From:	Parve, Lance - DOT
To:	Mohammed H. Zagloul, S.E., P.E.
Subject:	FW: For your Review and Comments from Consultant - 1090-05-02/72 and 1090-35-00/70 I-43 Rock Freeway Bridges: Rehab Items - feel free to further comment
Date:	Monday, March 25, 2019 9:38:02 AM

Julie's comments in blue…

Lance,

See my comments below in blue.

Julie Brooks, PE

1090-05-02/72 Rehab items (Consultant – Black) and (DOT-your comments-Red)- While reviewing the inspection reports for the subject bridges, in addition to polymer overlay, we notice that there are some maintenance recommendations that needs to be taken care off for 124Th street bridge. These are :

1. Remove loose concrete from bottom flanges of prestressed concrete girders. Fill existing cracks & spalled areas (some areas have exposed rebar and/or strands). Loose concrete around spalls should be removed and spalls patched using Concrete Surface Repair item. Don't include shallow spalls in webs since the patching material would probably just fall off. Cracks in the girders should be filled using the Epoxy Crack Injection item. (This crack filling would only be used on the girders – not abutments or other reinforced concrete elements such as parapets.)
2. Repair failed patch at the pier (column 3) This would be done under the Concrete Surface Repair item.
3. Place AC curb at SW wing tip Could be done with milling and overlaying the approaches.
4. Repair approaches from settlement and drainage issues Since the approaches are settling, they should be milled and overlaid.
5. Seal approaches at paving blocks Could be included with milling and overlaying approach.
6. Patch and seal abutment cracks. Water seeping through north abutment between girders 1 & 2 at the diaphragm If the joint between the approach and the deck is properly sealed, water most likely would stop seeping through below. We usually don't bother with Epoxy Crack Filling of cracks in the abutments.
7. Patch and seal pier cap spalls and cracks Concrete Surface Repair item should be used for patching spalls and delams. Cracks typically aren't addressed in pier caps unless extremely wide.
8. Seal vertical cracks on concrete parapet at both inside and outside faces This is not needed, only use Concrete Surface Repair item for patching spalls and delams.
9. Patch spalled areas at wingwalls Use Concrete Surface Repair item for patching the spall.
10. Slope paving pulling away from abutments by 2-3". Top panels at SW corner of slope paving appear to be settling. Fix cracking at slope paving. Cracked panels could be replaced. The separation at the top could be filled with an epoxy filler.

We are wondering if Maintenance like to take care of these items as well. Yes
We also, noticed a sudden drop in Inventory and Operating ratings from to 2014 inspection report (INV R=HS 24, OP R=HS 48) to 2016 inspection report (INV R= HS 19, OP R= HS 32). We looked at the DOT HSI system and we could not find any supporting calculations / documents or a reason(s) of why this drop. Will you please obtain any documentation from BOS that has these information. This information would be available from the BOS rating unit (Josh Dietsche's unit).

We find no other items in 116th St. Bridge that require immediate attention other than scoped. The approach sidewalks could be adjusted/replaced. They are settled at all 4 corners and this is a high pedestrian traffic area because of a school nearby. This work would be shown in roadway plans – not the structure plans.

From: Brooks, Julie - DOT
Sent: Friday, March 22, 2019 10:00 AM
To: Parve, Lance - DOT <Lance.Parve@dot.wi.gov>
Subject: RE: For your Review and Comments from Consultant - 1090-05-02/72 and 1090-35-00/70 I-43 Rock Freeway Bridges: Rehab Items - feel free to further comment

Lance,

See my comments below in blue.

Julie Brooks, PE

From: Parve, Lance - DOT
Sent: Wednesday, March 13, 2019 4:26 PM
To: Brooks, Julie - DOT <julie.brooks@dot.wi.gov>
Subject: For your Review and Comments from Consultant - 1090-05-02/72 and 1090-35-00/70 I-43 Rock Freeway Bridges: Rehab Items - feel free to further comment

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<< File: B-40-0376_qty - Prelim.pdf >> << File: B-40-0377_qty - Prelim.pdf >>

1090-35-00/70 Rehab items (attached spreadsheet)

<< File: 10903570- IH43-RehabItems.xlsx >>

(Still Awaiting Info on 4 HNTB Bridges – B-40-111, B-40-112, B-40-296, and B-40-297)

Realize that B-40-293, B-40-294, B-40-295, B-40-296, and B-40-297 are past effective TPO 10=yr

dates for rehab
even though BOS is forwarding TPOs for these bridges. All these bridges were built in 2007 and 2008. They are past the 10-year limit for placing TPO's. I highly recommend removing them from the project. If they stay in the project, maybe the treatment could change to a methacrylate sealer instead to seal any cracks. This would be better than a TPO which has a higher probability of failing.

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: 1090-05-02
Structure Number: B-40-0376
Structure Name: 124th Street over IH 43
City/County: City of Greenfield, Milwaukee County
Lat/Long Coordinates: 425726.39/ 880408.99
TRC Project Number: 258938.0000.0000
Date Inspected: June 21, 2016
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.

The caulk located in the abutment, parapet, and sidewalk joints contains <1% asbestos and therefore is not regulated ACM. The overlay on the bridge 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
1	Caulk	Abutment joint	Point Count, <0.25%	Not regulated, non-friable	16'x2"x4 = 11 sq ft
2	Caulk	Abutment joint	Point Count, <0.25%	Not regulated, non-friable	
3	Caulk	Abutment joint	Point Count, <0.25%	Not regulated, non-friable	
4	Caulk	Parapet and sidewalk joints	Point Count, <0.25%	Not regulated, non-friable	12.5'x1.5"x2 = 3.2 sq ft
5	Caulk	Parapet and sidewalk joints	Point Count, <0.25%	Not regulated, non-friable	
6	Caulk	Parapet and sidewalk joints	Point Count, <0.25%	Not regulated, non-friable	

Sample Number	Sample Description	Sample Location	Analytical Results and Method	Friable/ Non-friable or No ACM	Quantity of ACM Material
7	Black paint	Pedestrian fence	PLM, non-detect	No ACM	0
8	Black paint	Pedestrian fence	PLM, non-detect	No ACM	
9	Black paint	Pedestrian fence	PLM, non-detect	No ACM	
10	Caulk	Around pedestrian fence attachment plate	PLM, non-detect	No ACM	0
11	Caulk	Around pedestrian fence attachment plate	PLM, non-detect	No ACM	
12	Caulk	Around pedestrian fence attachment plate	PLM, non-detect	No ACM	
13	Caulk	Around bolts in fence attachment plate	PLM, non-detect	No ACM	0
14	Caulk	Around bolts in fence attachment plate	PLM, non-detect	No ACM	
15	Caulk	Around bolts in fence attachment plate	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 Report

Report Distribution:

Recipient	Electronic (PDF) Copy	Paper Copy
BTS-ESS sharlene.tebeest@dot.wi.gov	X (via email)	X
REC andrew.malsom@dot.wi.gov	X (via email)	
Project Manager ashley.kiepczynski@dot.wi.gov	X (via email)	
Other steven.ring@dot.wi.gov	X (via email)	

ID 1090-05-02/72

IH 43 Bridge Rehab

MILWAUKEE 40-SE

OZAUKEE CO.

WAUKESHA CO.

RACINE CO.

Brown Deer

River Hills

Bayside

Fox Point

Glendale

Whitefish Bay

Shorewood

Wauwatosa

Milwaukee

Lake Michigan

W. Milwaukee

W. Allis

St. Francis

Cudahy

Hales Cors.

Greendale

Greenfield

South Milwaukee

Franklin

Oak Creek

Town of Raymond

Town of Caledonia

T-8-N

T-7-N

T-6-N

T-5-N

R-21-E

R-22-E

2,510,000' E

2,550,000'

2,590,000' E

450,000' N

400,000'

350,000'

310,000' N

88° 00'

43° 00'

LEGEND

- Freeway
- Multilane Divided
- U.S. or State Hwy
- County Trunk Hwy
- Town Road
- Firelane
- Railroad
- State Trail
- Interchange
- Highway Separation
- Interstate Highway No. (94)
- U.S. Highway No. (18)
- State Highway No. (59)
- County Highway Letter (T)
- State Boundary
- County Boundary
- Civil Town Boundary
- Section Line
- Dam
- Hospital
- Airport
- County Seat
- Unincorporated Village
- Fish Hatchery
- Game Farm
- Public Hunt. or Fish. Grds.
- Public Camp & Picnic Grds.
- Ranger Station
- State Park
- County Park ..... With Facilities
- Without Facilities
- Rest Area ..... Modern Facilities
- Wayside ..... Rustic Facilities

Milwaukee Co. House of Correction [1]
University of Wisconsin – Milwaukee [2]
State Fair Park [3]
Wood Veterans Hospital [4]
Miller Park [5]
Milwaukee Co. Zoo [6]
Marquette University [7]
Schlitz Audubon Nature Center [8]
BMO Harris Bradley Center [9]
Port of Milwaukee [10]
Milwaukee Secure Detention Facility [11]
Marshall Sherrer Correctional Center [12]
Milwaukee Women's Correctional Ctr. [13]
Felmers O. Chaney Correctional Center [14]

Grid based on the state plane coordinate system south zone and the NAD 27

For boundaries of public hunting and fishing grounds please contact the Department of Natural Resources

REGIONS

NW NE NC SW SE

MILES OF HIGHWAY
as of Dec. 31, 2013

STATE	254
COUNTY	145
LOCAL ROADS	2619
OTHER ROADS	0
TOTAL FOR COUNTY	3018
Land Area (2010 Census)	241 sq mi
Population (2010 Census)	947735
County Seat	Milwaukee

MILWAUKEE CO.

DEPARTMENT OF TRANSPORTATION
STATE OFFICE BUILDING
Madison, Wisconsin

SCALE 0 1 2 MILES

Corrected for
JAN. 2016

Base compiled from U.S.G.S. Quadrangles
1:100,000 Series

MILWAUKEE 40-SE

B-40-0376

Caulk in abutment joint

Caulk in parapet and sidewalk joints

Black paint on pedestrian fence

Caulk around pedestrian fence attachment plate and around bolts in plate (did not observe any gaskets under plate)

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 #:	0048471
Project #:	258938.0000.0000
Date Received:	06/28/2016
Date Analyzed:	06/28/2016

Site: DOT Bridge Inspection, B-40-376

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
B-40-376 (1) ■	Grey	Yes	No	- -	- - -	<0.25%	Chrysotile
B-40-376 (2) ■	Grey	Yes	No	- -	- - -	<0.25%	Chrysotile
B-40-376 (3) ■	Grey	Yes	No	- -	- - -	<0.25%	Chrysotile
B-40-376 (4) ■	Grey	Yes	No	- -	- - -	<0.25%	Chrysotile
B-40-376 (5) ■	Grey	Yes	No	- -	- - -	<0.25%	Chrysotile
B-40-376 (6) ■	Grey	Yes	No	- -	- - -	<0.25%	Chrysotile
B-40-376 (7)	Black	Yes	No	- -	- - -	ND	None
B-40-376 (8)	Black	Yes	No	- -	- - -	ND	None
B-40-376 (9)	Black	Yes	No	- -	- - -	ND	None
B-40-376 (10)	Grey	Yes	No	- -	- - -	ND	None
B-40-376 (11)	Grey	Yes	No	- -	- - -	ND	None
B-40-376 (12)	Grey	Yes	No	- -	- - -	ND	None
B-40-376 (13)	Grey	Yes	No	- -	- - -	ND	None
B-40-376 (14)	Grey	Yes	No	- -	- - -	ND	None
B-40-376 (15)	Grey	Yes	No	- -	- - -	ND	None

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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

■ Analyzed by 400 Point Count Method
Reporting limit- asbestos present at 0.25% for 400 Point Count Method
ND- No asbestos was detected by 400 Point Count Method
<0.25%- Trace concentrations of asbestos are concentrations that are less than or equal 1% including samples that contain zero asbestos points out of 400 nonempty points, but did contain asbestos positively identified by PLM.

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 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize 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 accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) 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 QC data related to the samples is available upon written request from client.

Analyzed by: K. Williamson
Kathleen Williamson, Laboratory Manager

Reviewed by: Margaret Flanagan
Margaret Flanagan, Approved Signatory

Date Issued
06/29/2016

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for B-40-376

S 124TH ST over IH 43

Mar 28,2018

Type	Prior	Frequency (mos)	Performed
Routine	04-29-16	24	X
Interim	09-17-07	0	
SIA Review	04-29-16	48	
Vertical Clearance Measured	04-29-16	0	

	Start Coordinates	End Coordinates (optional)
Latitude	42°57'26.39"N	
Longitude	88°04'08.99"W	

Owner	STATE HIGHWAY DEPT	Maintainer	STATE HIGHWAY DEPT

Time Log

Hours	Minutes
3	0

Team members

	Name	Number	Signature	Date
Inspector	Jashinsky, Dan	2010	Dan Jashinsky E-signed by Dan P Jashinsky(dotdpj)	05-21-18

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

Identification & Location

Feature On: S 124TH ST	Section Town Range: S30 T06N R21E	Structure Number: **B-40-376**
Feature Under: IH 43	County: MILWAUKEE	
Location 0.4M S JCT CTH T	Municipality: GREENFIELD	Structure Name:

Geometry

measurements in feet, except where noted

Approach Roadway Width: 32	Bridge Roadway Width: 37.8	Total Length: 156.5
Approach Pavement Width: 20	Deck Width: 46.0	Deck Area (sq ft): 7199

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	2	3100	2012	TWO WAY TRAFFIC
Under	4	71200	2015	TWO WAY TRAFFIC

Capacity

Load Rating

Inventory rating: HS19	Overburden depth (in): 0.0	Last rating date: 08-21-13	Controlling:
Operating rating: HS39	Deck surface material: CONCRETE	Re-rate for capacity (Y/N):	Control location:
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	Sufficiency #: 95.9

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	CONT PREST CONC	DECK GIRDER	45	76.5	Y
2	CONT PREST CONC	DECK GIRDER	45	76.5	

Expansion joint(s)

Temperature:

File:	New:

Clearance

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical Under Cardinal	16.78	29-Apr-2016	
Highway Min Vertical Under Non-Cardinal	16.39	29-Apr-2016	
Horizontal Under Cardinal	48.0		
Horizontal Under Non-Cardinal	47.91		
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

Special Components

Component	Year	Work Performed	Note
DECK - IOWA MIX	1992	OVERLAY - CONCRETE	

Construction History

Year	Work Performed	FOS id
2011	NEW DECK	1090-18-70
1992	OVERLAY - CONCRETE	1090-04-73
1980	ADD PED FENCING	1090-02-70
1968	NEW STRUCTURE	

Maintenance Items History

Item	Recommended by	Status	Status change	Year completed
Substructure - Pier Repair	Bolka, John (2007)	REJECTED	05/03/18	
Repair failed Patch @ Pier, Column 3				

Maintenance Items

Item	Priority	Recommended by	Status	Status change
Misc - Remove/Monitor Loose Concrete	HIGH	Bolka, John (2007)	IDENTIFIED	05/09/16
Remove Loose Concrete from Bottom Flanges, Span 2: G1 over Lane 2; G2 over Lane 2; G6 over Lane 1/Lane 2.				
Approach - Wedge Shoulder	MEDIUM	Bolka, John (2007)	IDENTIFIED	05/09/16
Shoulder @ NW Wingtip				
Approach - Seal Approach to Paving Block	MEDIUM	Bolka, John (2007)	IDENTIFIED	05/09/16
Drainage - Repair/Construct Drainage Flumes	MEDIUM	Bolka, John (2007)	IDENTIFIED	05/09/16
Place AC Curb @ SW Wingtip				
IMP-Thin Epoxy Overlay	MEDIUM	Bolka, John (2007)	IDENTIFIED	05/09/16
2022 - Recommend Thin Polymer Overlay				

Elements

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**12**		**Reinforced Concrete Deck** New Deck 2011**.**	SF	7,121	6,477	644	0	0
		1130	Cracking (RC) SPAN 1: Diagonal Cracks at Corners w/Efflorescence, Transverse Cracks @ 8-ft Spa w/Efflorescence in all bays**.** SPAN 2: Transverse Cracks @ 6-ft Spa w/Efflorescence in all bays, Diagonal Cracks at Corners w/Efflorescence.	SF		0	644	0	0
	8000		Wearing Surface (Bare) **New Deck 2011- No IR.**	SF	5,879	2,279	3,600	0	0
		3210	Debonding/Spall/Patched Area/Pothole N Header: Small Spalls at End of Deck	SF		0	5	0	0
		3220	Crack (Wearing Surface) Unsealed HL/Narrow Transverse Cracks @ 4-ft spa; Map cracking around the pier in both lanes; Unsealed HL/Narrow Diagonal Cracks at all corners. Unsealed HL/Narrow Longitudinal Cracks Headers.	SF		0	3,600	0	0
X	**109**		**Prestressed Concrete Open Girder** Girders Numbered W=>E.	LF	918	809	66	43	0
		1080	Delamination - Spall - Patched Area Scattered Concrete Repairs, Spans 1 & 2, to Top Flange to Repair Damage from Deck Removal Operation**.** SPAN 1: G1 - Horizontal Crack w/Shallow Spall and Exp Reinforcement in Web, Spall in Bottom Flange over Lane 2, **Exp shallow rebar bot. over Rt shldr/slope,** G2 - Spall at Bottom Flange over Lane 2**, Shallow delams bot. web east face over Ln 2.** SPAN 2: G1 - Small Spall w/Adjacent Loose Concrete on Bottom Flange over Lane 2, Shallow Spalls in East Web over Lane 1, G2 - Loose Concrete on Bottom Flange over Lane 2, **Delam bot. over slope paving.** G4 - Spall w/exp Reinforcement on Bottom Flange over Lt Shoulder/Lane 1, Shallow Spall w/exp Reinforcement in Web near Pier, G6 - Shallow Spalls w/exp Reinforcement in Web at East Face**, Delam (loose) bot G6 over Ln1/Ln2.** N ABUTMENT: G1 - Spall @ Bottom Flange, G2-5 - Shallow Spalls at Abutment, G6 - Small Spall Bottom Flange.	LF		0	66	25	0
		1110	Cracking (PSC) Outside web of west girder has **2** horizontal crack**s** several feet long over NB rdwy. Inside web on girder 1 span 2 has 6' crack over lane 1.	LF		0	0	18	0

X	**205**		**Reinforced Concrete Column**	EA	3	2	1	0	0
			Columns W>E.						
		1080	Delamination - Spall - Patched Area	EA		0	1	0	0
			Delam and patch Column 3 bottom 2 feet						
		1130	Cracking (RC)	EA		0	0	0	0
X	**215**		**Reinforced Concrete Abutment**	LF	87	57	28	2	0
			Water seeping through N abut between girders 1&2 at diaphragm.						
		1080	Delamination - Spall - Patched Area	LF		0	19	0	0
			Patches under beam seats are sound with HL cracks N abut: 3' at NE corner patched. 2' at NW corner patched. Small Spalls at all beam seats.						
		1130	Cracking (RC)	LF		8	9	2	0
			S. Abut: HL **- Nrw** vert cracks w/staining. HL vert cracks at beam seats 2**&3**. N abut: narrow-medium vertical cracks						
X	**234**		**Reinforced Concrete Cap**	LF	45	38	7	0	0
		1080	Delamination - Spall - Patched Area	LF		0	4	0	0
			3 small Spalls on N face.						
		1130	Cracking (RC)	LF		0	3	0	0
			Few HL trans cracks @ Btm						
X	**331**		**Reinforced Concrete Bridge Rail**	LF	380	332	48	0	0
		1130	Cracking (RC)	LF		22	48	0	0
			HL/Narrow Vertical cracking on both sides full height widths ~4'. Cracks tend to line up w/ cracks on top of deck.						
X	**8400**		**Integral Wingwall**	EA	4	4	0	0	0
			NW Wingwall has a couple small Spalls. Drain hole in NW Wingwall. NE Wingwall **HL diag crk**. SW Wingwall has a couple small Delaminations. SE Wingwall has **2** small spall**s.**						
X	**8601**		**Gabion Wall**	LF	96	96	0	0	0
			Next to WW at NE, SE, SW corners						

Assessments

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**9001**		**Drainage - Ends of Structure**	EA	4	1	2	1	0
			NW: AC Pavement Settled and water does not make it to inlet; NE: Settlement and Loss of Fill Material @ Wingtip**, Inlet in fair cond**; SW: Settlement @ Wingtip, Minor Erosion; SE: Approach Asphalt Settled 2" at Wingtip, slope around wing intact.						
X	**9009**		**Sidewalk**	EA	1	1	0	0	0
			Sidewalk along E edge of deck. HL**-**Narrow Transverse**/Pattern** Cracks @ 6-ft Spa; Narrow Diagonal Cracks over Pier.						
X	**9010**		**Aesthetic Treatments**	EA	1	1	0	0	0
			Stained concrete exterior fascias and railings**.**						
X	**9030**		**Signs - Object Markers**	EA	2	2	0	0	0
			1 @ SE, 1 @ NW						

X	9035		**Signs - Other**	EA	1	1	0	0	0
			Speed limit sign strapped on column 1.						
X	9042		**Slope Protection- Concrete**	EA	2	0	2	0	0
			N. Slope: pulling away appx. 3" Few cracks. S. slope: pulling away appx. 2" @ ends of top edge, Few cracks. One panel has a wide crack. Top panels @ SW appear to be settling 1/2".						
X	9167		**Steel Diaphragm**	EA	10	10	0	0	0
			Galvanized channels						
X	9168		**Concrete Diaphragm**	EA	5	5	0	0	0
			At pier.						
X	9322		**Approach Roadway - Concrete (non-structural)**	EA	1	1	0	0	0
			S Approach: Joint @ Header open 1.5"; Diagonal Crack @ West Shoulder. **Appr. sidewalk crk'd at parapet.**						
X	9323		**Approach Roadway - Asphalt**	EA	1	1	0	0	0
			N Approach: NW **shldr (not appr.)** settled 3".						
X	9337		**Protective Screening**	EA	2	2	0	0	0
			5-ft Tubular Chain Link Fence w/1" Mesh; Duplex Coating w/Black Vinyl over Galvanization.						

NBI Ratings

	File	New
Deck	6	6
Superstructure	6	6
Substructure	7	7
Culvert	N	N
Channel	N	N
Waterway	N	N

Structure Specific Notes

Cardinal Minimum Vertical Clearance (16.78', 4/30/16) Measured @ G1 (West Fascia) @ Lane 1/Lt Shoulder Joint; Non-Cardinal Minimum Vertical Clearance (16.39', 4/30/16) Measured @ G1 (West Fascia) @ Lane 1/Lt Shoulder Joint

Inspection Specific Notes

Inspector Site-Specific Safety Considerations

Structure Inspection Procedures

Special Requirements

Chk	Hours	Cost	Comments

Routine

Document Comment/Description

Roadway looking south.

Routine

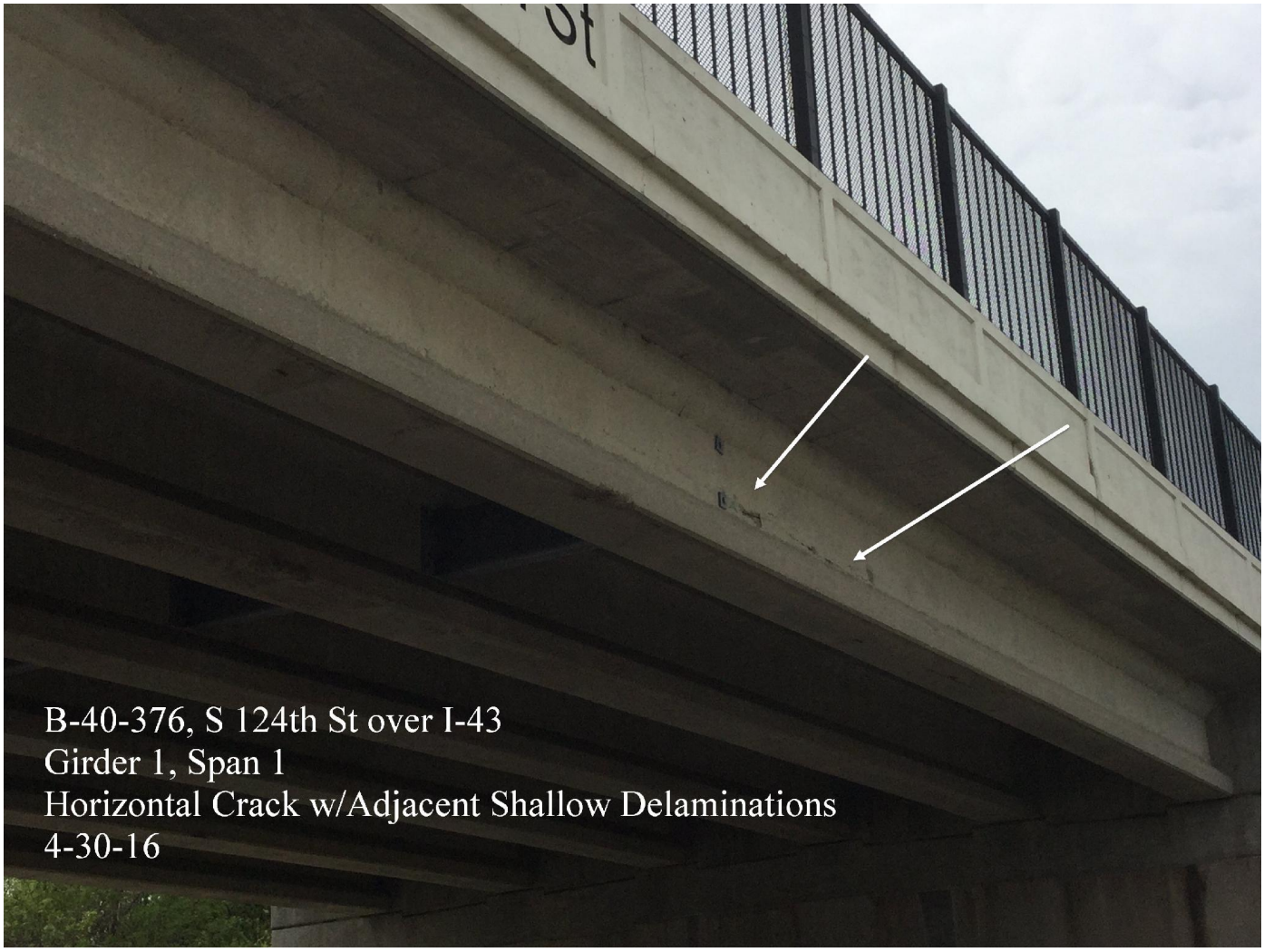
Document Comment/Description

Pier, Column 3.
Photo copied from 2016 inspection report - no change 2018.

Routine

Document Comment/Description

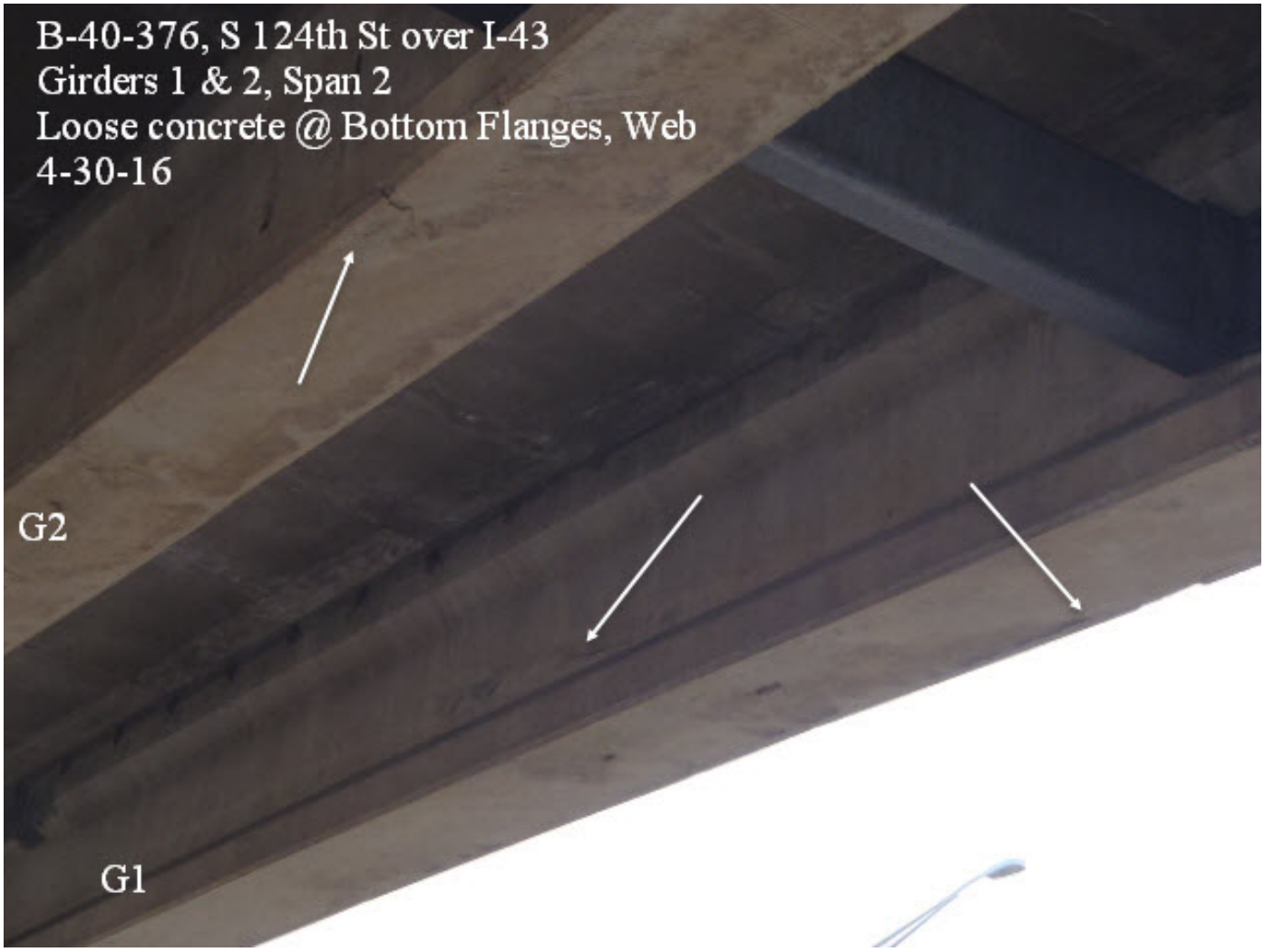
Girder 1, Span 1.
Photo copied from 2016 inspection report - no change 2018.



Routine

Document Comment/Description

Girders 1 & 2, Span 2.
Photo copied from 2016 inspection report - no change 2018.



Routine

Document Comment/Description

Girder 2, Span 2.
Photo copied from 2016 inspection report - no change 2018.

Routine

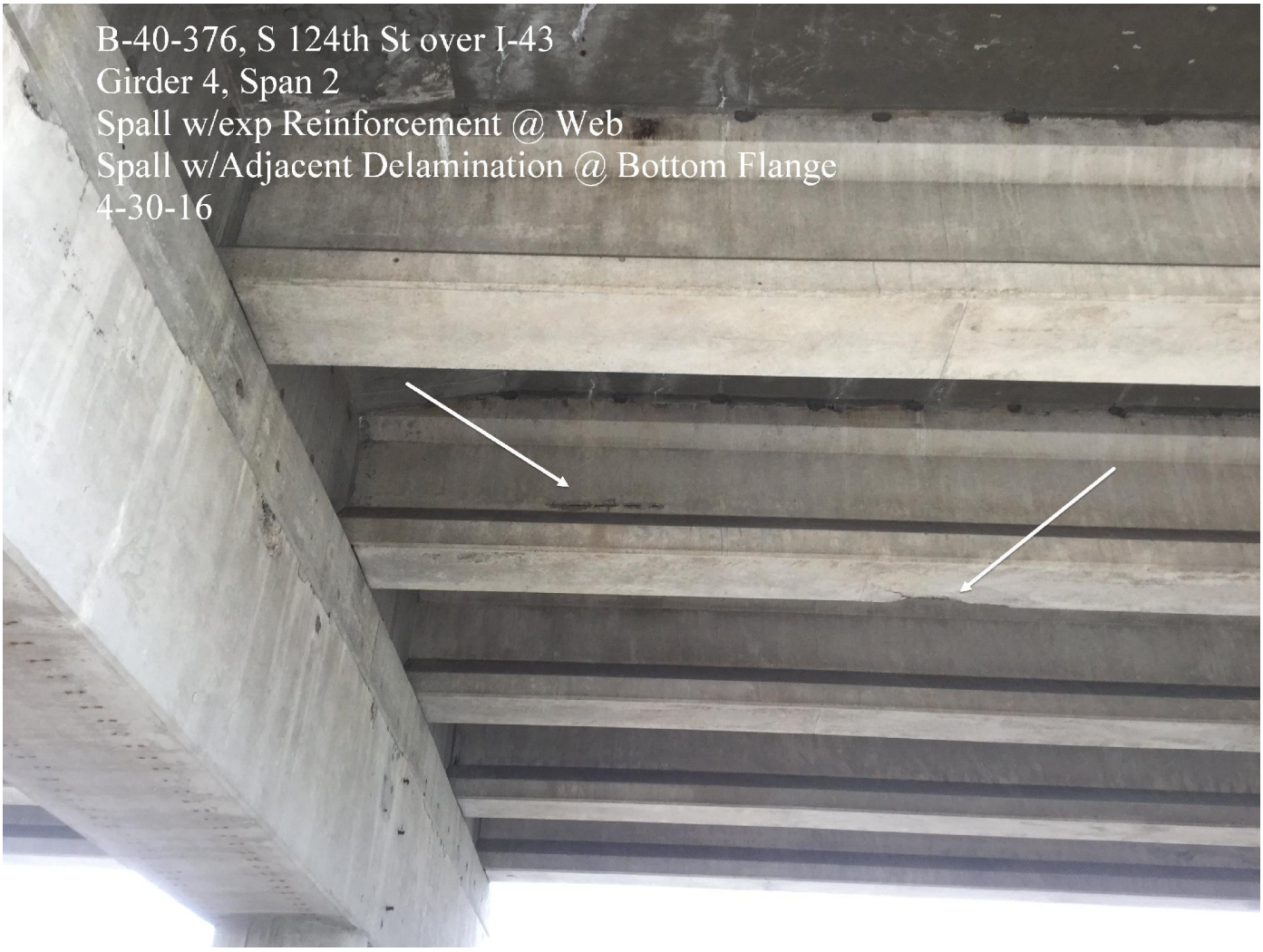
Document Comment/Description

Girder 4, Span 2.'
Photo copied from 2016 inspection report - no change 2018.

Routine

Document Comment/Description

Girder 4, Span 2.
Photo copied from 2016 inspection report - no change 2018.



Routine

Document Comment/Description

Girder 6, Span 2.
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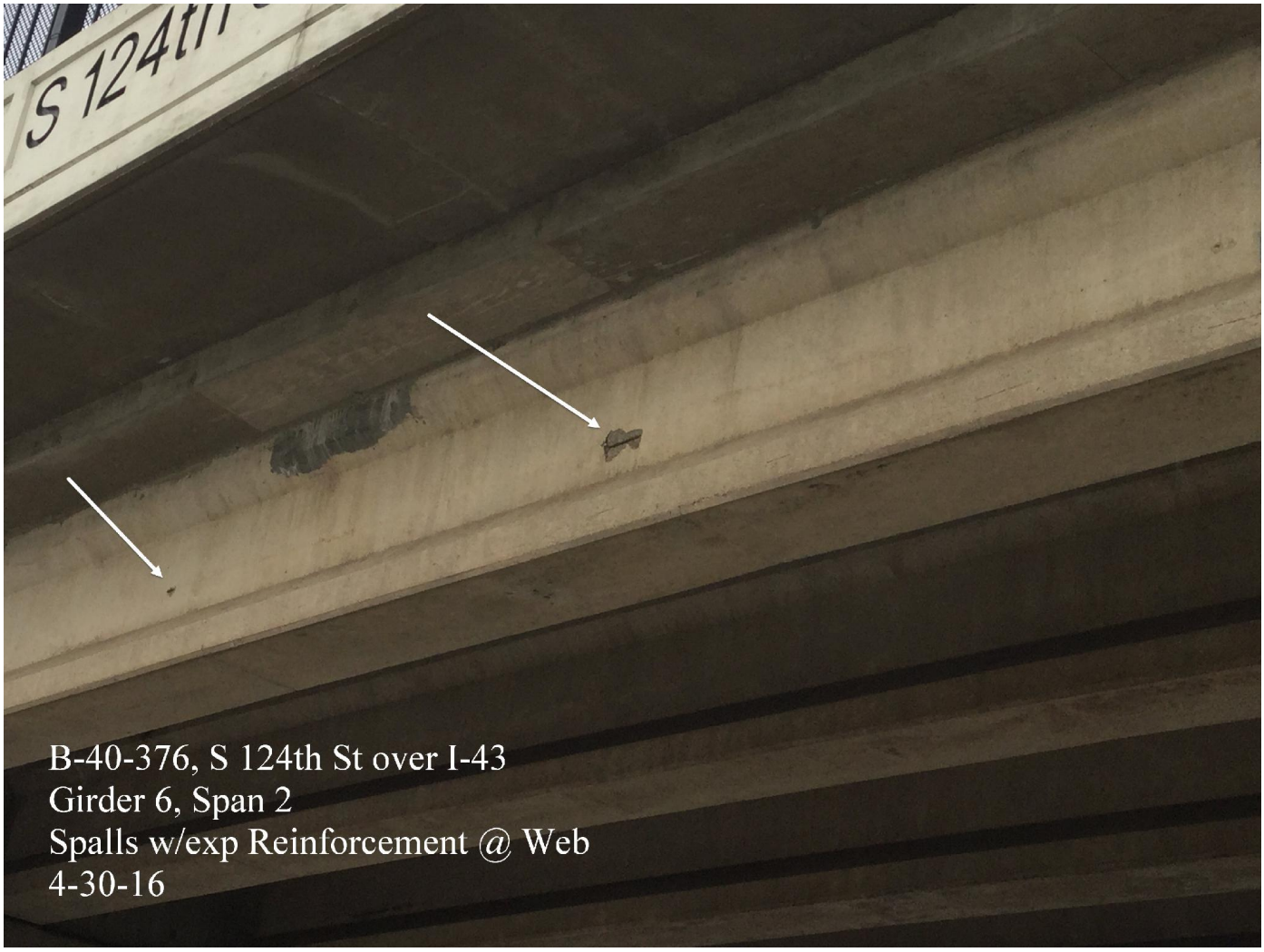

Routine

Document Comment/Description

NE Approach Drainage.
Photo copied from 2016 inspection report - no change 2018.

Routine

Document Comment/Description

NW Approach Drainage.
Photo copied from 2016 inspection report - no change 2018.

Routine

Document Comment/Description

Soffit, Span 1.
Photo copied from 2016 inspection report - no change 2018.

Routine

Document Comment/Description

Wearing Surface.
Photo copied from 2016 inspection report - no change 2018.

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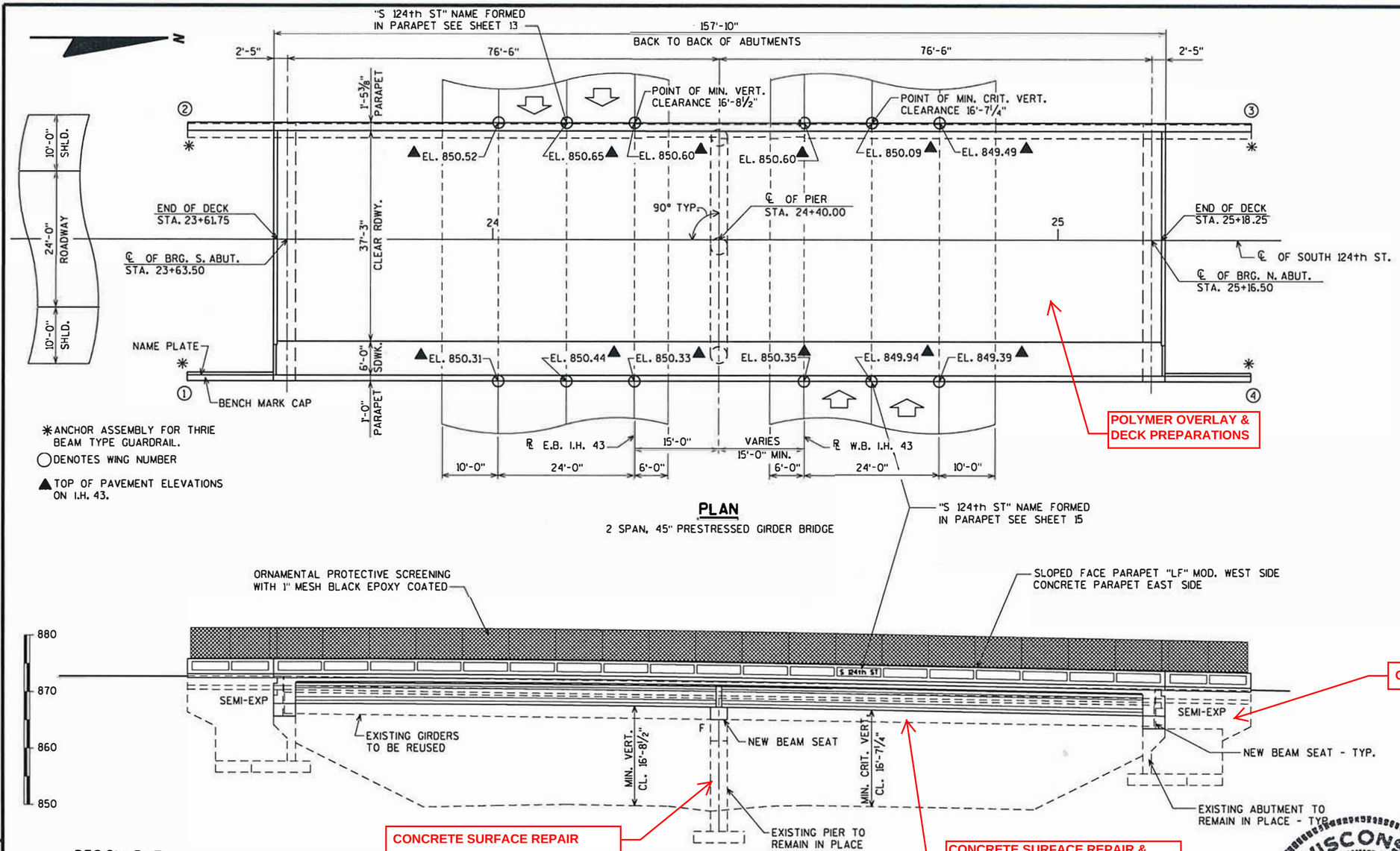
STATE PROJECT NUMBER	SHEET NO.
1090-18-70	

LIST OF DRAWINGS



PLAN

2 SPAN, 45" PRESTRESSED GIRDER BRIDGE

ELEVATION

DESIGN DATA

LIVE LOAD: HS-20 (STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20#/S.F.

RATINGS: INVENTORY = HS-22 OPERATING = HS-39

MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY {SLAB	f'_c =	4,000 p.s.i.
CONCRETE MASONRY {ALL OTHER	f'_c =	3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)	f_y =	60,000 p.s.i.
PRESTRESSED GIRDER CONCRETE MASONRY	f'_c =	6,000 p.s.i.
STRANDS - 1/2" DIA. WITH ULTIMATE TENSILE STRENGTH OF		270,000 p.s.i.

TRAFFIC DATA:

SOUTH 124th ST.	I.H. 43
A.D.T. = 3,900 (2002)	A.D.T. = 59,800 (2000)
R.D.S. = 30 M.P.H.	A.D.T. = 93,400 (2024)
	R.D.S. = 60 M.P.H.

DISTRICT 2 BRIDGE MAINTENANCE OFFICE CONTACT:
JOHN BOLKA
(262) 548-6711

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

WISCONSIN CHRISTOPHER B. McMAHON E-29454 EAU CLAIRE WI PROFESSIONAL ENGINEER 7/25/07

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

WISDOT
BUREAU OF STRUCTURES

STRUCTURE B-40-376
124 STREET OVER I-43

County MILWAUKEE/WAUKESHA		City GREENFIELD	
Design Spec. A.A.S.H.T.O. '02		Load HS-20	Const. Spec. 2003
Designed By MPF	Design Checked DNS	Drawn By GLO	Plans Checked CAM
Approved Chief Bridge Design Engineer		Date 11-14-07	

GENERAL PLAN

SHEET 1 OF 16

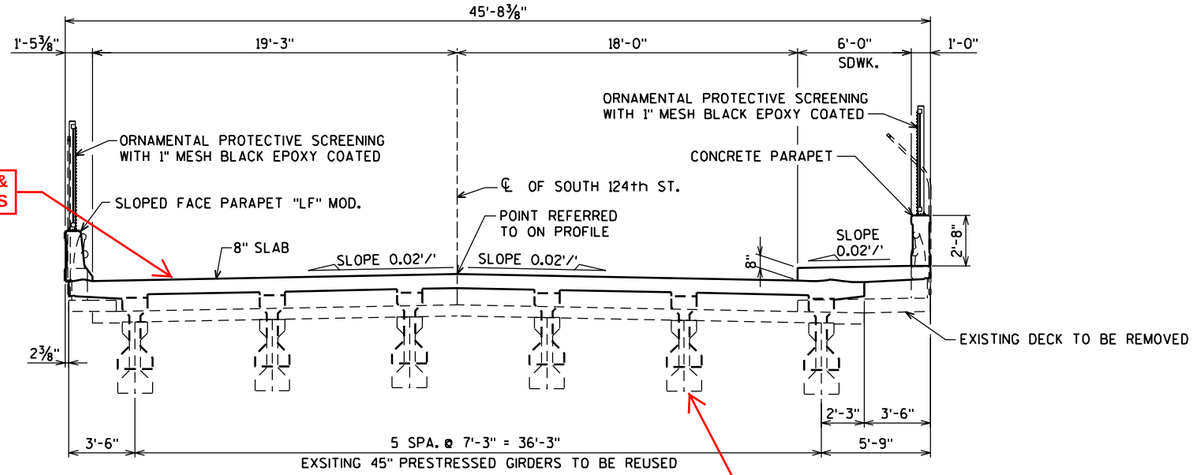
DATE: 360

DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:
DATE:
DATE:
BACK CHECKED BY:
CORRECTED BY:

8 8

B-40&67-376GP.dgn 11X17-5200.plt 7/25/2007 black.tbl

STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



POLYMER OVERLAY & DECK PREPARATIONS

CONCRETE SURFACE REPAIR & EPOXY CRACK INJECTION

TYPICAL CROSS SECTION THRU DECK

(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

DRAWINGS ARE BASED ON ORIGINAL PLANS, THEREFORE THE CONTRACTOR SHALL VERIFY DIMENSIONS AND ELEVATIONS IN THE FIELD.

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

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

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

THE EXISTING BRIDGE (B-40-376) IS A TWO SPAN PRESTRESSED CONCRETE DECK GIRDER TYPE BRIDGE, 158 FEET LONG AND HAS A CLEAR ROADWAY WIDTH OF 36 FEET AND ONE 6 FOOT SIDEWALK.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE POSSIBLE AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

ORIGINAL CONSTRUCTION YEAR IS 1968 FOR NEW NAME PLATE.

THE DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH A BENCH MARK CAP TO BE INSTALLED BY THE CONTRACTOR AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER.

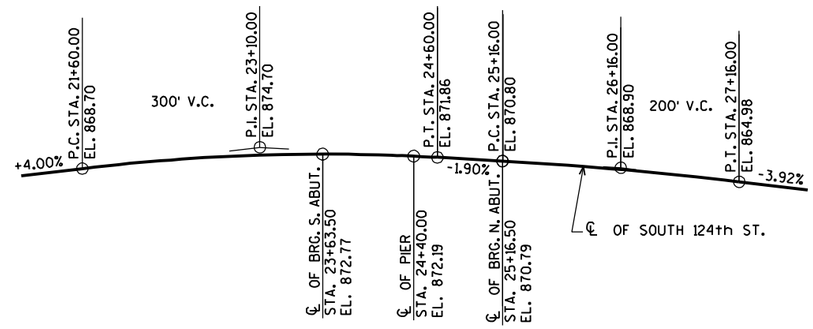
APPLY WHITE STAIN (FEDERAL COLOR NO. 27925) TO ALL FACES OF PARAPET EXCEPT THE RECESSED STREET NAME LETTERING IN THE PARAPET WHICH SHALL BE STAINED BLACK (FEDERAL COLOR NO. 27038).

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	S. ABUT.	PIER	N. ABUT.	SUPER.	TOTAL
REMOVING OLD STRUCTURE STA 24+40	LS	-----	-----	-----	-----	1
EXCAVATION FOR STRUCTURES BRIDGES B-40-376	LS	-----	-----	-----	-----	1
CONCRETE MASONRY BRIDGES	CY	18.9	6.8	16.4	295.9	338
STEEL DIAPHRAGMS B-40-376	EACH	-----	-----	-----	10	10
BAR STEEL REINFORCEMENT HS BRIDGES	LB	540	-----	510	-----	1,050
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	960	370	970	53,130	55,430
BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	6	6	6	-----	18
RUBBERIZED MEMBRANE WATERPROOFING	SY	21	-----	21	-----	42
BACKFILL STRUCTURE	CY	90	-----	90	-----	180
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	2	-----	4
MASONRY ANCHORS TYPE L NO. 4 BARS	EACH	92	84	92	-----	268
MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	64	-----	64	-----	128
CONCRETE SURFACE REPAIR	SF	-----	-----	30	10	40
● RAILING TUBULAR SCREENING B-40-376	LS	-----	-----	-----	-----	1
◐ CONCRETE STAINING B-40-376	SF	195	-----	195	2005	2,395
BRIDGE JACKING B-40-376	LS	-----	-----	-----	-----	1
ROADWAY NAME PANEL STRUCTURE B-40-376	LS	-----	-----	-----	-----	1
NON-BID ITEMS						
FILLER	SIZE	-----	-----	-----	-----	¾"
PLASTIC OR ZINC PLATE	SF	-----	-----	-----	8	8

● WITH 1" MESH BLACK EPOXY COATED

◐ STAIN INSIDE, TOP, AND OUTSIDE OF BOTH PARAPETS ON ABUTMENTS AND SUPERSTRUCTURE.



PROFILE GRADE LINE - SOUTH 124th STREET

BENCH MARK:
CONC. MONUMENT W/ALUM. CAP
SW CORNER I-43 & 124TH
EL. 870.119

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By GLD | Plans Checked DNS

TYPICAL SECTION, QUANTITIES AND NOTES

SHEET 2 OF 16

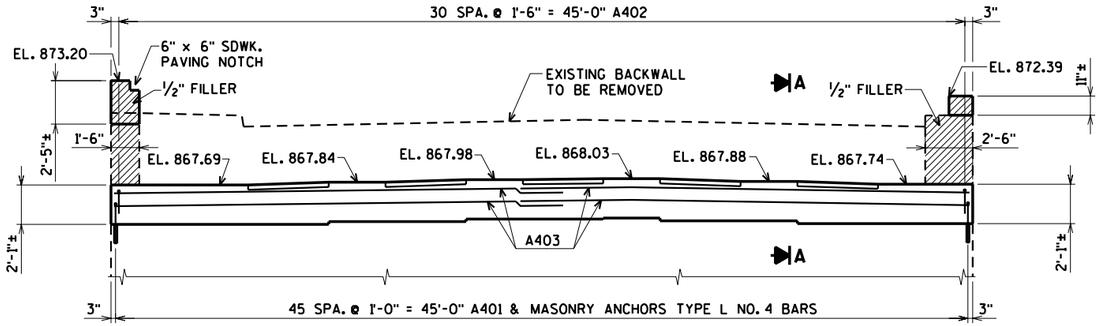
DATE: DATE: DATE:
CHECKED BY: BACK CHECKED BY: CORRECTED BY:

8

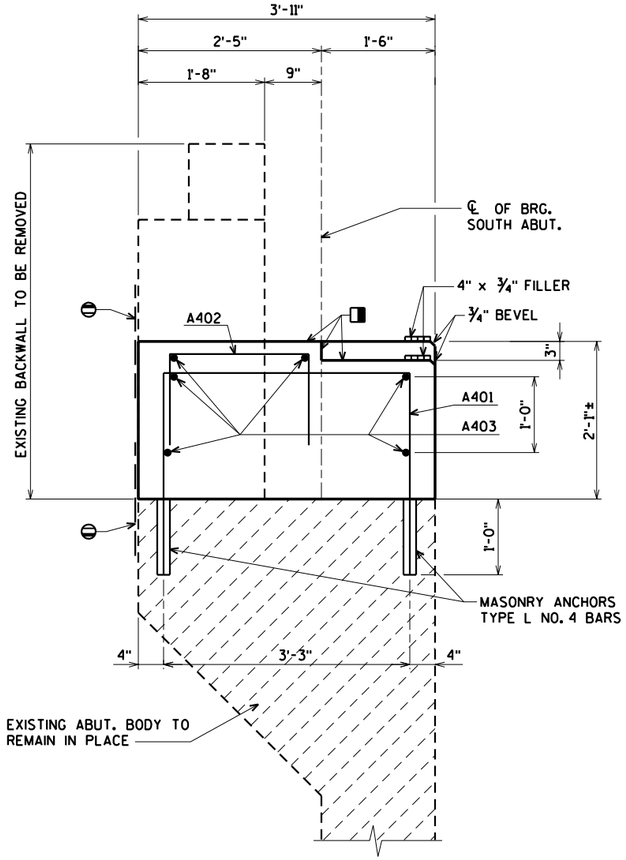
8

NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



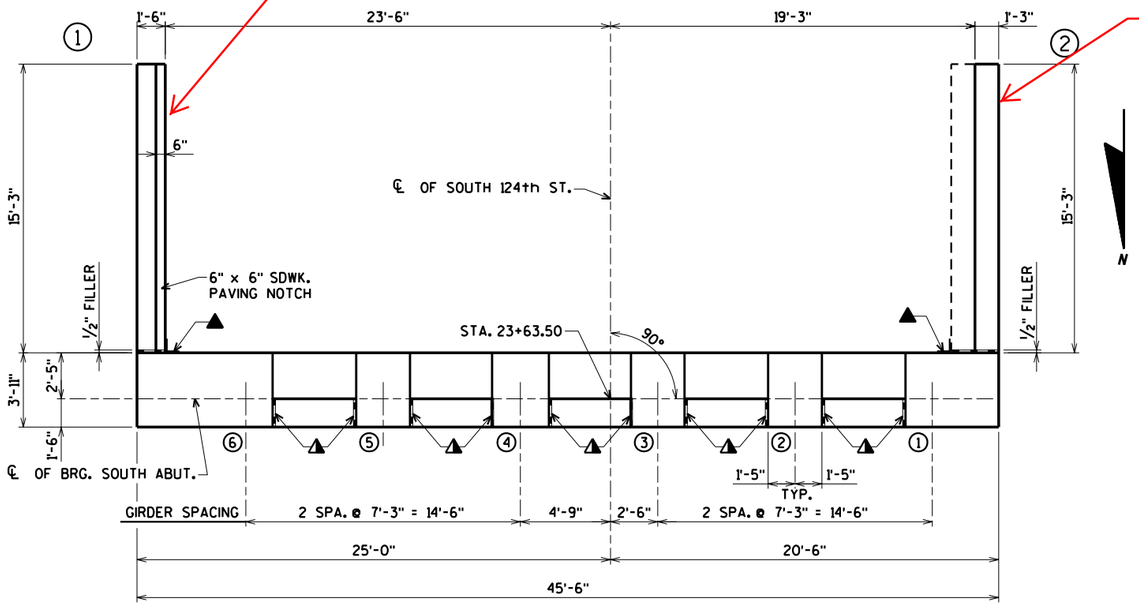
ELEVATION
(LOOKING SOUTH)



SECTION A

CONCRETE SURFACE REPAIR

CONCRETE SURFACE REPAIR



PLAN

NOTE:
THE CONTRACTOR IS TO VERIFY DIMENSIONS IN FIELD BEFORE STARTING CONSTRUCTION.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

◨ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHELENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING FILLER AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

◭ ¾" CORK FILLER ON VERTICAL FACE ONLY.

⊖ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By G.L.O. | Plans Checked DNS

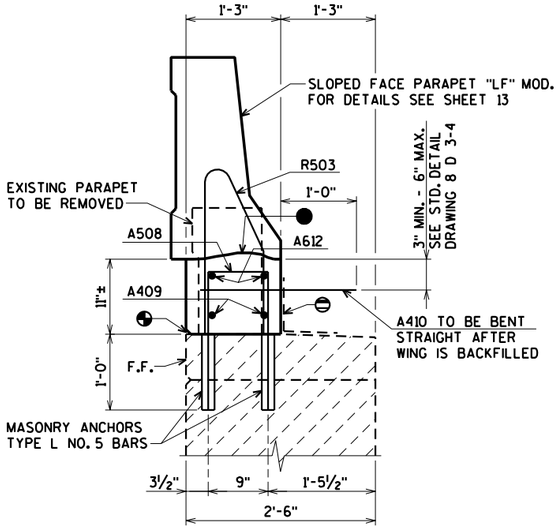
SHEET 3 OF 16

SOUTH ABUTMENT

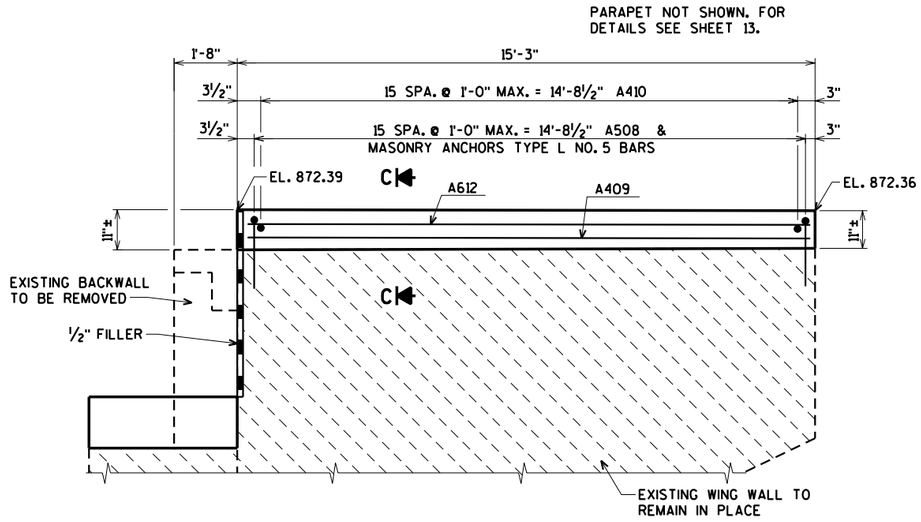
DATE:
CHECKED BY:
DATE:
BACK CHECKED BY:
DATE:
CORRECTED BY:

8

STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



SECTION C



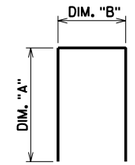
ELEVATION - WING 2
(FRONT FACE SHOWN)

BILL OF BARS

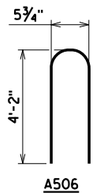
WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEET 13.

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	540# UNCOATED 960# COATED LOCATION
A401		46	8-5	X			BODY VERT.
A402		31	4-5	X			BODY VERT.
A403		12	23-7				BODY HORIZ.
A504	X	16	6-2	X			WING 1 VERT.
A405	X	6	14-10				WING 1 HORIZ.
A506	X	20	8-8	X			WING 1 PARAPET VERT.
A407	X	6	14-10				WING 1 PARAPET HORIZ.
A508	X	16	3-11	X			WING 2 VERT.
A409	X	2	14-10				WING 2 HORIZ.
A410	X	16	2-0	X			WING 2 DOWELS
A611	X	2	14-10				WING 1 HORIZ.
A612	X	2	14-10				WING 2 HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



BAR NO.	DIM. A	DIM. B
A401	2'-8"	3'-3½"
A402	1'-3"	2'-1"
A504	2'-9"	10½"
A508	1'-8"	10"



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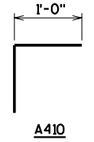

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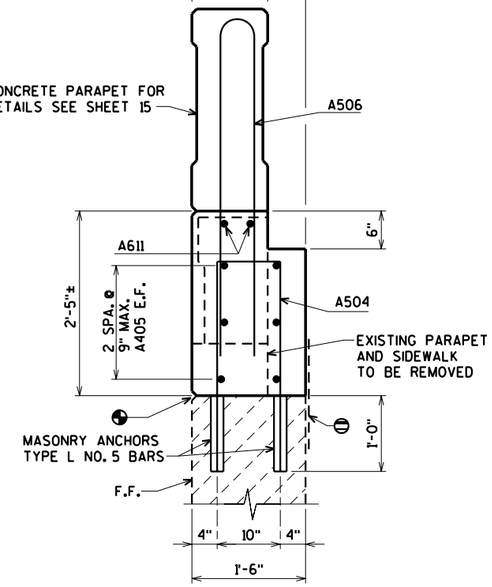
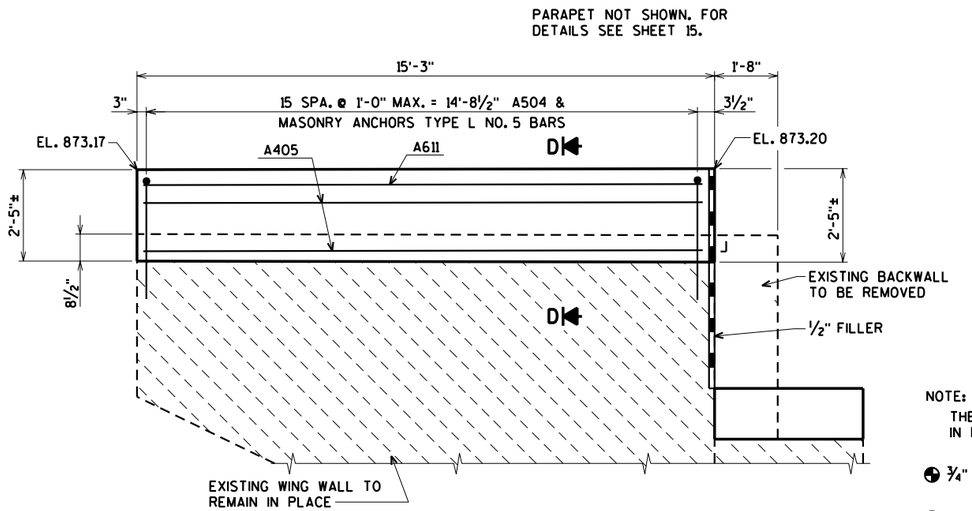


SECTION D



ELEVATION - WING 1
(FRONT FACE SHOWN)

NOTE:
THE CONTRACTOR IS TO VERIFY DIMENSIONS IN FIELD BEFORE STARTING CONSTRUCTION.

¾" V-GROOVE ON FRONT FACE ONLY.

STRIKE OFF AS SHOWN AND LEAVE ROUGH.

18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By G.L.O. | Plans Checked DNS

SOUTH ABUTMENT DETAILS

SHEET 4 OF 16

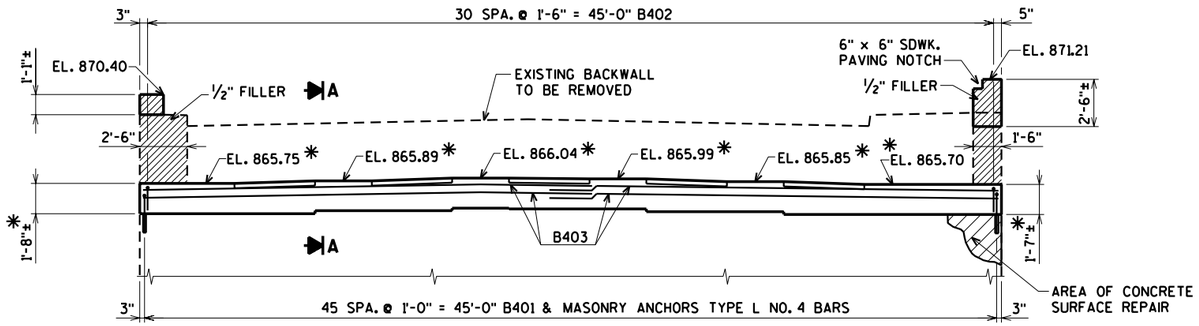
DATE: DATE: DATE:
CHECKED BY: BACK CHECKED BY: CORRECTED BY:

8

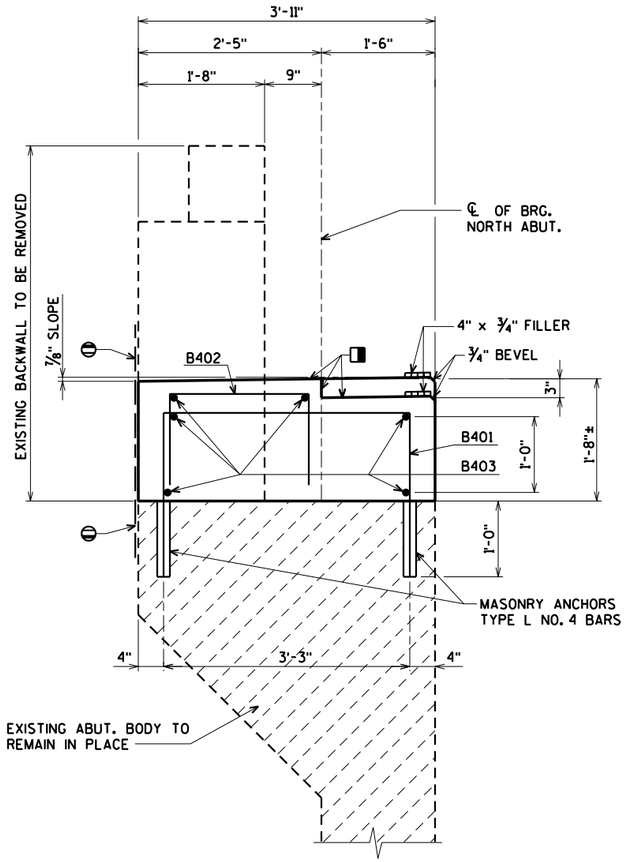
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

* ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG.

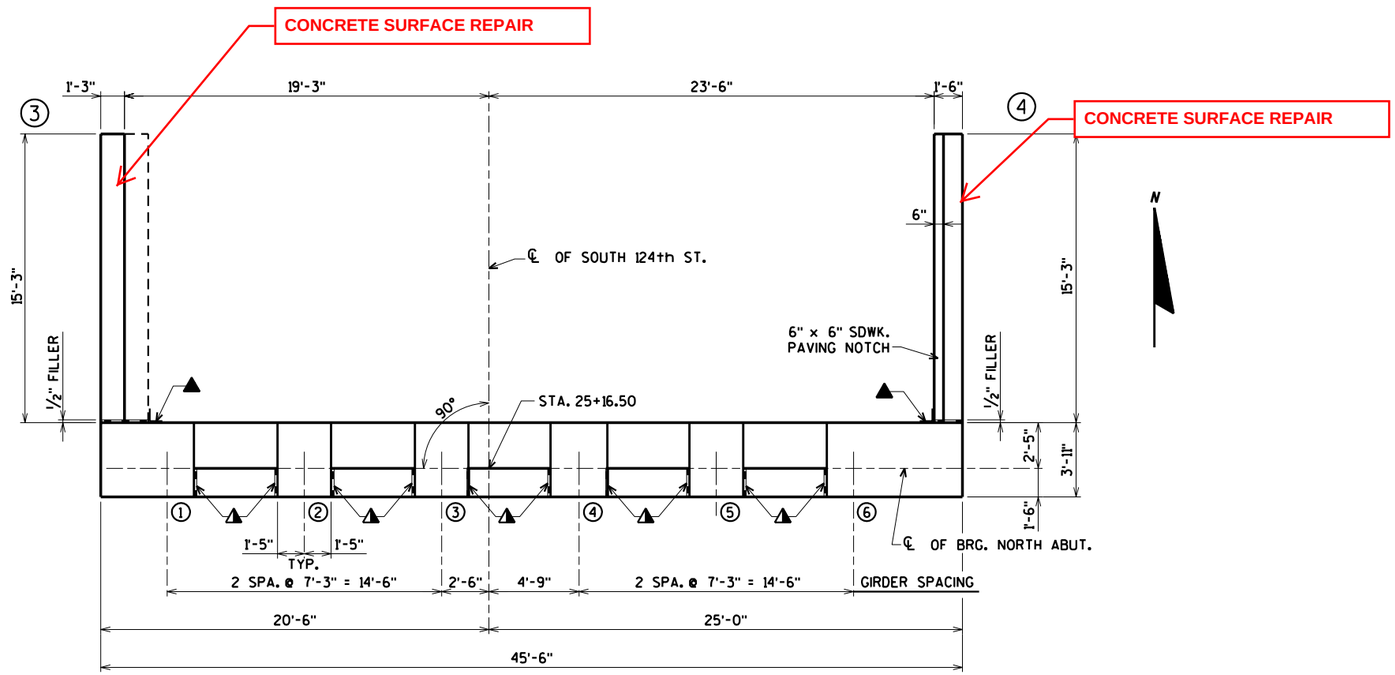
STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



ELEVATION
(LOOKING NORTH)



SECTION A



N

PLAN

NOTE:
THE CONTRACTOR IS TO VERIFY DIMENSIONS IN FIELD BEFORE STARTING CONSTRUCTION.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

◨ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHELENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING FILLER AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

▲ ¾" CORK FILLER ON VERTICAL FACE ONLY.

⊖ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By G.L.O. | Plans Checked DNS

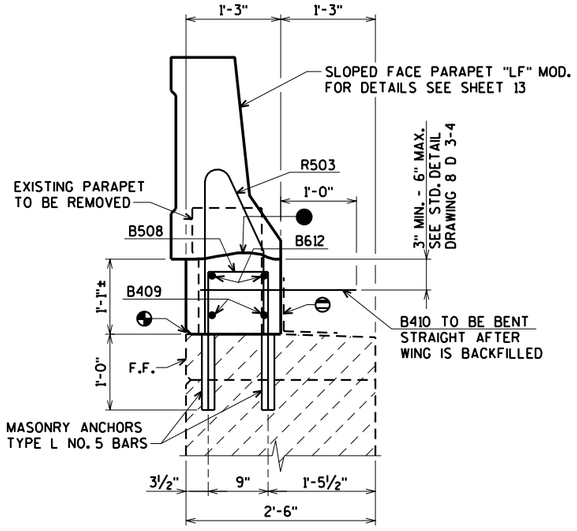
NORTH ABUTMENT

SHEET 5 OF 16

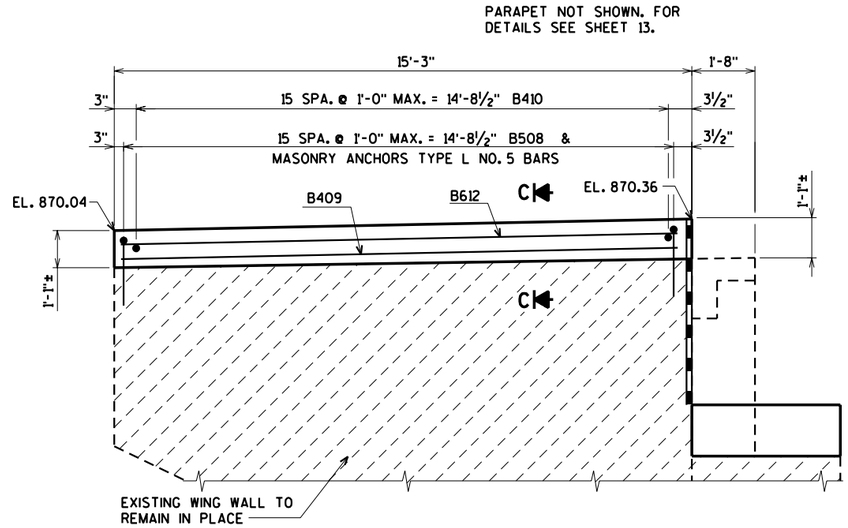
DATE:
CHECKED BY:
DATE:
BACK CHECKED BY:
DATE:
CORRECTED BY:

8

STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



SECTION C



ELEVATION - WING 3

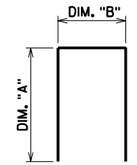
(FRONT FACE SHOWN)

BILL OF BARS

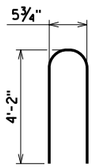
WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEET 13.

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	510* UNCOATED 970* COATED — LOCATION
B401		46	7-5	X		BODY VERT.
B402		31	4-5	X		BODY VERT.
B403		12	23-7			BODY HORIZ.
B504	X	16	6-4	X		WING 4 VERT.
B405	X	6	14-10			WING 4 HORIZ.
B506	X	20	8-8	X		WING 4 PARAPET VERT.
B407	X	6	14-10			WING 4 PARAPET HORIZ.
B508	X	16	4-3	X		WING 3 VERT.
B409	X	2	14-10			WING 3 HORIZ.
B410	X	16	2-0	X		WING 3 DOWELS
B611	X	2	14-10			WING 4 HORIZ.
B612	X	2	14-10			WING 3 HORIZ.

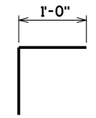
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



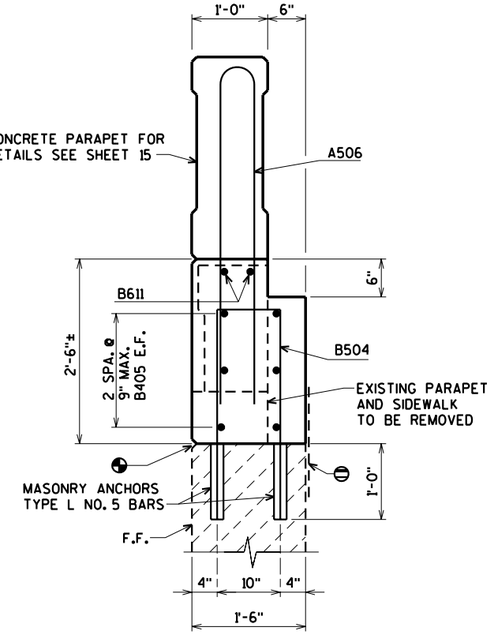
BAR NO.	DIM. A	DIM. B
B401	2'-2"	3'-3½"
B402	1'-3"	2'-1"
B504	2'-10"	10½"
B508	1'-10"	10"



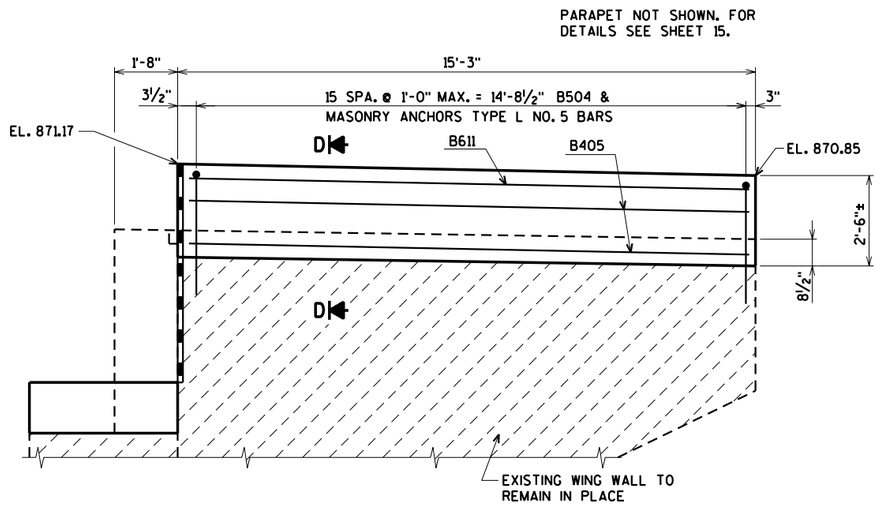
B506



B410



SECTION D



ELEVATION - WING 4

(FRONT FACE SHOWN)

NOTE:
THE CONTRACTOR IS TO VERIFY DIMENSIONS IN FIELD BEFORE STARTING CONSTRUCTION.

⊕ ¾" V-GROOVE ON FRONT FACE ONLY.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

⊖ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By G.L.O. | Plans Checked DNS

NORTH ABUTMENT DETAILS

SHEET 6 OF 16

DATE: DATE: DATE:
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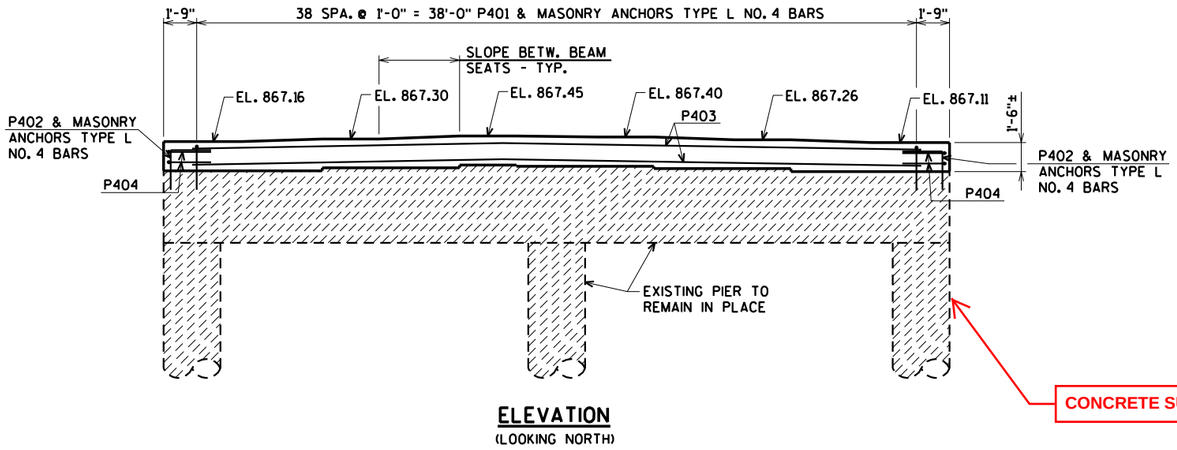
STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



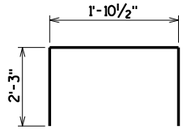
ELEVATION
(LOOKING NORTH)

CONCRETE SURFACE REPAIR

BILL OF BARS

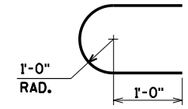
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	370# COATED LOCATION
P401	X	39	6-2	X		PIER VERT.
P402	X	6	3-3	X		PIER VERT.
P403	X	5	38-6			PIER HORIZ.
P404	X	4	5-2	X		PIER HORIZ. @ ENDS
P505	X	25	2-0			PIER DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

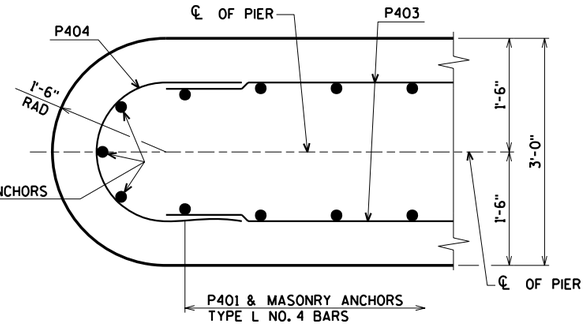


P401

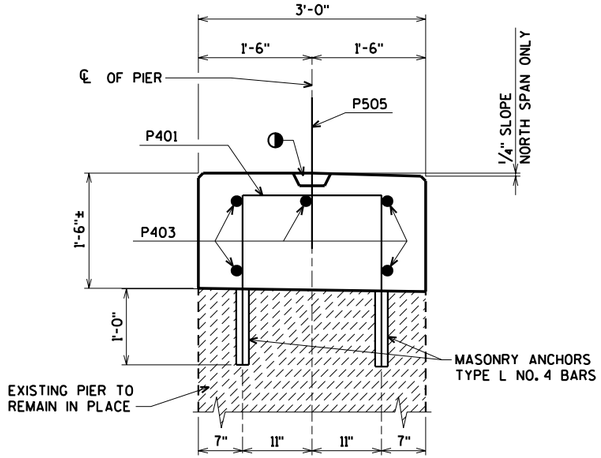
P402



P404

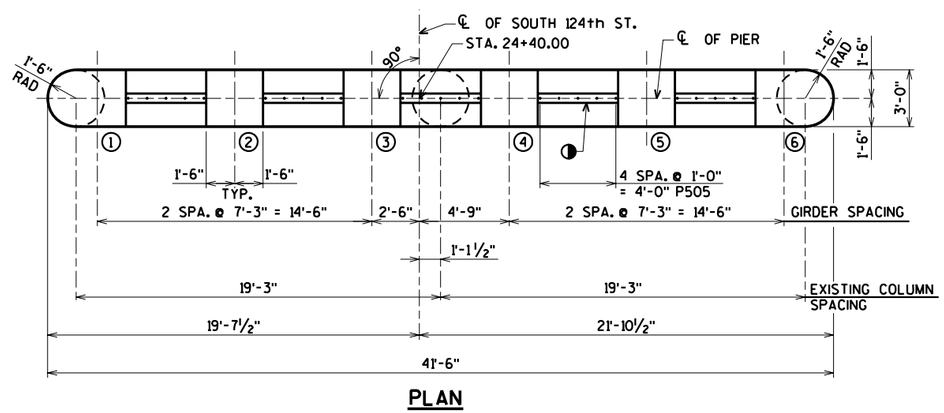


SECTION B



SECTION A

P505 BARS MAY BE PLACED AFTER CAP IS POURED BUT BEFORE CONC. HAS SET. IMBED BARS 1'-0".



PLAN

NOTE:
THE CONTRACTOR IS TO VERIFY DIMENSIONS IN FIELD BEFORE STARTING CONSTRUCTION.

◑ KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

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SHEET 7 OF 16

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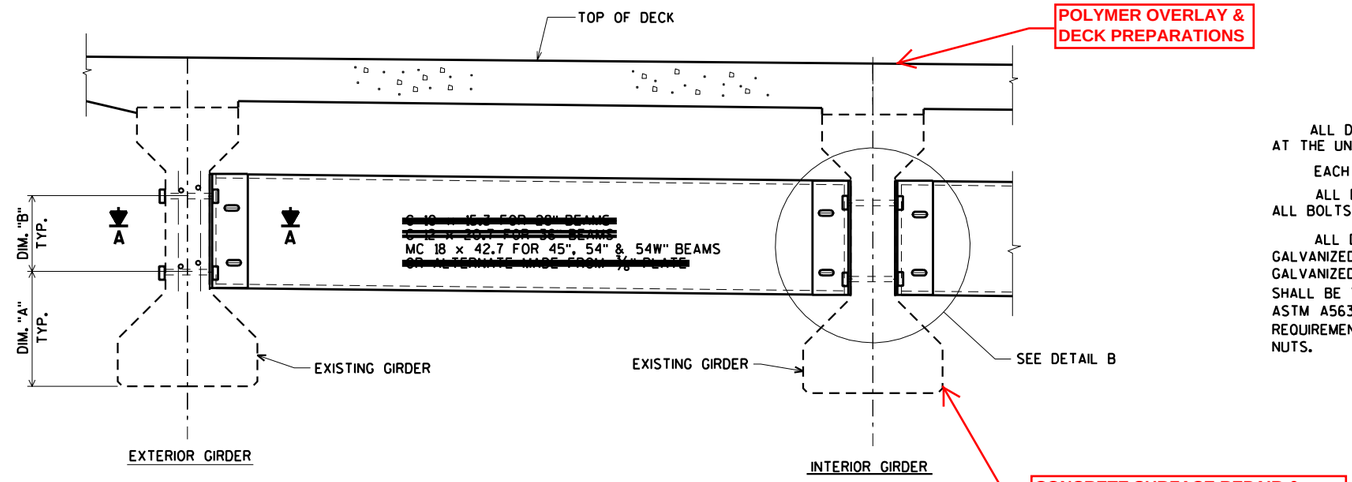
STATE PROJECT NUMBER	SHEET NO.
1090-18-70	

TABLE

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

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



NOTES

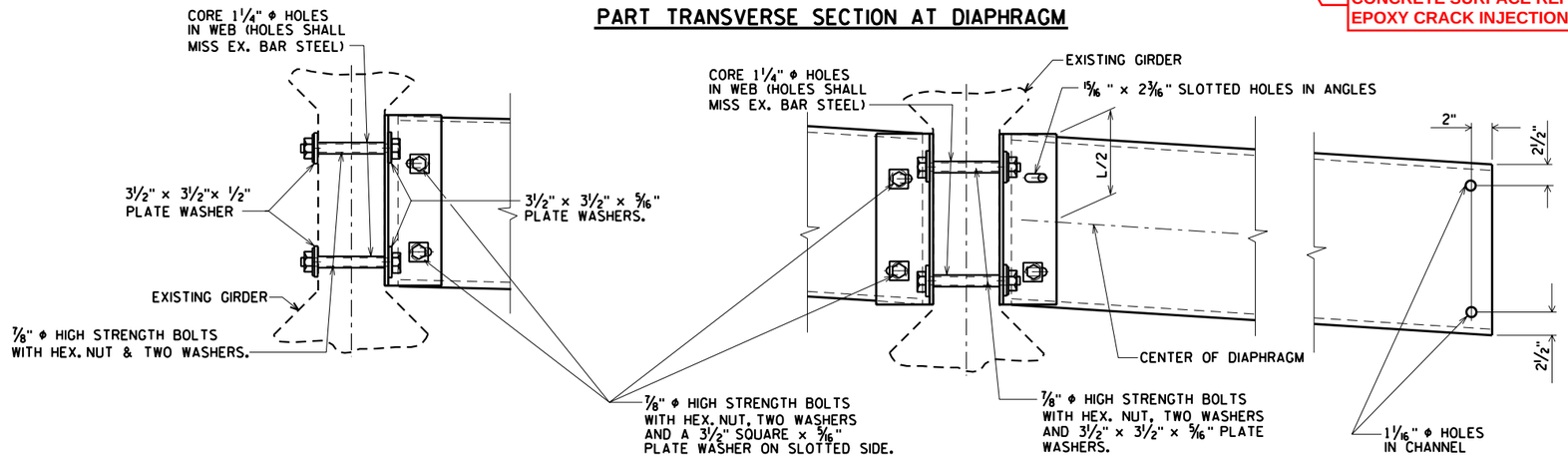
ALL DIAPHRAGM MATERIAL AND CORED HOLES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-376".

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

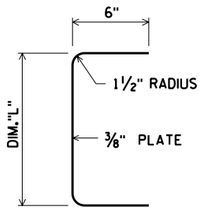
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

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.

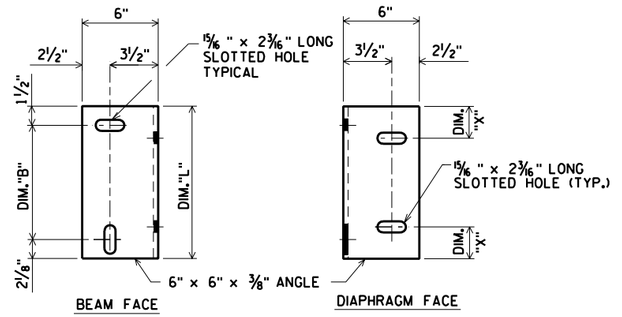
PART TRANSVERSE SECTION AT DIAPHRAGM



DETAIL B



SECTION THRU ALTERNATE DIAPHRAGM



DIAPHRAGM SUPPORT

No.	Date	Revision	By

PLANS PREPARED BY
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Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

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STEEL INTER. DIAPHRAGM DETAILS

SHEET 8 OF 16

DATE: DATE: DATE:
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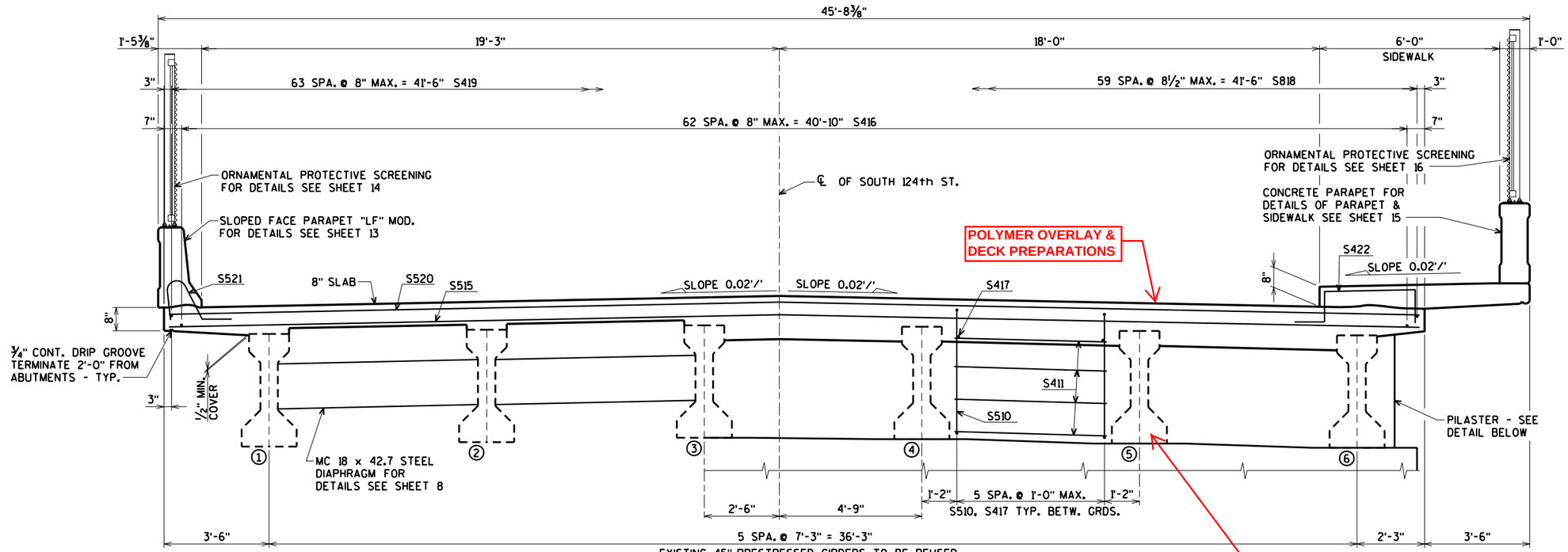
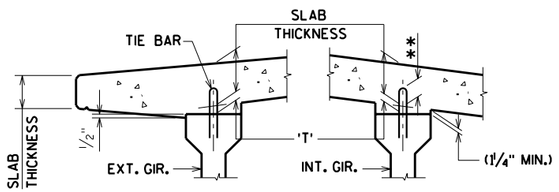
8

STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



TYPICAL CROSS SECTION THRU DECK

(LOOKING NORTH)



SLAB HAUNCH DETAIL

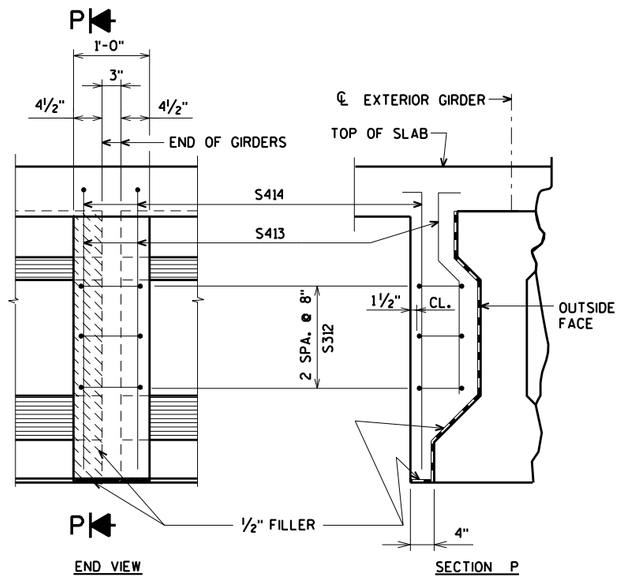
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

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 2½" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



PILASTER DETAILS AT PIERS

No.	Date	Revision	By

PLANS PREPARED BY

AYRES ASSOCIATES — Engineers/Architects Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

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SUPERSTRUCTURE

SHEET 9 OF 16

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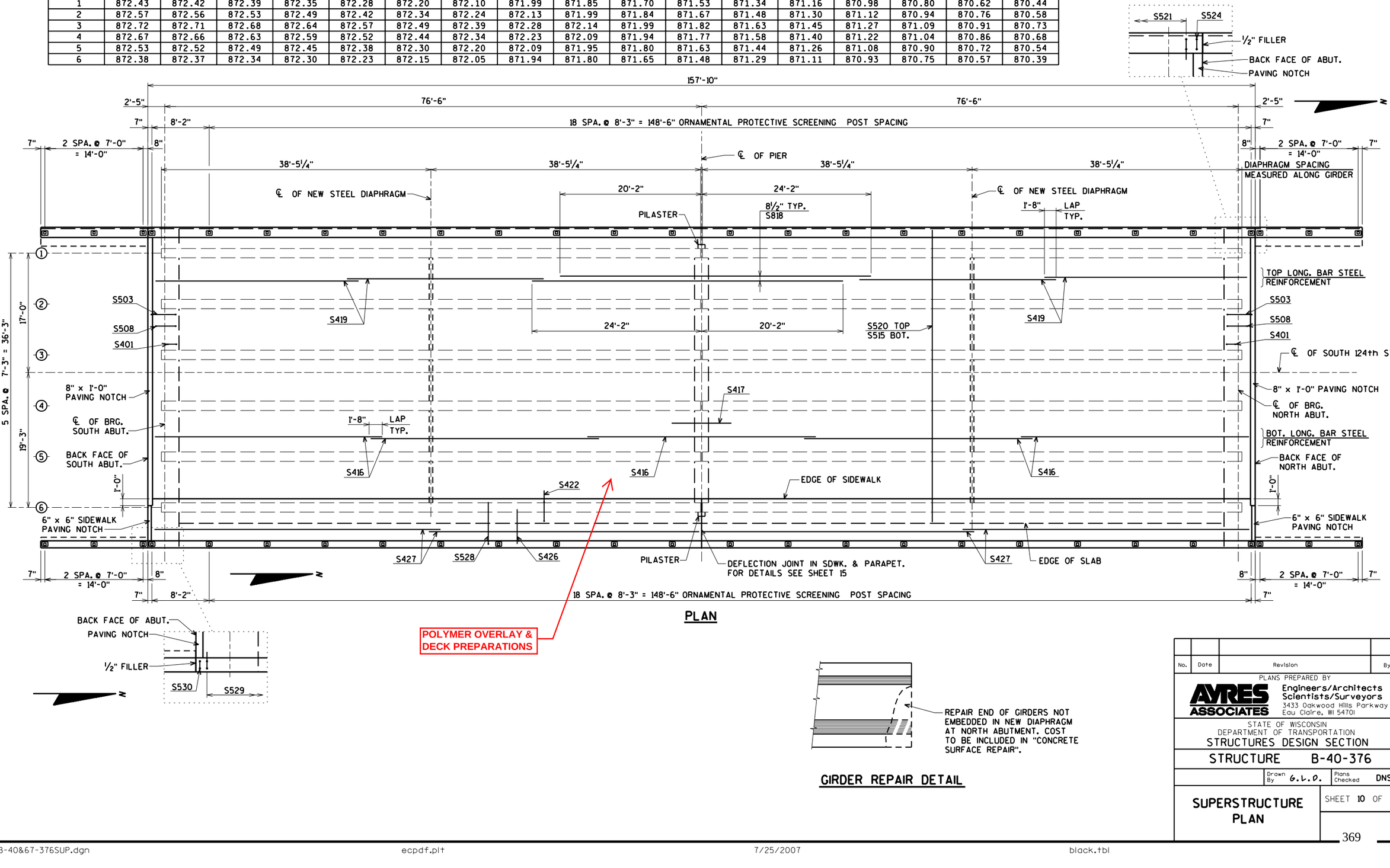
STATE PROJECT NUMBER	SHEET NO.
1090-18-70	

TOP OF DECK ELEVATIONS

GIRDER	℄ OF BRG S. ABUT.	1/8 PT	1/4 PT	3/8 PT	1/2 PT	5/8 PT	3/4 PT	7/8 PT	℄ PIER	1/8 PT	1/4 PT	3/8 PT	1/2 PT	5/8 PT	3/4 PT	7/8 PT	℄ OF BRG N. ABUT.
1	872.43	872.42	872.39	872.35	872.28	872.20	872.10	871.99	871.85	871.70	871.53	871.34	871.16	870.98	870.80	870.62	870.44
2	872.57	872.56	872.53	872.49	872.42	872.34	872.24	872.13	871.99	871.84	871.67	871.48	871.30	871.12	870.94	870.76	870.58
3	872.72	872.71	872.68	872.64	872.57	872.49	872.39	872.28	872.14	871.99	871.82	871.63	871.45	871.27	871.09	870.91	870.73
4	872.67	872.66	872.63	872.59	872.52	872.44	872.34	872.23	872.09	871.94	871.77	871.58	871.40	871.22	871.04	870.86	870.68
5	872.53	872.52	872.49	872.45	872.38	872.30	872.20	872.09	871.95	871.80	871.63	871.44	871.26	871.08	870.90	870.72	870.54
6	872.38	872.37	872.34	872.30	872.23	872.15	872.05	871.94	871.80	871.65	871.48	871.29	871.11	870.93	870.75	870.57	870.39



PLAN

POLYMER OVERLAY & DECK PREPARATIONS

REPAIR END OF GIRDERS NOT EMBEDDED IN NEW DIAPHRAGM AT NORTH ABUTMENT. COST TO BE INCLUDED IN "CONCRETE SURFACE REPAIR".

GIRDER REPAIR DETAIL

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
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Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By G.L.O. | Plans Checked DNS

SUPERSTRUCTURE PLAN

SHEET 10 OF 16

DATE:
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CORRECTED BY:

DATE:
CHECKED BY:
BACK CHECKED BY:
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8

8

B-40&67-376SUP.dgn ecpdf.plt 7/25/2007 black.tbl

STATE PROJECT NUMBER	SHEET NO.
1090-18-70	

DATE:
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DATE:
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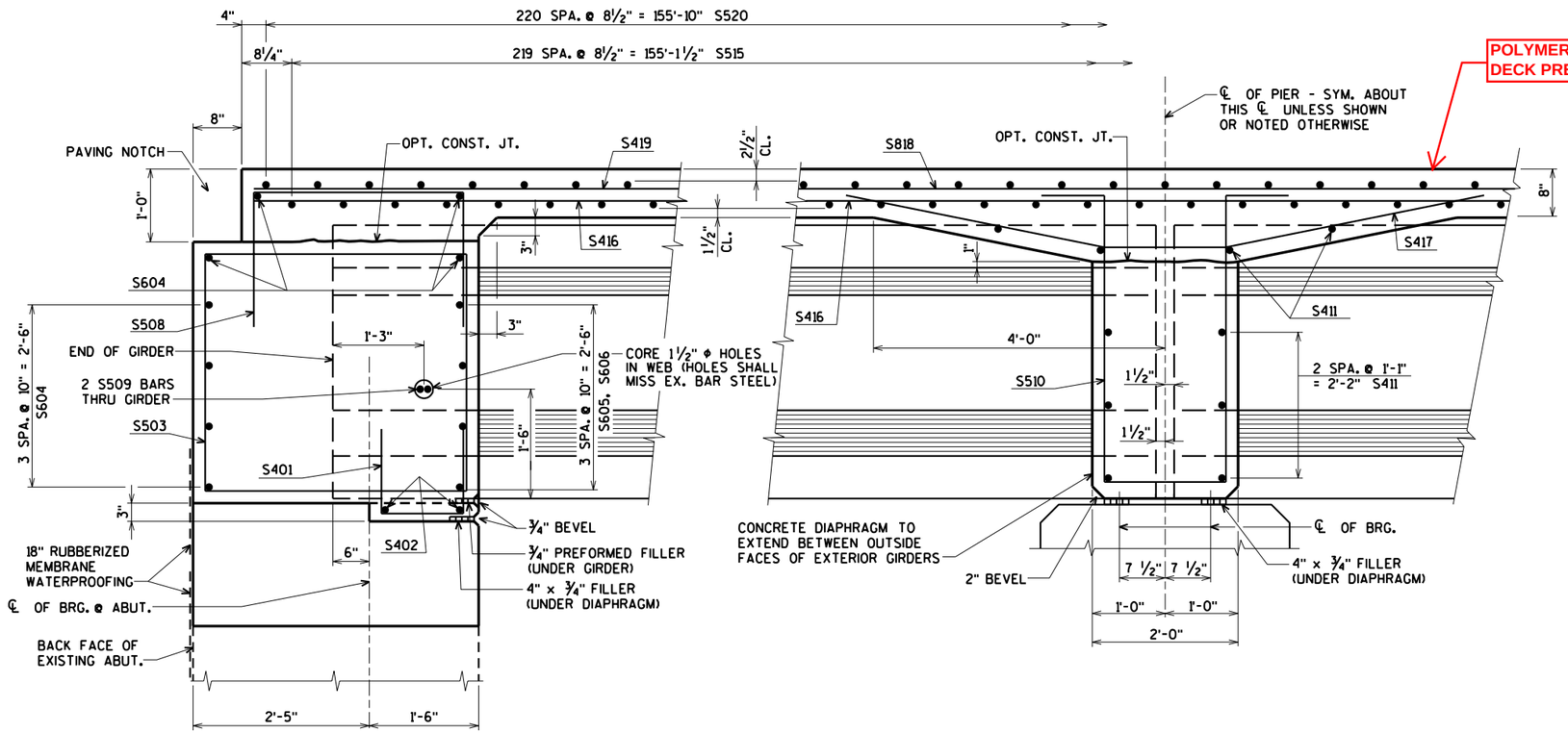
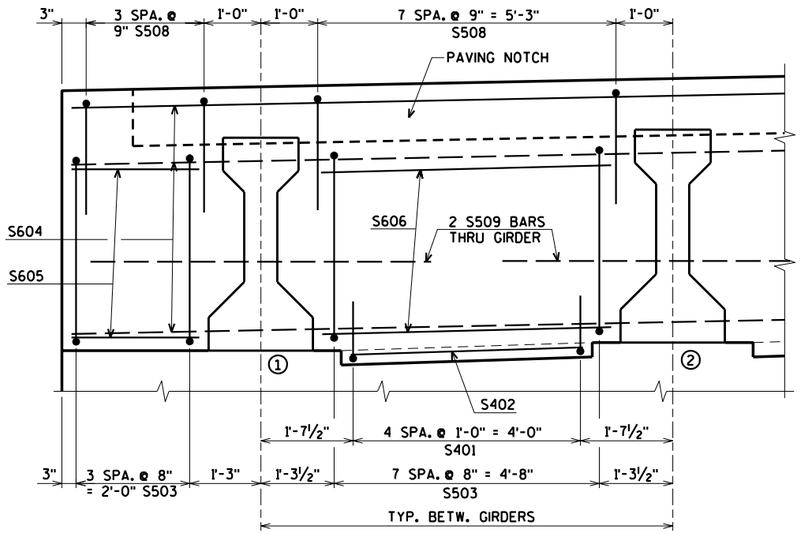
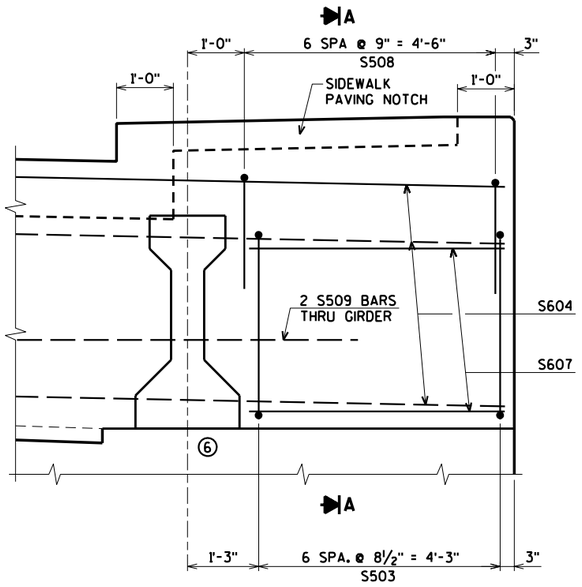
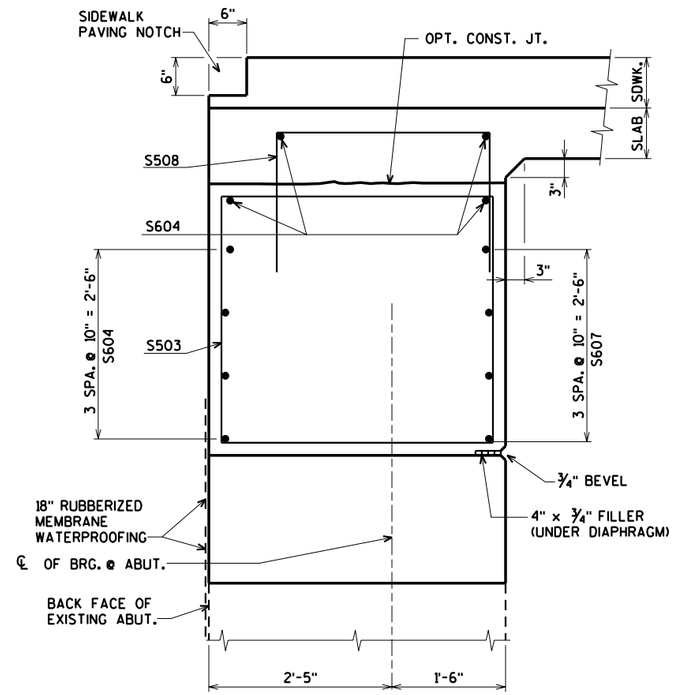


PART LONGITUDINAL SECTION



PART SECTION AT ABUTMENT





SECTION A

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

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SUPERSTRUCTURE DETAILS

SHEET 11 OF 16

8

8

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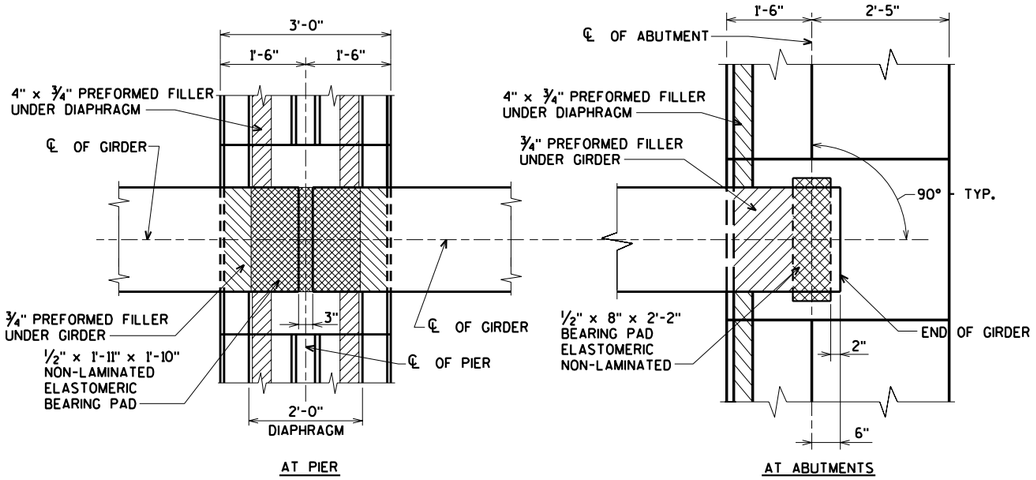
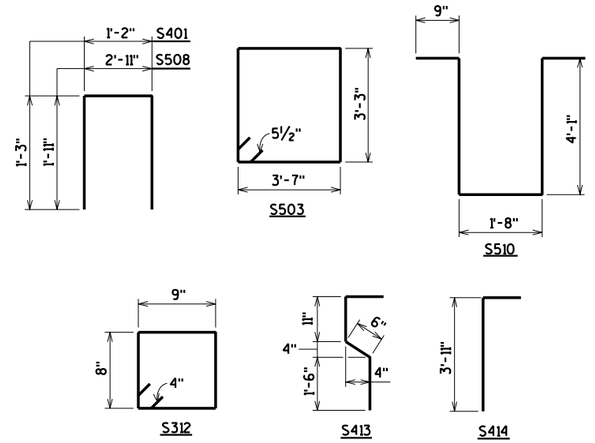
STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



BEARING PLAN



BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	53,130# COATED LOCATION
S401	X	50	3-6	X		DIAPH. @ ABUT. NOTCH
S402	X	20	4-0			DIAPH. @ ABUT. NOTCH
S503	X	102	14-4	X		DIAPH. @ ABUT. VERT.
S604	X	32	24-4			DIAPH. @ ABUT. HORIZ.
S605	X	8	2-3			DIAPH. @ ABUT. HORIZ. @ GDR. 1
S606	X	40	5-1			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S607	X	8	4-6			DIAPH. @ ABUT. HORIZ. @ GDR. 6
S508	X	102	6-6	X		DIAPH. @ ABUT. VERT.
S509	X	24	6-0			DIAPH. @ ABUT. THRU GIRDER
S510	X	30	11-0	X		DIAPH. @ PIER VERT.
S411	X	50	5-1			DIAPH. @ PIER HORIZ.
S312	X	6	3-3	X		PILASTER
S413	X	4	3-9	X		PILASTER
S414	X	4	4-7	X		PILASTER
S515	X	220	41-8			SLAB TRANS. BOT.
S416	X	315	32-7			SLAB LONG. BOT.
S417	X	30	9-2	X		SLAB LONG. BOT. @ PIER
S818	X	60	44-4			SLAB LONG. TOP @ PIER
S419	X	256	28-8			SLAB LONG. TOP IN SPAN
S520	X	221	41-8			SLAB TRANS. TOP
S521	X	235	4-2	X		SLAB @ PARAPET LF
S422	X	313	5-8	X		SLAB @ SIDEWALK
S523	X	235	4-10	X		PARAPET LF VERT.
S524	X	2	4-7	X		PARAPET LF VERT. @ ABUT.
S525	X	15	53-8			PARAPET LF HORIZ.
S426	X	108	4-6			SIDEWALK TRANS. BOT.
S427	X	56	40-0			SIDEWALK LONG. BOT. & TOP
S528	X	313	7-3	X		SIDEWALK TRANS. TOP
S529	X	157	7-4	X		PARAPET A VERT.
S530	X	2	8-6	X		PARAPET A VERT. @ ABUT.
S431	X	24	40-0			PARAPET A HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

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No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By G.L.O. | Plans Checked DNS

SUPERSTRUCTURE
BILL OF BARS

SHEET 12 OF 16

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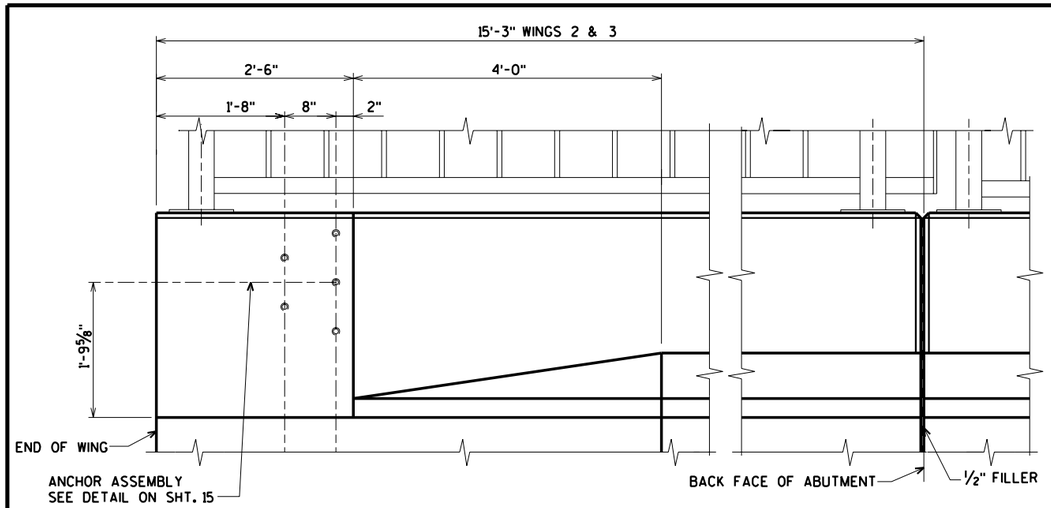
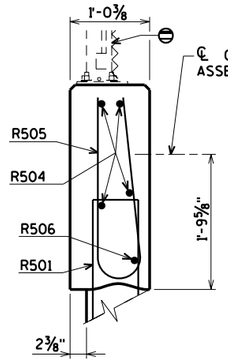
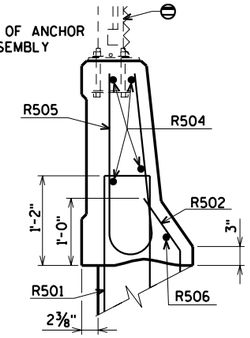
STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



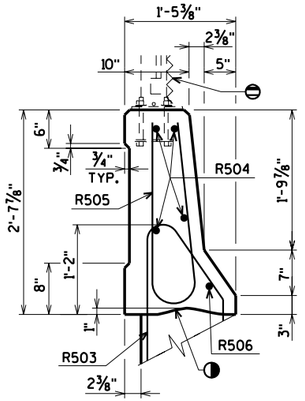
INSIDE ELEVATION



SECTION A



SECTION B



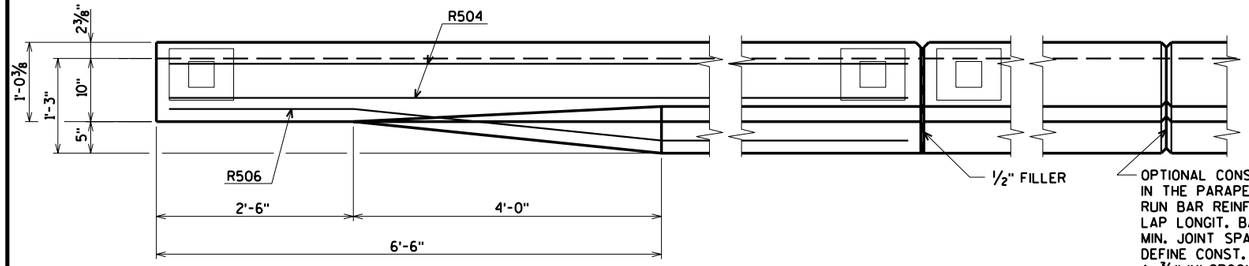
SECTION C

BILL OF BARS

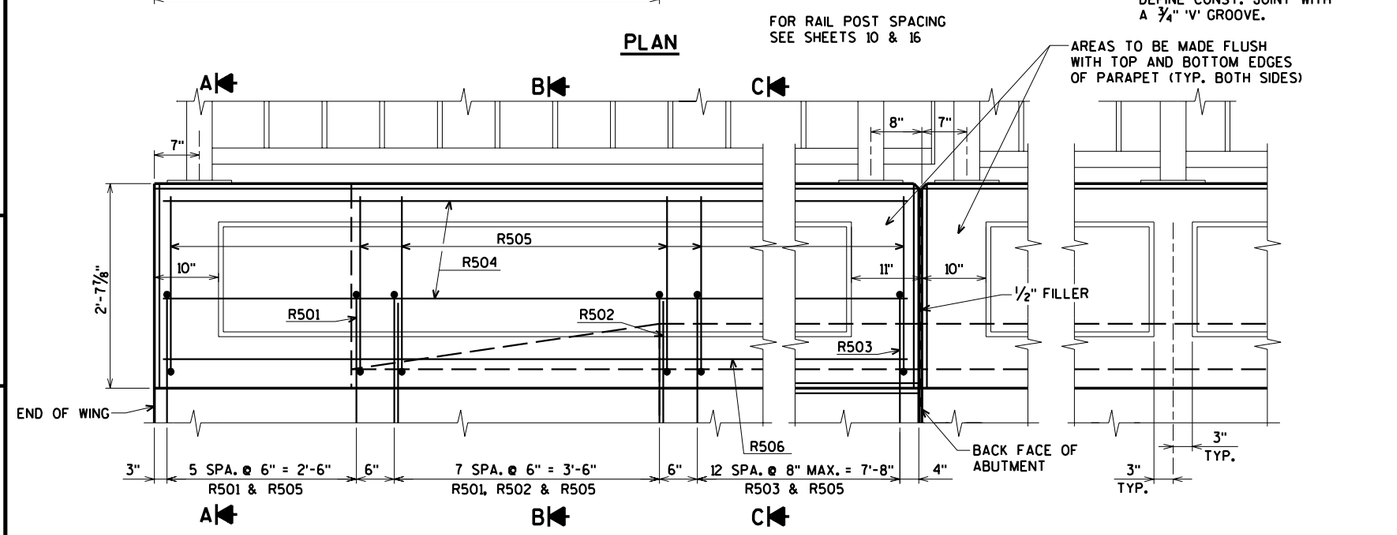
WEIGHT INCLUDED IN ABUTMENT
WEIGHTS SHOWN ON SHEET 4 & 6.

BAR MARK	COATED	NO. REQ'D. SOUTH ABUT.	NO. REQ'D. NORTH ABUT.	LENGTH	BENT BAR	360° COATED SOUTH ABUT. 360° COATED NORTH ABUT. LOCATION
R501	X	14	14	4-7	X	PARAPET VERT.
R502	X	8	8	2-4	X	PARAPET VERT.
R503	X	13	13	4-7	X	PARAPET VERT.
R504	X	4	4	14-9		PARAPET HORIZ.
R505	X	27	27	4-10	X	PARAPET VERT.
R506	X	1	1	14-9	X	PARAPET HORIZ.

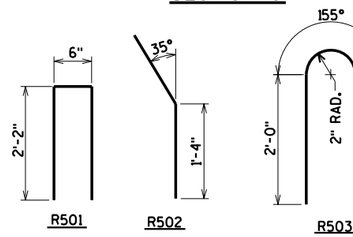
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PLAN

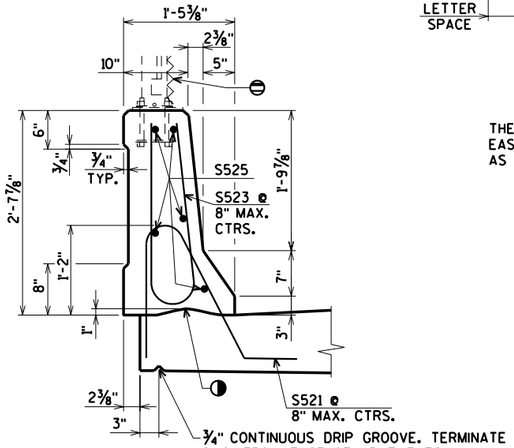


OUTSIDE ELEVATION

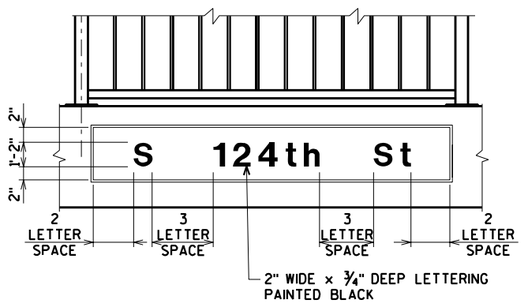


⊖ ORNAMENTAL PROTECTIVE SCREENING. FOR DETAILS SEE SHEET 14

◑ CONSTRUCTION JOINT STRIKE OFF AS SHOWN.



SECTION THRU PARAPET ON SUPER.



STREET NAME INSET DETAIL

THE STREET NAME SHALL BE CENTERED OVER THE EASTBOUND LANES ON THE WEST SIDE OF BRIDGE, AS DIRECTED BY THE ENGINEER.

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By G.L.D. | Plans Checked DNS

SLOPED FACE PARAPET "LF" MOD.

SHEET 13 OF 16

DATE: DATE: DATE:
CHECKED BY: BACK CHECKED BY: CORRECTED BY:
DATE: DATE: DATE:
CHECKED BY: BACK CHECKED BY: CORRECTED BY:

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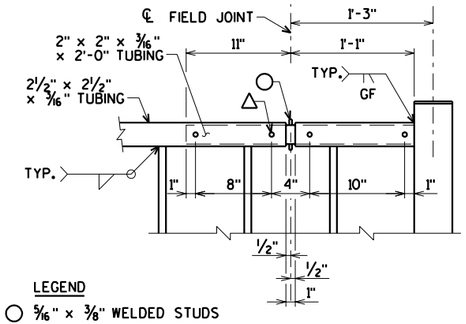
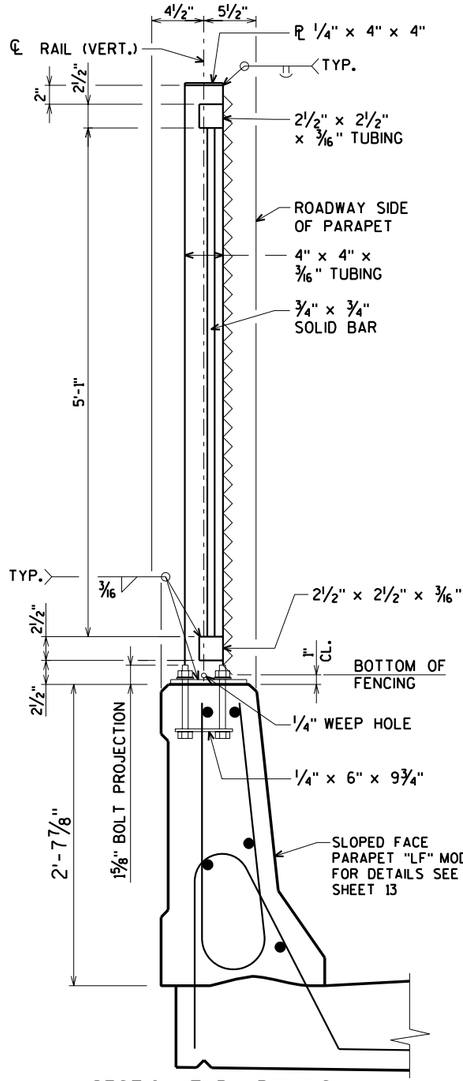


LEGEND

○ 5/16" x 3/8" WELDED STUDS

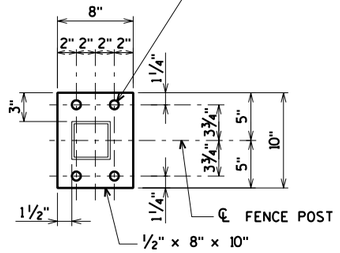
△ WELD BEAD ON EACH SIDE OF TUBE. GRIND BEADS SO THAT SLEEVE FITS FREELY IN THE I.D. OF 2 1/2" ϕ TUBE.

RAILING EXPANSION JOINT DETAIL

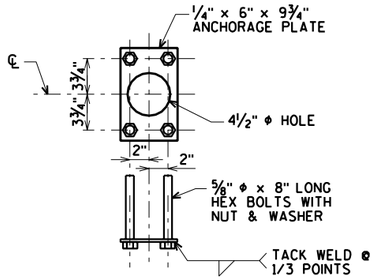


SECTION THRU RAILING

3/4" ϕ HOLES. USE 3/4" x 1 1/2" SLOTTED HOLE FOR CAST IN PLACE ANCHOR BOLTS.



BASE PLATE



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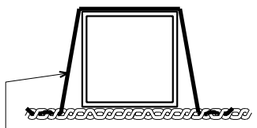
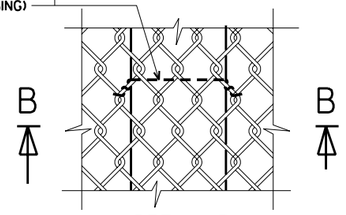
5/8" ϕ CONCRETE MASONRY ANCHOR, TYPE S EPOXY, 7" MINIMUM EMBEDMENT WITH A MINIMUM PULLOUT OF 20 KIPS MAY BE SUBSTITUTED FOR 5/8" CAST IN PLACE ANCHOR BOLTS. ANCHORAGE PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.

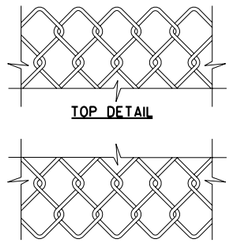


SECTION B-B

FABRIC TIE ℄ 1'-0" MAX. SPA. (TYP. RAIL POSTS & HORIZ. TUBING)

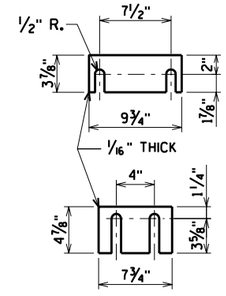


DETAIL B



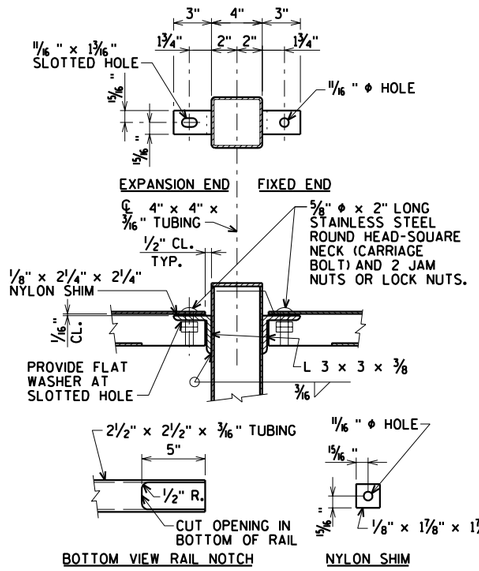
FENCE FABRIC

5'-6" VINYL COATED FENCE FABRIC WOVEN OF 9-GAUGE WIRE IN 1" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

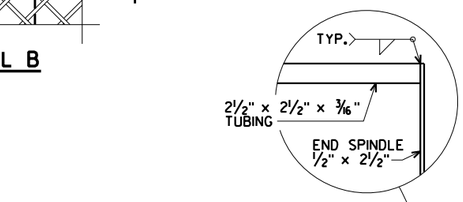


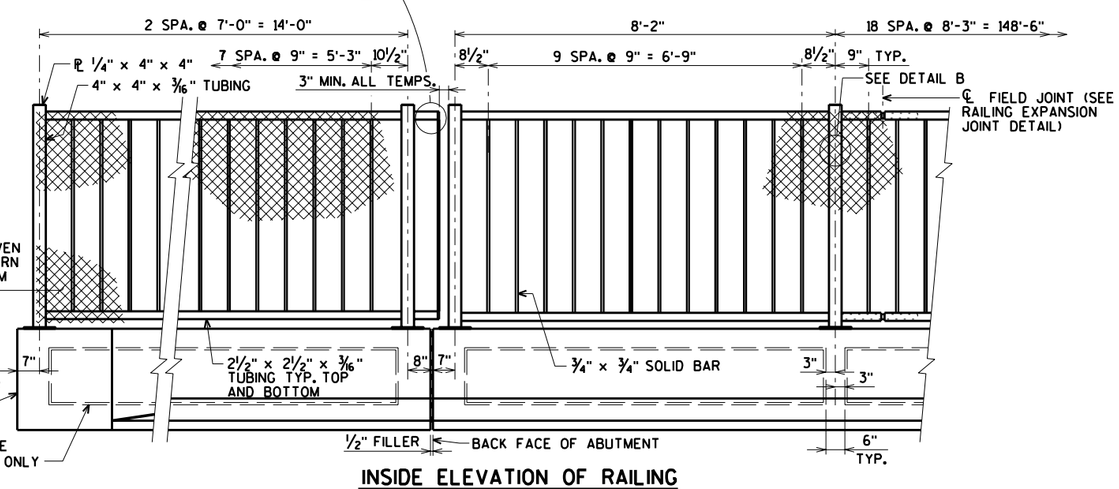
SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST



TOP RAIL CONNECTION FOR ALTERNATE DETAIL





INSIDE ELEVATION OF RAILING

NOTES

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STATE PROJECT NUMBER	SHEET NO.
1090-18-70	

DATE:
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BACK CHECKED BY:
CORRECTED BY:

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No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

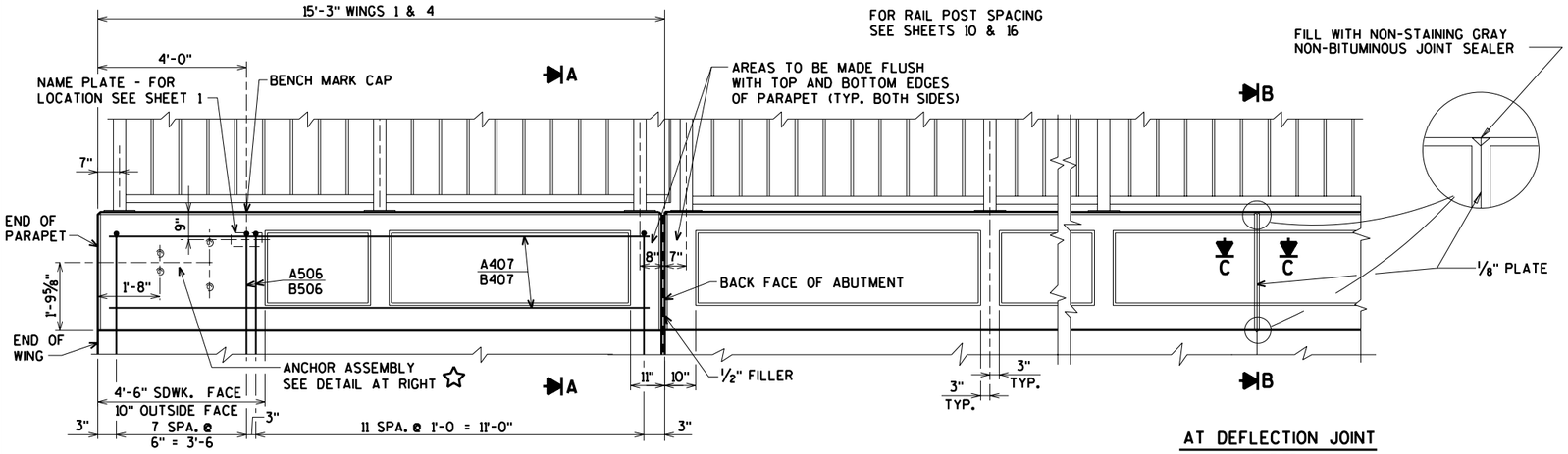
Drawn By G.L.O. | Plans Checked DNS

ORNAMENTAL PROTECTIVE SCREENING WEST SIDE

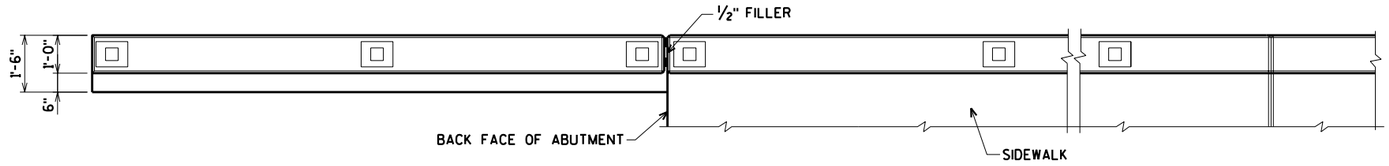
SHEET 14 OF 16

B-40&67-376RL.dgn ecpdf.plt 7/25/2007 black.tbl

STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



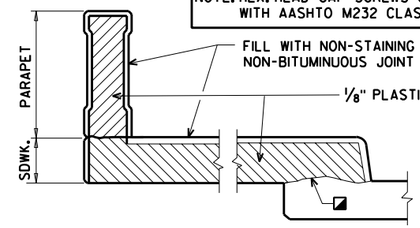
ELEVATION OF PARAPET



AT ABUTMENTS

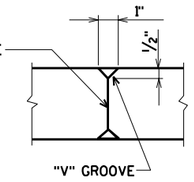
PLAN OF PARAPET

AT PIERS

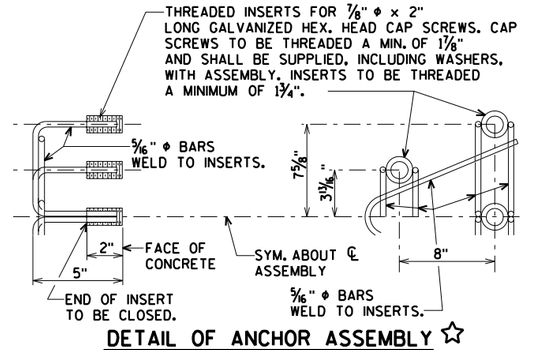


SECTION B

(SHOWING DEFLECTION JOINT IN SIDEWALK AND PARAPET AT PIER)



SECTION C



DETAIL OF ANCHOR ASSEMBLY ☆

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C. SEE SHEET 1 FOR LOCATION.

NOTES

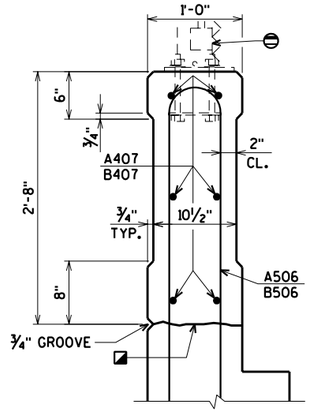
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END. THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION 'B' BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.

☆ PLACE ANCHOR ASSEMBLY AT ALL ABUTMENT WINGS WHERE ATTACHMENT FOR BEAM GUARD IS NEEDED. SEE SHEET 1.

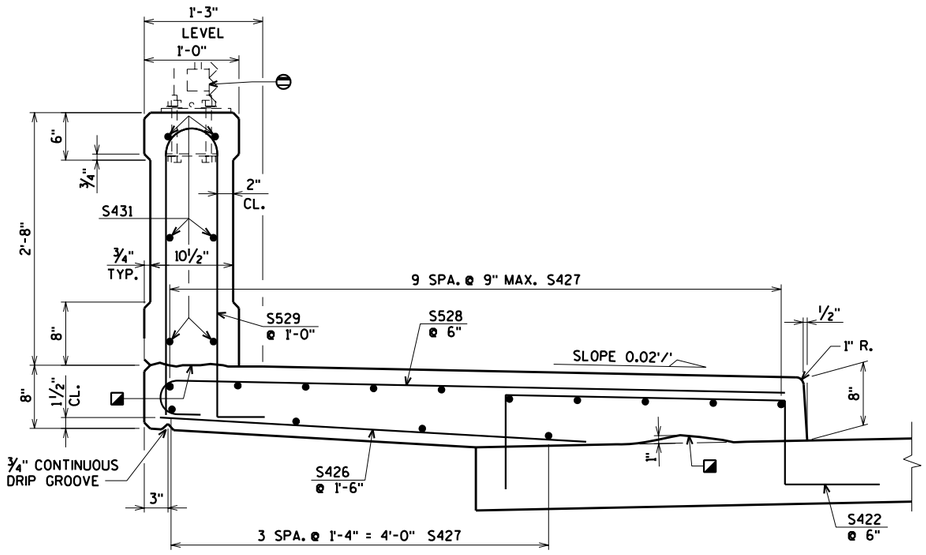
✳ EXTEND ¾" GROOVE TO END OF PARAPET WHEN ANCHOR ASSEMBLY IS NOT USED.

⊖ ORNAMENTAL PROTECTIVE SCREENING, FOR DETAILS SEE SHEET 16

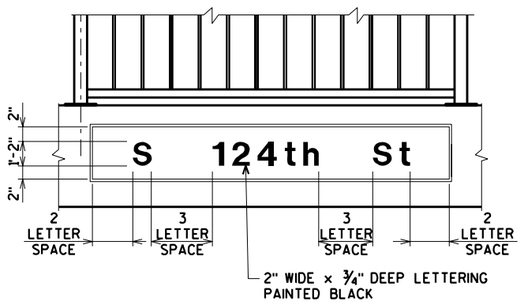
◪ HORIZ. CONS. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.



SECTION A



TYP. SECTION THRU SIDEWALK



STREET NAME INSET DETAIL

THE STREET NAME SHALL BE CENTERED OVER THE WESTBOUND LANES ON THE EAST SIDE OF BRIDGE, AS DIRECTED BY THE ENGINEER.

No.	Date	Revision	By

PLANS PREPARED BY

AYRES ASSOCIATES — Engineers/Architects Scientists/Surveyors
3433 Oakwood Hills Parkway
Eau Claire, WI 54701

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By G.L.O. | Plans Checked DNS

CONCRETE PARAPET

SHEET 15 OF 16

DATE: DATE: DATE:
CHECKED BY: BACK CHECKED BY: CORRECTED BY:
DATE: DATE: DATE:
CHECKED BY: BACK CHECKED BY: CORRECTED BY:

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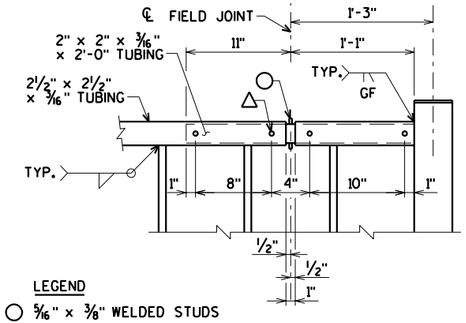
STATE PROJECT NUMBER	SHEET NO.
1090-18-70	



LEGEND

○ 5/16" x 3/8" WELDED STUDS

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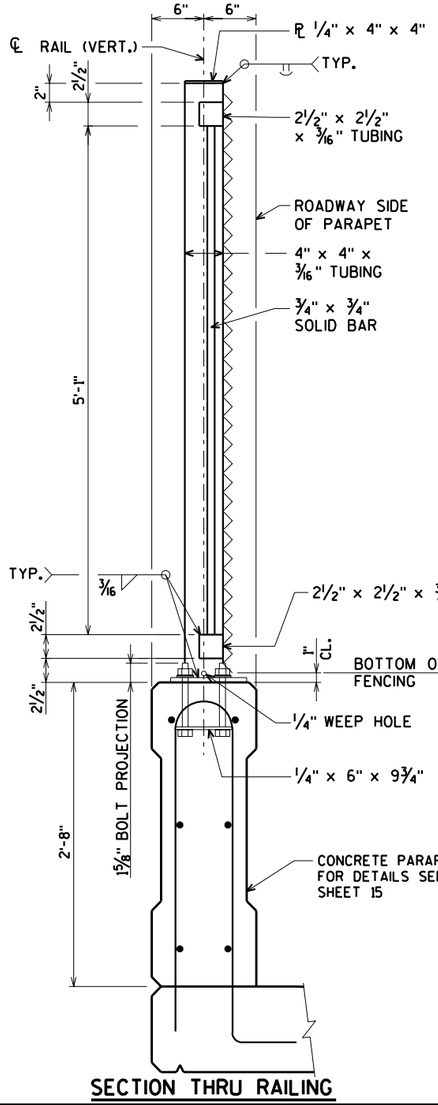
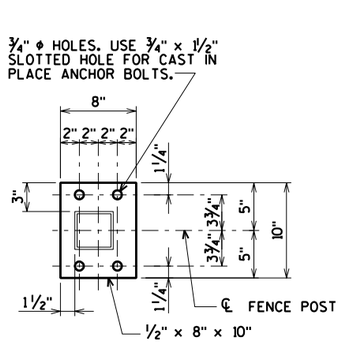
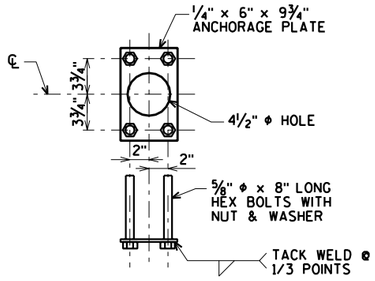


SECTION THRU RAILING



BASE PLATE



ANCHORAGE DETAIL

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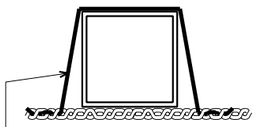
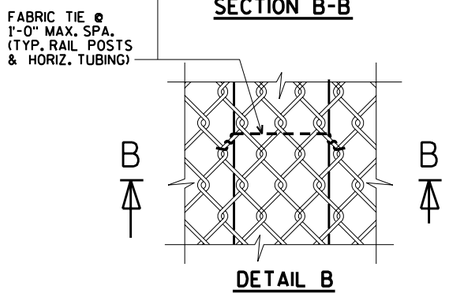


SECTION B-B



DETAIL B

FENCE FABRIC

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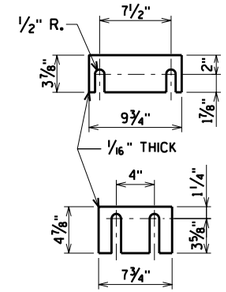
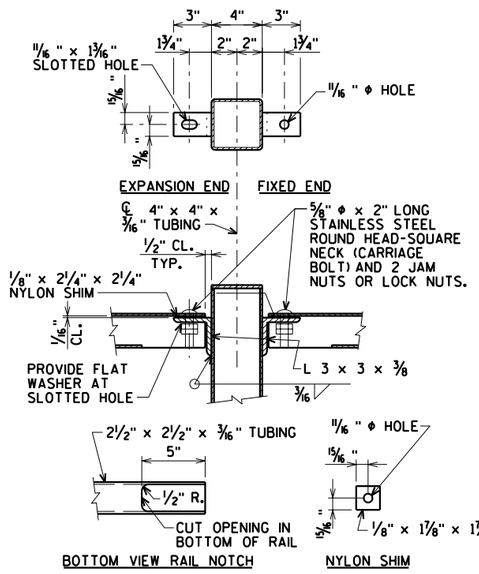
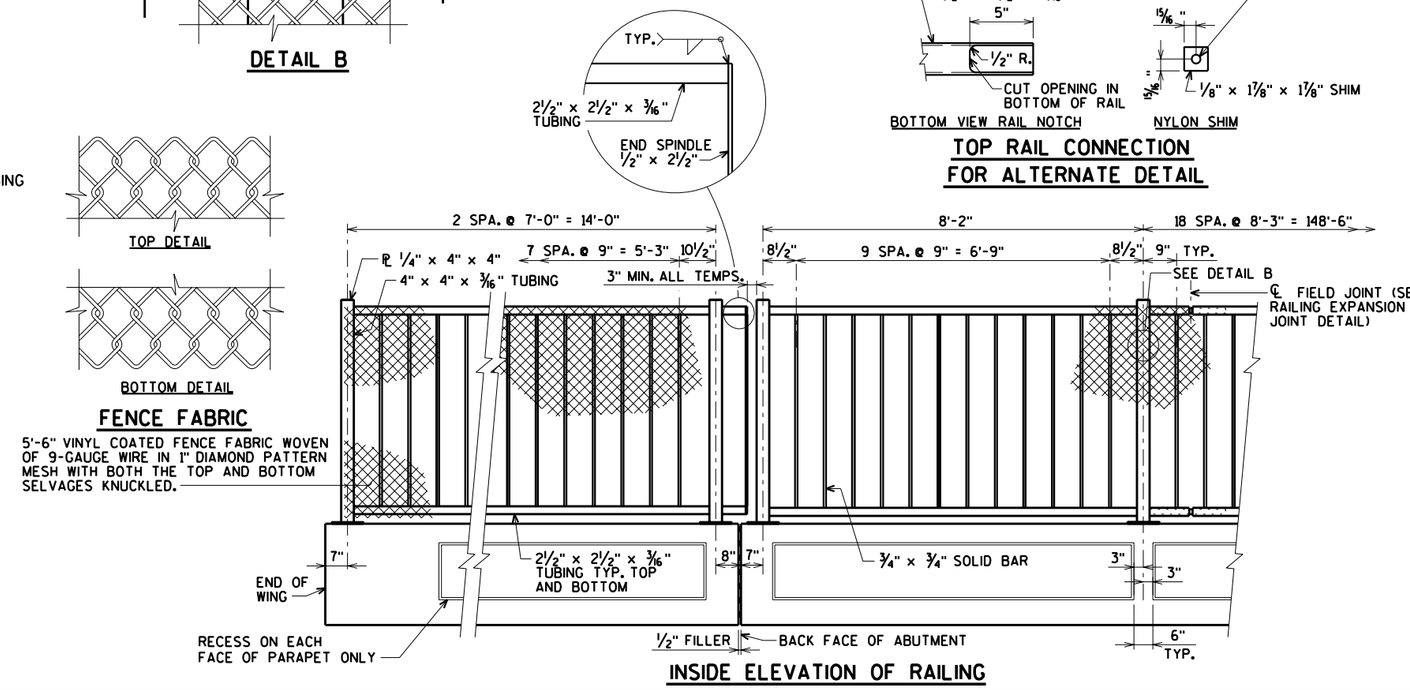


SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST



TOP RAIL CONNECTION FOR ALTERNATE DETAIL



INSIDE ELEVATION OF RAILING

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DATE:
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BACK CHECKED BY:
CORRECTED BY:

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No.	Date	Revision	By

PLANS PREPARED BY

AYRES ASSOCIATES
Engineers/Architects
Scientists/Surveyors
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-376

Drawn By G.L.O. | Plans Checked DNS

ORNAMENTAL PROTECTIVE SCREENING EAST SIDE

SHEET 16 OF 16

B-40&67-376RL.dgn ecpdf.plt 7/25/2007 black.tbl