

PROJECT ID: 5200-03-63
WITH: N/A

COUNTY: LA CROSSE

ORDER OF SHEETS

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

TOTAL SHEETS = 72



02

DESIGN DESIGNATION

A.A.D.T.	2014	=	16,527
A.A.D.T.		=	
D.H.V.		=	
D.D.		=	
T.		=	
DESIGN SPEED		=	35 MPH
ESALS		=	

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY REHABILITATION-MAINTENANCE PROJECT

C LA CROSSE, CAMERON AVE & CASS ST

MISSISSIPPI RVR B-32-202 & B-32-300

USH 14
LA CROSSE

STATE PROJECT NUMBER
5200-03-63

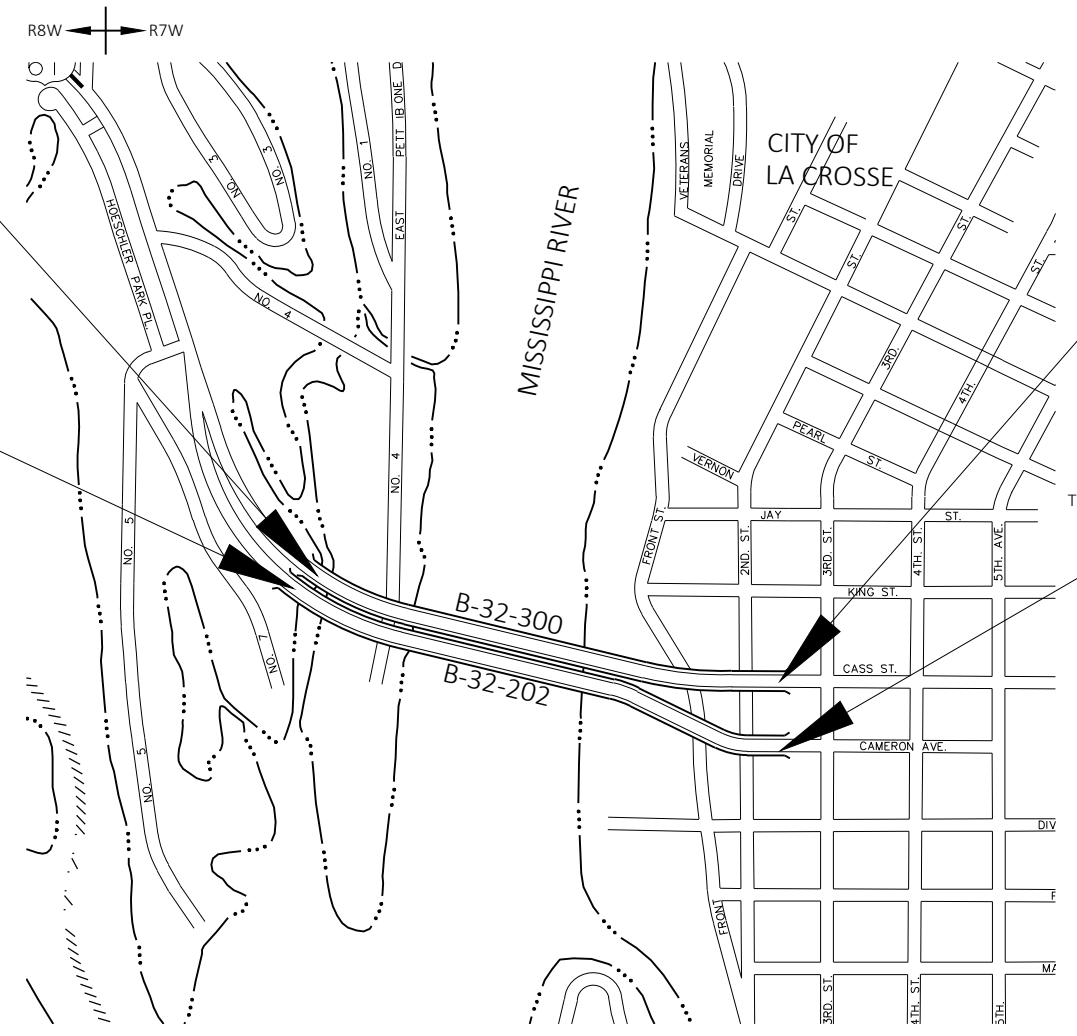
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5200-03-63		

BEGIN PROJECT
STA 38+09.25 WB
B-32-300 (Westbound)

BEGIN PROJECT
STA 41+71.92 EB
B-32-202 (Eastbound)
X=1,635,063.42
Y=66,326.57

END PROJECT
STA 63+42.92 WB
B-32-300 (Westbound)

END PROJECT
STA 68+93.07 EB
B-32-202 (Eastbound)



LAYOUT
SCALE 0 1000 FT
TOTAL NET LENGTH OF CENTERLINE = 0.515 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, LA CROSSE COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	SW REGION
Surveyor	BRYTON MEYER
Designer	PAUL VALENTI
Project Manager	VALERIE GUIDER
Regional Examiner	JOHN BANTER
Regional Supervisor	

APPROVED FOR THE DEPARTMENT
DATE: 10/19/2023
Paul M Valenti
(Signature)

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GENERAL NOTES

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST

WORK WITH THE UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKERS IS TO BE WITH THE APPROVAL OF THE ENGINEER

UTILITIES

BRIGHTSPEED OF WISCONSIN LLC
COMMUNICATIONS LINE
1905 WARD AVENUE
LA CROSSE, WI 54601
ATTN: TOM MURRAY
(608) 780-0895
TOM.L.MURRAY@BRIGHTSPEED.COM

CITY OF LA CROSSE
SEWER
400 LA CROSSE ST
LA CROSSE, WI 54601
ATTN: MATTHEW GALLAGER
(608) 789-7505
GALLAGHERM@CITYOFLACROSSE.ORG

XCEL ENERGY
GAS/PETROLEUM
1414 W HAMILTON AVE
PO BOX 8
EAU CLAIRE, WI 54702-0008
ATTN: DEE DEE KERSKA
(608) 789-3714
DEE.DEE.KERSKA@XCELENERGY.COM

XCEL ENERGY
TRANSMISSION
414 NICOLETT MALL
MINNEAPOLIS, MN 55401
ATTN: MITCHELL DIENGER
(612) 321-3109
MITCHELL.A.DIENGER@XCELENERGY.COM

XCEL ENERGY
ELECTRICITY
3215 COMMERCE ST
LA CROSSE, WI 54601
ATTN: JASON MCROBERTS
(608) 789-3689
JASON.L.MCROBERTS@XCELENERGY.COM

SPECTRUM
COMMUNICATION
1201 MCCANN DR
ALTOONA, WI 54720
ATTN: CURTIS MOORE
(715) 214-1172
CURTIS.MOORE@CHARTER.COM

WISDOT PROJECT MANAGER

WISDOT SW REGION
PAUL VALENTI
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-785-9053
PAUL.VALENTI@DOT.WI.GOV

WISDOT DESIGN CONTACT

WISDOT SW REGION
BRYTON MEYER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-789-7866
BRYTON.MEYER@DOT.WI.GOV

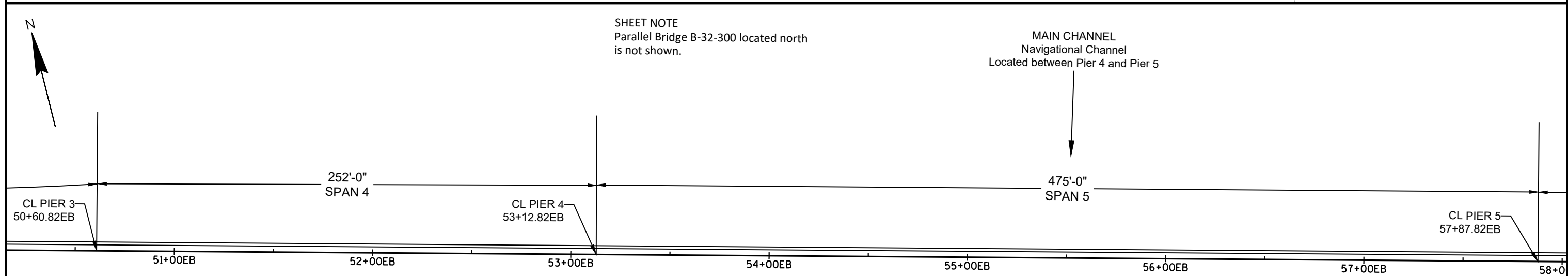
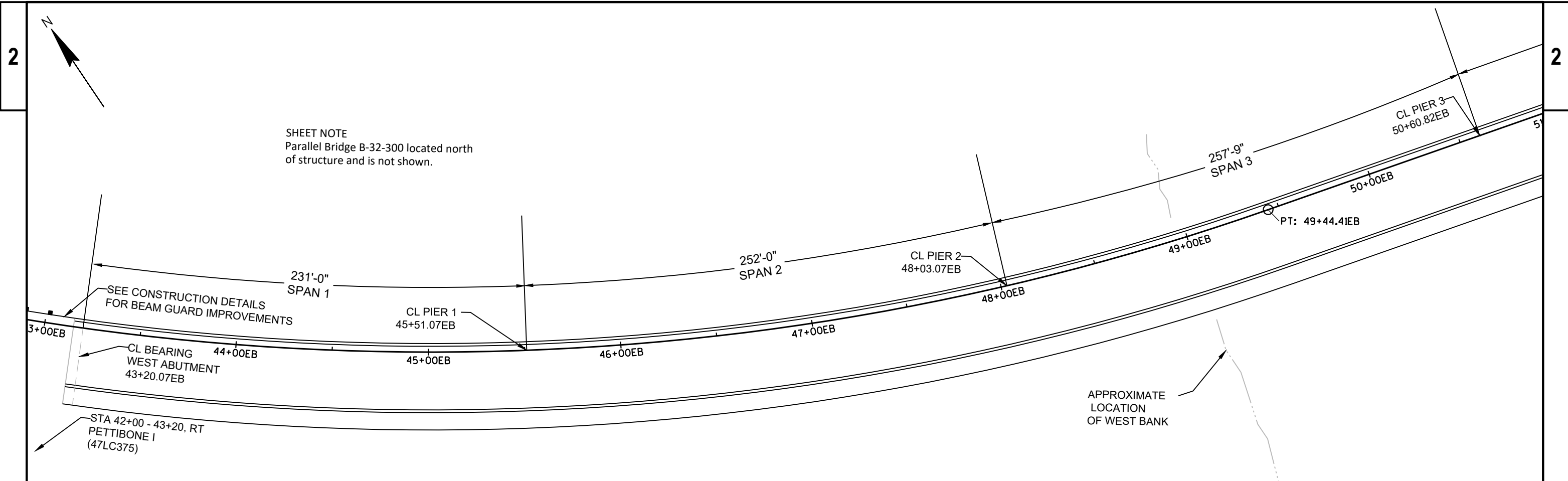
DNR LIAISON

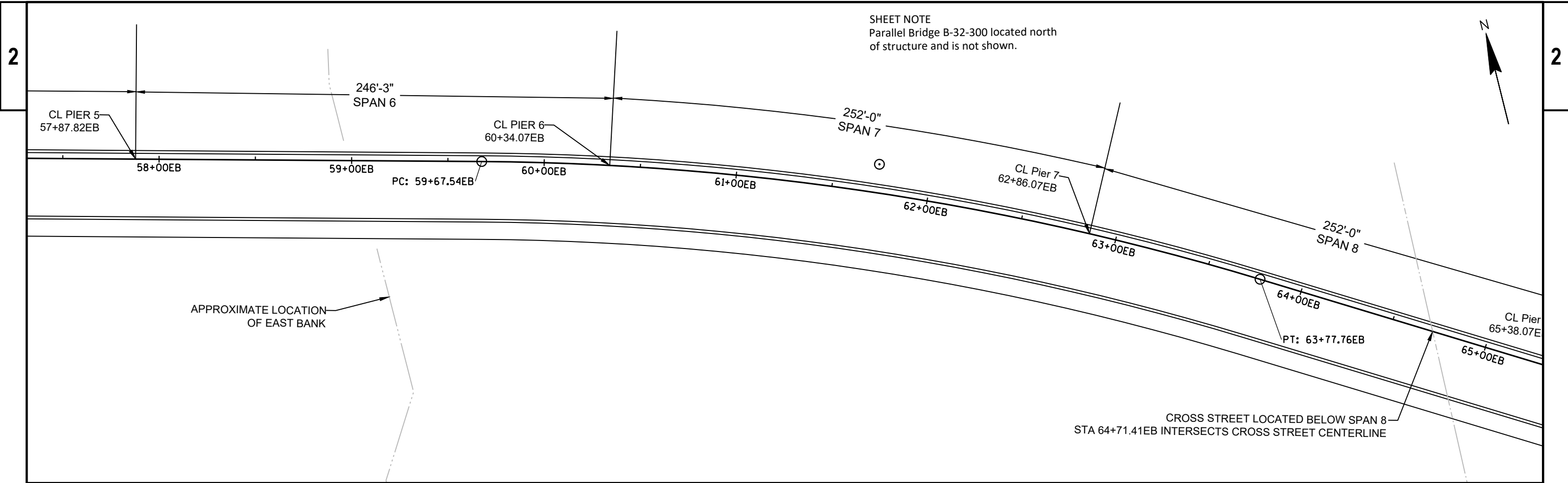
DNR SOUTHWEST CENTRAL
KAREN KALVELAGE
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 785-9115
(608) 406-7880
KAREN.KALVELAGE@WISCONSIN.GOV

STANDARD ABBREVIATIONS

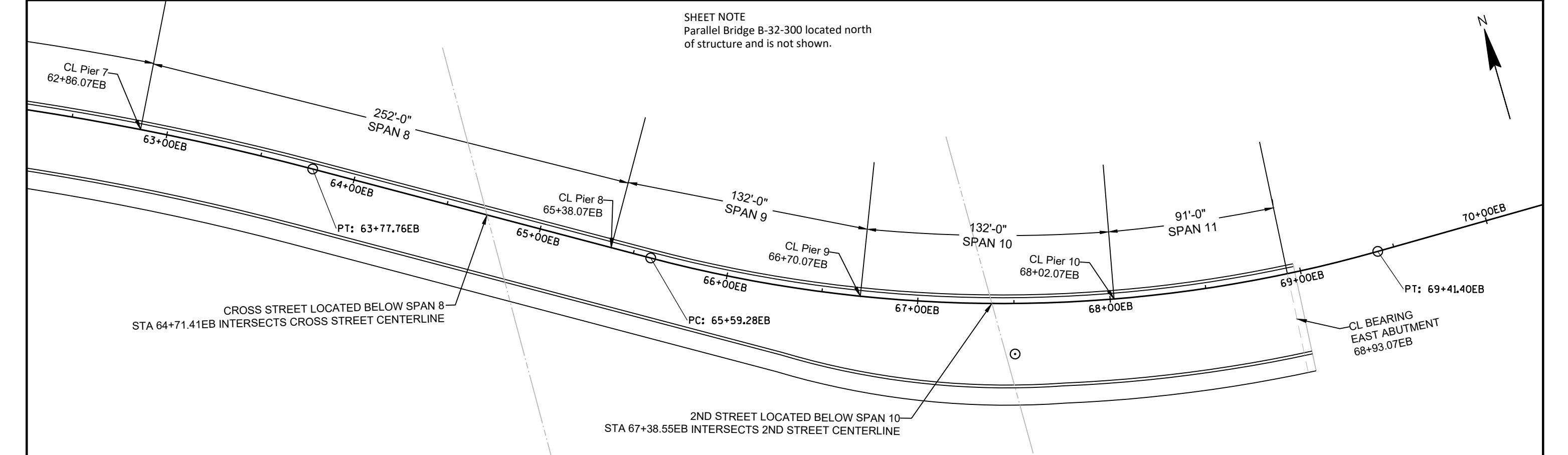
Table with 8 columns of abbreviations and their corresponding full names, including terms like AC, AGG, AE, ASPH, A.D.T., etc.







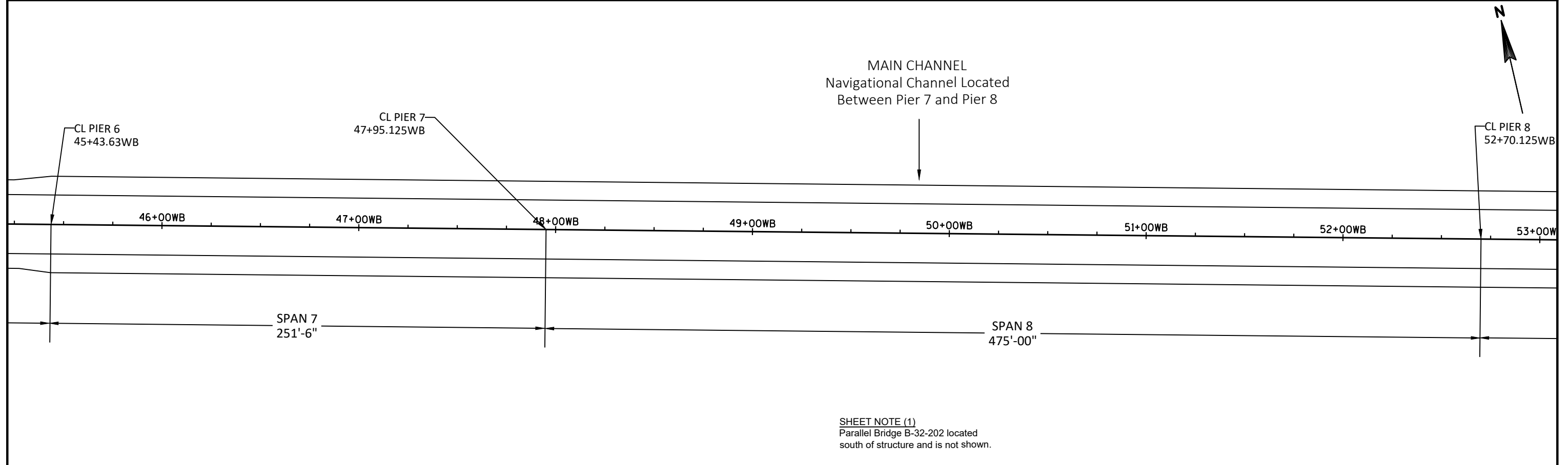
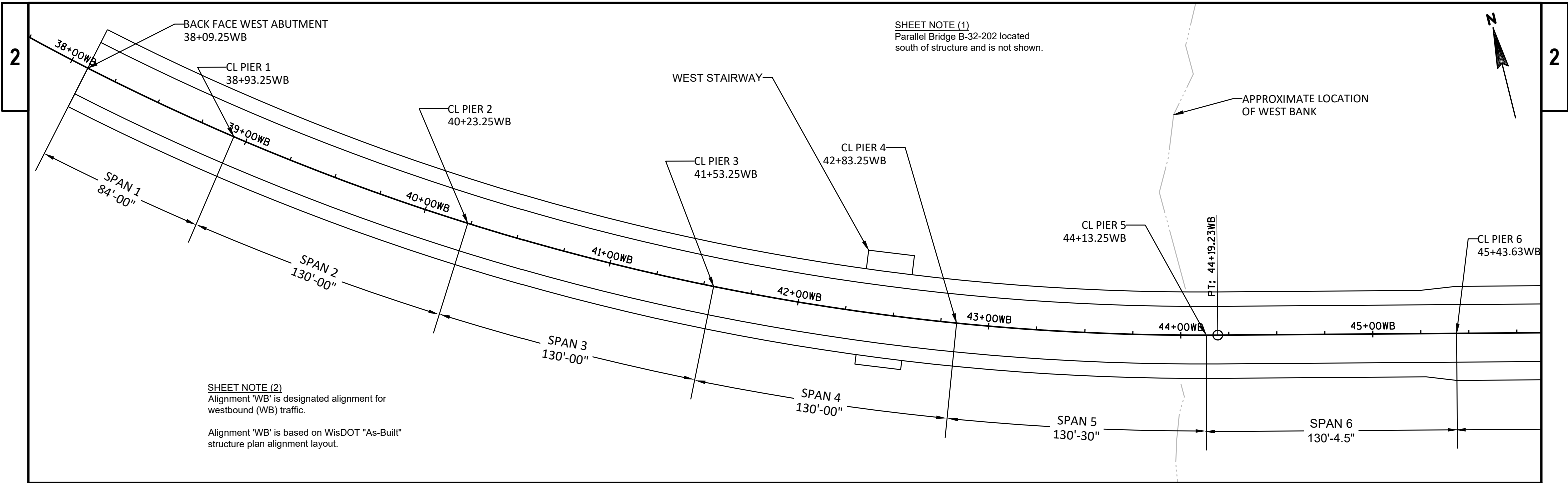
SHEET NOTE
Parallel Bridge B-32-300 located north
of structure and is not shown.

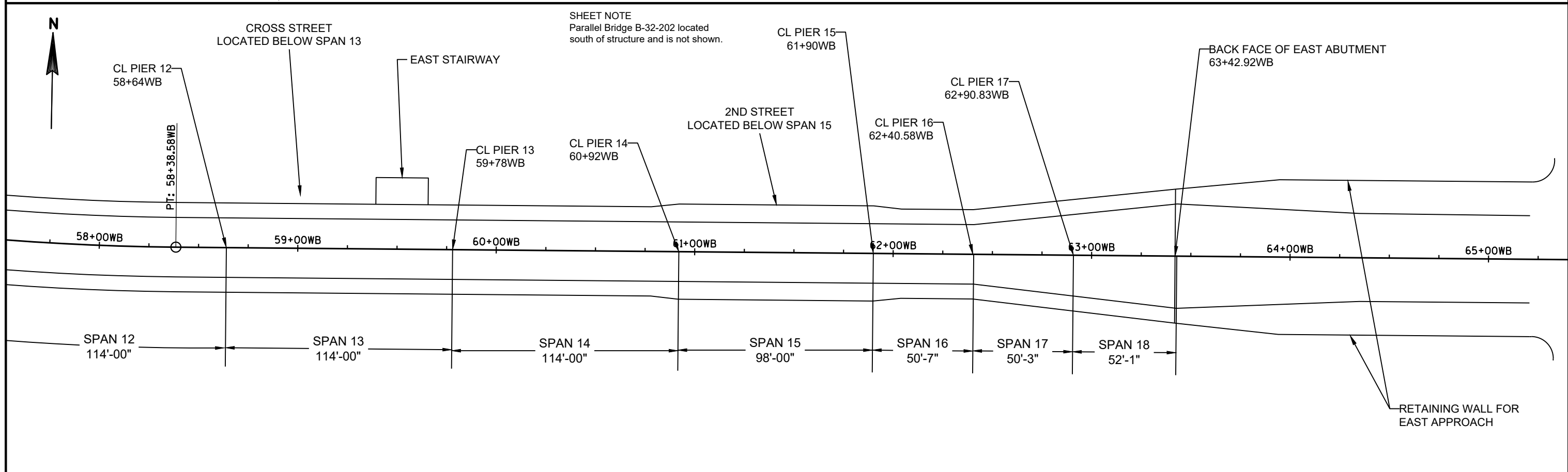
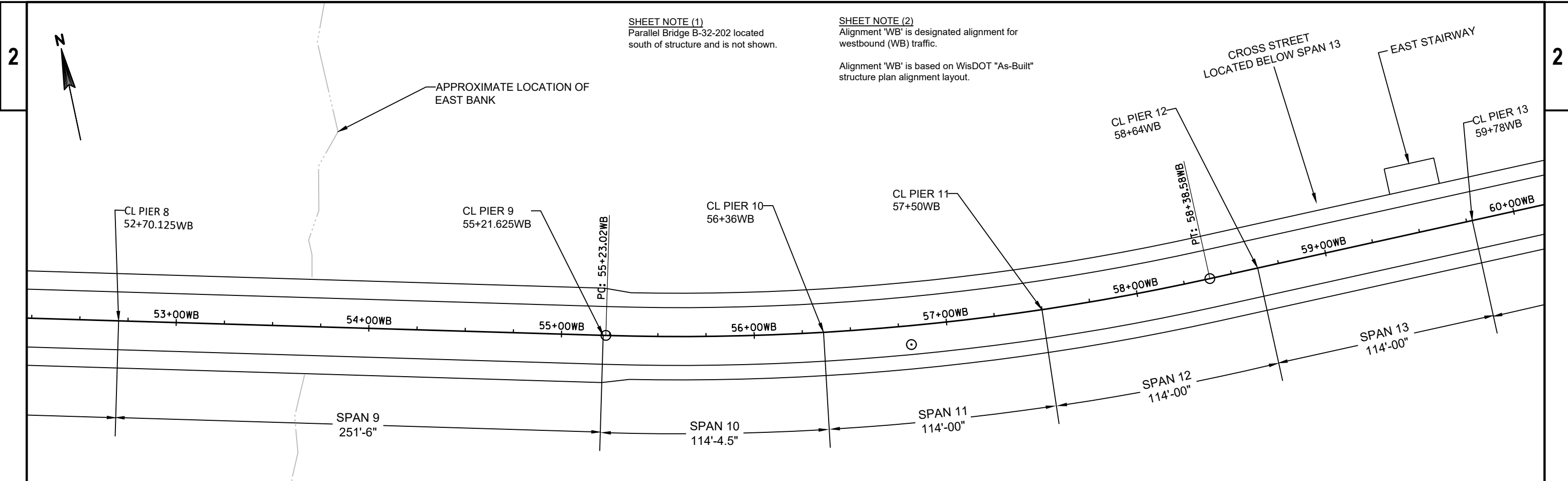


SHEET NOTE
Parallel Bridge B-32-300 located north
of structure and is not shown.

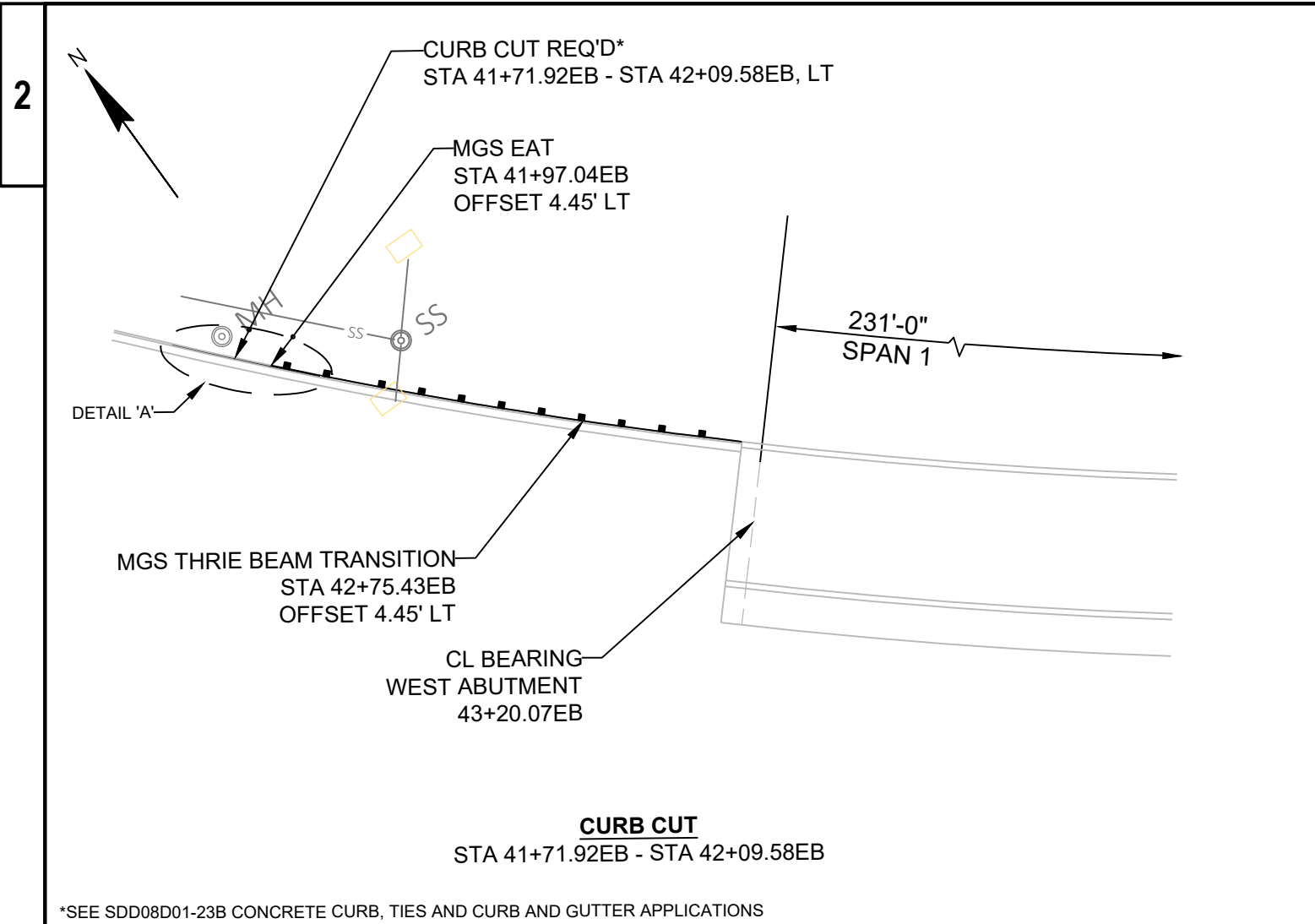


PROJECT NO: 5200-03-62	HWY: USH 14	COUNTY: LA CROSSE	B-32-202 LAYOUT	SHEET	E
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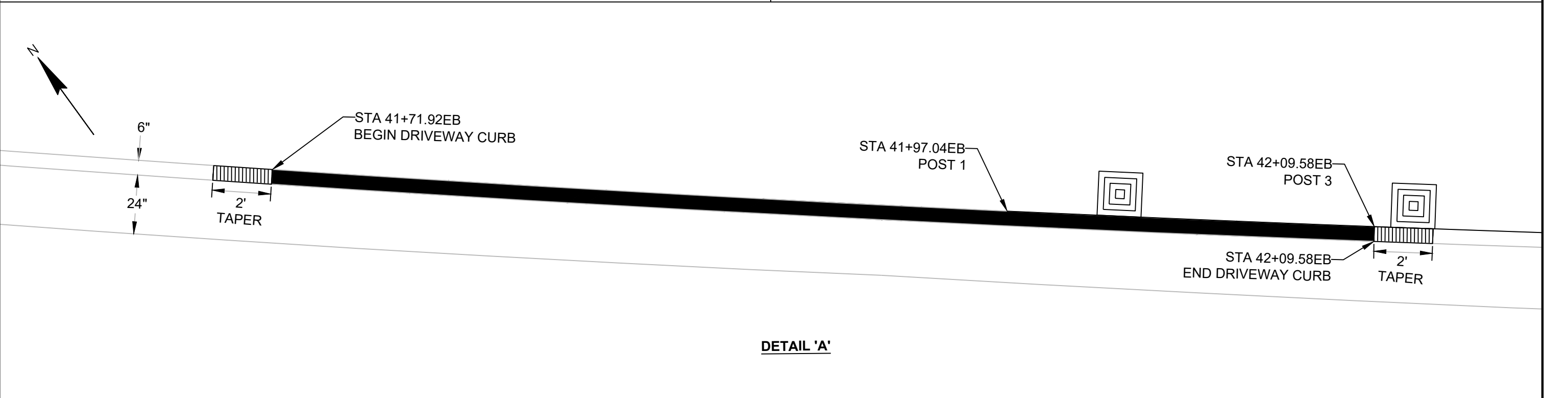




PROJECT NO: 5200-03-62	HWY: USH14	COUNTY: LA CROSSE	B-32-300 LAYOUT	SHEET	E
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*SEE SDD08D01-23B CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS



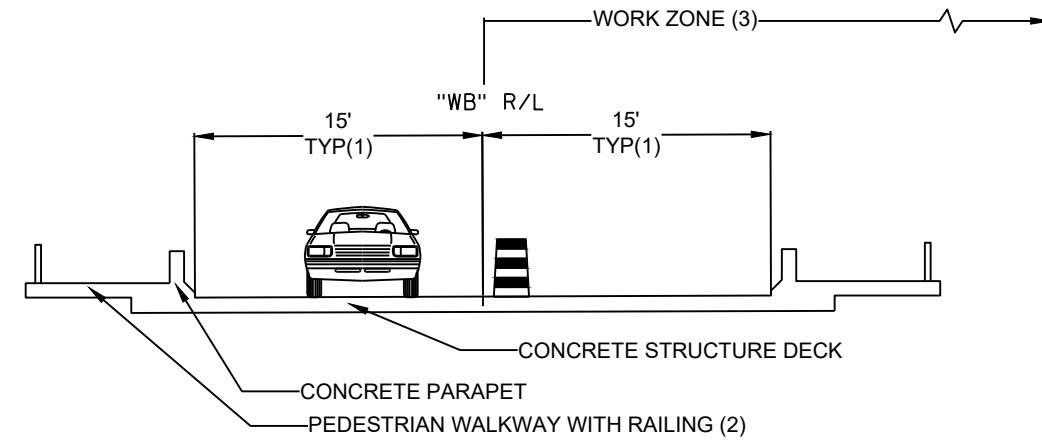
PROJECT NO: 5200-03-62	HWY: USH 14	COUNTY: LA CROSSE	CONSTRUCTION DETAILS	SHEET	E
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LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  SIGN ON PERMANENT SUPPORT
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  TRAFFIC CONTROL ARROW BOARD

TRAFFIC CONTROL NOTES FOR ALL TRAFFIC CONTROL SHEETS

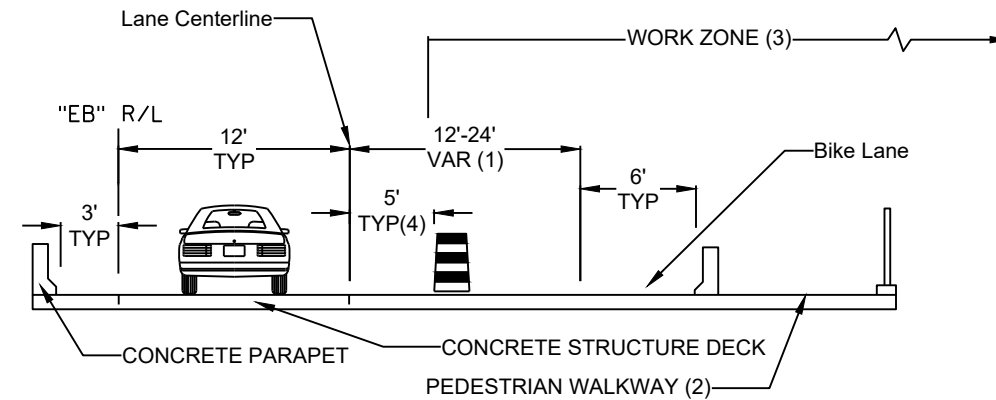
1. ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE SIGN BACKGROUND IS ORANGE.
3. ALL TRAFFIC CONTROL DEVICE LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. HOURS OF LANE CLOSURE RESTRICTIONS:
CAMERON (B-32-202), EASTBOUND (INBOUND) 6:00AM TO 9:00AM.
CASS (B-32-300), WESTBOUND (OUTBOUND) - 3:00PM TO 6:00PM.



B-32-300
WORK ZONE STRUCTURE ROADWAY AREA
38+09.3B TO 63+42.9B
(Looking East)

Notes:

- (1) Width increases to 26'-3" from 62+90.8B to 63+41.3B
- (2) Full bridge pedestrian cross access only on north side of structure
- (3) Left traffic lane closed as shown. Change lane closure signing according to work plan. Maintain one open lane for traffic during work operations.













B-32-202
WORK ZONE STRUCTURE ROADWAY AREA
43+15EB TO 68+97EB
(Looking East)

Notes:

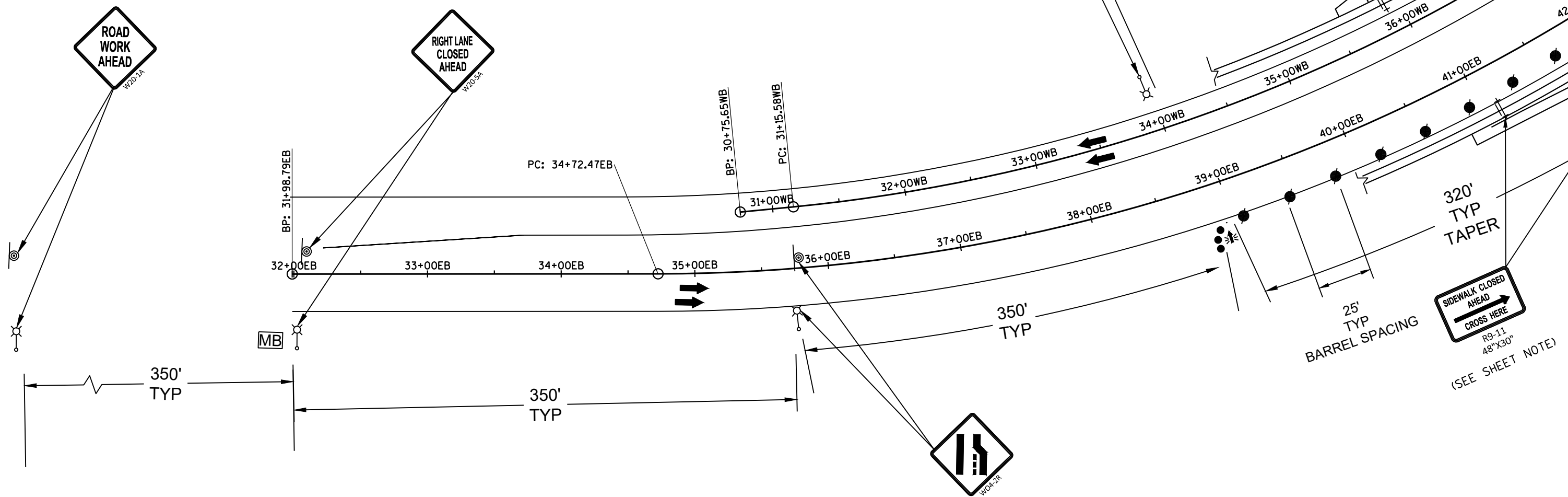
- (1) Variable width from 66+34EB to 67+74EB to accommodate right turn lane.
- (2) Full bridge pedestrian cross access only on south side of structure.
- (3) Right traffic lane closed as shown. Change lane closure signing according to work plan. Maintain one open lane for traffic during work operations.
- (4) Barrel shifted 5' right from lane line to accommodate bicycle traffic. For Left lane closure, barrel to be placed left of lane centerline and maintain bike lane.

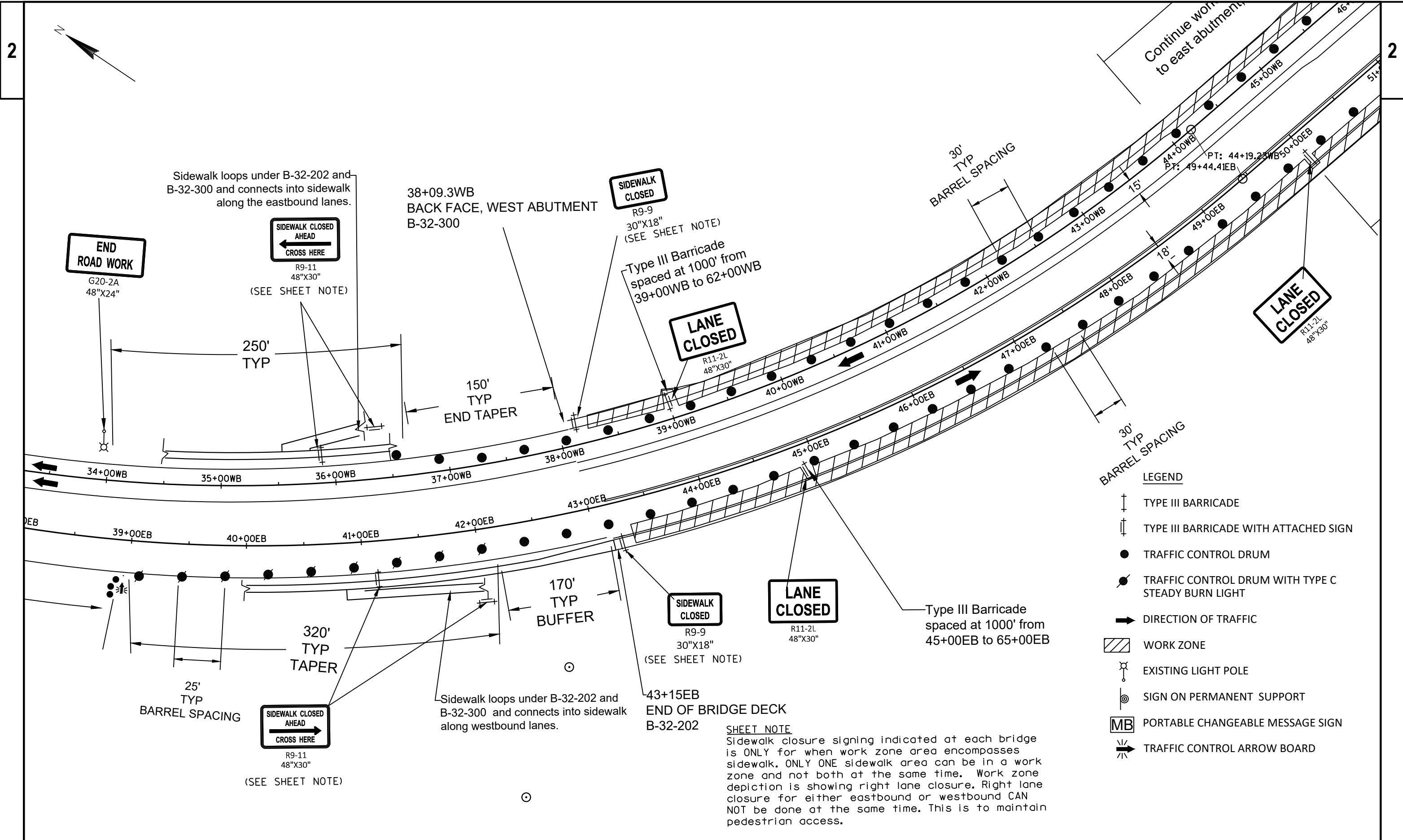
LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  SIGN ON PERMANENT SUPPORT
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  TRAFFIC CONTROL ARROW BOARD

SHEET NOTE

Sidewalk closure signing indicated at each bridge is ONLY for when work zone area encompasses sidewalk. ONLY ONE sidewalk area can be in a work zone and not both at the same time. Work zone depiction is showing right lane closure. Right lane closure for either eastbound or westbound CAN NOT be done at the same time. This is to maintain pedestrian access.















LEGEND

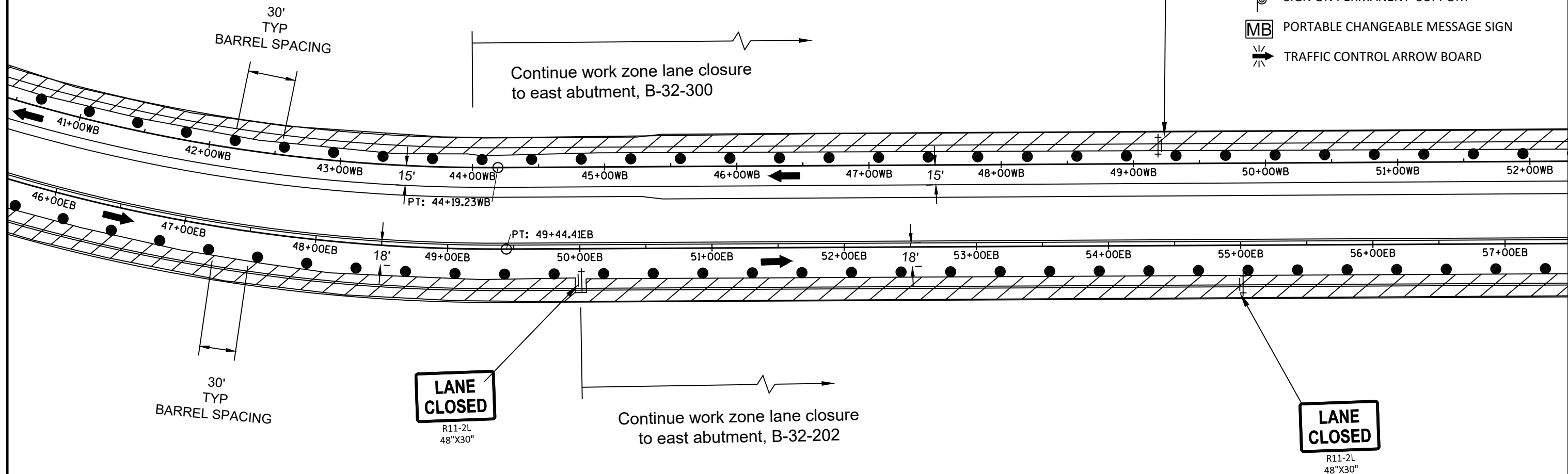
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ➔ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⊕ EXISTING LIGHT POLE
- ⊕ SIGN ON PERMANENT SUPPORT
- MB PORTABLE CHANGEABLE MESSAGE SIGN
- ➔ TRAFFIC CONTROL ARROW BOARD

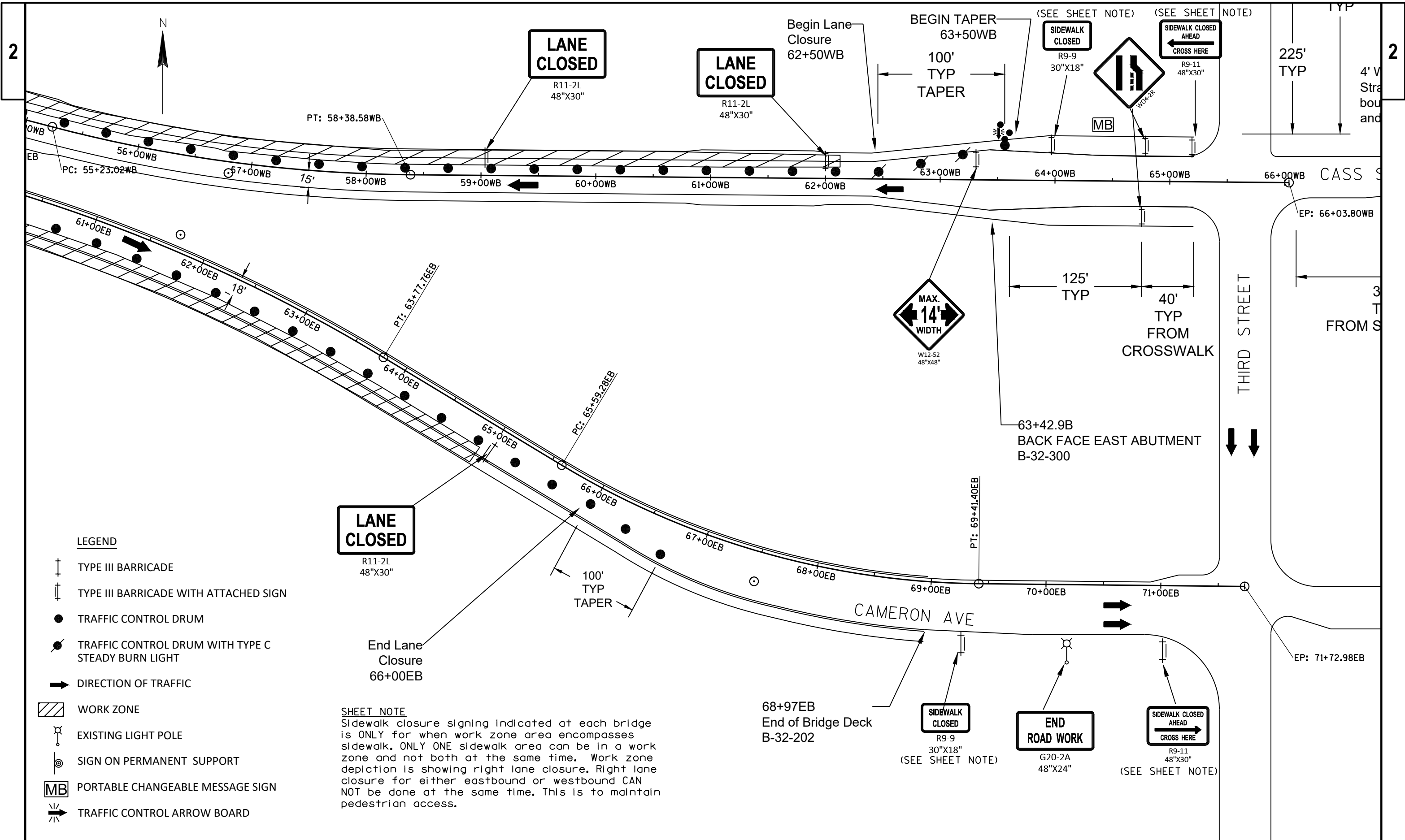
SHEET NOTE
 Sidewalk closure signing indicated at each bridge is ONLY for when work zone area encompasses sidewalk. ONLY ONE sidewalk area can be in a work zone and not both at the same time. Work zone depiction is showing right lane closure. Right lane closure for either eastbound or westbound CAN NOT be done at the same time. This is to maintain pedestrian access.



LEGEND

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-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  SIGN ON PERMANENT SUPPORT
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  TRAFFIC CONTROL ARROW BOARD



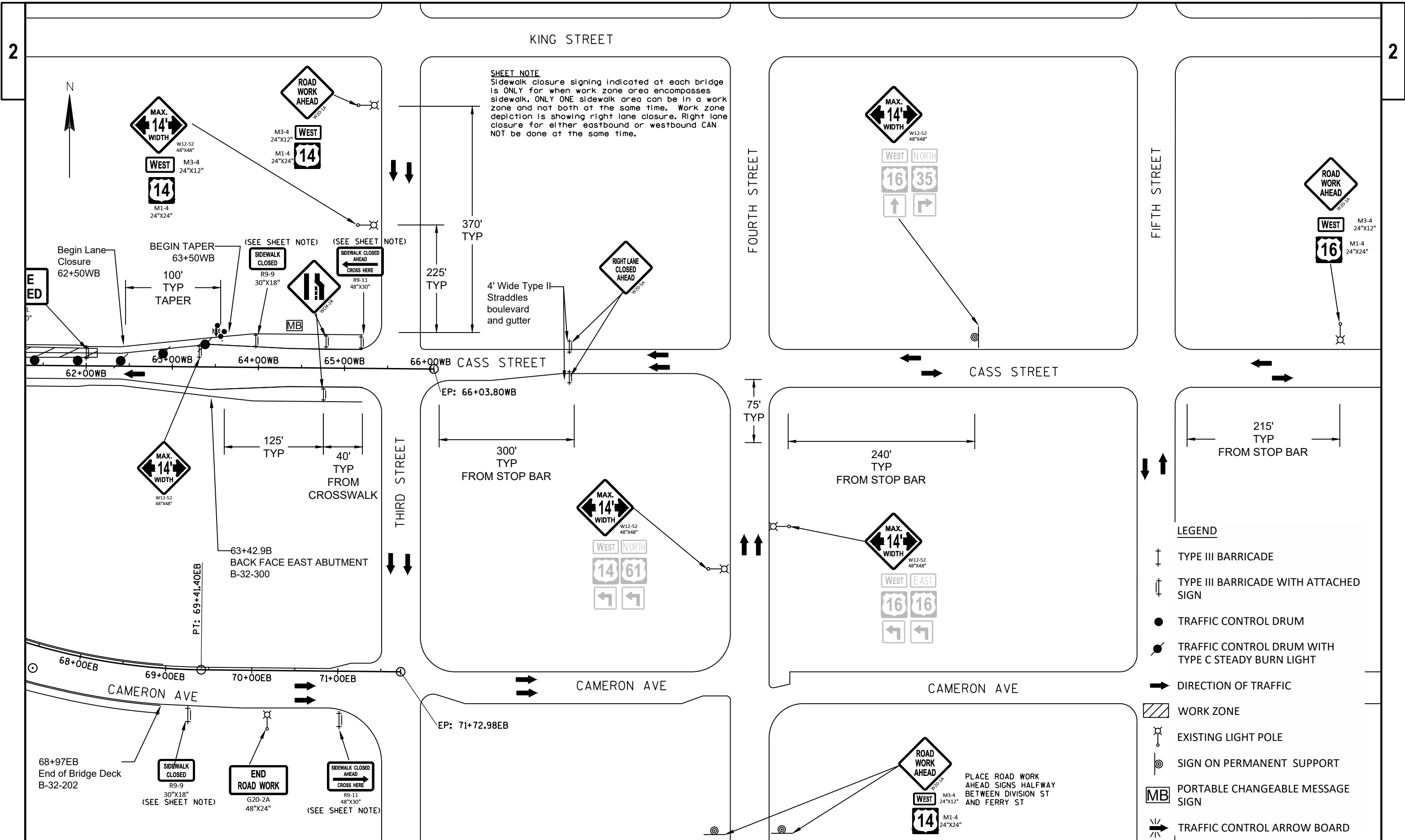


LEGEND

- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ➔ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⊕ EXISTING LIGHT POLE
- ⊙ SIGN ON PERMANENT SUPPORT
- MB PORTABLE CHANGEABLE MESSAGE SIGN
- ➔ TRAFFIC CONTROL ARROW BOARD

LANE CLOSED
R11-2L
48"X30"

SHEET NOTE
Sidewalk closure signing indicated at each bridge is ONLY for when work zone area encompasses sidewalk. ONLY ONE sidewalk area can be in a work zone and not both at the same time. Work zone depiction is showing right lane closure. Right lane closure for either eastbound or westbound CAN NOT be done at the same time. This is to maintain pedestrian access.



PROJECT NO: 5200-03-63

HWY: USH 14

COUNTY: LA CROSSE

TRAFFIC CONTROL

SHEET

E

LEGEND

➔ DIRECTION OF TRAFFIC

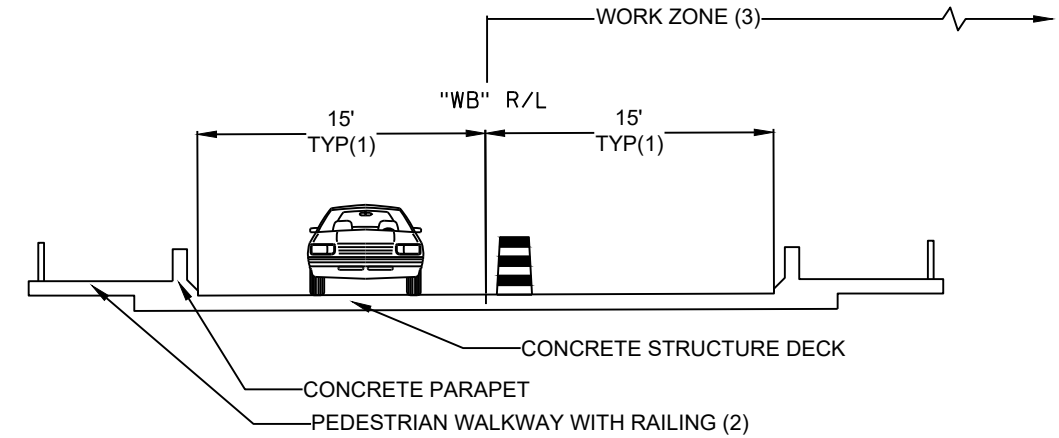
▨ WORK ZONE

⚡ EXISTING LIGHT POLE

🚶 BI DIRECTIONAL PEDESTRIAN TRAFFIC

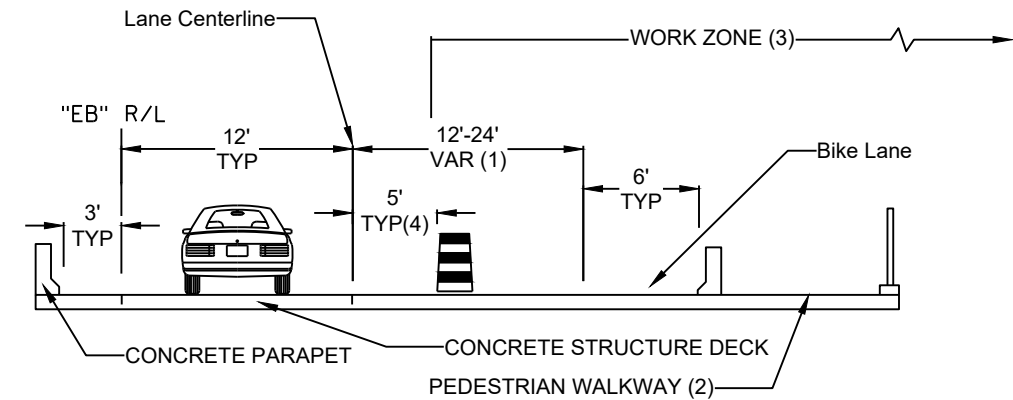
TRAFFIC CONTROL NOTES FOR PEDESTRIAN DETOUR SHEETS

1. WHILE THE WORK ZONE OCCUPIES THE RIGHT LANE OF B-32-300, PEDESTRIAN TRAFFIC IS TO BE MAINTAINED VIA THE EXISTING CASS ST. STREET CROSSING, THE EXISTING CAMERON AVE. STREET CROSSING, THE EXISTING SIDEWALK ON B-32-202, AND THE EXISTING PATH BENEATH B-32-202/300 NEAR THE BEGINNING OF PROJECT.
2. WHILE THE WORK ZONE OCCUPIES THE RIGHT LANE OF B-32-202, PEDESTRIAN TRAFFIC IS TO BE MAINTAINED VIA THE EXISTING CAMERON AVE. STREET CROSSING, THE EXISTING CASS ST. STREET CROSSING, THE EXISTING SIDEWALK ON B-32-300, AND THE EXISTING SIDEWALK BENEATH B-32-202/300 NEAR THE BEGINNING OF PROJECT. PEDESTRIAN TRAFFIC SHALL BE ABLE TO UTILIZE THE NORTH AND SOUTH SIDEWALKS OF B-32-300 WHILE THIS WORK IS PERFORMED.
3. WHILE THE WORK ZONE OCCUPIES THE LEFT LANE OF B-32-202/300, PEDESTRIAN TRAFFIC IS TO BE MAINTAINED VIA THE EXISTING CAMERON AVE. AND CASS ST. STREET CROSSINGS, THE EXISTING SIDEWALK ON THE NORTH SIDE OF B-32-300, AND THE EXISTING SIDEWALK ON THE SOUTH SIDE OF B-32-202.



B-32-300
 WORK ZONE STRUCTURE ROADWAY AREA
 38+09.3B TO 63+42.9B
 (Looking East)

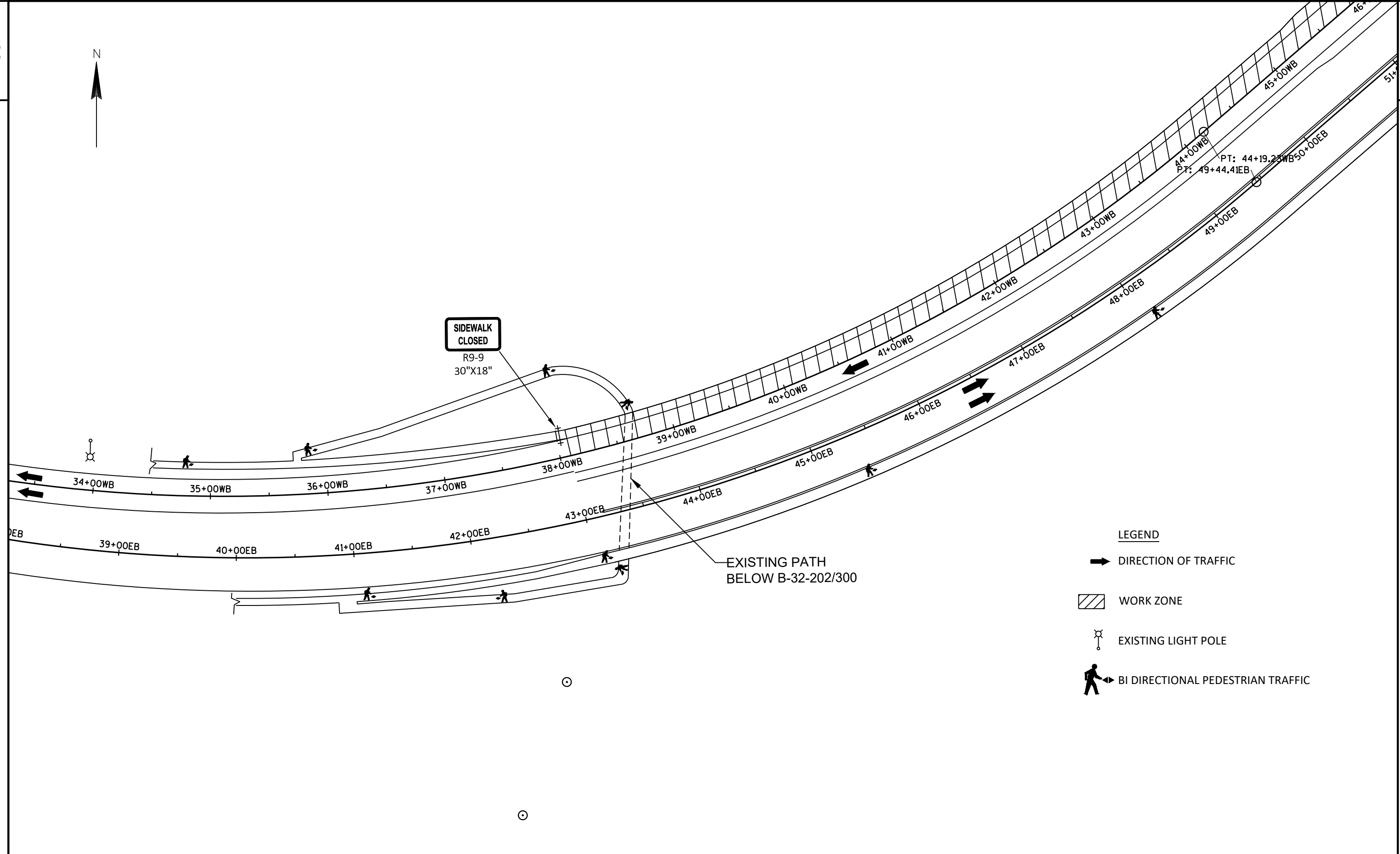
- Notes:
- (1) Width increases to 26'-3" from 62+90.8B to 63+41.3B
 - (2) Full bridge pedestrian cross access only on north side of structure
 - (3) Left traffic lane closed as shown. Change lane closure signing according to work plan. Maintain one open lane for traffic during work operations.



B-32-202
 WORK ZONE STRUCTURE ROADWAY AREA
 43+15EB TO 68+97EB
 (Looking East)

- Notes:
- (1) Variable width from 66+34EB to 67+74EB to accommodate right turn lane.
 - (2) Full bridge pedestrian cross access only on south side of structure.
 - (3) Right traffic lane closed as shown. Change lane closure signing according to work plan. Maintain one open lane for traffic during work operations.
 - (4) Barrel shifted 5' right from lane line to accommodate bicycle traffic. For Left lane closure, barrel to be placed left of lane centerline and maintain bike lane.

N







SIDEWALK
CLOSED

R9-9
30"X18"





EXISTING PATH
BELOW B-32-202/300

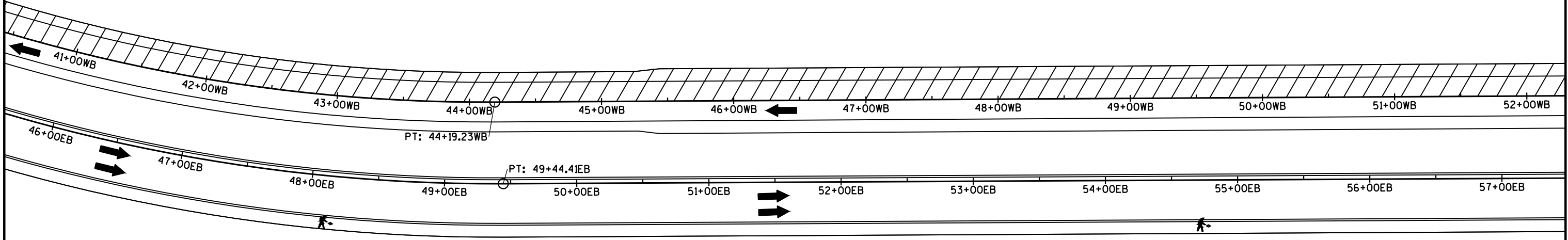
LEGEND

-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  BI DIRECTIONAL PEDESTRIAN TRAFFIC

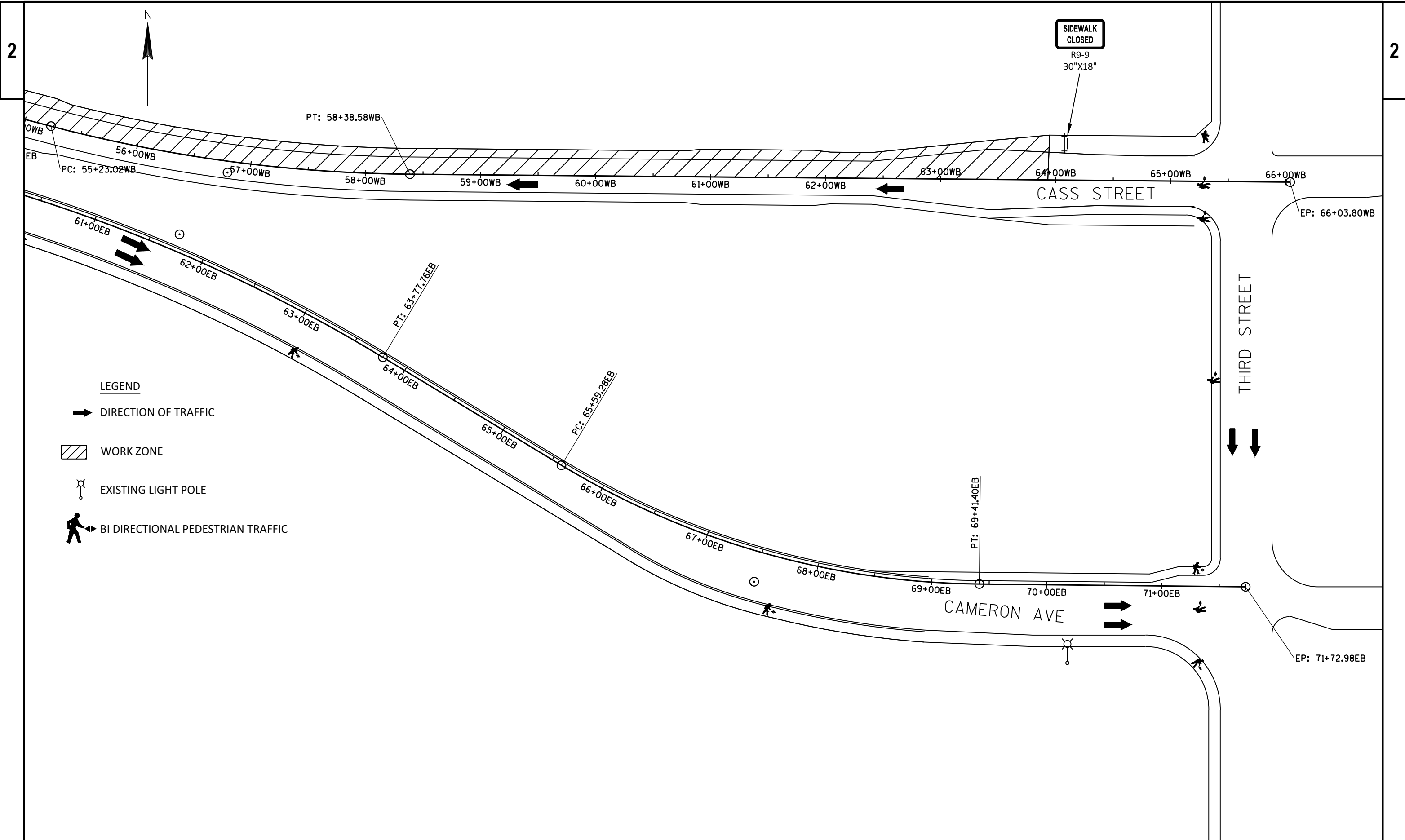


LEGEND

-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  BI DIRECTIONAL PEDESTRIAN TRAFFIC



PROJECT NO: 5200-03-63	HWY: USH 14	COUNTY: LA CROSSE	PEDESTRIAN DETOUR - B-32-300 RIGHT LANE	SHEET	E
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PROJECT NO: 5200-03-63

HWY: USH 14

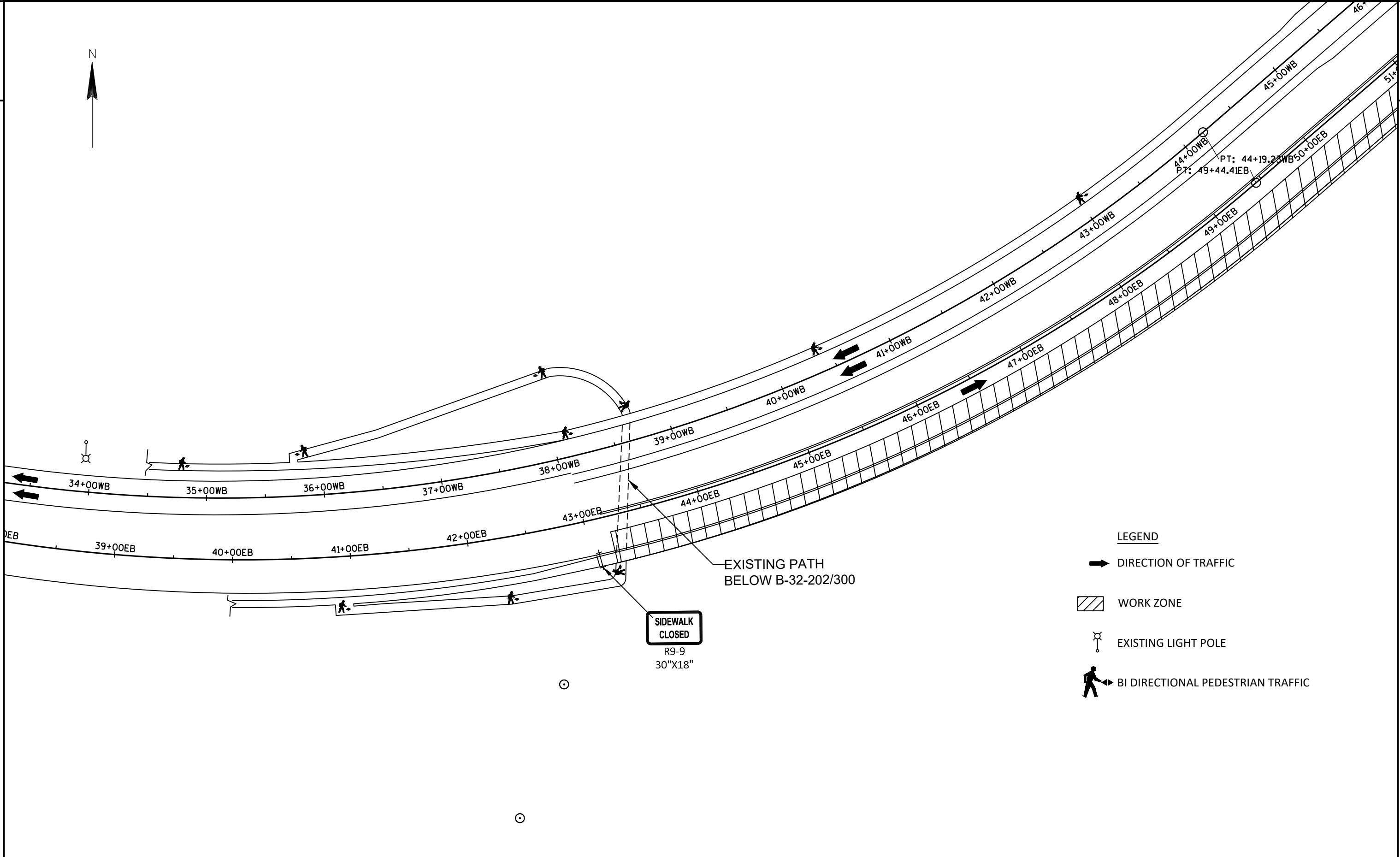
COUNTY: LA CROSSE

PEDESTRIAN DETOUR - B-32-300 RIGHT LANE





SHEET

E

N







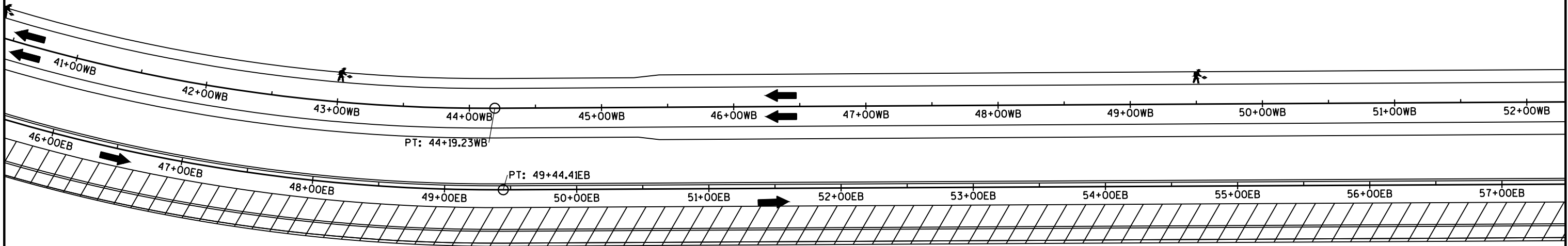
LEGEND

-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  BI DIRECTIONAL PEDESTRIAN TRAFFIC

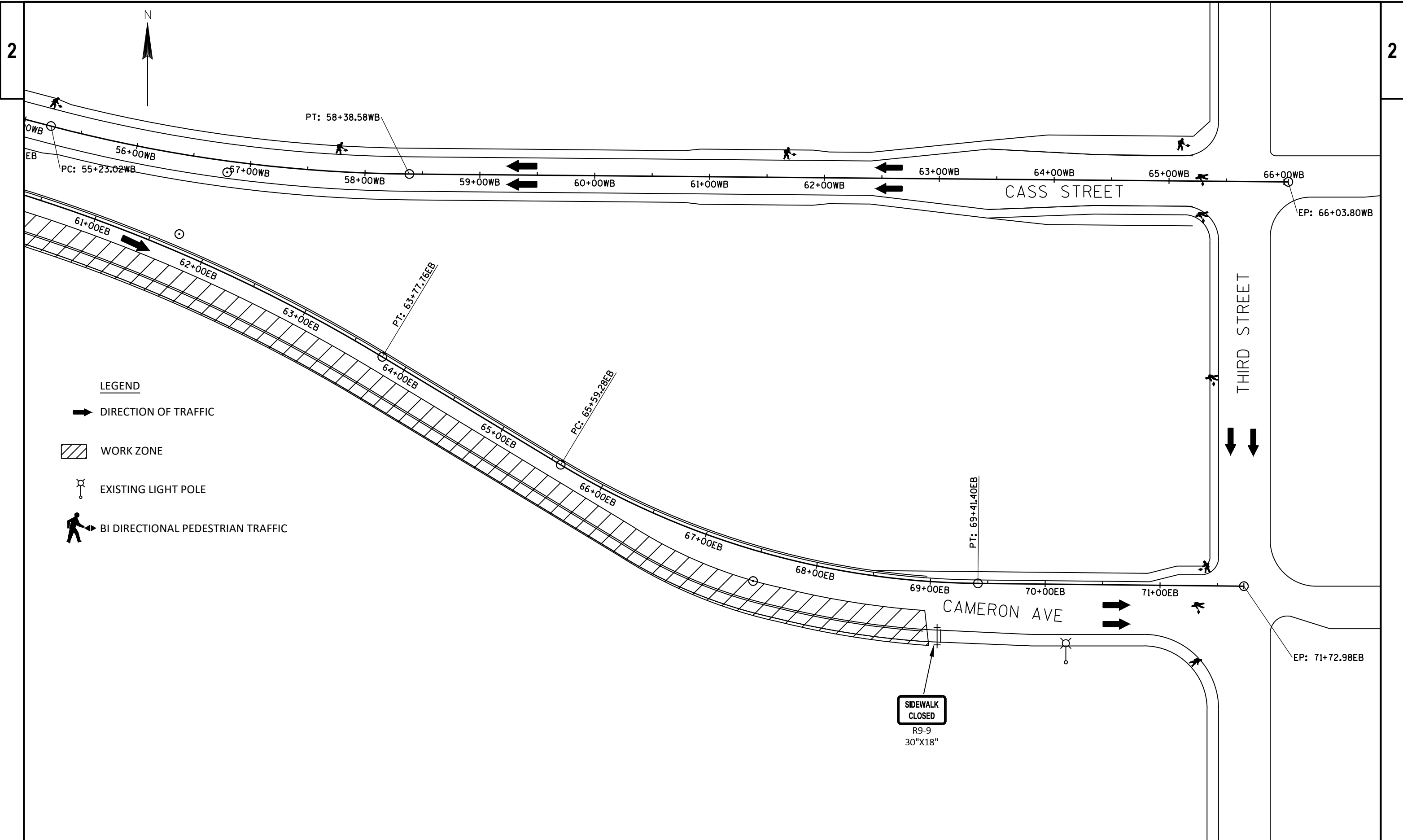


LEGEND





-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  BI DIRECTIONAL PEDESTRIAN TRAFFIC



PROJECT NO: 5200-03-63	HWY: USH 14	COUNTY: LA CROSSE	PEDESTRIAN DETOUR - B-32-202 RIGHT LANE	SHEET	E
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LEGEND

-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  BI DIRECTIONAL PEDESTRIAN TRAFFIC

PROJECT NO: 5200-03-63

HWY: USH 14

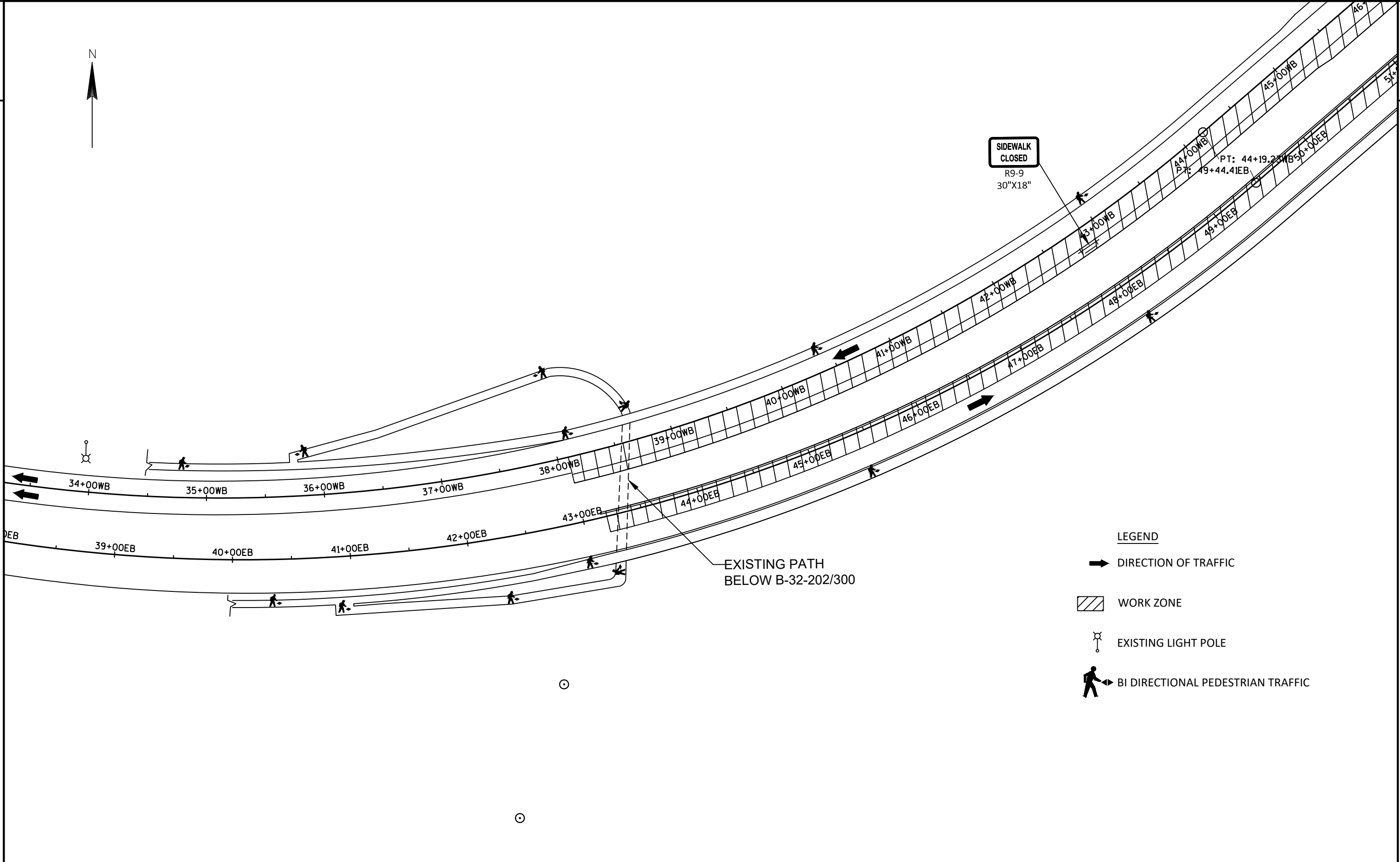
COUNTY: LA CROSSE

PEDESTRIAN DETOUR - B-32-202 RIGHT LANE

SHEET

E

N







**SIDEWALK
CLOSED**
R9-9
30"X18"

PT: 44+19.25WB
PT: 49+44.41EB





EXISTING PATH
BELOW B-32-202/300

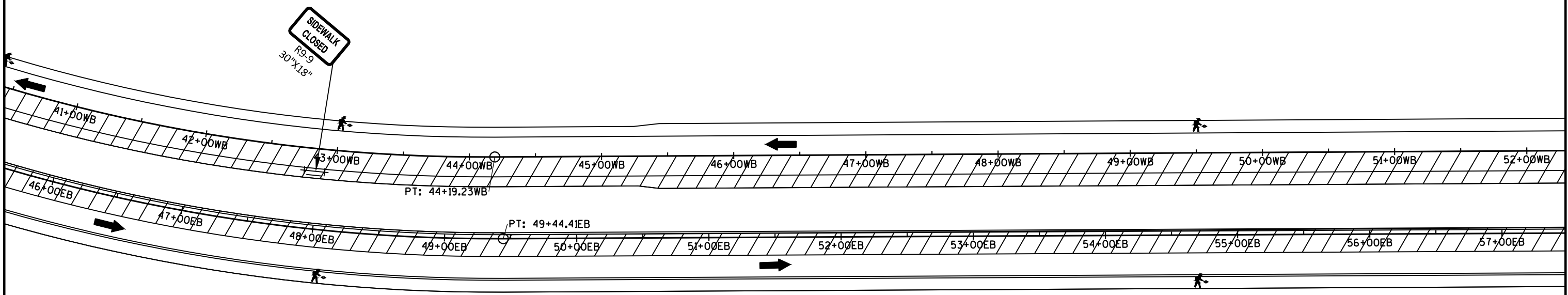
LEGEND

-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  BI DIRECTIONAL PEDESTRIAN TRAFFIC

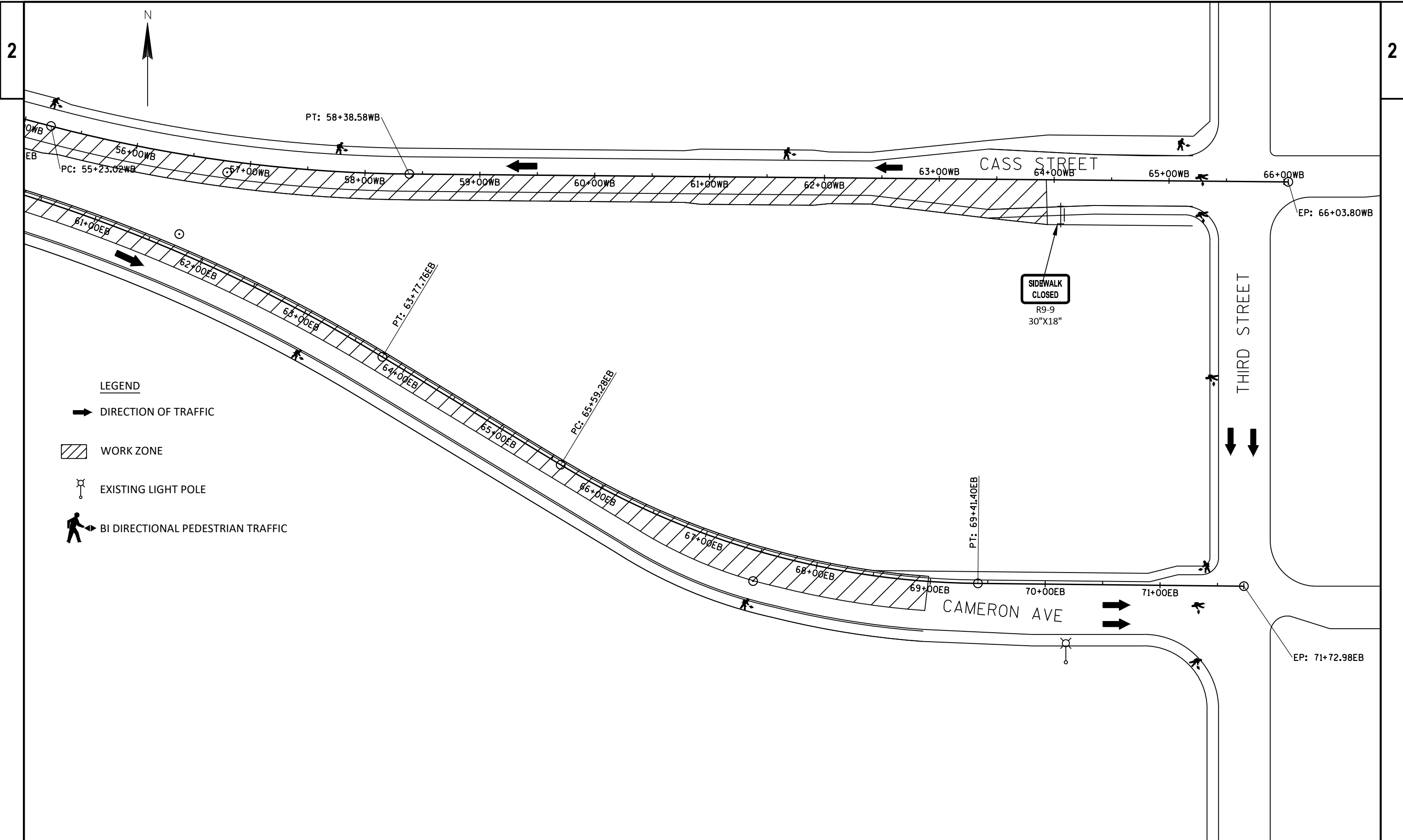


LEGEND

-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  EXISTING LIGHT POLE
-  BI DIRECTIONAL PEDESTRIAN TRAFFIC



PROJECT NO: 5200-03-63	HWY: USH 14	COUNTY: LA CROSSE	PEDESTRIAN DETOUR - B-32-202/300 LEFT LANE	SHEET	E
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LEGEND

- DIRECTION OF TRAFFIC
- WORK ZONE
- EXISTING LIGHT POLE
- BI DIRECTIONAL PEDESTRIAN TRAFFIC

Estimate Of Quantities

5200-03-63

Line	Item	Item Description	Unit	Total	Qty
0002	204.0165	Removing Guardrail	LF	88.000	88.000
0004	213.0100	Finishing Roadway (project) 01. 5200-03-63	EACH	1.000	1.000
0006	502.3210	Pigmented Surface Sealer	SY	18.000	18.000
0008	506.0105	Structural Steel Carbon	LB	158.000	158.000
0010	509.1500	Concrete Surface Repair	SF	262.000	262.000
0012	517.1010.S	Concrete Staining (structure) 01. B-32-300	SF	112.000	112.000
0014	614.0010	Barrier System Grading Shaping Finishing	EACH	1.000	1.000
0016	614.2300	MGS Guardrail 3	LF	25.000	25.000
0018	614.2500	MGS Thrie Beam Transition	LF	39.500	39.500
0020	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000
0022	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5200-03-63	EACH	1.000	1.000
0024	619.1000	Mobilization	EACH	1.000	1.000
0026	642.5001	Field Office Type B	EACH	1.000	1.000
0028	643.0300	Traffic Control Drums	DAY	11,990.000	11,990.000
0030	643.0410	Traffic Control Barricades Type II	DAY	80.000	80.000
0032	643.0420	Traffic Control Barricades Type III	DAY	915.000	915.000
0034	643.0705	Traffic Control Warning Lights Type A	DAY	1,080.000	1,080.000
0036	643.0715	Traffic Control Warning Lights Type C	DAY	375.000	375.000
0038	643.0800	Traffic Control Arrow Boards	DAY	795.000	795.000
0040	643.0900	Traffic Control Signs	DAY	2,000.000	2,000.000
0042	643.0920	Traffic Control Covering Signs Type II	EACH	40.000	40.000
0044	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0046	643.4100	Traffic Control Interim Lane Closure	EACH	81.000	81.000
0048	643.5000	Traffic Control	EACH	1.000	1.000
0050	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 56+06.57 'EB'	EACH	1.000	1.000
0052	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 02. 50+76.09 'WB'	EACH	1.000	1.000
0054	SPV.0060	Special 01. Removing Rivets	EACH	93.000	93.000
0056	SPV.0060	Special 02. Removing Corroded Shims	EACH	6.000	6.000
0058	SPV.0060	Special 03. Sidewalk Railing Post Replacement	EACH	1.000	1.000
0060	SPV.0060	Special 04. Staircase Picket Repair	EACH	50.000	50.000
0062	SPV.0060	Special 05. Staircase Bottom Rail Connection Repair	EACH	10.000	10.000
0064	SPV.0060	Special 06. Bridge Cleaning B-32-300	EACH	1.000	1.000
0066	SPV.0060	Special 07. Structure Spot Cleaning and Painting B-32-300	EACH	1.000	1.000
0068	SPV.0060	Special 08. Sidewalk Railing Post Repair	EACH	4.000	4.000
0070	SPV.0060	Special 09. Bridge Cleaning B-32-202	EACH	1.000	1.000
0072	SPV.0060	Special 10. Bridge Cleaning Inside Tub Girders B-32-202	EACH	1.000	1.000
0074	SPV.0060	Special 11. Structure Spot Cleaning and Painting B-32-202	EACH	1.000	1.000
0076	SPV.0060	Special 12. Staircase Platform Railing Replacement	EACH	1.000	1.000
0078	SPV.0090	Special 01. Sidewalk Railing Bottom Rail Replacement	LF	386.000	386.000
0080	SPV.0090	Special 02. Strip Seal Gland Replacement	LF	96.000	96.000
0082	SPV.0090	Special 03. Curb Cut	LF	38.000	38.000

GUARDRAIL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	204.0165	614.2300	614.2500	614.2610	REMARKS
					REMOVING GUARDRAIL	MGS GUARDRAIL 3	MGS THRIE BEAM TRANSITION	MGS GUARDRAIL TERMINAL EAT	
					LF	LF	LF	EACH	
0010	41+97.04EB	-	43+15.07EB	LT	88	25	39.5	1	
TOTAL 0010					88	25	39.5	1	

BARRIER SYSTEM GRADING, SHAPING, AND FINISHING

CATEGORY	STATION	TO	STATION	LOCATION	614.0010	FOR INFORMATIONAL PURPOSES ONLY					
					BARRIER SYSTEM GRADING SHAPING FINISHING	TOPSOIL	EROSIN MAT CLASS I TYPE B	FERTILIZER	SEEDING MIXTURE NO. 20	SEEDING TEMPORARY	SEED WATER
					EACH	SF	SY	CWT	LB	LB	MGAL
0010	41+97.04 EB	-	43+15.07 EB	LT	1	190	21	0.1	0.5	0.5	2
TOTAL 0010					1						

CURB CUT

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0090.03	REMARKS
					SPECIAL (03. CURB CUT)	
					LF	
0010	41+71.92 EB	-	42+09.58 EB	LT	38	
TOTAL 0010					38	

BIRD DETERRENT SUMMARY

CATEGORY	LOCATION	999.2000.S.01	999.2000.S.02	REMARKS
		INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. 56+06.57 'EB')	INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (STATION) (02. 50+76.09 'WB')	
		EACH	EACH	
0010	Project 5200-03-63	1	1	
TOTAL 0010		1	1	

3

3

TRAFFIC CONTROL

CATEGORY	LOCATION	SIGN CODE	MESSAGE	SERVICE PERIOD DAYS	643.0300		643.0410		643.0420		643.0705		643.0715		643.0800		643.0900		REMARKS			
					TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE II		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL ARROW BOARDS		TRAFFIC CONTROL SIGNS					
					NO	DAY	NO	DAY	NO	DAY	NO	DAY	NO	DAY	NO	DAY	NO	DAY				
0010	WEST OF WORK ZONE	G20-2A	END ROAD WORK	40	0	0	0	0	0	0	0	0	0	0	1	40	1	40	WESTBOUND LANE CLOSURE			
0010	WEST OF WORK ZONE	R9-11	SW CLOSED AHEAD W/ ARROW	40	0	0	0	0	2	80	0	0	0	0	1	40	2	80	WESTBOUND LANE CLOSURE			
0010	WEST OF WORK ZONE	R9-9	SIDEWALK CLOSED	40	0	0	0	0	1	40	0	0	0	0	1	40	1	40	WESTBOUND LANE CLOSURE			
0010	39+00WB - 62+00WB	R11-2L	LANE CLOSED	40	158	6320	0	0	5	200	10	400	5	200	1	40	5	200	WESTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	W12-52	MAX 14' WIDTH	40	0	0	0	0	1	40	2	80	0	0	1	40	5	200	WESTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	R9-9	SIDEWALK CLOSED	40	0	0	0	0	1	40	0	0	0	0	1	40	1	40	WESTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	W04-2R	WORK ZONE LANE ENDS	40	0	0	0	0	2	80	4	160	0	0	1	40	2	80	WESTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	R9-11	SW CLOSED AHEAD W/ ARROW	40	0	0	0	0	1	40	0	0	0	0	1	40	1	40	WESTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	W20-5A	RT/LT LANE CLOSED AHEAD	40	0	0	0	0	0	0	0	0	0	0	1	40	2	80	WESTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	M3-4	WEST	40	0	0	0	0	0	0	0	0	0	0	1	40	5	200	WESTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	M1-4	USH 14 OR 16	40	0	0	0	0	0	0	0	0	0	0	1	40	5	200	WESTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	W20-1A	ROAD WORK AHEAD	40	0	0	0	0	0	0	0	0	0	0	1	40	4	160	WESTBOUND LANE CLOSURE			
0010	WEST OF WORK ZONE	W20-1A	RAOD WORK AHEAD	35	0	0	0	0	0	0	0	0	0	0	1	35	2	70	EASTBOUND LANE CLOSURE			
0010	WEST OF WORK ZONE	W20-1A	RT/LT LANE CLOSED AHEAD	35	162	5670	0	0	0	0	0	0	5	175	1	35	2	70	EASTBOUND LANE CLOSURE			
0010	WEST OF WORK ZONE	W04-2R	WORK ZONE LANE ENDS	35	0	0	0	0	0	0	0	0	0	0	1	35	2	70	EASTBOUND LANE CLOSURE			
0010	WEST OF WORK ZONE	R9-11	SW CLOSED AHEAD W/ ARROW	35	0	0	0	0	2	70	0	0	0	0	1	35	2	70	EASTBOUND LANE CLOSURE			
0010	WEST OF WORK ZONE	R9-9	SIDEWALK CLOSED	35	0	0	0	0	1	35	0	0	0	0	1	35	1	35	EASTBOUND LANE CLOSURE			
0010	45+00EB - 65+00EB	R11-2L	LANE CLOSED	35	0	0	0	0	4	140	8	280	0	0	1	35	4	140	EASTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	R9-9	SIDEWALK CLOSED	35	0	0	0	0	1	35	0	0	0	0	1	35	1	35	EASTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	G20-2A	END ROAD WORK	35	0	0	0	0	0	0	0	0	0	0	1	35	1	35	EASTBOUND LANE CLOSURE			
0010	EAST OF WORK ZONE	R9-11	SW CLOSED AHEAD W/ ARROW	35	0	0	0	0	1	35	0	0	0	0	1	35	1	35	EASTBOUND LANE CLOSURE			
0010	BELOW STRUCTURE	W20-1A	ROAD WORK AHEAD	40	0	0	0	0	2	80	4	160	0	0	0	0	2	80	2ND STREET			
0010	EAST OF WORK ZONE	W20-5A	RT/LT LANE CLOSED AHEAD	40	0	0	2	80	0	0	0	0	0	0	0	0	0	0				
TOTAL 0010										11,990		80		915		1,080		375		795		2,000

INTERIM LANE CLOSURE

PCMS SIGNS

CATEGORY	STATION	LOCATION	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY
0010	32+00EB	RT	7
0010	64+00EB	LT	7
TOTAL 0010			14

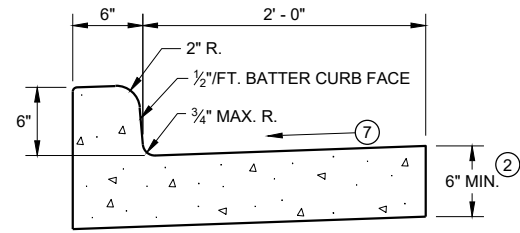
COVERING SIGNS TYPE II

CATEGORY	SIGN CODE	MESSAGE	# OF CYCLES	# OF SIGNS	643.0920 EACH
0010	W12-52	MAX 14' WIDTH	5	4	20
0010	W04-2R	WORK ZONE LANE ENDS	5	2	10
0010	W20-5A	RT/LT LANE CLOSED AHEAD	5	2	10
TOTAL 0010					40

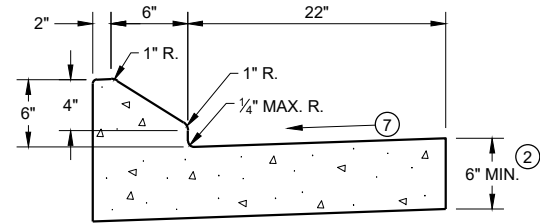
CATEGORY	STATION	TO	STATION	643.4100 TRAFFIC CONTROL INTERIM LANE CLOSURE EACH	REMARKS
0010	38+09.25WB	-	63+42.92WB	39	DAILY SETUP/TEARDOWN - EASTBOUND
0010	41+71.92EB	-	68+93.07EB	42	DAILY SETUP/TEARDOWN - WESTBOUND
TOTAL 0010				81	

Standard Detail Drawing List

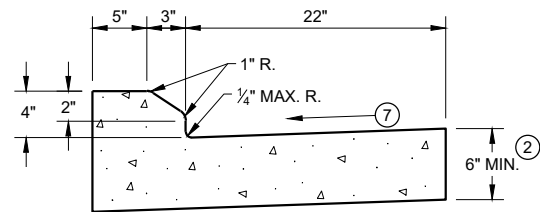
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY



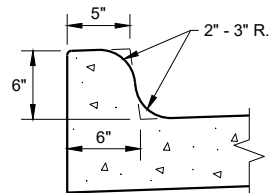
TYPES A¹ & D



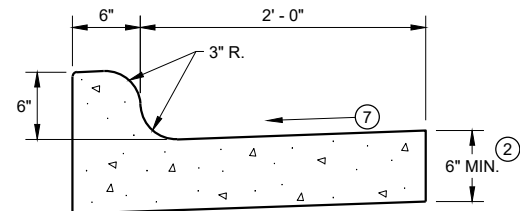
6" SLOPED CURB TYPES G¹ & J



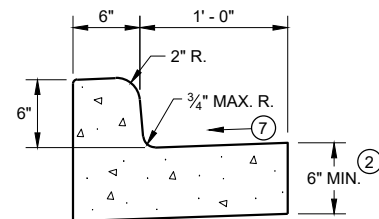
4" SLOPED CURB TYPES G¹ & J



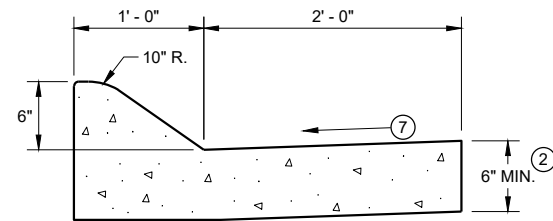
TYPES K¹ & L
(OPTIONAL CURB SHAPE)



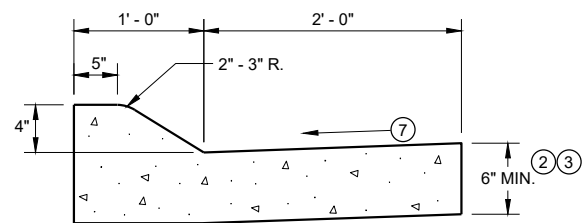
TYPES K¹ & L
CONCRETE CURB AND GUTTER 30"



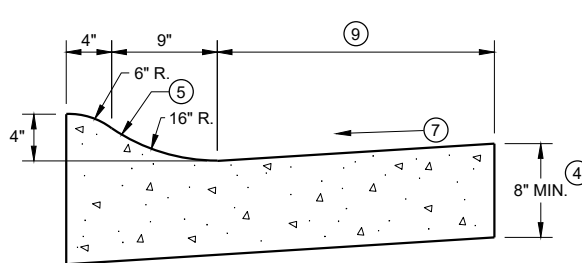
TYPES A¹ & D
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A¹ & D

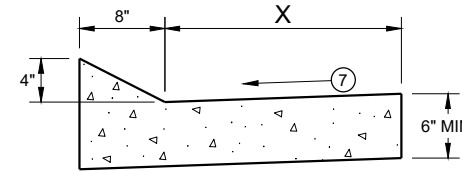


4" SLOPED CURB TYPES A¹ & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R¹ & T

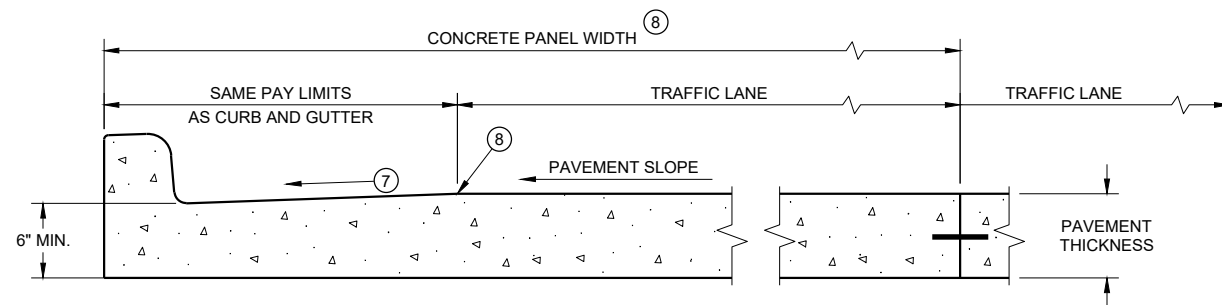
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT¹
CONCRETE CURB AND GUTTER

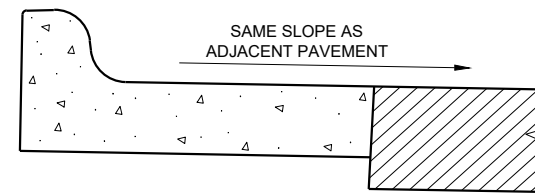
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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 GUTTER⁶
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

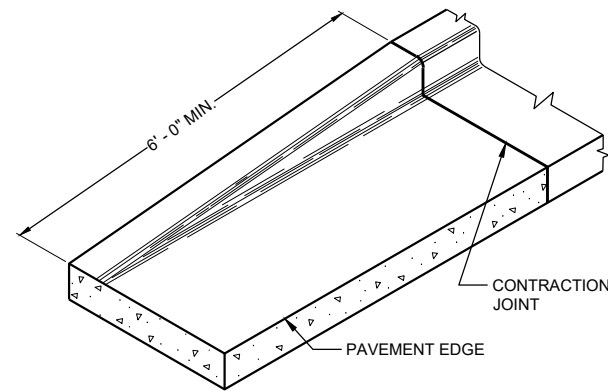
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

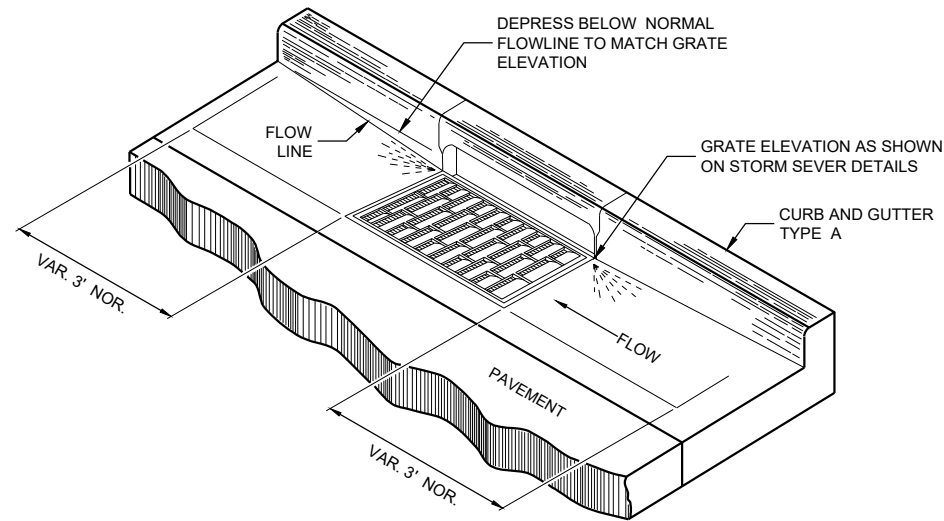
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

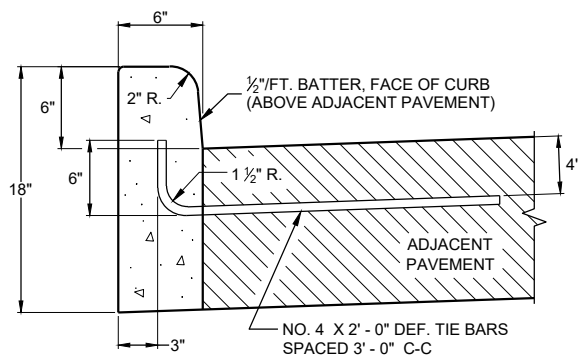
GENERAL NOTES

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

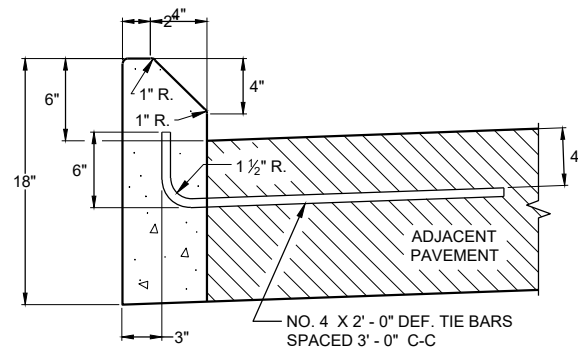
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

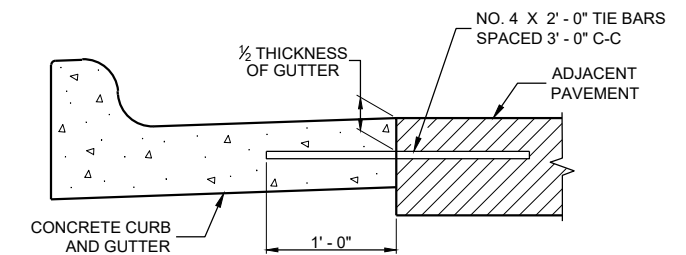
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



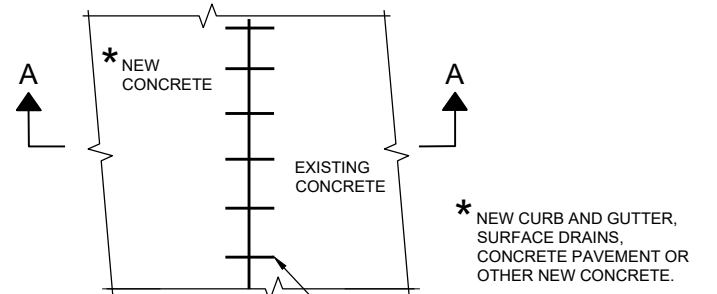
TYPES A^① & D



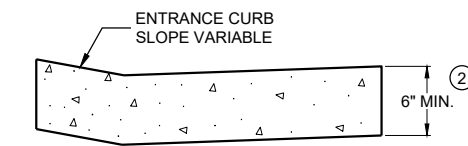
**TYPES G^① & J
CONCRETE CURB**



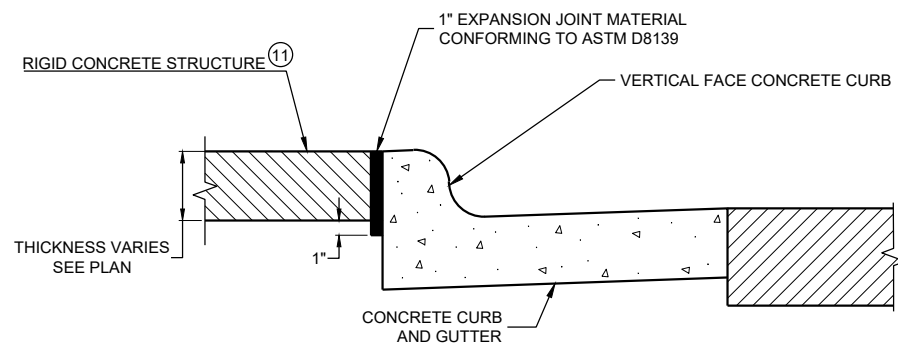
TYPICAL TIE BAR LOCATION^①



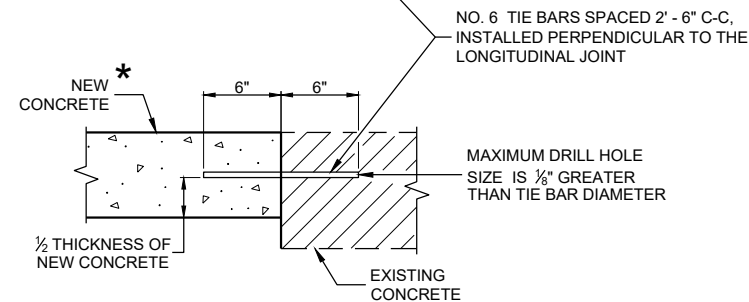
PLAN VIEW



**DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)**



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



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

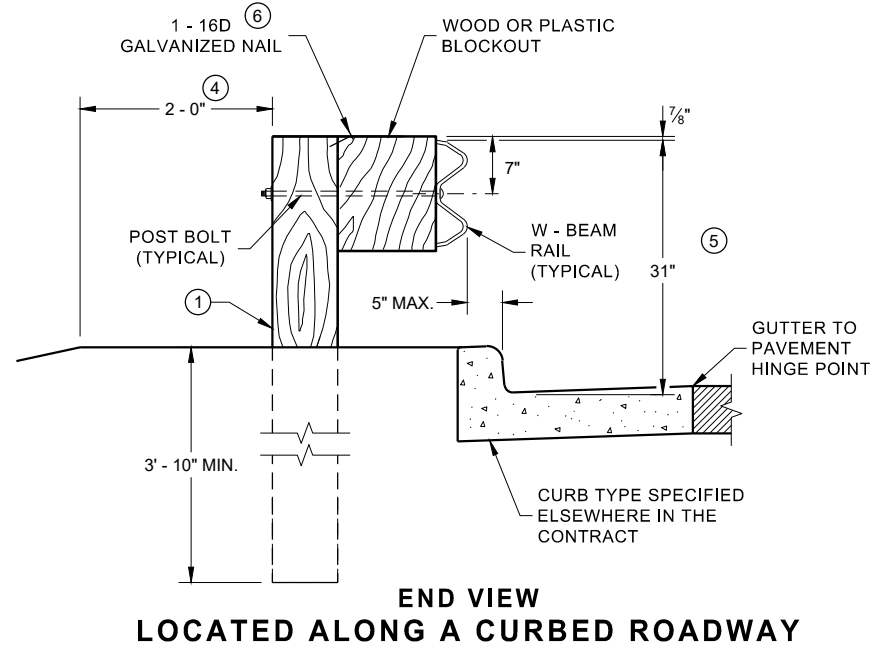
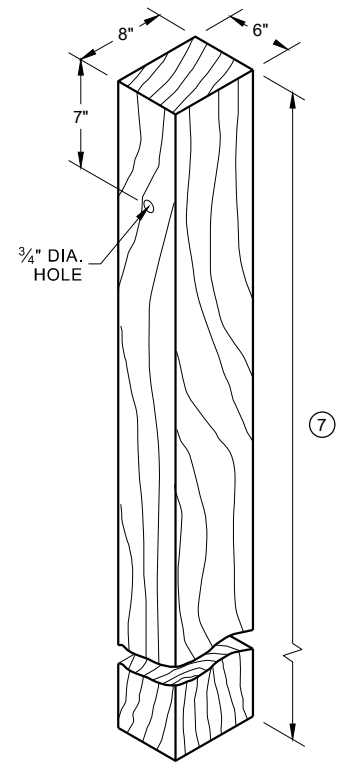
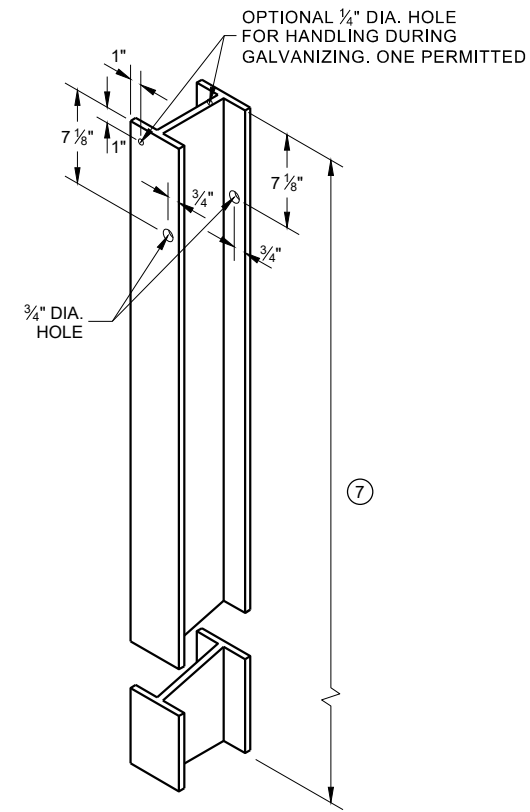
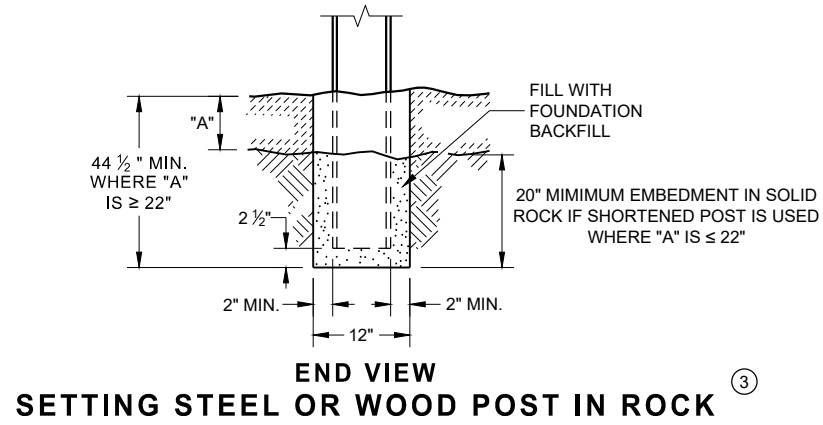
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

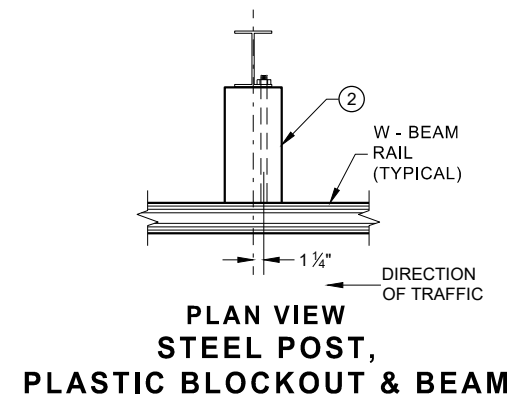
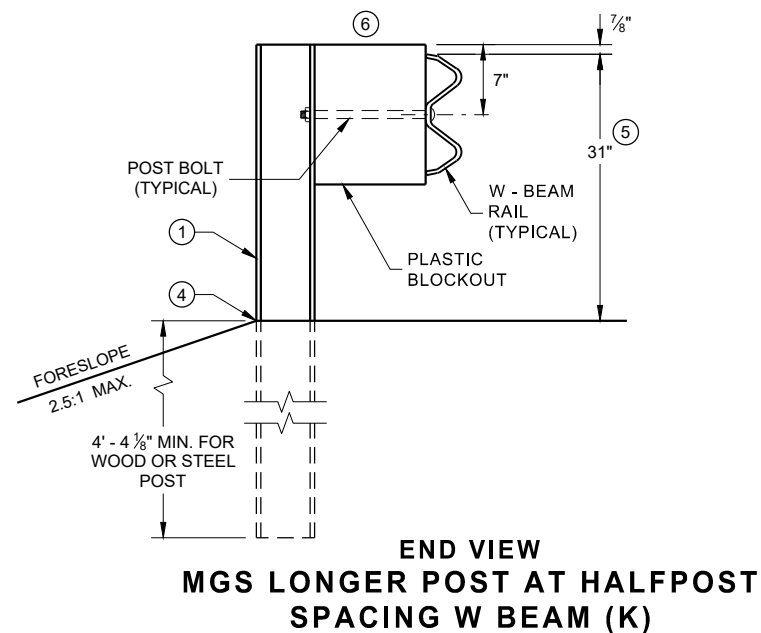
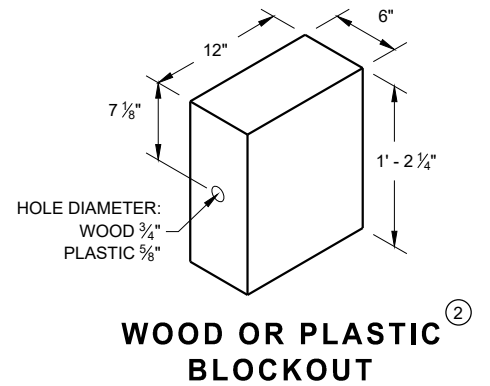
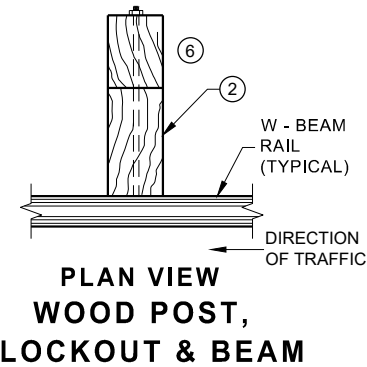
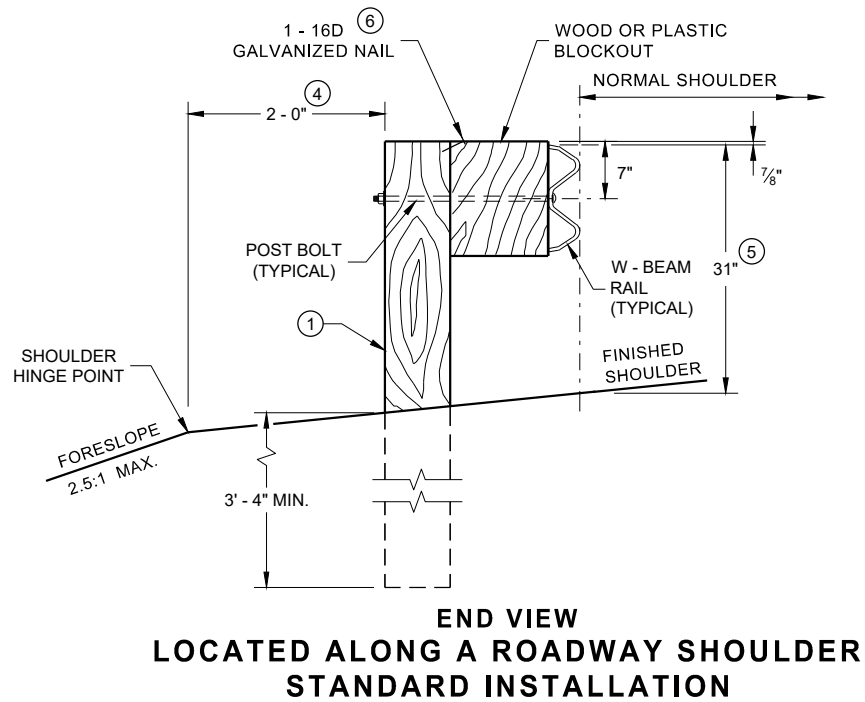
FHWA

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0". TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



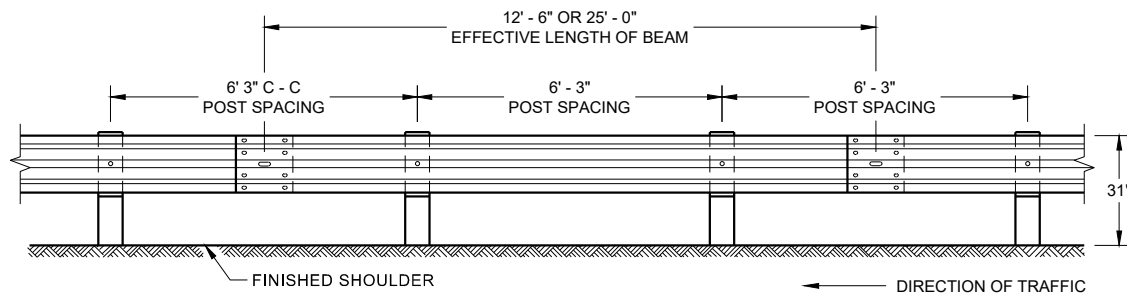
**STEEL POST & HOLE PUNCHING DETAIL
(W 6 X 9)** ①

**WOOD POST
(6" X 8") NOMINAL** ①

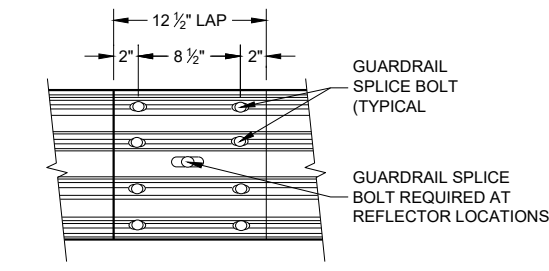


**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



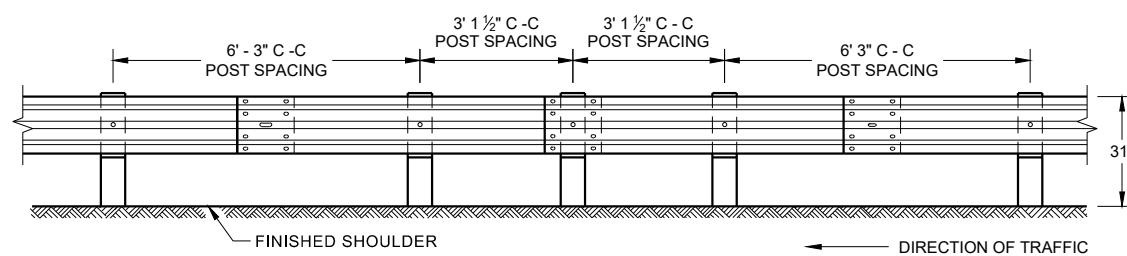
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



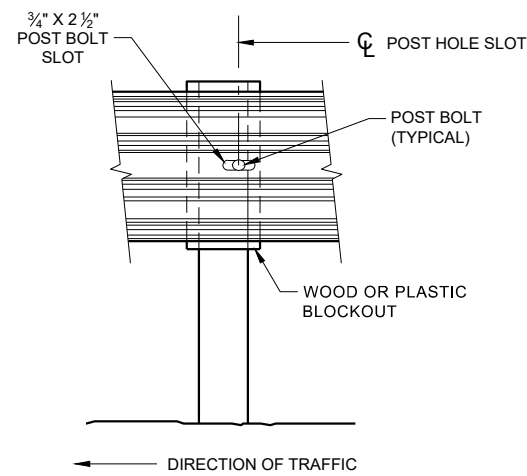
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

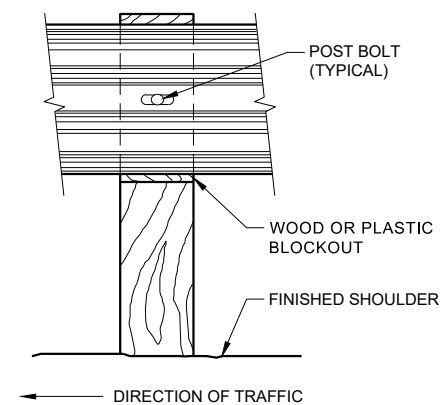
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



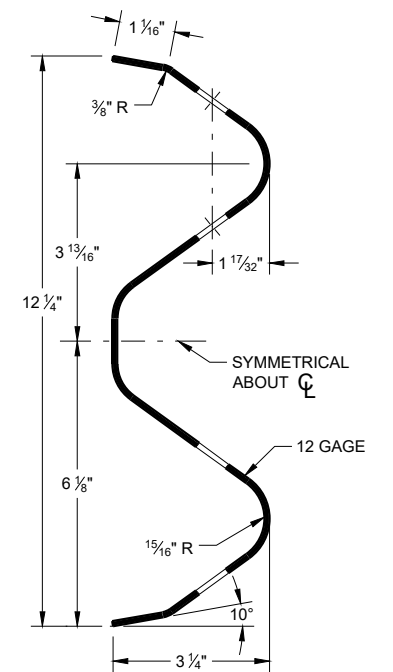
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



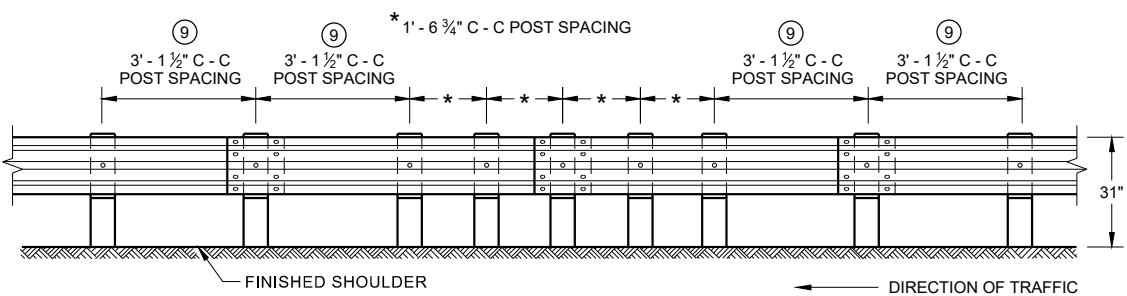
FRONT VIEW AT STEEL POST



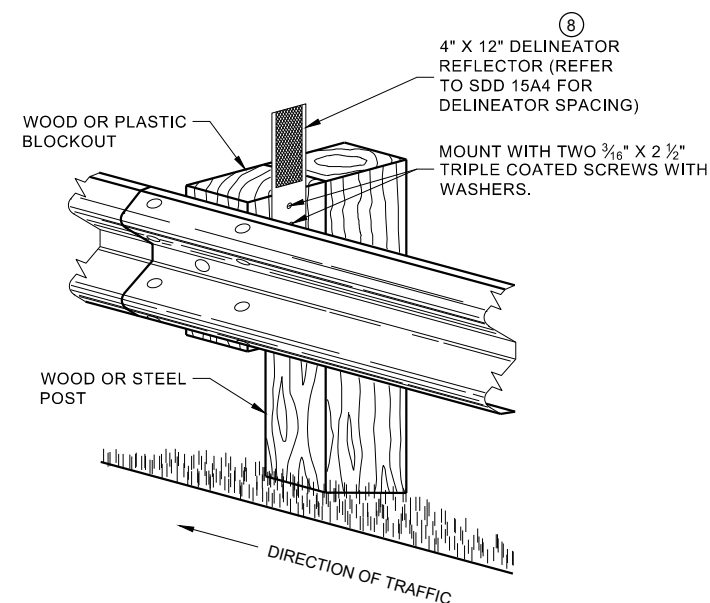
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



**FRONT VIEW
QUARTER POST SPACING (QS)**



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

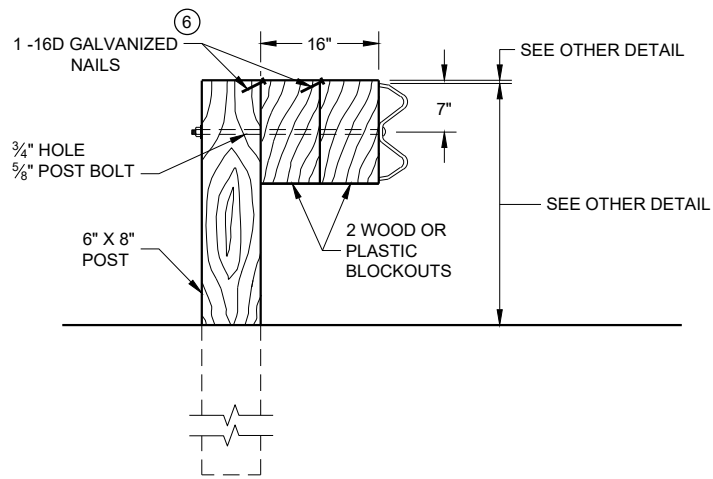
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

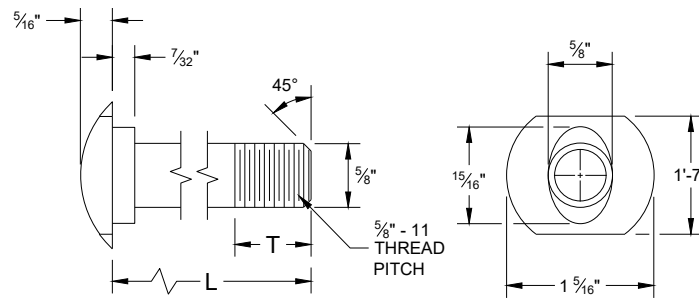


DETAIL FOR 16" BLOCKOUT DEPTH

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

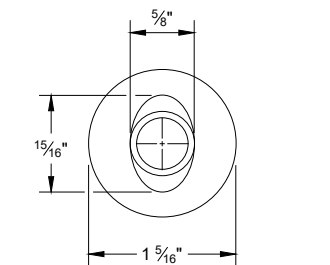
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

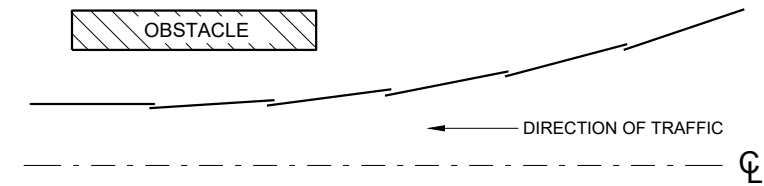


POST BOLT TABLE

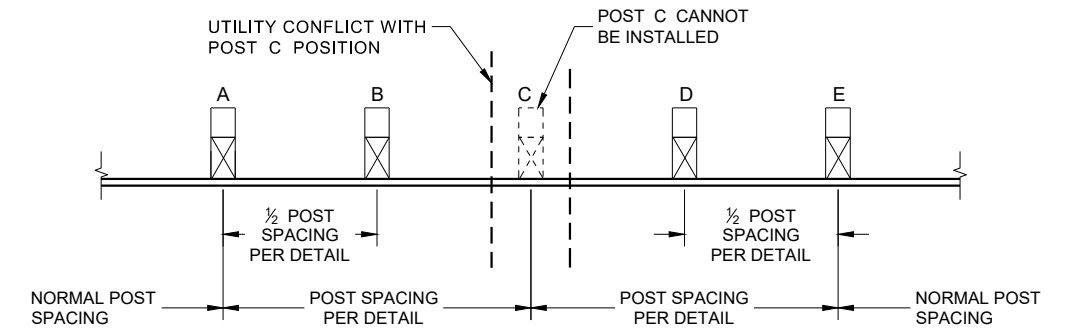
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



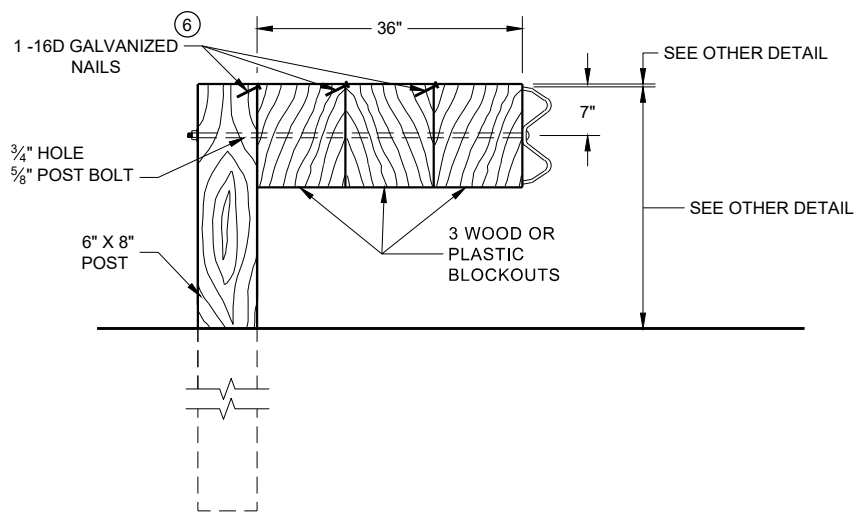
ALTERNATE BOLT HEAD



**PLAN VIEW
BEAM LAPPING DETAIL**

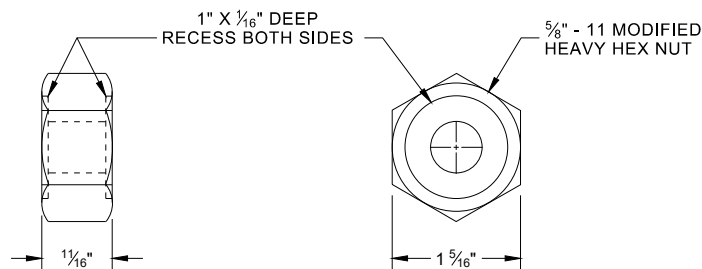


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

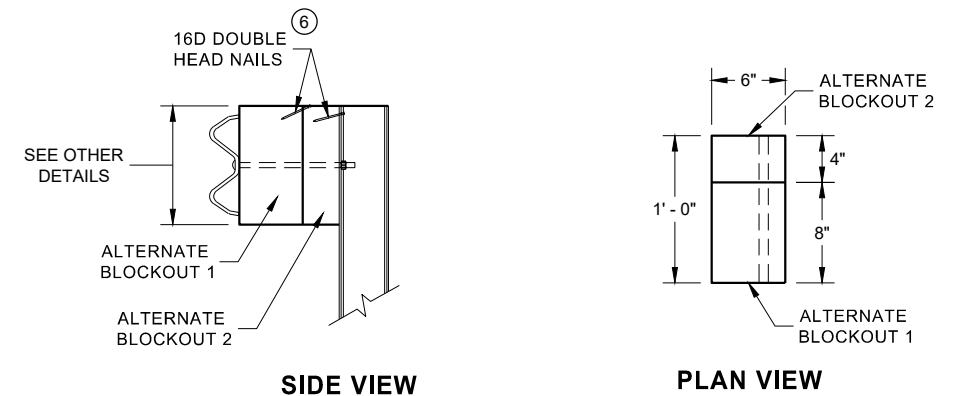


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



**POST BOLT, SPLICE BOLT
AND RECESS NUT**

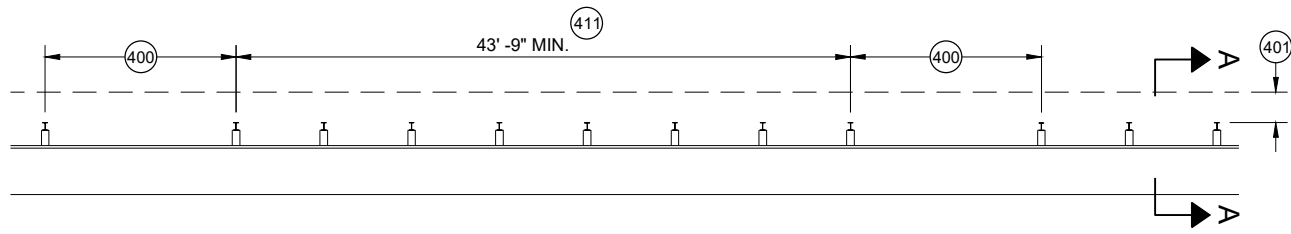


**ALTERNATE WOOD
BLOCKOUT DETAIL**

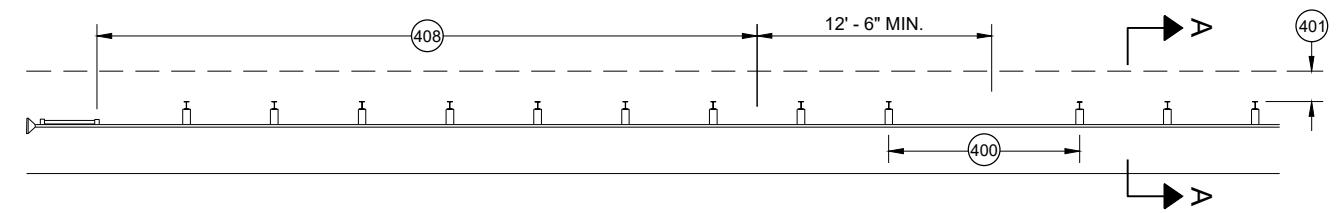
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

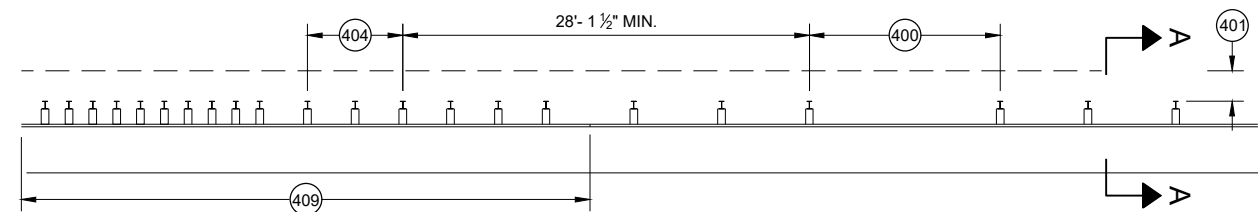
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



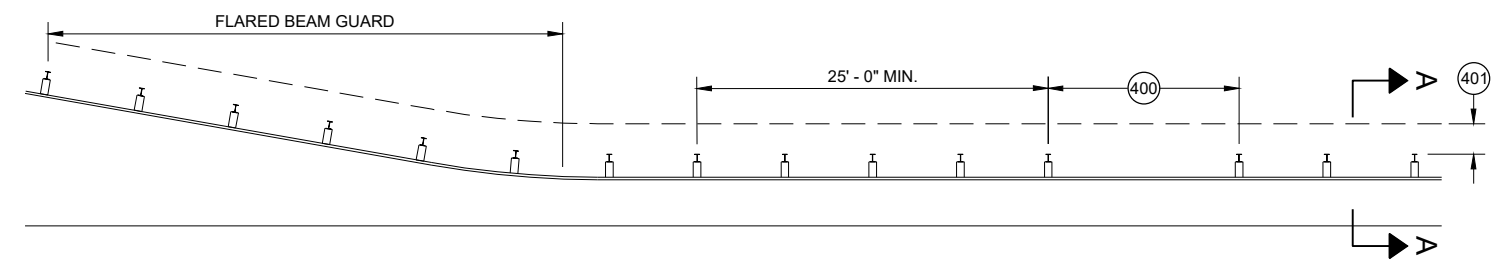
MISSING POST IN MGS GUARDRAIL



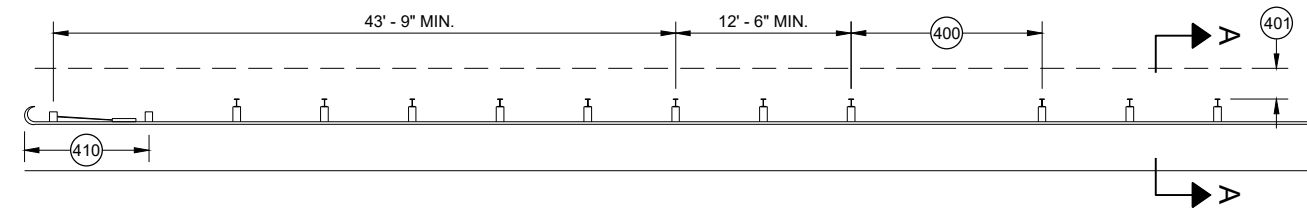
MISSING POST IN MGS GUARDRAIL NEAR EAT



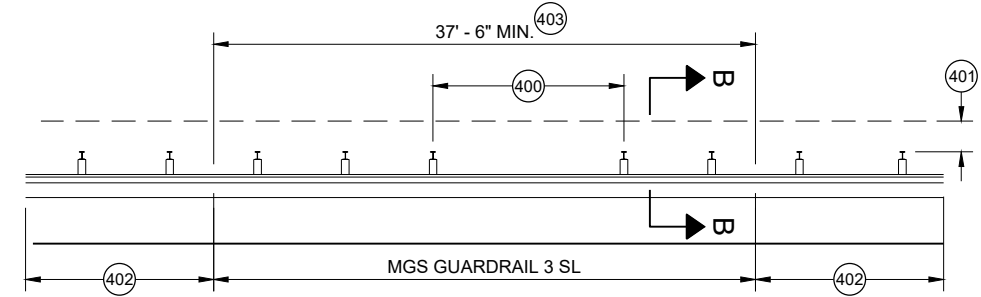
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

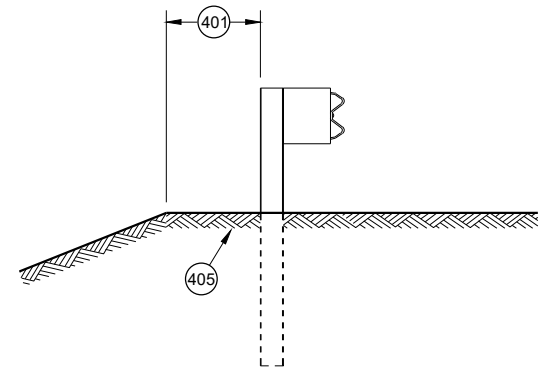


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

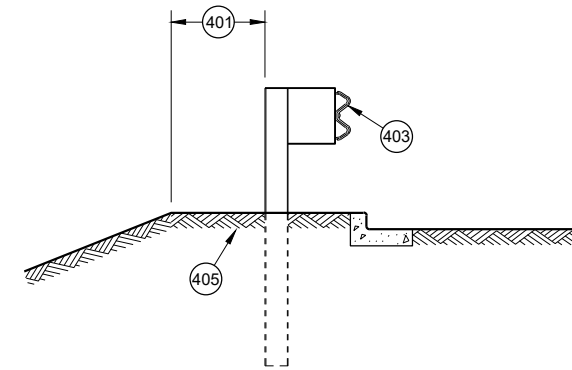


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- ④00 MAX SPAN 12' - 6"
- ④01 2' MIN.
- ④02 MGS GUARDRAIL 3
- ④03 NESTING BEAM GUARD
- ④04 ASYMMETRIC TRANSITION
- ④05 SOIL WELL DRAINED AND COMPACTED
- ④06 SEE OTHER DRAWINGS IN THIS SDD
- ④07 SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- ④08 SEE SDD 14B44
- ④09 SEE SDD 14B45
- ④10 SEE SDD 14B47
- ④11 MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
 - (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
 - (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
 - (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
 - (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.
- DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

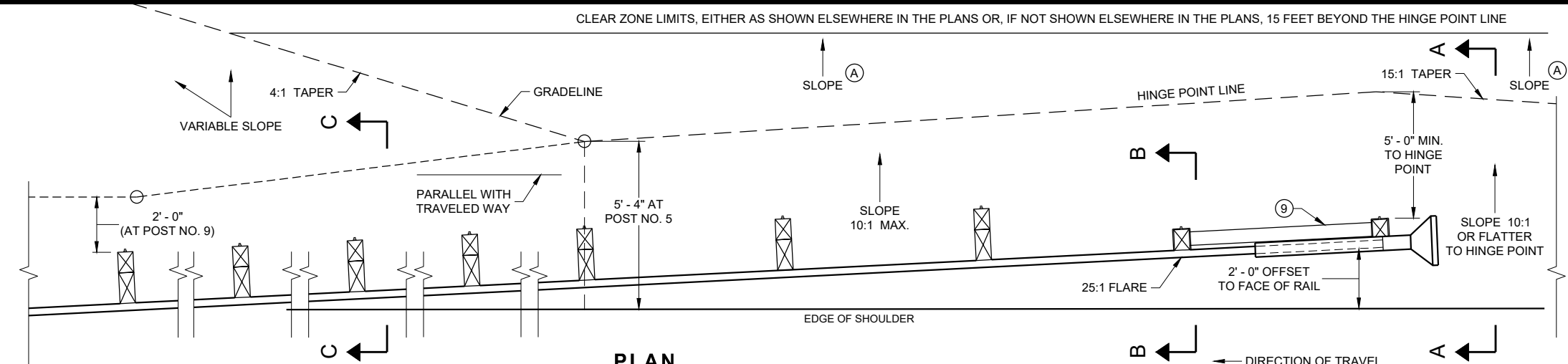
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

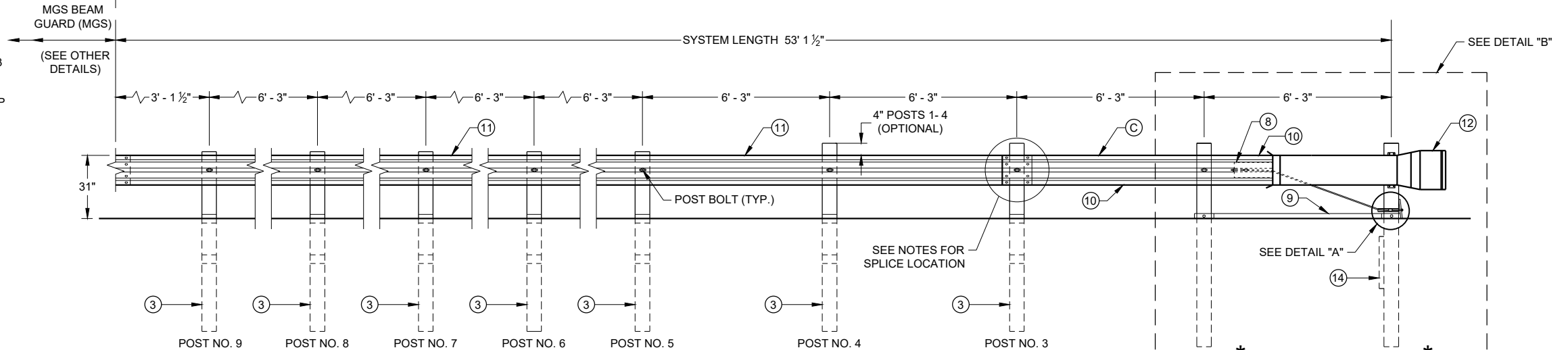
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

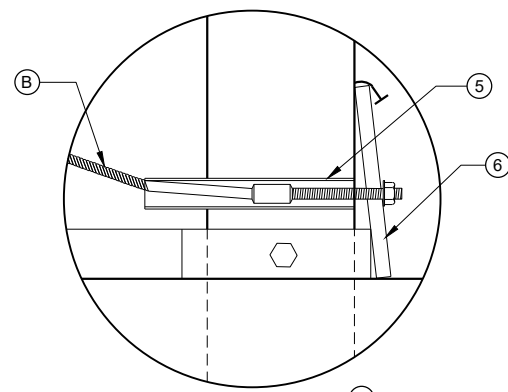
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



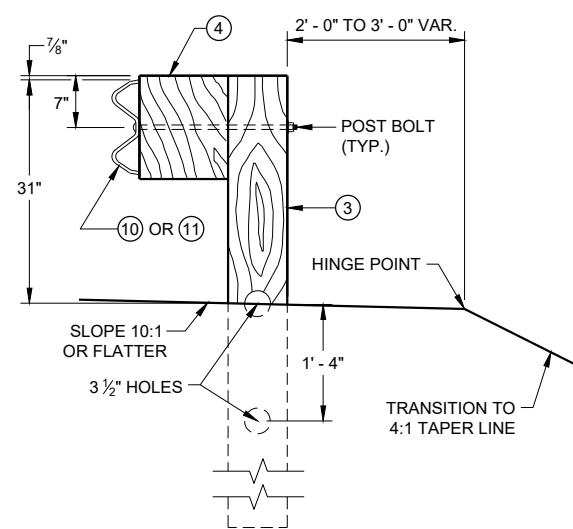
PLAN



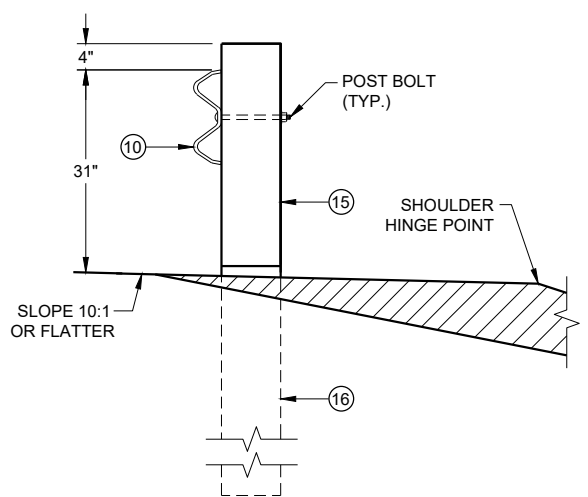
ELEVATION



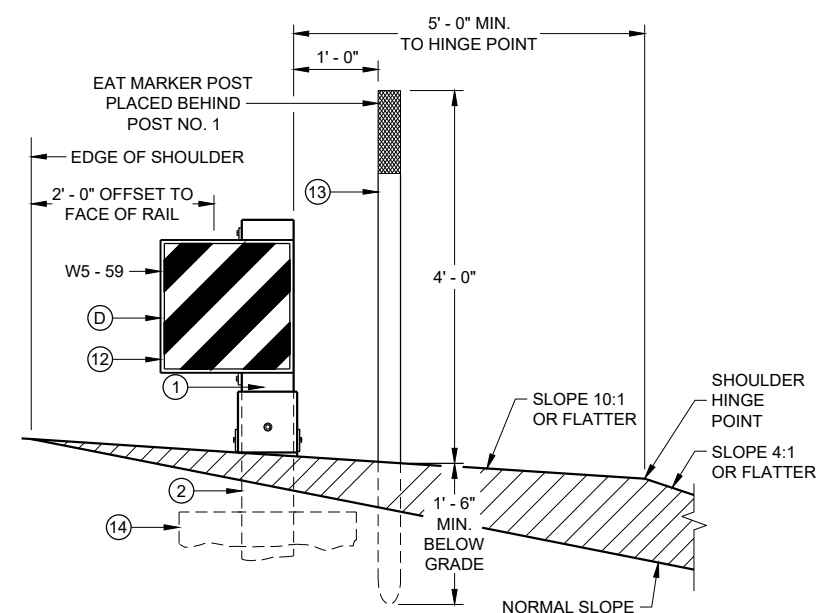
DETAIL "A"



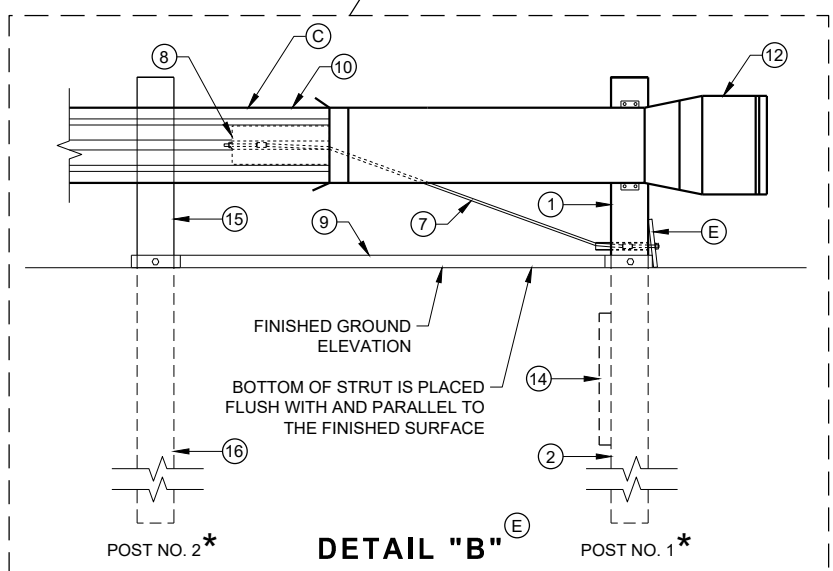
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B
TYPICAL AT POST NO. 2***



**SECTION A - A
TYPICAL AT POST NO. 1***



DETAIL "B"

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

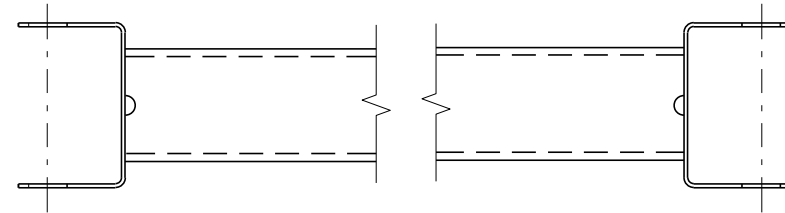
6

SDD 14B44 - 04a

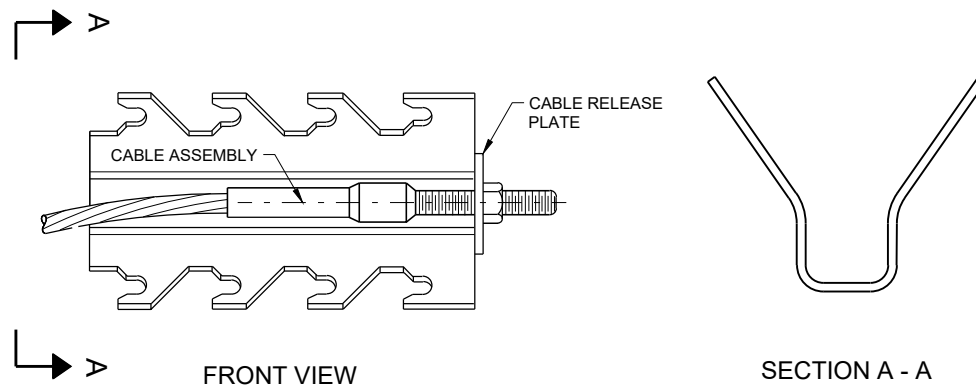
SDD 14B44 - 04a

BILL OF MATERIALS

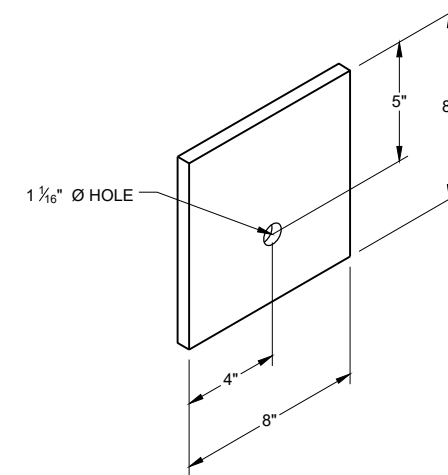
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL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



GENERIC GROUND STRUT ⑨ ⑤



GENERIC ANCHOR CABLE BOX ⑨ ⑤



BEARING PLATE ⑥ ⑤

6

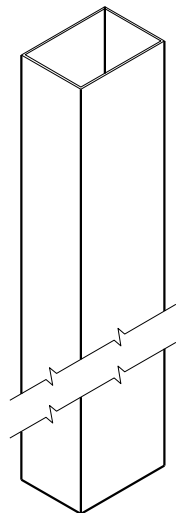
6

SDD 14B44 - 04b

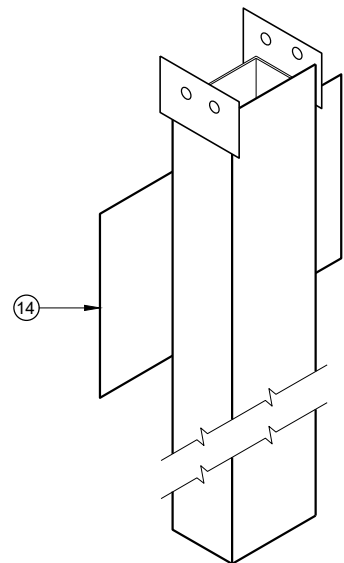
SDD 14B44 - 04b

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

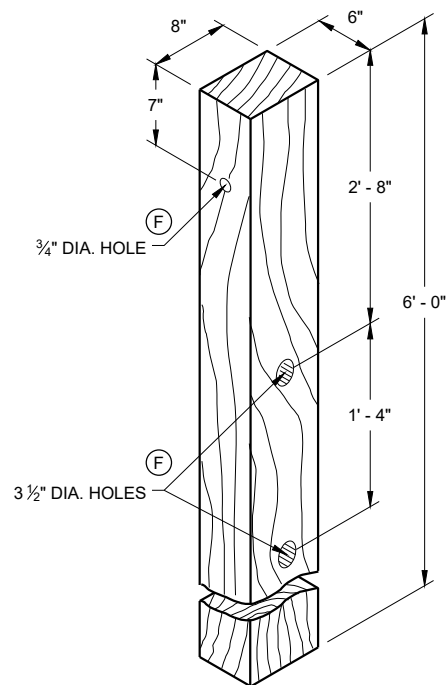
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



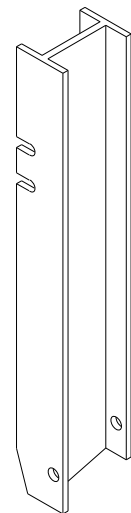
UPPER POST NO. 1 ^① (E)



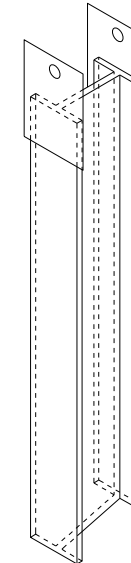
LOWER POST NO. 1 ^② (E)



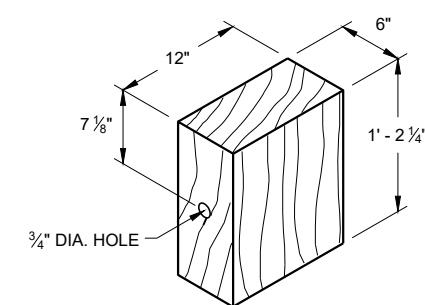
WOOD CRT POST ^③ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ^⑮ (E)

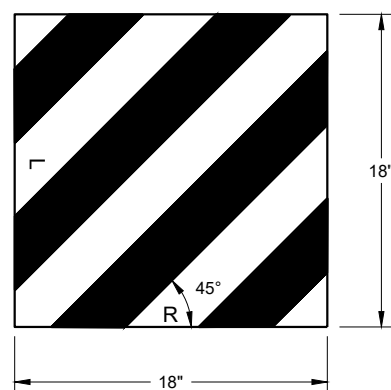


LOWER POST NO. 2 ^⑯ (E)



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

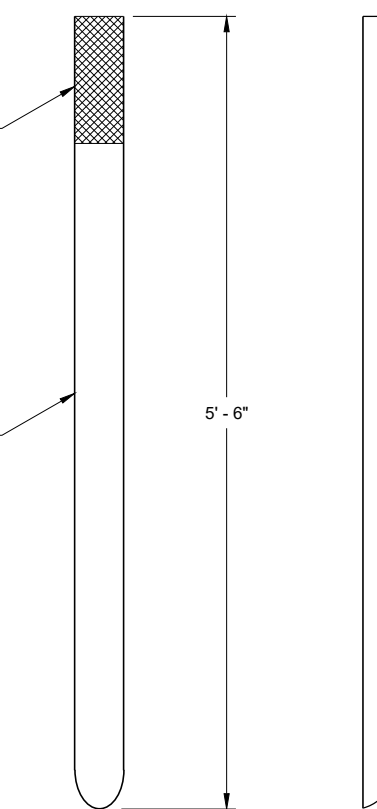
6



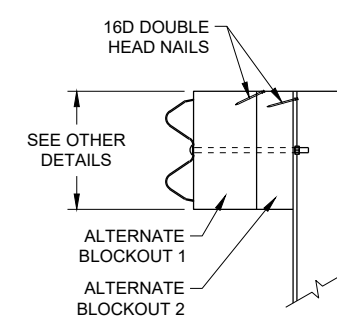
REFLECTIVE SHEETING DETAIL ^⑤

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.

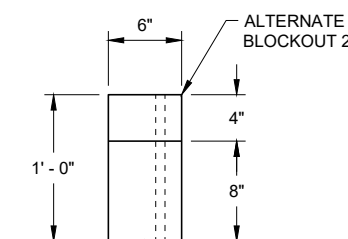
E.A.T. MARKER
POST (YELLOW)



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST ^⑬



SIDE VIEW



TOP VIEW

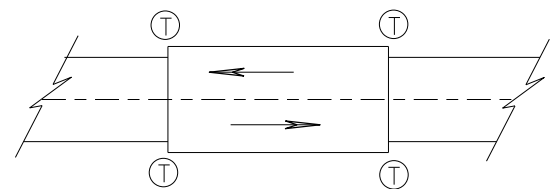
ALTERNATE WOOD
BLOCKOUT DETAIL

6

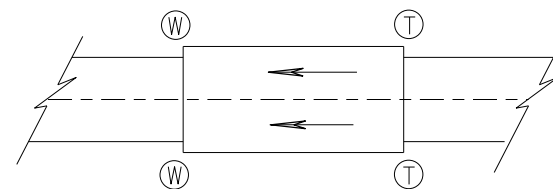
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

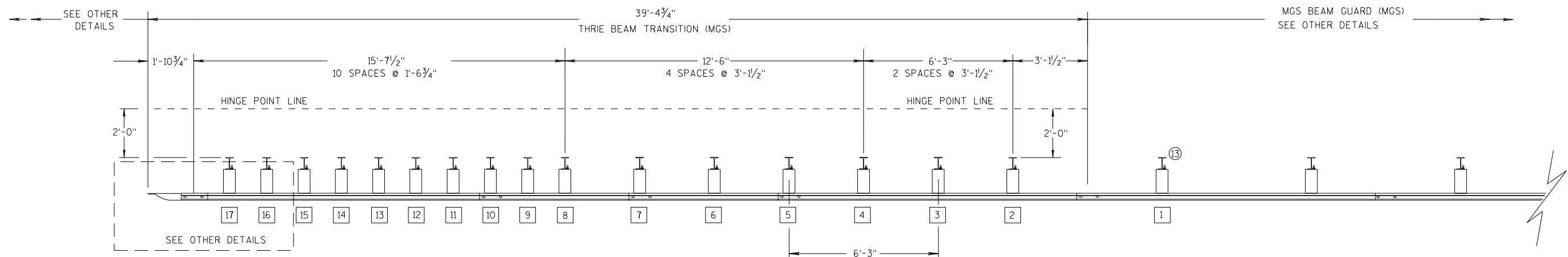
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

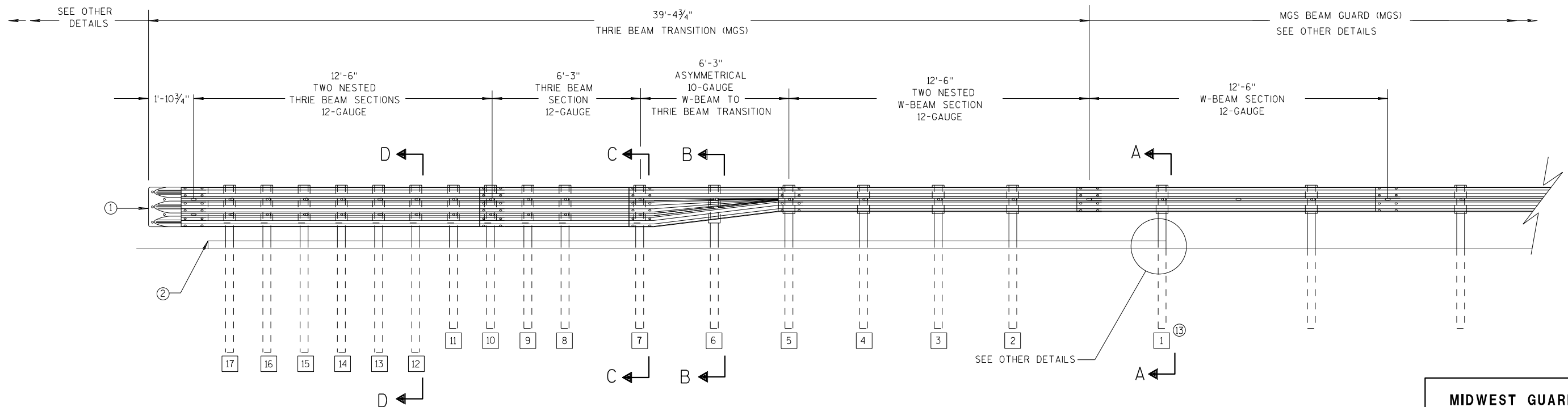
① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

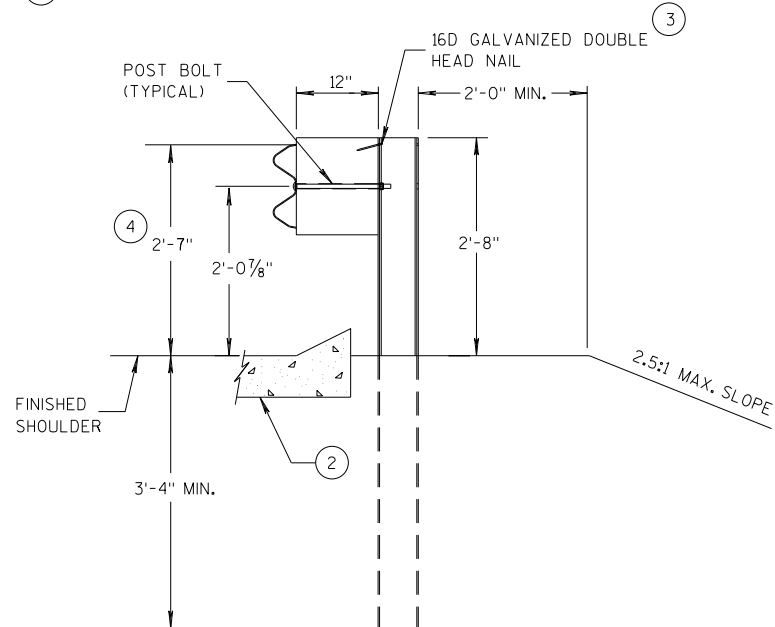
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

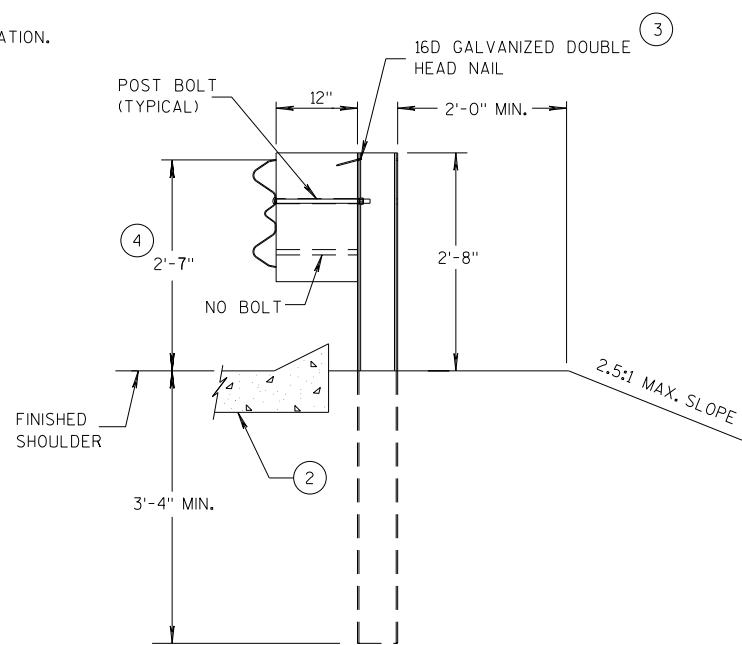
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

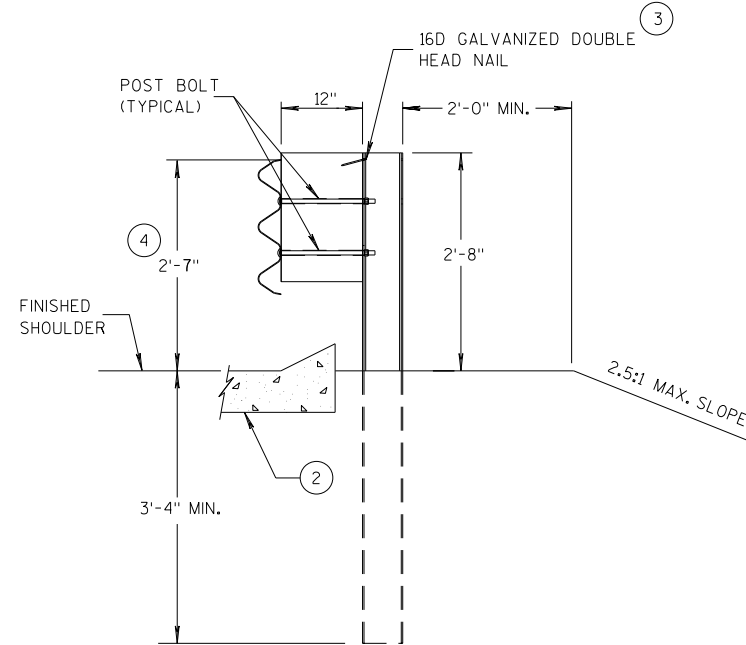
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



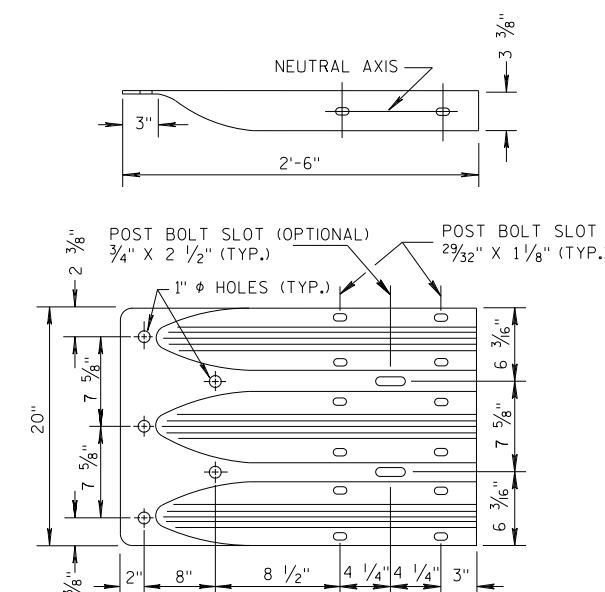
**SECTION A-A
POSTS 1-5**



**SECTION B-B
POST 6**



**SECTION C-C
POSTS 7-11**



**THRIE BEAM
TERMINAL CONNECTOR**

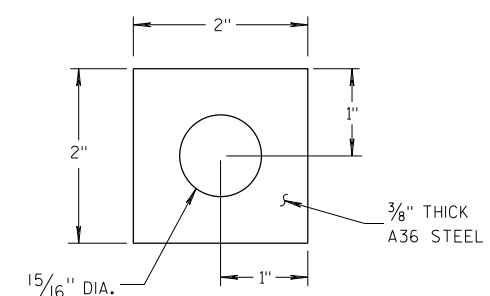
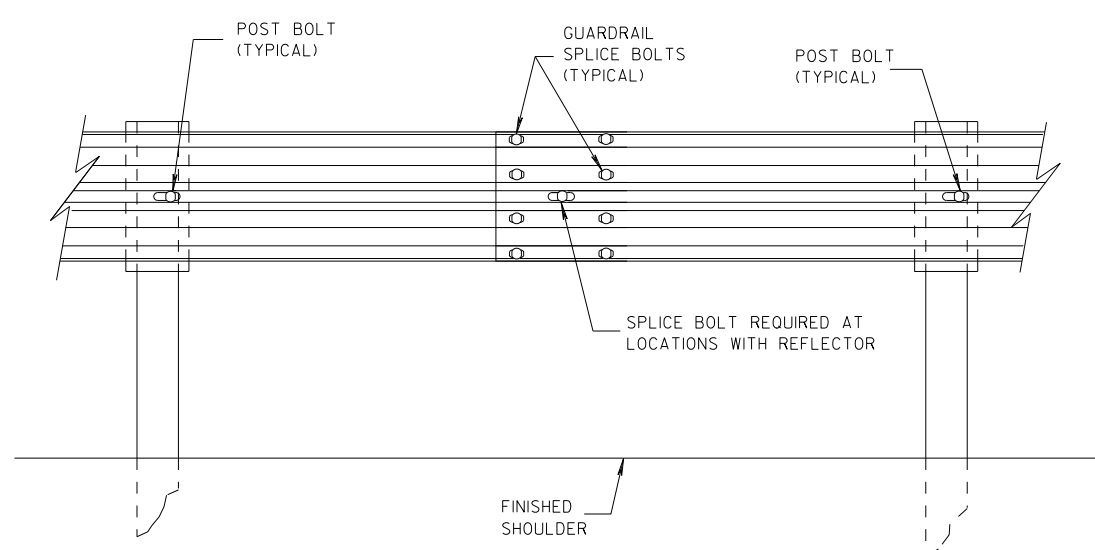
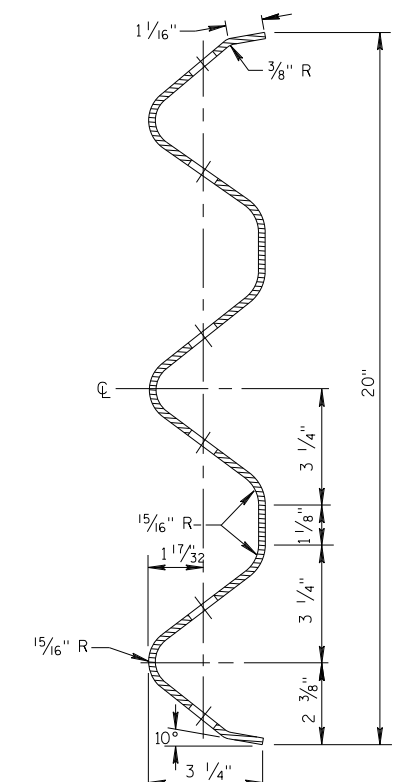


PLATE WASHER DETAIL



SPLICE DETAIL



**SECTION THRU THRIE
BEAM RAIL ELEMENT**

6

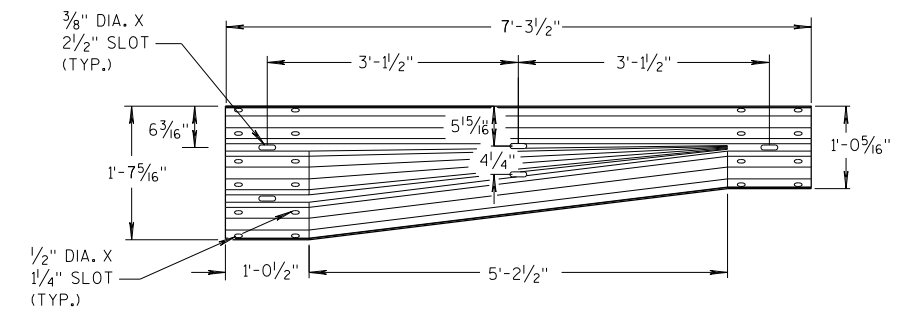
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S.D.D. 14 B 45-5b

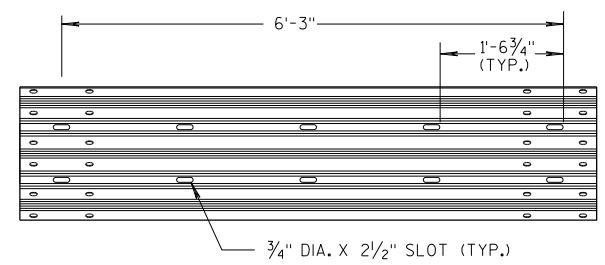
S.D.D. 14 B 45-5b

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

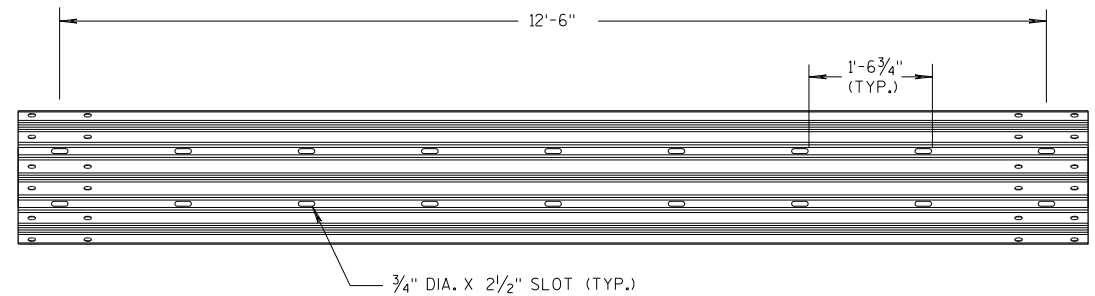
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



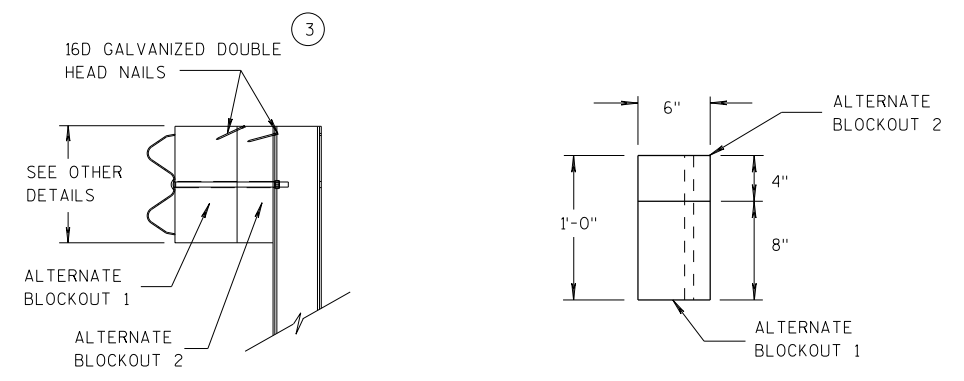
W-BEAM TO THRIE BEAM TRANSITION SECTION



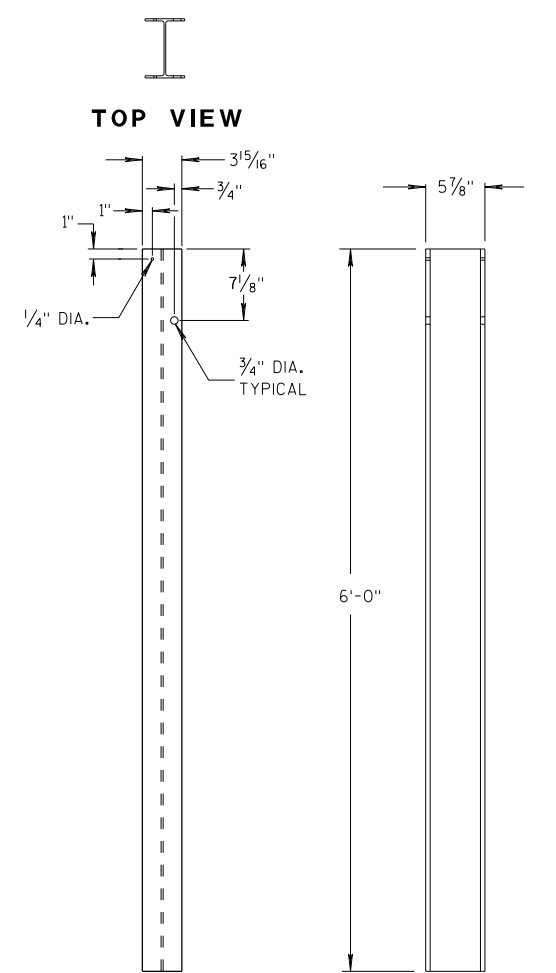
6'-3\"/>



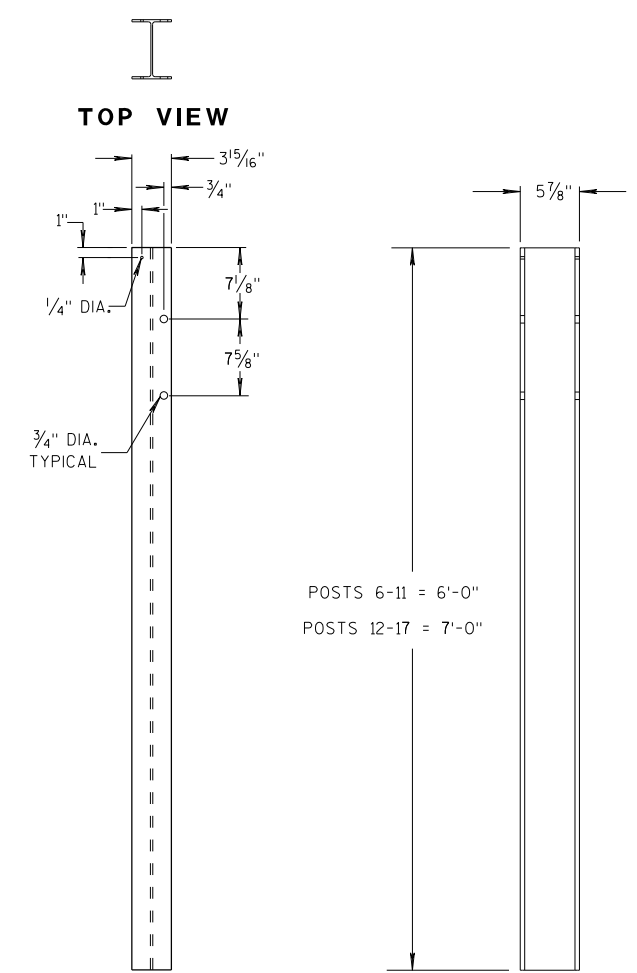
12'-6\"/>



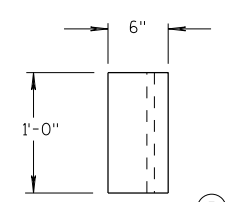
ALTERNATE WOOD BLOCKOUT DETAIL



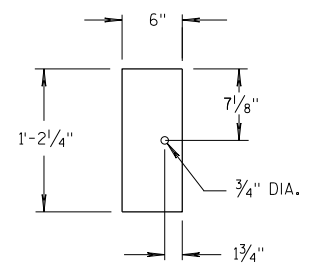
STEEL POSTS 1-5



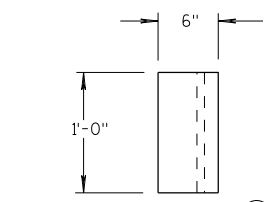
STEEL POSTS 6-17



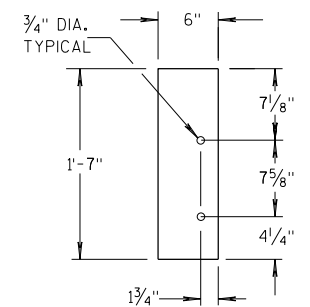
TOP VIEW



**FRONT VIEW
BLOCKOUT
POSTS 1-5**



TOP VIEW



**FRONT VIEW
BLOCKOUT
POSTS 6-17**

GENERAL NOTES

- STEEL POSTS ARE W6X9 OR W6X8.5.
- BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.
- (3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- (5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.
- (13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

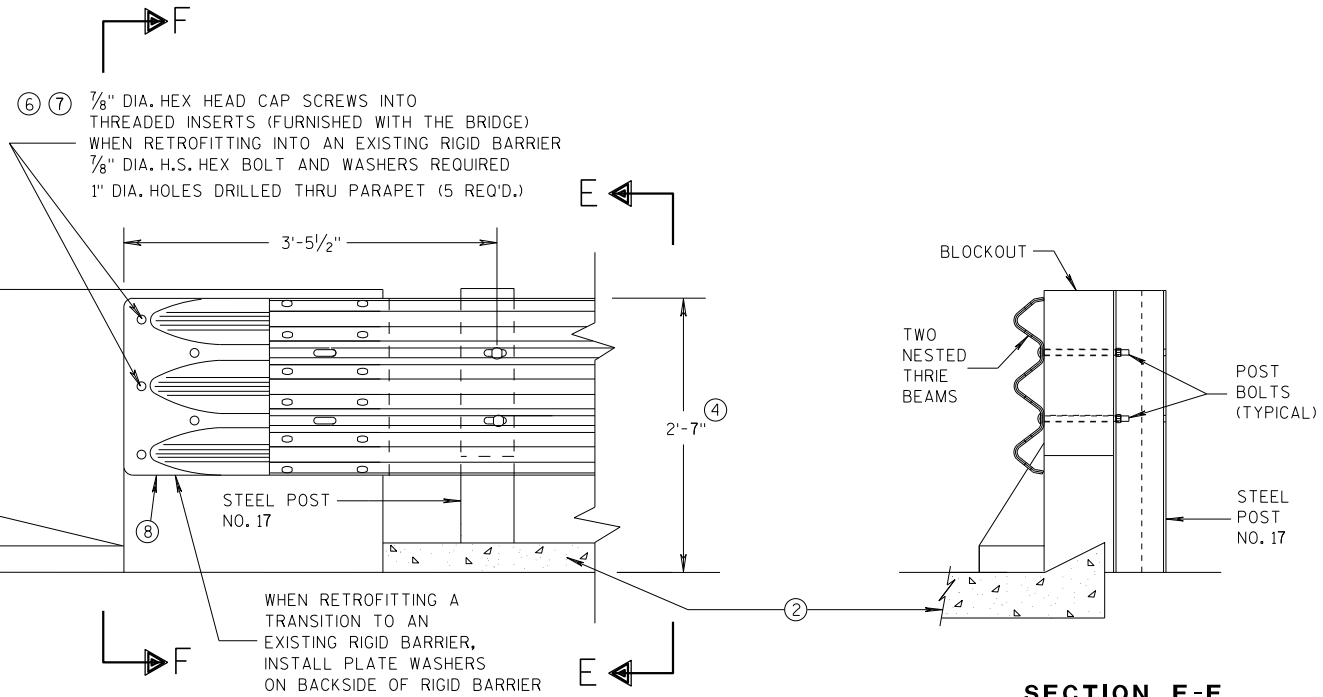
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

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

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



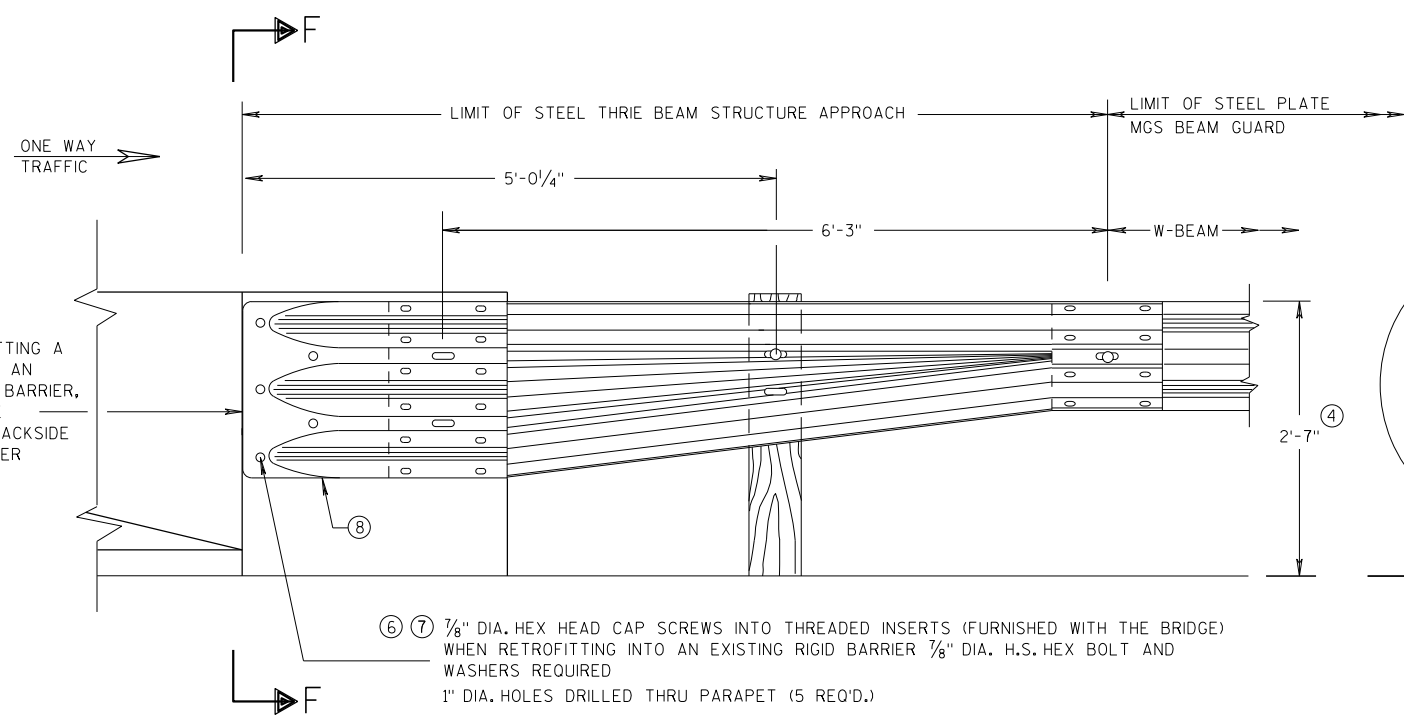
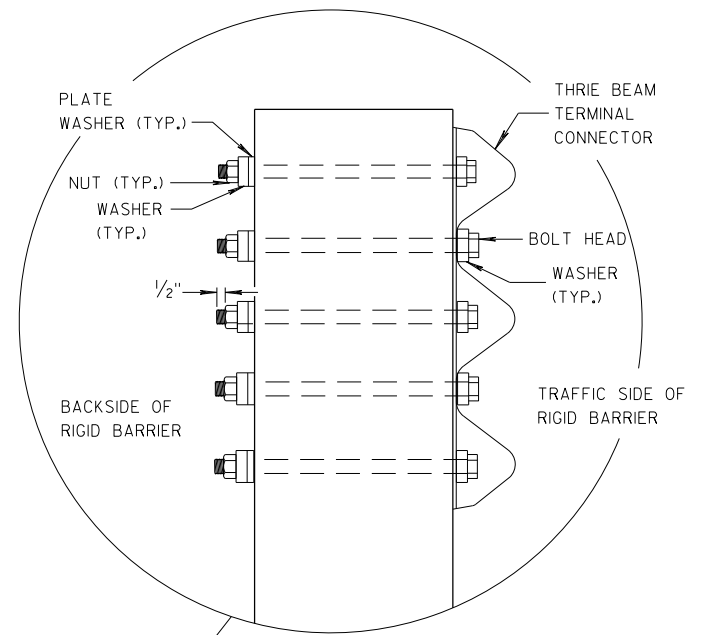
FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

SECTION E-E

GENERAL NOTES

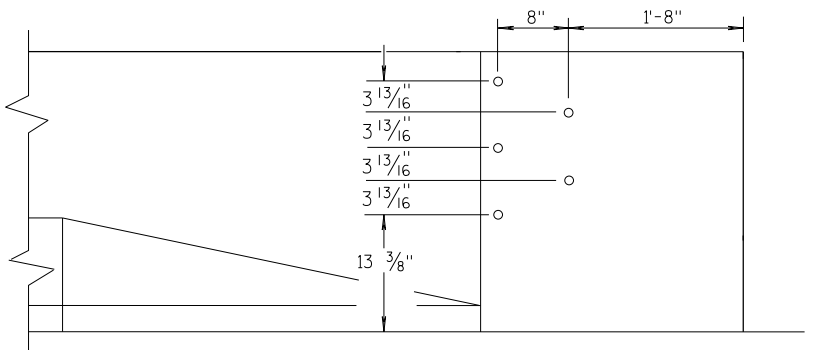
- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- (2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
 - (4) TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
 - (6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
 - (7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
 - (8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".



FRONT VIEW

**W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**

SECTION F-F



DRILL HOLE LOCATION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

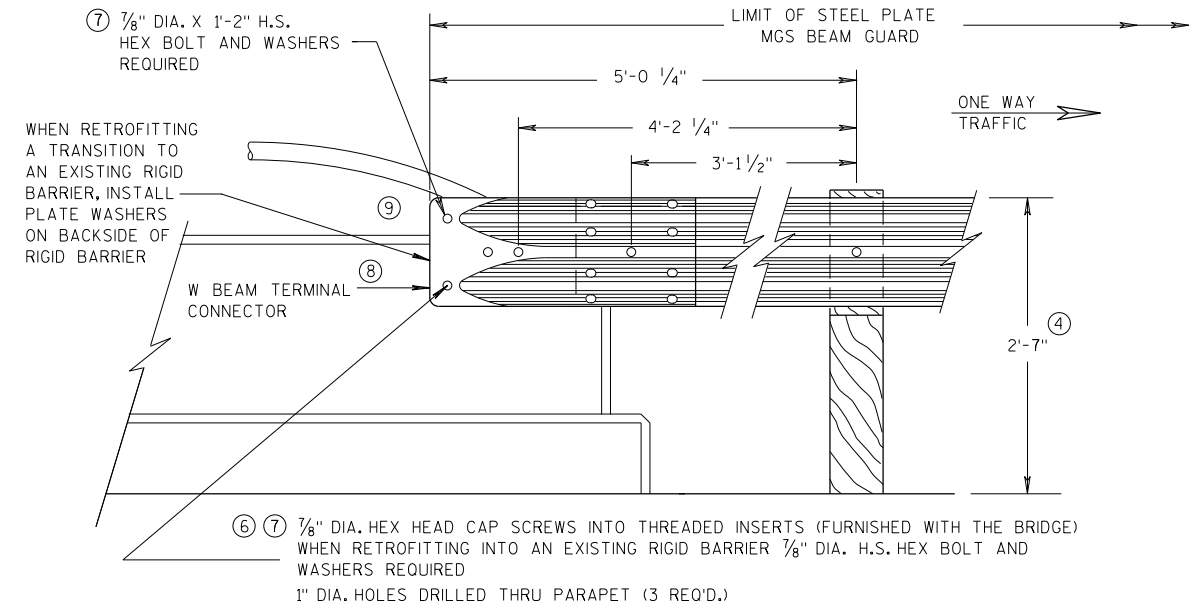
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

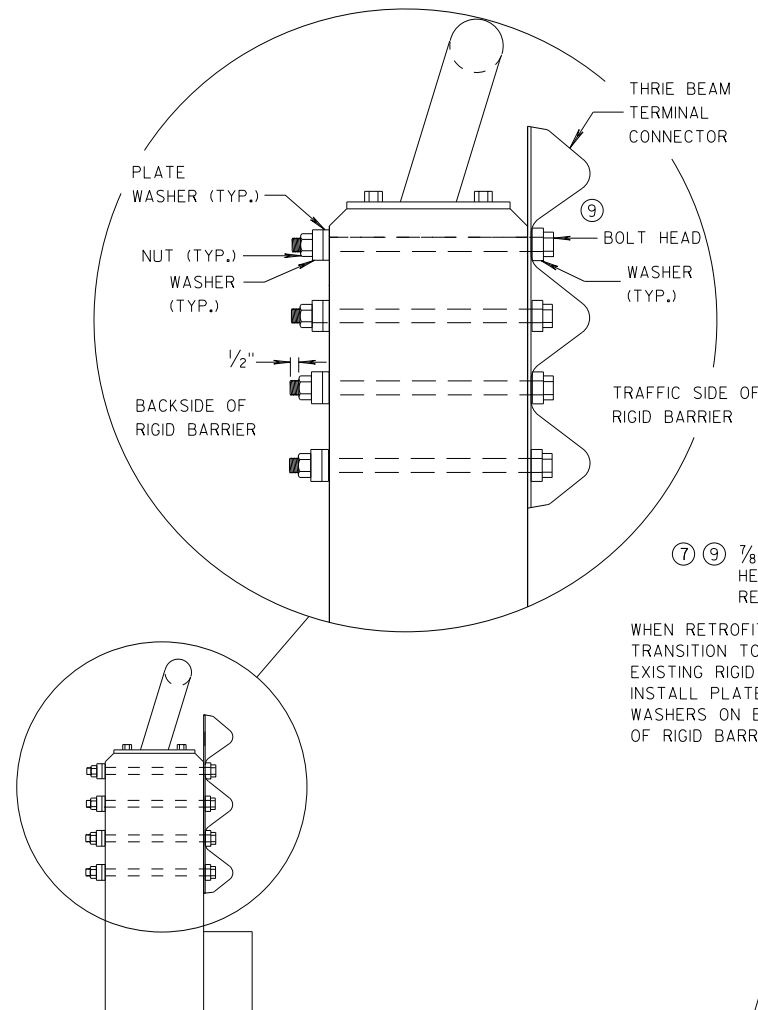
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
- ⑨ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

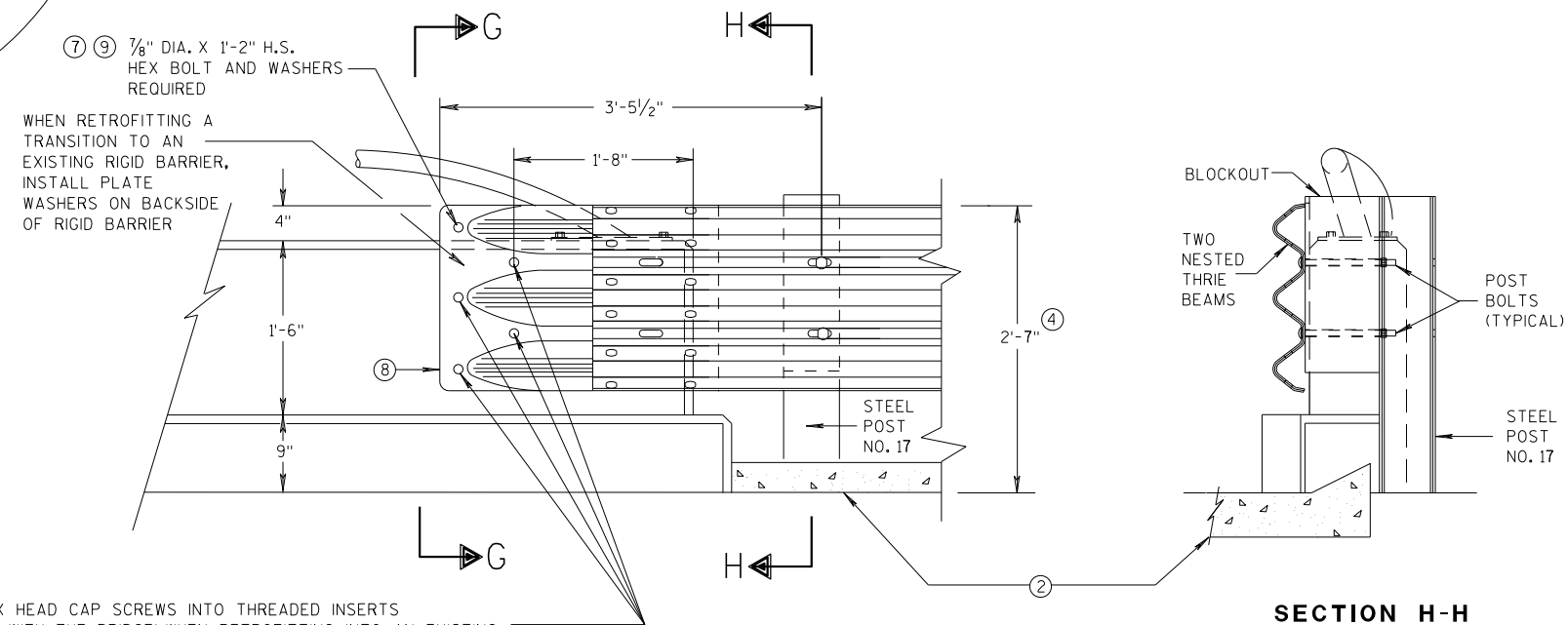


FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

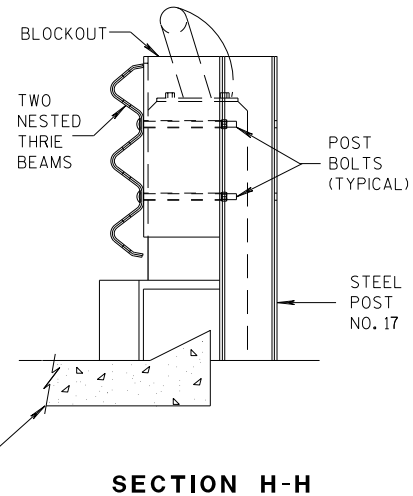


SECTION G-G



FRONT VIEW

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



SECTION H-H

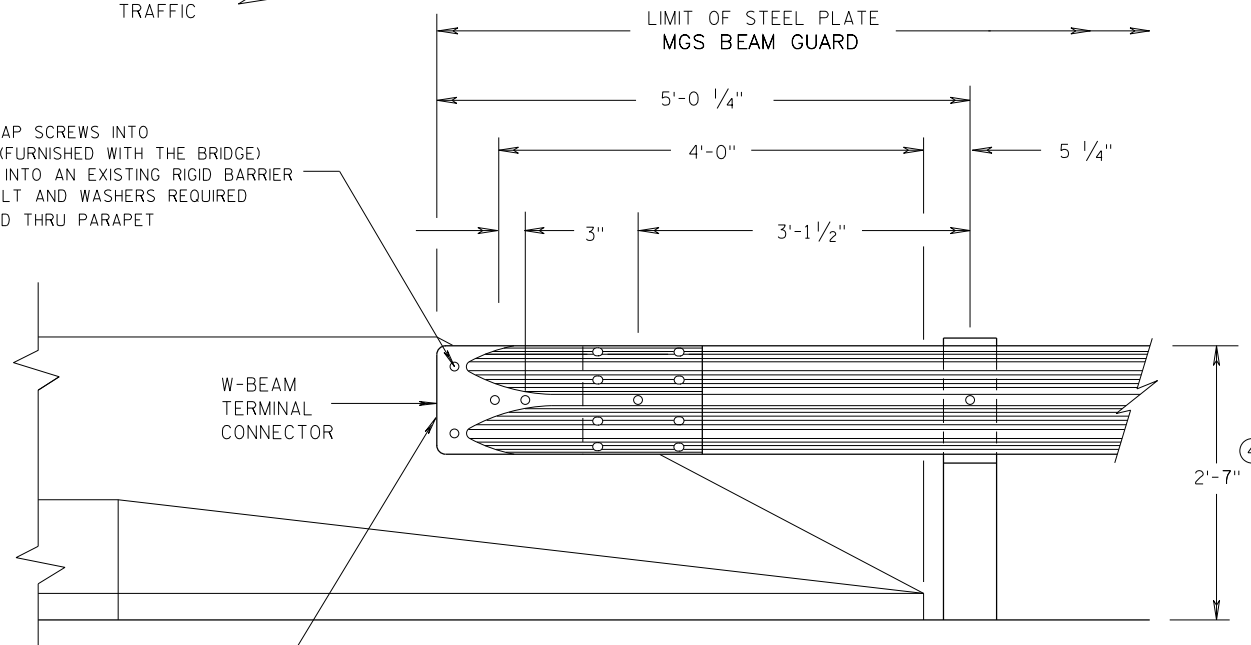
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

ONE WAY
TRAFFIC

⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO
THREADED INSERTS (FURNISHED WITH THE BRIDGE)
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET
(4 REQ'D.)



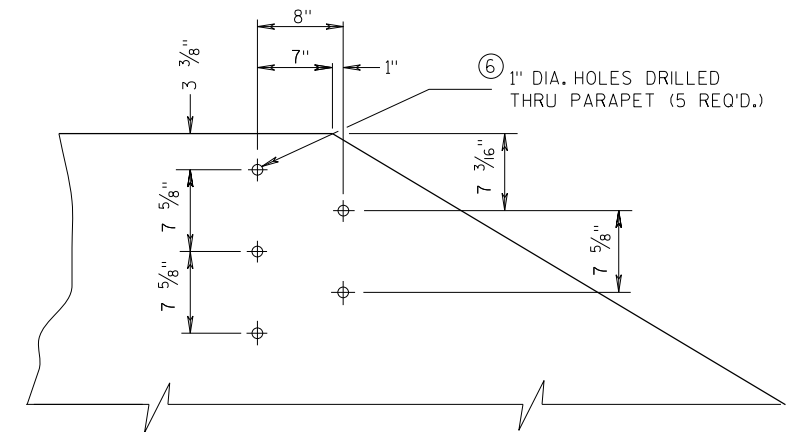
FRONT VIEW

**W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS**

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

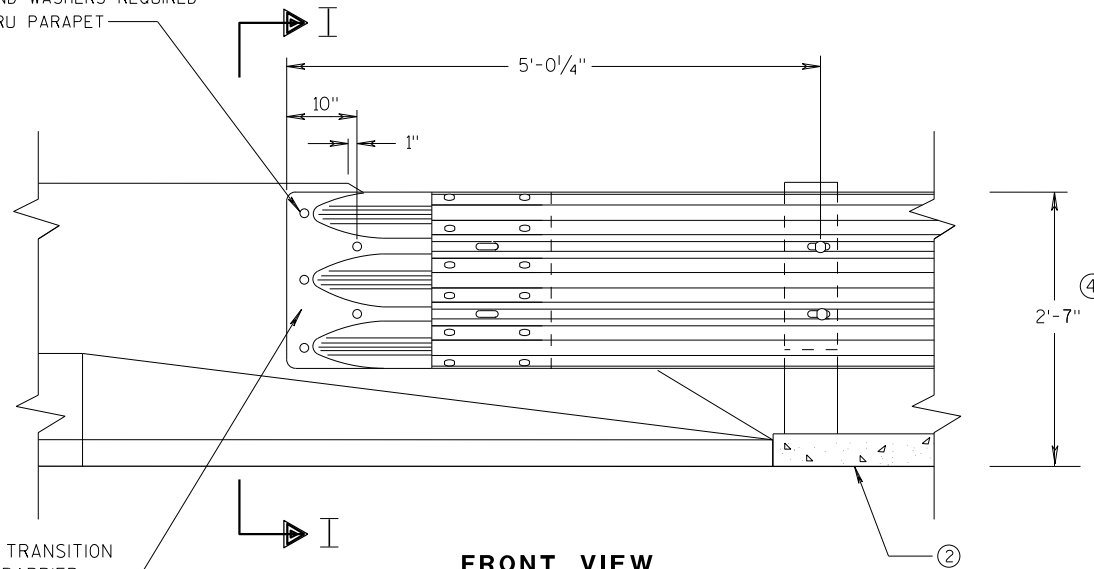
GENERAL NOTES

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



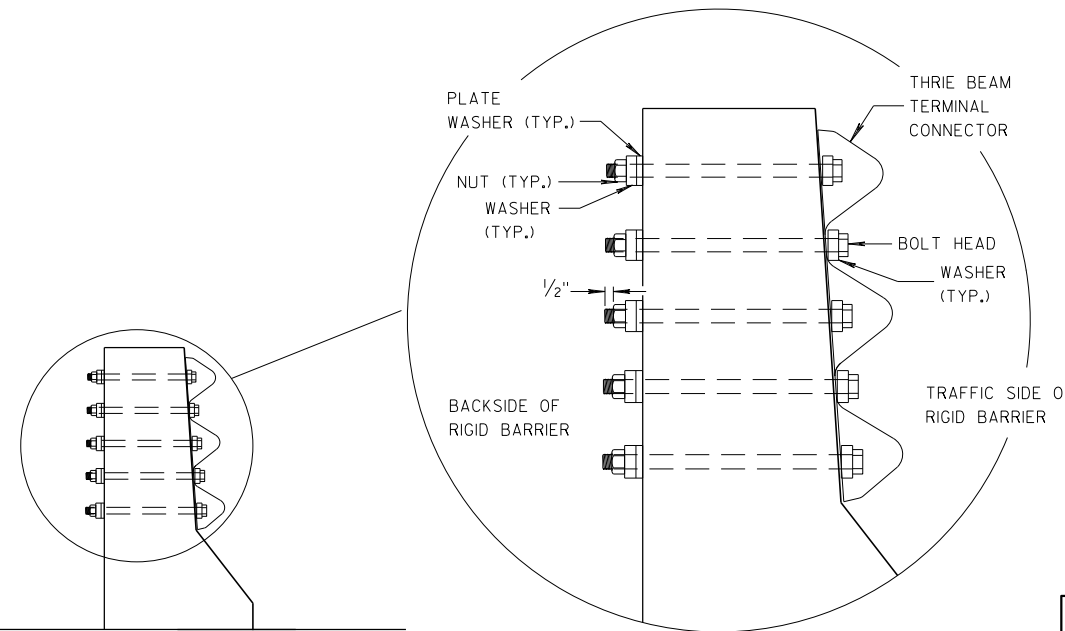
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION

⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO
THREADED INSERTS (FURNISHED WITH THE BRIDGE)
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET
(5 REQ'D.)



FRONT VIEW

**THRIE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS**



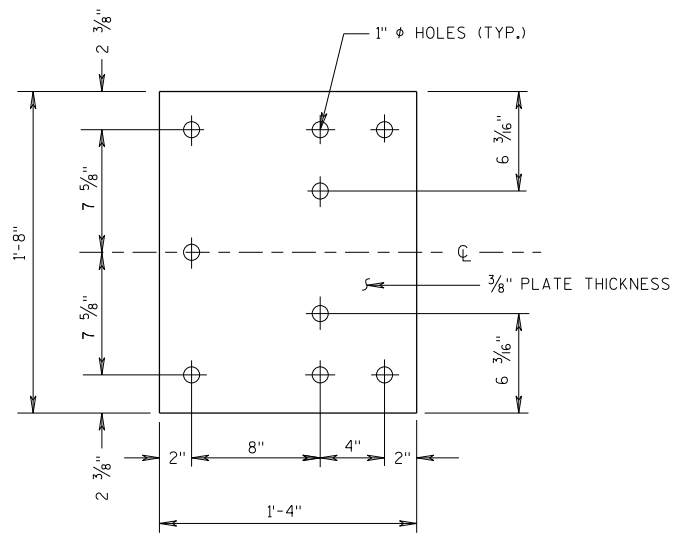
SECTION I-I

WHEN RETROFITTING A TRANSITION
TO AN EXISTING RIGID BARRIER,
INSTALL PLATE WASHERS ON
BACKSIDE OF RIGID BARRIER.

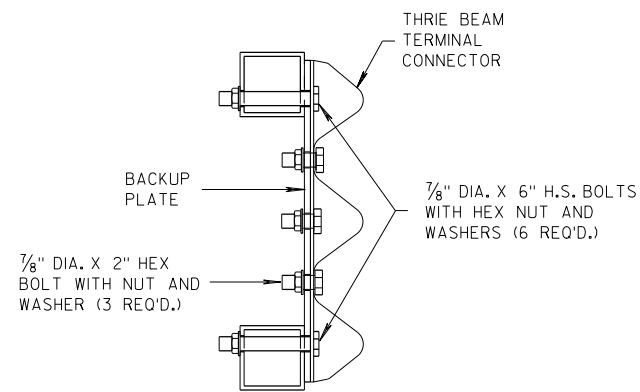
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

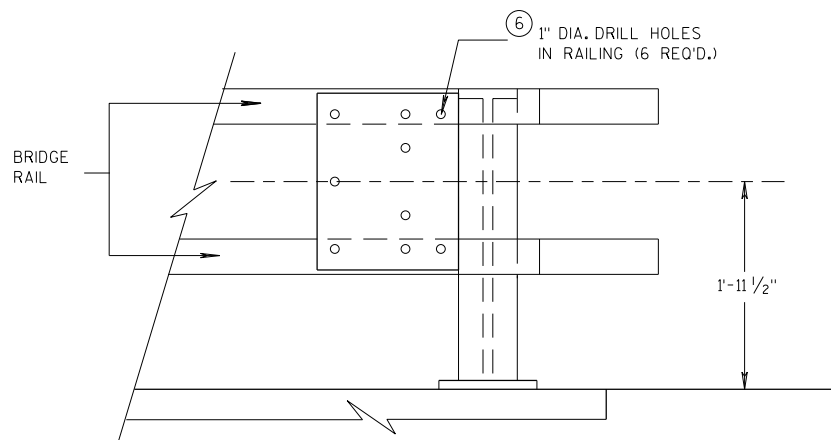
APPROVED
DATE 07/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



BACK-UP PLATE DETAIL



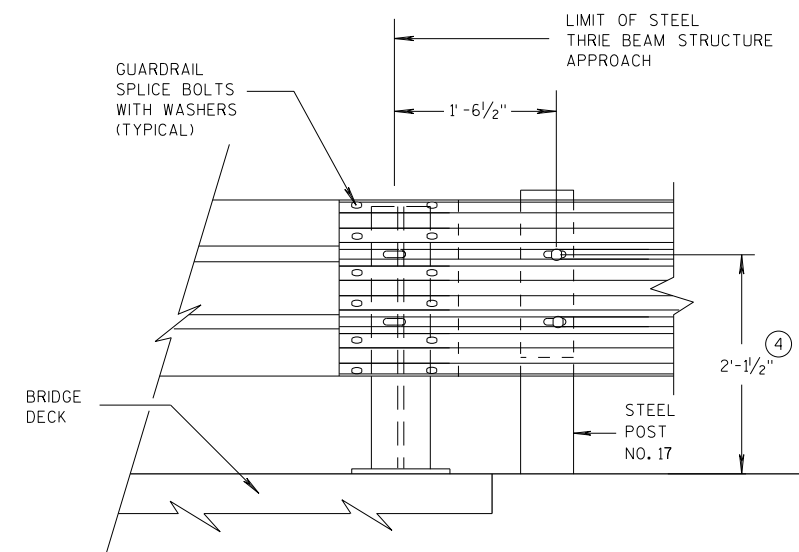
SECTION J-J



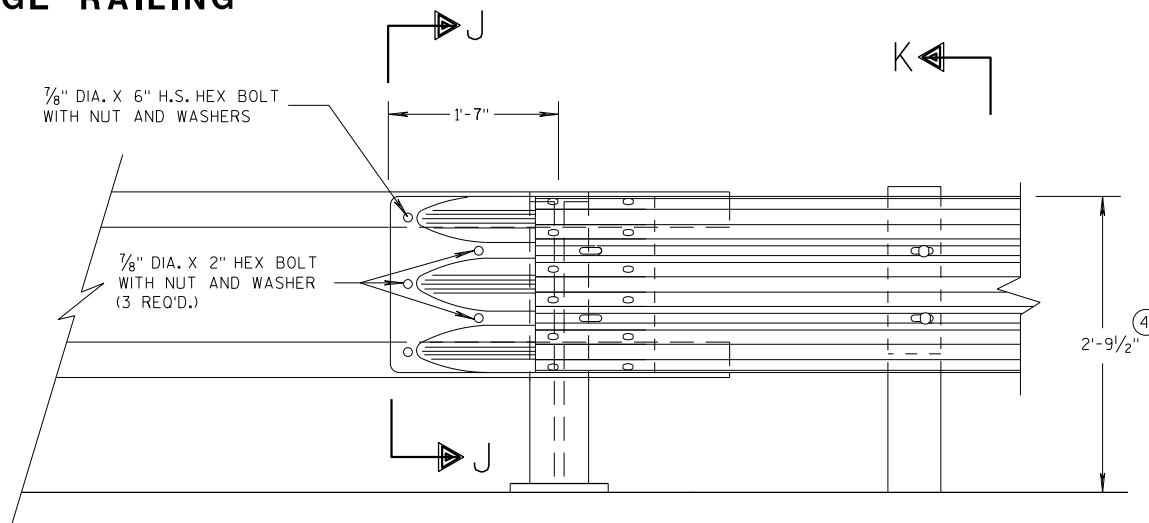
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1'$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

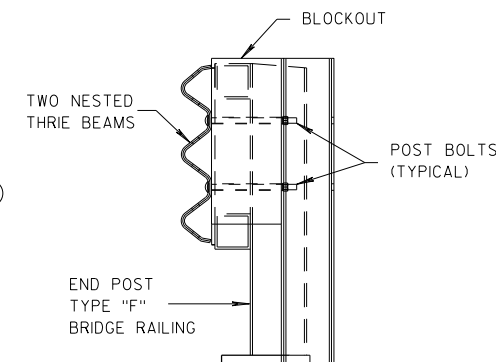


**FRONT VIEW
THRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"**



FRONT VIEW

**THRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"**



SECTION K-K

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

6

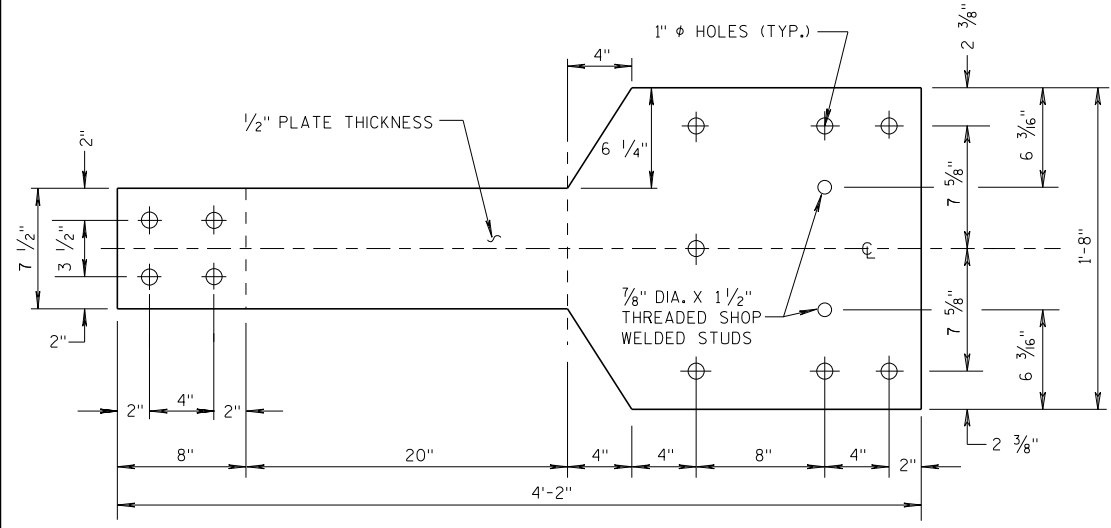
6

S.D.D. 14 B 45-59

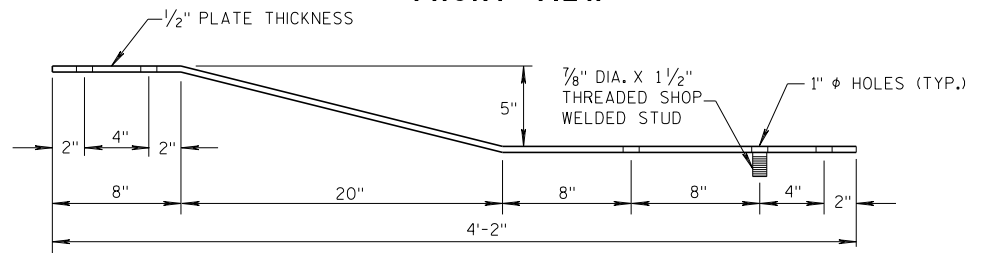
S.D.D. 14 B 45-59

GENERAL NOTES

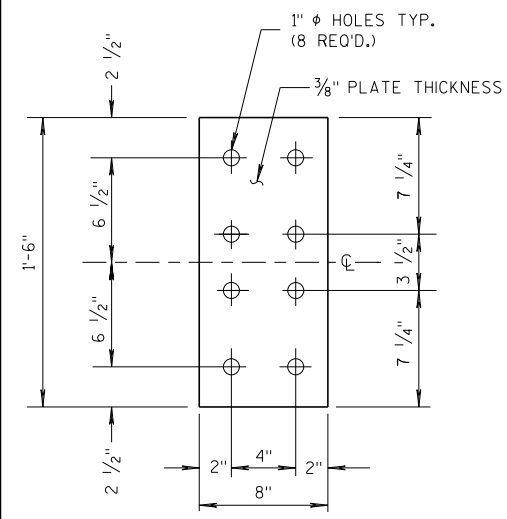
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



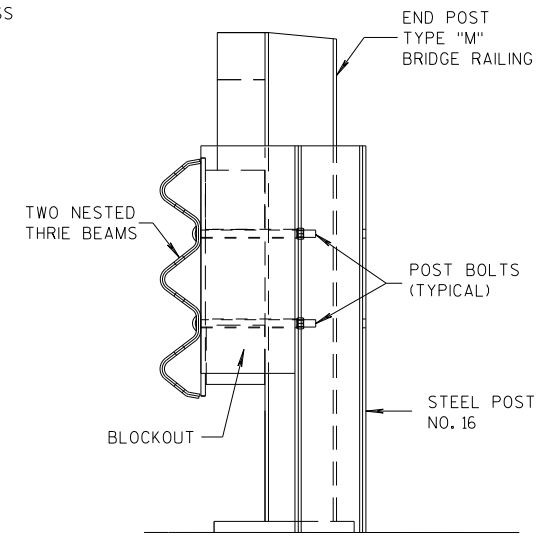
FRONT VIEW



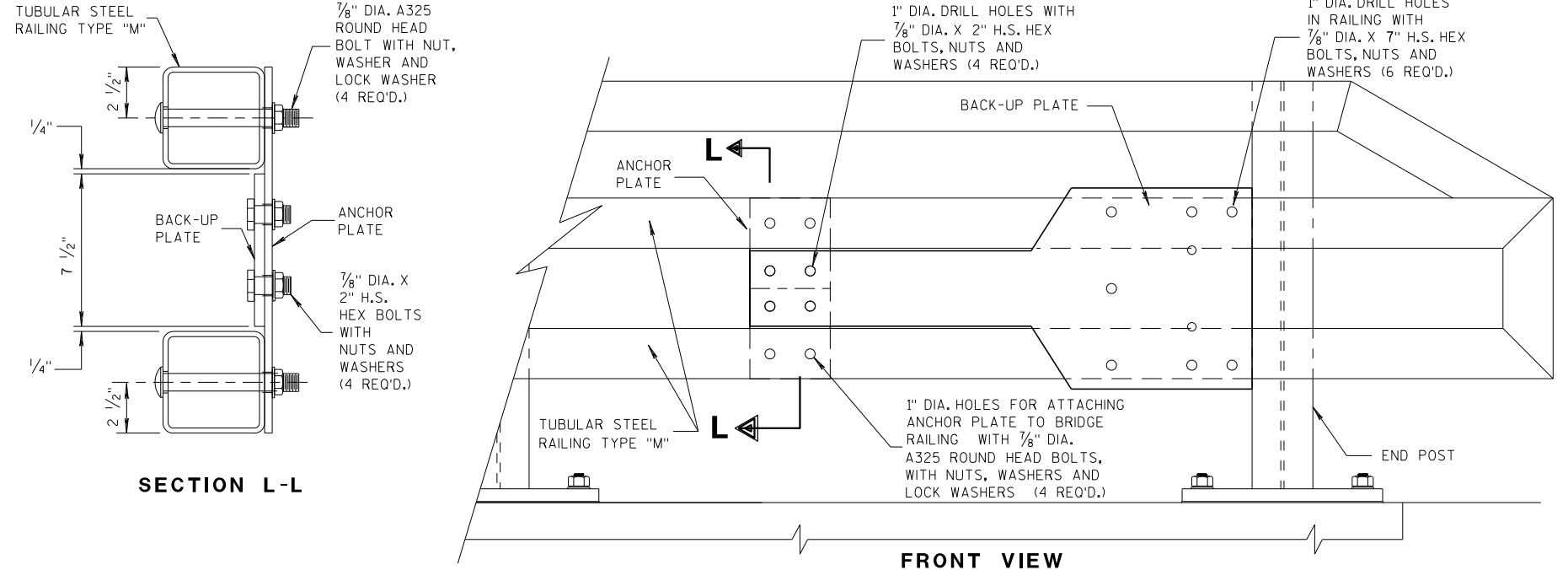
**PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"**



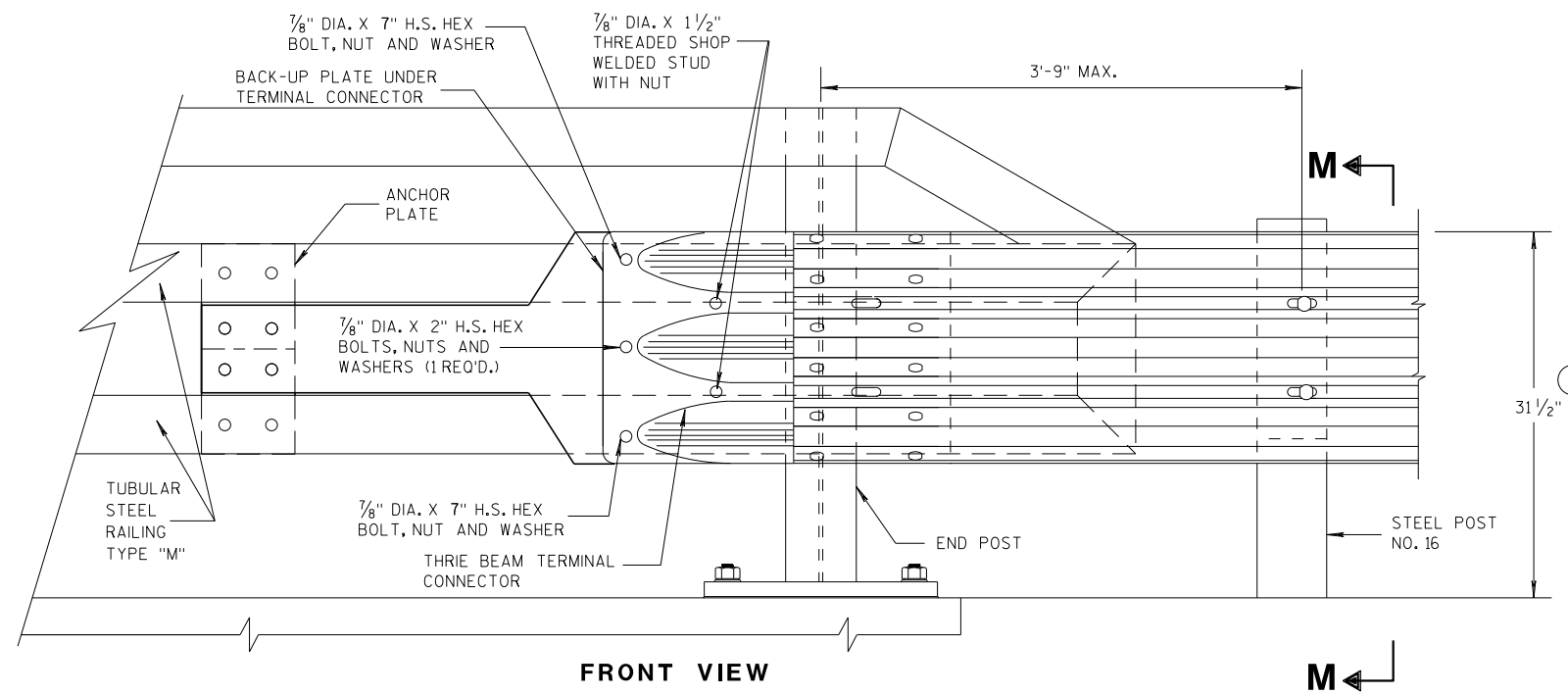
**FRONT VIEW
ANCHOR PLATE DETAIL,
TYPE "M"**



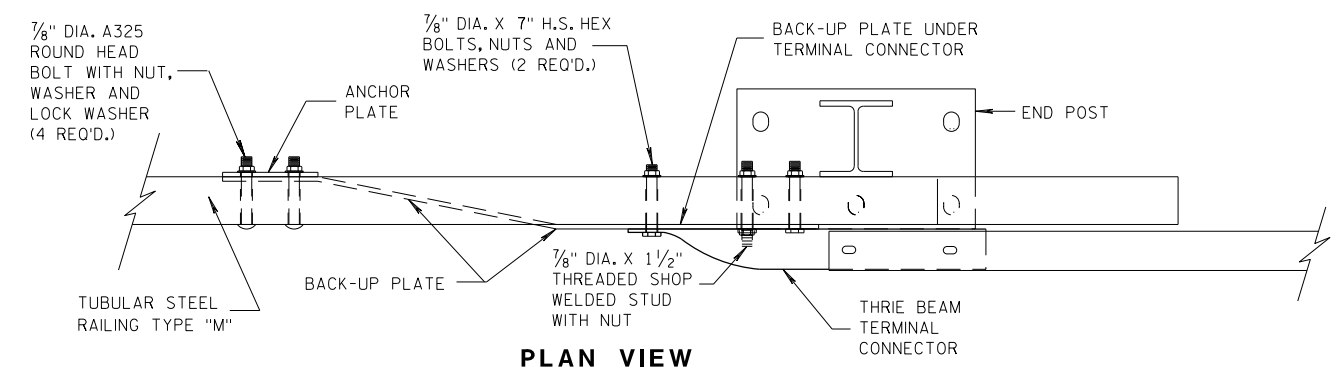
SECTION M-M



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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

6

6

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

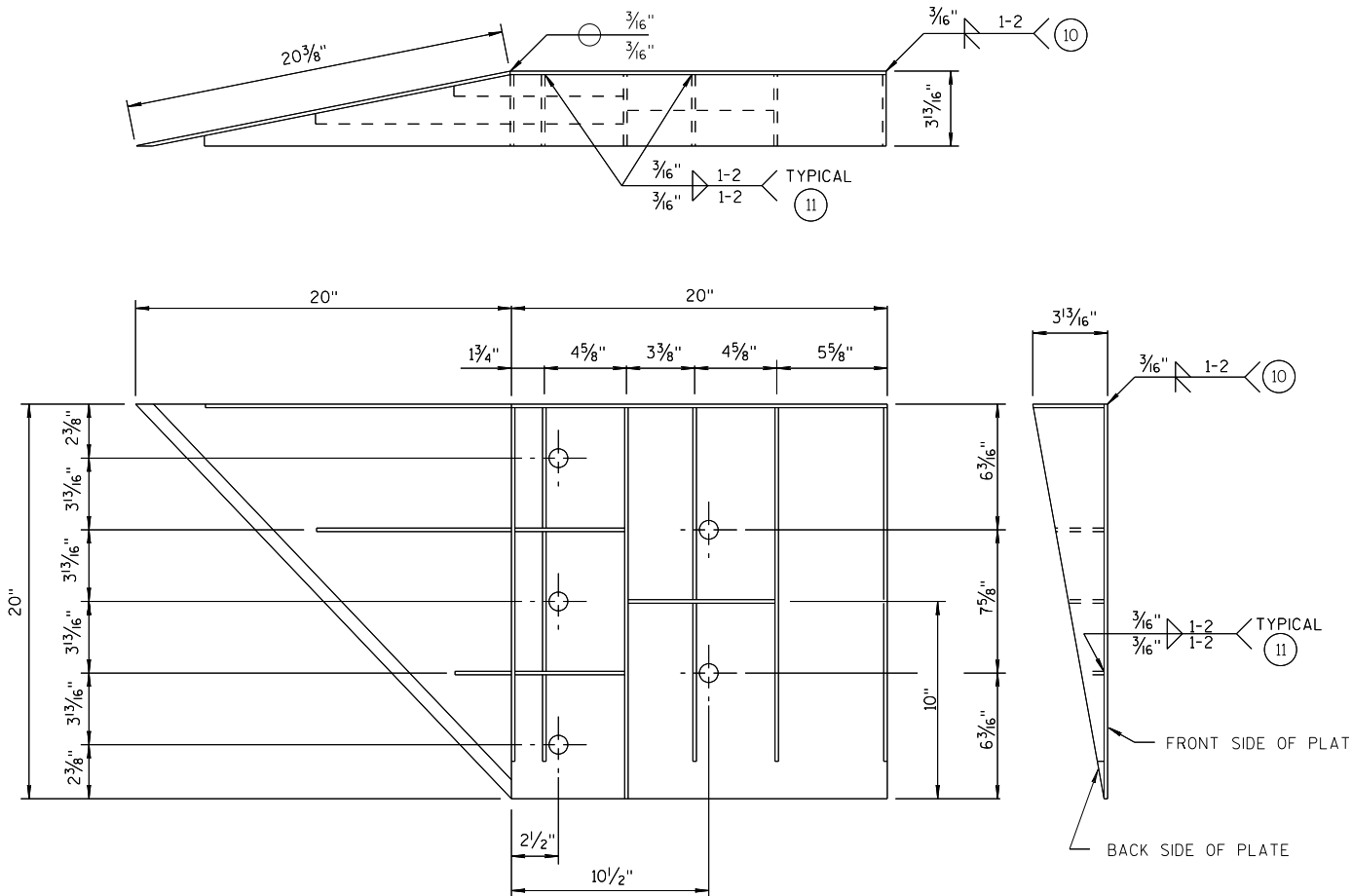
S.D.D. 14 B 45-5h

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/s/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

GENERAL NOTES

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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



WELDING INSTRUCTION
(VIEWED FROM BACK SIDE OF PLATE)

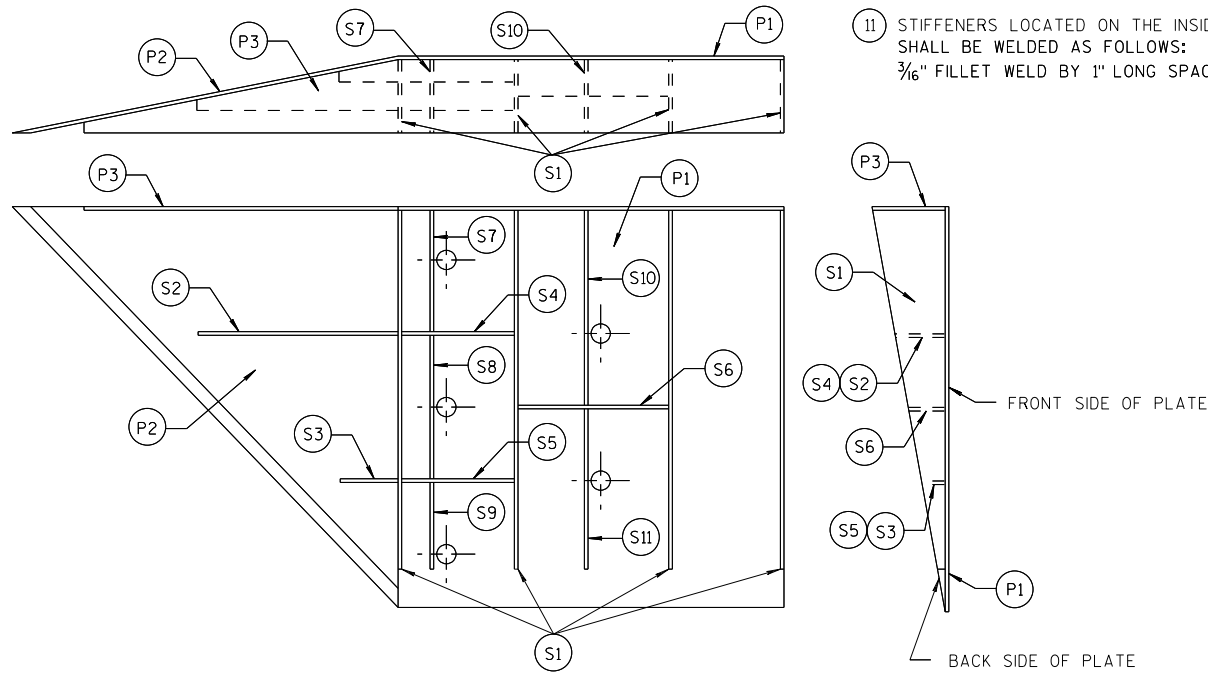


PLATE AND STIFFENER IDENTIFICATION
(VIEWED FROM BACK SIDE OF PLATE)

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

SINGLE SLOPE CONNECTION PLATE

**MIDWEST GUARDRAIL SYSTEM
THREE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

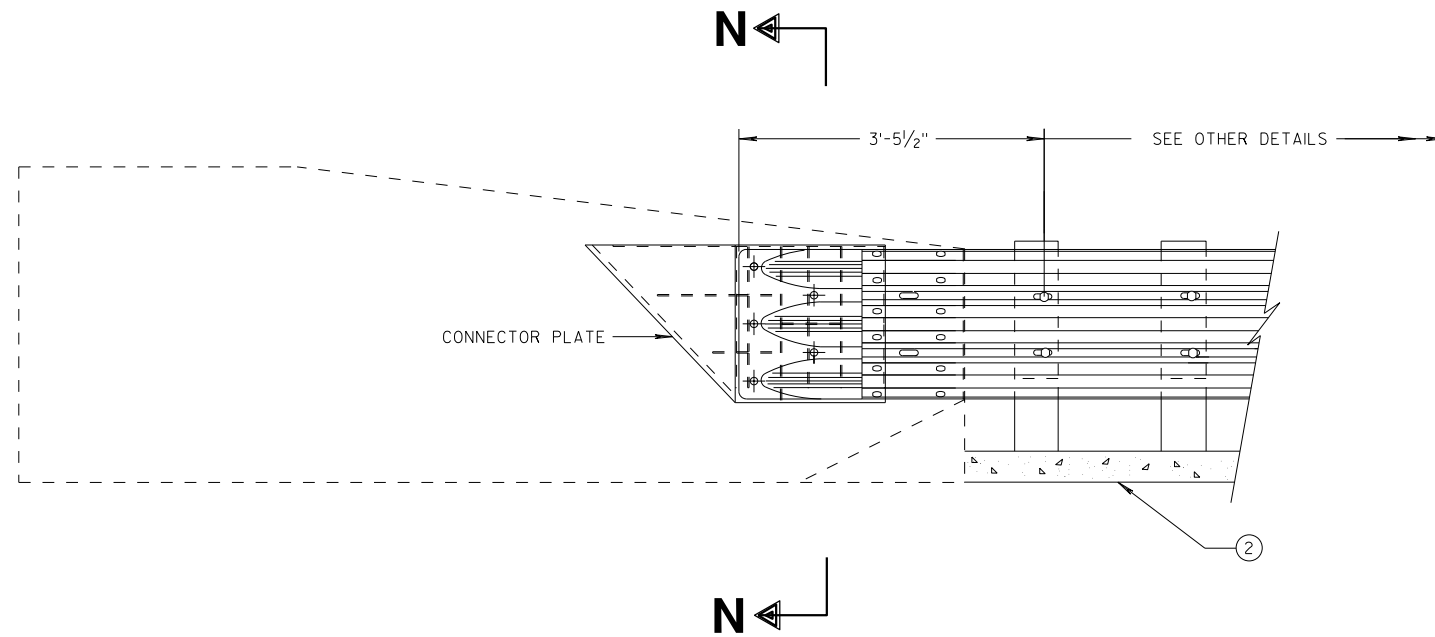
FHWA

GENERAL NOTES

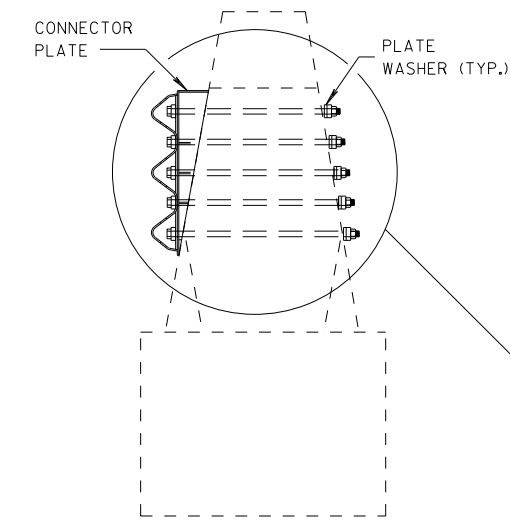
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

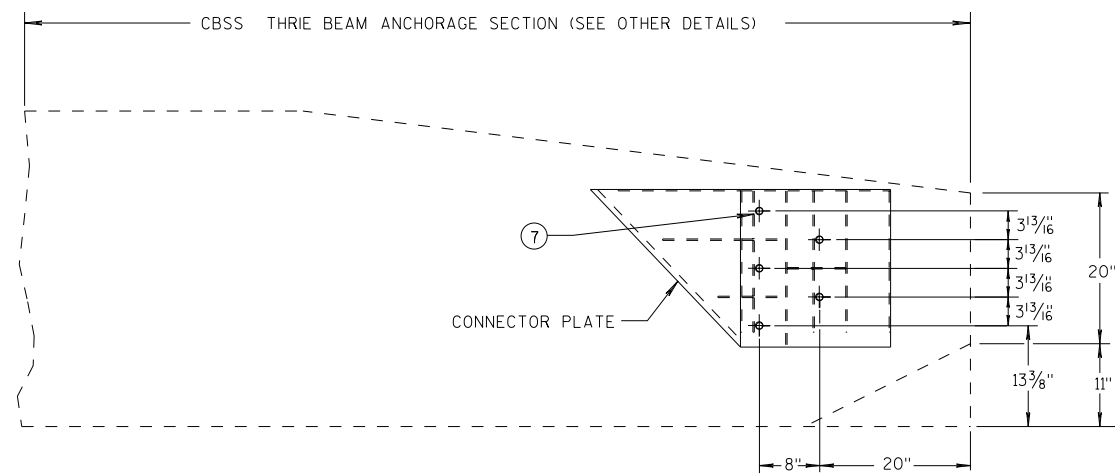
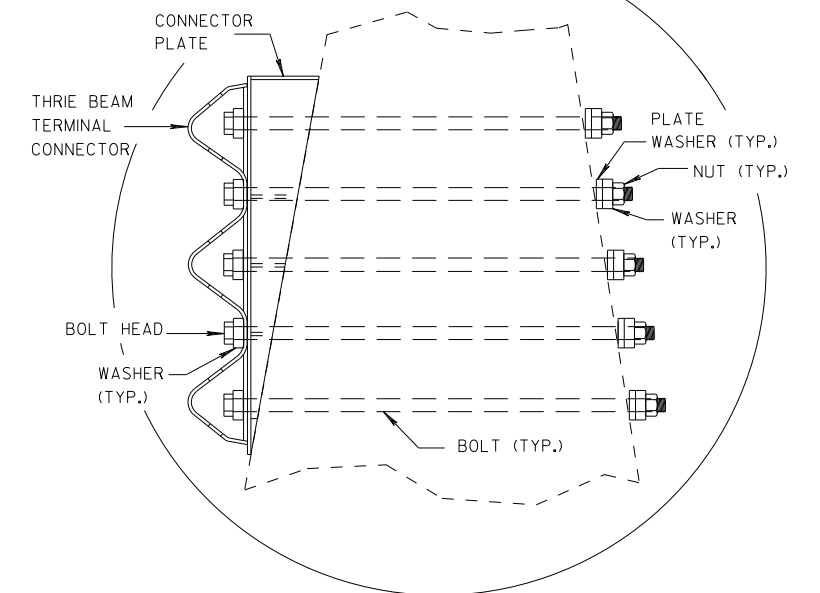
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTION PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



SECTION N-N

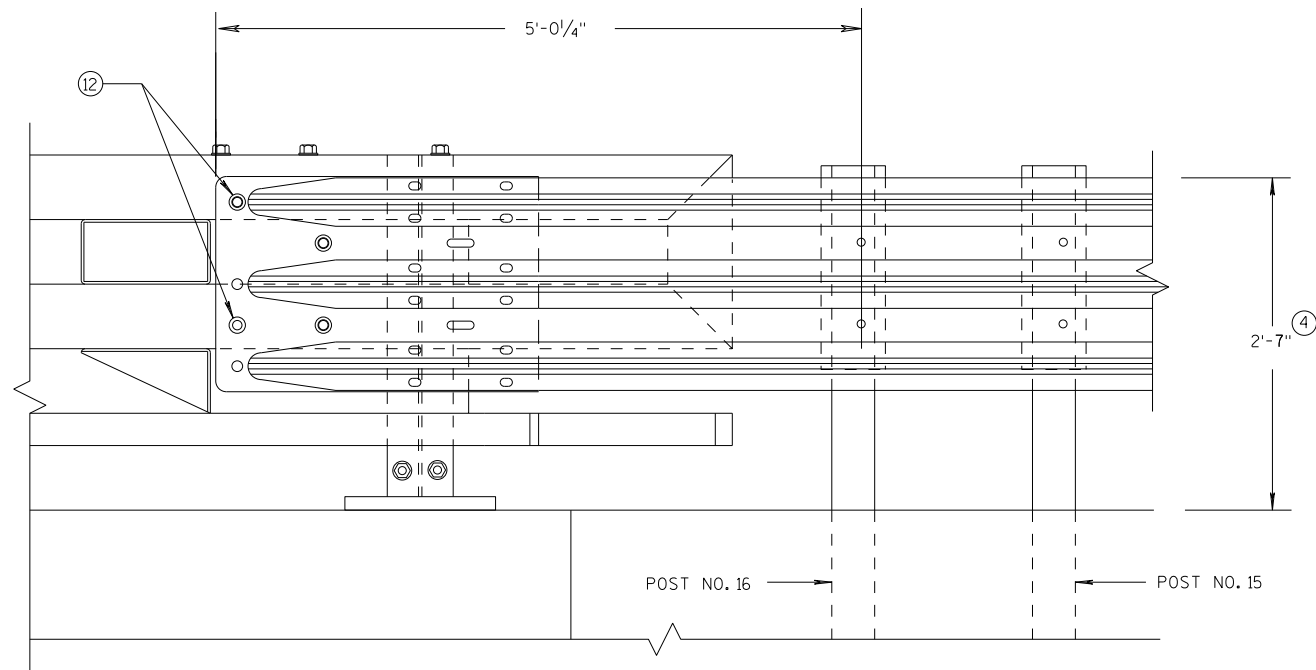


SINGLE SLOPE CONNECTION PLATE PLACEMENT

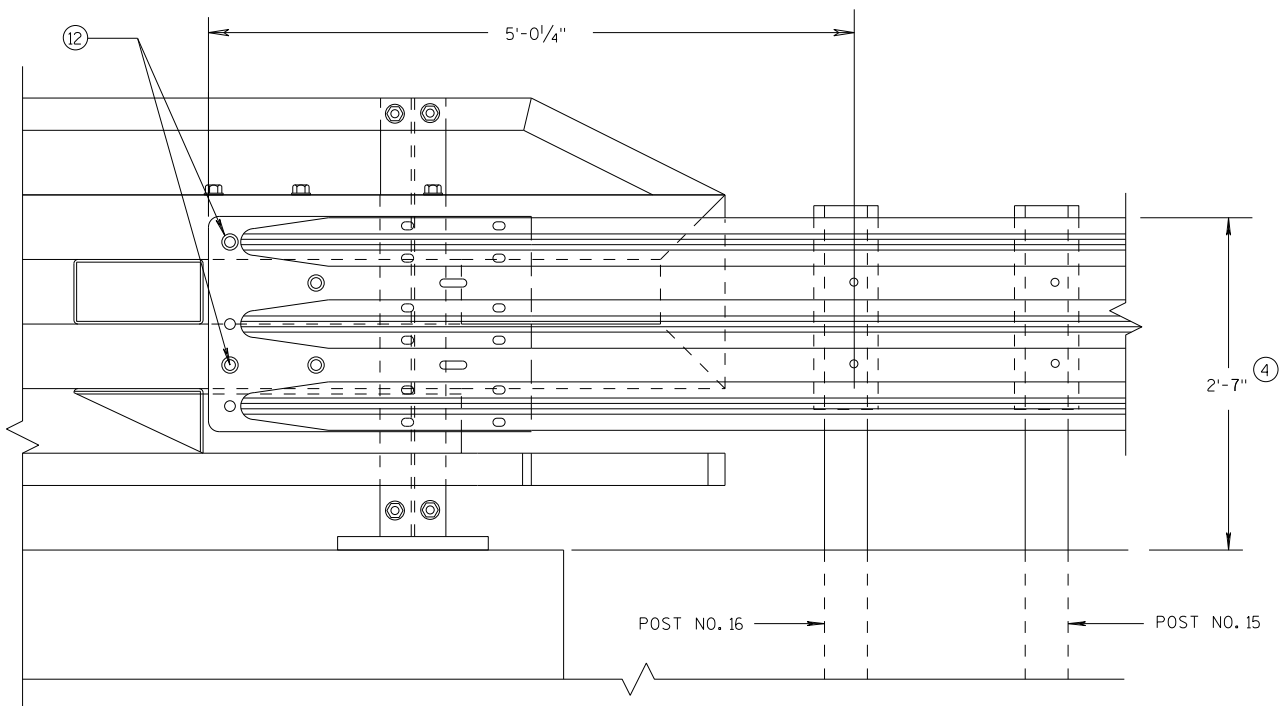
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



**ELEVATION OF DETAIL AT NY3 END POST
THRIE BEAM RAIL ATTACHMENT**



**ELEVATION OF DETAIL AT NY4 END POST
THRIE BEAM RAIL ATTACHMENT**

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS ± 1".
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

6

6

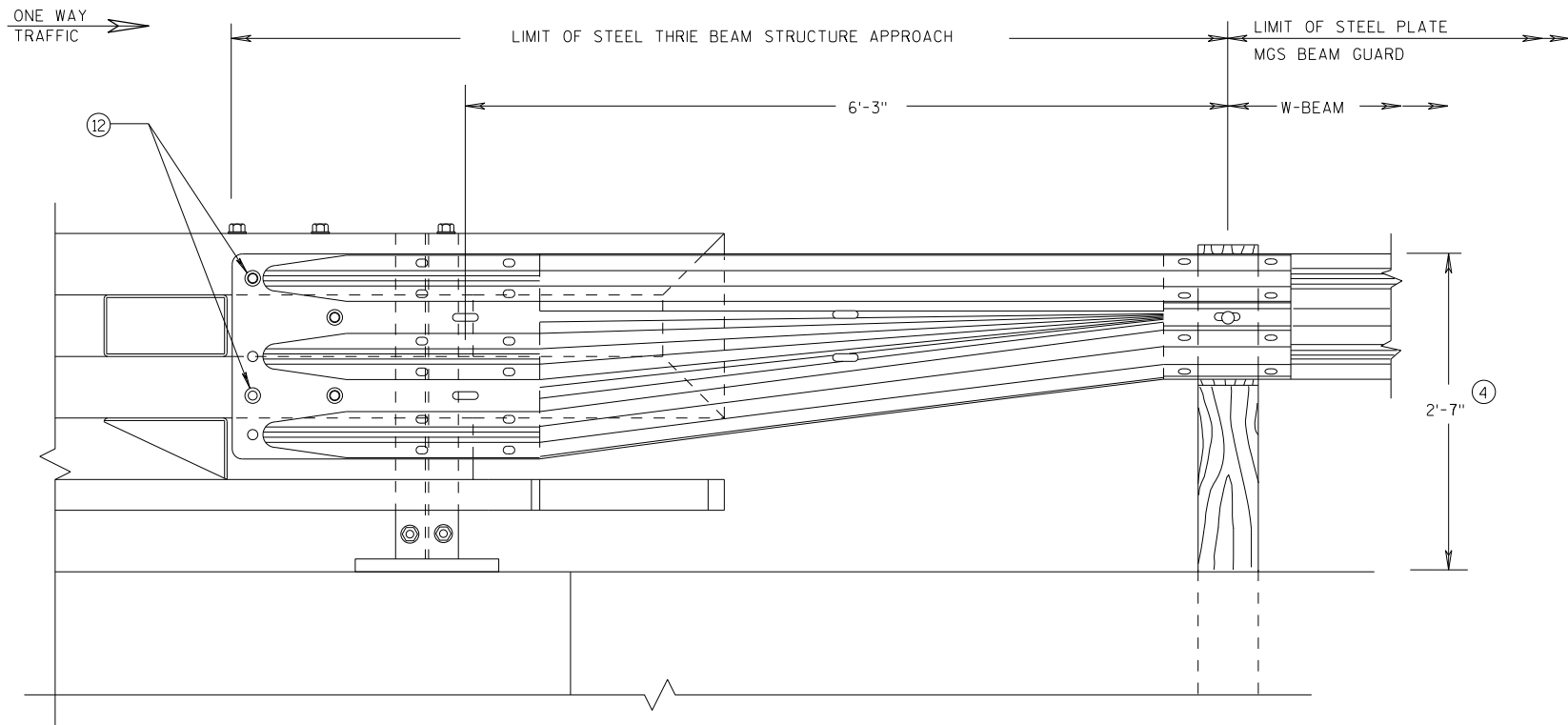
S.D.D. 14 B 45-5k

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

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

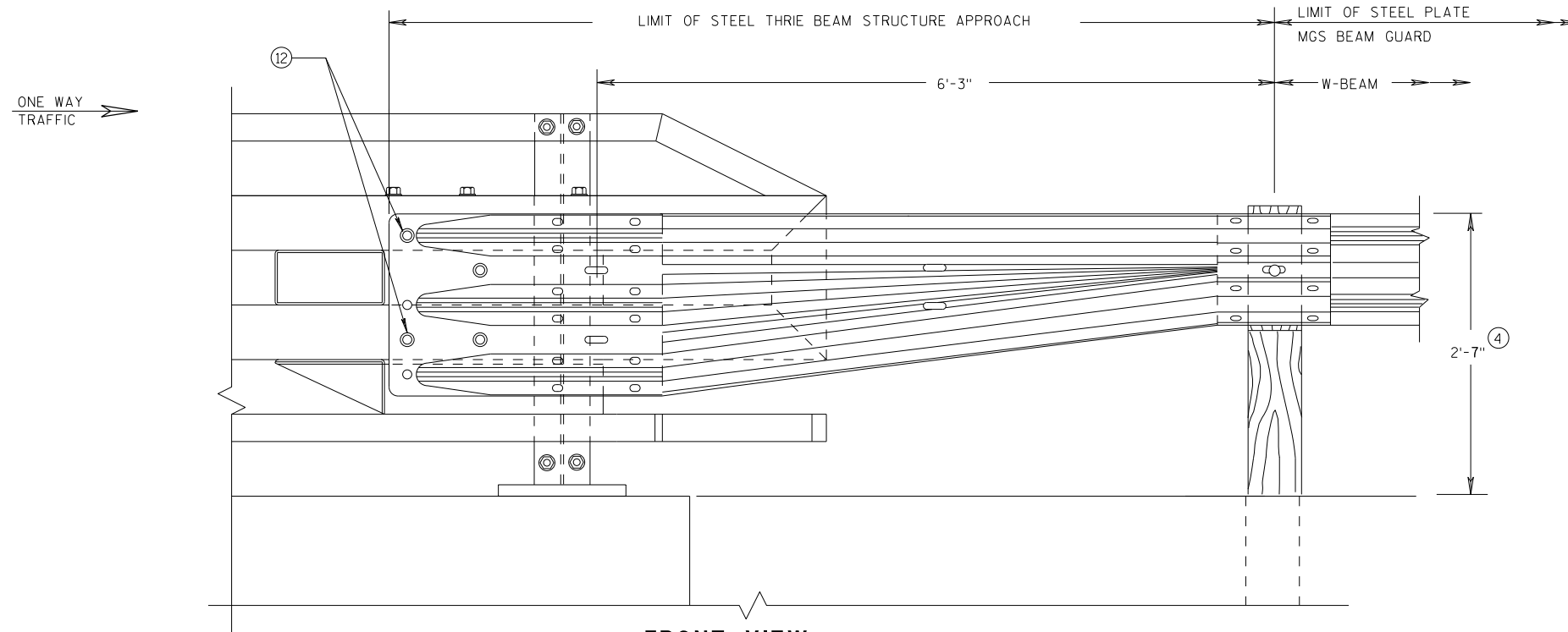
APPROVED
DATE 7/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY3"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.

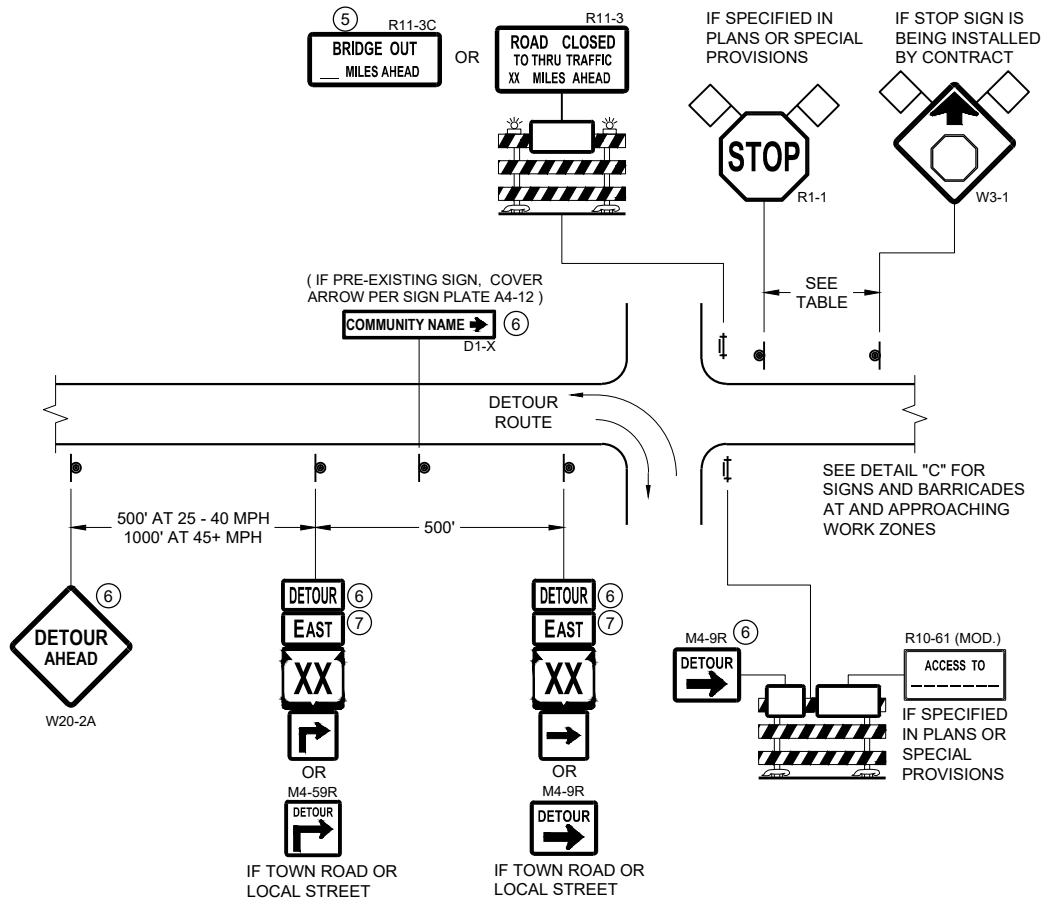


FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY4"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

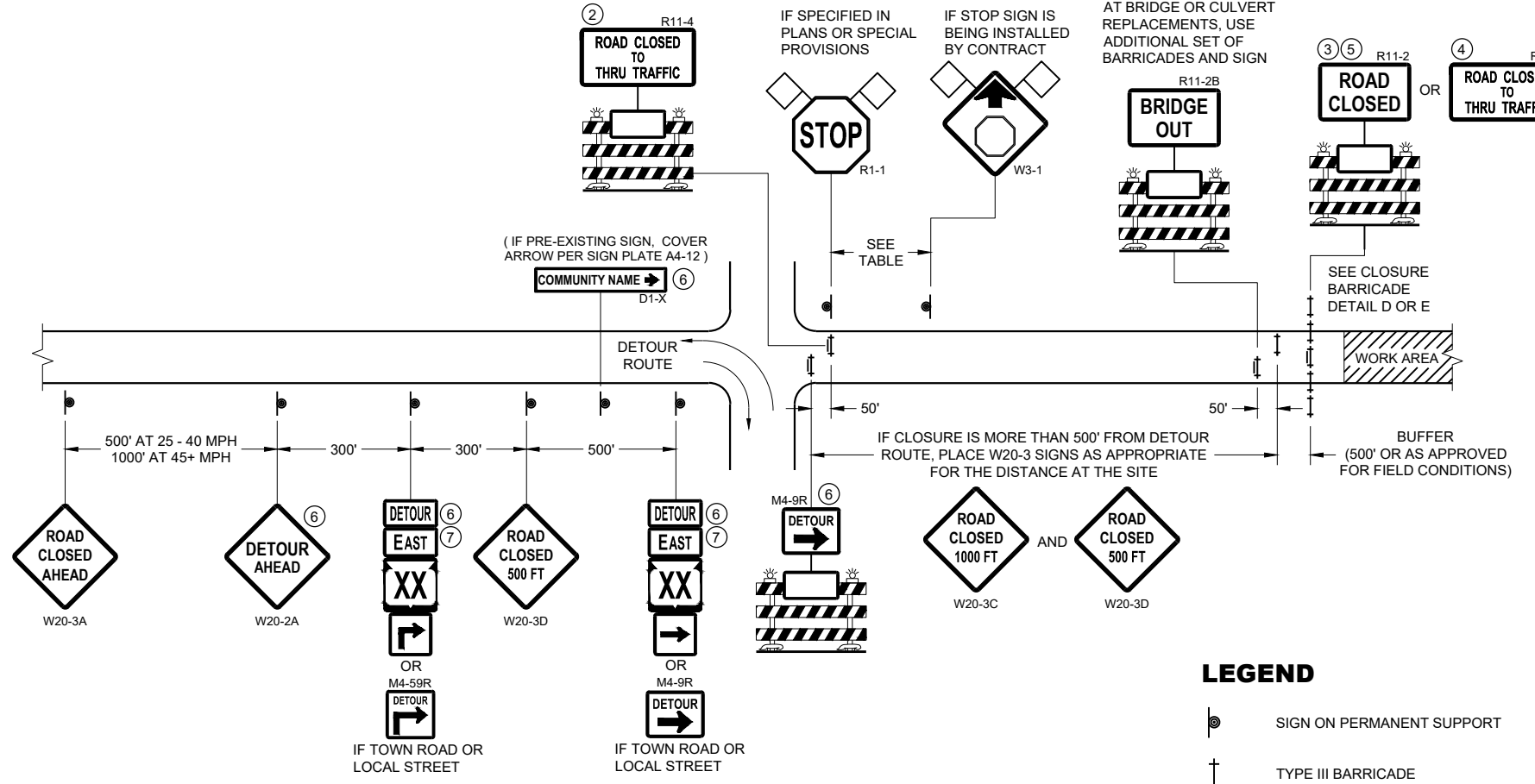
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

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



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



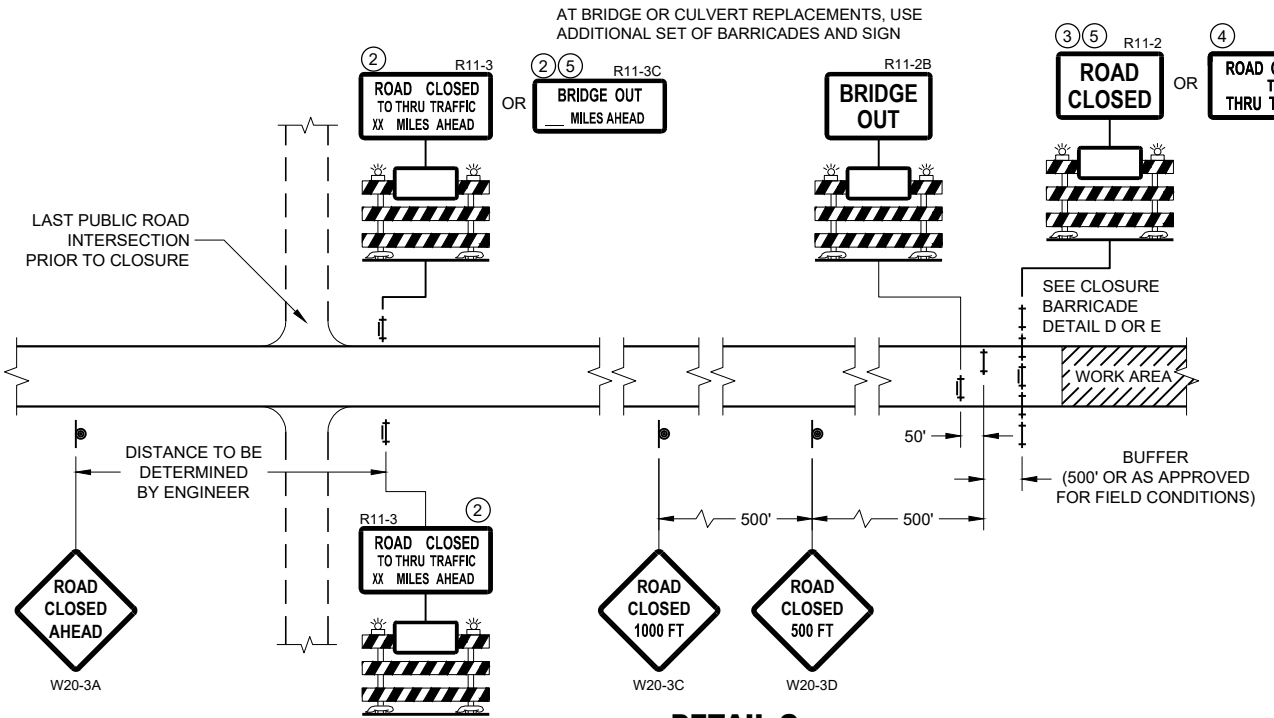
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
 WORK ZONE LESS THAN 1/2 MILE FROM
 DETOUR ROUTE (1000 FEET IF URBAN)

- 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)

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1

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

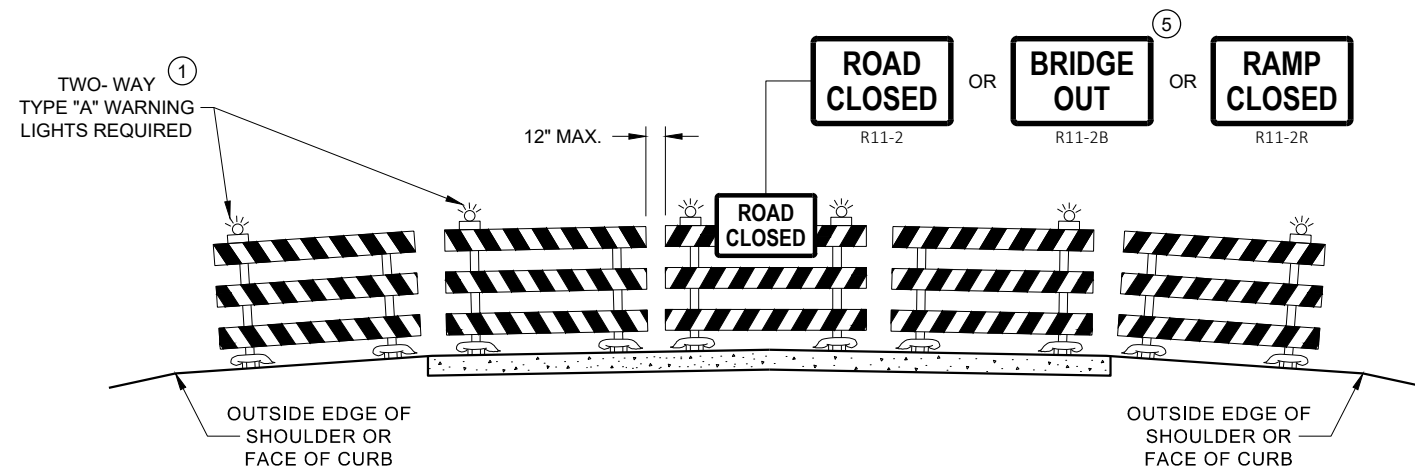


DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

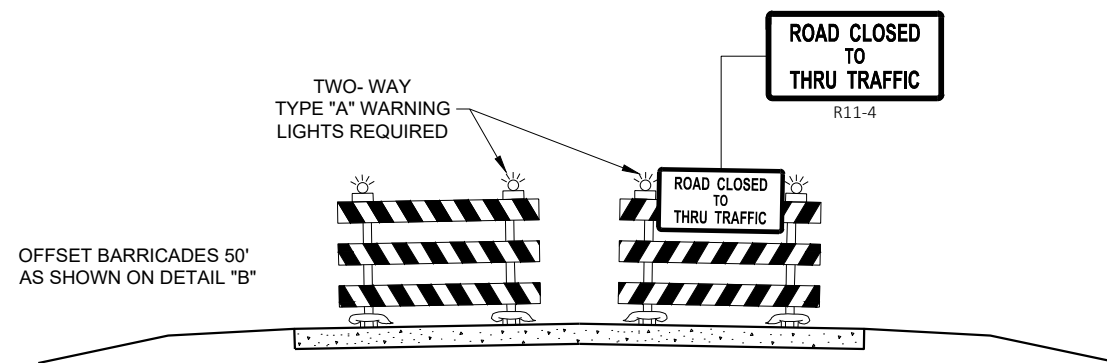
**BARRICADES AND SIGNS
 FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2023 /S/ Andrew Heidtke
 DATE DATE WORK ZONE ENGINEER
 FHWA



**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:

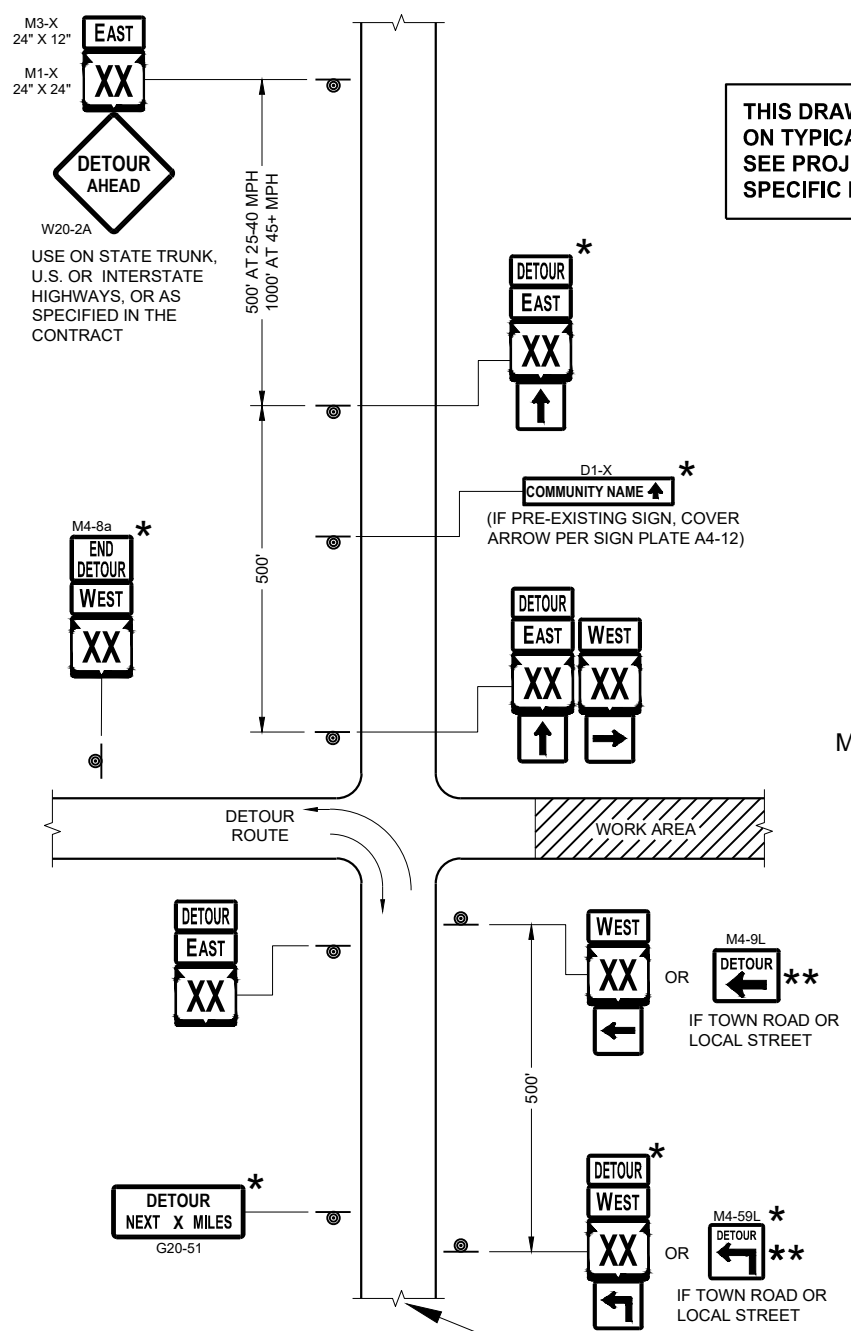
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" 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
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

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

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

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

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

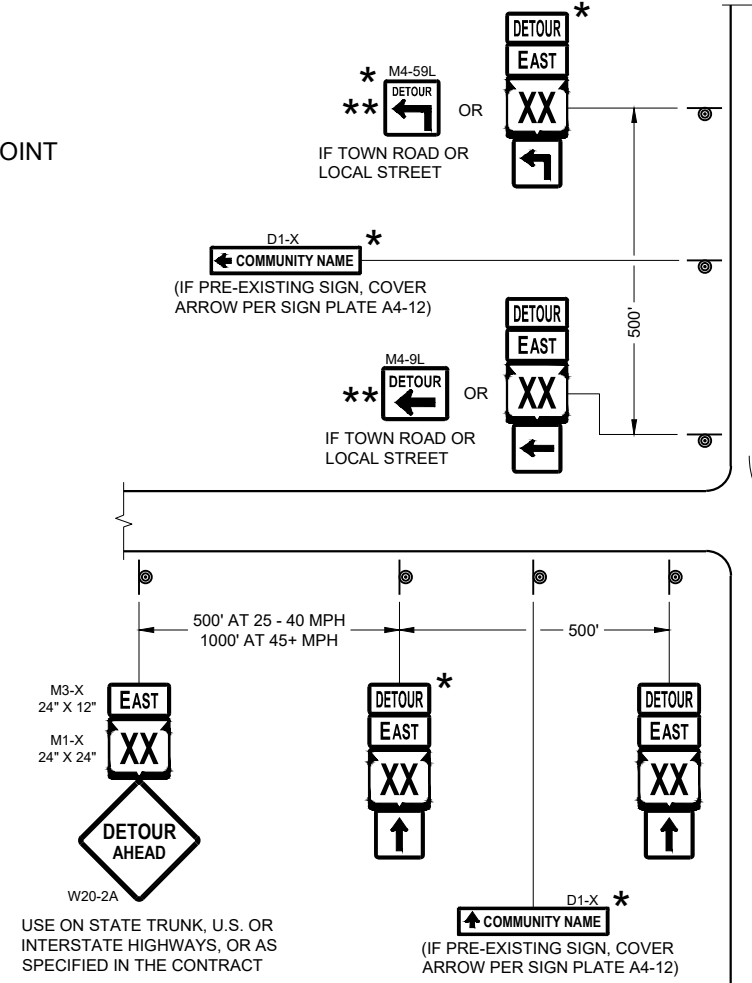
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

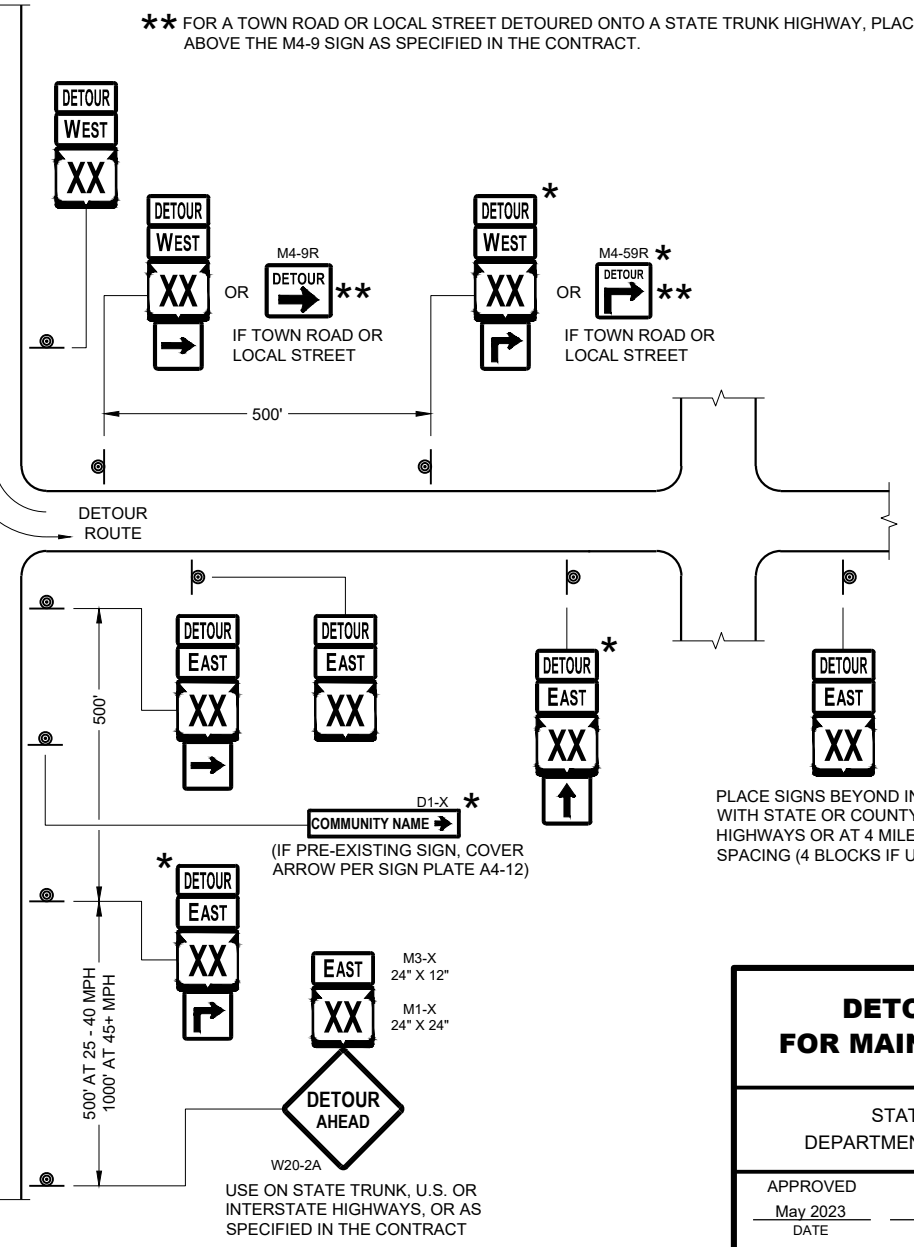
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING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

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

MATCH POINT



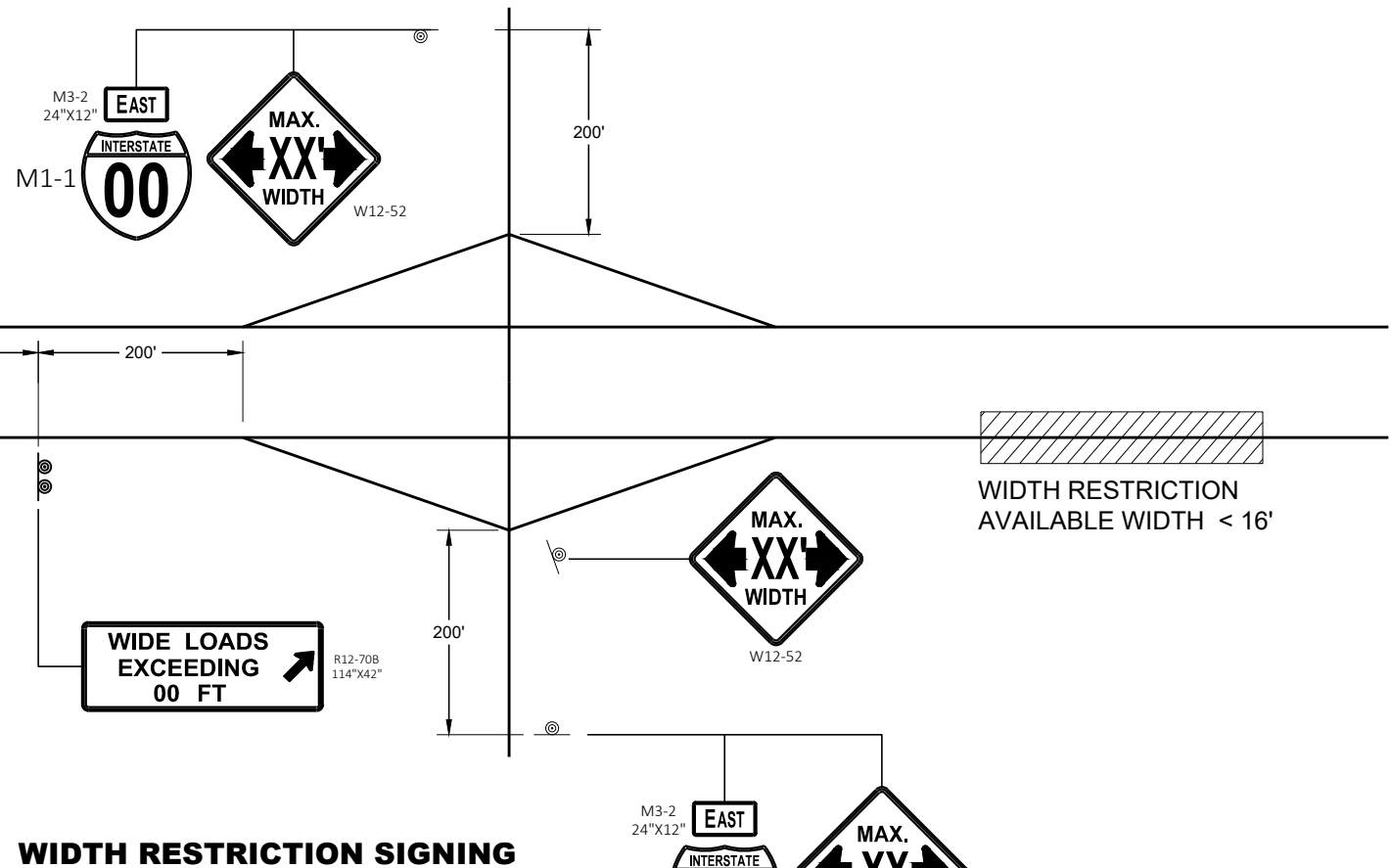
**DETAIL F
DETOUR SIGNING**



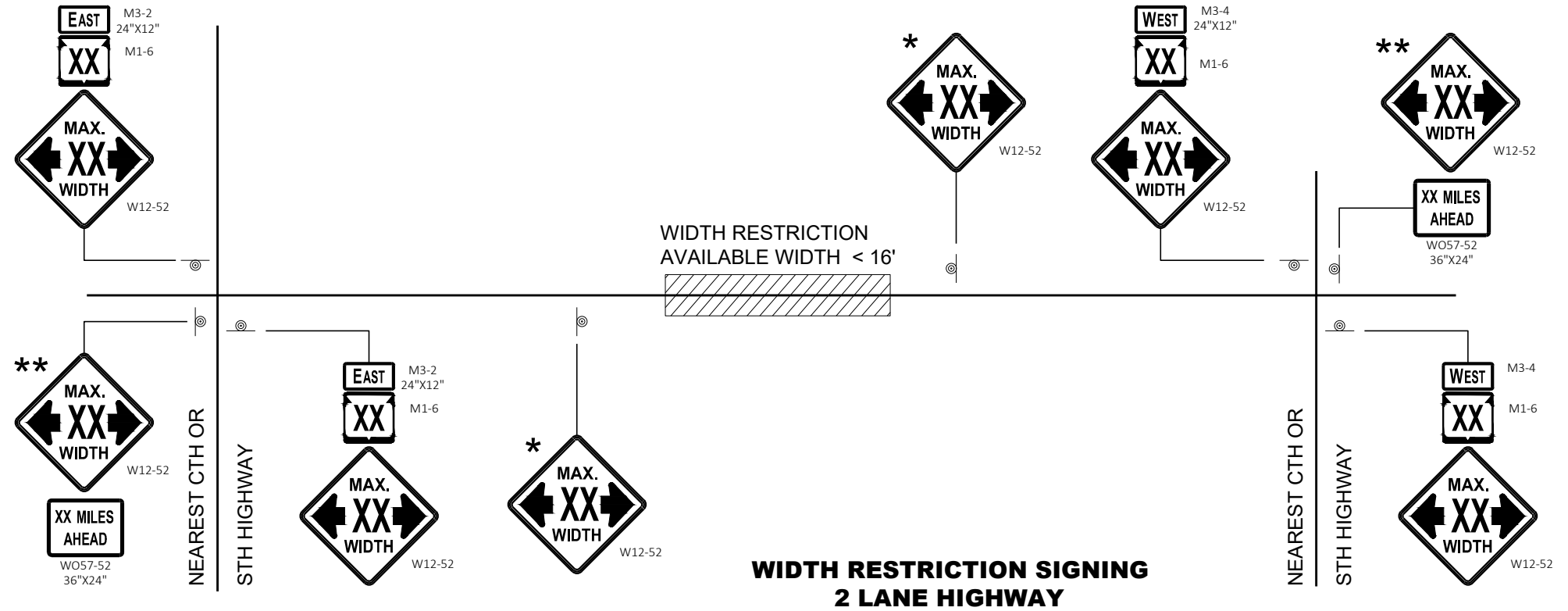
PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

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

DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



WIDTH RESTRICTION SIGNING



**WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY**

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.












WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED	/S/ Andrew Heidtke
DATE	May 2023
FHWA	WORK ZONE ENGINEER

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

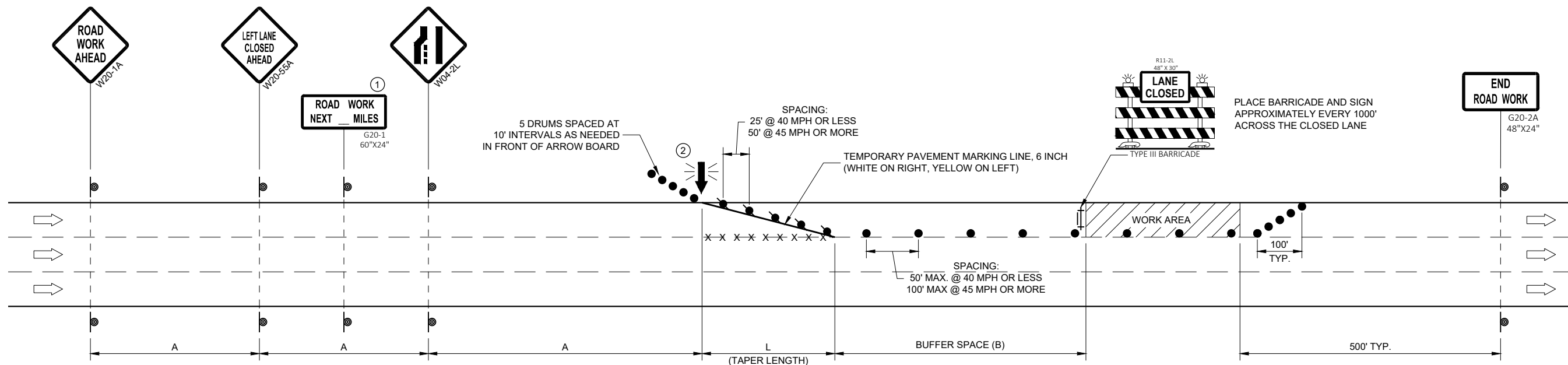
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE 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.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



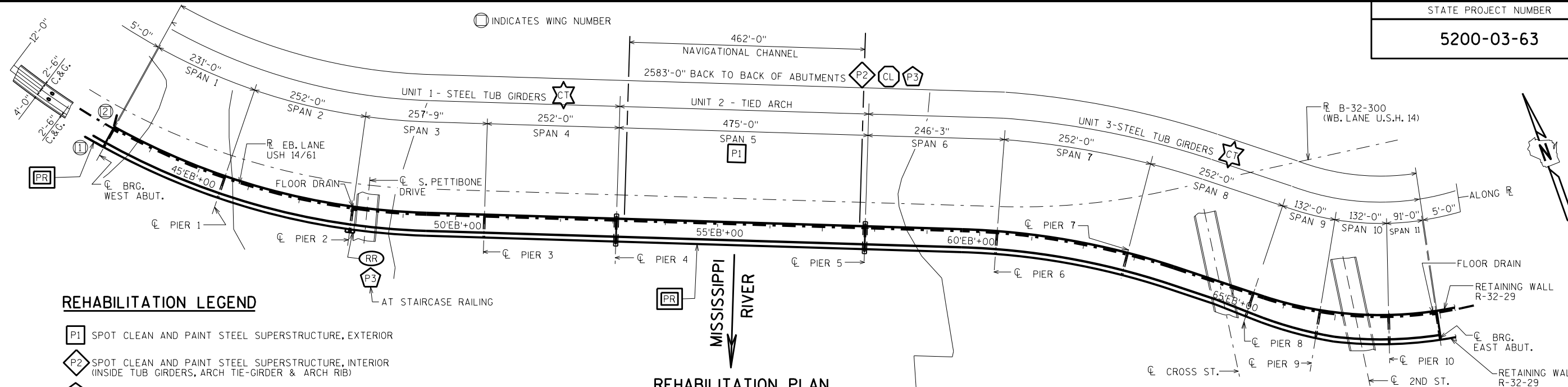
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
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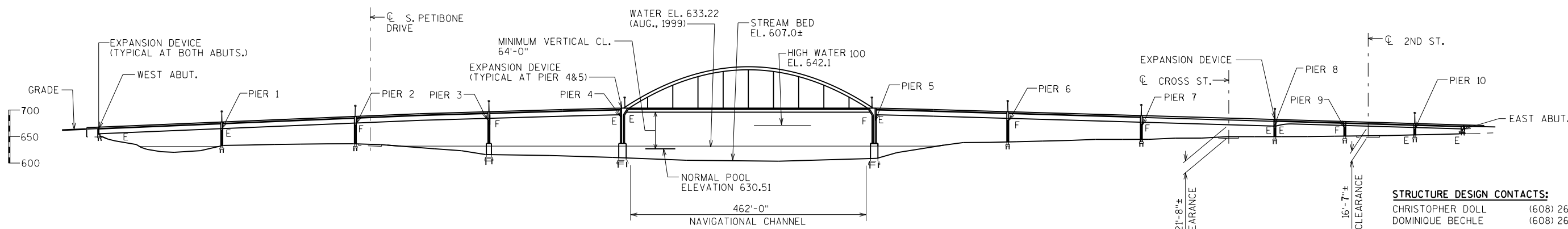
FHWA



REHABILITATION LEGEND

- P1 SPOT CLEAN AND PAINT STEEL SUPERSTRUCTURE, EXTERIOR
- P2 SPOT CLEAN AND PAINT STEEL SUPERSTRUCTURE, INTERIOR (INSIDE TUB GIRDERS, ARCH TIE-GIRDER & ARCH RIB)
- P3 SPOT CLEAN AND PAINT STEEL PEDESTRIAN RAILINGS AT SIDEWALKS AND STAIRCASE AT PIER 2
- RR REPLACE STAIRCASE PLATFORM RAILING
- CL REMOVE DEBRIS AND CLEAN BRIDGE, EXTERIOR
- CT REMOVE DEBRIS AND CLEAN INTERIOR OF TUB GIRDERS
- PR SIDEWALK RAILING POST REPAIR
- 6TH, 8TH, & 10TH POST FROM END OF WING 1 ON W. ABUT.
- 26TH POST EAST OF PIER 4, SOUTH RAIL

REHABILITATION PLAN
11 SPAN-STEEL TUB GIRDERS & STEEL TIED ARCH



SUBSTRUCTURE STATIONS

SUBSTRUCTURE UNIT	STATION
END OF SLAB	43+15.74
CL BRG. WEST ABUT.	43+20.07
CL PIER 1	45+51.07
CL PIER 2	48+03.07
CL PIER 3	50+60.82
CL PIER 4	53+12.82
CL PIER 5	57+87.82
CL PIER 6	60+34.07
CL PIER 7	62+86.07
CL PIER 8	65+38.07
CL PIER 9	66+70.07
CL PIER 10	68+02.07
CL BRG. EAST ABUT.	68+93.07
END OF SLAB	68+97.40

DESIGN DATA

LIVE LOAD:
TAKEN FROM HSI, 9/17/2002
DESIGN RATING; HS-20
INVENTORY RATING; HS-27
OPERATIONAL RATING; HS-45
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.

MATERIAL PROPERTIES:

STRUCTURAL CARBON STEEL, (ASTM A709 GRADE 36 OR A36) $F_y = 36,000$ P.S.I.

TRAFFIC VOLUME

U.S.H. 14
A.D.T.=7,550 (2022)
R.D.S.=30 M.P.H.

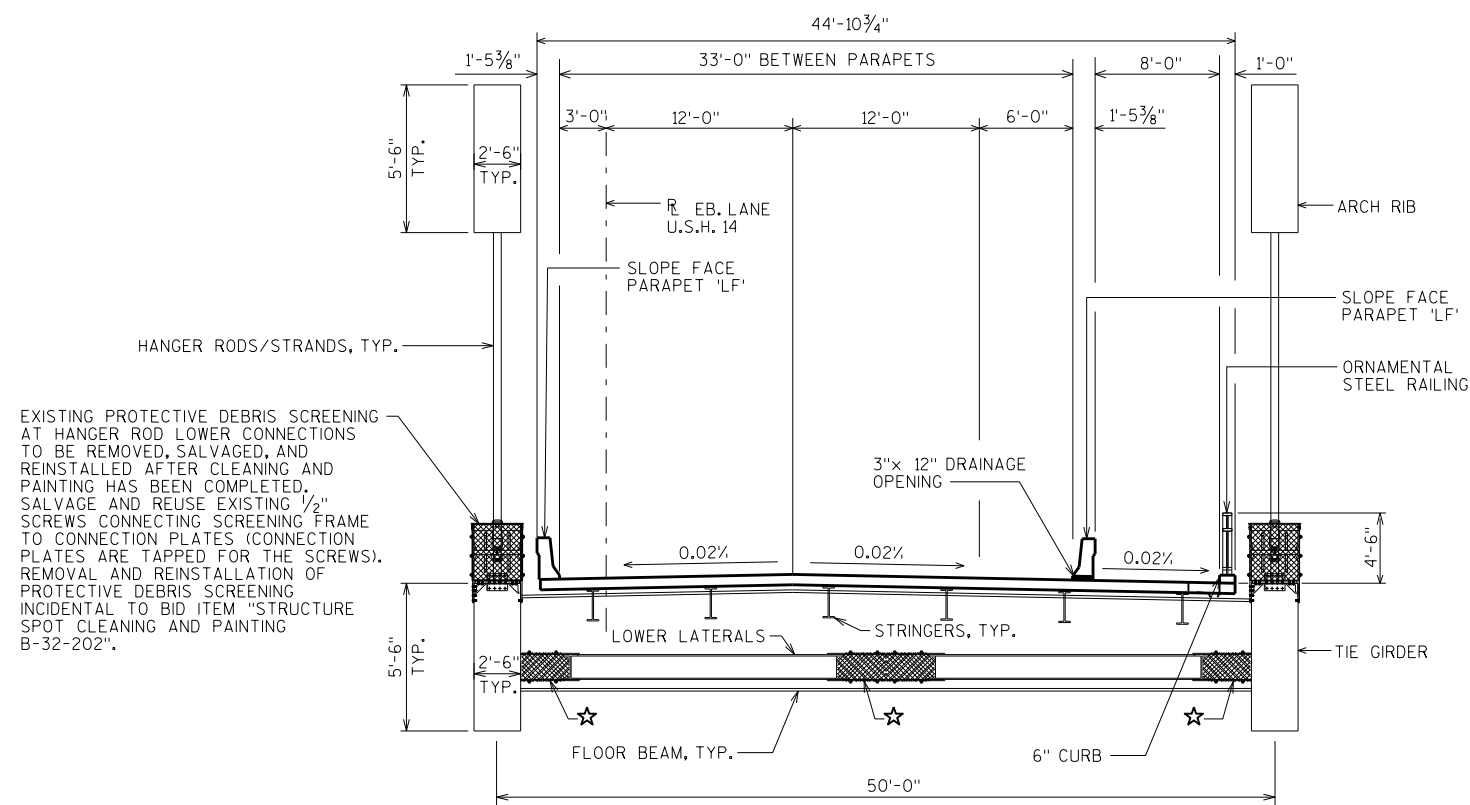
LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL CROSS SECTIONS
3. GENERAL NOTES & QUANTITIES
4. STAIRCASE RAILING REPLACEMENT
5. SIDEWALK RAILING REPAIR

STRUCTURE DESIGN CONTACTS:

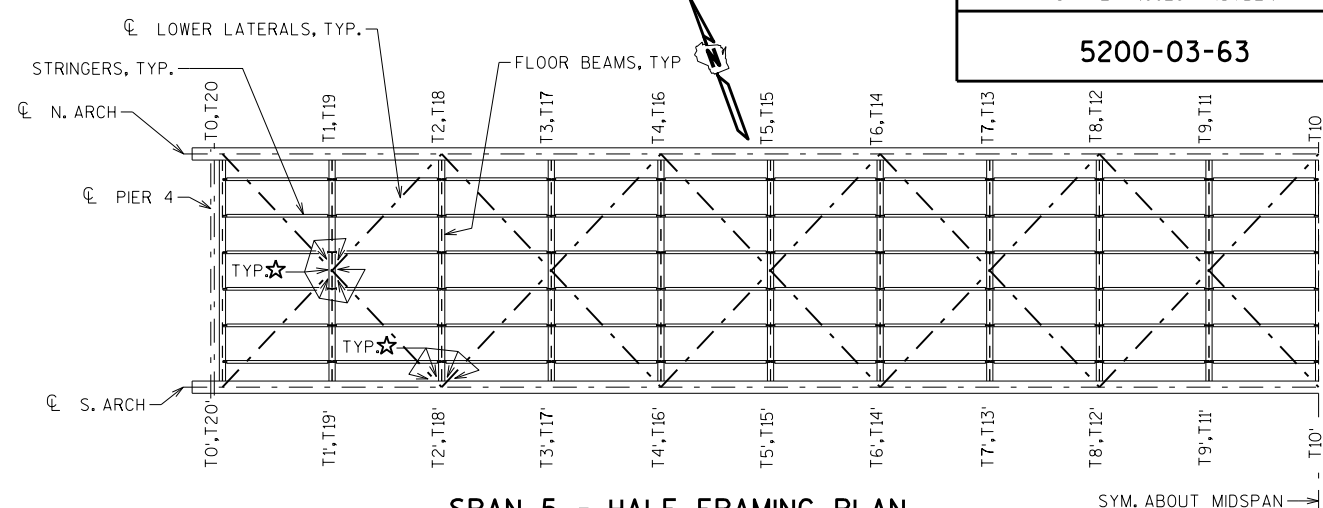
CHRISTOPHER DOLL (608) 266-3229
DOMINIQUE BECHLE (608) 261-8205

NO.	DATE	REVISION	BY
ACCEPTED		01/19/24	
		DATE	
STRUCTURE B-32-202			
USH 14/61 & STH 16 E.B. OVER MISSISSIPPI RIVER			
COUNTY	LA CROSSE	CITY	LA CROSSE
DESIGN SPEC. REHABILITATION	N/A		
DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
CAD	NA	CAD	NJK
GENERAL PLAN			SHEET 1 OF 5



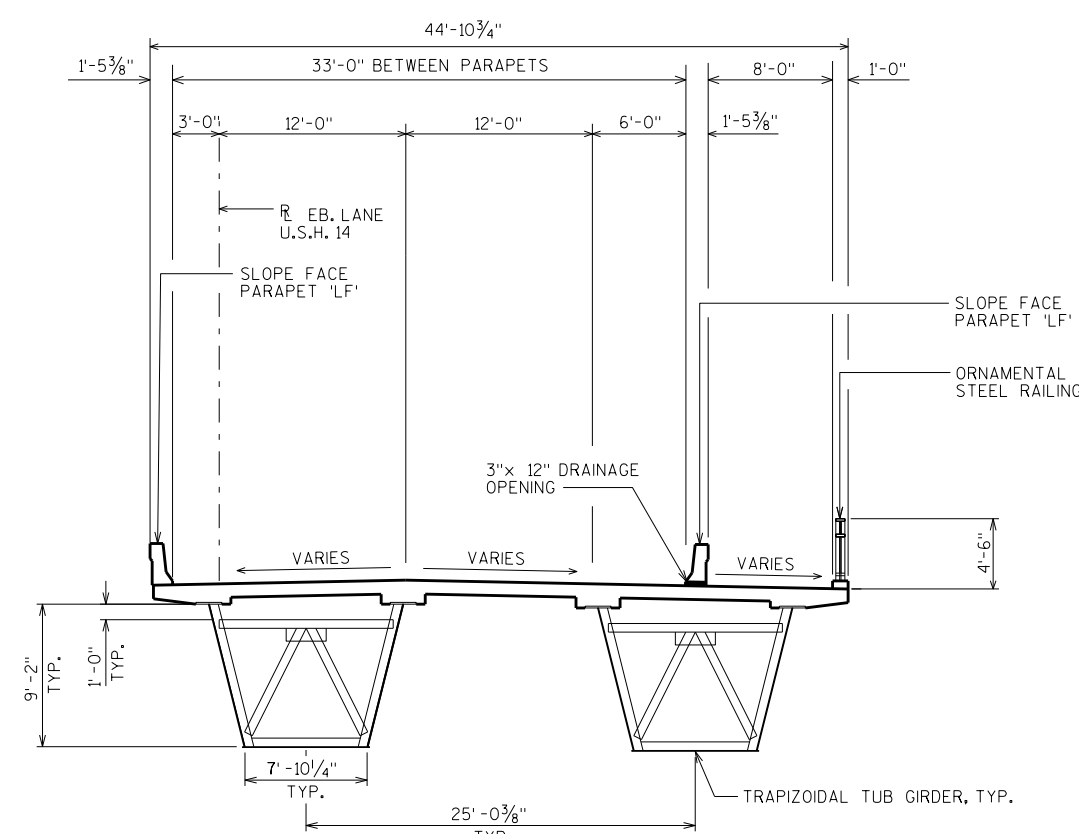
SPAN 5 CROSS SECTION-TIED ARCH
(LOOKING EAST)

EXISTING PROTECTIVE DEBRIS SCREENING AT HANGER ROD LOWER CONNECTIONS TO BE REMOVED, SALVAGED, AND REINSTALLED AFTER CLEANING AND PAINTING HAS BEEN COMPLETED. SALVAGE AND REUSE EXISTING 1/2\"/>

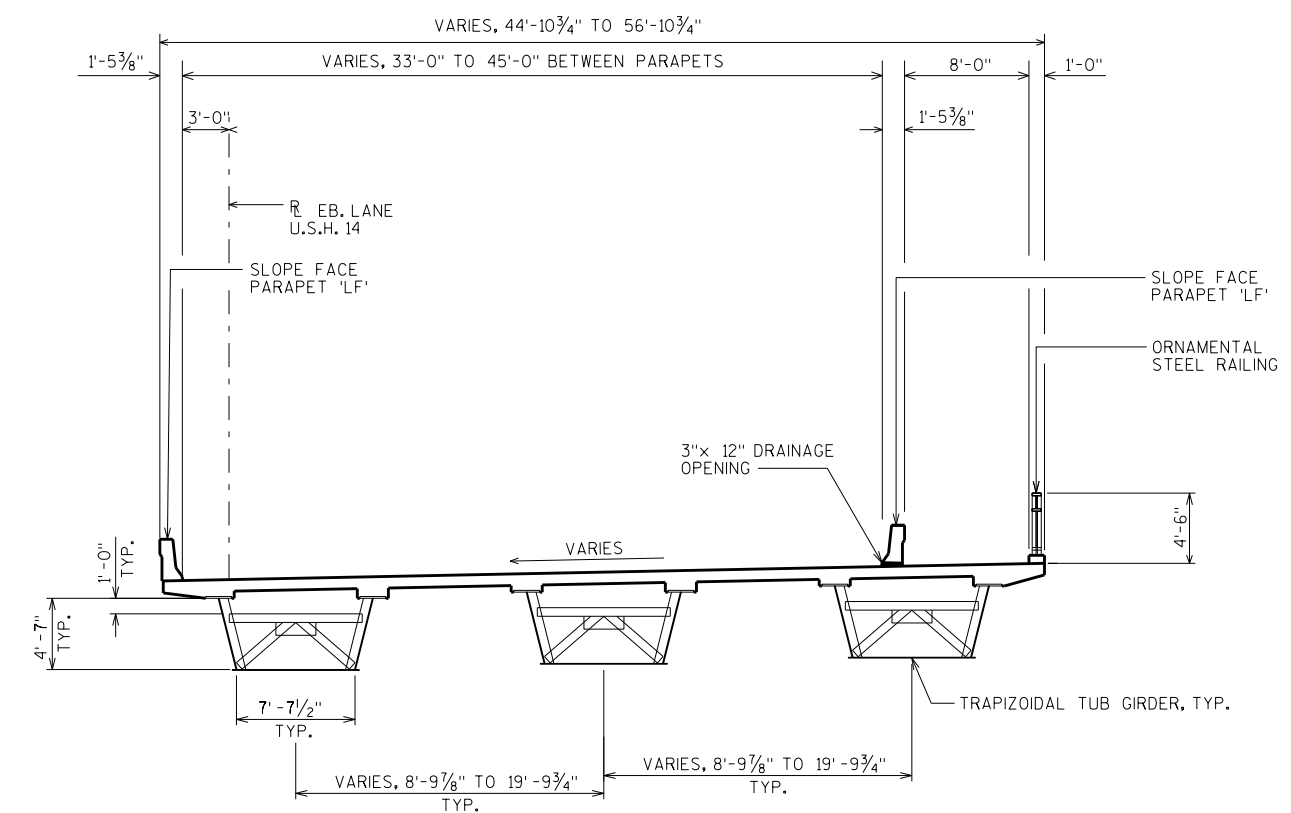


SPAN 5 - HALF FRAMING PLAN

★ EXISTING WIRE MESH BIRD SCREENING AT LOWER LATERAL CONNECTION PLATES TO BE REMOVED, SALVAGED, AND REINSTALLED AFTER CLEANING AND PAINTING HAS BEEN COMPLETED. SALVAGE AND REUSE EXISTING 1/2\"/>



CROSS SECTION- SPANS 1 THRU 4 & 6 THRU 8 - DUAL TUB GIRDERS
(LOOKING EAST)



CROSS SECTION- SPANS 9 THRU 11 - 3 TUB GIRDERS
(LOOKING EAST)

8

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-202			
DRAWN BY		CAD	PLANS CKD. NJK
TYPICAL CROSS SECTIONS			SHEET 2

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE COLOR OF THE FINISH EXTERIOR EPOXY TOP COAT OF THE WEATHERING STEEL TUB GIRDERS WITHIN 6'-0" OF EXPANSION JOINTS SHALL BE BROWN, (AMS STANDARD COLOR NO. 20059) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

THE COLOR OF THE FINISH EXTERIOR EPOXY TOP COAT OF THE TIED ARCH AND PEDESTRIAN RAILINGS SHALL BE BLUE, (AMS STANDARD COLOR NO. 25240) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

THE COLOR OF THE FINISH INTERIOR EPOXY TOP COAT OF THE TUB GIRDERS AND TIED ARCH SHALL BE WHITE, (AMS STANDARD COLOR NO. 27925) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

ACCESS TO THE INTERIOR OF TUB GIRDERS IS AVAILABLE AT THE WEST ABUTMENT AND AT PIER 4 FOR SPANS 1 THRU 4, AND AT PIERS 5 & 8 FOR SPANS 6 THRU 11.

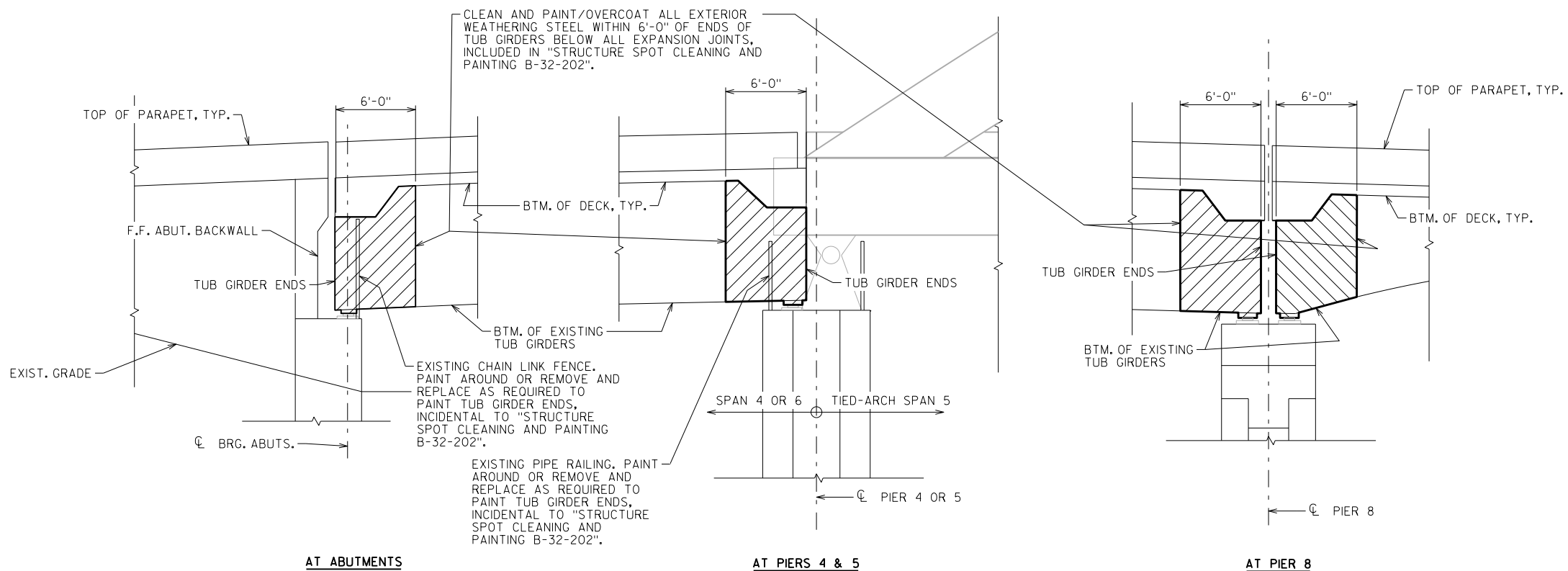
ACCESS TO THE INTERIOR OF THE TIED ARCH RIB AND TIE-GIRDER IS AVAILABLE AT PIERS 4 & 5. ACCESS HATCHES ARE LOCATED IN THE SIDEWALK/MULTI-USE PATH ON THE SOUTH SIDE OF THE BRIDGE AT THESE PIER LOCATIONS.

SEE ROADWAY PLANS FOR TRAFFIC CONTROL REQUIREMENTS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	WEST ABUT.	SUPER-UNIT 1	SUPER-UNIT 2	SUPER-UNIT 3	PIER 2	TOTALS
SPV.0060	SIDEWALK RAILING POST REPAIR	EACH	3	—	1	—	—	4
SPV.0060	BRIDGE CLEANING B-32-202	EACH	—	—	—	—	—	1
SPV.0060	BRIDGE CLEANING INSIDE TUB GIRDERS B-32-202	EACH	—	—	—	—	—	1
SPV.0060	STRUCTURE SPOT CLEANING AND PAINTING B-32-202	EACH	—	3500 SF*	5300 SF*	5270 SF*	—	1
SPV.0060	STAIRCASE PLATFORM RAILING REPLACEMENT	EACH	—	—	—	—	1	1

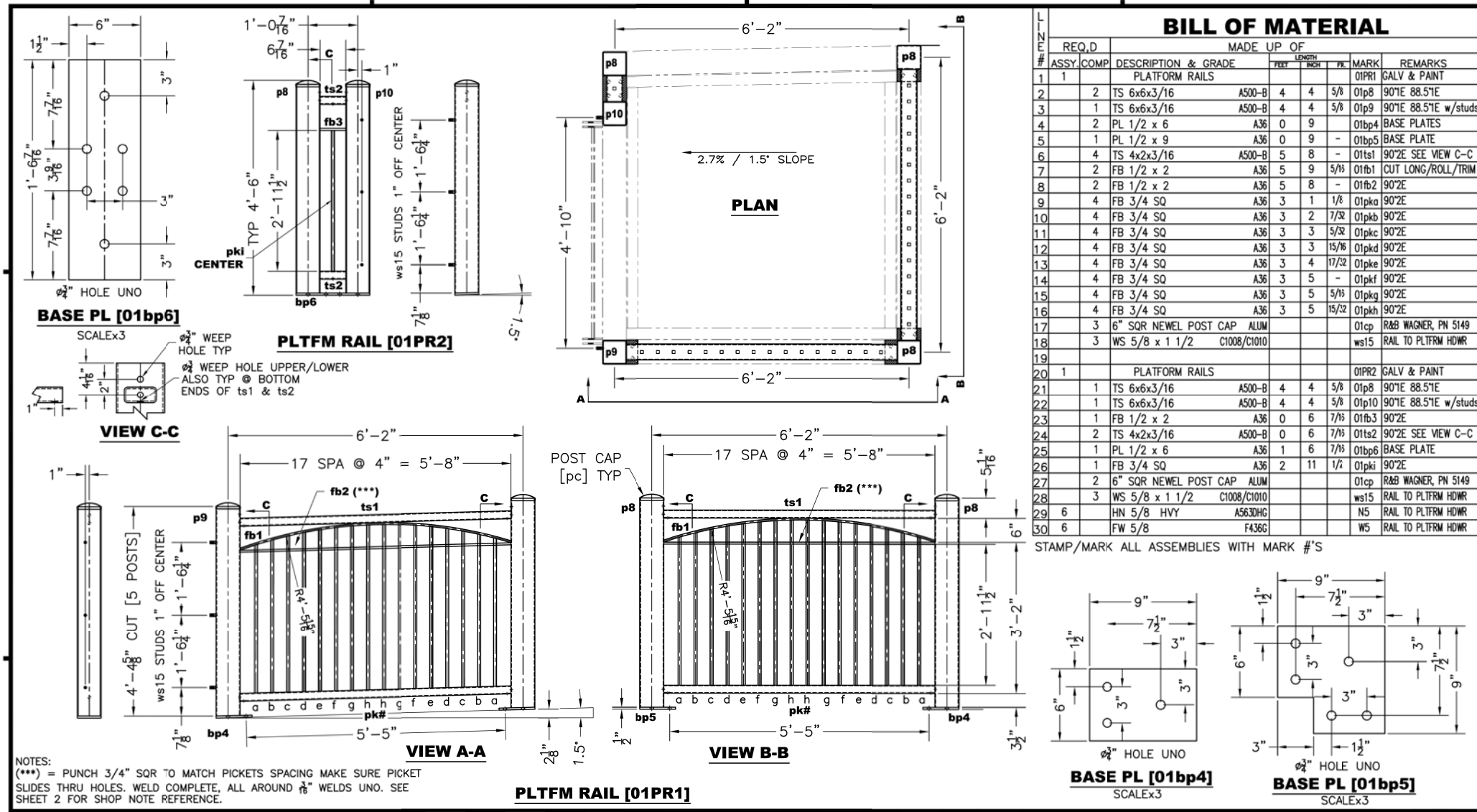
*ESTIMATED SQUARE FOOT QUANTITIES SHOWN FOR INFORMATION ONLY. ITEM TO BE BID AS A SINGLE AMOUNT FOR ALL PAINTING ON THE STRUCTURE. QUANTITIES SHOWN ARE APPROXIMATE AND ADDITIONAL CLEANING/PAINTING MAY BE REQUIRED DURING CONSTRUCTION AND SHOULD BE PERFORMED AS DIRECTED BY THE ENGINEER.



EXTERIOR WEATHERING STEEL PAINTING AT EXPANSION JOINTS

(SIDE ELEVATION VIEWS)

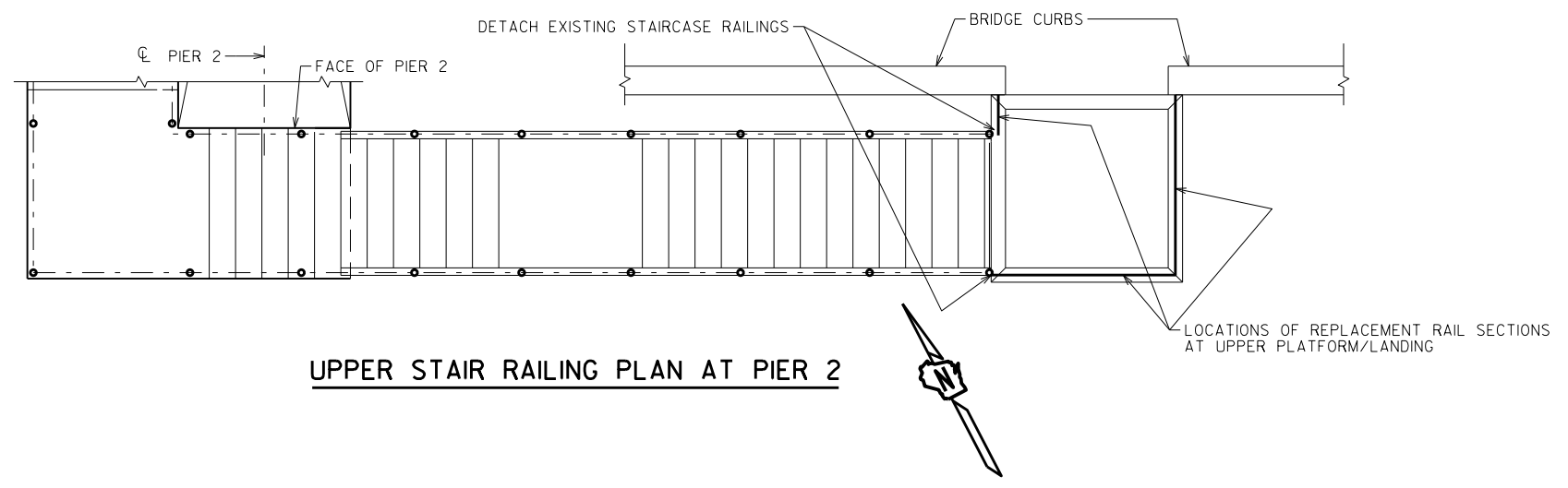
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-202			
		DRAWN BY CAD	PLANS CKD. NJK
GENERAL NOTES & QUANTITIES			SHEET 3



NOTES

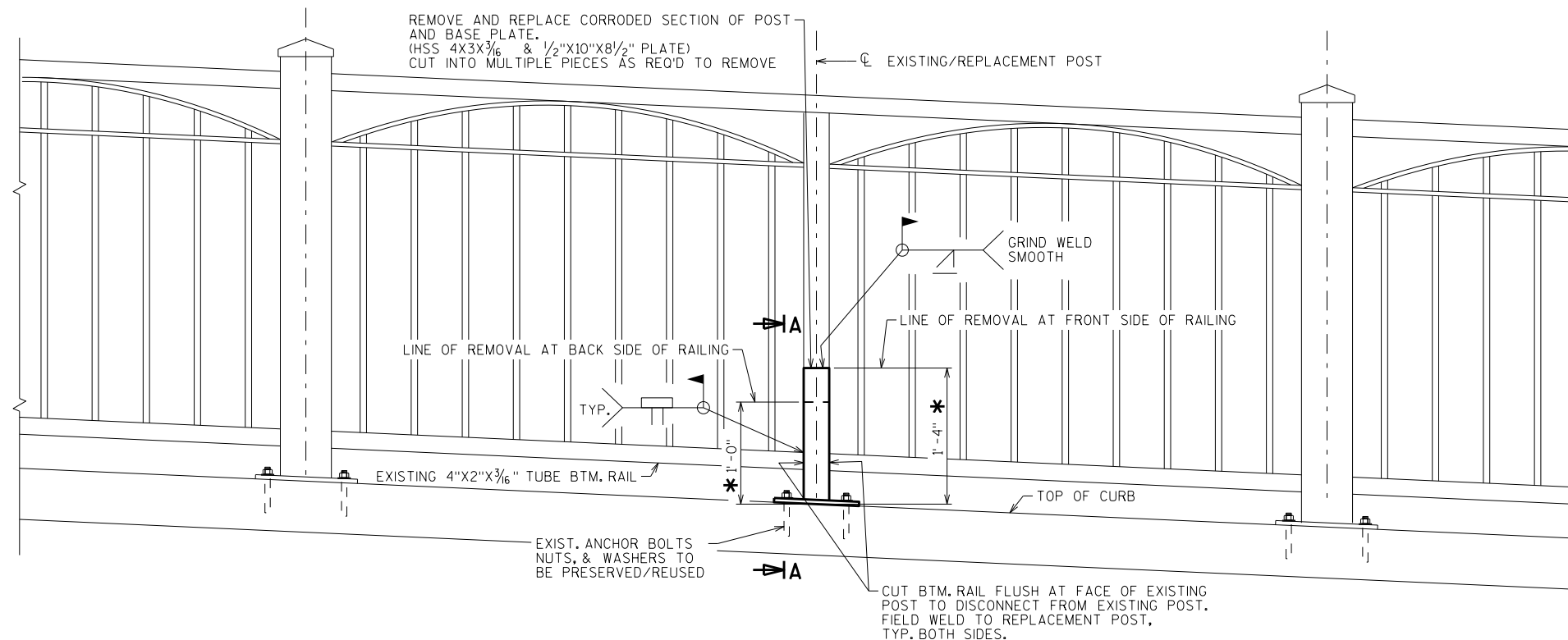
- REMOVE AND COMPLETELY REPLACE THE PEDESTRIAN RAILINGS AT THE TOP LANDING/PLATFORM OF THE STAIRCASE AT PIER 2. EXISTING ANCHOR BOLTS/STUDS (WELDED TO EXISTING LANDING FRAMING) AND NUTS TO BE SALVAGED AND REUSED.
- RAILING REPLACEMENT SHALL INCLUDE ALL PIECES (TAKEN FROM ORIGINAL SHOP DRAWINGS OF RAIL) AND WORK SHOWN, AND BE INCLUDED IN BID ITEM "STAIRCASE PLATFORM RAILING REPLACEMENT", INCLUDING REMOVAL AND DISPOSAL OF EXISTING RAILING, AS WELL AS GALVANIZING AND SHOP PAINTING THE NEW RAILING SECTIONS.
- AFTER REMOVING EXISTING RAILINGS, TOUCH UP WITH ZINC-RICH PRIMER ALL SURFACES OF PLATFORM FRAMING BELOW EXISTING BASE PLATES AS DIRECTED BY ENGINEER, INCLUDED IN "STRUCTURE SPOT CLEANING AND PAINTING B-32-202".
- EXISTING ALUMINUM CAPS (MARK 01CP) MAY BE REMOVED FROM EXISTING POSTS AND SALVAGED FOR PLACEMENT ON NEW POST AT CONTRACTOR'S OPTION, PROVIDED THEY ARE FREE FROM DAMAGE CAUSED BY REMOVAL/REINSTALLATION, AS DETERMINED BY THE ENGINEER.
- DETACH EXISTING STAIRCASE RAIL ON STAIR STRINGERS FROM END POST TO ALLOW EXISTING RAILING REMOVAL. PRESERVE AND REUSE EXISTING NUTS.
- 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 AND BARS SHALL CONFORM TO ASTM A36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B. WELD ALL COMPONENTS TOGETHER WITH 3/16" FILLET WELDS ALL AROUND.
- CAULK AROUND PERIMETER OF BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
- ALL STEEL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 25240, BLUE.
- VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.
- TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

EXISTING RAILING SHOP DRAWING - REPLACEMENT RAILING AT PIER 2 STAIRCASE PLATFORM



UPPER STAIR RAILING PLAN AT PIER 2

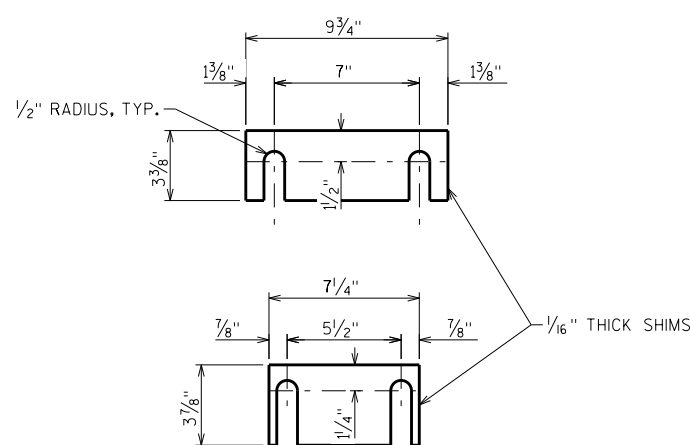
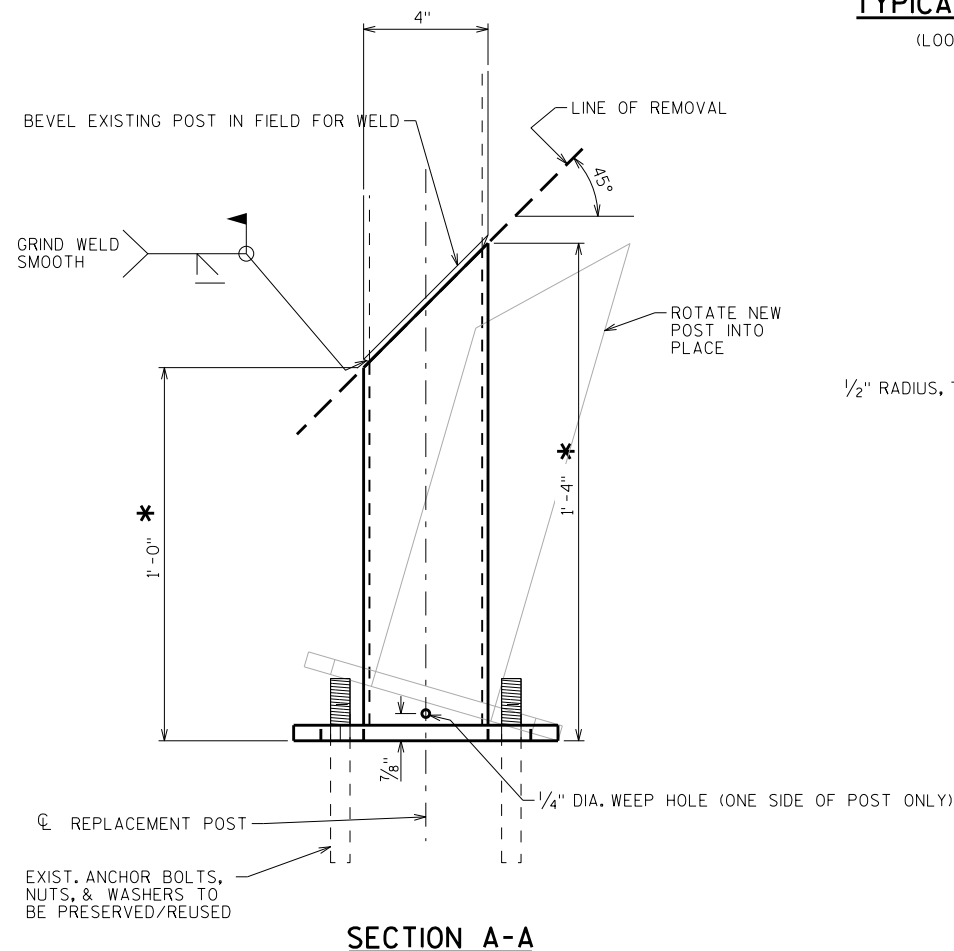
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-202			
DRAWN BY		CAD	PLANS CK'D. NJK
STAIRCASE RAILING REPLACEMENT		SHEET 4	



TYPICAL RAILING POST REPAIR ELEVATION

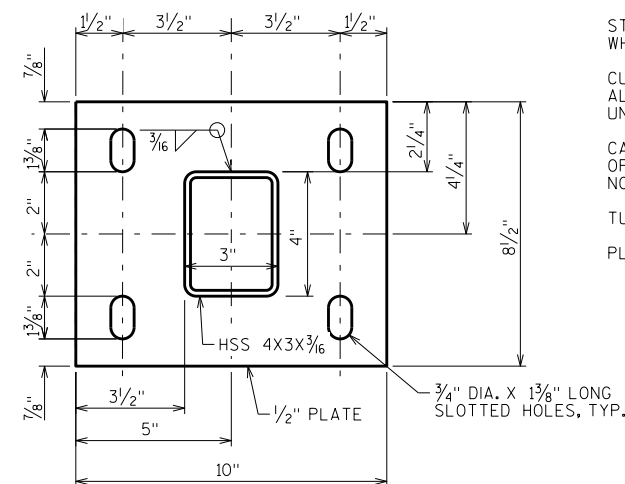
(LOOKING AT FRONT FACE OF RAILING FROM SIDEWALK)

* DIMENSION TAKEN AT ϕ OF POST ON 3" WIDE FACE



SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQ'D PER POST. (GALVANIZE AFTER FABRICATION)



REPLACEMENT POST & BASE PLATE

NOTES

BID ITEM SHALL BE "SIDEWALK RAILING POST REPAIR", AND SHALL INCLUDE ALL ITEMS AND WORK SHOWN.

AFTER FABRICATION, REPLACEMENT POST SECTION SHALL RECEIVE A SHOP BLAST CLEANING CONFORMING TO SSPC-SP 10 AND BE PAINTED WITH ONE COAT OF ZINC-RICH PRIMER COMPATIBLE WITH THE FIELD APPLIED TOP COATS. USE A WELDABLE PRIMER ON SURFACES THAT ARE TO BE FIELD WELDED. CLEAN AND PRIME AFTER SHOP ASSEMBLY/WELDING.

TOUCH-UP PAINTING/PRIMING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

FIELD APPLIED TOP COAT PAINTING TO BE INCLUDED IN BID ITEM "STRUCTURE SPOT CLEANING AND PAINTING B-32-202". RAILING SHALL BE PAINTED AMS STD. COLOR NO. 25240, BLUE.

EXISTING ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE SALVAGED.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CUT BOTTOM OF REPLACEMENT POST TO MATCH GRADE (4.5% AT ALL 3 POSTS AT THE WEST ABUTMENT, 0% AT POST REQUIRED IN UNIT 2)

CAULK AROUND PERIMETER OF BASE PLATES AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

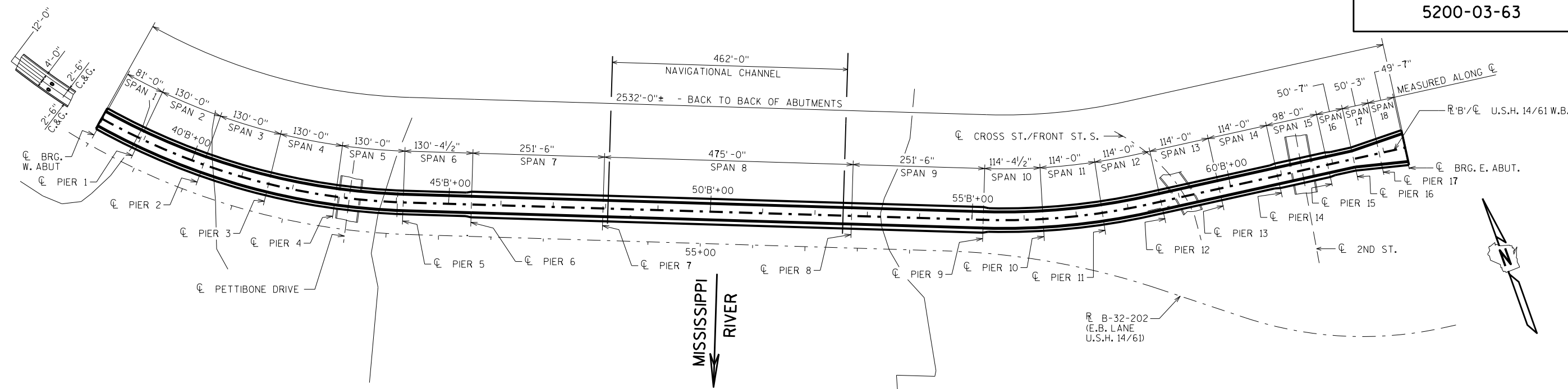
TUBING MATERIAL SHALL CONFORM TO ASTM A500 GRADE B.

PLATE MATERIAL SHALL CONFORM TO ASTM A36.

8

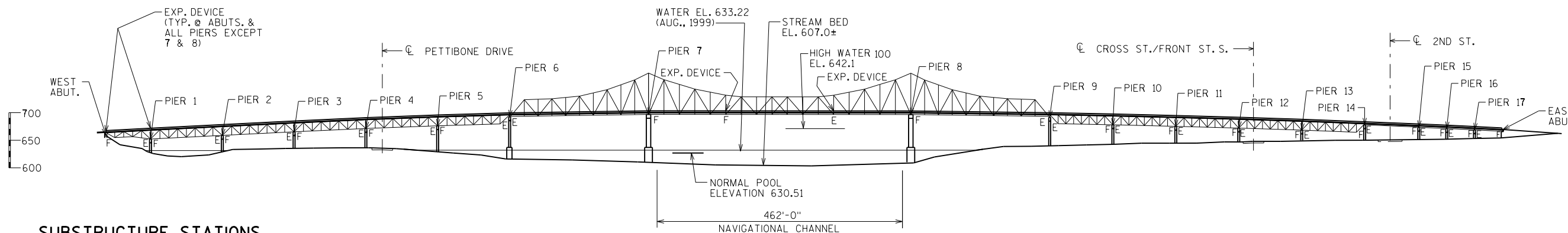
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-202			
		DRAWN BY	PLANS CK'D. NJK
SIDEWALK RAILING REPAIR		SHEET 5	



GENERAL PLAN

18 SPAN-STEEL TRUSS (SPANS 1 THRU 14) & STEEL GIRDER BRIDGE



ELEVATION

NORMAL TO MISSISSIPPI RIVER

SUBSTRUCTURE STATIONS

SUBSTRUCTURE UNIT	STATION
END OF SLAB	38'B+09.75
CL BRG. WEST ABUT.	38'B+12.25
CL PIER 1	38'B+93.25
CL PIER 2	40'B+23.25
CL PIER 3	41'B+53.25
CL PIER 4	42'B+83.25
CL PIER 5	44'B+13.25
CL PIER 6	45'B+43.63
CL PIER 7	47'B+95.13
CL PIER 8	52'B+70.13
CL PIER 9	55'B+21.63
CL PIER 10	56'B+36.00
CL PIER 11	57'B+50.00
CL PIER 12	58'B+64.00
CL PIER 13	59'B+78.00
CL PIER 14	60'B+92.00
CL PIER 15	61'B+90.00
CL PIER 16	62'B+40.58
CL PIER 17	62'B+90.83
CL BRG. EAST ABUT.	63'B+41.33
END OF SLAB	63'B+42.41

DESIGN DATA

LIVE LOAD:
(TAKEN FROM HSI 10/26/11)
DESIGN RATING; HS-20
INVENTORY RATING; HS-21 (SPAN 4 DECK TRUSS)
OPERATIONAL RATING; HS-36 (SPAN 4 DECK TRUSS)
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 170 KIPS.

MATERIAL PROPERTIES:

CONCRETE MASONRY (SURFACE REPAIRS) $f'_c = 4,000$ P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60,000$ P.S.I.
STRUCTURAL CARBON STEEL, (ASTM A709 GRADE 36) $F_y = 36,000$ P.S.I.
HIGH STRENGTH STRUCTURAL STEEL (ASTM A709 GRADE 50) $F_y = 50,000$ P.S.I.

TRAFFIC VOLUME

U.S.H. 14
A.D.T.=6,400 (2021)
R.D.S.=30 M.P.H.

STRUCTURE DESIGN CONTACTS:

CHRISTOPHER DOLL (608) 266-3229
DOMINIQUE BECHLE (608) 261-8205

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES & QUANTITIES
3. SPANS 1 THRU 6
4. SPANS 7 THRU 9
5. SPANS 10 THRU 14
6. SPANS 15 THRU 18
7. SURFACE REPAIR DETAILS
8. STEEL REPAIR DETAILS 1
9. STEEL REPAIR DETAILS 2
10. STEEL REPAIR DETAILS 3
11. STEEL REPAIR DETAILS 4
12. SIDEWALK RAILING REPAIRS
13. STAIRCASE RAILING REPAIRS

NO.	DATE	REVISION	BY
ACCEPTED			01/19/24
STRUCTURE B-32-300			
USH 14/61 & STH 16 W.B. OVER MISSISSIPPI RIVER			
COUNTY	LA CROSSE	CITY	LA CROSSE
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY	CAD	DESIGNED CK'D.	NA
DRAWN BY	CAD	PLANS CK'D.	NJK
GENERAL PLAN			SHEET 1 OF 13

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER- SPANS 1-6	SUPER- SPANS 7-9	SUPER- SPANS 10-14	SUPER- SPANS 15-18	WEST ABUT.	PIER 6	PIER 9	EAST ABUT.	TOTALS
502.3210	PIGMENTED SURFACE SEALER	SY	5	3	5	5	—	—	—	—	18
506.0105	STRUCTURAL STEEL CARBON	LB	12	141	—	5	—	—	—	—	158
509.1500	CONCRETE SURFACE REPAIR	SF	40	30	40	40	50	6	6	50	262
517.1010.S	CONCRETE STAINING B-32-300	SF	—	—	—	—	50	6	6	50	112
SPV.0060	REMOVING RIVETS	EACH	20	64	—	9	—	—	—	—	93
SPV.0060	REMOVING CORRODED SHIMS	EACH	6	—	—	—	—	—	—	—	6
SPV.0060	SIDEWALK RAILING POST REPLACEMENT	EACH	—	—	—	1	—	—	—	—	1
SPV.0060	STAIRCASE PICKET REPAIR	EACH	50 ☆	—	—	—	—	—	—	—	50 ☆
SPV.0060	STAIRCASE BOTTOM RAIL CONNECTION REPAIR	EACH	10 ☆	—	—	—	—	—	—	—	10 ☆
SPV.0060	BRIDGE CLEANING B-32-300	EACH	—	—	—	—	—	—	—	—	1
SPV.0060	STRUCTURE SPOT CLEANING AND PAINTING B-32-300	EACH	1105 SF *	790 SF *	895 SF *	562 SF *	—	—	—	—	1
SPV.0090	SIDEWALK RAILING BOTTOM RAIL REPLACEMENT	LF	191	1	183	12	—	—	—	—	386
SPV.0090	STRIP SEAL GLAND REPLACEMENT	LF	32	64	—	—	—	—	—	—	96

*ESTIMATED SQUARE FOOT QUANTITIES SHOWN FOR INFORMATION ONLY. ITEM TO BE BID AS A SINGLE AMOUNT FOR ALL PAINTING ON THE STRUCTURE. QUANTITIES SHOWN ARE APPROXIMATE AND ADDITIONAL CLEANING/PAINTING MAY BE REQUIRED DURING CONSTRUCTION AND SHOULD BE PERFORMED AS DIRECTED BY THE ENGINEER.

☆ ESTIMATED QUANTITIES ARE APPROXIMATE (±) AND HAVE BEEN INCLUDED FOR BID PURPOSES. ACTUAL QUANTITY TO BE DETERMINED BY THE ENGINEER.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

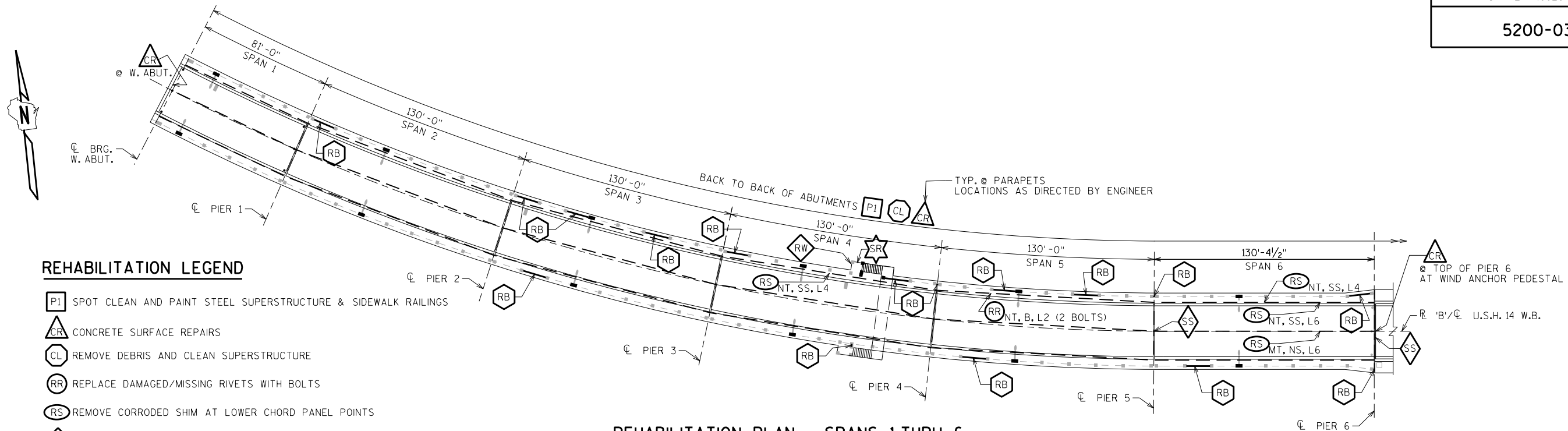
ALL FIELD CONNECTIONS SHALL BE MADE WITH ASTM F3125 GRADE A325 FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS.

THE COLOR OF THE FINISH EXTERIOR EPOXY TOP COAT SHALL BE BLUE, (FEDERAL STANDARD COLOR NO. 25240) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

ACCESS HATCHES TO THE TOPS OF PIERS 7 & 9 ARE LOCATED IN THE SIDEWALK ON THE SOUTH SIDE OF THE BRIDGE AT THESE PIER LOCATIONS.

SEE ROADWAY PLANS FOR TRAFFIC CONTROL REQUIREMENTS.

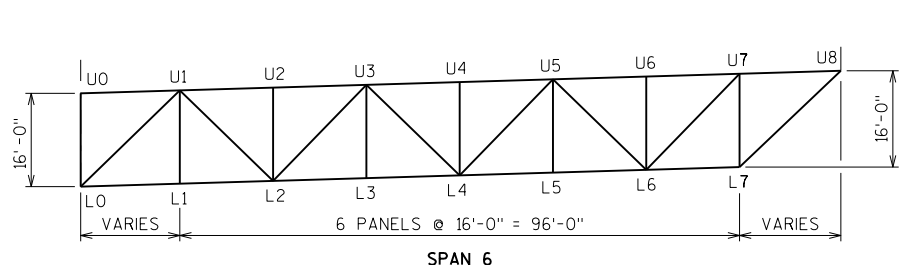
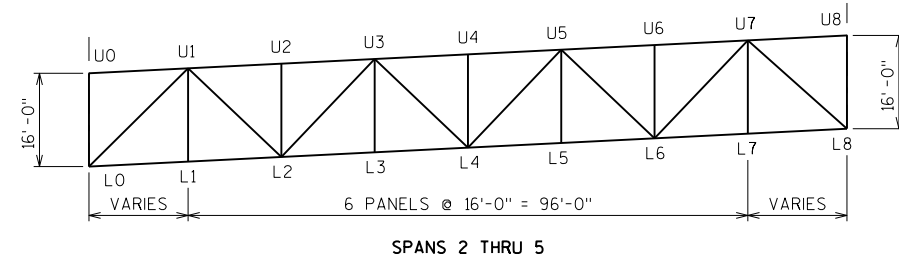
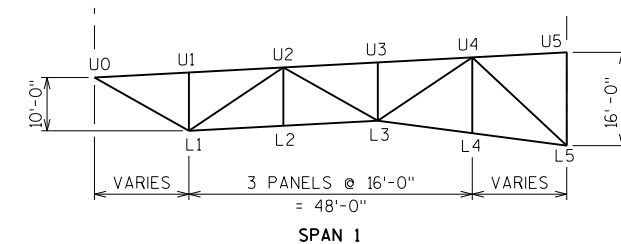
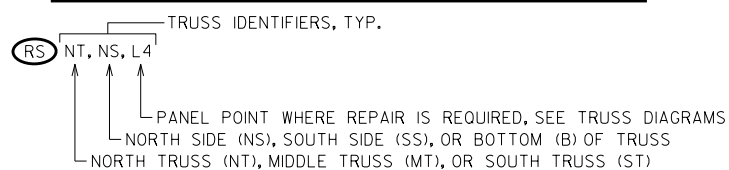
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
DRAWN BY		CAD	PLANS CKD. NJK
GENERAL NOTES & QUANTITIES			SHEET 2



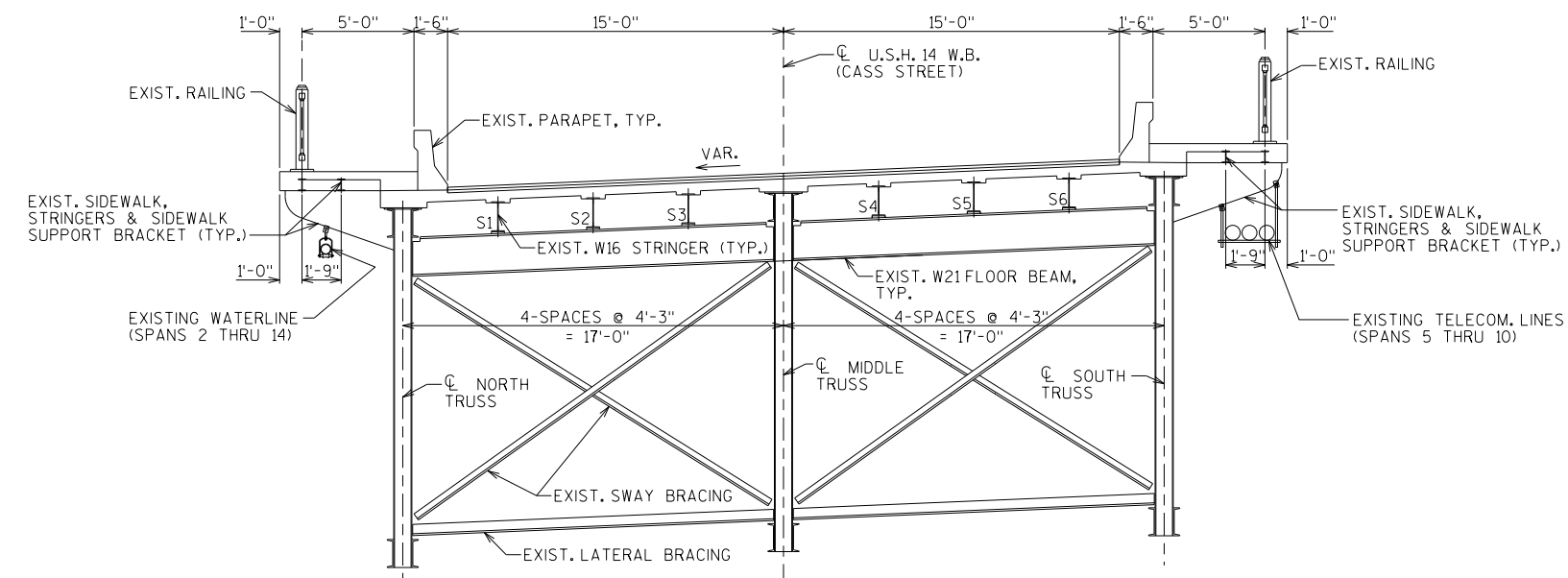
REHABILITATION LEGEND

- P1 SPOT CLEAN AND PAINT STEEL SUPERSTRUCTURE & SIDEWALK RAILINGS
- CR CONCRETE SURFACE REPAIRS
- CL REMOVE DEBRIS AND CLEAN SUPERSTRUCTURE
- RR REPLACE DAMAGED/MISSING RIVETS WITH BOLTS
- RS REMOVE CORRODED SHIM AT LOWER CHORD PANEL POINTS
- RW REPAIR WELDS ON LOWER RAIL OF STAIRCASE RAILINGS
(10 REPAIR LOCATIONS TOTAL FOR BID PURPOSES, LOCATIONS AS DIRECTED BY ENGINEER)
- SR REMOVE AND REPAIR PICKETS ON PEDESTRIAN RAIL ON STAIRCASE
(50 PICKETS TOTAL FOR BID PURPOSES, LOCATIONS AS DIRECTED BY ENGINEER)
- RB REMOVE AND REPLACE BOTTOM RAIL SECTION OF SIDEWALK RAIL
- SS REMOVE AND REPLACE TORN STRIP SEAL GLAND BTWN. PARAPETS
(EXISTING SEAL IS WATSON-BOWMAN-ACME SE-400, 32'-0"± LENGTH @ PIER 5)
(EXISTING SEAL IS WATSON-BOWMAN-ACME SE-500, 32'-0"± LENGTH @ PIERS 6 & 9)

REHABILITATION PLAN - SPANS 1 THRU 6



TRUSS DIAGRAMS
(ELEVATION VIEWS)

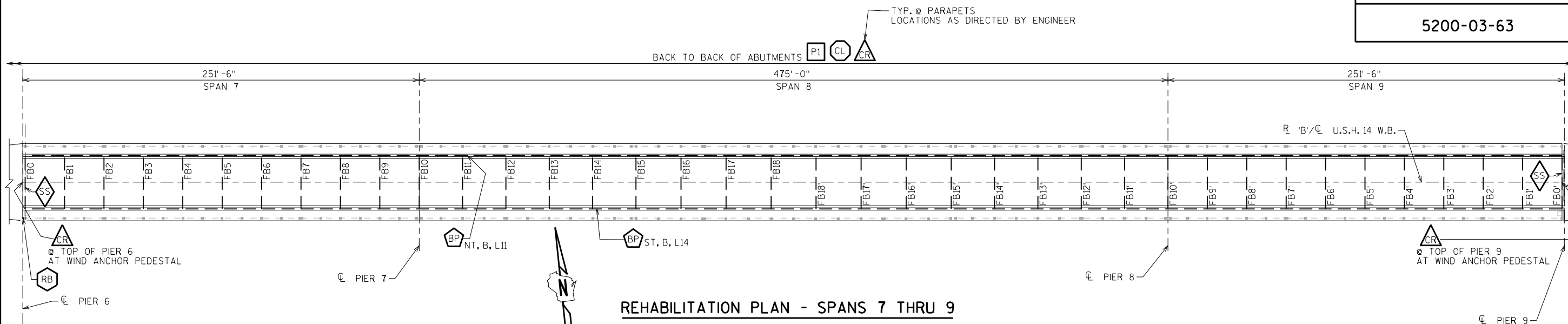


TYPICAL SECTION - SPANS 1 THRU 6
(LOOKING EAST)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
DRAWN BY CAD		PLANS CKD. NJK	
SPANS 1 THRU 6		SHEET 3	

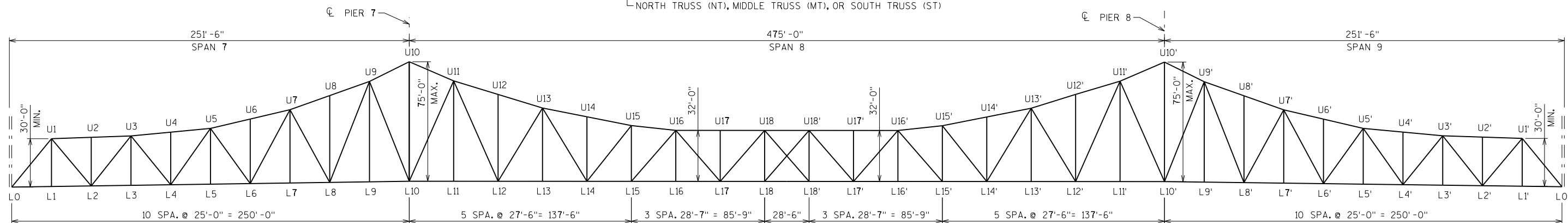
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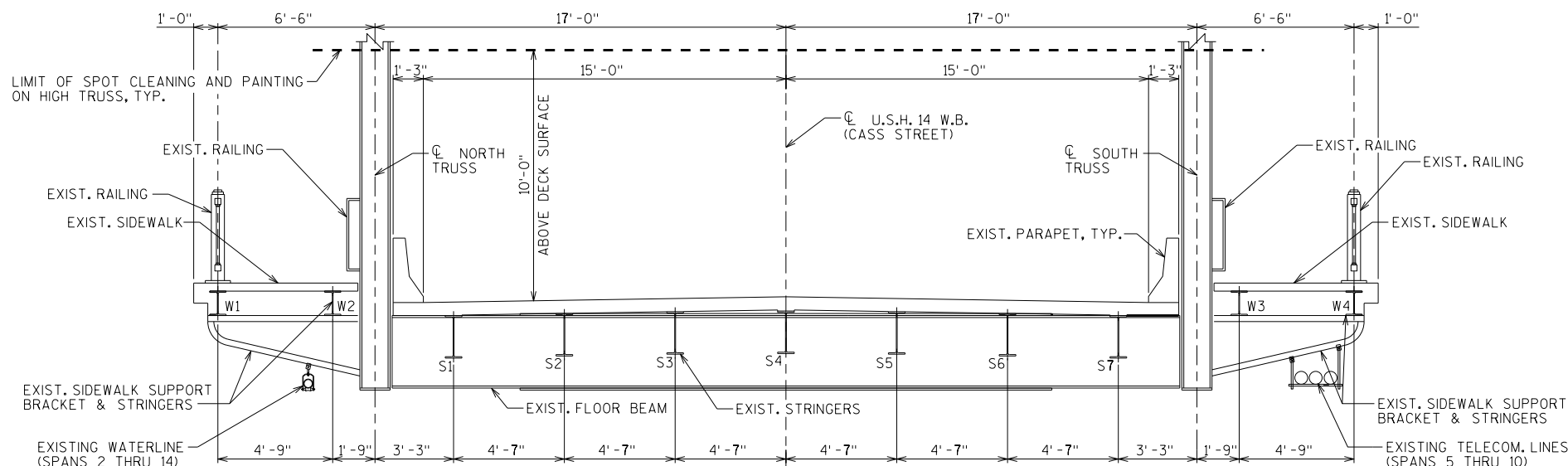
REHABILITATION PLAN - SPANS 7 THRU 9

- TRUSS IDENTIFIERS, TYP.
- BP NT, NS, L4
 - NT, NS, L4
 - PANEL POINT WHERE REPAIR IS REQUIRED, SEE TRUSS DIAGRAMS NORTH SIDE (NS), SOUTH SIDE (SS), OR BOTTOM (B) OF TRUSS
 - NORTH TRUSS (NT), MIDDLE TRUSS (MT), OR SOUTH TRUSS (ST)



TRUSS DIAGRAM

(ELEVATION VIEW)



TYPICAL SECTION - SPANS 7 THRU 9

(LOOKING EAST)

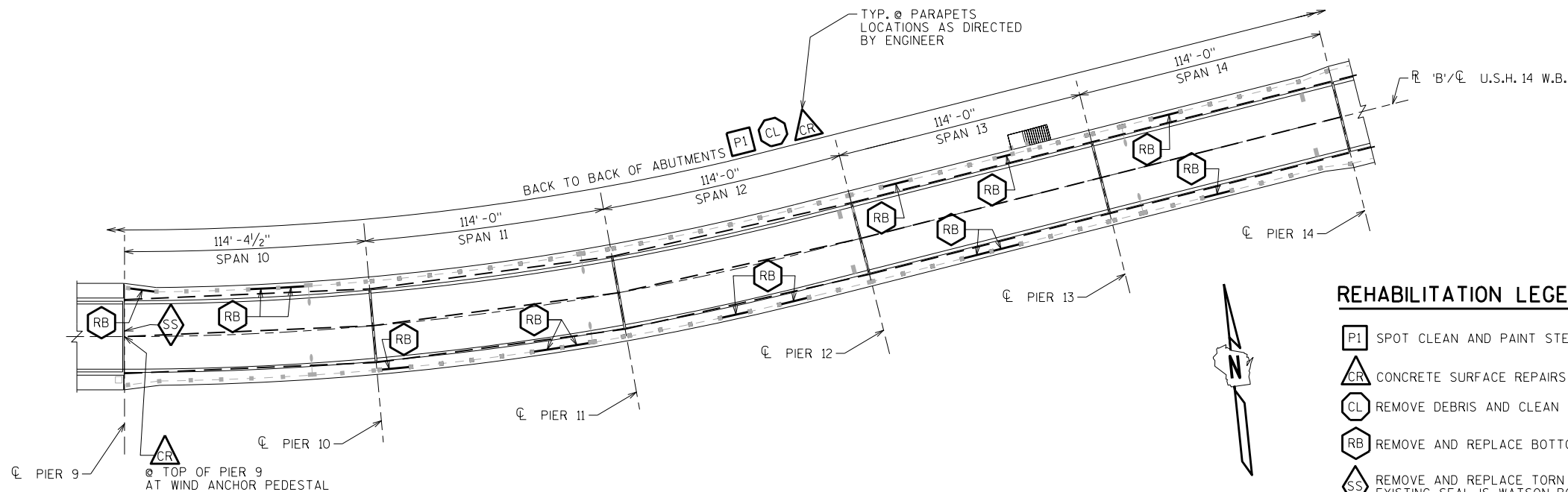
REHABILITATION LEGEND

- P1 SPOT CLEAN AND PAINT STEEL SUPERSTRUCTURE & SIDEWALK RAILINGS
- CR CONCRETE SURFACE REPAIRS
- CL REMOVE DEBRIS AND CLEAN SUPERSTRUCTURE
- BP REMOVE AND REPLACE CORRODED BATTEN PLATE AT BTM. OF LOWER CHORD
- SS REMOVE AND REPLACE TORN STRIP SEAL GLAND BTWN. PARAPETS EXISTING SEAL IS WATSON-BOWMAN-ACME SE-500, 32'-0"± LENGTH @ PIERS 6 & 9)
- RB REMOVE AND REPLACE BOTTOM RAIL SECTION OF SIDEWALK RAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
		DRAWN BY	CAD PLANS CKD. NJK
SPANS 7 THRU 9			SHEET 4

8

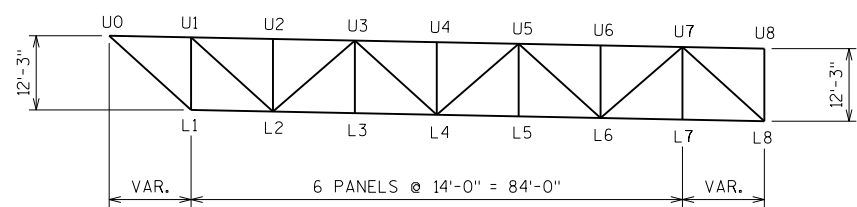
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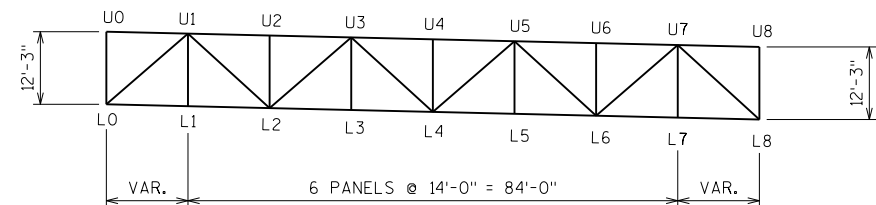
REHABILITATION LEGEND

- P1** SPOT CLEAN AND PAINT STEEL SUPERSTRUCTURE & SIDEWALK RAILINGS
- CR** CONCRETE SURFACE REPAIRS
- CL** REMOVE DEBRIS AND CLEAN SUPERSTRUCTURE
- RB** REMOVE AND REPLACE BOTTOM RAIL SECTION OF SIDEWALK RAIL
- SS** REMOVE AND REPLACE TORN STRIP SEAL GLAND BTWN. PARAPETS
EXISTING SEAL IS WATSON-BOWMAN-ACME SE-500, 32'-0"± LENGTH @ PIERS 6 & 9)

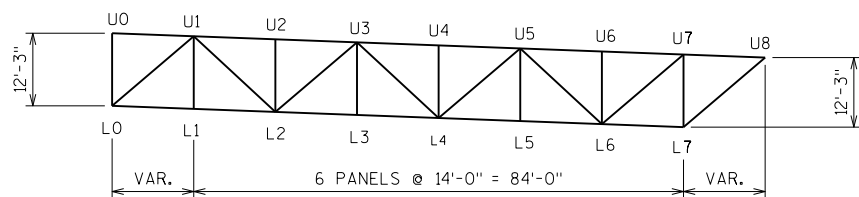
REHABILITATION PLAN - SPANS 10 THRU 14



SPAN 10



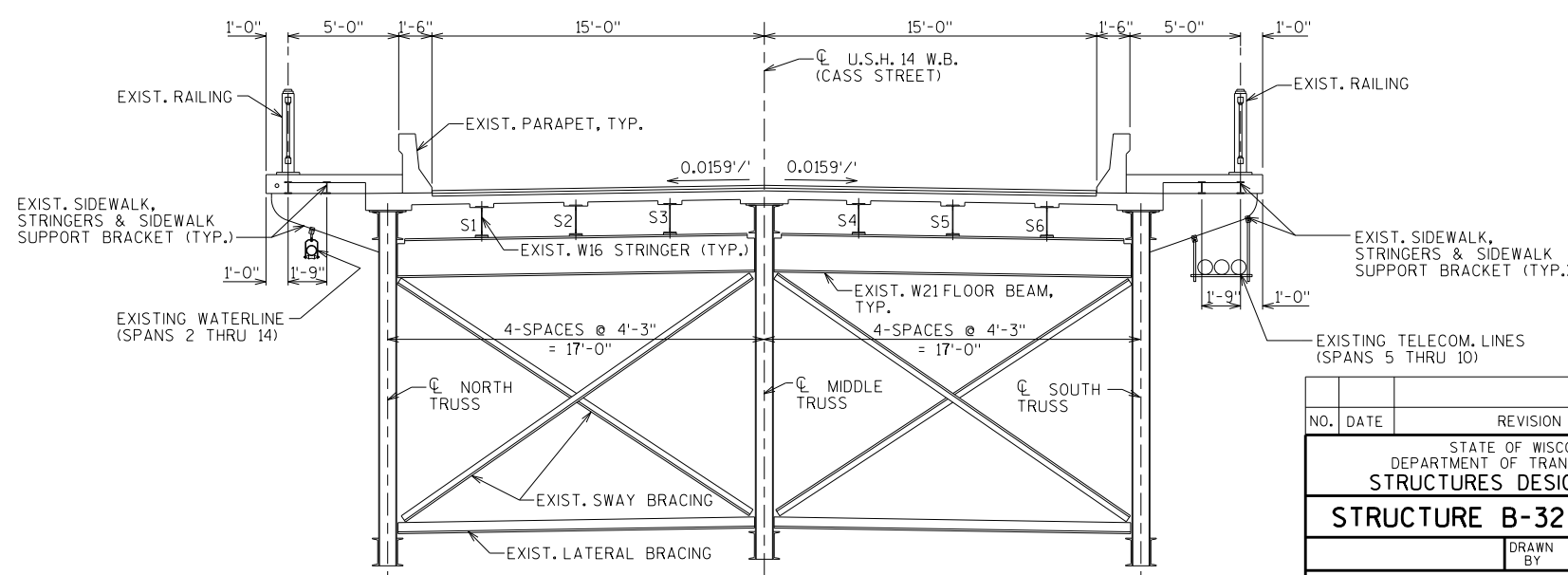
SPANS 11 THRU 13



SPAN 14

TRUSS DIAGRAMS

(ELEVATION VIEWS)



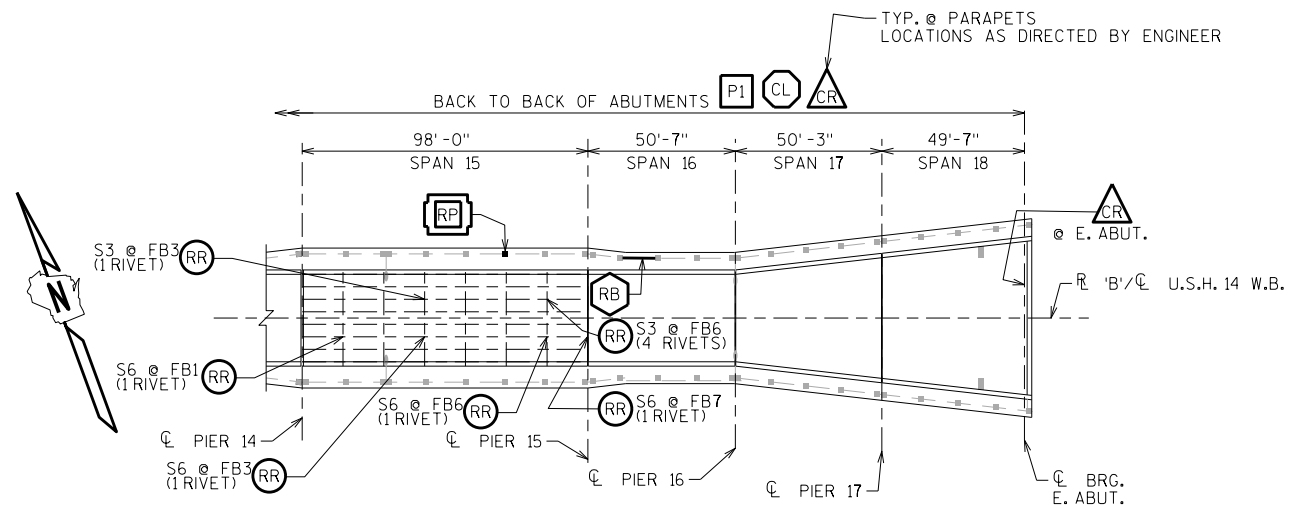
TYPICAL SECTION - SPANS 10 THRU 14

(LOOKING EAST)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
DRAWN BY		CAD	PLANS CKD. NJK
SPANS 10 THRU 14		SHEET 5	

8

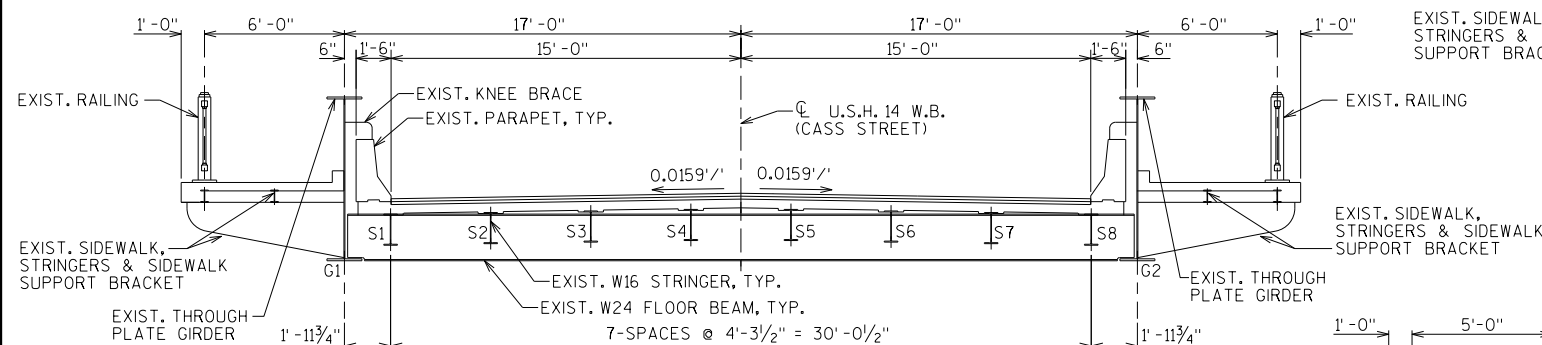
8



REHABILITATION PLAN - SPANS 15 THRU 18

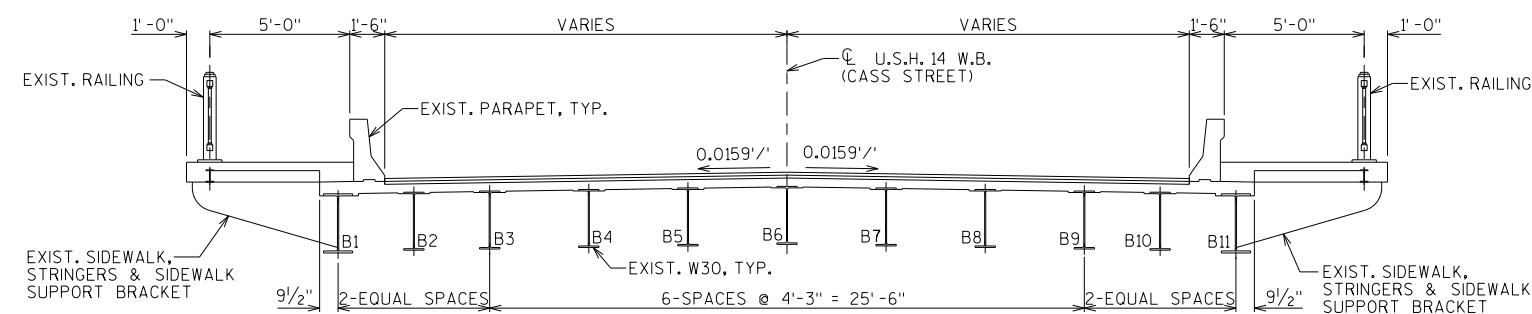
REHABILITATION LEGEND

- P1 SPOT CLEAN AND PAINT STEEL SUPERSTRUCTURE & SIDEWALK RAILINGS
- CR CONCRETE SURFACE REPAIRS
- CL REMOVE DEBRIS AND CLEAN SUPERSTRUCTURE
- RR REPLACE DAMAGED/MISSING RIVETS WITH BOLTS
- RP REMOVE AND REPLACE SIDEWALK RAIL POST
- RB REMOVE AND REPLACE BOTTOM RAIL SECTION OF SIDEWALK RAIL



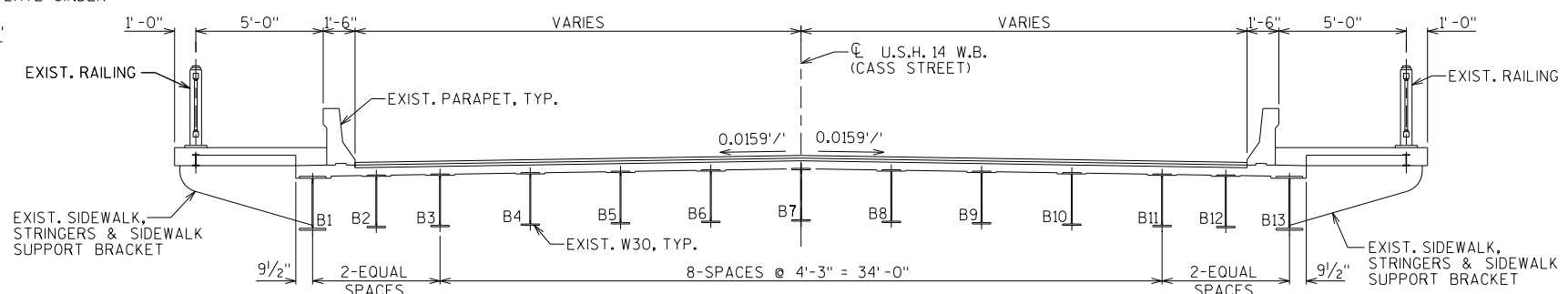
TYPICAL SECTION - SPAN 15

(LOOKING EAST)



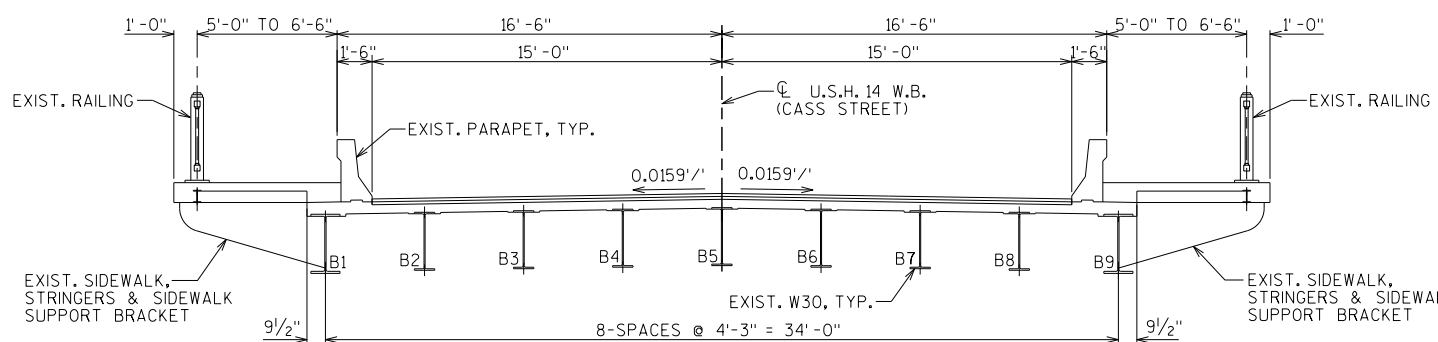
TYPICAL SECTION - SPAN 17

(LOOKING EAST)



TYPICAL SECTION - SPAN 18

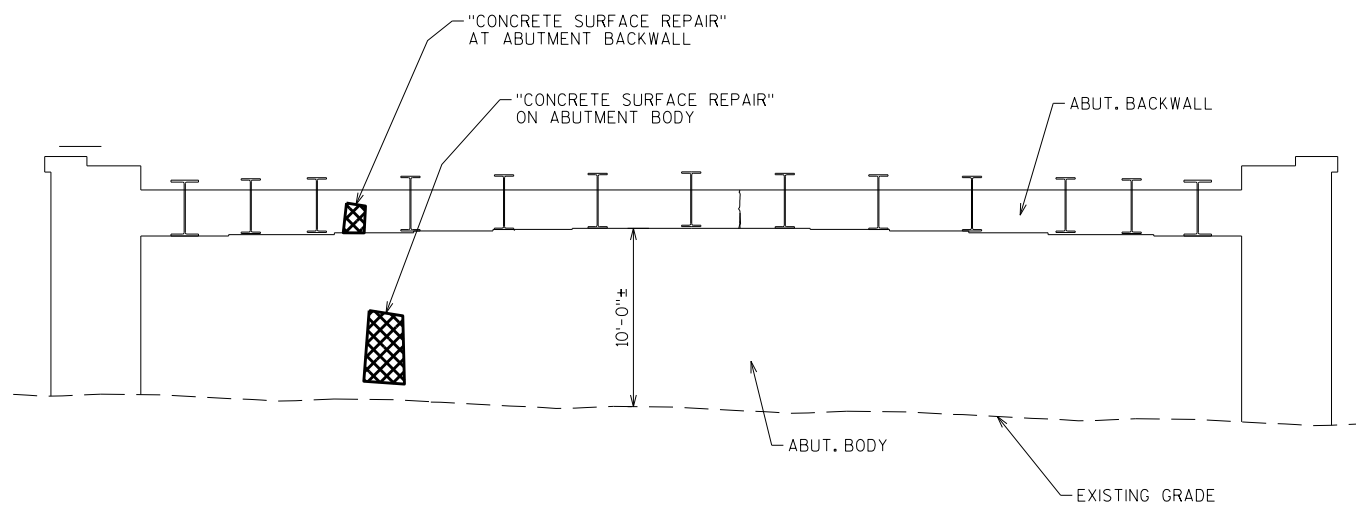
(LOOKING EAST)



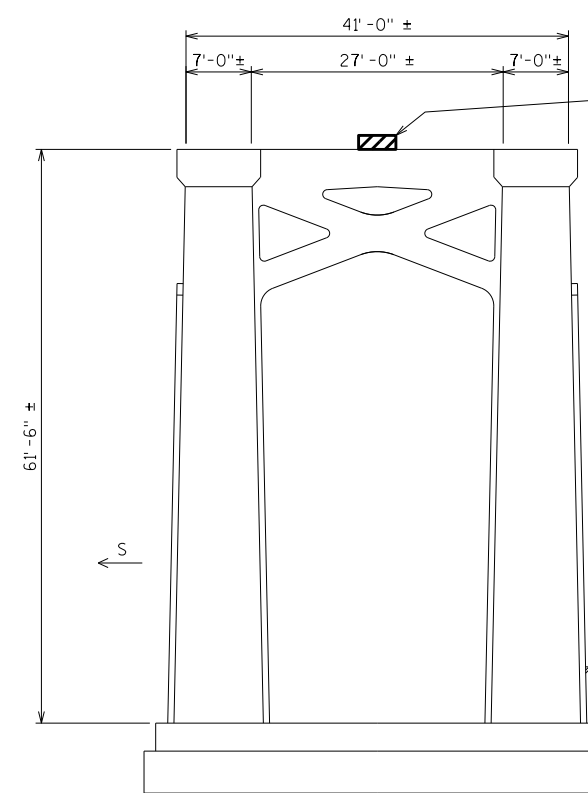
TYPICAL SECTION - SPAN 16

(LOOKING EAST)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
DRAWN BY		CAD	PLANS CKD. NJK
SPANS 15 THRU 18			SHEET 6

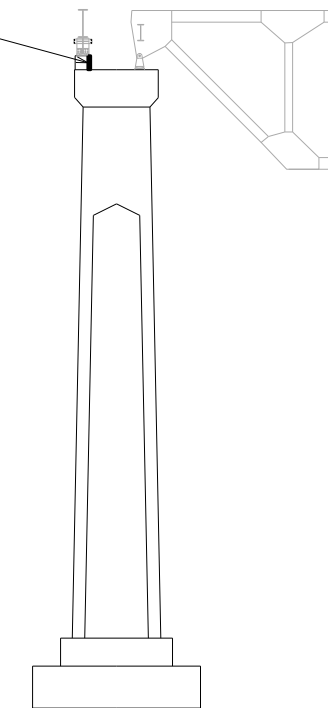


EAST ABUTMENT - WEST ELEVATION

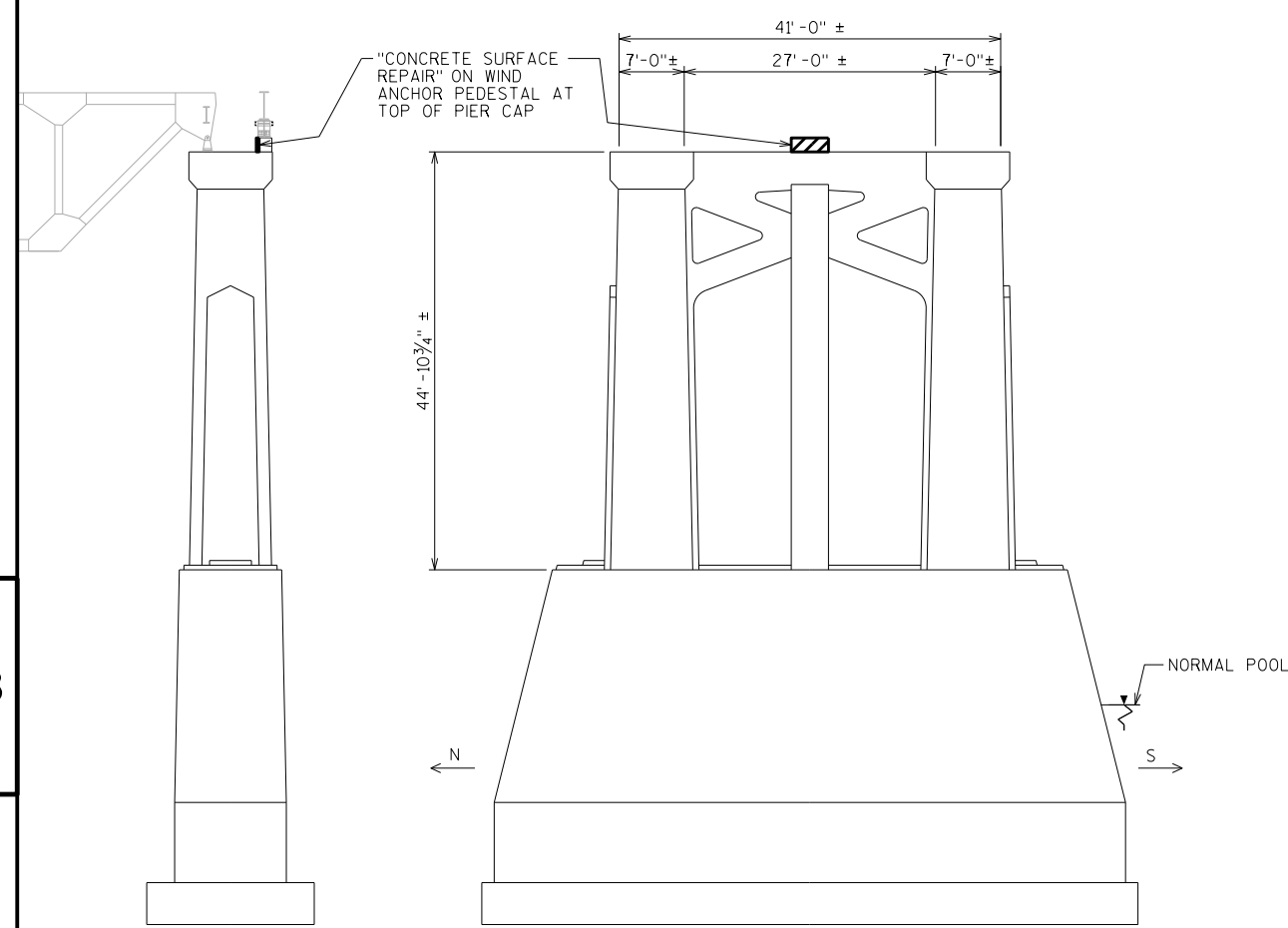


EAST ELEVATION

PIER 9



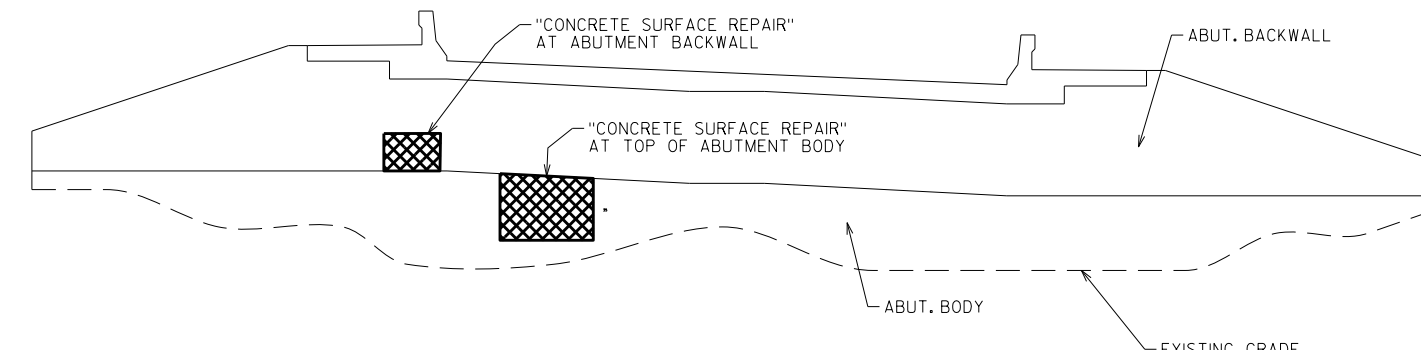
NORTH ELEVATION



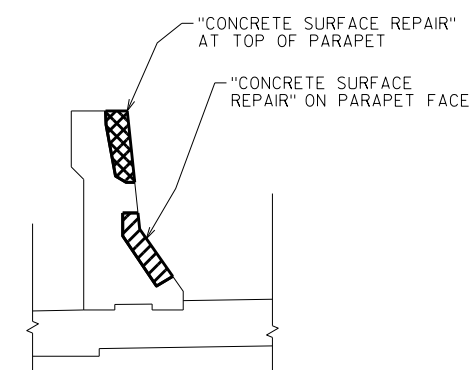
NORTH ELEVATION

WEST ELEVATION

PIER 6



WEST ABUTMENT - EAST ELEVATION



PARAPET SURFACE REPAIR

NOTES

THIS SHEET DEPICTS THE GENERAL TYPES AND LOCATIONS OF REPAIRS, AND MAY NOT BE ALL INCLUSIVE. QUANTITIES SHOWN ON SHT. 2 ARE APPROXIMATE. ADDITIONAL REPAIRS MAY BE REQUIRED DURING CONSTRUCTION AND SHOULD BE PERFORMED AS DIRECTED BY THE ENGINEER.

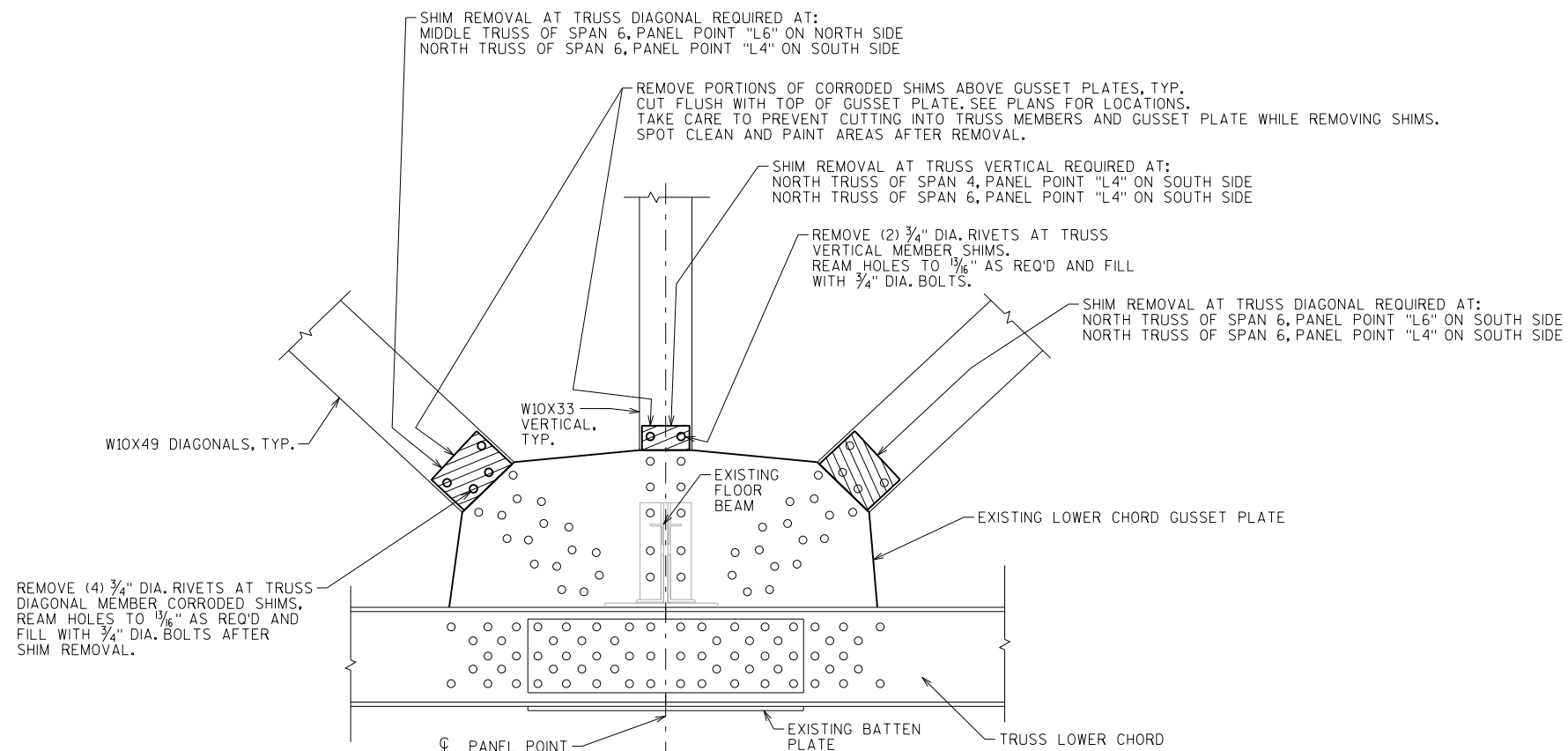
ALL SURFACE REPAIR AREAS SHALL BE DEFINED BY 1/2" MIN. SAWCUT.

APPLY "CONCRETE STAINING" TO ALL SURFACE REPAIR AREAS TO MATCH EXISTING STAIN AT PIERS AND ABUTMENTS.

APPLY "PIGMENTED SURFACE SEALER" TO ALL SURFACE REPAIR AREAS TO MATCH EXISTING AT PARAPETS.

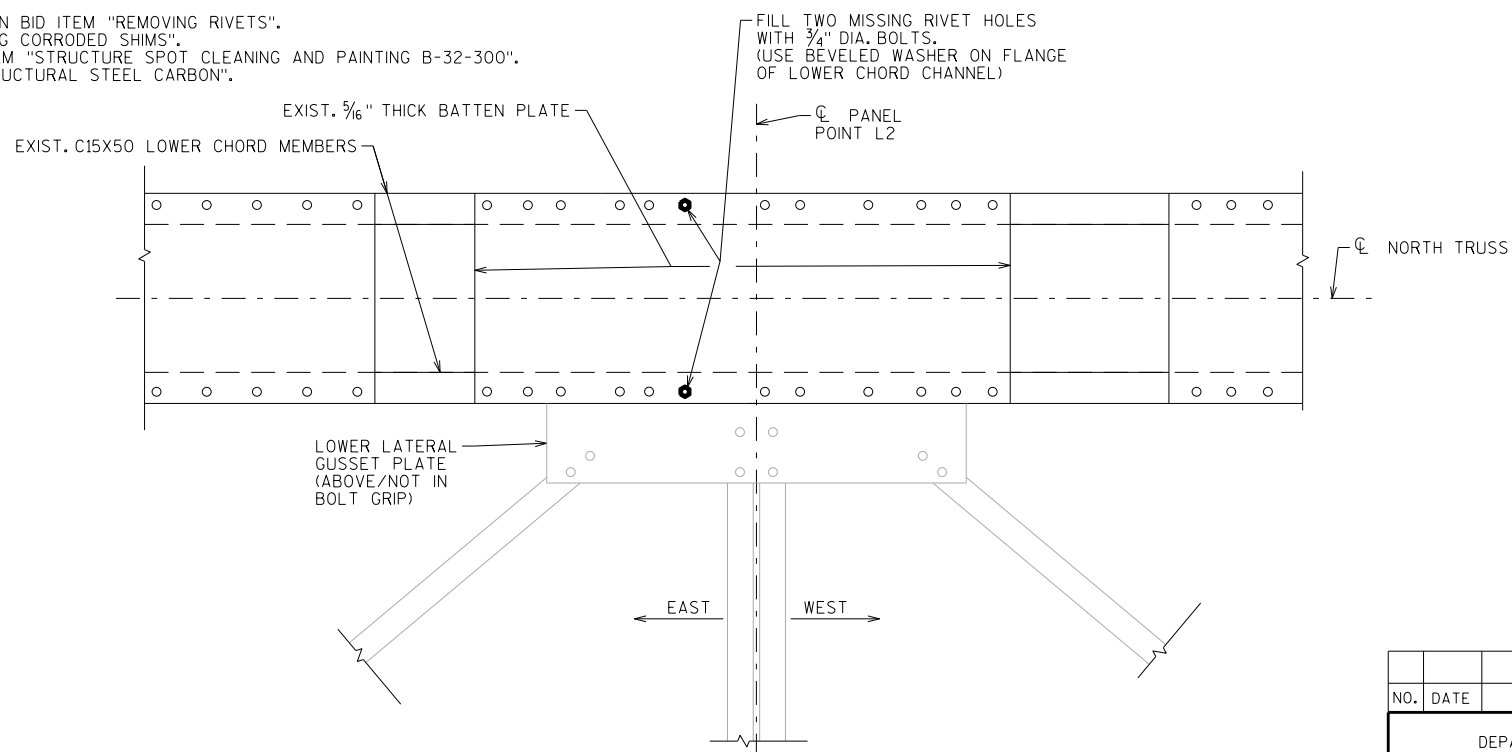
CONTRACTOR SHALL EMPLOY METHODS TO PREVENT REMOVED CONCRETE MATERIAL FROM ENTERING THE WATERWAY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
DRAWN BY CAD		PLANS CKD. NJK	
SURFACE REPAIR DETAILS			SHEET 7



SHIM REMOVAL DETAILS - ELEVATION VIEW

DETAIL NOTES:
 RIVET REMOVAL AND HOLE REAMING SHALL BE INCLUDED IN BID ITEM "REMOVING RIVETS".
 SHIM REMOVAL SHALL BE INCLUDED IN BID ITEM "REMOVING CORRODED SHIMS".
 SPOT CLEANING AND PAINTING TO BE INCLUDED IN BID ITEM "STRUCTURE SPOT CLEANING AND PAINTING B-32-300".
 BOLTS TO FILL HOLES TO BE INCLUDED IN BID ITEM "STRUCTURAL STEEL CARBON".

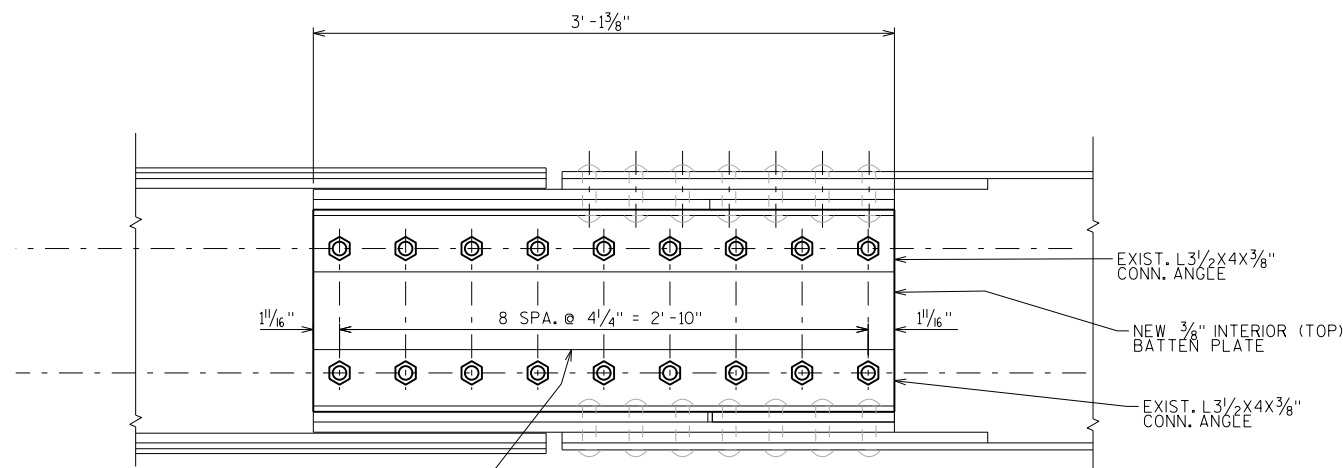


MISSING RIVETS BOLT REPAIR - SPAN 5, NORTH TRUSS, L2

(VIEW LOOKING UP AT TRUSS FROM BELOW)

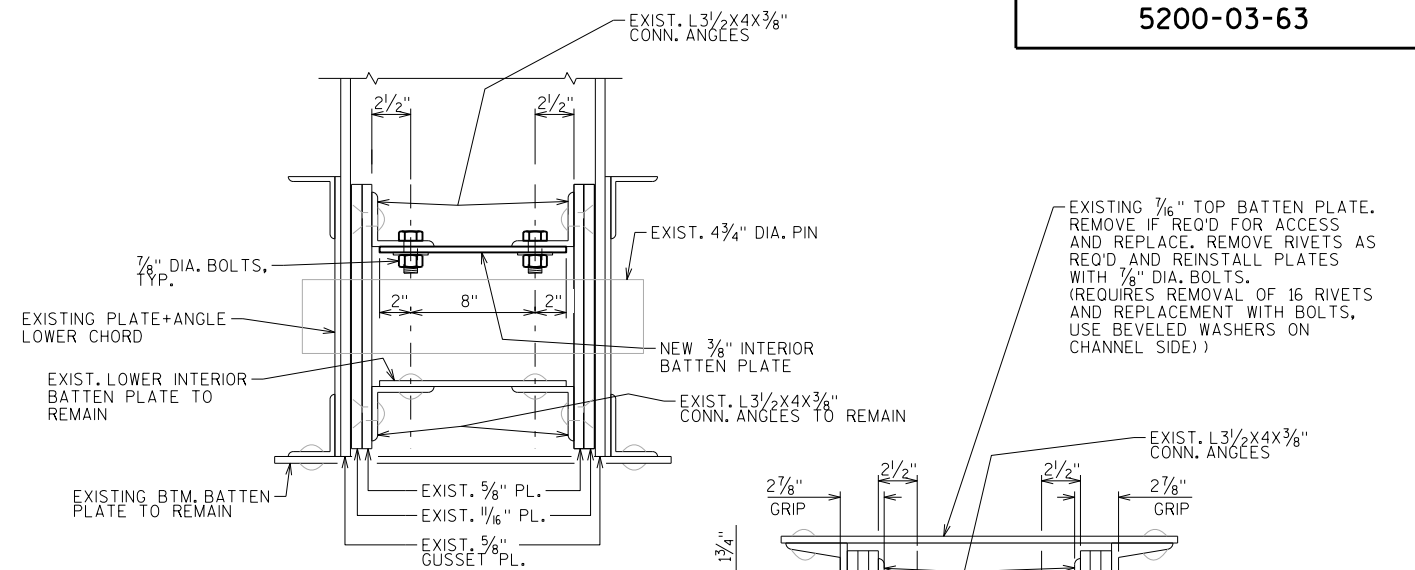
DETAIL NOTES:
 SPOT CLEANING AND PAINTING TO BE INCLUDED IN BID ITEM "STRUCTURE SPOT CLEANING AND PAINTING B-32-300".
 BOLTS TO FILL HOLES TO BE INCLUDED IN BID ITEM "STRUCTURAL STEEL CARBON".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
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STEEL REPAIR DETAILS 1			SHEET 8

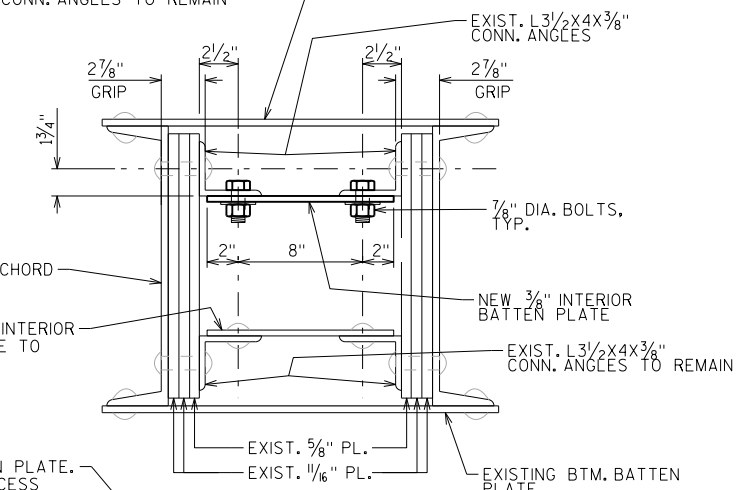


POWER TOOL CLEAN BOTTOM FACE OF EXISTING ANGLES TO REMOVE RUST AND DEBRIS PRIOR TO INSTALLING NEW PLATE, TYP.

SECTION D-D

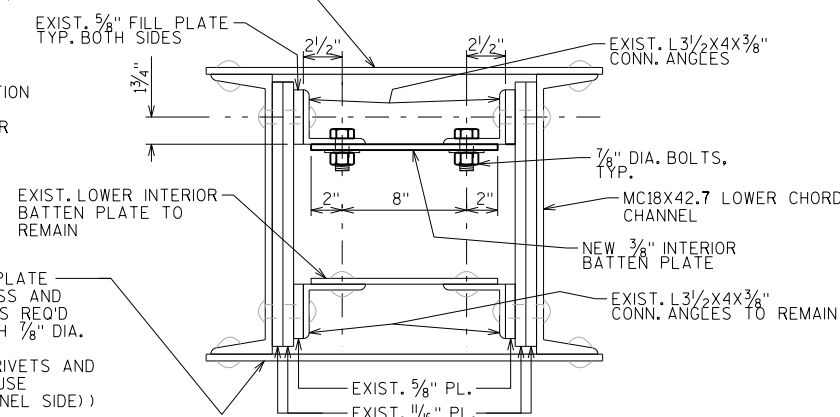


SECTION A-A



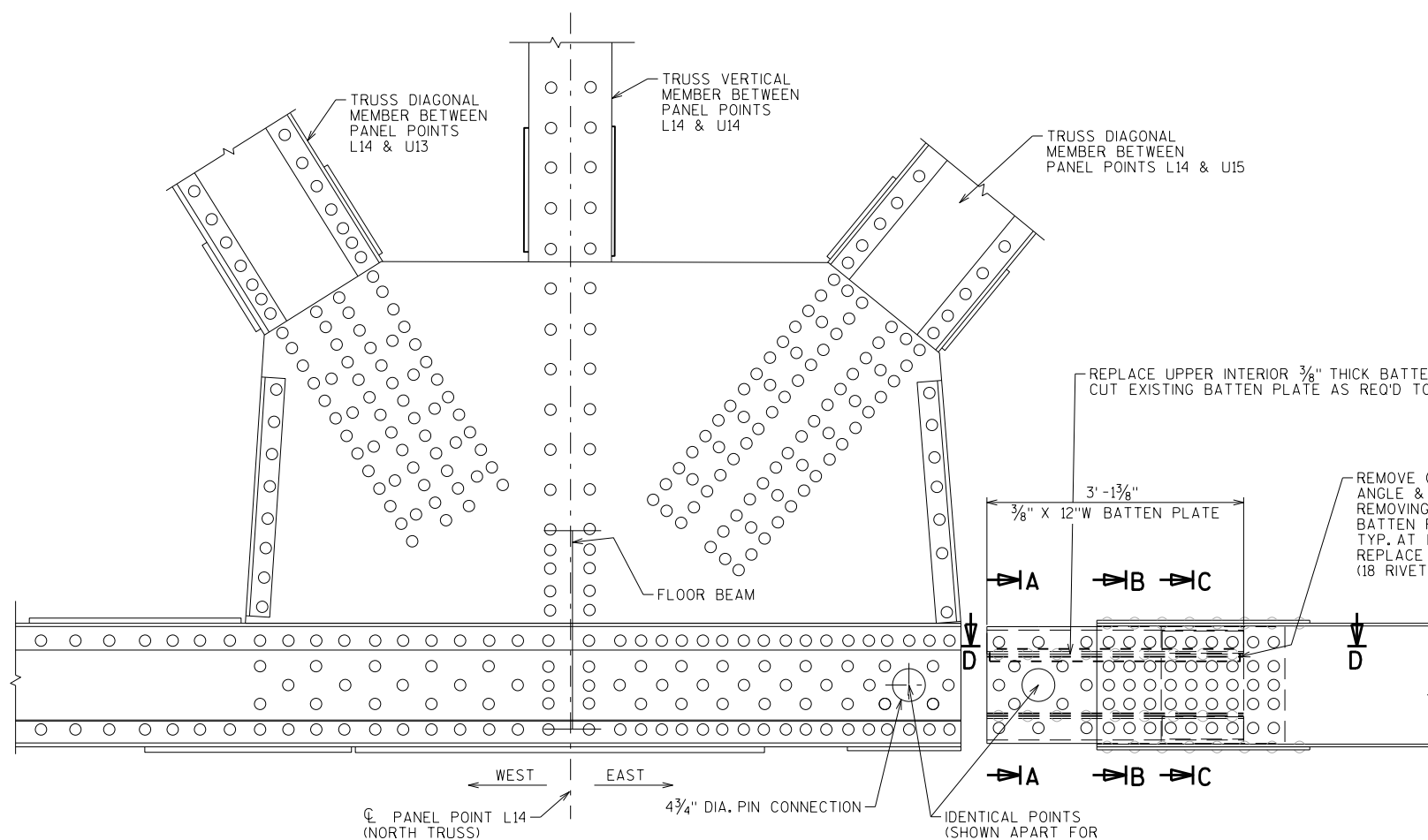
SECTION B-B

EXISTING 7/16" TOP BATTEN PLATE. REMOVE IF REQ'D FOR ACCESS AND REPLACE. REMOVE RIVETS AS REQ'D AND REINSTALL PLATES WITH 7/8" DIA. BOLTS. (REQUIRES REMOVAL OF 16 RIVETS AND REPLACEMENT WITH BOLTS, USE BEVELED WASHERS ON CHANNEL SIDE)



SECTION C-C

EXISTING 7/16" BTM. BATTEN PLATE REMOVE IF REQ'D FOR ACCESS AND REPLACE. REMOVE RIVETS AS REQ'D AND REINSTALL PLATES WITH 7/8" DIA. BOLTS. (REQUIRES REMOVAL OF 16 RIVETS AND REPLACEMENT WITH BOLTS, USE BEVELED WASHERS ON CHANNEL SIDE)



ELEVATION VIEW - LOOKING NORTH AT INSIDE FACE OF NORTH TRUSS

(STRINGERS NOT SHOWN)

INTERIOR BATTEN PLATES REPLACEMENT DETAIL - SPAN 8, NORTH TRUSS, L14

DETAIL NOTES:

RIVET REMOVAL AND HOLE REAMING SHALL BE INCLUDED IN BID ITEM "REMOVING RIVETS".

ANGLES, PLATES, & 7/8" DIA. BOLTS SHALL BE INCLUDED IN BID ITEM "STRUCTURAL STEEL CARBON".

PROVIDE STD. SIZE 1 5/16" DIA. HOLES IN PLATE FOR 7/8" DIA. BOLTS.

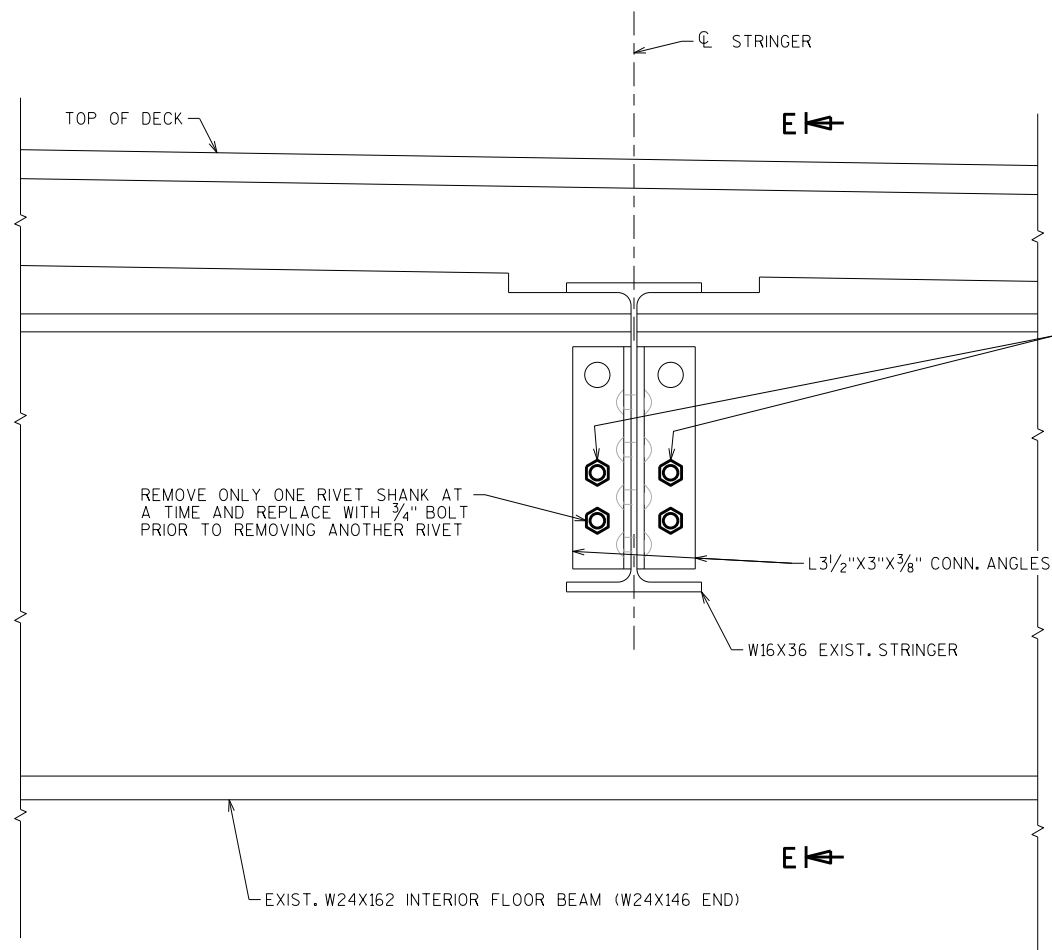
NEW STEEL PIECES SHALL RECEIVE A SHOP BLAST CLEANING CONFORMING TO SSPC-SP 10 AND BE PAINTED WITH ONE COAT OF ZINC-RICH PRIMER COMPATIBLE WITH THE FIELD APPLIED TOP COATS. CLEAN AND PRIME AFTER SHOP DRILLING/HOLES. SHOP PAINTING/PRIMING SHALL BE CONSIDERED INCIDENTAL TO BID-ITEM "STRUCTURAL STEEL CARBON".

PLATE STEEL SHALL CONFORM TO ASTM A709 GRADE 36 OR 50.

FIELD POWER TOOL CLEANING AND TOP COAT PAINTING TO BE INCLUDED IN BID ITEM "STRUCTURE SPOT CLEANING AND PAINTING B-32-300".

FIELD VERIFY EXISTING PLATE SIZES AND HOLE LOCATIONS PRIOR TO FABRICATION.

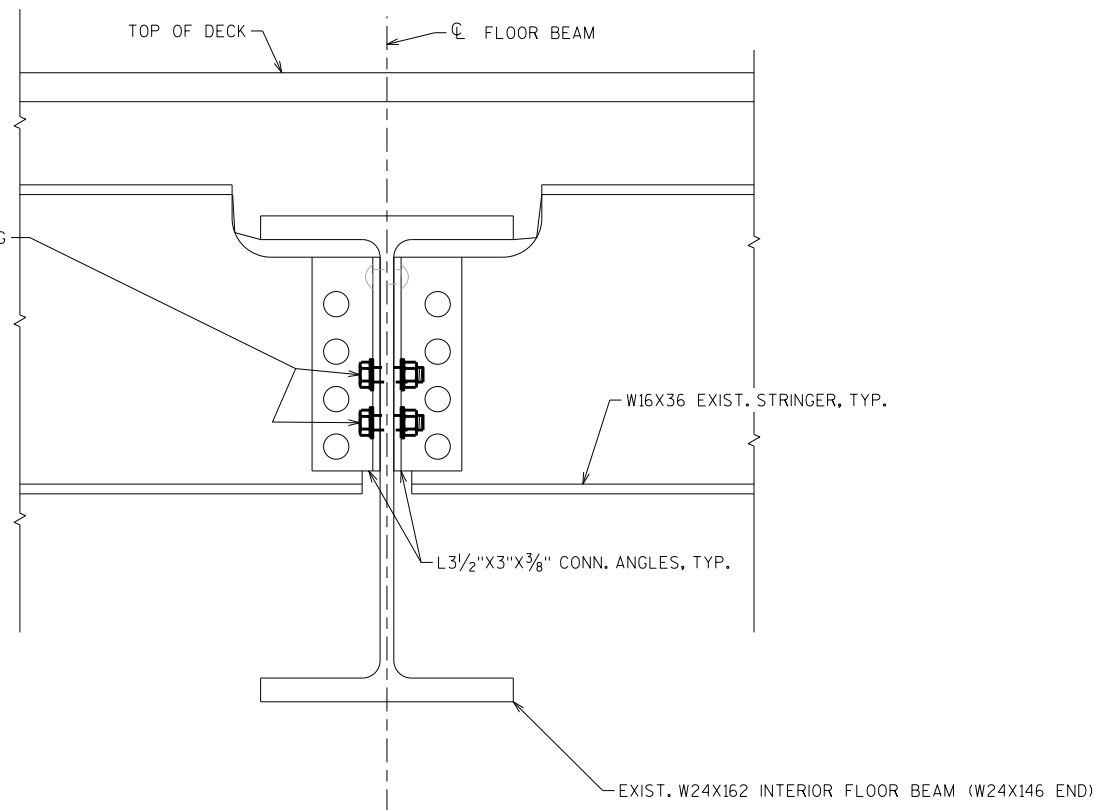
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
DRAWN BY		CAD	PLANS CKD. NJK
STEEL REPAIR DETAILS 2			SHEET 9



REMOVE ONLY ONE RIVET SHANK AT A TIME AND REPLACE WITH 3/4" BOLT PRIOR TO REMOVING ANOTHER RIVET

REMOVE DAMAGED/MISSING 3/4" DIA. RIVETS. REAM HOLES TO 1/2" DIA. AND INSTALL NEW 3/4" DIA. BOLTS
(4 REQ'D AT S3 TO FB3 & FB6 CONNECTION, 1REQ'D AT S6 TO FB1, FB3, FB6, & FB7 CONNECTIONS 1REQ'D AT S3 TO FB3 CONNECTION)

(CROSS-SECTIONAL VIEW)



SECTION E-E

(SECTION AT INTERIOR FLOOR BEAM SHOWN, STRINGER/CONN. ANGLE ON ONE SIDE ONLY AT END FLOOR BEAM FB7)

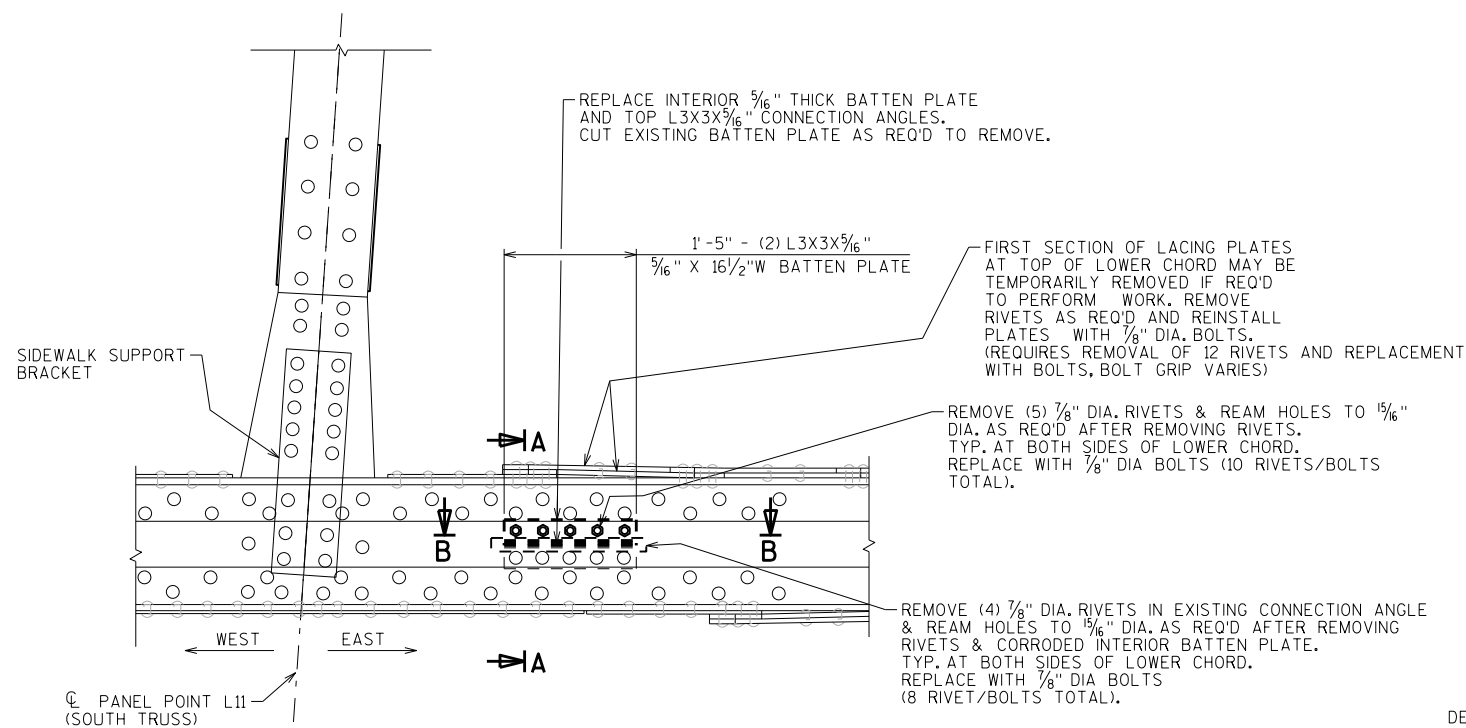
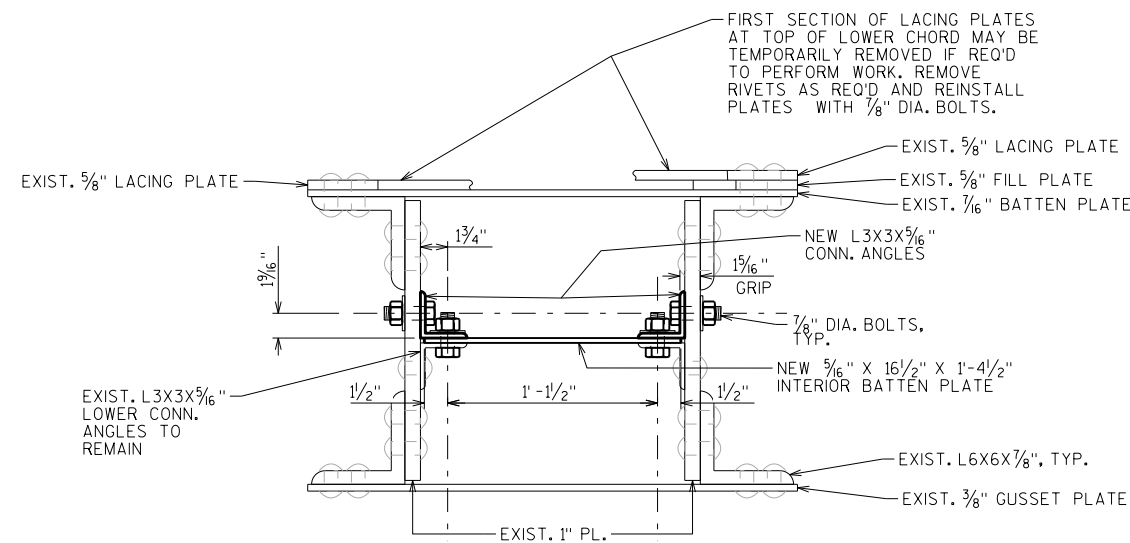
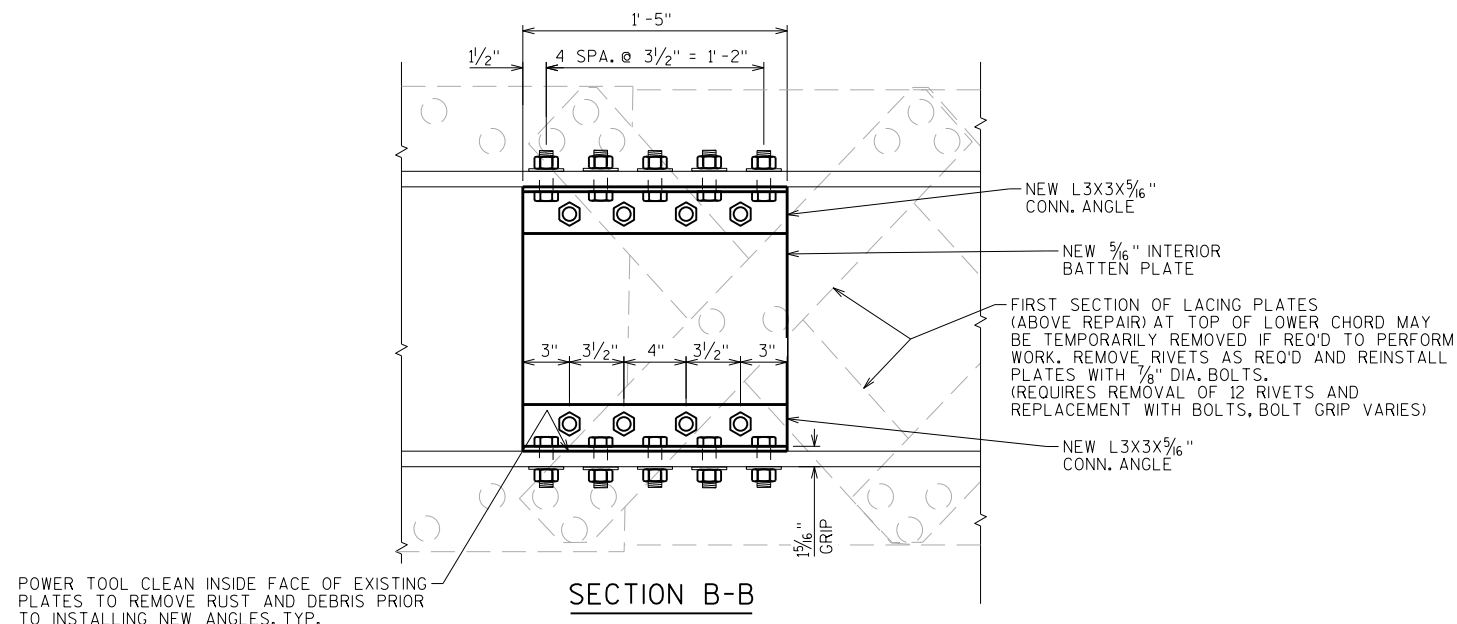
DAMAGE RIVET REPLACEMENT WITH BOLTS AT STRINGER TO FLOOR BEAM CONN. IN SPAN 15

DETAIL NOTES:
RIVET REMOVAL AND HOLE REAMING SHALL BE INCLUDED IN BID ITEM "REMOVING RIVETS".
NEW BOLTS SHALL BE INCLUDED IN BID ITEM "STRUCTURAL STEEL CARBON".
SPOT CLEANING AND PAINTING TO BE INCLUDED IN BID ITEM "STRUCTURE SPOT CLEANING AND PAINTING B-32-300".

8

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
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STEEL REPAIR DETAILS 3			SHEET 10



ELEVATION VIEW - LOOKING NORTH AT OUTSIDE FACE OF SOUTH TRUSS

(SIDEWALK, STRINGERS, AND RAILING NOT SHOWN)

INTERIOR BATTEN PLATES REPLACEMENT DETAIL - SPAN 8, SOUTH TRUSS, L11

SECTION A-A

DETAIL NOTES:

RIVET REMOVAL AND HOLE REAMING SHALL BE INCLUDED IN BID ITEM "REMOVING RIVETS".

ANGLES, PLATES, & 7/8" DIA. BOLTS SHALL BE INCLUDED IN BID ITEM "STRUCTURAL STEEL CARBON".

PROVIDE STD. SIZE 1 5/16" DIA. HOLES IN PLATE FOR 7/8" DIA. BOLTS.

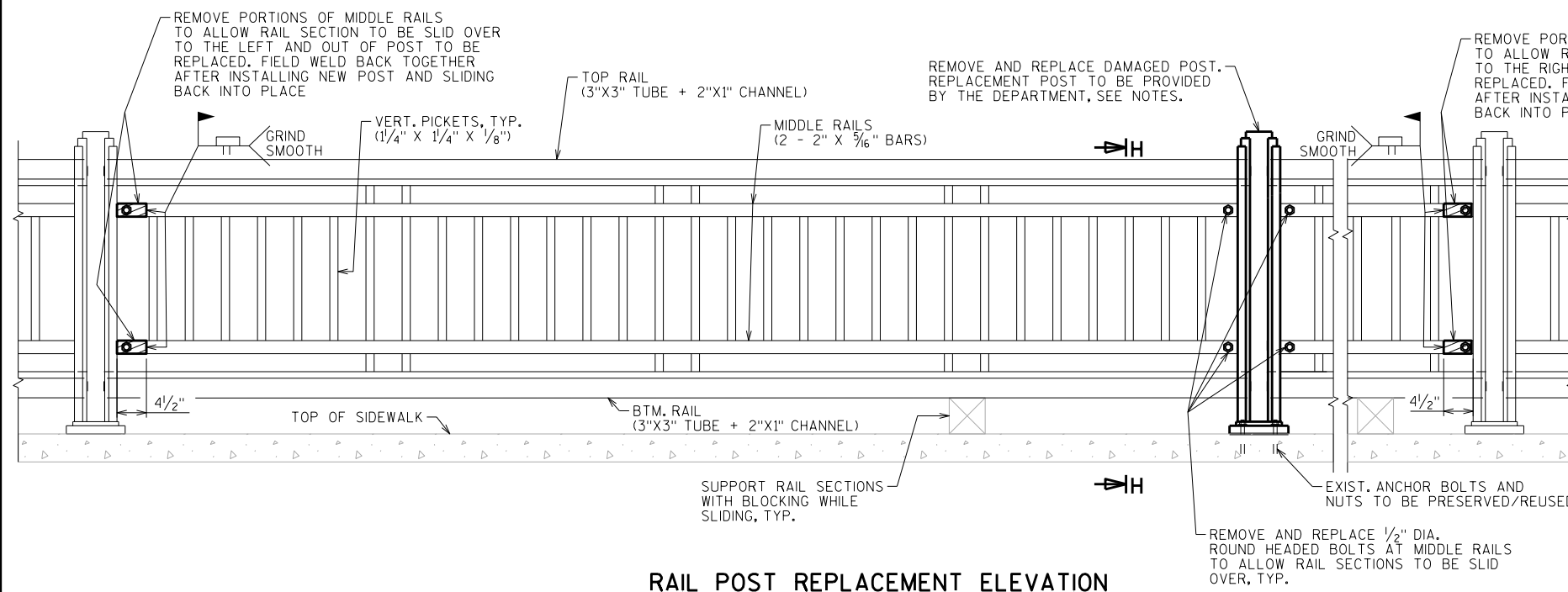
NEW STEEL PIECES SHALL RECEIVE A SHOP BLAST CLEANING CONFORMING TO SSPC-SP 10 AND BE PAINTED WITH ONE COAT OF ZINC-RICH PRIMER COMPATIBLE WITH THE FIELD APPLIED TOP COATS. CLEAN AND PRIME AFTER SHOP DRILLING HOLES. SHOP PAINTING/PRIMING SHALL BE CONSIDERED INCIDENTAL TO BID-ITEM "STRUCTURAL STEEL CARBON".

PLATE AND ANGLE STEEL SHALL CONFORM TO ASTM A709 GRADE 36 OR 50.

FIELD POWER CLEANING AND TOP COAT PAINTING TO BE INCLUDED IN BID ITEM "STRUCTURE SPOT CLEANING AND PAINTING B-32-300".

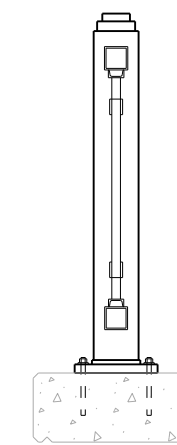
FIELD VERIFY EXISTING PLATE SIZES AND HOLE LOCATIONS PRIOR TO FABRICATION.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
		DRAWN BY CAD	PLANS CKD. NJK
STEEL REPAIR DETAILS 2			SHEET 11

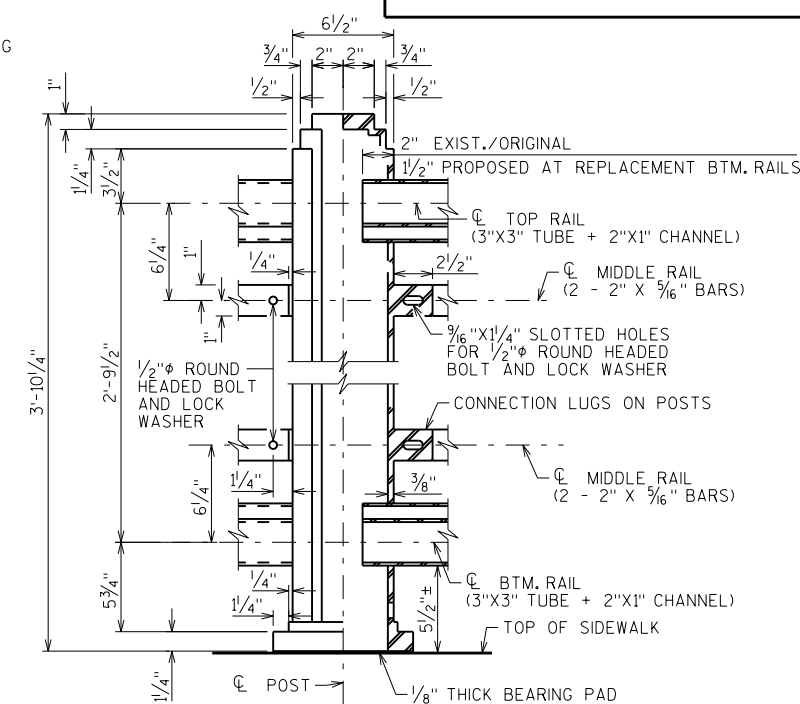


RAIL POST REPLACEMENT ELEVATION

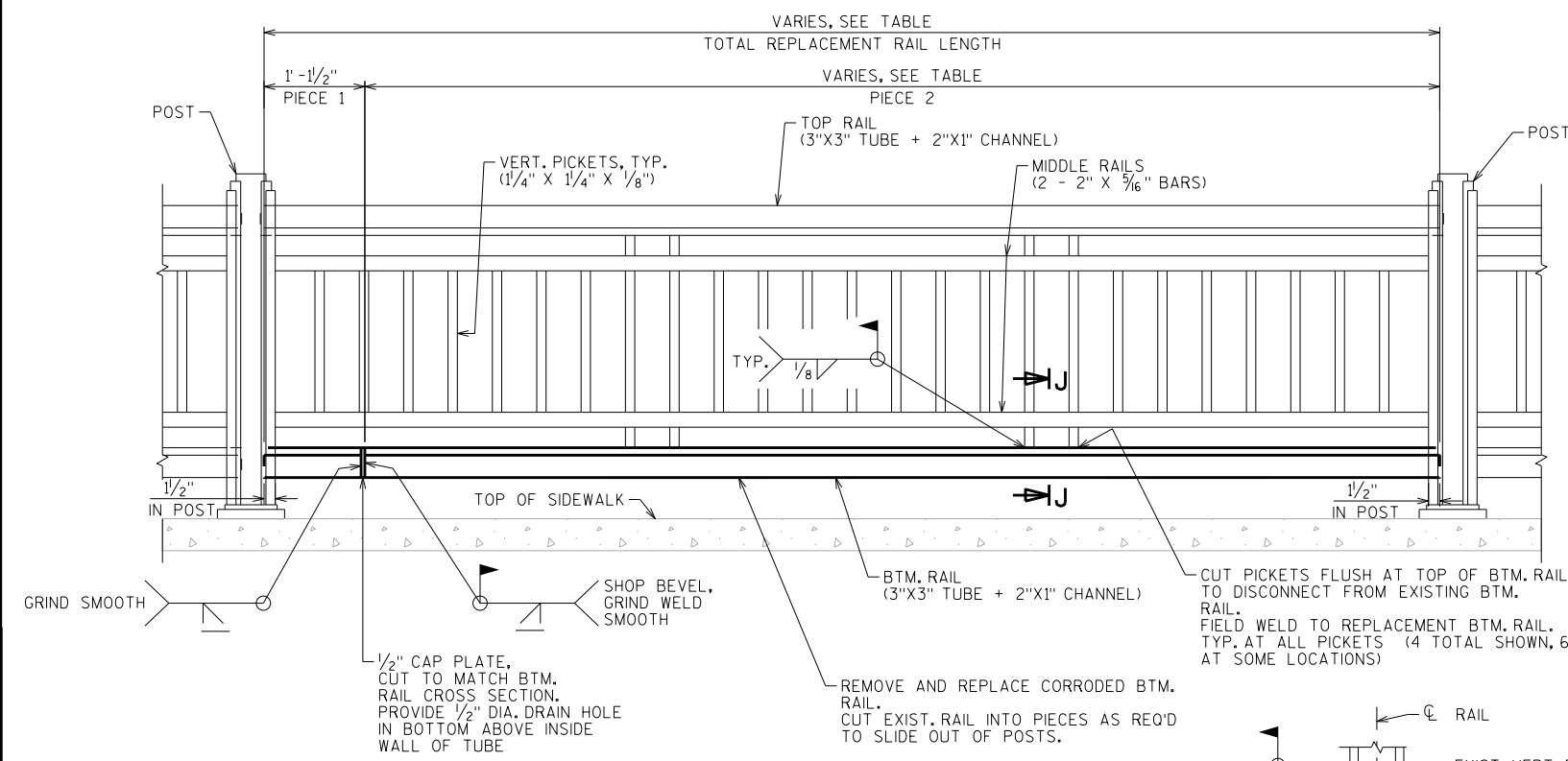
(SEE PLAN FOR LOCATION)



SECTION H-H

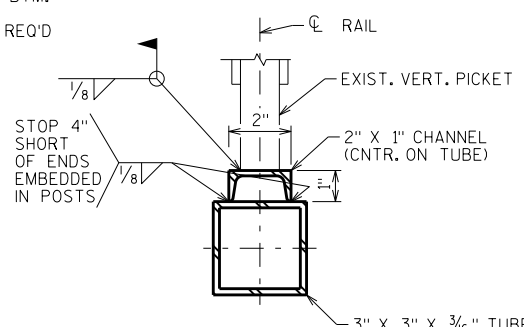


TYPICAL INTERMEDIATE SIDEWALK RAIL POST



BOTTOM RAIL REPLACEMENT ELEVATION

(SEE PLAN FOR LOCATIONS)



SECTION J-J - THRU BTM. RAIL

REPLACEMENT RAIL DIMENSIONS

LOCATION	PIECE "2" LENGTH	TOTAL LENGTH
SPAN 2, NORTH RAIL	13'-0"	14'-1 1/2"
SPAN 3, NORTH RAIL(1)	13'-0"	14'-1 1/2"
SPAN 3, NORTH RAIL(2)	14'-1 7/8"	15'-3 3/8"
SPAN 3, NORTH RAIL(3)	14'-7 1/8"	15'-8 5/8"
SPAN 3, SOUTH RAIL	14'-7 1/8"	15'-8 5/8"
SPAN 4, NORTH RAIL(1)	13'-0"	14'-1 1/2"
SPAN 4, NORTH RAIL(2)	14'-7 1/8"	15'-8 5/8"
SPAN 4, SOUTH RAIL - AT STAIRCASE OPENING	4 5/8"	1'-6 1/8"
SPAN 4, NORTH RAIL @ PIER 4	1'-7"	2'-8 1/2"
SPAN 5, NORTH RAIL(1)	14'-1 7/8"	15'-3 3/8"
SPAN 5, NORTH RAIL(2)	14'-7 1/8"	15'-8 5/8"
SPAN 5, NORTH RAIL(3) @ PIER 5	1'-7"	2'-8 1/2"
SPAN 5, SOUTH RAIL	14'-7 1/8"	15'-8 5/8"
SPAN 6, NORTH RAIL	14'-7"	15'-8 1/2"
SPAN 6, SOUTH RAIL(1)	14'-7"	15'-8 1/2"
SPAN 6, SOUTH RAIL(2) @ PIER 6	NA	1'-2"
SPAN 7, SOUTH RAIL @ PIER 6	NA	1'-2"
SPAN 10, NORTH RAIL(1)	11'-8"	12'-9 1/2"
SPAN 10, NORTH RAIL(2)	12'-7"	13'-8 1/2"
SPAN 10, NORTH RAIL(3)	12'-1 3/4"	13'-3 1/4"
SPAN 11, SOUTH RAIL(1)	13'-0 3/4"	14'-2 1/4"
SPAN 11, SOUTH RAIL(2)	12'-7"	13'-8 1/2"
SPAN 11, SOUTH RAIL(3)	12'-1 7/8"	13'-3 3/8"
SPAN 12, SOUTH RAIL(1)	12'-7"	13'-8 1/2"
SPAN 12, SOUTH RAIL(1)	12'-7"	13'-8 1/2"
SPAN 13, NORTH RAIL(1)	12'-7"	13'-8 1/2"
SPAN 13, NORTH RAIL(2)	4'-0"	5'-1 1/2"
SPAN 13, SOUTH RAIL (1)	12'-7"	13'-8 1/2"
SPAN 13, SOUTH RAIL (2)	12'-7"	13'-8 1/2"
SPAN 14, NORTH RAIL	12'-7"	13'-8 1/2"
SPAN 14, SOUTH RAIL	12'-7"	13'-8 1/2"
SPAN 16, NORTH RAIL	10'-9 3/8"	11'-11 3/8"

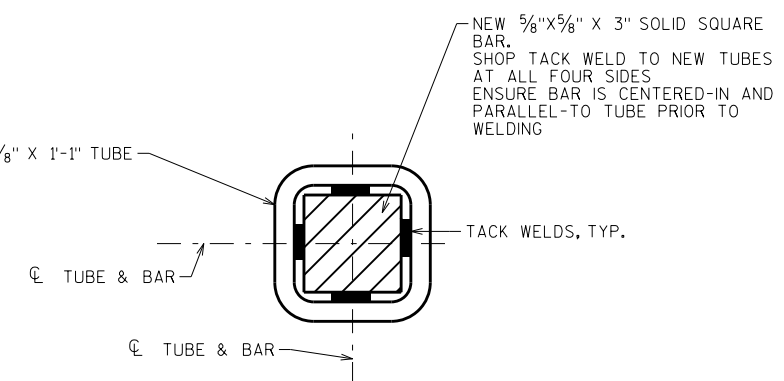
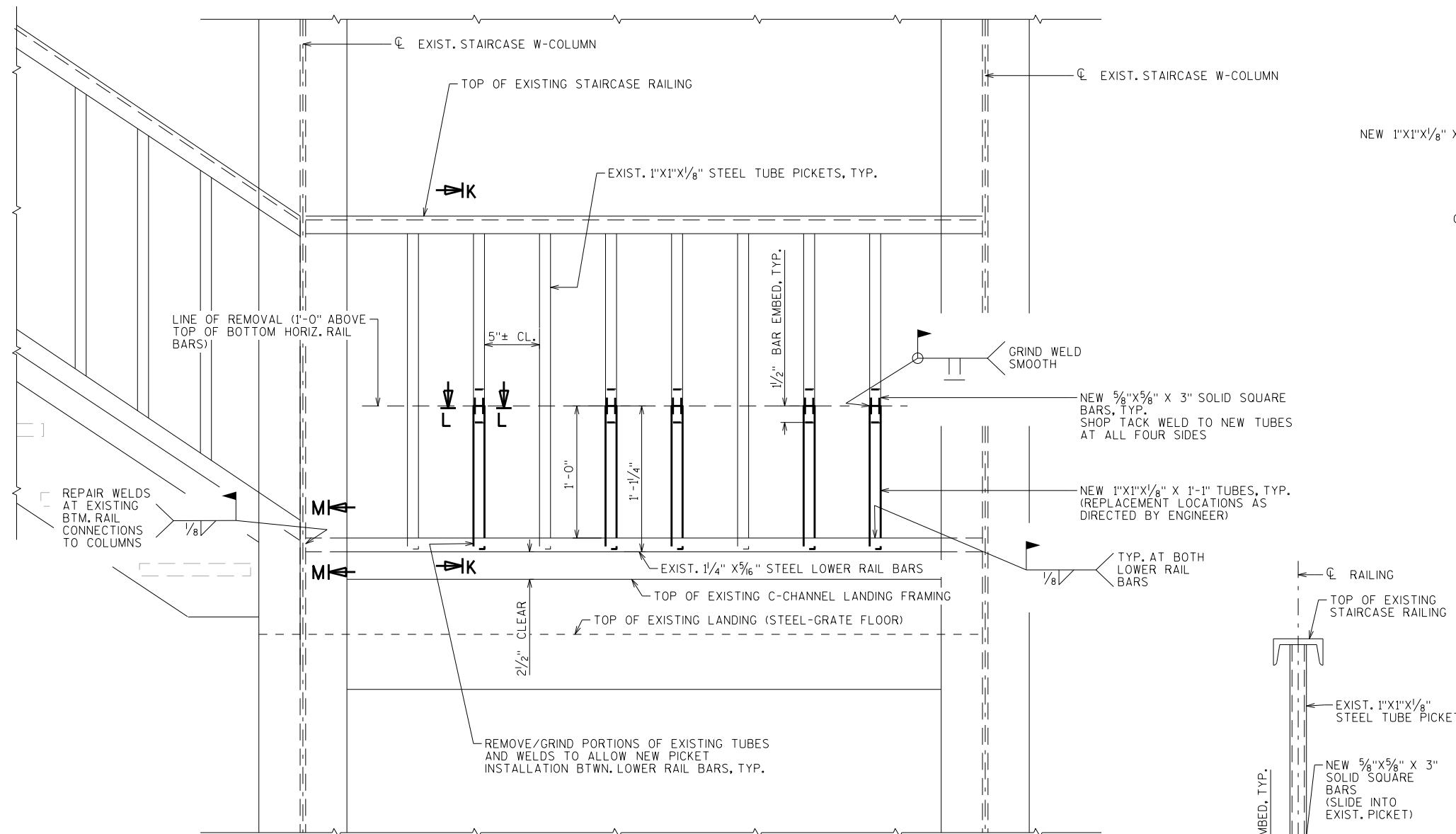
NOTES

- BID ITEM SHALL BE "SIDEWALK RAILING BOTTOM RAIL REPLACEMENT" AND "SIDEWALK RAILING POST REPLACEMENT", AND SHALL INCLUDE ALL ITEMS AND WORK SHOWN.
- AFTER FABRICATION, REPLACEMENT BOTTOM RAIL SECTION SHALL RECEIVE A SHOP BLAST CLEANING CONFORMING TO SSPC-SP 10 AND BE PAINTED WITH ONE COAT OF ZINC-RICH PRIMER COMPATIBLE WITH THE FIELD APPLIED TOP COATS. USE A WELDABLE PRIMER ON SURFACES THAT ARE TO BE FIELD WELDED. CLEAN AND PRIME AFTER SHOP ASSEMBLY/WELDING.
- TOUCH-UP PAINTING/PRIMING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.
- FIELD APPLIED TOP COAT PAINTING TO BE INCLUDED IN BID ITEM "STRUCTURE SPOT CLEANING AND PAINTING B-32-300".
- EXISTING STAINLESS STEEL ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE SALVAGED.
- REPLACEMENT POST TO BE PROVIDED BY THE DEPARTMENT/LACROSSE COUNTY. CONTACT TIM HAMMES (608-792-1216) AT THE LACROSSE COUNTY HIGHWAY DEPARTMENT TO OBTAIN POST. CONTRATOR TO PICK UP POST AT THE HIGHWAY DEPARTMENT'S WEST SALEM SHOP.
- PLACE 1/8" THICK BEARING PAD UNDER BASE OF RAILING POST.
- TUBING MATERIAL SHALL CONFORM TO ASTM A500 GRADE A OR B.
- PLATE AND CHANNEL MATERIAL SHALL CONFORM TO ASTM A36.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
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SIDEWALK RAILING REPAIRS			SHEET 12

8

8



SECTION L-L - THRU REPLACEMENT PICKET

ELEVATION VIEW - PICKET REPAIRS AT STAIRCASE RAILINGS
(PICKETS REPLACEMENTS AT STAIRCASE LANDINGS SHOWN, PICKET REPLACEMENT ABOVE STAIRCASE STRINGERS SIMILAR)

NOTES

PICKET REPAIRS/REPLACEMENTS SHALL BE INCLUDED IN "STAIRCASE PICKET REPAIR", AND SHALL INCLUDE ALL MATERIAL AND WORK REQUIRED TO REPLACE EACH PICKET AS SHOWN. REPAIR LOCATIONS ARE TO BE AS DIRECTED BY ENGINEER (50 LOCATIONS HAVE BEEN INCLUDED FOR BID PURPOSES).

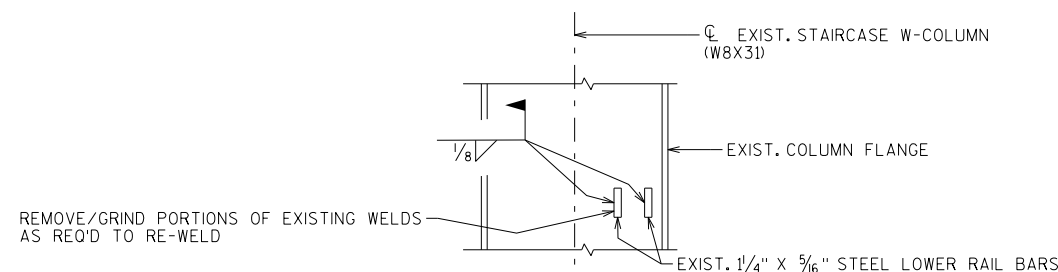
WELDING REPAIRS TO CONNECTIONS OF BOTTOM BARS TO COLUMNS SHALL BE INCLUDED IN "STAIRCASE BOTTOM RAIL CONNECTION REPAIR", AND SHALL INCLUDE ALL MATERIAL AND WORK REQUIRED TO RE-WELD RAILING TO THE SUPPORT COLUMNS. REPAIR LOCATIONS ARE TO BE AS DIRECTED BY ENGINEER (10 LOCATIONS HAVE BEEN INCLUDED FOR BID PURPOSES). EACH COLUMN TO BOTTOM RAIL INTERSECTION SHALL CONSTITUTE (1) LOCATION.

AFTER FABRICATION, REPLACEMENT PICKETS SHALL RECEIVE A SHOP BLAST CLEANING CONFORMING TO SSPC-SP 10 AND BE PAINTED WITH ONE COAT OF ZINC-RICH PRIMER COMPATIBLE WITH THE FIELD APPLIED TOP COATS. USE A WELDABLE PRIMER ON SURFACES THAT ARE TO BE FIELD WELDED. CLEAN AND PRIME AFTER SHOP ASSEMBLY/WELDING.

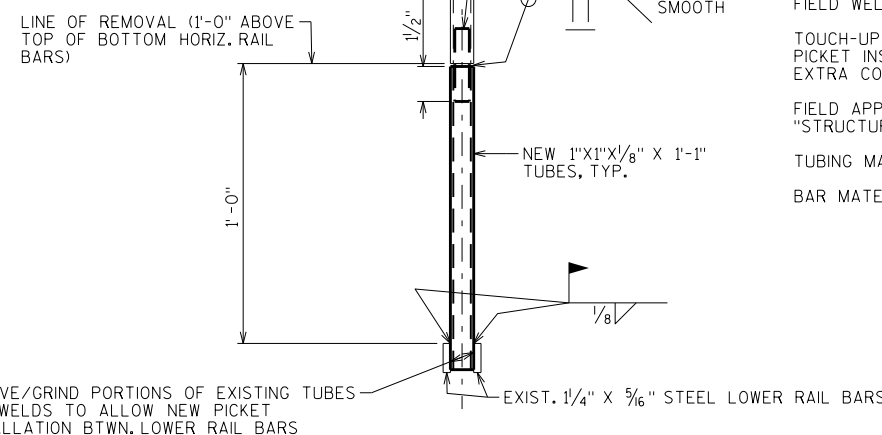
TOUCH-UP PAINTING/PRIMING TO BE DONE AT COMPLETION OF STEEL PICKET INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

FIELD APPLIED TOP COAT PAINTING TO BE INCLUDED IN BID ITEM "STRUCTURE SPOT CLEANING AND PAINTING B-32-300".

TUBING MATERIAL SHALL CONFORM TO ASTM A500 GRADE A OR B. BAR MATERIAL SHALL CONFORM TO ASTM A36.



SECTION M-M - AT LOWER RAIL - WELDED REPAIR CONNECTION
(INCLUDED IN BID ITEM "STAIRCASE BOTTOM RAIL CONNECTION REPAIR")



SECTION K-K - THRU RAILING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-32-300			
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STAIRCASE RAILING REPAIRS			SHEET 13



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