

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

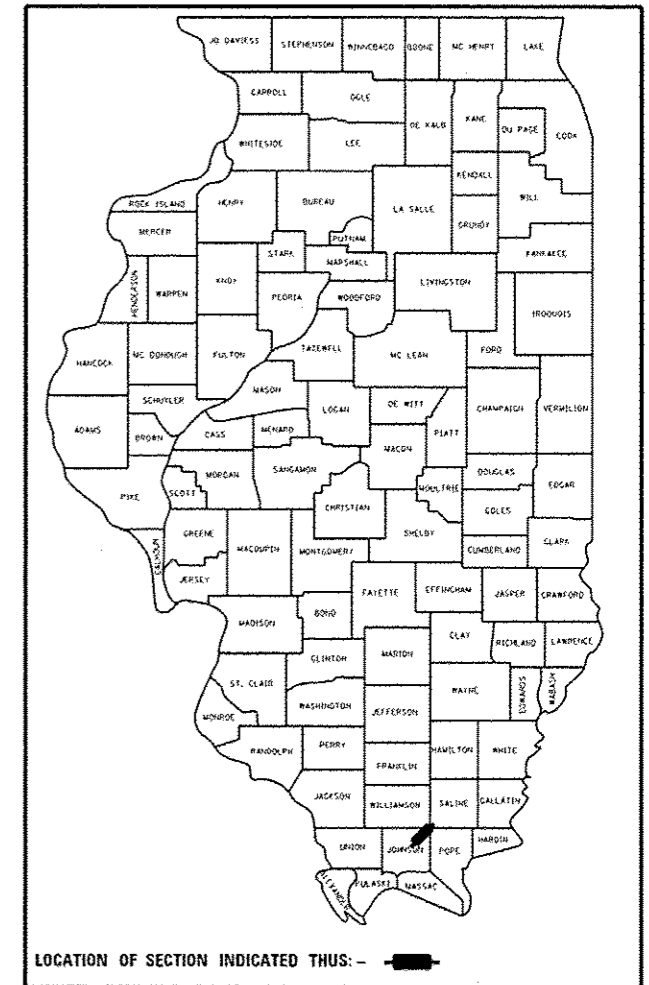
2013 ADT: 1550  
19% TRUCKS  
TOWNSHIP: JOHNSON CO. UNIT ROAD DISTRICT  
POSTED SPEED LIMIT: 55 MPH

FAP ROUTE 881 (US 45)  
SECTION D9 BRIDGE REPAIR 2016-2

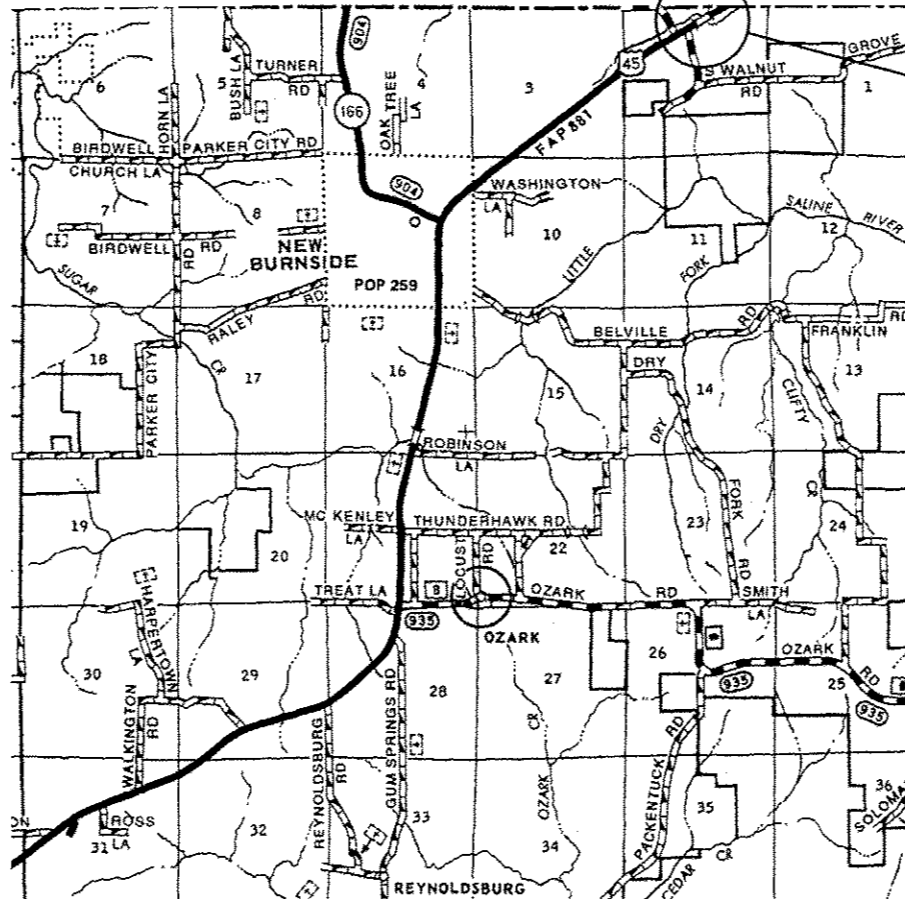
STRUCTURE REPAIRS  
JOHNSON COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	D9 BRIDGE REPAIR 2016-2	JOHNSON	13	1
		ILLINOIS	CONTRACT NO. 78466	

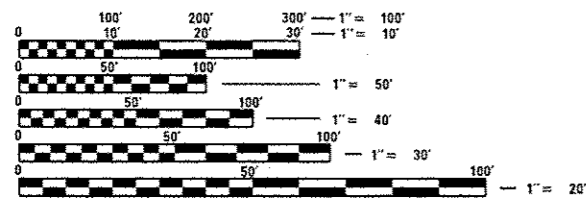
D-99-026-15



C-99-031-15



IMPROVEMENT LOCATION  
STRUCTURE NO. 044-0001  
US 45 OVER UNNAMED STREAM



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 PICHE (618) 351-5227  
DESIGN ENGINEER: ADRIAN ADAMS (618) 351-5262

CONTRACT NO. 78466

GROSS LENGTH = 99.75 FT. = 0.019 MILE  
NET LENGTH = 99.75 FT. = 0.019 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED *March 15, 2016*

*Jeffrey J. Keim*  
REGION FIVE ENGINEER

*May 6, 2016*  
*Maureen M. Addicks, P.E.*  
ENGINEER OF DESIGN AND ENVIRONMENT

*May 6, 2016*  
*Michelle A. [Signature]*  
DIRECTOR OF PROGRAM DEVELOPMENT

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

**INDEX OF SHEETS**

- 1 COVER SHEET
- 2 GENERAL NOTES, INDEX OF SHEETS, STANDARDS, AND MIX REQUIREMENTS
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- 7 STAGE CONSTRUCTION
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- 10 DRAIN DETAILS
- 11 PIER FOOTING DETAILS
- 12 BAR SPLICER ASSEMBLY DETAILS
- 13 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

**GENERAL NOTES**

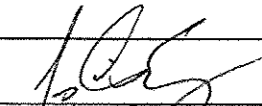
- 1) IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.
- 2) ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC.
- 3) PATCHING QUANTITIES ARE FOR ESTIMATED. THE FINAL LOCATIONS AND QUANTITIES WILL BE DETERMINED BY THE ENGINEER.
- 4) COMMITMENTS: NONE AS OF MARCH 18, 2016.


**STANDARDS**


- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 643001-02 SAND MODULE IMPACT ATTENUATORS
- 701001-02 OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
- 701006-05 OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701311-03 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
- 701321-15 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701326-04 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
- 701901-05 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER
- 780001-05 TYPICAL PAVEMENT MARKINGS
- 781001-04 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
- 782006 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
- 862001-01 UNINTERRUPTIBLE POWER SUPPLY

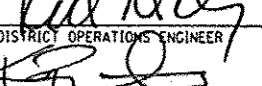
**MIX REQUIREMENTS**


LOCATIONS	HOT-MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	HOT- MIX ASPHALT SURFACE COURSE, MIX C, N70, FINE GRADED
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, TO GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 mm FINE GRADED
FRICTION AGGREGATE:	C SURFACE
QUALITY MANAGEMENT PROGRAM:	OCDA


Prepared By:   
 DISTRICT STUDIES & PLANS ENGINEER


Examined By:   
 DISTRICT LAND ACQUISITION ENGINEER

Examined By:   
 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

# SUMMARY OF QUANTITIES

*100% STATE*

CODE NUMBER	ITEM DESCRIPTION	UNIT	0014
			QUANTITY
20300100	CHANNEL EXCAVATION	CU YD	75
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SO YD	158
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	22
44000156	HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"	SO YD	329
50102400	CONCRETE REMOVAL	CU YD	5.8
50300225	CONCRETE STRUCTURES	CU YD	58.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	11.6
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	870
50800515	BAR SPLICERS	EACH	4
58100200	WATERPROOFING MEMBRANE SYSTEM	SO YD	319
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2

14

FILE NAME :	USER NAME : adamson	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default	PLOT DATE : 3/16/2016	DATE -	REVISED -		SHEET OF SHEETS	CONTRACT NO. 78466 ILLINOIS FED. AID PROJECT				

# SUMMARY OF QUANTITIES - CONT

CODE NUMBER	ITEM DESCRIPTION	UNIT	100% STATE
			0014 QUANTITY
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	LSUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	6
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2
70300100	SHORT TERM PAVEMENT MARKING	FOOT	20
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	220
<b>70300150</b>	<b>SHORT TERM PAVEMENT MARKING REMOVAL</b>	SO FT	73
70400100	TEMPORARY CONCRETE BARRIER	FOOT	338
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	338
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	220
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	1
* 86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1

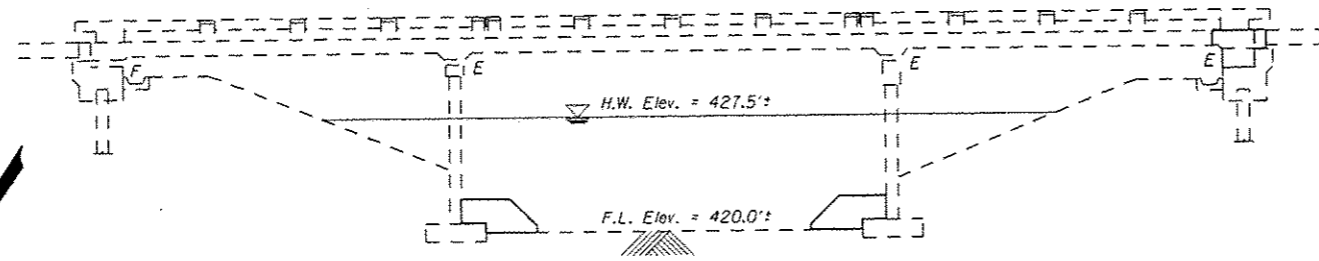
*\*Specialty Items*

FILE NAME =	USER NAME = edonson	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT SCALE = 96.4444' = 1" = 100'	DATE -	REVISED -		SHEET OF SHEETS	CONTRACT NO. 78466		ILLINOIS FED. AID PROJECT		

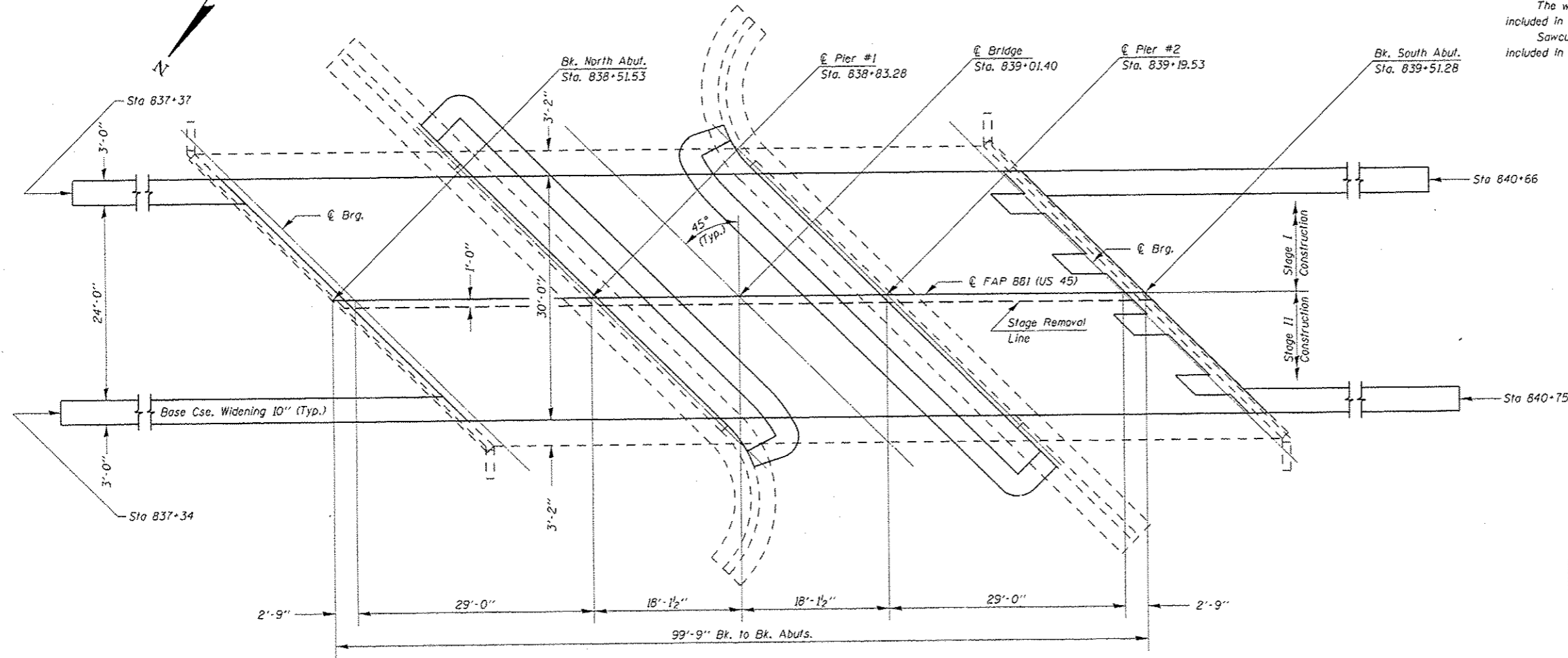


**GENERAL NOTES**

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.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Prior to pouring the new concrete section, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from steel surfaces to be in contact with concrete. Tightly adhered point may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in Concrete Superstructure.  
 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.  
 Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included in Concrete Removal.  
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.  
 The work, material, and equipment involved in saw cutting shall be considered included in the price bid for concrete removal.  
 Sawcuts for removal operations will not be paid for separately, but shall be included in the contract unit price for Concrete Removal.



**ELEVATION**



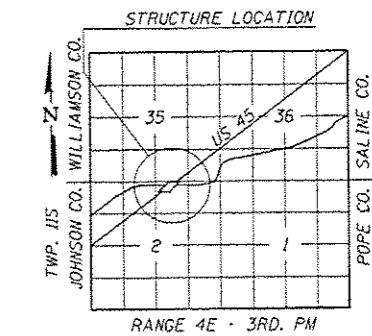
**PLAN**

**SCOPE OF WORK**

- 1) Setup TC&P 701321 with barrier for Stage I work in the NB lane of US 45.
- 2) Perform joint elimination on South Abutment & eliminate deck drains in NB lane.
- 3) Adjust TC&P 701321 with barrier for Stage II work in the SB lane of US 45.
- 4) Perform joint elimination on South Abutment & eliminate deck drains in SB lane.
- 5) Remove TC&P 701321.
- 6) Cover exposed pier footings with concrete.
- 7) Perform WMS & HMA removal and replacement, and extend deck drains.

**DESIGN STRESSES**

**NEW CONSTRUCTION**  
**FIELD UNITS**  
 $f'_c = 3,500 \text{ psi}$   
 $f'_c = 60,000 \text{ psi (Reinf.)}$



**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Channel Excavation	Cu. Yd.	75
Concrete Removal	Cu. Yd.	5.8
Concrete Structures	Cu. Yd.	58.8
Concrete Superstructure	Cu. Yd.	11.6
Reinforcement Bars, Epoxy Coated	Pound	870
Bar Splicers	Each	4
Waterproofing Membrane System	Sq. Yd.	319
HMA Surface Course, Mix 'C' N70	Ton	22
Floor Drain Extensions	Each	14
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Polymer Modified Portland Cement Mortar	Sq. Ft.	49
HMA Surface Course Removal 1 1/2"	Sq. Yd.	329

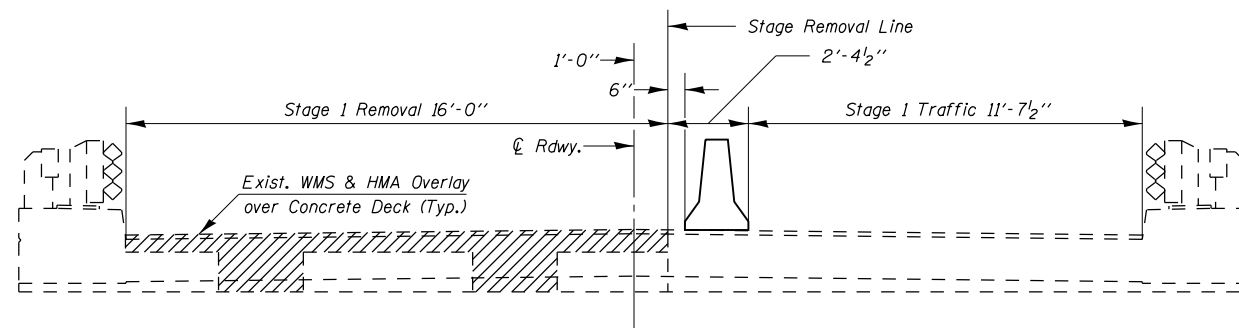
**BRIDGE REPAIRS**

**US ROUTE 45 OVER UNNAMED STREAM**  
**F.A.P. ROUTE 881 - SECTION D9 CM BRIDGE REPAIR 2016-2**  
**JOHNSON COUNTY**  
**STATION 839+01.40**  
**STRUCTURE NO. 044-0001**

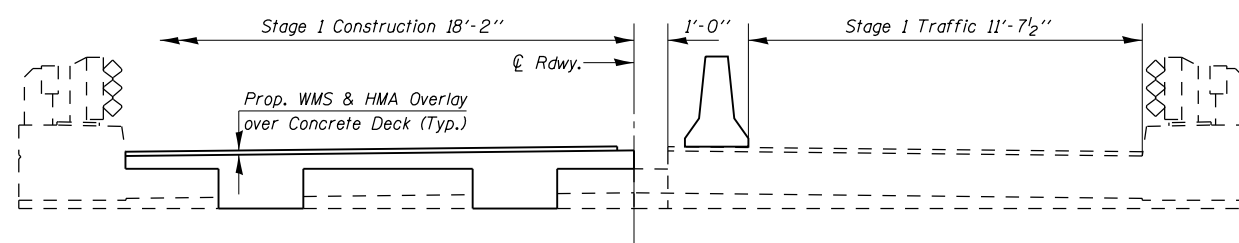


*David Carl Puzey* 8/10/15  
 Expires 11/30/16

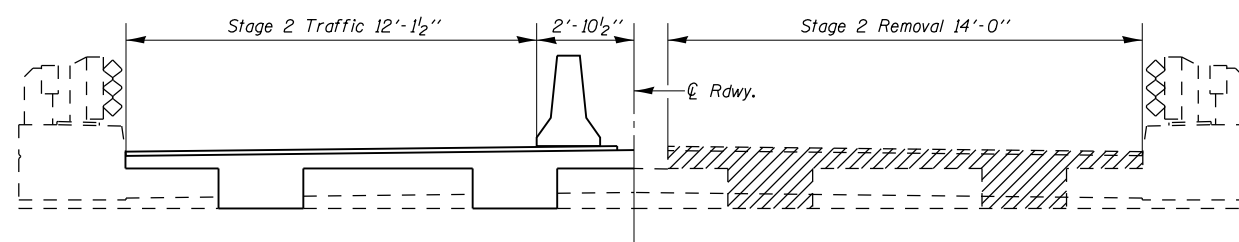
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DESIGNED: 2016\78466\CAD\Drawings\CD\Sheets\78466-01.dgn	REVISIONS:	CHECKED: SMR	REVISED:					881		JOHNSON	13	6
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PLOT DATE: 6/26/2015	DATE:	DATE:	DATE:		ILLINOIS FED. AID PROJECT							



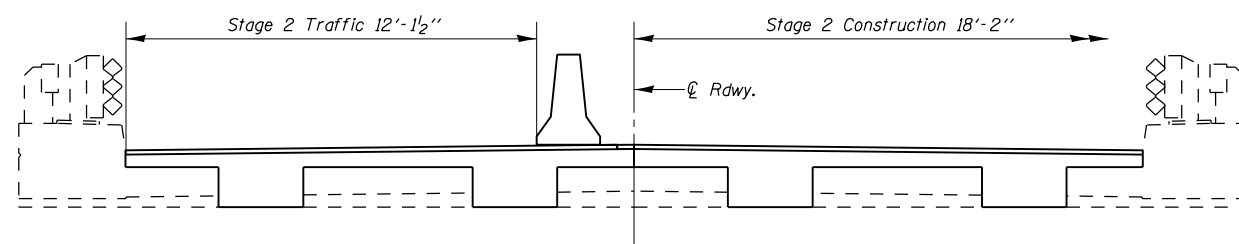
**Stage 1 Removal**



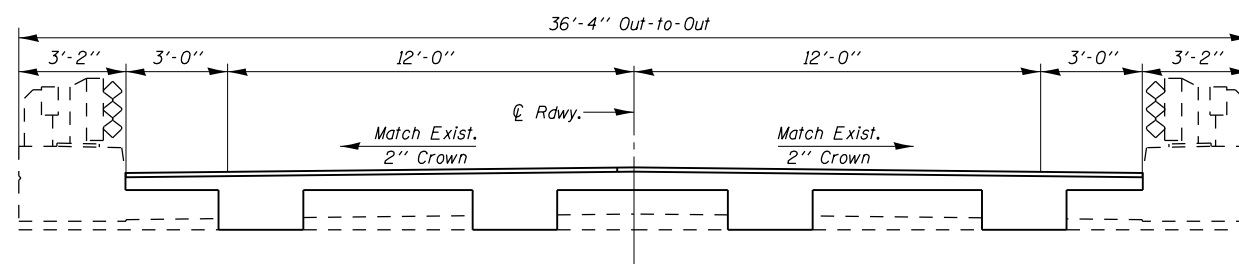
**Stage 1 Construction**



**Stage 2 Removal**

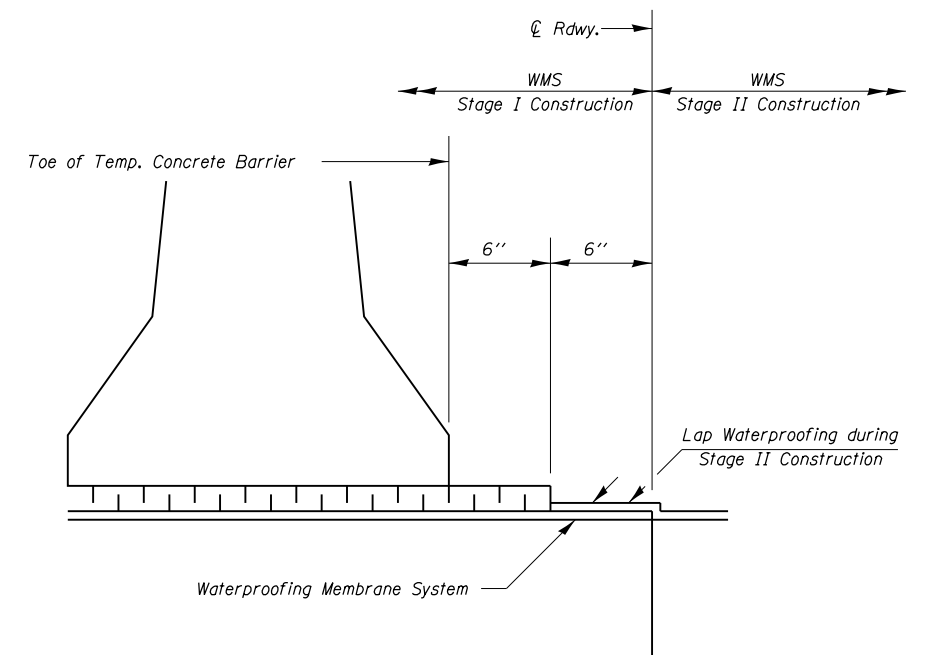


**Stage 2 Construction**



**Section Through Structure at South Abutment**

All Sections Looking South  
 All Dimensions at Right Angles

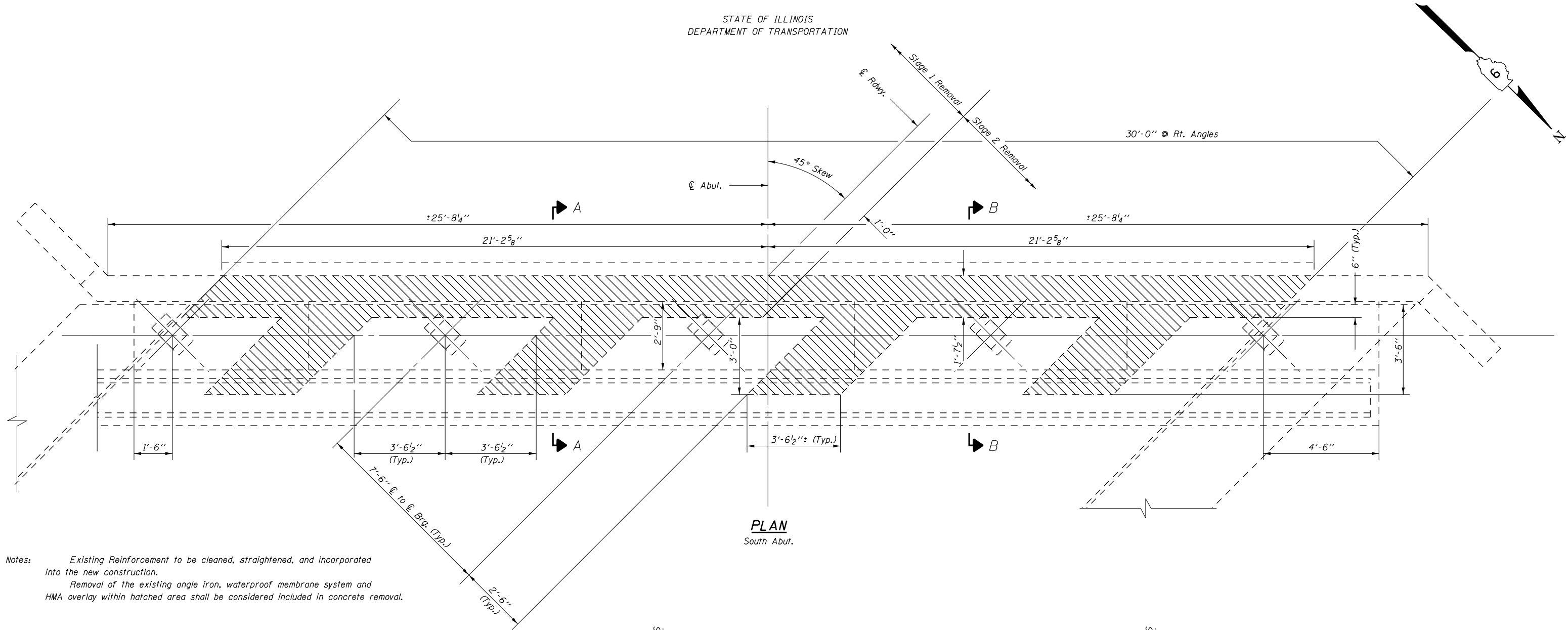


**Waterproofing Treatment at Stage Construction**

Concrete, HMA, & WMS Removal at South Abutment

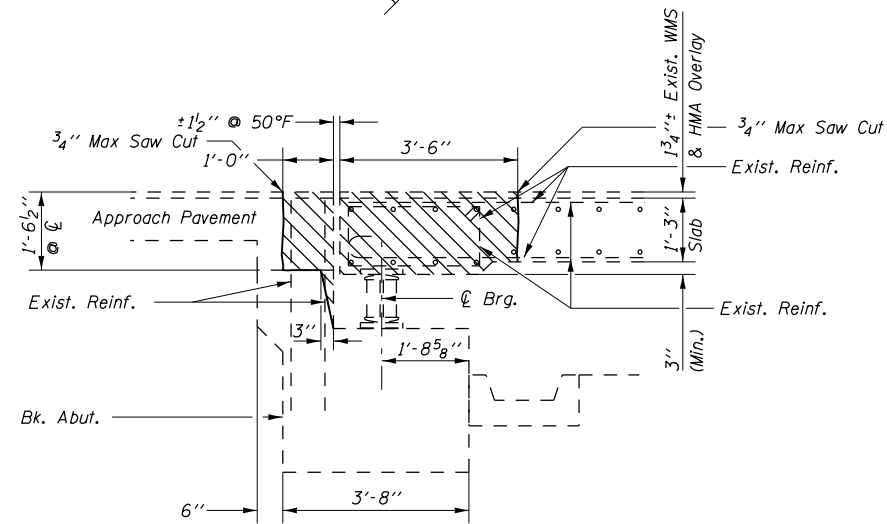
**STAGE CONSTRUCTION**  
**F.A.P. RT. 881 SEC. D9 BRIDGE REPAIR 2016-2**  
**JOHNSON COUNTY**  
**STATION 839+01.40**  
**STRUCTURE NO. 044-0001**

FILE NAME =	USER NAME = adamsom	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGE CONSTRUCTION</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78466												

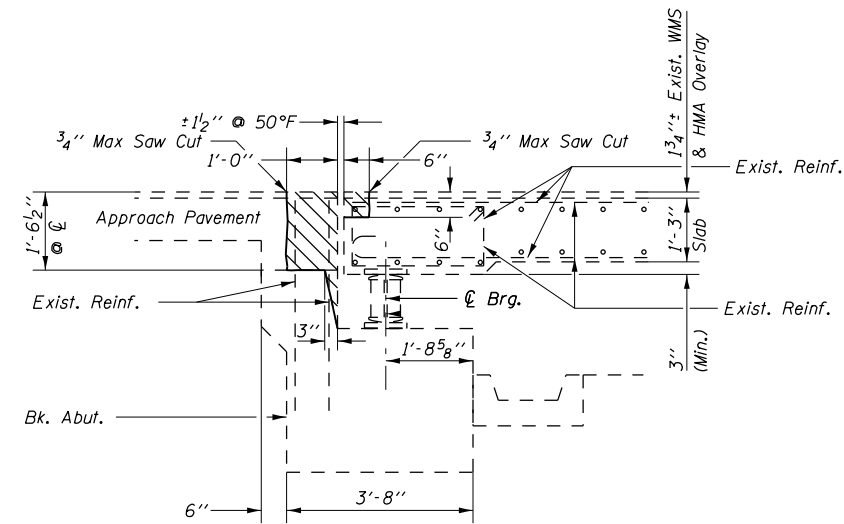


**PLAN**  
South Abut.

Notes:  
Existing Reinforcement to be cleaned, straightened, and incorporated into the new construction.  
Removal of the existing angle iron, waterproof membrane system and HMA overlay within hatched area shall be considered included in concrete removal.



**SECTION A-A**  
Dimensions at Rt. L's



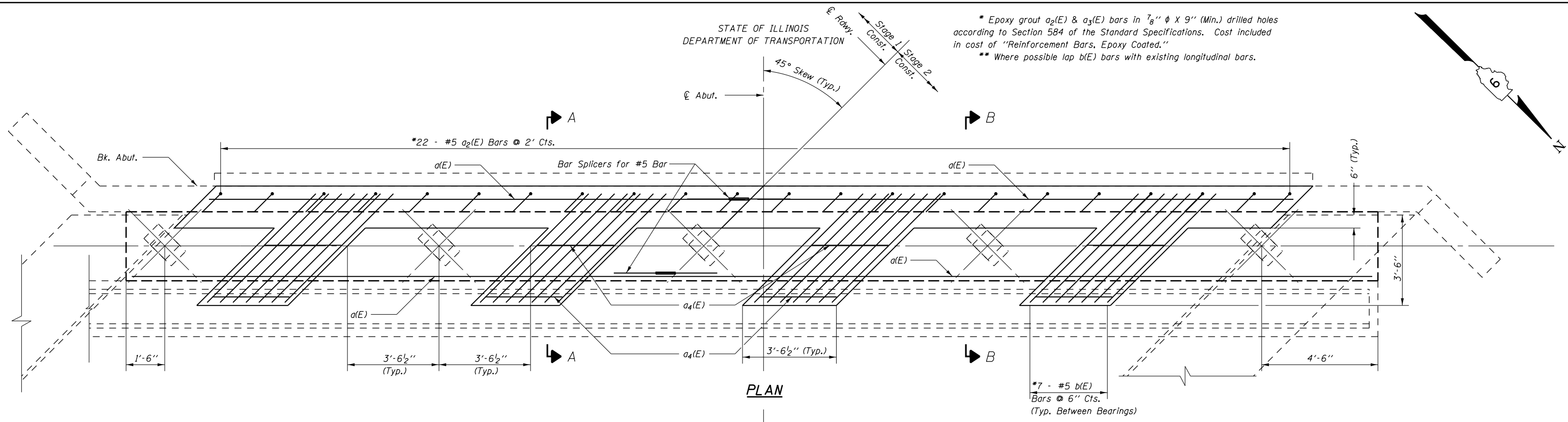
**SECTION B-B**  
Dimensions at Rt. L's

**JOINT DETAILS - SOUTH ABUTMENT**  
**F.A.P. RT. 881 SEC. D9 BRIDGE REPAIR 2016-2**  
**JOHNSON COUNTY**  
**STATION 839+01.40**  
**STRUCTURE 044-0001**

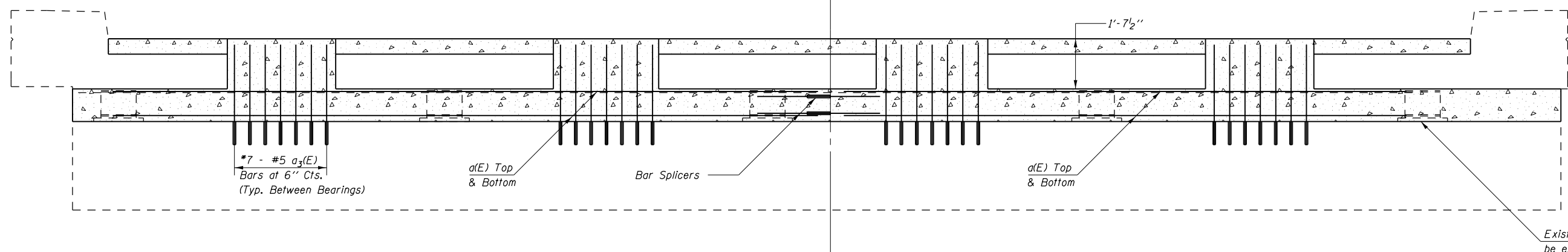
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pw:\IL084EBIDINTEG\Illinois.gov\PIDOT\Documents\DOT Offices\District 9\Projects\78466\Drawings\CAD\Sheets\78466-shr-plan.dgn		CHECKED -	REVISOR -			881	D9 BRIDGE REPAIR 2016-2	JOHNSON	13	8
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	PLOT DATE = 3/16/2016									



\* Epoxy grout  $a_2(E)$  &  $a_3(E)$  bars in  $7/8'' \phi \times 9''$  (Min.) drilled holes according to Section 584 of the Standard Specifications. Cost included in cost of "Reinforcement Bars, Epoxy Coated."  
\*\* Where possible lap  $b(E)$  bars with existing longitudinal bars.

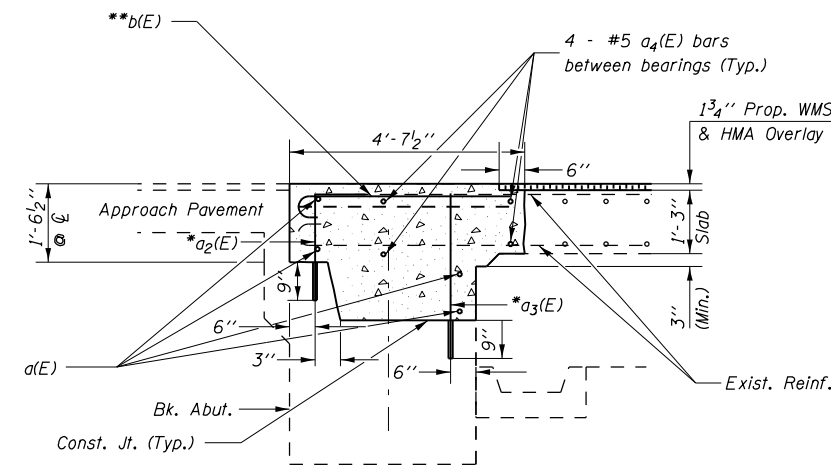


PLAN

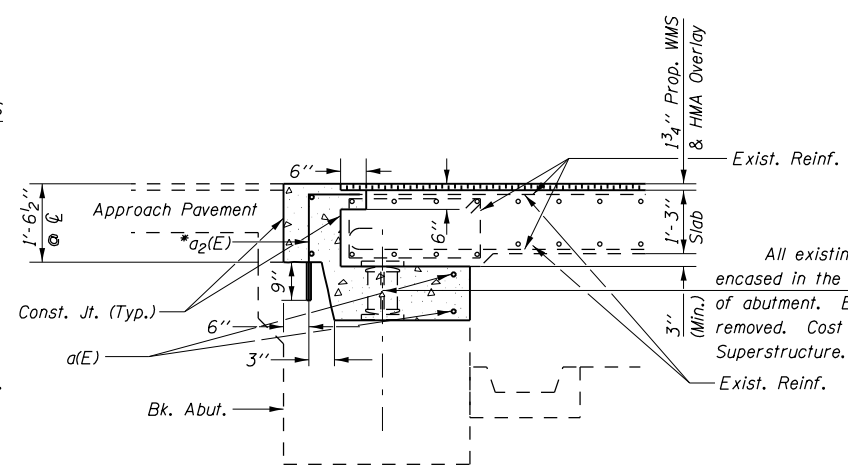


ELEVATION

Existing Rocker Bearing to be encased in new concrete. (Typ.)

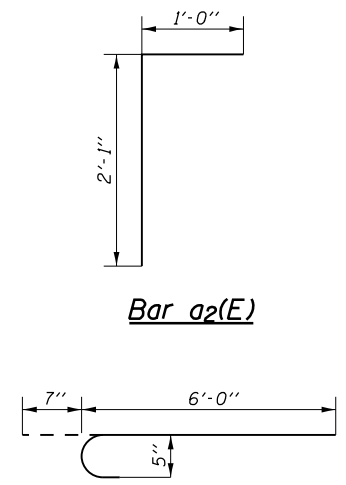


SECTION A-A  
Dimensions at Rt. L's



SECTION B-B  
Dimensions at Rt. L's

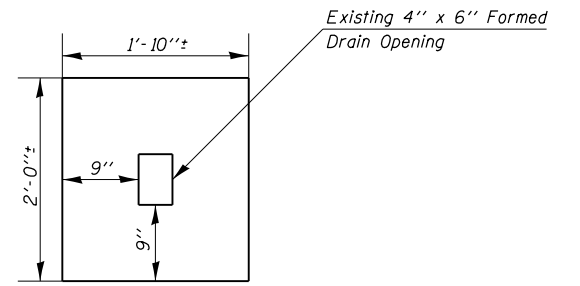
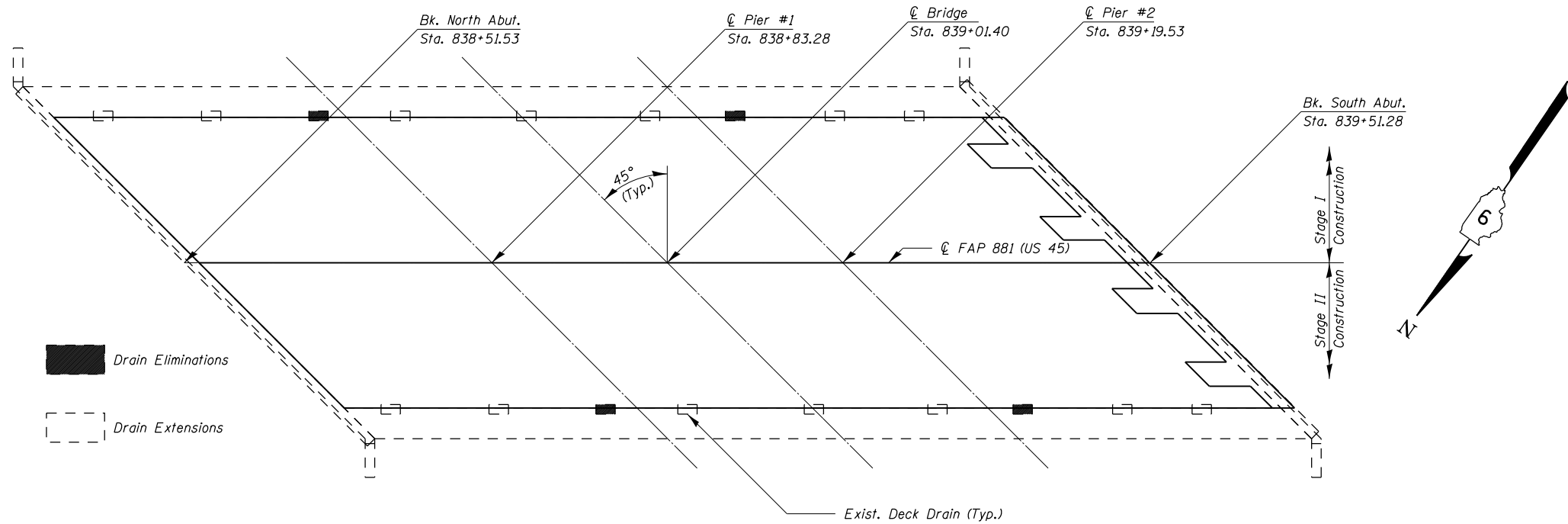
MIN. BAR LAP  
#5 Bar = 2'-7"



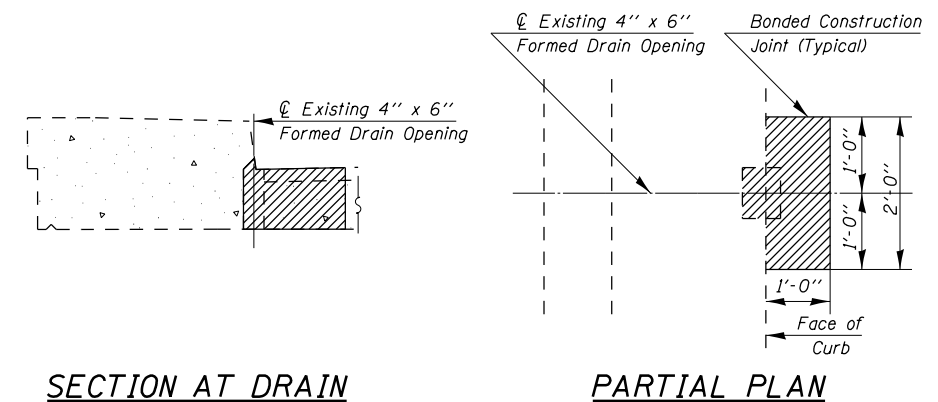
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
$a(E)$	8	5	29'-6"	—
$a_2(E)$	22	5	3'-1"	—
$a_3(E)$	28	5	3'-3"	—
$a_4(E)$	16	5	3'-0"	—
$b(E)$	28	5	6'-7"	—
CONCRETE SUPERSTRUCTURE		CU YD	11.6	
CONCRETE REMOVAL		CU YD	5.8	
BAR SPLICERS		EACH	4	
REINFORCEMENT BARS EPOXY COATED		POUND	660	

JOINT DETAILS - SOUTH ABUTMENT  
F.A.P. RT. 881 SEC. D9 BRIDGE REPAIR 2016-2  
JOHNSON COUNTY  
STATION 839+01.40  
STRUCTURE 044-001

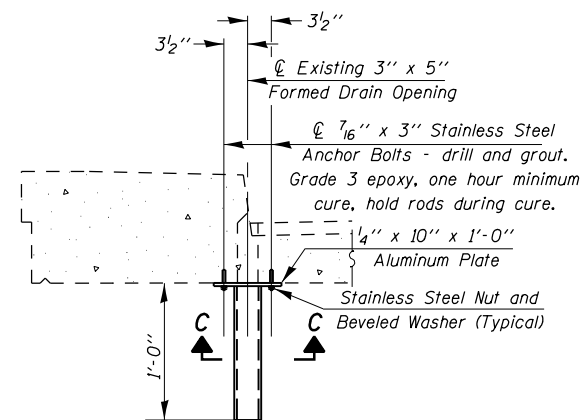


**POLYMER MODIFIED PORTLAND CEMENT MORTAR DETAIL @ DRAIN EXTENSIONS**  
 All Locations on Underside of Deck

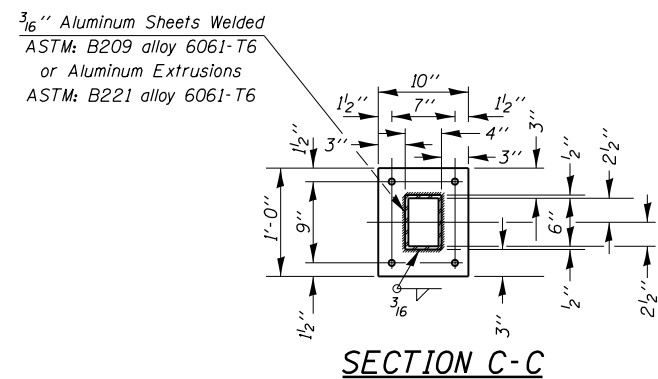


**SECTION AT DRAIN**  
 Hatched areas indicate concrete sections to be removed and replaced at Drain Elimination locations. Perimeters of concrete removal areas shall be saw cut 3/4 inch prior to the removal of concrete. Cost of concrete removal and concrete placement included in Deck Slab Repair (Full Depth, Type I).

**DRAIN ELIMINATION DETAIL**  
 4 Locations



**SECTION AT DRAIN**



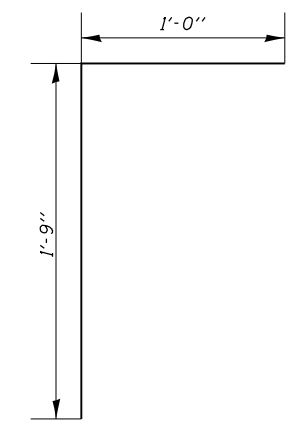
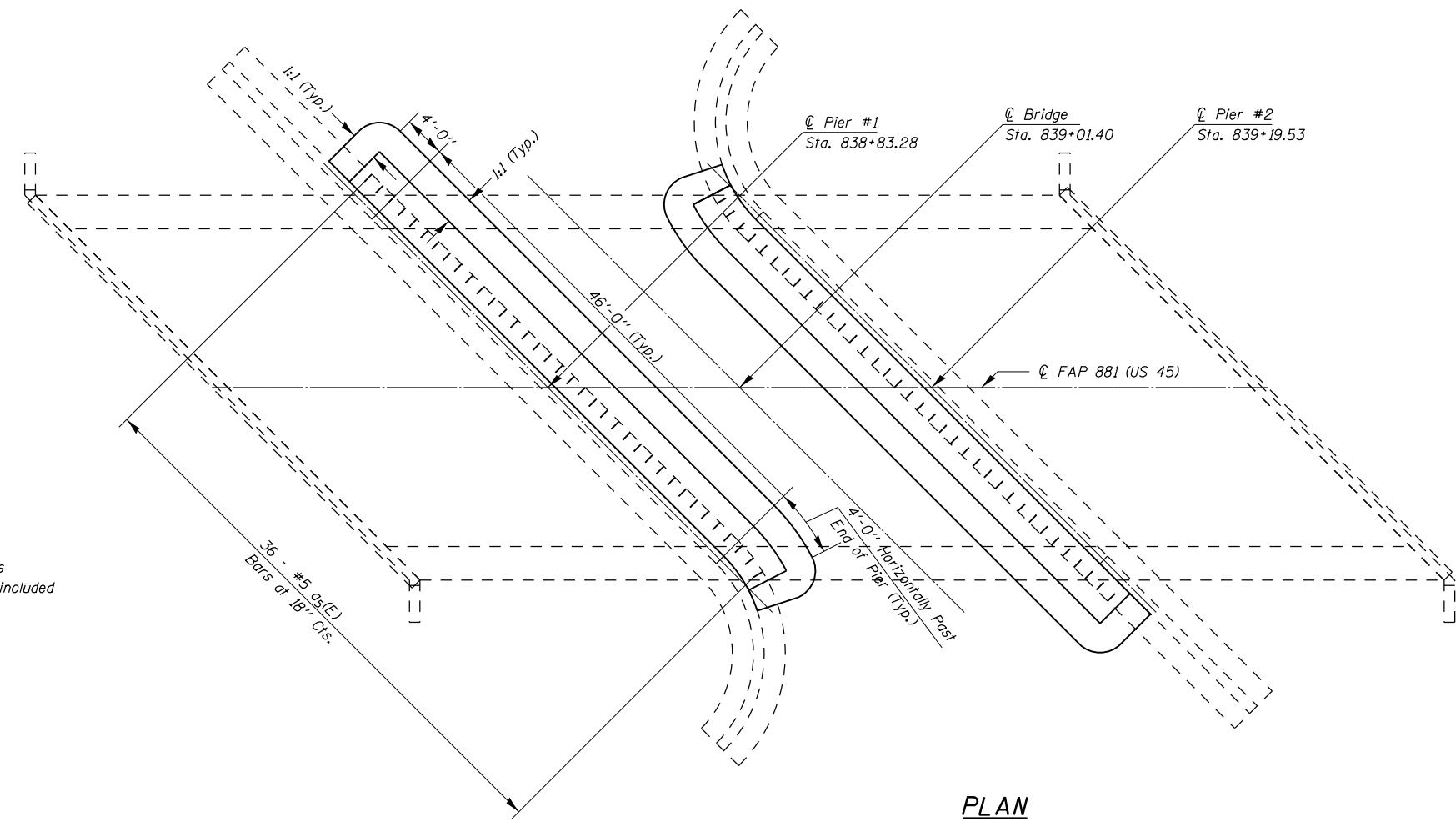
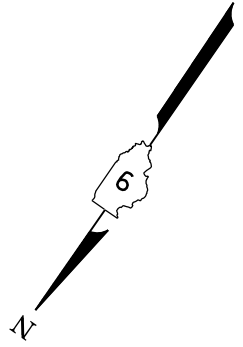
**DRAIN EXTENSION DETAILS**  
 14 Locations

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Floor Drain Extensions	Each	14
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Polymer Modified Portland Cement Mortar	Sq. Ft.	49

**DRAIN DETAILS**  
 F.A.P. RT. 881 SEC. D9 BRIDGE REPAIR 2016-2  
 JOHNSON COUNTY  
 STATION 839+01.40  
 STRUCTURE NO. 044-0001

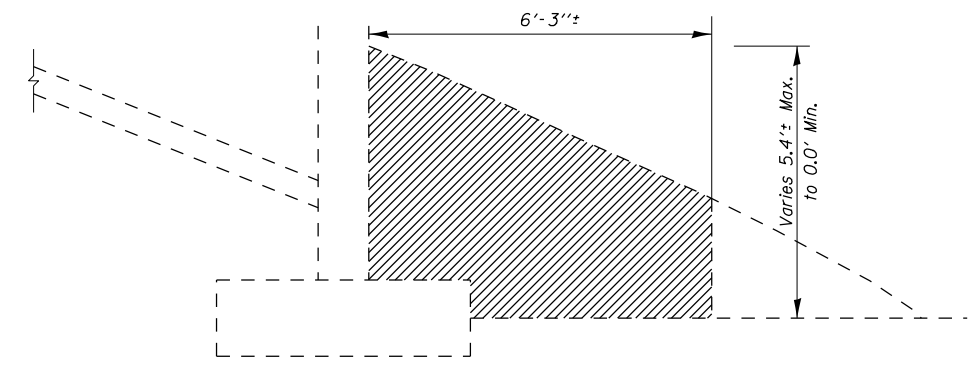
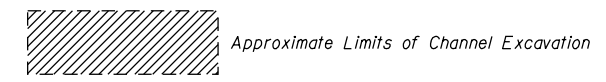
FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DRAIN DETAILS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL084EBIDINTEG\Illinois.gov\PWIDOT\Documents\IDOT Offices\District 9\Projects\78466\Drawings\CAD\Sheets\78466-shd-plan.dgn	PLOT SCALE = 15.11111' / 1" =	CHECKED -	REVISED -			881	D9 BRIDGE REPAIR 2016-2	JOHNSON	13	10
Default	PLOT DATE = 3/16/2016	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				
						SCALE:	SHEET 5 OF 8 SHEETS	STA.	TO STA.	



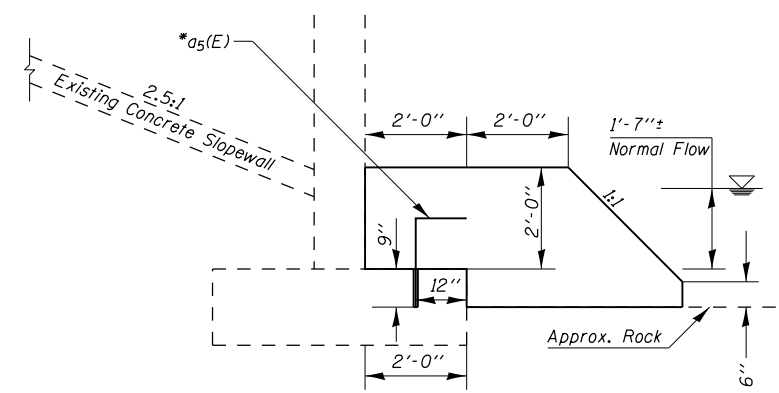
Bar a5(E)

\* Epoxy grout a5(E) bars in 7/8"  $\phi$  X 9" (Min.) drilled holes according to Section 584 of the Standard Specifications. Cost included in cost of "Reinforcement Bars, Epoxy Coated."

PLAN



SECTION THROUGH EXISTING PIER  
SHOWING CHANNEL EXCAVATION

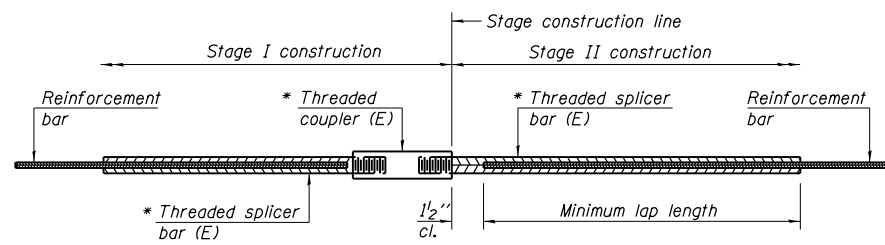


SECTION THROUGH EXISTING PIER

**BILL OF MATERIAL**

BAR NO.	SIZE	LENGTH	SHAPE
a5(E)	72	5	2'-9"
CHANNEL EXCAVATION			CU YD 75
CONCRETE STRUCTURES			CU YD 58.8
REINFORCEMENT BARS EPOXY COATED			POUND 210

**PIER FOOTING DETAILS**  
**F.A.P. RT. 881 SEC. D9 BRIDGE REPAIR 2016-2**  
**JOHNSON COUNTY**  
**STATION 839+01.40**  
**STRUCTURE NO. 044-0001**



**STANDARD BAR SPLICER ASSEMBLY**

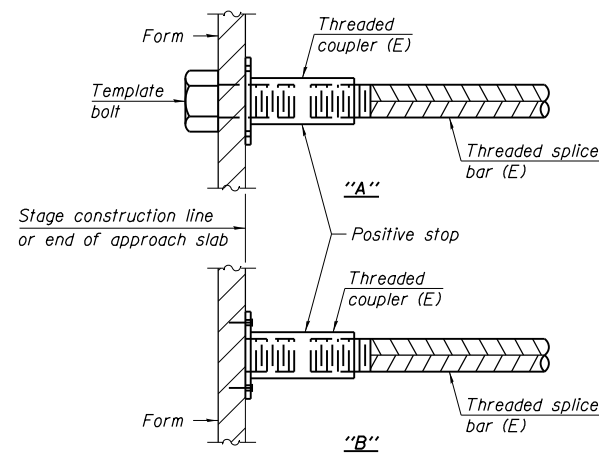
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

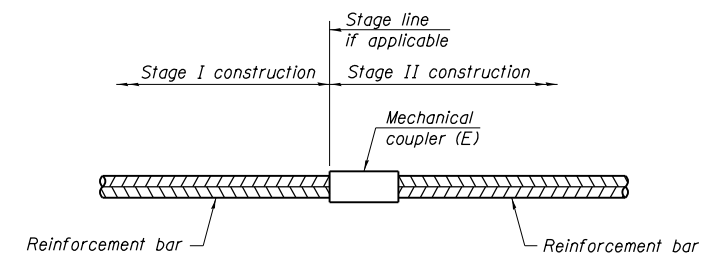
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
South Abutment	5	4	Table 3



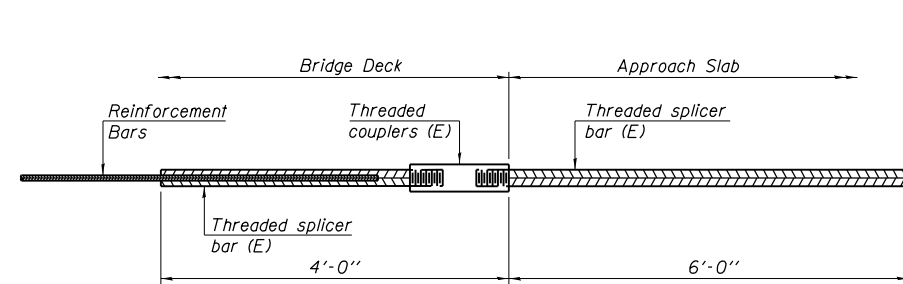
**INSTALLATION AND SETTING METHODS**

"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.



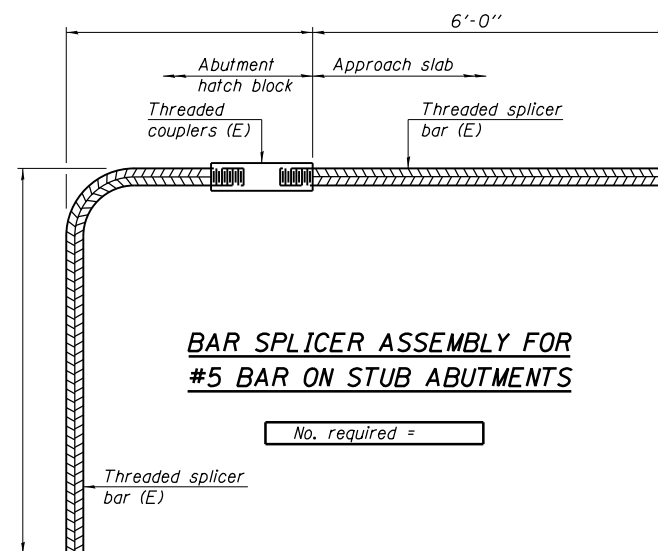
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



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

No. required =



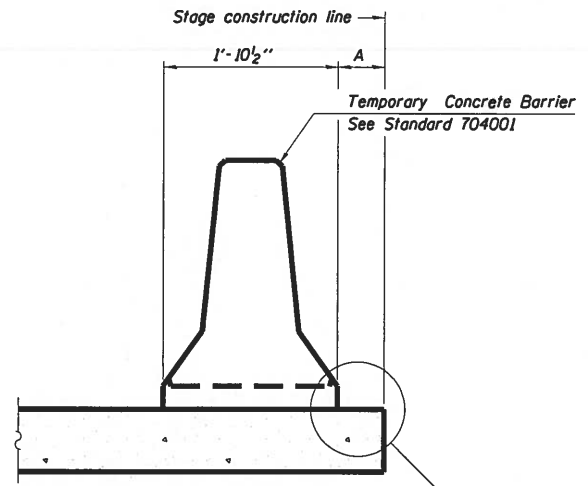
**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

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

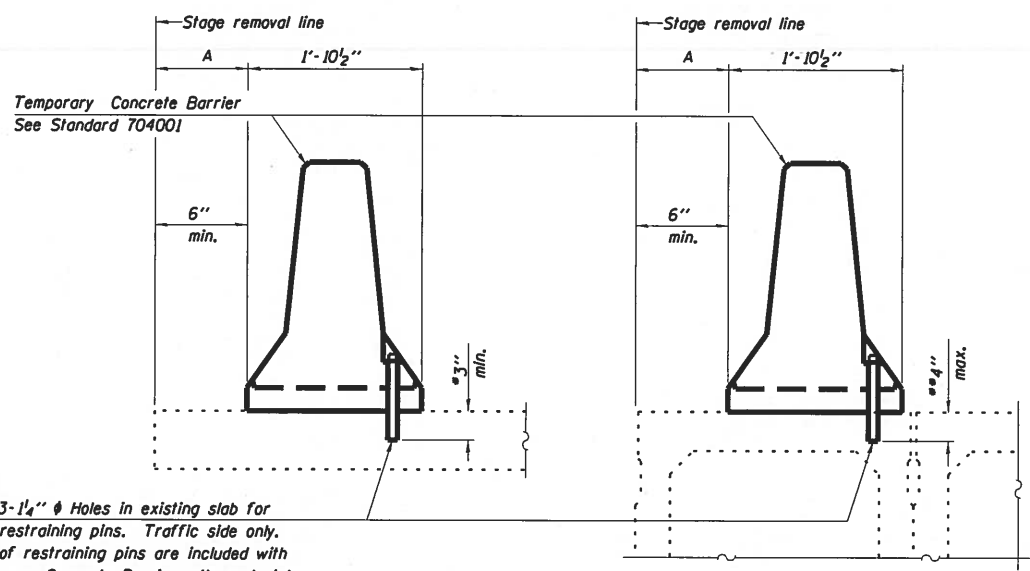
**BAR SPLICER ASSEMBLY DETAILS**  
**F.A.P. 881 SEC. D9 BRIDGE REPAIR 2016-2**  
**JOHNSON COUNTY**  
**STATION 839+01.40**  
**STRUCTURE NO. 044-0001**

BSD-1 1-27-12



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I or Detail II. No restraint is required when "A" is greater than 3'-1".

**NEW SLAB**



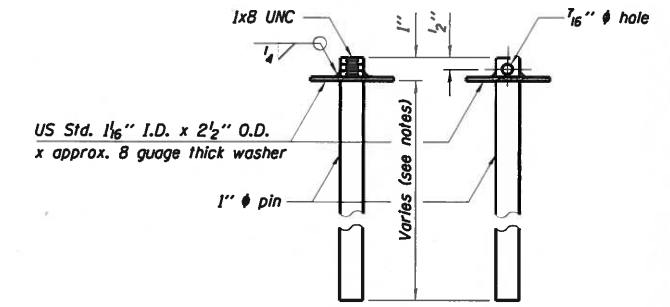
Drill 3-1/4"  $\phi$  Holes in existing slab for 1"  $\phi$  restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

**EXISTING SLAB**

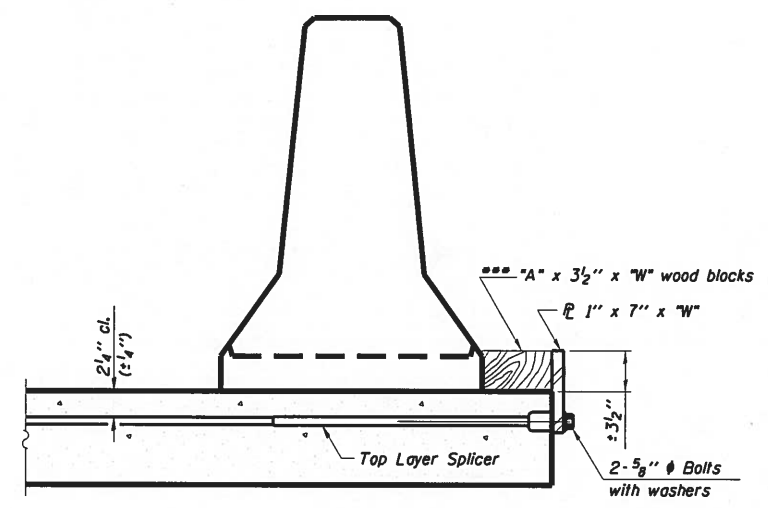
**EXISTING DECK BEAM**

**SECTIONS THRU SLAB OR DECK BEAM**

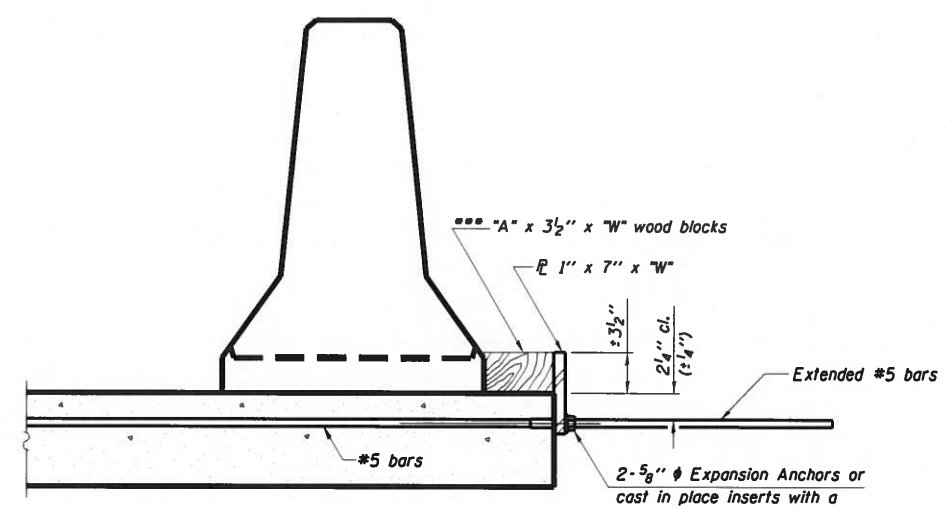
- Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**RESTRAINING PIN**



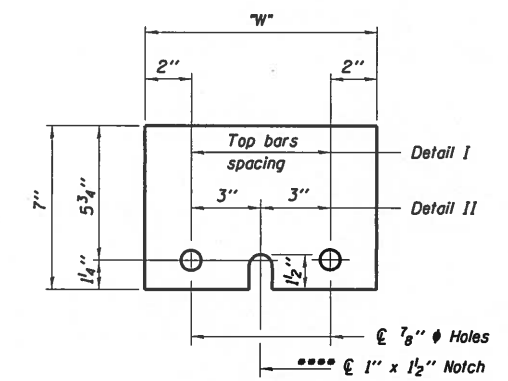
**DETAIL I**



**DETAIL II**

**RETAINER ASSEMBLY**

••• Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.



**STEEL RETAINER  $\phi$  1" x 7" x "W"**

•••• Required only with Detail II

**NOTES**

- Detail I - With Bar Splicer or Couplers:**  
Connect one (1) 1" x 7" x "W" steel  $\phi$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\phi$  of each barrier panel.
- Detail II - With Extended Reinforcement Bars:**  
Connect one (1) 1" x 7" x "W" steel  $\phi$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\phi$  of each barrier panel.
- Cost of retainer assembly is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

R-27

2-19-16

FILE NAME =	USER NAME = adamsan	DESIGNED -	REVISD -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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\$MODELNAME\$	PLOT DATE = 3/16/2016	DATE -	REVISD -			SCALE: _____ SHEET 8 OF 8 SHEETS STA. _____ TO STA. _____		CONTRACT NO. 78466			
						ILLINOIS FED. AID PROJECT					