

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

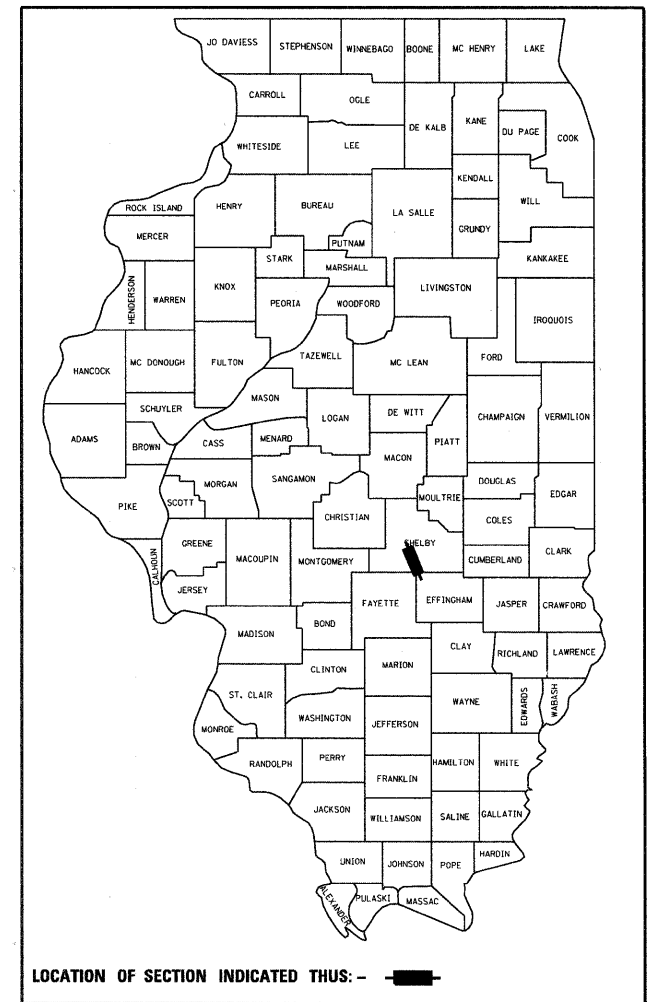
**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 774 (IL 128)
SECTION (102BR)BR-2
PROJECT ACF-0774(032)
BRIDGE REPAIRS
SHELBY COUNTY

C-97-133-10

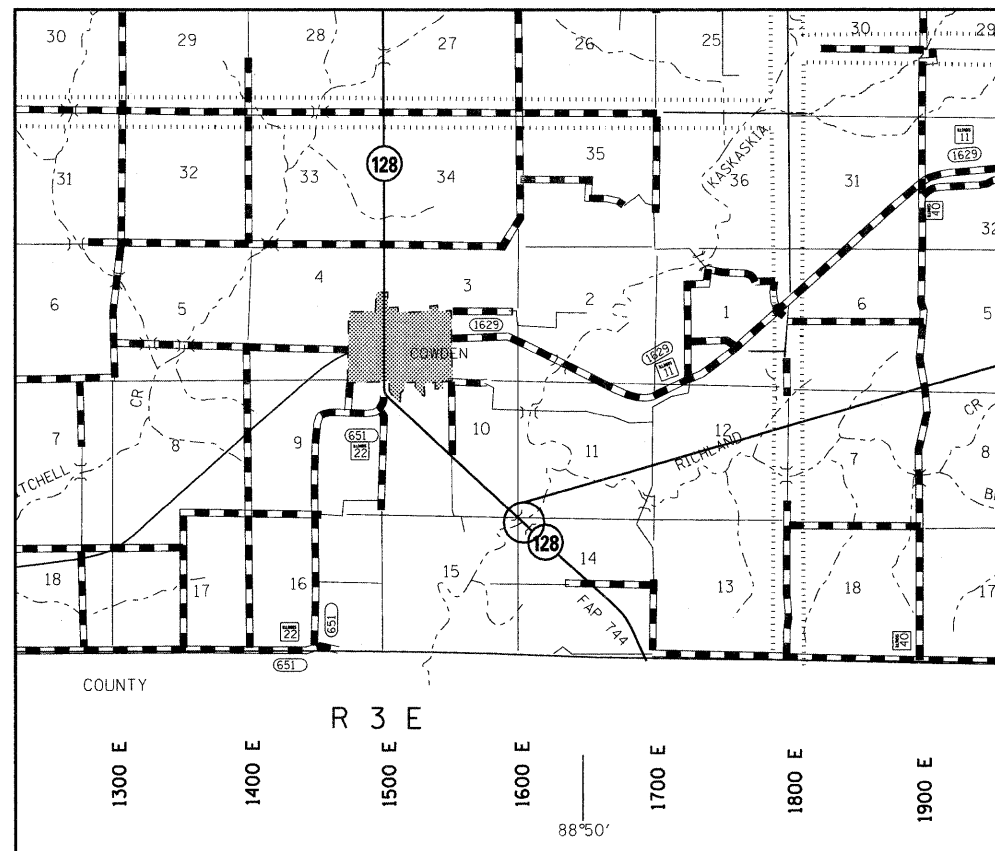
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
774	(102BR)BR-2	Shelby	19	1
		ILLINOIS	CONTRACT NO. 74483	

D-97-066-10

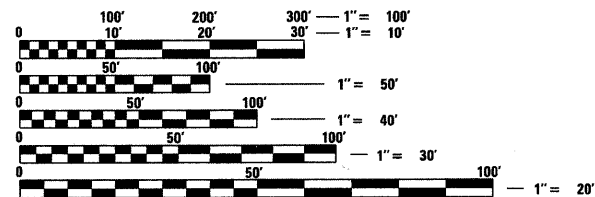


FOR INDEX OF SHEETS, SEE SHEET NO. 2

ADT (2009) = 2550



LOCATION OF PROPOSED IMPROVEMENT



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 EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: MARK DAUGHERTY
PROJECT MANAGER: BRIAN LEWIS

CONTRACT NO. 74483

GROSS LENGTH = 649 FT. = 0.12 MILE
NET LENGTH = 649 FT. = 0.12 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec. 16 2010
Ryan J. Duckell
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 4 2011
Scott E. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

February 4 2011
Christina M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" INDICATED ON THE CHECK SHEET, AND "THE SPECIAL PROVISIONS" INCLUDED IN THE PROPOSAL.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF HMA SURFACE REMOVAL, DECK PATCHING, JOINT REPLACEMENT, MICROSILICA CONCRETE OVERLAY, AND OTHER WORK NECESSARY TO COMPLETE THE PROJECT.

WIDENING MAY REMAIN IN PLACE AT THE COMPLETION OF THE PROJECT.

TEMPORARY RUMBLE STRIPS SHALL BE PLACED AS SHOWN IN STANDARD 701321 ONLY ON THE NORTHBOUND APPROACH.

THE MATERIAL USED FOR BITUMINOUS MATERIALS (PRIME COAT) SHALL BE RC-70, SS-1H, OR SS-1HP APPLIED AT THE RATE DIRECTED BY THE ENGINEER.

QUANTITIES OF HOT MIX ASPHALT SURFACE REMOVAL AND HOT MIX ASPHALT SURFACE COURSE HAVE BEEN PROVIDED TO ALLOW FOR RESURFACING OF A 20' LONG PORTION OF THE APPROACHES. THIS WORK WILL ALLOW TRANSITION BETWEEN THE EXISTING PAVEMENT AND PROPOSED BRIDGE JOINTS. EXISTING RESURFACING ON THE APPROACHES IS ESTIMATED TO BE 2 INCHES THICK.

THE LOCATIONS AND/OR DEPTHS OF UNDERGROUND UTILITIES SHOWN HAVE BEEN TAKEN FROM INFORMATION FURNISHED BY THE UTILITY OWNERS AND MUST BE CONSIDERED APPROXIMATE. FIELD MARKINGS OF FACILITIES IN CRITICAL AREAS MAY BE OBTAINED BY PROVIDING A MINIMUM OF 96 HOURS ADVANCE NOTICE THROUGH THE J.U.L.I.E. SYSTEM BY CALLING 800-892-0123.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

APPLICATION	AC/PG	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE
SURFACE COURSE	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C

INDEX OF SHEETS

SHEET NO	TITLE
1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTION
5	STAGE CONSTRUCTION DETAILS
6-19	STRUCTURAL SHEETS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS.

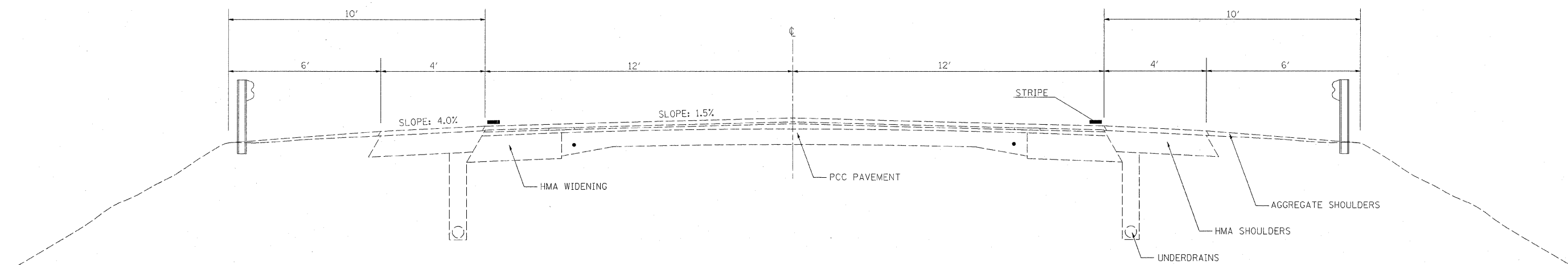
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701006-03	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-11	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
780001-02	TYPICAL PAVEMENT MARKINGS

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES AND INDEX OF SHEETS		F.A.P. RTE. 774	SECTION 1102BR1BR-2	COUNTY Shelby	TOTAL SHEETS 19	SHEET NO. 2
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		DATE -	REVISED -								

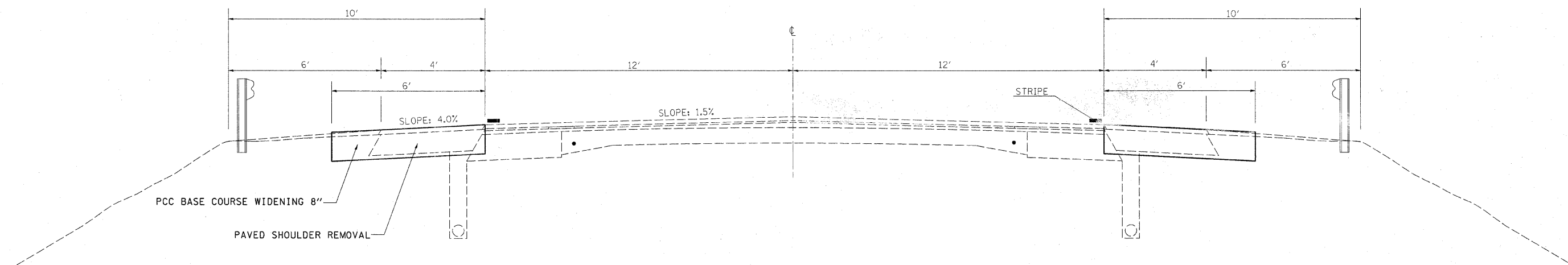
SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		80% FEDERAL 20% STATE 0014		
20200500 35400300	EARTH EXCAVATION (WIDENING) PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 8"	CU YD SQ YD	91 408	91 408		
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	11	11		
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	12	12		
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	106	106		
44004250	PAVED SHOULDER REMOVAL	SQ YD	272	272		
50102400	CONCRETE REMOVAL	CU YD	27.3	27.3		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	27.3	27.3		
50300260	BRIDGE DECK GROOVING	SQ YD	2744	2744		
50300300	PROTECTIVE COAT	SQ YD	3055	3055		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2260	2260		
50800515	BAR SPLICERS	EACH	22	22		
52000110	PREFORMED JOINT STRIP SEAL	FOOT	44	44		
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	5	5		
67100100	MOBILIZATION	L SUM	1	1		
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	120	120		
70106700	TEMPORARY RUMBLE STRIPS	EACH	3	3		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	40	40		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	900	900		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	900	900		
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2682	2682		
78300100	PAVEMENT MARKING REMOVAL	SQ FT	613	613		
XZ191200	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/2"	SQ YD	3,029	3,029		
Z0004556	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	3029	3029		
Z0006202	BRIDGE DECK HYDRO-SCARIFICATION 3/4"	SQ YD	3,029	3,029		
Z0015802	PLUG EXISTING DECK DRAINS	EACH	212	212		
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	2	2		
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	142	142		
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	84	84		
Z0018000	DRAINAGE SCUPPERS (SPECIAL)	EACH	20	20		
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
Z0034390	MODULAR EXPANSION JOINT 6"	FOOT	44	44		

*SPECIALTY ITEM

FILE NAME *	USER NAME = #USER*	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
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		CHECKED -	REVISED -												
		DATE -	REVISED -												
														CONTRACT NO. 74483	
														ILLINOIS FED. AID PROJECT	



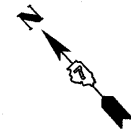
EXISTING TYPICAL



PROPOSED TYPICAL

STA 657+43 TO STA 658+96
 STA 665+46 TO STA 666+99

FILE NAME =	USER NAME = teasleyck	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwidot\teasleyck\202775\1074483-sht-typical.dgn	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -					774	(102BR)BR-2	Shelby	19	4
PLOT DATE = 12/16/2010	DATE -	CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 74483				
								ILLINOIS FED. AID PROJECT				



PAVED SHOULDER REMOVAL

RT STA 657+43 TO 658+96 68 S. Y.
 RT STA 665+46 TO 666+99 68 S. Y.
 TOTAL 136 S. Y.

PCC BASE COURSE WIDENING 8"

RT STA 657+43 TO 658+96 102 S. Y.
 RT STA 665+46 TO 666+99 102 S. Y.
 TOTAL 204 S. Y.

TEMPORARY CONCRETE BARRIER

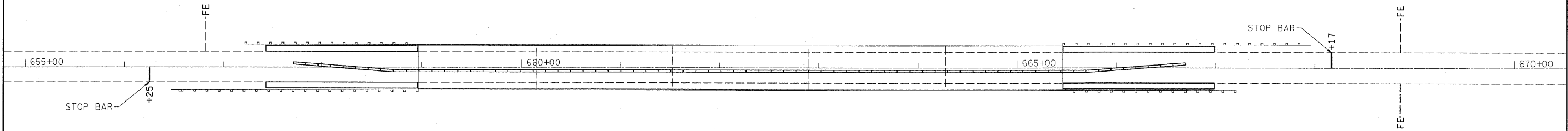
LT STA 657+71 TO RT STA 658+71 100 FEET
 RT STA 658+71 TO RT STA 665+71 700 FEET
 RT STA 665+71 TO LT STA 666+71 100 FEET
 TOTAL 900 FEET

PAVEMENT MARKING REMOVAL

RT STA 656+25 TO RT STA 667+87 387 S. F.
 STA 656+25 TO STA 658+96 23 S. F.
 STA 665+46 TO STA 668+17 23 S. F.
 LT STA 656+25 TO LT STA 658+96 90 S. F.
 LT STA 665+46 TO LT STA 668+17 90 S. F.
 TOTAL 613 S. F.

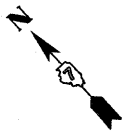
IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

2 EACH



STAGE 1

NOTE: SEE STANDARD 701321 FOR DETAILS NOT SHOWN.



PAVED SHOULDER REMOVAL

LT STA 657+43 TO 658+96 68 S. Y.
 LT STA 665+46 TO 666+99 68 S. Y.
 TOTAL 136 S. Y.

PCC BASE COURSE WIDENING 8"

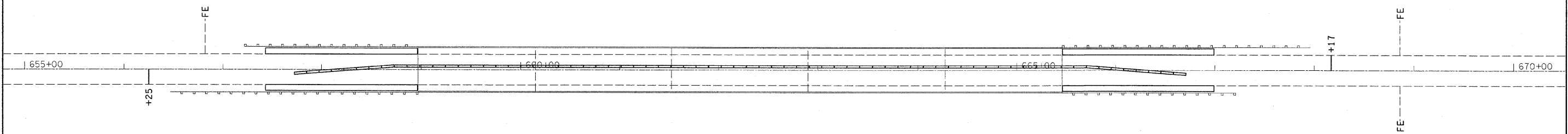
LT STA 657+43 TO 658+96 102 S. Y.
 LT STA 665+46 TO 666+99 102 S. Y.
 TOTAL 204 S. Y.

RELOCATE TEMPORARY CONCRETE BARRIER

RT STA 657+71 TO LT STA 658+71 100 FEET
 LT STA 658+71 TO LT STA 665+71 700 FEET
 LT STA 665+71 TO RT STA 666+71 100 FEET
 TOTAL 900 FEET

IMPACT ATTENUATORS, RELOCATE, (NON-REDIRECTIVE), TEST LEVEL 3

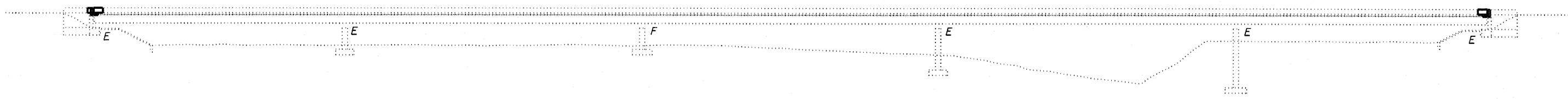
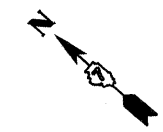
2 EACH



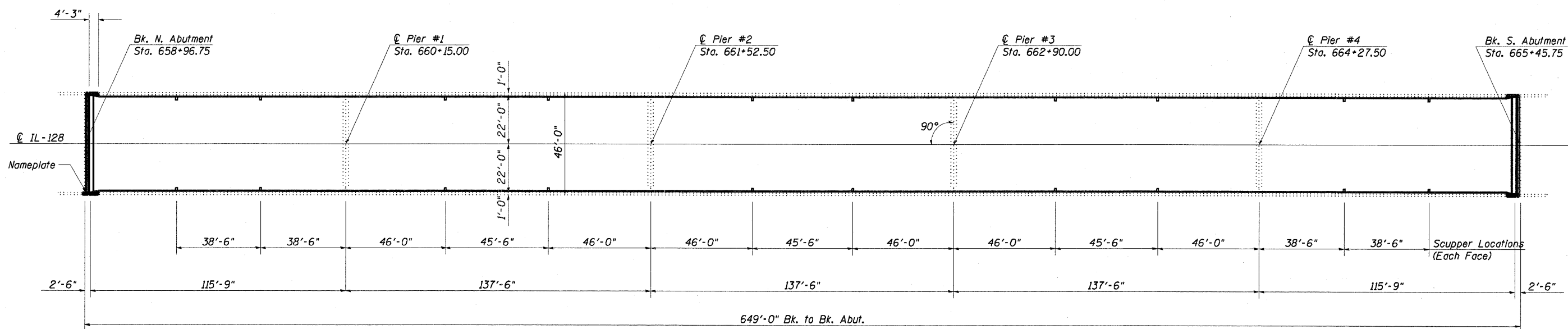
STAGE 2

FILE NAME =	USER NAME = teasleyck	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw_work\pwidot\teasleyck\d207751\07	4483-sht-plan.dgn	DRAWN -	REVISED -					774	(102BR)BR-2	Shelby	19	5
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	PLOT DATE = 12/16/2010	DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.			

The existing five span reinforced concrete deck on steel box girders structure was constructed in 1976 as SBI-128 section 102BR at Sta. 663+21.25. SN. 087-0023 carries SBI 128 (IL 128). The proposed project consists of new expansion joints, full depth deck repair, new microsilica wearing surface, and new deck drains.



ELEVATION



PLAN



David Carl Pluzy
Expires 11/30/2012

FILE NAME =	USER NAME = #USER#	DESIGNED - KLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION SN. 087-0023			F.A.P. RTE. - 114	SECTION - 1102BR/BB-2	COUNTY - Shelby	TOTAL SHEETS - 12	SHEET NO. - 6
#FILE#	PLOT SCALE = #SCALE#	DRAWN - KLB	REVISED -		SCALE: _____	SHEET NO. 1 OF 14 SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 74483				
	PLOT DATE = #DATE#	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									

GENERAL NOTES

Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the contractor's responsibility to verify dimensions and details in the field, to make necessary approved adjustments prior to construction or material acquisition, such variations shall not be cause for additional compensation or change in the scope of work. The contractor will be paid for the quantity actually furnished at the unit bid price for the work.

Reinforcement bars shall conform to the requirements of ASTM A 706 GRADE 60. See Special Provisions.

Reinforcement Bars designated (E) shall be epoxy coated.

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 operations shall be replaced using an approved bar splicer or anchorage system. Cost included in CONCRETE REMOVAL.

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.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.

The existing hot-mix asphalt wearing surface is not known to contain asbestos.

Removal and reinstallation of handrail sections and support posts at both abutments and drainage scupper locations will be necessary for construction of the expansion joints and drainage scuppers. The existing handrail sections and support posts shall be reused, new bolts, shim plates, and post support anchor assemblies as detailed in the plans are to be provided and installed for the reinstallation of the handrail and supports. This work and all materials shall be included in the contract unit price for CONCRETE SUPERSTRUCTURE.

Prior to pouring the new concrete deck, all heavy and 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.

Removal and installation of the existing name plate on the structure shall be included in the contract unit price for CONCRETE SUPERSTRUCTURE.

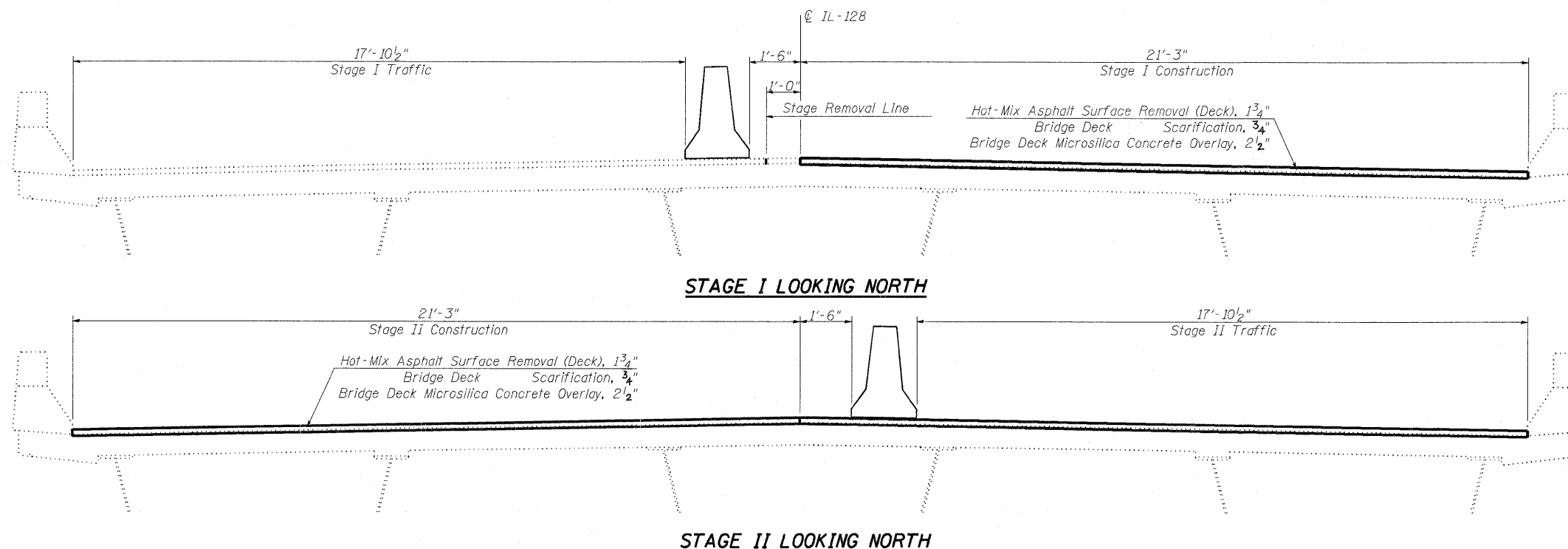
All structural steel shall conform to AASHTO Classification M-270 Gr. 36 unless otherwise noted.

The Contractor shall take care to not damage the USGS Gage Station located near the south abutment.

The Contractor must ensure that all debris or construction material is removed from the inside of the steel boxes upon completion of the deck slab repair or joint work.

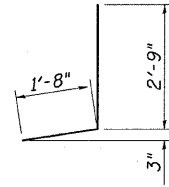
TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	27.3
Concrete Superstructure	Cu. Yd.	27.3
Reinforcement Bars, Epoxy Coated	Pound	2260
Bar Splicers	Each	22
Preformed Joint Strip Seal	Foot	44.0
Hot-Mix Asphalt Surface Removal (Deck)	Sq Yd	3029
Bridge Deck Scarification, 3/4"	Sq Yd	3029
Bridge Deck Microsilica Concrete Overlay, 2 1/2"	Sq Yd	3029
Bridge Deck Grooving	Sq Yd	2744
Protective Coat	Sq Yd	3055
Deck Slab Repair (Full Depth, Type I)	Sq Yd	2
Deck Slab Repair (Full Depth, Type II)	Sq Yd	142
Drainage Scuppers, (Special)	Each	20
Plug Existing Deck Drains	Each	212
Modular Expansion Joint, 6"	Foot	44.0

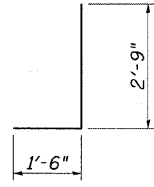


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		DATE -	REVISED -									

Hatched area indicates removal.



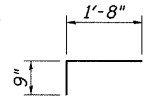
Bar d(E)



Bar d3(E)



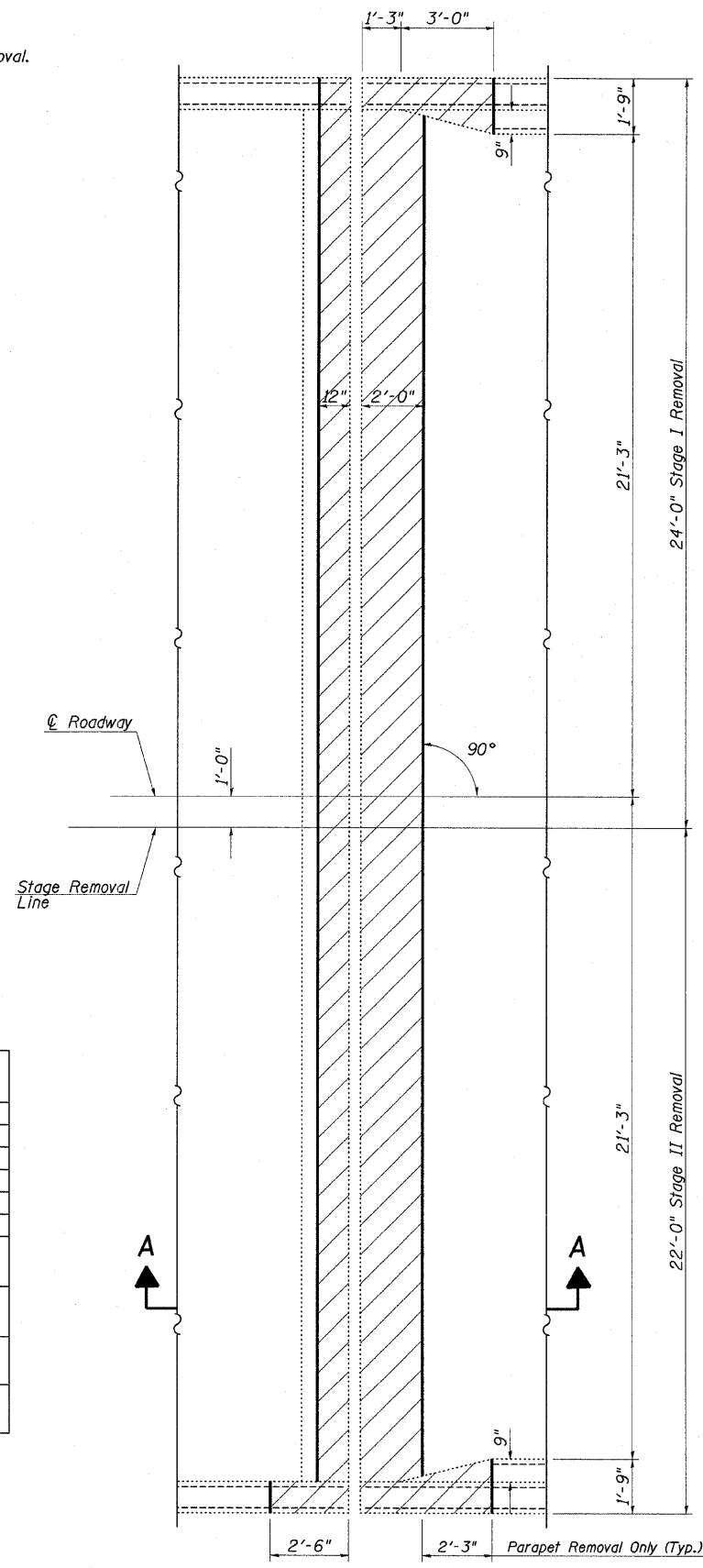
Bar d2(E)



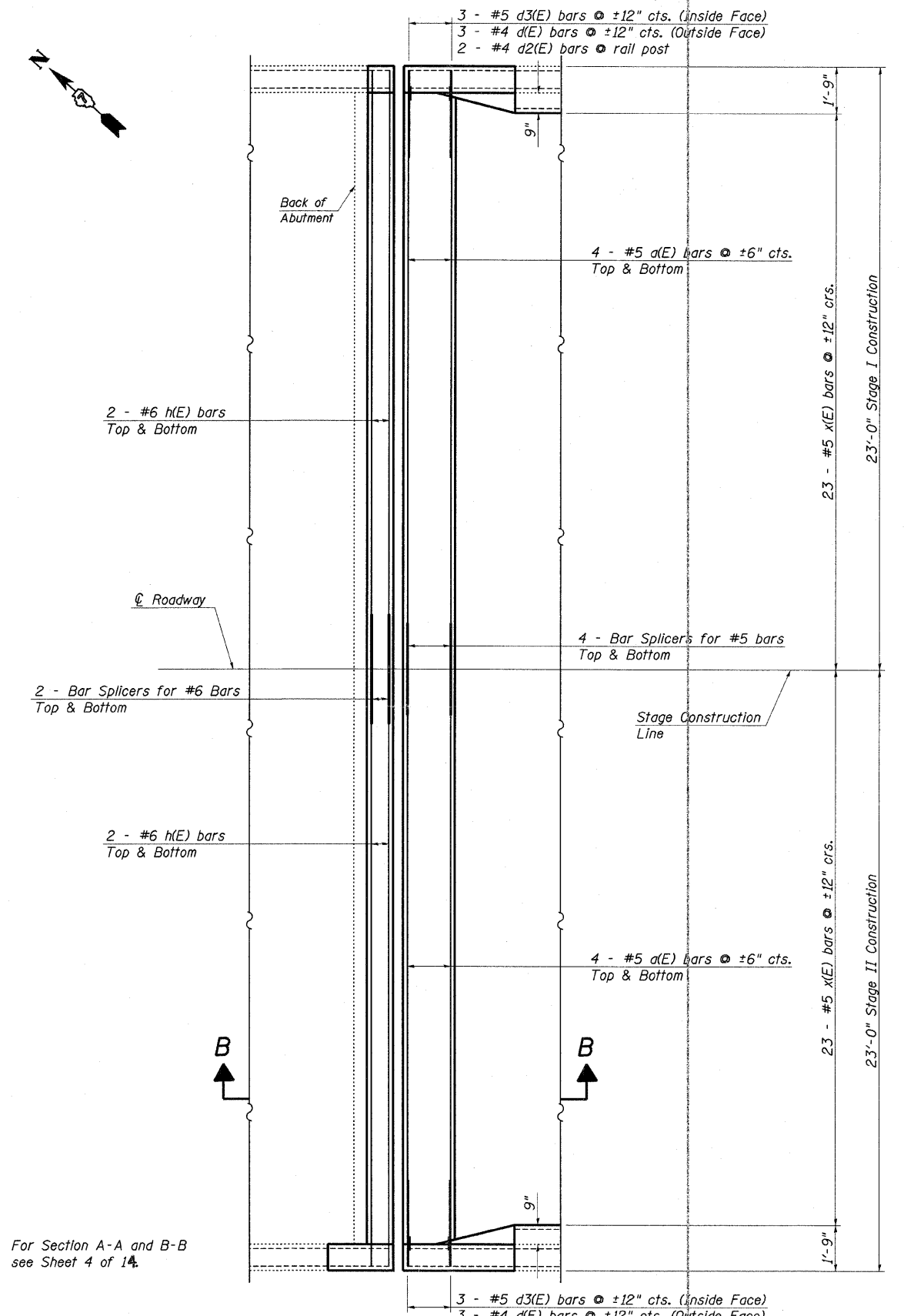
Bar x(E)

BILL OF MATERIAL

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE	
	STAGE I	STAGE II					
a (E)	8	8	16	#5	22'-8"	—	
d (E)	3	3	6	#4	4'-5"	J	
d2(E)	2	2	4	#4	2'-1"	□	
d3(E)	3	3	6	#5	4'-3"	J	
h (E)	4	4	8	#6	22'-8"	—	
x (E)	23	23	46	#5	2'-5"	□	
REINFORCEMENT BARS (EPOXY COATED)						POUND	820
BAR SPLICERS						EACH	12
CONCRETE REMOVAL						CU YD	6.7
CONCRETE SUPERSTRUCTURE						CU YD	6.7



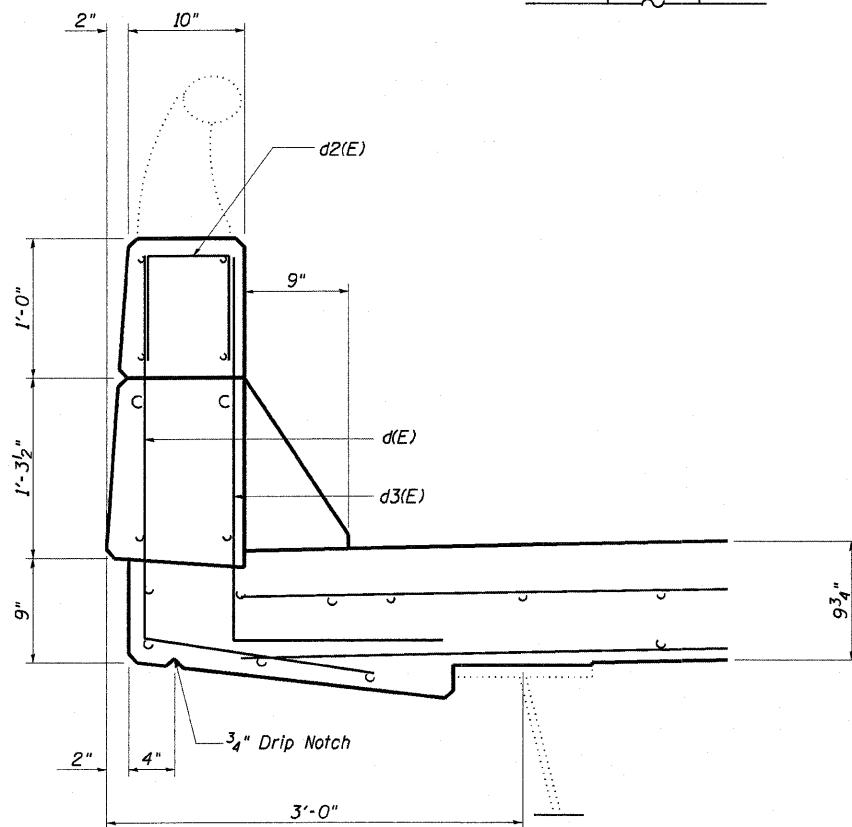
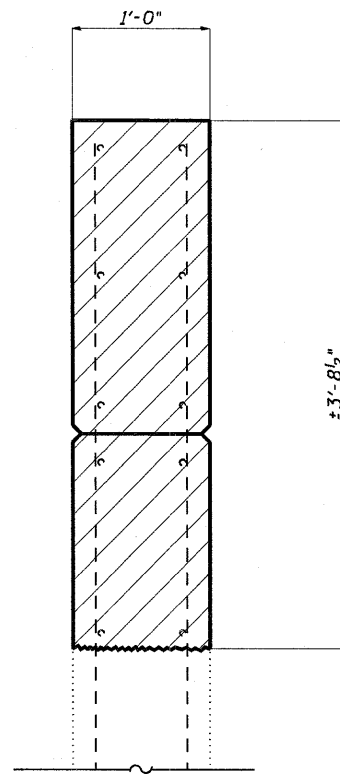
EXISTING PARTIAL PLAN
(North Abutment shown)



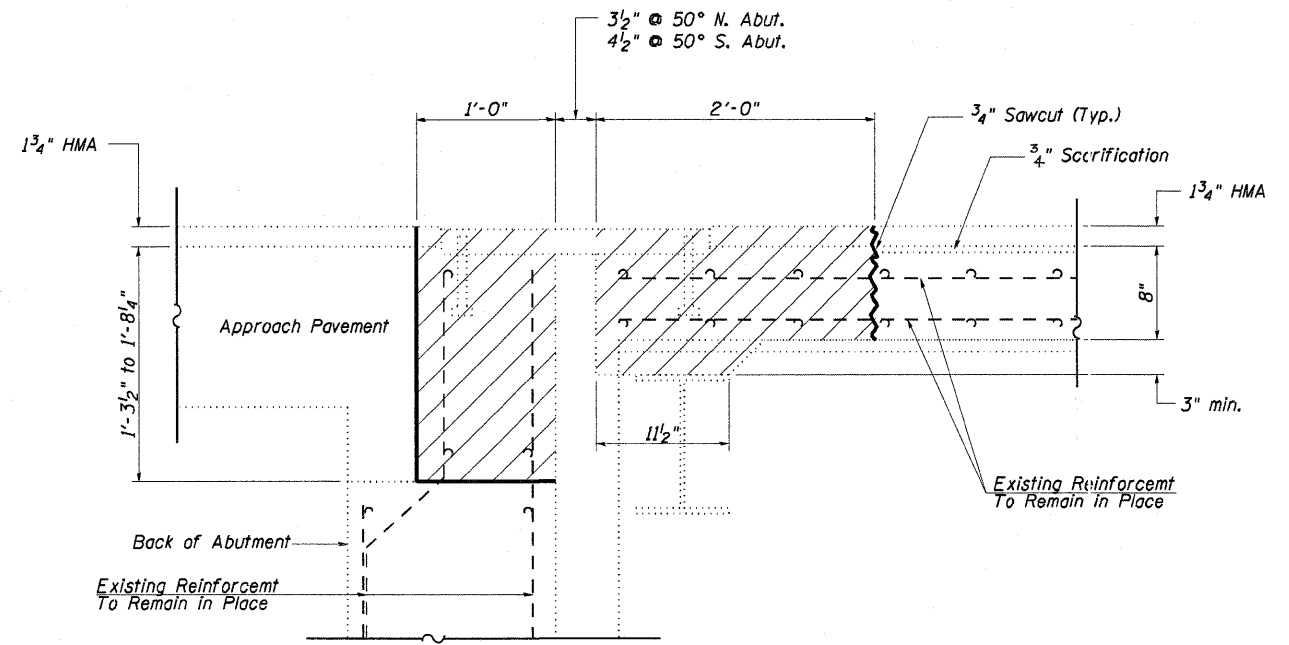
PROPOSED PARTIAL PLAN
(North Abutment shown)

For Section A-A and B-B see Sheet 4 of 14.

**TYPICAL WINGWALL
REMOVAL AND REPLACEMENT**

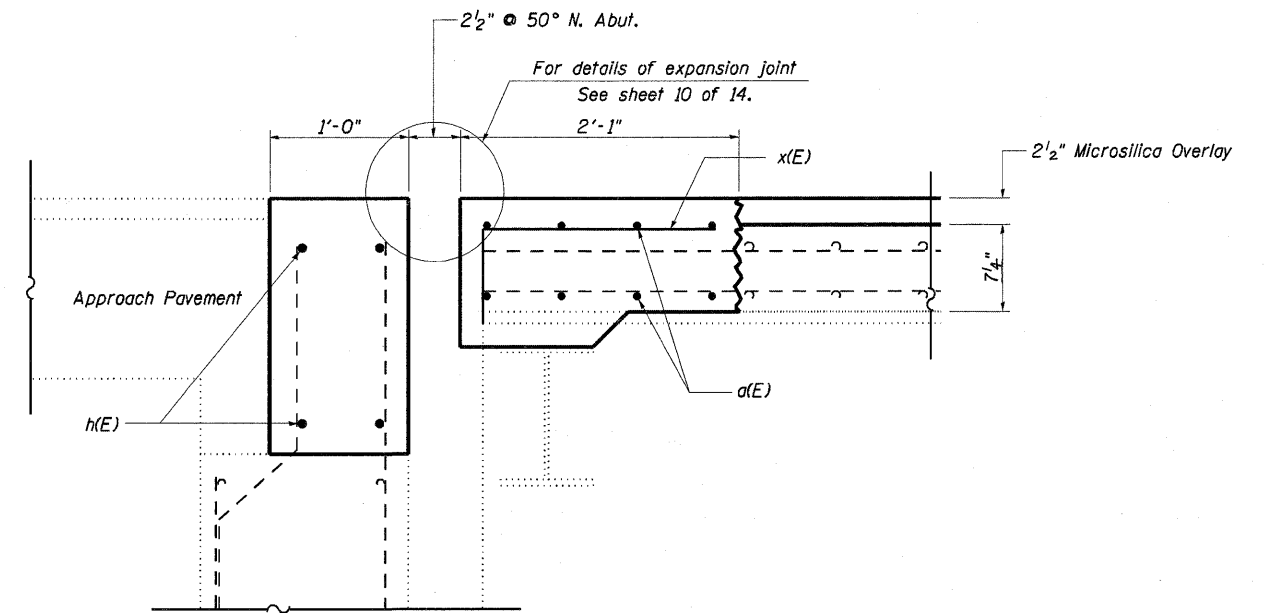


SECTION THRU PARAPET AT ABUTMENTS



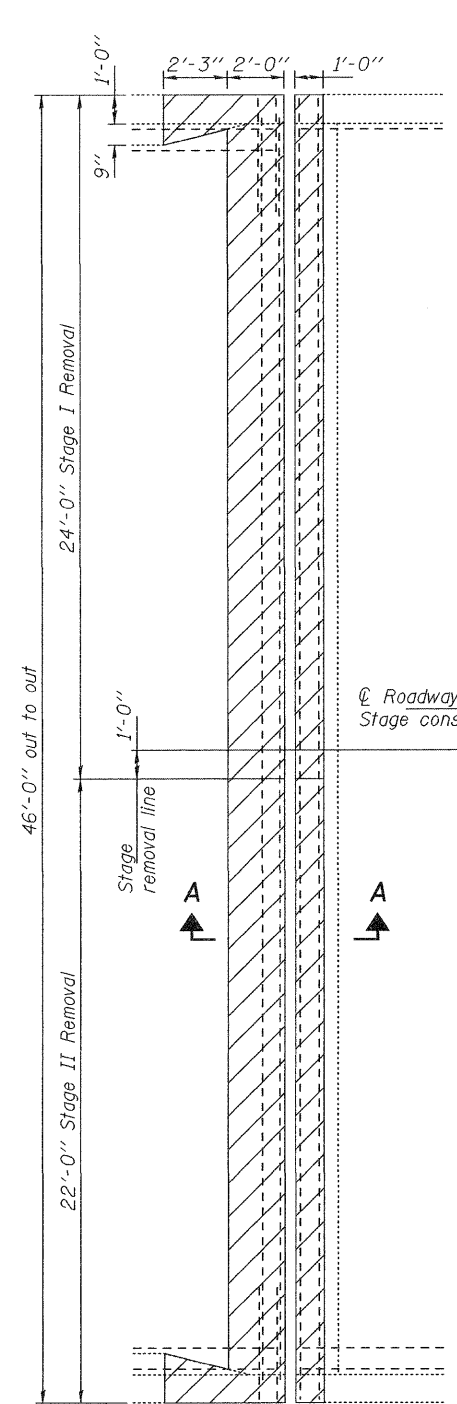
SECTION A-A
(Dimensions at Rt. L's to end of deck)

○ Existing Reinforcement
● Proposed Reinforcement

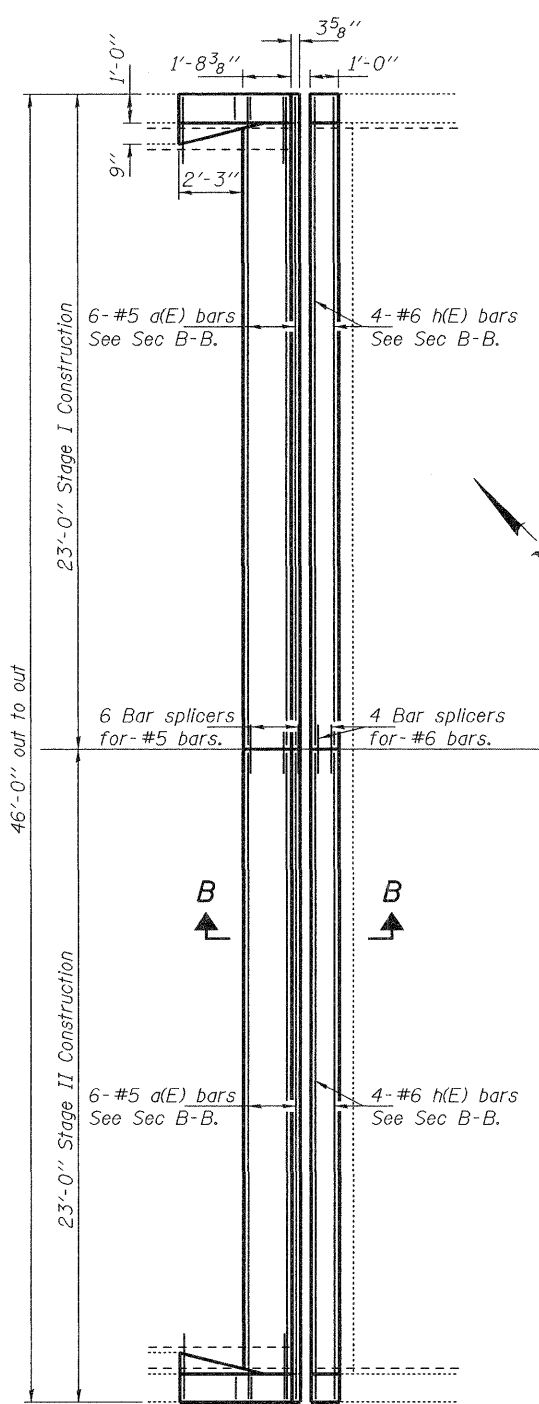


SECTION B-B
(Dimensions at Rt. L's to end of deck)

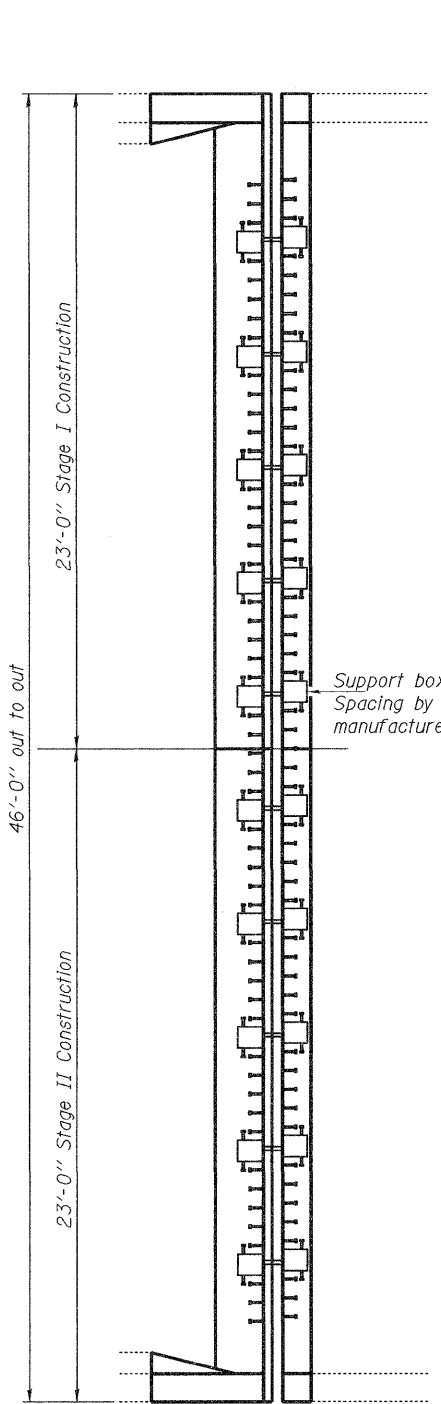
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#FILE#		DRAWN -	REVISED -			.774	11Q2BR/BB-2	Shelby	19	9	
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -			CONTRACT NO. 744B3					
	PLOT DATE = #DATE#	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE: _____	SHEET NO. 4 OF 14 SHEETS	STA. _____	TO STA. _____			



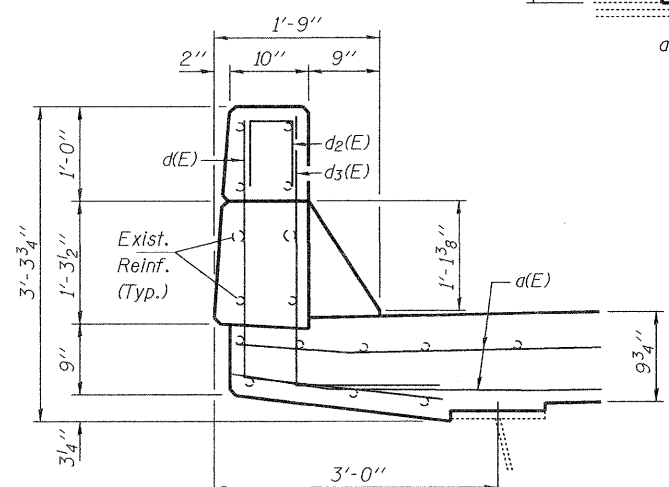
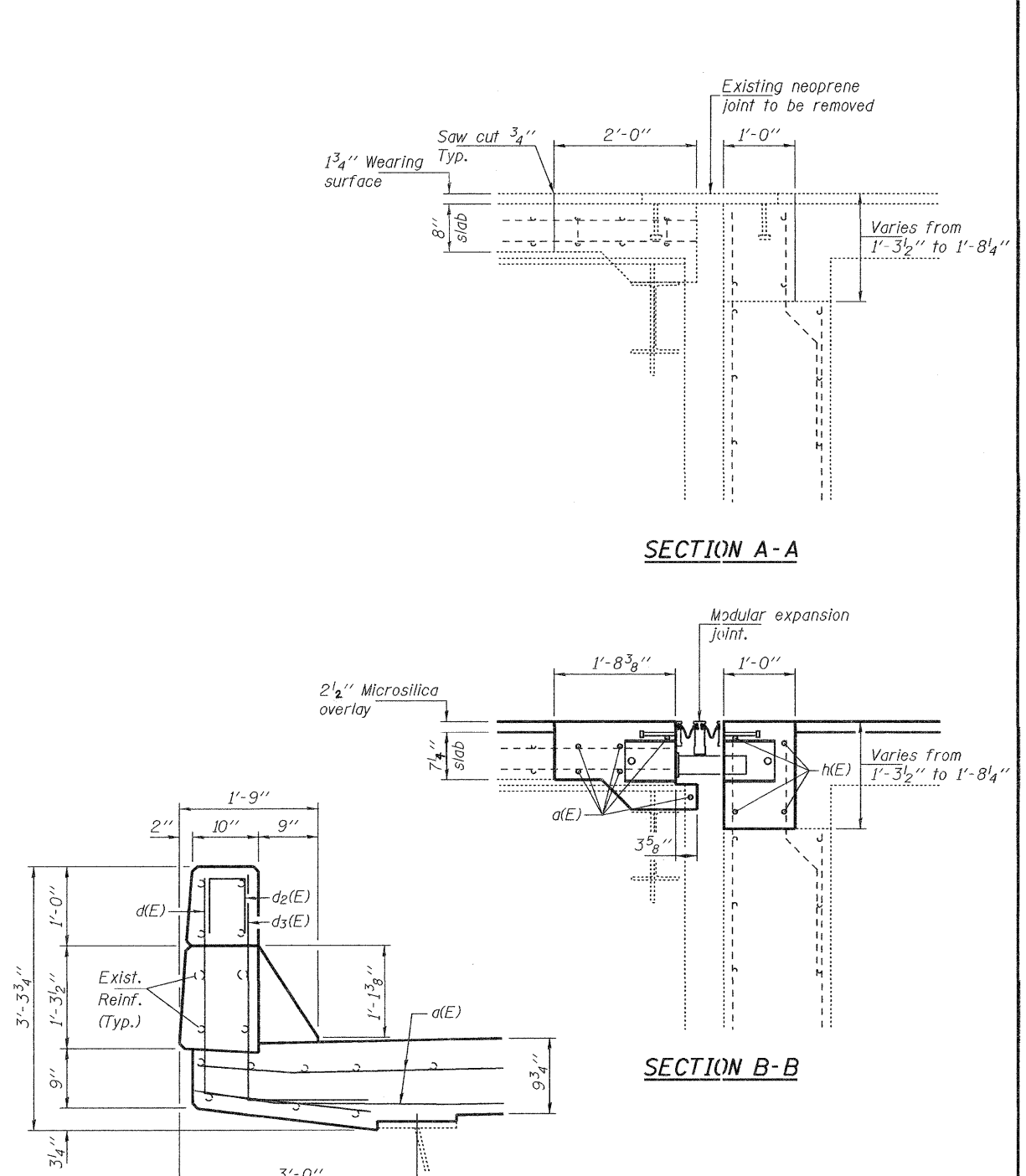
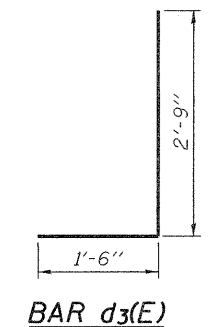
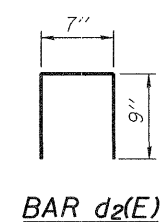
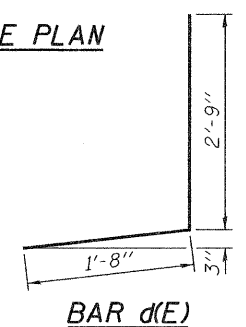
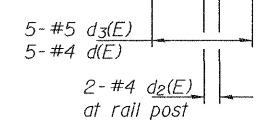
REMOVAL PLAN



CONCRETE PLAN



MODULAR JOINT PLAN
Reinforcement not shown for clarity



SECTION AT PARAPET

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	12	#5	22'-8"	—
d(E)	10	#4	4'-5"	J
d2(E)	4	#4	2'-1"	Π
d3(E)	10	#5	4'-3"	J
h(E)	8	#6	22'-8"	—
Bar Splicers		Each	10	
Concrete Removal		Cu. Yd.	6.6	
Concrete Superstructure		Cu. Yd.	6.6	
Reinforcement Bars, Epoxy Coated		Pound	640	
Modular Expansion Joint, 6"		Foot	44	

Note:
Hatched areas indicate concrete removal. Perimeters of concrete removal areas shall be saw cut 3/4" prior to the removal of concrete.
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.
In reference to Article 520.04 of the Standard Specifications, the expansion length handled by the S. abutment is 391 feet.

DESIGNED ADY
CHECKED DAB
DRAWN baliva
CHECKED ADY DAB

EXAMINED
PASSED
ACTING ENGINEER OF STRUCTURAL SERVICES
ACTING ENGINEER OF BRIDGES AND STRUCTURES

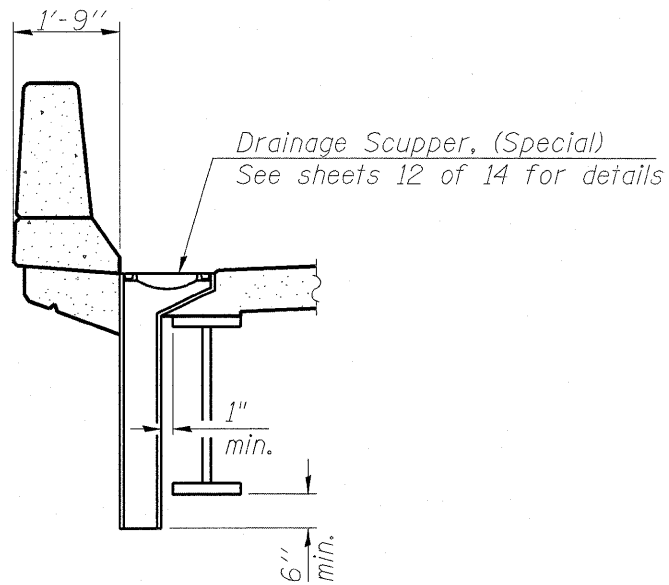
DATE - JANUARY 20, 2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT JOINT REPLACEMENT DETAILS
SN 087-0023

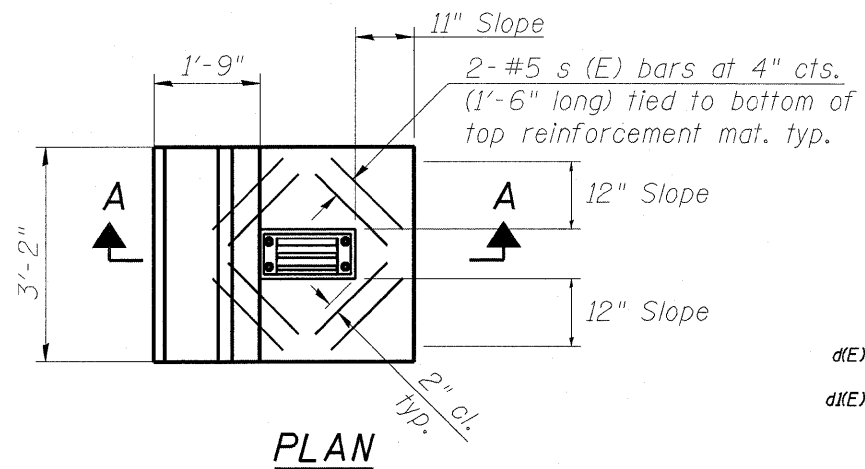
SHEET NO. 5 OF 14 SHEETS

F.A.P. SECTION COUNTY TOTAL SHEETS SHEET NO.
RTE. 774 (102BR)BR-2 SHELBY 19 10
CONTRACT NO. 74483
ILLINOIS FED. AID PROJECT



SECTION A-A

Drainage Scupper, (Special)
See sheets 12 of 14 for details

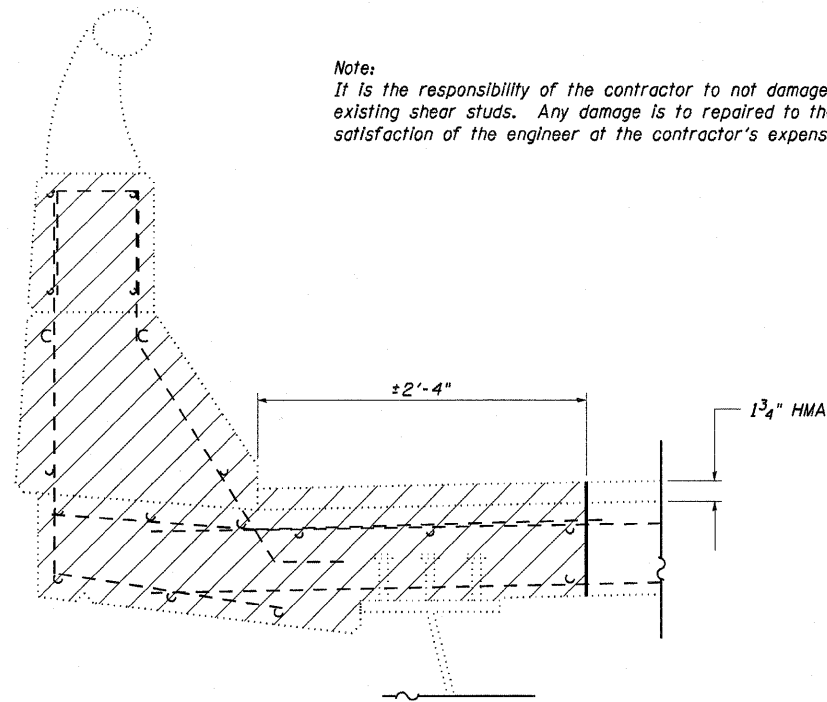


PLAN

Note:
Cut longitudinal reinforcement to clear drainage scuppers.

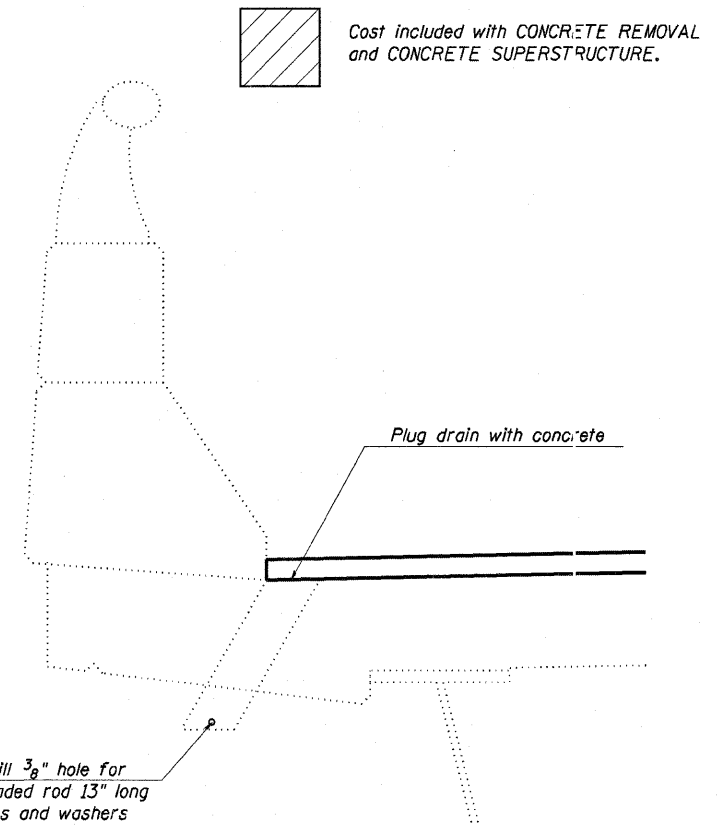
For drainage scupper locations see Sheet 1 of 14.

Note:
It is the responsibility of the contractor to not damage the existing shear studs. Any damage is to be repaired to the satisfaction of the engineer at the contractor's expense.



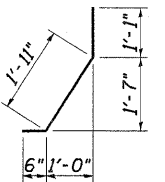
EXISTING SECTION THRU PROPOSED SCUPPER LOCATION

Hatched area indicates concrete removal at proposed scupper location.

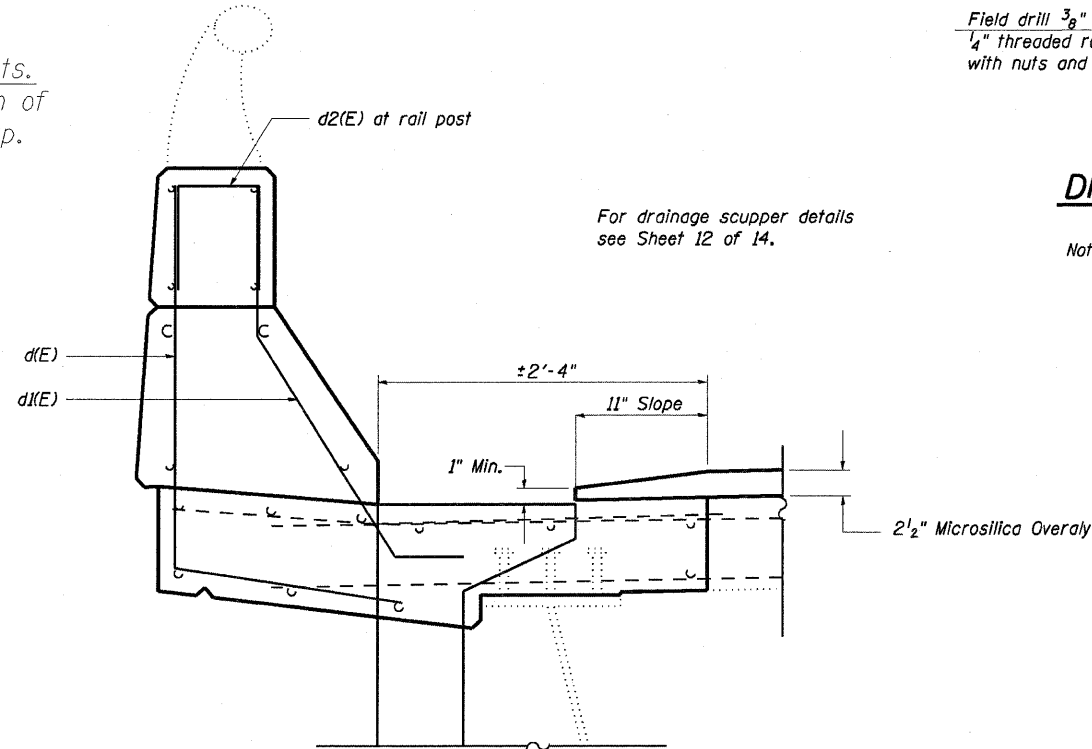


DRAINS TO BE PLUGGED DETAIL

Note: See "Bridge Deck Patching" plan sheets for Plug Existing Deck Drain locations. See "Total Bill of Materials" for structure quantities.



Bar d1(E)

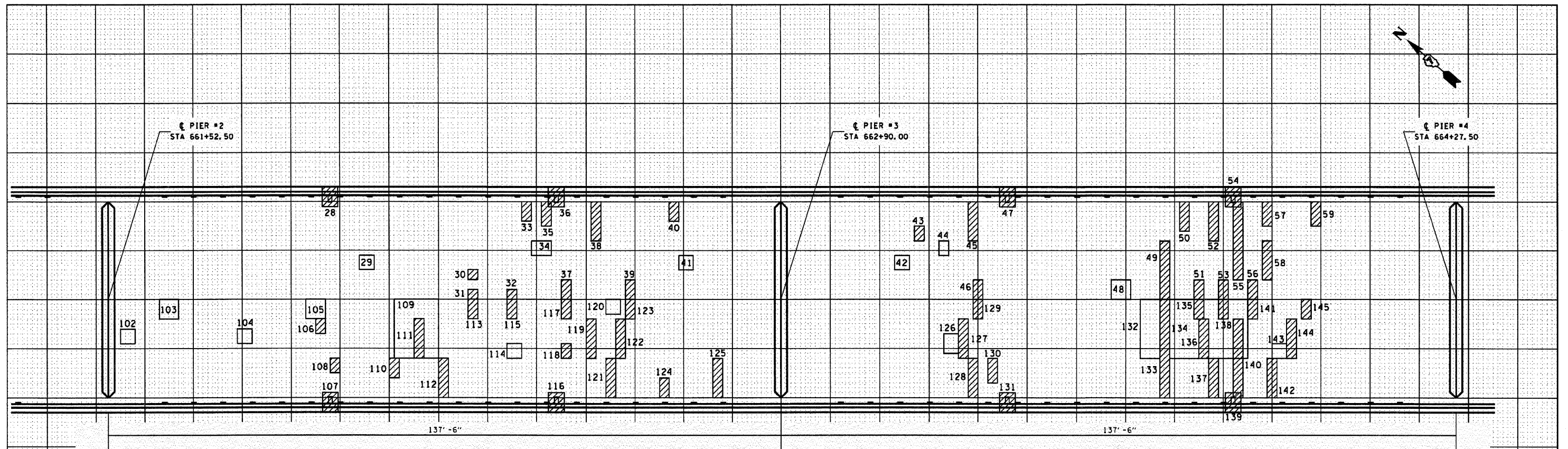




PROPOSED SECTION THRU PROPOSED SCUPPER LOCATION

BILL OF MATERIAL



PER SCUPPER LOCATION

BAR	NUMBER OF BARS	TOTAL	SIZE	LENGTH	SHAPE
d (E)	4	4	#4	4'-5"	J
d1(E)	4	4	#5	3'-6"	J
d2(E)	2	2	#4	2'-1"	□
s (E)	8	8	#5	1'-6"	—
REINFORCEMENT BARS (EPOXY COATED)				FOUND	40
CONCRETE REMOVAL				CU YD	0.7
CONCRETE SUPERSTRUCTURE				CU YD	0.7



 DRAINAGE SCUPPERS, (SPECIAL)
 DECK DRAINS TO BE PLUGGED
 * FOR INFORMATION ONLY
 COST INCLUDED WITH CONCRETE SUPERSTRUCTURE

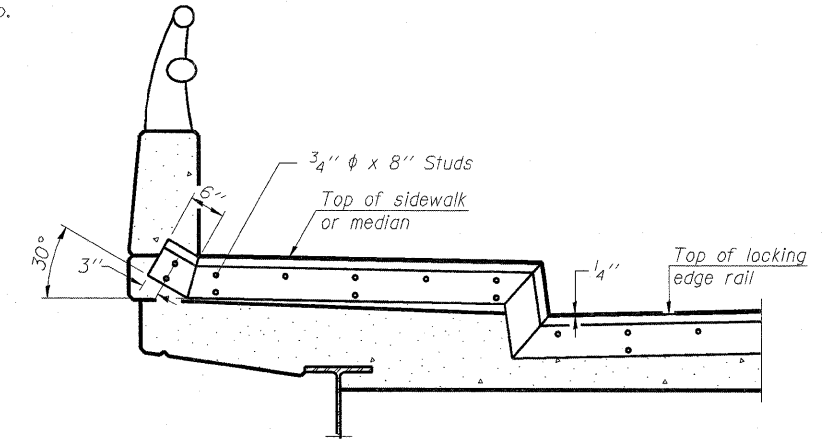
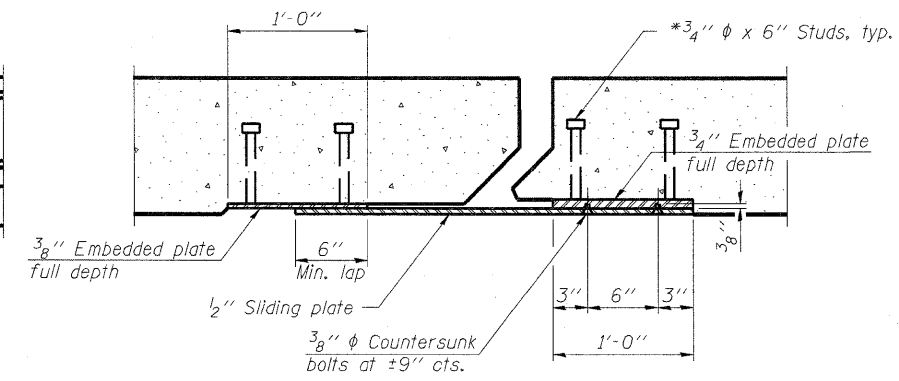
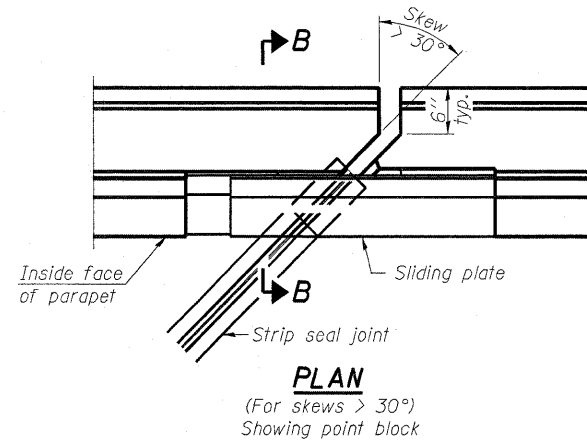
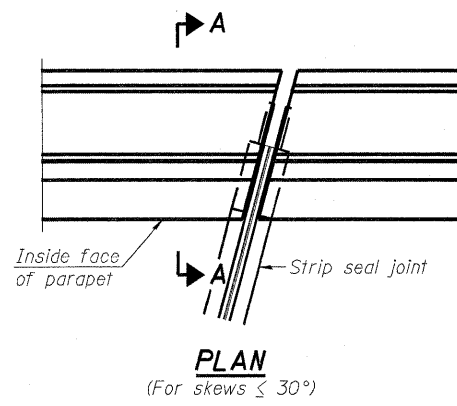
PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SO FT	SO FT	SO FT
•28	3.2 x 4.1			
29	3.0 x 3.0	9.0		
30	2.0 x 2.0		4.0	
31	2.0 x 2.0		4.0	
32	2.0 x 2.0		4.0	
33	2.0 x 4.0			8.0
34	4.0 x 3.0	12.0		
35	2.0 x 5.0			10.0
•36	3.2 x 4.1			
37	2.0 x 4.0			8.0
38	2.0 x 8.0			16.0
39	2.0 x 4.0			8.0
40	2.0 x 4.0			8.0
41	3.0 x 3.0	9.0		
42	3.0 x 3.0	9.0		
43	2.0 x 3.0			6.0
44	2.0 x 3.0			6.0
45	2.0 x 8.0			16.0
46	2.0 x 4.0			8.0
•47	3.2 x 4.1			
48	4.0 x 4.0	16.0		
49	2.0 x 12.0			24.0
50	2.0 x 6.0			12.0
51	2.0 x 4.0			8.0
52	2.0 x 8.0			16.0
53	2.0 x 4.0			8.0
•54	3.2 x 4.1			
55	2.0 x 16.0			32.0
56	2.0 x 4.0			8.0
57	2.0 x 5.0			10.0
58	2.0 x 8.0			16.0
59	2.0 x 5.0			10.0
102	3.0 x 3.0	9.0		
103	4.0 x 4.0	16.0		
104	3.0 x 3.0	9.0		
105	4.0 x 5.0	20.0		
106	2.0 x 3.0			6.0
•107	3.2 x 4.1			
108	2.0 x 3.0			6.0
109	9.0 x 12.0	108.0		
110	2.0 x 4.0			8.0
111	2.0 x 8.0			16.0
112	2.0 x 8.0			16.0
113	2.0 x 4.0			8.0
114	3.0 x 3.0	9.0		
115	2.0 x 4.0			8.0
•116	3.2 x 4.1			
117	2.0 x 4.0			8.0
118	2.0 x 3.0			6.0
119	2.0 x 8.0			16.0
120	3.0 x 3.0	9.0		
121	2.0 x 8.0			16.0
122	2.0 x 8.0			16.0
123	2.0 x 4.0			8.0
124	2.0 x 4.0			8.0
125	2.0 x 8.0			16.0
126	3.0 x 4.0	12.0		
127	2.0 x 8.0			16.0
128	2.0 x 8.0			16.0
129	2.0 x 4.0			8.0
130	2.0 x 5.0			10.0
•131	3.2 x 4.1			
132	4.0 x 12.0	48.0		
133	2.0 x 20.0			40.0
134	16.0 x 12.0	192.0		
135	2.0 x 4.0			8.0
136	2.0 x 8.0			16.0
137	2.0 x 8.0			16.0
138	2.0 x 4.0			8.0
•139	3.2 x 4.1			
140	2.0 x 16.0			32.0
141	2.0 x 4.0			8.0
142	2.0 x 8.0			16.0
143	3.0 x 3.0			6.0
144	2.0 x 8.0			16.0
145	2.0 x 4.0			8.0

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.
PATCHING LEGEND
 PARTIAL DEPTH (FOR INFORMATION ONLY)
 FULL DEPTH
 DATE OF SURVEY: 9-22-10
 SURVEY BY: MEA, ESS, KLB
 RSW, DPM
 METHOD OF SURVEY: VISUAL

BRIDGE DECK PATCHING
 SHELBY COUNTY
 IL 128 OVER THE
 KASKASKIA RIVER
 1 MILE SE OF
 COWDEN
 SN 087-0023

023

FILE NAME =	USER NAME = bsermarkj	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE DECK PATCHING SN. 087-0023	F.A.P. RTE. 114	SECTION 110288188-2	COUNTY	TOTAL SHEETS 19	SHEET NO. 13	
ca:\pwwork\p\idot\bsermarkj\0207751\0774	83-shc-brpatch.dgn	DRAWN - ---	REVISED - ---			SCALE: _____	SHEET NO. 8 OF 14 SHEETS	STA. _____	TO STA. _____	CONTRACT NO. 74483	
	PLOT SCALE = 100,0000' / IN.	CHECKED - ---	REVISED - ---								
	PLOT DATE = 11/22/2010	DATE - ---	REVISED - ---								



TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". 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 conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

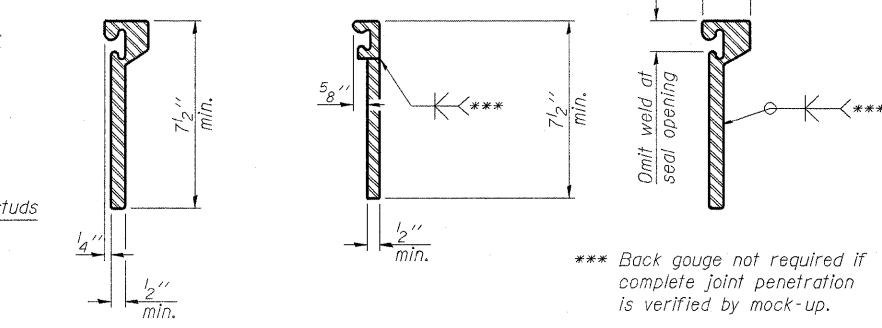
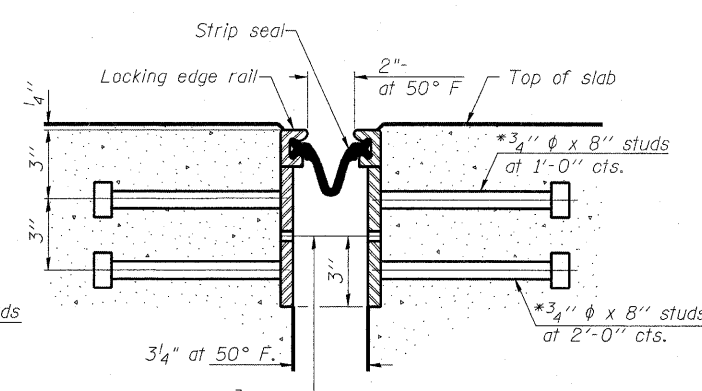
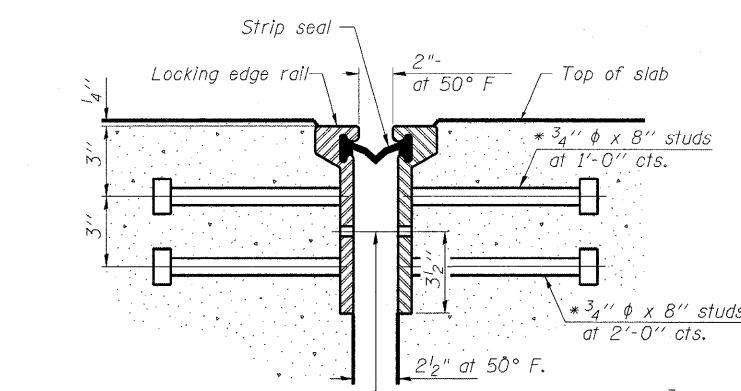
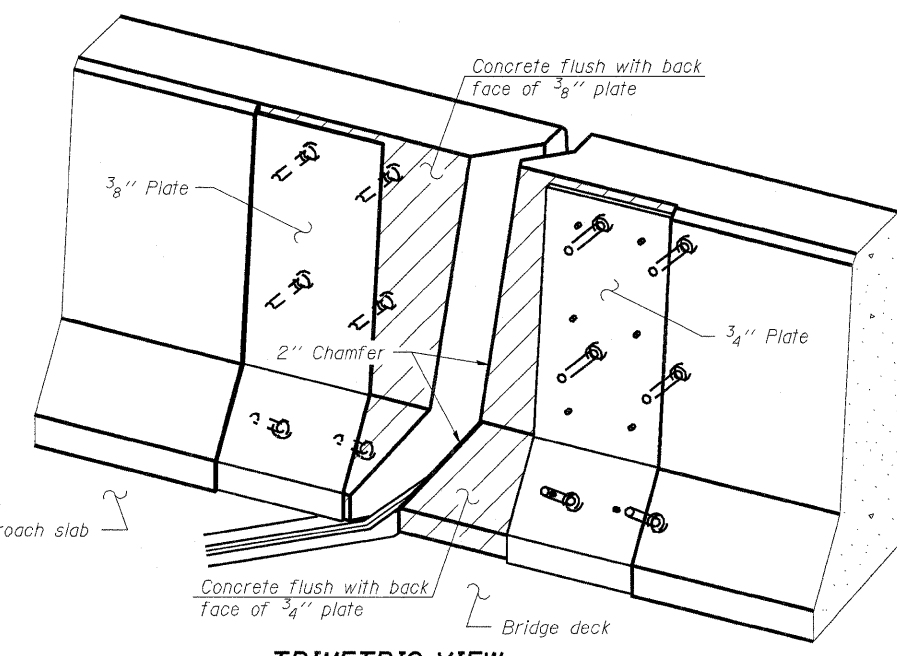
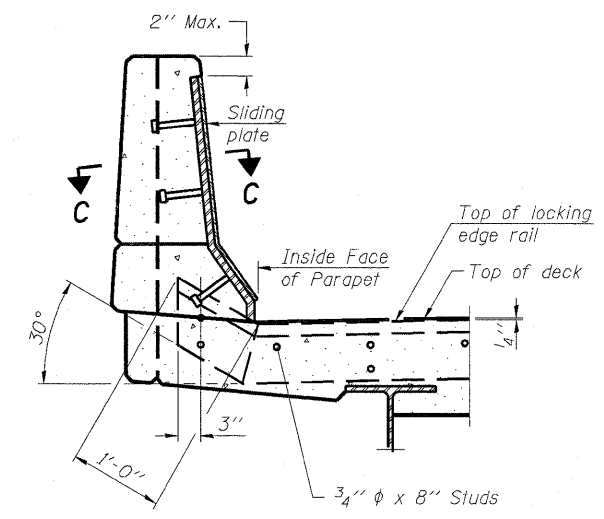
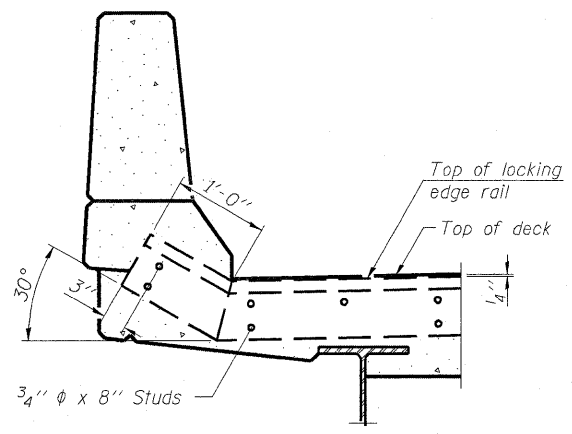
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

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

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

Parapet plates and anchorage studs for skews $> 30^\circ$ included in the cost of Preformed Joint Strip Seal.



LOCKING EDGE RAIL SPLICE

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

7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

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

BILL OF MATERIAL

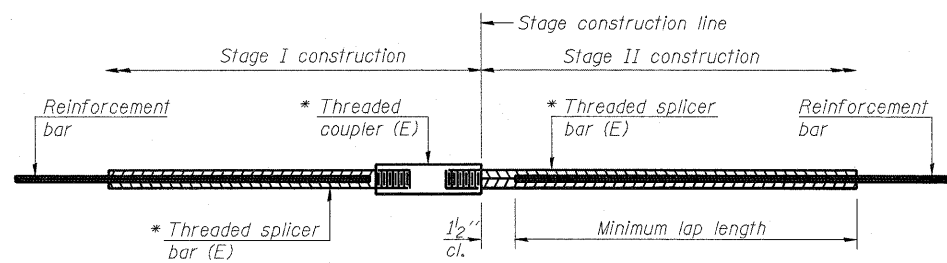
Item	Unit	Total
Preformed Joint Strip Seal	Foot	44.0

EJ-SSJ

7-1-10

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

FILE NAME =	USER NAME = #USER#	DESIGNED - KLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NORTH ABUTMENT PREFORMED JOINT STRIP SEAL STRUCTURE NO. 087-0023	F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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STANDARD BAR SPLICER ASSEMBLY

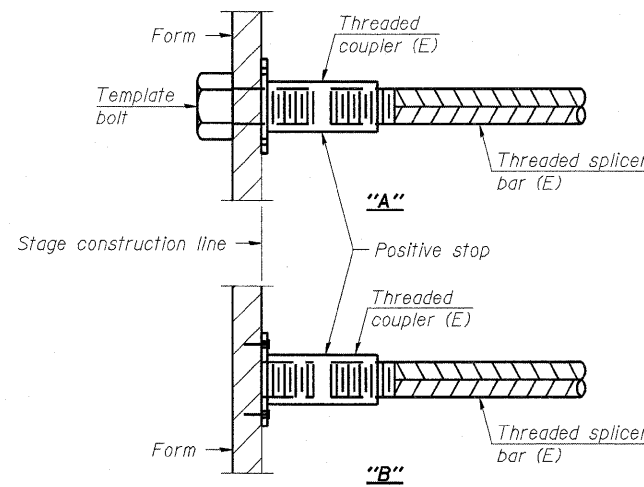
Bar size to be spliced	Minimum Lap Lengths				
	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

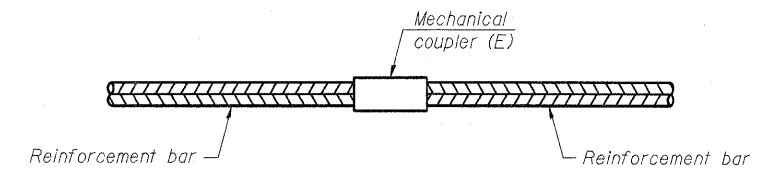
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	14	Table 3
Approach	#6	8	Table 3



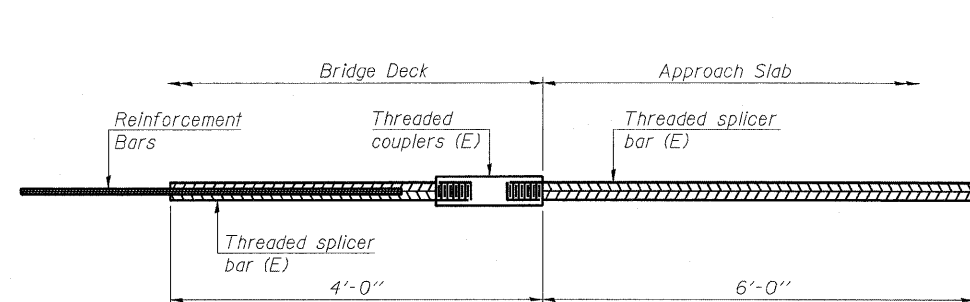
INSTALLATION AND SETTING METHODS

"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.



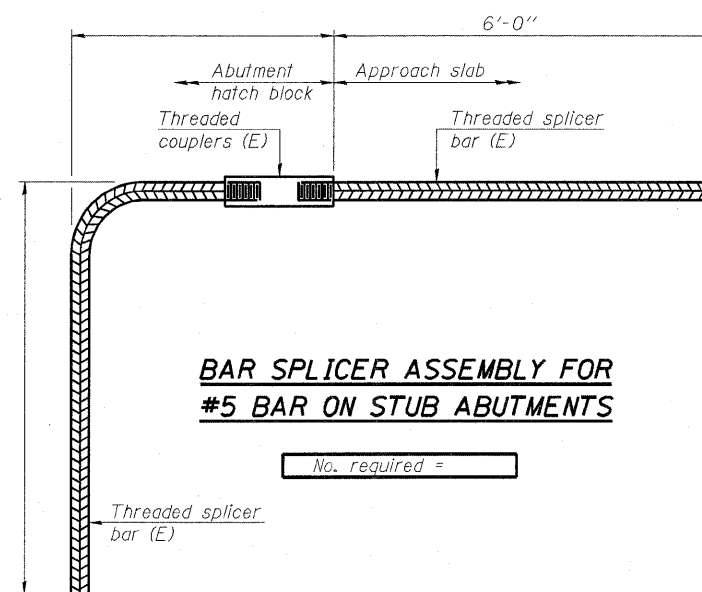
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. 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 special provision for Mechanical Splicers.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

7-1-10

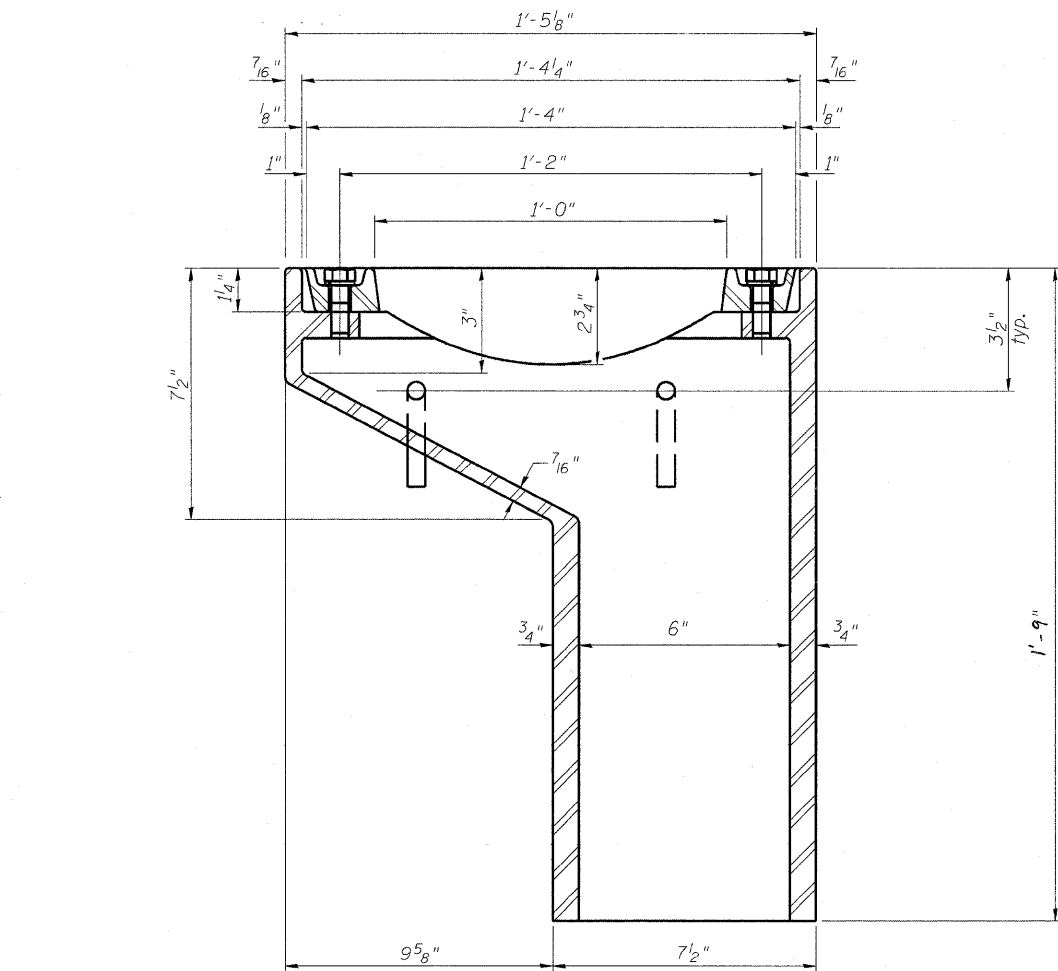
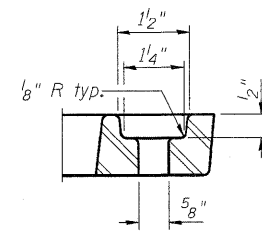
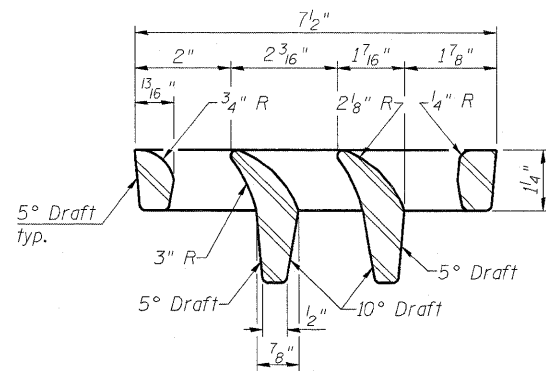
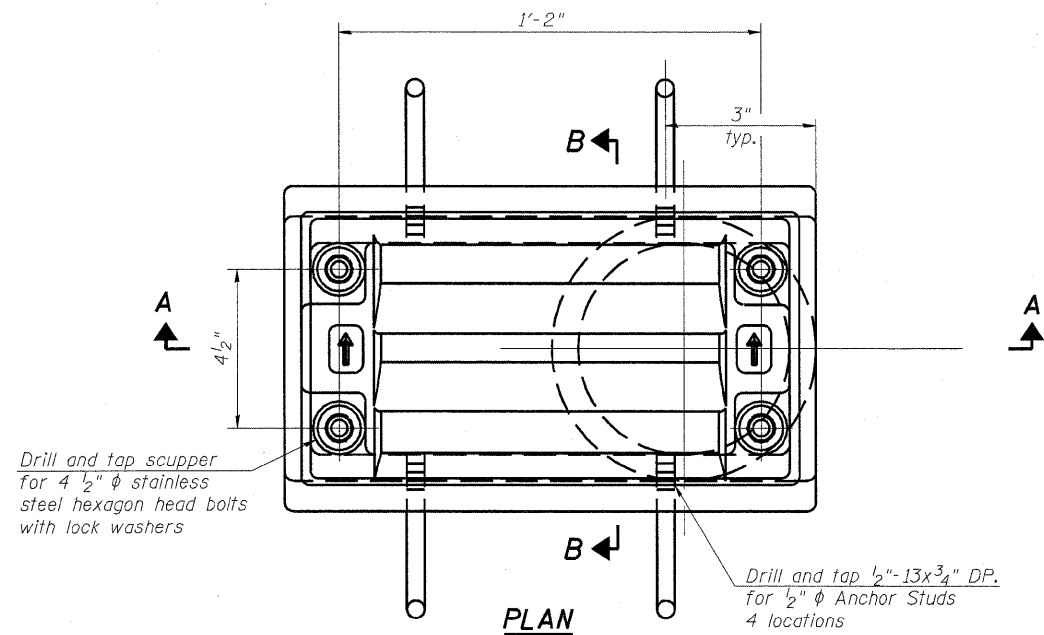
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

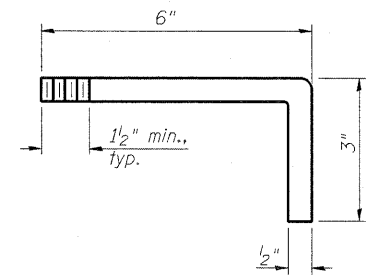
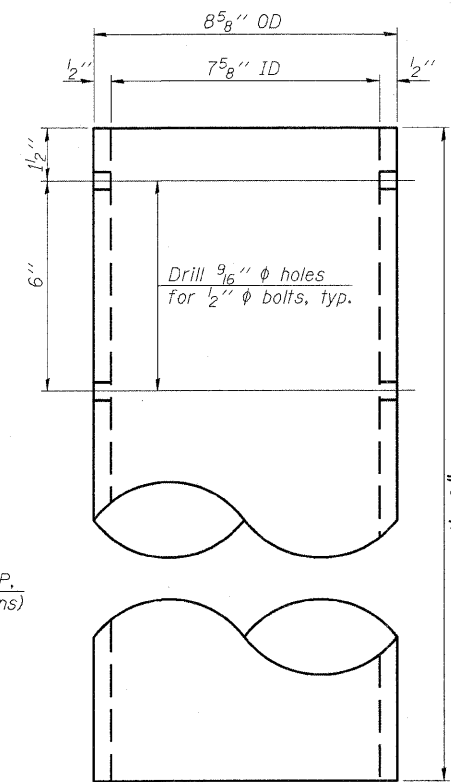
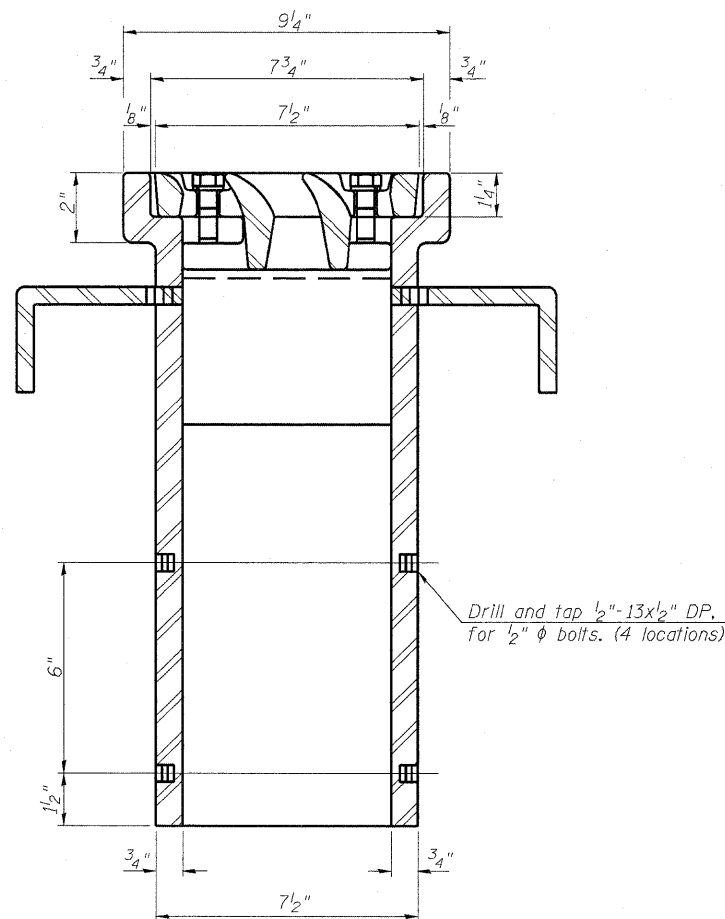
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 087-0023

SCALE: SHEET NO. 11 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	1102BR/BB-2	Shelby	19	16
CONTRACT NO. 74483			ILLINOIS FED. AID PROJECT	



See sheet 6 of 14 for scupper location relative to parapet.



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M11.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scuppers, (Special).

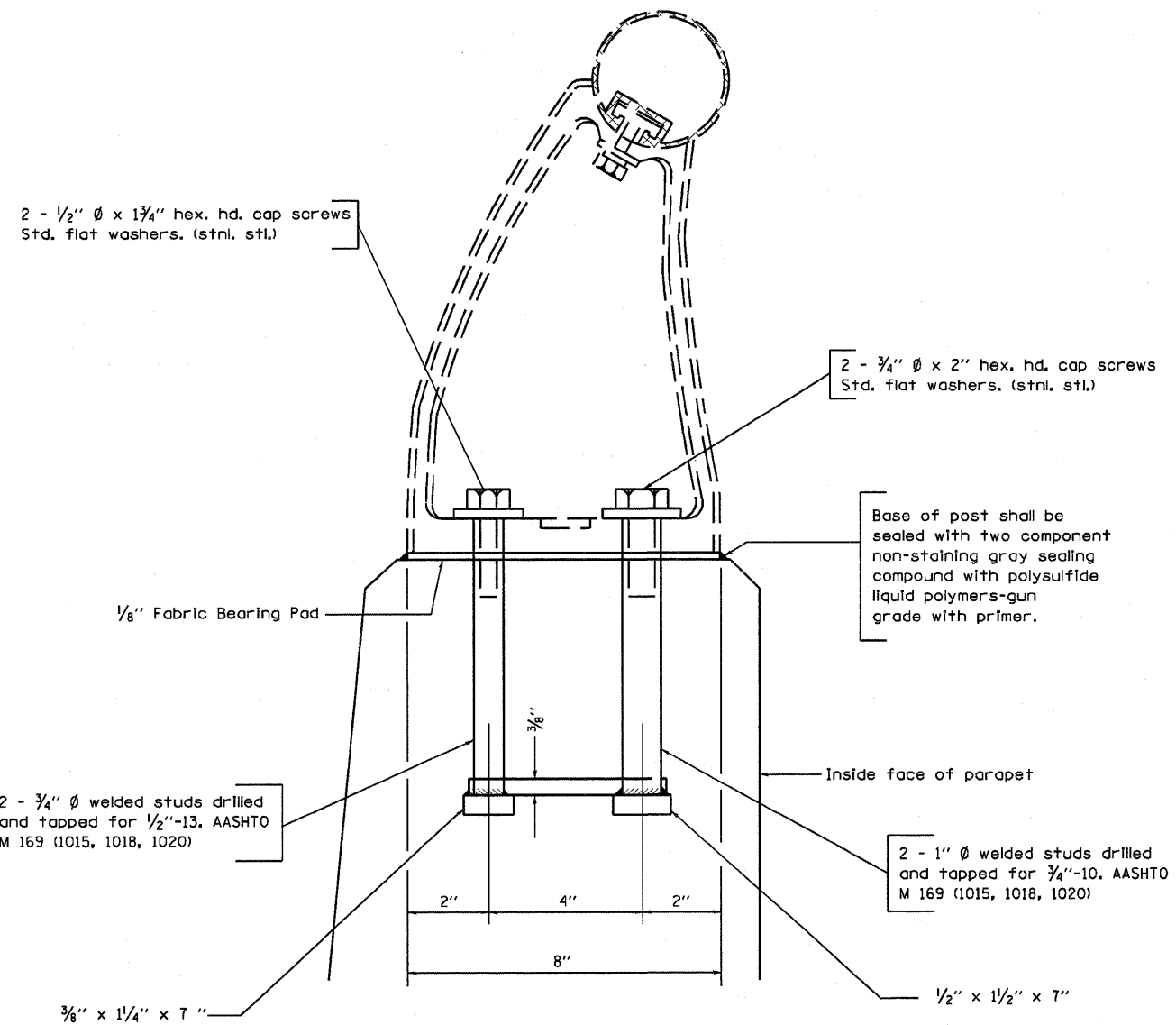
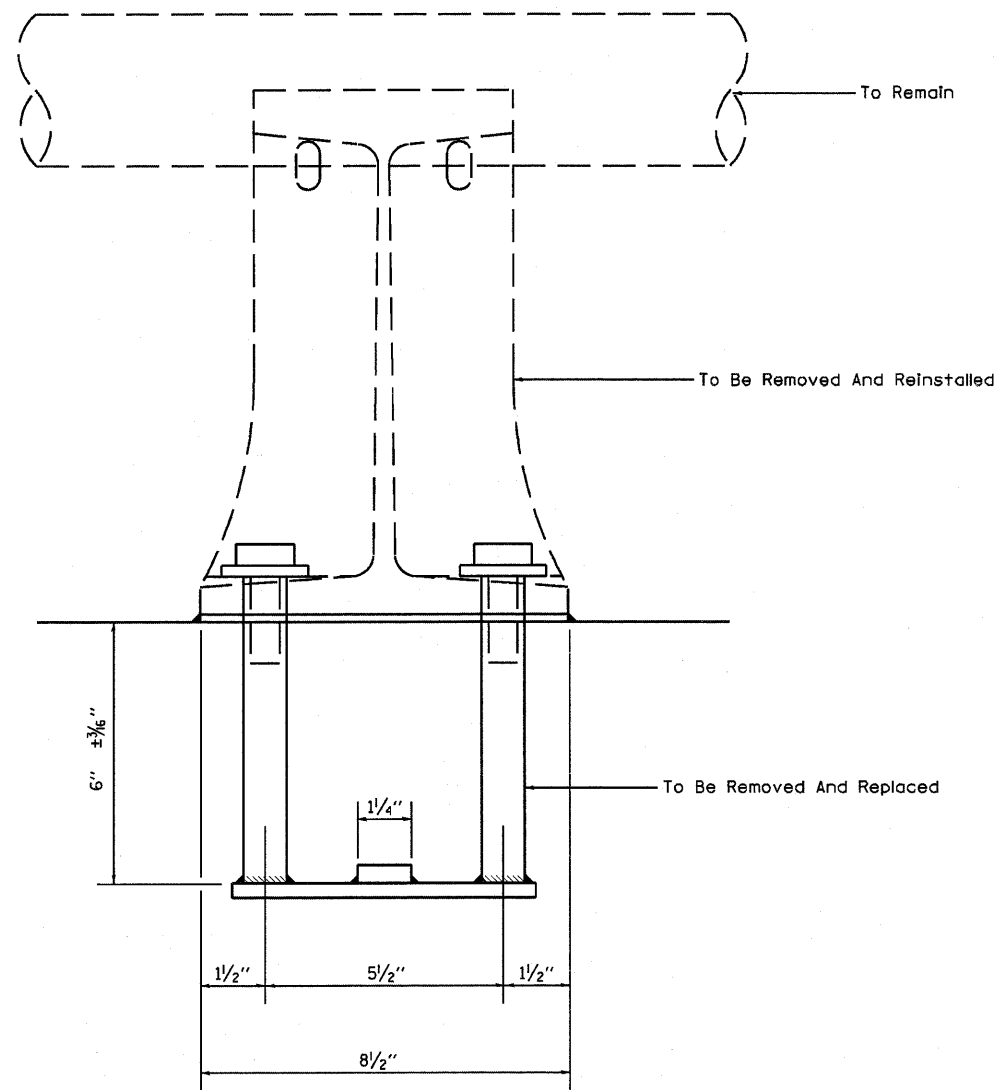
Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, (Special)	Each	20

FILE NAME =	USER NAME = #USER#	DESIGNED - KLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAINAGE SCUPPER, DS-11 STRUCTURE NO. 087-0023	F.A.P. RTE. 174	SECTION 1102BR)BR-2	COUNTY Shelby	TOTAL SHEETS 19	SHEET NO. 17	
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	CHECKED -	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
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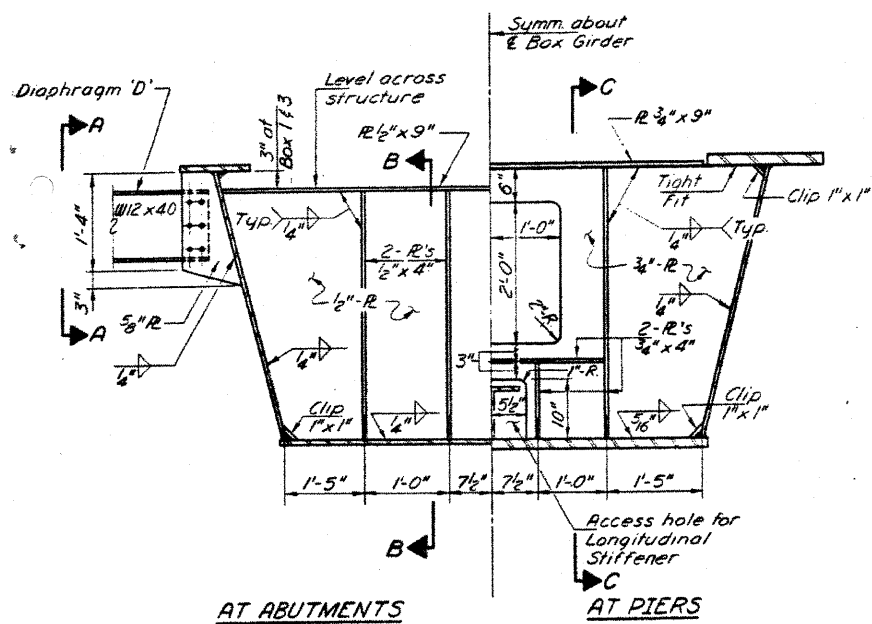


Note: New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost shall be included with Concrete Superstructure.

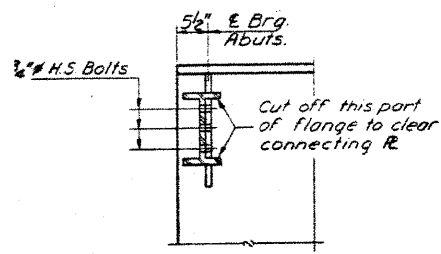
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	PLOT SCALE = #SCALE#	DRAWN - KLB	REVISED -		SCALE: _____	SHEET NO. 13 OF 14 SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 744B3		ILLINOIS FED. AID PROJECT	
	PLOT DATE = #DATE#	CHECKED -	REVISED -								
		DATE -	REVISED -								

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

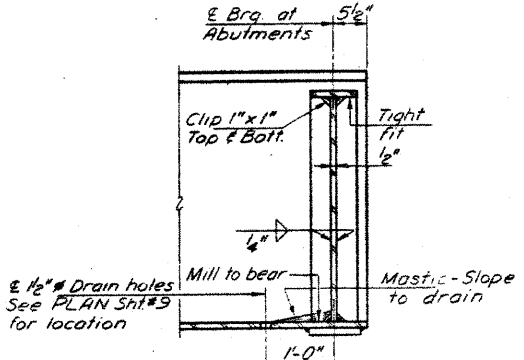
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
S.A. 17A	102BR	SHELBY	4-1	22	18 SHEETS
PER ROAD DIST. NO. 7		ALIGNED	PER AID PROJECT		



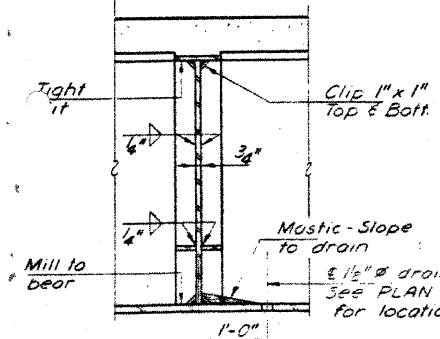
SECTION AT BEARINGS



SECTION A-A

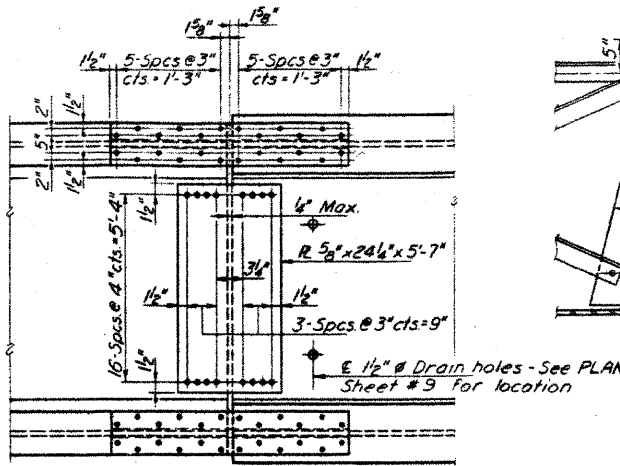


SECTION B-B

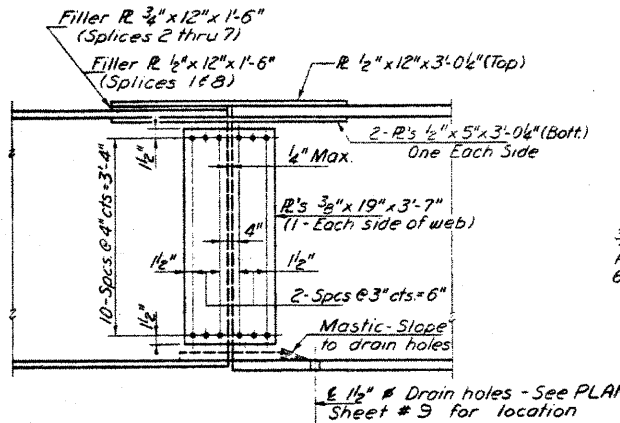


SECTION C-C

DETAIL OF SHOP FLANGE SPLICE
(For different plate width only)

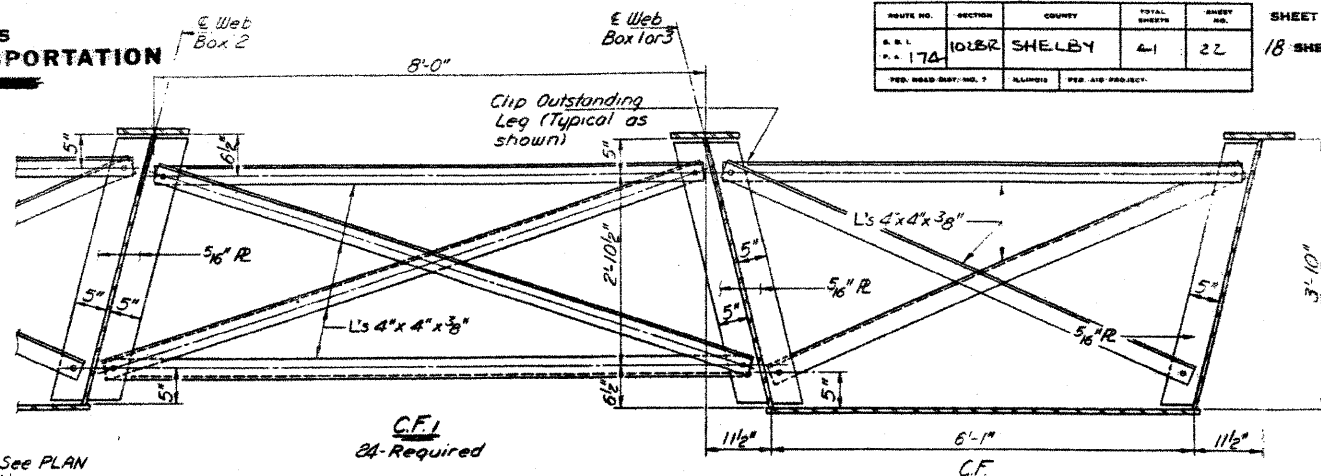


PLAN-FLANGE SPLICES



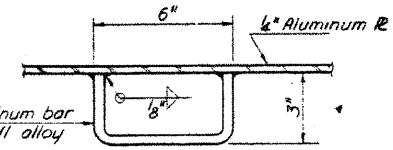
ELEVATION-WEB SPLICES

Note: All plates in splices shall conform to N.T.R.



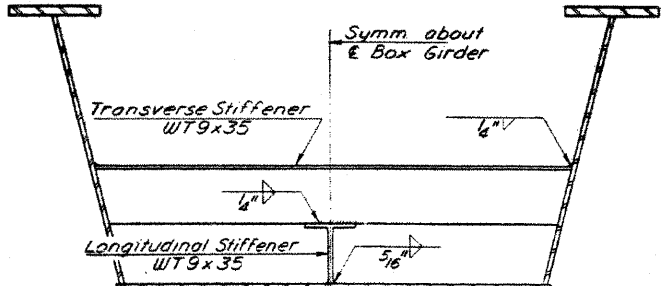
SECTION SHOWING C.F. & C.F.I 10B-Required

Cross frames C.F. shall be placed in the shop and cross frames C.F.I shall be placed in the field with the exception of the 5/16 inch R which shall be shop welded. Both C.F. & C.F.I shall remain in place during placement and curing of the concrete deck, after which these cross frames along with the deck forms shall be removed. See PLAN Sht #9 for location.

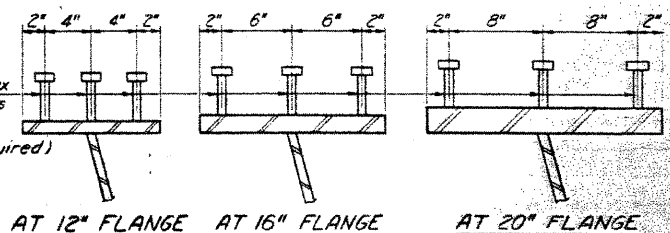


HANDLE DETAIL

** Use "H" = 4" for a fillet height of 2" or less. With more than 2" fillets increase "H" to maintain not less than 2" penetration above bottom of slab.

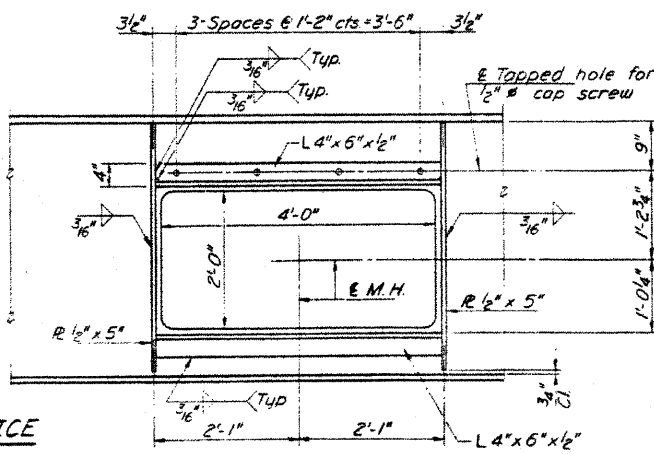


SECTION AT TRANSVERSE STIFFENER

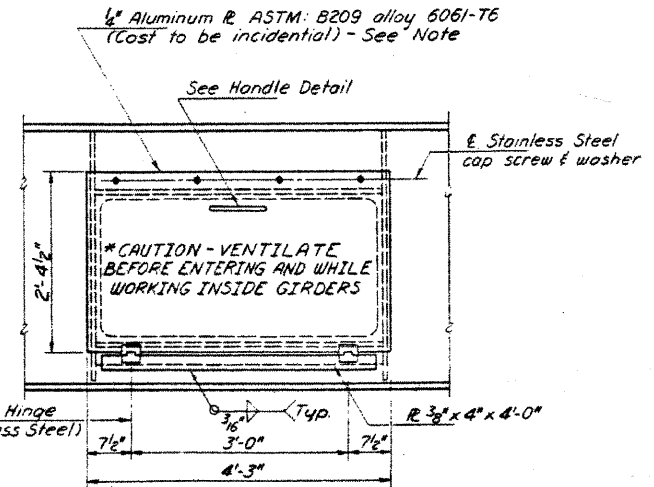


SHEAR STUDS

See Sht #9 for spacing



INSIDE VIEW



OUTSIDE VIEW

MANHOLE DETAILS

(Manholes shall be located in an inside web of each Box Girder in east Span.)

Note: The exterior surface of the aluminum access door shall be cleaned and given a washcoat pretreatment in accordance with the Steel Structures Painting Council's Specifications SSPC-SP1 and SSPC-PT3 followed by the basic lead silico chromate painting specified for structural steel.

FOR INFORMATION ONLY

DESIGNED	Sept 8, 1972
CHECKED	
DRAWN	
CHECKED	

EXAMINED	
PASSED	
APPROVED	

SHEET NO. 19 of 19

STRUCTURAL STEEL DETAILS
S.B.I. RT. 128-SEC. 102BR
SHELBY COUNTY
STA. 663+82.5