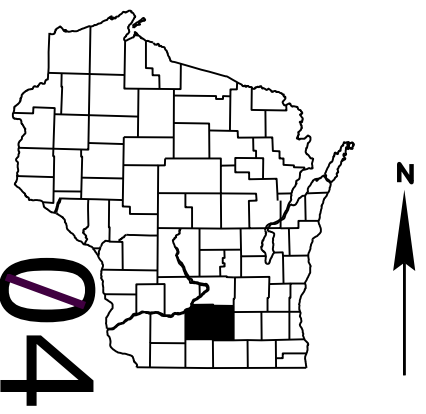


MADISON  
PROJECT ID: 1206-04-62  
WITH: N/A  
COUNTY: DANE

MARCH 2014

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	
<del>Section No. 4</del>	<del>Right of Way Plat</del>	
<del>Section No. 5</del>	<del>Plan and Profile</del>	
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 = 786



DESIGN DESIGNATION USH 12		
A.A.D.T. (2011)	=	118,500
A.A.D.T. (2031)	=	128,300
D.H.V. (2038)	=	12,158
D.D.	=	51/49
T.	=	7.0%
DESIGN SPEED	=	60 MPH
ESALS	=	11,899,000

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	////
PROPERTY LINE	PL + 58.1
LOT LINE	-----
LIMITED HIGHWAY EASEMENT	L-----
EXISTING RIGHT OF WAY	=====
PROPOSED OR NEW R/W LINE	=====
PROPOSED JOINT 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)	-----
SPECIAL DITCH	-----
GRADE ELEVATION	95.36
CULVERT (Profile View)	-----
UTILITIES	
COMMUNICATION OVERHEAD	C-OH
COMMUNICATION UNDERGROUND	C-UG
ELECTRIC OVERHEAD	OH
ELECTRIC UNDERGROUND	E
GAS	G
SANITARY SEWER	SAN
STORM SEWER	SS
WATER	W
UTILITY PEDESTAL	-----
POWER POLE	-----
TELEPHONE POLE	-----

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

## PLAN OF PROPOSED IMPROVEMENT

### C MADISON, SOUTH MADISON BELTLINE

TODD DRIVE - IH 39/90  
USH 12  
DANE COUNTY

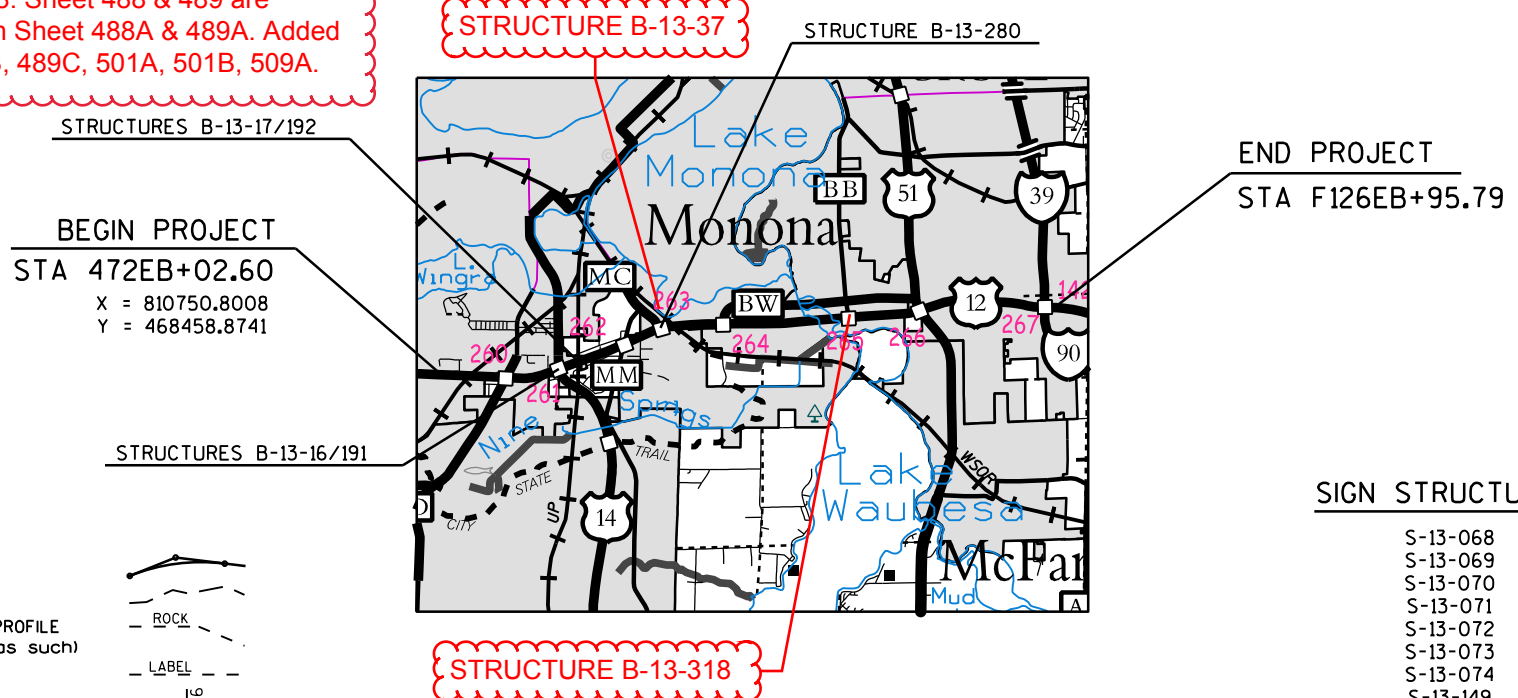
Addendum No. 1  
ID 1206-04-62  
Revised Sheets: 57, 58, 327, 331, 332, 333, 334, 335, 359  
March 5, 2014

Addendum No. 2  
ID 1206-04-62  
Revised Sheets: 16, 17, 18, 328, 329, 350, 351  
March 6, 2014

Section No. 8. Sheet 488 & 489 are replaced with Sheet 488A & 489A. Added Sheets 489B, 489C, 501A, 501B, 509A.

STATE PROJECT NUMBER  
**1206-04-62**

**AS-BUILT PLAN**  
SUPERVISOR: Brenda Schoenfeld  
PROJECT MANAGER: David Layton  
PROJECT LEADER: Kevin Eslick (AECOM)  
CONTRACTOR: Zignego Company, Inc  
WORK STARTED: 4/23/2014  
WORK COMPLETED: 8/28/2015



SIGN STRUCTURES

- S-13-068
- S-13-069
- S-13-070
- S-13-071
- S-13-072
- S-13-073
- S-13-074
- S-13-149
- S-13-150
- S-13-151
- S-13-152
- S-13-153
- S-13-157

TOTAL NET LENGTH OF USH 12 MADISON BELTLINE CENTERLINE = 8.200 MI.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD 88 (2011).  
COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DANE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1206-04-62	WISC 2014063	1

Subcontractor List  
Barricade Flasher Service, Inc.  
Diamond Surface, Inc  
Iverson Construction, LLC  
King Cut Concrete Cutters, Inc  
Mega Rentals, Inc  
Mid-State Concrete Cutting Co.  
Moore Surveying LLC  
Parisi Construction Co, Inc  
Payne and Dolan, Inc  
PCI Roads, LLC  
Red Arrow Electric  
Schrock Trucking LLC  
State Contractors Inc  
Surf Prep, Inc  
Surface Construction  
Sweep-All

ORIGINAL PLANS PREPARED BY

**HNTB**  
10 W. MIFFLIN STREET  
SUITE 300  
MADISON, WI 53711  
(608) 259-0045

ANDREW D. ROSEMEYER  
E-43027-6  
MADISON, WI  
PROFESSIONAL ENGINEER

10/31/2013 (Date) [Signature] (Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	HNTB
Designer	DAVID LAYTON
Project Manager	DAVID LAYTON
Regional Examiner	BRENDA SCHOENFELD
Regional Supervisor	
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 10/31/2013 [Signature] (Signature)

**E**

1. GENERAL PLAN
2. GENERAL NOTES AND QUANTITIES
3. CONSTRUCTION STAGING
4. EXPANSION JOINT
5. EXPANSION JOINT DETAILS
6. PARAPET REVISIONS

TRAFFIC DIRECTION

PROVIDE ANCHORAGE FOR STEEL PLATE BEAM GUARD  
(REMOVAL AND REPLACEMENT OF END OF CONCRETE  
PARAPET REQUIRED)

BRIDGE OFFICE:  
WILLIAM DREHER (608) 266-8489  
CONSULTANT:  
HEATHER ANDERS (414) 359-2300

ORIGINAL PLANS PREPARED BY

**HNTB** 11414 W. PARK PLACE  
MILWAUKEE, WI 53224  
(414) 359-2300

ACCEPTED William C. Dreher <sup>DRH</sup> 12/11/1  
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-13-16

USH 12 &amp; 18 FB OVER USH 14







COUNTY	DANE	TOWN/CITY/VILLAGE	MADISON
--------	------	-------------------	---------

DESIGN SPEC.		REHABILITATION N/A	
DESIGNED BY	KTM	DESIGN CK'D.	HDA
DRAWN BY	KTM	PLANS CK'D.	H

## GENERAL PLAN

SHEET 1 OF 6



FIELD OBSERVATIONS SUMMARY		S.N. B-13-16		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	f <sup>2</sup>	10797		DELAMINATION	
SHADE/DEBRIS	f <sup>2</sup>	0		SPALL	
DELAMINATION	f <sup>2</sup>	58	0.5	DEBOND	
SPALL	f <sup>2</sup>	0	0	ASPHALT PATCH	
DEBOND	f <sup>2</sup>	N/A	N/A	CONCRETE PATCH	
ASPHALT PATCH	f <sup>2</sup>	0	0	SHADE/DEBRIS	
CONCRETE PATCH	f <sup>2</sup>	0	0		

A.D.T. = 20,800 (2014)  
R.D.S. = 35 M.P.H.

CONCRETE MASONRY:	
SUPERSTRUCTURE .....	f'c = 4,000 psi
ALL OTHER .....	f'c = 3,500 psi
BAR STEEL REINFORCEMENT .....	fy = 60,000 psi



12-11-2013

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

INFRARED INSPECTION DATA PROVIDED FOR INFORMATION ONLY. INFRARED INSPECTION DATE: 7-11-2013

LOCATIONS OF THE FOLLOWING BID ITEMS SHALL BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER:

- CRACK SEALING EPOXY
- CONCRETE SURFACE REPAIR
- FULL DEPTH DECK REPAIR
- PREPARATION DECKS TYPE 1 AND 2
- SAWING PAVEMENT DECK PREPARATION AREAS

QUANTITES SHOWN FOR THE ABOVE BID ITEMS ARE APPROXIMATE.

UNDER THE BID ITEMS "MASONRY ANCHORS TYPE L", ANCHORED REINFORCING STEEL SHALL BE PAID FOR SEPARATELY AS PROVIDED IN SECTION 505 OF THE STANDARD SPECIFICATIONS FOR BAR STEEL REINFORCEMENT.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

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

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-13-16".

CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

PROTECTIVE SURFACE TREATMENT, PAID FOR UNDER "PROTECTIVE SURFACE TREATMENT RESEAL" SHALL BE APPLIED ON STRUCTURE B-13-16 TO THE FOLLOWING SURFACES:

- TOP OF EXISTING DECK SLAB
- TOP AND INSIDE FACES OF EXISTING PARAPETS

"PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED ON STRUCTURE B-13-16 TO THE FOLLOWING COMPLETED SURFACES:

- TOP OF DECK SLAB AT NEW CONCRETE SURFACES RELATED TO JOINT REPAIR AND FULL DEPTH DECK REPAIR AT BRIDGE PARAPET
- TOP AND INSIDE FACES OF NEW CONCRETE AT PARAPET REPAIRS/REPLACEMENTS

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

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1" JOINT FILLER WITH HOT POURED JOINT SEALANT (1/2" DEEP AND HOLD 1/4" BELOW SURFACE OF CONCRETE).

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

THE EASTBOUND AND WESTBOUND ALIGNMENTS SHOWN ON THE PLANS ARE PARALLEL TO EACH OTHER.

NEW CONCRETE AT JOINT REPAIR IS PAID FOR AS "CONCRETE MASONRY OVERLAY DECKS".

INSTALL AT PAVING NOTCH A NEW 1" PREFORMED JOINT FILLER WHICH SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY OVERLAY DECKS".

"REMOVING OLD STRUCTURE STA. 551EB+20" INCLUDES PARTIAL REMOVAL OF SW WINGWALL PARAPET, PARTIAL REMOVAL OF SOUTH PARAPET ON BRIDGE AND PRESERVING AND REUSING REINFORCEMENT IN PORTION OF PARAPET REPAIR/REPLACEMENT ON BRIDGE.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR.

"CONCRETE MASONRY BRIDGES" INCLUDES CONCRETE REQUIRED TO REPAIR/REPLACE PORTION OF SOUTH PARAPET AT WING AND ON BRIDGE AS INDICATED ON PLANS. REMOVAL PORTION OF SOUTH PARAPET IS APPROXIMATE AND SHALL BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER. QUANTITY FOR "CONCRETE MASONRY BRIDGES" ON BRIDGE IS APPROXIMATE.

BEVEL EDGES OF EXPOSED CONCRETE TO MATCH EXISTING BEVELS UNLESS OTHERWISE NOTED.

STATE PROJECT NUMBER

1206-04-62

TOTAL ESTIMATED QUANTITIES

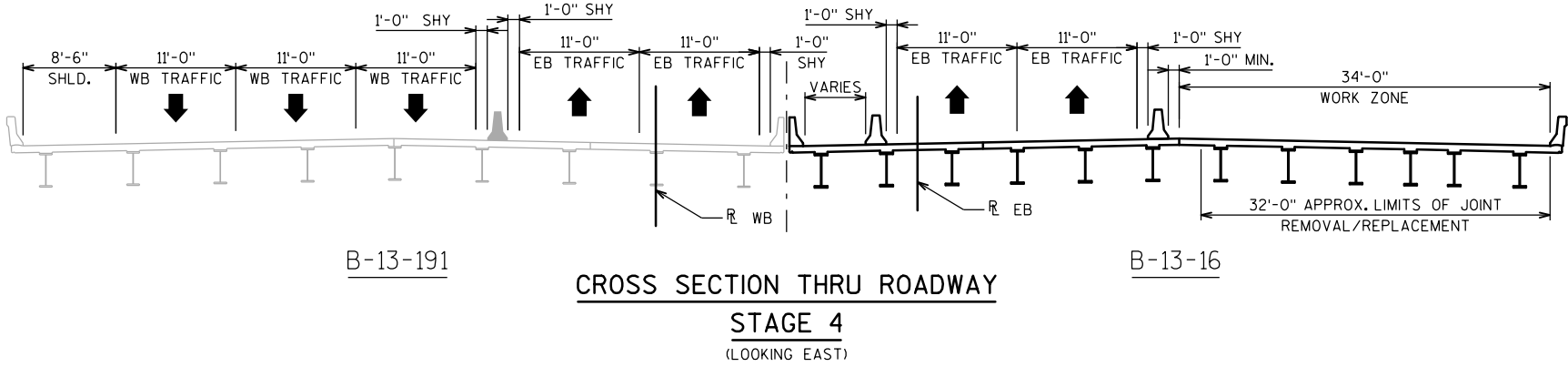
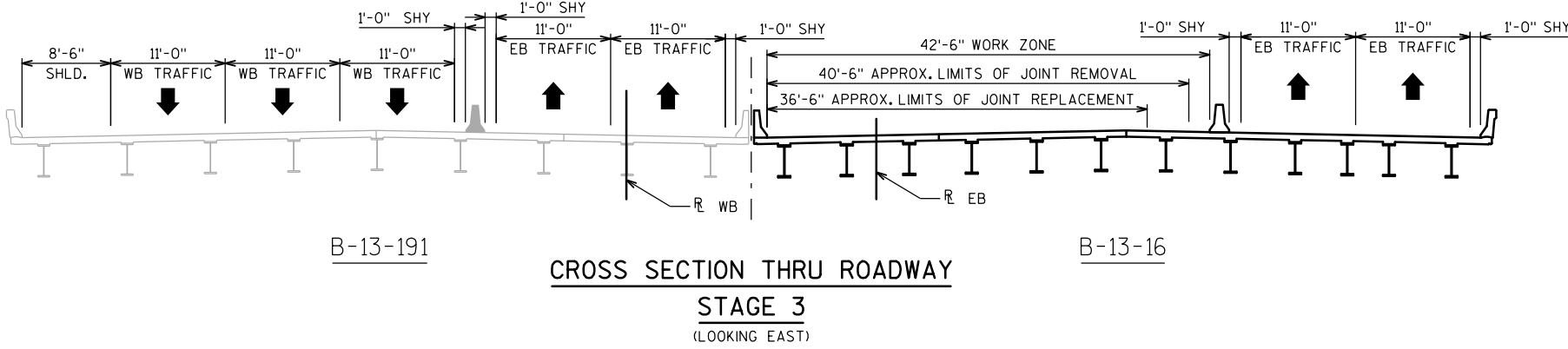
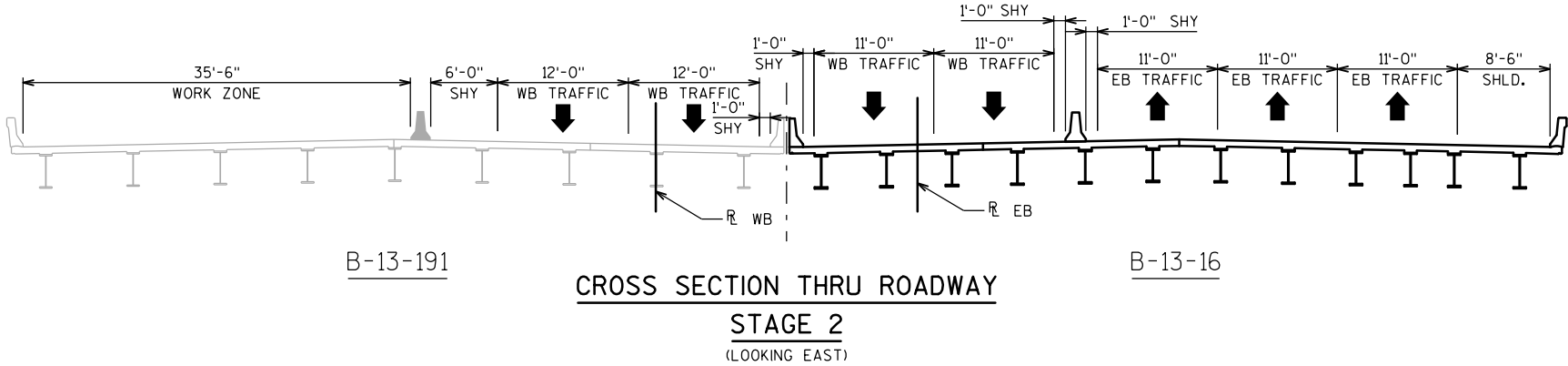
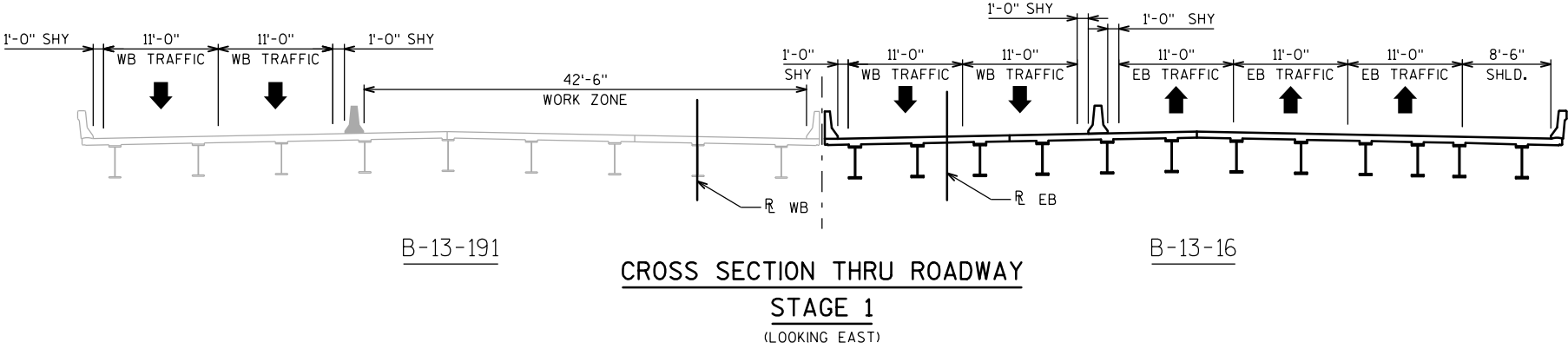
ITEM NO.	BID ITEM	UNIT	TOTAL
203.0200.01	REMOVING OLD STRUCTURE STA. 551EB+20	LS	1
502.0100	CONCRETE MASONRY BRIDGES	CY	2
502.0717.S	CRACK SEALING EPOXY	LF	600
502.3100.01	EXPANSION DEVICE B-13-16	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	69
502.3215.S	PROTECTIVE SURFACE TREATMENT RESEAL	SY	1,274
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	154
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	3
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	4,470
509.0301	PREPARATION DECKS TYPE 1	SY	2
509.0302	PREPARATION DECKS TYPE 2	SY	1
509.1000	JOINT REPAIR	SY	61
509.1500	CONCRETE SURFACE REPAIR	SF	20
509.2000	FULL-DEPTH DECK REPAIR	SY	4
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	17
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1
SPV.0035.01	CONCRETE MASONRY DECK PATCHING	CY	1
SPV.0090.04	SAWING PAVEMENT DECK PREPARATION AREAS	LF	35
SPV.0180.03	CLEAN ABUTMENT SEATS	SY	36
	NON-BID ITEMS		
	NAME PLATE	EACH	1
	PREFORMED JOINT FILLER	SIZE	1"

ALL ITEMS ARE CATEGORY 0030

8

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-16			
		DRAWN BY EAJ	PLANS CK'D. HDA
GENERAL NOTES AND QUANTITIES			SHEET 2 OF 6



NOTES

SEE ROADWAY PLANS FOR COMPLETE PROJECT STAGING DETAILS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-16			
DRAWN BY		KTM	PLANS CK'D. HDA
CONSTRUCTION STAGING			SHEET 3 OF 6

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 & EXTRUSIONS AFTER FABRICATION  
IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING".  
AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS  
SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 & NO. 9 SHALL CONFORM TO ASTM  
A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153  
CLASS C & 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-13-16".

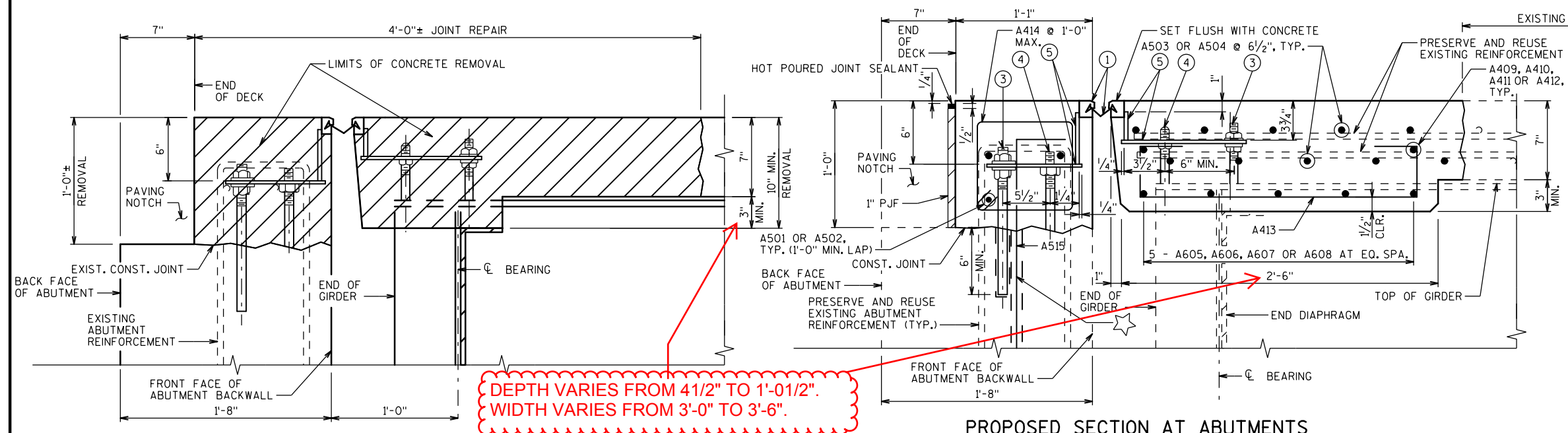
- ① NEOPRENE STRIP SEAL SEAL (4 - INCH) & STEEL EXTRUSIONS.
- ② STUDS  $\frac{5}{8}$ " DIA. x  $6\frac{3}{8}$ " LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- ②A  $\frac{1}{2}$ " THICK ANCHOR PLATE WITH  $\frac{5}{8}$ " DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PL. TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- ③  $\frac{3}{4}$ " DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. FOR STEEL GIRDERS 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  $\frac{3}{4}$ " DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- ⑤ FABRICATE SUPPORT FROM 3" x  $\frac{1}{2}$ " 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  $\frac{1}{2}$ " DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
- ⑥ GALVANIZED PLATE  $\frac{3}{8}$ " x  $10\frac{1}{2}$ " x 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
- ⑦  $\frac{3}{4}$ " DIA. x  $1\frac{1}{2}$ " STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTER SUNK HOLE. RECESS  $\frac{1}{16}$ " BELOW PLATE SURFACE.
- ⑧  $\frac{3}{4}$ " DIA. x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- ⑨  $\frac{3}{4}$ " DIA. x 2  $\frac{1}{4}$ " GALVANIZED THREADED COUPLING.
- ⑩ 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. SLOT PARALLEL TO DIRECTION OF MOVEMENT.

▲ SET JOINT OPENING AT  $1\frac{3}{4}$ "

★ MASONRY ANCHORS, TYPE L NO. 5 BARS. EMBED A MINIMUM OF 1'-6" INTO CONCRETE SPACE AT 1'-0" MAX. AND AVOID EXPANSION JOINT HARDWARE. TURN 10" LEG AS NECESSARY TO FIT. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.

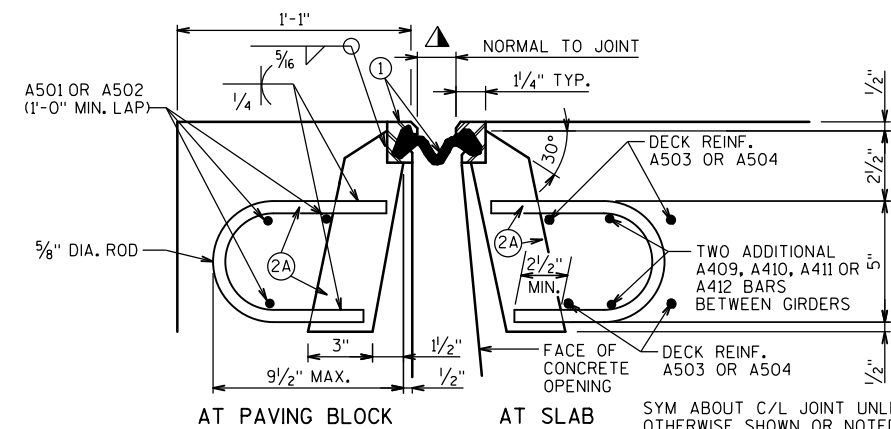
EXISTING TRANSVERSE DECK REINFORCEMENT TOP AND BOTTOM. PRESERVE AND REUSE PORTION OF EXISTING. MINIMUM OF 3'-1" TO EXTEND FROM INTERIOR TOE OF NORTH PARAPET AND SOUTH PARAPET INTO DECK.

NO.		DATE		REVISION		BY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION							
STRUCTURE B-13-16							
				DRAWN BY		EAJ	
				PLANS CK'D.		HDA	
EXPANSION JOINT						SHEET 4 OF 6	



### PROPOSED SECTION AT ABUTMENTS

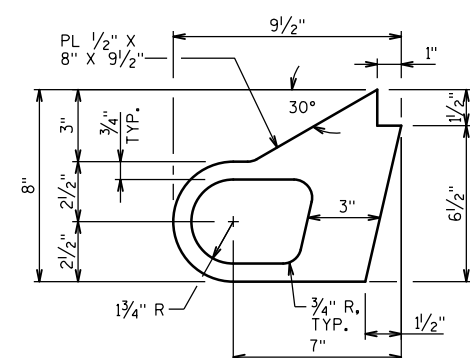
NORMAL TO C/I SUBSTRUCTURE



SYM ABOUT C/L JOINT UNLESS  
OTHERWISE SHOWN OR NOTED.



NORMAL TO C/L SUBSTRUCTURE

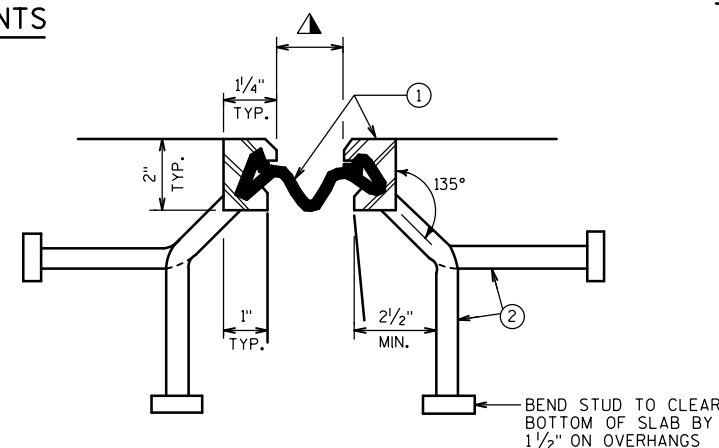


## ALTERNATE STRIP SEAL ANCHOR

— EXISTING PAVING BLOCK HORIZ. REINFORCEMENT.  
SALVAGE AND REUSE PORTION OF EXISTING.  
MINIMUM OF 1'-6" TO EXTEND FROM INTERIOR  
TOE OF NORTH PARAPET AND SOUTH PARAPET  
INTO PAVING BLOCK.

— EXISTING DECK #4 LONGITUDINAL REINFORCEMENT  
TOP AND BOTTOM. SALVAGE AND REUSE. TYPICAL  
FOR FULL WIDTH OF DECK REMOVAL.

A502 BARS HORIZ. PAVING BLOCK  
REINFORCEMENT, 1'-0" MIN. LAP



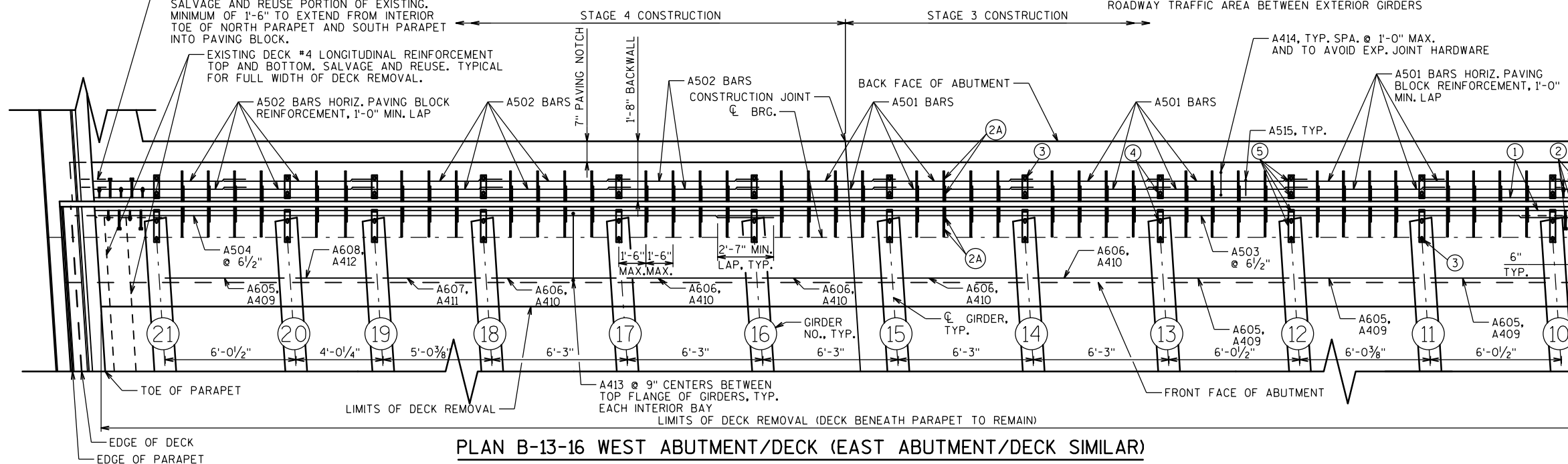
## SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS

#### STAGE 4 CONSTRUCTION

### STAGE 3 CONSTRUCTION

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PLAN B-13-16 WEST ABUTMENT/DECK (EAST ABUTMENT/DECK SIMILAR)

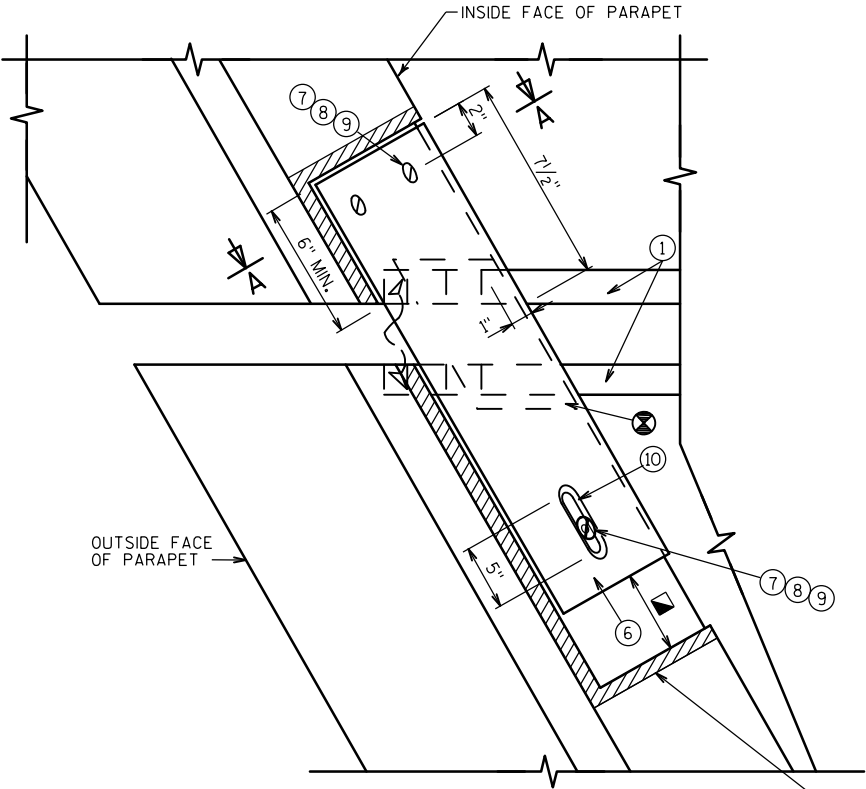
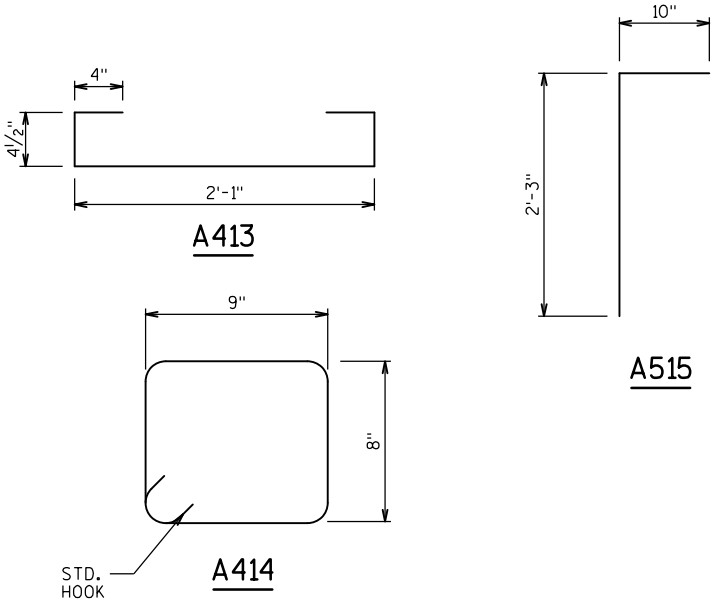
(SEE EXPANSION JOINT DETAILS SHEET FOR BILL OF BARS)



BILL OF BARS

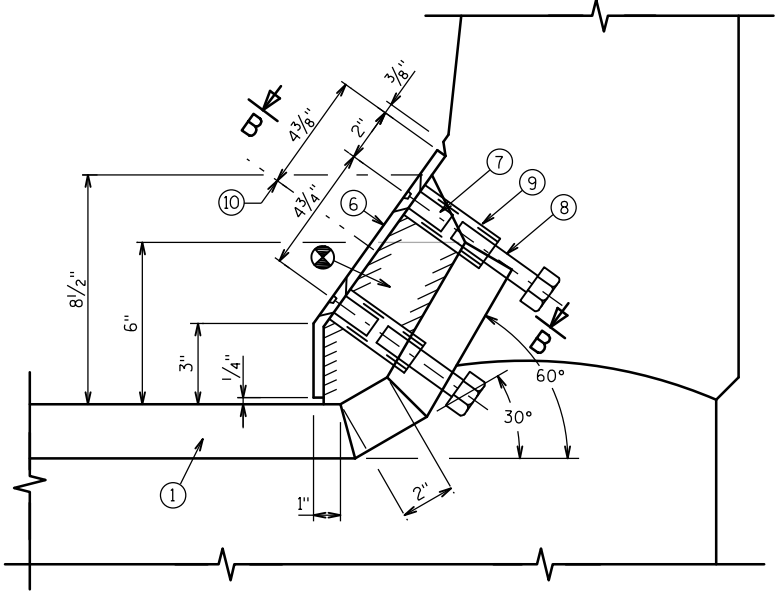
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A501	X	36	7'-4"			PAVING BLOCK - HORIZ. STAGE 3
A502	X	30	6'-11"			PAVING BLOCK - HORIZ. STAGE 4
A503	X	20	39'-11"			DECK - TRANSVERSE STAGE 3
A504	X	20	31'-1"			DECK - TRANSVERSE STAGE 4
A605	X	40	5'-6"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A606	X	50	5'-9"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A607	X	10	4'-6"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A608	X	10	3'-6"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A409	X	32	5'-6"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A410	X	40	5'-9"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A411	X	8	4'-6"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A412	X	8	3'-6"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A413	X	136	3'-2"	X		DIAPHRAGM - STIRRUPS BETWEEN GIRDERS
A414	X	140	3'-4"	X		PAVING BLOCK - STIRRUP
A515	X	140	3'-0"	X		PAVING BLOCK - ANCHOR

NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

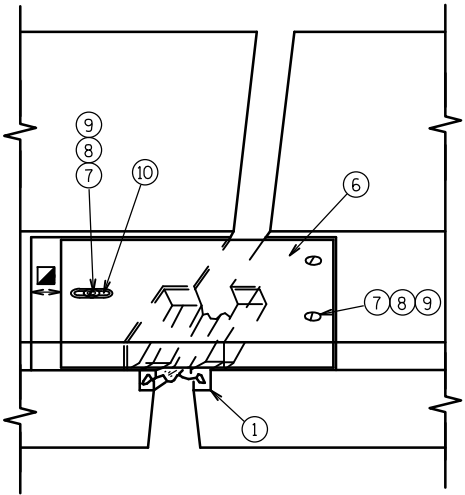


PLAN AT SLOPED FACE PARAPET

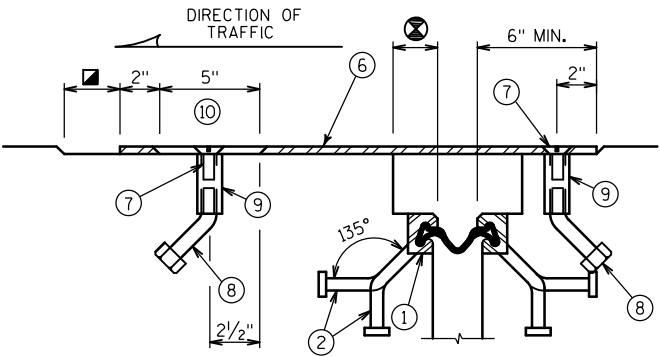
REMOVE AS NEEDED TO INSTALL  
NEW ITEMS AT PARAPET



SECTION A-A



VIEW OF SLOPED FACE PARAPET  
PLATES FROM ROADWAY



SECTION B-B

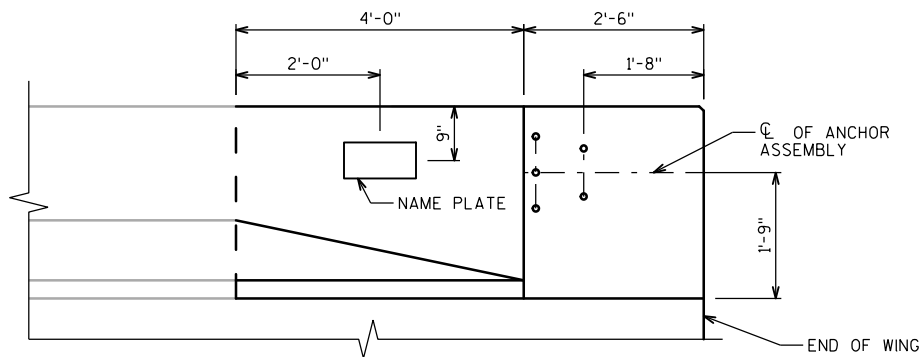
NOTE

SEE EXPANSION JOINT SHEET FOR ADDITIONAL INFORMATION.

LEGEND

- BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- JOINT OPENING DIM. ALONG SKEW PLUS 1/2"

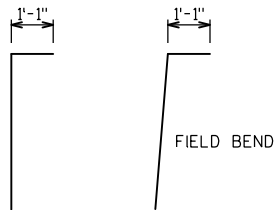
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-16			
DRAWN BY		EAJ	PLANS CK'D. HDA
EXPANSION JOINT DETAILS			SHEET 5 OF 6



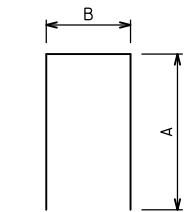
BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
R501	X	4	6'-2"		HORIZONTAL BACK FACE
R502	X	3	6'-2"	X	HORIZONTAL FRONT FACE
R503	X	1	6'-2"	X	HORIZONTAL FRONT FACE
R604	X	3	2'-7"		HORIZONTAL DOWEL
R505	X	12	5'-4"	X	VERTICAL STIRRUP
R506	X	8	3'-3"	X	VERTICAL BACK FACE
R507	X	8	3'-3"	X	VERTICAL FRONT FACE
R508	X	8	1'-10"		VERTICAL FRONT FACE
R509	X	7	5'-5"	X	VERTICAL DOWEL
R510	X	5	5'-6"		HORIZONTAL BRIDGE - AT REMOVED DEFLECTION JT.

NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS  
OF A BAR MARK SIGNIFIES THE BAR SIZE

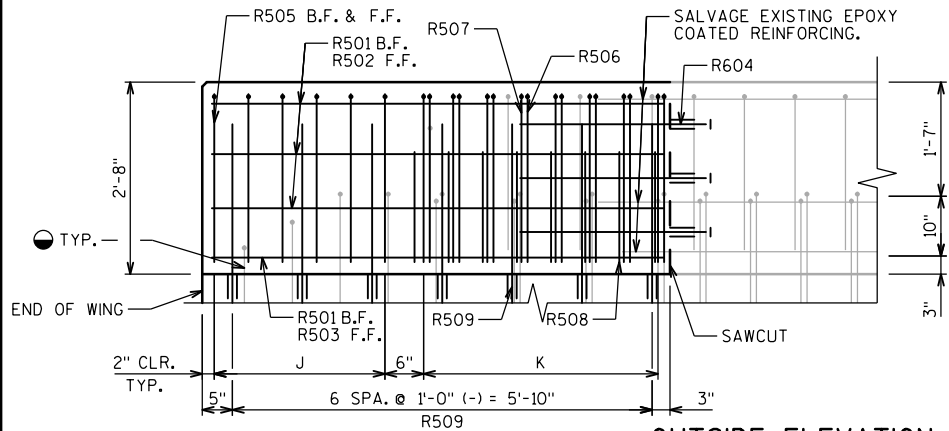
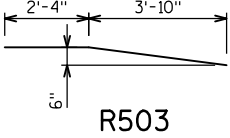
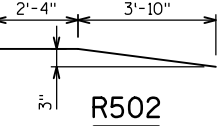


BAR MARK	A	B
R505	2'-4"	11"
R509	2'-7"	6"

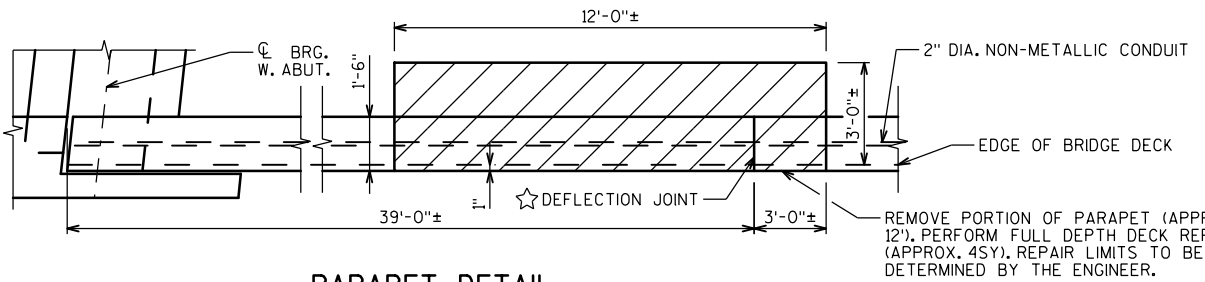


R506

R507

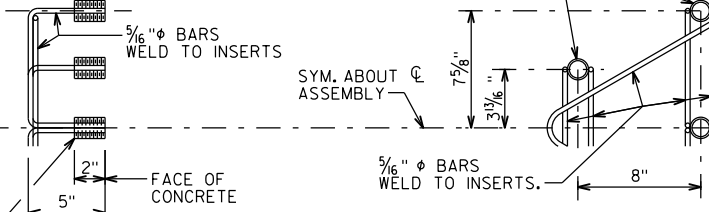


- SALVAGE EXISTING VERTICAL REINFORCEMENT BARS AND INCORPORATE INTO NEW WORK. BEND EXISTING BARS AS NECESSARY TO FIT NEW PARAPET SHAPE.
- ▲ MASONRY ANCHORS, TYPE L NO. 5 BARS. EMBED 6" IN CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.
- MASONRY ANCHORS, TYPE L NO. 6 BARS. EMBED 6" IN CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.



☆ DO NOT PROVIDE NEW DEFLECTION JOINT IN REPLACEMENT SECTION. PRESERVE AND REUSE EXISTING REINFORCEMENT IN PARAPET AND DECK. TAKE CARE TO NOT DISTURB AND PRESERVE 2" DIA. NON-METALLIC CONDUIT RUNNING THROUGH PARAPET. ADDITIONAL R510 BARS WITH MINIMUM LAP SPLICE OF 2'-7" TO BE ADDED AT LOCATION OF REMOVED DEFLECTION JOINT.

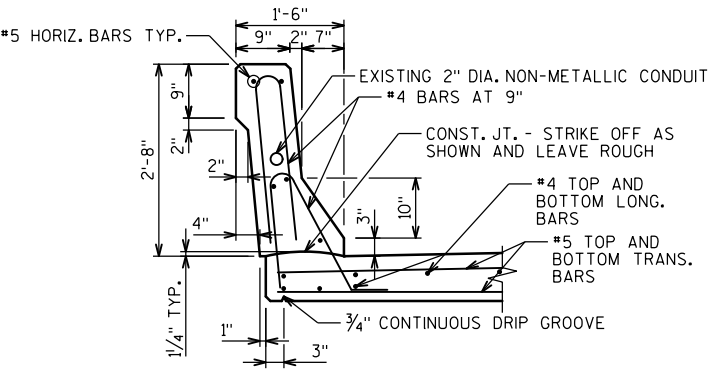
THREADED INSERTS FOR 7/8" Ø X 2" LONG GALVANIZED HEX HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF 1/8" AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF 1 3/4".



DETAIL OF ANCHOR ASSEMBLY

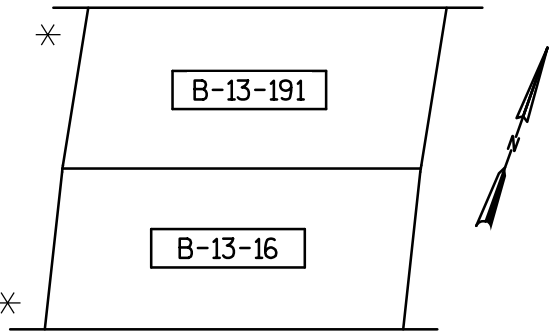
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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



SECTION THRU PARAPET ON BRIDGE

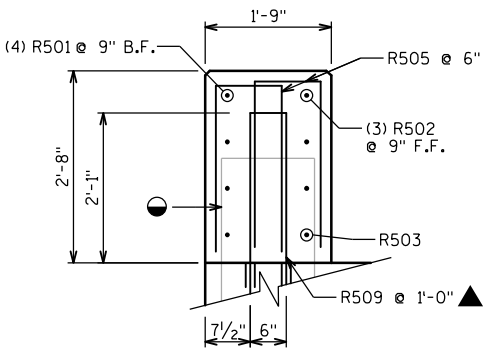
REINFORCEMENT SHOWN ARE EXISTING BARS TO BE PRESERVED AND REUSED.



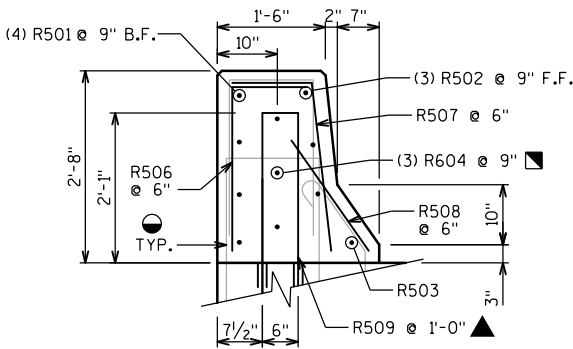
LOCATION PLAN

✱ WING LOCATION FOR PARAPET REMOVAL AND REPLACEMENT

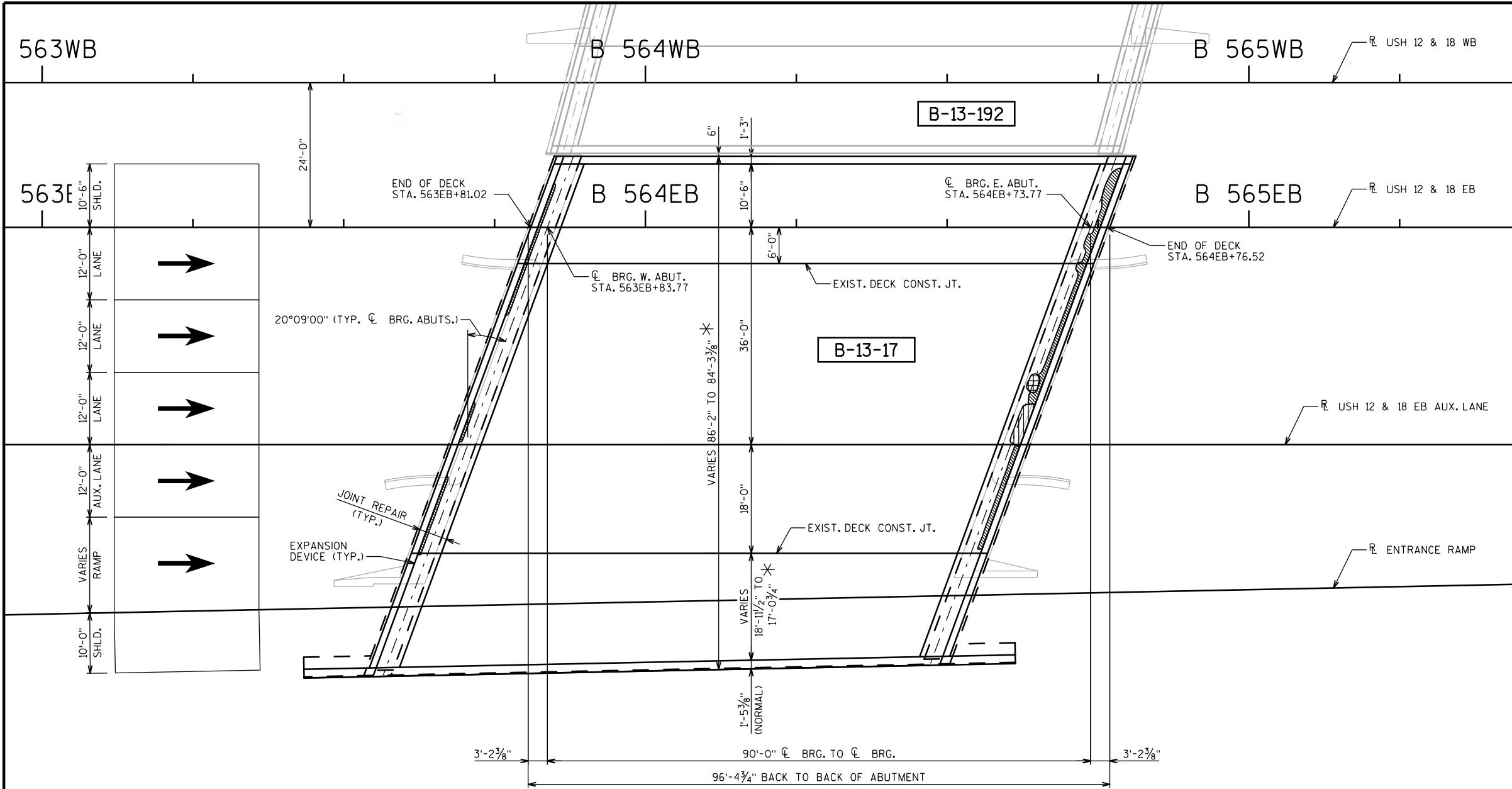
SECTION A-A



SECTION B-B



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-16			
DRAWN BY		KTM	PLANS CKD. HDA
PARAPET REVISIONS			SHEET 6 OF 6



PLAN

(SINGLE SPAN STEEL PLATE GIRDERS)

DECK INSPECTION RESULTS

(INFRARED INSPECTION DATE: 7/11/13)

FIELD OBSERVATIONS SUMMARY				S.N. B-13-17		LEGEND	
ITEM	UNIT	QUANT.	%				
TOTAL AREA	f <sup>2</sup>	7879				DELAMINATION	
SHADE/DEBRIS	f <sup>2</sup>	0				SPALL	
DELAMINATION	f <sup>2</sup>	72	0.9			DEBOND	
SPALL	f <sup>2</sup>	0	0			ASPHALT PATCH	
DEBOND	f <sup>2</sup>	N/A	N/A			CONCRETE PATCH	
ASPHALT PATCH	f <sup>2</sup>	5	<0.1			SHADE/DEBRIS	
CONCRETE PATCH	f <sup>2</sup>	13	0.2				

TRAFFIC DATA

USH 12/18 EB & WB

A.D.T. = 125,000 (2014)  
R.D.S. = 60 MPH

DESIGN DATA

RATINGS (TAKEN FROM HSI9-23-2013)

DESIGN LOADING: H20  
INVENTORY RATING: HS32  
OPERATING RATING: HS54  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

ULTIMATE STRESSES FOR MATERIALS

CONCRETE MASONRY:  
OVERLAY DECKS ..... f'c = 4,000 psi  
ALL OTHER ..... f'c = 3,500 psi  
BAR STEEL REINFORCEMENT ..... fy = 60,000 psi

STATE PROJECT NUMBER

1206-04-62

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES AND QUANTITIES
3. CONSTRUCTION STAGING
4. EXPANSION JOINT
5. EXPANSION JOINT DETAILS

LEGEND

- TRAFFIC DIRECTION
- ✱ DIMENSIONS TAKEN AT FRONT FACE OF ABUTMENT BACKWALL

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:  
WILLIAM DREHER (608) 266-8489  
CONSULTANT:  
HEATHER ANDERS (414) 359-2300

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
<b>HNTB</b>		11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2300	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher, P.E. CHIEF STRUCTURES DESIGN ENGINEER		01/13/14 DATE
STRUCTURE B-13-17			
USH 12 & 18 EB OVER WSOR (FORMERLY CNW RR)			
COUNTY	DANE	TOWN/CITY/VILLAGE	MADISON
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	KTM	DESIGN CK'D.	HDA
DRAWN BY	KTM	PLANS CK'D.	HDA
GENERAL PLAN			SHEET 1 OF 5



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

INFRARED INSPECTION DATA PROVIDED FOR INFORMATION ONLY. INFRARED INSPECTION DATE: 7-11-2013

LOCATIONS OF THE FOLLOWING BID ITEMS SHALL BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER:  
- CRACK SEALING EPOXY  
- CONCRETE SURFACE REPAIR

QUANTITES SHOWN FOR THE ABOVE BID ITEMS ARE APPROXIMATE.

UNDER THE BID ITEM "MASONRY ANCHORS TYPE L NO.5 BARS", ANCHORED REINFORCING STEEL SHALL BE PAID FOR SEPARATELY AS PROVIDED IN SECTION 505 OF THE STANDARD SPECIFICATIONS FOR BAR STEEL REINFORCEMENT.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

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

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-13-17".

CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

PROTECTIVE SURFACE TREATMENT, PAID FOR UNDER "PROTECTIVE SURFACE TREATMENT RESEAL" SHALL BE APPLIED ON STRUCTURE B-13-17 TO THE FOLLOWING SURFACES:  
- TOP OF EXISTING DECK SLAB  
- TOP AND INSIDE FACES OF PARAPETS

"PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED ON STRUCTURE B-13-17 TO THE FOLLOWING SURFACES:  
- TOP OF DECK SLAB AT NEW CONCRETE SURFACES RELATED TO THE JOINT REPAIR

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

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1" JOINT FILLER WITH HOT POURED JOINT SEALANT 1/2" DEEP AND HOLD 1/4" BELOW SURFACE OF CONCRETE).

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT THE WEST ABUTMENT IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

THE EASTBOUND AND WESTBOUND ALIGNMENTS SHOWN ON THE PLANS ARE PARALLEL TO EACH OTHER.

NEW CONCRETE AT JOINT REPAIR IS PAID FOR AS "CONCRETE MASONRY OVERLAY DECKS".

INSTALL AT PAVING NOTCH A NEW 1" PREFORMED JOINT FILLER WHICH SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY OVERLAY DECKS".

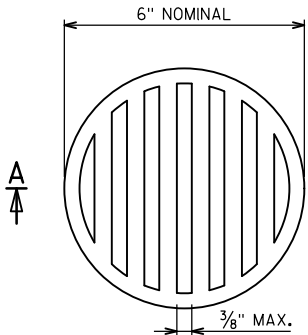
ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

BEVEL EDGES OF EXPOSED CONCRETE TO MATCH EXISTING BEVELS UNLESS OTHERWISE NOTED.

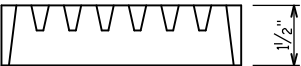
TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
203.0200.02	REMOVING OLD STRUCTURE STA. 564EB+25	LS	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-13-17	LS	1
206.6000.S	TEMPORARY SHORING	SF	520
210.0100	BACKFILL STRUCTURE	CY	430
502.0717.S	CRACK SEALING EPOXY	LF	360
502.3100.02	EXPANSION DEVICE B-13-17	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	78
502.3215.S	PROTECTIVE SURFACE TREATMENT RESEAL	SY	881
502.5005	MASONRY ANCHORS TYPE L NO.5 BARS	EACH	178
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	5,560
509.1000	JOINT REPAIR	SY	78
509.1500	CONCRETE SURFACE REPAIR	SF	20
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	22
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	105
SPV.0035.02	BACKFILL CONTROLLED LOW STRENGTH SPECIAL	CY	5
	NON-BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	1"

ALL ITEMS ARE CATEGORY 0040



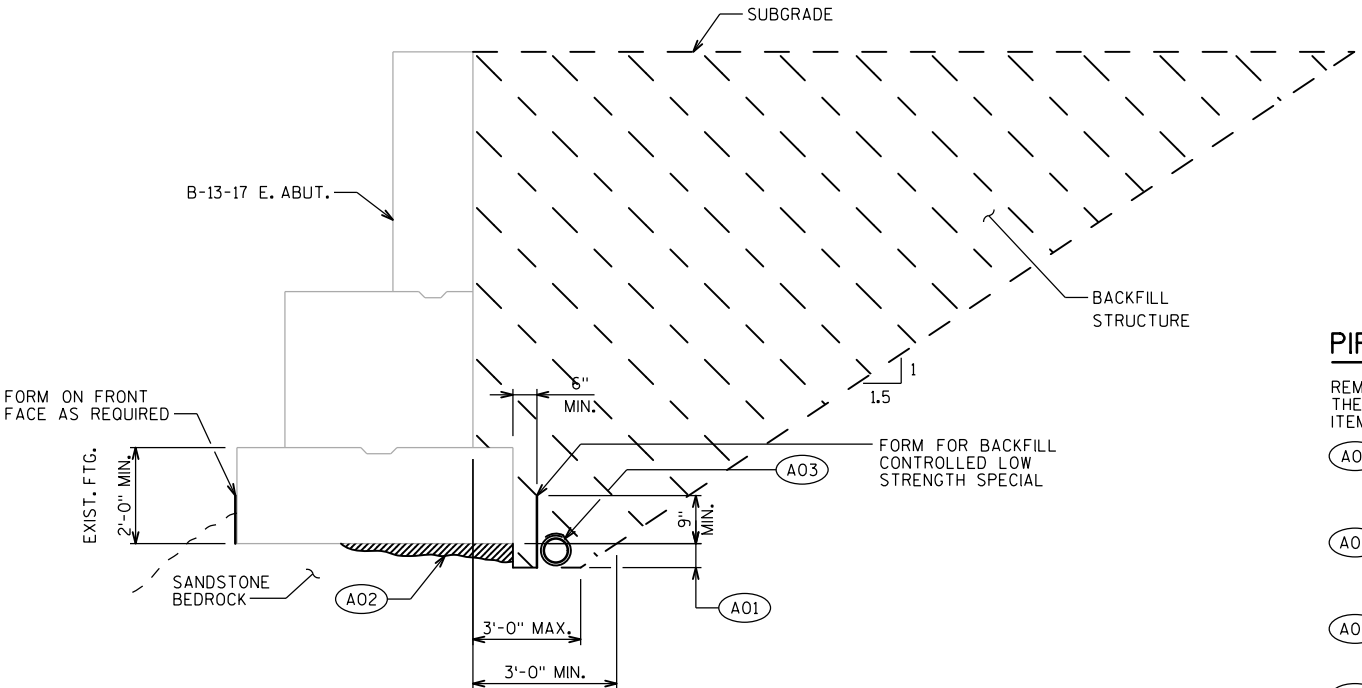
NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



SECTION A-A

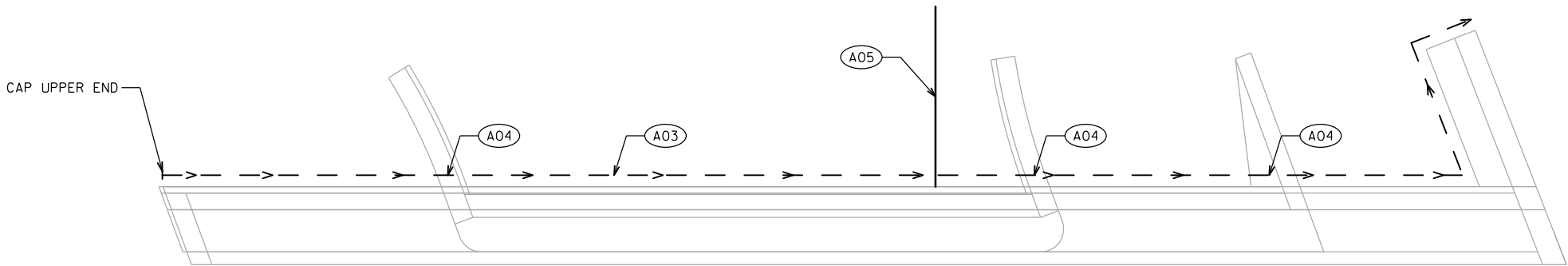
RODENT SHIELD

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 OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO.10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS. COST OF RODENT SHIELD AND ALL FITTINGS TO BE INCLUDED IN BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



EAST ABUTMENT PIPE UNDERDRAIN SECTION

(LOOKING NORTH)



EAST ABUTMENT PIPE UNDERDRAIN

STATE PROJECT NUMBER

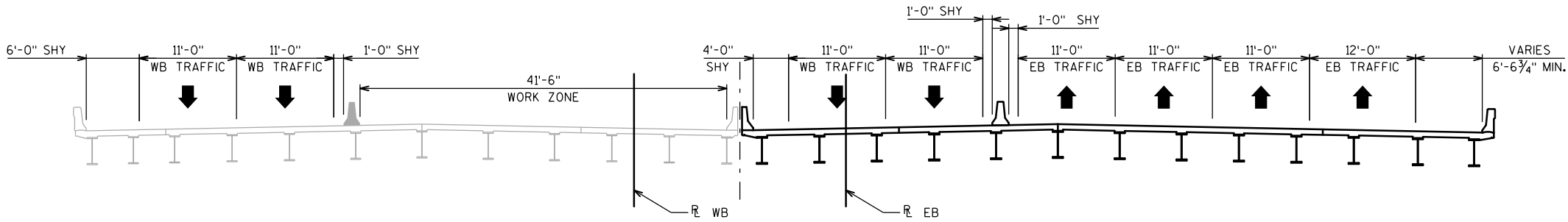
1206-04-62

PIPE UNDERDRAIN NOTES

REMOVE ANY EXISTING PIPE UNDERDRAIN BEHIND THE ABUTMENT AND WINGWALL. INCLUDED IN BID ITEM "REMOVING OLD STRUCTURE STA. 564EB+25."

- A01 EXCAVATE 6" MIN. BELOW BOTTOM OF FOOTING OR TO TOP OF SANDSTONE BEDROCK AS DIRECTED BY THE ENGINEER. ENGINEER TO INSPECT BASE OF FOOTING AND ROCK BELOW FOOTING FOR EROSION.
- A02 FILL GAPS BETWEEN ABUTMENT FOOTING AND SANDSTONE BEDROCK WITH BACKFILL CONTROLLED LOW STRENGTH SPECIAL AS DIRECTED BY THE ENGINEER AND AS PER THE SPECIAL PROVISION.
- A03 PIPE UNDERDRAIN WRAPPED 6-INCH, SLOPE 0.5% MIN. TO THE SOUTH TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD TO END OF PIPE.
- A04 PORTIONS OF ABANDONED WINGWALLS MAY REMAIN BELOW GRADE. REMOVE AS NEEDED OR CORE THROUGH TO INSTALL NEW PIPE UNDERDRAIN IN PROPER LOCATION. PAID FOR UNDER BID ITEM "REMOVING OLD STRUCTURE STA. 564EB+25."
- A05 TEMPORARY SHORING AS NEEDED PER STAGE TO ALLOW FOR STAGED CONSTRUCTION OF WORK

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-17			
DRAWN BY		EAJ	PLANS CK'D. HDA
GENERAL NOTES AND QUANTITIES			SHEET 2 OF 5



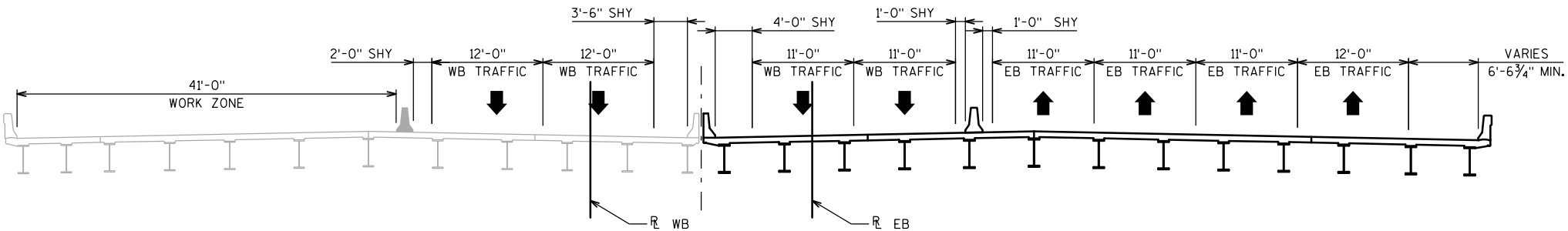
B-13-192

CROSS SECTION THRU ROADWAY

STAGE 1

(LOOKING EAST)

B-13-17



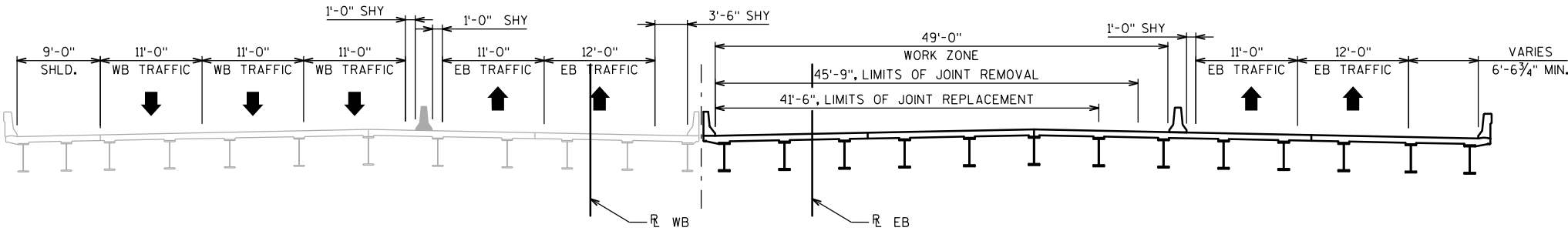
B-13-192

CROSS SECTION THRU ROADWAY

STAGE 2

(LOOKING EAST)

B-13-17



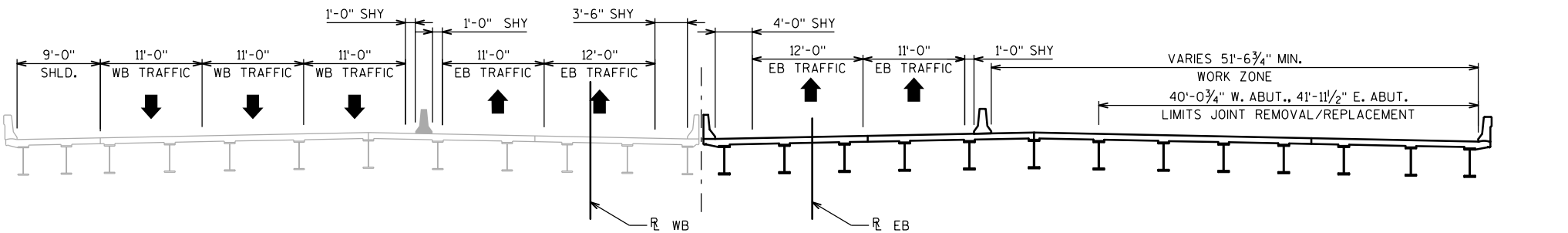
B-13-192

CROSS SECTION THRU ROADWAY

STAGE 3

(LOOKING EAST)

B-13-17



B-13-192

CROSS SECTION THRU ROADWAY

STAGE 4

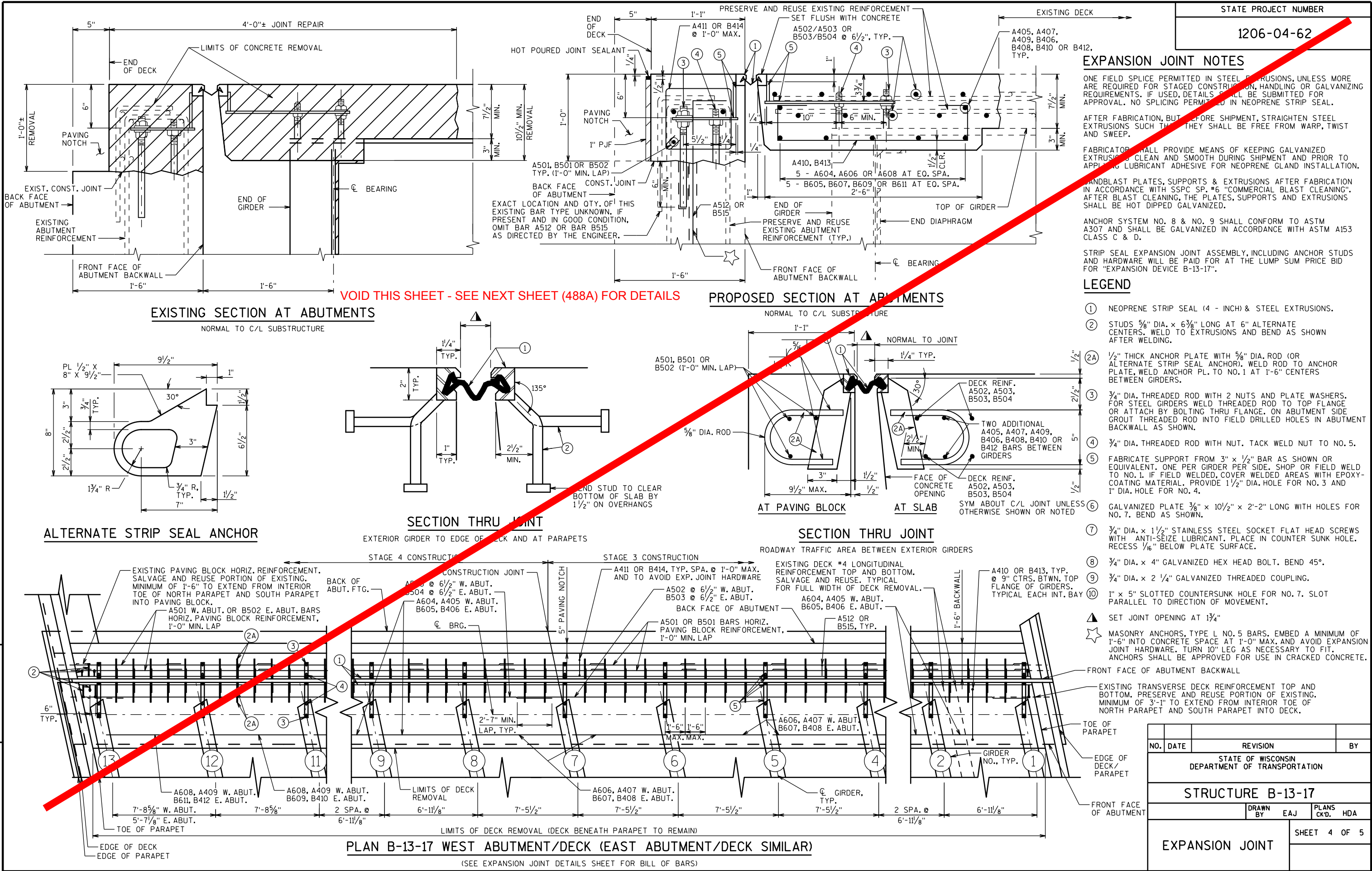
(LOOKING EAST)

B-13-17

NOTES

SEE ROADWAY PLANS FOR COMPLETE PROJECT STAGING DETAILS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-17			
DRAWN BY		KTM	PLANS CK'D. HDA
CONSTRUCTION STAGING			SHEET 3 OF 5



## EXPANSION JOINT NOTES

ONE FIELD SPICE 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.

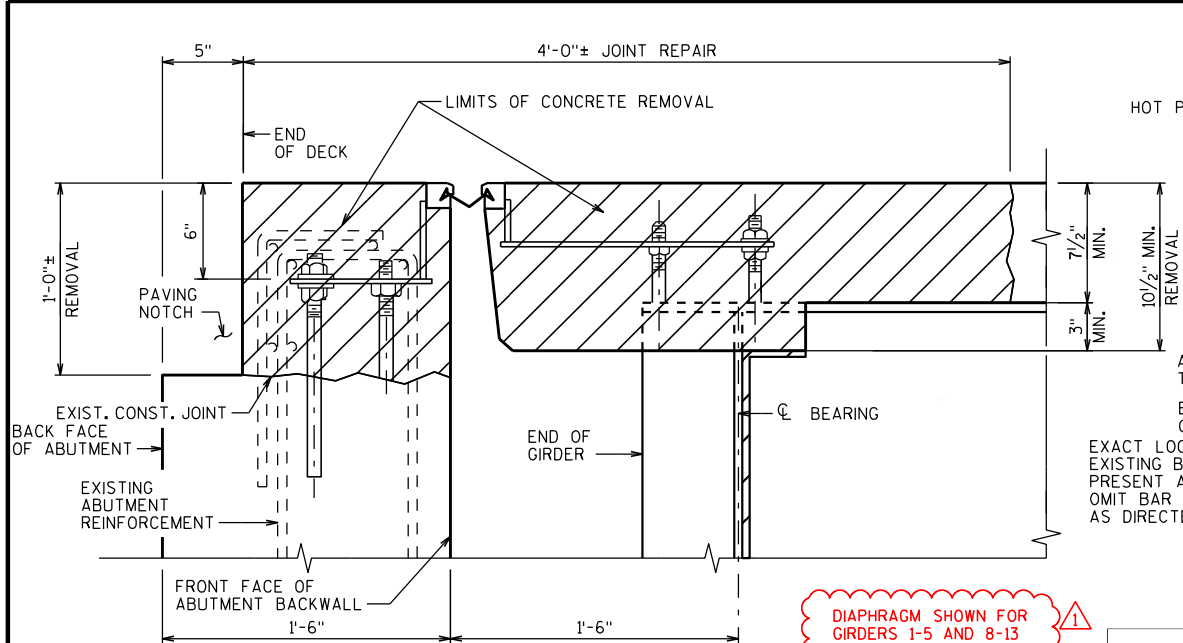
SANDBLAST PLATES, SUPPORTS & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 & NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & 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-13-17".

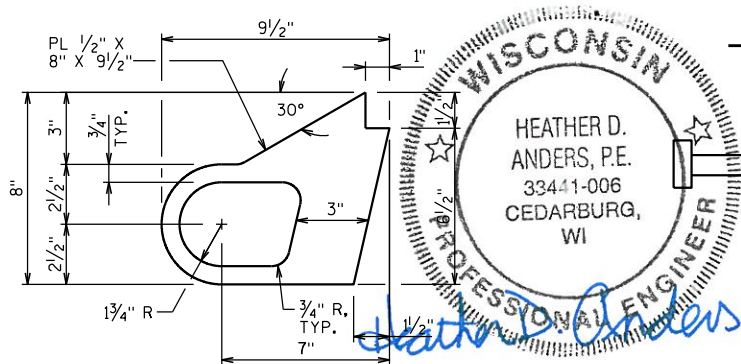
## LEGEND

- ① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.
- ② STUDS  $\frac{5}{8}$ " DIA.  $\times$   $6\frac{3}{8}$ " LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- ②A  $\frac{1}{2}$ " THICK ANCHOR PLATE WITH  $\frac{5}{8}$ " DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- ③  $\frac{3}{4}$ " DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. FOR STEEL GIRDERS 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  $\frac{3}{4}$ " DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- ⑤ FABRICATE SUPPORT FROM 3"  $\times$   $\frac{1}{2}$ " 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  $\frac{1}{2}$ " DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
- ⑥ GALVANIZED PLATE  $\frac{3}{8}$ "  $\times$   $10\frac{1}{2}$ "  $\times$  2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
- ⑦  $\frac{3}{4}$ " DIA.  $\times$   $1\frac{1}{2}$ " STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTER SUNK HOLE. RECESS  $\frac{1}{16}$ " BELOW PLATE SURFACE.
- ⑧  $\frac{3}{4}$ " DIA.  $\times$  4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- ⑨  $\frac{3}{4}$ " DIA.  $\times$  2  $\frac{1}{4}$ " GALVANIZED THREADED COUPLING.
- ⑩ 1"  $\times$  5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. SLOT PARALLEL TO DIRECTION OF MOVEMENT.
- ▲ SET JOINT OPENING AT 1 $\frac{3}{4}$ "
- ★ MASONRY ANCHORS, TYPE L NO. 5 BARS. EMBED A MINIMUM OF 1'-6" INTO CONCRETE SPACE AT 1'-0" MAX. AND AVOID EXPANSION JOINT HARDWARE. TURN 10° LEG AS NECESSARY TO FIT. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.



## EXISTING SECTION AT ABUTMENTS

NORMAL TO C/L SUBSTRUCTURE



## ALTERNATE STRIP SEAL ANCHOR

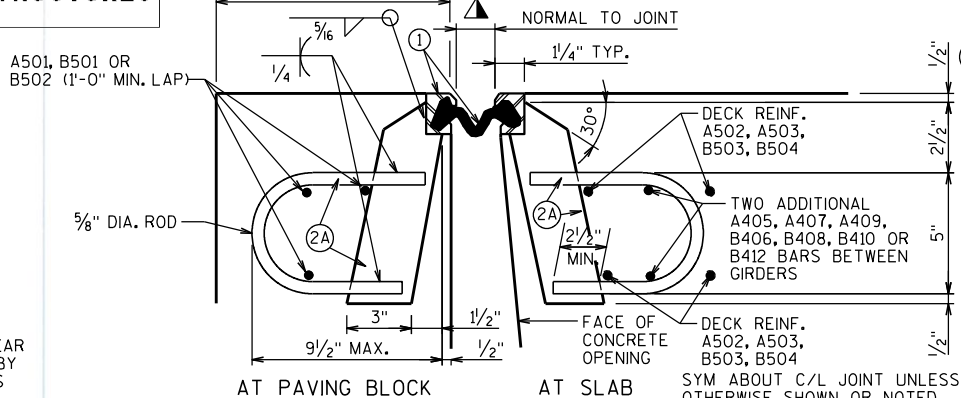
8-14-2014

DIAPHRAGM SHOWN FOR GIRDERS 1-5 AND 8-13

Plan Sheet  
Accepted ByWISDOT  
BUREAU OF STRUCTURES

## PROPOSED SECTION AT ABUTMENTS

NORMAL TO C/L SUBSTRUCTURE



AT PAVING BLOCK

AT SLAB

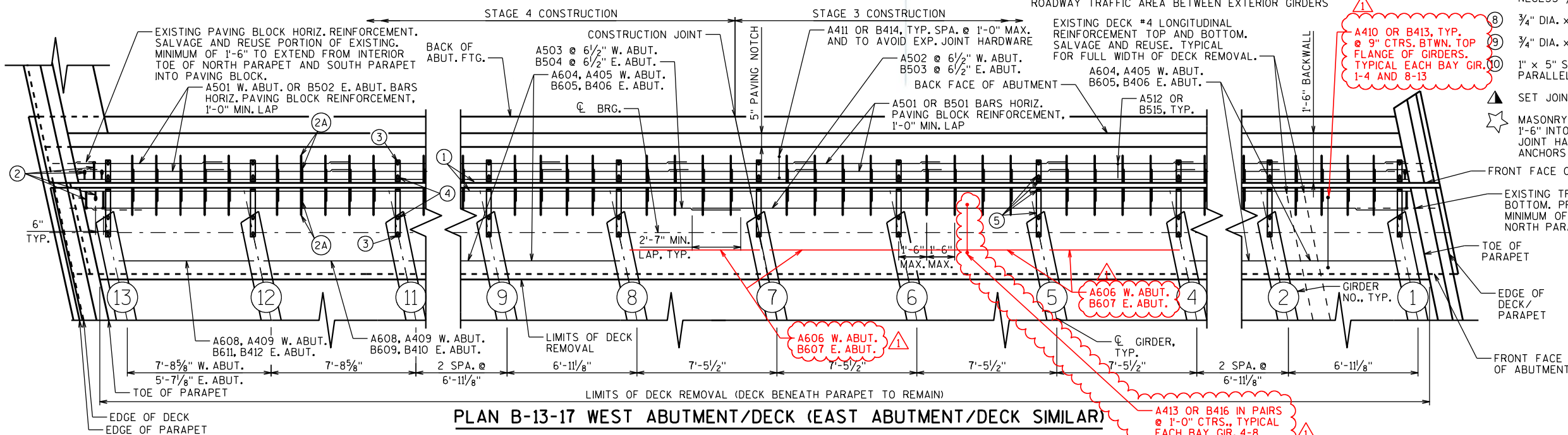
SYM ABOUT C/L JOINT UNLESS OTHERWISE SHOWN OR NOTED

## SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS

## SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



## PLAN B-13-17 WEST ABUTMENT/DECK (EAST ABUTMENT/DECK SIMILAR)

(SEE EXPANSION JOINT DETAILS SHEET FOR BILL OF BARS)

8/14/14 DIAPHRAGM REVISION GIRDERS 4-8 HDA		
NO.	DATE	REVISION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE B-13-17		
DRAWN BY EAJ PLANS CK'D. HDA		
EXPANSION JOINT		
SHEET 4 OF 5		
488A		



VOID THIS SHEET - SEE NEXT SHEET (489A) FOR DETAILS

WEST ABUTMENT BILL OF BARS

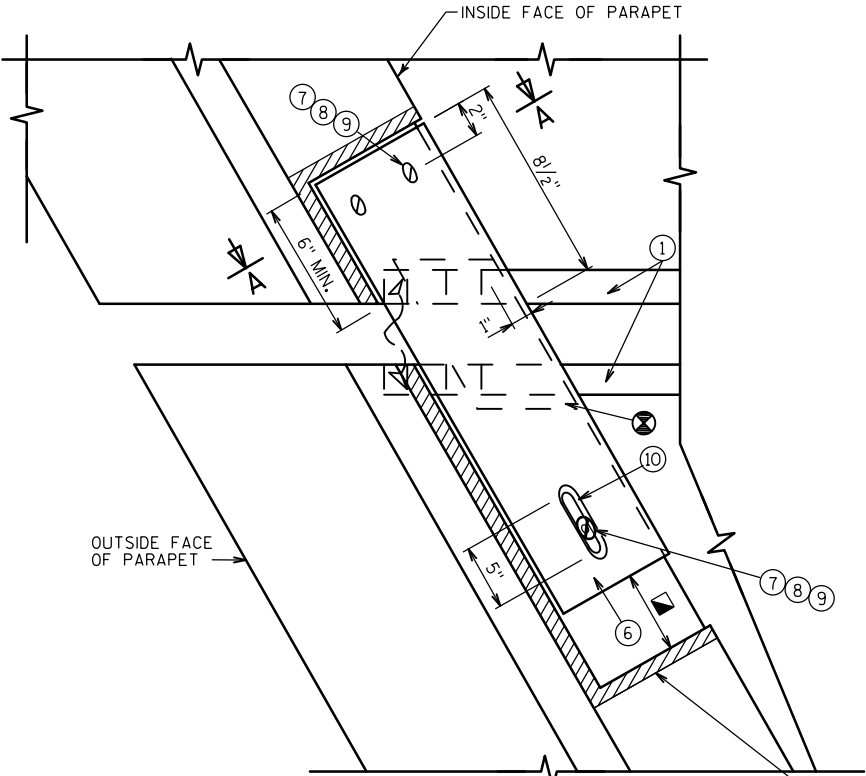
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A501	X	39	7'-9"			PAVING BLOCK - HORIZ. STAGES 3 AND 4
A502	X	10	47'-3"			DECK - TRANSVERSE STAGE 3
A503	X	10	43'-9"			DECK - TRANSVERSE STAGE 4
A604	X	30	6'-5"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
A405	X	24	6'-5"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
A606	X	20	6'-11"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
A407	X	16	6'-11"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
A608	X	10	7'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
A409	X	8	7'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
A410	X	114	3'-3"	X		DIAPHRAGM - STIRRUPS BETWEEN GIRDERS
A411	X	90	3'-4"	X		PAVING BLOCK - STIRRUP
A512	X		3'-0"	X		PAVING BLOCK - ANCHOR

NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

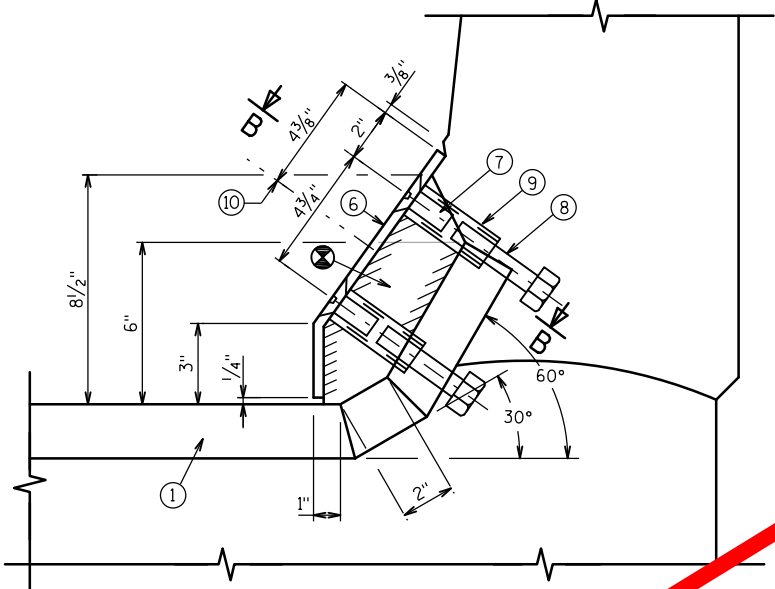
EAST ABUTMENT BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
B501	X	36	7'-9"			PAVING BLOCK - HORIZ. STAGES 3 AND 4
B502	X	3	5'-11"			PAVING BLOCK - HORIZ. STAGE 4
B503	X	10	47'-3"			DECK - TRANSVERSE STAGE 3
B504	X	10	41'-9"			DECK - TRANSVERSE STAGE 4
B605	X	30	6'-5"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
B406	X	24	6'-5"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
B607	X	20	6'-11"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
B408	X	16	6'-11"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
B609	X	5	7'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
B410	X	4	7'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
B611	X	5	5'-1"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
B412	X	4	5'-1"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
B413	X	111	3'-3"	X		DIAPHRAGM - STIRRUPS BETWEEN GIRDERS
B414	X	88	3'-4"	X		PAVING BLOCK - STIRRUP
B515	X	88	3'-0"	X		PAVING BLOCK - ANCHOR

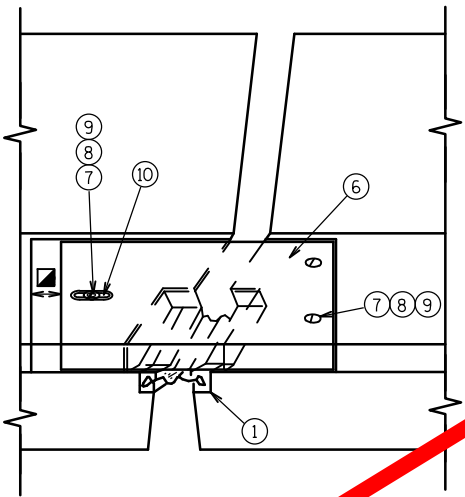
NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



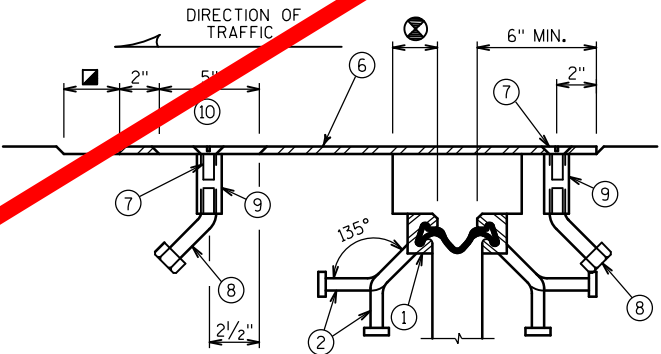
PLAN AT SLOPED FACE PARAPET



SECTION A-A



VIEW OF SLOPED FACE PARAPET  
PLATES FROM ROADWAY



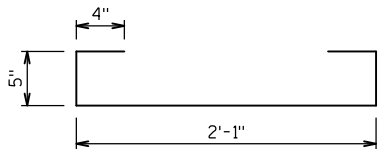
SECTION B-B

NOTE

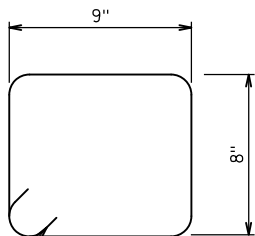
SEE EXPANSION JOINT SHEET FOR ADDITIONAL INFORMATION.

LEGEND

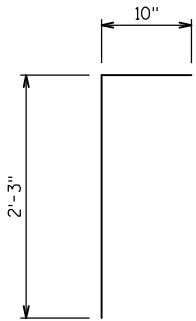
- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ◼ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"



A410, B413



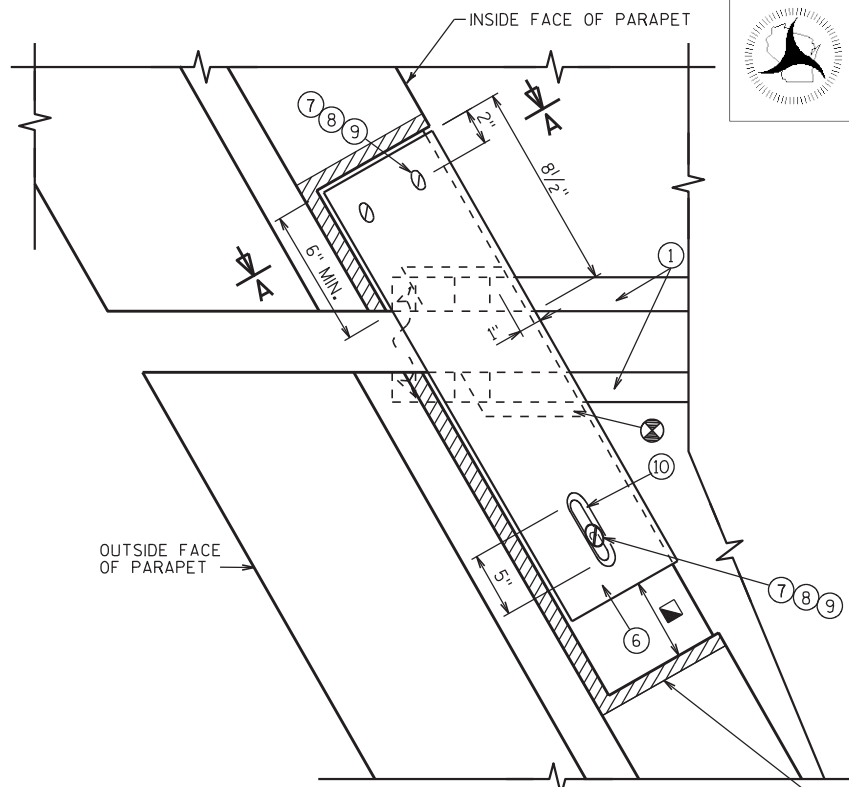
A411, B414



A512, B515

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-17			
DRAWN BY		EAJ	PLANS CK'D. HDA
EXPANSION JOINT DETAILS			SHEET 5 OF 5



[illegible]

WISCONSIN

REMOVE AS NEEDED TO INSTALL  
NEW ITEM ON THE PUMP

KEITH J. ANDERS, P.E.

33441-006

CEDARBURG,  
WI

PROFESSIONAL ENGINEER

Keith J. Anders

Technical drawing of a bridge deck cross-section showing a composite steel deck with a 135-degree corrugation. The drawing includes dimensions: 2 inches, 5 inches, 6 inches minimum, 2 1/2 inches, and 135 degrees. Callouts 1 through 10 identify various components: 1. Deck plate, 2. Deck plate, 3. Deck plate, 4. Deck plate, 5. Deck plate, 6. Deck plate, 7. Deck plate, 8. Deck plate, 9. Deck plate, 10. Deck plate.

A technical drawing of a mechanical assembly, likely a pump or motor component, shown in a cross-sectional view. The drawing includes several numbered callouts (1 through 10) pointing to specific parts. Callout 1 points to a base or support structure. Callout 2 points to a central shaft or rotor. Callout 3 points to a component on the left side, possibly a bearing or seal. Callout 4 points to a component on the right side, possibly a bearing or seal. Callout 5 points to a component on the right side, possibly a bearing or seal. Callout 6 points to a component on the right side, possibly a bearing or seal. Callout 7 points to a component on the right side, possibly a bearing or seal. Callout 8 points to a component on the right side, possibly a bearing or seal. Callout 9 points to a component on the right side, possibly a bearing or seal. Callout 10 points to a component on the left side, possibly a bearing or seal. The drawing also shows a central shaft with a rotor and a base with a support structure.

The image displays three technical drawings of door frames, each with its dimensions and a standard door opening indicated.

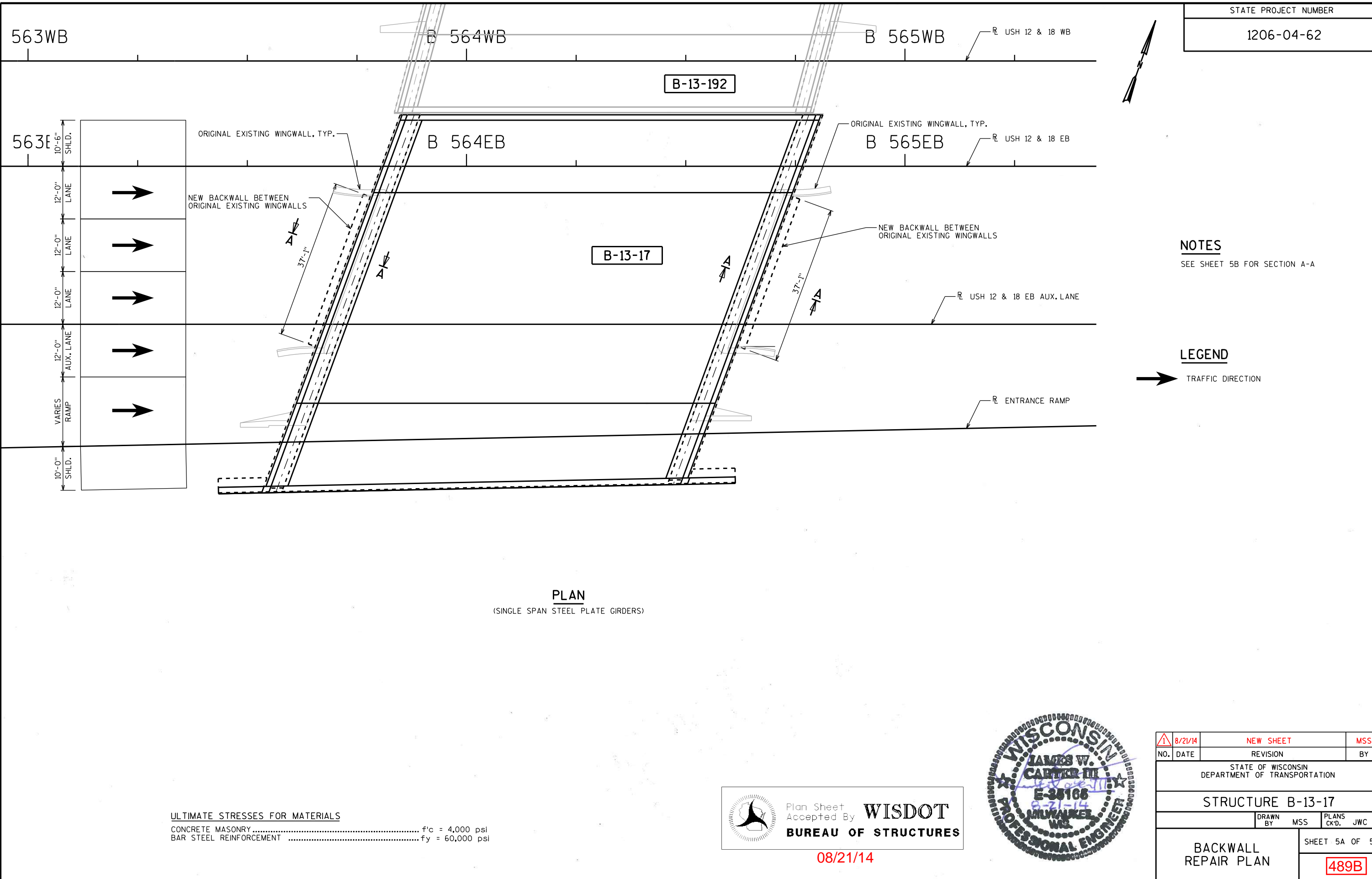
- A410, B413:** A rectangular frame with a height of 5" and a width of 2'-1". The top edge has a 4" wide section. The standard door opening is 2'-1" wide.
- A411, B414:** A rectangular frame with a height of 8" and a width of 9". The top edge has a 9" wide section. The standard door opening is 8" high and 9" wide.
- A512, B514:** A rectangular frame with a height of 2'-3" and a width of 10". The standard door opening is 2'-3" high and 10" wide.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A501	X	39	7'-9"			PAVING BLOCK - HORIZ. STAGES 3 AND 4
A502	X	10	47'-3"			DECK - TRANSVERSE STAGE 3
A503	X	10	43'-9"			DECK - TRANSVERSE STAGE 4
A604	X	30	6'-5"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
A405	X	24	6'-5"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
A406	X	12	5'-11"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
A407	X	16	6'-11"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
A608	X	10	7'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
A409	X	8	7'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
A410	X	74	3'-3"	X		DIAPHRAGM - STIRRUPS BETWEEN GIRDERS
A411	X	90	3'-4"	X		PAVING BLOCK - STIRRUP
A512	X	90	3'-0"	X		PAVING BLOCK - ANCHOR
A413	X	64	4'-0"	X		DIAPHRAGM - GIRDERS 4-8

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
B501	X	36	7'-9"			PAVING BLOCK - HORIZ. STAGES 3 AND 4
B502	X	3	5'-11"			PAVING BLOCK - HORIZ. STAGE 4
B503	X	10	47'-3"			DECK - TRANSVERSE STAGE 3
B504	X	10	41'-9"			DECK - TRANSVERSE STAGE 4
B605	X	30	6'-5"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
B406	X	24	6'-5"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
B607	X	12	6'-11"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
B408	X	16	6'-11"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 3 AND 4
B609	X	5	7'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
B410	X	4	7'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
B611	X	5	5'-1"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
B412	X	4	5'-1"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 4
B413	X	71	3'-3"	X		DIAPHRAGM - STIRRUPS BETWEEN GIRDERS
B414	X	88	3'-4"	X		PAVING BLOCK - STIRRUP
B515	X	88	3'-0"	X		PAVING BLOCK - ANCHOR
B416	X	64	4'-0"	X		DIAPHRAGM - GIRDERS 4-8

A413, B416

489A



STATE PROJECT NUMBER  
1206-04-62

**NOTES**  
SEE SHEET 5B FOR SECTION A-A

**LEGEND**  
→ TRAFFIC DIRECTION

**PLAN**  
(SINGLE SPAN STEEL PLATE GIRDERS)

**ULTIMATE STRESSES FOR MATERIALS**  
CONCRETE MASONRY..... f'c = 4,000 psi  
BAR STEEL REINFORCEMENT ..... fy = 60,000 psi

Plan Sheet Accepted By **WISDOT**  
**BUREAU OF STRUCTURES**  
08/21/14



NO.	8/21/14	NEW SHEET	MSS
DATE		REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-17			
DRAWN BY MSS		PLANS CK'D. JWC	
BACKWALL REPAIR PLAN		SHEET 5A OF 5	489B

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS, SUPPLEMENTED WITH FIELD MEASUREMENTS ON THE EAST ABUTMENT ONLY.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

UNDER THE BID ITEM "MASONRY ANCHORS TYPE L NO. 5 BARS", ANCHORED REINFORCING STEEL SHALL BE PAID FOR SEPARATELY AS PROVIDED IN SECTION 505 OF THE STANDARD SPECIFICATIONS FOR BAR STEEL REINFORCEMENT.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

CLEAN AND FILL EXISTING CRACKS IN BACKWALL WITH POLYURETHANE CRACK SEALER. PAYMENT IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

THE EASTBOUND AND WESTBOUND ALIGNMENTS SHOWN ON THE PLANS ARE PARALLEL TO EACH OTHER.

INSTALL AT EXISTING PAVING NOTCH A NEW 1" POLYSTYRENE PAD THE LENGTH OF THE RETROFIT WHICH SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

INSTALL BETWEEN NEW CONCRETE BACKWALL AND EXISTING WINGWALL A NEW 1" POLYSTYRENE PAD THE HEIGHT OF THE EXISTING WALLS WHICH SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

BEVEL EDGES OF EXPOSED CONCRETE TO MATCH EXISTING BEVELS UNLESS OTHERWISE NOTED.

STATE PROJECT NUMBER

1206-04-62

BACKWALL REPAIR ESTIMATED QUANTITIES

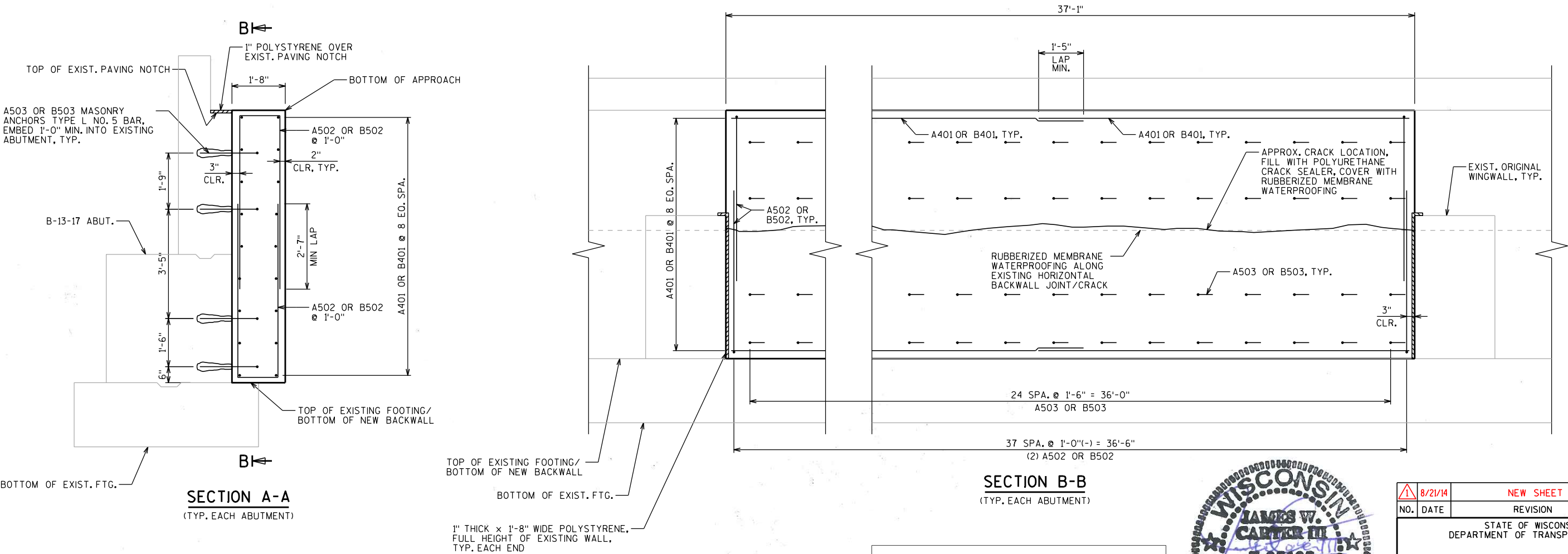
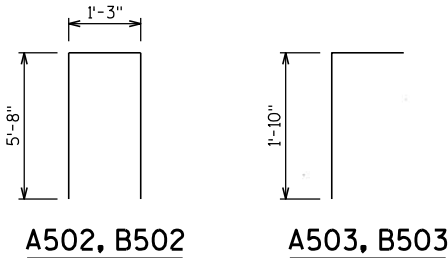
ITEM NO.	BID ITEM	UNIT	TOTAL
502.0100	CONCRETE MASONRY BRIDGES	CY	38
502.5005	CONCRETE MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	200
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	3,340
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12
NON-BID ITEMS			
	POLYURETHANE JOINT SEALER	-	-
	POLYSTYRENE	SIZE	1"

BILL OF BARS - WEST ABUTMENT

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A401	X	36	19'-1"			BACKWALL - HORIZ.
A502	X	76	12'-4"	X		BACKWALL - VERT.
A503	X	100	2'-3"	X		BACKWALL - ANCHORS

BILL OF BARS - EAST ABUTMENT

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
B401	X	36	19'-1"			BACKWALL - HORIZ.
B502	X	76	12'-4"	X		BACKWALL - VERT.
B503	X	100	2'-3"	X		BACKWALL - ANCHORS



Plan Sheet  
Accepted By **WISDOT**  
**BUREAU OF STRUCTURES**  
08/21/14



8/21/14	NEW SHEET	MSS
NO. DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE B-13-17		
DRAWN BY MSS	PLANS CK'D. JWC	
BACKWALL REPAIR DETAILS		SHEET 5B OF 5
		489C

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

SCOPE OF WORK FOR THIS STRUCTURE INCLUDES ONLY ISOLATED AREA(S) OF DECK PATCHING. LOCATIONS AND LIMITS OF THE FOLLOWING DECK PATCHING BID ITEMS TO BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER.

- PREPARATION DECKS
- SAWING PAVEMENT DECK PREPARATION AREAS

DECK PATCHING MATERIAL SHALL BE "POLYESTER POLYMER CONCRETE MASONRY".

QUANTITIES SHOWN FOR ALL BID ITEMS ARE APPROXIMATE.

INFRARED INSPECTION DATA PROVIDED FOR INFORMATION ONLY. INFRARED INSPECTION PERFORMED BY AECOM, 7-15-2013.

THE EASTBOUND AND WESTBOUND ALIGNMENTS SHOWN ON THE PLANS ARE PARALLEL TO EACH OTHER.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

## LIST OF DRAWINGS

1. GENERAL PLAN

## STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:  
WILLIAM DREHER (608) 266-8489  
CONSULTANT:  
HEATHER ANDERS (414) 359-2300

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
<b>HNTB</b>		11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2300	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher, P.E. CHIEF STRUCTURES DESIGN ENGINEER		12/21/13 DATE
STRUCTURE B-13-37			
USH 12 & 18 EB OVER JOHN NOLEN DR.			
COUNTY	DANE	TOWN/CITY/VILLAGE	MADISON
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	HDA	DESIGN CK'D.	SR
DRAWN BY	HDA	PLANS CK'D.	SR
GENERAL PLAN			SHEET 1 OF 1

## LEGEND

→ TRAFFIC DIRECTION

## HORIZONTAL CURVE DATA

R USH 12 &amp; 18 EB

P.I. = D 622+34.47  
Δ = 21°15'48" RIGHT  
D = 2°36'46"  
T = 411.66'  
L = 813.86'  
R = 2192.99'  
P.C. = D 618+22.80  
P.T. = D 626+36.66

## DESIGN DATA

RATINGS (TAKEN FROM HSI 12-9-2013)

DESIGN LOADING: HS20  
INVENTORY RATING: HS22  
OPERATING RATING: HS37  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 240 KIPS

## TRAFFIC DATA

USH 12/18 EB &amp; WB

A.D.T. = 104,000 (2012)  
R.D.S. = 60 MPH

## ULTIMATE STRESSES FOR MATERIALS

POLYESTER POLYMER CONCRETE MASONRY..... f'c = 1,000 psi (8 HRS)  
5,000 psi (24 HRS)

B-13-37

## PLAN

(4-SPAN SLAB BRIDGE)

## DECK INSPECTION RESULTS

(INFRARED INSPECTION DATE: 7/15/13)

FIELD OBSERVATIONS SUMMARY		S.N. B-13-37		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	ft <sup>2</sup>	9826		DELAMINATION	
SHADE/DEBRIS	ft <sup>2</sup>	0		SPALL	
DELAMINATION	ft <sup>2</sup>	2	<0.1	DEBOND	
SPALL	ft <sup>2</sup>	0	0	ASPHALT PATCH	
DEBOND	ft <sup>2</sup>	N/A	N/A	CONCRETE PATCH	
ASPHALT PATCH	ft <sup>2</sup>	0	0	SHADE/DEBRIS	
CONCRETE PATCH	ft <sup>2</sup>	0	0		

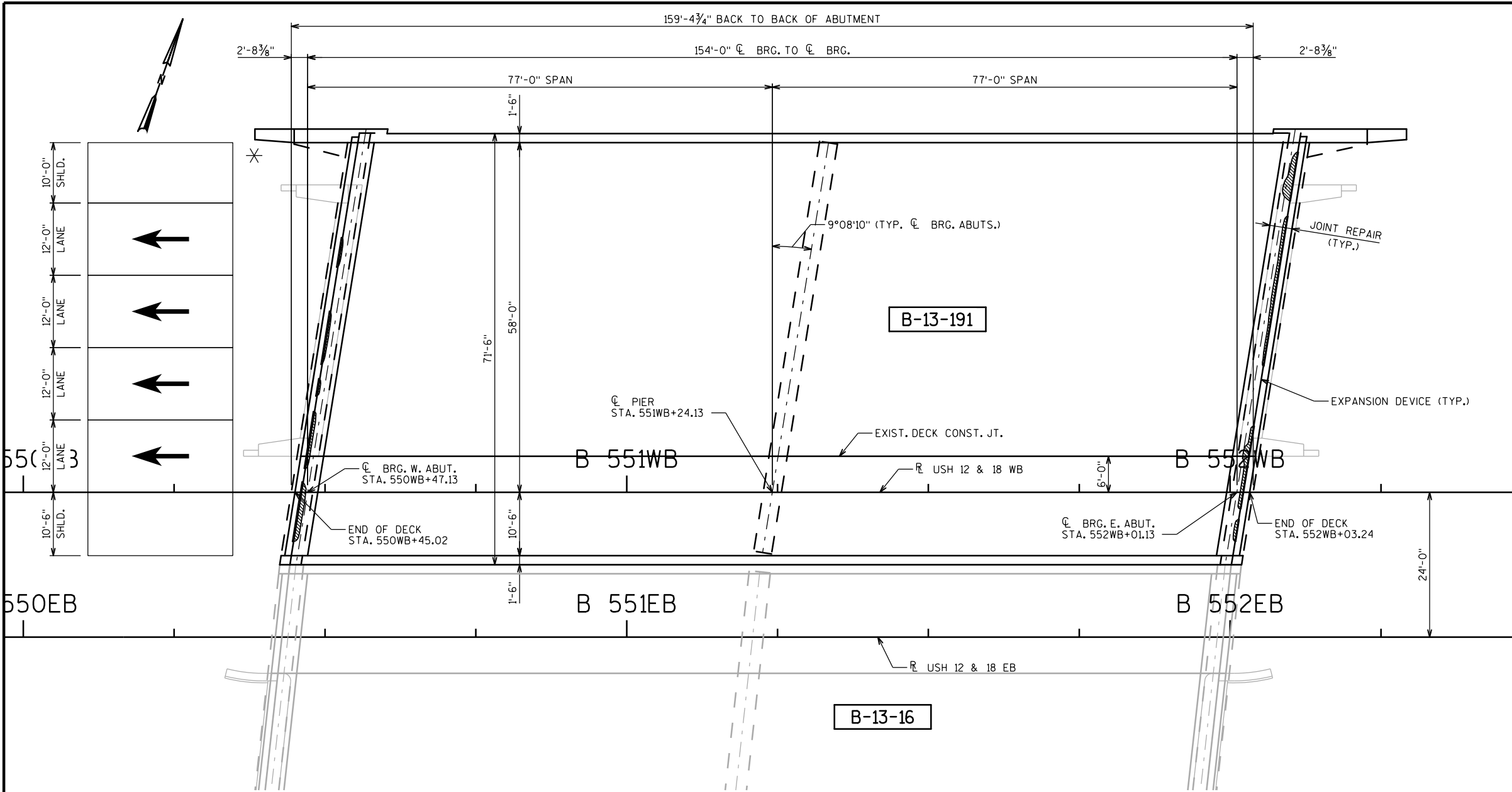
## TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
509.0301	PREPARATION DECKS TYPE 1	SY	0.5
509.0302	PREPARATION DECKS TYPE 2	SY	0.2
SPV.0025.01	POLYESTER POLYMER CONCRETE MASONRY	CF	1.4
SPV.0090.04	SAWING PAVEMENT DECK PREPARATION AREAS	LF	9

ALL ITEMS ARE CATEGORY 0010







PLAN

(2-SPAN 36" STEEL GIRDERS)

DECK INSPECTION RESULTS

(INFRARED INSPECTION DATE: 7/11/13)

FIELD OBSERVATIONS SUMMARY		S.N. B-13-191		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	f <sup>2</sup>	10797		DELAMINATION	
SHADE/DEBRIS	f <sup>2</sup>	0		SPALL	
DELAMINATION	f <sup>2</sup>	55	0.5	DEBOND	
SPALL	f <sup>2</sup>	0	0	ASPHALT PATCH	
DEBOND	f <sup>2</sup>	N/A	N/A	CONCRETE PATCH	
ASPHALT PATCH	f <sup>2</sup>	0	0	SHADE/DEBRIS	
CONCRETE PATCH	f <sup>2</sup>	0	0		

TRAFFIC DATA

USH 12/18 EB & WB

A.D.T. = 122,600 (2014)  
R.D.S. = 60 MPH

USH 14 WB - USH 151NB

A.D.T. = 20,800 (2014)  
R.D.S. = 35 M.P.H.

DESIGN DATA

RATINGS (TAKEN FROM HSI9-23-2013)

DESIGN LOADING: HS20  
INVENTORY RATING: HS15  
OPERATING RATING: HS25  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 230 KIPS

ULTIMATE STRESSES FOR MATERIALS

CONCRETE MASONRY:  
SUPERSTRUCTURE ..... f'c = 4,000 psi  
ALL OTHER ..... f'c = 3,500 psi  
BAR STEEL REINFORCEMENT ..... fy = 60,000 psi



12-11-2013

STATE PROJECT NUMBER

1206-04-62

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES AND QUANTITIES
3. CONSTRUCTION STAGING
4. EXPANSION JOINT
5. EXPANSION JOINT DETAILS
6. PARAPET REVISIONS

LEGEND

- ➔ TRAFFIC DIRECTION
- ✱ PROVIDE ANCHORAGE FOR STEEL PLATE BEAM GUARD (REMOVAL AND REPLACEMENT OF END OF CONCRETE PARAPET REQUIRED)

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:  
WILLIAM DREHER (608) 266-8489  
CONSULTANT:  
HEATHER ANDERS (414) 359-2300

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
<b>HNTB</b>		11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2300	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i>		12/11/13
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-13-191			
USH 12 & 18 WB OVER USH 14			
COUNTY	DANE	TOWN/CITY/VILLAGE	MADISON
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	KTM	DESIGN CK'D. HDA	DRAWN BY KTM
PLANS CK'D. HDA		SHEET 1 OF 6	
GENERAL PLAN			



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

INFRARED INSPECTION DATA PROVIDED FOR INFORMATION ONLY. INFRARED INSPECTION DATE: 7-11-2013

LOCATIONS OF THE FOLLOWING BID ITEMS SHALL BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER:  
- CRACK SEALING EPOXY  
- CONCRETE SURFACE REPAIR

QUANTITES SHOWN FOR THE ABOVE BID ITEMS ARE APPROXIMATE.

UNDER THE BID ITEMS "MASONRY ANCHORS TYPE L", ANCHORED REINFORCING STEEL SHALL BE PAID FOR SEPARATELY AS PROVIDED IN SECTION 505 OF THE STANDARD SPECIFICATIONS FOR BAR STEEL REINFORCEMENT.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

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

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-13-191".

CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

PROTECTIVE SURFACE TREATMENT, PAID FOR UNDER "PROTECTIVE SURFACE TREATMENT RESEAL" SHALL BE APPLIED ON STRUCTURE B-13-191 TO THE FOLLOWING SURFACES:  
- TOP OF EXISTING DECK SLAB  
- TOP AND INSIDE FACES OF EXISTING PARAPETS

"PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED ON STRUCTURE B-13-191 TO THE FOLLOWING COMPLETED SURFACES:  
- TOP OF DECK SLAB AT NEW CONCRETE SURFACES RELATED TO JOINT REPAIR  
- TOP AND INSIDE FACES OF REPLACEMENT PARAPET AT NEW CONCRETE SURFACES

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

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1" JOINT FILLER WITH HOT POURED JOINT SEALANT (1/2" DEEP AND HOLD 1/4" BELOW SURFACE OF CONCRETE).

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

THE EASTBOUND AND WESTBOUND ALIGNMENTS SHOWN ON THE PLANS ARE PARALLEL TO EACH OTHER.

NEW CONCRETE AT JOINT REPAIR IS PAID FOR AS "CONCRETE MASONRY OVERLAY DECKS".

INSTALL AT PAVING NOTCH A NEW 1" PREFORMED JOINT FILLER WHICH SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY OVERLAY DECKS".

EXISTING UTILITIES ATTACHED TO THE BRIDGE TO REMAIN IN PLACE AND IN SERVICE.

"REMOVING OLD STRUCTURE STA. 551WB+24" INCLUDES PARTIAL REMOVAL OF NW WINGWALL PARAPET.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

"CONCRETE MASONRY BRIDGES" INCLUDES CONCRETE REQUIRED TO REPLACE PORTION OF NORTH PARAPET AT WING.

BEVEL EDGES OF EXPOSED CONCRETE TO MATCH EXISTING BEVELS UNLESS OTHERWISE NOTED.

STATE PROJECT NUMBER

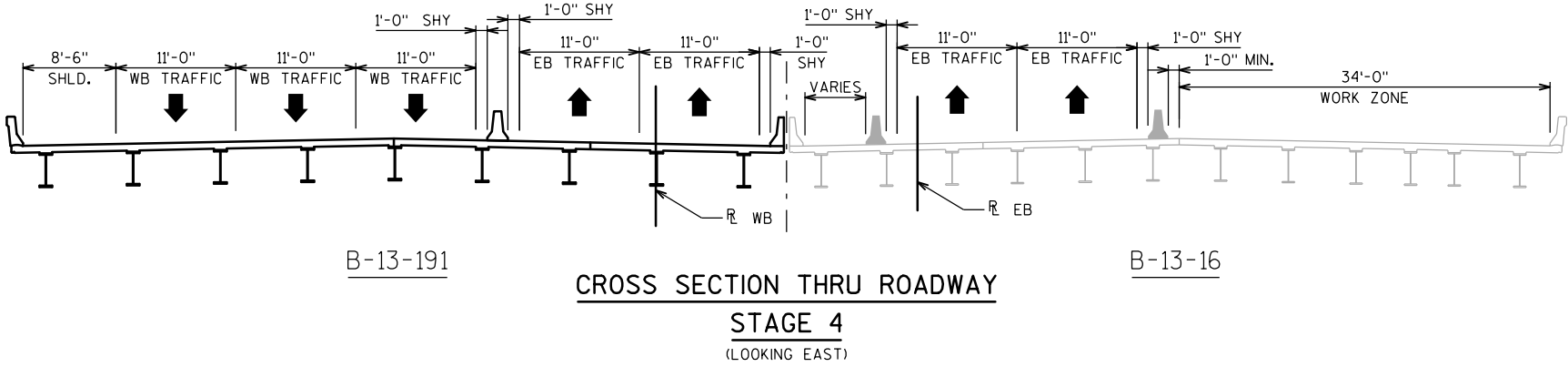
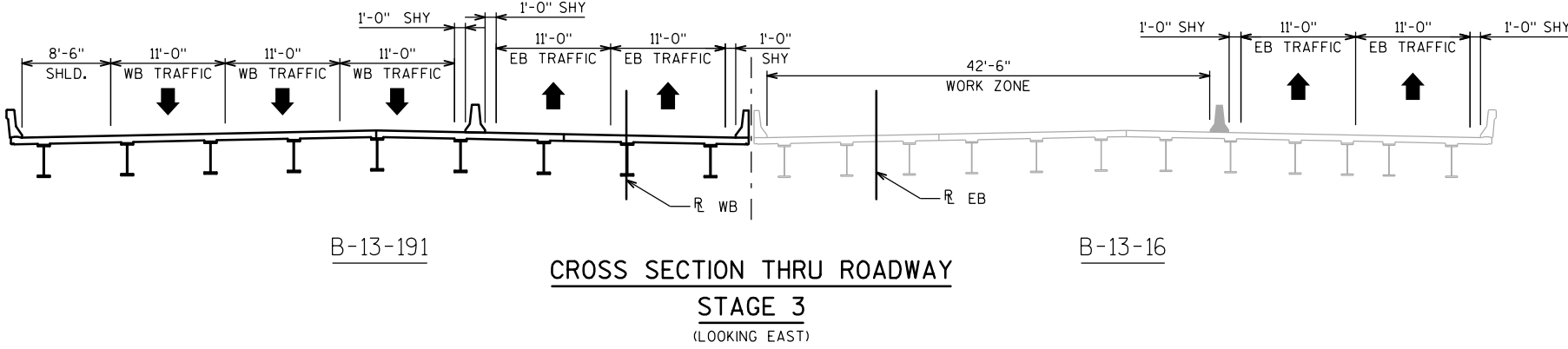
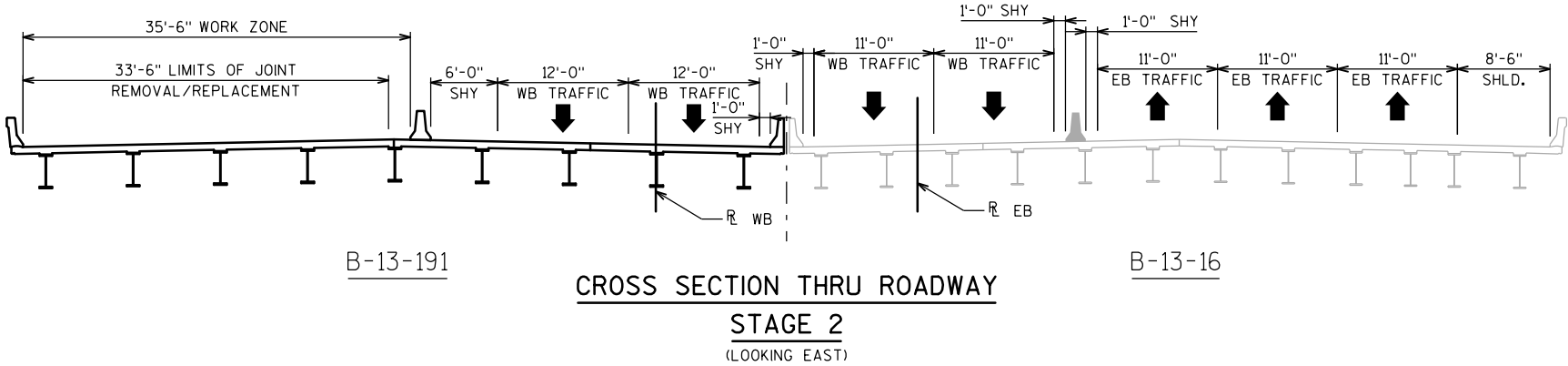
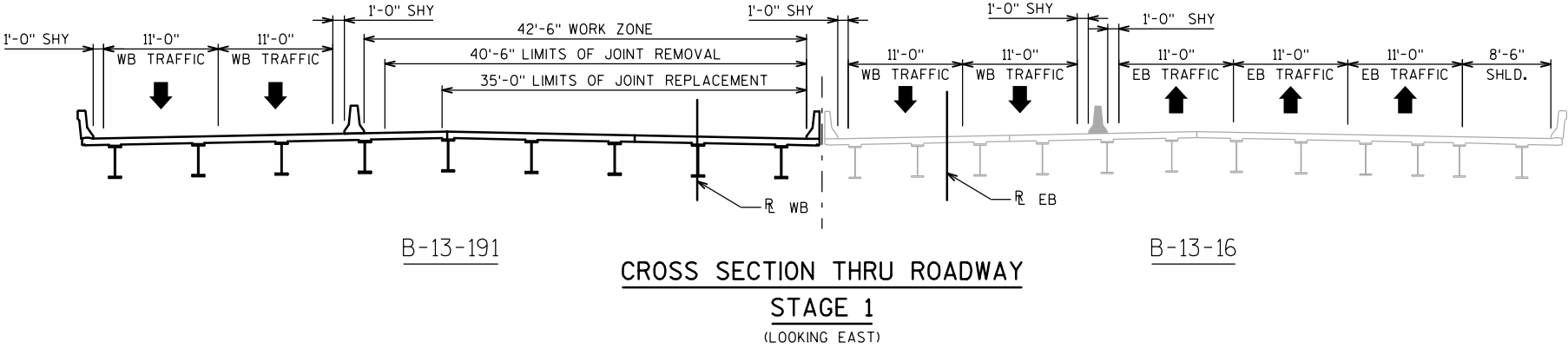
1206-04-62

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
203.0200.03	REMOVING OLD STRUCTURE STA. 551WB+24	LS	1
502.0100	CONCRETE MASONRY BRIDGES	CY	1
502.0717.5	CRACK SEALING EPOXY	LF	600
502.3100.03	EXPANSION DEVICE B-13-191	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	65
502.3215.5	PROTECTIVE SURFACE TREATMENT RESEAL	SY	1,278
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	154
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	3
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	4,770
509.1000	JOINT REPAIR	SY	62
509.1500	CONCRETE SURFACE REPAIR	SF	20
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	18
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1
SPV.0180.03	CLEAN ABUTMENT SEATS	SY	30
	NON-BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	1"

ALL ITEMS ARE CATEGORY 0050

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-191			
		DRAWN BY EAJ	PLANS CK'D. HDA
GENERAL NOTES AND QUANTITIES			SHEET 2 OF 6



NOTES

SEE ROADWAY PLANS FOR COMPLETE PROJECT STAGING DETAILS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-191			
DRAWN BY		KTM	PLANS CK'D. HDA
CONSTRUCTION STAGING			SHEET 3 OF 6

ONE FIELD SPICE 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.

MIN. 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 & EXTRUSIONS AFTER FABRICATION  
IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING".  
AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS  
SHALL BE HOT DIPPED GALVANIZED.

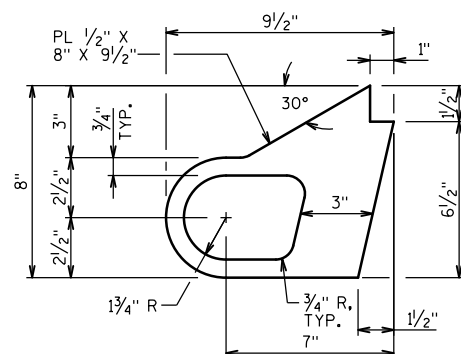
ANCHOR SYSTEM NO. 8 & NO. 9 SHALL CONFORM TO ASTM  
A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153  
CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-13-191".

- ① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.
- ② STUDS  $\frac{5}{8}$ " DIA. x  $6\frac{3}{8}$ " LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- ②A  $\frac{1}{2}$ " THICK ANCHOR PLATE (WITH  $\frac{5}{8}$ " DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- ③  $\frac{3}{4}$ " DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS, FOR STEEL GIRDERS. 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  $\frac{3}{4}$ " DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- ⑤ FABRICATE SUPPORT FROM 3" x  $\frac{1}{2}$ " 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  $1\frac{1}{2}$ " DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
- ⑥ GALVANIZED PLATE  $\frac{3}{8}$ " x  $10\frac{1}{2}$ " x 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
- ⑦  $\frac{3}{4}$ " DIA. x  $1\frac{1}{2}$ " STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTER SUNK HOLE. RECESS  $\frac{1}{16}$ " BELOW PLATE SURFACE.
- ⑧  $\frac{3}{4}$ " DIA. x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- ⑨  $\frac{3}{4}$ " DIA. x 2  $\frac{1}{4}$ " GALVANIZED THREADED COUPLING.
- ⑩ 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. SLOT PARALLEL TO DIRECTION OF MOVEMENT.

▲ SET JOINT OPENING AT  $1\frac{3}{4}$ "

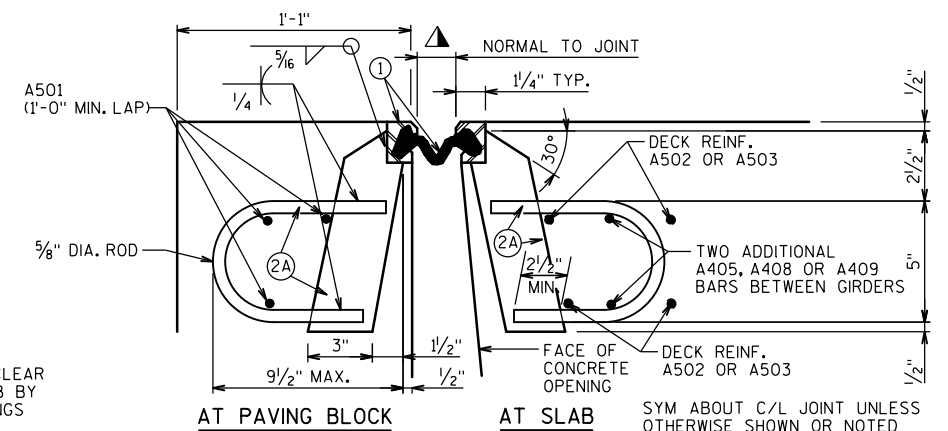
☆ MASONRY ANCHORS, TYPE L NO. 5 BARS, EMBED A MINIMUM OF 1'-6" INTO CONCRETE SPACE AT 1'-0" MAX. AND TO AVOID EXPANSION JOINT HARDWARE. TURN 10" LEG AS NECESSARY TO FIT. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.



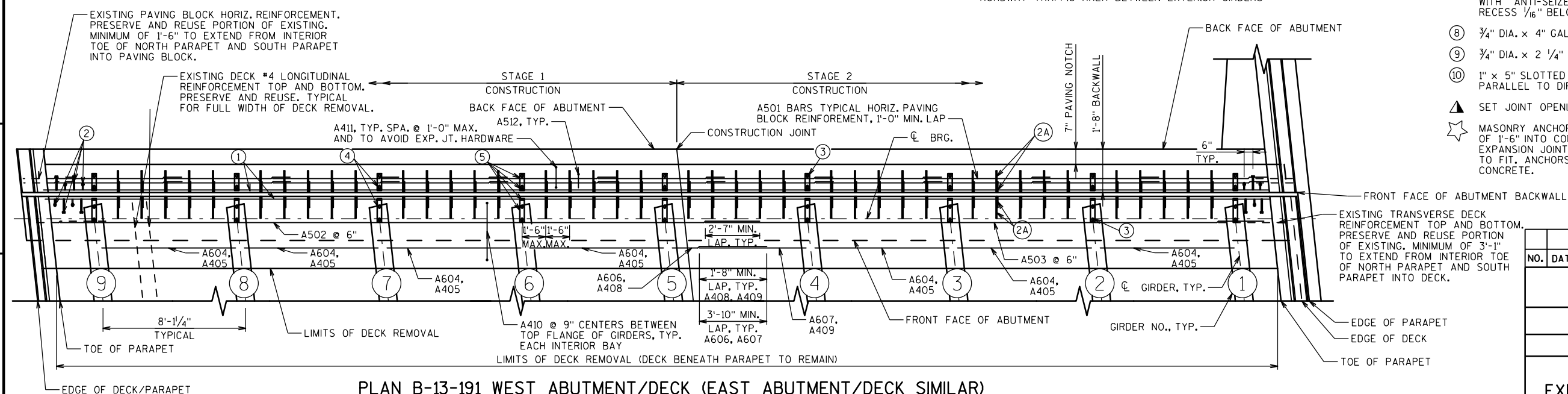
EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS



NORMAI TO C/I SUBSTRUCTURE



## ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS

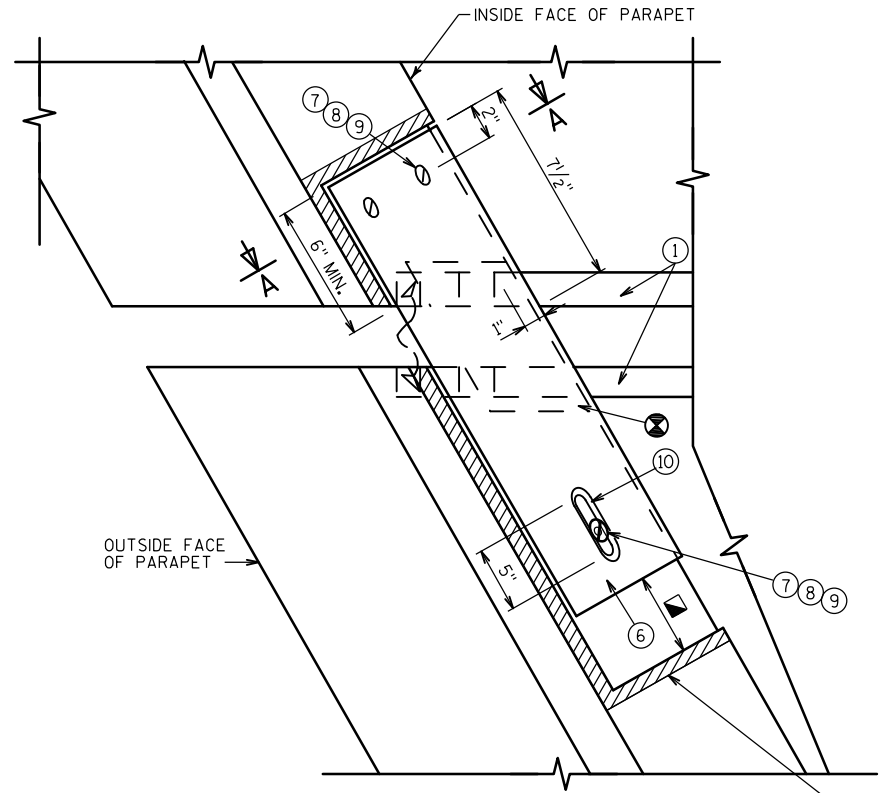


## (SEE EXPANSION JOINT DETAILS SHEET FOR BILL OF BARS)

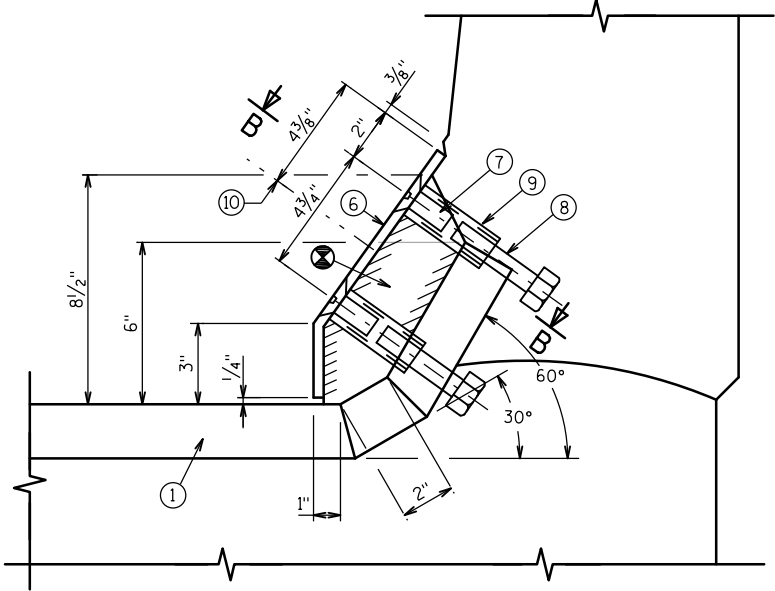
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A501	X	66	7'-2"			PAVING BLOCK - HORIZ. STAGE 1 AND 2
A502	X	22	39'-6"			DECK - TRANSVERSE STAGE 1
A503	X	22	32'-0"			DECK - TRANSVERSE STAGE 2
A604	X	70	7'-7"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A405	X	56	7'-7"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A606	X	10	5'-5"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 1
A607	X	10	6'-1"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 2
A408	X	8	4'-4"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 1
A409	X	8	5'-0"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 2
A410	X	160	3'-3"	X		DIAPHRAGM - STIRRUPS BETWEEN GIRDERS
A411	X	140	3'-4"	X		PAVING BLOCK - STIRRUP
A512	X	140	3'-0"	X		PAVING BLOCK - ANCHOR

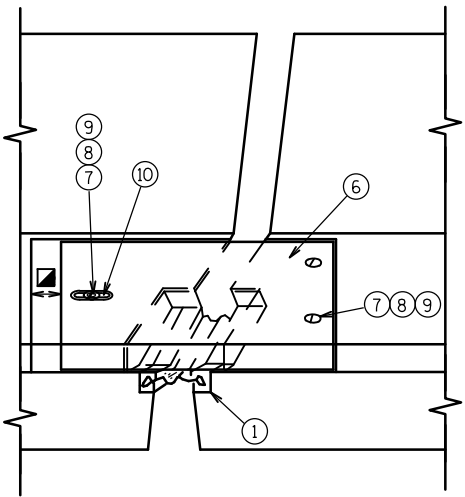
NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



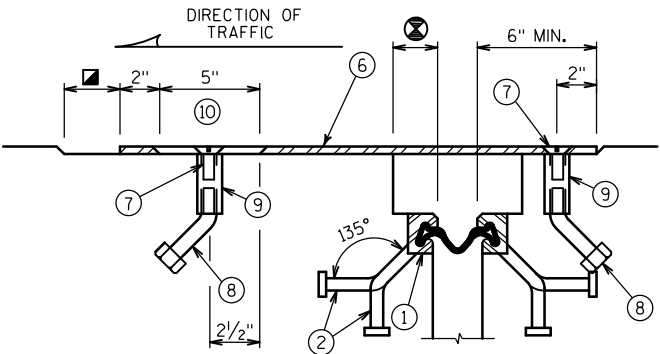
PLAN AT SLOPED FACE PARAPET



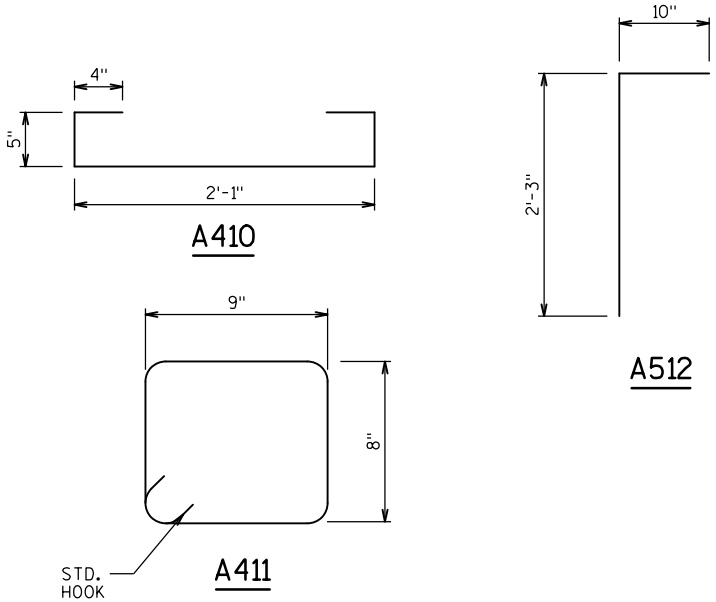
SECTION A-A



VIEW OF SLOPED FACE PARAPET  
PLATES FROM ROADWAY



SECTION B-B



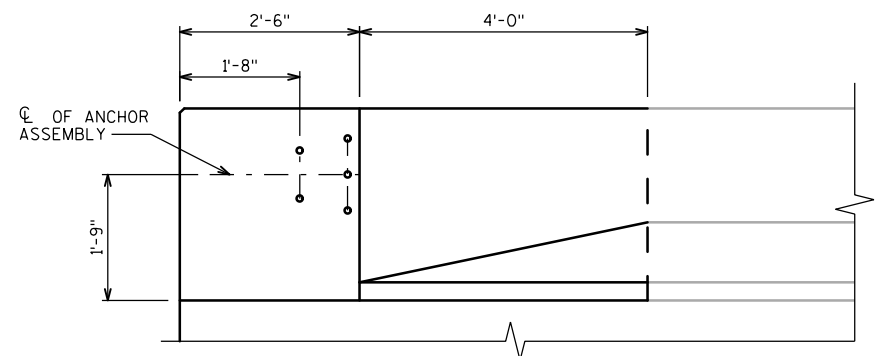
NOTE

SEE EXPANSION JOINT SHEET FOR ADDITIONAL INFORMATION.

LEGEND

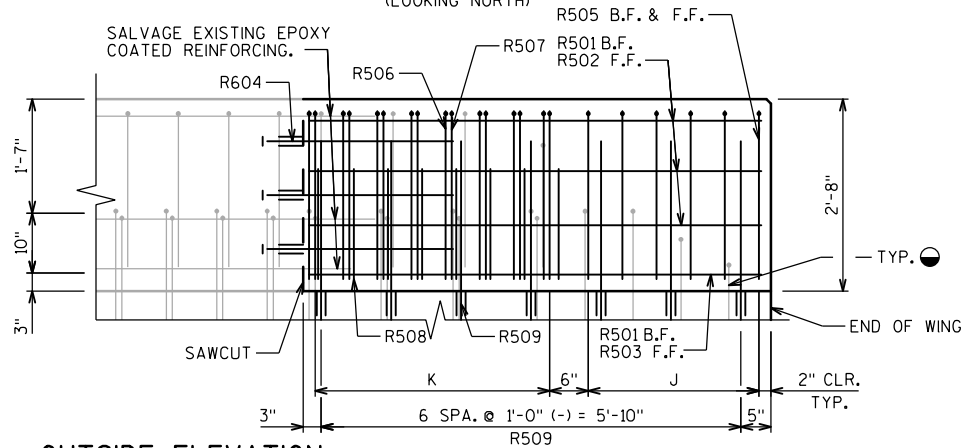
- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-191			
DRAWN BY		EAJ	PLANS CK'D. HDA
EXPANSION JOINT DETAILS			SHEET 5 OF 6



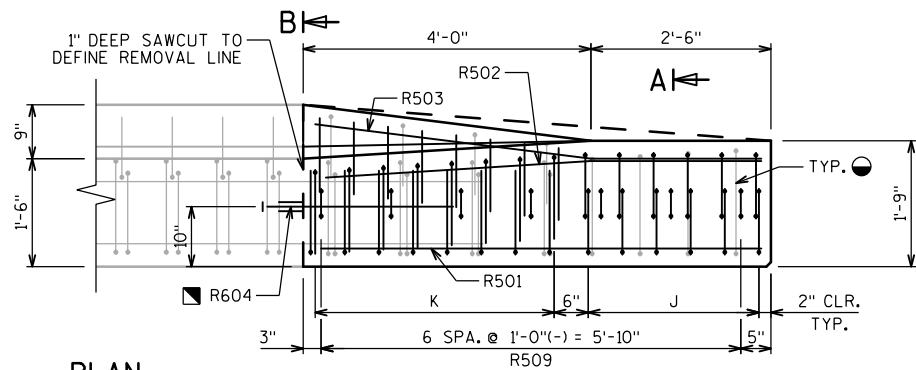
INSIDE ELEVATION

(LOOKING NORTH)



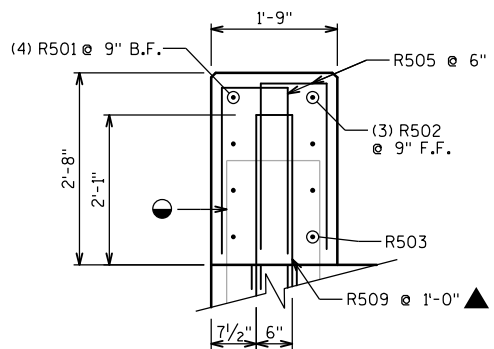
OUTSIDE ELEVATION

(LOOKING SOUTH)

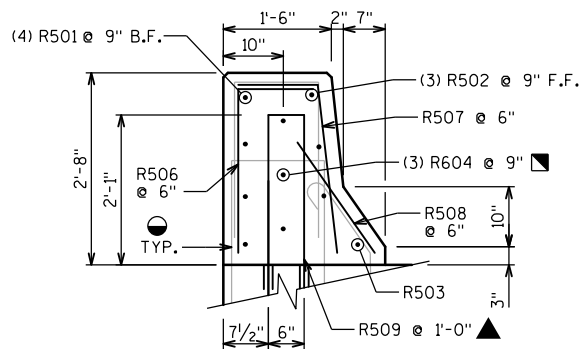


PLAN

'J' = 5 SPA. @ 6" (-), R505 B.F. & F.F.  
'K' = 7 SPA. @ 6" (-), R506, R507, R508



SECTION A-A

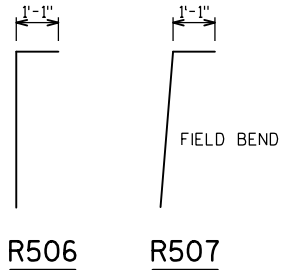


SECTION B-B

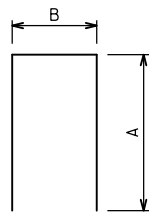
## BILL OF BARS

NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS  
OF A BAR MARK SIGNIFIES THE BAR SIZE

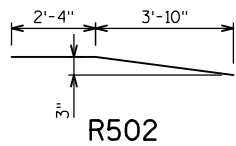
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
R501	X	4	6'-2"		HORIZONTAL BACK FACE
R502	X	3	6'-2"	X	HORIZONTAL FRONT FACE
R503	X	1	6'-2"	X	HORIZONTAL FRONT FACE
R604	X	3	2'-7"		HORIZONTAL DOWEL
R505	X	12	5'-4"	X	VERTICAL STIRRUP
R506	X	8	3'-3"	X	VERTICAL BACK FACE
R507	X	8	3'-3"	X	VERTICAL FRONT FACE
R508	X	8	1'-10"		VERTICAL FRONT FACE
R509	X	7	5'-5"	X	VERTICAL DOWEL



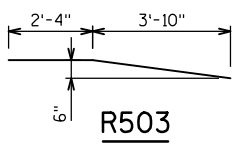
BAR MARK	A	B
R505	2'-4"	11"
R509	2'-7"	6"



R505 &amp; R509

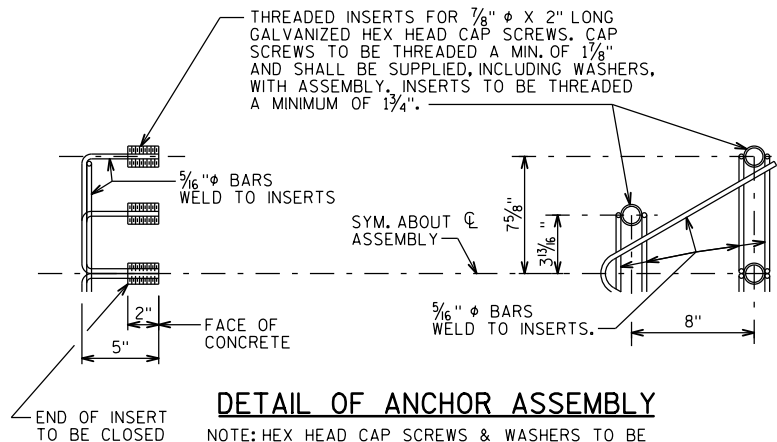


R502



R503

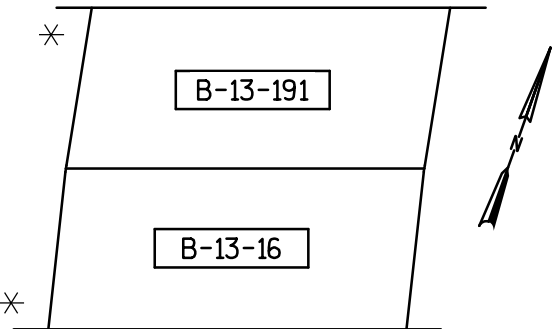
- SALVAGE EXISTING VERTICAL REINFORCEMENT BARS AND INCORPORATE INTO NEW WORK. BEND EXISTING BARS AS NECESSARY TO FIT NEW PARAPET SHAPE.
- ▲ MASONRY ANCHORS, TYPE L NO. 5 BARS. EMBED 6" IN CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.
- MASONRY ANCHORS, TYPE L NO. 6 BARS. EMBED 6" IN CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.



DETAIL OF ANCHOR ASSEMBLY

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

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



LOCATION PLAN

✱ WING LOCATION FOR PARAPET REMOVAL AND REPLACEMENT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-191			
DRAWN BY		KTM	PLANS CKD. HDA
PARAPET REVISIONS			SHEET 6 OF 6



LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES AND QUANTITIES
3. CONSTRUCTION STAGING
4. EXPANSION JOINT
5. EXPANSION JOINT DETAILS

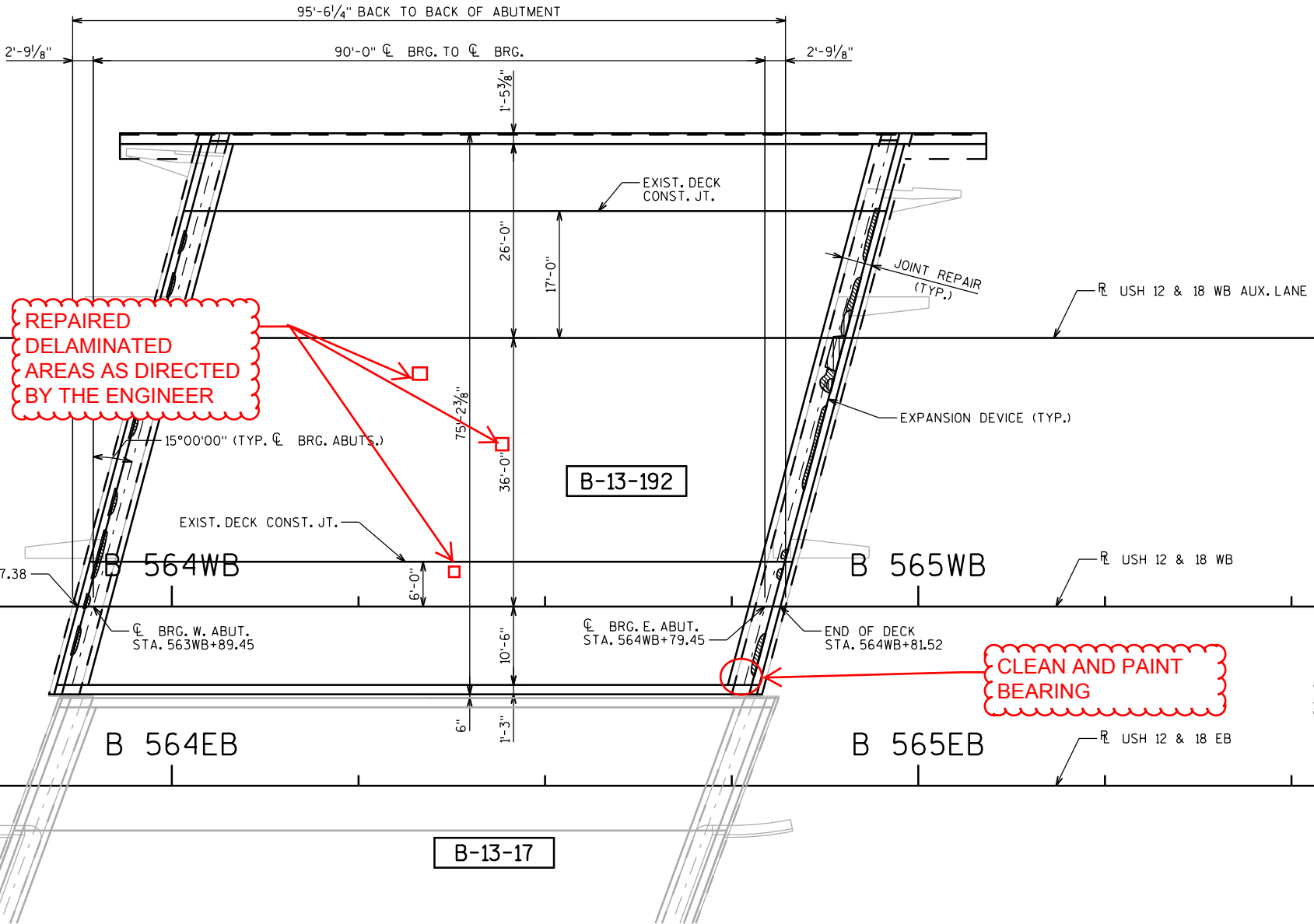
LEGEND

→ TRAFFIC DIRECTION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:  
WILLIAM DREHER (608) 266-8489  
CONSULTANT:  
HEATHER ANDERS (414) 359-2300

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
<b>HNTB</b>		11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2300	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher, P.E. CHIEF STRUCTURES DESIGN ENGINEER		01/13/14 DATE
STRUCTURE B-13-192			
USH 12 & 18 WB OVER WSOR (FORMERLY CNW RR)			
COUNTY	DANE	TOWN/CITY/VILLAGE	MADISON
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	KTM	DESIGN CK'D.	HDA
DRAWN BY	KTM	PLANS CK'D.	HDA
GENERAL PLAN			SHEET 1 OF 5



PLAN

(SINGLE SPAN STEEL PLATE GIRDERS)

DECK INSPECTION RESULTS

(INFRARED INSPECTION DATE: 7/11/13)

FIELD OBSERVATIONS SUMMARY				S.N. B-13-192		LEGEND	
ITEM	UNIT	QUANT.	%				
TOTAL AREA	f <sup>2</sup>	6830				DELAMINATION	
SHADE/DEBRIS	f <sup>2</sup>	0				SPALL	
DELAMINATION	f <sup>2</sup>	40	0.6			DEBOND	
SPALL	f <sup>2</sup>	0	0			ASPHALT PATCH	
DEBOND	f <sup>2</sup>	N/A	N/A			CONCRETE PATCH	
ASPHALT PATCH	f <sup>2</sup>	0	0			SHADE/DEBRIS	
CONCRETE PATCH	f <sup>2</sup>	11	0.2				

TRAFFIC DATA

USH 12/18 EB & WB  
A.D.T. = 125,000 (2014)  
R.D.S. = 60 MPH

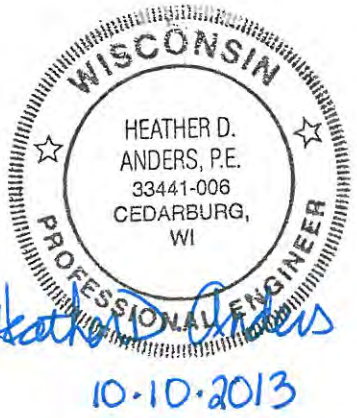
DESIGN DATA

RATINGS (TAKEN FROM HSI9-23-2013)

DESIGN LOADING: HS20  
INVENTORY RATING: HS32  
OPERATING RATING: HS54  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

ULTIMATE STRESSES FOR MATERIALS

CONCRETE MASONRY:  
OVERLAY DECKS ..... f<sub>c</sub> = 4,000 psi  
ALL OTHER ..... f<sub>c</sub> = 3,500 psi  
BAR STEEL REINFORCEMENT ..... f<sub>y</sub> = 60,000 psi



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

INFRARED INSPECTION DATA PROVIDED FOR INFORMATION ONLY. INFRARED INSPECTION DATE: 7-11-2013

LOCATIONS OF THE FOLLOWING BID ITEMS SHALL BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER:  
- CRACK SEALING EPOXY  
- CONCRETE SURFACE REPAIR

QUANTITES SHOWN FOR THE ABOVE BID ITEMS ARE APPROXIMATE.

UNDER THE BID ITEM "MASONRY ANCHORS TYPE L NO.5 BARS", ANCHORED REINFORCING STEEL SHALL BE PAID FOR SEPARATELY AS PROVIDED IN SECTION 505 OF THE STANDARD SPECIFICATIONS FOR BAR STEEL REINFORCEMENT.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

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

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-13-192".

CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

PROTECTIVE SURFACE TREATMENT, PAID FOR UNDER "PROTECTIVE SURFACE TREATMENT RESEAL" SHALL BE APPLIED ON STRUCTURE B-13-192 TO THE FOLLOWING SURFACES:  
- TOP OF EXISTING DECK SLAB  
- TOP AND INSIDE FACES OF PARAPETS

"PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED ON STRUCTURE B-13-192 TO THE FOLLOWING SURFACES:  
- TOP OF DECK SLAB AT NEW CONCRETE SURFACES RELATED TO THE JOINT REPAIR

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

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1" JOINT FILLER WITH HOT POURED JOINT SEALANT (1/2" DEEP AND HOLD 1/4" BELOW SURFACE OF CONCRETE).

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT THE WEST ABUTMENT IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

THE EASTBOUND AND WESTBOUND ALIGNMENTS SHOWN ON THE PLANS ARE PARALLEL TO EACH OTHER.

NEW CONCRETE AT JOINT REPAIR IS PAID FOR AS "CONCRETE MASONRY OVERLAY DECKS".

INSTALL AT PAVING NOTCH A NEW 1" PREFORMED JOINT FILLER WHICH SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY OVERLAY DECKS".

EXISTING UTILITIES ATTACHED TO THE BRIDGE TO REMAIN IN PLACE AND IN SERVICE.

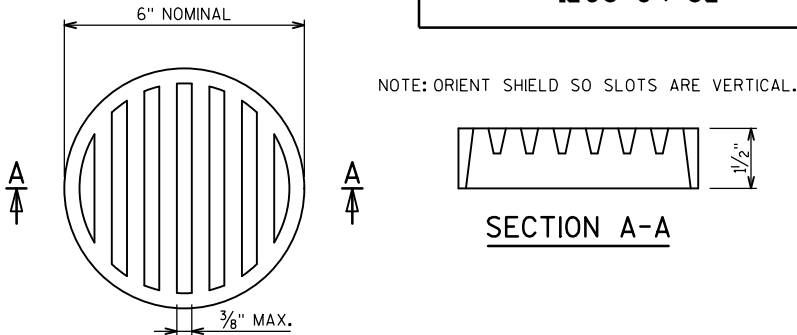
ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

BEVEL EDGES OF EXPOSED CONCRETE TO MATCH EXISTING BEVELS UNLESS OTHERWISE NOTED.

TOTAL ESTIMATED QUANTITIES

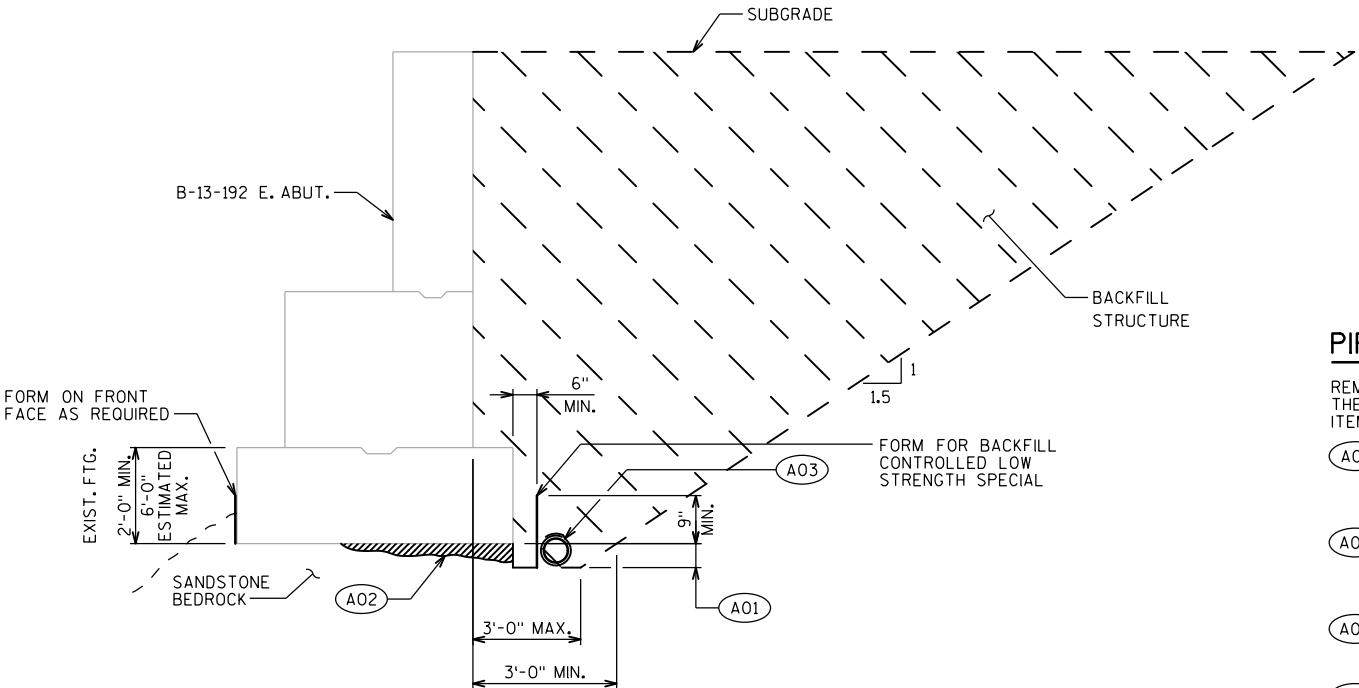
ITEM NO.	BID ITEM	UNIT	TOTAL
203.0200.04	REMOVING OLD STRUCTURE STA. 564WB+25	LS	1
206.1000.02	EXCAVATION FOR STRUCTURES BRIDGES B-13-192	LS	1
206.6000.S	TEMPORARY SHORING	SF	590
210.0100	BACKFILL STRUCTURE	CY	420
502.0717.S	CRACK SEALING EPOXY	LF	360
502.3100.04	EXPANSION DEVICE B-13-192	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	67
502.3215.S	PROTECTIVE SURFACE TREATMENT RESEAL	SY	774
502.5005	MASONRY ANCHORS TYPE L NO.5 BARS	EACH	152
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	4,750
509.1000	JOINT REPAIR	SY	67
509.1500	CONCRETE SURFACE REPAIR	SF	20
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	19
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90
SPV.0035.02	BACKFILL CONTROLLED LOW STRENGTH SPECIAL	CY	9
	NON-BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	1"

ALL ITEMS ARE CATEGORY 0060



RODENT SHIELD

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 OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS. COST OF RODENT SHIELD AND ALL FITTINGS TO BE INCLUDED IN BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

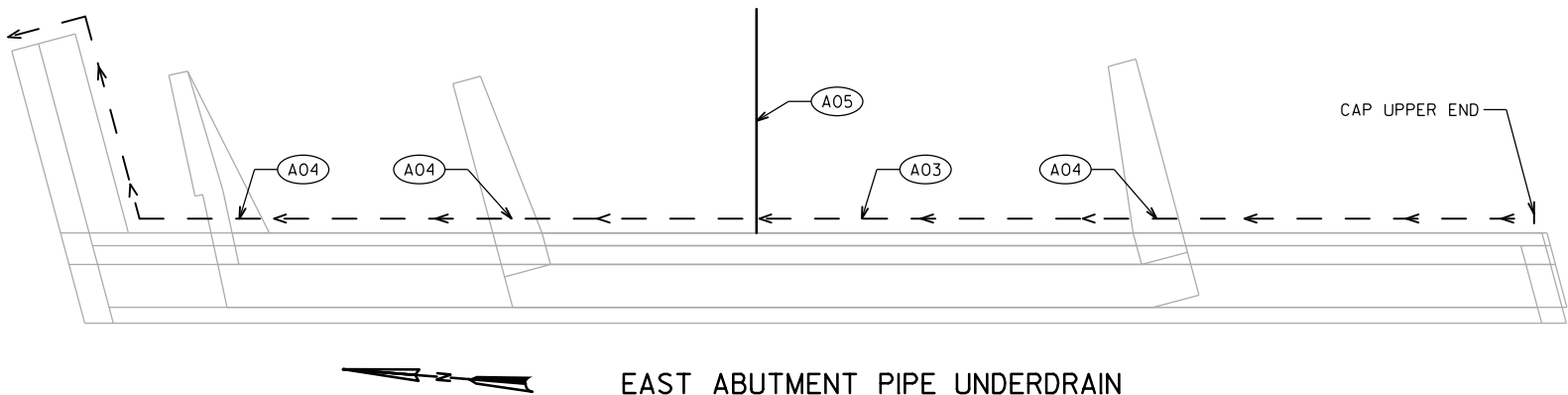


EAST ABUTMENT PIPE UNDERDRAIN SECTION  
(LOOKING NORTH)

PIPE UNDERDRAIN NOTES

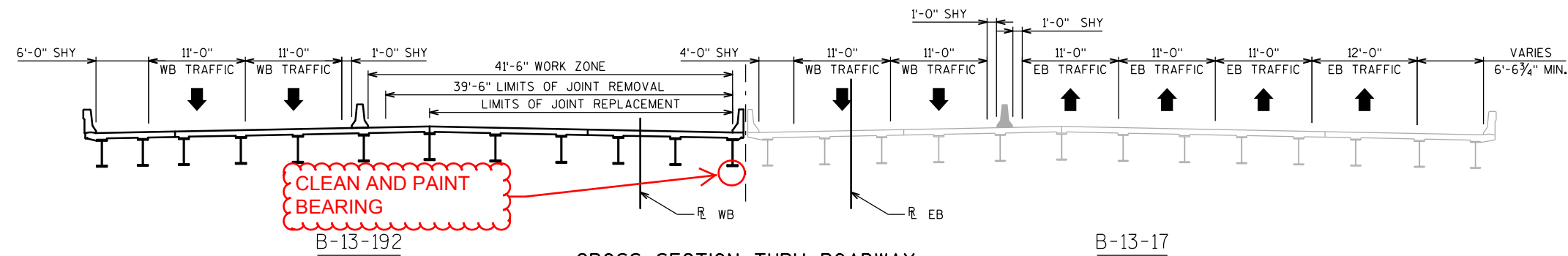
REMOVE ANY EXISTING PIPE UNDERDRAIN BEHIND THE ABUTMENT AND WINGWALL. INCLUDED IN BID ITEM "REMOVING OLD STRUCTURE STA. 564WB+25."

- A01 EXCAVATE 6" MIN. BELOW BOTTOM OF FOOTING OR TO TOP OF SANDSTONE BEDROCK AS DIRECTED BY THE ENGINEER. ENGINEER TO INSPECT BASE OF FOOTING AND ROCK BELOW FOOTING FOR EROSION.
- A02 FILL GAPS BETWEEN ABUTMENT FOOTING AND SANDSTONE BEDROCK WITH BACKFILL CONTROLLED LOW STRENGTH SPECIAL AS DIRECTED BY THE ENGINEER AND AS PER THE SPECIAL PROVISION.
- A03 PIPE UNDERDRAIN WRAPPED 6-INCH, SLOPE 0.5% MIN. TO THE NORTH TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD TO END OF PIPE.
- A04 PORTIONS OF ABANDONED WINGWALLS MAY REMAIN BELOW GRADE. REMOVE AS NEEDED OR CORE THROUGH TO INSTALL NEW PIPE UNDERDRAIN IN PROPER LOCATION. PAID FOR UNDER BID ITEM "REMOVING OLD STRUCTURE STA. 564WB+25."
- A05 TEMPORARY SHORING AS NEEDED PER STAGE TO ALLOW FOR STAGED CONSTRUCTION OF WORK



EAST ABUTMENT PIPE UNDERDRAIN

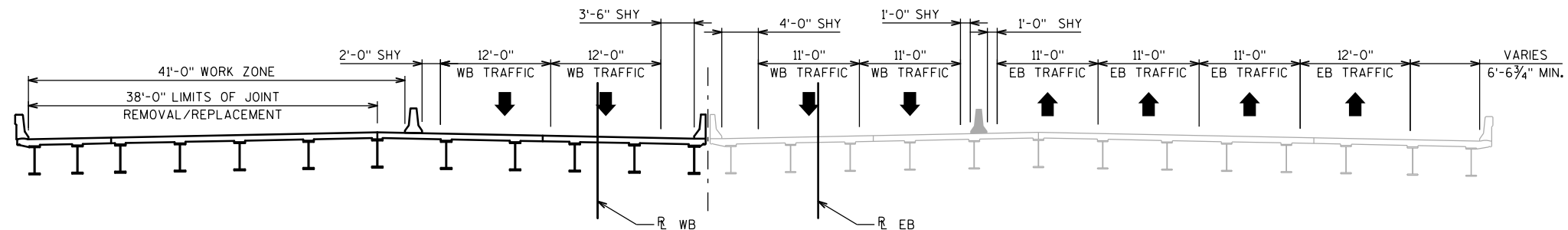
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-192			
DRAWN BY		EAJ	PLANS CK'D. HDA
GENERAL NOTES AND QUANTITIES			SHEET 2 OF 5



CROSS SECTION THRU ROADWAY

## STAGE 1

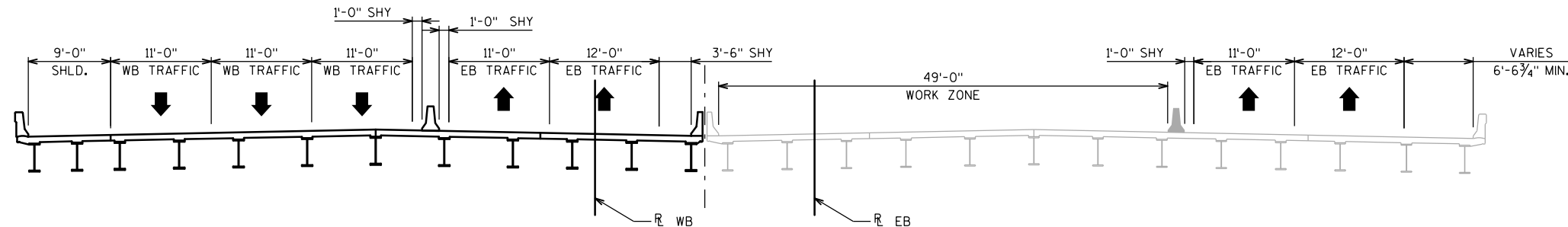
(LOOKING EAST)



CROSS SECTION THRU ROADWAY

## STAGE 2

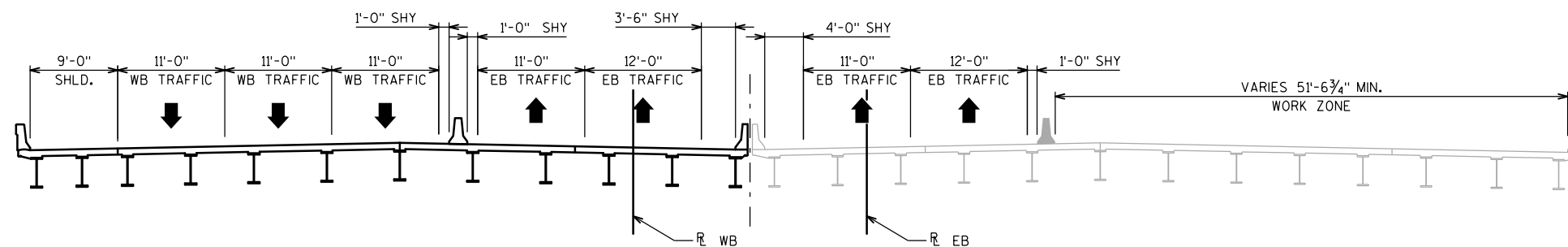
(LOOKING EAST)



CROSS SECTION THRU ROADWAY

## STAGE 3

(LOOKING EAST)



CROSS SECTION THRU ROADWAY

## STAGE 4

(LOOKING EAST)

## NOTES

SEE ROADWAY PLANS FOR COMPLETE PROJECT STAGING DETAILS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-192			
DRAWN BY		KTM	PLANS CK'D. HDA
CONSTRUCTION STAGING			SHEET 3 OF 5

EXPANSION JOINT 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 & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

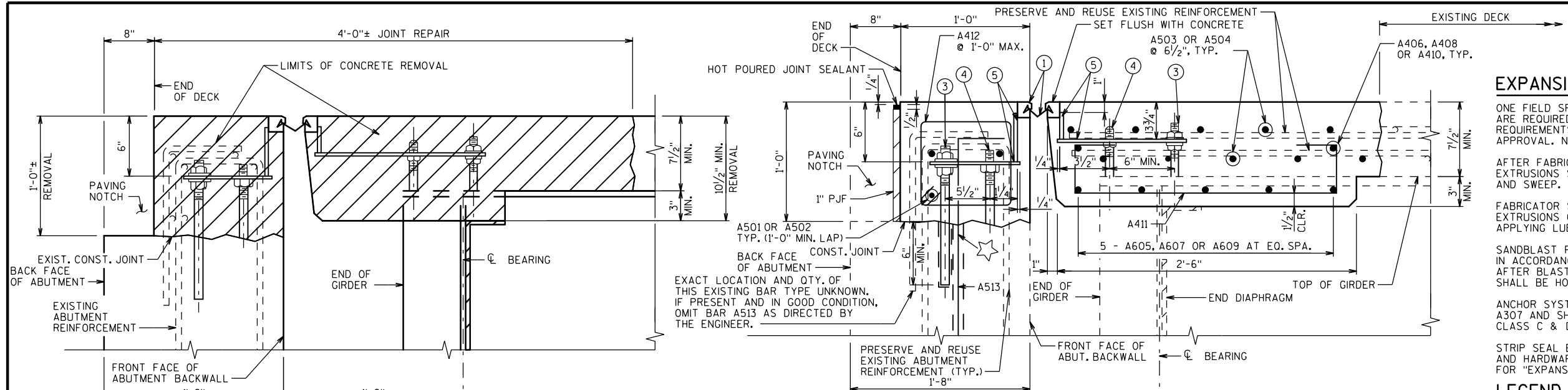
ANCHOR SYSTEM NO. 8 & NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-13-192".

LEGEND

- NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.
- STUDS  $\frac{5}{8}$ " DIA.  $\times$   $6\frac{3}{8}$ " LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- $\frac{1}{2}$ " THICK ANCHOR PLATE WITH  $\frac{5}{8}$ " DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- $\frac{3}{4}$ " DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. FOR STEEL GIRDERS 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.
- $\frac{3}{4}$ " DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- FABRICATE SUPPORT FROM 3"  $\times$   $\frac{1}{2}$ " 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  $\frac{1}{2}$ " DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
- GALVANIZED PLATE  $\frac{3}{8}$ "  $\times$   $10\frac{1}{2}$ "  $\times$  2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
- $\frac{3}{4}$ " DIA.  $\times$   $1\frac{1}{2}$ " STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTER SUNK HOLE. RECESS  $\frac{1}{16}$ " BELOW PLATE SURFACE.
- $\frac{3}{4}$ " DIA.  $\times$  4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- $\frac{3}{4}$ " DIA.  $\times$  2  $\frac{1}{4}$ " GALVANIZED THREADED COUPLING.
- 1"  $\times$  5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. SLOT PARALLEL TO DIRECTION OF MOVEMENT.
- SET JOINT OPENING AT  $1\frac{3}{4}$ "

★ MASONRY ANCHORS, TYPE L NO. 5 BARS. EMBED A MINIMUM OF 1'-6" INTO CONCRETE SPACE AT 1'-0" MAX. AND AVOID EXPANSION JOINT HARDWARE. TURN 10° LEG AS NECESSARY TO FIT. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.

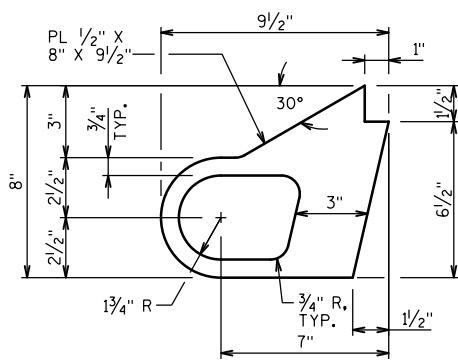


EXISTING SECTION AT ABUTMENTS

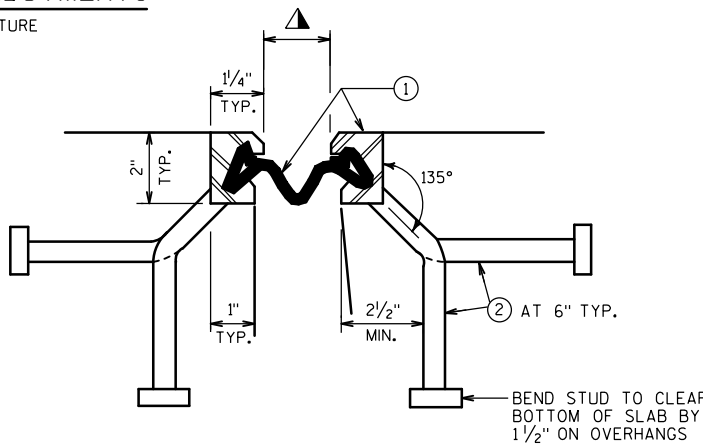
NORMAL TO C/L SUBSTRUCTURE

PROPOSED SECTION AT ABUTMENTS

NORMAL TO C/L SUBSTRUCTURE

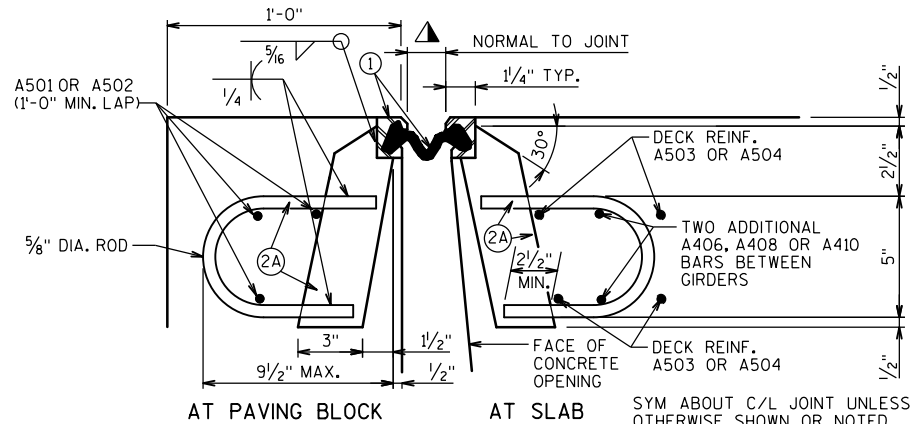


ALTERNATE STRIP SEAL ANCHOR



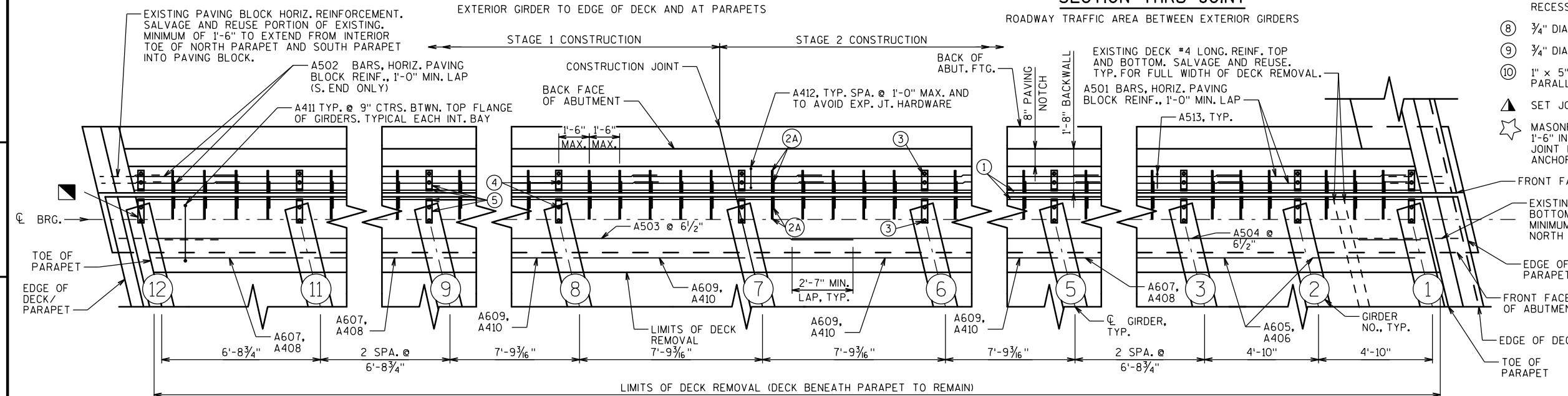
SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PLAN B-13-17 WEST ABUTMENT/DECK (EAST ABUTMENT/DECK SIMILAR)

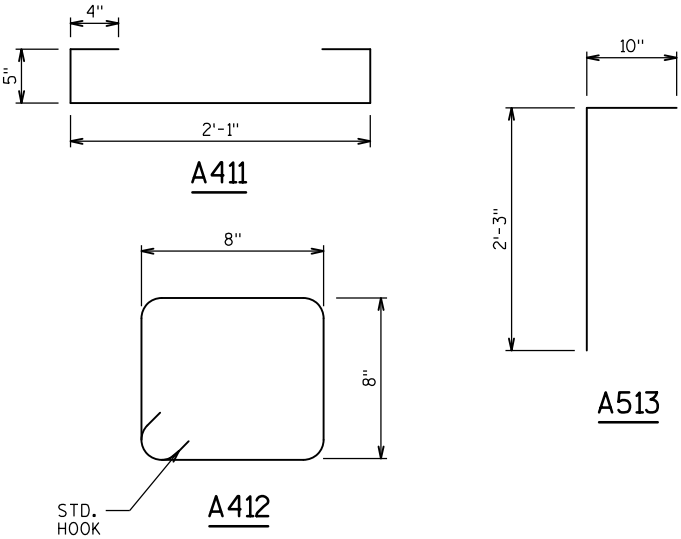
(SEE EXPANSION JOINT DETAILS SHEET FOR BILL OF BARS)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-192			
DRAWN BY		EAJ	PLANS CKD. HDA
EXPANSION JOINT			SHEET 4 OF 5

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A501	X	60	8'-0"			PAVING BLOCK - HORIZ. STAGES 1 AND 2
A502	X	6	4'-3"			PAVING BLOCK - HORIZ. STAGE 1
A503	X	20	40'-0"			DECK - TRANSVERSE STAGE 1
A504	X	20	37'-2"			DECK - TRANSVERSE STAGE 2
A605	X	20	4'-4"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 2
A406	X	16	4'-4"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 2
A607	X	50	6'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 1 AND 2
A408	X	40	6'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 1 AND 2
A609	X	40	7'-3"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 1 AND 2
A410	X	32	7'-3"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 1 AND 2
A411	X	194	3'-3"	X		DIAPHRAGM - STIRRUPS BETWEEN GIRDERS
A412	X	152	3'-2"	X		PAVING BLOCK - STIRRUP
A513	X	152	3'-0"	X		PAVING BLOCK - ANCHOR

NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



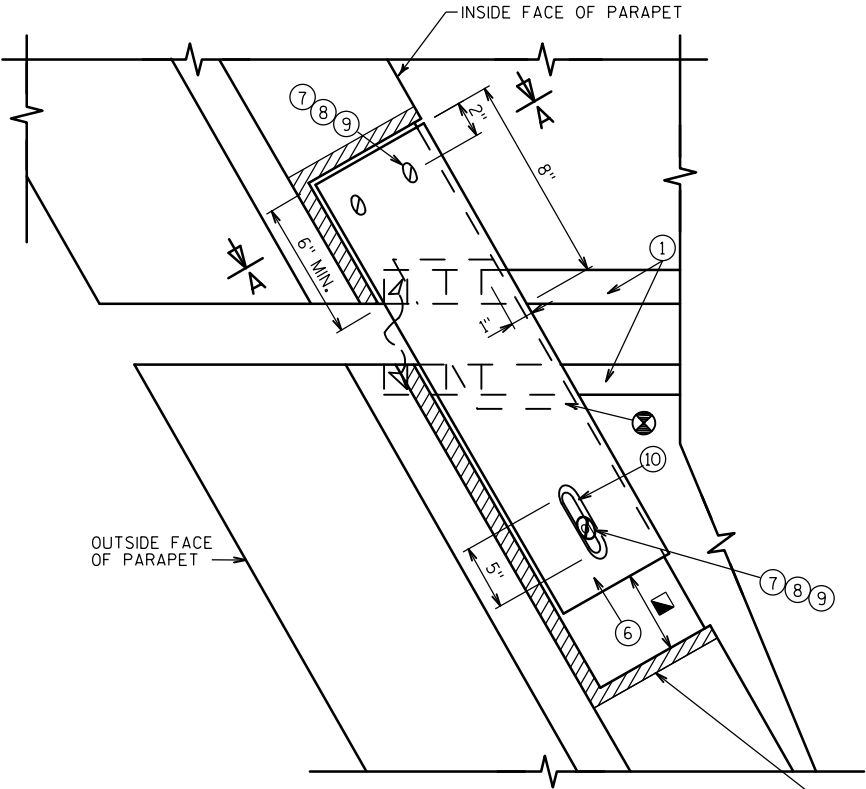
NOTE

SEE EXPANSION JOINT SHEET FOR ADDITIONAL INFORMATION.

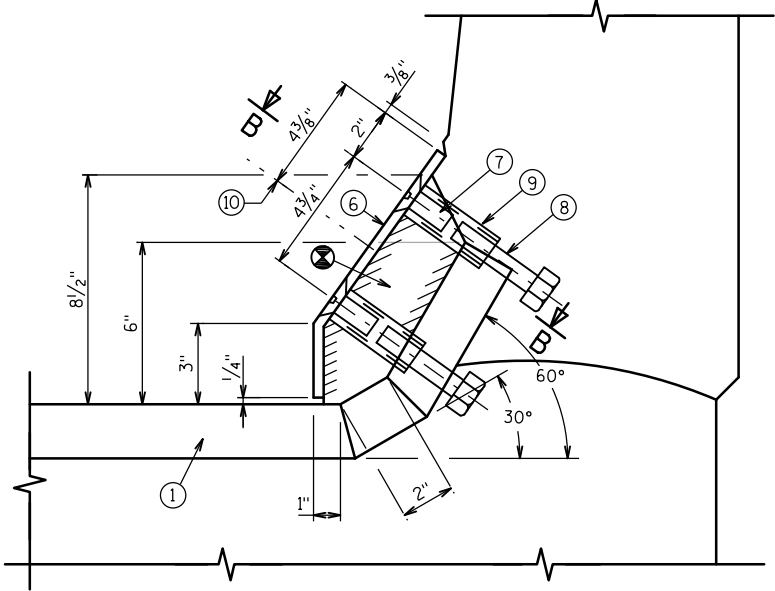
LEGEND

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"

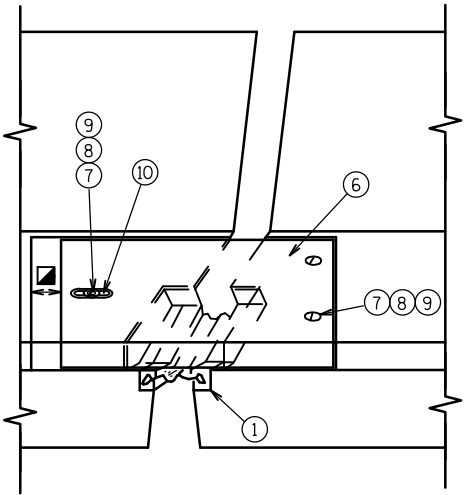
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-192			
DRAWN BY		EAJ	PLANS CK'D. HDA
EXPANSION JOINT DETAILS			SHEET 5 OF 5



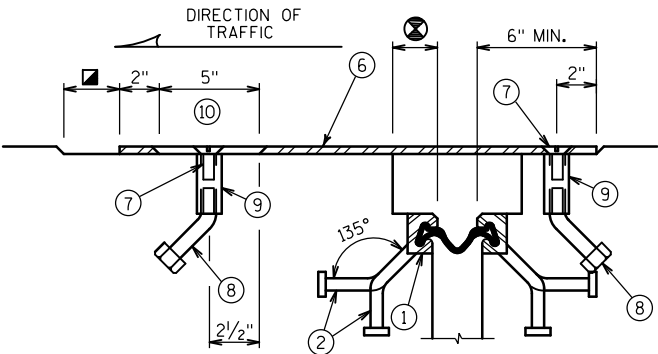
PLAN AT SLOPED FACE PARAPET



SECTION A-A

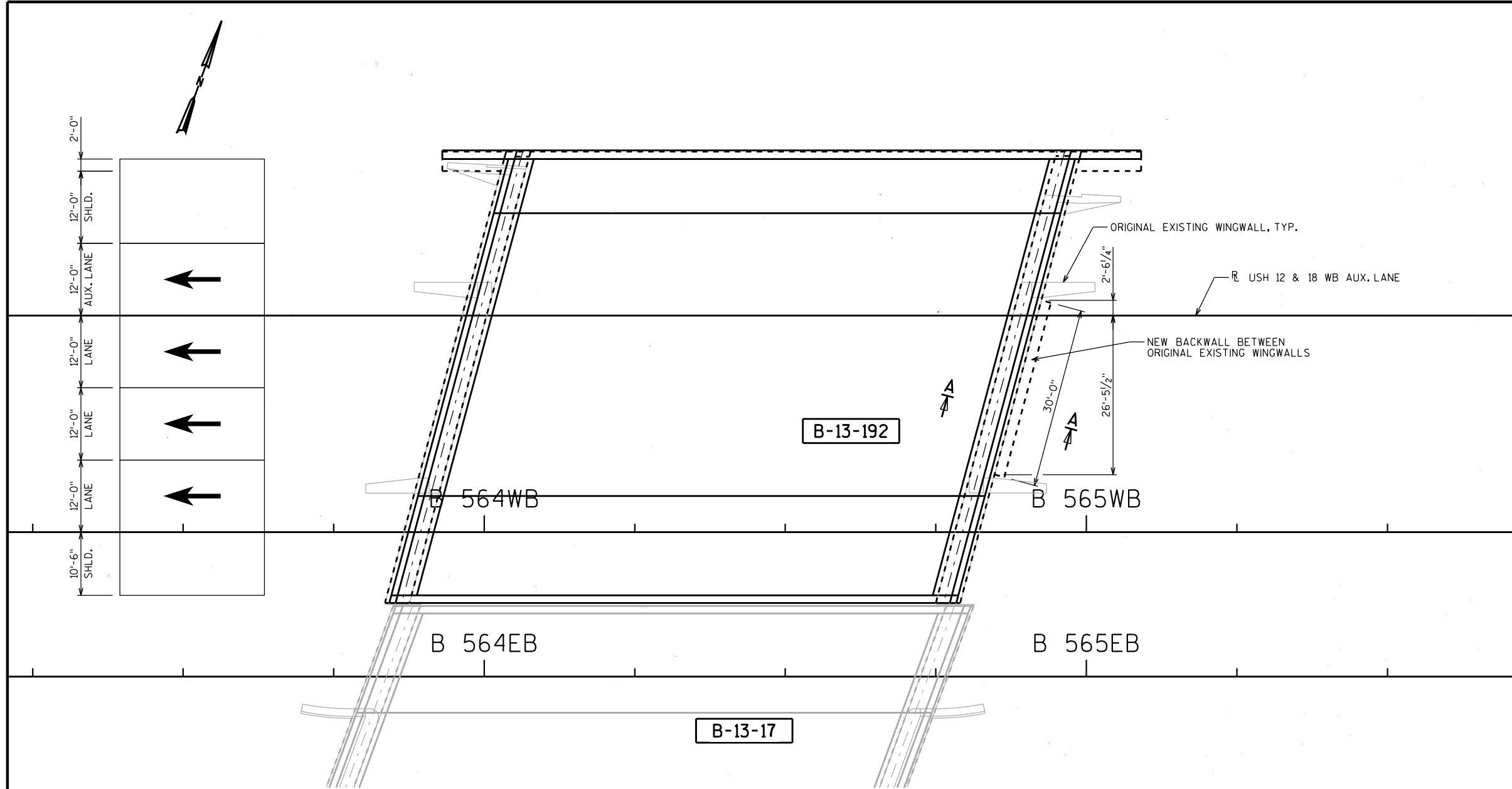


VIEW OF SLOPED FACE PARAPET  
PLATES FROM ROADWAY



SECTION B-B





NOTES

SEE SHEET 5B FOR SECTION A-A

LEGEND

→ TRAFFIC DIRECTION

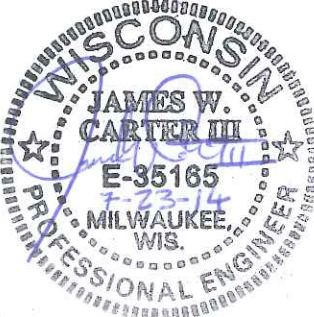
PLAN

(SINGLE SPAN STEEL PLATE GIRDERS)

ULTIMATE STRESSES FOR MATERIALS

CONCRETE MASONRY .....  $f'_c = 4,000$  psi  
BAR STEEL REINFORCEMENT .....  $f_y = 60,000$  psi

Plan Sheet  
Accepted By **WISDOT**  
**BUREAU OF STRUCTURES**



NO.	DATE	REVISION	BY
1	7/23/14	NEW SHEET	MSS
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-192			
DRAWN BY		MSS	PLANS CK'D. JWC
BACKWALL REPAIR PLAN		SHEET 5A OF 5	
		501A	

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

UNDER THE BID ITEM "MASONRY ANCHORS TYPE L NO. 5 BARS", ANCHORED REINFORCING STEEL SHALL BE PAID FOR SEPARATELY AS PROVIDED IN SECTION 505 OF THE STANDARD SPECIFICATIONS FOR BAR STEEL REINFORCEMENT.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

CLEAN AND FILL EXISTING CRACKS IN BACKWALL WITH POLYURETHANE CRACK SEALER. PAYMENT IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

THE EASTBOUND AND WESTBOUND ALIGNMENTS SHOWN ON THE PLANS ARE PARALLEL TO EACH OTHER.

INSTALL AT EXISTING PAVING NOTCH A NEW 1" POLYSTYRENE PAD THE LENGTH OF THE RETROFIT WHICH SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

EXISTING UTILITIES ATTACHED TO THE BRIDGE TO REMAIN IN PLACE AND IN SERVICE.

BEVEL EDGES OF EXPOSED CONCRETE TO MATCH EXISTING BEVELS UNLESS OTHERWISE NOTED.

STATE PROJECT NUMBER

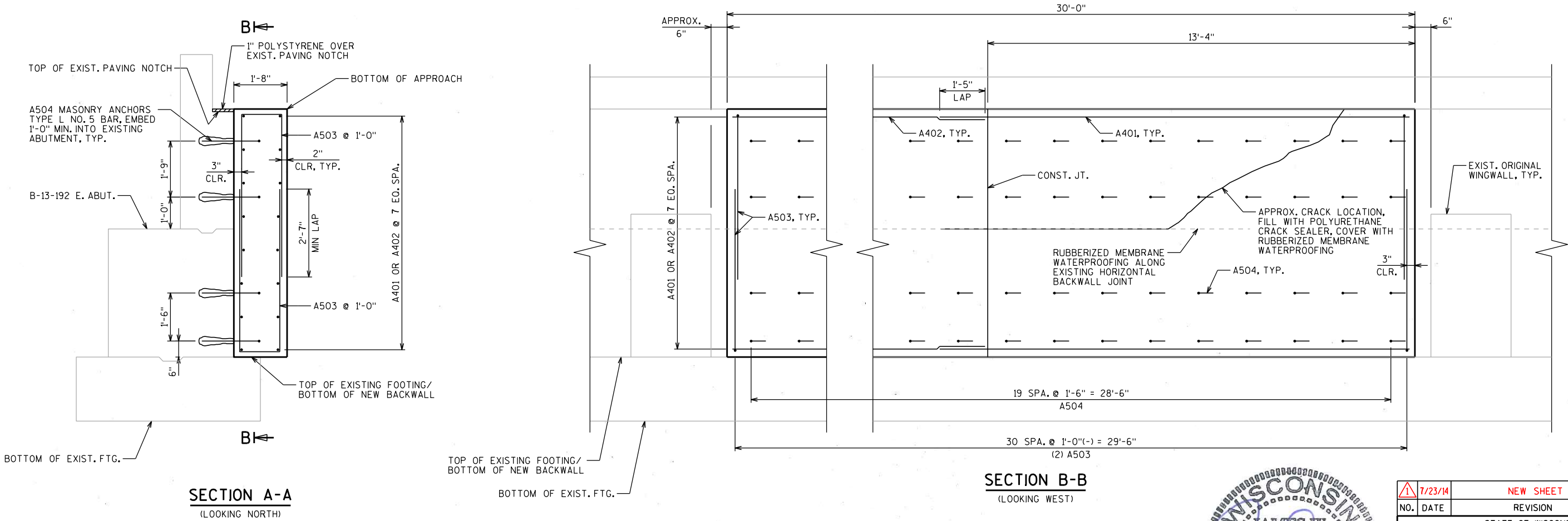
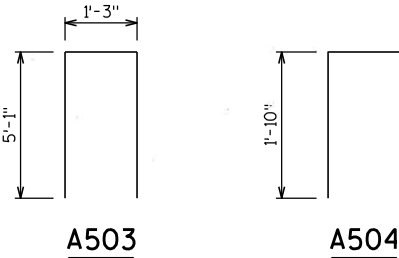
1206-04-62

BACKWALL REPAIR ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
502.0100	CONCRETE MASONRY BRIDGES	CY	14
502.5005	CONCRETE MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	80
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1,240
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6
NON-BID ITEMS			
	POLYURETHANE JOINT SEALER	-	-
	POLYSTYRENE	SIZE	1"

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A401	X	16	14'-8"			BACKWALL - HORIZ.
A402	X	16	16'-4"			BACKWALL - HORIZ.
A503	X	62	11'-2"	X		BACKWALL - VERT.
A504	X	80	2'-3"	X		BACKWALL - ANCHORS

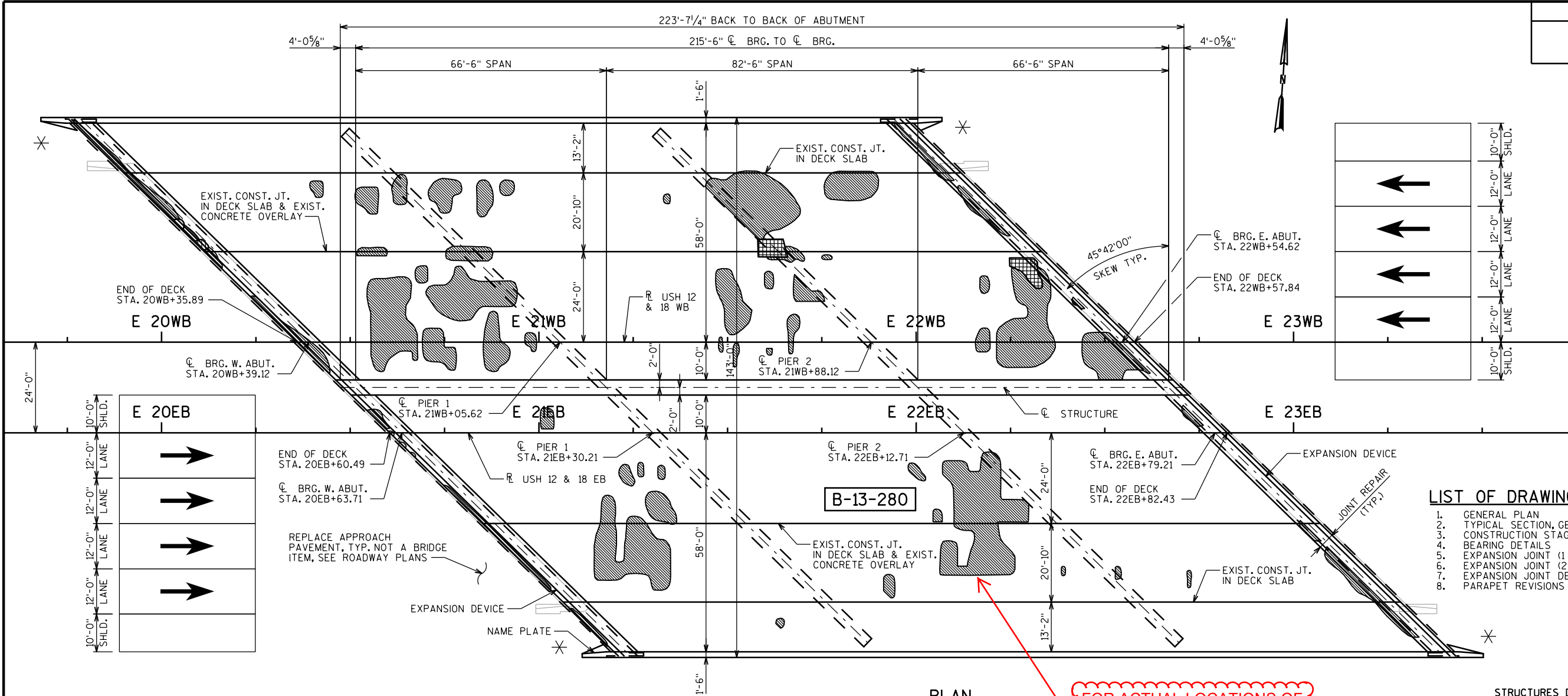


SECTION B-B  
(LOOKING WEST)

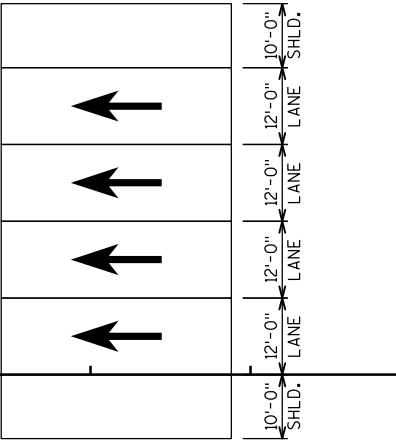
SECTION A-A  
(LOOKING NORTH)



7/23/14	NEW SHEET	MSS
NO. DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE B-13-192		
DRAWN BY	MSS	PLANS CK'D. JWC
BACKWALL REPAIR DETAILS		SHEET 5B OF 5
		501B



STATE PROJECT NUMBER  
1206-04-62



- LIST OF DRAWINGS**
- 1. GENERAL PLAN
  - 2. TYPICAL SECTION, GENERAL NOTES AND QUANTITIES
  - 3. CONSTRUCTION STAGING
  - 4. BEARING DETAILS
  - 5. EXPANSION JOINT (1 OF 2)
  - 6. EXPANSION JOINT (2 OF 2)
  - 7. EXPANSION JOINT DETAILS
  - 8. PARAPET REVISIONS

**STRUCTURES DESIGN CONTACTS**  
BRIDGE OFFICE:  
WILLIAM DREHER (608) 266-8489  
CONSULTANT:  
HEATHER ANDERS (414) 359-2300

**LEGEND**

→ TRAFFIC DIRECTION

✱ PROVIDE ANCHORAGE FOR STEEL PLATE BEAM GUARD (REMOVAL AND REPLACEMENT OF END OF CONCRETE PARAPET REQUIRED)

**TRAFFIC DATA**  
USH 12/18 EB & WB  
A.D.T. = 123,000 (2014)  
R.D.S. = 60 MPH

**DESIGN DATA**  
**LIVE LOAD:**  
DESIGN LOADING: HS20  
INVENTORY RATING: HS15  
OPERATING RATING: HS27  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 190 KIPS

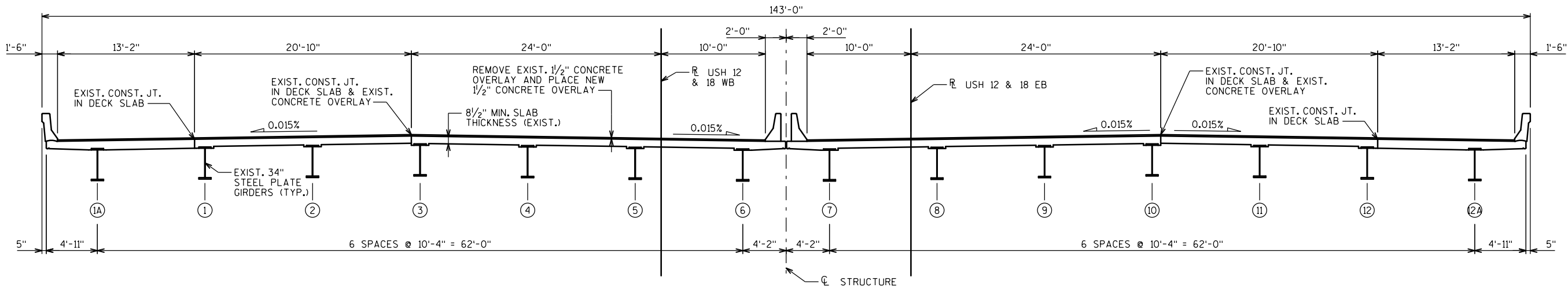
**ULTIMATE STRESSES FOR MATERIALS**  
CONCRETE MASONRY:  
SUPERSTRUCTURE ..... f'c = 4,000 psi  
ALL OTHER ..... f'c = 3,500 psi  
BAR STEEL REINFORCEMENT ..... fy = 60,000 psi  
STEEL BEARINGS  
(A.S.T.M. A709 GRADE 50W) ..... fs = 27,000 psi

**DECK INSPECTION RESULTS**  
(INFRARED INSPECTION DATE: 7/15/13)

FIELD OBSERVATIONS SUMMARY		S.N. B-13-280		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	ft <sup>2</sup>	30178		DELAMINATION	
SHADE/DEBRIS	ft <sup>2</sup>	0		SPALL	
DEBOND	ft <sup>2</sup>	3030	10.0	DEBOND	
SPALL	ft <sup>2</sup>	7	<0.1	ASPHALT PATCH	
DEBOND	ft <sup>2</sup>	0		CONCRETE PATCH	
ASPHALT PATCH	ft <sup>2</sup>	72	0.2	SHADE/DEBRIS	
CONCRETE PATCH	ft <sup>2</sup>	5	<0.1		



NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
<b>HNTB</b>		11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2300	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher		12/11/13
CHIEF STRUCTURES DESIGN ENGINEER		DATE	
STRUCTURE B-13-280			
USH 12 & 18 OVER WSOR (FORMERLY CMSTPP RR)			
COUNTY	DANE	TOWN/CITY/VILLAGE	MADISON
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	KTM	DESIGN CK'D.	HDA
DRAWN BY	KTM	PLANS CK'D.	HDA
GENERAL PLAN			SHEET 1 OF 8



DECK CROSS SECTION  
(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

INFRARED INSPECTION DATA PROVIDED FOR INFORMATION ONLY. INFRARED INSPECTION DATE: 7-15-2013

LOCATIONS OF THE FOLLOWING BID ITEMS SHALL BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER:  
- PREPARATION DECKS  
- CONCRETE SURFACE REPAIR  
- FULL DEPTH DECK REPAIR

QUANTITES SHOWN FOR THE ABOVE BID ITEMS, EXCEPT BEARING WORK, ARE APPROXIMATE.

UNDER THE BID ITEM "MASONRY ANCHORS TYPE L", ANCHORED REINFORCING STEEL SHALL BE PAID FOR SEPARATELY AS PROVIDED IN SECTION 505 OF THE STANDARD SPECIFICATIONS FOR BAR STEEL REINFORCEMENT.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

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

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-13-280".

CONTACT THE BUREAU OF STRUCTURES DESIGN SECTION BEFORE PLACEMENT OF THE OVERLAY IF THE AVERAGE THICKNESS OF THE NEW OVERLAY WILL EXCEED 1/2" MORE THAN THE AVERAGE OVERLAY THICKNESS SHOWN ON THIS PLAN.

"PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED ON STRUCTURE B-13-280 TO THE FOLLOWING SURFACES:  
- TOP OF DECK/SLAB OVERLAY  
- TOP AND INSIDE FACES OF NEW CONCRETE AT PARAPET REPAIRS/REPLACEMENTS

PROTECTIVE SURFACE TREATMENT, PAID FOR UNDER "PROTECTIVE SURFACE TREATMENT RESEAL" SHALL BE APPLIED ON STRUCTURE B-13-280 TO THE FOLLOWING SURFACES:  
- TOP AND INSIDE FACES OF EXISTING PARAPETS

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

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1" JOINT FILLER WITH HOT POURED JOINT SEALANT (1/2" DEEP AND HOLD 1/4" BELOW SURFACE OF CONCRETE).

REMOVE DESIGNATED MOVEABLE BEARING ASSEMBLIES AT THE ABUTMENTS AND PIERS UNDER THE BID ITEM "REMOVING BEARINGS B-13-280" AND REPLACE IN KIND.

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

REPLACEMENT MOVEABLE BEARINGS SHALL BE PAINTED LIGHT GRAY, FEDERAL COLOR NUMBER 26293.

REMOVE EXISTING CONCRETE OVERLAY. MILL SURFACE OF ORIGINAL DECK ±1/4". MILLING SHALL BE INCLUDED WITH THE BID ITEM "REMOVING CONCRETE MASONRY DECK OVERLAY".

THE EASTBOUND AND WESTBOUND ALIGNMENTS SHOWN ON THE PLANS ARE PARALLEL TO EACH OTHER.

NEW CONCRETE AT JOINT REPAIR IS PAID FOR AS "CONCRETE MASONRY OVERLAY DECKS".

INSTALL AT PAVING NOTCH A NEW 1" PREFORMED JOINT FILLER WHICH SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY OVERLAY DECKS".

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR.

"REMOVING OLD STRUCTURE STA. 22EB+00" INCLUDES PARTIAL REMOVAL OF ALL WINGWALL PARAPETS AS INDICATED ON PLANS.

"CONCRETE MASONRY BRIGES" INCLUDES CONCRETE REQUIRED TO REPAIR/REPLACE PARAPET AT ALL WINGWALLS.

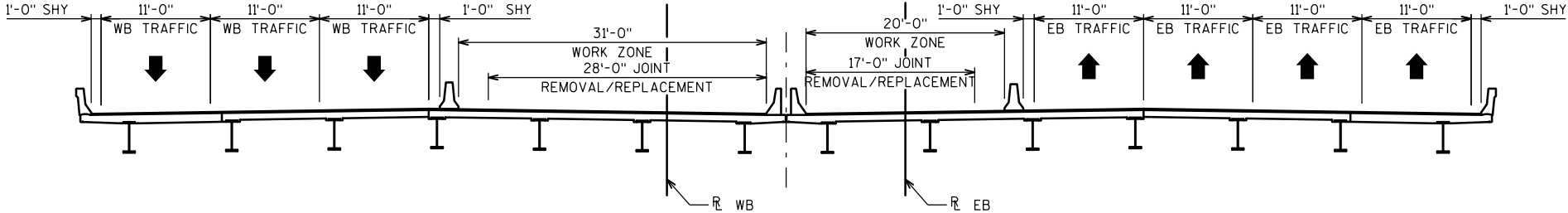
BEVEL EDGES OF EXPOSED CONCRETE TO MATCH EXISTING BEVELS UNLESS OTHERWISE NOTED.

TOTAL ESTIMATED QUANTITIES

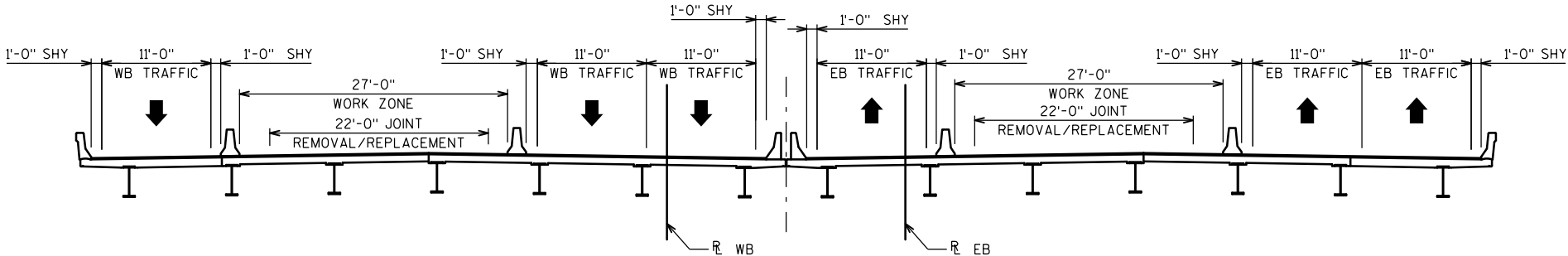
ITEM NO.	BID ITEM	UNIT	TOTAL
203.0200.05	REMOVING OLD STRUCTURE STA. 22EB+00	LS	1
203.0225.S	DEBRIS CONTAINMENT B-13-280	LS	1
502.0100	CONCRETE MASONRY BRIDGES	CY	3
502.3100.05	EXPANSION DEVICE B-13-280	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	3,364
502.3215.S	PROTECTIVE SURFACE TREATMENT RESEAL	SY	350
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	404
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	40
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	15,470
505.0904	BAR COUPLERS NO. 4	EACH	32
505.0905	BAR COUPLERS NO. 5	EACH	24
505.0906	BAR COUPLERS NO. 6	EACH	80
506.0907	BAR COUPLERS NO. 7	EACH	40
506.6000	BEARING ASSEMBLIES EXPANSION B-13-280	EACH	4
506.7050.S	REMOVING BEARINGS B-13-280	EACH	4
509.0301	PREPARATION DECKS TYPE 1	SY	402
509.0302	PREPARATION DECKS TYPE 2	SY	161
509.1000	JOINT REPAIR	SY	173
509.1500	CONCRETE SURFACE REPAIR	SF	40
509.2000	FULL-DEPTH DECK REPAIR	SY	67
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	293
509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-13-280	SY	3,181
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4
SPV.0090.05	SILICONE BRIDGE JOINT SEALANT	LF	222
SPV.0180.03	CLEAN ABUTMENT SEATS	SY	112
NON-BID ITEMS			
	NAME PLATE	EACH	1
	PREFORMED JOINT FILLER	SIZE	1"

ALL ITEMS ARE CATEGORY 0070

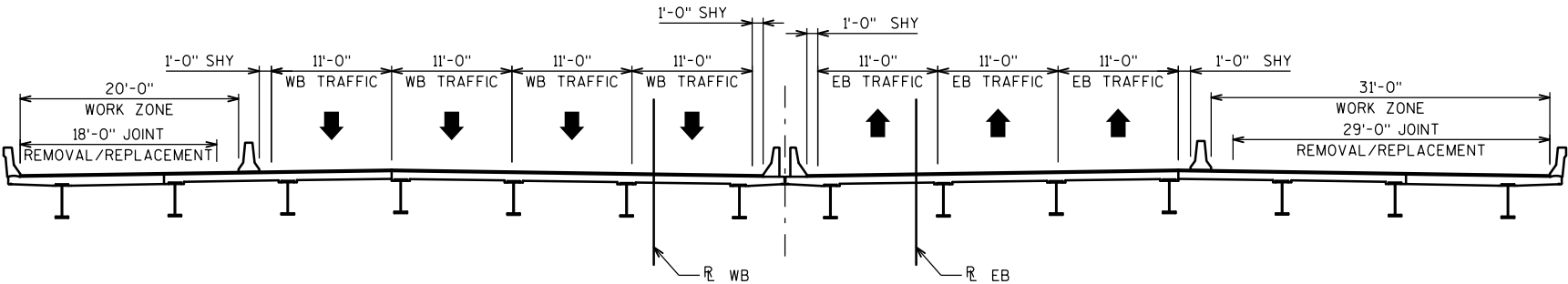
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-280			
		DRAWN BY KTM	PLANS CK'D. HDA
TYPICAL SECTION, GENERAL NOTES AND QUANTITIES			SHEET 2 OF 8



CROSS SECTION THRU ROADWAY  
STAGE 1  
(LOOKING EAST)



CROSS SECTION THRU ROADWAY  
STAGE 2  
(LOOKING EAST)



CROSS SECTION THRU ROADWAY  
STAGE 3  
(LOOKING EAST)

NOTES

SEE ROADWAY PLANS FOR COMPLETE  
PROJECT STAGING DETAILS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-280			
		DRAWN BY KTM	PLANS CK'D. HDA
CONSTRUCTION STAGING			SHEET 3 OF 8

FINISH BOTTOM OF PLATE  
ANSI 125 IN DIRECTION OF  
MOVEMENT. PROTECT FROM  
BLASTING.

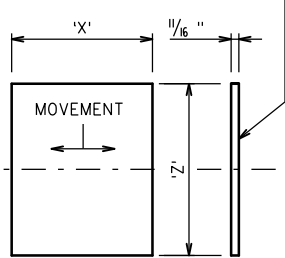


PLATE "A"

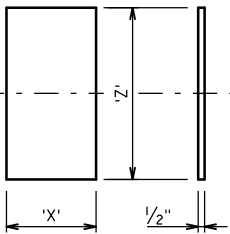
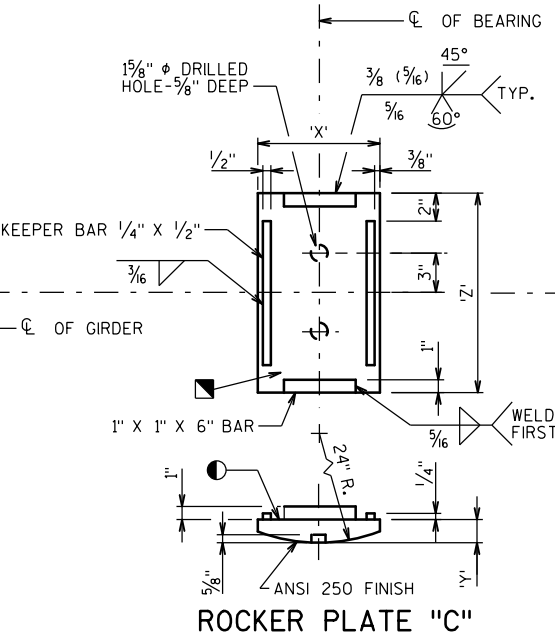
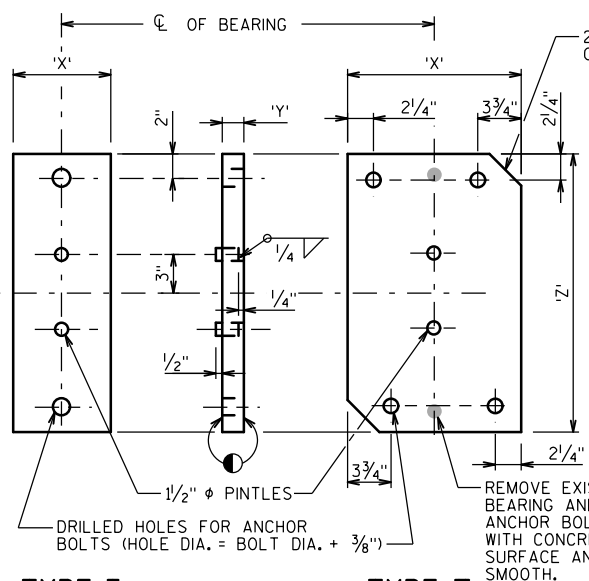


PLATE "B"

LUBRICATED BRONZE PLATE.  
LUBRICATE TOP SURFACE ONLY.



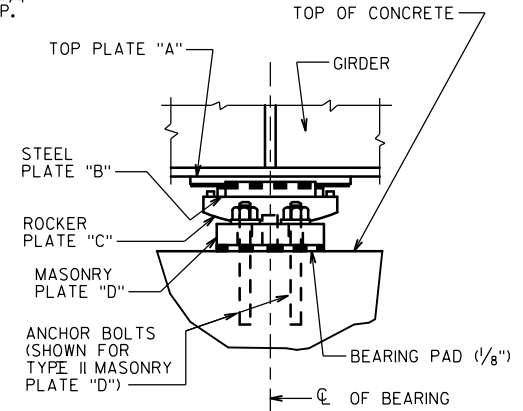
ROCKER PLATE "C"



TYPE I

TYPE II

MASONRY PLATE "D"



EXPANSION BEARING  
ASSEMBLY

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT CL OF GIRDER AND CL 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 1 1/4"  $\phi$  AND 1'-10 FOR 1 1/2"  $\phi$  BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, 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 1/8" 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-13-280", EACH.

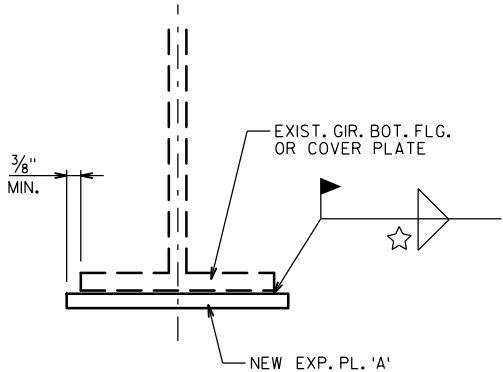
ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

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.

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

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

	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'-2"	7"	1'-2"	9"	1 1/16"	1'-4 1/4"	1'-3"	1 1/2"	2'-0"	II	1 1/4" $\phi$	4	ABUTMENTS - SEE LOCATION PLAN



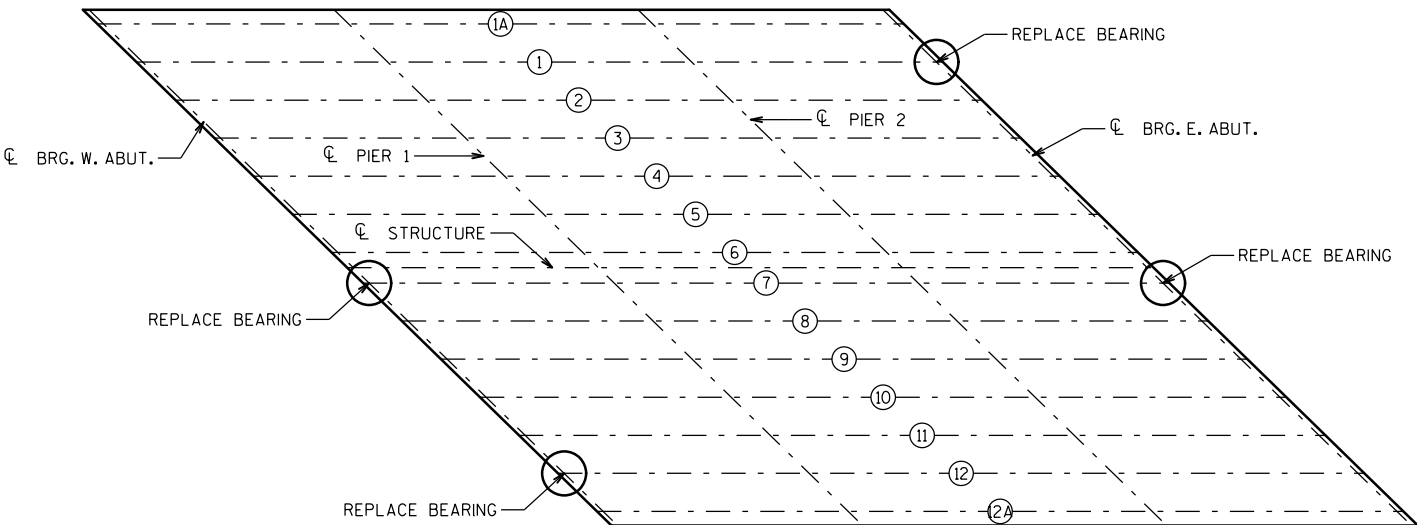
BEARING REPLACEMENT DETAILS

TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	$\pm$ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	$\Delta$ 5/16"
OVER 1 1/2" TO 2 1/4"	$\Delta$ 3/8"
OVER 2 1/4" TO 6"	$\Delta$ 1/2"

$\pm$  EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

$\Delta$  MIN. PASS SIZE IS 5/16"



BEARING REPLACEMENT LOCATIONS

(X) GIRDER NUMBER

REMOVE INDICATED BEARINGS, CUT OFF EXISTING ANCHORS BOLTS AND GRIND FLUSH WITH ABUTMENT SEAT. PAID FOR UNDER BID ITEM "REMOVING BEARINGS B-13-280".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-280			
DRAWN BY		KTM	PLANS CKD. HDA
BEARING DETAILS			SHEET 4 OF 8



EXPANSION JOINT 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.

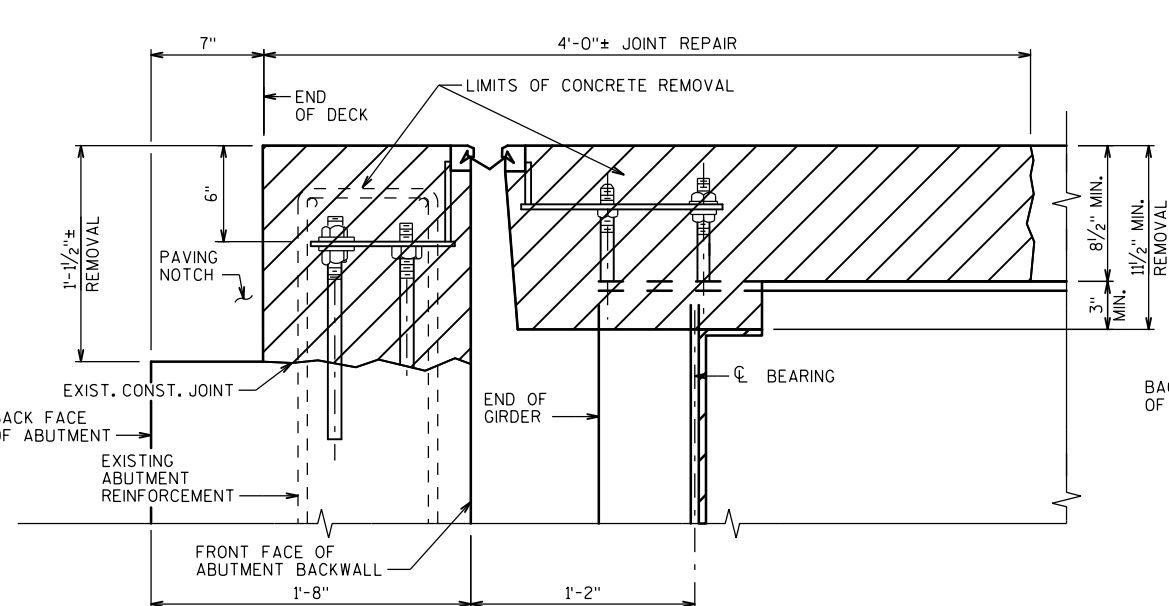
SANDBLAST PLATES, SUPPORTS & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 & NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & 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-13-280".

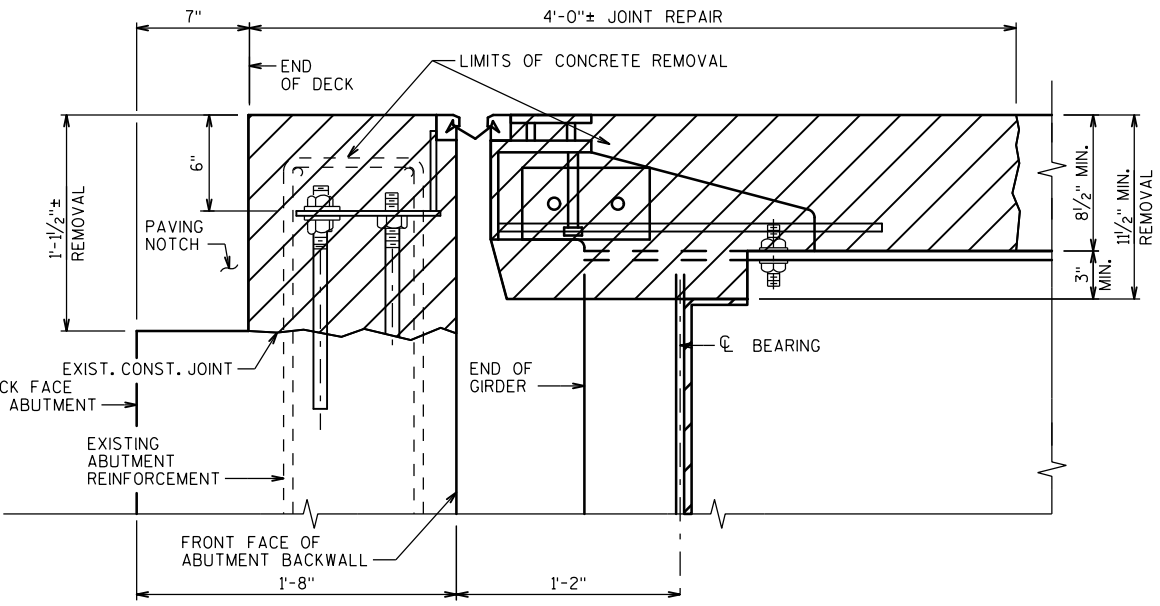
LEGEND

- NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.
- STUDS  $\frac{5}{8}$ " DIA. x  $6\frac{3}{8}$ " LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- $\frac{1}{2}$ " THICK ANCHOR PLATE WITH  $\frac{5}{8}$ " DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- $\frac{3}{4}$ " DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. FOR STEEL GIRDERS 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.
- $\frac{3}{4}$ " DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- FABRICATE SUPPORT FROM 3" x  $\frac{1}{2}$ " 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  $\frac{1}{2}$ " DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
- GALVANIZED PLATE  $\frac{3}{8}$ " x  $10\frac{1}{2}$ " x 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
- $\frac{3}{4}$ " DIA. x  $1\frac{1}{2}$ " STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTER SUNK HOLE. RECESS  $\frac{1}{16}$ " BELOW PLATE SURFACE.
- $\frac{3}{4}$ " DIA. x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- $\frac{3}{4}$ " DIA. x 2  $\frac{1}{4}$ " GALVANIZED THREADED COUPLING.
- 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. SLOT PARALLEL TO DIRECTION OF MOVEMENT.
- SET JOINT OPENING AT  $1\frac{3}{4}$ "
- MASONRY ANCHORS, TYPE L NO. 5 BARS. EMBED A MINIMUM OF 1'-6" INTO CONCRETE SPACE AT 1'-0" MAX. AND AVOID EXPANSION JOINT HARDWARE. TURN 10" LEG AS NECESSARY TO FIT. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.



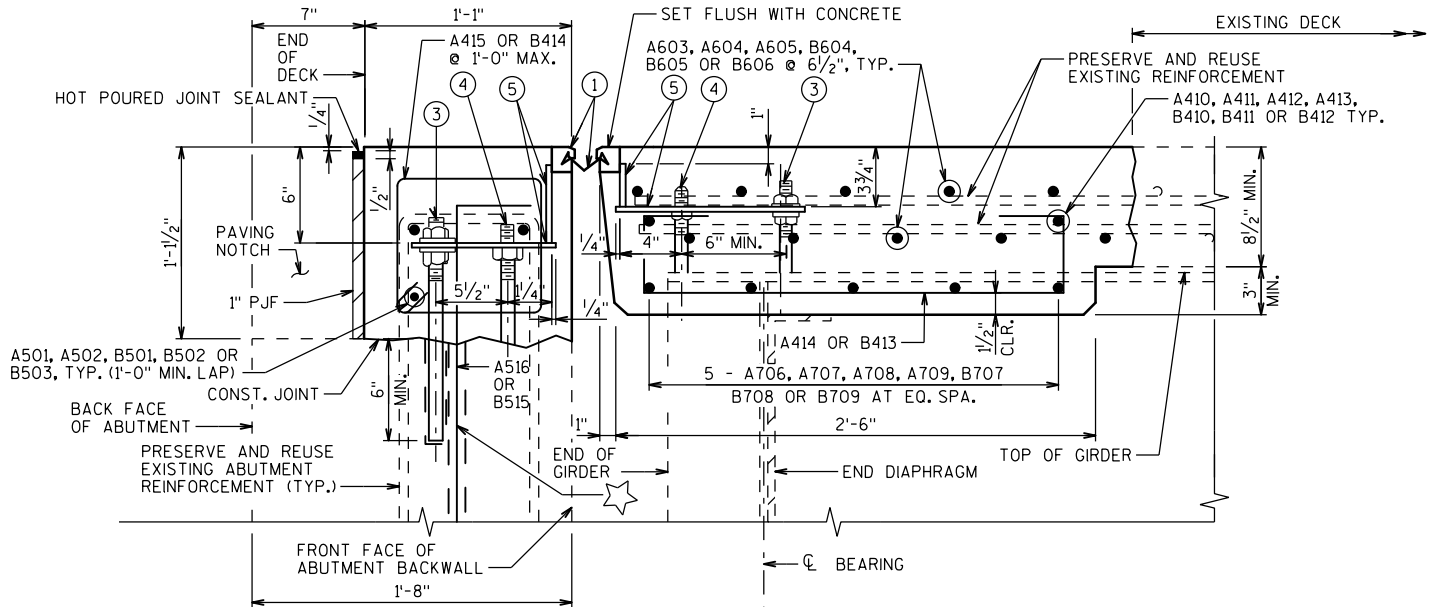
EXISTING SECTION AT ABUTMENTS (EXTERIOR PORTION, APPROX. 19' EACH END)

NORMAL TO CL SUBSTRUCTURE



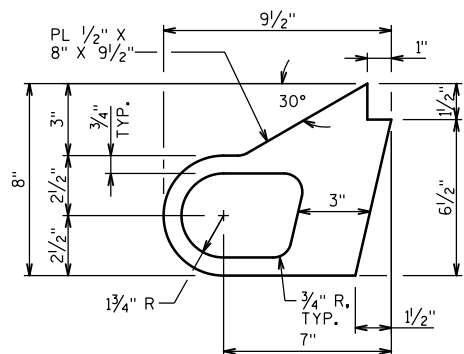
EXISTING SECTION AT ABUTMENTS (INTERIOR PORTION)

NORMAL TO CL SUBSTRUCTURE

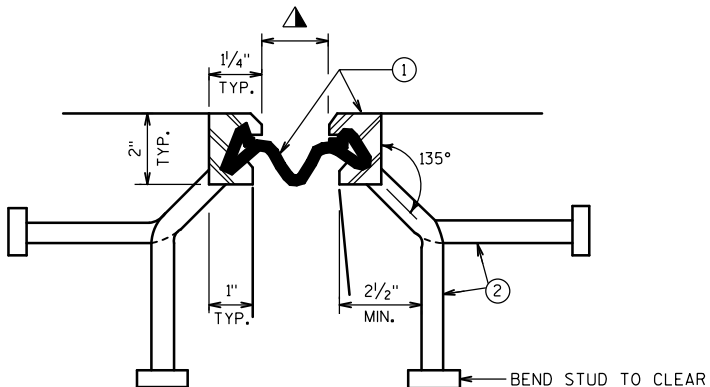


PROPOSED SECTION AT ABUTMENTS

NORMAL TO CL SUBSTRUCTURE

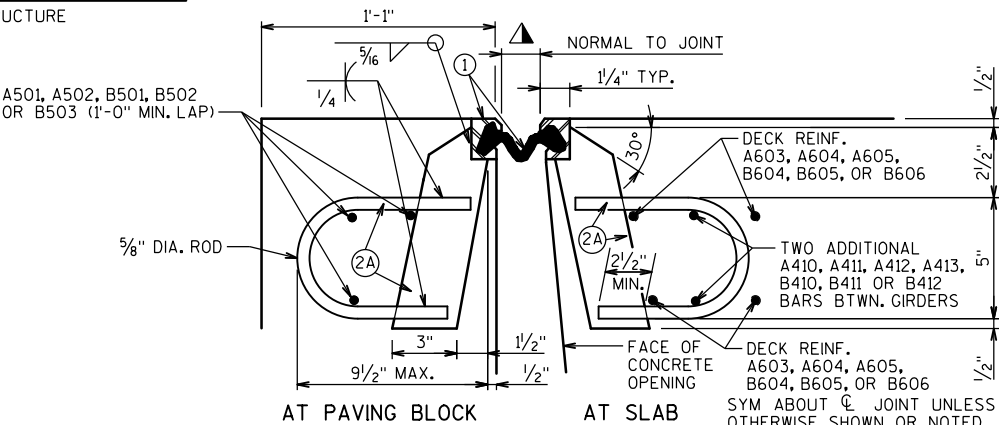


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

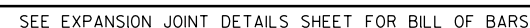
EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS



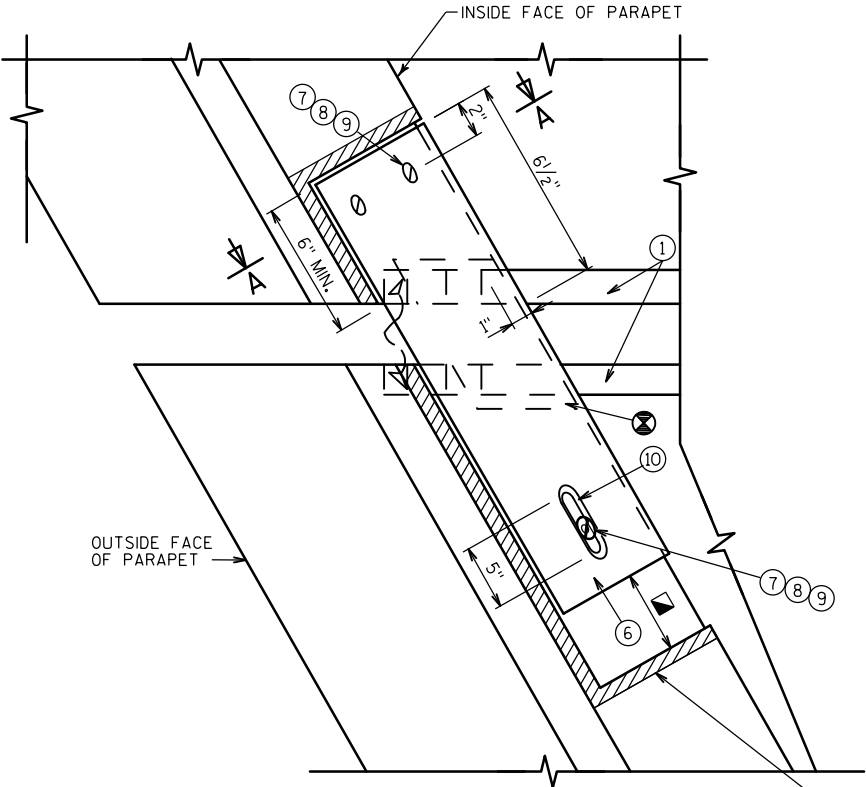
SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-280			
DRAWN BY		EAJ	PLANS CKD. HDA
EXPANSION JOINT (1 OF 2)			SHEET 5 OF 8

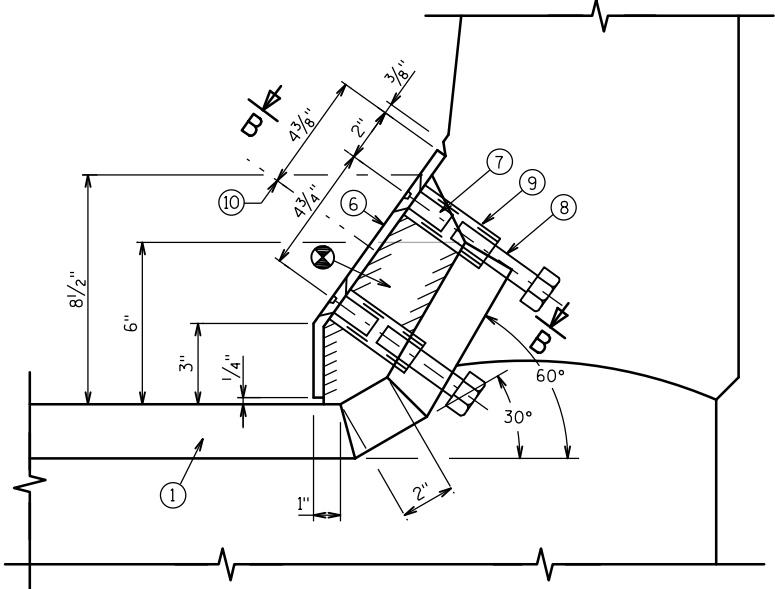


PLOT SCALE : 8:1

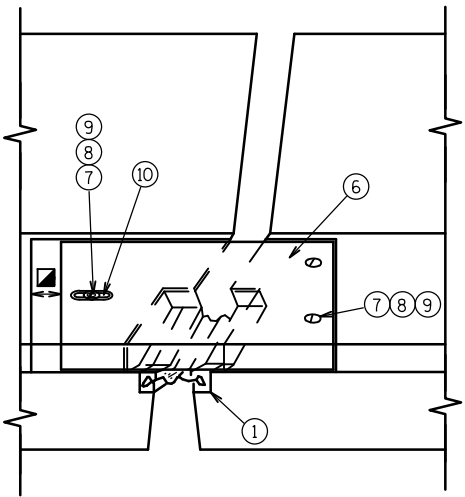


PLAN AT SLOPED FACE PARAPET

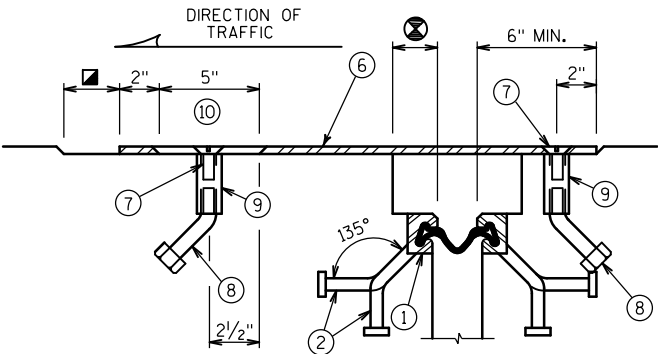
REMOVE AS NEEDED TO INSTALL  
NEW ITEMS AT PARAPET



SECTION A-A



VIEW OF SLOPED FACE PARAPET  
PLATES FROM ROADWAY



SECTION B-B

NOTE

SEE EXPANSION JOINT SHEETS FOR ADDITIONAL INFORMATION.

LEGEND

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ◼ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"

B-13-280 WB BILL OF BARS

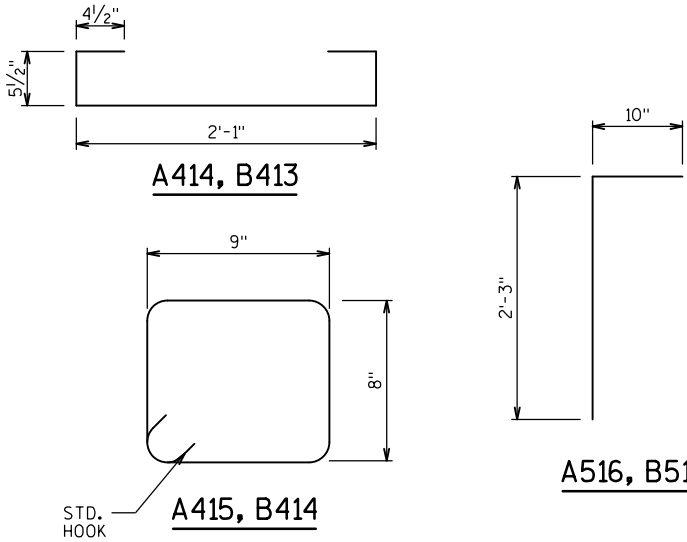
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A501	X	36	7'-6"			PAVING BLOCK - HORIZ. STAGE 1
A502	X	54	7'-2"			PAVING BLOCK - HORIZ. STAGES 2 & 3
A603	X	20	39'-10"			DECK - TRANSVERSE STAGE 1
A604	X	20	31'-6"			DECK - TRANSVERSE STAGE 2
A605	X	20	25'-6"			DECK - TRANSVERSE STAGE 3
A706	X	40	14'-3"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A707	X	20	7'-1"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 1 & 2
A708	X	10	9'-0"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 2
A709	X	10	5'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 3
A410	X	32	14'-3"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
A411	X	16	7'-1"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 1 & 2
A412	X	8	9'-0"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 2
A413	X	8	5'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 3
A414	X	228	3'-5"	X		DIAPHRAGM - STIRRUPS BETWEEN GIRDERS
A415	X	196	3'-4"	X		PAVING BLOCK - STIRRUP
A516	X	196	3'-0"	X		PAVING BLOCK - ANCHOR

NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

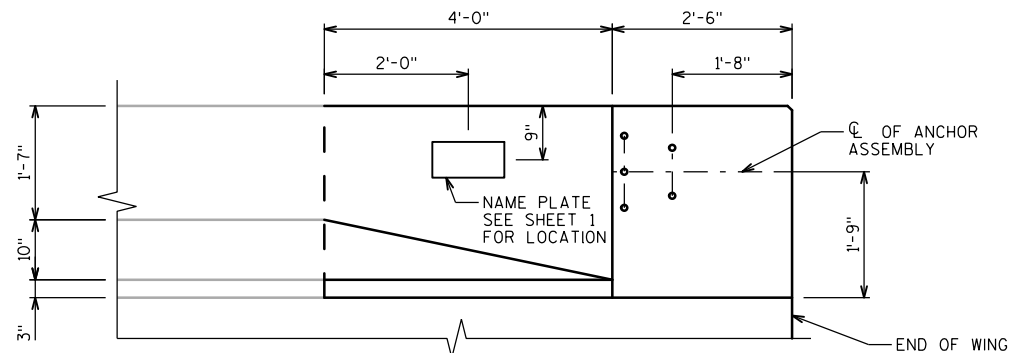
B-13-280 EB BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
B501	X	24	6'-10"			PAVING BLOCK - HORIZ. STAGE 1
B502	X	30	7'-2"			PAVING BLOCK - HORIZ. STAGE 2
B503	X	36	7'-9"			PAVING BLOCK - HORIZ. STAGE 3
B604	X	20	24'-1"			DECK - TRANSVERSE STAGE 1
B605	X	20	31'-6"			DECK - TRANSVERSE STAGE 2
B606	X	20	41'-3"			DECK - TRANSVERSE STAGE 3
B707	X	40	14'-3"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
B708	X	20	6'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 1 & 3
B709	X	20	8'-1"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 2
B410	X	32	14'-3"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS
B411	X	16	6'-2"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGES 1 & 3
B412	X	16	8'-1"			DIAPHRAGM - HORIZ. BETWEEN GIRDERS STAGE 2
B413	X	228	3'-5"	X		DIAPHRAGM - STIRRUPS BETWEEN GIRDERS
B414	X	196	3'-4"	X		PAVING BLOCK - STIRRUP
B515	X	196	3'-0"	X		PAVING BLOCK - ANCHOR

NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

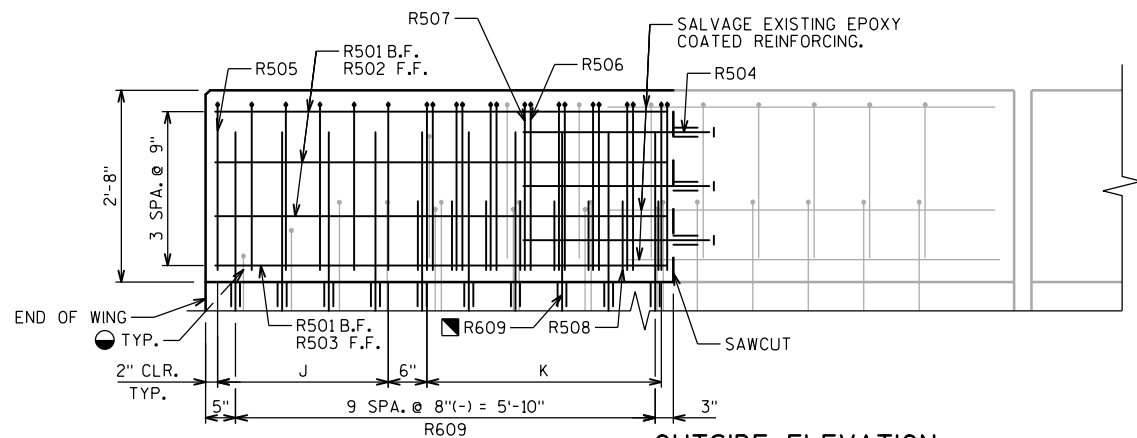


NO.	DATE	REVISION	BY
		STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
		STRUCTURE B-13-280	
		DRAWN BY EAJ	PLANS CK'D. HDA
		EXPANSION JOINT DETAILS	SHEET 7 OF 8



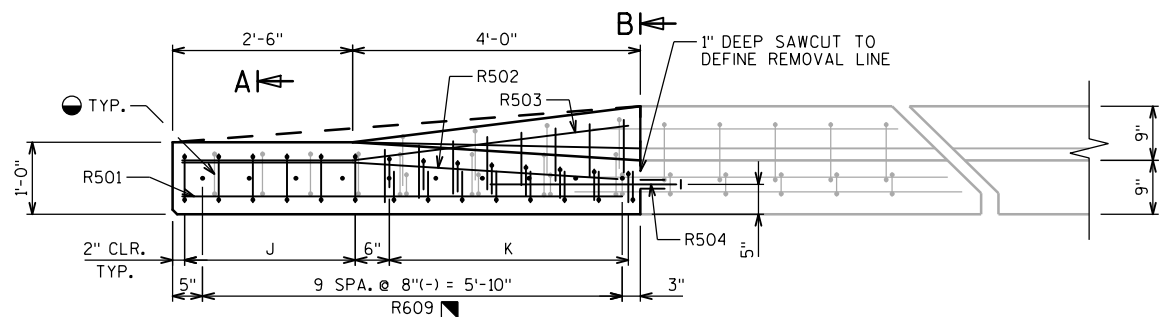
INSIDE ELEVATION

NE AND SW WINGS SHOWN. NW AND SE SIMILAR.



OUTSIDE ELEVATION

NE AND SW WINGS SHOWN. NW AND SE SIMILAR.

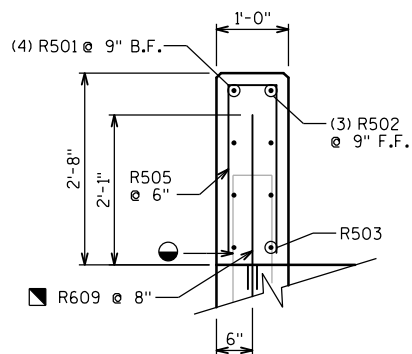


PLAN

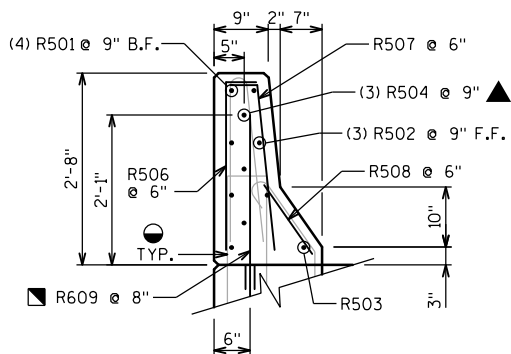
NE AND SW WINGS SHOWN. NW AND SE SIMILAR.

J = 5 SPA. @ 6" (-), R505

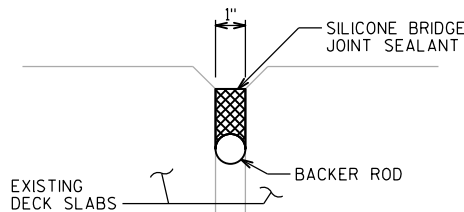
K = 7 SPA. @ 6" (-), R506, R507, R508



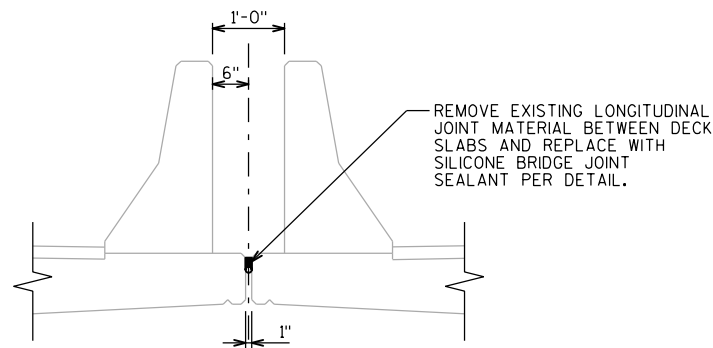
SECTION A-A



SECTION B-B



SILICONE BRIDGE JOINT SEALANT DETAIL

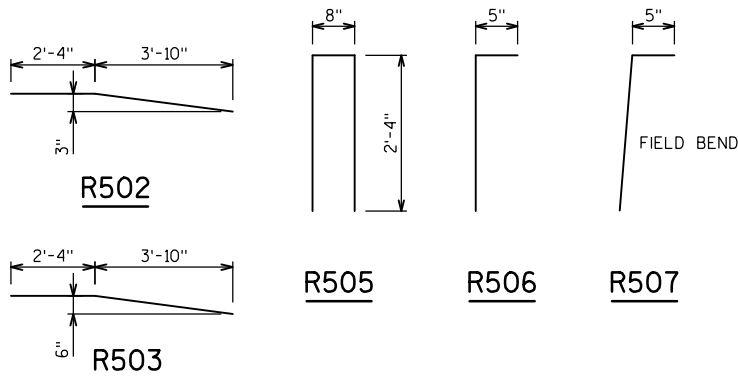


LONGITUDINAL JOINT BETWEEN DECK SLABS

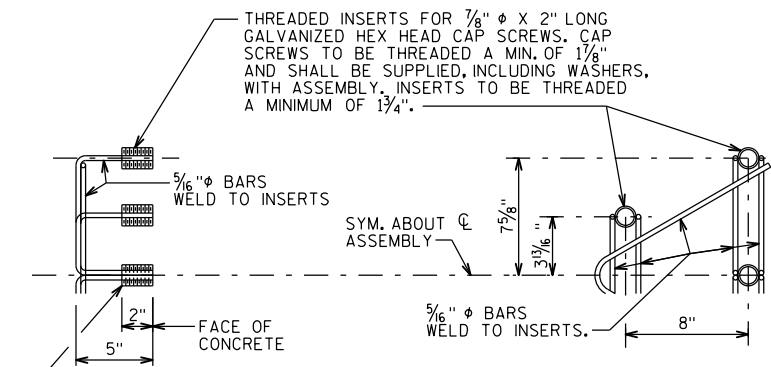
## BILL OF BARS

NOTE:  
BAR DIMENSIONS ARE OUT TO OUT OF BAR.  
THE FIRST OR FIRST TWO DIGITS  
OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	CONT	NO. REQ'D	LENGTH	BENT	LOCATION
R501	X	16	6'-2"		HORIZONTAL BACK FACE
R502	X	12	6'-2"	X	HORIZONTAL FRONT FACE
R503	X	4	6'-2"	X	HORIZONTAL FRONT FACE
R504	X	12	2'-7"		HORIZONTAL DOWEL
R505	X	24	5'-1"	X	VERTICAL STIRRUP
R506	X	32	2'-7"	X	VERTICAL BACK FACE
R507	X	32	2'-7"	X	VERTICAL FRONT FACE
R508	X	32	1'-3"		VERTICAL FRONT FACE
R609	X	40	2'-7"		VERTICAL DOWEL



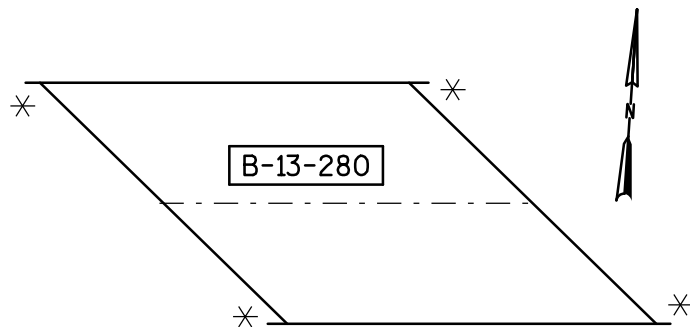
- SALVAGE EXISTING VERTICAL REINFORCEMENT BARS AND INCORPORATE INTO NEW WORK. BEND EXISTING BARS AS NECESSARY TO FIT NEW PARAPET SHAPE.
- ▲ MASONRY ANCHORS, TYPE L NO. 5 BARS, EMBED 6" IN CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.
- MASONRY ANCHORS, TYPE L NO. 6 BARS, EMBED 6" IN CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.



DETAIL OF ANCHOR ASSEMBLY

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

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

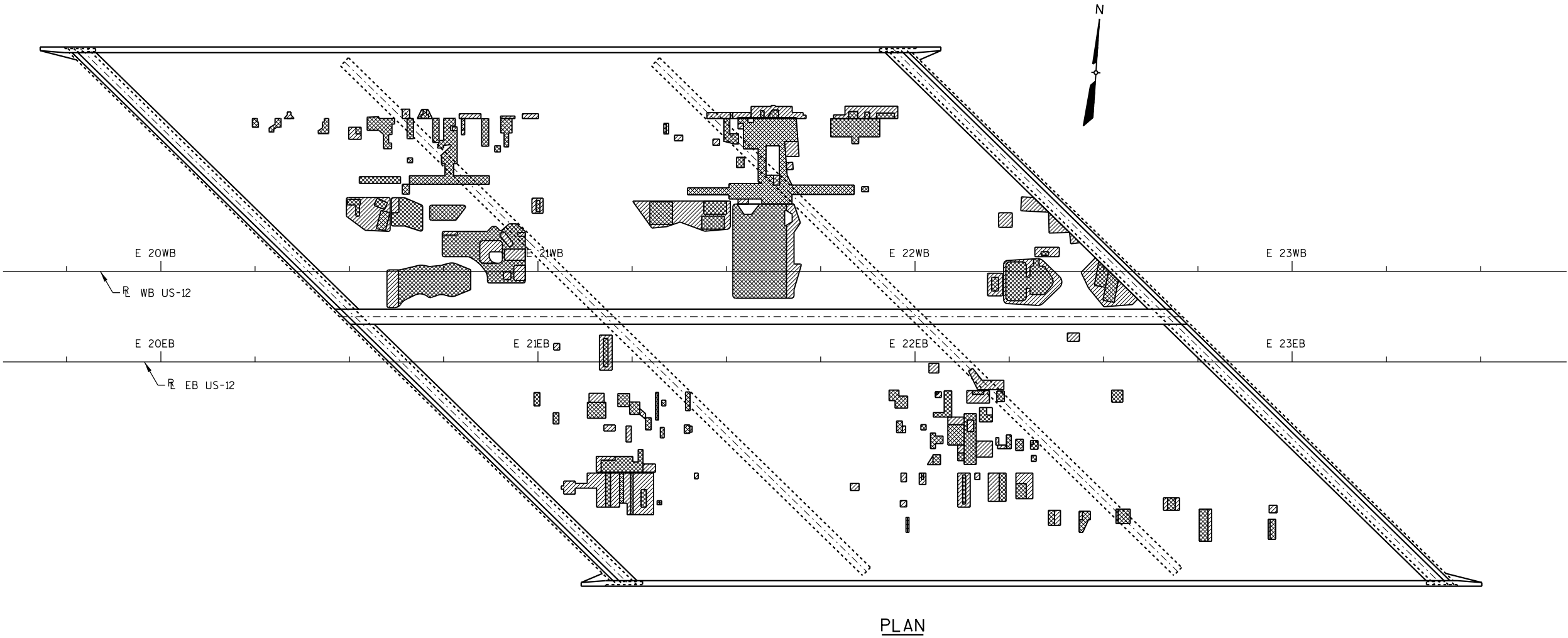


LOCATION PLAN



\* WING LOCATION FOR PARAPET REMOVAL AND REPLACEMENT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-280			
DRAWN BY		KTM	PLANS CKD. HDA
PARAPET REVISIONS			SHEET 8 OF 8

PRINTER DRIVER: S:\acm-CADstds\Libraries\WISDOT\MicroStation\Resources\MS\_Printing\Printer\_Drivers\AE\_PDF-11 x 17.plt  
PEN TABLE: C:\acm-CADstds\Libraries\WISDOT\MicroStation\Resources\MS\_Printing\Pen\_tables\AE\_WsDOT.tbl  
FILE NAME: P:\60317530\600-Construction\_Support\Drawings\As-built\plan\As-Built.pln Stg Ldgn  
PLOT DATE: 12/23/2014 PLOT TIME: 9:30:52 AM



LEGEND

- TYPE 1 REMOVAL 
- TYPE 2 REMOVAL 

STATE PROJECT NUMBER

1206-04-62

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-280			
DRAWN BY		MJK	PLANS CK'D.
EB & WB REMOVALS			SHEET 8A
			509A



## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

SCOPE OF WORK FOR THIS STRUCTURE INCLUDES ONLY ISOLATED AREA(S) OF DECK PATCHING. LOCATIONS AND LIMITS OF THE FOLLOWING DECK PATCHING BID ITEMS TO BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER.

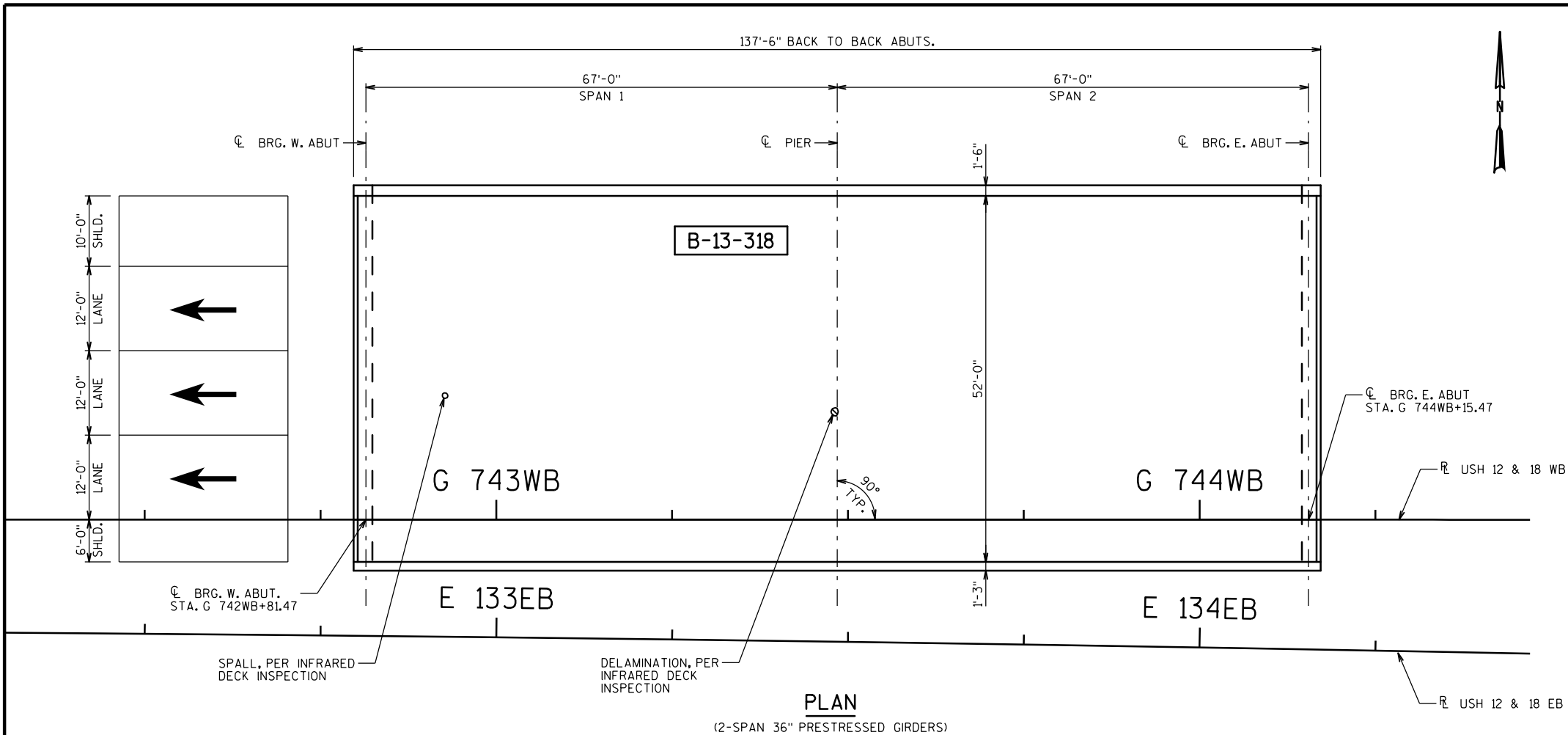
- PREPARATION DECKS
- SAWING PAVEMENT DECK PREPARATION AREAS

DECK PATCHING MATERIAL SHALL BE "POLYESTER POLYMER CONCRETE MASONRY".

QUANTITIES SHOWN FOR ALL BID ITEMS ARE APPROXIMATE.

INFRARED INSPECTION DATA PROVIDED FOR INFORMATION ONLY. INFRARED INSPECTION PERFORMED BY AECOM, 7-16-2013.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.



## DECK INSPECTION RESULTS

(INFRARED INSPECTION DATE: 7/16/13)

FIELD OBSERVATIONS SUMMARY		S.N. B-13-318		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	ft <sup>2</sup>	7150		DELAMINATION	
SHADE/DEBRIS	ft <sup>2</sup>	0		SPALL	
DELAMINATION	ft <sup>2</sup>	1	<0.1	DEBOND	
SPALL	ft <sup>2</sup>	1	<0.1	ASPHALT PATCH	
DEBOND	ft <sup>2</sup>	N/A	N/A	CONCRETE PATCH	
ASPHALT PATCH	ft <sup>2</sup>	0	0	SHADE/DEBRIS	
CONCRETE PATCH	ft <sup>2</sup>	0	0		

## LEGEND

TRAFFIC DIRECTION

## TRAFFIC DATA

USH 12/18 EB &amp; WB

A.D.T. = 104,000 (2012)  
R.D.S. = 60 MPH

## DESIGN DATA

RATINGS (TAKEN FROM HSI12-9-2013)

DESIGN LOADING: HS20  
INVENTORY RATING: HS23  
OPERATING RATING: HS31  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 190 KIPS

## ULTIMATE STRESSES FOR MATERIALS

POLYESTER POLYMER CONCRETE MASONRY..... f'c = 1,000 psi (8 HRS)  
5,000 psi (24 HRS)

## TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
509.0301	PREPARATION DECKS TYPE 1	SY	0.6
509.0302	PREPARATION DECKS TYPE 2	SY	0.3
SPV.0025.01	POLYESTER POLYMER CONCRETE MASONRY	CF	1.9
SPV.0090.04	SAWING PAVEMENT DECK PREPARATION AREAS	LF	14

ALL ITEMS ARE CATEGORY 0010



## LIST OF DRAWINGS

1. GENERAL PLAN

## STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:  
WILLIAM DREHER (608) 266-8489  
CONSULTANT:  
HEATHER ANDERS (414) 359-2300

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
<b>HNTB</b>		11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2300	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i>	KAR	12/21/13
CHIEF STRUCTURES DESIGN ENGINEER		DATE	
STRUCTURE B-13-318			
USH 12 & 18 WB OVER MONONA DR.			
COUNTY	DANE	TOWN/CITY/VILLAGE	MONONA
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	HDA	DESIGN CK'D.	SR
DRAWN BY	HDA	PLANS CK'D.	SR
GENERAL PLAN			SHEET 1 OF 1

TABLE OF ESTIMATED QUANTITIES

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	LOCATION	REPLACE MISSING CONDUIT PLUG	TENSION ANCHOR ROD	CLEAN AND PROTECT ANCHOR ROD	REMOVE SIGN BRIDGE WALKWAY	REMOVE GROUT PAD	INSTALL RODENT SCREEN	INSTALL OR TIGHTEN SIGN PANEL HARDWARE	INSTALL OR TIGHTEN HANDHOLE COVER BOLT	INSTALL SIGN BRIDGE ID PLAQUE	TENSION TRUSS CONNECTION BOLT	INSPECT PRIMARY BOLTED CONNECTIONS
			SPV.0060.05 EACH	SPV.0060.06 EACH	SPV.0060.07 EACH	SPV.0060.08 EACH	SPV.0060.09 EACH	SPV.0060.10 EACH	SPV.0060.11 EACH	SPV.0060.12 EACH	SPV.0060.13 EACH	SPV.0060.14 EACH	SPV.0105.01 LS
S-13-68	2 OF 14	USH 12 & 18 EB 1/4 MILE WEST OF JOHN NOLEN DR.	1	2	6	1	1	1			1	9	
S-13-69	3 OF 14	USH 12 & 18 WB AT EXIT TO RIMROCK RD.	1		8	1	1	1	3	1	1	17	
S-13-70	4 OF 14	USH 12 & 18 EB 1/8 MILE WEST OF JOHN NOLEN DR.			4		1	1	1		1		
S-13-71	5 OF 14	USH 12 & 18 WB 1/8 MILE EAST OF RIMROCK RD.	1		8	1	1	1	1	2	1	7	
S-13-72	6 OF 14	USH 12 & 18 EB AT EXIT TO JOHN NOLEN DR.	1		8	1	1	1	1		1	6	
S-13-73	7 OF 14	USH 12 & 18 WB AT EXIT TO CTH D	1	8				1			1		
S-13-74	8 OF 14	USH 12 & 18 WB 1/4 MILE EAST OF FISH HATCHERY RD.	1			1		1	1		1		
S-13-149	9 OF 14	USH 12 & 18 EB 1/2 MILE WEST OF I-39/90		6				2	6			2	
S-13-150	10 OF 14	USH 12 & 18 EB 1/2 MILE WEST OF I-39/90						2	2			22	
S-13-151	11 OF 14	USH 12 & 18 EB 1/4 MILE WEST OF I-39		2				1					
S-13-152	12 OF 14	USH 12 & 18 EB AT I-39/90 RAMP						2				32	
S-13-153	13 OF 14	USH 12 & 18 WB AT EXIT TO I-39 NB						2					
S-13-157	14 OF 14	I-94 WB 1/2 MILE EAST OF I-39 NB/I-90 WB						2	1		1		
TOTAL			6	18	34	5	5	18	16	3	8	95	1

ALL ITEMS ARE CATEGORY 0020

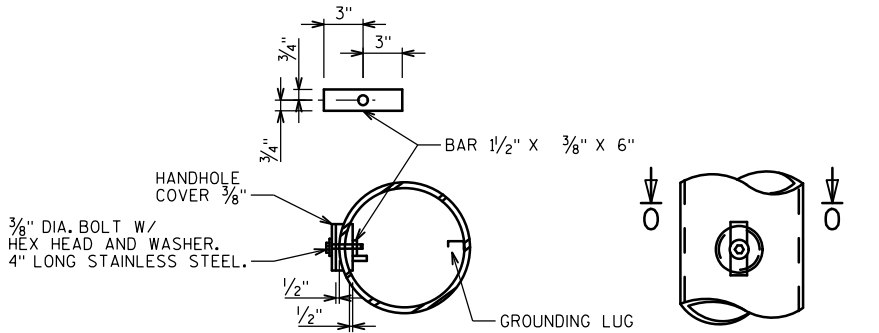
Found no loose anchor rod connections that required tensioning as per specifications.

Found no loose or missing hardware that required tightening as per specifications.

Found no loose post-to-truss connection bolts or splice bolts that required tensioning as per specifications.

STATE PROJECT NUMBER

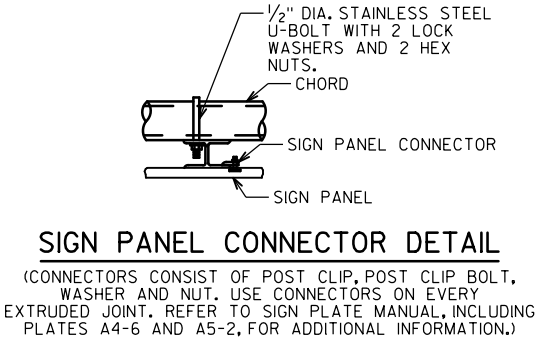
1206-04-62



SECTION 'O'

HANDHOLE DETAILS

(FOR SINGLE BOLT CONNECTION)



SIGN PANEL CONNECTOR DETAIL

(CONNECTORS CONSIST OF POST CLIP, POST CLIP BOLT, WASHER AND NUT. USE CONNECTORS ON EVERY EXTRUDED JOINT. REFER TO SIGN PLATE MANUAL, INCLUDING PLATES A4-6 AND A5-2, FOR ADDITIONAL INFORMATION.)

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
2. THE ANCHOR RODS, NUTS, LEVELING NUTS AND WASHERS SHALL BE CLEANED AND GALVANIZED IN ACCORDANCE WITH SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS. THIS ITEM IS PAID FOR UNDER "CLEAN AND PROTECT ANCHOR ROD" UNLESS THE ANCHOR ROD ASSEMBLIES NEED TO BE TENSIONED. IF TENSIONING OF THE ANCHOR ROD ASSEMBLY IS REQUIRED THAN THIS ITEM IS INCLUDED WITH "TENSION ANCHOR ROD". ANY GROUT PAD REMOVAL (IF REQUIRED) MUST BE COMPLETED PRIOR TO THIS WORK.
3. THE CONTRACTOR SHALL USE ANTI-SIEZE COMPOUND ON ELECTRICAL HANDHOLE COVER BOLTS AND CONDUIT PLUGS PER SECTION 651.3.1(5) OF THE WISDOT STANDARD SPECIFICATIONS.
4. SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE LOCATED AND FABRICATED IN ACCORDANCE WITH S.D.D. 12A 4-1.
5. WORK SPECIFIED BASED ON HSI SYSTEM MOST CURRENT INSPECTION REPORT RECOMMENDATIONS AND CONDITION STATES.

S-13-68: DATED 11-04-2011  
S-13-69: DATED 11-07-2011  
S-13-70: DATED 12-03-2011  
S-13-71: DATED 12-04-2011  
S-13-72: DATED 12-10-2011  
S-13-73: DATED 7-22-2013  
S-13-74: DATED 8-09-2013  
S-13-149: DATED 11-17-2011  
S-13-150: DATED 12-10-2011  
S-13-151: DATED 11-17-2011  
S-13-152: DATED 11-18-2011  
S-13-153: DATED 10-29-2011  
S-13-157: DATED 12-01-2011

ULTIMATE DESIGN STRESSES:

HIGH STRENGTH BOLTS - A325 \_\_\_\_\_ fy = 92,000 psi

HARDWARE GALVANIZED \_\_\_\_\_ A153 CLASS C

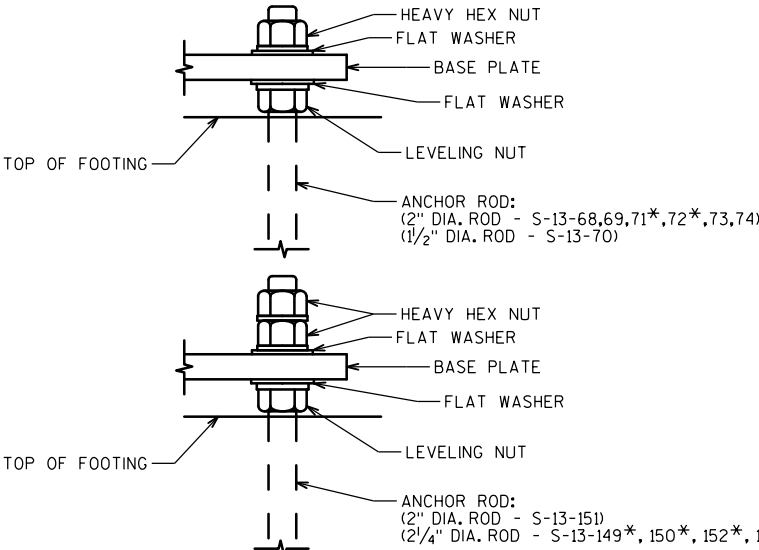
LIST OF DRAWINGS

1. GENERAL NOTES & QUANTITIES
2. SIGN STRUCTURE S-13-68 LAYOUT
3. SIGN STRUCTURE S-13-69 LAYOUT
4. SIGN STRUCTURE S-13-70 LAYOUT
5. SIGN STRUCTURE S-13-71 LAYOUT
6. SIGN STRUCTURE S-13-72 LAYOUT
7. SIGN STRUCTURE S-13-73 LAYOUT
8. SIGN STRUCTURE S-13-74 LAYOUT
9. SIGN STRUCTURE S-13-149 LAYOUT
10. SIGN STRUCTURE S-13-150 LAYOUT
11. SIGN STRUCTURE S-13-151 LAYOUT
12. SIGN STRUCTURE S-13-152 LAYOUT
13. SIGN STRUCTURE S-13-153 LAYOUT
14. SIGN STRUCTURE S-13-157 LAYOUT

STRUCTURES DESIGN CONTACTS

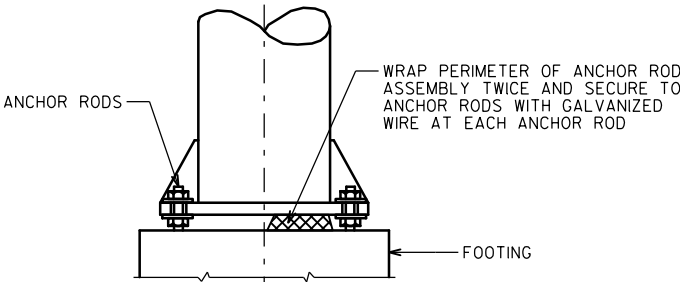
BRIDGE OFFICE:  
WILLIAM DREHER (608) 266-8489  
CONSULTANT:  
HEATHER ANDERS (414) 359-2300

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
<b>HNTB</b>		11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2300	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	WILLIAM C. DREHER CHIEF STRUCTURES DESIGN ENGINEER		12/11/13 DATE
SW SIGN BRIDGE REPAIRS			
SOUTH MADISON BELTLINE			
COUNTY	DANE	TOWN/CITY/VILLAGE	VARIOUS
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	EAJ	DESIGN CK'D.	HDA
DRAWN BY	KTM	PLANS CK'D.	HDA
GENERAL NOTES & QUANTITIES		SHEET 1 OF 14	

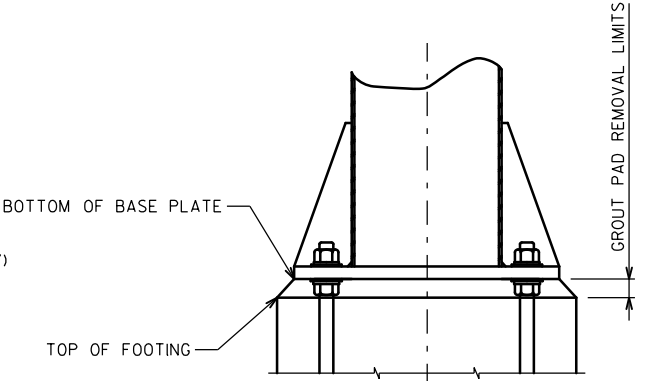


TYPICAL ANCHOR ROD ASSEMBLY DETAILS

\*REFER TO SIGN STRUCTURE SHEETS FOR ADDITIONAL NOTES



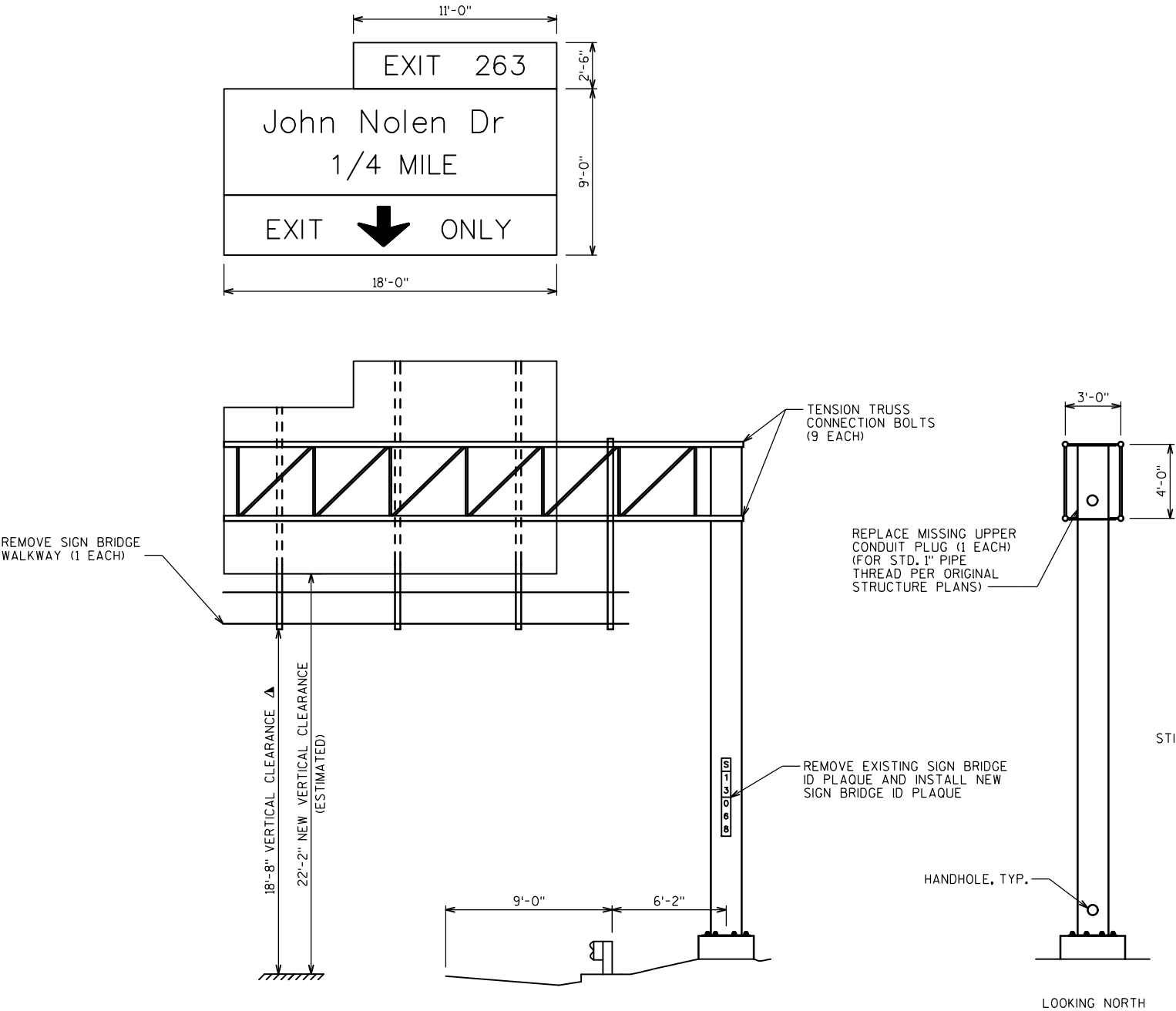
RODENT SCREEN



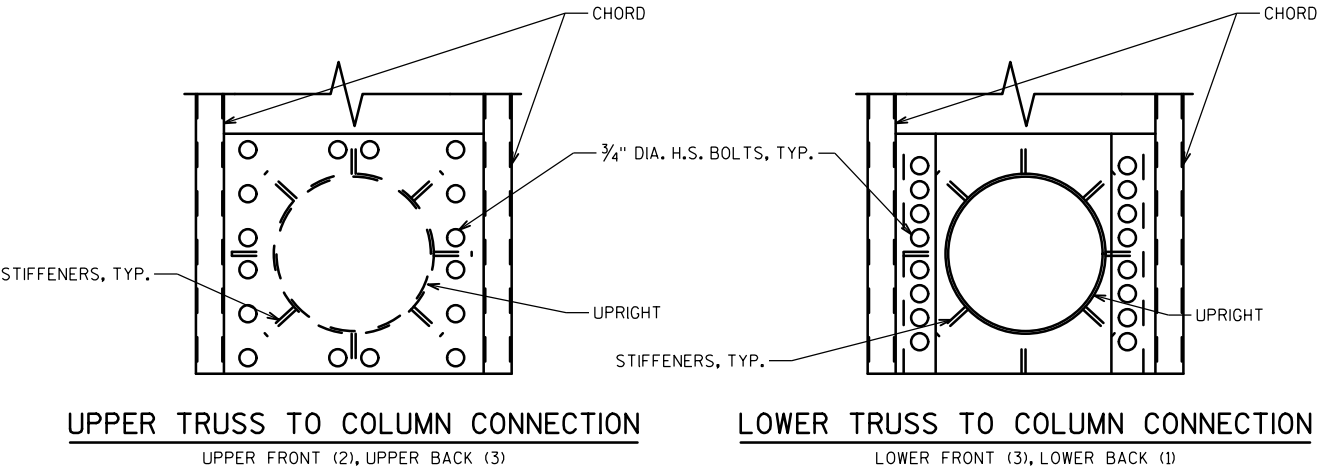
TYPICAL REMOVE GROUT PAD

NOTES

1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
2. ALL ANCHOR RODS ARE 2" DIA. PER ORIGINAL STRUCTURE PLANS AND MOST RECENT INSPECTION REPORT DATED 11-04-2011.

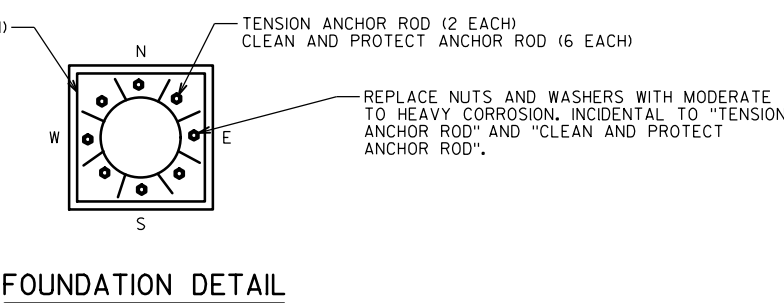


ELEVATION  
LOOKING EAST



UPPER TRUSS TO COLUMN CONNECTION  
UPPER FRONT (2), UPPER BACK (3)

LOWER TRUSS TO COLUMN CONNECTION  
LOWER FRONT (3), LOWER BACK (1)



FOUNDATION DETAIL

▲ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 11-4-2011

S-13-68 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.05	REPLACE MISSING CONDUIT PLUG	EA	1
SPV.0060.06	TENSION ANCHOR ROD	EA	2
SPV.0060.07	CLEAN AND PROTECT ANCHOR ROD	EA	6
SPV.0060.08	REMOVE SIGN BRIDGE WALKWAY	EA	1
SPV.0060.09	REMOVE GROUT PAD	EA	1
SPV.0060.10	INSTALL RODENT SCREEN	EA	1
SPV.0060.13	INSTALL SIGN BRIDGE ID PLAQUE	EA	1
SPV.0060.14	TENSION TRUSS CONNECTION BOLT	EA	9

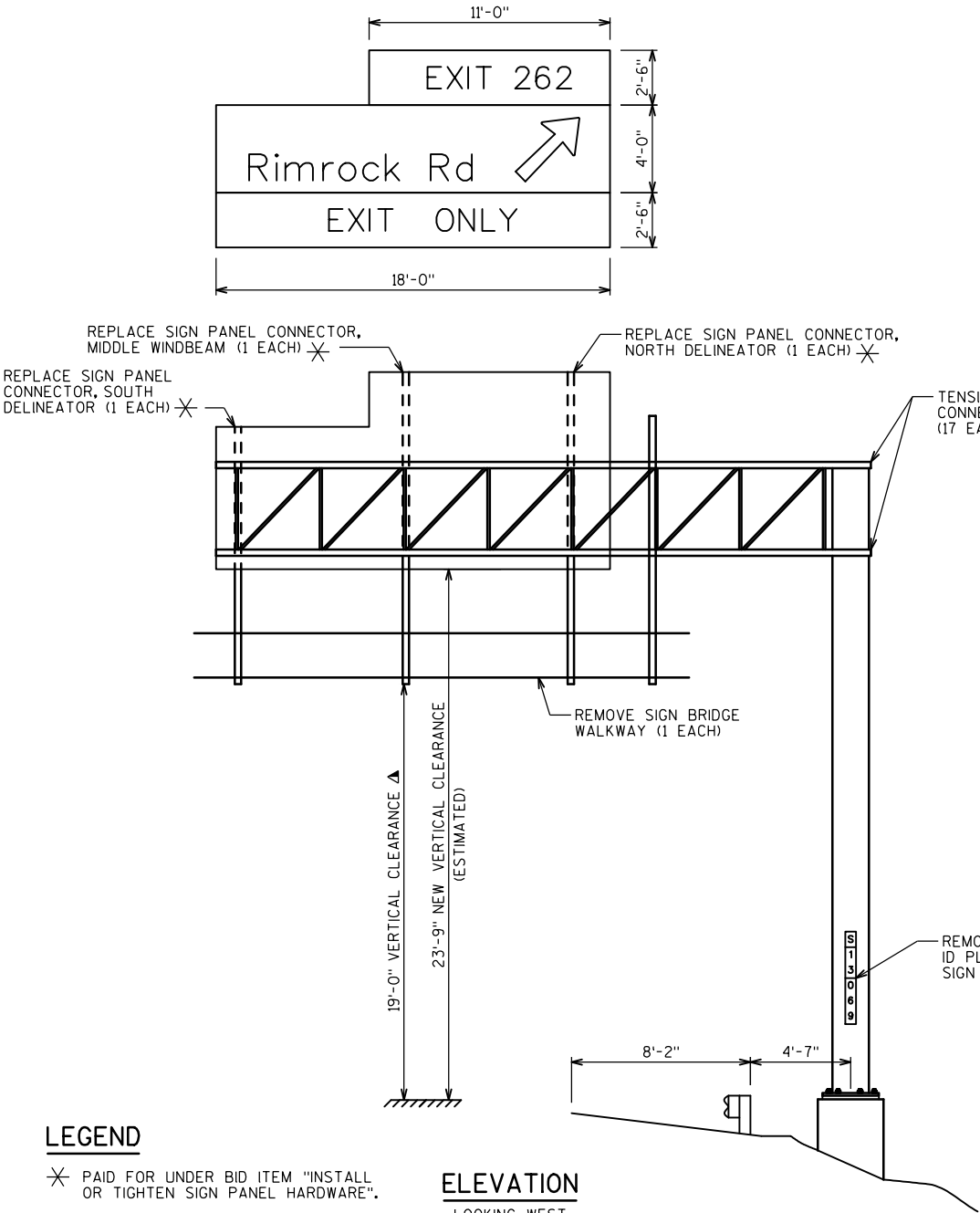
None Found Loose

None Found Loose

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-68			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-68 LAYOUT			SHEET 2 OF 14

NOTES

1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
2. ALL ANCHOR RODS ARE 2" DIA. PER ORIGINAL STRUCTURE PLANS AND MOST RECENT INSPECTION REPORT DATED 11-07-2011.



LEGEND

- PAID FOR UNDER BID ITEM "INSTALL OR TIGHTEN SIGN PANEL HARDWARE".
- VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 11-7-2011

ELEVATION

LOOKING WEST

S-13-69 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.05	REPLACE MISSING CONDUIT PLUG	EA	1
SPV.0060.07	CLEAN AND PROTECT ANCHOR ROD	EA	8
SPV.0060.08	REMOVE SIGN BRIDGE WALKWAY	EA	1
SPV.0060.09	REMOVE GROUT PAD	EA	1
SPV.0060.10	INSTALL RODENT SCREEN	EA	1
SPV.0060.11	INSTALL OR TIGHTEN SIGN PANEL HARDWARE	EA	3
SPV.0060.12	INSTALL OR TIGHTEN HANDHOLE COVER BOLT	EA	1
SPV.0060.13	INSTALL SIGN BRIDGE ID PLAQUE	EA	1
SPV.0060.14	TENSION TRUSS CONNECTION BOLT	EA	17

INSTALL LARGER WASHER. INCIDENTAL TO BID ITEM "CLEAN AND PROTECT ANCHOR ROD". (FIELD VERIFY SIZE OF LARGER WASHERS)

None Found Loose

None Found Loose

REPLACE MISSING UPPER CONDUIT PLUG (1 EACH) (FOR STD. 1" PIPE THREAD PER ORIGINAL STRUCTURE PLANS)

REMOVE EXISTING SIGN BRIDGE ID PLAQUE AND INSTALL NEW SIGN BRIDGE ID PLAQUE

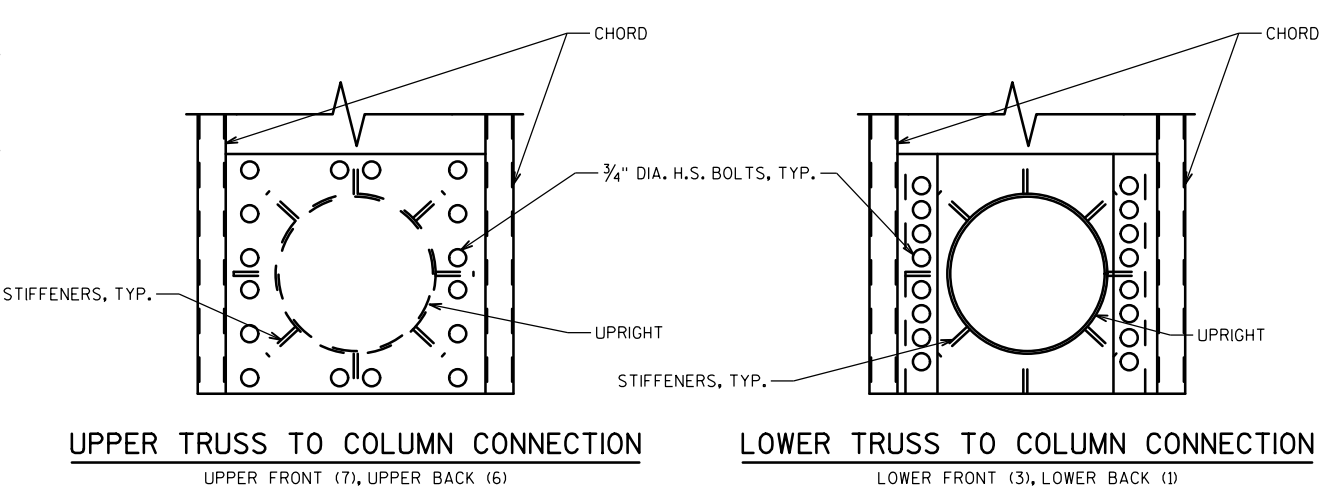
HANDHOLE, TYP.

INSTALL OR TIGHTEN LOWER HANDHOLE COVER 3/8" DIA. BOLT (1 EACH) (FIELD VERIFY BOLT SIZE)

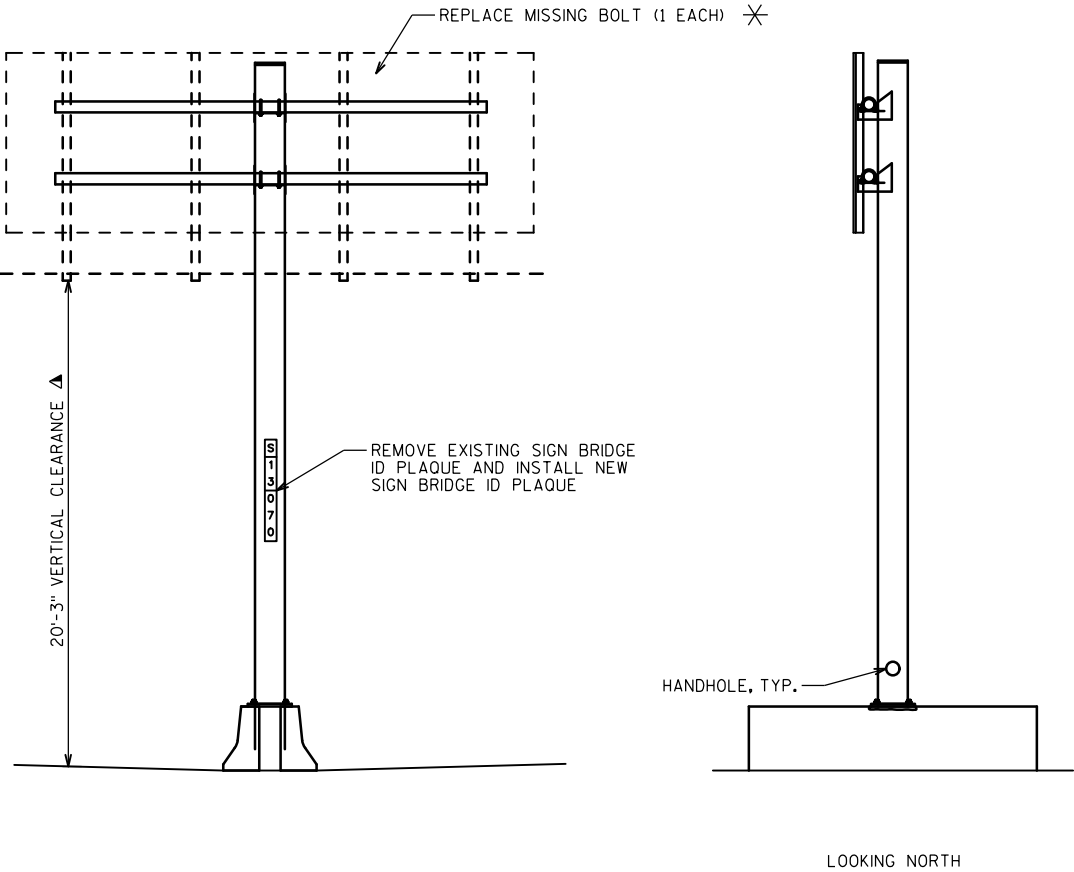
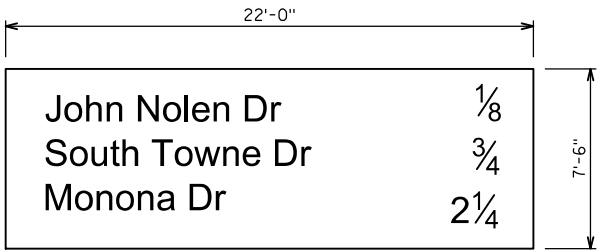
REMOVE GROUT PAD (1 EACH) INSTALL RODENT SCREEN (1 EACH)

CLEAN AND PROTECT ANCHOR ROD (8 EACH)

FOUNDATION DETAIL



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-69			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-69 LAYOUT			SHEET 3 OF 14



NOTES

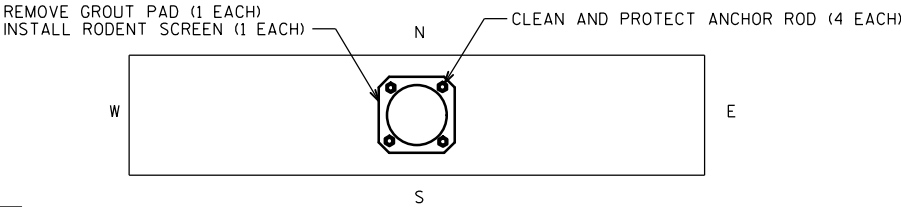
1. ALL ANCHOR RODS ARE 1/2" DIA. PER ORIGINAL STRUCTURE PLANS AND MOST RECENT INSPECTION REPORT DATED 12-03-2011.

LEGEND

- \* PAID FOR UNDER BID ITEM "INSTALL OR TIGHTEN SIGN PANEL HARDWARE".
- Δ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 12-3-2011

ELEVATION

LOOKING EAST



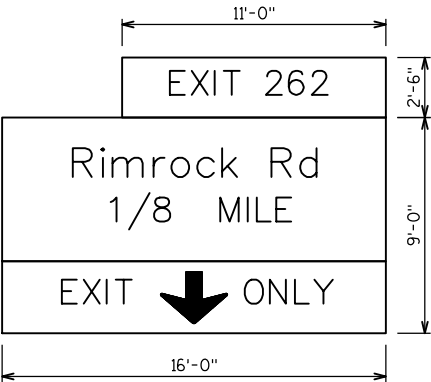
FOUNDATION DETAIL

S-13-70 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.07	CLEAN AND PROTECT ANCHOR ROD	EA	4
SPV.0060.09	REMOVE GROUT PAD	EA	1
SPV.0060.10	INSTALL RODENT SCREEN	EA	1
SPV.0060.11	INSTALL OR TIGHTEN SIGN PANEL HARDWARE	EA	1
SPV.0060.13	INSTALL SIGN BRIDGE ID PLAQUE	EA	1

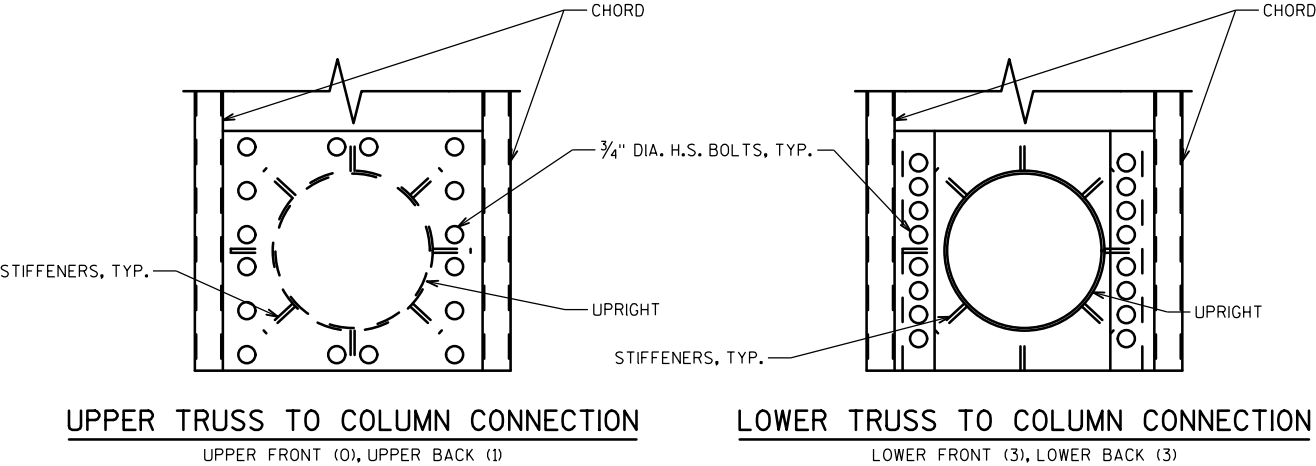
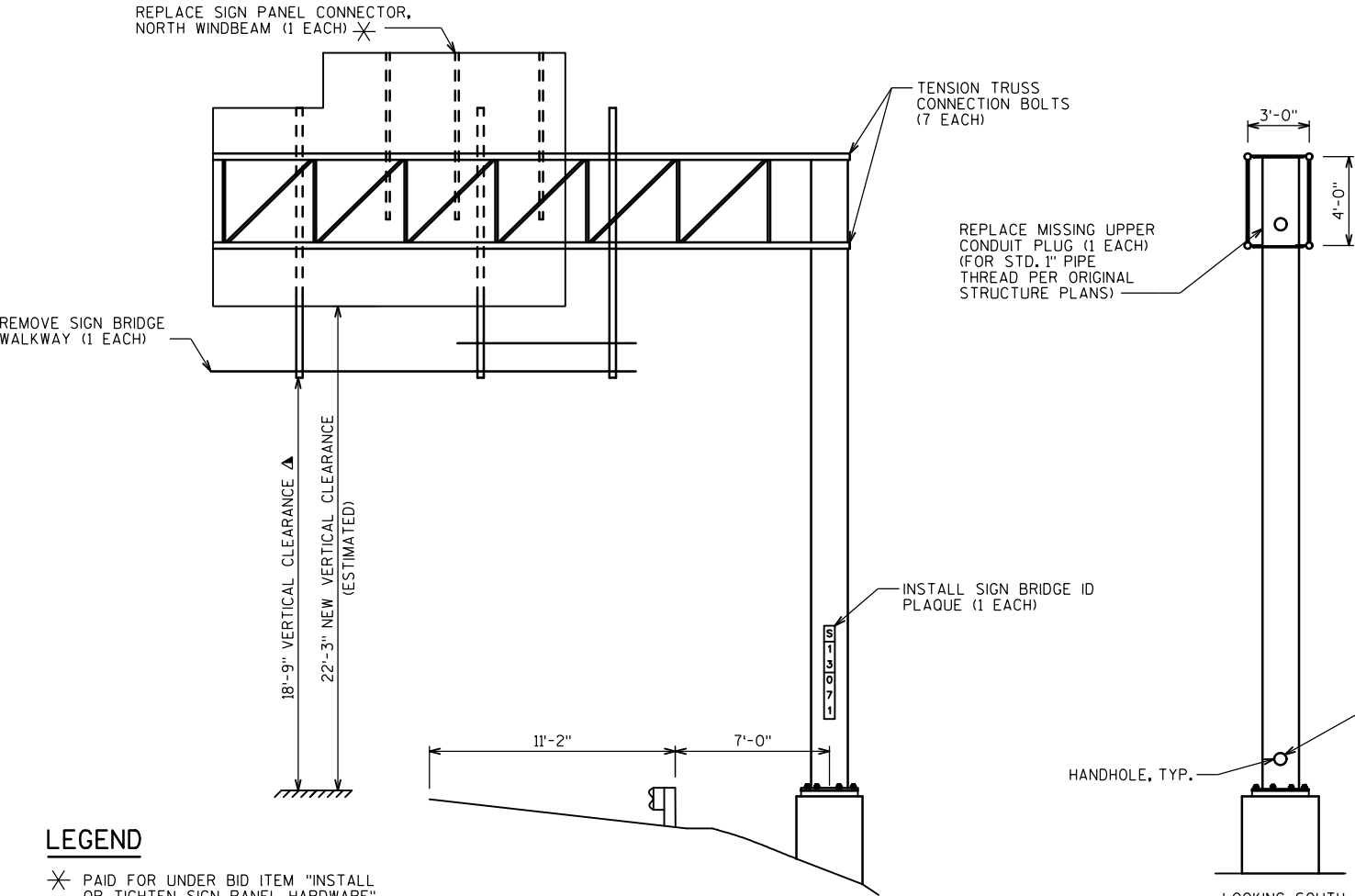
None Found Loose

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-70			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-70 LAYOUT			SHEET 4 OF 14



NOTES

- 1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
- 2. ALL ANCHOR RODS ARE 2" DIA. PER ORIGINAL STRUCTURE PLANS, BUT NOTED AS 1 3/4" DIA. PER MOST RECENT INSPECTION REPORT DATED 12-04-2011. FIELD VERIFY SIZE OF ANCHOR RODS.



LEGEND

- ✕ PAID FOR UNDER BID ITEM "INSTALL OR TIGHTEN SIGN PANEL HARDWARE".
- ▲ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 12-4-2011

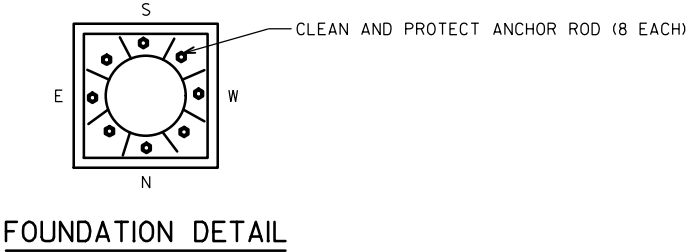
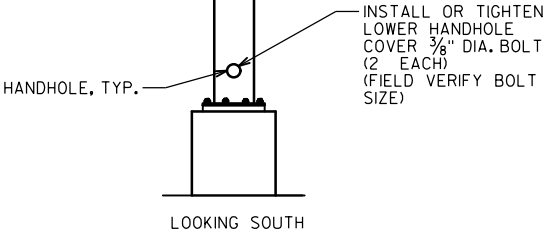
ELEVATION  
LOOKING WEST

S-13-71 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.05	REPLACE MISSING CONDUIT PLUG	EA	1
SPV.0060.07	CLEAN AND PROTECT ANCHOR ROD	EA	8
SPV.0060.08	REMOVE SIGN BRIDGE WALKWAY	EA	1
SPV.0060.09	REMOVE GROUT PAD	EA	1
SPV.0060.10	INSTALL RODENT SCREEN	EA	1
SPV.0060.11	INSTALL OR TIGHTEN SIGN PANEL HARDWARE	EA	1
SPV.0060.12	INSTALL OR TIGHTEN HANDHOLE COVER BOLT	EA	2
SPV.0060.13	INSTALL SIGN BRIDGE ID PLAQUE	EA	1
SPV.0060.14	TENSION TRUSS CONNECTION BOLT	EA	7

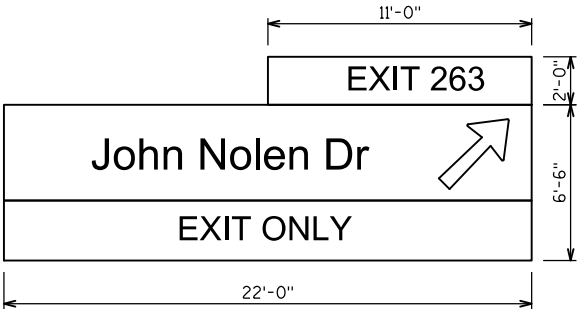
None Found Loose

None Found Loose



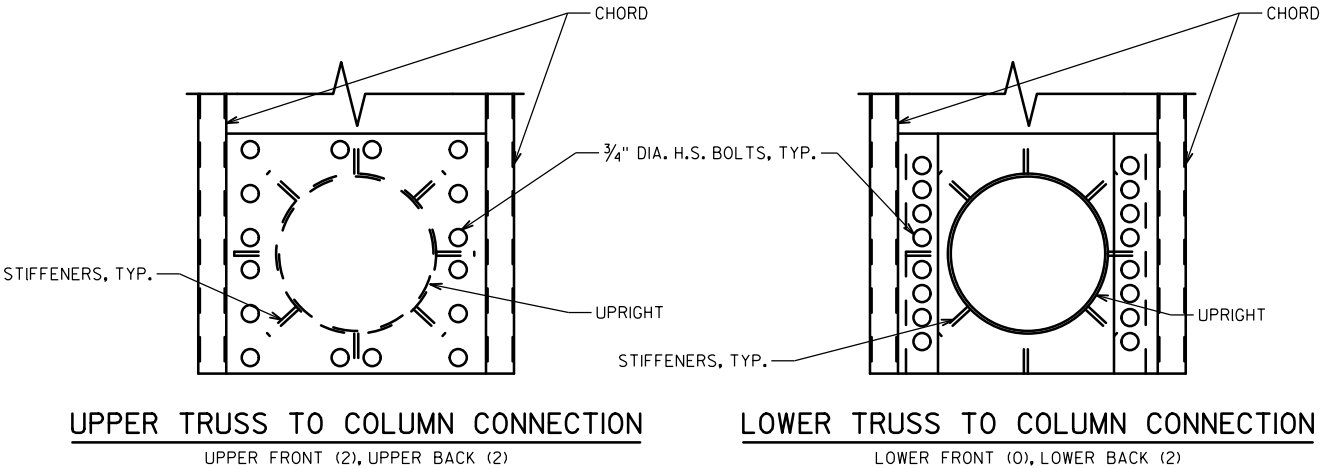
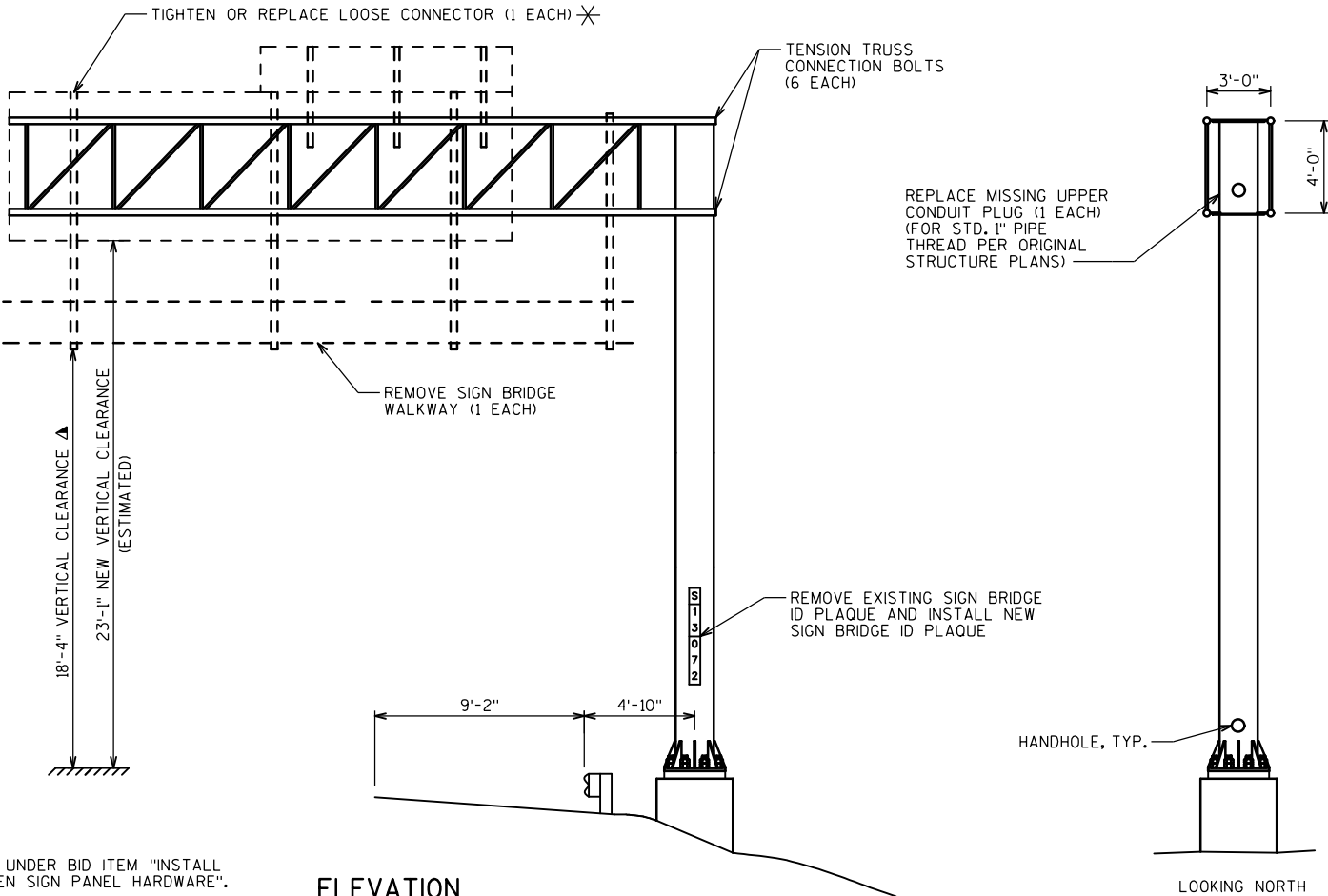
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-71			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-71 LAYOUT			SHEET 5 OF 14





NOTES

1. ALL TRUSS CONNECTION BOLTS ARE  $\frac{3}{4}$ " DIA. PER ORIGINAL STRUCTURE PLANS.
2. ALL ANCHOR RODS ARE 2" DIA. PER ORIGINAL STRUCTURE PLANS, BUT NOTED AS  $1\frac{3}{4}$ " DIA. PER MOST RECENT INSPECTION REPORT DATED 12-10-2011. FIELD VERIFY SIZE OF ANCHOR RODS.



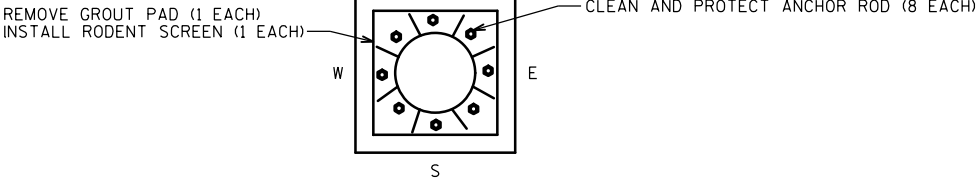
LEGEND

- ✱ PAID FOR UNDER BID ITEM "INSTALL OR TIGHTEN SIGN PANEL HARDWARE".
- ▲ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 12-10-2011

ELEVATION  
LOOKING EAST

S-13-72 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.05	REPLACE MISSING CONDUIT PLUG	EA	1
SPV.0060.07	CLEAN AND PROTECT ANCHOR ROD	EA	8
SPV.0060.08	REMOVE SIGN BRIDGE WALKWAY	EA	1
SPV.0060.09	REMOVE GROUT PAD	EA	1
SPV.0060.10	INSTALL RODENT SCREEN	EA	1
SPV.0060.11	INSTALL OR TIGHTEN SIGN PANEL HARDWARE	EA	1
SPV.0060.13	INSTALL SIGN BRIDGE ID PLAQUE	EA	1
SPV.0060.14	TENSION TRUSS CONNECTION BOLT	EA	6

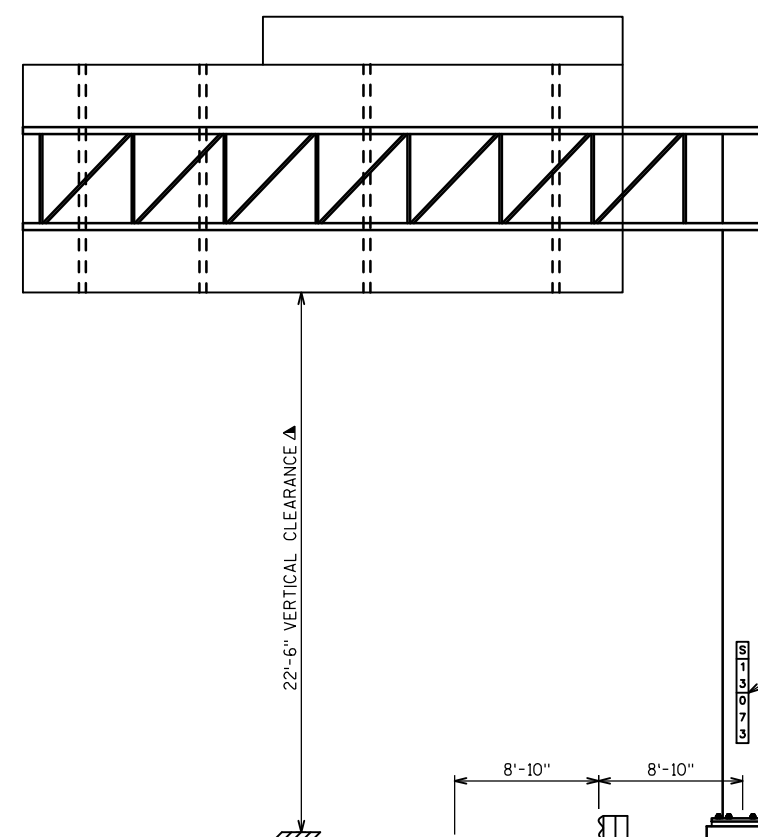
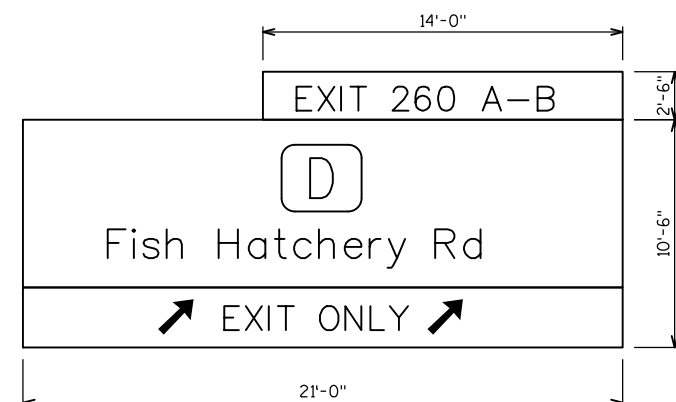


None Found Loose

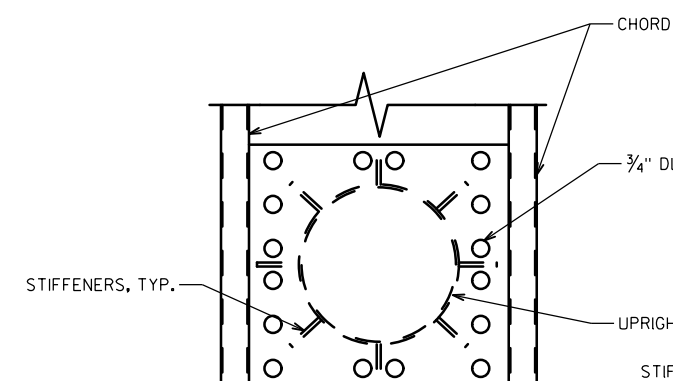
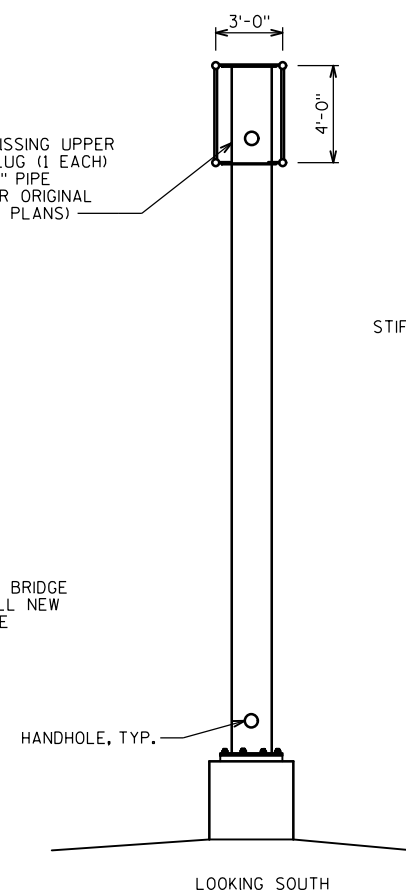
None Found Loose

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-72			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-72 LAYOUT			SHEET 6 OF 14

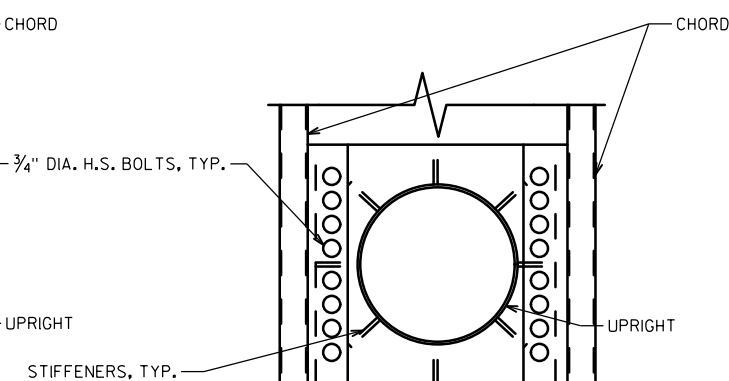
1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
2. ALL ANCHOR RODS ARE 2" DIA. PER ORIGINAL STRUCTURE PLANS AND MOST RECENT INSPECTION REPORT DATED 7-22-2013.



REPLACE MISSING UPPER  
CONDUIT PLUG (1 EACH)  
(FOR STD. 1" PIPE  
THREAD PER ORIGINAL  
STRUCTURE PLANS) —



UPPER TRUSS TO COLUMN CONNECTION  
FOR INFORMATION ONLY



LOWER TRUSS TO COLUMN CONNECTION  
FOR INFORMATION ONLY

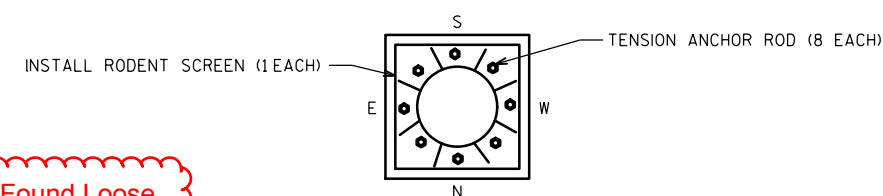
▲ VERTICAL CLEARANCE PER HSI SYSTEM  
MOST RECENT INSPECTION REPORT  
DATED 7-22-2013

LOOKING WEST

S-13-73 ESTIMATED QUANTITIES

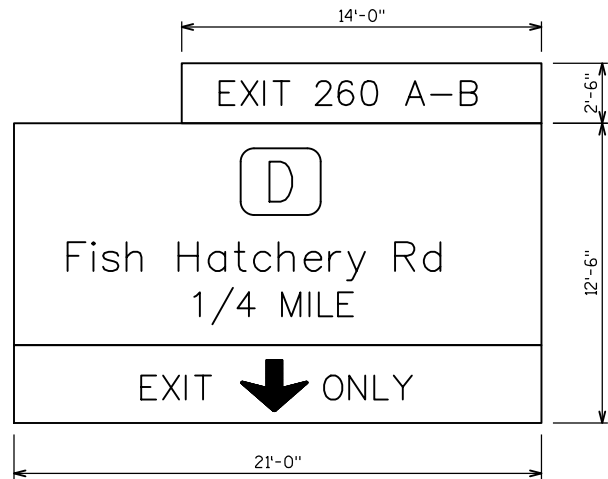
ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.05	REPLACE MISSING CONDUIT PLUG	EA	1
SPV.0060.06	TENSION ANCHOR ROD	EA	8
SPV.0060.10	INSTALL RODENT SCREEN	EA	1
SPV.0060.13	INSTALL SIGN BRIDGE ID PLACQUE	EA	1

None Found Loose



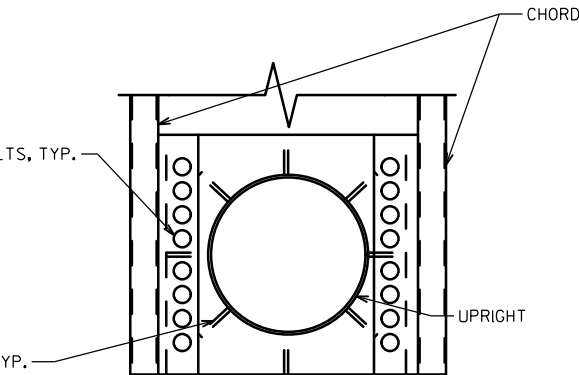
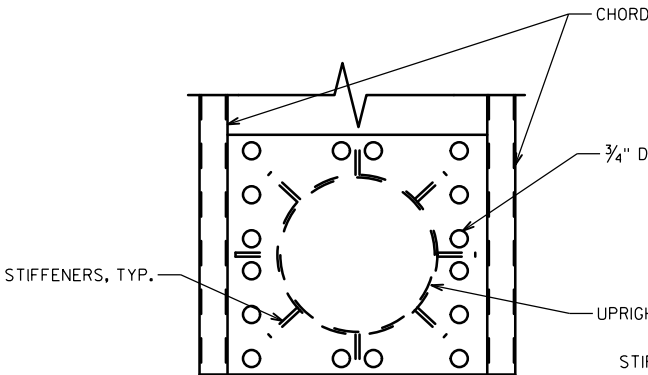
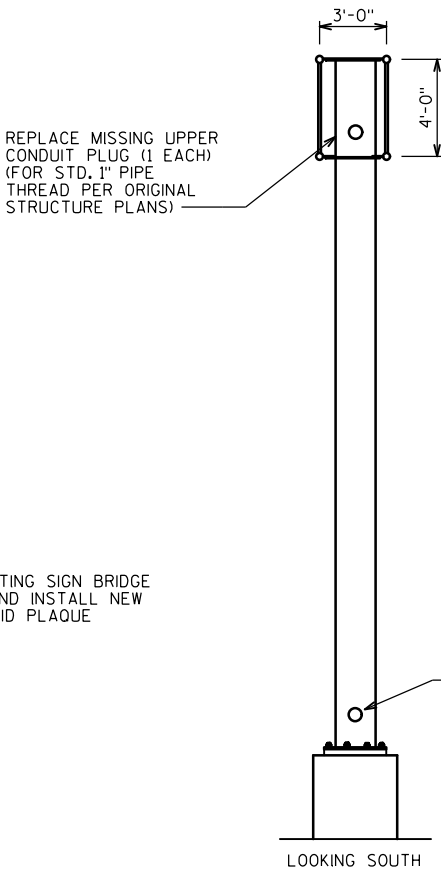
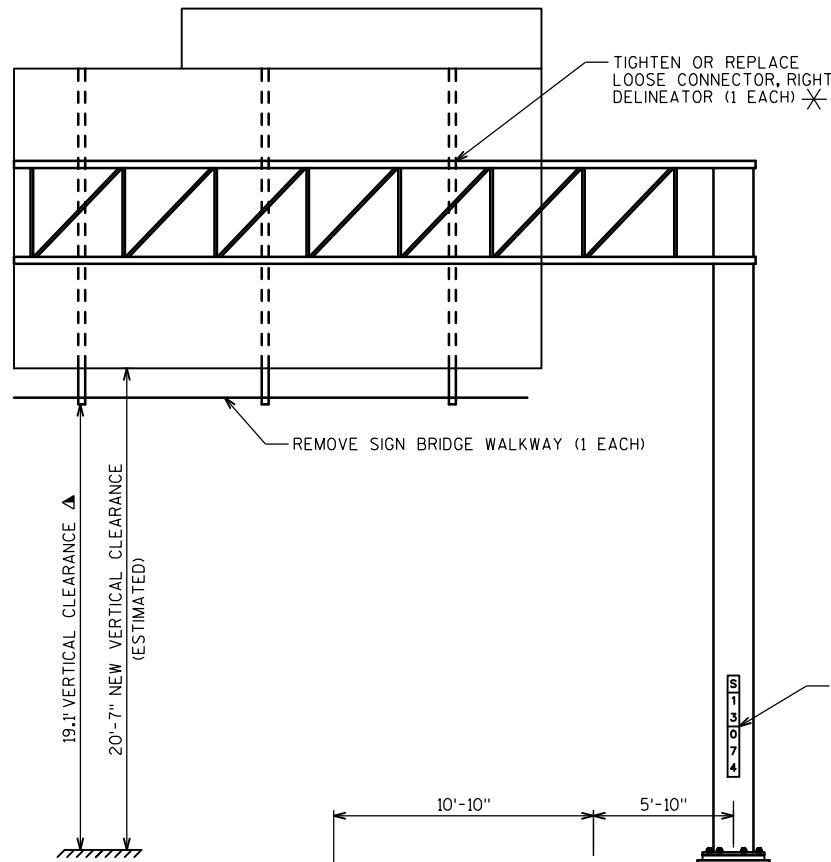
FOUNDATION DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-73			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-73 LAYOUT		SHEET 7 OF 1	



NOTES

1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
2. ALL ANCHOR RODS ARE 2" DIA. PER ORIGINAL STRUCTURE PLANS AND PER MOST RECENT INSPECTION REPORT DATED 8-9-2013.



LEGEND

- \* PAID FOR UNDER BID ITEM "INSTALL OR TIGHTEN SIGN PANEL HARDWARE".
- ▲ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 8-9-2013

ELEVATION  
LOOKING WEST

S-13-74 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.05	REPLACE MISSING CONDUIT PLUG	EA	1
SPV.0060.08	REMOVE SIGN BRIDGE WALKWAY	EA	1
SPV.0060.10	INSTALL RODENT SCREEN	EA	1
SPV.0060.11	INSTALL OR TIGHTEN SIGN PANEL HARDWARE	EA	1
SPV.0060.13	INSTALL SIGN BRIDGE ID PLAQUE	EA	1

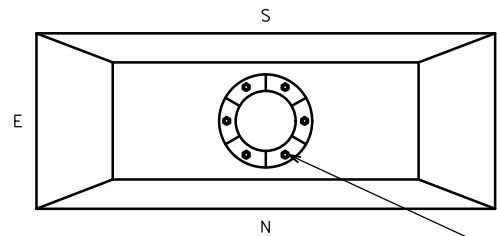
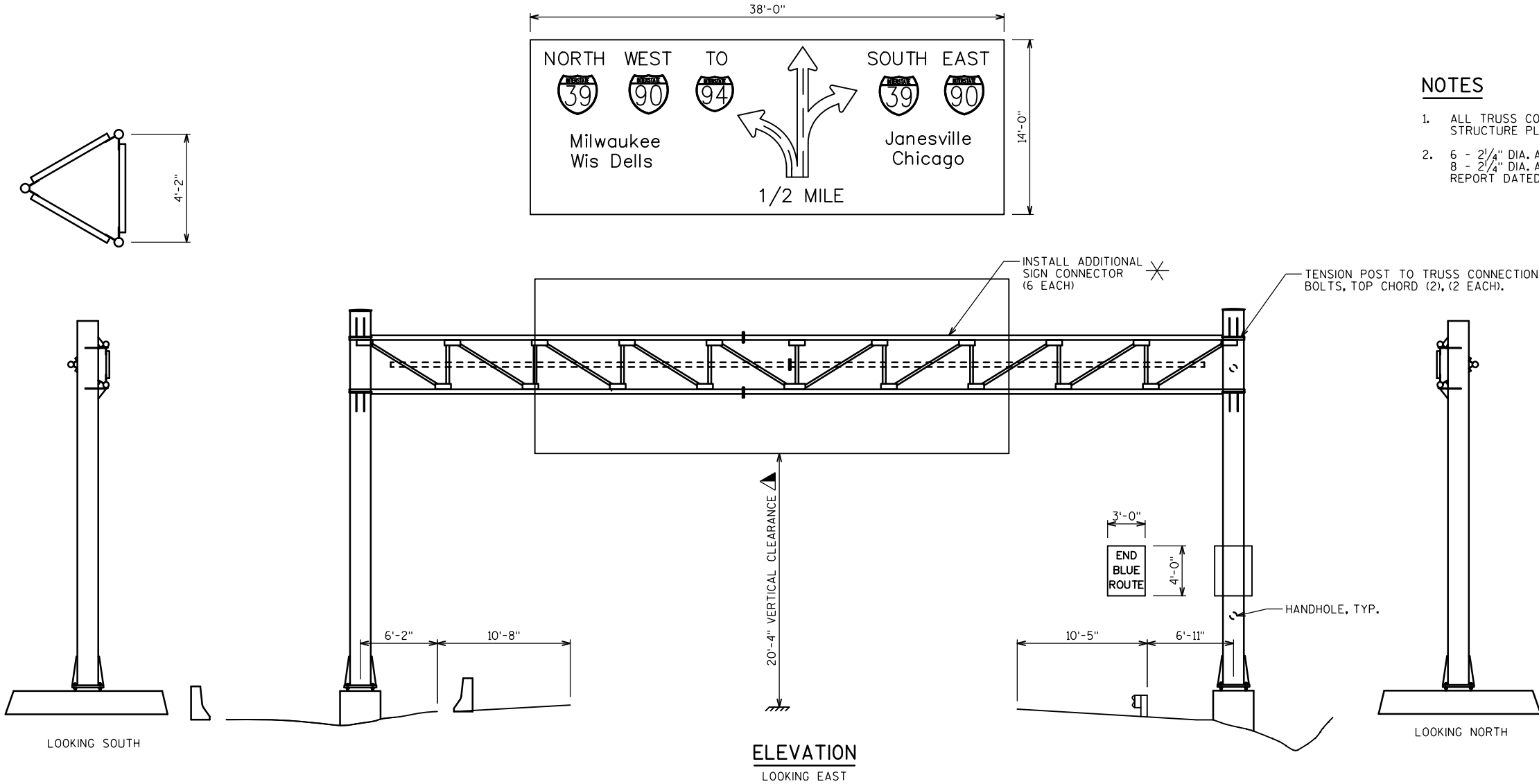
None Found Loose

FOUNDATION DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-74			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-74 LAYOUT			SHEET 8 OF 14

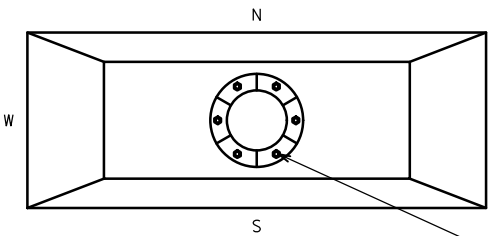
NOTES

1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
2. 6 - 2 1/4" DIA. ANCHOR RODS SHOWN ON ORIGINAL STRUCTURE PLANS.  
8 - 2 1/4" DIA. ANCHOR RODS SHOWN ON MOST RECENT INSPECTION REPORT DATED 11-17-2011. FIELD VERIFY QUANTITY.



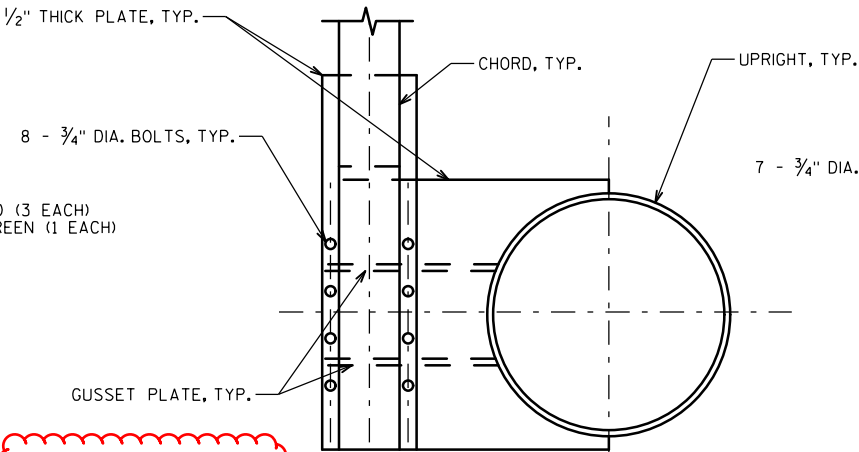
NORTH FOUNDATION DETAIL

TENSION ANCHOR ROD (3 EACH)  
INSTALL RODENT SCREEN (1 EACH)

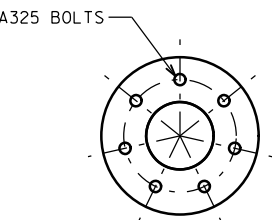


SOUTH FOUNDATION DETAIL

TENSION ANCHOR ROD (3 EACH)  
INSTALL RODENT SCREEN (1 EACH)



TYPICAL UPPER AND LOWER TRUSS  
TO COLUMN CONNECTION



FLANGE COUPLING DETAIL  
NO. OF SPLICE LOCATIONS = 3

LEGEND

- ✱ PAID FOR UNDER BID ITEM "INSTALL OR TIGHTEN SIGN PANEL HARDWARE".
- ▲ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 11-17-2011.

S-13-149 ESTIMATED QUANTITIES

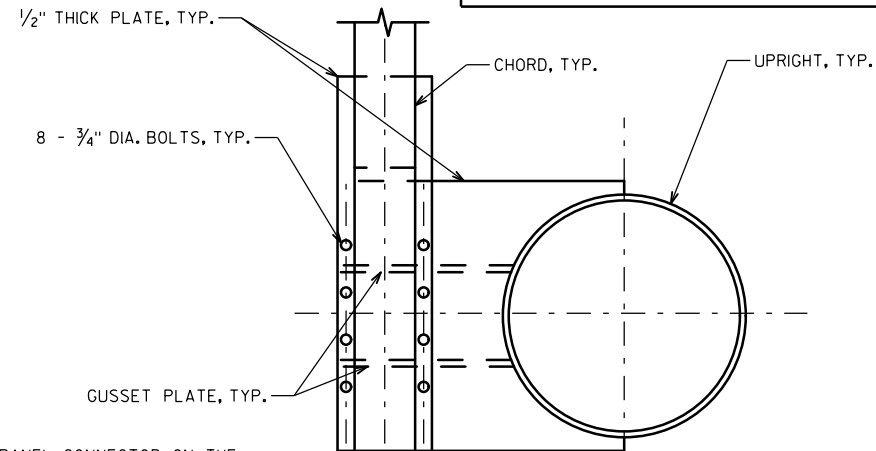
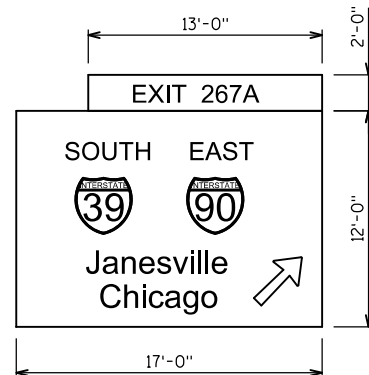
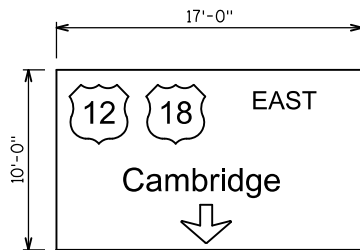
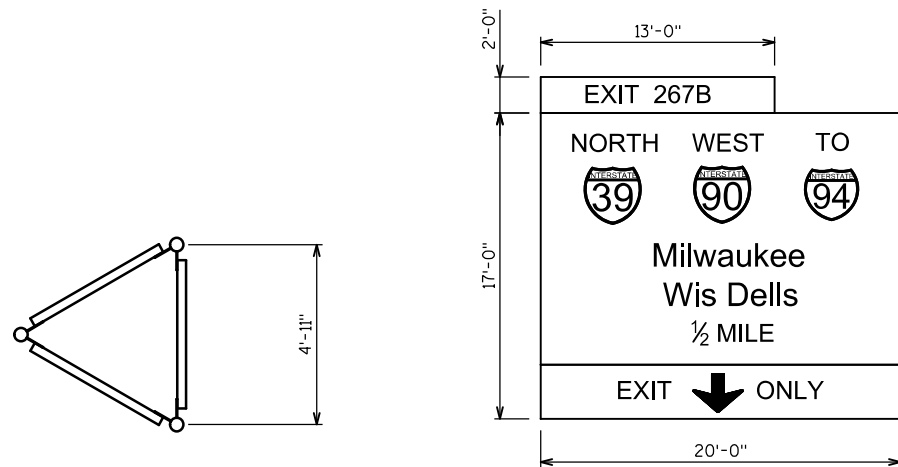
ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.06	TENSION ANCHOR ROD	EA	6
SPV.0060.10	INSTALL RODENT SCREEN	EA	2
SPV.0060.11	INSTALL OR TIGHTEN SIGN PANEL HARDWARE	EA	6
SPV.0060.14	TENSION TRUSS CONNECTION BOLT	EA	2

None Found Loose

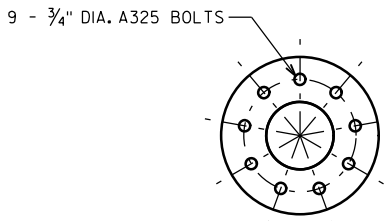
None Found Loose

None Found Loose

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-149			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-149 LAYOUT			SHEET 9 OF 14



TYPICAL UPPER AND LOWER TRUSS TO COLUMN CONNECTION



FLANGE COUPLING DETAIL  
NO. OF SPLICE LOCATIONS = 6

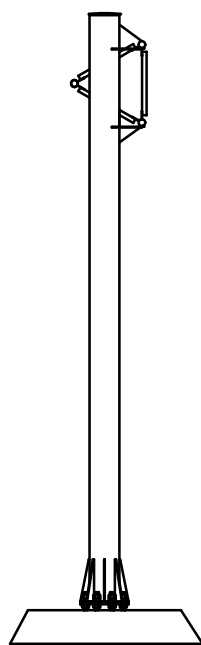
TENSION TRUSS CONNECTION BOLTS: LF (4) AND UF (6), (10 EACH).

INSTALL MISSING SIGN PANEL CONNECTOR ON THE NORTH WINDBEAM OF THE NORTH SIGN (1 EACH) ✕

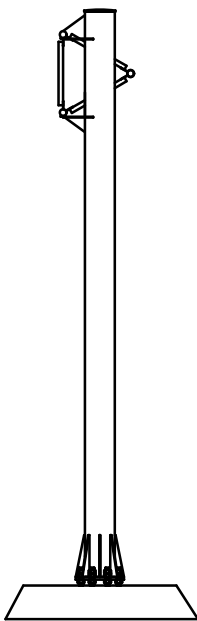
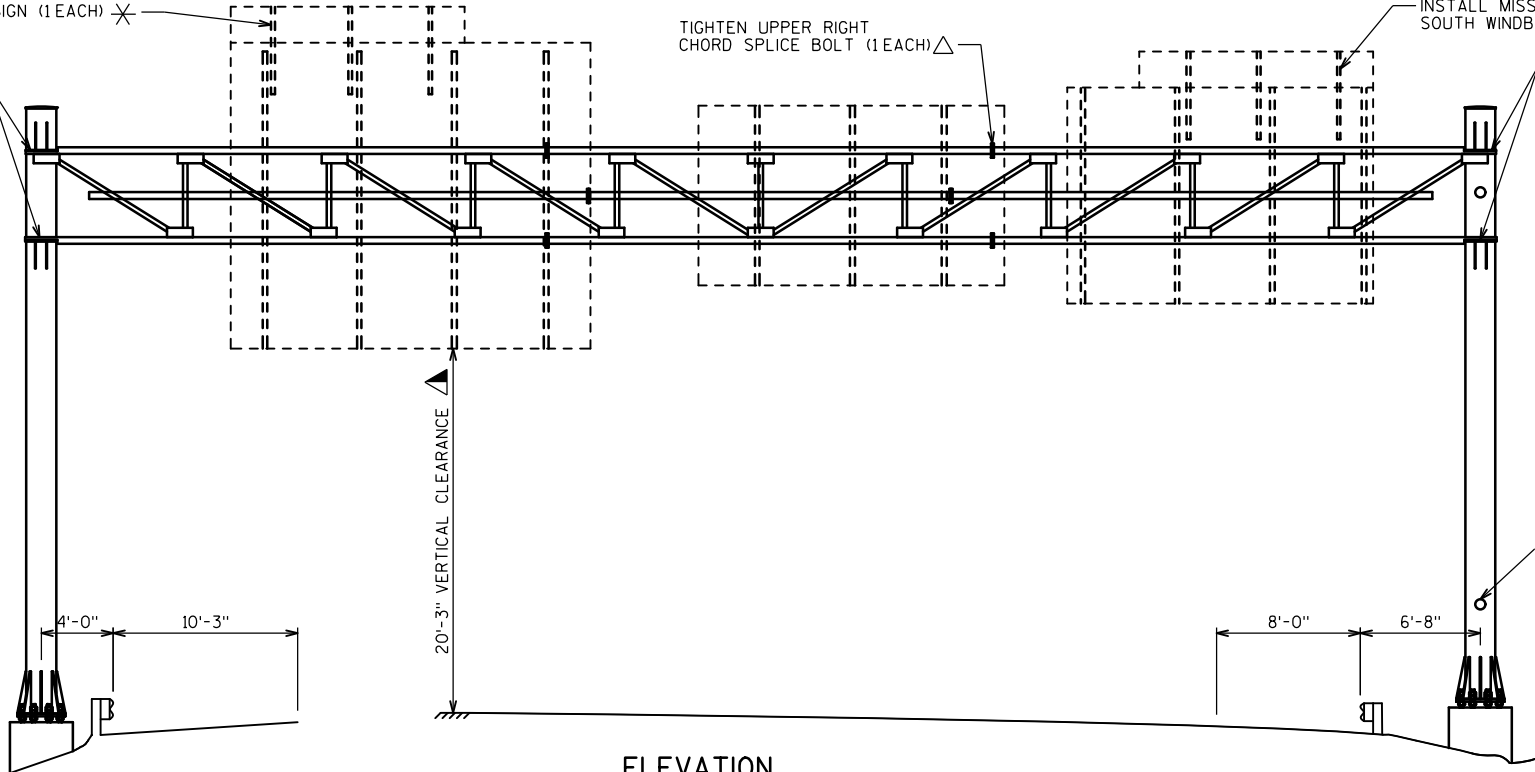
TIGHTEN UPPER RIGHT CHORD SPLICE BOLT (1 EACH) △

INSTALL MISSING SIGN PANEL CONNECTOR ON THE SOUTH WINDBEAM OF THE SOUTH SIGN (1 EACH) ✕  
TENSION TRUSS CONNECTION BOLTS: LF (4) AND UF (7), (11 EACH).

HANDHOLE, TYP.



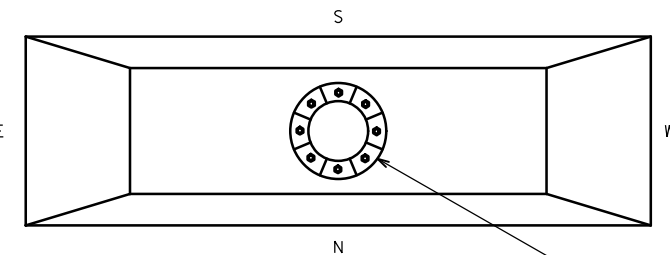
LOOKING SOUTH



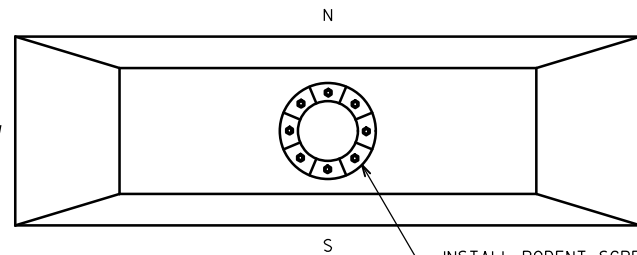
LOOKING NORTH

NOTES

1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
2. ALL ANCHOR RODS ARE 2 1/4" DIA. PER ORIGINAL STRUCTURE PLANS, BUT NOTED AS 2" DIA. PER MOST RECENT INSPECTION REPORT DATED 12-10-2011. FIELD VERIFY SIZE OF ANCHOR RODS.



NORTH FOUNDATION DETAIL



SOUTH FOUNDATION DETAIL

LEGEND

- ✕ PAID FOR UNDER BID ITEM "INSTALL OR TIGHTEN SIGN PANEL HARDWARE".
- △ PAID FOR UNDER BID ITEM "TENSION TRUSS CONNECTION BOLT".
- ▲ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 12-10-2011.

S-13-150 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.10	INSTALL RODENT SCREEN	EA	2
SPV.0060.11	INSTALL OR TIGHTEN SIGN PANEL HARDWARE	EA	2
SPV.0060.14	TENSION TRUSS CONNECTION BOLT	EA	22

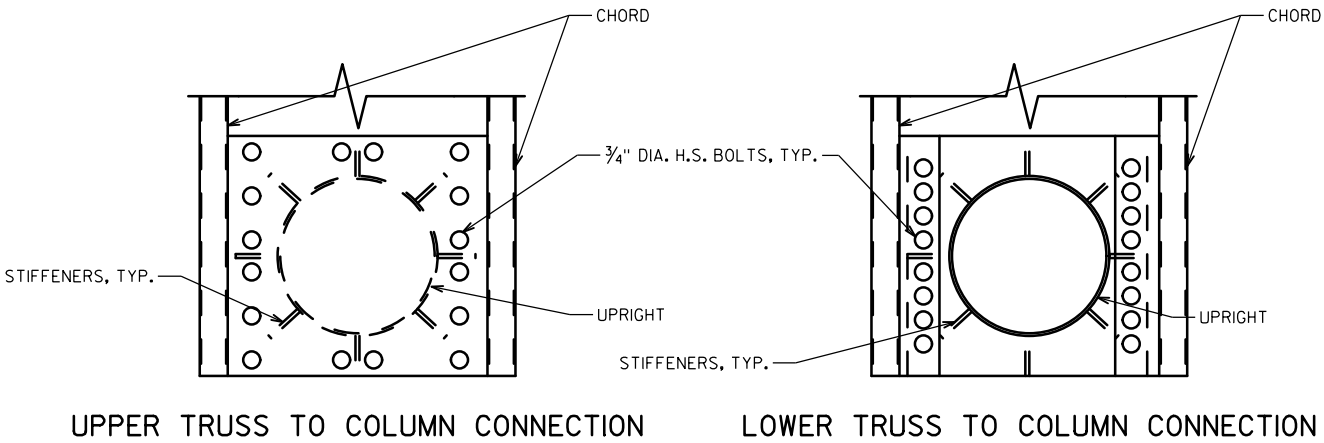
None Found Loose

None Found Loose

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-150			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-150 LAYOUT			SHEET 10 OF 14

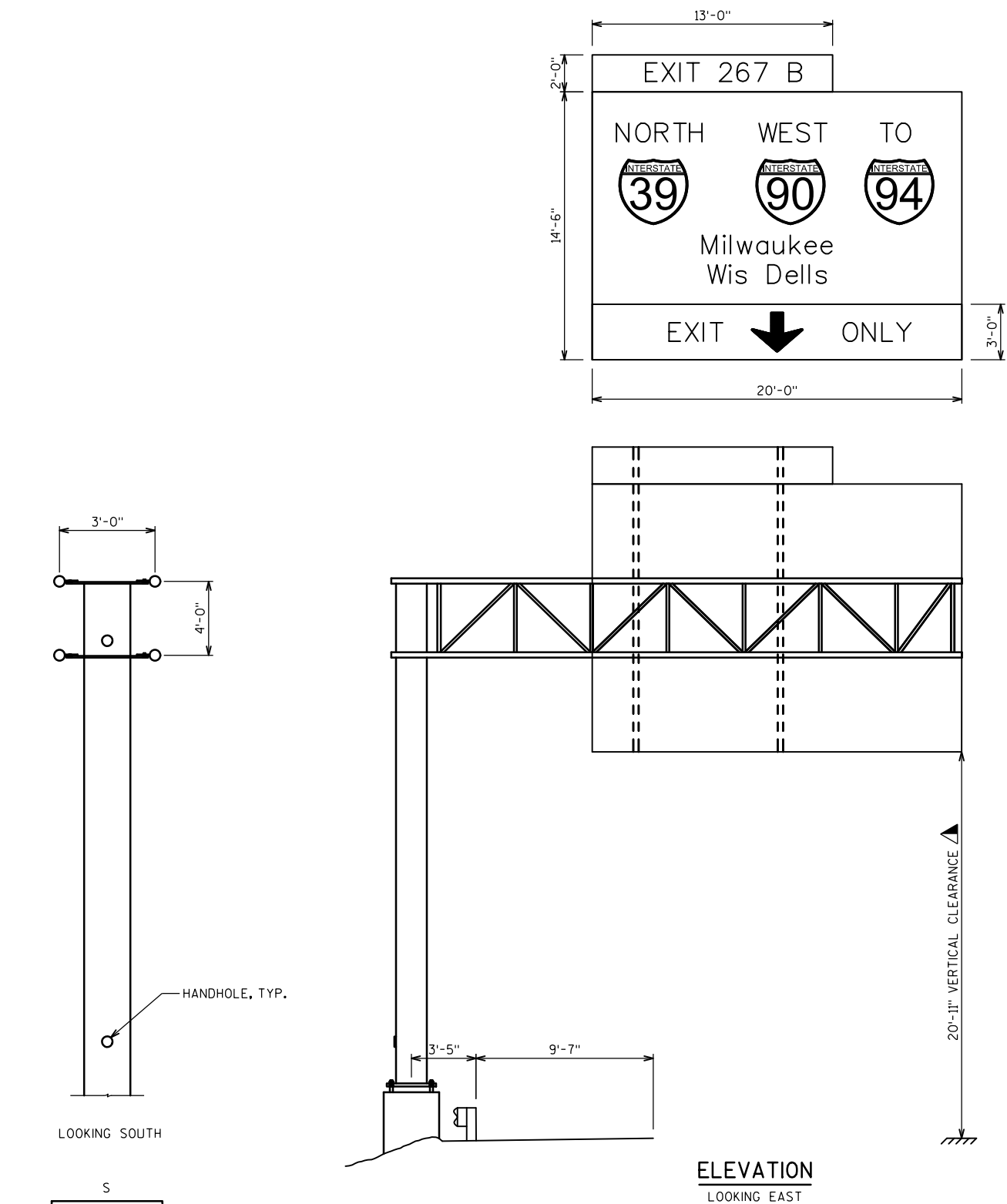
NOTES

1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
2. ALL ANCHOR RODS ARE 2" DIA. PER ORIGINAL STRUCTURE PLANS AND MOST RECENT INSPECTION REPORT DATED 11-17-2011.



LEGEND

- ▲ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 11-17-2011.



S-13-151 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.06	TENSION ANCHOR ROD	EA	2
SPV.0060.10	INSTALL RODENT SCREEN	EA	1

WisDOT performed

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-151			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-151 LAYOUT			SHEET 11 OF 14



NOTES

1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
2. ALL ANCHOR RODS ARE 2 1/4" DIA. PER ORIGINAL STRUCTURE PLANS, BUT NOTED AS 2" DIA. PER MOST RECENT INSPECTION REPORT DATED 11-18-2011. FIELD VERIFY SIZE OF ANCHOR RODS.

LEGEND

▲ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 11-18-2011.

TENSION TRUSS CONNECTION BOLTS: LF (8) AND UF (8), (16 EACH).

TENSION TRUSS CONNECTION BOLTS: LF (8) AND UF (8), (16 EACH).

HANDHOLE, TYP.

LOOKING SOUTH

LOOKING NORTH

ELEVATION

LOOKING EAST

1/2" THICK PLATE, TYP.

CHORD, TYP.

UPRIGHT, TYP.

8 - 3/4" DIA. BOLTS, TYP.

10 - 3/4" DIA. A325 BOLTS

GUSSET PLATE, TYP.

INSTALL RODENT SCREEN (1 EACH)

NORTH FOUNDATION DETAIL

SOUTH FOUNDATION DETAIL

FLANGE COUPLING DETAIL

NO. OF SPLICE LOCATIONS = 6

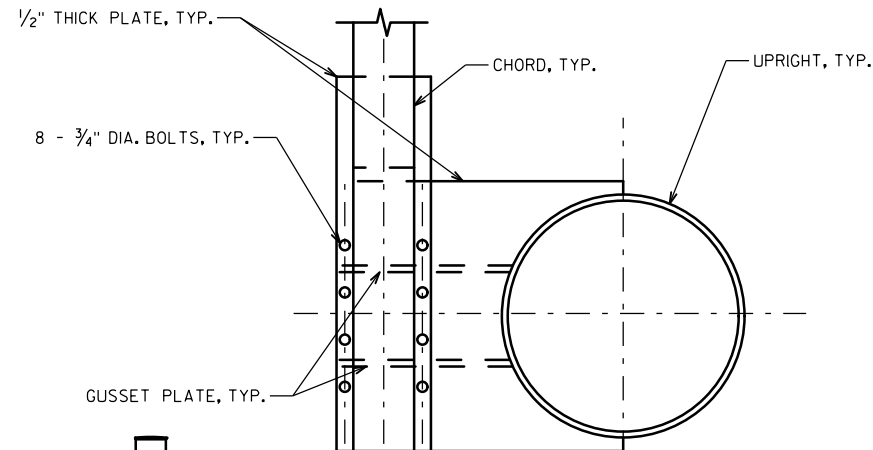
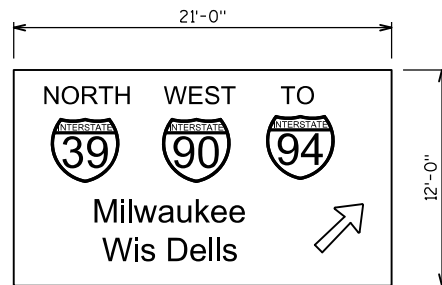
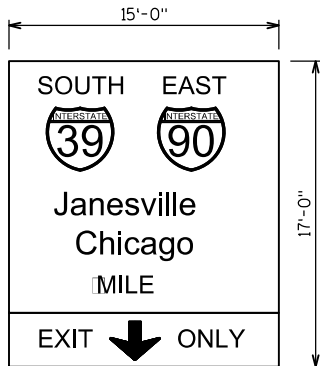
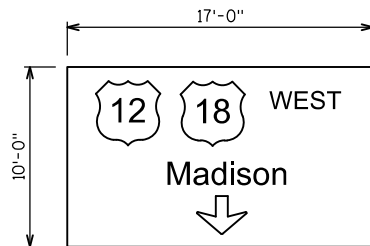
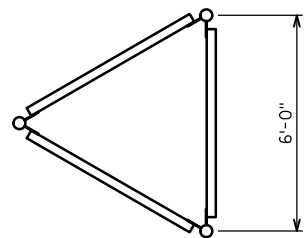
TYPICAL UPPER AND LOWER TRUSS TO COLUMN CONNECTION

S-13-152 ESTIMATED QUANTITIES

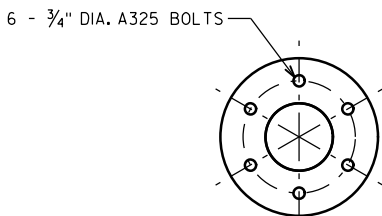
ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.10	INSTALL RODENT SCREEN	EA	2
SPV.0060.14	TENSION TRUSS CONNECTION BOLT	EA	32

None Found Loose

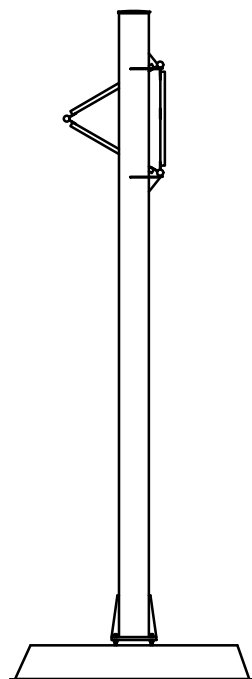
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-152			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-152 LAYOUT			SHEET 12 OF 14



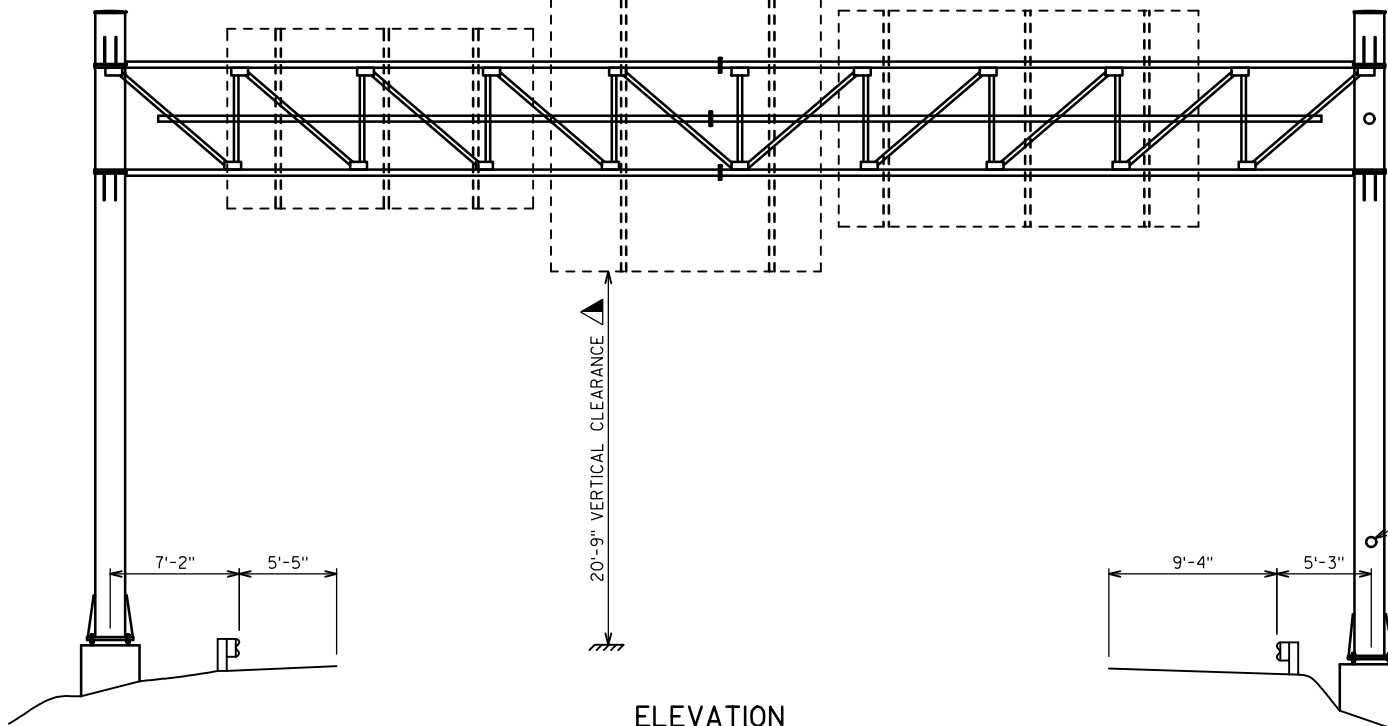
TYPICAL UPPER AND LOWER TRUSS  
TO COLUMN CONNECTION



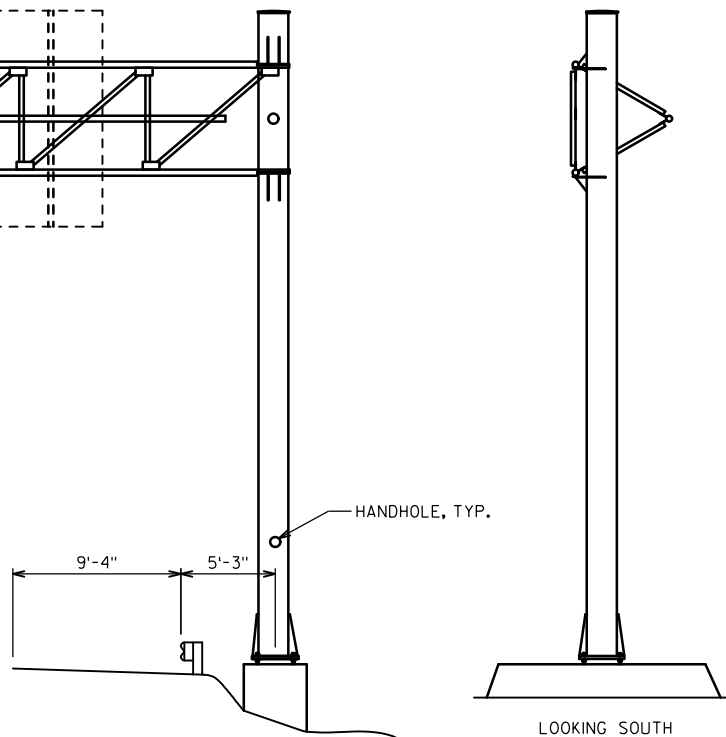
FLANGE COUPLING DETAIL  
NO. OF SPLICE LOCATIONS = 3



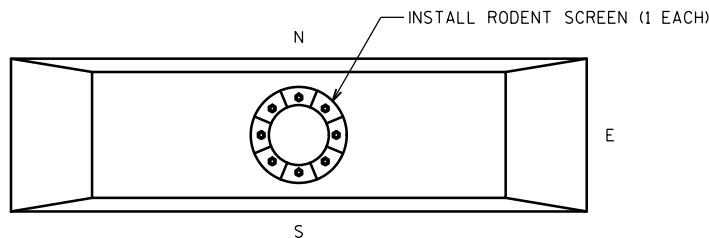
LOOKING NORTH



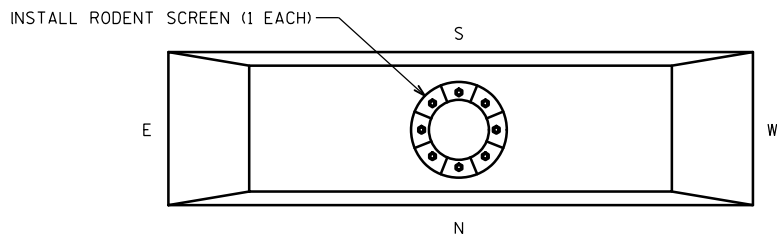
ELEVATION  
LOOKING WEST



LOOKING SOUTH



SOUTH FOUNDATION DETAIL



NORTH FOUNDATION DETAIL

LEGEND

▲ VERTICAL CLEARANCE PER HSI SYSTEM  
MOST RECENT INSPECTION REPORT  
DATED 10-29-2011.

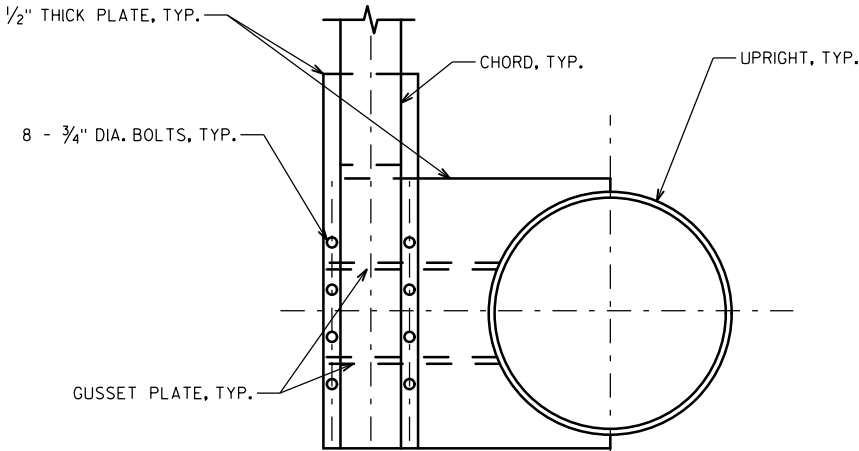
S-13-153 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.10	INSTALL RODENT SCREEN	EA	2

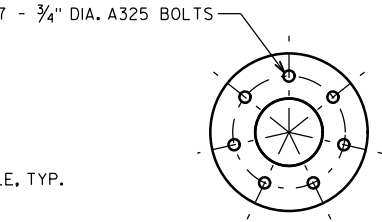
NOTES

- ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
- ALL ANCHOR RODS ARE 2 1/4" DIA. PER ORIGINAL STRUCTURE PLANS, BUT NOTED AS 2" DIA. PER MOST RECENT INSPECTION REPORT DATED 10-29-2011. FIELD VERIFY SIZE OF ANCHOR RODS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-153			
DRAWN BY		KTM	PLANS CK'D. HDA
SIGN STRUCTURE S-13-153 LAYOUT			SHEET 13 OF 14



TYPICAL UPPER AND LOWER TRUSS  
TO COLUMN CONNECTION



FLANGE COUPLING DETAIL  
NO. OF SPLICE LOCATIONS = 6

NOTES

1. ALL TRUSS CONNECTION BOLTS ARE 3/4" DIA. PER ORIGINAL STRUCTURE PLANS.
2. ALL ANCHOR RODS ARE 2 1/4" DIA. PER ORIGINAL STRUCTURE PLANS AND MOST RECENT INSPECTION REPORT DATED 12-1-2011.

ELEVATION  
LOOKING WEST

LOOKING SOUTH

LOOKING NORTH

SOUTH FOUNDATION DETAIL

NORTH FOUNDATION DETAIL

LEGEND

- ✕ PAID FOR UNDER BID ITEM "INSTALL OR TIGHTEN SIGN PANEL HARDWARE".
- ▲ VERTICAL CLEARANCE PER HSI SYSTEM MOST RECENT INSPECTION REPORT DATED 12-1-2011.

S-13-157 ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
SPV.0060.10	INSTALL RODENT SCREEN	EA	2
SPV.0060.11	INSTALL OR TIGHTEN SIGN PANEL HARDWARE	EA	1
SPV.0060.13	INSTALL SIGN BRIDGE ID PLAQUE	EA	1

None Found Loose