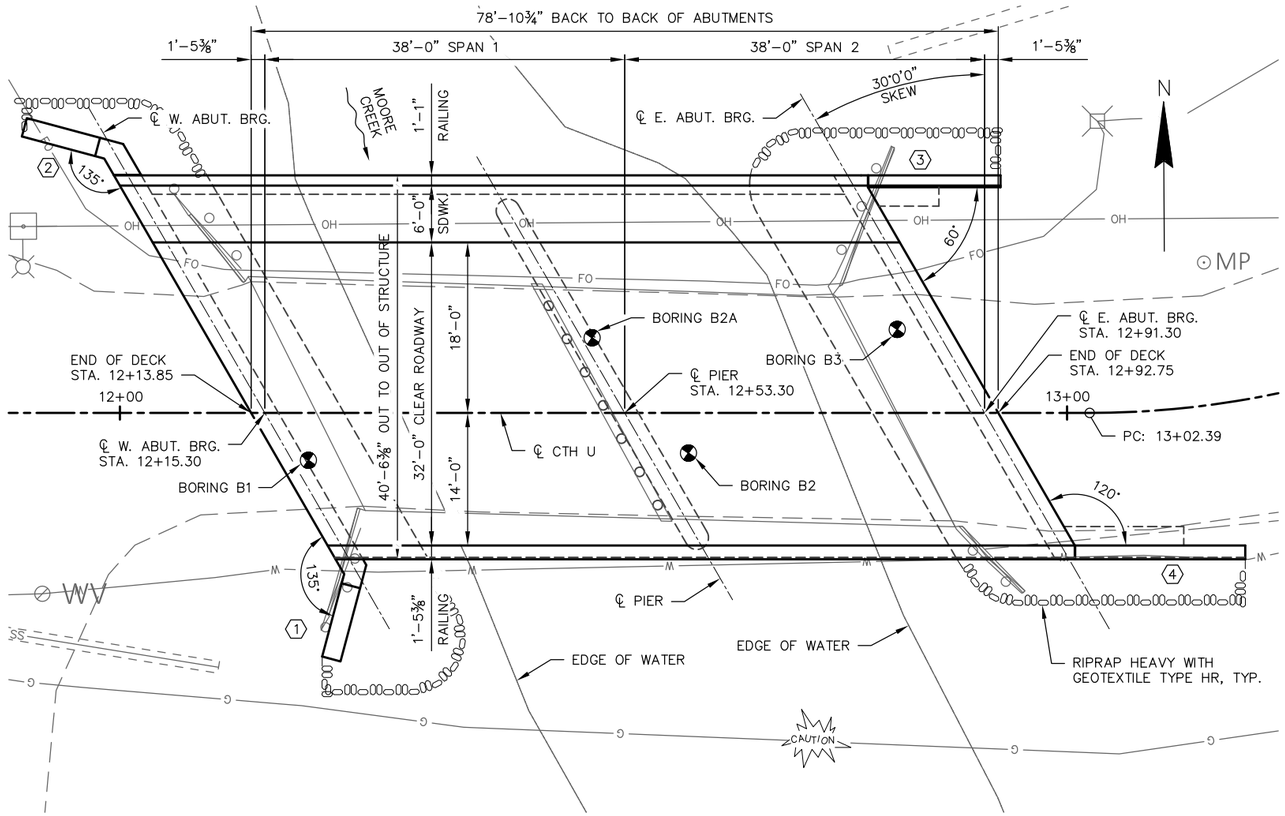
FILE: B410319_02_qty.dwg
PLOT SCALE:

B-41-319 BORINGS

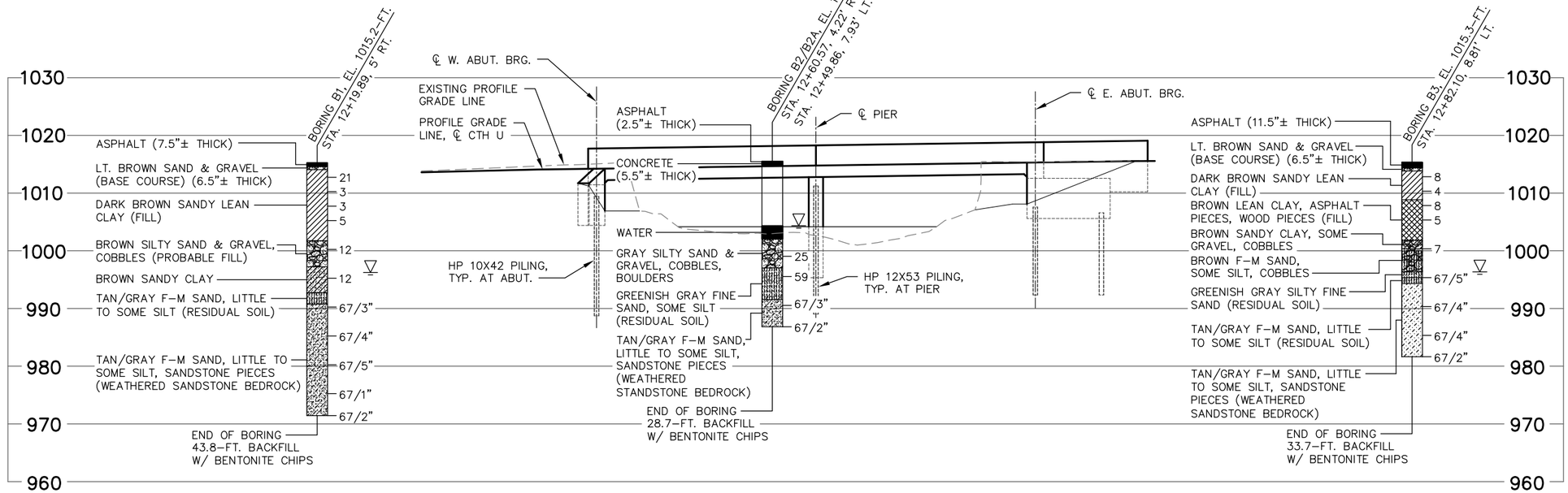
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
BORING B1	9/22/2020	337923.64	677312.15
BORING B2	9/22/2020	337924.25	677352.28
BORING B2A	9/25/2020	337936.46	677342.16
BORING B3	9/23/2020	337937.22	677374.37
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
SUBSURFACE INVESTIGATION REPORT: NUMMELIN TESTING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS, MONROE COUNTY			

NOTE

⬡ INDICATES WING NUMBER



PLAN B-41-319



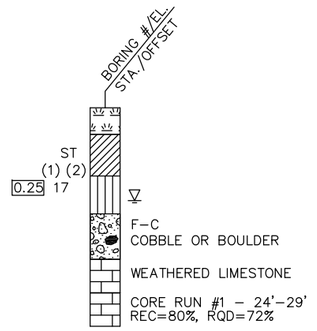
STATE PROJECT NUMBER

5017-00-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▼ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-319

DRAWN BY CDS | PLANS CK'D ACK

SUBSURFACE EXPLORATION

SHEET 3 OF 19

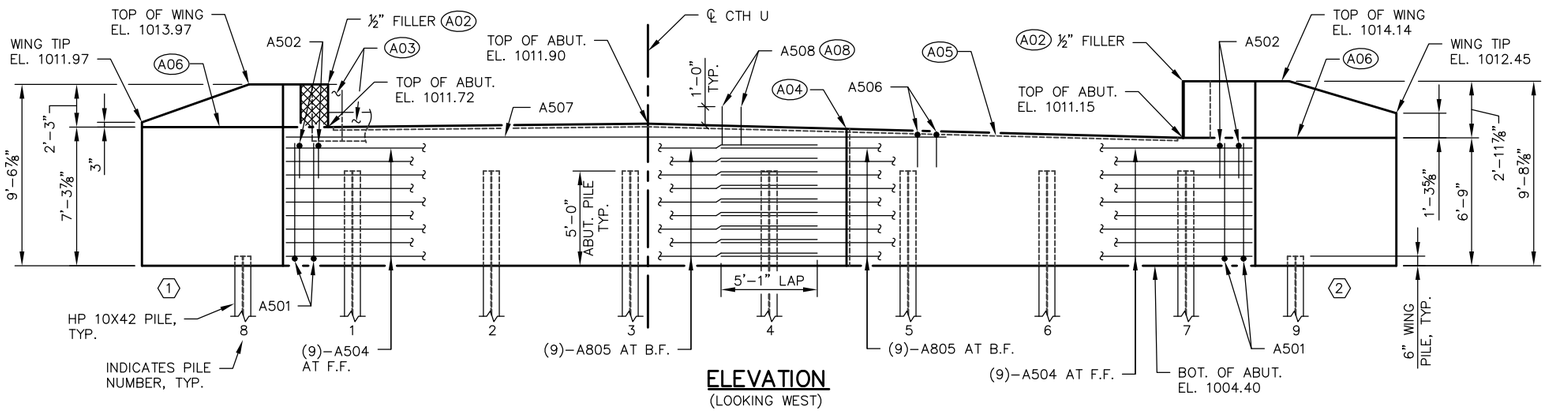
43

8

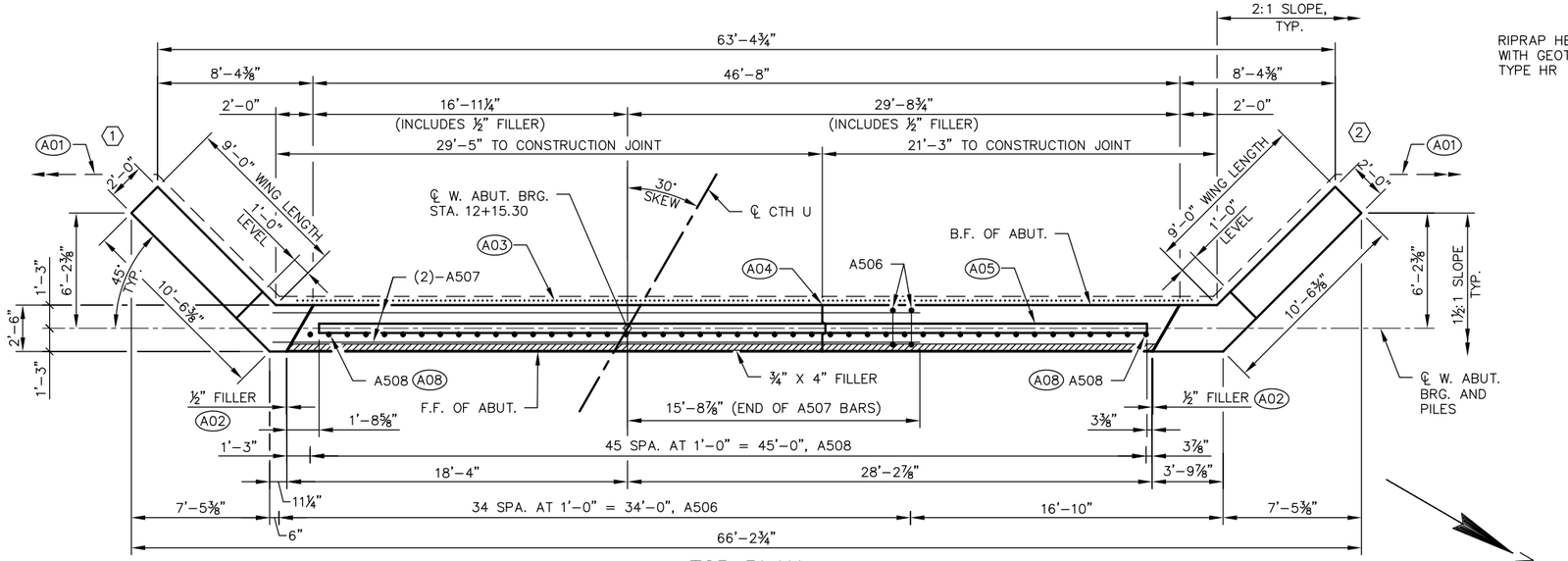
8

I.D. 5017-00-70 PLOT DATE: Jul 25, 2022

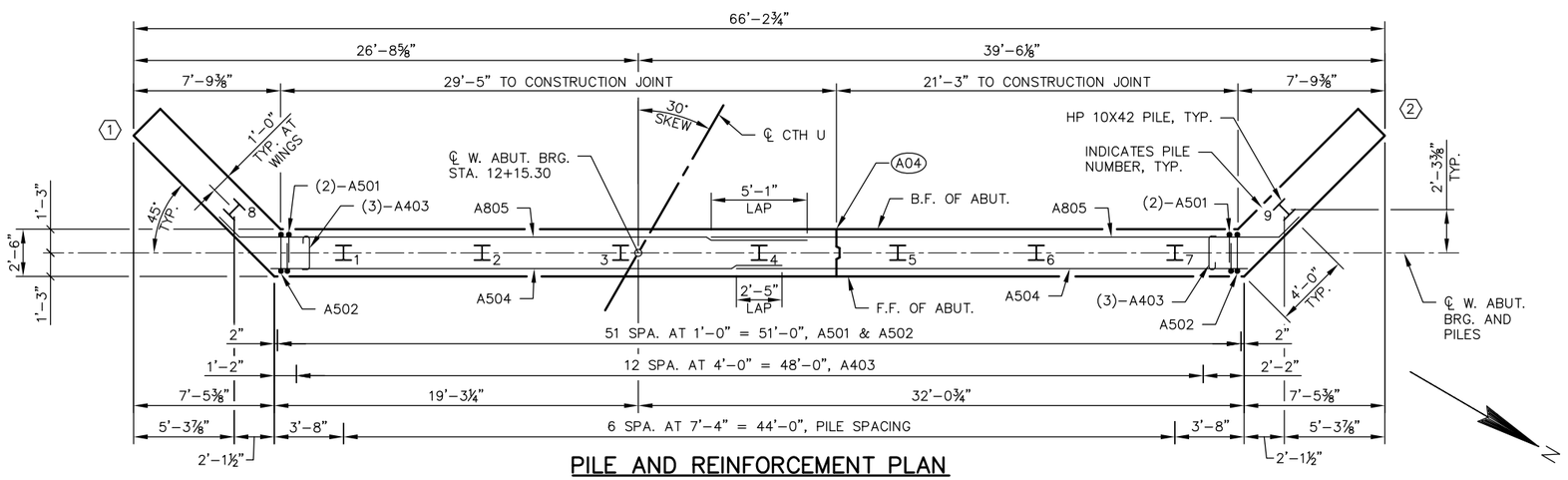
FILE: B410319_03_bor.dwg
PLOT SCALE:



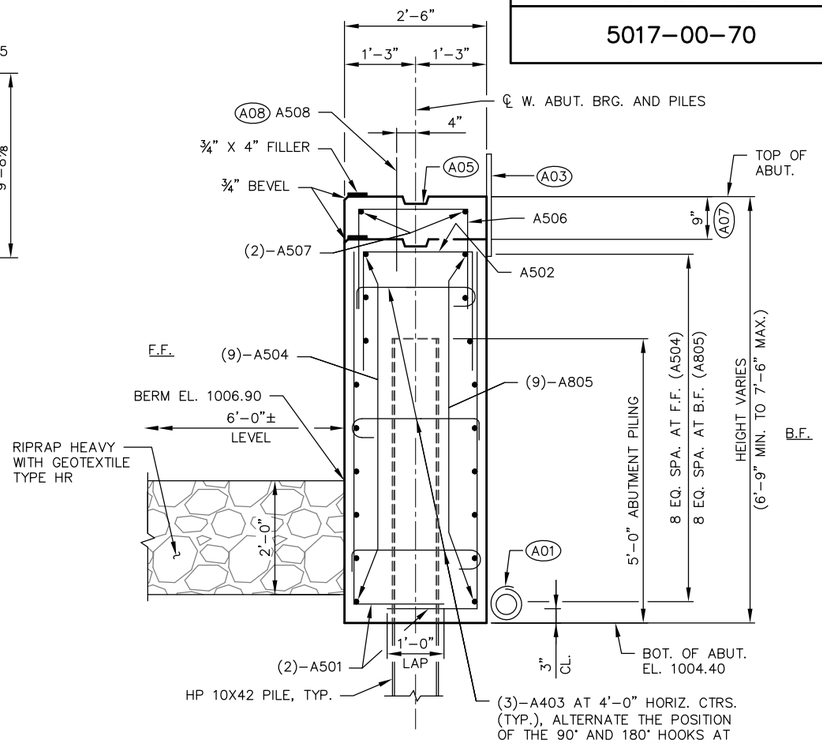
ELEVATION
(LOOKING WEST)



TOP PLAN



PILE AND REINFORCEMENT PLAN



TYPICAL SECTION THRU WEST ABUTMENT

NOTES

DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF THE ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

WEST ABUTMENT TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 25 FT PILE LENGTHS AT THE WEST ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

(A01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "WEST ABUTMENT REINFORCEMENT" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

(A03) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

(A04) VERTICAL CONSTRUCTION JOINT KEYWAY FORMED BY BEVELED 2" X 8". RUN BAR STEEL THRU JOINT. SEE "WEST ABUTMENT REINFORCEMENT" SHEET FOR DETAILS. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A05) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2 X 6

(A06) OPTIONAL CONSTRUCTION JOINT, SEAL B.F. WITH R.M.W. IF CONST. JOINT IS USED COST INCLUDED WITH THE BID ITEM "CONCRETE MASONRY BRIDGES".

(A07) A506 & A507 BARS REQUIRED WHERE DIMENSION EXCEEDS 4".

(A08) A508 BARS MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED 1'-0" INTO ABUTMENT BODY.

⬡ INDICATES WING NUMBER

F.F. – FRONT FACE
B.F. – BACK FACE

STATE PROJECT NUMBER
5017-00-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-319

DRAWN BY CDS | PLANS CK'D ACK

WEST ABUTMENT

SHEET 4 OF 19

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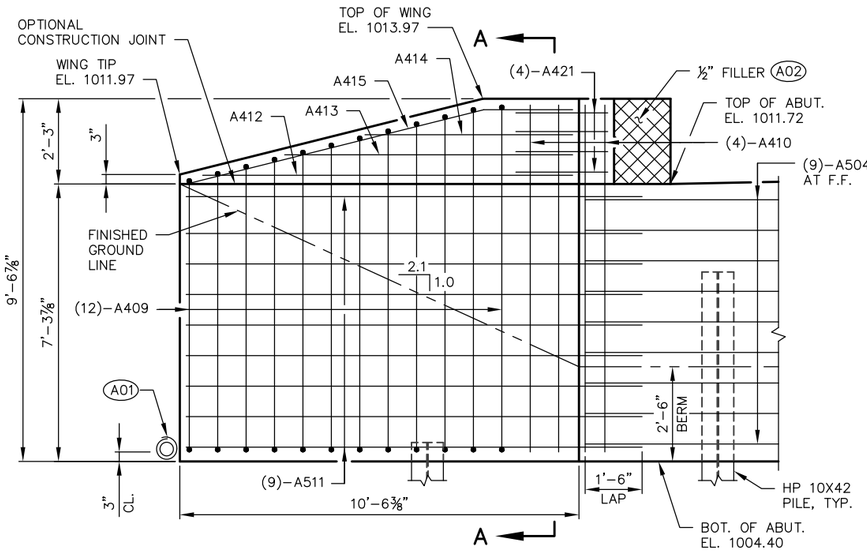
I.D. 5017-00-70

PLOT DATE: Jul 25, 2022

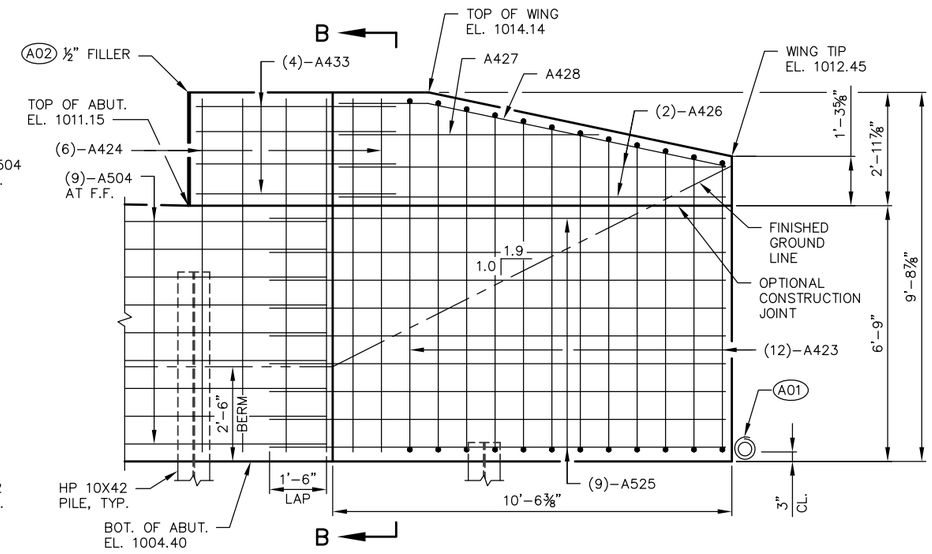
FILE: B410319_04-09_abut.dwg
PLOT SCALE:

STATE PROJECT NUMBER

5017-00-70



F.F. ELEVATION – WING 1



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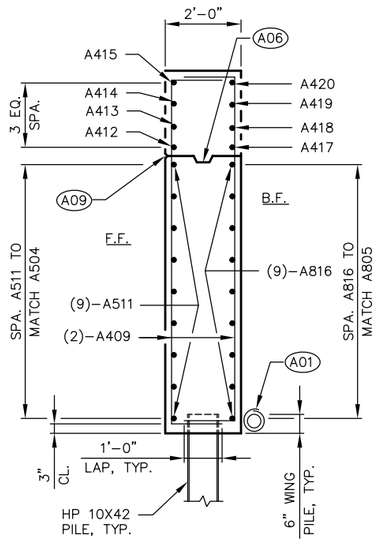
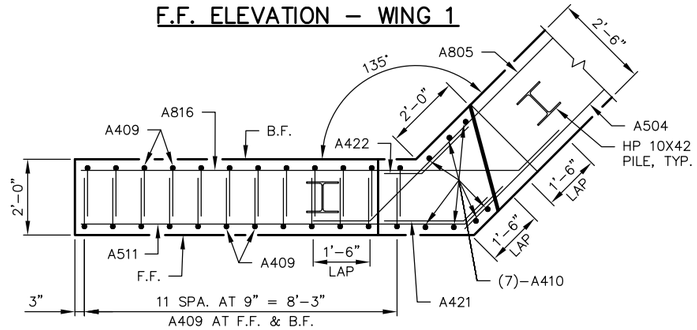
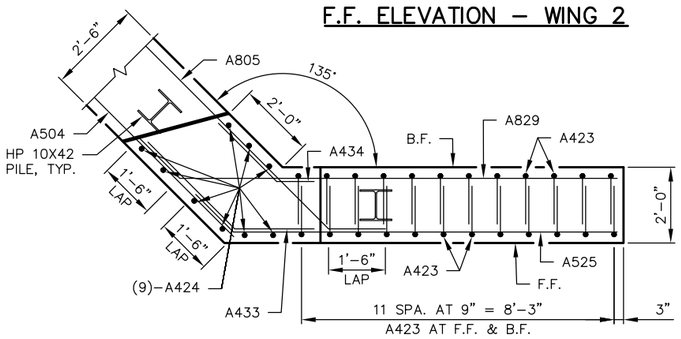


SECTION A–A

(WING 1)



PLAN – WING 1



PLAN – WING 2

NOTES

DO NOT PLACE FILL ABOVE 3'–0" FROM THE BOTTOM OF THE ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

WEST ABUTMENT TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 25 FT PILE LENGTHS AT THE WEST ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

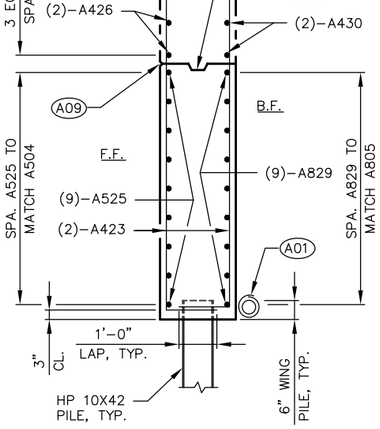
(A01) PIPE UNDERDRAIN WRAPPED (6–INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THE "WEST ABUTMENT REINFORCEMENT" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

(A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON–STAINING GRAY NON–BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

(A06) OPTIONAL CONSTRUCTION JOINT, SEAL B.F. WITH R.M.W. IF CONST. JOINT IS USED COST INCLUDED WITH THE BID ITEM "CONCRETE MASONRY BRIDGES".

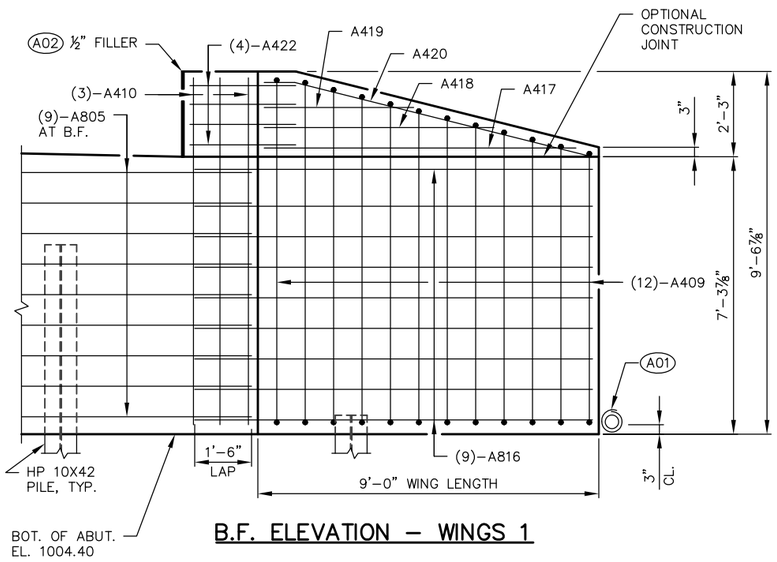
(A09) ¾" "V" GROOVE ON F.F. OF WINGWALL

F.F. – FRONT FACE
B.F. – BACK FACE

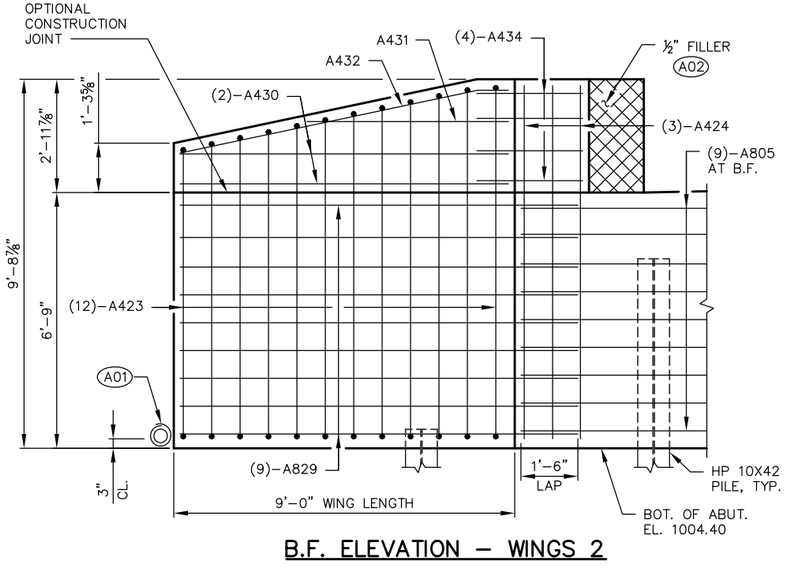


SECTION B–B

(WING 2)



B.F. ELEVATION – WINGS 1



B.F. ELEVATION – WINGS 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–41–319

DRAWN BY	CDS	PLANS CK'D	ACK

WEST ABUTMENT WINGS

SHEET 5 OF 19

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I.D. 5017–00–70

PLOT DATE: Jul 25, 2022

FILE: B410319_04–09_abut.dwg
PLOT SCALE:

STATE PROJECT NUMBER
5017–00–70

BILL OF BARS
WEST ABUTMENT

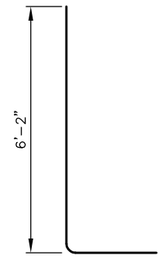
COATED = 1,530 LBS.
UNCOATED = 3,600 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
A501		104	7'–8"	X		BODY – STIRRUP – F.F. & B.F.	VERT.
A502		52	6'–11"	X		BODY – STIRRUP – TOP	VERT.
A403		39	3'–2"	X		BODY – TIES	HORIZ.
A504		18	26'–11"			BODY – F.F.	HORIZ.
A805		18	31'–9"	X		BODY – B.F.	HORIZ.
A506		35	5'–5"	X		BODY – TOP – STIRRUP	VERT.
A507		2	34'–10"			BODY – TOP	HORIZ.
A508	46		2'–0"			BODY – TOP DOWELS	VERT.
A409	24		10'–8"	X	⚠	WING 1 – STIRRUP – F.F. & B.F.	VERT.
A410	7		9'–1"			WING 1 – F.F. & B.F.	VERT.
A511	9		11'–9"	X		WING 1 – F.F.	HORIZ.
A412	1		9'–9"			WING 1 – F.F.	HORIZ.
A413	1		7'–7"			WING 1 – F.F.	HORIZ.
A414	1		5'–5"			WING 1 – F.F.	HORIZ.
A415	1		10'–5"	X		WING 1 – F.F. – TOP	HORIZ.
A816	9		13'–3"	X		WING 1 – B.F.	HORIZ.
A417	1		8'–2"			WING 1 – B.F.	HORIZ.
A418	1		6'–0"			WING 1 – B.F.	HORIZ.
A419	1		3'–11"			WING 1 – B.F.	HORIZ.
A420	1		8'–10"	X		WING 1 – B.F. – TOP	HORIZ.
A421	4		2'–10"	X		WING 1 – F.F. CORNER	HORIZ.
A422	4		2'–7"	X		WING 1 – B.F. CORNER	HORIZ.
A423	24		11'–0"	X	⚠	WING 2 – STIRRUP – F.F. & B.F.	VERT.
A424	9		9'–3"			WING 2 – F.F. & B.F.	VERT.
A525	9		11'–9"	X		WING 2 – F.F.	HORIZ.
A426	2		10'–2"			WING 2 – F.F.	HORIZ.
A427	1		6'–10"			WING 2 – F.F.	HORIZ.
A428	1		10'–4"	X		WING 2 – F.F. – TOP	HORIZ.
A829	9		13'–3"	X		WING 2 – B.F.	HORIZ.
A430	2		8'–8"			WING 2 – B.F.	HORIZ.
A431	1		5'–3"			WING 2 – B.F.	HORIZ.
A432	1		8'–9"	X		WING 2 – B.F. – TOP	HORIZ.
A433	4		5'–6"	X		WING 2 – F.F. CORNER	HORIZ.
A434	4		2'–10"	X		WING 2 – B.F. CORNER	HORIZ.

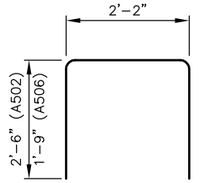
THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

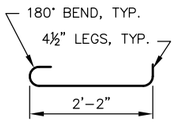
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE "BAR SERIES TABLE" FOR ACTUAL LENGTHS.



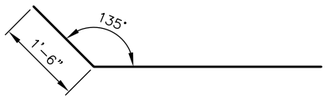
A501



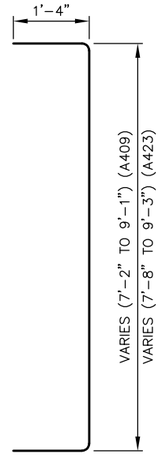
A502 & A506



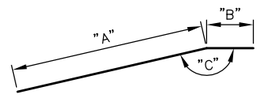
A403



A805, A511, A816, A525 & A829



A409 & A423



A415, A420, A428 & A432

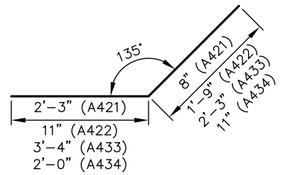
BAR BEND DIMENSIONS

MARK	"A"	"B"	"C"
A415	8'–1"	2'–4"	166°
A420	8'–1"	9"	166°
A428	8'–0"	2'–4"	168°
A432	8'–0"	9"	168°

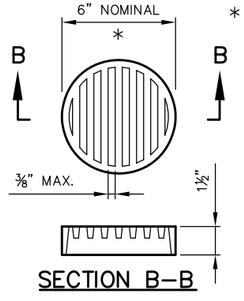
BAR SERIES TABLE

MARK	NO. REQ'D	LENGTH
A409	2 SERIES OF 12	9'–8" TO 11'–7"
A423	2 SERIES OF 12	10'–2" TO 11'–9"

BUNDLE AND TAG EACH SERIES SEPARATELY.



A421, A422, A433 & A434



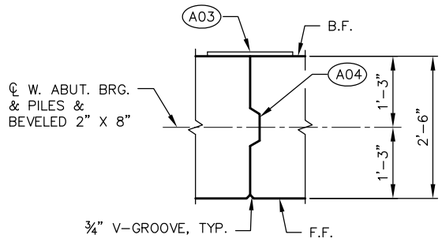
SECTION B–B

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

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

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

RODENT SHIELD DETAIL



VERTICAL CONSTRUCTION JOINT DETAIL

NOTES

(A03) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

(A04) VERTICAL CONSTRUCTION JOINT KEYWAY FORMED BY BEVELED 2" X 8". RUN BAR STEEL THRU JOINT. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

F.F. – FRONT FACE
B.F. – BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–41–319

DRAWN BY CDS | PLANS CK'D ACK

WEST ABUTMENT REINFORCEMENT

SHEET 6 OF 19

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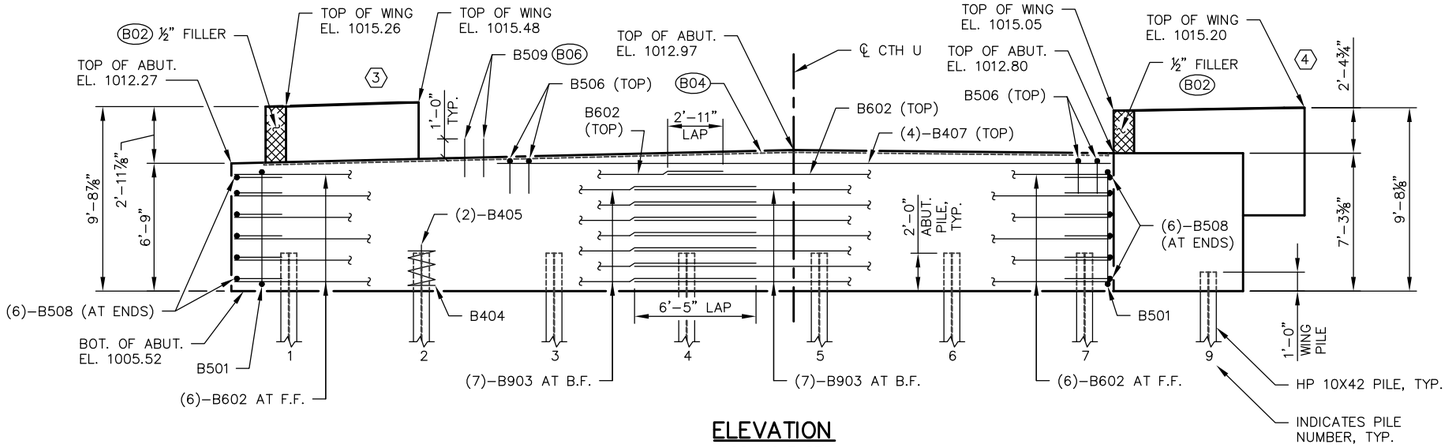
FILE: B410319_04–09_abut.dwg
PLOT SCALE:

I.D. 5017–00–70

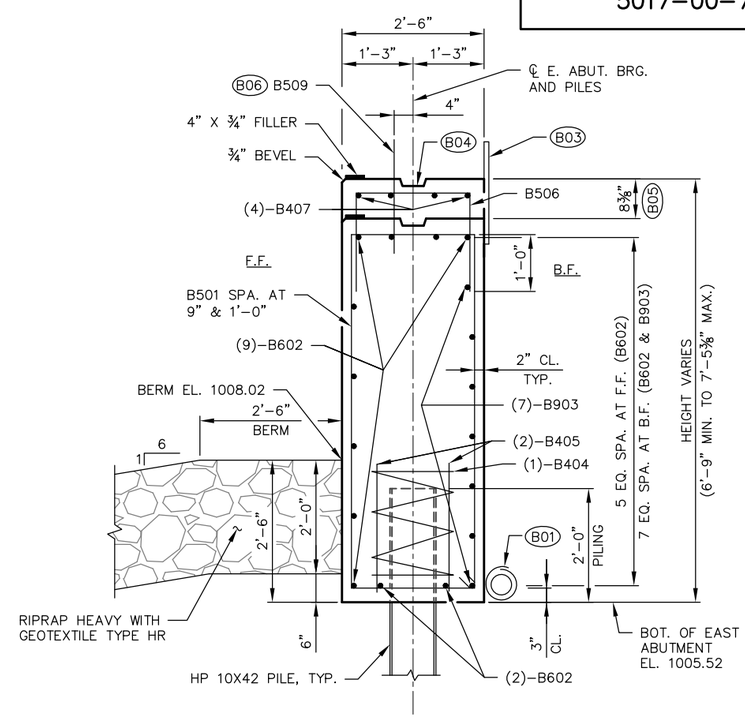
PLOT DATE: Jul 25, 2022

STATE PROJECT NUMBER

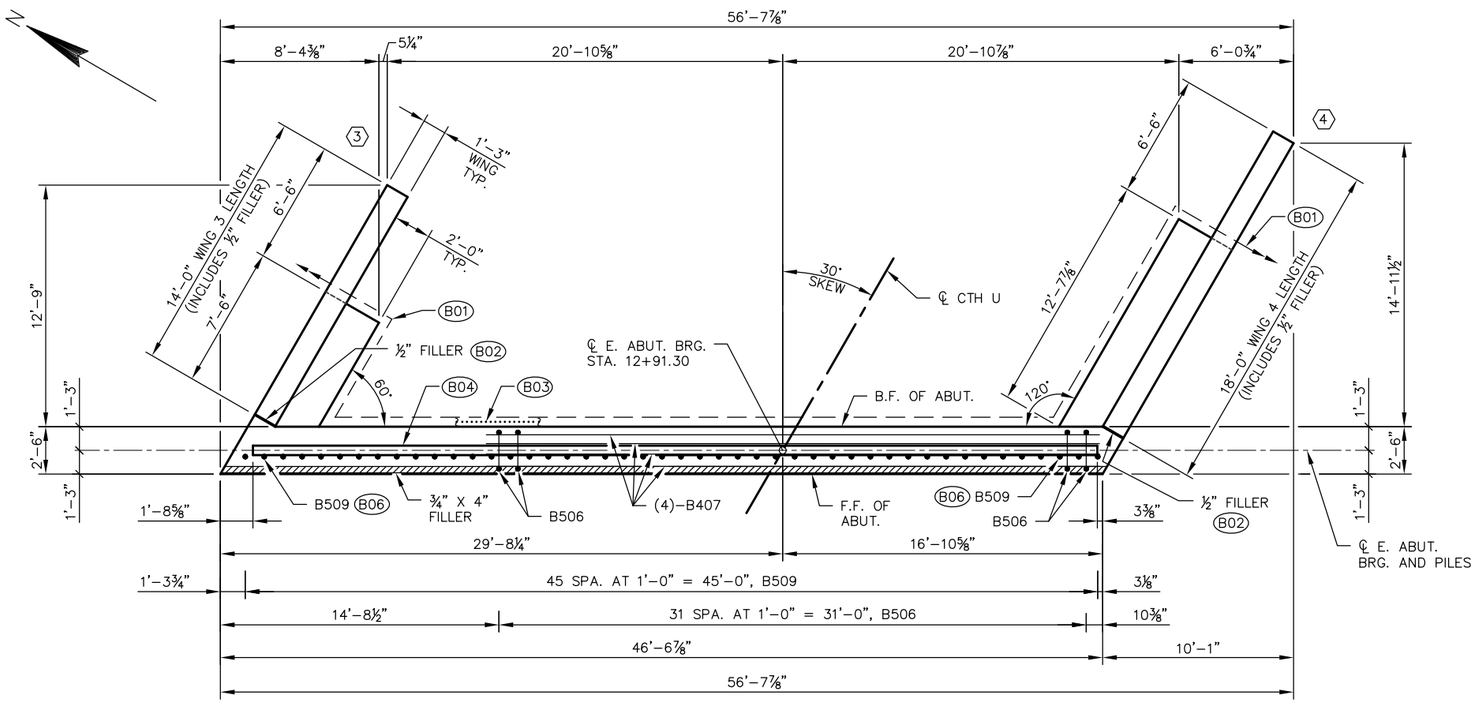
5017-00-70



ELEVATION
(LOOKING EAST)



TYPICAL SECTION THRU EAST ABUTMENT



TOP PLAN

NOTES

DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF THE ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

EAST ABUTMENT TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 20 FT PILE LENGTHS AT THE EAST ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

(B01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "WEST ABUTMENT REINFORCEMENT" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

(B02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

(B03) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

(B04) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2 X 6

(B05) B506 & B407 BARS REQUIRED WHERE DIMENSION EXCEEDS 4".

(B06) B509 BARS MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED 1'-0" INTO ABUTMENT BODY.

⬡ INDICATES WING NUMBER

F.F. - FRONT FACE
B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-319

DRAWN BY CDS | PLANS CK'D ACK

EAST ABUTMENT

SHEET 7 OF 19

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8

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FILE: B410319_04-09_abut.dwg
PLOT SCALE:

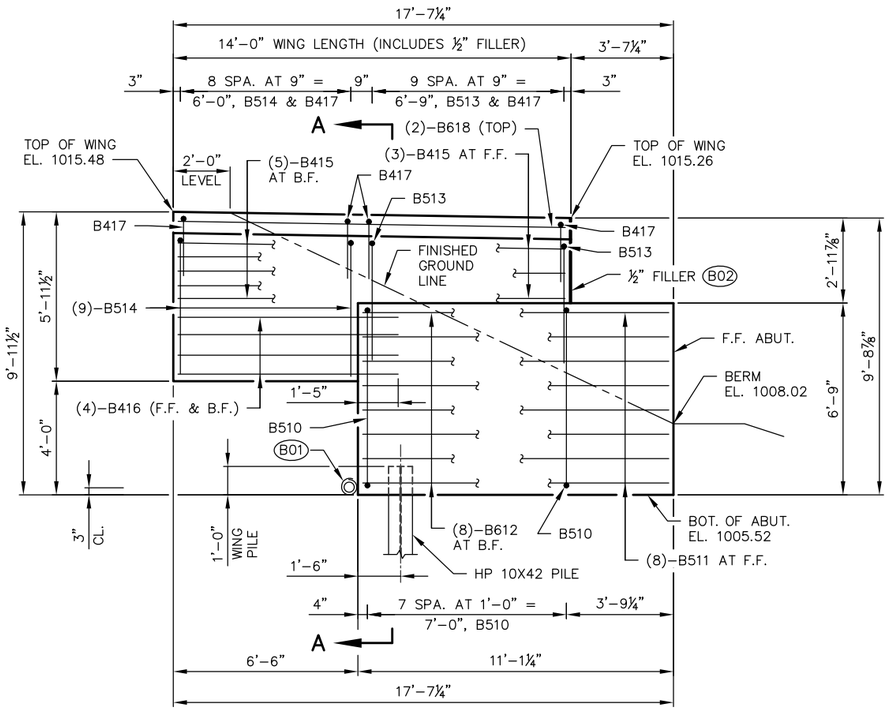
I.D. 5017-00-70

PLOT DATE: Jul 25, 2022

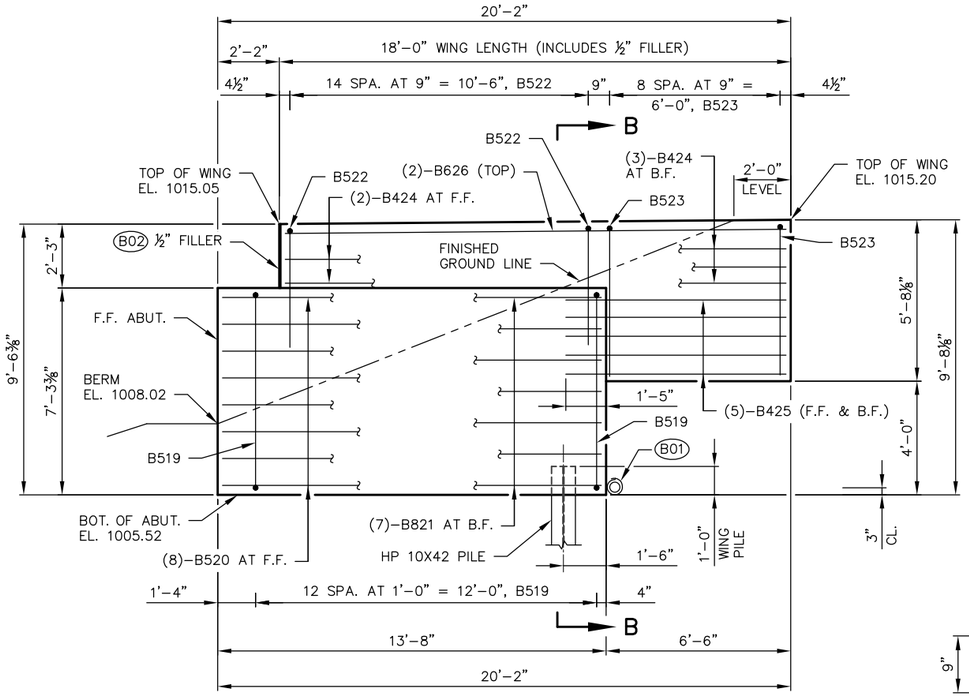
STATE PROJECT NUMBER

5017-00-70

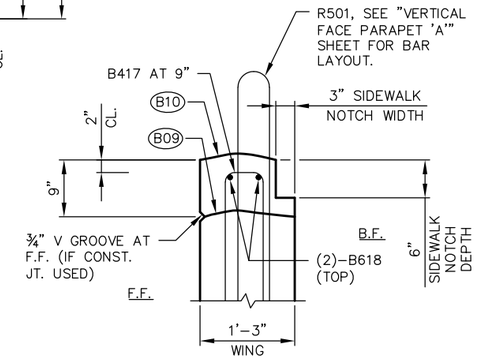
F.F. – FRONT FACE
B.F. – BACK FACE



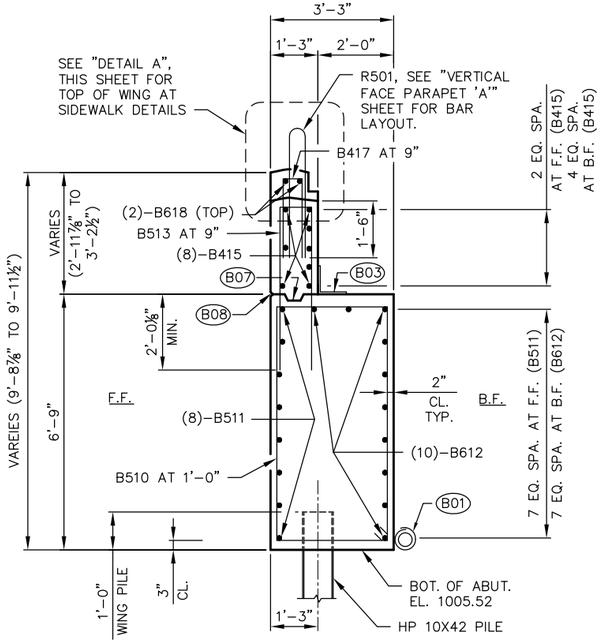
WING 3 – F.F. ELEVATION



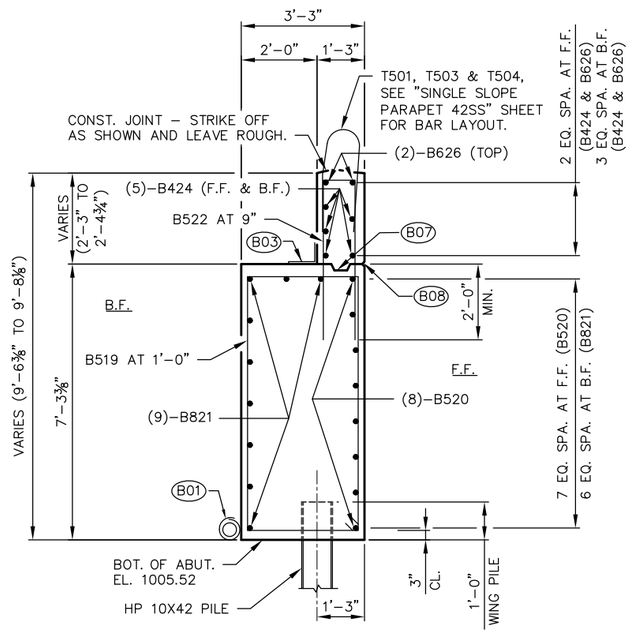
WING 4 – F.F. ELEVATION



DETAIL A



SECTION A–A
(WING 3)



SECTION B–B
(WING 4)

NOTES

DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF THE ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

EAST ABUTMENT TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 20 FT PILE LENGTHS AT THE EAST ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

(B01) PIPE UNDERDRAIN WRAPPED (6–INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "WEST ABUTMENT REINFORCEMENT" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

(B02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON–STAINING GRAY NON–BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

(B03) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

(B07) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2"X6" KEYWAY. IF JOINT IS USED, UTILIZE RUBBERIZED MEMBRANE WATERPROOFING (COST INCLUDED WITH BID ITEM "CONCRETE MASONRY BRIDGES").

(B08) ¾" V–GROOVE ON F.F. OF WING IF CONSTRUCTION JOINT IS USED.

(B09) OPTIONAL CONSTRUCTION JOINT, LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER SLAB IS IN PLACE. IF JOINT IS USED, UTILIZE RUBBERIZED MEMBRANE WATERPROOFING (COST INCLUDED WITH BID ITEM "CONCRETE MASONRY BRIDGES").

(B10) CONSTRUCTION JOINT – STRIKE OFF AS SHOWN AND LEAVE ROUGH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-41-319

DRAWN BY CDS | PLANS CK'D ACK

EAST ABUTMENT WINGS

SHEET 8 OF 19

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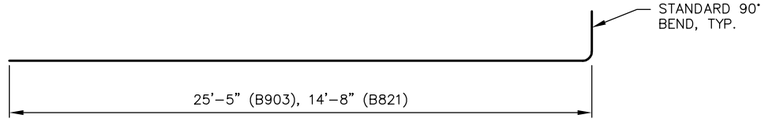
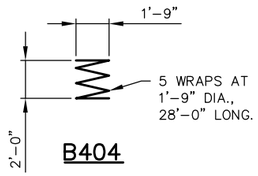


B903, & B821



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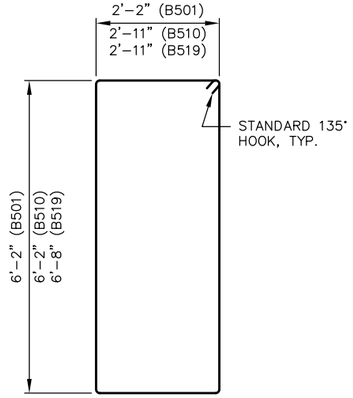
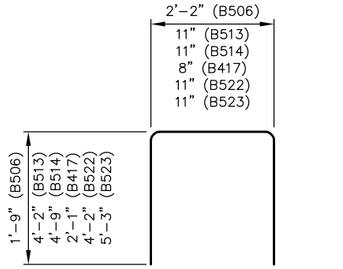
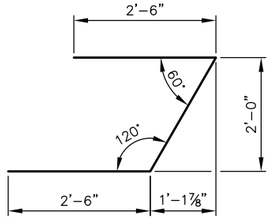


B501, B510 & B519



B506, B513, B514, B417, B522 & B523



B508

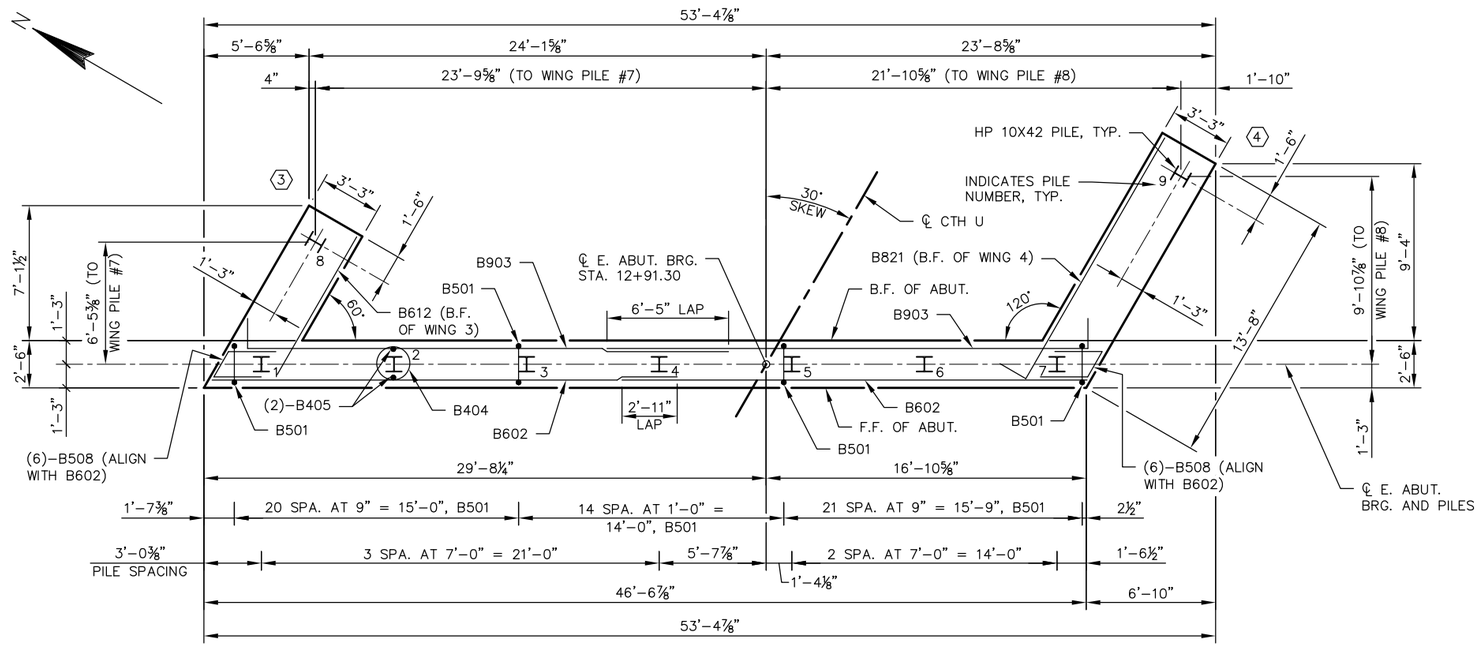
BILL OF BARS
EAST ABUTMENT

COATED = 2,050 LBS.
UNCOATED = 3,610 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
B501		56	17'–4"	X		BODY – STIRRUP	VERT.
B602		22	24'–7"			BODY – F.F. & TOP & BOT.	HORIZ.
B903		14	26'–9"	X		BODY – B.F.	HORIZ.
B404		7	28'–0"	X		BODY – PILES – STIRRUP	VERT.
B405		14	2'–3"			BODY – PILES	VERT.
B506		32	5'–5"	X		BODY – TOP – STIRRUP	VERT.
B407		4	32'–5"			BODY – TOP	HORIZ.
B508		12	7'–1"	X		BODY – END STIRRUP	HORIZ.
B509	46		2'–0"			BODY – TOP DOWELS	VERT.
B510	8		18'–10"	X		WING 3 BODY – STIRRUP	VERT.
B511	8		10'–9"			WING 3 BODY – F.F.	HORIZ.
B612	10		8'–5"			WING 3 BODY – B.F. & TOP	HORIZ.
B513	10		9'–0"	X		WING 3 – STIRRUP	VERT.
B514	9		10'–2"	X		WING 3 – STIRRUP	VERT.
B415	8		13'–7"			WING 3 – F.F. & B.F.	HORIZ.
B416	8		7'–9"			WING 3 – BOT. (F.F. & B.F.)	HORIZ.
B417	19		4'–8"	X		WING 3 – TOP STIRRUP	VERT.
B618	2		13'–7"			WING 3 – TOP	HORIZ.
B519	13		19'–10"	X		WING 4 BODY – STIRRUP	VERT.
B520	8		13'–4"			WING 4 BODY – F.F.	HORIZ.
B821	9		15'–10"	X		WING 4 BODY – B.F. & TOP	HORIZ.
B522	15		9'–0"	X		WING 4 – STIRRUP	VERT.
B523	9		11'–2"	X		WING 4 – STIRRUP	VERT.
B424	5		17'–7"			WING 4 – F.F. & B.F.	HORIZ.
B425	10		7'–9"			WING 4 – BOT. (F.F. & B.F.)	HORIZ.
B626	2		17'–7"			WING 4 – TOP	HORIZ.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.



PILE AND REINFORCEMENT PLAN

NOTES

DO NOT PLACE FILL ABOVE 3'–0" FROM THE BOTTOM OF THE ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

EAST ABUTMENT TO BE SUPPORTED ON HP 10X42 PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 20 FT PILE LENGTHS AT THE EAST ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR HP 10X42 PILE SPLICE DETAILS.

⬡ INDICATES WING NUMBER

F.F. – FRONT FACE
B.F. – BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–41–319

DRAWN BY CDS | PLANS CK'D ACK

EAST ABUTMENT REINFORCEMENT

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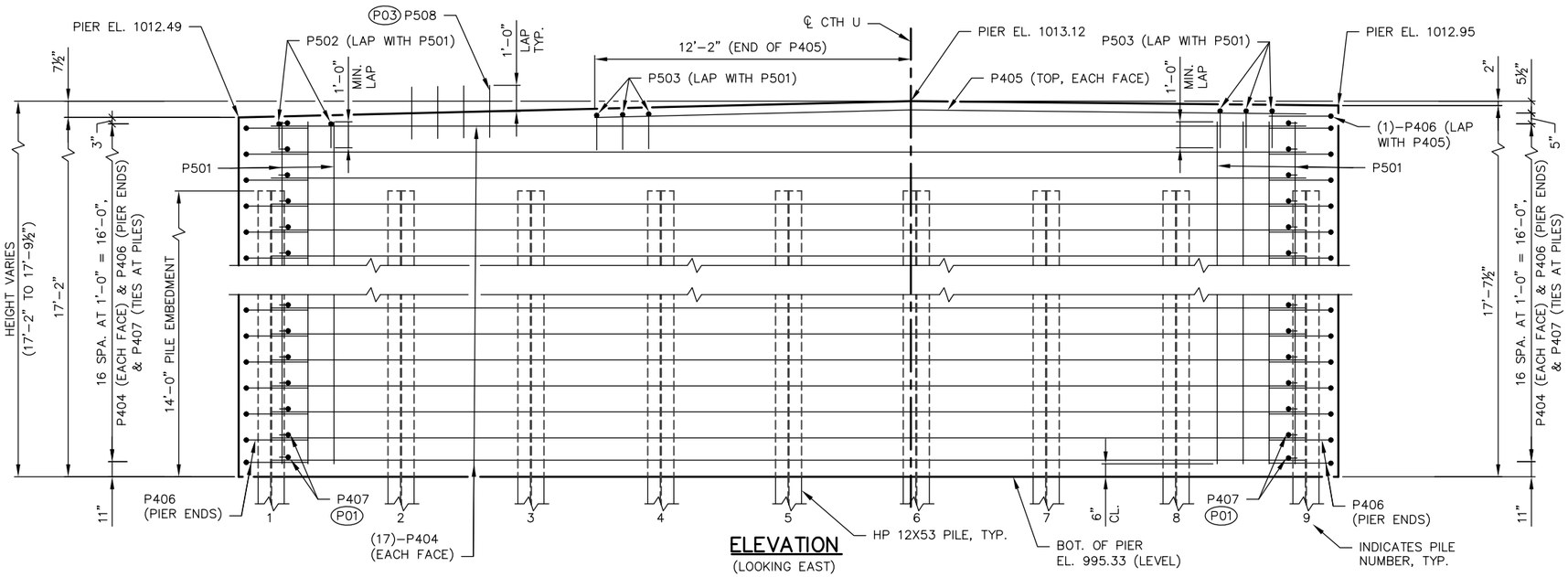
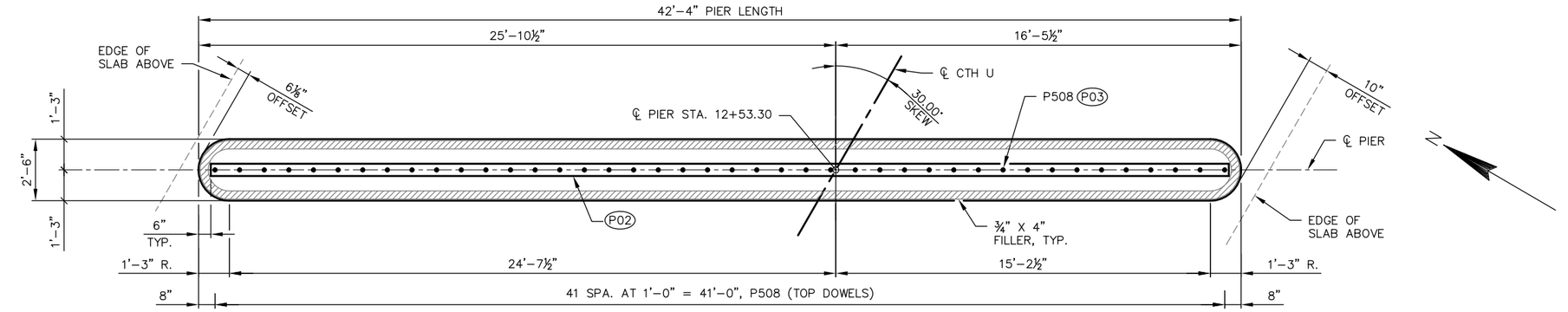
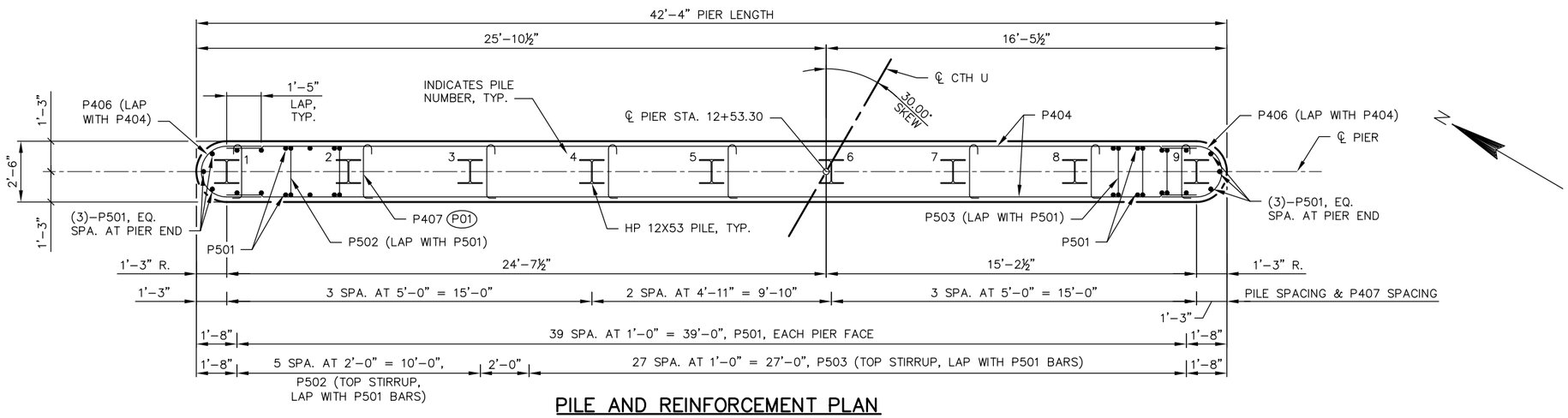


ELEVATION
(LOOKING EAST)



TOP PLAN



PILE AND REINFORCEMENT PLAN

NOTES

THE PIER TO BE SUPPORTED ON HP 12X53 PILING AND SHALL BE PRE-BORED A MINIMUM OF 3-FT INTO THE BEDROCK. THE MAXIMUM FACTORED AXIAL COMPRESSION DESIGN LOAD IS 110 TONS PER PILE AT THE PIER. ESTIMATED 25 FT PILE LENGTHS AT THE PIER.

FOR PILE SPLICE DETAILS SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET.

(P01) PLACE P407 BARS ADJACENT TO EACH PILE ONLY. TIE TO NEAREST VERT. P501 BAR. VERTICAL SPA. AT 1'-0" TO MATCH P404 OUTSIDE BARS. ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

(P02) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".

(P03) P508 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.

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PIER

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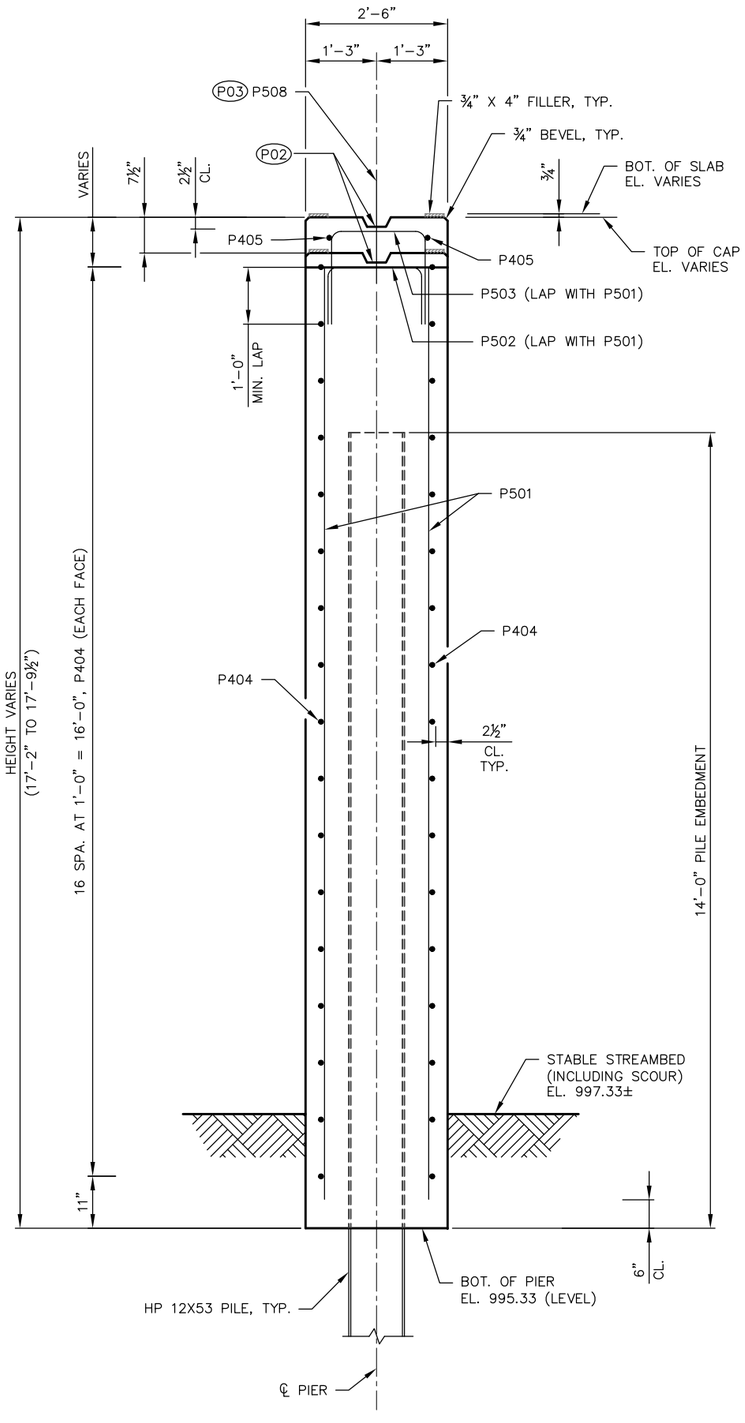


TYPICAL SECTION THRU PIER

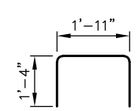
BILL OF BARS
PIER

COATED = 90 LBS.
UNCOATED = 3,030 LBS

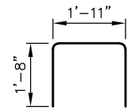
MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
P501		86	16'–4"			PIER SIDES	VERT.
P502		6	4'–4"	X		PIER – TOP STIRRUP	VERT.
P503		28	5'–0"	X		PIER – TOP STIRRUP	VERT.
P404		34	39'–10"			PIER – SIDES	HORIZ.
P405		2	27'–5"			PIER – SIDES (TOP)	HORIZ.
P406		35	6'–2"	X		PIER – END STIRRUP	HORIZ.
P407		153	2'–11"	X		PIER – TIES	HORIZ.
P508	42		2'–0"			PIER – TOP DOWELS	VERT.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.



P502



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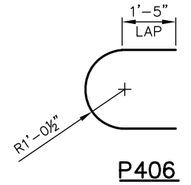

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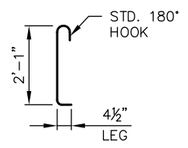

P407

NOTES

THE PIER TO BE SUPPORTED ON HP 12X53 PILING AND SHALL BE PRE–BORED A MINIMUM OF 3–FT INTO THE BEDROCK. THE MAXIMUM FACTORED AXIAL COMPRESSION DESIGN LOAD IS 110 TONS PER PILE AT THE PIER. ESTIMATED 25 FT PILE LENGTHS AT THE PIER.

FOR PILE SPLICE DETAILS SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET.

(P02) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".

(P03) P508 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

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PIER DETAILS

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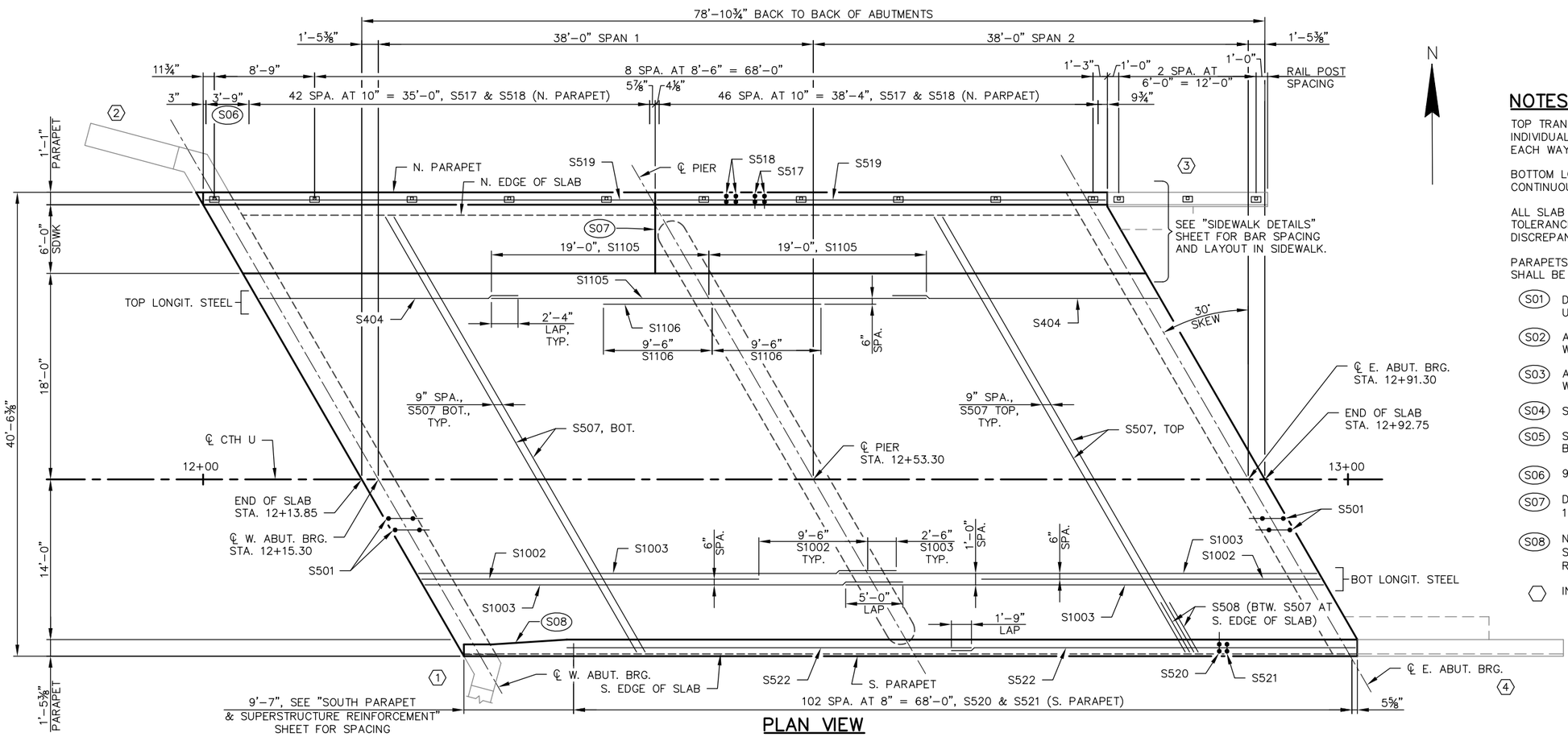
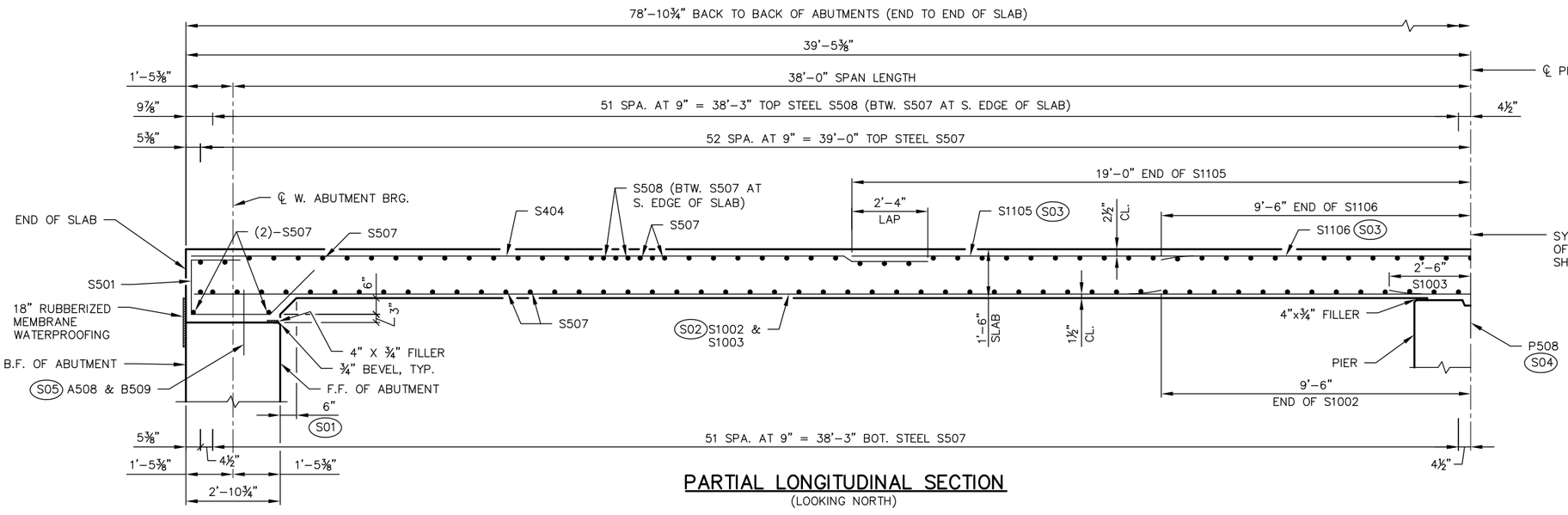


PLAN VIEW



PARTIAL LONGITUDINAL SECTION
(LOOKING NORTH)

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'–0" CENTERS EACH WAY.

BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'–0" CENTERS.

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

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

- (S01) DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNIT.
- (S02) ALTERNATE BETWEEN S1002 & S1003 ACROSS ENTIRE WIDTH OF THE BRIDGE SLAB IN SPANS 1 & 2.
- (S03) ALTERNATE BETWEEN S1105 & S1106 ACROSS ENTIRE WIDTH OF THE BRIDGE SLAB OVER THE PIER.
- (S04) SEE "PIER" SHEET FOR PLACEMENT OF P508 BARS.
- (S05) SEE ABUTMENT SHEETS FOR PLACEMENT OF A508 & B509 BARS.
- (S06) 9 SPA. AT 5" = 3'–9", S517 & S518
- (S07) DEFLECTION JOINT IN PARAPET AND SIDEWALK (STA. 12+39.49)
- (S08) NAME PLATE AND BENCHMARK (WHEN SUPPLIED). SEE "SOUTH PARAPET & SUPERSTRUCTURE REINFORCEMENT" SHEET FOR PLACEMENT LOCATION.
- ⬡ INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B–41–319

DRAWN BY JDO | PLANS CK'D ABP

SUPERSTRUCTURE

SHEET 12 OF 19

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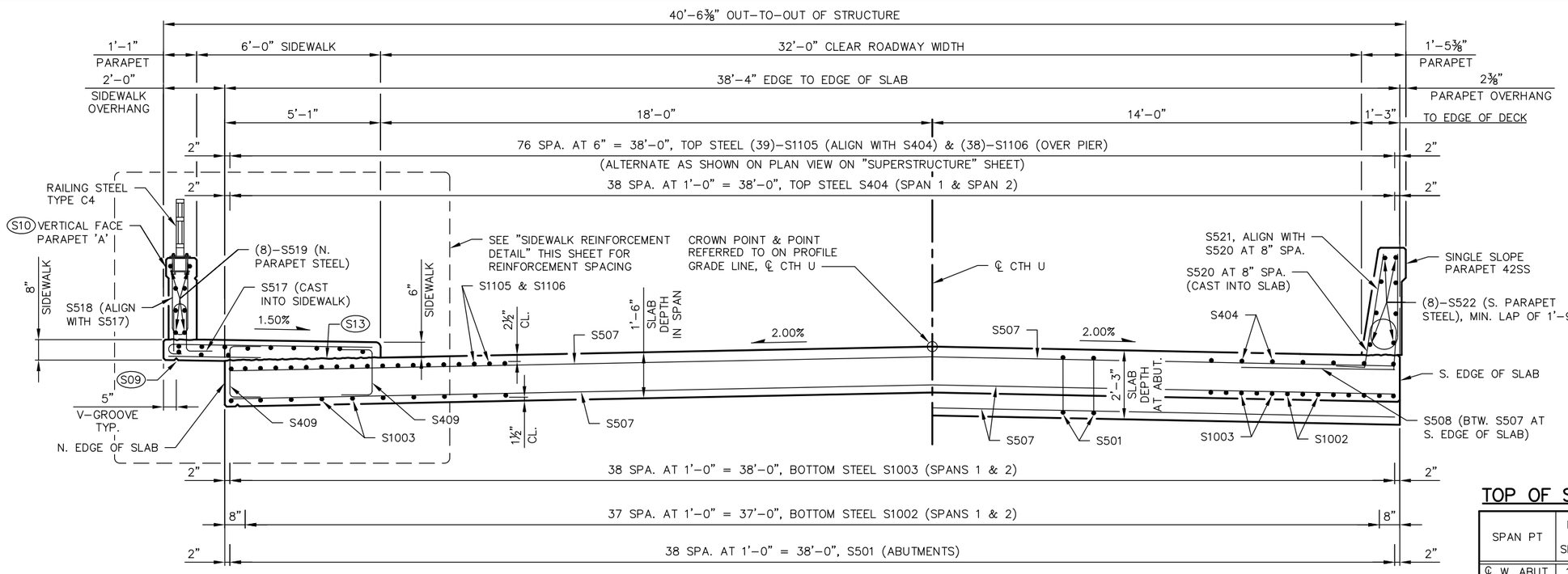
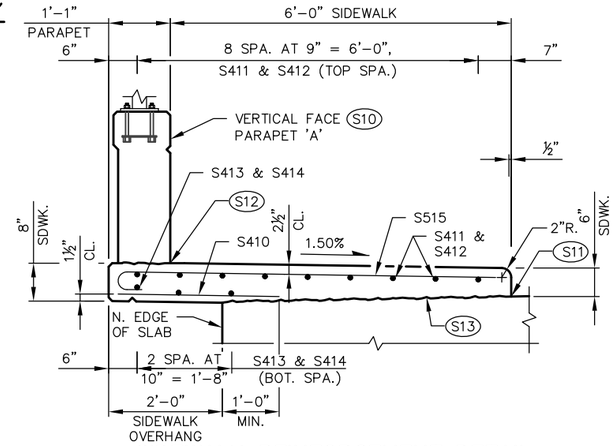


TOP OF SLAB/SIDEWALK ELEVATIONS

SPAN PT	N. TOP OF SIDEWALK	N. SLAB EDGE	INSIDE FACE OF SIDEWALK CURB	℄ CTH U	S. SLAB EDGE
℄ W. ABUT.	1014.14	1013.47	1013.64	1014.15	1013.97
0.1	1014.23	1013.55	1013.69	1014.20	1014.02
0.2	1014.29	1013.60	1013.75	1014.25	1014.08
0.3	1014.34	1013.66	1013.80	1014.31	1014.13
0.4	1014.39	1013.71	1013.85	1014.36	1014.19
0.5	1014.45	1013.77	1013.91	1014.42	1014.24
0.6	1014.50	1013.82	1013.96	1014.47	1014.29
0.7	1014.56	1013.87	1014.02	1014.52	1014.35
0.8	1014.61	1013.93	1014.07	1014.58	1014.40
0.9	1014.66	1013.98	1014.12	1014.63	1014.46
℄ PIER	1014.72	1014.04	1014.18	1014.68	1014.51
1.1	1014.77	1014.09	1014.23	1014.74	1014.56
1.2	1014.83	1014.14	1014.29	1014.79	1014.62
1.3	1014.88	1014.20	1014.34	1014.85	1014.67
1.4	1014.93	1014.25	1014.39	1014.90	1014.72
1.5	1014.99	1014.31	1014.45	1014.95	1014.78
1.6	1015.04	1014.36	1014.50	1015.01	1014.83
1.7	1015.10	1014.41	1014.55	1015.06	1014.89
1.8	1015.15	1014.47	1014.61	1015.12	1014.94
1.9	1015.20	1014.52	1014.66	1015.17	1014.99
℄ E. ABUT.	1015.26	1014.57	1014.72	1015.22	1015.05

CROSS SECTION THRU ROADWAY

(LOOKING EAST)



SIDEWALK REINFORCEMENT DETAIL

(PARAPET AND SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)
(SEE "SIDEWALK DETAILS" SHEET FOR ADDITIONAL DETAILS)

NOTES

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

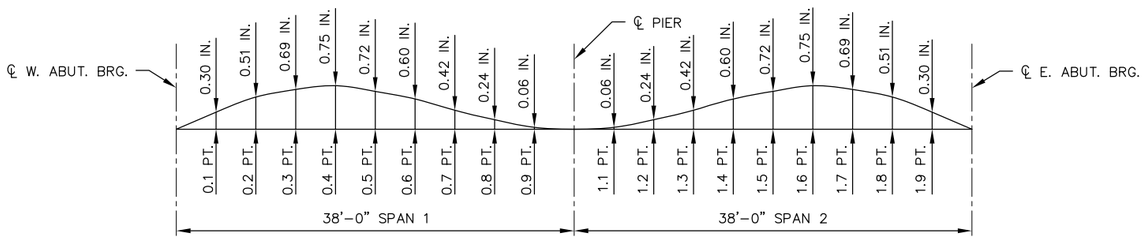
(S09) ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT BODY. V-GROOVES ARE REQUIRED.

(S10) SEE "VERTICAL FACE PARAPET 'A'" SHEET FOR DETAILS.

(S11) INSIDE FACE OF SIDEWALK CURB

(S12) NORTH TOP OF SIDEWALK (AT INSIDE FACE OF PARAPET)

(S13) CONSTRUCTION JOINT – STRIKE OFF AS SHOWN AND LEAVE ROUGH. MATCH BRIDGE SLAB CROSS SLOPE OF 2%.



SLAB CAMBER DIAGRAM

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

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

SURVEY TOP OF SLAB ELEVATIONS

	℄ W. ABUT. BRG.	5/10 PT.	℄ PIER	5/10 PT.	℄ E. ABUT. BRG.
NORTH SLAB EDGE					
℄ CTH U					
SOUTH SLAB EDGE					

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, ℄ OF PIER AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND REFERENCE LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-319

DRAWN BY JDO | PLANS CK'D ABP

SUPERSTRUCTURE DETAILS

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PLOT SCALE:

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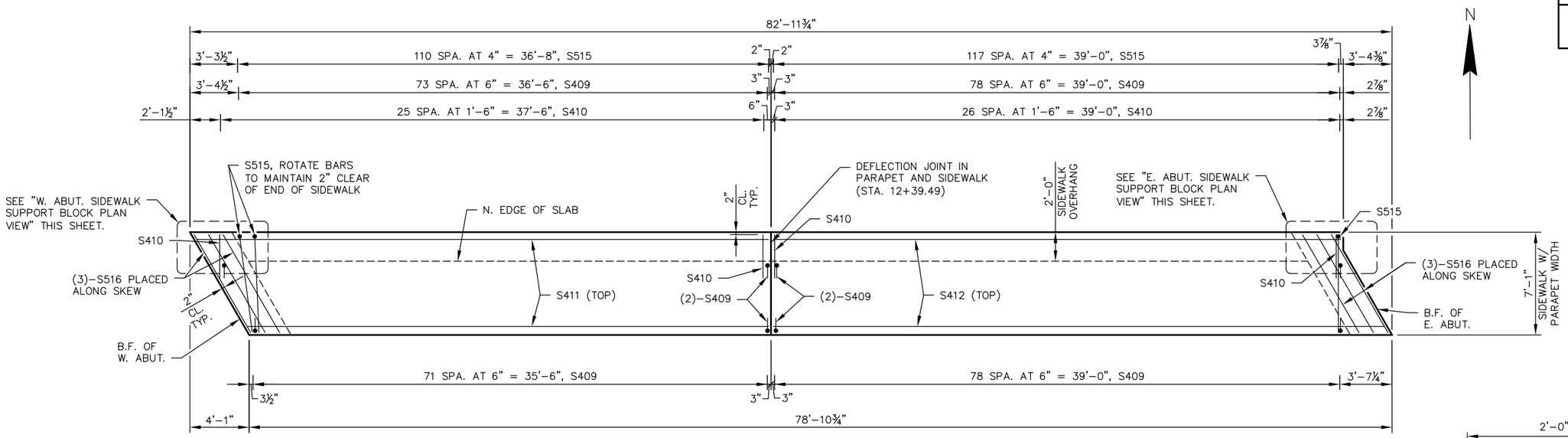
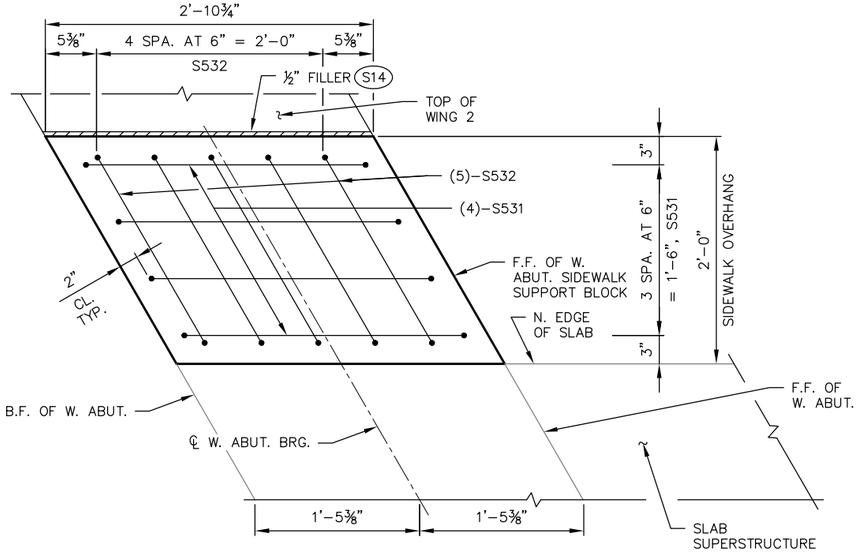
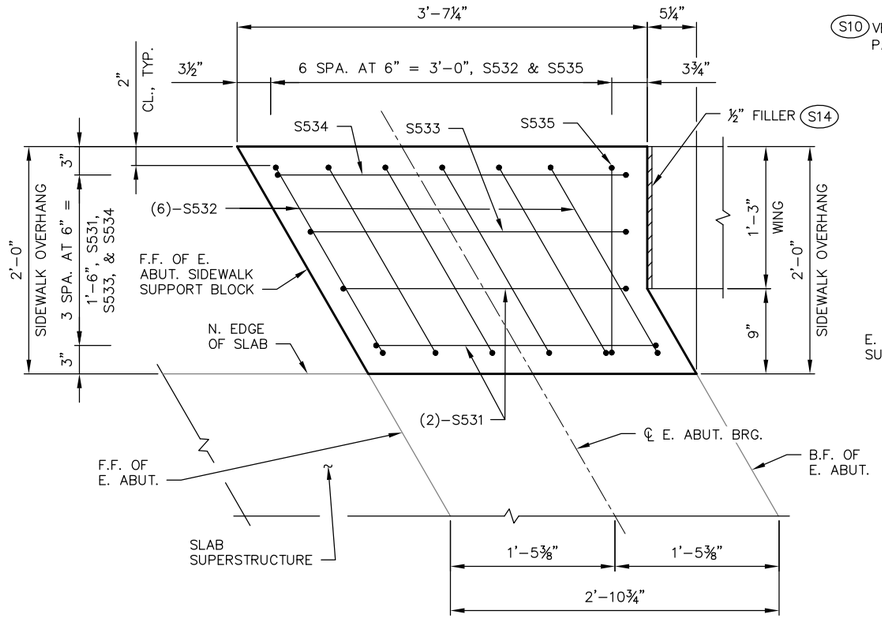


SIDEWALK PLAN

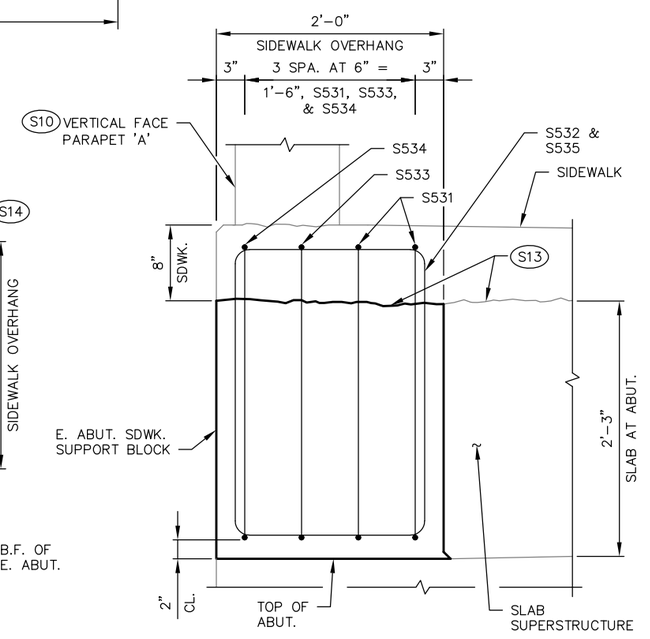
(PARAPET STEEL NOT SHOWN FOR CLARITY)



W. ABUT. SIDEWALK SUPPORT BLOCK PLAN VIEW



E. ABUT. SIDEWALK SUPPORT BLOCK PLAN VIEW



ABUT. SIDEWALK SUPPORT BLOCK ELEVATION

(E. ABUT. SHOWN, W. ABUT. SIMILAR)
(SIDEWALK & PARAPET STEEL NOT SHOWN FOR CLARITY)

NOTES

(S10) SEE "VERTICAL FACE PARAPET 'A'" SHEET FOR DETAILS.

(S13) CONSTRUCTION JOINT–STRIKE OFF AS SHOWN AND LEAVE ROUGH. MATCH BRIDGE SLAB CROSS SLOPE OF 2%.

(S14) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON–STAINING GRAY NON–BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

F.F. – FRONT FACE
B.F. – BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–41–319

DRAWN BY JDO | PLANS CK'D ABP

SIDEWALK DETAILS

SHEET 14 OF 19

54

I.D. 5017–00–70

PLOT DATE: Jul 25, 2022

FILE: B410319_12–15_super.dwg
PLOT SCALE:

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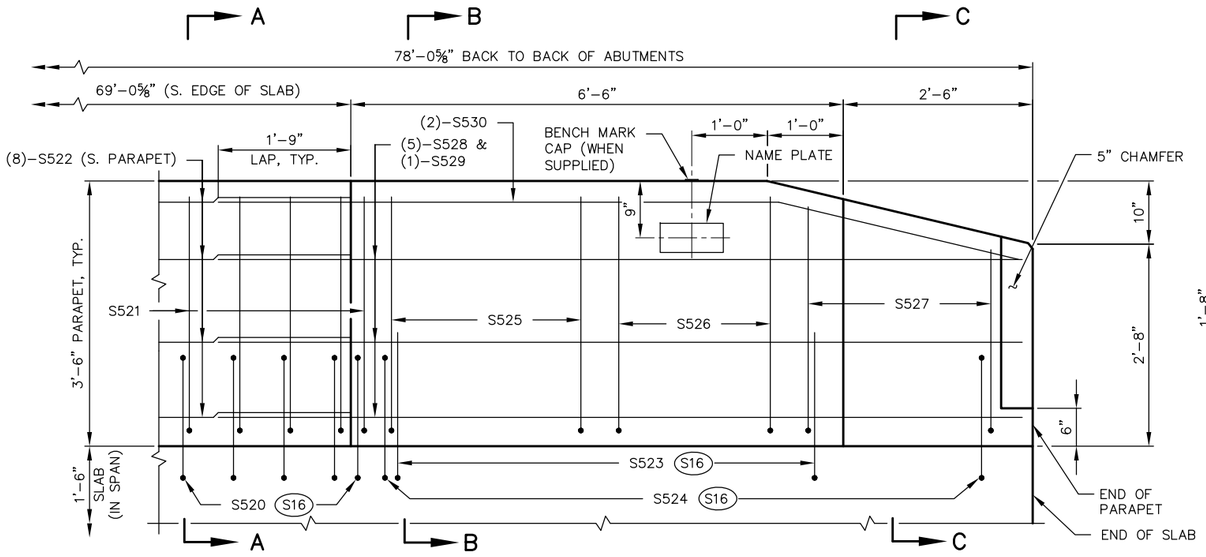
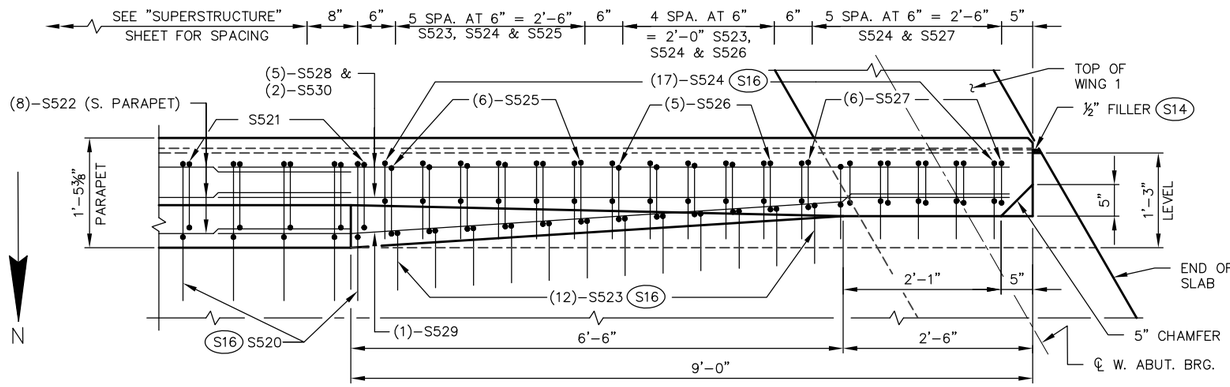
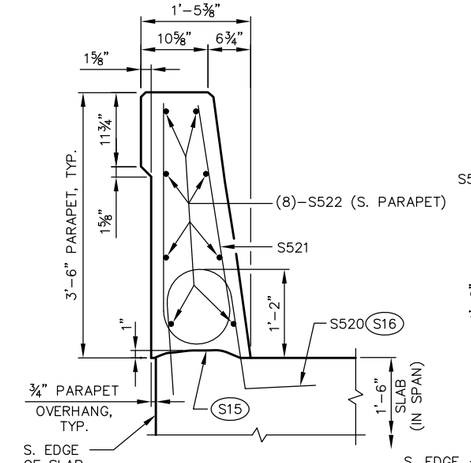


INSIDE ELEVATION



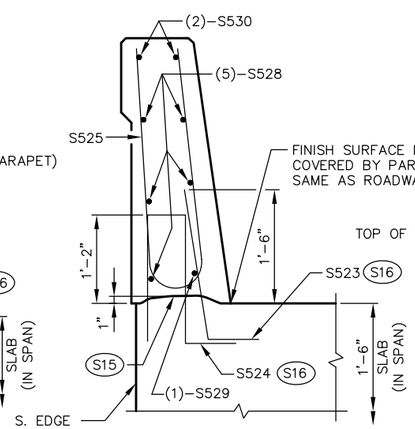
PLAN

(END OF SLAB NEAR WING 1)

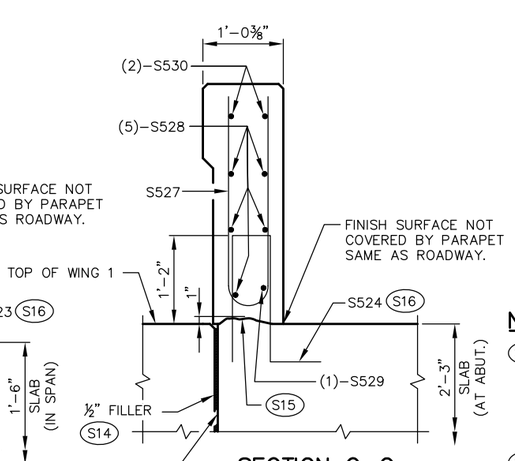


SECTION A–A

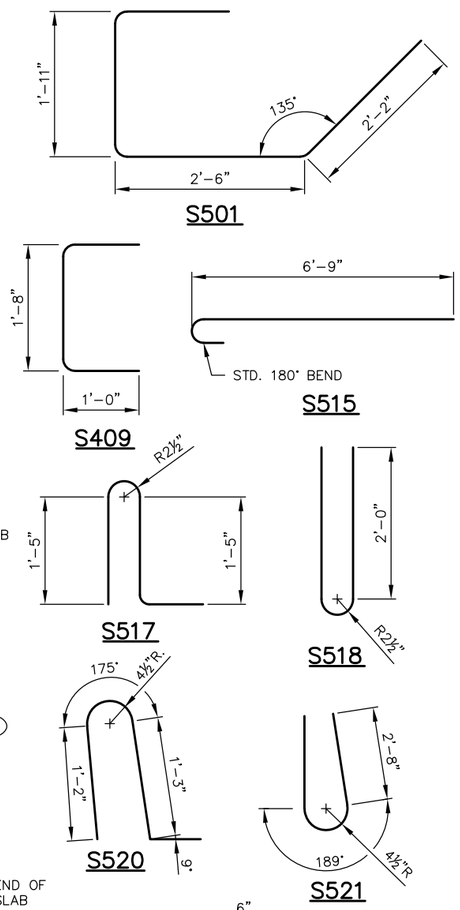
(TYPICAL SECTION THRU S. PARAPET ON BRIDGE)



SECTION B–B



SECTION C–C



NOTES

(S14) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON–STAINING GRAY NON–BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

(S15) CONST. JOINT – STRIKE OFF AS SHOWN AND LEAVE ROUGH.

(S16) S520, S523 AND S524 BARS TO BE TIED TO SUPERSTRUCTURE SLAB STEEL BEFORE CONCRETE IS POURED.

STATE PROJECT NUMBER

5017–00–70

BILL OF BARS
SUPERSTRUCTURE

COATED = 54,790 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
S501	78		7'–10"	X		SLAB AT ABUTMENTS – TIES	LONGIT.
S1002	76		29'–9"			SLAB – BOTTOM SPAN 1 & 2	LONGIT.
S1003	78		41'–9"			SLAB – BOTTOM SPAN 1 & 2	LONGIT.
S404	78		22'–7"			SLAB – TOP SPAN 1 & 2	LONGIT.
S1105	39		38'–0"			SLAB – TOP OVER PIER	LONGIT.
S1106	38		19'–0"			SLAB – TOP OVER PIER	LONGIT.
S507	215		43'–10"			SLAB – TOP & BOTTOM	TRANS.
S508	104		5'–0"			SLAB – TOP AT SOUTH EDGE OF SLAB	TRANS.
S409	304		3'–6"	X		SLAB – SIDEWALK – STIRRUP	VERT.
S410	53		3'–0"			SIDEWALK BOT. – NORTH EDGE	TRANS.
S411	9		37'–9"		⚠	SIDEWALK TOP – WEST	LONGIT.
S412	9		40'–6"		⚠	SIDEWALK TOP – EAST	LONGIT.
S413	3		38'–11"		⚠	SIDEWALK BOT. – WEST	LONGIT.
S414	3		39'–2"		⚠	SIDEWALK BOT. – EAST	LONGIT.
S515	229		7'–4"	X		SIDEWALK OVERHANG	TRANS.
S516	6		7'–9"			SIDEWALK OVERHANG AT SIDEWALK ENDS	TRANS.
S517	99		4'–4"	X		N. PARAPET – STIRRUP INTO SIDEWALK	VERT.
S518	99		4'–9"	X		N. PARAPET – STIRRUP	VERT.
S519	16		39'–1"			N. PARAPET – HORIZ.	LONGIT.
S520	104		4'–5"	X		S. PARAPET – STIRRUP	VERT.
S521	104		6'–8"	X		S. PARAPET – STIRRUP	VERT.
S522	16		35'–4"			S. PARAPET – HORIZ.	LONGIT.
S523	12		2'–9"	X		S. PARAPET – WEST END TRANSITIONS	VERT.
S524	17		4'–4"	X		S. PARAPET – WEST END TRANSITIONS	VERT.
S525	6		6'–6"	X		S. PARAPET – WEST END TRANSITIONS	VERT.
S526	5		6'–5"	X		S. PARAPET – WEST END TRANSITIONS	VERT.
S527	6		5'–5"	X	⚠	S. PARAPET – WEST END TRANSITIONS	VERT.
S528	5		10'–7"			S. PARAPET – WEST END TRANSITIONS	HORIZ.
S529	1		10'–7"	X		S. PARAPET – WEST END TRANSITIONS	HORIZ.
S530	2		10'–7"	X		S. PARAPET – WEST END TRANSITIONS	HORIZ.
S531	6		10'–8"	X		E. & W. ABUT. SDWK. SUPPORT – LONGIT.	VERT.
S532	11		9'–6"	X		E. & W. ABUT. SDWK. SUPPORT – TRANS.	VERT.
S533	1		11'–2"	X		E. ABUT. SDWK. SUPPORT – LONGIT.	VERT.
S534	1		11'–10"	X		E. ABUT. SDWK. SUPPORT – LONGIT.	VERT.
S535	1		9'–0"	X		E. ABUT. SDWK. SUPPORT – TRANS.	VERT.

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

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

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

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
S411	1 SERIES OF 9	36'–0" TO 39'–5"
S412	1 SERIES OF 9	38'–10" TO 42'–2"
S413	1 SERIES OF 3	38'–6" TO 39'–5"
S414	1 SERIES OF 3	38'–8" TO 39'–8"
S527	1 SERIES OF 6	4'–9" TO 6'–1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–41–319

DRAWN BY JDO | PLANS CK'D ABP

SOUTH PARAPET & SUPERSTRUCTURE REINFORCEMENT

SHEET 15 OF 19

55

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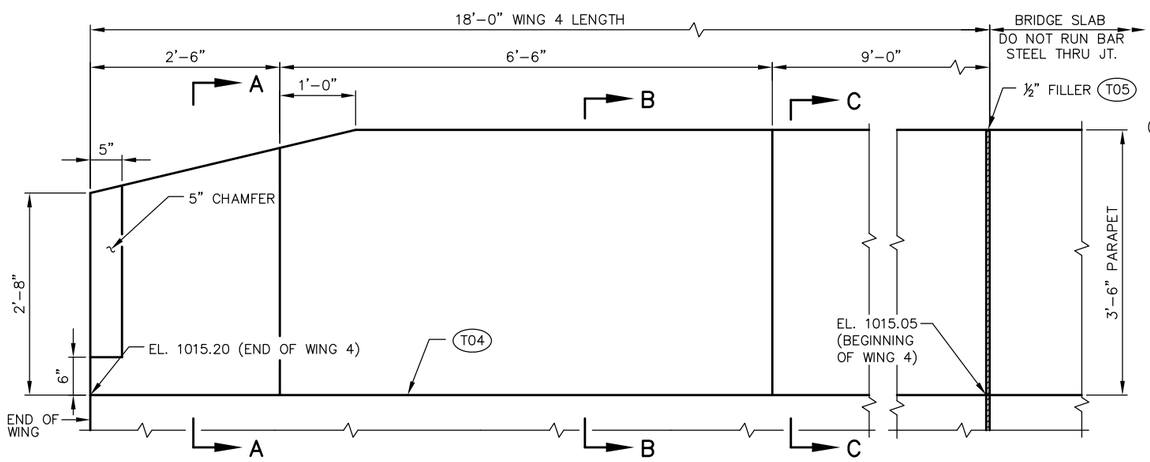
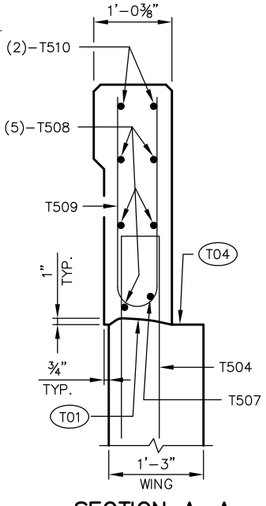
I.D. 5017–00–70

PLOT DATE: Jul 25, 2022

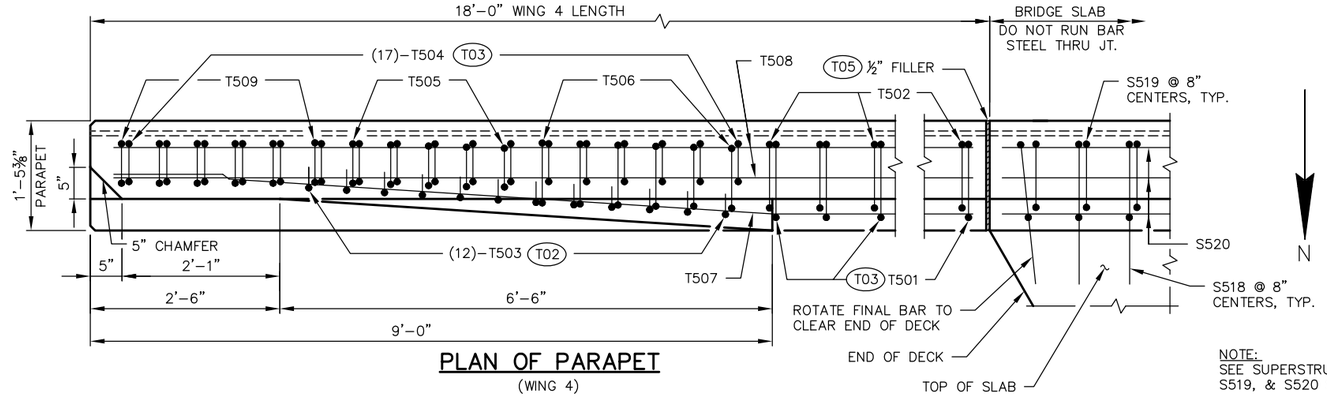
FILE: B410319_12–15_super.dwg
PLOT SCALE:



INSIDE ELEVATION OF PARAPET
(AT WING 4)

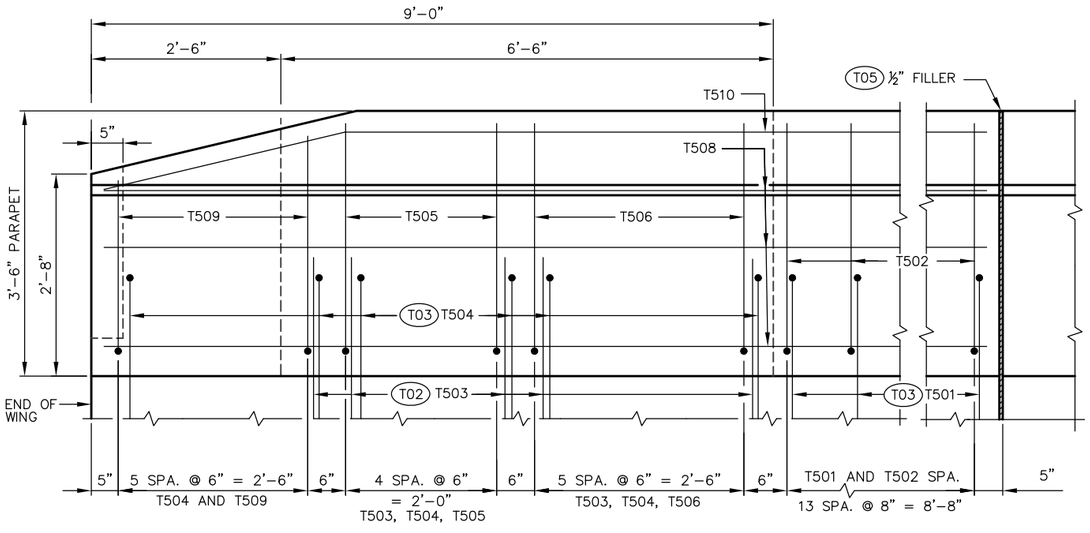


SECTION A-A



PLAN OF PARAPET
(WING 4)

NOTE:
SEE SUPERSTRUCTURE SHEETS FOR S518, S519, & S520 SPACING AND DETAILS.



OUTSIDE ELEVATION OF PARAPET
(AT WING 4)

NOTES

STEEL & CONCRETE QUANTITIES FOR PARAPET ON WING 4 INCLUDED IN EAST ABUTMENT QUANTITIES ON "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET.

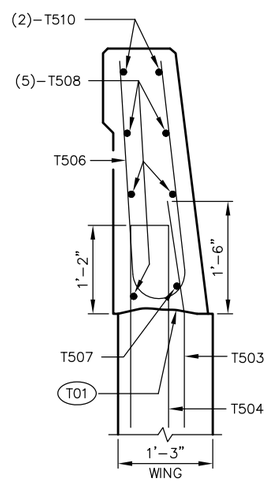
(T01) CONST. JOINT – STRIKE OFF AS SHOWN AND LEAVE ROUGH.

(T02) T503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE T503 CORRECTLY ALONG TRANSITION OF PARAPET.

(T03) T501 AND T504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

(T04) FINISH CONCRETE NOT COVERED BY THE PARAPET. MATCH ROADWAY CROSS SLOPE.

(T05) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.



SECTION B-B

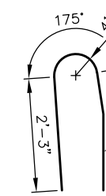
BILL OF BARS
S. PARAPET AT WING 4 COATED = 580 LBS.

BAR MARK	COAT.	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
T501	X	14	5'-10"	X		PARAPET	VERT.
T502	X	14	6'-8"	X		PARAPET	VERT.
T503	X	12	3'-0"	X		PARAPET	VERT.
T504	X	17	5'-7"	X		PARAPET	VERT.
T505	X	5	6'-5"	X		PARAPET	VERT.
T506	X	6	6'-6"	X		PARAPET	VERT.
T507	X	1	17'-5"	X		PARAPET	HORIZ.
T508	X	5	17'-6"			PARAPET	HORIZ.
T509	X	6	5'-5"	X	⚠	PARAPET	VERT.
T510	X	2	17'-3"	X		PARAPET	HORIZ.

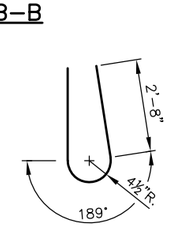
THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

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



T501



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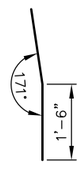
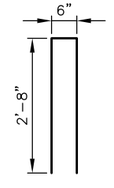
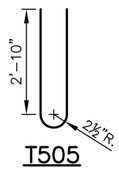


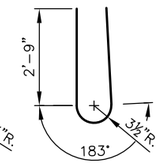
T503



T504

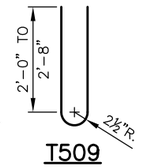


T505

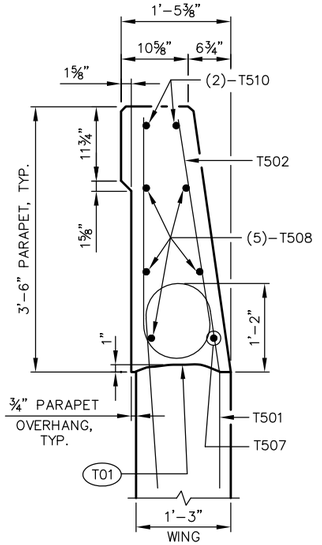


T506

T507



T509

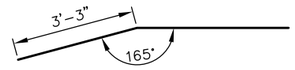


SECTION C-C

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
T509	1 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



T510

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-319

DRAWN BY CDS | PLANS CK'D ACK

SINGLE SLOPE
PARAPET 42SS

SHEET 16 OF 19

56

STATE PROJECT NUMBER
5017-00-70

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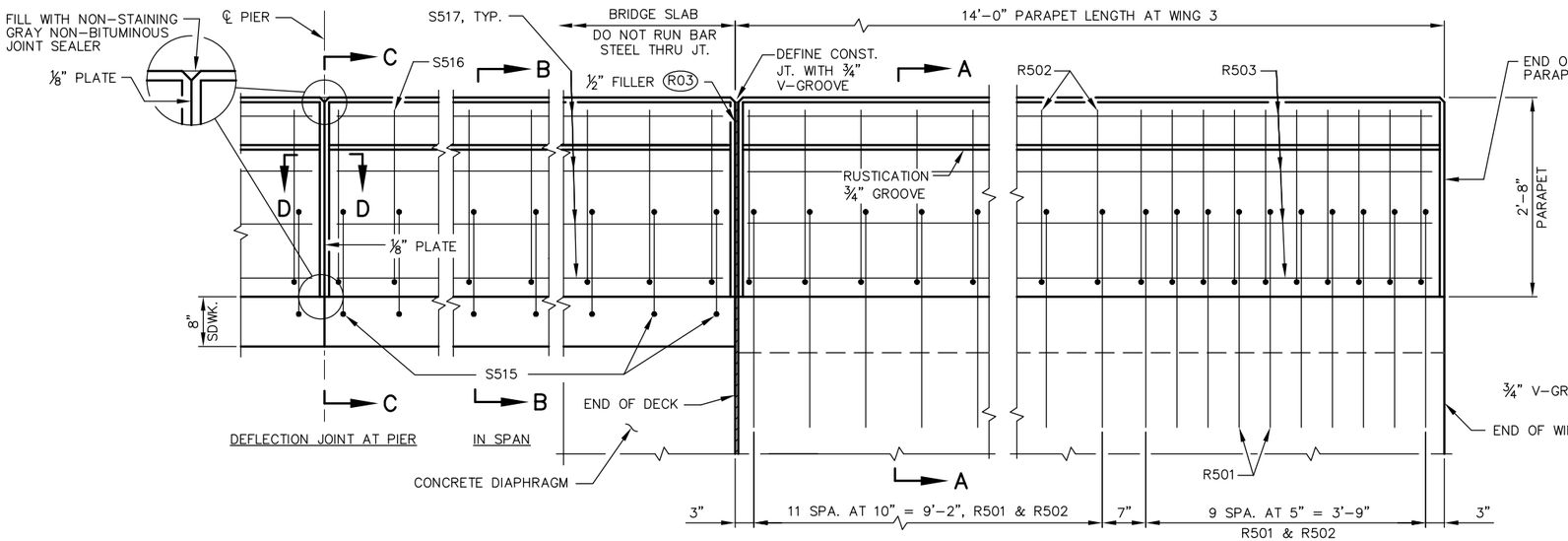
I.D. 5017-00-70

PLOT DATE: Jul 25, 2022

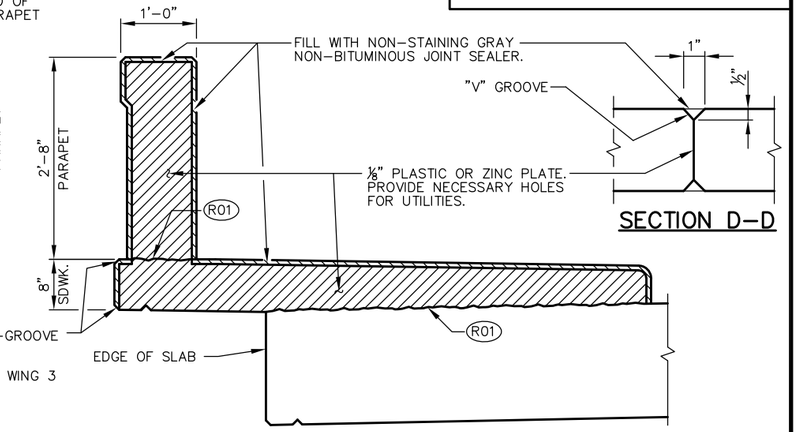
FILE: B410319_16_ppt42ss.dwg
PLOT SCALE:

STATE PROJECT NUMBER
5017-00-70



INSIDE ELEVATION OF PARAPET

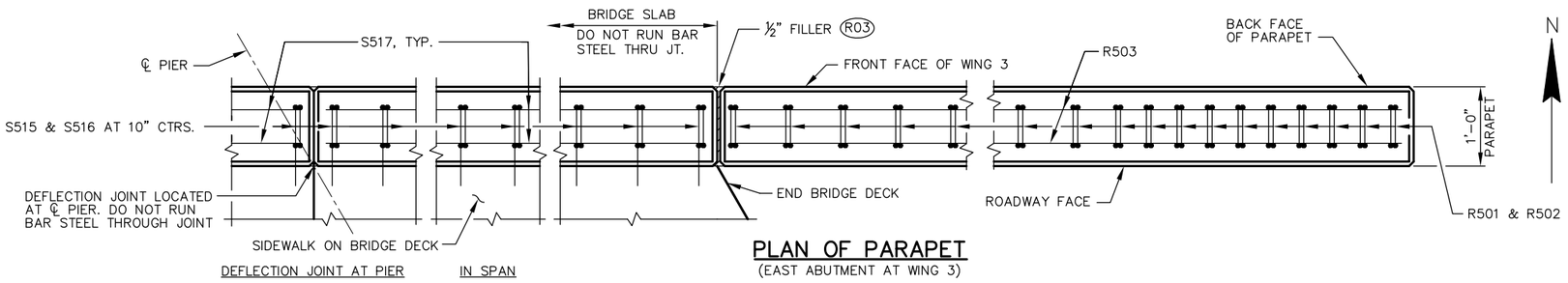
(LOOKING NORTH, RAILING STEEL TYPE C4 NOT SHOWN FOR CLARITY)



SECTION D-D

SECTION C-C

(LOOKING EAST, DEFLECTION JOINT IN PARAPET AND SIDEWALK LOCATED AT ℄ PIER STA. 12+39.49) (NORTH EDGE OF SLAB)

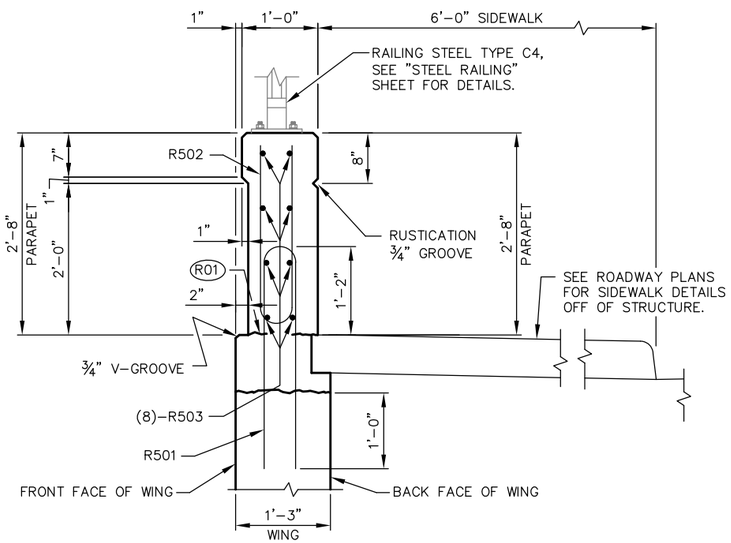


PLAN OF PARAPET

(EAST ABUTMENT AT WING 3)

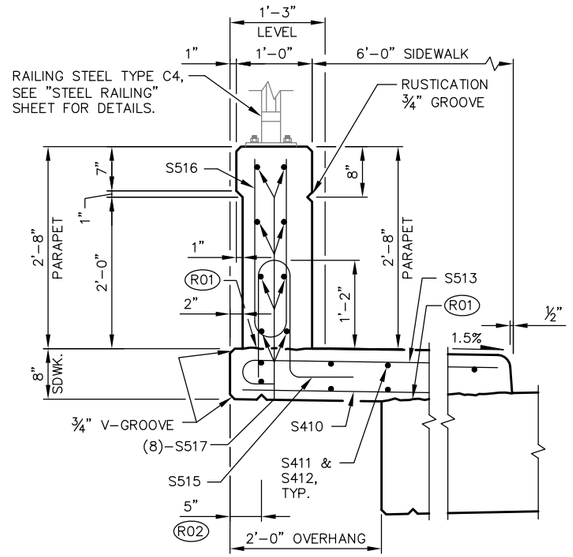
BILL OF BARS
N. PARAPET AT WING 3 COATED = 370 LBS.

BAR MARK	COAT.	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	22	6'-3"	X		PARAPET VERT.
R502	X	22	4'-9"	X		PARAPET VERT.
R503	X	8	13'-8"			PARAPET HORIZ.



SECTION A-A

(SHOWING PARAPET ON EAST ABUTMENT WING 3, LOOKING EAST)



SECTION B-B

(SHOWING PARAPET ON SIDEWALK IN SPAN, LOOKING EAST)

NOTES

STEEL & CONCRETE QUANTITIES FOR PARAPET ON WING 3 INCLUDED IN EAST ABUTMENT QUANTITIES ON "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET.

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION C-C BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

A DEFLECTION JOINT IS REQUIRED IN THE PARAPET AND SIDEWALK OVER THE PIER AS SHOWN IN SECTION C-C.

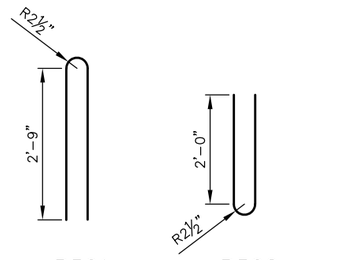
ALL JOINTS IN CONCRETE PARAPET ARE TO BE VERTICAL.

SEE SUPERSTRUCTURE SHEETS FOR S515, S516 & S517 SPACING AND DETAILS.

(R01) CONSTRUCTION JOINT – STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK AND STRUCTURAL APPROACH SLAB POUR, MATCH BRIDGE SLOPE.

(R02) ¾" V-GROOVE. EXTEND V-GROOVE TO 3" FROM FRONT FACE OF ABUTMENT DIAPHRAGM. V-GROOVES ARE REQ'D.

(R03) SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS, JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3' BELOW GUTTER LINE AT INSIDE FACE.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-319

DRAWN BY CDS | PLANS CK'D ACK

VERTICAL FACE PARAPET 'A'

SHEET 17 OF 19

57

8

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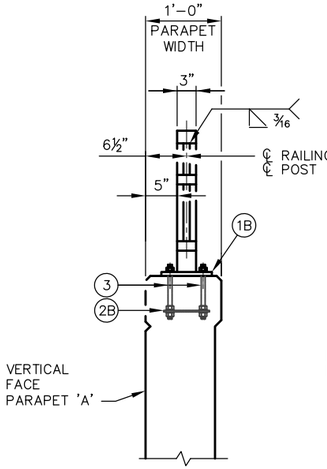
I.D. 5017-00-70

PLOT DATE: Jul 25, 2022

FILE: B410319_17_apptva.dwg
PLOT SCALE:

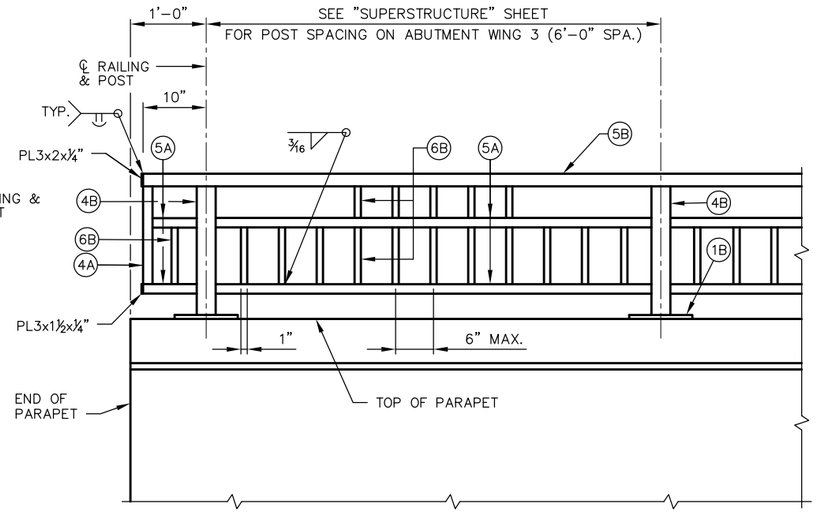
STATE PROJECT NUMBER

5017-00-70



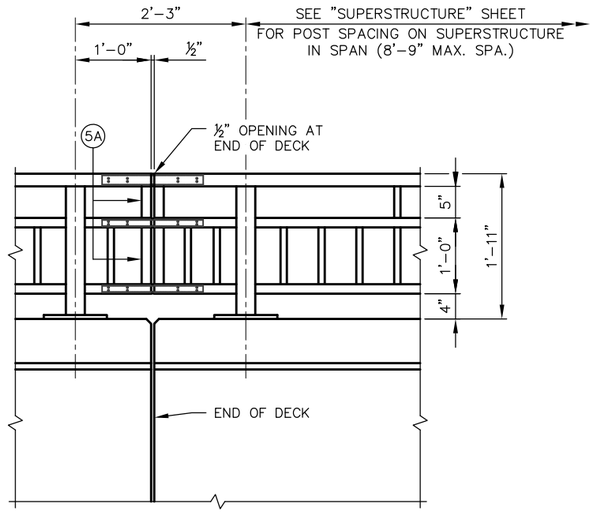
END VIEW

(WING 3, LOOKING WEST)



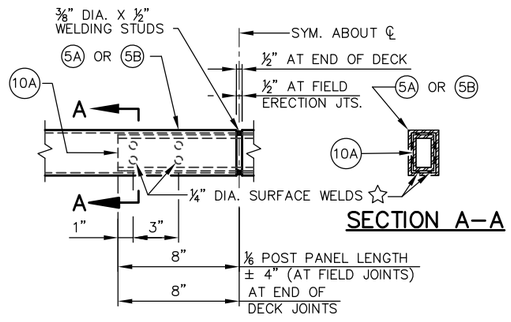
WING 3

(EXTERIOR FACE, LOOKING SOUTH)



SUPERSTRUCTURE IN SPAN

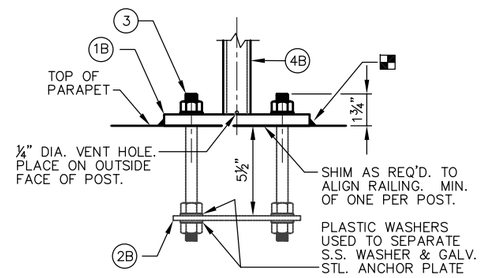
ELEVATION OF PARAPET



SECTION A-A

FIELD ERECTION JOINT DETAIL

☆MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATIVE.



ANCHORAGE FOR RAIL POSTS

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

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C4", 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 CUTS.

ALL PLATES, BARS, 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 PLATES 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 & 12) 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.

LEGEND

(1B) PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.

(2B) ¼" X 5" X 9" ANCHOR PLATE WITH 1⁄16" DIA. HOLES FOR THR'D. RODS NO. 3.

(3) ⅝" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

(4A) STRUCTURAL TUBING 3" X 1½" X 3⁄16". PLACE VERTICAL. WELD TO NO. 5.

(4B) STRUCTURAL TUBING 3" X 3" X 3⁄16". PLACE VERTICAL. WELD TO NO. 1 & 5.

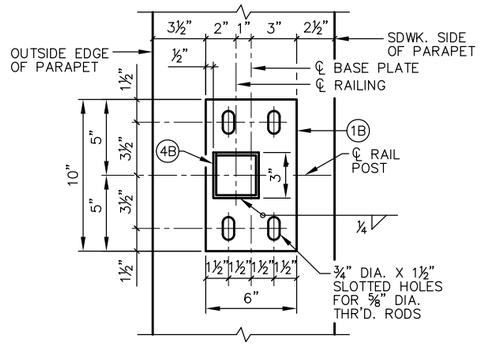
(5A) STRUCTURAL TUBING 3" X 1½" X 3⁄16" RAILS. WELD TO NO. 1 & NO. 4.

(5B) STRUCTURAL TUBING 3" X 2" X 3⁄16" RAILS. WELD TO NO. 1 & NO. 4.

(6B) BAR 1" X 1½" PICKETS. WELD TO NO. 5. (SPACE AT 6" MAX. ℄ TO ℄ SPACING). PLACE VERTICAL.

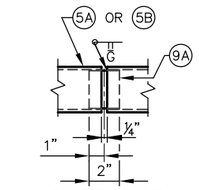
(9A) RECTANGULAR SLEEVE FABRICATED FROM 3⁄16" PLATES. PROVIDE "SLIDING FIT".

(10A) RECTANGULAR SLEEVE FABRICATED FROM 3⁄16" PLATES. (1'-4" @ FIELD ERECTION JTS.)



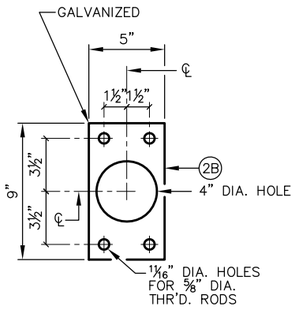
TYPICAL RAIL POST BASE PLATE

FOR 3" X 3" X 3⁄16" POSTS (4B)



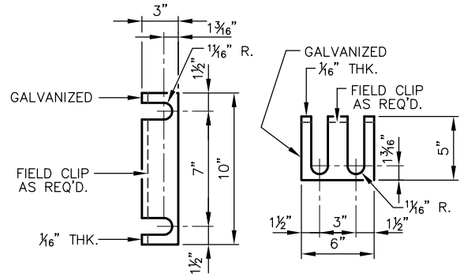
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



ANCHOR PLATE

FOR 3" X 3" X 3⁄16" POSTS (4B)



RAIL POST SHIM DETAIL

(2 SETS PER POST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-319

DRAWN BY CDS | PLANS CK'D ACK

STEEL RAILING

SHEET 18 OF 19

58

I.D. 5017-00-70

PLOT DATE: Jul 25, 2022

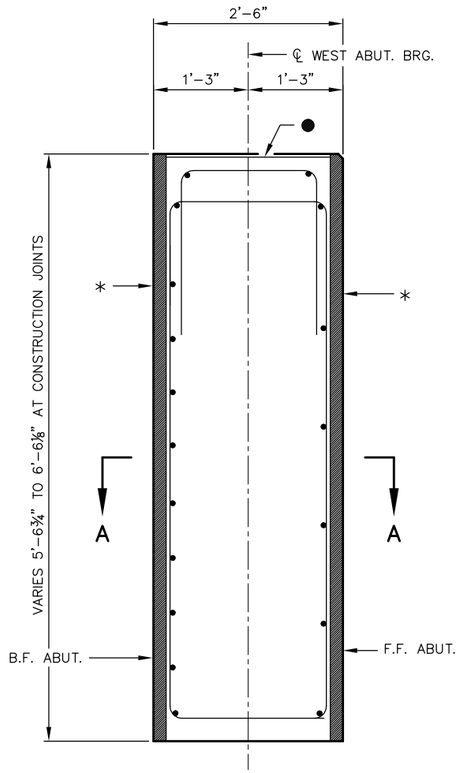
FILE: B410319_18_rail.dwg
PLOT SCALE:

8

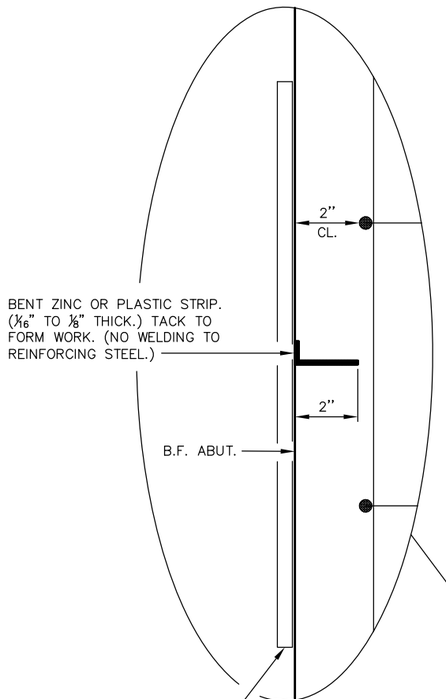
8

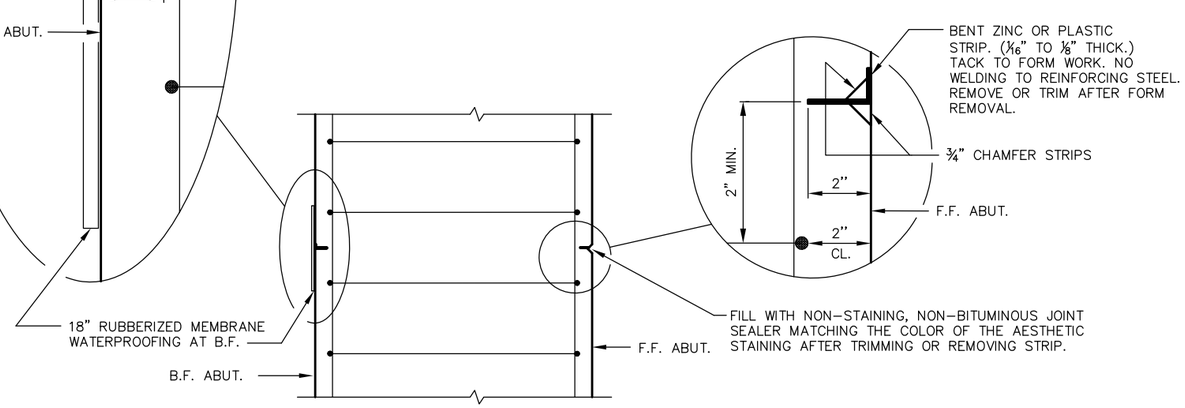
STATE PROJECT NUMBER

5017–00–70



SECTION THRU ABUTMENT BODY





SECTION A–A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING THE CONSTRUCTION JOINT IS NOT ALLOWED.

● USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY ½" DEEP.

* BENT ZINC OR PLASTIC STRIP.

F.F. – FRONT FACE
B.F. – BACK FACE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–41–319

DRAWN BY CDS | PLANS CK'D ACK

ALTERNATE CONSTRUCTION JOINT

SHEET 19 OF 19

59

FILE: B410319_19_alconstjt.dwg
PLOT SCALE:

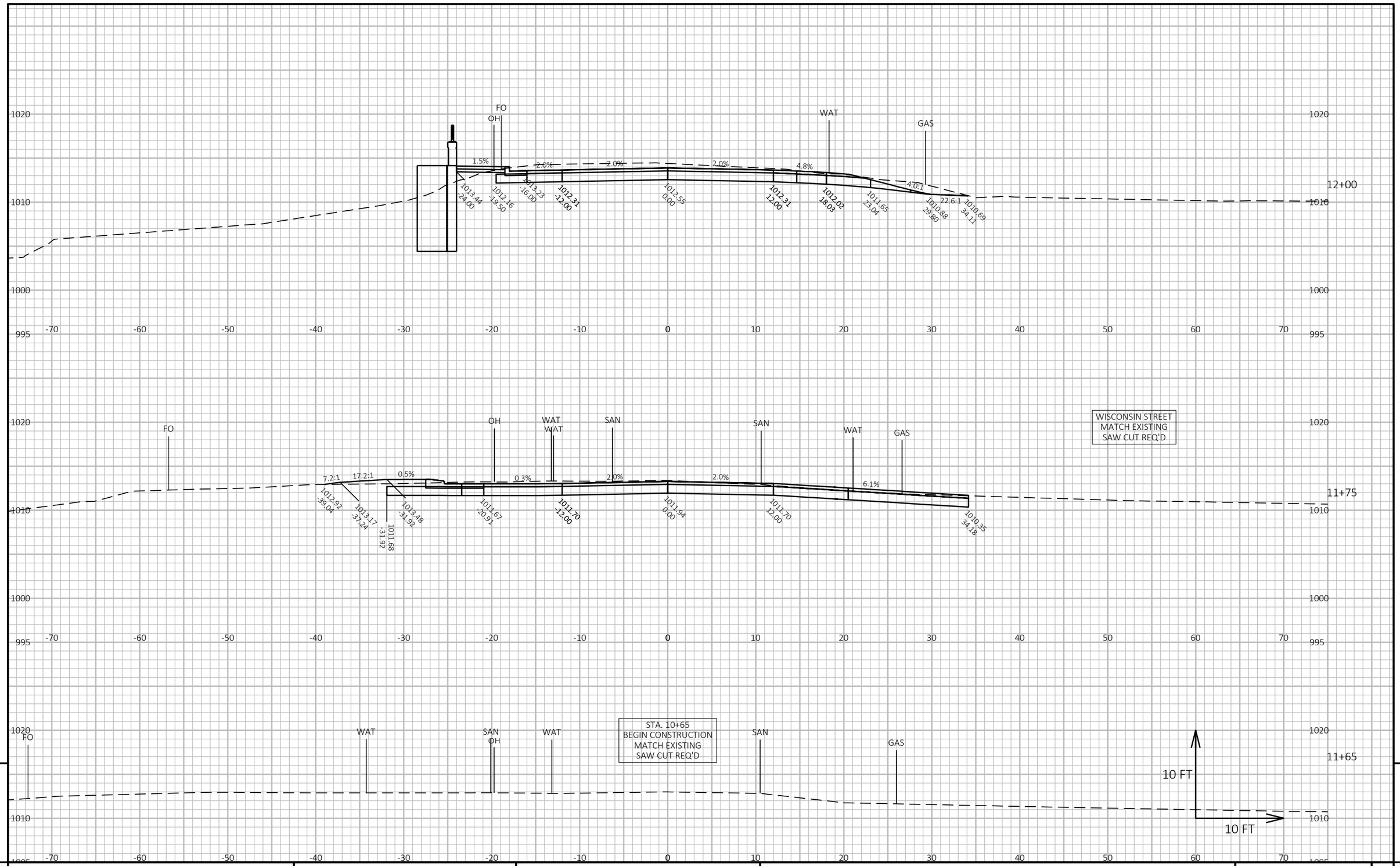
I.D. 5017–00–70

PLOT DATE: Jul 25, 2022

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
								1.00	1.25	
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
11+65	0.00	83.37	37.92	0.00	0	0	0	0	0	0
11+70	5.00	98.56	43.17	0.00	17	8	0	17	0	9
11+75	5.00	93.09	37.92	0.00	18	8	0	35	0	19
11+80	5.00	79.56	33.83	1.02	16	7	0	51	0	28
11+85	5.00	81.34	30.92	1.35	15	6	0	66	0	37
11+90	5.00	83.82	29.17	1.21	15	6	0	81	0	46
11+95	5.00	82.03	23.33	5.83	15	5	1	96	1	55
12+00	5.00	81.51	16.33	1.75	15	4	1	111	3	65
12+05	5.00	70.54	14.58	0.00	14	3	0	125	3	76
12+10	5.00	46.15	13.42	6.52	11	3	1	136	4	82
12+11.98	1.98	38.47	14.00	9.41	3	1	1	139	5	83
12+13.86	1.88	32.24	14.00	10.57	2	1	1	141	6	83
12+17	3.14	21.45	10.50	14.10	3	1	1	144	8	84
12+20	3.00	9.43	7.00	19.87	2	1	2	146	10	82
12+21.27	1.27	4.65	5.25	21.47	0	0	1	146	11	81
STRUCTURE B-41-0319										
			DIVISION 1 TOTALS		146	54	9			

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
								1.00	1.25	
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
STRUCTURE B-41-0319										
12+79.04	0.00	15.02	4.50	1.72	0	0	0	0	0	0
12+80	0.96	18.71	6.00	5.25	1	0	0	1	0	1
12+85	5.00	37.92	13.50	5.14	5	2	1	6	1	3
12+90	5.00	46.43	18.00	2.44	8	3	1	14	3	7
12+95	5.00	43.37	18.00	12.90	8	3	1	22	4	10
13+00	5.00	44.24	18.00	6.55	8	3	2	30	6	13
13+05	5.00	45.02	18.00	2.96	8	3	1	38	8	17
13+10	5.00	43.33	18.00	1.94	8	3	0	46	8	22
13+15	5.00	43.20	18.00	0.45	8	3	0	54	8	27
13+20	5.00	56.18	18.00	0.09	9	3	0	63	8	33
13+25	5.00	57.26	18.00	0.00	11	3	0	74	8	41
13+30	5.00	48.39	18.75	0.00	10	3	0	84	8	48
13+35	5.00	47.97	18.75	0.00	9	3	0	93	8	54
13+40	5.00	46.38	18.75	0.00	9	3	0	102	8	60
13+42.75	2.75	46.64	18.75	0.00	5	2	0	107	8	63
			DIVISION 2 TOTALS		107	37	6			
			PROJECT TOTALS		253	91	15			

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	[(CUT) - (FILL * FILL FACTOR) - (SALVAGED/UNUSABLE PAVEMENT MATERIAL)]



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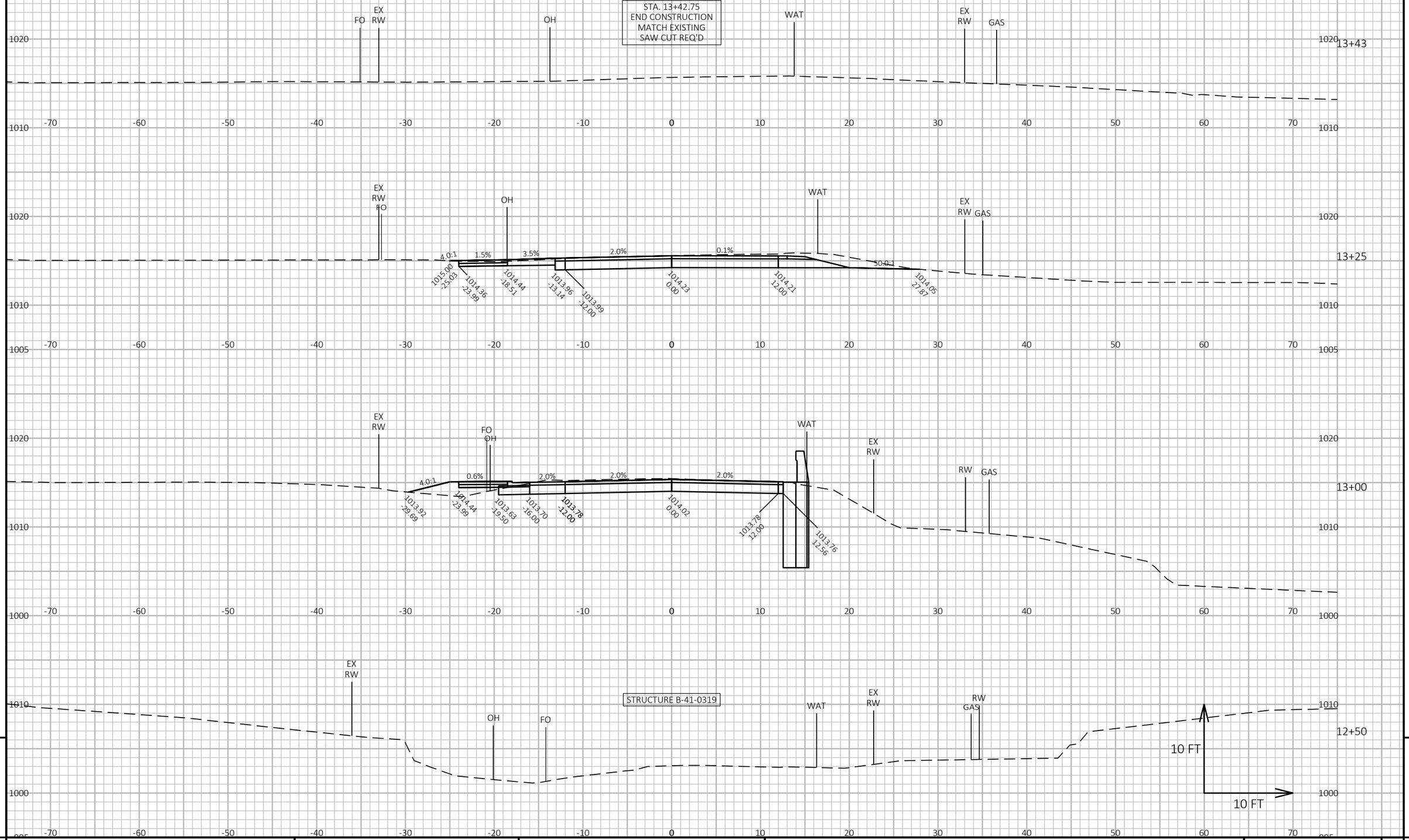
9

PROJECT NO: 5017-00-70	HWY: CTH U	COUNTY: MONROE	CROSS SECTIONS:	SHEET 61	E

FILE NAME : G:\00-PROJECT FILES\2020\20163 CTH U BRIDGE REPLACEMENT - MONROE COUNTY ID 5017-00-00\0-CAD\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_xs

PLOT DATE : 7/11/2022 11:08 AM PLOT BY : ERIK MEYER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

STA. 13+42.75
END CONSTRUCTION
MATCH EXISTING
SAW CUT REQ'D



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9

PROJECT NO: 5017-00-70	HWY: CTH U	COUNTY: MONROE	CROSS SECTIONS:	SHEET 62	E

Notes

Wisconsin Department of Transportation

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