EAU

JANUARY 2018

PROJECT ID: 1195-06-61

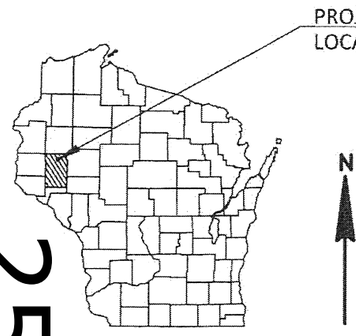
WITH: N/A

COUNTY: BARRON

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 = 30



25

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

RICE LAKE - SPOONER

CTH SS BRIDGE NORTH BOUND B-03-0057

USH 53

BARRON

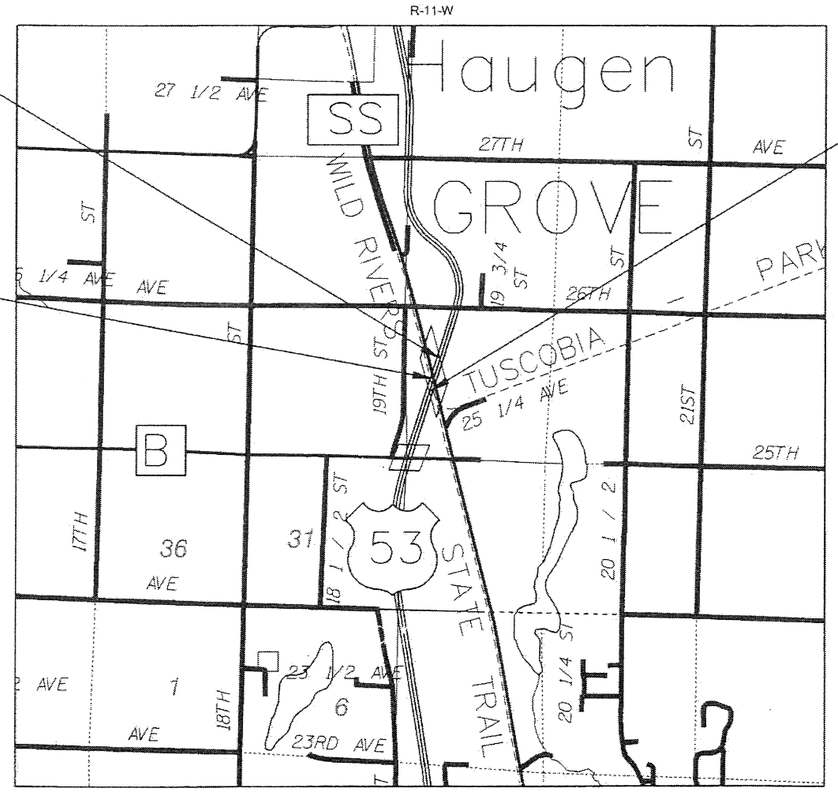
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1195-06-61	WISC 2018106	1

STATE PROJECT NUMBER
1195-06-61

BEGIN PROJECT
STA 658'N'+43.43
Y= 161,031.58
X= 328,440.37

END PROJECT
STA 663'N'+47.96

STRUCTURE B-03-0057
STA 658'N'+43.43 - STA 663'N'+47.96



LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.096 MILES

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

DESIGN DESIGNATION

A.A.D.T.	2018	=	9700
A.A.D.T.	2038	=	10800
D.H.V.		=	1,620
D.D.		=	61 / 39
T.		=	26.9%
DESIGN SPEED		=	75 MPH / 70 MPH (POSTED)
ESALS		=	9,139,600

CONVENTIONAL SYMBOLS

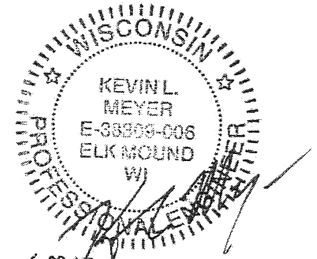
PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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

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

ORIGINAL PLANS PREPARED BY

CORRE ENGINEERING



DATE: 6-22-17 (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	CORRE, INC.
Project Manager	BRENDAN DIRKES
Regional Examiner	
Regional Supervisor	ANDREW STENSLAND

APPROVED FOR THE DEPARTMENT

DATE 6/26/17 Brendan Dirkes (Signature)

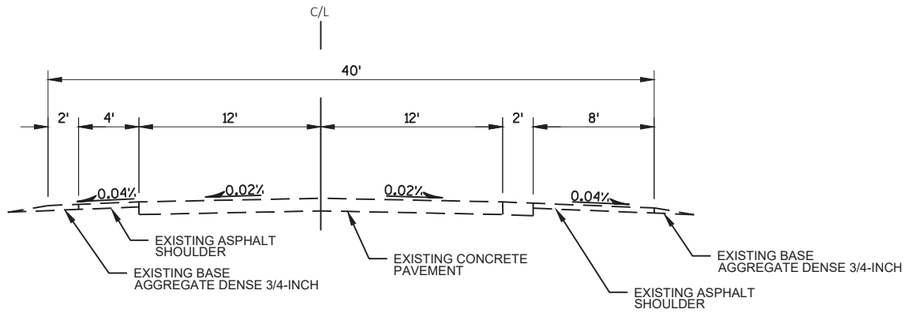
E

FILE NAME : P:\WI - NW REGION\1195-06-31_USH 53 OVER CTH SS\500_CADD\501_C3D\1195-06-31\SHEETSPLAN\010101_TI.DWG

PLOT DATE : 6/14/2017 8:24 AM

PLOT BY : BOBBY JONES

PLOT NAME :



TYPICAL EXISTING SECTION

NORTHBOUND USH 53

GENERAL NOTES

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

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

BEARINGS SHOWN ON THE PLANS ARE GRID BEARINGS TO THE NEAREST SECOND.

UTILITY CONTACTS

* PACKERLAND BROADBAND

COMMUNICATION
ATTN: WAYNE CRETTON
105 KENT STREET
P.O. BOX 190
IRON MOUNTAIN, MI 49801

TELEPHONE: (906) 282-3768
E-MAIL: wayne.cretton@packerlandbroadband.com

* WE ENERGIES

GAS/PETROLEUM
ATTN: LEWIS KNAPP
104 W SOUTH ST
RICE LAKE, WI 54868

TELEPHONE: (715) 234-9605
E-MAIL: lewis.knapp@we-energies.com

DESIGN CONTACT

CORRE, INC.
ATTN: KEVIN MEYER
1802 WARDEN STREET
EAU CLAIRE, WI 54703

TELEPHONE: (715) 299-1894
E-MAIL: kmeyer@correinc.com

DNR CONTACT

DNR NORTHERN REGION HQ
ATTN: AMY CRONK
810 W. MAPLE STREET
SPOONER, WI 54801

TELEPHONE: (715) 635-4229
E-MAIL: amy.cronk@wisconsin.gov

* DENOTES UTILITIES THAT ARE DIGGERS HOTLINE MEMBERS

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

1195-06-61

Line	Item	Item Description	Unit	Total	Qty
0002	213.0100	Finishing Roadway (project) 01. 1195-06-61	EACH	1.000	1.000
0004	502.3100	Expansion Device (structure) 01. B-03-0057	LS	1.000	1.000
0006	502.3210	Pigmented Surface Sealer	SY	440.000	440.000
0008	502.4205	Adhesive Anchors No. 5 Bar	EACH	76.000	76.000
0010	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	7,080.000	7,080.000
0012	505.0907	Bar Couplers No. 7	EACH	18.000	18.000
0014	506.6000	Bearing Assemblies Expansion (structure) 01. B-03-0057	EACH	10.000	10.000
0016	506.7050.S	Removing Bearings (structure) 01. B-03-0057	EACH	10.000	10.000
0018	509.0301	Preparation Decks Type 1	SY	14.000	14.000
0020	509.0302	Preparation Decks Type 2	SY	10.000	10.000
0022	509.1000	Joint Repair	SY	80.000	80.000
0024	509.1500	Concrete Surface Repair	SF	25.000	25.000
0026	509.2000	Full-Depth Deck Repair	SY	1.000	1.000
0028	509.5100.S	Polymer Overlay	SY	2,243.000	2,243.000
0030	509.9050.S	Cleaning Parapets	LF	1,085.000	1,085.000
0032	517.0900.S	Preparation and Coating of Top Flanges (structure) 01. B-03-0057	LS	1.000	1.000
0034	517.3000.S	Structure Overcoating Cleaning and Priming (structure) 01. B-03-0057	LS	1.000	1.000
0036	517.4000.S	Containment and Collection of Waste Materials (structure) 01. B-03-0057	LS	1.000	1.000
0038	603.8000	Concrete Barrier Temporary Precast Delivered	LF	800.000	800.000
0040	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,600.000	1,600.000
0042	614.0905	Crash Cushions Temporary	EACH	2.000	2.000
0044	619.1000	Mobilization	EACH	1.000	1.000
0046	642.5001	Field Office Type B	EACH	1.000	1.000
0048	643.0300	Traffic Control Drums	DAY	10,400.000	10,400.000
0050	643.0715	Traffic Control Warning Lights Type C	DAY	4,600.000	4,600.000
0052	643.0800	Traffic Control Arrow Boards	DAY	400.000	400.000
0054	643.0900	Traffic Control Signs	DAY	6,000.000	6,000.000
0056	643.1050	Traffic Control Signs PCMS	DAY	200.000	200.000
0058	643.5000	Traffic Control	EACH	1.000	1.000
0060	646.1020	Marking Line Epoxy 4-Inch	LF	2,000.000	2,000.000
0062	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	5,440.000	5,440.000
0064	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0066	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0068	SPV.0035	Special 01. Concrete Masonry Deck Repair	CY	27.000	27.000
0070	SPV.0090	Special 01. Sawing Pavement Deck Preparation Areas	LF	10.000	10.000

3

FINISHING ROADWAY

	213.0100 EACH
CATEGORY CODE 0010	
1195-06-61	1
TOTAL	**1**

MOBILIZATION

	619.1000 EACH
CATEGORY CODE 0020	0.2
CATEGORY CODE 0010	0.8
TOTALS	**1**

FIELD OFFICE TYPE B

	642.5001 EACH
CATEGORY CODE 0010	
1195-06-61	1
TOTAL	**1**

3

TRAFFIC CONTROL ITEMS

LOCATION	603.8000 CONCRETE BARRIER TEMP. PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMP. PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN --	CRASH TEST LEVEL --	TRAFFIC DIRECTION --	TRAFFIC LOCATION --	CRASH CUSHION SHIELDS --	643.5000 (PROJECT) EACH	643.0300 DRUMS DAY	643.0715 WARNING LIGHTS TYPE C DAY	643.0800 ARROW BOARDS DAY	643.0900 SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	649.0150 TEMPORARY MARKING LINE REMOVEABLE TAPE 4-INCH LF
CATEGORY CODE 0010																
PHASE 1	800	800	1	4	OM-3L	TL-3	UNIDIRECTIONAL	RT	BLUNT END OF TEMP BARRIER	0.5	5,200	2,300	200	3,000	100	2,720
PHASE 2	---	800	1	4	OM-3R	TL-3	UNIDIRECTIONAL	LT	BLUNT END OF TEMP BARRIER	0.5	5,200	2,300	200	3,000	100	2,720
TOTALS	**800**	**1,600**	**2**							**1**	**10,400**	**4,600**	**400**	**6,000**	**200**	**5,440**

MARKING ITEMS

STATION	-	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF
CATEGORY CODE 0010					
7+80	-	12+20	CL	---	880
7+80	-	12+20	EDGELINE & CENTERLINE	1,120	
			TOTALS	**1,120**	**880**
				2,000	

2

2

N

USH 53

USH 53 SB

USH 53

USH 53 SB

UTILIZE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER" FOR USH 53 NB TRAFFIC CONTROL

STRUCTURE
B-03-0057

653'N' 654'N' 655'N' 656'N' 657'N' 658'N' 659'N' 660'N' 661'N' 662'N' 663'N' 664'N' 665'N' 666'N' 667'N' 668'N'

USH 53

USH 53 NB

USH 53

USH 53 NB

UTILIZE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER" FOR USH 53 NB TRAFFIC CONTROL

WILD RIVERS STATE TRAIL

CTH "SS"

CTH SS

500'

1500'

500'

1500'

500'

1500'

500'

1500'

1

2

3

ROAD WORK 500 FT
W20-1D

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

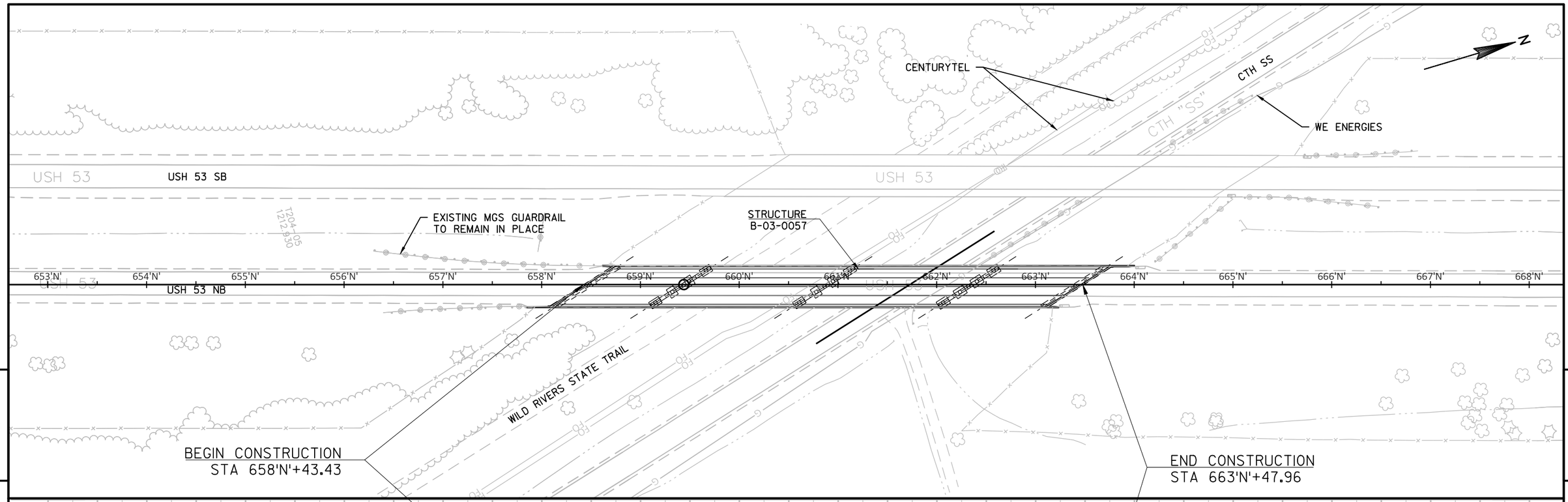
1 2 3

PROJECT NO: 1195-06-61	HWY: USH 53	COUNTY: BARRON	TRAFFIC CONTROL: MAINLINE	SHEET 5	E

FILE NAME : P:\WI - NW REGION\1195-06-31_USH 53 OVER CTH SS\500_CADD\501_C3D\1195-06-31\SHEETSPLAN\025001-TC.DWG
LAYOUT NAME - 025001-tc

PLOT DATE : 7/21/2017 2:45 PM PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



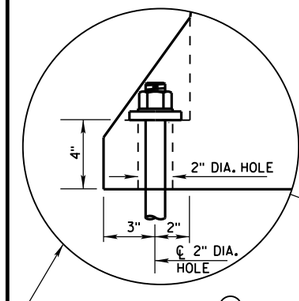
PROJECT NO: 1195-06-61	HWY: USH 53	COUNTY: BARRON	PLAN AND PROFILE: MAINLINE	SHEET 6	E

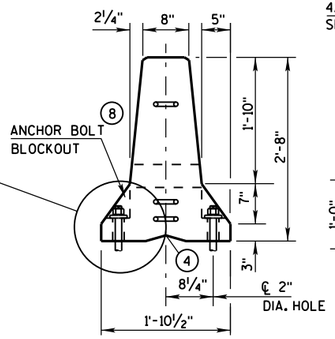
FILE NAME : P:\WI - NW REGION\1195-06-31_USH 53 OVER CTH SS\500_CADD\501_C3D\1195-06-31\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050101_pp

PLOT DATE : 6/13/2017 9:43 AM PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:100 FT

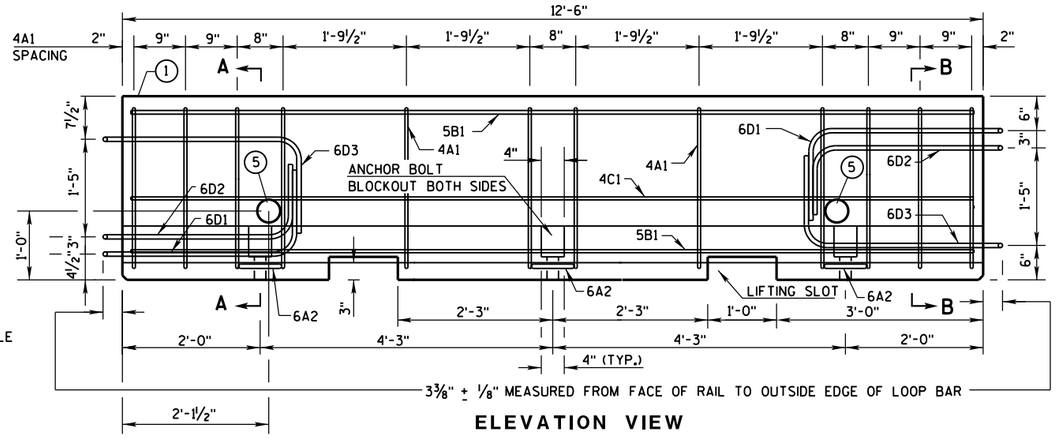
Standard Detail Drawing List

14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	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
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15D03-04	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER

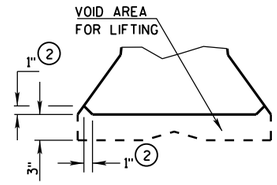




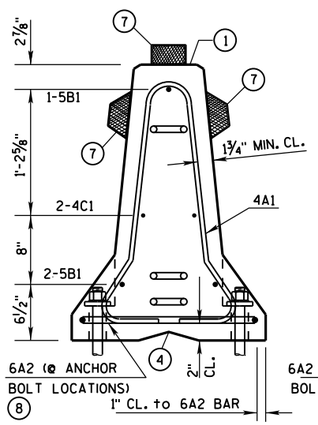
END VIEW



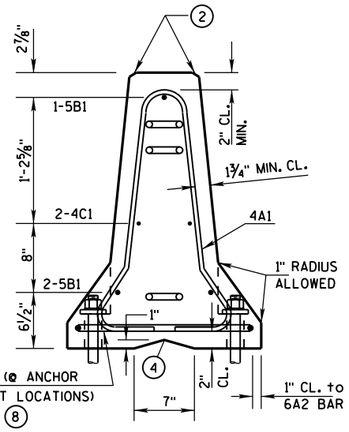
ELEVATION VIEW



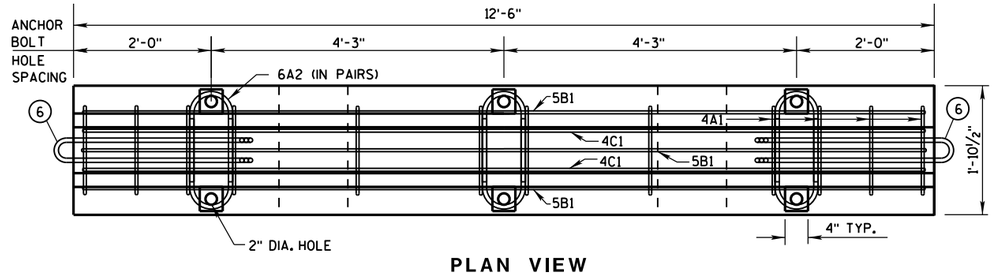
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

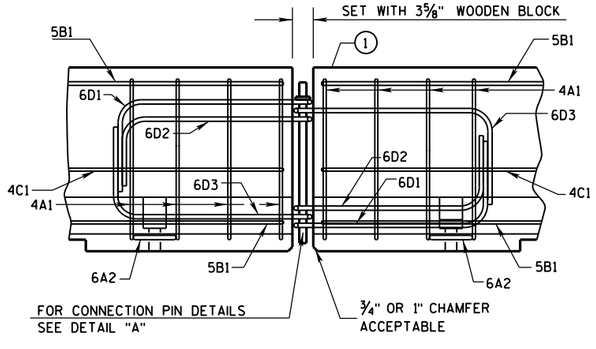


SECTION B-B
(STIRRUP PLACEMENT)

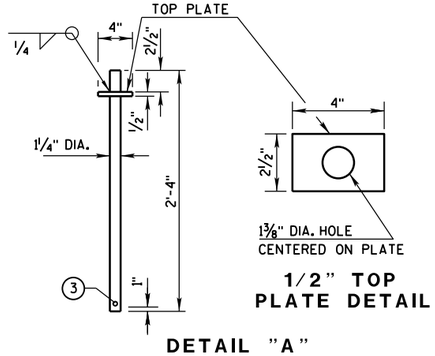


PLAN VIEW

DETAILS OF BARRIER SECTION

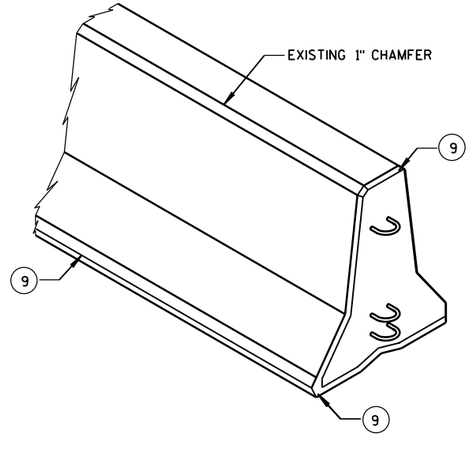


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

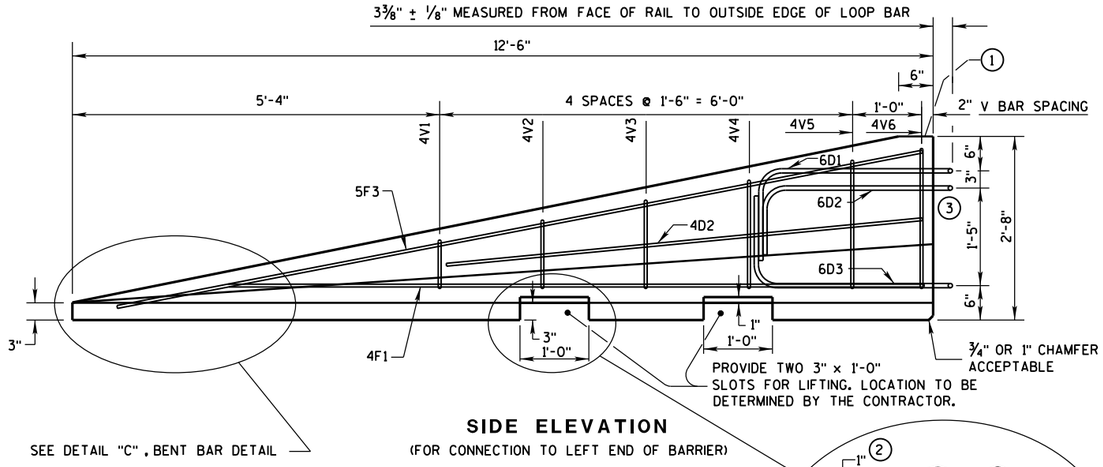
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

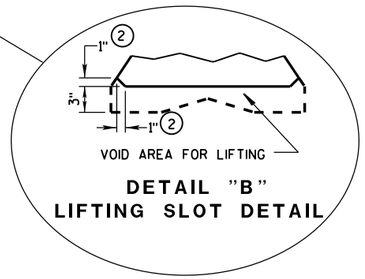
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

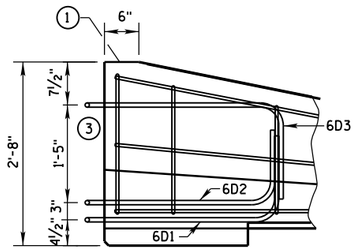
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 8



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



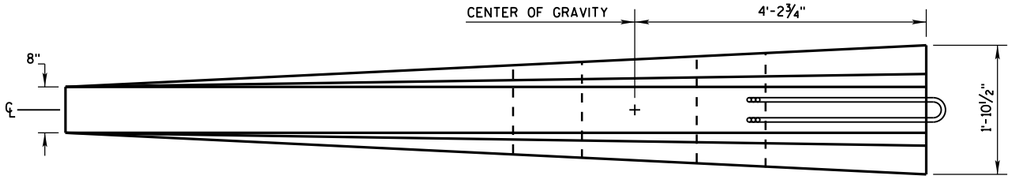
DETAIL "B"
LIFTING SLOT DETAIL



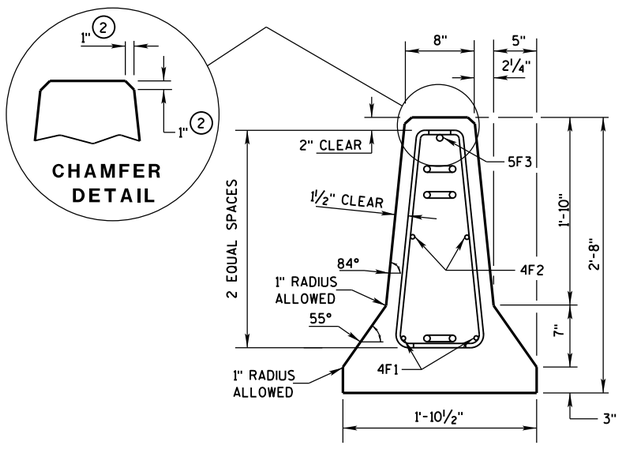
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

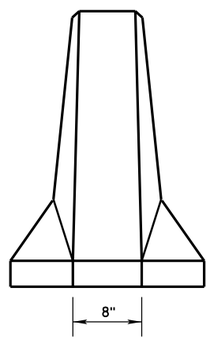
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



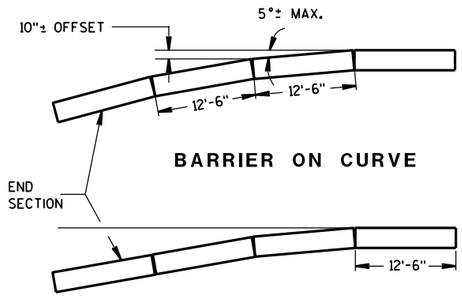
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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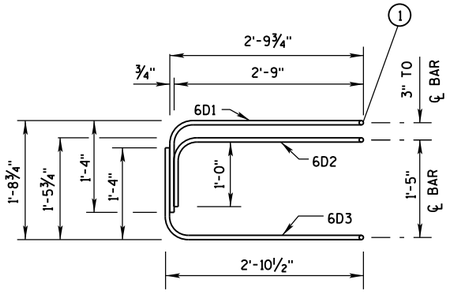
S.D.D. 14 B 7-14b

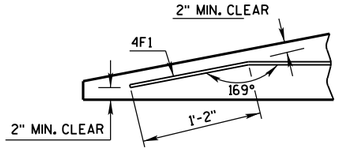
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

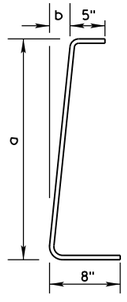
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

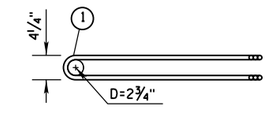
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

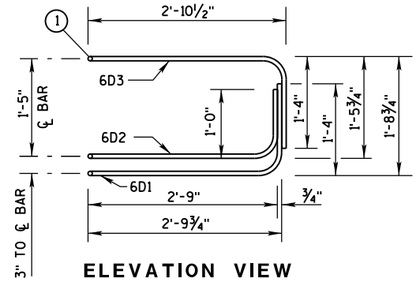
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

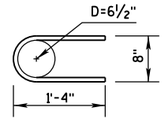
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



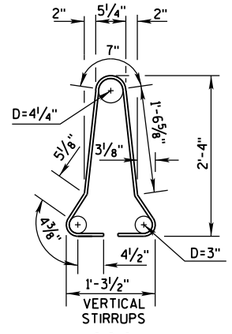
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

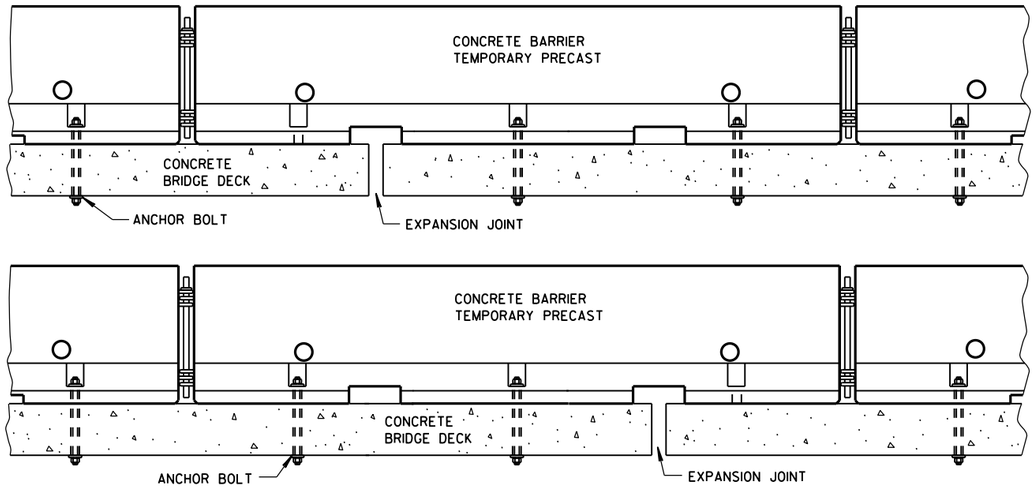
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

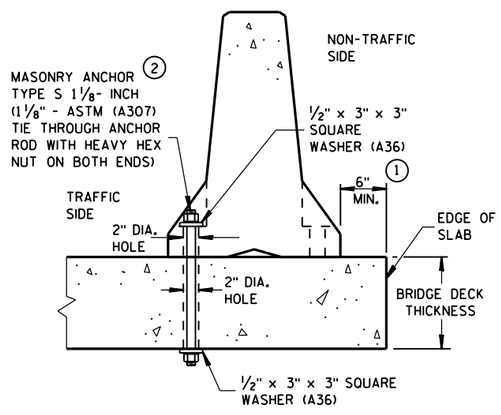
6

S.D.D. 14 B 7-14c



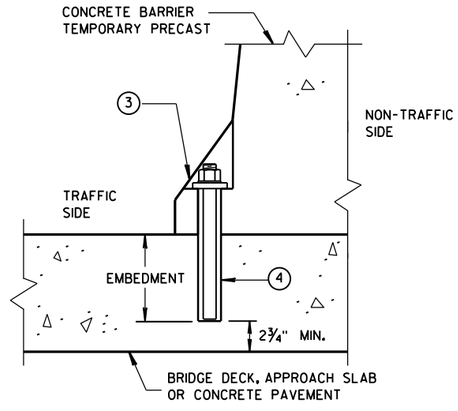
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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.)



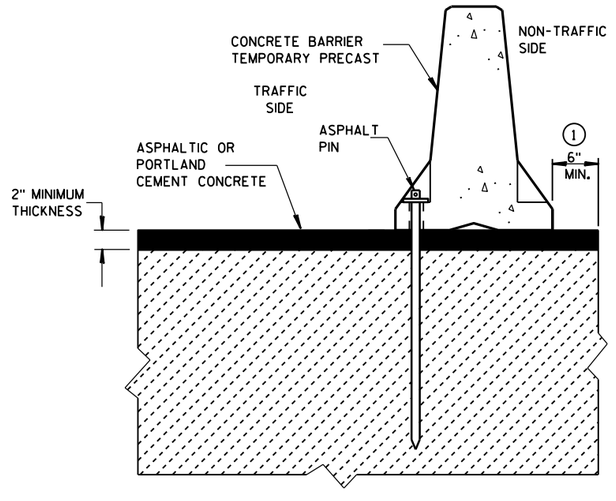
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



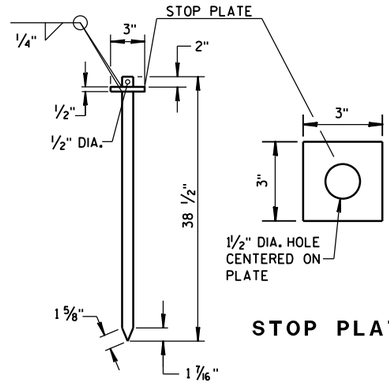
REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

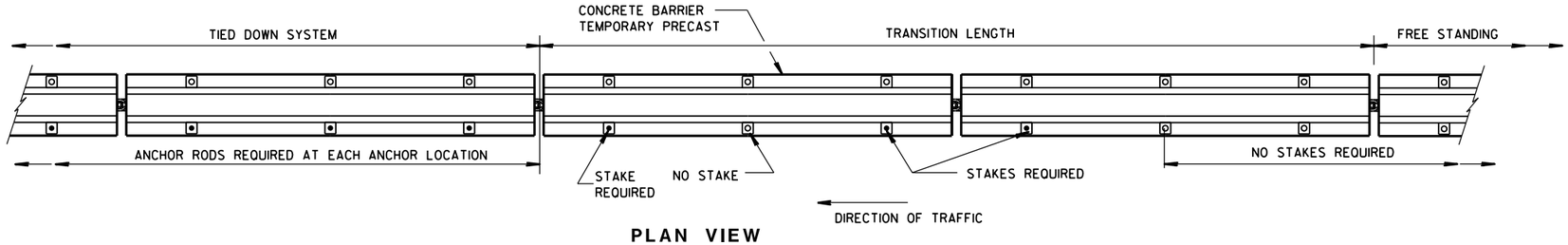
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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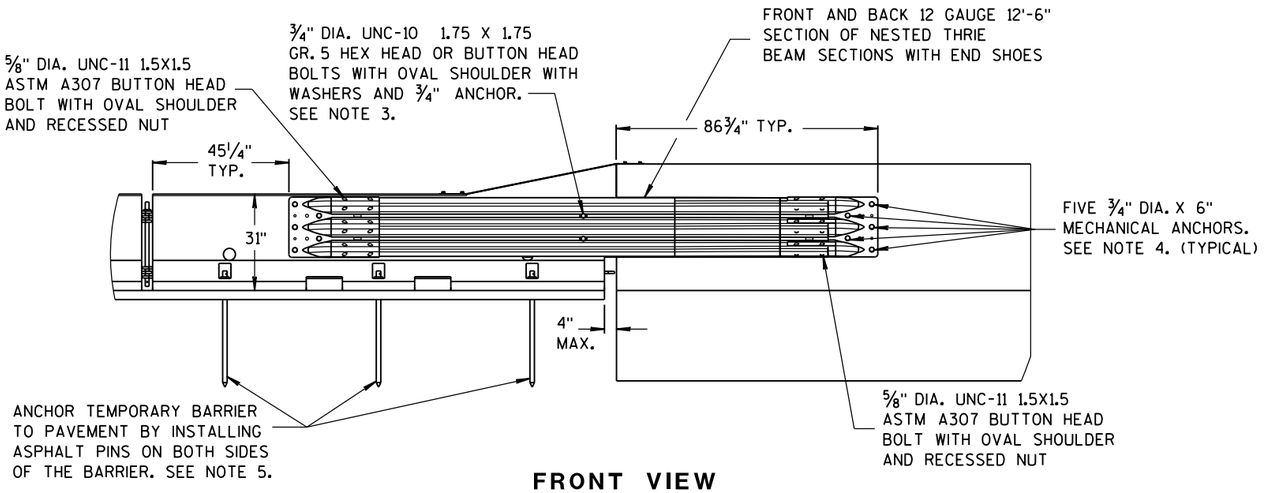
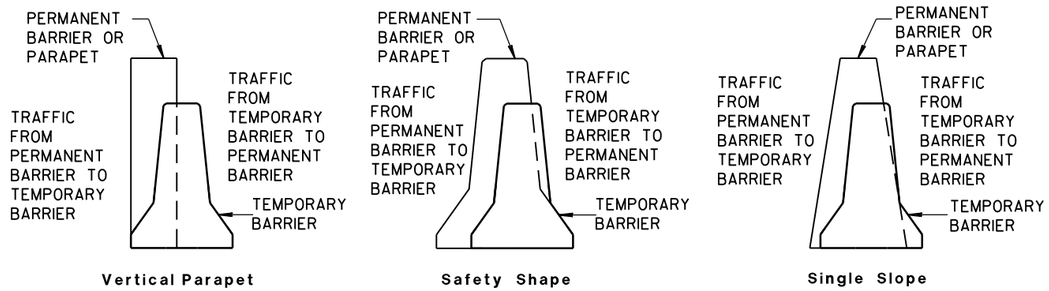
S.D.D. 14 B 7-14d



FRONT VIEW

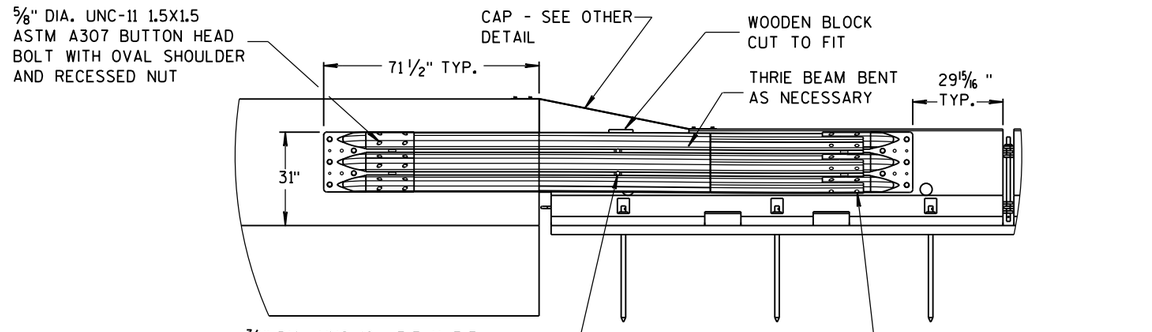


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

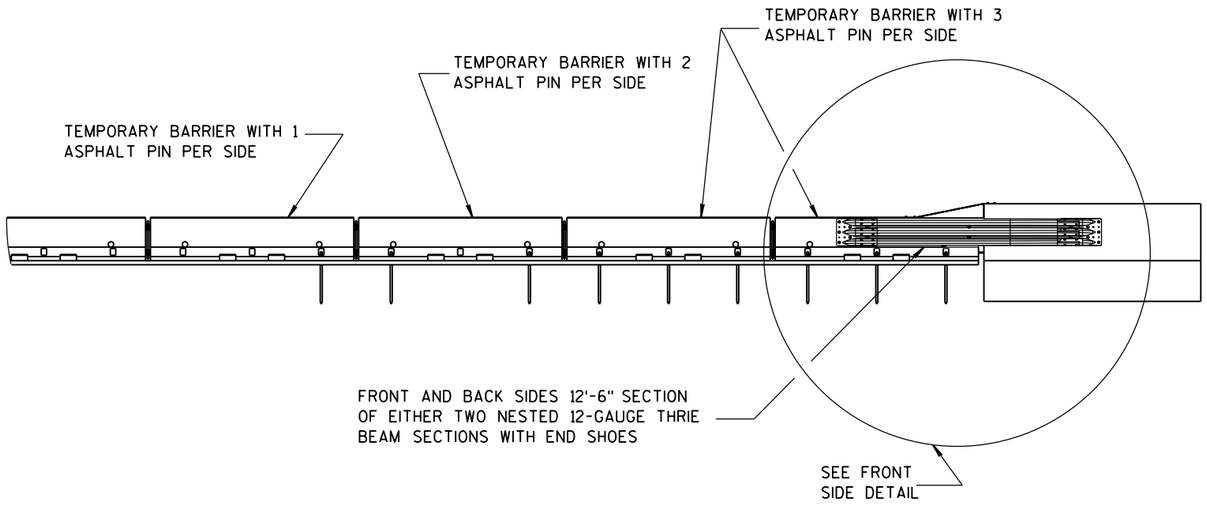
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

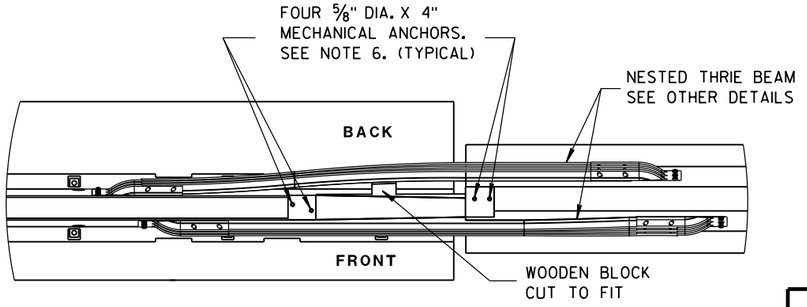
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



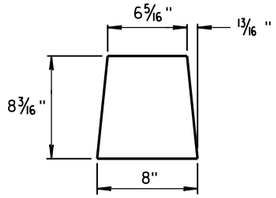
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

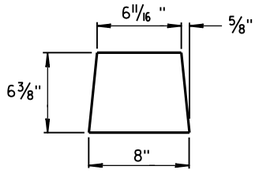
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

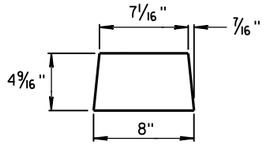
6
S.D.D. 14 B 7-14e



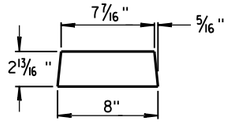
GUSSET 1



GUSSET 2

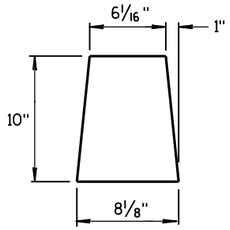


GUSSET 3

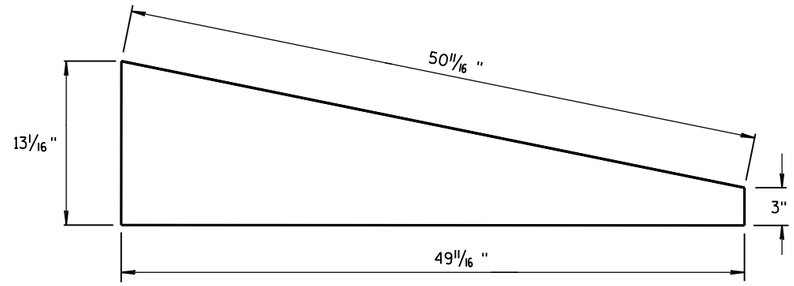


GUSSET 4

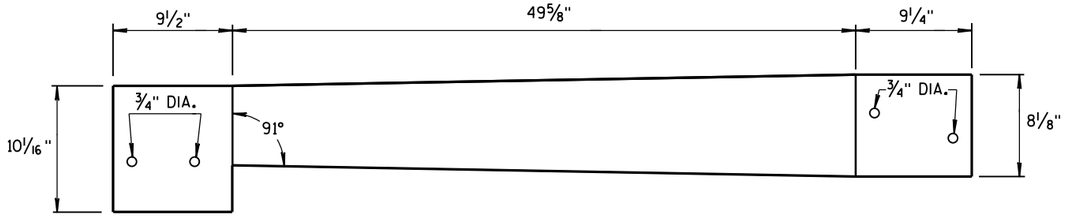
GUSSETS

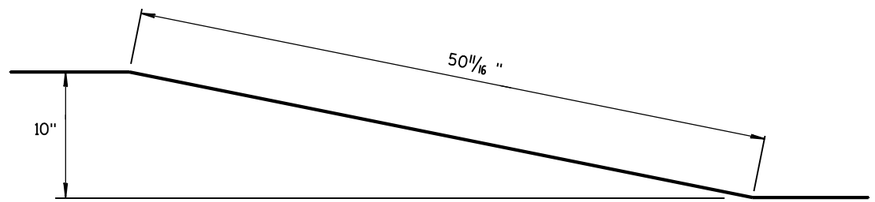


END PLATE



SIDE PLATE

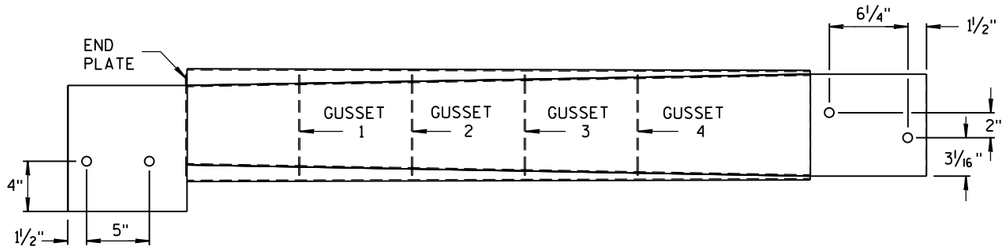


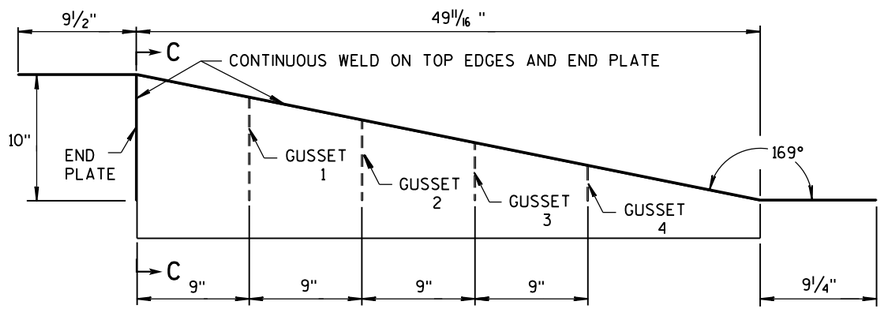


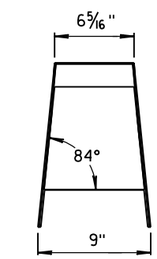
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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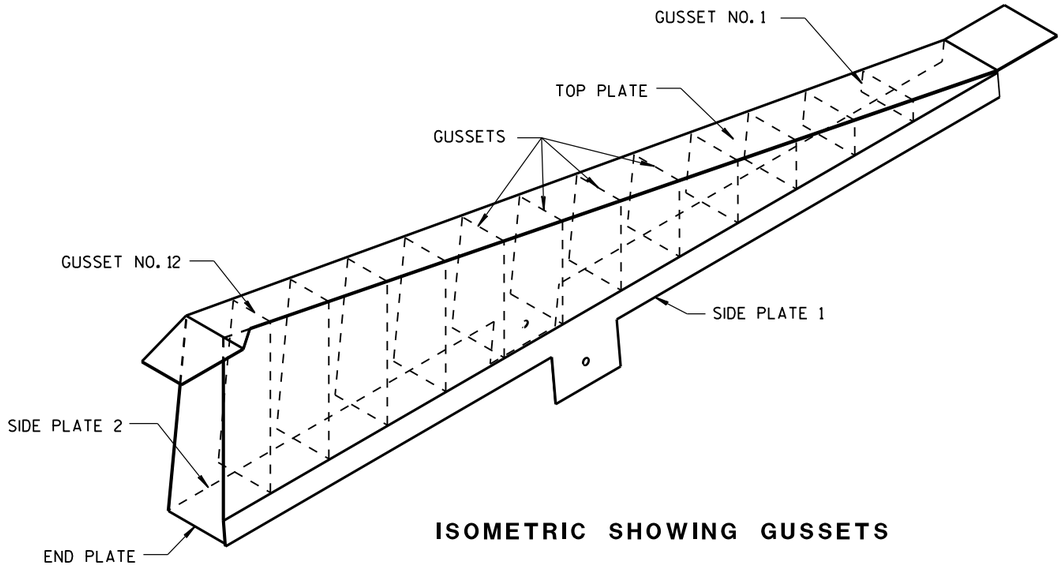
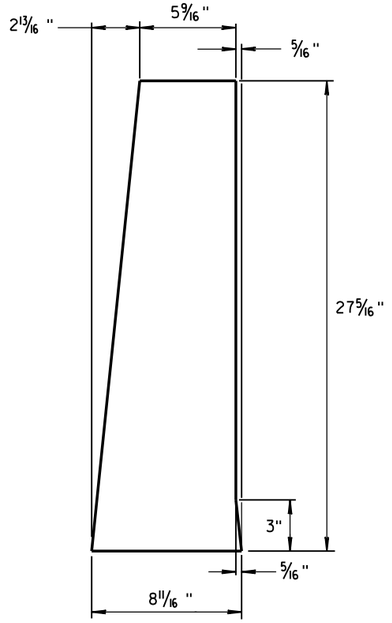
S.D.D. 14 B 7-14f

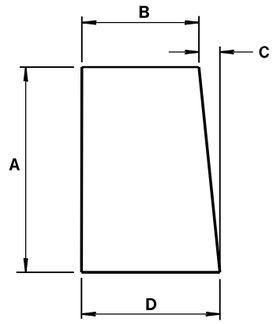


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



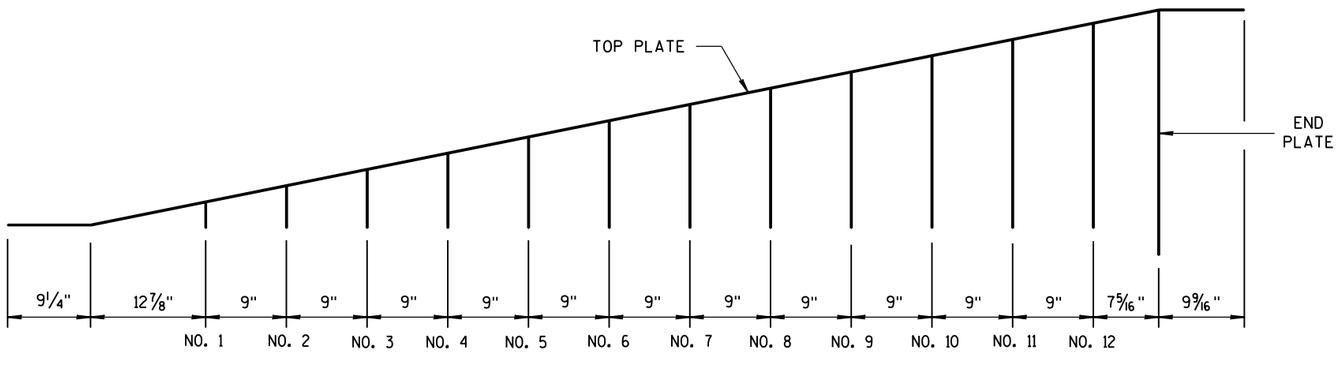
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

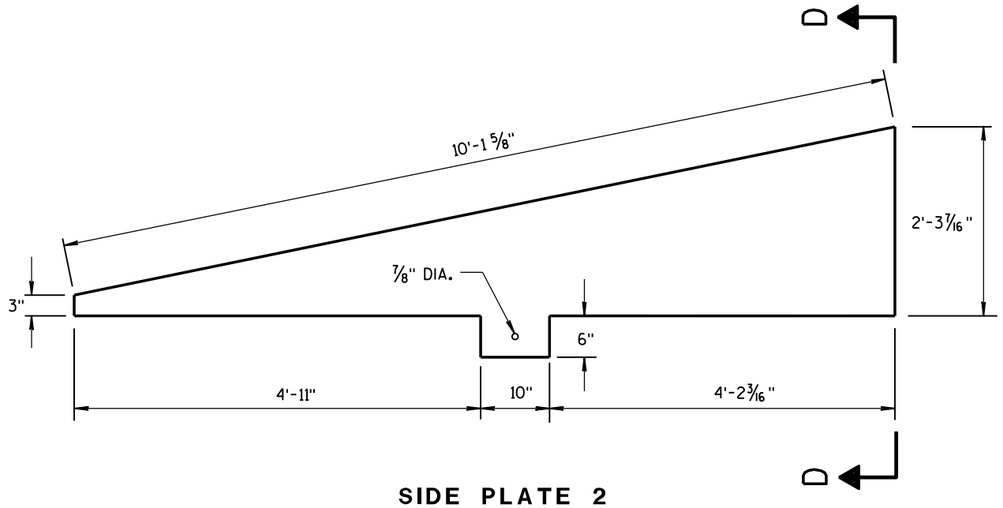
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

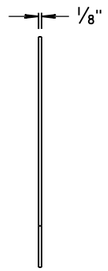
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

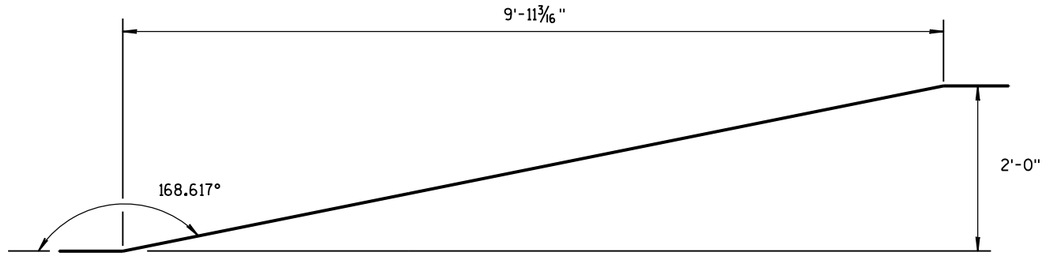
S.D.D. 14 B 7-14g



SIDE PLATE 2

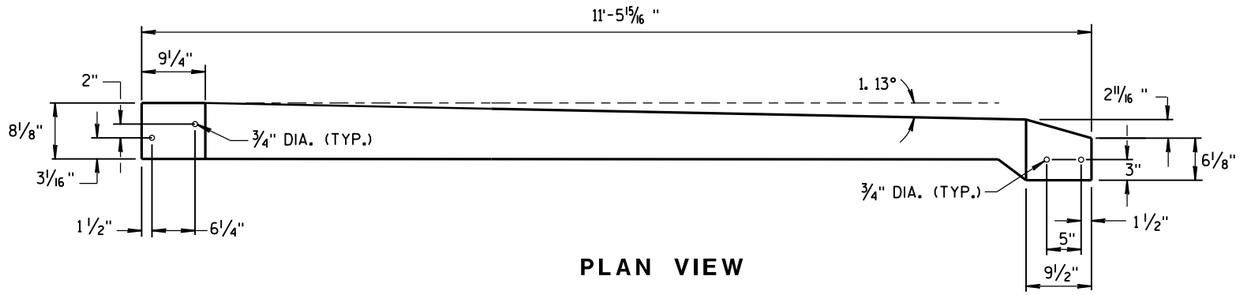


END VIEW



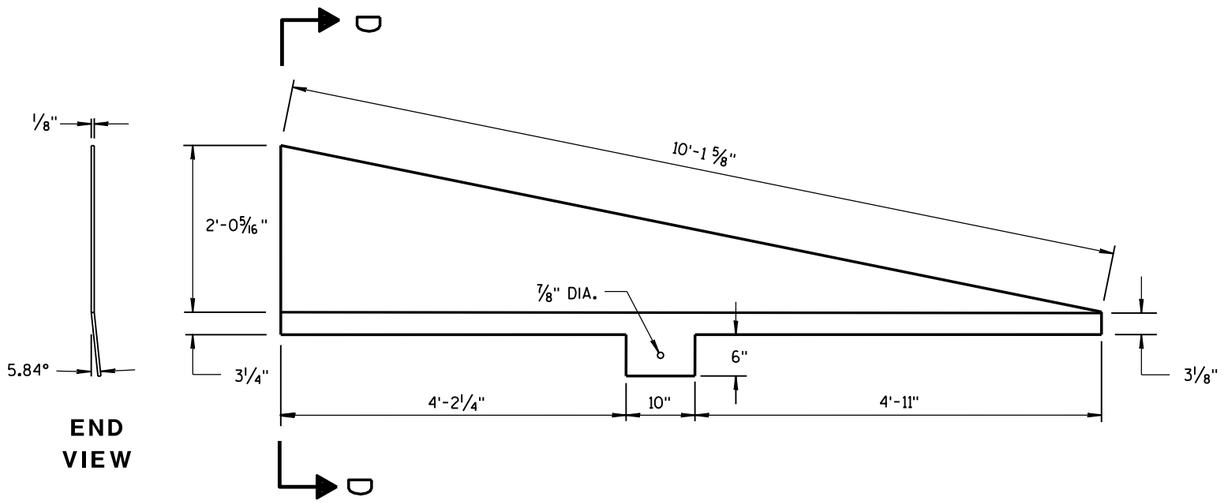
SIDE VIEW

TOP PLATE



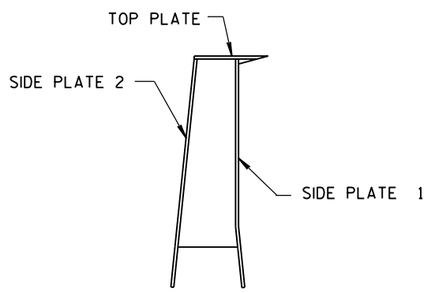
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

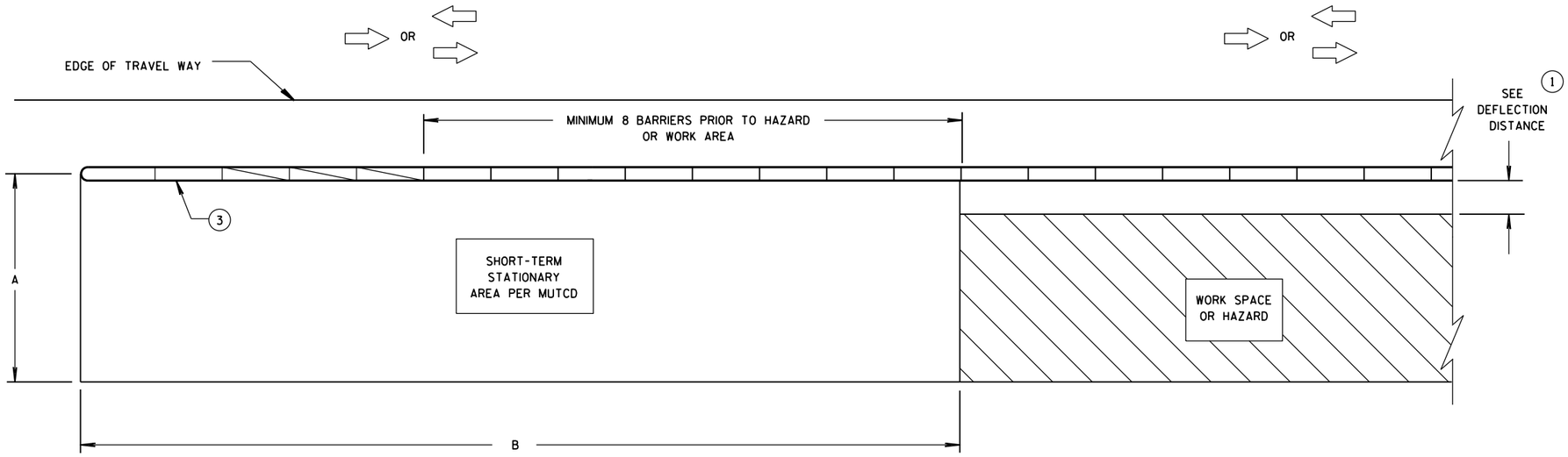
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 7-14h

6

S.D.D. 14 B 7-14h



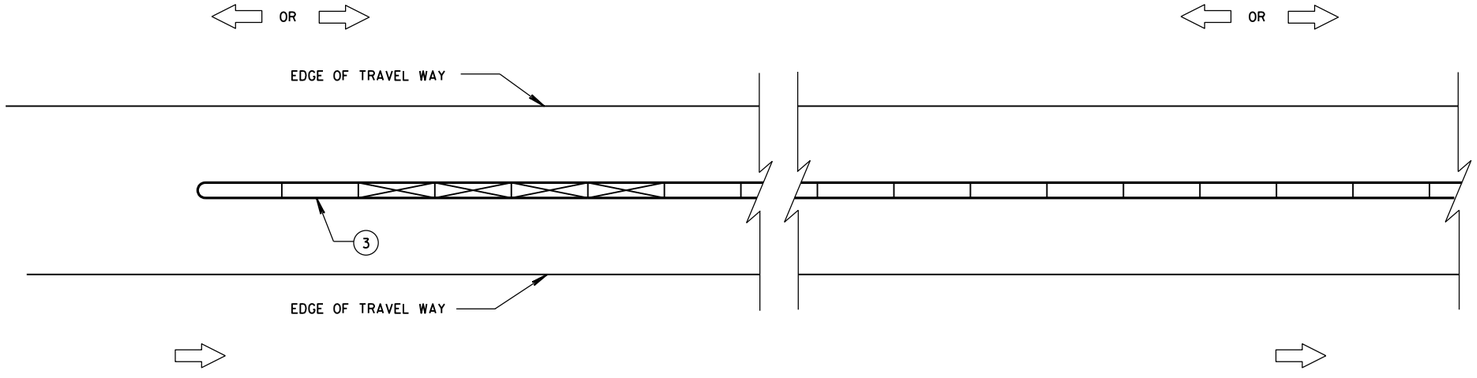
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

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

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.

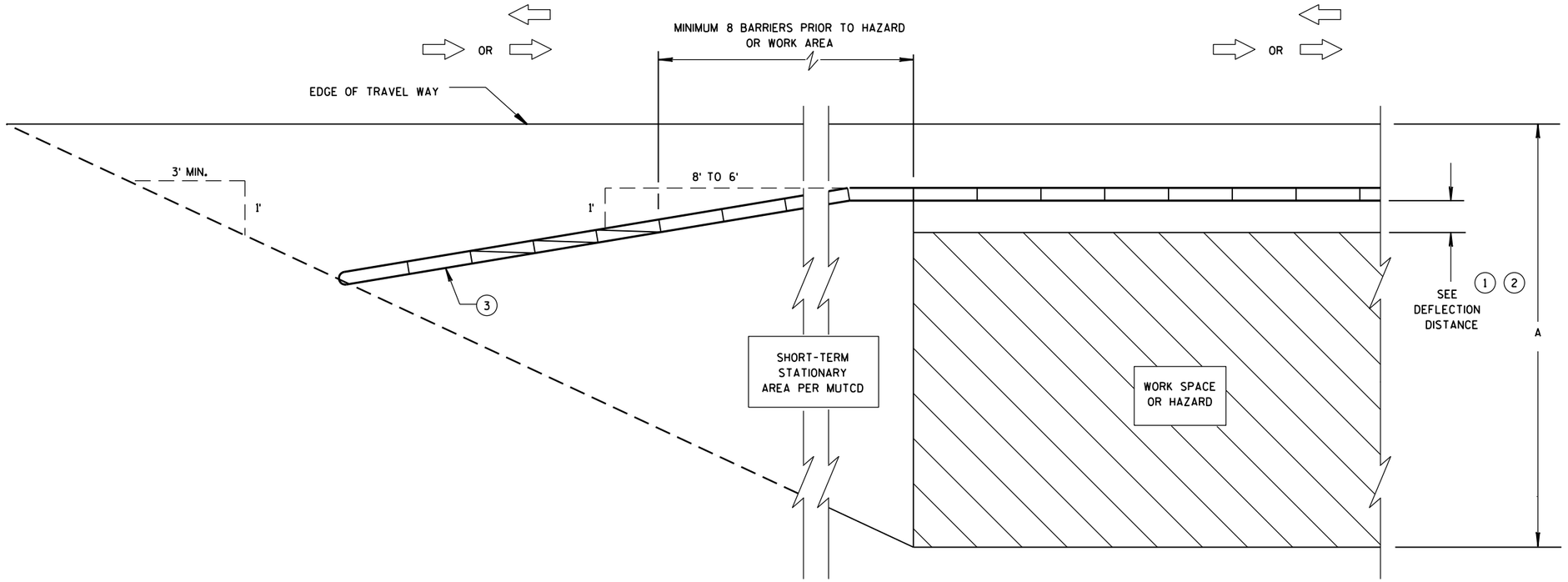
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

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

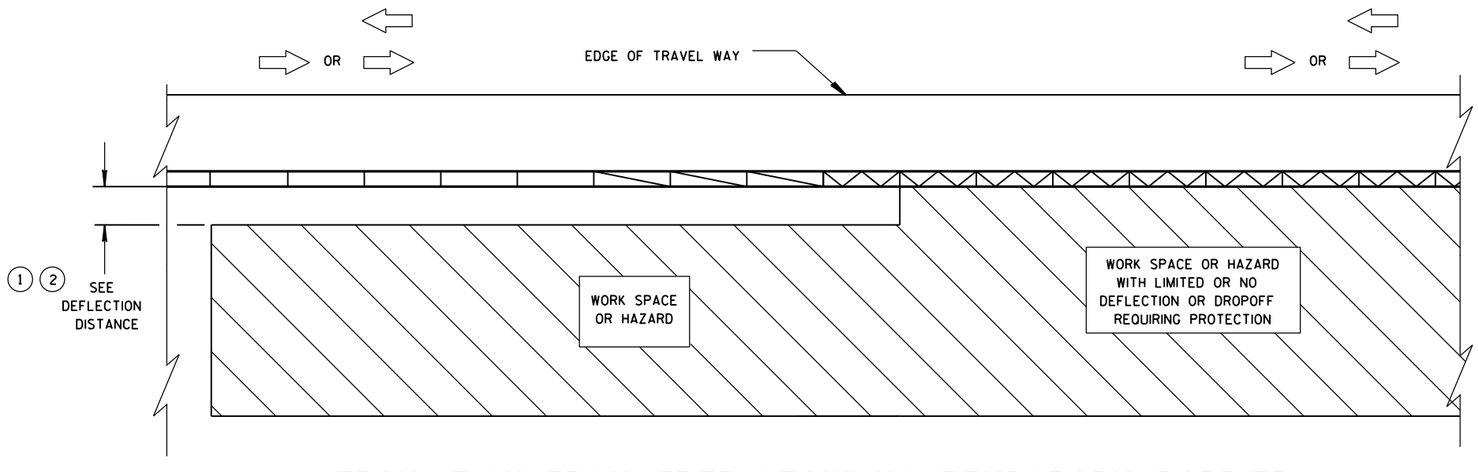
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

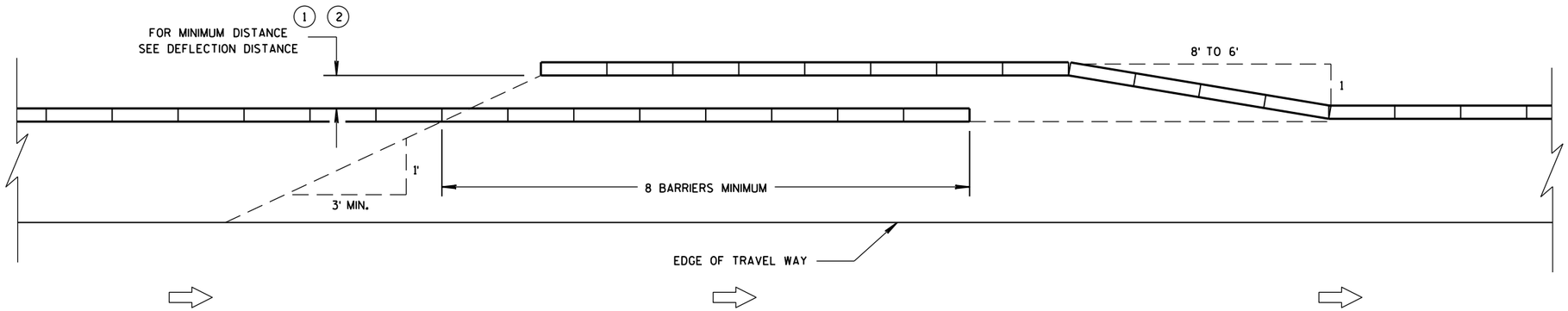
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

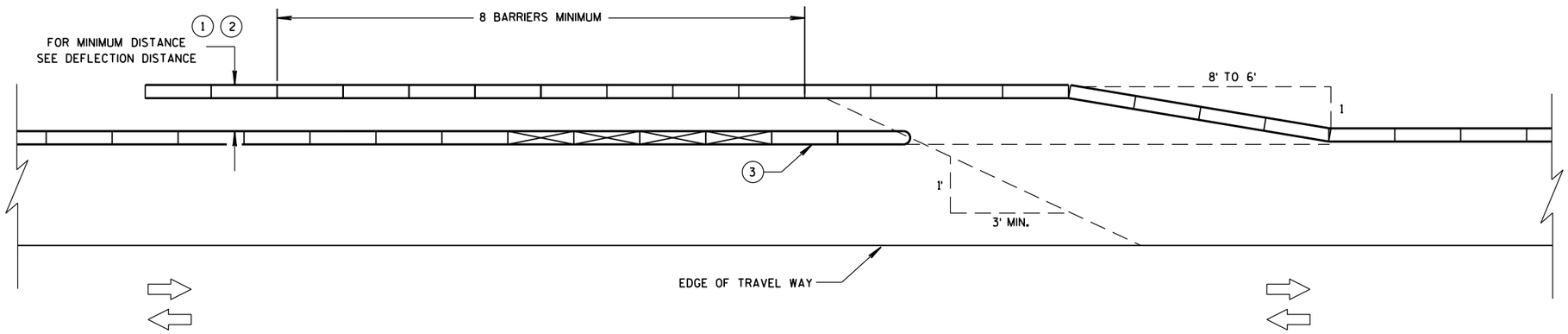
S.D.D. 14 B 8-2b

6

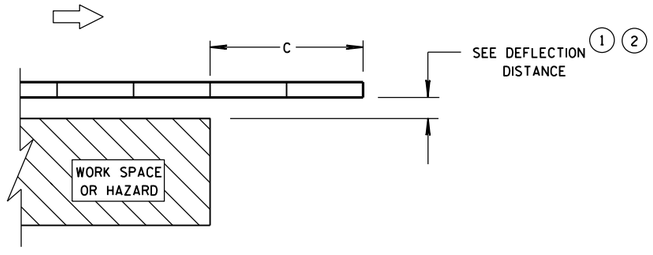
S.D.D. 14 B 8-2b



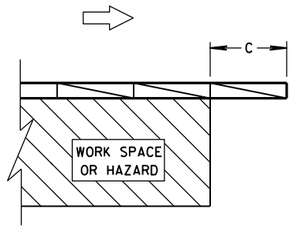
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

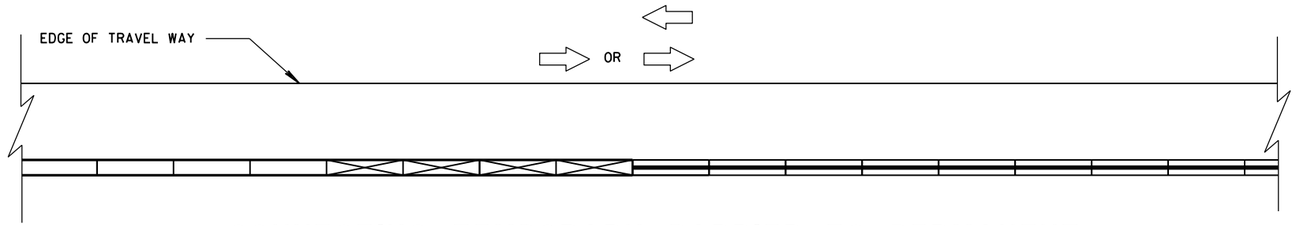
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

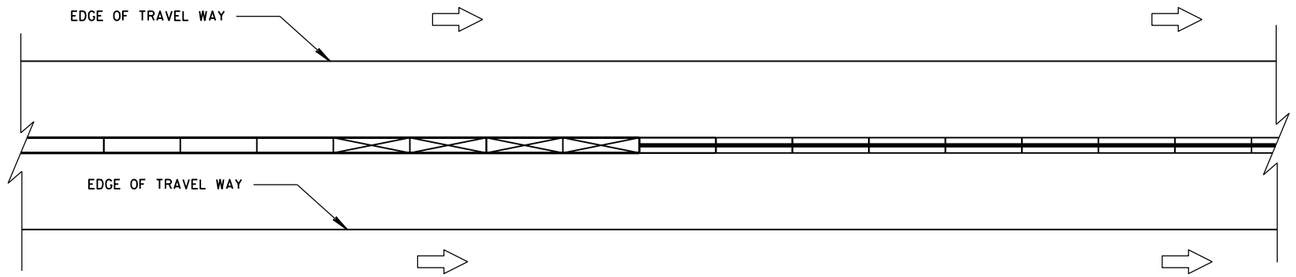
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

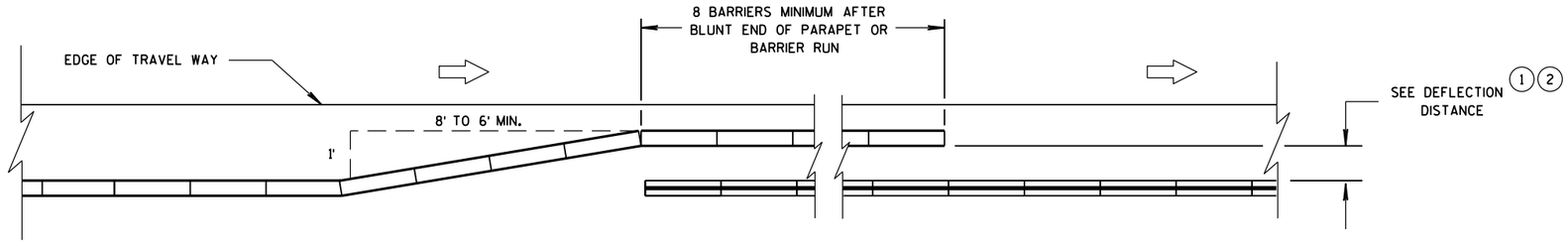
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

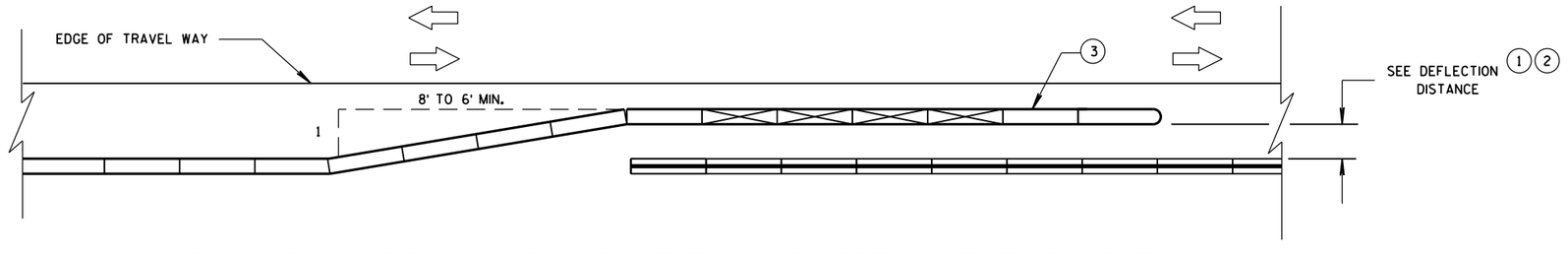
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

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 TRANSPOI

6

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

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

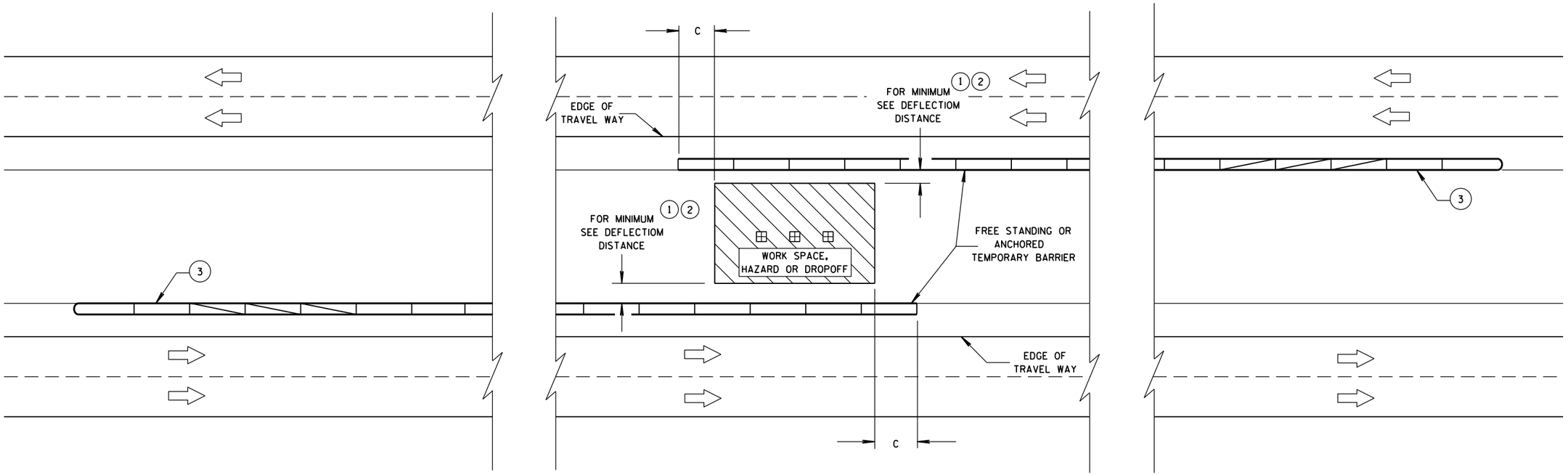
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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



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 — ROADWAY STANDARDS ENGINNER
FHWA

6

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

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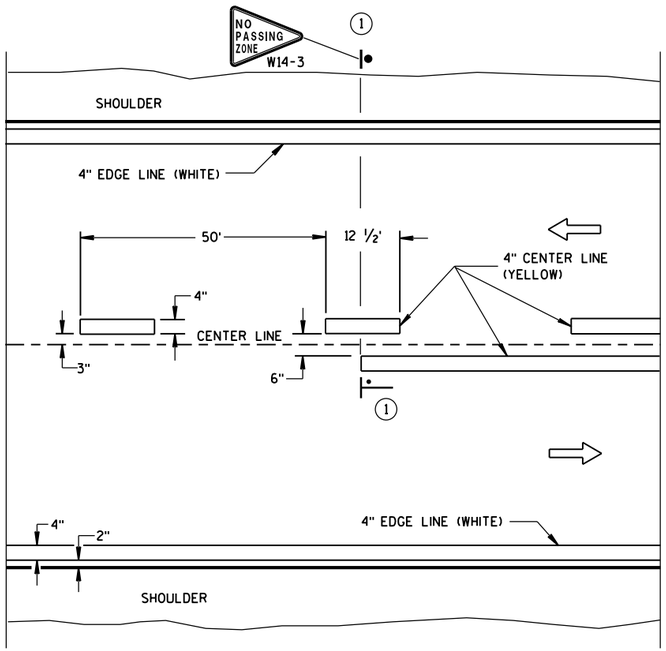
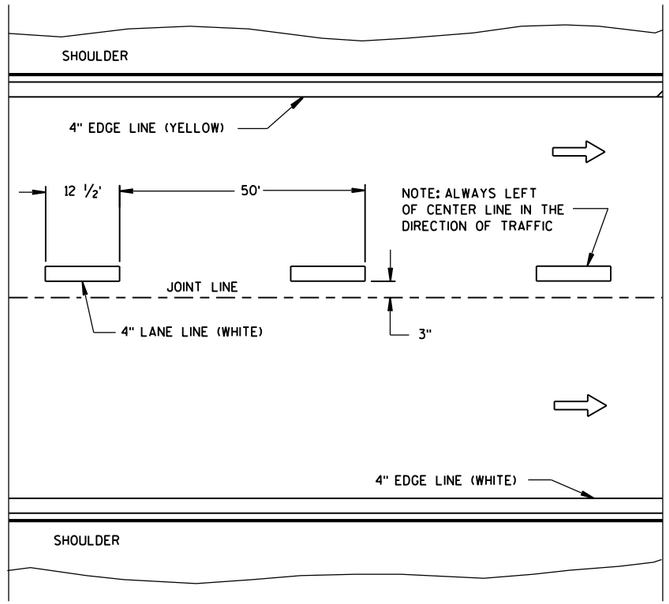
S.D.D. 14 B 8-2e



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

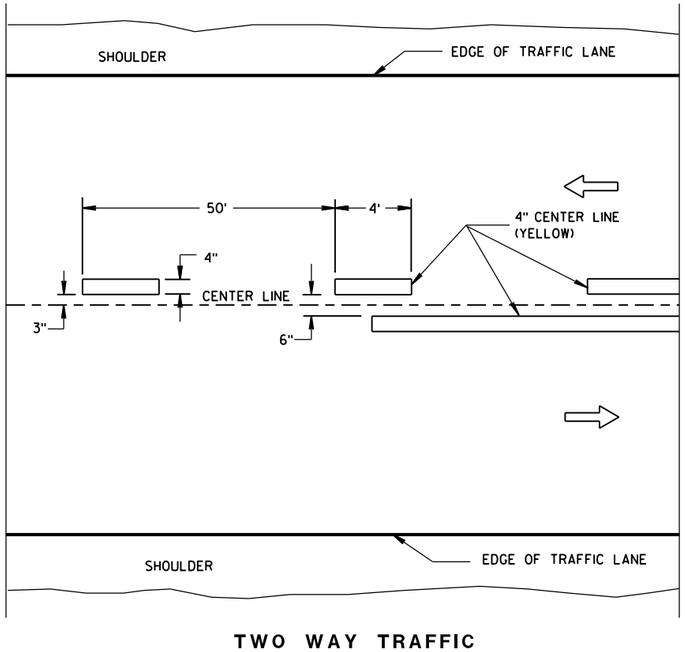
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

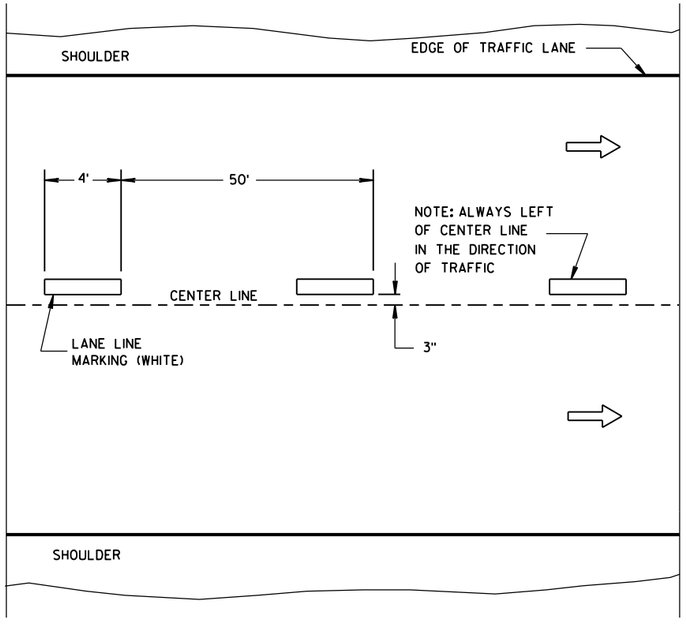
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

S.D.D. 15 C 8-17a

6

LEGEND

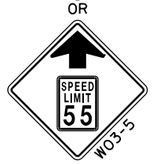
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA

L, TAPER LENGTH (MPH)							
SPEED (MPH)	W, LATERAL OFFSET (FT)						
	10	11	12	13	14	15	16
45	450	495	540	585	630	675	720
50	500	550	600	650	700	750	800
55	550	605	660	715	770	825	880
60	600	660	720	780	840	900	960
65	650	715	780	845	910	975	1040
70	700	770	840	910	980	1050	1120

W057-52
48"x36"

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1 FOOT LESS THAN AVAILABLE WIDTH (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET).

OR



LOCATED 2600 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.

OR

R2-1
48"x60"
(BLACK AND WHITE)

LOCATED 500 FEET BEYOND W20-5G SIGN.

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.

* INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.

GENERAL NOTES

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

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.

ALL SIGNS ARE 48"x48" 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.

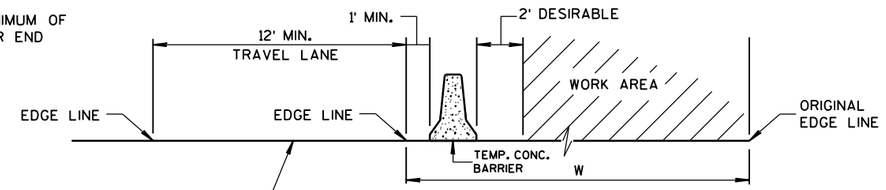
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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 IF LANE CLOSURE IS TO BE IN PLACE FOR 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.

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 1/2 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.



TYPICAL SECTION

TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZOI SAFETY ENGIN — IC
FHWA

6

S.D.D. 15 D 3-4

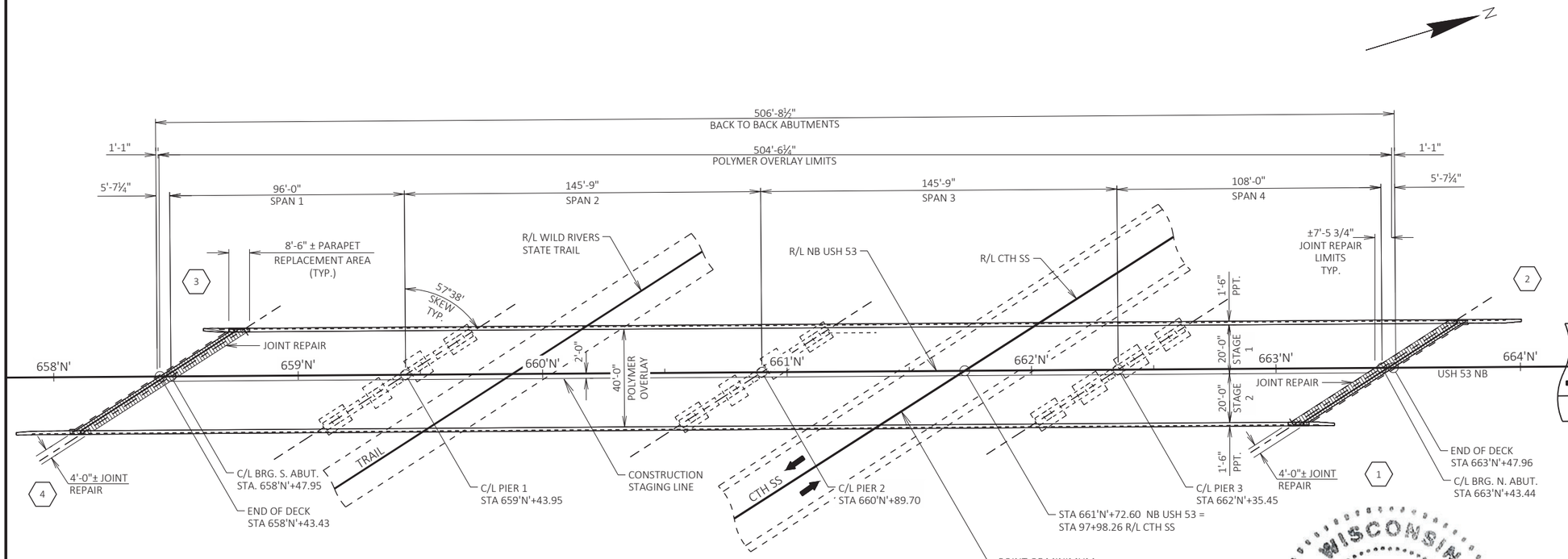
6

S.D.D. 15 D 3-4

STATE PROJECT NUMBER

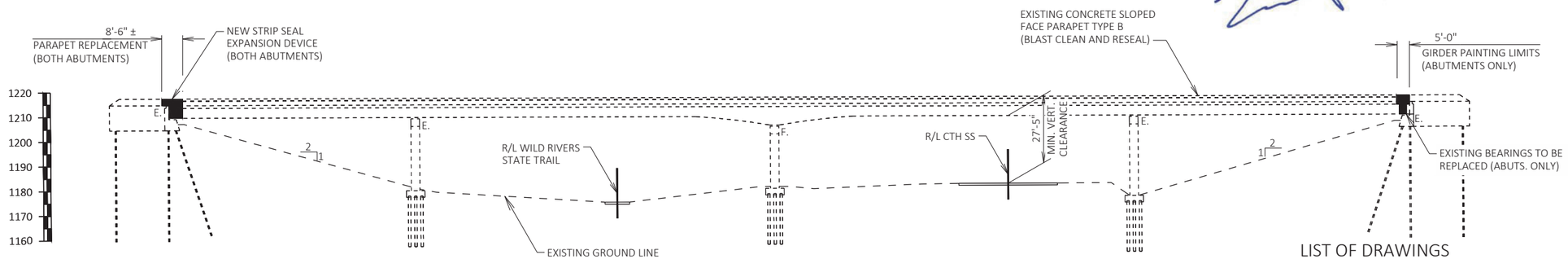
1195-06-61

INDICATES WING NUMBER



PLAN

(4-SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE, POLYMER OVERLAY)



ELEVATION

(LOOKING WEST)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	HS-20
INVENTORY RATING	HS-27
OPERATIONAL RATING	HS-45
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	fy = 60,000 psi

TRAFFIC DATA

USH 53

A.D.T. (2018)	= 9,700
A.D.T. (2038)	= 11,900
R.D.S.	= 70 MPH

CTH SS

A.D.T. (2018)	= 2,100
A.D.T. (2038)	= 2,100
R.D.S.	= 60 MPH

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION & QUANTITIES
3. BEARING DETAILS
4. EXPANSION DEVICE
5. COVER PLATE DETAILS
6. JOINT REPAIR DETAILS
7. BAR COUPLER DETAILS

WISCONSIN
ERIC T. PRICE
E-39027
MADISON
WI
PROFESSIONAL ENGINEER

July 19, 2017

BRIDGE OFFICE CONTACT
BILL DREHER, P.E.
TELEPHONE: (608) 266-8489

NW REGION CONTACT
BRENDAN DIRKES, P.E.
TELEPHONE: (715) 395-3026

CONSULTANT CONTACT
ERIC PRICE, P.E.
TELEPHONE: (608) 826-6146

NO.	DATE	REVISION	BY

CORRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/09/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-3-57

NB USH 53 OVER CTH SS & REC TRAIL

COUNTY	TOWN/CITY/VILLAGE
BARRON	OAK GROVE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ETP	BH	BJJ	ETP

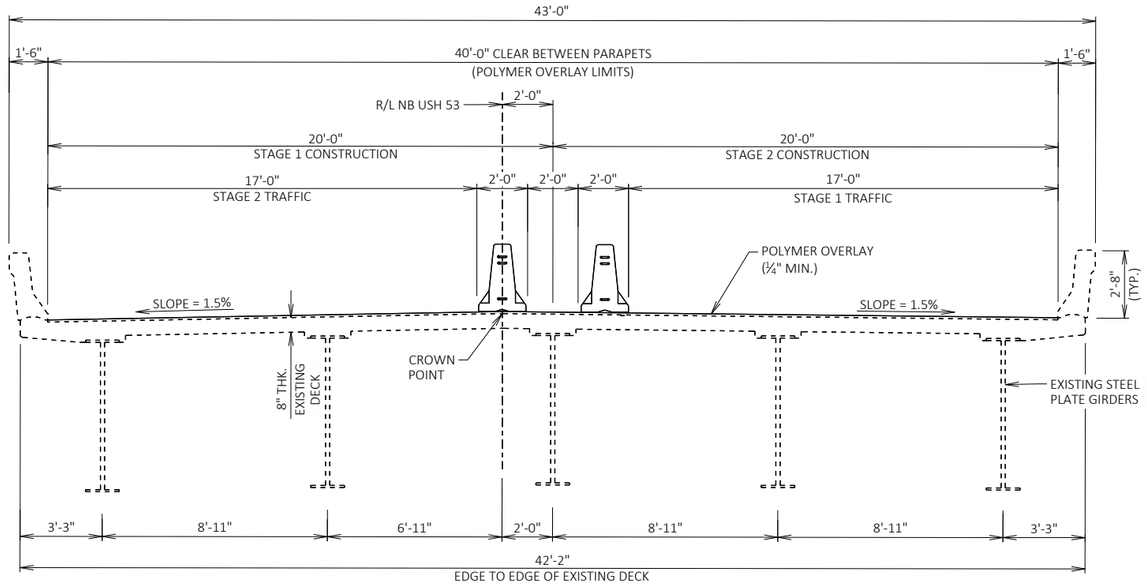
GENERAL PLAN

SHEET 1 OF 7

23

8

8



CROSS SECTION THRU ROADWAY

LOOKING NORTH

TOTAL ESTIMATED QUANTITIES

	BID NUMBER	BID ITEM	UNIT	TOTALS
	502.3100	EXPANSION DEVICE B-3-57	LS	1
	502.3210	PIGMENTED SURFACE SEALER	SY	440
	502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	76
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	7,080
	505.0907	BAR COUPLERS NO. 7	EACH	18
	506.6000	BEARING ASSEMBLIES EXPANSION B-3-57	EACH	10
	506.7050.S	REMOVING BEARINGS B-3-57	EACH	10
	509.0301	PREPARATION DECKS TYPE 1	SY	14
	509.0302	PREPARATION DECKS TYPE 2	SY	10
	509.1000	JOINT REPAIR	SY	80
**	509.1500	CONCRETE SURFACE REPAIR	SF	25
***	509.2000	FULL-DEPTH DECK REPAIR	SY	1
	509.5100.S	POLYMER OVERLAY	SY	2,243
	509.9050.S	CLEANING PARAPETS	LF	1,085
	517.0900.S	PREPARATION AND COATING OF TOP FLANGES	LS	1
	517.3000.S	STRUCTURE OVERCOATING CLEANING AND PRIMING B-3-57	LS	1
	517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-3-57	LS	1
*	SPV.0035	CONCRETE MASONRY DECK REPAIR	CY	27
	SPV.0090	SAWING PAVEMENT DECK PREPARATION AREAS	LF	10

* ITEM IS UTILIZED FOR CONCRETE PLACEMENT IN DECK PREPARATION AND JOINT REPAIR AREAS.

** CONCRETE SURFACE REPAIR LOCATIONS TO BE DETERMINED BY THE ENGINEER

*** FULL-DEPTH DECK REPAIR QUANTITY IS FOR INFORMATIONAL PURPOSES ONLY. LOCATION TO BE DETERMINED BY THE ENGINEER.

STATE PROJECT NUMBER

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GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLAN.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY DECK REPAIR".

EXISTING LONGITUDINAL DECK AND PARAPET REINFORCEMENT THAT EXTENDS IN THE JOINT REPAIR AREAS SHALL REMAIN IN PLACE. TRIM AS REQUIRED TO ACCOMMODATE THE 2" CLEAR COVER IN RELATION TO THE NEW JOINT OPENING. EXTEND EXISTING BAR STEEL 24 DIAMETERS INTO NEW WORK.

THE ADDITIONAL HORIZONTAL REINFORCEMENT REQUIRED IN THE PARAPETS SHALL BE TIED TO THE EXISTING HORIZONTAL REINFORCEMENT.

CONCRETE REMOVAL LINES SHALL BE DEFINED BY A 1" DEEP SAW CUT.

CLEAN AND PAINT ALL EXISTING EXPOSED SUPERSTRUCTURE STEEL WITHIN 5'-0" OF THE ENDS OF THE GIRDERS AT BOTH ABUTMENTS, INCLUDING GIRDERS, DIAPHRAGMS AND HARDWARE. THE COLOR SHALL BE FEDERAL COLOR #26293 (LIGHT GRAY) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2 AND CONCRETE SURFACE REPAIR AREAS ARE FOR INFORMATIONAL PURPOSES ONLY AND FINAL AREAS ARE TO BE DETERMINED BY THE FIELD ENGINEER. THE QUANTITY FOR PREPARATION DECKS TYPE 2 IS ESTIMATED AT 40% OF TYPE 1 AREAS FOR THIS STRUCTURE.

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-3-57".

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

JOINT REPAIR AND DECK PREPARATION AREAS SHALL BE FILLED WITH "CONCRETE MASONRY DECK REPAIR".

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

AFTER CLEANING THE EXISTING PARAPETS, APPLY WHITE PIGMENTED SURFACE SEALER TO THE TOP AND INSIDE FACES. BOTH SHALL BE DONE TO THE SATISFACTION OF THE FIELD ENGINEER.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-3-57

DRAWN BY BJJ | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY
CORRE

TYPICAL SECTION & QUANTITIES

SHEET 2 OF 7

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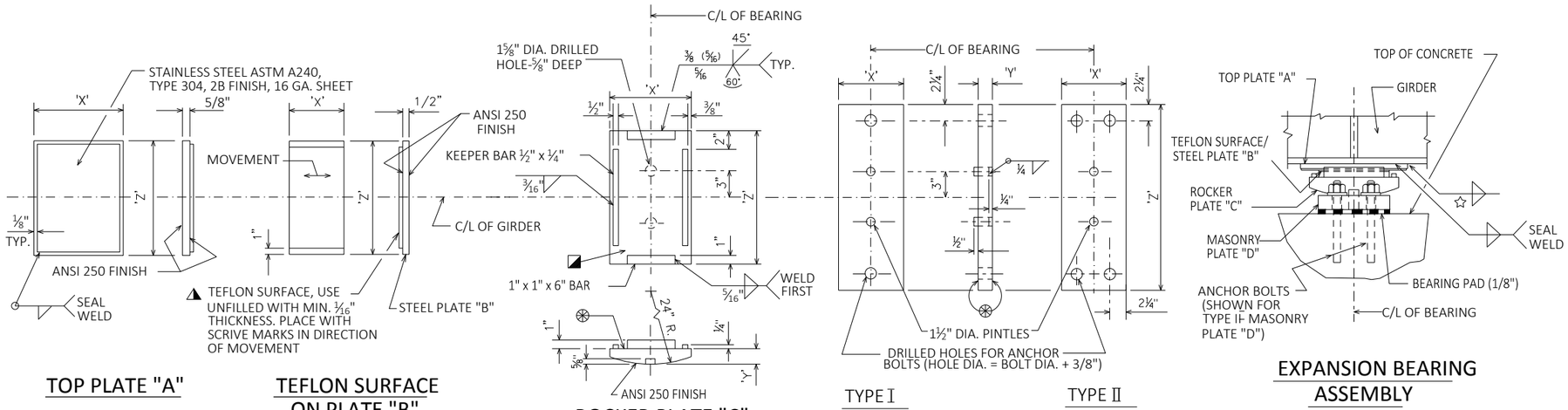


TOP PLATE "A"

TEFLON SURFACE ON PLATE "B"

ROCKER PLATE "C"

TYPE I

TYPE II

MASONRY PLATE "D"

EXPANSION BEARING ASSEMBLY

EXPANSION BEARING

	PLATE "A"		PLATE "B"		PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
	'X'	'Z'	'X'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'				
EXPANSION BEARING	11"	1'-6"	7"	1'-4"	9"	1 7/16"	1'-6 1/4"	8"	1 1/2"	2'-6"	I	1 1/2"	10	ABUTMENTS
FIXED BEARING														

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT C/L OF GIRDER AND C/L OF BEARING.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5 FOR 1¼," DIA. AND 1'-10 FOR 1½" DIA. BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2¼", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES ⅛". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE ⅛" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-3-57"

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

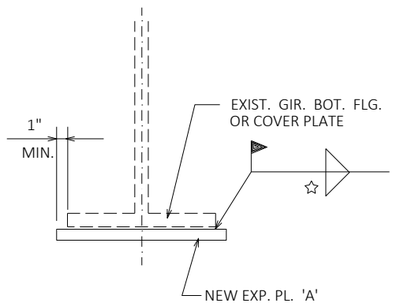
EXPANSION BEARINGS:
TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED.
USE A WELDABLE PRIMER ON TOP PLATE "A".
ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

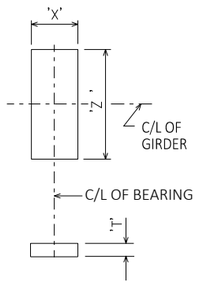
◭ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING REQUIREMENTS FOUND IN THE STANDARD SPECIFICATION.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.



BEARING REPLACEMENT DETAILS

REMOVE EXISTING EXPANSION BEARINGS AT ABUTMENTS. BURN OFF EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE BEARING SURFACE AND GRIND FLUSH.



PLACE SHIM PLATE BETWEEN BEARING PAD AND MASONRY PLATE "D".

'T'	NO. REQ'D.	LOCATION
1/8"	0	SOUTH ABUT.
1/8"	2	NORTH ABUT. G3 & G4

FOR DIMS. 'X', 'Z' AND ANCHOR BOLT LOCATIONS SEE MASONRY PLATE "D".

SHIM PLATE DETAILS

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF TOP PLATE "A" OR MASONRY PLATE "D" BY "T", THE SHIM PLATE THICKNESS.

☆ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	÷ MIN. SIZE OF FILLET WELD
TO ½" INCLUSIVE	3/16"
OVER ½" TO ¾"	¼"
OVER ¾" TO 1"	△ 5/16"
OVER 1½"	△ ⅜"

÷ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-3-57

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BEARING DETAILS

SHEET 3 OF 7

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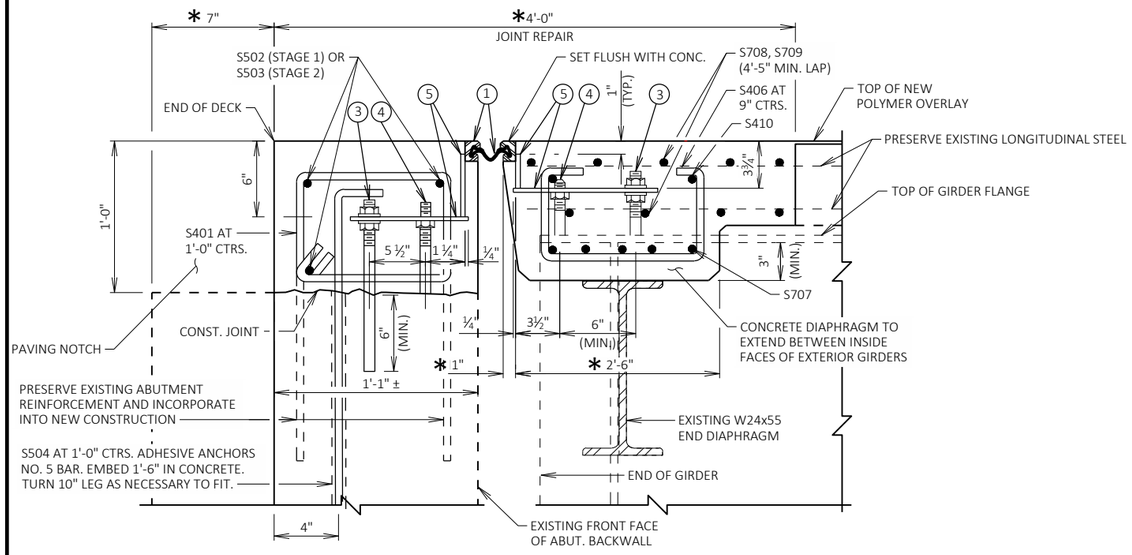
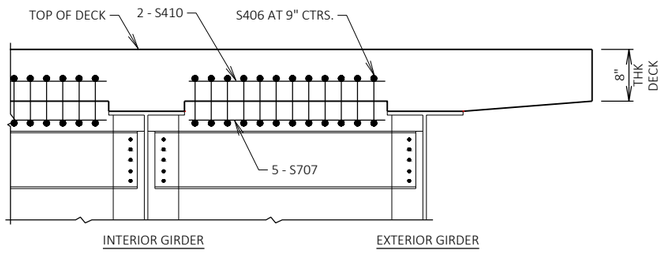
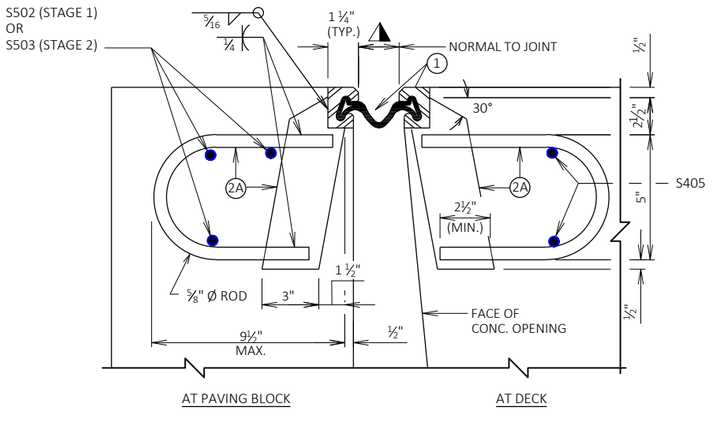


NEW SECTION THRU JOINT AT ABUTMENTS

NORMAL TO C/L SUBSTRUCTURE

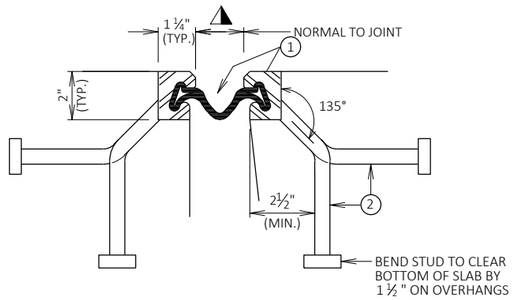


PART TRANSVERSE SECTION AT DIAPHRAGM



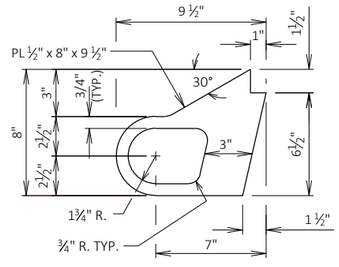
SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

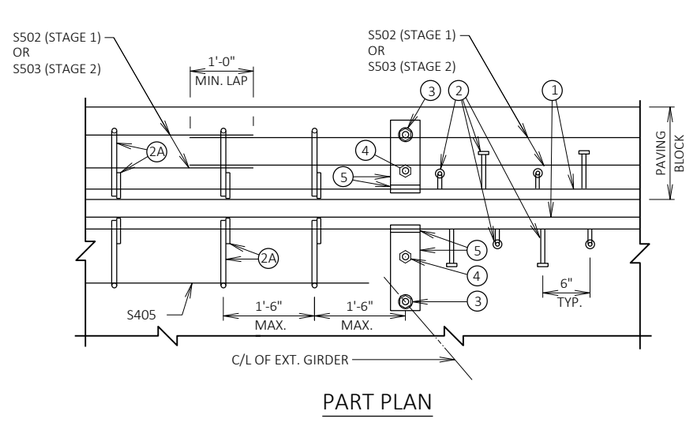


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS



ALTERNATE STRIP SEAL ANCHOR



PART PLAN

LEGEND

1. NEOPRENE STRIP SEAL (5 - INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝" DIA. X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" x ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1 ½ " DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 1'-2 ½" x 3'-0" WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
10. 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

* DIMENSION IS NORMAL TO C/L OF SUBSTRUCTURE UNITS.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. NO. 6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-3-57".

⚠ TEMPERATURE TABLE

SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)
85°	1 13/16"
75°	1 15/16"
65°	2 1/16"
55°	2 3/16"
45°	2 1/4"
35°	2 3/8"
25°	2 7/16"
15°	2 9/16"
5°	2 11/16"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-3-57

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ORIGINAL PLAN PREPARED BY
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EXPANSION DEVICE

SHEET 4 OF 7

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STATE PROJECT NUMBER

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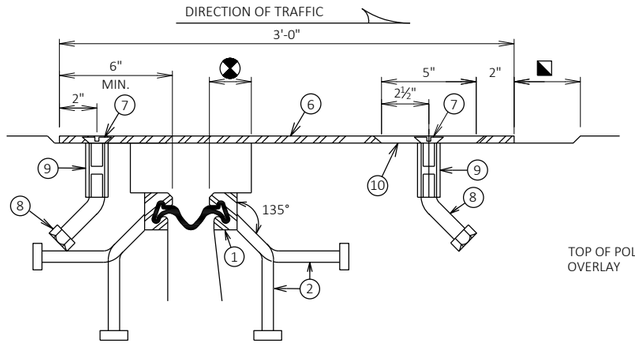
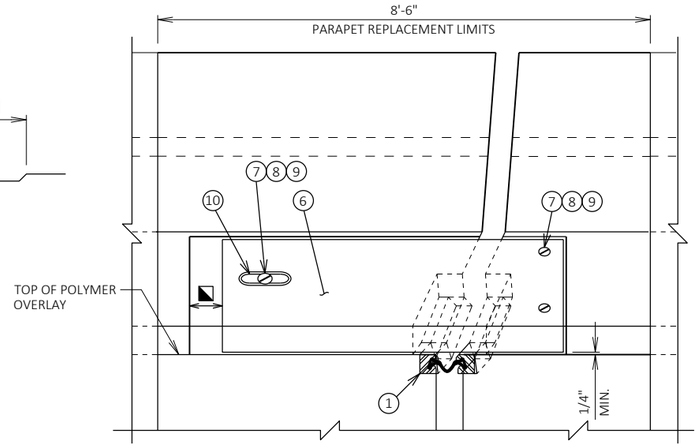
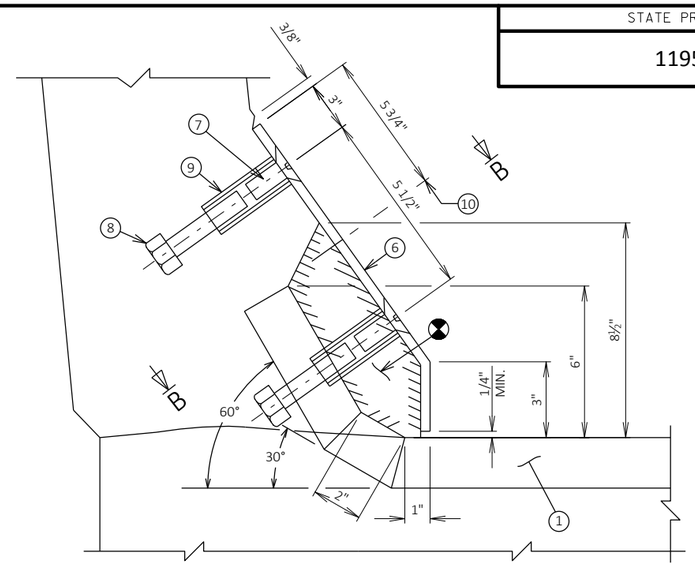


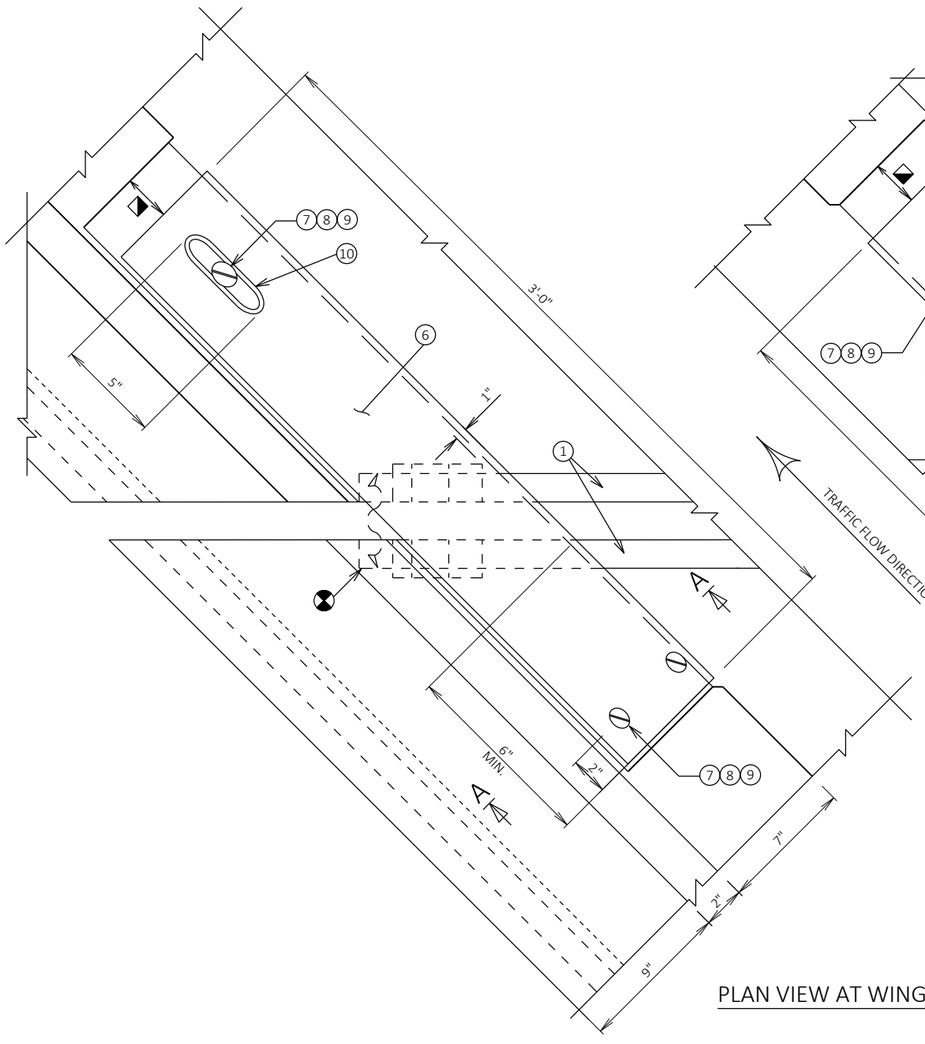
SECTION B-B



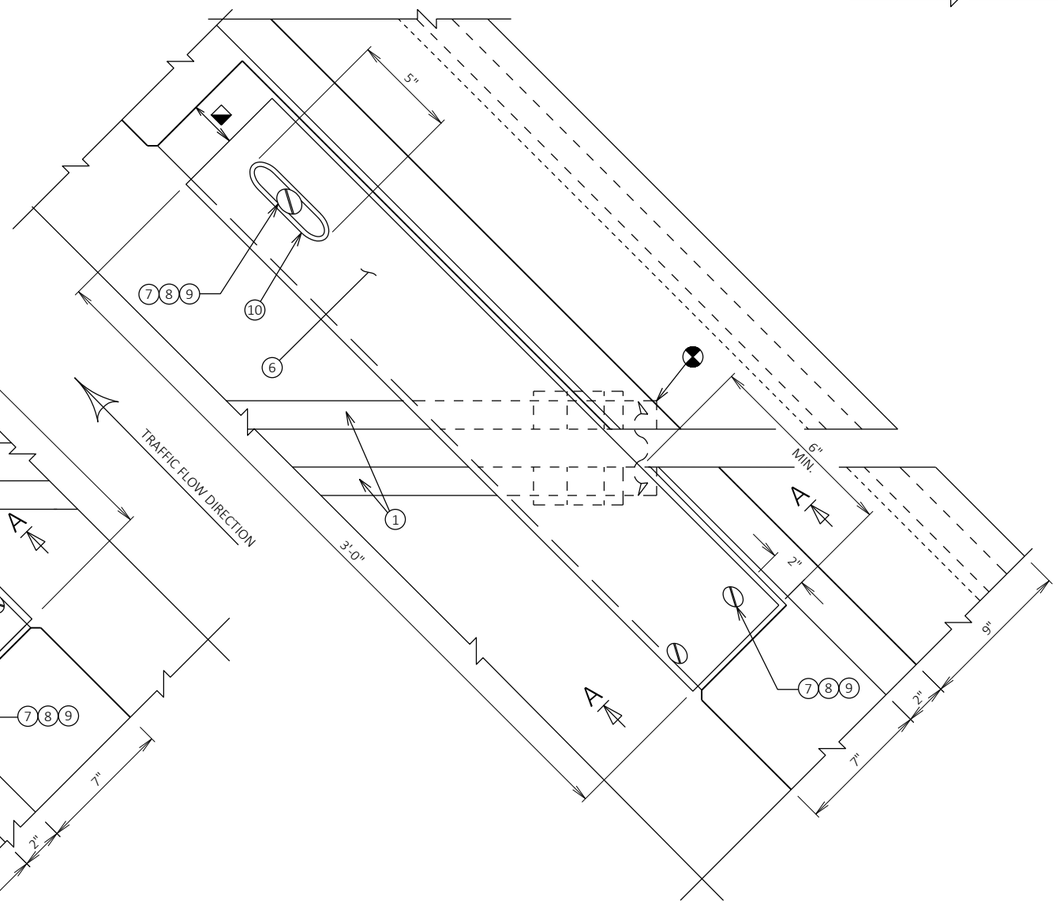
VIEW OF PARAPET PLATE FROM ROADWAY



SECTION A-A



PLAN VIEW AT WING CORNERS 2 & 3



PLAN VIEW AT WING CORNERS 1 & 4

LEGEND

1. NEOPRENE STRIP SEAL (5 - INCH) AND STEEL EXTRUSIONS.
6. GALVANIZED PLATE ⅜" X 1'-2 ½" x 3'-0" WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
10. 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NOTES

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-3-57

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ORIGINAL PLAN PREPARED BY
CORRE

COVER PLATE DETAILS

SHEET 5 OF 7

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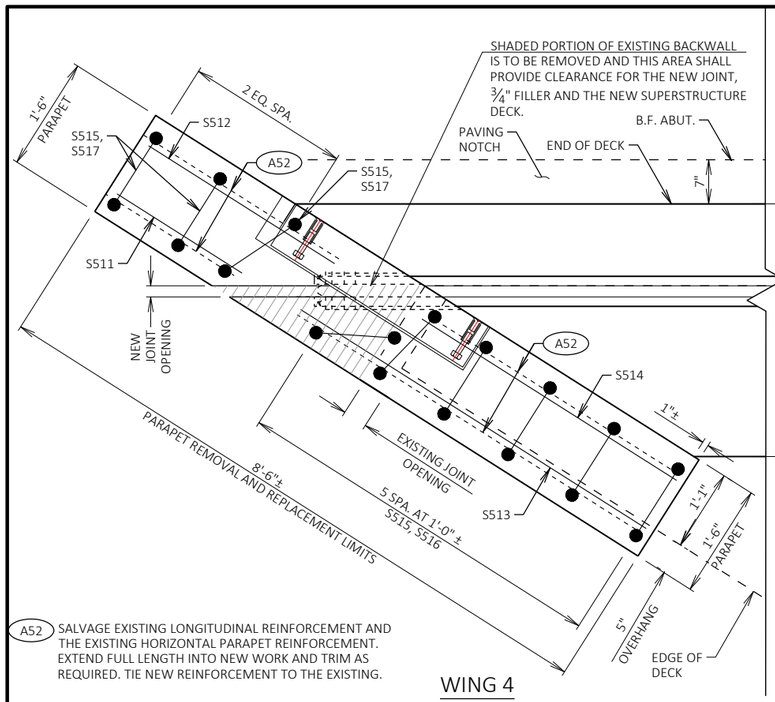
8

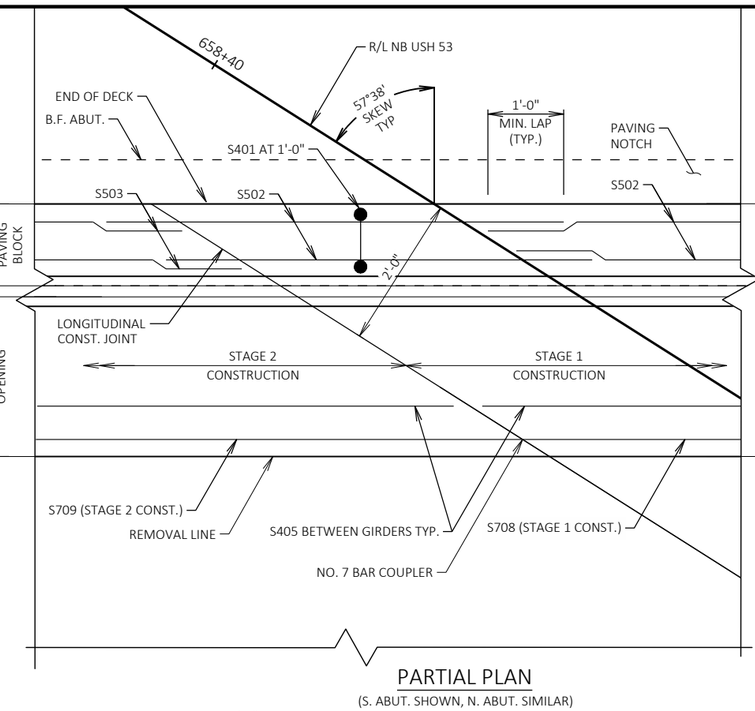
8

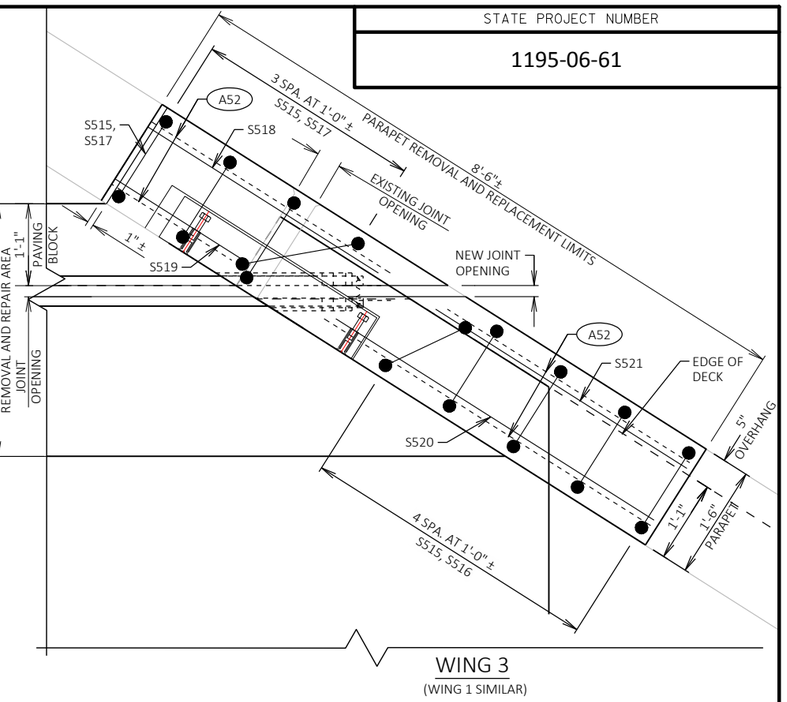
FILE NAME : P:±WI - NW REGION±1195-06-31_USH 53 OVER CTH SS±500_CADD±503_STRUCTURES±502.4_FINAL±080602-COVERPLATEDTL.DWG PLOT DATE : 6/8/2017 12:08 PM PLOT BY : BOBBY JONES

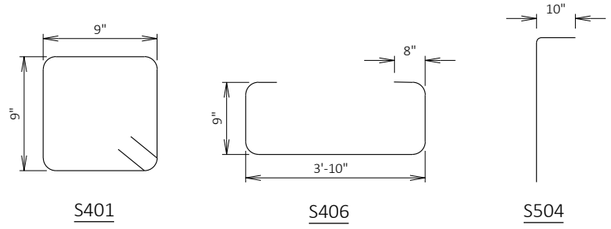
STATE PROJECT NUMBER

1195-06-61



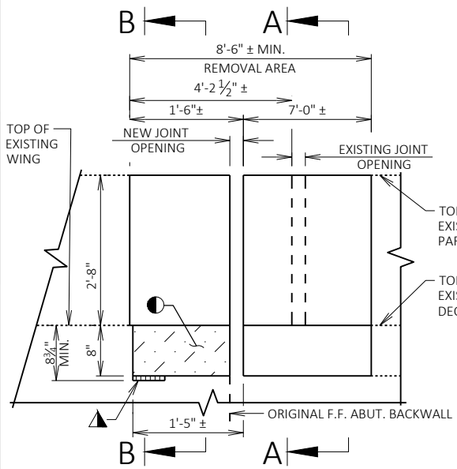


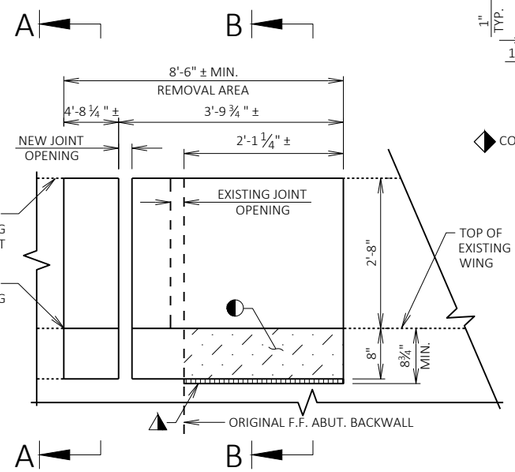


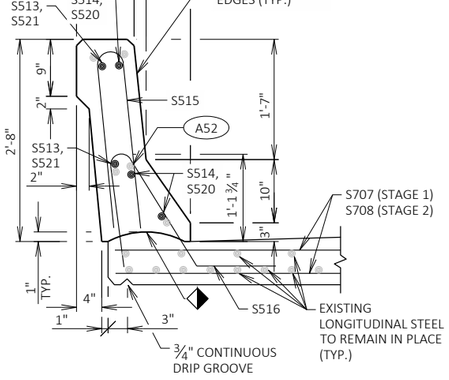


◐ REMOVE SHADED PORTION OF EXISTING BACKWALL TO PROVIDE CLEARANCE FOR NEW JOINT AND SUPERSTRUCTURE DECK.

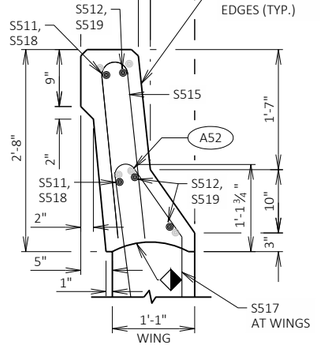
◭ PLACE ¾" FILLER BETWEEN SUPERSTRUCTURE CONCRETE AND ABUTMENT CONCRETE. (SEE SHADED AREAS) TO PERMIT JOINT MOVEMENT.







◆ CONSTRUCTION JOINT - STRIKE OFF AND LEAVE ROUGH.



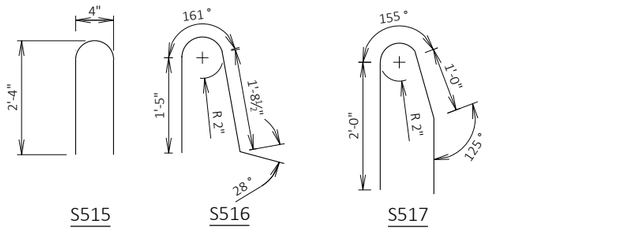
BILL OF BARS - SUPERSTRUCTURE

DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

BAR MARK	NO. REQ'D STAGE 1	NO. REQ'D STAGE 2	LENGTH	BENT	BAR SERIES	LOCATION	
COATED BARS						TOTAL WEIGHT = 7,080 LBS	
S401	38	38	3'-6"	X		PAVING BLOCK	TRANS.
S502	30		9'-1"			PAVING BLOCK	HORIZ.
S503		30	8'-10"			PAVING BLOCK	HORIZ.
S504	38	38	3'-1"	X		PAVING BLOCK	VERT.
S405	8	8	16'-2"			SLAB - DIAPHRAGM	HORIZ.
S406	44	44	6'-3"	X		SLAB - DIAPHRAGM	HORIZ.
S707	20	20	16'-2"			SLAB - DIAPHRAGM	HORIZ.
S708	54		16'-1"			DECK	TRANS.
S709		54	16'-1"			DECK	TRANS.
S410	8	8	16'-2"			SLAB - DIAPHRAGM	LONGIT
S511	2	2	1'-0"			PARAPET - WINGS 2 & 4	HORIZ.
S512	3	3	2'-3"			PARAPET - WINGS 2 & 4	HORIZ.
S513	2	2	6'-2"			PARAPET - WINGS 2 & 4	HORIZ.
S514	3	3	5'-0"			PARAPET - WINGS 2 & 4	HORIZ.
S515	18	18	4'-10"	X		PARAPET - ALL WINGS	TRANS.
S516	11	11	4'-3"	X		PARAPET - ALL WINGS	TRANS.
S517	7	7	4'-7"	X		PARAPET - ALL WINGS	TRANS.
S518	2	2	3'-0"			PARAPET - WINGS 1 & 3	HORIZ.
S519	3	3	1'-11"			PARAPET - WINGS 1 & 3	HORIZ.
S520	3	3	5'-4"			PARAPET - WINGS 1 & 3	HORIZ.
S521	2	2	4'-2"			PARAPET - WINGS 1 & 3	HORIZ.

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

● SPLICE AT STAGING LINE WITH BAR COUPLERS.



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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-3-57

DRAWN BY BJJ | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY CORRE

JOINT REPAIR DETAILS

SHEET 6 OF 7

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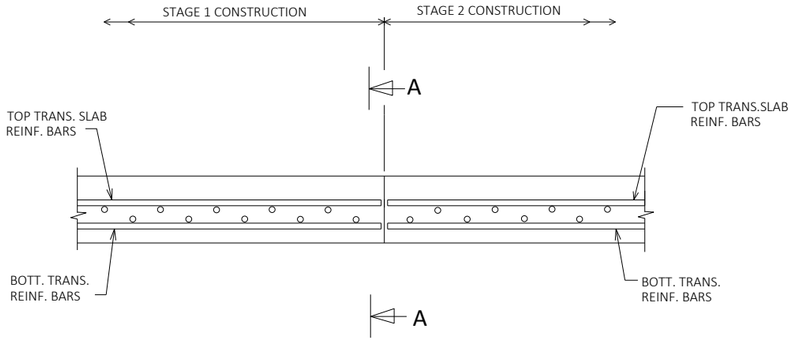
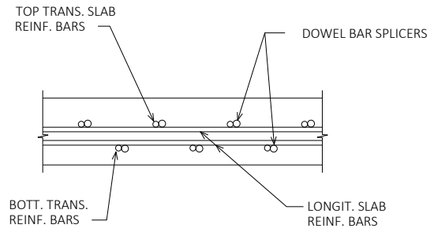
STATE PROJECT NUMBER

1195-06-61



SECTION THRU SLAB



SECTION A

NOTES

CLEAN, STRAIGHTEN AND EXTEND EXISTING BAR STEEL REINFORCEMENT A MINIMUM OF 24 BAR DIAMETERS INTO NEW CONSTRUCTION WHERE APPLICABLE. DO NOT CUT EXISTING DOWELS OR STIRRUPS THAT EXTEND INTO EXISTING WING OR DECK.

STEEL SPLICE (COUPLER) ASSEMBLY SHALL BE AN APPROVED TYPE AND SHALL DEVELOP IN TENSION AT LEAST 125% OF THE YIELD STRENGTH OF THE SPLICED REINFORCEMENT BARS.

DOWEL BAR SPLICERS SHALL BE OF MINIMUM 60 ksi YIELD STRENGTH, AND HAVE TENSILE STRENGTH AREA EQUAL OR GREATER THAN THAT OF THE LAPPED REINFORCEMENT BARS.

DOWEL BAR SPLICERS SHALL MEET THE DEFORMATION REQUIREMENTS FOR STANDARD ASTM DEFORMED REINFORCING BARS.

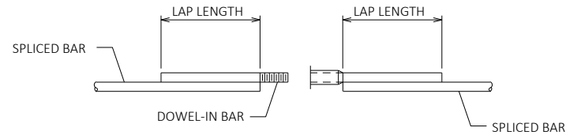
FOR DOWEL BAR SPLICERS, ALL REINFORCEMENT BARS SHALL BE LAPPED AND TIED TO THE SPLICER BARS.

SPLICER (COUPLER) ASSEMBLY IN THE SLAB SHALL BE EPOXY COATED IN ACCORDANCE WITH THE REQUIREMENTS FOR REINFORCEMENT BARS.

OTHER SYSTEMS OF SIMILAR DESIGN MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL. APPROVAL SHALL BE BASED ON CERTIFIED TEST RESULTS FROM AN APPROVED TESTING LABORATORY THAT THE PROPOSED SPLICER (COUPLER) ASSEMBLY SATISFIES THE FOLLOWING REQUIREMENT:

① MINIMUM CAPACITY = 1.25 X fy X AREA OF SPLICED REINFORCEMENT BAR.

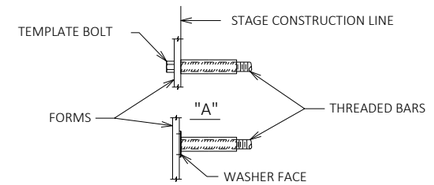
WHERE fy = YIELD STRENGTH OF SPLICED REINFORCEMENT BARS



DOWEL BAR SPLICER

ONE PIECE THREADED SPLICER

SPLICER ALTERNATIVES



INSTALLATION AND SETTING METHODS

"A" SET SPLICER BY MEANS OF A TEMPLATE BOLT
"B" SET SPLICER BY NAILING TO WOOD FORMS OR CEMENTING TO STEEL FORMS.

DOWEL BAR SPLICER 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 C/L LONGIT. JOINT AND SHALL BE MODIFIED IF REQ'D. TO BAR COUPLER MANUFACTURER RECOMMENDATIONS. PAY BASED ON BARS AS DETAILED.

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