REHABILITATION STRUCTURE SURVEY REPORT

Wisconsin Department of Transportation

DT1696 6/2012

☒ **Grade Separation** ☐ **Stream Crossing** ☐ **Culvert**

☐ **Railroad** ☐ **Retaining Wall** ☐ **Noise Barrier**

☐ **Sign Structure** ☐ **Other:** _____

For guidance see: **http://dotnet/dtid_bos/extranet/structures/reports-checklists.htm**

Design Project ID 1190-02-34	Construction Project ID 1190-02-64	Highway (Project Name) EAU CLAIRE - CHIPPEWA FALLS		
Final Plan Due Date 05/01/2018	Preliminary Plan Due Date 05/01/2018	☐ Town ☐ Village ☒ City EAU CLAIRE		
PS&E Date 08/01/2018	Letting Date 02/12/2019	County EAU CLAIRE		
Structure Number B-18-178		Section 27	Town 27N	Range 09W
Station 238+10.34 - 239+58.16	Latitude: 444715.0 Longitude: 912710.6	☒ YES ☐ NO Structure Located on National Highway System		
For Survey and CADD Files Horizontal Coordinate System: Vertical Datum:		**Traffic Forecast Data**		
		Design Year	Average Daily Traffic (ADT)	Roadway Design Speed	Functional Class
Feature On USH 53 SB		Feature On 2008	18800	70 MPH	Principal Arterial
Feature Under HASTINGS WAY		Feature Under 2014	15400	50 MPH	Principal Arterial
Region Contact: Adam Hetrick (Area Code) Telephone Number(s): 715-836-2855 Email: adam.hetrick@dot.wi.gov		Consultant Contact: (Area Code) Telephone Number(s): Email:			

Work To Be Performed

Field Information Required
Item Number *(see Pages 2–4)*

- ☐ A. Structural Repair 1–3, 22
- ☒ B. Overlay 1–3, 10–22, 26–28, 32, 34
  - ☐ Concrete Overlay ☐ Asphalt Overlay
  - ☐ Polymer Modified Asphalt Overlay ☒ Thin Bonded Polymer Overlay
  - ☐ Other: _____
- ☐ C. New Bearings 3, 8, 9, 22
- ☐ D. New Railings 15–17, 20–23
- ☐ E. Curb and Sidewalk Repair 2, 3, 16, 22, 23
- ☐ F. Abutment Repair 2, 3, 12, 16
- ☐ G. Pier Repair 2, 3, 12, 16
- ☐ H. New Deck 1–6, 9, 10, 13–28, 32–34
- ☐ I. Widening 1–28, 30, 32–35
- ☐ J. Joint Repair 2, 3, 8, 16, 19, 22
- ☐ K. Surface Repair 2, 3, 22
- ☐ L. Raising Bridge 3, 6, 9, 16, 20–24
- ☐ M. Slope Stabilization 1–3, 30
- ☐ N. Scour Repair ..... 1, 2 or 3, 16, 19, 21, 27, 29, 31–35
- ☐ O. Painting 16, 22, 24
- ☐ P. Other: _____

Field Information Required

If no structure number exists provide the following: Small County Map on which the location of proposed structure is shown in red and any highway relocation in green. In addition, provide Location Map of scale not less than 1" = 2000' showing the structure location and number.

☒ 1. Most recent inspection report, brief history of bridge construction date, and description of repairs with dates.

☒ 2. Outline deficient areas on existing structure plan or drawing.

☒ 3. Photographs of details requiring repairs or modifications, such as: bearings, x-frames, joints, etc. Photograph all deficient areas. Clearly label all photographs.

☐ 4. Provide proposed typical section for roadway and structure showing dimensions and cross slopes.

☐ 5. Survey beam seat or girder elevations at both sides of bridge at all substructure units.

☐ 6. Provide cross-section elevations at 10 foot intervals extending across the structure and a minimum of 100 feet beyond each end. Sections should be normal to centerline and show elevations at centerline roadway and gutter line. Take elevations along joints and at floor drains.

☐ 7. Show and identify starting stationing on bridge.

☐ 8. Record measurement, temperature of the structure, and date taken for each of the following:
(a) Joint opening measured normal to joint at centerline of roadway and both curb lines.
(b) Clearance between girder ends at piers.
(c) Distance from front face of abutment backwall to closest point of girder end measured parallel to girder.
(d) Temperature of structure determined by averaging top and under deck (if accessible) readings.

☐ 9. Fixed and expansion bearings - condition and orientation.

☒10. Number and width of proposed pours including construction staging sequence.

☒11. Location of existing construction joints in the deck.

☒12. Estimated Quantities:

Preparation, Decks, Type 1	Sq. Yd. 0	
Preparation, Decks, Type 2	Sq. Yd. 0	
Full Depth Deck Repair	Sq. Yd. 0	Galvanic Anodes? NO
Concrete Surface Repair Superstructure	Sq. Ft. 0	Galvanic Anodes? NO
Concrete Surface Repair Substructure	Sq. Ft. 0	Galvanic Anodes? NO
Curb Repair	LF. 0	Galvanic Anodes? NO

☒13. Sufficiency number: 100.0 (obtain from HSI Bridge Inventory System)

☒14. Appraisal and Condition Rating

	Deck Condition	Superstructure Condition	Substructure Condition	Load Capacity Appraisal	Structural EVAL Appraisal
Current	8	8	8	5	8

☒ 15. Load Ratings

	Inventory	Operational
Current Calculated Date: 6/5/2013	HS28	HS73
After Completed by Bridge Designer		

☒ 16. Utilities on/near Structure. (WisDOT policy is to avoid placing utilities on the structure.)
☐ Yes ☒ No

Type	Owner and Contact Information	Size	Opening at Abutment	Weight	Pressure

☒ 17. Is existing bridge railing deficient?
☐ Yes ☒ No If Yes – Replacement Rail Type:

☐ 18. Drains to be:
☐ Raised ☐ Closed ☐ Downspouted ☐ New

☒ 19. Traffic maintained on bridge during work?
☒ Yes ☐ No If Yes – Include sketches

☒ 20. Will guard rail be attached?
☐ Yes ☒ No If Yes – Which corners? Existing guardrail to remain at all corners.

☒ 21. Will work to be performed eliminate all deficiencies?
☒ Yes ☐ No If No – Explain:

☒ 22. Hazardous waste (asbestos) to be removed?
☐ Yes ☒ No If Yes – Explain:

☐ 23. Wing location(s) for surface drain anchors:

☒ 24. Painting?
☐ Yes ☒ No If Yes – Explain on Page 4
(all, part, railing, color system, containment, bid items)

☐ 25. Desired roadway width: *(new deck / widening)* _____ Ft.
Desired sidewalk clear width: Left: _____ Ft. Right: _____ Ft.

☒ 26. Maximum increase in grade line elevation 3/8 In.

☒ 27. Benchmark description to be shown

☒ 28. Desired final cross slopes on bridge SE = 0.06 Ft./Ft.

☐ 29. Underwater Inspection Report including:
- Streambed Cross Section With Pier, Footing and Seal Elevations
- Pier Elevation Drawings
- Pier Layout
- Hydrographic Survey

☐ 30. Slope stabilization, provide:
Type: _____ Quantity: _____ CY.
Slope: _____ Ft./Ft. Fill: _____ CY.

☐ 31. Preliminary layout of grout bags or proposed scour repair.
C.I.P. Articulated Mats (for Scour) _____ CY.
Grout Bags (for Scour) _____ CY.
Heavy Riprap _____ CY.
Extra Heavy Riprap _____ CY.

☒ 32. Report submitted with Preliminary Plan requires **no** CADD file submittal *(See ESubmittal instructions)*.

☐ 33. Report submitted for development of Preliminary Plan to structure design engineer requires CADD file (if available) submittal and Report submittal to Soils Engineer if project involves foundation modifications.

☐ 34. Coordinate with structure design engineer **before** going into the field if existing structure has no available plans, if staged construction is planned, or if there are adjoining/adjacent structures that will remain in place.

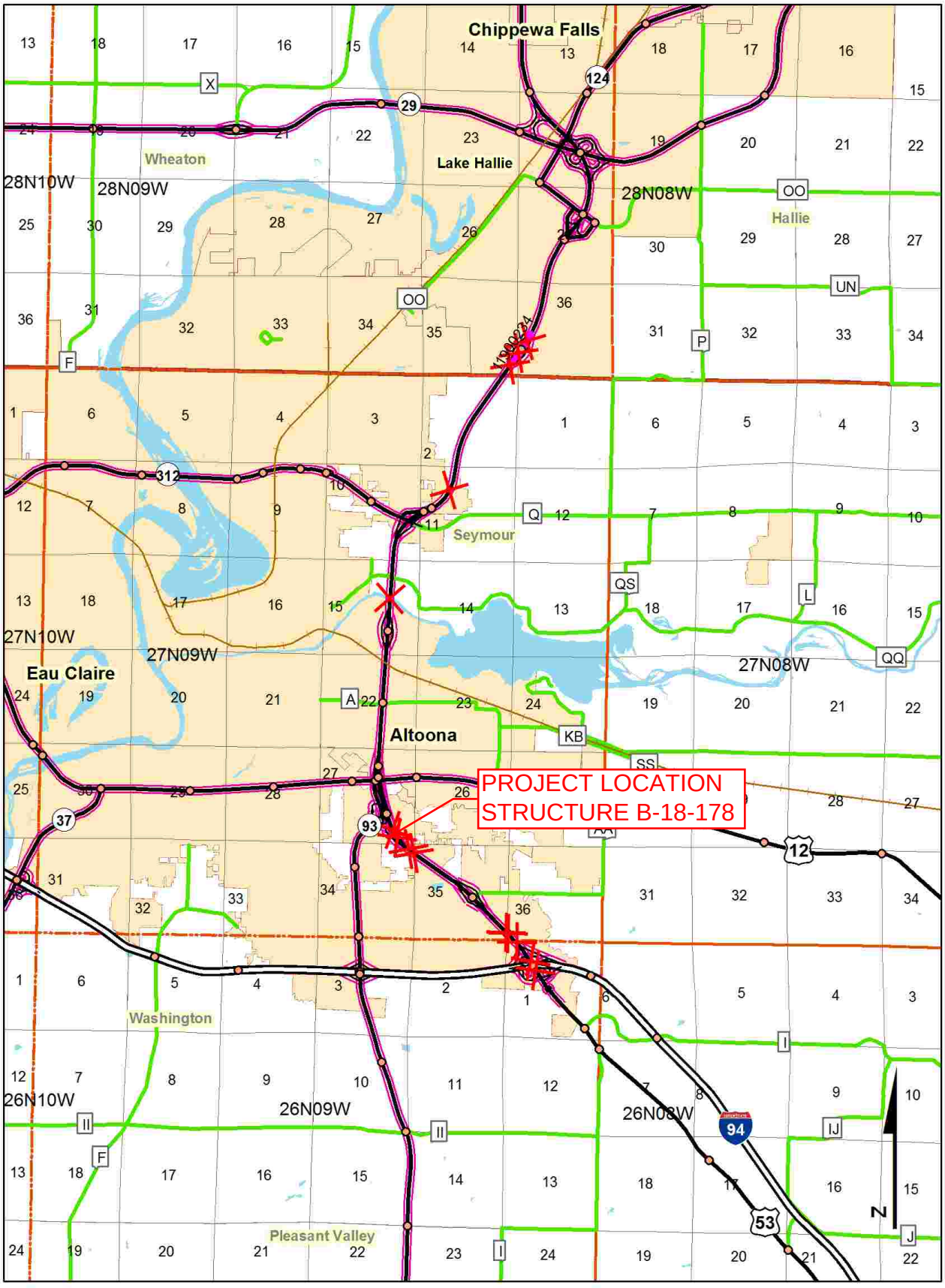
☐ 35. If project involves substructure widening coordinate with structure and/or hydraulic design engineer to determine if information on the separation and/or stream crossing SSR will be required.

Additional Information

Elaborate on other concerns such as: DNR, Local, Utility Conflicts, Aesthetics, Railing Type and Staged Construction.
Please be as detailed and specific as possible.

1.) Structure built in 2006. No repairs since construction. See attached Bridge Inspection Report.
2.) Deficient areas to be determined in the field by the engineer. See attached Bridge Inspection Report. A Polymer Overlay is proposed because of deficiency over the entire structure due to poor bridge deck surface. The deck has a couple hairline diagonal cracks at the deck ends and a few hairline transverse cracks. The deck has diagonal cracking at the northwest and southeast corners. The northwest approach shoulder has a large diagonal crack in it and has settled about 2 inches. The northeast, southeast, and southwest approach shoulders have settled about 2 inches.
3.) See attached photographs.
10.) This work will be constructed half at a time under traffic using single lane closures during non-peak hours with night work. Nighttime ramp closures are anticipated at some structures. All lanes and ramps will be opened to traffic daily.
11.) See asbuilt plans.
16.) No utilities on or near structure. No conflicts anticipated.
19.) This work will be constructed half at a time under traffic using single lane closures during non-peak hours with night work. Nighttime ramp closures are anticipated at some structures. All lanes and ramps will be opened to traffic daily.
22.) See attached Asbestos Inspection Report. No asbestos-containing material was found.
27.) To be determined.
32.) See preliminary plans.

CDR Map


Chippewa Falls
Wheaton
Lake Hallie
Hallie
Seymour
Eau Claire
Altoona
Washington
Pleasant Valley
28N10W
28N09W
28N08W
27N10W
27N09W
27N08W
26N10W
26N09W
26N08W
PROJECT LOCATION
STRUCTURE B-18-178
N

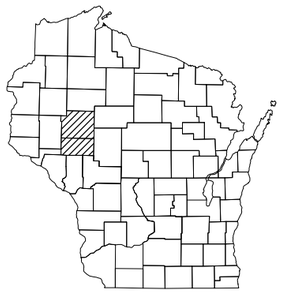
PROJECT ID: 1190-02-64

WITH:

COUNTY: EAU CLAIRE / CHIPPEWA

ORDER OF SHEETS

TOTAL SHEETS =



N

DESIGN DESIGNATION

A.A.D.T.	=
A.A.D.T.	=
D.H.V.	=
D.D.	=
T.	=
DESIGN SPEED	=
ESALS	=

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1190-02-64		

EAU CLAIRE - CHIPPEWA FALLS

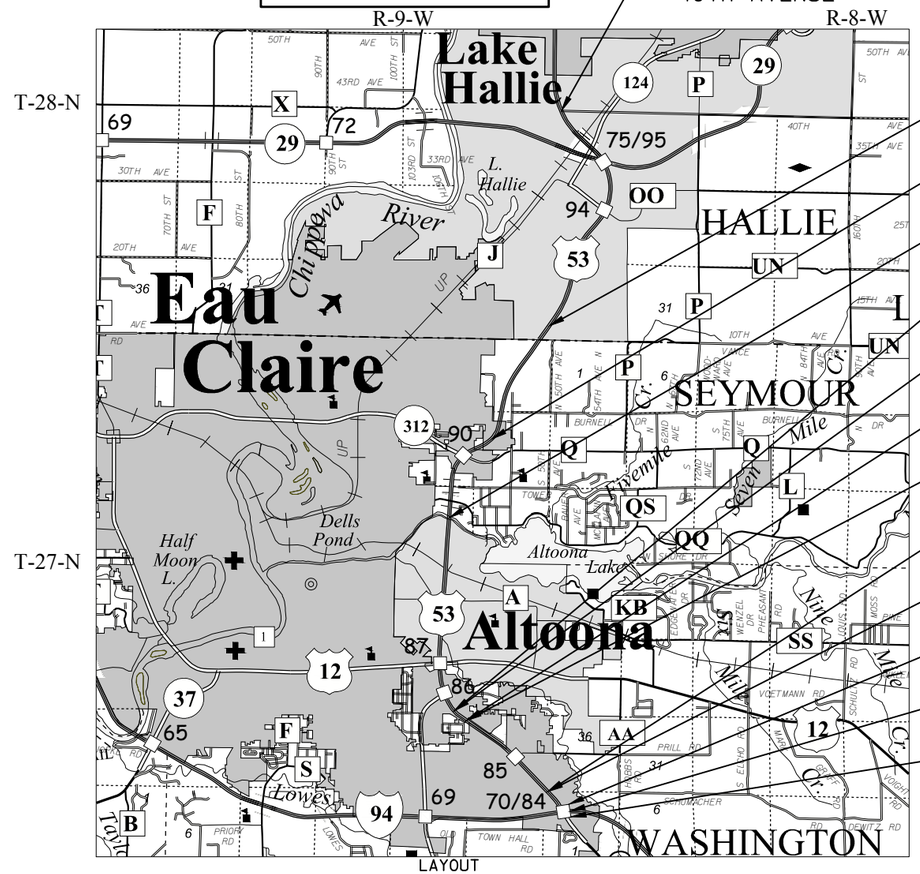
IH 94 TO 40TH AVENUE (11 BRIDGES)

USH 53

EAU CLAIRE AND CHIPPEWA COUNTIES

STATE PROJECT NUMBER
1190-02-64

END PROJECT
STA. 83+66.39 N.B.
40TH AVENUE



LAYOUT

SCALE 0 2 MILES

TOTAL NET LENGTH OF CENTERLINE = 11.26 MILES

STRUCTURE B-09-262

STRUCTURE B-18-190

STRUCTURE B-18-168

STRUCTURE B-18-178

STRUCTURE B-18-182

STRUCTURE B-18-183

STRUCTURE B-18-184

STRUCTURE B-18-37

STRUCTURE B-18-38

STRUCTURE B-18-35

STRUCTURE B-18-36

BEGIN PROJECT
STA. 38+66.40 N.B.
IH 94
X = 359529.44
Y = 262430.72

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	WISDOT
Designer	ADAM HETRICK
Project Manager	DAVID KOEPP
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	TMOTHY MASON

APPROVED FOR THE DEPARTMENT

DATE: _____ _____ (Signature)

E

route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.433

Lat: 44.78777818 Long: -91.45303642 Elev: 796.57 ft.

\\doteauplog1p\photolog\Rg5\053S_R5_2013\\Front\Dir_140\F_14071.jpg

route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.443

Lat: 44.78764373 Long: -91.45296299 Elev: 798.21 ft.

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route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.453

Lat: 44.78750909 Long: -91.45288552 Elev: 799.85 ft.

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route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.463

Lat: 44.78737642 Long: -91.45280568 Elev: 801.19 ft.

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route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.473

Lat: 44.78724346 Long: -91.45272118 Elev: 802.63 ft.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for B-18-178

USH 53 SB over HASTINGS WAY

Jul 15,2015

Type	Prior	Frequency (mos)	Performed
Routine	07-15-15	24	X
SI&A	07-18-11	48	X

Latitude	44°47'15.00"N	Owner	STATE HIGHWAY DEPT
Longitude	91°27'10.60"W	Maintainer	STATE HIGHWAY DEPT

Time Log

Hours	Minutes
1	11

Team members

	Name	Number	Signature	Date
Inspector	Frueh, Rick J	1003	Completed by HSI System Account(HSI)	
Reviewer				

BRIDGE INSPECTION REPORT
Wisconsin Department of Transportation
DT2007 2003 s.84.17 Wis. Stats.

Identification & Location

Feature On: USH 53 SB	Section Town Range: S27 T27N R09W	Structure Number: **B-18-178**
Feature Under: HASTINGS WAY	County: EAU CLAIRE(18)	
Location: 0.7M S JCT CTH HH	Municipality: CITY-EAU CLAIRE(18221)	Structure Name:

Geometry

measurements in feet, except where noted

Approach Roadway Width: 40	Bridge Roadway Width: 40.0	Total Length: 148.4
Approach Pavement Width: 24	Deck Width: 45.4	Deck Area (sq ft): 6737

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	2	22000	2004	ONE WAY TRAFFIC
Under	2			ONE WAY TRAFFIC

Capacity

Load Rating

Inventory rating: HS28	Overburden depth (in): 0.0	Last rating date: 06-05-13	Controlling: INTERIOR DECK GIRDER Positive Moment
Operating rating: HS73	Deck surface material: CONCRETE	Re-rate for capacity (Y/N):	Control location: SPAN 1
Posting:	Re-rate notes:		

Hydraulic

Classification

Scour Critical Code(113): (N) NO WATERWAY	Q100 (ft3/sec): 0	
High water elevation (ft): 0.0	Velocity (ft/sec): 0.0	Sufficieny #: 100.0

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	PREST CONCRETE	DECK GIRDER	70	142.1	Y

Expansion joint(s)

Temperature: File: | New:

Vertical Clearance

	Measurement file (ft)	File Date	Measurement new (ft)
Highway Minimum Under Cardinal	17.1	29-Apr-2003	
Highway Minimum Under Non-Cardinal			
Highway Minimum On			
Railroad Minimum Under			

Elements

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**12**		**Reinforced Concrete Deck**	SF	6,737	6,733	4	0	0
		1130	Cracking (RC)	SF		133	4	0	0
			Couple hairline diagonal cracks at deck ends.						
	8000		Wearing Surface (Bare)	SF	6,737	6,720	17	0	0
		3220	Crack (Wearing Surface)	SF		333	17	0	0
			Few hairline diagonal cracks off deck ends. **Few hairline transverse cracks through out deck.**						
	8522		Coated Reinforcing	SF	6,737	0	0	0	0
			Diagonal cracking at the NW and SE corners						
X	**109**		**Prestressed Concrete Open Girder**	LF	1,002	1,002	0	0	0
			7 Girders.						
X	**215**		**Reinforced Concrete Abutment**	LF	150	142	8	0	0
			Behind MSE wall.						
		1130	Cracking (RC)	LF		50	8	0	0
			Few hairline vertical cracks under girders.						
X	**331**		**Reinforced Concrete Bridge Rail**	LF	300	260	36	4	0
		1080	Delamination - Spall - Patched Area	LF		0	0	4	0
			Northeast corner back side 2" x 2" spall with exposed rusty rebar.						
		1130	Cracking (RC)	LF		23	36	0	0
			Few hairline vertical cracks.						
X	**8400**		**Integral Wingwall**	EA	4	2	2	0	0
			Northwest **is not a wing** wall **b**ut **a retaining wall.** No **wing walls or retaining walls at southeast or northeast corners.**						
		8902	Wingwall Movement	EA		0	2	0	0
			Southwest wingwall tip outward about 4". **Northwest wingwall tipped inward about 2 1/4". No change in 2011-2013-2015.**						

BRIDGE INSPECTION REPORT
Wisconsin Department of Transportation
DT2007 2003 s.84.17 Wis. Stats.

Structure No.:**B-18-178**

Assessments

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**9004**		**Drainage - Deck** At northeast corner--Surface AC flume off north approach slab.	EA	1	1	0	0	0
X	**9030**		**Signs - Object Markers**	EA	4	0	0	0	4
X	**9167**		**Steel Diaphragm** **Between girders.**	EA	12	12	0	0	0
X	**9322**		**Approach Roadway - Concrete (non-structural)** Northwest approach shoulder has settle about 2". Northwest approach shoulder has on large diagonal crack in it. Southeast and southwest approa**ch** shoulder **has** settled **about 2 inches.** **Northeast shoulder has settle about 2 inches.** **Southwest shoulder about 12 ft south of deck joint has settle about 2 inches.**	EA	2	0	2	0	0

NBI Ratings

	File	New
Deck	8	8
Superstructure	8	8
Substructure	8	8
Culvert	N	N
Channel	N	N
Waterway	N	N

Structure Specific Notes

Piece of MSE wall are being pushed outward.

Inspection Specific Notes

Monitor settlement behind SE wing at retaining wall, front face of wall displaced est. 2 inches with grass growing at seams. Also, sand has leaked from joints at bottom of NW corner.

Inspector Site-Specific Safety Considerations

Structure Inspection Procedures

Walk around.

Special Requirements

	Chk	Comments
Traffic Control		
Access Equipment		
Other		

Construction History

Year	Work Performed	FOS id
2006	NEW STRUCTURE	1190-00-72

Maintenance Items History

Item	Recommended by	Status	Status change	Year completed

Maintenance Items

Item	Priority	Recommended by	Status	Status change
Drainage - Repair Washouts / Erosion	HIGH	Frueh, Rick J (1003)	COMPLETE	07/26/15
Large washout behind southwest wing wall and abutment.				

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-18-178
USH 53 SB over HASTINGS WAY

LOCATION

(3) Municipality:	CITY-EAU CLAIRE(18221)
(16) Latitiude(° ' "):	44°47'15.00"N
(17) Longitude(° ' "):	91°27'10.60"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	2
(102) Traffic Pattern On:	-NO TRAFFIC X-ONE WAY TRAFFIC -TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC X-ONE WAY TRAFFIC -TWO WAY TRAFFIC
(19) Detour Length(mi):	0

GEOMETRY

(49) Structure Length(ft):	148.4	
(50) Sidewalk Width(ft):	**Left:** 0.0	**Right:** 0.0
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	**Angle(°):** 52	**Direction:** -RIGHT FORWARD X-LEFT FORWARD
	Cardinal Width	**Non-Cardinal Width**
(51) Bridge Roadway(ft):	40.0	40.0
(52) Deck(ft):	45.4	45.4
(32) Approach Roadway(ft):	40	0
	Cardinal Under Clearance	**Non-Cardinal Under Clearance**
(47) Minimum Horizontal(ft):	75.0	
(55) Minimum Right Lateral(ft):	17.0	
(55) Minimum Left Lateral(ft):	40.0	

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE

Outer Rail:

Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
X	X	SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
		OTHER(99) (Please specify)

Transition Type:

	CONT GUARD RAIL
	NO APP GRDRL
	NO ATTACHMENT
5	22 MM(7/8") BOLT (Please enter quantity)
	25 MM(1") BOLT (Please enter quantity)
	OTHER (Please specify)

Guardrail Termination Type:

X	(01) ENERGY ABSORBING TERMINAL/EAT
	(02) TURN DOWN
	(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:

	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vehicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

708 Heartland Trail, Suite 3000
Madison, WI 53717

608.826.3600 PHONE
608.826.3941 FAX

www.TRCsolutions.com

Bridge Asbestos Inspection Report

WisDOT Project ID: 1190-02-34
Structure Number: B-18-0178, B-18-0182
Structure Name: USH 53 over Hastings Way
City/County: City of Eau Claire, Eau Claire County
Lat/Long Coordinates: 444715.0/ 912710.6, 444712.5/ 912706.7
TRC Project Number: 235777.0000.0000
Date Inspected: October 14, 2015
Inspected By/License Number: John Roelke, AII-119523

Findings:

The inspection to identify and collect samples of potential asbestos-containing material (ACM) was completed following WisDOT standard sampling procedure for bridge inspections found in FDM 21-35-45.

None of the materials that were identified as potentially ACM and sampled tested positive for asbestos. The overlay on the bridges can proceed as planned. Standard Special Provision (STSP) 107-125 should be included in the specifications.

Sample Number	Sample Description	Sample Location	Analytical Results and Method	Friable/ Non-friable or No ACM	Quantity of ACM Material
B-18-0178					
1	Caulk	Abutment joint	PLM, non-detect	No ACM	0
2	Caulk	Abutment joint	PLM, non-detect	No ACM	
3	Caulk	Abutment joint	PLM, non-detect	No ACM	
B-18-0182					
1	Caulk	Abutment joint	PLM, non-detect	No ACM	0
2	Caulk	Abutment joint	PLM, non-detect	No ACM	
3	Caulk	Abutment joint	PLM, non-detect	No ACM	

If you have any questions, please contact me, at (608) 826-3628.

TRC Environmental Corporation

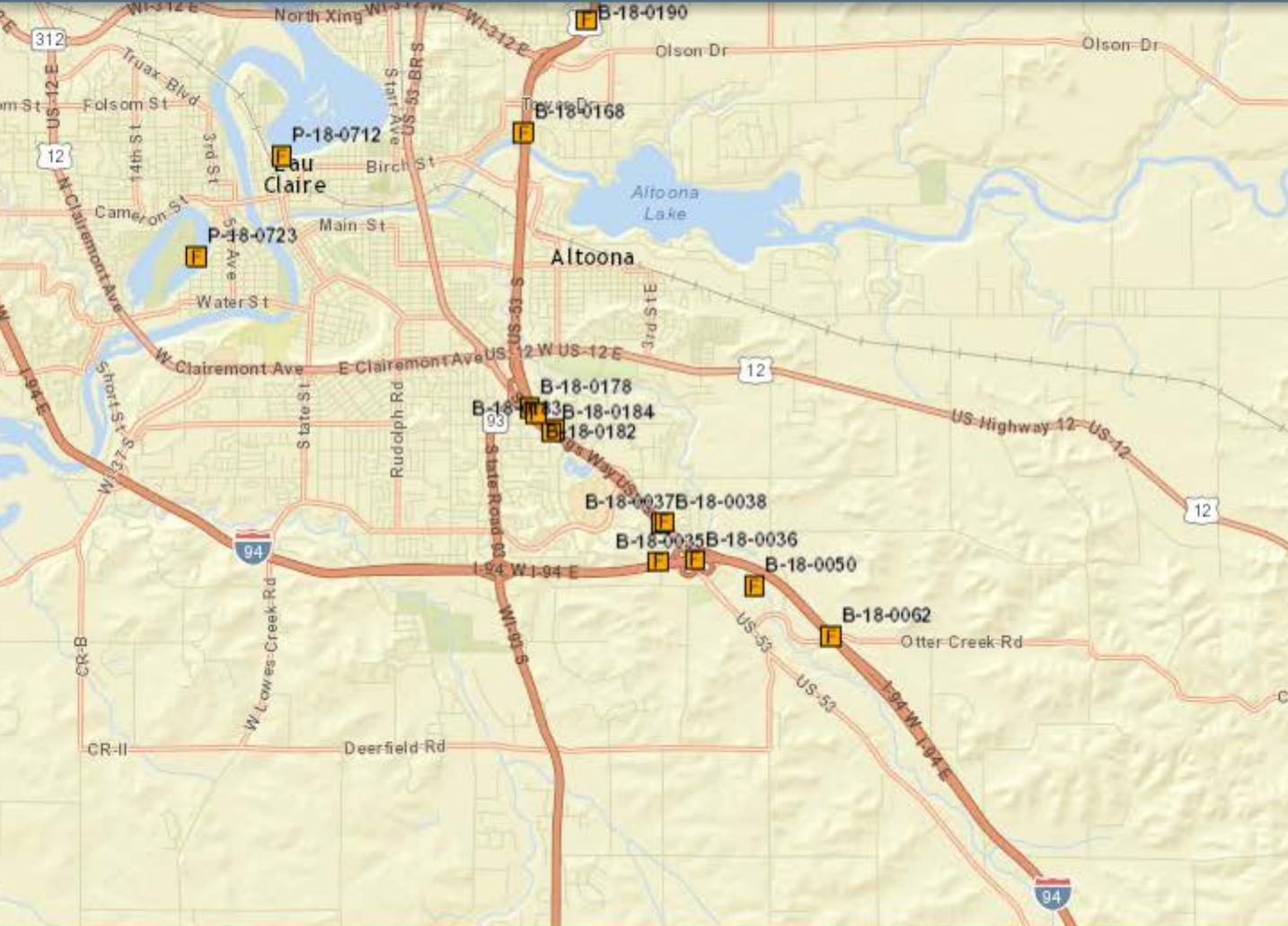
Daniel Haak
Project Manager

John Roelke
Asbestos Inspector

Attachments: Location Map, Photos, and Laboratory Reports

Report Distribution:

Recipient	Electronic (PDF) Copy	Paper Copy
BTS-ESS sharlene.tebeest@dot.wi.gov	X (via email)	X
REC amy.adrihan@dot.wi.gov; nicholasA.schaff@dot.wi.gov	X (via email)	
Project Manager david.koepp@dot.wi.gov	X (via email)	
Other		


B-18-0190
Olson Dr
Olson Dr
B-18-0168
P-18-0712
Eau Claire
Birch St
Altoona Lake
P-18-0723
Main St
Altoona
Water St
W Clairemont Ave
E Clairemont Ave
US 12 W US 12 E
B-18-0178
B-18-0184
B-18-0182
US Highway 12 US-12
B-18-0037
B-18-0038
B-18-0035
B-18-0036
B-18-0050
I-94 W I-94 E
B-18-0062
Otter Creek Rd
Deerfield Rd
CR-II
CR-B
W Lowes Creek Rd
State Road 93
Rudolph Rd
State St
Short St
N Clairemont Ave
Truax Blvd
Folsom St
Cameron St
14th St
3rd St
5th Ave
Start Ave
US-53-BR-S
US-53-S
3rd St E
US-53
I-94 W I-94 E
312
12
93
94

B-18-0178

Caulk in abutment joint

B-18-0182

Caulk in abutment joint

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Wisconsin Department of Transportation

Lab Log #:	0047026
Project #:	235777.0000.0000
Date Received:	10/16/2015
Date Analyzed:	10/19/2015

Site: DOT Bridge Inspection, B-18-178

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
B-18-178 (1)	Grey	Yes	No	- -	- - -	ND	None
B-18-178 (2)	Grey	Yes	No	- -	- - -	ND	None
B-18-178 (3)	Grey	Yes	No	- -	- - -	ND	None

Reporting limit- asbestos present at 1%
ND - asbestos was not detected
Trace - asbestos was observed at level of less than 1%
NA/PS - Not Analyzed / Positive Stop
SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation (1982), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

Analyzed by: K. Williamson — Kathleen Williamson, Laboratory Manager

Reviewed by: Amanda Parkins — Amanda Parkins, Approved Signatory

Date Issued 10/20/2015

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0 AIHA-LAP,LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV# LT000411
RI #AAL-007 TX #300354 VT #AL014538 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907
CO# AL-15020 PHIL# 461 PA#68-03387

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Wisconsin Department of Transportation

Lab Log #:	0047032
Project #:	235777.0000.0000
Date Received:	10/16/2015
Date Analyzed:	10/19/2015

Site: DOT Bridge Inspection, B-18-182

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
B-18-182 (1)	Grey	Yes	No	- -	- - -	ND	None
B-18-182 (2)	Grey	Yes	No	- -	- - -	ND	None
B-18-182 (3)	Grey	Yes	No	- -	- - -	ND	None

Reporting limit- asbestos present at 1%
ND - asbestos was not detected
Trace - asbestos was observed at level of less than 1%
NA/PS - Not Analyzed / Positive Stop
SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation (1982), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

Analyzed by: K. Williamson — Kathleen Williamson, Laboratory Manager

Reviewed by: Amanda Parkins — Amanda Parkins, Approved Signatory

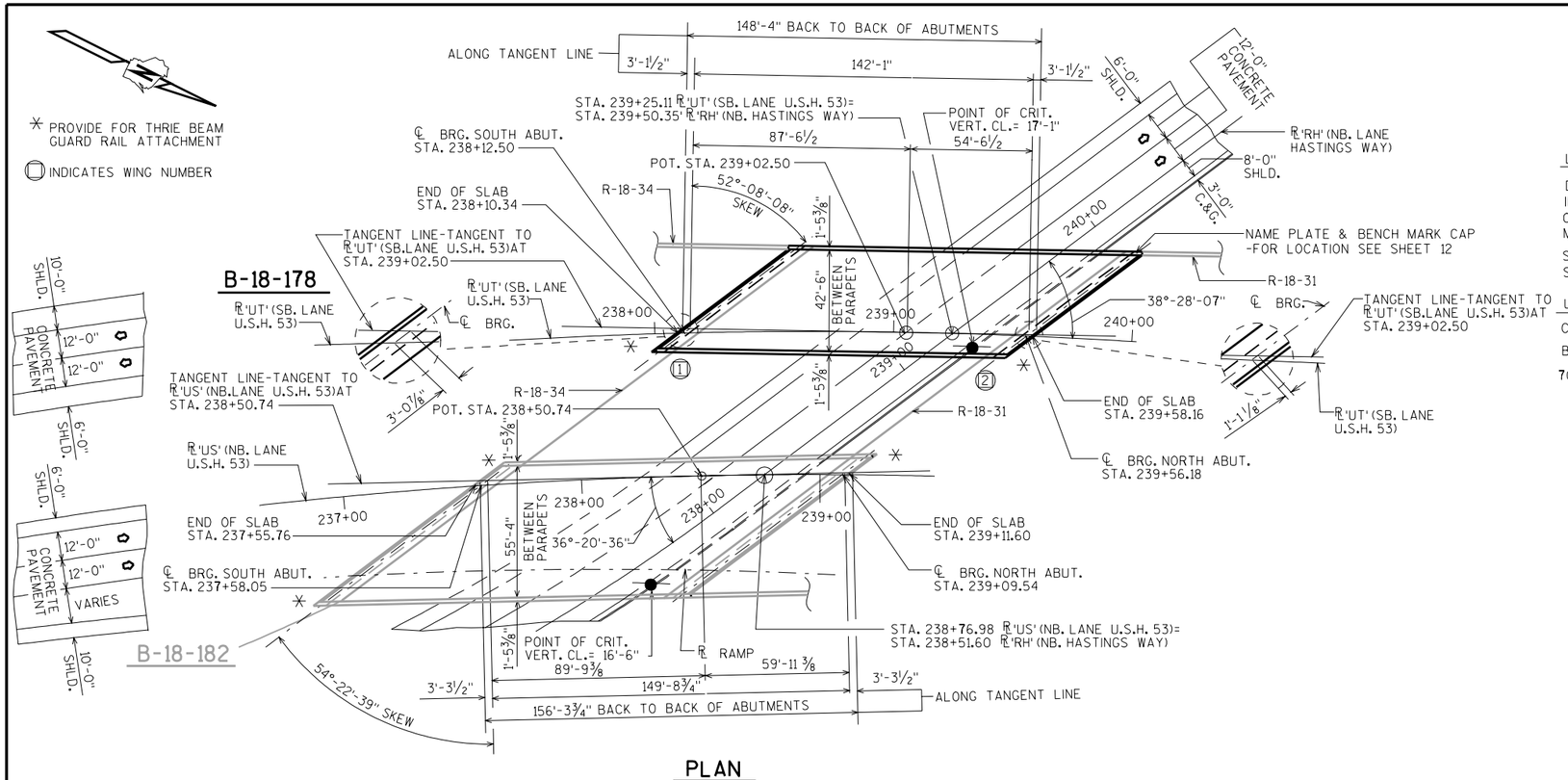
Date Issued 10/21/2015

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0 AIHA-LAP,LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV# LT000411
RI #AAL-007 TX #300354 VT #AL014538 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907
CO# AL-15020 PHIL# 461 PA#68-03387

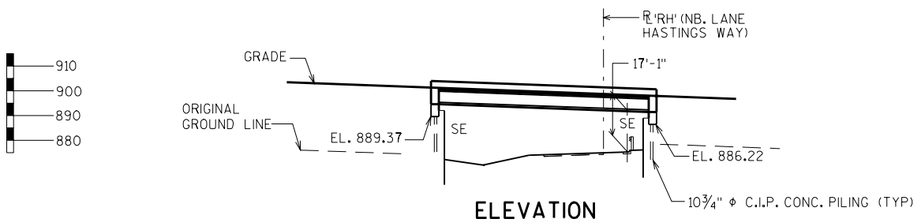
STATE PROJECT NUMBER

1190-00-72



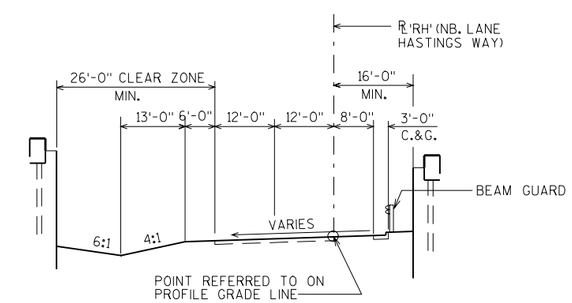
PLAN

SINGLE SPAN-70" PRESTRESSED GIRDERS



ELEVATION

NORMAL TO HASTINGS WAY



TYPICAL SECTION THRU HASTINGS WAY

DESIGN DATA

LIVE LOAD:

DESIGN RATING; HS-20
INVENTORY RATING; HS-24
OPERATIONAL RATING; HS-72
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

70" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 7,000 P.S.I.
STRANDS - 0.6 " Φ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 10¾" Φ C.I.P. CONC. PILING DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE.
ESTIMATED 100'-0 LONG @ S. ABUT. & 115'-0" LONG @ N. ABUT.

TRAFFIC VOLUME

U.S.H. 53	HASTINGS WAY
A.D.T.=25,750 (2024)	A.D.T.=5,600 (2024)
R.D.S.=70 M.P.H.	R.D.S.=50 M.P.H.

CURVE DATA

℄'UT' (SB. LANE U.S.H. 53)	℄'US' (NB. LANE U.S.H. 53)
P.I. = STA. 234+24.11	P.I. = STA. 234+67.33
Δ = 36°-06'-38.5"	Δ = 36°-06'-38.5"
D = 2°-40'-16.1"	D = 2°-44'-52.8
T = 699.24'	T = 679.68'
L = 1351.89'	L = 1314.07'
R = 2145.00'	R = 2085.00'
S.E. = 0.06%	S.E. = 0.06%
P.C. = STA. 227+24.87	P.C. = STA. 227+87.65
P.T. = STA. 240+76.76	P.T. = STA. 241+01.72

BRIDGE OFFICE CONTACTS: BILL DREHER (608) 261-8205
JOEL HUENINK (608) 266-5160

LIST OF DRAWINGS

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

APPROVED Trista Hubbard 3-2-2004
CHIEF STRUCTURAL DESIGN ENGINEER DATE

STRUCTURE B-18-178

U.S.H. 53 OVER HASTINGS WAY

COUNTY EAU CLAIRE	~~TOWN~~/CITY/~~VILLAGE~~		
DESIGN SPEC. AASHTO STD. SPEC. 2002	LOAD HS-20	CONST. SPEC. 2003	
DESIGNED BY WCD	DESIGN CK'D. MGW	DRAWN BY JHG	PLANS CK'D. JPH

GENERAL PLAN

SHEET 1 OF 12

8

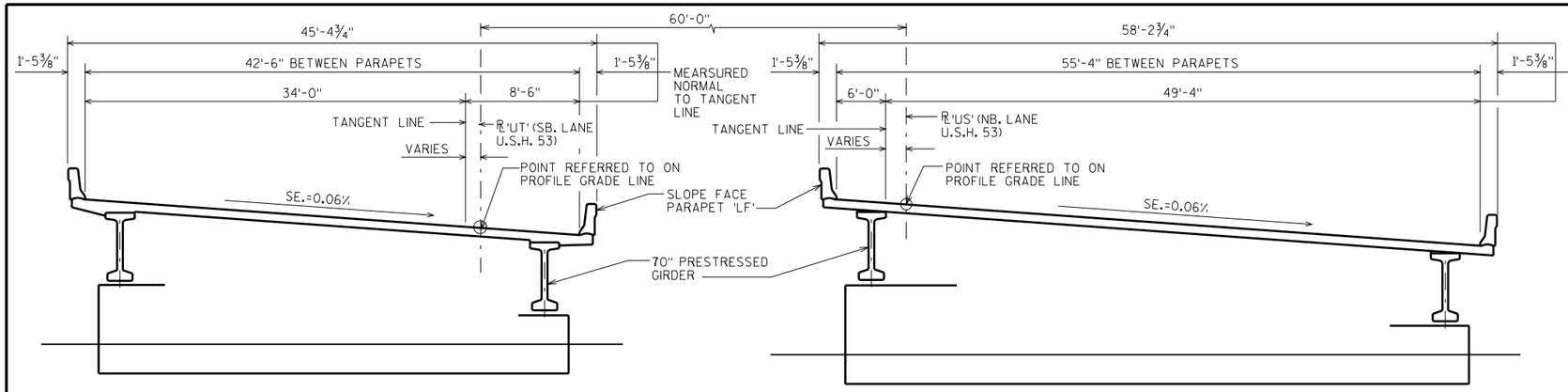
I.D. 1190-00-05K

DATE: JAN.'04

FILE= 01-178GP.DGN
SCALE = 30

STATE PROJECT NUMBER

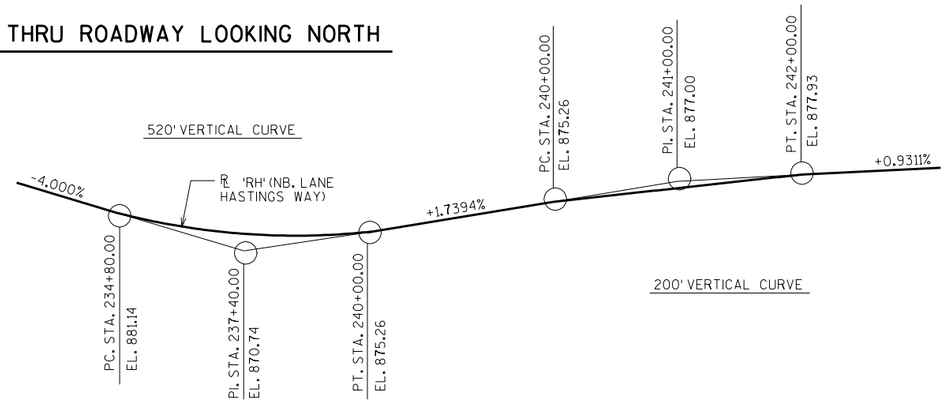
1190-00-72



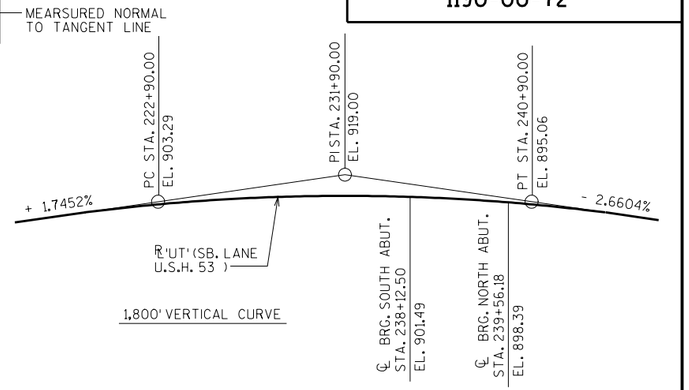
SOUTHBOUND LANE (B-18-178)

NORTHBOUND LANE (B-18-182)

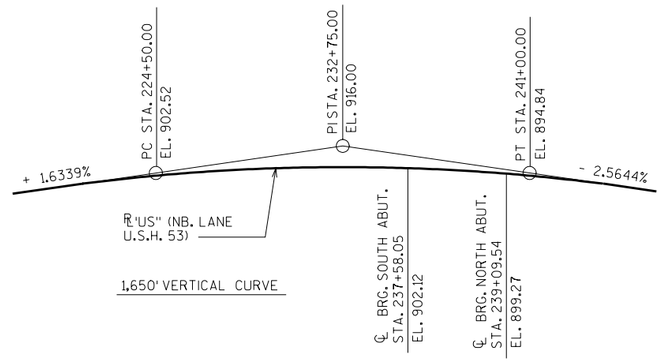
CROSS SECTION THRU ROADWAY LOOKING NORTH



PROFILE GRADE LINE ℄'RH' (NB. HASTINGS WAY)



℄'UT' (SOUTHBOUND LANE) B-18-178



℄'US' (NORTHBOUND LANE) B-18-182

PROFILE GRADE LINE U.S.H. 53

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
EXCAVATION FOR STRUCTURES BRIDGES B-18-178	L.S.	———	———	———	1
BACKFILL STRUCTURE	C.Y.	———	460	470	930
CONCRETE MASONRY BRIDGES	C.Y.	321	52	53	426
PROTECTIVE SURFACE TREATMENT	S.Y.	810	———	———	810
PRESTRESSED GIRDER TYPE I 70-INCH	L.F.	1002	———	———	1002
BAR STEEL REINFORCEMENT HS BRIDGES	LB.	———	3610	3610	7220
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB.	44210	320	320	44850
BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	14	———	———	14
STEEL DIAPHRAGMS B-18-178	EACH	12	———	———	12
PILING CIP CONCRETE DELIVERED AND DRIVEN 10¾-INCH	L.F.	———	1600	1840	3440
RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	———	16	16	32
CONCRETE STAINING B-18-178	LS	———	———	———	1
	S.Y.	———	15	15	30
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	———	———	2
QMP CONCRETE STRUCTURES 5-CYLINDER	C.Y.	321	52	53	426
INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL.	3210	520	530	4260
NON-BID ITEMS					
FILLER	SIZE	———	———	———	½" & ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

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

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

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

THE FOLLOWING COMPONENTS SHALL BE STAINED LIGHT GRAY (FEDERAL STANDARD COLOR NO. 36622) IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
- THE UNDERSIDE OF THE DECK OVERHANGS TO THE EXTERIOR GIRDERS.
- THE EDGES OF THE DECK.
- THE BACK FACES OF THE PARAPETS.
- ALL EXPOSED VERTICAL SURFACES OF THE ABUTMENTS TO 1'-0" BELOW FINISHED GROUNDLINE.
- ALL EXPOSED VERTICAL SURFACES OF THE ABUTMENT DIAPHRAGMS EXCEPT BETWEEN GIRDERS.

THE FOLLOWING COMPONENTS SHALL BE STAINED DARK GRAY (FEDERAL STANDARD COLOR NO. 26293) IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
- THE OUTSIDE FACE AND UNDERSIDE OF THE BOTTOM FLANGE OF THE EXTERIOR GIRDERS.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP SURFACE OF THE DECK AND THE INSIDE FACE AND TOP OF PARAPETS.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

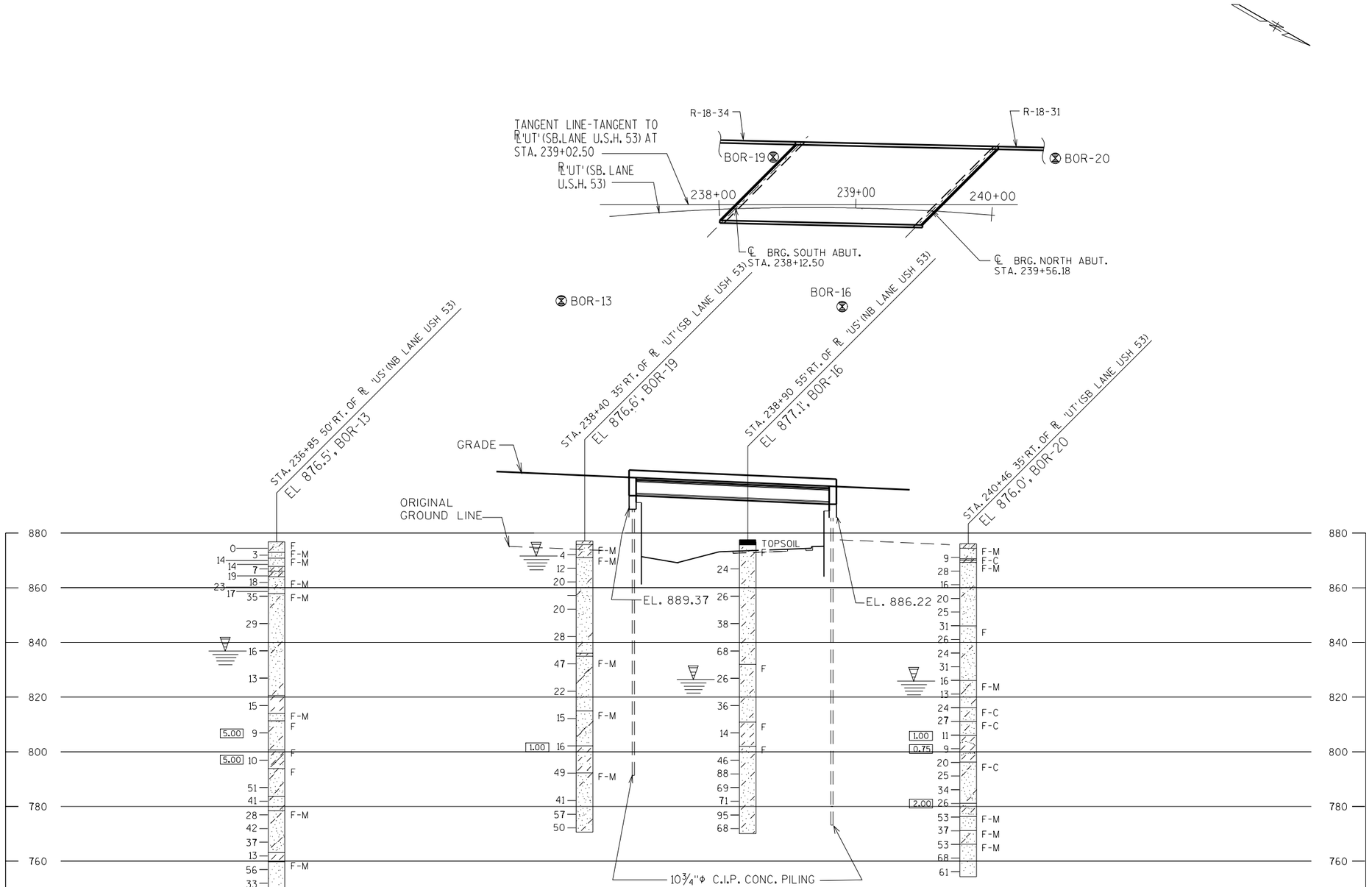
CONST. SPEC. 2003	DRAWN BY JHG	PLANS CK'D. JPH

CROSS SECTION & QUANTITIES

SHEET 2

FILE= 02-178QUAN.DGN
SCALE = 6

USH 53 OVER SB HASTINGS WAY
EAU CLAIRE BYPASS, EAU CLAIRE COUNTY



STATE PROJECT NUMBER

1190-00-72

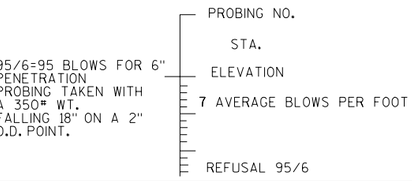
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

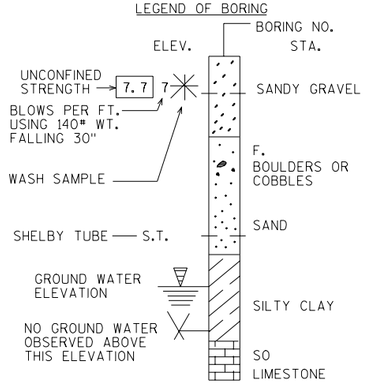
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC.	2003	DRAWN BY	SJJ/JHG	PLANS CK'D.	JPH

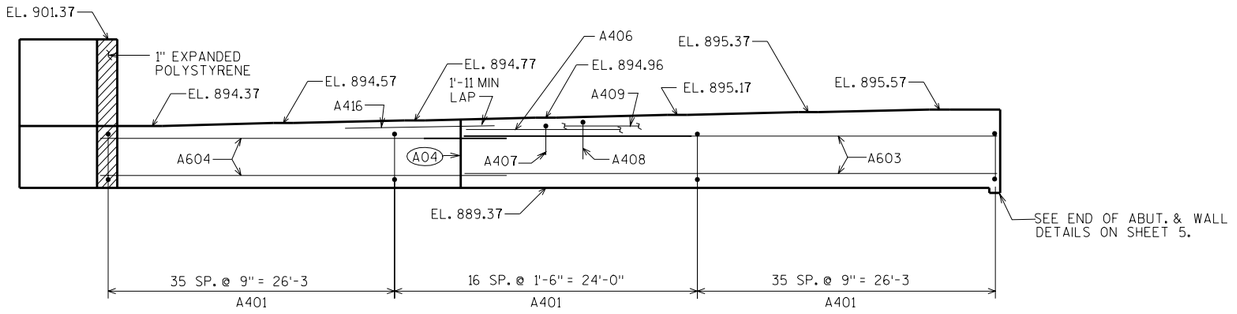
SUBSURFACE EXPLORATION

SHEET 3

FILE= 03-178SOILS.DGN
SCALE = 40

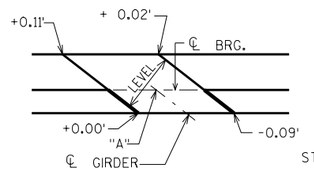
STATE PROJECT NUMBER

1190-00-72



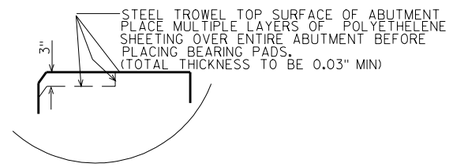
ELEVATION LOOKING SOUTH

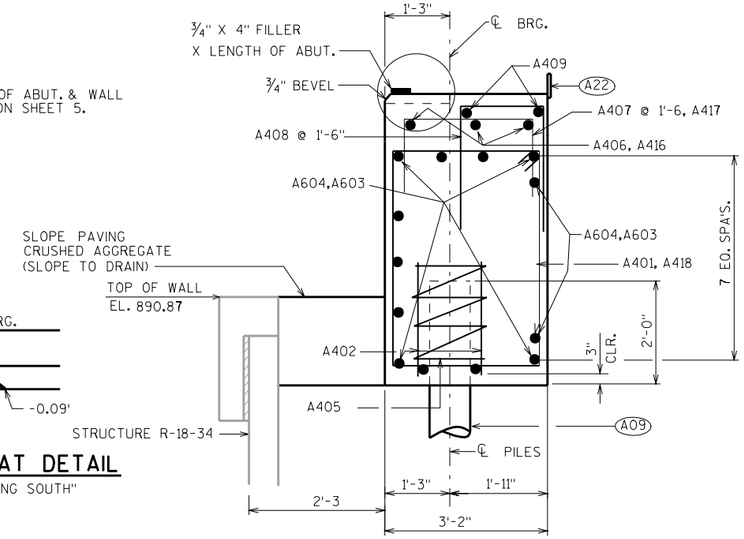
BEAM SEAT ELEVATIONS ARE AT LOCATION "A"
(SEE BEAM SEAT DETAIL)



SLOPED BEAM SEAT DETAIL

SEE "ELEVATION LOOKING SOUTH" FOR ELEVATION @ "A"





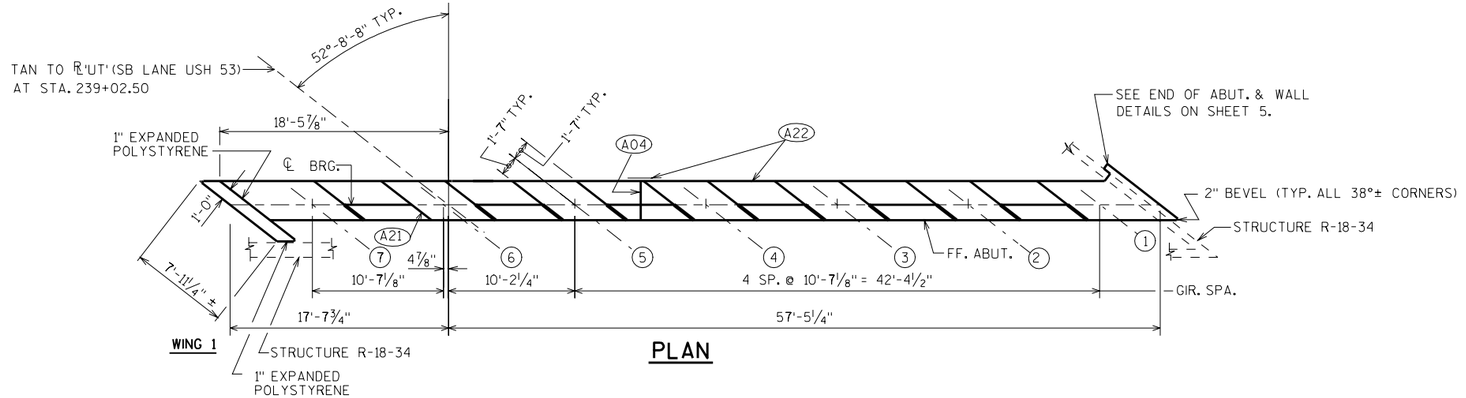
SECTION THRU BODY

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. (¾" "V" GROOVE @ THE FRONT FACE) (R.M.W. @ BACKFACE).

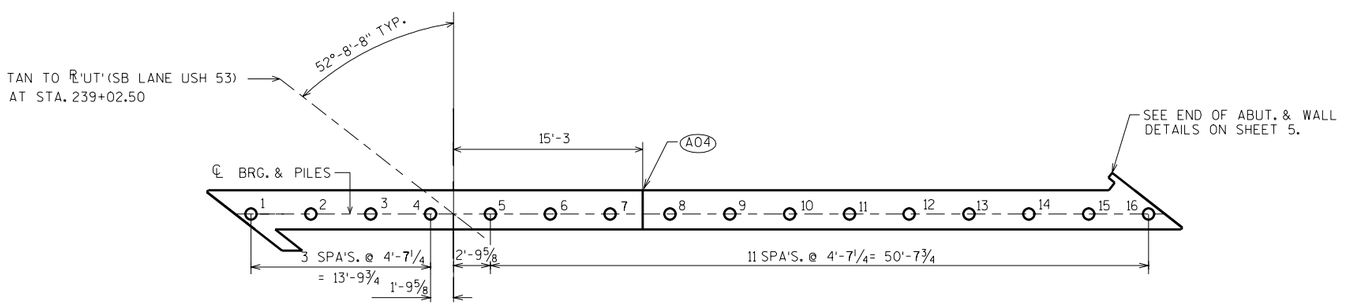
(A09) SUPPORT ABUTMENT ON 10 ¾" DIA. CAST-IN-PLACE CONCRETE PILING, ESTIMATED 100'-0" LONG, AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS PER PILE.

(A21) ¾" CORK UP VERT. FACES OF BEAM SEATS.

(A22) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



PLAN



PILE PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC. 2003	DRAWN BY JHG	PLANS CK'D. JPH

SOUTH ABUTMENT

SHEET 4

8

FILE= 04-178ABUTSO.DGN
SCALE = 6

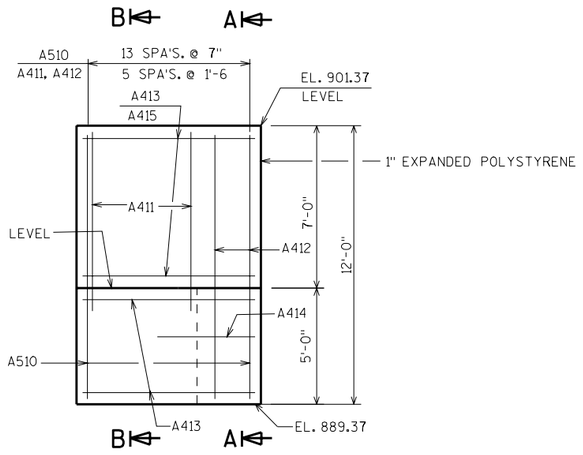
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

STATE PROJECT NUMBER

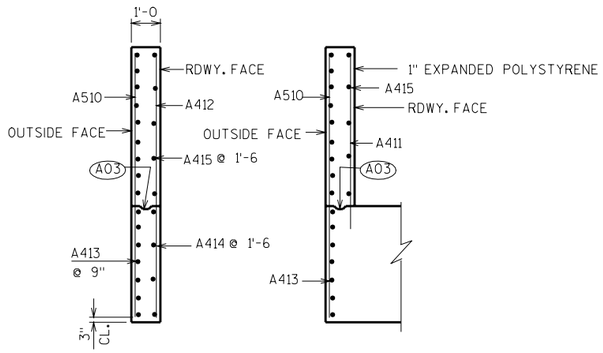
1190-00-72

BILL OF BARS

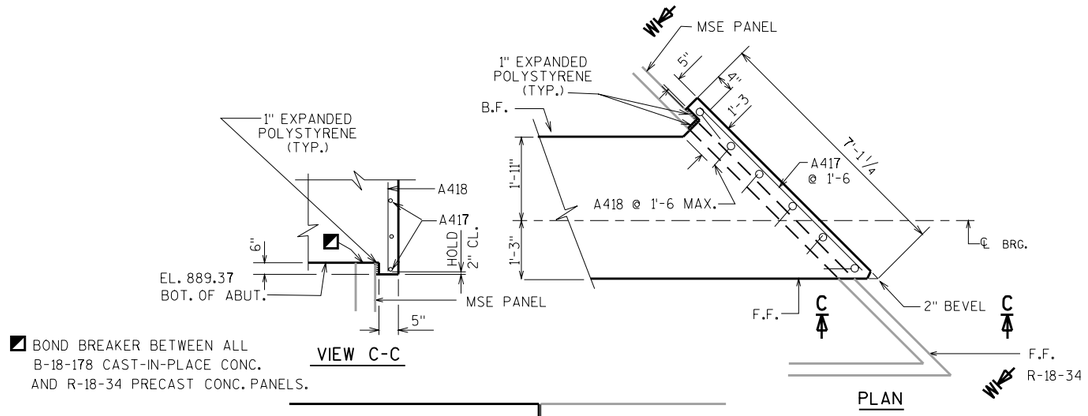
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		87	14'-10"	X		BODY-STIRRUPS
A402		32	2'-3"			PILES- 2 PER PILE
A603		17	39-6			BODY-HORIZONTAL
A604		17	38-0			BODY-HORIZONTAL
A405		16	28-0	X		PILES-1 PER PILE
A406		3	39-6			BODY-HORZ. OVER GIRS. 1-4
A407		34	7'-6	X		BODY-TOP OVER GIRS. 1-5
A408		18	3'-11"	X		BODY-BETWEEN BEAM SEATS
A409		12	4-11			BODY-HORZ. EXT
A510	X	14	11-7			WING 1-VERTICAL OUTSIDE FACE
A411	X	4	8'-4			WING 1-VERTICAL RDWY. FACE
A412	X	2	11-7			WING 1-VERTICAL RDWY. FACE
A413	X	16	7-5			WING 1-HORIZONTAL OUTSIDE FACE
A414	X	4	3-11			WING 1-HORIZONTAL RDWY. FACE
A415	X	5	7-5			WING 1-HORIZONTAL RDWY. FACE
A416		3	17-4			BODY - TOP - HORIZ. OVER GIR'S. 4-5
A417		4	6-5			BODY-HORIZ. - WEST END
A418		6	7-5	X		BODY-VERT. - WEST END



WING 1 ELEVATION

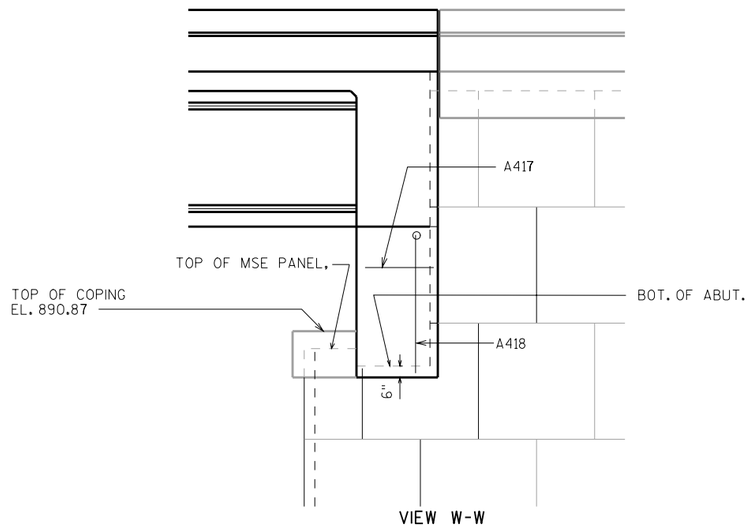


SECTION A-A SECTION B-B



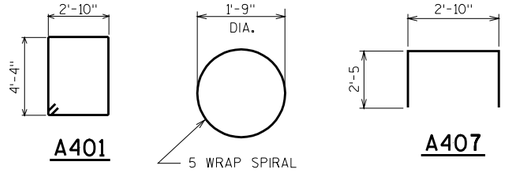
VIEW C-C

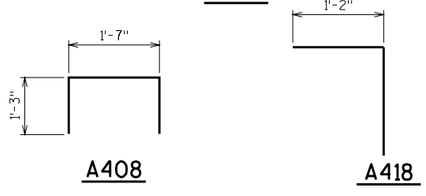
PLAN

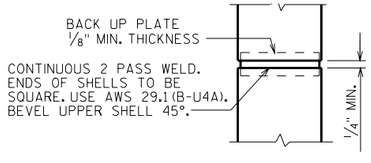


VIEW W-W

END OF ABUT. & WALL DETAILS @ WEST END OF S. ABUT.







PILE SPLICE DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2003	JHG	JPH

SOUTH ABUTMENT DETAILS

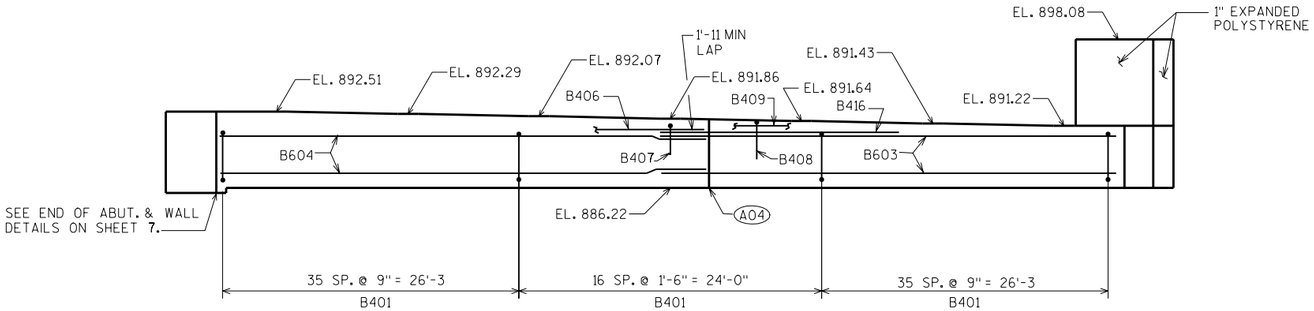
SHEET 5

8

FILE= 05-178ABUTSODET.DGN
SCALE = 3.2

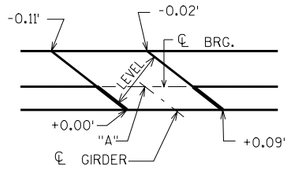
STATE PROJECT NUMBER

1190-00-72



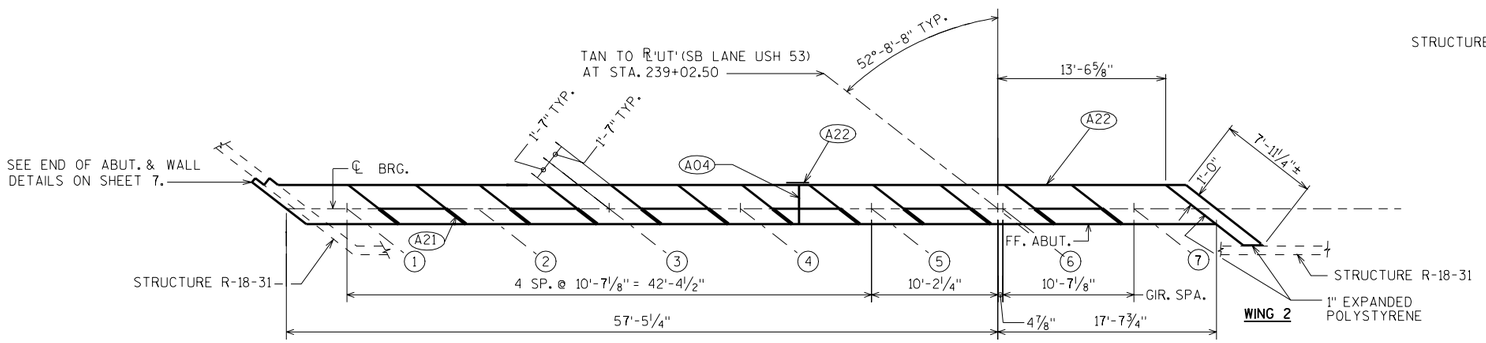
ELEVATION LOOKING NORTH

BEAM SEAT ELEVATIONS ARE AT LOCATION "A" (SEE BEAM SEAT DETAIL)

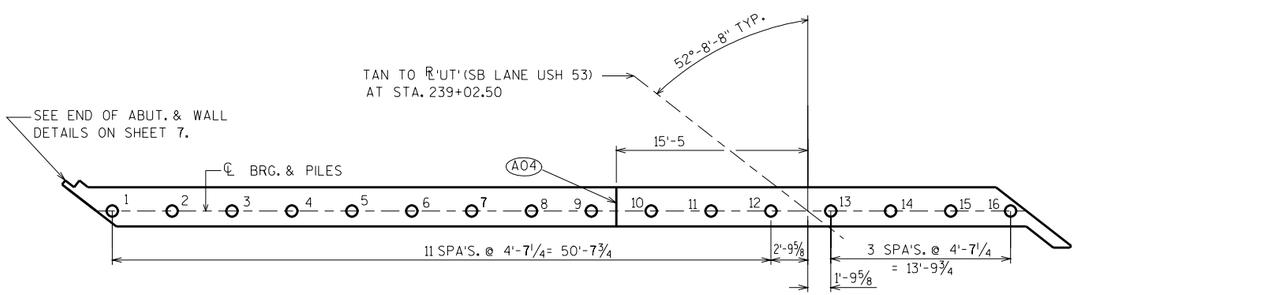


SLOPED BEAM SEAT DETAIL

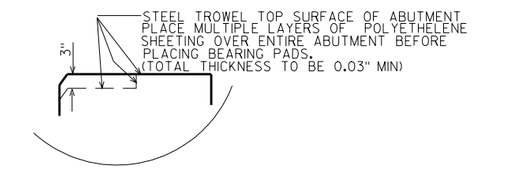
SEE "ELEVATION LOOKING NORTH" FOR ELEVATION AT "A"

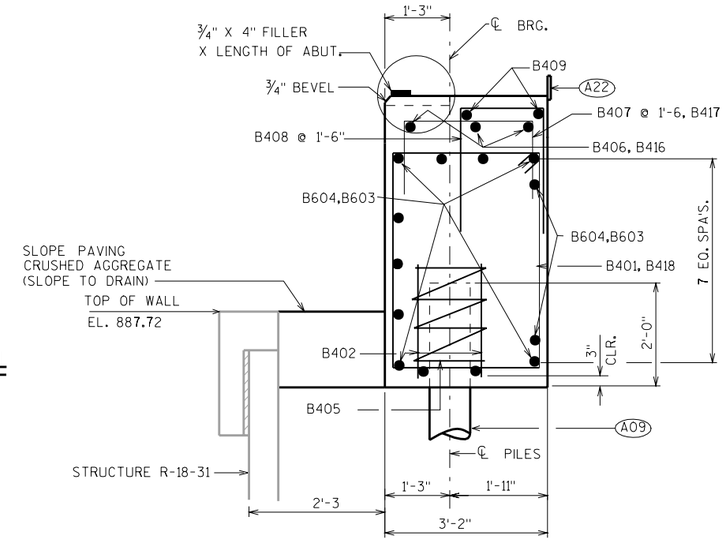


PLAN



PILE PLAN





SECTION THRU BODY

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. (3/4" "V" GROOVE @ THE FRONT FACE) (R.M.W. @ BACKFACE).

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. CAST-IN-PLACE CONCRETE PILING. ESTIMATED 115'-0" LONG, AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS PER PILE.

(A21) 3/4" CORK UP VERT. FACES OF BEAM SEATS.

(A22) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC. 2003	DRAWN BY JHG	PLANS CK'D. JPH

NORTH ABUTMENT

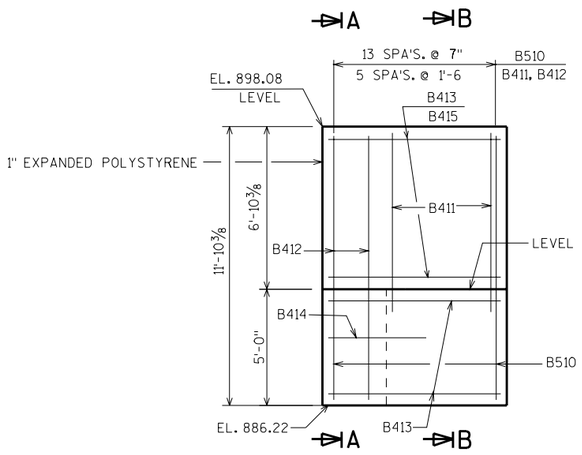
SHEET 6

FILE= 06-178ABUTNO.DGN
SCALE = 6

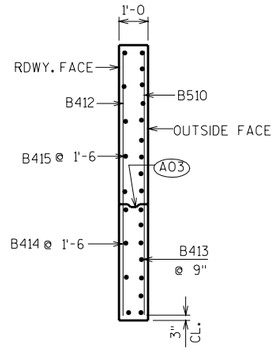
STATE PROJECT NUMBER

1190-00-72

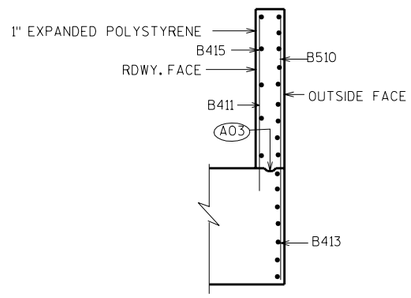
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).



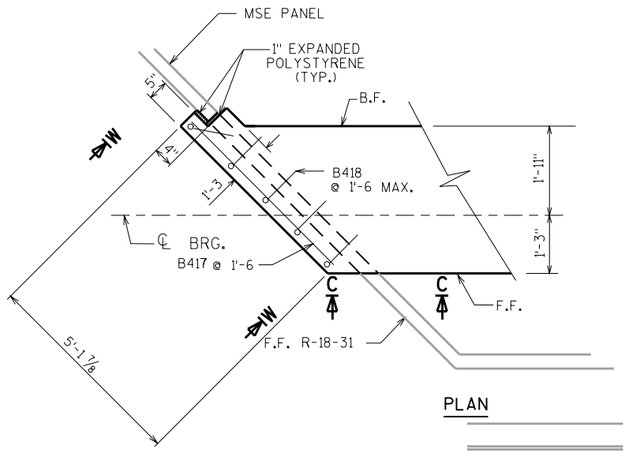
WING 2 ELEVATION

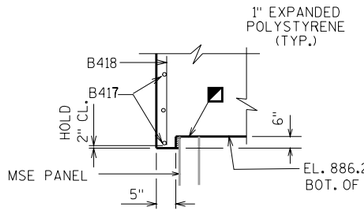


SECTION A-A



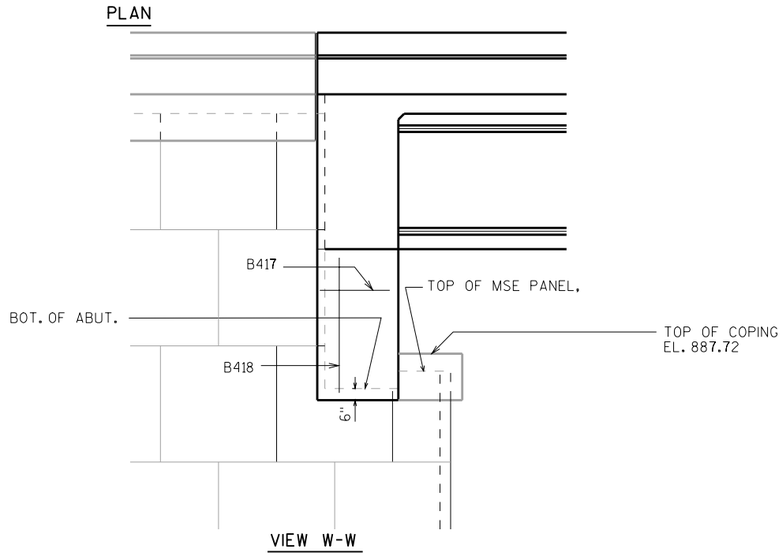
SECTION B-B





VIEW C-C

■ BOND BREAKER BETWEEN ALL B-18-178 CAST-IN-PLACE CONC. AND R-18-31 PRECAST CONC. PANELS.

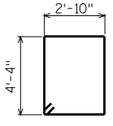


VIEW W-W

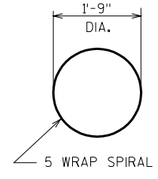
END OF ABUT. & WALL DETAILS @ WEST END OF N. ABUT.

BILL OF BARS

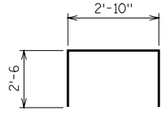
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		87	14'-10"	X		BODY-STIRRUPS
B402		32	2'-3"			PILES- 2 PER PILE
B603		17	37-6			BODY-HORIZONTAL
B604		17	40-0			BODY-HORIZONTAL
B405		16	28'-0"	X		PILES-1 PER PILE
B406		3	40-4			BODY-HORZ. OVER GIRS. 1-4
B407		35	7'-8	X		BODY-TOP OVER GIRS. 1-5
B408		18	3'-11"	X		BODY-BETWEEN BEAM SEATS
B409		12	4-11			BODY-HORZ. EXT
B510	X	14	11-5			WING 2-VERTICAL OUTSIDE FACE
B411	X	4	8-3			WING 2-VERTICAL RDWY. FACE
B412	X	2	11-5			WING 2-VERTICAL RDWY. FACE
B413	X	16	7-5			WING 2-STIRRUP OUTSIDE FACE
B414	X	4	3-11			WING 2-HORIZONTAL RDWY. FACE
B415	X	5	7-5			WING 2-HORIZONTAL RDWY. FACE
B416		3	15-2			BODY - TOP - HORIZ. OVER GIR 5
B417		5	5-0			BODY-VERT. - WEST END
B418		5	7-6	X		BODY-HORIZ. - WEST END



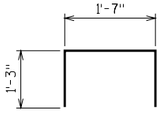
B401



B405



B407



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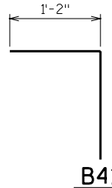

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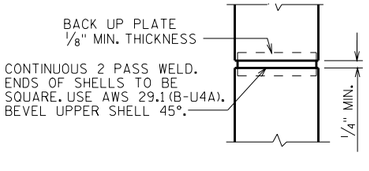


PILE SPLICE DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2003	JHG	JPH

NORTH ABUTMENT DETAILS

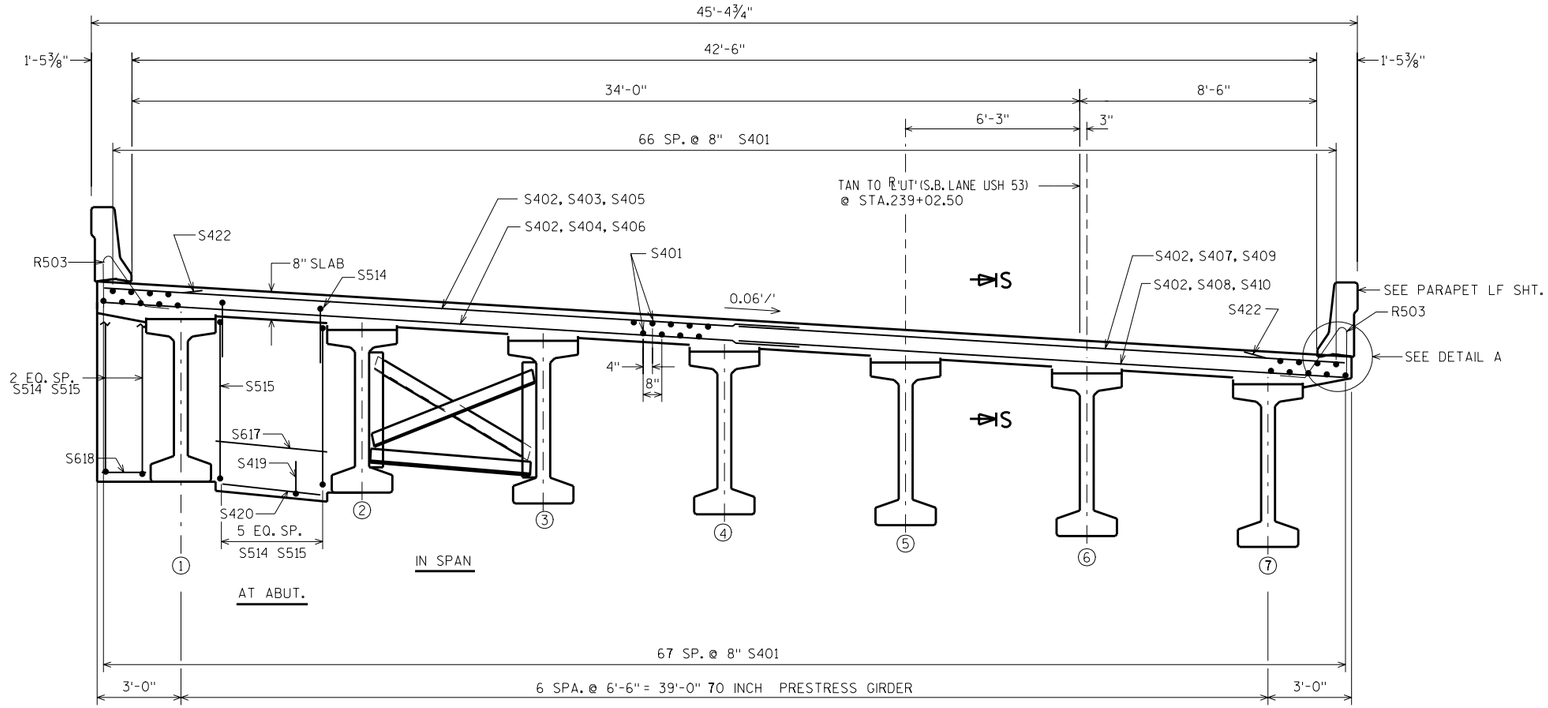
SHEET 7

8

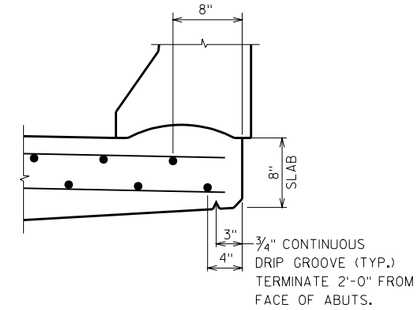
FILE= 07-178ABUTNODET.DGN
SCALE = 3.2

STATE PROJECT NUMBER

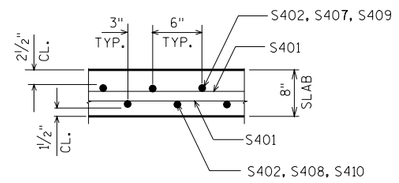
1190-00-72



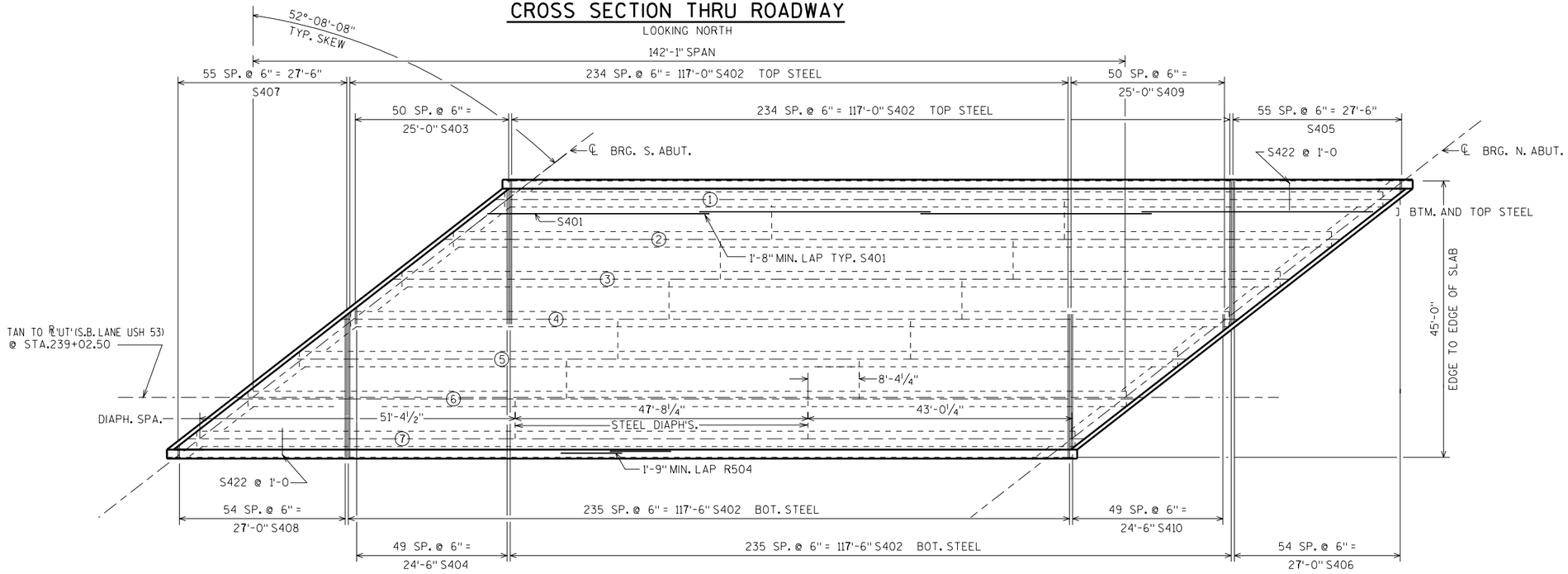
CROSS SECTION THRU ROADWAY



DETAIL A



SECTION S-S



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2003	JHG	JPH

SUPERSTRUCTURE

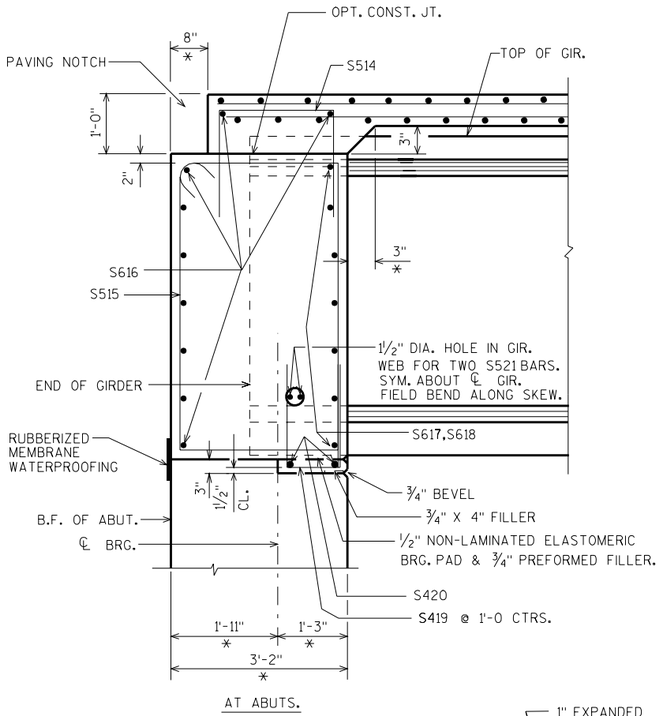
SHEET 8

8

FILE= 08-178SUPER.DGN
SCALE = 10

STATE PROJECT NUMBER

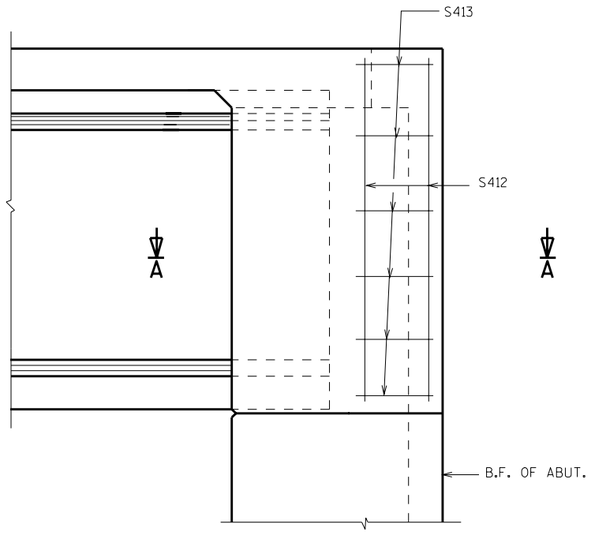
1190-00-72



AT ABUTS.

PART. LONGIT. SECTION

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.



VIEW A-A

BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY

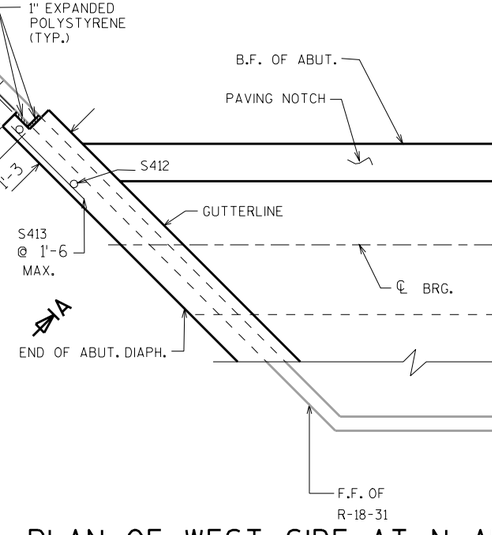
MARK	NO. REQD.	LENGTH
S403	1 SERIES OF 51	2'-3" TO 21'-8"
S404	1 SERIES OF 50	2'-5" TO 21'-6"
S405	1 SERIES OF 56	1'-5" TO 22'-10"
S406	1 SERIES OF 55	1'-8" TO 22'-8"
S407	1 SERIES OF 56	1'-5" TO 22'-10"
S408	1 SERIES OF 55	1'-8" TO 22'-8"
S409	1 SERIES OF 51	2'-3" TO 21'-8"
S410	1 SERIES OF 50	2'-5" TO 21'-6"

BILL OF BARS

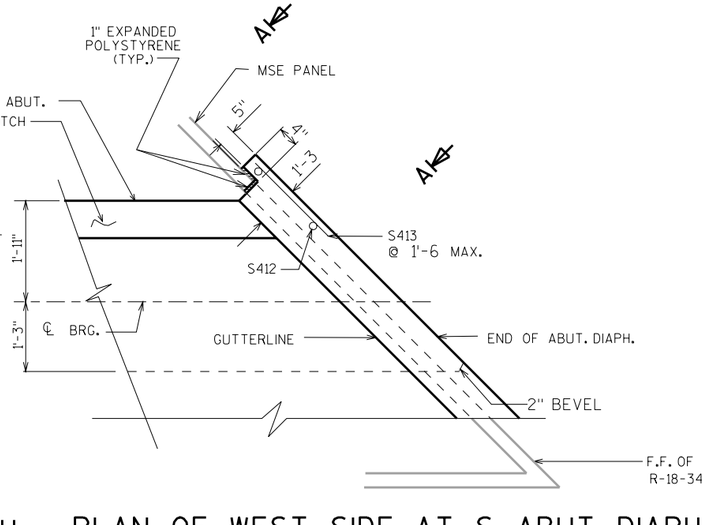
▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
	S401	X	540	37'-8"			LONGITUDINAL TOP & BOTTOM
	S402	X	942	23'-2"			TRANSVERSE
	S403	X	51	11'-11"		▲	TRANSVERSE
	S404	X	50	11'-11"		▲	TRANSVERSE
	S405	X	56	12'-1"		▲	TRANSVERSE
	S406	X	55	12'-2"		▲	TRANSVERSE
	S407	X	56	12'-1"		▲	TRANSVERSE
	S408	X	55	12'-2"		▲	TRANSVERSE
	S409	X	51	11'-11"		▲	TRANSVERSE
	S410	X	50	11'-11"		▲	TRANSVERSE
	S412	X	4	6'-8"			ABUT. DIAPHRAGM - WEST ENDS - VERT.
	S413	X	12	1'-8"			ABUT. DIAPHRAGM - WEST ENDS - HORIZ.
	S514	X	84	7'-8"	X		ABUT. DIAPHRAGM
	S515	X	84	21-3	X		ABUT. DIAPHRAGM
	S616	X	36	38'-2			ABUT. DIAPHRAGM
	S617	X	84	6'-0"			ABUT. DIAPHRAGM
	S618	X	28	2'-4			ABUT. DIAPHRAGM
	S419	X	48	3'-10"	X		ABUT. DIAPHRAGM
	S420	X	24	4-11			ABUT. DIAPHRAGM
	S521	X	28	6'-0"			ABUT. DIAPHRAGM
*	S422	X	290	4'-6"			TOP TRANS. BARS @ EDGE

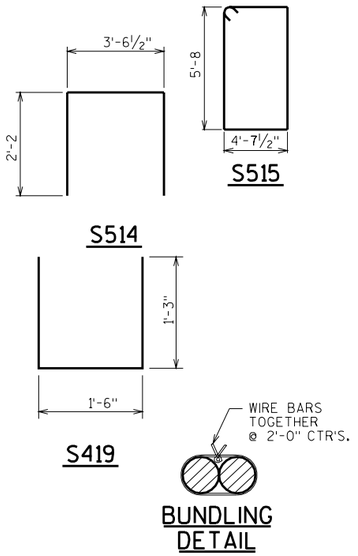
* BUNDLE TO EVERY OTHER TOP TRANS. BAR. SEE BUNDLING DETAIL BELOW.



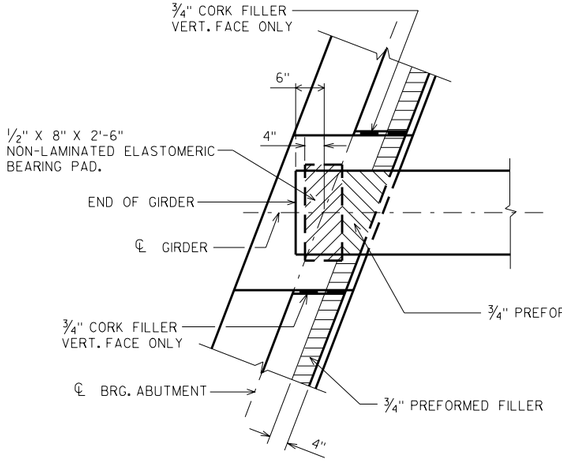
PLAN OF WEST SIDE AT N. ABUT. DIAPH.



PLAN OF WEST SIDE AT S. ABUT. DIAPH.



BUNDLING DETAIL



BEARING PAD DETAIL

TOP OF DECK ELEVATIONS

	S. ABUT.	1/8	2/8	3/8	4/8	5/8	6/8	7/8	N. ABUT.
GIR. 1	902.55	902.16	901.78	901.39	901.01	900.63	900.24	899.86	899.49
GIR. 2	902.35	901.96	901.57	901.18	900.80	900.41	900.03	899.65	899.27
GIR. 3	902.15	901.76	901.37	900.98	900.59	900.20	899.82	899.43	899.05
GIR. 4	901.94	901.55	901.16	900.77	900.38	899.99	899.61	899.22	898.84
GIR. 5	901.75	901.35	900.96	900.57	900.18	899.79	899.40	899.01	898.62
GIR. 6	901.55	901.15	900.76	900.36	899.97	899.58	899.19	898.80	898.41
GIR. 7	901.35	900.95	900.56	900.16	899.77	899.37	898.98	898.59	898.20

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2003	JHG	JPH

SUPERSTRUCTURE DETAILS

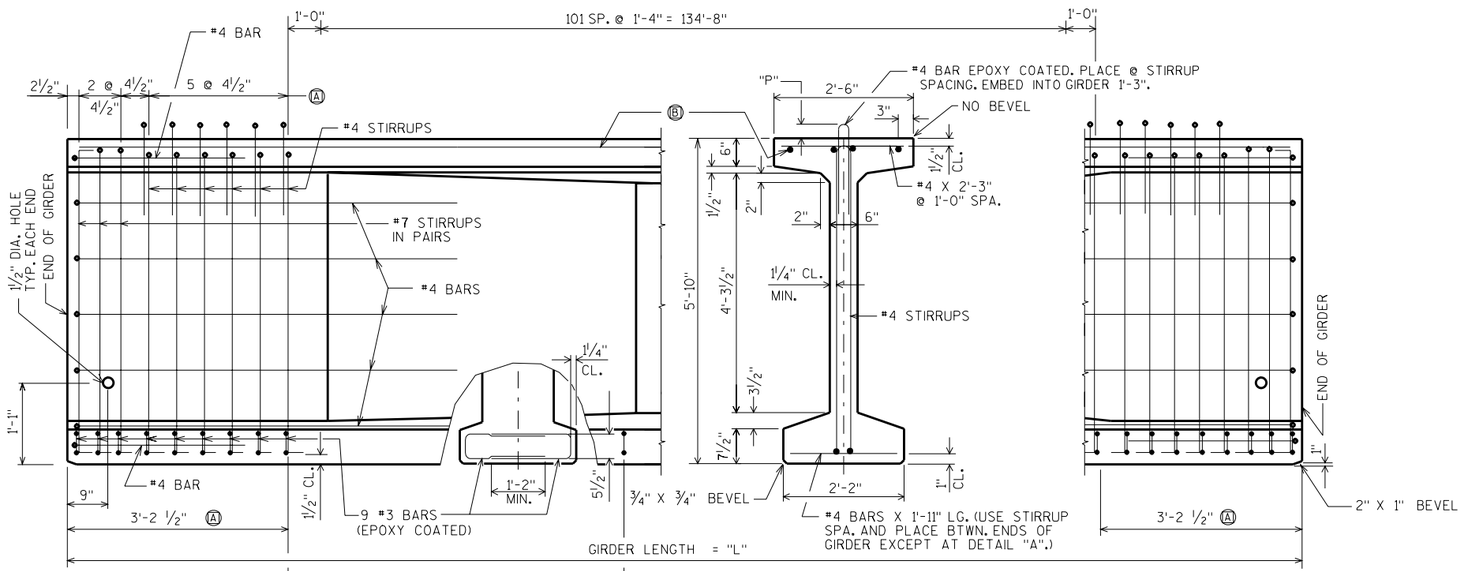
SHEET 9

8

FILE= 09-178SUPERDET.DGN
SCALE = 1.333

STATE PROJECT NUMBER

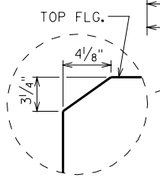
1190-00-72

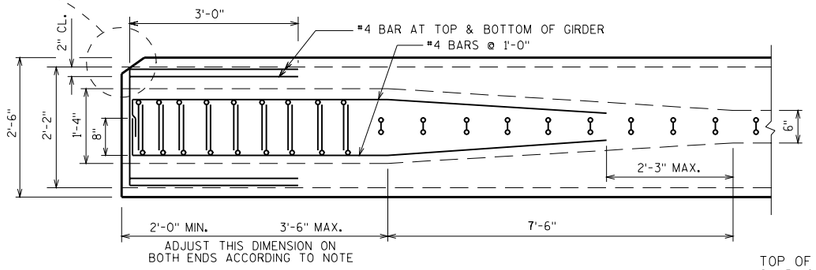


SIDE VIEW & TYPICAL SECTION IN SPAN

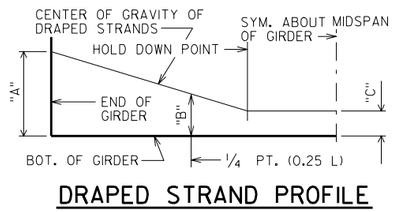
Ⓐ DETAIL TYP. AT EACH END.

Ⓑ 4, #6 BARS, FULL LENGTH, 2'-11" MIN. LAP

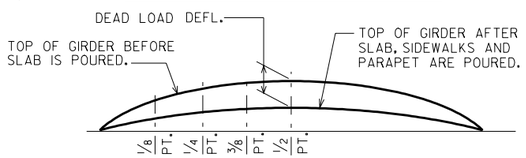




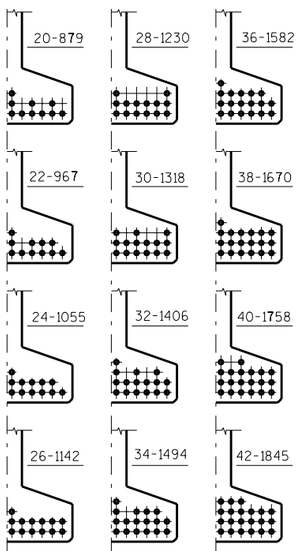
TOP VIEW OF GIRDER Ⓐ



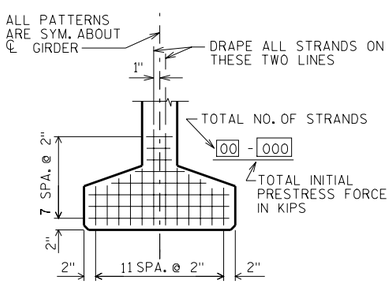
DRAPED STRAND PROFILE



DEAD LOAD DEFLECTION DIAGRAM



DRAPED PATTERN



TYP STRAND PATTERN

⚠ P=8½" FOR END 23'-0" OF GIRDERS

⚠ P=7" FOR MIDDLE 97'-1" OF GIRDERS

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 0.6"Φ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF #4 STIRRUPS 4½", #7 STIRRUP 12".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

ON MULTIPLE SPAN STRUCTURES, SET THE END BLOCK LENGTHS OF GIRDERS RESTING ON THE SAME PIER TO ± 2". ON SIMPLE SPANS, SET THE END BLOCK LENGTH ON BOTH GIRDER ENDS TO ± 2".

IF THE CONTRACTOR USES BOTTOM FLANGE TO SUPPORT CONSTRUCTION FORMS, THE CONTRACTOR SHALL SUBMIT FALSEWORK PLANS FOR APPROVAL OF THE STRUCTURES DESIGN SECTION.

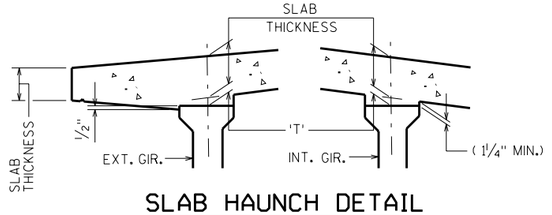
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, 2 OPTIONS ARE AVAILABLE:

1. USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.
2. USE ASTM A615, GRADE 40 REINFORCEMENT AND A MODIFIED STIRRUP SPACING SUBMITTED TO AND APPROVED BY THE STRUCTURES DEVELOPMENT SECTION.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A497.



SLAB HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY BRIDGE OFFICE FOR HAUNCH HEIGHTS OVER 4".

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT ⅛ POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) ⅛	¼	⅜	½	CONC. STRGTH. f'c (P.S.I.)	"P"	DIA. OF STRAND	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.)	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.)
1	143'-1"	1.03	1.77	2.21	2.36	7000	⚠	0.60	42	6745	65.00	20.00	23.00	5.00	0	0

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC. 2003 | DRAWN BY JHG | PLANS CK'D. JPH

70" PRESTRESSED GIRDER DETAILS

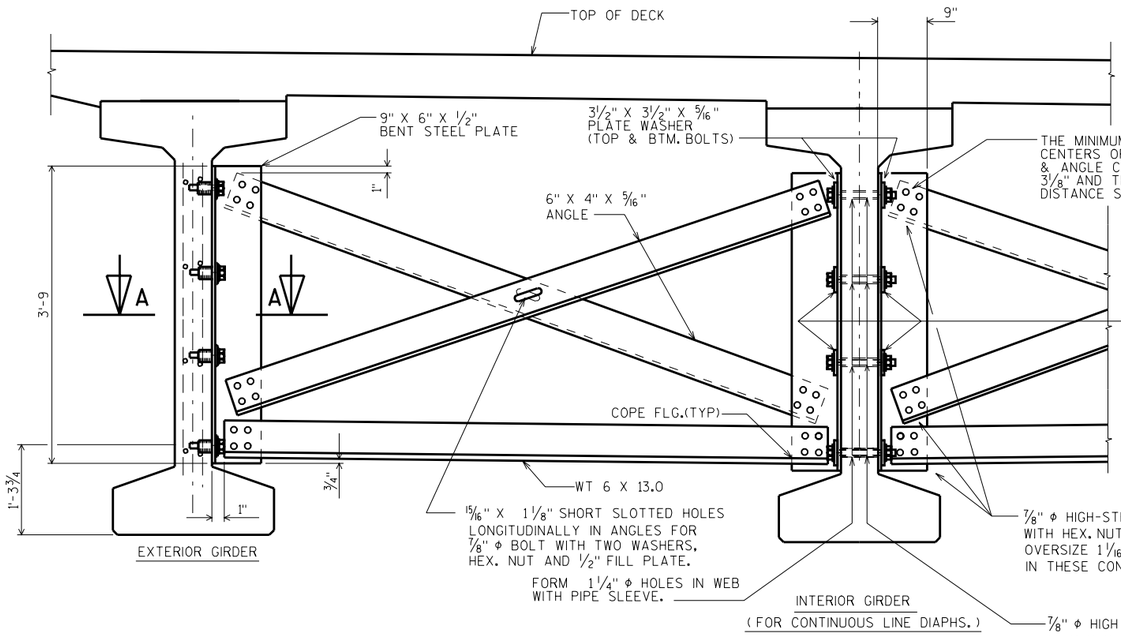
SHEET 10

8

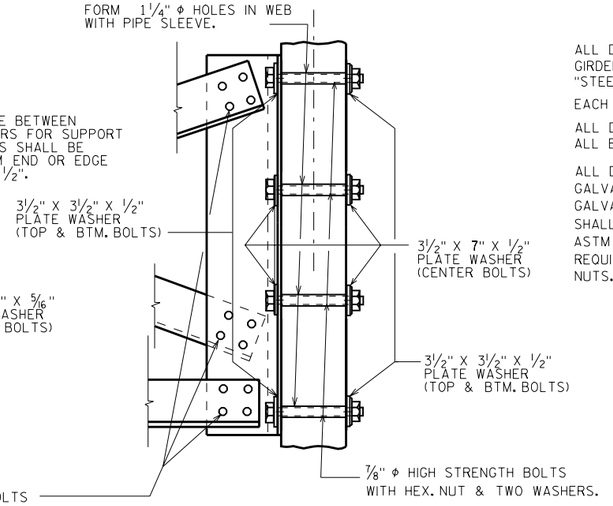
FILE= 10-178GIR.DGN
SCALE = 2.6667

STATE PROJECT NUMBER

1190-00-72



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION AT INTERIOR GIRDERS (FOR STAGGERED DIAPHRAGMS)

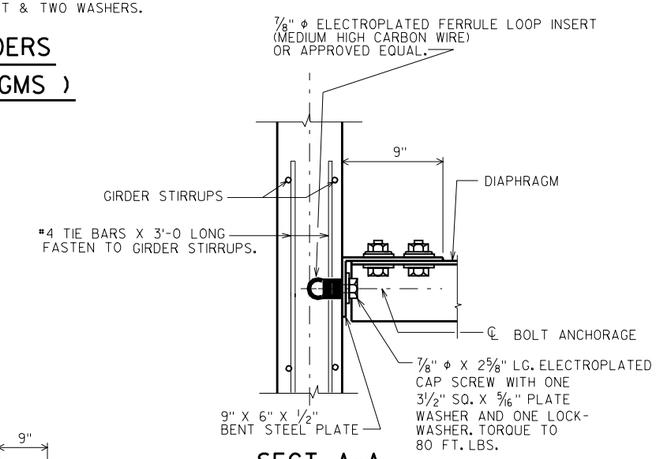
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGM".

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

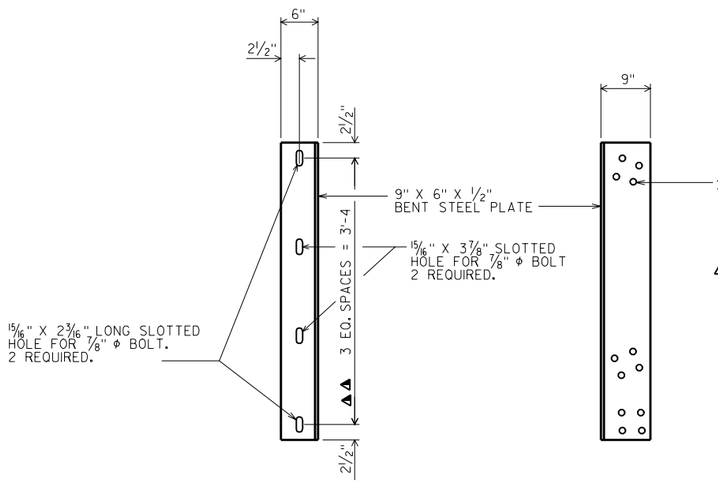
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



SECT. A-A

(FOR EXTERIOR ATTACHMENT)



DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2003	JHG	JPH

STEEL DIAPHRAGM

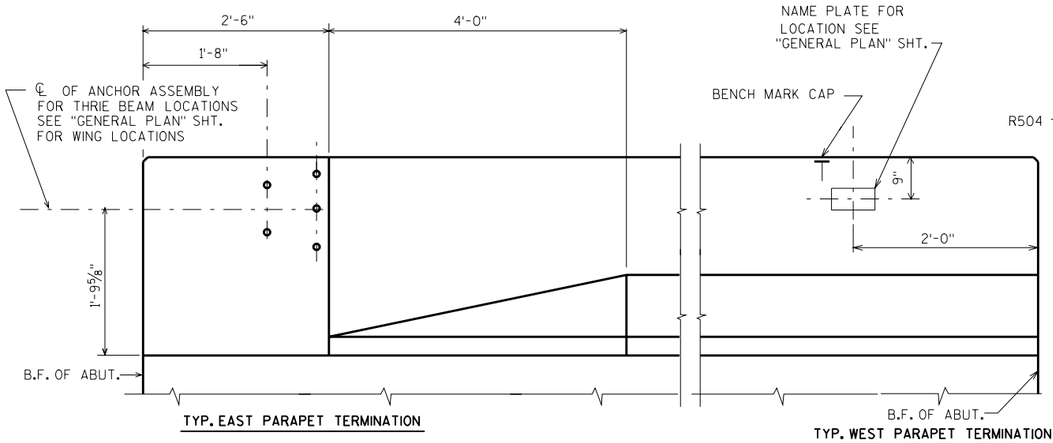
SHEET 11

8

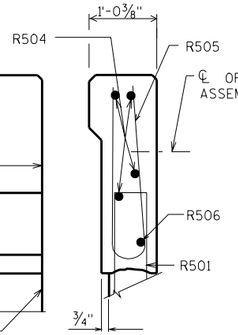
FILE= 11-178DIA.DGN
SCALE = 1

STATE PROJECT NUMBER

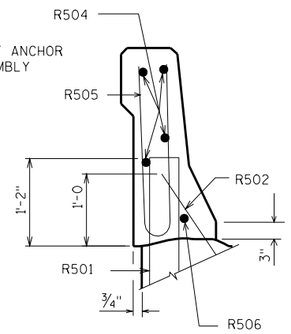
1190-00-72



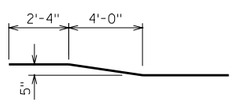
INSIDE ELEVATION



SECTION A



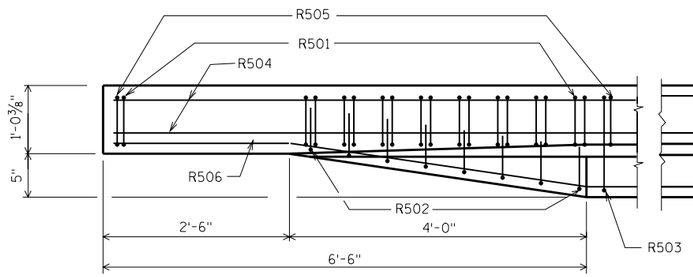
SECTION B



R506

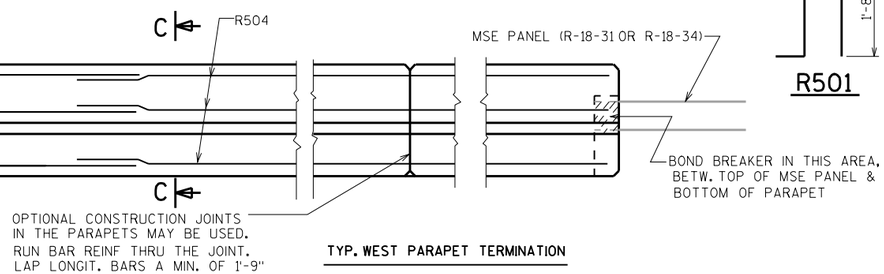
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	28	4-5	X		PARAPET VERT.
R502	X	16	3-2	X		PARAPET VERT.
R503	X	425	4-2	X		PARAPET VERT.
R504	X	38	38-3			PARAPET HORIZ.
R505	X	453	4-10	X		PARAPET VERT.
R506	X	2	38-3	X		PARAPET HORIZ.



TYP. EAST PARAPET TERMINATION

PLAN



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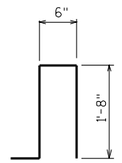

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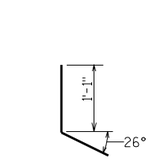

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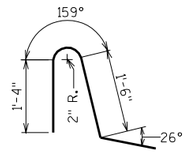
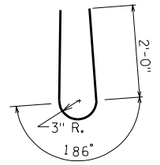
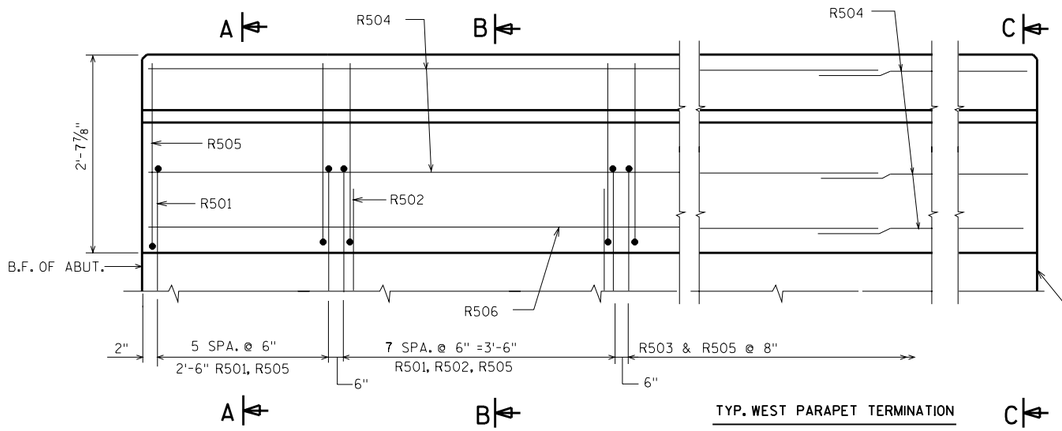


R503



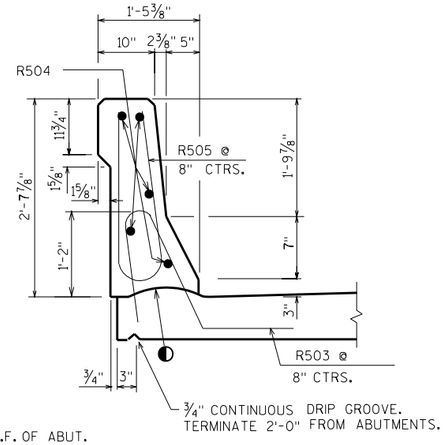
R505



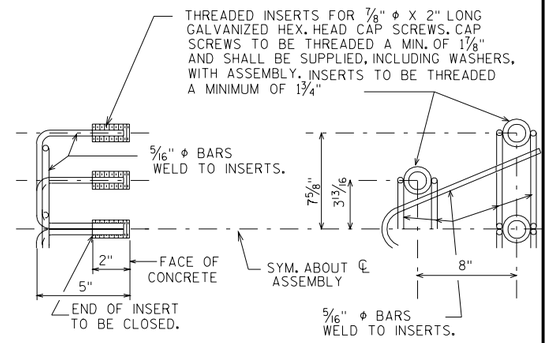
TYP. EAST PARAPET TERMINATION

OUTSIDE ELEVATION

TYP. WEST PARAPET TERMINATION



SECTION C



DETAIL OF ANCHOR ASSEMBLY

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-178

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2003	JHG	JPH

SLOPED FACE PARAPET LF

SHEET 12

8

FILE= 12-178PPT.DGN
SCALE = 1