

**Wisconsin Dept. of Transportation
Structure Inventory Data**

Bridge B360230

Structure No.: B360230	Municipality: CENTERVILLE	Section:	Town:	Range:	Maintenance Agency: STATE HIGHWAY DEPT	Owner: STATE HIGHWAY DEPT
Replaced Structure No.: B360014	Historical Sig.: 5	Latitude: 435804. 78	Longitude: 874409.69	County: MANITOWOC(3 6)	District: 3	

ABUTMENT DATA (CARDINAL)

1. Abutment Type: SILL FLEXIBLE/RECT
2. Pile Type: PILING - CAST IN PLACE (CIP)
3. Pile Size: 254 OR 273 MM (10 OR 10-3/4")
4. Slope Protection Type: HEAVY RIPRAP
5. Rdwy. Width: 42.0 ft
6. Deck Width: 44.5 ft
7. Wing Type: PARALLEL TO ROADWAY

ABUTMENT DATA (NON-CARDINAL)

1. Abutment Type: SILL FLEXIBLE/RECT
2. Pile Type: PILING - CAST IN PLACE (CIP)
3. Pile Size: 254 OR 273 MM (10 OR 10-3/4")
4. Slope Protection Type: HEAVY RIPRAP
5. Rdwy. Width: 42.0 ft
6. Deck Width: 44.5 ft
7. Wing Type: PARALLEL TO ROADWAY

GEOMETRIC DATA

1. Structure Length: 75.5 ft (Back to Back Abuts. Along Rdwy. Centerline)
2. No. Lanes On: 2
3. L. Sdk. Width On: ft
4. R. Sdk. Width On: ft
5. Median Type:
6. Median Width: ft
7. Skew Angle: Deg.
8. Direction Skew Angle:
9. Horizontal Curve: Radius, ft
10. Dir.-Hor. Curve:
11. Girder Spacing: 9.5 ft
12. Height: 36.0 ft (Top Pier Footing to Top Deck or Streambed Elev. to Top Deck)
13. NBI Bridge Length Met: true

APPROACH DATA

1. Appr. Pavement Width: 24 ft
2. Rt. Shoulder Width: 12 ft
3. Lt. Shoulder Width: 6 ft
4. Total Width (Sum Above): 42 ft
5. Guardrail Termination: 1
6. Guardrail Adequacy: 1
7. Railing Attachment Type: 5 - 22 MM (7/8") BOLTS
8. Railing Design Year:
9. Left Outer Railing Type:
10. Right Outer Railing Type:
11. Left Inner Railing Type:
12. Right Inner Railing Type:

CAPACITY DATA

1. Design MS: HL93
2. Inventory MS: RF1.35
3. Operating MS: RF1.75
4. Max. Veh. Wt.: 250 kips
5. Load Rating Basis.: LRFR
6. Load Governing Member: INTERIOR DECK GIRDER
7. Deck Composition: EPOXY COATED REINFORCING
8a. Deck Membrane: NONE
8b. Deck Surface: CONCRETE

HYDRAULIC DATA

1. Design Flood Frequency: 100 yrs
2. Design Discharge: 2500 cu-ft/s
3. Max. Velocity: 7.4 ft/s
4. Drainage Area: 17.6 sq. ft
5. High Water Elev.: 634.1 ft
6. Scour Critical Code: 8
7. Scour Calculated?: false

STRUCTURE SERVICE DATA

1. Hwy. On Detour Length: 27 ft
2. Type Service On: HIGHWAY
3. Type Service Under: WATERWAY

APPRAISAL UPDATE

1. Load Capacity: 5-LEGAL LOAD STRESS NOT EXCEEDED
2. Geom. On: 8-COND EQUAL DESIRABLE CRITERIA
3. Geom. Under: N-NO UNDERCLEARANCE RECORD EXISTS
4. Appr. Align: 8-COND EQUAL DESIRABLE CRITERIA
5. Horiz. Align:
6. Vert. Align:

PLANNING DATA

1. Functional Classification: INTERSTATE-RURAL(01)
2. ADT: 25000
3. ADT-Year: 2015
4. Truck ADT %: 16
5. Future ADT: 29500
6. Future ADT-Year: 2036

CONDITION DATA

Deck:	SuperStructure:	SubStructure:	Channel:
--------------	------------------------	----------------------	-----------------

Culvert:	Waterway:
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Bridge B360230

CONSTRUCTION DATE

Project ID	Construction Contractor	Construction Designer	Construction Year	Plans Reel Number	Letting Date	Survey Received	Work Performed
1224-21-73	NORTHEAST ASPHALT, INC.	AYRES & ASSOCIATES	2017		13-Dec-2016	04-Feb-2016	NEW STRUCTURE

CLEARANCE DATA

Clearance Lane Number	Minimum Vertical	Minimum Vertical Date	Minimum Horizontal Distance	Right Minimum Lateral
Left Minimum Lateral	Railroad Right Minimum Lateral	Railroad Left Minimum Lateral	Railroad Vertical Distance	Railroad Horizontal Distance

ROUTE DATA

Number	Direction	Type	Structure Route On / Under	Structure Route Cardinal / NonCardinal
043	N		0	C
			U	

Number	Structure Route Location	Highway Feature Name	Structure Route Local System	Highway Feature Designation
043	3.8M N JCT CTH XX	IH 43 NB	IH	MAINLINE
		POINT CREEK		WATER / LAND / OTHER

Number	Structure Route Primary Flag	Designed National Network Flag	Structure Defense Highway Designation	Highway On Inventory Route
043	Y	Y	1	NHI
	Y	N	0	

PIER DATA

Number	Pier Type	Piling Type	Piling Size	Pier Skew Angle	Direction of Skew

SPAN DATA

Number	Type	Length	Configuration	Material	Girder or Truss Height	Girder or Truss Spacing
0		71.0	DECK GIRDER - PS WIDE	PREST CONCRETE	36.0	9.5

EXPANSIONJOINT DATA

Number	Location	Type	Inactive Date

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for
B-36-230

IH 43 NB over POINT CREEK
Aug 17, 2017



Type	Prior	Frequency (mos)	Performed
Routine		24	X
SIA Review		48	X
Uw-Profile		24	X

Latitude 43°58'04.78"N
Longitude 87°44'09.69"W

Owner STATE HIGHWAY DEPT
Maintainer STATE HIGHWAY DEPT

Time Log

Team members

Hours	Minutes	
1	0	

Inspector	Name	Number	Signature	Date
	Weber, Dale	3007	<i>Dale Weber</i> E-signed by Brady Rades(dotbpr)	08-28-17

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

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Identification & Location

Feature On: IH 43 NB	Section Town Range: S03 T17N R23E	Structure Number: B-36-230
Feature Under: POINT CREEK	County: MANITOWOC	
Location 3.8M N JCT CTH XX	Municipality: CENTERVILLE	Structure Name:

Geometry

measurements in feet, except where noted

Approach Roadway Width: 40	Bridge Roadway Width: 42.0	Total Length: 75.5
Approach Pavement Width: 24	Deck Width: 44.5	Deck Area (sq ft): 3359

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	2	10050	2015	ONE WAY TRAFFIC

Capacity

Load Rating

Inventory rating: 1.06	Overburden depth (in):	Last rating date:	Controlling:
Operating rating:	Deck surface material: CONCRETE	Re-rate for capacity (Y/N):	Control location:
Posting:	Re-rate notes:		

Hydraulic

Classification

Scour Critical Code(113): (8) STABLE-ABOVE TOP FOOTING	Q100 (ft3/sec):	
High water elevation (ft): 634.1	Velocity (ft/sec): 7.4	Sufficiency #:

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	PREST CONCRETE	DECK GIRDER - PS WIDE	36	71.0	Y

Expansion joint(s)

Temperature:

File:	New:
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Clearance

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

Construction History

Year	Work Performed	FOS id
9999	NOT BUILT	1224-21-73

Elements

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	12		Reinforced Concrete Deck-Coated Reinforcing	SF	3,359	3,359	0	0	0
	8000		Wearing Surface (Bare)	SF	3,133	3,133	0	0	0
X	109		Prestressed Concrete Open Girder 36" W Girders	LF	360	360	0	0	0
X	215		Reinforced Concrete Abutment	LF	94	94	0	0	0
X	321		Reinforced Concrete Structural Approach Slab	SF	1,780	1,780	0	0	0

BRIDGE INSPECTION REPORT
Wisconsin Department of Transportation
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Structure No.: **B-36-230**

X	331		Reinforced Concrete Bridge Rail	LF	190	190	0	0	0
			Parapet covered with curing materials at time of inspection (8/17/17)						
X	8400		Integral Wingwall	EA	4	4	0	0	0

Assessments

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	9001		Drainage - Approach	EA	4	4	0	0	0
			Concrete flumes at NW & NE quadrants						
X	9045		Slope Protection- Riprap	EA	2	2	0	0	0
X	9167		Steel Diaphragm	EA	4	4	0	0	0

NBI Ratings

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

Structure Specific Notes

Inspection Specific Notes

Inspector Site-Specific Safety Considerations

Structure Inspection Procedures

Special Requirements

Chk Hours Cost Comments

**Underwater Probe Form
B-36-230**

General Site Conditions - Scour

No scour

General Site Conditions - Embankment Erosion/Conditions

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Substructure Notes

Unit	Max Water Depth(ft)	Mode	Notes
Cardinal		Dry	
Non Cardinal		Dry	

Non-Image Documents

Type	Document	Document Comment/Description	Attached
UW Profile	b36-230_17_xpd1.xls	East Profile 8/17/17	
UW Profile	b36-230_17_xpd2.xls	West Profile 8/17/17	

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-36-230
IH 43 NB over POINT CREEK

LOCATION

(3) Municipality:
(16) Latitude(° ' ")
(17) Longitude(° ' ")

CENTERVILLE
43°58'04.78"N
87°44'09.69"W

TRAFFIC SERVICE

(28A) Lanes On:
(28B) Lanes Under:
(102) Traffic Pattern On:
(102) Traffic Pattern Under:
(19) Detour Length(mi):

2
-NO TRAFFIC ☒ ONE WAY TRAFFIC -TWO WAY TRAFFIC
☒ NO TRAFFIC -ONE WAY TRAFFIC -TWO WAY TRAFFIC
27

GEOMETRY

(49) Structure Length(ft):
(50) Sidewalk Width(ft):
(50) Curb Width(ft):
(52) Culvert Barrel Length(ft):
(34) Skew:

(51) Bridge Roadway Width(ft):
(52) Deck Width(ft):
Right Wingwall Length(ft):
Left Wingwall Length(ft):
(32) Approach Roadway Width(ft):

(47) Minimum Horizontal(ft):
(55) Minimum Right Lateral(ft):
(56) Minimum Left Lateral(ft):

75.5	
Left:	Right:
Angle(°):	Direction: -RIGHT FORWARD -LEFT FORWARD
Cardinal	Non-Cardinal
42.0	
44.5	
40	0
Cardinal Under Clearance	Non-Cardinal Under Clearance

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:
(36B) Transition Adequacy:
(36C) Approach Guardrail Adequacy:
(36D) Guardrail Termination Adequacy:
Outer Rail:

-SUB-STANDARD ☒ STANDARD -NOT APPLICABLE		
-SUB-STANDARD ☒ STANDARD -NOT APPLICABLE		
-SUB-STANDARD ☒ STANDARD -NOT APPLICABLE		
-SUB-STANDARD ☒ STANDARD -NOT APPLICABLE		
Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify)
		Left:
		Right:
	CONT GUARD RAIL	
	NO APP GRDRL	
	NO ATTACHMENT	
5	22 MM(7/8") BOLT (Please enter quantity)	
	25 MM(1") BOLT (Please enter quantity)	
	OTHER (Please specify)	
X	(01) ENERGY ABSORBING TERMINAL/EAT	
	(02) TURN DOWN	
	(99) OTHER (Please specify)	

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:

	3 Intolerable- Substantial speed reduction
	6 Fair- Minor speed reduction
X	8 Good- No speed reduction

HSI · B-36-230

6 SANDBOX FOLDERS

home

go »

b-36-230



BatchEntry[190131121201] ExportStructures complete

1 value exported via Report

B-36-230 IH 43 NB over POINT CREEK

General Inventory

Bridge

Main

Abutment

Pier

Span

Geometry

Approach

Sufficiency

Capacity

Hydraulic

Expansion Joint

Appraisal

ADT

Design load rating

HL93



Inventory load rating

RF1.35



Operating load rating

RF1.75



Load posting

Max vehicle weight (kips)

250



Load rating basis

LRFR



Load governing member

INTERIOR DECK GIRDER



Rating change date

2018-04-04



Girder section loss

Overburden depth (in)

0.0



Overburden depth date

2018-01-17

Deck protection

EPOXY COATED REINFORCING

Deck membrane

NONE

Deck surface

CONCRETE



Deck Composition

Material

CONCRETE(01)

Add material



add

Inspection

save

cancel

SUFFICIENCY RATING CALCULATION**B-36-230 on 01/31/19****BUILDING S1**

Inventory Rating =	[43.74]	SuperStructure Rating is =	[8]
SubStructure Rating is =	[8]	Culvert Rating is =	[N]

$S1 = 55.0 - (A + B)$
 $55.00 = 55.0 - (0.0 + 0.00)$
-----> S1 = 55.00

BUILDING S2

Calculated Values ---> X = 12500.00 ---> Y = 6.40 ---> G = 0.0 ---> H = 0.0

Deck (58) Rating is =	[8]	Structural Eval.(67) Rating is =	[8]
Deck Geometry (68) Rating is =	[8]	UnderClearance (69) Rating is =	[N]
Water Adequacy (71) Rating is =	[8]	Approach Align. (72) Rating is =	[8]
ADT (29) =	[25000]	Road Way Width (51) m =	[12.80]
Approach Width (32) m =	[12.80]	Number of Lanes (28) =	[2]
Structure Type (43) =	[02]	Vertical Clearance (53) m =	[99.99]
STRAHNET (100) =	[1]	Traffic Pattern (102) =	[1]

$S2 = 30 - [J + (G + H) + I]$
 $30.00 = 30 - [0 + 0.00 + 0]$
-----> S2 = 30.00

BUILDING S3

ADT (29) =	[25000]	Detour Length (19) km =	[43]
------------	---------	-------------------------	------

$A = 50.39$
 $K = 1.00$

STRAHNET (100) =	[1]
------------------	-----

$S3 = 15.0 - (A + B)$
 $-2.00 = 15.0 - 15.00 + 2.0$
-----> S3 = 0.00(min:0,max:15)

Detour Length (19) km is =	[43]	Structure Type (43) is =	[02]
Traffic Safety number digits(36) is =	[0]		

$S4 = A + B + C$
 $0.03 = 0.03 + 0 + 0$
-----> **S4 = 0.03**

theRating is = S1 [55.00] + S2 [30.00] + S3 [0.00] - S4 [0.03]

FINAL RATING IS 85.0

Database-stored sufficiency

Inspection

save

cancel

brianepley • 60 • 19 01 31 12

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
 INVENTORY RATING FACTOR: 1.06
 OPERATING RATING FACTOR: 1.67
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING
 SURFACE OF 20 #/S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY { SUPERSTRUCTURE f'_c = 4,000 p.s.i.
 ALL OTHER f'_c = 3,500 p.s.i.
 HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) f_y = 60,000 p.s.i.

36W" PRESTRESSED GIRDER
 CONCRETE MASONRY f'_c = 8,000 p.s.i.
 STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF = 270,000 p.s.i.

HYDRAULIC DATA:

100 YEAR FLOOD

DRAINAGE AREA = 17.6 sq. mi.
 WATERWAY AREA = 337 sq. ft.
 $V = 7.4$ f.p.s.
 $Q_{100} = 2,500$ c.f.s.
 HIGH WATER₁₀₀ EL. 634.1
 HIGH WATER₂ EL. 629.9
 RDWY. OVERFLOW = N/A
 SCOUR CRITICAL CODE = 8
 NGVD 88 DATUM

REGULATORY HIGH WATER₁₀₀ EL. 636.5
 REGULATORY Q_{100} = 3,250 c.f.s.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON $10\frac{3}{4}$ " ϕ C.I.P. PILING DRIVEN TO A REQUIRED
 DRIVING RESISTANCE OF 130 TONS $\pm$ PER PILE AT REDRIVING AS DETERMINED BY
 THE MODIFIED GATES DYNAMIC FORMULA.
 ESTIMATED LENGTH 85'-0" FOR BOTH ABUTMENTS.

*THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS
 THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5
 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA:

IH 43 NB

A.D.T. = 25,000 (2016)
 A.D.T. = 29,500 (2036)
 R.D.S. = 70 M.P.H.

FOR TYPICAL SECTION,
 PROFILE GRADE LINE, AND
 GENERAL NOTES, SEE SHEET 2



LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES, AND NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT WING DETAILS
6. SOUTH ABUTMENT BILL OF BARS
7. NORTH ABUTMENT
8. NORTH ABUTMENT WING DETAILS
9. NORTH ABUTMENT BILL OF BARS
10. 36W" PRESTRESSED GIRDER DETAILS
11. 36W" PRESTRESSED GIRDER DETAILS
12. STEEL INTER. DIAPHRAGM DETAILS
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE PLAN
15. SOUTH STRUCTURAL APPROACH SLAB
16. NORTH STRUCTURAL APPROACH SLAB
17. STRUCTURAL APPROACH SLAB DETAILS
18. SINGLE SLOPE PARAPET 32SS

BRIDGE OFFICE CONTACT:
 WILLIAM DREHER
 (608)-266-8489

CONSULTANT CONTACT:
 DAN SYDOW
 (715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i> CHIEF STRUCTURES DESIGN ENGINEER		DATE 08/09/16
STRUCTURE B-36-230			
IH 43 NB OVER POINT CREEK			
COUNTY	MANITOWOC		TOWN/CITY/VILLAGE CENTERVILLE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY AEB	DESIGN CK'D. CJM	DRAWN BY CJM/CLS	PLANS CK'D. DNS
GENERAL PLAN			SHEET 1 OF 18 359

SPRNAME\$
 U:\42-0888.00 - Manitowoc County, IH43 Rehab\B-36-230\BRIDGE\B-36-230 gp.dgn

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

8

8

\$PRNAME\$
U:\42-0888.00 - Manitowoc County, IH43 Rehab±B-36-230±BRIDGE±B-36-230 gp.dgn

STATE PROJECT NUMBER

1224-21-73

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. STR. APPR. SLAB	S. ABUT.	N. ABUT.	N. STR. APPR. SLAB	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-36-230	LS	-----	-----	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-----	300	300	-----	-----	600
502.0100	CONCRETE MASONRY BRIDGES	CY	57	48	48	57	176	386
502.3200	PROTECTIVE SURFACE TREATMENT	SY	95	-----	-----	95	365	555
502.3210	PIGMENTED SURFACE SEALER	SY	17	-----	-----	17	65	99
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	-----	-----	-----	-----	360	360
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-----	2,990	2,990	-----	-----	5,980
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	15,610	1,400	1,400	15,610	23,370	57,390
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	780	-----	-----	780	-----	1,560
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	5	5	-----	-----	10
506.4000	STEEL DIAPHRAGMS B-36-230	EACH	-----	-----	-----	-----	4	4
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	11	11	-----	-----	22
550.0600	PILE REDRIVING	EACH	-----	10	10	-----	-----	20
550.2104	PILING CIP CONCRETE 10 3/4 X 0.25-INCH	LF	-----	850	850	-----	-----	1,700
606.0300	RIPRAP HEAVY	CY	-----	100	110	-----	-----	210
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-----	100	100	-----	-----	200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	-----	2	-----	4
645.0120	GEOTEXTILE TYPE HR	SY	-----	160	160	-----	-----	320
	NON-BID ITEMS							
	FILLER	SIZE		-----	-----		-----	1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

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

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

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

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

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

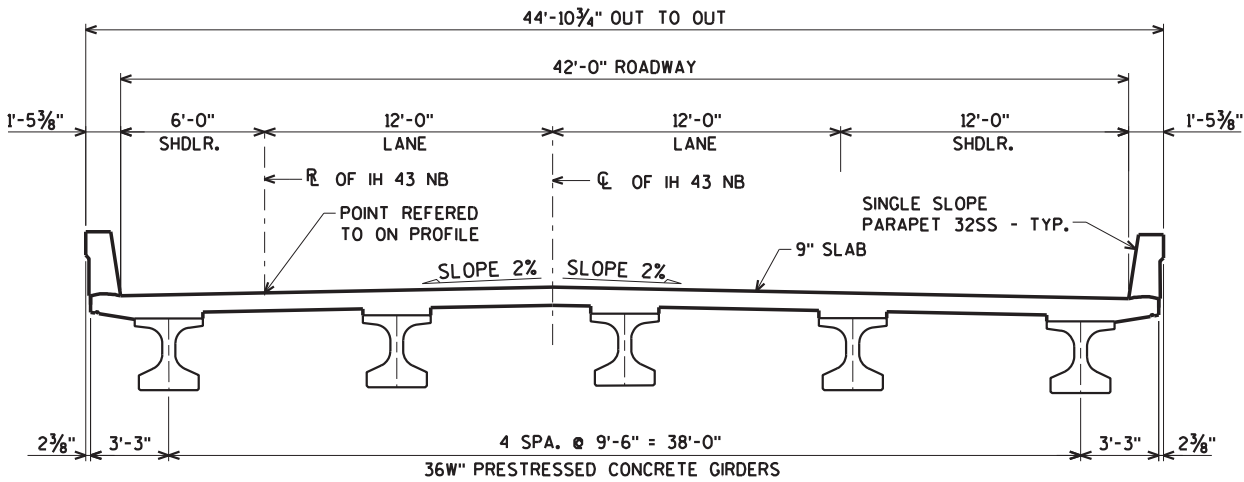
THE EXISTING STRUCTURE, B-36-14, TO BE REMOVED, IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE ON CONCRETE, FULL-RETAINING ABUTMENTS, 53 FT. LONG WITH A 40 FT. CLEAR ROADWAY WIDTH.

AT BACKFACE OF ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

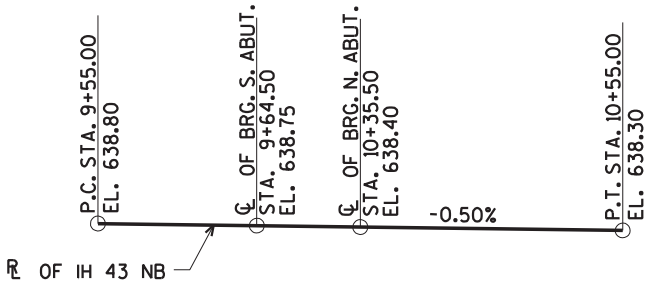
PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER TO BE APPLIED AS SHOWN ON THE DETAIL ON THIS SHEET.

THE HAUNCH QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEETS, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

THE QUANTITY OF BACKFILL STRUCTURE TYPE A, BID ITEM 210.1500 IS CALCULATED BASED ON APPLICABLE FIGURES 12.6-1 AND 12.6-2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.

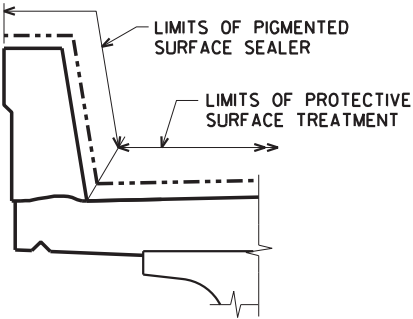


TYPICAL SECTION THRU BRIDGE
(LOOKING NORTH)



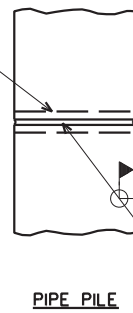
PROFILE GRADE LINE
(IH 43 NB)

BENCH MARK:
B.M. CAP LOCATED IN SE PARAPET WALL OF STRUCTURE B-36-14
STA. 9+76, 35' RT.
EL. 640.34



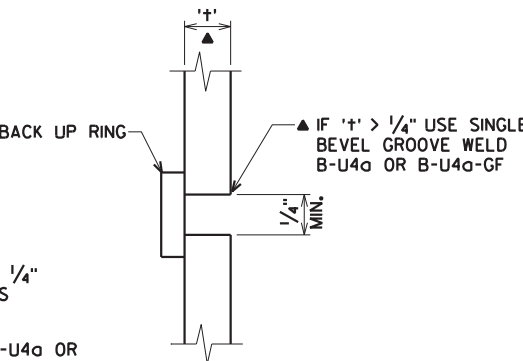
PROTECTIVE SURFACE TREATMENT AND
PIGMENTED SURFACE SEALER DETAIL

BACK UP RING
3/16" MIN. THICKNESS FOR SMAW AND 1/4" MIN. THICKNESS FOR FCAW



PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.



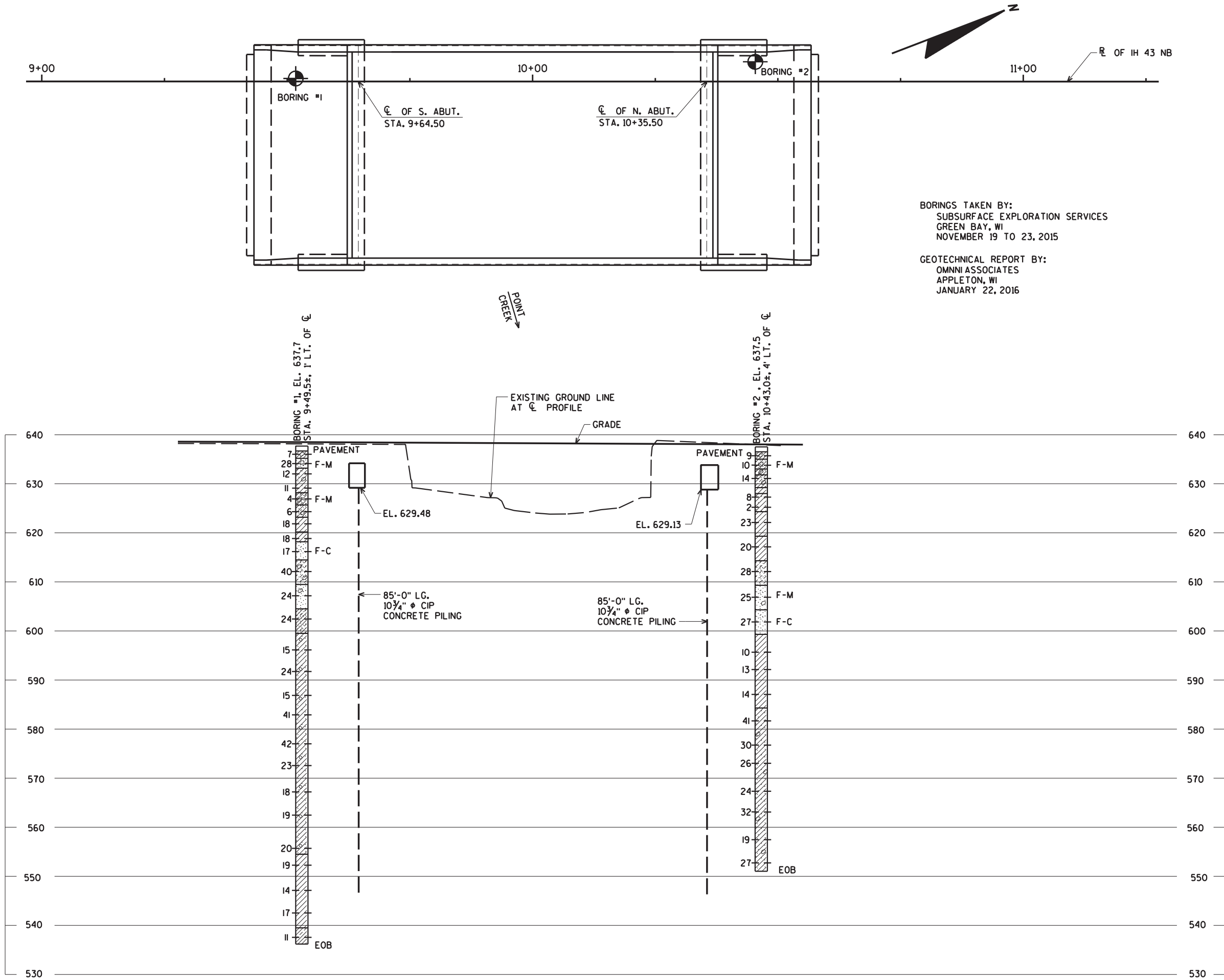
CIP PILE WELD DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
	DRAWN BY CJM/CLS	PLANS CK'D. AEB	
TYPICAL SECTION, QUANTITIES, AND NOTES			SHEET 2 OF 18 360

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8



BORINGS TAKEN BY:
SUBSURFACE EXPLORATION SERVICES
GREEN BAY, WI
NOVEMBER 19 TO 23, 2015

GEOTECHNICAL REPORT BY:
OMNI ASSOCIATES
APPLETON, WI
JANUARY 22, 2016

STATE PROJECT NUMBER

1224-21-73

ABBREVIATIONS

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

MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
95/6=95 BLOWS FOR 6"
PENETRATION
PROBING TAKEN WITH
A 350# WT.
FALLING 18" ON A 2"
O.D. POINT.
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

ELEV. BORING NO.
STA.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CJM	PLANS CK'D. AEB
SUBSURFACE EXPLORATION		SHEET 3 OF 18 361	

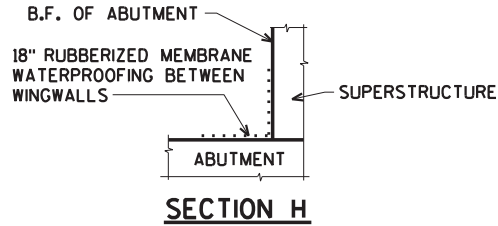
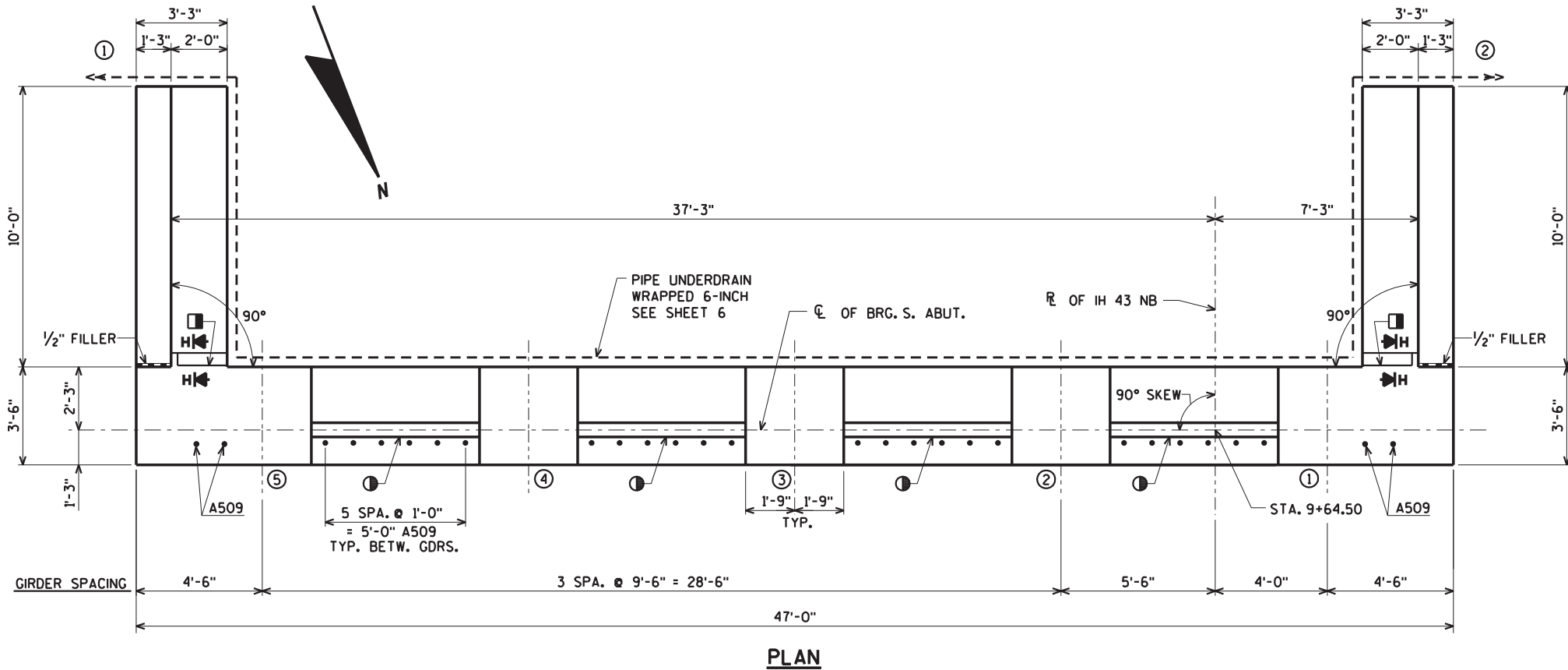
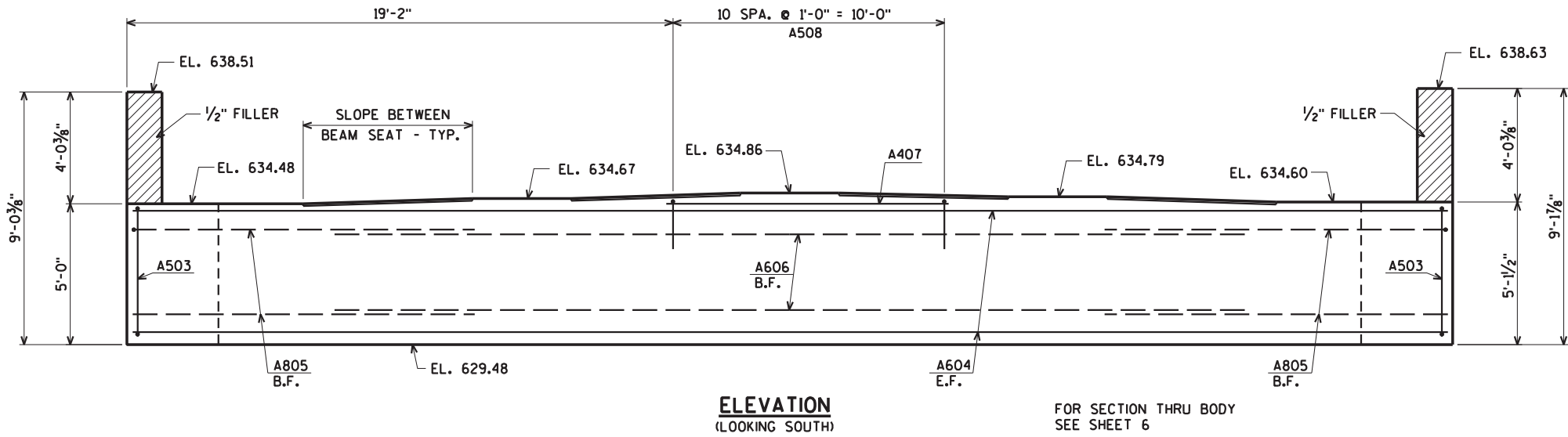
8

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NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF
1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT
SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER

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- KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6"
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WAL
- B.F. DENOTES BACK FACE
- E.F. DENOTES EACH FACE

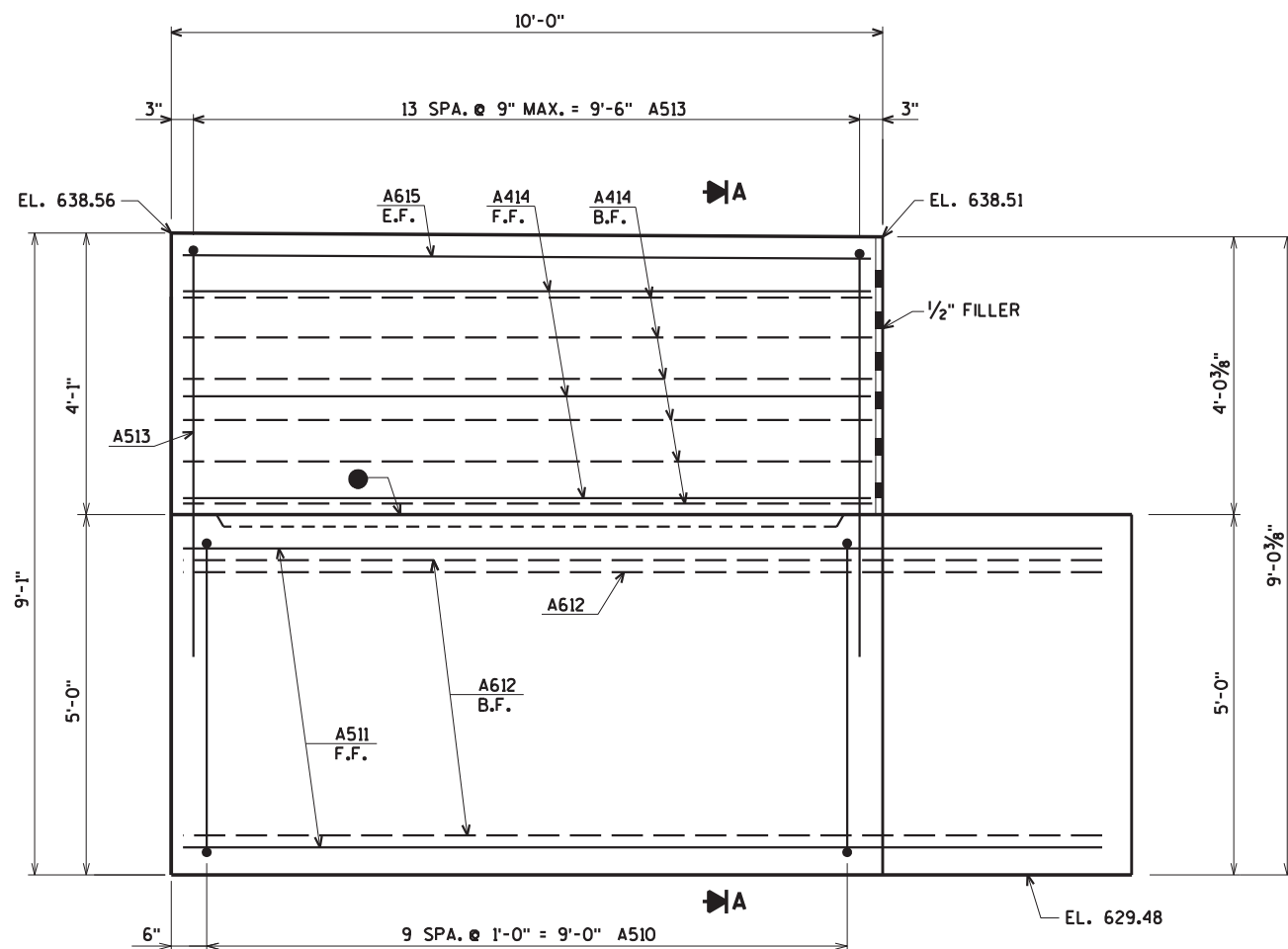
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AEB
SOUTH ABUTMENT		SHEET 4 OF 18 362	

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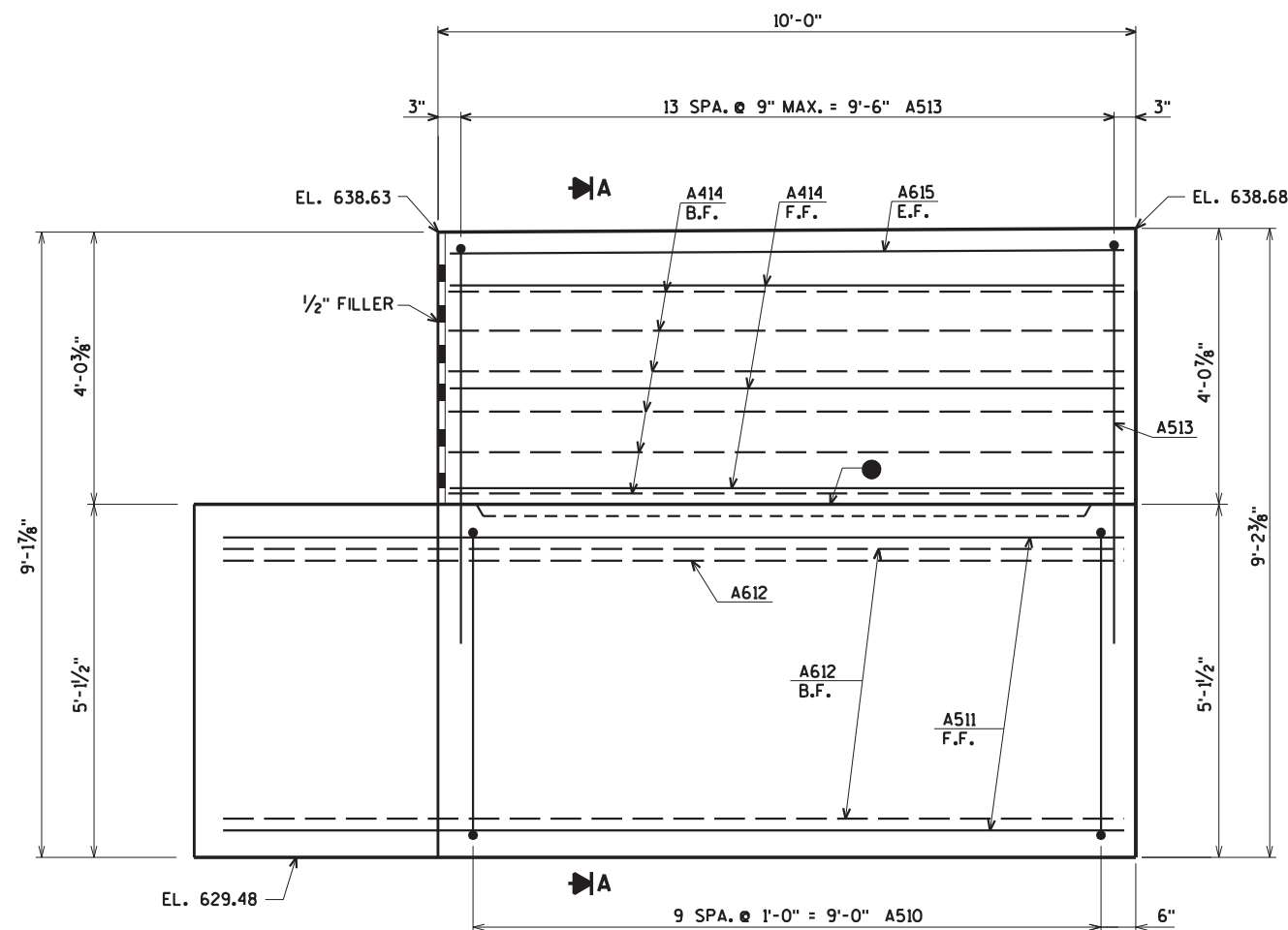
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U:\42-0888.00 - Manitowoc County, IH43 Rehab±B-36-230±BRIDGE±B-36-230 sa.dgn

STATE PROJECT NUMBER

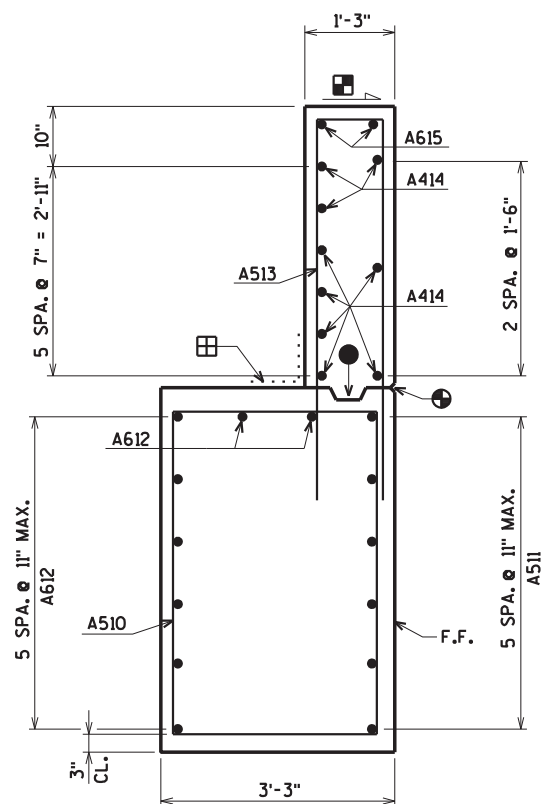
1224-21-73



ELEVATION - WING 1



ELEVATION - WING 2



SECTION A

- 3/4" x V" GROOVE ON FRONT FACE OF WINGWALL.
- OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".
- 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.
- SLOPE TO DRAIN.
- B.F. DENOTES BACK FACE.
- F.F. DENOTES FRONT FACE.
- E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AEB
SOUTH ABUTMENT WING DETAILS		SHEET 5 OF 18 363	

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[illegible]

A401

Dimensions: 2'-0" (height), 1'-9" (width), 6" (width of base).

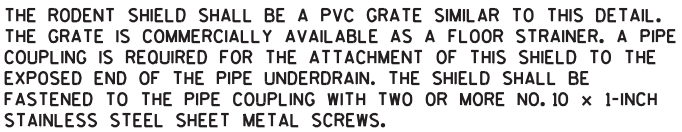
A503 / A510

Dimensions: 3'-2" (width), 2'-11" (width), 4'-5" (height), 4'-5" (height), 5 1/2" (radius).

A805

Dimensions: 12'-0" (width), 1'-8" (height), 6'-0" (height), 3'-2" (width), 11" (width).

STD. 180° HOOK



OF BRG. S. ABUT.

A509 BARS MAY BE PLACED AFTER ABUT. IS POURED BUT BEFORE CONC. HAS SET. IMBED BARS 1'-0".

18" RUBBERIZED MEMBRANE WATERPROOFING BETW. WINGS

A508

A509

4" x 3/4" FILLER

3/4" BEVEL

A407

A604

A503

6 SPA. @ 6" = 3'-0"

A805, A606

1'-1"

2'-0"

A604

A401

A402

F.F.

2'-6"

TOP OF BERM EL. 631.98

1 1/2

1

2'-6"

3 SPA. @ 1'-1" = 3'-3"

VARIES - 5'-0" MIN., 5'-4 5/8" MAX.

RIPRAP HEAVY

GEOTEXTILE TYPE HR

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

ABUTMENT TO BE SUPPORTED ON 10 3/4" φ x 0.25" C.I.P. PILING WITH A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE. ESTIMATED LENGTH 85'-0".

2'-3"

1'-3"

4"

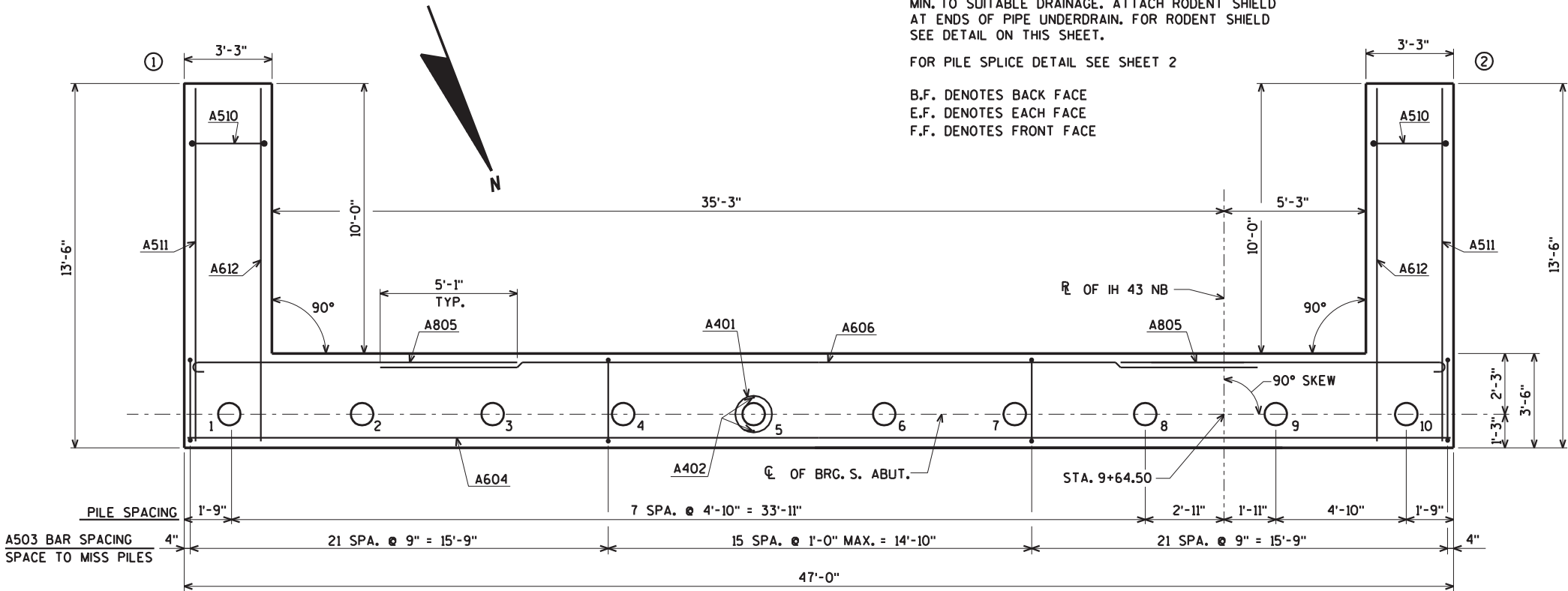
2'-6"

3'-6"

3"

CL.

B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE
F.F. DENOTES FRONT FACE



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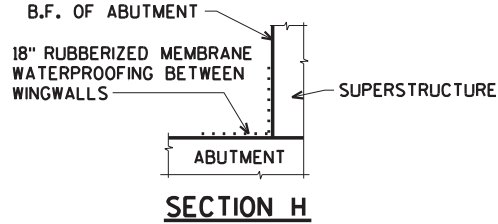
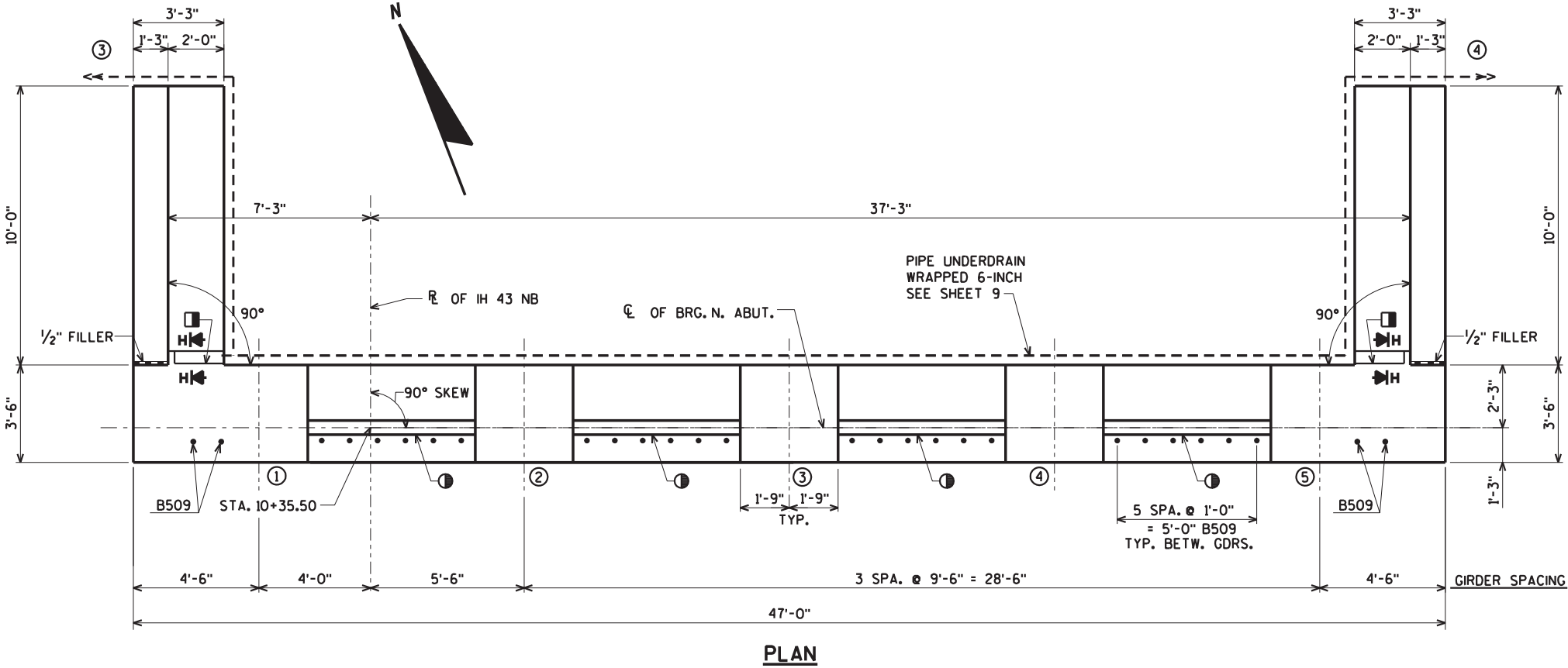
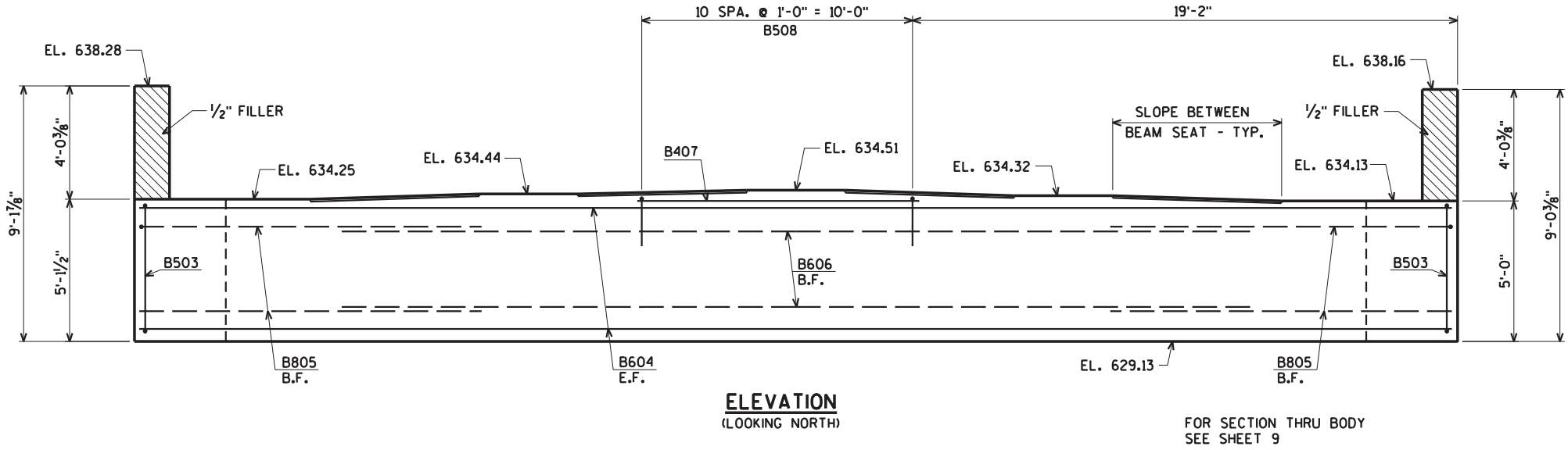
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AEB
SOUTH ABUTMENT BILL OF BARS		SHEET 6 OF 18 364	

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NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF
1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT
SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER

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- KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6"
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WAL
- B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AEB
NORTH ABUTMENT		SHEET 7 OF 18 365	

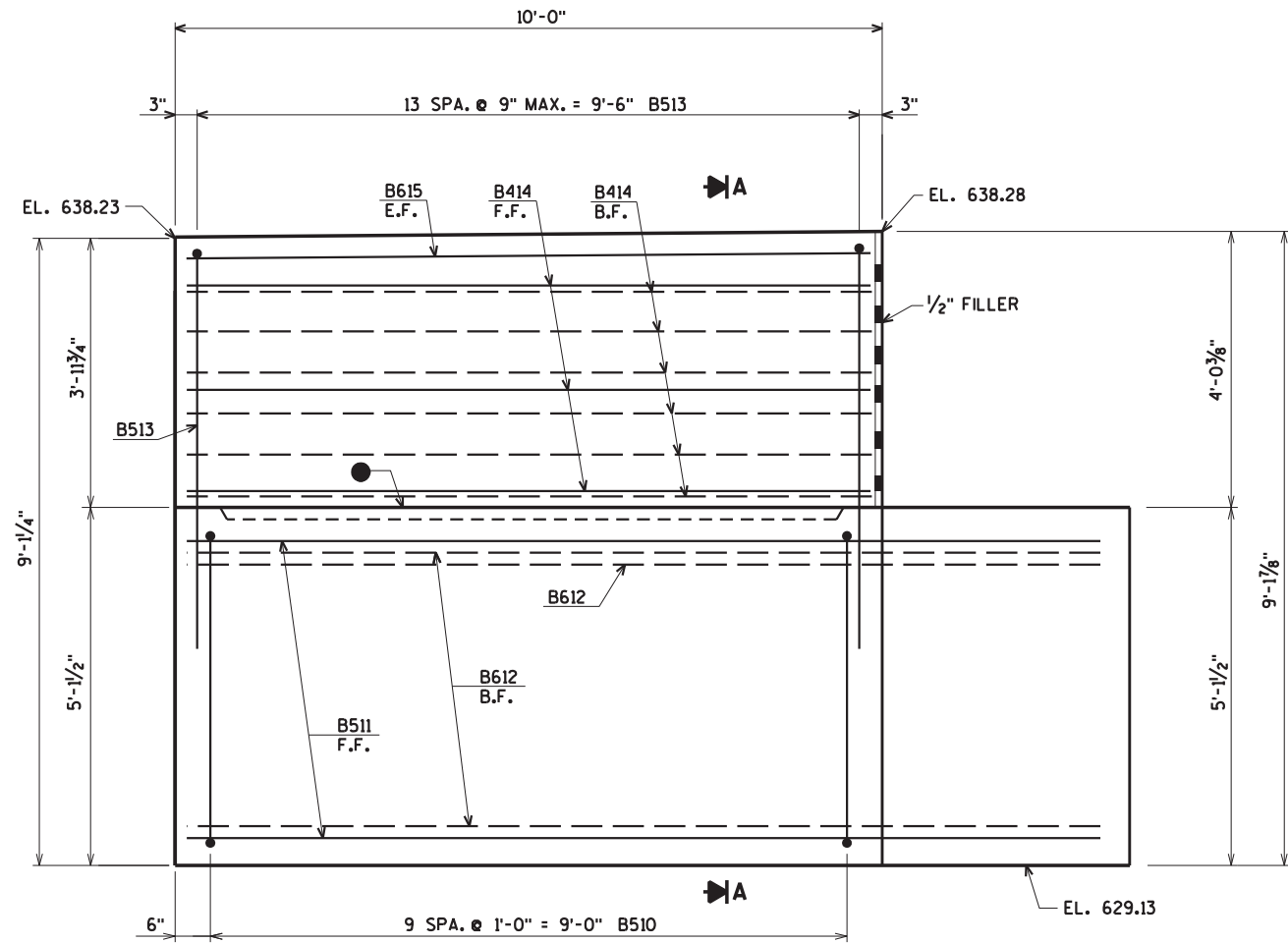
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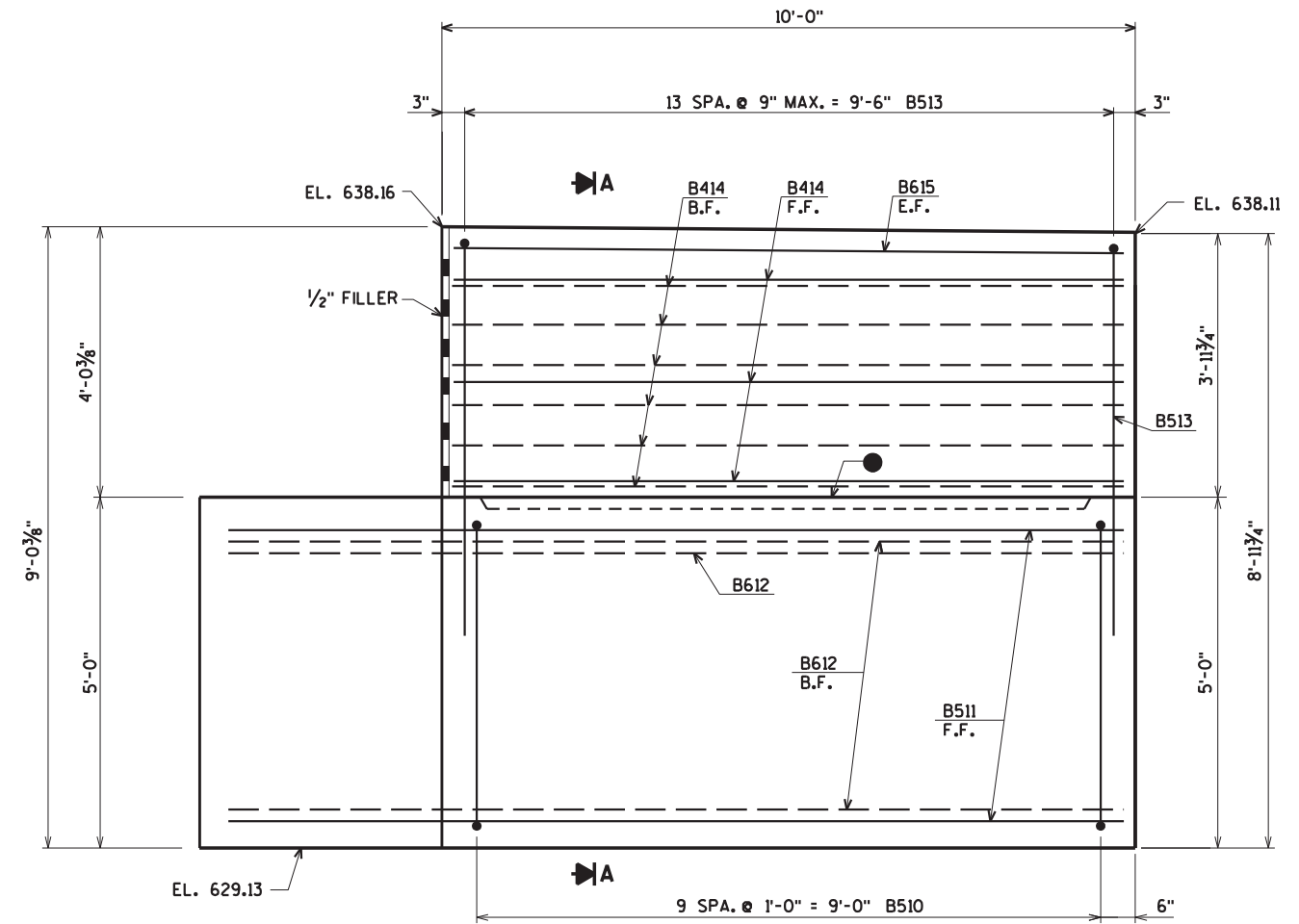
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STATE PROJECT NUMBER

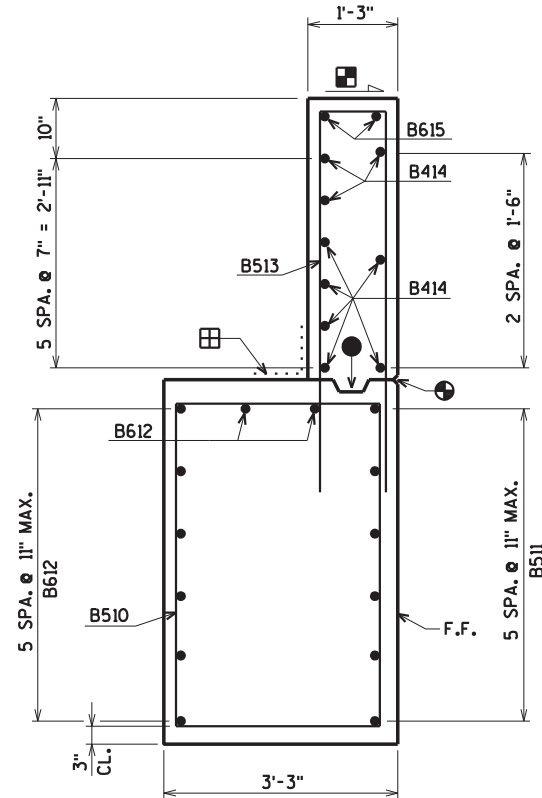
1224-21-73



ELEVATION - WING 3



ELEVATION - WING 4



SECTION A

- 3/4" x V" GROOVE ON FRONT FACE OF WINGWALL.
- OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".
- 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.
- SLOPE TO DRAIN.
- B.F. DENOTES BACK FACE.
- F.F. DENOTES FRONT FACE.
- E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AEB
NORTH ABUTMENT WING DETAILS		SHEET 8 OF 18 366	

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[illegible]

B401

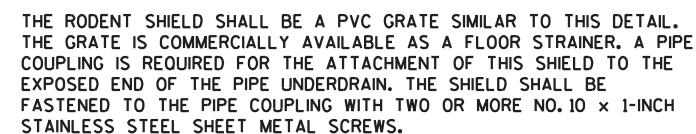
Technical drawing of hanger B401. It shows a vertical hanger with a circular top and a zigzag spring body. Dimensions include a total height of 2'-0", a top section height of 1'-9", and a bottom section height of 6".

B501

Technical drawing of hanger B501. It shows a vertical hanger with a rectangular top and a rectangular body. Dimensions include a total height of 4'-5", a top section height of 3'-2", a middle section height of 2'-11", and a bottom section height of 4'-5". A diagonal dimension of 5 1/2" is shown for the bottom section.

B513

Technical drawing of hanger B513. It shows a vertical hanger with a rectangular top and a rectangular body. Dimensions include a total height of 1'-8", a top section height of 3'-2", a middle section height of 11", and a bottom section height of 6'-0". A diagonal dimension of 5 1/2" is shown for the bottom section.



18" RUBBERIZED MEMBRANE WATERPROOFING BETW. WINGS

6 SPA, @ 6" = 3'-0" B805, B606

1'-1" 2'-0"

B508

B509

4" x 3/4" FILLER

3/4" BEVEL

B407

B604

B503

B401

B402

B604

3'-6"

2'-3"

1'-3"

3'-6"

2'-6"

TOP OF BERM EL. 631.63

1 1/2

1

2'-6"

3 SPA, @ 1'-1" = 3'-3"

VARIES - 5'-0" MIN., 5'-4 5/8" MAX.

RIPRAP HEAVY

GEOTEXTILE TYPE HR

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

TO BE SUPPORTED ON 0.25" C.I.P. PILING WITH A DRIVING RESISTANCE OF PER PILE. LENGTH 85'-0".

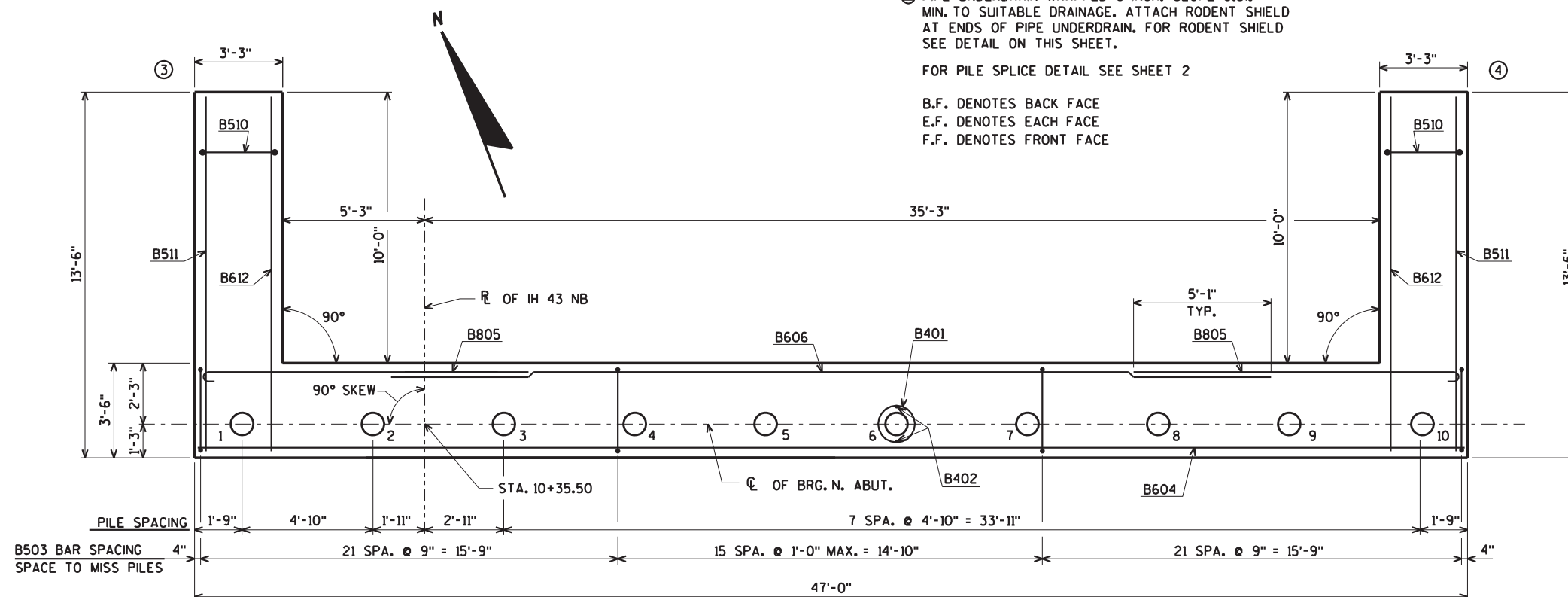
B509 BARS MAY BE PLACED AFTER ABUT. IS POURED BUT BEFORE CONC. HAS SET. IMBED BARS 1'-0".

ALL HORIZONTAL BARS IN BODY ARE B604 BARS UNLESS SHOWN OTHERWISE.

F.F.

C. OF BRG. N. ABUT.

B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE
F.F. DENOTES FRONT FACE



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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AER
NORTH ABUTMENT		SHEET 9 OF 367	
BILL OF BARS			

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

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

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH AN EPOXY-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

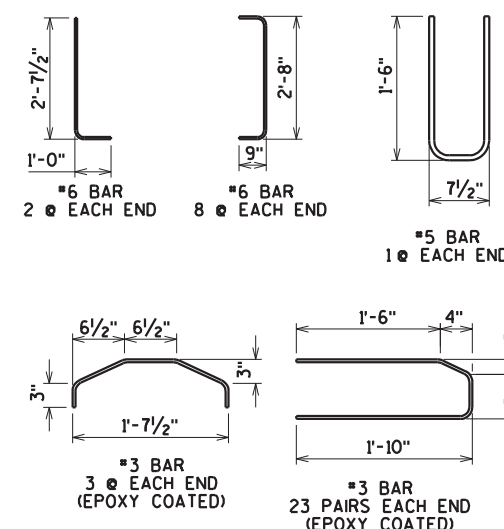
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF)
ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP
REINFORCEMENT SHOWN, UPON APPROVAL OF THE
STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE
LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF
270,000 PSI.

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



(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 2'-4"

[illegible][illegible]

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY	CLS	PLANS CK'D	AEB
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36W" PRESTRESSED GIRDER DETAILS

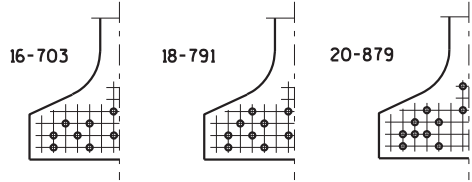
SHEET 10 OF 1
368

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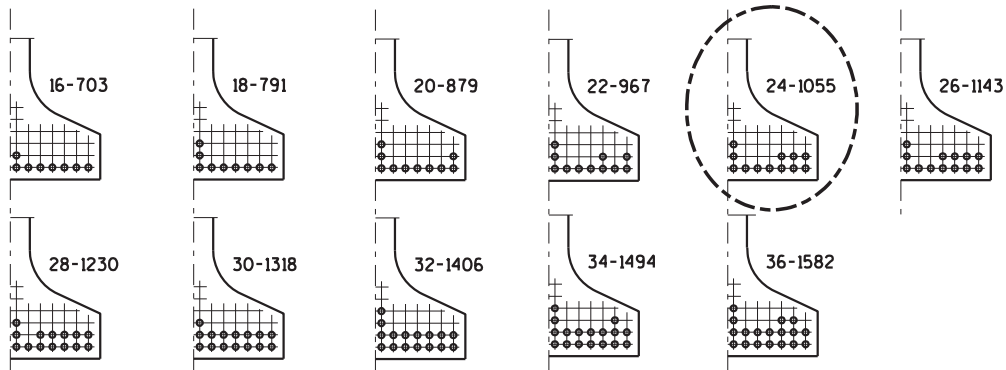
STATE PROJECT NUMBER

1224-21-73



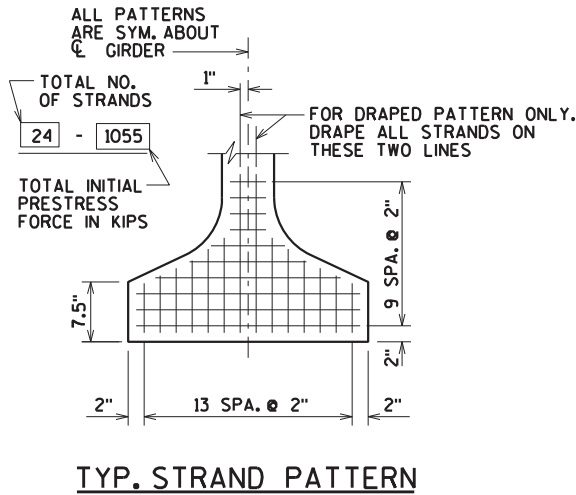
**STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY
TO AVOID DRAPING OF STRANDS**

0.6"Ø STRANDS



ARRANGEMENT AT $\mathcal{C}$ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Ø STRANDS

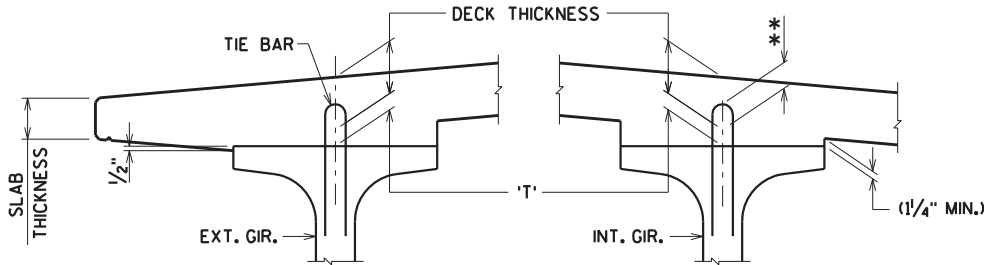


TYP. STRAND PATTERN

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	2.0

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'.
USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



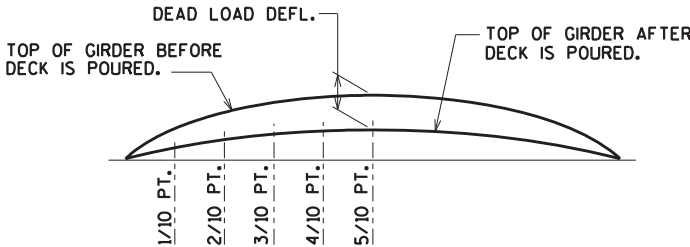
DECK HAUNCH DETAIL

IF 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, ** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT $\mathcal{C}$ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN, THEN FOLLOW THIS PROCESS:

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

NOTE: AN AVERAGE HAUNCH ('T') OF 3" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
	DRAWN BY	CLS	PLANS CK'D. AEB
36W" PRESTRESSED GIRDER DETAILS			SHEET 11 OF 18 369

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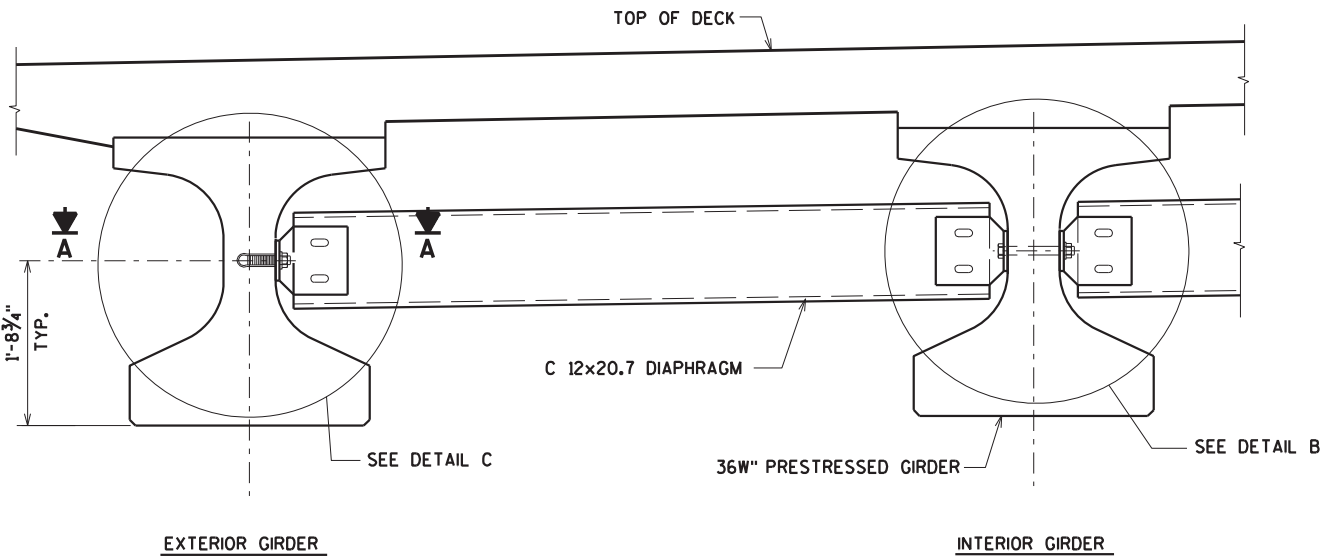
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-36-230", EACH.

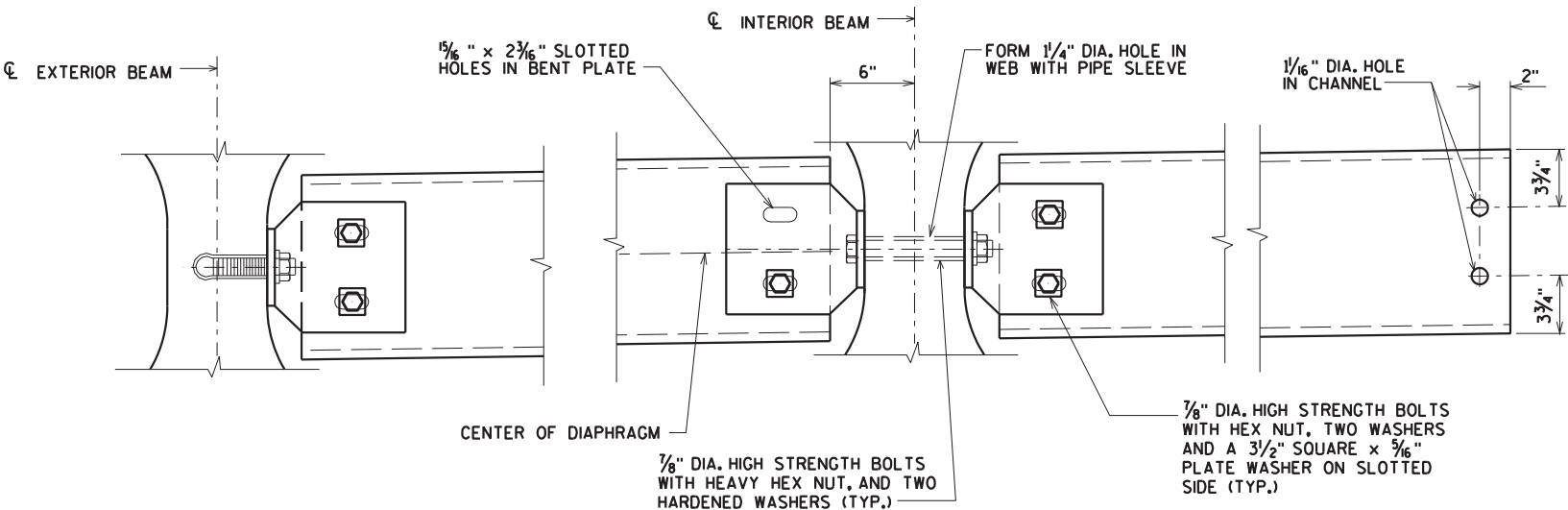
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

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

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

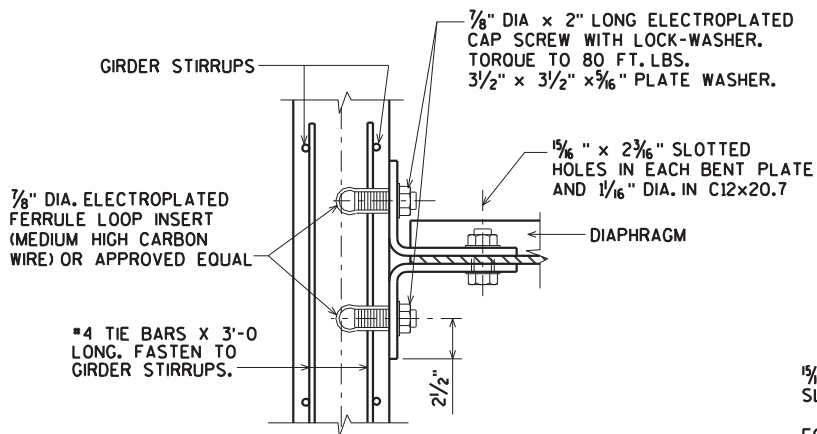


PART TRANSVERSE SECTION AT DIAPHRAGM

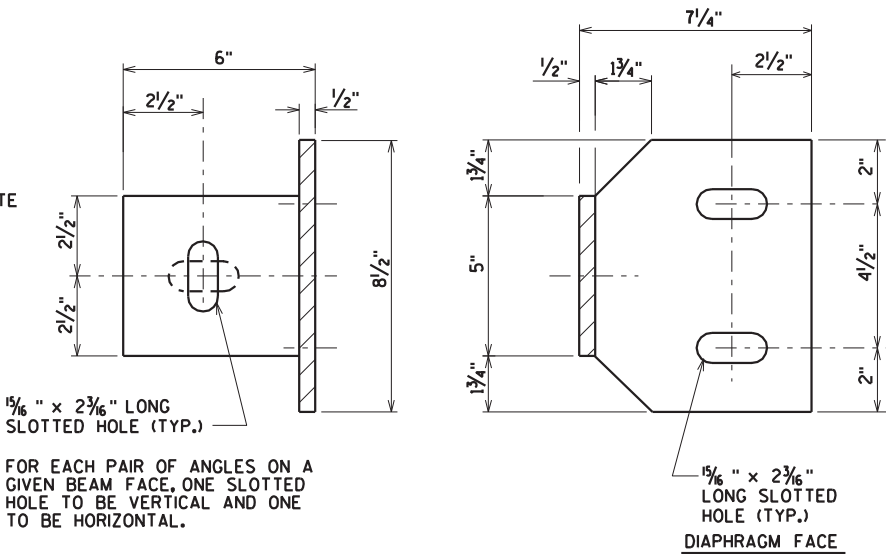


DETAIL C

DETAIL B

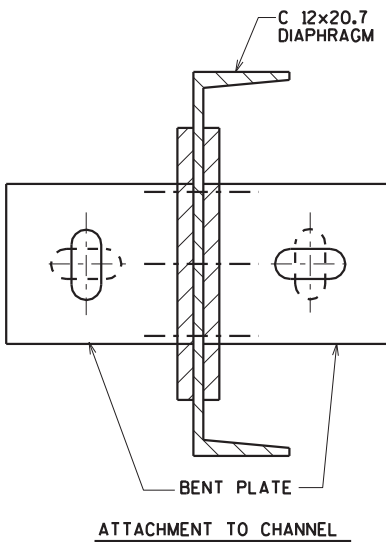


SECTION A-A
(FOR EXTERIOR ATTACHMENT)

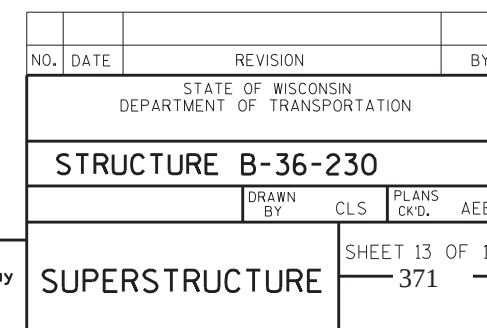


BEAM FACE

DIAPHRAGM FACE



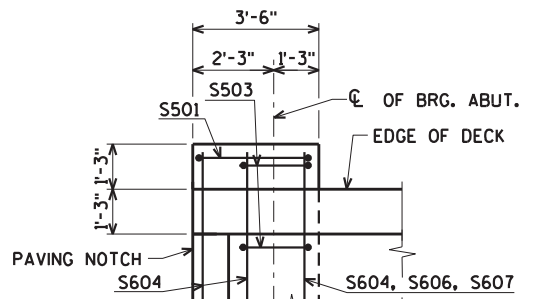
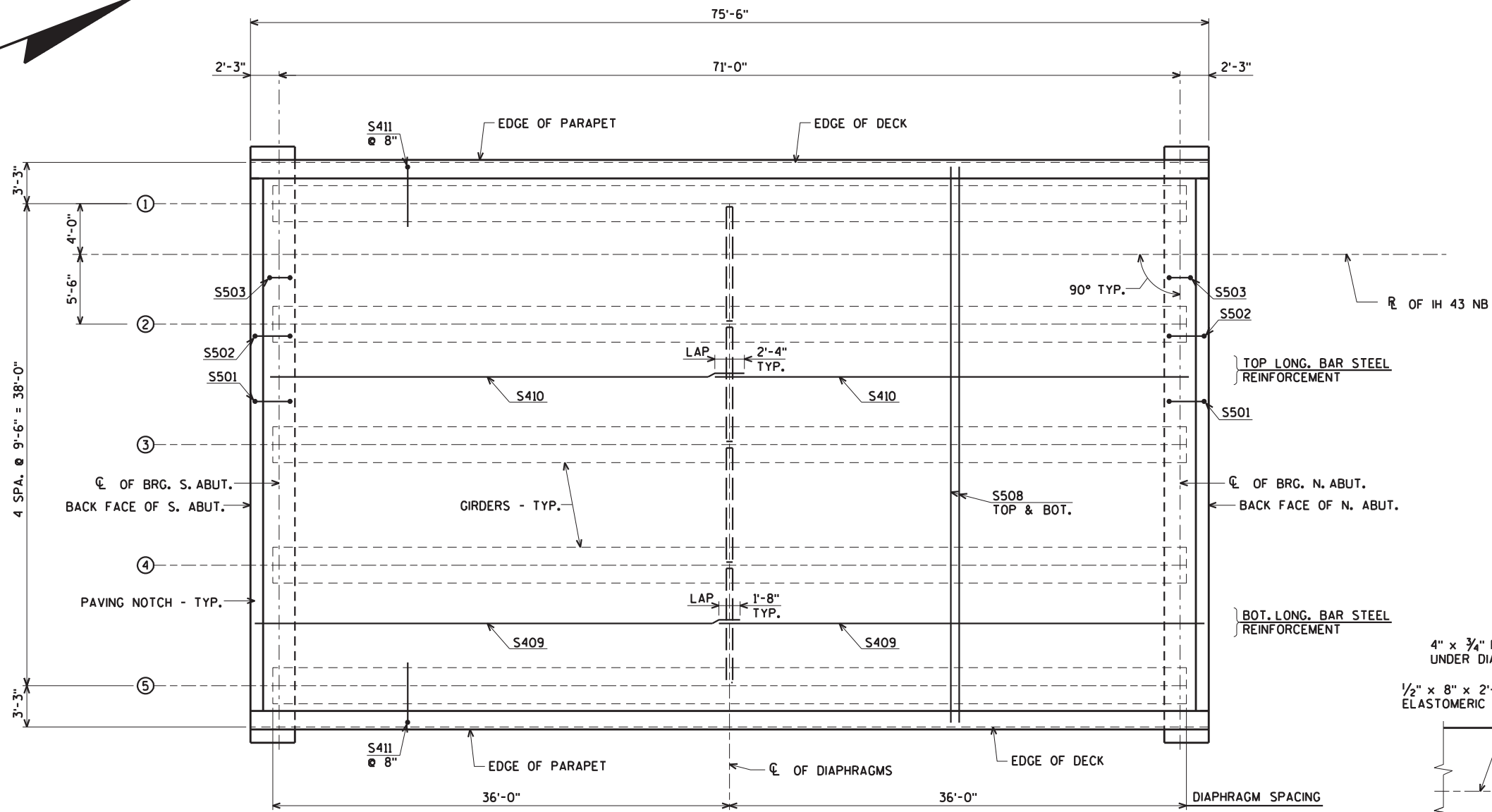
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AEB
STEEL INTER. DIAPHRAGM DETAILS		SHEET 12 OF 18 370	



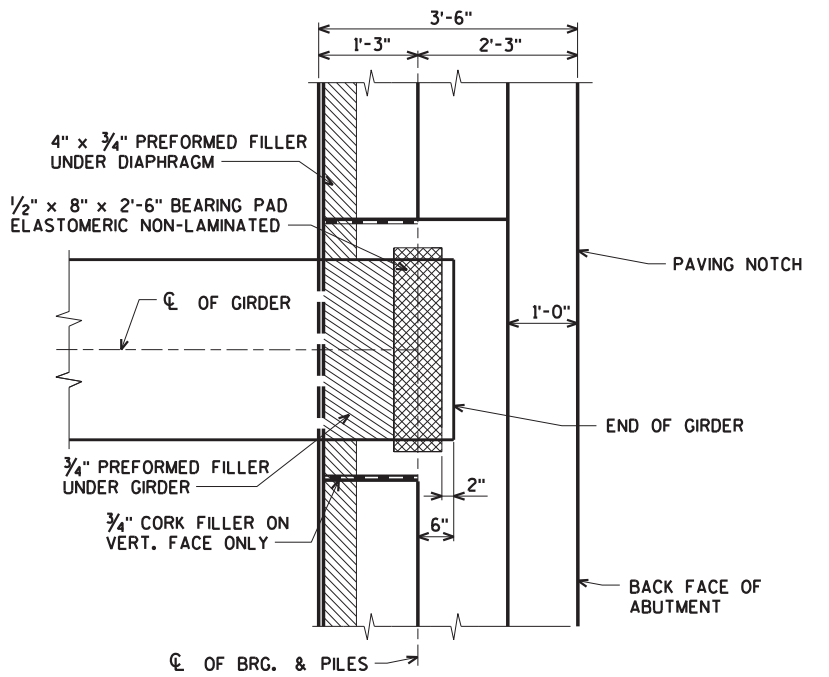
\$PRNAME\$
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STATE PROJECT NUMBER

1224-21-73



CORNER DETAIL



BEARING PAD DETAIL

TOP OF DECK ELEVATIONS

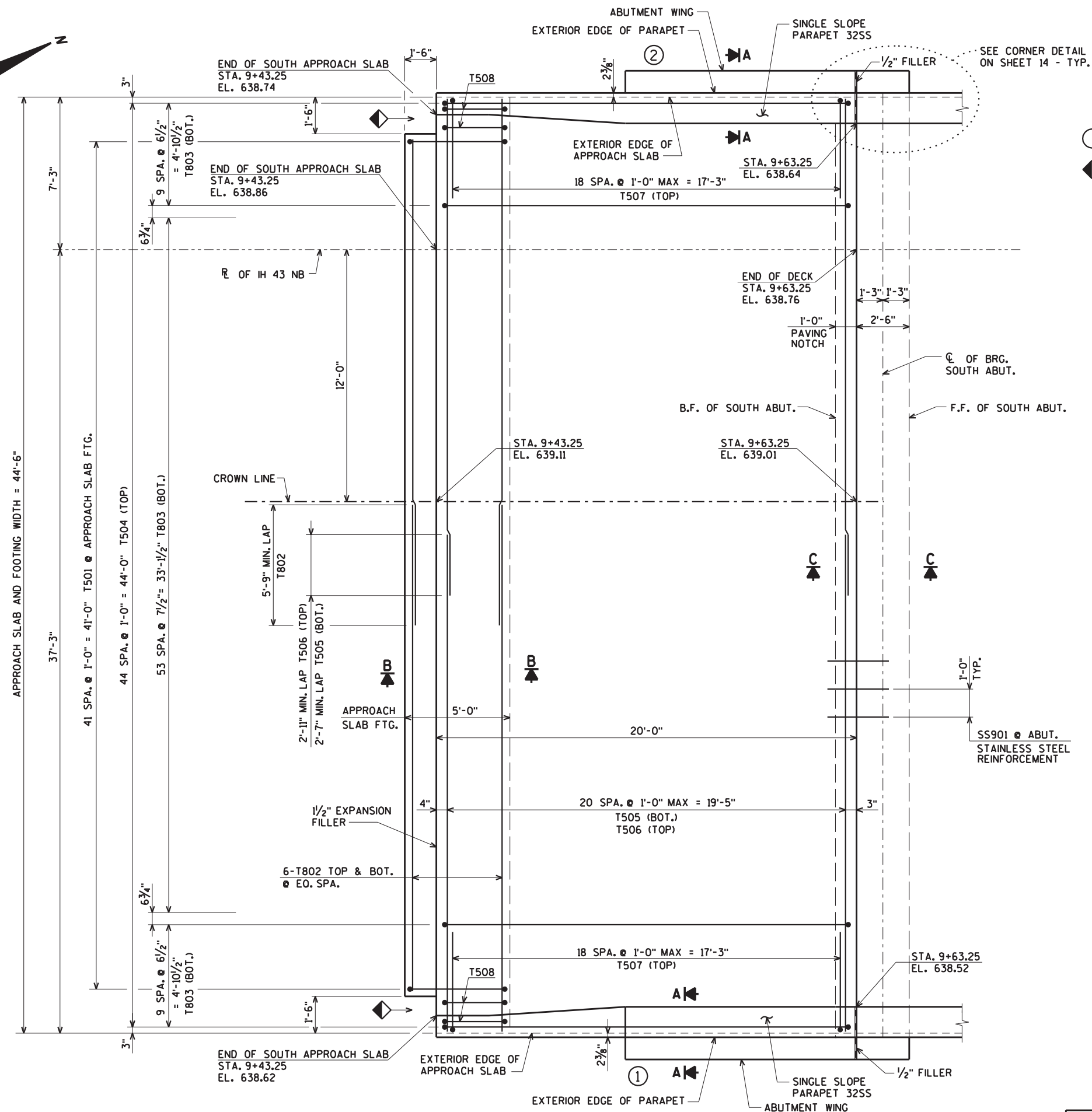
	CL OF BRG. S. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	CL OF BRG. N. ABUT.
W. EDGE OF DECK	638.63	638.60	638.56	638.53	638.49	638.46	638.42	638.38	638.35	638.31	638.28
GIRDER 1	638.67	638.64	638.60	638.57	638.53	638.50	638.46	638.42	638.39	638.35	638.32
CL OF ROAD	638.75	638.72	638.68	638.65	638.61	638.58	638.54	638.50	638.47	638.43	638.40
GIRDER 2	638.86	638.83	638.79	638.76	638.72	638.69	638.65	638.61	638.58	638.54	638.51
CL OF ROAD	638.99	638.96	638.92	638.89	638.85	638.82	638.78	638.74	638.71	638.67	638.64
GIRDER 3	638.93	638.90	638.86	638.83	638.79	638.76	638.72	638.68	638.65	638.61	638.58
GIRDER 4	638.74	638.71	638.67	638.64	638.60	638.57	638.53	638.49	638.46	638.42	638.39
GIRDER 5	638.55	638.52	638.48	638.45	638.41	638.38	638.34	638.30	638.27	638.23	638.20
E. EDGE OF DECK	638.51	638.48	638.44	638.41	638.37	638.34	638.30	638.26	638.23	638.19	638.16

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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AEB
SUPERSTRUCTURE PLAN		SHEET 14 OF 18 372	

\$PRNAME\$
U:\42-0888.00 - Manitowoc County, IH43 Rehabs\B-36-230\BRIDGE\B-36-230 app slab.dgn

8



- DENOTES WING NUMBER.
- ◀ NOTCH APPROACH SLAB FOOTING TO ALLOW FOR THRIE BEAM POST INSTALLATION. (ADJUST BAR STEEL AS NECESSARY)
- FOR DETAILS OF SECTIONS A, B, & C SEE SHEET 17

STATE PROJECT NUMBER

1224-21-73

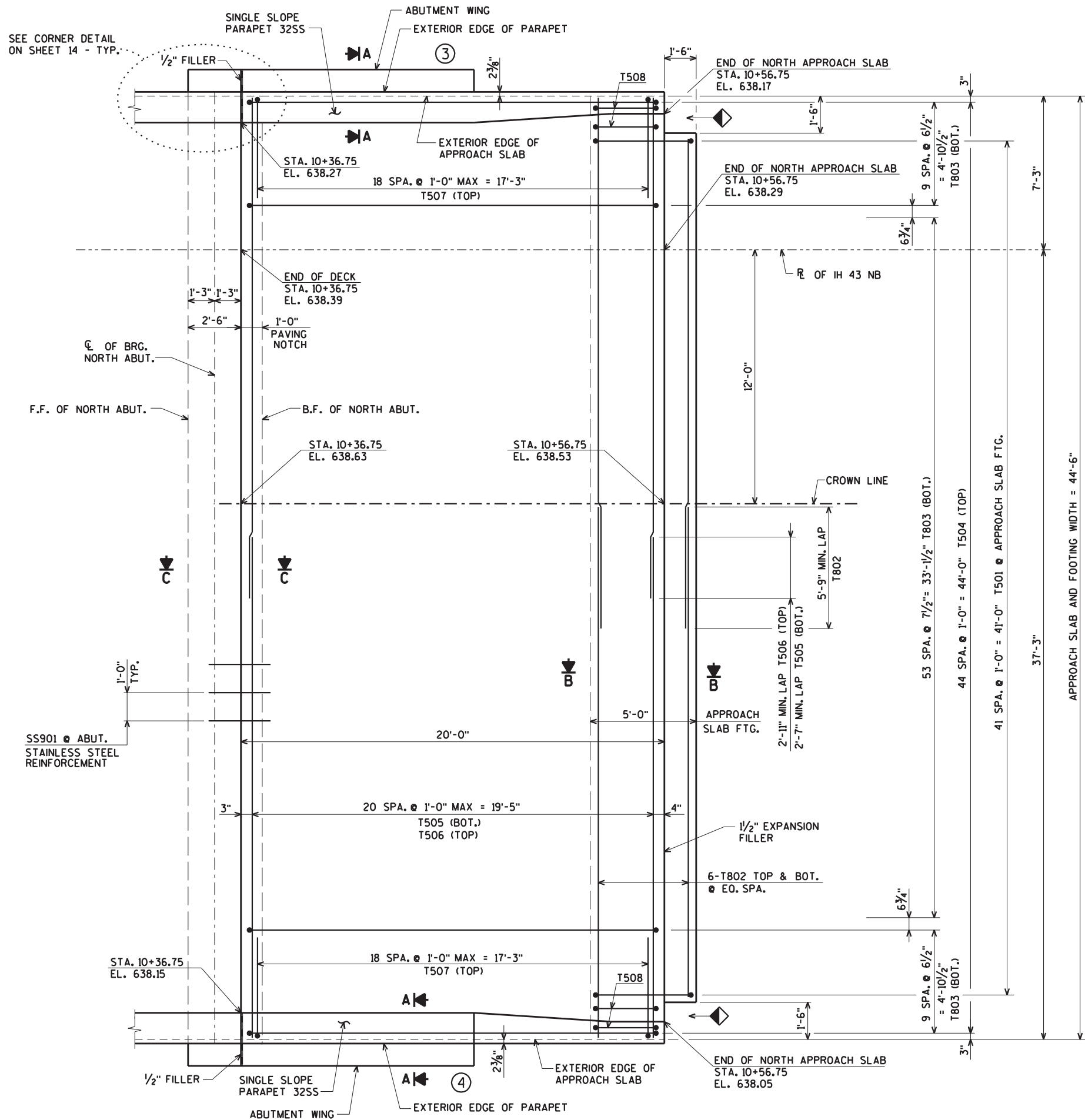
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AEB
SOUTH STRUCTURAL APPROACH SLAB			SHEET 15 OF 18 373

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8



APPROACH SLAB PLAN

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- DENOTES WING NUMBER.
- ◆ NOTCH APPROACH SLAB FOOTING TO ALLOW FOR THRIE BEAM POST INSTALLATION. (ADJUST BAR STEEL AS NECESSARY)

FOR LOCATIONS OF SECTIONS A, B, & C SEE SHEET 17

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY		CLS	PLANS CK'D. AEB
NORTH STRUCTURAL APPROACH SLAB			SHEET 16 OF 18 374

\$PRNAME\$
U:\42-0888,00 - Manitowoc County, I413 Rehabs\B-36-230\B-36-230 app slab.dgn

STATE PROJECT NUMBER

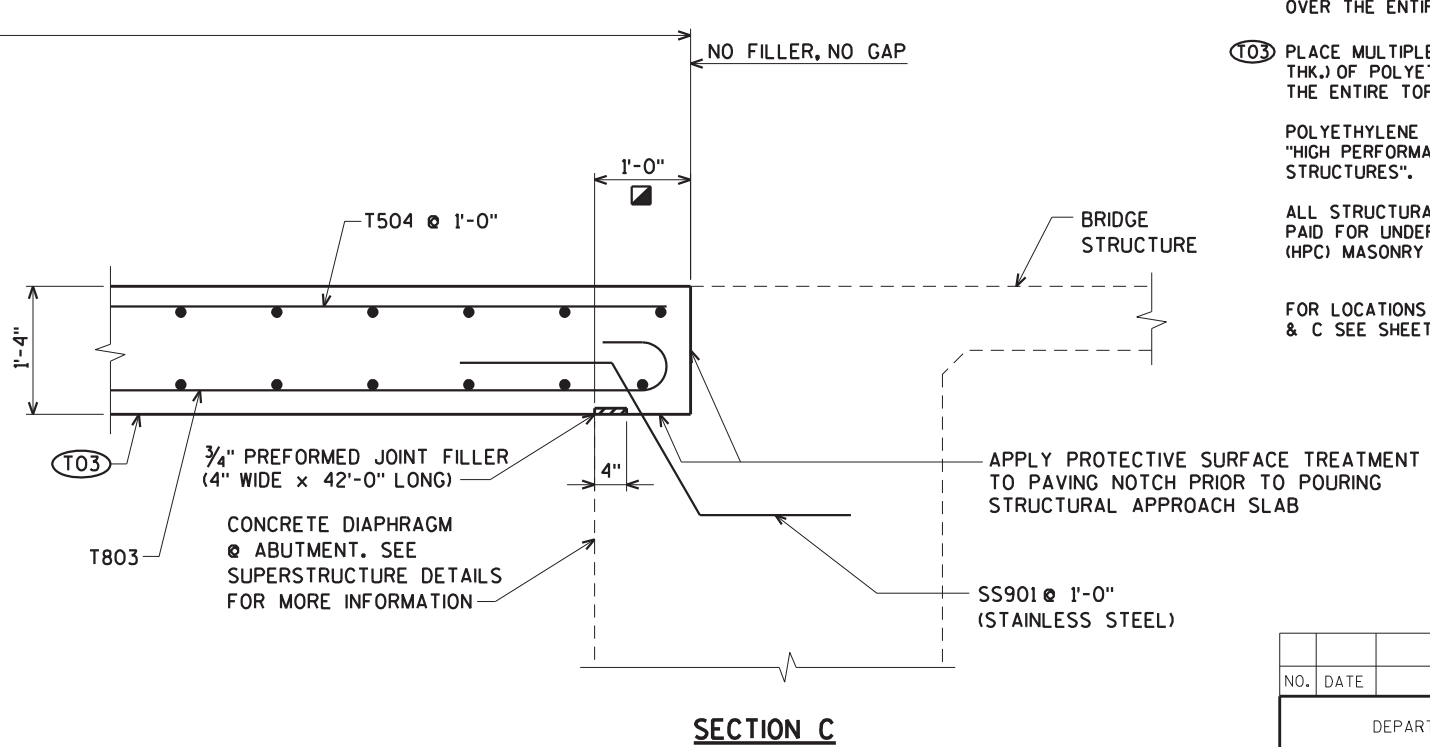
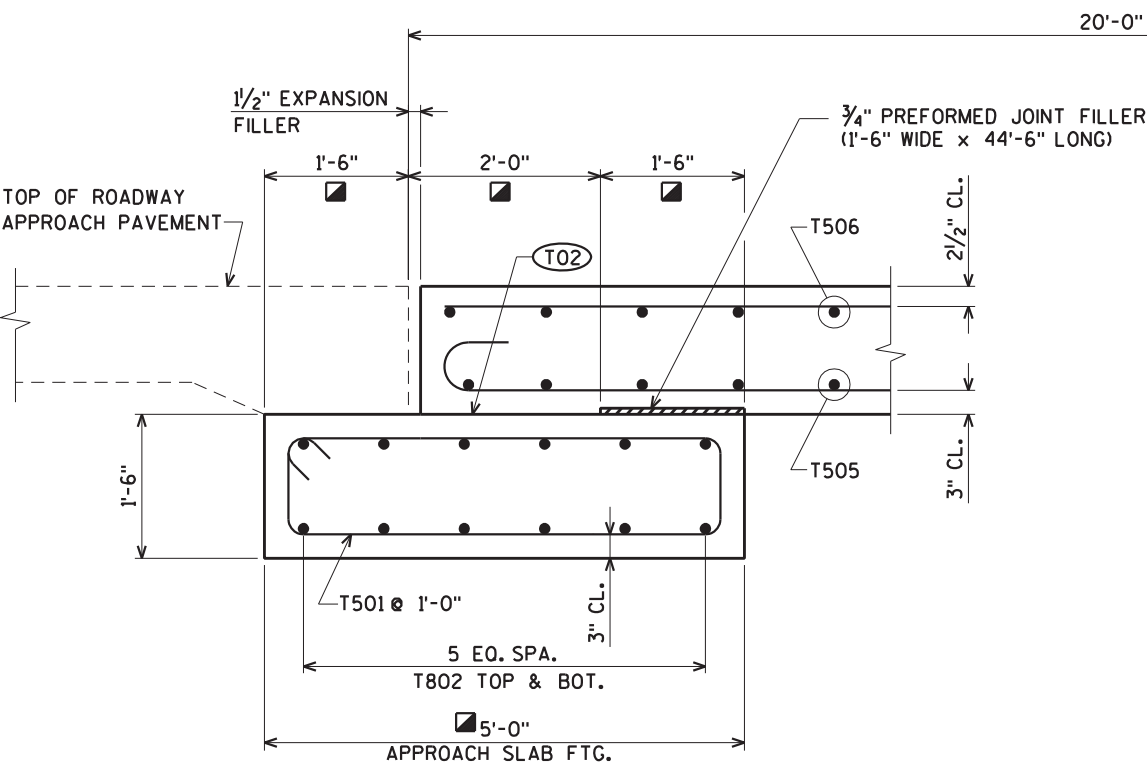
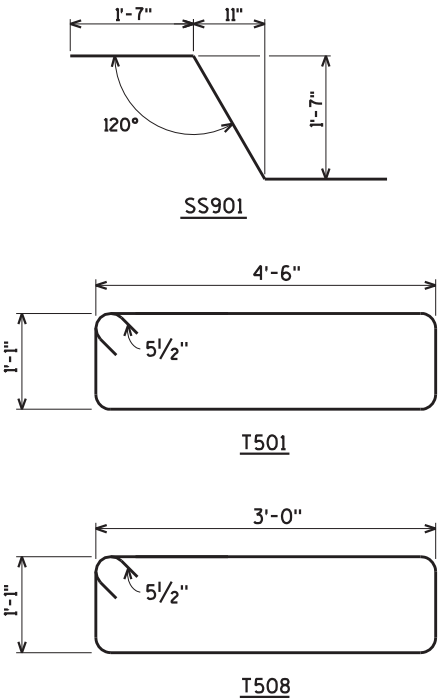
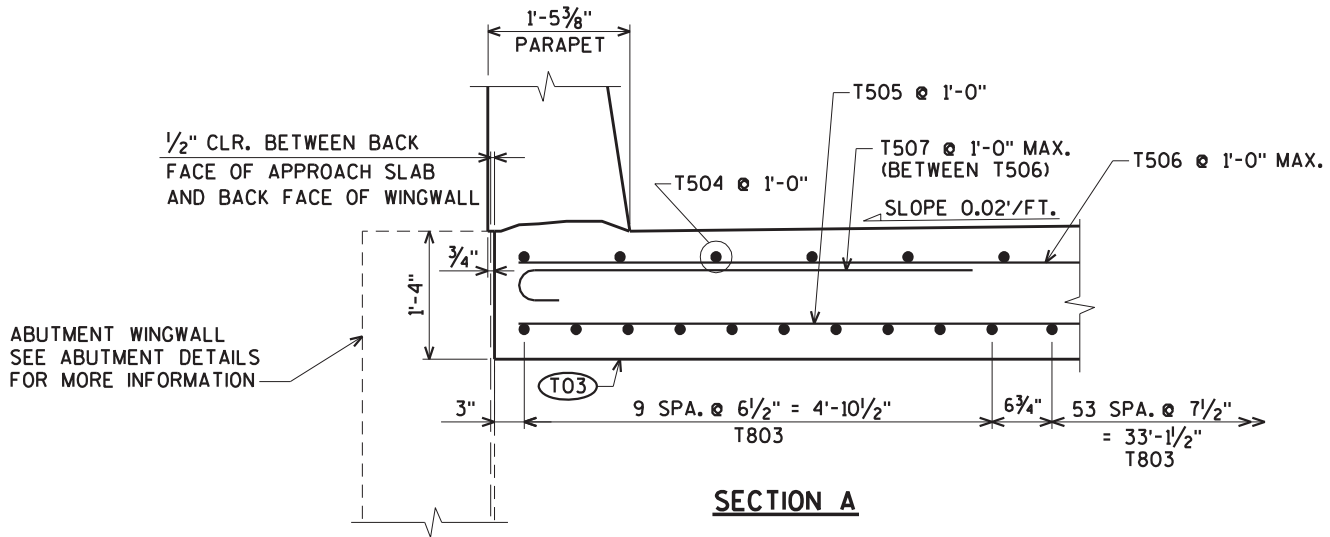
1224-21-73

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	780# STAINLESS STEEL (PER APPROACH SLAB)
						LOCATION
SS901		46	5'-0"	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	14,640# COATED (PER APPROACH SLAB)
						LOCATION
T501	X	84	11'-10"	X		APPROACH SLAB FTG. - STIRRUP
T802	X	48	25'-0"			APPROACH SLAB FTG. - TRANS.
T803	X	74	21'-4"	X		APPROACH SLAB - LONG. - BOT.
T504	X	90	19'-6"			APPROACH SLAB - LONG - TOP
T505	X	84	23'-5"			APPROACH SLAB - TRANS. - BOT.
T506	X	84	23'-7"			APPROACH SLAB - TRANS. - TOP
T507	X	38	4'-1"	X		APPROACH SLAB - TRANS. - TOP
T508	X	8	8'-10"	X		APPROACH SLAB FTG. - STIRRUP AT ENDS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE.

POLYETHYLENE SHEETS ARE INCIDENTAL TO "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

ALL STRUCTURAL APPROACH SLAB CONCRETE PAID FOR UNDER "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

FOR LOCATIONS OF SECTIONS A, B, & C SEE SHEETS 15 & 16

APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH PRIOR TO POURING STRUCTURAL APPROACH SLAB

SS901 @ 1'-0" (STAINLESS STEEL)

SECTION THRU APPROACH SLAB

MEASURED NORMAL TO ABUTMENT

SECTION B

SECTION C

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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
	DRAWN BY	CLS	PLANS CK'D. AEB
STRUCTURAL APPROACH SLAB DETAILS			SHEET 17 OF 18 375

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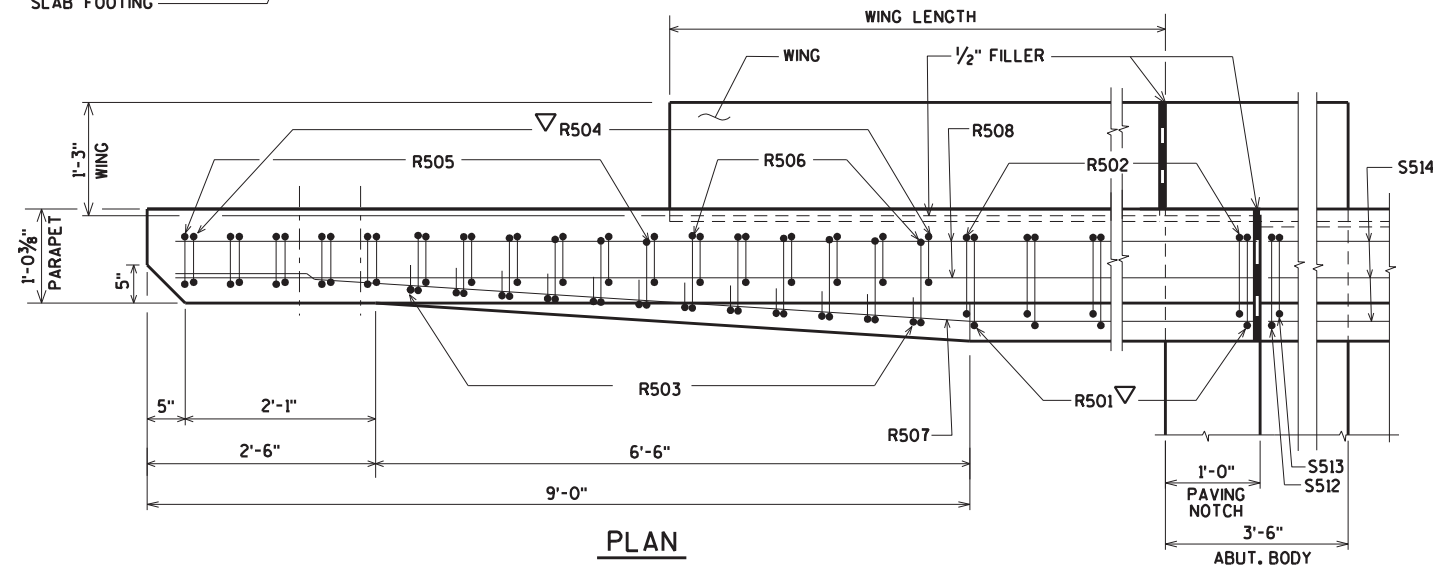
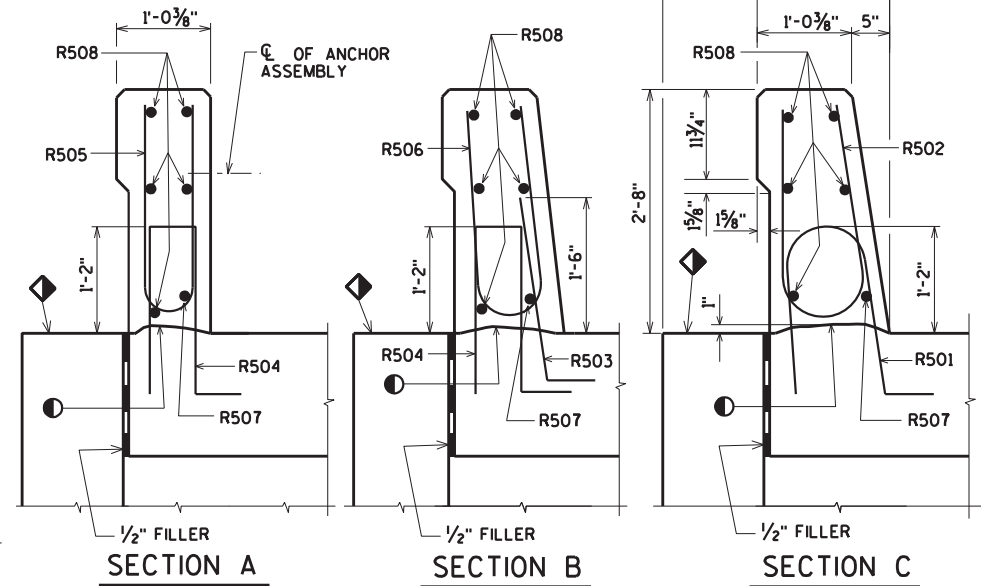
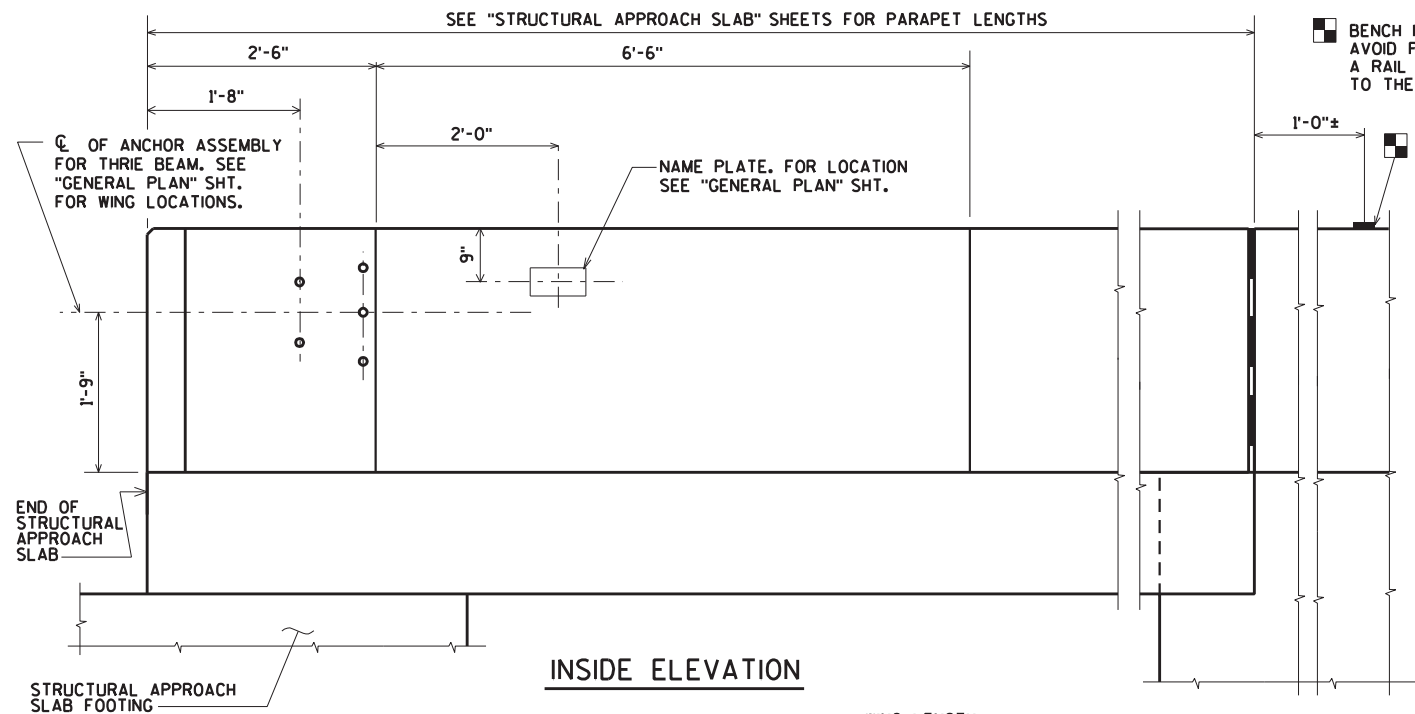
STATE PROJECT NUMBER

1224-21-73

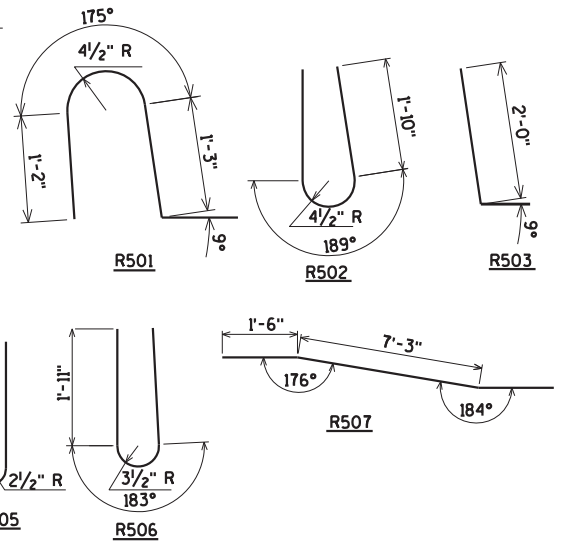
BILL OF BARS

970* COATED PER APPROACH
FOR STRUCTURAL APPROACH SLAB PARAPETS

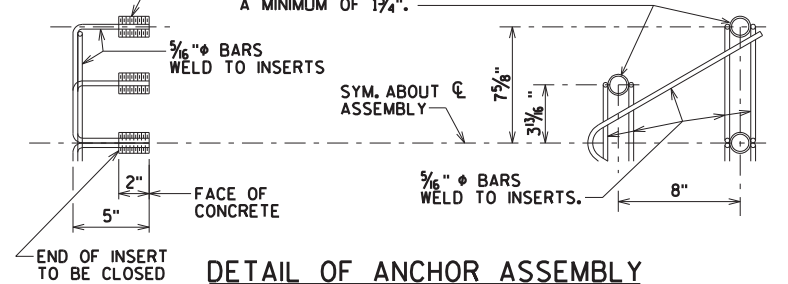
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4-5	X		PARAPET VERT.
R502	X	34	34	5-0	X		PARAPET VERT.
R503	X	24	24	2-9	X		PARAPET VERT.
R504	X	34	34	4-4	X		PARAPET VERT.
R505	X	22	22	4-9	X		PARAPET VERT.
R506	X	12	12	4-10	X		PARAPET VERT.
R507	X	2	2	19-8	X		PARAPET HORIZ.
R508	X	10	10	19-8			PARAPET HORIZ.



OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



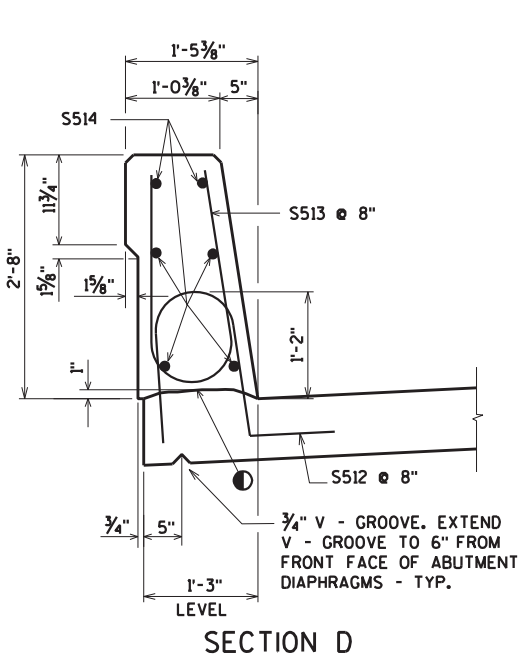
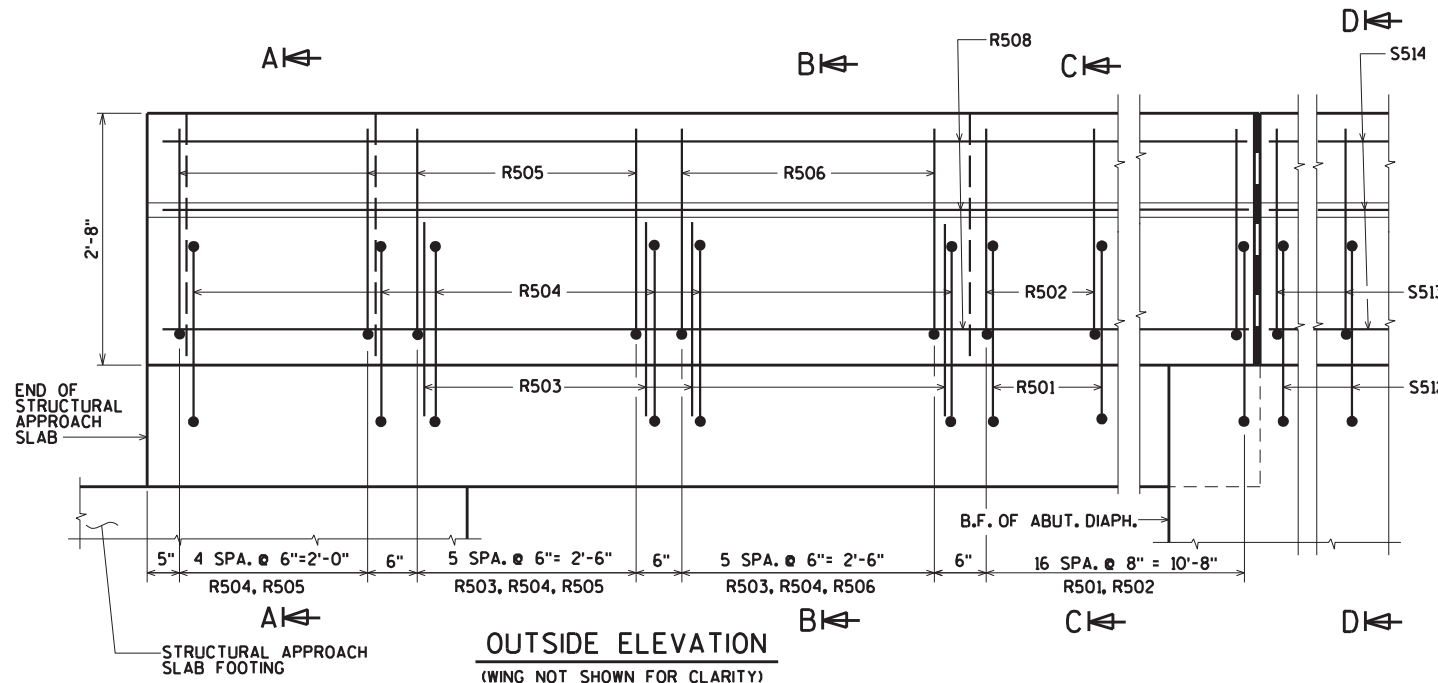
THREADED INSERTS FOR 3/8" Ø X 2" LONG GALVANIZED HEX HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF 1 1/8" AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF 1 1/4".



DETAIL OF ANCHOR ASSEMBLY

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

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



◆ SLOPE FOR DRAINAGE

● CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-36-230			
DRAWN BY CLS		PLANS CK'D. AEB	
SINGLE SLOPE PARAPET 32SS WITH STRUCTURAL APPROACH SLAB			SHEET 18 OF 18 376