11-18-2022 LETTING ITEM 058

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE OVERLAY 2023-4	FRANKLIN	24	1
	ILLINOIS	CONTRACT NO. 78930		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

F.A.I. ROUTE 57 (I–57)
SECTION D9 BRIDGE OVERLAY 2023–4
PROJECT NHPP–GF12(580)
BRIDGE REPAIRS
FRANKLIN COUNTY

C–99–036–22

FOR INDEX OF SHEETS, SEE SHEET NO. 3
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4–5

TRAFFIC DATA

WEST WEBSTER ST.
2019 ADT = 1,200
WITH 3% TRUCKS

I-57
2021 ADT TWO WAY = 40,000
WITH 39% TRUCKS

NB FAI 57 RAMP TO IL 14
2021 ADT = 2,500
WITH 12% TRUCKS

IL 14 TO SB FAI 57 RAMP
2021 ADT = 2,750
WITH 9% TRUCKS

TOWNSHIPS

BENTON (SN 028-0063)

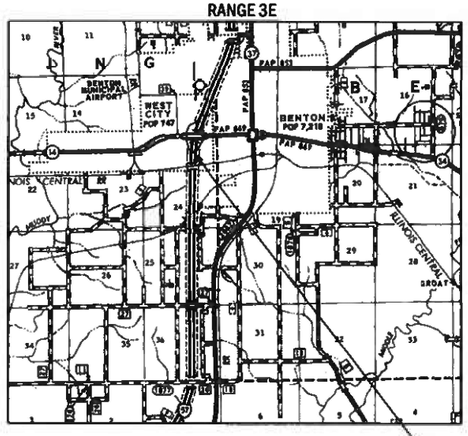
POSTED SPEED : 25 MPH

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

PROJECT ENGINEER: GRANT DETERDING
PROJECT DESIGNER: BRANDON HENK

CONTRACT NO. 78930

RANGE 3E

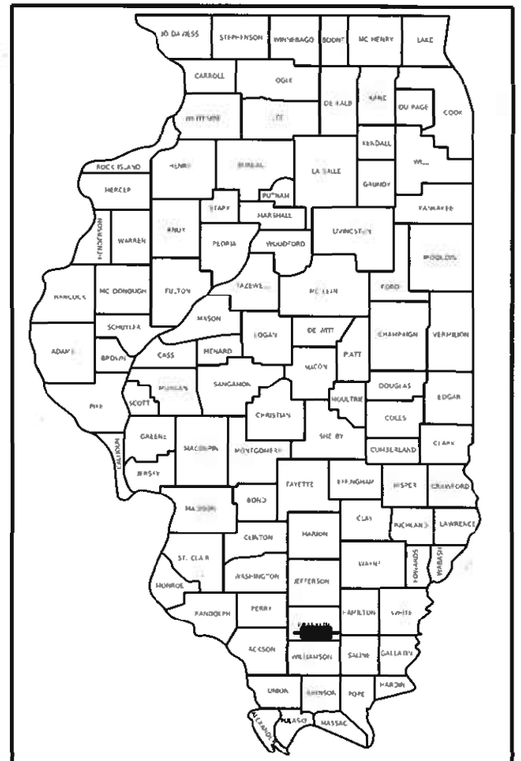


TOWNSHIP 6S

REPAIR LOCATION
STRUCTURE 028-0063
WEST WEBSTER ST. OVER I-57

GROSS LENGTH = 285.00 FT. = 0.054 MILE
NET LENGTH = 285.00 FT. = 0.054 MILE

D-99-024-22



LOCATION OF SECTION INDICATED THUS: –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 22 2022
Kirk H. Brown
REGION FIVE ENGINEER
October 14, 2022
ENGINEER OF DESIGN AND ENVIRONMENT
October 14, 2022
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

Prepared By: Charles Steiss
DISTRICT STUDIES & PLANS ENGINEER

Examined By:
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By:
DISTRICT OPERATIONS ENGINEER

Examined By:
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By:
DISTRICT CONSTRUCTION ENGINEER

Examined By:
DISTRICT MATERIALS ENGINEER

MODEL: $MODELNAME$
FILE NAME: $FILES$

USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = $SCALES$	CHECKED -	REVISED -	
PLOT DATE = $DATES$	DATE -	REVISED -	

SIGNATURES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	-	FRANKLIN	24	2
		CONTRACT NO. 78930		
	ILLINOIS FED. AID PROJECT			

D9 Bridge Overlay 2023-4

GENERAL NOTES

1) FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT MIX ASPHALT	2.016 TONS/CU YD
BITUMINOUS MATERIALS: ON PAVEMENT	0.05 LB/SQ FT

COMMITMENTS

NONE

MIXTURE REQUIREMENTS

The following HMA mixture requirements are applicable for this project:

Location(s):	Hot-Mix Asphalt Surface Course (Butt Joint)
Mixture Use(s):	Hot-Mix Asphalt Surface Course, Mix C, N70
AC/PG:	PG64-22
ABR % (Max):	Article 1031.06
Design Air Voids:	4.0 %, 70 Gyration Design
Mixture Composition: (Gradation Mixture)	IL-9.5 mm
Friction Aggregate:	C Surface
Mixture Weight:	112 lbs/Sq. Yd/in
Quality Management Program:	QCQA
Sublot Size:	N/A
Material Transfer Device (Required?)	No

INDEX OF SHEETS

STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701901-08	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
B.L.R 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
701400-11	APPROACH TO LANE CLOSURE FREEWAY/ EXPRESSWAY
701401-13	LANE CLOSURE FREEWAY/ EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/ EXPRESSWAY
701446-11	TWO LANE CLOSURE, FREEWAY/ EXPRESSWAY
701451-05	RAMP CLOSURE FREEWAY/ EXPRESSWAY
001001-02	AREAS OF REINFORCEMENT BARS
420001-10	PAVEMENT JOINTS

REV. - MS

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	DRAWN - _____	REVISED - _____
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PLOT DATE = 9/26/2022	DATE - _____	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS, STANDARDS, AND COMMITMENTS

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	3
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

SUMMARY OF QUANTITIES

COUNTY:	FRANKLIN
ROUTE:	FAI 57
FUNDING:	90% FEDERAL; 10% STATE
LOCATION:	SN 028-0063

CODE NUMBER	ITEM DESCRIPTION	UNIT	CONSTRUCTION CODE 0013
			RURAL
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	104
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ YD	202
40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70	TON	23
50102400	CONCRETE REMOVAL	CU YD	9.6
50157300	PROTECTIVE SHIELD	SQ YD	517
50300255	CONCRETE SUPERSTRUCTURE	CU YD	10.6
50300260	BRIDGE DECK GROOVING	SQ YD	802
50300300	PROTECTIVE COAT	SQ YD	850
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1,820
50500505	STUD SHEAR CONNECTORS	EACH	24
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,360
52000110	PREFORMED JOINT STRIP SEAL	FOOT	73
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12
52100520	ANCHOR BOLTS, 1"	EACH	24

REV. - MS

MODEL: $MODELNAME$
FILE NAME: $FILE$

USER NAME = $USER$	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = $SCALE$	CHECKED - _____	REVISED - _____
PLOT DATE = $DATE$	DATE - _____	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	4
		CONTRACT NO. 78930		
	ILLINOIS FED. AID PROJECT			

*D9 Bridge Overlay 2023-4

SUMMARY OF QUANTITIES - CONT

COUNTY:	FRANKLIN
ROUTE:	FAI 57
FUNDING:	90% FEDERAL; 10% STATE
LOCATION:	SN 028-0063

	CODE NUMBER	ITEM DESCRIPTION	UNIT	CONSTRUCTION CODE 0013
				RURAL
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4
	67100100	MOBILIZATION	L SUM	1
	70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	4
	70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1
	70100815	TRAFFIC CONTROL AND PROTECTION, STANDARD 701446	L SUM	1
	70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1
	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	112
	70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	730
	X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
	Z0001800	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SQ YD	4
	Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	12
	Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	802
	Z0012164	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/2"	SQ YD	802
	Z0015802	PLUG EXISTING DECK DRAINS	EACH	10

* SPECIALTY ITEM

MODEL: $MODELNAME$
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USER NAME = $USER$	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = $SCALE$	CHECKED - _____	REVISED - _____
PLOT DATE = $DATE$	DATE - _____	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	5
		CONTRACT NO. 78930		
	ILLINOIS FED. AID PROJECT			

*D9 Bridge Overlay 2023-4

PAVEMENT MARKING SCHEDULE									
STATION						NOTES	PAINT PAVEMENT MARKING - LINE 4"		
							SOILD WHITE	WHITE SKIP DASH	SOLID YELLOW
SN 028-0063							FOOT	FOOT	FOOT
8+03.50	RT	TO	11+68.50	RT		ALONG CENTERLINE			365
8+03.50	LT	TO	11+68.50	LT		ALONG CENTERLINE			365
SUBTOTAL									730
TOTAL							730		

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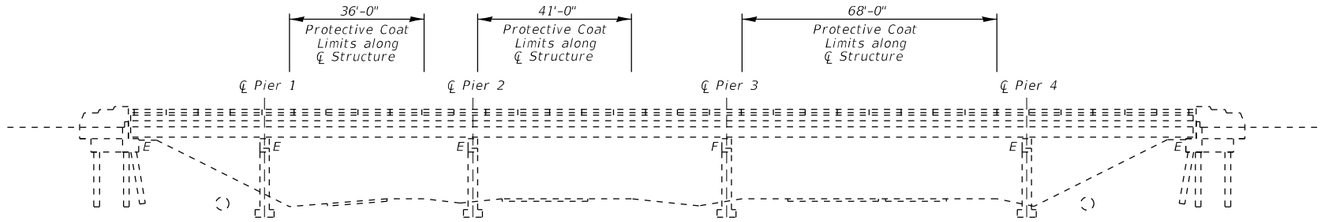
	DRAWN -	REVISED -	
PLOT SCALE = $SCALE$	CHECKED -	REVISED -	
PLOT DATE = $DATE$	DATE -	REVISED -	

SCHEDULES

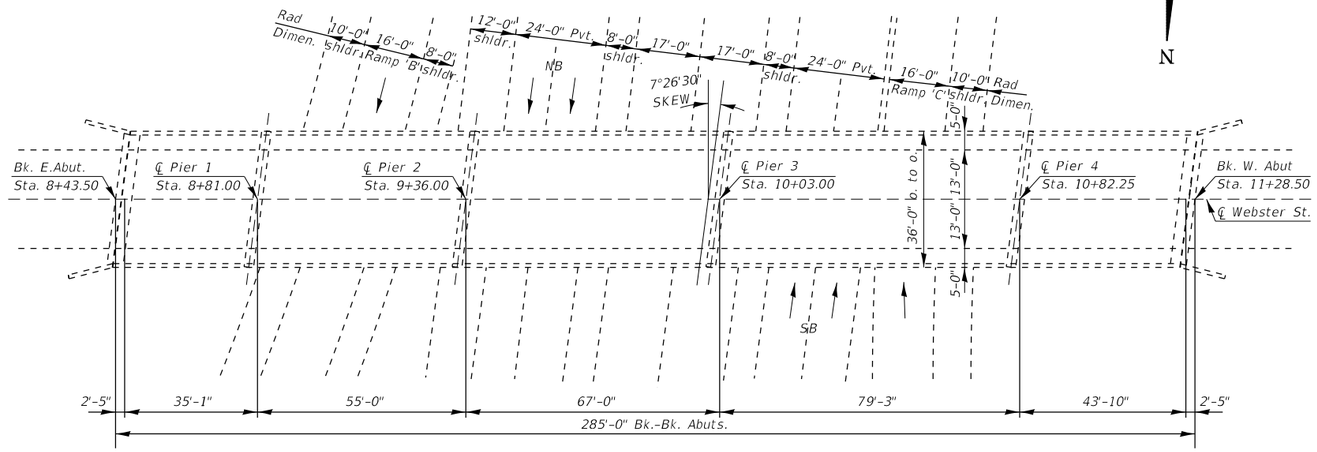
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	6
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

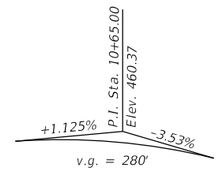
*D9 Bridge Overlay 2023-4



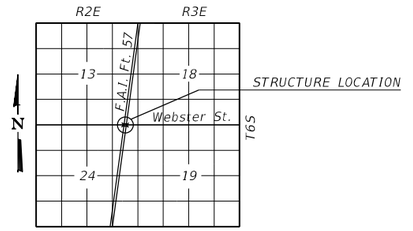
ELEVATION



PLAN



PROFILE WEBSTER ST.



LOCATION MAP

GENERAL NOTES

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.

In addition to the requirements of article 107.16 the contractor shall protect the surface of all bridge decks and bridge approach pavements in a manner satisfactory to the engineer before any equipment is allowed to cross the structure. Protection shall be provided for all equipment as defined in article 101.16 regardless if track mounted or wheeled.

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.

The cost of any saw cuts made to complete the work as described in plan details shall not be paid for separately but shall be included in the various pay items involved.

Protective coat shall be applied to all new concrete surfaces on concrete overlay and at joints. Seasonal limits for application shall not apply.

Synthetic Fibers shall be added to the Bridge Deck Microsilica Concrete Overlay, see Special Provisions. The cost of Synthetic Fibers shall be included in the cost of Bridge Deck Microsilica Concrete Overlay.

Reinforcement bars designated (E) shall be epoxy coated.

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

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.

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

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

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

	UNIT	QUANTITY
Bituminous Materials (Tack Coat)	Pound	104
PCC Surface Removal - Butt Joint	Sq. Yd.	202
Hot-Mix Asphalt Surface Course, IL-9.5, Mix "C", N70	Ton	23
* Protective Coat	Sq. Yd.	850
Concrete Removal	Cu. Yd.	9.6
Concrete Superstructure	Cu. Yd.	10.6
Bridge Deck Grooving	Sq. Yd.	802
Furnishing and Erecting Structural Steel	Pound	1820
Stud Shear Connectors	Each	24
Reinforcement Bars, Epoxy Coated	Pound	1360
Preformed Joint Strip Seal	Foot	73
Elastomeric Bearing Assembly, Type I	Each	12
Anchor Bolts, 1"	Each	24
Paint Pavement Marking - Line 4"	Foot	730
Approach Slab repair (Partial Depth)	Sq. Yd.	4
Jack and Remove Existing Bearings	Each	12
Bridge Deck Scarification, ¾"	Sq. Yd	802
Bridge Deck Microsilica Concrete Overlay, 2½"	Sq. Yd.	802
Plug Existing Deck Drains	Each	10
Protective Shield	Sq. Yd.	517

* On new concrete surfaces only

DESIGN STRESSES

(From Existing Plans)
f'c = 1,400 psi Super & Sub.
vc = 75 psi. Ftgs. & Wingwalls
fs= 20,000 psi Reinf.
fs= 20,000 psi. Struct. (A-36)
n=10

SCOPE OF WORK

1. Set up traffic control B.L.R. 21-9 (Construction to be done under Road Closure)
2. Perform full depth joint reconstruction with strip seals at abutments.
3. Install microsilica concrete overlay using ¾" scarification; 2½" overlay.
4. Replace bearings at the abutments.
5. Perform approach slab repair.

LICENSED STRUCTURAL ENGINEER
JAYME F. SCHIFF
081-005540
STATE OF ILLINOIS

EXPIRES 11-30-2022

Jayme F. Schiff

BRIDGE REPAIRS
WEBSTER ST. OVER I-57
F.A.I. RTE 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

USER NAME = William.Porter	DESIGNED - _____	REVISED - _____	
	DRAWN - _____	REVISED - _____	
PLOT SCALE = 40.0000 ' / in.	CHECKED - _____	REVISED - _____	
PLOT DATE = 9/26/2022	DATE - _____	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	7
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

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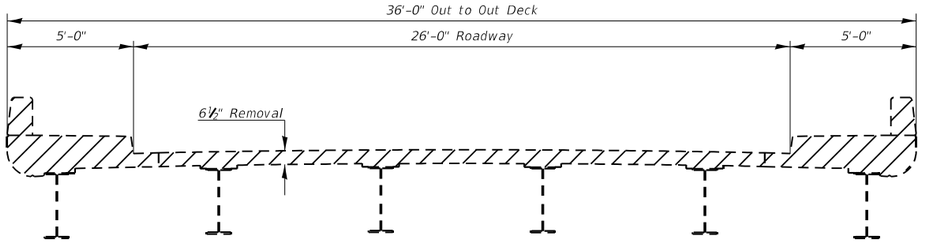
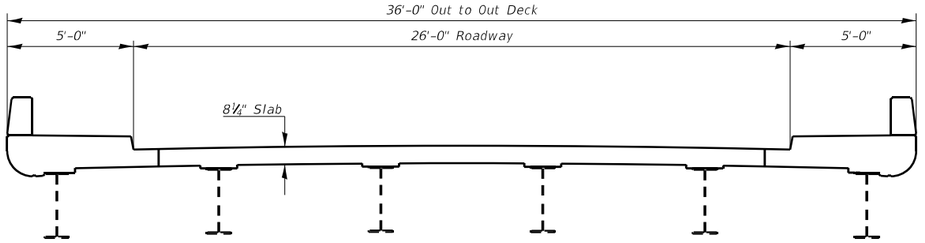
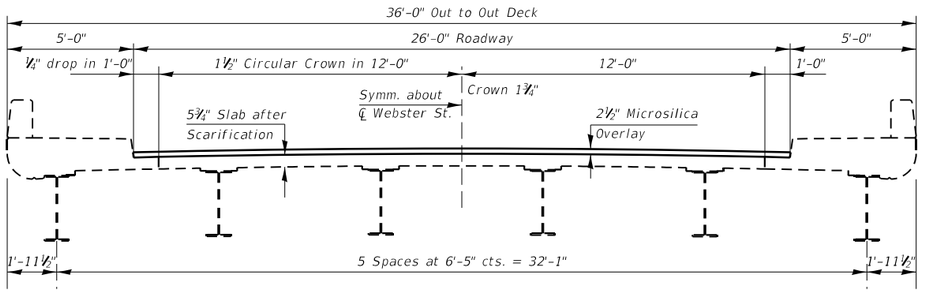


Concrete Removal at joint reconstruction

TYPICAL CROSS SECTION - REMOVAL AT JOINT



TYPICAL CROSS SECTION - CONSTRUCTION AT JOINT



TYPICAL CROSS SECTION - OUTSIDE LIMITS OF JOINT

TYPICAL SECTIONS
WEBSTER ST. OVER I-57
F.A.I. RTE 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

MODEL: $MODELNAME$
FILE NAME: $FILE$

USER NAME = $USER$	DESIGNED - _____	REVISED - _____	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
	DRAWN - _____	REVISED - _____	
PLOT SCALE = $SCALE$	CHECKED - _____	REVISED - _____	
PLOT DATE = $DATE$	DATE - _____	REVISED - _____	

TYPICAL SECTIONS

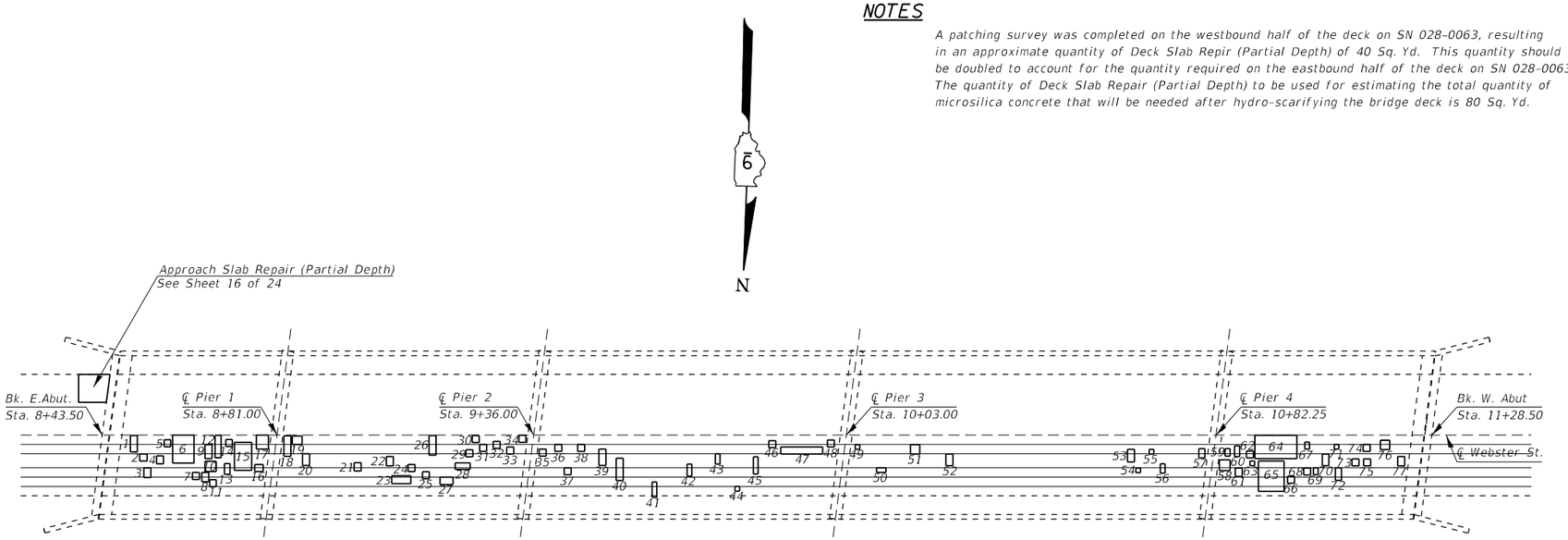
SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	8
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

NOTES

A patching survey was completed on the westbound half of the deck on SN 028-0063, resulting in an approximate quantity of Deck Slab Repir (Partial Depth) of 40 Sq. Yd. This quantity should be doubled to account for the quantity required on the eastbound half of the deck on SN 028-0063. The quantity of Deck Slab Repair (Partial Depth) to be used for estimating the total quantity of microsilica concrete that will be needed after hydro-scarifying the bridge deck is 80 Sq. Yd.



WESTBOUND LANE PATCHING SURVEY

WESTBOUND LANE DECK SLAB REPAIR (PARTIAL DEPTH) FOR INFORMATION ONLY

PATCH NO.	DIST. FROM ℄	LENGTH	WIDTH	AREA
1	0'	1.5'	3.5'	6 Sq Ft
2	4'	1.6'	1.5'	3 Sq Ft
3	7'	1.5'	2.1'	3 Sq Ft
4	5'	1.5'	1.7'	3 Sq Ft
5	1'	1.4'	1.5'	2 Sq Ft
6	0'	4.6'	6.0'	28 Sq Ft
7	8'	1.5'	1.5'	2 Sq Ft
8	8'	1.5'	2.0'	3 Sq Ft
9	2'	1.5'	3.0'	4 Sq Ft
10	7'	2.4'	2.2'	5 Sq Ft
11	9'	1.5'	1.5'	2 Sq Ft
12	0'	1.3'	4.8'	7 Sq Ft
13	6'	1.2'	1.3'	2 Sq Ft
14	1'	1.5'	1.5'	2 Sq Ft
15	1.5'	3.7'	6.0'	22 Sq Ft
16	5'	1.8'	1.5'	3 Sq Ft
17	0'	2.6'	3.0'	8 Sq Ft
18	0'	1.5'	4.4'	7 Sq Ft
19	0'	2.2'	1.8'	4 Sq Ft
20	4'	1.5'	2.5'	4 Sq Ft
21	6'	1.5'	1.8'	3 Sq Ft
22	4.5'	1.5'	2.0'	3 Sq Ft
23	8.5'	4.1'	1.7'	7 Sq Ft
24	6.5'	1.5'	1.5'	2 Sq Ft
25	8'	1.5'	1.5'	2 Sq Ft
26	0'	1.5'	4.2'	6 Sq Ft
27	9'	2.8'	1.6'	5 Sq Ft
28	5.5'	3.2'	1.4'	5 Sq Ft
29	3'	1.5'	1.5'	2 Sq Ft
30	0'	1.5'	1.5'	2 Sq Ft
31	2'	1.5'	1.5'	2 Sq Ft
32	1.5'	1.5'	1.5'	2 Sq Ft
33	2.5'	1.5'	1.5'	2 Sq Ft
34	0'	1.5'	1.5'	2 Sq Ft
35	3'	1.5'	1.5'	2 Sq Ft
36	2'	1.5'	1.5'	2 Sq Ft
37	7'	1.5'	1.5'	2 Sq Ft
38	2'	1.5'	1.5'	2 Sq Ft
39	3'	1.5'	3.5'	6 Sq Ft
40	4.5'	1.5'	4.8'	7 Sq Ft
41	8'	1.0'	3.3'	3 Sq Ft
42	6'	1.0'	2.6'	3 Sq Ft
43	4'	1.0'	2.2'	2 Sq Ft
44	11'	1.0'	1.0'	1 Sq Ft
45	5'	1.0'	3.7'	4 Sq Ft
46	1'	1.5'	1.5'	2 Sq Ft
47	3'	2.0'	1.5'	3 Sq Ft
48	1'	1.5'	1.5'	2 Sq Ft
49	2'	1.0'	1.0'	1 Sq Ft
50	7'	2.0'	1.0'	2 Sq Ft
51	2'	2.0'	2.0'	4 Sq Ft
52	4'	1.5'	2.5'	4 Sq Ft
53	3'	1.5'	2.7'	4 Sq Ft
54	7'	1.0'	1.0'	1 Sq Ft
55	3'	1.0'	1.0'	1 Sq Ft
56	6'	1.0'	2.0'	2 Sq Ft
57	3'	1.3'	2.0'	3 Sq Ft
58	5'	2.3'	2.3'	5 Sq Ft
59	3'	1.1'	1.6'	2 Sq Ft
60	3'	1.1'	2.3'	3 Sq Ft
61	7'	1.5'	1.8'	3 Sq Ft
62	4'	1.5'	1.5'	2 Sq Ft
63	5'	1.0'	1.0'	1 Sq Ft
64	0'	9.0'	5.0'	45 Sq Ft
65	5'	5.5'	6.5'	36 Sq Ft
66	8'	1.5'	1.5'	2 Sq Ft
67	1.5'	1.0'	1.5'	2 Sq Ft
68	7'	1.5'	1.5'	2 Sq Ft
69	7'	1.0'	1.5'	2 Sq Ft
70	4'	1.4'	2.5'	4 Sq Ft
71	2'	1.0'	1.0'	1 Sq Ft
72	7'	1.3'	2.6'	4 Sq Ft
73	5'	1.5'	1.5'	2 Sq Ft
74	2.5'	1.5'	1.5'	2 Sq Ft
75	5'	1.5'	1.5'	2 Sq Ft
76	1'	2.0'	2.0'	4 Sq Ft
77	4.5'	1.5'	2.0'	3 Sq Ft
			SUBTOTAL	355 Sq Ft
			WESTBOUND LANE TOTAL	40 Sq Yd

DECK SLAB REPAIR
WEBSTER ST. OVER I-57
F.A.I. RTE 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

MODEL: Default
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USER NAME = William.Porter	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = 30.0000 ' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 9/26/2022	DATE - _____	REVISED - _____

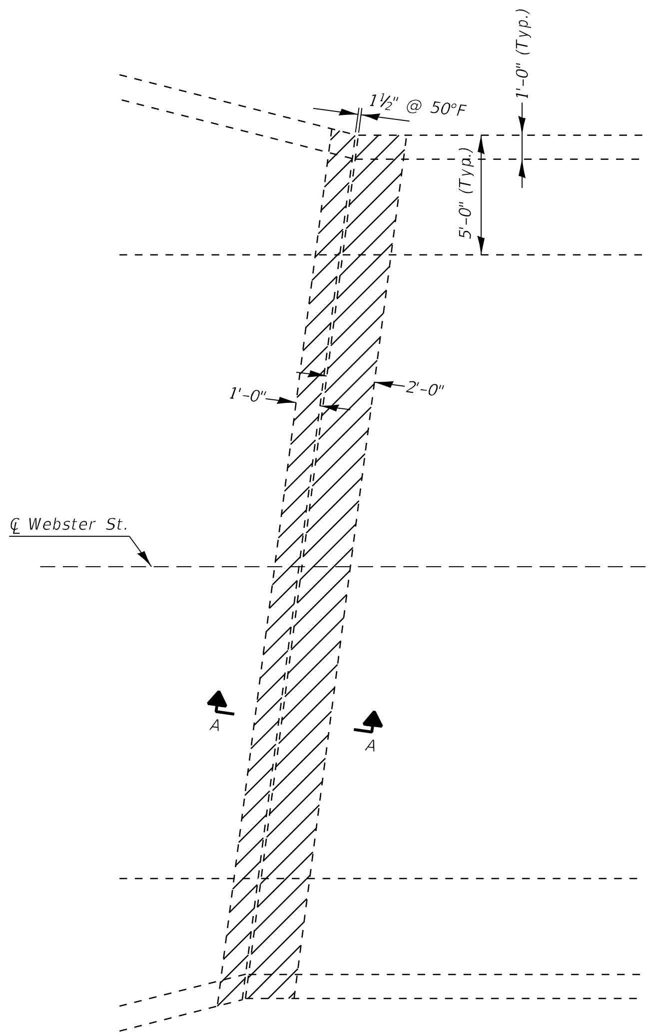
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

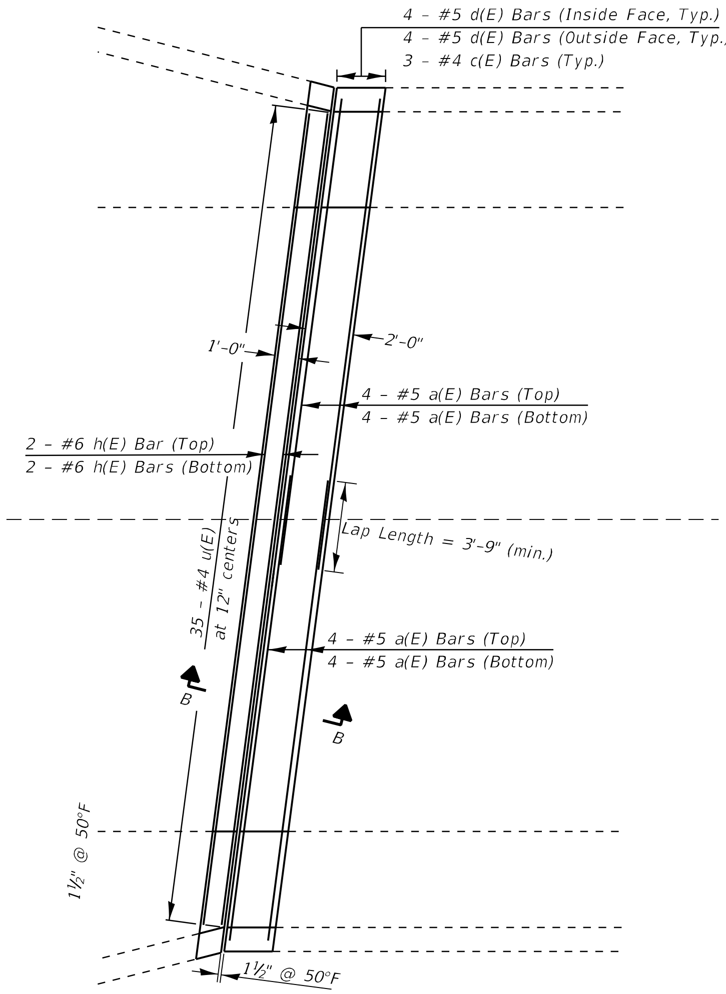
DECK SLAB REPAIR

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	9
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

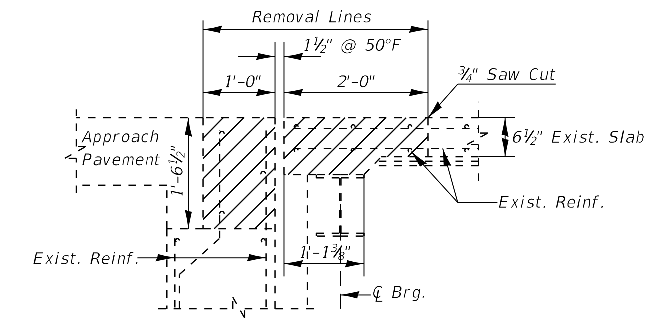
*D9 Bridge Overlay 2023-4



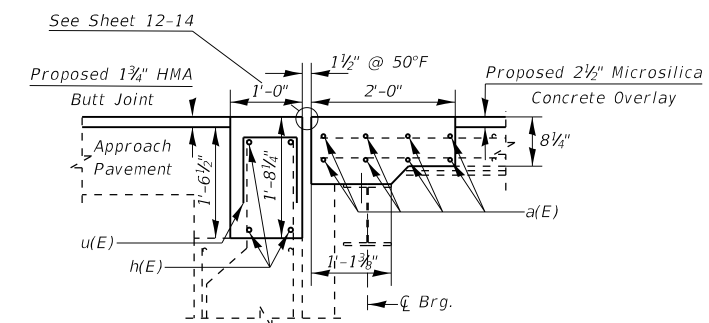


JOINT @ ABUTMENTS
SHOWING CONCRETE REMOVAL

JOINT @ ABUTMENTS
SHOWING NEW CONCRETE



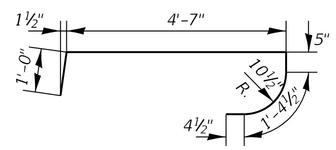
SECTION A-A



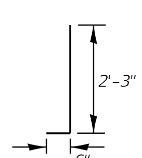
SECTION B-B

BILL OF MATERIAL
(TWO ABUTMENTS)

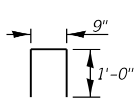
Bar	No.	Size	Length	Shape
a(E)	32	#5	19'-8"	
c(E)	12	#4	7'-9"	
d(E)	32	#5	2'-9"	
h(E)	8	#6	34'-1"	
u(E)	70	#4	2'-9"	
Concrete Removal			Cu. Yd.	9.6
Concrete Superstructure			Cu. Yd.	10.6
Stud Shear Connectors			Each	24
Reinforcement Bars, Epoxy Coated			Pound	1360



c(E)



d(E)



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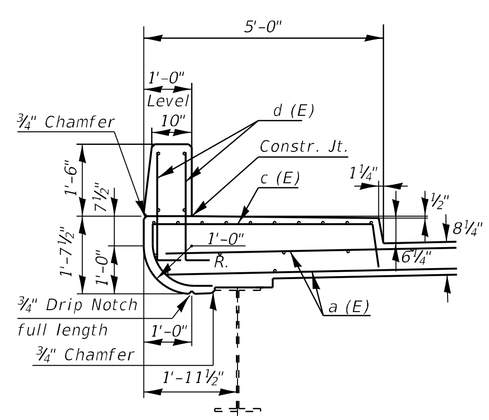
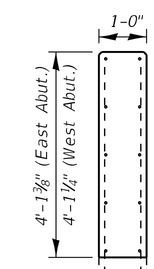


CURB DETAIL @ ABUTMENTS



SECTION THROUGH
WING WALL

JOINT RECONSTRUCTION DETAILS
WEBSTER ST. OVER I-57
F.A.I. RTE 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

USER NAME = William.Porter	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 8.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 9/26/2022	DATE -	REVISED -	

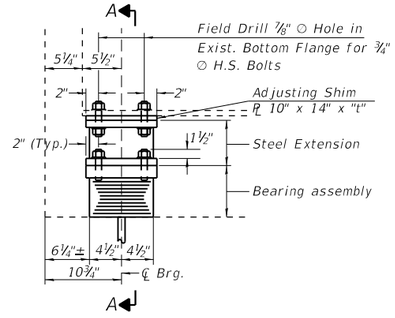
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT RECONSTRUCTION DETAILS
AT ABUTMENTS

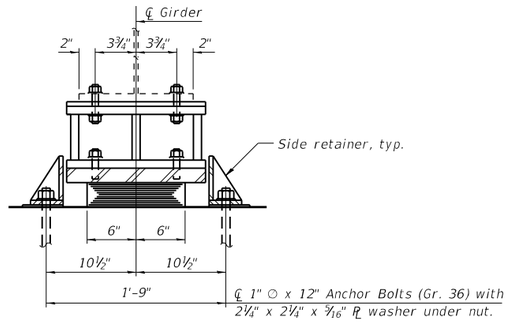
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	10
		CONTRACT NO. 78930		
		ILLINOIS FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

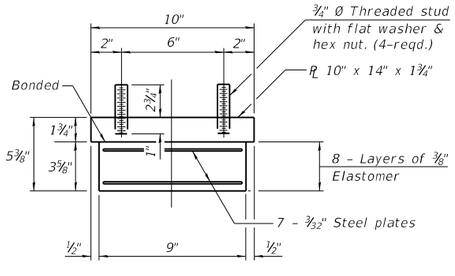


ELEVATION AT ABUT.



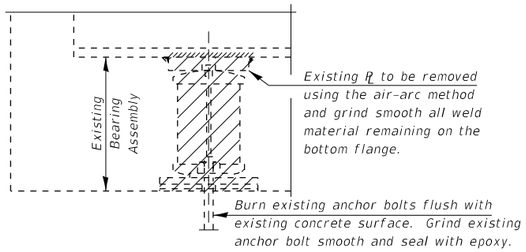
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



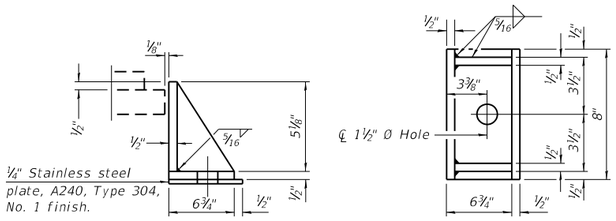
BEARING ASSEMBLY

Note:
Shim plates shall not be placed under bearing assembly.



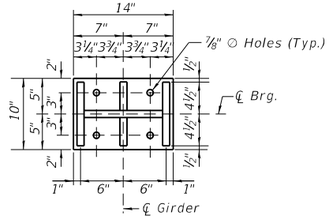
EXISTING BEARING REMOVAL DETAIL

Cost included in Jack and Remove Existing Bearings.

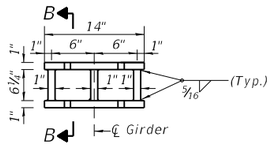


SIDE RETAINER

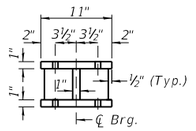
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



PLAN - TOP AND BOTTOM PLATE



STEEL EXTENSION DETAIL



SECTION B-B

Notes:

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 = 15 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.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

VALUE OF "t"

Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
⅜"	7/16"	⅛"	0	0	0

GIRDER REACTIONS

	E. Abut.
R DL	7.9 Kips
R SDL	5.2 Kips
R LL	29.2 Kips
R IMP	8.8 Kips
R (Total)	51.1 Kips

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	6
Anchor Bolts, 1"	Each	12
Furnishing and Eracting Structural Steel	Pound	1,010
Jack and Remove Existing Bearings	Each	6

EAST ABUTMENT BEARING DETAILS
WEBSTER ST. OVER I-57
F.A.I. RTE. 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

MODEL: Default
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USER NAME = William.Porter	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 8.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 9/26/2022	DATE -	REVISED -	

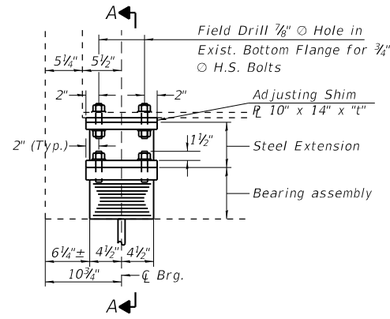
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT BEARING DETAILS

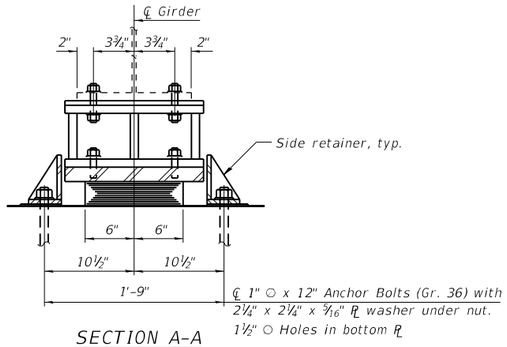
SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	11
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

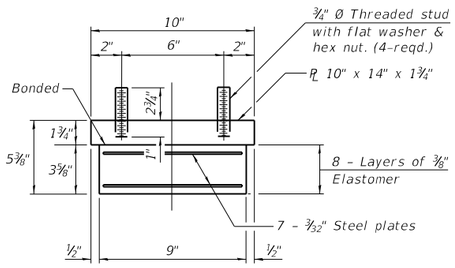


ELEVATION AT ABUT.



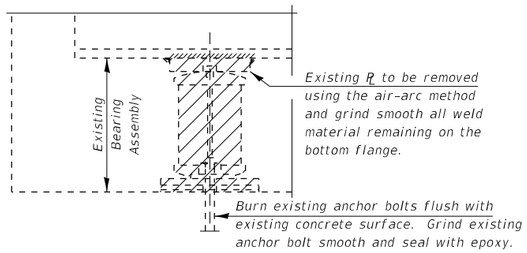
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



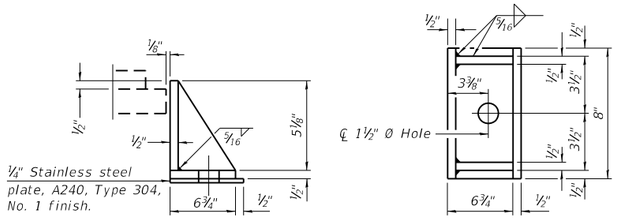
BEARING ASSEMBLY

Note:
Shim plates shall not be placed under bearing assembly.



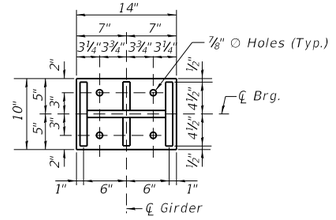
EXISTING BEARING REMOVAL DETAIL

Cost included in Jack and Remove Existing Bearings.

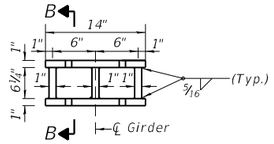


SIDE RETAINER

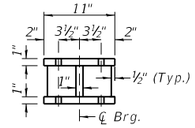
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



PLAN - TOP AND BOTTOM PLATE



STEEL EXTENSION DETAIL



SECTION B-B

Notes:

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 = 15 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.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

VALUE OF "t"

Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
⅜"	7/16"	⅛"	0	0	0

GIRDER REACTIONS

	W. Abut.
R DL	7.8 Kips
R SDL	5.9 Kips
R LL	31.2 Kips
R IMP	9.3 Kips
R (Total)	54.2 Kips

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	6
Anchor Bolts, 1"	Each	12
Furnishing and Eracting Structural Steel	Pound	1,010
Jack and Remove Existing Bearings	Each	6

WEST ABUTMENT BEARING DETAILS
WEBSTER ST. OVER I-57
F.A.I. RTE. 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

USER NAME = William.Porter	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	WEST ABUTMENT BEARING DETAILS
PLOT SCALE = 8.0000 ' / in.	CHECKED -	REVISED -	SCALE: _____ SHEET __ OF __ SHEETS STA. _____ TO STA. _____
PLOT DATE = 9/26/2022	DATE -	REVISED -	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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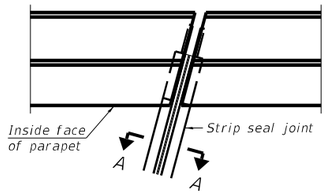
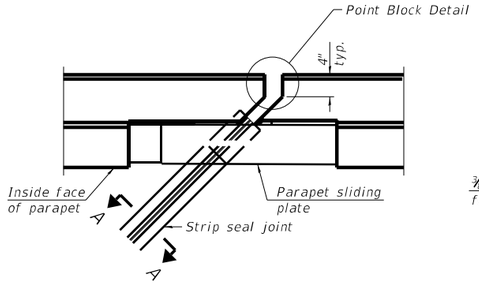
		CONTRACT NO. 78930		
		ILLINOIS FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

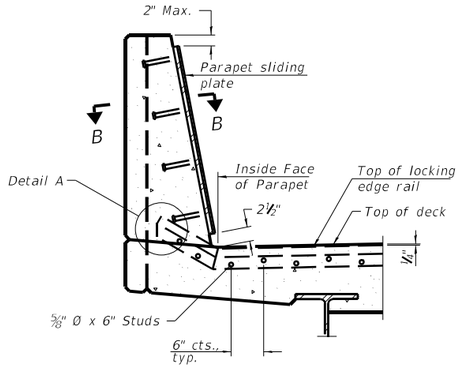


FOR SKEWS ≤ 30°



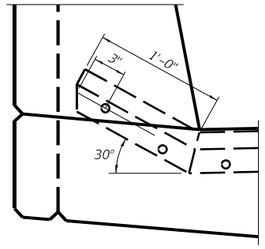
FOR SKEWS > 30°

PLAN AT PARAPET

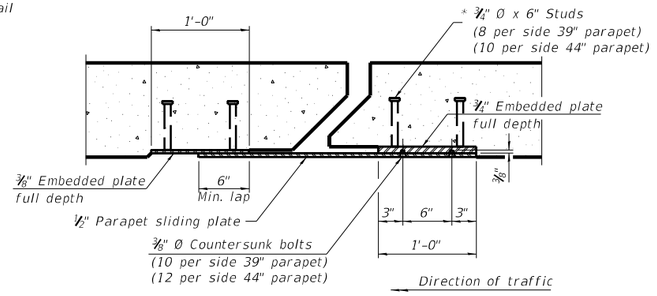


SECTION AT PARAPET

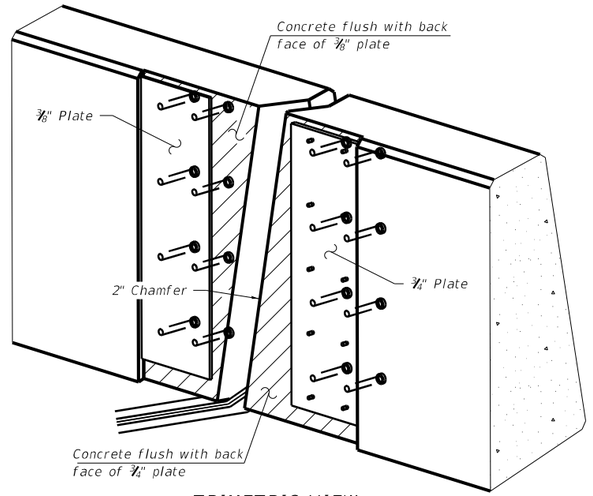
(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)



DETAIL A

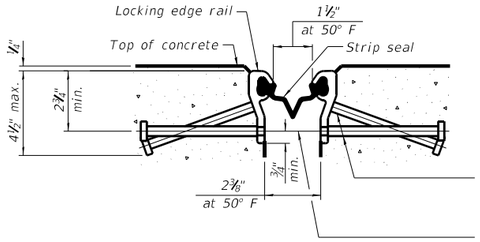


SECTION B-B

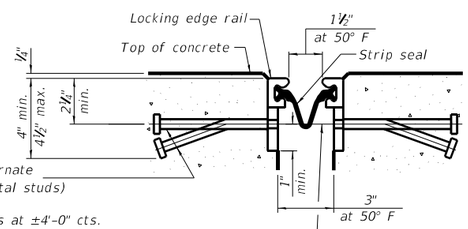


TRIMETRIC VIEW

(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT



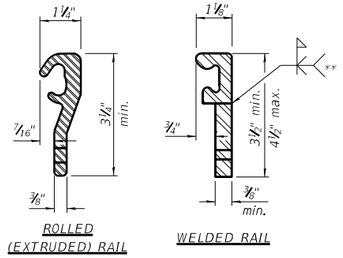
SHOWING WELDED RAIL JOINT

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

⅞" ϕ threaded rods in 7/16" ϕ 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 A-A

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

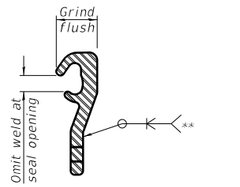


ROLLED (EXTRUDED) RAIL

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.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ½". 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.

The top surface of sidewalk sliding plates shall have a raised pattern according to ASTM A786.

Cost of parapet sliding plates, sidewalk sliding plates, embedded plates, anchorage studs, and expansion anchors 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.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	73

EJ-SS-S 1-1-2020

PREFORMED JOINT STRIP SEAL - SIDEWALK
WEBSTER ST. OVER I-57
F.A.I. RTE. 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

MODEL: SMODELNAME$
FILE NAME: SFILE$

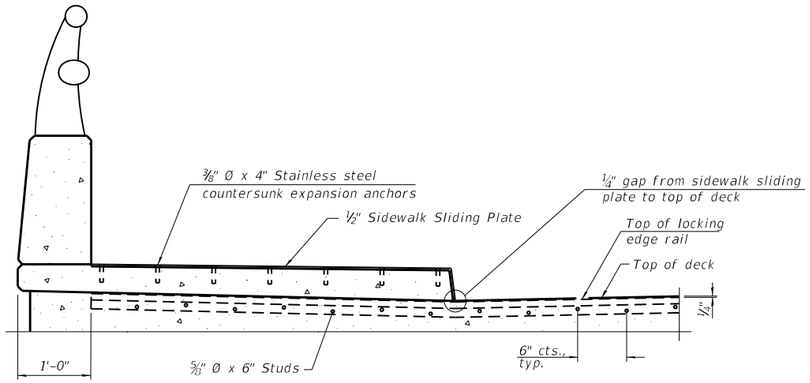
USER NAME = SUSER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = SSCALE$	CHECKED -	REVISED -	
PLOT DATE = SDATE$	DATE -	REVISED -	

PREFORMED JOINT STRIP SEAL – SIDEWALK

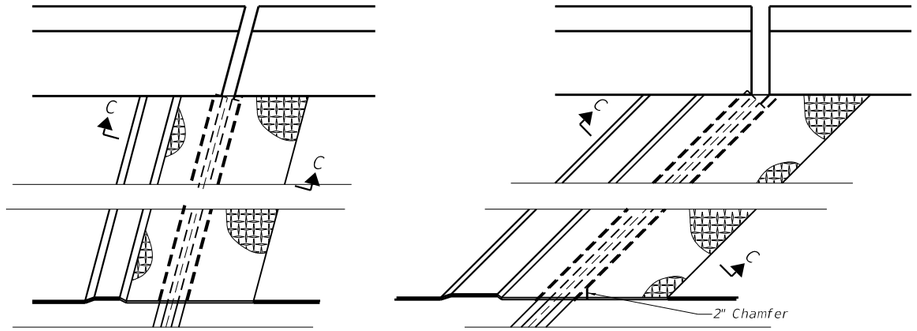
SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	13
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4



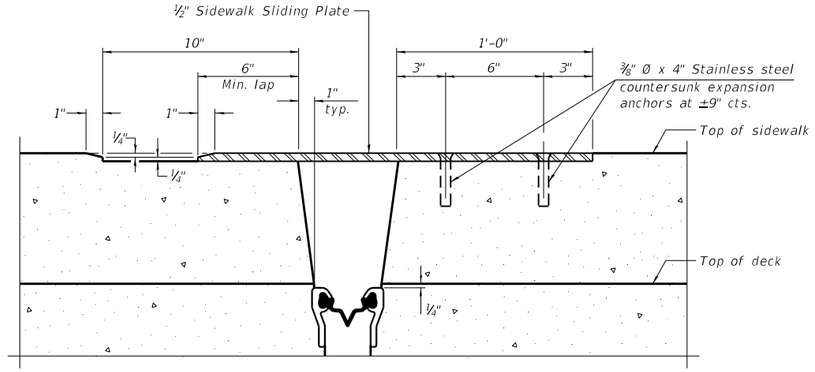
SECTION AT RAISED SIDEWALK



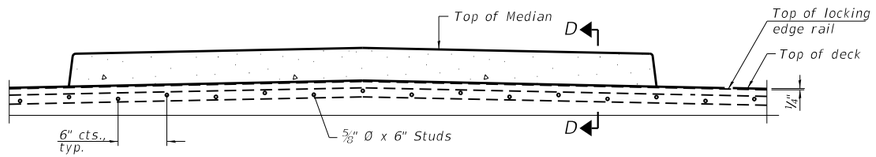
(FOR SKEWS ≤ 30°)

(FOR SKEWS > 30°)

PLAN AT RAISED SIDEWALK

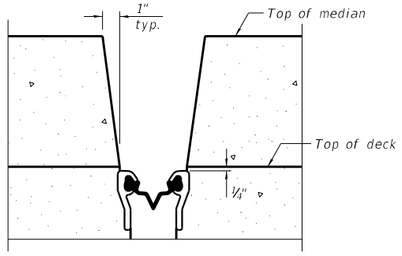


SECTION C-C

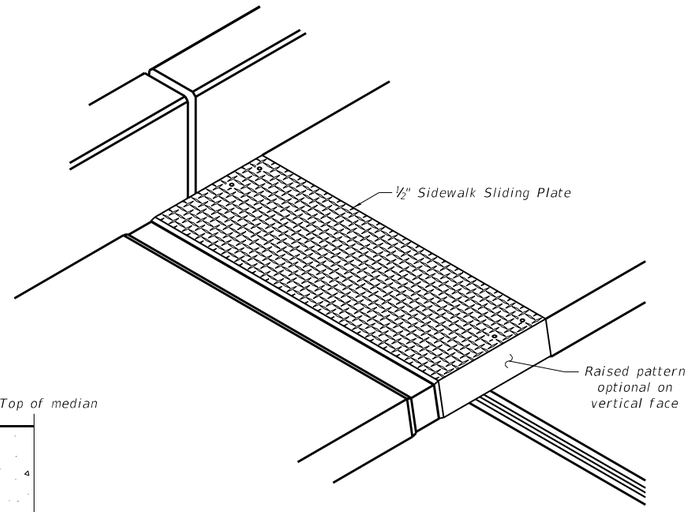


SECTION AT MEDIAN

For skews > 30°, chamfer acute corners 2" similar to sidewalk.



SECTION D-D
(at Rt. ∠'s)



TRIMETRIC VIEW

EJ-SS-S 1-1-2020

PREFORMED JOINT STRIP SEAL - SIDEWALK
WEBSTER ST. OVER I-57
F.A.I. RTE. 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

USER NAME = William.Porter	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = 8.0000 ' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 9/26/2022	DATE - _____	REVISED - _____

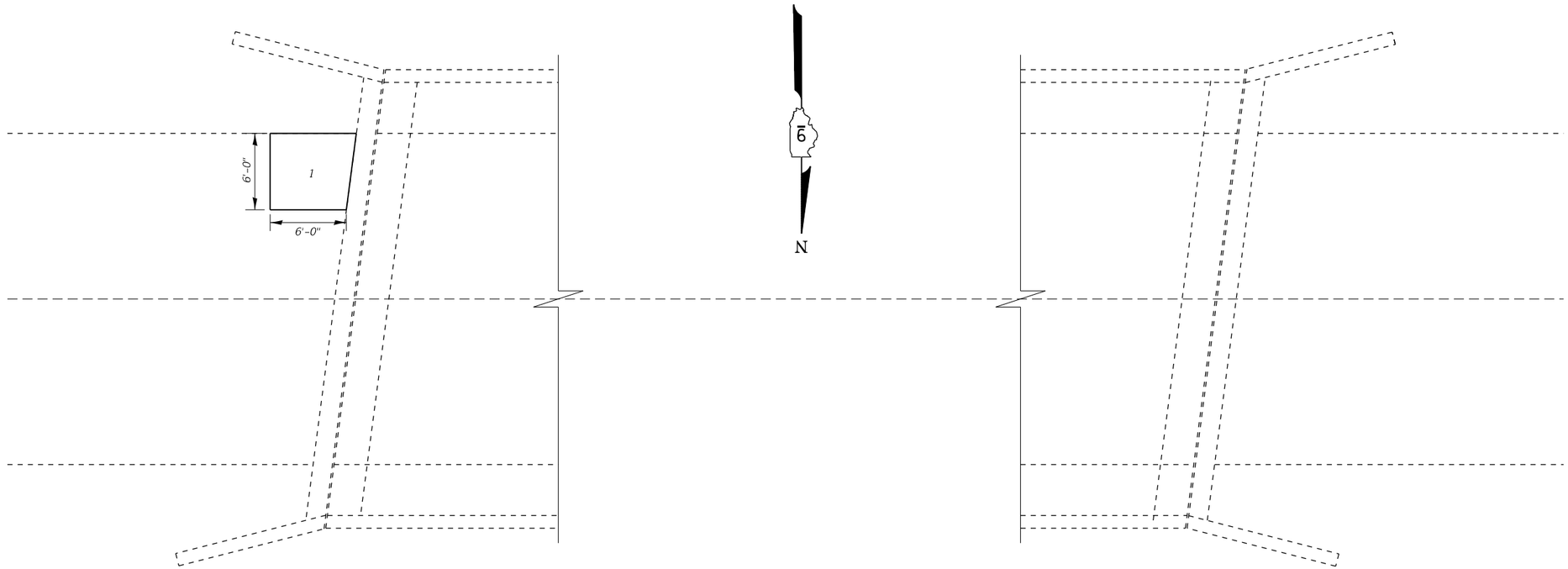
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL – SIDEWALK

SCALE: _____ SHEET __ OF __ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	14
		CONTRACT NO. 78930		
	ILLINOIS FED. AID PROJECT			

*D9 Bridge Overlay 2023-4



PLAN

APPROACH SLAB REPAIR (PARTIAL DEPTH)

PATCH NO.	DIST. FROM ℄	LENGTH	WIDTH	AREA
1	7'	6'	6'	36 Sq Ft

BILL OF MATERIAL

	UNIT	QUANTITY
Approach Slab Repair (Partial Depth)	Sq. Yd.	4

APPROACH SLAB REPAIR
WEBSTER ST. OVER I-57
F.A.I. RTE 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

MODEL: Default
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USER NAME = William.Porter	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = 10.0000 ' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 9/26/2022	DATE - _____	REVISED - _____

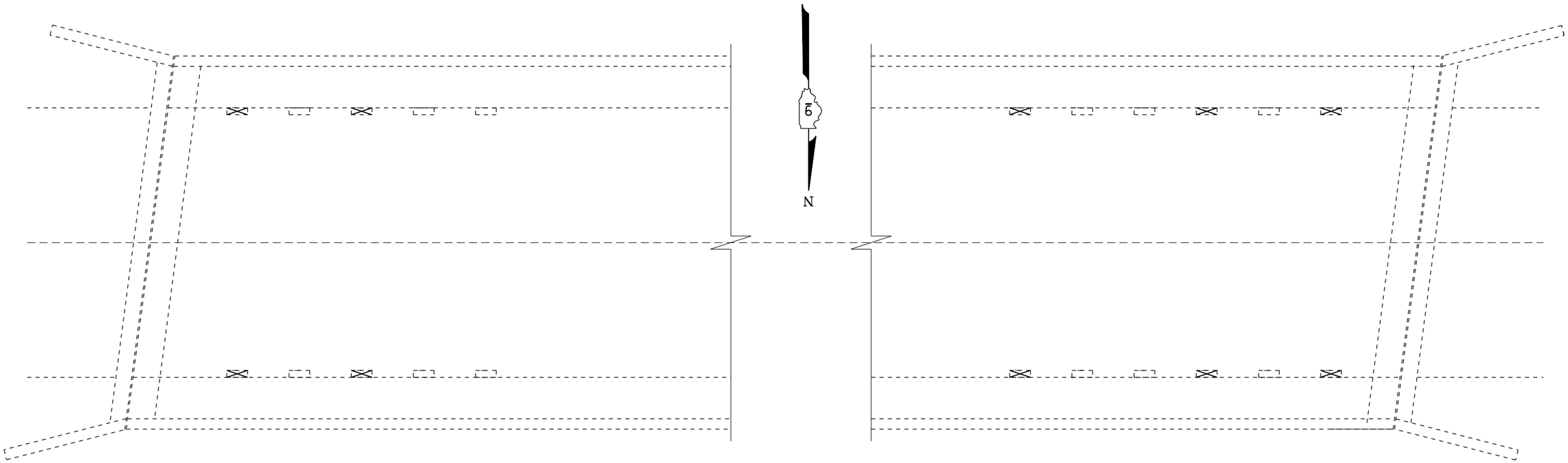
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROACH SLAB REPAIR

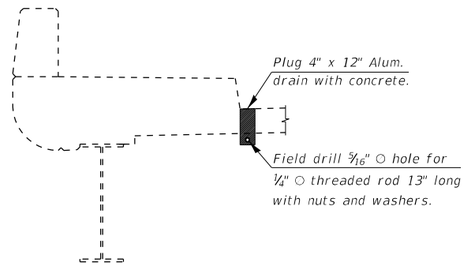
SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	15
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

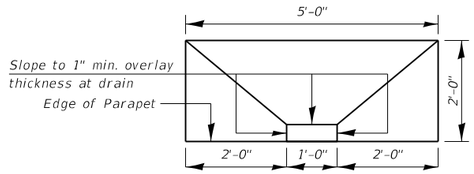
*D9 Bridge Overlay 2023-4



PLAN



DRAIN ELIMINATION DETAIL



TOP PLAN - SURFACE AT DRAINS

Slope Concrete Overlay to Drains

BILL OF MATERIAL

	UNIT	QUANTITY
Plug Existing Deck Drains	Each	10

DRAIN DETAILS
WEBSTER ST. OVER I-57
F.A.I. RTE 57 - D9 BRIDGE OVERLAY 2023-4
FRANKLIN COUNTY
STRUCTURE NO. 028-0063

MODEL: Default
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USER NAME = William.Porter	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = 10.0000 ' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 9/26/2022	DATE - _____	REVISED - _____

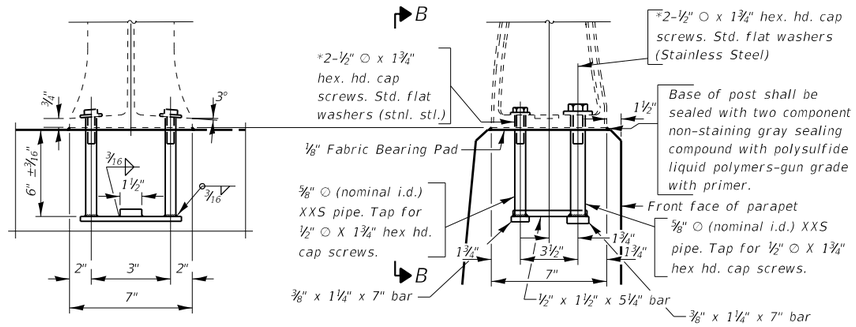
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAIN DETAILS

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	16
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4



VIEW B-B

RAIL POST DETAILS

NOTES

New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost included with Concrete Superstructure.

USER NAME = William.Porter	DESIGNED - _____	REVISED - _____	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
	DRAWN - _____	REVISED - _____	
PLOT SCALE = 100.0000 ' / in.	CHECKED - _____	REVISED - _____	
PLOT DATE = 9/26/2022	DATE - _____	REVISED - _____	

PARAPET RAILING

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	17
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

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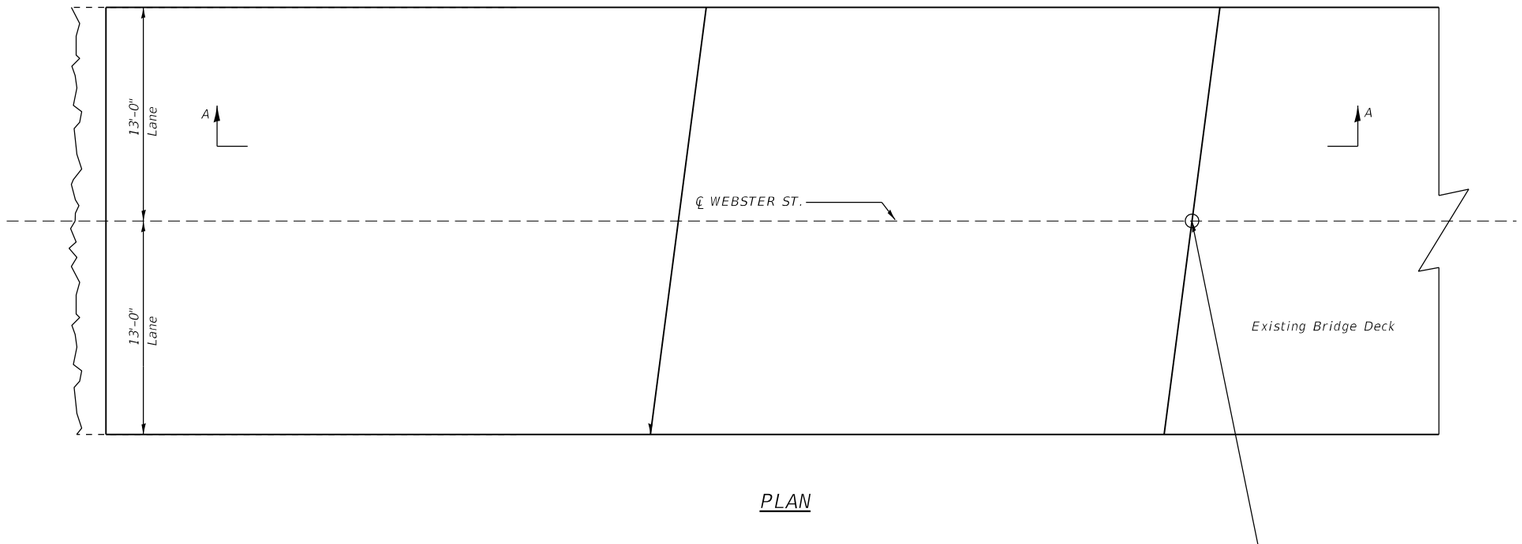
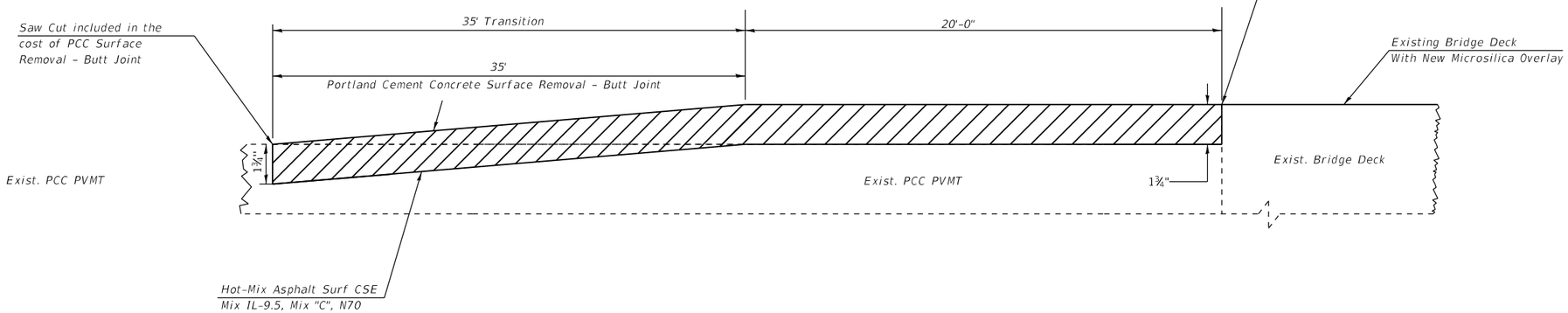
BUTT JOINT



PLAN



SECTION A-A

MODEL: Default
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USER NAME = William.Porter	DESIGNED - _____	REVISED - _____	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
	DRAWN - _____	REVISED - _____	
PLOT SCALE = 100.0000 ' / in.	CHECKED - _____	REVISED - _____	
PLOT DATE = 9/26/2022	DATE - _____	REVISED - _____	

BUTT JOINT DETAIL

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	18
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

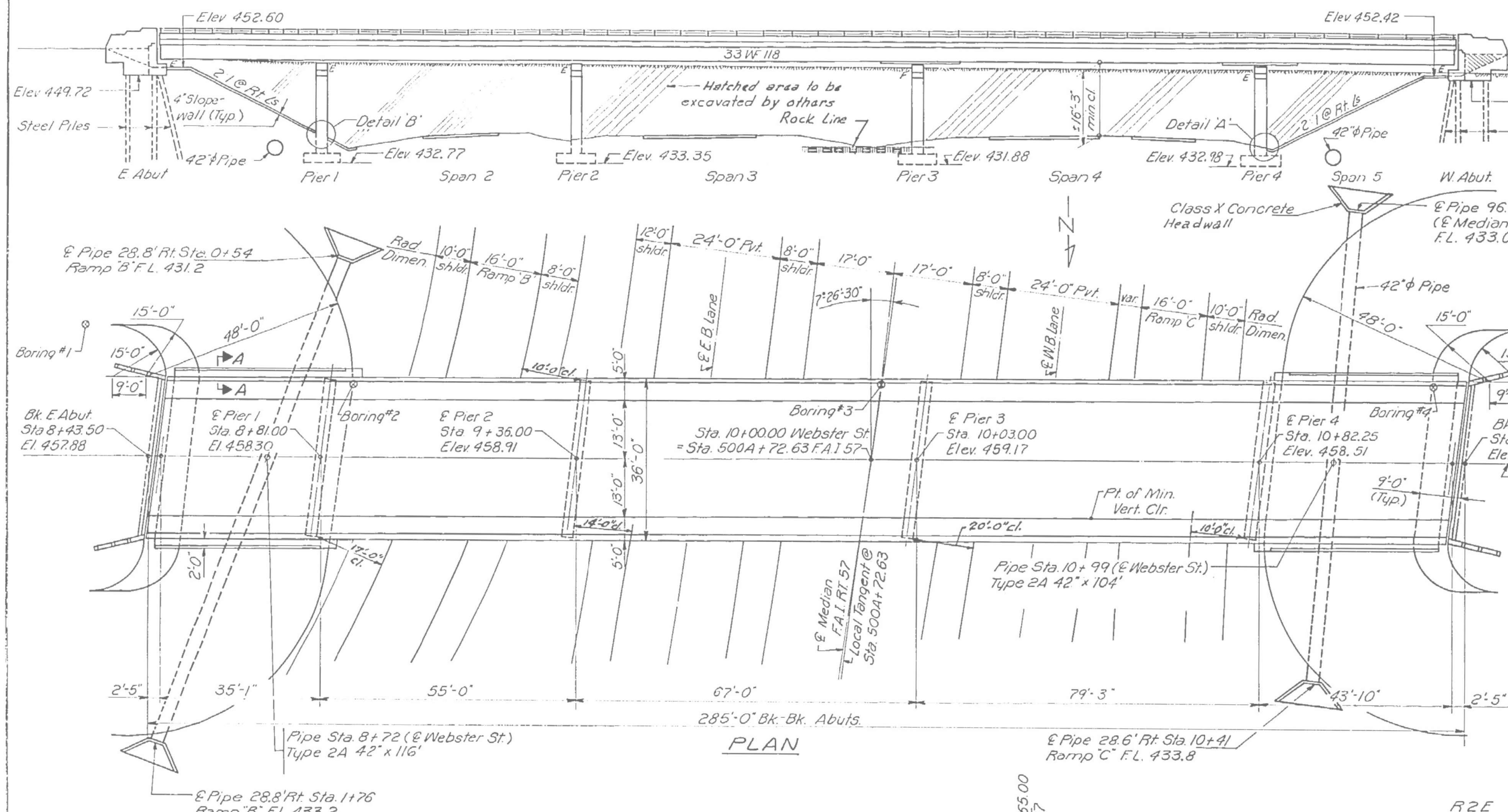
*D9 Bridge Overlay 2023-4

B.M.: R.R. Spike in 24" Elm 180' Lt. Sta. 503A+65
Elev. 453.93

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 57	28-3HB-4	FRANKLIN	44	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	I-57-2(66)72	

SHEET NO. 1
11 SHEETS



PLAN

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and posts must be free of chert, lignite, flint, limonite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Permanent forms will not be permitted in forming the concrete floor.

Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 sq. ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

Rivets 3/4"φ, open holes 13/16"φ, unless otherwise noted.

All structural steel shall conform to ASTM designation A-36.

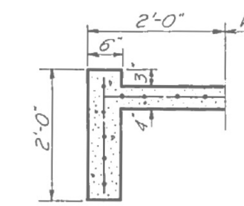
Anchor bolts shall be set before riveting diaphrams over supports.

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor and shear studs shall not be painted.

Expansion guards are included in the quantity of structural steel. Estimated weight = 1450 lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.

The contractor shall drive one steel test pile at W. Abut. in a permanent location as directed by the engineer before ordering the remaining piles.



SECTION A-A

TOTAL BILL OF MATERIAL

	Item	Unit	Super	Sub	Total
	Rock Excavation for Struct.	Cu. Yds.		101	101
**	Class A Excavation for Structure	Cu. Yds.		170	170
	Class X Concrete	Cu. Yds.	335.7	223.1	558.8
	Structural Steel	lbs.	253,150		253,150
	Pipe Culvert (42"φ Type 2A)	Lin. Ft.			220
	Aluminum Handrail - Type G	Lin. Ft.	563		563
	Reinforcement Bars	lbs.	63,530	31,720	95,250
	Steel Piles - 8BP36	Lin. Ft.		254	254
	Test Piles (Steel - 8BP36)	Ea.		1	1
	Name Plates	Ea.		2	2
	Protective Coat	Sq. Yds.	1240		1240
	Slope Wall (4")	Sq. Yds.			420
	Metal Handrail - Type H	Lin. Ft.	563		563
*	Bridge Seat Sealant	Lump Sum			L.S.

*Applied at Abutments only.

** Includes excavation for slope wall

STATION 500A+72.63
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. 28-3HB-4
F.A. PROJ. I-57-2(66)
LOADING H15 - S12

NAME PLATE
See Standard 2113-1

RAMP 'B' (Arc)

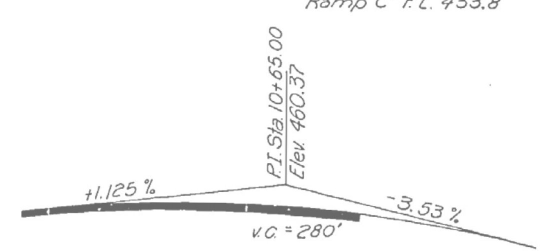
Δ = 47°-31'-14" T = 303.89'
D = 8°-18' L = 572.54'
R = 690.31' E = 63.93'
0.08 S.E. Attained
Full S.E. at Nose
7+12.54 to 4+32.54
P.C. = Sta. 0+00
P.I. = Sta. 3+03.89
P.T. = Sta. 5+72.54

RAMP 'C' (Arc)

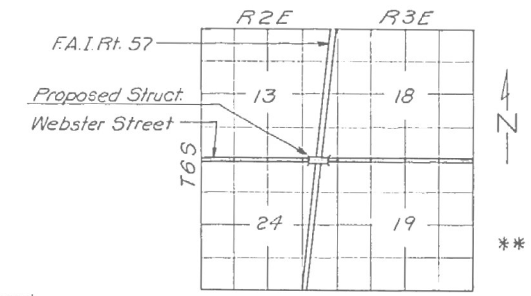
Δ = 37°-25' T = 233.77
D = 8°-18' L = 450.80
R = 690.31' E = 38.51
0.08 S.E. Attained
5+07.56 to 7+87.56
1/2 S.E. at nose to 9+58.36
P.C. = Sta. 6+47.56
P.I. = Sta. 8+81.33
P.T. = Sta. 10+98.36

℄ MEDIAN (Chord)

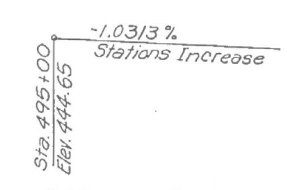
Δ = 21°-37'-30" T = 1094.28
D = 1°-00' L = 2162.50
R = 5729.65' E = 103.56
0.02 S.E. Attained
485A+54.70 to 486A+54.70
477+50.00 to 507A+17.20
P.C. = Sta. 486A+04.70
P.I. = Sta. 496A+98.98
P.T. = Sta. 507A+67.20



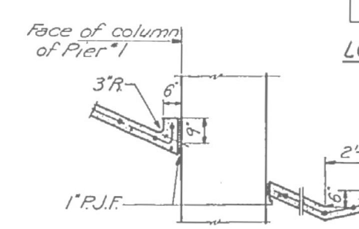
PROFILE WEBSTER ST.



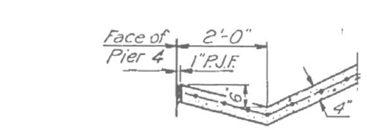
LOCATION SKETCH



PROFILE F.A.I. RT. 57



DETAIL 'B'



DETAIL 'A'

JAN. 29 1964

DESIGNED	Wei Hsiung
CHECKED	J. M. Tjarnorh
rbc.	W.H.
DRAWN	W. R. Deason
CHECKED	J. M. T.

EXAMINED W. Baumann — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED E. Ehret — ENGINEER OF DESIGN
APPROVED V. E. Wolff — CHIEF HIGHWAY ENGINEER

DESIGN STRESSES

fc = 1400 psi Super. & Sub.
vc = 75 psi. Ftgs. & Wingwalls
fs = 20,000 psi. Reinf.
fs = 20,000 psi. Struct. (A-36)
n = 10

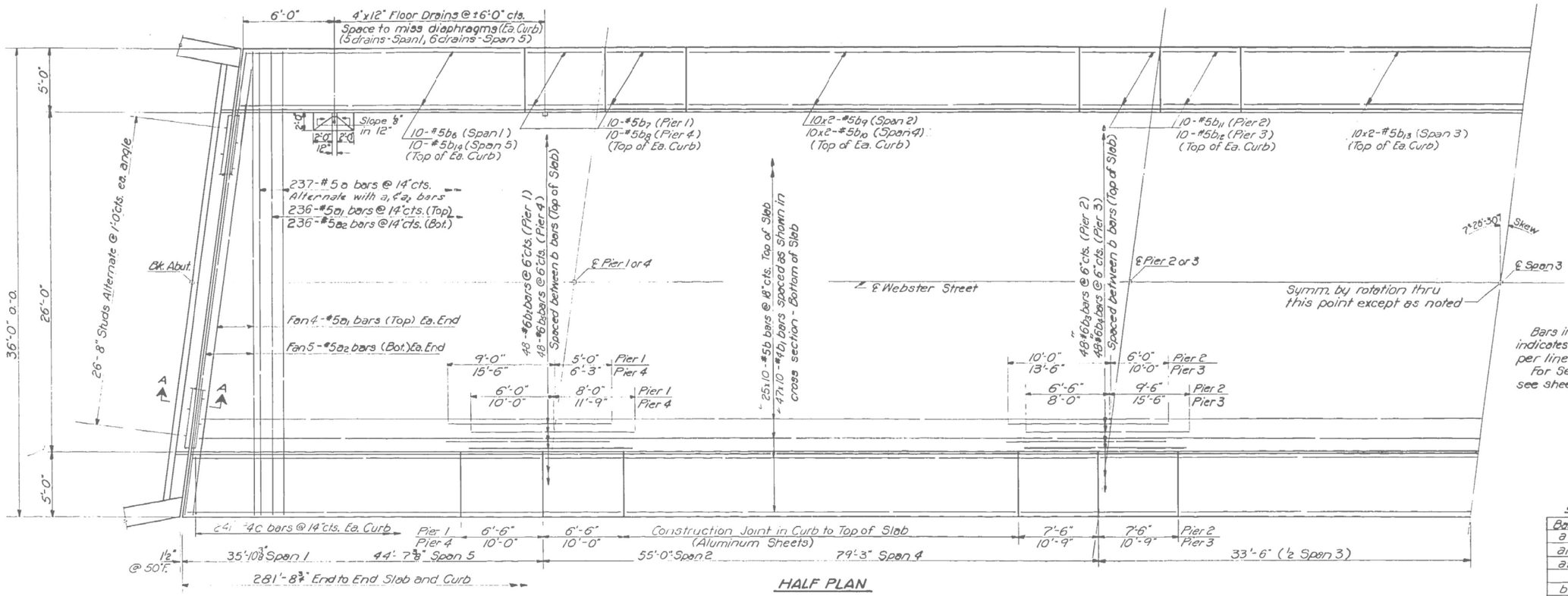
LOADING: H15-S12-44

GENERAL PLAN & ELEVATION
PROJ. I-57-2(66)72
WEBSTER ST. OVER F.A.I. RT. 57
F.A.I. RT. 57 SEC. 28-3HB-4
FRANKLIN COUNTY
STA. 500A + 72.63

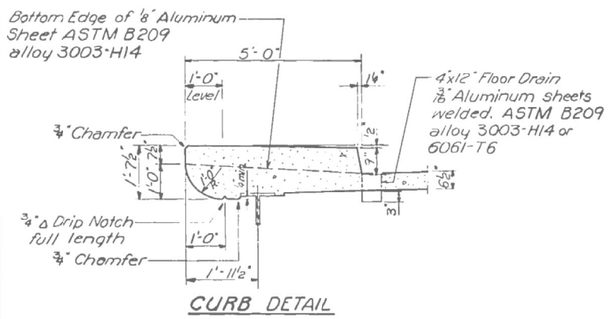
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	283HB-4	FRANKLIN	44	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

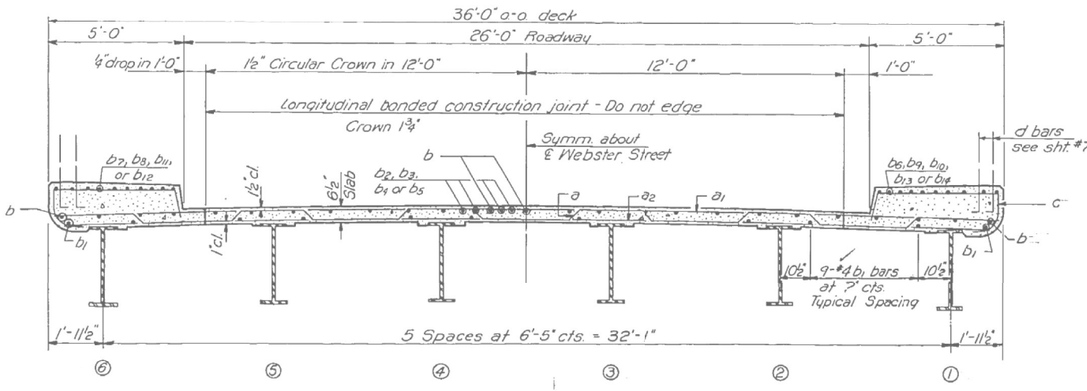
SHEET NO. 4
11 SHEETS



HALF PLAN



CURB DETAIL



NEAR PIERS NEAR MIDSPAN

CROSS SECTION

NOTES

Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line. Min. bar laps = 20 dia.
For Section A-A and bar details see sheet #5.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	237	#5	36'-11"	
a1	244	#5	35'-6"	
a2	246	#5	34'-6"	
b	250	#5	29'-3"	
b1	470	#4	29'-3"	
b2	48	#6	14'-0"	
b3	48	#6	16'-0"	
b4	48	#6	23'-6"	
b5	48	#6	21'-9"	
b6	20	#5	28'-6"	
b7	40	#5	6'-3"	
b8	40	#5	9'-9"	
b9	40	#5	21'-0"	
b10	40	#5	29'-9"	
b11	40	#5	7'-3"	
b12	40	#5	10'-6"	
b13	40	#5	25'-0"	
b14	20	#5	33'-9"	
c	482	#4	7'-9"	
Reinforcement Bars		Lbs.	57610	
*Structural Steel		Lbs.	253150	
Class X Concrete		Cu. Yds.	306.9	

*Weight of bearing assemblies with lead plates and anchor bolts are included as structural steel. Est. Wt. = 10,300 lbs.

DESIGNED	Wei Hsiung	
CHECKED	J.M Tyarsh	
DRAWN	W.H. W.R. Deason	
CHECKED	J.M.J	

JAN 29 1964
EXAMINED M.G. Baumann — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED U.E. Doyle — CHIEF HIGHWAY ENGINEER

SUPERSTRUCTURE
F.A.I. RT. 57 SEC. 28-3HB-4
FRANKLIN COUNTY
STA. 500A + 72.63

USER NAME = William.Porter	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 9/26/2022	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
FOR INFORMATION ONLY
SCALE: ____ SHEET __ OF __ SHEETS STA. ____ TO STA. ____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	20
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

MODEL: Default
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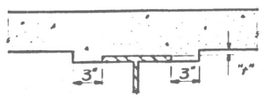
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

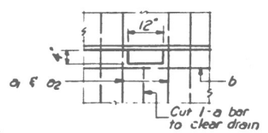
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	28-3HB-4	FRANKLIN	44	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5
11 SHEETS

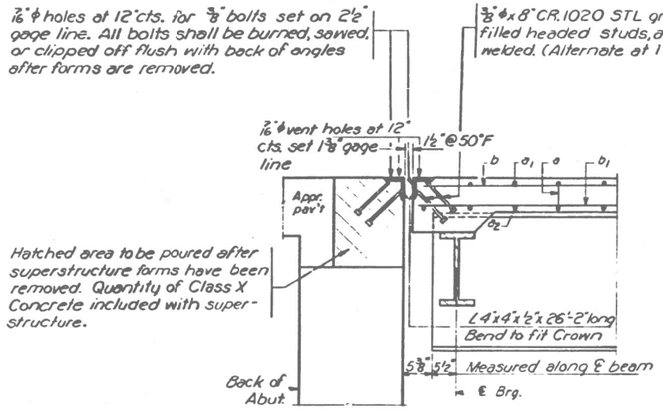


STANDARD FILLET DETAIL

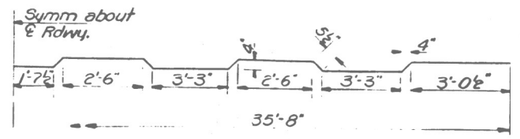
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet #3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet #3 minus slab thickness, equals the fillet heights "t" above top of beams.



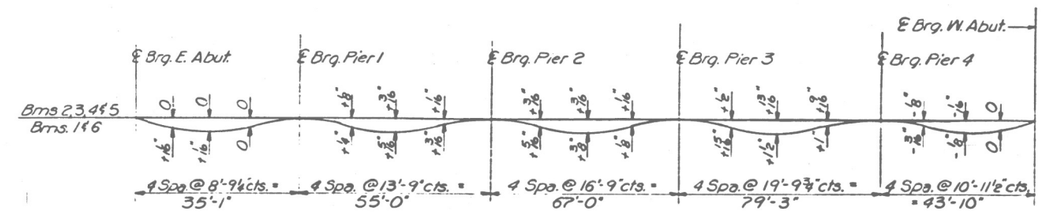
TYP. DETAIL AT DRAIN



SECTION A-A

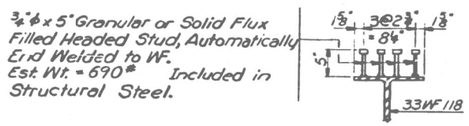


BAR a

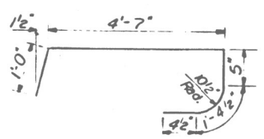


DEAD LOAD DEFLECTION DIAGRAM

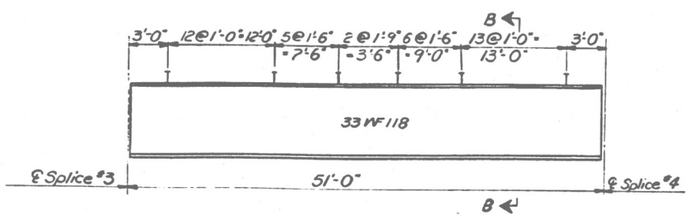
(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sht. #3.



SECTION B-B



BAR c



PARTIAL ELEVATION
Showing Shear Connector

DESIGNED Wai Hoang	EXAMINED	JAN. 29 1964
CHECKED J. M. J. N.H.	PASSED	
DRAWN W.R. Deason	APPROVED	
CHECKED J.M.J		

SUPERSTRUCTURE DETAILS
F.A.I. RT. 57 SEC. 28-3HB-4
FRANKLIN COUNTY
STA. 500A + 72.63

USER NAME = William.Porter	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 9/26/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
FOR INFORMATION ONLY

SCALE: ____ SHEET __ OF __ SHEETS STA. ____ TO STA. ____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	21
		CONTRACT NO. 78930		
		ILLINOIS	FED. AID PROJECT	

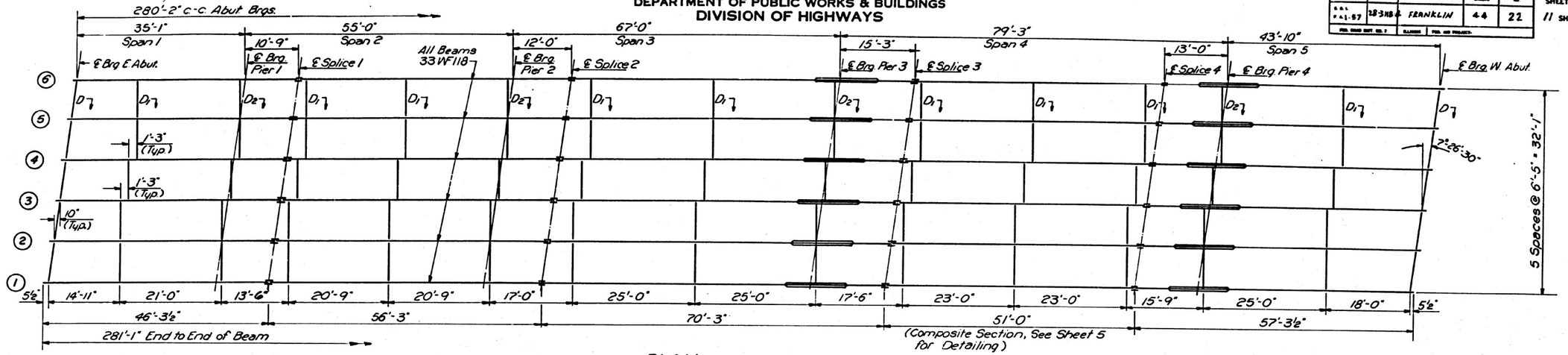
*D9 Bridge Overlay 2023-4

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWDOT1\Documents\IDOT Offices\District 9\Projects\78930\CADD\data\CADSheets\D978930-Sheet5.dgn

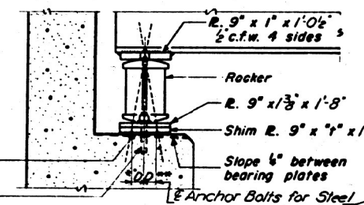
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE SEC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	28-3HB-4	FRANKLIN	44	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
11 SHEETS

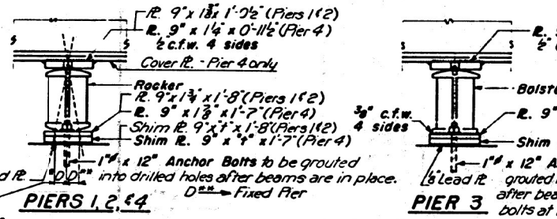


PLAN

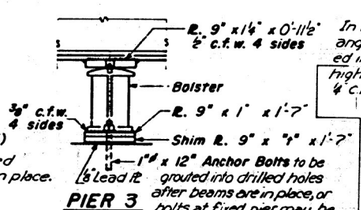


SECTION AT ABUTMENT

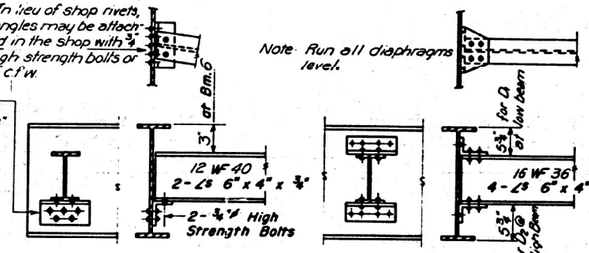
*D = ⅛/100 ft. of exp. for every 15° below the normal temp of 50°F.
D** = ⅛/100 ft of exp. for every 15° above the normal temp of 50°F.



PIERS 1, 2, & 4



PIER 3



DIAPHRAGM D
10 Required

DIAPHRAGMS D1 & D2
D1 - 45 Required
D2 - 20 Required

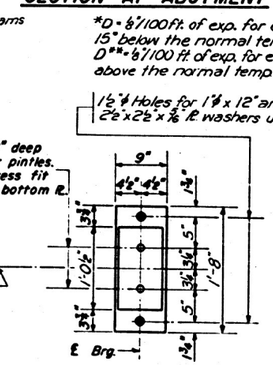
VALUE OF "t"
At All Supports

Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
5/8"	7/8"	1/8"	0	0	0

ELEVATION TOP OF WF*

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Brg. ℄ Abut.	457.15	457.25	457.31	457.30	457.22	457.10
℄ Brg. Pier 1	457.51	457.61	457.67	457.66	457.58	457.46
℄ Splice 1	457.62	457.72	457.78	457.77	457.69	457.57
℄ Brg. Pier 2	458.09	458.19	458.25	458.24	458.16	458.04
℄ Splice 2	458.22	458.32	458.38	458.37	458.29	458.17
℄ Brg. Pier 3	458.36	458.46	458.52	458.51	458.43	458.31
℄ Splice 3	458.40	458.50	458.56	458.55	458.47	458.35
℄ Splice 4	457.98	458.08	458.14	458.13	458.05	457.93
℄ Brg. Pier 4	457.75	457.85	457.91	457.90	457.82	457.70
℄ Brg. W. Abut.	456.97	457.07	457.13	457.12	457.04	456.92

* For Fabrication Only



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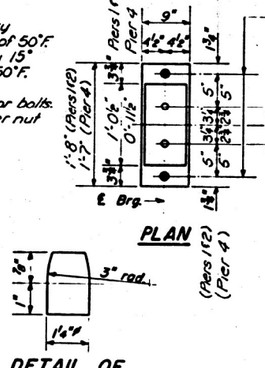

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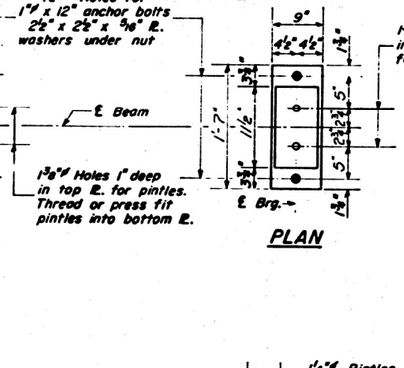

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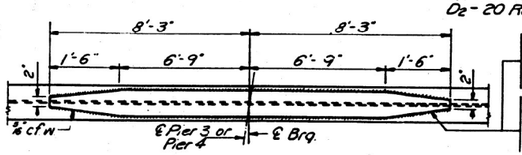
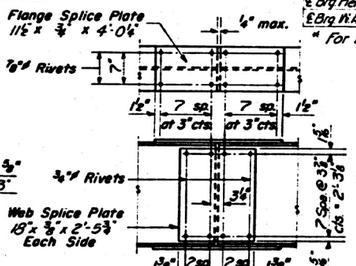
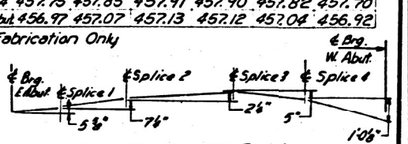


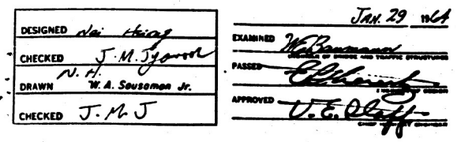
DETAIL OF COVER PLATE



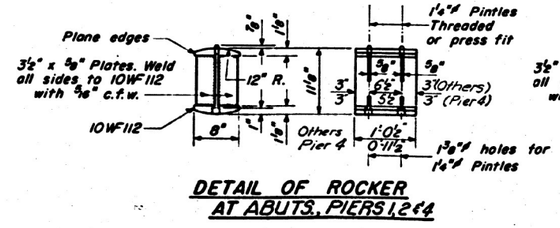
DETAIL OF SPLICE



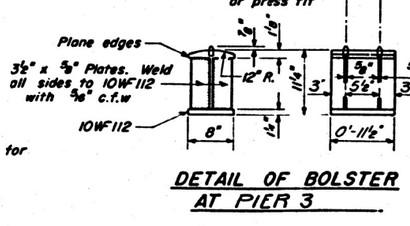
FABRICATION DIAGRAM
All Beams



I-2 7-2-62 Rev. 11-9-62



DETAIL OF ROCKER AT ABUTS. PIERS 1, 2 & 4



DETAIL OF BOLSTER AT PIER 3

DETAIL OF PINTLE

STRUCTURAL STEEL
F.A.I. RT. 57 SEC. 28-3HB-4
FRANKLIN COUNTY
STA. 500A + 72.63

USER NAME = $USERS	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALES	CHECKED -	REVISED -
PLOT DATE = $DATES	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL
FOR INFORMATION ONLY

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	22
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

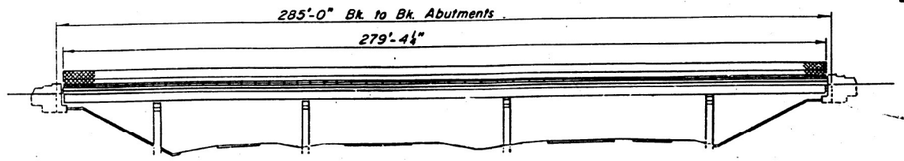
MODEL: $MODEL NAMES
FILE NAME: SFILES

*D9 Bridge Overlay 2023-4

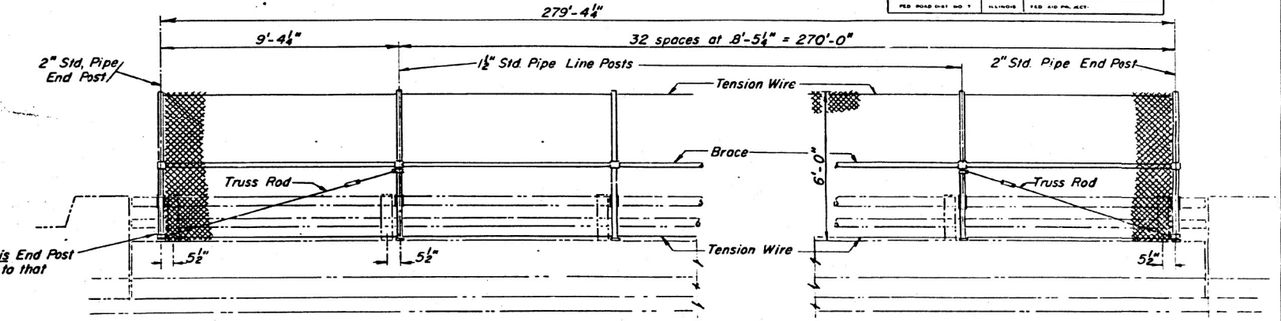
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	* (28-3HB-4)I	FRANKLIN	4	3
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PRI. PROJ.		

SHEET NO.
SHEETS

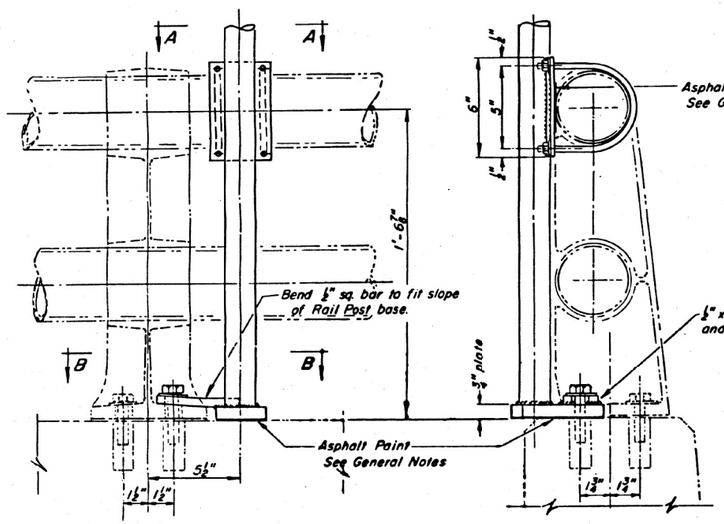


ELEVATION

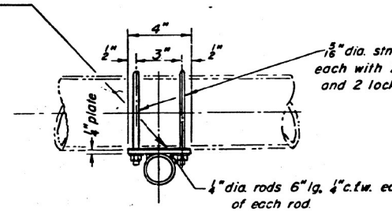


Note - Base of this End Post is opposite hand to that detailed below.

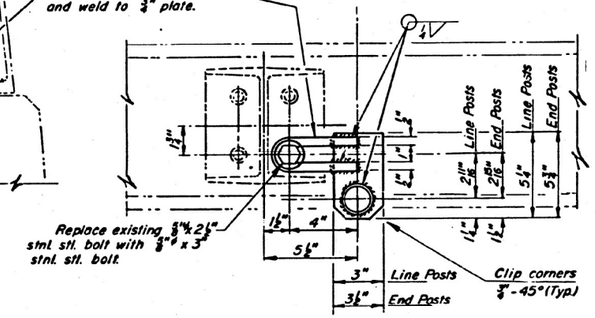
ENLARGED ELEVATION of FENCE - Showing Post Bracing and Tension Wires
See Standard 2168-5 for additional details.



FENCE POST BASE DETAILS



SEC. A-A



SEC. B-B

GENERAL NOTES

Chain Link Fence shall conform to the applicable requirements of Section 629 of the Standard Specifications.

Materials shall conform to Articles 710.33 (a)(1), (b), (d), (e), (f) and (g) of the Standard Specifications.

Steel plates and bars shall conform to ASTM A-36.

Bolts, cap screws - excepting stnl. stl., nuts and locknuts shall conform to ASTM A-307.

Bolts, cap screws - excepting stnl. stl., nuts, locknuts and washers shall be galvanized to ASTM A-153.

All posts, bracing and anchor devices shall be galvanized after fabrication in accordance with ASTM A-123 and A-385.

Bridge Rail Post dimensions and spacing have been taken from design drawings. It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to ordering materials and construction.

The portion of base plates of posts that will contact concrete parapet and the portion of ¾" steel bolting plates that will contact existing Aluminum Handrail shall receive two coats of asphalt paint conforming to Article 714.08 Type B of the Standard Specifications.

Method of Measurement: Chain Link Fence Mounted on Bridge shall be measured for payment in lineal feet. The length paid for shall be the over-all length along the top of the fence from center to center of end posts.

Basis of Payment: This work shall be paid for at the contract unit price per lineal foot for CHAIN LINK FENCE MOUNTED on BRIDGE of the size and type specified, and measured as specified above, which price shall include the cost of furnishing all materials and installing the complete fences.

BILL of MATERIAL

6 ft CHAIN LINK FENCE MOUNTED on BRIDGE	Lin.Ft	559.0

SAFETY FENCE
Webster St. Bridge
F.A.I. Rt. 57
Sec. (28-3HB-4)I
FRANKLIN COUNTY

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

19
EXAMINED
PASSED
APPROVED

F.A.I. RTE. 57 SEC. (28-3HB-4)I FRANKLIN CO. CHAIN LINK FENCE MOUNTED ON BRIDGE

MODEL: $MODELNAME$
FILE NAME: $FILE$

USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SAFETY FENCE
FOR INFORMATION ONLY

SCALE: | SHEET OF SHEETS | STA. | TO STA.

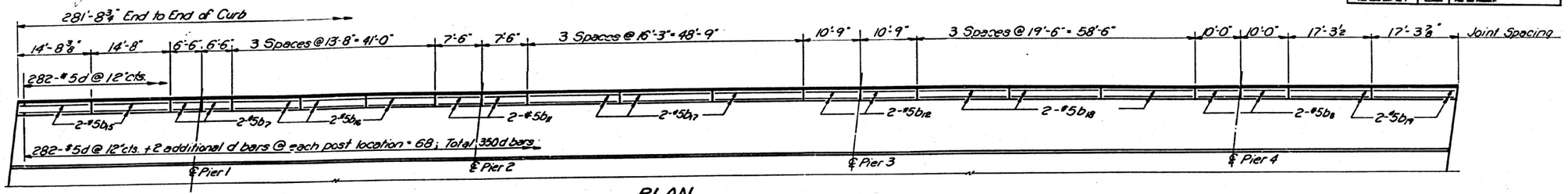
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	23
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

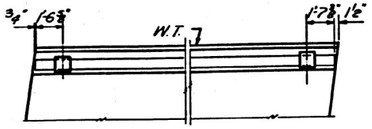
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	28-3HB-4	FRANKLIN	44	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
11 SHEETS



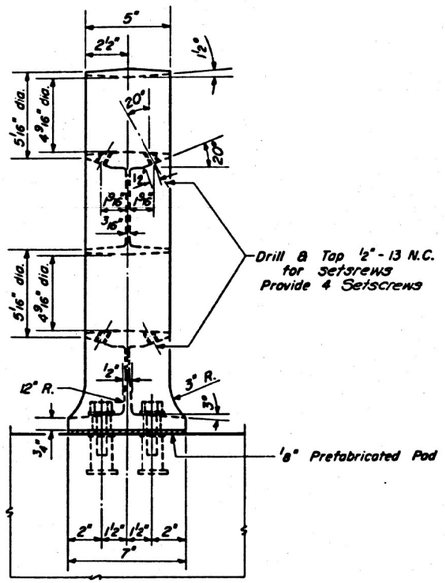
PLAN
(Showing South Curb, North Curb Similar)



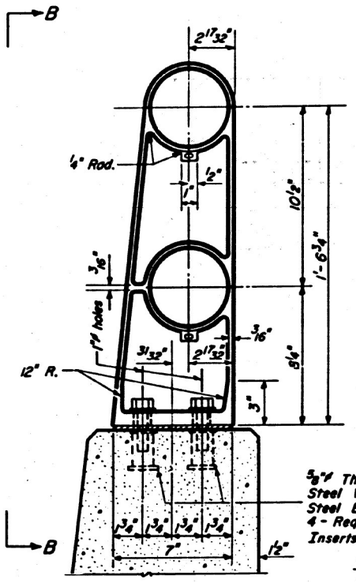
CORNER DETAIL

BAR LIST

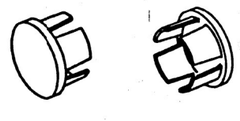
Bar	No.	Size	Length	Shape	Bar	No.	Size	Length	Shape
b_7	16	#5	6'-3"	—	b_{12}	24	#5	16'-0"	—
b_8	16	#5	9'-9"	—	b_{18}	24	#5	19'-3"	—
b_{11}	16	#5	7'-3"	—	b_{19}	16	#5	17'-0"	—
b_{12}	16	#5	10'-6"	—					
b_{15}	16	#5	14'-3"	—	d	1264	#5	2'-9"	⌐
b_{16}	24	#5	13'-3"	—					



VIEW B-B



SECTION A-A



CAST END CAP
DRIVE FIT TYPE
8 - Required
Incidental to item "Aluminum Handrail."

⅝"ø Threaded Inserts. Provide 1- Stainless Steel Washer and 1- ⅝"ø x 2½" Stainless Steel Bolt with each Insert
4 - Required each post
Inserts shall be cast in place.

RAIL POST DETAILS

NOTES

Aluminum handrail will be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation and erection.

All Posts shall be placed normal to parapet.

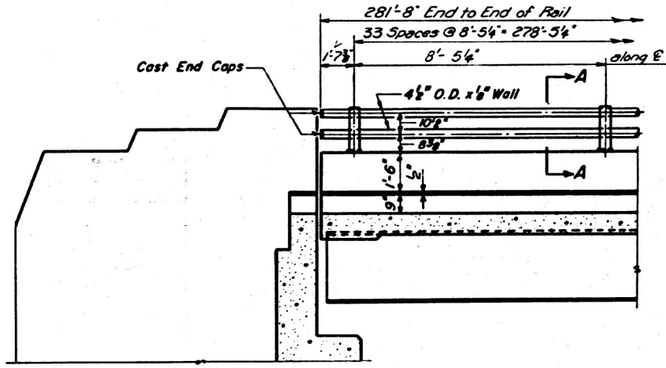
All Posts shall be of Aluminum conforming to ASTM Specification B-108 alloy SG-70B-T6.

All Rail Tubing shall be of Aluminum conforming to ASTM Specification B-235 alloy 6061-T6.

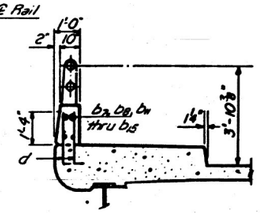
Aluminum handrail shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all post and gaps. Rail Tubing may extend a maximum of 3 panel lengths.

For material composition of Prefabricated Pad, See Art. 54.9 (f), (Bearings and Anchorage), of the Std. Specs.

Setscrews shall be of Aluminum conforming to ASTM Specification B-211 alloy 2024-T4.



ELEVATION - END POST



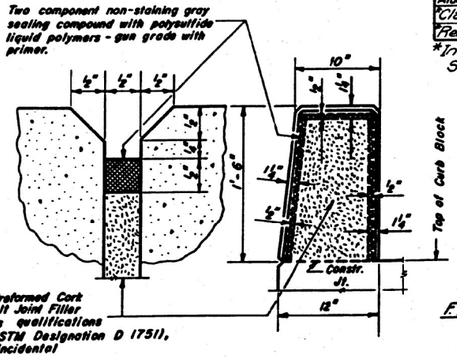
SEC. THRU CURB

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Handrail	Lin. Ft.	563
*Class X Concrete	Cu Yds.	28.8
*Reinforcement Bars	Lbs.	5920

*Included with Total Bill of Material Superstructure

Two component non-staining gray sealing compound with polysulfide liquid polymers - gun grade with primer.



½" Preformed Cork Asphalt Joint Filler (meets qualifications for ASTM Designation D 1751), Cost Incidental

PARAPET JOINT DETAIL

ALTERNATE 'A'
TYPE G
ALUMINUM HANDRAIL

F.A.I. RT. 57 SEC. 28-3HB-4
FRANKLIN COUNTY
STA. 500A+72.63

DESIGNED	Wei Hsing	EXAMINED	Jan 29 1964
CHECKED	J.M.J.	PASSED	
P.E.	W.H.	APPROVED	
DRAWN	W.A. Sausaman		
CHECKED	J.M.J.		

R-11 Drawn 2-17-60 Rev. 11-2-62 Rev. 7-17-63

USER NAME = $USER$	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = $SCALE$	CHECKED -	REVISED -	
PLOT DATE = $DATE$	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALUMINUM HANDRAIL
FOR INFORMATION ONLY

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	24	24
		CONTRACT NO. 78930		
	ILLINOIS	FED. AID PROJECT		

*D9 Bridge Overlay 2023-4

MODEL: $MODELNAME$
FILE NAME: $FILE$