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-18-184		Section 27	Town 27N	Range 09W	
Station 223+01.34 - 223+98.84	Latitude: 444703.22 Longitude: 912655.68	☒ 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 CYPRESS RD		Feature Under		40 MPH	Collector
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: 94.7 (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: 07/11/2013	HS25	HS53
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 the NE and SE 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 0.02 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.

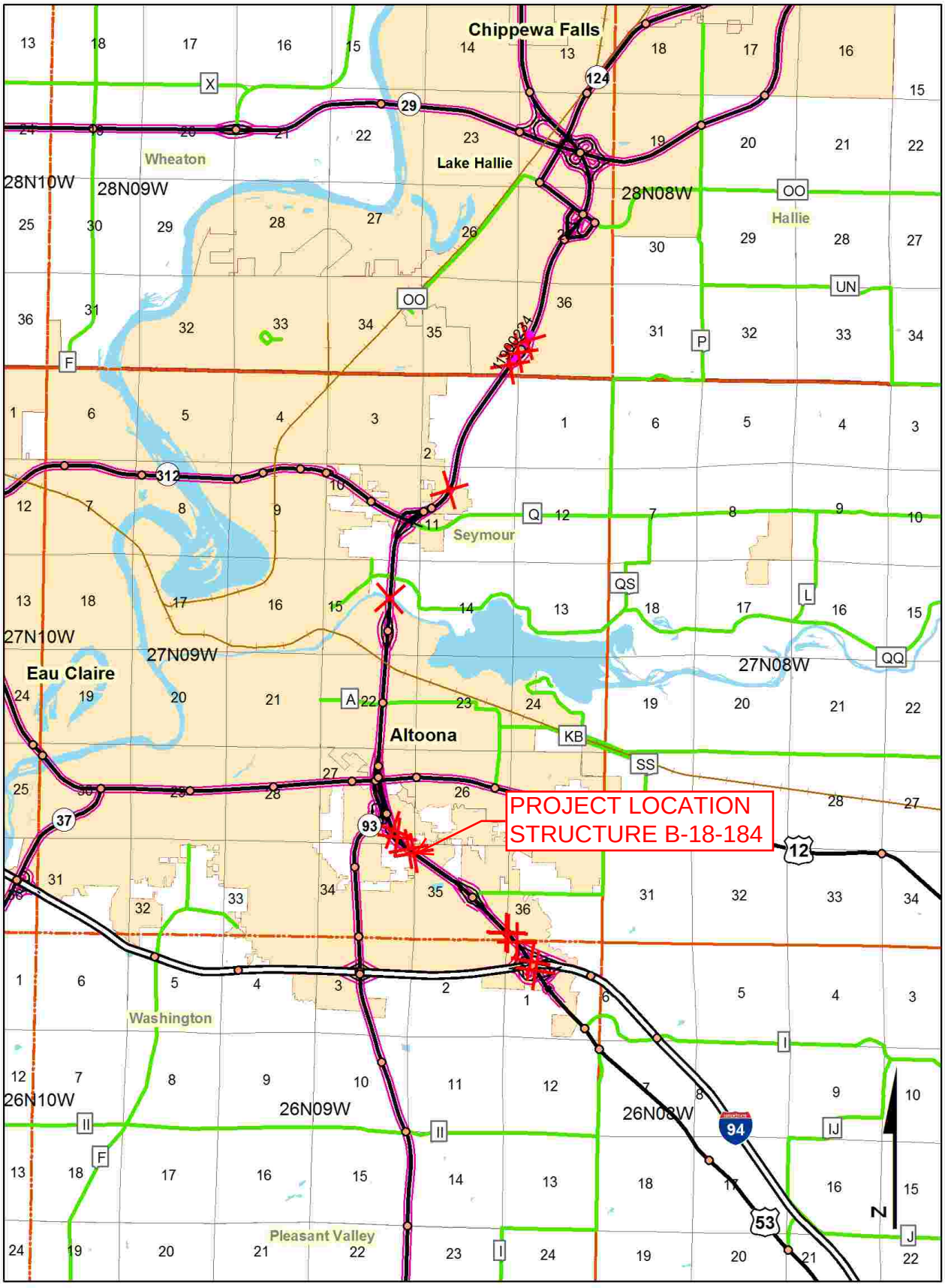
☐ 35. If project involves substructure widening coordinate with structure and/or hydraulic design engineer to determine if information on the separation and/or stream crossing SSR will be required.

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 2005. 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 few hairline transverse/diagonal cracks. The northwest approach shoulder is settling. The southwest corner of the deck is buckling upward.
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.) Conduit for lighting is attached to the North abutment. 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-18-184
N

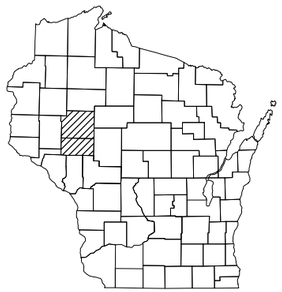
PROJECT ID: 1190-02-64

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

EAU CLAIRE - CHIPPEWA FALLS

IH 94 TO 40TH AVENUE (11 BRIDGES)

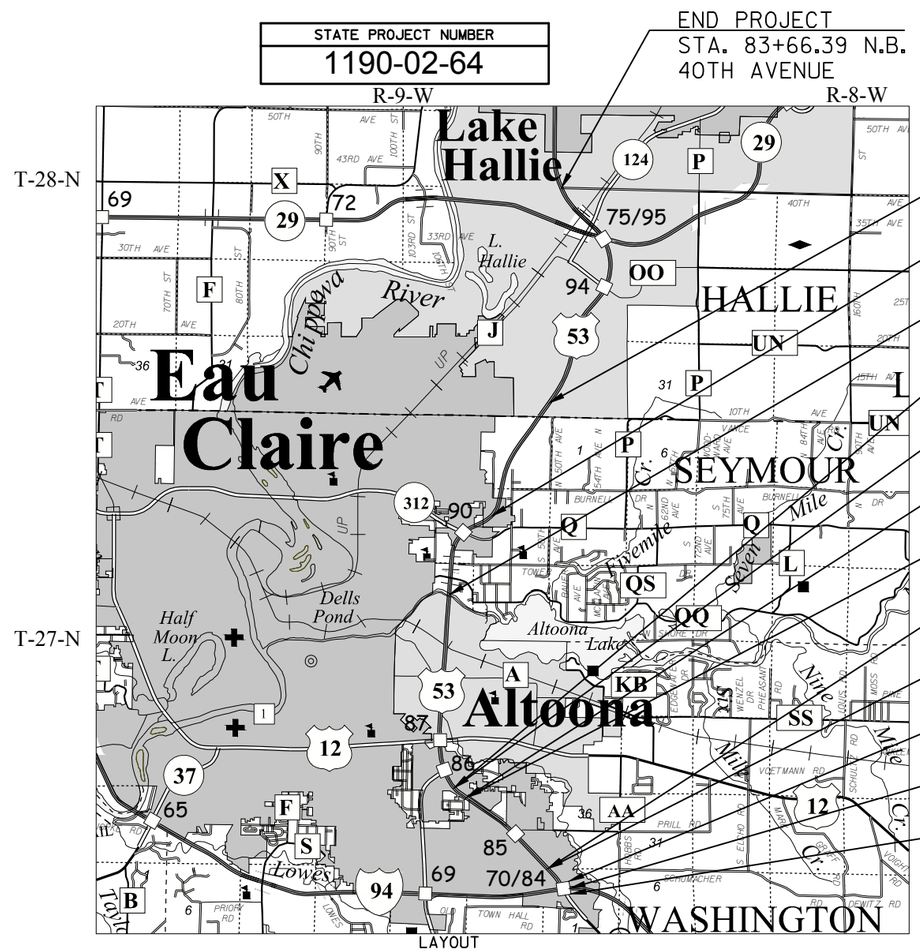
USH 53

EAU CLAIRE AND CHIPPEWA COUNTIES

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1190-02-64		

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

FILE NAME : N:\PDS\C3D\11900264\SHEETSPLAN\010101_TI.DWG
LAYOUT NAME - ****

PLOT DATE : 6/17/2015 3:44 PM

PLOT BY : HETRICK, ADAM M PLOT NAME :

route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.713

Lat: 44.78469488 Long: -91.44952059 Elev: 810.91 ft.

\\doteauplog1p\photolog\Rg5\053S_R5_2013\\Front\Dir_140\F_14099.jpg

route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.723

Lat: 44.78461515 Long: -91.4493518 Elev: 810.37 ft.

\\doteauplog1p\photolog\Rg5\053S_R5_2013\\Front\Dir_141\F_14100.jpg

route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.733

Lat: 44.78453485 Long: -91.44918334 Elev: 809.64 ft.

\\doteauplog1p\photolog\Rg5\053S_R5_2013\\Front\Dir_141\F_14101.jpg

route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.743

Lat: 44.78445467 Long: -91.44901293 Elev: 809.05 ft.

\\doteauplog1p\photolog\Rg5\053S_R5_2013\\Front\Dir_141\F_14102.jpg

route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.753

Lat: 44.78437393 Long: -91.44884324 Elev: 808.25 ft.

\\doteauplog1p\photolog\Rg5\053S_R5_2013\\Front\Dir_141\F_14103.jpg

route: 053S county: EAU CLAIRE date: 08/14/2013 plm: 138.763

Lat: 44.78429363 Long: -91.44867335 Elev: 807.39 ft.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for B-18-184

USH 53 SB HASTINGS WAY over CYPRESS RD

Jul 14,2015

Type	Prior	Frequency (mos)	Performed
Routine	07-14-15	24	X
SI&A	07-11-13	48	

Latitude	44°47'03.22"N	Owner	STATE HIGHWAY DEPT
Longitude	91°26'55.68"W	Maintainer	STATE HIGHWAY DEPT

Time Log

Hours	Minutes
1	59

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 HASTINGS WAY	Section Town Range: S27 T27N R09W	Structure Number: **B-18-184**
Feature Under: CYPRESS RD	County: EAU CLAIRE(18)	
Location: AT CYPRESS RD	Municipality: CITY-EAU CLAIRE(18221)	Structure Name:

Geometry

measurements in feet, except where noted

Approach Roadway Width: 68	Bridge Roadway Width: 64.9	Total Length: 98.8
Approach Pavement Width: 54	Deck Width: 67.8	Deck Area (sq ft): 6698

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	4	1500	2003	ONE WAY TRAFFIC
Under	4	100	2003	TWO WAY TRAFFIC

Capacity

Load Rating

Inventory rating: HS25	Overburden depth (in): 0.0	Last rating date:	Controlling: INTERIOR DECK GIRDER Positive Moment
Operating rating: HS53	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 #: 94.7

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	PREST CONCRETE	DECK GIRDER	45	95.0	Y

Expansion joint(s)

Temperature:

File:	New:

Vertical Clearance

	Measurement file (ft)	File Date	Measurement new (ft)
Highway Minimum Under Cardinal	15.0	17-Nov-2005	
Highway Minimum Under Non-Cardinal	15.0	17-Nov-2004	
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	6,800	6,786	14	0	0
		1130	Cracking (RC)	SF		69	14	0	0
			Few hairline diagonal cracks						
	8000		Wearing Surface (Bare)	SF	6,800	6,682	118	0	0
		3220	Crack (Wearing Surface)	SF		214	118	0	0
			Few hairline Transverse/diagonal cracks.						
	8522		Coated Reinforcing	SF	6,800	0	0	0	0
X	**109**		**Prestressed Concrete Open Girder**	LF	1,056	1,056	0	0	0
			11 Girders.						
X	**215**		**Reinforced Concrete Abutment**	LF	175	156	13	6	0
			Electric lights on north abutment.						
			Decorative face on both abutments.						
		1080	Delamination - Spall - Patched Area	LF		0	0	3	0
			1 ft X 1 ft spall at southeast joint with wing wall but no expose rebar.						
			1 ft X 2 ft spall at southeast joint with wing wall with expose rebar.						
		1130	Cracking (RC)	LF		0	13	3	0
			11 hairline vertical/mapping cracks in south abutment.						
			5 hairline vertical cracks in north abutment.						
X	**331**		**Reinforced Concrete Bridge Rail**	LF	200	171	20	9	0
			Safety chain link fence on west concrete parapet.						
		1130	Cracking (RC)	LF		0	20	9	0
			Few hairline vertical cracks.						
X	**8400**		**Integral Wingwall**	EA	4	4	0	0	0
		8902	Wingwall Movement	EA		0	0	0	0
			There no wing walls on this bridge, there are retaining walls.						
			Northwest and Southwest roadway and parapet has settled at the retaining wall.						

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

Structure No.:**B-18-184**

Assessments

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**9009**		**Sidewalk** **Under bridge on south side.**	EA	1	1	0	0	0
X	**9011**		**Utilities** Conduit for lighting is attached to the North abutment.	EA	1	1	0	0	0
X	**9167**		**Steel Diaphragm**	EA	20	20	0	0	0
X	**9322**		**Approach Roadway - Concrete (non-structural)** Northwest approach shoulder is settling.	EA	2	1	1	0	0
X	**9337**		**Protective Screening** **Mounted on top of east concrete parapet railing.**	EA	1	1	0	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

Inspection Specific Notes

Inspector Site-Specific Safety Considerations

Structure Inspection Procedures

Special Requirements

	Chk	Comments
Traffic Control		
ReachAll Vehicle		
Access Equipment		
Other		

Construction History

Year	Work Performed	FOS id
2005	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

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-18-0183, B-18-0184
Structure Name: USH 53 over Cypress Road
City/County: City of Eau Claire, Eau Claire County
Lat/Long Coordinates: 444704.31/ 912653.17, 444703.22/ 912655.68
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-18-0183					
1	Paint	Fence	PLM, non-detect	No ACM	0
2	Paint	Fence	PLM, non-detect	No ACM	
3	Paint	Fence	PLM, non-detect	No ACM	
4	Caulk	Around fence attachment plate	PLM, non-detect	No ACM	0
5	Caulk	Around fence attachment plate	PLM, non-detect	No ACM	
6	Caulk	Around fence attachment plate	PLM, non-detect	No ACM	

Sample Number	Sample Description	Sample Location	Analytical Results and Method	Friable/ Non-friable or No ACM	Quantity of ACM Material
7	Caulk	Abutment joint	PLM, non-detect	No ACM	0
8	Caulk	Abutment joint	PLM, non-detect	No ACM	
9	Caulk	Abutment joint	PLM, non-detect	No ACM	
B-18-0184					
1	Paint	Fence	PLM, non-detect	No ACM	0
2	Paint	Fence	PLM, non-detect	No ACM	
3	Paint	Fence	PLM, non-detect	No ACM	
4	Caulk	Around fence attachment plate	PLM, non-detect	No ACM	0
5	Caulk	Around fence attachment plate	PLM, non-detect	No ACM	
6	Caulk	Around fence attachment plate	PLM, non-detect	No ACM	
7	Caulk	Abutment joint	PLM, non-detect	No ACM	0
8	Caulk	Abutment joint	PLM, non-detect	No ACM	
9	Caulk	Abutment joint	PLM, non-detect	No ACM	

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

TRC Environmental Corporation

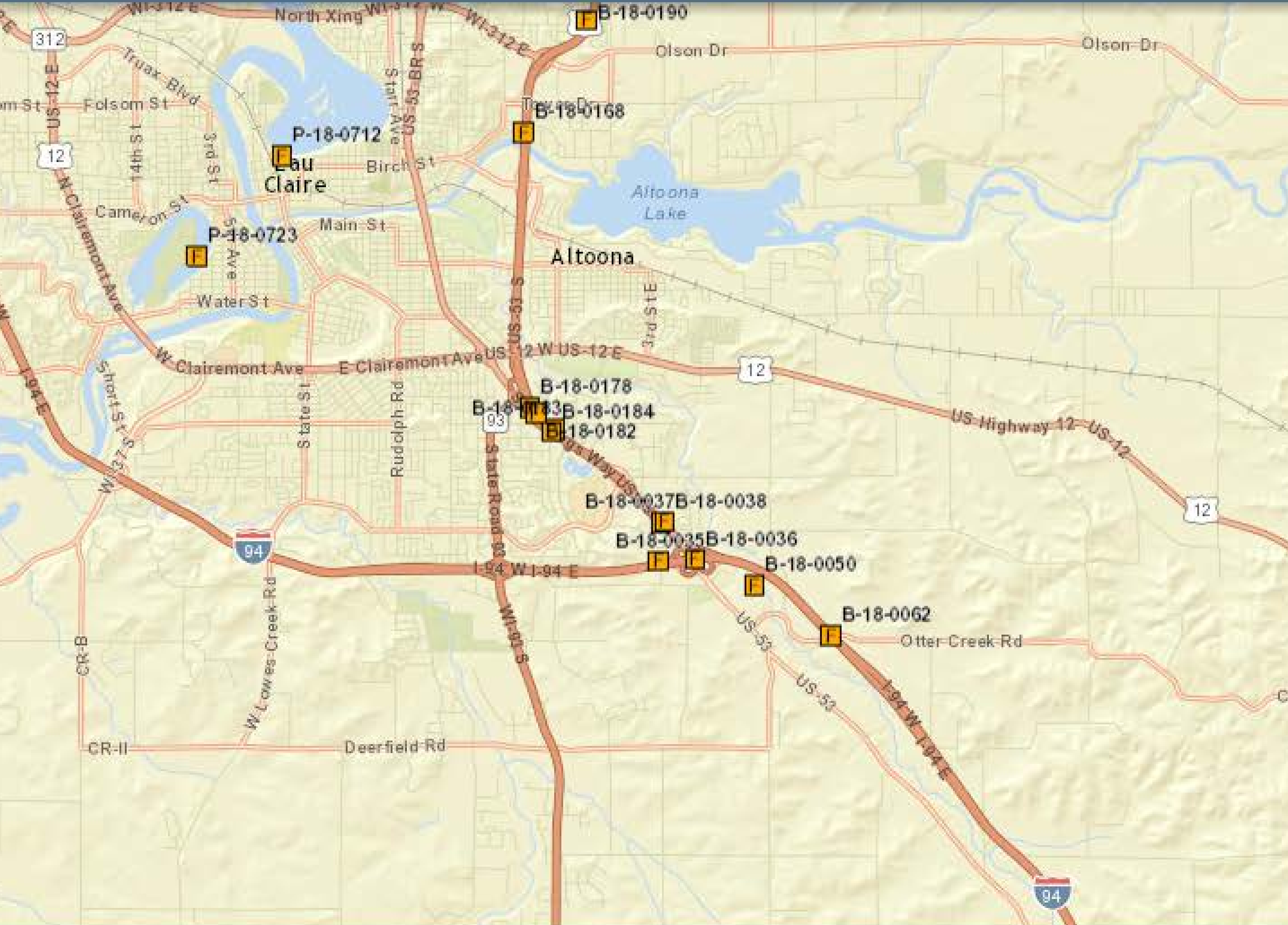
Daniel Haak
Project Manager

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
P-18-0712
B-18-0168
P-18-0723
Eau Claire
Altoona
Altoona Lake
B-18-0178
B-18-0184
B-18-0182
B-18-0037
B-18-0038
B-18-0035
B-18-0036
B-18-0050
B-18-0062
Olson Dr
Folsom St
Birch St
Cameron St
Main St
Water St
W Clairemont Ave
E Clairemont Ave
US-12 W
US-12 E
US Highway 12
State St
Rudolph Rd
State Road 93
I-94 W
I-94 E
Otter Creek Rd
Deerfield Rd
CR-II
CR-B
W Lowes Creek Rd
WI-93 S
US-53
Truax Blvd
N Clairemont Ave
Short St
WI-37 S
3rd St E
North Xing

B-18-0183

Paint on fence

Caulk around fence attachment plate

Caulk in abutment joint

B-18-0184

Paint on fence

Caulk around fence attachment plate

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 #: 0047028
Project #: 235777.0000.0000
Date Received: 10/16/2015
Date Analyzed: 10/19/2015

Site: DOT Bridge Inspection, B-18-183

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
B-18-183 (1)	Black	Yes	No	- -	- - -	ND	None
B-18-183 (2)	Black	Yes	No	- -	- - -	ND	None
B-18-183 (3)	Black	Yes	No	- -	- - -	ND	None
B-18-183 (4)	Grey	Yes	No	- -	- - -	ND	None
B-18-183 (5)	Grey	Yes	No	- -	- - -	ND	None
B-18-183 (6)	Grey	Yes	No	- -	- - -	ND	None
B-18-183 (7)	Grey	Yes	No	- -	- - -	ND	None
B-18-183 (8)	Grey	Yes	No	- -	- - -	ND	None
B-18-183 (9)	Grey	Yes	No	- -	- - -	ND	None

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

TRC
Results you can rely on

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type

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
10/19/2015

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 #:	0047033
Project #:	235777.0000.0000
Date Received:	10/16/2015
Date Analyzed:	10/19/2015

Site: DOT Bridge Inspection, B-18-184

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
B-18-184 (1)	Black	Yes	No	- -	- - -	ND	None
B-18-184 (2)	Black	Yes	No	- -	- - -	ND	None
B-18-184 (3)	Black	Yes	No	- -	- - -	ND	None
B-18-184 (4)	Black	Yes	No	- -	- - -	ND	None
B-18-184 (5)	Black	Yes	No	- -	- - -	ND	None
B-18-184 (6)	Black	Yes	No	- -	- - -	ND	None
B-18-184 (7)	Grey	Yes	No	- -	- - -	ND	None
B-18-184 (8)	Grey	Yes	No	- -	- - -	ND	None
B-18-184 (9)	Grey	Yes	No	- -	- - -	ND	None

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

TRC
Results you can rely on

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type

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.

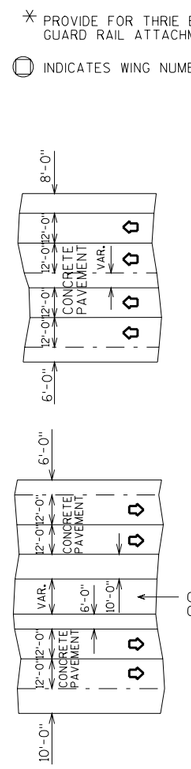
Analyzed by: K. Williamson — Kathleen Williamson, Laboratory Manager

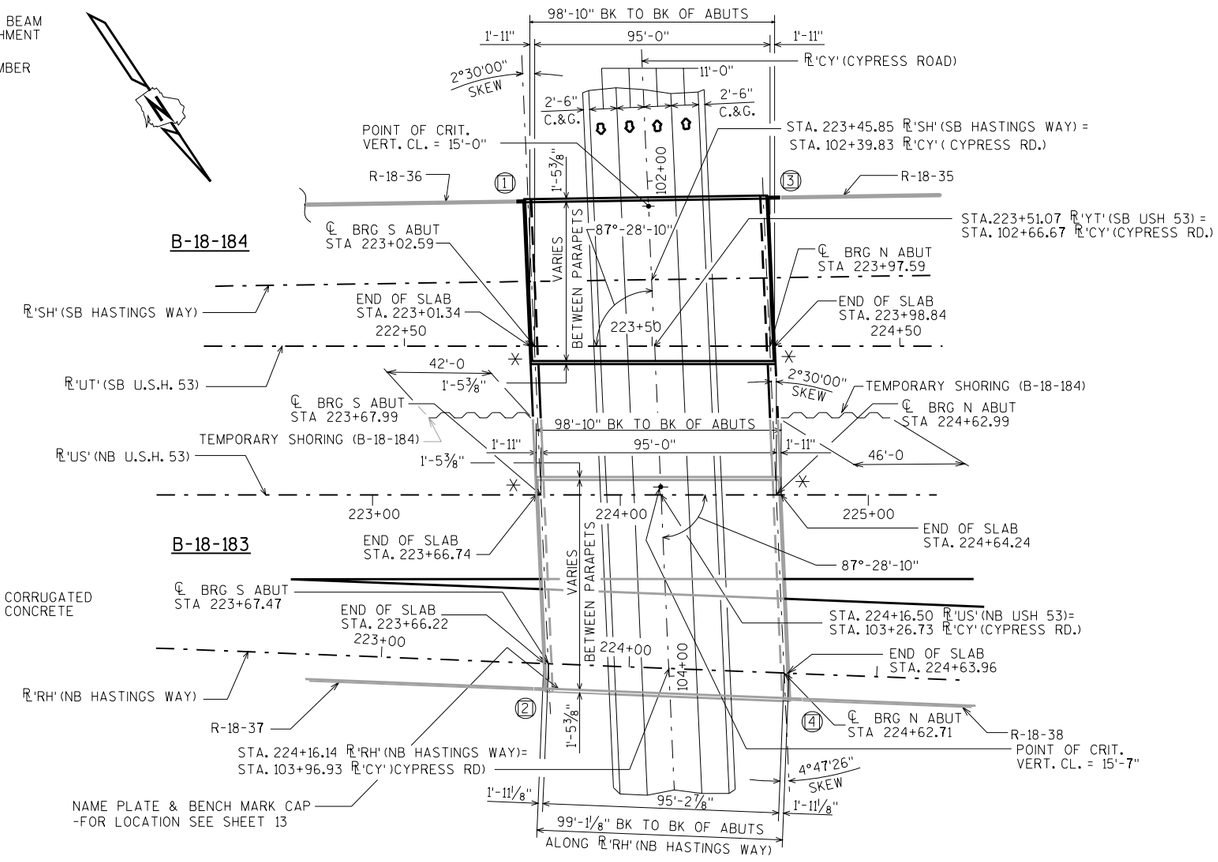
Reviewed by: Amanda Parkins — Amanda Parkins, Approved Signatory

Date Issued 10/21/2015

STATE PROJECT NUMBER

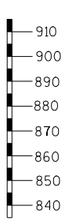
1190-00-72

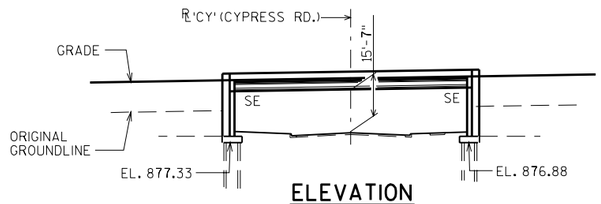




PLAN

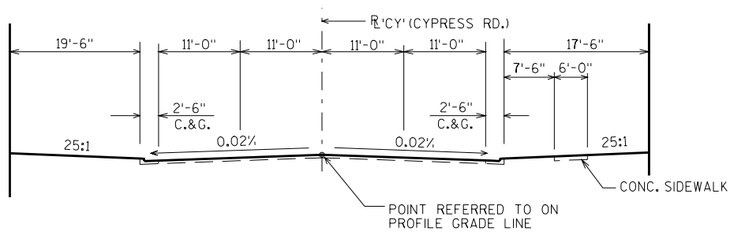
SINGLE SPAN - 45" PRESTRESSED GIRDERS





ELEVATION

(FENCING NOT SHOWN)
NORMAL TO CYPRESS ROAD



TYPICAL SECTION THRU CYPRESS ROAD

DESIGN DATA

LIVE LOAD:

DESIGN RATING; HS-20
INVENTORY RATING; HS-24
OPERATIONAL RATING; HS-55
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.

45" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 6,000 P.S.I.
STRANDS-½" Φ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 10¾"Φ CAST-IN-PLACE CONC. PILING DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE.
ESTIMATED 100'-0" LG. @ S. ABUT. & 90'-0" LG. @ N. ABUT.

TRAFFIC VOLUME

USH 53/HASTINGS WAY	CYPRESS ROAD
A.D.T.=13,000 (2024)	A.D.T.=25,750 (2024)
R.D.S.=70 M.P.H.	R.D.S.=40 M.P.H.

LIST OF DRAWINGS

BRIDGE OFFICE CONTACT = BILL DREHER (608) 261-8205

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES
Frank Hubbard
APPROVED CHIEF STRUCTURAL DESIGN ENGINEER 3-2-2004 DATE

STRUCTURE B-18-184

SB USH 53/HASTINGS WAY OVER CYPRESS RD

COUNTY EAU CLAIRE		~~TOWN~~/CITY/~~VILLAGE~~ EAU CLAIRE	
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. Budd

GENERAL PLAN

SHEET 1 OF 13

8

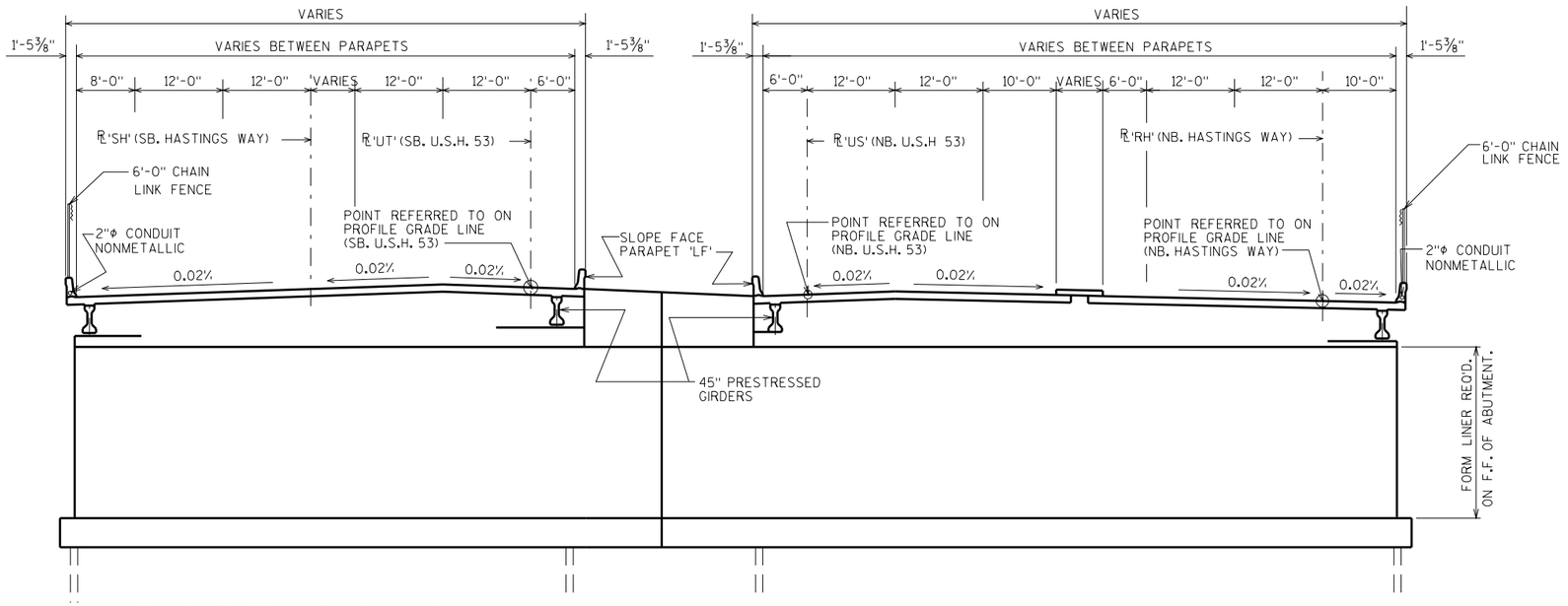
I.D. 1190-00-05H

DATE: 2/17/04

FILE= 01-184GP.DGN
SCALE = 30

STATE PROJECT NUMBER

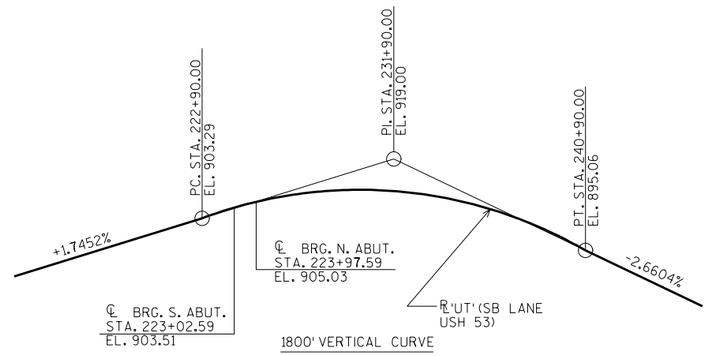
1190-00-72



SB USH 53/SB HASTINGS WAY (B-18-184)

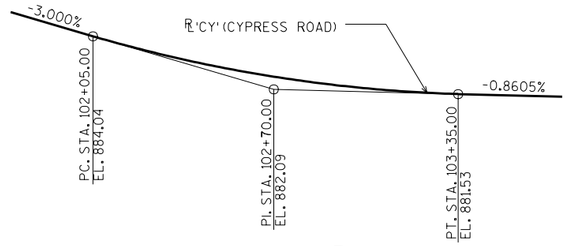
NB USH 53/NB HASTINGS WAY (B-18-183)

CROSS SECTION THRU ROADWAY LOOKING NORTH



PROFILE GRADE LINE ℄'UT' (SB USH 53)

130' VERTICAL CURVE



PROFILE GRADE LINE ℄'CY' (CYPRESS ROAD)

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	110	———	———	110
EXCAVATION FOR STRUCTURES BRIDGES B-18-184	L.S.	———	———	———	1
BACKFILL STRUCTURE	C.Y.	———	1730	2020	3750
CONCRETE MASONRY BRIDGES	C.Y.	258	336	365	959
PROTECTIVE SURFACE TREATMENT	S.Y.	785	———	———	758
BAR STEEL REINFORCEMENT HS BRIDGES	LB.	———	20720	21730	42450
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB.	45710	4070	4290	54070
BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	22	———	———	22
PRESTRESSED GIRDER TYPE I 45-INCH	L.F.	1056	———	———	1056
STEEL DIAPHRAGMS B-18-184	EACH	20	———	———	20
GEOTEXTILE FABRIC TYPE DF - SCHEDULE A	S.Y.	———	70	70	140
RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	———	22	23	45
PIPE UNDERDRAIN 6-INCH	L.F.	———	85	85	170
PIPE UNDERDRAIN UNPERFORATED 6-INCH	L.F.	———	20	20	40
QMP CONCRETE STRUCTURES 5 CYLINDER	C.Y.	258	336	365	959
INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL.	2580	3360	3650	9590
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	———	———	2
ARCHITECTURAL SURFACE TREATMENT	S.F.	———	1376	1580	2956
PILING CIP CONCRETE DELIVERED AND DRIVEN 10¾-INCH	L.F.	———	4960	4960	9920
CONCRETE STAINING B-18-184	LS	———	———	———	1
FENCE CHAIN LINK 6-FT.	L.F.	107	———	———	107
SHORING TEMPORARY	S.F.	———	395	480	875
NON-BID ITEMS					
FILLER	SIZE	———	———	———	1",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 IN PLACE BEFORE ABUTMENT CONSTRUCTION AND 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.

FORMLINER ON ABUTMENT BODY TO BE 2" BROKEN ROCK RIB.

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.

THE VINYL COATED CHAIN LINK FENCE SHALL BE BLACK.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

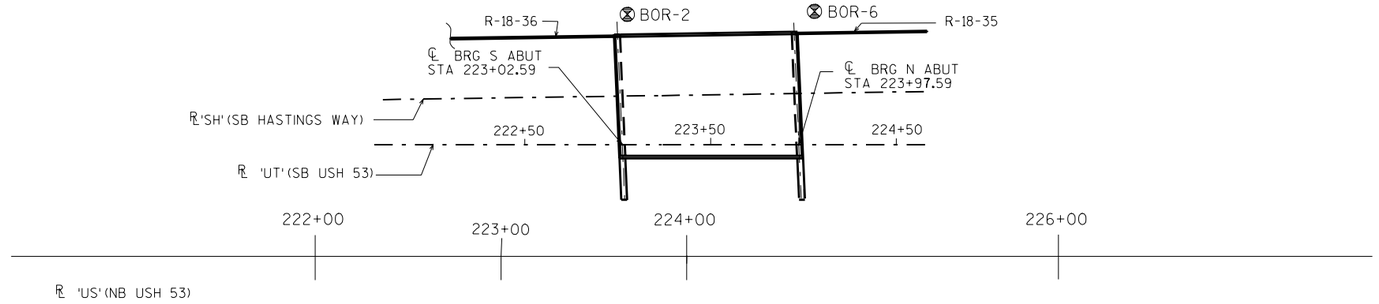
CROSS SECTION & QUANTITIES

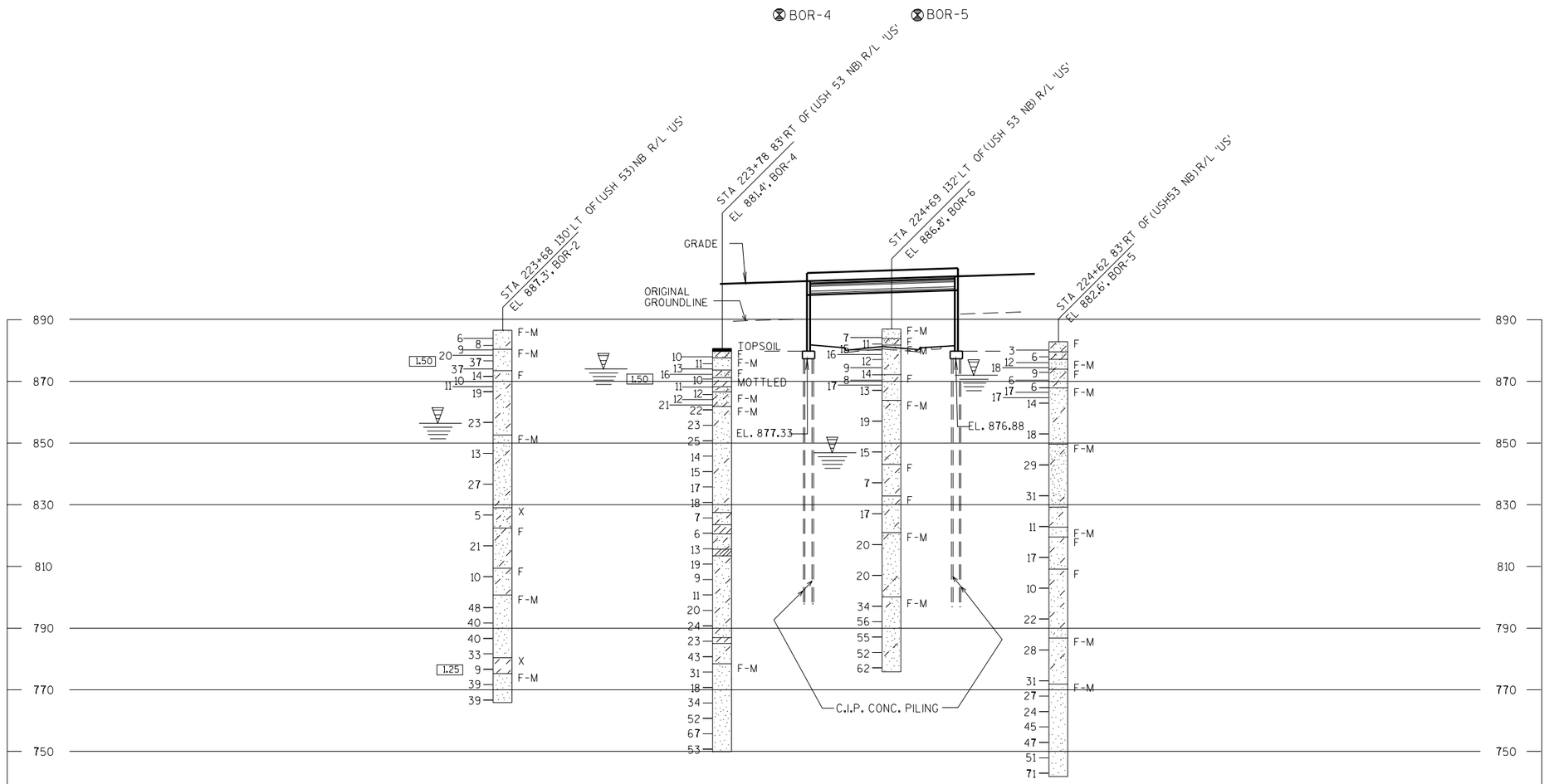
SHEET 2

8

FILE= 02-184QUAN.DGN
SCALE = 10

USH 53 OVER CYPRESS ROAD
EAU CLAIRE BYPASS, EAU CLAIRE COUNTY





STATE PROJECT NUMBER

1190-00-72

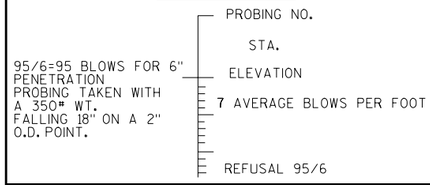
ABBREVIATIONS

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

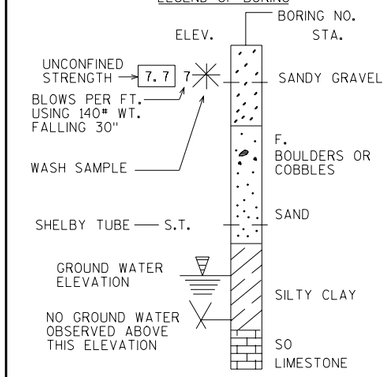
MATERIAL SYMBOLS

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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

SUBSURFACE EXPLORATION

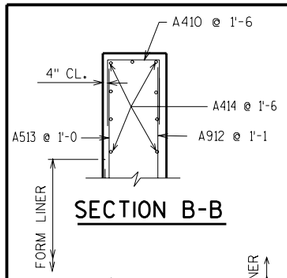
SHEET 3

8

FILE= 03-184SOILS.DGN
SCALE = 40

STATE PROJECT NUMBER

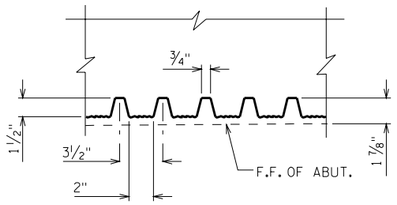
1190-00-72



SECTION B-B

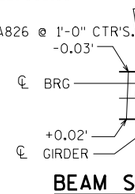
ELEVATION

LOOKING SOUTH

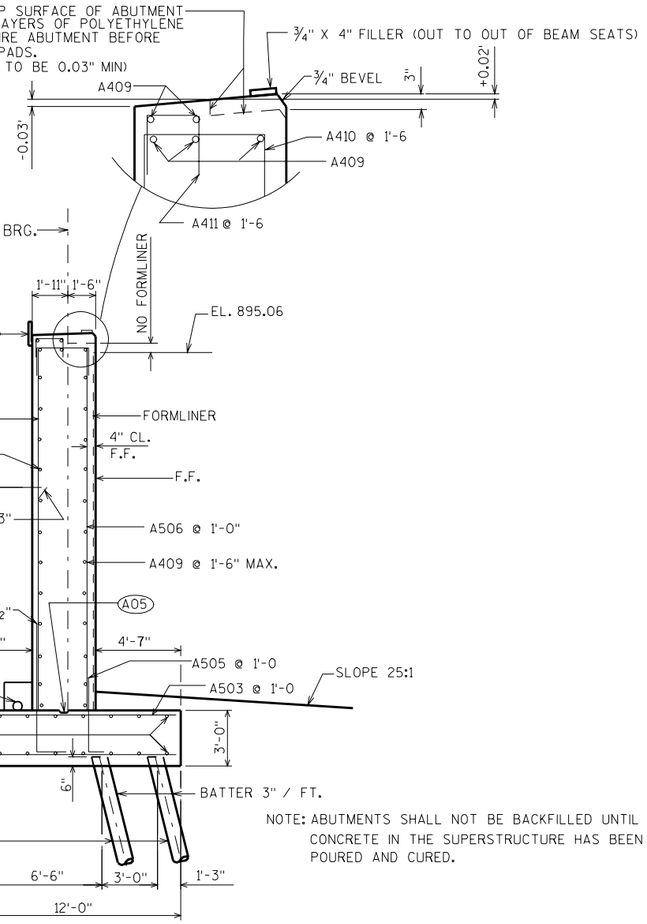


SECTION A-A

SHOWING DIM'S. FOR 2" BROKEN ROCK RIB FORM LINER.

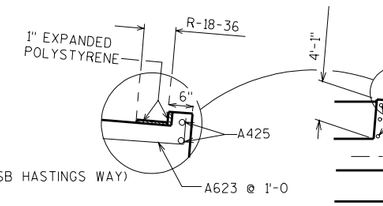


BEAM SEAT DETAIL



NOTE: ABUTMENTS SHALL NOT BE BACKFILLED UNTIL CONCRETE IN THE SUPERSTRUCTURE HAS BEEN POURED AND CURED.

TYPICAL SECTION THRU ABUT. BODY



SECTION D-D

FOR VIEW 'C-C' SEE SHEET 5.

PLAN

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

(A05) CONSTRUCTION JOINT IN FTG: KEYWAY FORMED BY A BEVELED 2 x 8.

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. CAST-IN-PLACE CONCRETE PILING, ESTIMATED 80'-0" LONG, AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS PER PILE.

(A15) PIPE UNDERDRAINS, 6 INCH. SLOPE 0.5% MIN. TO DRAIN. ENCLOSED IN 1'-6" X 1'-6" AREA OF SIZE 1 COARSE AGGREGATE (INCLUDED IN UNDERDRAIN BID ITEM) WRAPPED IN GEOTEXTILE FABRIC, TYPE DF, WITH 1'-6" OVERLAP.

(A16) PIPE UNDERDRAIN, 6 INCH, UNPERFORATED. TO SUITABLE DRAINAGE.

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

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

(A20) 1/2" FILLER :SEAL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

SOUTH ABUTMENT

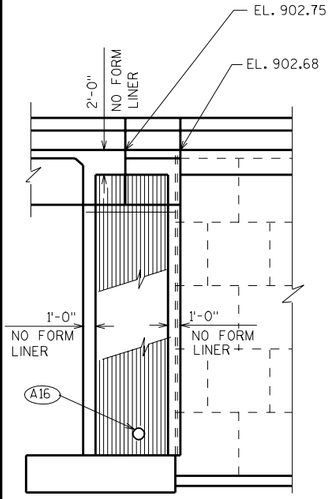
SHEET 4

8

FILE= 04-184ABUTSO.DGN
SCALE = 8

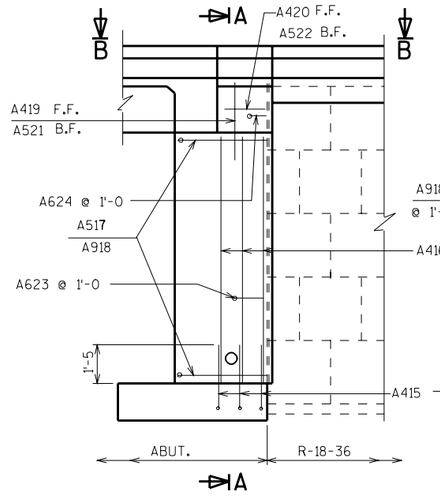
STATE PROJECT NUMBER

1190-00-72



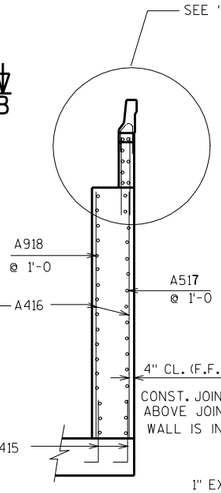
VIEW C-C

SHOWING FORM LINER LIMITS

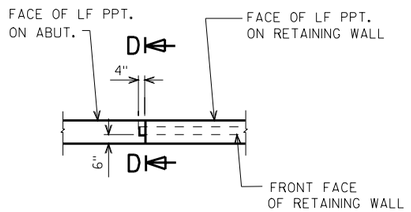


VIEW C-C

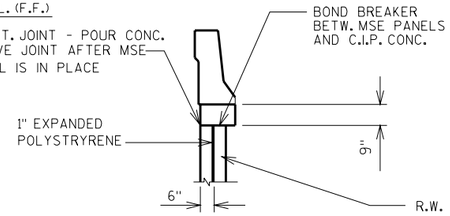
FORM LINER NOT SHOWN



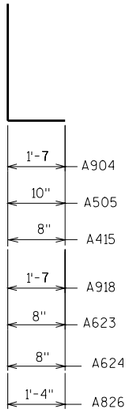
SECT. A-A



VIEW B-B



SECT. D-D

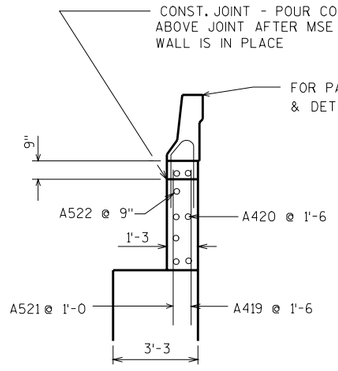


BILL OF BARS

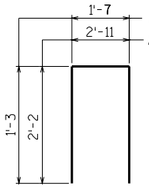
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A701		173	11-8			FOOTING
A402		48	30-3			FOOTING
A503		87	11-8			FOOTING
A904		160	8-4	X		FOOTING DOWEL B.F.
A505		88	4-10	X		FOOTING DOWEL F.F.
A506	X	69	17-4			VERT. F.F.
A907		80	12-0			VERT. B.F.
A908		62	17-7			VERT. B.F.
A409	X	87	30-3			HORIZ. F.F. & B.F.
A410	X	58	7-1	X		TOP
A411		45	3-11	X		TOP
A912		18	21-10			VERT. B.F. EAST SIDE
A513	X	20	21-10			VERT. F.F. EAST SIDE
A414	X	9	21-0			HORIZ. F.F. & B.F. EAST SIDE
A415		6	4-4	X		FOOTING WEST SIDE WALL WING 1
A416		6	17-4			WEST SIDE-WALL VERT. F.F. & B.F. WING 1
A517		18	7-0			WEST SIDE-WALL HORIZ. F.F. WING 1
A918		18	8-2	X		WEST SIDE-WALL HORIZ. B.F. WING 1
A419	X	4	5-9			WEST SIDE-WALL VERT. F.F. WING 1
A420	X	3	3-8			WEST SIDE-WALL HORIZ. F.F. WING 1
A521	X	5	6-0			WEST SIDE-WALL VERT. B.F. WING 1
A522	X	5	3-5			WEST SIDE-WALL HORIZ. B.F. WING 1
A623	X	18	3-8	X		EAST SIDE-WALL
A624	X	4	1-5	X		EAST SIDE-WALL
A425	X	2	21-7			EAST SIDE-WALL
A826		18	9-1	X		BODY B.F. @ WING 1

(A16) PIPE UNDERDRAIN, 6 INCH, UNPERFORATED. TO SUITABLE DRAINAGE.

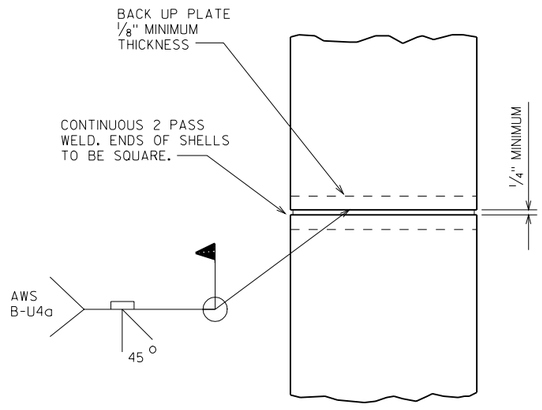


DETAIL E-E

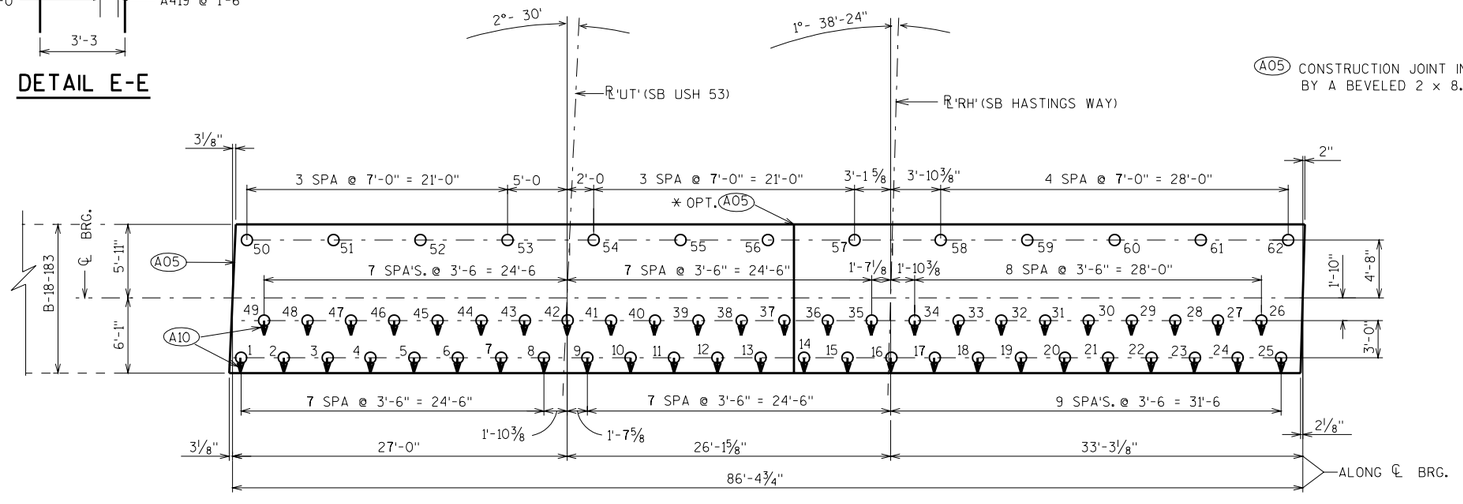


* PLACE OPT. FTG. JOINT TO CL. PILES BY 9" MIN.

(A05) CONSTRUCTION JOINT IN FTG: KEYWAY FORMED BY A BEVELED 2 x 8.



PILE SPLICE DETAIL



(A10) INDICATES PILE BATTERED 3" PER FT. IN DIRECTION OF ARROW.

PILE PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

S. ABUT. DETAILS

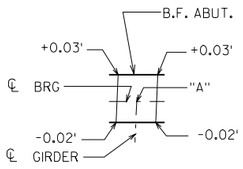
SHEET 5

8

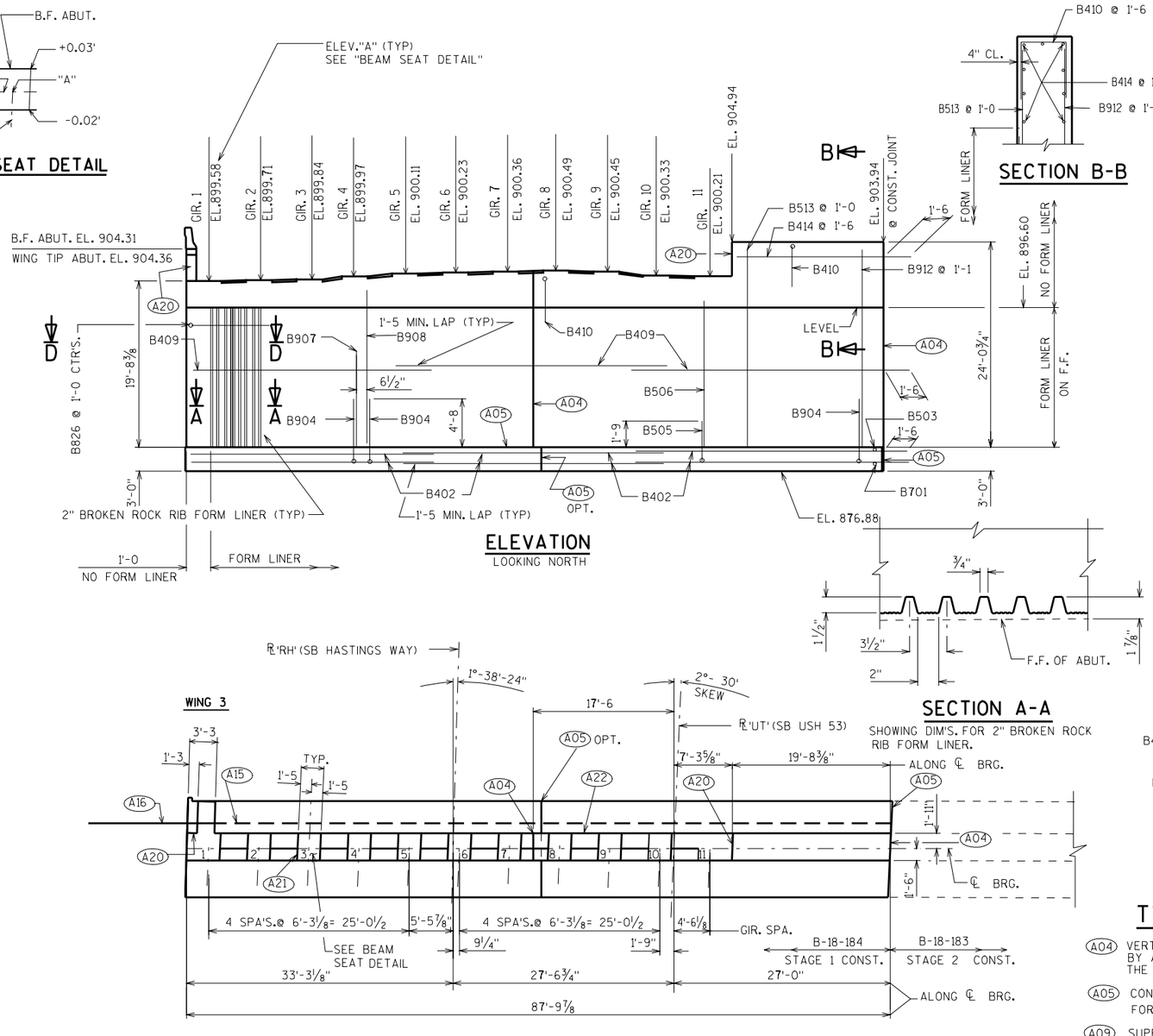
FILE= 05-183ABTSO2.DGN
SCALE = 6

STATE PROJECT NUMBER

1190-00-72

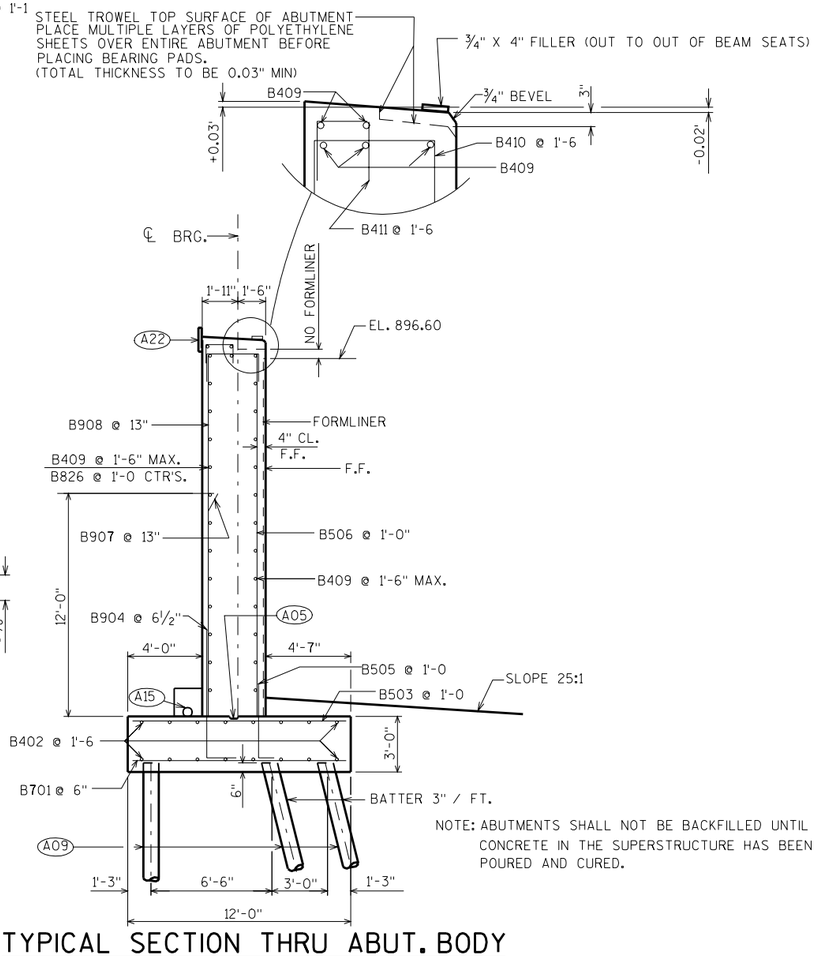


BEAM SEAT DETAIL



ELEVATION
LOOKING NORTH

SECTION B-B

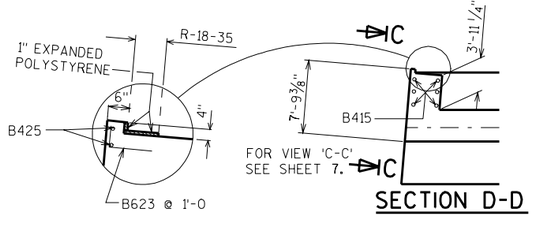


NOTE: ABUTMENTS SHALL NOT BE BACKFILLED UNTIL CONCRETE IN THE SUPERSTRUCTURE HAS BEEN POURED AND CURED.

TYPICAL SECTION THRU ABUT. BODY

SECTION A-A
SHOWING DIM'S. FOR 2" BROKEN ROCK RIB FORM LINER.

PLAN



SECTION D-D

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

(A05) CONSTRUCTION JOINT IN FTG: KEYWAY FORMED BY A BEVELED 2 x 8.

(A09) SUPPORT ABUTMENT ON 10¾" DIA. CAST-IN-PLACE CONCRETE PILING, ESTIMATED 80'-0" LONG, AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS PER PILE.

(A15) PIPE UNDERDRAINS, 6 INCH. SLOPE 0.5% MIN. TO DRAIN. ENCLOSED IN 1'-6" X 1'-6" AREA OF SIZE 1 COARSE AGGREGATE (INCLUDED IN UNDERDRAIN BID ITEM) WRAPPED IN GEOTEXTILE FABRIC, TYPE DF, WITH 1'-6" OVERLAP.

(A16) PIPE UNDERDRAIN, 6 INCH, UNPERFORATED. TO SUITABLE DRAINAGE.

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

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

(A20) ½" FILLER :SEAL EXPOSED HORIZ. & VERT. SURFACES ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

NORTH ABUTMENT

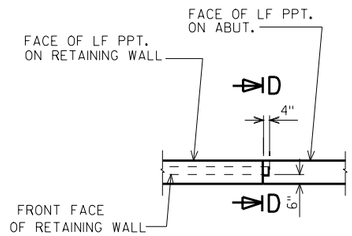
SHEET 6

8

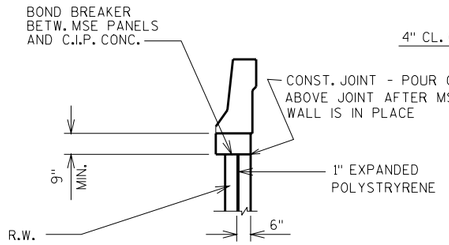
FILE= 06-184ABUTNO.DGN
SCALE = 8

STATE PROJECT NUMBER

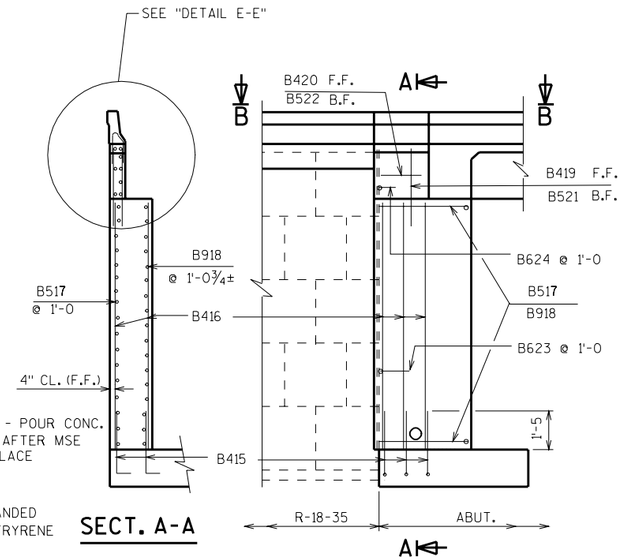
1190-00-72



VIEW B-B



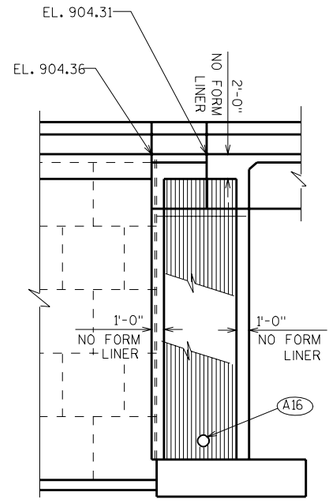
SECT. D-D



SECT. A-A

VIEW C-C

FORM LINER NOT SHOWN

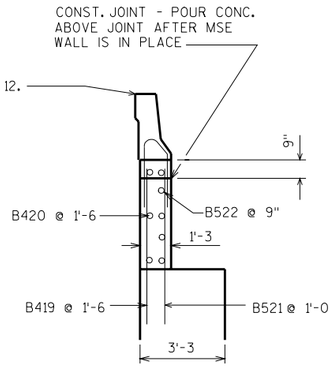


VIEW C-C

SHOWING FORM LINER LIMITS

PLACE OPT. FTG. JOINT TO CLEAR PILES BY 9" MIN. *

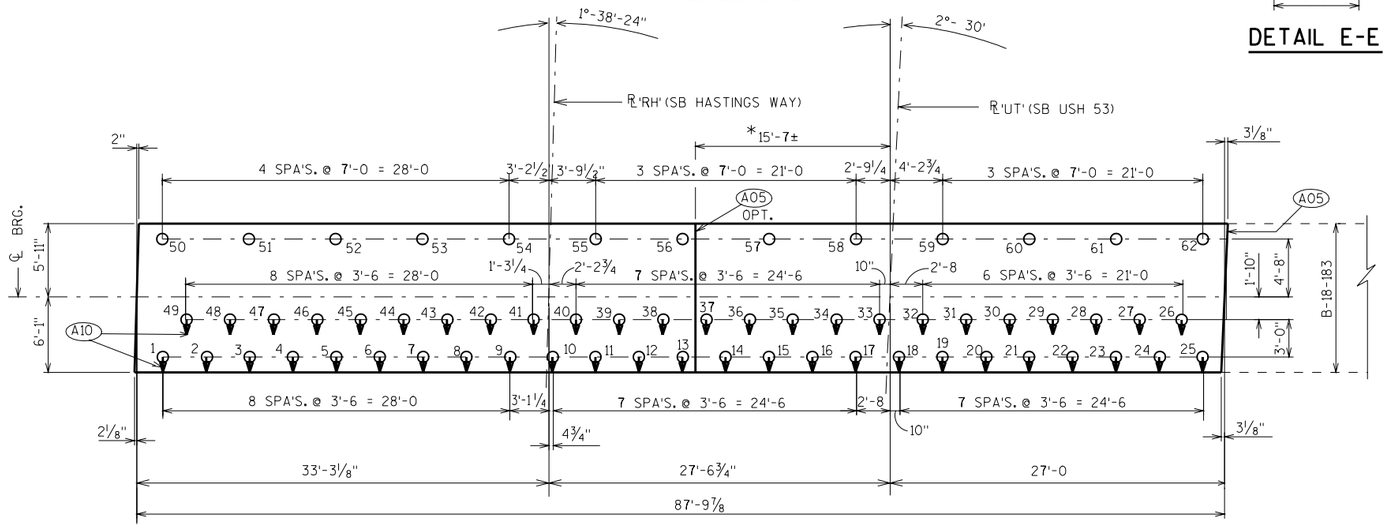
(A16) PIPE UNDERDRAIN, 6 INCH, UNPERFORATED. TO SUITABLE DRAINAGE.



DETAIL E-E

* PLACE OPT. FTG. JOINT TO CLEAR PILES BY 9" MIN.

(A05) CONSTRUCTION JOINT IN FTG: KEYWAY FORMED BY A BEVELED 2 x 8.



PILE PLAN

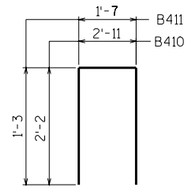
(A10) INDICATES PILE BATTERED 3" PER FT. IN DIRECTION OF ARROW.

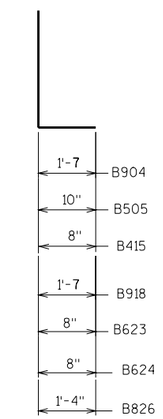
NOTE: FOR PILE SPLICE DETAIL SEE SHT. 5.

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B701		176	11-8			FOOTING
B402		48	30-7			FOOTING
B503		88	11-8			FOOTING
B904		162	8-4	X		FOOTING DOWEL B.F.
B505		89	4-10	X		FOOTING DOWEL F.F.
B506	X	70	19-2			VERT. F.F.
B907		81	12-0			VERT. B.F.
B908		63	19-6			VERT. B.F.
B409	X	87	30-7			HORIZ. F.F. & B.F.
B410	X	59	7-0	X		TOP
B411		46	3-11	X		TOP
B912		19	23-10			VERT. B.F. EAST SIDE
B513	X	21	23-10			VERT. F.F. EAST SIDE
B414	X	8	21-0			HORIZ. F.F. & B.F. EAST SIDE
B415		6	4-4	X		FOOTING EAST SIDE WALL WING 3
B416		6	19-6			EAST SIDE-WALL VERT. F.F. & B.F. WING 3
B517		20	7-1			EAST SIDE-WALL HORIZ. F.F. WING 3
B918		20	8-4			EAST SIDE-WALL HORIZ. B.F. WING 3
B419	X	4	5-9			EAST SIDE-WALL VERT. F.F. WING 3
B420	X	3	3-6			EAST SIDE-WALL HORIZ. F.F. WING 3
B521	X	4	6-0			EAST SIDE-WALL VERT. B.F. WING 3
B522	X	5	3-6			EAST SIDE-WALL HORIZ. B.F. WING 3
B623	X	20	3-5			EAST SIDE-WALL
B624	X	5	1-5	X		EAST SIDE-WALL
B425	X	2	23-9			EAST SIDE-WALL
B826		20	9-1	X		BODY B.F. @ WING 3





NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

N. ABUT. DETAILS

SHEET 7

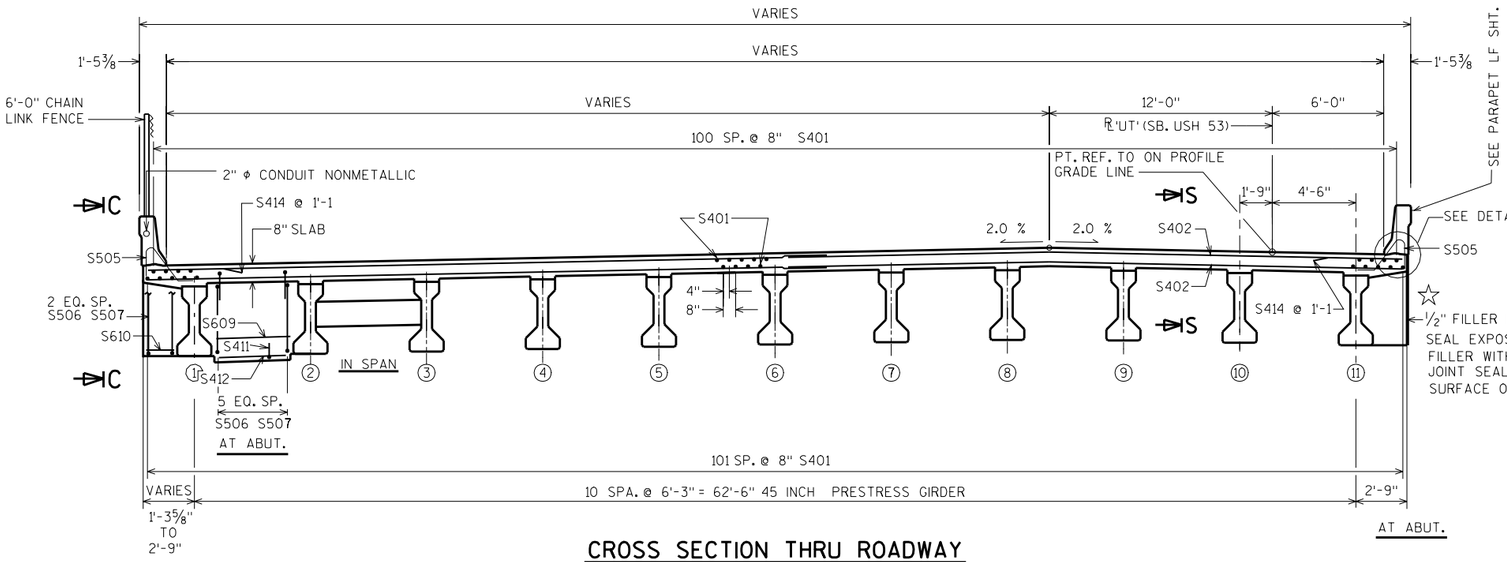
8

FILE= 07-184ABUTNO2.DGN
SCALE = 4

SCALE = 10.000000 '/IN

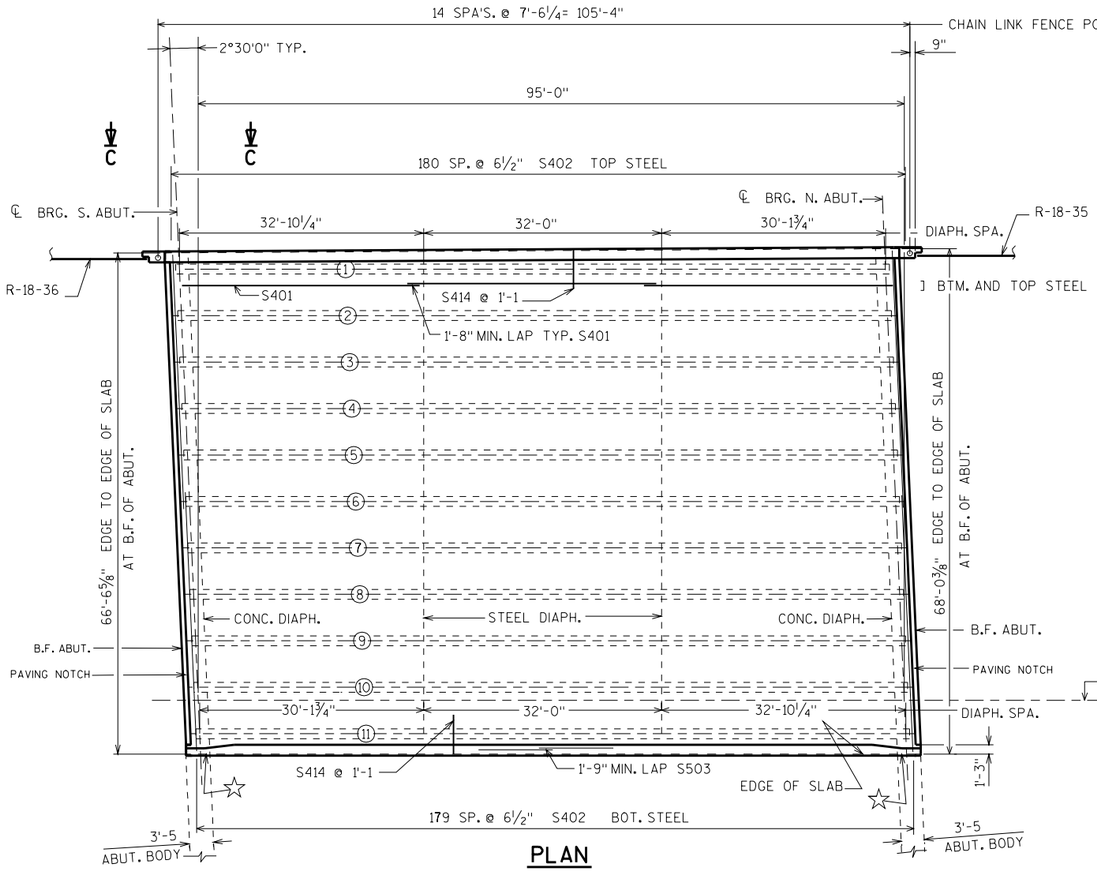
STATE PROJECT NUMBER

1190-00-72

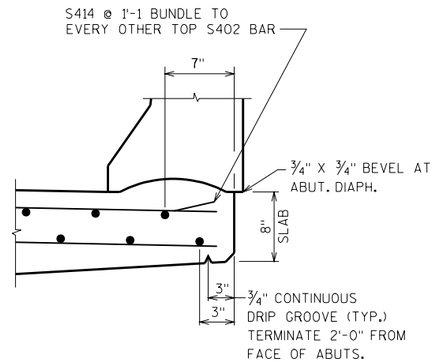


CROSS SECTION THRU ROADWAY

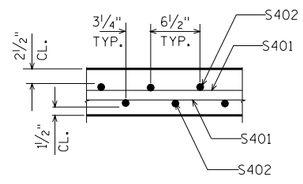
(LOOKING NORTH)



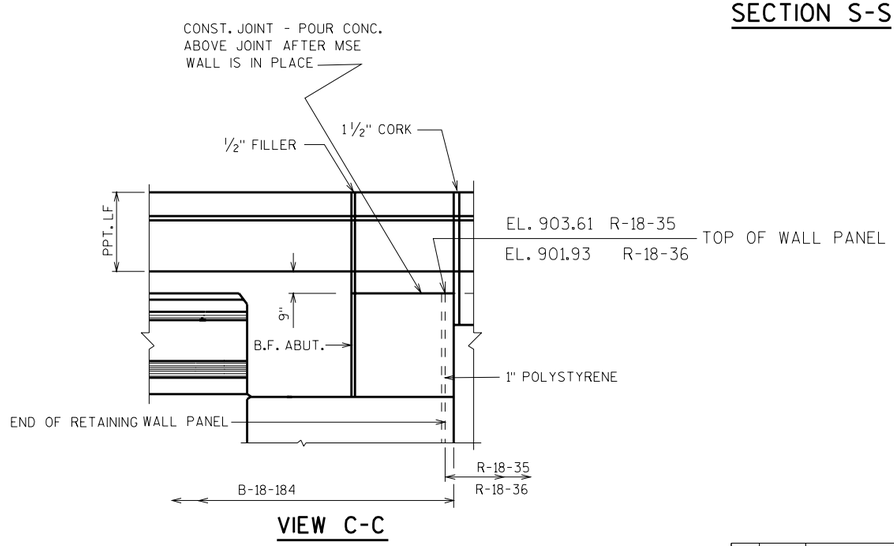
PLAN



DETAIL A



SECTION S-S



VIEW C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

SUPERSTRUCTURE

SHEET 8

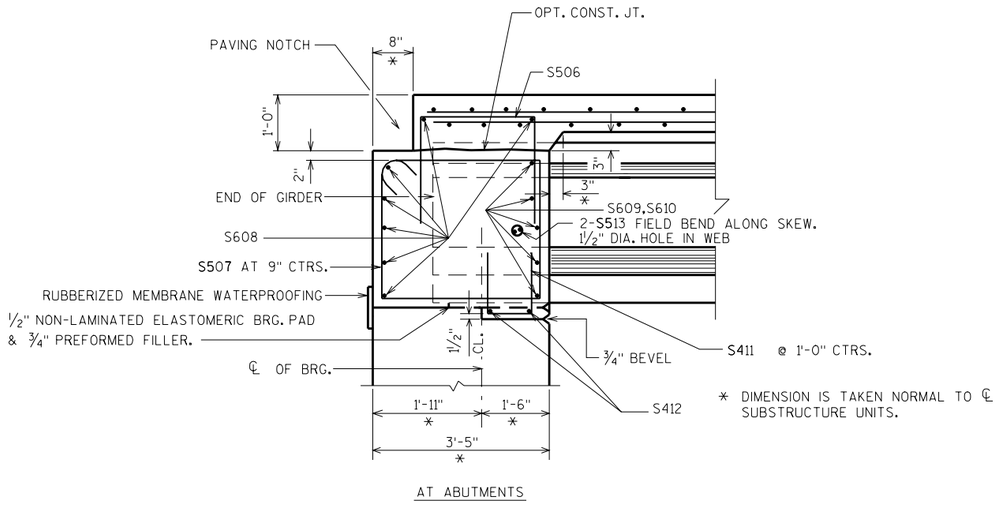
8

FILE= 08-184SUP1.DGN
SCALE = 10

WED SEP 11 10:03:12 2002*

STATE PROJECT NUMBER

1190-00-72

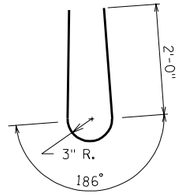


AT ABUTMENTS

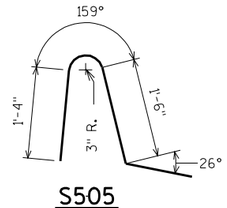
PART LONGIT. SECTION

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BUNDLE	LOCATION
S401	X	609	33'-6"			LONGITUDINAL TOP & BOTTOM
S402	X	722	34'-8"		X	TRANSVERSE TOP & BOTTOM
S503	X	28	34'-0"			PARAPET LF HORIZ.
S504	X	309	4'-10"	X		PARAPET LF VERT.
S505	X	277	4'-5"	X		PARAPET LF VERT.
S506	X	132	6-0	X		ABUT. DIAPHRAGM
S507	X	132	13'-8	X		ABUT. DIAPHRAGM
S608	X	28	35'-4"			ABUT. DIAPHRAGM
S609	X	100	4'-1"			ABUT. DIAPHRAGM
S610	X	15	1'-6"			ABUT. DIAPHRAGM @ SE,NE & NW COR'S.
S411	X	80	3'-6	X		ABUT. DIAPHRAGM
S412	X	40	3'-1"			ABUT. DIAPHRAGM
S513	X	44	6'-0"			ABUT. DIAPHRAGM SYM. ABOUT ℄ GIR.
S414	X	182	4'-3"		X	TOP TRANSVERSE



S504



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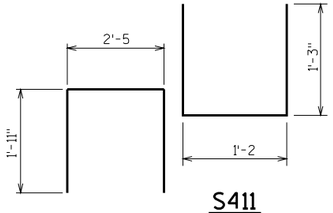
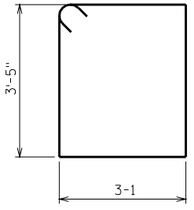


S506

S411



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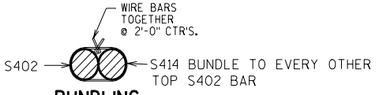
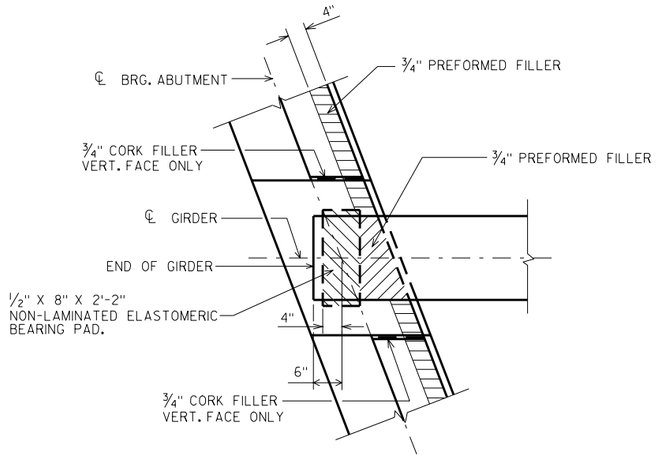


BUNDLING DETAIL



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	902.79	902.99	903.19	903.38	903.58	903.77	903.95	904.13	904.31
GIR. 2	902.92	903.12	903.32	903.51	903.71	903.90	904.08	904.26	904.44
GIR. 3	903.05	903.25	903.45	903.64	903.84	904.02	904.21	904.39	904.57
GIR. 4	903.18	903.38	903.58	903.77	903.96	904.15	904.34	904.52	904.70
GIR. 5	903.31	903.51	903.71	903.90	904.10	904.28	904.47	904.65	904.83
GIR. 6	903.44	903.64	903.84	904.03	904.22	904.41	904.60	904.78	904.96
GIR. 7	903.57	903.77	903.97	904.16	904.35	904.54	904.73	904.91	905.09
GIR. 8	903.70	903.90	904.10	904.29	904.48	904.67	904.86	905.04	905.22
GIR. 9	903.66	903.87	904.06	904.26	904.45	904.64	904.82	905.01	905.18
GIR. 10	903.54	903.75	903.94	904.14	904.33	904.52	904.70	904.88	905.06
GIR. 11	903.42	903.63	903.82	904.02	904.21	904.40	904.58	904.76	904.94

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

SUPERSTRUCTURE DETAILS

SHEET 9

FILE= 09-184SUP2.DGN
SCALE = 1.33

WED SEP 11 10:03:10 2002*

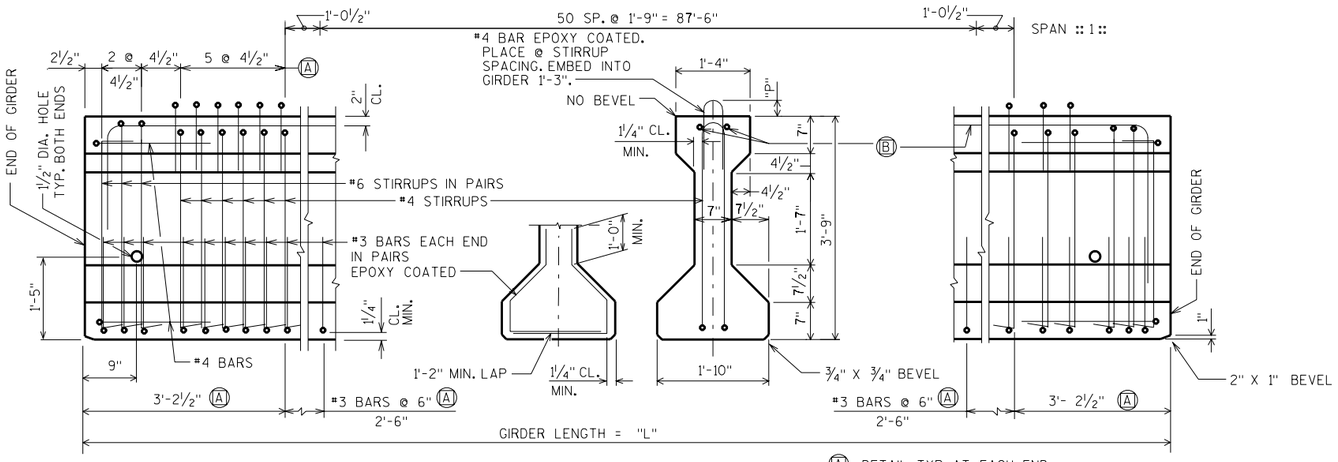
6-01

13

1 2 4

STATE PROJECT NUMBER

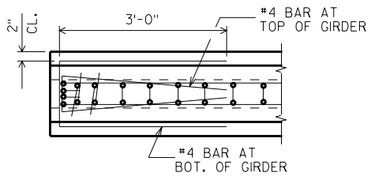
1190-00-72



SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 2-BARS BEND DOWN 16 BAR DIA. AT ENDS
(SPAN 1) 2 #4, 1'-11" MIN. LAP



TOP VIEW OF GIRDER ENDS

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 0.5"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" AND #6 STIRRUPS 6½".

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

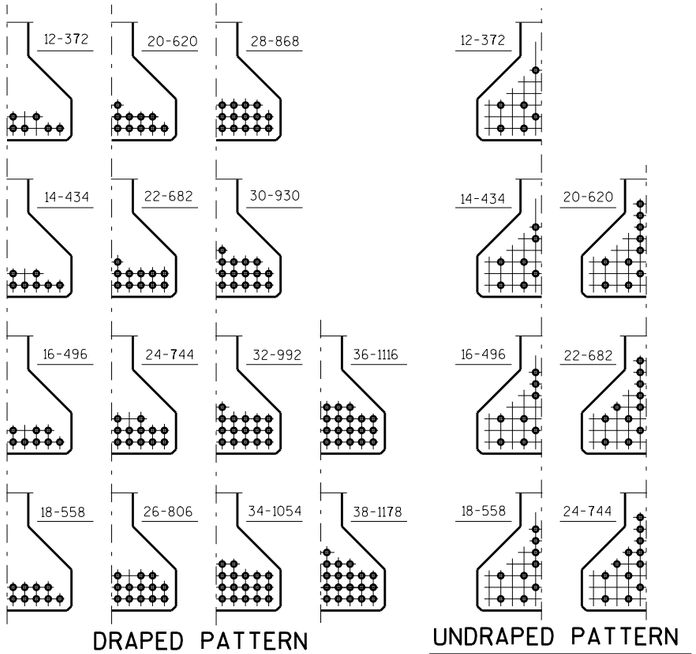
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

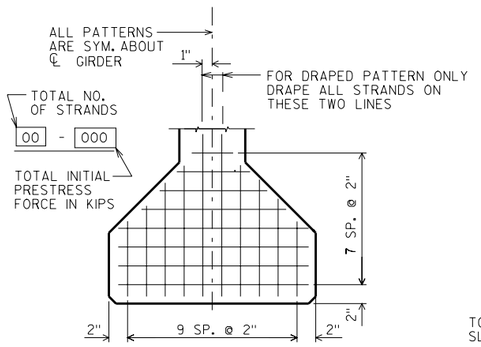
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, 2 OPTIONS ARE AVAILABLE:

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.

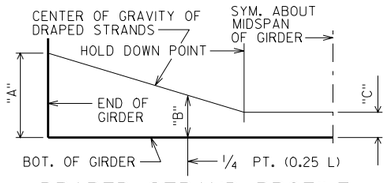
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION

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

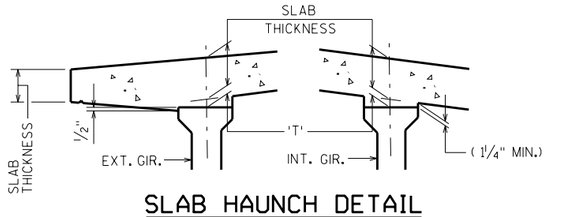




TYP. STRAND PATTERN



DRAPED STRAND PROFILE

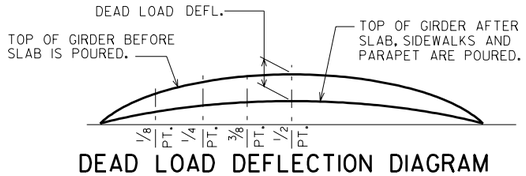


SLAB HAUNCH DETAIL

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'



DEAD LOAD DEFLECTION DIAGRAM

✳ 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 (IN.)	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	96.00	0.71	1.22	1.53	1.63	7000	6	0.50	38	5610	39.00	14.25	17.25	6.00	——	——

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

45" PRESTRESSED GIRDER DETAILS

SHEET 10

8

FILE= 10-184GIR.DGN
SCALE = 2.66
6-01

LV = 12345 8

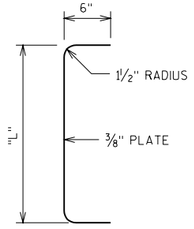
WED SEP 11 10:03:11 2002✳

STATE PROJECT NUMBER

1190-00-72

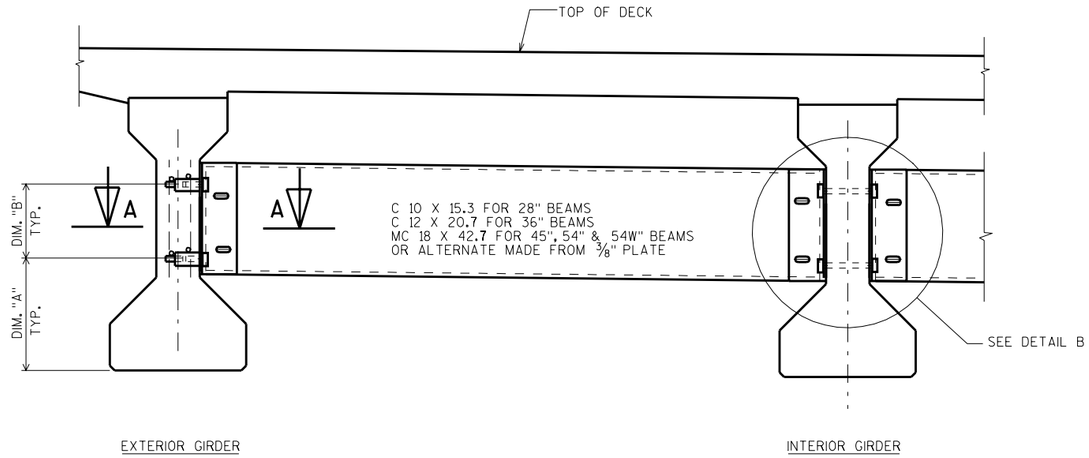
TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	* DIM. "X"
28"	1'-0 7/8"	5 7/8"	9 1/2"	2 1/4"
36"	1'-2 7/8"	9 7/8"	1'-1 1/2"	3 1/4"
45"	1'-5 3/8"	1'-1 7/8"	1'-5 1/2"	2 1/4"
54"	1'-7 7/8"	1'-5 7/8"	1'-9 1/2"	4 1/4"
54W"	1'-9 1/8"	1'-5 7/8"	1'-9 1/2"	4 1/4"



SECTION THRU ALTERNATE DIAPHRAGM

*DIM "X" = 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM



NOTES

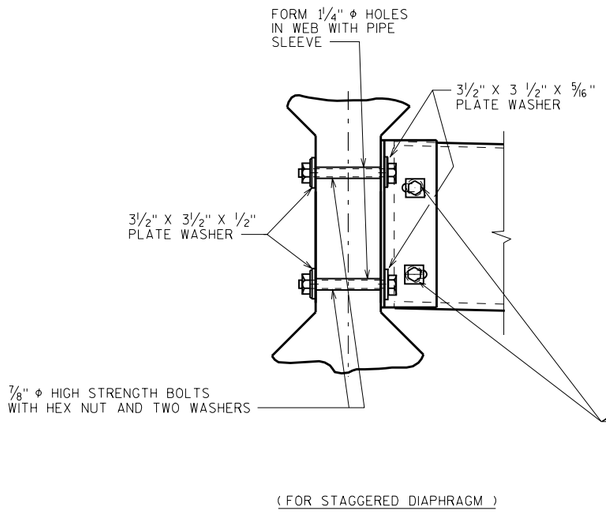
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGM", STRUCTURE, EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

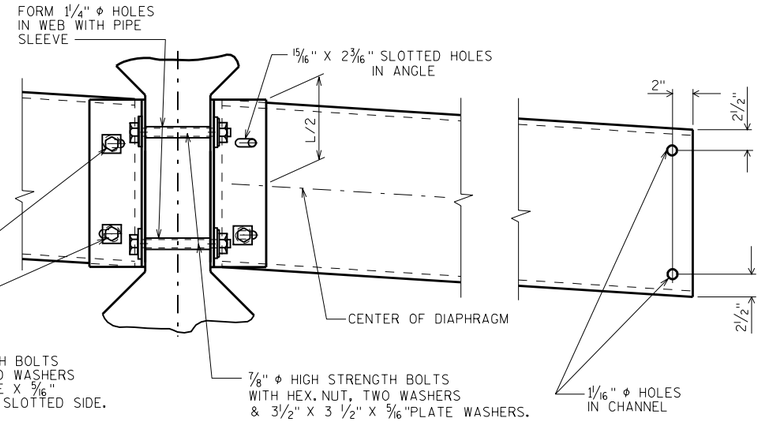
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

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.

PART TRANSVERSE SECTION AT DIAPHRAGM

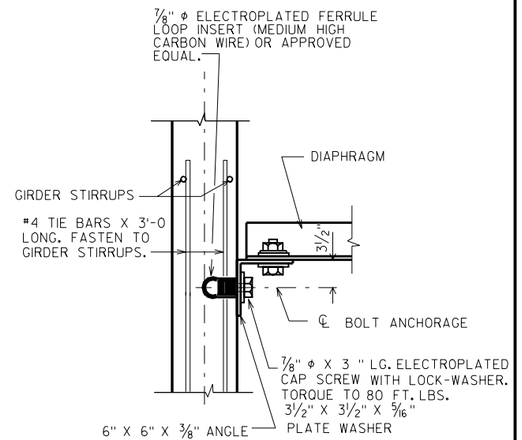


(FOR STAGGERED DIAPHRAGM)



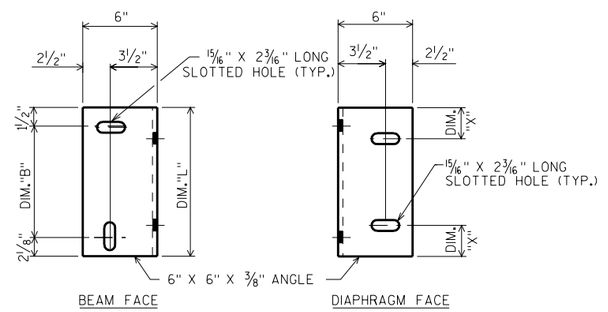
(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B



SECT. A-A

(FOR EXTERIOR ATTACHMENT)



DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

STEEL DIAPHRAGM

SHEET 11

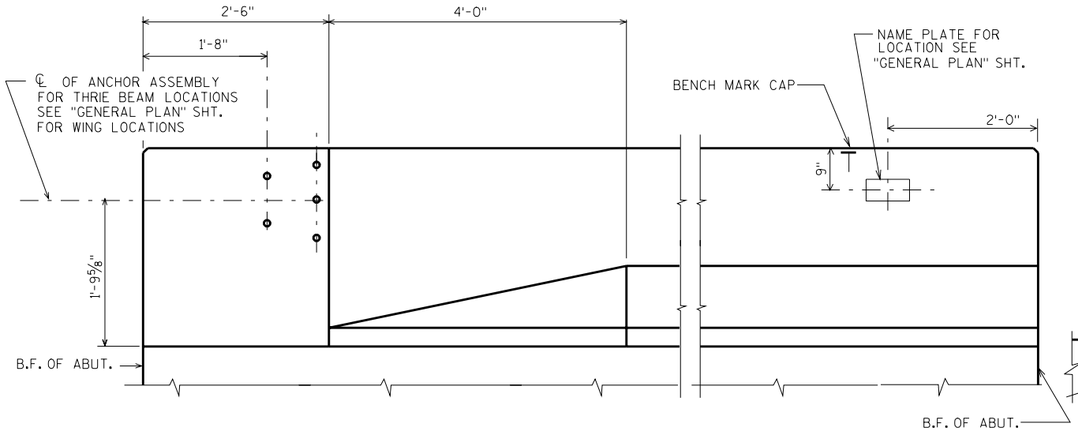
8

FILE= 11-184DIA.DGN
SCALE =
6-00

WED SEP 11 10:03:11 2002*

STATE PROJECT NUMBER

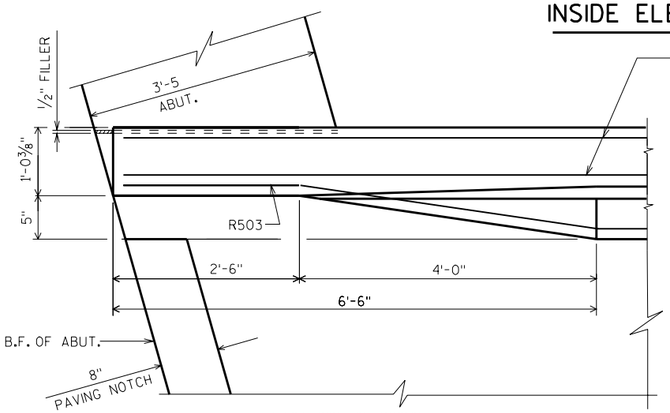
1190-00-72



EAST SIDE OF BRIDGE

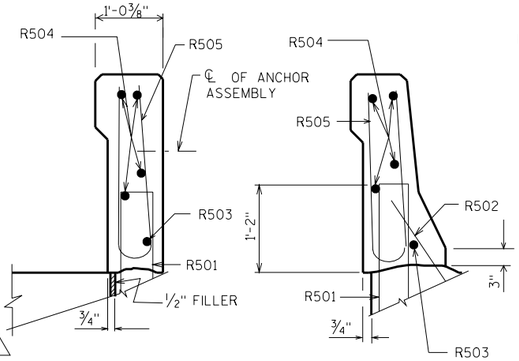
WEST SIDE OF BRIDGE

INSIDE ELEVATION



EAST SIDE OF BRIDGE

PLAN



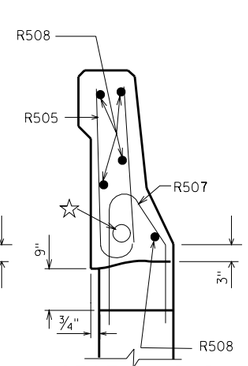
WEST SIDE OF BRIDGE

SECTION A-A

EAST PPT. ONLY

SECTION B-B

EAST PPT. ONLY

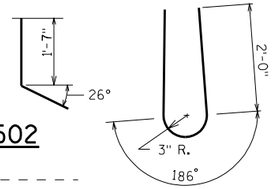


SECTION D-D

WING 1 & 3 ONLY

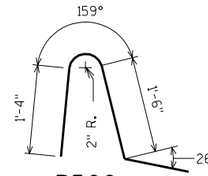
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
R501	X	28	4-5	X	EAST PARAPET VERT.
R502	X	16	2-4	X	EAST PARAPET VERT.
R503	X	2	34-0	X	EAST PARAPET VERT.
R504	X	28	34-0		E. & W. PPT'S. HORIZ.
R505	X	412	4-10	X	E. & W. PPT'S. VERT.
R506	X	277	4-2	X	E. & W. PPT'S. VERT.
R507	X	16	4-8	X	WINGS 1 & 3 PPT'S.
R508	X	10	4-0		WINGS 1 & 3 PPT'S.

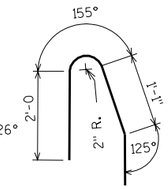


R502

R505



R506



R507

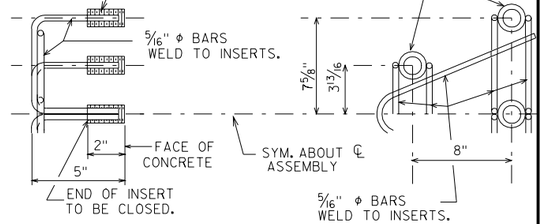
R501

R503

¾" CONTINUOUS DRIP GROOVE. TERMINATE 2'-0" FROM ABUTMENTS.

SECTION C-C

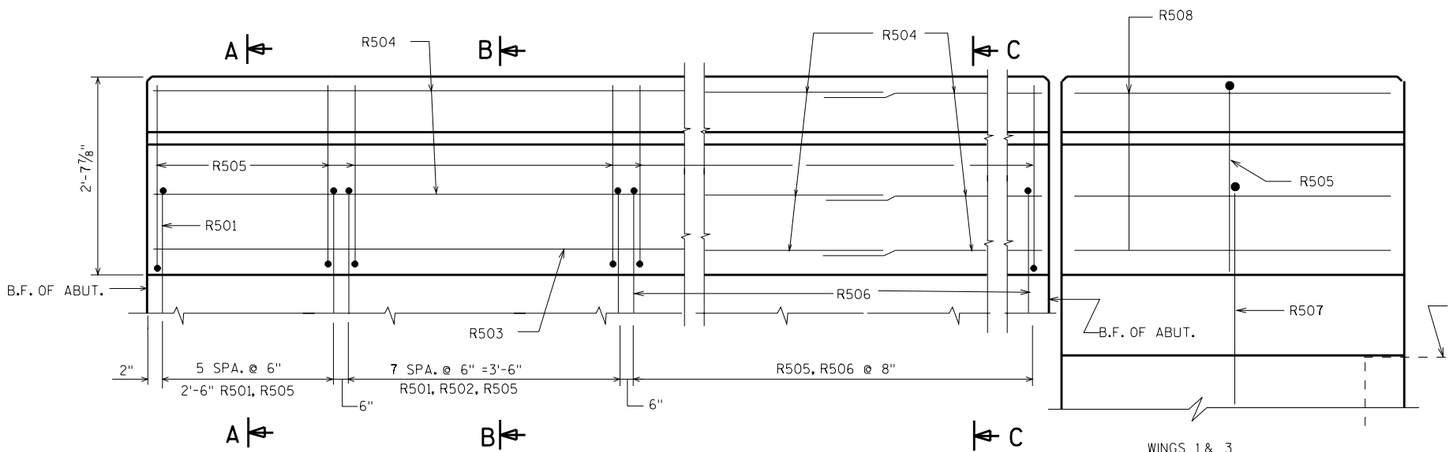
◐ CONST. JOINT - STRIKE OFF AS SHOWN.



DETAIL OF ANCHOR ASSEMBLY

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

☆ 2" Φ NON-METALLIC CONDUIT WEST SIDE ONLY



EAST SIDE OF BRIDGE

OUTSIDE ELEVATION

WEST SIDE OF BRIDGE

WINGS 1& 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

SLOPED FACE PARAPET LF

SHEET 12

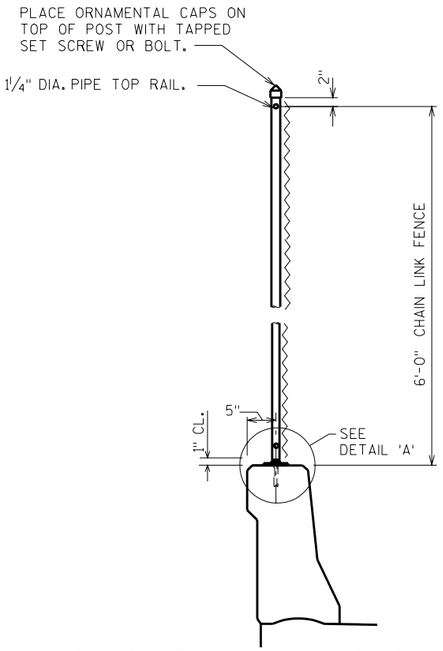
8

FILE= 12-184PPT.DGN
SCALE = 1
11-01

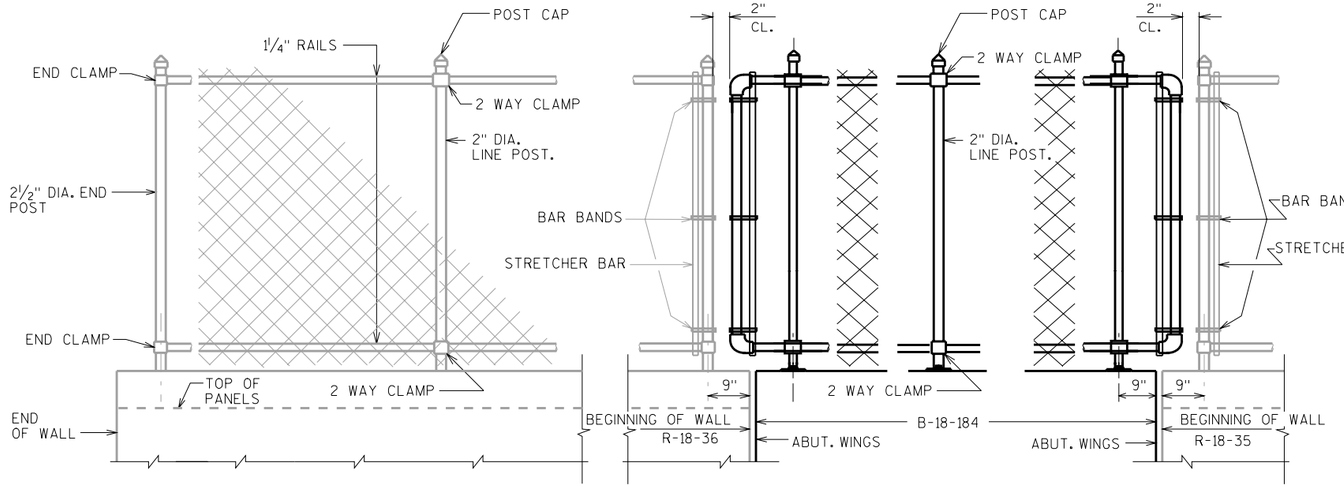
12 6

STATE PROJECT NUMBER

1190-00-72



SECTION THRU WALL, COPING, & FENCE



ELEVATION OF & FENCE

GENERAL NOTES

THE COLOR OF THE VINYL COATED CHAIN LINK FENCE SHALL BE BLACK.

POSTS ARE TO BE SET VERTICAL.

KNUCKLE TOP AND BOTTOM OF 2" MESH CHAIN LINK FENCING.

BAR BANDS
ALL FENCING COMPONENTS SHALL BE GALVANIZED STEEL OR APPROVED ALTERNATE LISTED BELOW.

STRETCHER BAR
ALL RAILS, POSTS AND SLEEVES ARE STANDARD WEIGHT PIPE, SCHEDULE 40.

PLACE ALL NUTS ON OUTSIDE OF FENCE.

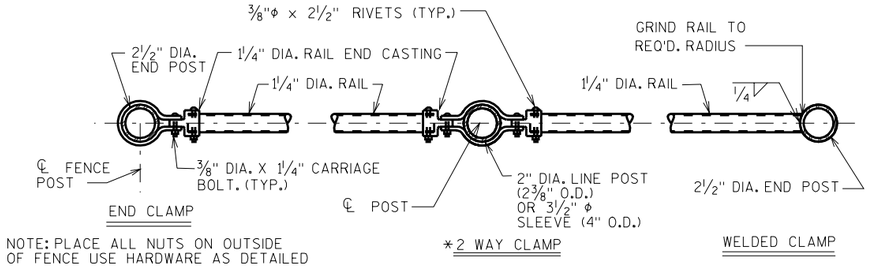
TOP RAIL SHALL BE CONTINUOUS OVER INTERIOR POSTS. MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". PLACE TOP RAIL SPLICES NEAR ¼ POINTS OF POST SPACING. NO. 9 GAGE TIES AT 9" SPACING REQ'D. ON RAILS & POSTS WITHOUT STRETCHER BARS.

ALTERNATE FENCING MATERIALS ARE ALUMINUM, ALUMINUM COATED STEEL, AND APPROVED COLOR COATING SYSTEMS. IF ALTERNATE MATERIALS ARE USED FOR POSTS & RAILS, THESE ELEMENTS SHOULD BE DESIGNED.

* ALTERNATE BOULEVARD 2-WAY CLAMP MAY BE USED WHEN THE POST IS EITHER BOLTED TO THE 3½"Φ PIPE SLEEVE OR DIRECTLY WELDED TO THE BASE PLATE.

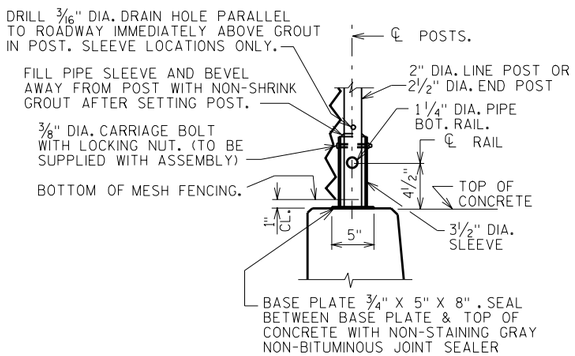
✿ ½" Φ CONCRETE MASONRY ANCHOR, TYPE "S", 6" EMBEDMENT (EPOXY ANCHORED) MIN. PULLOUT OF 10 KIPS, THREADED LENGTH OF ANCHOR, WASHER, AND NUT SHALL BE GALVANIZED.

▲ ½" DIA. X 6⅞" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE S, ½" Φ CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR ½" Φ BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED. SEE ✿ IN "GENERAL NOTES".

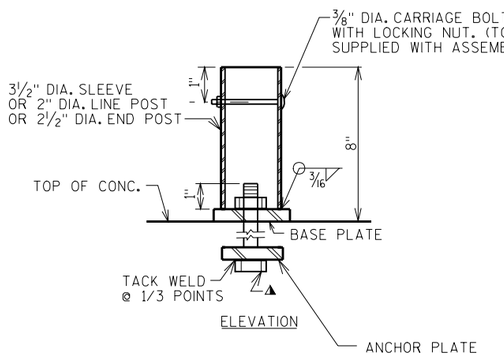


NOTE: PLACE ALL NUTS ON OUTSIDE OF FENCE USE HARDWARE AS DETAILED

PLAN OF RAILING



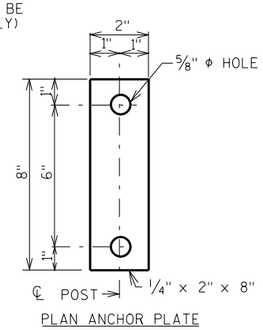
DETAIL A



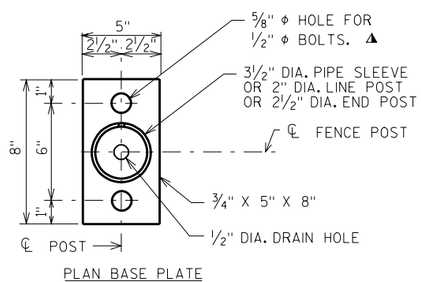
POST ATTACHMENT

UNIT SHALL BE GALV. AFTER FABRICATION

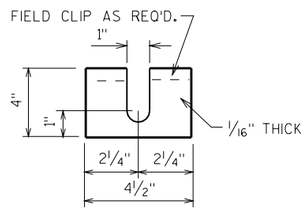
NOTE: IN LIEU OF USING THE 3½" Φ SLEEVE, THE 2" Φ OR 2½" Φ FENCE POST MAY BE WELDED TO THE BASE PLATE.



PLAN ANCHOR PLATE



PLAN BASE PLATE



POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-184

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

FENCING DETAILS

SHEET 13

8

FILE= 13-184FENCE.DGN
SCALE = 5.33