

EAU
PROJECT ID:
WITH:
1021-03-80

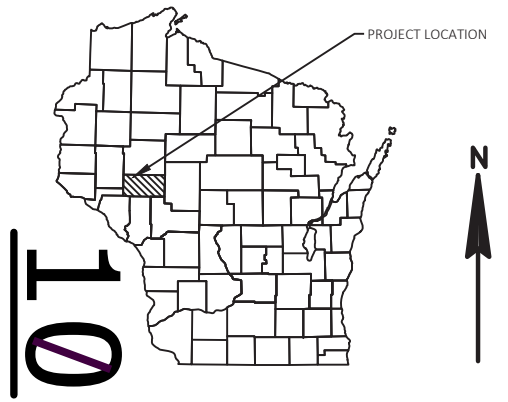
COUNTY:
EAU CLAIRE

JUNE 2024

ORDER OF SHEETS

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

TOTAL SHEETS = 140



DESIGN DESIGNATION 1021-03-10

A.A.D.T.	2022	=	20,800
A.A.D.T.	2032	=	23,100
D.H.V.		=	2,755
D.D.		=	56/44
T.		=	7.1%
DESIGN SPEED		=	45 MPH
ESALS		=	3,695,219

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

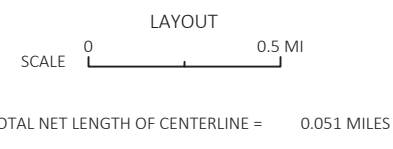
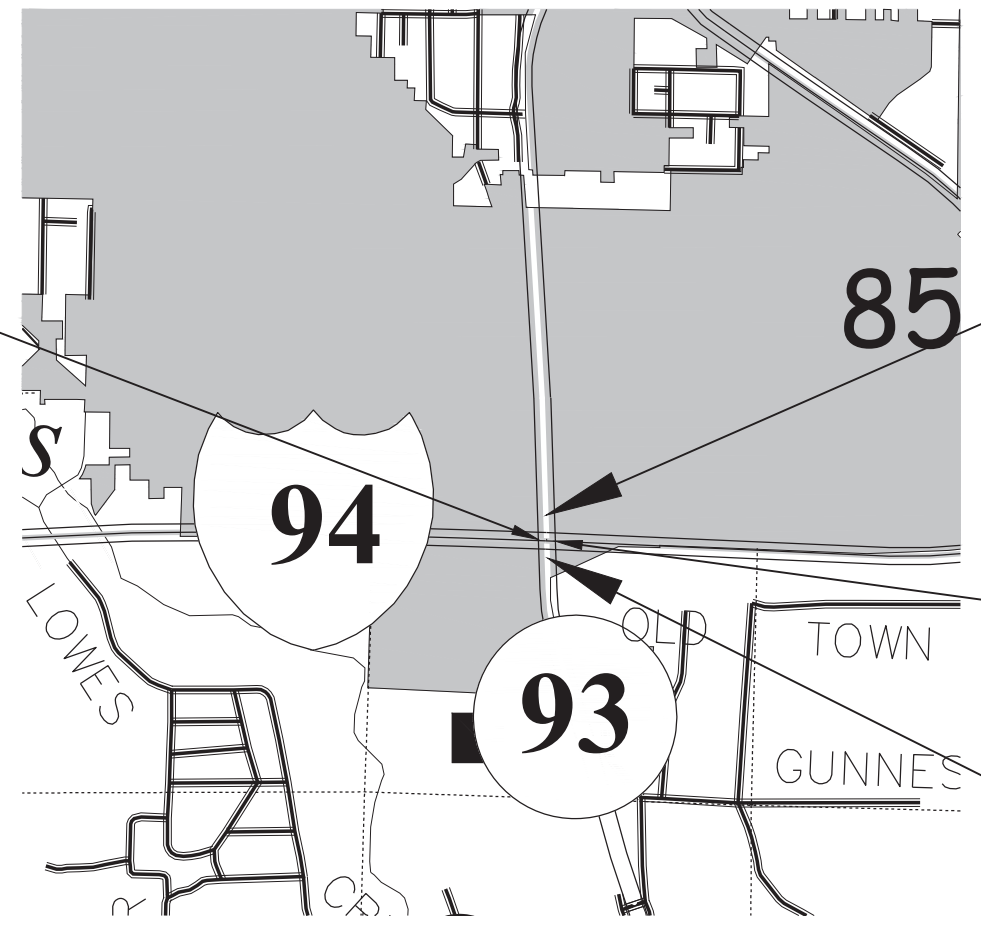
PLAN OF PROPOSED IMPROVEMENT

EAU CLAIRE - OSSEO

STH-93 BRIDGES B-18-0034, B-18-0119

IH 94
EAU CLAIRE

STATE PROJECT NUMBER
1021-03-80



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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1021-03-80		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	Surveyor	WILLIAM HOLME
Designer	NW REGION	
Project Manager	NICOLE PASSUELLO, P.E.	
Regional Examiner	TOU YANG	
Regional Supervisor	NICOLE PASSUELLO, P.E.	

APPROVED FOR THE DEPARTMENT
Nicole Passuello
 DATE: _____
 (Signature)

E

LIST OF STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
AH.	AHEAD
APPROX.	APPROXIMATE
A.E.W.	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT ON TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWINGS
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY OR DESIGN SPEED
V.C.	VERTICAL CURVE

GENERAL NOTES

THE ENGINEER WILL DETERMINE ANY DETAILS OF CONSTRUCTION NOT SHOWN ON THE PLAN.

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

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN IN THE PLANS. COORDINATE 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.

STATIONING, DISTANCE, AND OFFSETS FOR PERMANENT SIGNS SHOWN ON THE PLANS ARE APPROXIMATE. ACTUAL LOCATIONS OF SIGNS ARE TO BE COORDINATED IN THE FIELD BY THE ENGINEER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL DIGGERS HOTLINE PRIOR TO BEGINNING WORK OPERATIONS.

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

BACKFILL FOR THE AREA BEHIND THE CURB AND GUTTER SHALL BE INCIDENTAL.

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

UTILITIES

ALISSA OVERMYER, JMC ENGINEERS
AT&T LEGACY - COMMUNICATION LINE
110 N MAIN STREET
CULVER, IN 46511
574-842-8830 (OFFICE)
AOVERMYER@JMCEAINC.COM

RICK PODOLAK
AT&T WI - COMMUNICATION LINE
304 SOUTH DEWEY STREET, 4TH FLOOR
EAU CLAIRE, WI 54701
715-839-5565 (OFFICE)
RP4514@ATT.COM

DAREN BAUER
CINC - COMMUNICATION LINE
105 GARFIELD AVE
EAU CLAIRE, WI 54701
715-836-5286
BAUERDP@UWEC.EDU

JAHN EBERHARDT
CITY OF EAU CLAIRE - SEWER
910 FOREST ST
EAU CLAIRE, WI 54703
715-839-4950
JAHN.EBERHARDT@EAUCLAIREWI.GOV

JAHN EBERHARDT
CITY OF EAU CLAIRE - WATER
910 FOREST ST
EAU CLAIRE, WI 54703
715-839-4950
JAHN.EBERHARDT@EAUCLAIREWI.GOV

JOSH VANINGAN
EAU CLAIRE ENERGY COOPERATIVE - ELECTRICITY
8214 HWY 12
P.O. BOX 368
FALL CREEK, WI 54742-0368
715-836-6473
JVANINGAN@ECEC.COM

LORI KETTER
WINDSTREAM - COMMUNICATION LINE
969 WAUBE LANE
GREEN BAY, WI 54304
920-410-6902
LORI.KETTER@WINDSTREAM.COM

MITCHELL A DIENGER
XCEL ENERGY - ELECTRIC - TRANSMISSION
414 NICOLLET MALL, 5TH FLOOR
MINNEAPOLIS, MN 55401
612-321-3109 (OFFICE)
608-386-2233 (MOBILE)
MITCHELL.A.DIENGER@XCELENERGY.COM

BRADY GARDOW
XCEL ENERGY - GAS
PO BOX 8
EAU CLAIRE, WI 54702
715-737-1450 (OFFICE)
715-563-4081 (MOBILE)
BRADY.P.GARDOW@XCELENERGY.COM

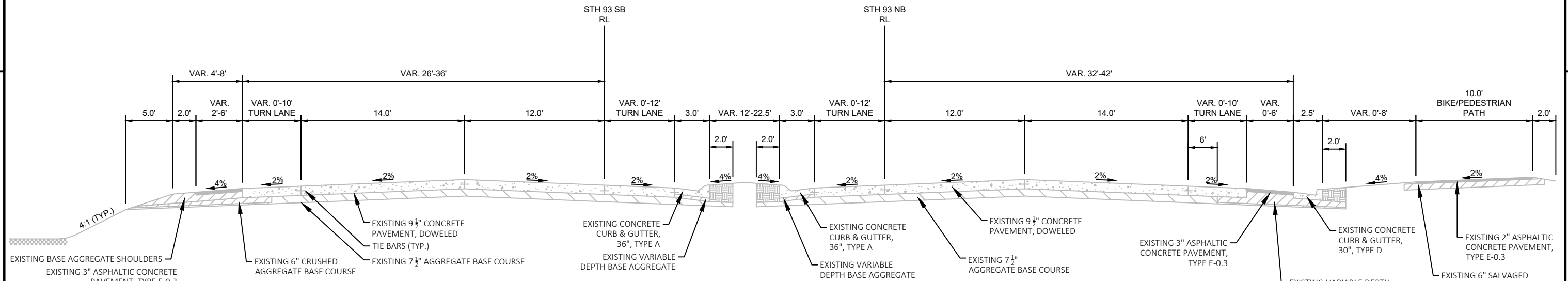
WISCONSIN DNR - LIAISON

LEAH NICOL
DNR WEST CENTRAL REGION HEADQUARTERS
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715-934-9014
EMAIL: LEAH.NICOL@WISCONSIN.GOV

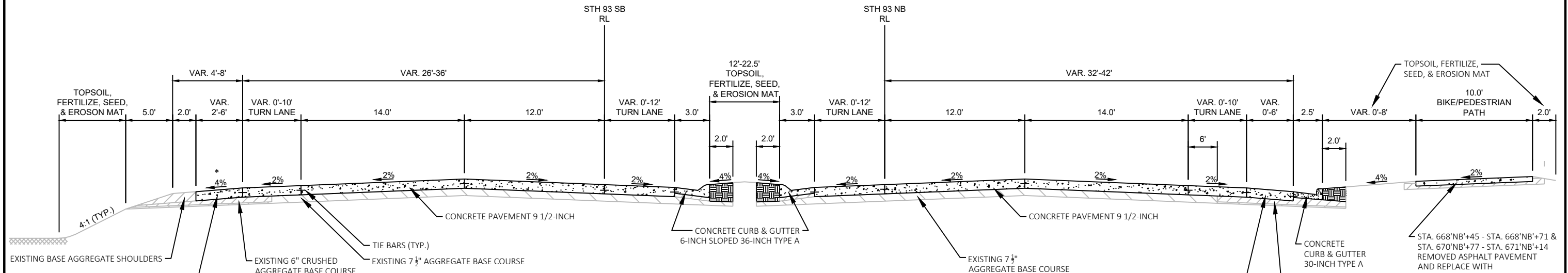
DESIGN PROJECT MANAGER

NICOLE PASSUELLO
NORTHWEST REGION
718 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
OFFICE: 715-833-5572
CELL: 715-579-0013
EMAIL: NICOLE.PASSUELLO@DOT.WI.GOV





TYPICAL EXISTING SECTION
 STA 668'NB'+43 TO 668'NB'+56
 STA 670'NB'+95 TO 671'NB'+14
 STA 668'SB'+43 TO 668'SB'+58
 STA 671'SB'+00 TO 671'SB'+49



TYPICAL FINISHED SECTION
 STA 668'NB'+43 TO 668'NB'+56
 STA 670'NB'+95 TO 671'NB'+14
 STA 668'SB'+43 TO 668'SB'+58
 STA 671'SB'+00 TO 671'SB'+49

REMOVE ASPHALT PAVEMENT AND REPLACE WITH CONCRETE PAVEMENT 9 1/2-INCH
 * CONTINUES TO STA 671'SB'+58

REMOVE ASPHALT PAVEMENT AND REPLACE WITH CONCRETE PAVEMENT 9 1/2-INCH

STA. 668'NB'+45 - STA. 668'NB'+71 & STA. 670'NB'+77 - STA. 671'NB'+14 REMOVED ASPHALT PAVEMENT AND REPLACE WITH CONCRETE SIDEWALK 6-INCH

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS AND DEVICES AND THEIR LOCATION SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD), THE PLANS, STANDARD SPECIFICATIONS, CONTRACT AND APPLICABLE STANDARD DETAIL DRAWINGS.










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

ALL SIGNS ARE 48" X 38" UNLESS OTHERWISE NOTED IN STANDARD DETAIL DRAWINGS.

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

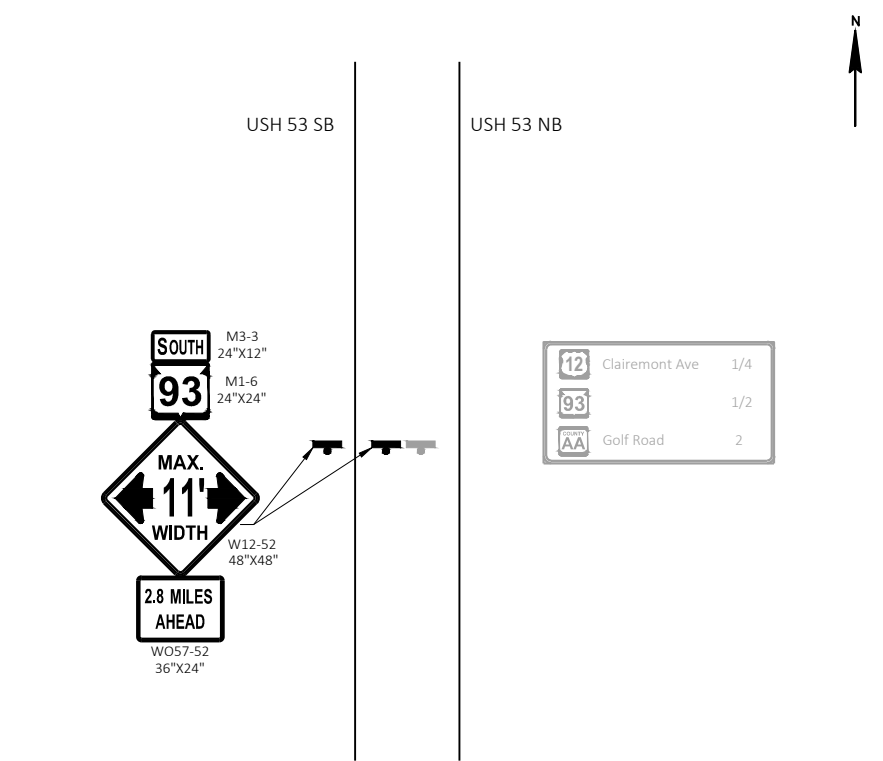
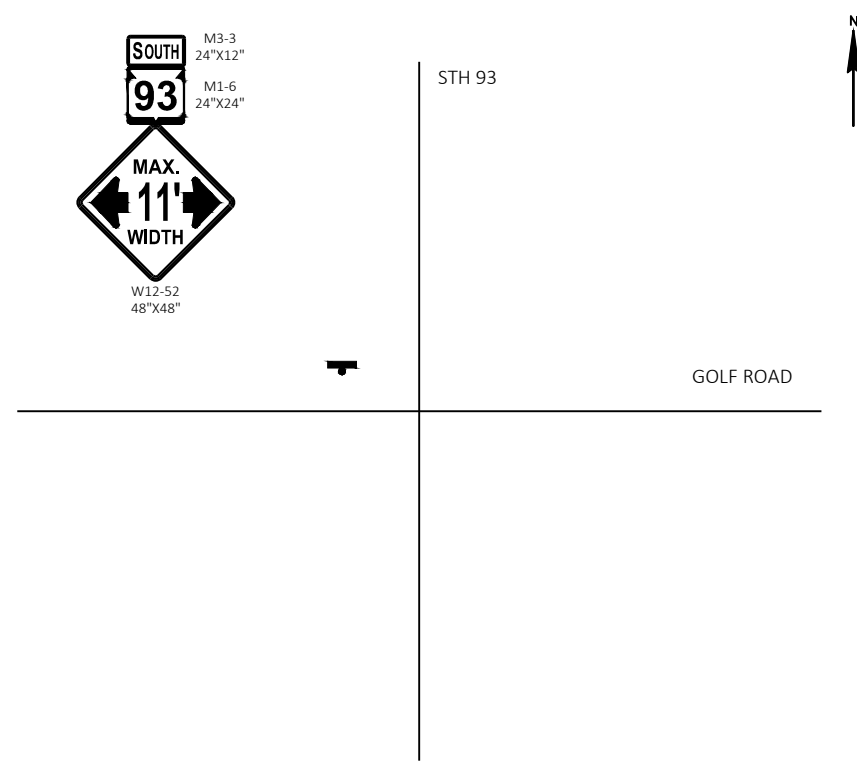
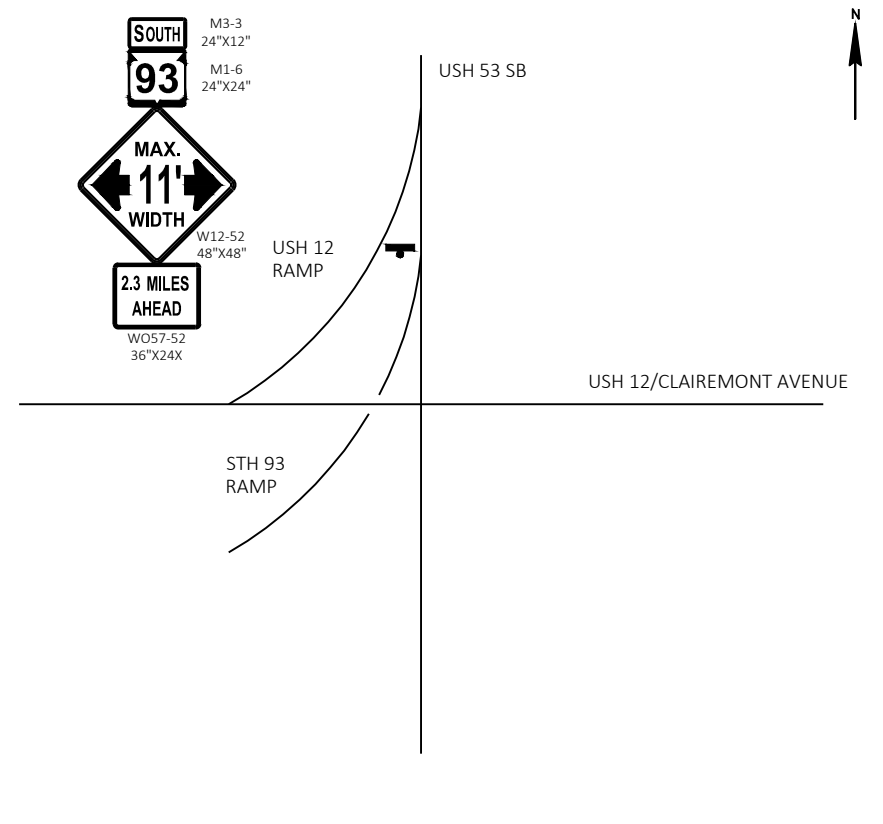
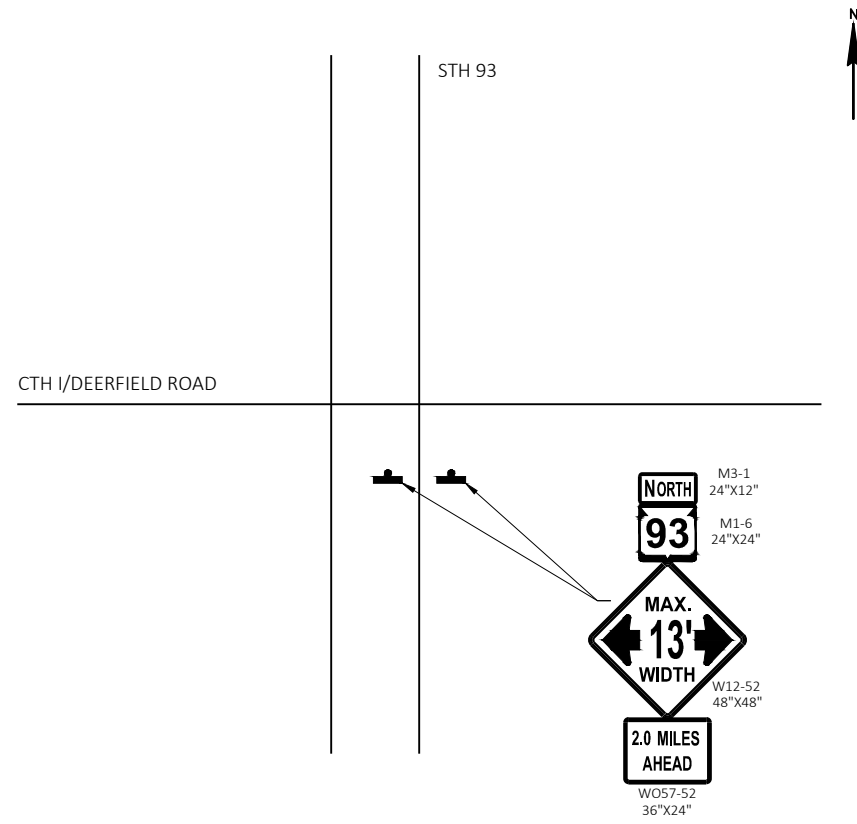
SIGNS IN CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID UNDER THE ITEM "TRAFFIC CONTROL COVERING SIGNS TYPE II".

LEGEND













-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  EXISTING SIGN ON SUPPORT POST
-  PROPOSED SIGN ON SUPPORT POST
-  CONCRETE BARRIER TEMPORARY PRECAST
-  TEMPORARY CRASH CUSHION
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD

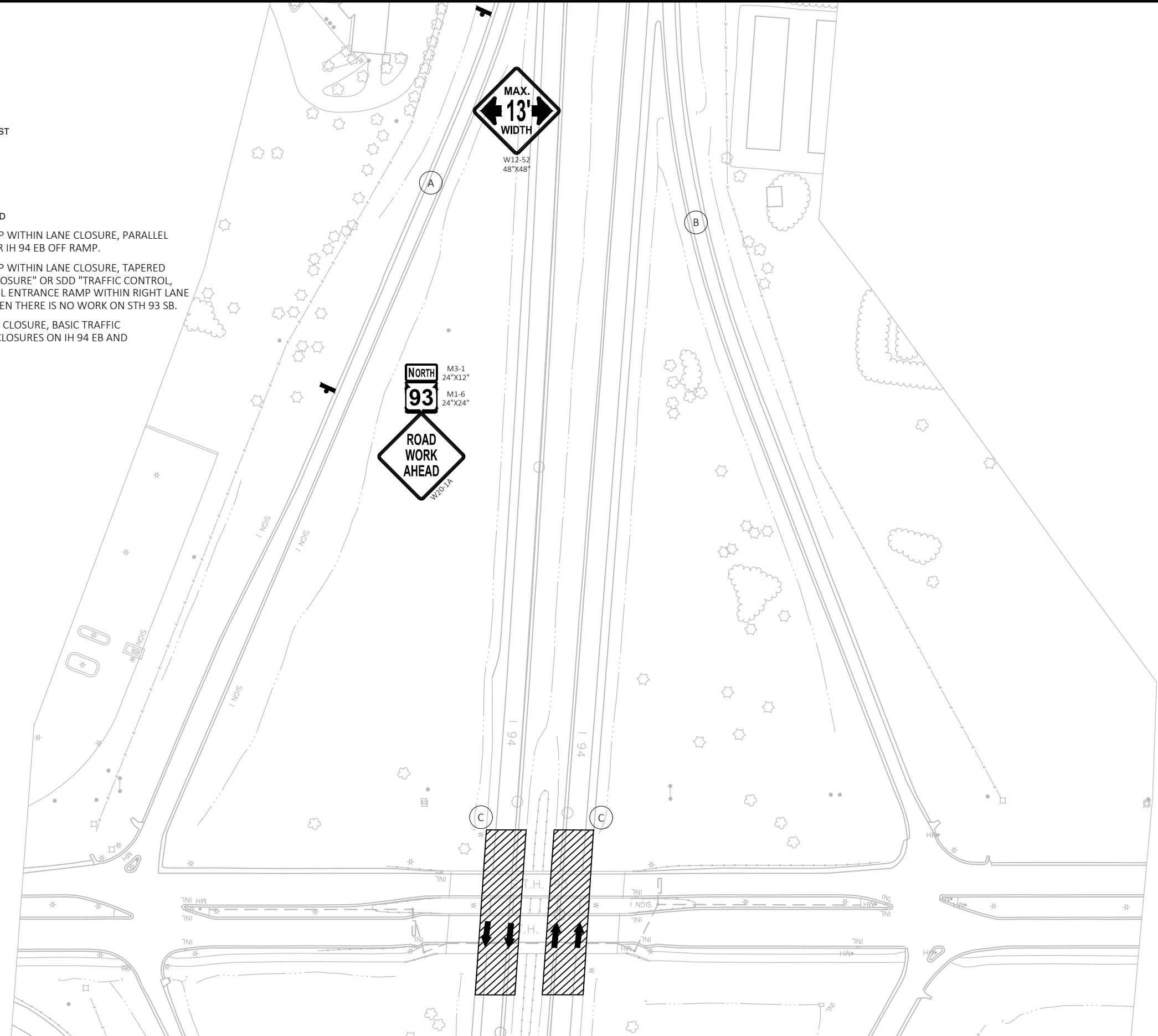
PLACE ONE PORTABLE CHANGEABLE MESSAGE SIGN IN EACH DIRECTION ON STH 9 SEVEN DAYS PRIOR TO THE START OF CONSTRUCTION. REMOVE PCMS AFTER SEVEN DAYS.

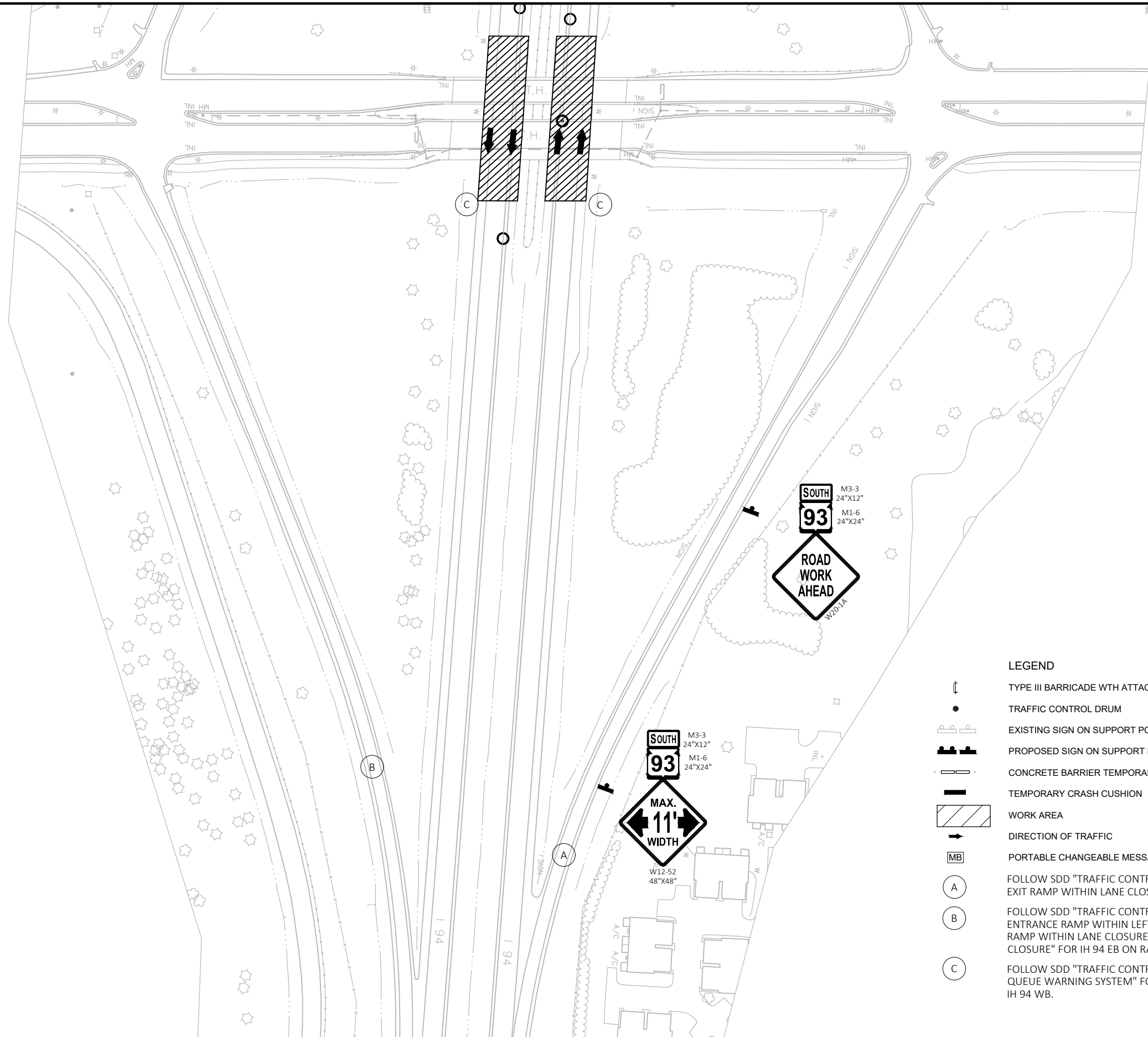
FRAME 1	FRAME 2
BRIDGE WORK	STARTS XX XX XX















LEGEND

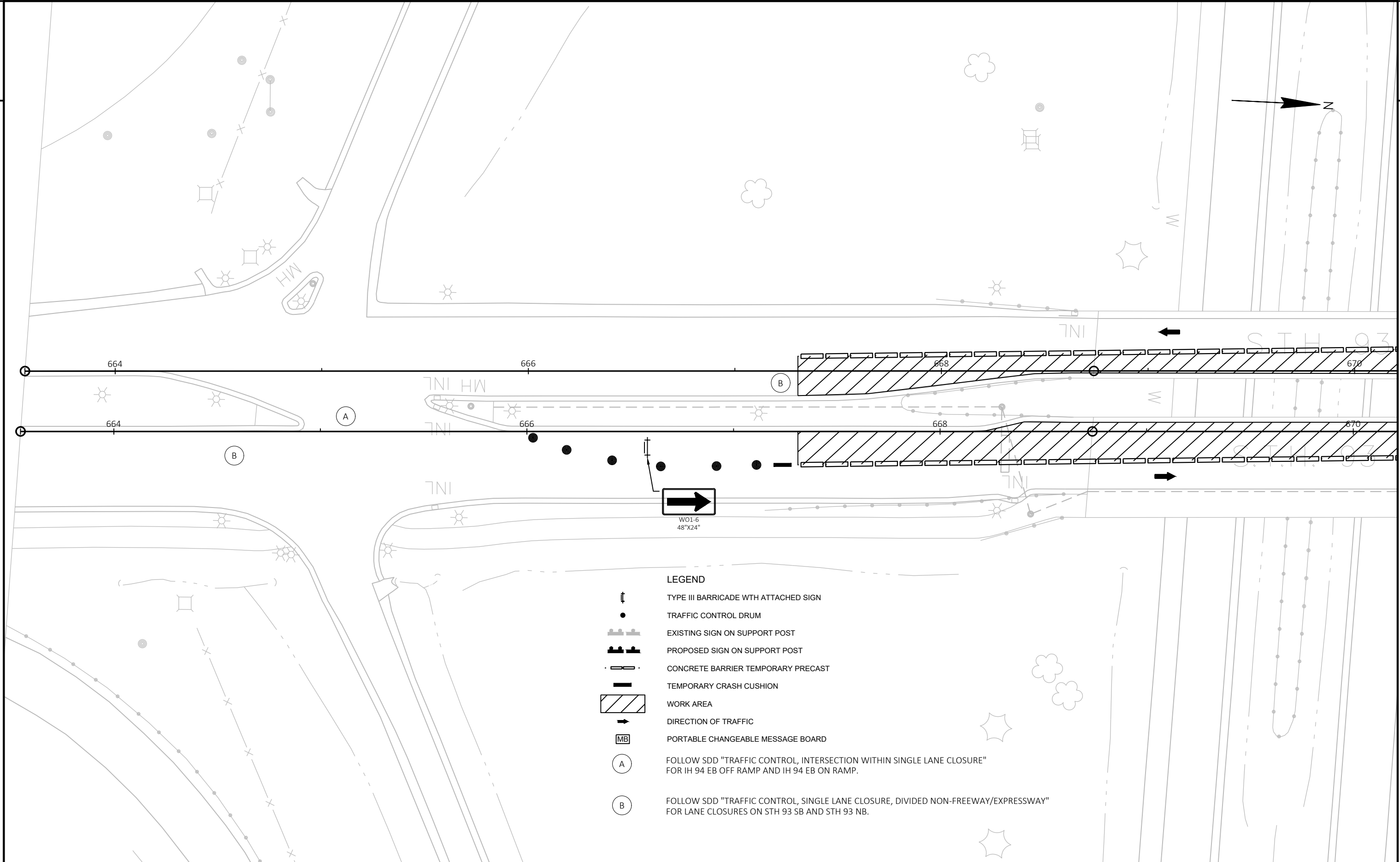
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  EXISTING SIGN ON SUPPORT POST
-  PROPOSED SIGN ON SUPPORT POST
-  CONCRETE BARRIER TEMPORARY PRECAST
-  TEMPORARY CRASH CUSHION
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD
-  FOLLOW SDD "TRAFFIC CONTROL, RAMP WITHIN LANE CLOSURE, PARALLEL EXIT RAMP WITHIN LANE CLOSURE" FOR IH 94 EB OFF RAMP.
-  FOLLOW SDD "TRAFFIC CONTROL, RAMP WITHIN LANE CLOSURE, TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE" OR SDD "TRAFFIC CONTROL, RAMP WITHIN LANE CLOSURE, PARALLEL ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE" FOR IH 94 WB ON RAMP WHEN THERE IS NO WORK ON STH 93 SB.
-  FOLLOW SDD "TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM" FOR LANE CLOSURES ON IH 94 EB AND IH 94 WB.









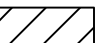






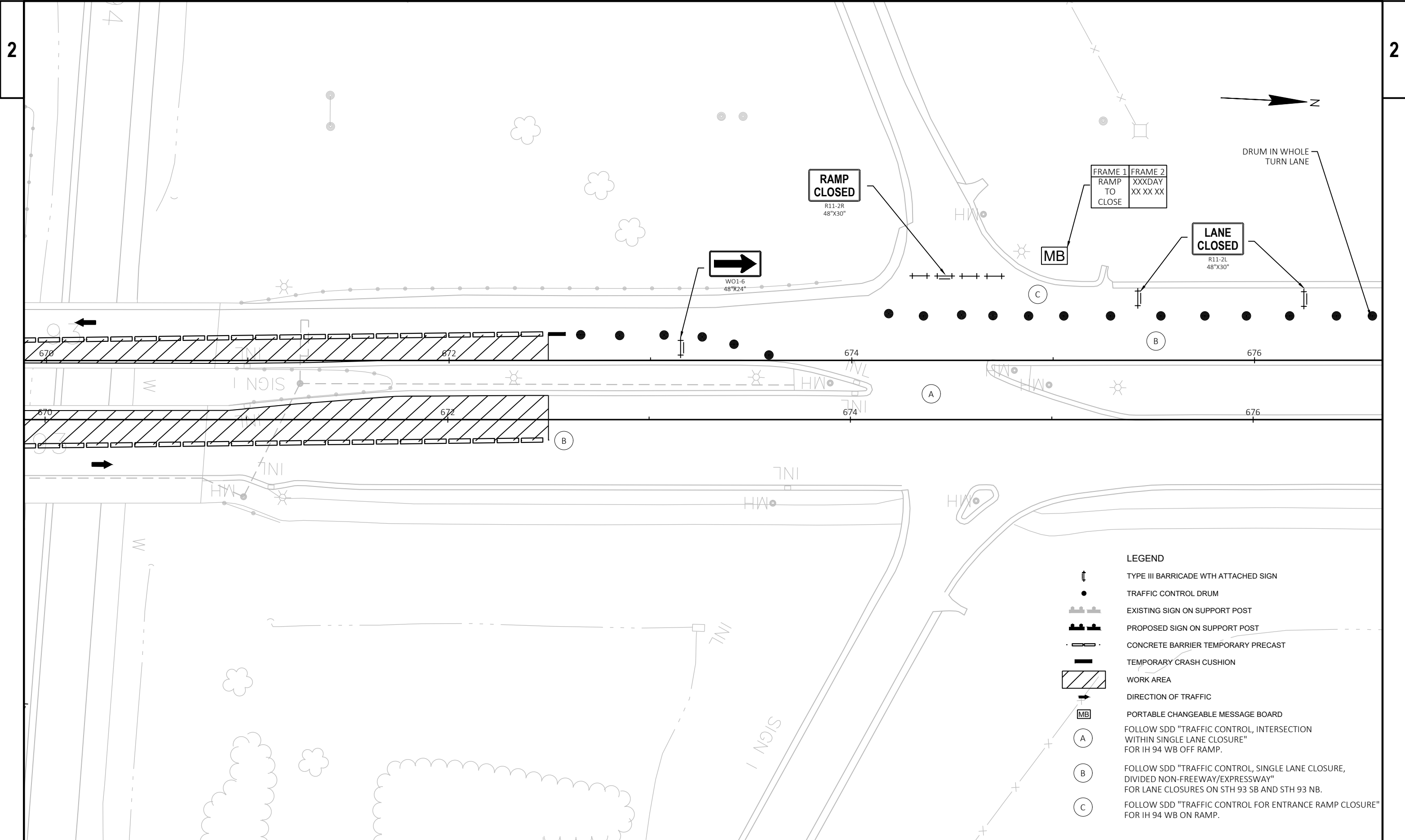
LEGEND













-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  EXISTING SIGN ON SUPPORT POST
-  PROPOSED SIGN ON SUPPORT POST
-  CONCRETE BARRIER TEMPORARY PRECAST
-  TEMPORARY CRASH CUSHION
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-  PORTABLE CHANGEABLE MESSAGE BOARD
-  FOLLOW SDD "TRAFFIC CONTROL, RAMP WITHIN LANE CLOSURE, PARALLEL EXIT RAMP WITHIN LANE CLOSURE" FOR IH 94 WB OFF RAMP.
-  FOLLOW SDD "TRAFFIC CONTROL, RAMP WITHIN LANE CLOSURE, TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE" OR SDD "TRAFFIC CONTROL, RAMP WITHIN LANE CLOSURE, PARALLEL ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE" FOR IH 94 EB ON RAMP..
-  FOLLOW SDD "TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM" FOR LANE CLOSURES ON IH 94 EB AND IH 94 WB.

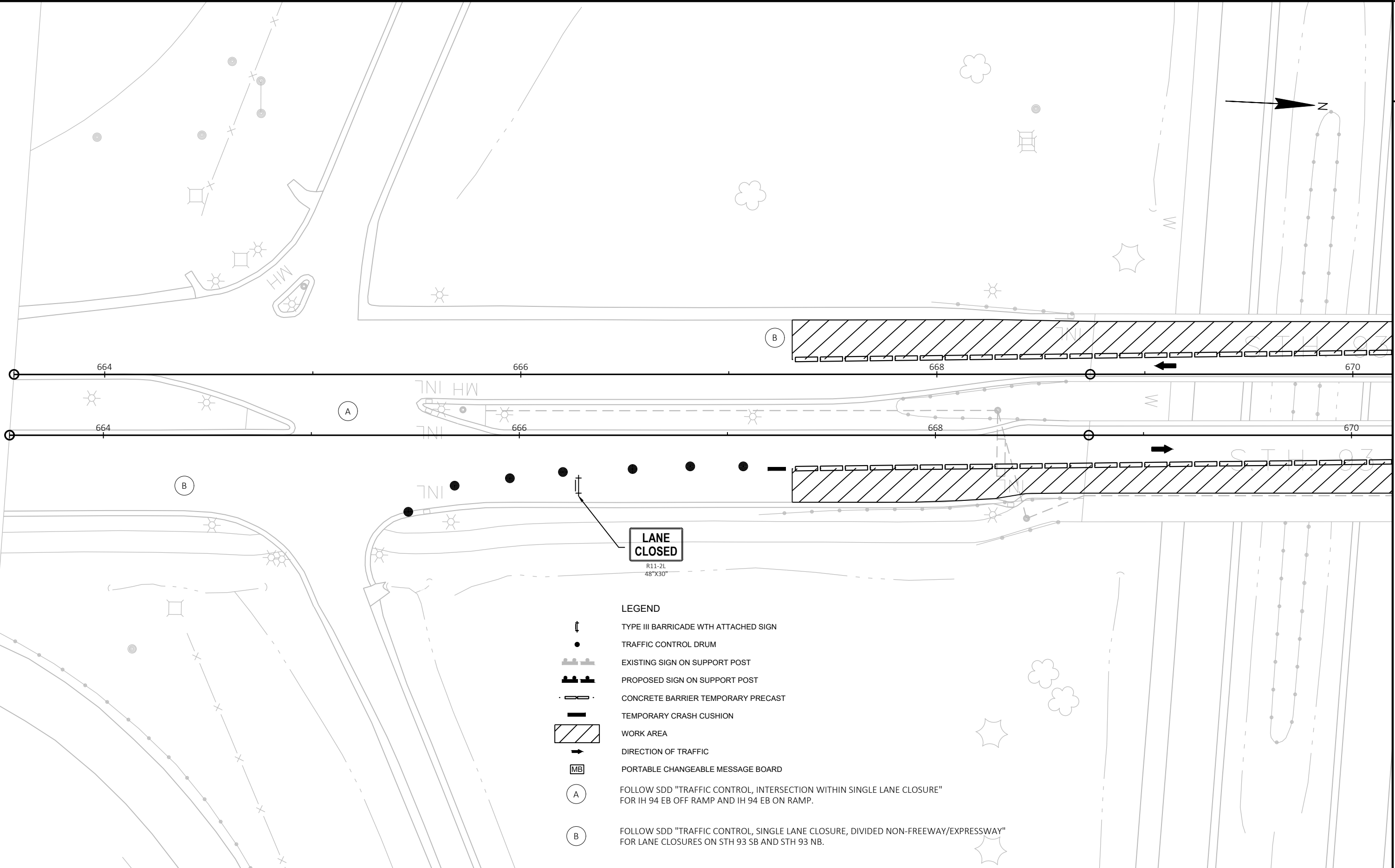


LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
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-  EXISTING SIGN ON SUPPORT POST
-  PROPOSED SIGN ON SUPPORT POST
-  CONCRETE BARRIER TEMPORARY PRECAST
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-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD
-  FOLLOW SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE"
FOR IH 94 EB OFF RAMP AND IH 94 EB ON RAMP.
-  FOLLOW SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY"
FOR LANE CLOSURES ON STH 93 SB AND STH 93 NB.














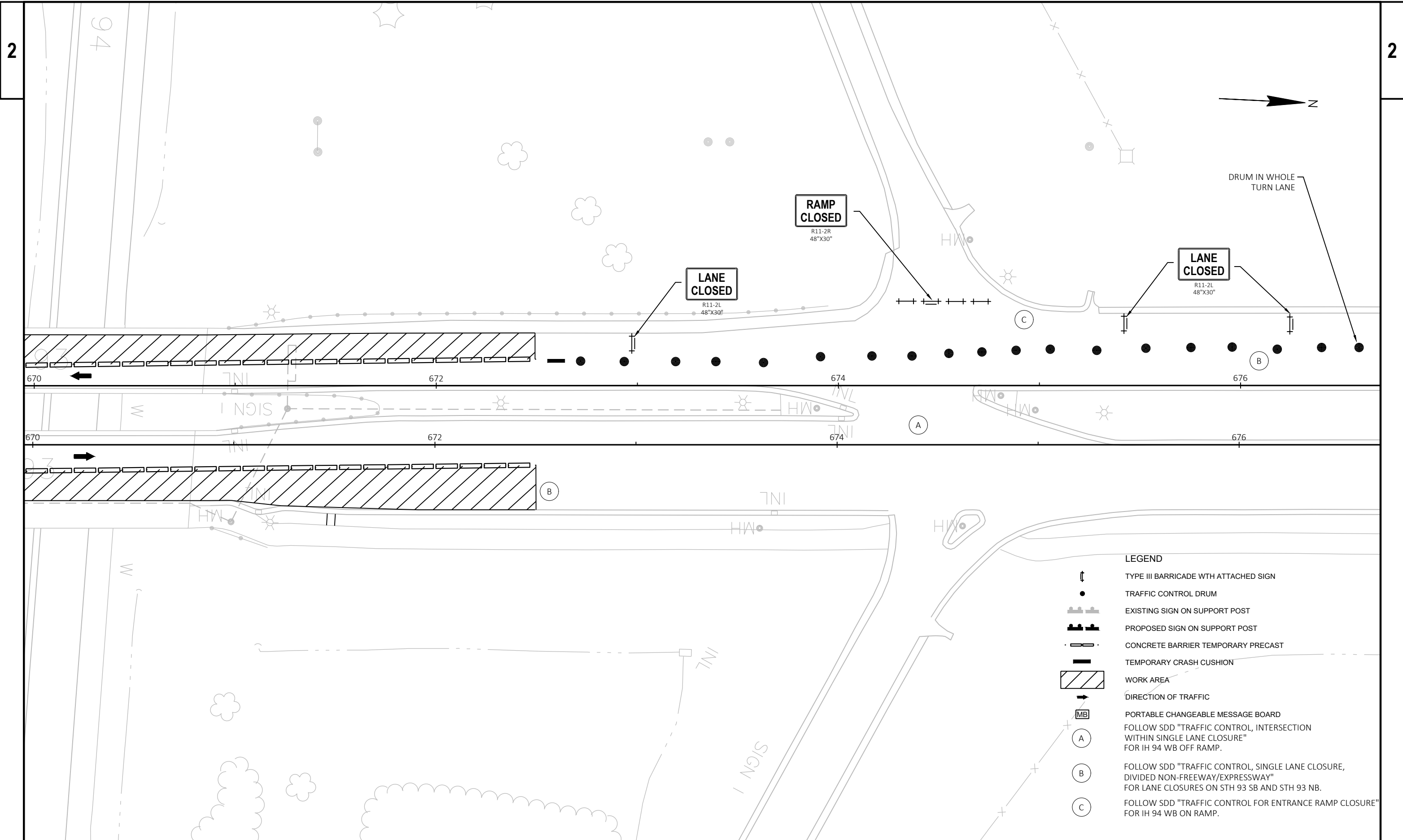
- LEGEND**
-  TYPE III BARRICADE WITH ATTACHED SIGN
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 -  FOLLOW SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR IH 94 WB OFF RAMP.
 -  FOLLOW SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY" FOR LANE CLOSURES ON STH 93 SB AND STH 93 NB.
 -  FOLLOW SDD "TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE" FOR IH 94 WB ON RAMP.















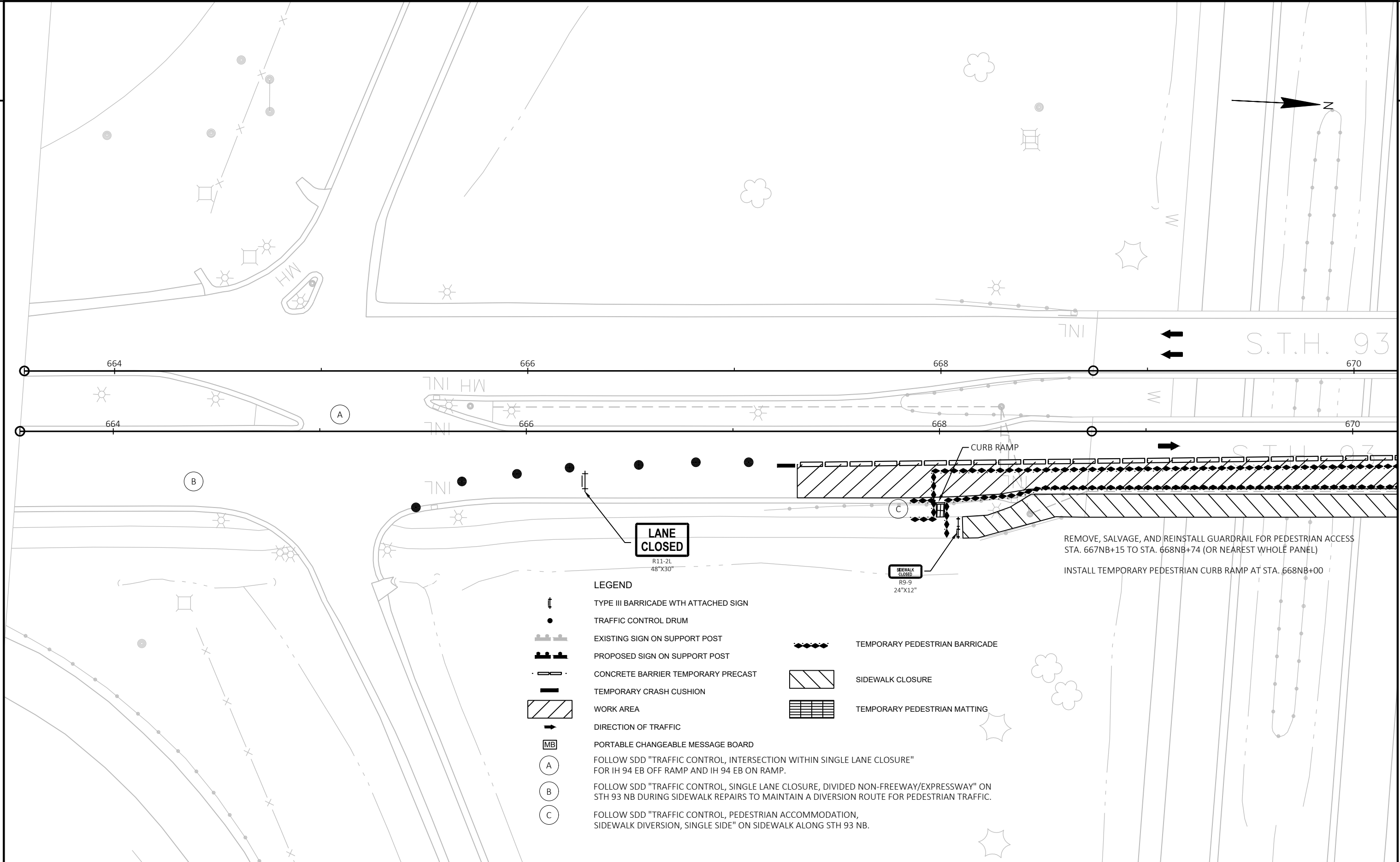
**LANE
CLOSED**
R11-2L
48"X30"

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  EXISTING SIGN ON SUPPORT POST
-  PROPOSED SIGN ON SUPPORT POST
-  CONCRETE BARRIER TEMPORARY PRECAST
-  TEMPORARY CRASH CUSHION
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-  PORTABLE CHANGEABLE MESSAGE BOARD
-  FOLLOW SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE"
FOR IH 94 EB OFF RAMP AND IH 94 EB ON RAMP.
-  FOLLOW SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY"
FOR LANE CLOSURES ON STH 93 SB AND STH 93 NB.



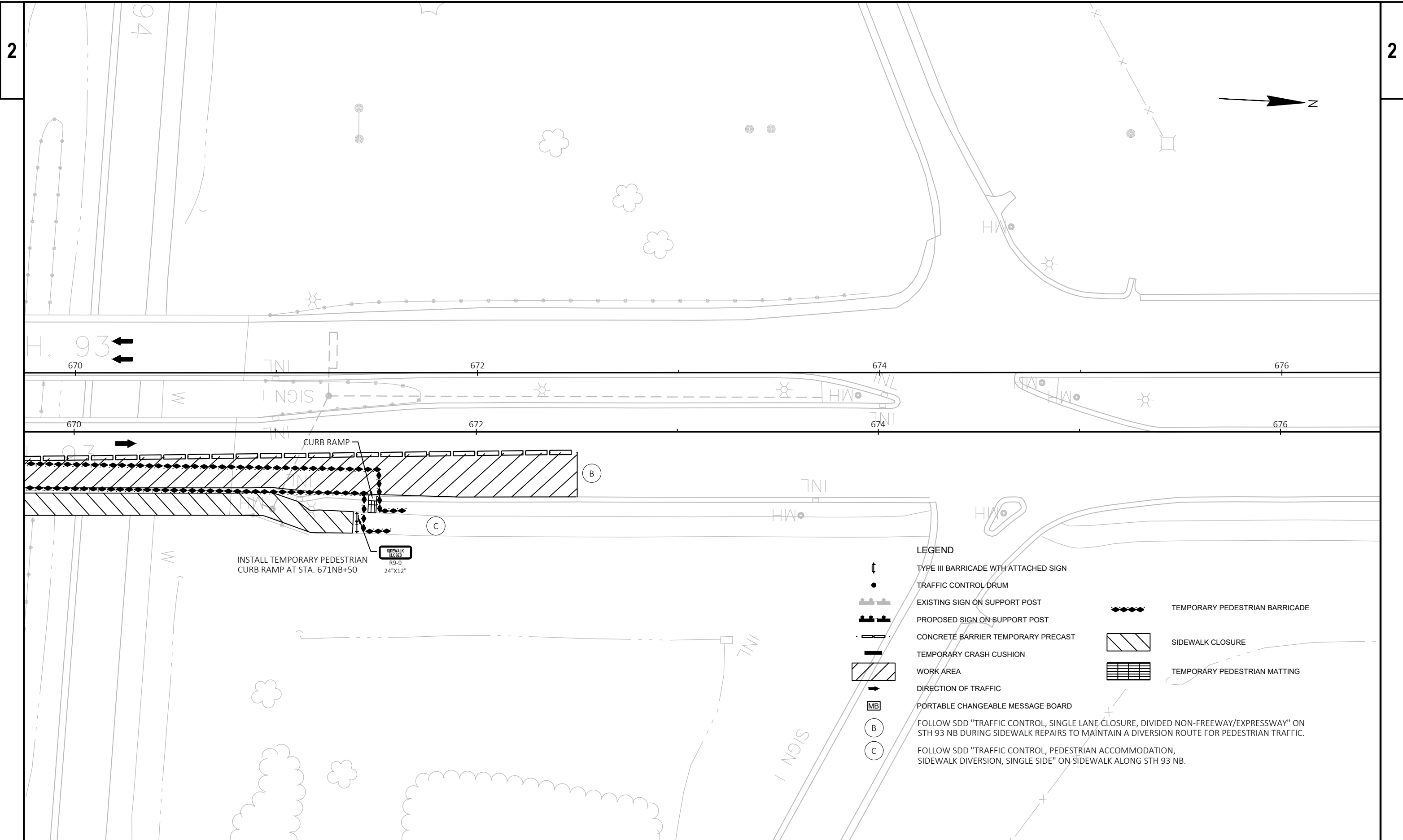
- LEGEND**
-  TYPE III BARRICADE WITH ATTACHED SIGN
 -  TRAFFIC CONTROL DRUM
 -  EXISTING SIGN ON SUPPORT POST
 -  PROPOSED SIGN ON SUPPORT POST
 -  CONCRETE BARRIER TEMPORARY PRECAST
 -  TEMPORARY CRASH CUSHION
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 -  DIRECTION OF TRAFFIC
 -  PORTABLE CHANGEABLE MESSAGE BOARD
 -  FOLLOW SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR IH 94 WB OFF RAMP.
 -  FOLLOW SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY" FOR LANE CLOSURES ON STH 93 SB AND STH 93 NB.
 -  FOLLOW SDD "TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE" FOR IH 94 WB ON RAMP.



REMOVE, SALVAGE, AND REINSTALL GUARDRAIL FOR PEDESTRIAN ACCESS
 STA. 667NB+15 TO STA. 668NB+74 (OR NEAREST WHOLE PANEL)
 INSTALL TEMPORARY PEDESTRIAN CURB RAMP AT STA. 668NB+00

LEGEND

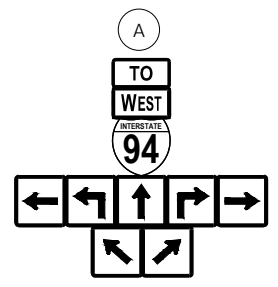
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- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD
- FOLLOW SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR IH 94 EB OFF RAMP AND IH 94 EB ON RAMP.
- FOLLOW SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY" ON STH 93 NB DURING SIDEWALK REPAIRS TO MAINTAIN A DIVERSION ROUTE FOR PEDESTRIAN TRAFFIC.
- FOLLOW SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION, SIDEWALK DIVERSION, SINGLE SIDE" ON SIDEWALK ALONG STH 93 NB.
- TEMPORARY PEDESTRIAN BARRICADE
- SIDEWALK CLOSURE
- TEMPORARY PEDESTRIAN MATTING



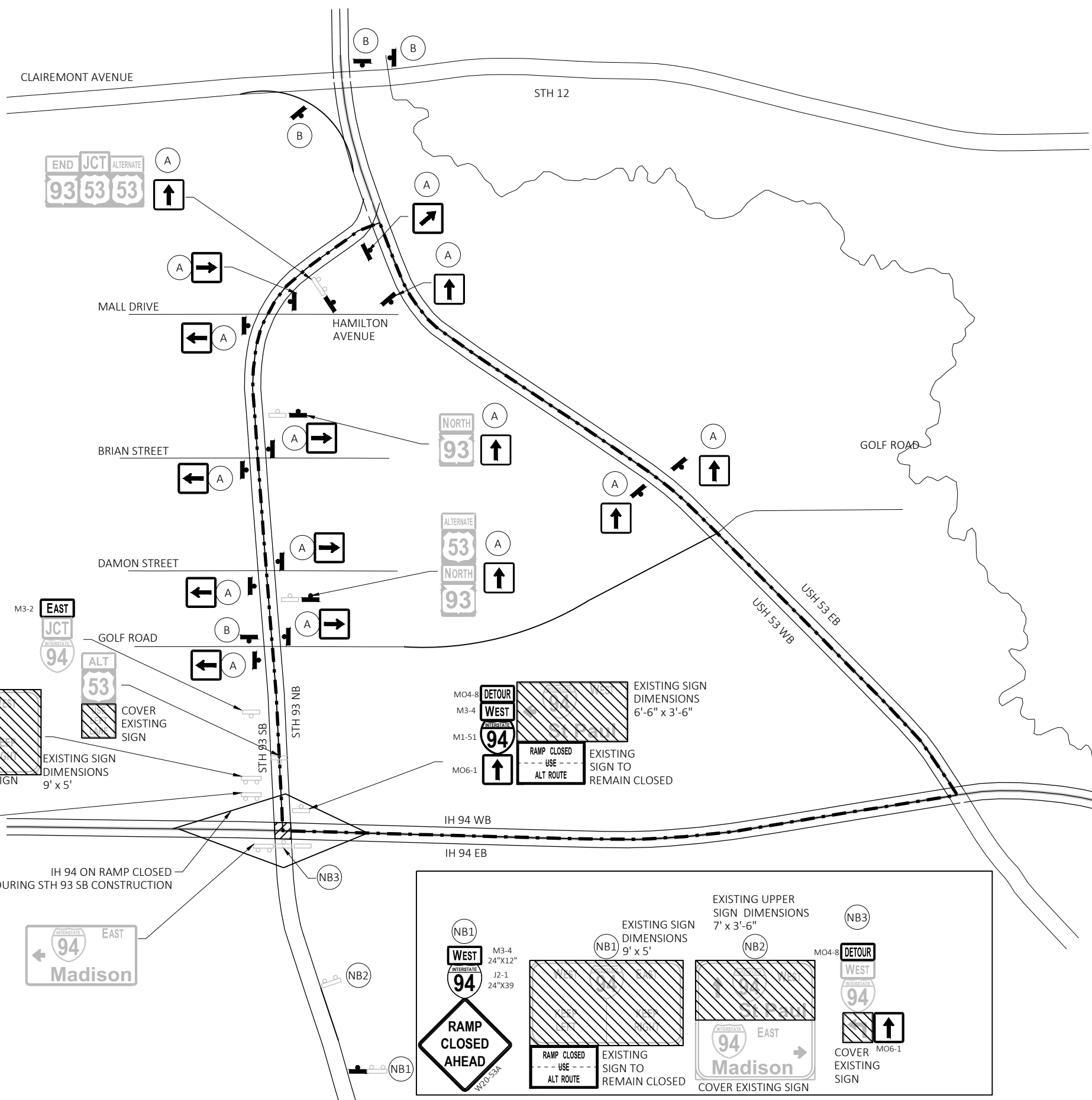
INSTALL TEMPORARY PEDESTRIAN CURB RAMP AT STA. 671NB+50

SIDEWALK CLOSED
R9-9
24"x12"

- LEGEND**
- TYPE III BARRICADE WITH ATTACHED SIGN
 - TRAFFIC CONTROL DRUM
 - EXISTING SIGN ON SUPPORT POST
 - PROPOSED SIGN ON SUPPORT POST
 - CONCRETE BARRIER TEMPORARY PRECAST
 - TEMPORARY CRASH CUSHION
 - WORK AREA
 - DIRECTION OF TRAFFIC
 - PORTABLE CHANGEABLE MESSAGE BOARD
 - TEMPORARY PEDESTRIAN BARRICADE
 - SIDEWALK CLOSURE
 - TEMPORARY PEDESTRIAN MATTING
- FOLLOW SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY" ON STH 93 NB DURING SIDEWALK REPAIRS TO MAINTAIN A DIVERSION ROUTE FOR PEDESTRIAN TRAFFIC.
- FOLLOW SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION, SIDEWALK DIVERSION, SINGLE SIDE" ON SIDEWALK ALONG STH 93 NB.



NO ACCESS TO I-94 WEST FROM HWY 93
7'-6" X 4'



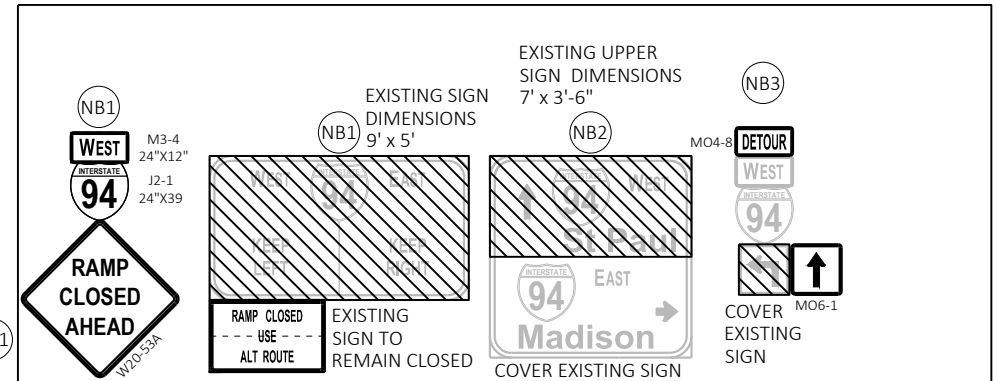
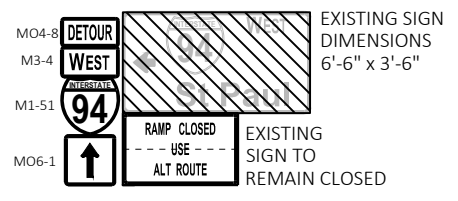
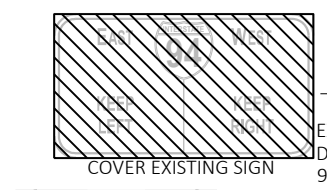
GENERAL NOTES
DRAWING IS NOT TO SCALE.

ALL TRAFFIC CONTROL SIGNS AND DEVICES AND THEIR LOCATION SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD), THE PLANS, STANDARD SPECIFICATIONS, CONTRACT, AND APPLICABLE STANDARD DETAIL DRAWINGS.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. SIGNS IN CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID UNDER THE ITEM "TRAFFIC CONTROL COVERING SIGNS TYPE II"

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- DENOTED SIGN NUMBER
- WORK ZONE
- COVERING EXISTING SIGNS
- I-94 WB ON RAMP DETOUR ROUTE



Estimate Of Quantities

1021-03-80

Line	Item	Item Description	Unit	Total	Qty
0002	203.0220	Removing Structure (structure) 01. B-18-0034	EACH	1.000	1.000
0004	203.0220	Removing Structure (structure) 02. B-18-0119	EACH	1.000	1.000
0006	204.0100	Removing Concrete Pavement	SY	579.000	579.000
0008	204.0155	Removing Concrete Sidewalk	SY	25.000	25.000
0010	204.0190	Removing Surface Drains	EACH	1.000	1.000
0012	205.0100	Excavation Common	CY	11.000	11.000
0014	206.1001	Excavation for Structures Bridges (structure) 01. B-18-0034	EACH	1.000	1.000
0016	206.1001	Excavation for Structures Bridges (structure) 02. B-18-0119	EACH	1.000	1.000
0018	210.1500	Backfill Structure Type A	TON	121.000	121.000
0020	211.0201	Prepare Foundation for Concrete Pavement (project) 01. 1021-03-80	EACH	1.000	1.000
0022	213.0100	Finishing Roadway (project) 01. 1021-03-80	EACH	1.000	1.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	65.000	65.000
0026	415.0095	Concrete Pavement 9 1/2-Inch	SY	380.000	380.000
0028	415.0410	Concrete Pavement Approach Slab	SY	184.000	184.000
0030	416.0620	Drilled Dowel Bars	EACH	96.000	96.000
0032	502.0100	Concrete Masonry Bridges	CY	45.000	45.000
0034	502.3200	Protective Surface Treatment	SY	708.000	708.000
0036	502.3205	Pigmented Surface Sealer Reseal	SY	440.000	440.000
0038	502.4205	Adhesive Anchors No. 5 Bar	EACH	120.000	120.000
0040	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	7,550.000	7,550.000
0042	505.0906	Bar Couplers No. 6	EACH	60.000	60.000
0044	506.7061.S	Bridge Jacking (structure) 01. B-18-0034	EACH	1.000	1.000
0046	509.0301	Preparation Decks Type 1	SY	34.000	34.000
0048	509.0302	Preparation Decks Type 2	SY	27.000	27.000
0050	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	255.000	255.000
0052	509.0505.S	Cleaning Decks to Reapply Concrete Masonry Overlay	SY	708.000	708.000
0054	509.1500	Concrete Surface Repair	SF	29.000	29.000
0056	509.2000	Full-Depth Deck Repair	SY	5.000	5.000
0058	509.2100.S	Concrete Masonry Deck Repair	CY	1.000	1.000
0060	509.2500	Concrete Masonry Overlay Decks	CY	54.000	54.000
0062	509.9005.S	Removing Concrete Masonry Deck Overlay (structure) 01. B-18-0034	SY	708.000	708.000
0064	511.1200	Temporary Shoring (structure) 01. B-18-0034	SF	70.000	70.000
0066	516.0500	Rubberized Membrane Waterproofing	SY	16.000	16.000
0068	520.8700	Cleaning Culvert Pipes	EACH	5.000	5.000
0070	601.0105	Concrete Curb Type A	LF	16.000	16.000
0072	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	42.000	42.000
0074	601.0555	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	LF	117.000	117.000
0076	602.0415	Concrete Sidewalk 6-Inch	SF	685.000	685.000
0078	602.3010	Concrete Surface Drains	CY	1.000	1.000
0080	603.8000	Concrete Barrier Temporary Precast Delivered	LF	1,440.000	1,440.000
0082	603.8125	Concrete Barrier Temporary Precast Installed	LF	2,880.000	2,880.000
0084	611.8115	Adjusting Inlet Covers	EACH	5.000	5.000
0086	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	20.000	20.000
0088	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	1.000	1.000
0090	614.0400	Adjusting Steel Plate Beam Guard	LF	25.000	25.000
0092	614.0905	Crash Cushions Temporary	EACH	4.000	4.000
0094	614.0950	Replacing Guardrail Posts and Blocks	EACH	10.000	10.000
0096	614.0951	Replacing Guardrail Rail and Hardware	LF	50.000	50.000
0098	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1021-03-80	EACH	1.000	1.000
0100	619.1000	Mobilization	EACH	1.000	1.000

Estimate Of Quantities

1021-03-80

Line	Item	Item Description	Unit	Total	Qty
0102	624.0100	Water	MGAL	7.000	7.000
0104	625.0100	Topsoil	SY	980.000	980.000
0106	628.1504	Silt Fence	LF	1,325.000	1,325.000
0108	628.1520	Silt Fence Maintenance	LF	2,650.000	2,650.000
0110	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0112	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0114	628.2004	Erosion Mat Class I Type B	SY	980.000	980.000
0116	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0118	628.7010	Inlet Protection Type B	EACH	1.000	1.000
0120	628.7015	Inlet Protection Type C	EACH	4.000	4.000
0122	629.0210	Fertilizer Type B	CWT	1.000	1.000
0124	630.0110	Seeding Mixture No. 10	LB	14.000	14.000
0126	630.0200	Seeding Temporary	LB	28.000	28.000
0128	630.0500	Seed Water	MGAL	34.000	34.000
0130	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	4.000	4.000
0132	637.2230	Signs Type II Reflective F	SF	27.000	27.000
0134	638.2102	Moving Signs Type II	EACH	2.000	2.000
0136	638.2602	Removing Signs Type II	EACH	4.000	4.000
0138	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0140	638.4000	Moving Small Sign Supports	EACH	2.000	2.000
0142	642.5001	Field Office Type B	EACH	1.000	1.000
0144	643.0300	Traffic Control Drums	DAY	14,400.000	14,400.000
0146	643.0420	Traffic Control Barricades Type III	DAY	1,100.000	1,100.000
0148	643.0705	Traffic Control Warning Lights Type A	DAY	830.000	830.000
0150	643.0715	Traffic Control Warning Lights Type C	DAY	3,300.000	3,300.000
0152	643.0800	Traffic Control Arrow Boards	DAY	340.000	340.000
0154	643.0900	Traffic Control Signs	DAY	12,440.000	12,440.000
0156	643.0920	Traffic Control Covering Signs Type II	EACH	7.000	7.000
0158	643.1000	Traffic Control Signs Fixed Message	SF	120.000	120.000
0160	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	21.000	21.000
0162	643.1205.S	Basic Traffic Queue Warning System	DAY	60.000	60.000
0164	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	14,410.000	14,410.000
0166	643.5000	Traffic Control	EACH	1.000	1.000
0168	644.1440	Temporary Pedestrian Surface Matting	SF	52.000	52.000
0170	644.1601	Temporary Pedestrian Curb Ramp	DAY	14.000	14.000
0172	644.1810	Temporary Pedestrian Barricade	LF	830.000	830.000
0174	645.0111	Geotextile Type DF Schedule A	SY	10.000	10.000
0176	646.2020	Marking Line Epoxy 6-Inch	LF	2,785.000	2,785.000
0178	646.4020	Marking Line Epoxy 10-Inch	LF	430.000	430.000
0180	646.9000	Marking Removal Line 4-Inch	LF	1,230.000	1,230.000
0182	650.6501	Construction Staking Structure Layout (structure) 01. B-19-0034	EACH	1.000	1.000
0184	650.6501	Construction Staking Structure Layout (structure) 02. B-19-0119	EACH	1.000	1.000
0186	650.7000	Construction Staking Concrete Pavement	LF	158.000	158.000
0188	650.9500	Construction Staking Sidewalk (project) 01. 1021-03-80	EACH	1.000	1.000
0190	650.9911	Construction Staking Supplemental Control (project) 01. 1021-03-80	EACH	1.000	1.000
0192	653.0900	Adjusting Pull Boxes	EACH	2.000	2.000
0194	690.0150	Sawing Asphalt	LF	38.000	38.000
0196	690.0250	Sawing Concrete	LF	297.000	297.000
0198	715.0502	Incentive Strength Concrete Structures	DOL	500.000	500.000
0200	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000

Estimate Of Quantities

1021-03-80

Line	Item	Item Description	Unit	Total	Qty
0202	SPV.0060	Special 01. Cleaning Inlets	EACH	5.000	5.000
0204	SPV.0090	Special 01. Remove, Salvage, and Reinstall Guardrail	LF	280.000	280.000
0206	SPV.0165	Special 01. Fiber Wrap Reinforcing Non-Structural	SF	2,985.000	2,985.000

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CATEGORY	TO	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	REMARKS
STH 93 NB				
0010	-	STH 93 NB SOUTH APPROACH SHOULDER LT	23	INCLUDES CURB AND GUTTER
0010	-	STH 93 NB SOUTH MAINLINE	83	
0010	-	STH 93 NB SOUTH APPROACH SHOULDER RT	12	INCLUDES CURB AND GUTTER
0010	-	STH 93 NB NORTH APPROACH SHOULDER LT	28	INCLUDES CURB AND GUTTER
0010	-	STH 93 NB NORTH APPROACH MAINLINE	100	
0010	-	STH 93 NB NORTH APPROACH SHOULDER RT	14	INCLUDES CURB AND GUTTER
STH 93 SB				
0010	-	STH 93 SB SOUTH APPROACH SHOULDER LT	4	INCLUDES CURB HEAD
0010	-	STH 93 SB SOUTH MAINLINE	88	
0010	-	STH 93 SB SOUTH APPROACH SHOULDER RT	12	INCLUDES CURB AND GUTTER
0010	-	STH 93 SB NORTH APPROACH SHOULDER LT	3	INCLUDES CURB HEAD
0010	-	STH 93 SB NORTH APPROACH MAINLINE	188	
0010	-	STH 93 SB NORTH APPROACH SHOULDER RT	24	INCLUDES CURB AND GUTTER
TOTAL 0010			579	

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
STH 93 NB							
0010	668NB+44	-	668NB+74	LT/RT	15	1	
0010	670NB+80	-	671NB+10	LT/RT	15	1	
0010	670NB+80	-	671NB+17	37' RT	5	1	
STH 93 SB							
0010	668SB+43	-	668SB+73	26' LT	5	1	
0010	668SB+43	-	668SB+73	LT/RT	10	1	
0010	670SB+85	-	671SB+14	26' LT	5	1	
0010	670SB+85	-	671SB+14	LT/RT	10	1	
TOTAL 0010					65	7	

CATEGORY	LOCATION	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 1021-03-80) EACH	REMARKS
0010	STH 93 NB	0.5	
0010	STH 93 SB	0.5	
TOTAL 0010		1	

CATEGORY	TO	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK SY
STH 93 NB			
0010	-	SOUTH	13
0010	-	NORTH	12
TOTAL 0010			25

CATEGORY	LOCATION	204.0190 REMOVING SURFACE DRAINS EACH	REMARKS
0010	B-18-0034 NE	1	Existing Asphalt Portion
TOTAL 0010		1	

CATEGORY	LOCATION	211.0201.01 PREPARE FOUNDATION FOR CONCRETE PAVEMENT (PROJECT) (01. 1021-03-80) EACH	REMARKS
0010	STH 93 NB	0.5	
0010	STH 93 SB	0.5	
TOTAL 0010		1	

CONCRETE PAVEMENT

CATEGORY	TO	LOCATION	205.0100 EXCAVATION COMMON CY	REMARKS
STH 93 NB				
0010	-	STH 93 NB NORTH APPROACH SHOULDER RT	2	68 SF AT 9.5-INCH DEPTH
STH 93 SB				
0010	-	STH 93 SB SOUTH APPROACH SHOULDER LT	1	32 SF AT 9.5-INCH DEPTH
0010	-	STH 93 SB NORTH APPROACH SHOULDER LT	8	257 SF AT 9.5-INCH DEPTH
TOTAL 0010			11	

CATEGORY	TO	LOCATION	415.0095 CONCRETE PAVEMENT 9 1/2- INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	416.0620 DRILLED DOWEL BARS EACH	REMARKS
STH 93 NB						
0010	-	STH 93 NB SOUTH APPROACH SHOULDER LT	17		48	
0010	-	STH 93 NB SOUTH APPROACH MAINLINE	37	46		
0010	-	STH 93 NB SOUTH APPROACH SHOULDER RT	7			
0010	-	STH 93 NB NORTH APPROACH SHOULDER LT	21			
0010	-	STH 93 NB NORTH APPROACH MAINLINE	54	46		
0010	-	STH 93 NB NORTH APPROACH SHOULDER RT	11			
STH 93 SB						
0010	-	STH 93 SB SOUTH APPROACH SHOULDER LT	7		48	
0010	-	STH 93 SB SOUTH APPROACH MAINLINE	41	46		
0010	-	STH 93 SB SOUTH APPROACH SHOULDER RT	6			
0010	-	STH 93 SB NORTH APPROACH SHOULDER LT	32			
0010	-	STH 93 SB NORTH APPROACH MAINLINE	142	46		
0010	-	STH 93 SB NORTH APPROACH SHOULDER RT	5			
TOTAL 0010			380	184	96	

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CATEGORY	LOCATION	520.8700 CLEANING CULVERT PIPES EACH	SPV.0060.01 SPECIAL (01. CLEANING INLETS) EACH	REMARKS
0010	B-18-0119 SE	1	1	
0010	B-18-0119 NE		1	
0010	B-18-0119 NW		1	
0010	B-18-0119 North Approach	1		
0010	B-18-0034 SW	1	1	
0010	B-18-0034 NE	1	1	
0010	B-18-0034 NW	1		
TOTAL 0010		5	5	

CATEGORY	LOCATION	611.8115 ADJUSTING INLET COVERS EACH	REMARKS
0010	SW QUADRANT OF B-18-0034	1	
0010	NE QUADRANT OF B-18-0034	1	
0010	SE QUADRANT OF B-18-0119	1	
0010	NW QUADRANT OF B-18-0119	1	
0010	NE QUADRANT OF B-18-0119	1	
TOTAL 0010		5	

CATEGORY	TO	LOCATION	601.0105 CONCRETE CURB TYPE A LF	601.0409 CONCRETE CURB & GUTTER 30- INCH TYPE A LF	601.0555 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A LF	602.0415 CONCRETE SIDEWALK 6-INCH SF	REMARKS
0010	STH 93 NB						
0010	-	RT (SOUTH END OF BRIDGE)		17		294	
0010	-	RT (NORTH END OF BRIDGE)		25		391	
0010	-	LT (SOUTH END OF BRIDGE)			19		
0010	-	LT (NORTH END OF BRIDGE)			23		
0010	STH 93 SB						
0010	-	RT (SOUTH END OF BRIDGE)			18		
0010	-	RT (NORTH END OF BRIDGE)			57		
0010	-	LT (SOUTH END OF BRIDGE)	10				
0010	-	LT (NORTH END OF BRIDGE)	6				
TOTAL 0010			16	42	117	685	

CATEGORY	LOCATION	619.1000 MOBILIZATION EACH	REMARKS
0010	ROADWAY	0.4	
TOTAL 0010		0.4	
0020	STRUCTURE B-18-0034	0.4	
TOTAL 0020		0.4	
0030	STRUCTURE B-18-0119	0.2	
TOTAL 0030		0.2	
PROJECT TOTAL		1	

CATEGORY	LOCATION	602.3010 CONCRETE SURFACE DRAINS CY	REMARKS
0010	B-18-0034 NW	1	
TOTAL 0010		1	

CATEGORY	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	REMARKS
0010	STH 93 NB	720	1,440	
0010	STH 93 SB	720	1,440	
TOTAL 0010		1,440	2,880	

CATEGORY	LOCATION	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
0010	STH 93 NB STAGE 1, 10' RT	1	2	OM-3R (W05-58R)	TL-2	UNIDIRECTIONAL	LEFT	CONCRETE BARRIER TEMPORARY PRECAST
0010	STH 93 SB STAGE 1, 12' LT	1	2	OM-3R (W05-58R)	TL-2	UNIDIRECTIONAL	LEFT	CONCRETE BARRIER TEMPORARY PRECAST
0010	STH 93 NB STAGE 2, 14' RT	1	2	OM-3L (W05-58L)	TL-2	UNIDIRECTIONAL	RIGHT	CONCRETE BARRIER TEMPORARY PRECAST
0010	STH 93 SB STAGE 2, 16' LT	1	2	OM-3L (W05-58L)	TL-2	UNIDIRECTIONAL	RIGHT	CONCRETE BARRIER TEMPORARY PRECAST
TOTAL 0010		4						

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CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING MIXTURE NO. 10 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	REMARKS
0010	667NB+31	-	668NB+74	MEDIAN	240	240	0.20	3.00	6.00	8	
0010	670NB+80	-	672NB+50	MEDIAN	290	290	0.20	4.00	8.00	10	
0010	668NB+25	-	668NB+74	RT	100	100	0.10	1.00	2.00	3	
0010	670NB+80	-	671NB+30	RT	50	50	0.10	1.00	2.00	2	
0010	668SB+23	-	668SB+73	LT	50	50	0.10	1.00	2.00	2	
0010	670SB+85	-	671SB+35	LT	50	50	0.10	1.00	2.00	2	
0010					200	200	0.20	3.00	6.00	7	UNDISTRIBUTED
TOTAL 0010					980	980	1	14	28	34	

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	REMARKS
0010	PROJECT	3	2	
TOTAL 0010		3	2	

CATEGORY	LOCATION	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	REMARKS
0010	B-18-0119 SE			1	
0010	B-18-0119 SW				
0010	B-18-0119 NE			1	
0010	B-18-0119 NW	1		1	
0010	B-18-0034 SE				
0010	B-18-0034 SW	1	1		
0010	B-18-0034 NE	1		1	
0010	B-18-0034 NW				
TOTAL 0010		3	1	4	

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	REMARKS
0010	667NB+31	-	668NB+74	MEDIAN	330	660	
0010	670NB+80	-	672NB+50	MEDIAN	370	740	
0010	668NB+25	-	668NB+74	RT	70	140	
0010	670NB+80	-	671NB+30	RT	150	300	
0010	668SB+23	-	668SB+73	LT	70	140	
0010	670SB+85	-	671SB+35	LT	70	140	
0010					265	530	UNDISTRIBUTED
TOTAL 0010					1,325	2,650	

CATEGORY	LOCATION	634.0616 POSTS WOOD 4X6- INCH X 16-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	STH 93 NB, RT	1	6.75	1	1	1	1	Clearance Striper Down Right (W5-52-L) 18" x 54" = 6.75 SF
0010	STH 93 NB, LT	1	6.75	1	1	1	1	Clearance Striper Down Left (W5-52-R) 18" x 54" = 6.75 SF
0010	STH 93 SB, RT	1	6.75		1	1		
0010	STH 93 SB, LT	1	6.75		1	1		
TOTAL 0010		4	27.0	2	4	4	2	

CATEGORY	LOCATION	642.5001 FIELD OFFICE TYPE B EACH	REMARKS
0010	PROJECT	0.4	
TOTAL 0010		0.4	
0020	PROJECT	0.4	
TOTAL 0020		0.4	
0030	PROJECT	0.2	
TOTAL 0030		0.2	
PROJECT TOTAL		1	

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643.3180
TEMPORARY
MARKING LINE
REMOVABLE TAPE
6-INCH

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	667NB+31	-	672NB+51	STH 93 NB	1,360	WHITE, STAGE 1
0010	667NB+31	-	672NB+51	STH 93 NB	1,850	YELLOW, STAGE 1
0010	667SB+30	-	672SB+50	STH 93 SB	1,410	WHITE, STAGE 1
0010	667SB+30	-	672SB+50	STH 93 SB	1,850	YELLOW, STAGE 1
0010	667NB+31	-	672NB+51	STH 93 NB	1,360	WHITE, STAGE 2
0010	667NB+31	-	672NB+51	STH 93 NB	1,850	YELLOW, STAGE 2
0010	667SB+30	-	672SB+50	STH 93 SB	1,360	WHITE, STAGE 2
0010	667SB+30	-	672SB+50	STH 93 SB	1,850	YELLOW, STAGE 2
0010	667NB+31	-	672NB+51	STH 93 NB	-	WHITE, STAGE 3
0010	667NB+31	-	672NB+51	STH 93 NB	-	YELLOW, STAGE 3
0010	667SB+30	-	672SB+50	STH 93 SB	760	WHITE, STAGE 3
0010	667SB+30	-	672SB+50	STH 93 SB	760	YELLOW, STAGE 3
0010	667NB+31	-	672NB+51	STH 93 NB	-	
0010	667SB+30	-	672SB+50	STH 93 SB	-	
TOTAL 0010					14,410	

644.1440
TEMPORARY
PEDESTRIAN
SURFACE MATTING

CATEGORY	STATION	LOCATION	SF	REMARKS
0010	668NB+00	STH 93 NB	24	GRASS BOULEVARD BETWEEN STH 93 AND SIDEWALK
0010	671NB+50	STH 93 NB	28	GRASS BOULEVARD BETWEEN STH 93 AND SIDEWALK
TOTAL 0010			52	

644.1601
TEMPORARY
PEDESTRIAN CURB
RAMP

CATEGORY	STATION	LOCATION	DAY	REMARKS
0010	668NB+00	STH 93 NB	7	STAGE 3 SIDEWALK REPAIRS
0010	671NB+50	STH 93 NB	7	STAGE 3 SIDEWALK REPAIRS
TOTAL 0010			14	

643.0920
TRAFFIC CONTROL
COVERING SIGNS

CATEGORY	LOCATION	TYPE II EACH	NUMBER OF CYCLES	NUMBER OF SIGNS
0010	STH 93 NB	4	1	4
0010	STH 93 SB	3	1	3
TOTAL 0010		7		

644.1810
TEMPORARY
PEDESTRIAN
BARRICADE

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	667NB+84	-	671NB+48	RT	830	STAGE 3 SIDEWALK REPAIRS
TOTAL 0010					830	

643.0300 643.0420 643.0705 643.0715 643.0800 643.0900 643.1051 643.1205.S

CATEGORY	STATION	TO	STATION	LOCATION	TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	TRAFFIC CONTROL ARROW BOARDS DAY	TRAFFIC CONTROL SIGNS DAY	TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS DAY	BASIC TRAFFIC QUEUE WARNING SYSTEM DAY	REMARKS
0010				IH 94 EB	2,850	180	120	950	60	800	0	30	
0010				IH 94 WB	1,800	120	120	630	60	650	0	30	
STAGE 1													
0010	667NB+31	-	672NB+51	STH 93 NB	2790	170	25	400	50	820	7		
0010	667SB+30	-	672SB+50	STH 93 SB	1850	270	290	400	50	820	7		
0010				DETOUR	0	0	0	0	0	3080	7		
STAGE 2													
0010	667NB+31	-	672NB+51	STH 93 NB	2430	120	25	400	50	850	0		
0010	667SB+30	-	672SB+50	STH 93 SB	1970	170	240	400	50	1200	0		
0010				DETOUR	0	0	0	0	0	3080	0		
STAGE 3													
0010	667NB+31	-	672NB+51	STH 93 NB	710	40	10	120	20	220	0		
0010				DETOUR	0	0	0	0	0	900	0		
0010				SIDEWALK	0	30	0	0	0	20	0		SIDEWALK REPAIR
TOTAL 0010					14,400	1,100	830	3,300	340	12,440	21	60	

3

3

LOCATION	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	REMARKS
USH 12 WB PRIOR TO OTTER CREEK BRIDGE	30	7.5' x 4' "NO ACCESS TO I-94 WEST FROM HWY 93"
USH 53 SB BETWEEN OFF RAMP TO USH 12 AND RAMP TO STH 93 SB	30	7.5' x 4' "NO ACCESS TO I-94 WEST FROM HWY 93"
USH 12 EB PRIOR TO RAMP TO STH 93 SB	30	7.5' x 4' "NO ACCESS TO I-94 WEST FROM HWY 93"
STH 93 SB PRIOR TO GOLF ROAD	30	7.5' x 4' "NO ACCESS TO I-94 WEST FROM HWY 93"
TOTAL 0010	120	

CATEGORY	STATION	LOCATION	653.0900 ADJUSTING PULL BOXES EACH	REMARKS
0010	670NB+98	SE QUADRANT OF B-18-0119	1	SIDEWALK
0010	670NB+98	NE QUADRANT OF B-18-0119	1	SIDEWALK
		TOTAL 0010	2	

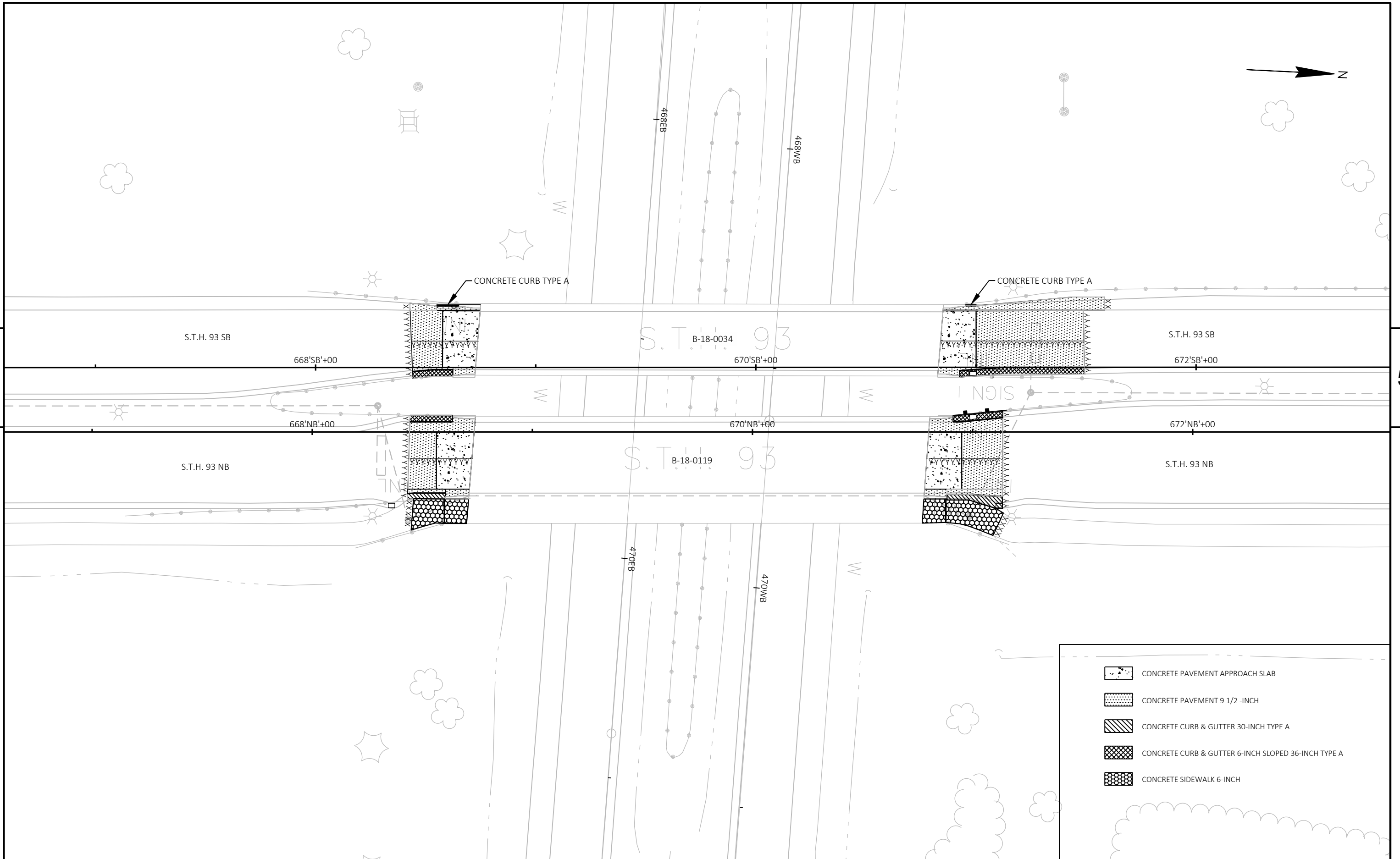
STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY 6- INCH LF	646.4020 MARKING LINE EPOXY 10-INCH LF	646.9000 MARKING REMOVAL LINE 4- INCH LF	REMARKS
668NB+44	-	671NB+10	NB, RT	860		270	WHITE, EDGELINE TO STOP BAR
668NB+44	-	671NB+10	NB, CL	212.5		70	WHITE, CENTERLINE SKIPS
668NB+44	-	671NB+10	NB, LT	340		270	YELLOW, EDGELINE
668NB+44	-	671NB+10	LT		230		WHITE, TURN LANE CHANNELIZING
668SB+43	-	671SB+14	SB, LT	860		275	YELLOW, EDGELINE
668SB+43	-	671SB+14	SB, CL	212.5		70	WHITE, CENTERLINE SKIPS
668SB+43	-	671SB+14	SB, RT	300		275	REPLACE Y
668SB+43	-	671SB+14	CL		200		WHITE CENTERLINE SKIPS
668SB+43	-	671SB+14	LT				WHITE EDGELINE
		TOTAL 0010		2,785	430	1,230	

CATEGORY	TO	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
		STH 93 NB			
0010	-	STH 93 NB SOUTH APPROACH SHOULDER LT			
0010	-	STH 93 NB SOUTH		67	
0010	-	STH 93 NB SOUTH APPROACH SHOULDER RT			
0010	-	STH 93 NB SOUTH SIDEWALK	14		
0010	-	STH 93 NB NORTH APPROACH SHOULDER LT			
0010	-	STH 93 NB NORTH	4	75	
0010	-	STH 93 NB NORTH APPROACH SHOULDER RT			
0010	-	STH 93 NB NORTH SIDEWALK	11		
		STH 93 SB			
0010	-	STH 93 SB SOUTH APPROACH SHOULDER LT			
0010	-	STH 93 SB SOUTH	3	61	
0010	-	STH 93 SB SOUTH APPROACH SHOULDER RT			
0010	-	STH 93 SB NORTH APPROACH SHOULDER LT			
0010	-	STH 93 SB NORTH APPROACH MAINLINE	6	94	
0010	-	STH 93 SB NORTH APPROACH SHOULDER RT			
		TOTAL 0010	38	297	

CATEGORY	STATION	TO	STATION	LOCATION	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	REMARKS
0010	667NB+31	-	672NB+51	STH 93 NB	30	
0010	667NB+31	-	672NB+51	STH 93 NB	65	
0010	667SB+30	-	672SB+50	STH 93 SB	29	
0010	667SB+30	-	672SB+50	STH 93 SB	34	
			TOTAL 0010		158	

CATEGORY	LOCATION	614.0400 ADJUSTING STEEL PLATE BEAM GUARD LF	614.0950 REPLACING GUARDRAIL POSTS AND BLOCKS EACH	614.0951 REPLACING GUARDRAIL RAIL AND HARDWARE LF	SPV.0090.01 SPECIAL (01. REMOVE, SALVAGE, AND REINSTALL GUARDRAIL) LF	REMARKS
0010	B-18-0119 SE				34	
0010	B-18-0119 SW				34	
0010	B-18-0119 NE					
0010	B-18-0119 NW				34	
0010	B-18-0034 SE				34	
0010	B-18-0034 SW	25	10	25	34	
0010	B-18-0034 NE				59	
0010	B-18-0034 NW				51	
0010	UNDISTRIBUTED			25		
	TOTAL 0010	25	10	50	280	

CATEGORY	LOCATION	650.9500.01 CONSTRUCTION STAKING SIDEWALK (PROJECT) (01. 1021-03-80) EACH	REMARKS	CATEGORY	LOCATION	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-18-0034) EACH	REMARKS	CATEGORY	LOCATION	650.6501.02 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (02. B-18-0119) EACH	REMARKS
0010	EXISTING LOCATION	1		0020	B-18-0034	1		0030	B-18-0119	1	
	TOTAL 0010	1			TOTAL 0020	1			TOTAL 0030	1	



5

5

	CONCRETE PAVEMENT APPROACH SLAB
	CONCRETE PAVEMENT 9 1/2 -INCH
	CONCRETE CURB & GUTTER 30-INCH TYPE A
	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A
	CONCRETE SIDEWALK 6-INCH

PROJECT NO: 1021-03-80 HWY: IH 94 COUNTY: EAU CLAIRE PLAN SHEET E

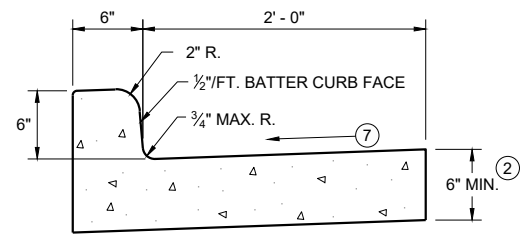
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Standard Detail Drawing List

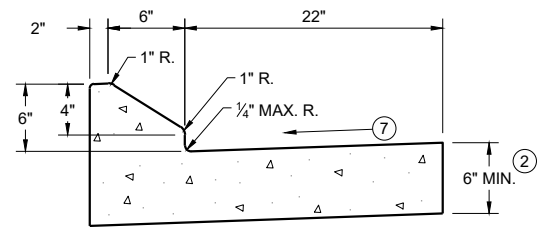
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-12A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-12B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-12C	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS
14B20-12D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-12E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B20-12F	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"
14B20-12G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-12H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09D	ON RAMP LANE CLOSURE
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D12-12A	TRAFFIC CONTROL, LANE CLOSURE, WITH TEMPORARY RUMBLE STRIPS
15D12-12B	TEMPORARY EMERGENCY PULLOUTS
15D12-12D	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D16-06	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-09A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

Standard Detail Drawing List

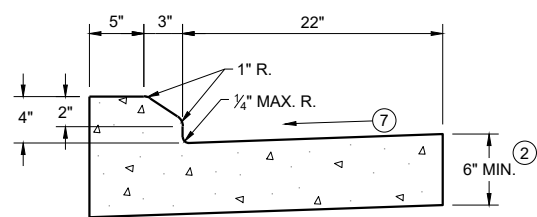
15D30-09C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09K	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09L	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



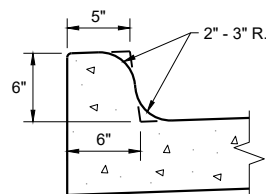
TYPES A^① & D



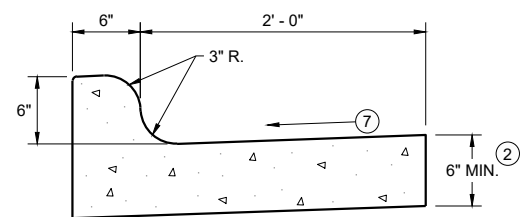
6" SLOPED CURB TYPES G^① & J



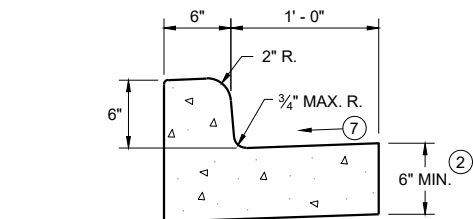
4" SLOPED CURB TYPES G^① & J



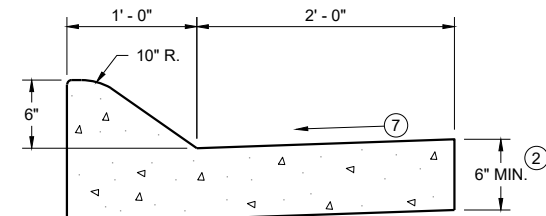
TYPES K^① & L
(OPTIONAL CURB SHAPE)



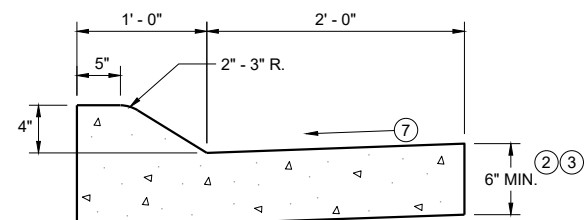
TYPES K^① & L
CONCRETE CURB AND GUTTER 30"



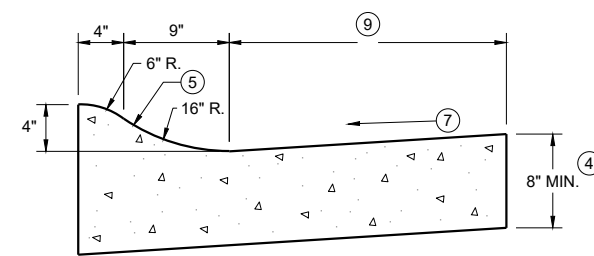
TYPES A^① & D
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

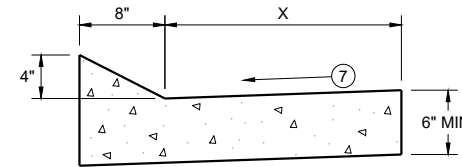


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

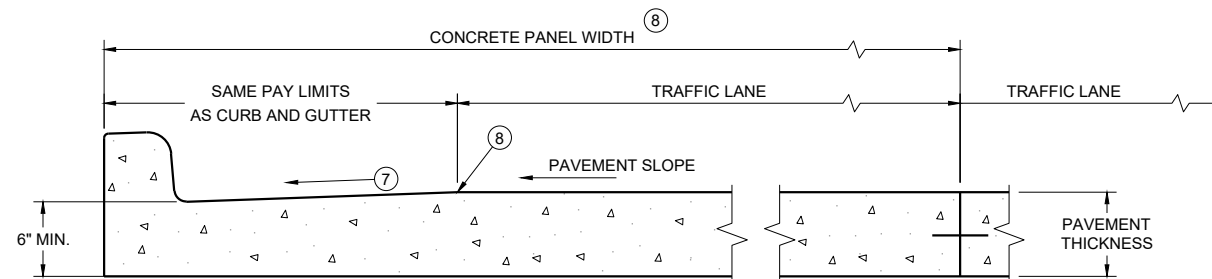
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT^①
CONCRETE CURB AND GUTTER

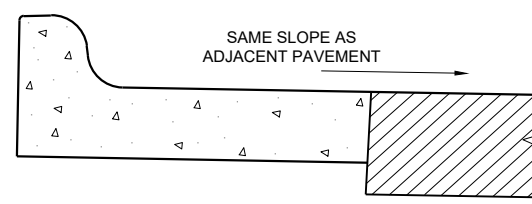
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

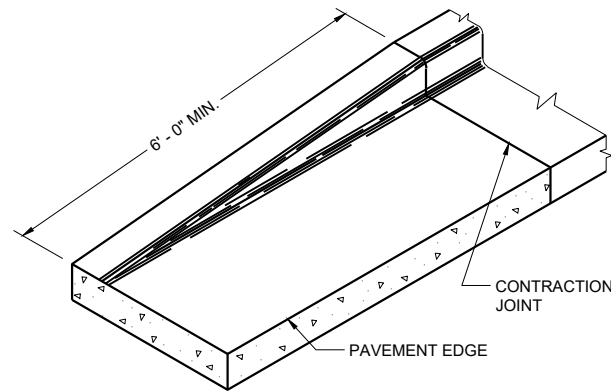
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

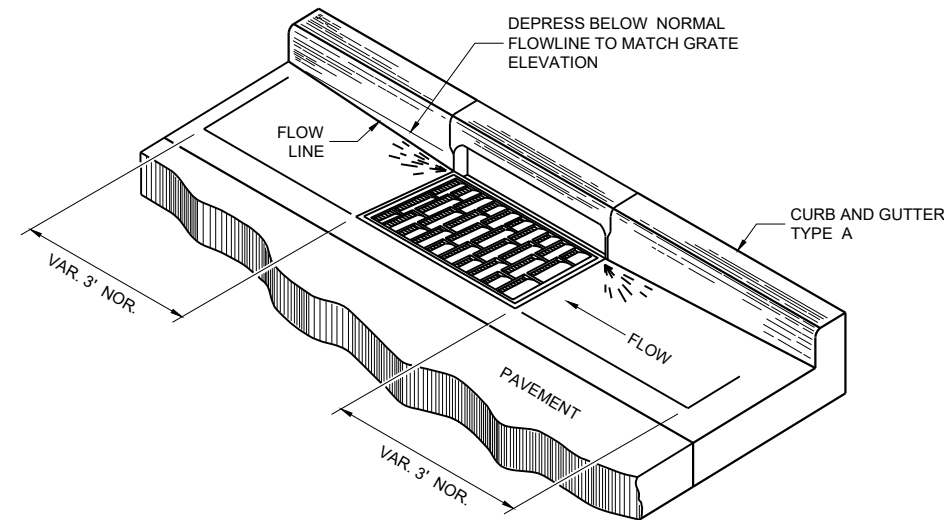
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

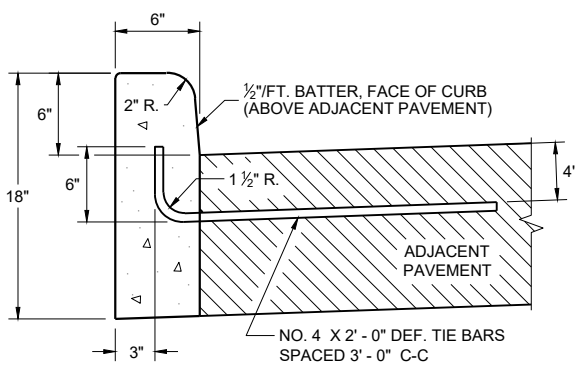


END SECTION CURB AND GUTTER

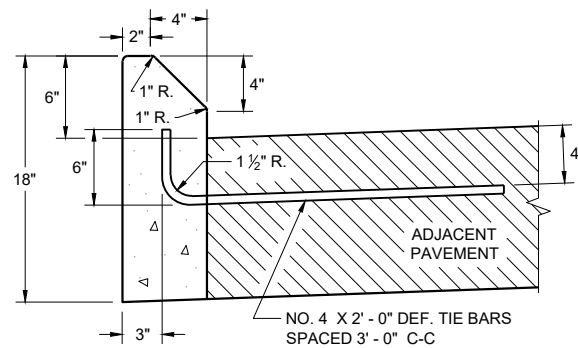


DETAIL OF CURB AND GUTTER AT INLETS

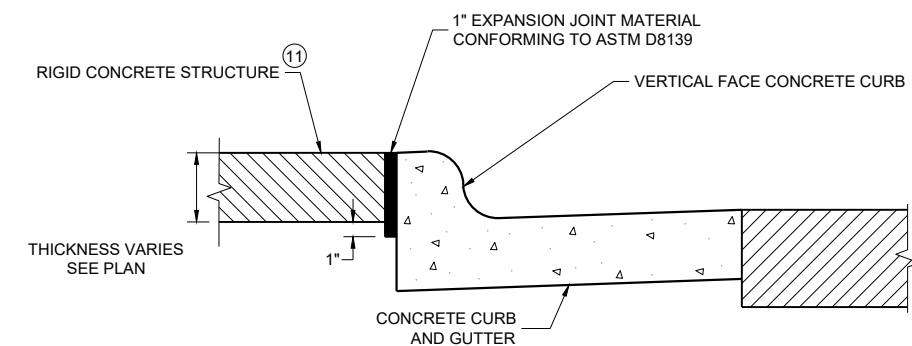
(TYPICAL H INLET COVER SHOWN)



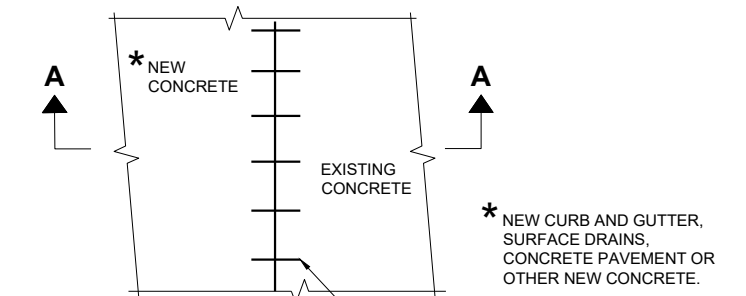
TYPES A^① & D



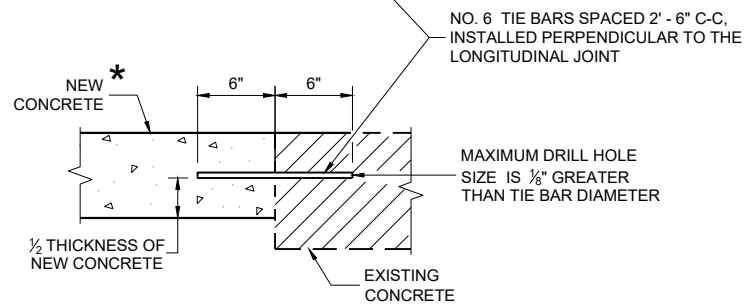
**TYPES G^① & J
CONCRETE CURB**



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



PLAN VIEW



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

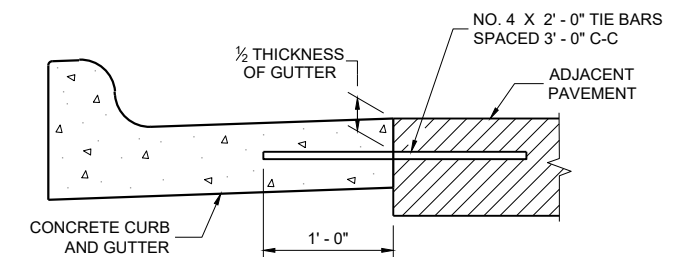
GENERAL NOTES

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

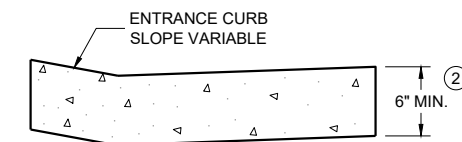
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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.



TYPICAL TIE BAR LOCATION^①



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

6

6

SDD 08D01-23b

SDD 08D01-23b

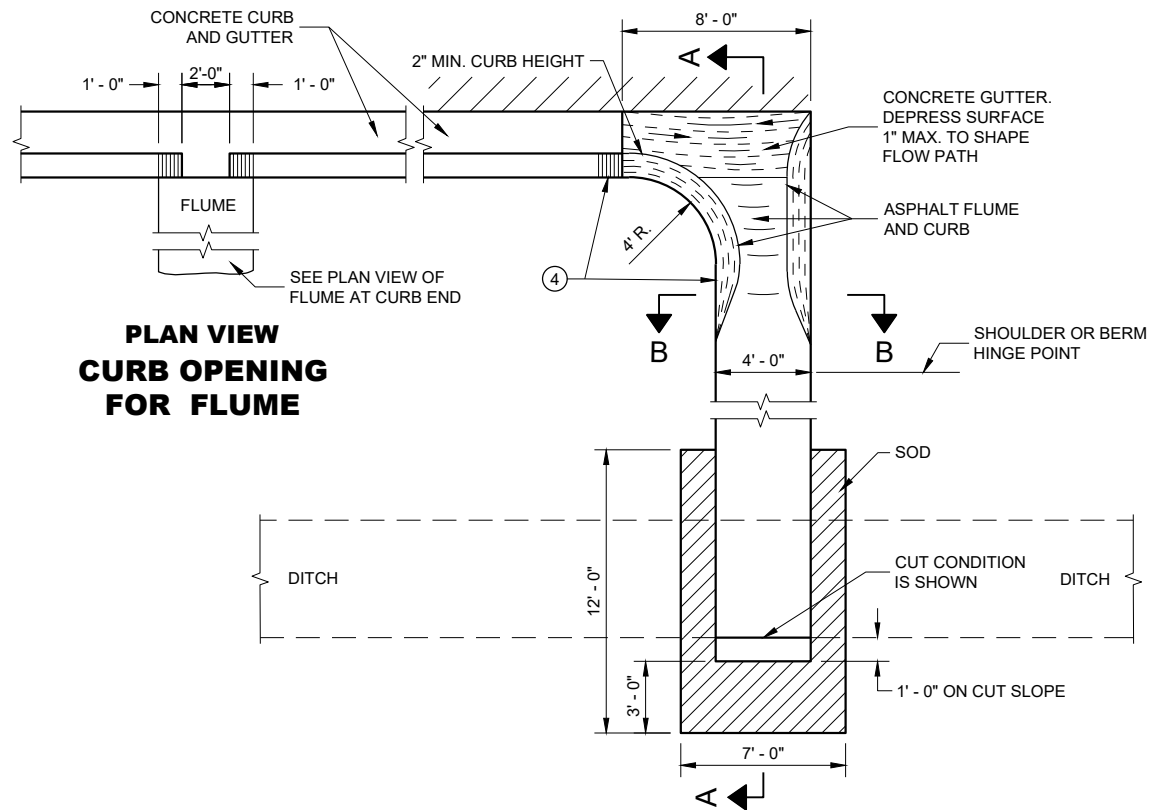
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

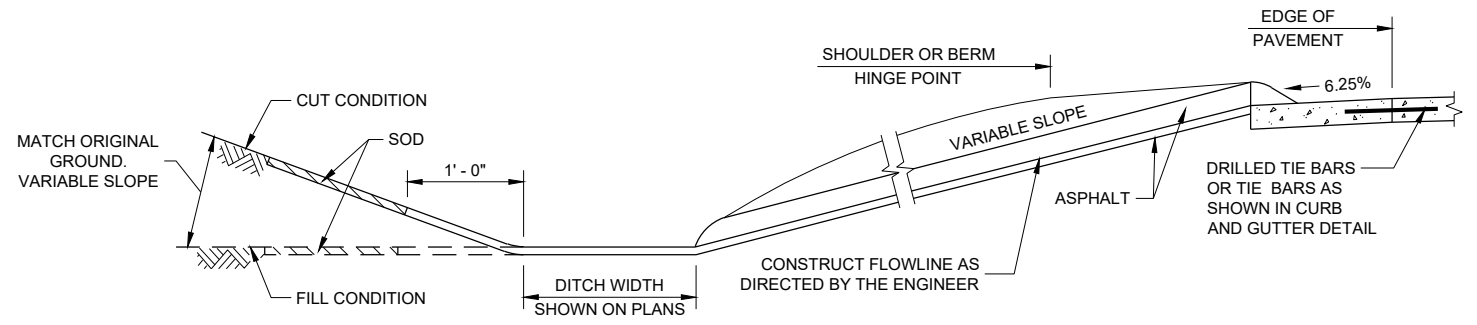
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

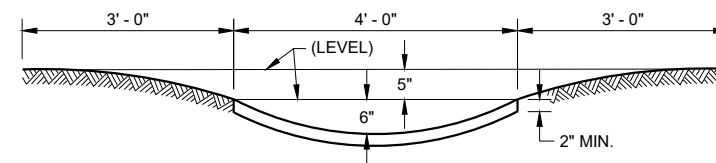
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

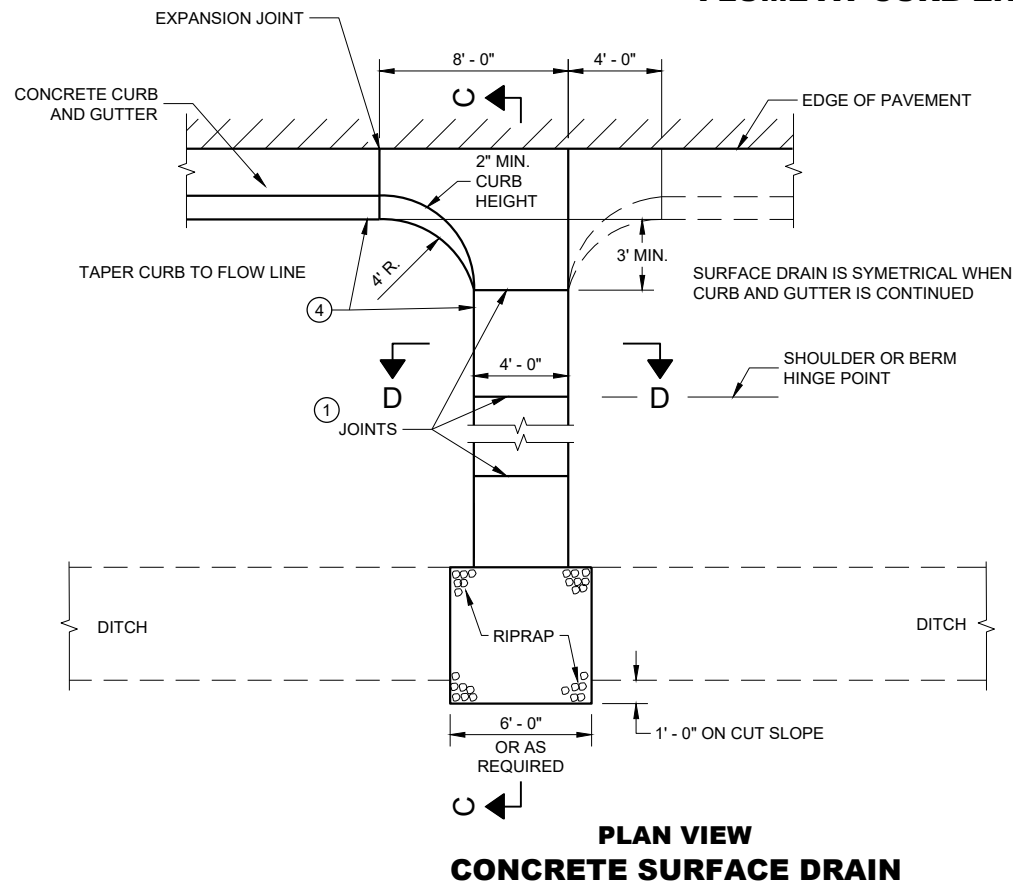
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



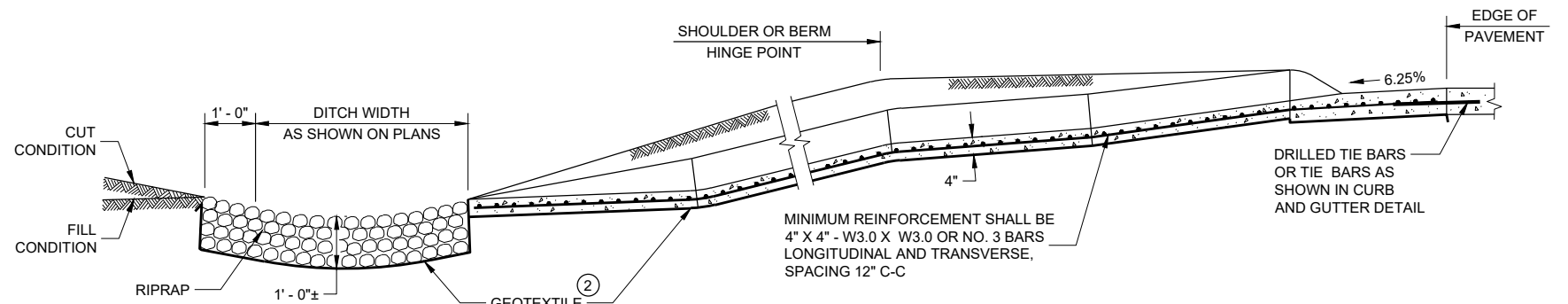
SECTION A - A



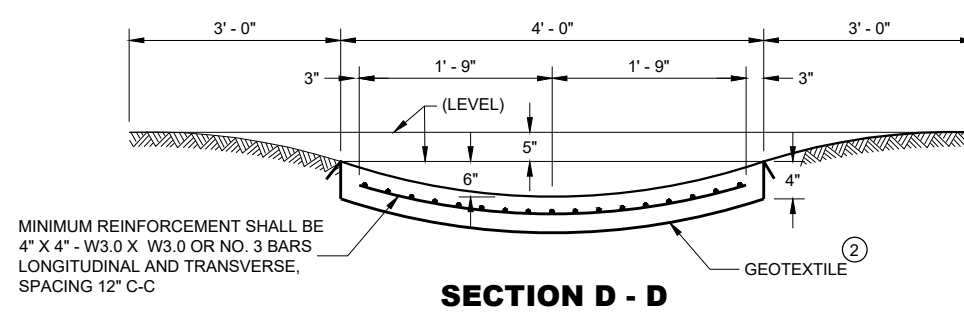
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



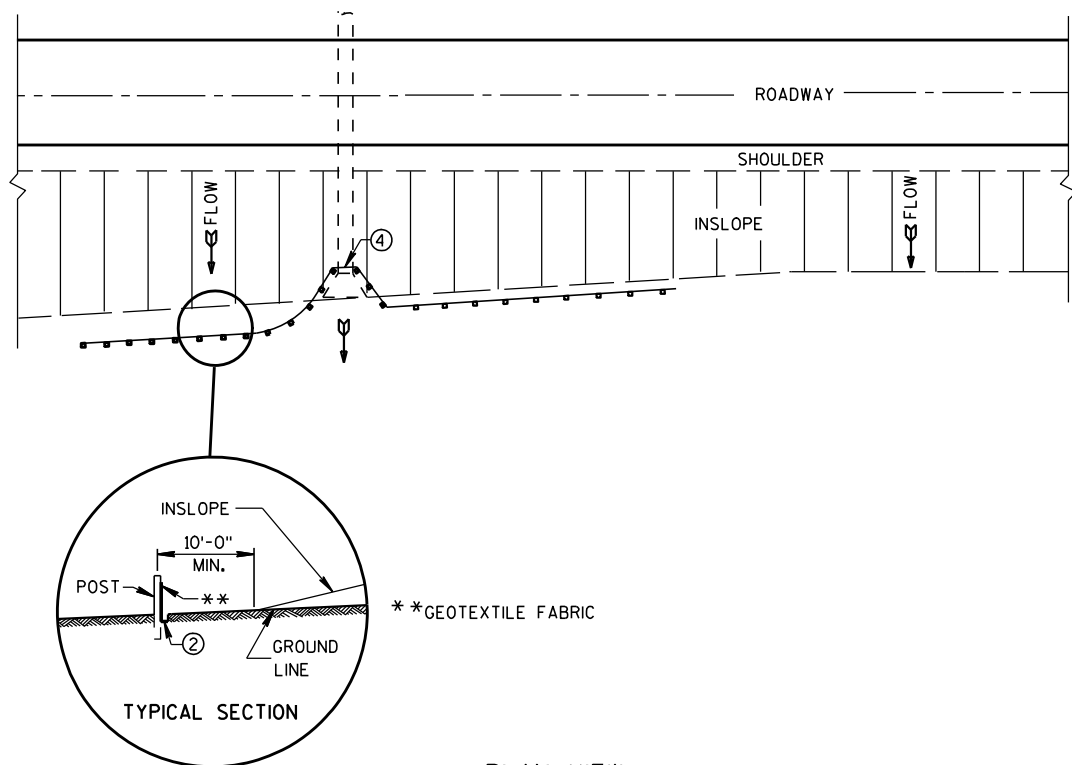
SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

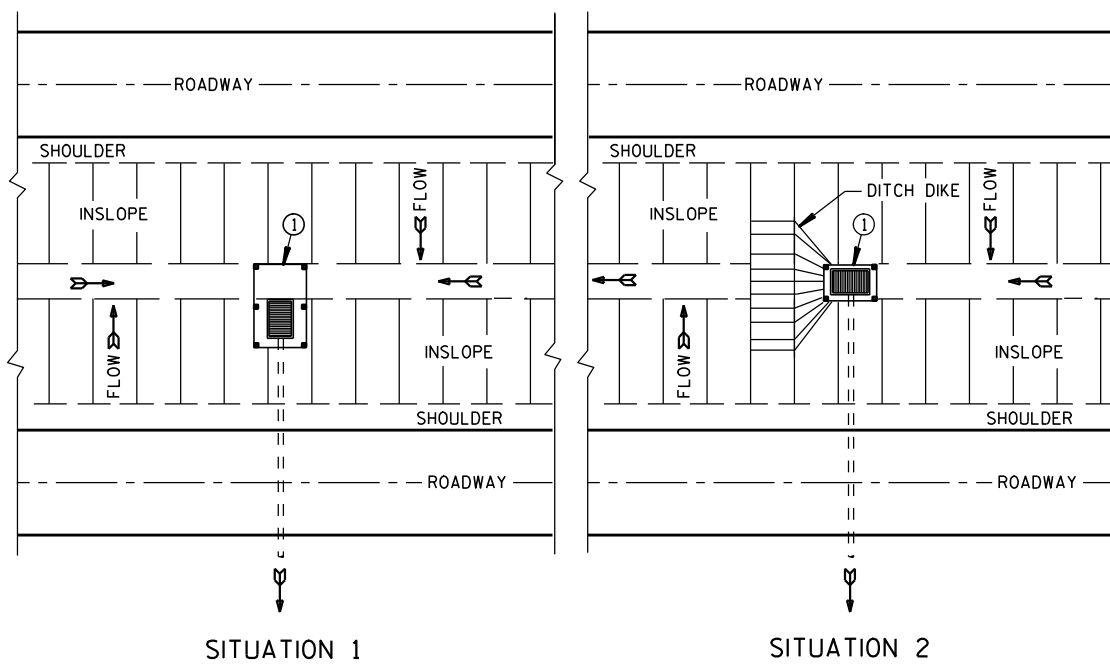
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

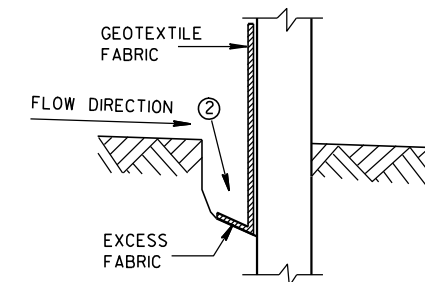


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

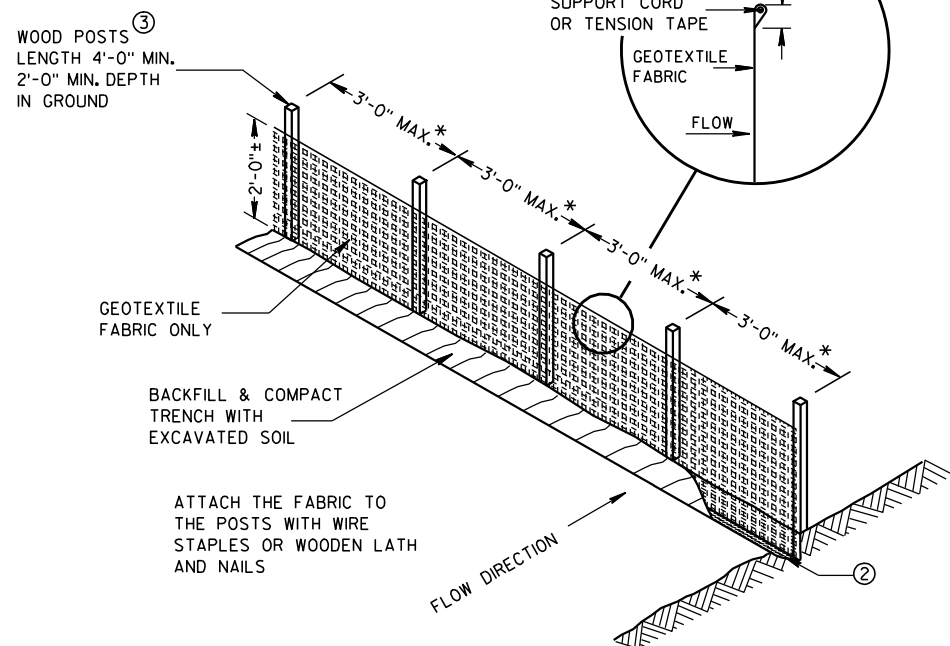
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



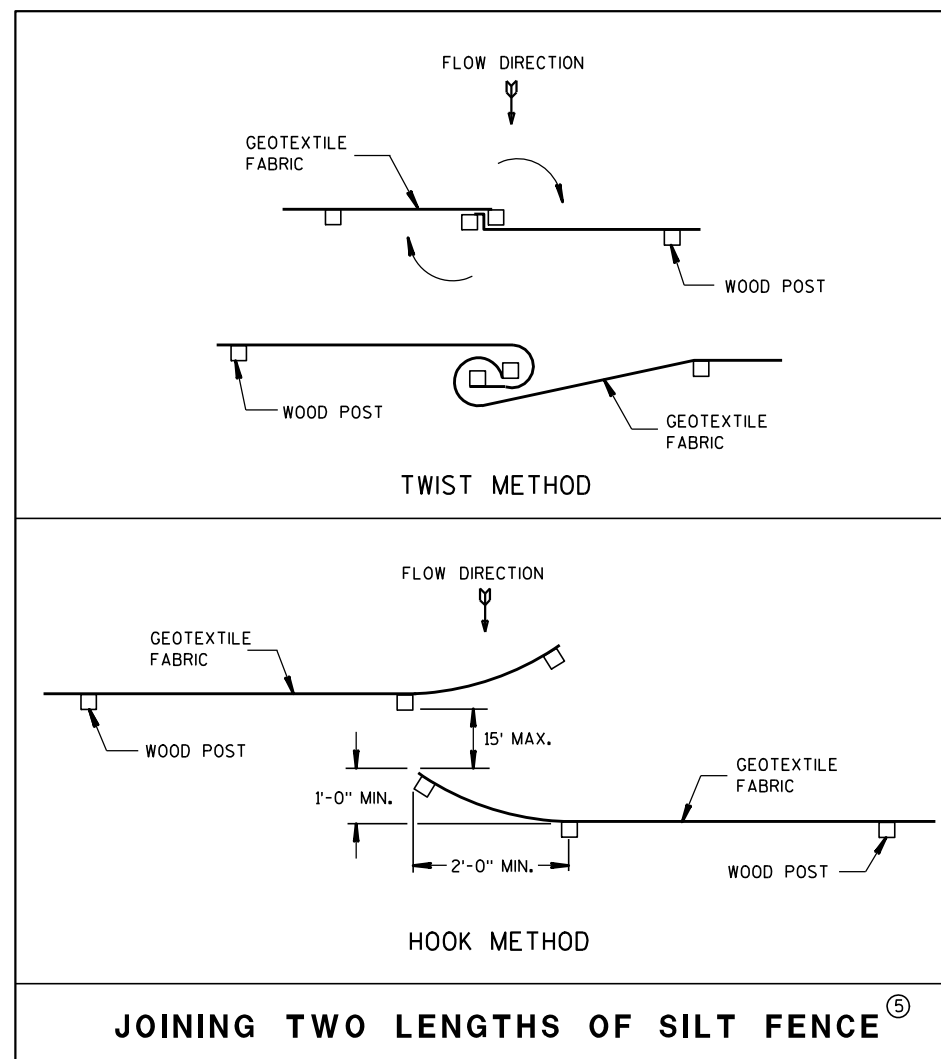
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

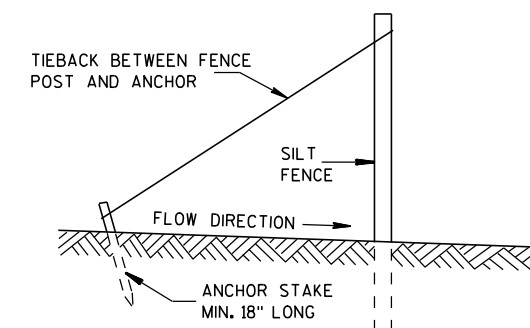


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

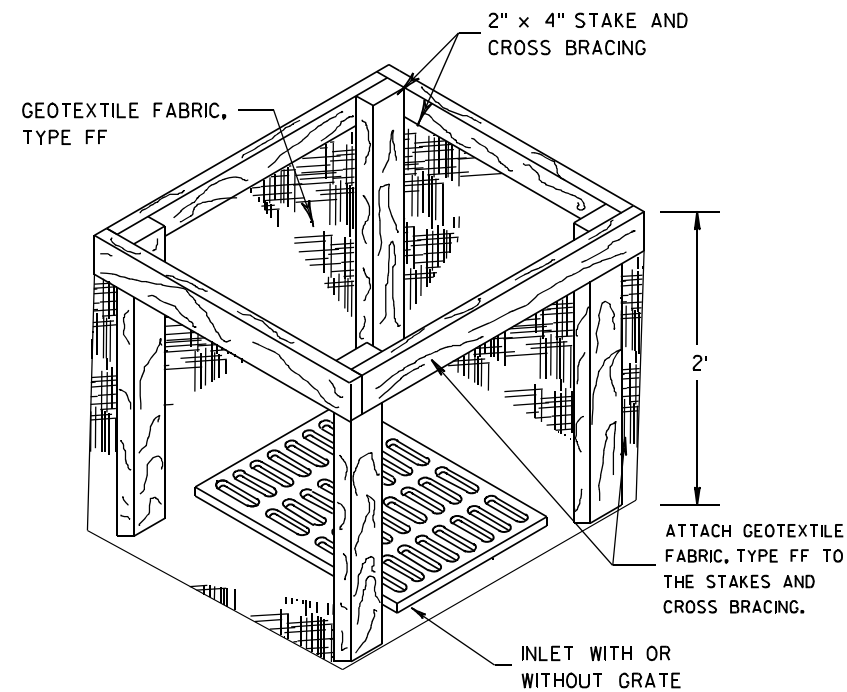
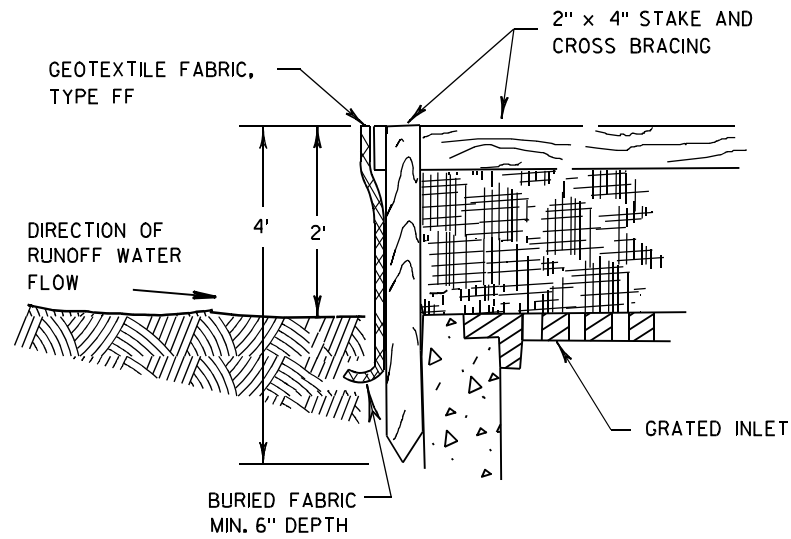
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05
DATE

FHWA

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



INLET PROTECTION, TYPE A

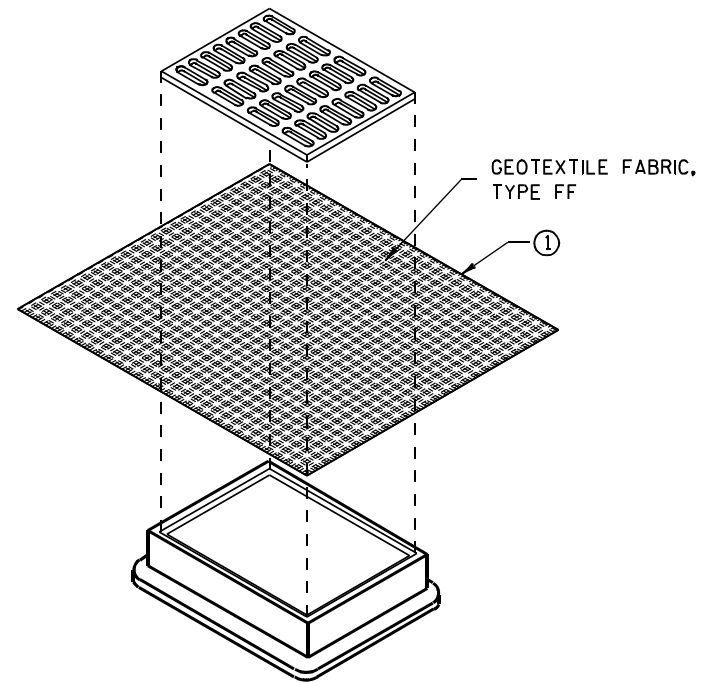
GENERAL NOTES

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

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

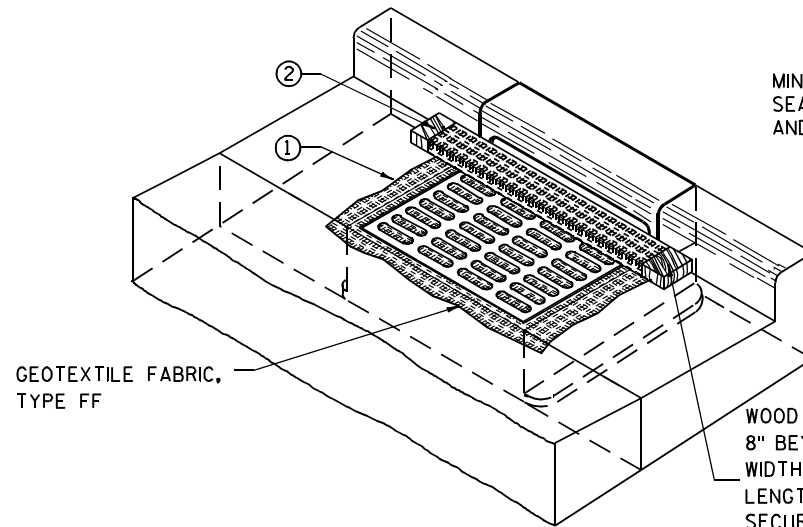
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

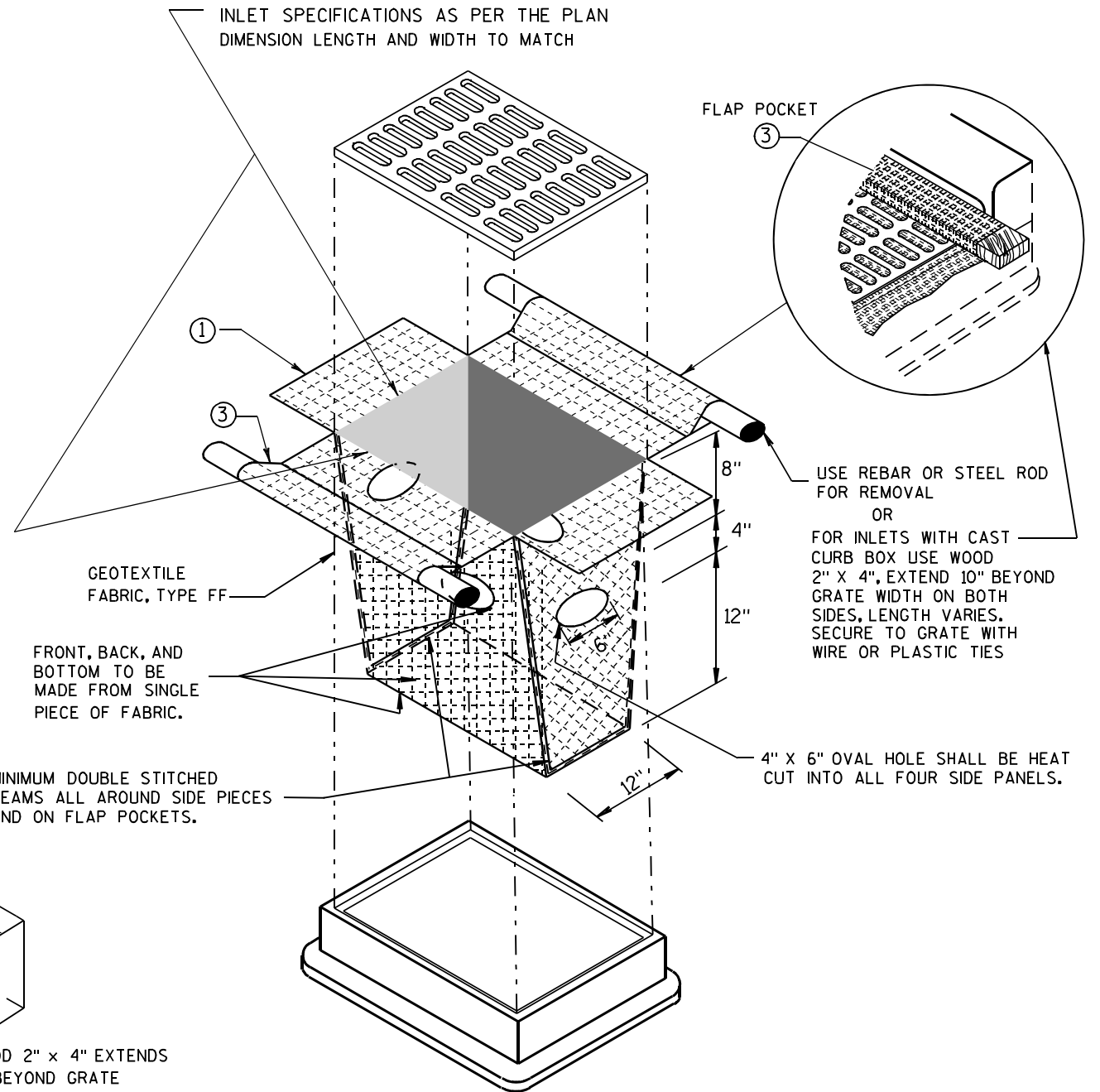
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

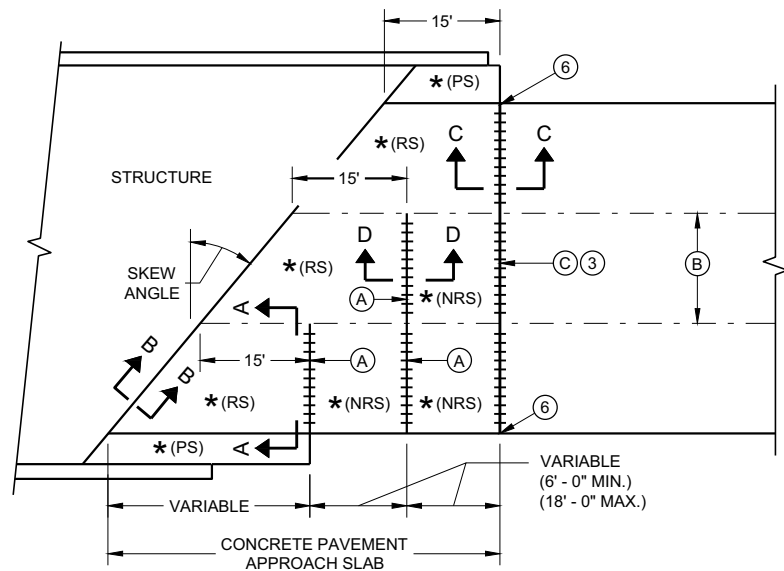
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



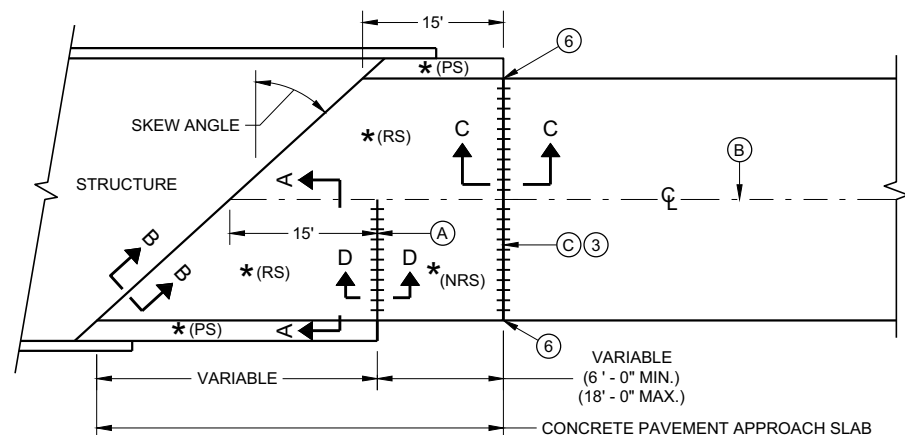
INLET PROTECTION, TYPE D

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

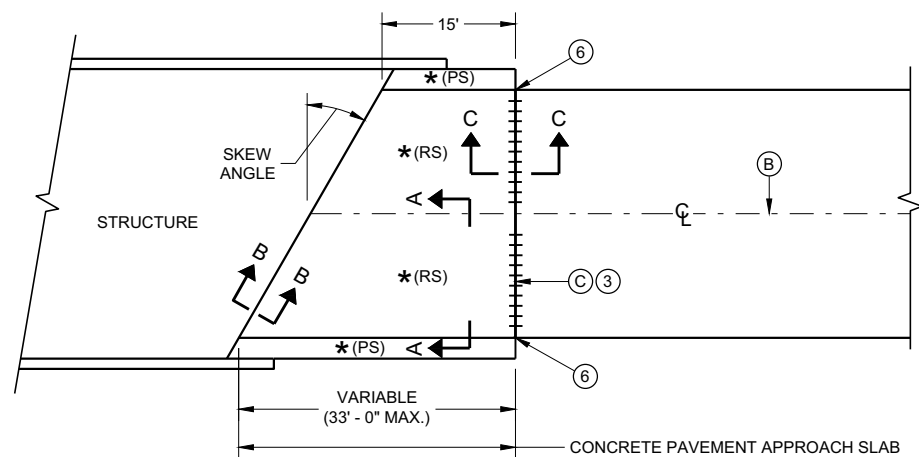
INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Connestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



**SKewed APPROACH
(PAVEMENT MORE THAN TWO LANES)**

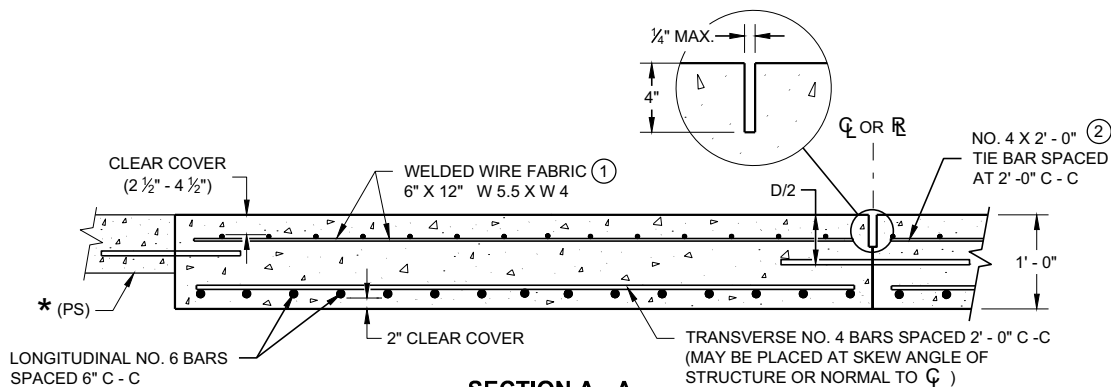


**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**

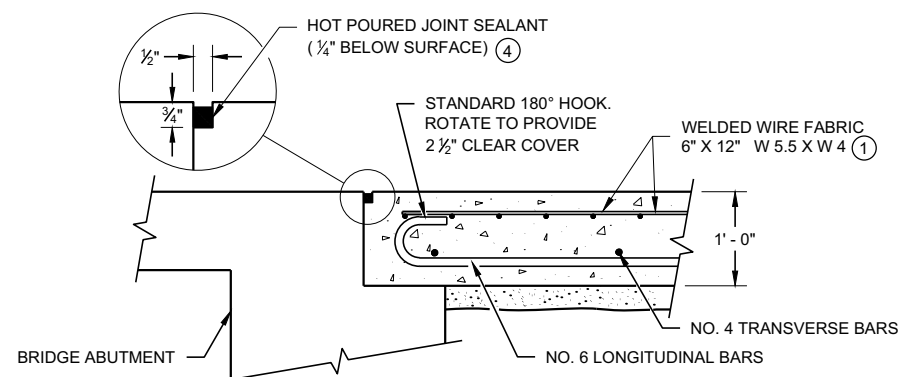


**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')**
APPROACH SLAB AND ADJACENT PAVEMENT

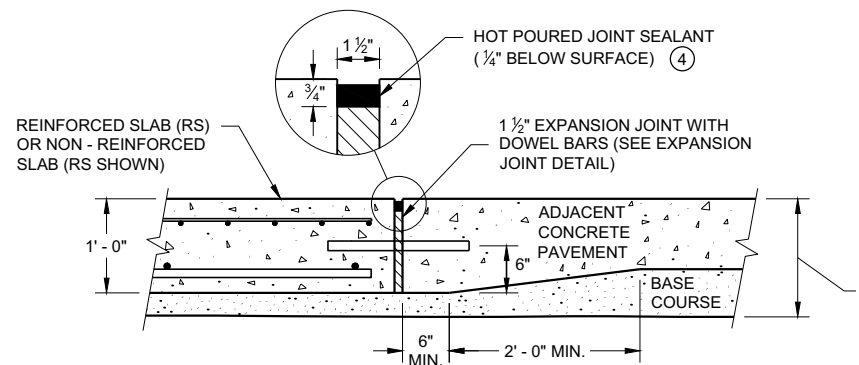
- * (RS) = REINFORCED CONCRETE SLAB
- * (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- * (NRS) = NON - REINFORCED CONCRETE SLAB
- *** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A
REINFORCEMENT POSITIONING DETAIL**



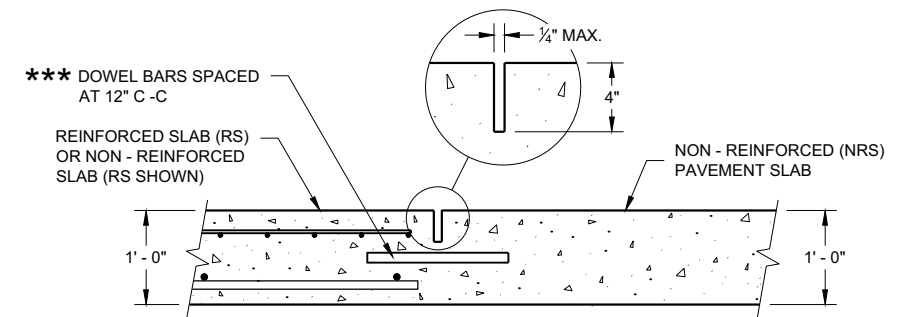
**SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT**



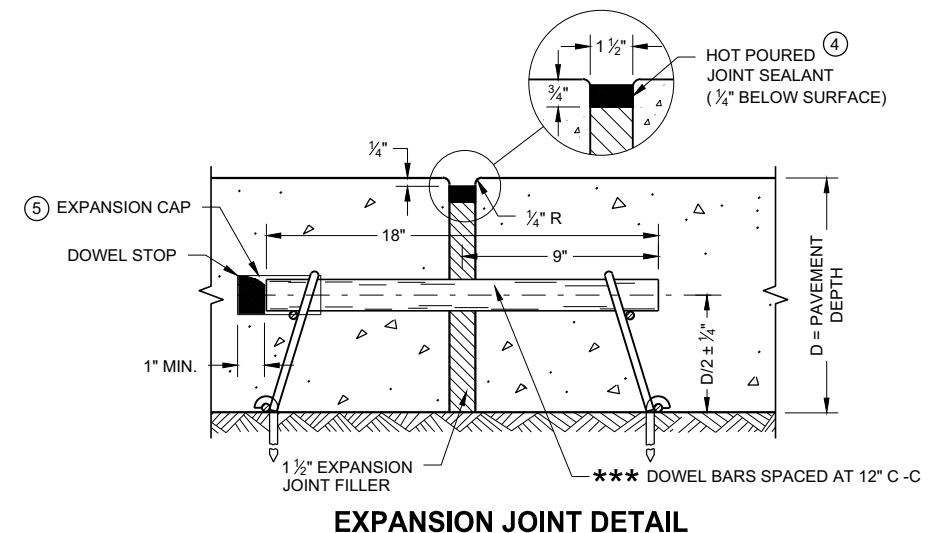
**SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**

GENERAL NOTES

- THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.
- TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.
- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
 - ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
 - ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
 - ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
 - ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
 - ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
 - (A) STANDARD CONTRACTION JOINT NORMAL TO \mathcal{C} OR \mathcal{R} .
 - (B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
 - (C) 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO \mathcal{C} OR \mathcal{R} .



**SECTION D - D
CONTRACTION JOINT**



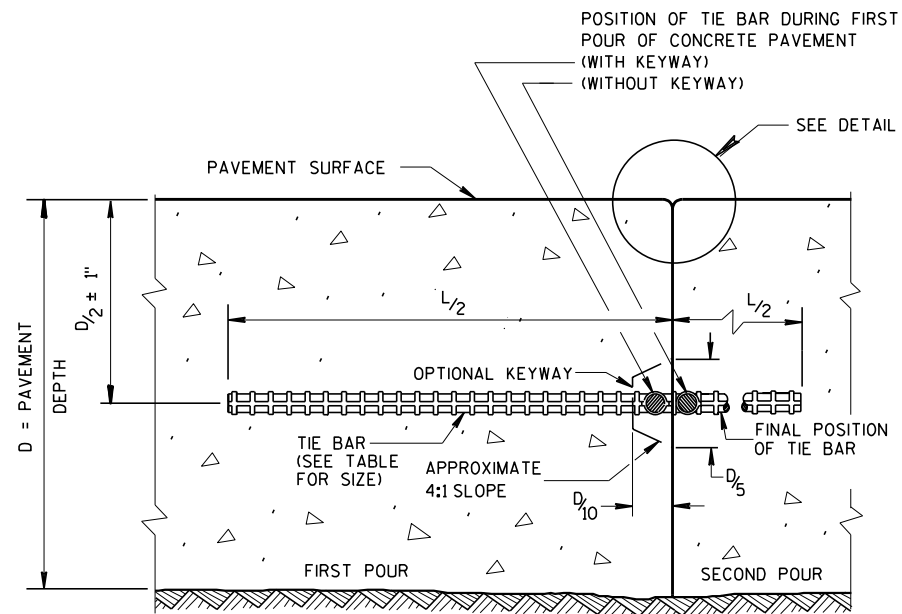
EXPANSION JOINT DETAIL

**CONCRETE PAVEMENT
APPROACH SLAB**

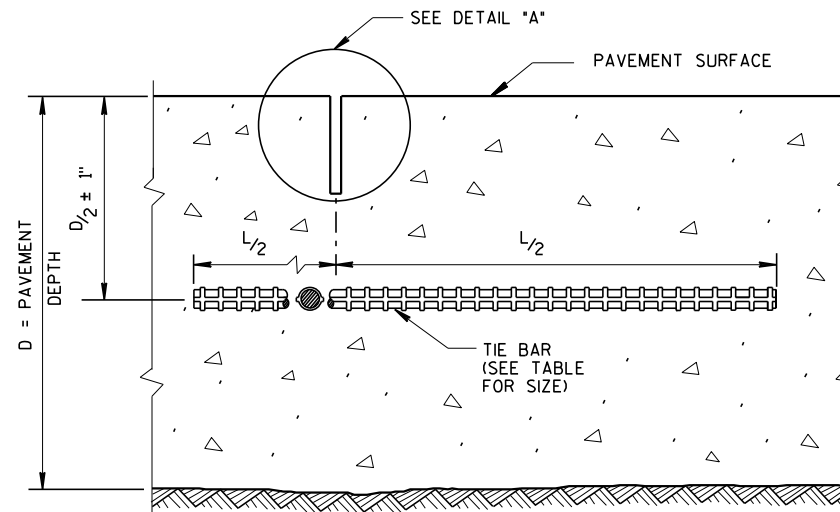
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp, P.E.
DATE DATE PAVEMENT SUPERVISOR

FHWA



CONSTRUCTION JOINT



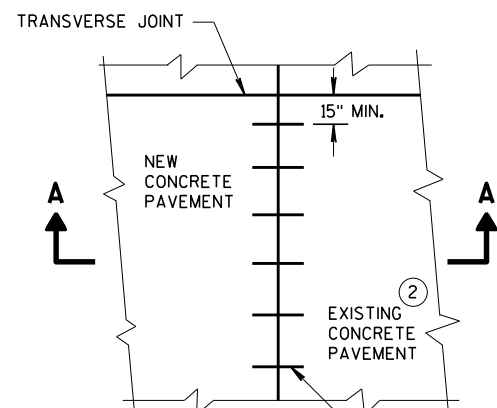
SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

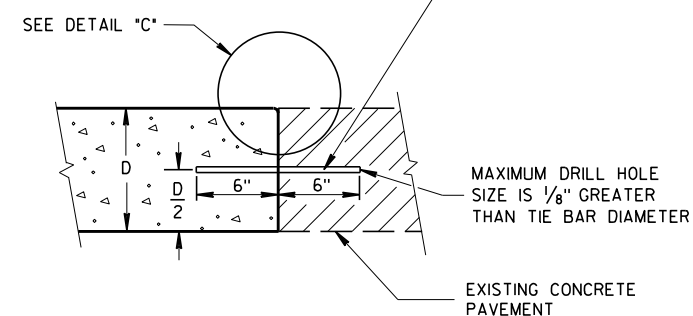
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

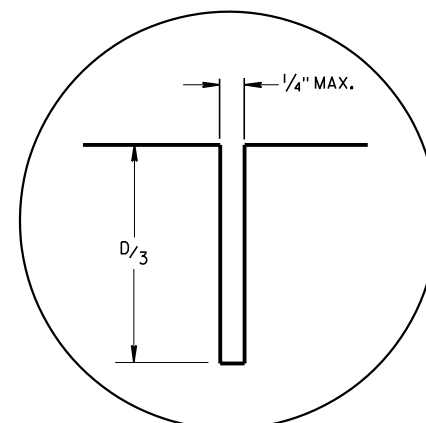


PLAN VIEW

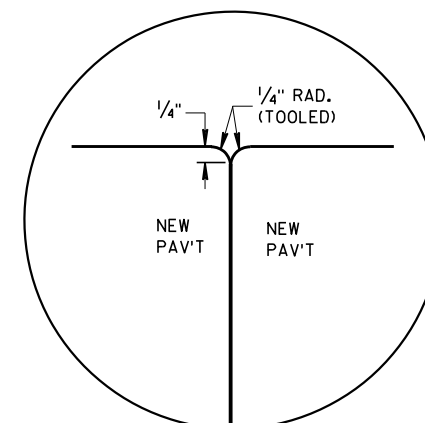
NO. 6 TIE BARS SPACED 30\"/>



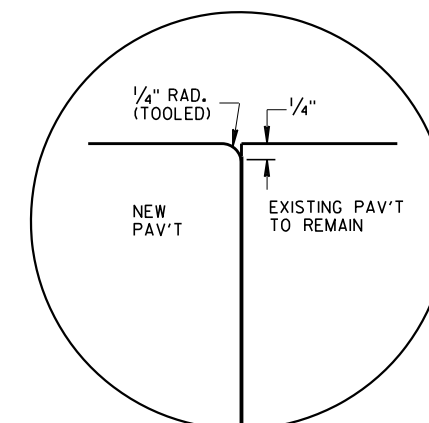
**SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT**



DETAIL "A"



DETAIL "B"



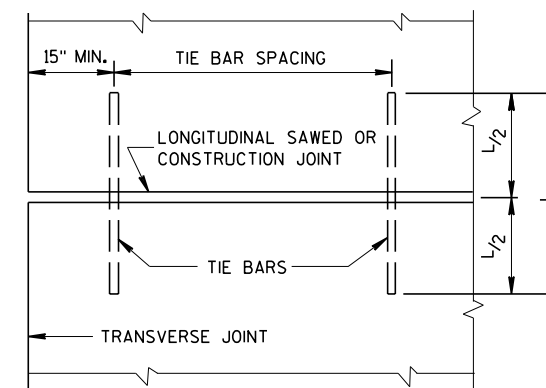
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

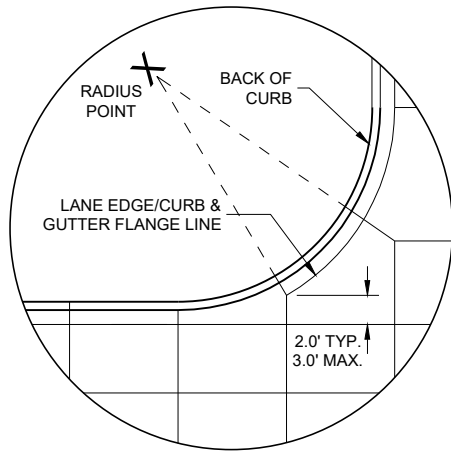


**PLAN VIEW
SHOWING LOCATION OF TIE BARS**

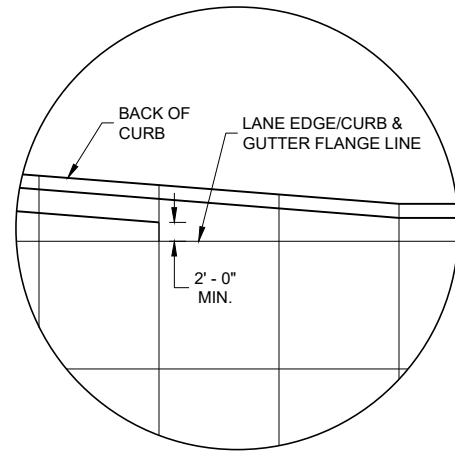
**CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

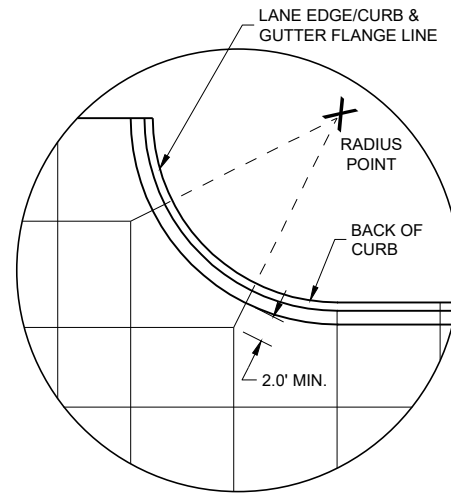
APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA



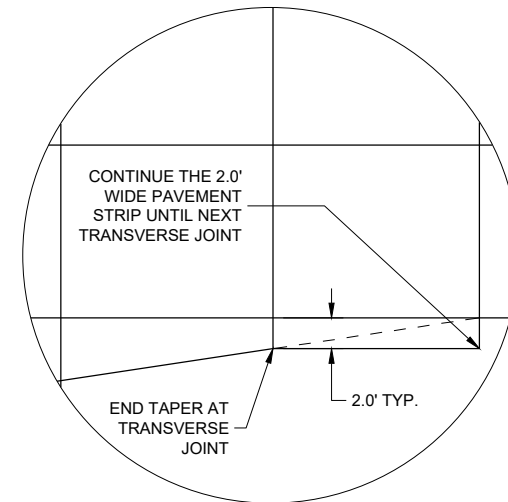
DETAIL "A"



DETAIL "B"



DETAIL "C"

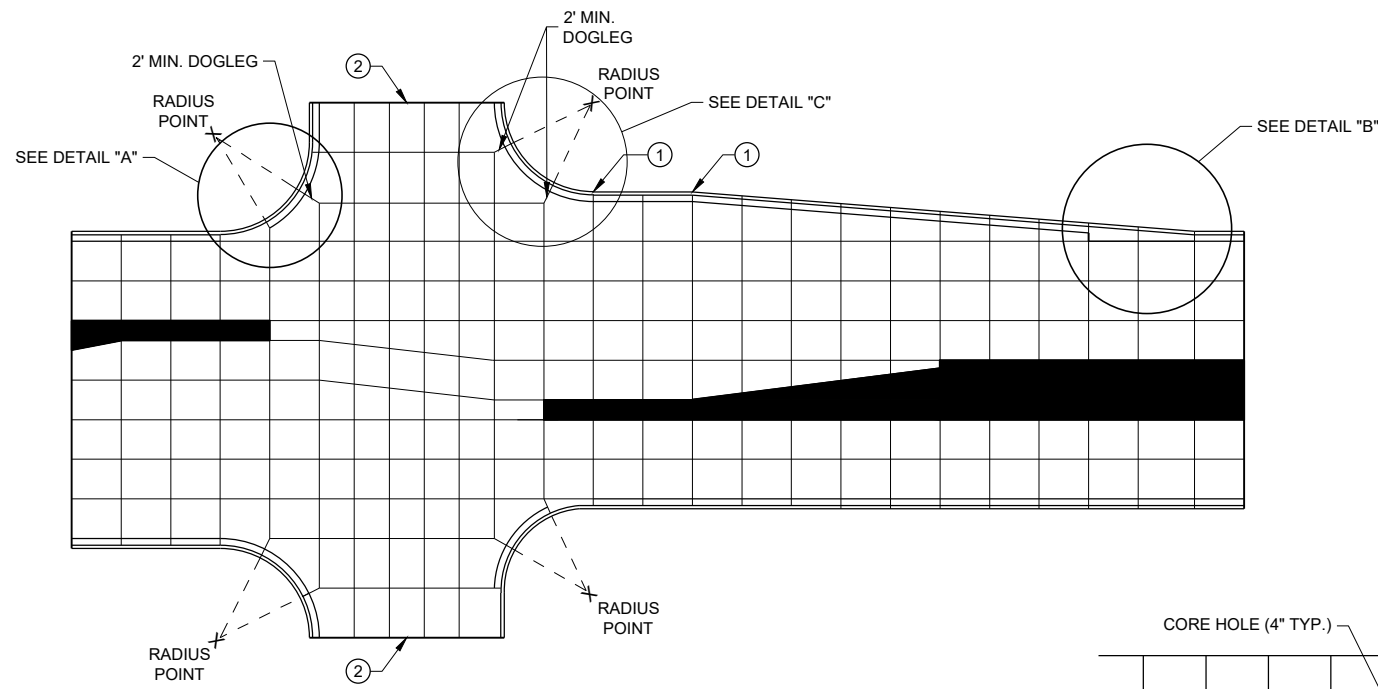


DETAIL "D"

GENERAL NOTES

- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
- AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
- SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
- AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

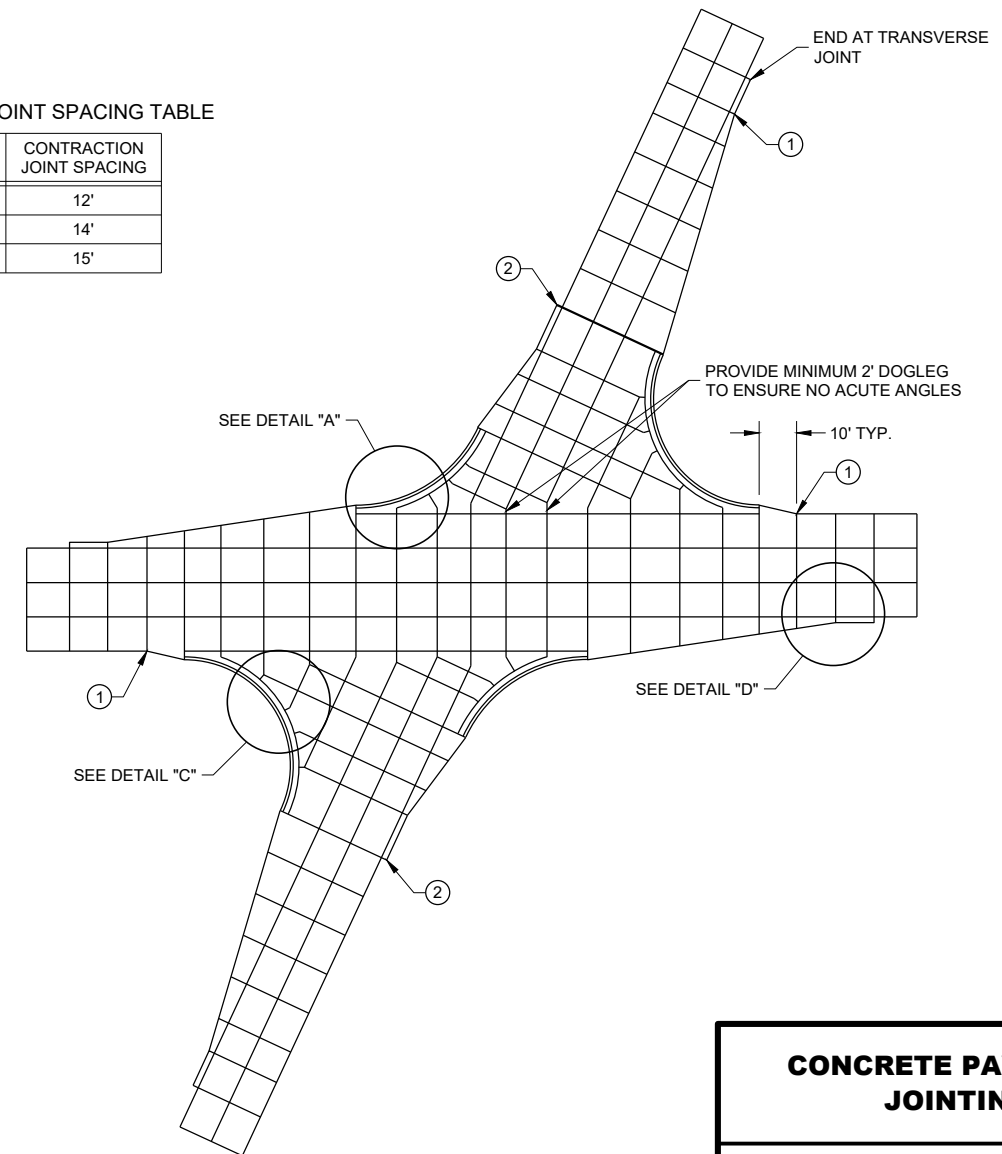
- ① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
- ② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
- ③ THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



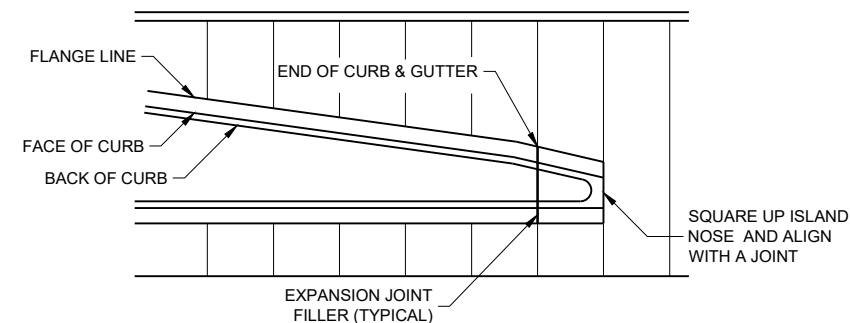
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

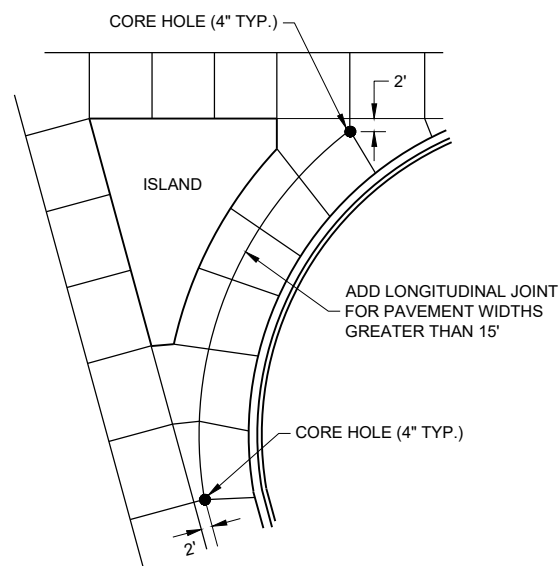
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

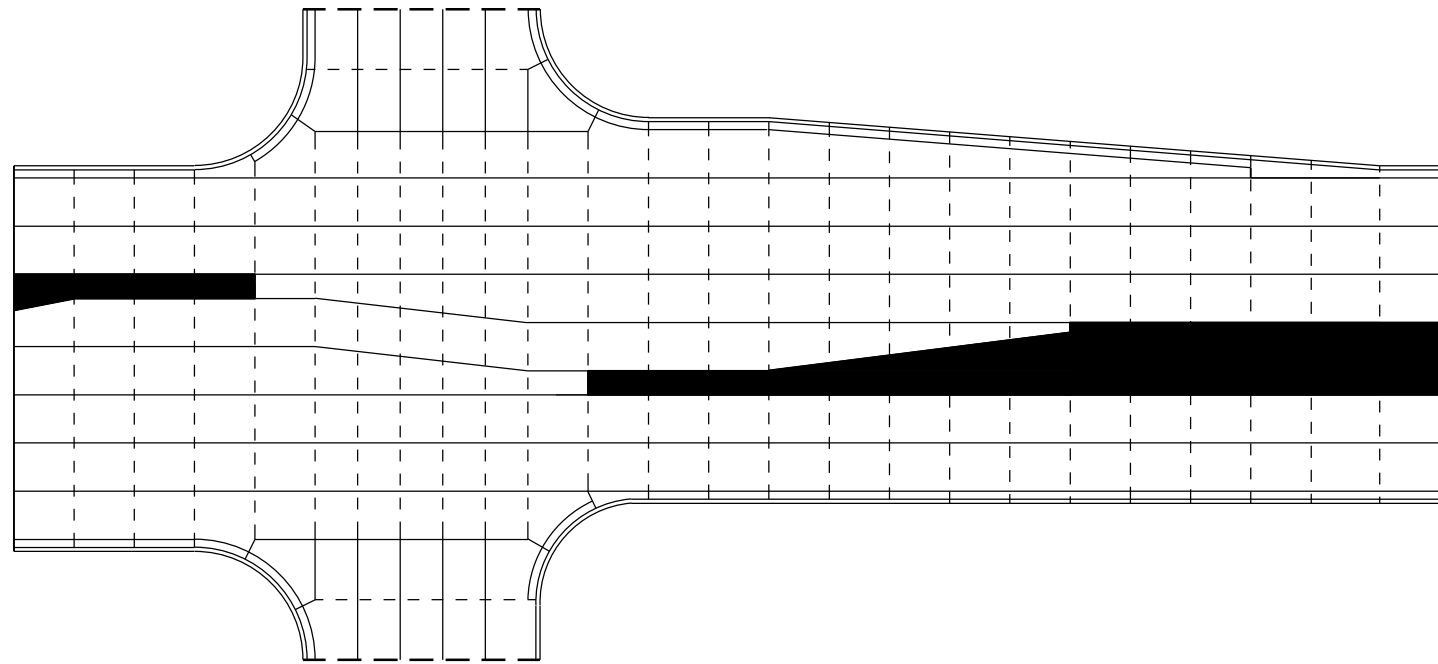
LEGEND

- - - - - POTENTIAL DOWELED EXPANSION JOINT
- - - - - DOWELED JOINT
- TIED JOINT

GENERAL NOTES

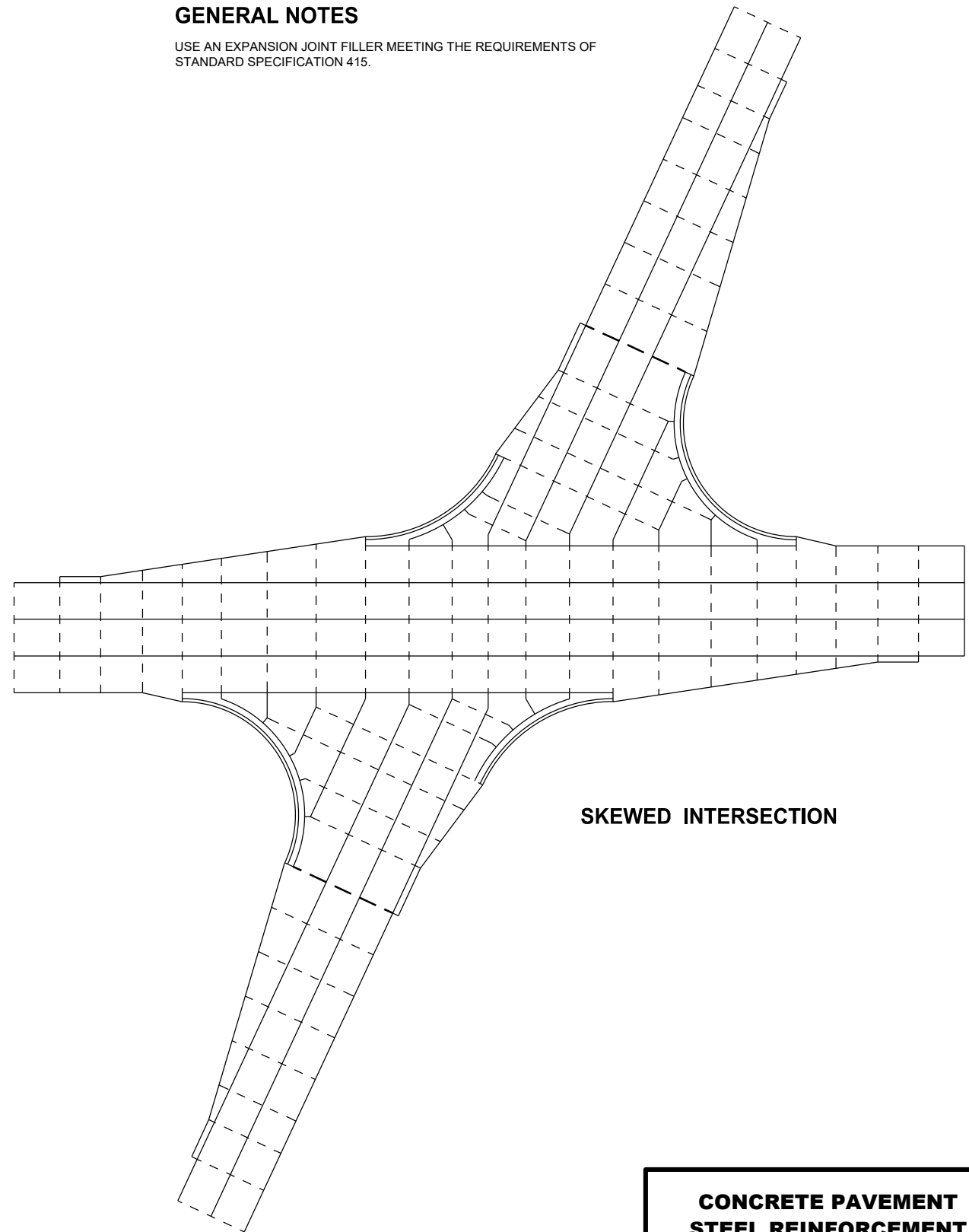
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

6



STANDARD INTERSECTION

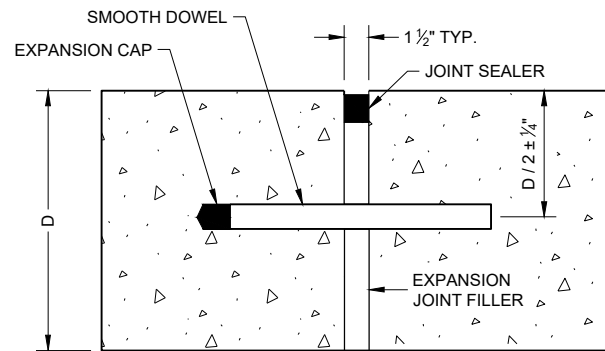
6



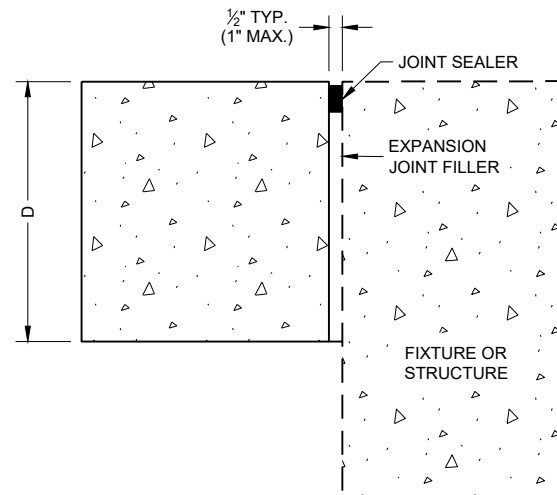
SKEWED INTERSECTION

**CONCRETE PAVEMENT
STEEL REINFORCEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DOWELED TRANSVERSE ①



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

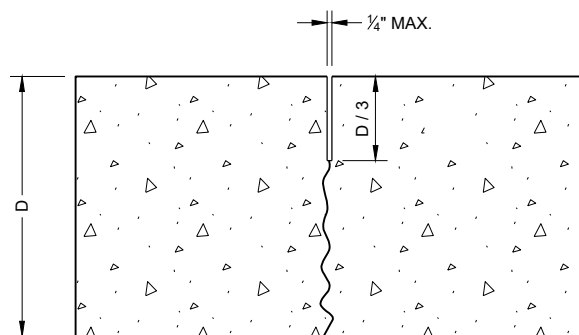
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

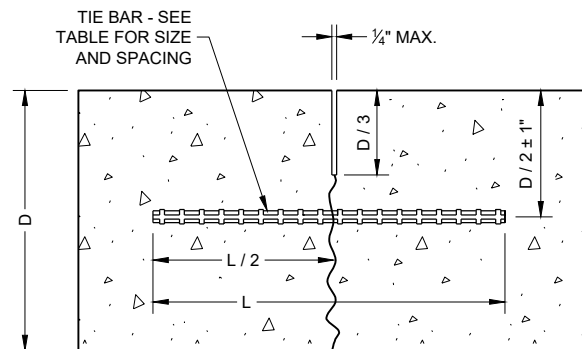
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

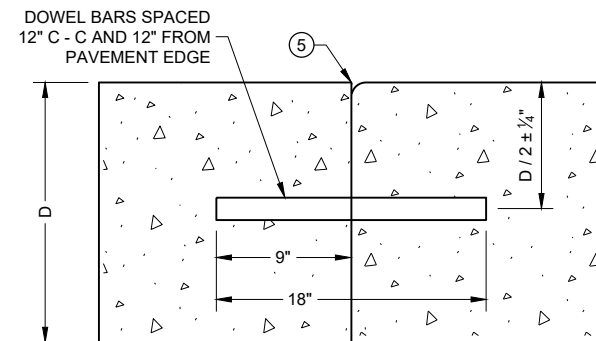
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- ④ CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- ⑤ IF JOINT IS FORMED, PROVIDE A 1/4" RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



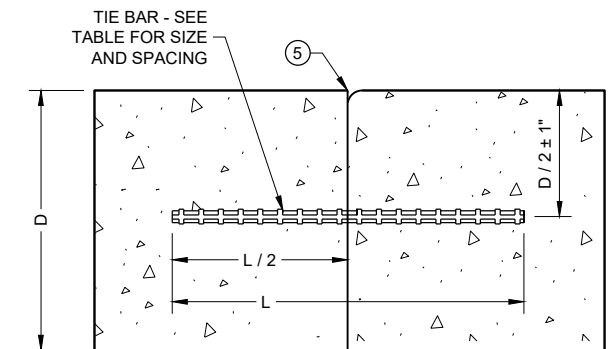
UNDOWELED TRANSVERSE



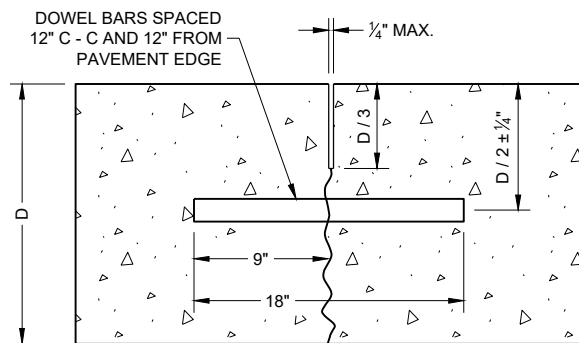
TIED LONGITUDINAL



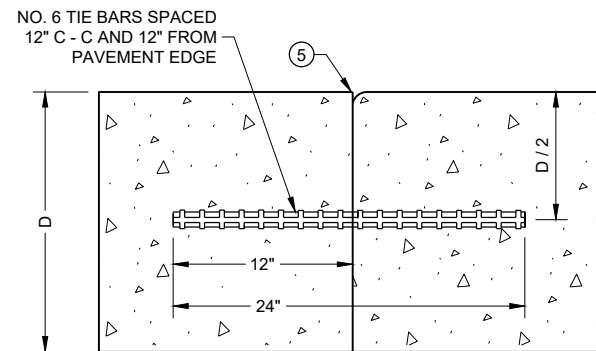
DOWELED TRANSVERSE ③



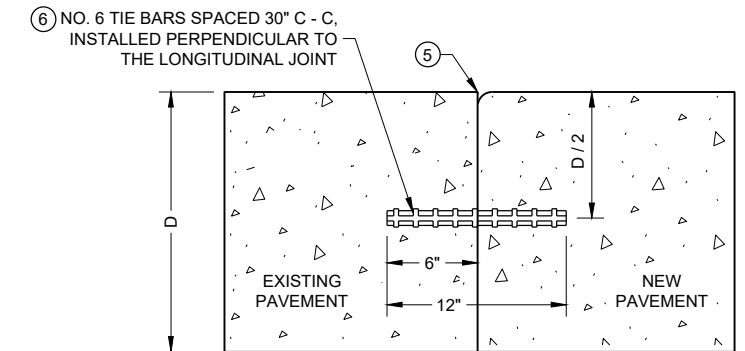
TIED LONGITUDINAL



DOWELED TRANSVERSE



TIED TRANSVERSE ③
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



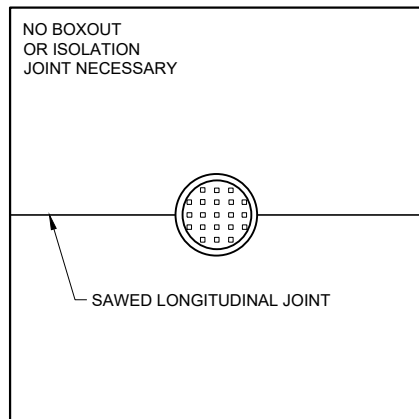
TIED LONGITUDINAL TO EXISTING

CONTRACTION JOINTS ②

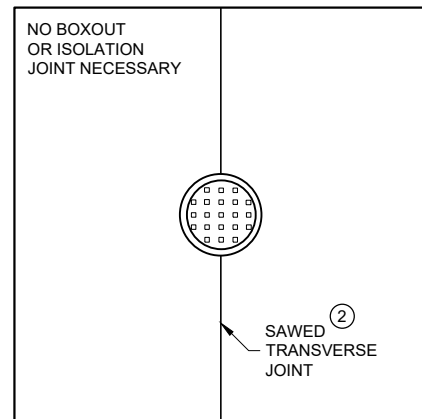
CONSTRUCTION JOINTS ④

**CONCRETE PAVEMENT
JOINT TYPES**

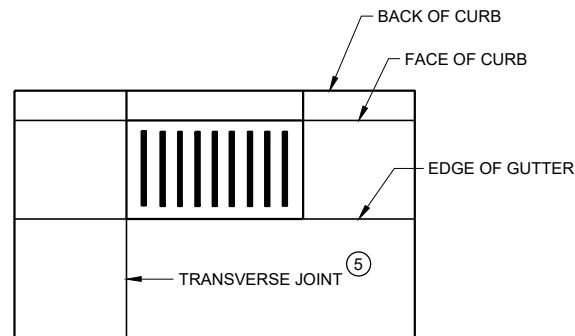
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MANHOLE WITH LONGITUDINAL JOINT



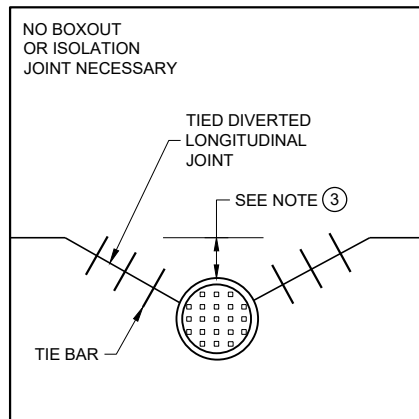
MANHOLE WITH TRANSVERSE JOINT



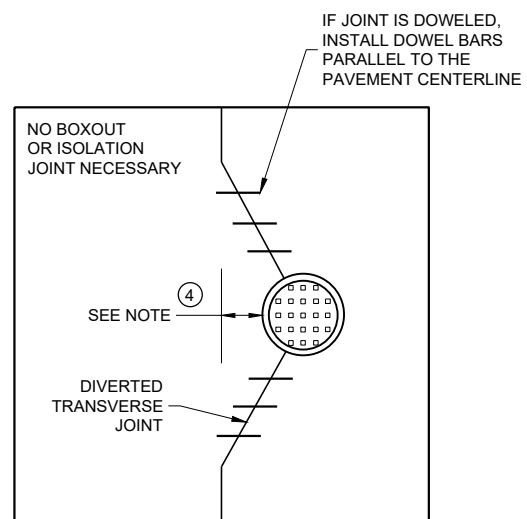
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

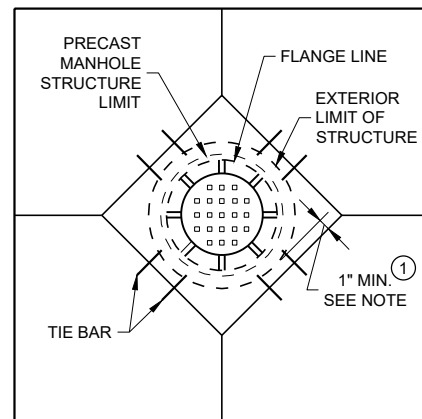
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ④ IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

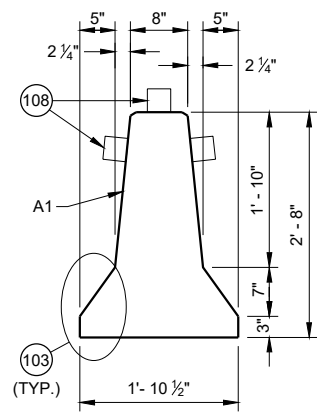


DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

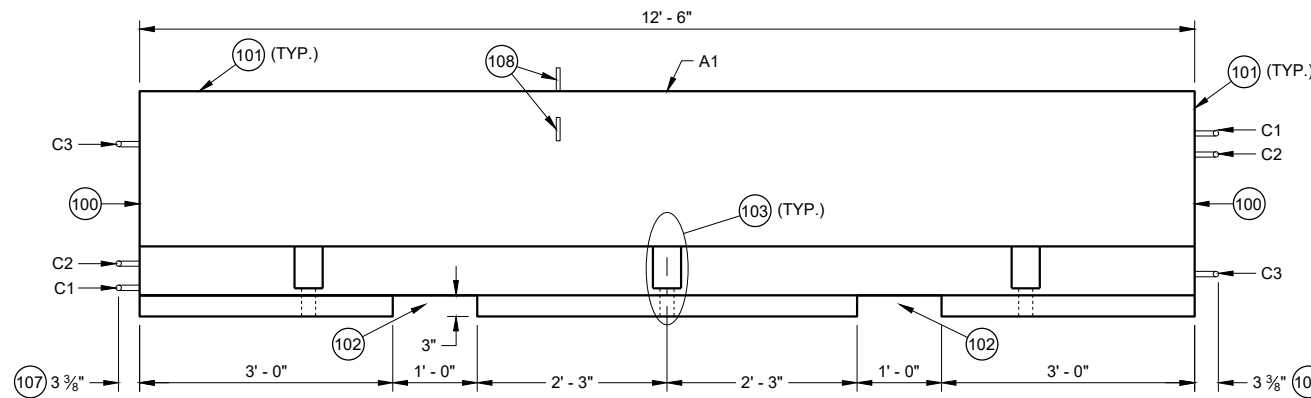
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2023 /S/ Peter Kemp P.E.
 DATE PAVEMENT SUPERVISOR



CROSS SECTION



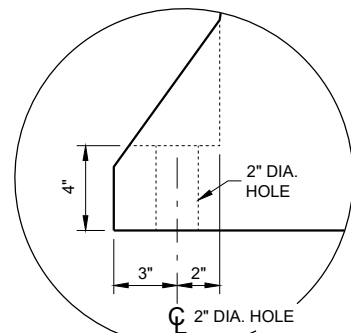
PROFILE VIEW

GENERAL NOTES

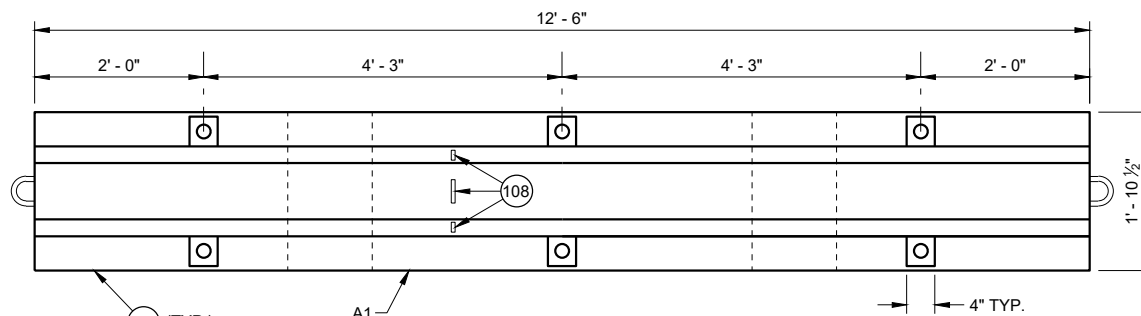
PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

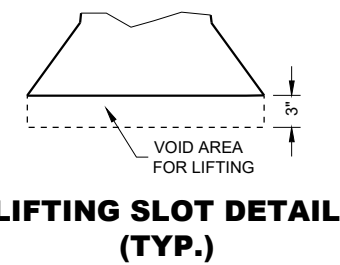
- (100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
A. TYPE OF BARRIER: WI-CBTP
B. MANUFACTURER
C. DATE OF MANUFACTURE (MONTH AND YEAR)
- (101) 1" OPTIONAL CHAMFER
- (102) SEE LIFTING SLOT DETAIL
- (103) SEE ANCHOR BLOCK DETAIL
- (104) 1 3/4" MIN. CLEAR COVER
- (105) 2" MIN. CLEAR COVER
- (106) 1" MIN. CLEAR COVER
- (107) ± 1/8" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)
- (108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TO MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.



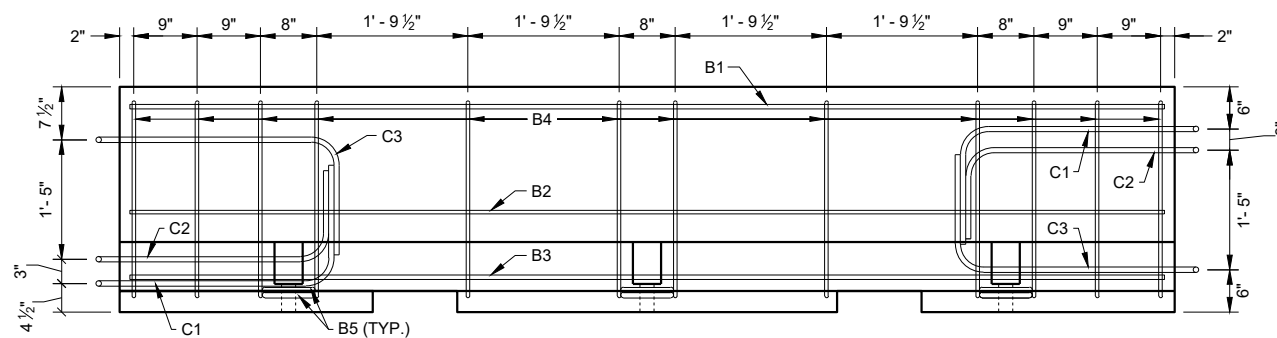
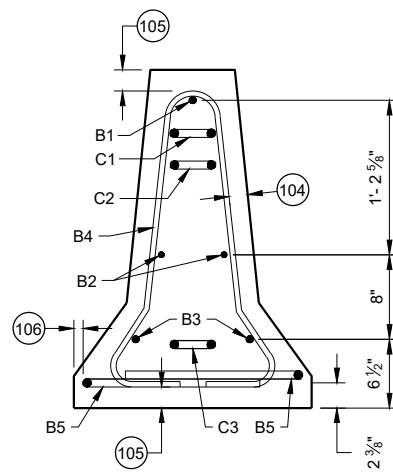
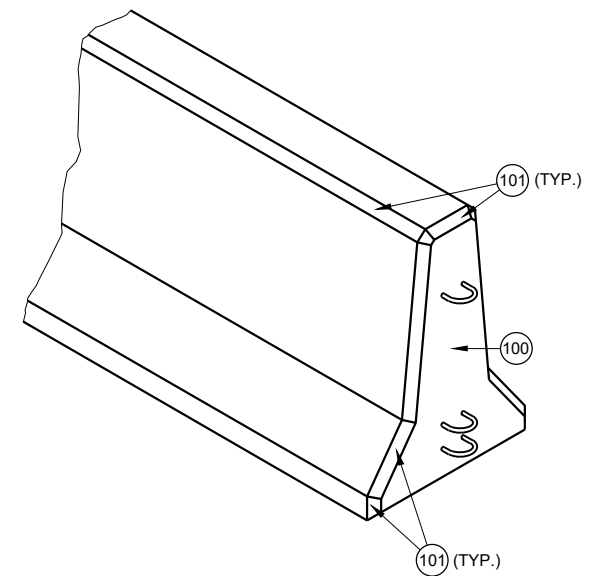
ANCHOR BLOCK DETAIL



**PLAN VIEW
TEMPORARY BARRIER**



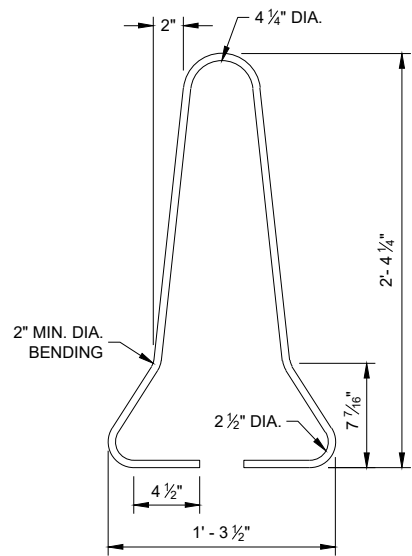
**LIFTING SLOT DETAIL
(TYP.)**



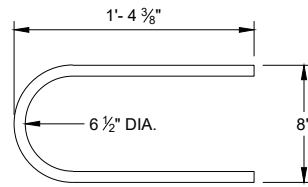
**PROFILE VIEW
TEMPORARY BARRIER REINFORCEMENT**

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

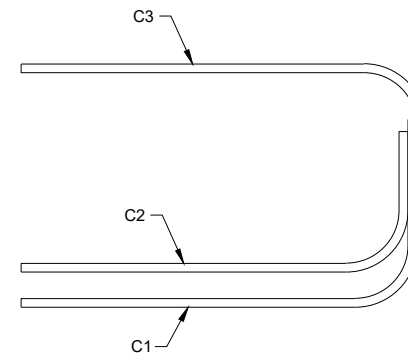
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



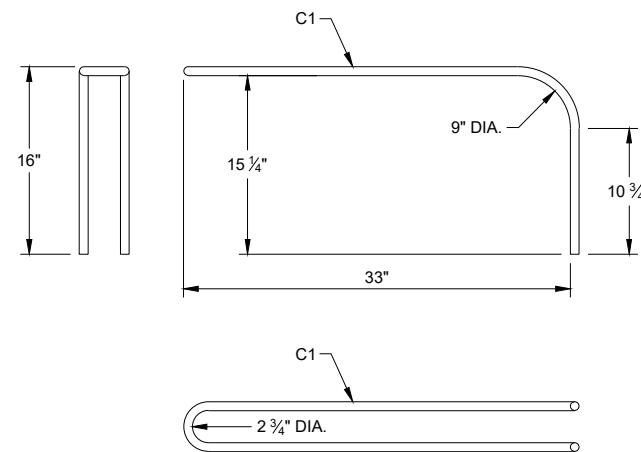
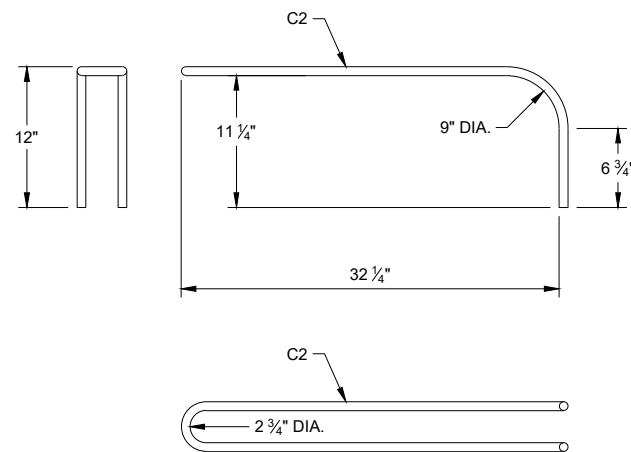
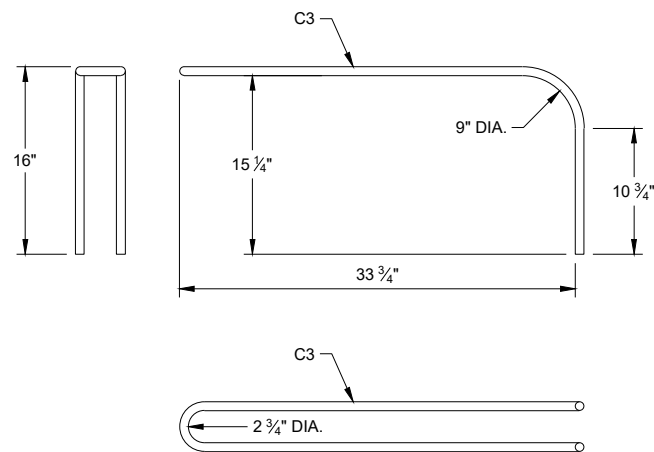
B4 BAR DETAIL



B5 BAR DETAIL



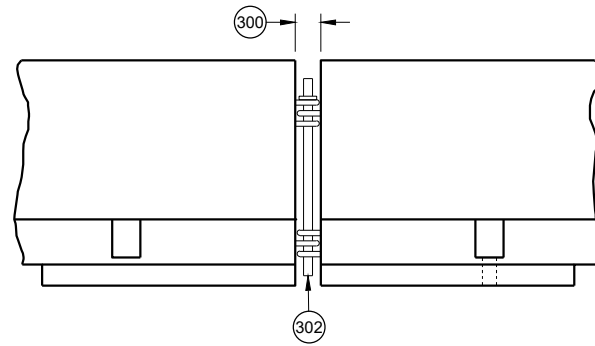
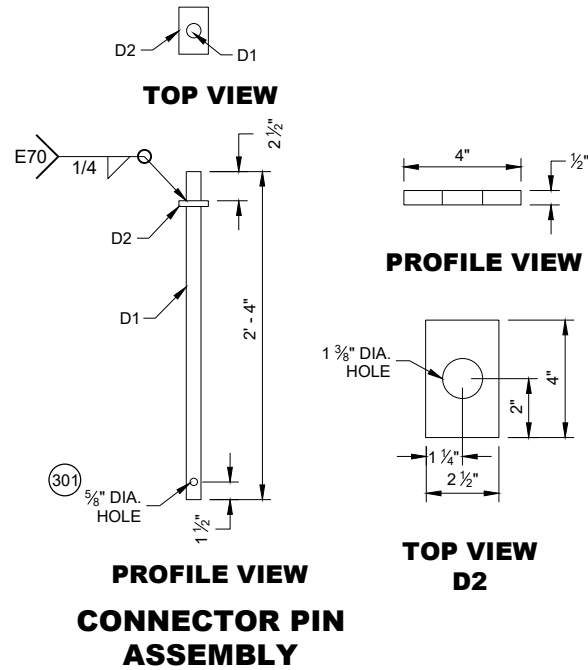
**PROFILE VIEW
LOOP BAR ASSEMBLY**



C BAR DETAILS

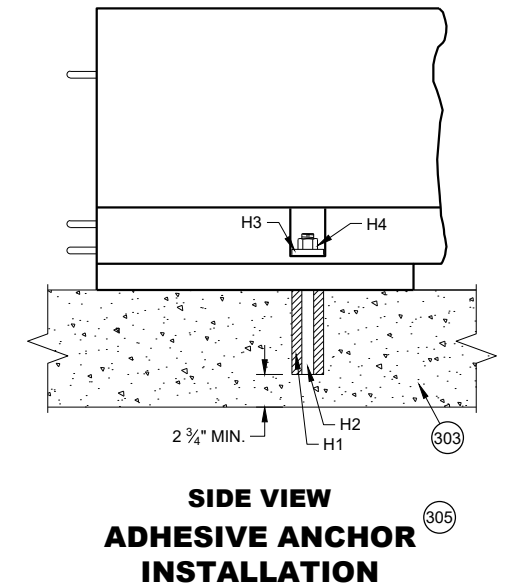
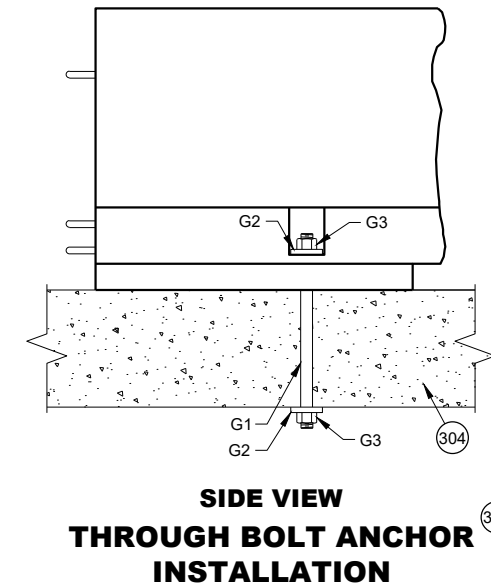
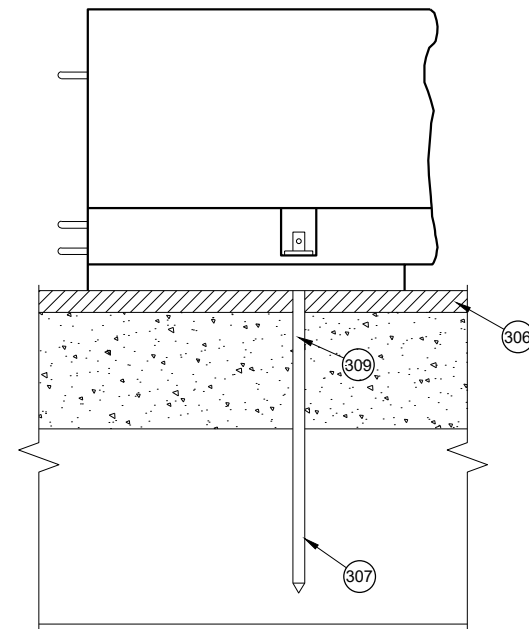
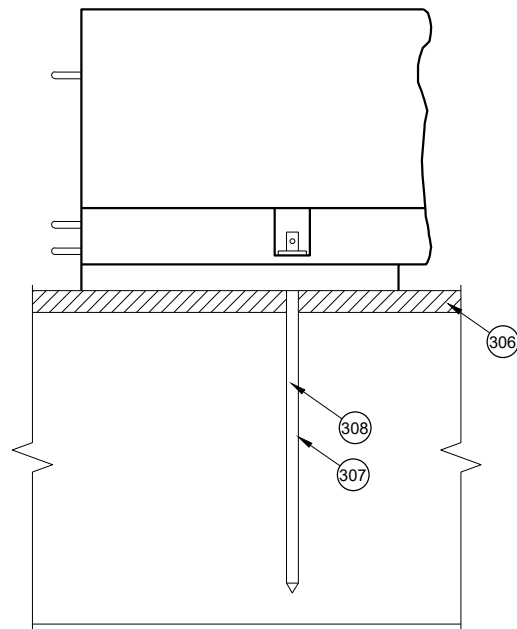
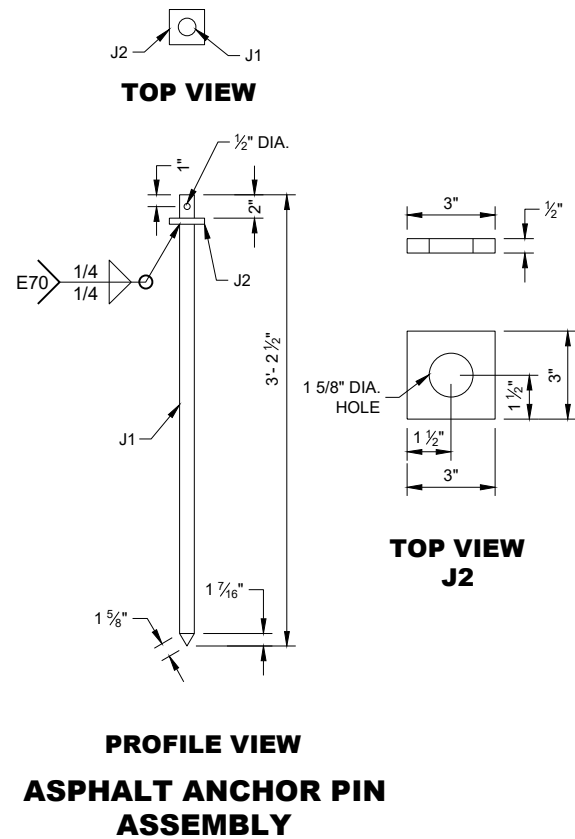
**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



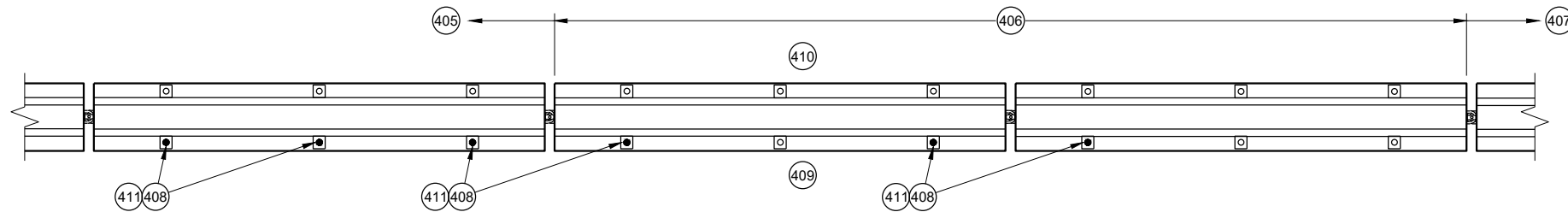
GENERAL NOTES

- (300) SET WITH 3 5/8" WOOD BLOCK.
- (301) HOLE IS OPTIONAL.
- (302) CONNECTOR PIN ASSEMBLY.
- (303) CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.
- (304) CONCRETE DECK.
- (305) DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.
- (306) MINIMUM OF 2" OF ASPHALT.
- (307) ASPHALT ANCHOR PIN ASSEMBLY
- (308) IF DRILLING A PILOT HOLE, THE MAX. DIA. OF THE HOLE IS 3/4"
- (309) WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.

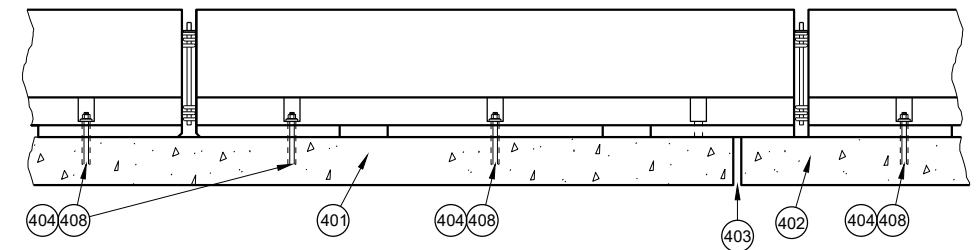


**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

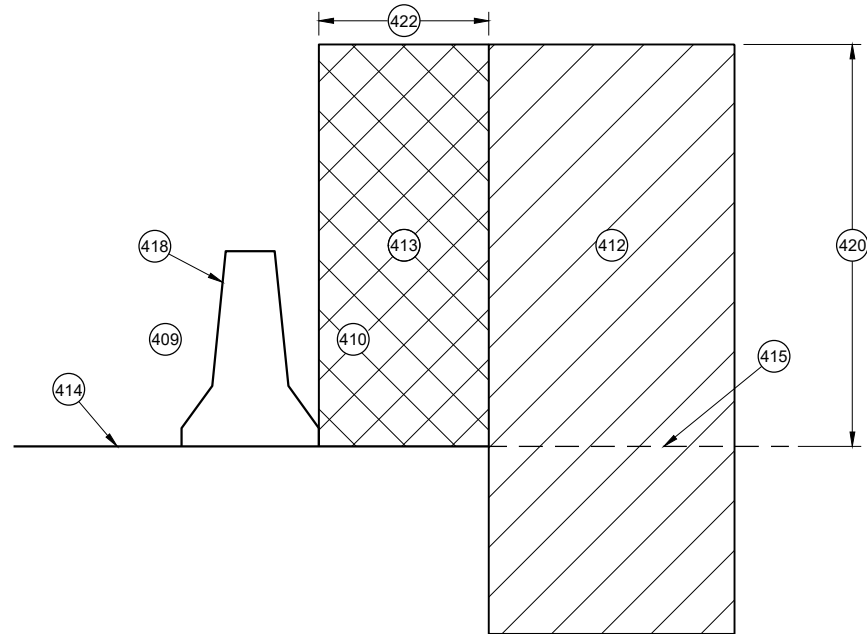
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



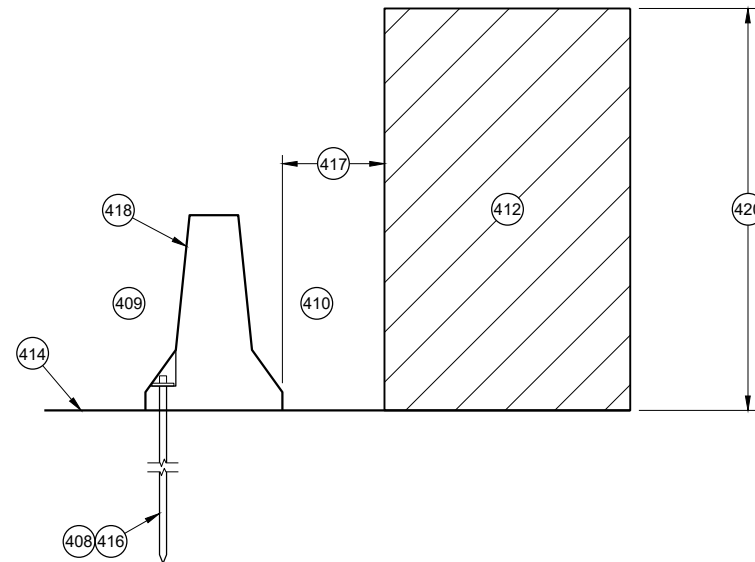
PLAN VIEW
TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



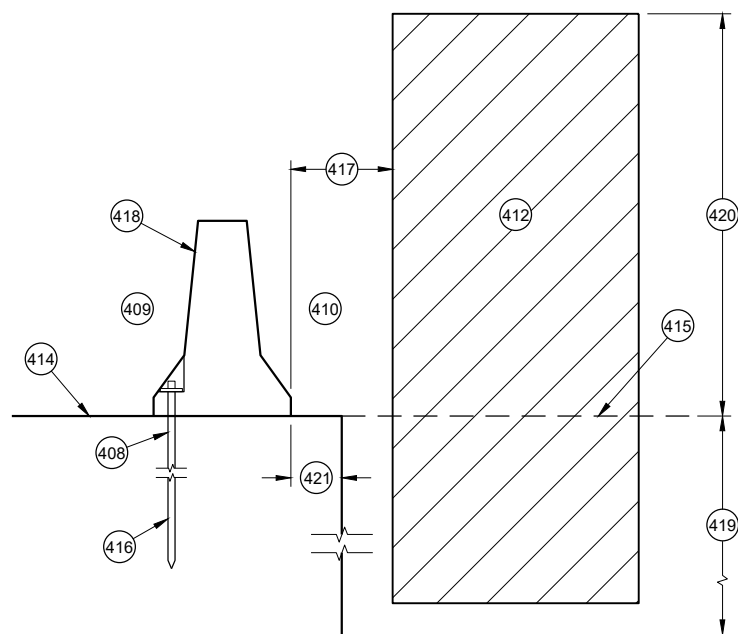
PROFILE VIEW
ANCHORED BARRIER NEAR EXPANSION JOINT



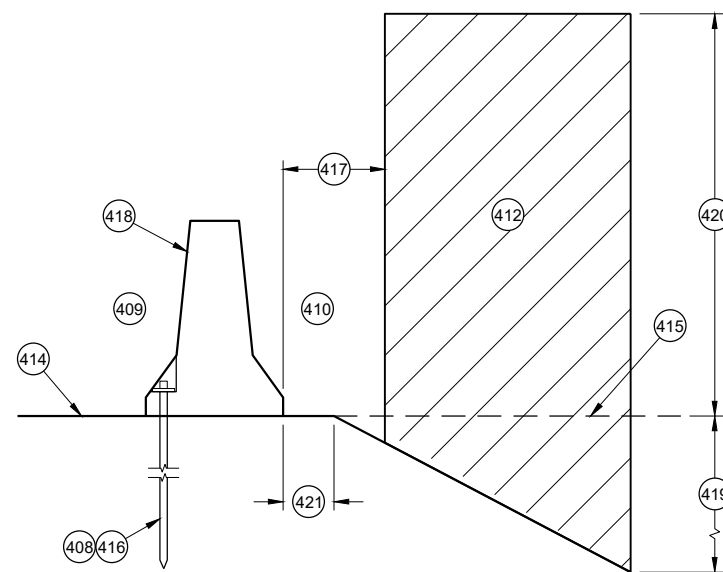
CROSS SECTION
FREE STANDING BARRIER



CROSS SECTION
ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION
ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION
ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

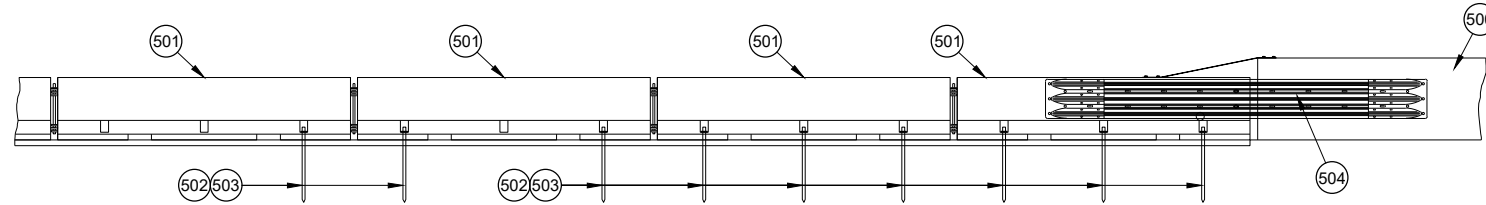
- 400 NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.
- 401 CONCRETE DECK
- 402 CONCRETE DECK OR APPROACH SLAB.
- 403 EXPANSION JOINT
- 404 ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.
- 405 ANCHORED TEMPORARY BARRIER
- 406 TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING
- 407 FREE STANDING BARRIER
- 408 REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.
- 409 TRAFFIC SIDE
- 410 NON-TRAFFIC SIDE
- 411 ANCHOR LOCATION. SEE ANCHORING DETAILS.
- 412 WORK AREA
- 413 AREA FREE OF OBJECTS AND WORKERS
- 414 GRADE LINE
- 415 EXTENDED GRADE LINE
- 416 ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.
- 417 WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.
- 418 OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.
- 419 DEPTHS OF 3 FEET OR MORE.
- 420 Y = 6.5'
- 421 OFFSET FROM BACK OF BARRIER EDGE:
 CONCRETE PAVEMENT 0.5'
 ASPHALT 0.5'
- 422 POSTED SPEED (MPH):
 45 OR GREATER 4.0'
 40 OR LOWER 2.0'

CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"

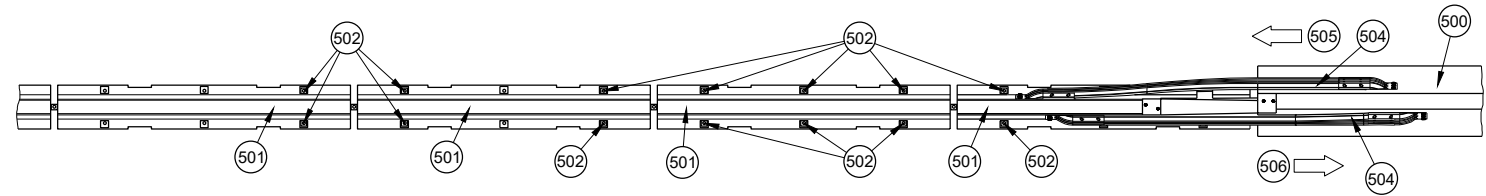
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

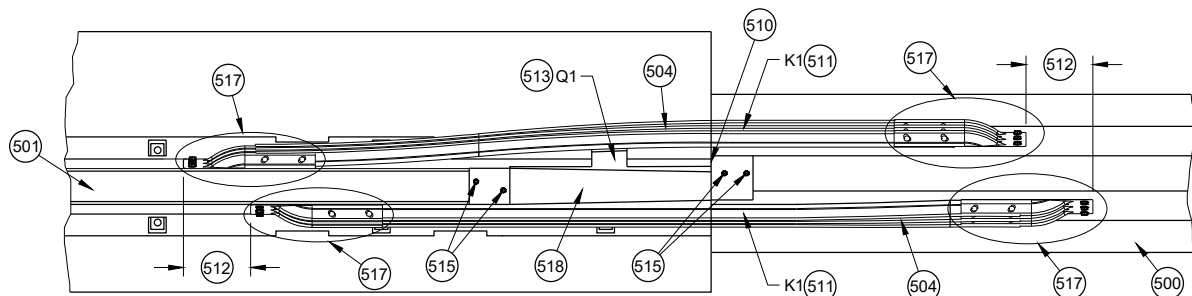
- (500) EXISTING RIGID BARRIERS (VARIES)
- (501) TEMPORARY BARRIER
- (502) SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).
- (503) ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.
- (504) NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.
- (505) TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.
- (506) TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.
- (507) VERTICAL BARRIER
- (508) SAFETY SHAPE BARRIER
- (509) SINGLE SLOPE BARRIER
- (510) CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.
- (511) BENT THRIE BEAM TO FIT.
- (512) THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
- (513) TWO (2) P1, P2 AND P3 ARE REQUIRED
- (514) FIVE (5) N1, N2 AND N3 ARE REQUIRED
- (515) TWO (2) R1, R2 AND R3 ARE REQUIRED
- (516) CUT WOOD BLOCK TO FIT.
- (517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.
- (518) CAP ASSEMBLY
- (519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.
- (520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



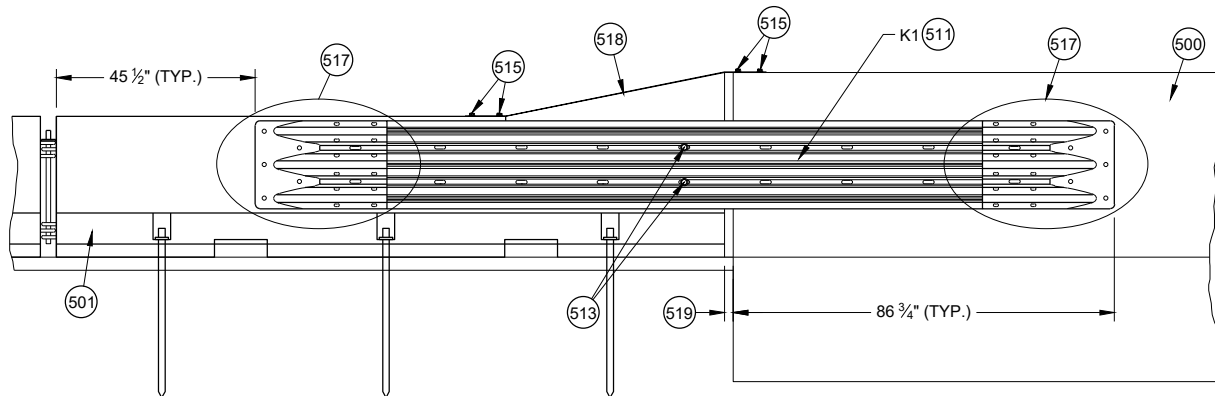
PROFILE VIEW



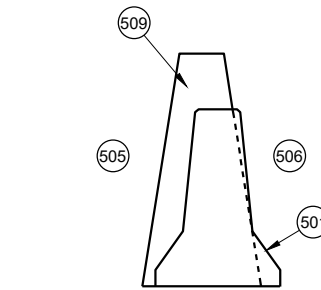
**PLAN VIEW
TRANSITION TO RIGID BARRIER**



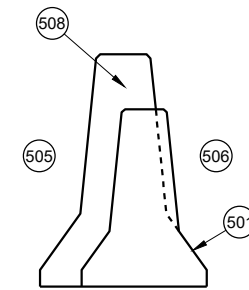
**PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER**



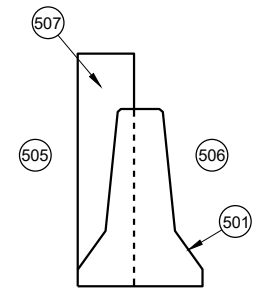
**FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER**



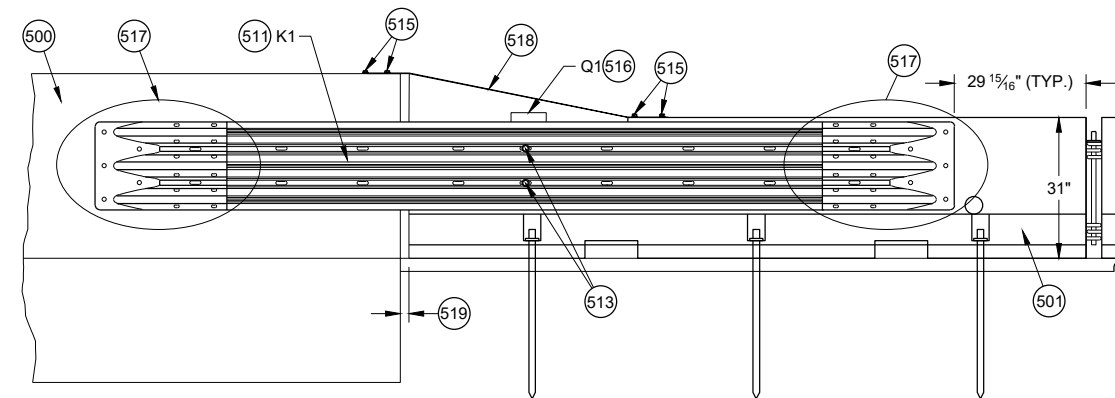
**CROSS SECTION
TEMPORARY BARRIER
PLACEMENT SINGLE SLOPE**



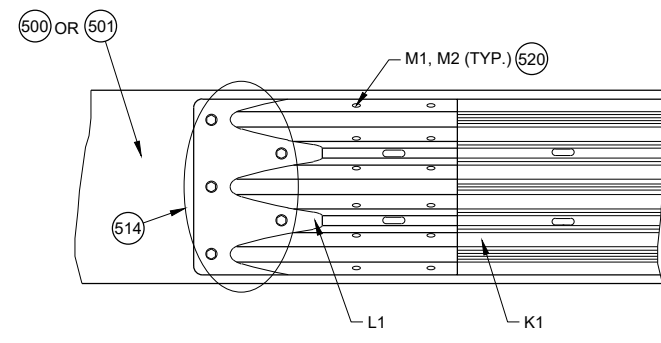
**CROSS SECTION
TEMPORARY BARRIER
PLACEMENT SAFETY SHAPE**



**CROSS SECTION
TEMPORARY BARRIER
PLACEMENT VERTICAL**



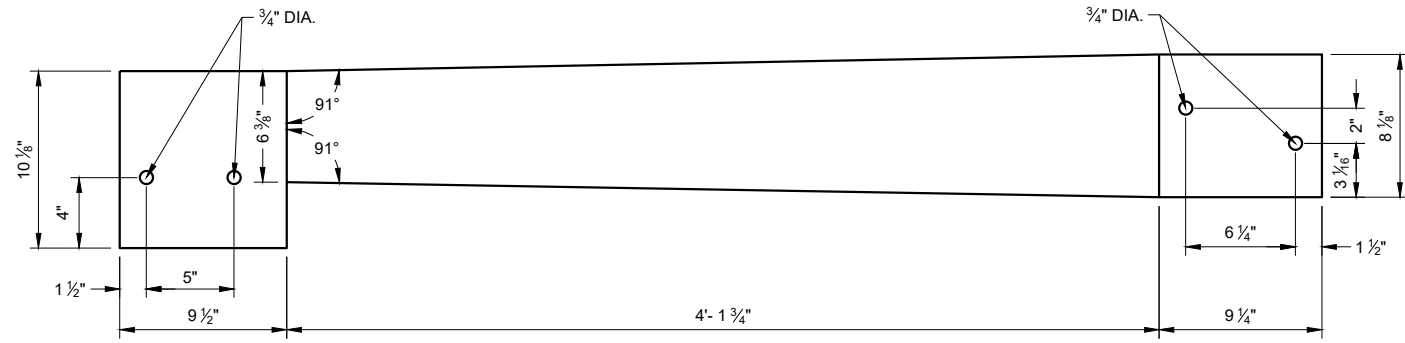
**BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER**



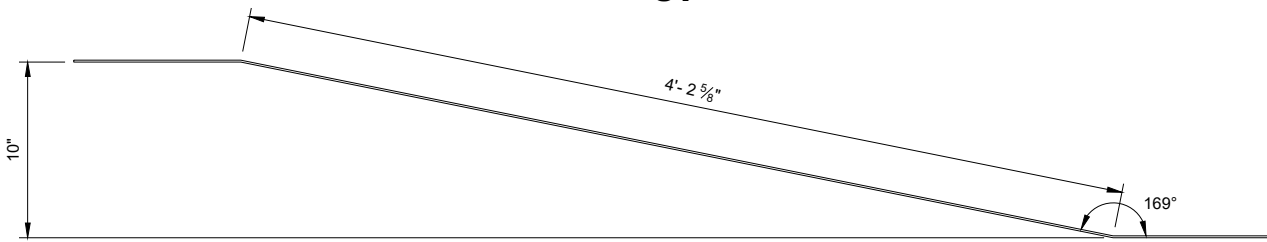
**(517) DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY**

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

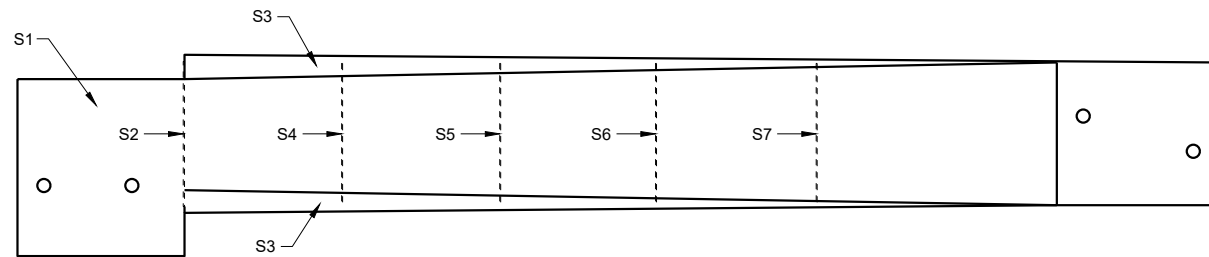
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



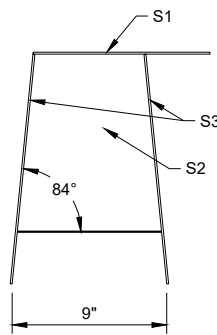
**TOP VIEW
S1**



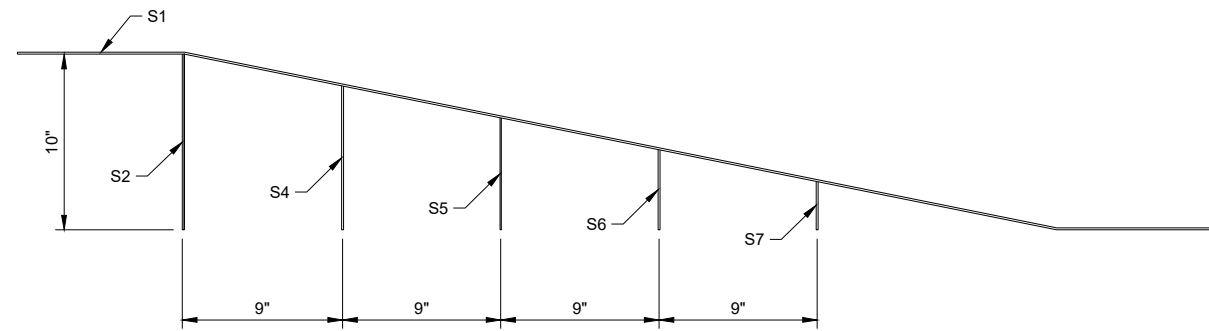
**ELEVATION VIEW
S1**



PLAN VIEW

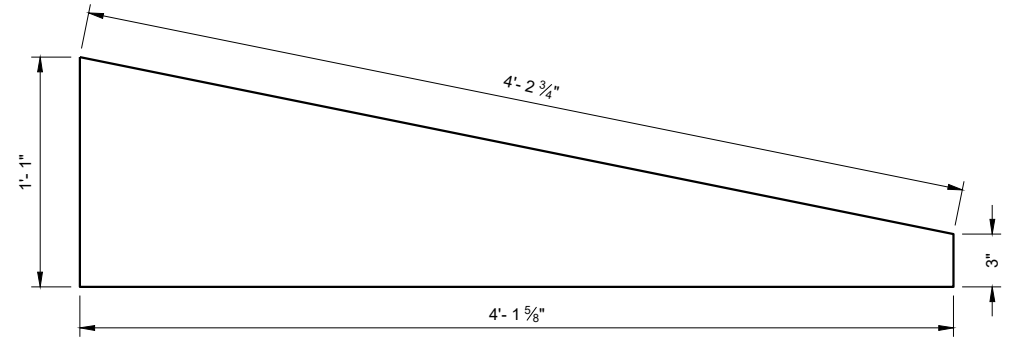


BACK VIEW

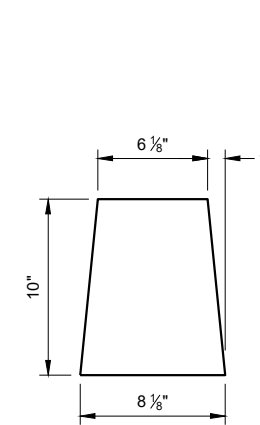


SIDE VIEW (600)

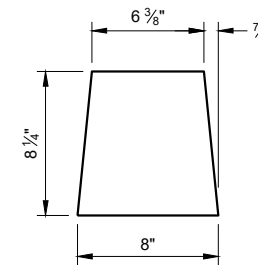
42" TOP CAP ASSEMBLY



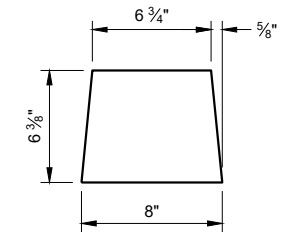
**SIDE VIEW
S3**



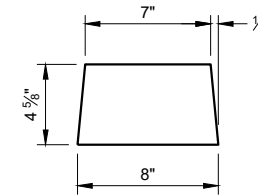
S2



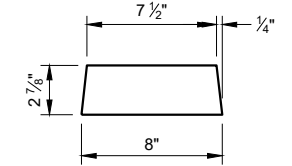
S4



S5



S6



S7

GENERAL NOTES

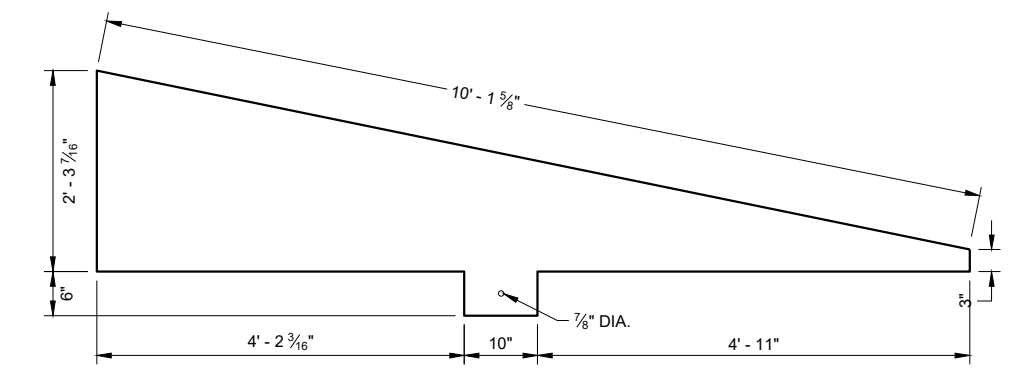
STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

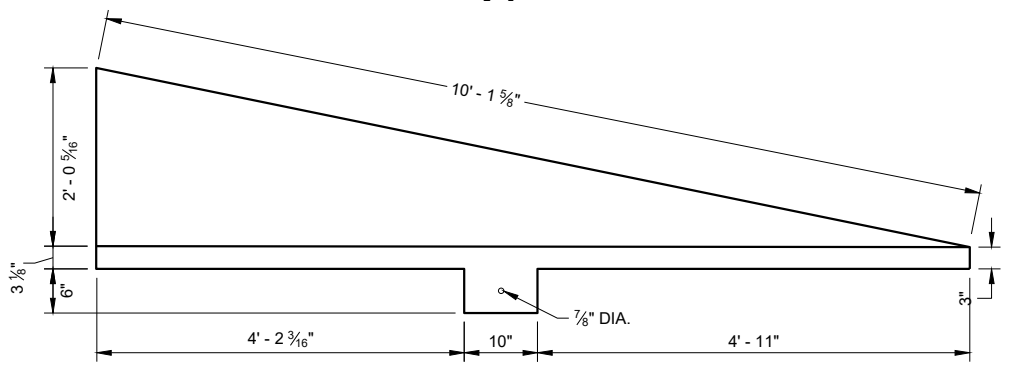
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SIDE VIEW
T4**



**SIDE VIEW
T3**

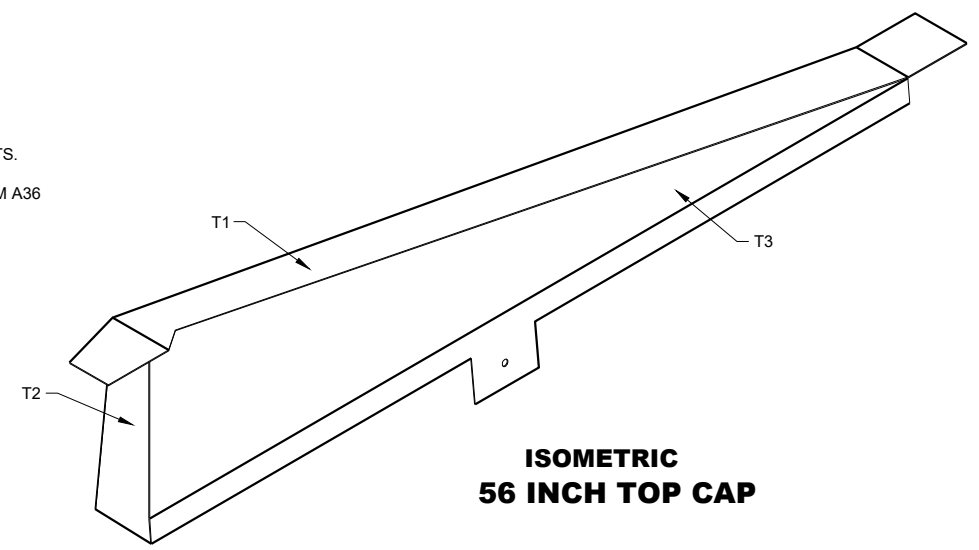
**END
VIEW**



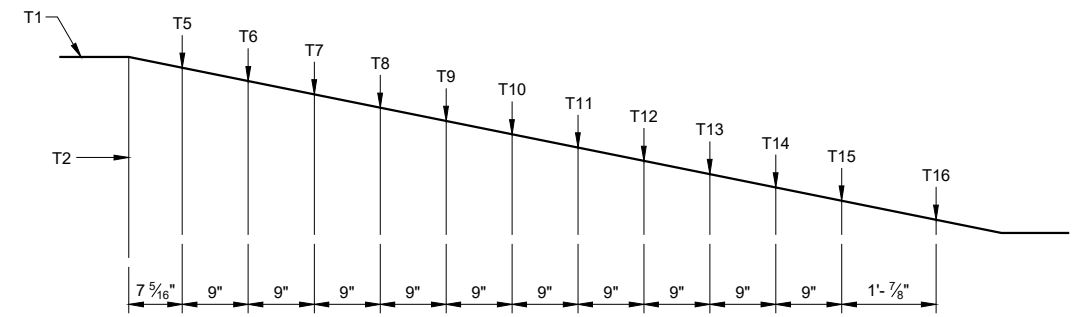
**END
VIEW**

GENERAL NOTES

- STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES
- STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.
- SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.
- (700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.

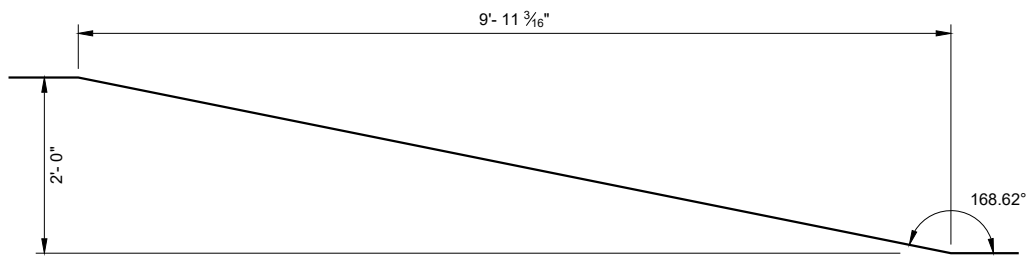
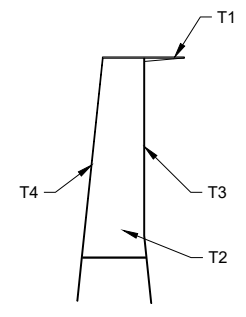


**ISOMETRIC
56 INCH TOP CAP**

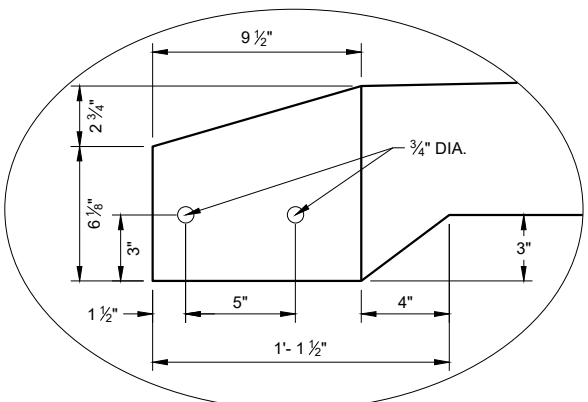


**SIDE VIEW
56 INCH TOP CAP (700)**

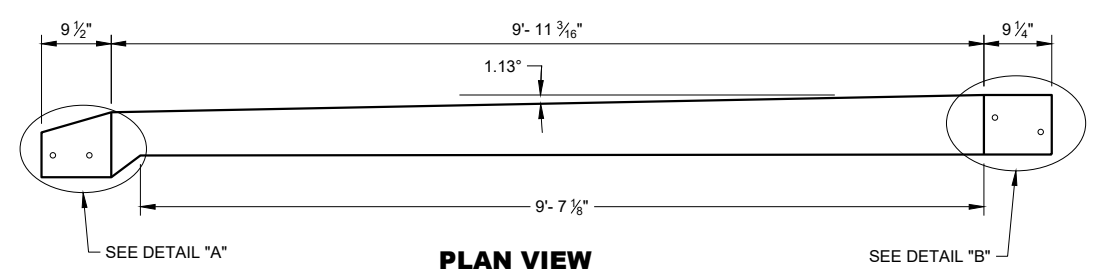
**END VIEW
56 INCH TOP CAP**



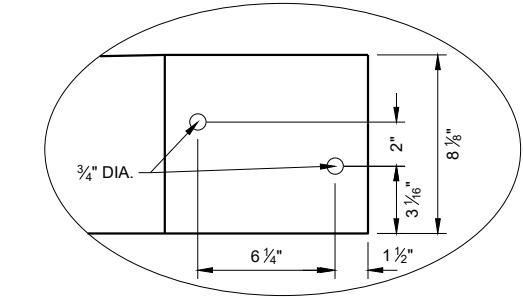
**SIDE VIEW
TOP PLATE T1**



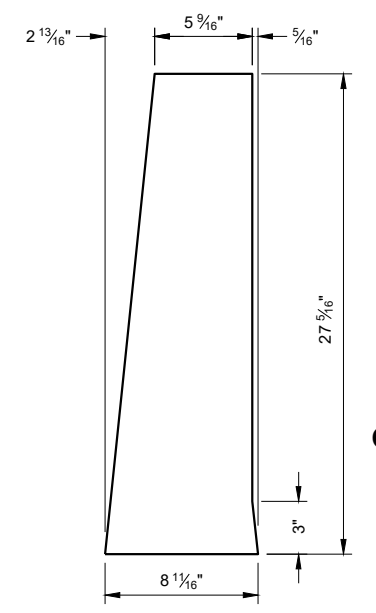
DETAIL "A"



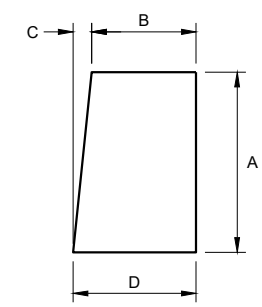
**PLAN VIEW
TOP PLATE T1**



DETAIL "B"



END PLATE T2

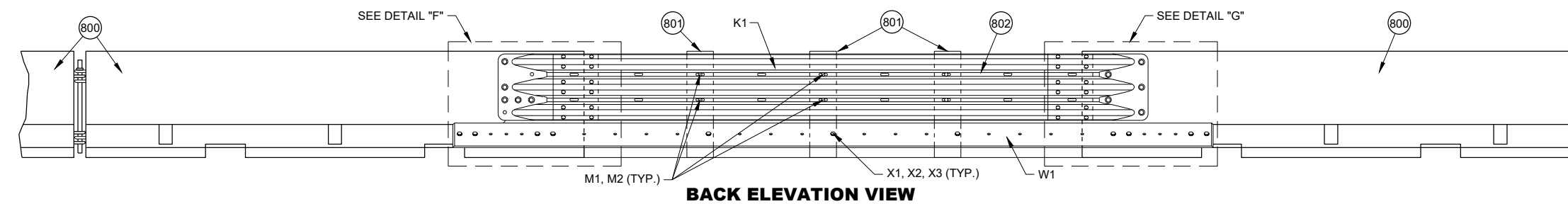
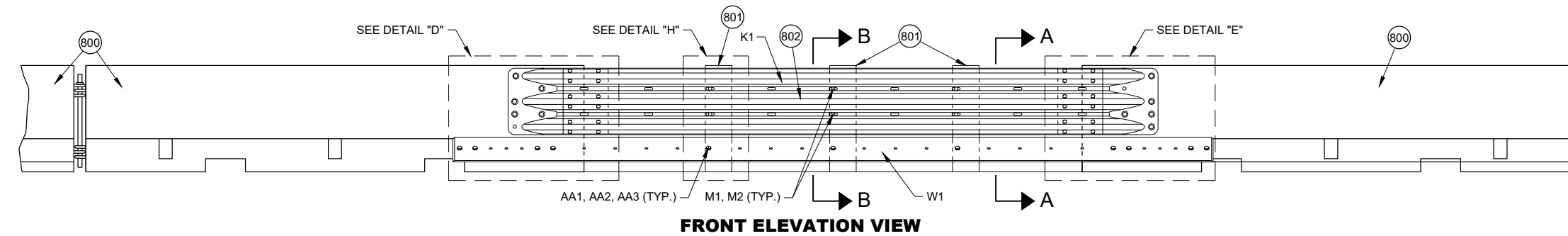
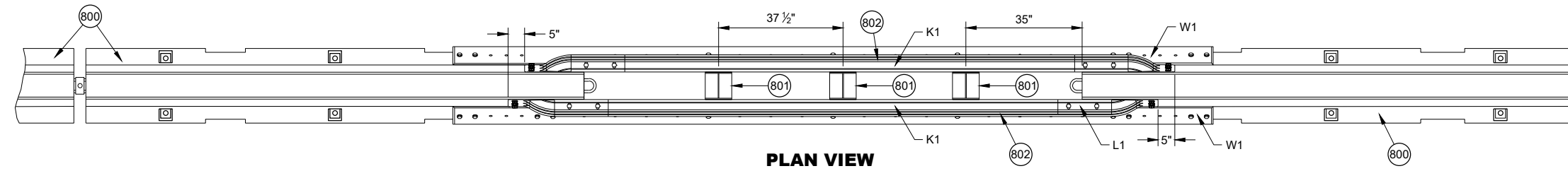
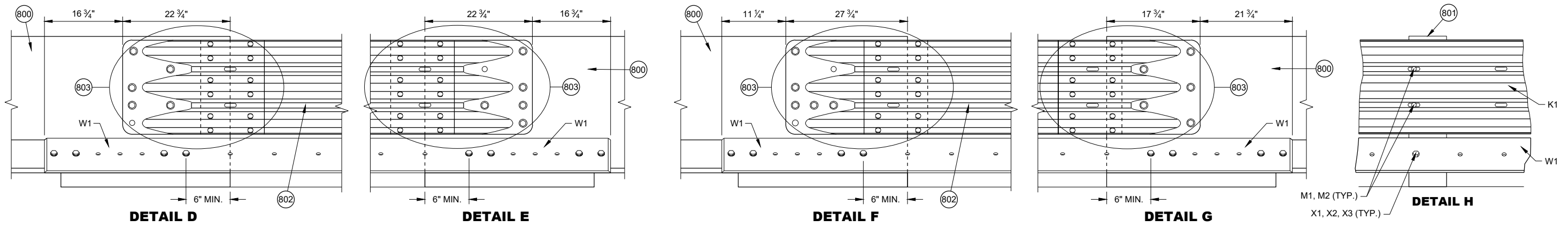


**GUSSET PLATES
T5 - T16**

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/8"	1 13/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 9/16"	6 7/16"	1 1/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 1/16"	7 1/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



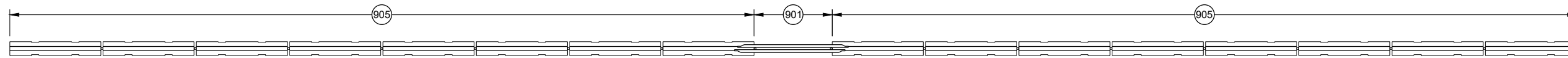
PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

GENERAL NOTES

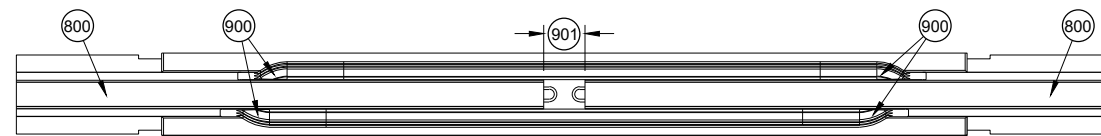
- 800 FREE STANDING TEMPORARY BARRIER
- 801 GAP STIFFENER ASSEMBLY
- 802 THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.
- 803 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

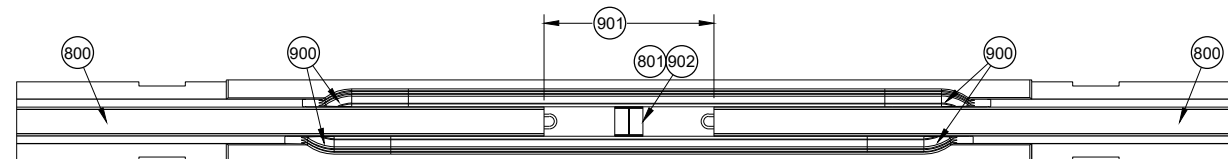
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



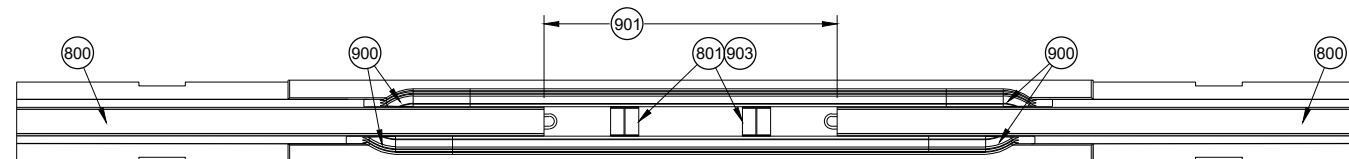
**PLAN VIEW
GAP WITHIN SPACING**



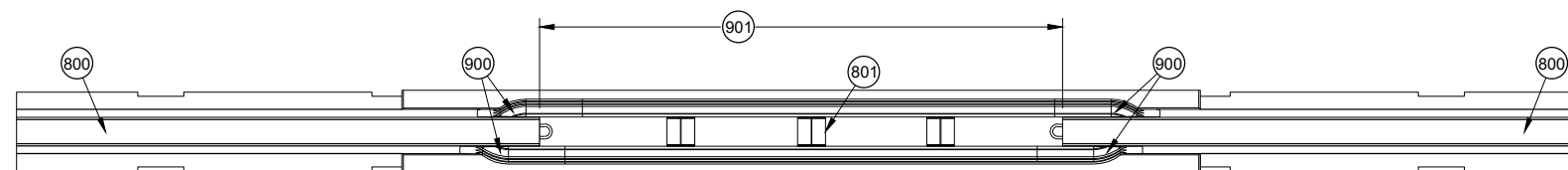
**PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. 904**



**PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. 904**



**PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. 904**



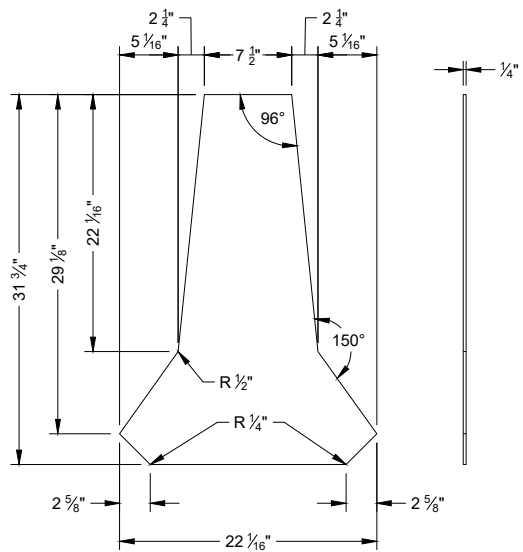
**PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. 904**

GENERAL NOTES

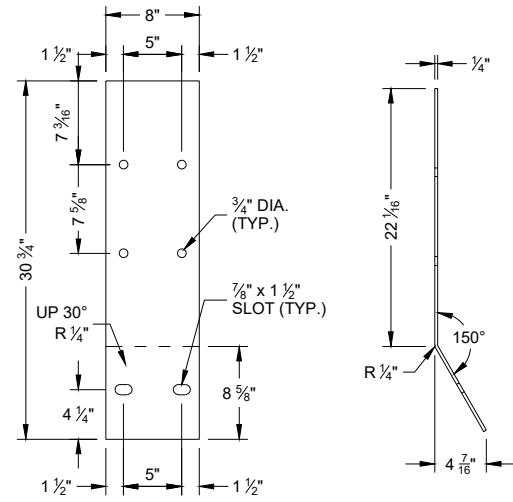
- 900 SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
- 901 TEMPORARY BARRIER GAP
- 902 GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
- 903 GAP STIFFENER ASSEMBLY IS OFFSET 18 3/4" FROM CENTER
- 904 MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
- 905 MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

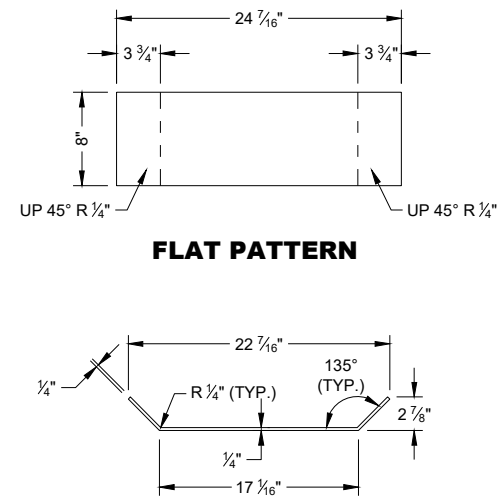
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



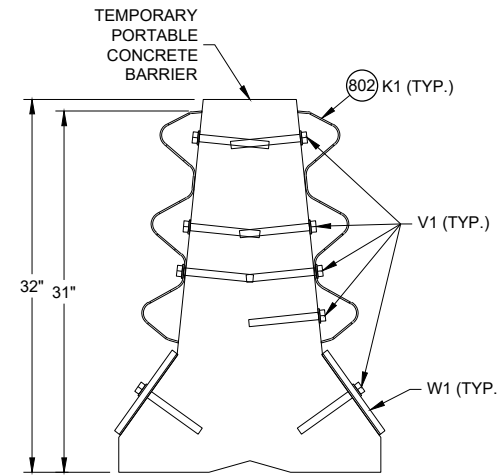
PROFILE VIEW **SIDE VIEW**
STIFFENER ASSEMBLY
CENTER PANEL U1



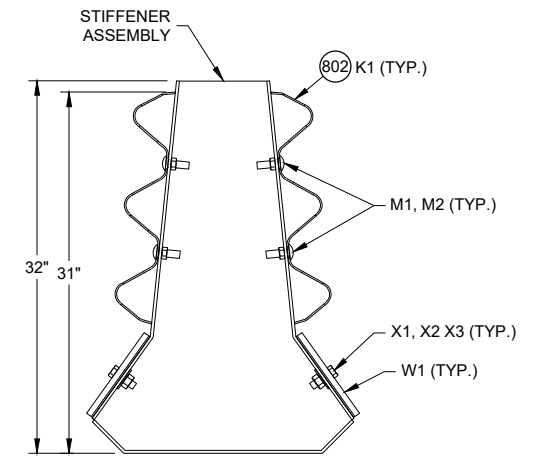
FLAT PATTERN **SIDE VIEW**
STIFFENER ASSEMBLY
SIDE PANEL U2



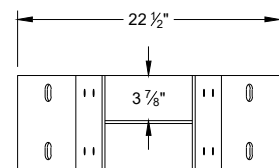
PROFILE VIEW
STIFFENER ASSEMBLY
BOTTOM PANEL U3



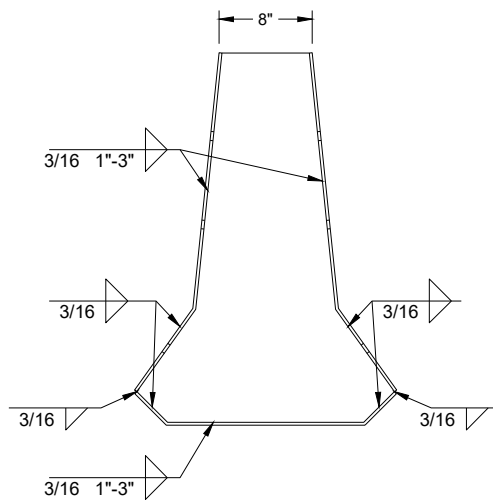
SECTION A - A



SECTION B - B

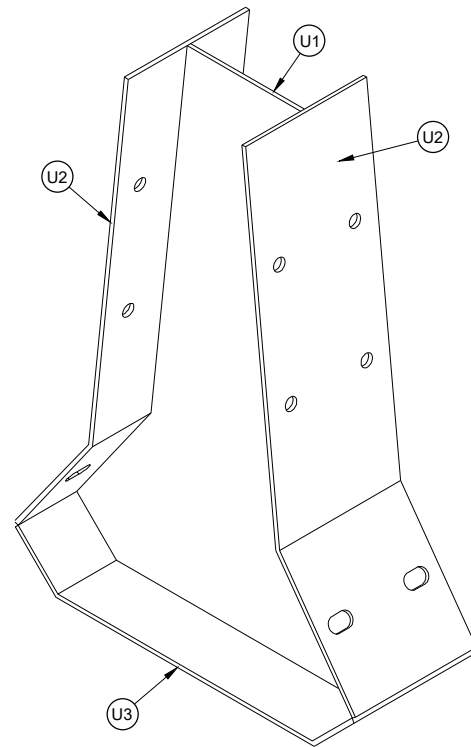


PLAN VIEW

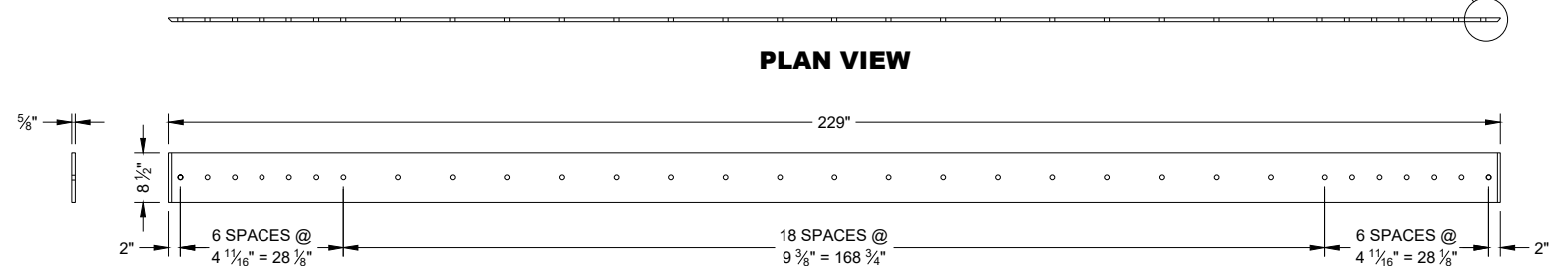


PROFILE VIEW **SIDE VIEW**

GAP STIFFENER ASSEMBLY

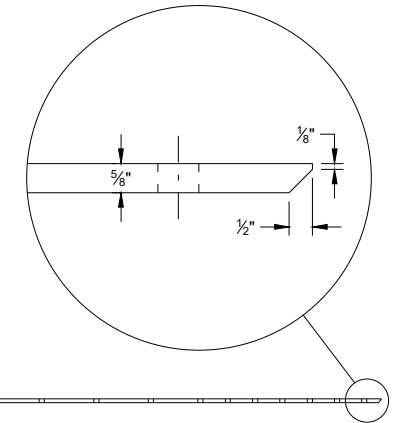


ISOMETRIC



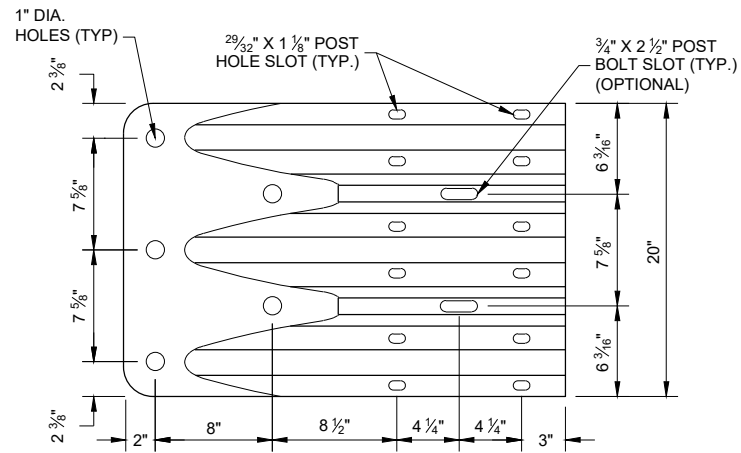
SIDE VIEW

ELEVATION VIEW
W1 TOE PLATE



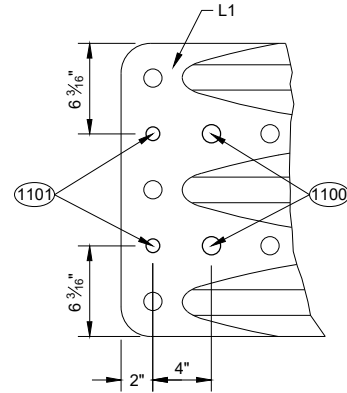
CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION



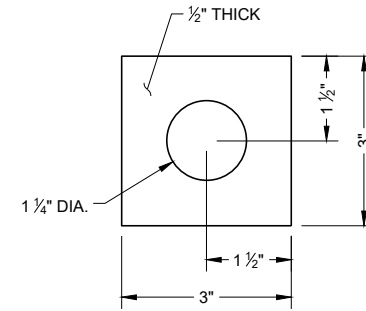
ELEVATION VIEW

**THRIE BEAM
TERMINAL CONNECTOR**



ELEVATION VIEW

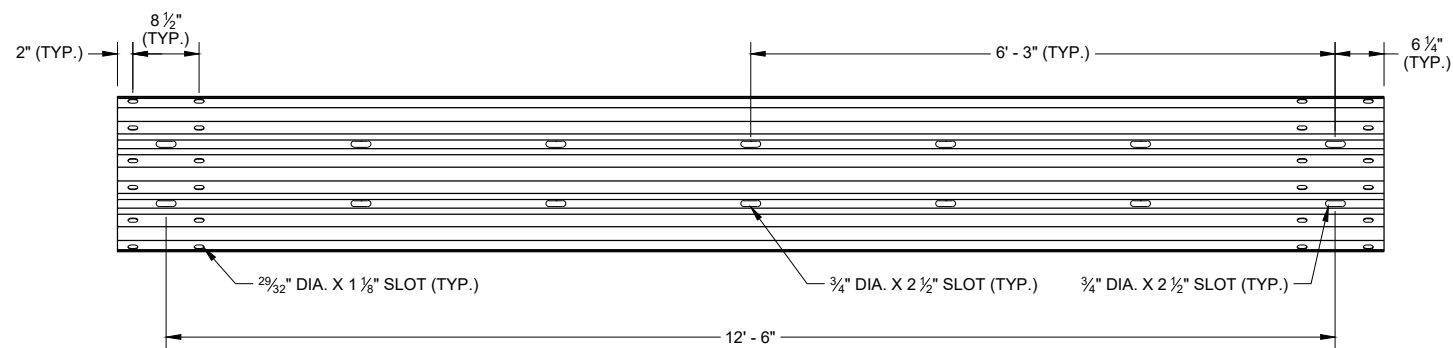
**ADDITIONAL THRIE BEAM
TERMINAL CONNECTOR HOLE DETAIL**



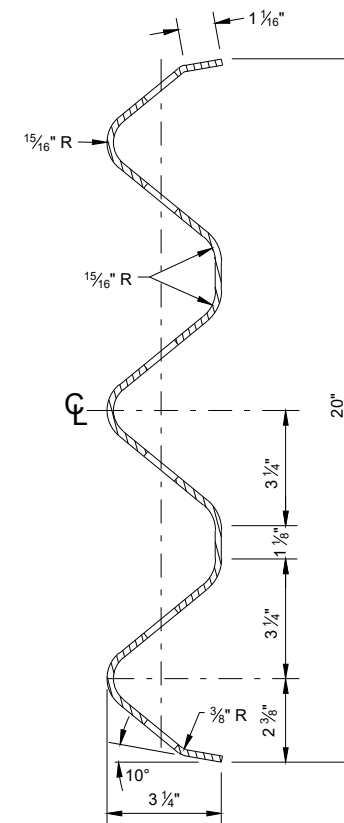
**PLATE WASHER DETAIL
G2, H3**

GENERAL NOTES

- (1100) 1" DIA. HOLE
- (1101) 3/4" DIA. HOLE
- (1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



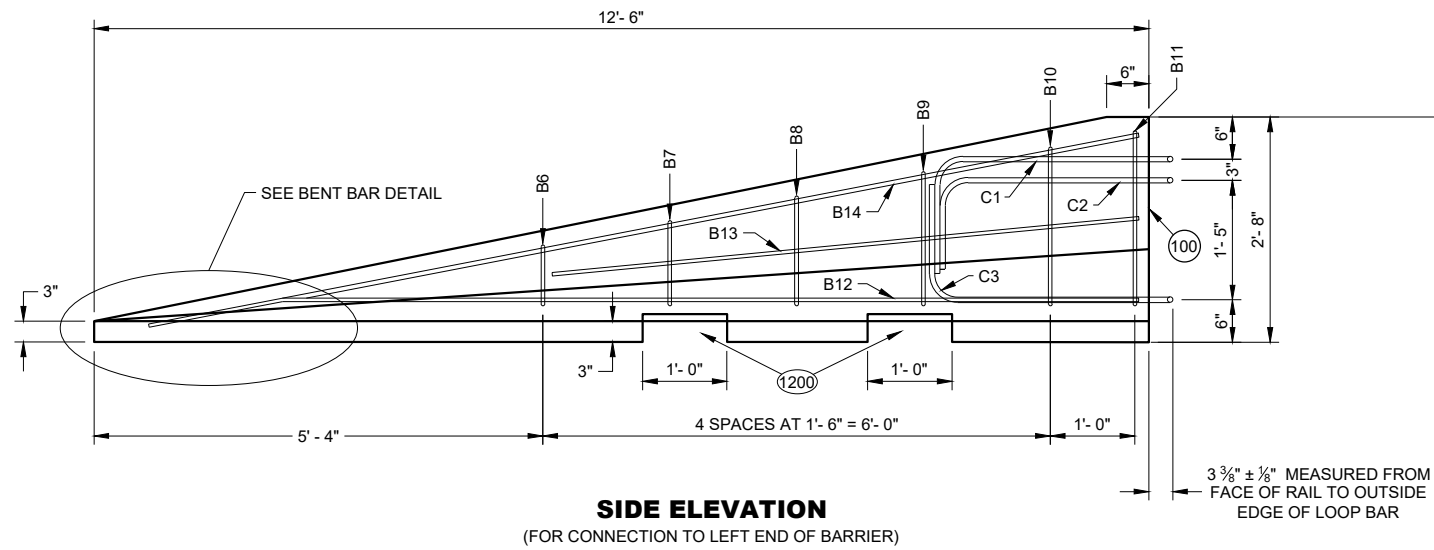
SLOTTED THRIE BEAM RAIL K1



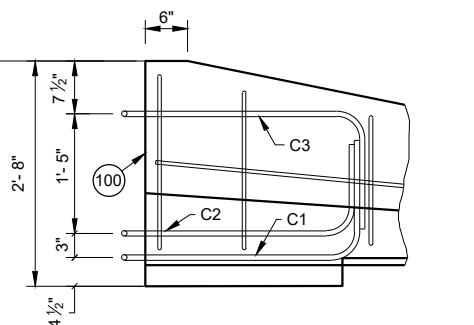
**SECTION THROUGH
BEAM K1**

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



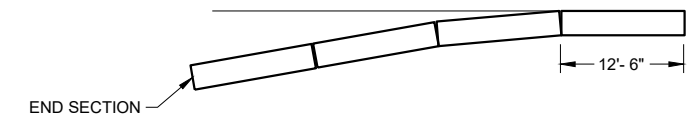
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

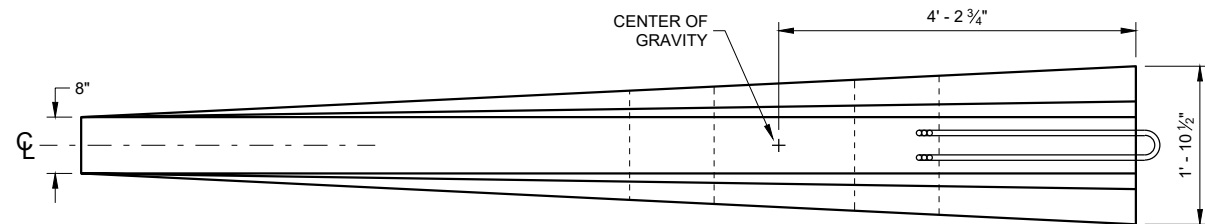
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

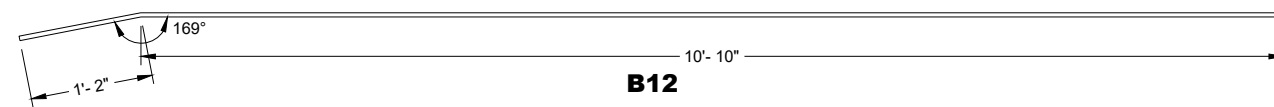


FLARE AT BARRIER END

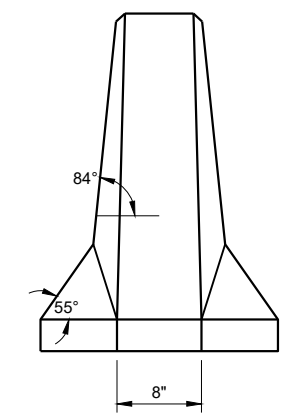
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



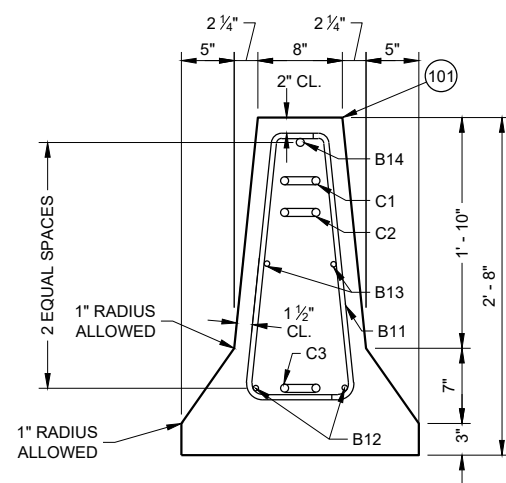
PLAN VIEW



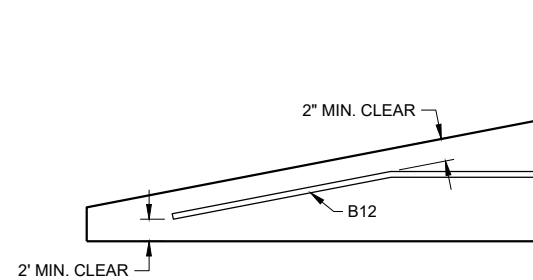
B12



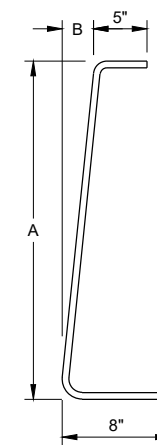
FRONT ELEVATION



END SECTION



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 1/4"
B8	1'- 5"	1 5/8"
B9	1'- 8"	1 7/8"
B10	2'- 0 1/2"	2 3/8"
B11	2'- 3"	2 3/4"

B BARS

2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

DETAILS OF BARRIER TAPER SECTION

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f _c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ½" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ½" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	¾" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
R2	CAP - BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

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SDD 14B07-16m

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**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

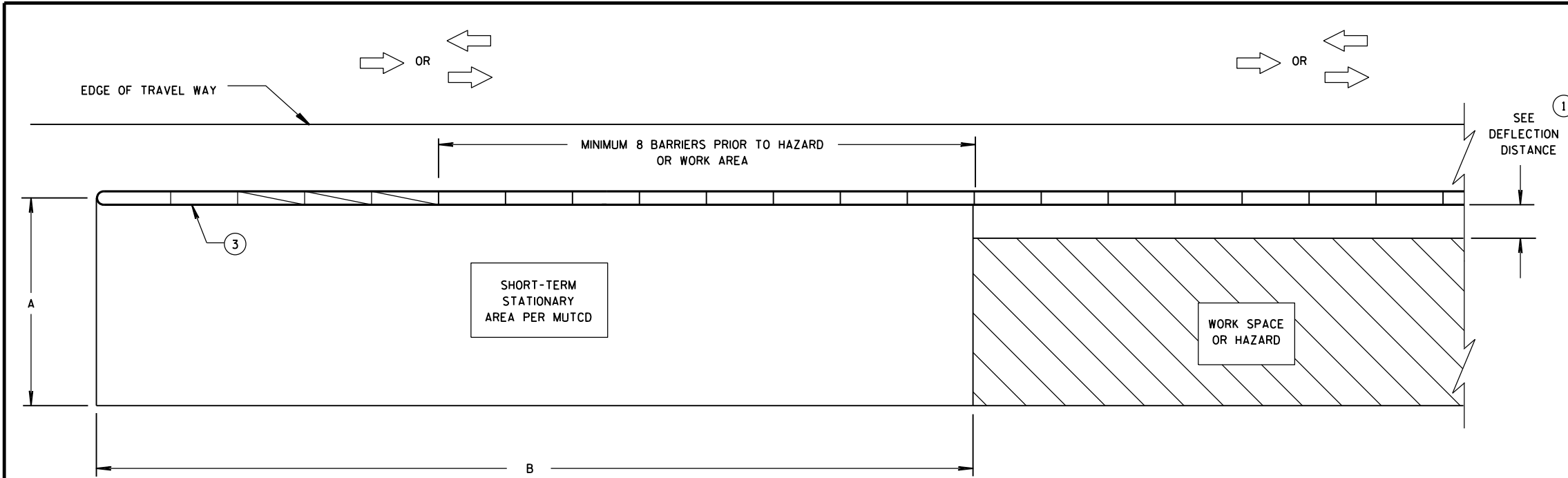
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SDD 14B07-16n

SDD 14B07-16n

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



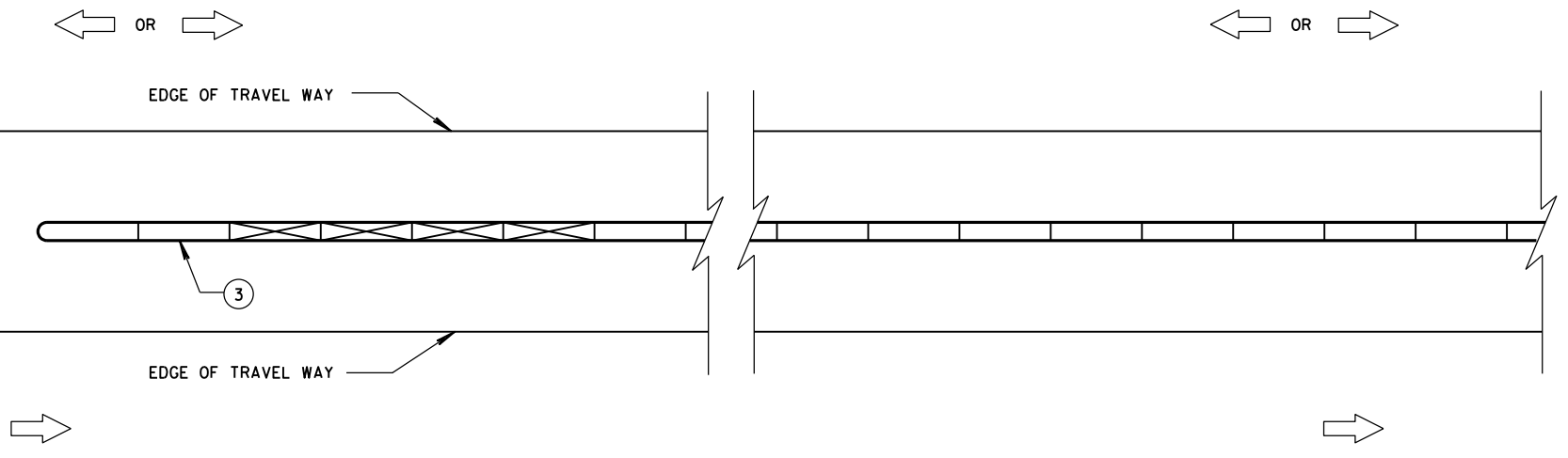
DIMENSION A TABLE ⁽²⁾

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER**

DIMENSION B TABLE ⁽²⁾

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER**

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

- FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.
- SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.
- ⁽¹⁾ FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.
- ⁽²⁾ VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.
- ⁽³⁾ ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

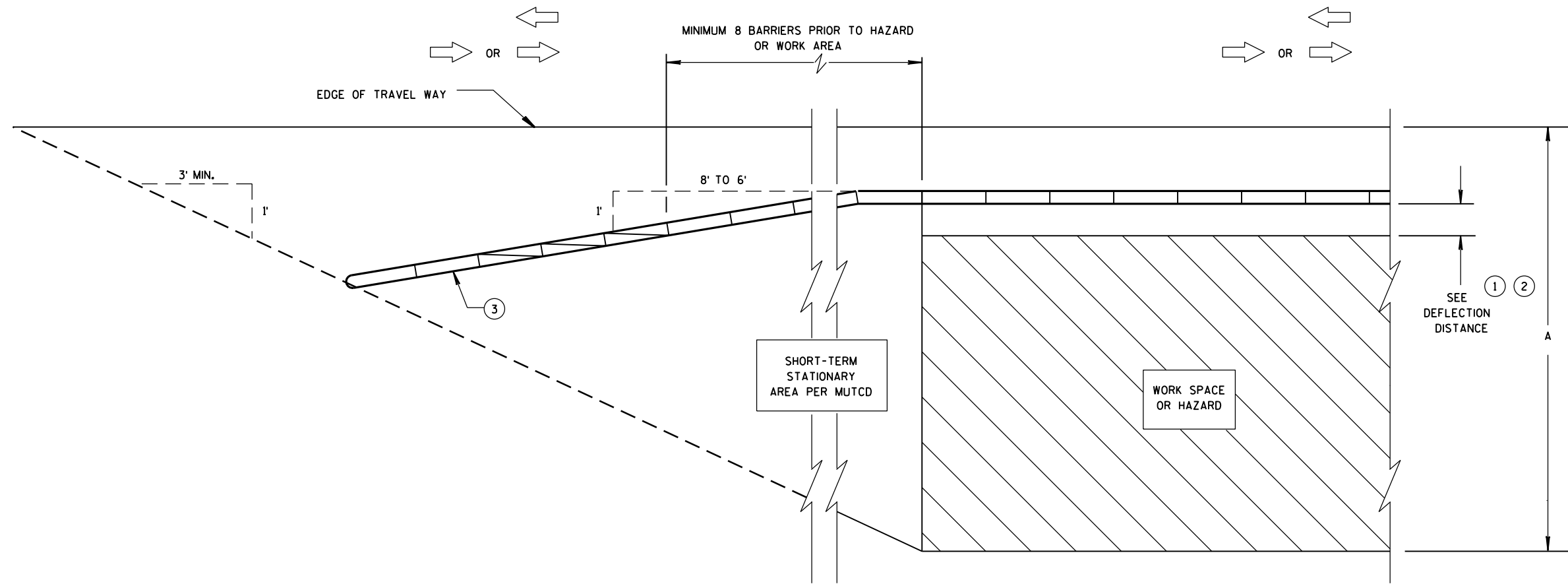
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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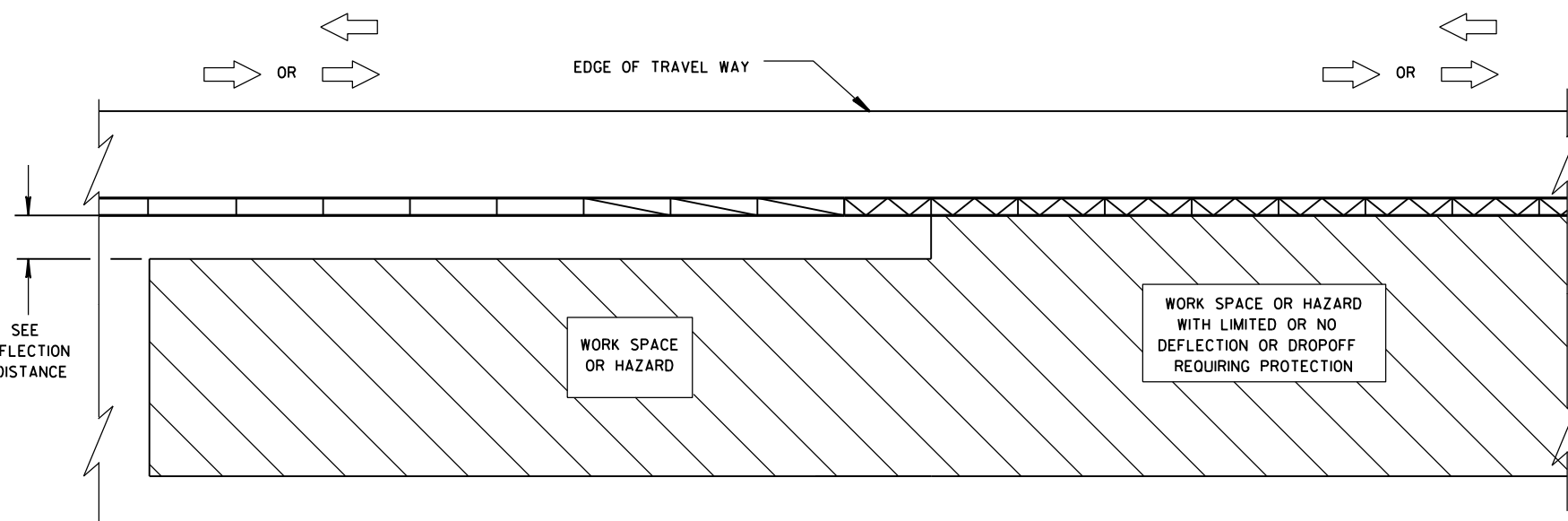
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S.D.D. 14 B 8-2a

S.D.D. 14 B 8-2a



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION**



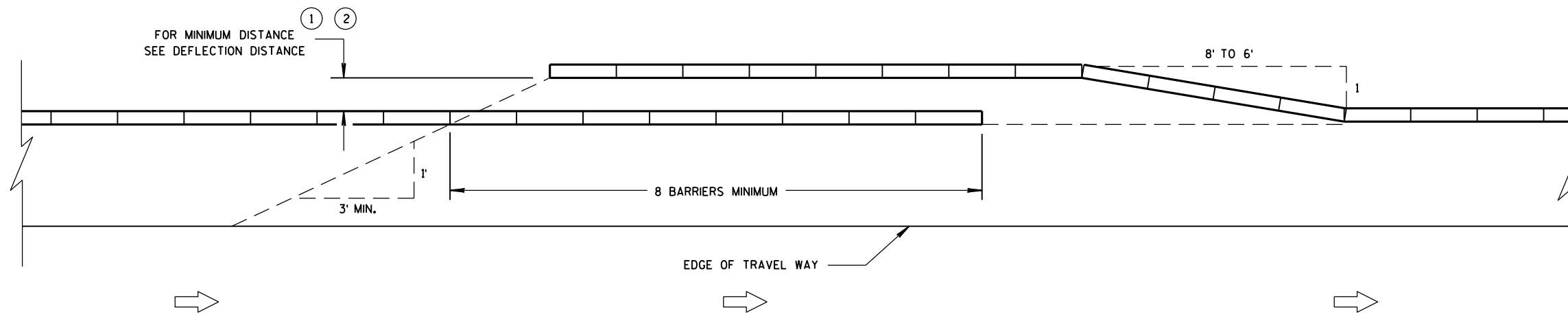
**TRANSITION FROM FREE STANDING TEMPORARY BARRIER
TO ANCHORED BARRIER**

LEGEND

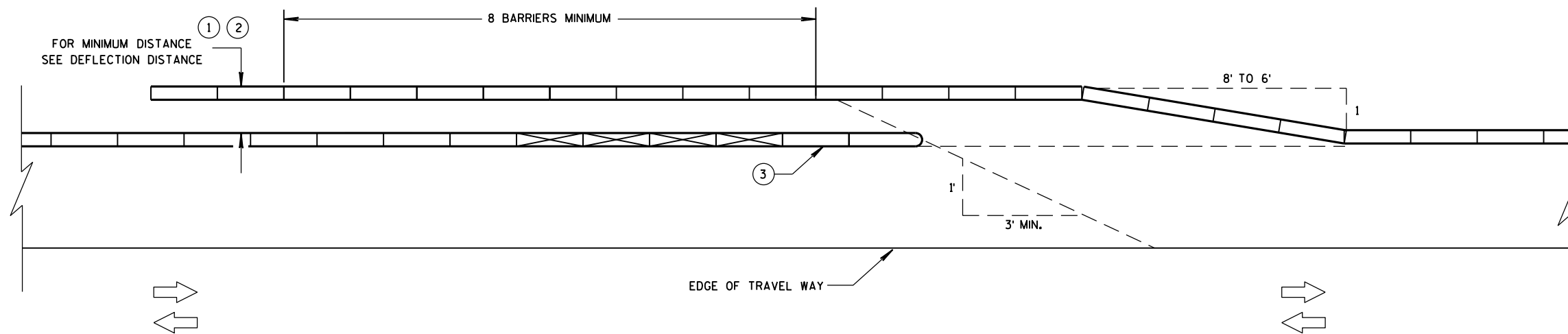
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

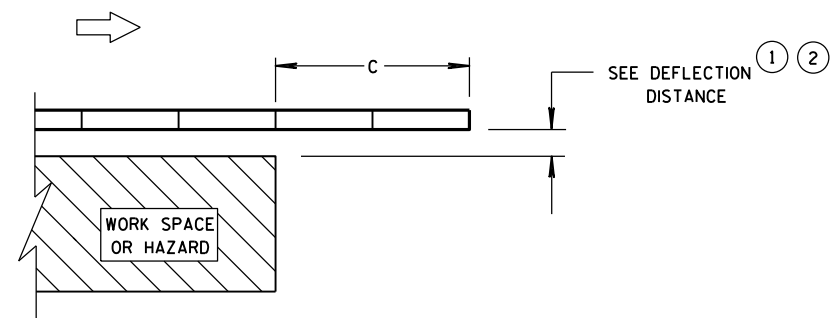
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



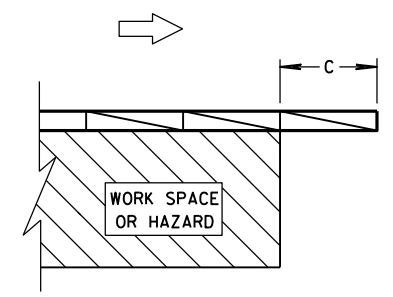
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



**ENDING TEMPORARY BARRIER
DOWNSTREAM - UNANCHORED**



**ENDING TEMPORARY BARRIER
DOWNSTREAM - ANCHORED**

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

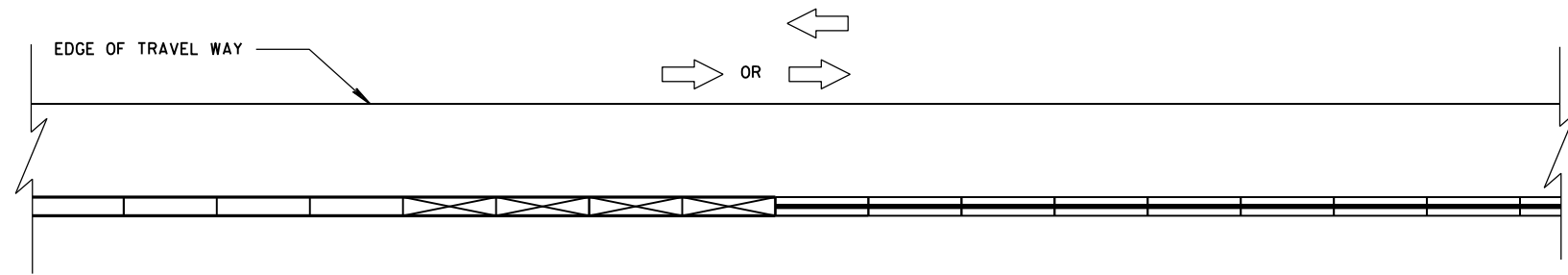
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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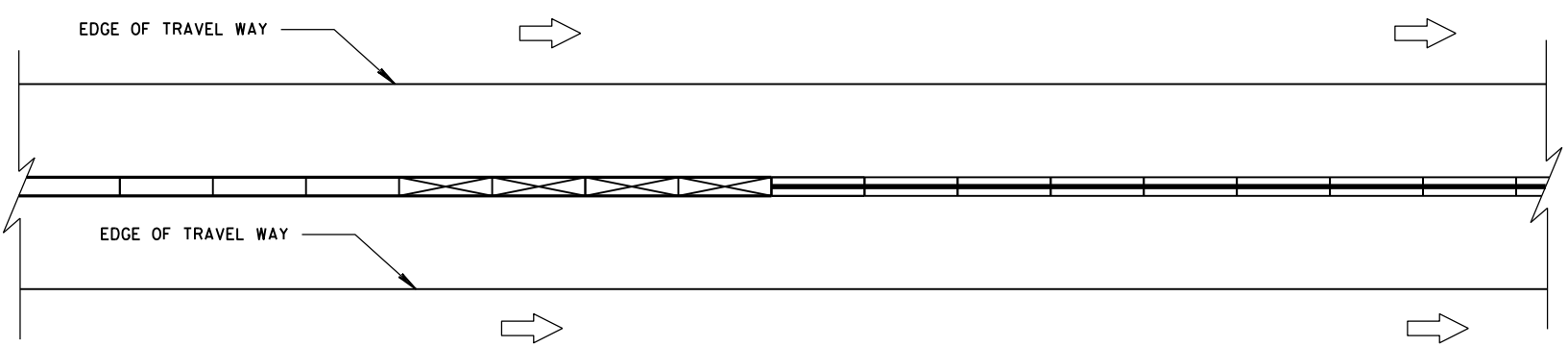
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S.D.D. 14 B 8-2c

S.D.D. 14 B 8-2c



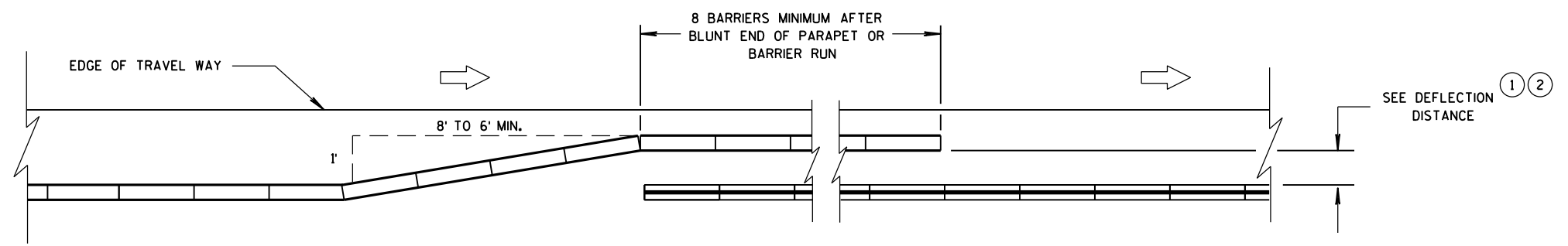
CONNECTING TEMPORARY BARRIER TO PERMANENT CONCRETE BARRIER-TRAFFIC ON ONE SIDE



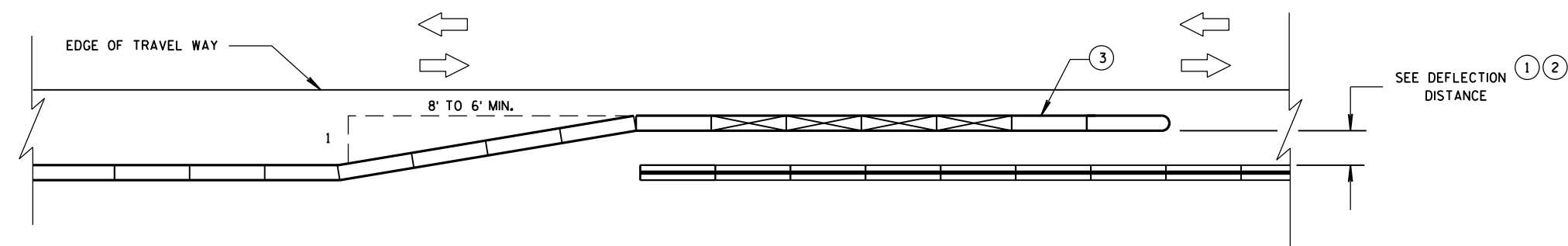
CONNECTING TEMPORARY BARRIER TO PERMANENT CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

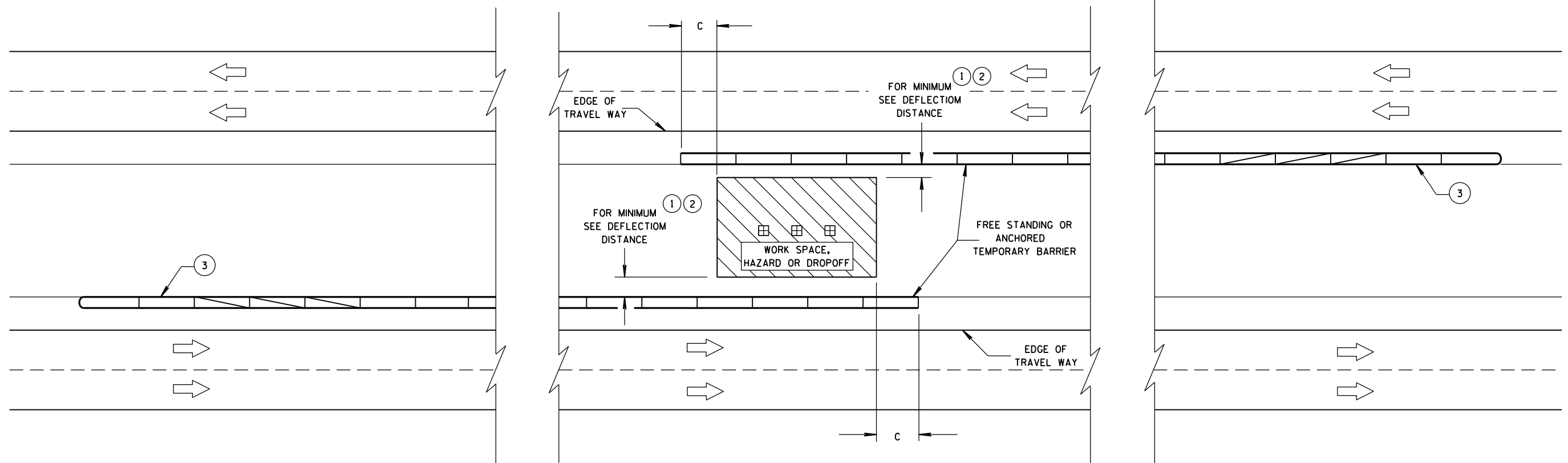
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE ²

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



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S.D.D. 14 B 8-2e

S.D.D. 14 B 8-2e

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

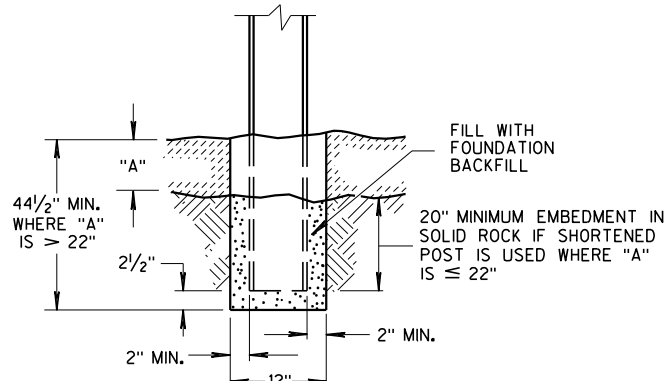
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 DATE /S/ Jerry H. Zogg
FHWA ROADWAY STANDARDS DEVELOPMENT ENGINEER

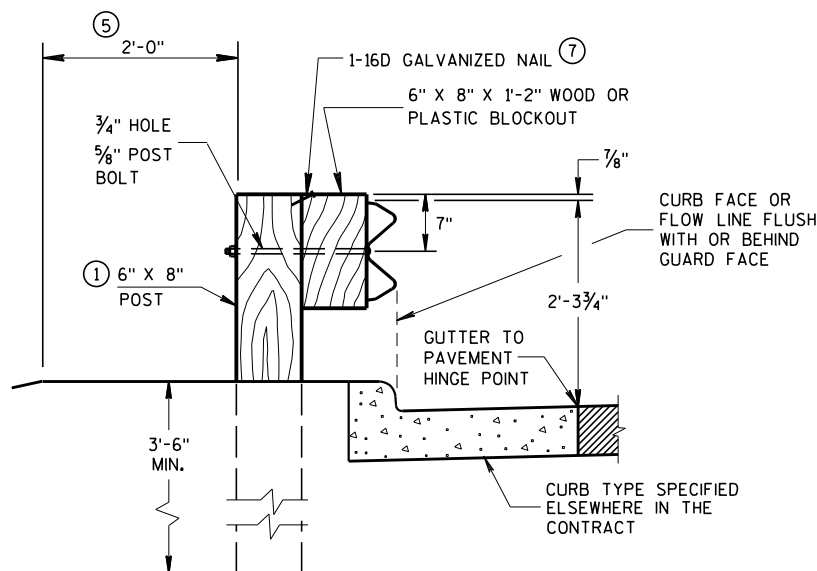
GENERAL NOTES

- ① W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS. DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
- ② USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
- ③ INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ④ USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- ⑤ IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- ⑥ IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.
- ⑦ 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.

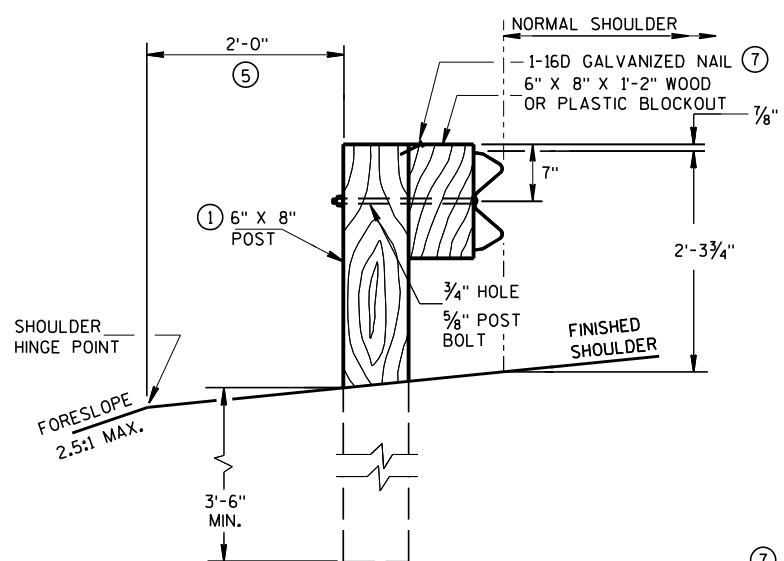
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



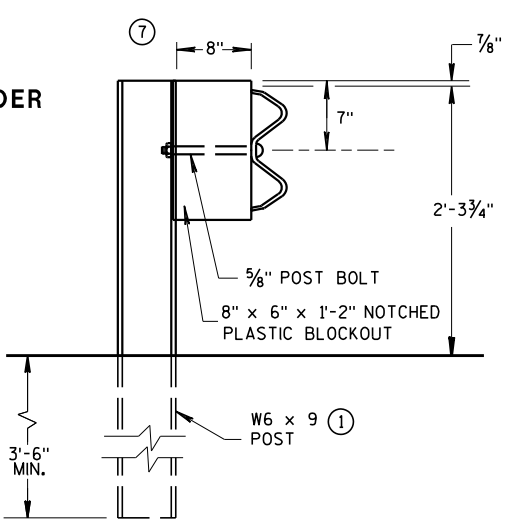
END VIEW SETTING STEEL OR WOOD POST IN ROCK ⑥



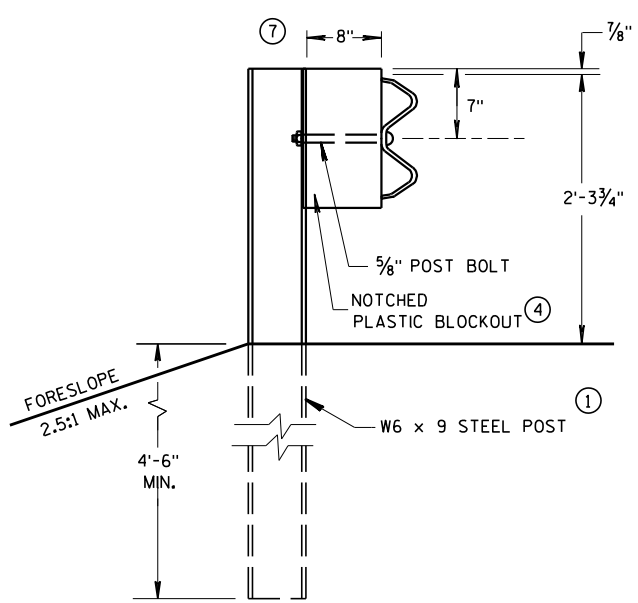
END VIEW LOCATED ALONG A CURBED ROADWAY



END VIEW LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION

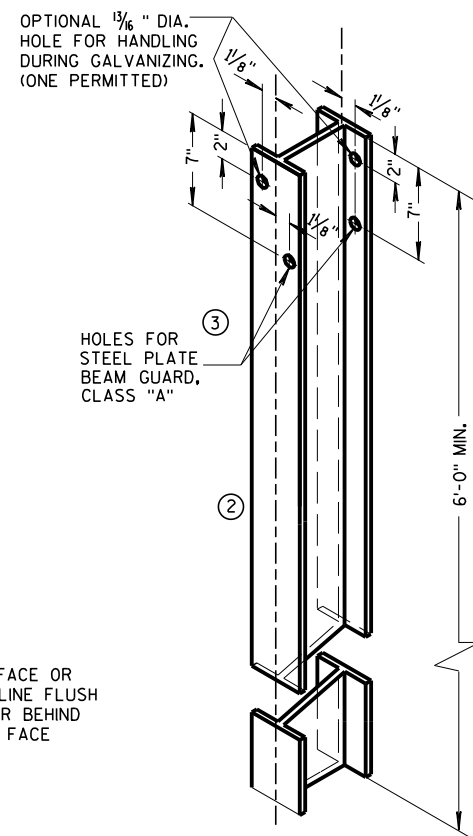


END VIEW STEEL POST & NOTCHED PLASTIC BLOCKOUT ALTERNATIVE STANDARD INSTALLATION

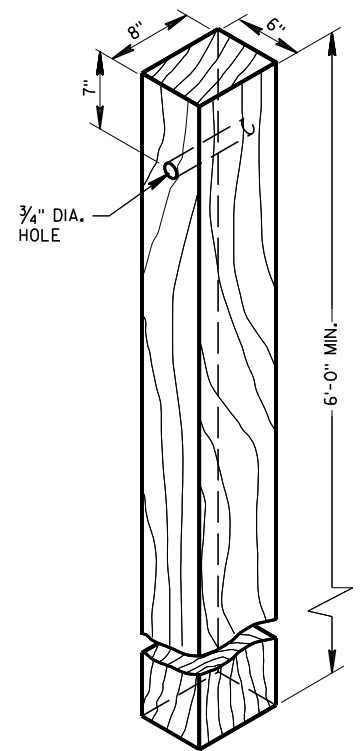


END VIEW LONGER POST AT HALF POST SPACING W BEAM (LHW)

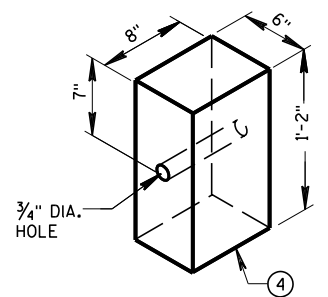
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD



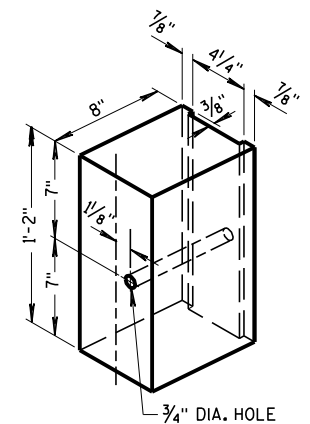
STEEL POST & HOLE PUNCHING DETAIL (W6 X 9) ①
ALL HOLES 1/8" DIAMETER EXCEPT AS NOTED



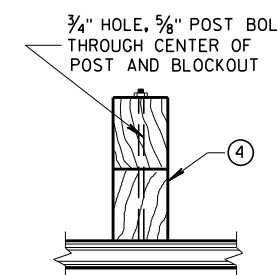
WOOD POST (6" X 8") NOMINAL



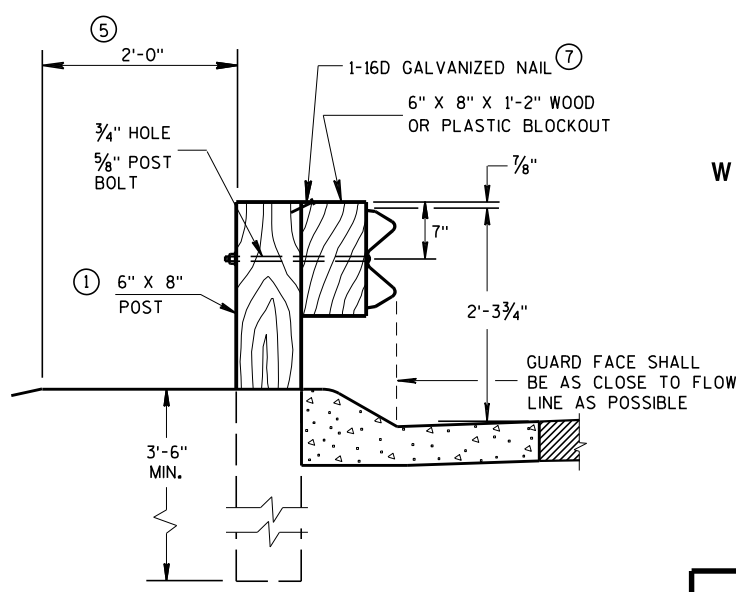
WOOD OR PLASTIC BLOCKOUT FOR WOOD POSTS



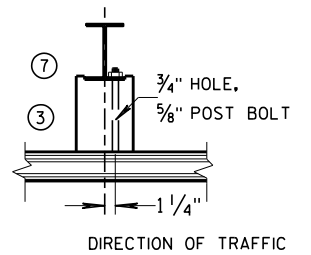
TYPICAL NOTCHED PLASTIC BLOCKOUT FOR STEEL POSTS ①



PLAN VIEW WOOD POST, BLOCKOUT & BEAM



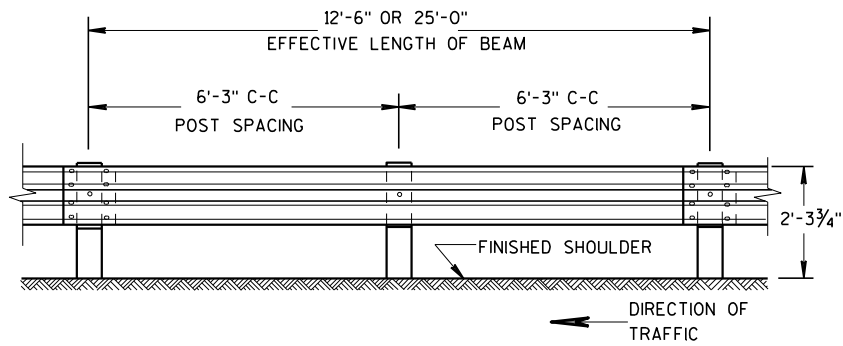
END VIEW LOCATED ALONG A MOUNTABLE CURBED ROADWAY



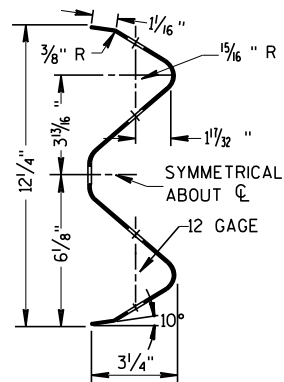
PLAN VIEW STEEL POST, NOTCHED PLASTIC BLOCKOUT & BEAM

STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS

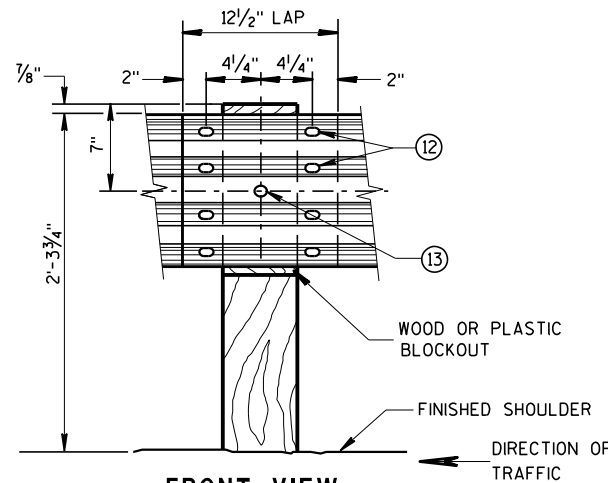
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



SECTION THRU W BEAM

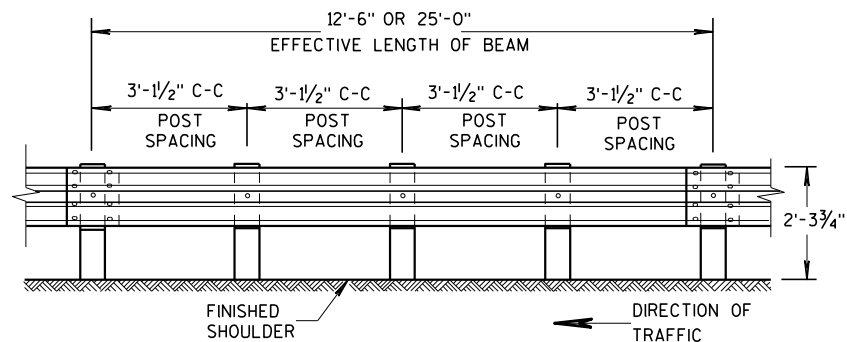


**FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL**

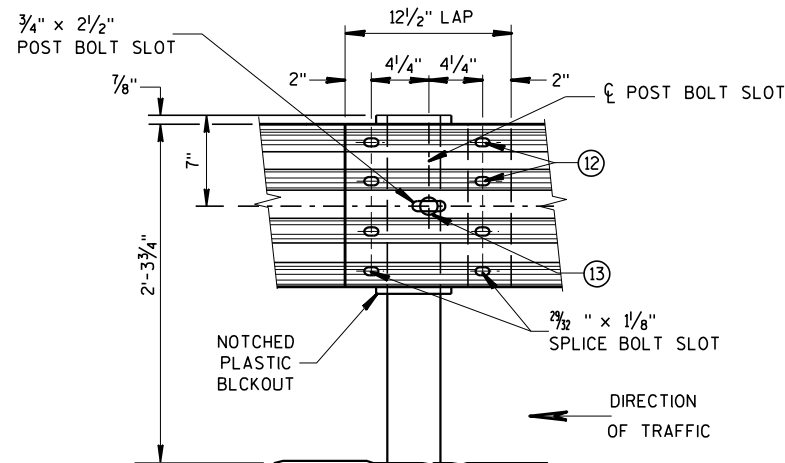
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

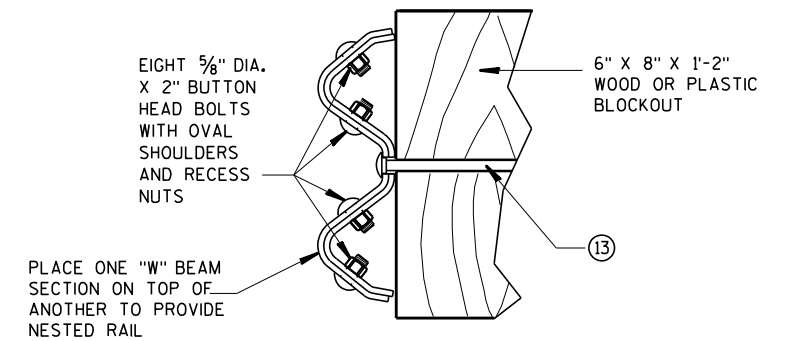
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



**FRONT VIEW
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)**



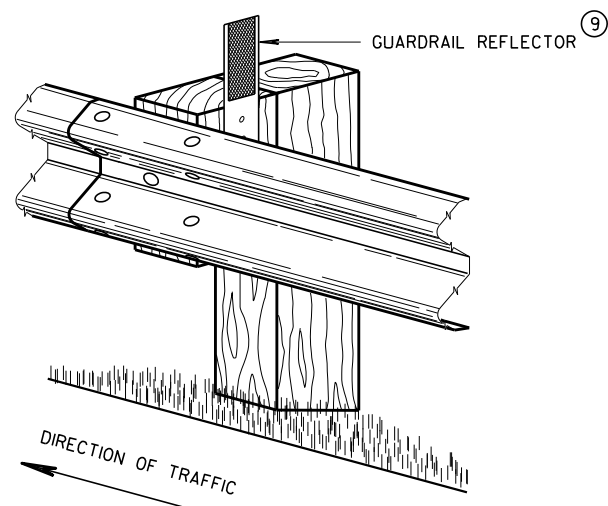
**FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPlicing DETAILS
OF STEEL PLATE BEAM GUARD**



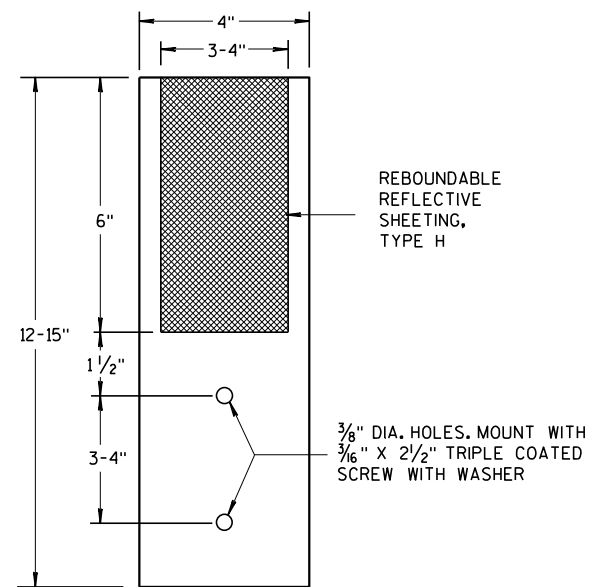
EIGHT 5/8" DIA. X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS AND RECESS NUTS

NESTED W BEAM (NW)
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

* USE DOUBLE SIDED WHITE GUARDRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



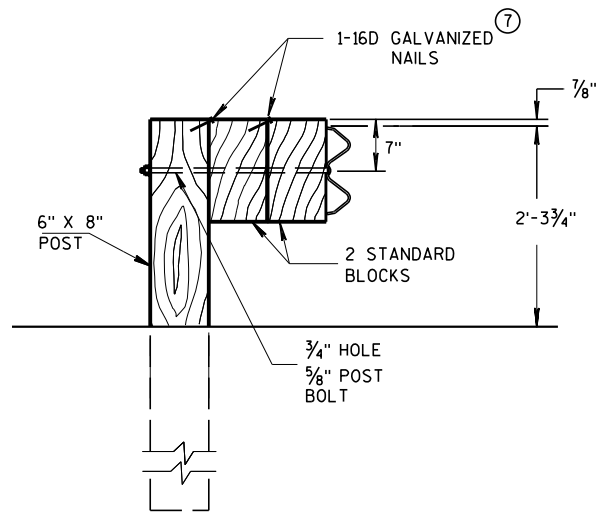
**4" X 12" GUARDRAIL REFLECTOR DETAIL
AND TYPICAL INSTALLATION ***



4" x 12" GUARDRAIL REFLECTOR

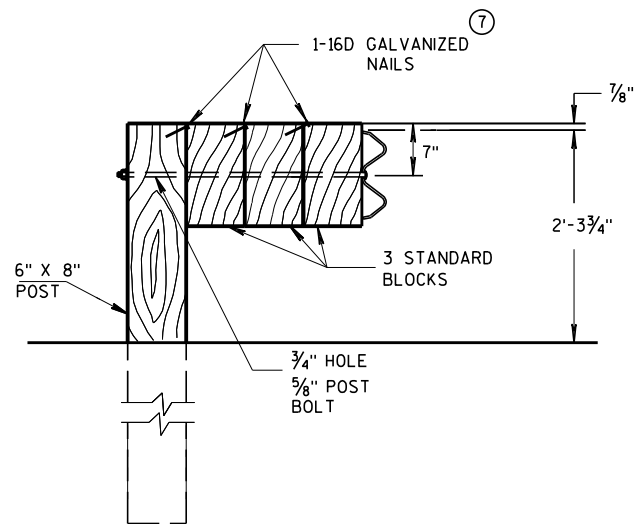
**STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

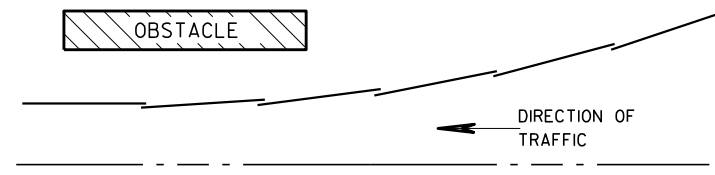


DETAIL FOR TRIPLE BLOCKS

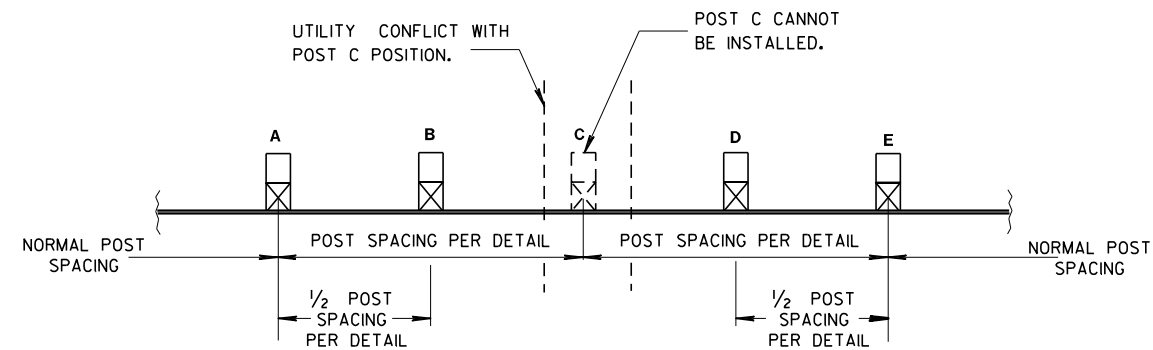
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.

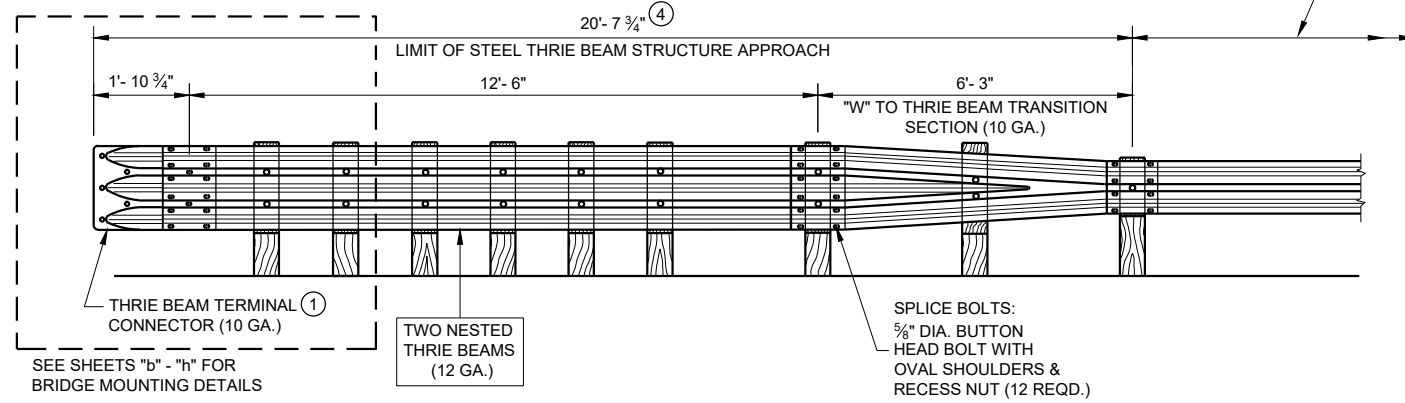
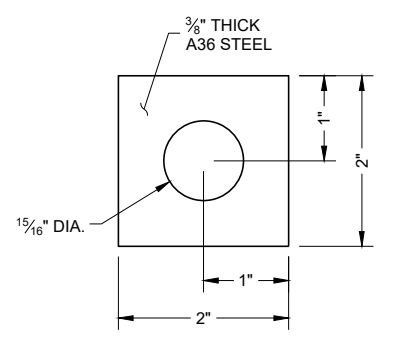
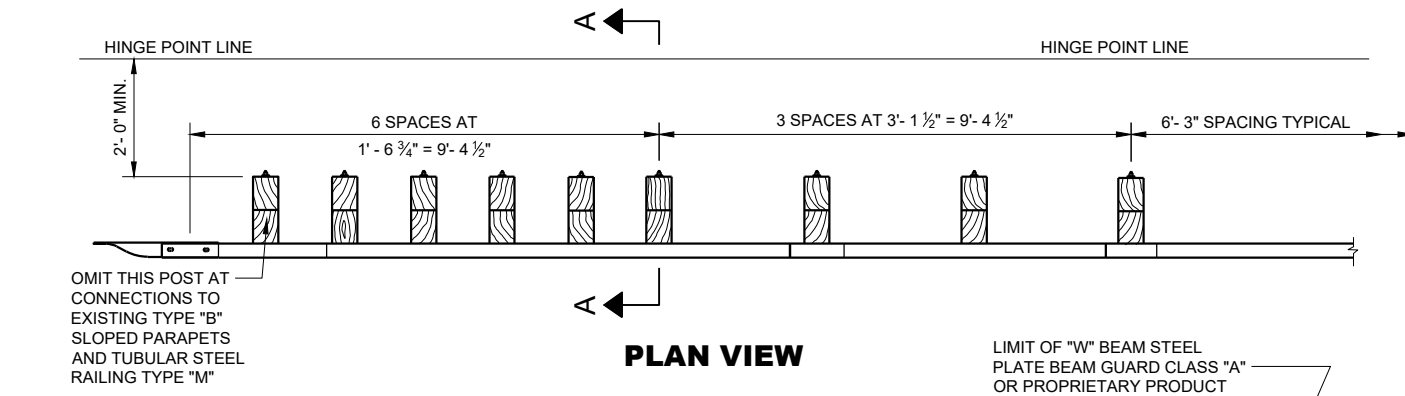


**PLAN VIEW
BEAM LAPPING DETAIL**

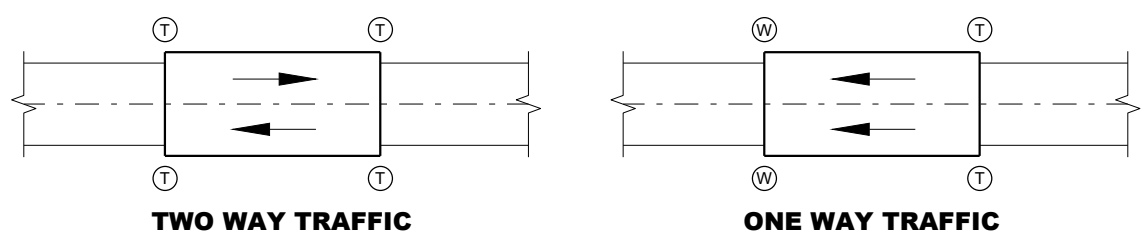


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

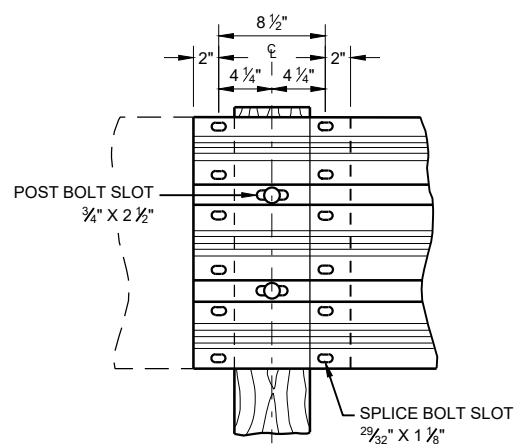
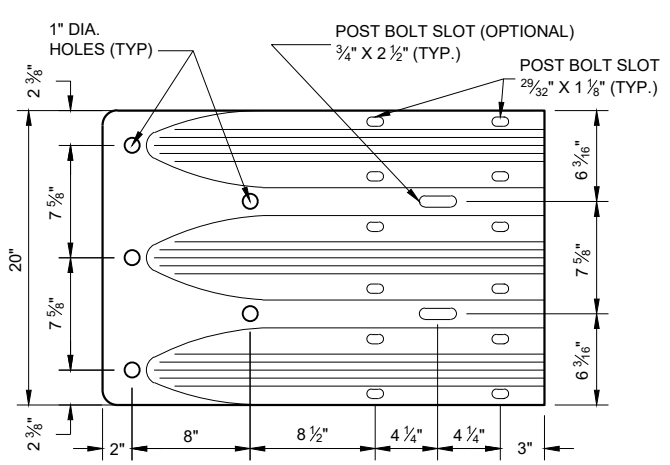
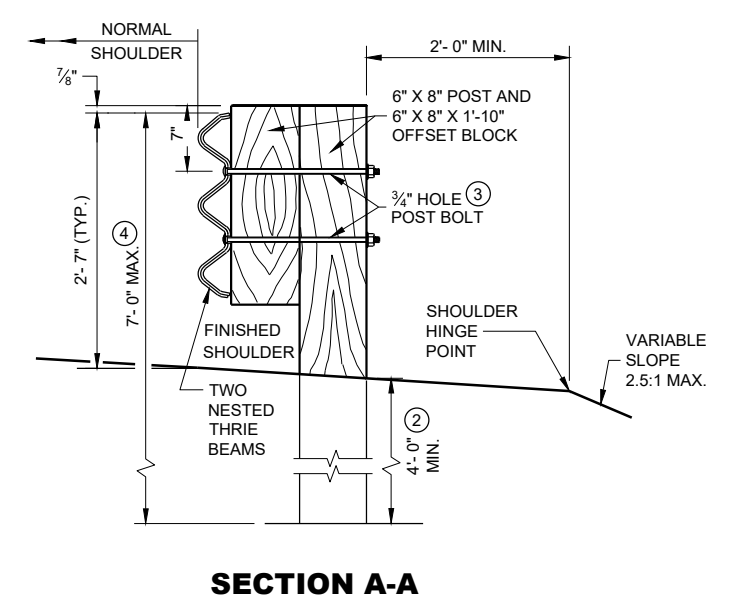
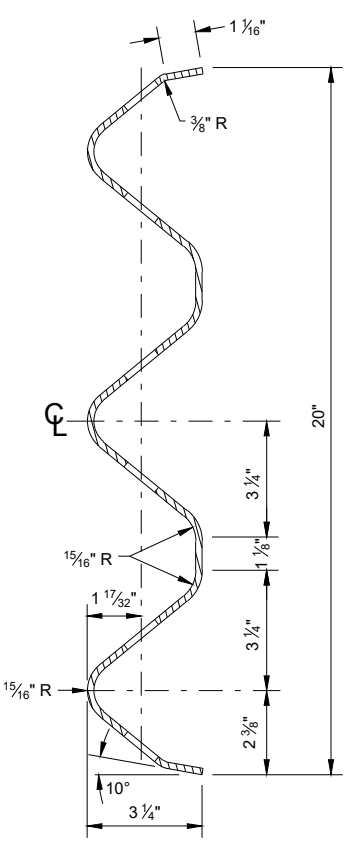
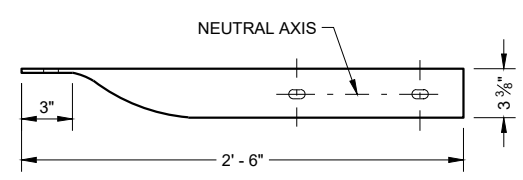
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017	/s/ Rodney Taylor
DATE	ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



- GENERAL NOTES**
- BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".
- DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.
- IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.
- BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
 - MINIMUM EMBEDMENT SHALL BE 4'-0".
 - POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
 - ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



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



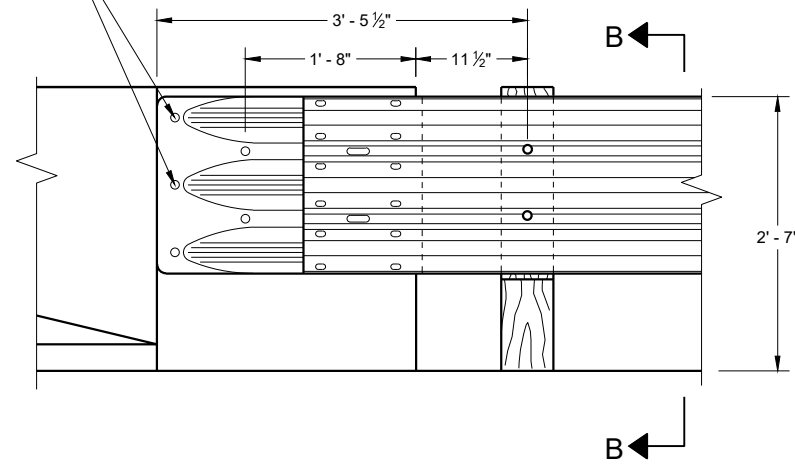
STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

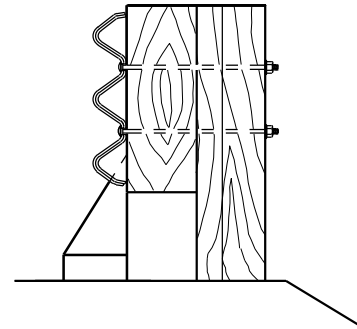
APPROVED
November 2022 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

- ① ② 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



SECTION B - B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

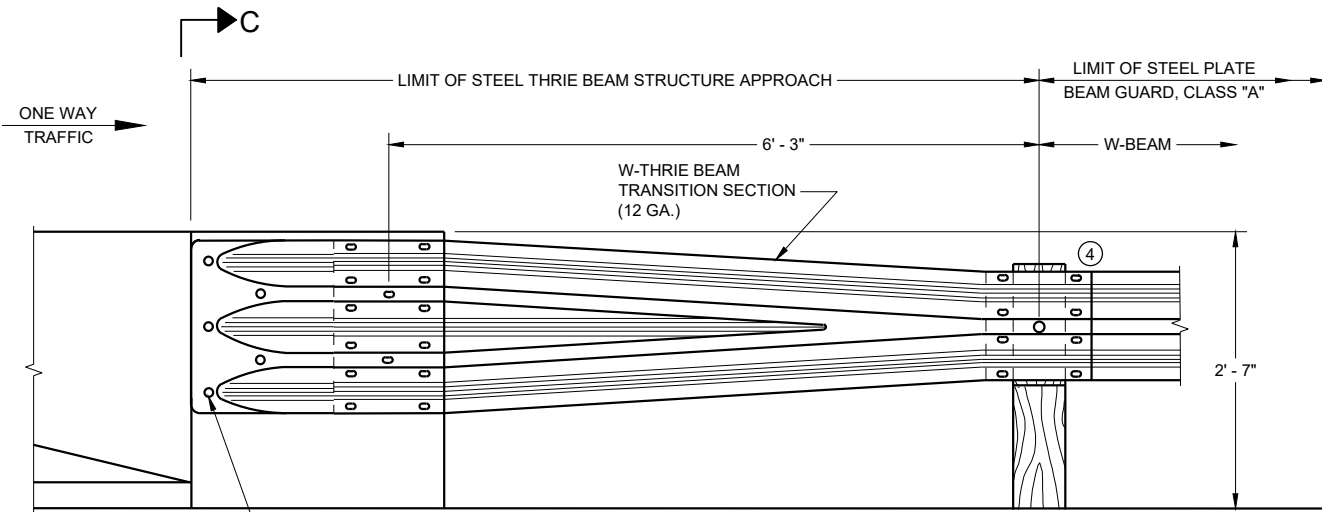
GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② 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 TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ 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".
- ④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

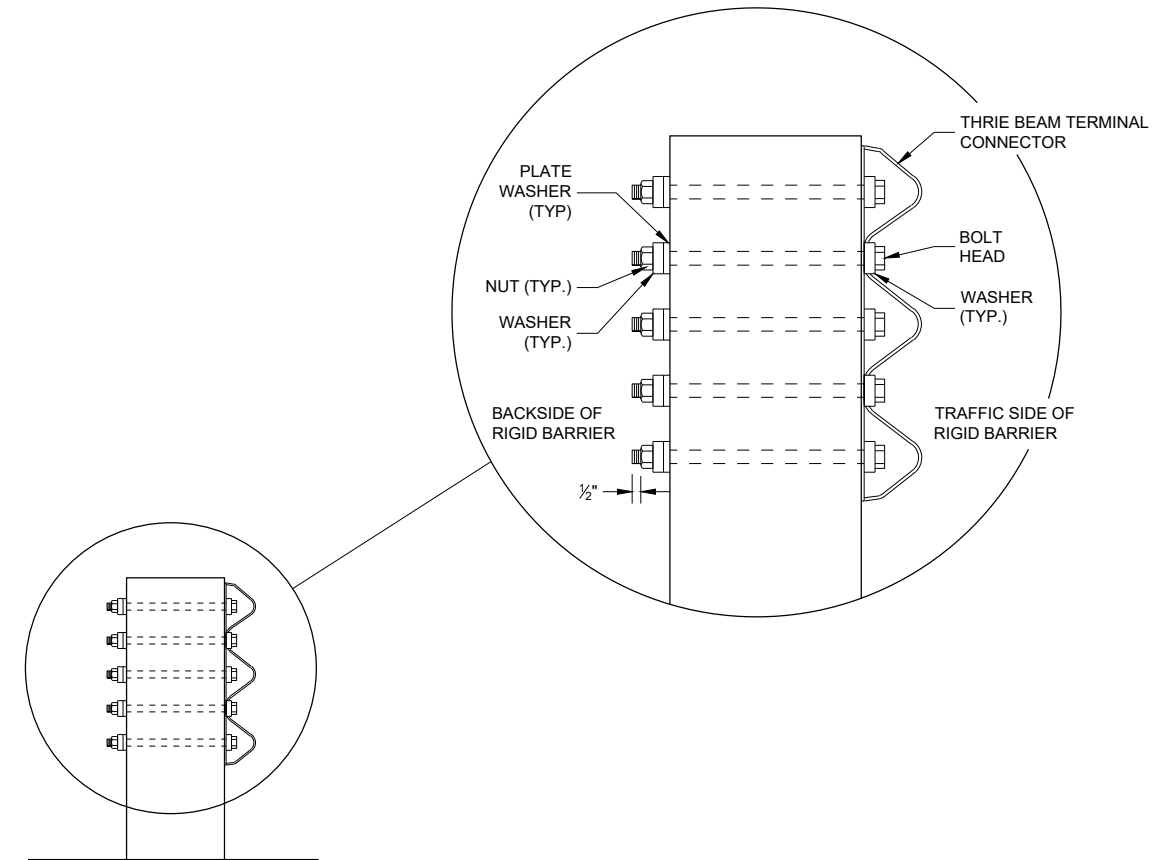
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



- ① ② 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

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



SECTION C - C

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

GENERAL NOTES

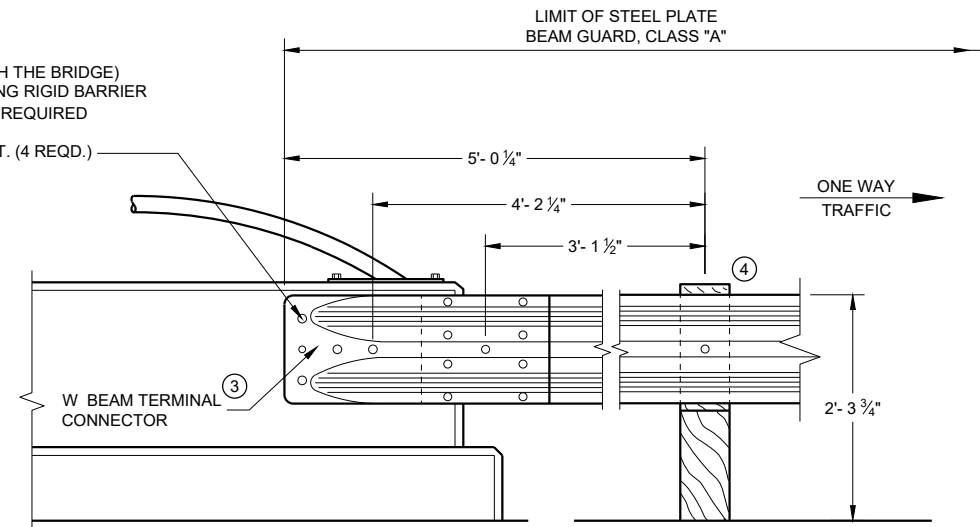
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② 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 TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ 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".
- ④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.
- ⑤ BOLT, NUT AND WASHERS NO REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PARAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE THE EDGE OF PARAPET.

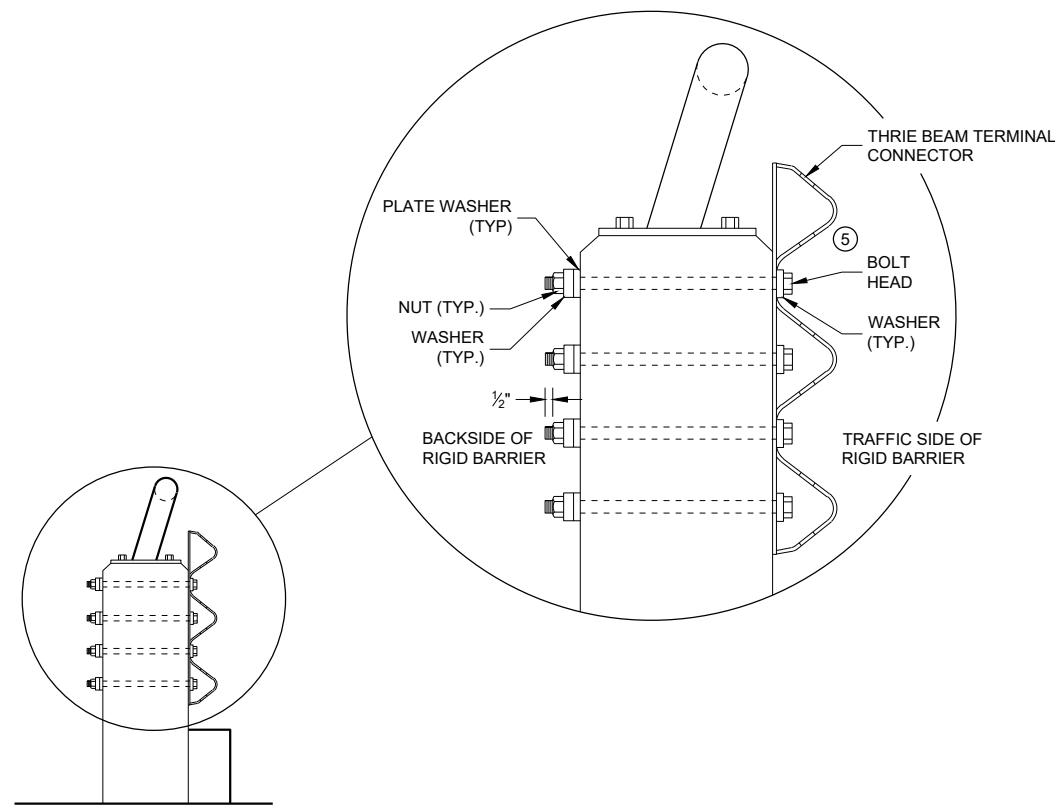
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

- ①② 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 REQD.)

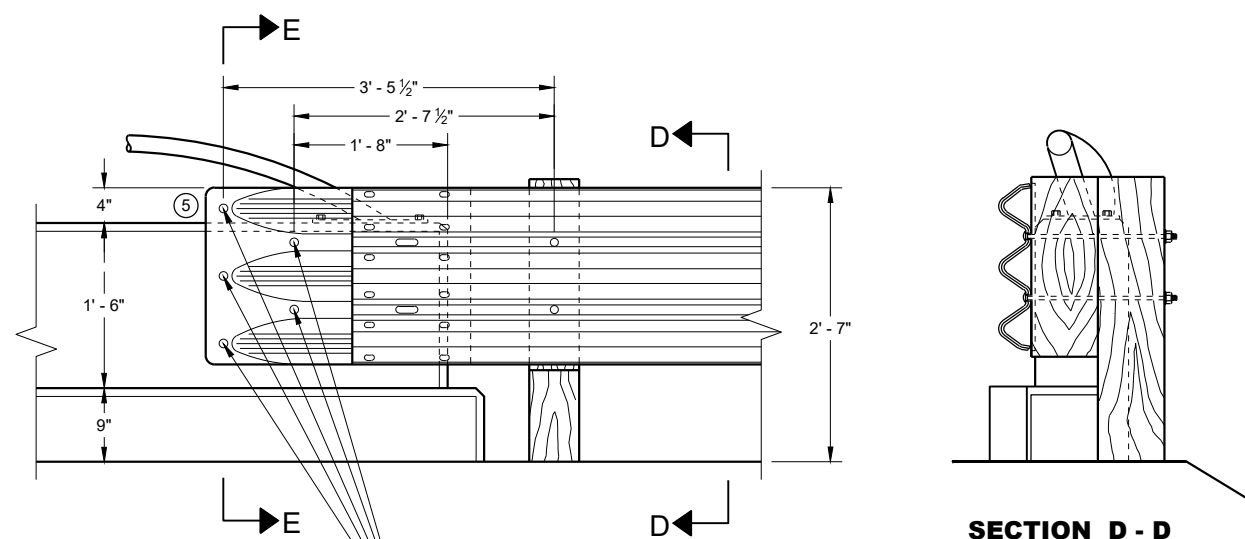


FRONT VIEW

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



SECTION E - E



FRONT VIEW

SECTION D - D

- ①② 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 REQD.)

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

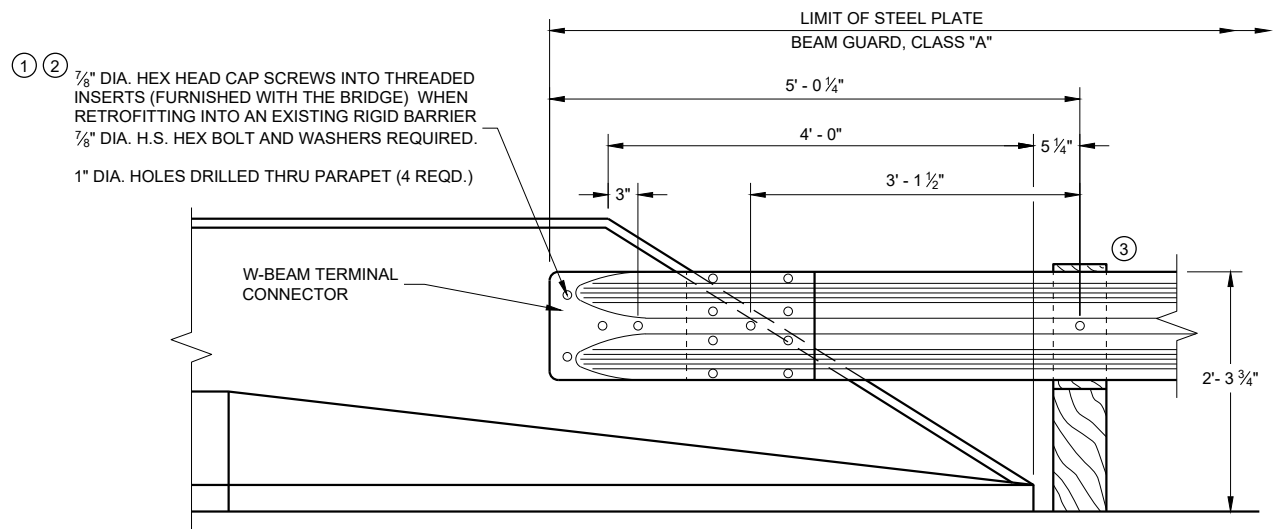
**STEEL THRIE BEAM STRUCTURE
APPROACH, CONNECTION TO
VERTICAL FACED PARAPETS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

ONE WAY
TRAFFIC →



FRONT VIEW

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

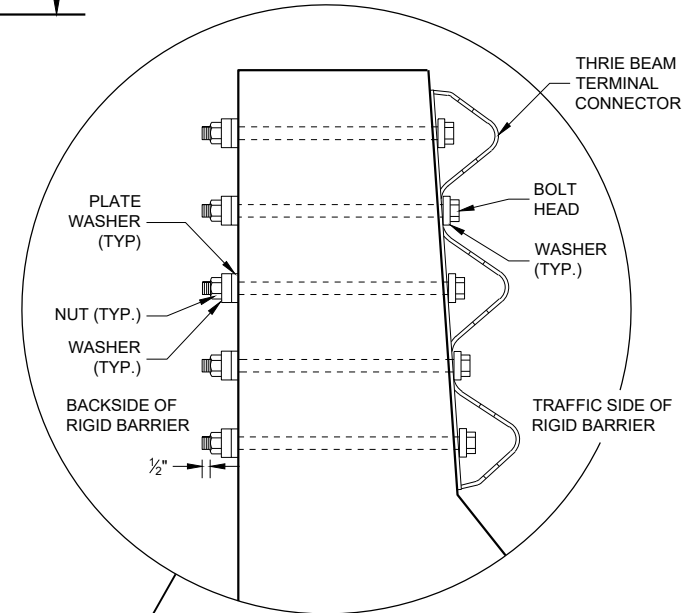
GENERAL NOTES

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

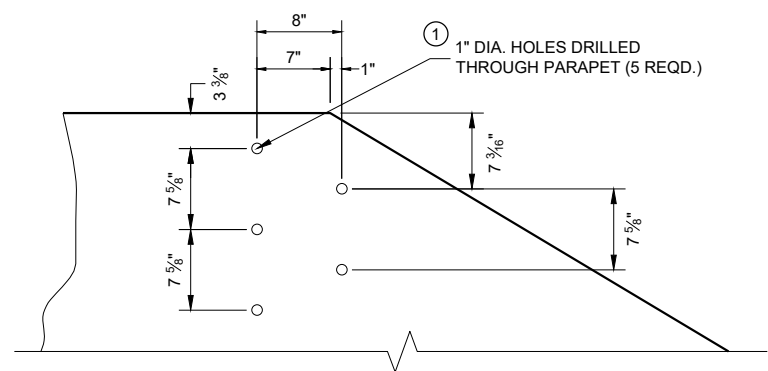
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② 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 TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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



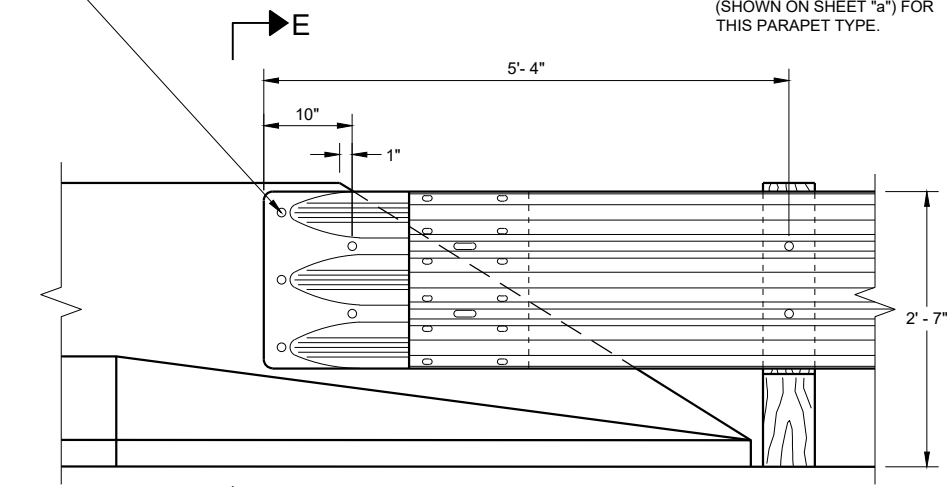
SECTION E - E



**DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION**

① ② 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 REQD.)

NOTE:
OMIT THE FIRST POST (SHOWN ON SHEET "a") FOR THIS PARAPET TYPE.



FRONT VIEW

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

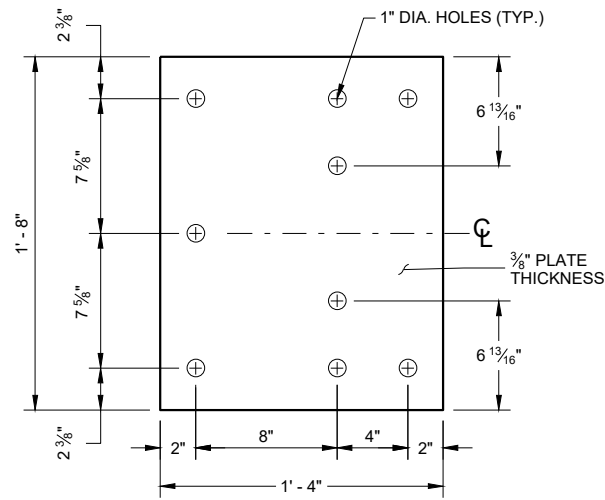
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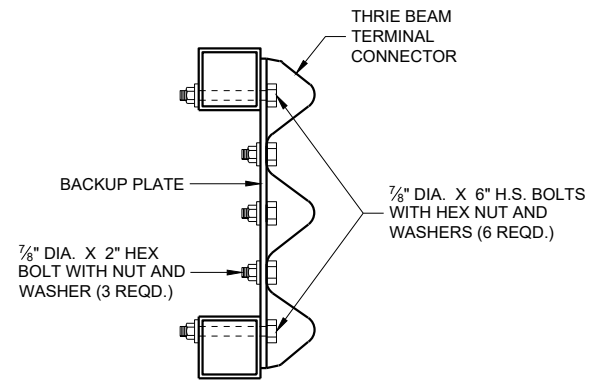
SDD 14B20 - 12d

SDD 14B20 - 12d

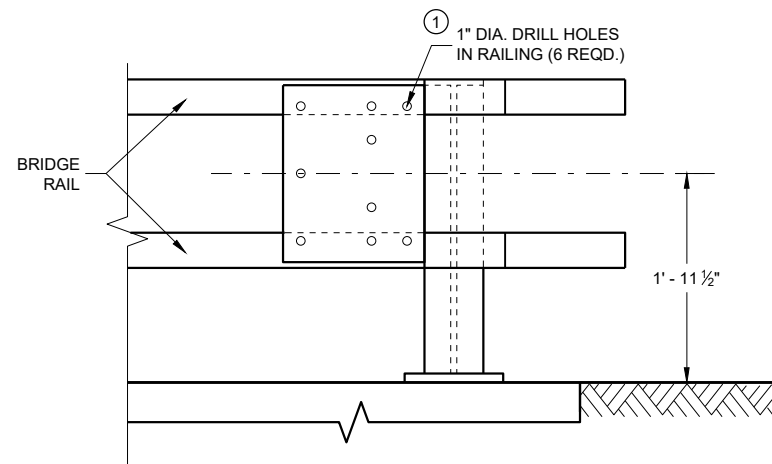
STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2022 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



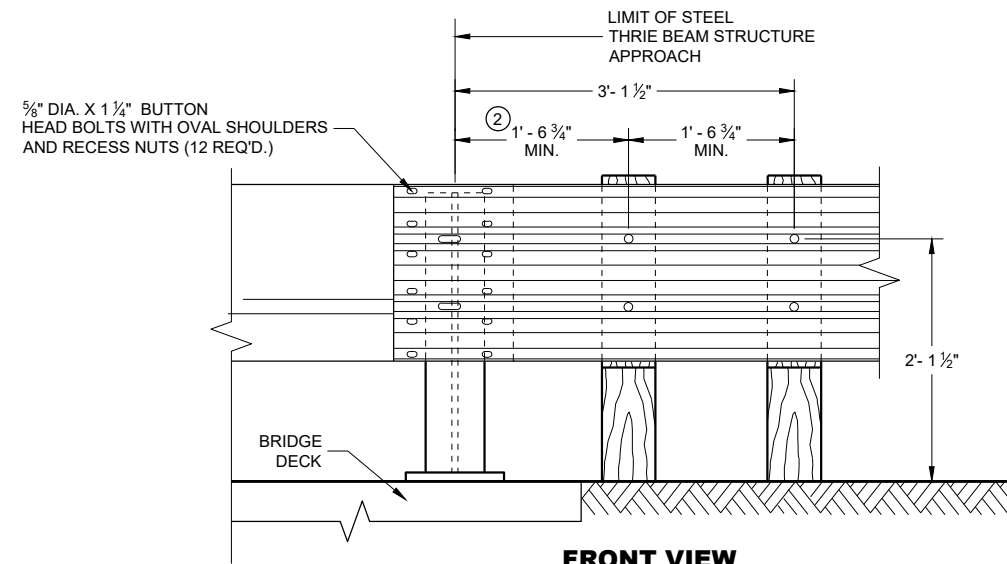
BACK-UP PLATE DETAIL



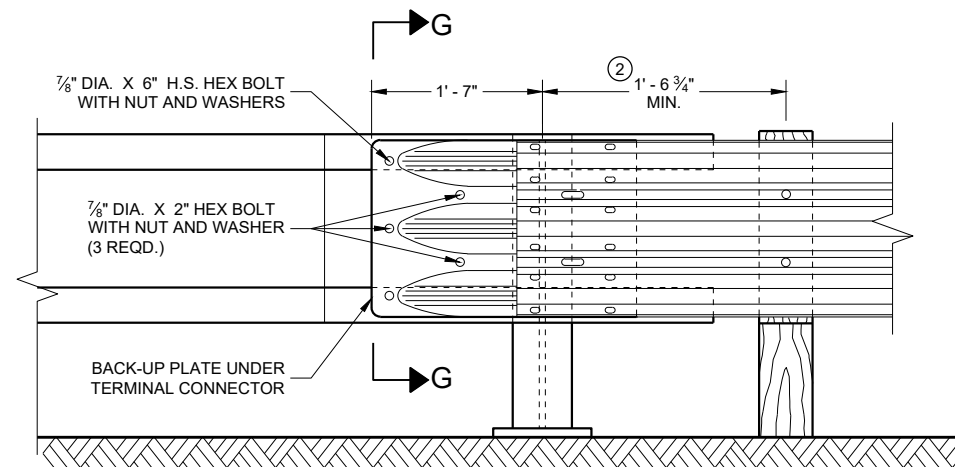
SECTION G - G



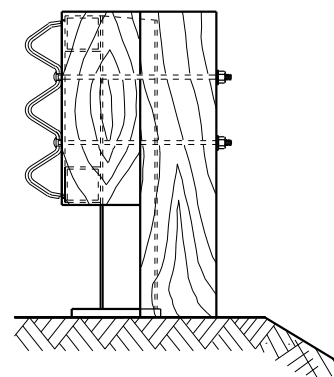
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



END VIEW

GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.

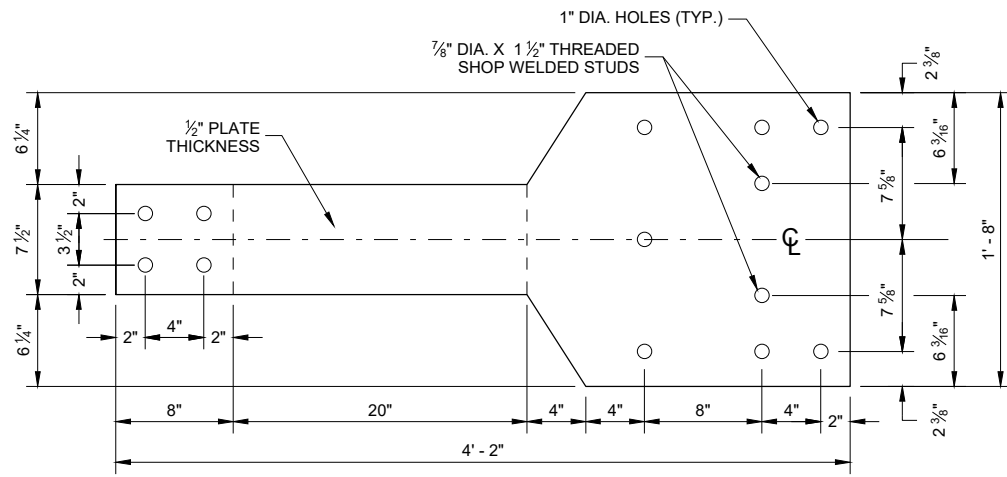
STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" & "W"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

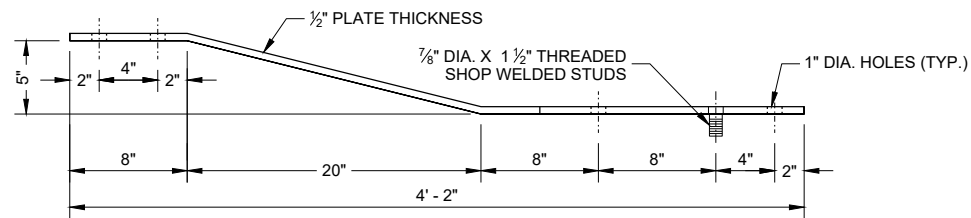
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November 2022 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

GENERAL NOTES

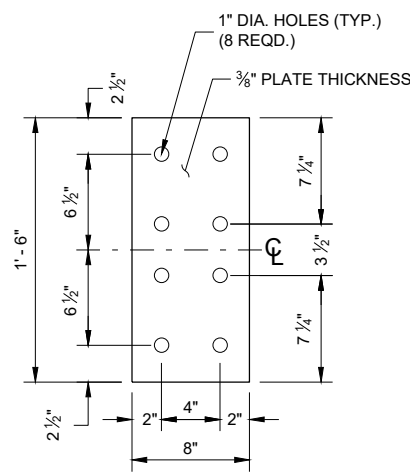
- ① VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AN ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.



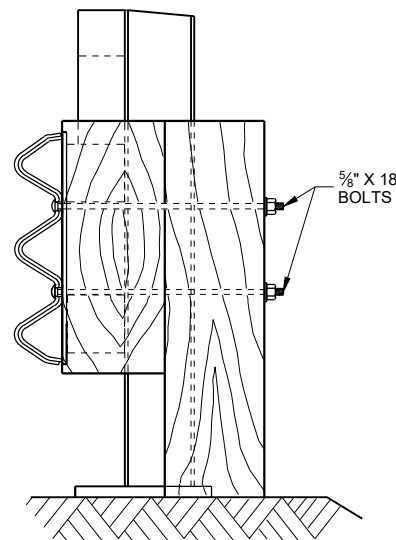
FRONT VIEW



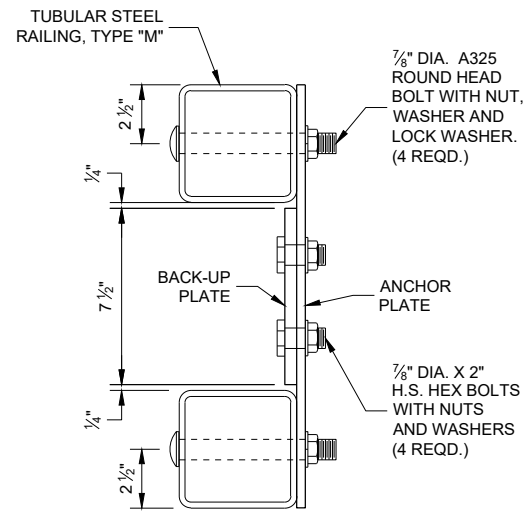
**PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"**



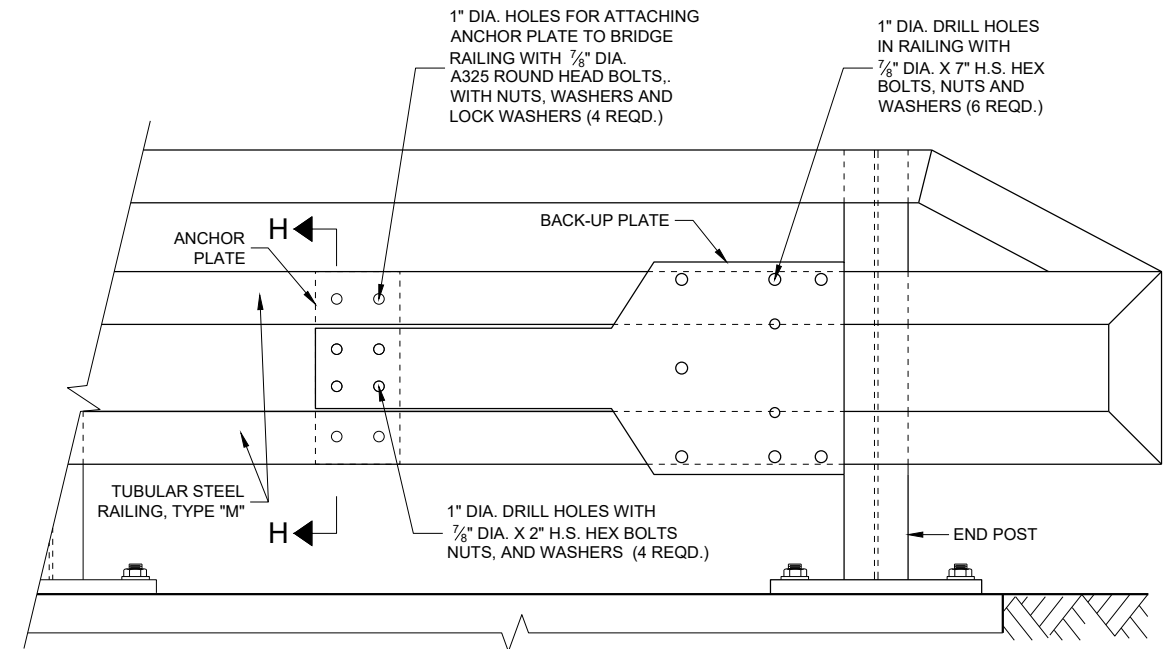
**PLAN VIEW
ANCHOR PLATE DETAIL,
TYPE "M"**



SECTION I - I

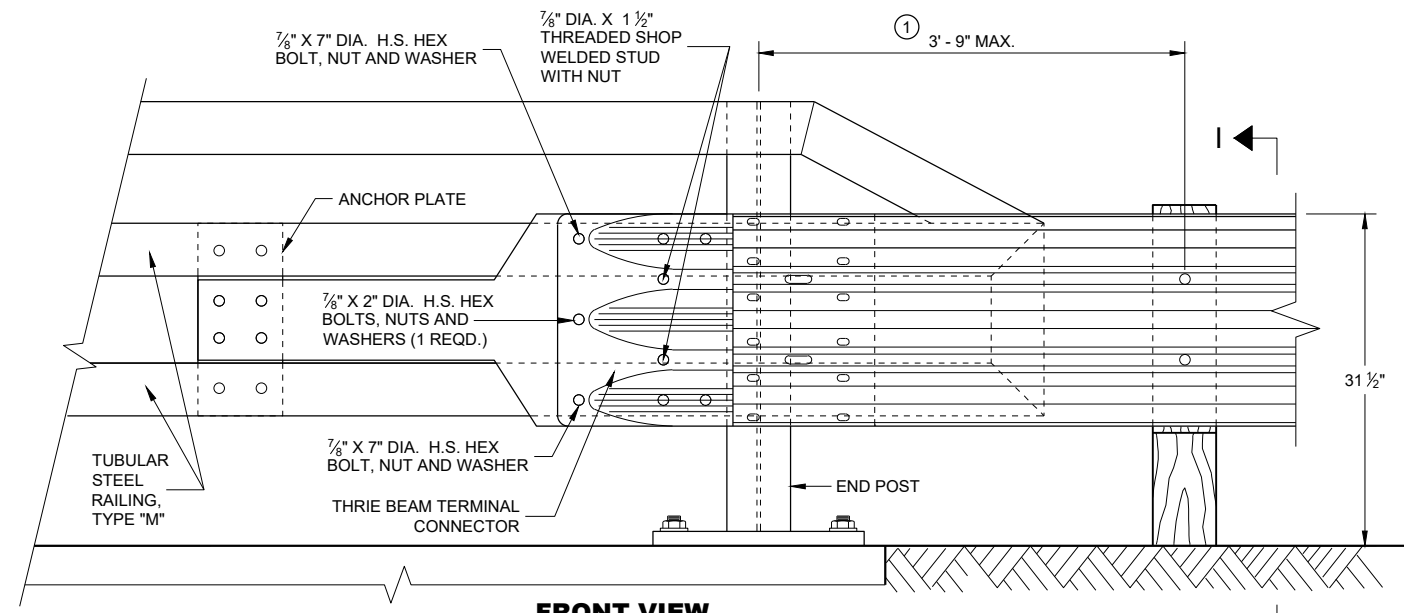


SECTION H - H

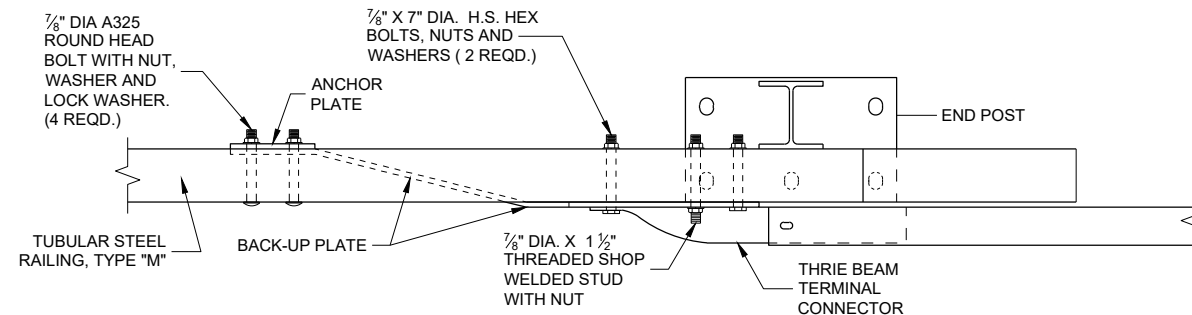


FRONT VIEW

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



FRONT VIEW



**PLAN VIEW
THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"**

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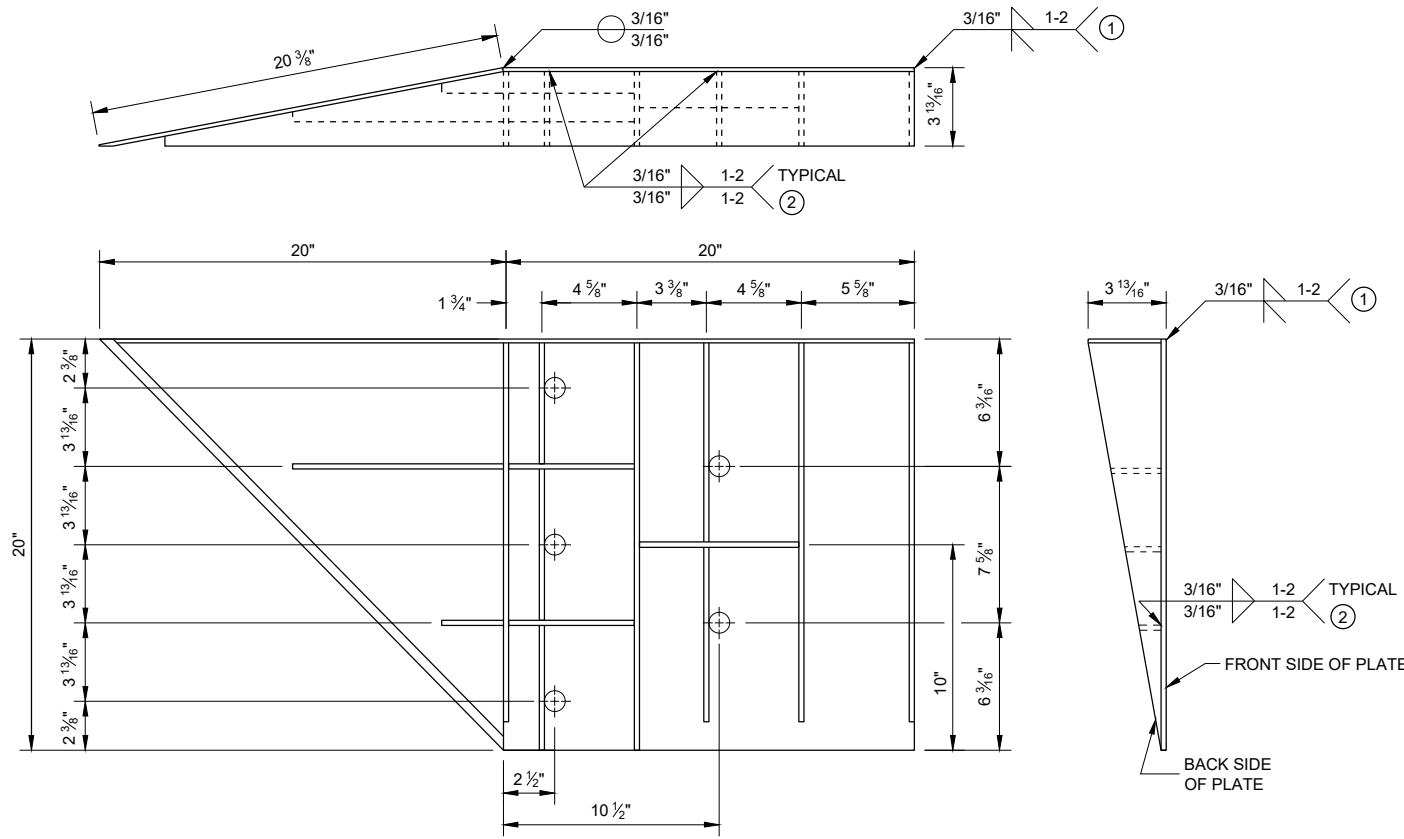
SDD 14B20 - 12f

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

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DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

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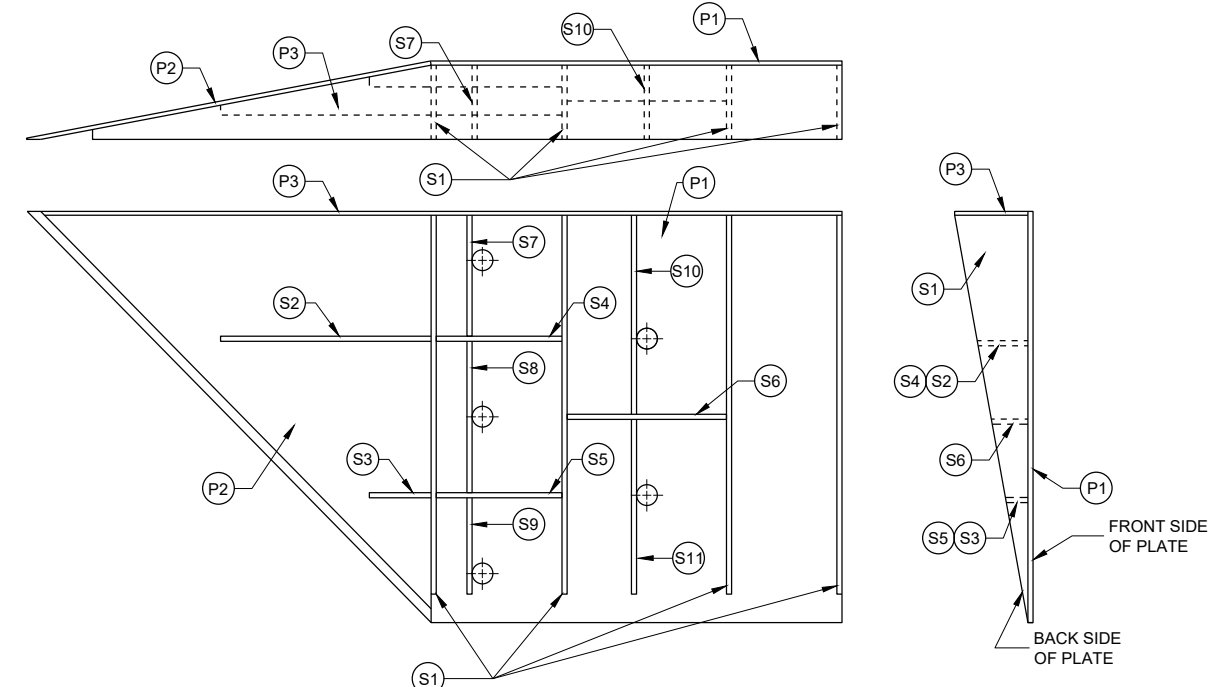


GENERAL NOTES

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.

- ① 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.
- ② 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 PLATED 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 9/16"	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 7/16" 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 9/16" 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 5/8" x 9 1/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

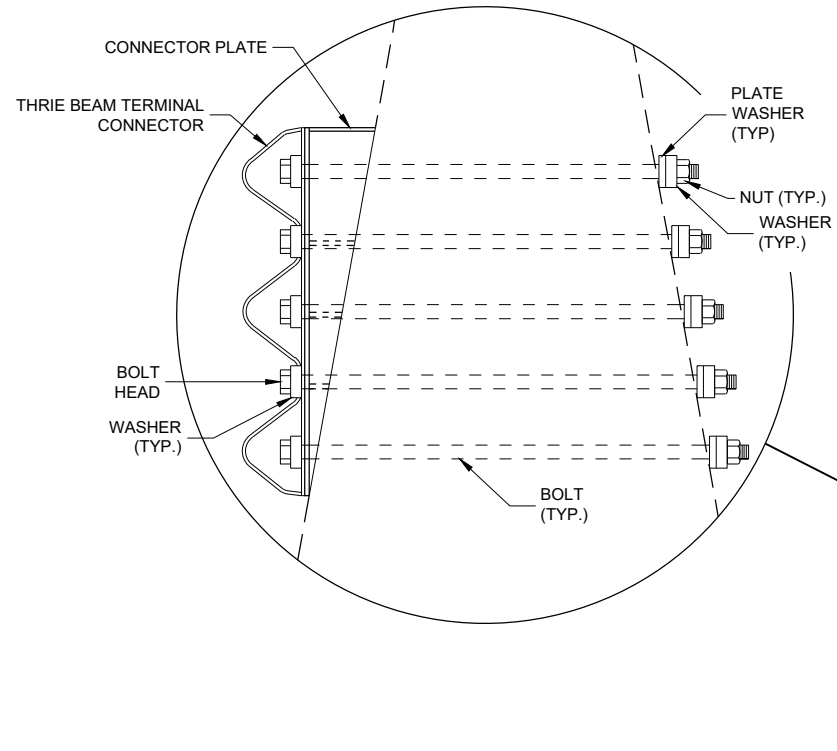
STEEL THRIE BEAM STRUCTURE APPROACH

**STEEL THRIE BEAM
 STRUCTURE APPROACH,
 CONNECTOR PLATE DETAIL**

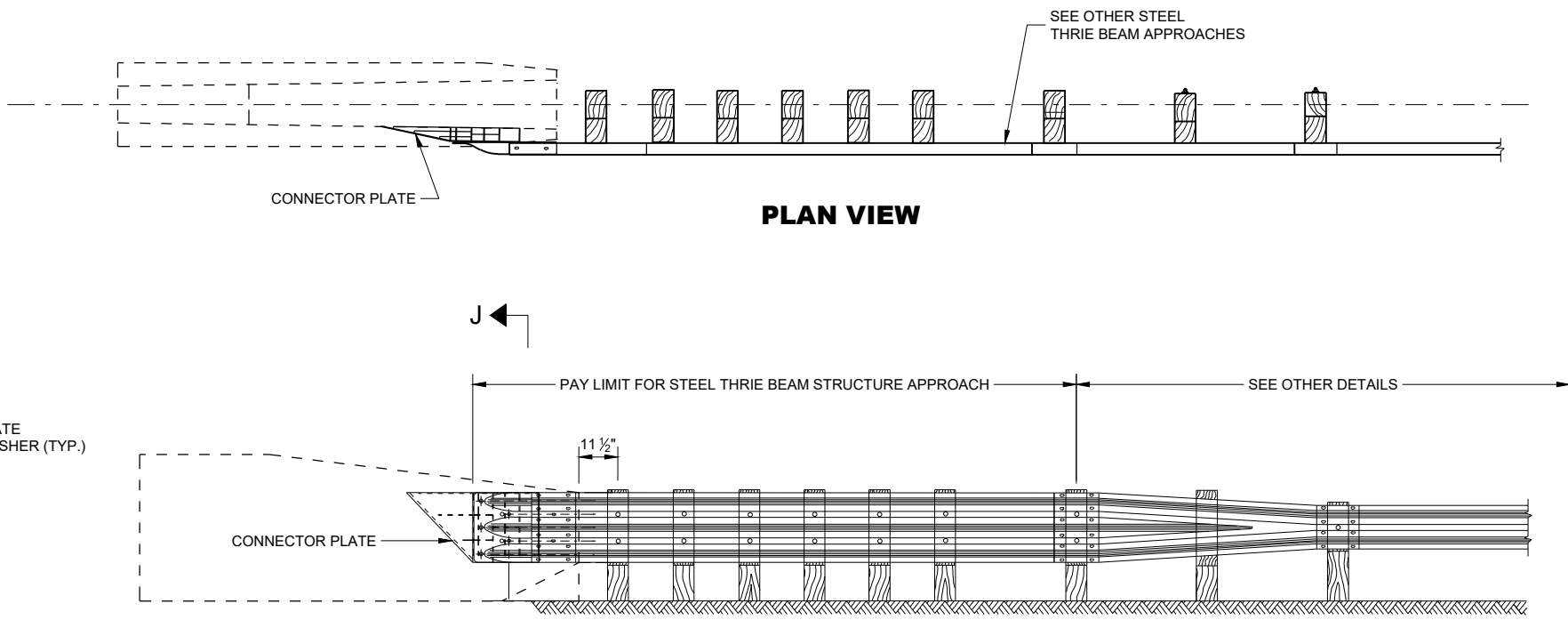
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SECTION J - J

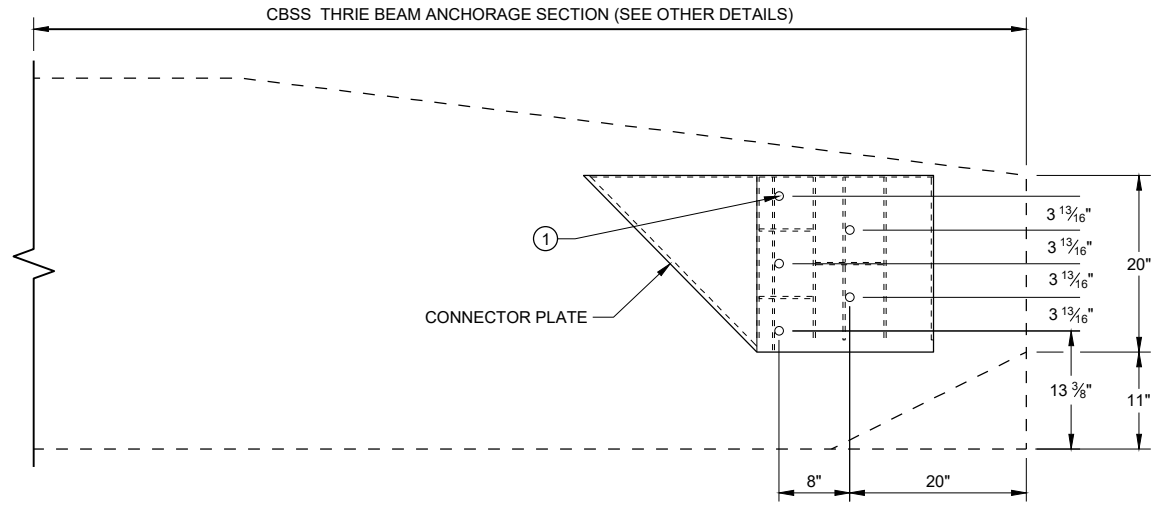


PLAN VIEW

FRONT VIEW

GENERAL NOTES

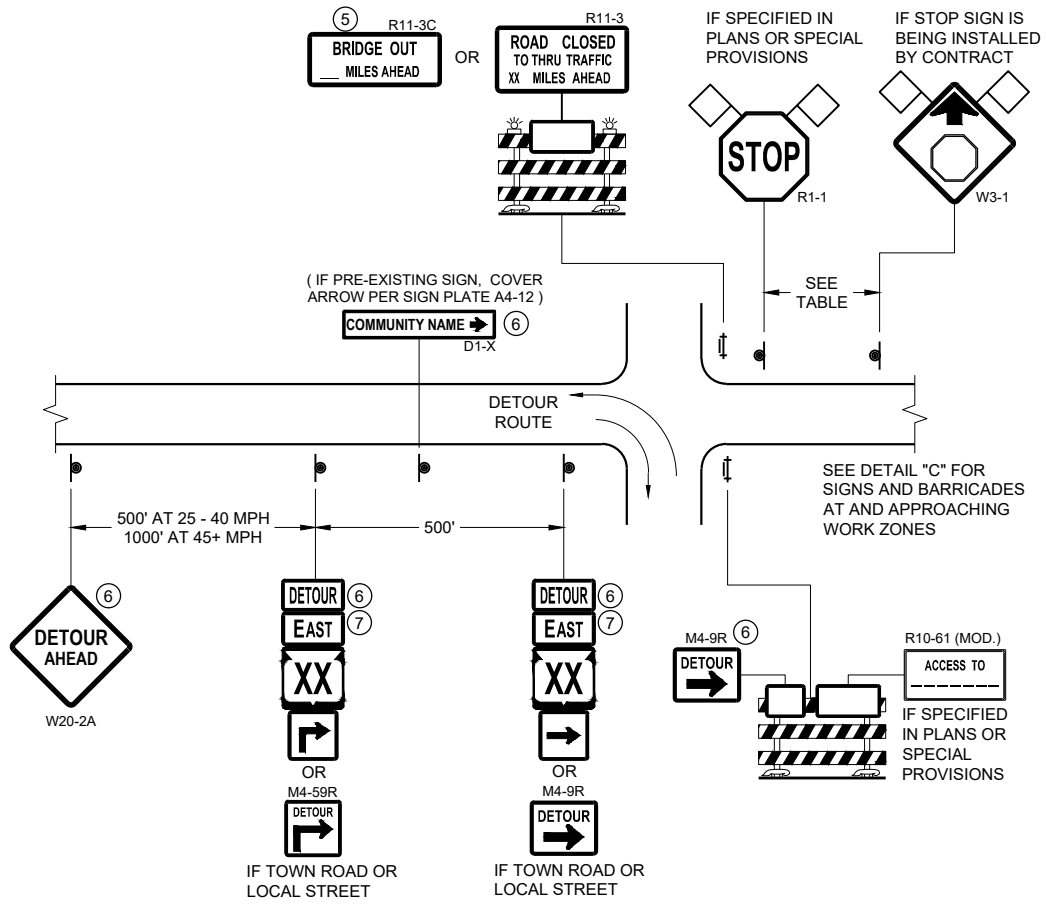
- CONSTRUCT PER STANDARD SPECIFICATION 614.
- CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ① BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN 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 TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



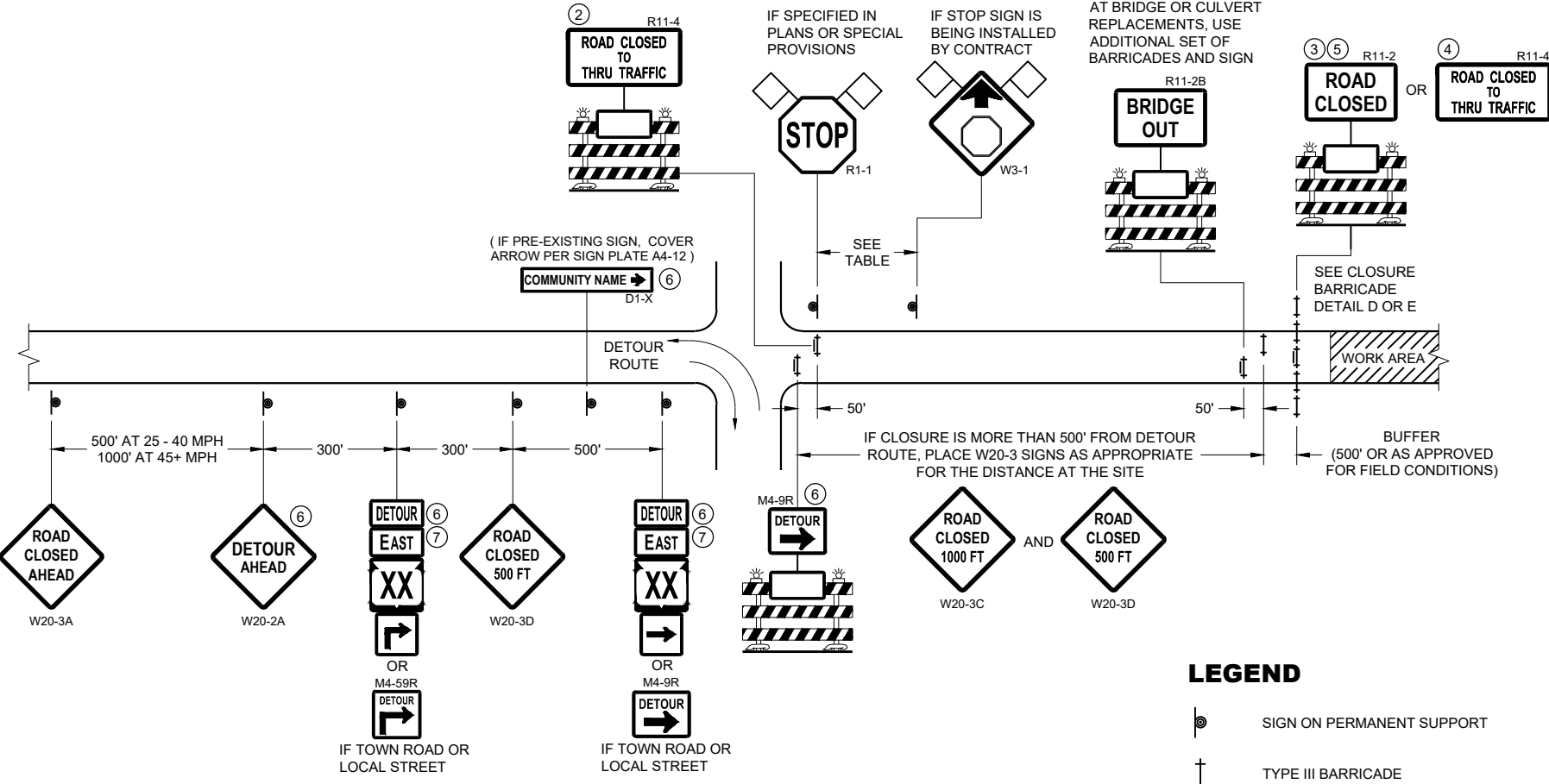
CONNECTOR PLATE PLACEMENT

STEEL THRIE BEAM STRUCTURE APPROACH

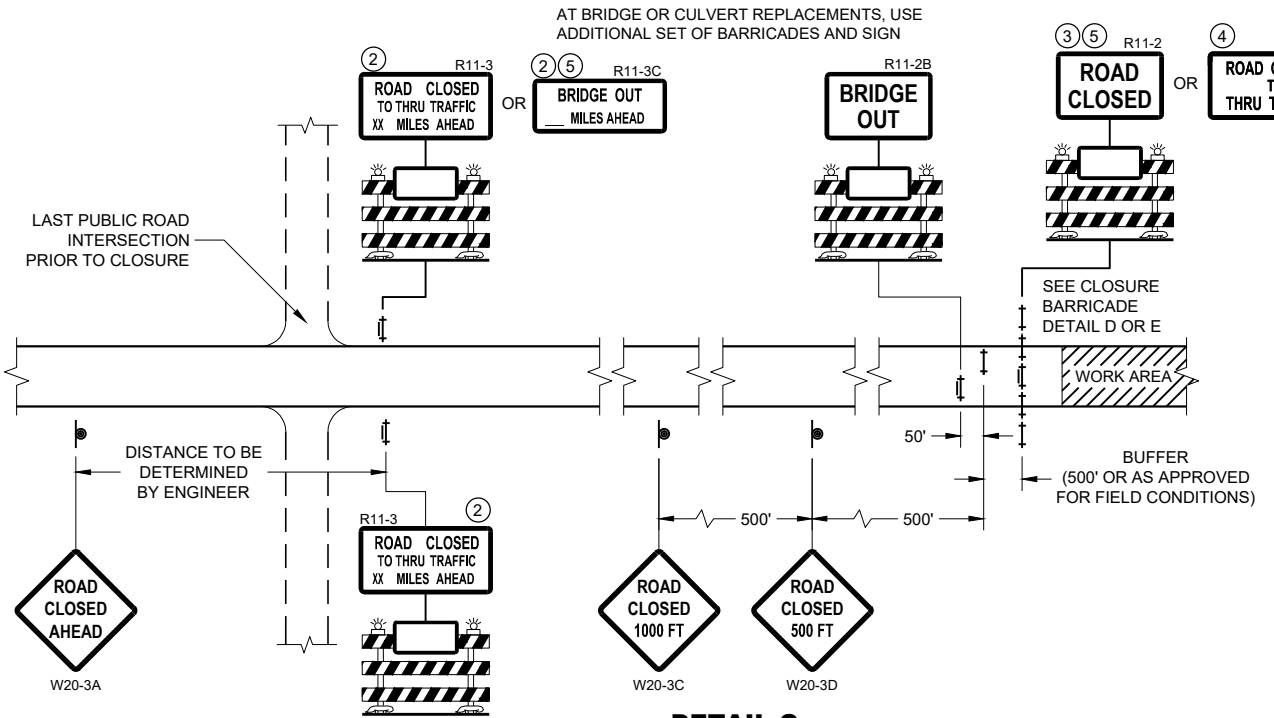
MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2022 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



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)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

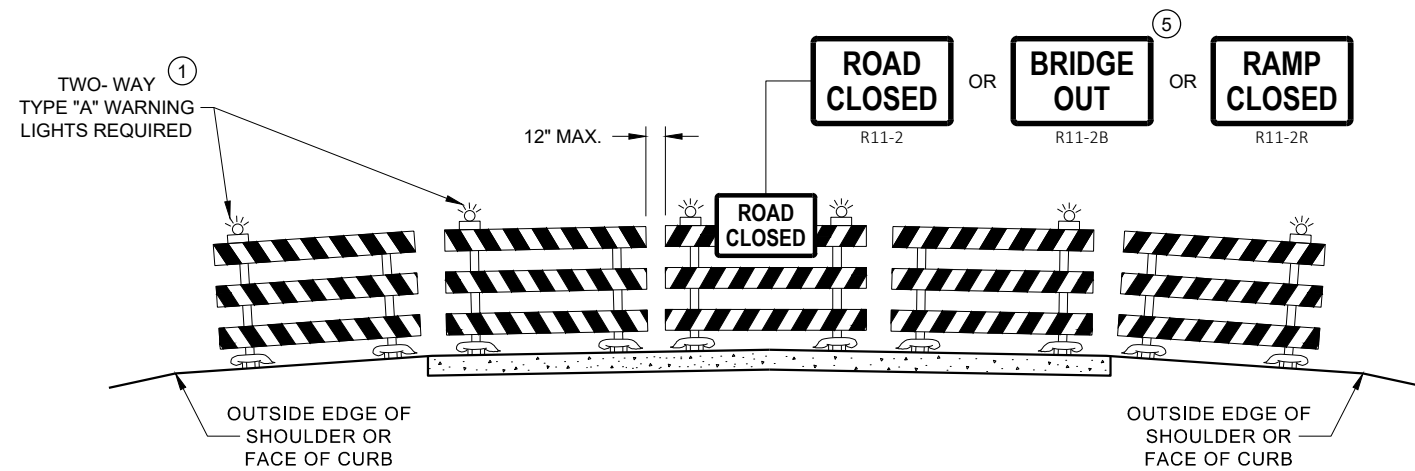
SEE SDD 15C2-SHEET "b" FOR GENERAL NOTES AND FOOTNOTES ① THROUGH ⑦

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

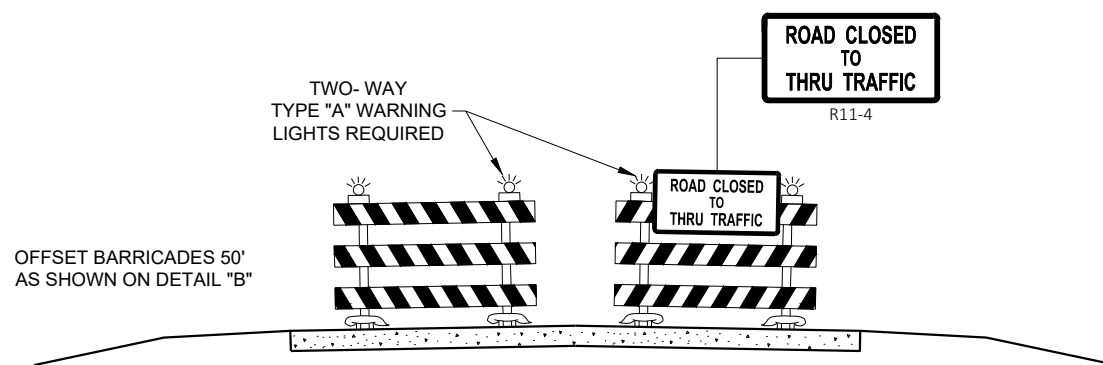
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 May 2023 /S/ Andrew Heidtke
 DATE DATE WORK ZONE ENGINEER

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**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.

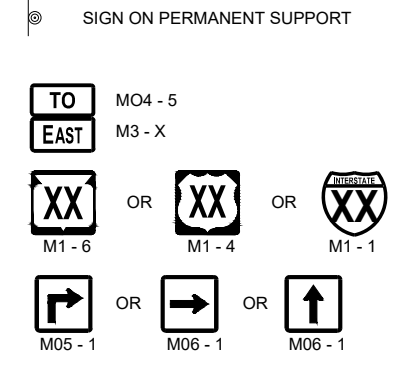
**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
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APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

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

LEGEND



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 ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.
- THE SPACING BETWEEN TRAFFIC CONTROL AND TO 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 SHALL 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 FOLLOW:
M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
M04 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
M05 - 1, M05 - 2, AND M06 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
W20 - 53A SHALL BE 48" X 48"
- * PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

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SDD 15C02 - 09d

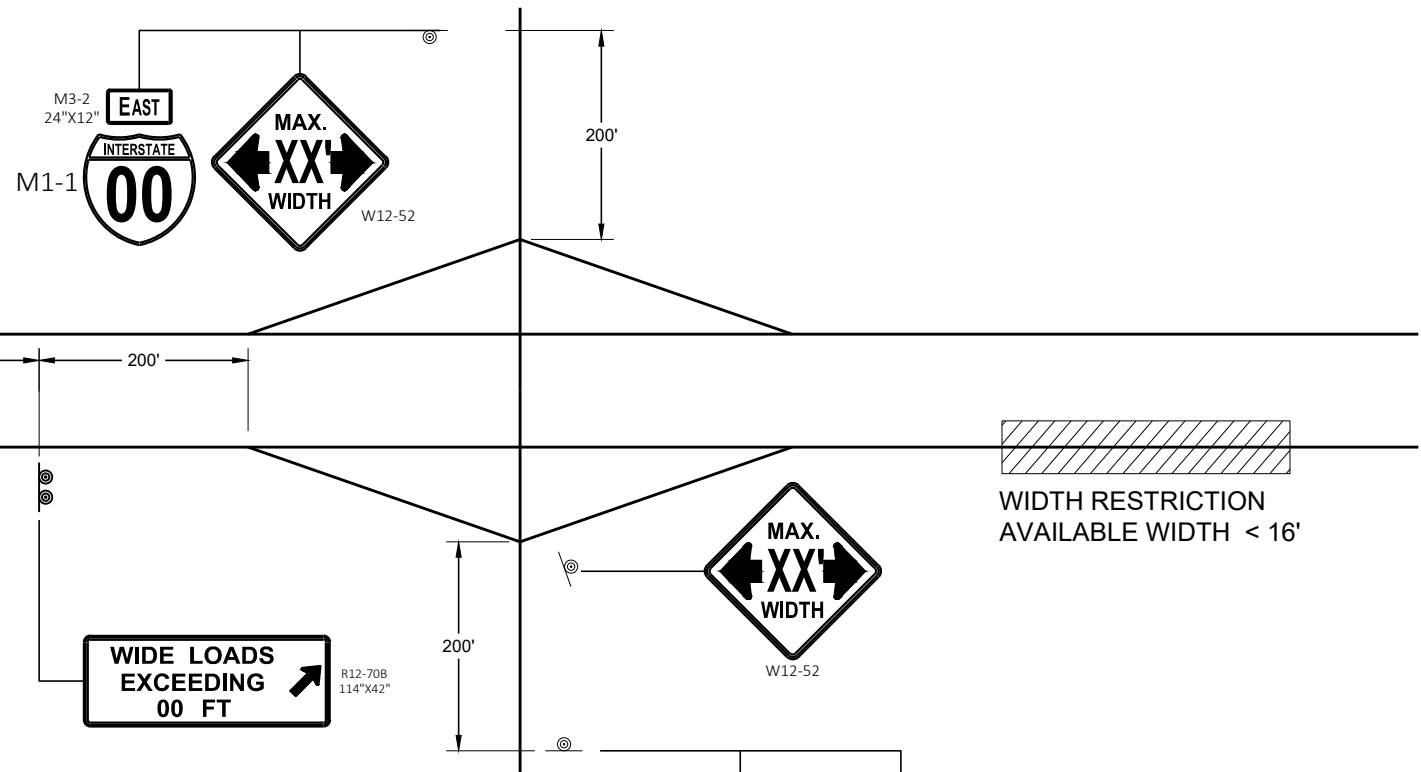
SDD 15C02 - 09d

**ON RAMP
LANE CLOSURE**

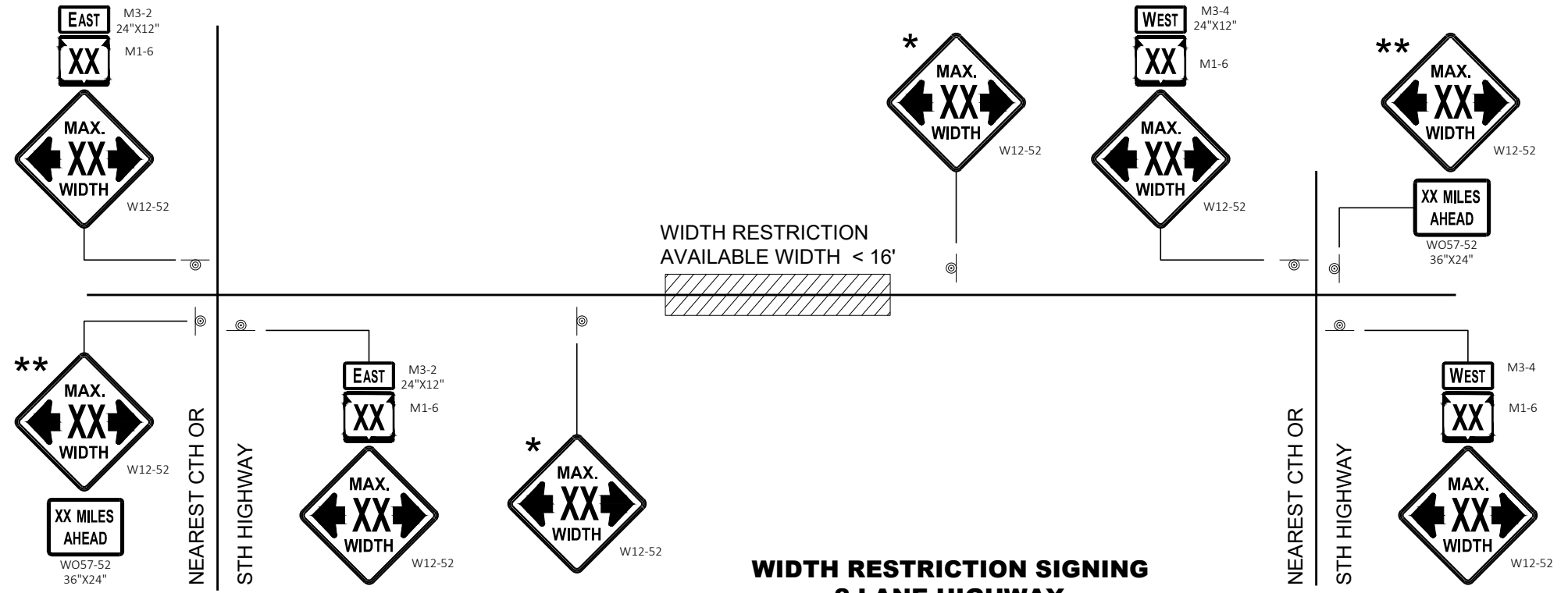
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DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /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.

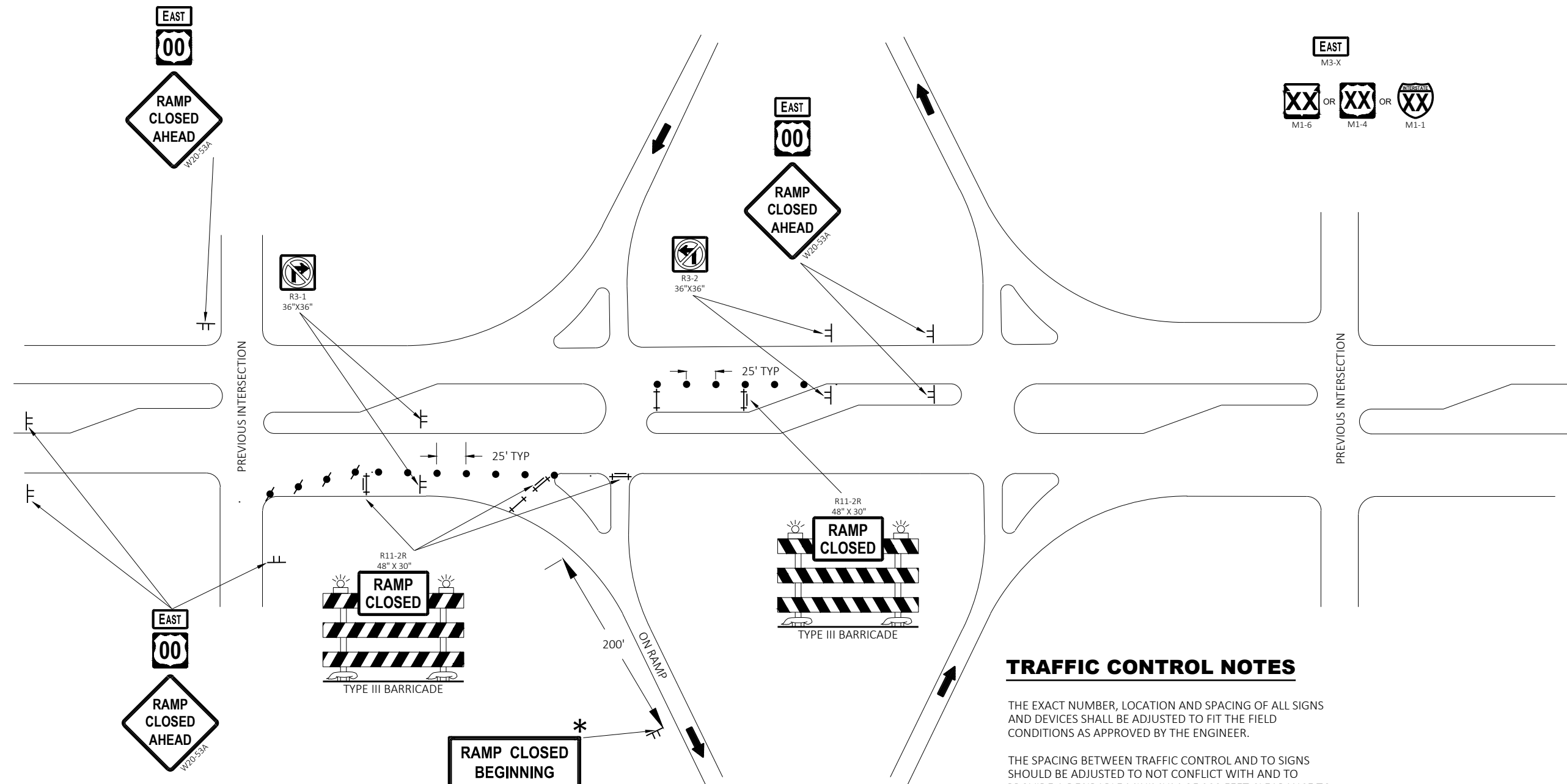


WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- ↑ SIGN ON PERMANENT SUPPORT
- ↑ SIGN ON TEMPORARY SUPPORT
- ↓ DIRECTION OF TRAFFIC

**RAMP CLOSED BEGINNING
XXX-XX**

G20-58
OR
PCMS MESSAGING

FRAME 1 RAMP TO CLOSE	FRAME 2 XXX DAY XX XX XX
--------------------------	--------------------------------

TRAFFIC CONTROL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL AND TO 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 THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
- W20-53A SHALL BE 48"x48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

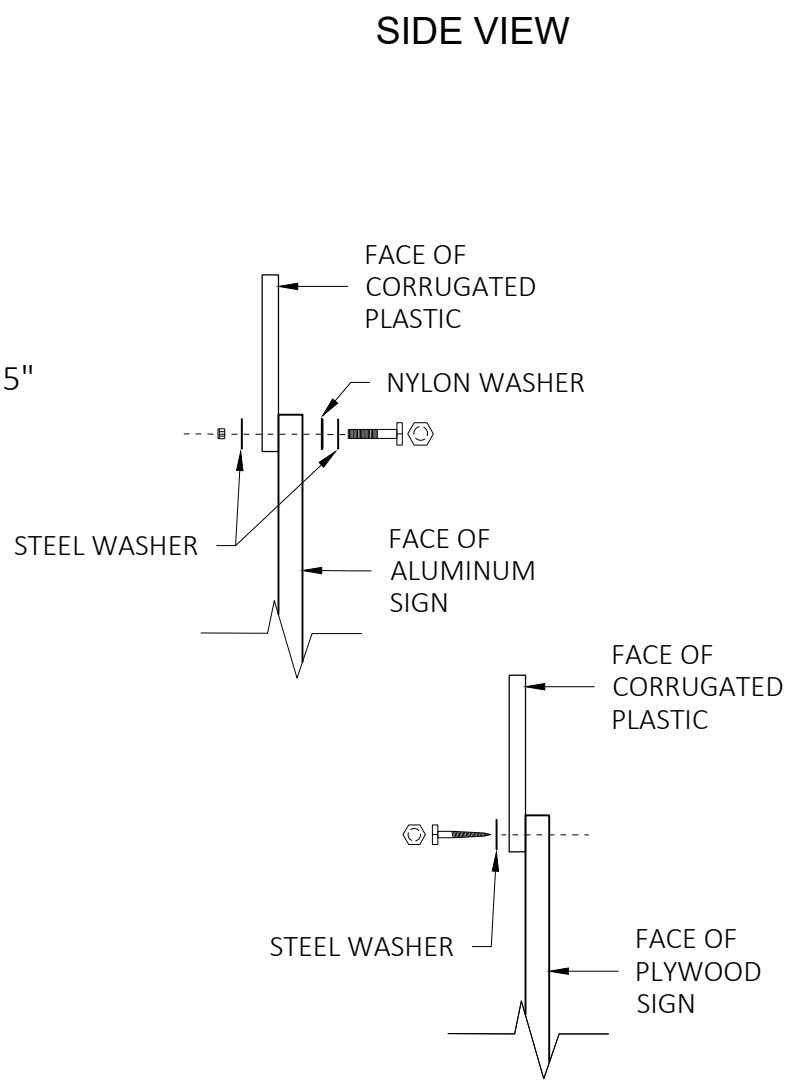
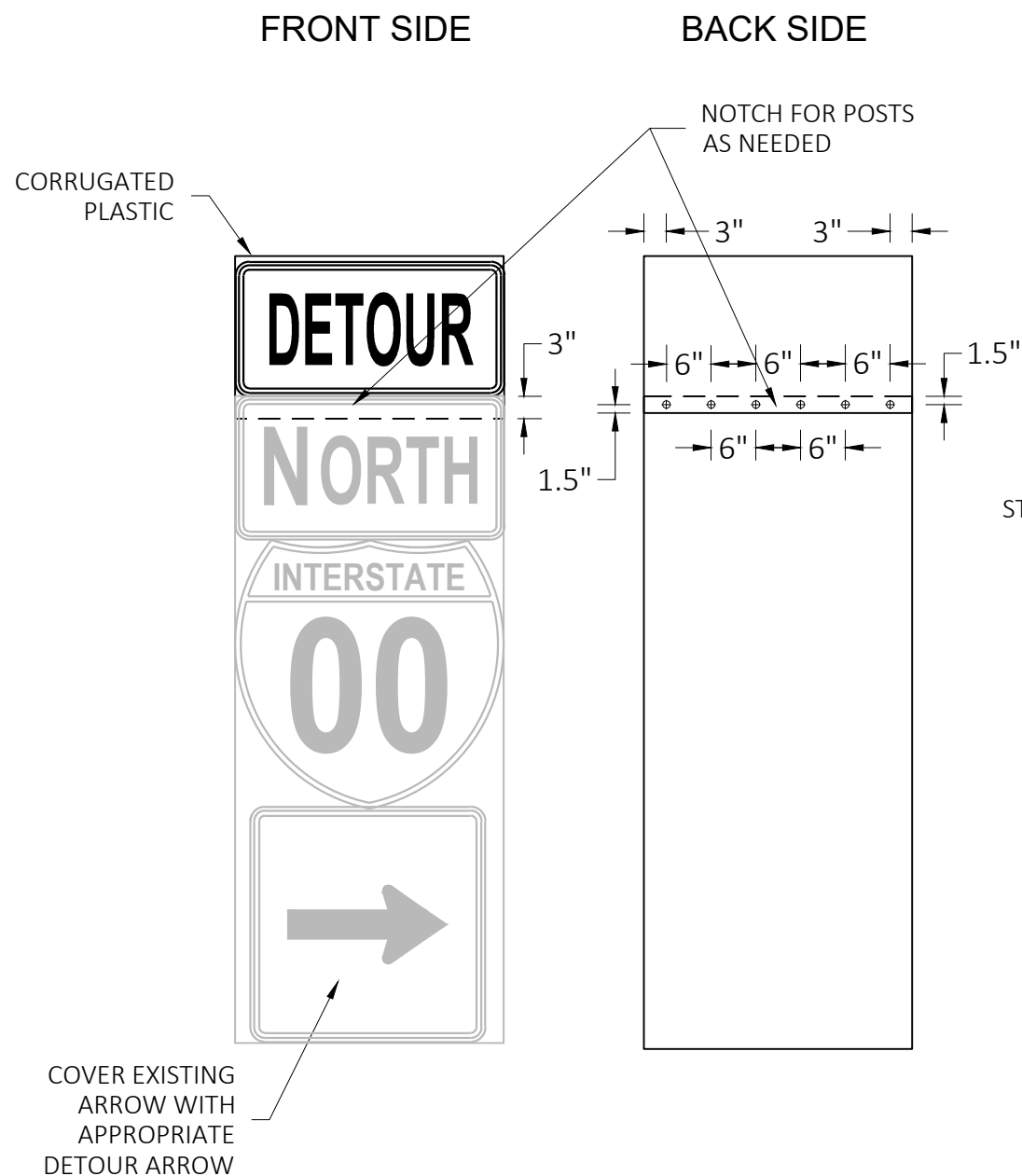
**TRAFFIC CONTROL FOR
ENTRANCE RAMP CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/s/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



GENERAL NOTES

- CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.
- PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.
- FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.
- FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.
- METAL WASHERS, NUTS, BOLTS AND LAGS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:
 - A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3.
 - B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC3
- THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.
- PLYWOOD SIGNS:
 - LAG SCREWS - 5/16" x 1"
- ALUMINUM SIGNS:
 - MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS
- WASHERS:
 - 1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL
 - 1-1/4" O.D. x 3/8" I.D. x .080 NYLON

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

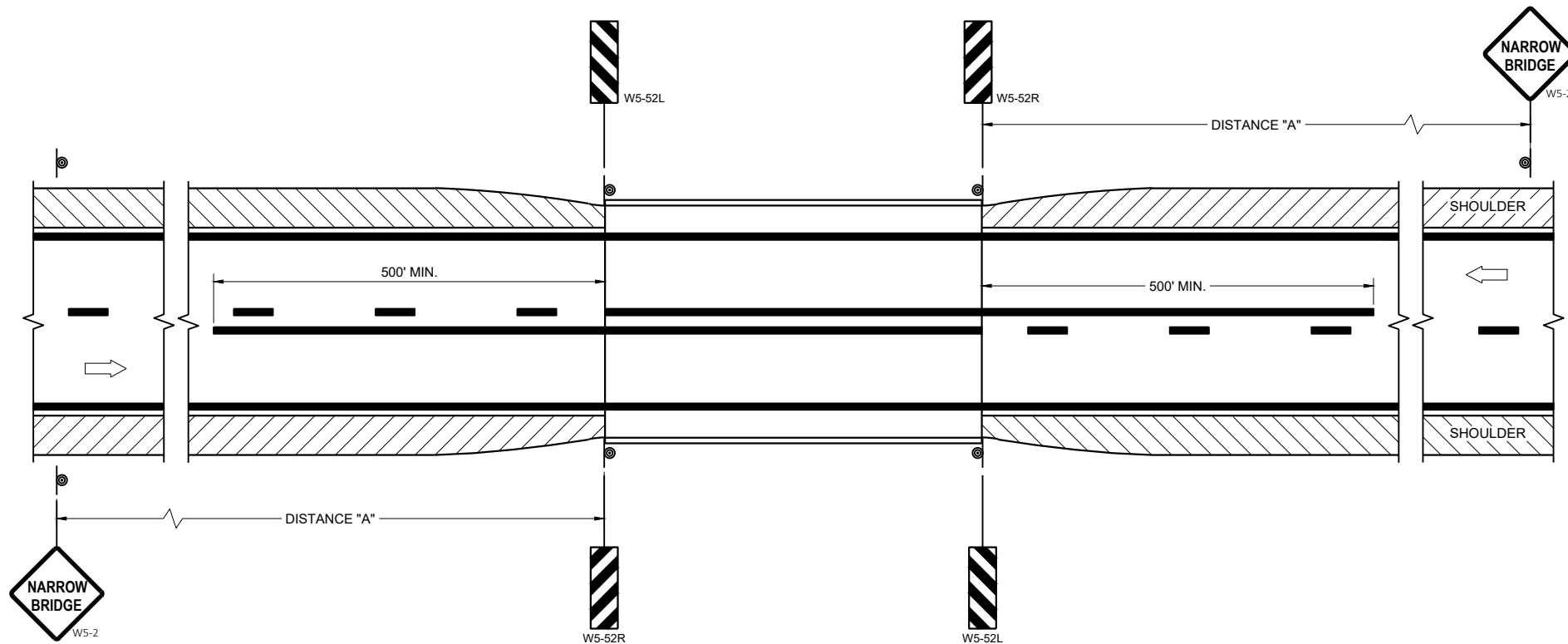
MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

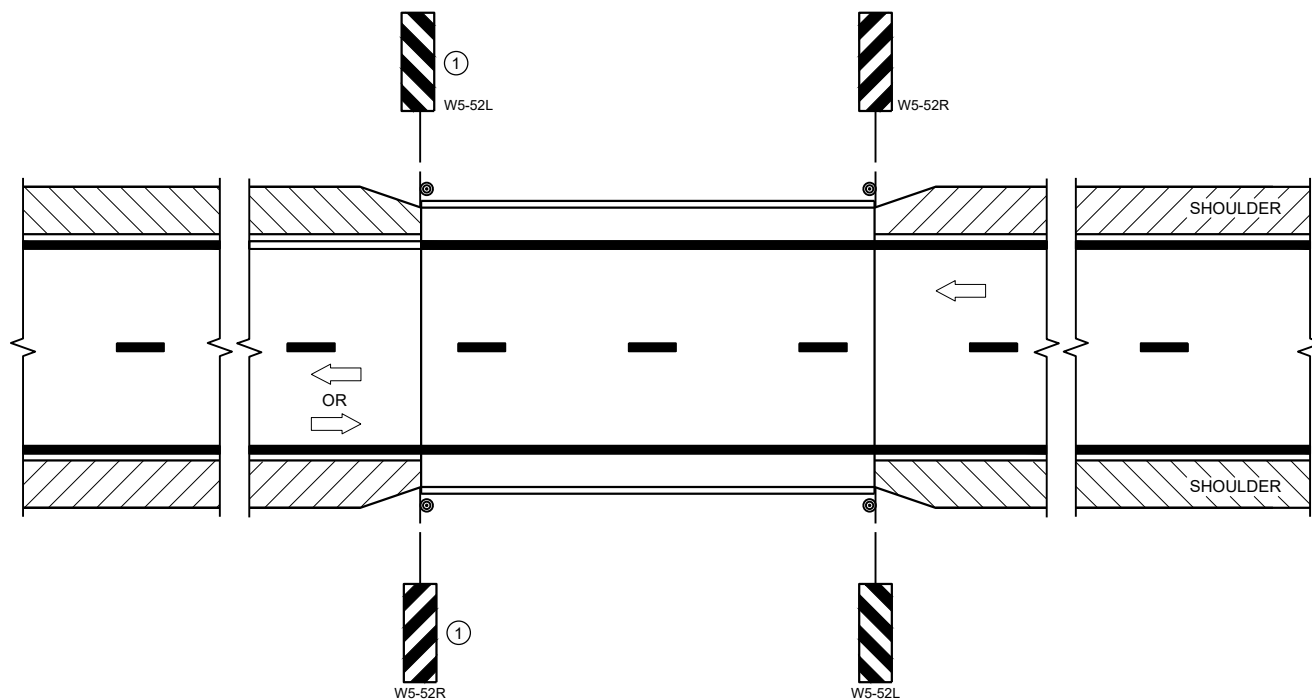
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SDD 15C02-09h

SDD 15C02-09h



SITUATION 1
 WARRANTING CRITERIA:
 BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

DISTANCE TABLE

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

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2023 /S/ Jeannie Silver
 DATE ROADWAY STANDARDS DEVELOPMENT
 UNIT SUPERVISOR




FHWA

GENERAL NOTES

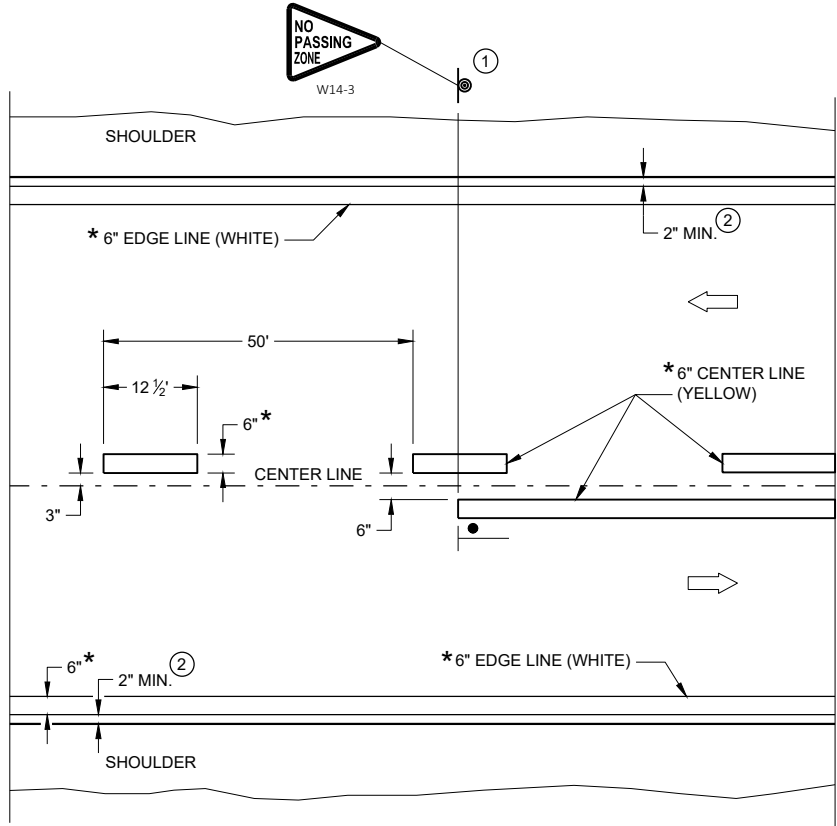
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

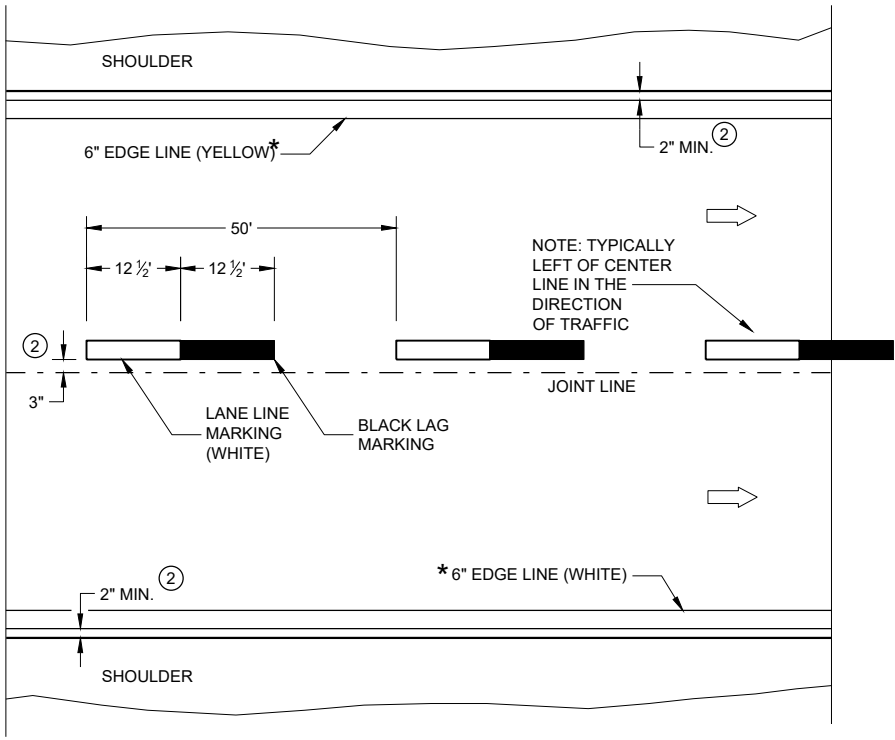
LEGEND

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

6

SDD 15C08-23a

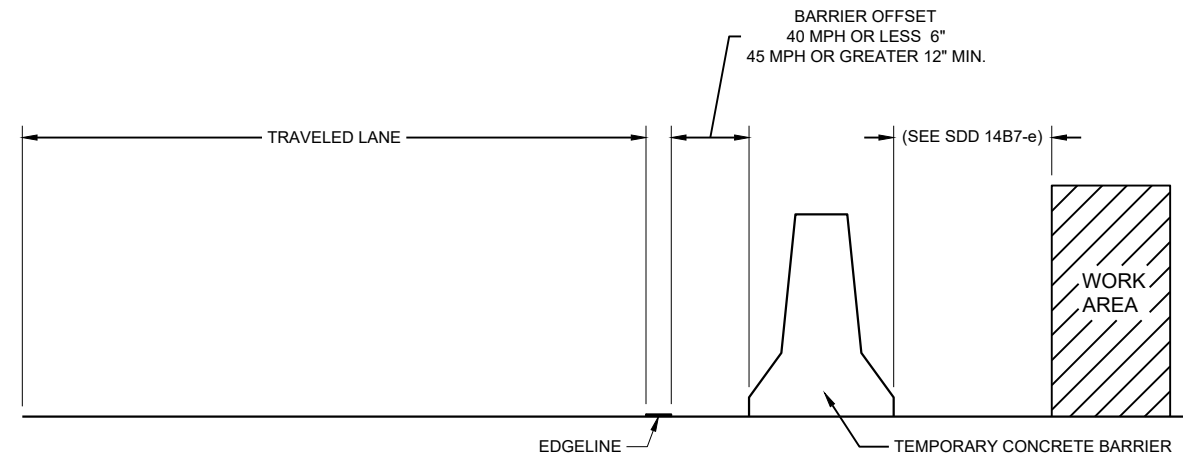
SDD 15C08-23a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA



TEMPORARY BARRIER OFFSET FROM EDGELINE

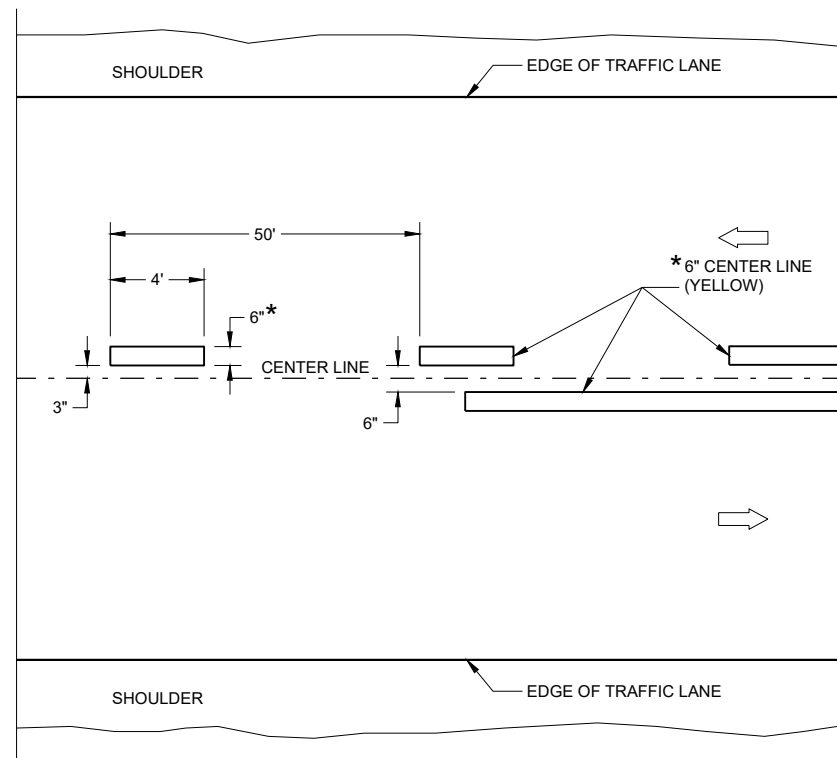
GENERAL NOTES

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

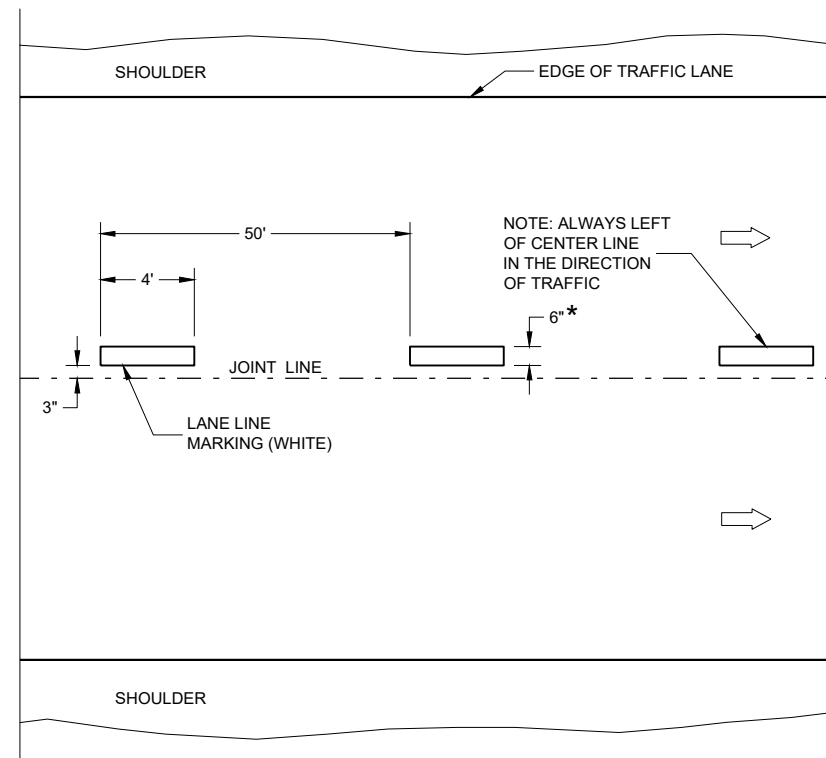
LEGEND

➡ DIRECTION OF TRAFFIC

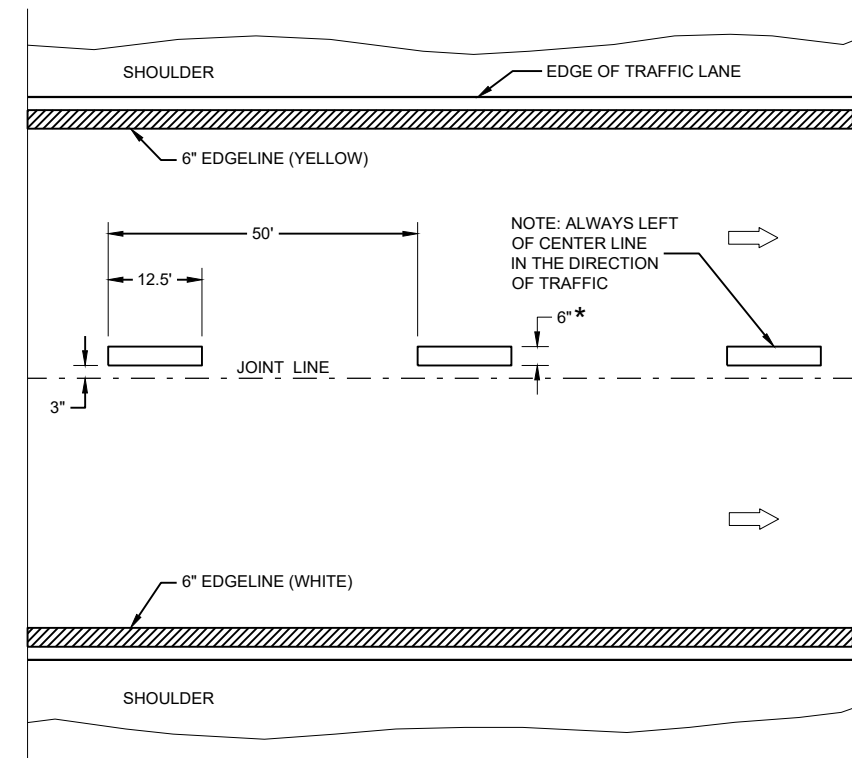
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

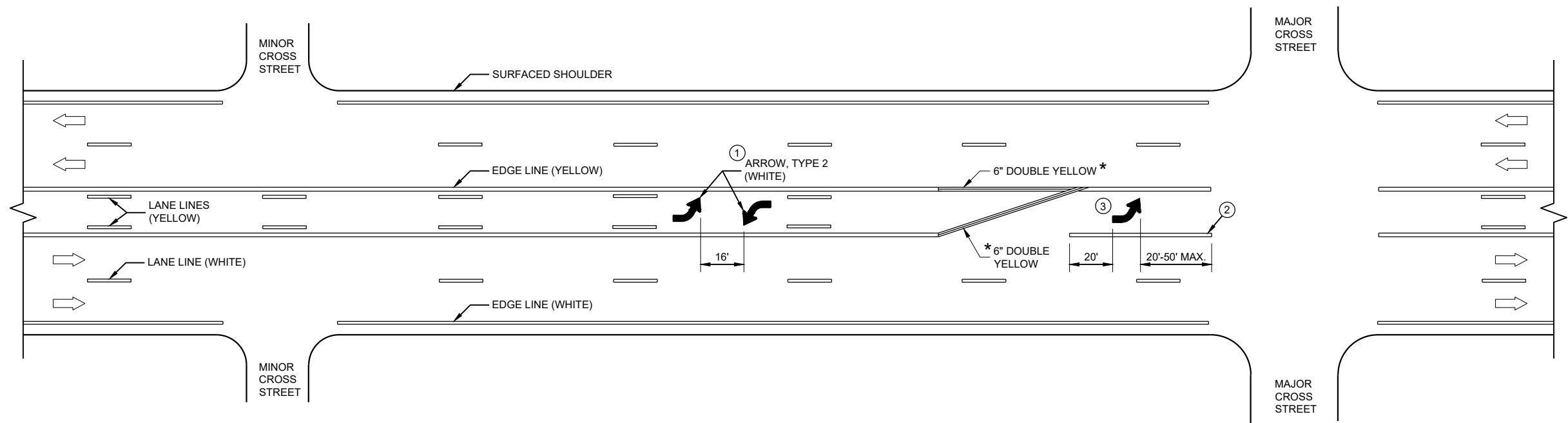
FHWA

GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

➡ DIRECTION OF TRAFFIC

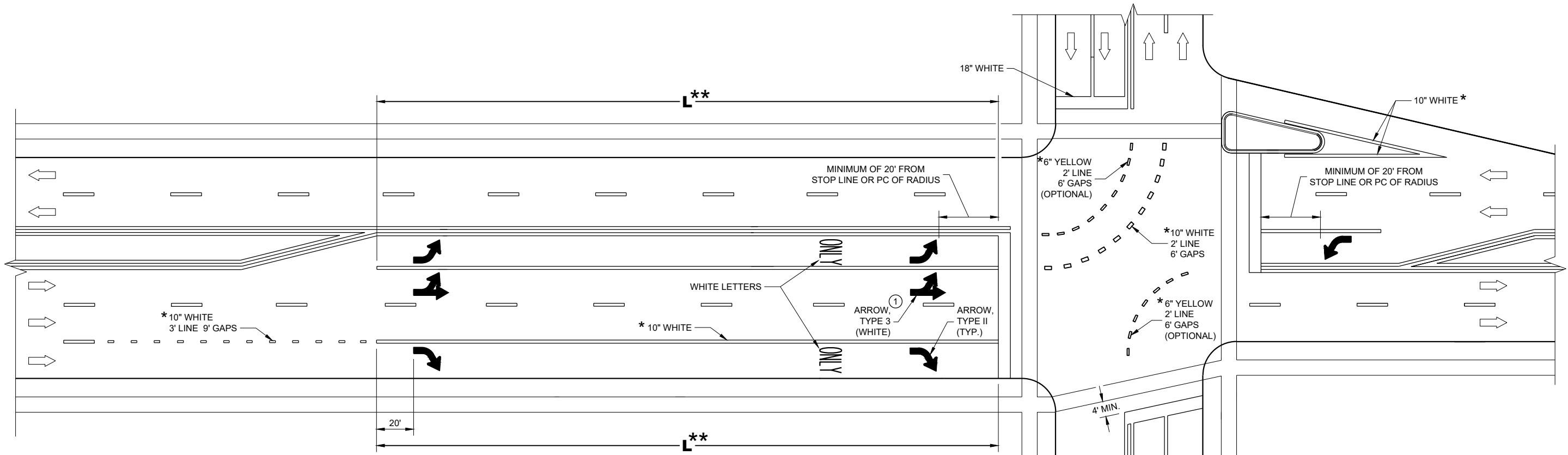
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY LEFT TURN LANE

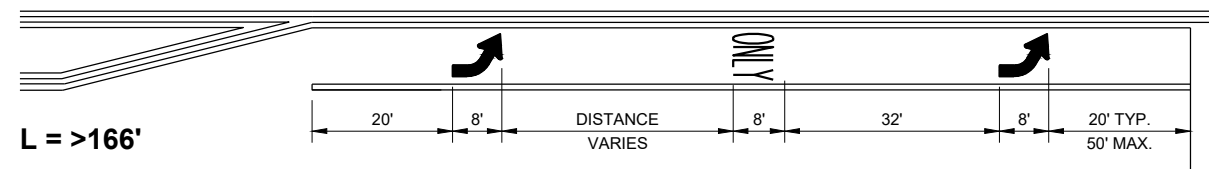
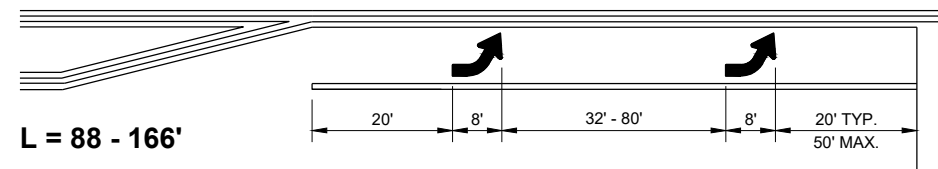
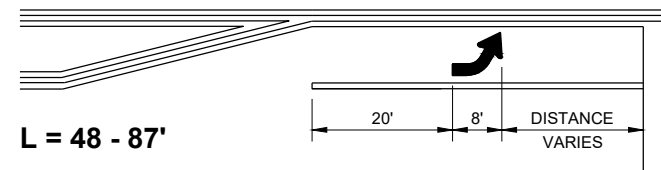
**PAVEMENT MARKING
(TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TURN LANE OPTIONS

LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

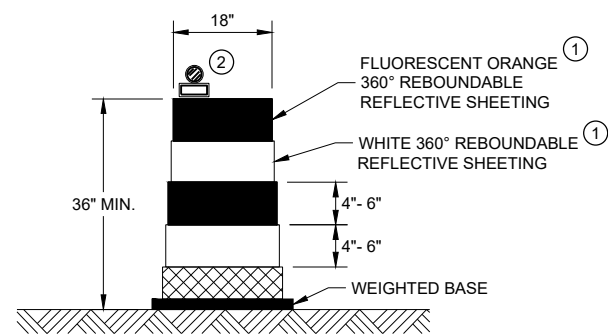
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

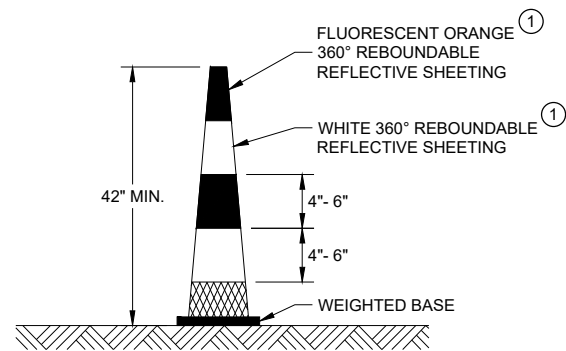
**PAVEMENT MARKING
(TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



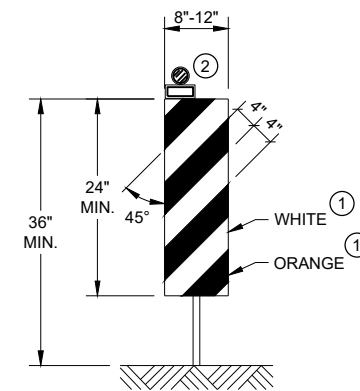
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"

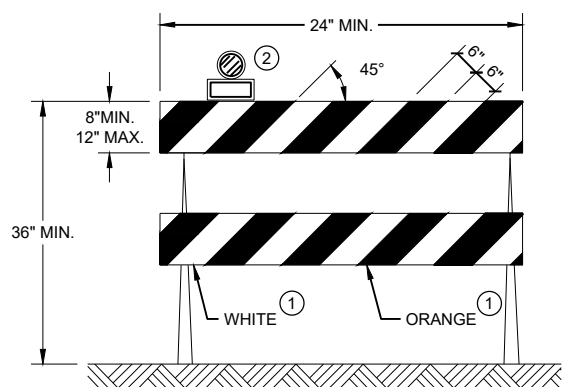


VERTICAL PANEL

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

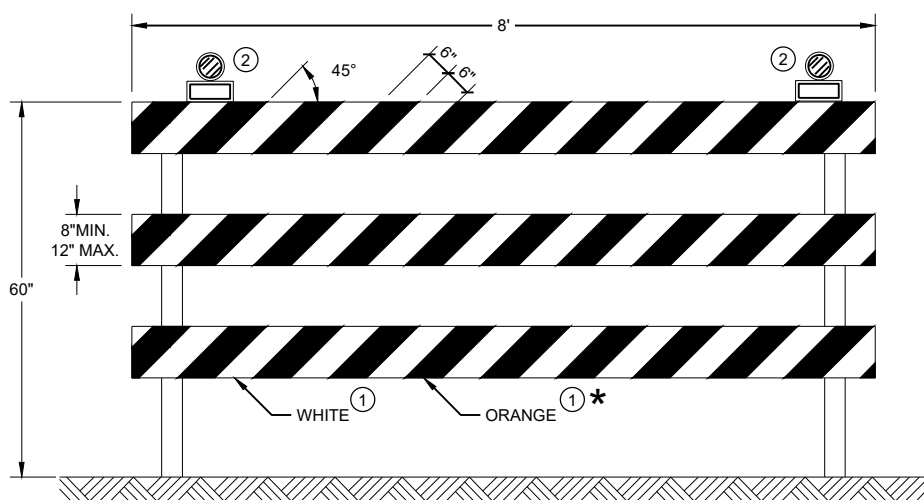
GENERAL NOTES

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2022 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER
 FHWA

GENERAL NOTES

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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









IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

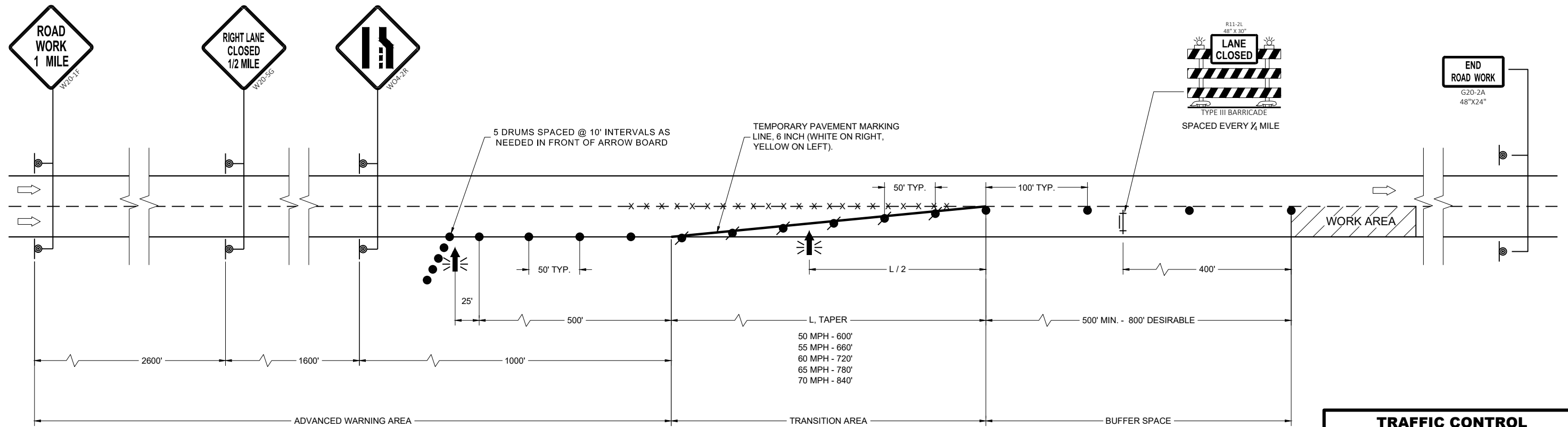
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

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)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD

6

SDD 15D12-12a



6

SDD 15D12-12a

TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED September 2023 DATE	/s/ Andrew Heidtke ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

GENERAL NOTES

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

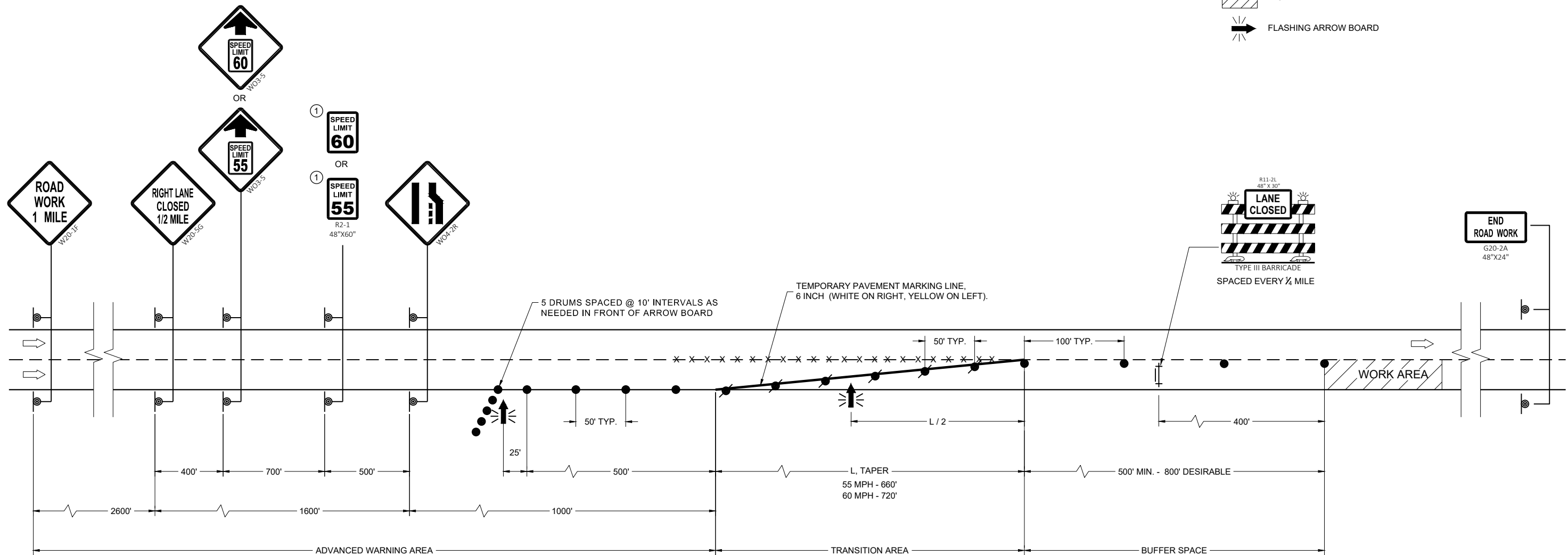
① A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

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)
- * * * REMOVING PAVEMENT MARKINGS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ➡ FLASHING ARROW BOARD

6

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SDD 15D12-12b

SDD 15D12-12b

TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED September 2023 DATE	/s/ Andrew Heidtke ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD
-  PORTABLE TRAFFIC SENSOR (PTS)
-  FLASHING BEACON SIGN

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, INCLUDING FBS AND DEVICES 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 MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS. WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

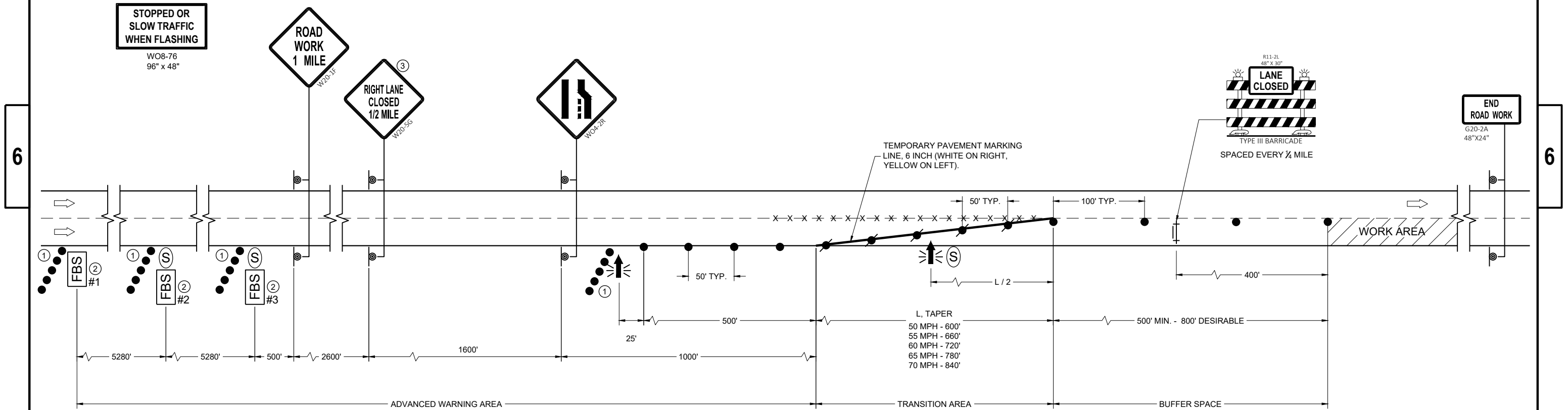
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ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON THE FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

- ① 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.
- ② IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDES OF THE ROADWAY.
- ③ IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.



SDD 15D12-12d

SDD 15D12-12d

TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2023 DATE /S/ Erin Schwark
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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 SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

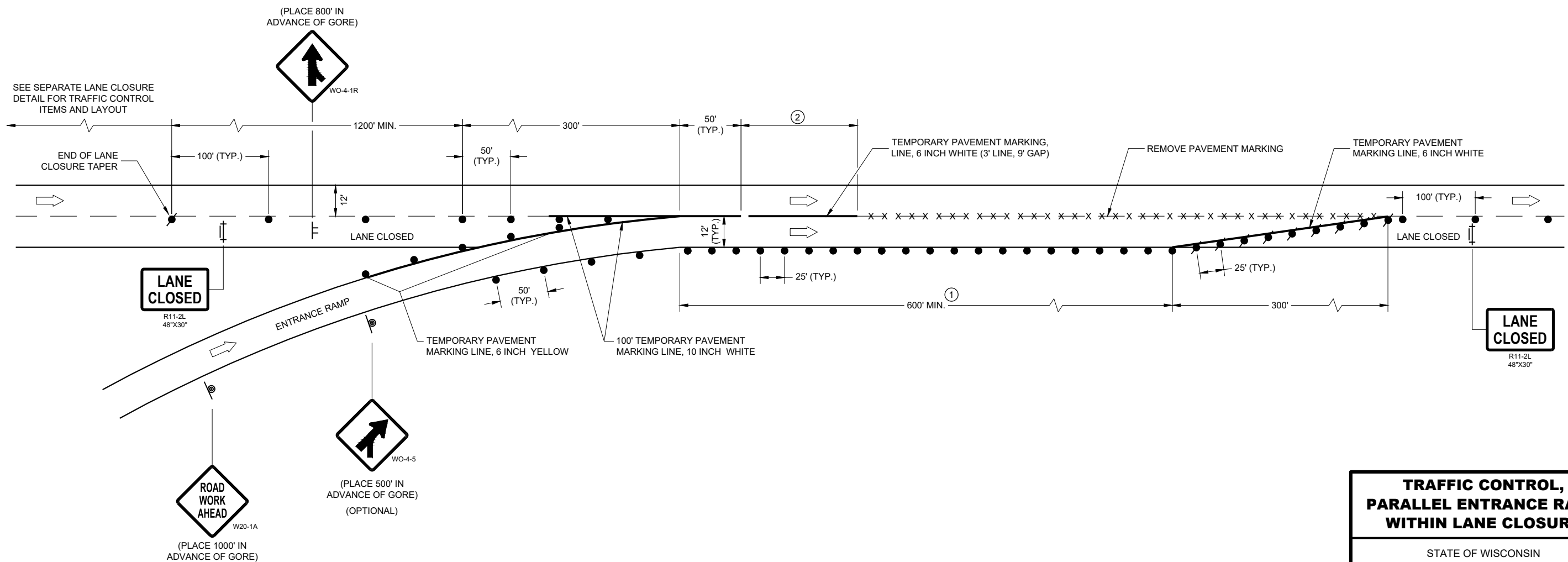
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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

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

- ① EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.
- ② END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	








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SDD 15D15-07a

SDD 15D15-07a

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

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

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS /OR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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.

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

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

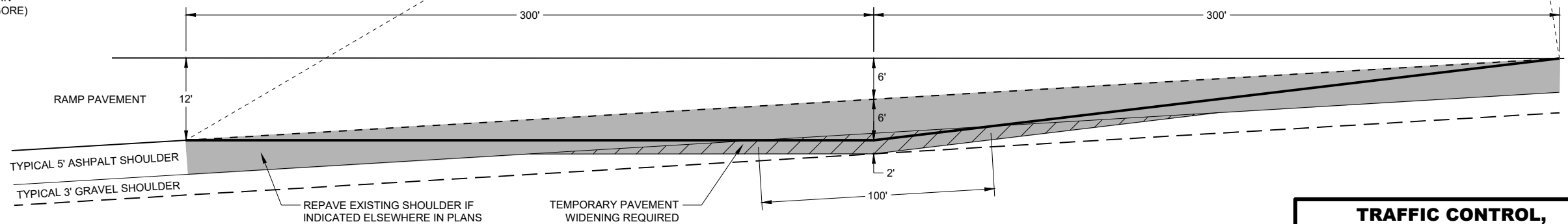
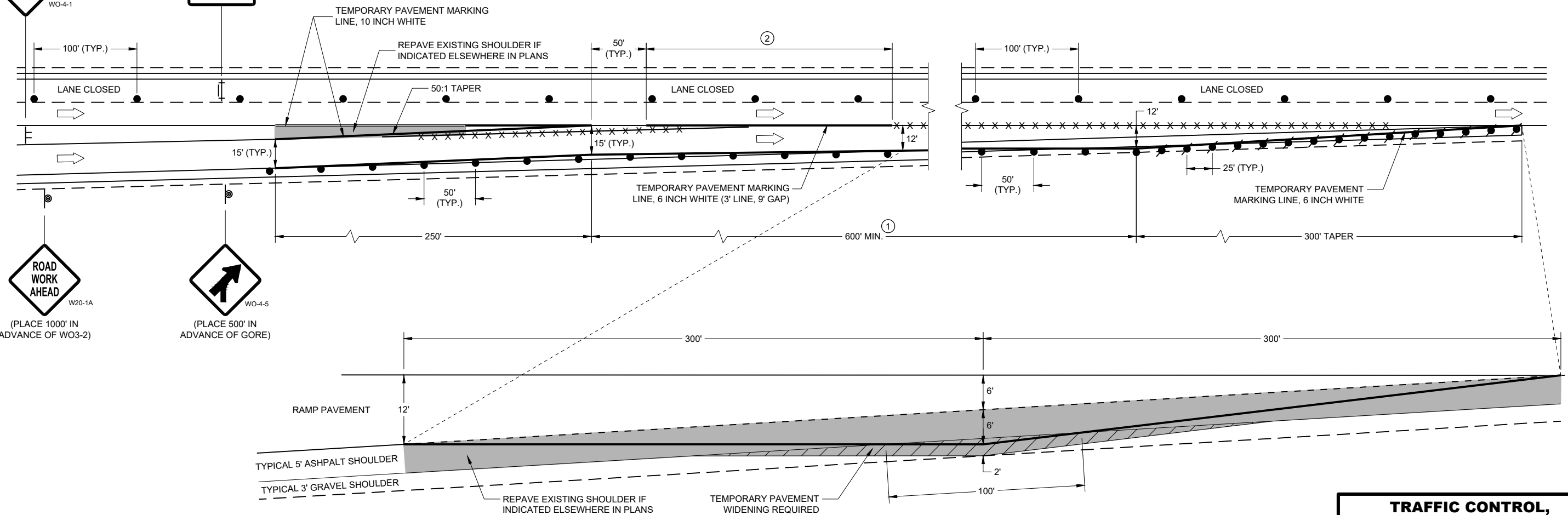
- ① EXTEND THE LENGTH OF THE MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.
- ② END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.

(PLACE 800' IN ADVANCE OF GORE)



(PLACE 1000' IN ADVANCE OF WO3-2)

(PLACE 500' IN ADVANCE OF GORE)



TEMPORARY PAVEMENT DETAIL
(EXISTING RAMP DIMENSIONS MAY VARY, ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION









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

FHWA

SDD 15D15-07b

SDD 15D15-07b

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  FLAGS, 16" X 16" MIN., ORANGE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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 SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

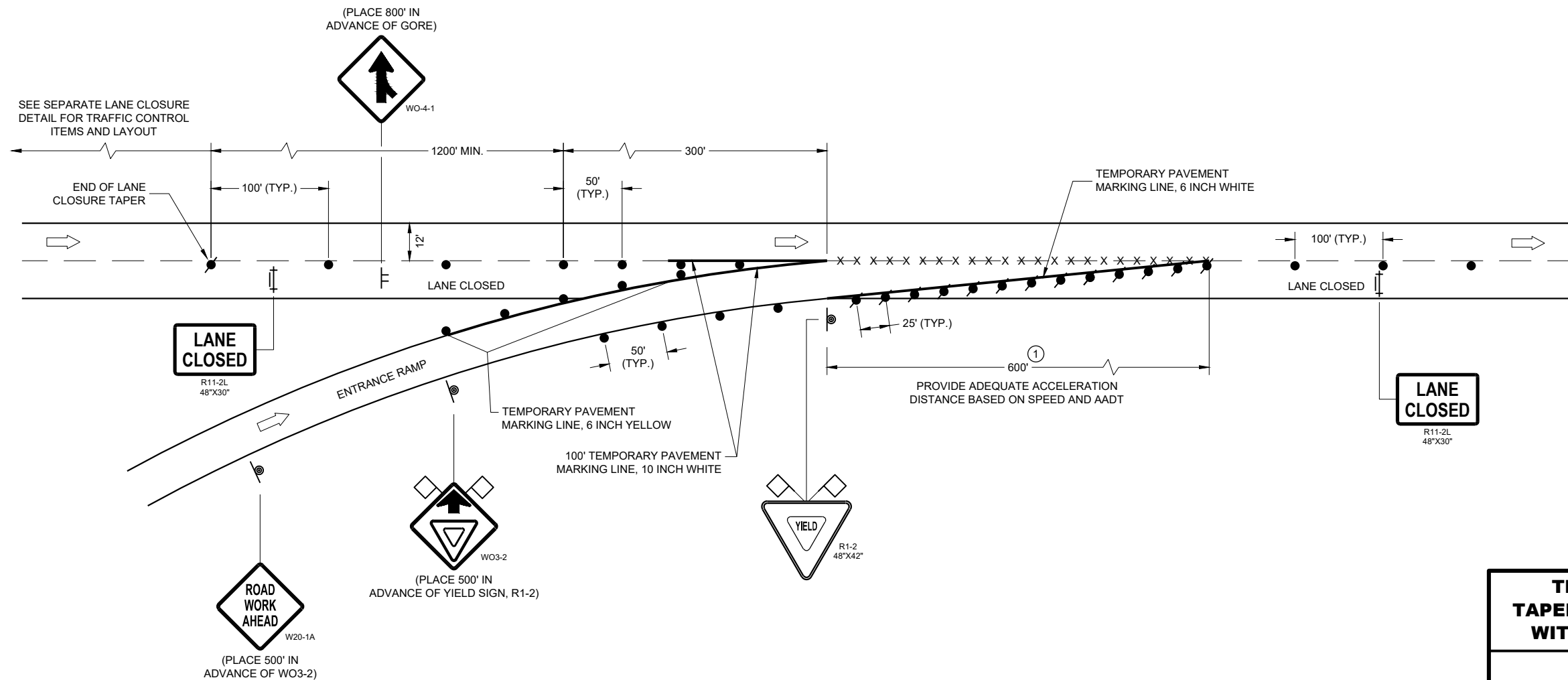
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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

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

① CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



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SDD 15D15-07c

SDD 15D15-07c








**TRAFFIC CONTROL,
TAPERED ENTRANCE RAMP
WITHIN LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  FLAGS, 16" X 16" MIN., ORANGE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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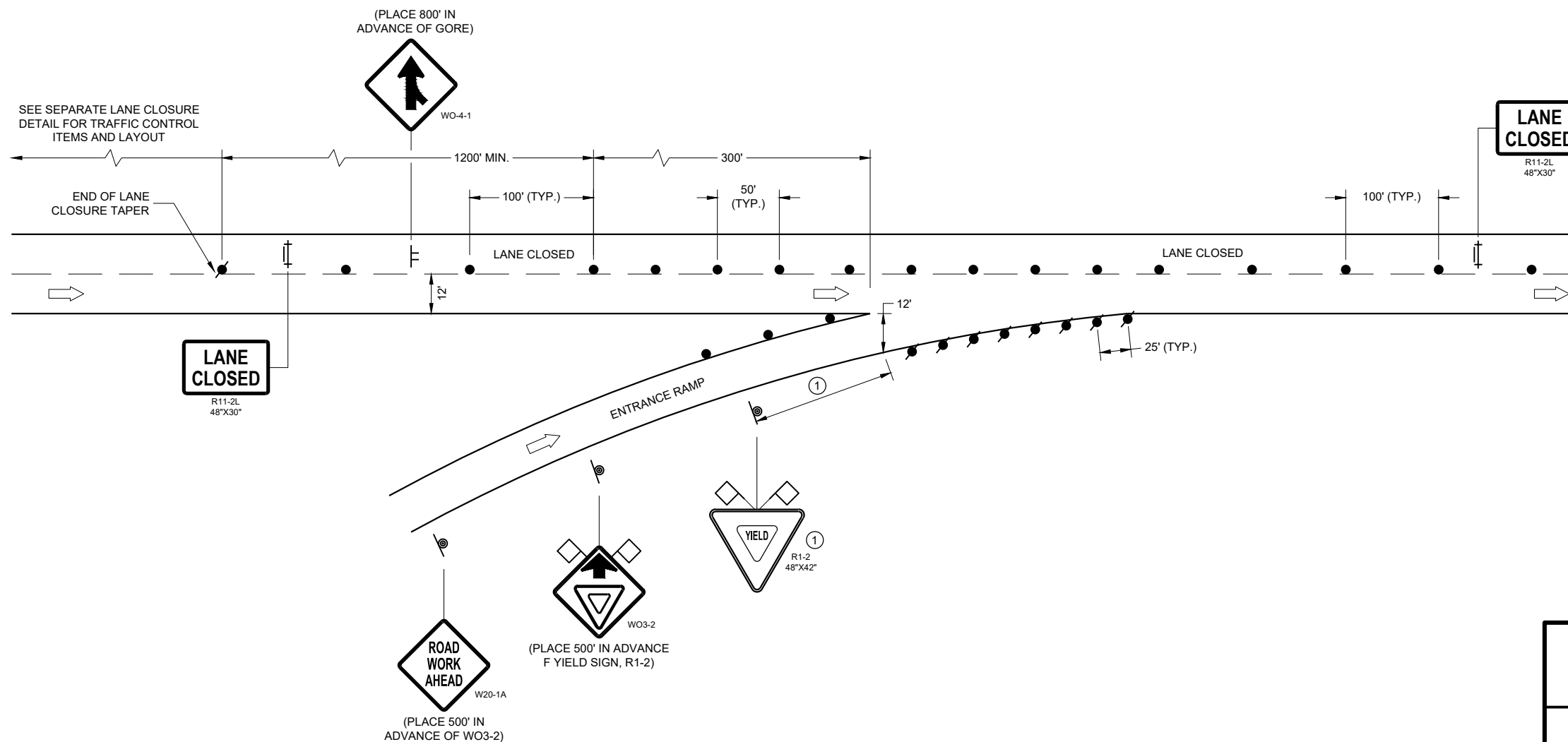
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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

- ① PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.



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SDD 15D15-07d

SDD 15D15-07d

TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊞ SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ×-×-× REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- ⊞ TYPE III BARRICADE WITH ATTACHED SIGN
- ➡ DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

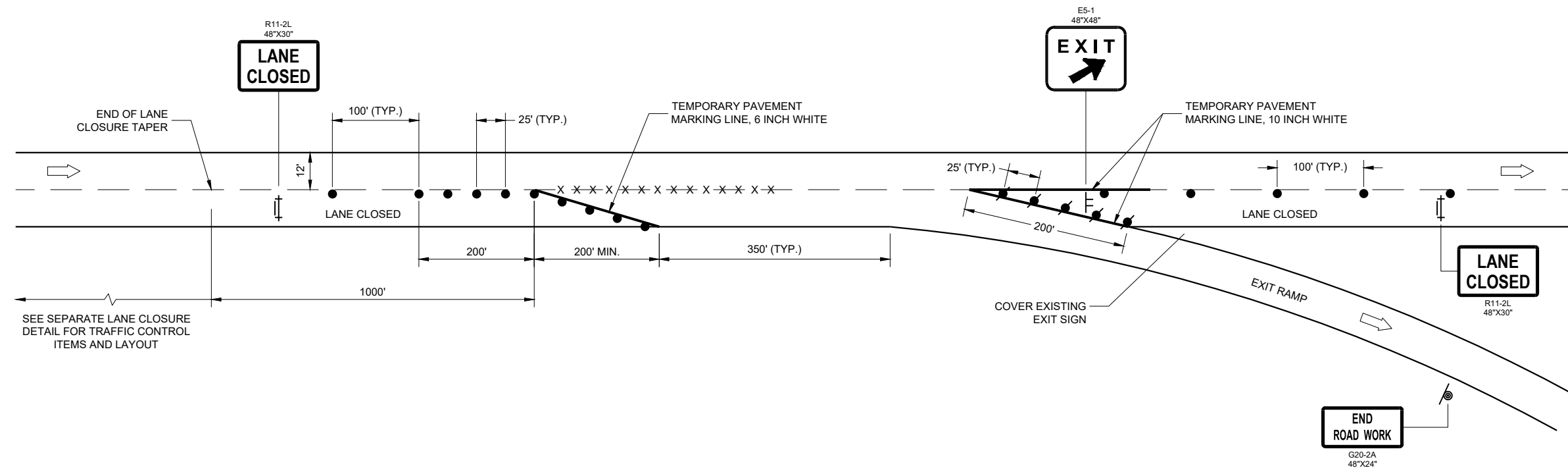
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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.

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

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



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SDD 15D15-07e

SDD 15D15-07e

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

- † TYPE III BARRICADE
- †† TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC

GENERAL NOTES

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

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 SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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.

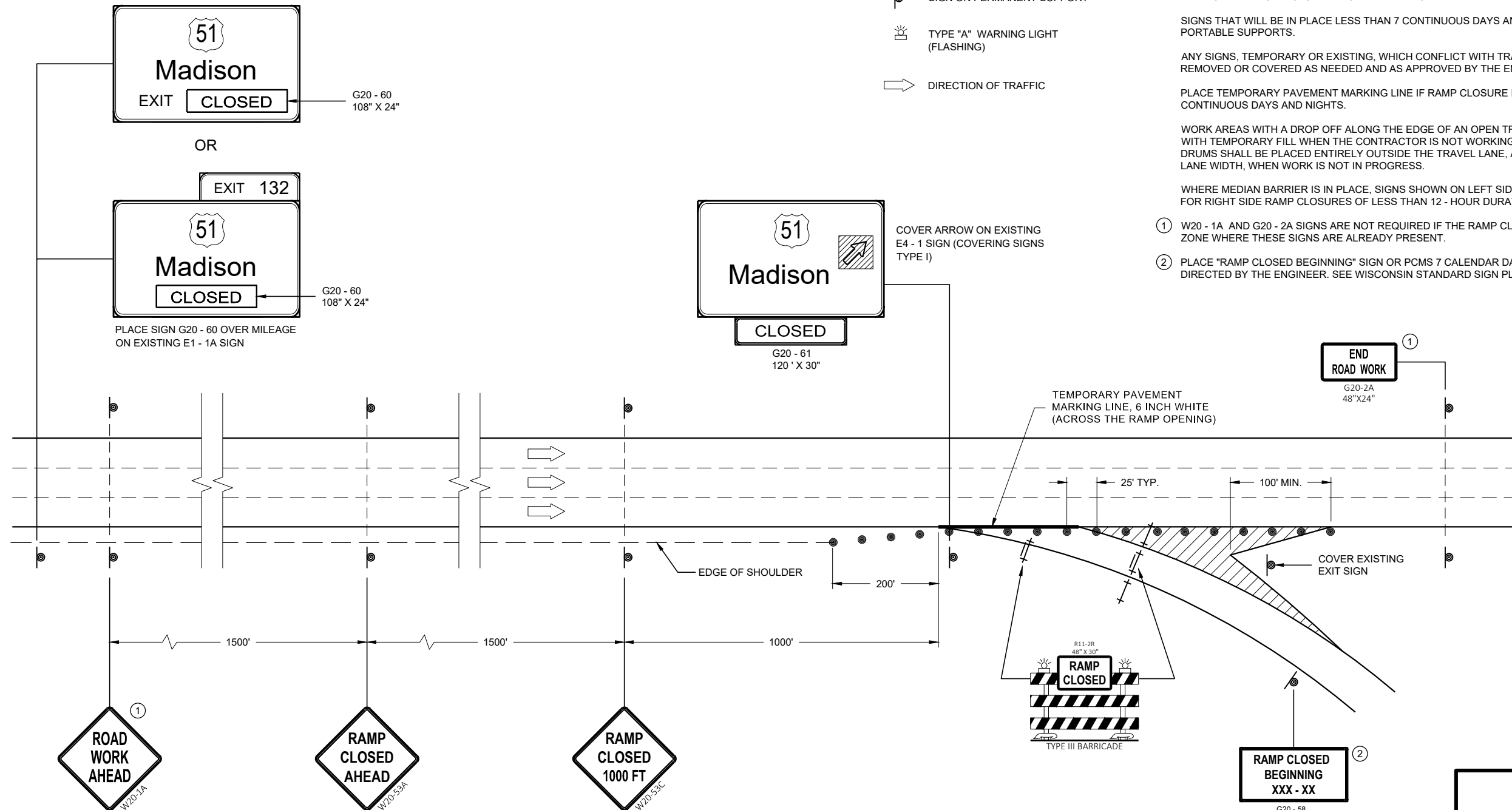
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

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

② PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.












**TRAFFIC CONTROL,
EXIT RAMP CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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.

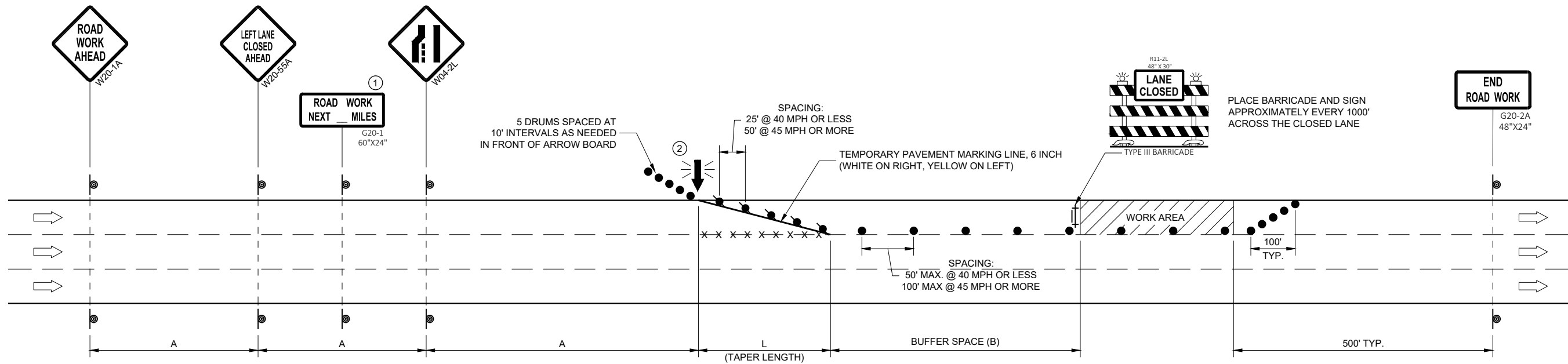
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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.



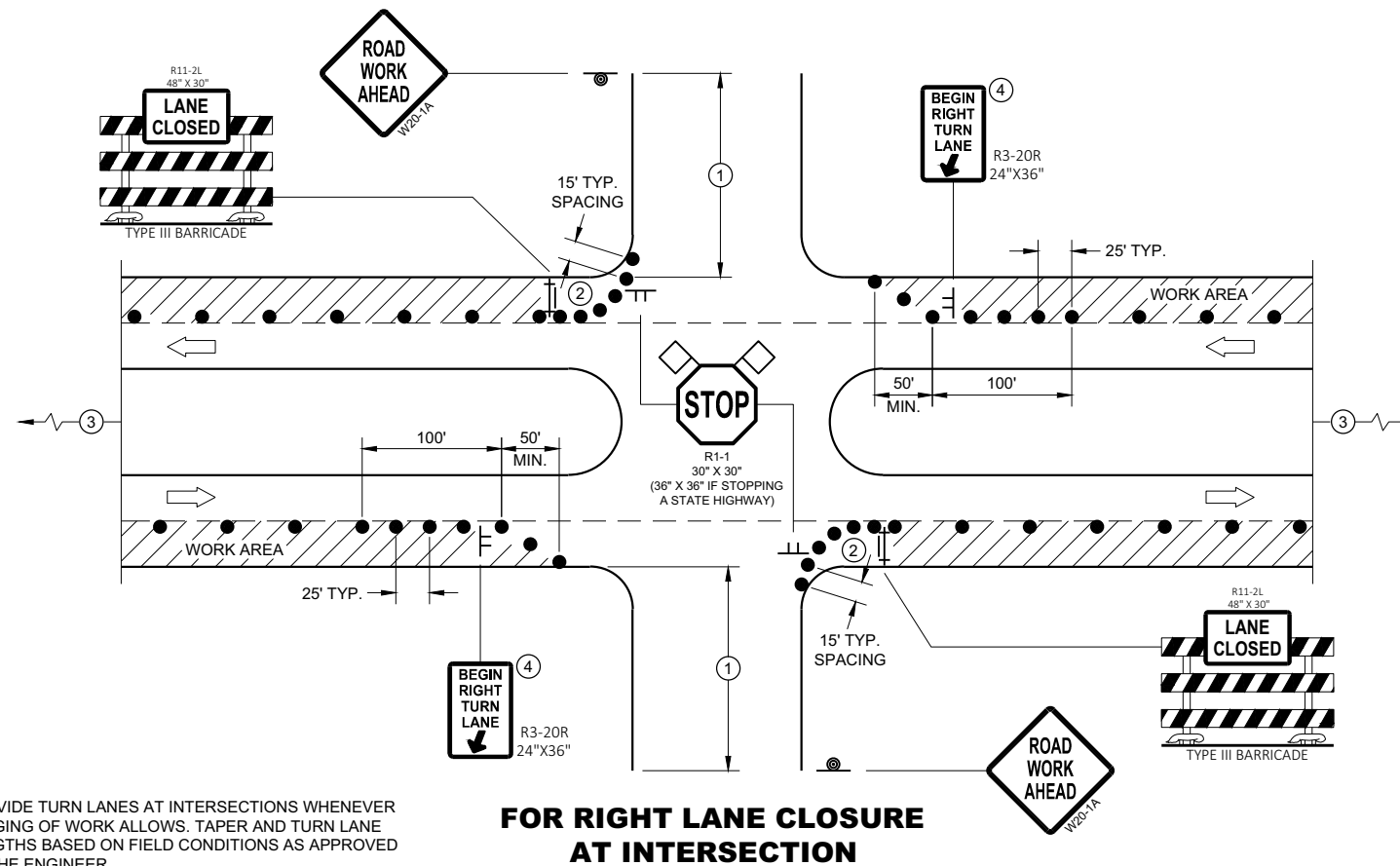
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

GENERAL NOTES

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

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

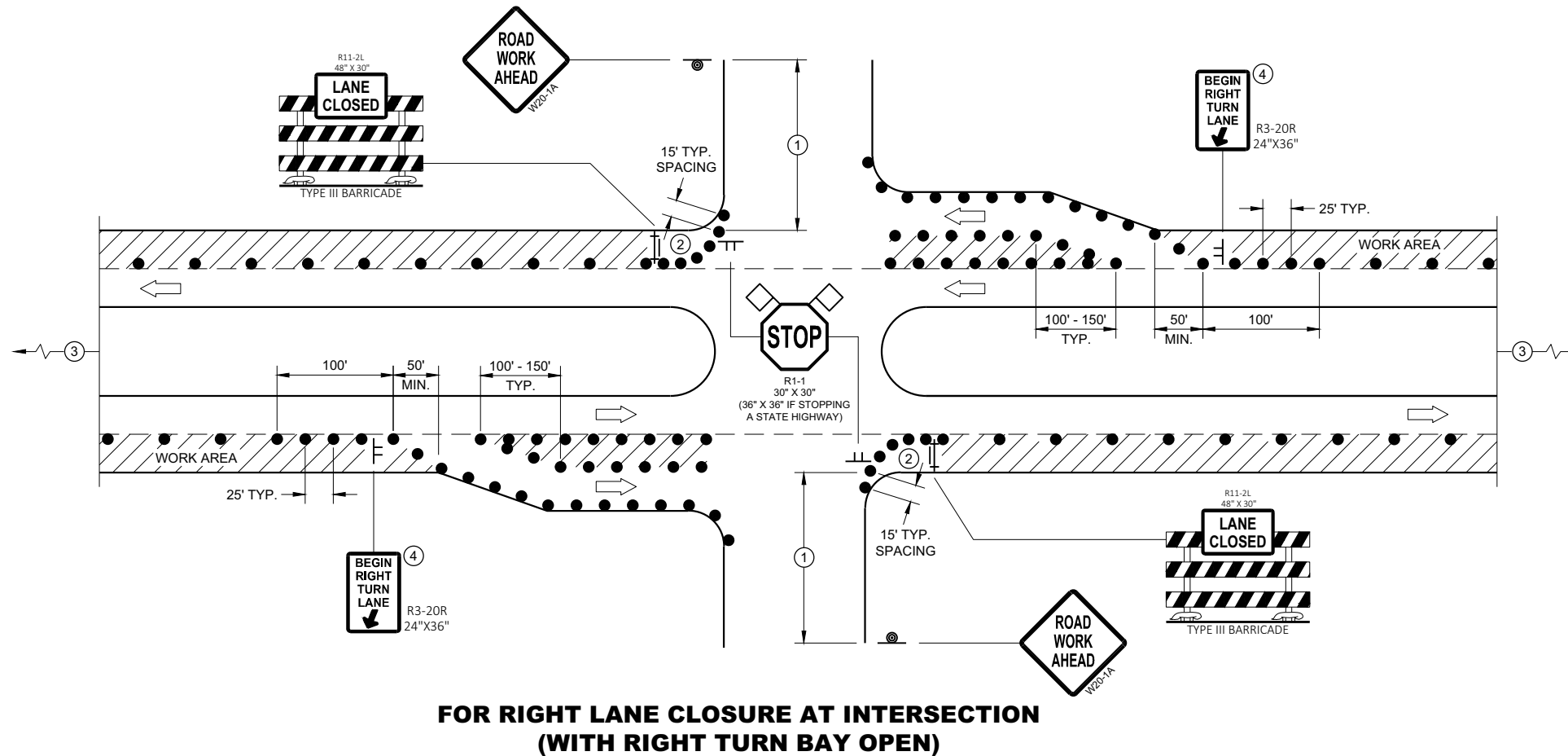
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

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.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

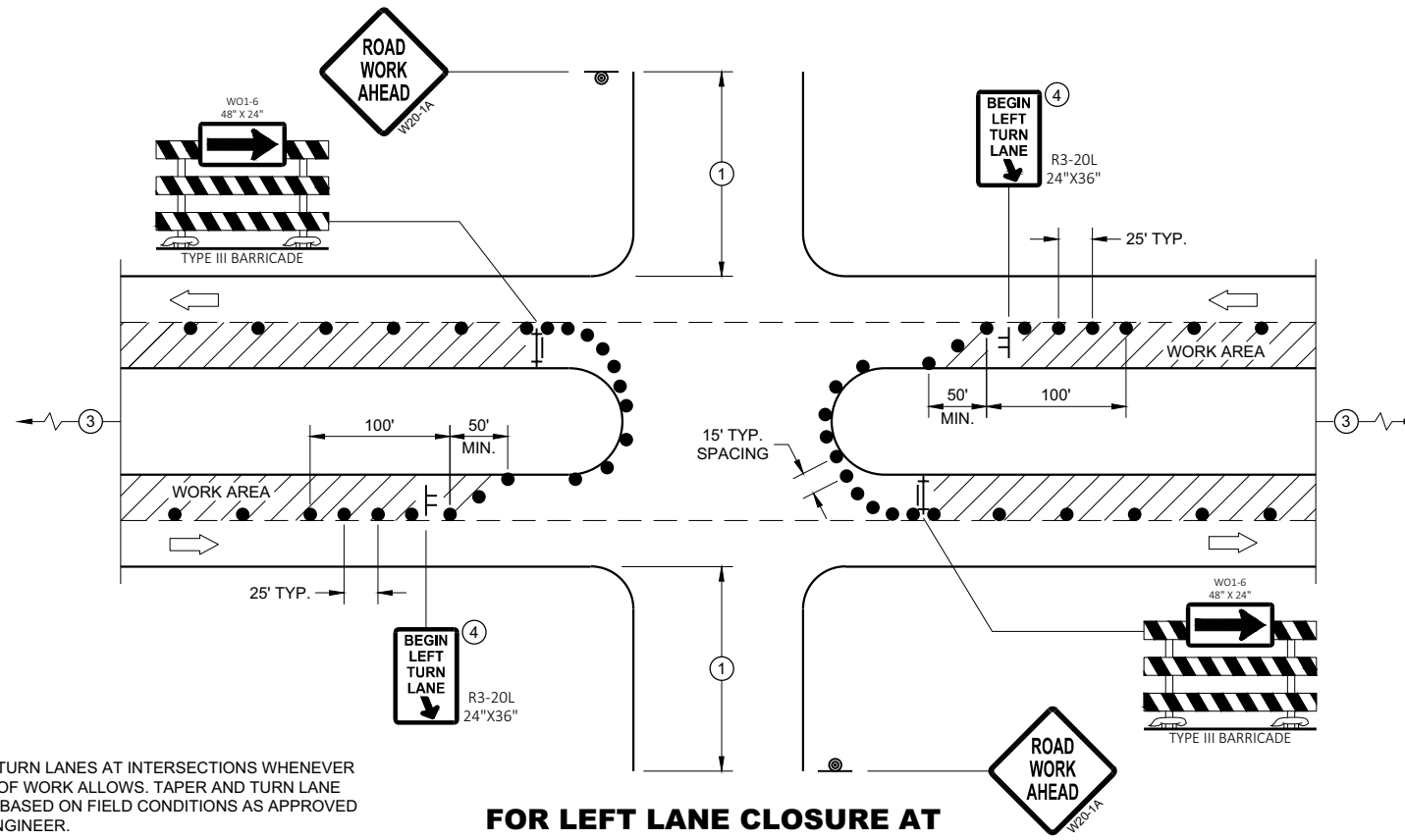


LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

**TRAFFIC CONTROL,
INTERSECTION WITHIN SINGLE
RIGHT LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

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

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

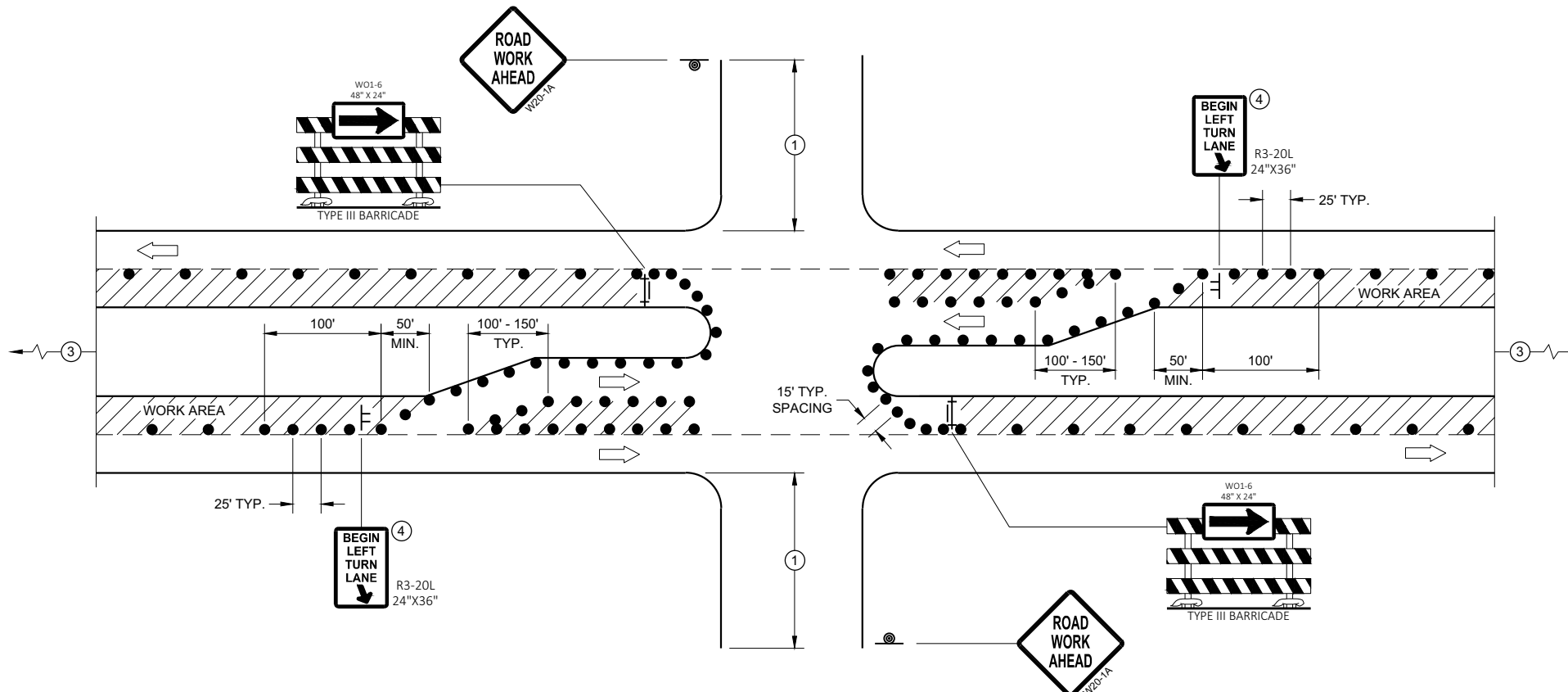
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

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.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

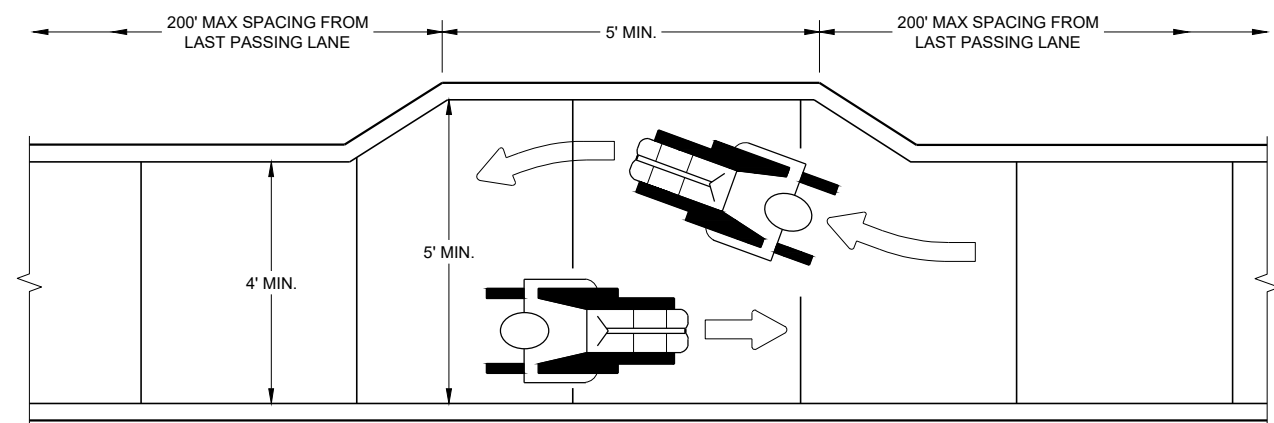


FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

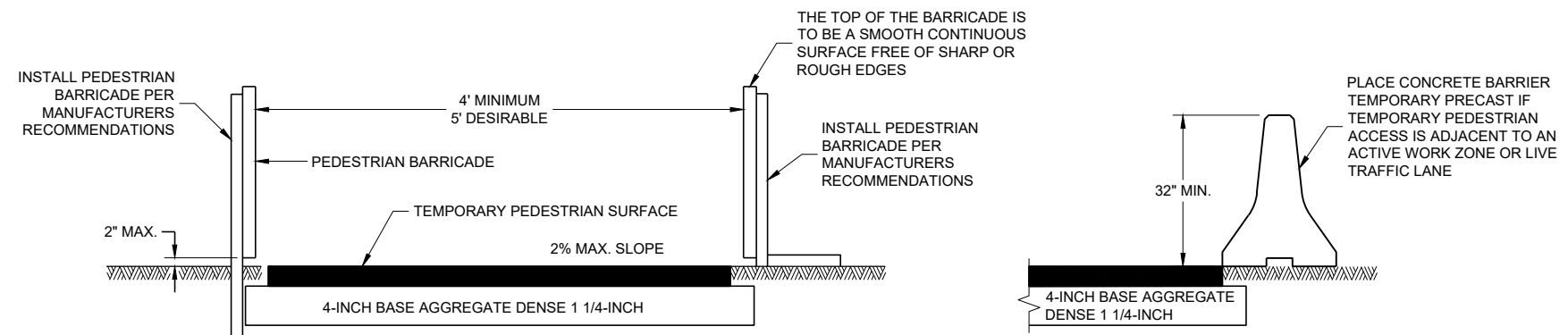
LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



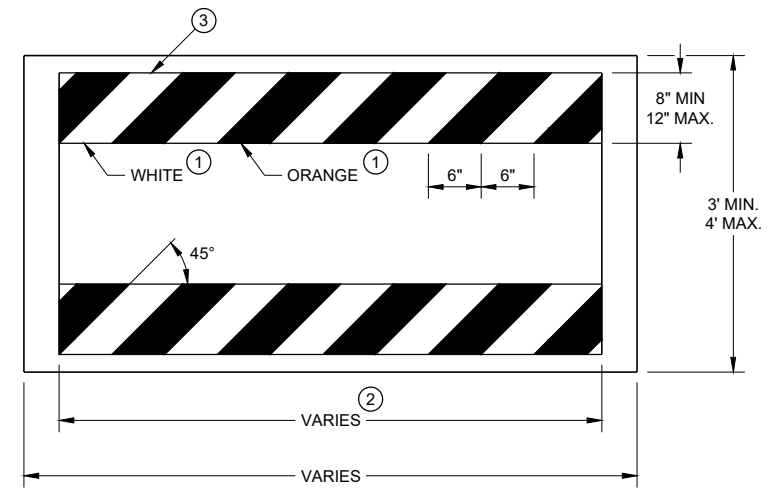
NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
- * USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



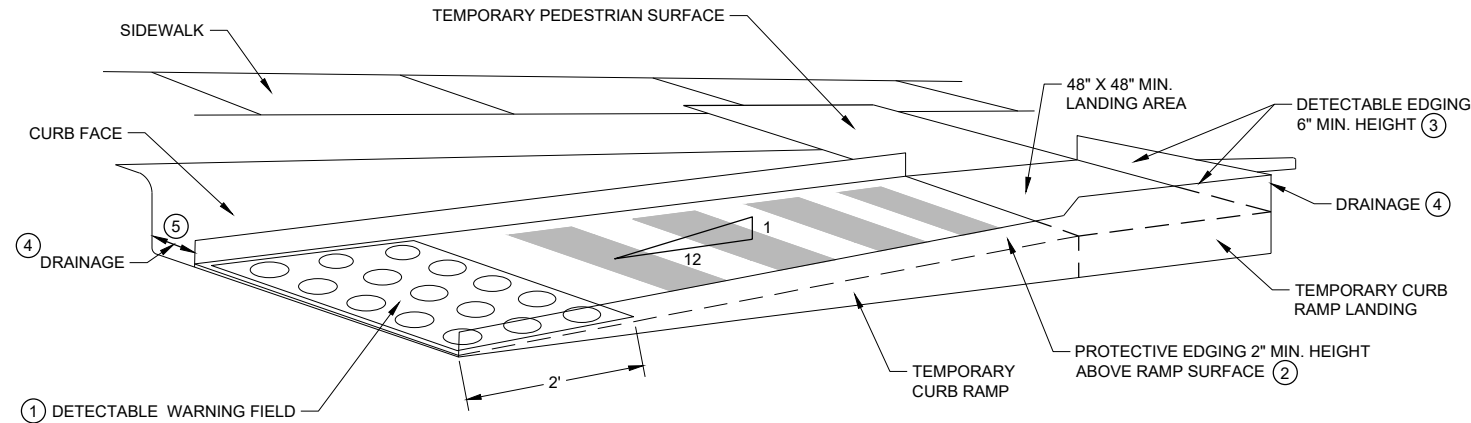
TEMPORARY PEDESTRIAN BARRICADE*

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

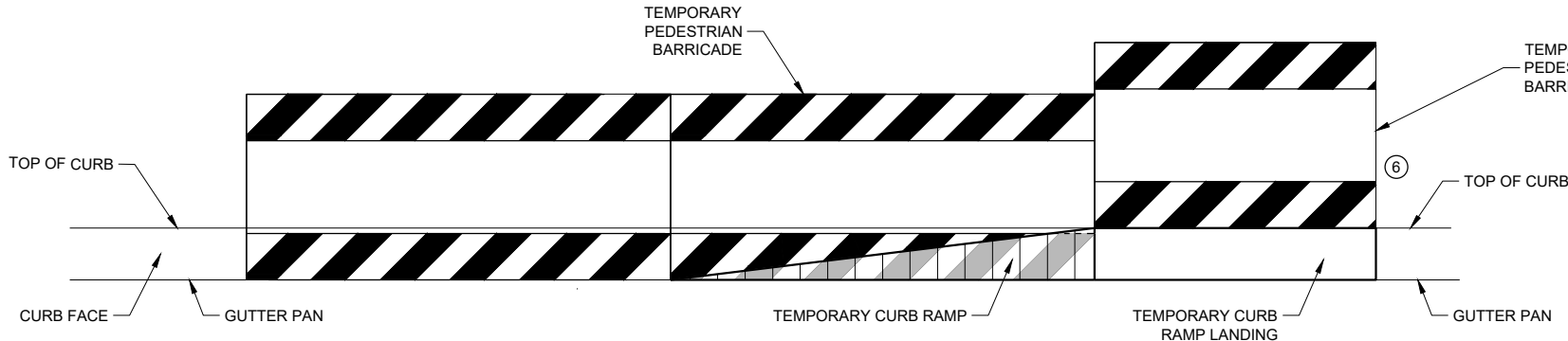
GENERAL NOTES

CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
 CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
 CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
 LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
 CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

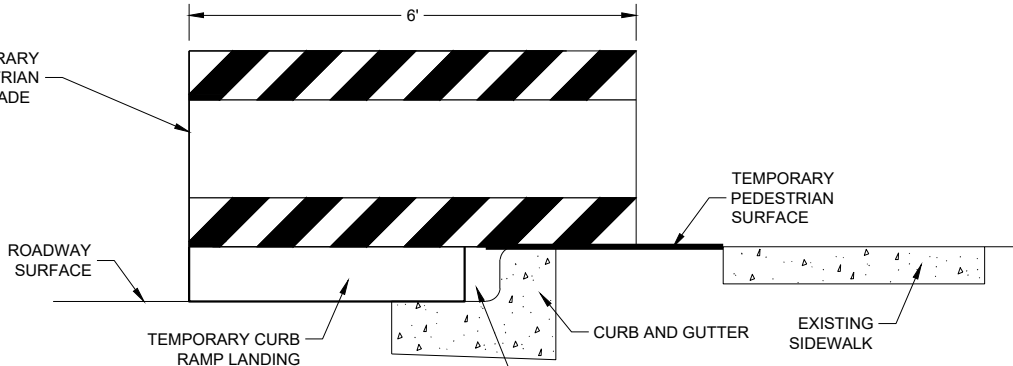
- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
- ⑥ IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.



PERSPECTIVE VIEW



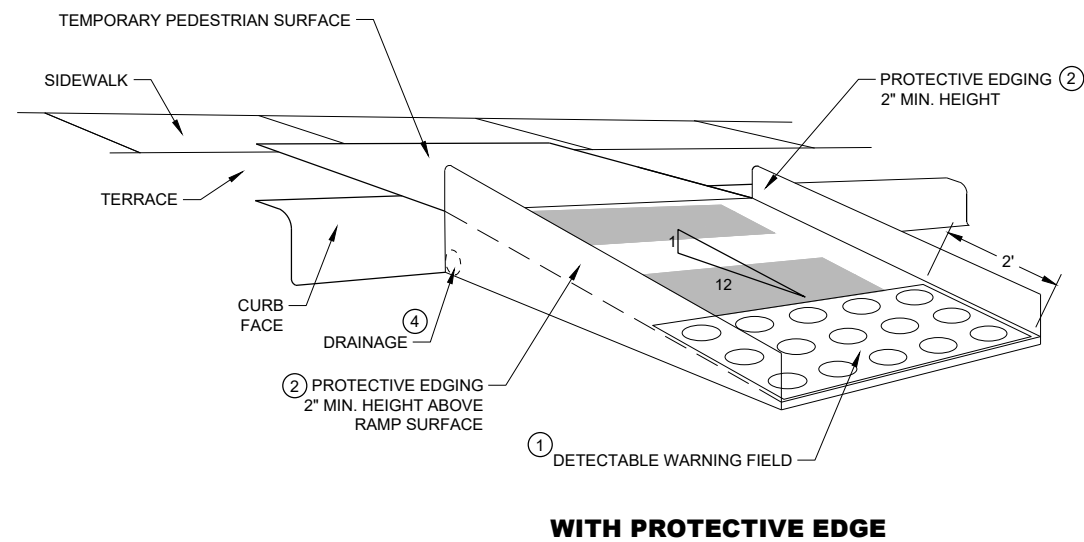
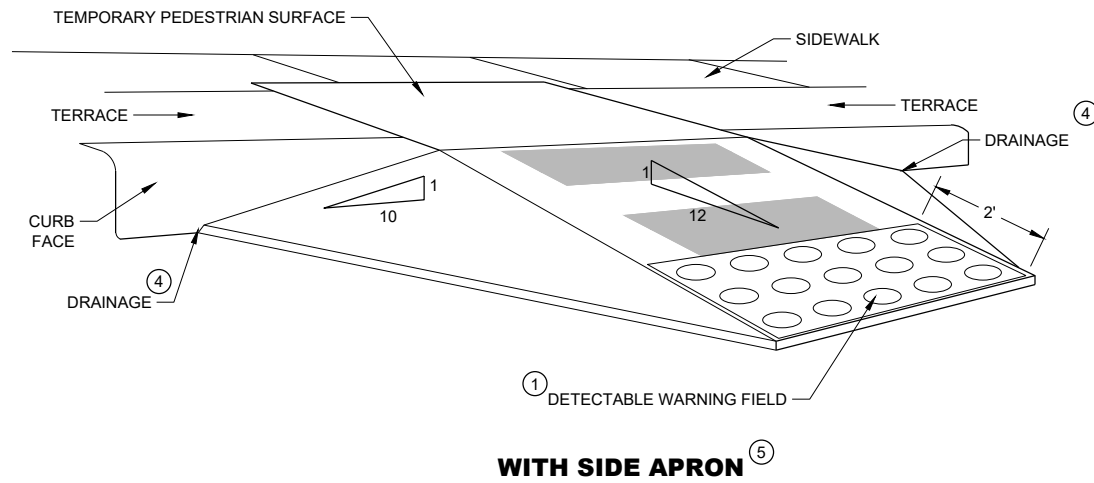
FRONT VIEW



SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB

<p>TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>



TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

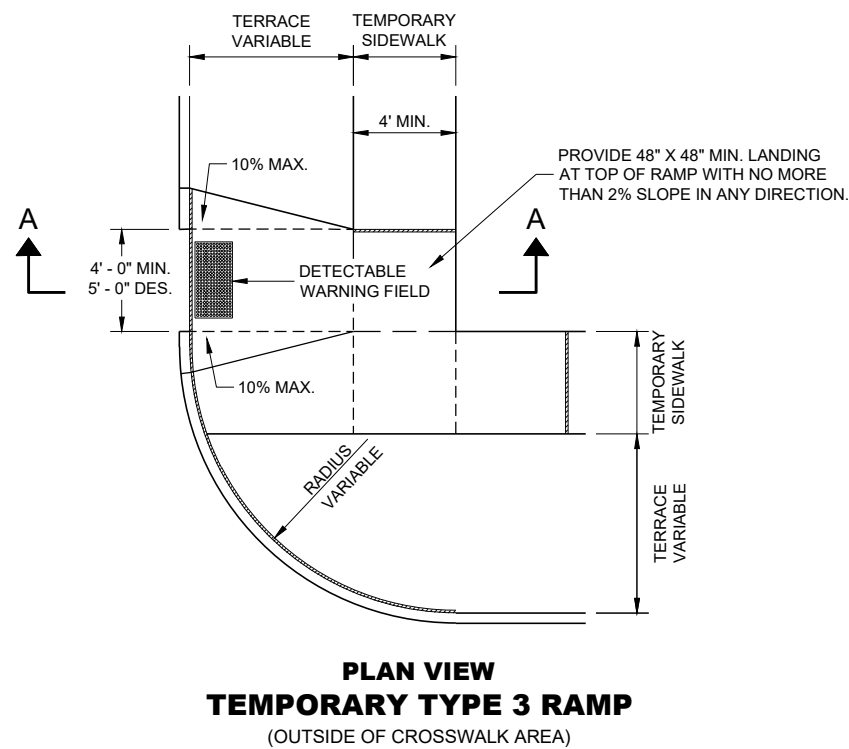
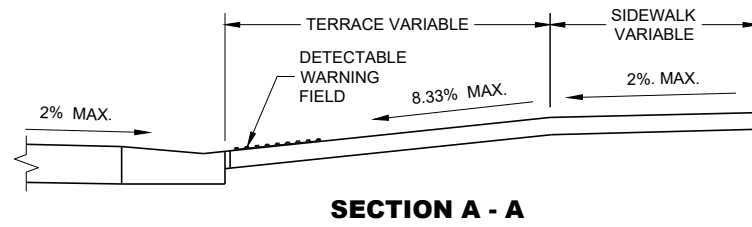
LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

GENERAL NOTES

- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
- ★ USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



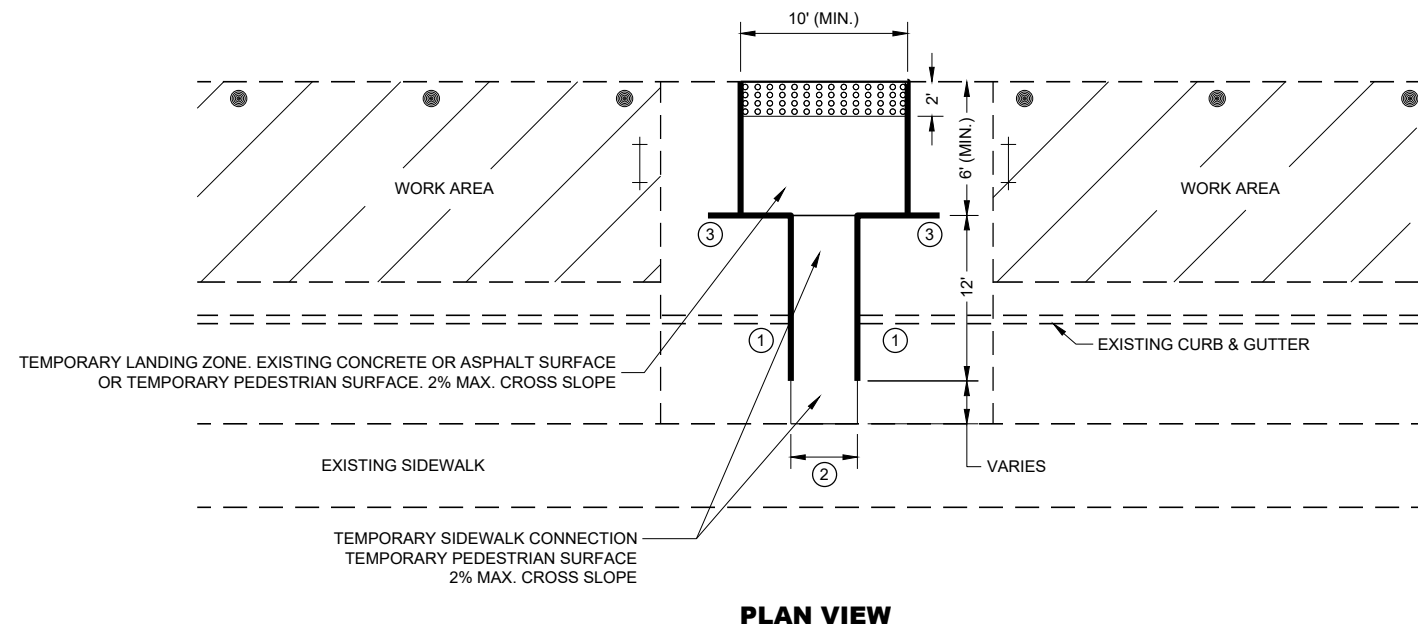
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SDD 15D30-09d

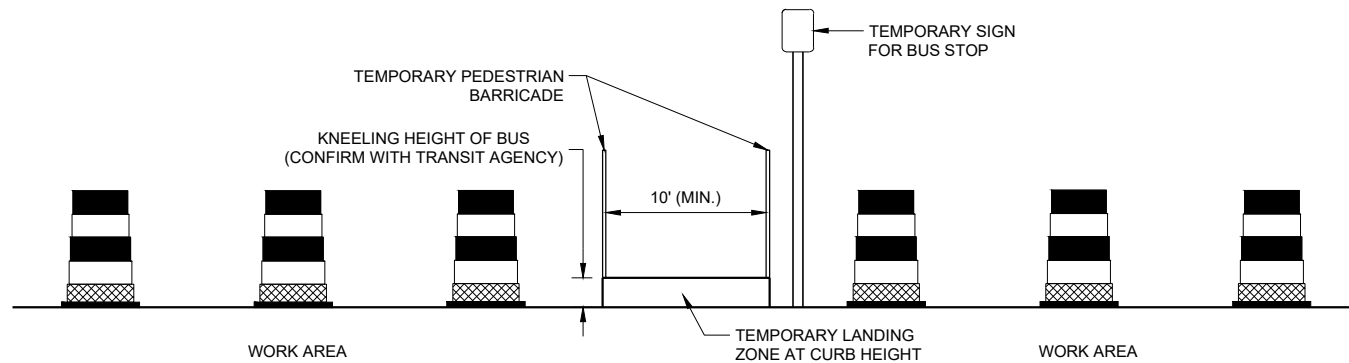
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TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	



PLAN VIEW

TEMPORARY BUS STOP PAD



GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.
- PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMP OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
- CURB RAMP AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

- ① DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ② 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.
- ③ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.







LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

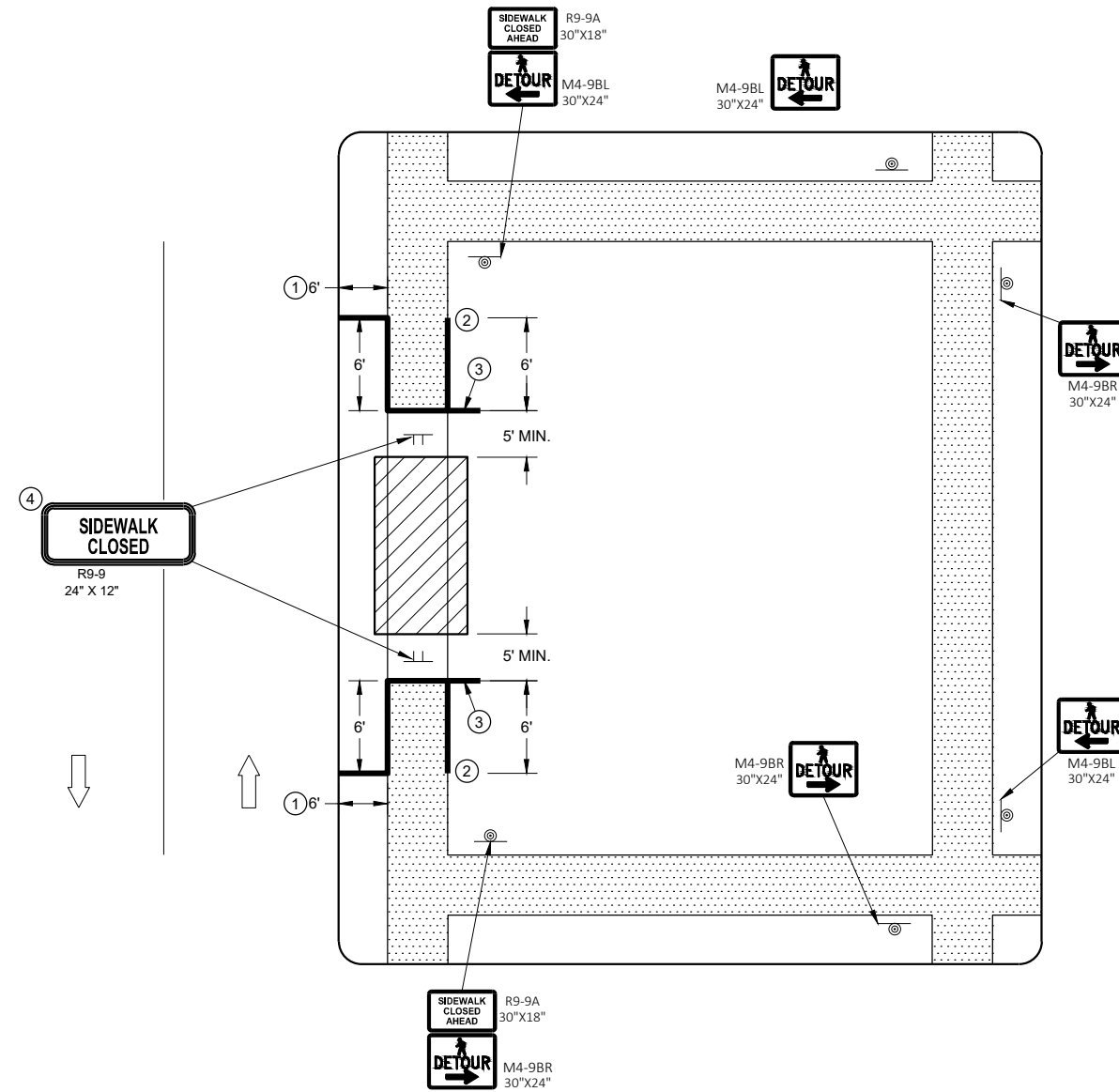
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC

GENERAL NOTES








- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.
- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
 - ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
 - ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
 - ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

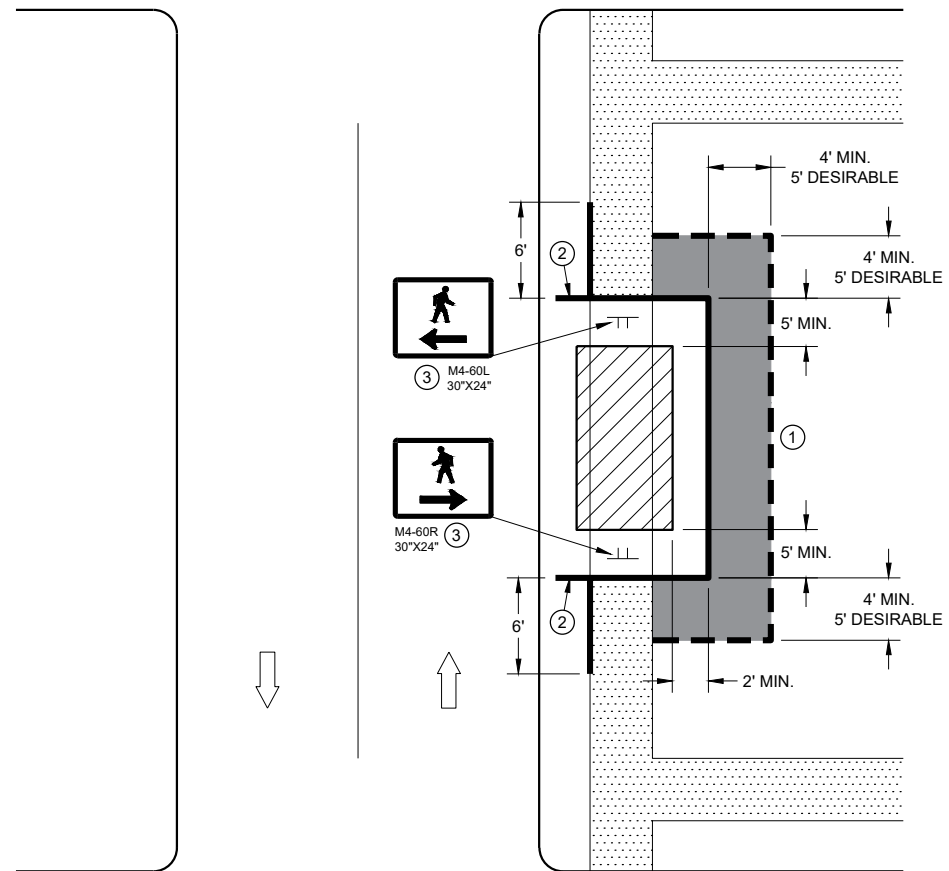
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  UNDER PEDESTRIAN TRAFFIC
-  TEMPORARY PEDESTRIAN SURFACE
-  TEMPORARY PEDESTRIAN BARRICADE
-  OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC










GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- ① USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ② IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



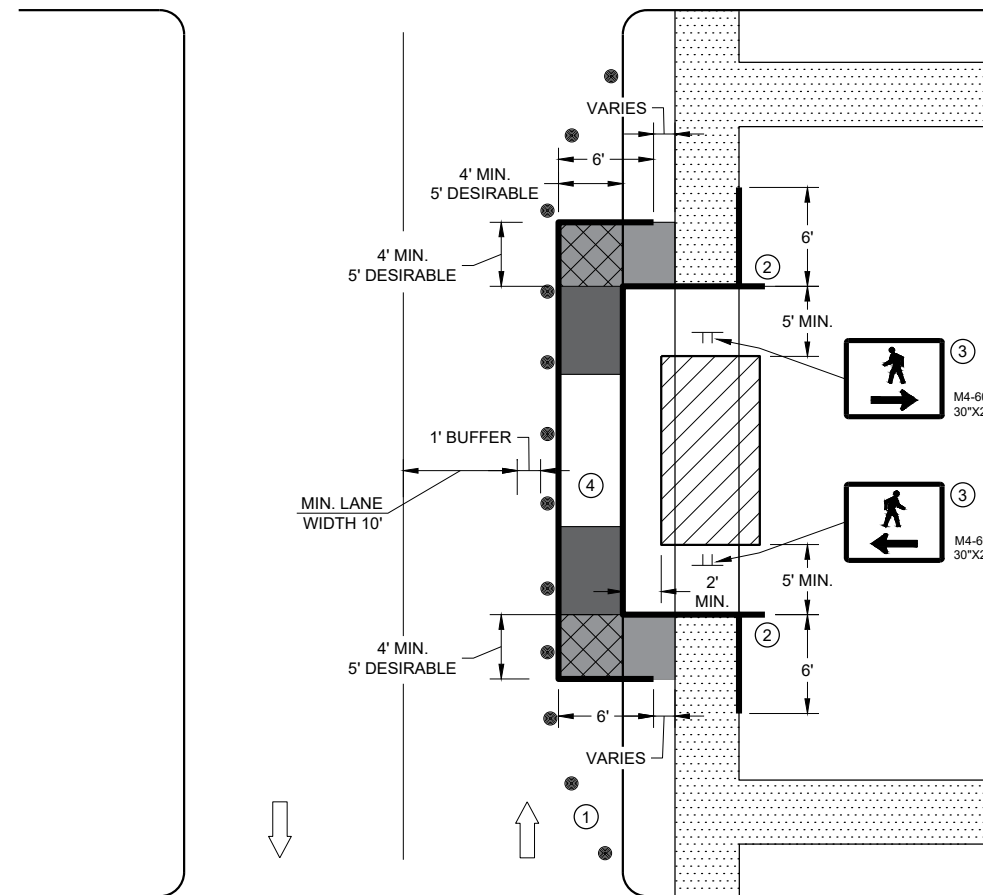
**SIDEWALK DIVERSION
SINGLE SIDE**

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  UNDER PEDESTRIAN TRAFFIC
-  TEMPORARY CURB RAMP
-  TEMPORARY PEDESTRIAN SURFACE "A"
-  TEMPORARY PEDESTRIAN SURFACE "B"
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
 - ② PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
 - ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
 - ④ USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURFACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE.



SIDEWALK DIVERSION, SINGLE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

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SDD 15D30 - 09h

SDD 15D30 - 09h

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.











SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

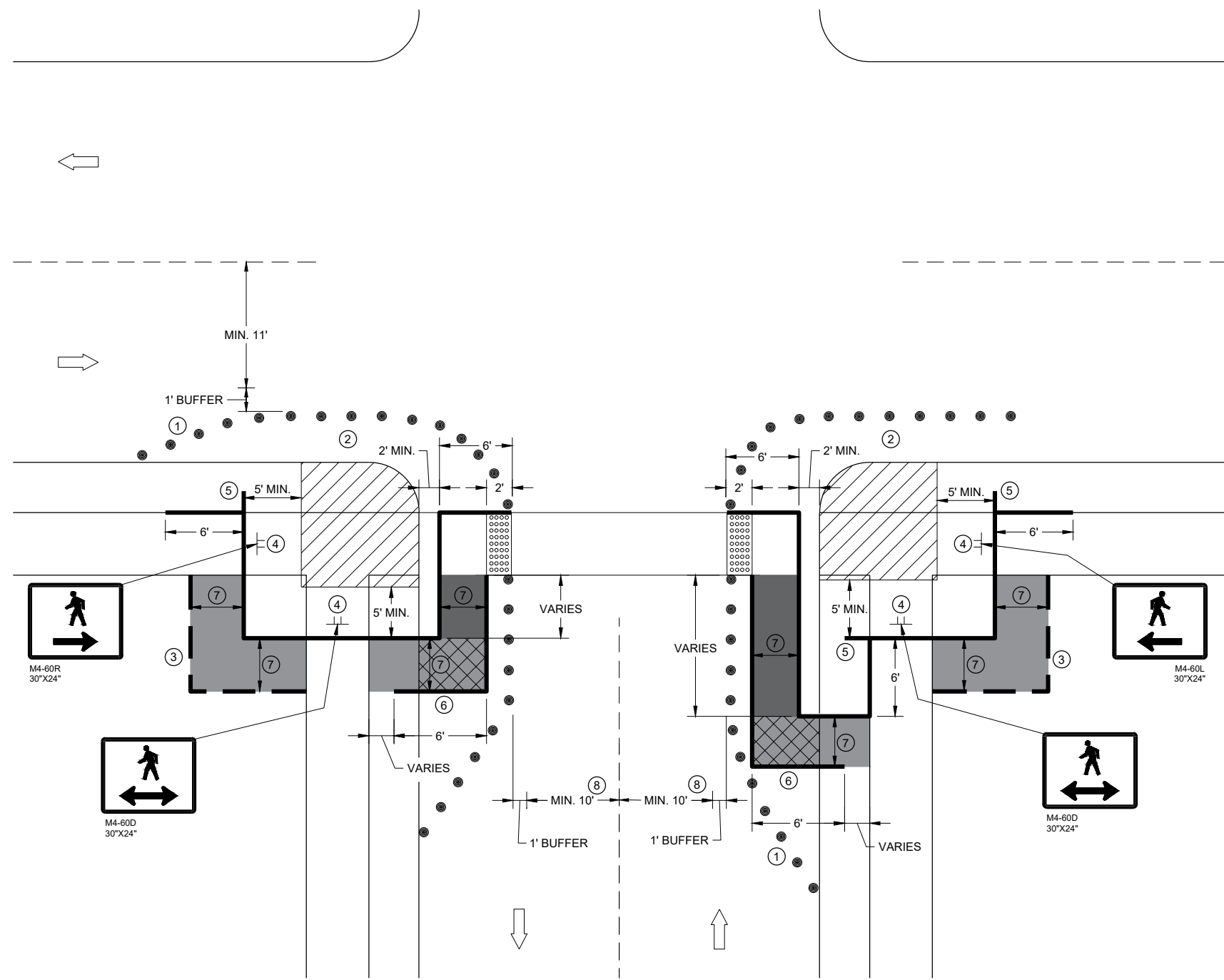
TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- ⑥ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- ⑦ 4 FEET MINIMUM, 5 FEET DESIRABLE
- ⑧ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  TEMPORARY CURB RAMP
-  TEMPORARY PEDESTRIAN SURFACE "A"
-  TEMPORARY PEDESTRIAN SURFACE "B"
-  TEMPORARY DETECTABLE WARNING FIELD
-  TEMPORARY PEDESTRIAN BARRICADE
-  OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC



**CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE**

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.











SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

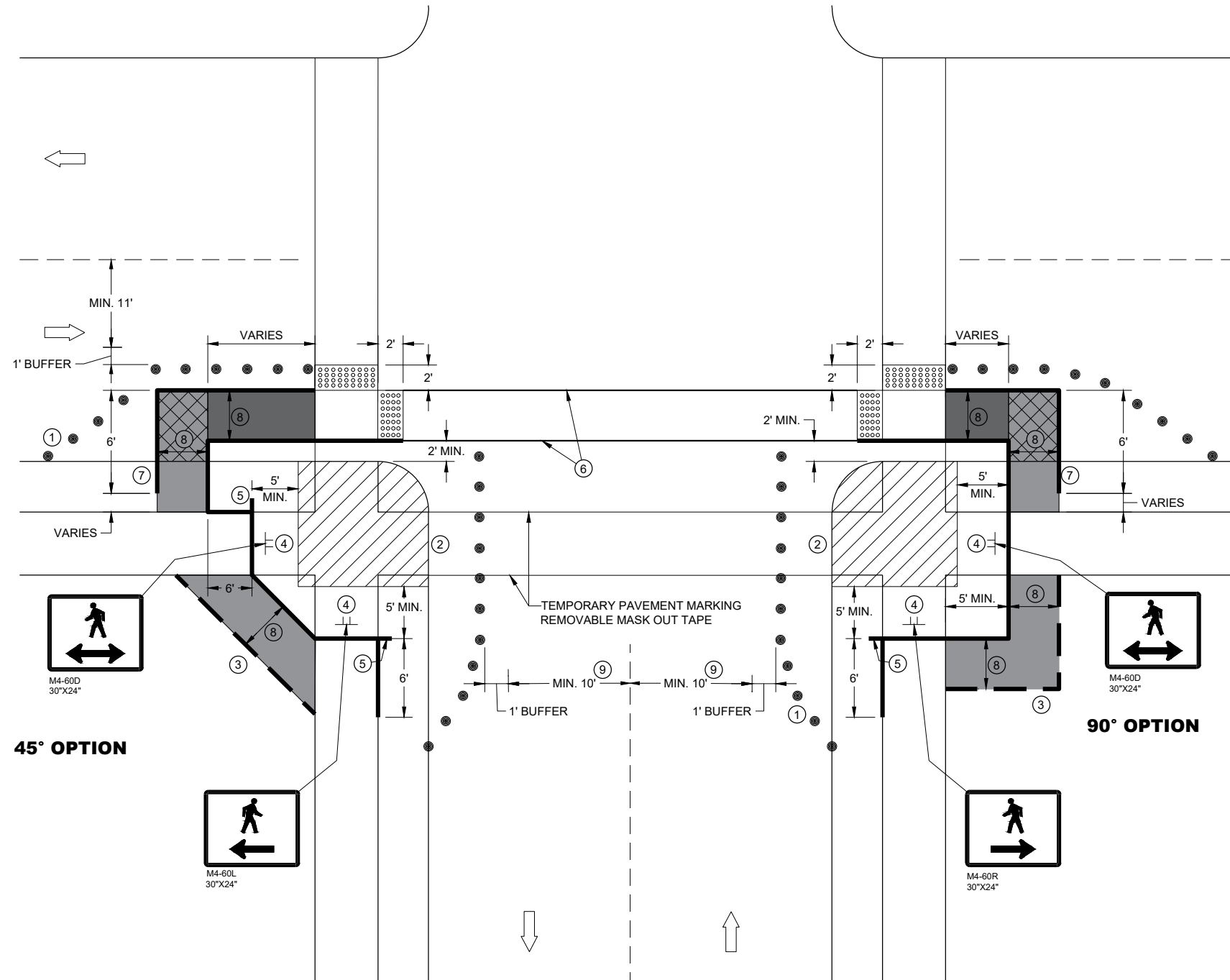
TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- ⑥ WHITE 6" TEMPORARY PAVEMENT MARKING
- ⑦ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- ⑧ 4 FEET MINIMUM, 5 FEET DESIRABLE
- ⑨ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  TEMPORARY CURB RAMP
-  TEMPORARY PEDESTRIAN SURFACE "A"
-  TEMPORARY PEDESTRIAN SURFACE "B"
-  TEMPORARY DETECTABLE WARNING FIELD
-  TEMPORARY PEDESTRIAN BARRICADE
-  OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC









CURB RAMP PEDESTRIAN TRAFFIC CONTROL

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

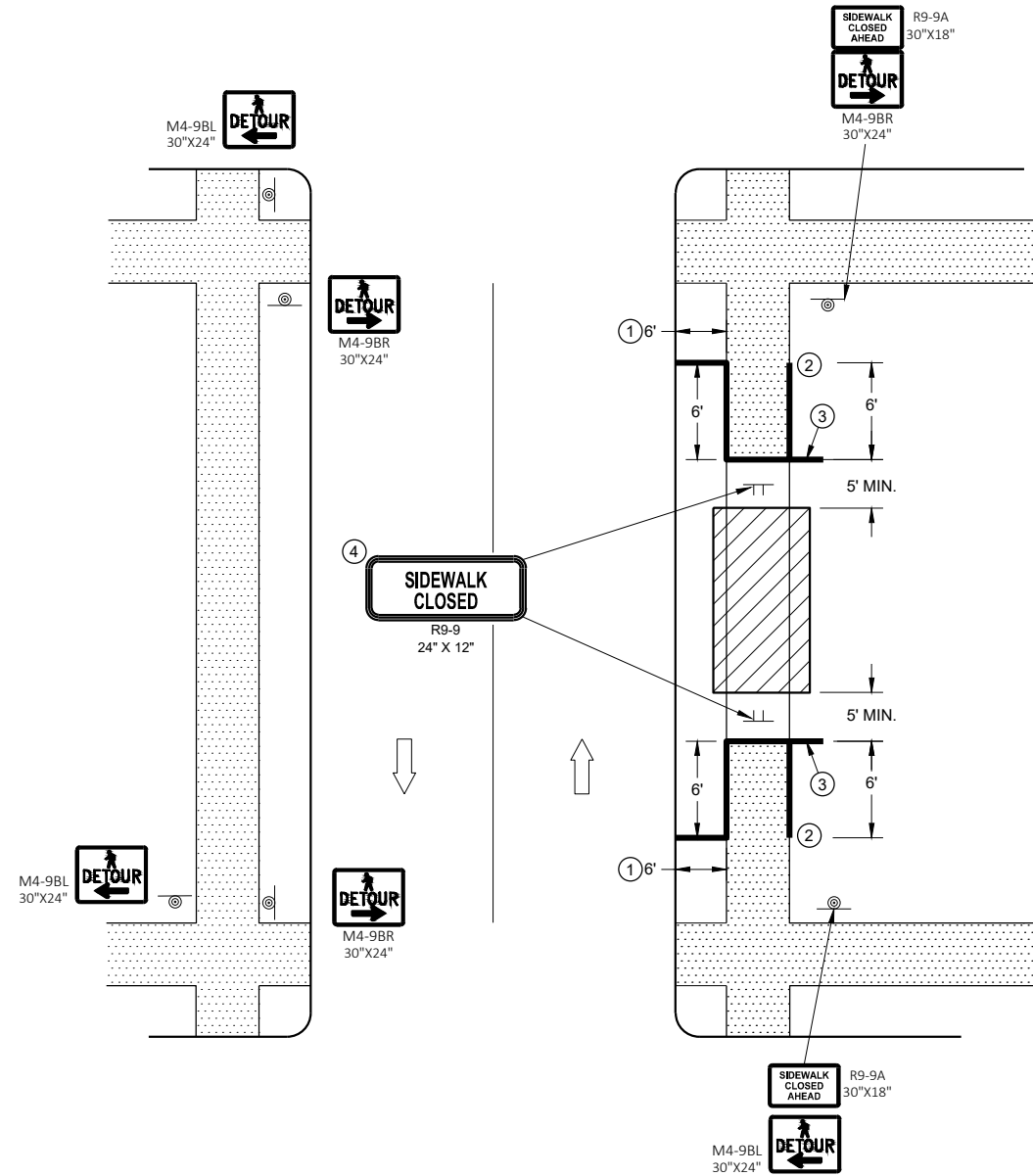
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.
- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
 - ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
 - ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
 - ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

6

SDD 15D30 - 09k

SDD 15D30 - 09k

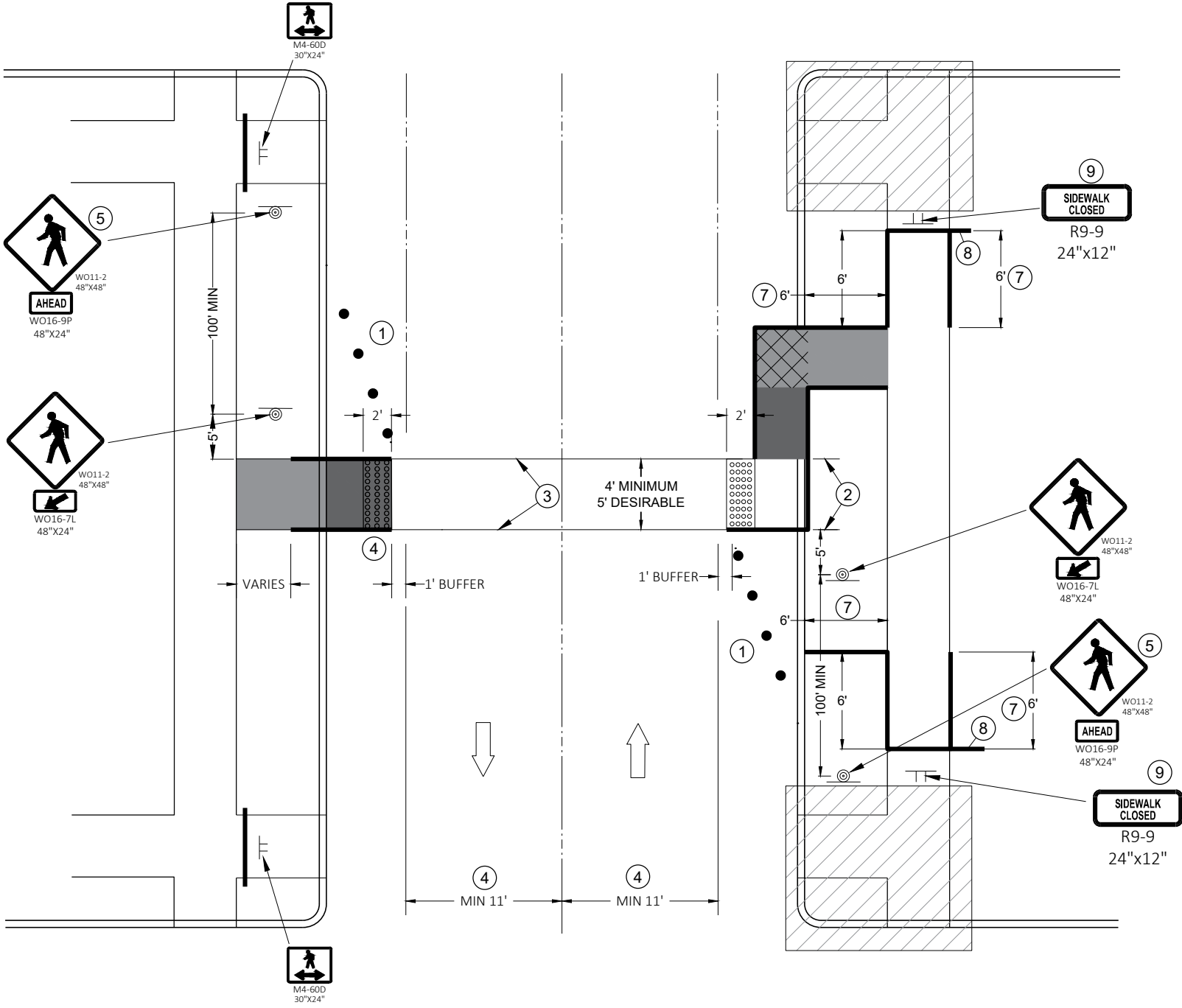
GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
 SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
 SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

- ① SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② 4 FEET MINIMUM, 5 FEET DESIRABLE.
- ③ WHITE 6" TEMPORARY PAVEMENT MARKING.
- ④ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMP MAY NEED TO BE UTILIZED.
- ⑤ IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
- ⑥ IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ⑦ PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ⑧ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ⑨ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY CURB RAMP
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC



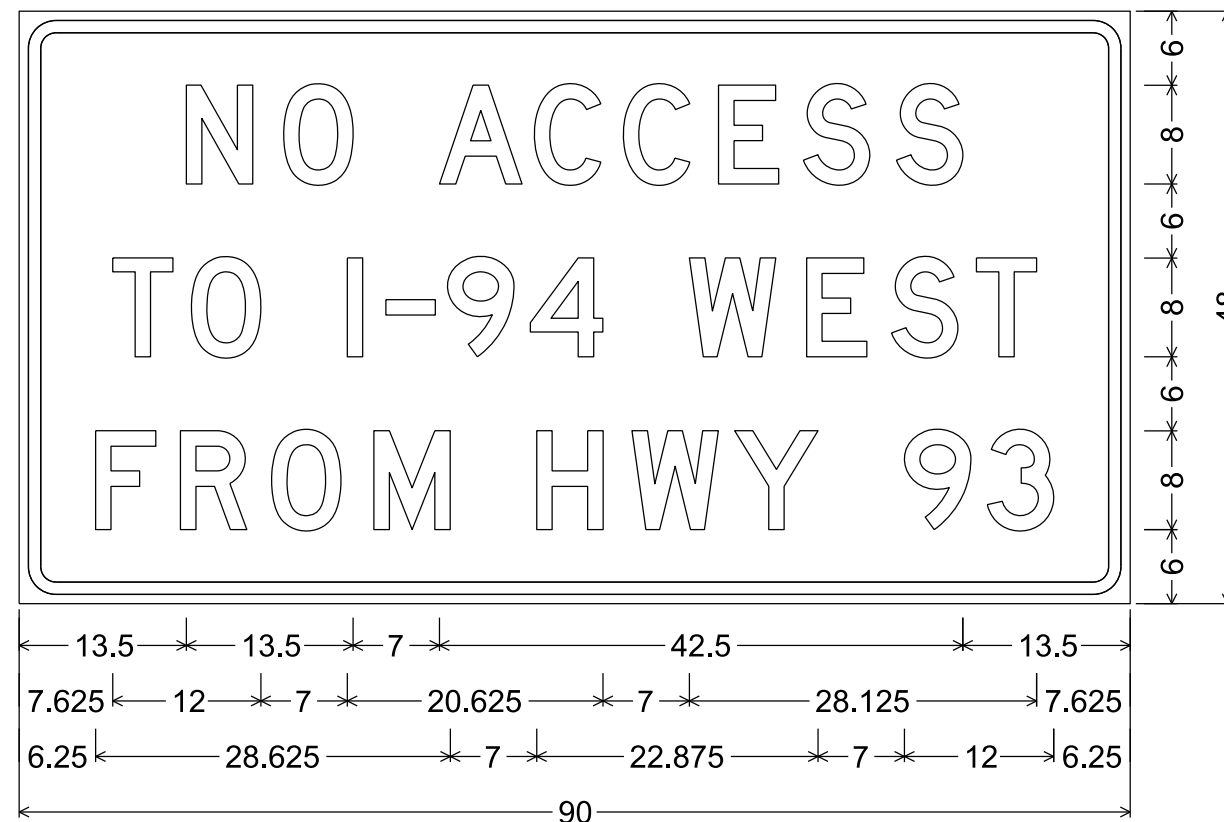
TEMPORARY PEDESTRIAN CROSSING

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

NOTES

1. Fixed Message Sign Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - D



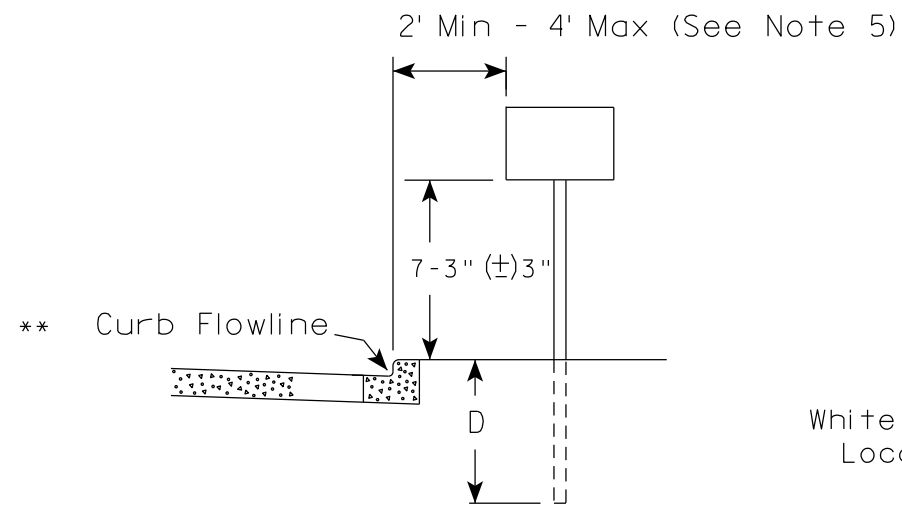
3.000" Radius, 1.000" Border, 0.750" Indent

7

7

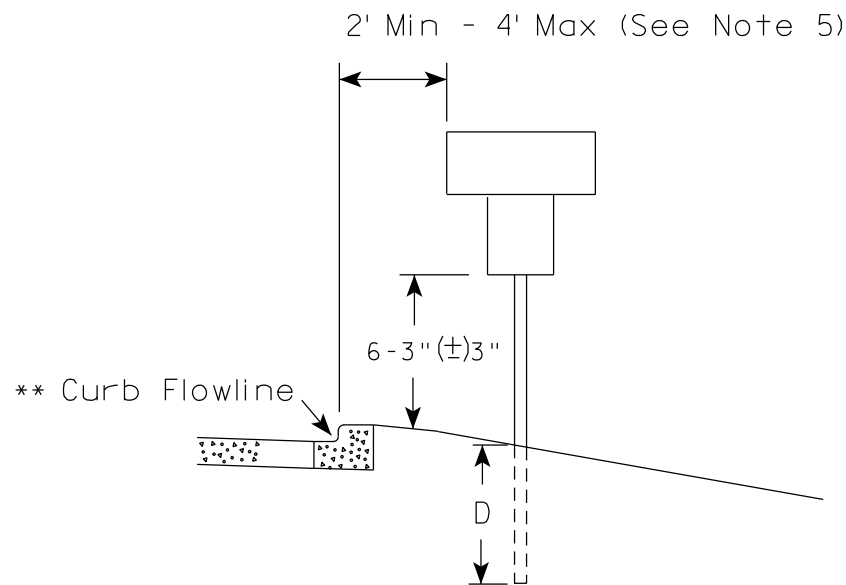
URBAN AREA

RURAL AREA (See Note 2)



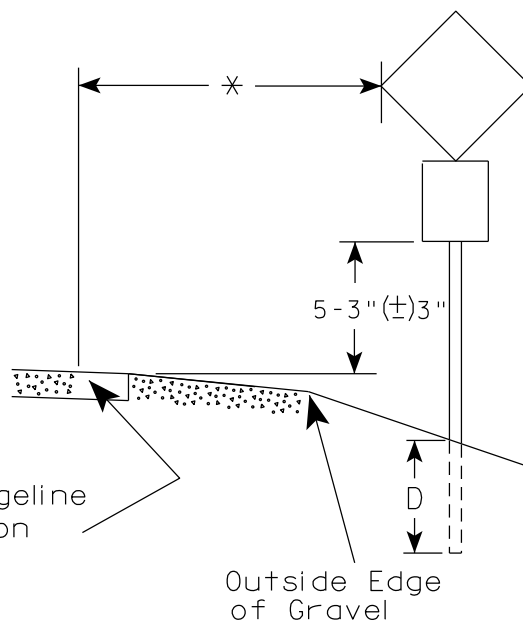
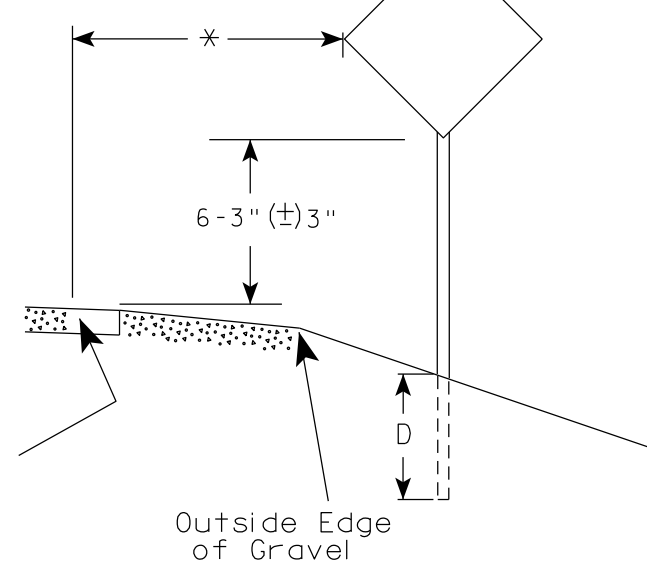
White Edgeline Location

Outside Edge of Gravel



White Edgeline Location

Outside Edge of Gravel



POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

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

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

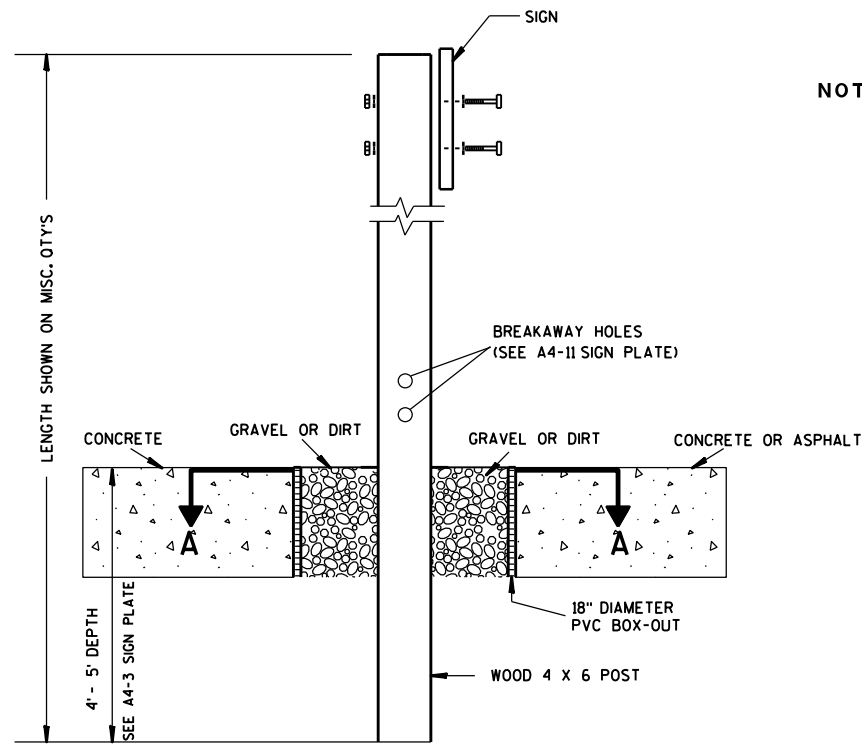
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R Raub
for State Traffic Engineer

DATE 12/6/23

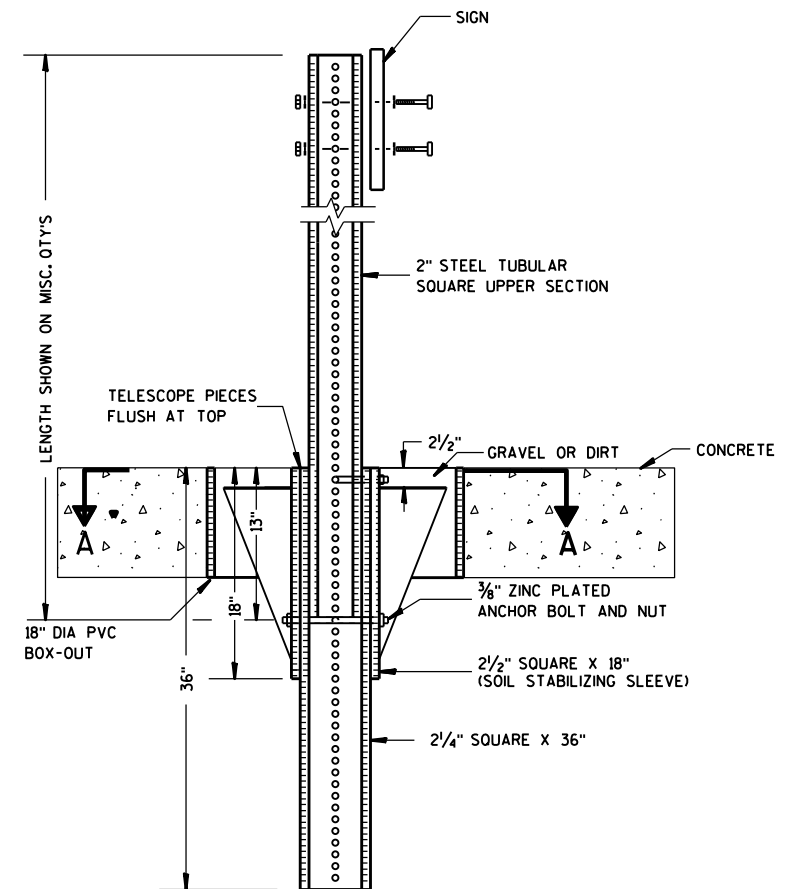
PLATE NO. A4-3.23



ELEVATION VIEW

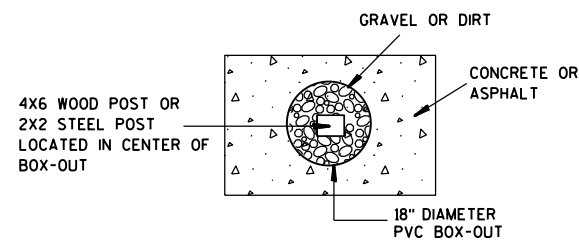
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

GENERAL NOTES

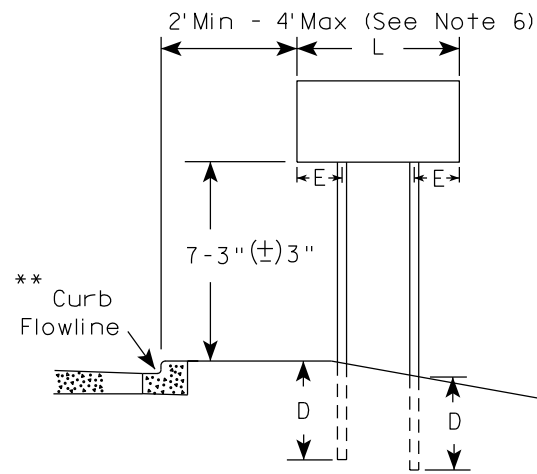
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".

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

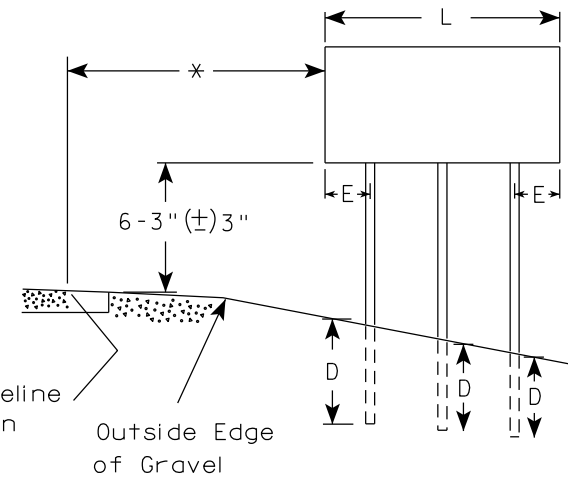
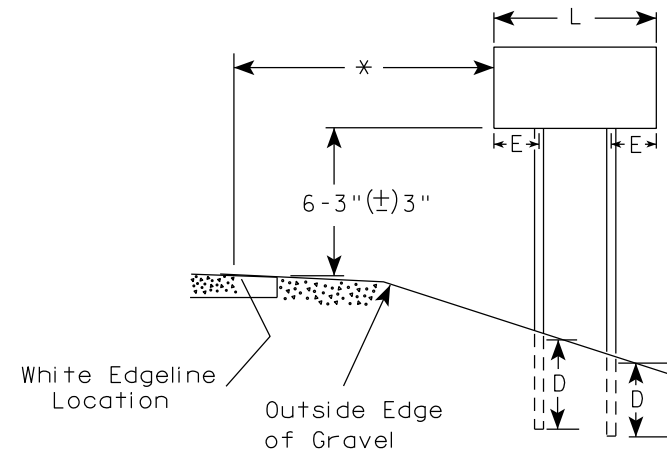
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

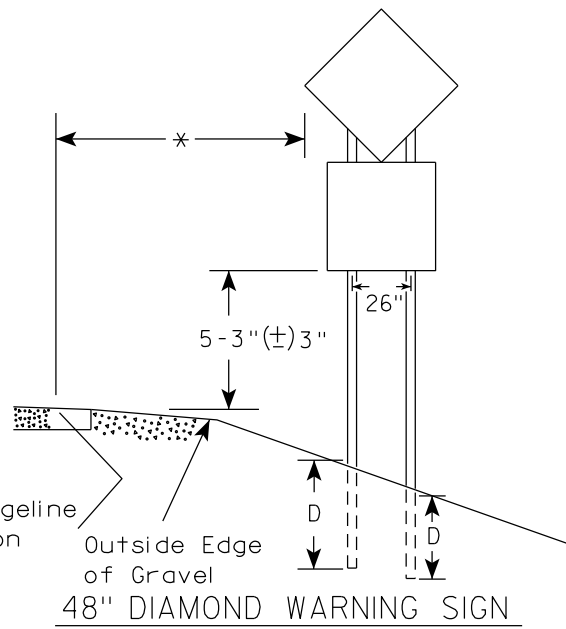
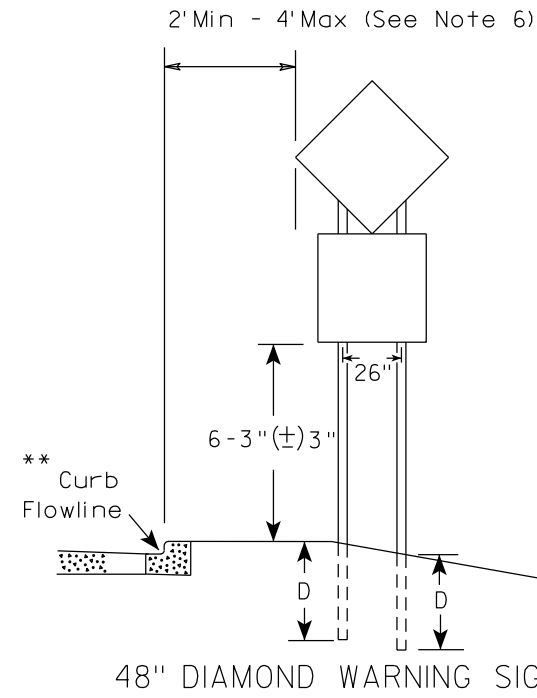
URBAN AREA



RURAL AREA (See Note 3)



URBAN AREA



SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

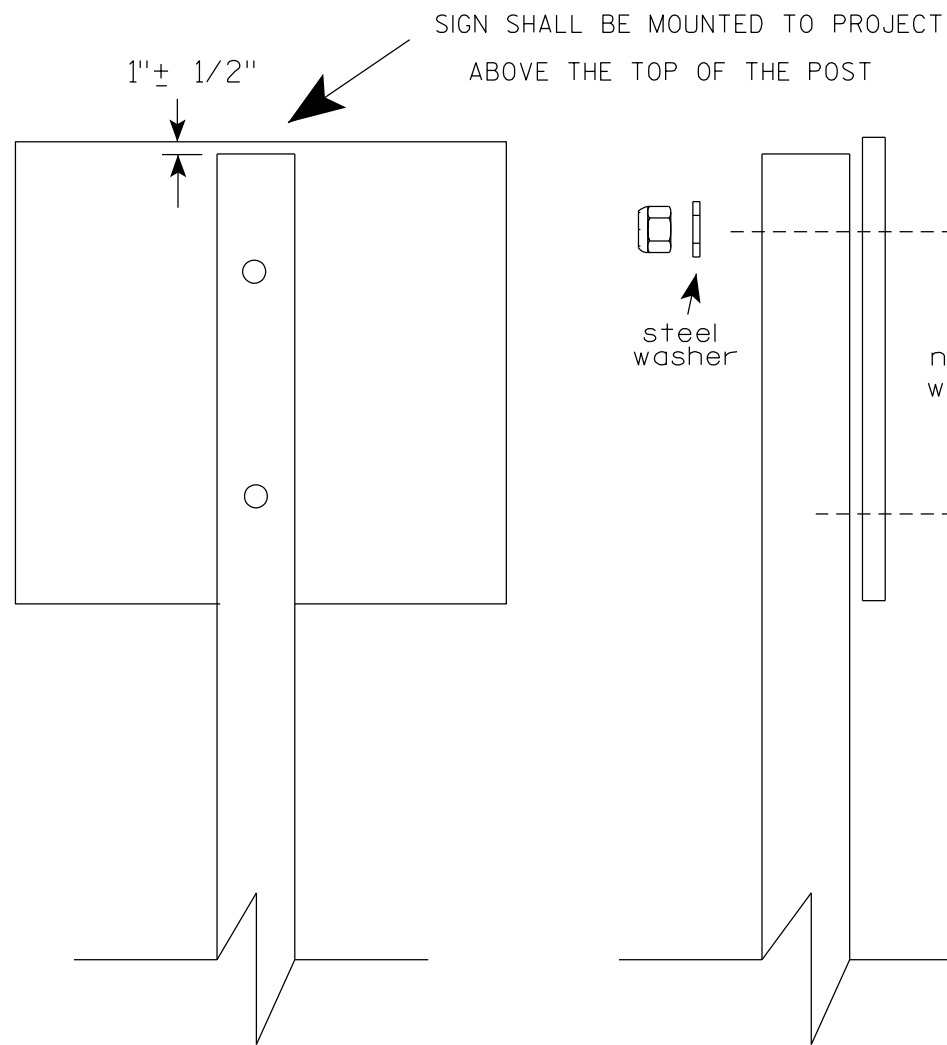
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

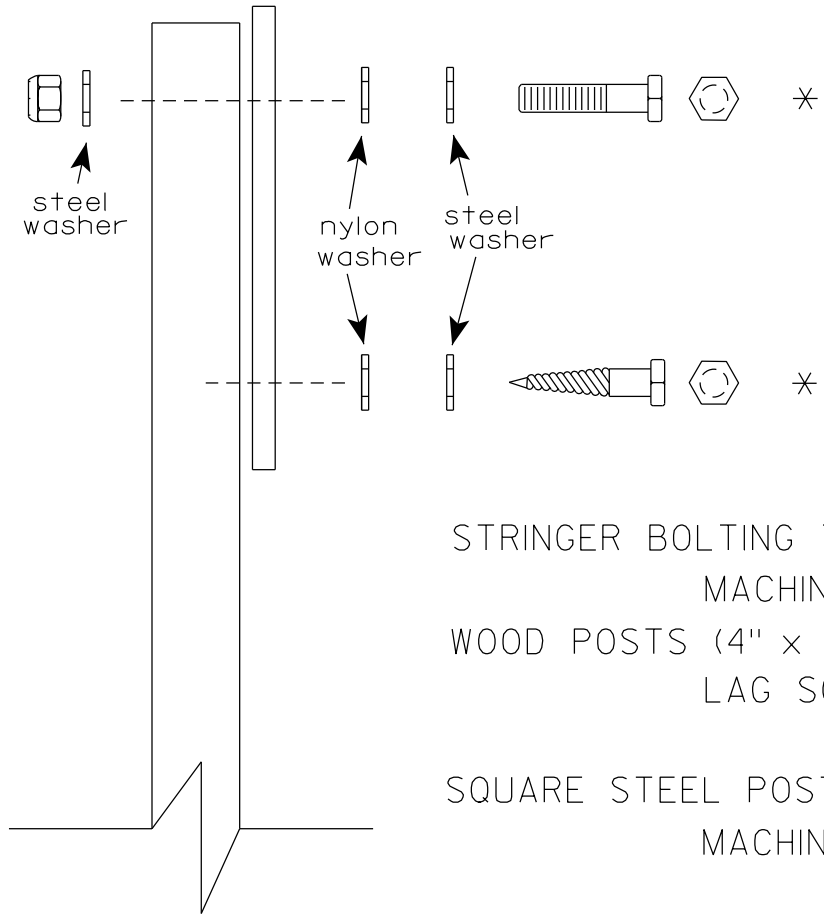
E



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

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

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



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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

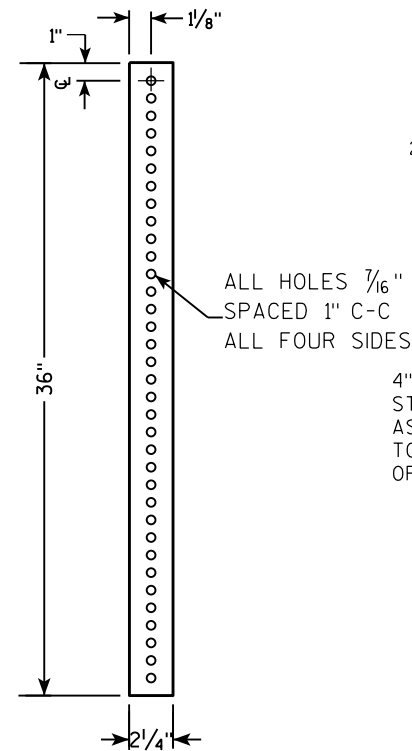
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

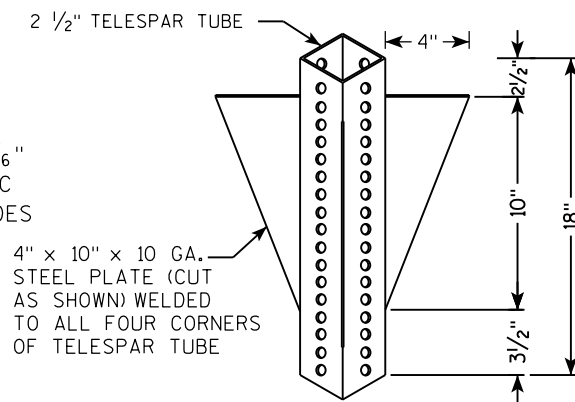
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

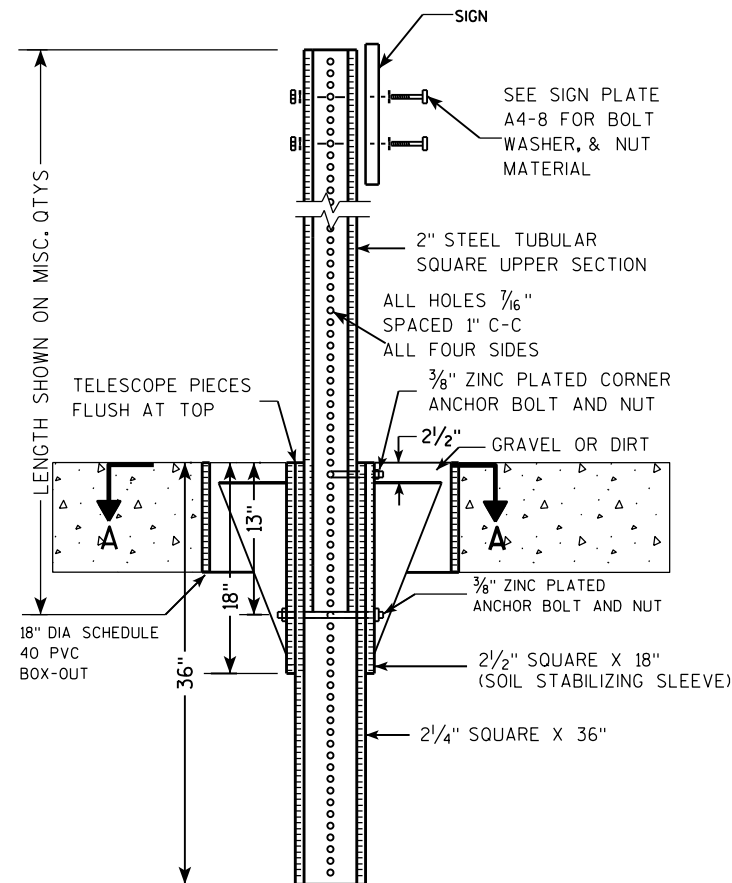
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



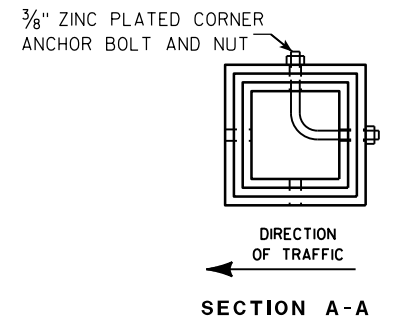
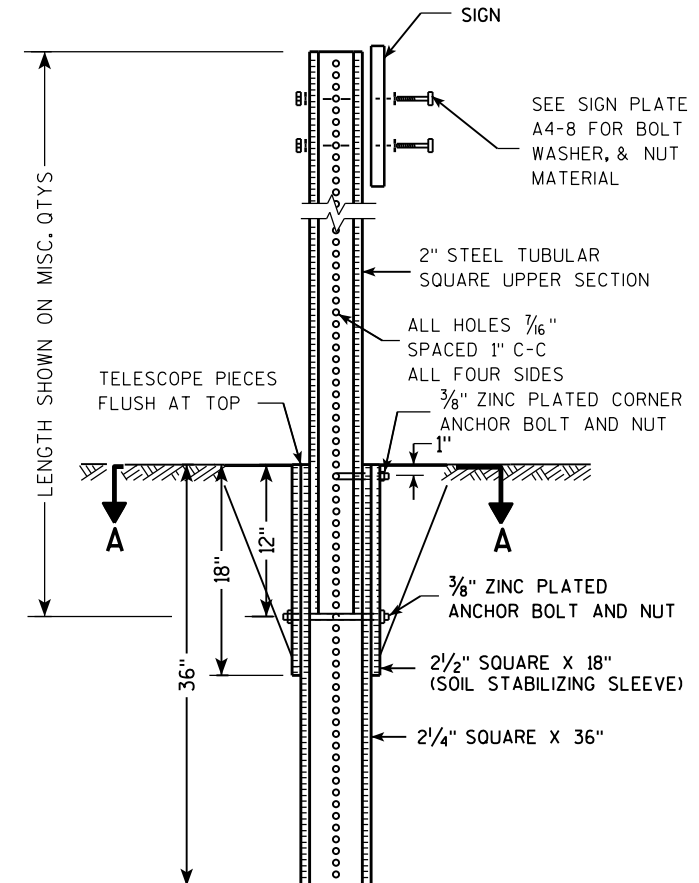
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

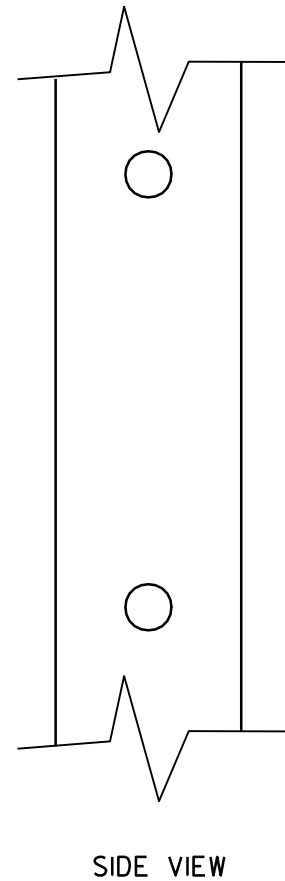
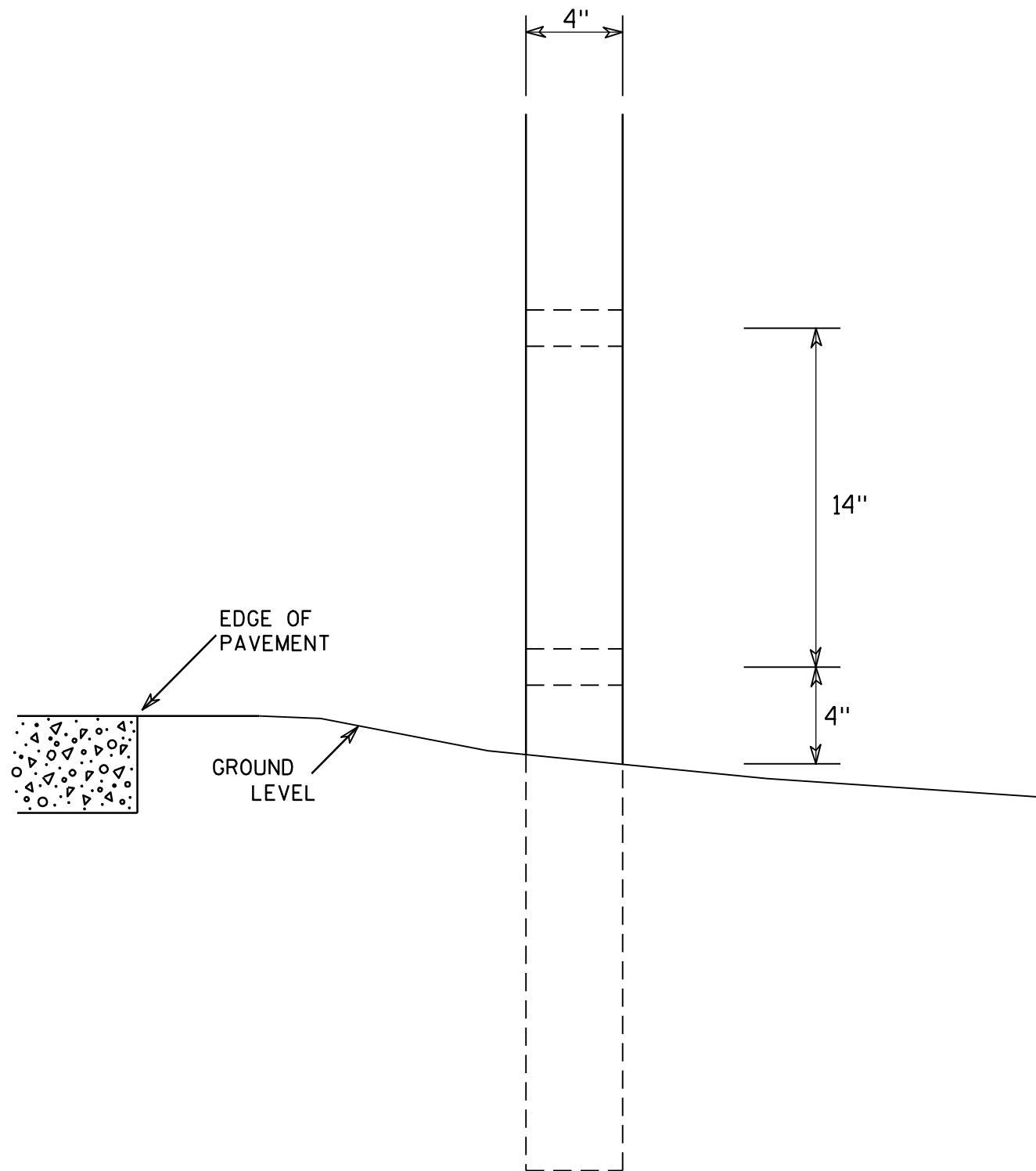
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

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

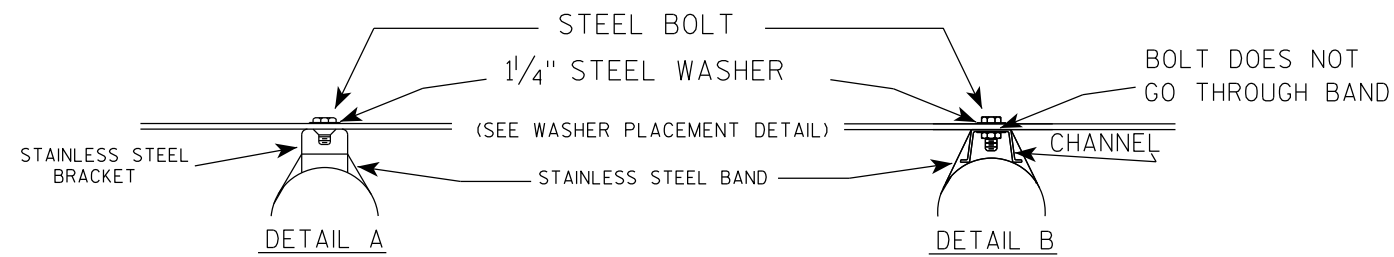
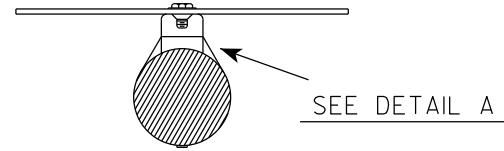
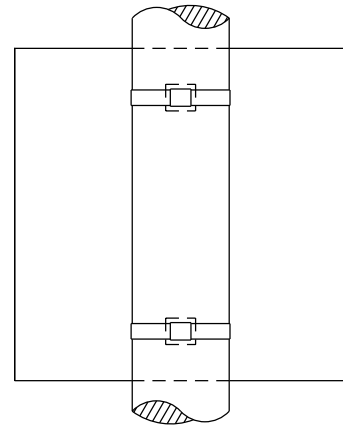
7

7

4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

BANDING

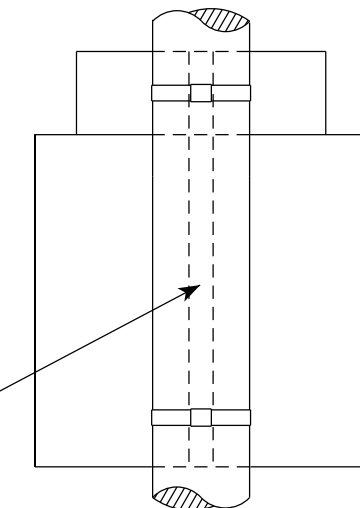
SINGLE SIGN



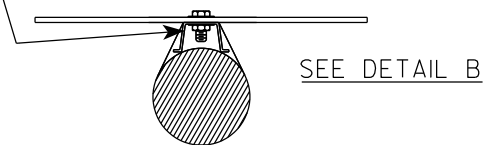
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

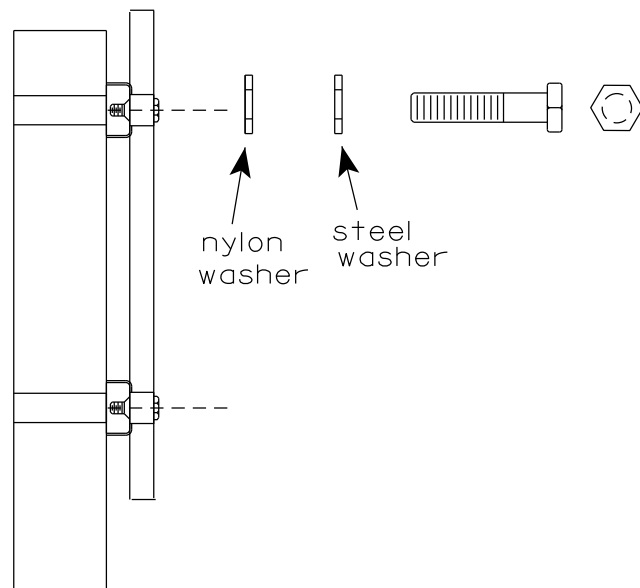
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

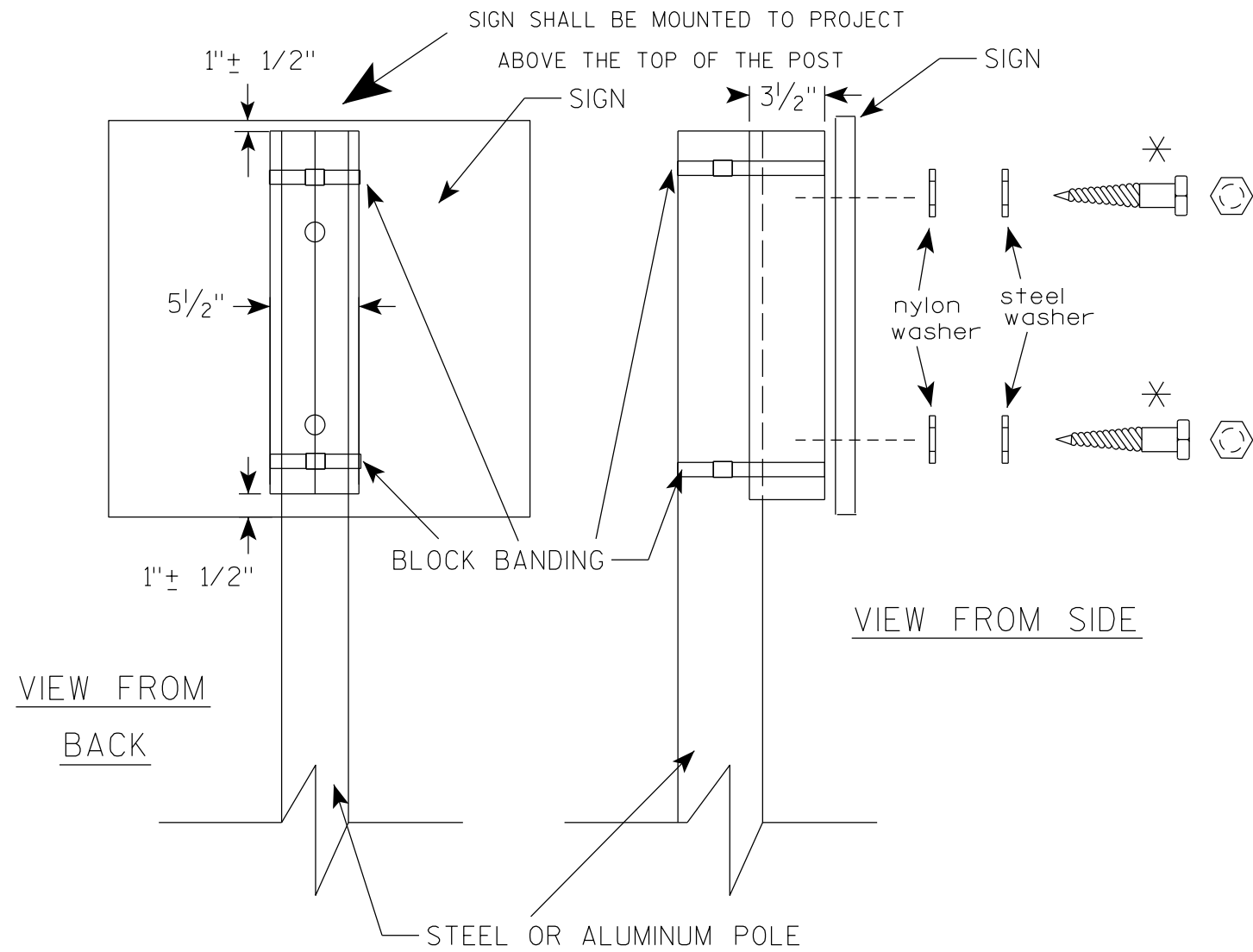


WASHER PLACEMENT



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

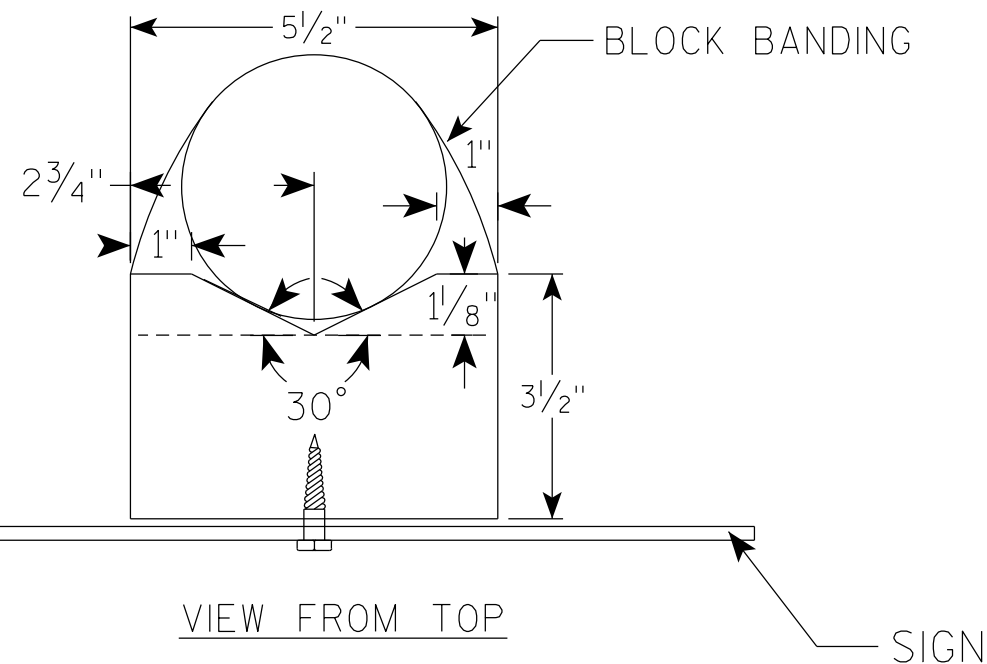
STANDARD SIGN
SIGN BANDING DETAILS
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL
(V-BLOCK OPTION)

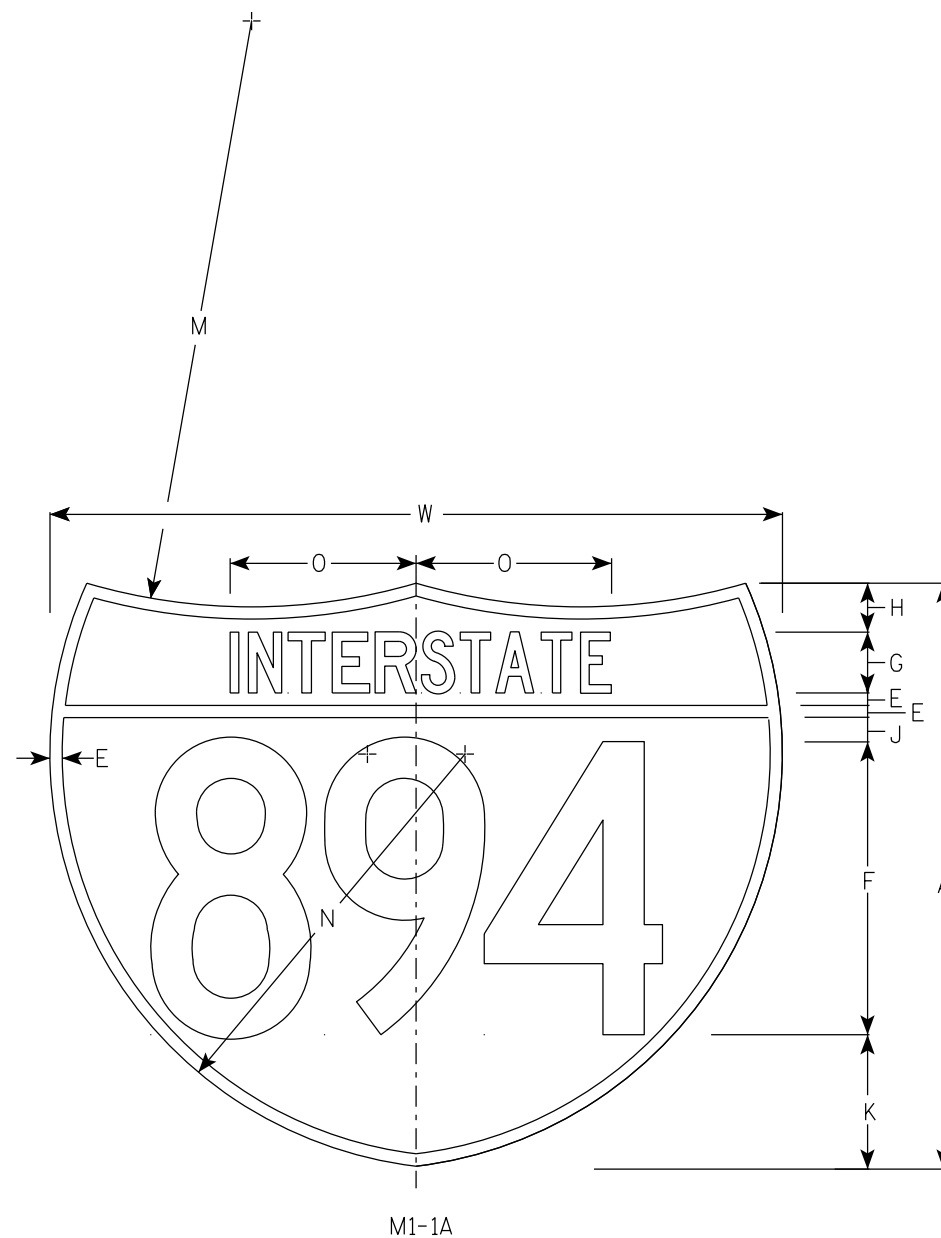
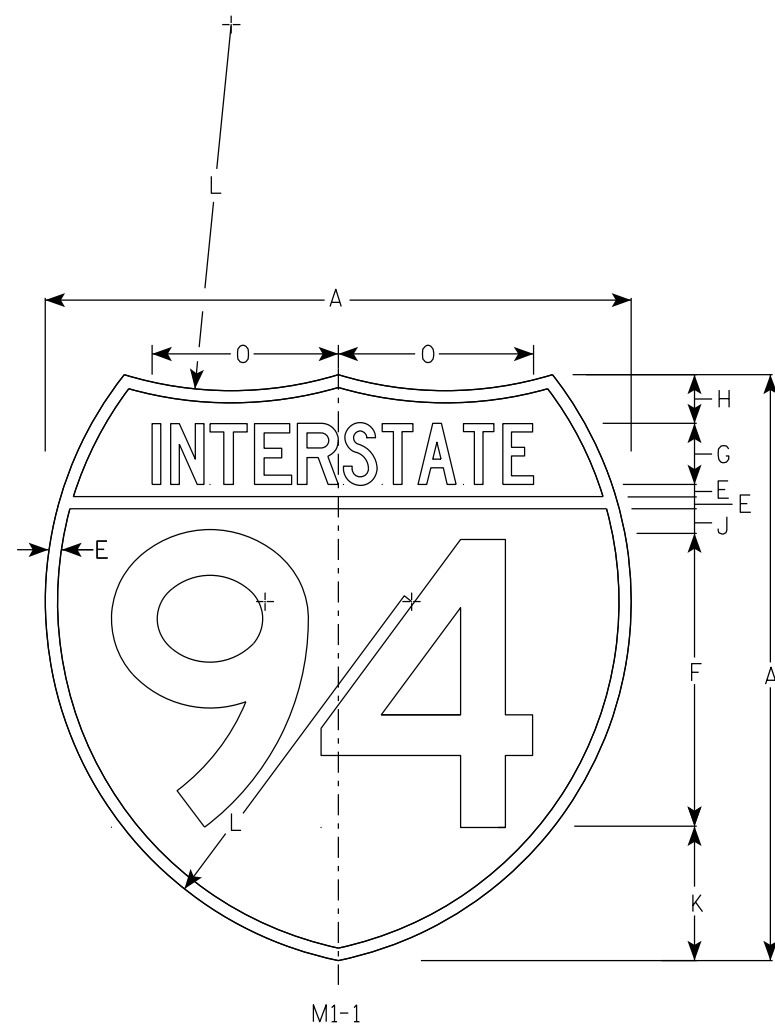
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - Top Red - Bottom Blue
Message - White
3. Message Series - See note 5
4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
5. M1-1 - Numerals - D
Interstate - C
M1-1A - All copy - C



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.
1																											
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91
2M	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 11/7/2022 PLATE NO. M1-1.9

PROJECT NO:

HWY:

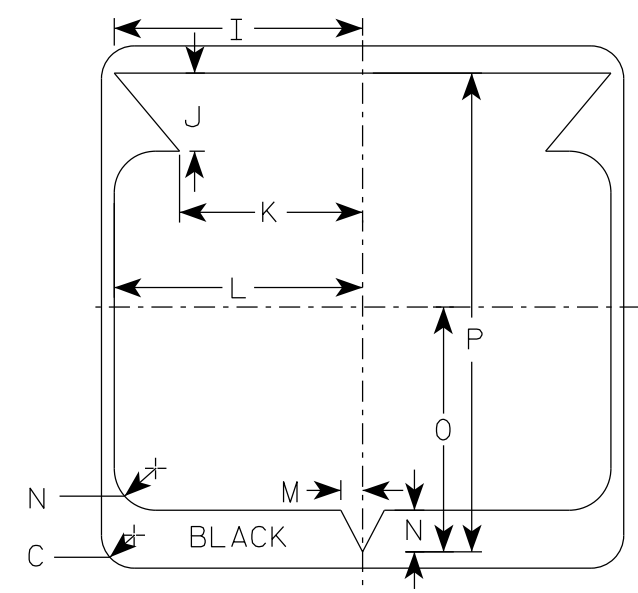
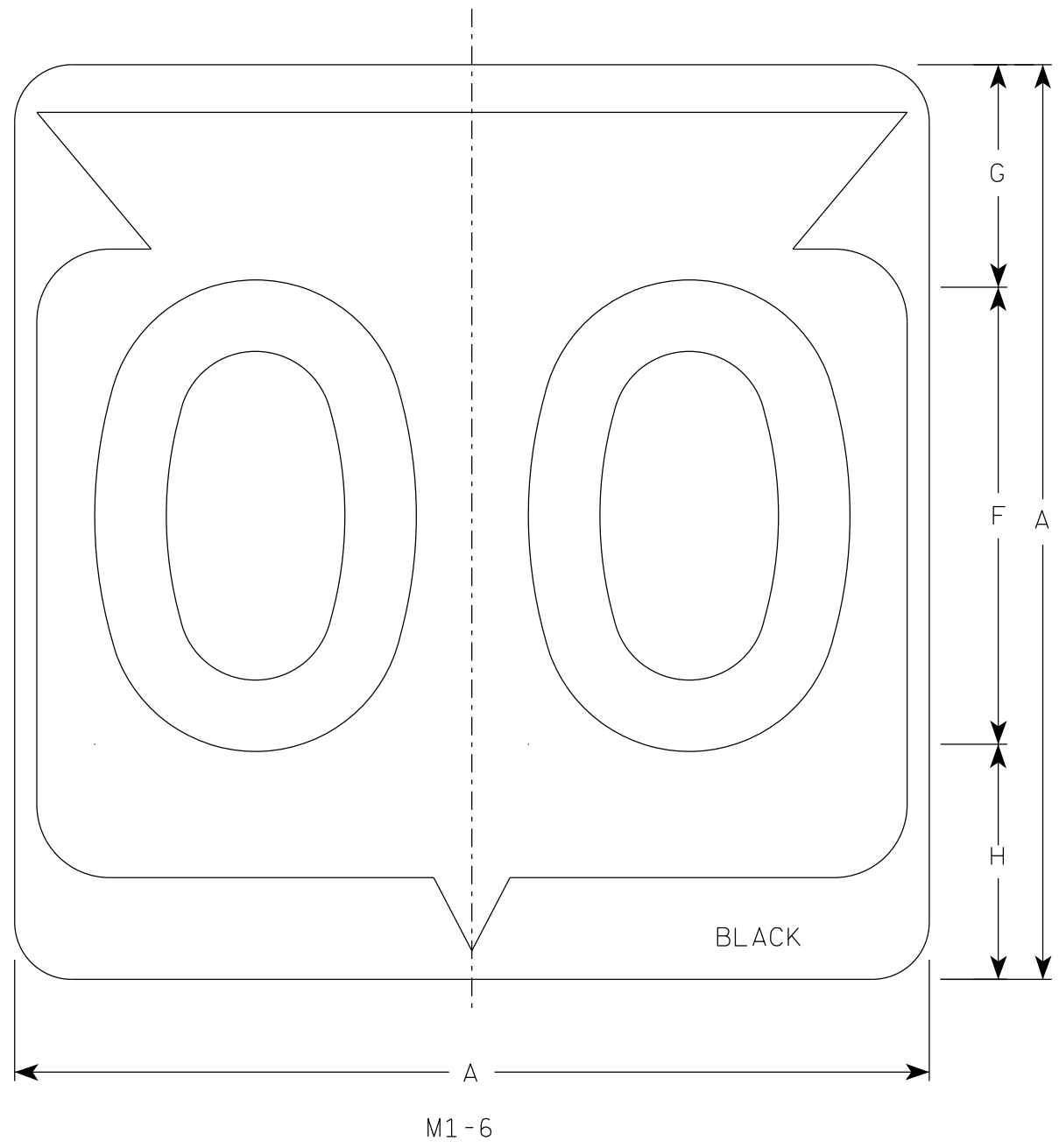
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C



7

7

M1-6

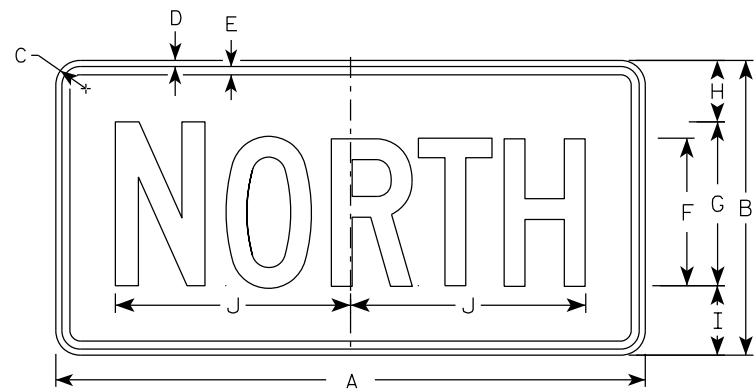
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33										9.0	
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33										9.0	
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33										9.0	

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

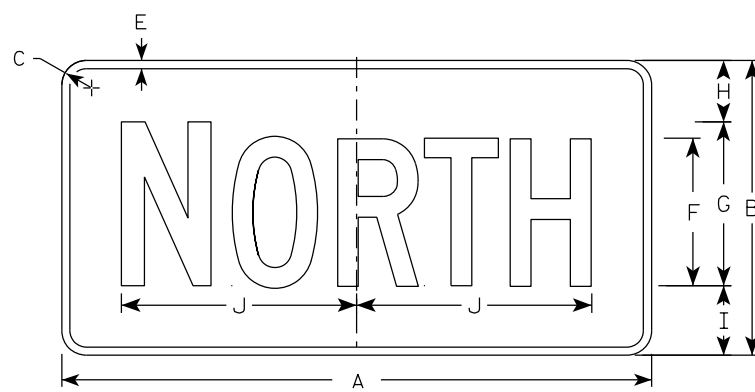
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*
for State Traffic Engineer

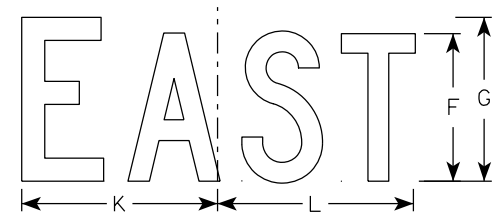
DATE 11/8/2022 PLATE NO. M1-6.11



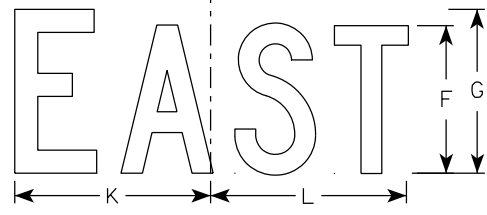
M3-1
MM3-1
MP3-1



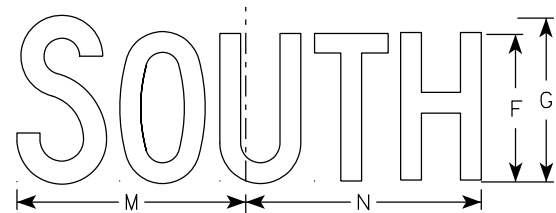
MB3-1
MK3-1
MN3-1



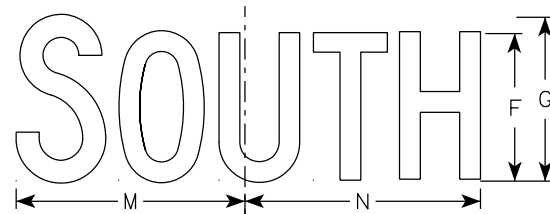
M3-2
MM3-2
MP3-2



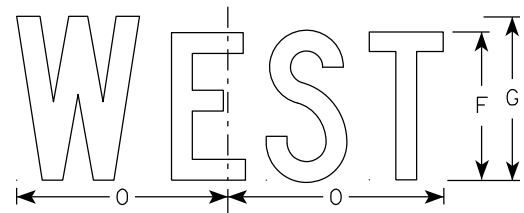
MB3-2
MK3-2
MN3-2



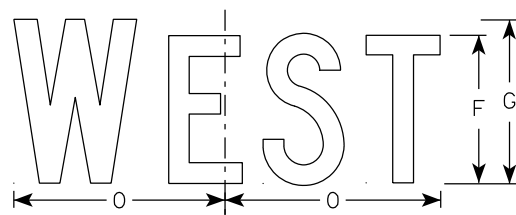
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

- All Signs Type II - Type H Reflective
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
2M	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

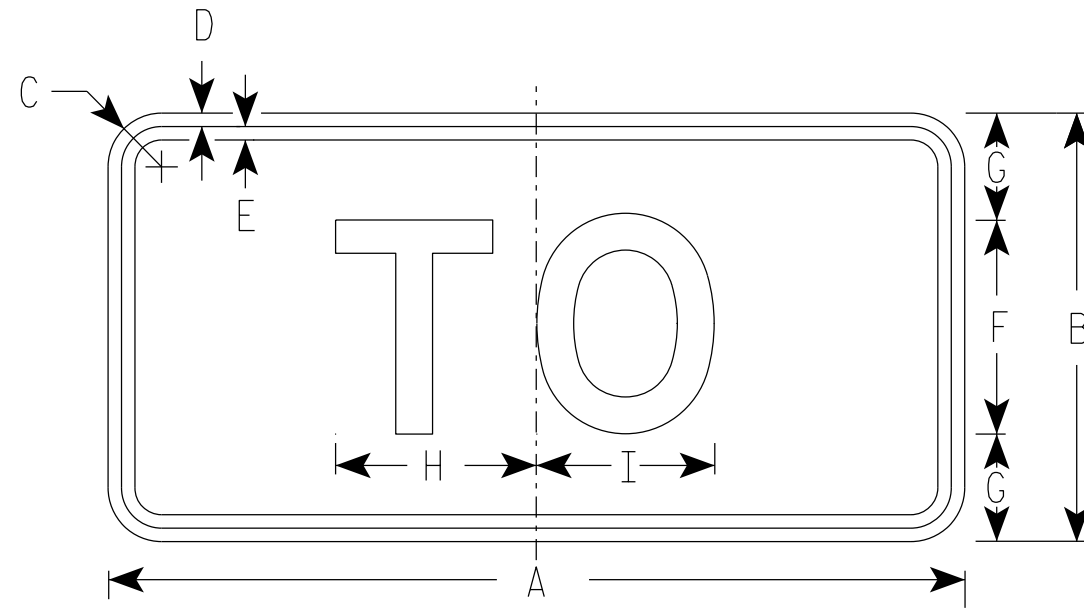
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

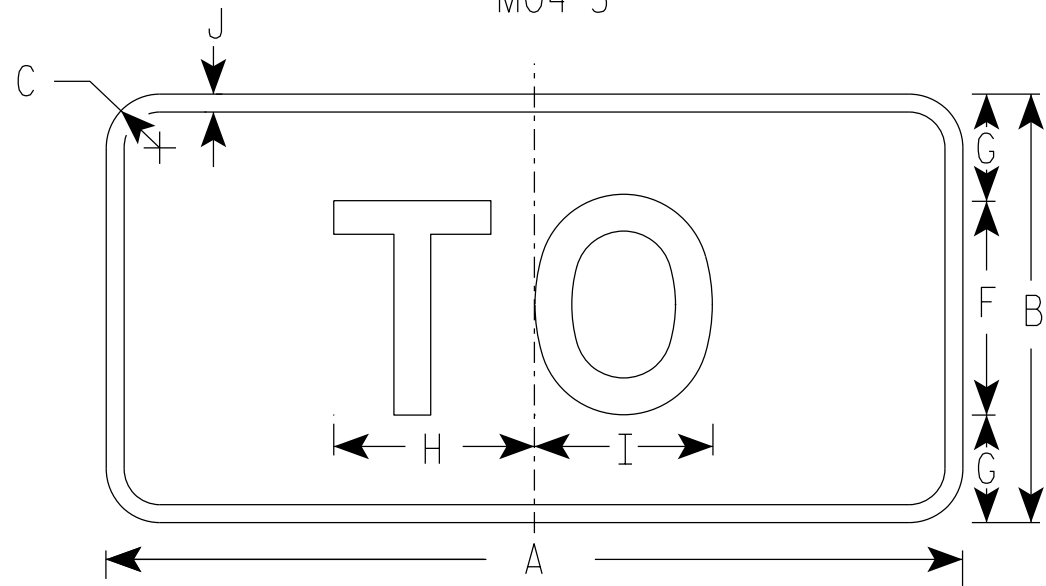
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
Message - Black
MB4-5 Background - Blue
Message - White
MK4-5 Background - Green
Message - White
MM4-5 Background - White
Message - Green
MN4-5 Background - Brown
Message - White
MP4-5 Background - White
Message - Blue
M04-5 Background - Orange Type F Reflective
Message - Black

7

7

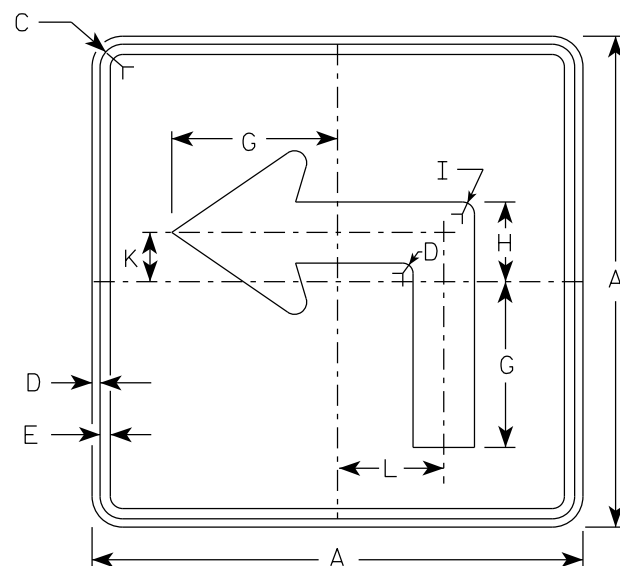
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	6	3	5 3/8	5 1/4	1/2																2.00	
2M	24	12	1 1/2	3/8	3/8	6	3	5 3/8	5 1/4	1/2																2.00	
3	36	18	1 1/2	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2																4.5	
4	36	18	1 1/2	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2																4.5	
5	36	18	1 1/2	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2																4.5	

STANDARD SIGN
M4-5

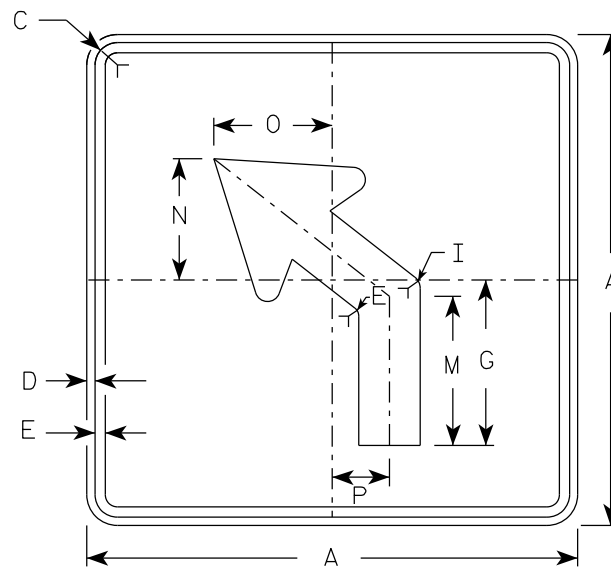
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

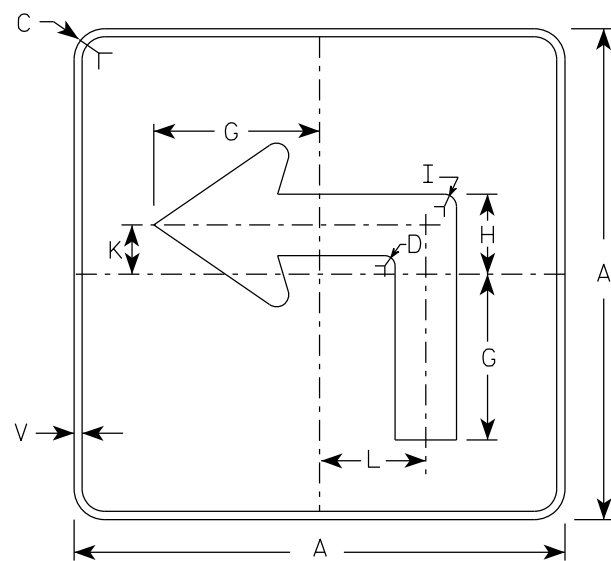
DATE 2/8/2023 PLATE NO. M4-5.11



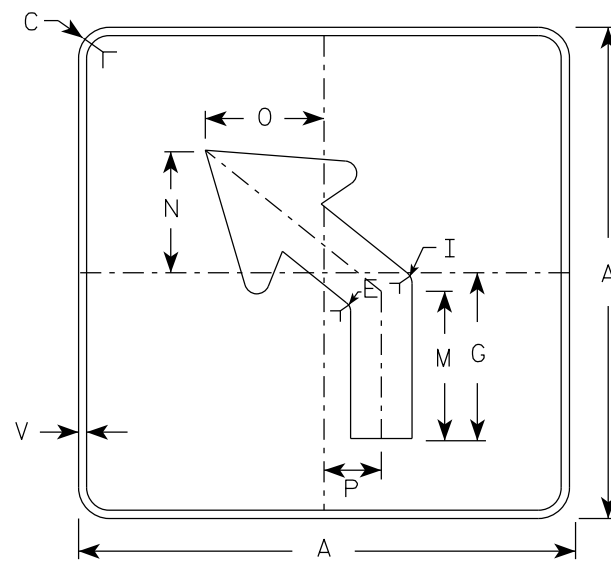
M5-1L
MM5-1L
M05-1L
MP5-1L



M5-2L
MM5-2L
M05-2L
MP5-2L

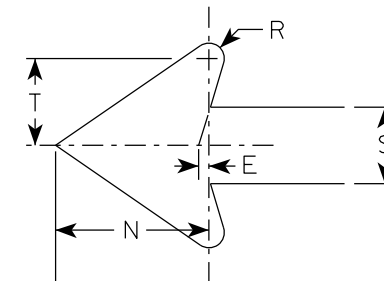


MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L

ARROW DETAIL



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | |
|-----------------|---|
| M5-1 and M5-2 | Background - White |
| | Message - Black |
| MB5-1 and MB5-2 | Background - Blue |
| | Message - White |
| MK5-1 and MK5-2 | Background - Green |
| | Message - White |
| MM5-1 and MM5-2 | Background - White |
| | Message - Green |
| MN5-1 and MN5-2 | Background - Brown |
| | Message - White |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
| | Message - Black |
| MP5-1 and MP5-2 | Background - White |
| | Message - Blue |
| MR5-1 and MR5-2 | Background - Brown |
| | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
4	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
5	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25

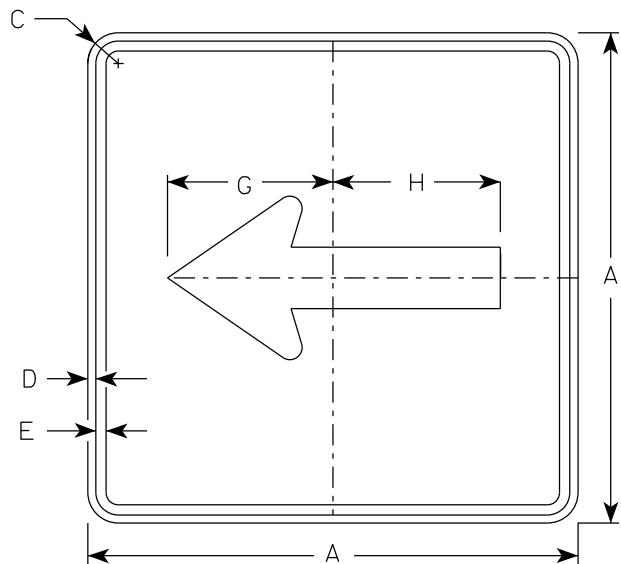
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

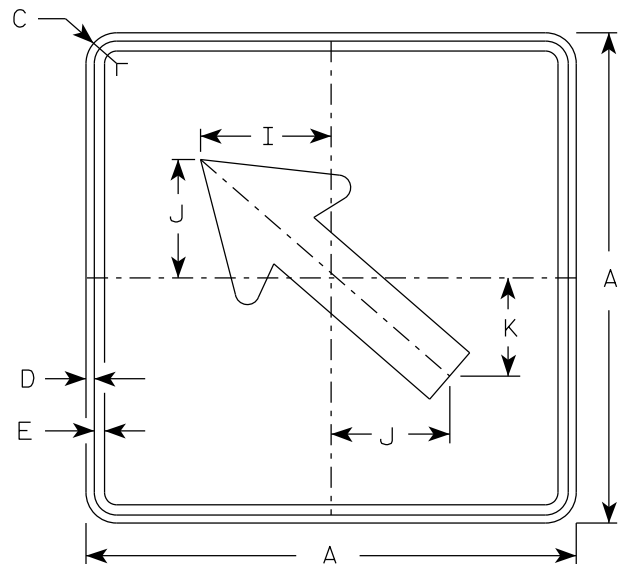
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

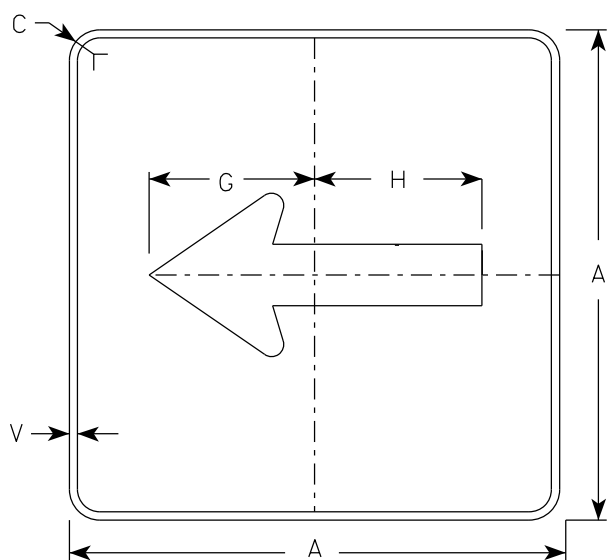
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



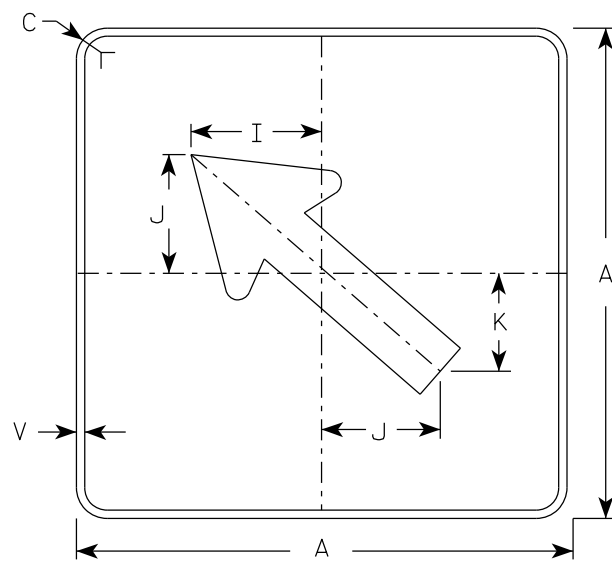
M6-1
MM6-1
M06-1
MP6-1



M6-2
MM6-2
M06-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1

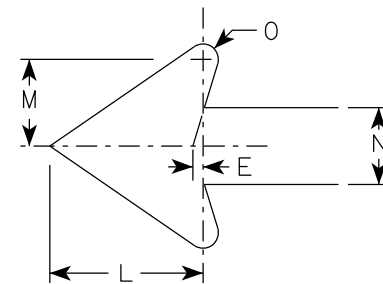


MB6-2
MK6-2
MN6-2
MR6-2

NOTES

- Signs are Type II - Type H Reflective except as Shown
- Color:
 - Background - See note 4
 - Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
4	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
5	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

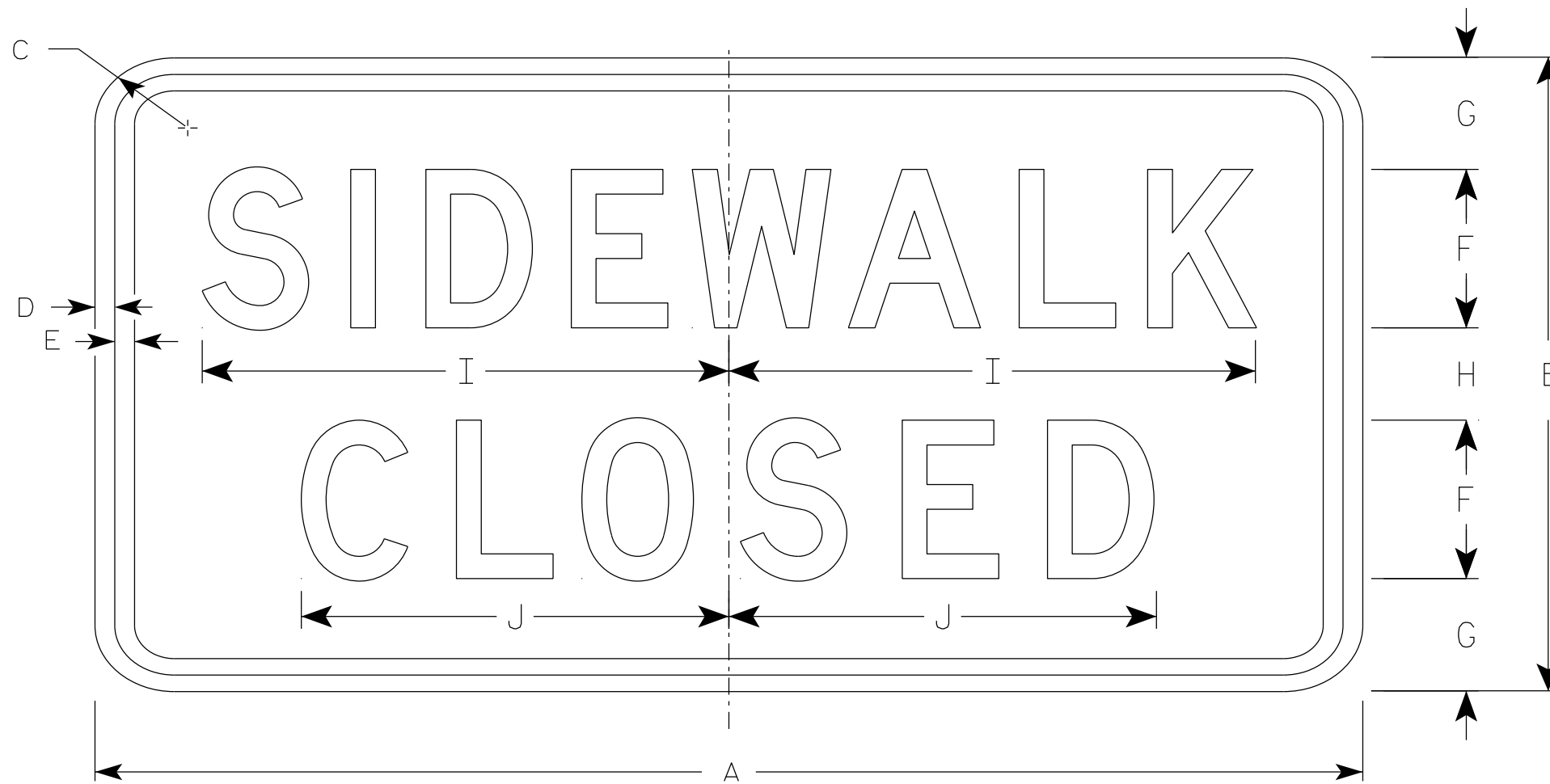
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
 - Background - White
 - Message - Black
3. Message Series - C
4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.



R9-9

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 1/2	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

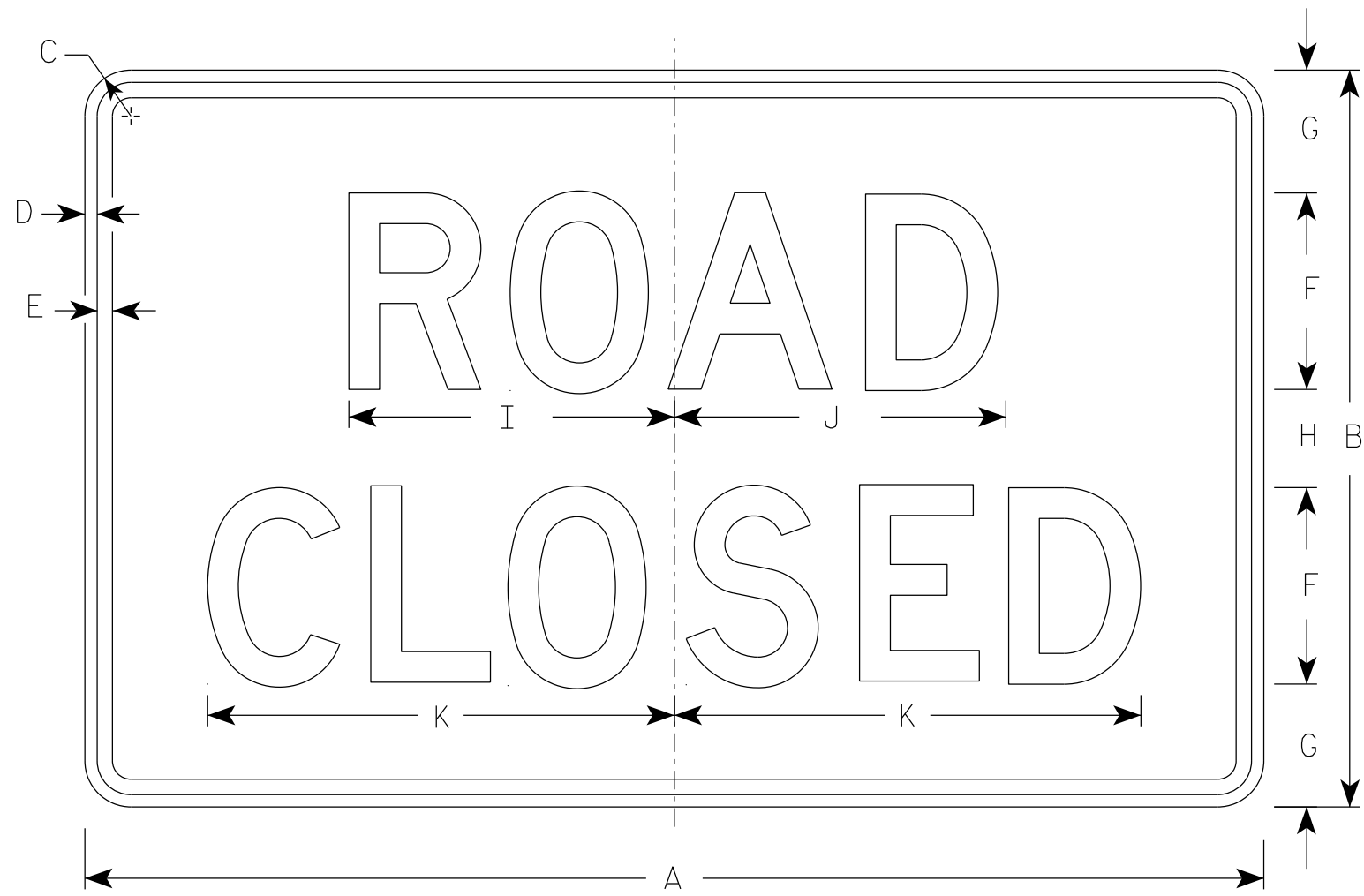
STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

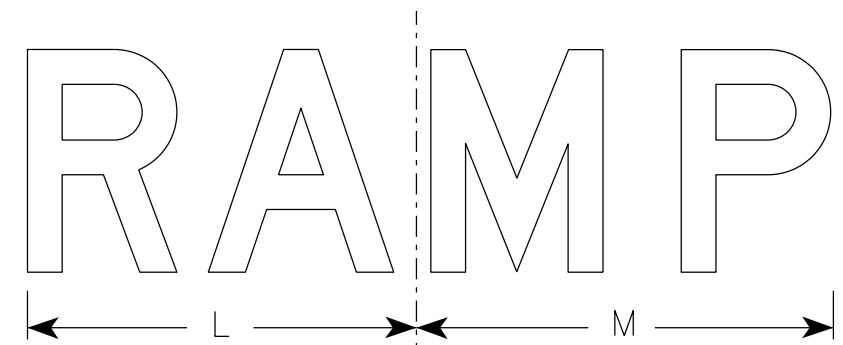
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9.7

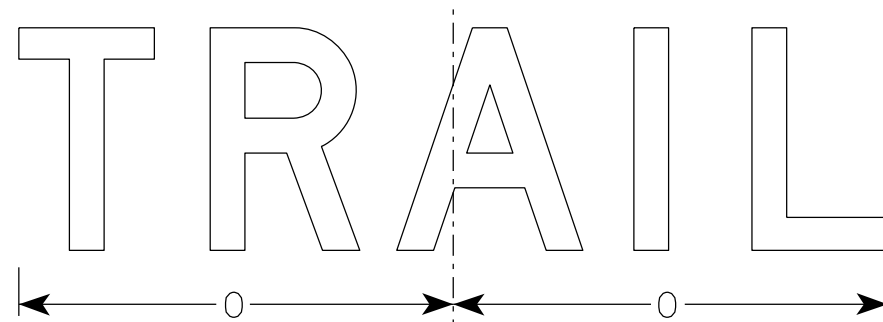
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



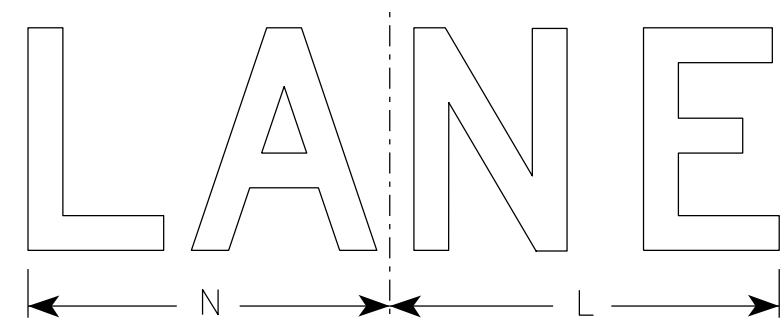
R11-2



R11-2R



R11-2T



R11-2L

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

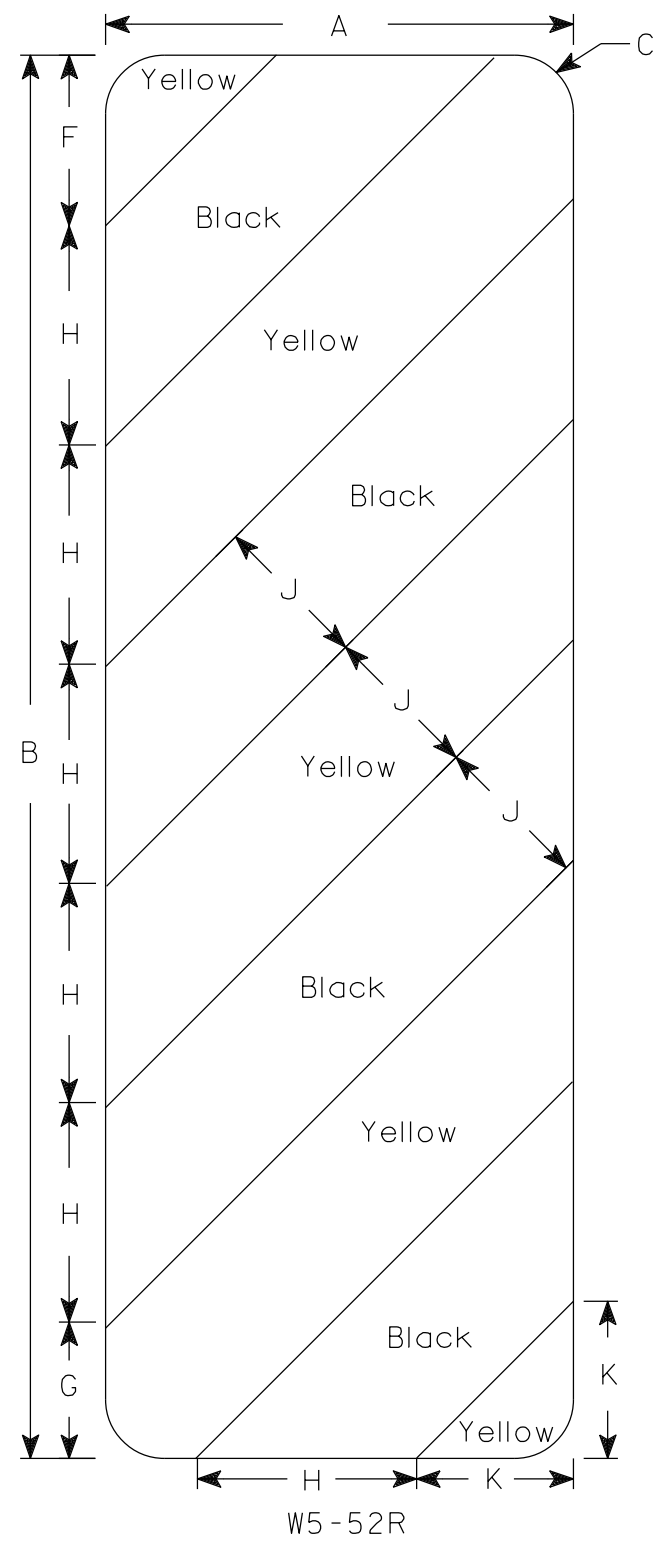
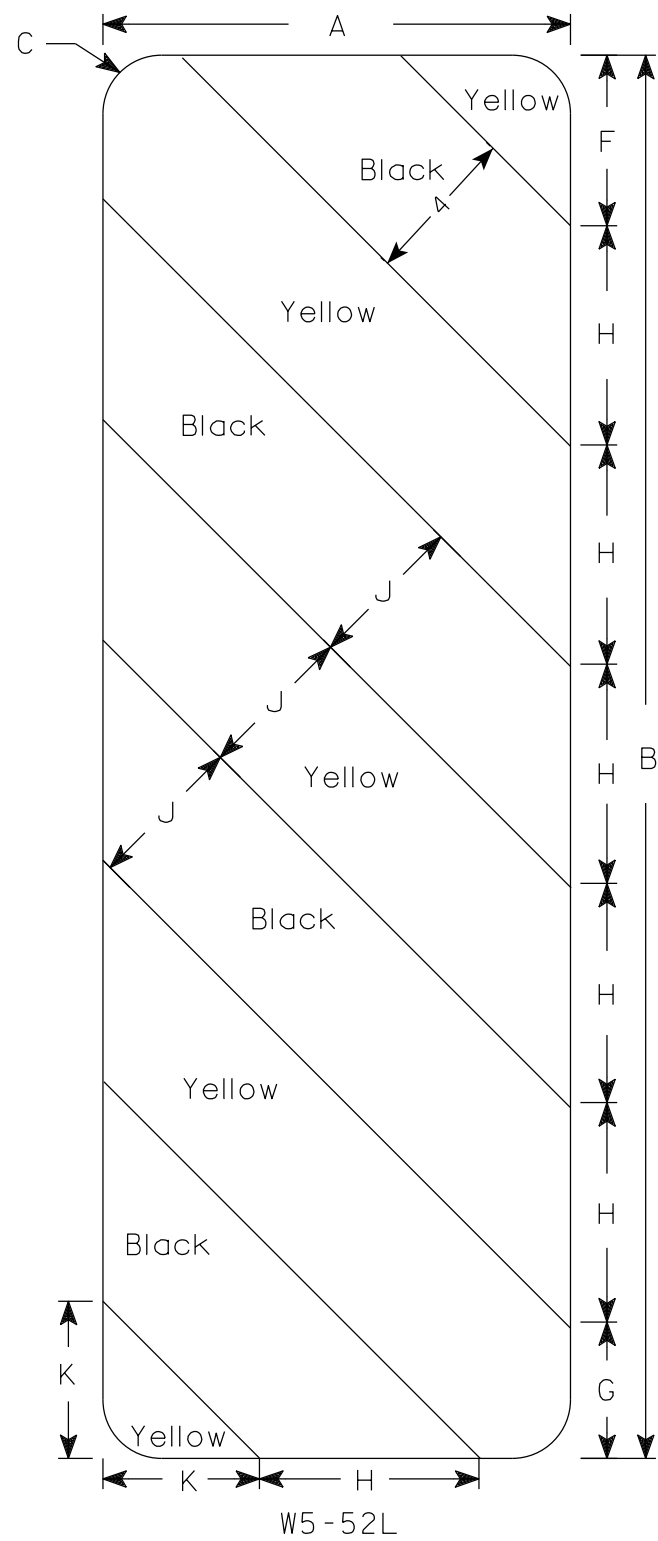
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-2.12

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Alternate colors of stripes as shown.

7

7

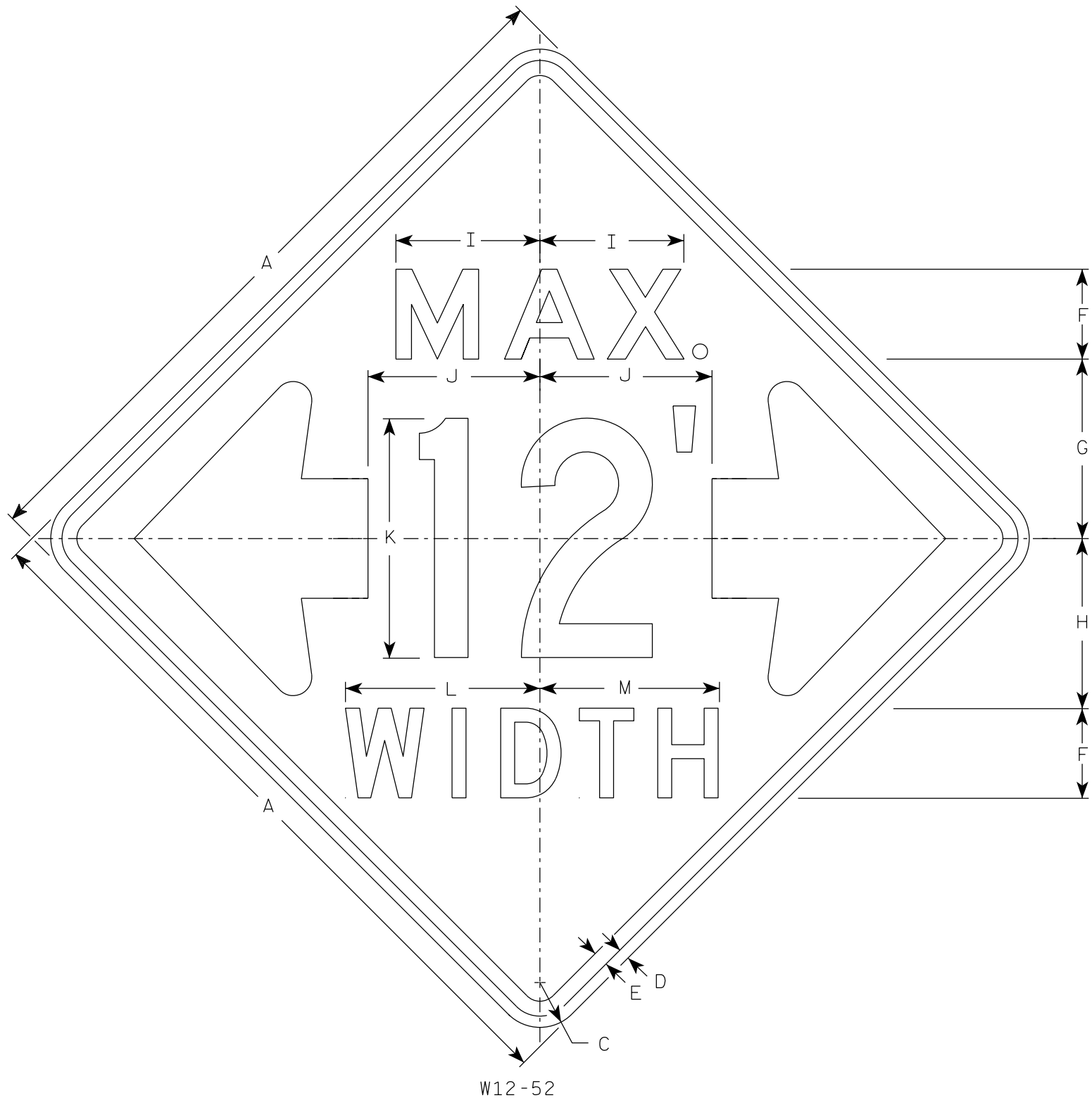
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4													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

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

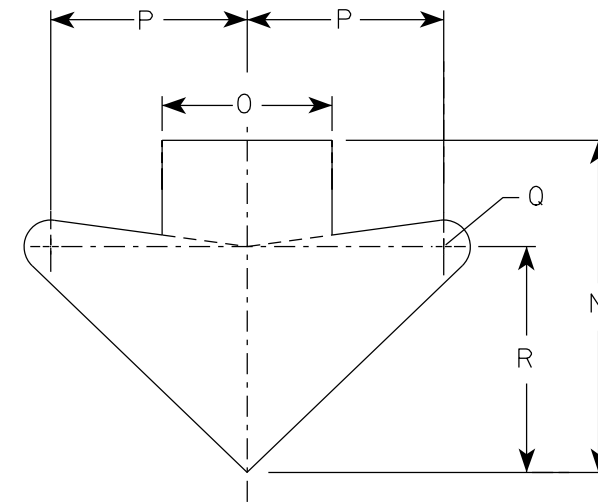
DATE 3/4/2024 PLATE NO. W5-52.10



W12-52

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. The top line is series E, the numerals are series C, and the bottom line is series D.
5. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		3	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		3	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Raub*
For State Traffic Engineer

DATE 3/10/2024 PLATE NO. W12-52.8

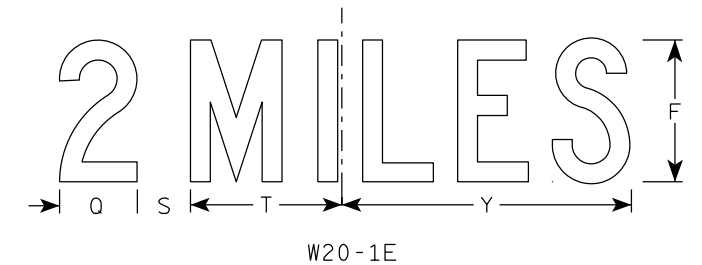
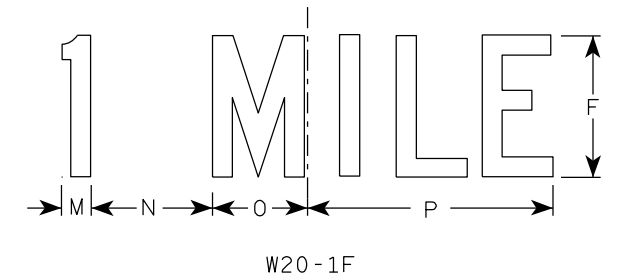
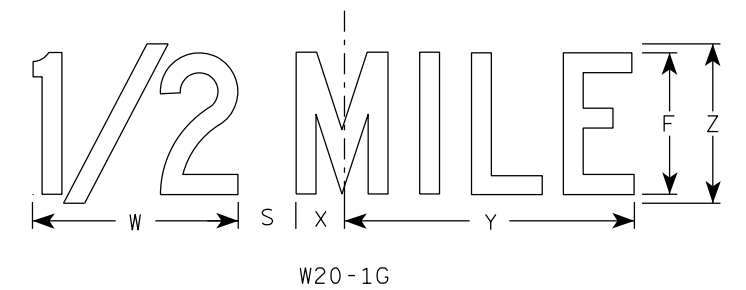
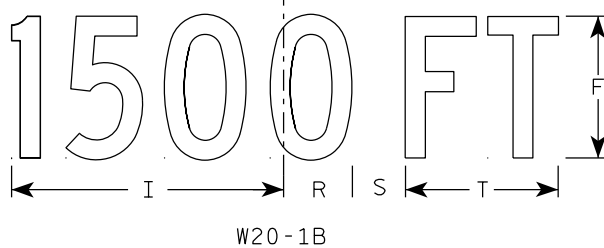
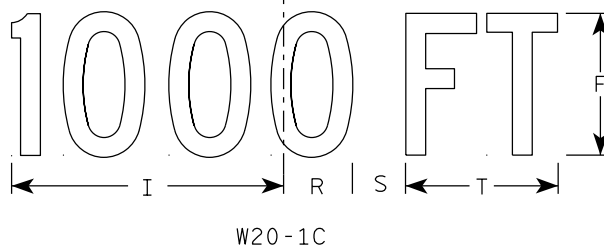
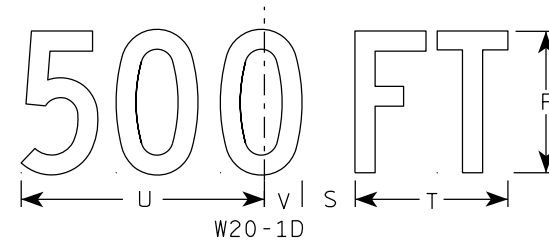
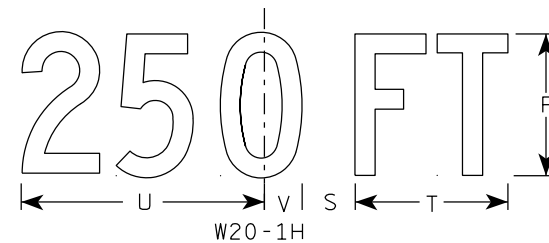
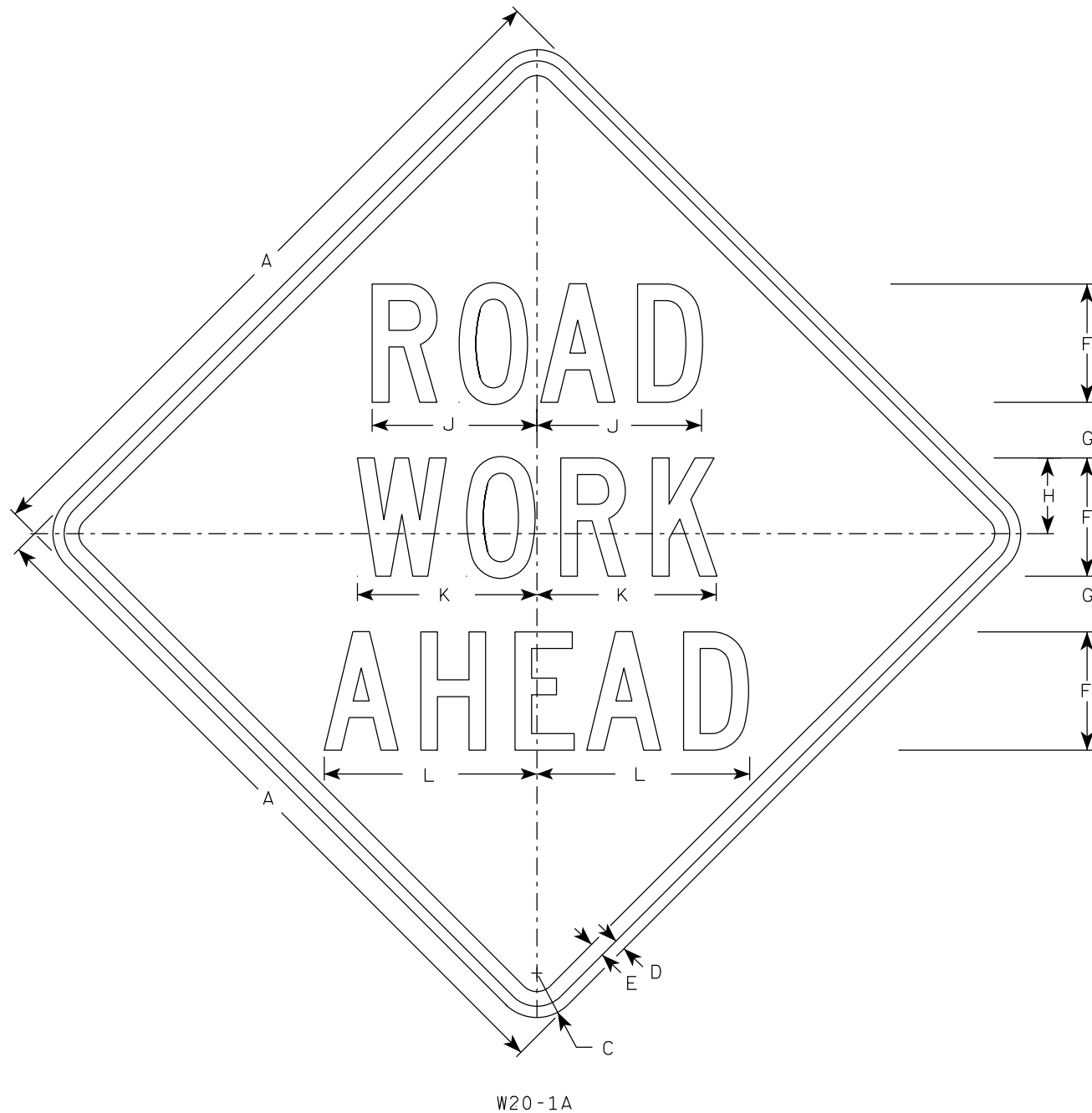
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

7

7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



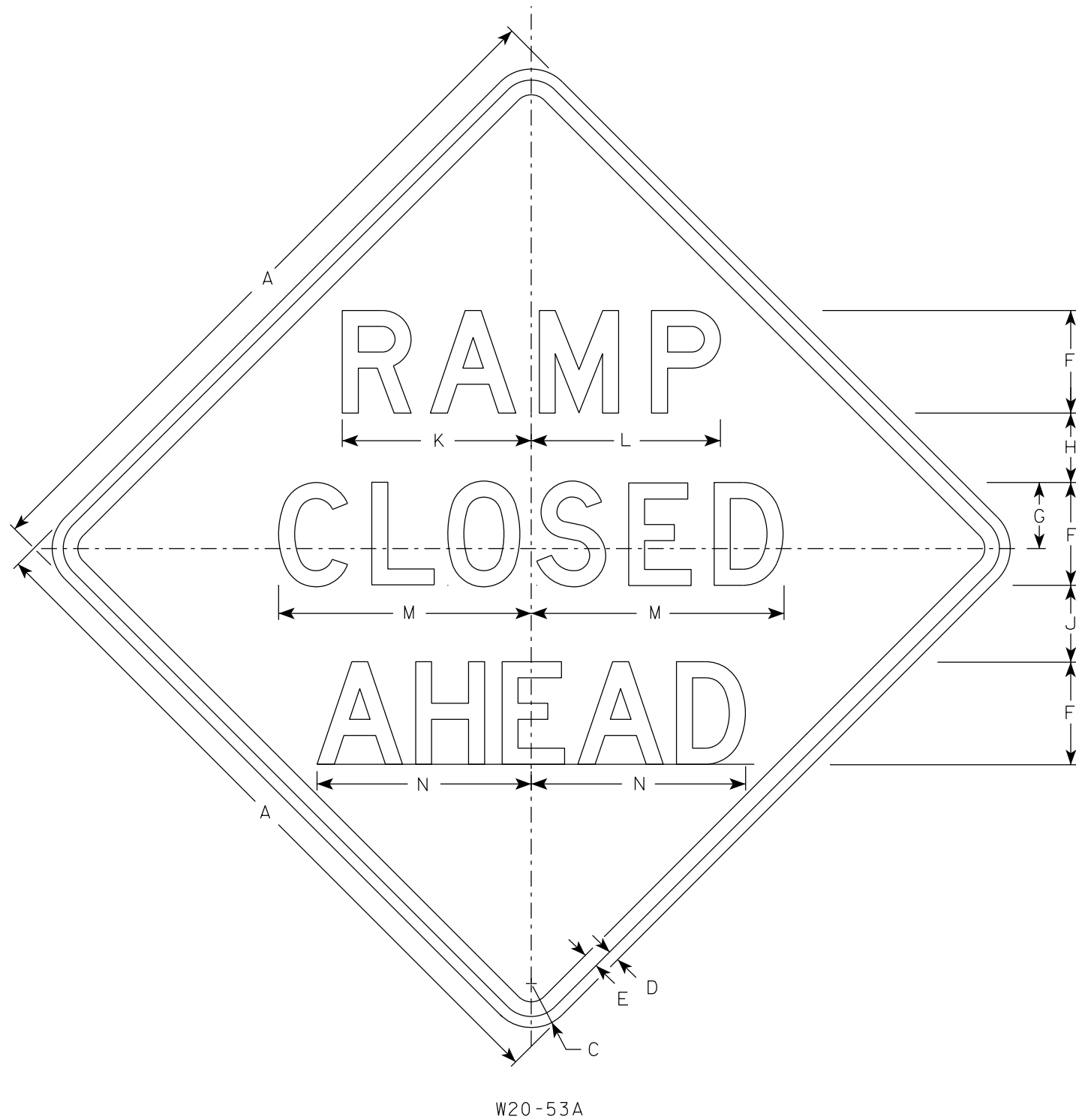
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

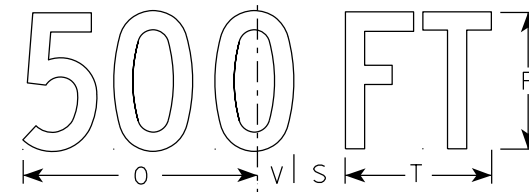
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

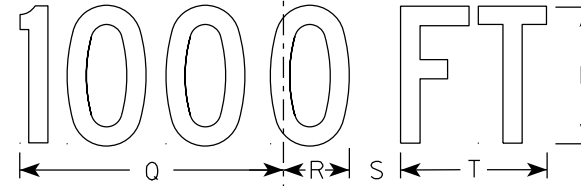
DATE 1/10/2024 PLATE NO. W20-1.12



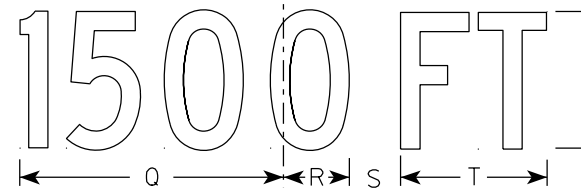
W20-53A



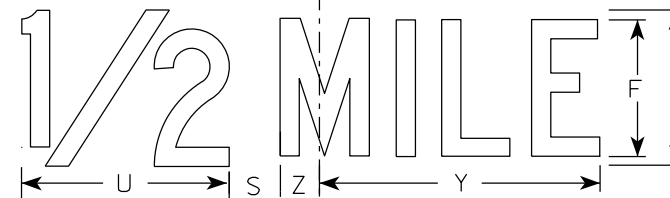
W20-53D



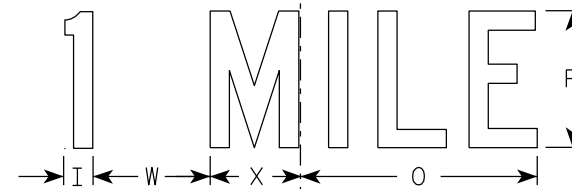
W20-53C



W20-53B



W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-53.2

PROJECT NO:

HWY:

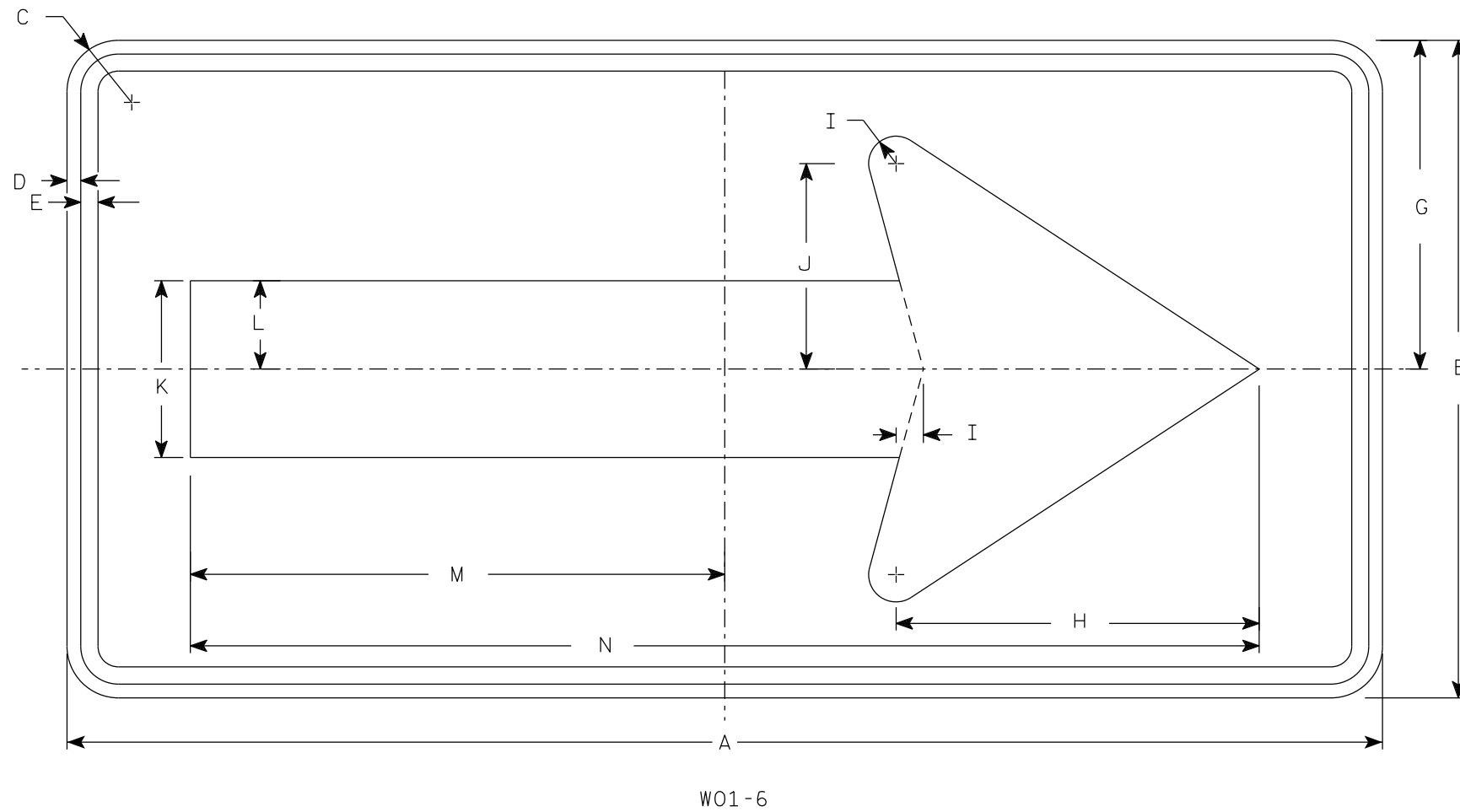
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

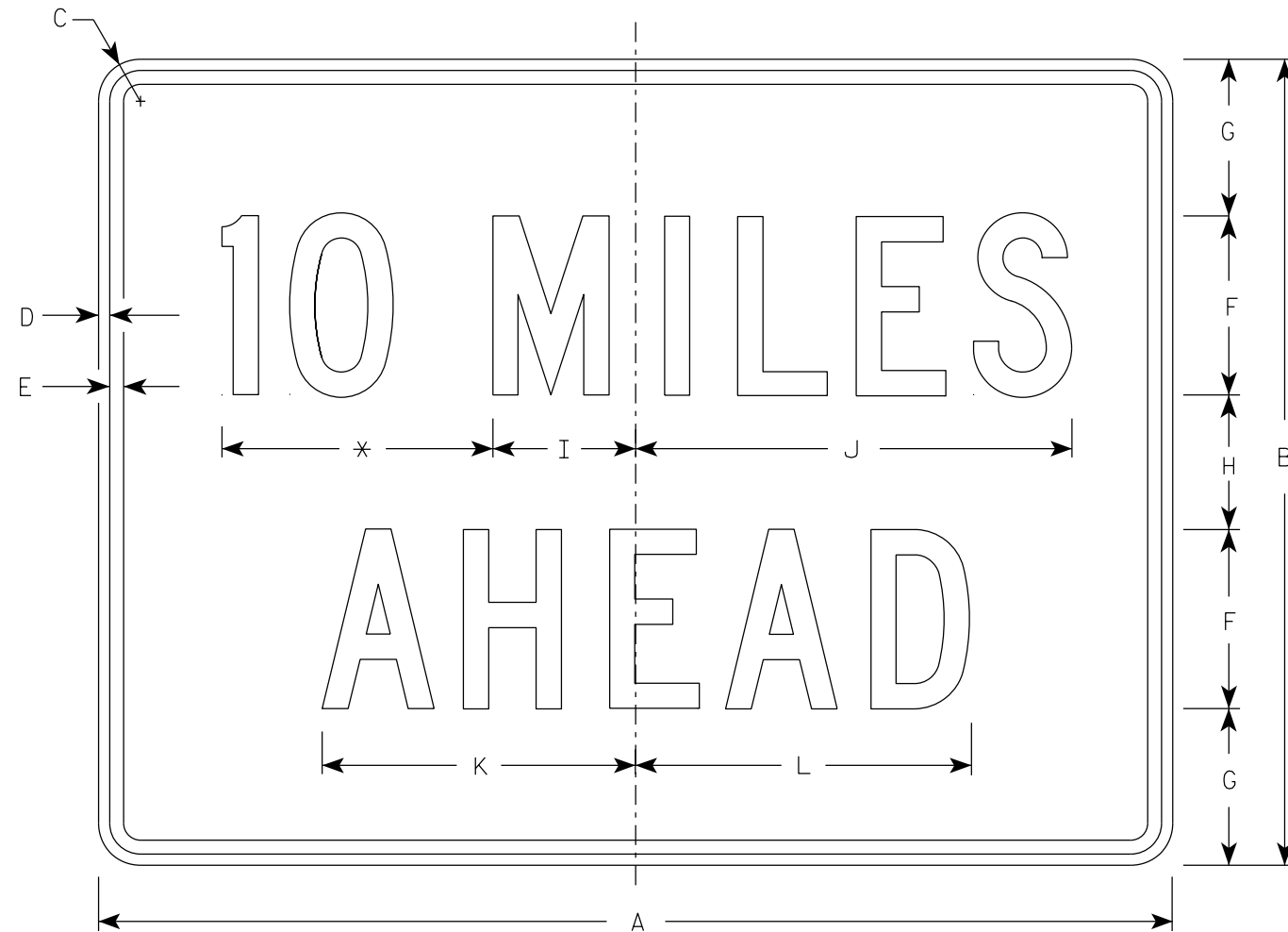
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-6.2

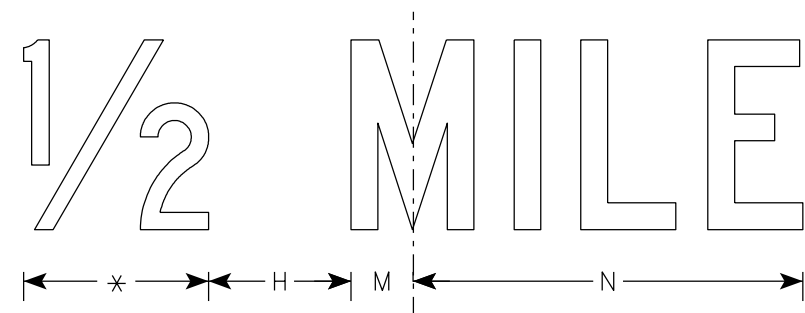
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.



W057-52



* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/2	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN

W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/1/2024 PLATE NO. W057-52.3

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

PLOT TIME: 02/26/24

PLOT DATE: 1/3/2024

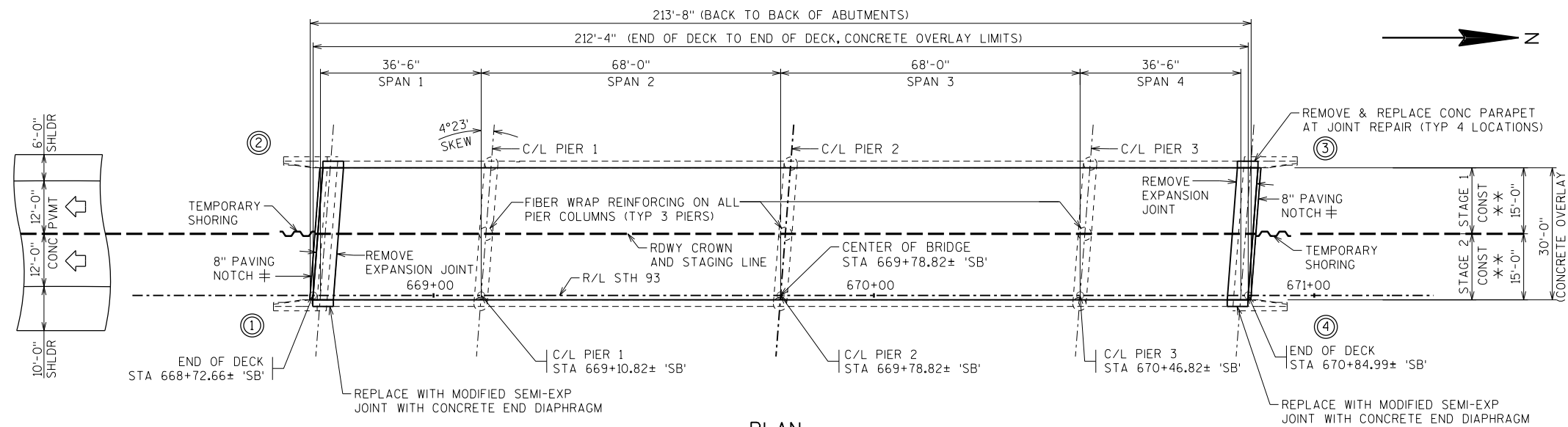
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STATE PROJECT NUMBER

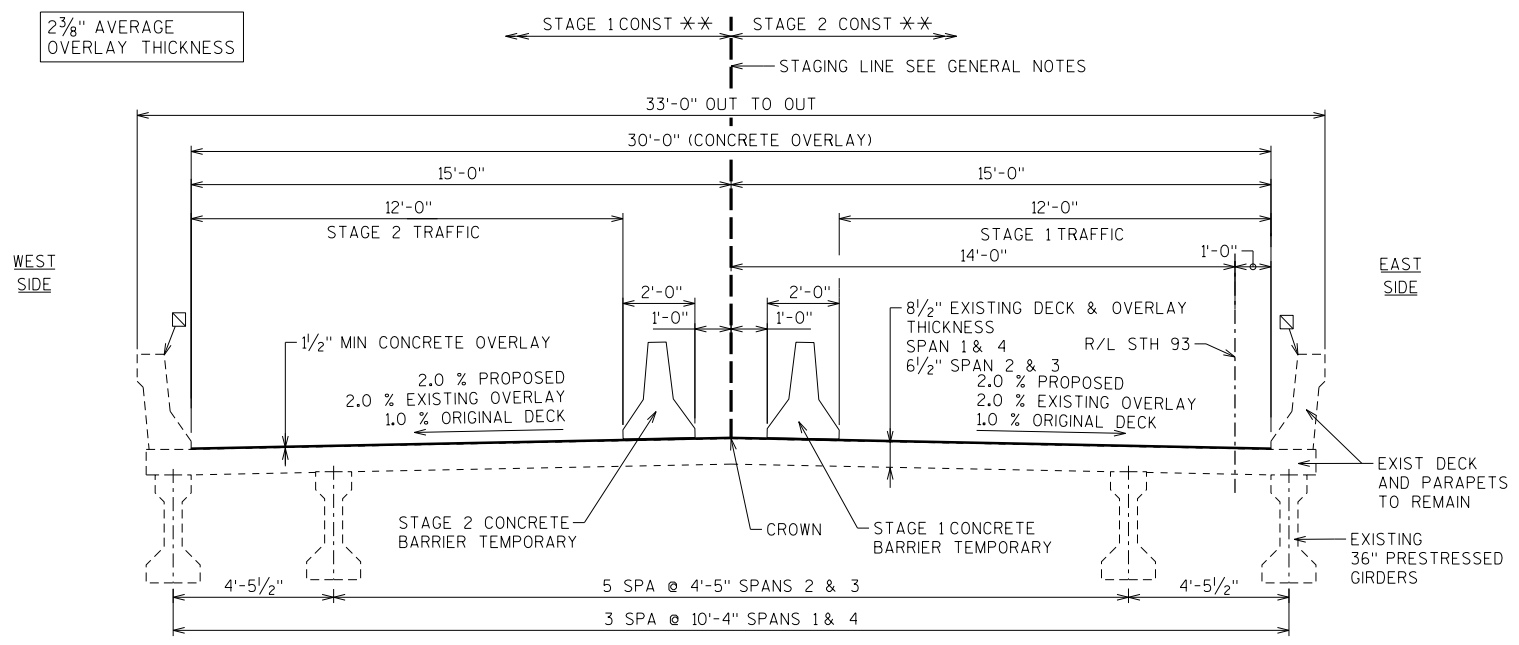
1021-03-80

LEGEND

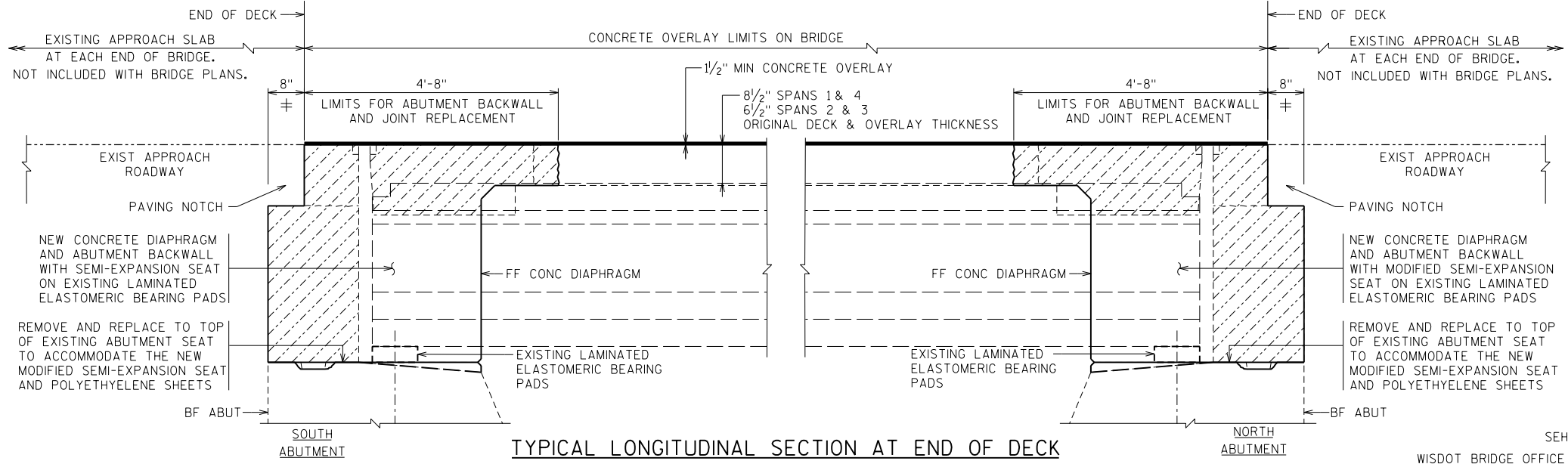
- ⊙ INDICATES WING NUMBER.
- ± DIMENSIONS GIVEN ARE NORMAL TO C/L OF SUBSTRUCTURE UNIT.
- ☒ COAT EXISTING PARAPET WITH "PIGMENTED SURFACE SEALER" PER THE STANDARD SPECIFICATIONS, SEE NOTES ON SHEETS 2.
- ** SEE ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.
- ▨ INDICATES REMOVAL



PLAN NO SCALE FOUR SPAN - 36" PRESTRESSED GIRDER BRIDGE



CROSS SECTION THRU ROADWAY (LOOKING NORTH)



TYPICAL LONGITUDINAL SECTION AT END OF DECK

DESIGN DATA

LIVE LOAD: HS20
 DESIGN LOADING:
 INVENTORY RATING = HS15
 OPERATING RATING = HS26
 WISCONSIN STANDARD VEHICLE (WIS-SPV) = 170 KIPS
 MATERIAL PROPERTIES:
 CONCRETE MASONRY - SUPERSTRUCTURE/OVERLAY - f'c = 4,000 psi
 - ALL OTHER - f'c = 3,500 psi
 HIGH STRENGTH BAR STEEL REINFORCEMENT
 AASHTO GRADE 60 - fy = 60,000 psi
 ALL BAR STEEL SHALL BE EPOXY COATED

TRAFFIC DATA

ADT (2022) = 20,800
 ADT (2032) = 23,100
 DHV = 9.9
 DD = 56/44
 T = 7.1%
 DESIGN SPEED = 45 MPH

LIST OF DRAWINGS

- BRIDGE REHABILITATION & CONCRETE OVERLAY
- NOTES AND QUANTITIES
- REMOVALS
- DECK REPAIRS
- MISCELLANEOUS DETAILS
- PIER COLUMN REPAIR DETAILS
- ABUTMENT REPAIR DETAILS
- SUPERSTRUCTURE & JOINT REPLACEMENT DETAILS
- SLOPED FACE PARAPET "B" DETAILS



NO.	DATE	REVISION	BY
 SHORT ELLIOTT HENDRICKSON INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED		SDR	DATE
		02/05/24	
STRUCTURE B-18-34			
STH 93 (SB) OVER I-94			
COUNTY	TOWN/CITY/VILLAGE		
EAU CLAIRE	WASHINGTON		
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
NCK	CJB	AMJ/DLF	CJB
BRIDGE REHABILITATION & CONCRETE OVERLAY			SHEET 1 OF 10

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
 WISDOT BRIDGE OFFICE CONTACT: AARON BONK, PE, 608.261.0261

TOTAL ESTIMATED QUANTITIES - B-18-34

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
⑧ 203.0220	REMOVING STRUCTURE B-18-34	EACH	1
⑧ 206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-18-34	EACH	1
⑦ 210.1500	BACKFILL STRUCTURE TYPE A	TON	105
⑥ 502.0100	CONCRETE MASONRY BRIDGES	CY	42
502.3200	PROTECTIVE SURFACE TREATMENT	SY	708
⑤ ③ 502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	190
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EA	120
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	6970
505.0906	BAR COUPLERS NO. 6	EACH	60
506.7061S	BRIDGE JACKING, B-18-34	EACH	1
④ ② 509.0301	PREPARATION DECKS TYPE 1	SY	25
④ ② 509.0302	PREPARATION DECKS TYPE 2	SY	25
509.0505.S	CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY	SY	708
④ 509.1500	CONCRETE SURFACE REPAIR	SF	9
④ 509.2000	FULL-DEPTH DECK REPAIR	SY	5
② ① 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	54
⑨ 509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-18-34	SY	708
511.1200	TEMPORARY SHORING B-18-34	SF	70
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	13
④ 516.0165.01	FIBER WRAP REINFORCING NON-STRUCTURAL	SF	1805
NON-BID ITEMS			
	FILLER	SIZE	1/2" & 3/4"
	FILLER	SIZE	3/2"

QUANTITIES NOTES

- ① CONCRETE FOR:
* PREPARATION DECKS TYPE 1 & 2, *FULL-DEPTH DECK REPAIR.
- ② PERTAINS TO DECK.
- ③ FURNISH AND APPLY PIGMENTED SEALER TO FRONT FACE, TOP, AND ENDS OF EXISTING PARAPETS. CLEAN THE INSIDE FACE, TOP AND ENDS OF PARAPET PER BID ITEM "PIGMENTED SURFACE SEALER RESEAL". APPLICATION AND QUANTITY FOR PIGMENTED SURFACE SEALER ARE CONSIDERED INCIDENTAL TO BRIDGE BID ITEM "PIGMENTED SURFACE SEALER RESEAL".
- ④ AS LOCATED BY FIELD ENGINEER.
- ⑤ INCLUDES PARAPETS ON WINGWALLS AND DECK.
- ⑥ CONCRETE FOR JOINT CONVERSION, PAVING BLOCK, BACK WALL AND PARAPET.
- ⑦ A FACTOR OF 2.0 WAS USED TO CONVERT CUBIC YARDS TO TONS.
- ⑧ PERTAINS TO REMOVAL PORTIONS AT JOINTS AND ABUTMENT BACKWALL AND AS DIRECTED BY FIELD ENGINEER.
- ⑨ EXISTING 1 1/2" CONCRETE OVERLAY SHALL BE REMOVED.

* THESE QUANTITIES TOTALS ARE AN ESTIMATE AND ARE INCLUDED IN BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

- PREPARATION DECKS TYPE 1 = 2.2 CY
- PREPARATION DECKS TYPE 2 = 3.4 CY
- FULL-DEPTH DECK REPAIR = 1.1 CY

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND INSPECTION REPORTS. EXISTING BRIDGE PLANS AVAILABLE AT WISDOT.

STATIONING MAY VARY BASED ON EXACT LOCATION OF BRIDGE TO PROPOSED ALIGNMENT.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AS DETERMINED, LOCATED, MARKED AND MEASURED BY THE FIELD ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

BOTTOM OF THE EXISTING DECK WILL BE INSPECTED FOR AREAS OF FULL-DEPTH DECK REPAIR PRIOR TO DECK PREPARATION OPERATIONS.

BOTTOM OF THE EXISTING DECK IS TO BE INSPECTED FOR AREAS OF DISTRESS AFTER COMPLETION OF THE DECK PREPARATION AND PRIOR TO OVERLAYING THE BRIDGE.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

THESE STRUCTURE PLANS ARE ONLY THE STRUCTURE REPAIR WORK. ANY ADDITIONAL REMOVAL REQUIRED, OUTSIDE OF THE LIMITS SHOWN IN THESE PLANS MUST BE COORDINATED WITH THE FIELD ENGINEER. FIELD ENGINEER SHOULD BE CONTACTED FOR APPROVAL OF ADDITIONAL REMOVAL.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM CONCRETE OVERLAY THICKNESS OF 1 1/2" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE THICKNESS IS 2 3/8" IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN 1/2", CONTACT THE STRUCTURES DESIGN SECTION.

CLEAN ALL LOOSE MATERIAL ON THE DECK AFTER CLEANING OPERATIONS USING HIGH PRESSURE AIR, ENSURING ALL FREE-STANDING WATER IS REMOVED PRIOR TO PLACEMENT OF THE CONCRETE OVERLAY AND PIGMENTED SURFACE SEALER.

APPLY "PIGMENTED SURFACE SEALER" TO THE EXISTING CONCRETE PARAPETS PER THE STANDARD SPECIFICATIONS AND AS SHOWN IN THIS PLAN SET.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

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

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

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

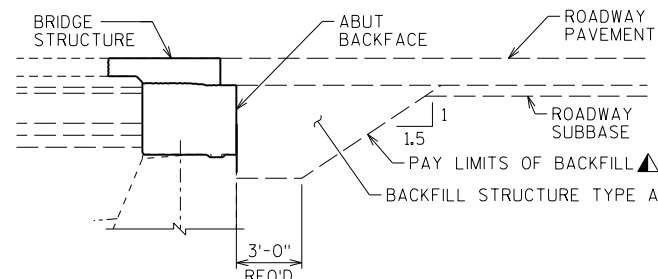
SEE ROADWAY PLAN FOR LANE STAGING AND TRAFFIC SHIFT. COORDINATE THESE STRUCTURE PLANS WITH THE ROADWAY STAGING.

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-18-34" SHALL BE THE EXISTING GROUNDLINE.

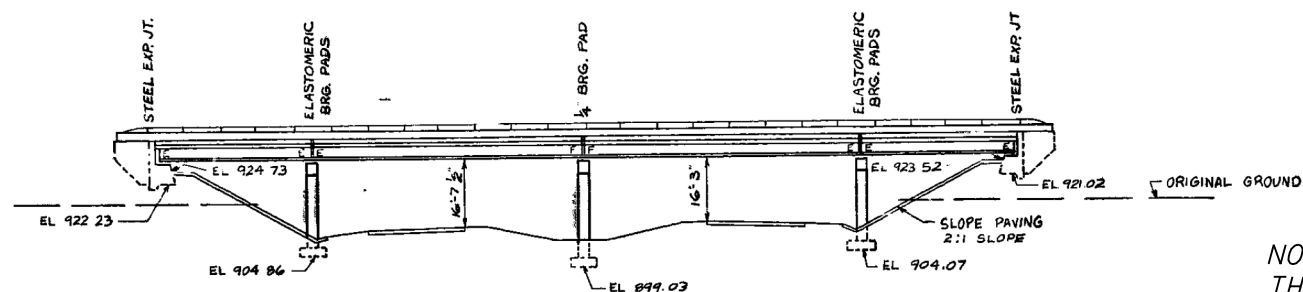
THE QUANTITY FOR BACKFILL STRUCTURE TYPE A IS CALCULATED BASED ON THE BACKFILL STRUCTURE LIMITS REQUIRED TO PERFORM REPAIR WORK.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION M213.



TYPICAL SECTION AT ABUTMENT BACKWALL

▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.



ELEVATION

NOTE:
THIS ELEVATION VIEW TAKEN FROM EXISTING PLANS, REFERENCE ONLY, NOT FOR CONSTRUCTION. INTENT IS TO SHOW CONTRACTOR BENEATH THE BRIDGE

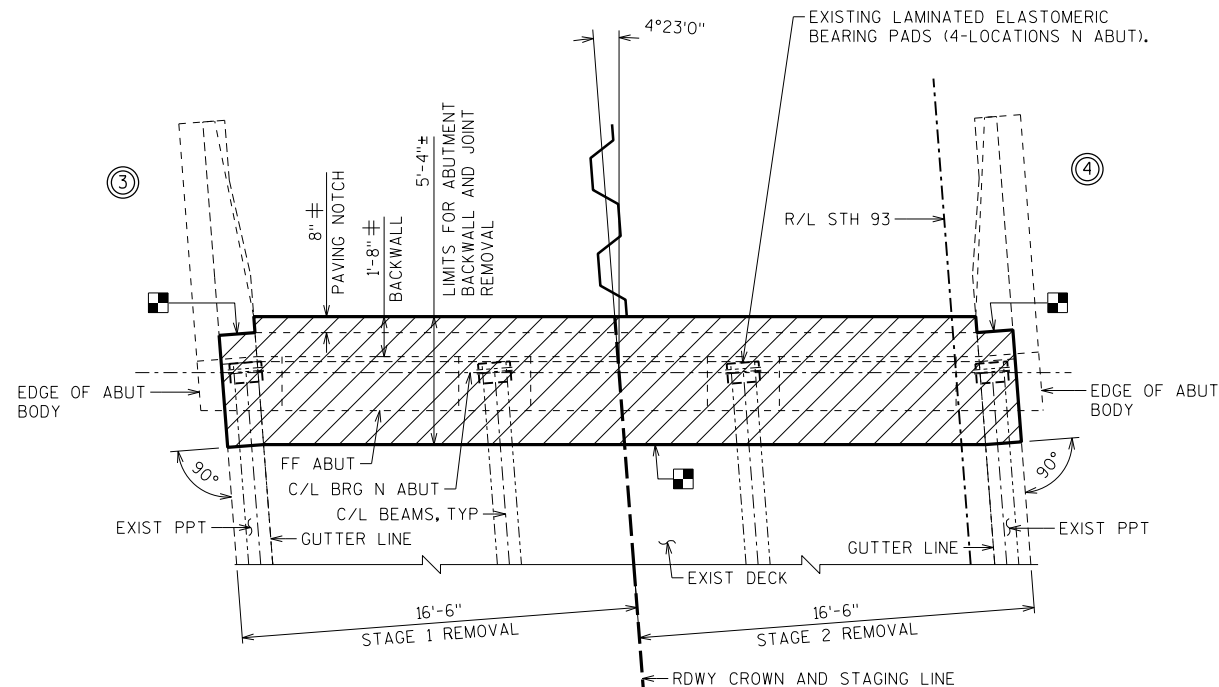
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-34			
DRAWN BY DLF		PLANS CKD. CJB	
NOTES AND QUANTITIES			SHEET 2 OF 10

NOTES

- SEE GENERAL NOTES ON SHEET 2.
- EXISTING APPROACH SLAB AT EACH END OF BRIDGE NOT INCLUDED WITH BRIDGE PLANS.
- PRESERVE/CLEAN AND UTILIZE EXIST REINF WHERE POSSIBLE AND INCORPORATED INTO NEW WORK. BEND/TRIM AS NECESSARY TO PROVIDE 2" CLEAR.
- IF EXISTING BARS ARE SEVERELY CORRODED OR DAMAGED DURING CONCRETE REMOVAL, REPLACE WITH EPOXY COATED BARS PER DETAILS IN THIS PLAN

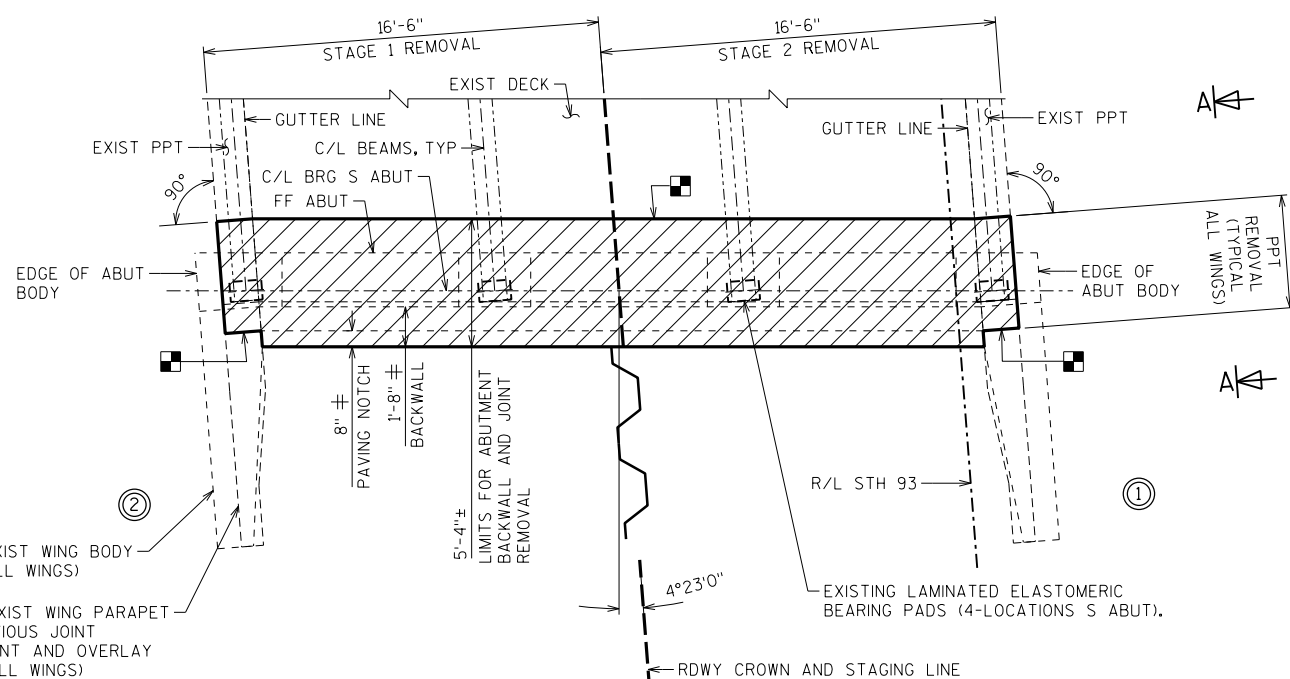
LEGEND

- ⊙ INDICATES WING NUMBER.
- ± DIMENSIONS GIVEN ARE NORMAL TO C/L OF SUBSTRUCTURE UNIT.
- INDICATES REMOVAL
- CONCRETE SURFACE REPAIR
- FF = FRONT FACE
- BF = BACK FACE
- EF = EACH FACE
- DEFINE REMOVAL WITH 1" DEEP SAWCUT TO A NEAT LINE ALL AROUND DECK & SLOPED FACE PARAPET. SAWCUT LINES ON THE SLOPED FACE PARAPET ARE PERPENDICULAR TO THE GUTTER LINE.
- DEFINE REMOVAL WITH 1" DEEP SAWCUT TO A NEAT LINE DOWN TO THE CONST JOINT AT THE TOP OF WING/ABUTMENT BODY AS NEEDED TO PERFORM THE NEW WORK
- (A24) INDICATES CONCRETE SURFACE REPAIR ON FF ABUTMENT AT VARIOUS LOCATIONS AS LOCATED BY THE FIELD ENGINEER



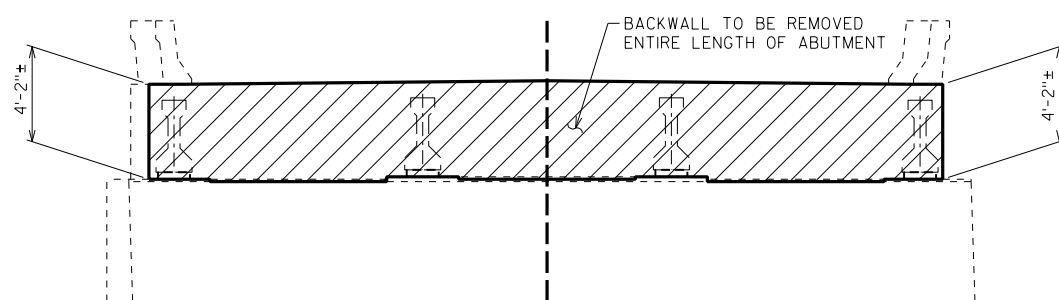
REMOVAL PLAN - NORTH ABUTMENT

APPROACH SLAB NOT SHOWN FOR CLARITY
APPROACH SLAB NOT INCLUDED WITH BRIDGE PLANS



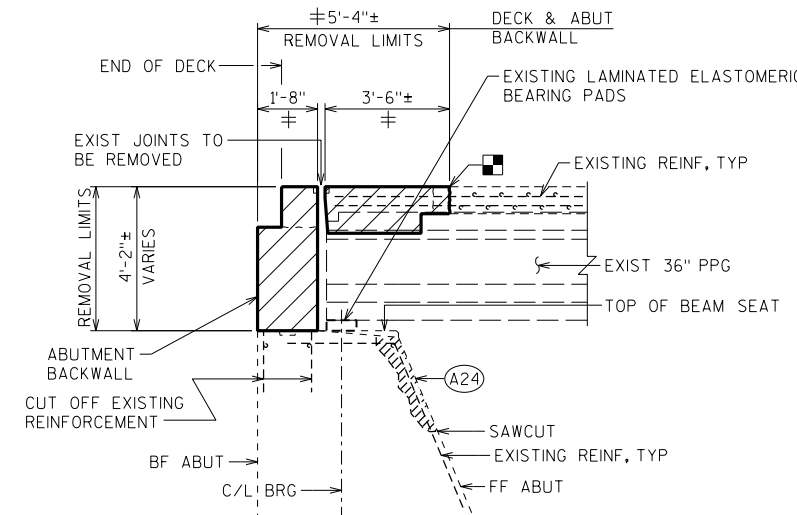
REMOVAL PLAN - SOUTH ABUTMENT

APPROACH SLAB NOT SHOWN FOR CLARITY
APPROACH SLAB NOT INCLUDED WITH BRIDGE PLANS



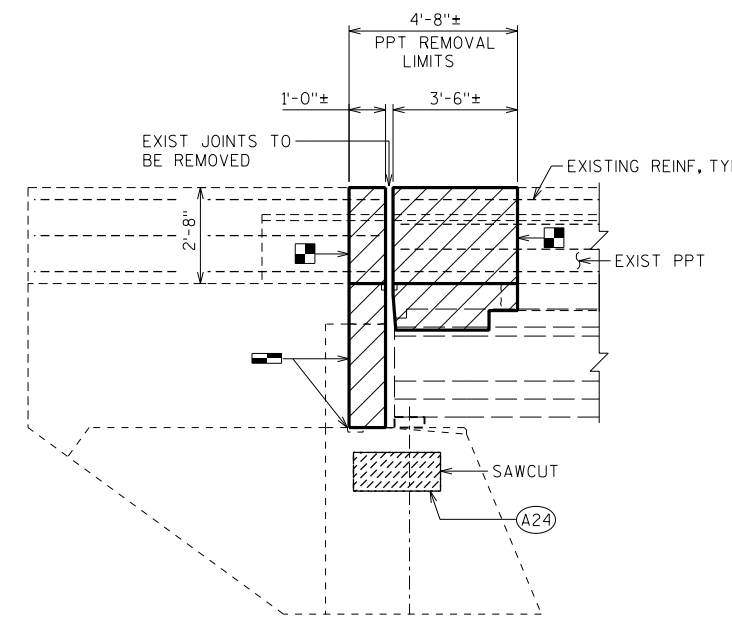
BACKWALL REMOVAL ELEVATION

TYP BOTH ABUTMENTS



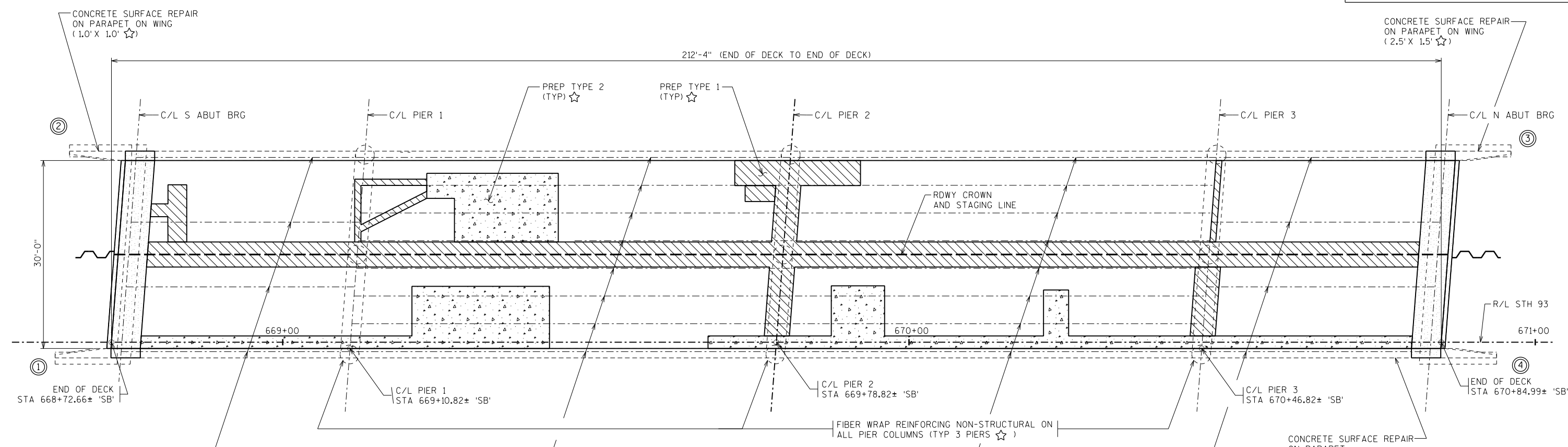
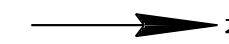
BACKWALL AND JOINT REMOVAL SECTION

TYP BOTH ABUTMENTS



VIEW A
(TYPICAL ALL WINGS)
SEE PLAN FOR ORIENTATION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-34			
DRAWN BY DLF		PLANS CK'D. CJB	
REMOVALS			SHEET 3 OF 10



SEE GIRDER NOTES ALL GIRDERS EACH SPAN:
 GIRDER ENDS AND FULL LENGTH OF GIRDER SHALL BE INSPECTED FOR REPAIRS AND REPAIRS LOCATED AND QUANTIFIED IN THE FIELD BY THE FIELD ENGINEER.
 SPAN 1 & 4 SHALL HAVE "FIBER WRAP REINFORCING NON-STRUCTURAL" APPLIED TO DETERIORATED GIRDER ENDS AT EACH ABUTMENT.
 SEE NOTES ON SHEET 2.
 SEE MISCELLANEOUS DETAILS ON SHEET 5.

PLAN

LEGEND

- ⊙ INDICATES WING NUMBER.
- ☆ QUANTITY AND LOCATION TO BE VERIFIED IN THE FIELD BY THE FIELD ENGINEER.

- PREPARATION DECKS TYPE 1
- PREPARATION DECKS TYPE 2
- JOINT REPLACEMENT

FULL DEPTH DECK REPAIR, UNDISTRIBUTED AMOUNT, AS DETERMINED BY FIELD ENGINEER.

FILE NAME : S:\UZ\W\1111\147076\5-final-dsgn\5-final-dsgn\20-Struct\B-18-34\bridge\B03494.dgn PLOT DATE: 1/3/2024 PLOT TIME: 02:26:54 AM

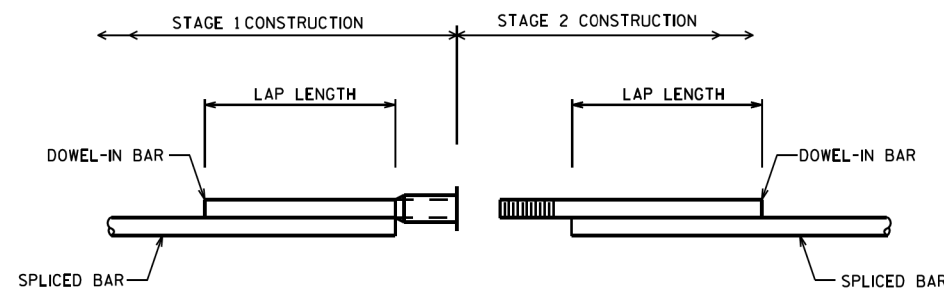
8

8

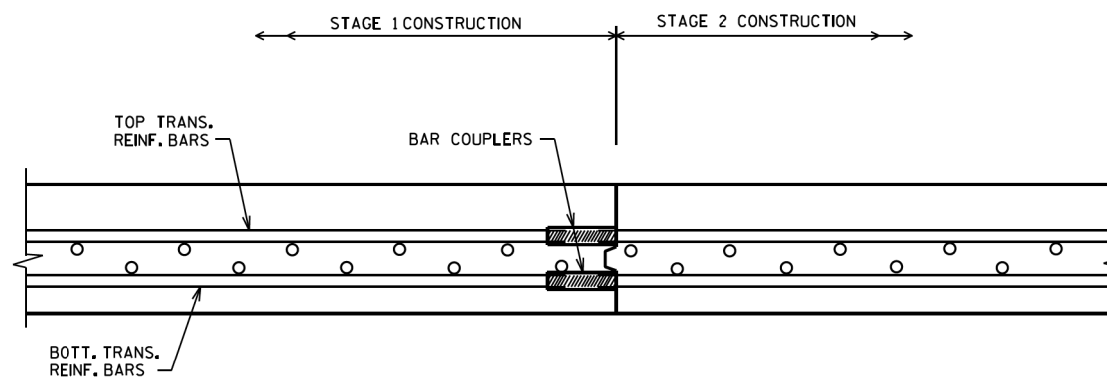
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-34			
DRAWN BY		DLF	PLANS CK'D. CJB
DECK REPAIRS			SHEET 4 OF 10

GIRDER REPAIR NOTES

- ⊗ REPAIR AREAS EACH SIDE OF GIRDER AND THE GIRDER ENDS AS DETERMINED AND MARKED FOR REPAIR IN THE FIELD BY THE FIELD ENGINEER ARE AS FOLLOWS:
 1. REMOVAL AREA SHOWN IS APPROXIMATE. THE ENTIRE BEAM END SHALL BE SOUNDED BUT ONLY UNSOUND CONCRETE SHALL BE REMOVED EXCEPT WHERE NECESSARY TO GET BEHIND EXPOSED REINFORCING STEEL.
 2. EXERCISE PROPER CARE WHEN SAWING/DRILLING OF THE EXISTING GIRDERS TO NOT DAMAGE EMBEDDED REINFORCING STEEL OR PRESTRESSING STRANDS. REPLACE DAMAGED GIRDERS AT NO ADDITIONAL COST TO THE DEPARTMENT.
 3. DRILL 1/2" DIA HOLE IN GIRDER WEB AT LOCATION SHOWN.
 4. SEE EXISTING GIRDER DETAILS FOR GIRDER DIMENSIONS: EXISTING ORIGINAL PLANS AVAILABLE AT THE WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DIVISION.
 5. CLEAN & REPAIR BEAM END AREAS, INCLUDING WITHIN THE PROPOSED CONCRETE DIAPHRAGMS UNDER "FIBER WRAP REINFORCING NON-STRUCTURAL" BID ITEM. CONCRETE REPAIR AT GIRDER ENDS WITHIN THE PROPOSED CONCRETE DIAPHRAGMS SHALL FOLLOW THE SPECIFICATION FOR FIBER WRAP REINFORCING NON-STRUCTURAL AS IT PERTAINS TO THE CONCRETE PREPARATION. THIS COST OF THIS CONCRETE REPAIR IS INCLUDED IN THE BID ITEM "FIBER WRAP REINFORCING NON-STRUCTURAL". NO FIBER WRAP SHALL BE APPLIED WITHIN THE AREA OF THE PROPOSED CONCRETE DIAPHRAGMS.
- ☆ WHERE EXISTING REINFORCEMENT IS EXPOSED, REMOVE CONCRETE A MIN 1/2" BEHIND REINFORCING BARS. ABRASIVE BLAST CLEAN AND COAT WITH ZINC RICH PAINT. WHERE EXISTING PRESTRESSING STRAND IS EXPOSED, REMOVE UNSOUND CONCRETE, ABRASIVE BLAST CLEAN AND COAT WITH ZINC RICH PAINT.



DOWEL BAR COUPLER
STAGE 2 DOWEL SCREWS INTO
COUPLER PLACED IN STAGE 1



SECTION THRU DECK
ONE-PIECE THREADED COUPLER SHOWN

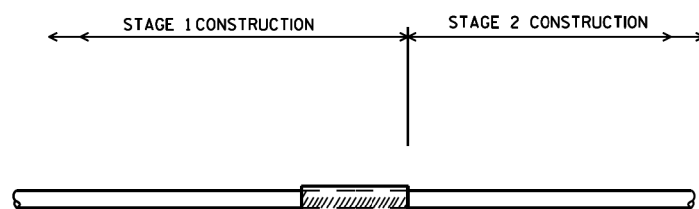
BAR COUPLER NOTES

FOR DOWEL BAR COUPLERS, ALL DOWEL BARS SHALL BE LAPPED AND TIED TO THE REINFORCEMENT BARS.

DOWEL BAR COUPLER LAP LENGTHS

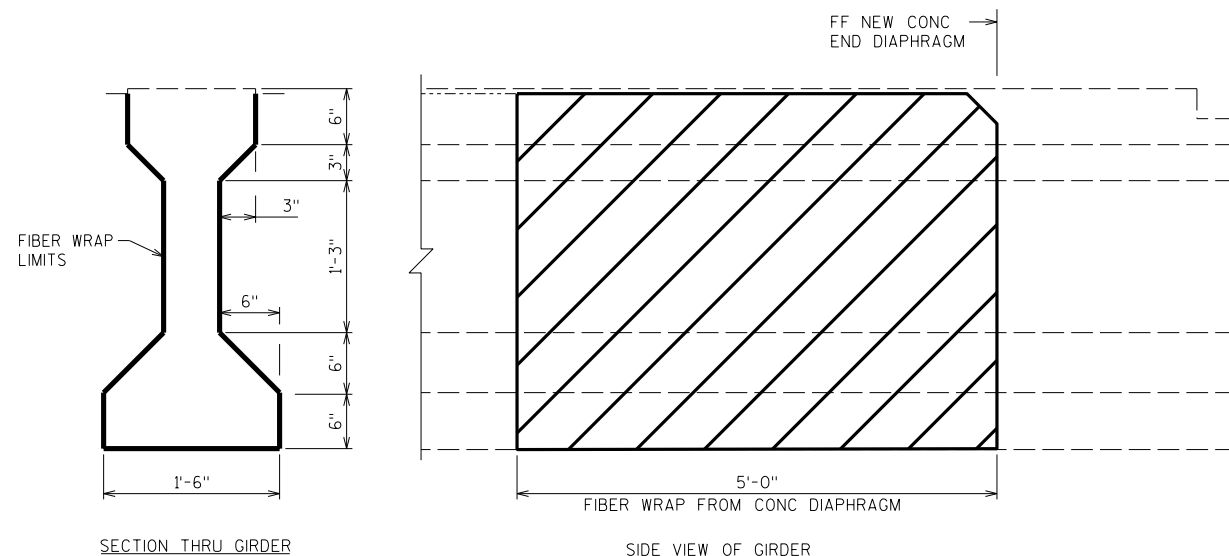
CONCRETE UNDER BAR	BAR SIZE	4	5	6	7	8	9	10	11
12" OR LESS	f'c = 3500	1'-8"	2'-8"	3'-2"	4'-3"	5'-6"	7'-0"	8'-9"	10'-11"
	f'c = 4000	1'-8"	2'-8"	3'-2"	4'-0"	5'-2"	6'-6"	8'-3"	10'-2"
MORE THAN 12"	f'c = 3500	2'-3"	2'-11"	3'-6"	4'-8"	6'-1"	7'-10"	9'-10"	12'-1"
	f'c = 4000	2'-3"	2'-11"	3'-6"	4'-5"	5'-8"	7'-4"	9'-2"	11'-4"

BAR LENGTH COMPUTED TO ϕ LONGIT. JOINT AND SHALL BE MODIFIED IF REQ'D. TO BAR COUPLER MANUFACTURER RECOMMENDATIONS. PAY BASED ON BARS AS DETAILED.



ONE-PIECE THREADED COUPLER

BAR COUPLER ALTERNATIVES



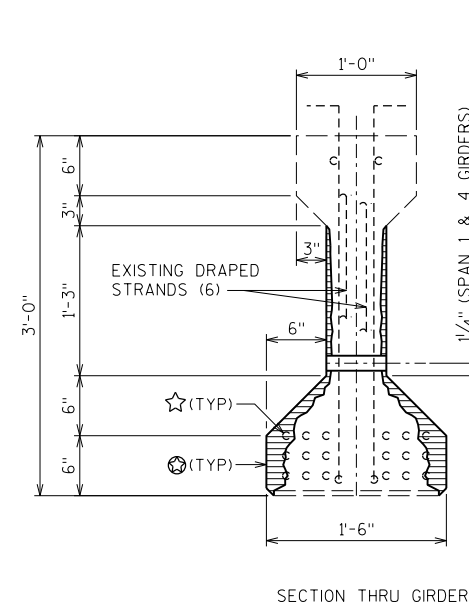
FIBER WRAP GIRDER DETAIL ALTERNATE

(TYP AT GIRDER ENDS
AS DIRECTED BY THE FIELD ENGINEER)

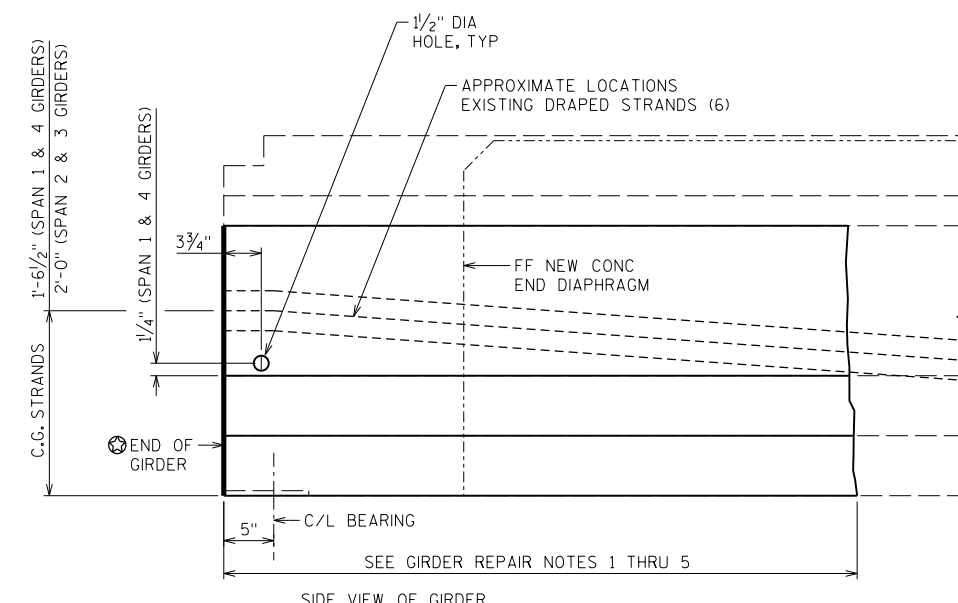
FIBER WRAP NOTES

PROVIDE FIBER WRAP REINFORCEMENT NON-STRUCTURAL ACCORDING TO THE PLAN DETAILS AND SPECIFICATIONS.

ALL WORK REQUIRED TO APPLY FIBER WRAP REINFORCING NON-STRUCTURAL TO THE GIRDER ENDS AT BOTH ABUTMENTS SHALL BE INCLUDED IN THE BID ITEM "FIBER WRAP REINFORCING NON-STRUCTURAL".



SECTION THRU GIRDER



SIDE VIEW OF GIRDER

GIRDER REPAIR DETAIL

(TYP AT GIRDER ENDS
AS DIRECTED BY THE FIELD ENGINEER)

GIRDER REACTION AT BEARING (KIPS)

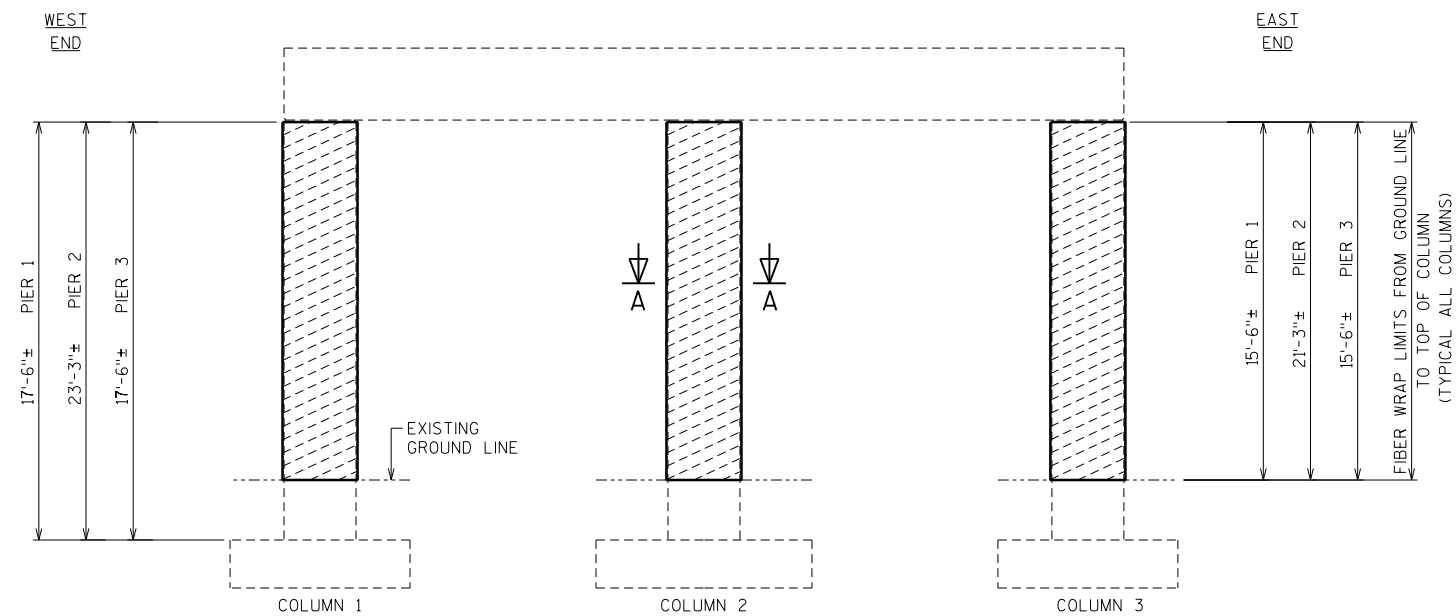
		SOUTH ABUT	NORTH ABUT
INTERIOR GIRDER	DL	25.3	25.3
EXTERIOR GIRDER	DL	30.7	30.7

THE THEORETICAL SERVICE LOADS (UNFACTORED) SHOWN IN THE TABLE ARE BASED ON THE BRIDGE IN ITS FINAL CONFIGURATION. ADDITIONAL LOAD RESULTING FROM STAGING AND/OR CONTRACTOR OPERATION SUCH AS UNEVEN JACKING OR ADJACENT GIRDERS OR ADJACENT SUBSTRUCTURE UNITS, IS NOT INCLUDED.

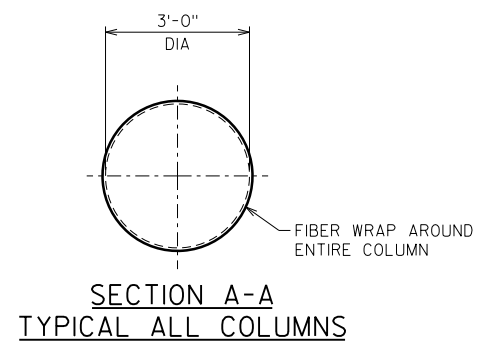
EXTERIOR GIRDER DEAD LOAD REACTIONS WERE INCREASED 10% TO ACCOUNT FOR VARIABILITY IN COMPOSITE DEAD LOAD DISTRIBUTION METHODS.

IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE ADEQUACY OF THE GIRDER AT THE JACKING LOCATION.

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MISCELLANEOUS DETAILS			SHEET 5 OF 10



**PIER ELEVATION
TYPICAL PIER FIBER WRAP**
(PIER 1, 2 & 3)
(LOOKING NORTH)



FIBER WRAP NOTES

SEE SPECIAL PROVISIONS FOR FIBER WRAP. ALL CRACKING, DELAMINATION AND SPALLING SHALL BE REPAIRED PRIOR TO PLACEMENT OF THE FIBER WRAP. COST INCLUDED IN THE BID ITEM "FIBER WRAP REINFORCING NON-STRUCTURAL". REPAIR AREAS SHALL BE DETERMINED AND LOCATED BY THE FIELD ENGINEER.

PROVIDE FIBER WRAP REINFORCEMENT NON-STRUCTURAL ACCORDING TO THE PLAN DETAILS AND SPECIFICATIONS.

ALL WORK REQUIRED TO APPLY FIBER WRAP REINFORCING NON-STRUCTURAL TO THE PIER COLUMNS AT ALL COLUMNS SHALL BE INCLUDED IN THE BID ITEM "FIBER WRAP REINFORCING NON-STRUCTURAL".

LEGEND



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-34			
DRAWN BY DLF		PLANS CK'D. CJB	
PIER COLUMN REPAIR DETAILS			SHEET 6 OF 10

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

BILL OF BARS						ABUTMENTS		
BAR MARK	COAT	NO. * REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1 CONST	STG 2 CONST
A501		60	2 - 1		X	ANCHOR	X	
A501		60	2 - 1		X	ANCHOR		X
A402		10	7 - 4			LONGIT	X	
A402		10	7 - 4			LONGIT		X
A403		10	3 - 6			LONGIT	X	
A403		10	3 - 6			LONGIT		X
A404		30	3 - 5			TRANS	X	
A404		30	3 - 5			TRANS		X

* NUMBER REQUIRED IS FOR TWO ABUTMENTS

NOTES

SEE GENERAL NOTES ON SHEET 2.

SEE REMOVAL PLAN SHEET FOR REMOVALS.

PRESERVE/CLEAN AND UTILIZE EXIST REINF WHERE POSSIBLE AND INCORPORATED INTO NEW WORK. BEND/TRIM AS NECESSARY TO PROVIDE 2" CLEAR.

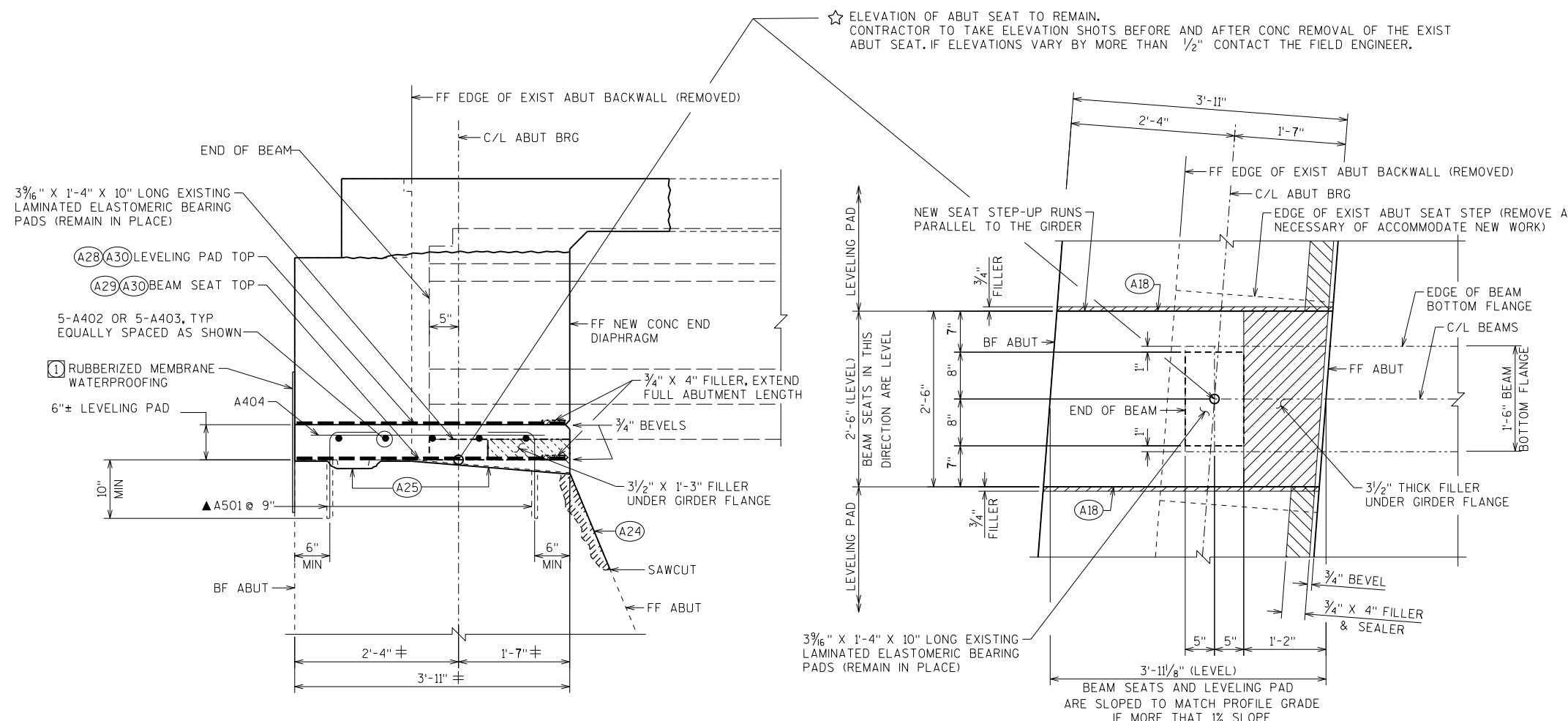
BRIDGE JACKING SHALL BE USED TO RAISE THE BRIDGE AND BEARING PADS IN ORDER TO PLACE POLYETHYLENE SHEETS UNDER BEARING PADS.

LEGEND

- (A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES (STEP-UPS) THAT RUN PARALLEL WITH GIRDER. CORK FILLER INCLUDED IN LEVELING PAD LENGTH
- (A24) HATCHED AREA INDICATES CONCRETE SURFACE REPAIR ON FF ABUT AT VARIOUS LOCATIONS AS LOCATED BY THE FIELD ENGINEER
- (A25) CLEAN AND/OR ROUGHEN SURFACE OF CONCRETE 1/2" DEEP MINIMUM AT ALL AREAS OF NEW TO EXISTING CONCRETE/GROUT CONTACT.
- (A28) PLACE CONCRETE MASONRY OVER THE WIDTH OF THE ABUTMENT LEVELING PADS PRIOR TO PLACING POLYETHYLENE SHEETS. CHIP OUT EXISTING CONCRETE AS REQUIRED TO PLACE NEW CONCRETE. PLACE CONCRETE TO BE SMOOTH AND LEVEL. REMOVE DELAMINATED OR LOOSE CONCRETE AND CLEAN THE SURFACE PRIOR TO PLACING CONCRETE.
- (A29) PLACE A DEPARTMENT APPROVED NON-SHRINK COMMERCIAL GROUT OVER THE WIDTH OF THE ABUTMENT BEAM SEATS PRIOR TO PLACING POLYETHYLENE SHEETS. CHIP OUT CONC AS REQUIRED TO PLACE GROUT. PLACE GROUT TO BE SMOOTH AND LEVEL. REMOVE DELAMINATED OR LOOSE CONCRETE AND CLEAN THE SURFACE PRIOR TO PLACING GROUT. ADDITIONAL SURFACE PREPARATION MAY BE REQUIRED PER THE MANUFACTURER INSTRUCTION RECOMMENDATIONS AND AS DIRECTED BY THEIR ENGINEER.

DO NOT APPLY LOADS TO THE NON-SHRINK COMMERCIAL GROUT UNTIL A MINIMUM COMPRESSIVE STRENGTH OF 3,500 P.S.I. IS ACHIEVED. NON-SHRINK COMMERCIAL GROUT AND SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

- (A30) PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP FULL LENGTH OF ABUTMENT (INCLUDING TOP OF LEVELING PAD) AND UNDER THE EXISTING ELASTOMERIC BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE A LEAST 0.03".



TYPICAL ABUTMENT SECTION SHOWN BETWEEN BEAMS

NORMAL TO C/L SUBSTRUCTURE
MODIFIED SEMI-EXPANSION SEAT

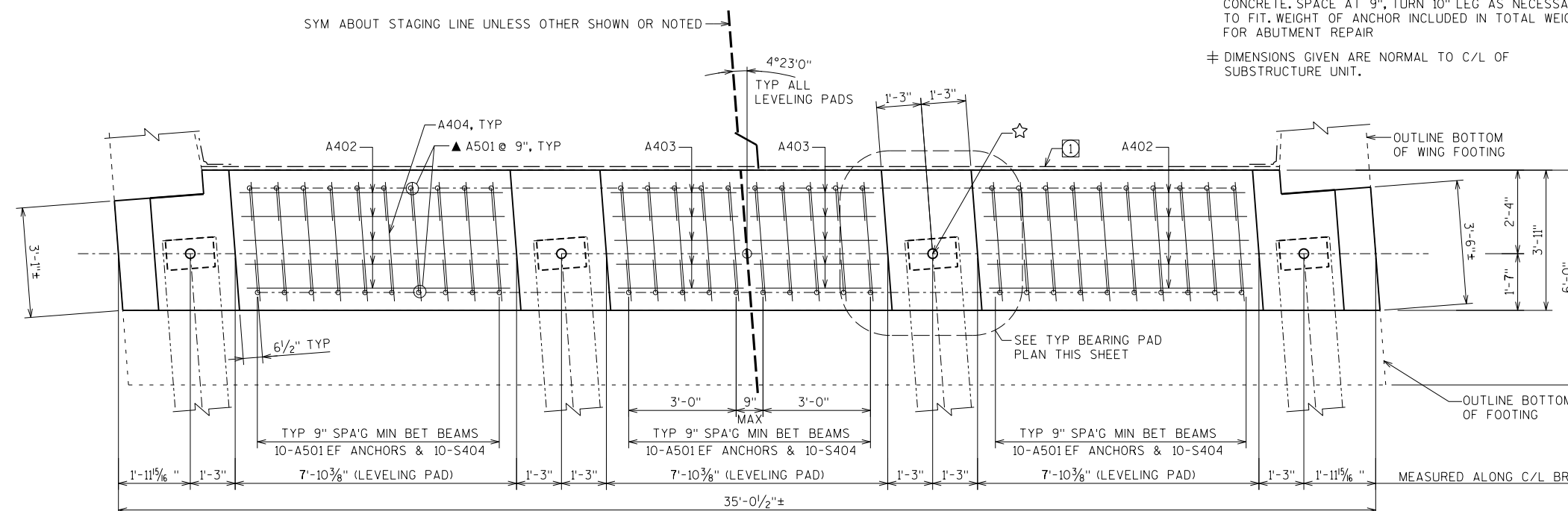
TYPICAL BEARING PAD PLAN AT ABUTMENT TOP

SEE PLAN VIEW FOR ORIENTATION

- (1) 18" INCH RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT REPAIR.

- ▲ ADHESIVE ANCHORS NO. 5 BAR, EMBED 10" MIN IN CONCRETE. SPACE AT 9", TURN 10" LEG AS NECESSARY TO FIT. WEIGHT OF ANCHOR INCLUDED IN TOTAL WEIGHT FOR ABUTMENT REPAIR

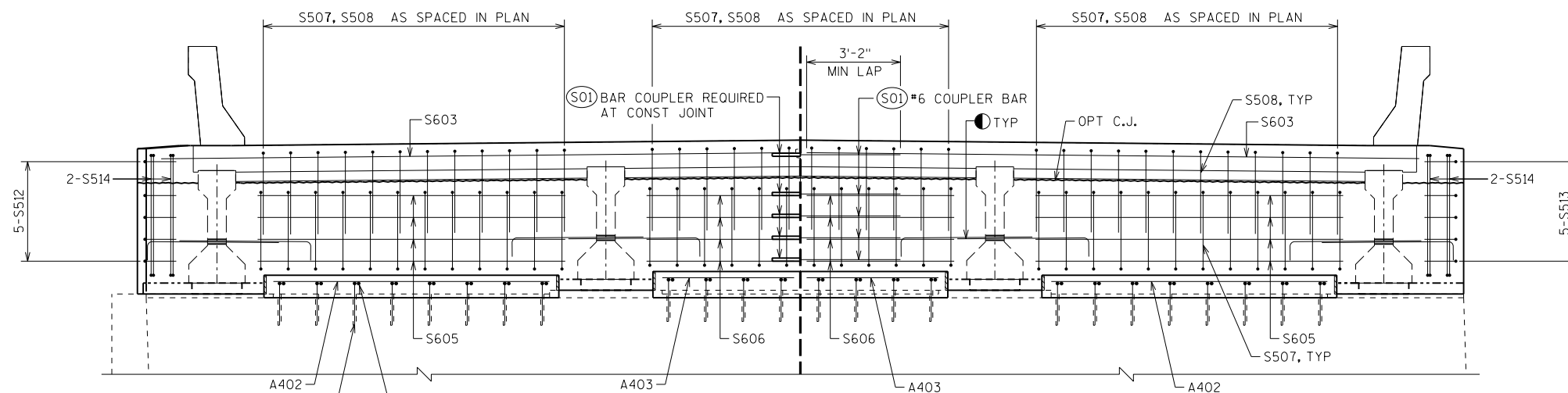
± DIMENSIONS GIVEN ARE NORMAL TO C/L OF SUBSTRUCTURE UNIT.



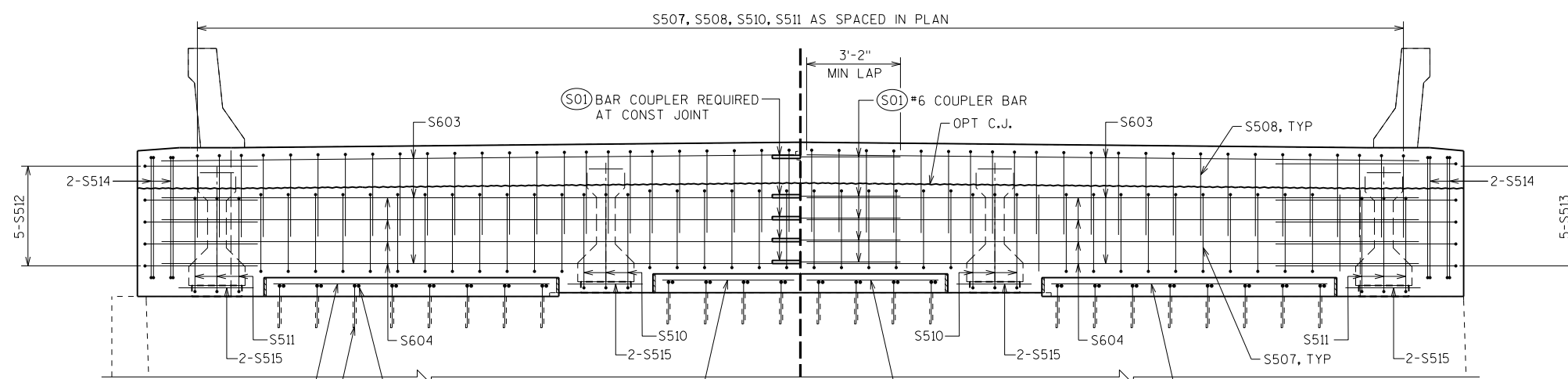
PLAN AT EACH ABUTMENT

SEE SHEET 1 FOR ORIENTATION

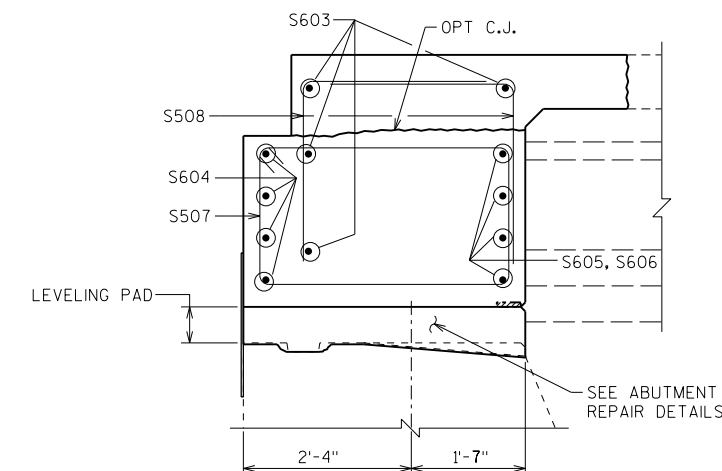
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-34			
DRAWN BY		DLF	PLANS CK'D. CJB
ABUTMENT REPAIR DETAILS			SHEET 7 OF 10



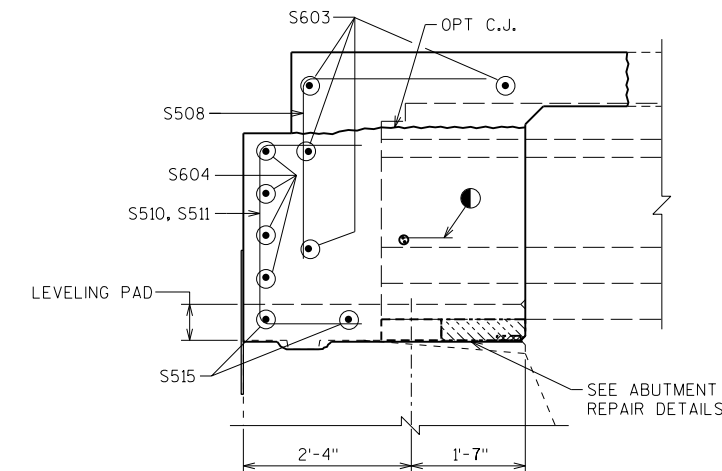
SECTION VIEW - FRONT FACE REINFORCEMENT
CONCRETE END DIAPHRAGM



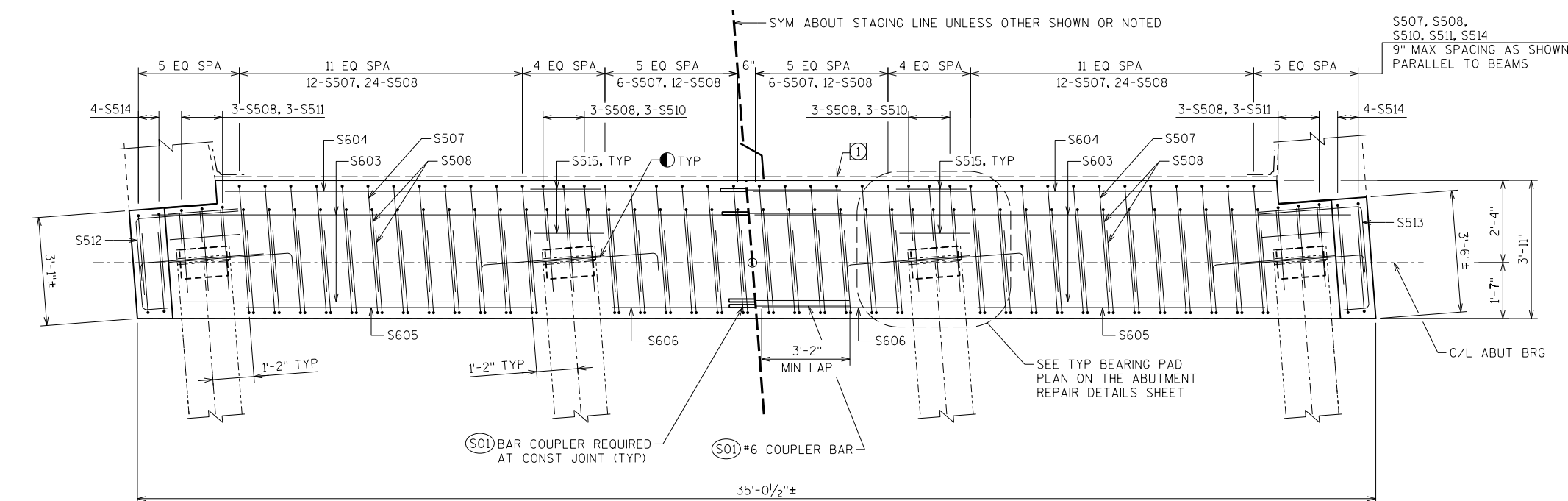
SECTION VIEW - BACK FACE REINFORCEMENT
CONCRETE END DIAPHRAGM



TYP CONC END DIAPHRAGM SECTION BETWEEN BEAMS
NORMAL TO SUBSTRUCTURE



TYP CONC END DIAPHRAGM SECTION AT BEAMS
NORMAL TO SUBSTRUCTURE



PLAN AT EACH ABUTMENT
CONCRETE END DIAPHRAGM
SEE SHEET 1 FOR ORIENTATION

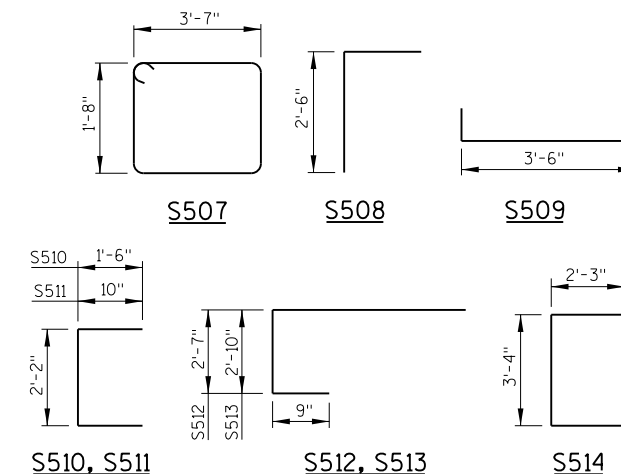
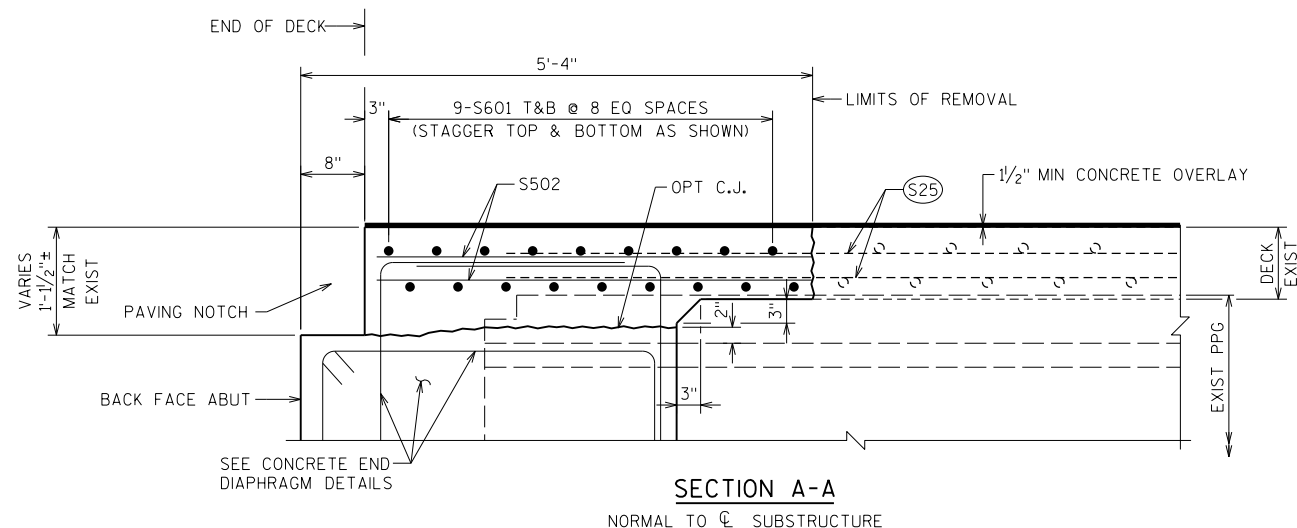
NOTES

SEE NOTES AND LEGEND ON SHEET 7 & 9.

- 2-S509 THRU BEAM LAP BARS WITHIN DRILLED HOLES
- (S01) BAR COUPLERS USED. BAR COUPLER LENGTH COMPUTED TO CENTERLINE LONGIT JOINT AND SHALL BE MODIFIED IF REQ'D TO THE BAR COUPLER MANUFACTURER RECOMMENDATIONS. BILL OF BARS CALCULATED AS THOUGH THE STAGING JOINT WAS AT THE CROWN. PAYMENT FOR BAR COUPLER INCLUDES THE COUPLER, AND COUPLER BAR AS DETAILED.

NO.	DATE	REVISION	BY
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STRUCTURE B-18-34			
DRAWN BY DLF		PLANS CK'D. CJB	
SUPERSTRUCTURE & JOINT REPLACEMENT DETAILS			SHEET 8 OF 10

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.



BILL OF BARS SUPER & END DIAPHRAGM

BAR MARK	COAT	NO. * REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1 CONST	STG 2 CONST
S601	X	36	16 - 0			TRANS T & B	X	
S601	X	36	16 - 0			TRANS T & B		X
S502	X	100	4 - 6			LONGIT T & B	X	
S502	X	100	4 - 6			LONGIT T & B		X
S603	X	8	17 - 0			DIAPHR HORIZ BF	X	
S603	X	8	17 - 0			DIAPHR HORIZ BF		X
S604	X	8	14 - 7			DIAPHR HORIZ BF	X	
S604	X	8	14 - 7			DIAPHR HORIZ BF		X
S605	X	8	8 - 2			DIAPHR HORIZ FF	X	
S605	X	8	8 - 2			DIAPHR HORIZ FF		X
S606	X	8	3 - 11			DIAPHR HORIZ FF	X	
S606	X	8	3 - 11			DIAPHR HORIZ FF		X
S507	X	36	11 - 1		X	DIAPHR STIRRUP	X	
S507	X	36	11 - 1		X	DIAPHR STIRRUP		X
S508	X	84	4 - 11		X	DIAPHR VERT	X	
S508	X	84	4 - 11		X	DIAPHR VERT		X
S509	X	16	4 - 0		X	DIAPHR THRU BEAMS	X	
S509	X	16	4 - 0		X	DIAPHR THRU BEAMS		X
S510	X	6	4 - 11		X	DIAPHR BEHIND BEAMS	X	
S510	X	6	4 - 11		X	DIAPHR BEHIND BEAMS		X
S511	X	6	3 - 7		X	DIAPHR BEHIND BEAMS	X	
S511	X	6	3 - 7		X	DIAPHR BEHIND BEAMS		X
S512	X	10	6 - 2		X	DIAPHR AT ENDS	X	
S512	X	10	6 - 2		X	DIAPHR AT ENDS		X
S513	X	10	6 - 6		X	DIAPHR AT ENDS	X	
S513	X	10	6 - 6		X	DIAPHR AT ENDS		X
S514	X	8	7 - 6		X	DIAPHR AT ENDS VERT	X	
S514	X	8	7 - 6		X	DIAPHR AT END VERT		X
S515	X	8	2 - 2			DIAPHR BEHIND BEAMS	X	
S515	X	8	2 - 2			DIAPHR BEHIND BEAMS		X

* NUMBER REQUIRED IS FOR TWO ABUTMENTS

☒ BAR COUPLER REQUIRED

NOTES

SEE GENERAL NOTES ON SHEET 2.

REMOVE AND REPLACE JOINT AND DECK IN AREA OF JOINT REPAIR AS SHOWN ON THE REMOVAL SHEET AND THIS SHEET AND AS NEEDED.

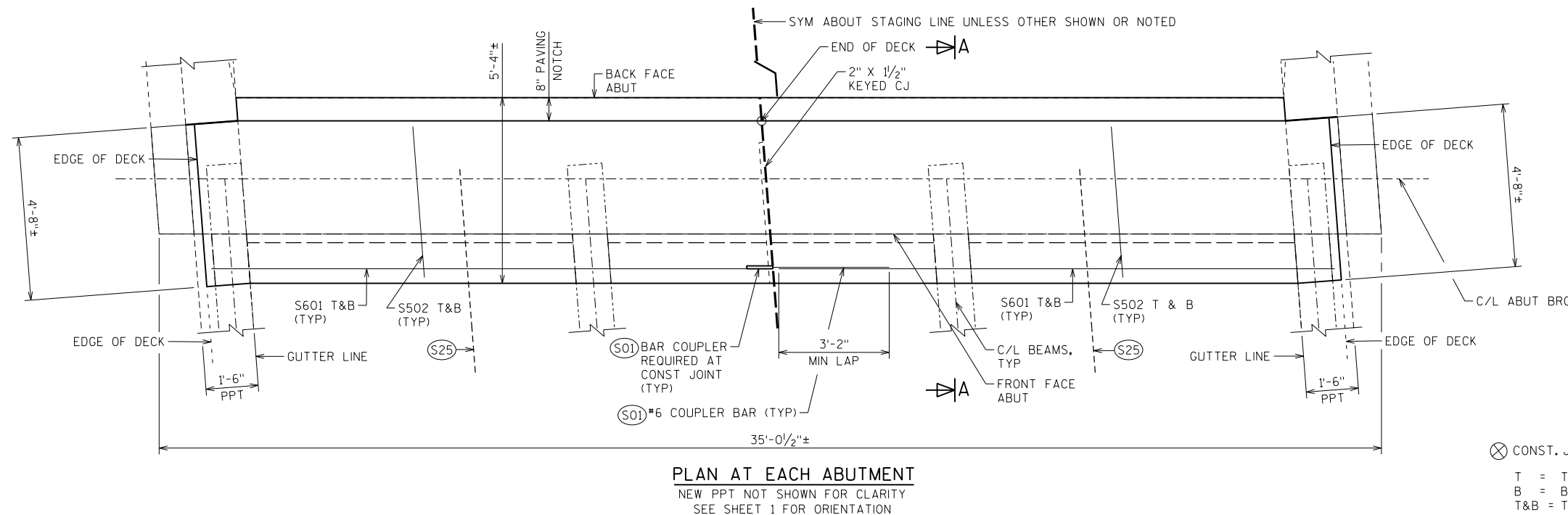
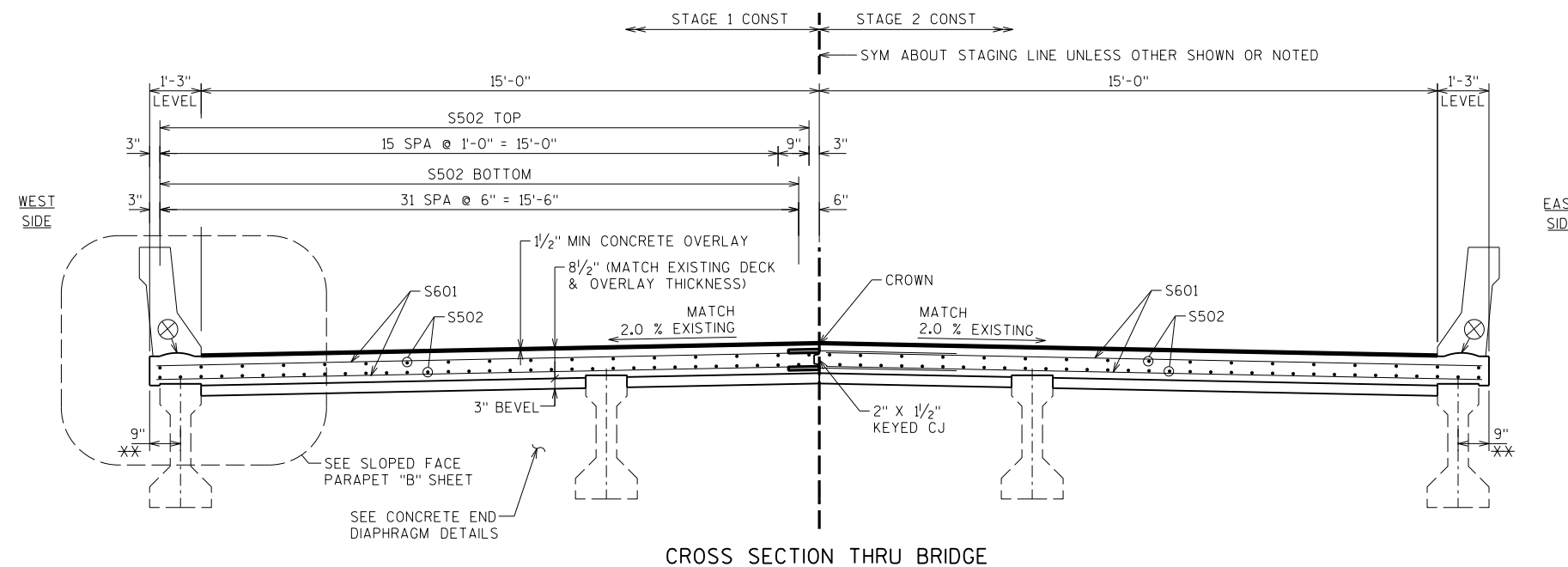
SEE REMOVAL PLAN SHEET FOR REMOVALS.

LEGEND

(S25) PRESERVE/CLEAN AND UTILIZE EXIST REINF WHERE POSSIBLE AND INCORPORATED INTO NEW WORK. BEND/TRIM AS NECESSARY TO PROVIDE 2" CLEAR. EXTEND A MINIMUM OF 3'-6" INTO NEW WORK.

(S01) BAR COUPLERS USED IN STAGE 1. BAR COUPLER LENGTH COMPUTED TO CENTERLINE LONGIT JOINT AND SHALL BE MODIFIED IF REQ'D TO THE BAR COUPLER MANUFACTURER RECOMMENDATIONS. BILL OF BARS CALCULATED AS THOUGH THE STAGING JOINT WAS AT THE CROWN. PAYMENT FOR BAR COUPLER INCLUDES THE COUPLER, AND COUPLER BAR AS DETAILED.

** DIMENSION MAY VARY BASED ON ACTUAL INPLACE EDGES. IF DIMENSIONS VARY BY MORE THAN 1/2", INFORM THE FIELD ENGINEER.



☒ CONST. JOINT - STRIKE OFF AS SHOWN.

T = TOP
B = BOTTOM
T&B = TOP AND BOTTOM

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-34			
DRAWN BY		DLF	PLANS CKD. CJB
SUPERSTRUCTURE & JOINT REPLACEMENT DETAILS			SHEET 9 OF 10

NOTES

SEE GENERAL NOTES ON SHEET 2.

REMOVE AND REPLACE PARAPET IN AREA OF JOINT REPAIR AS SHOWN ON THE REMOVAL SHEET AND AS NEEDED TO INSTALL THE NEW CONCRETE PARAPET.

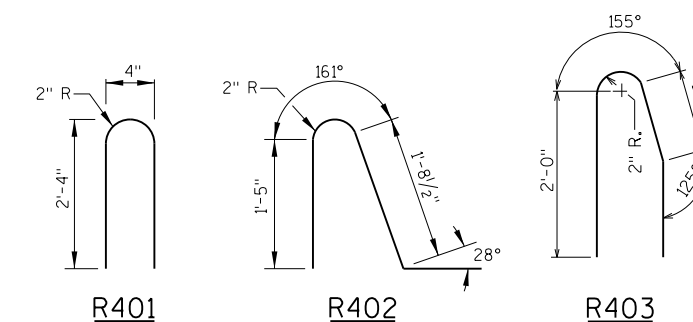
SEE REMOVAL PLAN SHEET FOR REMOVALS.

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

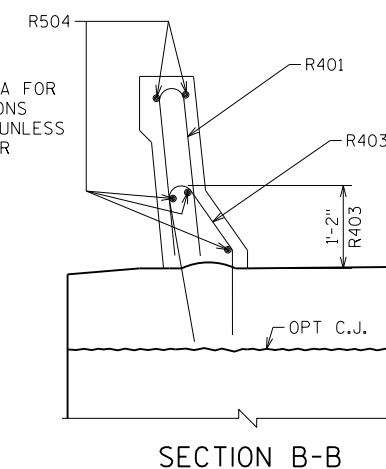
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

BILL OF BARS					SLOPED FACE PARAPET "B"			
BAR MARK	COAT	NO. * REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1 CONST	STG 2 CONST
R401	X	14	4 - 10		X	PARAPET VERTICAL	X	
R401	X	14	4 - 10		X	PARAPET VERTICAL		X
R402	X	4	4 - 3		X	PARAPET STIRRUPS	X	
R402	X	4	4 - 3		X	PARAPET STIRRUPS		X
R403	X	10	4 - 9		X	PARAPET STIRRUPS	X	
R403	X	10	4 - 9		X	PARAPET STIRRUPS		X
R504	X	10	4 - 6			PARAPET HORIZONTAL	X	
R504	X	10	4 - 6			PARAPET HORIZONTAL		X

* NUMBER REQUIRED IS FOR TWO ABUTMENTS



NOTE: SEE SECTION A-A FOR SIMILAR DIMENSIONS AND CALLOUTS UNLESS OTHER SHOWN OR NOTED



LEGEND

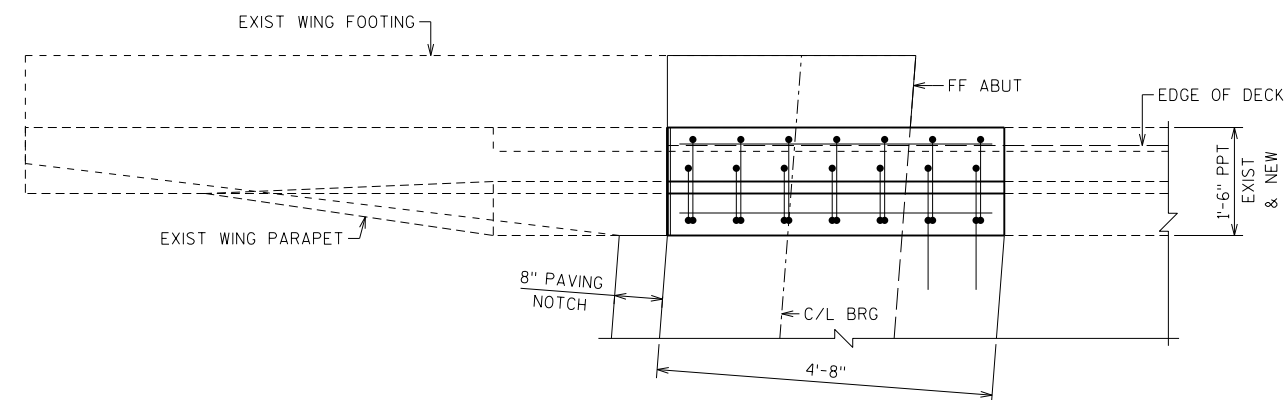
(S25) PRESERVE/CLEAN AND UTILIZE EXIST REINF WHERE POSSIBLE AND INCORPORATED INTO NEW WORK. BEND/TRIM AS NECESSARY TO PROVIDE 2" CLEAR.

(S29) ROUGHEN SURFACE OF CONCRETE 1/4" DEEP MINIMUM AT ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

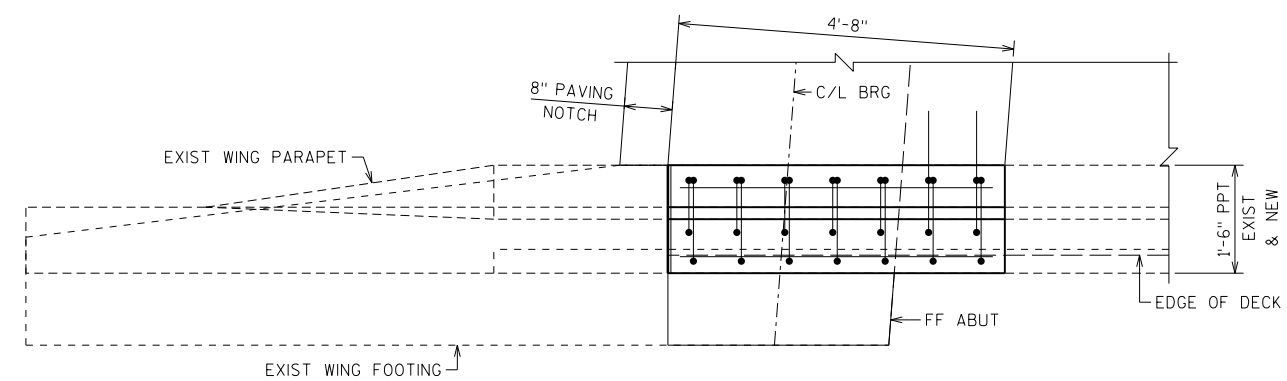
⊗ CONST. JOINT - STRIKE OFF AS SHOWN.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

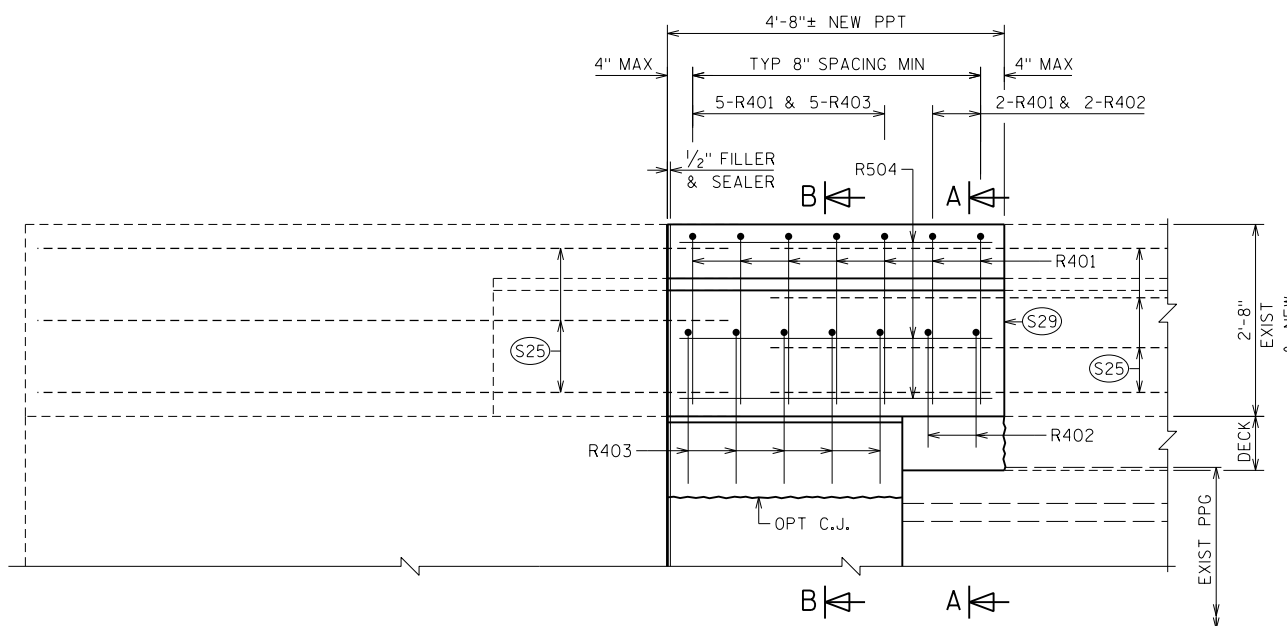
** DIMENSION MAY VARY BASED ON ACTUAL INPLACE EDGES. IF DIMENSIONS VARY BY MORE THAN 1/2", INFORM THE FIELD ENGINEER.



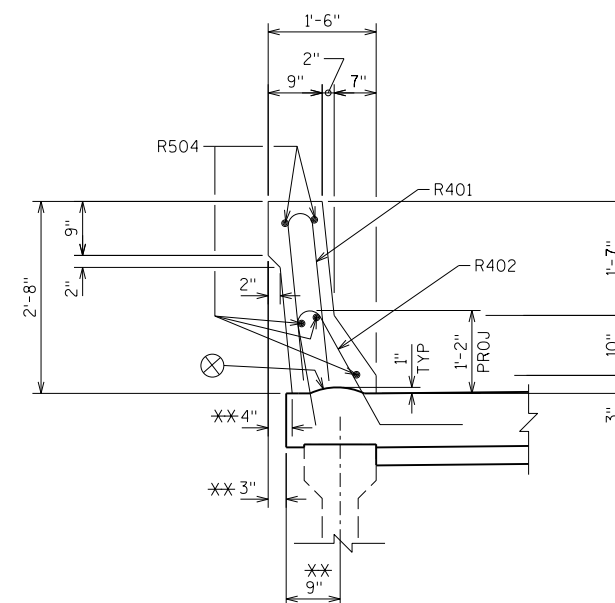
PLAN
(WING 2 & 4)



PLAN
(WING 1 & 3)



OUTSIDE ELEVATION
(WING 1 & 3 SHOWN, WING 2 & 4 SIMILAR)



SECTION A-A
(MATCH EXISTING PARAPET SHAPE)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-34			
DRAWN BY DLF		PLANS CK'D. CJB	
SLOPED FACE PARAPET "B" DETAILS			SHEET 10 OF 10

PLOT TIME: 2:39:27 PM

PLOT DATE: 12/26/2023

FILE NAME: S:\UZ\W\111111\417076\3-5-final-dsgn\51-drawings\20-Structure\B-18-119-bridge\1818181.dgn

STATE PROJECT NUMBER

1021-03-80

LEGEND

- ⊙ INDICATES WING NUMBER.
- ± DIMENSIONS GIVEN ARE NORMAL TO C/L OF SUBSTRUCTURE UNIT
- ⊗ ATTACH ANCHOR ASSEMBLY FOR THRIE BEAM GUARD RAIL
- ☒ COAT EXISTING PARAPET WITH PIGMENTED SURFACE SEALER PER THE STANDARD SPECIFICATIONS, SEE NOTES ON SHEETS 2
- ** SEE ROADWAY PLANS FOR TRAFFIC CONTROL STAGING
- ☆ QUANTITY AND LOCATION TO BE VERIFIED IN THE FIELD BY THE FIELD ENGINEER.

- ▨ PREPARATION DECKS TYPE 1
- ▩ PREPARATION DECKS TYPE 2

DESIGN DATA

LIVE LOAD: HS20
 TAKEN FROM HSI(5/24/2013)
 INVENTORY RATING: HS10
 OPERATING RATING: HS40
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

MATERIAL PROPERTIES:
 CONCRETE MASONRY - SUPERSTRUCTURE f'c = 4,000 psi
 - ALL OTHER f'c = 3,500 psi

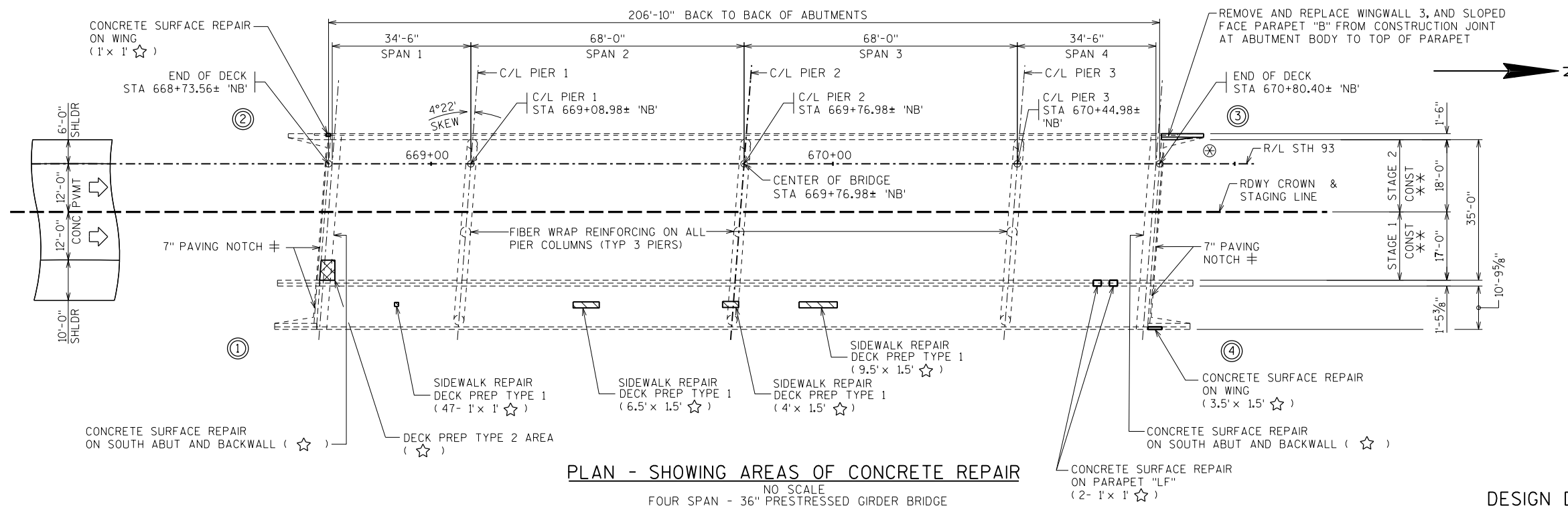
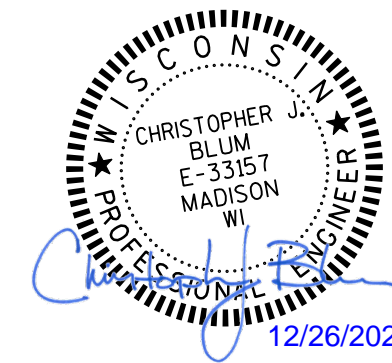
HIGH STRENGTH BAR STEEL REINFORCEMENT
 AASHTO GRADE 60 fy = 60,000 psi
 ALL BAR STEEL SHALL BE EPOXY COATED

TRAFFIC DATA

ADT (2022) = 20,800
 ADT (2032) = 23,100
 DHV = 9.9
 DD = 56/44
 T = 7.1%
 DESIGN SPEED = 45 MPH

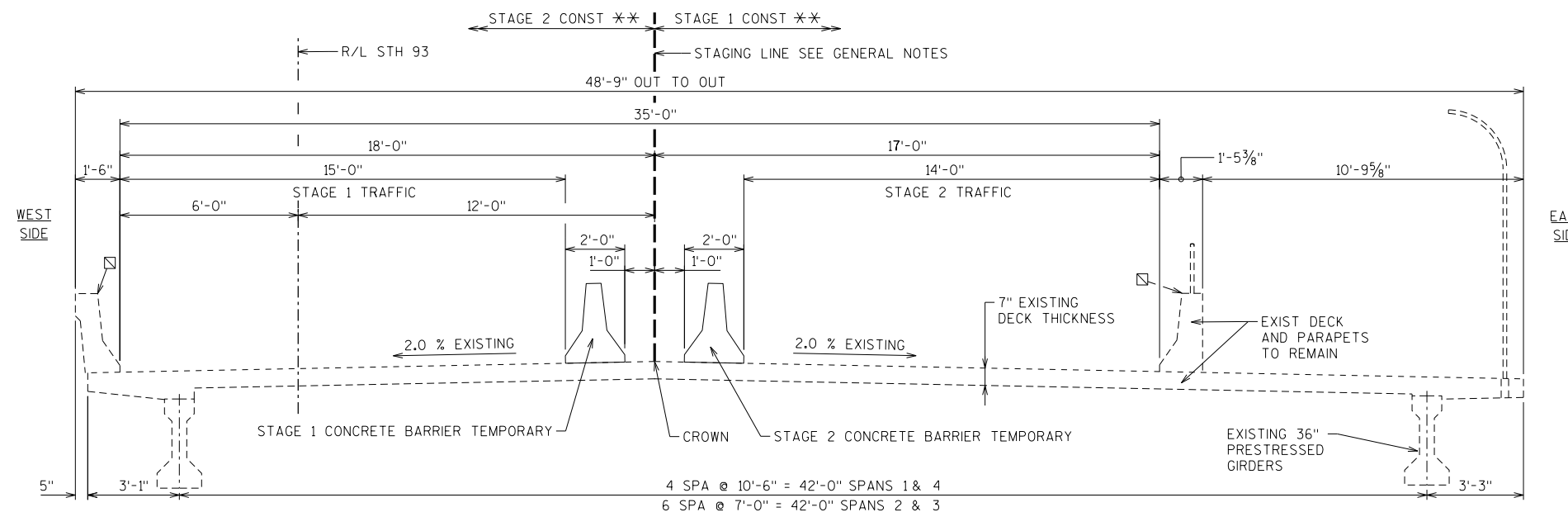
LIST OF DRAWINGS

- BRIDGE REHABILITATION
- NOTES AND QUANTITIES
- WINGWALL REPAIR DETAILS
- PIER COLUMN REPAIR DETAILS
- SLOPED FACE PARAPET "B"



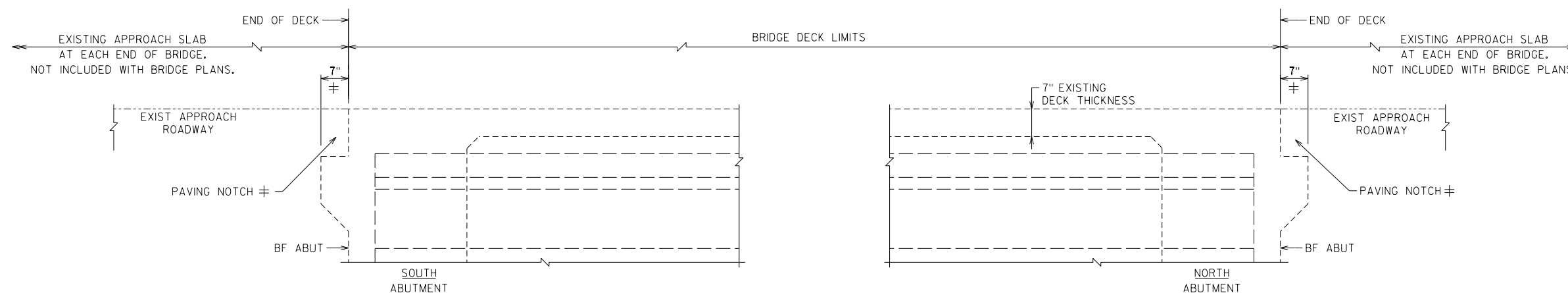
PLAN - SHOWING AREAS OF CONCRETE REPAIR

NO SCALE
FOUR SPAN - 36" PRESTRESSED GIRDER BRIDGE



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

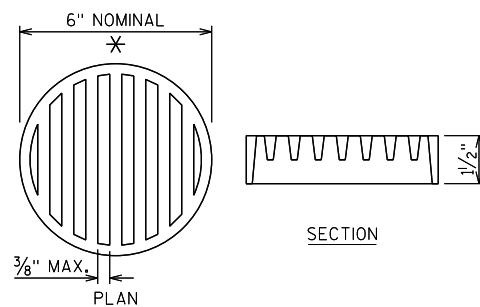


TYPICAL LONGITUDINAL SECTION AT END OF DECK

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
 WISDOT BRIDGE OFFICE CONTACT: AARON BONK, PE, 608.261.0261

NO.	DATE	REVISION	BY

SHORT ELLIOTT HENDRICKSON INC.
 STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 ACCEPTED: *[Signature]* SDR 12/29/23
 CHIEF STRUCTURES DESIGN ENGINEER DATE
STRUCTURE B-18-119
 STH 93 (NB) OVER I-94
 COUNTY EAU CLAIRE TOWN/CITY/VILLAGE WASHINGTON
 DESIGN SPEC. REHABILITATION N/A
 DESIGNED BY CJB DESIGN CK'D. NCK DRAWN BY AMJ/DLF PLANS CK'D. CJB
BRIDGE REHABILITATION SHEET 1 OF 5

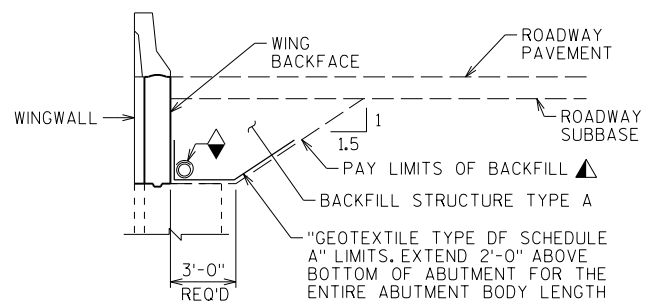


RODENT SHIELD DETAIL

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

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

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



TYPICAL SECTION AT WING

- ▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- ◆ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND INSPECTION REPORTS. EXISTING BRIDGE PLANS AVAILABLE AT WISDOT.

STATIONING MAY VARY BASED ON EXACT LOCATION OF BRIDGE TO PROPOSED ALIGNMENT.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

CONCRETE SURFACE REPAIR AND CONCRETE MASONRY DECK REPAIR AS DETERMINED, LOCATED, MARKED AND MEASURED BY THE FIELD ENGINEER.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

THESE STRUCTURE PLANS ARE ONLY THE STRUCTURE REPAIR WORK. ANY ADDITIONAL REMOVAL REQUIRED, OUTSIDE OF THE LIMITS SHOWN IN THESE PLANS MUST BE COORDINATED WITH THE FIELD ENGINEER. FIELD ENGINEER SHOULD BE CONTACTED FOR APPROVAL OF ADDITIONAL REMOVAL.

APPLY "PIGMENTED SURFACE SEALER RESEAL" TO THE EXISTING CONCRETE PARAPETS PER THE STANDARD SPECIFICATIONS AND AS SHOWN IN THIS PLAN SET.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

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

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

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

SEE ROADWAY PLAN FOR LANE STAGING AND TRAFFIC SHIFT. COORDINATE THESE STRUCTURE PLANS WITH THE ROADWAY STAGING.

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-18-119" SHALL BE THE EXISTING GROUNDLINE.

THE QUANTITY FOR BACKFILL STRUCTURE TYPE A IS CALCULATED BASED ON THE BACKFILL STRUCTURE LIMITS REQUIRED TO PERFORM REPAIR WORK.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION M213.

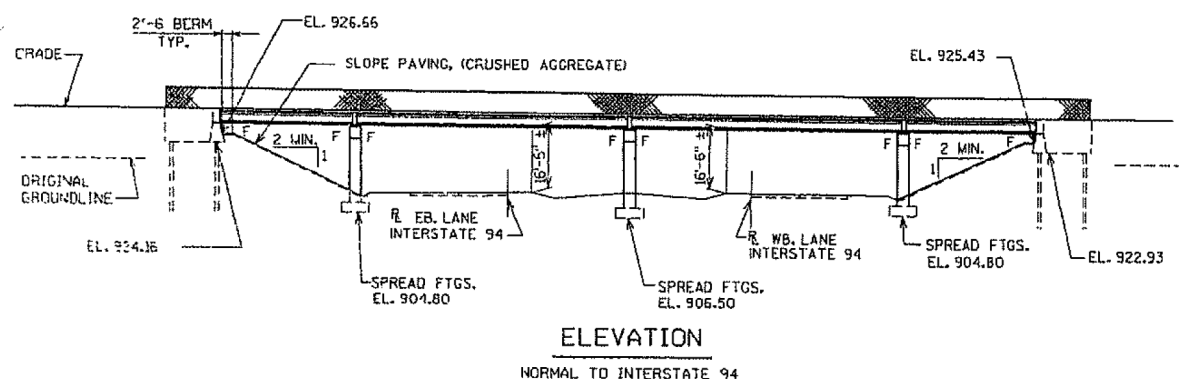
ALL MATERIAL THAT REQUIRES REMOVAL FOR WING 3 REPAIR SHALL BE STOCK PILED AND REPLACED AT THE FRONT FACE OF WING ONCE WING WORK IS COMPLETED. THIS SHALL BE PAID FOR UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-18-119".

TOTAL ESTIMATED QUANTITIES - B-18-119

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
⑥ 203.0220	REMOVING STRUCTURE B-18-119	EACH	1
⑥ 206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-18-119	EACH	1
⑧ ⑥ 210.1500	BACKFILL STRUCTURE TYPE A	TON	16
⑤ 502.0100	CONCRETE MASONRY BRIDGES	CY	3
④ ② 502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	250
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	580
③ ① 509.0301	PREPARATION DECKS TYPE 1	SY	9
③ ① 509.0302	PREPARATION DECKS TYPE 2	SY	2
③ ① 509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	255
③ 509.1500	CONCRETE SURFACE REPAIR	SF	20
③ ① 509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	3
⑦ 612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	20
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	10
SPV.0165	FIBER WRAP REINFORCING NON-STRUCTURAL	SF	1180
NON-BID ITEMS			
	FILLER	SIZE	1/2"

QUANTITIES NOTES

- ① PERTAINS TO DECK/SIDEWALK.
- ② FURNISH AND APPLY PIGMENTED SEALER TO FRONT FACE, BACK FACE AT SIDEWALK, TOP AND ENDS OF EXISTING PARAPETS. CLEAN THE INSIDE FACE, BACK FACE AT SIDEWALK, TOP AND ENDS OF PARAPET PER SPECIFICATIONS.
- ③ AS LOCATED BY FIELD ENGINEER.
- ④ INCLUDES PARAPETS ON WINGWALLS AND DECK.
- ⑤ CONCRETE FOR PARAPET AND WINGWALL.
- ⑥ PERTAINS TO REMOVAL PORTIONS AT NW WING AND AS DIRECTED BY FIELD ENGINEER.
- ⑦ INCLUDES RODENT SHIELD FOR PIPE UNDERDRAIN PER SDD 8F6-4.
- ⑧ A FACTOR OF 2.0 WAS USED TO CONVERT CUBIC YARDS TO TONS.



ELEVATION

NORMAL TO INTERSTATE 94

NOTE:
THIS ELEVATION VIEW TAKEN FROM EXISTING PLANS, REFERENCE ONLY, NOT FOR CONSTRUCTION. INTENT IS TO SHOW CONTRACTOR BENEATH THE BRIDGE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-119			
DRAWN BY		AMJ/DLF	PLANS CK'D. CJB
NOTES AND QUANTITIES			SHEET 2 OF 5

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

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

NOTES

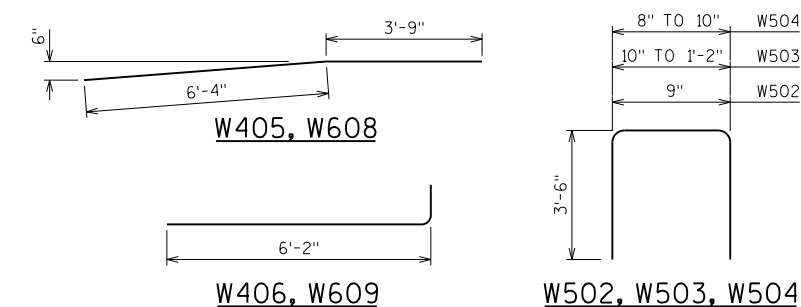
SEE GENERAL NOTES ON SHEET 2.

LEGEND

- ① 18" INCH RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT REPAIR.
- ◆ PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE.
- Ⓢ ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN, FOR RODENT SHIELD DETAIL SEE SHEET 2.
- ▲ ADHESIVE ANCHOR NO. 6 BAR, 14" MIN EMBEDMENT. WEIGHT OF ANCHOR INCLUDED IN TOTAL WEIGHT FOR NORTH ABUT WINGWALL REPAIR.
- ⊗ CONST. JOINT - STRIKE OFF AS SHOWN. SEE SINGLE SLOPED FACE PARAPET "B" SHEET FOR DETAILS

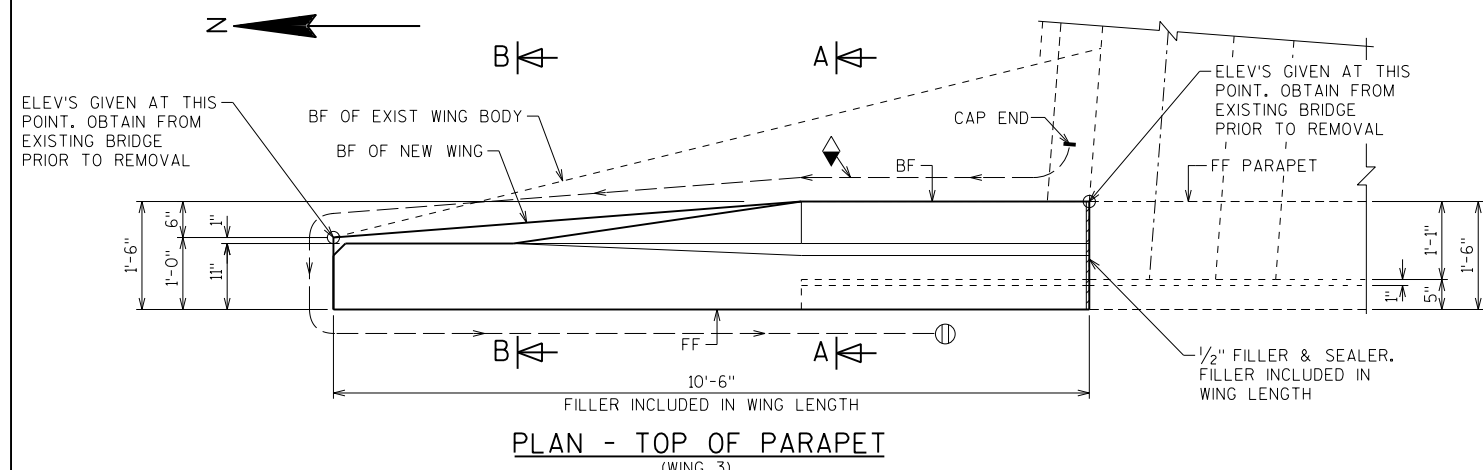
FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

BILL OF BARS						NORTH ABUT WINGWALL 3		
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1 CONST	STG 2 CONST
W601	X	27	3 - 2			DOWEL BARS		X
W502	X	6	7 - 6		X	VERTICAL		X
W503	X	7	7 - 9		X	VERTICAL		X
W504	X	5	7 - 6		X	VERTICAL		X
W405	X	5	10 - 1		X	HORIZONTAL BF		X
W406	X	3	7 - 2		X	HORIZONTAL FF		X
W407	X	3	5 - 6			HORIZONTAL FF		X
W608	X	1	10 - 1		X	HORIZONTAL BF TOP		X
W609	X	1	7 - 2		X	HORIZONTAL FF TOP		X
W610	X	1	5 - 6			HORIZONTAL FF TOP		X

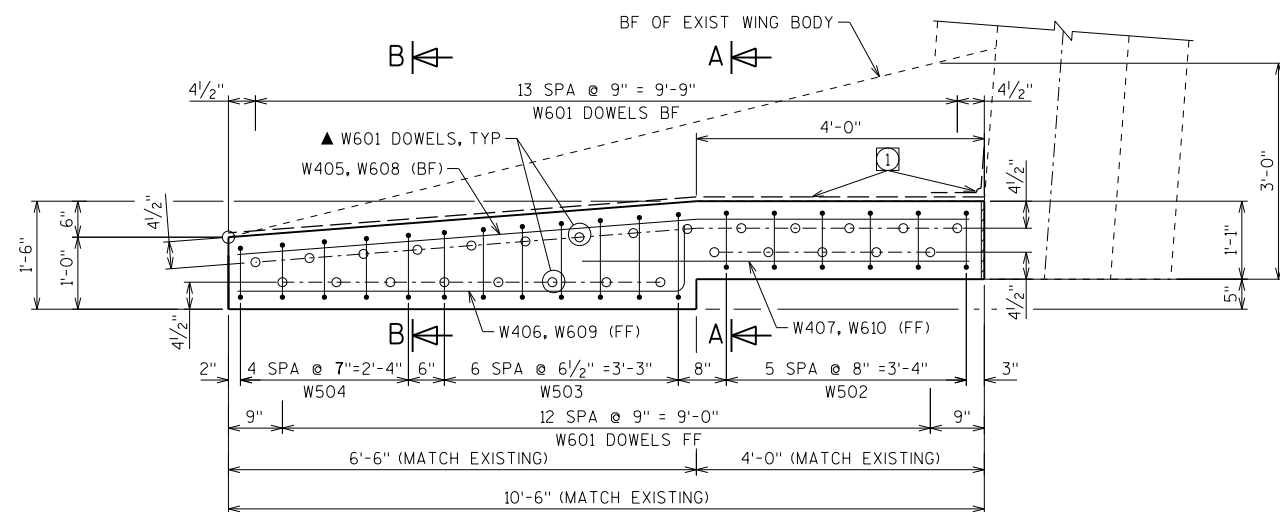


BAR SERIES TABLE						NORTH ABUT WING 3	
BAR MARK	NO. REQ'D.	LENGTH	BENT	LOCATION	STG 1 CONST	STG 2 CONST	
W503	1 SERIES OF 7	7'-7" TO 7'-11"	X	WING 3		X	
W504	1 SERIES OF 5	7'-5" TO 7'-7"	X	WING 3		X	

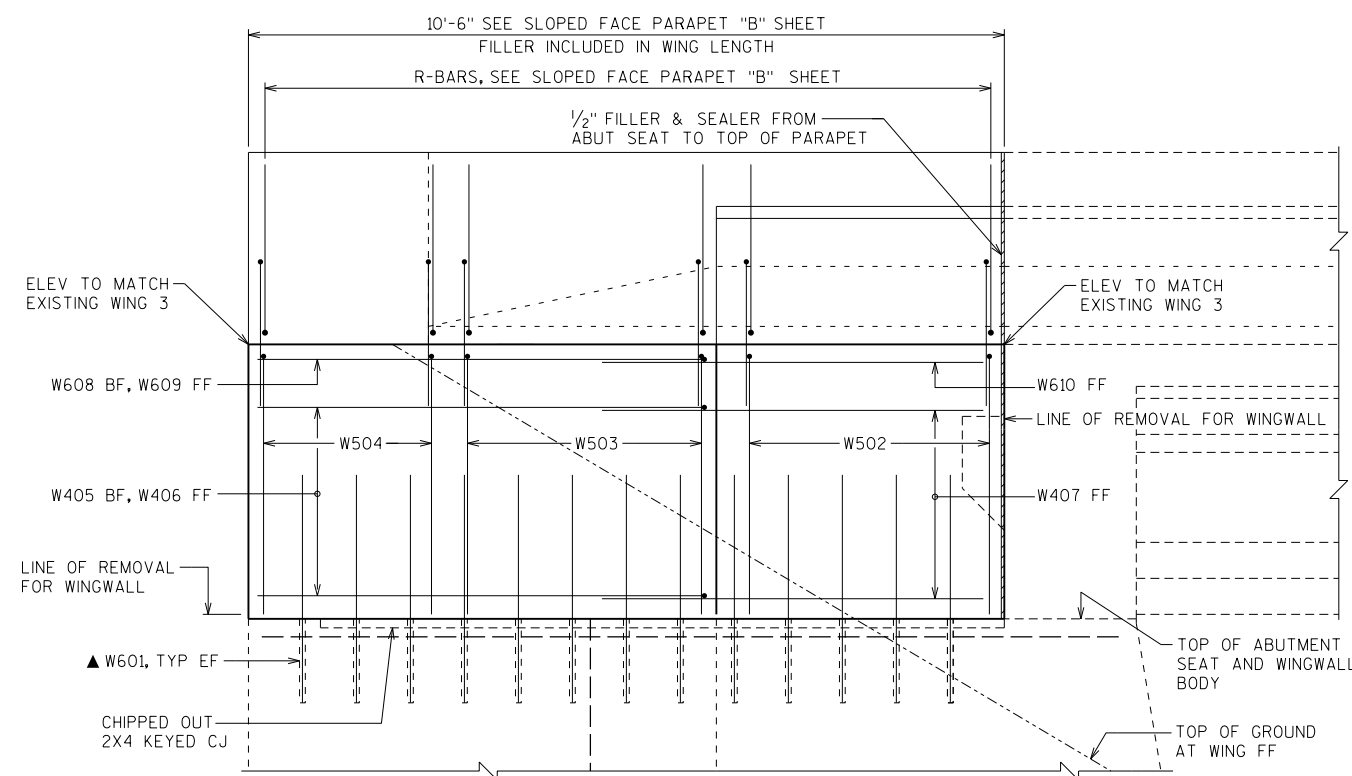
BUNDLE AND TAG EACH SERIES SEPARATELY



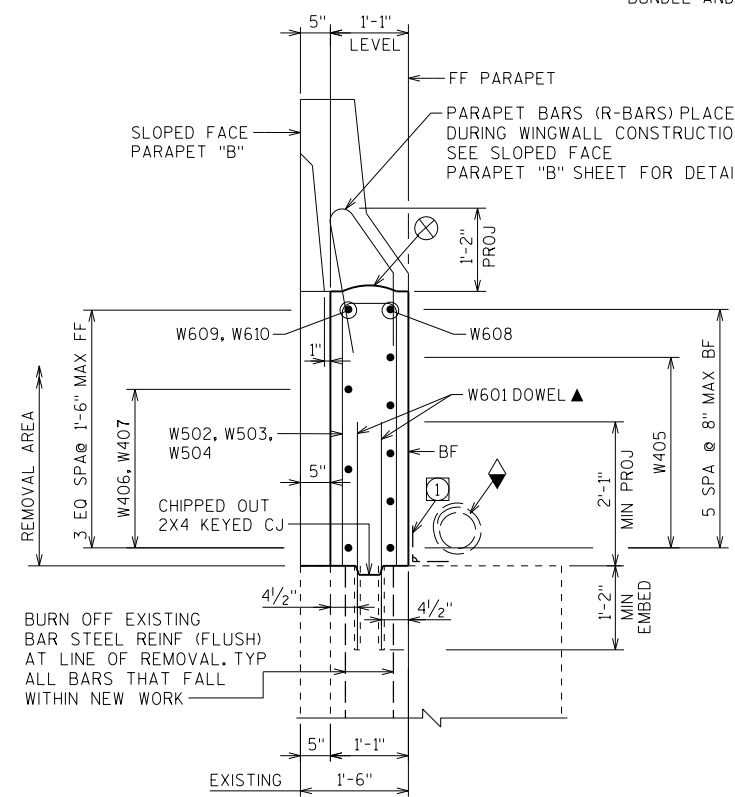
PLAN - TOP OF PARAPET (WING 3)



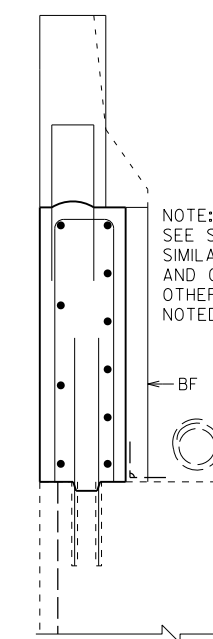
PLAN (WING 3)



OUTSIDE ELEVATION (WING 3)

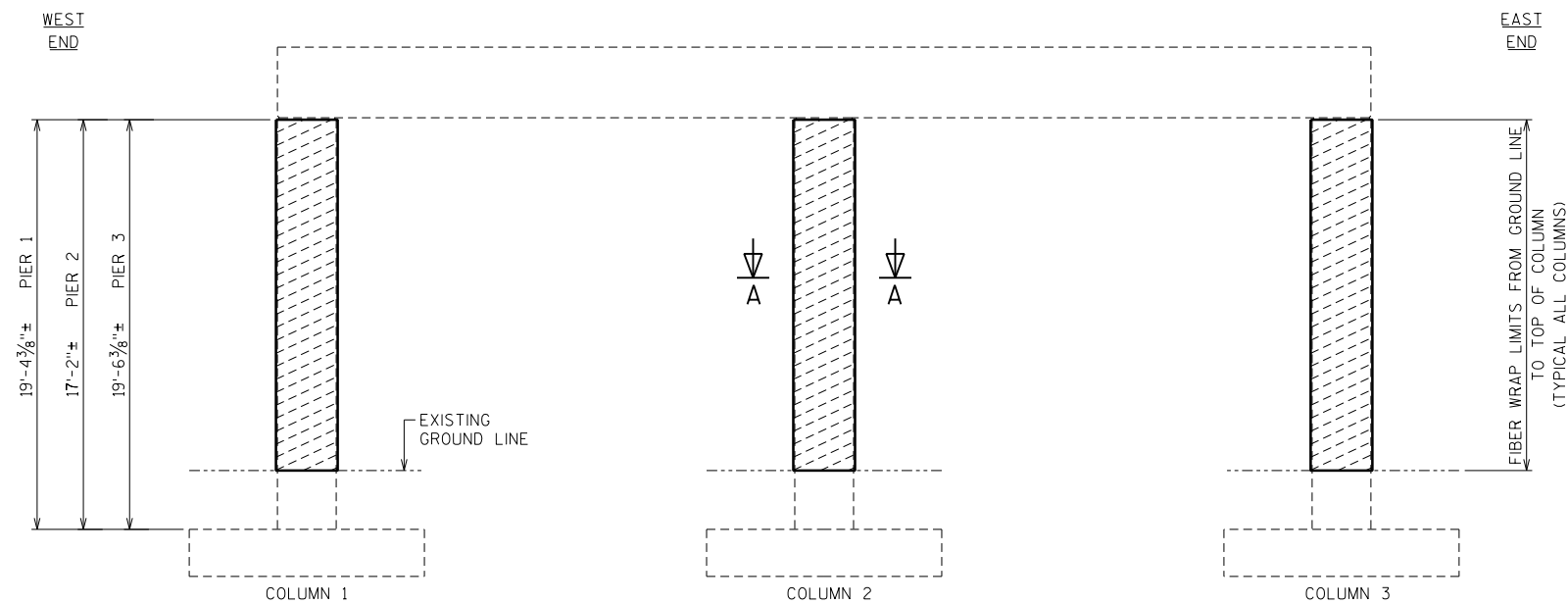


SECTION A-A

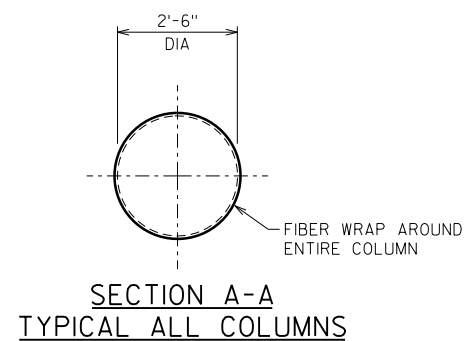


SECTION B-B

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-119			
DRAWN BY DLF		PLANS CK'D. CJB	
WINGWALL REPAIR DETAILS			SHEET 3 OF 5



**PIER ELEVATION
TYPICAL PIER FIBER WRAP**
(PIER 1, 2 & 3)
(LOOKING NORTH)



FIBER WRAP NOTES

SEE SPECIAL PROVISIONS FOR FIBER WRAP. ALL CRACKING, DELAMINATION AND SPALLING SHALL BE REPAIRED PRIOR TO PLACEMENT OF THE FIBER WRAP. COST INCLUDED IN THE BID ITEM "FIBER WRAP REINFORCING NON-STRUCTURAL". REPAIR AREAS SHALL BE DETERMINED AND LOCATED BY THE FIELD ENGINEER.

PROVIDE FIBER WRAP REINFORCEMENT NON-STRUCTURAL ACCORDING TO THE PLAN DETAILS AND SPECIFICATIONS.

ALL WORK REQUIRED TO APPLY FIBER WRAP REINFORCING NON-STRUCTURAL TO THE PIER COLUMNS AT ALL COLUMNS SHALL BE INCLUDED IN THE BID ITEM "FIBER WRAP REINFORCING NON-STRUCTURAL".

LEGEND



PLOT TIME: 2:39:51PM

PLOT DATE: 12/26/2023

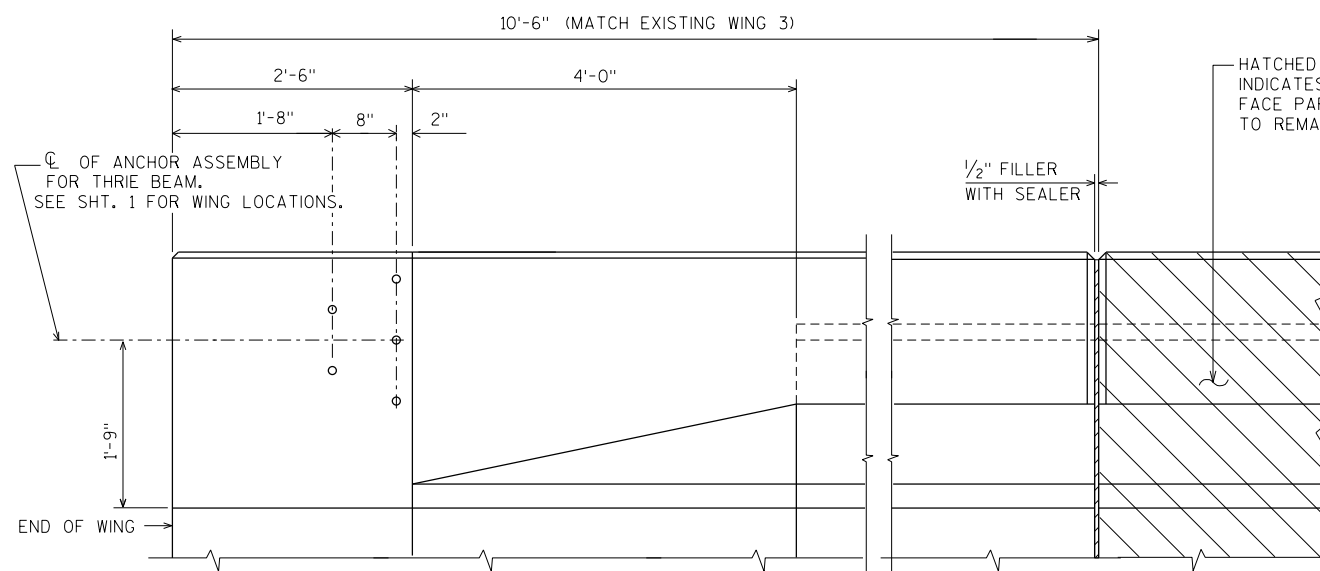
FILE NAME : S:\UZ\W\W\trw\147076\5-final-dsgn\5-final-dsgn\5-drawings\20-Struct\B-18-119\bridge\B18119pl.dgn

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-119			
DRAWN BY DLF		PLANS CK'D. CJB	
PIER COLUMN REPAIR DETAILS			SHEET 4 OF 5

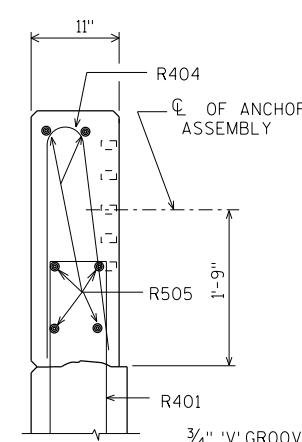
NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

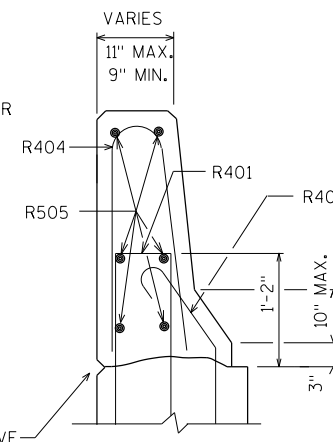
BILL OF BARS				NORTH ABUT WING 3			
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BENT	LOCATION	STG 1 CONST	STG 2 CONST
R401	X	15	4 - 9	X	WINGS STIRRUPS		X
R402	X	4	3 - 1	X	WINGS		X
R403	X	6	4 - 9	X	WINGS STIRRUPS		X
R404	X	15	4 - 9	X	WINGS		X
R505	X	6	6 - 2		WINGS		X
R406	X	6	4 - 10	X	WINGS		X
R507	X	5	6 - 0		WINGS		X



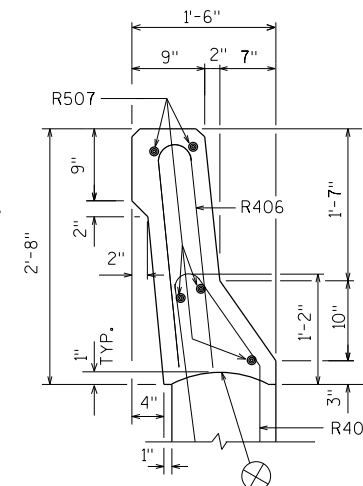
INSIDE ELEVATION
WING 3



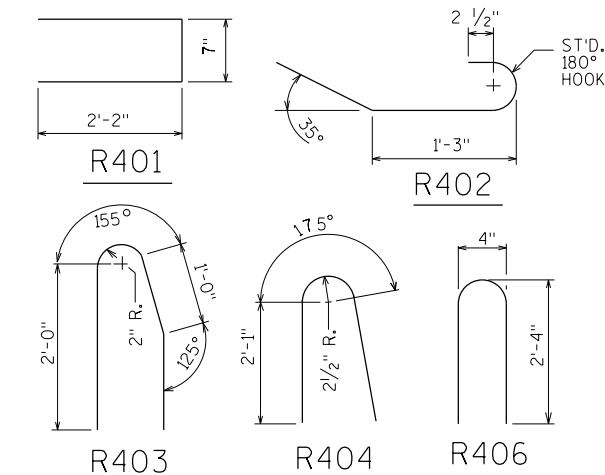
SECTION A



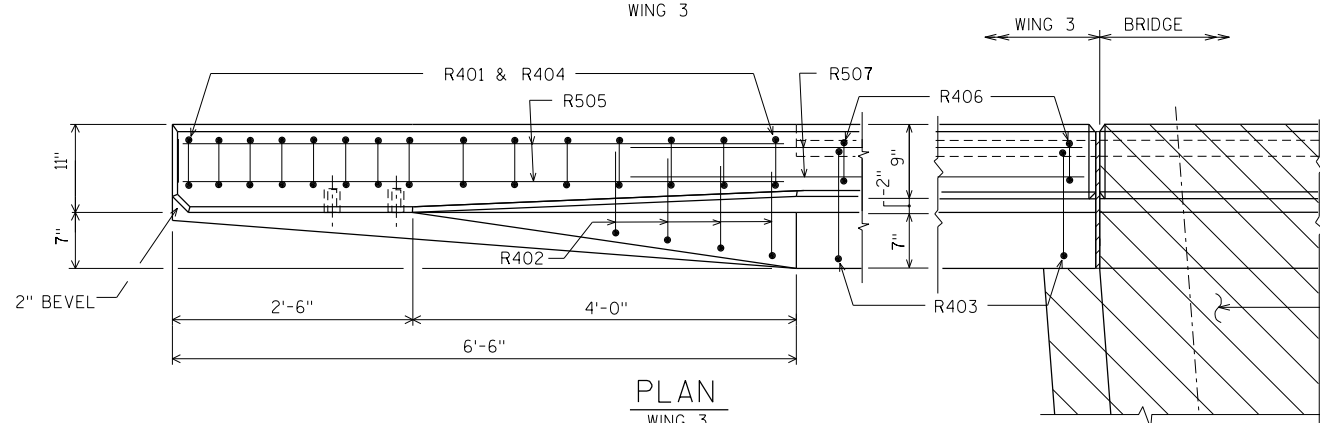
SECTION B



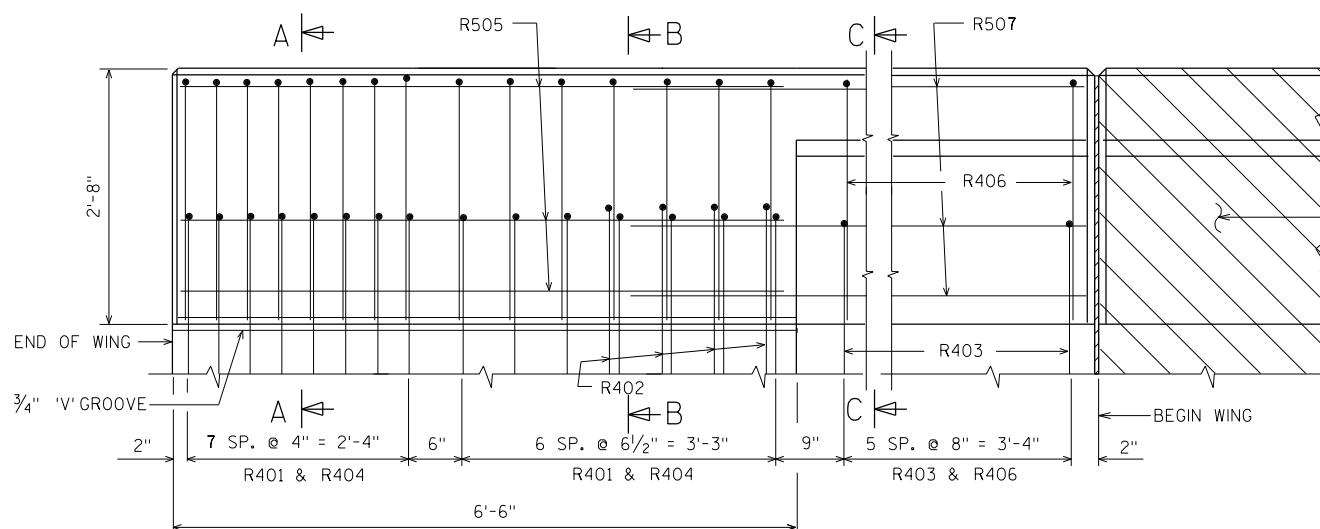
SECTION C



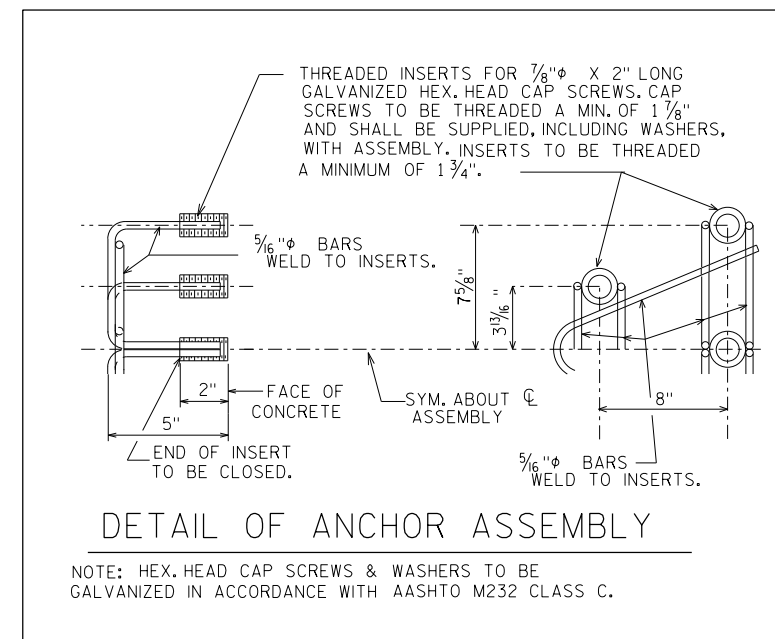
⊗ CONST. JOINT - STRIKE OFF AS SHOWN.



PLAN
WING 3



OUTSIDE ELEVATION
WING 3



DETAIL OF ANCHOR ASSEMBLY

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

NOTE:

THIS SHEET IS DERIVED FROM WISCONSIN STANDARD DETAIL INSERT SHEET FOR SLOPED FACE PARAPET "B" AND EDITED TO FOR USE IN THIS PLAN SET AND BRIDGE B-18-119. SEE SHEET 1 FOR ORIENTATION AND LOCATION OF WING 3

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-18-119			
DRAWN BY DLF		PLANS CK'D. CJB	
SLOPED FACE PARAPET "B"			SHEET 5 OF 5



Wisconsin Department of Transportation

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