

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

**PROPOSED  
 HIGHWAY PLANS**

F.A.I. ROUTE 57 (I-57)  
 SECTION D9 CM BRIDGE REPAIR 2011-1

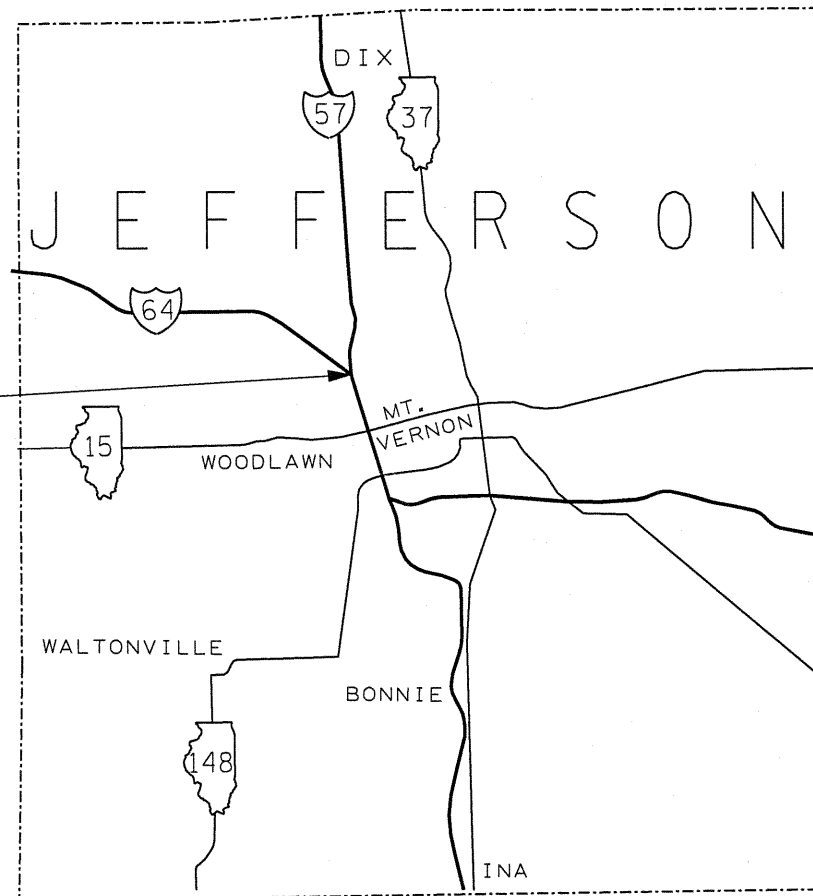
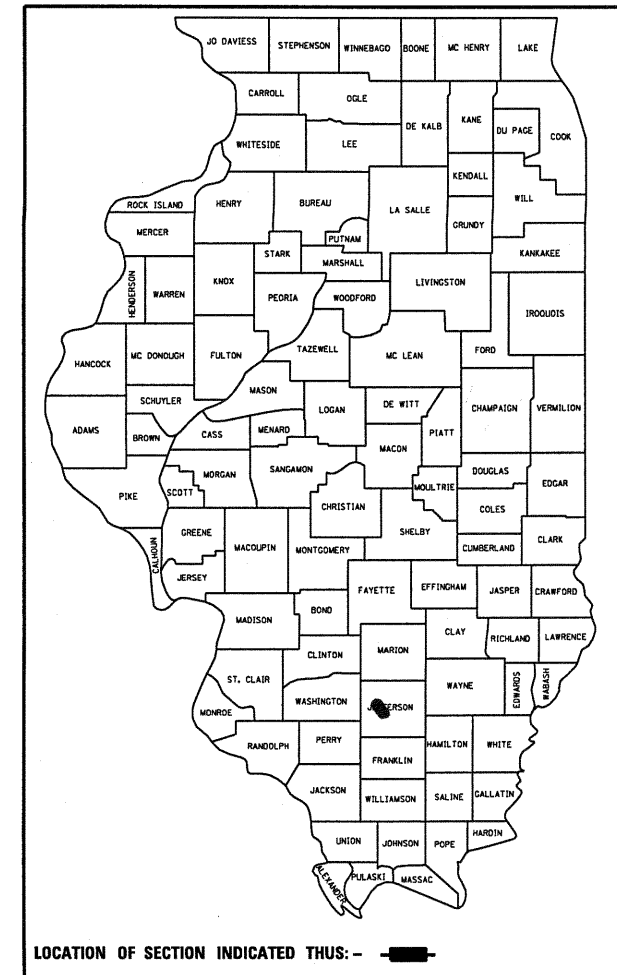
BRIDGE SURFACE, JOINTS, BEARINGS  
 JEFFERSON COUNTY

C-99-070-10

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 CM BRIDGE REPAIR 2011-1	JEFFERSON	15	1
		ILLINOIS	CONTRACT NO. 78212	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

D-99-068-10



041-0061 RAMP  
 TOP LEVEL OF NW TRI-LEVEL  
 CARRIES I-64 EB TO I-57 NB  
 OVER I-64 WB & I-57 SB

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

PROJECT ENGINEER DAVID PICHE  
 DESIGNER RITA GAUTNEY

CONTRACT NO. 78212

MAP IS NOT TO SCALE

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED Nov 9 20 10  
Mary C. Lammie  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
Dec 10 20 10  
Scott E. Still, P.E.  
 ACTING ENGINEER OF DESIGN AND ENVIRONMENT  
Dec 10 20 10  
Christine M. Reed  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS

**GENERAL NOTES**

- 1) THE THICKNESS OF HOT-MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT-MIX ASPHALT MIXTURE IS PLACED.
- 2) FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:
 

ALL HOT MIX ASPHALT	2.016 TONS/CU YD
BITUMINOUS MATERIALS ON PAVEMENT	0.09 GAL/SQ YD
INTERMEDIATE LIFTS (FOG COAT)	0.04 GAL/SQ YD
- 3) PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.
- 4) 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.
- 5) COMMITMENTS: NONE AS OF 10/27/10.

**INDEX OF SHEETS**

- 1 COVER SHEET
- 2 SIGNATURES, INDEX OF SHEETS, STANDARDS, GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 GENERAL PLAN & ELEVATION
- 5 NOTES, MIXTURE REQUIREMENTS
- 6-9 JOINT REPLACEMENT DETAILS
- 10 PREFORMED JOINT STRIP SEAL DETAILS
- 11 ALUMINUM RAILING (FOR INFORMATION)
- 12 RESURFACING
- 13 EROSION REPAIR
- 14, 15 BEARING REPLACEMENT DETAILS

**STANDARDS**

- |           |                                                           |
|-----------|-----------------------------------------------------------|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS              |
| 001001-02 | AREAS OF REINFORCEMENT BARS                               |
| 635011-02 | REFLECTOR MARKER AND MOUNTING DETAILS                     |
| 701451-01 | RAMP CLOSURE, FREEWAY/EXPRESSWAY                          |
| 780001-02 | TYPICAL PAVEMENT MARKINGS                                 |
| 781001-03 | TYPICAL APPLICATION OF RAISED REFLECTIVE PAVEMENT MARKERS |
| 701901-01 | TRAFFIC CONTROL DEVICES                                   |

Prepared By: *Ape Blankiewicz*  
DISTRICT STUDIES & PLANS ENGINEER

Examined By: *Paul S.*  
DISTRICT LAND ACQUISITION ENGINEER

Examined By: *Carrie Miller*  
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: *Douglas Nelkin*  
DISTRICT OPERATIONS ENGINEER

Examined By: *K. F. S.*  
DISTRICT CONSTRUCTION ENGINEER

Examined By: *Brian P. P.*  
DISTRICT MATERIALS ENGINEER

Examined By: *K. M. T.*  
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: *Danny Clayton*  
ASSISTANT REGIONAL ENGINEER

Approved By: *Mary C. Kamie*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

Nov 9 2010  
DATE

FILE NAME = c:\pwworkspace\autodesk\userprofile\local appdata\autodesk\lisp\acp.plt

USER NAME = gautneyrk	DESIGNED - <u>RKG</u>	REVISED -
DRAWN - <u>RKG</u>	CHECKED - <u>MAS</u>	DATE - <u>10/27/10</u>
PLOT SCALE = 25ft=1" 1/4" = 1' IN.		
PLOT DATE = 10/26/2010		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>INDEX OF SHEETS, GENERAL NOTES, STANDARDS</b>	
SCALE: _____	SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 CM BRIDGE REPAIR 2011-1	JEFFERSON	15	2
CONTRACT NO. 78212				
ILLINOIS FED. AID PROJECT				

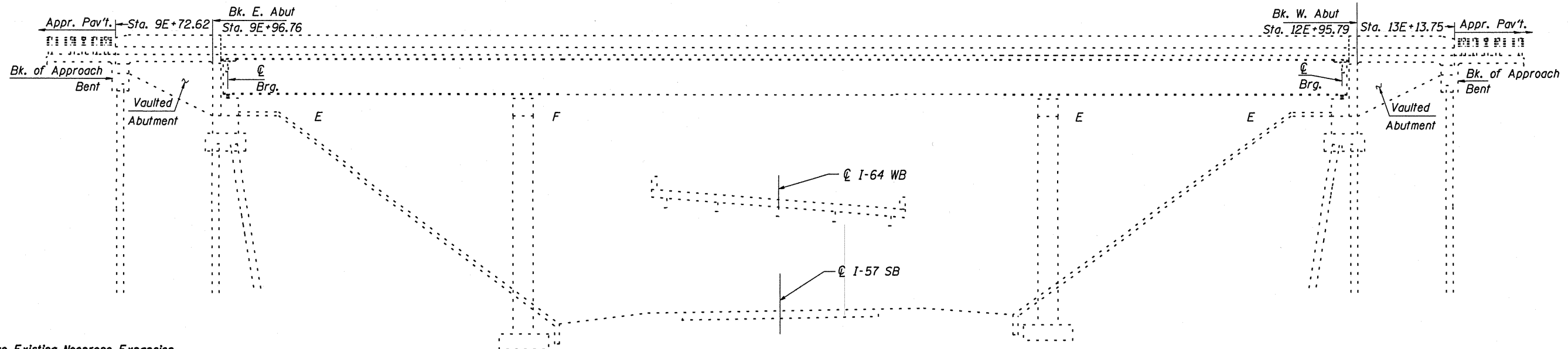
**SUMMARY OF QUANTITIES**

0014

CONSTRUCTION TYPE CODE: 0014		JEFFERSON COUNTY	
		100% STATE	
CODE NO.	ITEM DESCRIPTION	UNIT	QUANTITY
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	1
40603550	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N105	TON	113
44000156	HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"	SQ YD	20.3
50102400	CONCRETE REMOVAL	CU YD	10.4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	11.5
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1700
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1390
52000110	PREFORMED JOINT STRIP SEAL	FOOT	83
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	5
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	5
52100520	ANCHOR BOLTS, 1"	EACH	20
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	1161
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	5.4
67100100	MOBILIZATION	L SUM	1
70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2
* 78003110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B- LINE 4"	FOOT	690
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	19
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	19
* X0325205	MONODIRECTIONAL REFLECTORS TYPE C	EACH	4
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	10
Z0004556	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	1119
Z0007122	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	40
Z0049790	RELOCATING NAME PLATES	EACH	1

*\*Specialty Items*

FILE NAME =	USER NAME = gautneyrk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SUMMARY OF QUANTITIES STRUCTURE 041-0061	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
es:\pwwork\pwwork\gautneyrk\d0190470\7812-shr-plan.dgn	DRAWN -	REVISED -	57			09 CM BRIDGE REPAIR 2011-1	JEFFERSON	15	3	
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PLOT DATE = 11/9/2010	DATE -	REVISED -								

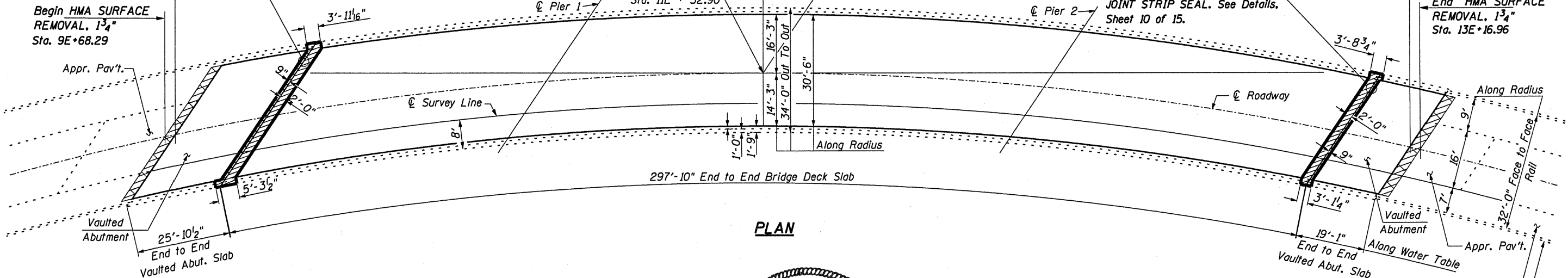


**ELEVATION**

Remove Existing Neoprene Expansion Joint, 1 1/2" And Construct PREFORMED JOINT STRIP SEAL. See Details, Sheet 10 of 15.

End HMA SURFACE REMOVAL, 1 3/4" And Begin HMA SURFACE REMOVAL (DECK) Sta. 9E+72.62

Begin HMA SURFACE REMOVAL, 1 3/4" Sta. 9E+68.29



**PLAN**

Remove Existing Neoprene Expansion Joint, 1 1/2" And Construct PREFORMED JOINT STRIP SEAL. See Details, Sheet 10 of 15.

End HMA SURFACE REMOVAL, DECK And Begin HMA SURFACE REMOVAL, 1 3/4" Sta. 13E+13.75

End HMA SURFACE REMOVAL, 1 3/4" Sta. 13E+16.96

- Concrete Removal and Replacement
- HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4" BITUMINOUS MATERIALS (PRIME COAT) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N105
- HOT-MIX ASPHALT SURFACE REMOVAL, DECK WATERPROOFING MEMBRANE SYSTEM HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N105



Expires 11/30/2012

**CURVE DATA**  
(FROM EXISTING PLANS)

P.I. STA. 17E + 34.10  
 $\Delta = 118^\circ - 30' - 00''$   
 $D = 7^\circ - 30' - 00''$   
 $R = 763.94'$   
 $L = 1580.00'$   
 $T = 1284.07'$   
 $E = 730.19'$   
 $S.E. = 0.08 \text{ FT./FT.}$   
 ATTAINED IN 192 FT.

**GENERAL PLAN & ELEVATION**  
**JEFFERSON COUNTY**  
**STRUCTURE NO. 041-0061**

FILE NAME =	USER NAME = gautnayrk	DESIGNED - RKG	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 5/8, 7/4 1/4 "/> IN.	CHECKED - MAS	REVISED -	CONTRACT NO. 78212							
PLOT DATE = 11/9/2010	DATE - 10/27/10	REVISED -	FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT							

**NOTES**

Plan dimensions and details relative to existing plans are subject to routine 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.

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

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

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.

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

Raised Reflective Pavement Markers are located on north edge line.

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

The cost of hot-mix asphalt removal in the concrete removal area is 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.

No deck slab repair is anticipated based on a visual inspection performed in September, 2010. The Engineer will perform a deck survey after removal of the existing hot-mix asphalt surface is completed, and may determine patching locations and quantities. This work will be paid for according to Article 109.04 of the Standard Specifications. The Engineer shall mark patches in the as-built plans.

Work is to be performed with no traffic on the structure.

Reinforcement bars designated (E) shall be epoxy coated.

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

**MIXTURE REQUIREMENTS**

LOCATION(S):	HOT-MIX ASPHALT SURFACE COURSE
MIXTURE USES(S):	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX D, N105
AC/PG:	PG76-22
RAP% (MAX):	0
DESIGN AIR VOIDS:	4%, 105 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 MM OR 12.5 MM
FRICITION AGGREGATE:	D SURFACE

**THERMOPLASTIC PAVEMENT MARKING - LINE 4"**

YELLOW	WHITE
Ft.	Ft.
345	345

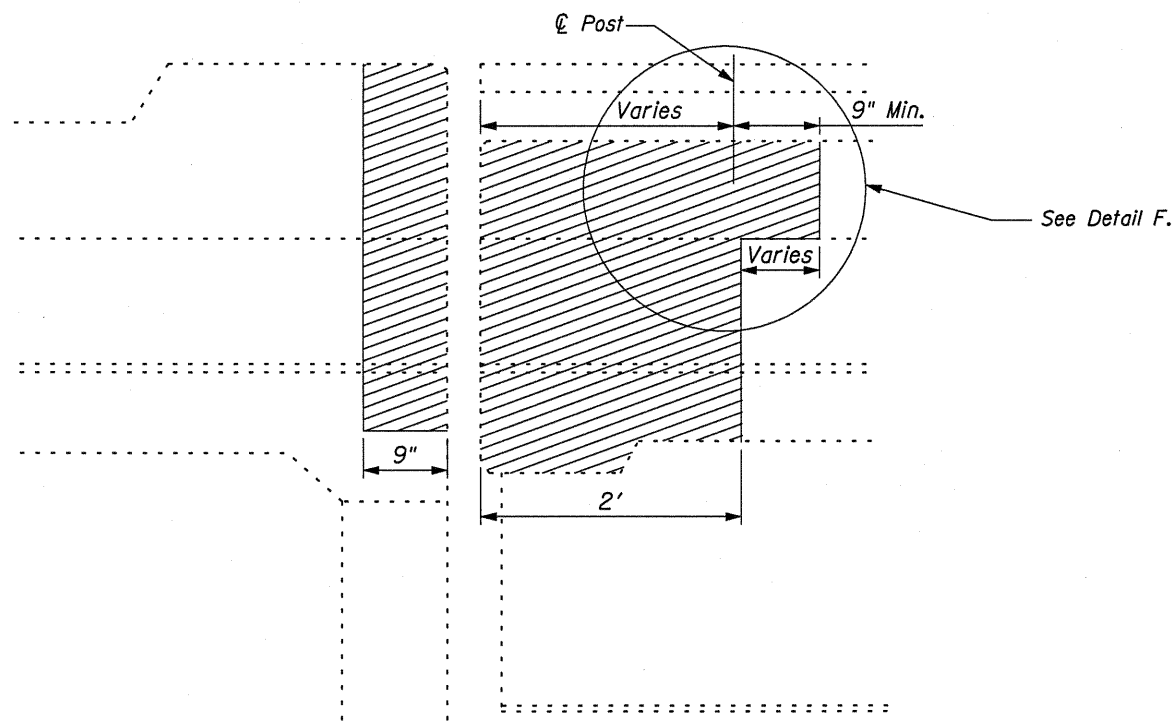
**BRIDGE BARRIER WALL REFLECTORS**

AMBER	WHITE
2	2

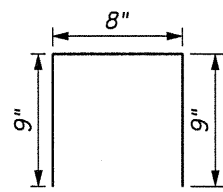
Cost of removing, storing and reinstalling Name Plate will be paid for at the contract unit price EACH for Relocating Name Plate

**JEFFERSON COUNTY  
STRUCTURE NO. 041-0061**

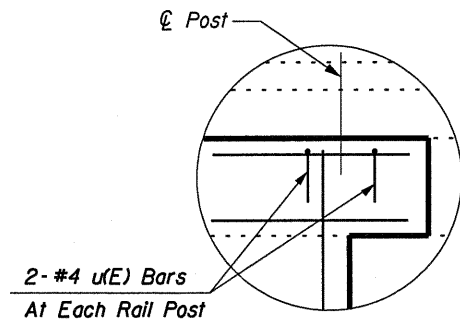
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PLOT SCALE = 5/8"=1' 1/4" IN.		CHECKED - MAS	REVISED - ---		CONTRACT NO. 78212							
PLOT DATE = 11/9/2010		DATE - 10/27/10	REVISED - ---		FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT							



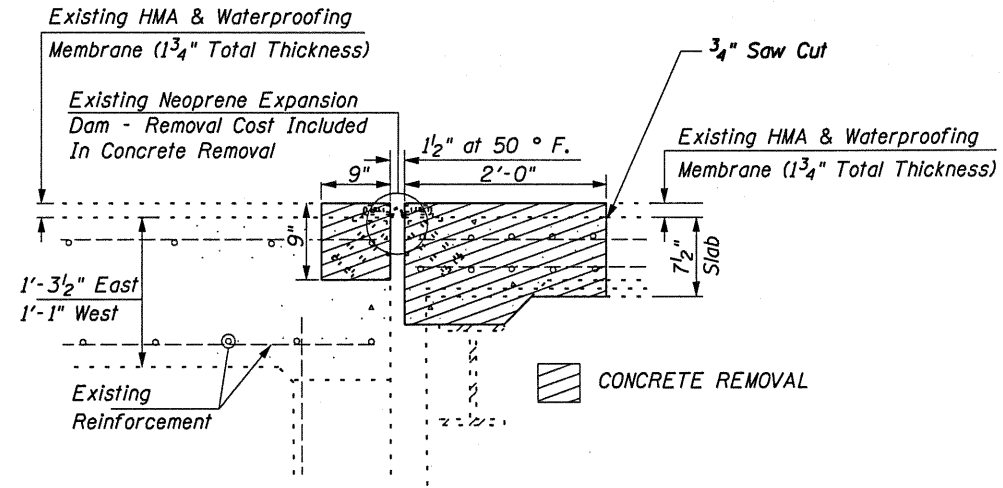
**ENDPOST ELEVATION**



**Bar u(E)**

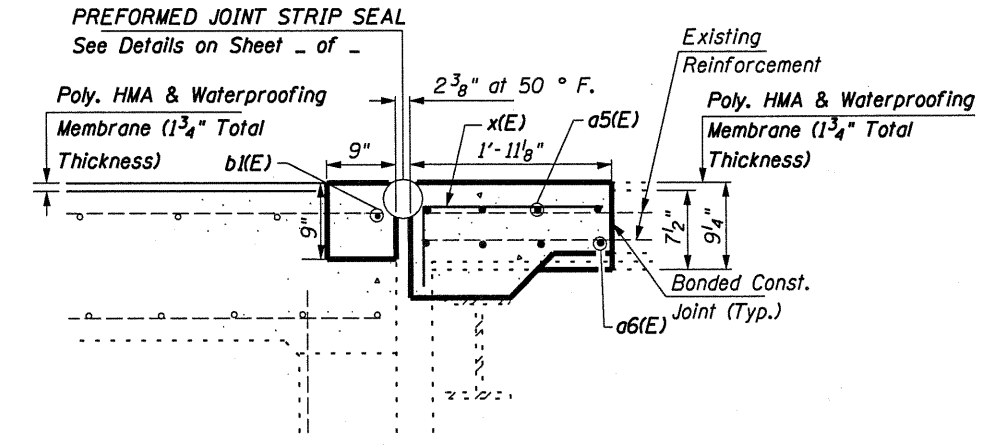


**Detail F**



**SECTION VIEW  
SHOWING CONCRETE REMOVAL**

All dimensions at right L s.

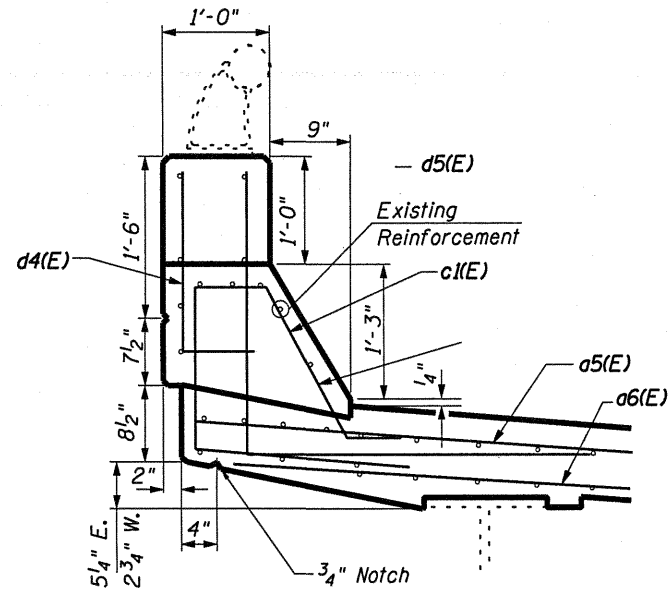


**SECTION VIEW  
SHOWING CONCRETE REPLACEMENT**

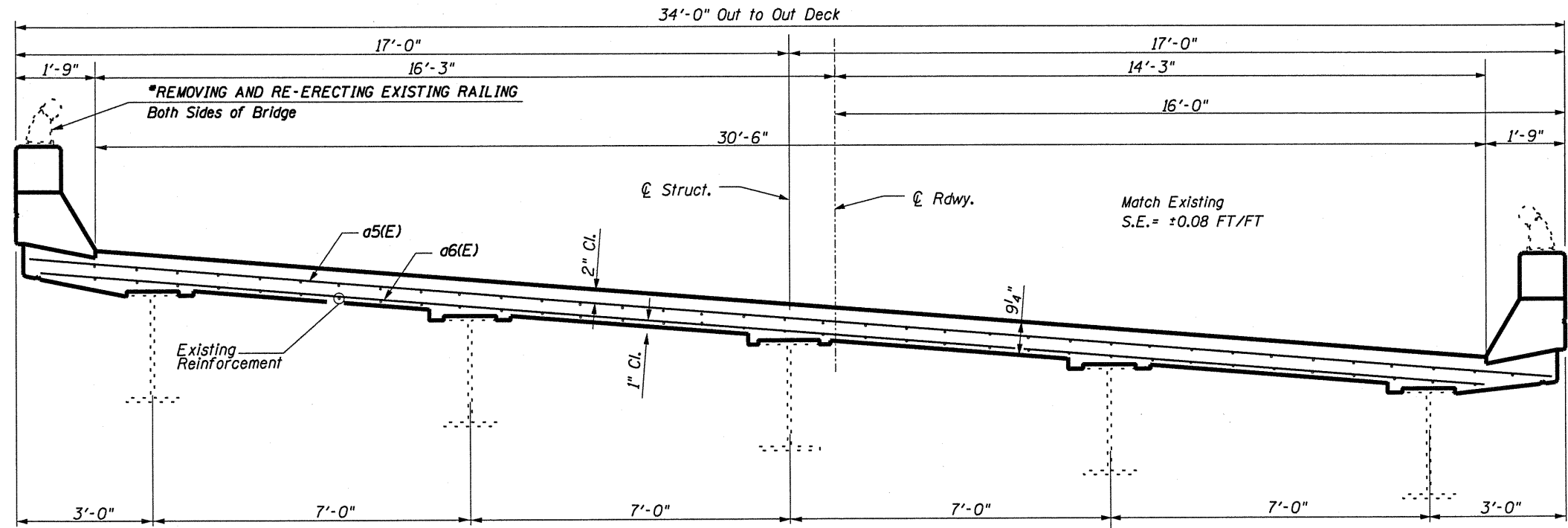
All dimensions at right L s.

**JOINT REPLACEMENT DETAILS  
JEFFERSON COUNTY  
STRUCTURE NO. 041-0061**

FILE NAME =	USER NAME = gautneyrk	DESIGNED - RKG	REVISED - ---	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 5:8,74 1/4" / IN.	CHECKED - MAS	REVISED - ---	SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____		FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT		CONTRACT NO. 78212		
PLOT DATE = 11/9/2010	DATE - 10/27/10	REVISED - ---							

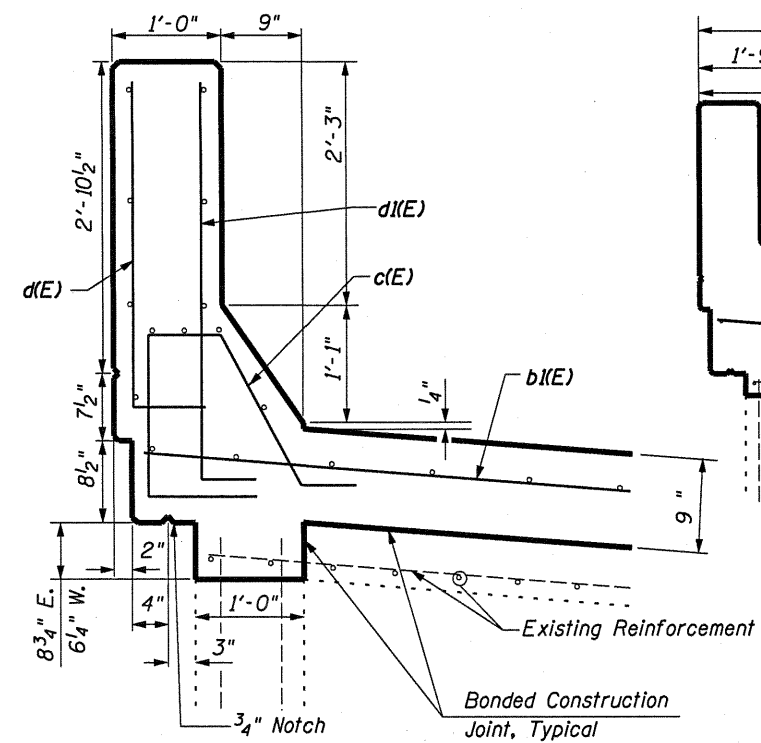


**BRIDGE PARAPET SECTION**

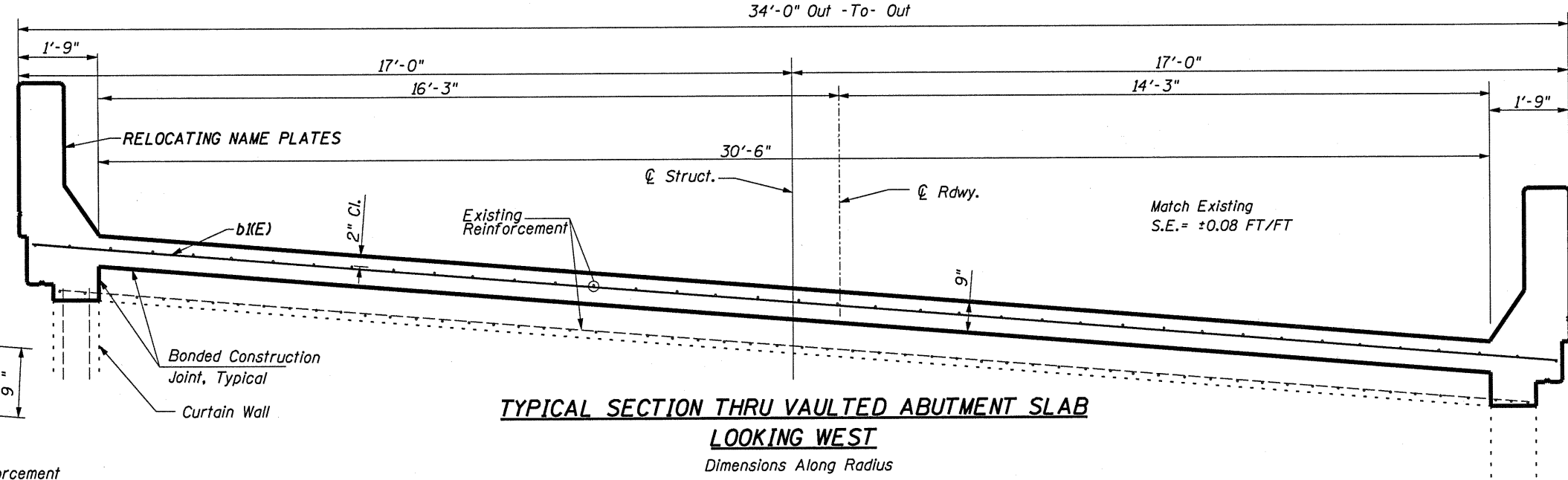


**TYPICAL SECTION THRU BRIDGE DECK SLAB  
LOOKING WEST**

\*Remove and re-erect one section of aluminum handrail ( $\pm 10$  ft. in length) and one post at each corner of bridge. See Sheet 11 of 15 for information.



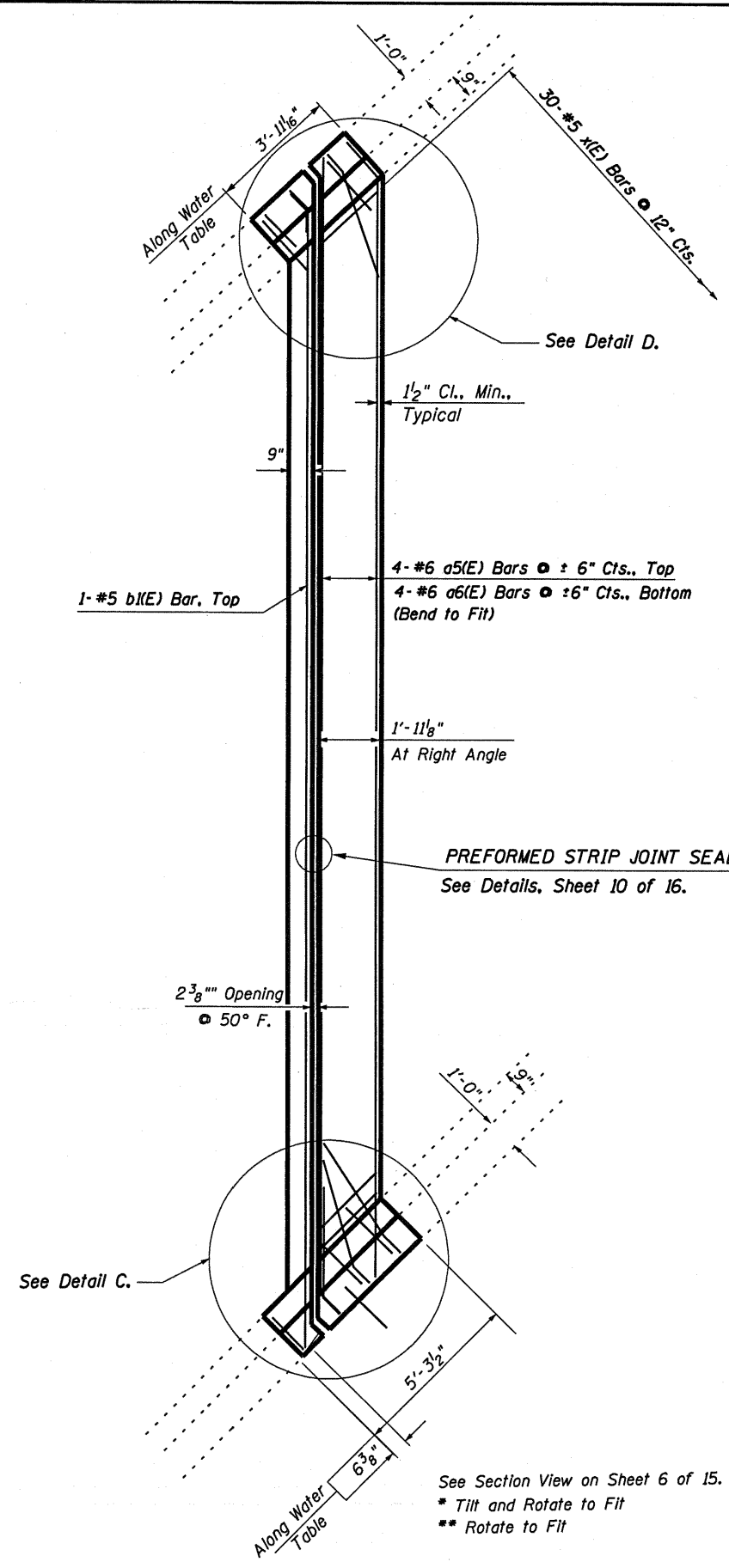
**VAULTED ABUTMENT PARAPET SECTION**



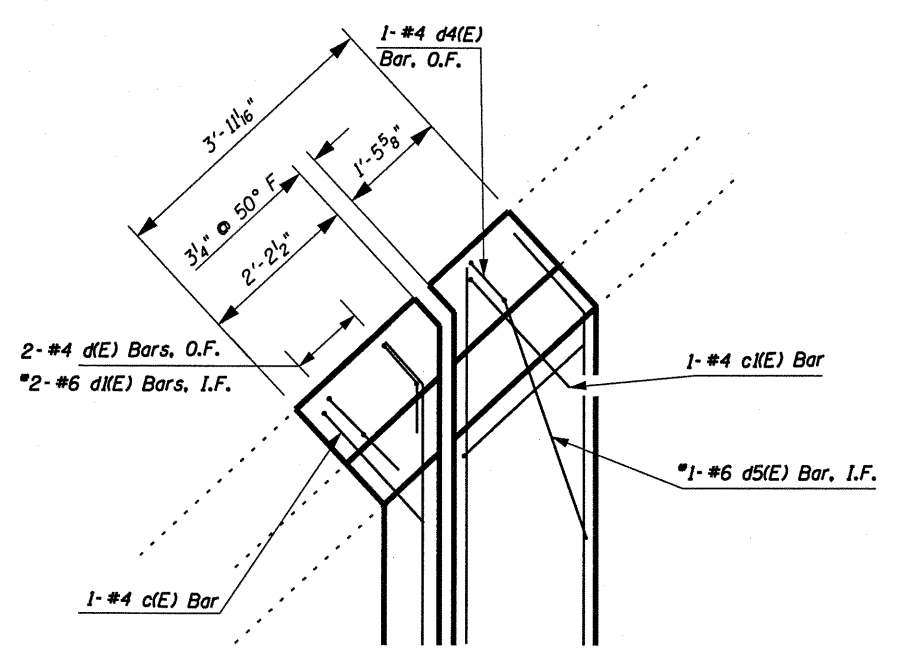
**TYPICAL SECTION THRU VAULTED ABUTMENT SLAB  
LOOKING WEST**

**CONCRETE REPLACEMENT DETAILS  
JEFFERSON COUNTY  
STRUCTURE NO. 041-0061**

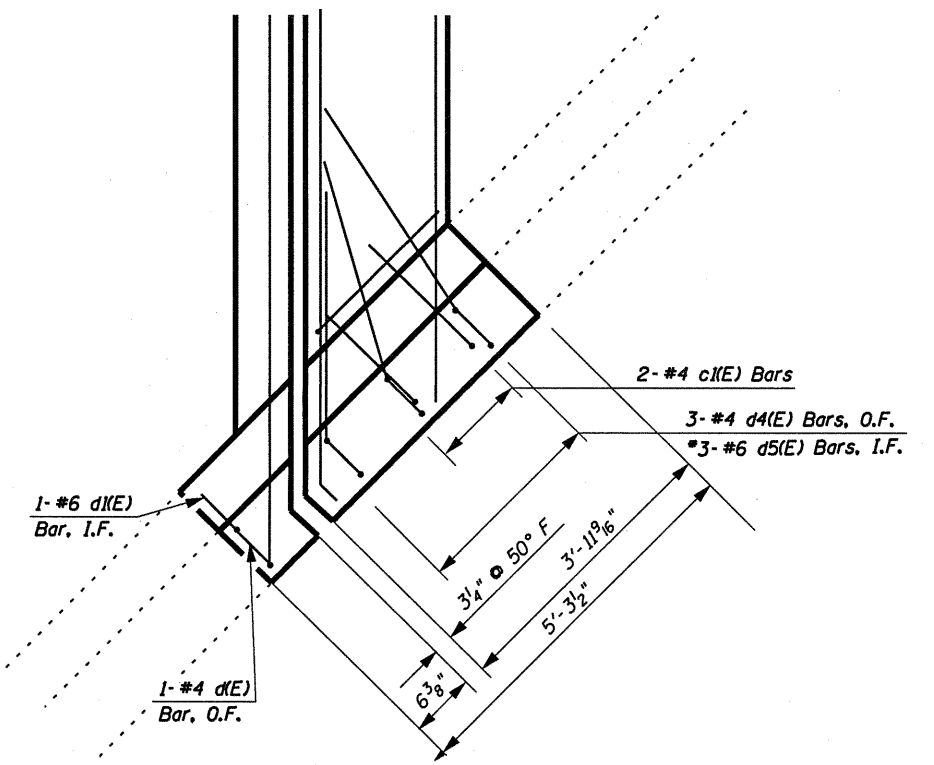
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PLOT DATE = 11/9/2010	DATE = 10/27/10	CHECKED - MAS	REVISED -			CONTRACT NO. 78212					
			REVISED -			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					
			REVISED -								



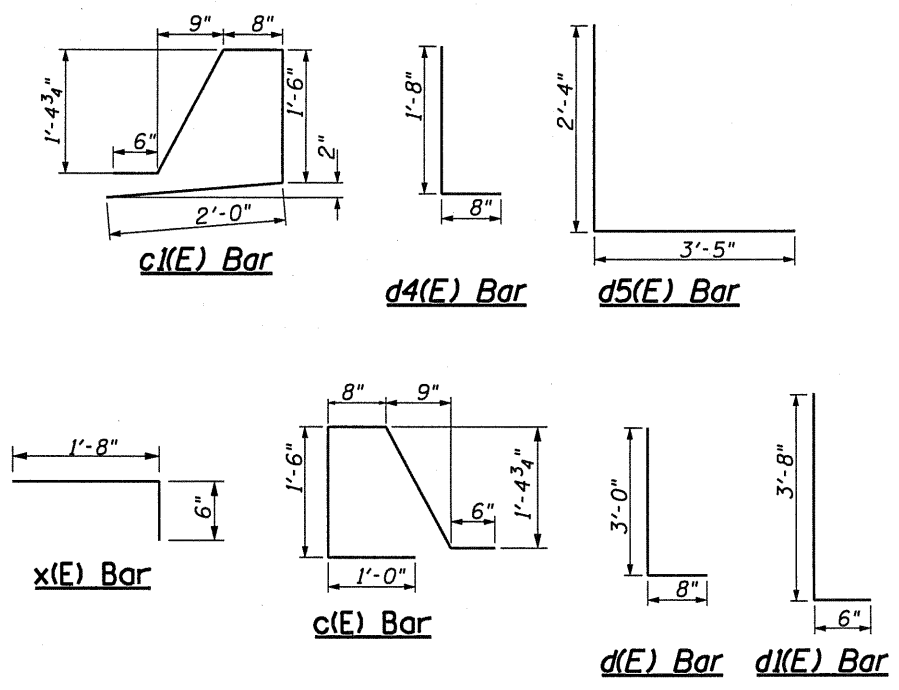
**PLAN**



**DETAIL D**



**DETAIL C**



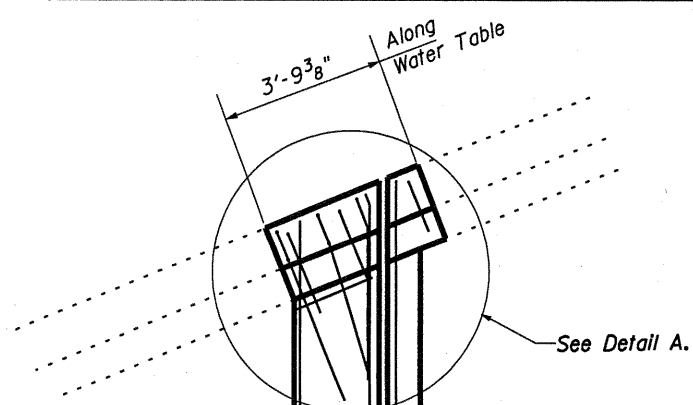
**STRUCTURE NO. 041-0061  
EAST JOINT REPLACEMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a5(E)	4	#6	46'-8"	—
a6(E)	4	#6	43'-5"	—
b(E)	1	#5	46'-8"	—
c(E)	1	#4	5'-9"	∩
c(E)	3	#4	6'-3"	∩
d(E)	3	#4	3'-8"	∩
d(E)	3	#6	4'-2"	∩
d4(E)	4	#4	2'-4"	∩
d5(E)	4	#6	5'-9"	∩
u(E)	4	#4	2'-2"	∩
x(E)	30	#5	2'-2"	∩
Preformed Joint Strip Seal	Foot		44.5	
Concrete Removal	Cu. Yd.		5.7	
Concrete Superstructure	Cu. Yd.		6.3	
Reinforcement Bars, Epoxy Coated	Pound		750	

Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

**EAST ABUT.  
CONCRETE REPLACEMENT DETAILS  
JEFFERSON COUNTY  
STRUCTURE NO. 041-0061**





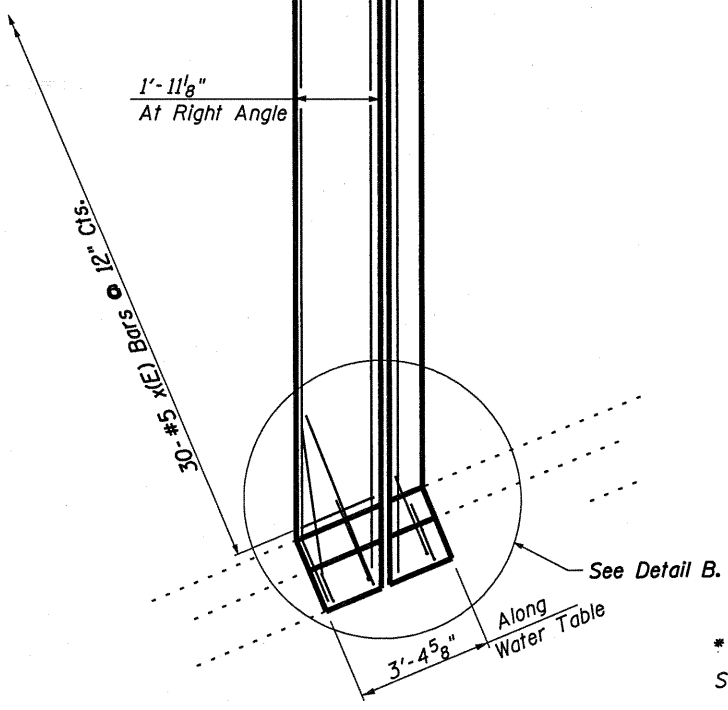
1/2" Cl., Min., Typical

1- #5 b(E) Bar, Top

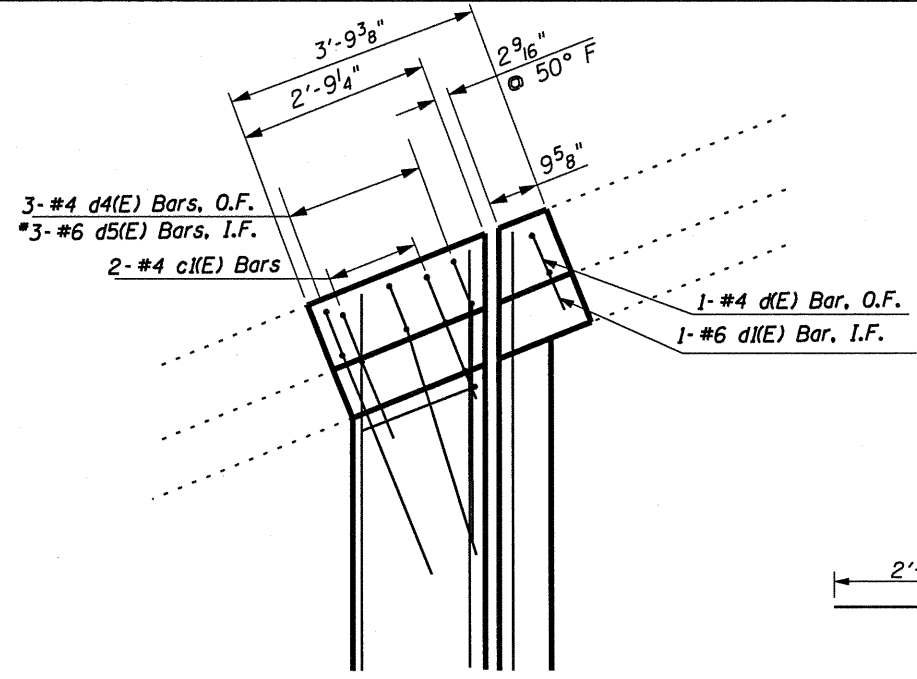
2 3/8" Opening  
 50° F.

4- #6 a5(E) Bars ± 6" Cts., Top  
 4- #6 a6(E) Bars ± 6" Cts., Bottom  
 (Bend to Fit)

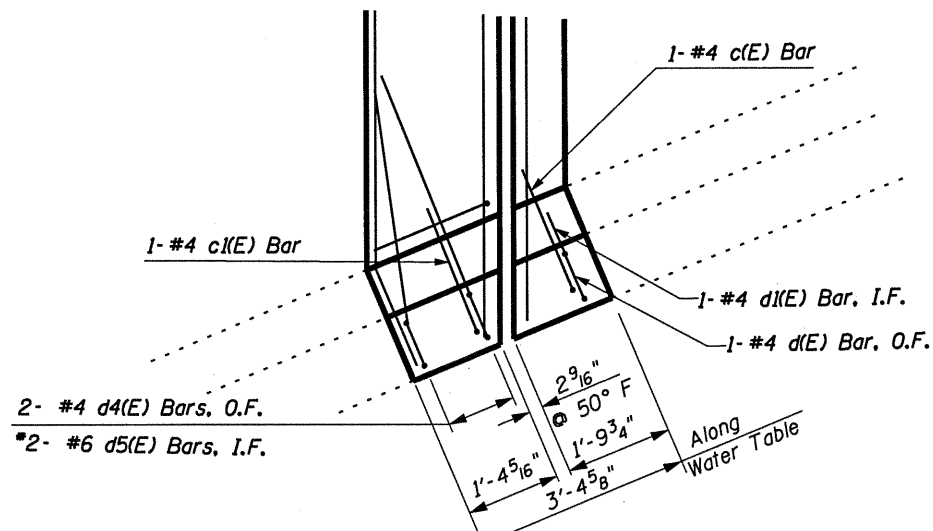
1'-11 1/8"  
 At Right Angle



**PLAN**

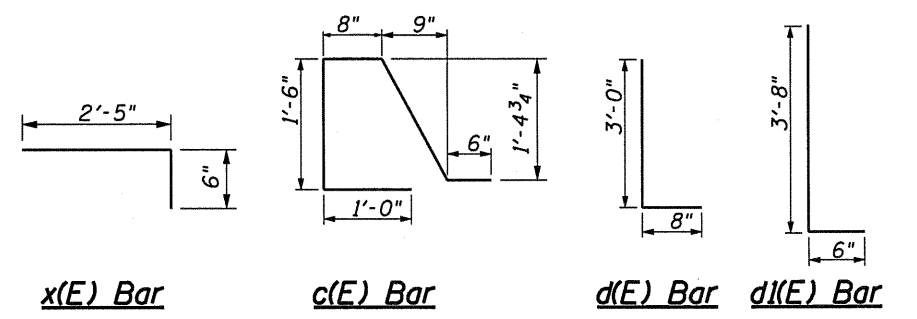
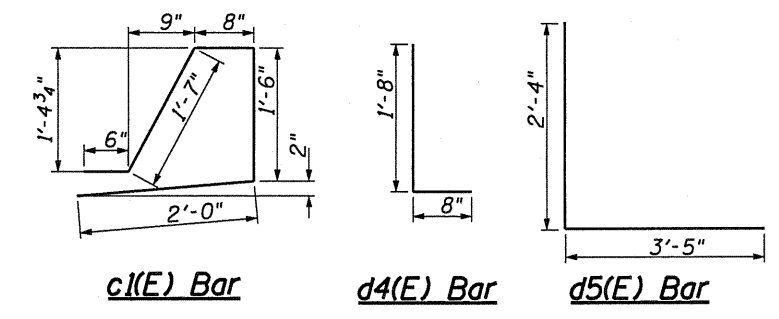


**DETAIL A**



**DETAIL B**

\* Tilt and Rotate to Fit  
 See Section View on Sheet 6 of 15.

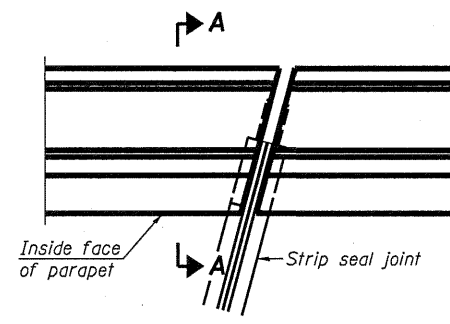


**STRUCTURE NO. 041-0061  
 WEST JOINT REPLACEMENT  
 BILL OF MATERIAL**

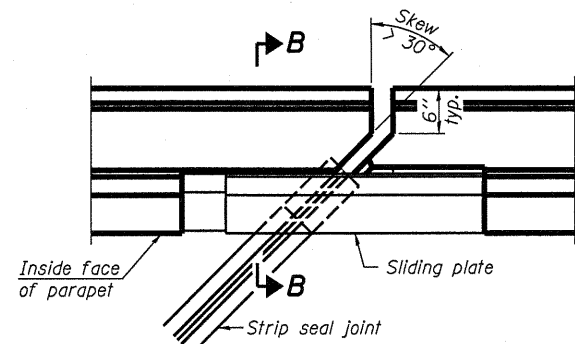
Bar	No.	Size	Length	Shape
a5(E)	4	#6	36'-1"	—
a6(E)	4	#6	33'-0"	—
b(E)	1	#5	36'-1"	—
c(E)	2	#4	5'-9"	∩
c(E)	3	#4	6'-3"	∩
d(E)	2	#4	3'-8"	—
d(E)	2	#6	4'-2"	—
d4(E)	5	#4	2'-4"	—
d5(E)	5	#6	5'-9"	—
u(E)	4	#4	2'-2"	—
x(E)	30	#5	2'-11"	—
Preformed Joint Strip Seal		Foot	39	
Concrete Removal		Cu. Yd.	4.7	
Concrete Superstructure		Cu. Yd.	5.2	
Reinforcement Bars, Epoxy Coated		Pound	640	

Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

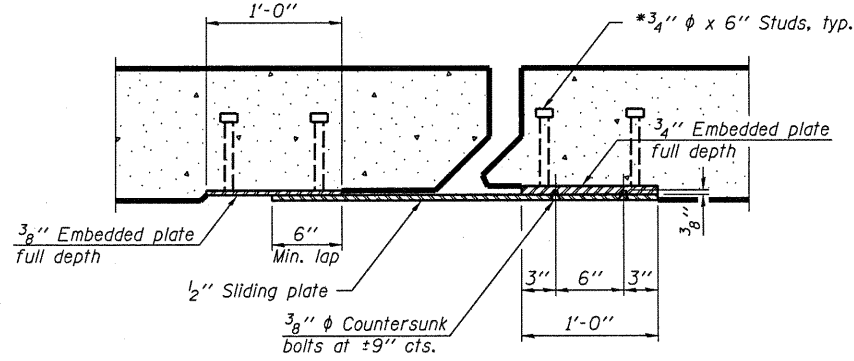
**WEST ABUT.  
 CONCRETE REPLACEMENT DETAILS  
 JEFFERSON COUNTY  
 STRUCTURE NO. 041-0061**



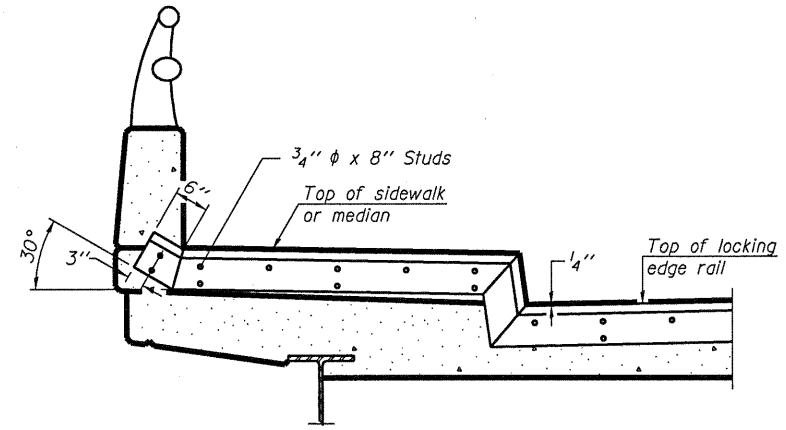
**PLAN**  
(For skews  $\leq 30^\circ$ )



**PLAN**  
(For skews  $> 30^\circ$ )  
Showing point block

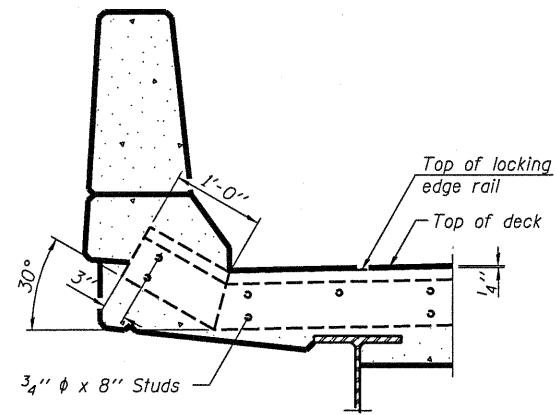


**SECTION C-C**

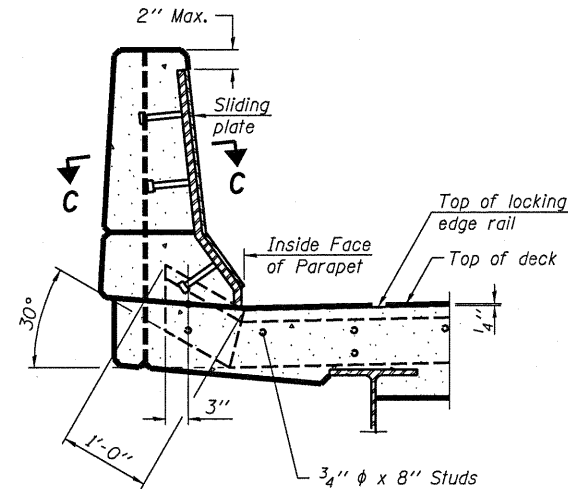


**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**

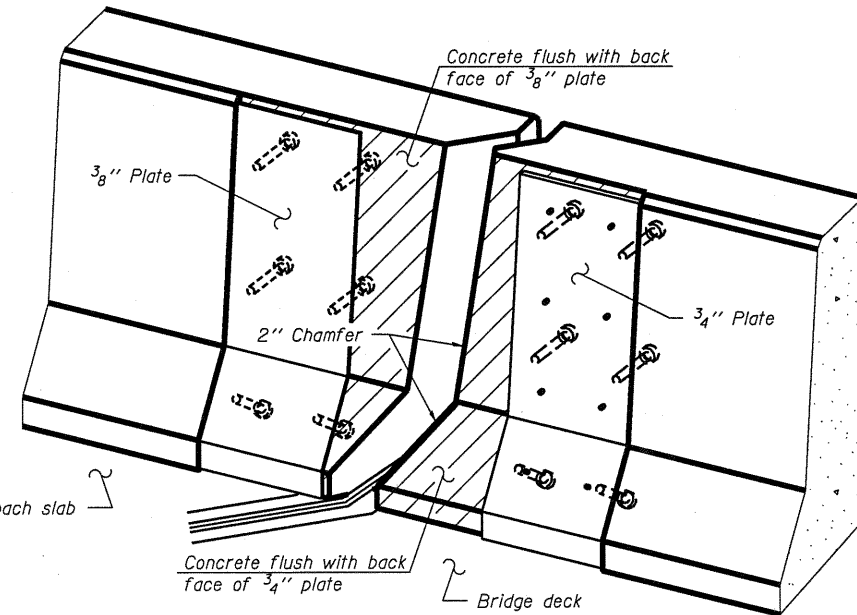
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



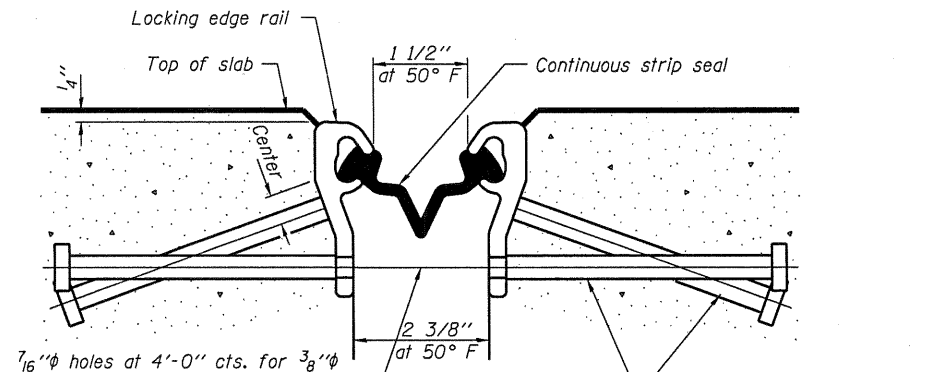
**SECTION A-A**



**SECTION B-B**



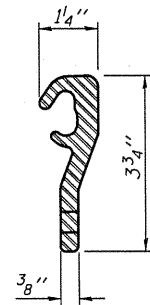
**TRIMETRIC VIEW**  
(Showing back plates only)



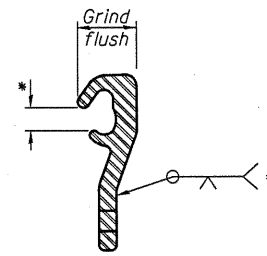
**SECTION THRU STRIP SEAL JOINT**

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

Place  $1/2$ "  $\phi$  x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.



**LOCKING EDGE RAIL**



**LOCKING EDGE RAIL SPLICE**

\* Omit weld at seal opening.

**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.

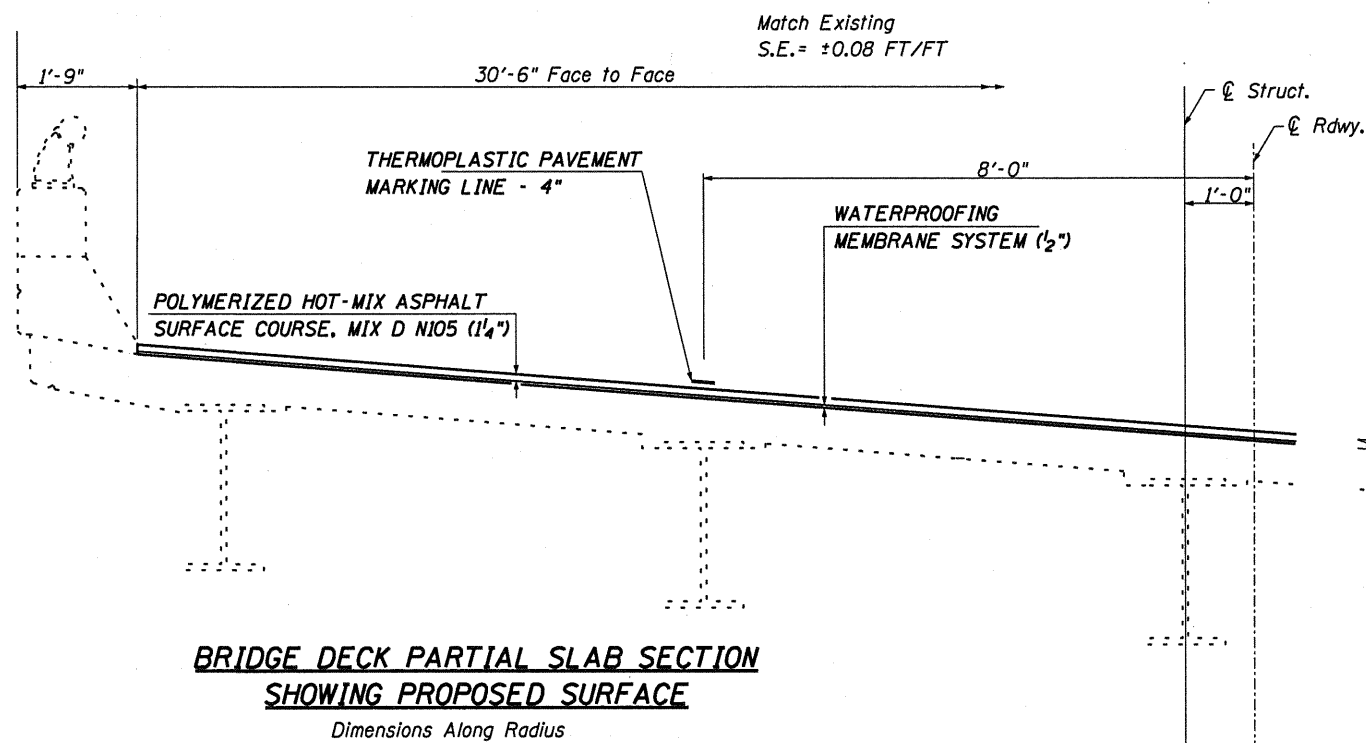
**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	83.5

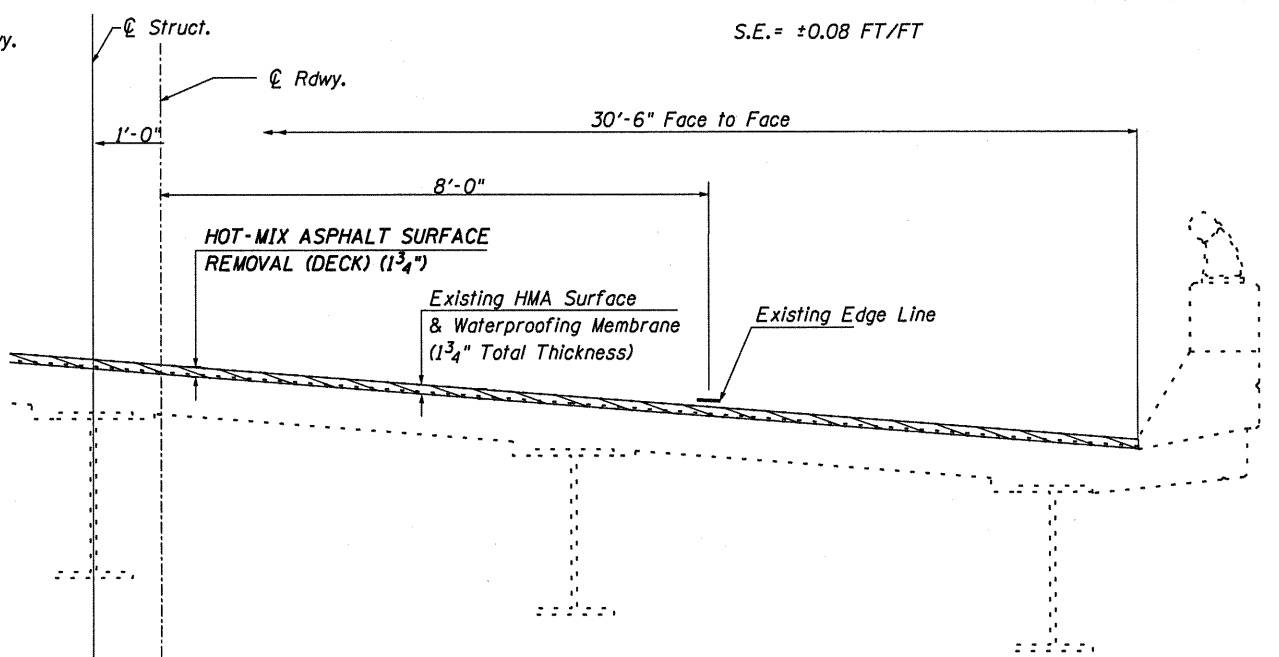
**PREFORMED JOINT STRIP SEAL  
STRUCTURE NO. 041-0061**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 CM BRIDGE REPAIR 2011-1	JEFFERSON	15	10
CONTRACT NO. 78212				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

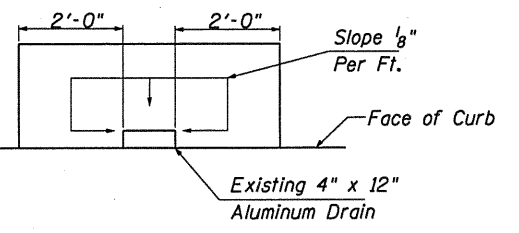




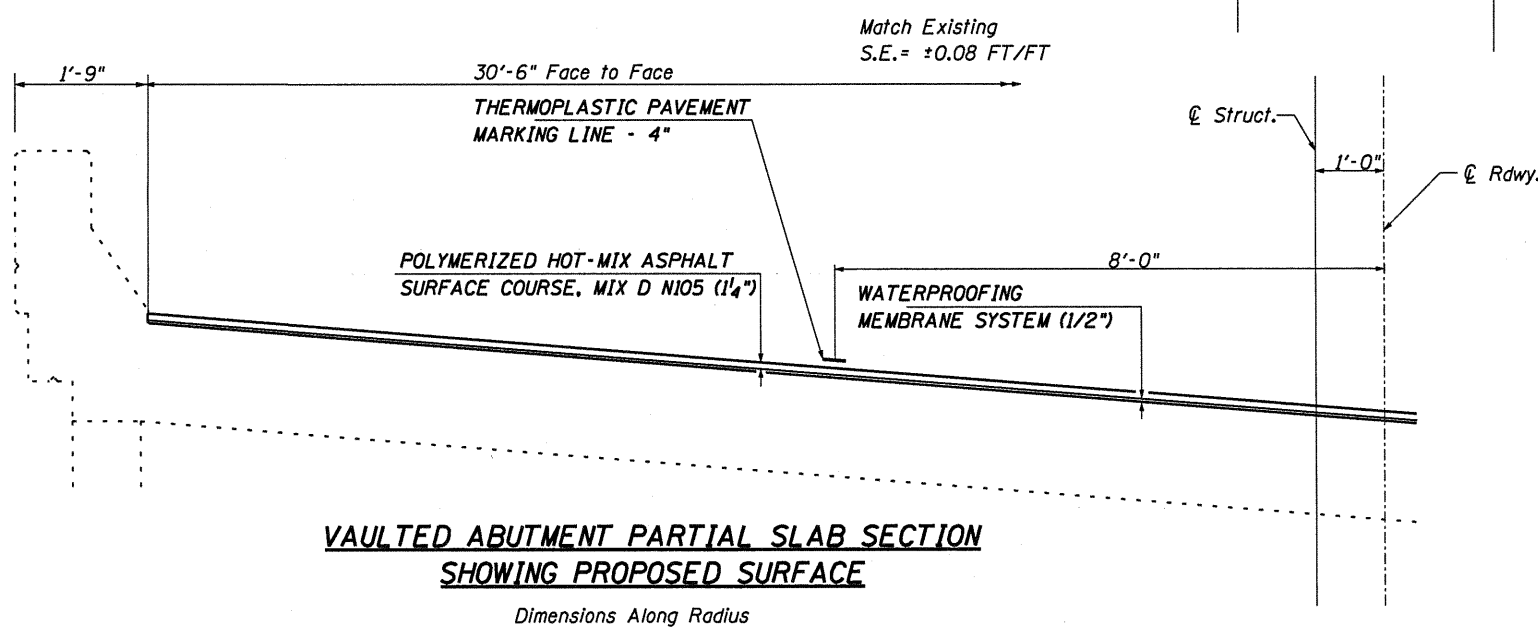
**BRIDGE DECK PARTIAL SLAB SECTION  
SHOWING PROPOSED SURFACE**  
Dimensions Along Radius



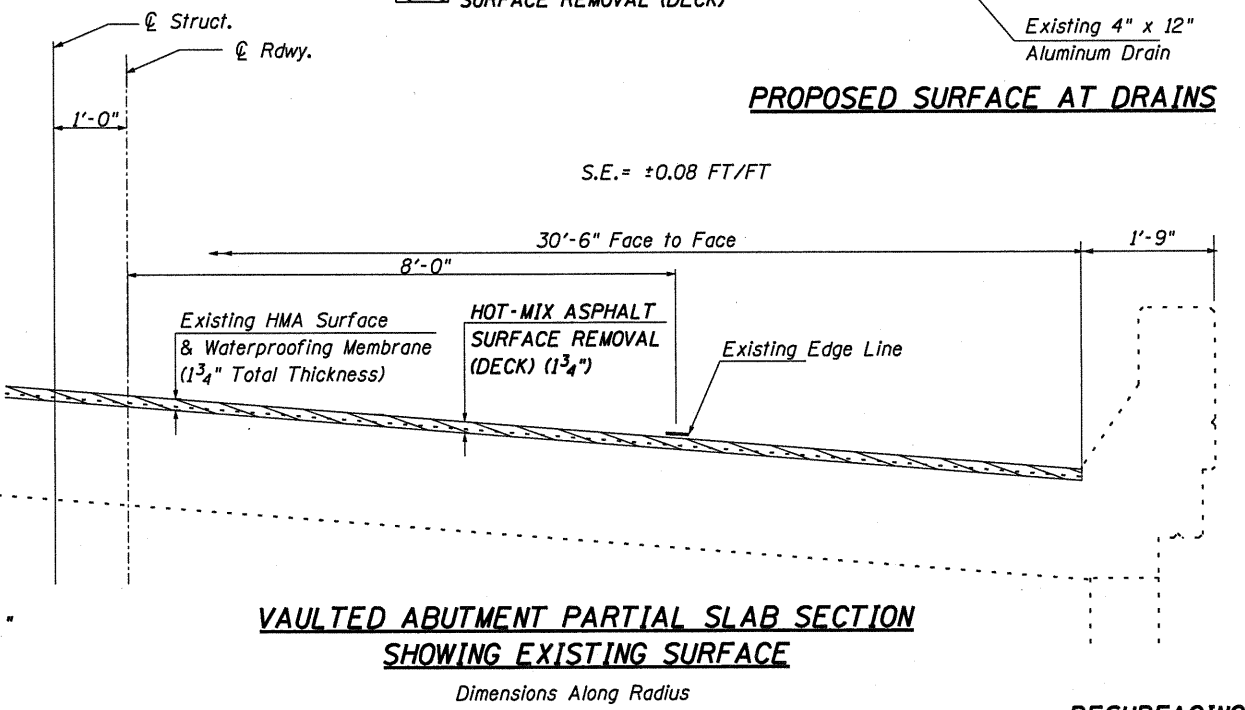
**BRIDGE DECK PARTIAL SLAB SECTION  
SHOWING EXISTING SURFACE**  
Dimensions Along Radius



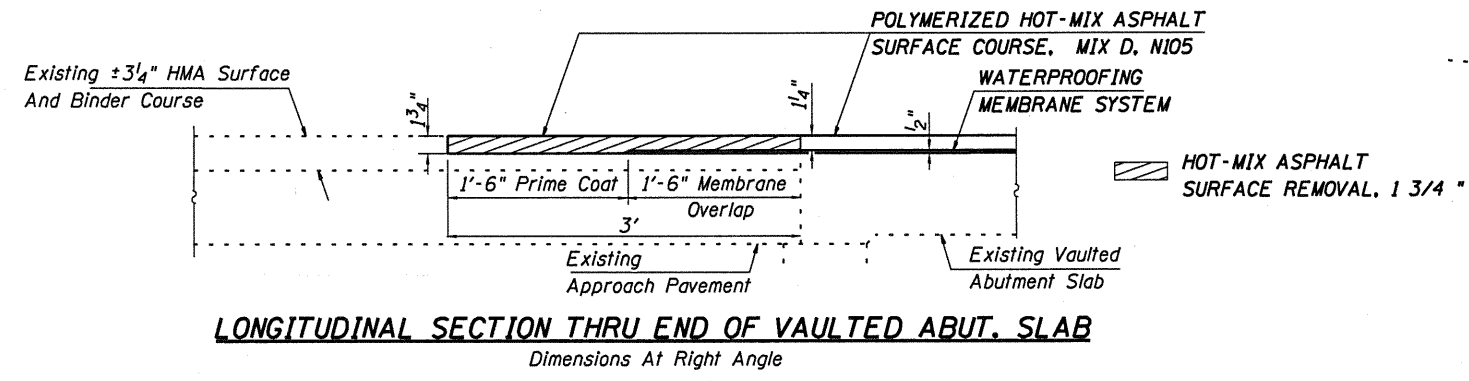
**PROPOSED SURFACE AT DRAINS**



**VAULTED ABUTMENT PARTIAL SLAB SECTION  
SHOWING PROPOSED SURFACE**  
Dimensions Along Radius



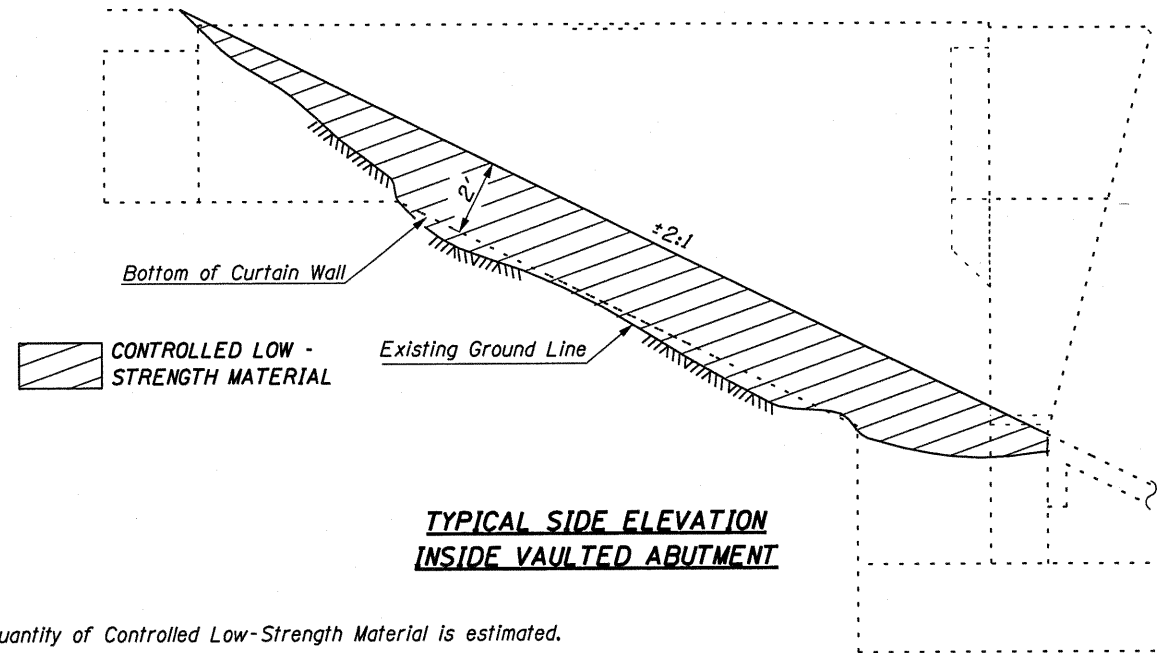
**VAULTED ABUTMENT PARTIAL SLAB SECTION  
SHOWING EXISTING SURFACE**  
Dimensions Along Radius



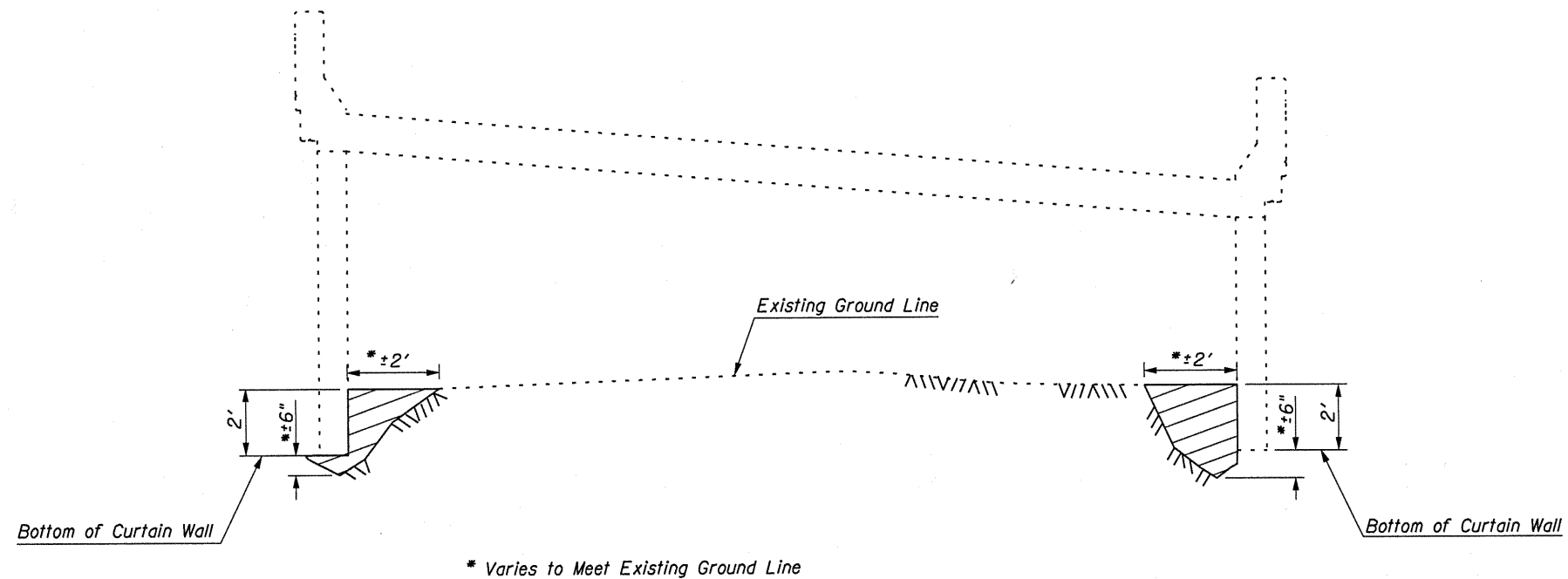
**LONGITUDINAL SECTION THRU END OF VAULTED ABUT. SLAB**  
Dimensions At Right Angle

**RESURFACING  
JEFFERSON COUNTY  
STRUCTURE NO. 041-0061**

FILE NAME =	USER NAME = gautneyrk	DESIGNED - RKG	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____	SHEET NO. _____ OF _____ SHEETS	STA. _____ TO STA. _____	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwork\pwork\gautneyrk\0190470\78212-shr-plan.dgn		DRAWN - RKG	REVISED -		57	09 CM BRIDGE REPAIR 2011-1	JEFFERSON	15	12			
PLOT SCALE = 5/8" = 1/4" / IN.		CHECKED - MAS	REVISED -		CONTRACT NO. 78212							
PLOT DATE = 11/9/2010		DATE - 10/27/10	REVISED -		FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT							



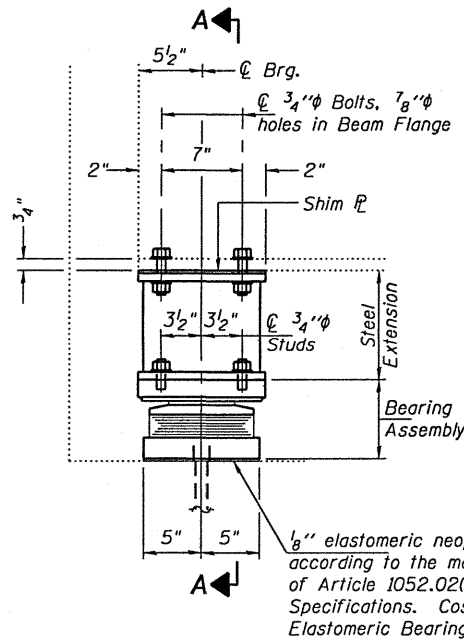
Quantity of Controlled Low-Strength Material is estimated.



**TYPICAL SECTION THRU VAULTED ABUTMENT**

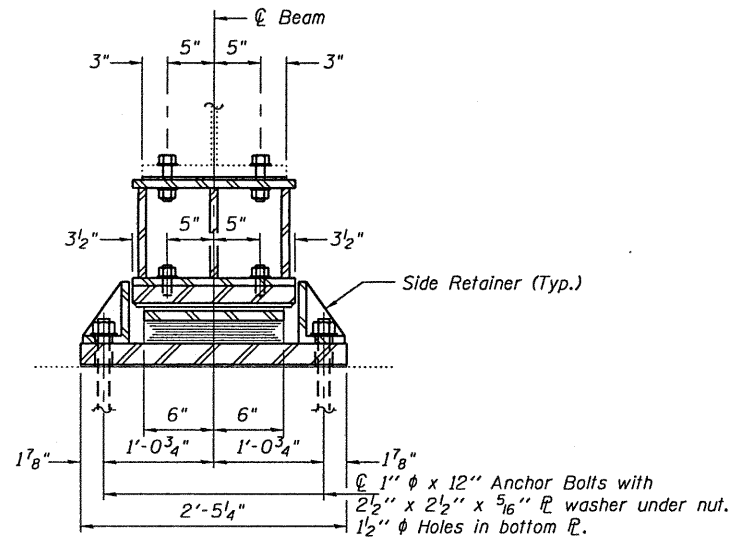
**EROSION REPAIR  
JEFFERSON COUNTY  
STRUCTURE NO. 041-0061**

FILE NAME =	USER NAME = gautneyrk	DESIGNED - RKG	REVISED - ---	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____	SHEET NO. ____ OF ____ SHEETS	STA. _____ TO STA. _____	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwork\gautneyrk\d0190478\78212-shr-plan.dgn		DRAWN - RKG	REVISED - ---		57	09 CM BRIDGE REPAIR 2011-1	JEFFERSON	15	13			
PLOT SCALE = 5/8" = 1/4" IN.		CHECKED - MAS	REVISED - ---		FED. ROAD DIST. NO. _____ (ILLINOIS) FED. AID PROJECT							
PLOT DATE = 10/26/2010		DATE - 10/27/10	REVISED - ---		CONTRACT NO. 78212							



ELEVATION AT ABUTMENT

TYPE II TFE ELASTOMERIC EXP. BRG.

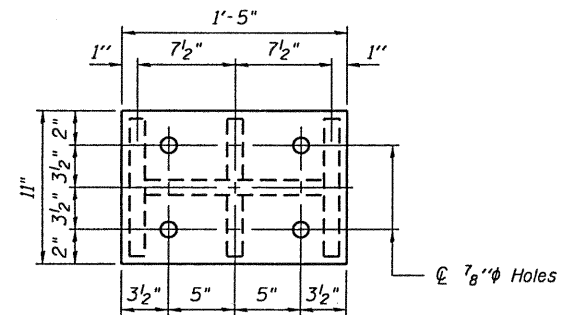


SECTION A-A

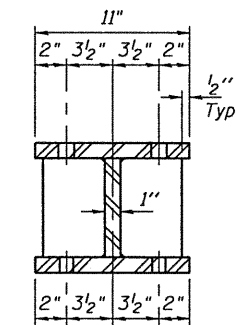
BEAM REACTIONS

R <sub>P</sub>	(K)	38.7
R <sub>L</sub>	(K)	39.7
Imp.	(K)	9.4
R (Total)	(K)	87.8

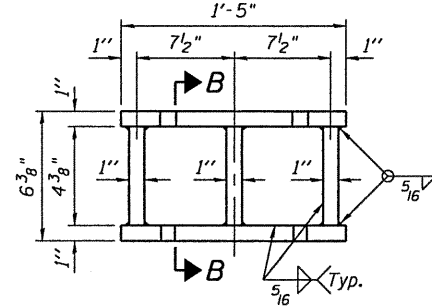
Notes:  
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 50 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub>=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.  
 Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.  
 Drilled and set anchor bolts shall be installed according to Article 52.106 of the Standard Specifications.  
 Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.  
 The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.  
 Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



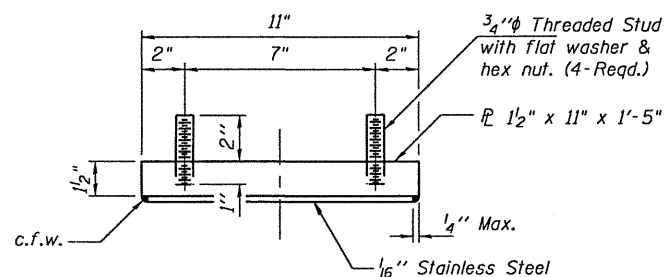
PLAN TOP AND BOTTOM PLATE



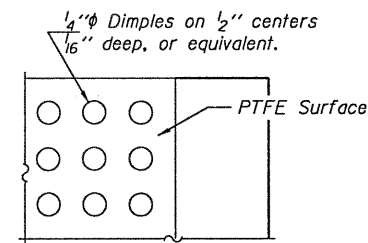
SECTION B-B



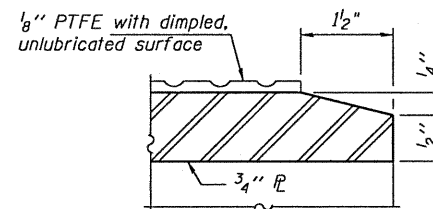
STEEL EXTENSION DETAIL



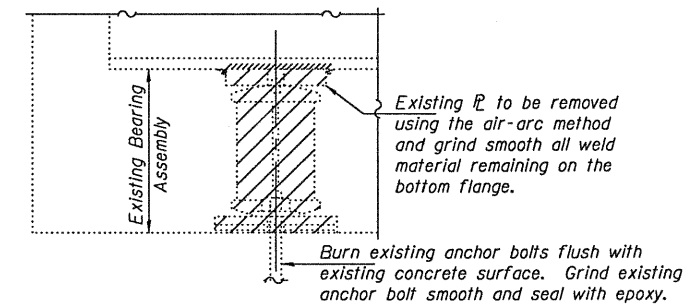
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE



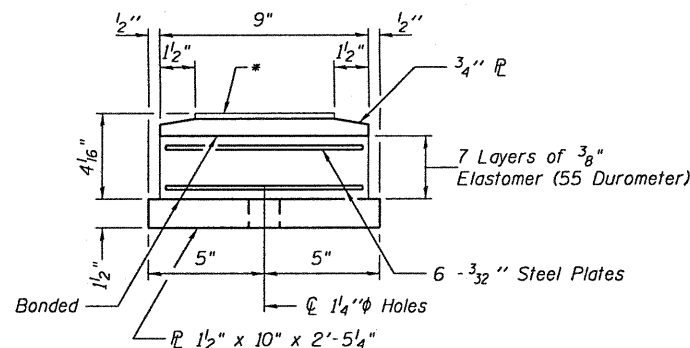
SECTION THRU PTFE



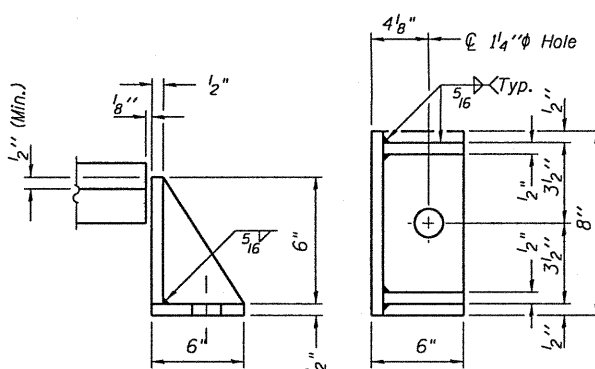
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

\* 1/8" PTFE dimpled, unlubricated

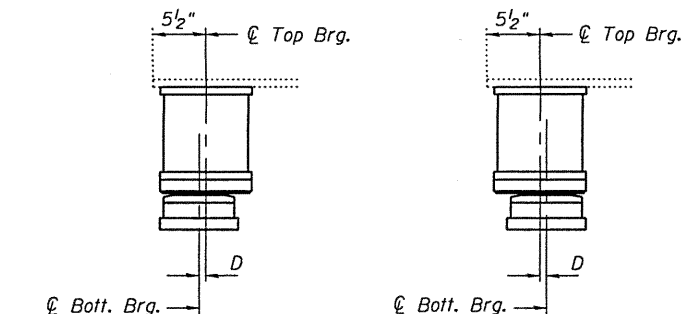


BOTTOM BEARING ASSEMBLY



SIDE RETAINER

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



BELOW 50° F. (Move bott. brg. away from fixed brg.) ABOVE 50° F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	5
Jack and Remove Existing Bearings	Each	5
Furnishing and Erecting Structural Steel	Pound	810
Anchor Bolts 1"φ	Each	10

TYII/REPS 12-03-2008

DESIGNED - A.D.Y.	EXAMINED - <i>A. Carl</i>	DATE - NOVEMBER 22, 2010
CHECKED - G.G.E.	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Drew Christopher	PASSED - <i>Ralph E. Anderson</i>	
CHECKED - A.D.Y. G.G.E.	ENGINEER OF BRIDGES AND STRUCTURES	

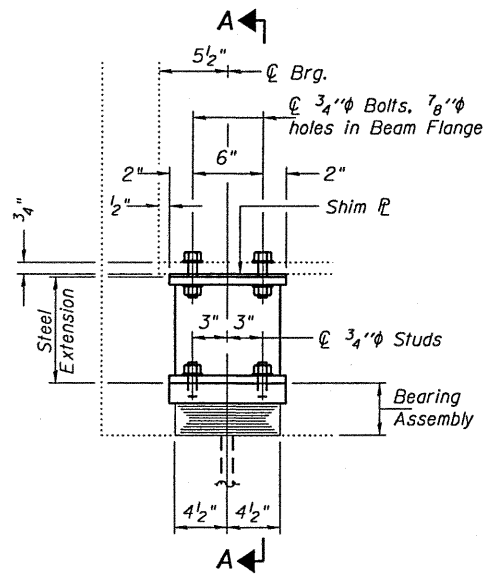
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT DETAILS  
 SN 041-0061

F.A. RTE. 57	SECTION D9 CM BRIDGE REPAIR 2011-1	COUNTY Jefferson	TOTAL SHEETS 15	SHEET NO. 14
			CONTRACT NO. 78212	
ILLINOIS FED. AID PROJECT				

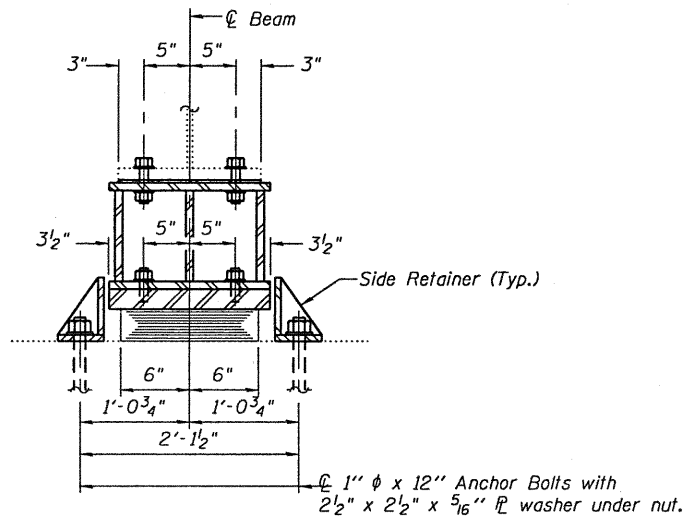
SHEET NO. 1 OF 2 SHEETS

SLT-99-001-10



**ELEVATION AT ABUTMENT**

**TYPE I ELASTOMERIC EXP. BRG.**

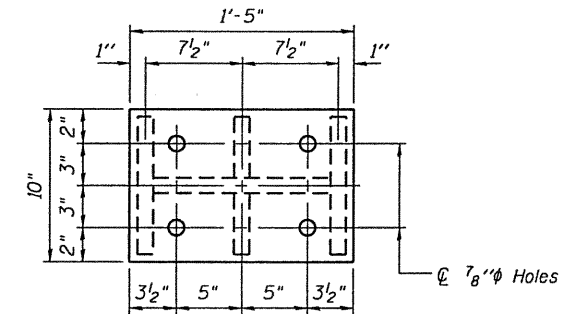


**SECTION A-A**

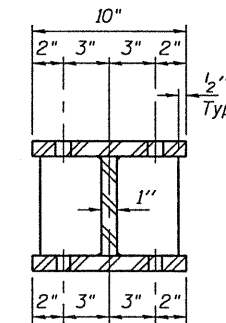
**BEAM REACTIONS**

RE	(K)	40.9
Rt	(K)	39.9
Imp.	(K)	9.3
R (Total)	(K)	90.1

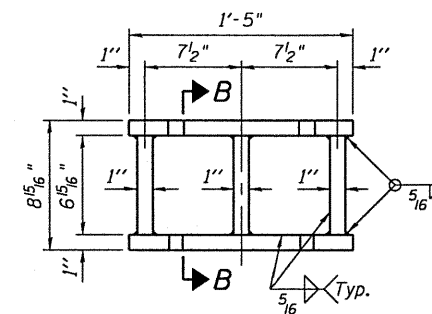
Notes:  
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 50 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



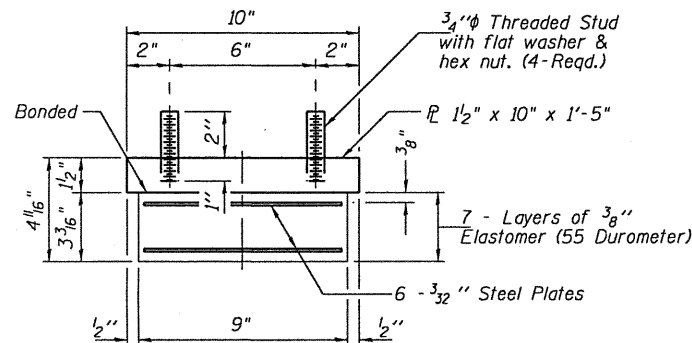
**PLAN TOP AND BOTTOM PLATE**



**SECTION B-B**

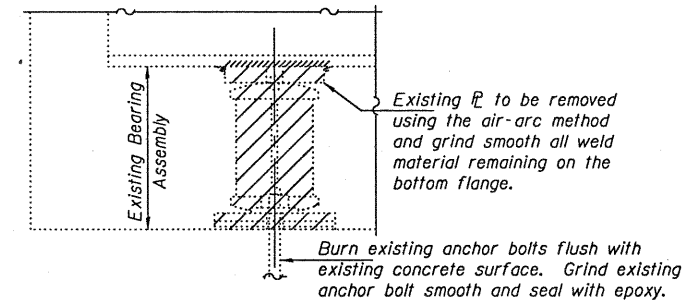


**STEEL EXTENSION DETAIL**



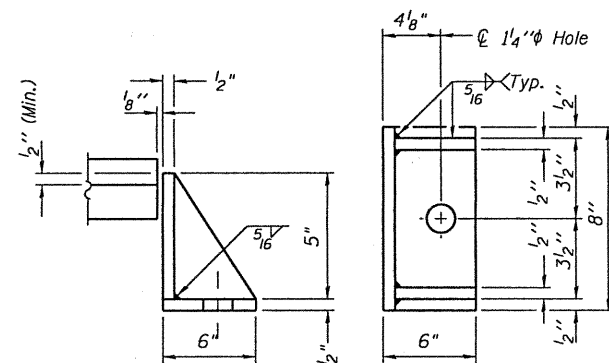
**BEARING ASSEMBLY**

Note:  
 Shim plates shall not be placed under Bearing Assembly.



**EXISTING BEARING REMOVAL DETAIL**

Cost included with Jack and Remove Existing Bearings.



**SIDE RETAINER**

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

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	5
Jack and Remove Existing Bearings	Each	5
Furnishing and Erecting Structural Steel	Pound	890
Anchor Bolts 1\"/>		

TYI/REPS 12-03-2008

DESIGNED - A.D.Y.  
 CHECKED - G.G.E.  
 DRAWN - Drew Christopher  
 CHECKED - A.D.Y. G.G.E.

EXAMINED - *Carl Perry*  
 ENGINEER OF STRUCTURAL SERVICES  
 PASSED - *Ralph E. Anderson*  
 ENGINEER OF BRIDGES AND STRUCTURES  
 DATE - NOVEMBER 22, 2010

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT DETAILS  
 SN 041-0061

SHEET NO. 2 OF 2 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 CM BRIDGE REPAIR 2011-1	Jefferson	15	15
			CONTRACT NO. 78212	
ILLINOIS FED. AID PROJECT				

SLT-99-001-10