F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB 1,2,3)BR	PEORIA	63 *	1
	ILLINOIS	CONTRACT NO. 68E52		

~~* 63 + 12 = 75 TOTAL SHEETS~~
63 + 16 = 79 TOTAL SHEETS

D-94-065-18

06–11–2021 LETTING ITEM 210

INDEX OF SHEETS

HIGHWAY STANDARDS

701400–10	701428–01
701401–12	701451–05
701402–12	701901–08
701406–12	704001–08
701411–09	780001–05
701426–09	782006–01

DESIGN DESIGNATION

INTERSTATE

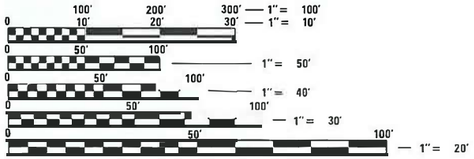
I–74	I–474 EB
ADT: 38800 (2017)	ADT: 13800 (2017)
MU: 1850	MU: 400
SU: 700	SU: 350

FREEWAY

IL 6 EB	IL 6 WB
ADT: 35000 (2019)	ADT: 9500 (2017)
MU: 1050	MU: 300
SU: 1250	SU: 500

RAMPS (2017)

RAMP D	RAMP C	RAMP E
ADT: 4150	ADT: 6900	ADT: 1100
MU: 50	MU: 175	MU: 60
SU: 100	SU: 200	SU: 90



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1–800–892–0123
OR 811

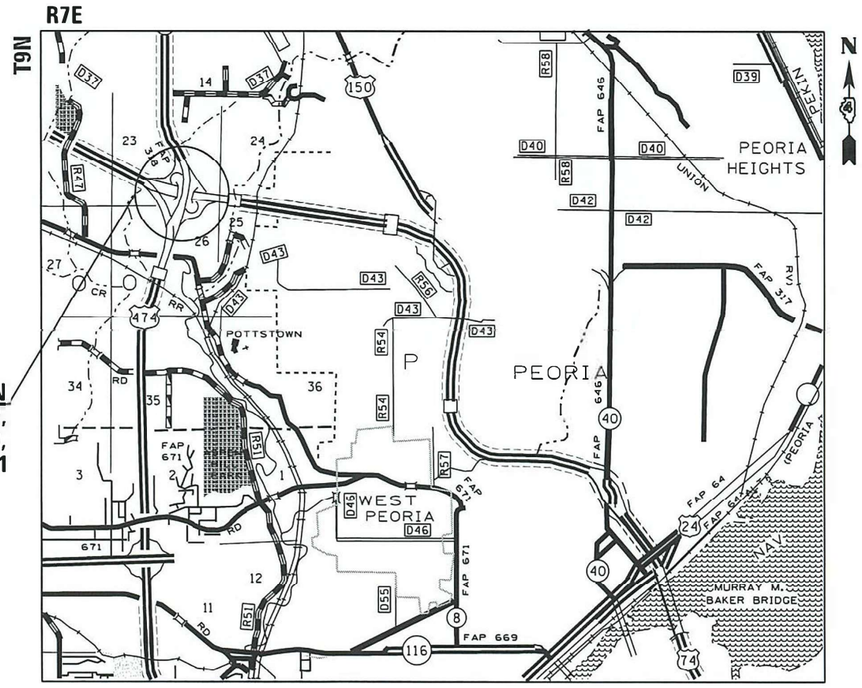
PROJECT ENGINEER: RICH DOTSON (309)671–3455
PROJECT MANAGER: ANNA DEVINE (309)671–3475

CONTALOG NO. 035641–00D
CONTRACT NO. 68E52

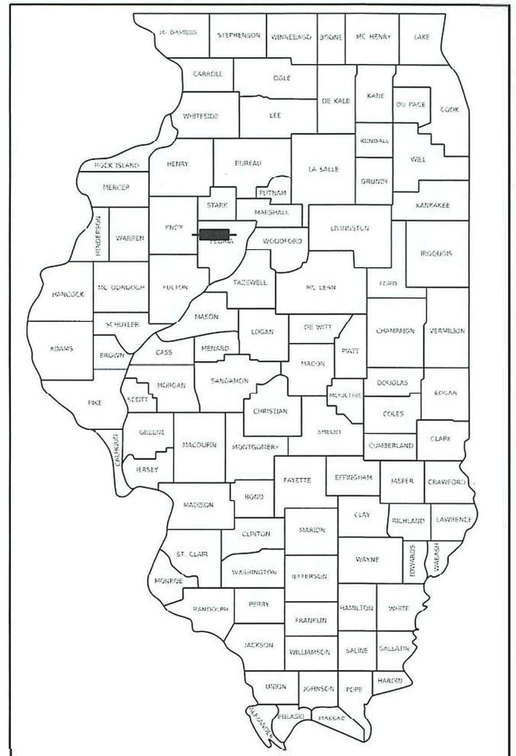
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAI ROUTE 474 & 74
FAP ROUTE 318 (I–474, I–74, IL 6)
SECTION 72(1HB,HB–1,2,3)BR
PROJECT NHPP–R034(528)
BRIDGE REHABILITATION
PEORIA COUNTY
C–94–087–18



GROSS LENGTH = 2,700 FT. = 0.51 MILE
NET LENGTH = 2,700 FT. = 0.51 MILE



LOCATION OF SECTION INDICATED THUS: –

PROJECT DESCRIPTION:

BRIDGE REHABILITATION TO 6 STRUCTURES, SN 072–0106, –0107, –0108, –0109, –0110, & –0111. REHABILITATION INCLUDES, BUT NOT LIMITED TO: HYDROSCARIFY AND MICROSILICA OVERLAY, JOINT REPLACEMENTS, DECK PATCHING, PARAPET WALL EXTENSIONS, SUBSTRUCTURE REPAIRS, AND ANY OTHER RELATED COLLATERAL WORK NECESSARY TO COMPLETE THIS PROJECT AS SHOWN IN THE PLANS AND AS DESCRIBED HEREIN.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 19 20 21
REGION THREE ENGINEER

May 7, 2021
ENGINEER OF DESIGN AND ENVIRONMENT

May 7, 2021
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

1 REVISED 6/1/21 REV. 5/10/21 REV. 5/5/21

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION 0006 ROADWAY 90% FED 10% STATE URBAN	CONSTRUCTION CODE 0013 BRIDGE 90% FED 10% STATE URBAN	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	3	3		
28100225	STONE RIPRAP, CLASS B3	TON	6	6		
28100825	STONE DUMPED RIPRAP, CLASS B3	TON	59	59		
						1
42001300	PROTECTIVE COAT	SQ YD	5893		5893	
Z0004556	HOT - MIX ASPHALT SURFACE REMOVAL, (DECK)	SQ YD	5580		5580	
44201785	CLASS D PATCHES, TYPE I, 12 INCH	SQ YD	4	4		
						1
50102400	CONCRETE REMOVAL	CU YD	125.1		125.1	
50300100	FLOOR DRAINS	EACH	19		19	
						1
50300225	CONCRETE STRUCTURES	CU YD	3.7		3.7	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	130		130	
50300260	BRIDGE DECK GROOVING	SQ YD	5453		5453	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	26,150		26,150	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	11,310		11,310	
50800515	BAR SPLICERS	EACH	156		156	
50800530	MECHANICAL SPLICERS	EACH	144		144	

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	DRAWN -	REVISED -	
PLOT SCALE = 1:100	CHECKED -	REVISED -	
PLOT DATE = 3/19/2021	DATE -	REVISED -	

SUMMARY OF QUANTITIES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	3
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

1 REVISED 6/1/21 REV. 5/10/21 REV. 4/12/21

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION 0006 ROADWAY 90% FED 10% STATE URBAN	CONSTRUCTION CODE 0013 BRIDGE 90% FED 10% STATE URBAN	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	878		878	
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE 1	EACH	46		46	
						1
52100520	ANCHOR BOLTS, 1"	EACH	80		80	
52100530	ANCHOR BOLTS, 1 1/4"	EACH	68		68	
63301210	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	12.5	12.5		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	11	11		
67100100	MOBILIZATION	L SUM	1	1		
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	4	4		
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2	2		
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	1		
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1		
70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1	1		
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	2351	2351		
70107007	PAVEMENT MARKING BLACKOUT TAPE, 7"	FOOT	20	20		
70107009	PAVEMENT MARKING BLACKOUT TAPE, 9"	FOOT	700	700		

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	DRAWN -	REVISED -
PLOT SCALE = 1:100	CHECKED -	REVISED -
PLOT DATE = 3/19/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	4
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

1 REVISED 6/1/21 REV. 5/10/21 REV. 4/12/21

				CONSTRUCTION CODE		
				0006	0013	
				ROADWAY	BRIDGE	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FED	90% FED	
				10% STATE	10% STATE	
				URBAN	URBAN	
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	370	370		
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	7634	7634		
70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	18354.5	18354.5		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2975	2975		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2450	2450		
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	4		
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4	4		
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	5649	5649		
* 78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	568	568		
* 78009008	MODIFIED URETHANE PAVEMENT MARKING - LINE 8"	FOOT	1310	1310		
X5017305	PROTECTIVE SHIELD (PERMANENT)	SQ YD	1804		1804	
X6025602	MANHOLES TO BE ADJUSTED WITH FRAME AND GRATE (SPECIAL)	EACH	1	1		
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	80		80	
Z0003600	BEAM STRAIGHTENING	L SUM	1		1	1
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	5580		5580	

*= SPECIALTY ITEM

USER NAME = *USER*	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 1:100	CHECKED -	REVISED -
PLOT DATE = 3/19/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	5
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

1 REVISED 6/1/21 REV. 5/10/21 REV. 5/6/21 REV. 4/12/21

				CONSTRUCTION		
				0006	CODE 0013	
				ROADWAY	BRIDGE	
				90% FED	90% FED	
				10% STATE	10% STATE	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	URBAN	
						1
Z0012162	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/4"	SQ YD	5580		5580	
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	1462		1462	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1		1	
						1
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	8.8		8.8	
Z0016702	DETOUR SIGNING	L SUM	1	1		
Z0041895	POLYMER CONCRETE	CU FT	18.8		18.8	
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	1		1	
Ø Z0076600	TRAINEES	HOUR	1,000	1,000		
Ø Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOUR	1,000	1,000		

Ø 0042

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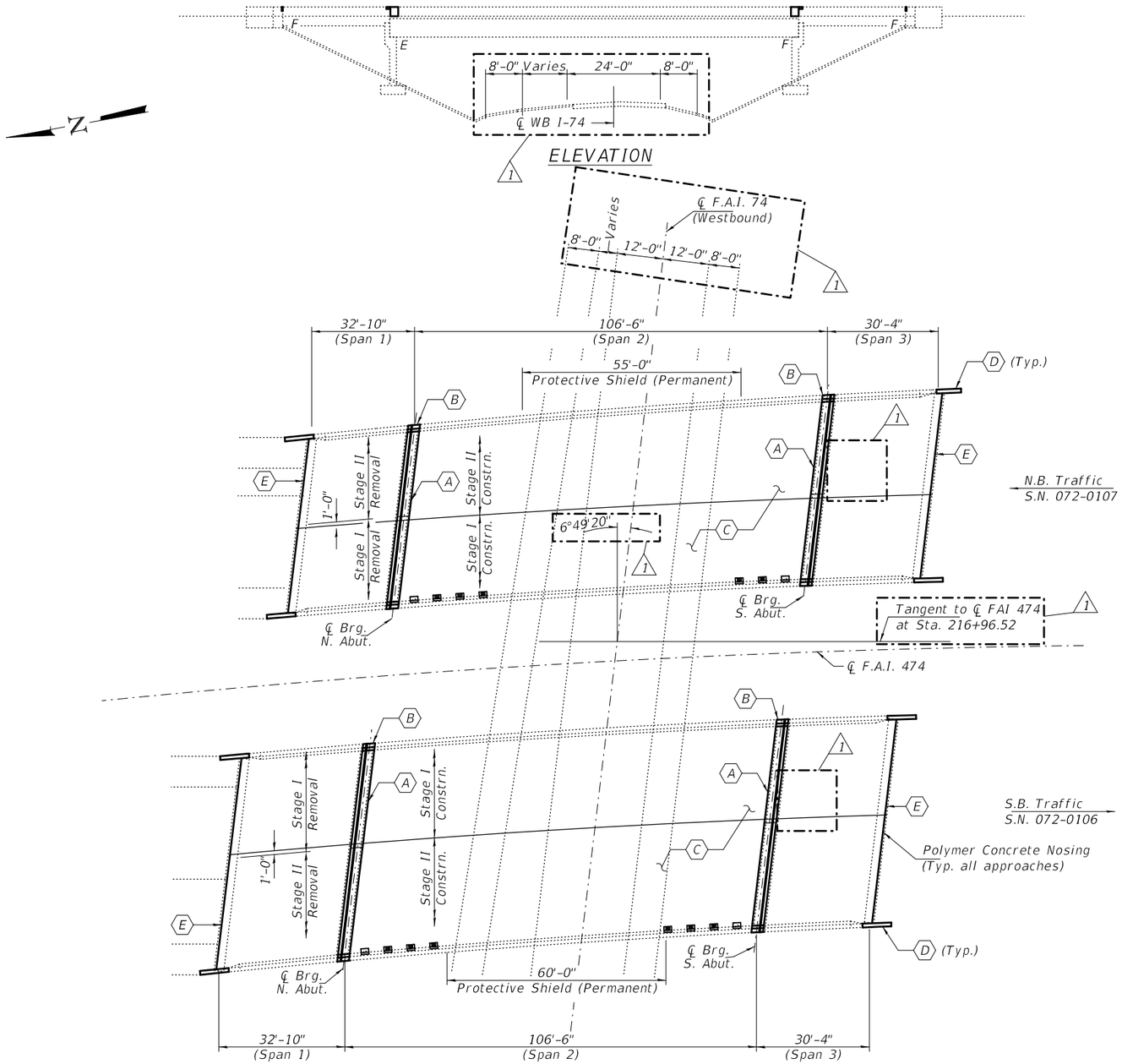
	DRAWN -	REVISED -	
PLOT SCALE = 1x100	CHECKED -	REVISED -	
PLOT DATE = 3/19/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	6
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

1 REVISED 6/1/21 REV. 5/10/21 REV. 4/20/21 REV. 4/12/21



PLAN

Expires 11/30/2022

Ⓐ – Remove and replace expansion joint with Preformed Joint Strip Seal.

Ⓑ – Bearing removal and replacement at Abutments.

Ⓒ – HMA Surface Removal, Bridge deck scarification with new Microsilica Concrete Overlay and Bridge Deck Grooving.

Ⓓ – Wingwall and Railing Modifications. See sheet 12 of 14 for details.

Ⓔ – Polymer Concrete Nosing. See sheet 8 of 14 for detals.

Ⓕ – Substructure Repairs

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

1

TOTAL BILL OF MATERIAL

	ITEM	UNIT	QUANTITY	
	Concrete Removal	Cu. Yd.	18.4	
	Concrete Superstructure	Cu. Yd.	20.0	1
	Preformed Joint Strip Seal	Foot	181	
	Reinforcement Bars, Epoxy Coated	Pound	3360	
	Bar Splicers	Each	30	1
	Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	3.7	
*	Protective Coat	Sq. Yd.	1835	
	Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	538	1
	Hot-Mix Asphalt Surface Removal Deck	Sq. Yd.	1746	
	Furnishing & Erecting Structural Steel	Pound	8570	
	Elastomeric Bearing Assembly, Type I	Each	14	1
	Jack & Remove Existing Bearings	Each	28	
	Anchor Bolts, 1¼"Ø	Each	56	
1	Protective Shield (Permanent)	Sq. Yd.	494	
1	Floor Drains	Each	7	
	Bridge Deck Grooving	Sq. Yd.	1721	
	Bridge Deck Microsilica Concrete Overlay, 2¼"	Sq. Yd.	1746	
	Bridge Deck Scarification, ¾"	Sq. Yd.	1746	1
	Polymer Concrete	Cu. Ft.	8.1	

* On new concrete and overlay areas

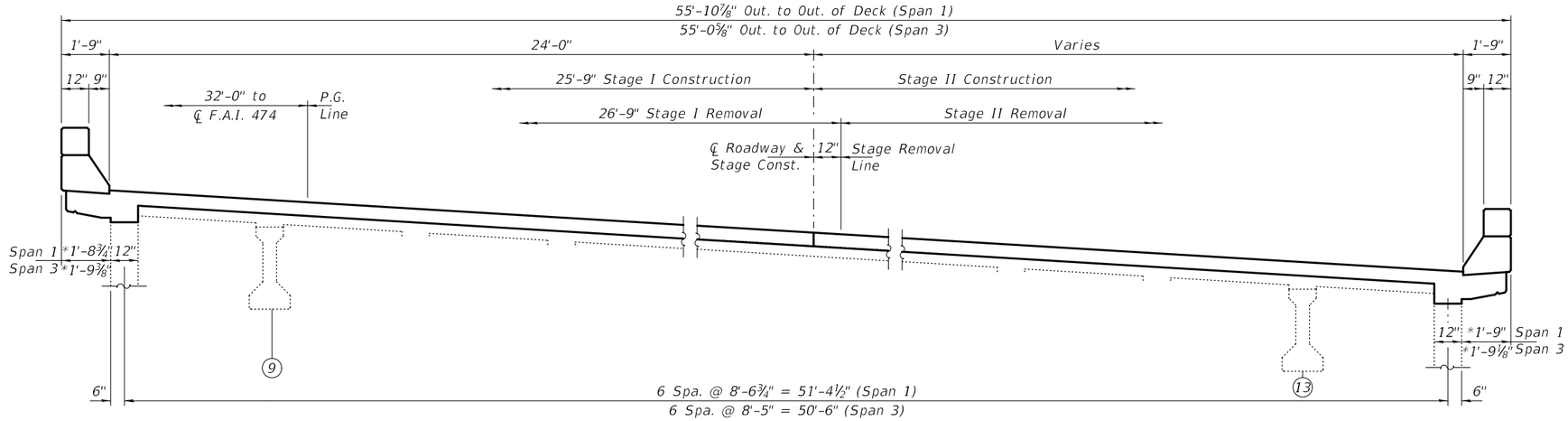
LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

DESIGNED - Jeffrey S. Burke	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - Chi-Cheung Chau	ENGINEER OF STRUCTURAL SERVICES	REVISED 1 05/28/2021 JSB	
DRAWN - jostermann Venkat Ramana	PASSED	REVISED -	
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES		

GENERAL PLAN AND ELEVATION
F.A.I. 474 OVER F.A.I. 74
SN 072-0106 (SB) & 072-0107 (NB)
SHEET NO. 1 OF 14 SHEETS

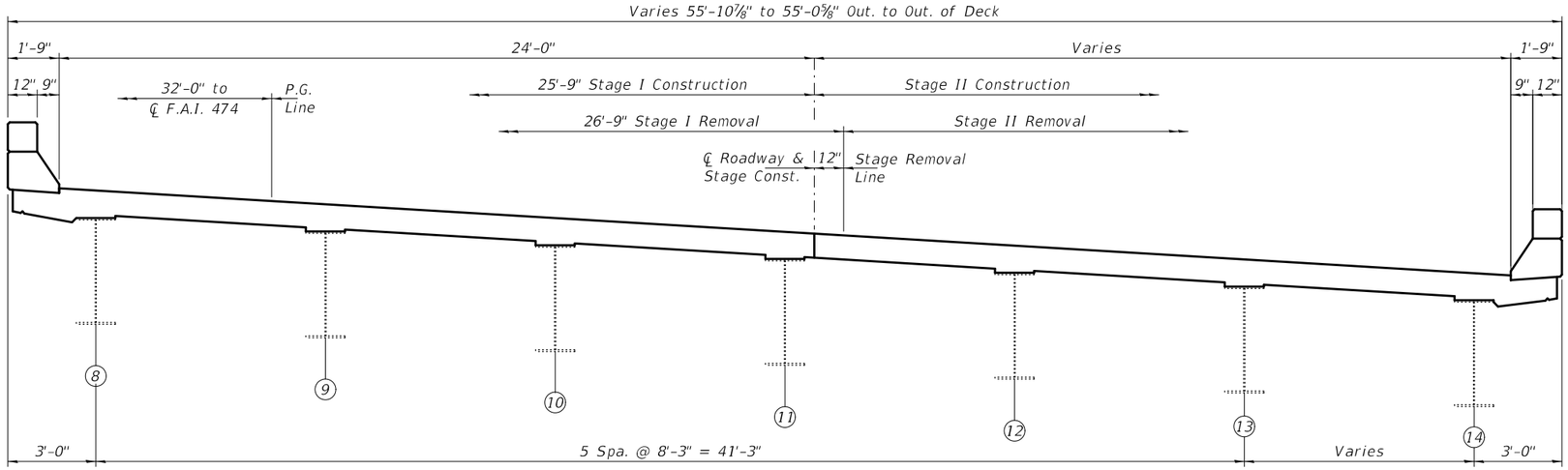
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	13
		CONTRACT NO. 68E52		
		ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21



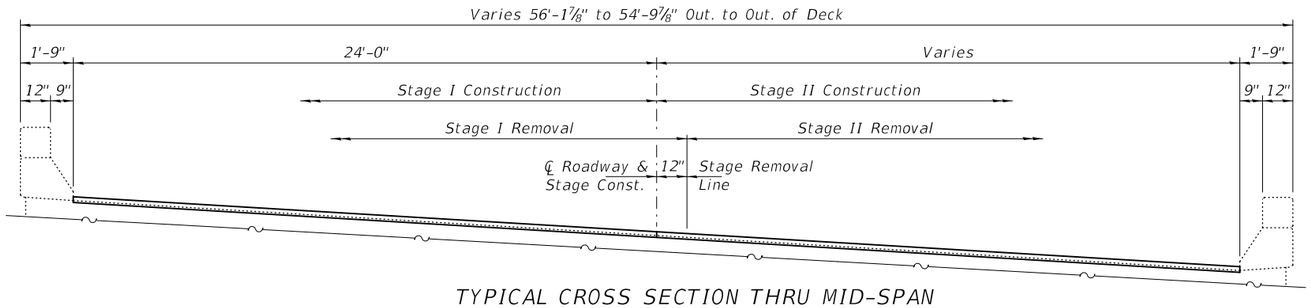
CROSS SECTION THRU SPANS 1 & 3 AT ABUTMENT

(Looking South)



CROSS SECTION THRU SPAN 2 AT ABUTMENT

(Looking South)



TYPICAL CROSS SECTION THRU MID-SPAN

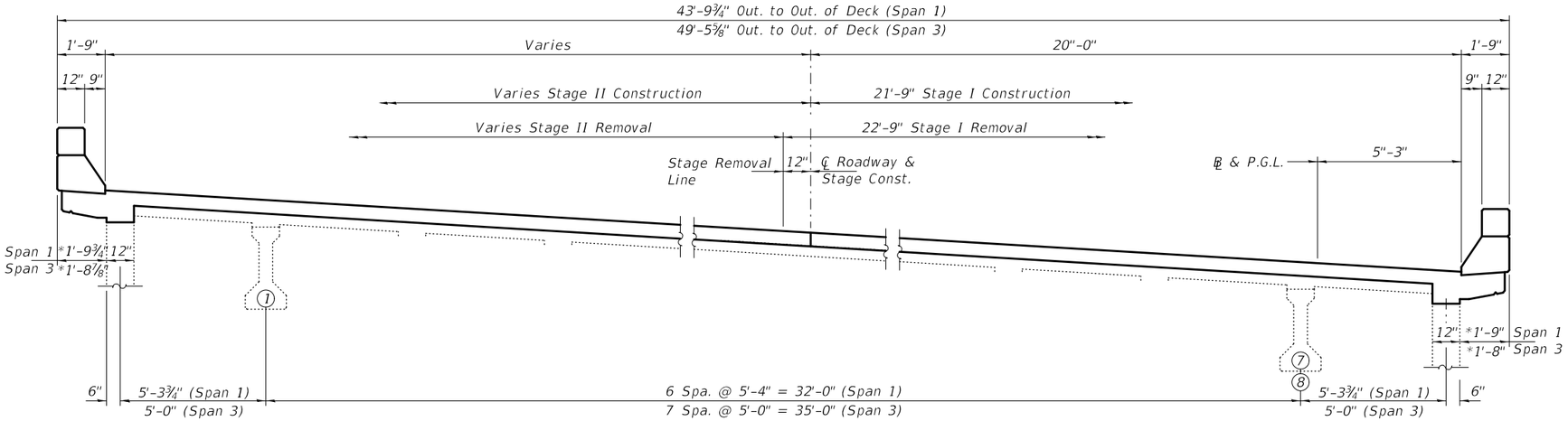
(Looking South)

* Radial to CL of FAI 474

Entire Sheet 1

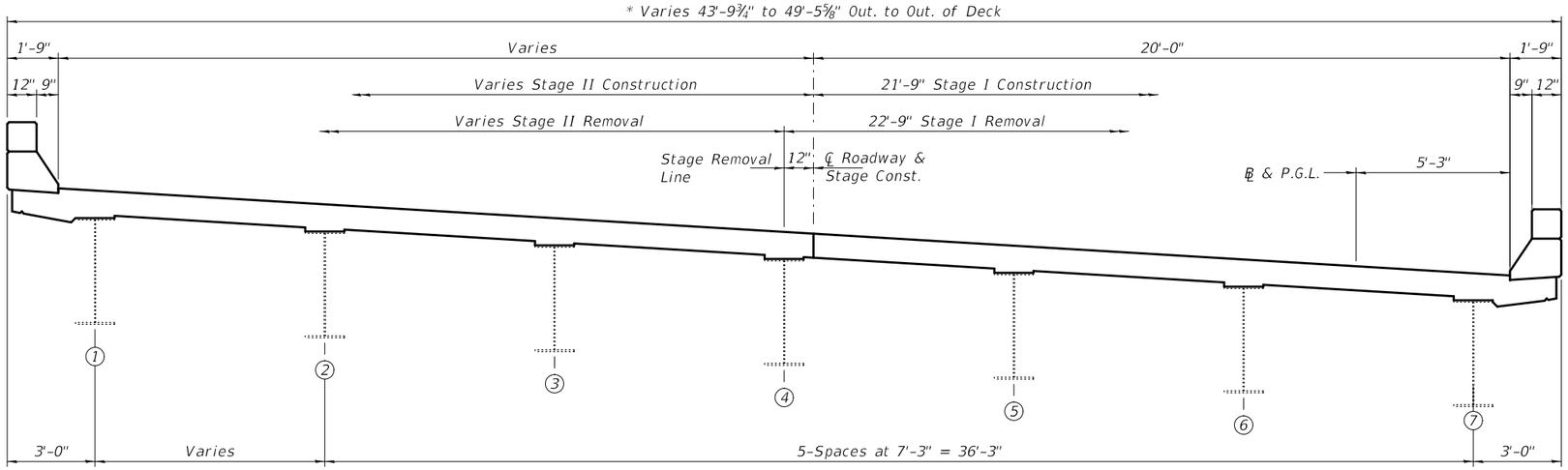
DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STAGING CROSS SECTIONS SN 072-0106 (SB)**	F.A.I. RTE. 474
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES	REVISED 1 05/28/2021 JSB		SHEET NO. 2 OF 14 SHEETS	SECTION 72(1HB,HB-1,2,3)BR
DRAWN - Jim Ostermann VVR	PASSED	REVISED -			COUNTY PEORIA
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES				TOTAL SHEETS 63
					SHEET NO. 14
					CONTRACT NO. 68E52
					ILLINOIS FED. AID PROJECT

1 REVISED 6/1/21



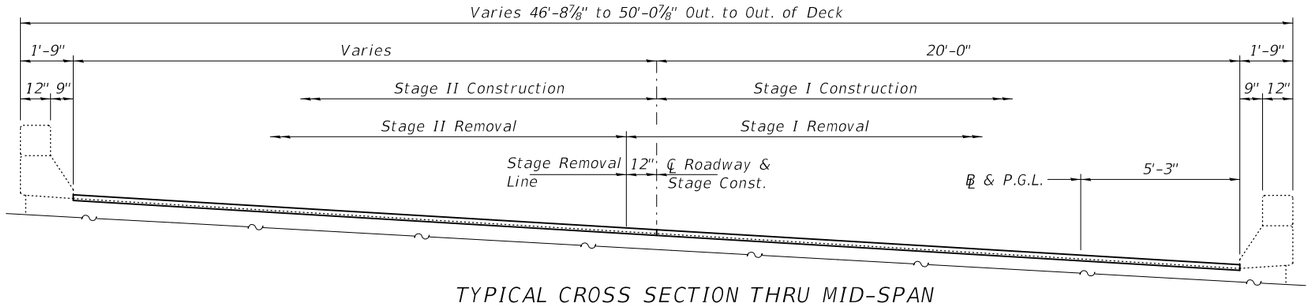
CROSS SECTION THRU SPANS 1 & 3 AT ABUTMENT

(Looking South)



CROSS SECTION THRU SPAN 2 AT ABUTMENT

(Looking South)



TYPICAL CROSS SECTION THRU MID-SPAN

(Looking South)

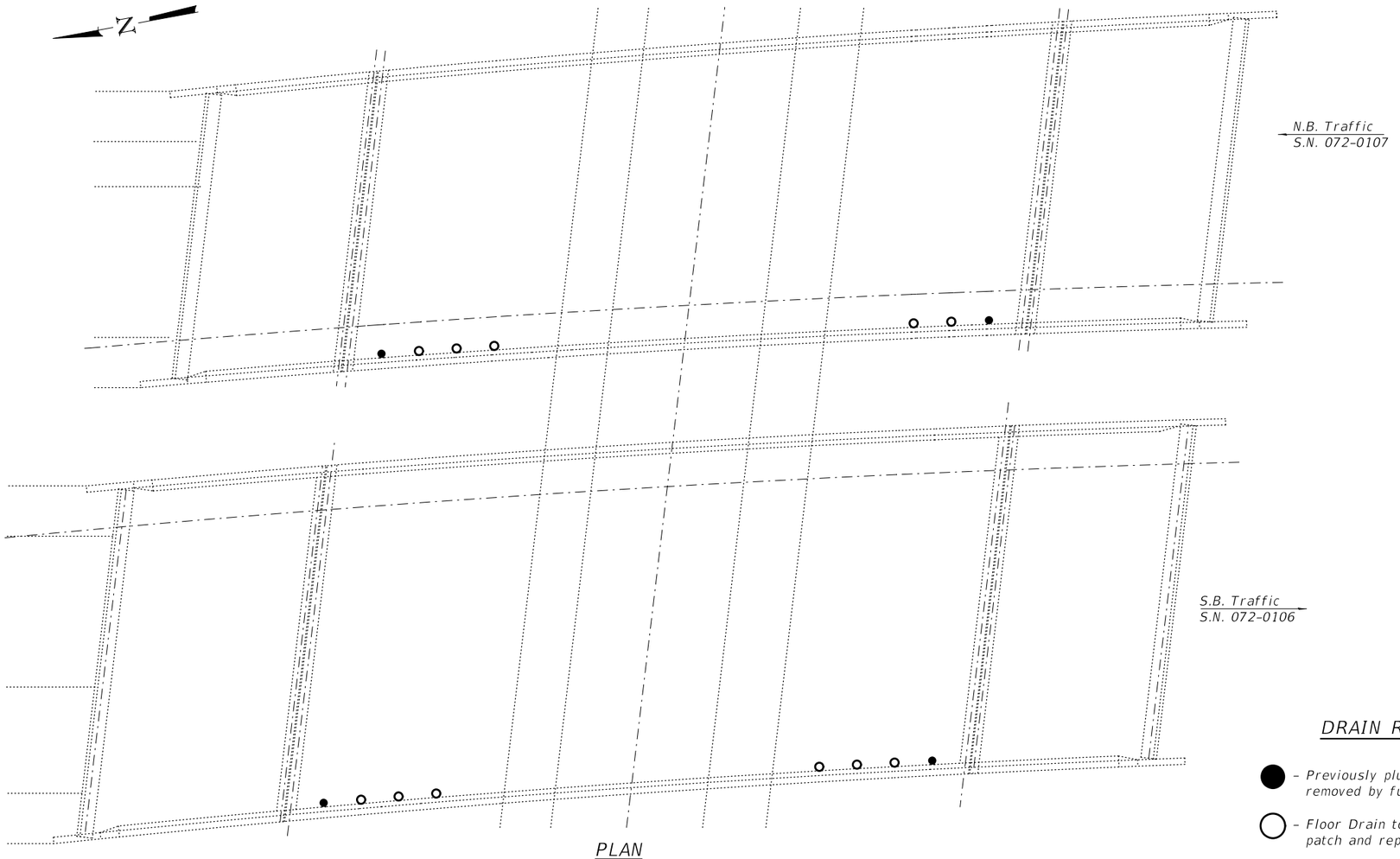
* Radial to CL of FAI 474

Sheet Added
1

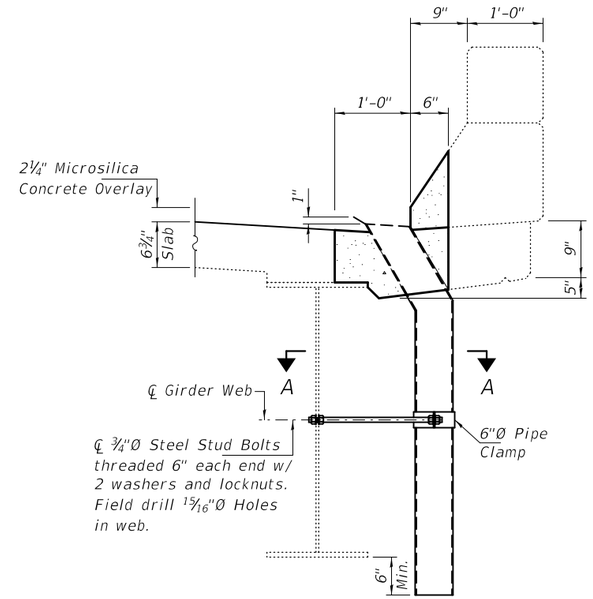
DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STAGING CROSS SECTIONS SN 072-0107 (NB)**	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	14A
DRAWN - Jim Ostermann VVR	PASSED	REVISED 1 05/28/2021 JSB		SHEET NO. 2A OF 14 SHEETS			CONTRACT NO. 68E52		
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS FED. AID PROJECT		

1 ADDED SHEET 6/1/21

Notes:
Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-built Plans.
An estimated amount of 70 S.F of Structural Repair of Concrete (depth less than or equal to 5") was added to each structure for repairs to the underside of the overhang soffit.



PLAN

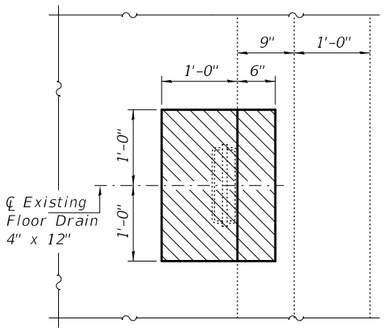


FLOOR DRAIN DETAILS
(7-Locations)

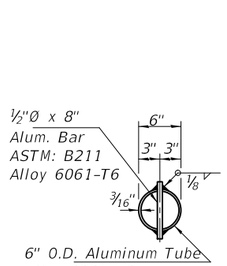
DRAIN REPAIR LEGEND

● - Previously plugged drains to be removed by full depth deck patch.

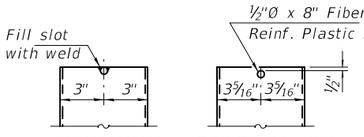
○ - Floor Drain to be removed with full depth deck patch and replaced with new floor drains.

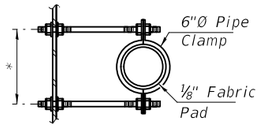


CONCRETE REMOVAL & REPLACEMENT
PLAN AT FLOOR DRAINS
Existing reinf. to remain.

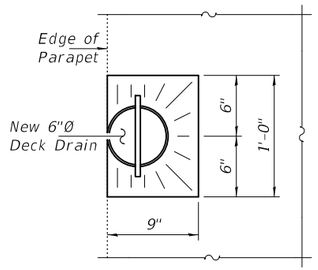


TOP PLAN
(Showing Aluminum Tube)

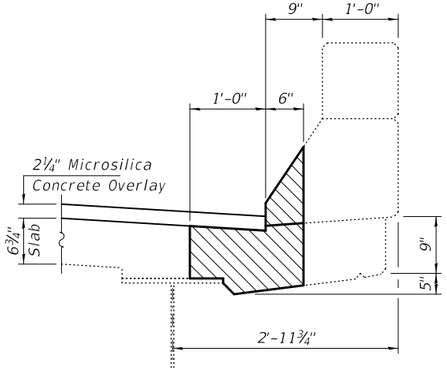




SECTION A-A
* Dimension as req'd by Pipe Clamp.



OVERLAY TREATMENT
AT FLOOR DRAINS



SECTION THRU CONCRETE REMOVAL &
REPLACEMENT AT FLOOR DRAINS

Entire Sheet
1

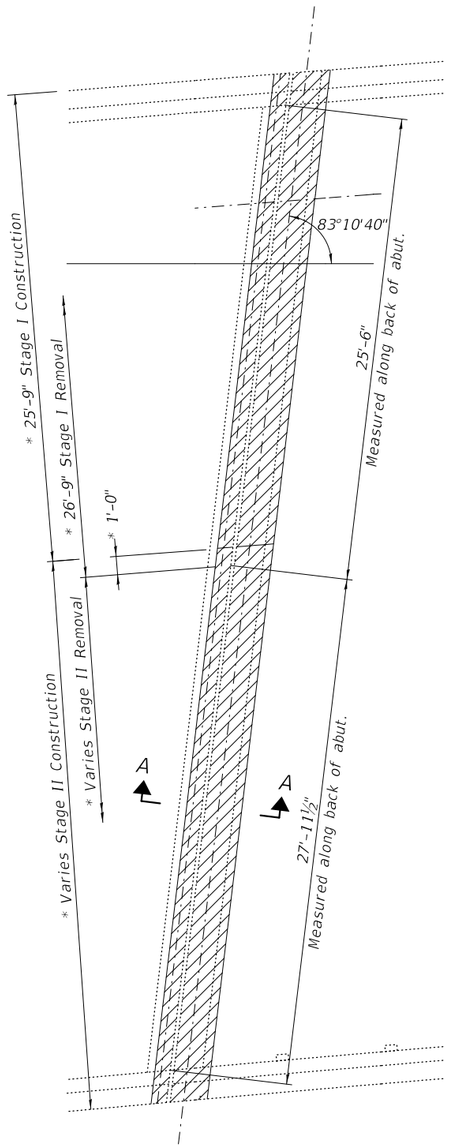
BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	3.7
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	140
Floor Drains	Each	7

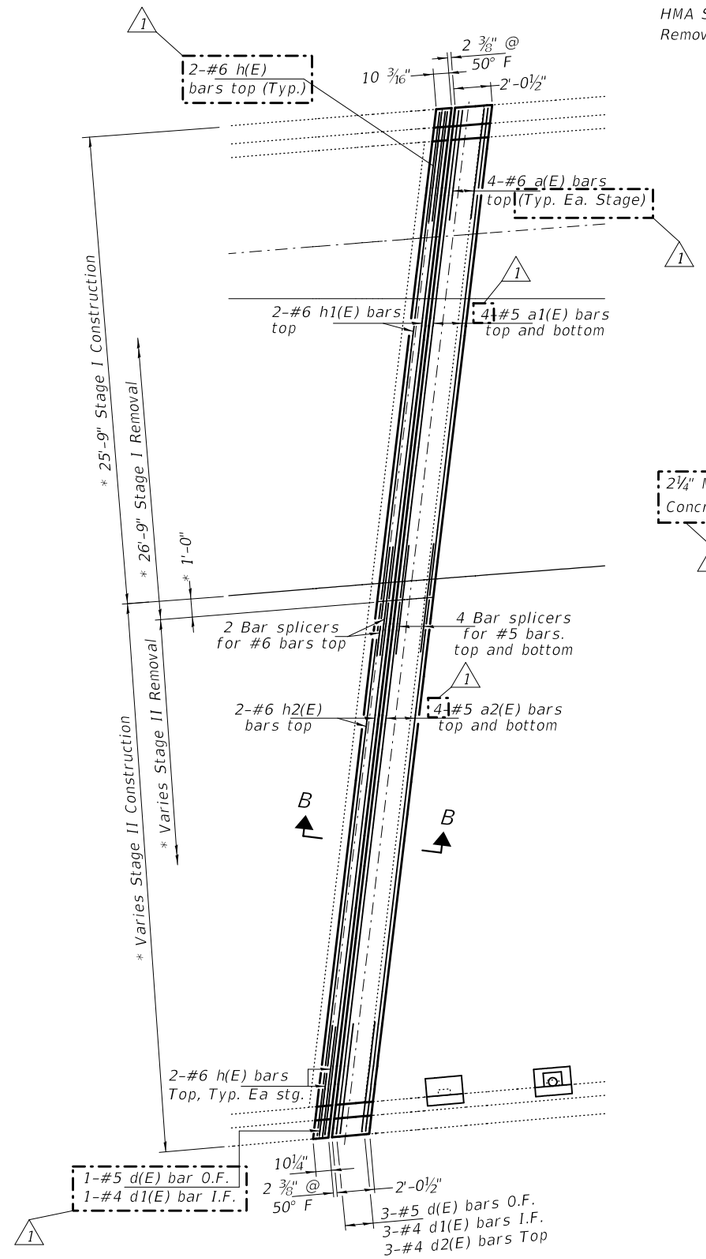
DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK SLAB REPAIR SN 072-0106 (SB) & 072-0107 (NB)	
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES				
DRAWN - Jim Ostermann VVR	PASSED	REVISED 1 05/28/2021 JSB		SHEET NO. 3 OF 14 SHEETS	
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	15
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

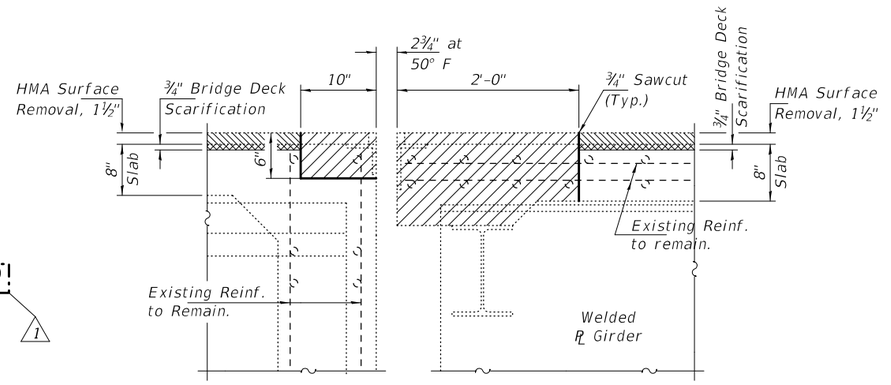
1 REVISED 6/1/21



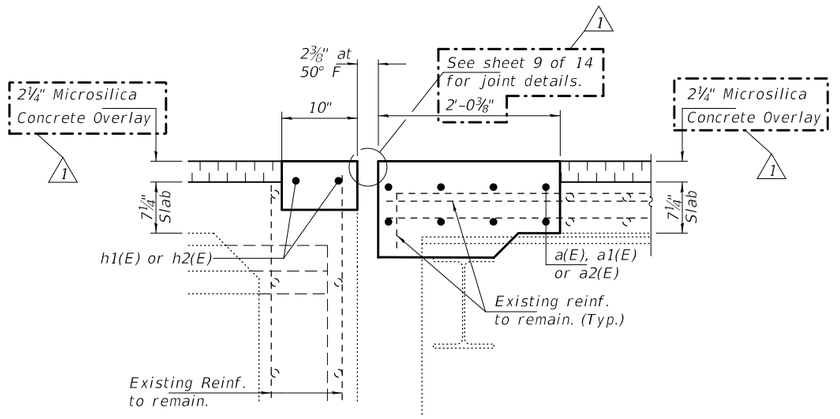
CONCRETE REMOVAL DETAILS
N. ABUT., 072-0106 (S.B.)



CONCRETE REPLACEMENT DETAILS
N. ABUT., 072-0106 (S.B.)



SECTION A-A
(Near ℄ Roadway)
(Dims at RT Ls to end of deck)



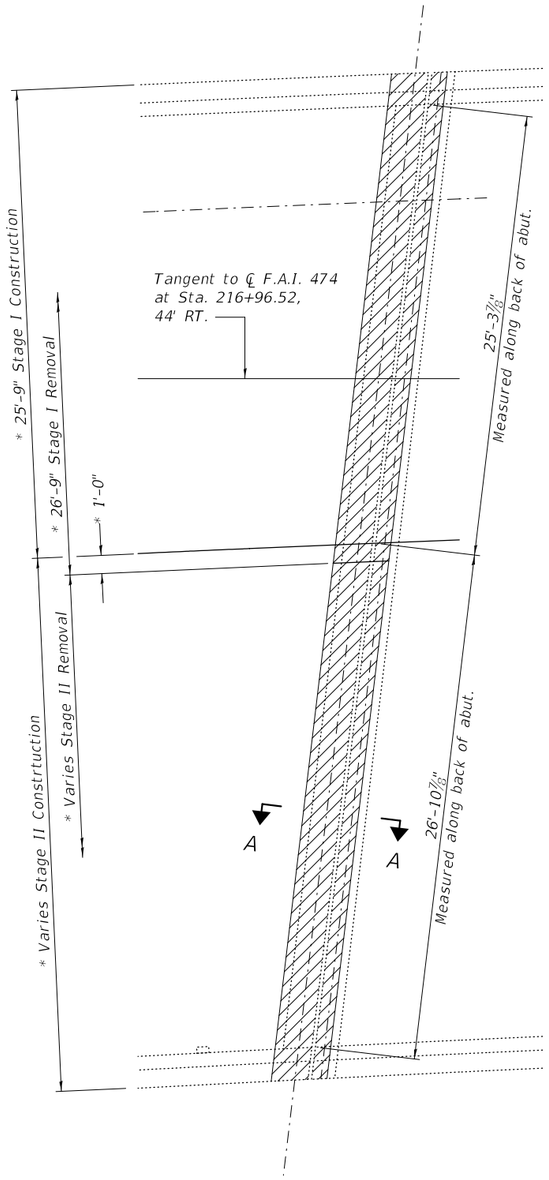
SECTION B-B
(Near ℄ Roadway)
(Dims at RT Ls to end of deck)

Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material, see sheet 8 of 14.

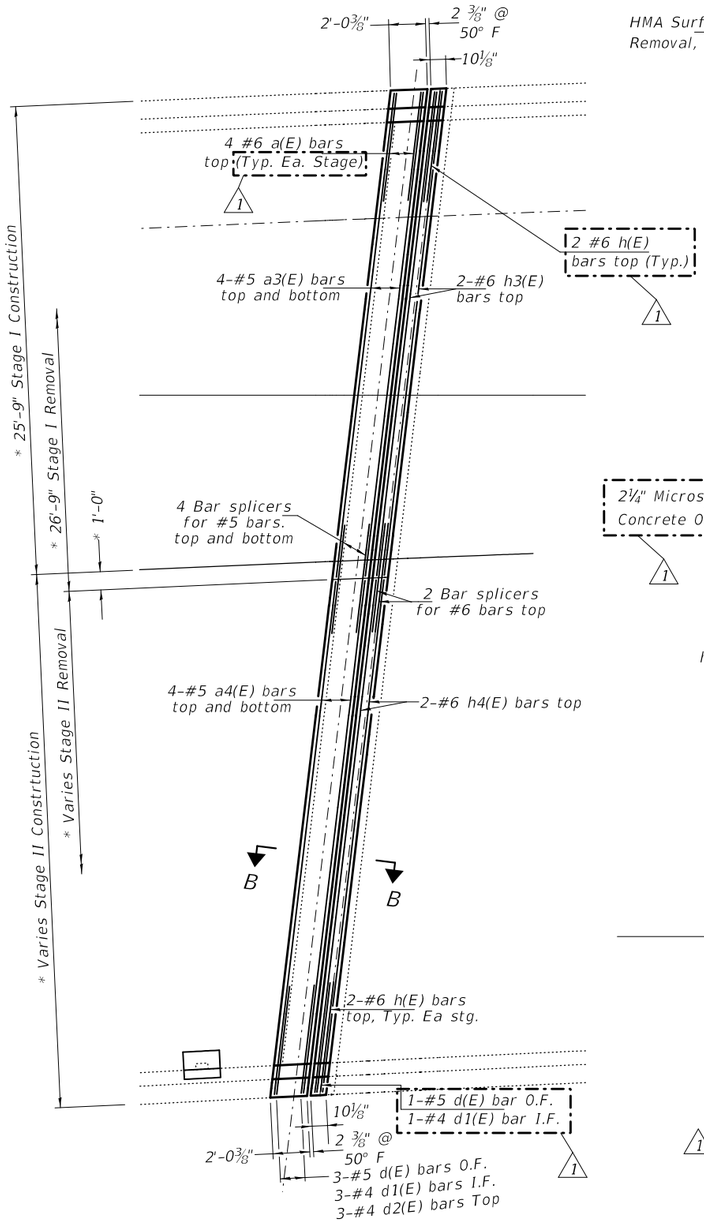
* Measured radially to ℄ F.A.I. 474.

DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL AND REPLACEMENT DETAILS - N. ABUT. SN 072-0106 (SB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	16
DRAWN - Jim Ostermann VVR	PASSED	REVISED 1 05/28/2021 JSB		SHEET NO. 4 OF 14 SHEETS			CONTRACT NO. 68E52		
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS FED. AID PROJECT		

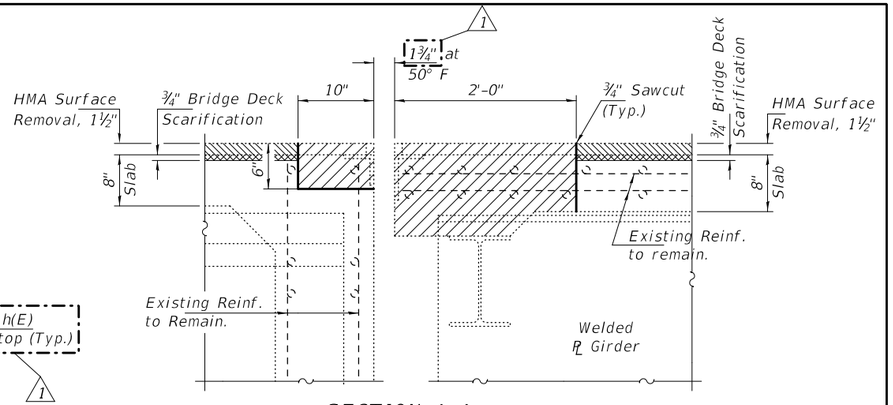
1 REVISED 6/1/21



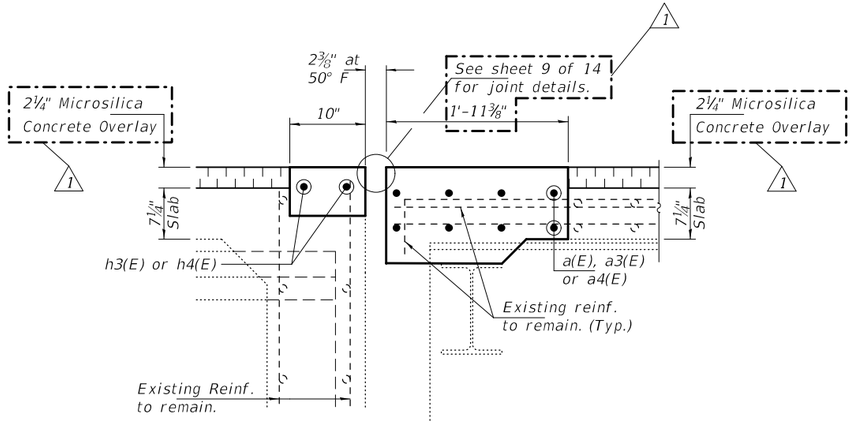
CONCRETE REMOVAL DETAILS
S. ABUT., 072-0106 (S.B.)



CONCRETE REPLACEMENT DETAILS
S. ABUT., 072-0106 (S.B.)



SECTION A-A
(Near ℄ Roadway)
(Dims at RT Ls to end of deck)



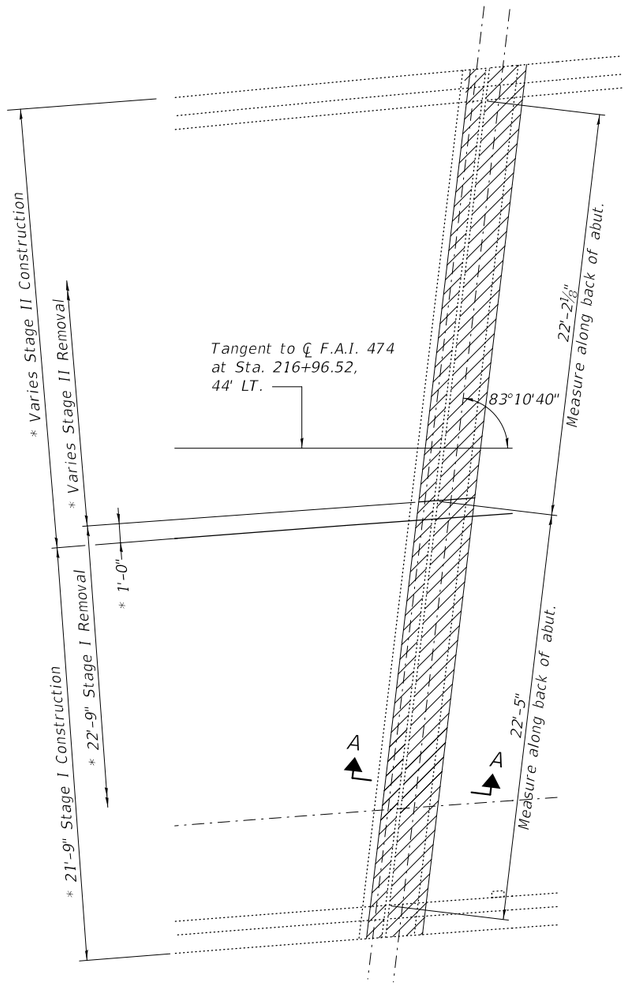
SECTION B-B
(Near ℄ Roadway)
(Dims at RT Ls to end of deck)

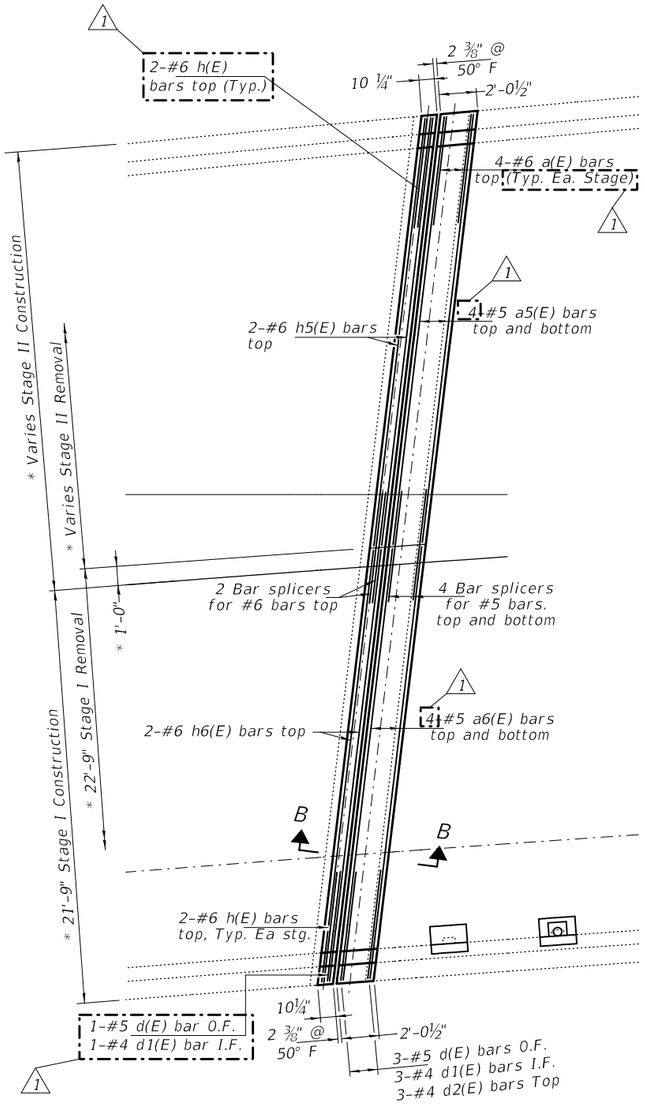
Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material, see sheet 8 of 14.

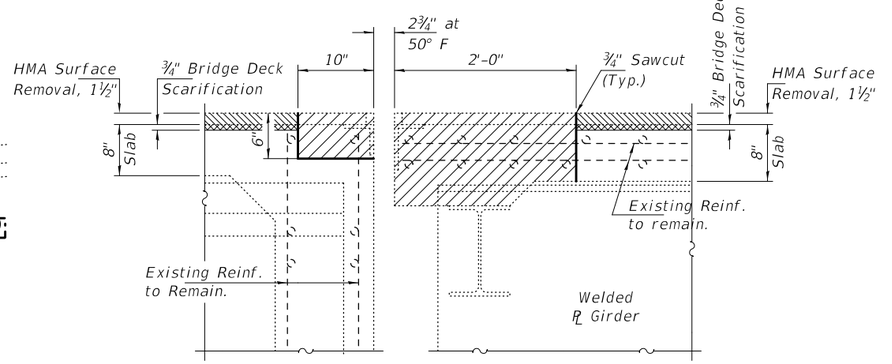
* Measured radially to ℄ F.A.I. 474.

DESIGNED - JSB	EXAMINED	Timothy A. Sheckler ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL AND REPLACEMENT DETAILS - S. ABUT. SN 072-0106 (SB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC						474	72(1HB,HB-1,2,3)BR	PEORIA	63	17
DRAWN - Jim Ostermann VVR	PASSED	A. Carl Piney ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 05/28/2021 JSB		SHEET NO. 5 OF 14 SHEETS			CONTRACT NO. 68E52		
CHECKED - JSB CCC			REVISED -					ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21

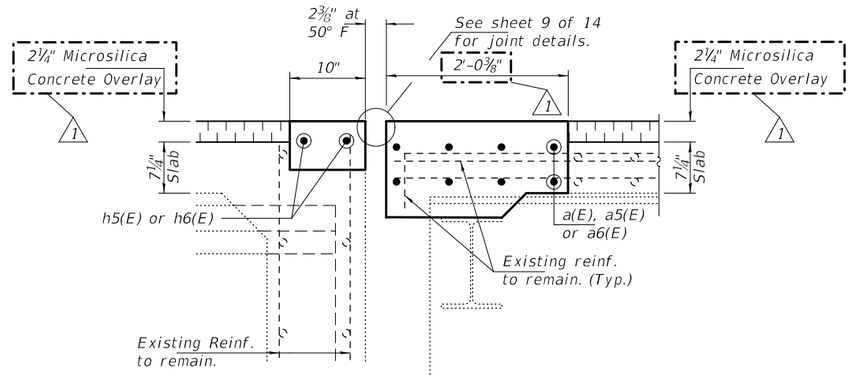






SECTION A-A

(Near ℄ Roadway)
(Dims at RT L's to end of deck)



SECTION B-B

(Near ℄ Roadway)
(Dims at RT L's to end of deck)

Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material, see sheet 8 of 14.

1

* Measured radially to ℄ F.A.I. 474.

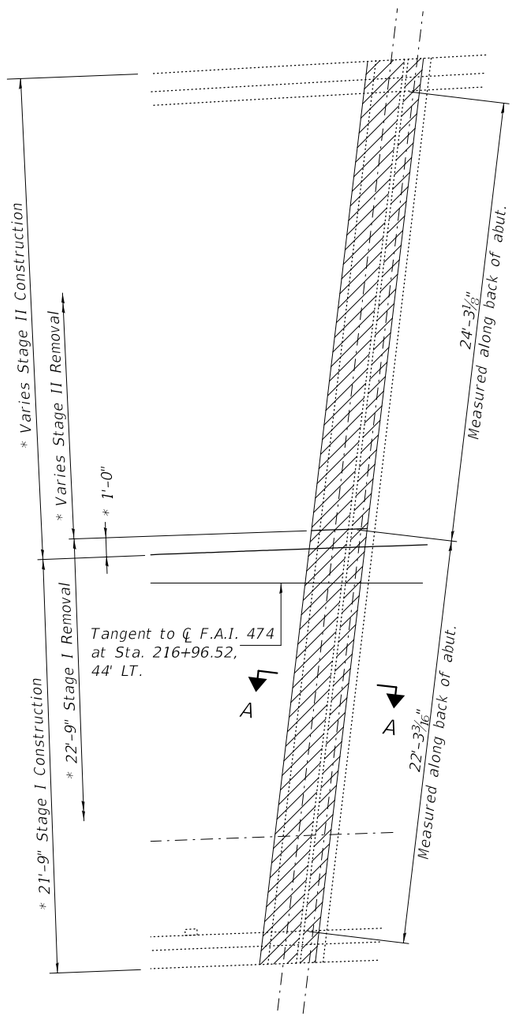
CONCRETE REMOVAL DETAILS
N. ABUT., 072-0107 (N.B.)

CONCRETE REPLACEMENT DETAILS
N. ABUT., 072-0107 (N.B.)

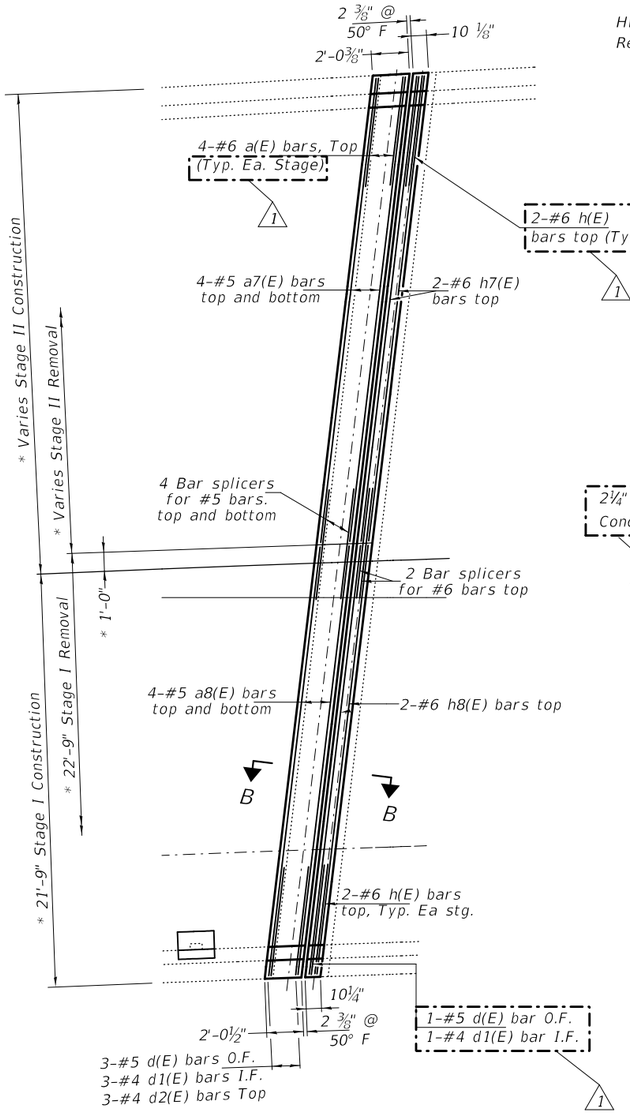
DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL AND REPLACEMENT DETAILS - N. ABUT. SN 072-0107 (NB)	
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES	REVISED 1 05/28/2021 JSB			
DRAWN - Jim Ostermann VVR	PASSED	REVISED -		SHEET NO. 6 OF 14 SHEETS	
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES				

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	18
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

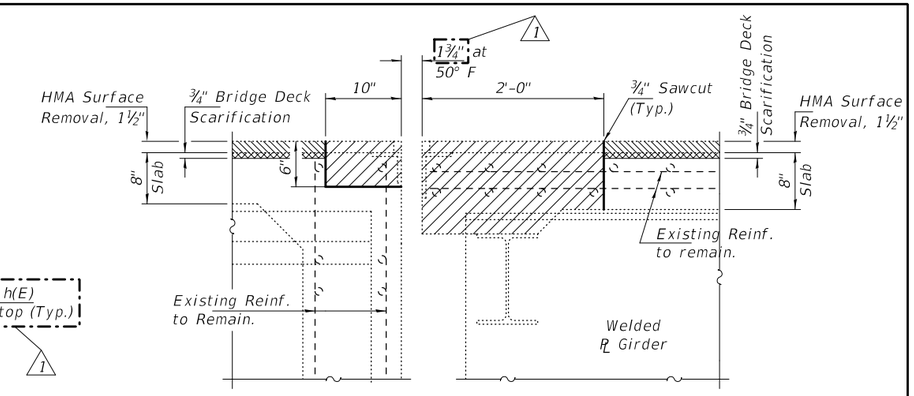
1 REVISED 6/1/21



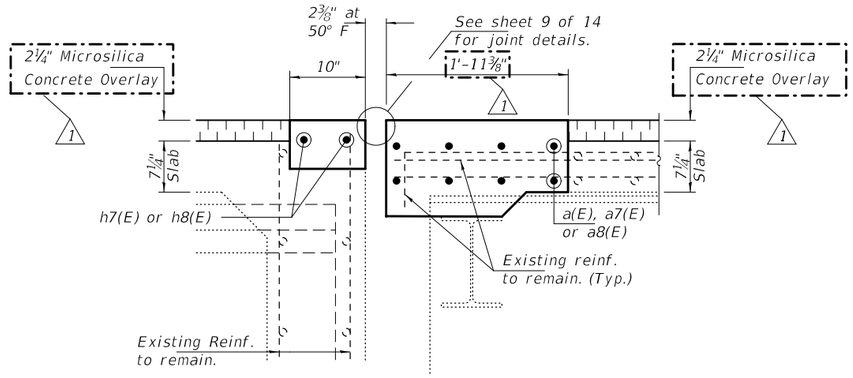
CONCRETE REMOVAL DETAILS
S. ABUT., 072-0107 (N.B.)



CONCRETE REPLACEMENT DETAILS
S. ABUT., 072-0107 (N.B.)



SECTION A-A
(Near ℄ Roadway)
(Dims at RT Ls to end of deck)



SECTION B-B
(Near ℄ Roadway)
(Dims at RT Ls to end of deck)

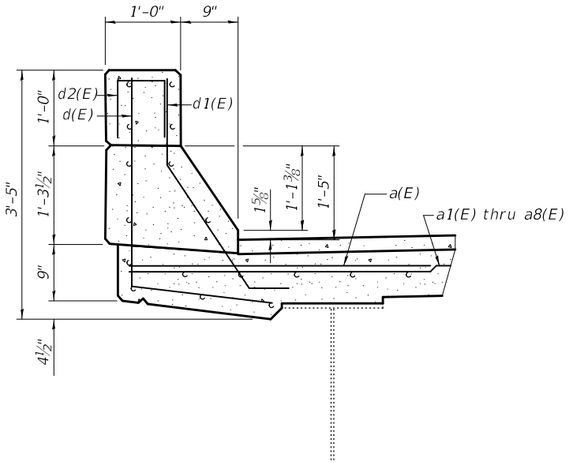
Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material,
see sheet 8 of 14.

1

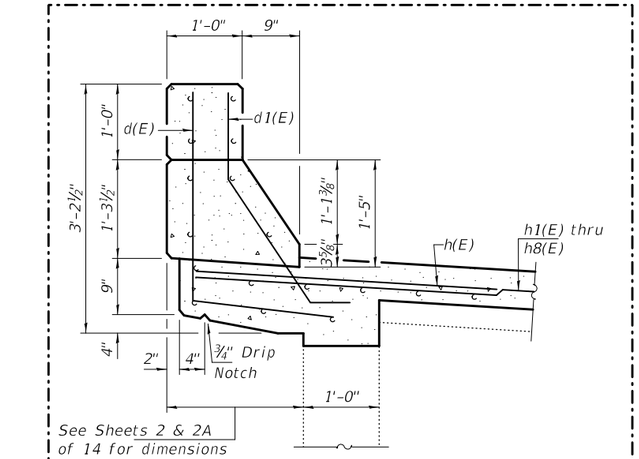
* Measured radially to ℄ F.A.I. 474.

DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL AND REPLACEMENT DETAILS - S. ABUT. SN 072-0107 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	19
DRAWN - Jim Ostermann VVR	PASSED	REVISED 1 05/28/2021 JSB		SHEET NO. 7 OF 14 SHEETS			CONTRACT NO. 68E52		
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21

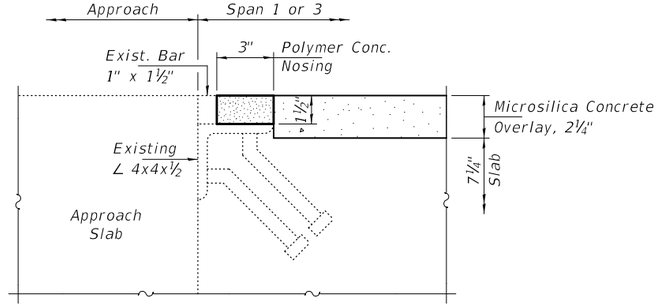


SECTION THRU BRIDGE PARAPET

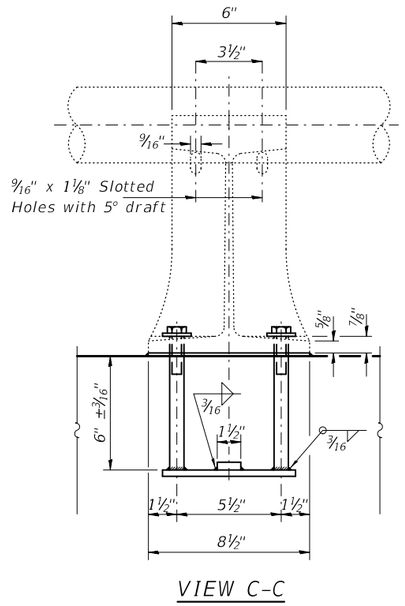


SECTION THRU SPAN 1 & 3 PARAPET

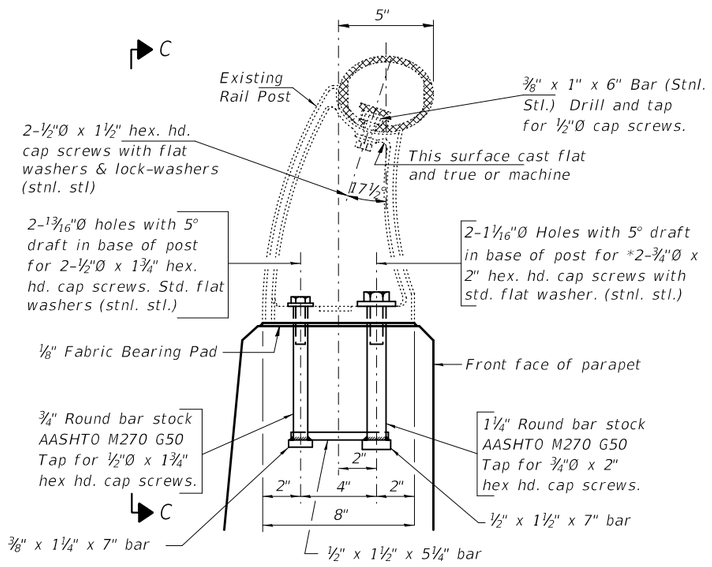
1



POLYMER CONCRETE NOSING DETAIL

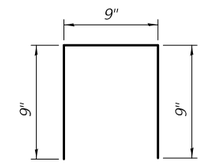


VIEW C-C



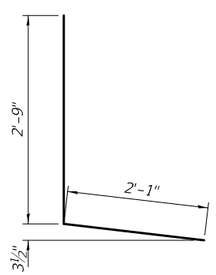
RAIL POST ANCHORAGE DEVICE DETAILS

New Rail Post Anchorage Devices will be required at locations where posts are connected to new concrete. Cost to be included with Concrete Removal (8-Required)

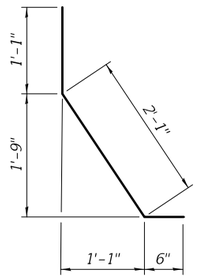


BAR d2(E)

Min. Bar Laps
#5 = 3'-6"
#6 = 4'-10"



BARS d(E)



BAR d1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	32	#6	6'-0"	
a1(E)	8	#5	25'-6"	
a2(E)	8	#5	27'-10"	
a3(E)	8	#5	25'-3"	
a4(E)	8	#5	26'-10"	
a5(E)	8	#5	22'-1"	
a6(E)	8	#5	22'-4"	
a7(E)	8	#5	24'-2"	
a8(E)	8	#5	22'-2"	
d(E)	32	#5	4'-10"	
d1(E)	32	#5	3'-8"	
d2(E)	24	#4	2'-3"	
h(E)	16	#6	6'-0"	
h1(E)	2	#6	25'-6"	
h2(E)	2	#6	27'-10"	
h3(E)	2	#6	25'-3"	
h4(E)	2	#6	26'-10"	
h5(E)	2	#6	22'-1"	
h6(E)	2	#6	22'-4"	
h7(E)	2	#6	24'-2"	
h8(E)	2	#6	22'-2"	
Concrete Removal			Cu. Yd.	18.4
Concrete Superstructure			Cu. Yd.	20.0
Reinforcement Bars, Epoxy Coated			Pound	2910

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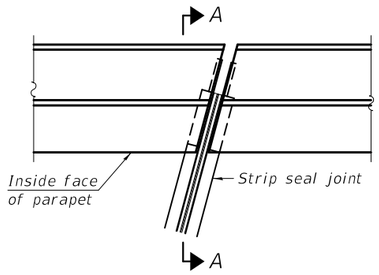
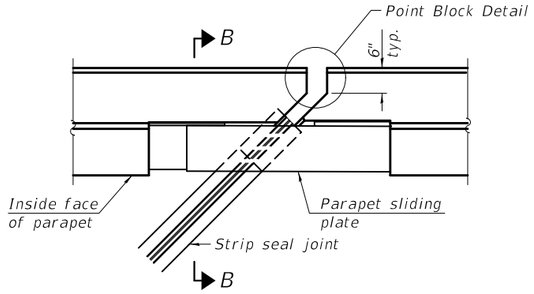
DESIGNED - JSB	EXAMINED		DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REPLACEMENT DETAILS SN 072-0106 (SB) & 072-0107 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC			REVISED 1 05/28/2021 JSB			474	72(1HB,HB-1,2,3)BR	PEORIA	63	20
DRAWN - Jim Ostermann VVR	PASSED		REVISED -		SHEET NO. 8 OF 14 SHEETS			CONTRACT NO. 68E52		
CHECKED - JSB CCC		ENGINEER OF STRUCTURAL SERVICES						ILLINOIS FED. AID PROJECT		
		ENGINEER OF BRIDGES AND STRUCTURES								

1 REVISED 6/1/21

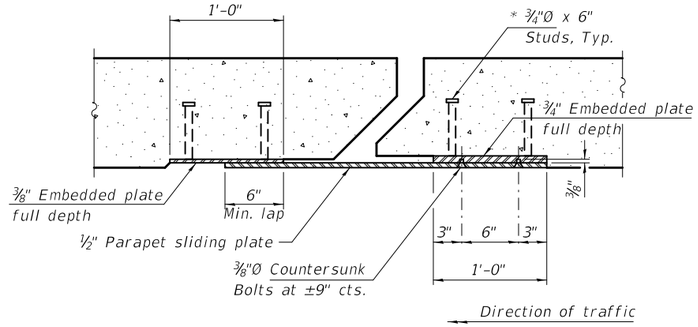


FOR SKEWS ≤ 30°



FOR SKEWS > 30°

PLAN AT PARAPET



SECTION C-C

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

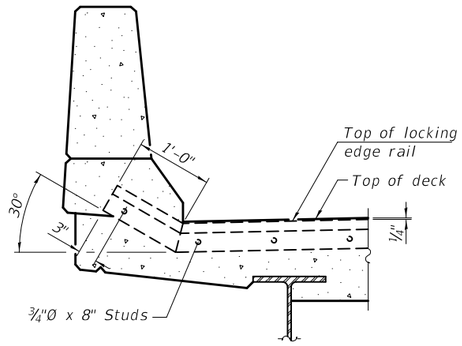
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

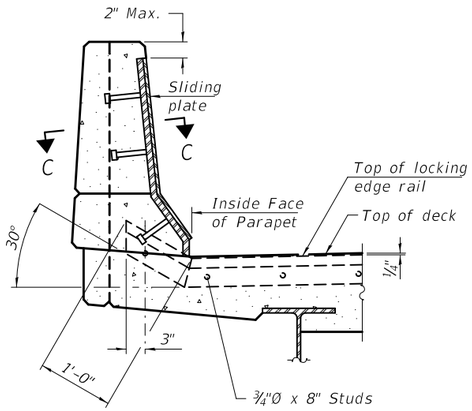
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

39" constant slope barrier shown, 44" constant slope barrier similar as noted.

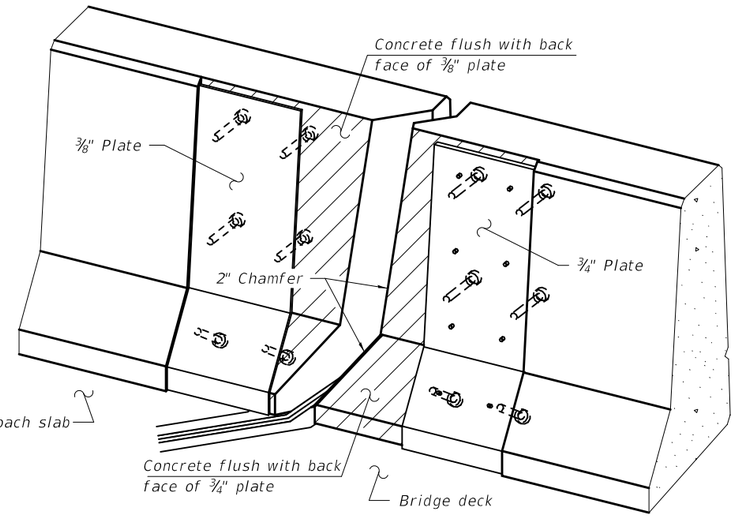
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



SECTION A-A

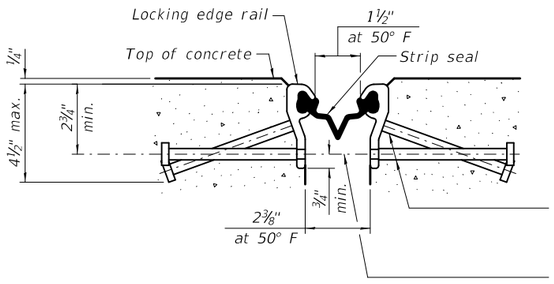


SECTION B-B

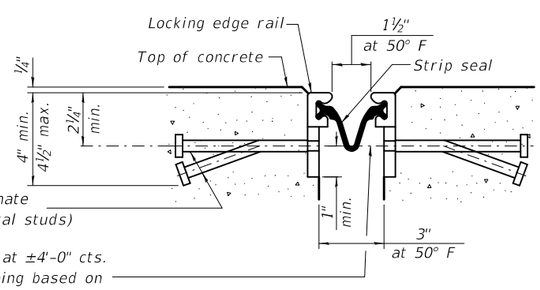


TRIMETRIC VIEW

(Showing back plates only)



SECTION THRU ROLLED RAIL JOINT

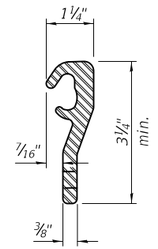


* ⅝"Ø x 6" studs at 6" cts. (alternate angled/bent studs with horizontal studs)

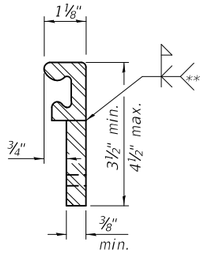
⅜"Ø threaded rods in 7/16"Ø holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION THRU WELDED RAIL JOINT

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



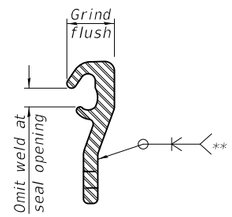
ROLLED (EXTRUDED) RAIL



WELDED RAIL

LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

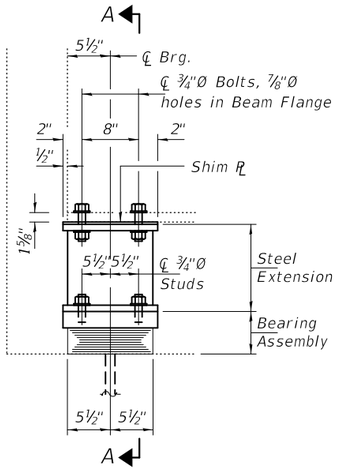
Item	Unit	Total
Preformed Joint Strip Seal	Foot	181

Entire Sheet

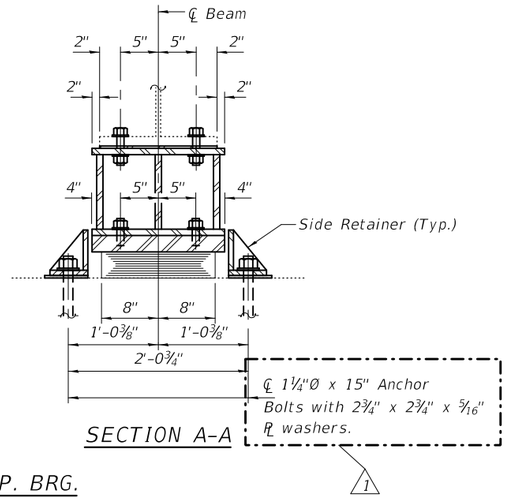
1

DESIGNED - JSB	EXAMINED		DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PREFORMED JOINT STRIP SEAL SN 072-0106 (SB) & 072-0107 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC		ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	21
DRAWN - Jim Ostermann VVR	PASSED		REVISED 1 05/28/2021 JSB		SHEET NO. 9 OF 14 SHEETS			CONTRACT NO. 68E52		
CHECKED - JSB CCC		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21



ELEVATION AT ABUTMENT



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

		072-0106(SB)	072-0107(NB)
R ℄	(K)	86.2	76.7
R ℄	(K)	49.3	43.3
Imp.	(K)	10.6	9.3
R (Total)	(K)	146.1	129.3

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

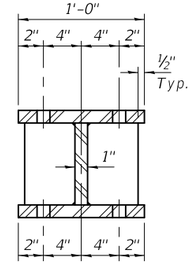
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 83 Tons.

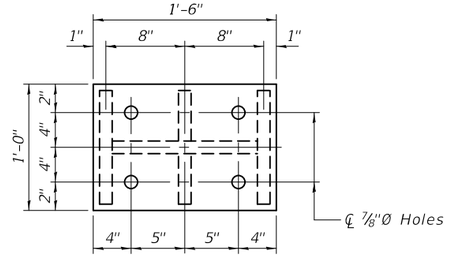
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

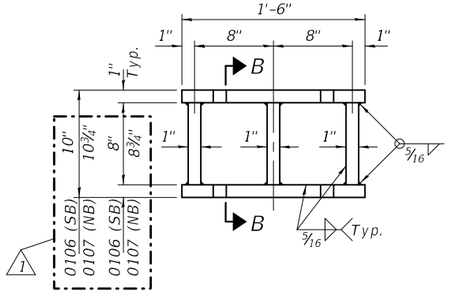
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



SECETION B-B



PLAN TOP AND BOTTOM PLATE

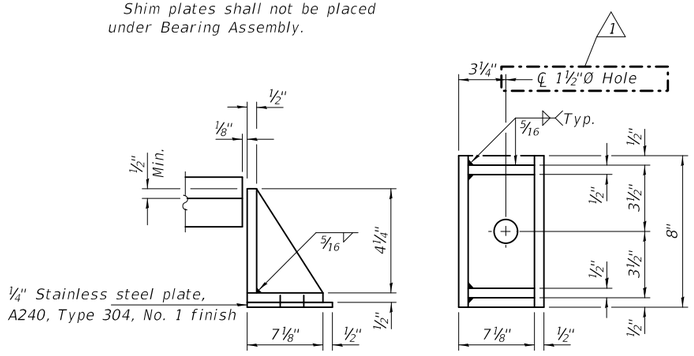


STEEL EXTENSION DETAIL

BEARING ASSEMBLY

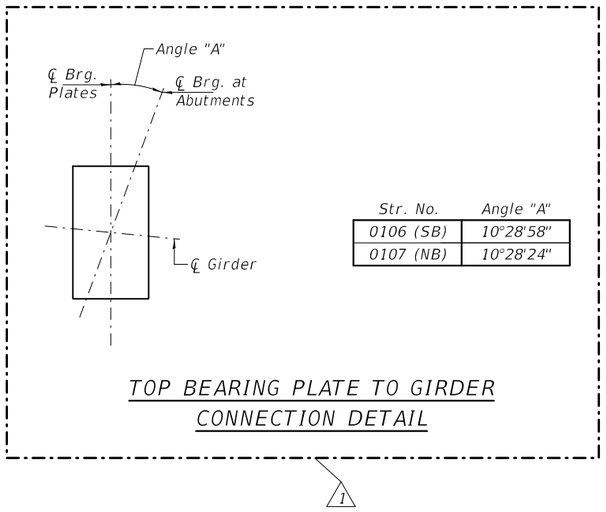
Note:

Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

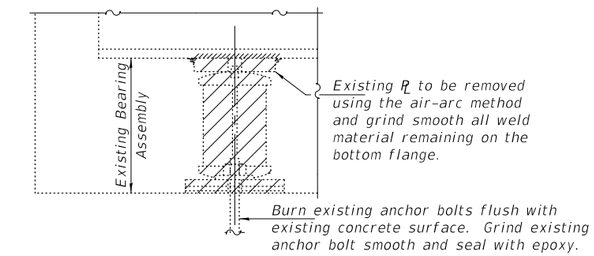
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



Str. No.	Angle "A"
0106 (SB)	10°28'58"
0107 (NB)	10°28'24"

TOP BEARING PLATE TO GIRDER CONNECTION DETAIL

1



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	14
Jack and Remove Existing Bearings	Each	14
Furnishing and Erecting Structural Steel	Pound	3430
Anchor Bolts, 1¼"Ø	Each	28

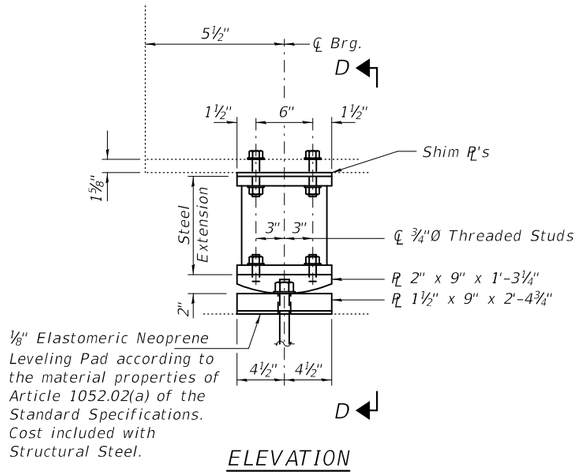
1 1

TYI/REPS 5-17-2018

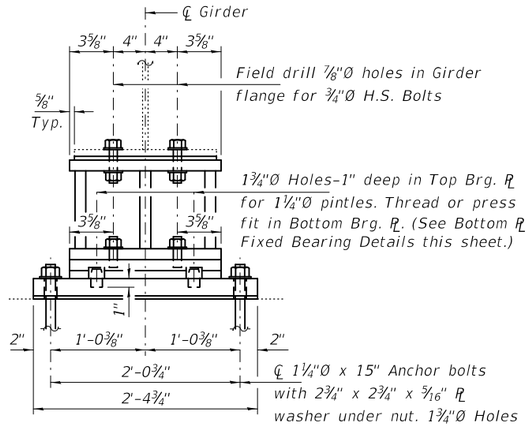
DESIGNED - JSB	EXAMINED		DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - NORTH ABUTMENTS SN 072-0106 (SB) & 072-0107 (NB)
CHECKED - CCC		ENGINEER OF STRUCTURAL SERVICES			
DRAWN - Jim Ostermann VVR	PASSED		REVISED 1 05/28/2021 JSB		SHEET NO. 10 OF 14 SHEETS
CHECKED - JSB CCC		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	22
		CONTRACT NO. 68E52		
		ILLINOIS	FED. AID PROJECT	

1 REVISED 6/1/21



ELEVATION



SECTION D-D

FIXED BEARINGS

BEAM REACTIONS

		072-0106(SB)	072-0107(NB)
R PL	(K)	86.2	76.7
R L	(K)	49.3	43.3
Imp.	(K)	10.6	9.3
R (Total)	(K)	146.1	129.3

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

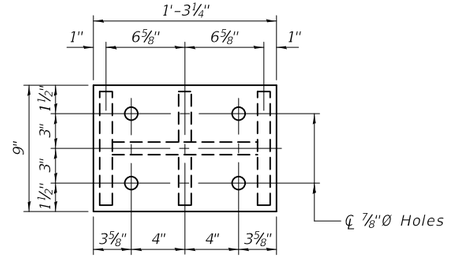
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 83 Tons.

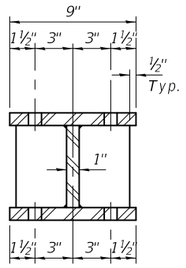
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

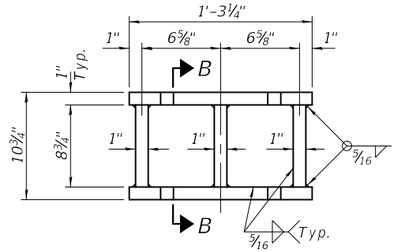
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



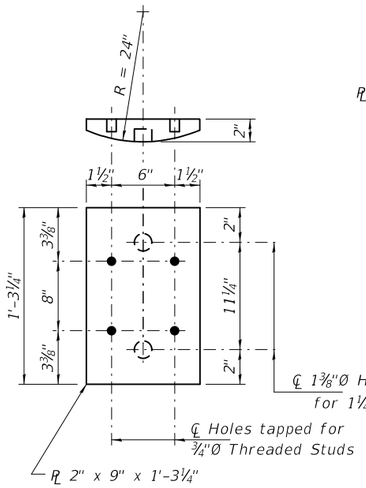
PLAN TOP AND BOTTOM PLATE



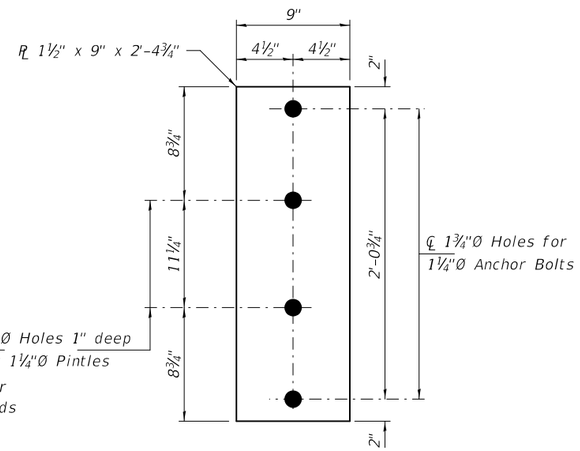
SECETION B-B



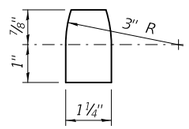
STEEL EXTENSION DETAIL



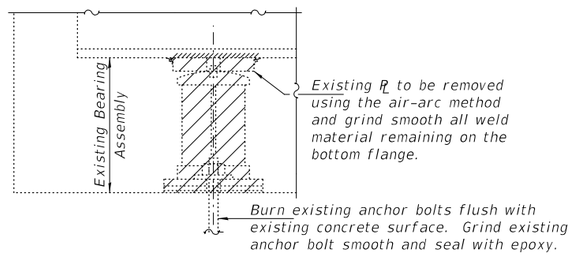
PLAN - TOP PLATE
FIXED BEARINGS



PLAN - BOTTOM PLATE
FIXED BEARINGS

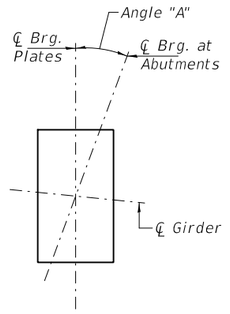


PINTLE



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



Str. No.	Angle "A"
0106 (SB)	10°28'58"
0107 (NB)	10°28'24"

TOP BEARING PLATE TO GIRDER
CONNECTION DETAIL

Entire Sheet

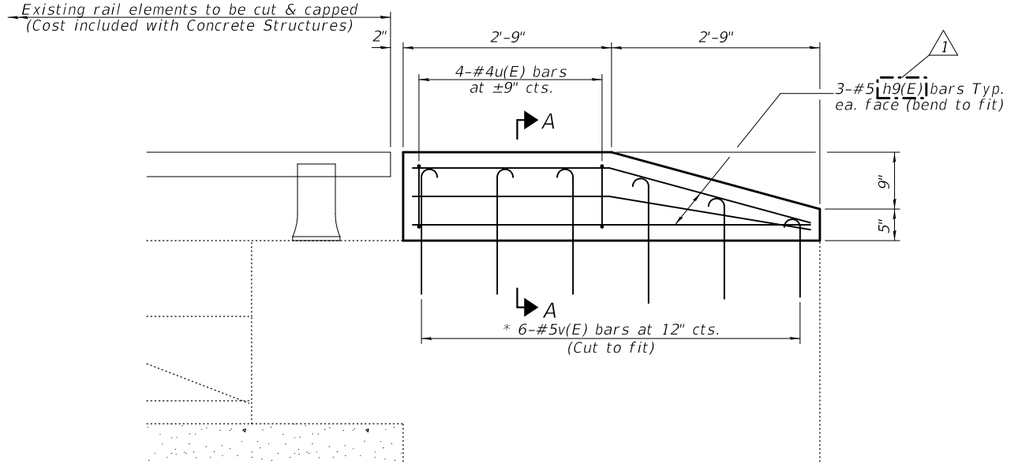
1

BILL OF MATERIAL

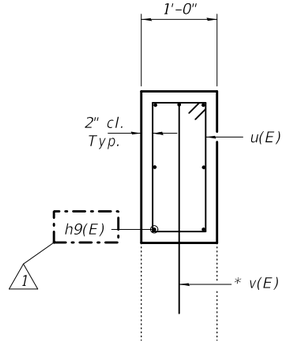
Item	Unit	Total
Jack and Remove Existing Bearings	Each	14
Furnishing and Erecting Structural Steel	Pound	5140
Anchor Bolts, 1¼"Ø	Each	28

DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - SOUTH ABUTMENTS SN 072-0106 (SB) & 072-0107 (NB)	F.A.I. RTE. 474 | SECTION 72(1HB,HB-1,2,3)BR | COUNTY PEORIA | TOTAL SHEETS 63 | SHEET NO. 23
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES	REVISED 1 05/28/2021 JSB			CONTRACT NO. 68E52
DRAWN - Jim Ostermann VVR	PASSED	REVISED -		SHEET NO. 11 OF 14 SHEETS	ILLINOIS | FED. AID PROJECT
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES				

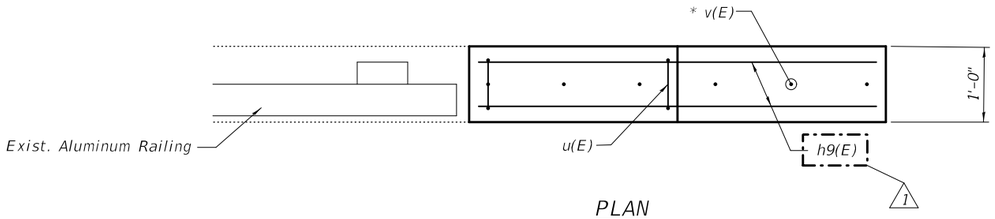
1 REVISED 6/1/21



PROPOSED ELEVATION

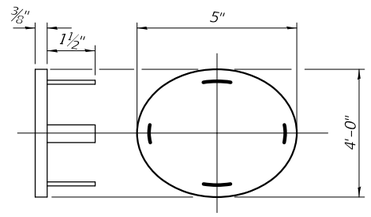


SECTION A-A

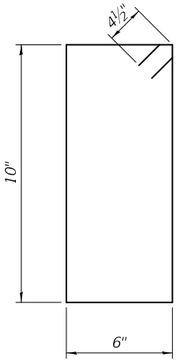


PLAN

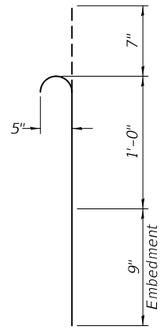
* Epoxy v(E) bars in 9" min. holes according to Article 584 of the Standard Specs.



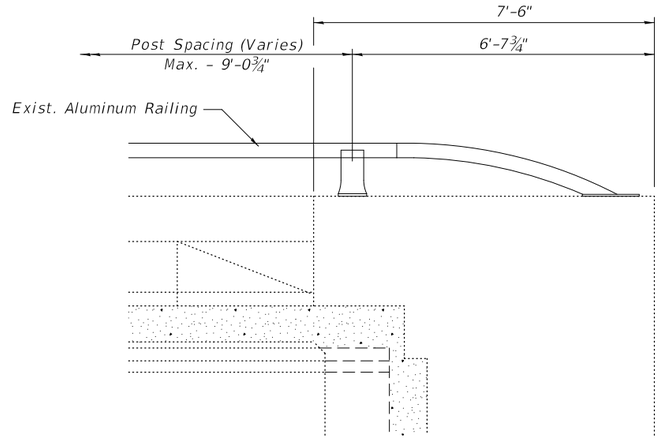
CAST END CAP



BAR u(E)



BAR v(E)



INSIDE VIEW AT APPROACH BENT

NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

TOTAL BILL OF MATERIAL
8 LOCATIONS

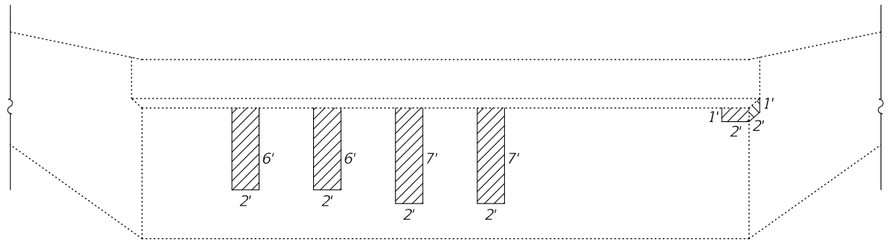
Bar	No.	Size	Length	Shape
h9(E)	48	#5	5'-2"	
u(E)	32	#4	3'-5"	
v(E)	48	#5	2'-4"	
Concrete Superstructure		Cu. Yd.	1.6	
Reinforcement Bars, Epoxy Coated		Pound	450	

1

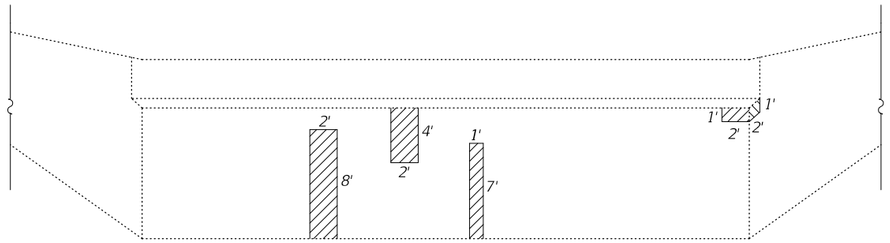
DESIGNED - JSB	EXAMINED		DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WINGWALL AND RAILING MODIFICATIONS SN 072-0106 (SB) & 072-0107 (NB)
CHECKED - CCC		ENGINEER OF STRUCTURAL SERVICES			
DRAWN - Jim Ostermann VVR	PASSED		REVISED 1 05/28/2021 JSB		SHEET NO. 12 OF 14 SHEETS
CHECKED - JSB CCC		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	24
		CONTRACT NO. 68E52		
		ILLINOIS	FED. AID PROJECT	

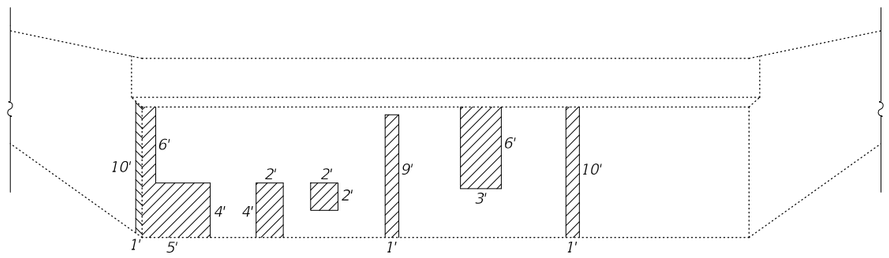
1 REVISED 6/1/21



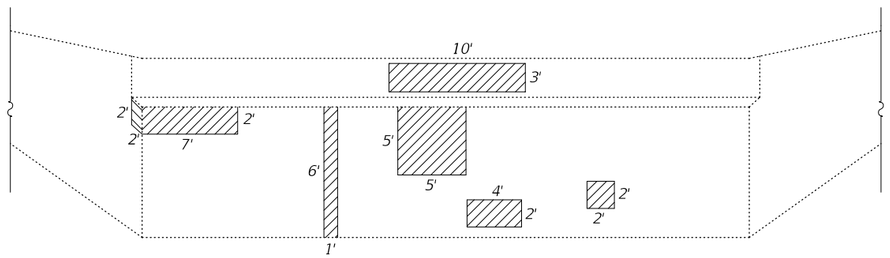
SOUTH ABUTMENT FACE
(SN 072-0106)



SOUTH ABUTMENT FACE
(SN 072-0107)



NORTH ABUTMENT FACE
(SN 072-0106)



NORTH ABUTMENT FACE
(SN 072-0107)

Note:
An additional 50% has been included with the estimated quantity.

1

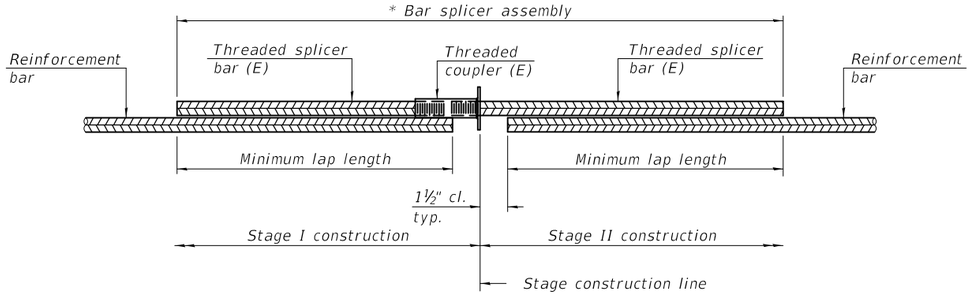
BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	398

1

DESIGNED - JSB	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUBSTRUCTURE CONCRETE REPAIRS SN 072-0106 (SB) & 072-0107 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC			REVISED 1 05/28/2021 JSB			474	72(1HB,HB-1,2,3)BR	PEORIA	63	25
DRAWN - Jim Ostermann VVR	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 13 OF 14 SHEETS			CONTRACT NO. 68E52		
CHECKED - JSB CCC								ILLINOIS	FED. AID PROJECT	

1 REVISED 6/1/21



STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1½" + thread length

** Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.*

SN 072-0106

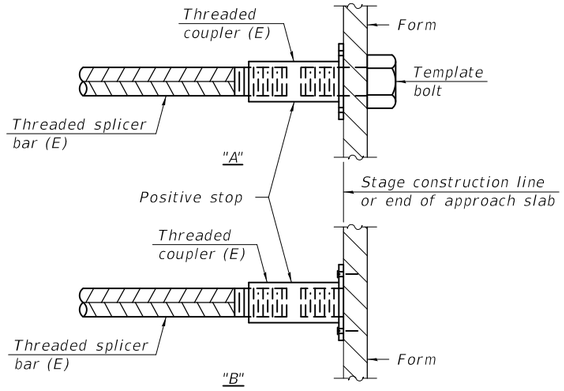
Location	Bar size	No. assemblies required	Minimum lap length
N. Abut - deck	#5	8	3'-6"
S. Abut - deck	#5	8	3'-6"
N. Abut - appr.	#6	2	4'-0"
S. Abut - appr.	#6	2	4'-0"

1

SN 072-0107

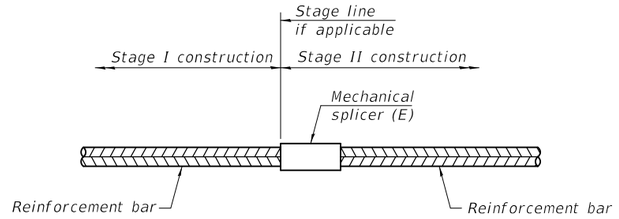
Location	Bar size	No. assemblies required	Minimum lap length
N. Abut - deck	#5	8	3'-6"
S. Abut - deck	#5	8	3'-6"
N. Abut - appr.	#6	2	4'-0"
S. Abut - appr.	#6	2	4'-0"

1



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

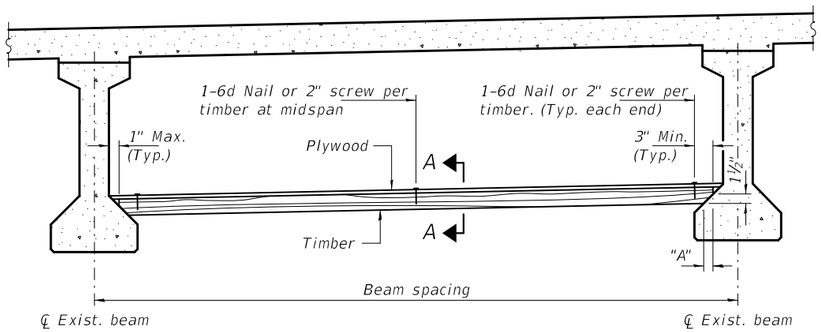
Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

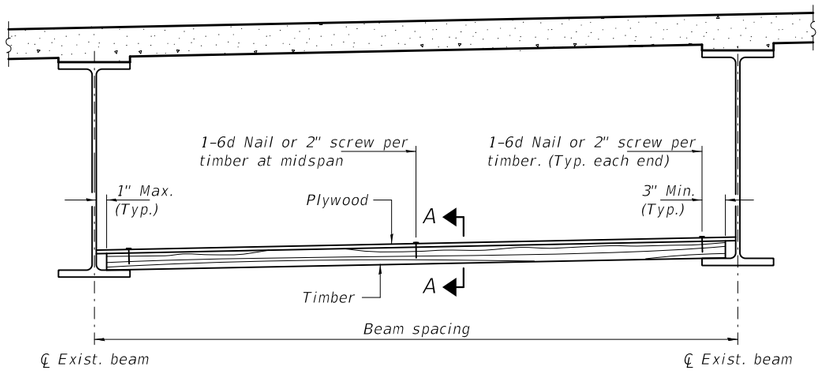
BSD-1 1-1-2020

DESIGNED - JSB	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 072-0106 (SB) & 072-0107 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC						474	72(1HB,HB-1,2,3)BR	PEORIA	63	26
DRAWN - Jim Ostermann VVR	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 05/28/2021 JSB		SHEET NO. 14 OF 14 SHEETS			CONTRACT NO. 68E52		
CHECKED - JSB CCC			REVISED -					ILLINOIS FED. AID PROJECT		

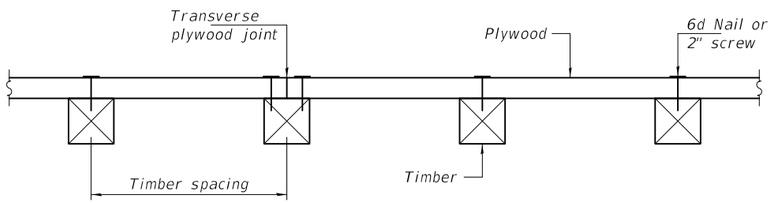
1 REVISED 6/1/21



PPC I-BEAMS AND BULB-T's



STEEL BEAMS



SECTION A-A

TIMBER SPACING

Beam Spacing (ft.)	Timber Sizes (in.)		
	4" x 4" with min. Fb=775 psi Fv=135 psi	4" x 6" with min. Fb=775 psi Fv=135 psi	6" x 6" with min. Fb=575 psi Fv=125 psi
	Maximum Timber Spacing (in.)		
4.5	16	16	16
4.75	16	16	16
5.0	16	16	16
5.25	16	16	16
5.5	16	16	16
5.75	16	16	16
6.0	16	16	16
6.25	12	16	16
6.5	12	16	16
6.75	12	16	16
7.0	8	16	16
7.25	8	16	16
7.5	8	16	16
7.75	8	16	16
8.0	8	12	16
8.25	8	12	16
8.5	6	12	12
8.75	6	12	12
9.0	6	8	12

Notes:

See special provision for Permanent Protective Shield System.

Timber sizes shown are nominal sizes. Rough sawn timber of the dimensions shown will also be considered acceptable.

The minimum Fb and Fv values shown are the tabulated design values given in the National Design Specification for Wood Construction for No. 2 Spruce-Pine-Fir without adjustment factors applied. Better grades or other species with equal or higher allowable stresses will also be considered acceptable.

The timber spacings shown have been determined using allowable stresses with all adjustment factors necessary for the anticipated service conditions.

All timber shall be treated.

Plywood shall be ⅝" rated Exterior type plywood by APA.

Plywood shall be placed such that the face grain is perpendicular to the timber supports. When less than a full sheet (4' width) of plywood is used, the width of the strip used shall not be less than 2'.

Transverse plywood joints shall be supported by timbers.

When 4" x 6" timbers are used, they shall be placed such that the wide face is horizontal and the narrow face is vertical.

Design load = 200 psf.

PPC I-BEAMS AND BULB-T's

BEAM	"A"
36" I-Beam	1½"
42" I-Beam	1½"
48" I-Beam	1½"
54" I-Beam	1⅝"
63" Bulb-T	3⅜"
72" Bulb-T	3⅜"

Sheet Added

1

BILL OF MATERIAL

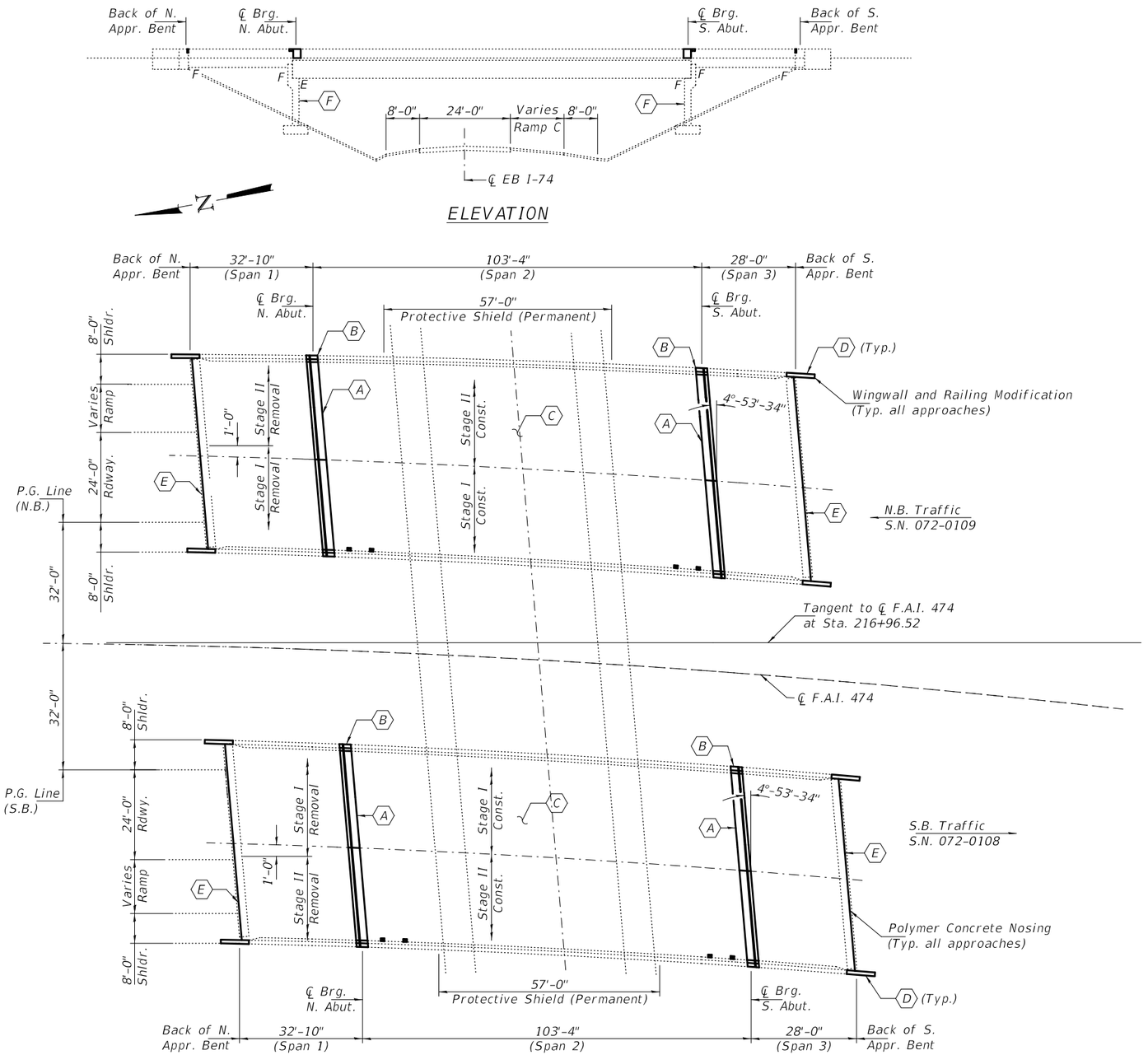
Item	Unit	Total
Protective Shield (Permanent)	Sq. Yd.	494

PPS-1/REP 10-27-2020

DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Jim Ostermann VVR	PASSED	REVISED 1 05/28/2021 JSB	PERMANENT PROTECTIVE SHIELD SN 072-0106 (SB) & 072-0107 (NB)
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET NO. 14A OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	26A
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

1 ADDED SHEET 6/1/21



LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

EXPIRES 11-30-2022

(A) – Remove and replace expansion joint with Preformed Joint Strip Seal.

(B) – Bearing removal and replacement at Abutments.

(C) – Bridge deck scarification with new Microsilica Concrete Overlay

(D) – Wingwall and Railing Modifications. See sheet 15 of 17 for details.

(E) – Polymer Concrete Nosing. See sheet 9 of 17 for detals.

(F) – Substructure Repairs

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

All new structural steel and bearing assemblies shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	QUANTITY	
	Concrete Removal	Cu. Yd.	21.1	
	Concrete Superstructure	Cu. Yd.	24.3	1
	Bridge Deck Microsilica Concrete Overlay, 2¼"	Sq. Yd.	1825	
	Bridge Deck Grooving	Sq. Yd.	1677	
	Floor Drains	Each	4	
	Preformed Joint Strip Seal	Foot	211	
	Reinforcement Bars, Epoxy Coated	Pound	2710	
	Bar Splicers	Each	40	
*	Protective Coat	Sq. Yd.	1825	
	Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	441	1
	Furnishing & Erecting Structural Steel	Pound	11810	
	Elastomeric Bearing Assembly, Type I	Each	14	
	Jack & Remove Existing Bearings	Each	28	
	Anchor Bolts, 1"Ø	Each	56	
	Protective Shield (Permanent)	Sq. Yd.	511	
	Hot-Mix Asphalt Surface Removal Deck	Sq. Yd	1825	
	Polymer Concrete	Cu. Ft.	6.5	
	Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1.8	
	Bridge Deck Scarification, ¾"	Sq. Yd.	1825	
1	Floor Drain	Each	4	

* On new concrete and microsilica concrete overlay only.

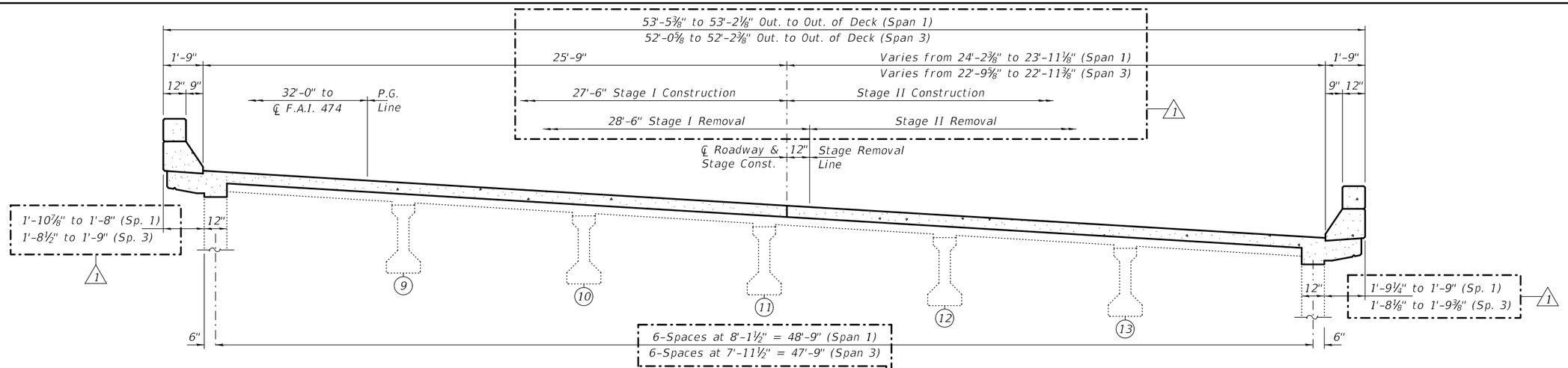
DESIGNED	- CHI-CHEUNG CHAU	EXAMINED	ENGINEER OF STRUCTURAL SERVICES
CHECKED	- JEFFREY S. BURKE	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
DRAWN	jostermann	DATE	- MAY 7, 2021
CHECKED	- CCC JSB	REVISED	1 - 05/21/2021 CCC
		REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
F.A.I. 474 OVER F.A.I. 74
SN 072-0108 (SB) & 072-0109 (NB)
SHEET NO. 1 OF 17 SHEETS

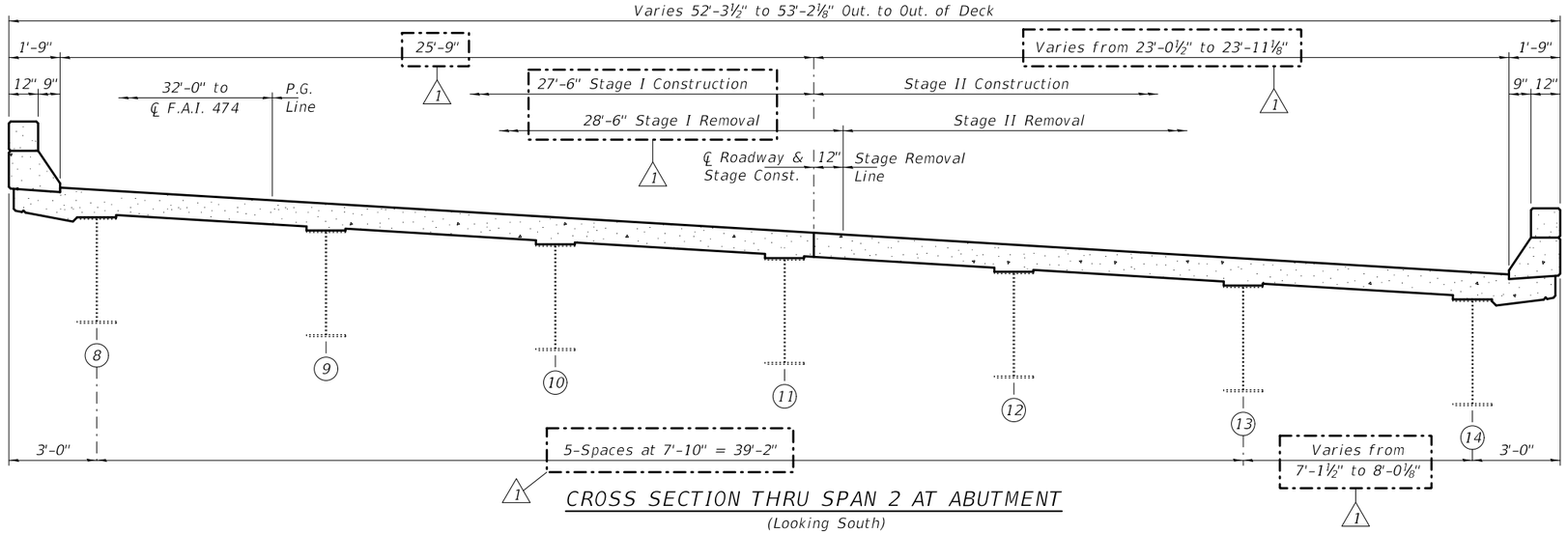
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	27
		CONTRACT NO. 68E52		
	ILLINOIS	FED. AID PROJECT		

1 REVISED 6/1/21



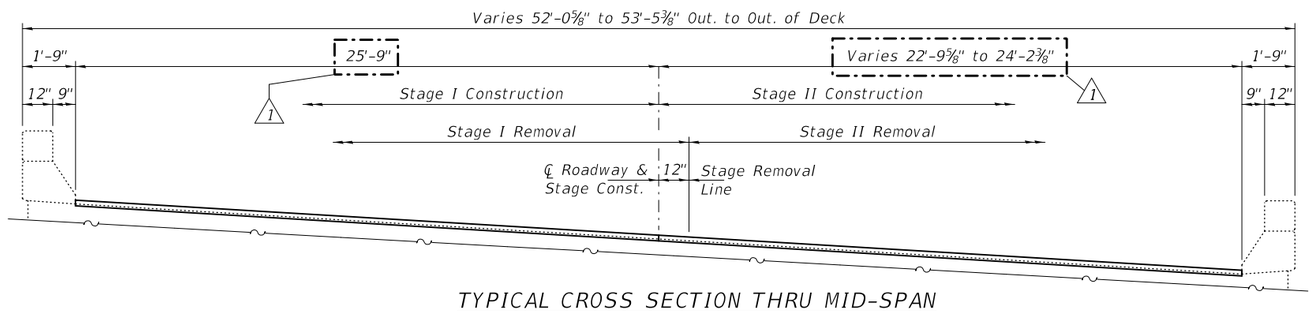
CROSS SECTION THRU SPANS 1 & 3 AT APPROACH BENT

(Looking South)



CROSS SECTION THRU SPAN 2 AT ABUTMENT

(Looking South)

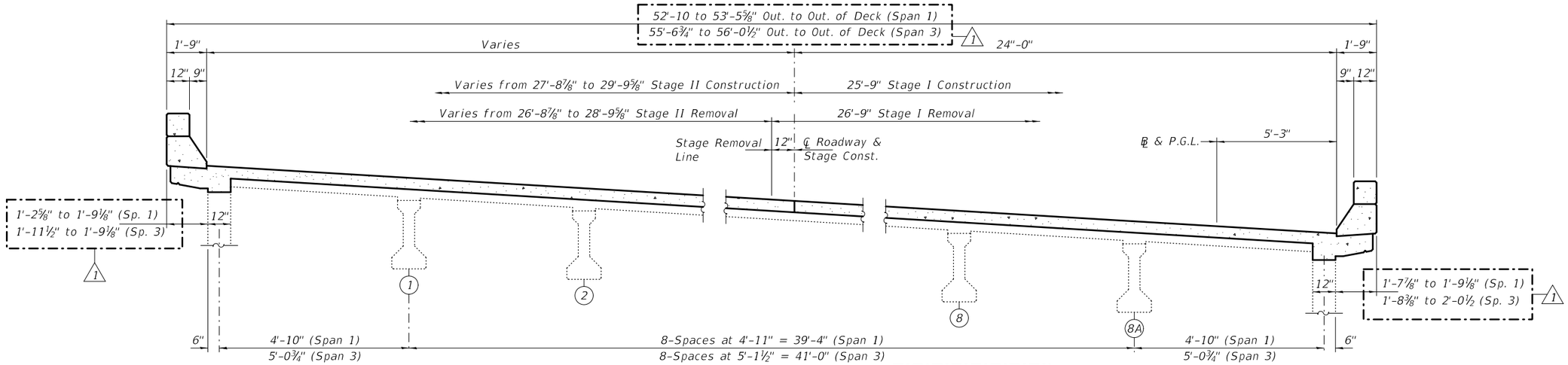


TYPICAL CROSS SECTION THRU MID-SPAN

(Looking South)

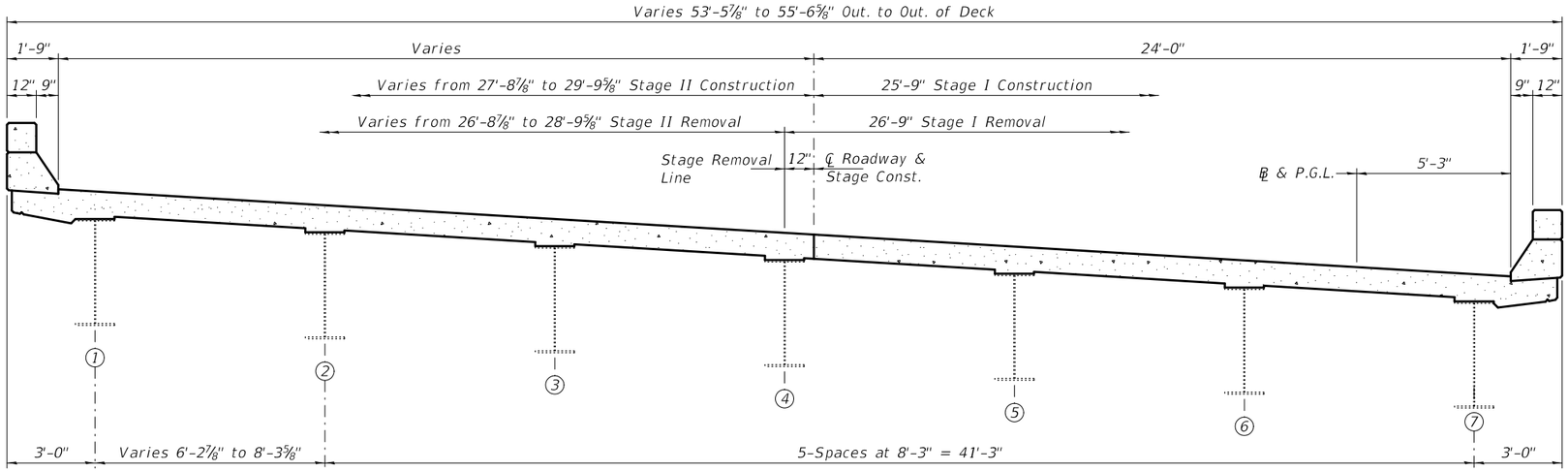
DESIGNED - CCC	EXAMINED		DATE - MAY 7, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STAGING CROSS SECTIONS SN 072-0108 (SB)**	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	28
DRAWN - Jim Ostermann steffen	PASSED		REVISED 1 - 05/21/2021 CCC		SHEET NO. 2 OF 17 SHEETS			CONTRACT NO. 68E52		
CHECKED - CCC JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21



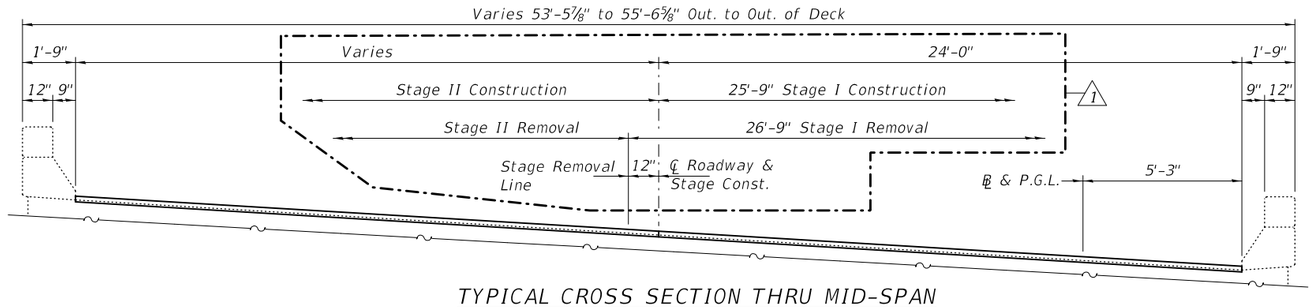
CROSS SECTION THRU SPANS 1 & 3 AT APPROACH BENT

(Looking South)



CROSS SECTION THRU SPAN 2 AT ABUTMENT

(Looking South)

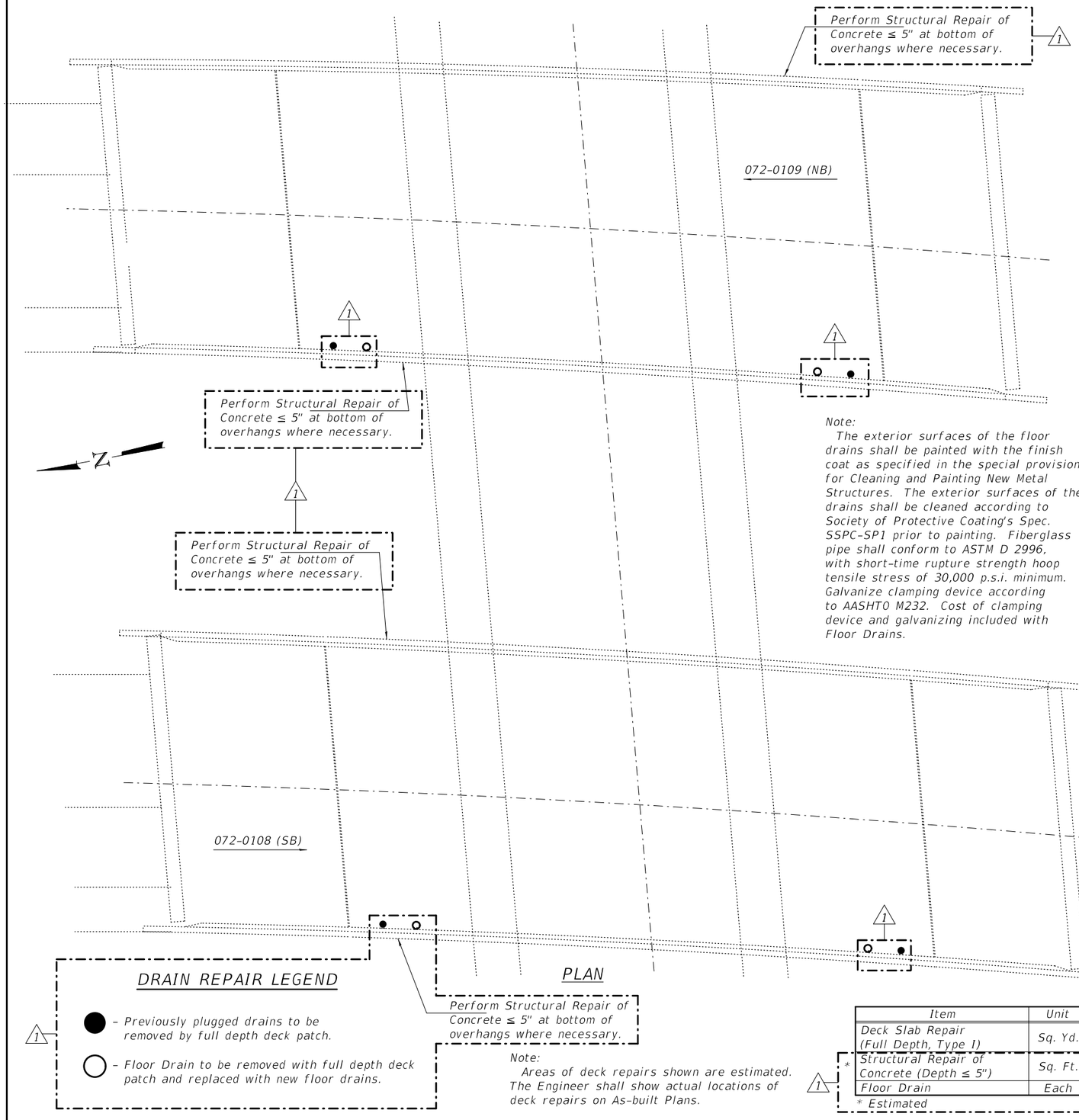


TYPICAL CROSS SECTION THRU MID-SPAN

(Looking South)

DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STAGING CROSS SECTIONS SN 072-0109 (NB)**	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	29
DRAWN - Jim Ostermann steffen	PASSED	REVISED 1 - 05/21/2021 CCC		SHEET NO. 3 OF 17 SHEETS			CONTRACT NO. 68E52		
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -				ILLINOIS	FED. AID PROJECT		

1 REVISED 6/1/21



PLAN

DRAIN REPAIR LEGEND

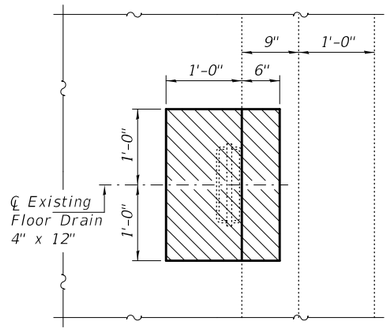
- ● – Previously plugged drains to be removed by full depth deck patch.
- ○ – Floor Drain to be removed with full depth deck patch and replaced with new floor drains.

Note:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coating's Spec. SSPC-SP1 prior to painting. Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. Galvanize clamping device according to AASHTO M232. Cost of clamping device and galvanizing included with Floor Drains.

Note:
Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-built Plans.

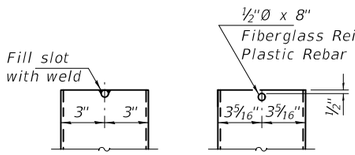
Item	Unit	Total
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1.8
* Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	70
Floor Drain	Each	4

* Estimated



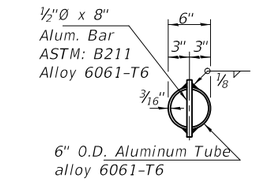
CONCRETE REMOVAL & REPLACEMENT PLAN AT FLOOR DRAINS

Existing reinf. to remain.



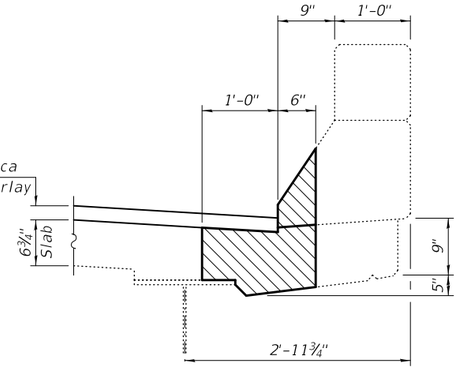
ALUMINUM TUBE

FIBERGLASS PIPE

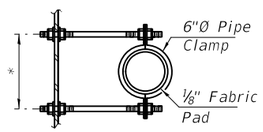


TOP PLAN

(Showing Aluminum Tube)

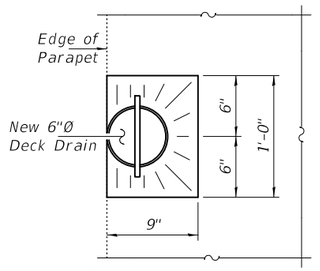


SECTION THRU CONCRETE REMOVAL & REPLACEMENT AT FLOOR DRAINS

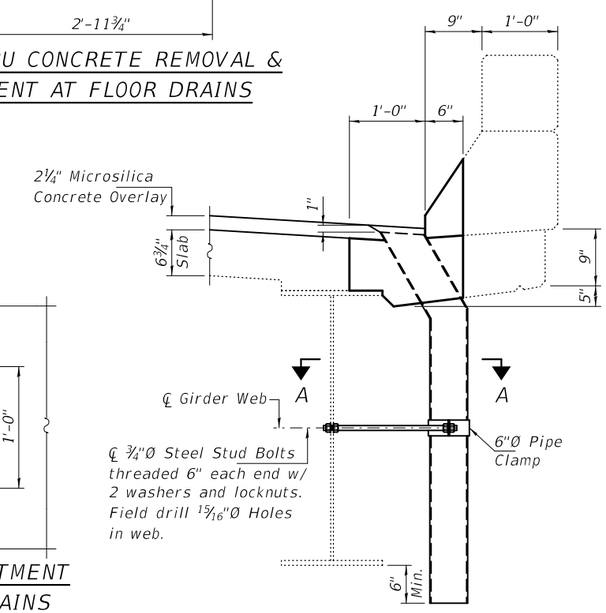


SECTION A-A

* Dimension as req'd by Pipe Clamp.



OVERLAY TREATMENT AT FLOOR DRAINS



FLOOR DRAIN DETAILS

(4-Locations)

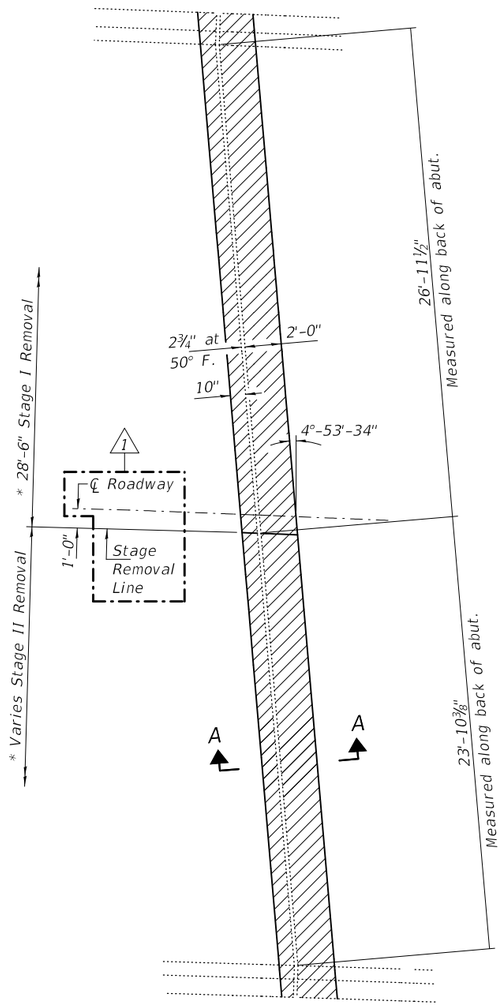
DESIGNED -	EXAMINED	DATE - MAY 7, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED -	ENGINEER OF STRUCTURAL SERVICES		
DRAWN jostermann	PASSED	REVISED 1 - 05/21/2021 CCC	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

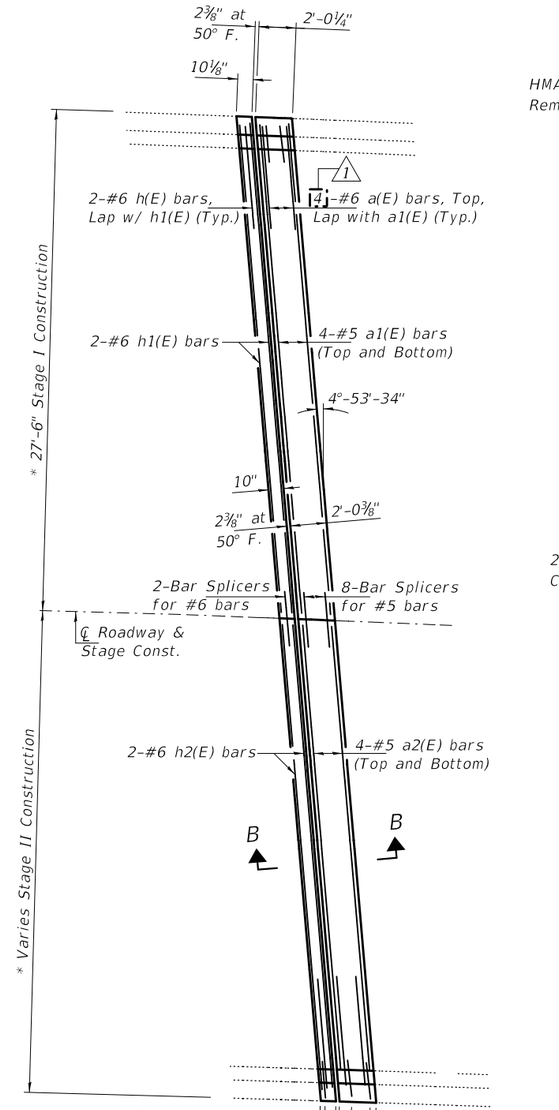
DECK SLAB REPAIRS
SN 072-0108 (SB) & 072-0109 (NB)

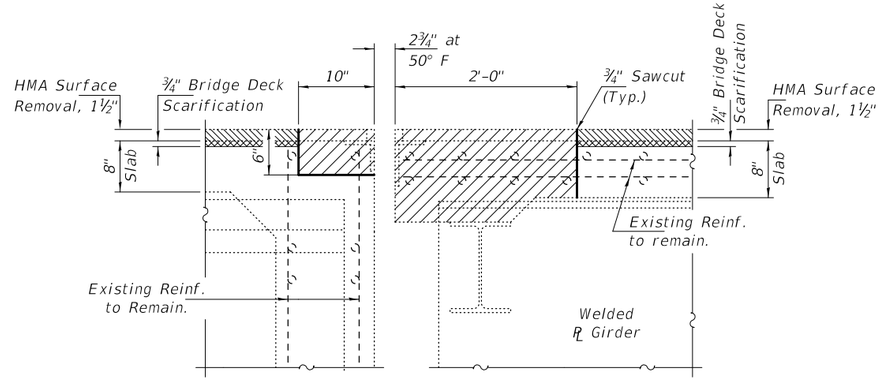
SHEET NO. 4 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	30
		CONTRACT NO. 68E52		
	ILLINOIS	FED. AID PROJECT		

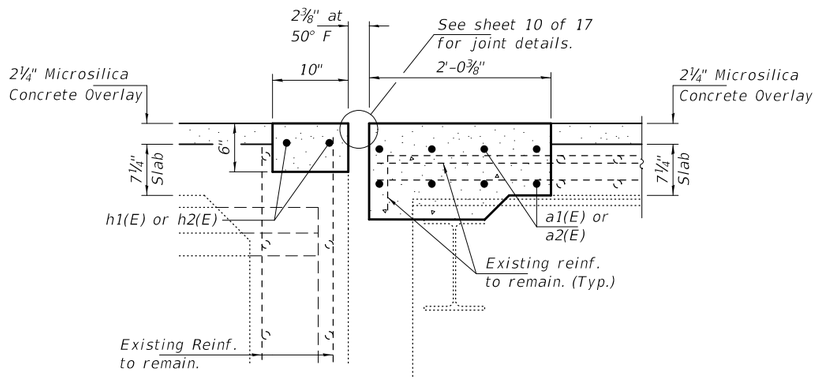
1 REVISED 6/1/21







SECTION A-A
(Near ℄ Roadway)
(Dims at RT L's to end of deck)



SECTION B-B
(Near ℄ Roadway)
(Dims at RT L's to end of deck)

Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material, see sheet 9 of 17.

* Measured radially to ℄ F.A.I. 474.

CONCRETE REMOVAL DETAILS
N. ABUT., 072-0108 (S.B.)

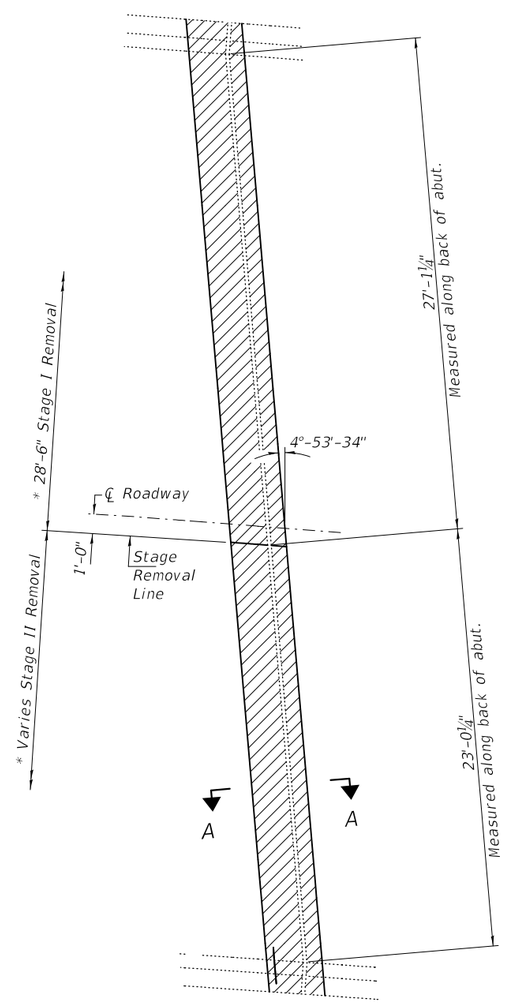
CONCRETE REPLACEMENT DETAILS
N. ABUT., 072-0108 (S.B.)

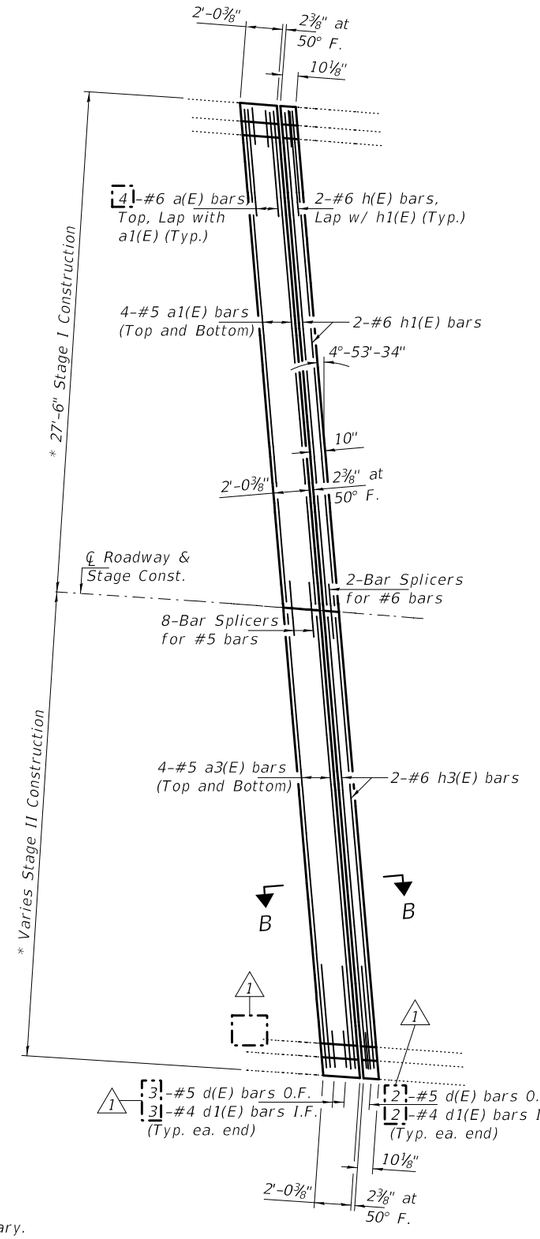
DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Jim Ostermann steffen	PASSED	REVISED 1 - 05/21/2021 CCC	
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

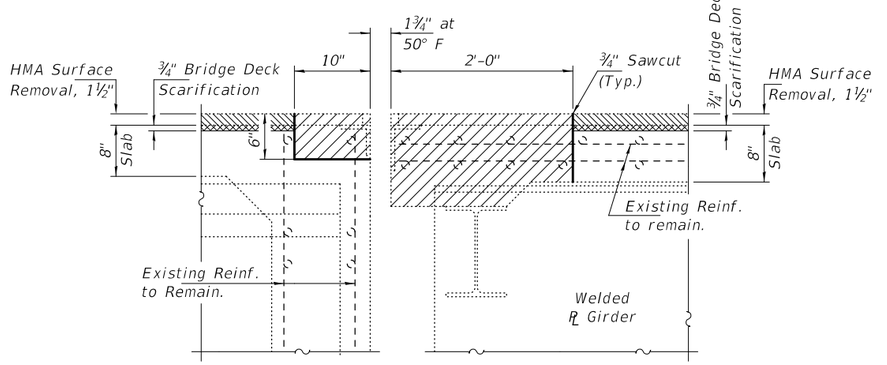
JOINT REMOVAL AND REPLACEMENT DETAILS - N. ABUT.
SN 072-0108 (SB)
SHEET NO. 5 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	31
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

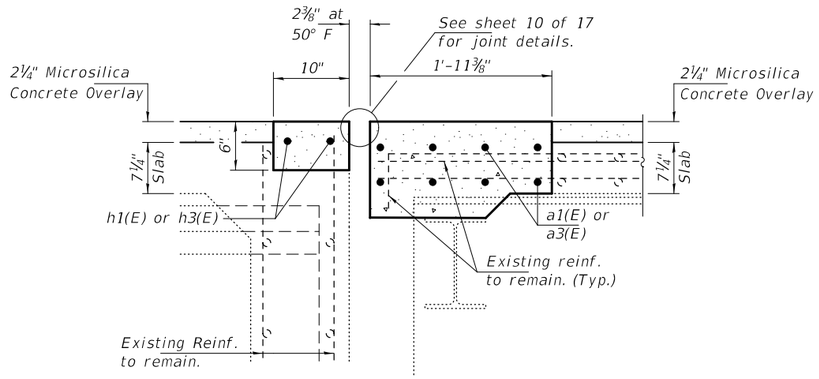
1 REVISED 6/1/21







SECTION A-A
(Near ℄ Roadway)
(Dims at RT L's to end of deck)



SECTION B-B
(Near ℄ Roadway)
(Dims at RT L's to end of deck)

Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material, see sheet 9 of 17.

* Measured radially to ℄ F.A.I. 474.

CONCRETE REMOVAL DETAILS
S. ABUT., 072-0108 (S.B.)

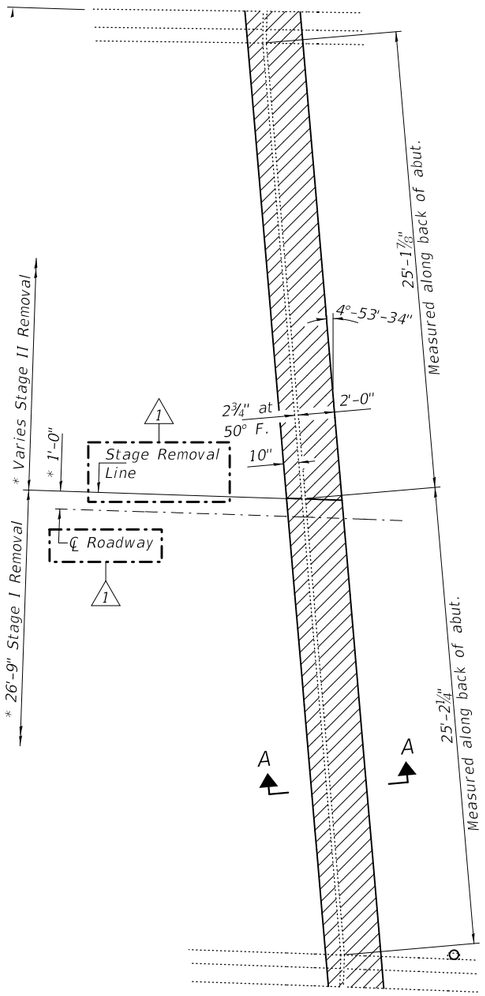
CONCRETE REPLACEMENT DETAILS
S. ABUT., 072-0108 (S.B.)

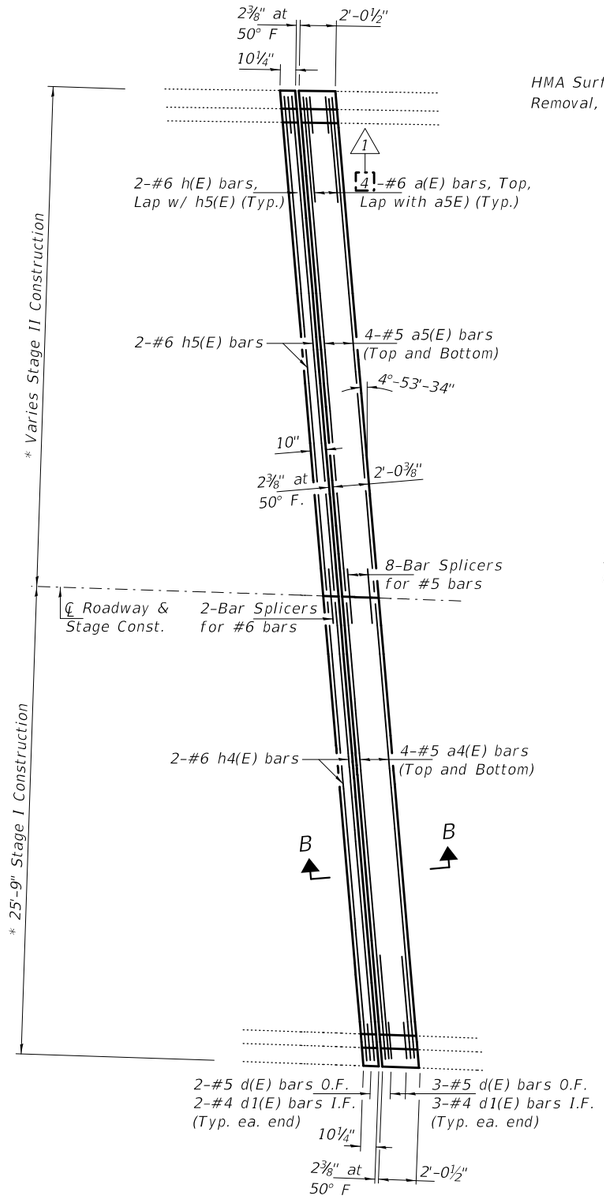
DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Jim Ostermann steffen	PASSED	REVISED 1 - 05/21/2021 CCC	
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

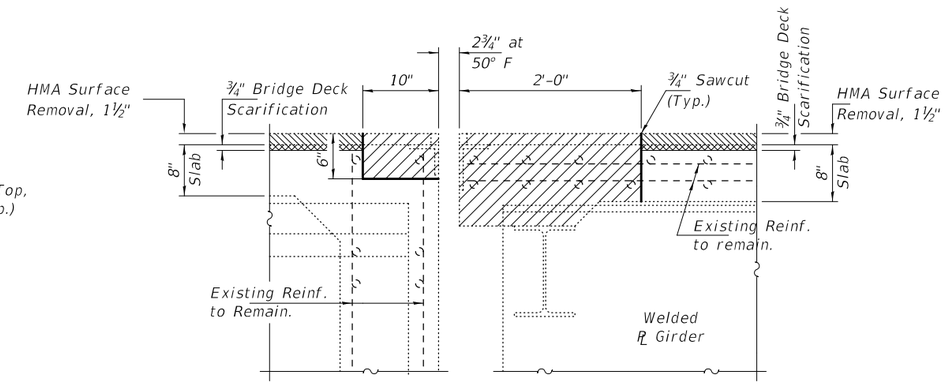
JOINT REMOVAL AND REPLACEMENT DETAILS - S. ABUT.
SN 072-0108 (SB)
SHEET NO. 6 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	32
		CONTRACT NO. 68E52		
		ILLINOIS FED. AID PROJECT		

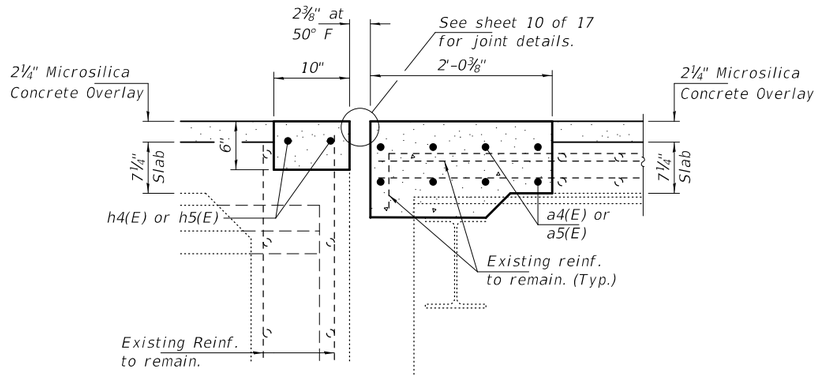
1 REVISED 6/1/21







SECTION A-A
(Near ℄ Roadway)
(Dims at RT Ls to end of deck)



SECTION B-B
(Near ℄ Roadway)
(Dims at RT Ls to end of deck)

Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material, see sheet 9 of 17.

* Measured radially to ℄ F.A.I. 474.

CONCRETE REMOVAL DETAILS
N. ABUT., 072-0109 (N.B.)

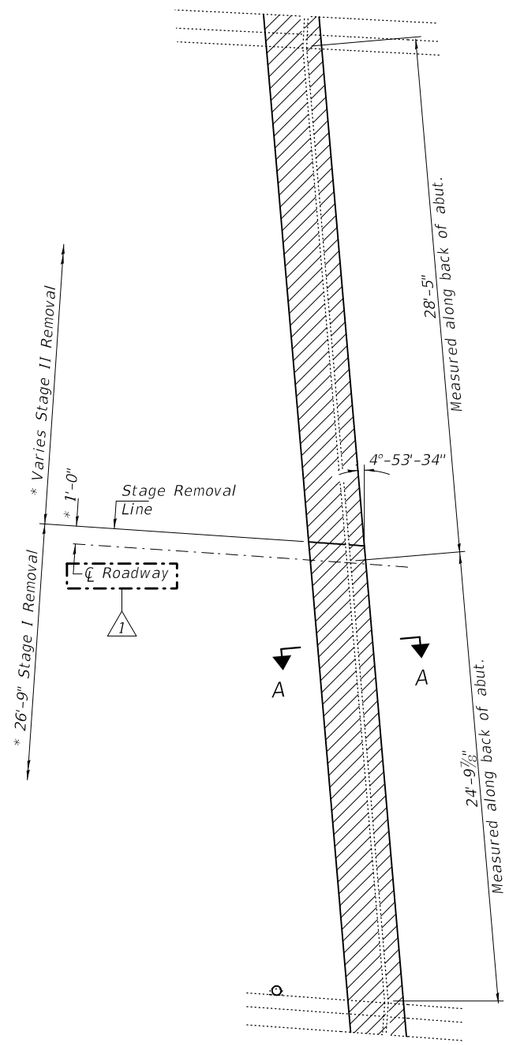
CONCRETE REPLACEMENT DETAILS
N. ABUT., 072-0109 (N.B.)

DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Jim Ostermann steffen	PASSED	REVISED 1 - 05/21/2021 CCC	
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

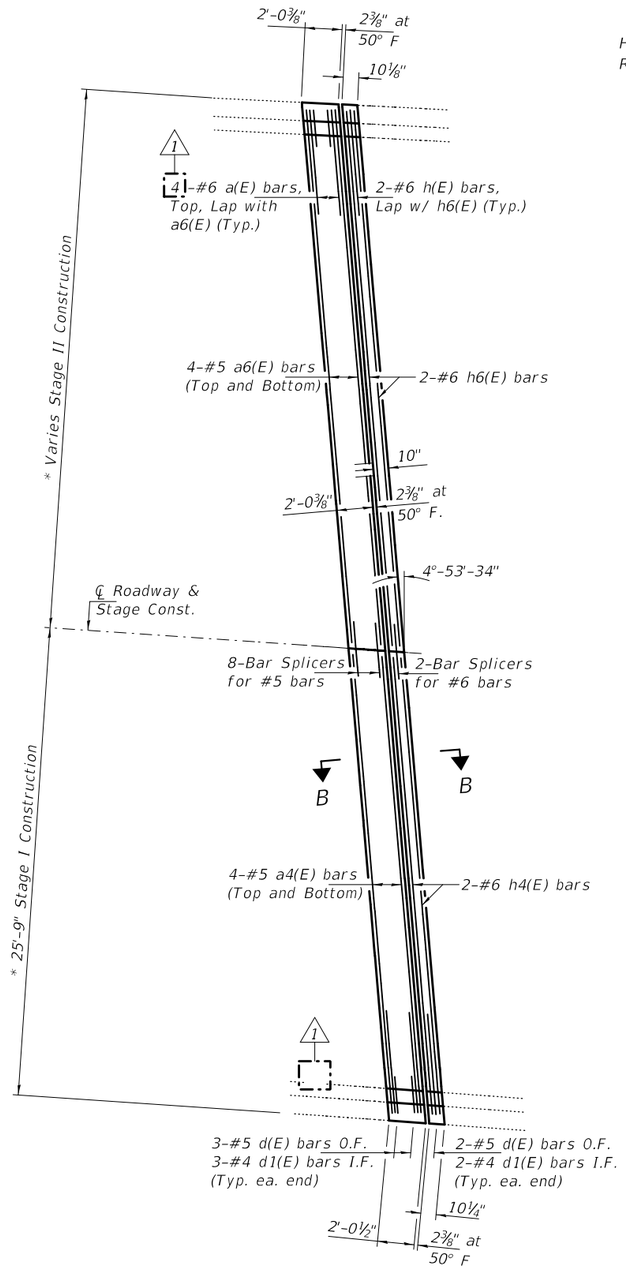
JOINT REMOVAL AND REPLACEMENT DETAILS - N. ABUT.
SN 072-0109 (NB)
SHEET NO. 7 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	33
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

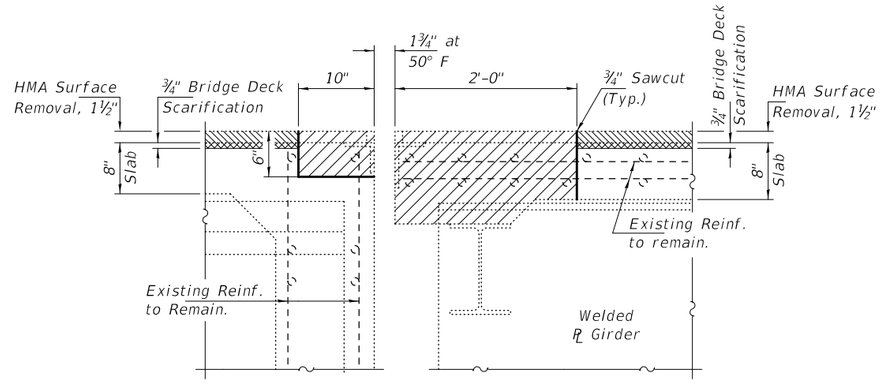
1 REVISED 6/1/21



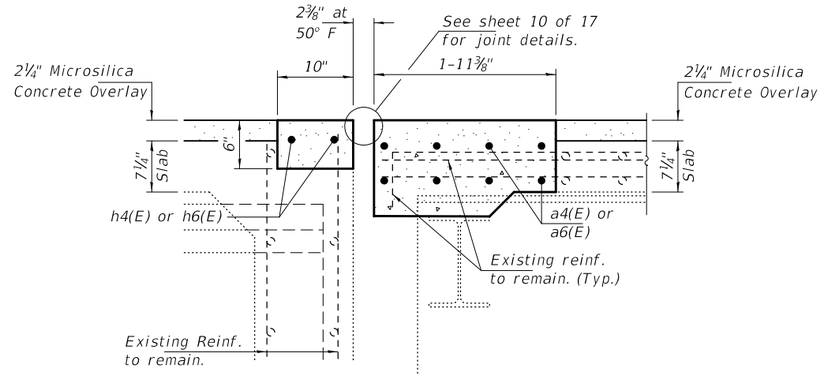
CONCRETE REMOVAL DETAILS
S. ABUT., 072-0109 (N.B.)



CONCRETE REPLACEMENT DETAILS
S. ABUT., 072-0109 (N.B.)



SECTION A-A
(Near ℄ Roadway)
(Dims at RT L's to end of deck)



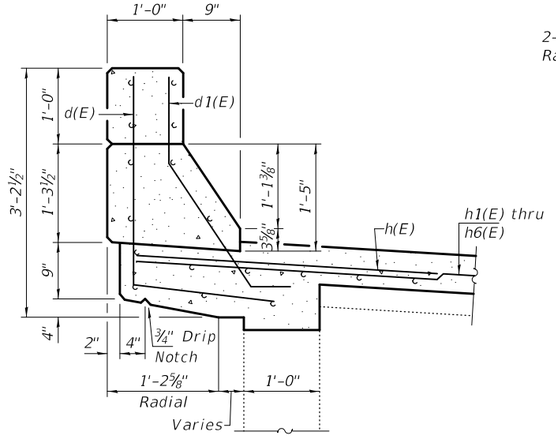
SECTION B-B
(Near ℄ Roadway)
(Dims at RT L's to end of deck)

Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material, see sheet 9 of 17.

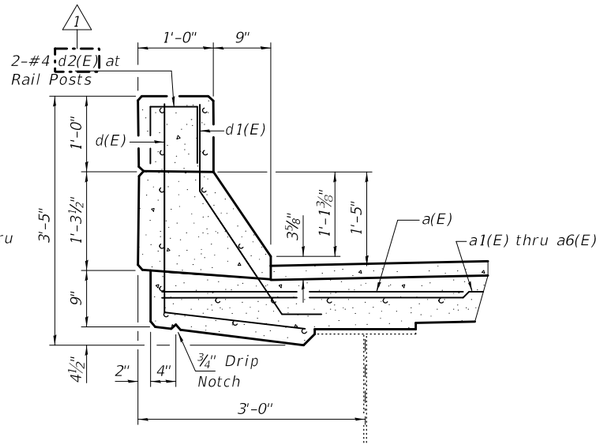
** Measured radially to ℄ F.A.I. 474.*

DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL AND REPLACEMENT DETAILS - S. ABUT. SN 072-0109 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	34
DRAWN - Jim Ostermann steffen	PASSED	REVISED 1 - 05/21/2021 CCC		SHEET NO. 8 OF 17 SHEETS			CONTRACT NO. 68E52		
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS FED. AID PROJECT		

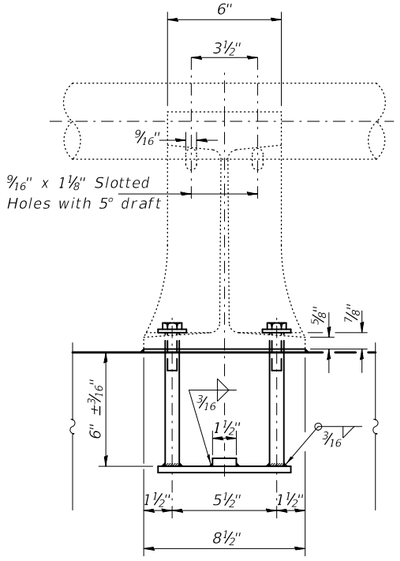
1 REVISED 6/1/21



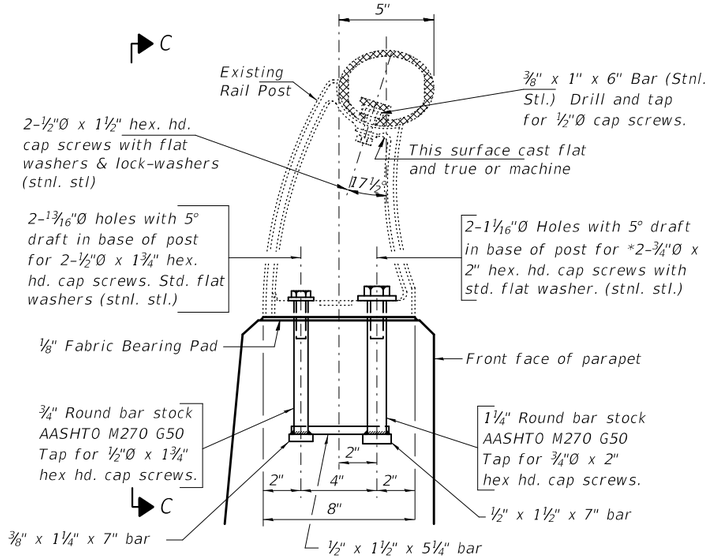
SECTION THRU SPAN 1 & 3 PARAPET



SECTION THRU SPAN 2 PARAPET

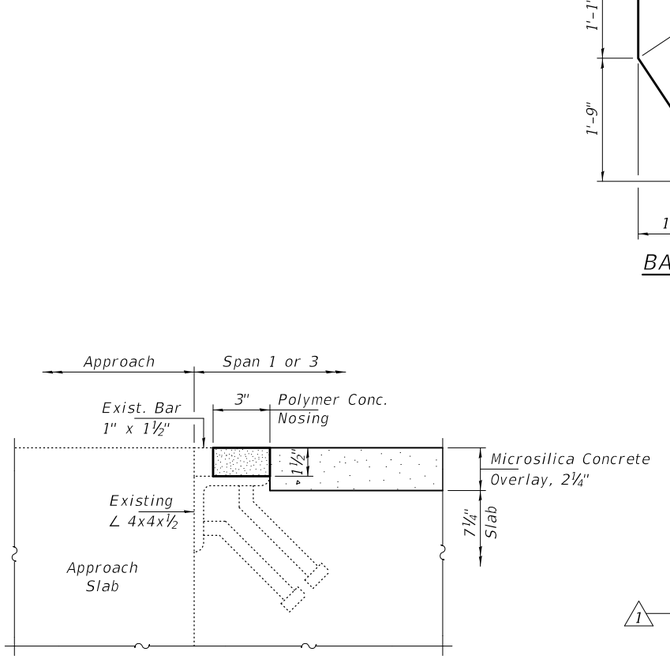


VIEW C-C

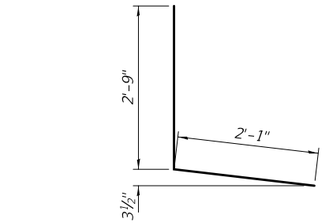


RAIL POST ANCHORAGE DEVICE DETAILS

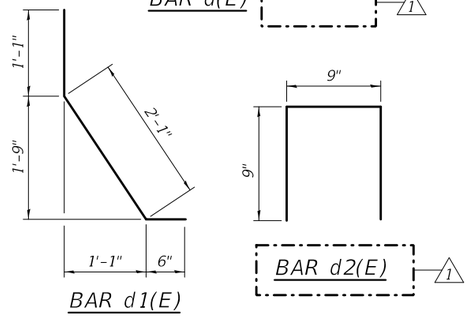
New Rail Post Anchorage Devices will be required at locations where posts are connected to new concrete. Cost to be included with Concrete Removal (-Required)



POLYMER CONCRETE NOSING DETAIL



BAR d(E) 1



BAR d1(E)

BAR d2(E) 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	32	#6	6'-0"	
a1(E)	16	#5	27'-2"	
a2(E)	8	#5	26'-1"	
a3(E)	8	#5	25'-3"	
a4(E)	16	#5	25'-5"	
a5(E)	8	#5	27'-6"	
a6(E)	8	#5	27'-8"	
d(E)	40	#5	4'-10"	
d1(E)	40	#5	3'-8"	
d2(E)	16	#4	2'-3"	
h(E)	16	#6	6'-0"	
h1(E)	4	#6	27'-2"	
h2(E)	2	#6	26'-1"	
h3(E)	2	#6	25'-3"	
h4(E)	4	#6	25'-5"	
h5(E)	2	#6	27'-6"	
h6(E)	2	#6	29'-8"	
Concrete Removal		Cu. Yd.	21.1	
Concrete Superstructure		Cu. Yd.	21.1	
Reinforcement Bars, Epoxy Coated		Pound	3240	

1

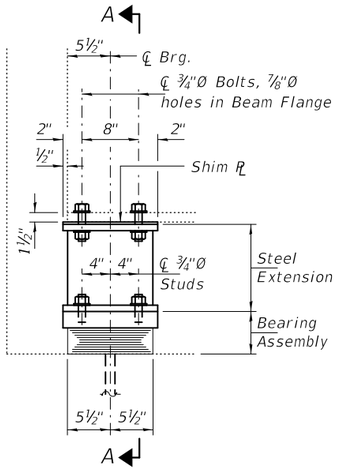
DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Jim Ostermann steffen	PASSED	REVISED 1 - 05/21/2021 CCC	
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

JOINT REPLACEMENT DETAILS
SN 072-0108 (SB) & 072-0109 (NB)

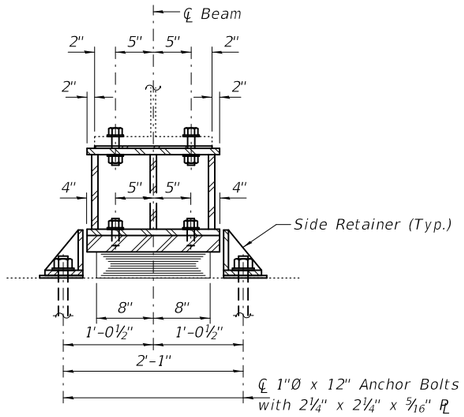
SHEET NO. 9 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	35
		CONTRACT NO. 68E52		
		ILLINOIS	FED. AID PROJECT	

1 REVISED 6/1/21



ELEVATION AT ABUTMENT



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

R ℘	(K)	79.4
R ℄	(K)	46.7
Imp.	(K)	10.1
R (Total)	(K)	136.2

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

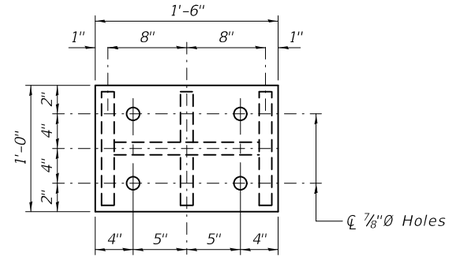
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 85 Tons.

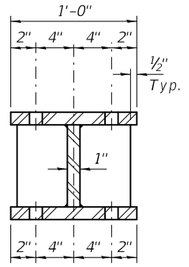
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

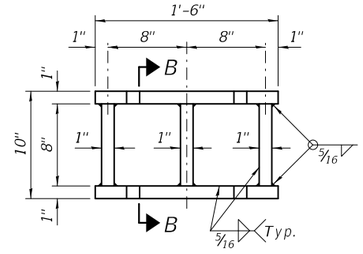
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN TOP AND BOTTOM PLATE



SECTION B-B

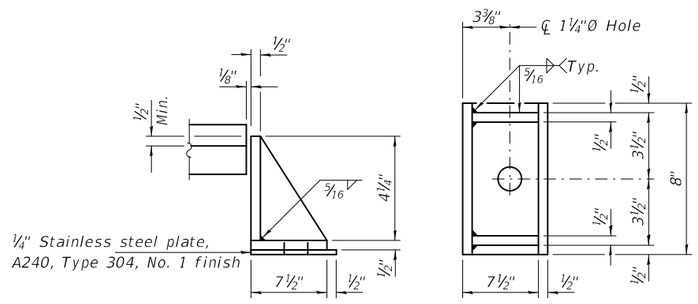


STEEL EXTENSION DETAIL

BEARING ASSEMBLY

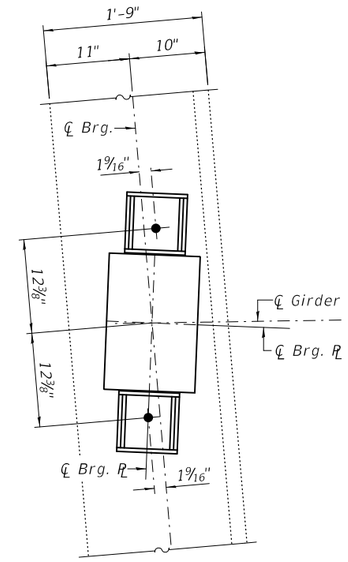
Note:

Shim plates shall not be placed under Bearing Assembly.

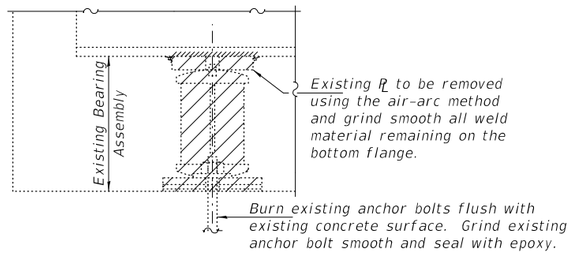


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ANCHOR BOLT LOCATION PLAN



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

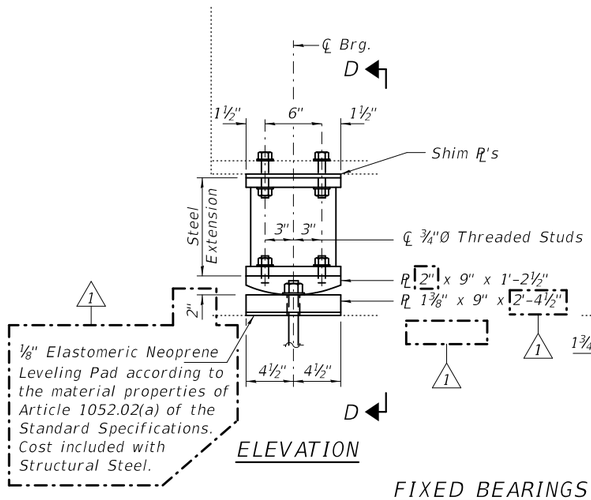
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	7
Jack and Remove Existing Bearings	Each	7
Furnishing and Erecting Structural Steel	Pound	3330
Anchor Bolts, 1"Ø	Each	14

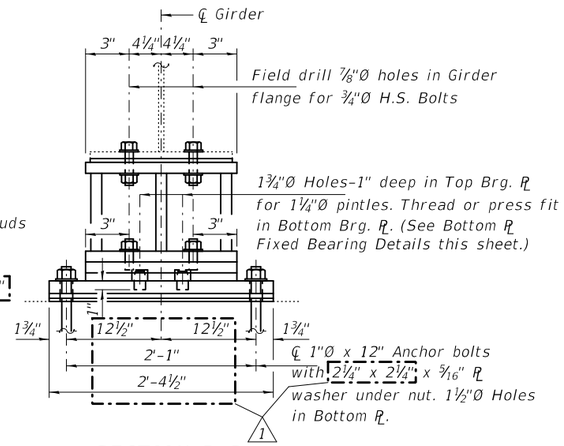
TYI/REPS 5-17-2018

DESIGNED - CCC	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - NORTH ABUTMENT SN 072-0108 (SB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 - 05/21/2021 CCC		SHEET NO. 11 OF 17 SHEETS	474	72(1HB,HB-1,2,3)BR	PEORIA	63	37
DRAWN daburdell nn steffen			REVISED -					CONTRACT NO. 68E52		
CHECKED - CCC JSB								ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21

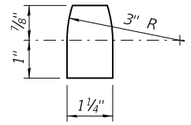


ELEVATION

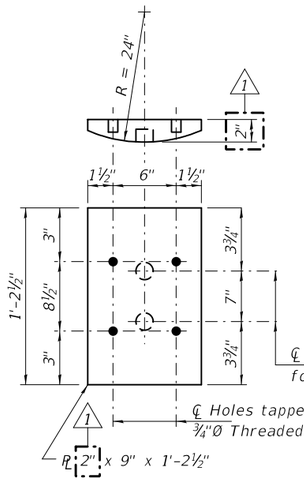


SECTION D–D

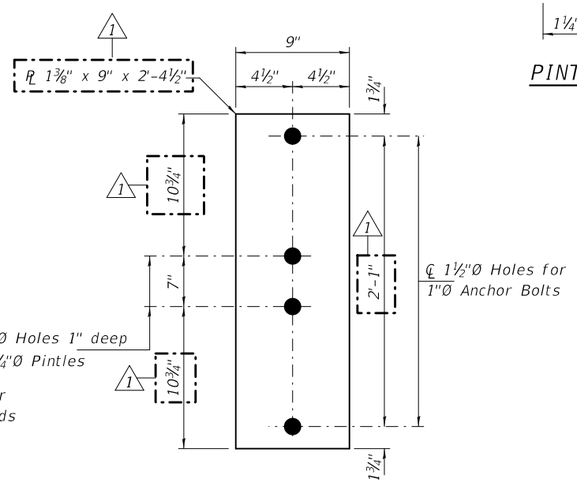
FIXED BEARINGS



PINTLE



PLAN – TOP PLATE
FIXED BEARINGS



PLAN – BOTTOM PLATE
FIXED BEARINGS

BEAM REACTIONS

R ℄	(K)	79.4
R ℄	(K)	46.7
Imp.	(K)	10.1
R (Total)	(K)	136.2

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

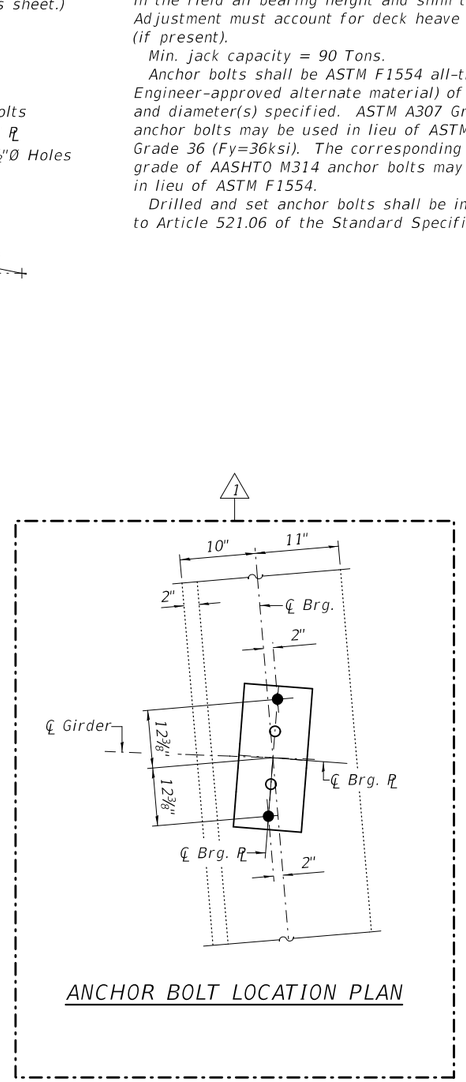
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

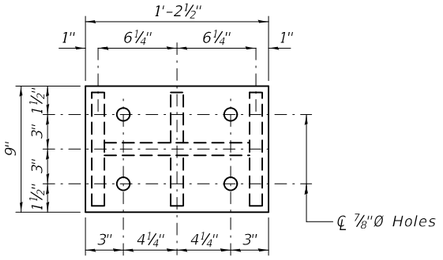
Min. jack capacity = 90 Tons.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

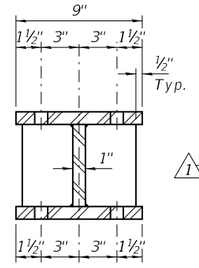
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



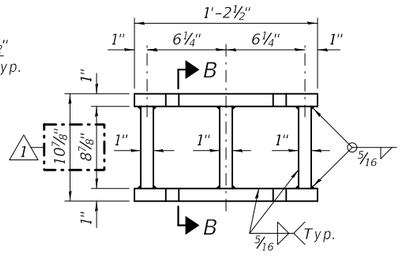
ANCHOR BOLT LOCATION PLAN



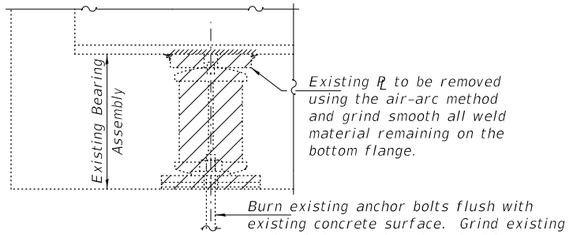
PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL



EXISTING BEARING REMOVAL DETAIL

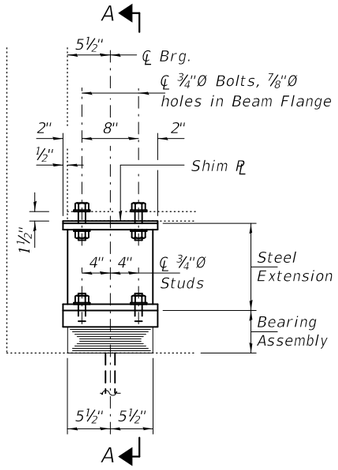
Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

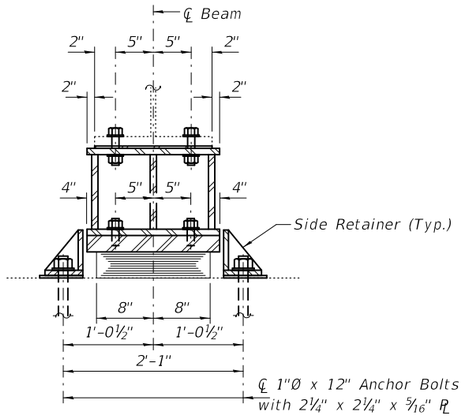
Item	Unit	Total
Jack and Remove Existing Bearings	Each	7
Furnishing and Erecting Structural Steel	Pound	2507 (1)
Anchor Bolts, 1"Ø	Each	14

DESIGNED - CCC	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - SOUTH ABUTMENT SN 072-0108 (SB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 - 05/21/2021 CCC		SHEET NO. 12 OF 17 SHEETS	474	72(1HB,HB-1,2,3)BR	PEORIA	63	38
DRAWN daburdell IN steffen			REVISED -					CONTRACT NO. 68E52		
CHECKED - CCC JSB							ILLINOIS	FED. AID PROJECT		

1 REVISED 6/1/21



ELEVATION AT ABUTMENT



SECTION A-A

BEAM REACTIONS

R ℄	(K)	84.3
R ℄	(K)	49.1
Imp.	(K)	10.7
R (Total)	(K)	144.1

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

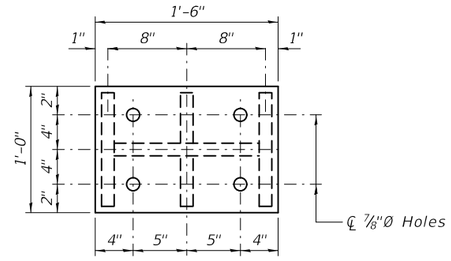
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 90 Tons.

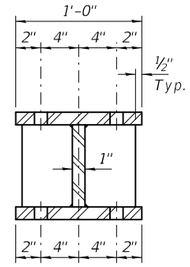
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

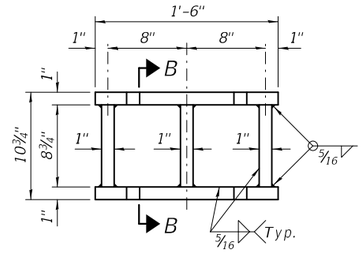
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



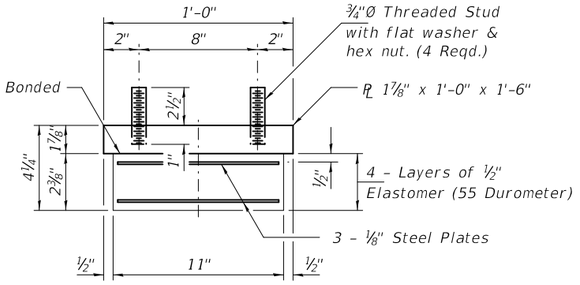
PLAN TOP AND BOTTOM PLATE



SECTION B-B



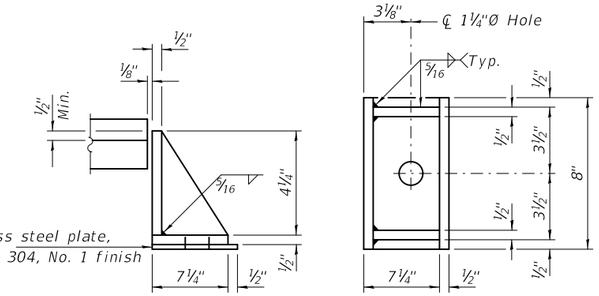
STEEL EXTENSION DETAIL



BEARING ASSEMBLY

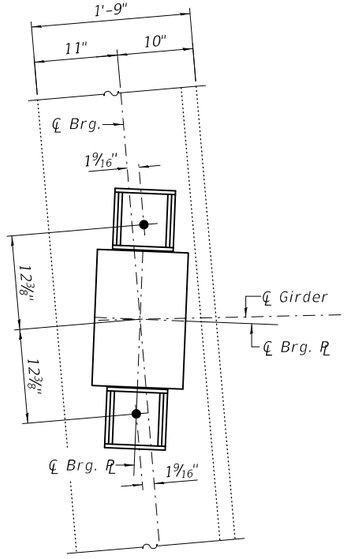
Note:

Shim plates shall not be placed under Bearing Assembly.

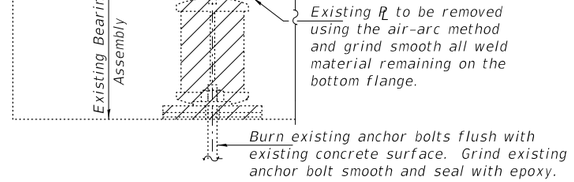


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ANCHOR BOLT LOCATION PLAN



EXISTING BEARING REMOVAL DETAIL

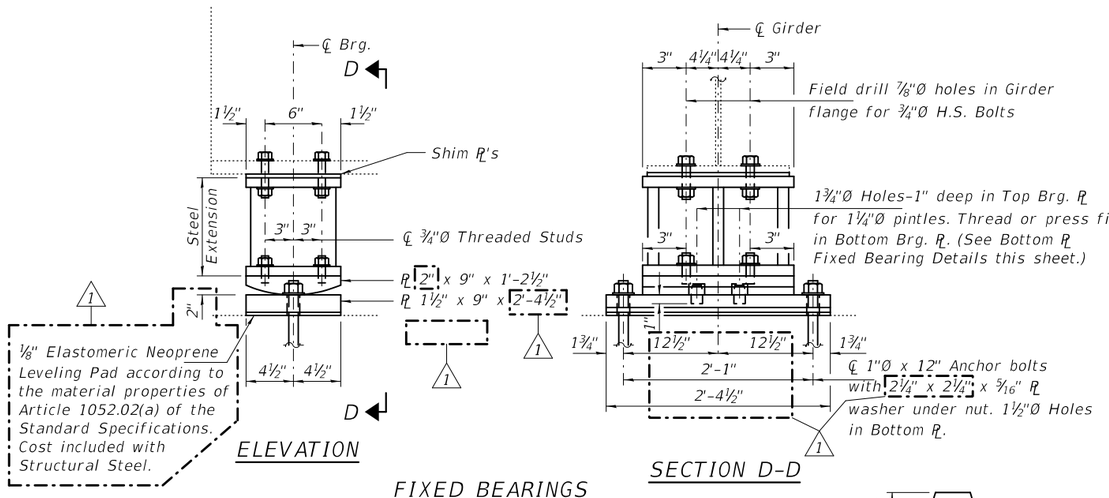
Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	7
Jack and Remove Existing Bearings	Each	7
Furnishing and Erecting Structural Steel	Pound	3470
Anchor Bolts, 1"Ø	Each	14

DESIGNED - CCC	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - NORTH ABUTMENT SN 072-0109 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 - 05/21/2021 CCC		SHEET NO. 13 OF 17 SHEETS	474	72(1HB,HB-1,2,3)BR	PEORIA	63	39
DRAWN daburdell in steffen			REVISED -					CONTRACT NO. 68E52		
CHECKED - CCC JSB							ILLINOIS FED. AID PROJECT			

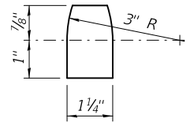
1 REVISED 6/1/21



ELEVATION

SECTION D–D

FIXED BEARINGS



PINTLE

BEAM REACTIONS

R ℄	(K)	84.3
R ℄	(K)	49.1
Imp.	(K)	10.7
R (Total)	(K)	144.1

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

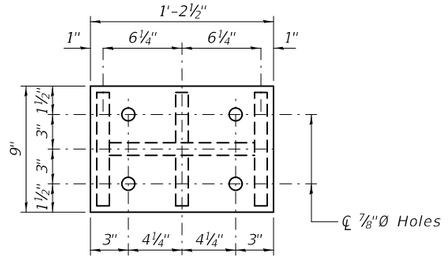
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

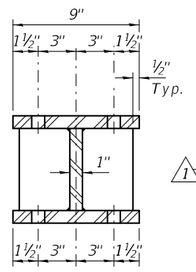
Min. jack capacity = 90 Tons.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

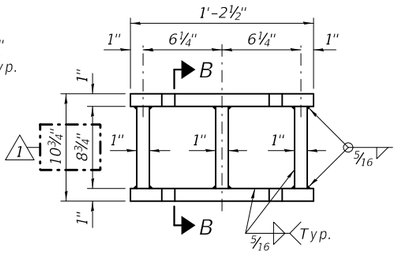
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



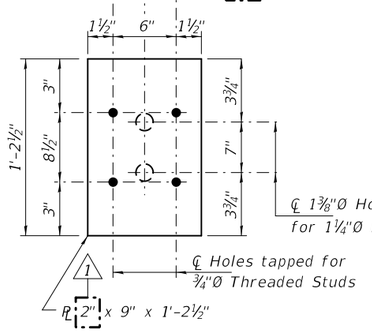
PLAN TOP AND BOTTOM PLATE



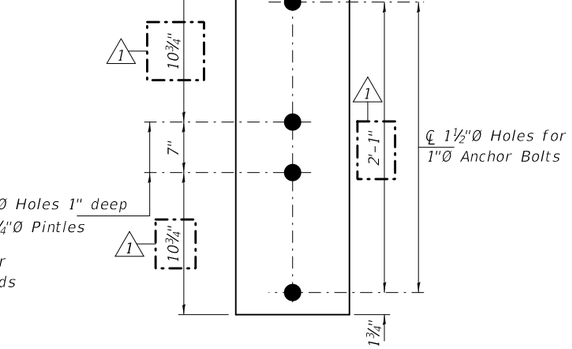
SECTION B-B



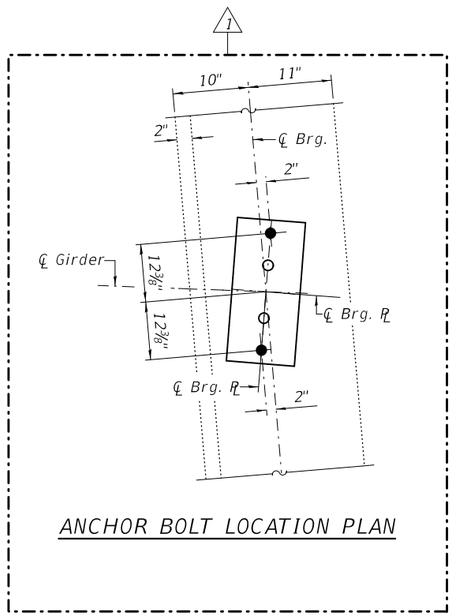
STEEL EXTENSION DETAIL



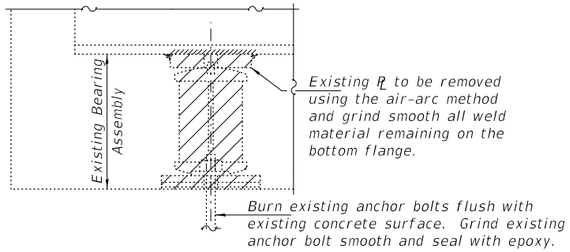
PLAN – TOP PLATE
FIXED BEARINGS



PLAN – BOTTOM PLATE
FIXED BEARINGS



ANCHOR BOLT LOCATION PLAN



EXISTING BEARING REMOVAL DETAIL

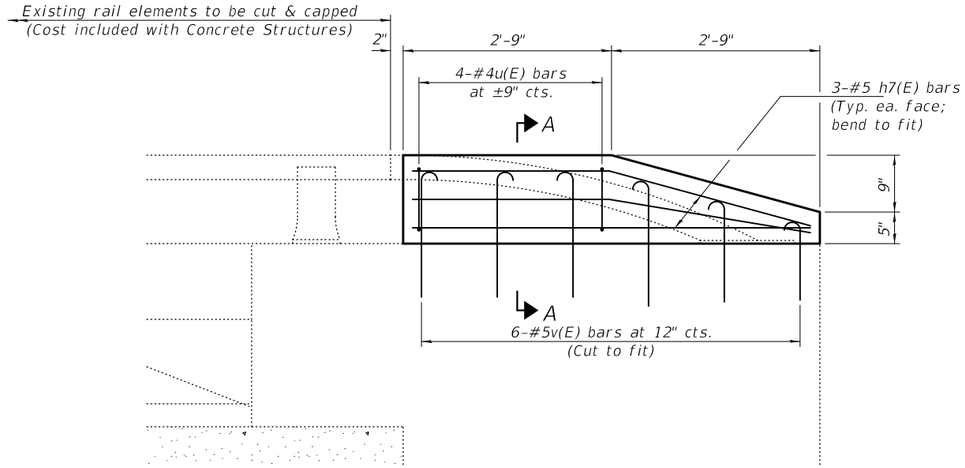
Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

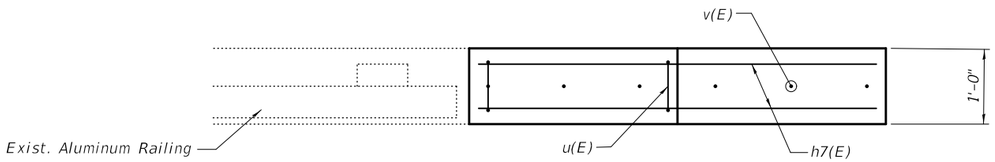
Item	Unit	Total
Jack and Remove Existing Bearings	Each	7
Furnishing and Erecting Structural Steel	Pound	2507 (1)
Anchor Bolts, 1"Ø	Each	14

DESIGNED - CCC	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - SOUTH ABUTMENT SN 072-0109 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 - 05/21/2021 CCC		SHEET NO. 14 OF 17 SHEETS	474	72(1HB,HB-1,2,3)BR	PEORIA	63	10
DRAWN daburdell IN steffen			REVISED -					CONTRACT NO. 68E52		
CHECKED - CCC JSB							ILLINOIS	FED. AID PROJECT		

1 REVISED 6/1/21

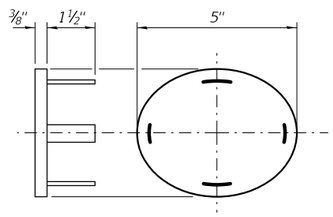


PROPOSED ELEVATION

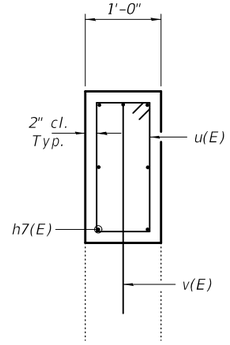


PLAN

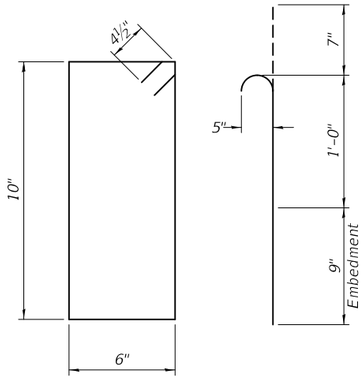
* Epoxy grout v(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.



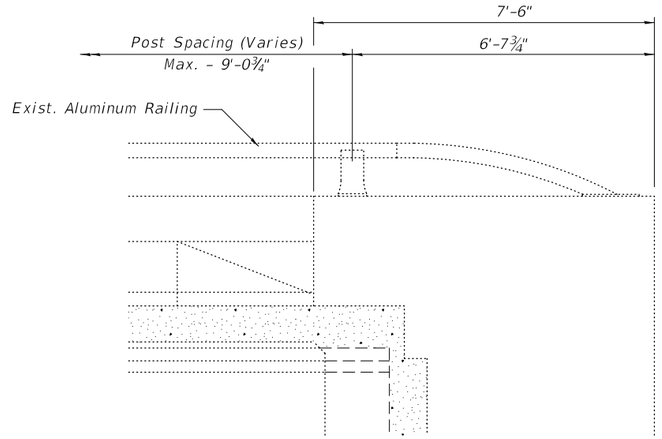
CAST END CAP



SECTION A-A



BAR u(E) BAR v(E)



INSIDE VIEW AT APPROACH BENT

NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h7(E)	48	#5	5'-1"	
u(E)	32	#4	3'-5"	
v(E)	48	#5	2'-4"	
	1			
Concrete Superstructure			Cu. Yd.	1.6
Reinforcement Bars, Epoxy Coated			Pound	440
				1

DESIGNED - CCC
CHECKED - JSB
DRAWN - Jim Ostermann steffen
CHECKED - CCC JSB

EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

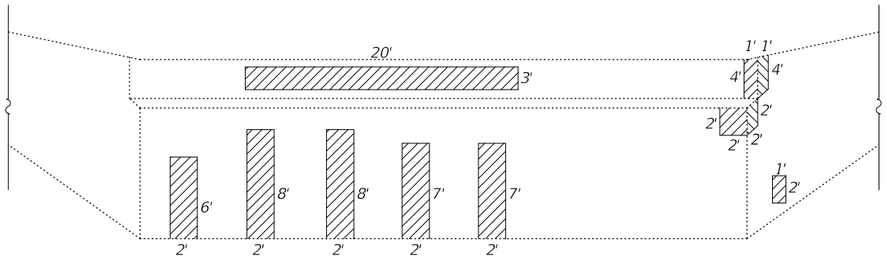
DATE - MAY 7, 2021
REVISED 1 - 05/21/2021 CCC
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

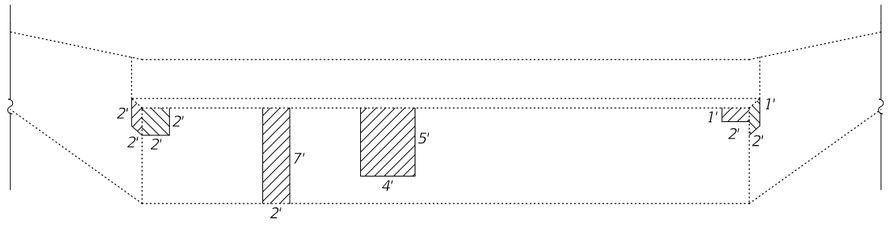
WINGWALL AND RAILING MODIFICATIONS
SN 072-0108 (SB) & 072-0109 (NB)
SHEET NO. 15 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	41
		CONTRACT NO. 68E52		
		ILLINOIS	FED. AID PROJECT	

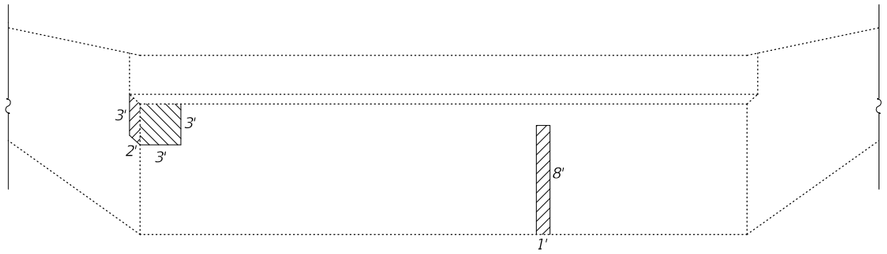
1 REVISED 6/1/21



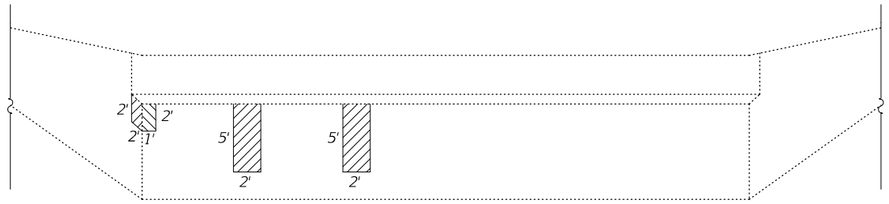
SOUTH ABUTMENT FACE
(SN 072-0108)



SOUTH ABUTMENT FACE
(SN 072-0109)



NORTH ABUTMENT FACE
(SN 072-0108)



NORTH ABUTMENT FACE
(SN 072-0109)

1

* An additional 50% is included in the Structural Repair of Concrete. Final areas shall be marked in the field by the Engineer and marked on the As-Built plans.

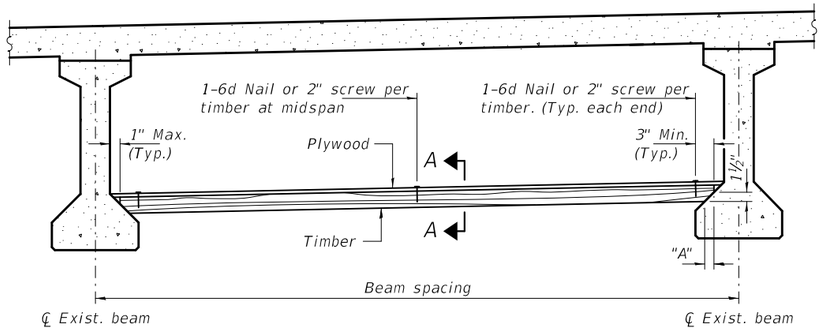
BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	371 * 1

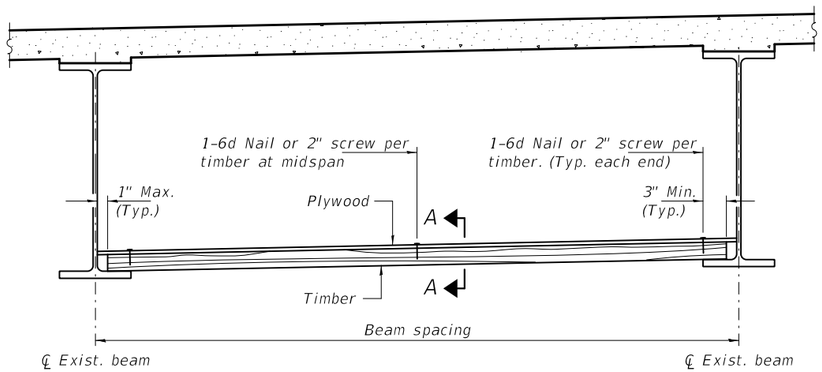
DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN daburdell ın steffen	PASSED	REVISED 1 - 05/21/2021 CCC	**SUBSTRUCTURE CONCRETE REPAIRS SN 072-0108 (SB) & 072-0109 (NB)**
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET NO. 16 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	42
		CONTRACT NO. 68E52		
	ILLINOIS	FED. AID PROJECT		

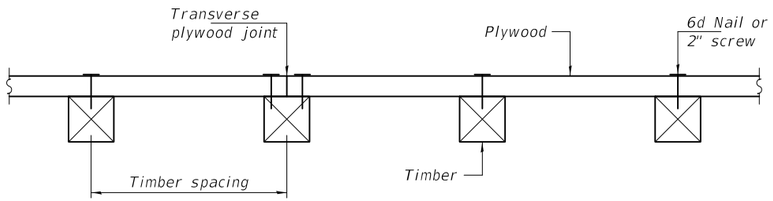
1 REVISED 6/1/21



PPC I-BEAMS AND BULB-T's



STEEL BEAMS



SECTION A-A

TIMBER SPACING

Beam Spacing (ft.)	Timber Sizes (in.)		
	4" x 4" with min. Fb=775 psi Fv=135 psi	4" x 6" with min. Fb=775 psi Fv=135 psi	6" x 6" with min. Fb=575 psi Fv=125 psi
	Maximum Timber Spacing (in.)		
4.5	16	16	16
4.75	16	16	16
5.0	16	16	16
5.25	16	16	16
5.5	16	16	16
5.75	16	16	16
6.0	16	16	16
6.25	12	16	16
6.5	12	16	16
6.75	12	16	16
7.0	8	16	16
7.25	8	16	16
7.5	8	16	16
7.75	8	16	16
8.0	8	12	16
8.25	8	12	16
8.5	6	12	12
8.75	6	12	12
9.0	6	8	12

Notes:

See special provision for Permanent Protective Shield System.

Timber sizes shown are nominal sizes. Rough sawn timber of the dimensions shown will also be considered acceptable.

The minimum Fb and Fv values shown are the tabulated design values given in the National Design Specification for Wood Construction for No. 2 Spruce-Pine-Fir without adjustment factors applied. Better grades or other species with equal or higher allowable stresses will also be considered acceptable.

The timber spacings shown have been determined using allowable stresses with all adjustment factors necessary for the anticipated service conditions.

All timber shall be treated.

Plywood shall be 5/8" rated Exterior type plywood by APA.

Plywood shall be placed such that the face grain is perpendicular to the timber supports. When less than a full sheet (4' width) of plywood is used, the width of the strip used shall not be less than 2'.

Transverse plywood joints shall be supported by timbers.

When 4" x 6" timbers are used, they shall be placed such that the wide face is horizontal and the narrow face is vertical.

Design load = 200 psf.

PPC I-BEAMS AND BULB-T's

BEAM	"A"
36" I-Beam	1½"
42" I-Beam	1½"
48" I-Beam	1½"
54" I-Beam	1⅝"
63" Bulb-T	3⅜"
72" Bulb-T	3⅜"

BILL OF MATERIAL

Item	Unit	Total
Protective Shield (Permanent)	Sq. Yd.	511

PPS-1/REP 10-27-2020

DESIGNED - CCC	EXAMINED	Timothy A. Sheldahl ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PERMANENT PROTECTIVE SHIELD SN 072-0108 (SB) & 072-0109 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	J. Carl Piney ENGINEER OF BRIDGES AND STRUCTURES	SHEET ADDED 1 05/21/2021 CCC			474	72(1HB,HB-1,2,3)BR	PEORIA	63	43A
DRAWN - Jim Ostermann steffen			REVISED -		SHEET NO. 17A OF 17 SHEETS			CONTRACT NO. 68E52		
CHECKED - CCC JSB								ILLINOIS FED. AID PROJECT		

1 ADDED SHEET 6/1/21

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

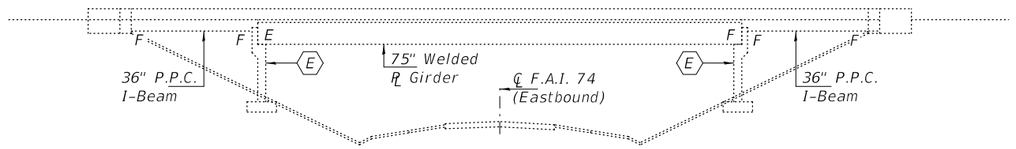
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

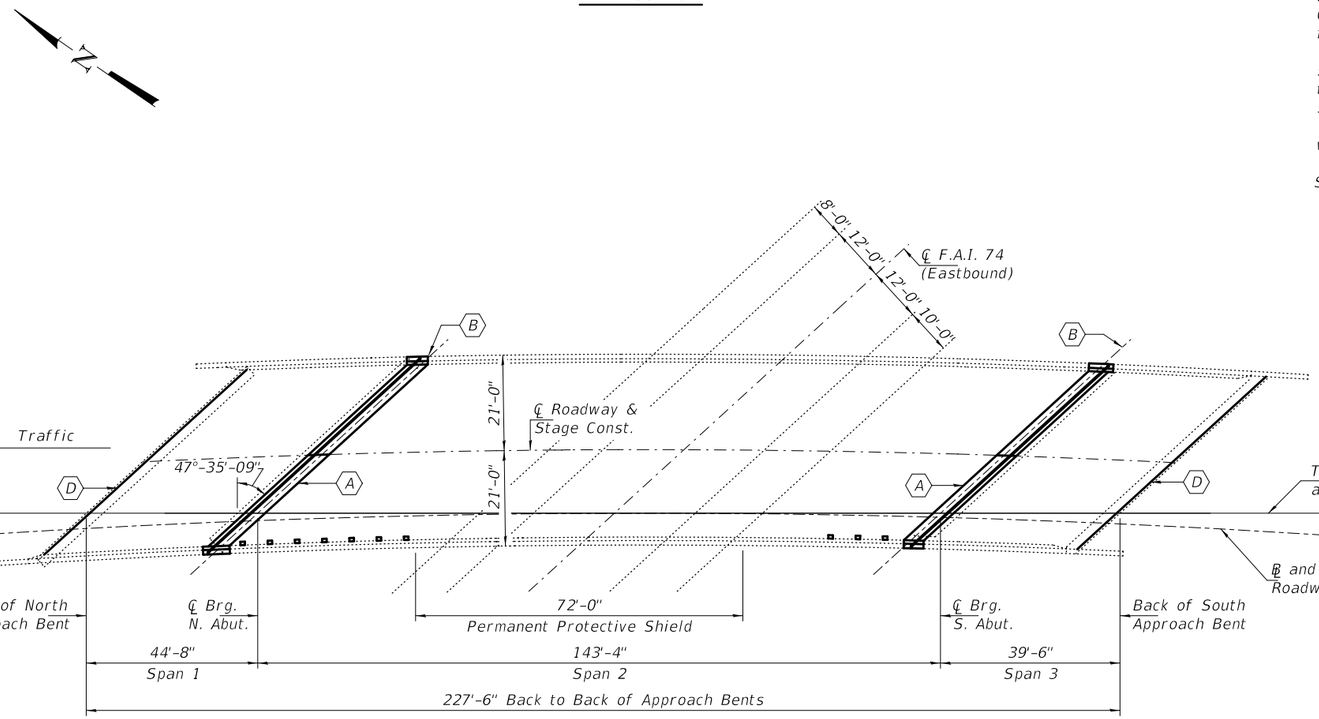
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

All new structural steel and bearing assembly shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel."



ELEVATION



PLAN

(A) – Remove and replace expansion joint with Preformed Joint Strip Seal.

(B) – Bearing removal and replacement at Abutments.

(C) – Bridge deck scarification with new Microsilica Concrete Overlay on Spans 1 thru 3.

(D) – Polymer Concrete Nosing. See sheet 6 of 11 for detals.

(E) – Substructure Repairs

TOTAL BILL OF MATERIAL

	ITEM	UNIT	QUANTITY	
	Concrete Removal	Cu. Yd.	14	
	Concrete Superstructure	Cu. Yd.	14	
	Bridge Deck Microsilica Concrete Overlay, 2¼"	Sq. Yd.	928.4	
	Bridge Deck Grooving	Sq. Yd.	916.2	
	Floor Drains	Each	8	
	Preformed Joint Strip Seal	Foot	118	
	Reinforcement Bars, Epoxy Coated	Pound	1640	
	Bar Splicers	Each	20	
*	Protective Coat	Sq. Yd.	975.1	
	Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	253	1
	Furnishing & Erecting Structural Steel	Pound	3570	1
	Elastomeric Bearing Assembly, Type 1	Each	6	
	Jack & Remove Existing Bearings	Each	12	1
1	Anchor Bolts, 1¼"Ø	Each	24	
	Protective Shield (Permanent)	Sq. Yd.	288	
	Hot-Mix Asphalt Surface Removal Deck	Sq. Yd.	928.4	
	Bridge Deck Scarification, ¾"	Sq. Yd.	928.4	
	Mechanical Splicers	Each	48	
	Polymer Concrete	Cu. Ft.	4.2	
	Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	3.3	1

* On new concrete & microsilica concrete overlay only.

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

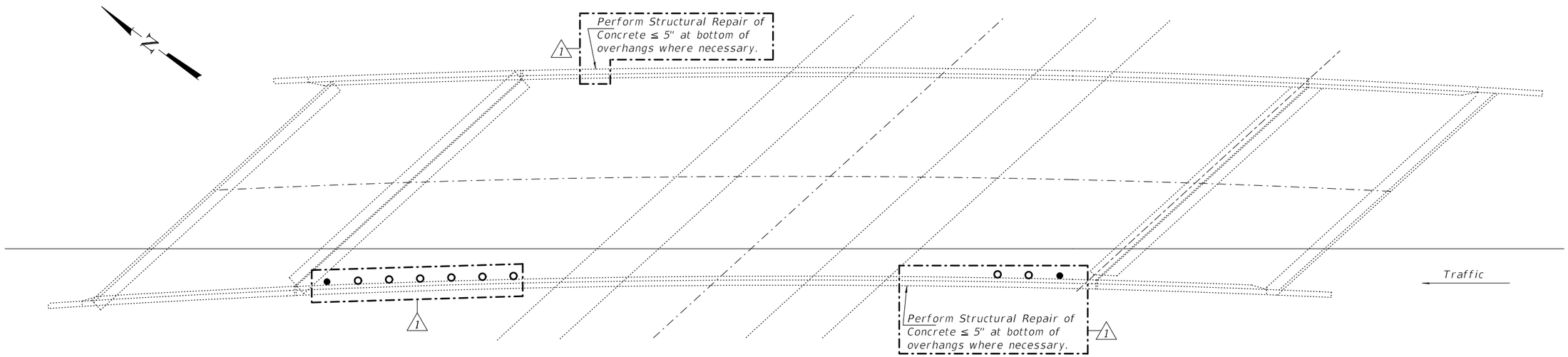
EXPIRES 11-30-2022

DESIGNED - ADRIAN T. HALLOWAY	EXAMINED	DATE - MAY 7, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - VICTOR H. VELIZ	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - *jostermann* Steffen	PASSED	REVISED 1 - 05/25/2021 ATH	
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

GENERAL PLAN AND ELEVATION
F.A.I. 474 OVER F.A.I. 74
SN 072-0110
SHEET NO. 1 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	44
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

1 REVISED 6/1/21

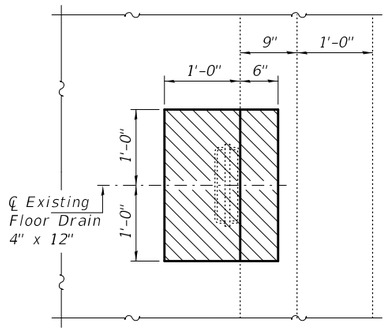


PLAN

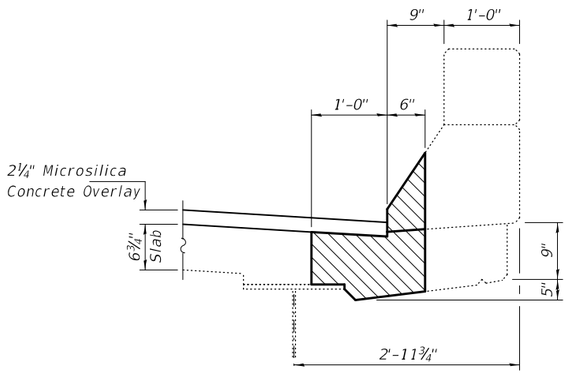
Note:
Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-built Plans.

DRAIN REPAIR LEGEND

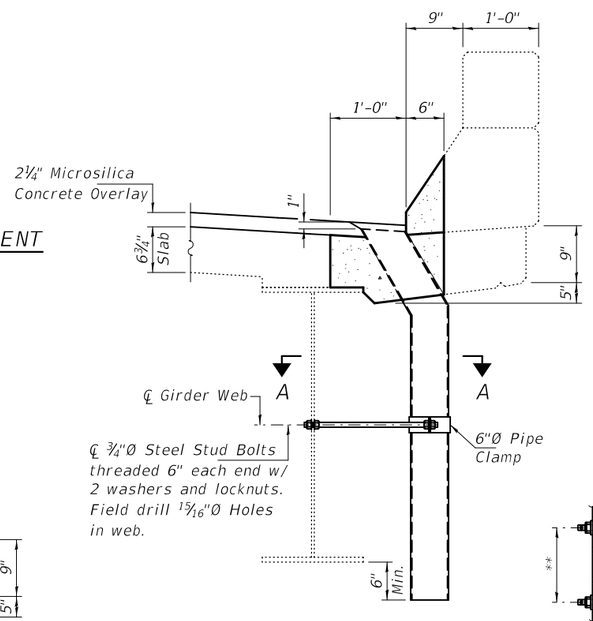
- ● – Previously plugged drains to be removed by full depth deck patch.
- ○ – Floor Drain to be removed with full depth deck patch and replaced with new floor drains.



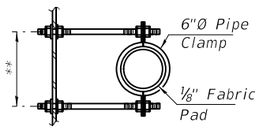
CONCRETE REMOVAL & REPLACEMENT
PLAN AT FLOOR DRAINS
Existing reinf. to remain.



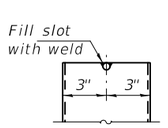
SECTION THRU CONCRETE REMOVAL &
REPLACEMENT AT FLOOR DRAINS



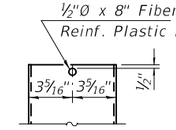
FLOOR DRAIN DETAILS
(8-Locations)



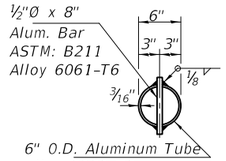
SECTION A-A
** Dimension as req'd by Pipe Clamp.



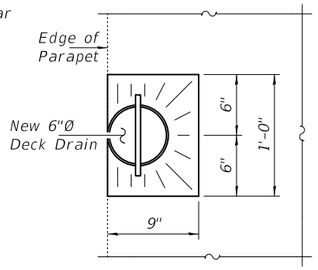
ALUMINUM TUBE



FIBERGLASS PIPE



TOP PLAN
(Showing Aluminum Tube)



OVERLAY TREATMENT
AT FLOOR DRAINS

Note:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coating's Spec. SSPC-SP1 prior to painting. Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. Galvanize clamping device according to AASHTO M232. Cost of clamping device and galvanizing included with Floor Drains.

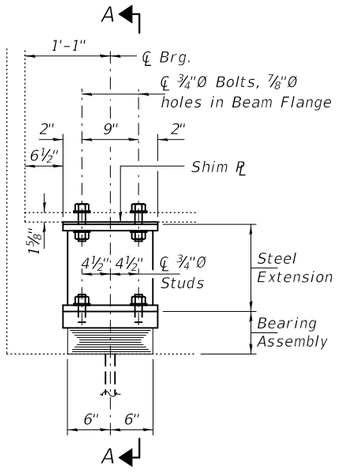
BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	3.3
* Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	70
Floor Drain	Each	8

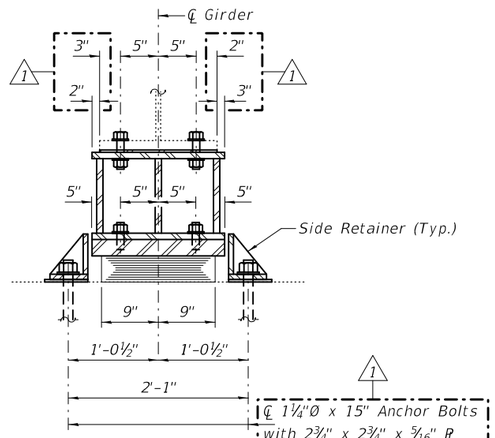
* Estimated

DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK SLAB REPAIR SN 072-0110	F.A.I. RTE.	SECTION	COUNTY / TOTAL SHEETS / SHEET NO.
CHECKED - VHV	ENGINEER OF STRUCTURAL SERVICES	REVISED 1 - 05/25/2021 ATH		SHEET NO. 3 OF 11 SHEETS	474	72(1HB,HB-1,2,3)BR	PEORIA / 63 / 46
DRAWN - Jim Ostermann Steffen	PASSED	REVISED -					CONTRACT NO. 68E52
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES					ILLINOIS	FED. AID PROJECT

1 REVISED 6/1/21



ELEVATION AT NORTH ABUTMENT



SECTION A-A

BEAM REACTIONS

R℄	(K)	111.8
R℄	(K)	47.0
Imp.	(K)	8.7
R (Total)	(K)	167.5

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

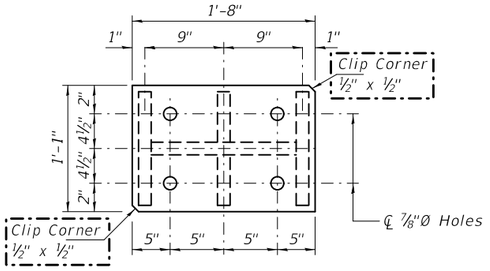
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 105 Tons.

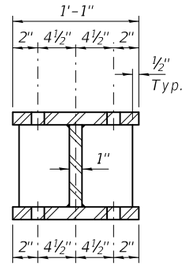
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

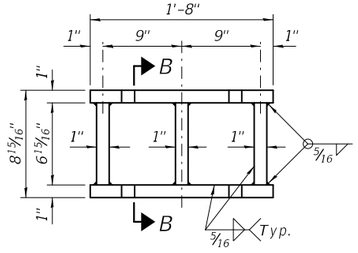
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN TOP AND BOTTOM PLATE

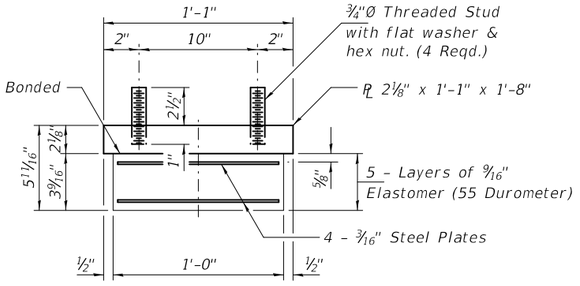


SECTION B-B



STEEL EXTENSION DETAIL

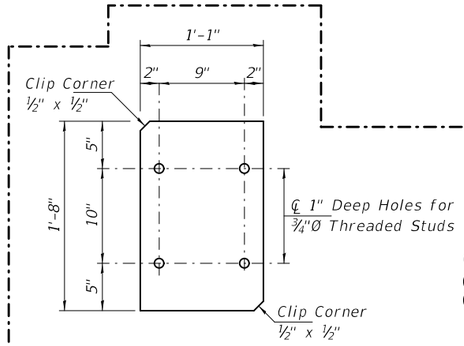
TYPE I ELASTOMERIC EXP. BRG.



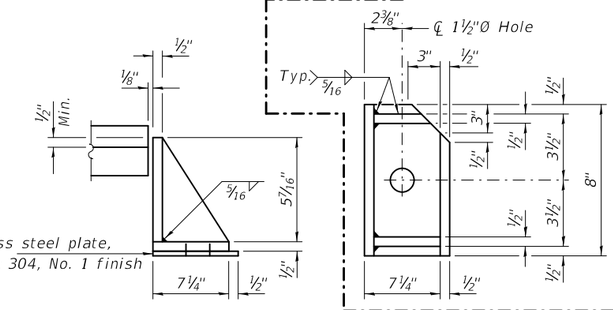
BEARING ASSEMBLY

Note:

Shim plates shall not be placed under Bearing Assembly.

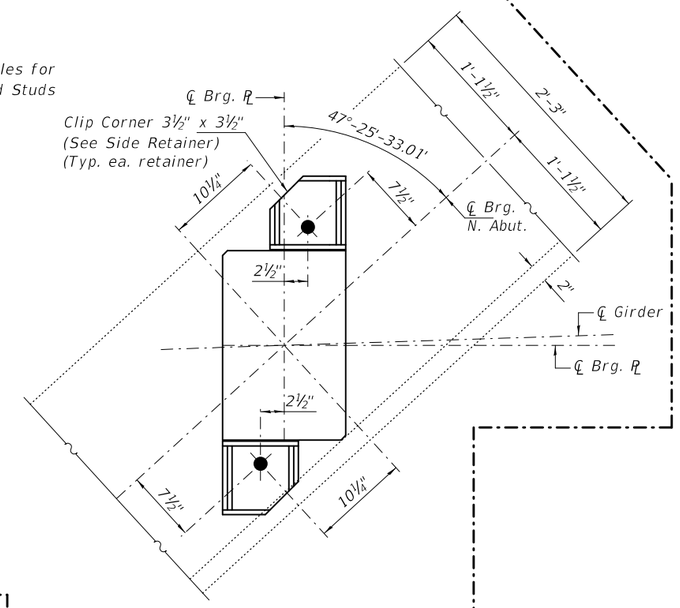


BEARING PLATE PLAN

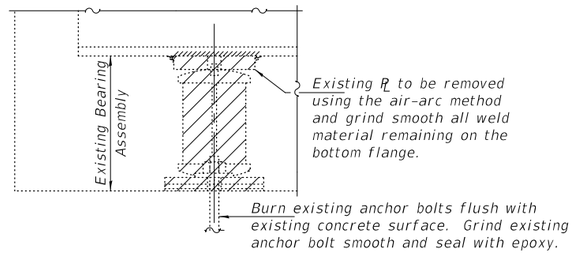


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ANCHOR BOLT LOCATION PLAN



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

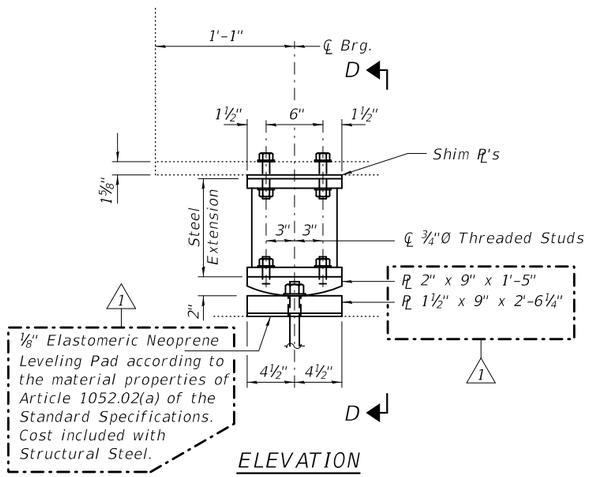
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	1530 (1)
(1) Anchor Bolts, 1¼"Ø	Each	12

TYI/REPS 5-17-2018

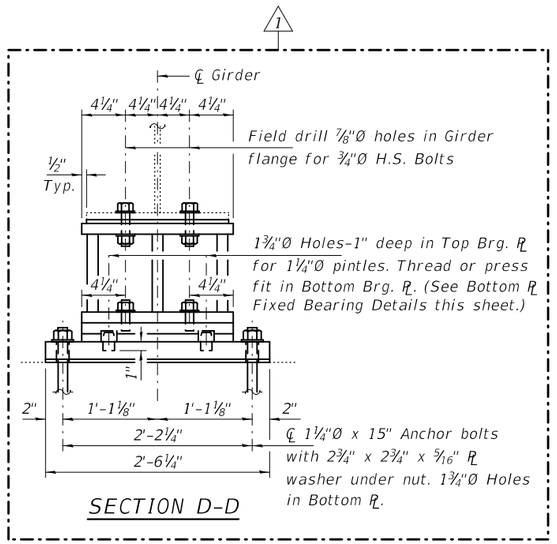
DESIGNED - ATH	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - NORTH ABUTMENT SN 072-0110
CHECKED - VHV	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 - 05/25/2021 ATH		SHEET NO. 8 OF 11 SHEETS
DRAWN - Jim Ostermann Steffen			REVISED -		
CHECKED - ATH VHV					

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	51
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

1 REVISED 6/1/21



ELEVATION



SECTION D-D

FIXED BEARINGS

BEAM REACTIONS

R ℄	(K)	111.8
R ℄	(K)	47.0
Imp.	(K)	8.7
R (Total)	(K)	167.5

1

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

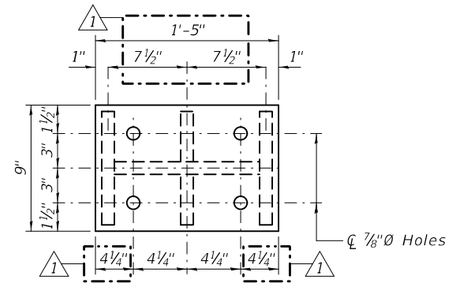
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

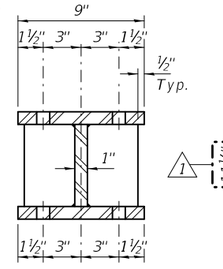
Min. jack capacity = 105 Tons. 1

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

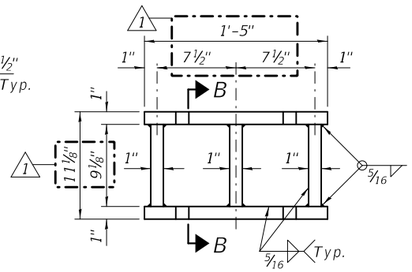
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



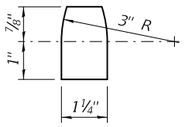
PLAN TOP AND BOTTOM PLATE



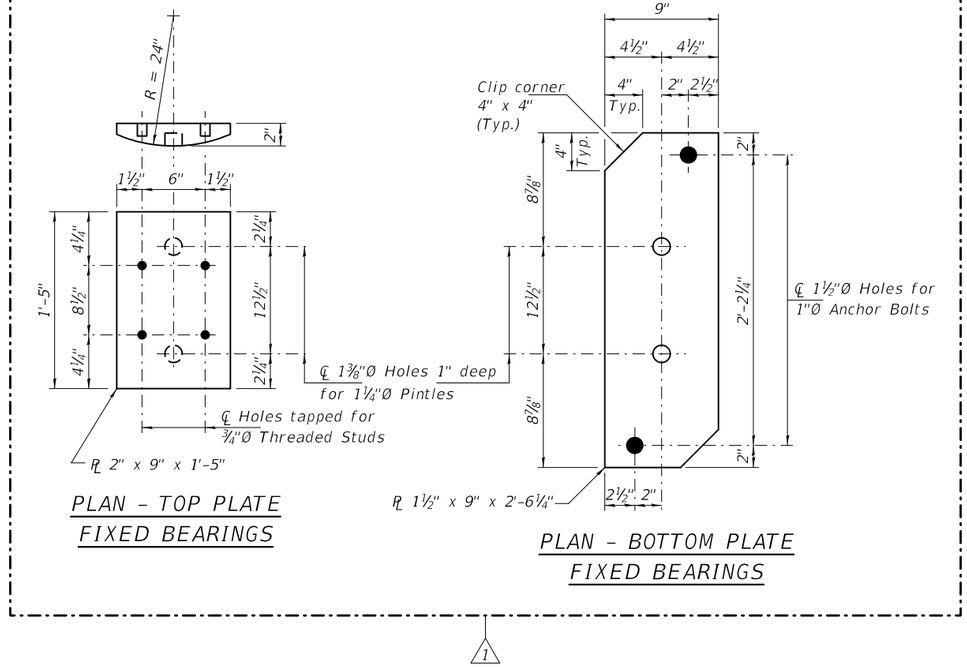
SECTION B-B



STEEL EXTENSION DETAIL

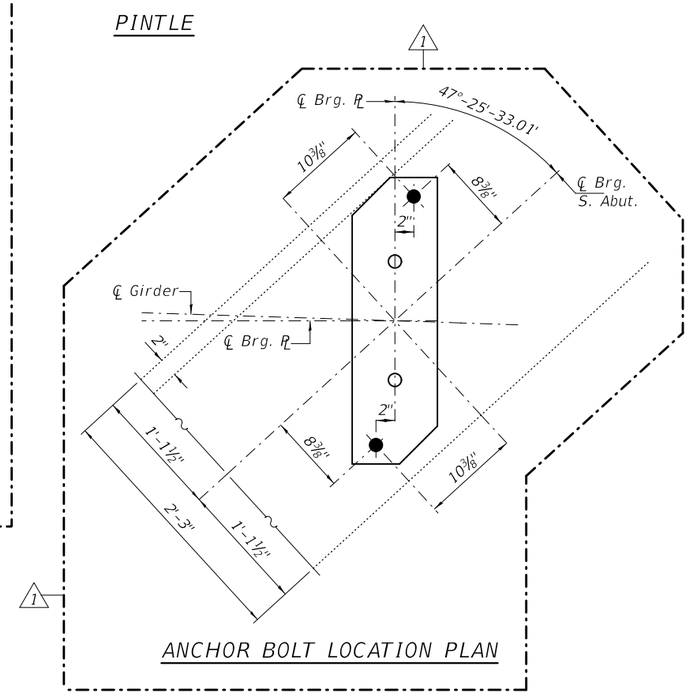


PINTLE

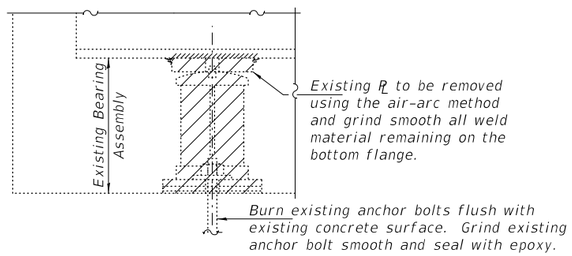


PLAN - TOP PLATE FIXED BEARINGS

PLAN - BOTTOM PLATE FIXED BEARINGS



ANCHOR BOLT LOCATION PLAN



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

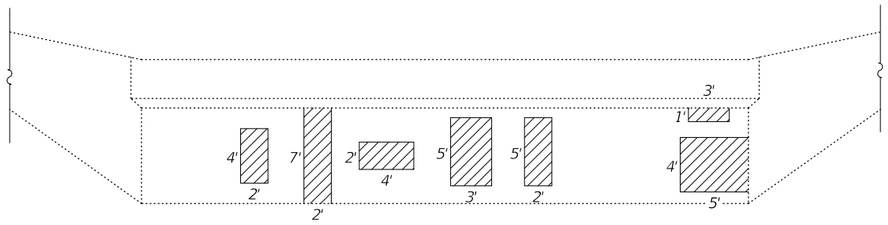
BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	2040 1
Anchor Bolts, 1¼"Ø	Each	12

1

DESIGNED - ATH	EXAMINED	Timothy A. Sahlstrom ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - SOUTH ABUTMENT SN 072-0110	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV	PASSED	A. Carl Preuss ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 - 05/25/2021 ATH		SHEET NO. 9 OF 11 SHEETS	474	72(1HB,HB-1,2,3)BR	PEORIA	63	52
DRAWN - Jim Ostermann Steffen			REVISED -					CONTRACT NO. 68E52		
CHECKED - ATH VHV							ILLINOIS	FED. AID PROJECT		

1 REVISED 6/1/21



SOUTH ABUTMENT FACE
(SN 072-0110)

NORTH ABUTMENT FACE
(SN 072-0110)

BILL OF MATERIAL

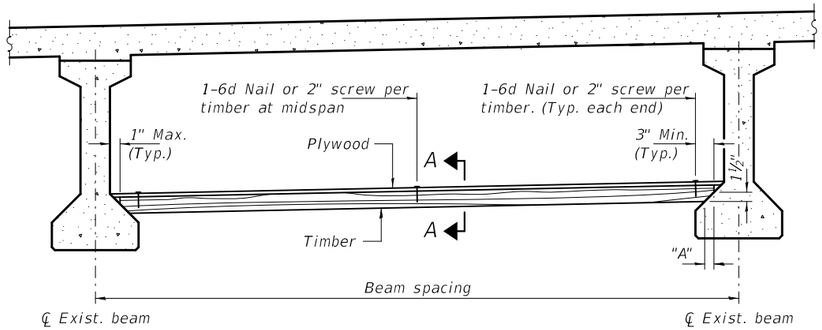
	Item	Unit	Total
*	Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	183

* Includes a 50% contingency.

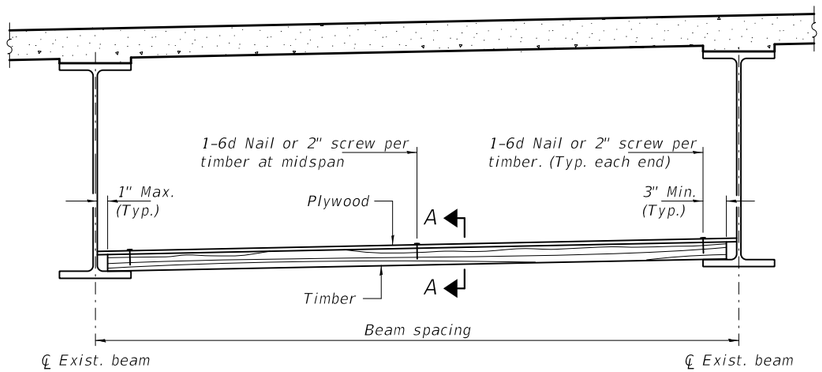
DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - VHV	ENGINEER OF STRUCTURAL SERVICES	REVISED 1 - 05/25/2021 ATH	SUBSTRUCTURE CONCRETE REPAIRS SN 072-0110
DRAWN - Jim Ostermann Steffen	PASSED	REVISED -	SHEET NO. 10 OF 11 SHEETS
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	53
		CONTRACT NO. 68E52		
	ILLINOIS	FED. AID PROJECT		

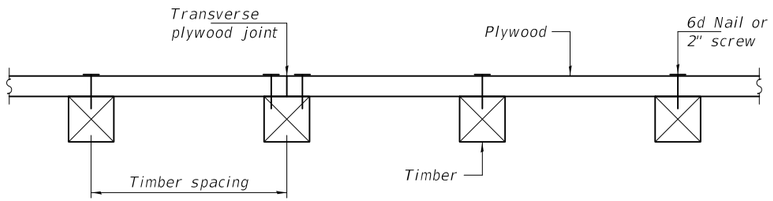
1 REVISED 6/1/21



PPC I-BEAMS AND BULB-T's



STEEL BEAMS



SECTION A-A

TIMBER SPACING

Beam Spacing (ft.)	Timber Sizes (in.)		
	4" x 4" with min. Fb=775 psi Fv=135 psi	4" x 6" with min. Fb=775 psi Fv=135 psi	6" x 6" with min. Fb=575 psi Fv=125 psi
	Maximum Timber Spacing (in.)		
4.5	16	16	16
4.75	16	16	16
5.0	16	16	16
5.25	16	16	16
5.5	16	16	16
5.75	16	16	16
6.0	16	16	16
6.25	12	16	16
6.5	12	16	16
6.75	12	16	16
7.0	8	16	16
7.25	8	16	16
7.5	8	16	16
7.75	8	16	16
8.0	8	12	16
8.25	8	12	16
8.5	6	12	12
8.75	6	12	12
9.0	6	8	12

Notes:

See special provision for Permanent Protective Shield System.

Timber sizes shown are nominal sizes. Rough sawn timber of the dimensions shown will also be considered acceptable.

The minimum Fb and Fv values shown are the tabulated design values given in the National Design Specification for Wood Construction for No. 2 Spruce-Pine-Fir without adjustment factors applied. Better grades or other species with equal or higher allowable stresses will also be considered acceptable.

The timber spacings shown have been determined using allowable stresses with all adjustment factors necessary for the anticipated service conditions.

All timber shall be treated.

Plywood shall be 5/8" rated Exterior type plywood by APA.

Plywood shall be placed such that the face grain is perpendicular to the timber supports. When less than a full sheet (4' width) of plywood is used, the width of the strip used shall not be less than 2'.

Transverse plywood joints shall be supported by timbers.

When 4" x 6" timbers are used, they shall be placed such that the wide face is horizontal and the narrow face is vertical.

Design load = 200 psf.

PPC I-BEAMS AND BULB-T's

BEAM	"A"
36" I-Beam	1½"
42" I-Beam	1½"
48" I-Beam	1½"
54" I-Beam	1⅝"
63" Bulb-T	3⅜"
72" Bulb-T	3⅜"

BILL OF MATERIAL

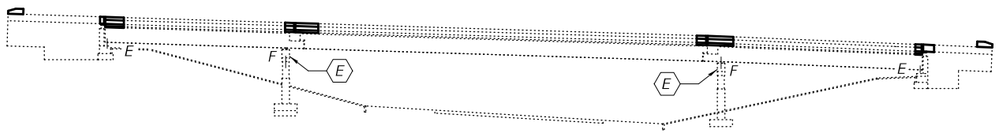
Item	Unit	Total
Protective Shield (Permanent)	Sq. Yd.	288

PPS-1/REP 10-27-2020

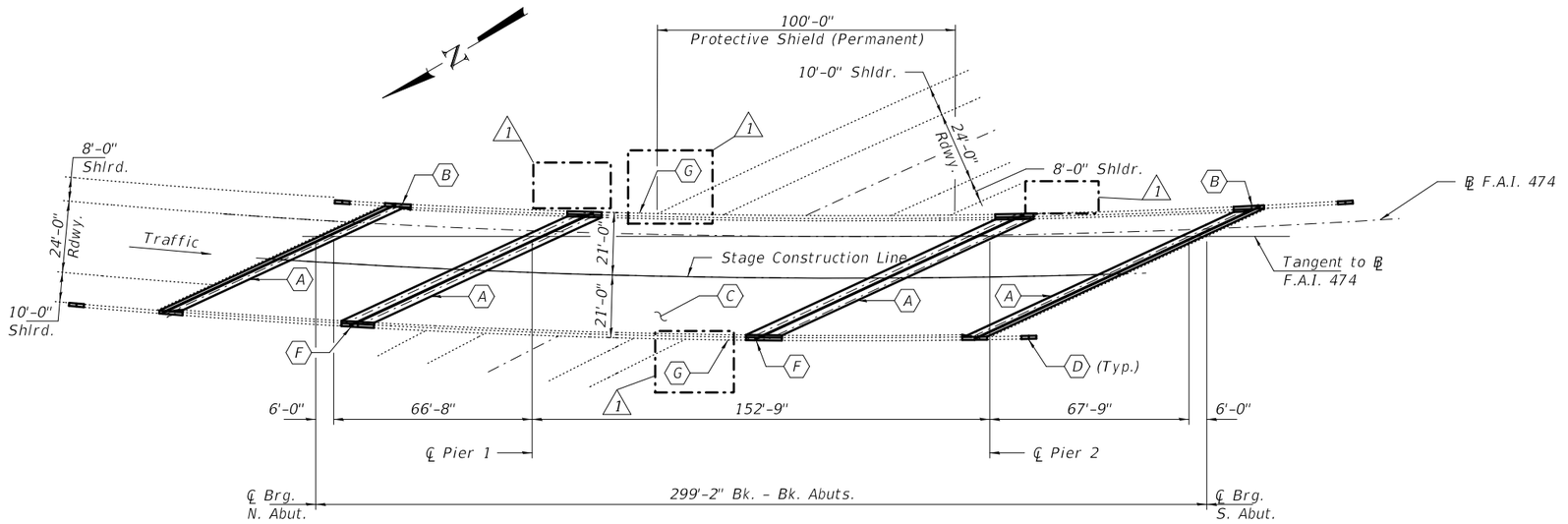
DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - VHV	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Jim Ostermann Steffen	PASSED	SHEET ADDED 1 05/25/2021 ATH	**PERMANENT PROTECTIVE SHIELD SN 072-0110**
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET NO. 11A OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	54A
		CONTRACT NO. 68E52		
	ILLINOIS	FED. AID PROJECT		

1 ADDED SHEET 6/1/21



ELEVATION



PLAN

(A) - Remove and replace joint with Preformed Joint Strip Seal.

(B) - Bearing removal and replacement at Abutments.

(C) - Bridge deck scarification with new Microsilica Overlay and diamond grinding. (All Spans)

(D) - Wingwall and Railing Modifications. See sheet 17 of 19 for details.

(E) - Substructure Repairs

(F) - Straighten Fascia Girder and replace missing anchor bolt at Hinge.

(G) - Perform Structural Repair of Concrete ≤ 5" at Overhang where necessary. (70 Sq. Ft. Estimated)

1

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

EXPIRES 11-30-2022

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

All new structural steel and bearing assembly shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel."

TOTAL BILL OF MATERIAL

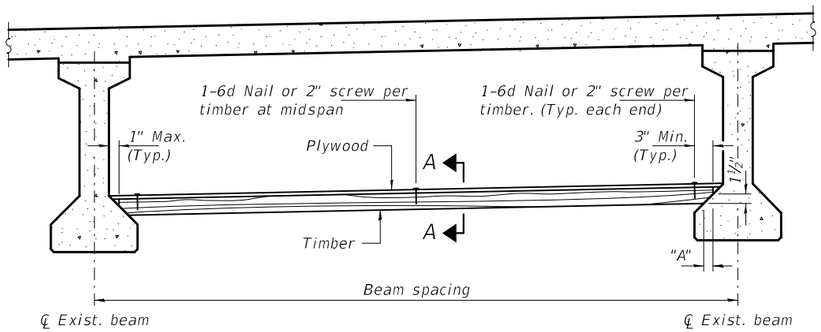
	ITEM	UNIT	QUANTITY	
	Concrete Removal	Cu. Yd.	71.6	
	Concrete Superstructure	Cu. Yd.	71.6	
	Bridge Deck Microsilica Concrete Overlay, 2¼"	Sq. Yd.	1080.5	
	Bridge Deck Grooving	Sq. Yd.	1138.7	
	Preformed Joint Strip Seal	Foot	368	
	Reinforcement Bars, Epoxy Coated	Pound	3600	1
	Bar Splicers	Each	56	
*	Protective Coat	Sq. Yd.	1257.5	
	Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	230	1
	Furnishing & Erecting Structural Steel	Pound	2200	
	Elastomeric Bearing Assembly, Type I	Each	12	
	Jack & Remove Existing Bearings	Each	12	
	Anchor Bolts, 1"Ø	Each	24	
	Protective Shield (Permanent)	Sq. Yd.	511	
	Hot-Mix Asphalt Surface Removal Deck	Sq. Yd.	1080.5	
	Bridge Deck Scarification, ¾"	Sq. Yd.	1080.5	
	Mechanical Splicers	Each	96	
	Concrete Structures	Cu. Yd.	2.1	1
	Temporary Shoring and Cribbing	Each	1	
	Beam Straightening	L. Sum	1	

* On new concrete and overlay only.

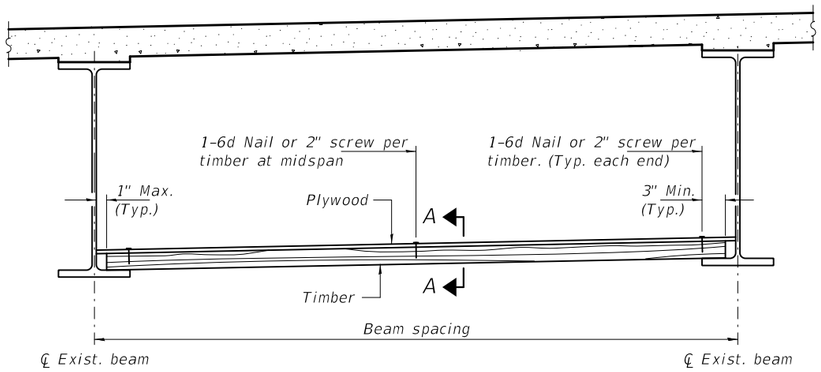
DESIGNED - Adrian T. Halloway	EXAMINED	Tony A. Hoback	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION F.A.I. 474 RAMP OVER F.A.I. 474 SN 072-0111 (SB)
CHECKED - Victor H. Veliz		ENGINEER OF STRUCTURAL SERVICES			SHEET NO. 1 OF 19 SHEETS
DRAWN - Jim Ostermann daburdell	PASSED	Lt. Carl Puzey	REVISED 1 05/28/2021 ATH		
CHECKED - ATH VHV		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	55
		CONTRACT NO. 68E52		
		ILLINOIS	FED. AID PROJECT	

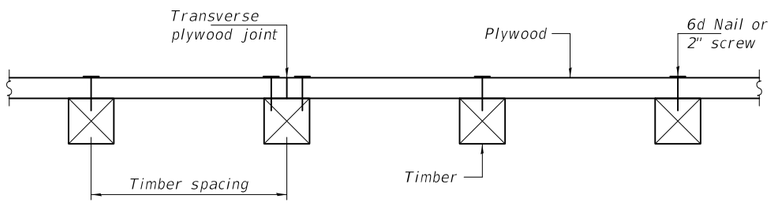
1 REVISED 6/1/21



PPC I-BEAMS AND BULB-T's



STEEL BEAMS



SECTION A-A

TIMBER SPACING

Beam Spacing (ft.)	Timber Sizes (in.)		
	4" x 4" with min. Fb=775 psi Fv=135 psi	4" x 6" with min. Fb=775 psi Fv=135 psi	6" x 6" with min. Fb=575 psi Fv=125 psi
	Maximum Timber Spacing (in.)		
4.5	16	16	16
4.75	16	16	16
5.0	16	16	16
5.25	16	16	16
5.5	16	16	16
5.75	16	16	16
6.0	16	16	16
6.25	12	16	16
6.5	12	16	16
6.75	12	16	16
7.0	8	16	16
7.25	8	16	16
7.5	8	16	16
7.75	8	16	16
8.0	8	12	16
8.25	8	12	16
8.5	6	12	12
8.75	6	12	12
9.0	6	8	12

Notes:

See special provision for Permanent Protective Shield System.

Timber sizes shown are nominal sizes. Rough sawn timber of the dimensions shown will also be considered acceptable.

The minimum Fb and Fv values shown are the tabulated design values given in the National Design Specification for Wood Construction for No. 2 Spruce-Pine-Fir without adjustment factors applied. Better grades or other species with equal or higher allowable stresses will also be considered acceptable.

The timber spacings shown have been determined using allowable stresses with all adjustment factors necessary for the anticipated service conditions.

All timber shall be treated.

Plywood shall be ⅝" rated Exterior type plywood by APA.

Plywood shall be placed such that the face grain is perpendicular to the timber supports. When less than a full sheet (4' width) of plywood is used, the width of the strip used shall not be less than 2'.

Transverse plywood joints shall be supported by timbers.

When 4" x 6" timbers are used, they shall be placed such that the wide face is horizontal and the narrow face is vertical.

Design load = 200 psf.

PPC I-BEAMS AND BULB-T's

BEAM	"A"
36" I-Beam	1½"
42" I-Beam	1½"
48" I-Beam	1½"
54" I-Beam	1⅝"
63" Bulb-T	3⅜"
72" Bulb-T	3⅜"

Removed Deck Slab Repair sheet and replaced it with Permanent Protective Shield sheet. 1

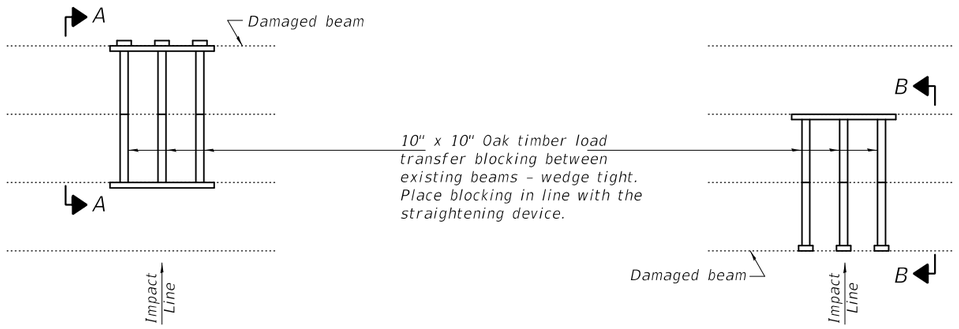
BILL OF MATERIAL

Item	Unit	Total
Protective Shield (Permanent)	Sq. Yd.	511

PPS-1/REP 10-27-2020

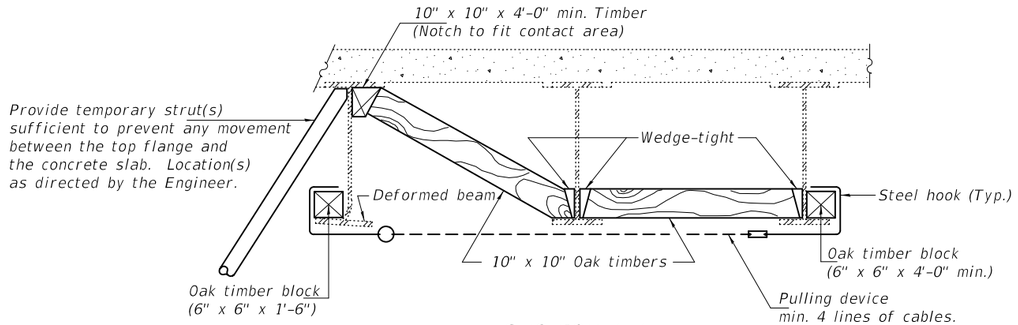
DESIGNED - ATH	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PERMANENT PROTECTIVE SHIELD SN 072-0111	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV						474	72(1HB,HB-1,2,3)BR	PEORIA	63	57
DRAWN - Jim Ostermann daburdell	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 05/28/2021 ATH		SHEET NO. 3 OF 19 SHEETS			CONTRACT NO. 68E52		
CHECKED - ATH VHV			REVISED -					ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21

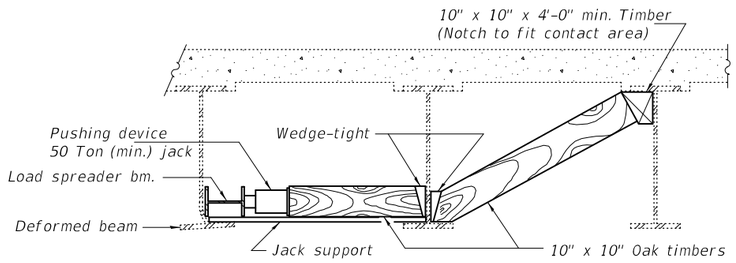


PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS

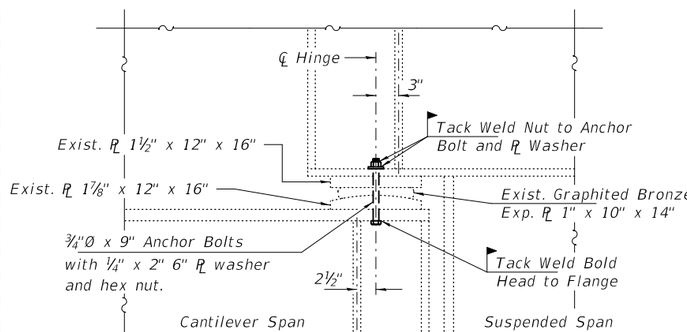
Straightening force shall be maintained on all load transfer blocking during beam straightening.



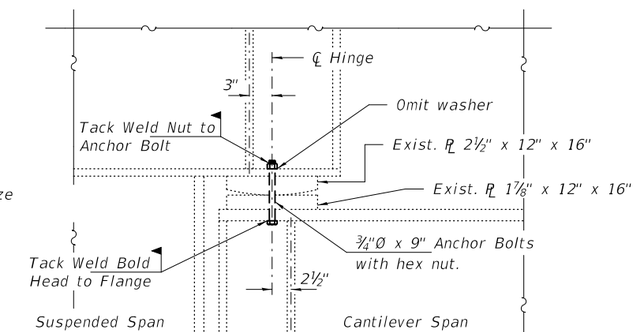
SECTION A-A



SECTION B-B



ELEVATION AT HINGE #1

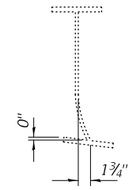


ELEVATION AT HINGE #2

PHOTO 1
(Showing beam shift)

PHOTO 2
(Showing missing bolt)

Notes:
Contractor shall contact the Bridge Office Repairs Unit for further guidance if there is any difficulty in straightening or achieving the required 1¾" movement to restore the beam to its original location.
Cost of anchor bolts, nuts and washers included with Furnishing & Erecting Structural Steel.



EXISTING DEFORMATION TO BE STRAIGHTENED
(Looking South)

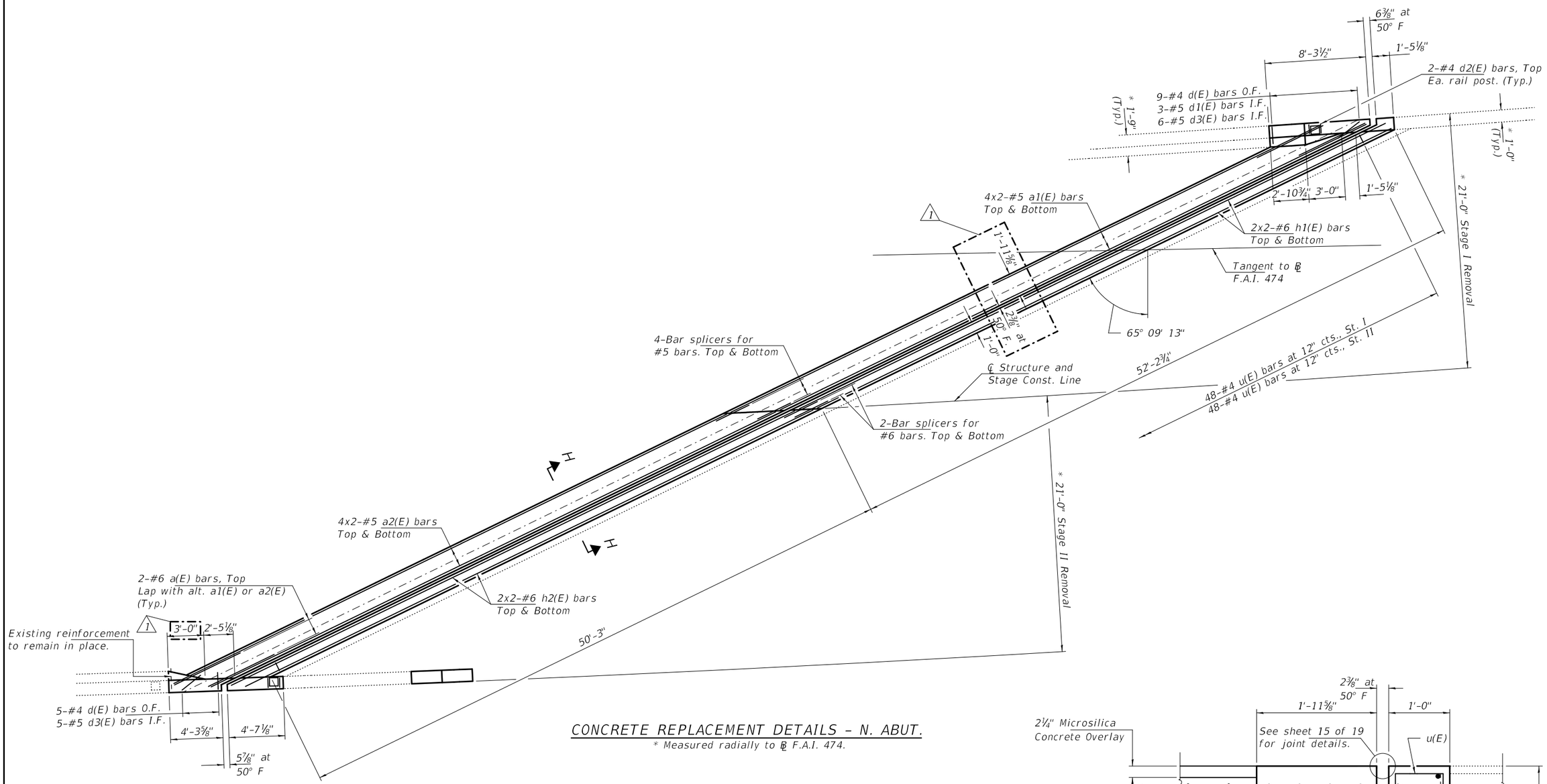
1

REP-1 8-16-2018

DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEAM STRAIGHTENING DETAILS SN 072-0111	
CHECKED - VHV	ENGINEER OF STRUCTURAL SERVICES				
DRAWN - Jim Ostermann *daburdell*	PASSED	REVISED 1 05/28/2021 ATH		SHEET NO. 4 OF 19 SHEETS	
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	58
		CONTRACT NO. 68E52		
		ILLINOIS FED. AID PROJECT		

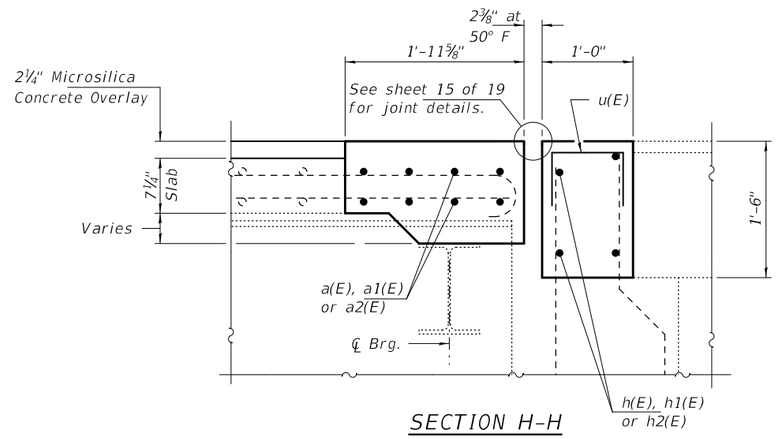
1 REVISED 6/1/21



CONCRETE REPLACEMENT DETAILS - N. ABUT.

* Measured radially to ℄ F.A.I. 474.

Notes:
Bend transverse bars in field as necessary.
For bending bar diagrams, Section Thru Parapets and Bill of Material, see sheet 13 of 19.
Bars indicated thus 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

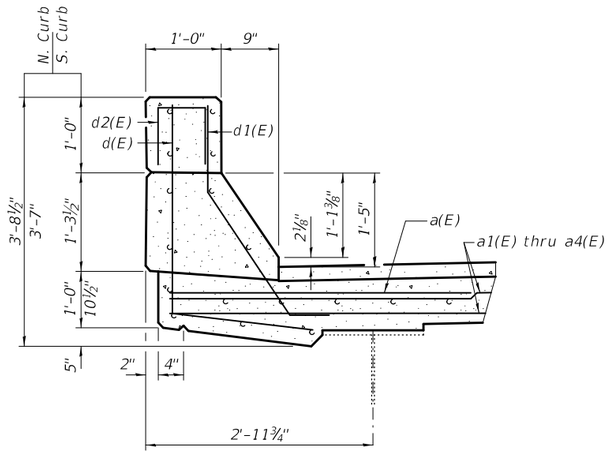


SECTION H-H

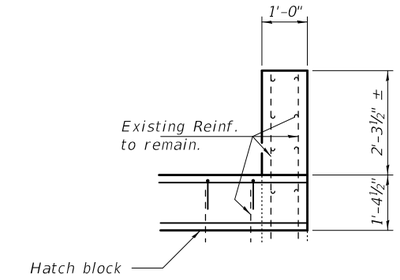
DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REPLACEMENT DETAILS - S. ABUT. SN 072-0111
CHECKED - VHV	ENGINEER OF STRUCTURAL SERVICES			
DRAWN - Jim Ostermann daburdell	PASSED	REVISED 1 05/28/2021 ATH		SHEET NO. 12 OF 19 SHEETS
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	61E
		CONTRACT NO. 68E52		
	ILLINOIS FED. AID PROJECT			

1 REVISED 6/1/21

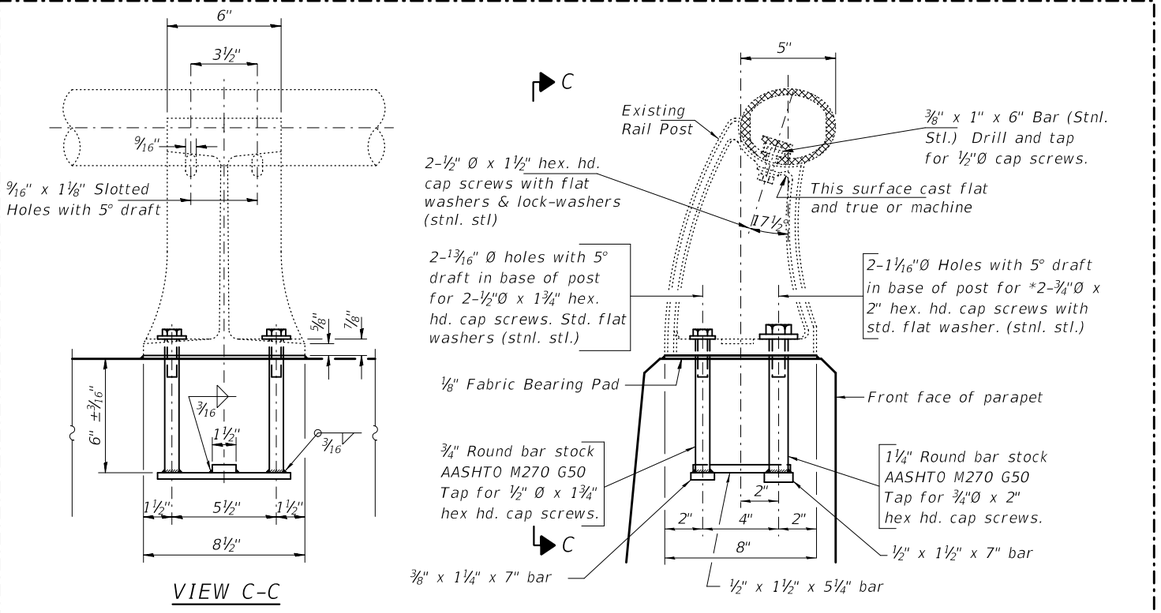


SECTION THRU BRIDGE PARAPET



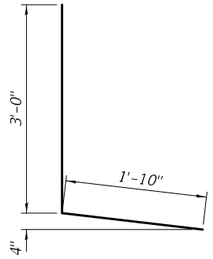
SECTION THRU ABUTMENT AT APPROACH

1

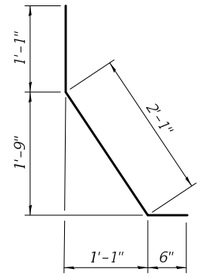


RAIL POST ANCHORAGE DEVICE DETAILS

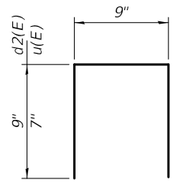
New Rail Post Anchorage Devices will be required at locations where posts are connected to new concrete. Relocate post as necessary to miss joint openings. Cost to be included with Concrete Removal. (8-Required)



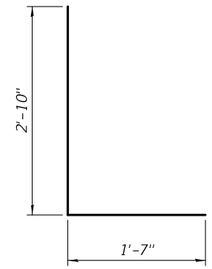
BARS d(E)



BAR d1(E)



BARS d2(E) & u(E)



BAR d3(E)

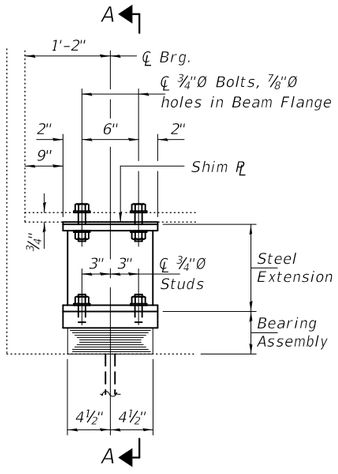
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	24	#6	6'-0"	
a1(E)	8	#5	22'-11"	
a2(E)	8	#5	22'-6"	
a3(E)	8	#5	28'-6"	
a4(E)	8	#5	23'-3"	
a5(E)	8	#5	26'-1"	
a6(E)	8	#5	25'-3"	
a7(E)	8	#5	27'-9"	
a8(E)	8	#5	26'-9"	
d(E)	59	#4	4'-10"	
d1(E)	23	#5	3'-8"	
d2(E)	16	#4	2'-3"	
d3(E)	18	#5	4'-5"	
h1(E)	4	#6	24'-0"	
h2(E)	4	#6	23'-4"	
h3(E)	4	#6	29'-0"	
h4(E)	4	#6	27'-11"	
u(E)	176	#4	1'-11"	
Concrete Removal			Cu. Yd.	71.6
Concrete Superstructure			Cu. Yd.	71.6
Reinforcement Bars, Epoxy Coated			Pound	3130

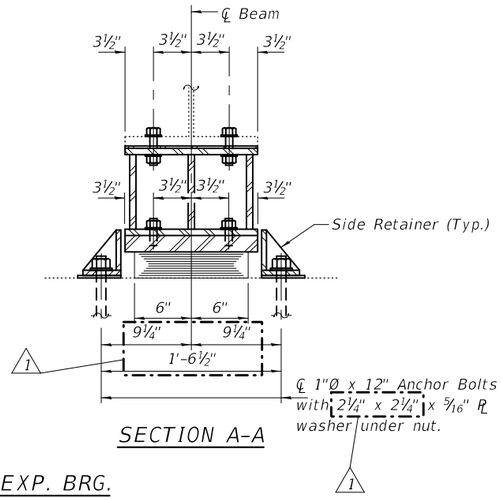
DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - VHV	ENGINEER OF STRUCTURAL SERVICES	REVISED 1 05/28/2021 ATH	
DRAWN - Jim Ostermann daburdell	PASSED	REVISED -	JOINT REPLACEMENT DETAILS SN 072-0111
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES		SHEET NO. 13 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	61F
		CONTRACT NO. 68E52		
	ILLINOIS	FED. AID PROJECT		

1 REVISED 6/1/21



ELEVATION AT ABUTMENT



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

R℄	(K)	33.2
R℄	(K)	42.0
Imp.	(K)	11.0
R (Total)	(K)	86.2

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

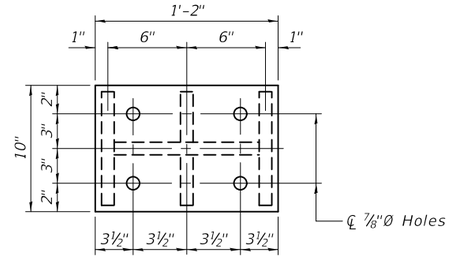
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 45 Tons.

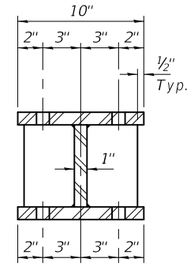
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

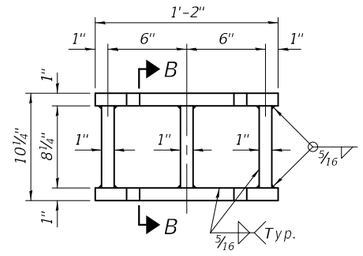
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN TOP AND BOTTOM PLATE



SECETION B-B

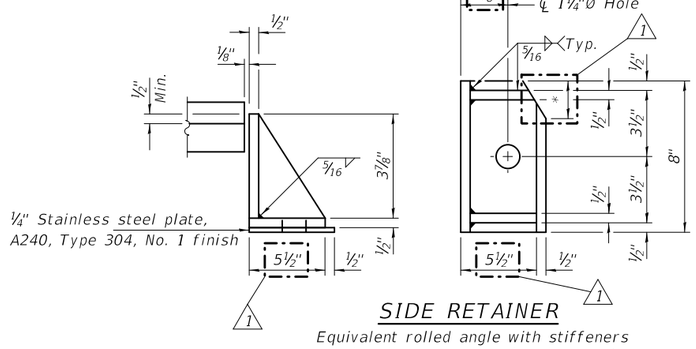


STEEL EXTENSION DETAIL

BEARING ASSEMBLY

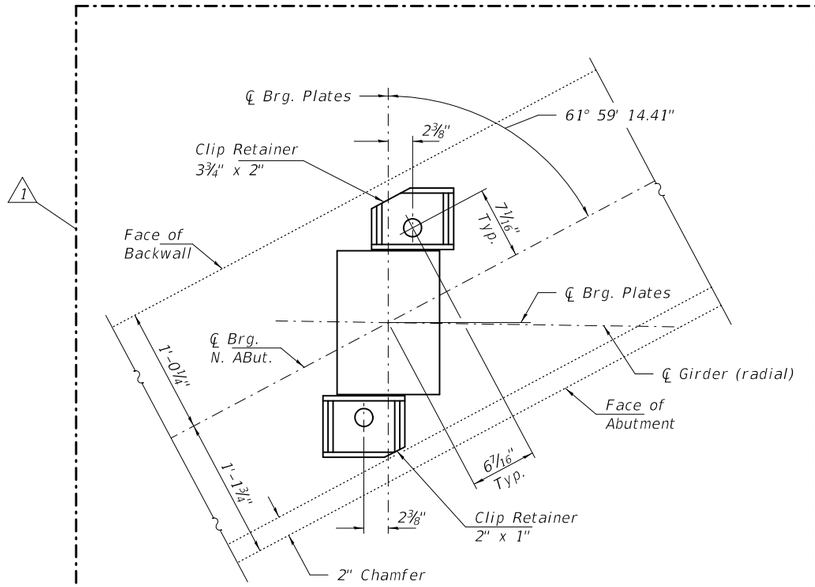
Note:

Shim plates shall not be placed under Bearing Assembly.

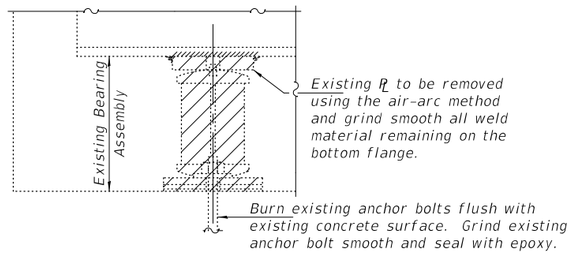


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ANCHOR BOLT LOCATION PLAN



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

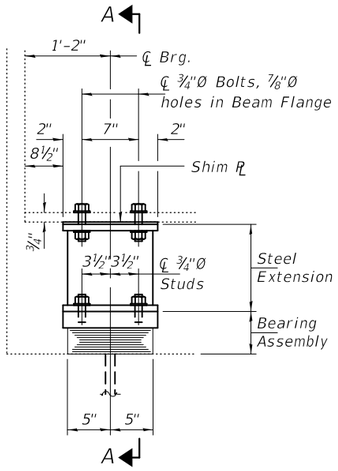
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	1030
Anchor Bolts, 1"Ø	Each	12

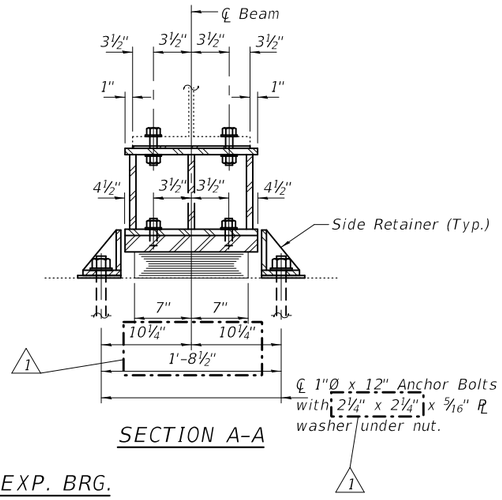
TYI/REPS 5-17-2018

DESIGNED - ATH	EXAMINED		DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - N. ABUT. SN 072-0111	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV		ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	61H
DRAWN - Jim Ostermann daburdell	PASSED		REVISED 1 05/28/2021 ATH		SHEET NO. 15 OF 19 SHEETS			CONTRACT NO. 68E52		
CHECKED - ATH VHV		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21



ELEVATION AT ABUTMENT



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

R℘	(K)	44.2
R℄	(K)	42.8
Imp.	(K)	11.1
R (Total)	(K)	98.1

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

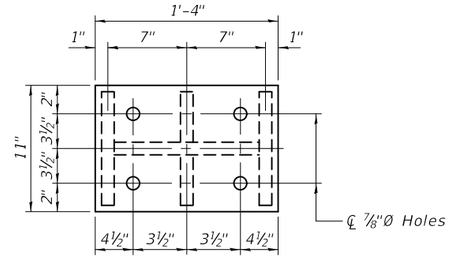
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 35 Tons.

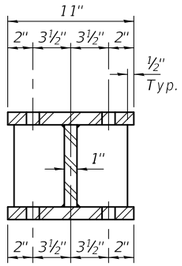
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

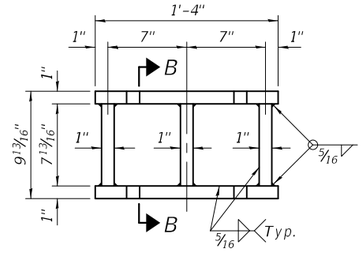
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN TOP AND BOTTOM PLATE



SECETION B-B

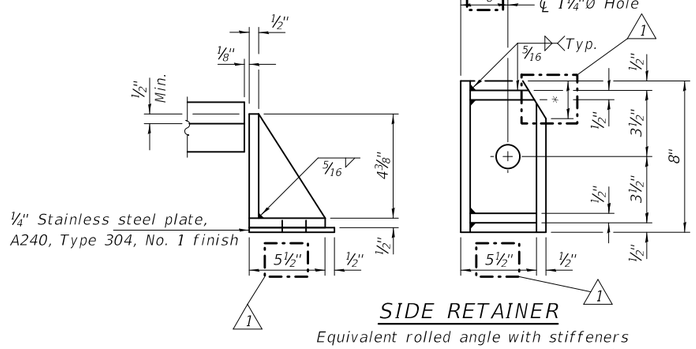


STEEL EXTENSION DETAIL

BEARING ASSEMBLY

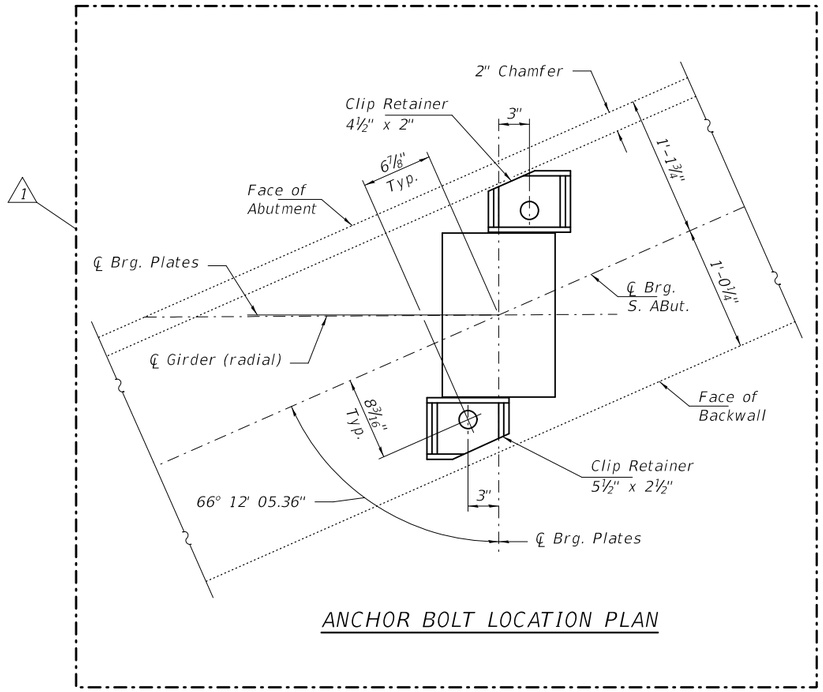
Note:

Shim plates shall not be placed under Bearing Assembly.

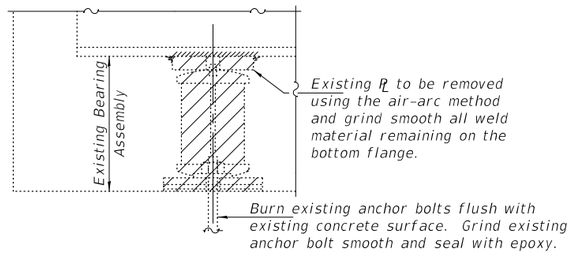


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ANCHOR BOLT LOCATION PLAN



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

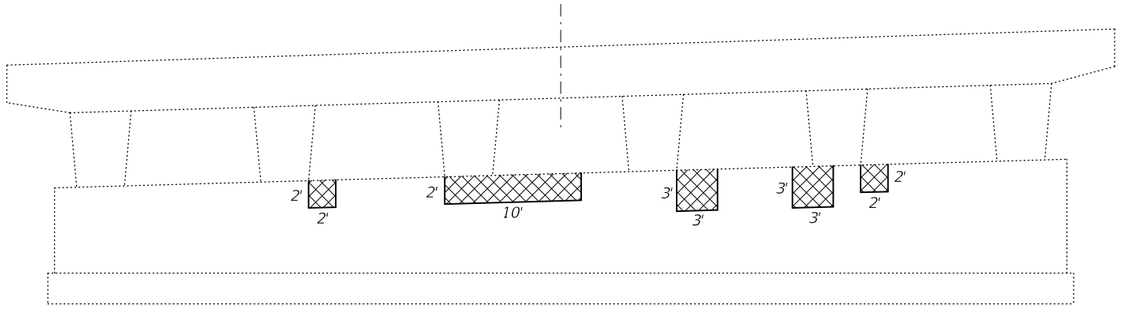
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	1190
Anchor Bolts, 1"Ø	Each	12

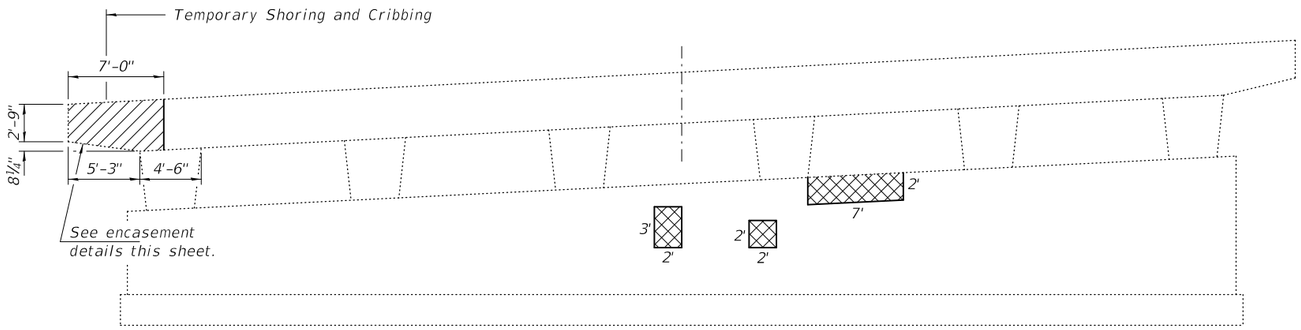
TYI/REPS 5-17-2018

DESIGNED - ATH	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - S. ABUT. SN 072-0111	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED 1 05/28/2021 ATH		SHEET NO. 16 OF 19 SHEETS	474	72(1HB,HB-1,2,3)BR	PEORIA	63	61i
DRAWN - Jim Ostermann daburdell			REVISED -					CONTRACT NO. 68E52		
CHECKED - ATH VHV								ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21

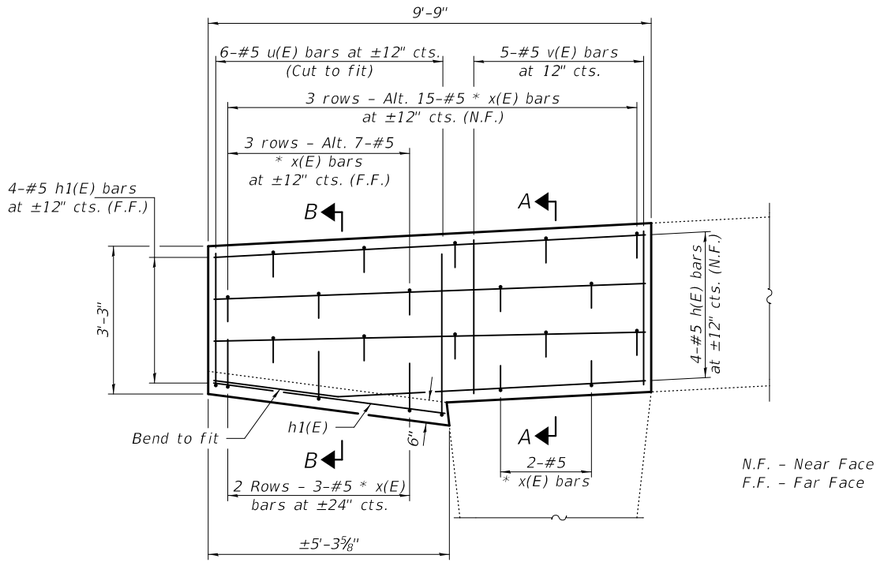


PIER 1
(Looking West)



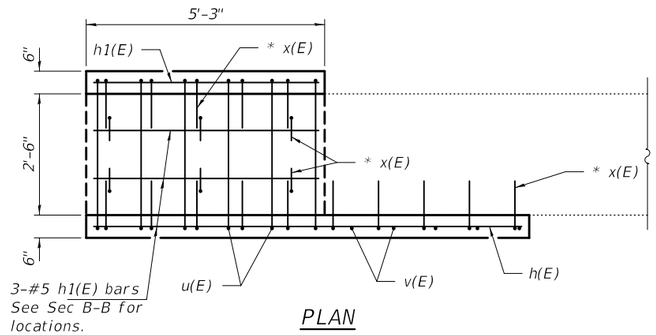
PIER 2
(Looking West)

1
Entire sheet revised.



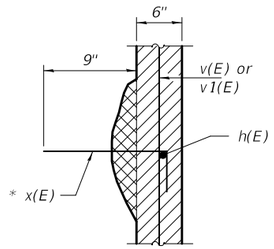
ELEVATION

N.F. - Near Face
F.F. - Far Face



PLAN

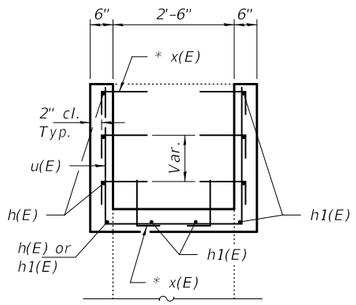
* Epoxy grout n(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.



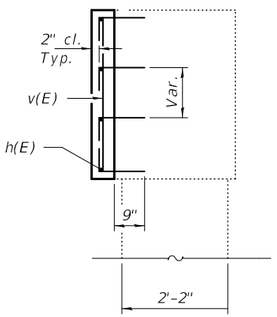
REPAIR DETAIL

Concrete in this area to be paid as Concrete Structures.

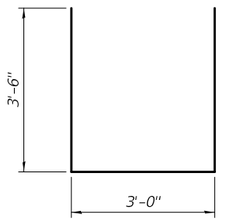
Concrete in this area is included with Structural Repair of Concrete (Depth ≤ 5").



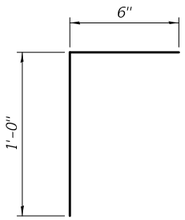
SEC B-B



SEC A-A



BAR u(E)



BAR x(E)

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h(E)	4	#5	9'-5"	
	h1(E)	7	#5	4'-11"	
	u(E)	6	#5	10'-0"	
	v(E)	5	#5	3'-4"	
	x(E)	30	#5	1'-6"	
	Concrete Structures			Cu. Yd.	1.4
	Reinforcement Bars, Epoxy Coated			Pound	200
**	Structural Repair of Concrete (Depth ≤ 5")			Sq. Ft.	160
	Temporary Shoring and Cribbing			Each	1

** Includes a 50% contingency.

DESIGNED - ATH	EXAMINED	Timothy A. Ballot	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUBSTRUCTURE CONCRETE REPAIR DETAILS - PIERS SN 072-0111
CHECKED - VHV		ENGINEER OF STRUCTURAL SERVICES			SHEET NO. 18 OF 19 SHEETS
DRAWN - Jim Ostermann daburdell	PASSED	J. Carl Piney	REVISED 1 05/28/2021 ATH		
CHECKED - ATH VHV		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	61K
		CONTRACT NO. 68E52		
		ILLINOIS FED. AID PROJECT		

1 REVISED 6/1/21