708 Heartland Trail, Suite 3000
Madison, WI 53717

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Bridge Asbestos Inspection Report

WisDOT Project ID: 1090-35-00
Structure Number: B-67-0113
Structure Name: CTH Y over IH 43
City/County: City of New Berlin, Waukesha County
Lat/Long Coordinates: 425559.06/ 880931.33
TRC Project Number: 258937.0000.0000
Date Inspected: June 14, 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.

None of the materials that were identified as potentially ACM and sampled tested positive for asbestos. 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	Green paint	Girder	PLM, non-detect	No ACM	0
2	Green paint	Girder	PLM, non-detect	No ACM	
3	Green paint	Girder	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
4	Caulk	Around fence attachment plates on parapet	PLM, non-detect	No ACM	0
5	Caulk	Around fence attachment plates on parapet	PLM, non-detect	No ACM	
6	Caulk	Around fence attachment plates on parapet	PLM, non-detect	No ACM	
7	Caulk	Parapet expansion joint	PLM, non-detect	No ACM	0
8	Caulk	Parapet expansion joint	PLM, non-detect	No ACM	
9	Caulk	Parapet expansion 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 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)	
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Other steven.ring@dot.wi.gov	X (via email)	

ID 1090-35-00/70
IH 43 Bridge Rehab

DODGE CO. | WASHINGTON CO. | WASHINGTON CO. | WAUKESHA 67-SE

2,380,000' E | 2,400,000' | 2,450,000' | 2,500,000' | 2,530,000' E

450,000' N

88° 30' | 88° 15'

R-17-E | R-18-E | R-19-E | R-20-E

Town of Ashippun | Town of Erin | Town of Richfield

JEFFERSON CO. | MILWAUKEE CO.

Town of Ixonia | Town of Concord | Town of Sullivan | Town of Palmyra

T-8-N | T-7-N | T-6-N | T-5-N

400,000' | 350,000'

Mapleton | Monches | Colgate | Lannon | Sussex | Menomonee Falls | Brookfield | Elm Grove | New Berlin | Muskego

Monterey | Ashippun | Lac LaBelle | Stone Bank | Lake Merton | Okauchee | Okauchee Lake | Chenequa | Oconomowoc | Oconomowoc Lake | Nashotah | Hartland | Pewaukee | Delafield | Pewaukee Lake | Summit | Dousman | Wales | Bethesda | Genesee Depot | Genesee | Saylesville | North Prairie | Waukesha | Eagle | Jericho | Big Bend | Mukwonago

OCONO-MOWOC | LISBON | MERTON | BROOKFIELD | DELAFIELD | GENESEE | OTTAWA | WAUKESHA | MUKWONAGO | EAGLE | VERNON

Town of Troy | Town of East Troy | Town of Waterford | Town of Norway

WALWORTH CO. | RACINE CO.

LEGEND

Freeway		Dam	
Multilane Divided		Hospital	
U.S. or State Hwy		Airport	
County Trunk Hwy		County Seat	
Town Road		Unincorporated Village	
Firelane		Fish Hatchery	
Railroad		Game Farm	
State Trail		Public Hunt. or Fish. Grds.	
Interchange		Public Camp & Picnic Grds.	
Highway Separation		Ranger Station	
Interstate Highway No.	94	State Park	
U.S. Highway No.	18	County Park — With Facilities	
State Highway No.	59	Without Facilities	
County Highway Letter	T	Rest Area — Modern Facilities	
State Boundary		Wayside — Rustic Facilities	
County Boundary		*Ethan Allen School*	1
Civil Town Boundary		*Univ. of Wisconsin – Waukesha*	2
Section Line			

REGIONS: NW, NC, NE, SW, SE

SECTION NUMBERING OF A TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

CIVIL TOWNS

OCONOMOWOC	MERTON	LISBON	VILLAGE
SUMMIT	DELAFIELD	PEWAUKEE	BROOKFIELD
OTTAWA	GENESEE	WAUKESHA	CITY
EAGLE	MUKWONAGO	VERNON	CITY

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

* Public hunting and fishing grounds not shown within Kettle Moraine State Forest

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

MILES OF HIGHWAY
as of Dec. 31, 2013

STATE	233
COUNTY	400
LOCAL ROADS	2429
OTHER ROADS	0
TOTAL FOR COUNTY	3062

Land Area (2010 Census) ..... 550 sq mi
Population (2010 Census) 389891
County Seat ..... Waukesha

WAUKESHA 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

WAUKESHA 67-SE

B-67-0113

Paint on girder

Caulk around pedestrian fence attachment plates on parapet (did not observe any gaskets under plate)

Caulk in parapet expansion joint

No suspect materials under/around light/sign pole

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 #:	0048319
Project #:	258937.0000.0000
Date Received:	06/16/2016
Date Analyzed:	06/16/2016

Site: DOT Bridge Inspection, B-67-113

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
B-67-113 (1)	Green	Yes	No	- -	- - -	ND	None
B-67-113 (2)	Green	Yes	No	- -	- - -	ND	None
B-67-113 (3)	Green	Yes	No	- -	- - -	ND	None
B-67-113 (4)	Grey	Yes	No	- -	- - -	ND	None
B-67-113 (5)	Grey	Yes	No	- -	- - -	ND	None
B-67-113 (6)	Grey	Yes	No	- -	- - -	ND	None
B-67-113 (7)	Grey	Yes	No	- -	- - -	ND	None
B-67-113 (8)	Grey	Yes	No	- -	- - -	ND	None
B-67-113 (9)	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

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
06/16/2016

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for B-67-113

CTH Y (RACINE AVE) over IH 43

Sep 04,2018

Type	Prior	Frequency (mos)	Performed
Routine	11-28-17	12	X
Interim	08-11-08	0	
SIA Review	11-23-15	48	
Vertical Clearance Measured	11-28-17	0	X

	Start Coordinates	End Coordinates (optional)
Latitude	42°55'59.06"N	
Longitude	88°09'31.33"W	

Owner	STATE HIGHWAY DEPT	
Maintainer		STATE HIGHWAY DEPT

Time Log

Hours	Minutes
2	45

Team members

Leah Barsch

	Name	Number	Signature	Signature Date
Inspector	Zemke, Jason	2016	Jason Zemke E-signed by Jason Zemke(dotjrz)	01-07-19

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

Identification & Location

Feature On: CTH Y (RACINE AVE)	Section Town Range: S32 T06N R20E	Structure Number: **B-67-113**
Feature Under: IH 43	County: WAUKESHA	
Location: 0.2M N JCT CTH HH	Municipality: NEW BERLIN	Structure Name:

Geometry

measurements in feet, except where noted

Approach Roadway Width: 79	Bridge Roadway Width: 78.5	Total Length: 214.0
Approach Pavement Width: 102	Deck Width: 106.5	Deck Area (sq ft): 22791

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	4	17100	2015	TWO WAY TRAFFIC
Under	4	62700	2018	TWO WAY TRAFFIC

Capacity

Load Rating

Inventory rating: HS16	Overburden depth (in): 0.0	Last rating date: 07-08-13	Controlling: INTERIOR DECK GIRDER Moment
Operating rating: HS26	Deck surface material: CONCRETE	Re-rate for capacity (Y/N):	Control location: 6.2 SPAN 2, 66.5
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 #: 84.1

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	CONT STEEL	DECK GIRDER		101.5	
2	CONT STEEL	DECK GIRDER		108.0	Y

Expansion joint(s)

Temperature: File: | New: 88

Joint #	Location	Type	Last inspection date	Last measure (in)	New measure (in)
1	NORTH ABUTMENT	STRIPSEAL	11-28-17	1.5	0.5
2	SOUTH ABUTMENT	STRIPSEAL	11-28-17	1.3	1.0

Clearance

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical Under Cardinal	16.29	28-Nov-2017	16.3
Highway Min Vertical Under Non-Cardinal	18.51	28-Nov-2017	18.47
Horizontal Under Cardinal	65.43		
Horizontal Under Non-Cardinal	63.42		
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

Special Components

Component	Year	Work Performed	Note
CONC. PROTECTIVE TREATMENT - TK-590-1 MS			APPLIED IN 2014 MAINTENANCE PROJECT

Construction History

Year	Work Performed	FOS id
2018	REPAIR SUPERSTRUCTURE	0077-12-28
2009	PAINTING	1090-22-70
2009	RAISE STRUCTURE	1090-22-70
2009	NEW BEARINGS	1090-22-70
2009	NEW DECK	1090-22-70
1998	PAINTING	1091-01-63
1984	OVERLAY - CONCRETE	0067-34-11
1969	NEW STRUCTURE	1092-03-77

Maintenance Items History

Item	Recommended by	Status	Status change	Year completed
Misc - Follow Up	Zemke, Jason (2016)	COMPLETE	06/06/18	2018
Critical findings report for damage to G1 from vehicle impact 12/1/17. Repair/replacement of G1 in Span 1 required to remove shoulder closed restriction on bridge.				
Superstructure - Heat Straighten	Zemke, Jason (2016)	COMPLETE	06/27/18	2018
Work completed May 2018 from Dec 2017 vehicle damage.				
IMP-Thin Epoxy Overlay	Zippel, William J (9605)	REJECTED	11/28/17	
Recommend thin epoxy overlay 2016.				
Deck - Seal w/ Concrete Sealer	Wittrock, Jon (9613)	COMPLETE		2014
UPLOADED ON 4/28/2015 FROM EXCEL SHEET COMPILED BY ALLAN JOHNSON. SEE SPECIAL COMPONENT TAB FOR SPECIFIC PRODUCT				

Maintenance Items

Item	Priority	Recommended by	Status	Status change
Drainage - Repair/Replace Deck Drains	HIGH	Zemke, Jason (2016)	IDENTIFIED	01/04/19
Inlet at NE corner at outside shoulder (not deck drain) - tuckpoint below casting at adjustment rings. Roadway base course visible; also tuckpoint outside inlet at SE quad.				
Substructure - Other Work	MEDIUM	Zemke, Jason (2016)	IDENTIFIED	10/09/18
Recommend sealing vertical medium and wide cracks at both abutments.				
Misc - Other Work	MEDIUM	Zemke, Jason (2016)	IDENTIFIED	10/09/18
Recommend monitoring cracking in top cap of pier for growth or widening.				
Approach - Seal Joint along Parapet/Wing	MEDIUM	Zemke, Jason (2016)	IDENTIFIED	01/04/19
Clean and seal parapet/sidewalk joints at NE and SE quadrants.				
Expansion Joints - Clean	LOW	Zippel, William J (9605)	IDENTIFIED	01/07/16
Clean out expansion joints.				
IMP-Concrete Overlay	LOW	Zippel, William J (9605)	IDENTIFIED	01/07/16
2034-Recommend concrete overlay.				
Approach - Seal Approach to Paving Block	LOW	Zippel, William J (9605)	IDENTIFIED	01/07/16
Reseal approaches at headers.				
Misc - Remove Vegetation (Spray)	LOW	Zemke, Jason (2016)	IDENTIFIED	10/09/18
Spray slope paving to remove vines, particularly at W end of S slope. Also kill weed overgrowth at riprap flumes at all 4 quadrants.				

Elements

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**12**		**Reinforced Concrete Deck-Coated Reinforcing**	SF	22,928	21,614	1,314	0	0
		1080	Delamination - Spall - Patched Area	SF		0	3	0	0
			Patch at concrete deck thickening at Bay 5 at south abutment (3 SF CS2). **Mortar rubs at soffit at Bay 1 over N slope.**						
		1130	Cracking (RC)	SF		0	1,311	0	0
			Transverse HL to narrow cracks with efflorescence in all bays and both spans, especially in bay 5 and under the west overhang**, and in bay 6 between NB/SB sides of the bridge**.						
	8000		Wearing Surface (Bare)	SF	16,373	14,073	2,300	0	0
			No IR since **2009** re-deck. **Some poor finishing, with surface not closed up at NB side near N end of deck.**						
		3220	Crack (Wearing Surface)	SF		420	2,300	0	0
			Few longitudinal narrow cracks **over pier. Typical HL/Nrw transverse cracks at pier. Nrw longit. cracks at deck ends. Few scattered HL random cracks. Cracks are wider at outside shoulders.**						
X	**107**		**Steel Open Girder**	LF	2,526	2,089	436	1	0
			Girders are numbered **1-12** west to east. **Note: G1 Span 1 over NB I-43 heat straightened 2018 and repainted.**						
		1000	Corrosion	LF		0	373	0	0
			S Span: **Some areas with** Lt edge rust bot flange 0-10 ft from S. abut. **Some light e**nd rust over abutment bearings. Scattered rust bot**tom** flange over SB rdwy**. Some heavier rust at G6/7 over L2 NB**. N Span: Small areas of freckled rust at girder ends and blush rust over pier bearings.						
		1010	Cracking	LF		0	4	1	0
			Traffic impact from **12/1/2017 resulted in tears to web at several diaphragms. 2018 repair plans include bolted repair**s and crack **arresting/grinding. G1at 2nd interm. diaph connection - horiz. crack near btm flang**e to **web weld mouseho**led **at each end; G1 between 2nd and 3rd interm. diaph - horiz crk near btm weld ground out; G1 at 3rd interm. diaph conn**ection **- horiz. crk near btm flange to web weld mouseho**led **at each end, large tear in web cut out to rectangular hole with 0.5" radius corners and bolted over, short diagonal crack in stiffener plate through old diaph bolt hole unable to be fully drilled out because** of **drill clearance to web [1' CS3].**						
		1020	Connection	LF		3	0	0	0
			Traffic impact **to** G1 **in span 1 from 12/1/2017 resulted torn web and web-**diaphragm connections at **intermediate diaphs 2-3-4; all were repair**ed **using various bolted conn**ection**s.**						
		1900	Distortion	LF		0	59	0	0
			Traffic impact **to** G1 **in span 1 from 12/1/2017 resulted in distortion to the web and bottom flange.** The total length of distortion of the bottom flange and web **wa**s 59 LF, 14 LF north and 45 LF south of the first field splice**; this wa**s corre**cted using heat straightening by International Straightening Inc. Approximately 4LF** of **distortion** and **gouges still visible after straightening but is within** the s**traightness specification.**						
	8516		Painted Steel	SF	36,275	36,094	181	0	0
			Re-painted **4/10. G1 at Span 1 partially repainted 2018 post-heat straightening (approx. 59').**						
		3440	Effectiveness (Steel Protective Coatings)	SF		36,094	181	0	0
			Paint in overall good condition with isolated areas of **edge rust at bottom flanges near abutments and over traffic. A few isolated areas with peeling paint at bottom flange**s. S Span: Paint failure at corners of bottom flange 0-10 ft from S. abut. Small areas of paint failure over abutment bearings. S**ome s**cattered rust bot. flng over SB rdwy. Blush rust over pier bearings G2-G4. N Span: Small areas of freckled rust at girder ends and blush rust over pier bearings. **Estimate <0.5% of total area with peeling** paint or **light corros**ion **(CS2).**						

X	**205**		**Reinforced Concrete Column**	EA	6	5	0	1	0
		1080	Delamination - Spall - Patched Area	EA		0	0	1	0
			Med. **sized** delam @ top of Col #3, South Face.						
X	**215**		**Reinforced Concrete Abutment**	LF	229	170	44	15	0
			Some staining on both abutments. **Vertical joint sealant failing at both abutments.**						
		1080	Delamination - Spall - Patched Area	LF		0	16	1	0
			South Abut: 2 small sound patched areas (2 LF**); Delam at 2nd girder from the East (1 LF CS3**). North Abut: Numerous sound patched areas(1**3** LF). Small spall in abut seat at G1.						
		1130	Cracking (RC)	LF		24	28	14	0
			Both abutments: **HL/Nrw v**ert & **d**iag cracks, some with efflorescence. HL Map cracking in backwalls. **Vertical Medium cracks at both abutments some with rust staining. Wide crack on N. abutment between G3 & G4.**						
X	**234**		**Reinforced Concrete Cap**	LF	104	77	27	0	0
		1080	Delamination - Spall - Patched Area	LF		0	3	0	0
			Sm delam underside between C1 & C2, also @ NW top corner of E half of Pier**; Delam on N. face between C4 & C5.**						
		1130	Cracking (RC)	LF		16	24	0	0
			Several load induced HL **and NRW** cracks radiating diagonally up from each column on the N face of the Pier, also several vertical cracks at top of Pier Cap above each column in negative moment regions, Similar on S face but not as bad.						
X	**300**		**Strip Seal Expansion Joint**	LF	222	0	214	8	0
			Jts. meas'd at **88** degrees: **Meas. @ parapet: NW** 1-1/2", **NE 1-3/4", SW 1-1/4", &** SE 1-**3/8". Meas. near curb between gap of steel extrusion NW 1-1/4", NE 1", SW 7/8", & SE 1/2".**						
		2350	Debris Impaction	LF		0	214	0	0
			Dirt & debris in joint**, heavier packed at edges.**						
		2360	Adjacent Deck or Header Damage	LF		0	0	8	0
			Longit HL **and NRW** cracks in all headers. **5 LF CS3** spall**ing** in N**.** header in the SB lanes. **CS3 delam(S.) and spall(N.)** at end of compression seal joint at both ends of bridge. **Failing patch at SW corner of header 1 LF.**						
X	**302**		**Compression Joint Seal**	LF	367	181	186	0	0
			Longitudinal Joint in Median						
		2310	Leakage, Seal Adhesion, Damage,Cracking	LF		0	14	0	0
			Few areas of no adhesion/leakage.						
		2350	Debris Impaction	LF		0	172	0	0
			80% of joint with moderate debris impaction.						
X	**310**		**Elastomeric Bearing**	EA	24	24	0	0	0
			Bearings resting on 10-1/2" precast concrete pads.						
X	**313**		**Fixed Bearing**	EA	12	12	0	0	0
			Bearings resting on 10-1/2" precast concrete pads.						
X	**331**		**Reinforced Concrete Bridge Rail**	LF	518	440	75	3	0
			Staining at all East rail fence posts.						
		1080	Delamination - Spall - Patched Area	LF		0	1	3	0
			West Rail: Lg vertical spall at N expansion joint. **Large spall on backface near south joint.** **East Rail: Med size CS3 spall at N. expansion joint. CS2 spall at vertical expansion jnt near middle of bridge.**						
		1130	Cracking (RC)	LF		45	74	0	0
			Scattered HL-Nrw vert crks.						

X	**8400**		**Integral Wingwall**	EA	4	3	1	0	0
		8903	Wall Deterioration	EA		3	1	0	0
			All wings: Sound patch at abut. and few HL vert cracks. **SW: HL and NRW vertical cracks.**						

Assessments

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**9001**		**Drainage - Ends of Structure**	EA	10	8	1	1	0
			Qty= 6 inlets + 4 wings. Riprap flumes @ NW & NE wings. Riprap along both S wings. Curb and gutter w/inlets at all 4 corners. **NW: inlets at median and outside-good; riprap at wingtip-good. NE: median inlet-good; outside inlet-deterioration at adjustment rings/block below casting (roadway base gravel visible) - CS3; riprap at end of wing overgrown with weeds but no erosion. SE: inlet with failing adjustment rings (CS2); riprap at tip and around wing is overgrown with weeds, no erosion. SW: inlet-good, wingtip-good.**						
X	**9007**		**Median**	EA	1	0	1	0	0
			Median: HL **and NRW** transv and longit cracks. Some minor plow abrasion.						
X	**9009**		**Sidewalk**	EA	2	0	2	0	0
			Both Walks: **scattered pop outs wtih** HL **and NRW** Trans cracks - heavier over pier. **West walk 2-large spalls at curb near middle of bridge.**						
X	**9011**		**Utilities**	EA	2	2	0	0	0
			(2) Light poles**. Both poles have nests under the monotube pole. No issues noted. East: BYY20 West: DYY8**						
X	**9030**		**Signs - Object Markers**	EA	4	3	1	0	0
			(4) Tiger 2 NB and 2 SB attached to sign bridges **S-67-915 (SB) and S-67-913 (NB). SB right: right chip at top of sign. SB left: dented at the bottom near the bottom bolt from traffic impact.**						
X	**9035**		**Signs - Other**	EA	2	2	0	0	0
			(2) "Slippery When Wet" ahead signs on light poles on bridge.						
X	**9043**		**Slope Protection- Crushed Aggregate with Bit.**	EA	2	2	0	0	0
			Resealed 2009 **South:** some **bleaching at SE corner, vines growing through at W. end and light growth on E. end. North: ligh**t bleaching **at bottom and scattered locations**.						
X	**9167**		**Steel Diaphragm**	EA	130	100	30	0	0
			Some bottom corner edge rust **scatte**red **throughout the structure (7 at south abutment, 15 in span 1, 3 at pier, 2 at span 2, and 3 at north abutment = 30 total CS2) Note: G1 in span 1 has bolted retrofit repai**r connection**s at intermediate diaphs 2 and 3 due to Dec. 2017 traffic impact, plus welded connection at diaph 4 removed and bolt**ed to **stiffener.**						
X	**9322**		**Approach Roadway - Concrete (non-structural)**	EA	4	1	3	0	0
			NW- good condition except large delam in median curbhead NE- Few **small spalls/ravels at joints, expansi**on **joint** sealing **is failing SW- exp. joint material starting to fail, a few crks in C&G pan SE- exp. joint material is failing**						
X	**9336**		**Luminaire Bases**	EA	2	1	1	0	0
			West base: NRW cracks propagating from the utility box out in parapet.						
X	**9337**		**Protective Screening**	EA	2	1	1	0	0
			2" Galvanized CL Fence on both rails. **East rail: galvanizing is starting to fail.**						

NBI Ratings

	File	New
Deck	7	7
Superstructure	4	6
Substructure	6	6
Culvert	N	N
Channel	N	N
Waterway	N	N

Structure Specific Notes

Painted in 1998.
Need to monitor cracking in Pier Cap: No apparent change 2017 **or 2018.**
The bridge was stationed south to north and the girders were labeled west to east. The diaphragm numbering increased fr**om south to north.**
12/15/17: Empty dump truck traveling full freeway speeds on I-43 NB with box up hit G1 over L2 resulting in significant damage. Repairs were completed by Zenith Tech with International Straightening Inc. as the heat straightening sub in early May 2018.

Inspection Specific Notes

Inspector Site-Specific Safety Considerations

Structure Inspection Procedures

Top-park in very wide SB RT shoulder **of Racine Ave.**
Bottom- park on NB or SB RT shoulder of I**-43**

Special Requirements

	Chk	Hours	Cost	Comments

Routine

Document Comment/Description

Roadway looking SB

Routine

Document Comment/Description

W elevation looking NB

Routine

Document Comment/Description

SB at N approach median - curb with several spalls.

Routine

Document Comment/Description

Inlet at NE quad - CABC visible below casting - tuckpoint needed.

Routine

Document Comment/Description

NE approach - typical unsealed transverse joints.

Routine

Document Comment/Description

NE- wing/sidewalk joint full of weeds and needs to be sealed.

Routine

Document Comment/Description

Strip Seal Exp Jt - CS3 spall in S header at compression seal.

Routine

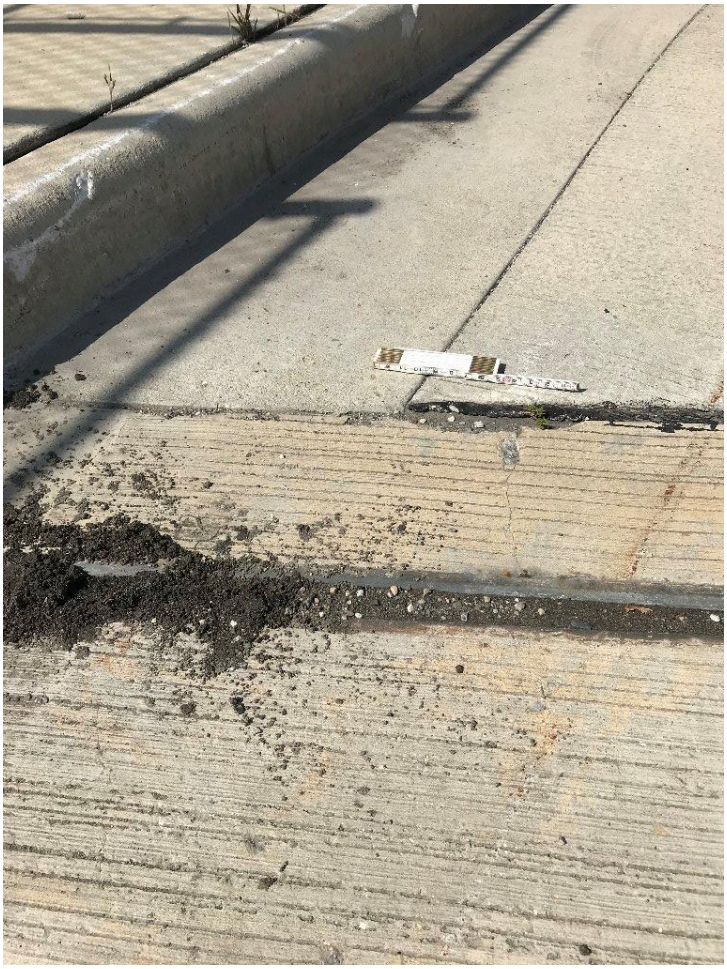
Document Comment/Description

West Rail: Large vertical spall at N expansion joint.

Routine

Document Comment/Description

Typical small spall in header.



Routine

Document Comment/Description

West sidewalk - spall near middle of bridge

Routine

Document Comment/Description

Debris in compression seal.

Routine

Document Comment/Description

Failed patch in S header.

Routine

Document Comment/Description

G1 span 1 previous distortion heat straightened. Note some minor distortion still present but within tolerances.

Routine

Document Comment/Description

E face G1 in span 1 at intermediate diaph connection 4 - crack in stiffener drilled out but not fully arrested due to clearance issue between web and drill.

Routine

Document Comment/Description

Span 1 superstructure in good condition.

Routine

Document Comment/Description

G1 in span 1 repainted after heat straightening.

Routine

Document Comment/Description

G1 span 1 - some minor distortion still visible.

Routine

Document Comment/Description

Typ light rust at girder - picture at G12 at S abut.

Routine

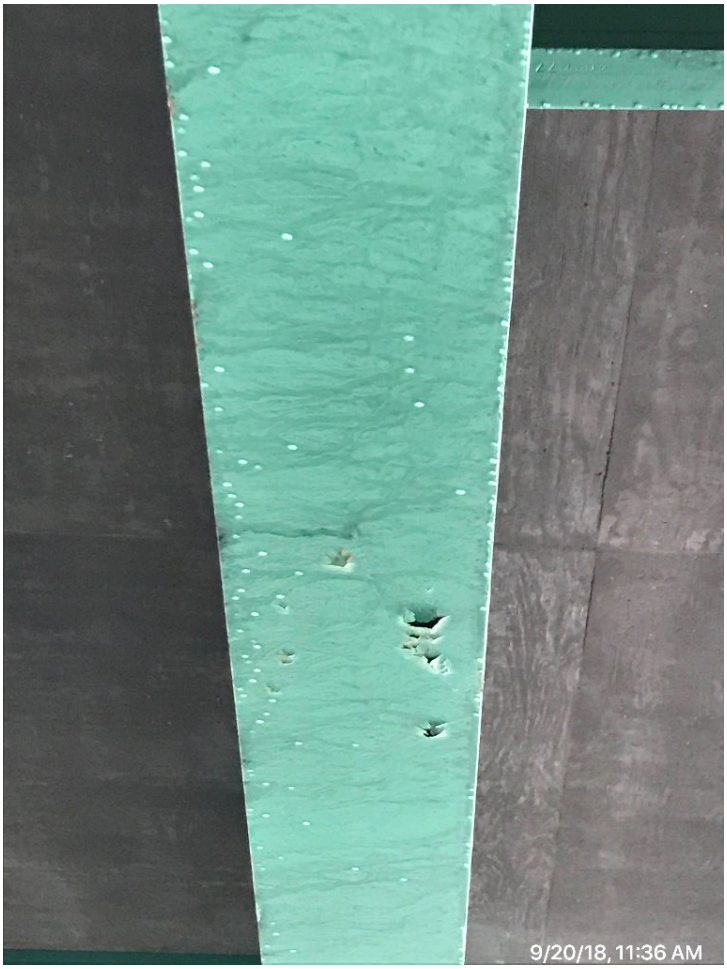
Document Comment/Description

Example of condensation at bottom flanges at south abutment girder ends.

Routine

Document Comment/Description

Scattered peeling paint in bottom flange with light rust.



Routine

Document Comment/Description

Span 1 girders - typical edge rust on bottom rust.

Routine

Document Comment/Description

Typical condition superstructure span 2.

Routine

Document Comment/Description

Bay 1 at north abutment - mortar rubs in soffit.

Routine

Document Comment/Description

Vine growth at south slope.

Routine

Document Comment/Description

RC Abut - Wide crack at Girder 4 at N abutment.

Routine

Document Comment/Description

RC Cap - Typical HL load induced cracks in cap. Photo shows north side of pier at west end.

Routine

Document Comment/Description

CS3 delam on C4.

Routine

Document Comment/Description

Typical medium cracking at abutment.

Routine

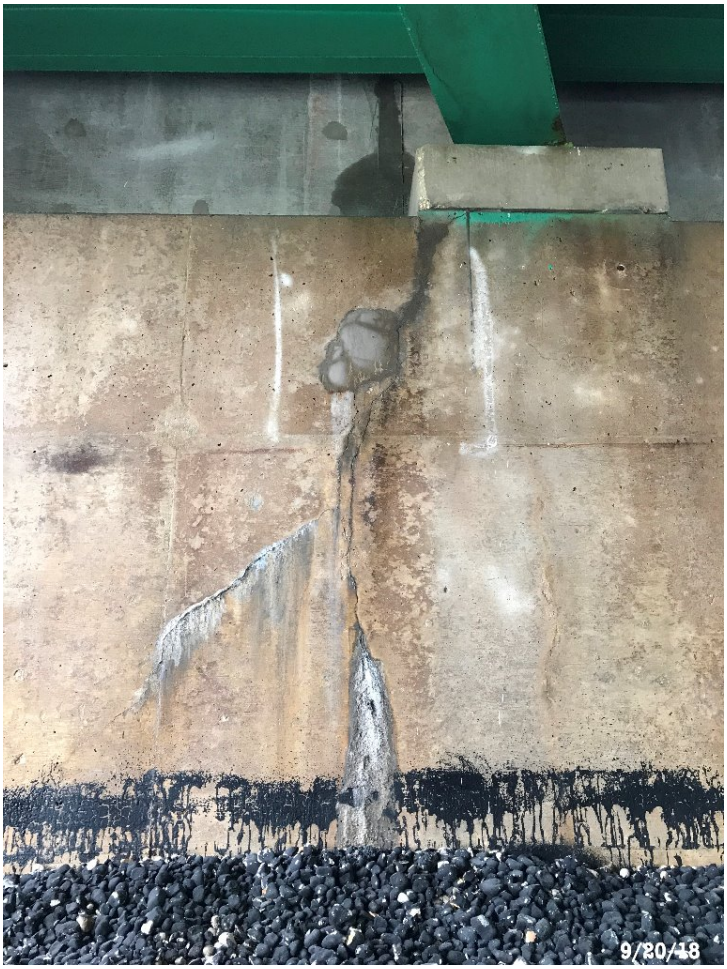
Document Comment/Description

SW wing - patch with adjacent cracks.

Routine

Document Comment/Description

S abut - crack with effl and patch.



Vertical Clearance Verification

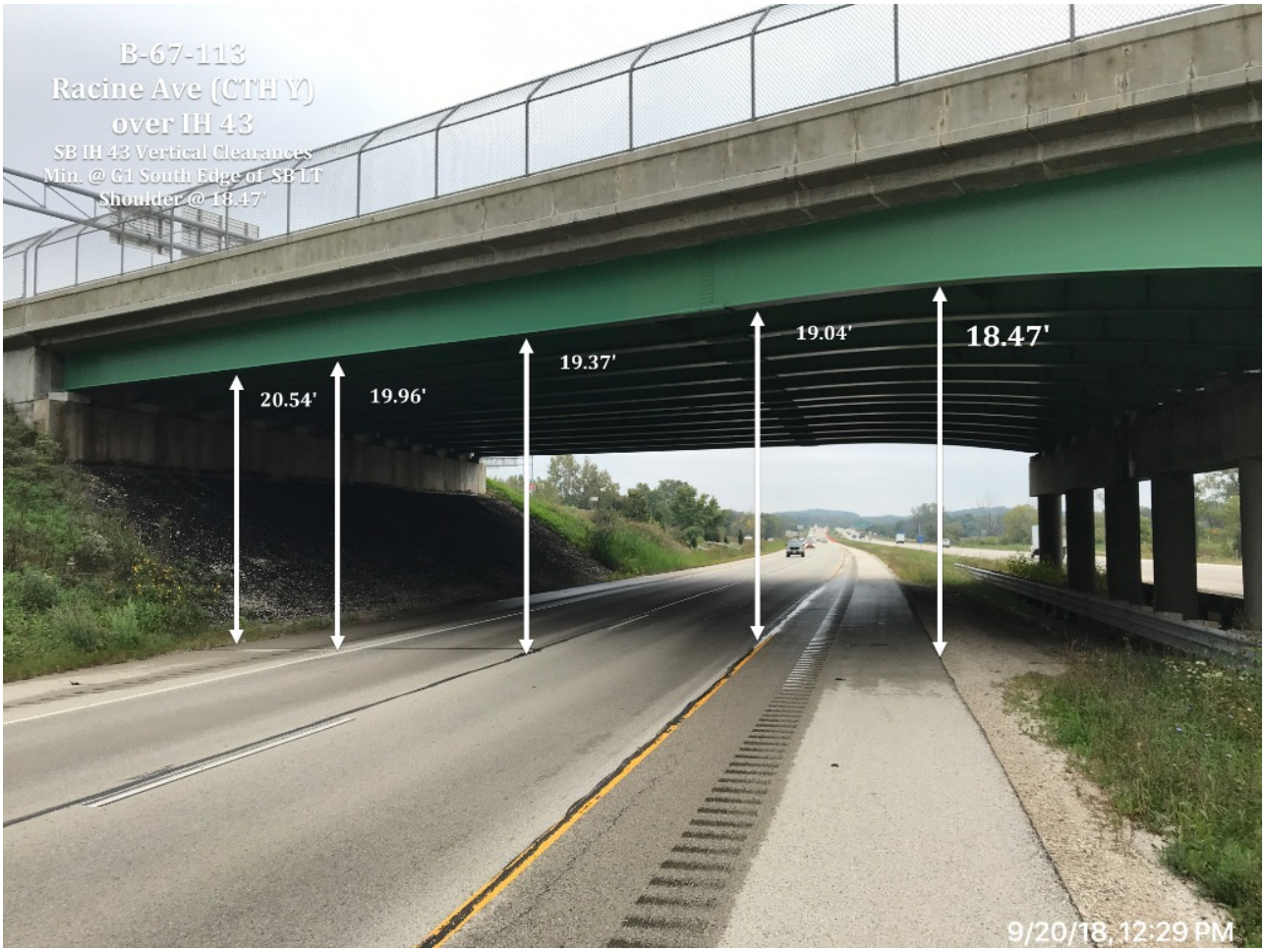
Document Comment/Description

Span 1 min. VC at edge of NB right shoulder, 16.30'

Vertical Clearance Verification

Document Comment/Description

Span 2 Min. VC at SB left shoulder, 18.47'



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STATE PROJECT NUMBER

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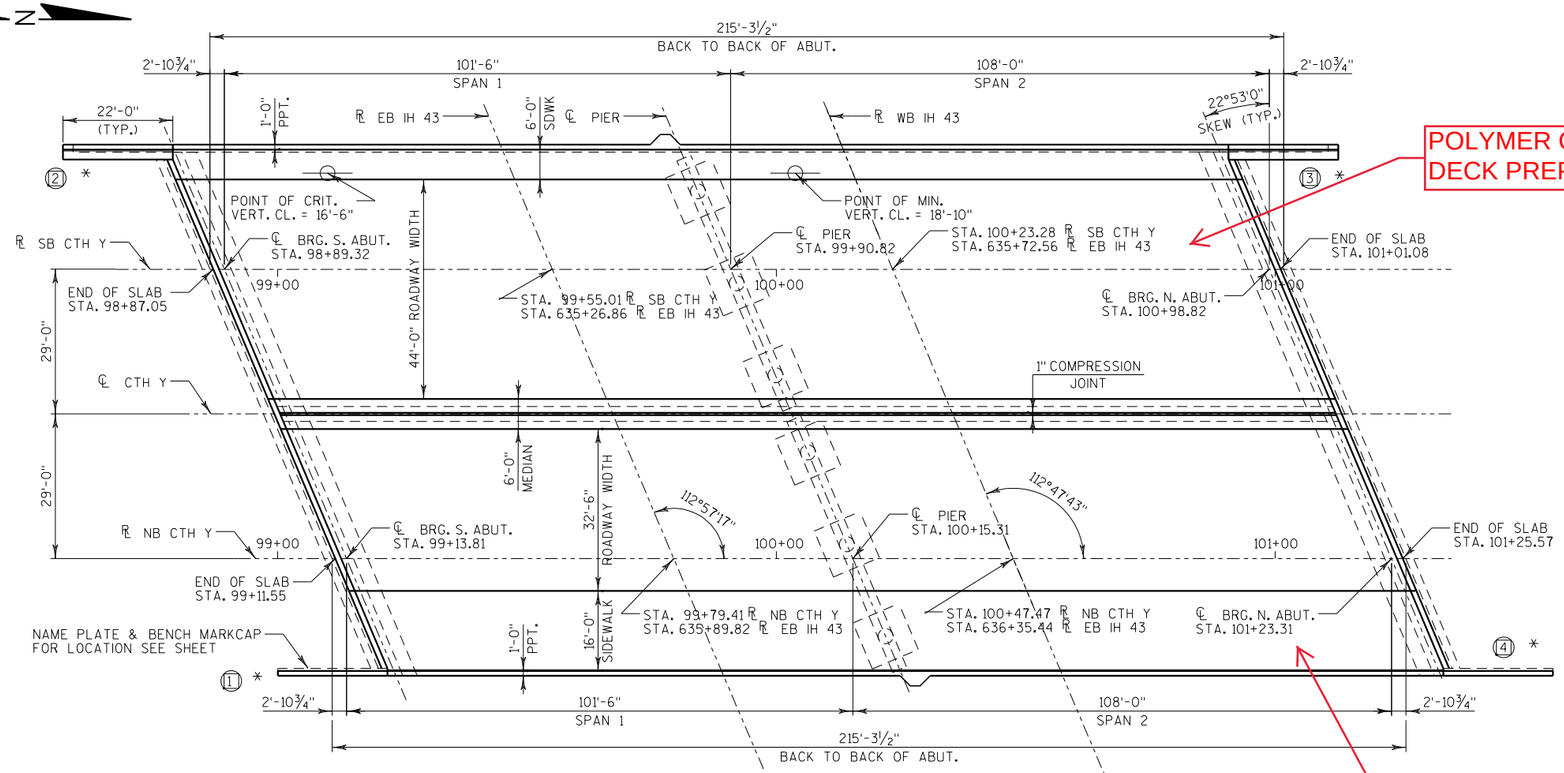
* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT

(2) - INDICATES WING NUMBER



DESIGN DATA

LIVE LOAD:

DESIGN RATING: HS-20
INVENTORY RATING; HS-18
OPERATIONAL RATING; HS-29
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 190 Kips.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SUPERSTRUCTURE 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.

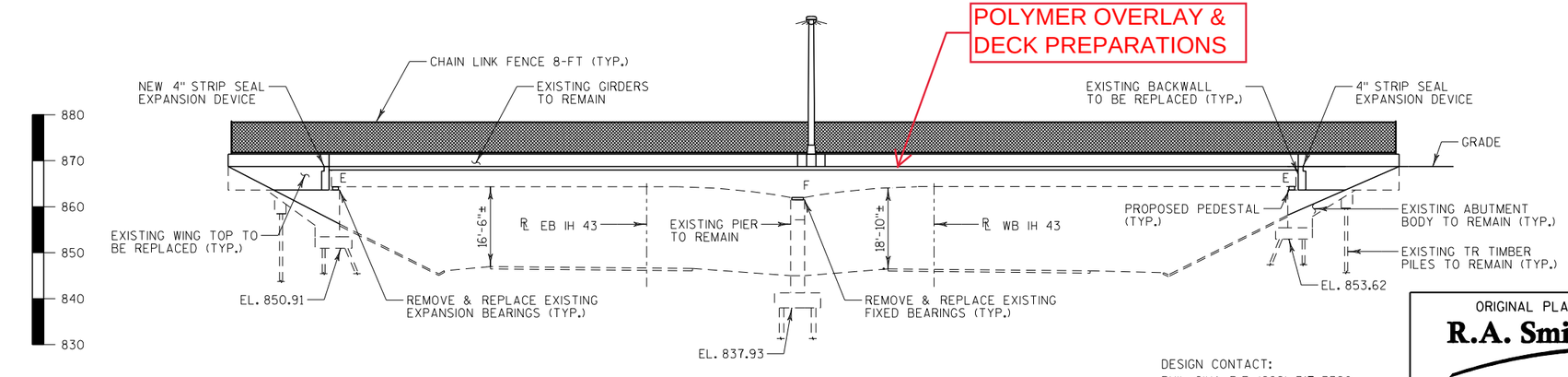
PLAN
2 SPAN STEEL PLATE GIRDER

LIST OF DRAWINGS

TRAFFIC VOLUME

C.T.H. Y

A.D.T. = 32,052 (2029)
R.D.S = 45 MPH



ELEVATION
NORMAL TO IH 43

DESIGN CONTACT:
PHIL CIHA, P.E. (262)-317-3320

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

ORIGINAL PLANS PREPARED BY
R.A. Smith National
Beyond Surveying and Engineering
16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.rasmithnational.com

NO.	DATE	REVISION	BY

WISDOT
BUREAU OF STRUCTURES

APPROVED William C. Dreher SDR 1-7-09
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-67-113

CTH Y OVER IH 43

COUNTY WAUKESHA		~~TOWN~~/CITY/~~VILLAGE~~ NEW BERLIN	
DESIGN SPEC. AASHTO STD. SPEC. 2003		LOAD HS-20	CONST. SPEC. 2008
DESIGNED BY KMA	DESIGN CK'D. PGC	DRAWN BY MJB	PLANS CK'D. PGC

GENERAL PLAN
RE-DECK & WIDENING

SHEET 1 OF 21

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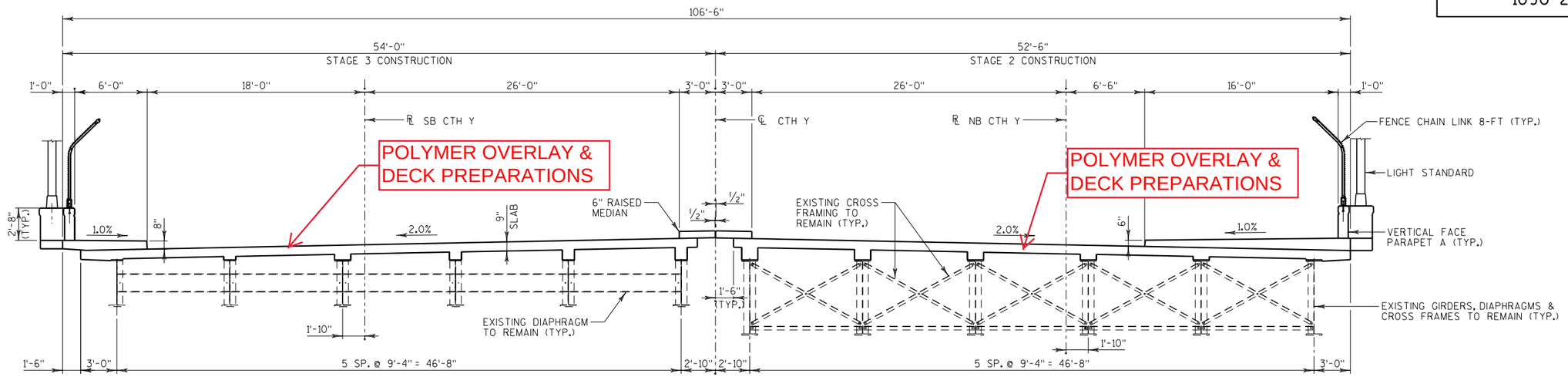
I.D.

DATE:

STATE PROJECT NUMBER
1090-22-70



IN SPAN

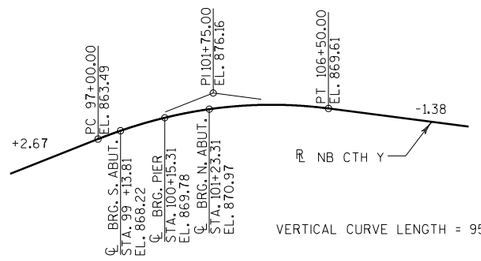
AT PIER

SECTION THRU CTH Y

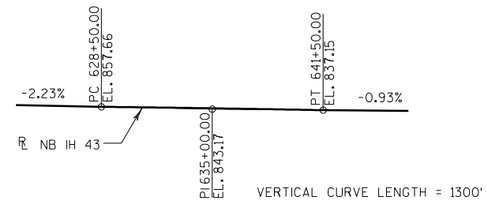
(LOOKING NORTH)

TOTAL ESTIMATED QUANTITIES

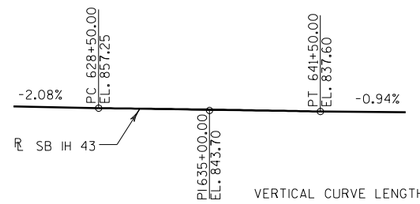
BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	PIER	NORTH ABUT.	TOTALS
REMOVING OLD SRUCTURE (STA. 100+03.07)	L.S.	——	——	——	——	1
EXCAVATION FOR STRUCTURES BRIDGES (B-67-113)	L.S.	——	——	——	——	1
BACKFILL STRUCTURE	C.Y.	——	150	——	148	298
CONCRETE MASONRY BRIDGES	C.Y.	1038	67	4	65	1174
COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC (2½-INCH)	L.F.	212	——	——	——	212
EXPANSION DEVICE (B-67-113)	L.S.	——	——	——	——	1
MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	——	282	——	282	564
MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	——	70	——	70	140
MASONRY ANCHORS TYPE S ½-INCH	EACH	——	96	96	96	288
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB.	191110	9160	300	9290	209860
STRUCTURAL CARBON STEEL	LB.	——	81	——	81	162
BEARING PADS ELASTOMERIC LAMINATED	EACH	——	12	——	12	24
WELDED STUD SHEAR CONNECTORS ⅞x6-INCH	EACH	5220	——	——	——	5220
BEARING ASSEMBLIES FIXED (B-67-113)	EACH	——	——	12	——	12
CONCRETE SURFACE REPAIR	S.F.	——	50	——	50	100
RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	——	27	——	27	54
SLOPE PAVING CRUSHED AGGREGATE	S.Y.	——	498	——	660	1158
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	——	——	——	4
FENCE CHAIN LINK 8-FT	L.F.	501	——	——	——	501
CONDUIT RIGID METALLIC 2-INCH	L.F.	40	170	——	170	380
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	L.F.	810	——	——	——	810
JUNCTION BOXES 18x12x6-INCH	EACH	2	——	——	——	2
REMOVING BEARINGS	EACH	——	12	12	12	36
BRIDGE JACKING, STRUCTURE B-67-113	L.S.	——	——	——	——	1
PREPARATION AND COATING OF TOP FLANGES	L.S.	——	——	——	——	1
STRUCTURE OVERCOATING CLEANING AND PRIMING STRUCTURE B-67-113	L.S.	——	——	——	——	1
CONTAINMENT AND COLLECTION OF WASTE MATERIALS STRUCTURE B-67-113	L.S.	——	——	——	——	1
ANCHOR ASSEMBLIES LIGHT POLES	EACH	2	——	——	——	2
TEMPORARY SHORING SPECIAL	S.F.	——	180	——	180	360
REMOVING CRUSHED AGGERGATE SLOPE PAVING	S.Y.	——	415	——	550	965
ABATEMENT OF ASBETOS CONTAINING MATERIAL (B-67-113)	L.S.	——	——	——	——	1
NON-BID ITEMS						
FILLER	SIZE					½" & ¾"



PROFILE GRADE LINE CTH Y



PROFILE GRADE LINE EB IH 43



PROFILE GRADE LINE WB IH 43

GENERAL NOTES

1. DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
2. DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.
3. ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.
4. ALL REINFORCEMENT BARS ARE ENGLISH AND THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
5. AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH GRANULAR BACKFILL.
6. EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID FOR IN LUMP SUM PRICE BID AS "EXPANSION DEVICE (B-67-113)".
7. VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.
8. IF NEW NAME PLATE IS REQUIRED, ORIGINAL CONSTRUCTION YEAR IS 1969.
9. THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARDS SPECIFICATIONS FOR GRADE 1 MATERIAL.
10. EXISTING STRUCTURES B-67-113 IS A 2 SPAN HAUNCHED STEEL PLATE GIRDER STRUCTURE: EXISTING DECK, OVERLAY, BACKWALL, TOP OF WING WALLS, PARAPET, MEDIAN & BEARINGS TO BE REMOVED. EXISTING STRUCTURE TO BE REMOVED IN STAGES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
11. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO BEAMS OR GIRDERS UNLESS PERMITTED BY THE ENGINEER.
12. THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH HEIGHT OF 4½"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

CONST. SPEC. 2008	DRAWN BY MJB	PLANS CK'D. PGC

CROSS SECTION & QUANTITIES

SHEET 2 OF 21

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STATE PROJECT NUMBER
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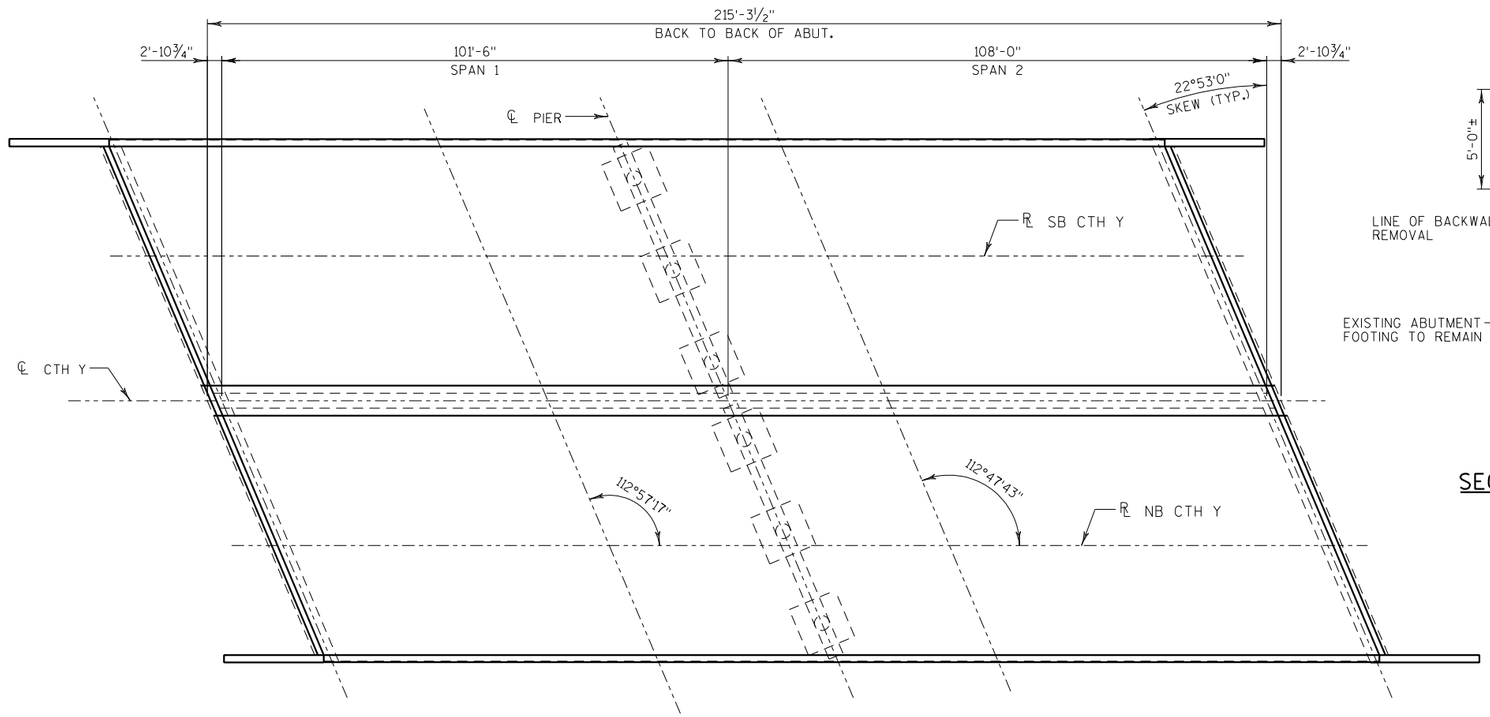
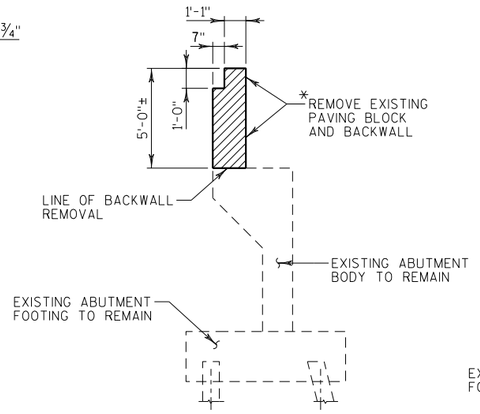
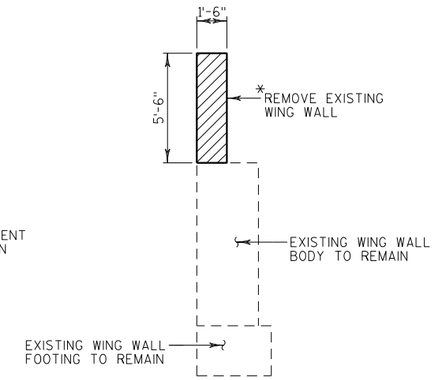
* DEFINE REMOVAL WITH 1" DEEP SAW CUT



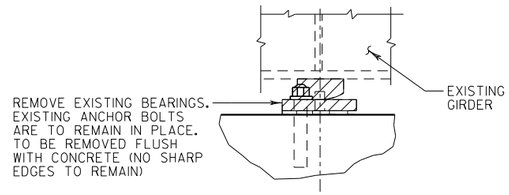
EXISTING PLAN
(2 SPAN PLATE GIRDER)



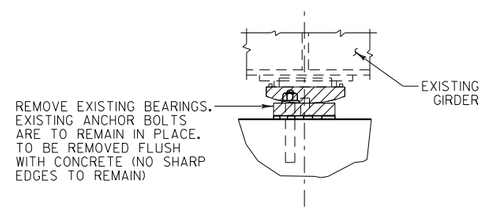
SECTION THRU EXISTING ABUTMENT



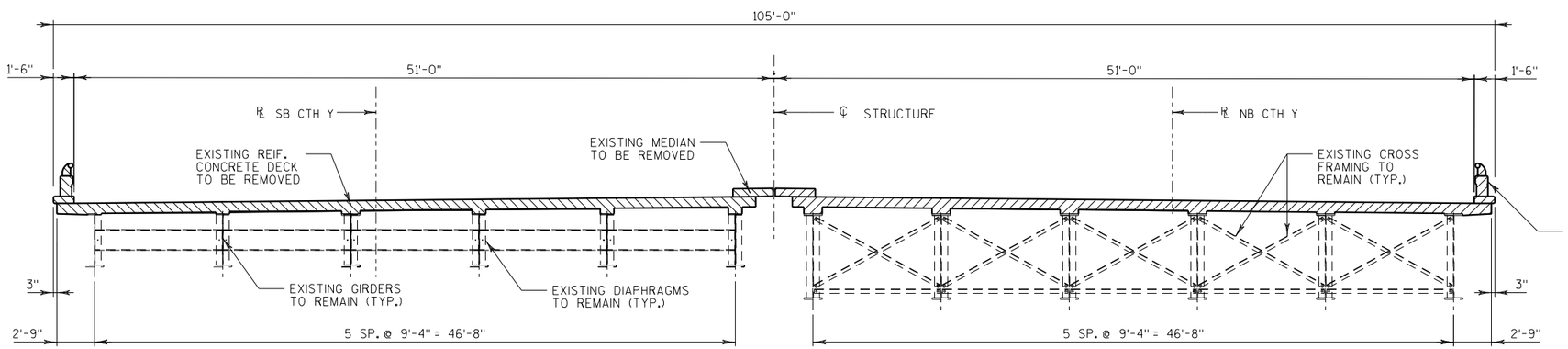
SECTION THRU EXISTING WING WALL



BEARING REMOVAL
(AT PIER)



BEARING REMOVAL
(AT ABUTMENT)



SECTION THRU EXISTING CTH Y
(LOOKING NORTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

CONST. SPEC 2008	DRAWN BY MJB	PLANS CK'D. PGC

REMOVALS

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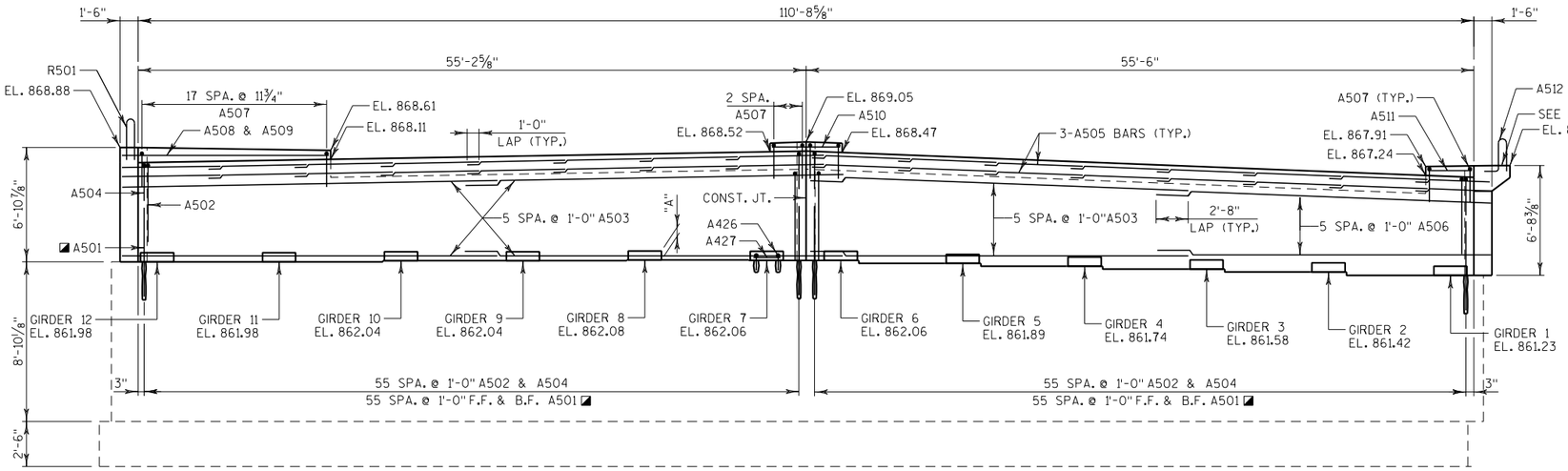
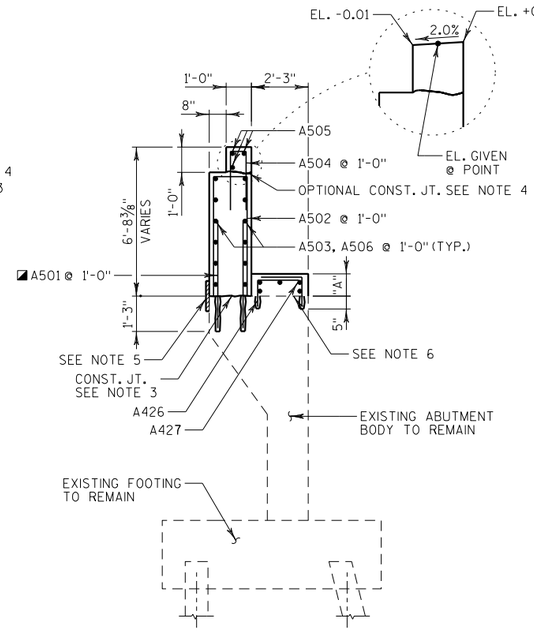
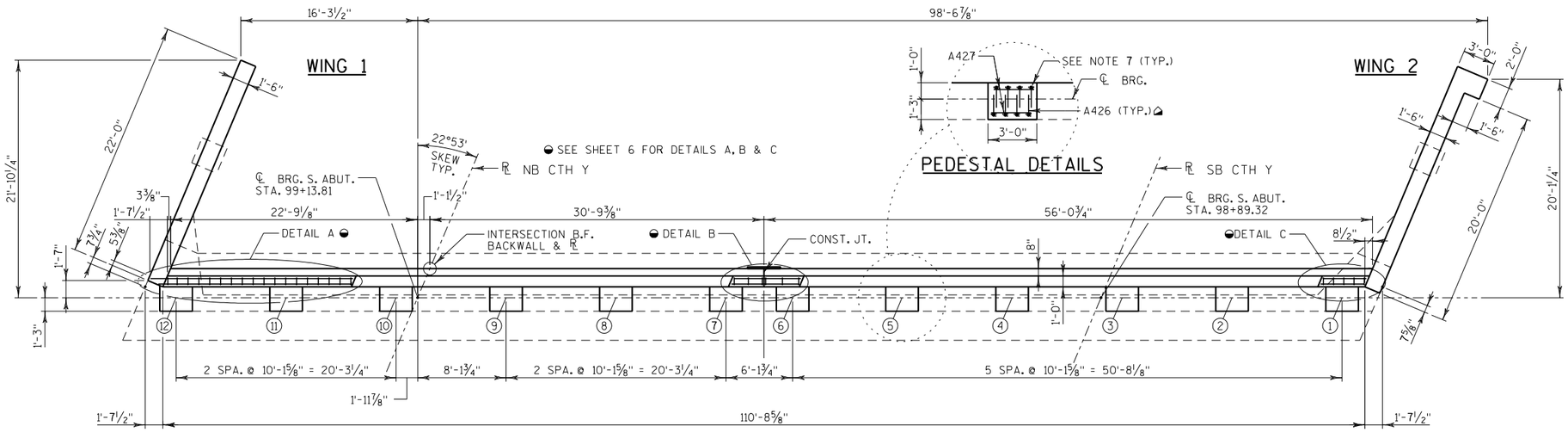


ELEVATION
(LOOKING SOUTH)



SECTION THRU SOUTH ABUTMENT
(SIDEWALK & MEDIAN NOT SHOWN)



PLAN

PEDESTAL HEIGHTS

LOCATION	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5	GIRDER 6	GIRDER 7	GIRDER 8	GIRDER 9	GIRDER 10	GIRDER 11	GIRDER 12
"A"	11"	11"	11"	11"	11"	11"	11¼"	11"	11¼"	11"	11⅜"	11"

NOTES:

1. ◪ CONCRETE MASONRY ANCHORS TYPE L NO. 5 BAR EMBEDED 1'-3" INTO EXISTING ABUTMENT BODY. HAVING A MINIMUM PULLOUT CAPACITY OF 19 KIPS.
2. ▲ CONCRETE MASONRY ANCHORS TYPE L NO. 6 BAR EMBEDED 1'-6" INTO EXISTING ABUTMENT BODY. HAVING A MINIMUM PULLOUT CAPACITY OF 27 KIPS.
3. LINE OF BACKWALL REMOVAL. ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.
4. POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE, STRIKE OFF AND LEAVE ROUGH.
5. 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACKFACE.
6. ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXIST. CONCRETE CONTACT.
7. ◭ CONCRETE MASONRY ANCHORS TYPE S ½-INCH. EMBED 5" INTO EXISTING CONCRETE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

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SOUTH ABUTMENT

SHEET 4 OF 21

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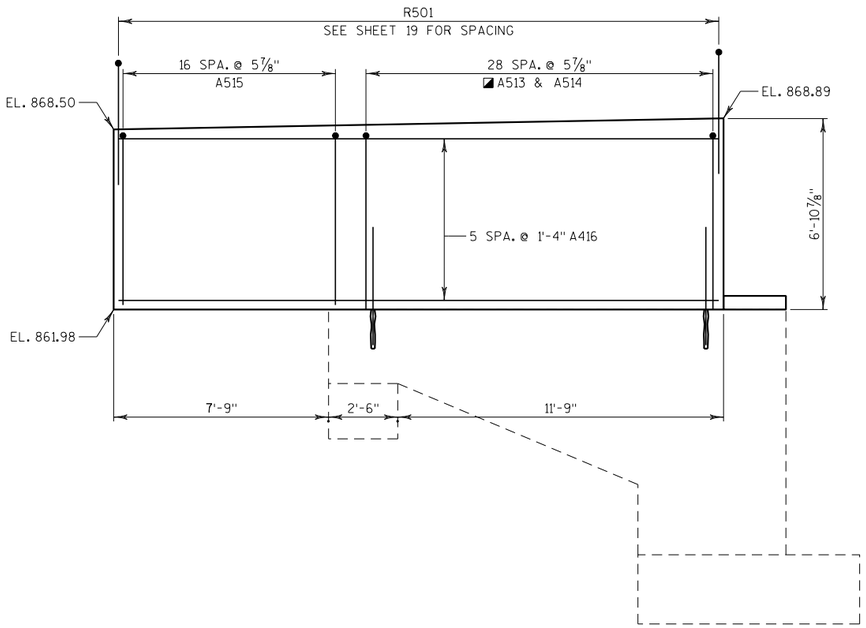
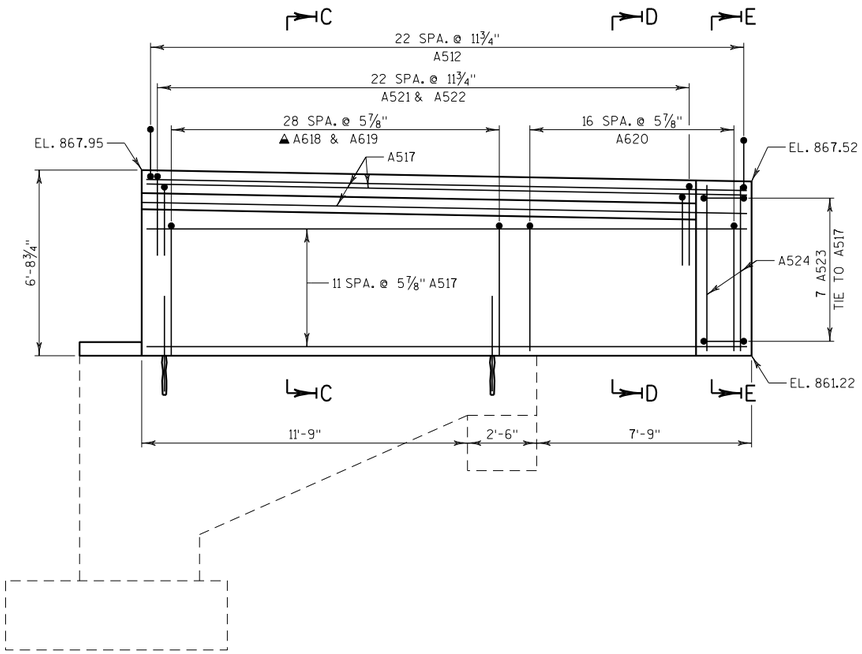
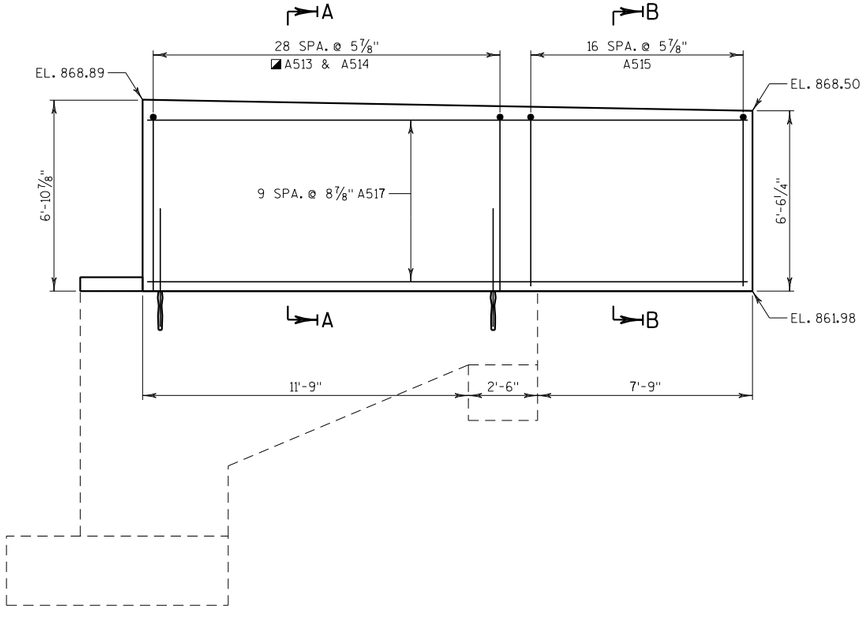


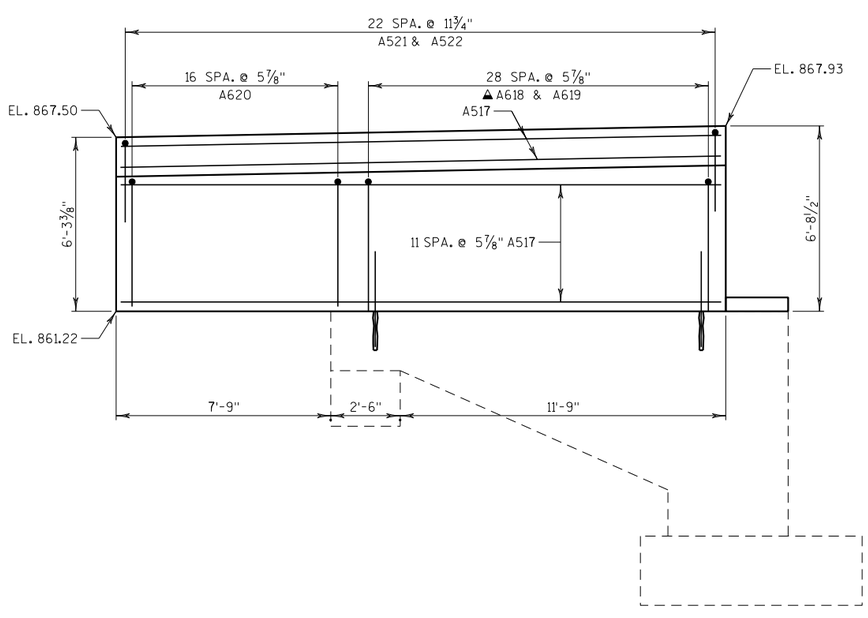
WING 1 ELEVATION- F.F.



WING 2 ELEVATION - F.F.



WING 1 ELEVATION - B.F.



WING 2 ELEVATION - B.F.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

CONST. SPEC. 2008	DRAWN BY MJB	PLANS CK'D. PGC

SOUTH ABUTMENT DETAILS

SHEET 5 OF 21

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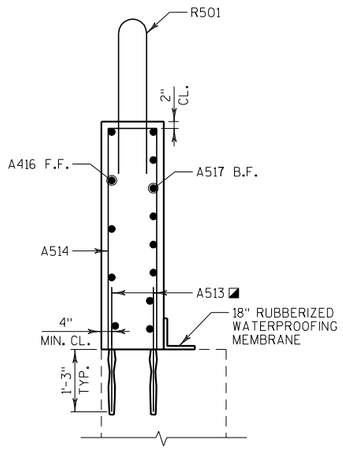
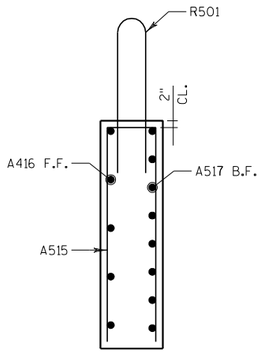
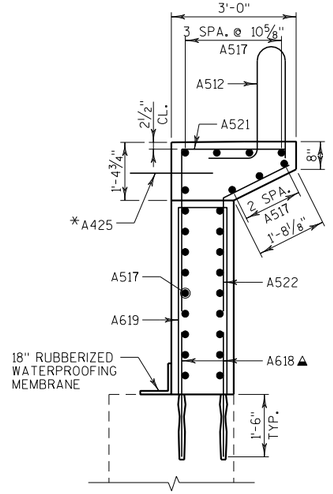


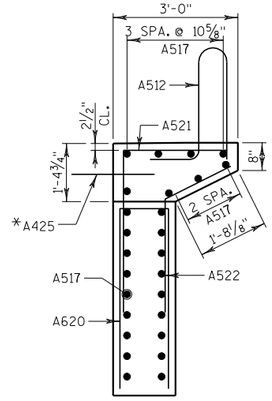
SECTION A-A



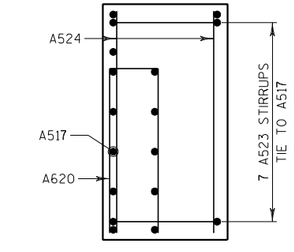
SECTION B-B



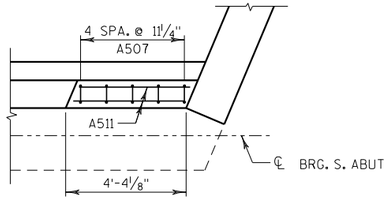
SECTION C-C



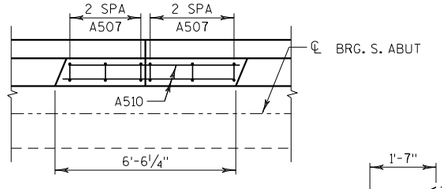
SECTION D-D



SECTION E-E



DETAIL C



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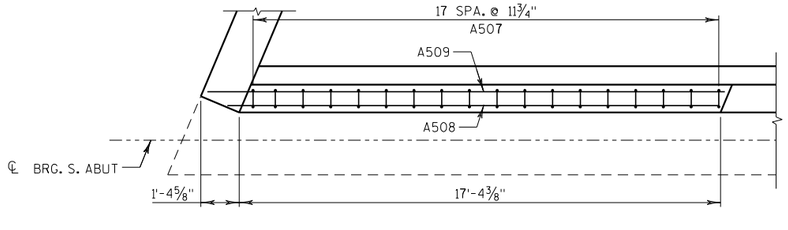

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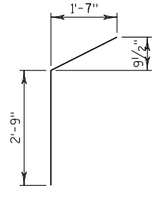

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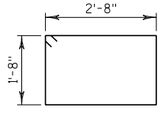

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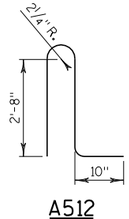

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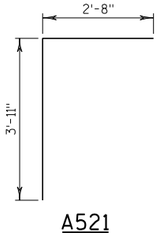

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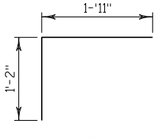
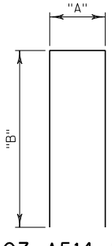


A426

U-BAR DIMENSIONS

BAR MARK	"A"	"B"
A502	1-4	4-10
A504	0-8	1-6
A507	0-8	2-4
A514	1-2	6-6
A515	1-2	6-2
A619	1-2	4-11
A620	1-2	4-7



A502, A504, A507, A514, A515, A619 & A620

STATE PROJECT NUMBER

1090-22-70

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
◪	A501	X	224	4-9			ABUT. BACKWALL DOWELL
	A502	X	111	10-9	X		ABUT. BACKWALL STIRRUP
	A503	X	36	31-2			ABUT. BACKWALL LONGITUDINAL
	A504	X	111	3-5	X		ABUT. BACKWALL STIRRUP
	A505	X	45	8-2			ABUT. BACKWALL LONGITUDINAL
	A506	X	12	27-7			ABUT. BACKWALL LONGITUDINAL
	A507	X	29	5-1	X		ABUT. BACKWALL STIRRUP
	A508	X	1	17-9			ABUT. BACKWALL LONGITUDINAL
	A509	X	1	18-9			ABUT. BACKWALL LONGITUDINAL
	A510	X	2	6-2			ABUT. BACKWALL LONGITUDINAL
	A511	X	2	4-0			ABUT. BACKWALL LONGITUDINAL
	A512	X	23	6-8	X		ABUT. BACKWALL & WING 2 STIRRUP
◪	A513	X	58	4-2			WING 1 DOWELL
	A514	X	29	13-11	X		WING 1 STIRRUP
	A515	X	17	13-3	X		WING 1 STIRRUP
	A416	X	6	21-8			WING 1 LONGITUDINAL
	A517	X	42	21-8			WING 1 & 2 LONGITUDINAL
▲	A618	X	58	5-0			WING 2 DOWELL
	A619	X	29	10-8	X		WING 2 STIRRUP
	A620	X	17	10-0	X		WING 2 STIRRUP
	A521	X	23	6-6	X		WING 2 STIRRUP
	A522	X	23	4-6	X		WING 2 OVERHANG
	A523	X	7	9-4	X		WING 2 OVERHANG
	A524	X	4	5-9			WING 2 HORIZONTAL
*	A425	X	22	2-0			WING 2 SIDEWALK
◪	A426	X	96	3-0	X		ABUT. PEDESTAL
	A427	X	60	2-8			ABUT. PEDESTAL

* A425 BARS SPACED @ 1'-0" CTRS. EMBED 1'-0" INTO WING CONC. LOCATE 4" DOWN FROM TOP OF WING @ BACKFACE

◪ CONCRETE MASONRY ANCHORS TYPE L. NO. 5 BAR EMBEDED 1'-3"

▲ CONCRETE MASONRY ANCHORS TYPE L. NO. 6 BAR EMBEDED 1'-6"

◪ CONCRETE MASONRY ANCHORS TYPE S 1/2-INCH EMBEDED 5"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

CONST. SPEC. 2008 | DRAWN BY MJB | PLANS CK'D. PGC

SOUTH ABUTMENT DETAILS

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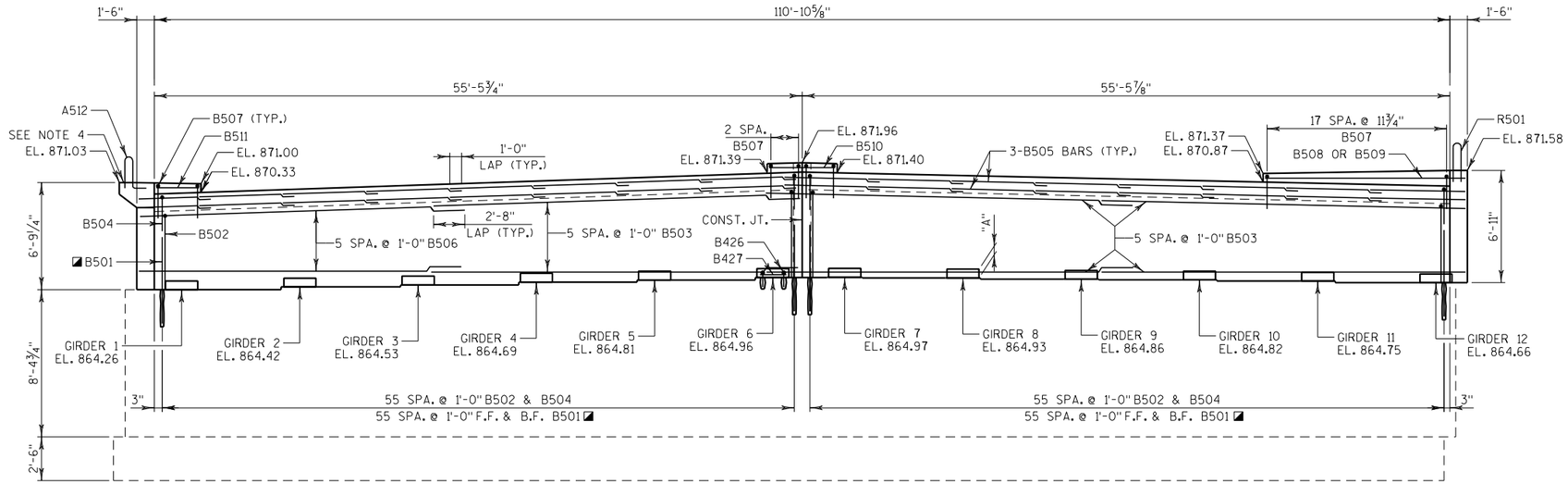
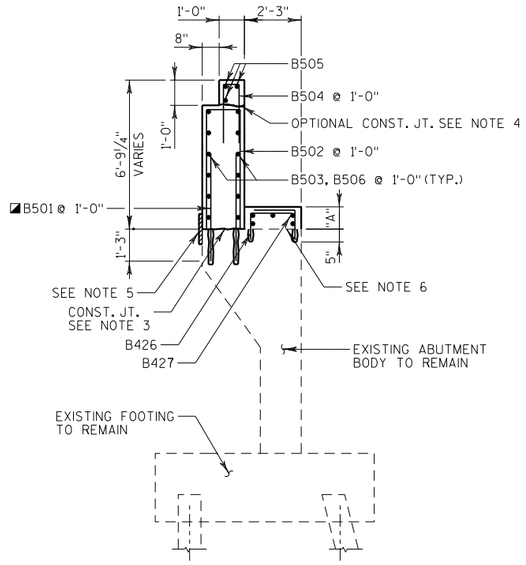
STATE PROJECT NUMBER

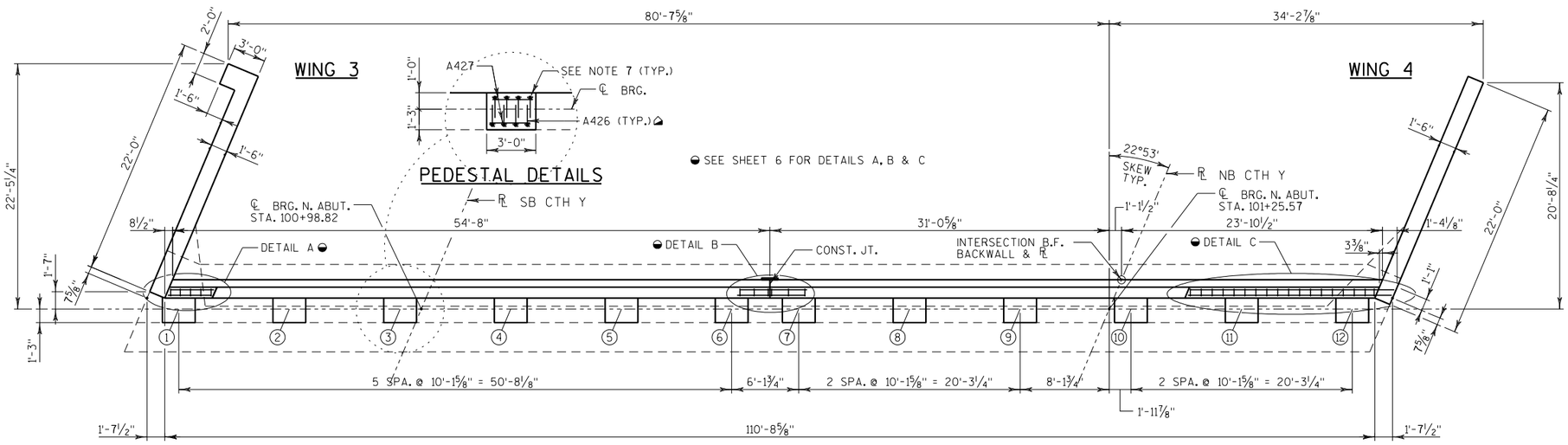
1090-22-70



ELEVATION
(LOOKING NORTH)



SECTION THRU NORTH ABUTMENT
(SIDEWALK & MEDIAN NOT SHOWN)



PLAN

PEDESTAL HEIGHTS

LOCATION	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5	GIRDER 6	GIRDER 7	GIRDER 8	GIRDER 9	GIRDER 10	GIRDER 11	GIRDER 12
"A"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"

NOTES:

1. ◪ CONCRETE MASONRY ANCHORS TYPE L, NO. 5 BAR EMBEDED 1'-3" INTO EXISTING ABUTMENT BODY. HAVING A MINIMUM PULLOUT CAPACITY OF 19 KIPS.
2. ▲ CONCRETE MASONRY ANCHORS TYPE L, NO. 6 BAR EMBEDED 1'-6" INTO EXISTING ABUTMENT BODY. HAVING A MINIMUM PULLOUT CAPACITY OF 27 KIPS.
3. LINE OF BACKWALL REMOVAL. ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.
4. POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE, STRIKE OFF AND LEAVE ROUGH.
5. 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACKFACE.
6. ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXIST. CONCRETE CONTACT.
7. ◭ CONCRETE MASONRY ANCHORS TYPE S ½-INCH. EMBED 5" INTO EXISTING CONCRETE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

CONST. SPEC. 2008	DRAWN BY MJB	PLANS CK'D. PGC

NORTH ABUTMENT

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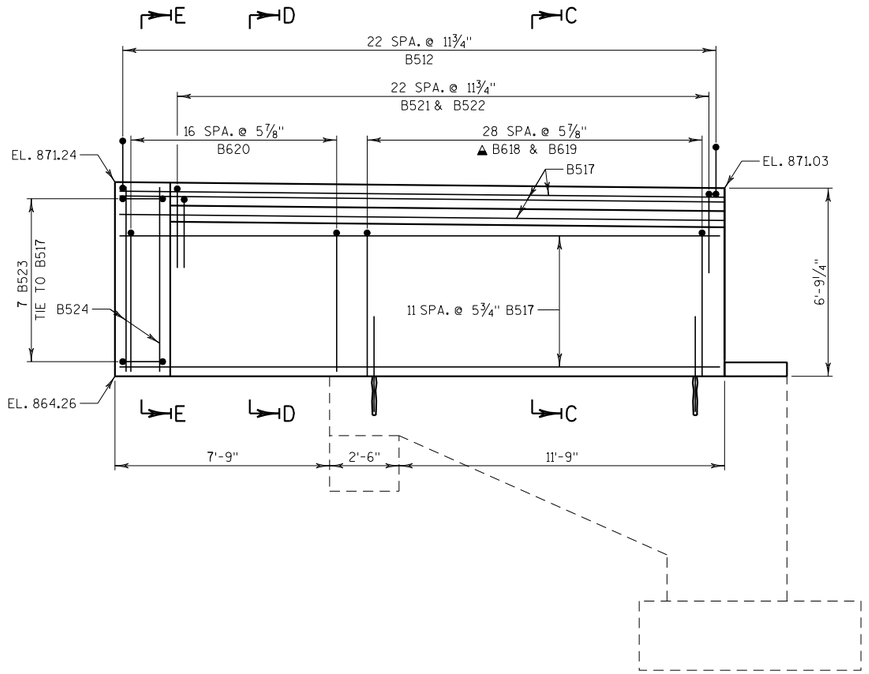
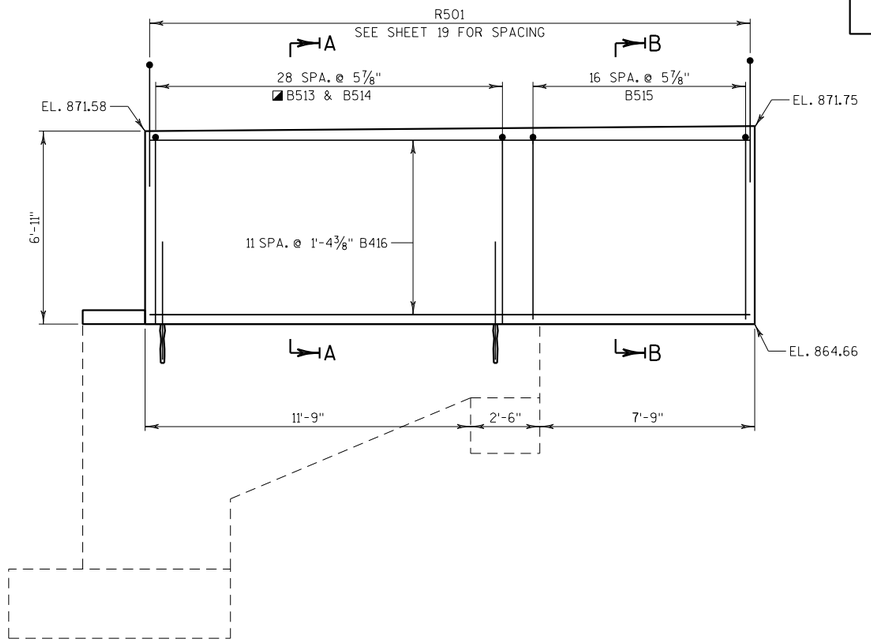
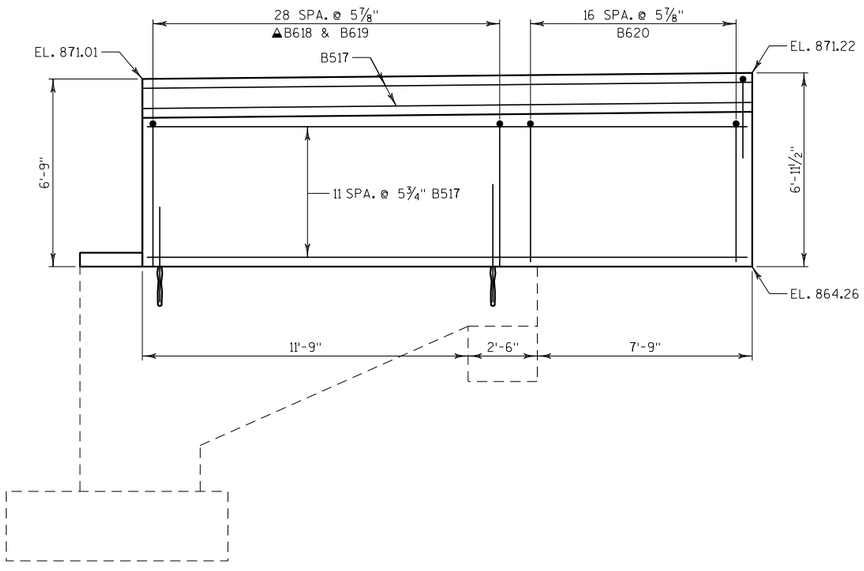


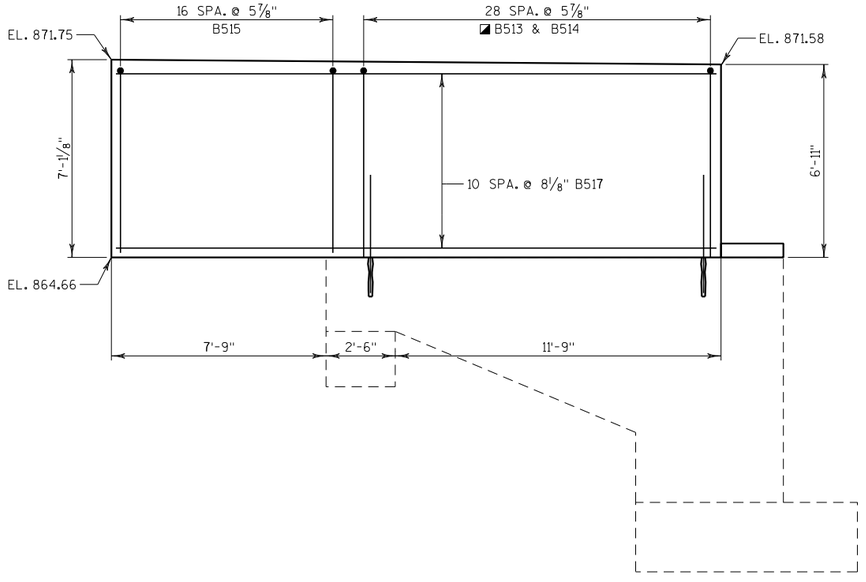
WING 3 ELEVATION- F.F.



WING 4 ELEVATION - F.F.



WING 3 ELEVATION - B.F.



WING 4 ELEVATION - B.F.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

CONST. SPEC. 2008	DRAWN BY MJB	PLANS CK'D. PGC

NORTH ABUTMENT DETAILS

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STATE PROJECT NUMBER

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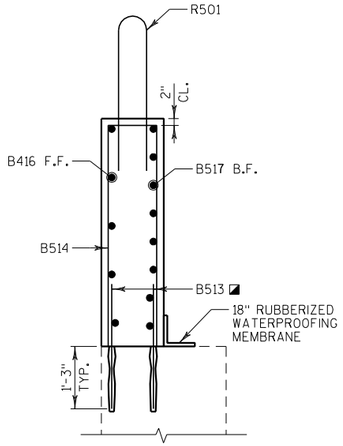
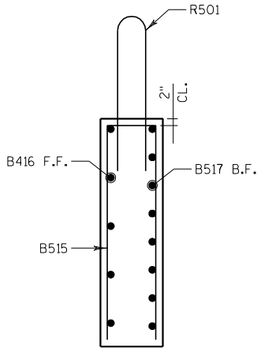


SECTION A-A



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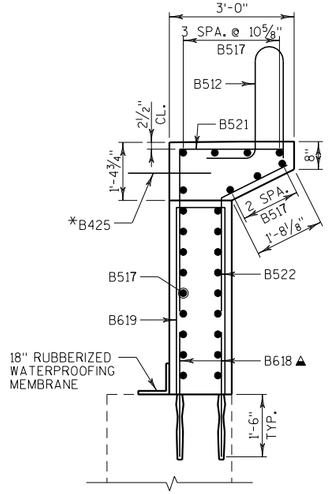
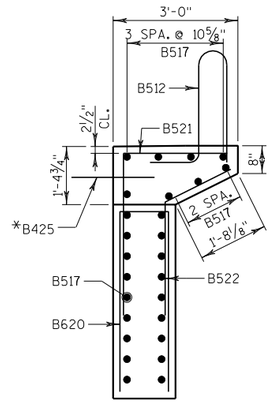


SECTION C-C



SECTION D-D

BILL OF BARS

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

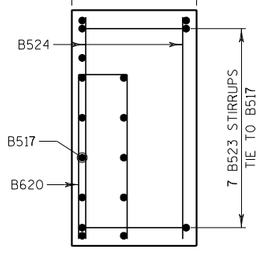
	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
◪	B501	X	224	4-9			ABUT. BACKWALL DOWELL
	B502	X	112	10-11	X		ABUT. BACKWALL STIRRUP
	B503	X	36	31-2			ABUT. BACKWALL LONGITUDINAL
	B504	X	110	3-5	X		ABUT. BACKWALL STIRRUP
	B505	X	45	8-2			ABUT. BACKWALL LONGITUDINAL
	B506	X	12	27-7			ABUT. BACKWALL LONGITUDINAL
	B507	X	29	5-1	X		ABUT. BACKWALL STIRRUP
	B508	X	1	18-8			ABUT. BACKWALL LONGITUDINAL
	B509	X	1	18-7			ABUT. BACKWALL LONGITUDINAL
	B510	X	2	6-2			ABUT. BACKWALL LONGITUDINAL
	B511	X	2	4-0			ABUT. BACKWALL LONGITUDINAL
	B512	X	25	6-8	X		ABUT. BACKWALL & WING 3 STIRRUP
◪	B513	X	58	4-1			WING 4 DOWELL
	B514	X	29	14-5	X		WING 4 STIRRUP
	B515	X	17	14-3	X		WING 4 STIRRUP
	B416	X	6	21-8			WING 4 LONGITUDINAL
	B517	X	43	21-8			WING 3 & 4 LONGITUDINAL
▲	B618	X	58	4-10			WING 3 DOWELL
	B619	X	29	11-4	X		WING 3 STIRRUP
	B620	X	17	11-2	X		WING 3 STIRRUP
	B521	X	23	6-5	X		WING 3 STIRRUP
	B522	X	23	4-6	X		WING 3 OVERHANG
	B523	X	7	9-4	X		WING 3 OVERHANG
	B524	X	4	5-11			WING 3 HORIZONTAL
*	B425	X	22	2-0			WING 3 SIDEWALK
◪	B426	X	96	3-0	X		ABUT. PEDESTAL
	B427	X	60	2-8			ABUT. PEDESTAL

* A425 BARS SPACED @ 1'-0" CTRS. EMBED 1'-0" INTO WING CONC. LOCATE 4" DOWN FROM TOP OF WING @ BACKFACE

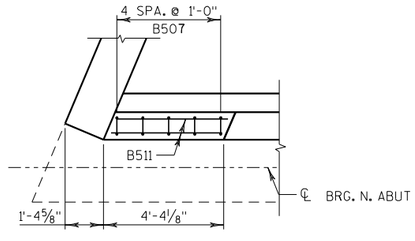
◪ CONCRETE MASONRY ANCHORS TYPE L. NO. 5 BAR EMBEDED 1'-3"

▲ CONCRETE MASONRY ANCHORS TYPE L. NO. 6 BAR EMBEDED 1'-6"

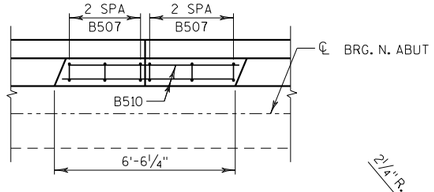
◪ CONCRETE MASONRY ANCHORS TYPE S 1/2-INCH EMBEDED 5"



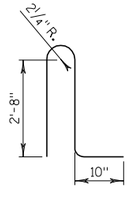
SECTION E-E



DETAIL A



DETAIL B



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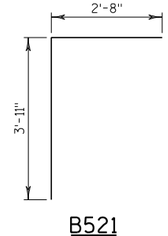

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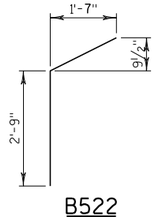

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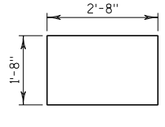

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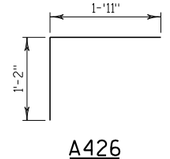
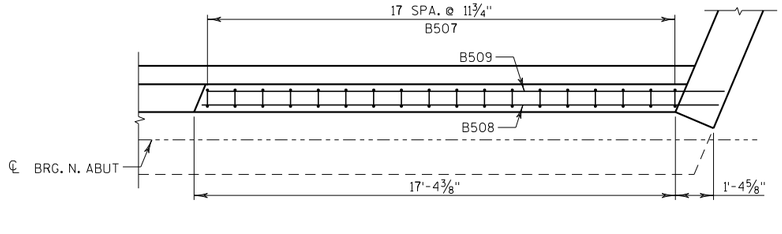


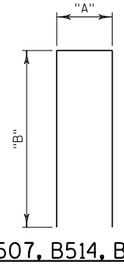
A426



DETAIL C

U-BAR DIMENSIONS

BAR MARK	"A"	"B"
B502	1-4	4-11
B504	0-8	1-6
B507	0-8	2-4
B514	1-2	6-9
B515	1-2	6-8
B619	1-2	5-3
B620	1-2	5-2



B502, B504, B507, B514, B515, B619 & B620

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

CONST. SPEC. 2008 | DRAWN BY MJB | PLANS CK'D. PGC

NORTH ABUTMENT DETAILS

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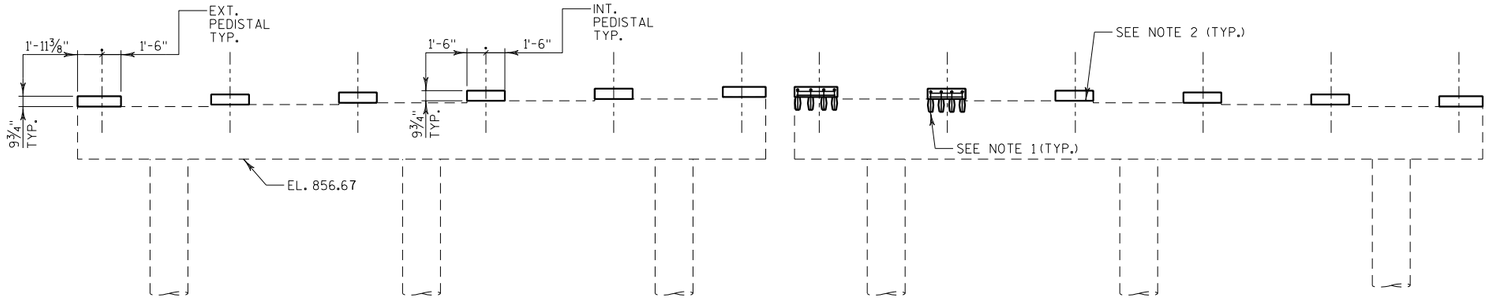
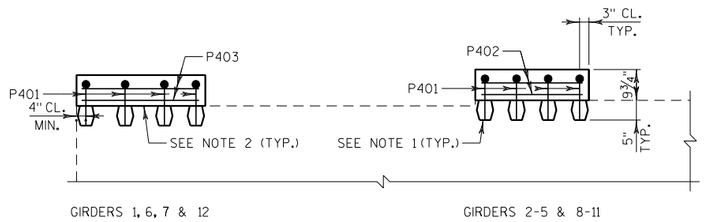
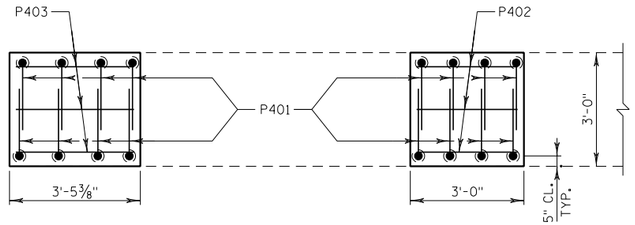
STATE PROJECT NUMBER
1090-22-70



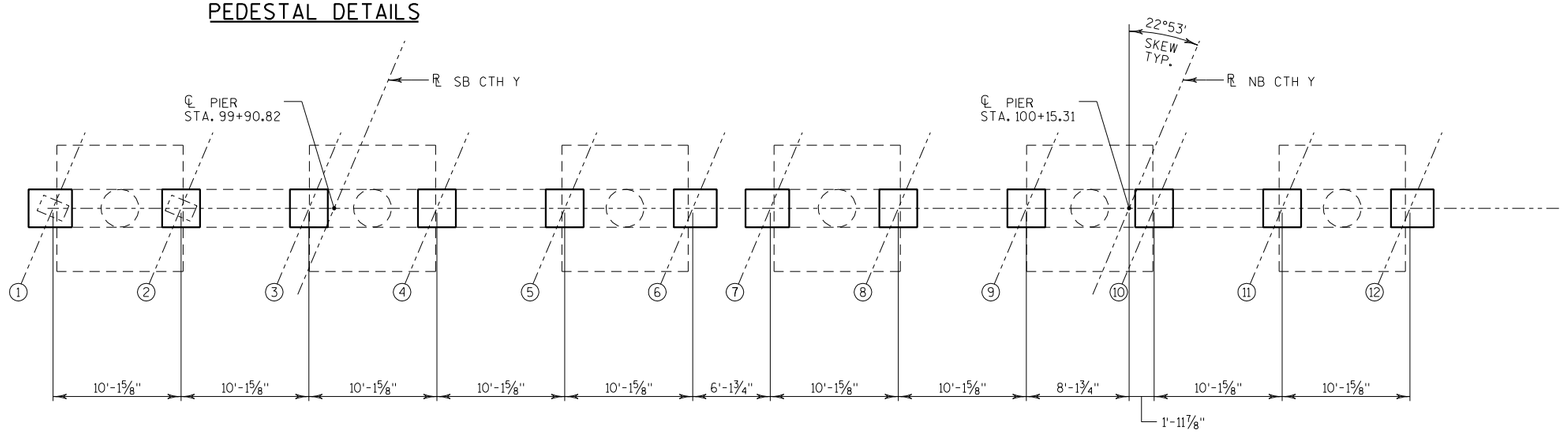
ELEVATION
(LOOKING NORTH)



GIRDERS 1, 6, 7 & 12 GIRDERS 2-5 & 8-11



PEDESTAL DETAILS

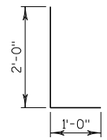


PLAN

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	
◪ P401	X	96	2-11	X		PIER PEDESTAL	VERTICAL
P402	X	40	2-8			PIER PEDESTAL	LONGITUDINAL
P403	X	20	3-1			PIER PEDESTAL	LONGITUDINAL



P401

NOTES:

1. ◪ P401 CONCRETE MASONRY ANCHORS TYPE S ½-INCH EMBED 5" INTO SOUND CONCRETE.
2. ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXIST. CONCRETE CONTACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

CONST. SPEC. 2008	DRAWN BY MJB	PLANS CK'D. PGC

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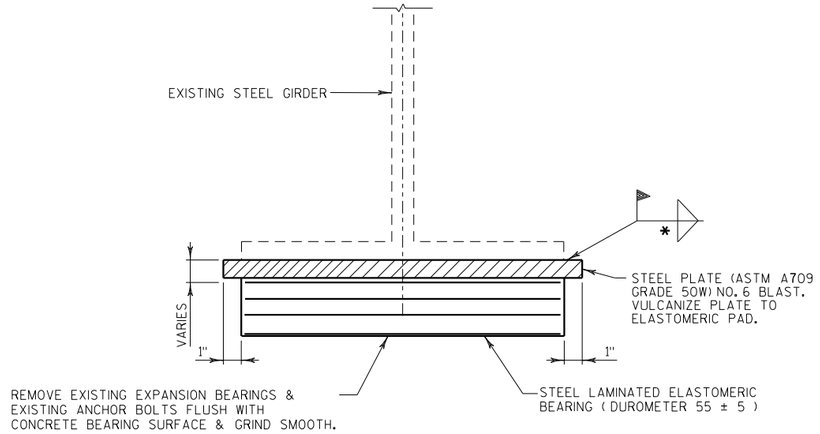
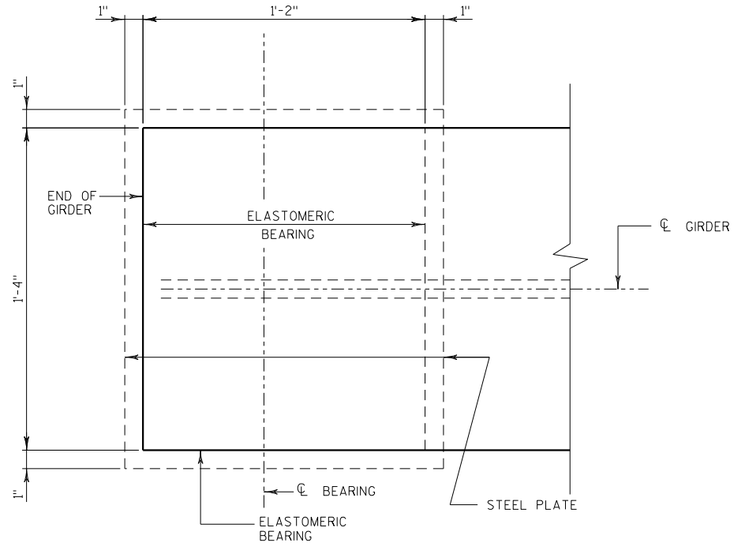
STATE PROJECT NUMBER

1090-22-70



END VIEW



PLAN VIEW

* TABLE OF FILLET WELD SIZES

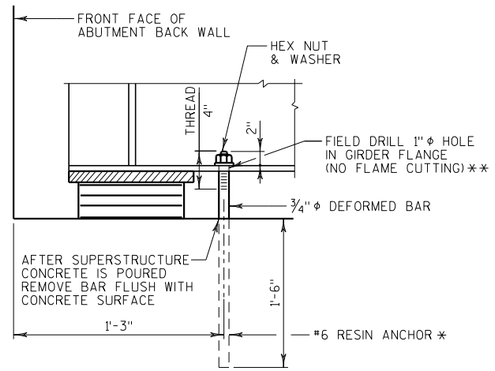
MATERIAL THICKNESS OF THICKER PART JOINED	∓ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2" TO 2 1/4"	△ 3/8"
OVER 2 1/4" TO 6"	△ 1/2"

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

△ MIN. PASS SIZE IS 5/16"

BEARING PLATE THICKNESS

LOCATION	A	B
N. ABUT	1 1/2"	1 1/2"
S. ABUT	1 3/8"	1 5/8"

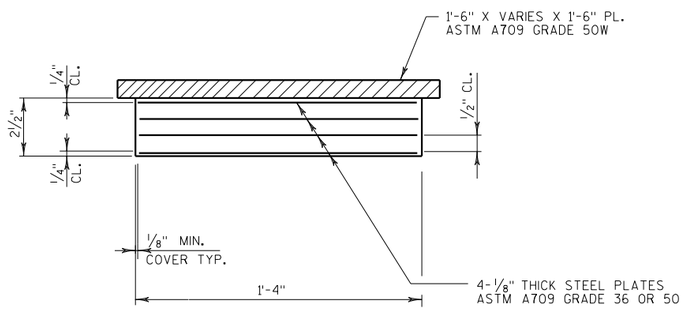


TEMPORARY HOLD DOWN

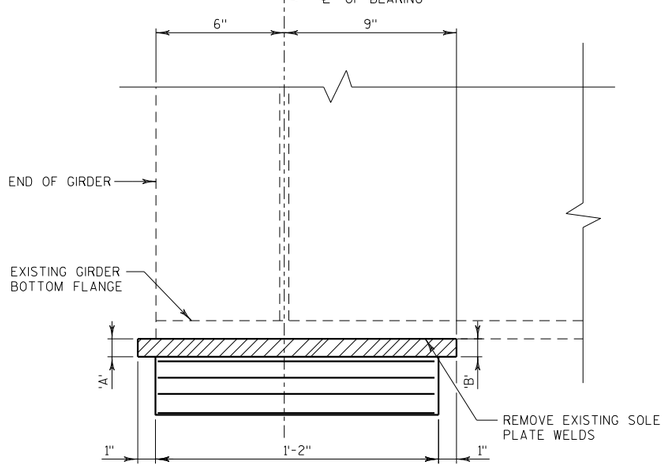
PLACE ONE TEMP. HOLD DOWN PER GIRDER AT ABUTMENT WHERE SLAB POUR TERMINATES. LOCATE 3" PERPENDICULAR OFF ℄ OF GIRDER. ROD, HEX NUT, WASHER & DRILLED HOLE IN GIRDER FLG. TO BE PAID FOR AS "STRUCTURAL STEEL CARBON".

*CONCRETE MASONARY ANCHOR TYPE L. NO. 6 BAR EMBEDED 1'-6"

**AFTER REMOVING TEMPORARY HOLD DOWN, HOLE IN FLANGE SHALL BE FILLED WITH A GALVINIZED HS BOLT. BOLT SHALL BE TORQUED.



SECTION THRU ELASTOMERIC BEARING



TAPERED TOP PLATE DETAIL

NOTES

1. BEARINGS SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85°F.
2. ALL MATERIALS USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARINGS PADS ELASTOMERIC LAMINATED", EACH.
3. ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.
4. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

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STATE OF WISCONSIN
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STRUCTURE B-67-113

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ELASTOMERIC ABUT. BEARINGS

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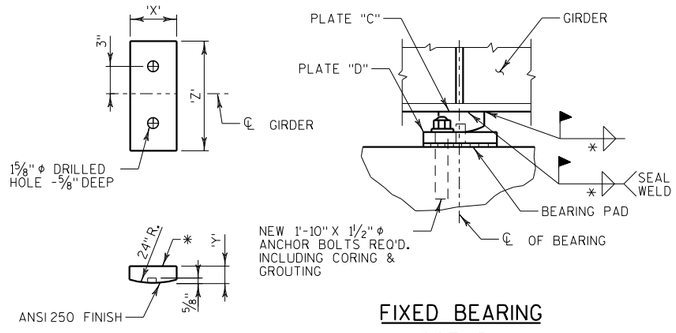


PLATE "C"

FIXED BEARING ASSEMBLY

FIXED BEARING

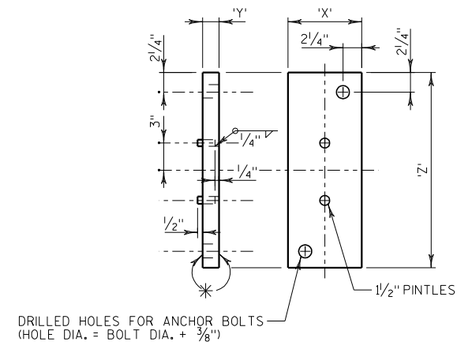


PLATE "D"

* FINISH THESE SURFACES ANSI 250 FINISH IF 'Y' DIM. IS GREATER THAN 2"

NOTE

EXISTING ANCHOR BOLTS TO REMAIN IN PLACE.
DRILL FOR NEW ANCHOR BOLTS AND EPOXY IN PLACE.

	PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D	LOCATION
	X	Y	Z	X	Y	Z				
FIXED BEARING	5"	2⅜"	1'-4"	1'-4"	2⅞"	2'-2"	SHOWN	1½"ϕ	12	PIER

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

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

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

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

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

LOCATE ANCHOR BOLTS AS INDICTED FOR PLATE "D". SEE TABLE FOR SIZE. PROJECT ANCHOR BOLTS "D" PLATE THICKNESS +2¼" ABOVE TOP OF CONCRETE.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEXNUT PER BOLT. BOLT LENGTH TO BE 1'-10".

FOR UNPAINTED STRUCTURES THE UPPER 6" OF THE ANCHOR BOLTS, NUTS AND WASHER ASHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS C OR A164, TYPE GS.

CHAMFER TOP OF PINTLES ⅛". DRILL HOLES FOR PINTLES IN ALL "D" PLATES FOR DRIVING FIT.

ALL MATERIALS FOR BEARING INCLUDING SHIMS BUT EXCLUDING ANCHORS BOLTS, STAINLESS STEEL, TELFLON SURFACES, PINTLES, NUTS AND WASHERS SHALL BE MADE OF ASTM A709 GRADE 50W.

STEEL PINTLES SHALL BE MADE OF ASTM A449 STEEL OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

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

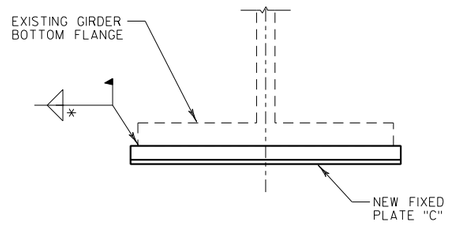
PROVIDE ⅛" THICK BEARING PAD SAME SIZE AS PLATE "D" FOR EACH BEARING.

ALL MATERIALS IN BEARINGS, INCLUDING BEARING PADS, ANCHOR BOLTS, WASHERS, NUTS, CORING, GROUTING & SHIM PLATES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR AS "BEARING ASSEMBLIES FIXED B-66-39".

ANCHOR BOLTS, NUTS & WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS L.

PLATE "C" SHALL NOT BE GALVANIZED. SHOP PAINT PLATE "C" A WELDABLE PRIMER. GALVANIZE PLATE "D".

EXISTING FIXED BEARINGS INCLUDING MASONARY PLATE, ROCKER PLATE, ANCHOR BOLTS & BEARING PAD TO BE REMOVED. GRIND BTM FLANGE REMOVAL AREAS SMOOTH. CLEAN CONCRETE SURFACE.



BEARING REPLACEMENT DETAILS

REMOVE EXISTING FIXED BEARINGS AND EXISTING TOP PLATE AND REPLACE WITH NEW PLATE "C"

PAID FOR AS BID ITEM "REMOVING BEARINGS".

* TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED	∓ MIN. SIZE OF FILLET WELD
TO ½" INCLUSIVE	3/16"
OVER ½" TO ¾"	¼"
OVER ¾" TO 1½"	△ 5/16"
OVER 1½" TO 2¼"	△ ⅜"
OVER 2¼" TO 6"	△ ½"

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

△ MIN. PASS SIZE IS 5/16"

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

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FIXED BEARING DETAILS

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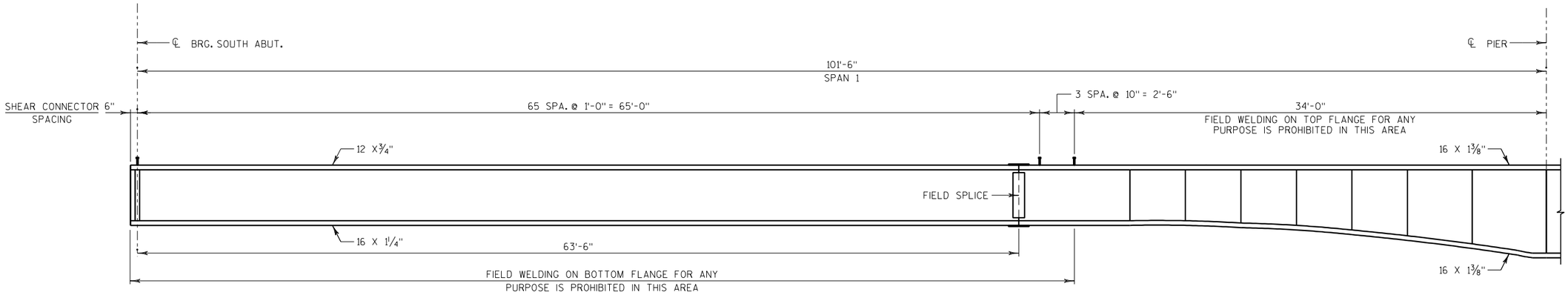
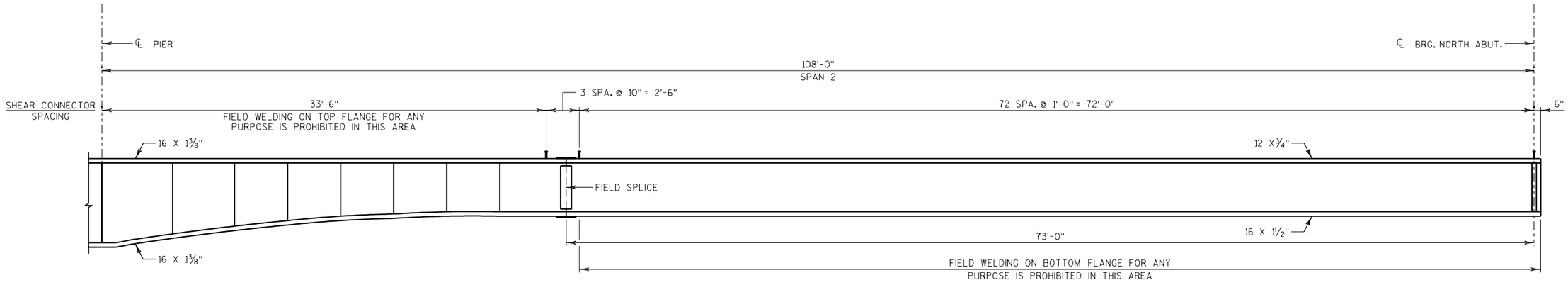
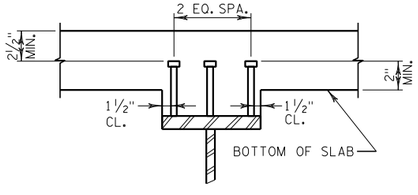


GIRDER ELEVATION
(SPAN 1)



GIRDER ELEVATION
(SPAN 2)



SHEAR CONNECTOR DETAILS

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NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

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SHEAR STUD DETAILS

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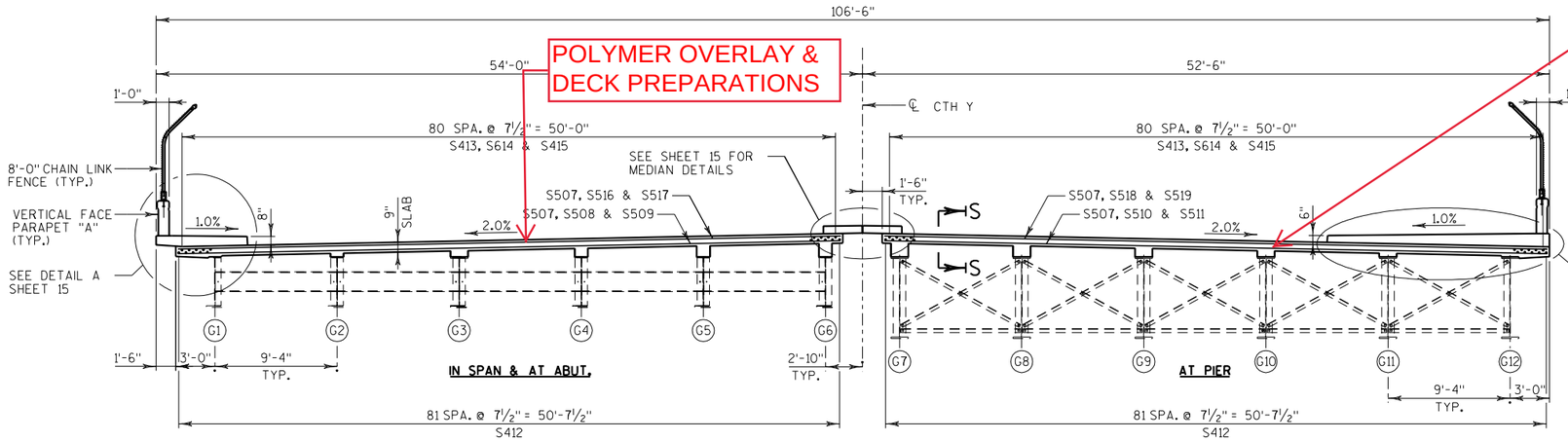
1090-22-70

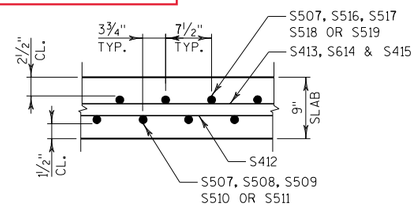
POLYMER OVERLAY & DECK PREPARATIONS

POLYMER OVERLAY & DECK PREPARATIONS

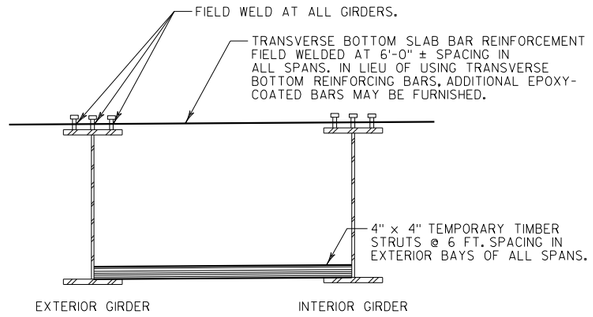


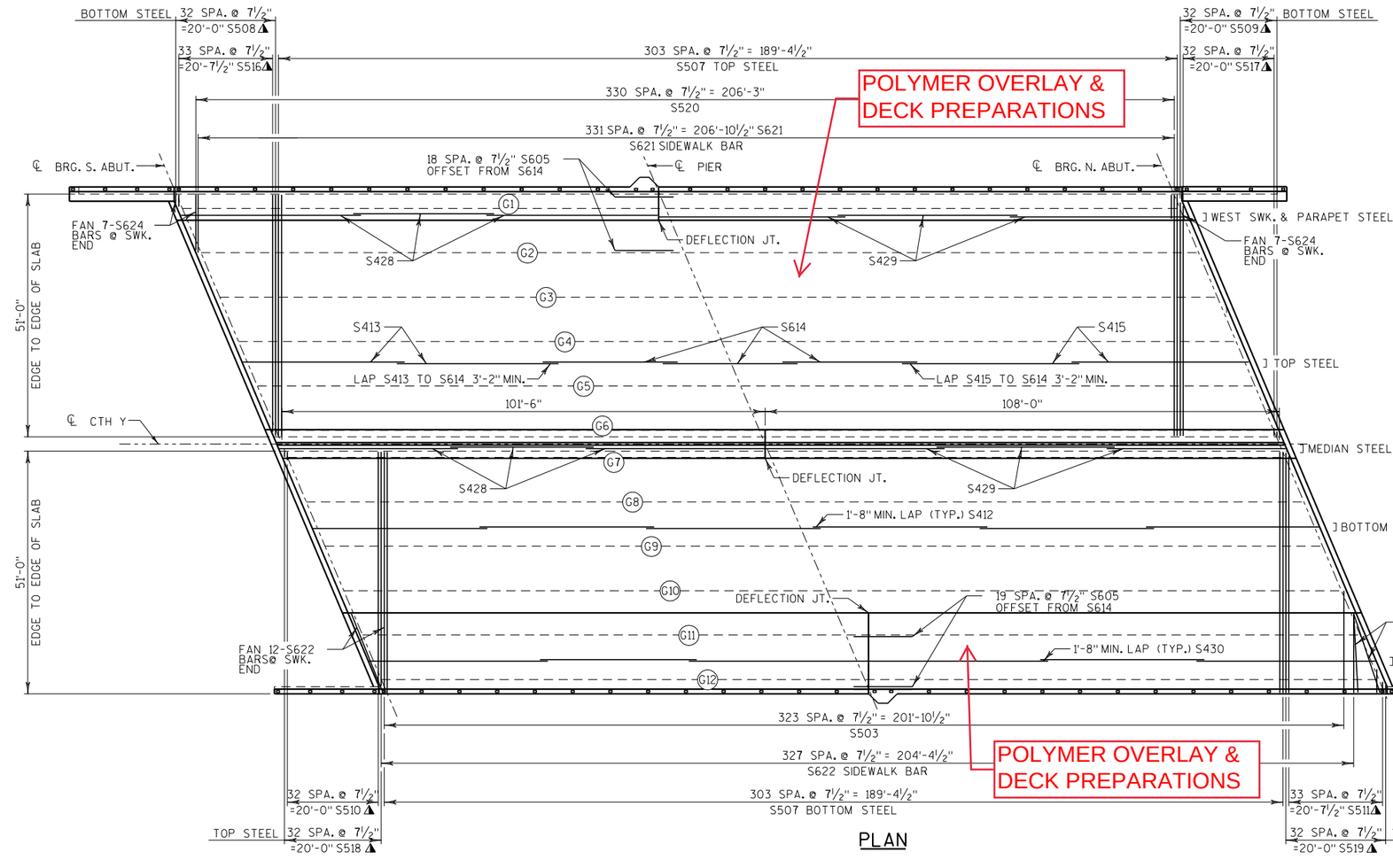
SECTION THRU CTH Y

(LOOKING NORTH)



SECTION S-S

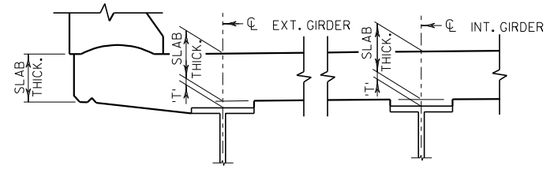




PLAN

POLYMER OVERLAY & DECK PREPARATIONS

BLOCKING DIAGRAM



CONCRETE HAUNCH DETAILS

TO DETERMINE 'T': AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES, TOP OF SPLICE PLATES, OR TOP OF COVER PLATES, WHICHEVER APPLIES, SHALL BE TAKEN AT CENTERLINE OF BEARINGS, CENTERLINE OF FIELD SPLICES, AND AT TENTH POINTS.

TOP OF DECK ELEV. AT FINAL GRADE.
- TOP OF STEEL ELEV. AFTER PLACEMENT.
+ DEFLECTION (CONCRETE ONLY)
- SLAB THICKNESS (9")
= 'T' VALUE FOR SETTING HAUNCH.

BAR LAP TABLE

BAR	LAP
#4	1'-8"
#5	2'-8"
#6	3'-2"

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SUPERSTRUCTURE

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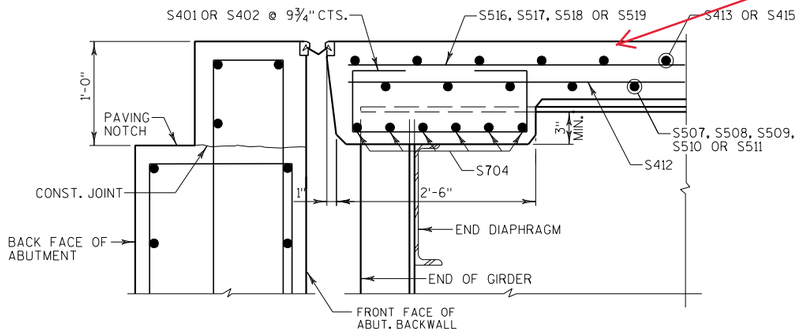
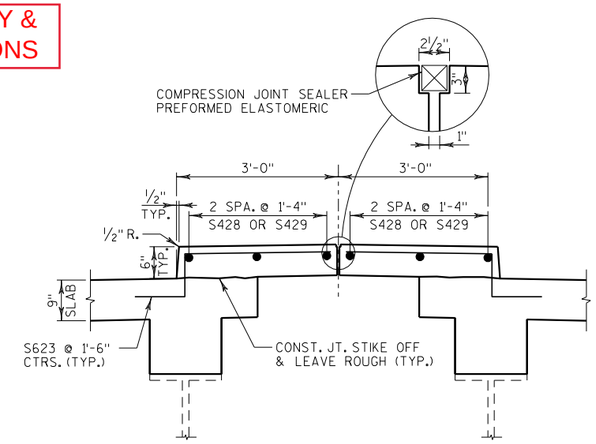


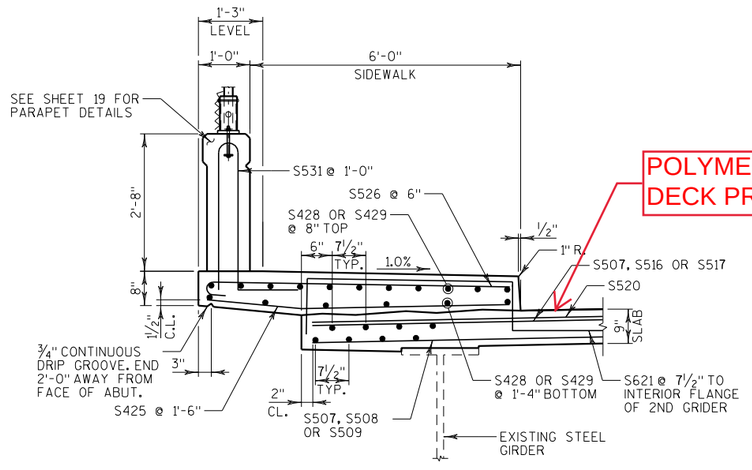
TYPICAL SECTION THRU CONCRETE DIAPHRAGM

(NORMAL TO ℄ SUBSTRUCTURE)



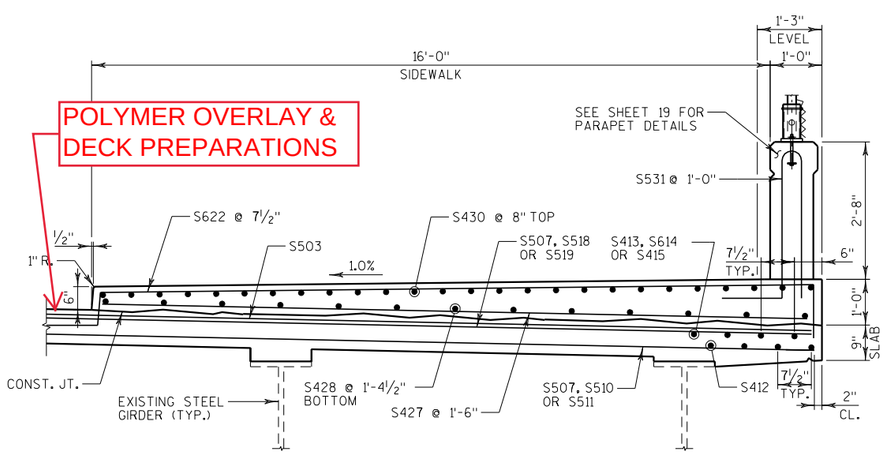
SOUTHBOUND MEDIAN DETAIL

(LOOKING NORTH)



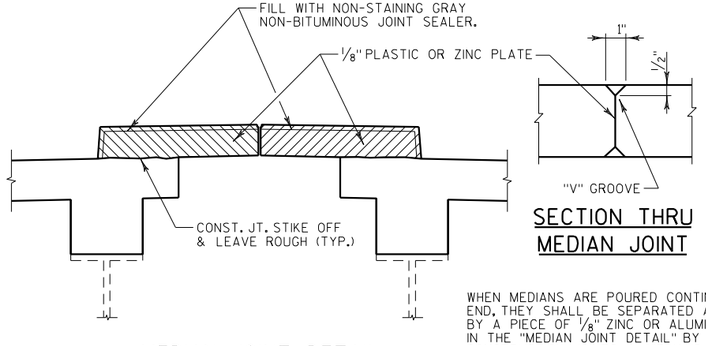
DETAIL A

(LOOKING NORTH)



DETAIL B

(LOOKING NORTH)

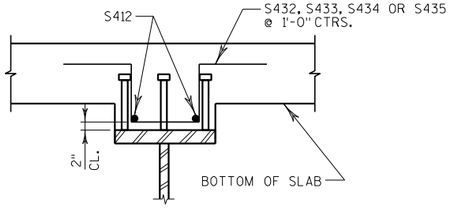


MEDIAN JOINT DETAIL

SHOWING DEFLECTION JOINT IN MEDIAN & SIDEWALK (SEE SHEET 19 FOR DETAILS)

SECTION THRU MEDIAN JOINT

WHEN MEDIANS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR ALUMINUM PLATE CUT AS SHOWN IN THE "MEDIAN JOINT DETAIL" BY SHADED AREA. IF CONSTRUCTION JOINTS IN MEDIANS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.



HAT BAR DETAIL

NO.	DATE	REVISION	BY

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SUPERSTRUCTURE DETAILS

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STATE PROJECT NUMBER
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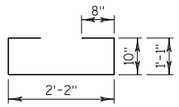
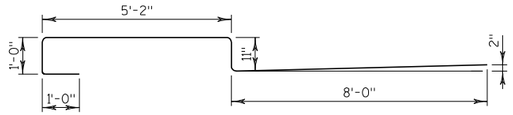
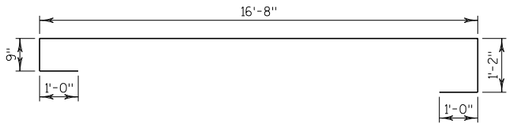


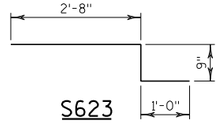
S401 & S402



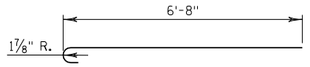
S621



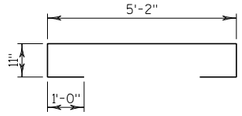
S622



S623



S526



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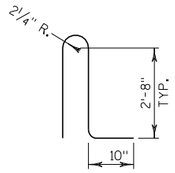
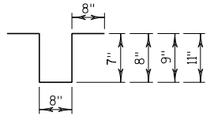
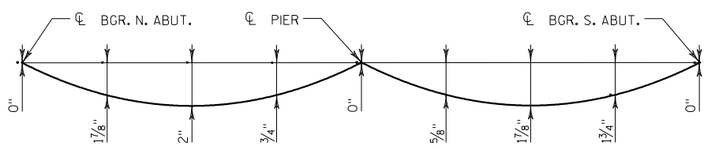


S531



S432, S433, S434 & S435



DEAD LOAD DEFLECTION

S406

TOP OF DECK ELEVATIONS

	S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT.
GIRDER 1	867.21	867.40	867.58	867.76	867.94	868.11	868.28	868.45	868.61	868.76	868.91	869.07	869.22	869.36	869.51	869.64	869.77	869.90	870.02	870.14	870.25
GIRDER 2	867.47	867.66	867.84	868.02	868.20	868.37	868.53	868.70	868.85	869.01	869.16	869.31	869.46	869.60	869.74	869.88	870.01	870.13	870.25	870.36	870.47
GIRDER 3	867.73	867.91	868.10	868.27	868.45	868.62	868.78	868.94	869.10	869.25	869.40	869.55	869.70	869.84	869.98	870.11	870.24	870.36	870.48	870.59	870.70
GIRDER 4	867.99	868.17	868.35	868.53	868.70	868.87	869.03	869.19	869.35	869.50	869.64	869.79	869.94	870.08	870.21	870.34	870.47	870.59	870.71	870.82	870.92
GIRDER 5	868.25	868.43	868.61	868.78	868.95	869.12	869.28	869.44	869.59	869.74	869.88	870.03	870.18	870.32	870.45	870.58	870.70	870.82	870.93	871.04	871.15
GIRDER 6	868.50	868.69	868.86	869.04	869.21	869.37	869.53	869.69	869.84	869.98	870.13	870.27	870.41	870.55	870.68	870.81	870.93	871.05	871.16	871.27	871.37
GIRDER 7	868.55	868.73	868.90	869.08	869.24	869.41	869.57	869.72	869.87	870.02	870.16	870.30	870.45	870.58	870.71	870.84	870.96	871.07	871.19	871.29	871.39
GIRDER 8	868.43	868.61	868.79	868.96	869.12	869.28	869.44	869.59	869.74	869.89	870.03	870.17	870.31	870.44	870.57	870.70	870.81	870.93	871.04	871.14	871.24
GIRDER 9	868.31	868.49	868.67	868.83	869.00	869.16	869.31	869.47	869.61	869.75	869.89	870.03	870.17	870.30	870.43	870.55	870.67	870.78	870.89	870.99	871.09
GIRDER 10	868.20	868.37	868.54	868.71	868.87	869.03	869.19	869.34	869.48	869.62	869.76	869.90	870.03	870.16	870.29	870.41	870.52	870.64	870.74	870.84	870.94
GIRDER 11	868.08	868.25	868.42	868.59	868.75	868.91	869.06	869.21	869.35	869.49	869.62	869.76	869.90	870.02	870.15	870.27	870.38	870.49	870.59	870.69	870.78
GIRDER 12	867.96	868.13	868.30	868.47	868.62	868.78	868.93	869.08	869.22	869.35	869.49	869.62	869.76	869.88	870.00	870.12	870.23	870.34	870.44	870.54	870.63

TOP OF STEEL ELEVATIONS

	S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT.
GIRDER 1	866.31										868.03										869.36
GIRDER 2	866.50										868.20										869.52
GIRDER 3	866.66										868.36										869.63
GIRDER 4	866.82										868.50										869.79
GIRDER 5	866.97										868.66										869.91
GIRDER 6	867.14										868.78										870.06
GIRDER 7	867.16										868.81										870.07
GIRDER 8	867.16										868.78										870.03
GIRDER 9	867.14										868.72										869.96
GIRDER 10	867.12										868.70										869.92
GIRDER 11	867.09										868.66										869.85
GIRDER 12	867.06										868.61										869.76

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
S401	X	52	4-0	X		SLAB DIAPH. G1-G3 & G10-G12 STIRRUP
S402	X	78	4-3	X		SLAB DIAPH. G3-G10 STIRRUP
S503	X	324	21-6			SLAB OVERHANG TRANS.
S704	X	120	9-9			SLAB DIAPH. TRANS.
S605	X	39	9-10			SLAB TOP LONG.
S406	X	4	5-7	X		PARAPET HORIZ.
S507	X	1218	50-8			SLAB TOP & BOTTOM TRANS.
S508	X	33	26-4		▲	SLAB BOTTOM TRANS.
S509	X	33	24-8		▲	SLAB BOTTOM TRANS.
S510	X	33	25-6		▲	SLAB BOTTOM TRANS.
S511	X	34	26-1		▲	SLAB BOTTOM TRANS.
S412	X	1032	36-8			SLAB BOTTOM LONG.
S413	X	324	34-0			SLAB TOP LONG.
S614	X	487	28-4			SLAB TOP LONG.
S415	X	324	37-3			SLAB TOP LONG.
S516	X	34	26-2		▲	SLAB TOP TRANS.
S517	X	33	25-5		▲	SLAB TOP TRANS.
S518	X	33	24-9		▲	SLAB TOP TRANS.
S519	X	33	26-1		▲	SLAB TOP TRANS.
S520	X	331	12-2			SLAB OVERHANG TRANS.
S621	X	332	15-5	X		WEST SIDEWALK DOWELL
S622	X	351	19-11	X		EAST SIDEWALK DOWELL
S623	X	426	4-1	X		MEDIAN DOWELL
S624	X	14	8-4	X		WEST SIDEWALK DOWELL
S425	X	143	6-8			WEST SIDEWALK BOTTOM TRANS.
S526	X	427	7-3	X		WEST SIDEWALK TOP TRANS.
S427	X	146	16-8			EAST SIDEWALK BOTTOM TRANS.
S428	X	78	35-8			MEDIAN, WEST SIDEWALK & PARAPET LONG.
S429	X	78	38-3			MEDIAN, WEST SIDEWALK & PARAPET LONG.
S430	X	270	37-5			EAST SIDEWALK & PARAPET LONG.
S531	X	430	6-8	X		PARAPET VERTICAL
S432	X	420	2-10	X		GIRDER 3 & 10 HAT BAR
S433	X	420	2-11	X		GIRDER 4 & 9 HAT BAR
S434	X	420	3-0	X		GIRDER 5 & 8 HAT BAR
S435	X	420	3-2	X		GIRDER 6 & 7 HAT BAR

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
S508	1 SERIES OF 33	2-5 TO 49-10
S509	1 SERIES OF 33	1-0 TO 48-4
S510	1 SERIES OF 33	1-9 TO 49-2
S511	1 SERIES OF 34	1-8 TO 50-6
S516	1 SERIES OF 34	1-9 TO 50-7
S517	1 SERIES OF 33	1-8 TO 49-1
S518	1 SERIES OF 33	1-0 TO 48-5
S519	1 SERIES OF 33	2-4 TO 49-9

BUNDLE AND TAG EACH SERIES SEPARATELY.

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SUPERSTRUCTURE DETAILS

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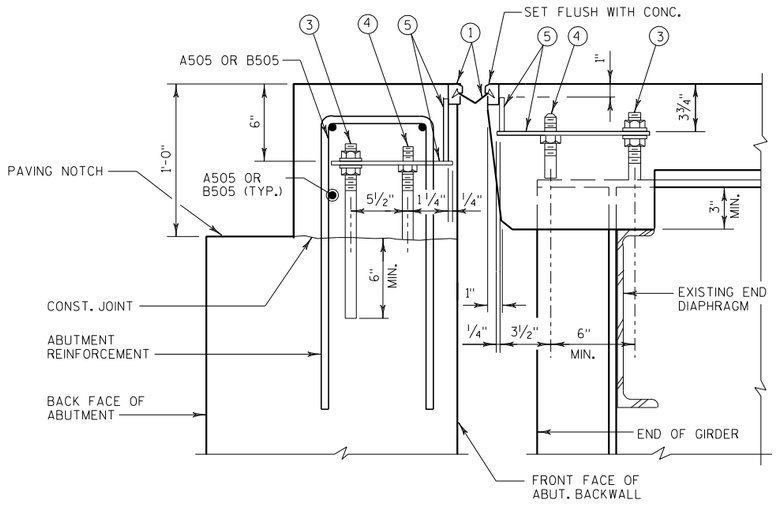
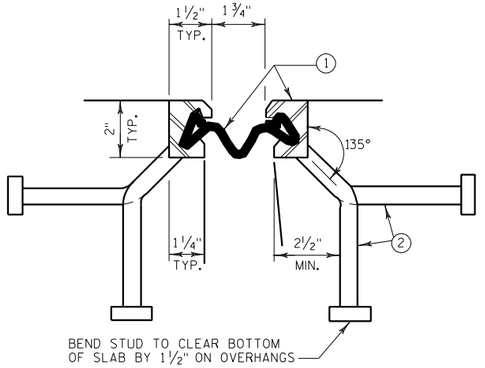


TYPICAL SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB & AT PARAPETS, MEDIANS & SIDEWALKS

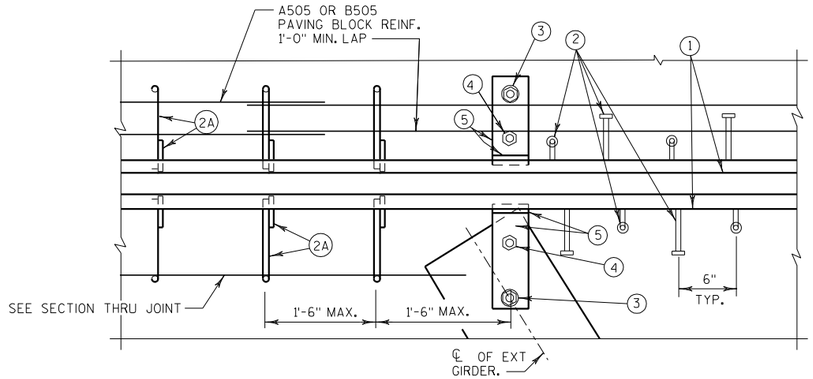
LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS.
2. STUDS ⅝" Φ x 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.

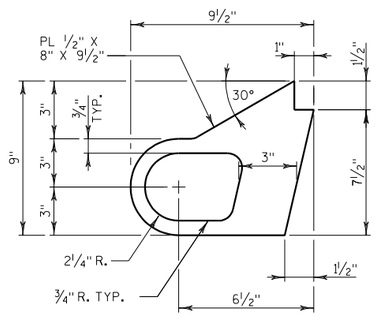
2A. ½" THICK ANCHOR PLATE WITH ⅝" Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

3. ¾" Φ THREADED ROD WITH 2 NUTS AND WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾" Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" x ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELDTO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 & 1" Φ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" x 10½" x (2'-0" LONG FOR SKEWS TO 45° & 3'-0" LONG FOR SKEWS > 45°) WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾" Φ x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" Φ x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾" Φ x 2¼" GALVANIZED THREADED COUPLING.
10. GALVANIZED SIDEWALK PLATE ⅜" x 2'-0" x LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7.
11. 1" x 5" SLOTTED CSK. HOLE FOR NO. 7. SLOT PARALLEL TO DIRECTION OF MOVEMENT.

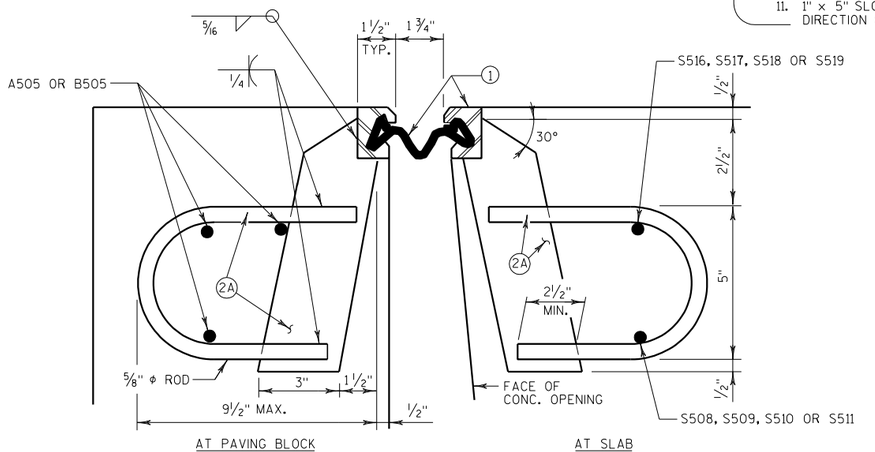
FOR DETAILS SEE SHEET 18



PART PLAN



ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

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

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

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

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

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-67-113".

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EXPANSION DEVICE

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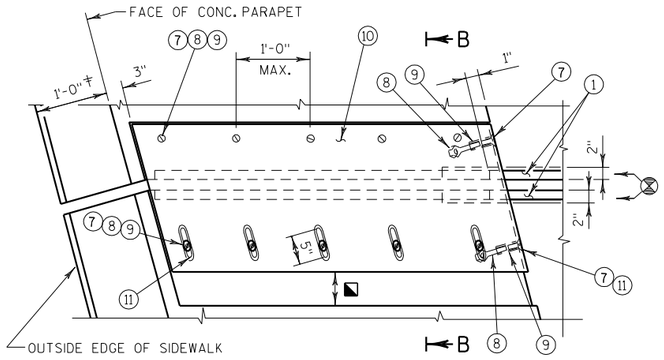
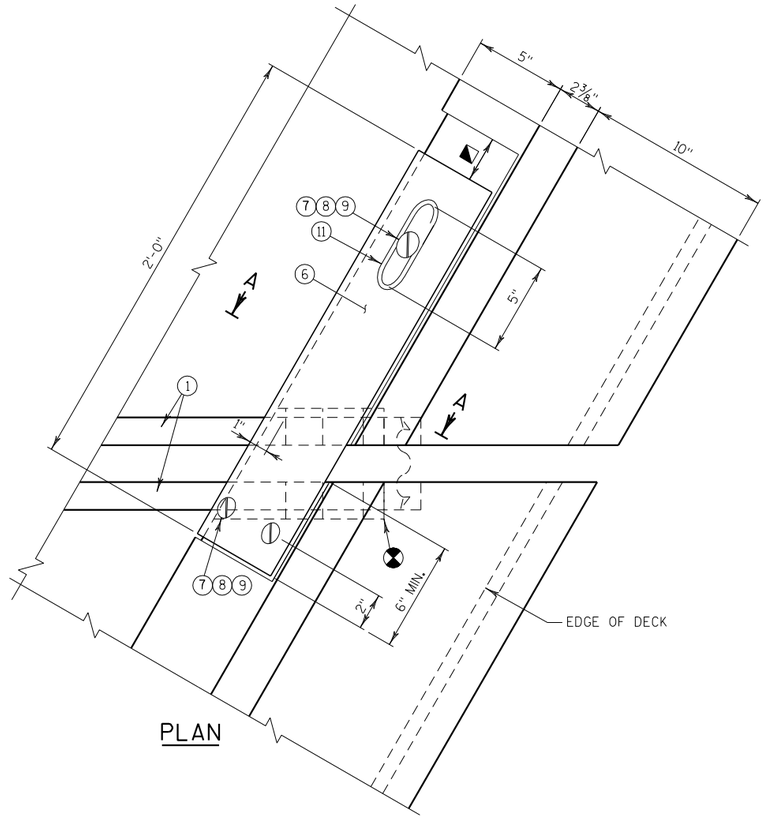
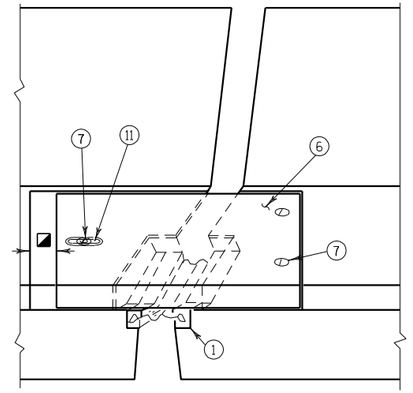


PLAN AT SIDEWALK

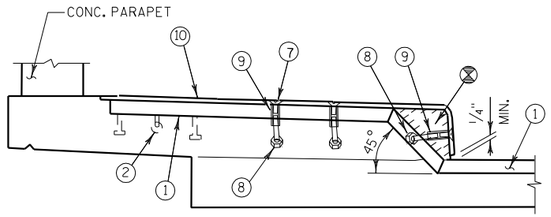
† 1'-2" WHEN "VERTICAL FACE PARAPET TYPE 'TX' IS USED



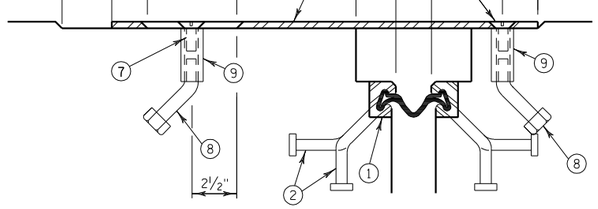
PLAN



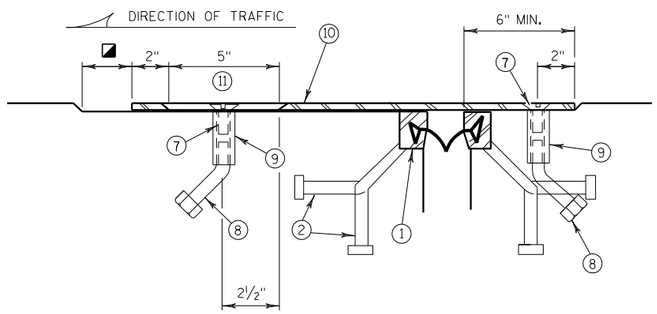
VIEW OF PARAPET PLATES FROM ROADWAY



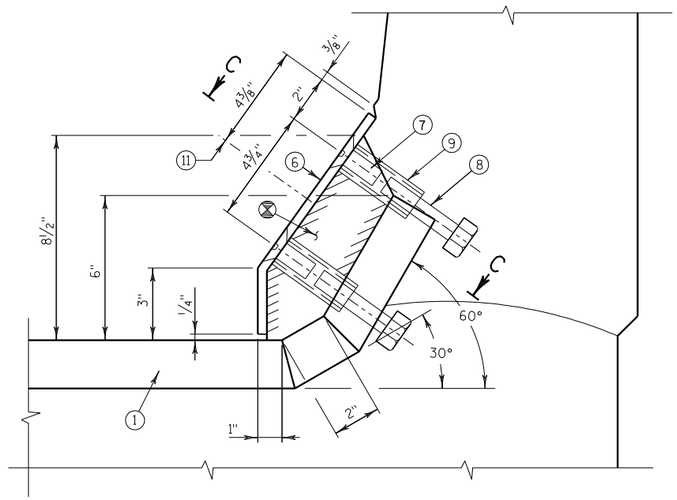
SECTION AT SIDEWALK



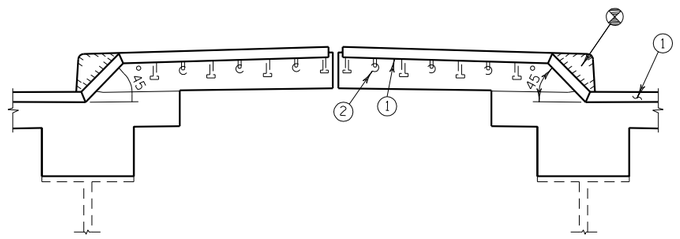
SECTION C-C



SECTION B-B



SECTION A-A



SECTION AT MEDIAN

⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING

◪ JOINT OPENING DIM. ALONG SKEW PLUS ½"

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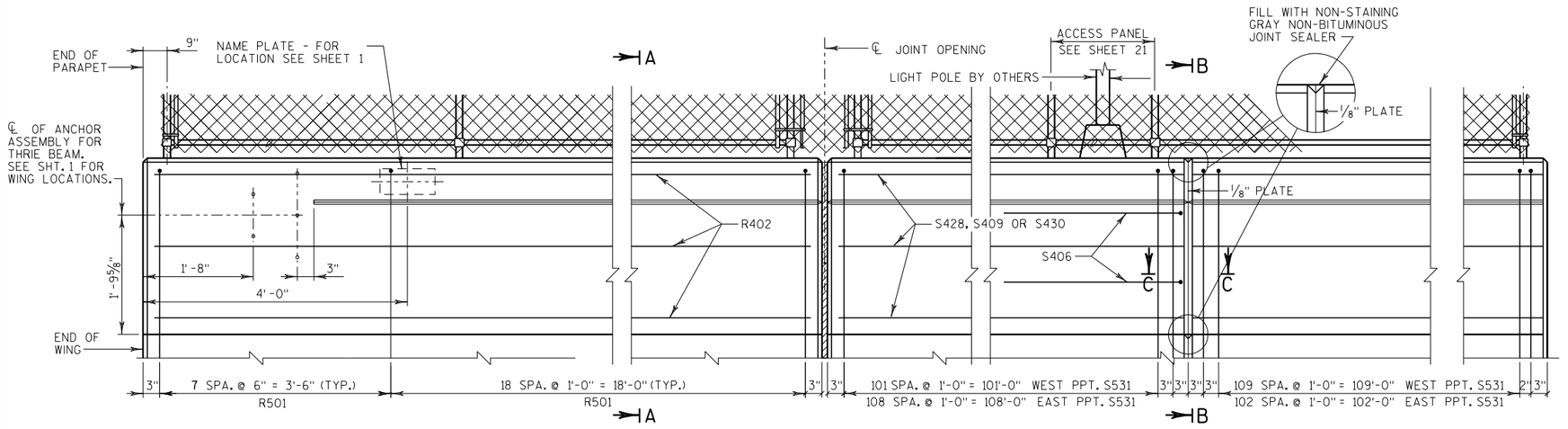
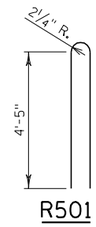


AT ABUTMENTS

AT DEFLECTION JOINT

BILL OF BARS

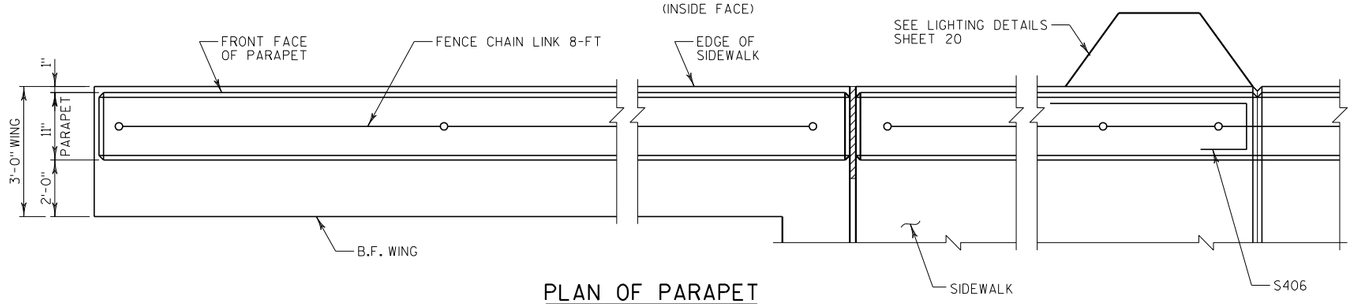
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	52	9-5	X		PARAPET VERT.
R402	X	12	21-6			PARAPET HORIZ.



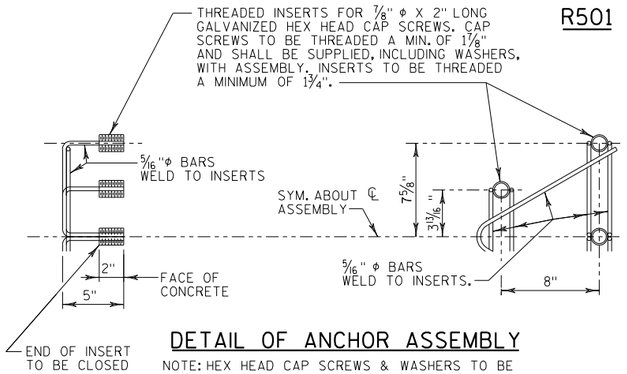
R501

ELEVATION OF PARAPET

(INSIDE FACE)



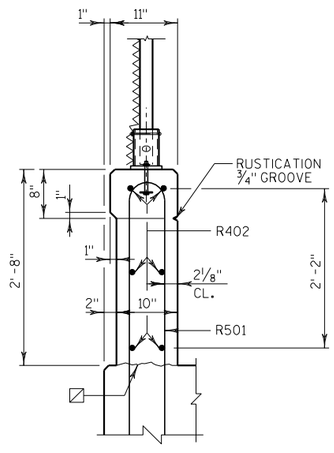
PLAN OF PARAPET



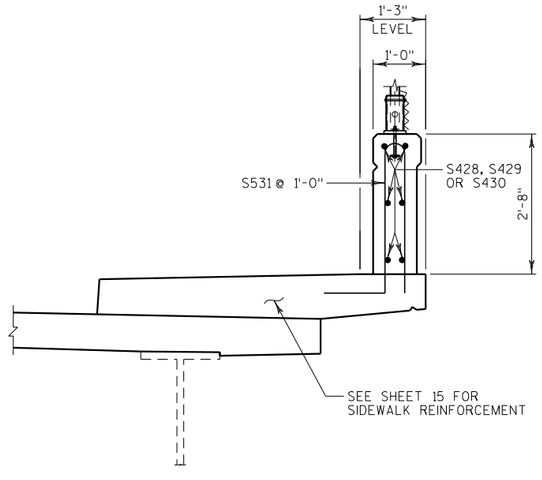
DETAIL OF ANCHOR ASSEMBLY

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

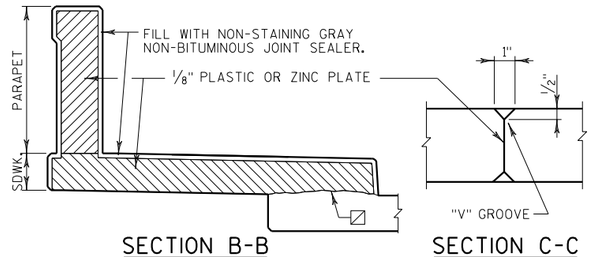
ASSEMBLY BID ITEM SHALL BE "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



SECTION A-A



SIDEWALK DETAIL

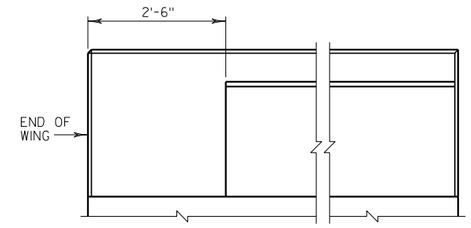


SECTION B-B

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR ALUMINUM PLATE CUT AS SHOWN IN SECTION B-B BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

SECTION C-C



FRONT FACE OF PARAPET

☒ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

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VERTICAL FACE PARAPET "A"

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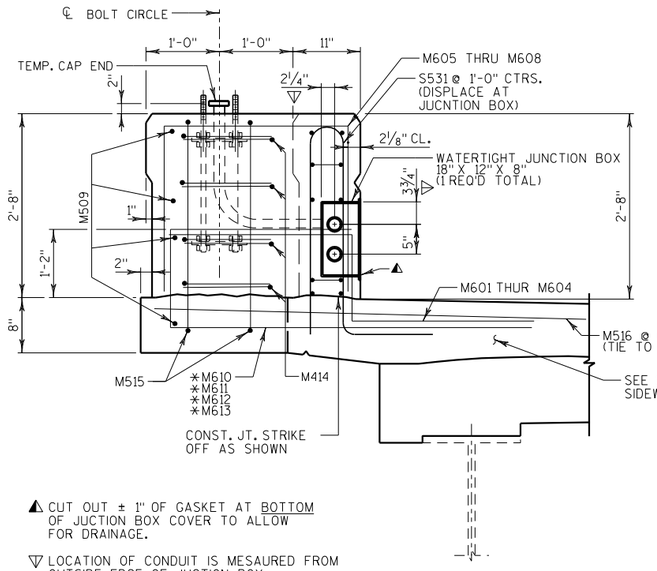


SECTION A-A

NOTES

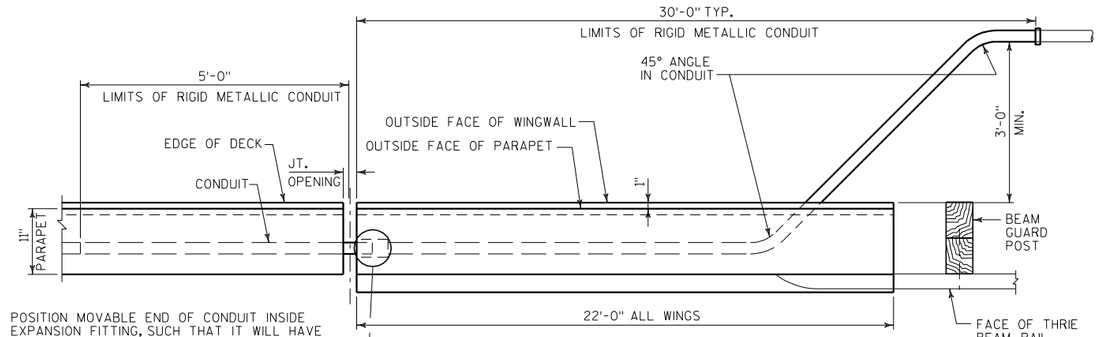
BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANXHOR ASSEMBLIES LIGHT POLES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH".

APPOVED MANUFACTURES - JUNCTION BOXES:
SEE APPOVED MATERIAL LIST.

APPOVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
O-Z/GEDNEY TYPE AX-200 & BONDING JUMPER
(4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES & ADAPTER FITTINGS TO BE INCIDENTAL TO RIGID "CONDUIT RIGID METALLIC 2-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. LISTED FOR ELECTRICAL USE SHALL BE USED.



POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

PLAN OF PARAPET AT WINGWALL

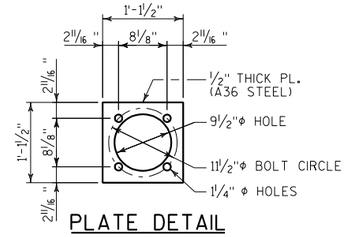
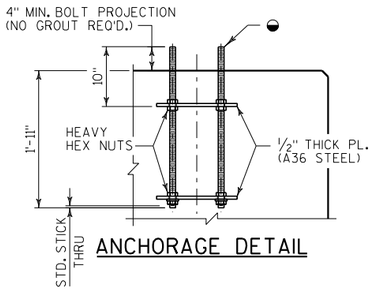


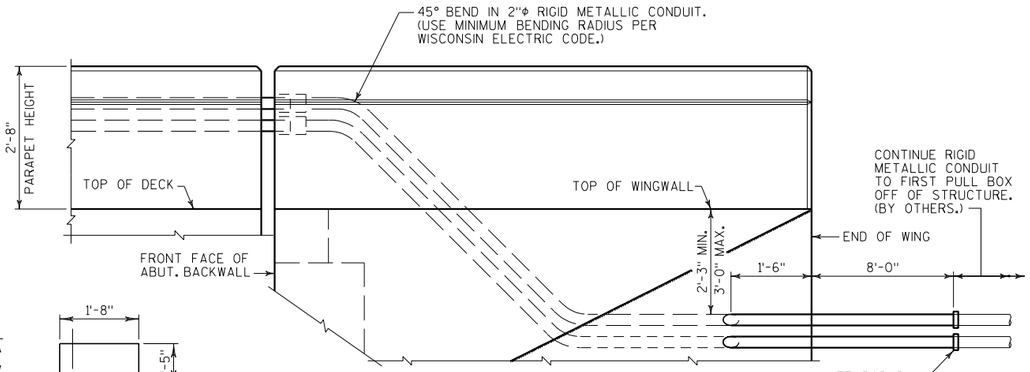
PLATE DETAIL



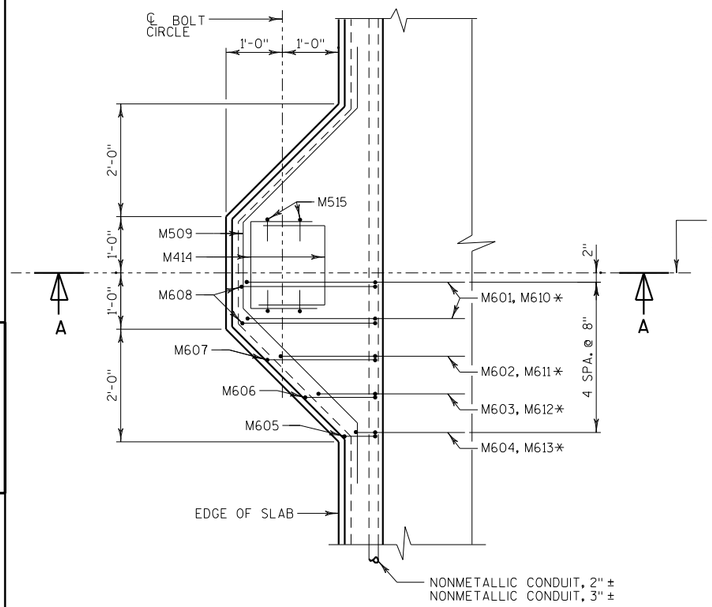
ANCHORAGE DETAIL

M610

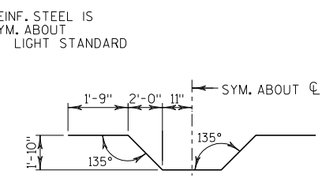
M414



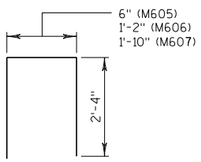
OUTSIDE ELEVATION OF PARAPET AT WINGWALL



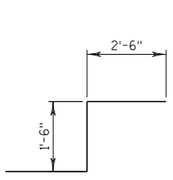
PLAN OF LIGHT STANDARD SUPPORT



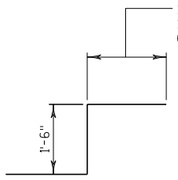
M509



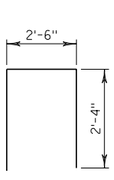
M605 THRU M607



M601



M602 THUR M604

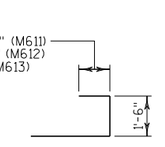


M608

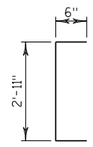
BILL OF BARS

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
M601	X	8	5-10	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M602	X	4	5-2	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M603	X	4	4-6	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M604	X	4	3-10	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M605	X	4	4-10	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M606	X	4	5-6	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M607	X	4	6-2	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M608	X	8	6-10	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M509	X	8	10-9	X		PARAPET @ LIGHT STD. SUPPORT HORIZ.
M610	X	8	8-4	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M611	X	4	7-0	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M612	X	4	5-8	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M613	X	4	4-4	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M614	X	16	4-4	X		PARAPET @ LIGHT STD. SUPPORT HORIZ.
M515	X	8	3-8	X		PARAPET @ LIGHT STD. SUPPORT VERT.
M516	X	24	7-0			PARAPET @ LIGHT STD. SUPPORT HORIZ.



M611 THRU M613



M515

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-113

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LIGHTING DETAILS

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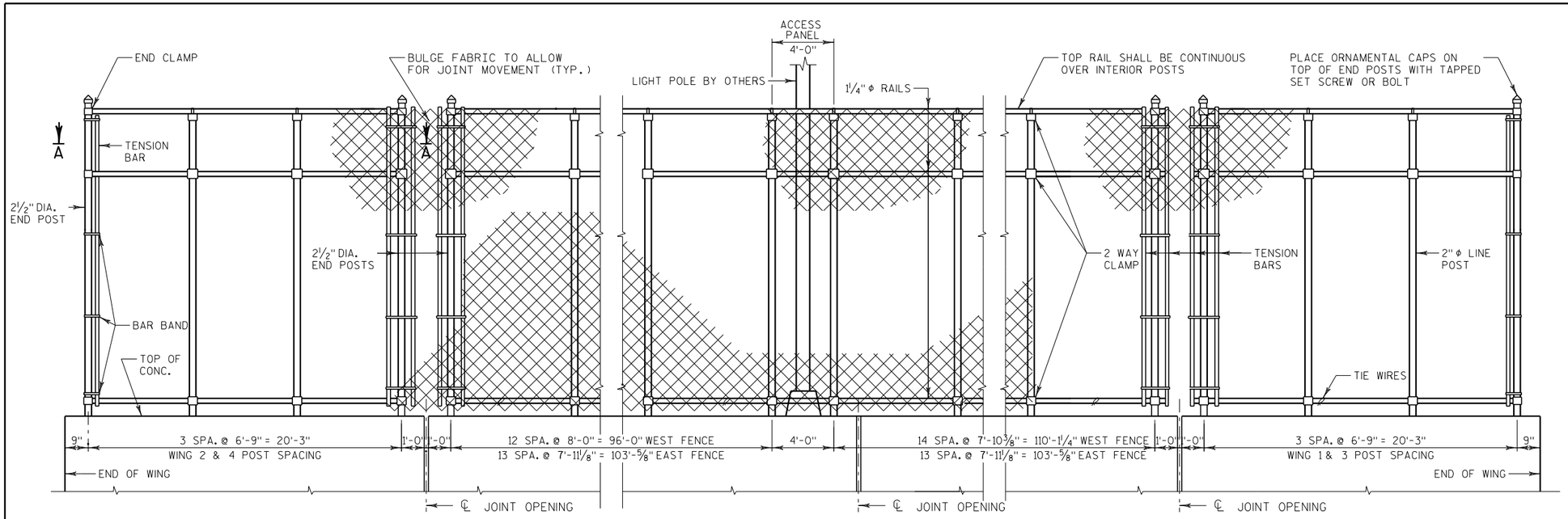
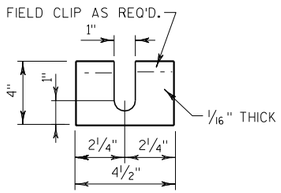
STATE PROJECT NUMBER

1090-22-70



FENCE PART ELEVATION



POST SHIM DETAILS

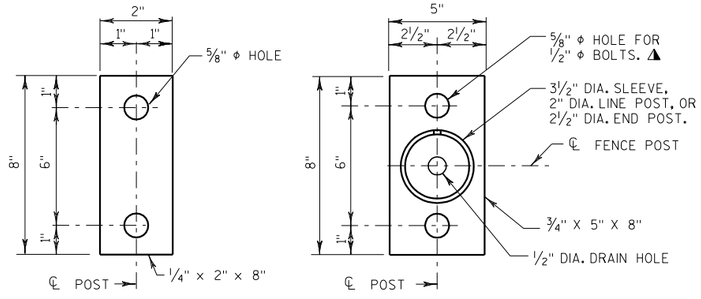
SHIMS REQUIRED ONLY WHEN POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST.

SECTION THRU FENCE

END CLAMP — *2 WAY CLAMP — WELDED CLAMP

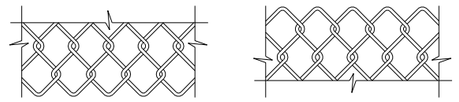
SECTION A-A

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



ANCHOR PLATE

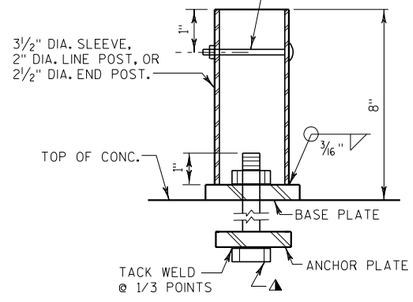
BASE PLATE



BOTTOM DETAIL — TOP DETAIL

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAUGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

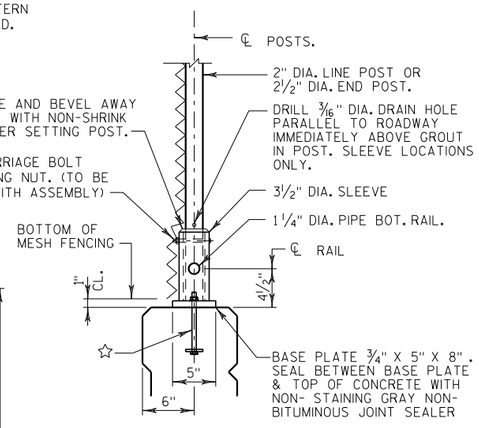


ELEVATION

POST ATTACHMENT

UNIT SHALL BE GALV. AFTER FABRICATION

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



DETAIL A

GENERAL NOTES

BID ITEM SHALL BE "FENCE CHAIN LINK 8-FT" WHICH INCLUDES ALL ITEMS SHOWN.

POSTS ARE TO BE SET VERTICAL.

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

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 TENSION 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.

COST FOR LOCATING AND PROVIDING AN ACCESS PANEL AT THE LIGHT POLE SHALL BE INCLUDED IN THE BID ITEM "FENCE CHAIN LINK 8-FT"

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

▲ 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 ☆

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

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FENCING DETAILS

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