

1-17-14 LETTING ITEM 104

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

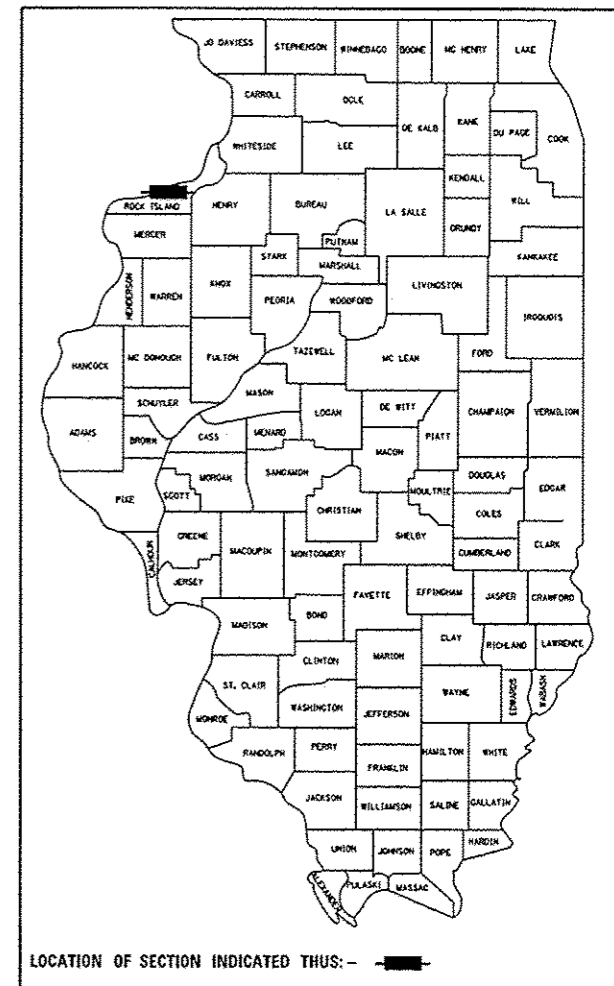
**PROPOSED  
HIGHWAY PLANS**

FAI ROUTE 88 (I-88)  
SECTION D2 BRIDGE REPAIR 2014-1  
TYPE OF IMPROVEMENT: BRIDGE REPAIR  
SN 081-0124 OVER I-88  
ROCK ISLAND COUNTY

C-92-117-13  
R2-E.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	D2 BRIDGE REPAIR 2014-1	ROCK ISLAND	10	1
ILLINOIS CONTRACT NO. 64J91				

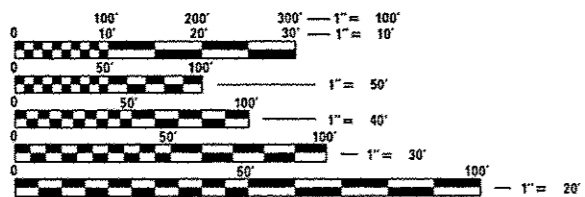
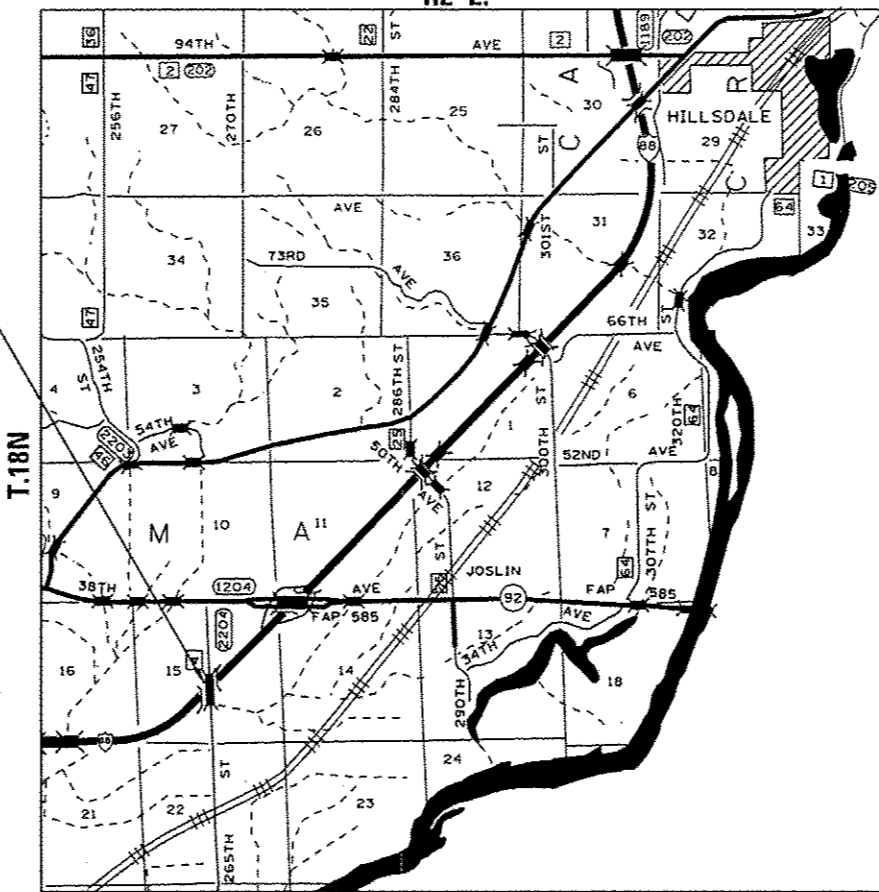
D-92-076-13



FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR STATE STANDARDS, SEE SHEET NO. 2

ZUMA TOWNSHIP, SECTION: 15

SN 081-0124



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: DAVID DOSS (815) 284-5416  
PROJECT MANAGER: MAHMOUD ETEMADI (815) 284-5393

CONTRACT NO. 64J91

GROSS LENGTH=277.06 FT.=0.052 MILE  
NET LENGTH=277.06 FT.=0.052 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Oct 9 2013  
Paul A. Luetken  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Dec 6 2013  
John D. Baranzelli, P.E.  
actg ENGINEER OF DESIGN AND ENVIRONMENT

Dec 6 2013  
Omer Osman, P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS



## SUMMARY OF QUANTITIES

**0014  
100%  
State Funds**

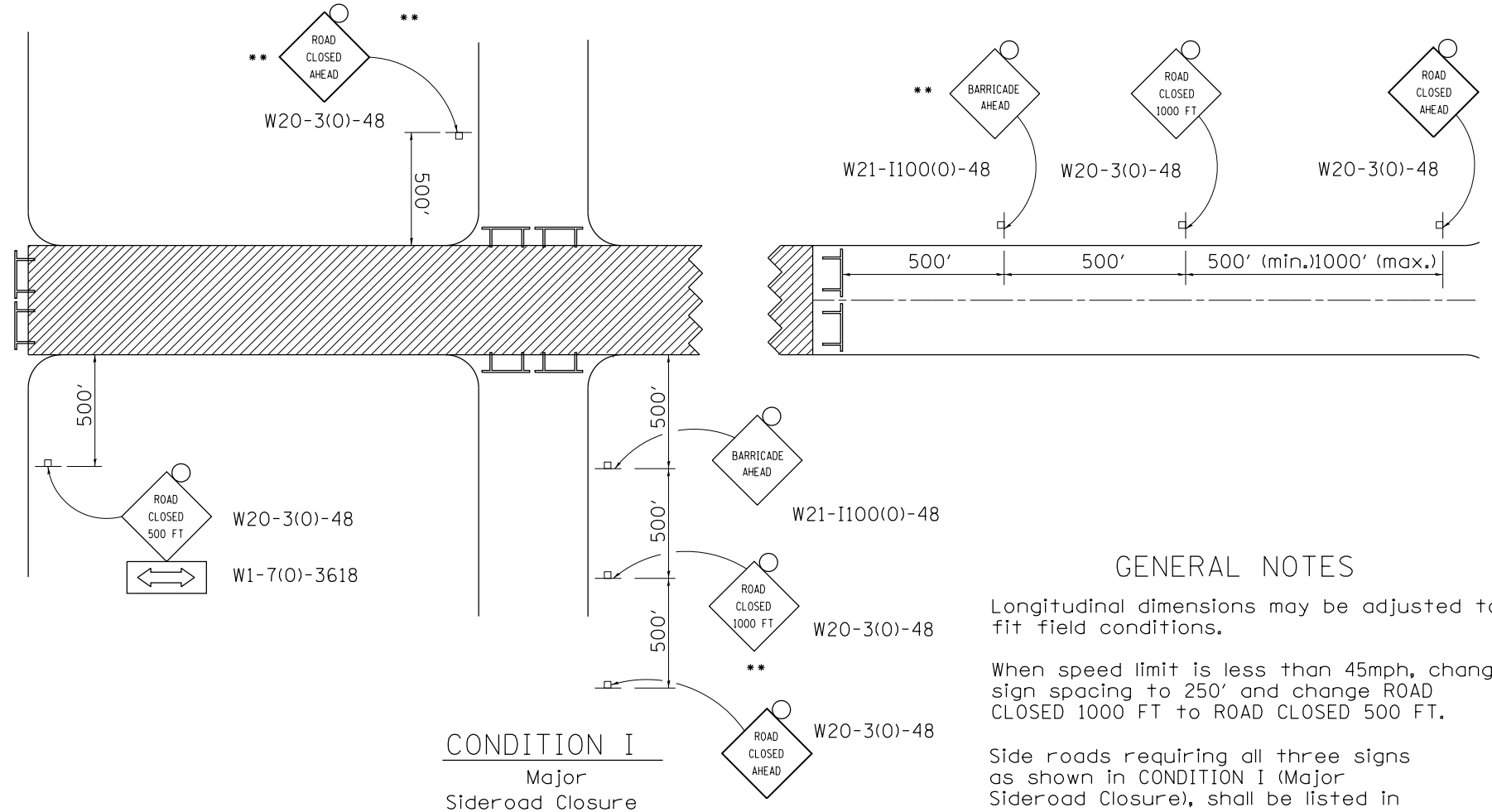
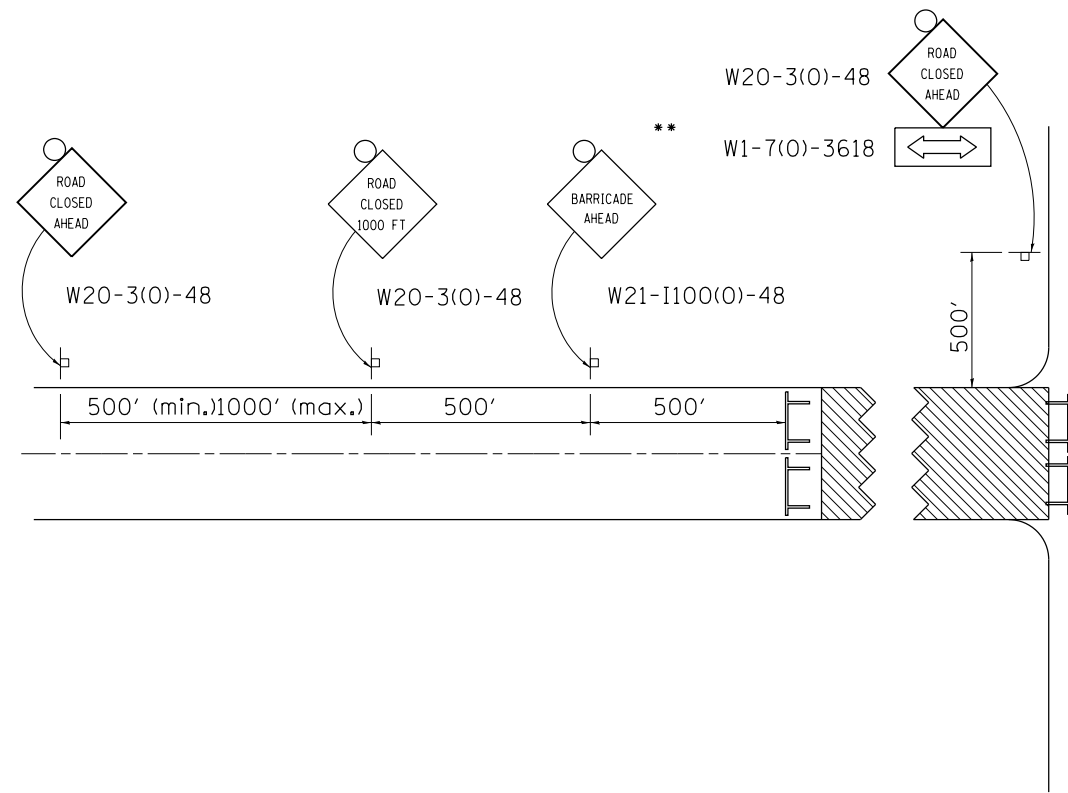
CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY
50102400	CONCRETE REMOVAL	CU YD	4.3
50300255	CONCRETE SUPERSTRUCTURE	CU YD	4.2
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	450
50800515	BAR SPLICERS	EACH	8
52000110	PREFORMED JOINT STRIP SEAL	FOOT	82
67100100	MOBILIZATION	L SUM	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	627

*Rev.*

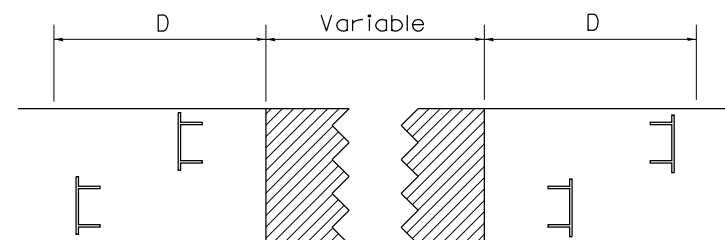
# TRAFFIC CONTROL FOR ROAD CLOSURE

## CONDITION II

Minor Sideroad Closure

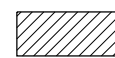


### ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To Thru Traffic" detail on Highway Standard 701901. If the distance "D" exceeds 2000' an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

### SYMBOLS



Work area



Type III Barricade with Flashers



Sign with flashing light

### GENERAL NOTES

Longitudinal dimensions may be adjusted to fit field conditions.

When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT to ROAD CLOSED 500 FT.

Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.

\*\* Where local access is to be maintained, barricades are to be set up as shown in Road Closed to thru traffic. Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 701901.

All dimensions are in inches unless otherwise shown.

TYPICAL APPLICATION FOR ROAD CLOSURE

FILE NAME = D:\BR\Draws\Rock Island\64J91 Repairs SN	USER NAME = dossdd	DESIGNED -	REVISED - 10-17-11	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>REGION 2 / DISTRICT 2 STANDARD</b>				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	081-0124\CADD\0207613-sht-cover.dgn	DRAWN -	REVISED -		88	D2 BRIDGE REPAIR 2014-1	ROCK ISLAND	10	4				
	PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 64J91				
	PLOT DATE = Tue Sep 17 07:52:34 2013	DATE -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								

**GENERAL NOTES**

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

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.

Reinforcement bars designated (E) shall be epoxy coated.

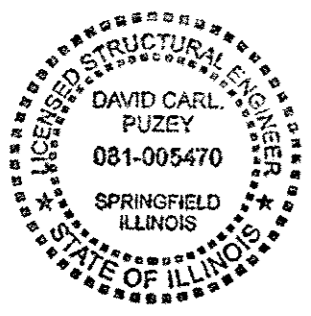
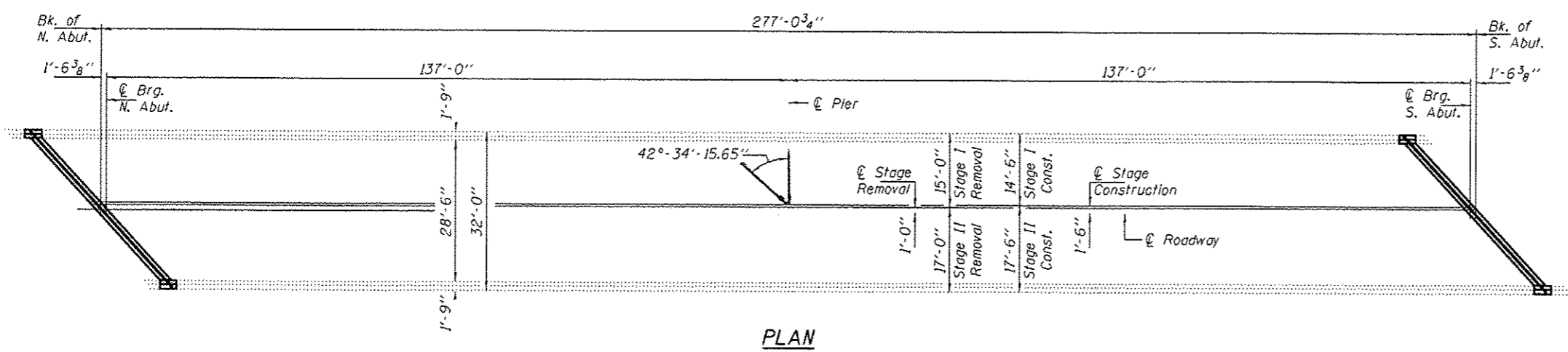
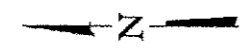
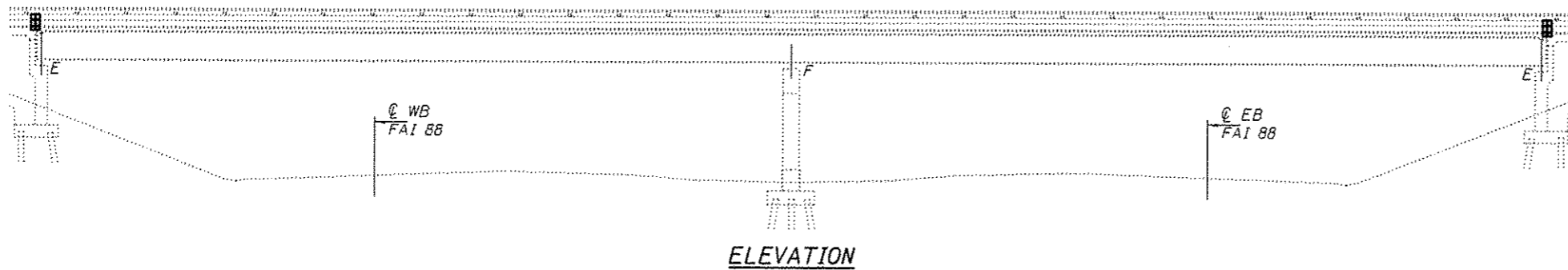
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods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

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.

The deck surface shall have its final finish lined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

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.

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



EXPIRES 11-30-2014

**TOTAL BILL OF MATERIAL**

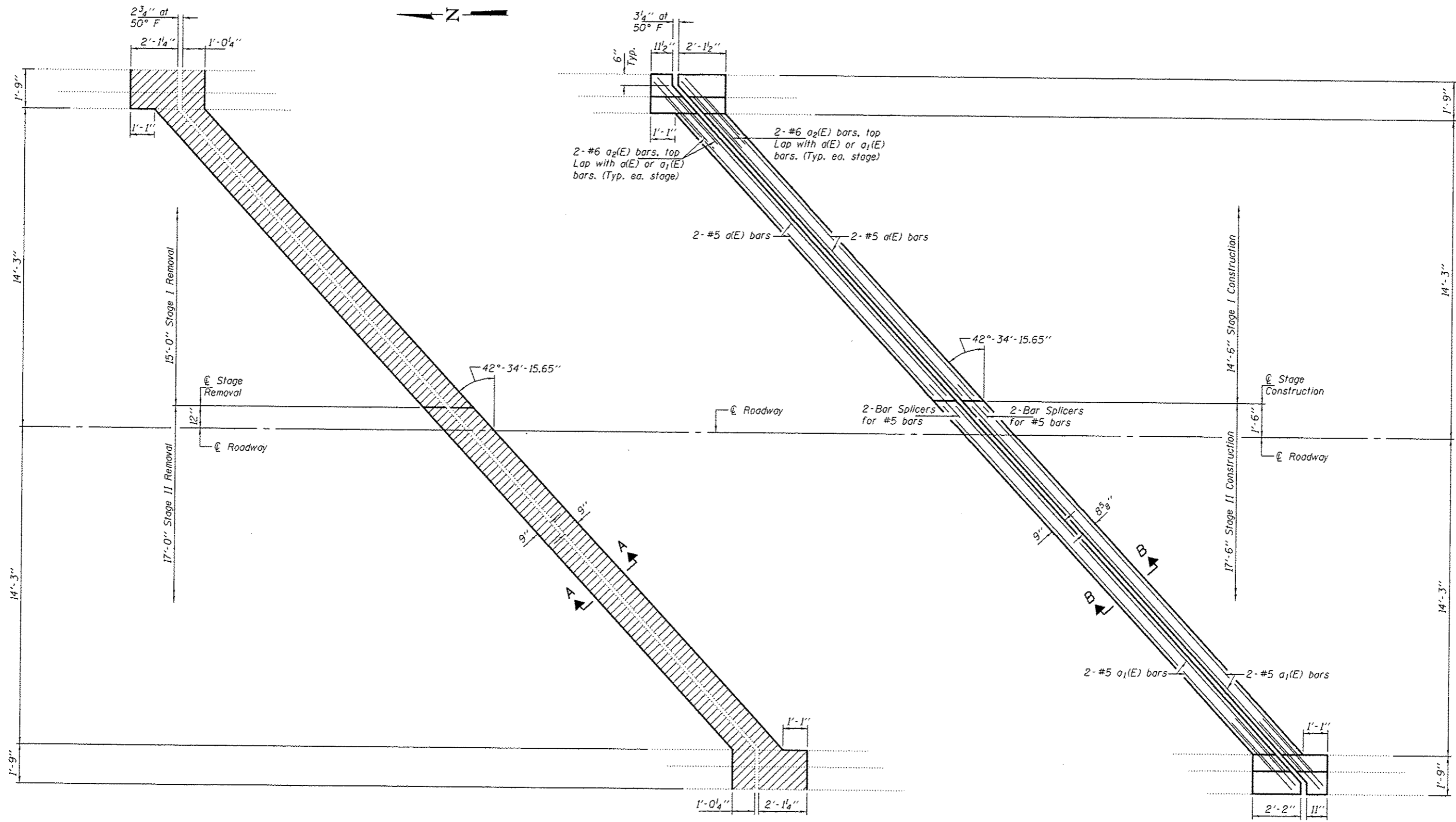
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	4.3
Concrete Superstructure	Cu. Yd.	4.2
Reinforcement Bars, Epoxy Coated	Pound	450
Preformed Joint Strip Seal	Foot	82
Bar Splacers	Each	8
Structural Repair of Concrete (Depth ≤ 5 inches)	Sq. Ft.	627

DESIGNED <i>Stephen M. Ryan</i>	EXAMINED <i>Timothy A. Adams</i>	DATE NOVEMBER 12, 2013
CHECKED <i>John Clark</i>	PASSED <i>David Carl Puzey</i>	REVISED
DRAWN <i>bolivg</i>	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED
CHECKED <i>JMR TLC</i>		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION  
CH 4 OVER FAI 88  
SN 081-0124  
SHEET NO. 1 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	02 BRIDGE REPAIR 2014-1	ROCK ISLAND	10	5
CONTRACT NO. 64J91			[ILLINOIS] FED. AID PROJECT	

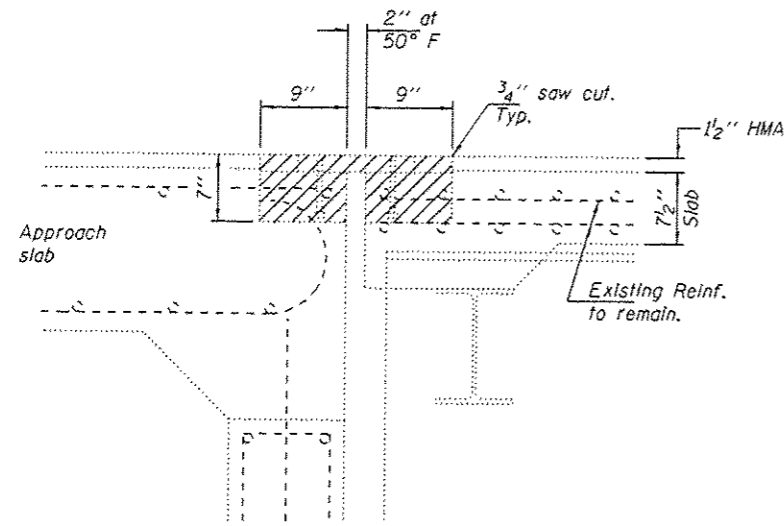


Notes:  
 Hatched areas indicate removal.  
 For Sections A-A & B-B, bar details and  
 Bill of Material, see sheet 3 of 6.

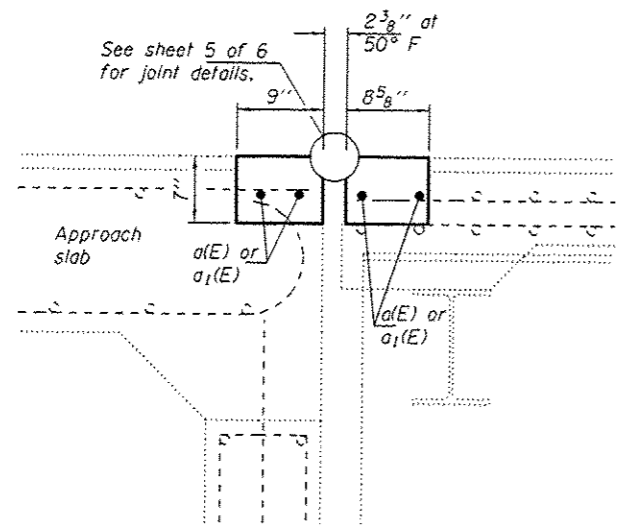
**REMOVAL DETAILS**  
 (N. Abut. shown  
 S. Abut. similar)

**REPLACEMENT DETAILS**  
 (N. Abut. shown  
 S. Abut. similar)

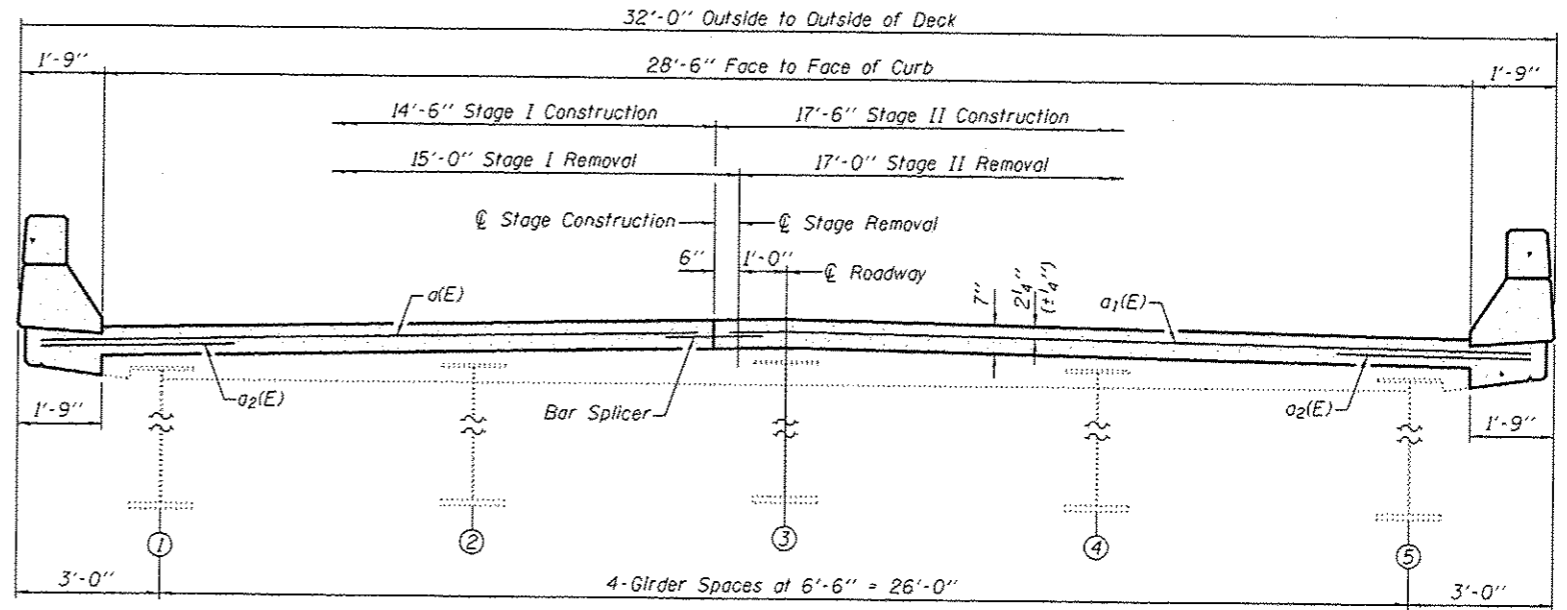
DESIGNED SMR	EXAMINED	DATE NOVEMBER 12, 2013	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>REPAIR DETAILS SN 081-0124</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED TLC	<i>Timothy A. Anghel</i> ACTING ENGINEER OF STRUCTURAL SERVICES	REVISED			88	02 BRIDGE REPAIR 2014-1	ROCK ISLAND	10	6
DRAWN baliva	<i>Carl Perry</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED			CONTRACT NO. 64J91				
CHECKED SMR TLC			SHEET NO. 2 OF 6 SHEETS		ILLINOIS FED. AID PROJECT				



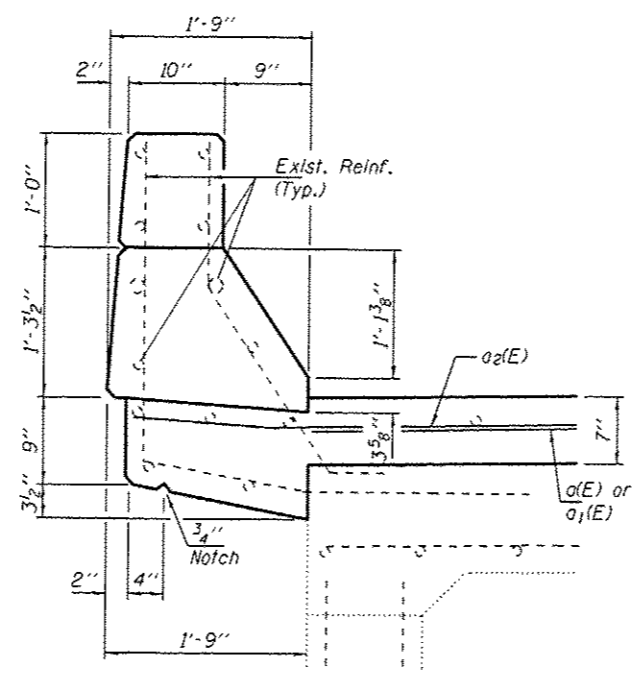
**SECTION A-A**  
(Near  $\bar{C}$  Roadway)  
(Dims. at RT L's to end of deck)



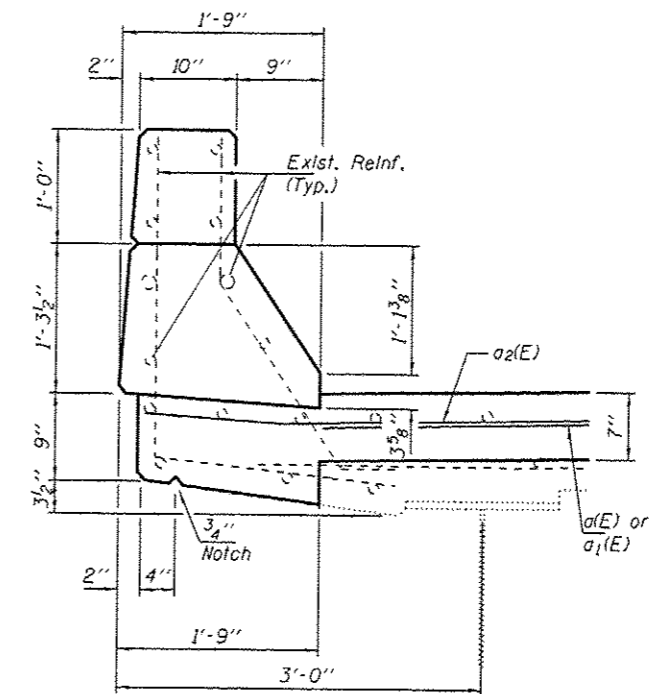
**SECTION B-B**  
(Near  $\bar{C}$  Roadway)  
(Dims. at RT L's to end of deck)



**CROSS SECTION**  
(Looking South)  
(Existing Reinforcement not shown for clarity.)



**SECTION THRU APPROACH PARAPETS**



**SECTION THRU BRIDGE PARAPETS**

**BILL OF MATERIAL**

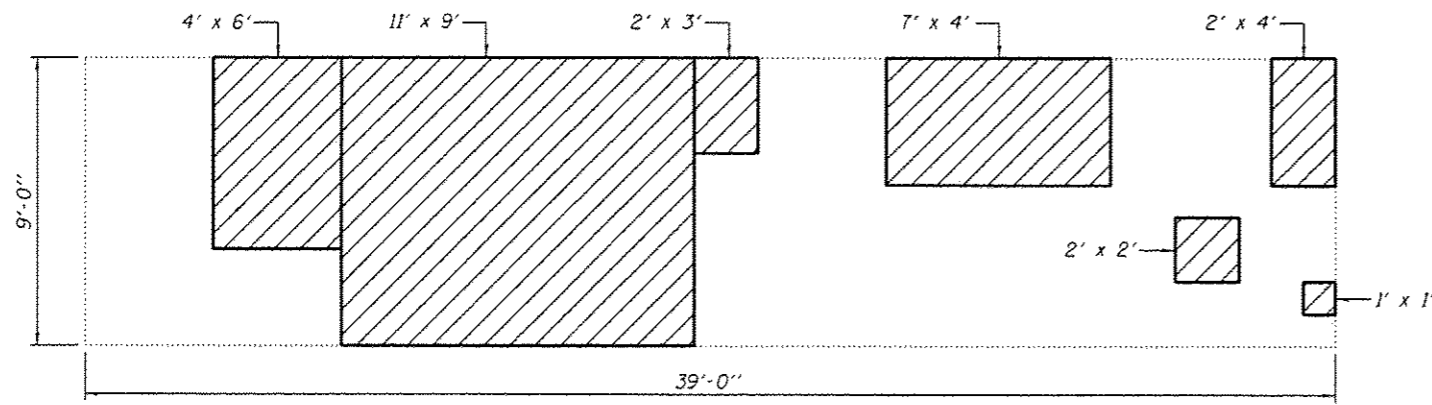
Bar	No.	Size	Length	Shape
a(E)	8	#5	19'-4"	
a1(E)	8	#5	23'-5"	
o2(E)	16	#6	4'-0"	
Concrete Removal			Cu. Yd.	4.3
Concrete Superstructure			Cu. Yd.	4.2
Reinforcement Bars, Epoxy Coated			Pound	450

DESIGNED SMR	EXAMINED	DATE NOVEMBER 12, 2013
CHECKED TLC	PASSED	
DRAWN baliva		
CHECKED SMR TLC		

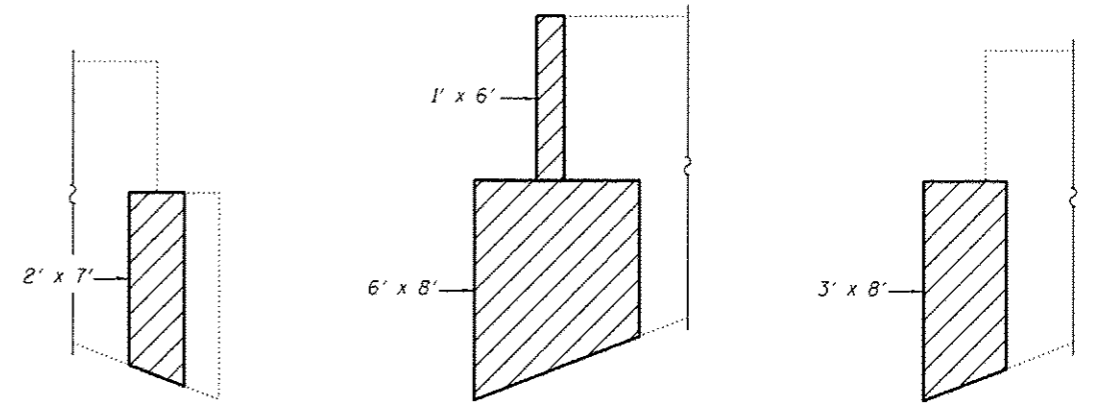
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS  
SN 081-0124

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	D2 BRIDGE REPAIR 2014-1	ROCK ISLAND	10	7
				CONTRACT NO. 64J91
ILLINOIS FED. AID PROJECT				



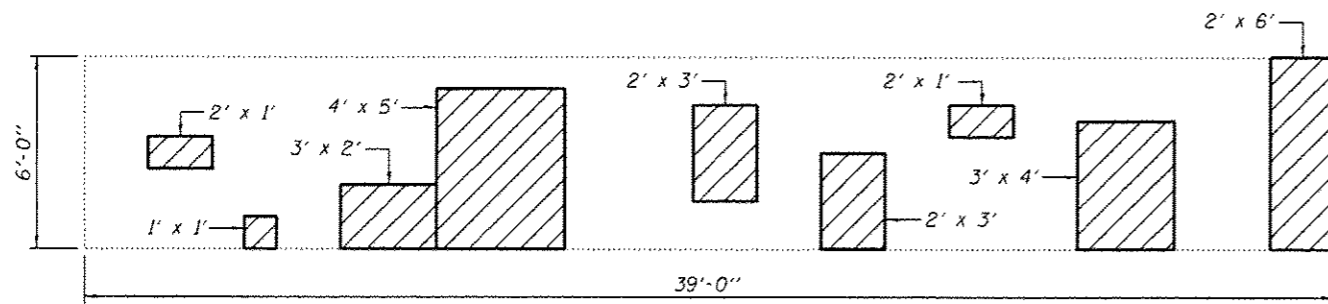
**NORTH ABUTMENT**



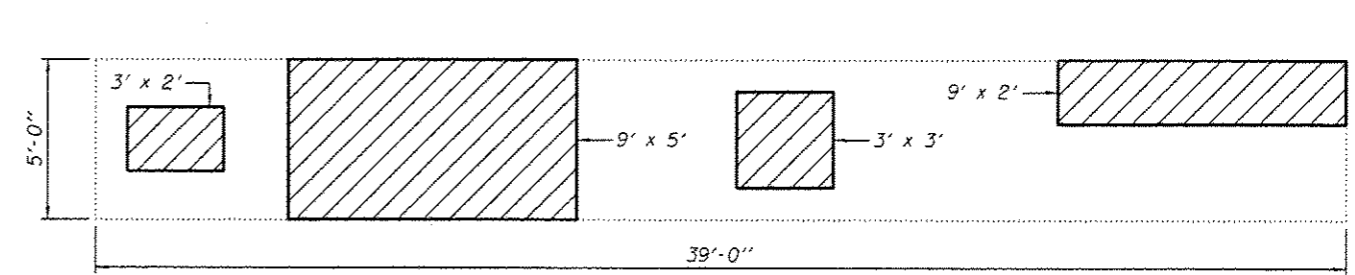
**NORTH ABUTMENT WEST FACE**

**NORTH ABUTMENT EAST FACE**

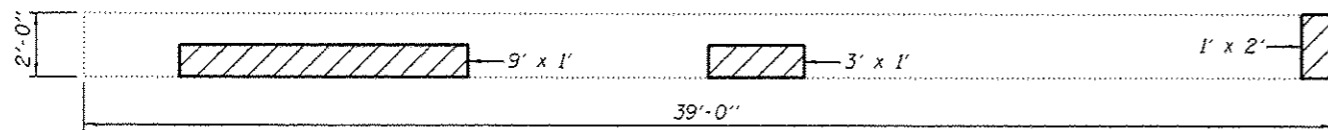
**SOUTH ABUTMENT WEST FACE**



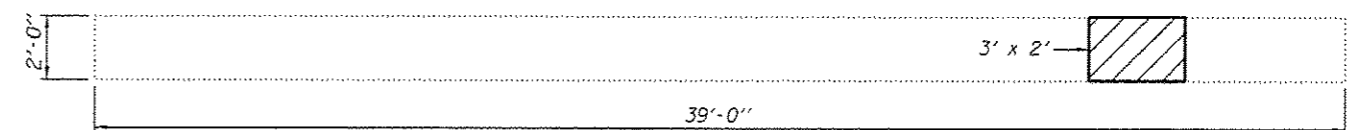
**NORTH ABUTMENT BACKWALL**



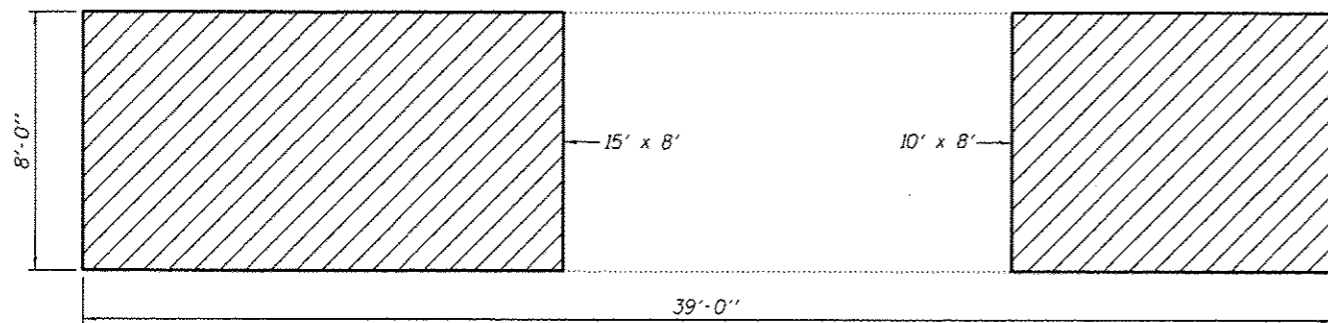
**SOUTH ABUTMENT BACKWALL**




**NORTH ABUTMENT CAP**



**SOUTH ABUTMENT CAP**



**SOUTH ABUTMENT**

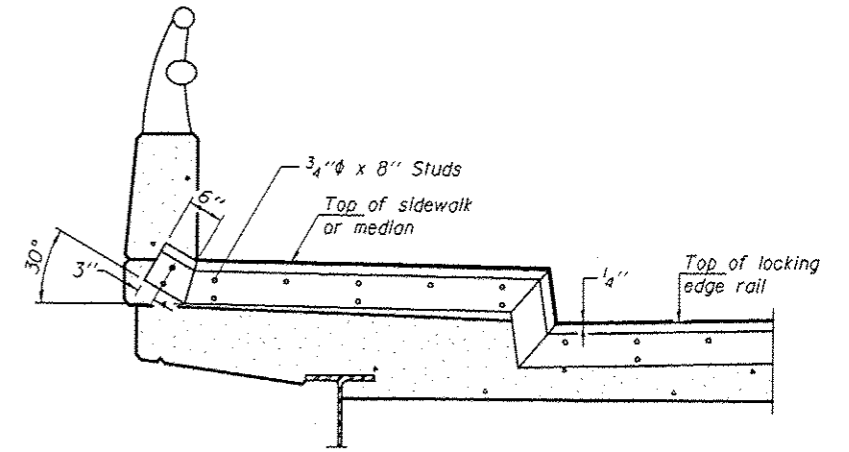
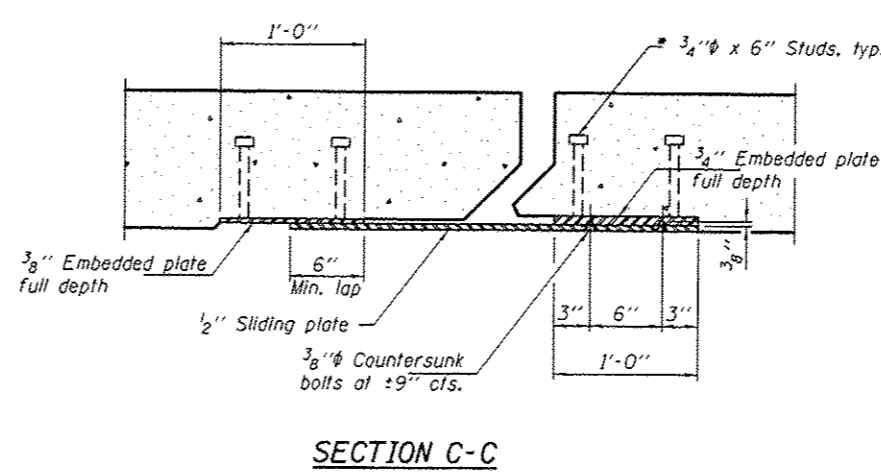
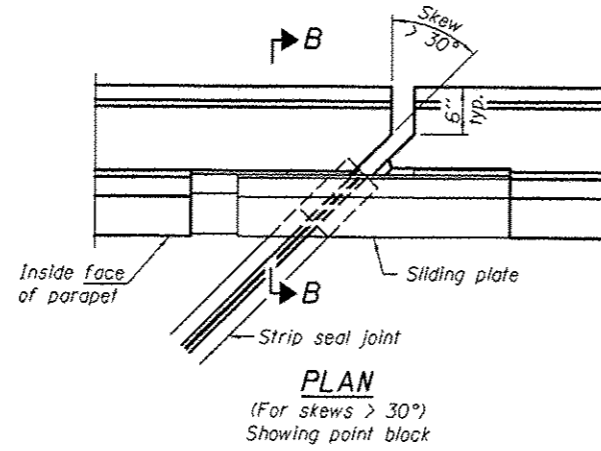
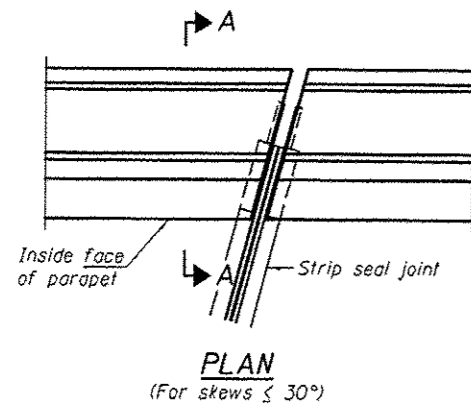
 - Hatched areas indicate delaminated areas.

\* This is an estimated quantity. The actual location of delaminated areas and quantities will be determined by the Resident Engineer in the field.

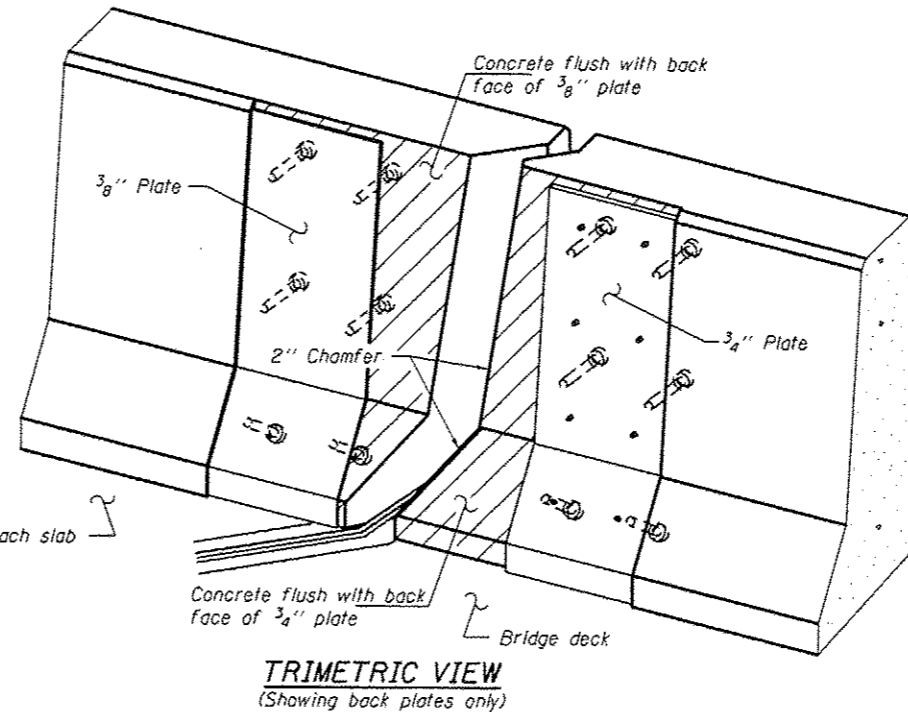
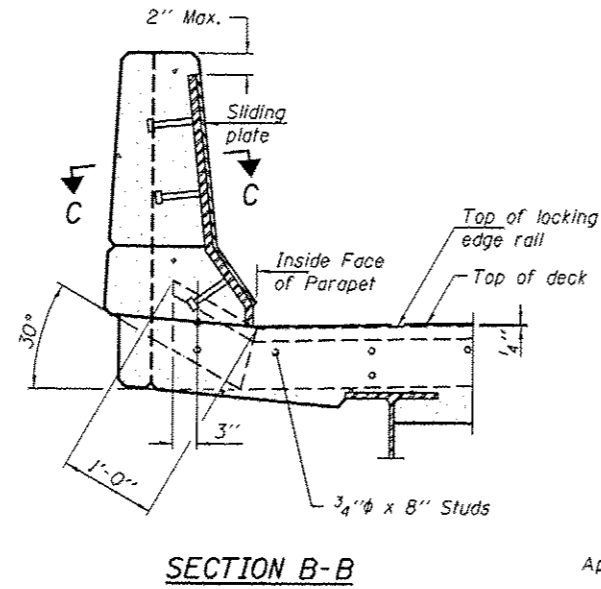
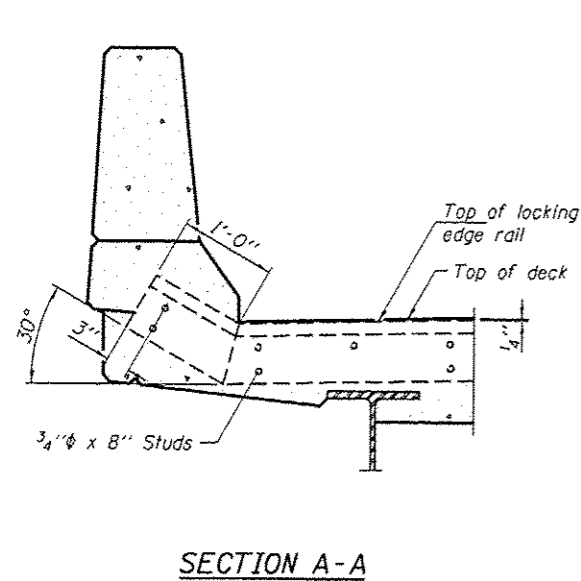
**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth ≤ 5 Inches)	Sq. Ft.	627

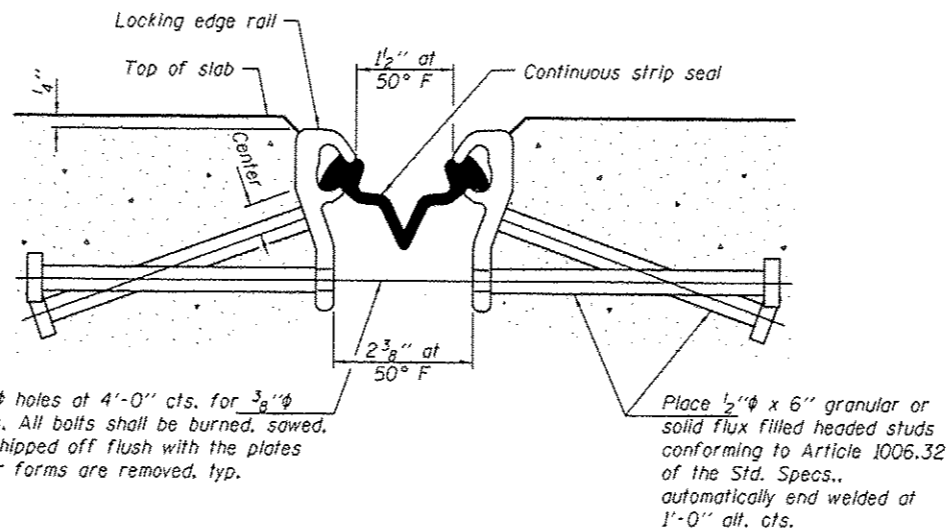
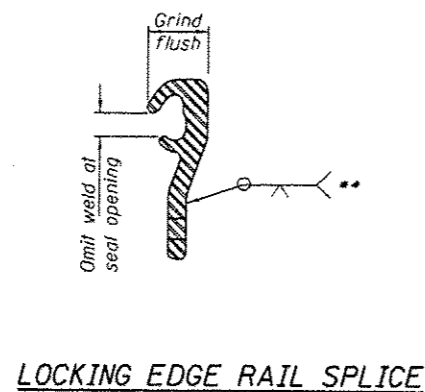
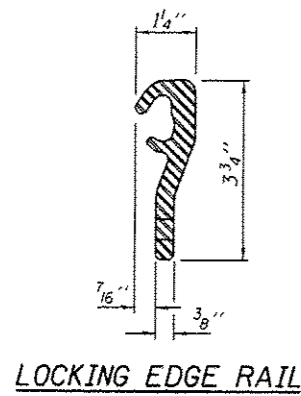




**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**  
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



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



**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.  
The height and thickness of the Locking Edge Rails shown are minimum dimensions. 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.  
The inside of the Locking Edge Rail groove shall be free of weld residue.  
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.  
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.  
The manufacturer's recommended installation methods shall be followed.

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

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	82

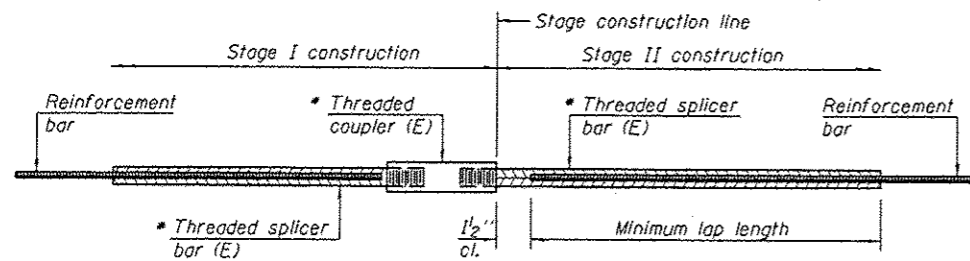
DESIGNED <i>SMR</i>	EXAMINED <i>Timothy A. Anzani</i>	DATE <i>NOVEMBER 12, 2013</i>
CHECKED <i>TLC</i>	PASSED <i>ACTING ENGINEER OF STRUCTURAL SERVICES</i>	REVISED
DRAWN <i>baliva</i>	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED
CHECKED <i>SMR TLC</i>		

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL SN 081-0124**

SHEET NO. 5 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	02 BRIDGE REPAIR 2014-1	ROCK ISLAND	10	9
CONTRACT NO. 64J91			ILLINOIS FED. AID PROJECT	



**STANDARD BAR SPLICER ASSEMBLY**

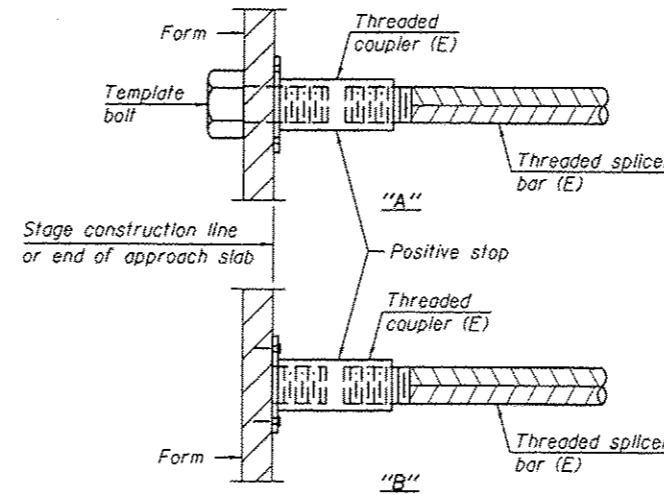
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

- 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, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

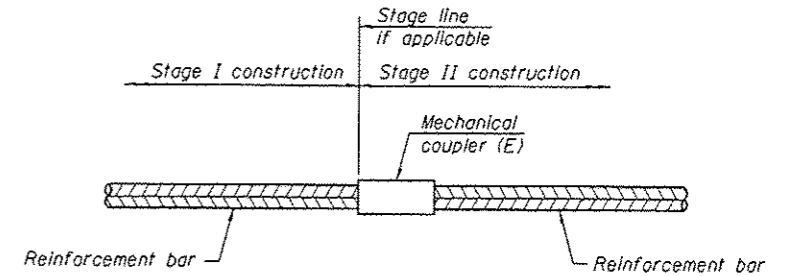
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Joints	#5	8	5



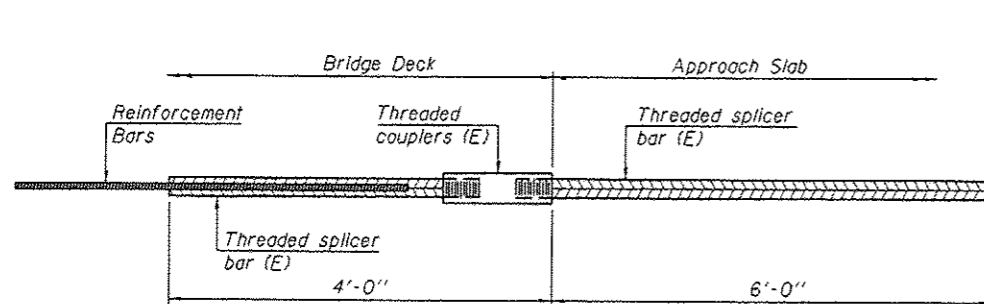
**INSTALLATION AND SETTING METHODS**

"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.



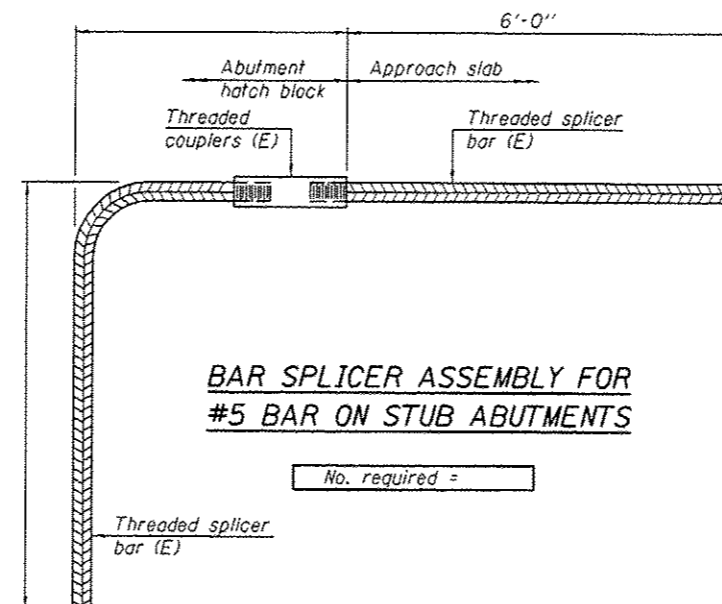
**STANDARD MECHANICAL SPLICER**

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 approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 1-27-12