

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

**PROPOSED  
 HIGHWAY PLANS**

FAP ROUTE 821 (IL RTE 15)  
 SECTION D7 BRIDGE REPAIRS 2011-1

BRIDGE JOINT REPAIRS  
 WAYNE COUNTY

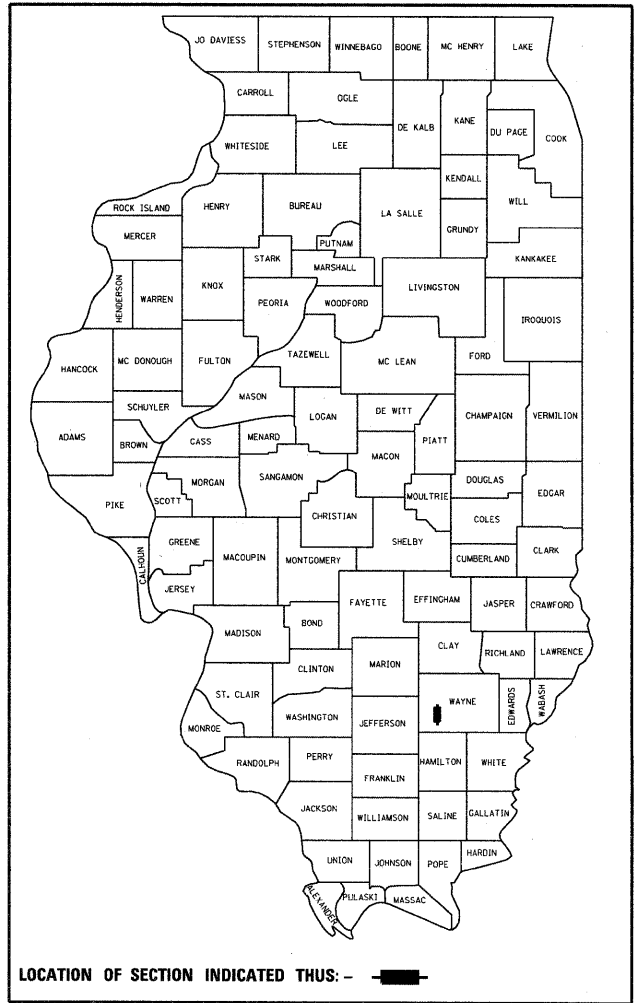
C-97-136-10

FOR INDEX OF SHEETS, SEE SHEET NO. 2

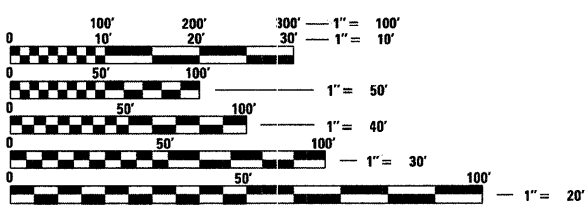
ADT = 3,450 (2009)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	D7 BRIDGE REPAIRS 2011-1	WAYNE	23	1
ILLINOIS		CONTRACT NO. 74485		

D-97-068-10



STA. 957 + 95.03  
 S.N. 096-0062  
 10 SPAN, 421'-9"  
 CONTINUOUS STEEL  
 PLATE GIRDER

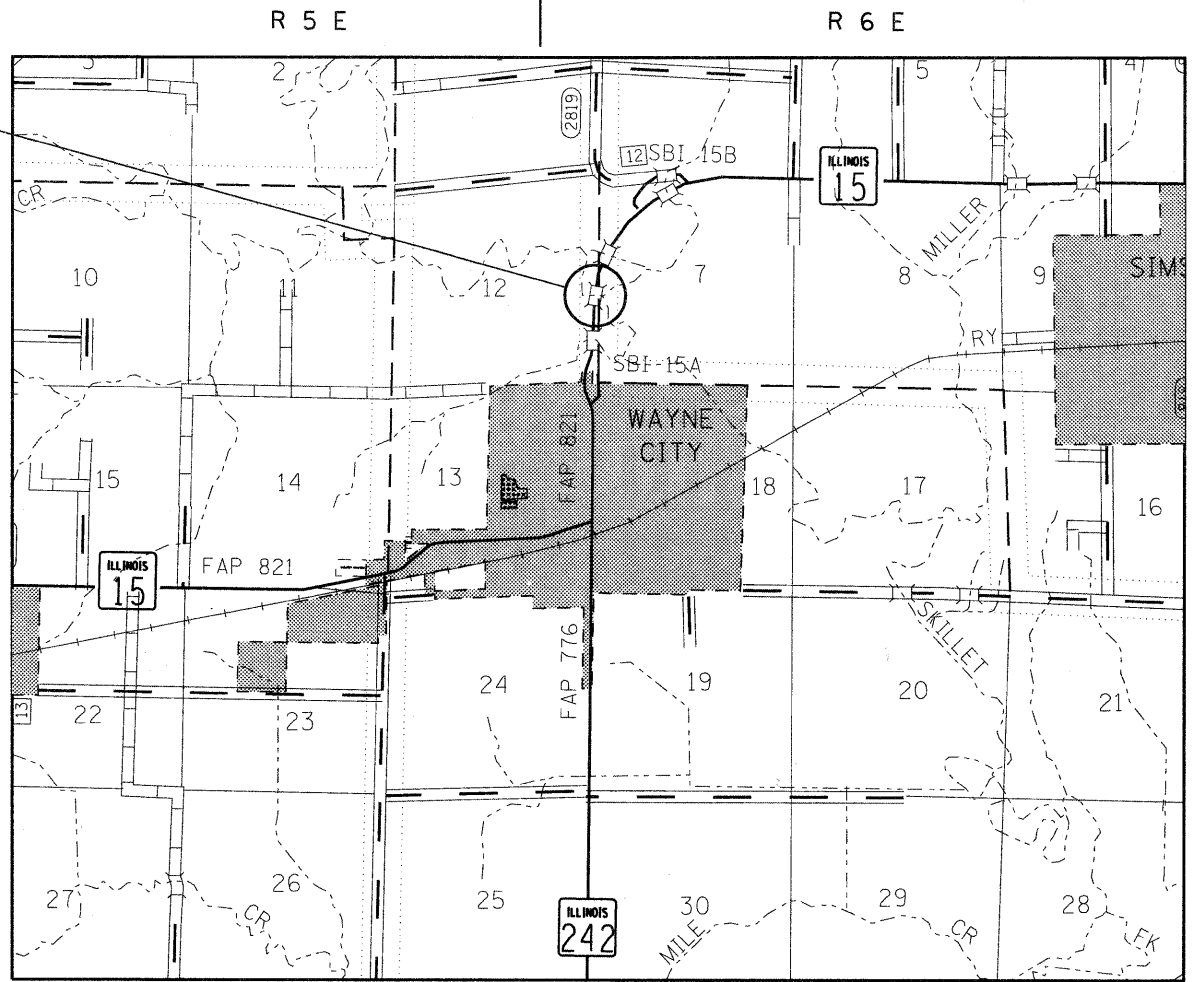


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: TOM RONAN (217) 342-8320  
 PROJECT MANAGER: JEFF DAVISON (217) 342-8314

CONTRACT NO. 74485



GROSS LENGTH = 422.00 FT. = 0.0799 MILE  
 NET LENGTH = 422.00 FT. = 0.0799 MILE

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED Feb 17 20 11  
*Ronan J. Davison*  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 25 20 11  
*Scott E. Stett* P.E.  
 ACTING ENGINEER OF DESIGN AND ENVIRONMENT

March 25 20 11  
*Christine M. Zedler*  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS**

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## GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS; THE •STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION• ADOPTED JANUARY 1, 2007; AND THE SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

THIS PROJECT IS LOCATED ON FAP ROUTE 821 (ILL 15) IN WAYNE COUNTY AT STRUCTURE NUMBER 096-0062. STRUCTURE NUMBER 096-0062 CARRIES ILLINOIS ROUTE 15 OVER THE SKILLET FORK OVERFLOW 0.2 MILES NORTH OF WAYNE CITY. THE WORK INCLUDED IN SECTION D7 BRIDGE REPAIRS 2011-1 CONSISTS OF BRIDGE EXPANSION JOINT REPLACEMENT, BEARING REPLACEMENT, AND ANY OTHER WORK NECESSARY TO COMPLETE THE SECTION.

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 CONTRACTORS RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO THE CONSTRUCTION OR ORDERING OF MATERIAL. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION OR A CHANGE IN THE SCOPE OF THE WORK. THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

APPROACH SHOULDER INLETS ON BOTH THE NORTH AND SOUTH APPROACHES SHALL BE COVERED WITH STEEL PLATING FOR TRAFFIC TO TRAVERSE WITHOUT DAMAGING THE INLET GRATES. THE COST OF THE STEEL PLATING SHALL BE CONSIDERED INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701321.

FILE NAME *	USER NAME * #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS AND GENERAL NOTES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -			821	D7 BRIDGE REPAIRS 2011-1	WAYNE	23	2	
		CHECKED -	REVISED -			CONTRACT NO. 74485					
		DATE -	REVISED -			SCALE: NA	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	

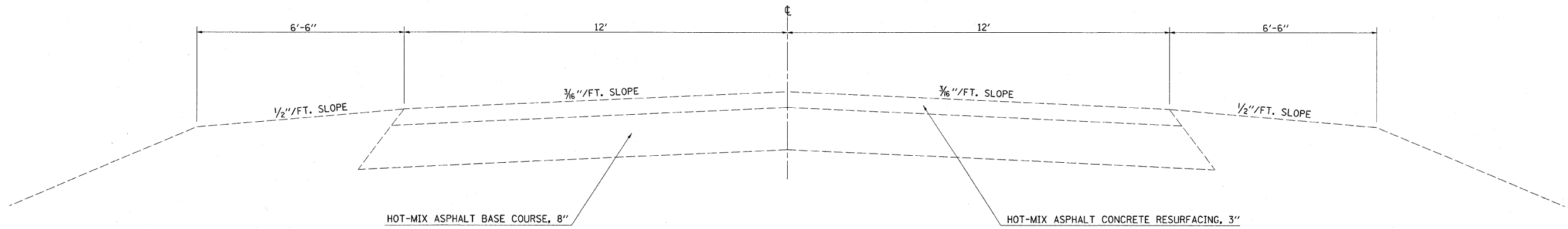
SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 100% STATE 0014
CODE NO	ITEM	UNIT		
35400300	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 8"	SQ YD	382	382
50102400	CONCRETE REMOVAL	CU YD	17.5	17.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	18.3	18.3
50300300	PROTECTIVE COAT	SQ YD	61	61
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	2950	2950
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2530	2530
50800515	BAR SPLICERS	EACH	48	48
52000110	PREFORMED JOINT STRIP SEAL	FOOT	115	115
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	6	6
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	18	18
52100520	ANCHOR BOLTS, 1"	EACH	48	48
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	3	3
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	2	2
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70400100	TEMPORARY CONCRETE BARRIER	FOOT	616	616
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	616	616
*78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1576	1576
78300100	PAVEMENT MARKING REMOVAL	SQ FT	119	119
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	24	24
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1

\*SPECIALTY ITEM

FILE NAME :	USER NAME : *USER*	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.
*FILEL#		DRAWN -	REVISED -					821	D7 BRIDGE REPAIRS 2011-1	WAYNE	23	3
PLOT SCALE : *SCALE#		CHECKED -	REVISED -		SCALE: NA SHEET NO. 1 OF 1 SHEETS STA. TO STA.			CONTRACT NO. 74485				
PLOT DATE : *DATE#		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

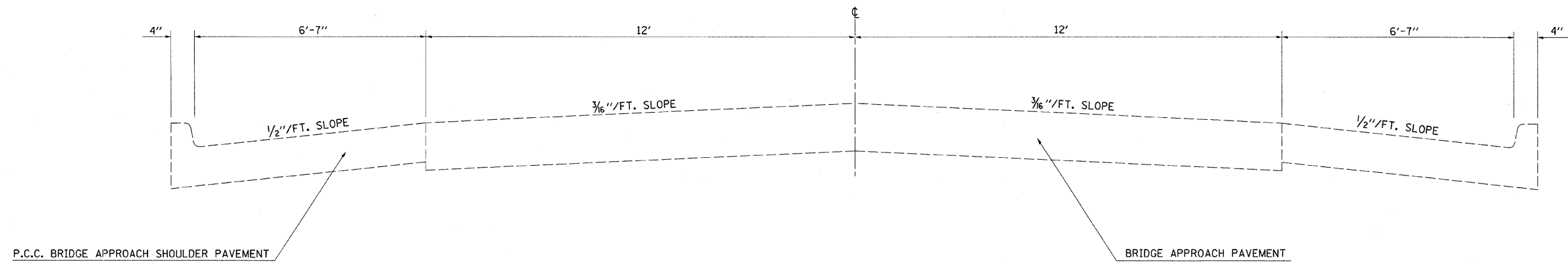
**EXISTING TYPICAL CROSS SECTION**

STA. 927+79.15 TO STA. 955+64.15



**EXISTING TYPICAL CROSS SECTION**

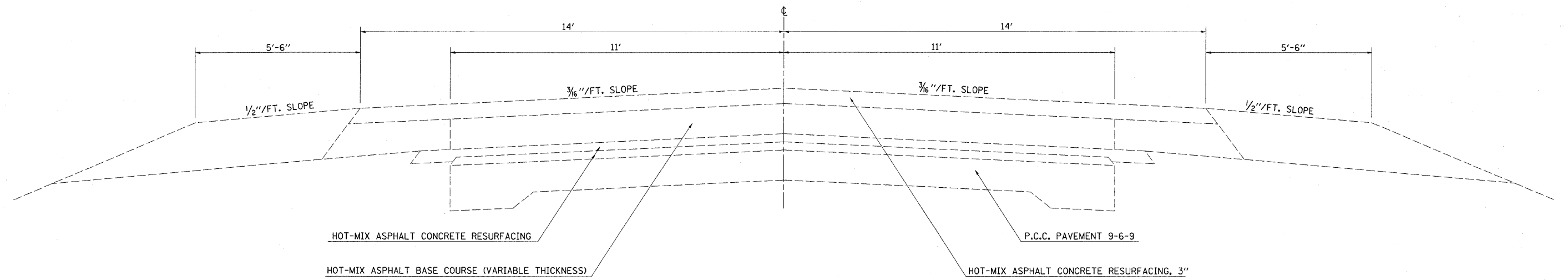
STA. 955+64.15 TO STA. 955+84.15  
STA. 960+25.90 TO STA. 960+25.90



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		DATE -	REVISED -						ILLINOIS FED. AID PROJECT				

**EXISTING TYPICAL CROSS SECTION**

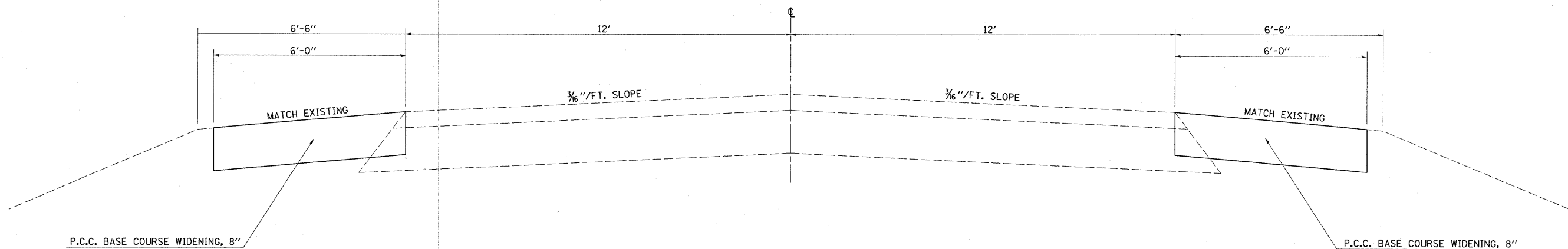
STA. 960+25.90 TO STA. 963+70.00



FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPICAL CROSS SECTIONS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwork\pwork\swartzw\0209308\077485-sht-typicals.dgn	485-sht-typicals.dgn	DRAWN -	REVISED -		SCALE: NA	SHEET NO. 2 OF 3 SHEETS	STA.	TO STA.	821	D7 BRIDGE REPAIRS 2011-1	WAYNE	23	5
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -		CONTRACT NO. 74485								
	PLOT DATE = 2/3/2011	DATE -	REVISED -		ILLINOIS FED. AID PROJECT								

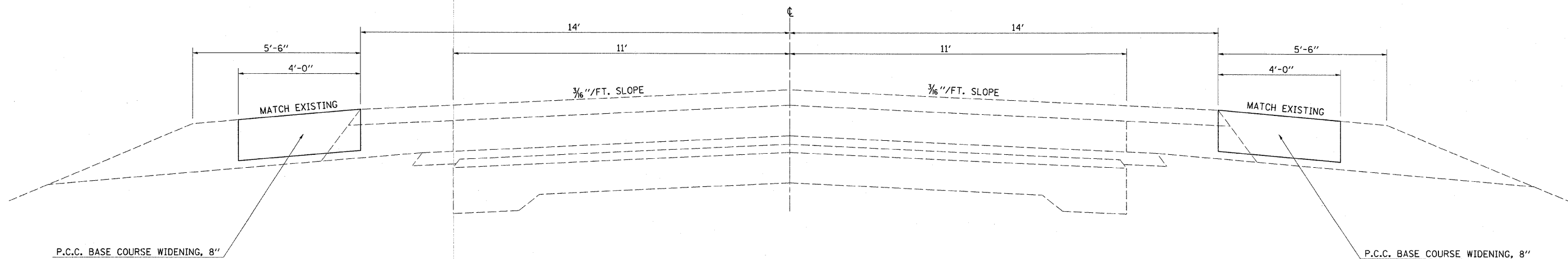
**PROPOSED TYPICAL CROSS SECTION**

STA. 927+79.15 TO STA. 955+64.15



**PROPOSED TYPICAL CROSS SECTION**

STA. 960+25.90 TO STA. 963+70.00



FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPICAL CROSS SECTIONS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 2/3/2011	DATE -	REVISED -										
ILLINOIS FED. AID PROJECT												CONTRACT NO. 74485	

PORTLAND CEMENT CONCRETE BASE COURSE WIDENING, 8" SCHEDULE

LOCATION				LENGTH (FEET)	WIDTH (FEET)	QUANTITY (SQ. YD.)
953+99.15	TO	955+67.65	RT	168.5	6.0	112.3
953+99.15	TO	955+67.65	LT	168.5	6.0	112.3
960+21.90	TO	961+99.21	RT	177.3	4.0	78.8
960+21.90	TO	961+99.21	LT	177.3	4.0	78.8
TOTAL =						382

PAVEMENT MARKING REMOVAL SCHEDULE

LOCATION				QUANTITY (SQ. FT.)
954+49.15	TO	955+83.15	LT	11.2
955+83.15	TO	960+06.90	LT	35.3
955+83.15	TO	960+06.90	RT	35.3
960+06.90	TO	961+49.44	LT	11.9
954+48.71	TO	955+83.15	RT	11.2
960+06.90	TO	961+72.12	RT	13.8
TOTAL =				119.0

TEMPORARY CONCRETE BARRIER SCHEDULE

LOCATION	LENGTH (FEET)	
954+87.15 TO 961+02.90	616.0	
TOTAL =		616.0

RELOCATE TEMPORARY CONCRETE BARRIER SCHEDULE

LOCATION	LENGTH (FEET)	
954+87.15 TO 961+02.90	616.0	
PROJECT TOTAL		616.0

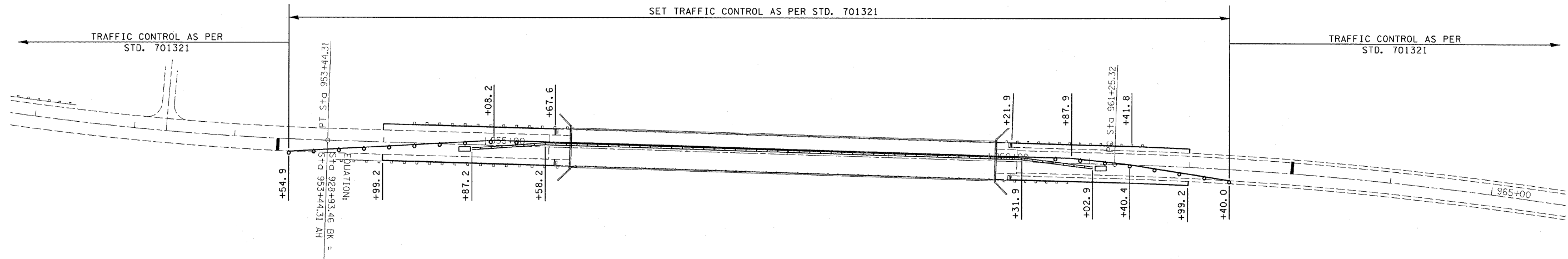
PAVEMENT MARKING SCHEDULE

LOCATION	SKIP-DASH 4"	EDGE LINE 4"	QUANTITY (FOOT)
	(YELLOW)	(WHITE)	
954+49.15 TO 961+49.44	175.1	1400.6	1,575.7
TOTAL =			1,576

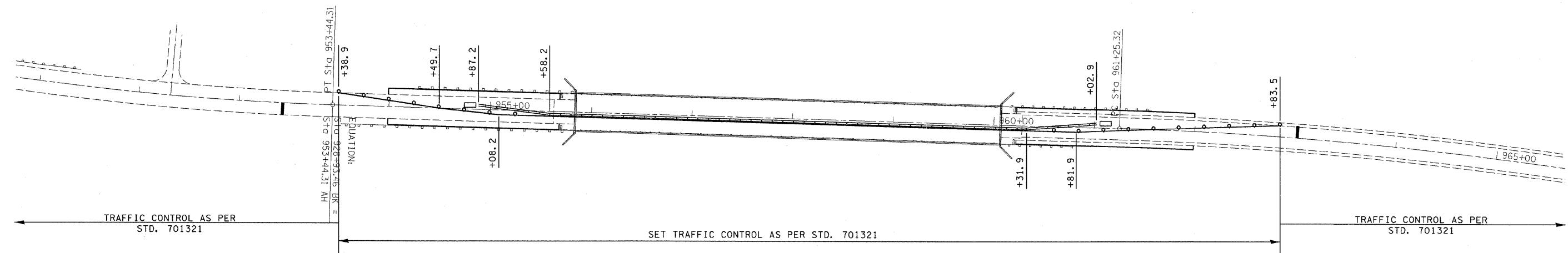
RAISED REFLECTIVE PAVEMENT MARKERS (BRIDGE) SCHEDULE

LOCATION	QUANTITY (EACH)	
SN 096-0062	5	
PROJECT TOTAL		5

**STAGE 1**  
STATION 926+00 TO STATION 965+00



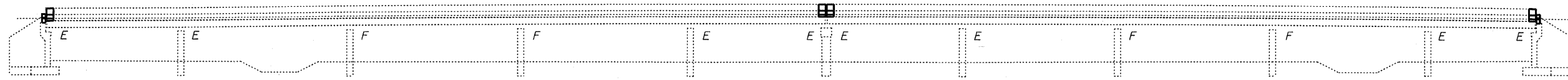
**STAGE 2**  
STATION 926+00 TO STATION 965+00



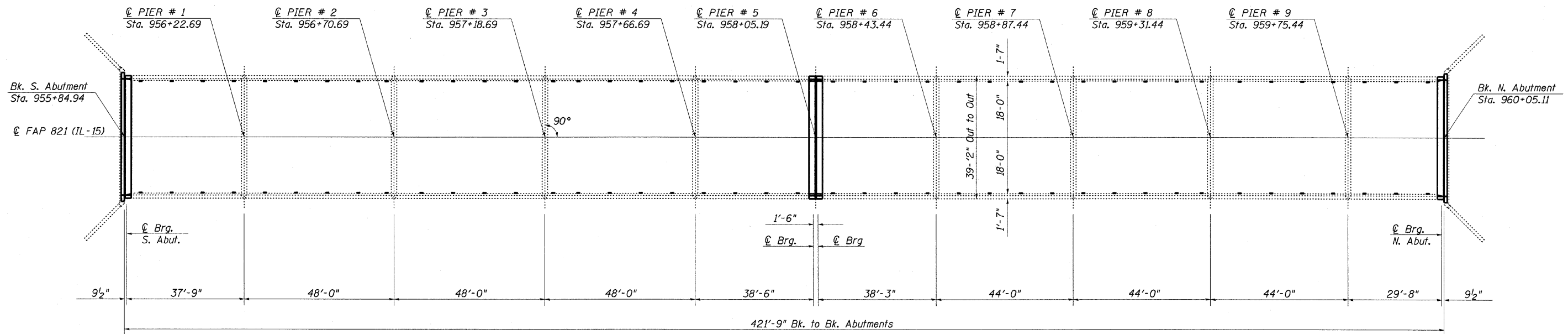
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	495-shr-trafficcontrol.dgn	DRAWN -	REVISED -					821	DT BRIDGE REPAIRS 2011-1	WAYNE	23	8
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -		SCALE: 50	SHEET NO. 1 OF 1 SHEETS	STA. 926+00 TO STA. 965+00	CONTRACT NO. 74485				
	PLOT DATE = 2/3/2011	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							



The existing ten span continuous steel multi-beam structure was constructed in 1982 as FA -821 section 17BR-1 at Sta. 957+95.03. SN. 096-0062 carries FAP-821 (IL-15) over Skillet Creek Overflow. The proposed project consists of new expansion joints, and new elastomeric bearings.



ELEVATION



PLAN



David Carl Puze 3/8/11  
 Expires 11/30/12

FILE NAME =	USER NAME = swartzw	DESIGNED - ESS	REVISED -
ca:\pwork\pwork\swartzw\08209308\077485-shr-brp\p\p-f-0960062.dgn		DRAWN - ESS	REVISED -
		CHECKED - MEA	REVISED -
		DATE - 11/24/2010	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION  
 SN. 096-0062

SCALE: NA SHEET NO. 1 OF 11 SHEETS STA. TO STA.

*D7 Bridge Repairs 2011-1				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821		Wayne	23	9
CONTRACT NO. 74485			ILLINOIS FED. AID PROJECT	

**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 and 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.

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.

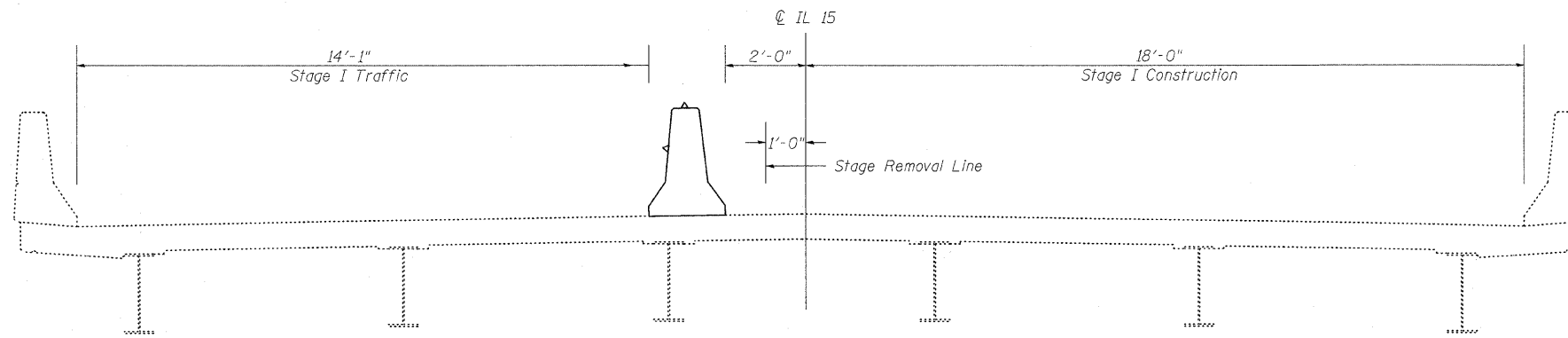
The removal and reinstallation of the first section of TRAFFIC BARRIER TERMINAL, TYPE 6 (Standard 2341-1) at each abutment to allow construction of the expansion joints shall be included in the contract unit price for CONCRETE SUPERSTRUCTURE.

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

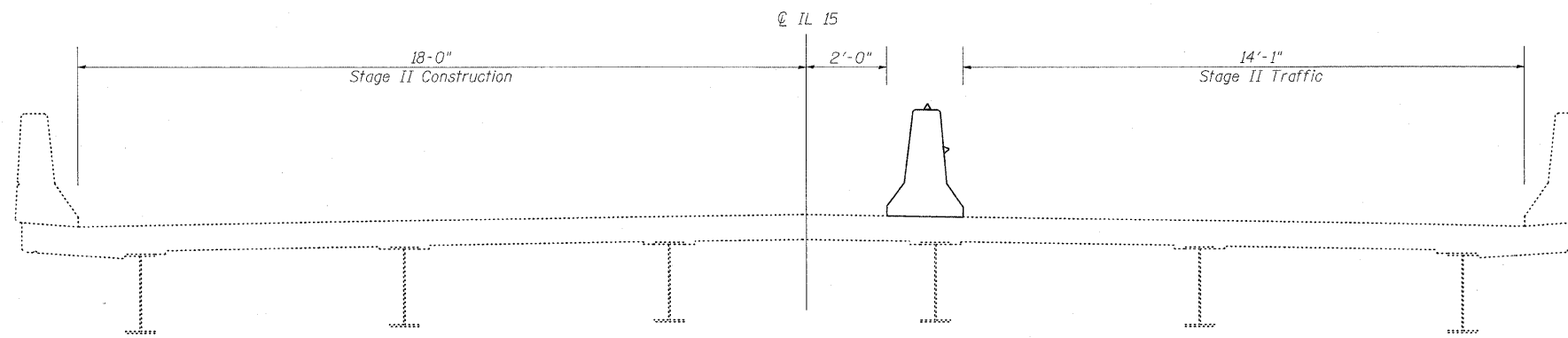
All structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	17.5
Concrete Superstructure	Cu. Yd.	18.3
Reinforcement Bars, Epoxy Coated	Pound	2530
Bar Splicers	Each	48
Elastomeric Bearing Assembly Type I	Each	6
Elastomeric Bearing Assembly Type II	Each	18
Furnishing and Erecting Structural Steel	Pound	2950
Jack and Remove Existing Bearings	Each	24
Protective Coat	Sq Yd	61
Preformed Joint Strip Seal	Foot	114.5
Anchor Bolt 1" Ø	Each	48



**STAGE I LOOKING NORTH**



**STAGE II LOOKING NORTH**

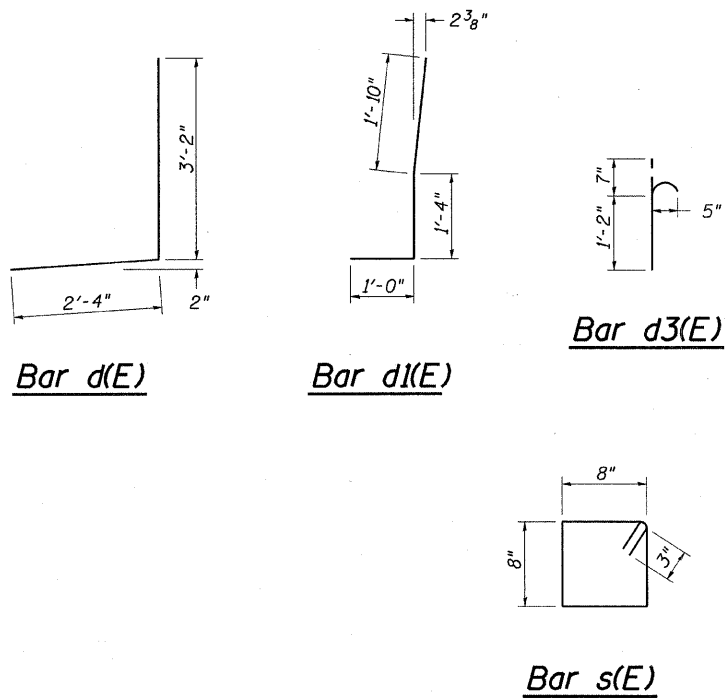
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PLOT SCALE = 20.0000 ' / IN.	CHECKED - MEA	REVISED -	REVISED -		CONTRACT NO. 74485			ILLINOIS FED. AID PROJECT				
PLOT DATE = 2/3/2011	DATE - 11/24/2008	REVISED -	REVISED -		SCALE: NA	SHEET NO. 2 OF 11 SHEETS	STA. TO STA.					

\*07 Bridge Repairs 2011-1

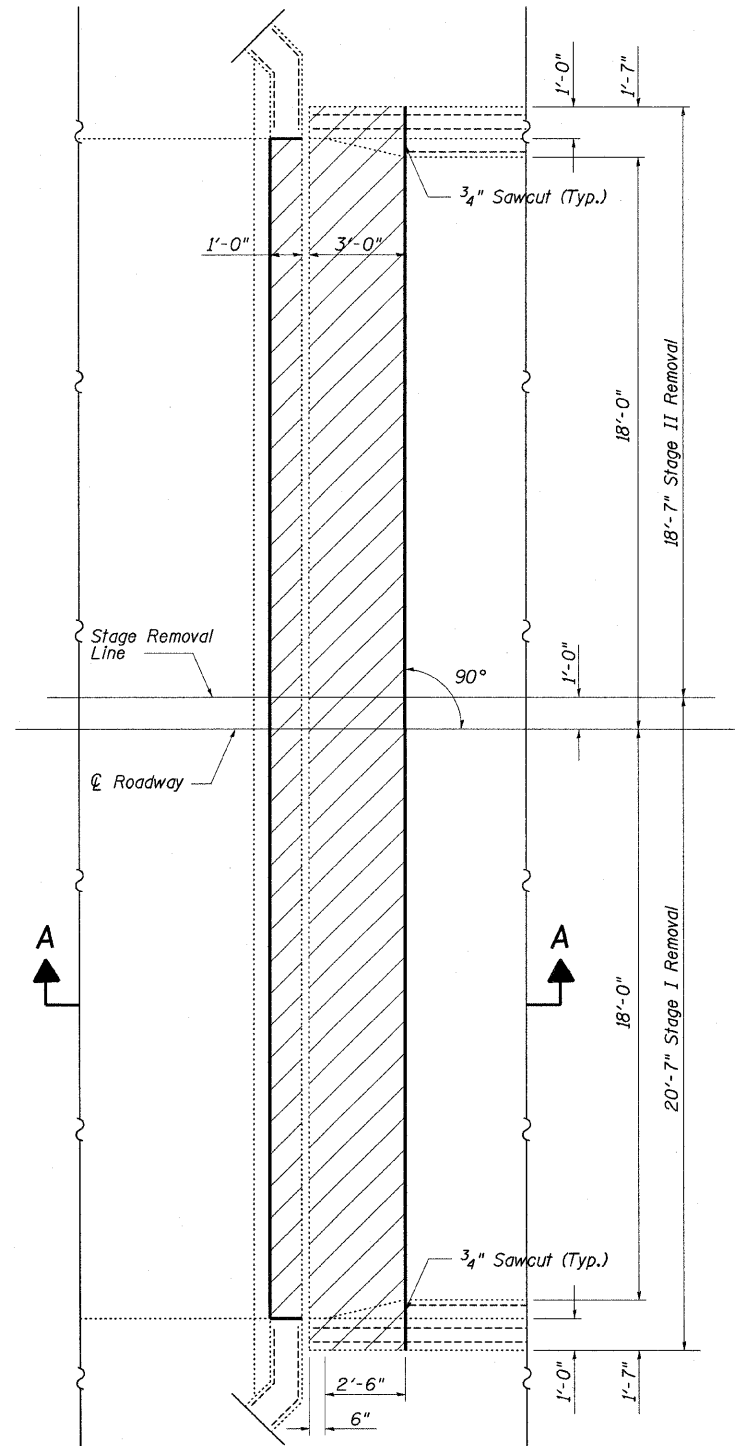
# BILL OF MATERIAL

PER ABUTMENT

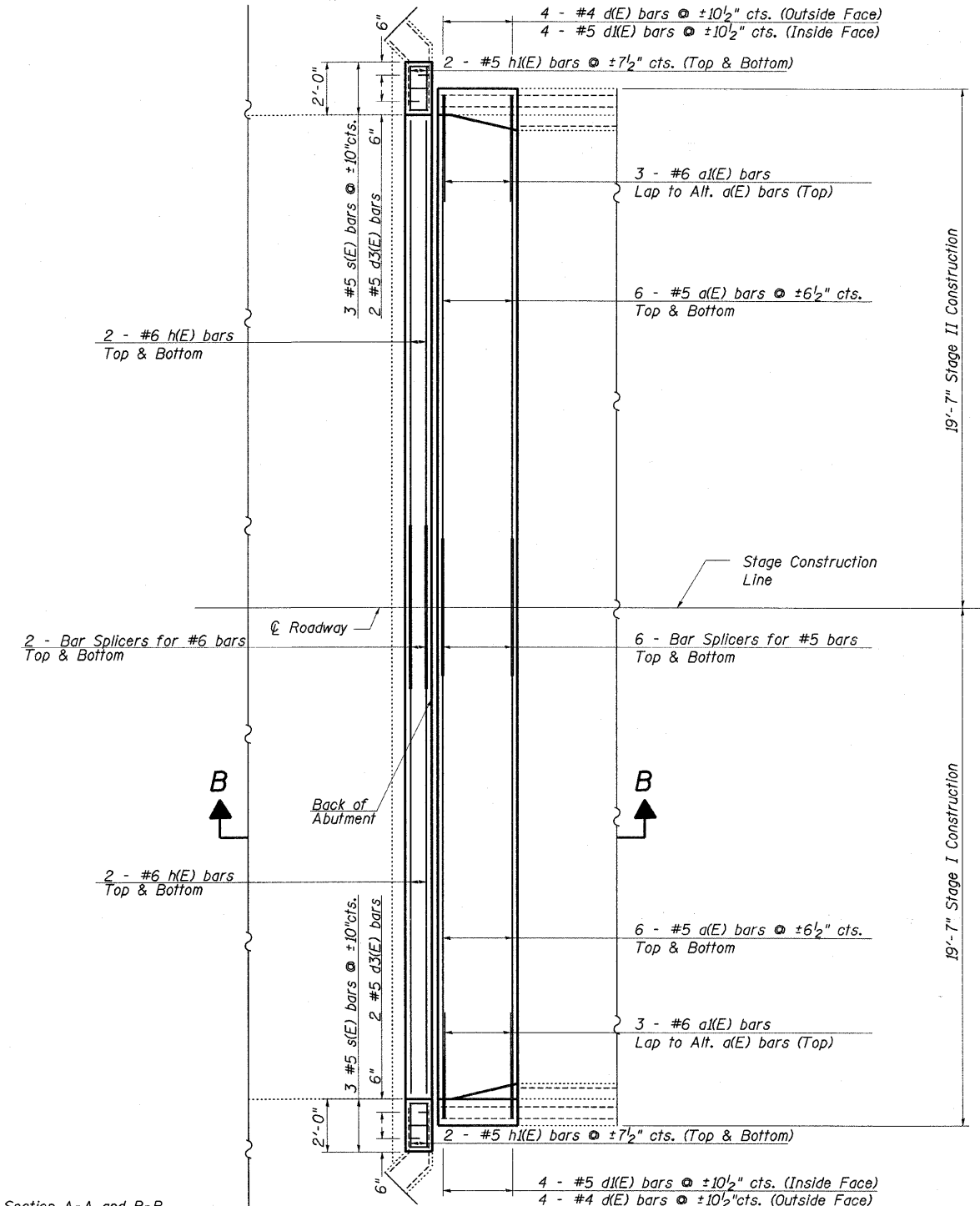
BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a(E)	12	12	24	#5	19'-2"	—
a1(E)	3	3	6	#6	4'-0"	—
d(E)	4	4	8	#4	5'-6"	J
d1(E)	4	4	8	#5	4'-2"	J
d3(E)	2	2	4	#5	1'-9"	┌
h(E)	4	4	8	#6	18'-2"	—
h1(E)	8	8	16	#5	1'-8"	—
s(E)	6	6	12	#5	3'-2"	□
REINFORCEMENT BARS (EPOXY COATED)					POUND	870
CONCRETE REMOVAL					CU YD	5.8
CONCRETE SUPERSTRUCTURE (South Abutment)					CU YD	6.2
CONCRETE SUPERSTRUCTURE (North Abutment)					CU YD	6.1
BAR SPLICERS					EACH	16



Hatched area indicates removal.



**EXISTING PARTIAL PLAN**  
(South Abutment shown; North Abutment similar)

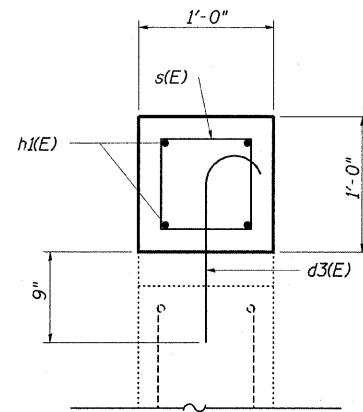


For Section A-A and B-B  
See sheet 4 of 8.

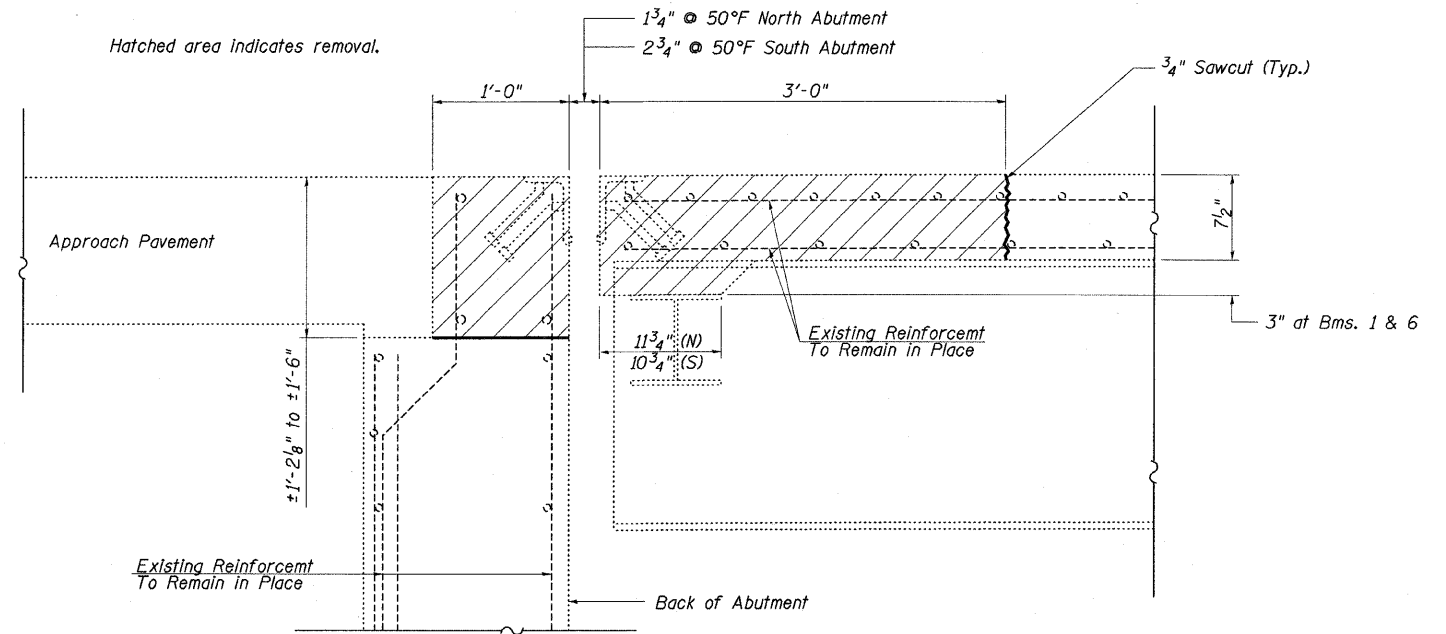
**PROPOSED PARTIAL PLAN**  
(South Abutment shown; North Abutment similar)

\*07 Bridge Repairs 2011-1

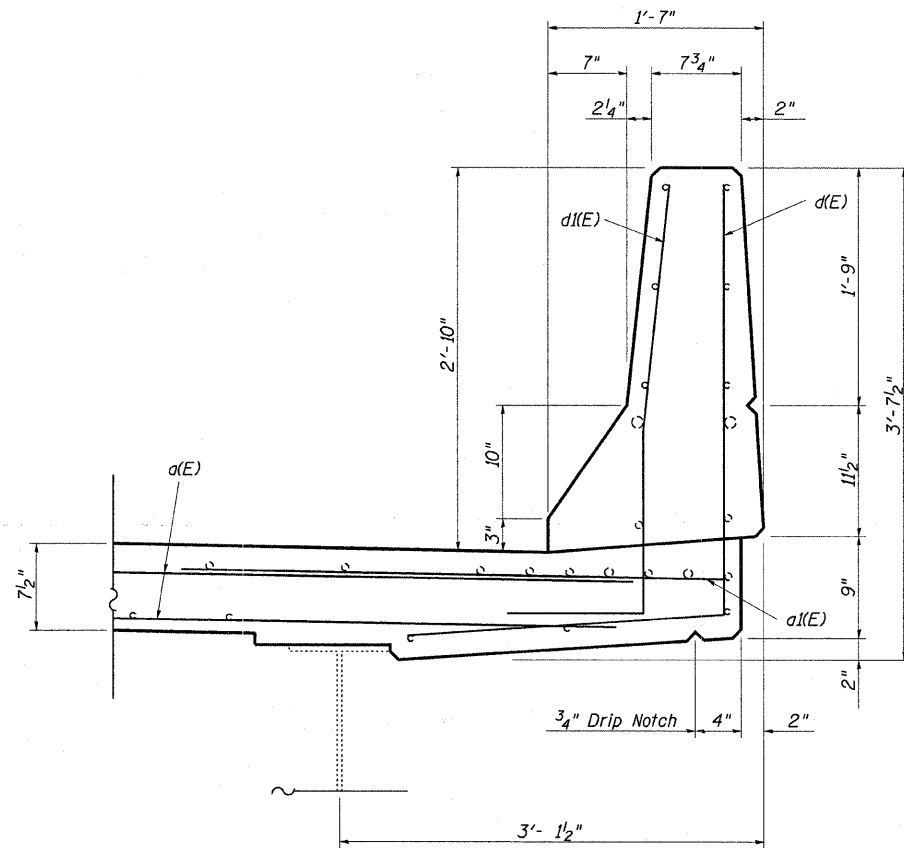
Note: Epoxy grout d3 (E) bars according to Art. 584 of the Standard Specifications.



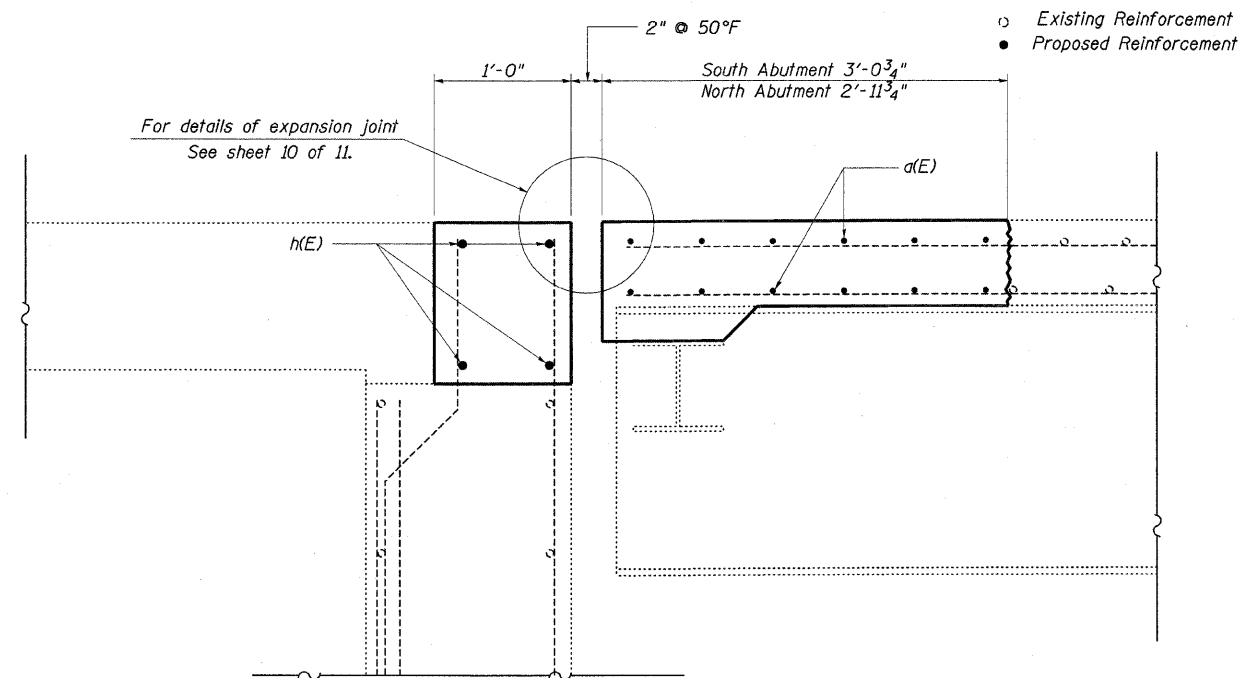
**WING DETAIL**



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



**SECTION THRU PARAPET**



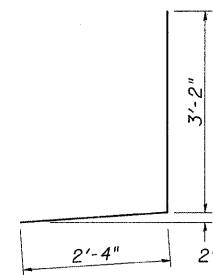
**SECTION B-B**  
(Dimensions at RT L's to end of deck)

FILE NAME =	USER NAME = swartzrw	DESIGNED - ESS	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>EXPANSION JOINT REPLACEMENT DETAILS-ABUTMENTS</b>		F.A.P. RTE. 821		SECTION		COUNTY		TOTAL SHEETS		SHEET NO.	
4485-shr-brd-detaills-0960062.dgn		DRAWN - ESS	REVISED -		<b>SN. 096-0062</b>		Wayne		23		12		CONTRACT NO. 74485			
PLT SCALE = 20.0000 1 / IN.		CHECKED - MEA	REVISED -		SCALE: NA		SHEET NO. 4 OF 11 SHEETS		STA.		TO STA.		ILLINOIS FED. AID PROJECT			
PLT DATE = 2/3/2011		DATE - 11/24/2010	REVISED -		*07 Bridge Repairs 2011-1											

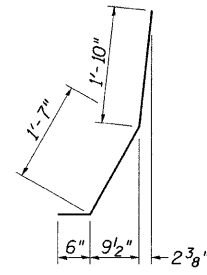
# BILL OF MATERIAL

PIER

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a(E)	16	16	32	#5	19'-2"	—
a(E)	4	4	8	#6	4'-0"	—
d(E)	6	6	12	#4	5'-6"	J
d2(E)	6	6	12	#5	3'-11"	J
REINFORCEMENT BARS (EPOXY COATED)					POUND	790
CONCRETE REMOVAL					CU YD	5.9
CONCRETE SUPERSTRUCTURE					CU YD	6.0
BAR SPLICERS					EACH	16

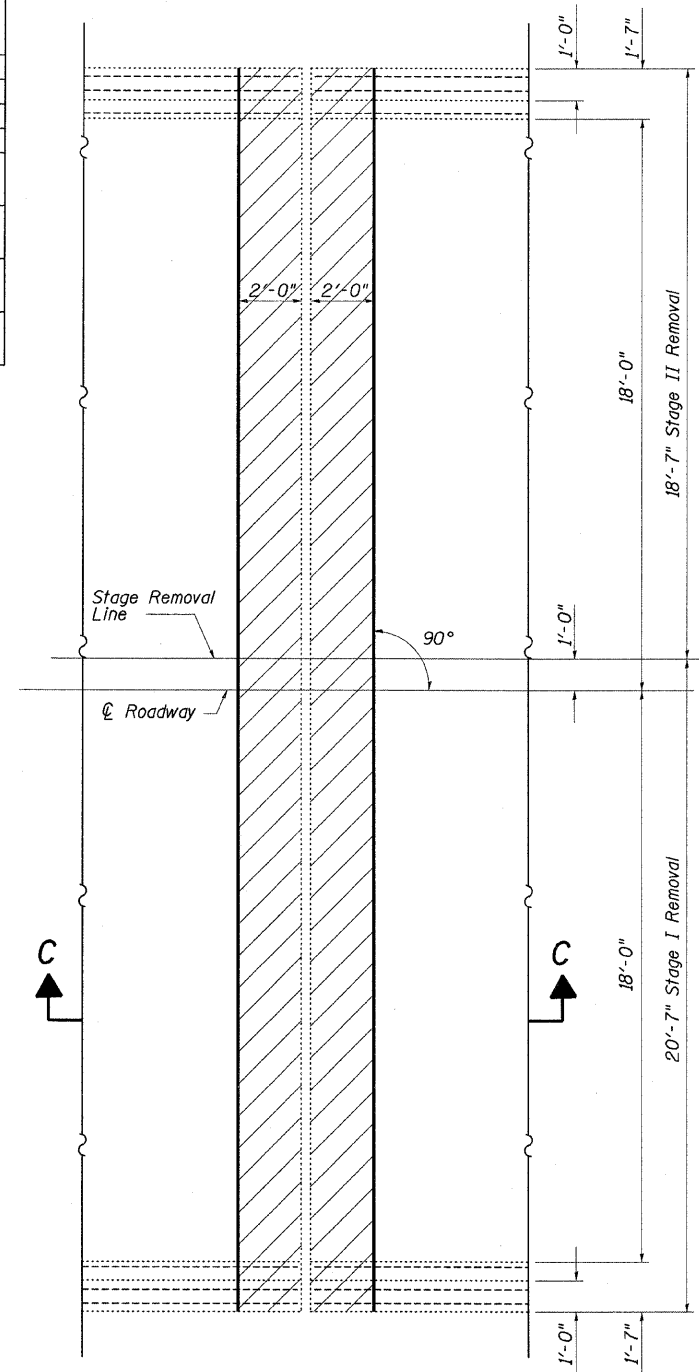


Bar d(E)

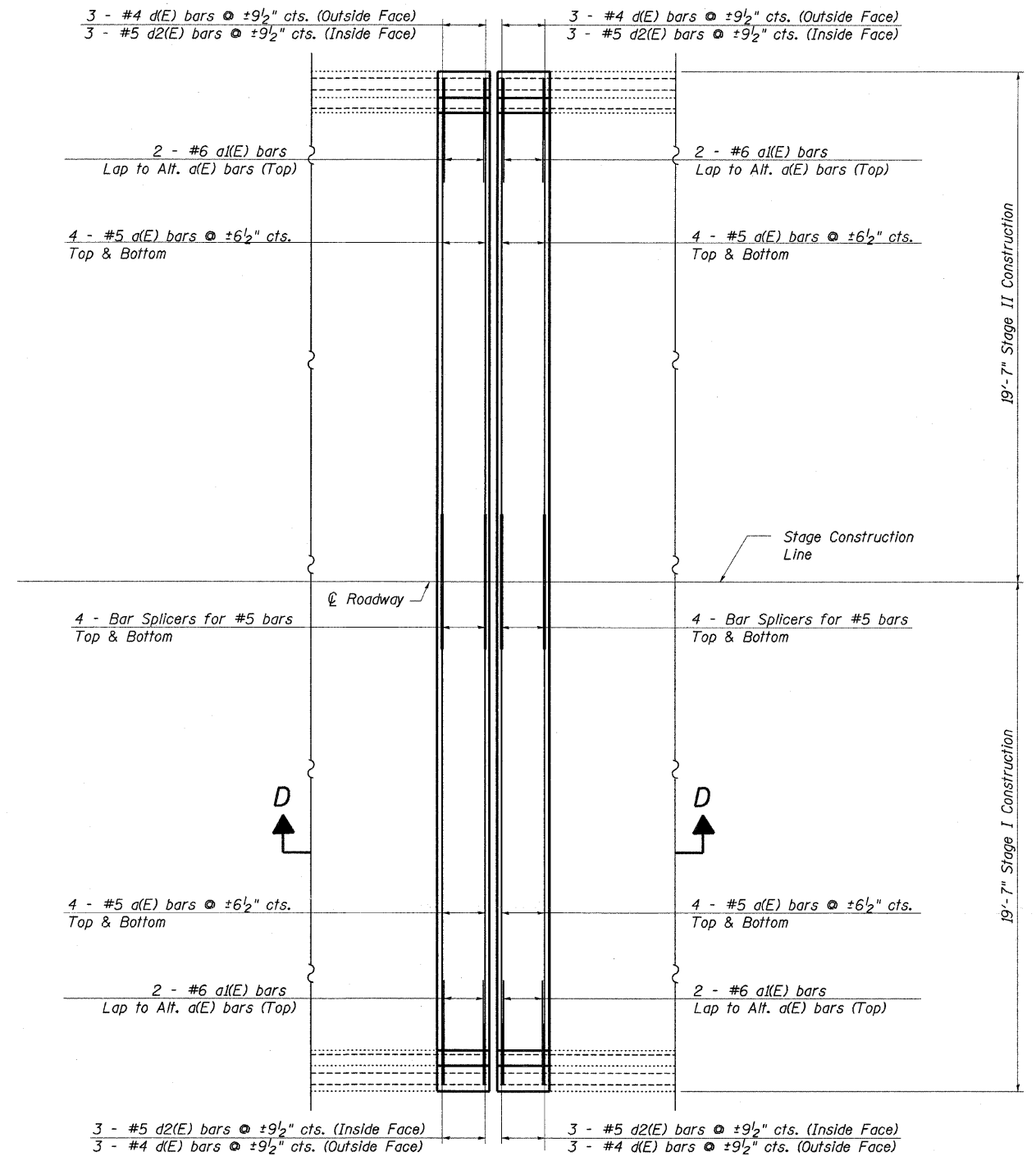


Bar d2(E)

Hatched area indicates removal.

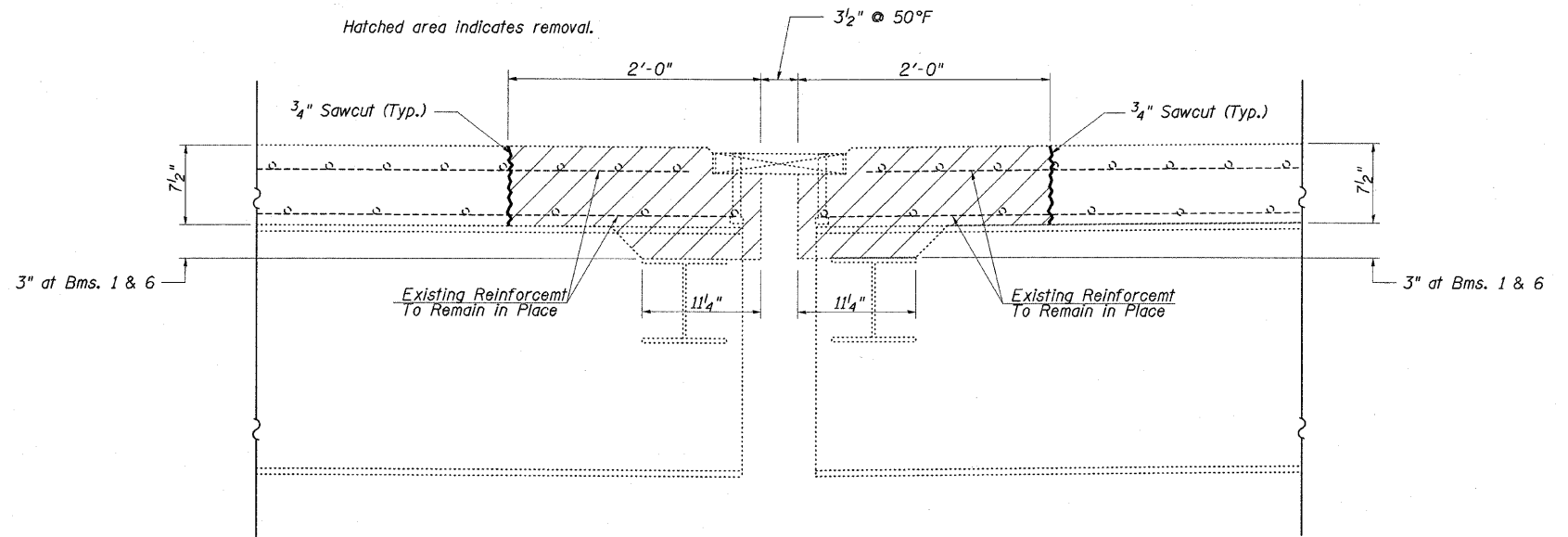


EXISTING PARTIAL PLAN  
(Pier #5)



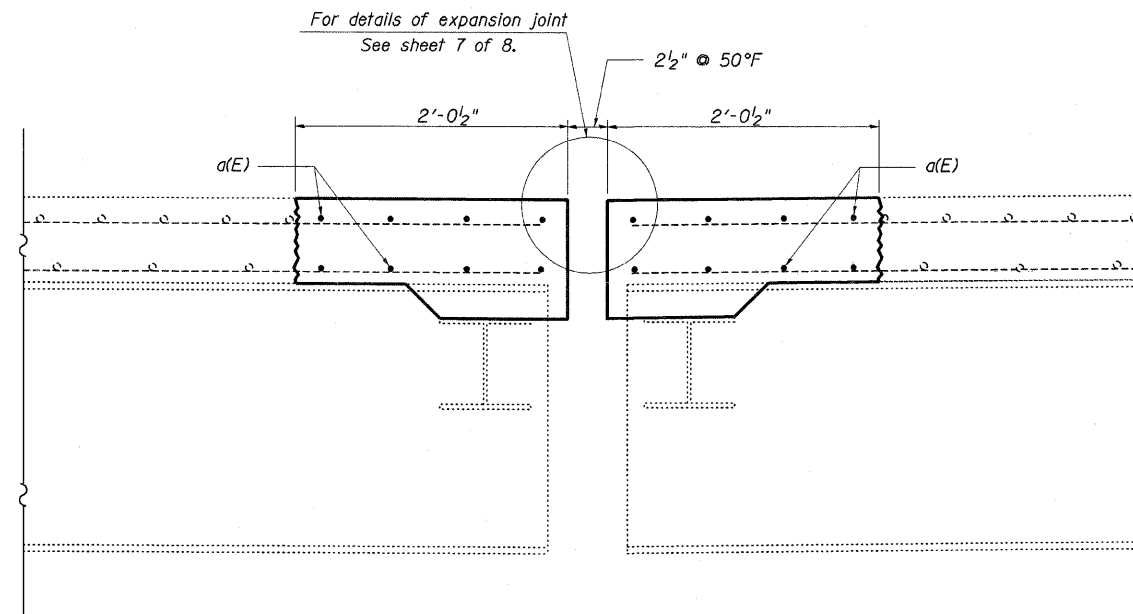
For Section C-C and D-D  
See sheet 6 of 8.

PROPOSED PARTIAL PLAN  
(Pier #5)

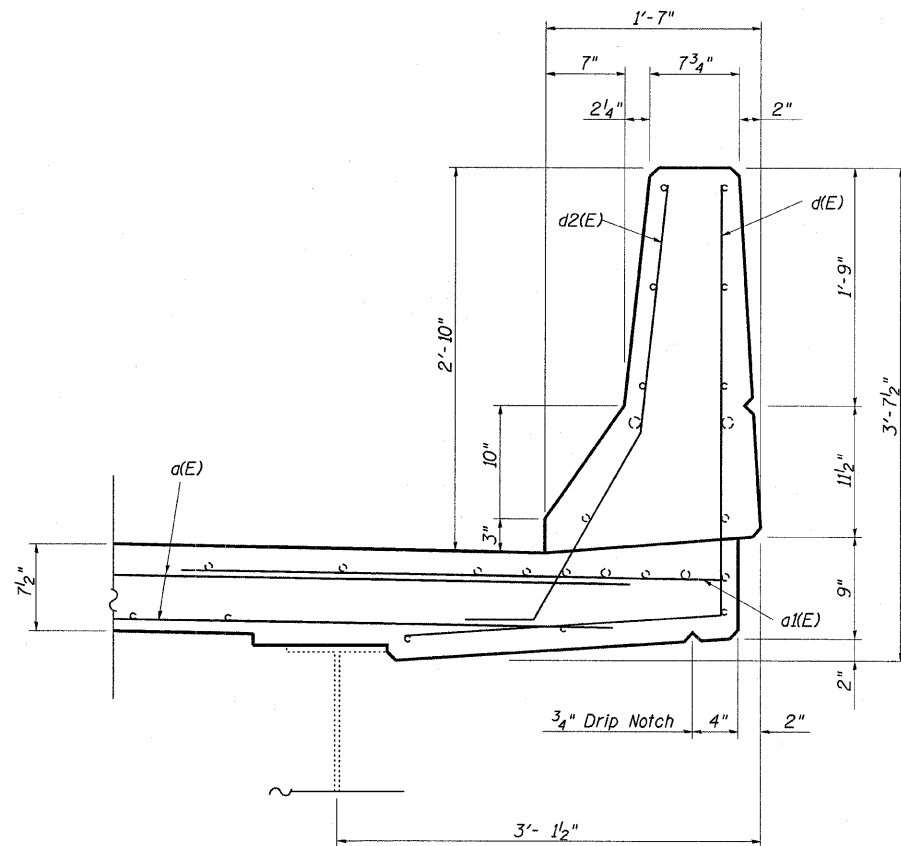


**SECTION C-C**  
(Dimensions at Rt. L's to end of deck)

○ Existing Reinforcement  
● Proposed Reinforcement



**SECTION D-D**  
(Dimensions at RT L's to end of deck)



**SECTION THRU PARAPET**

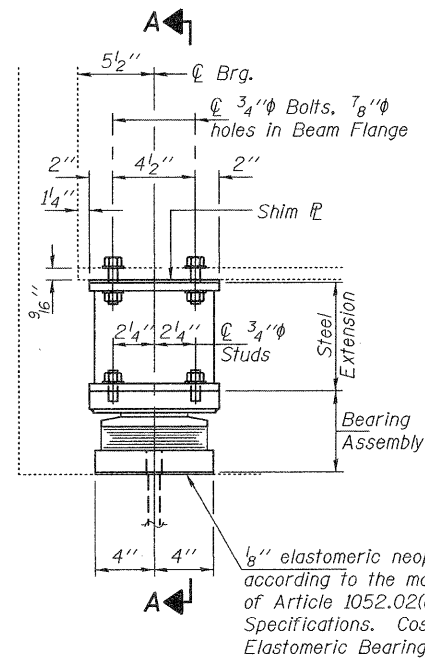
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c:\pwwork\pwidot\swartzw\d0209308\10-7	4485-shr-b-detailed-0960062.dgn	DRAWN - ESS	REVISED -
	PLOT SCALE = 20.0000' / IN.	CHECKED - MEA	REVISED -
	PLOT DATE = 2/3/2011	DATE - 11/24/2010	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS-PIER 5  
SN. 096-0062**

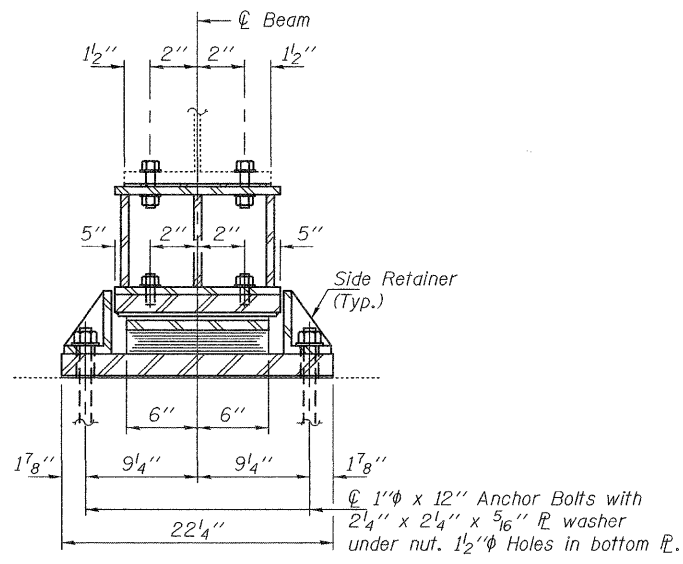
SCALE: NA SHEET NO. 6 OF 11 SHEETS STA. TO STA.

*07 Bridge Repairs 2011-1				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	•	Wayne	23	14
			CONTRACT NO. 74485	
ILLINOIS FED. AID PROJECT				



**ELEVATION AT S. ABUTMENT**

**TYPE II TFE ELASTOMERIC EXP. BRG.**



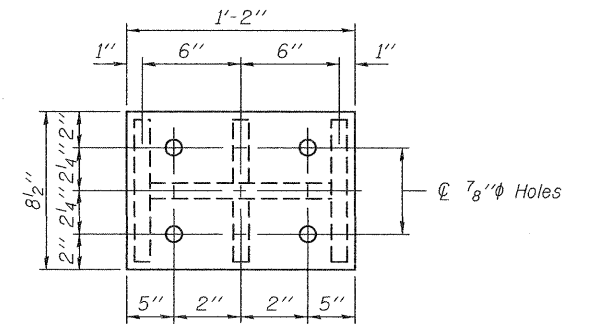
**SECTION A-A**

**BEAM REACTIONS**

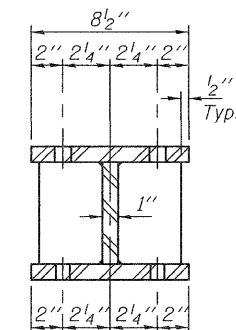
RP	(K)	16.5
RL	(K)	31.3
Imp.	(K)	9.4
R (Total)	(K)	57.2

**Notes:**

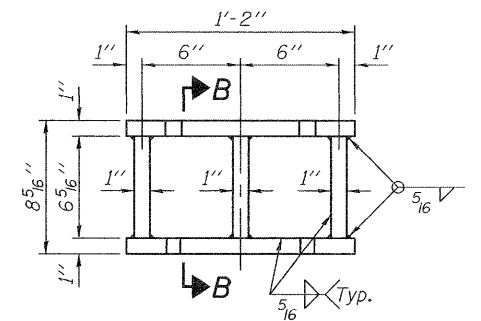
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 40 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 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 521.06 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.



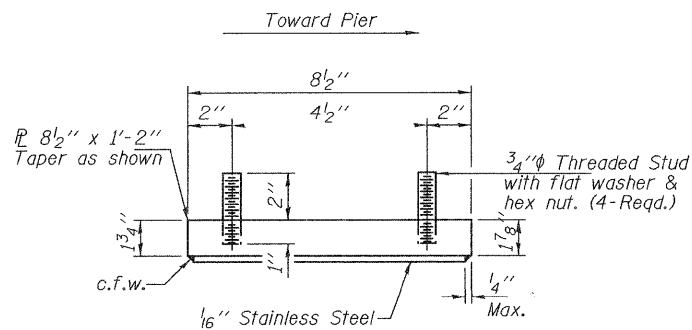
**PLAN TOP AND BOTTOM PLATE**



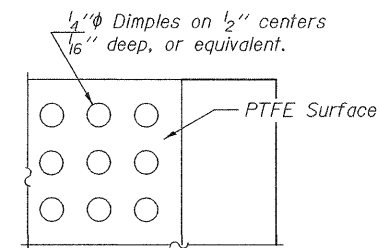
**SECTION B-B**



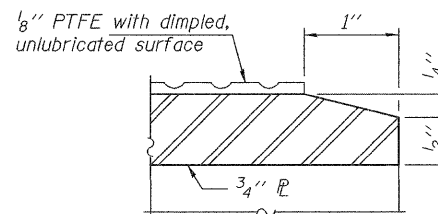
**STEEL EXTENSION DETAIL**



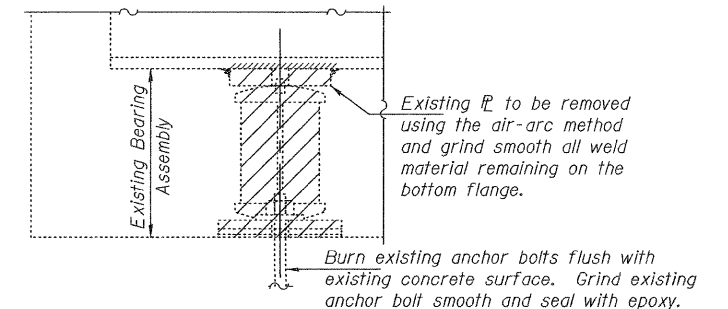
**TOP BEARING ASSEMBLY**



**PLAN-PTFE SURFACE**

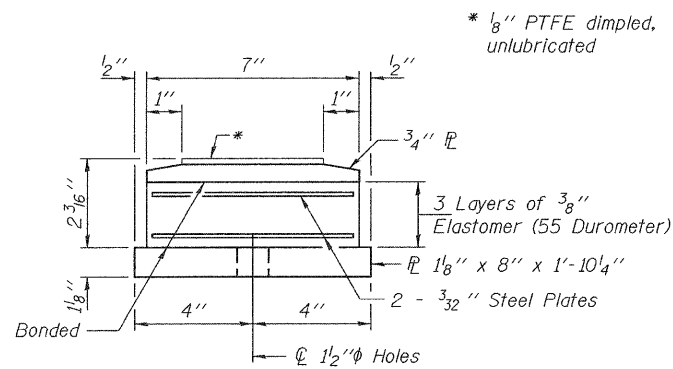


**SECTION THRU PTFE**

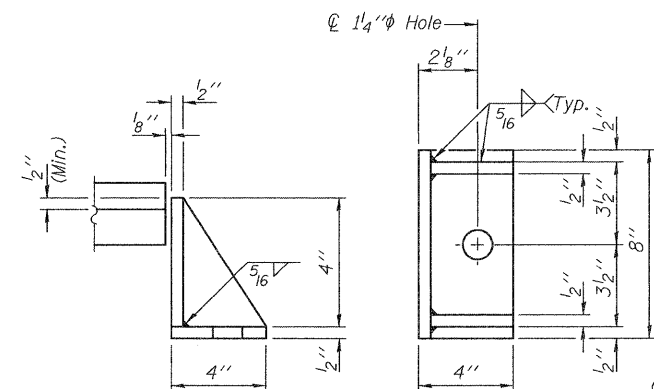


**EXISTING BEARING REMOVAL DETAIL**

Cost included with Jack and Remove Existing Bearings.

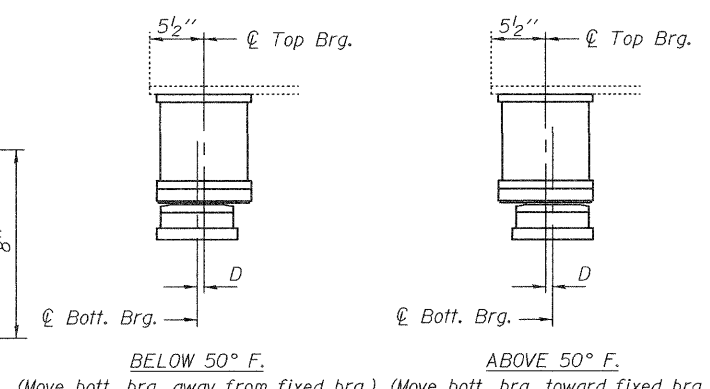


**BOTTOM BEARING ASSEMBLY**



**SIDE RETAINER**

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



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

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	770
Anchor Bolts 1"φ	Each	12

TYII/REPS 12-03-2008

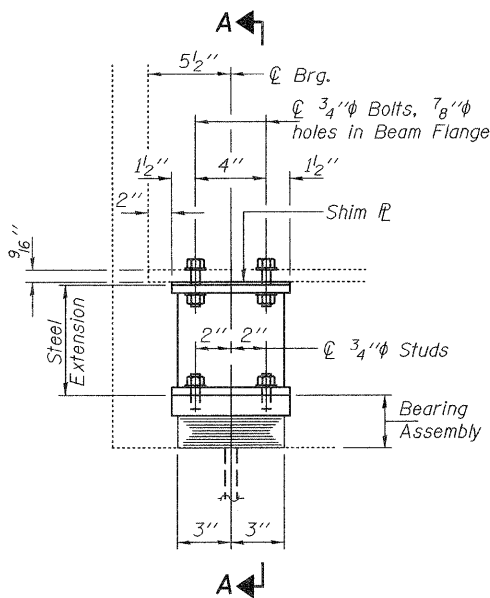
DESIGNED IJL	EXAMINED	DATE - MARCH 7, 2011
CHECKED DAB	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN baliva	PASSED	
CHECKED IJL DAB	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

S. ABUTMENT BEARING REPLACEMENT DETAILS  
SN 096-0062

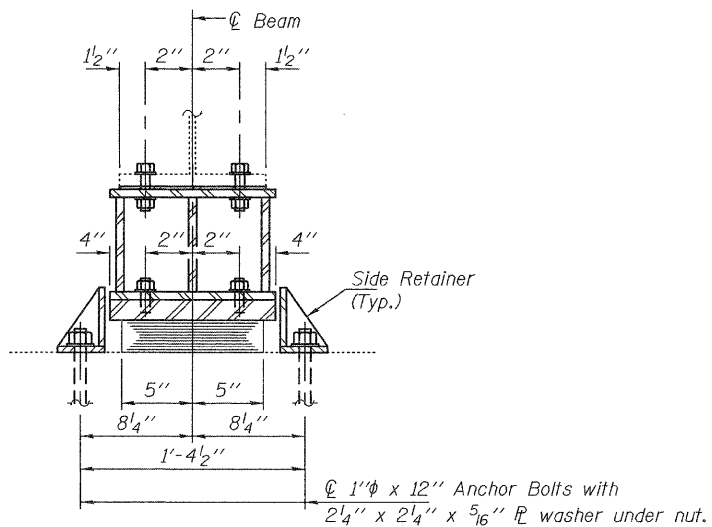
SHEET NO. 1 OF 3 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	D7 BRIDGE REPAIRS 2011-1	WAYNE	23	15
			CONTRACT NO. 74485	
(ILLINOIS) FED. AID PROJECT				



**ELEVATION AT N. ABUTMENT**

**TYPE I ELASTOMERIC EXP. BRG.**



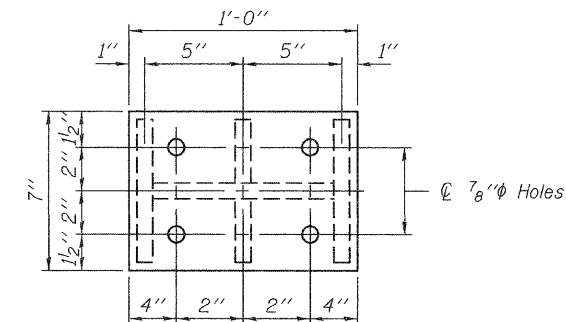
**SECTION A-A**

**BEAM REACTIONS**

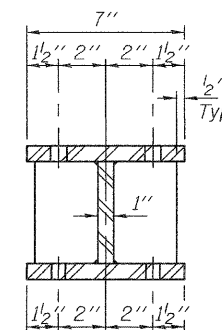
RP	(K)	11.9
R <sub>t</sub>	(K)	27.5
Imp.	(K)	8.3
R (Total)	(K)	47.7

**Notes:**

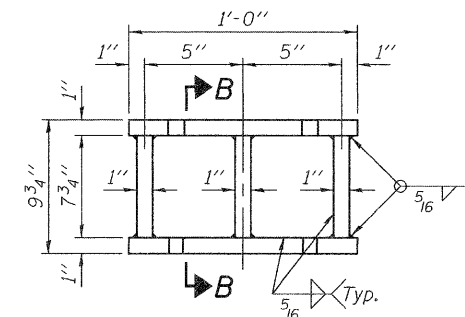
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 30 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.



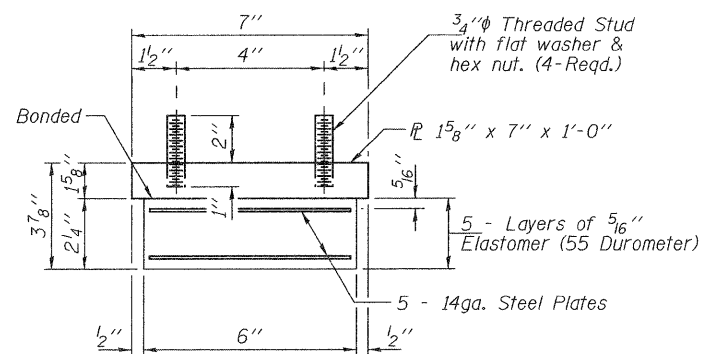
**PLAN TOP AND BOTTOM PLATE**



**SECTION B-B**

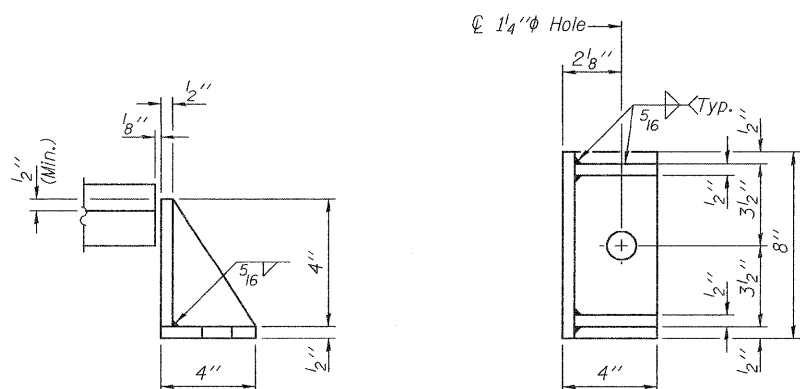


**STEEL EXTENSION DETAIL**



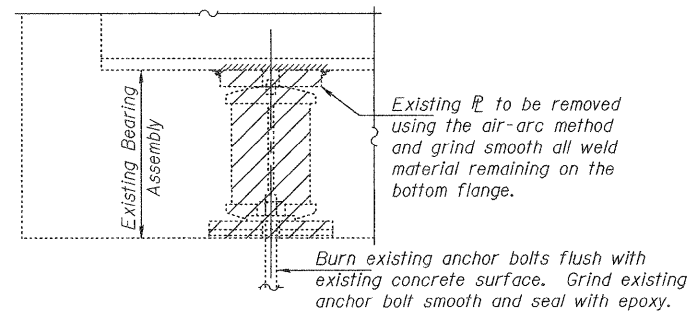
**BEARING ASSEMBLY**

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



**SIDE RETAINER**

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



**EXISTING BEARING REMOVAL DETAIL**

Cost included with Jack and Remove Existing Bearings.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	640
Anchor Bolts 1"φ	Each	12

TYI/REPS 12-03-2008

DESIGNED IJL  
 CHECKED DAB  
 DRAWN baliva  
 CHECKED IJL DAB

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

DATE - MARCH 7, 2011

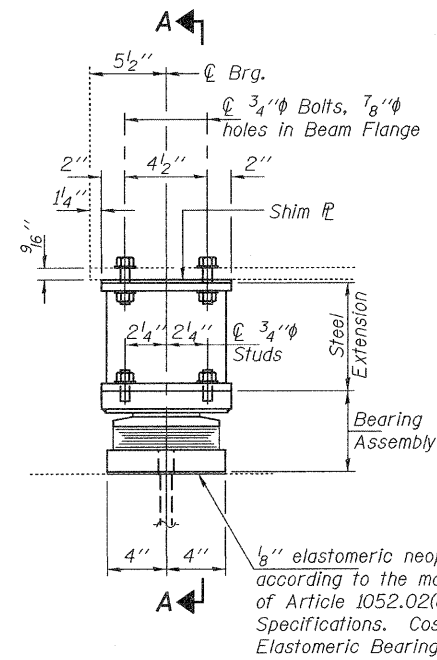
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

N. ABUTMENT BEARING REPLACEMENT DETAILS  
 SN 096-0062

SHEET NO. 2 OF 3 SHEETS

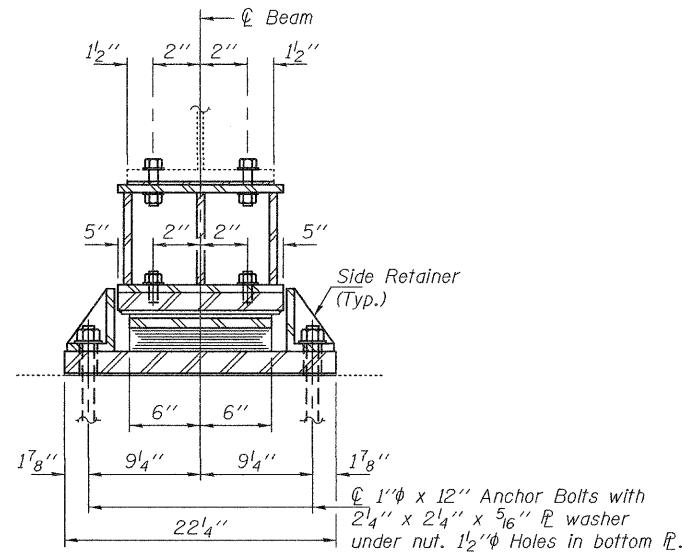
F.A. RTE. 821 SECTION DT BRIDGE REPAIRS 2011-1 COUNTY WAYNE TOTAL SHEETS 23 SHEET NO. 16 ILLINOIS FED. AID PROJECT CONTRACT NO. 74485





**ELEVATION AT PIER 5**

**TYPE II TFE ELASTOMERIC EXP. BRG.**

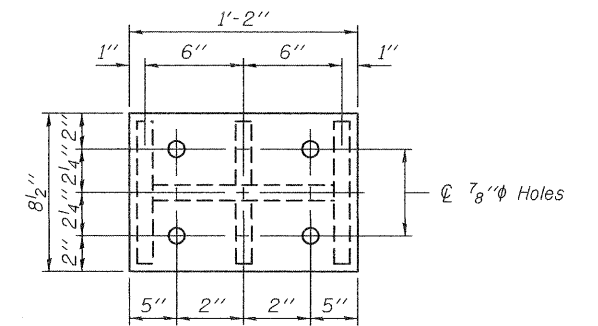


**SECTION A-A**

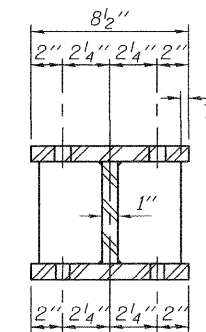
**BEAM REACTIONS**

	Unit I	Unit II
RP (K)	16.5	16.8
Rt (K)	31.3	31.2
Imp. (K)	9.4	9.4
R (Total) (K)	57.2	57.4

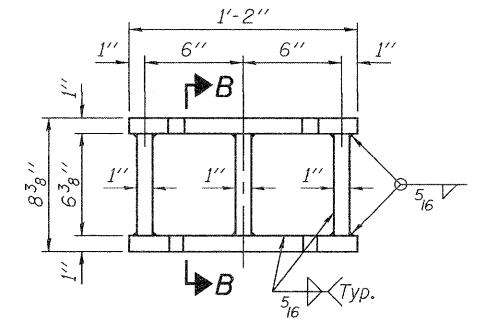
Notes:  
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 40 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 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 521.06 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.



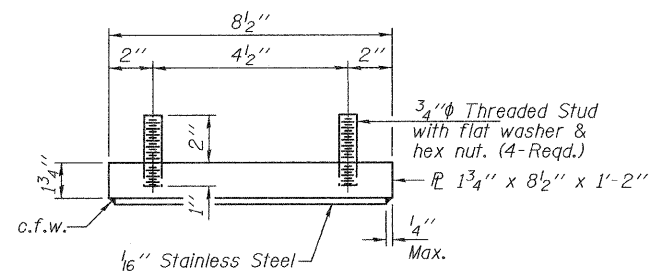
**PLAN TOP AND BOTTOM PLATE**



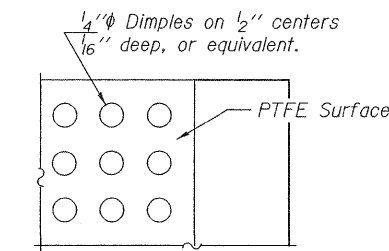
**SECTION B-B**



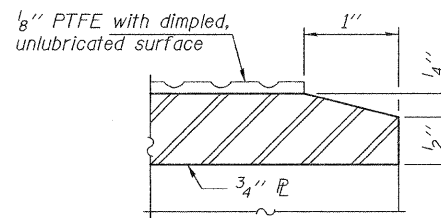
**STEEL EXTENSION DETAIL**



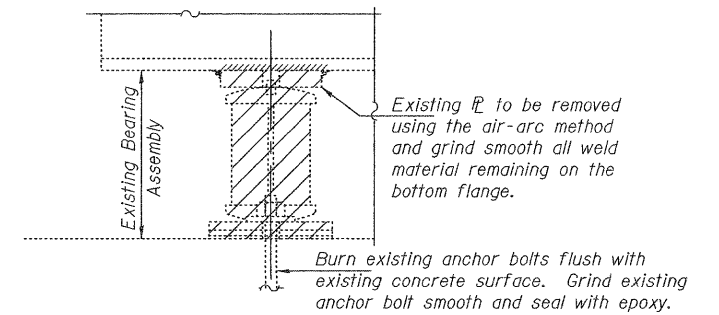
**TOP BEARING ASSEMBLY**



**PLAN-PTFE SURFACE**

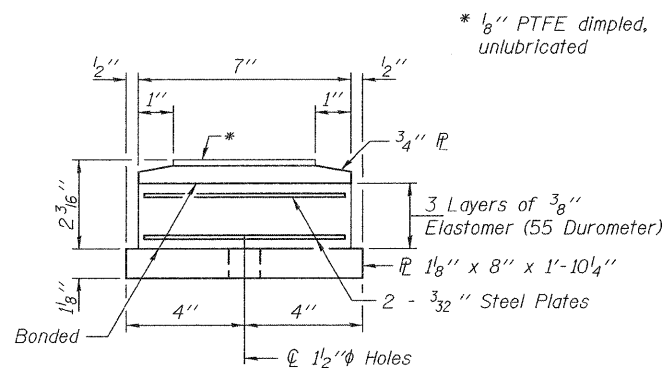


**SECTION THRU PTFE**



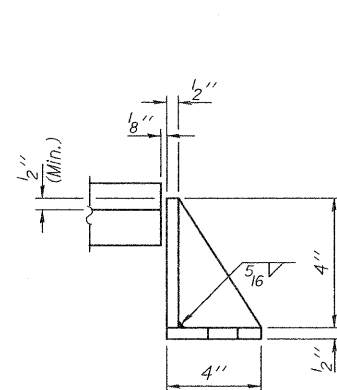
**EXISTING BEARING REMOVAL DETAIL**

Cost included with Jack and Remove Existing Bearings.



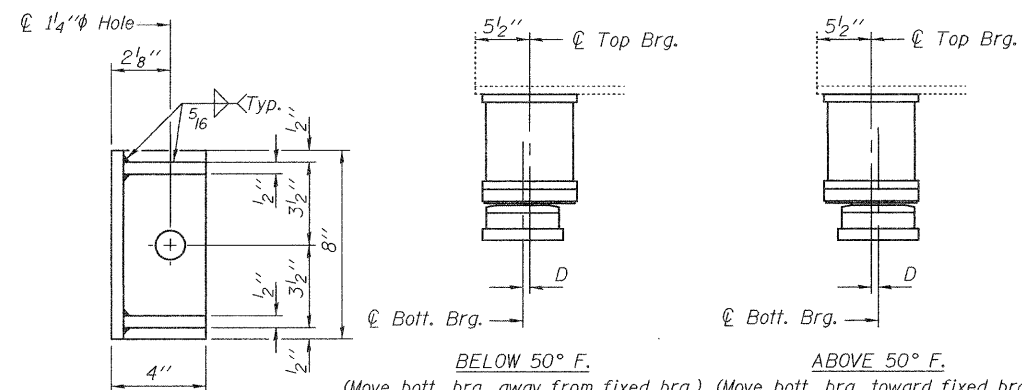
**BOTTOM BEARING ASSEMBLY**

\* 1/8" PTFE dimpled, unlubricated



**SIDE RETAINER**

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



**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 TWO BEARING LINES**

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	1540
Anchor Bolts 1"φ	Each	24

TYII/REPS 12-03-2008

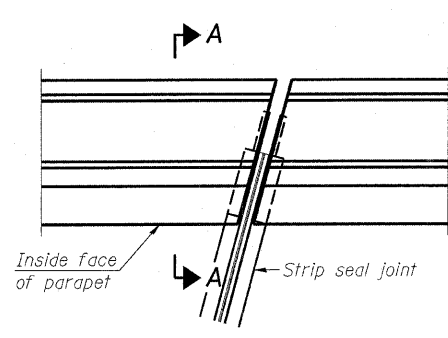
DESIGNED IJL	EXAMINED
CHECKED DAB	PASSED
DRAWN baliva	
CHECKED IJL DAB	

 ACTING ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 7, 2011
 ACTING ENGINEER OF BRIDGES AND STRUCTURES	

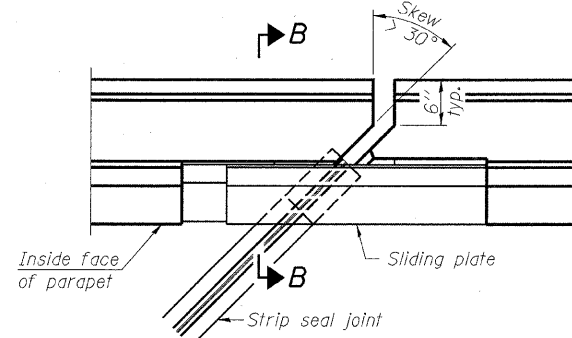
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**PIER 5 BEARING REPLACEMENT DETAILS SN 096-0062**  
 SHEET NO. 3 OF 3 SHEETS

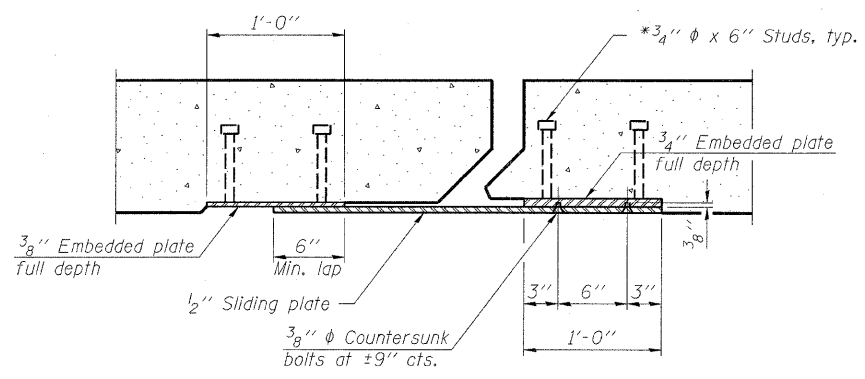
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	DT BRIDGE REPAIRS 2011-1	WAYNE	23	17
CONTRACT NO. 74485				
ILLINOIS FED. AID PROJECT				



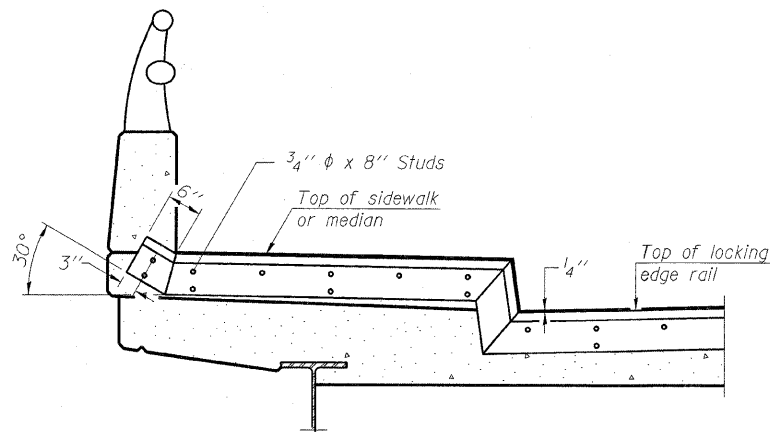
**PLAN**  
(For skews  $\leq 30^\circ$ )



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

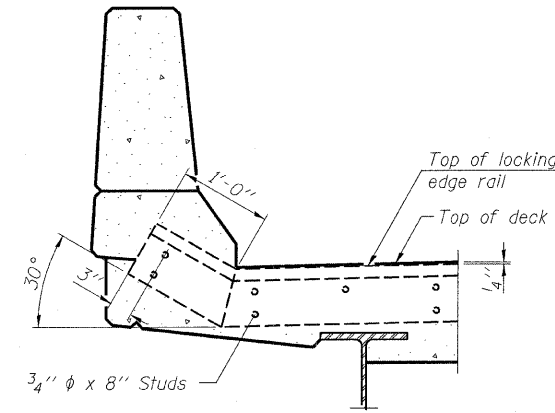


**SECTION C-C**

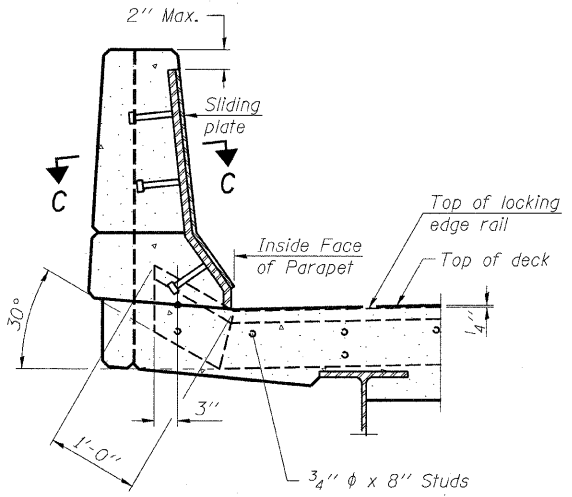


**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**

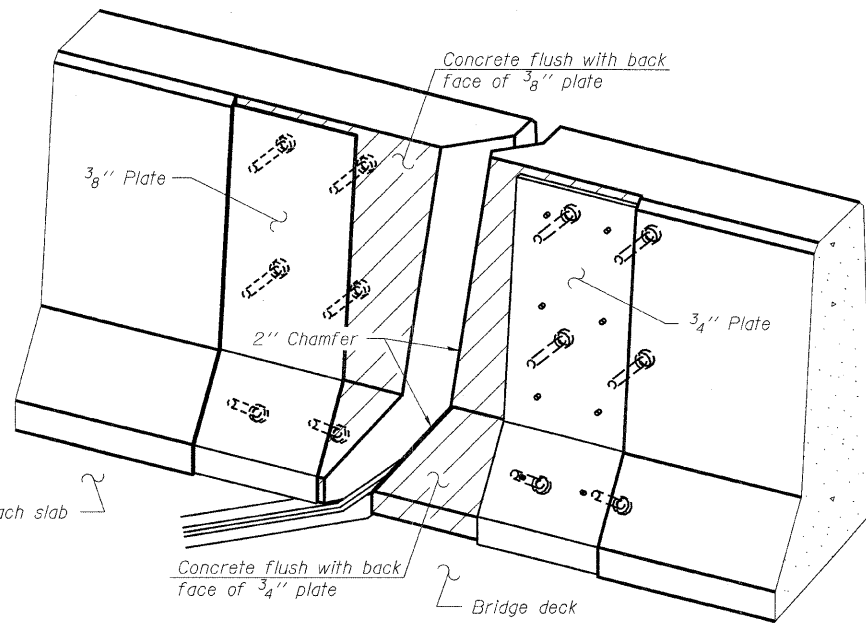
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



**SECTION A-A**



**SECTION B-B**



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

**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.

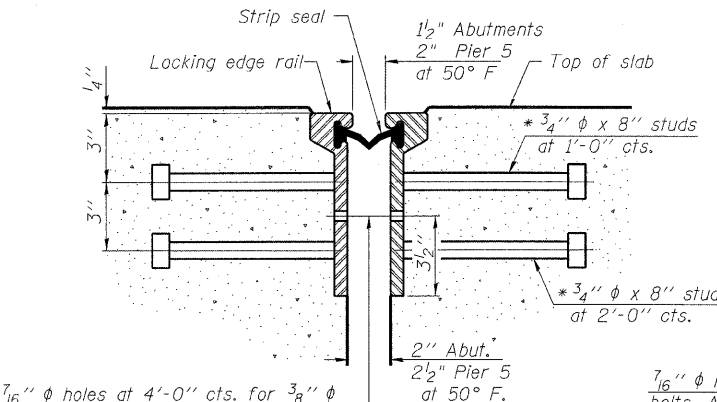
The manufacturer's recommended installation methods shall be followed.

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.

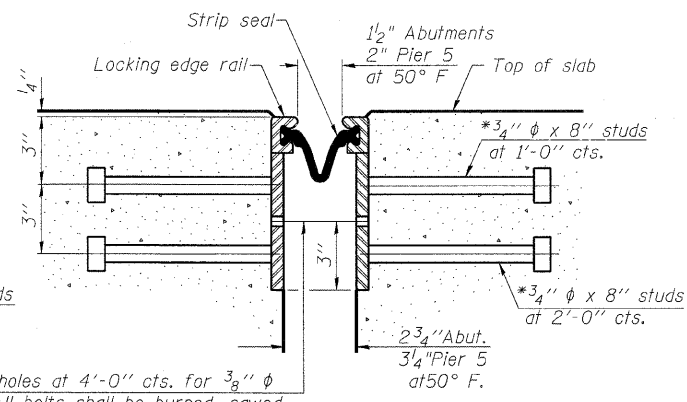
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

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.



**SECTION THRU ROLLED RAIL JOINT**

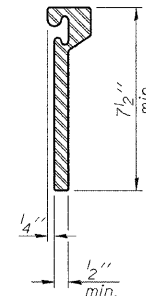


**SECTION THRU WELDED RAIL JOINT**

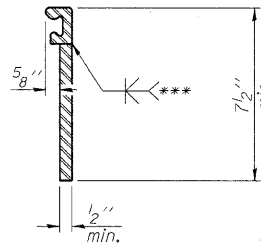
7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

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.

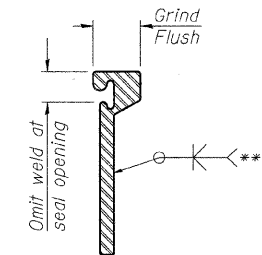
\* Granular or solid Flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



**ROLLED EXTRUDED RAIL**



**WELDED RAIL**



**LOCKING EDGE RAIL SPLICE**

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

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

**LOCKING EDGE RAILS**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	114.5

EJ-SSJ

7-1-10

FILE NAME =	USER NAME = swartzw
4485-sht-br-detail-0960062.dgn	
PLOT SCALE = 20.0000' / IN.	
PLOT DATE = 2/3/2011	

DESIGNED - ESS	REVISED -
DRAWN - ESS	REVISED -
CHECKED - MEA	REVISED -
DATE - 11/24/2010	REVISED -

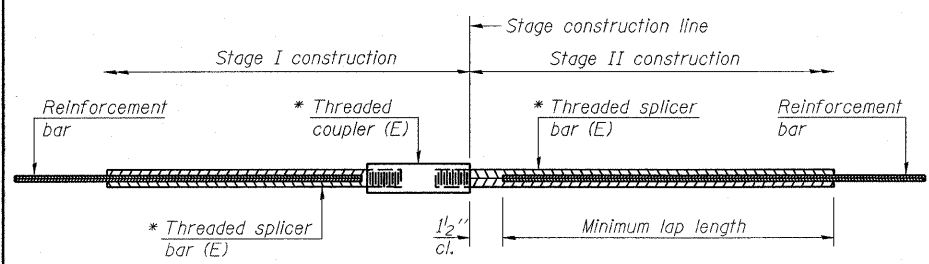
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL STRUCTURE NO. 096-0062**

SCALE: NA SHEET NO. 10 OF 11 SHEETS STA. TO STA.

#07 Bridge Repairs 2011-1

F.A.P. RTE. 821	SECTION	COUNTY Wayne	TOTAL SHEETS 23	SHEET NO. 18
			CONTRACT NO. 74485	
ILLINOIS FED. AID PROJECT				



**STANDARD BAR SPLICER ASSEMBLY**

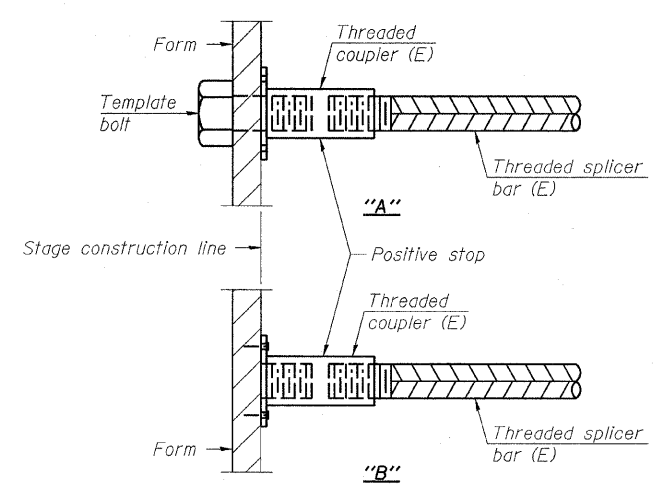
Bar size to be spliced	Minimum Lap Lengths				
	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- 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

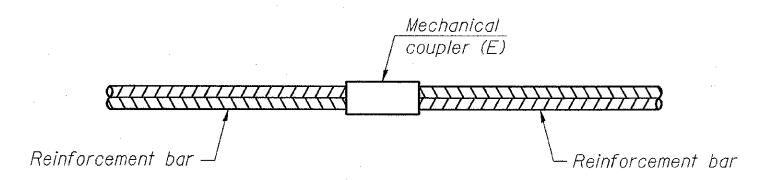
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	40	Table 3
Hatchblock	#6	8	Table 3



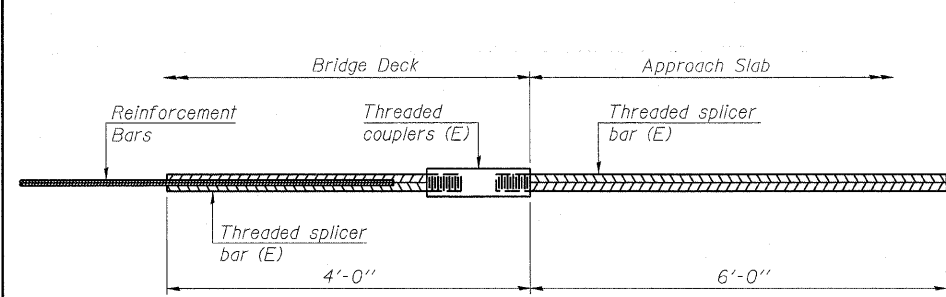
**INSTALLATION AND SETTING METHODS**

"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.



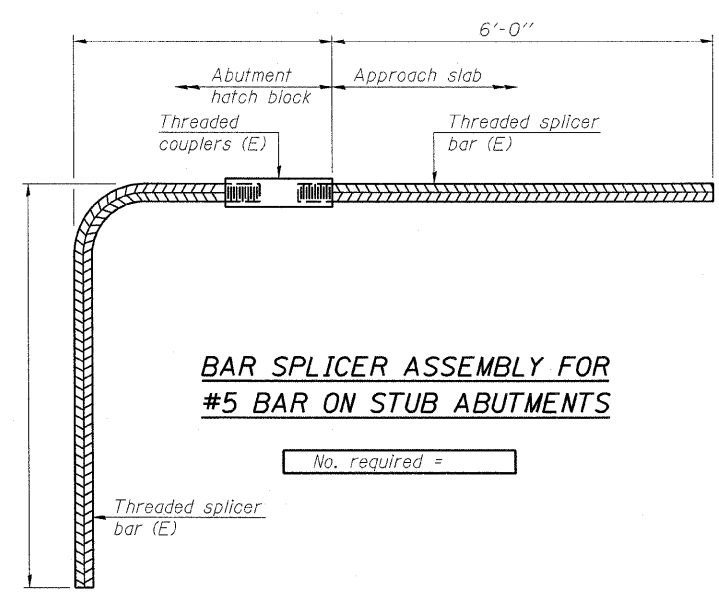
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



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

No. required =

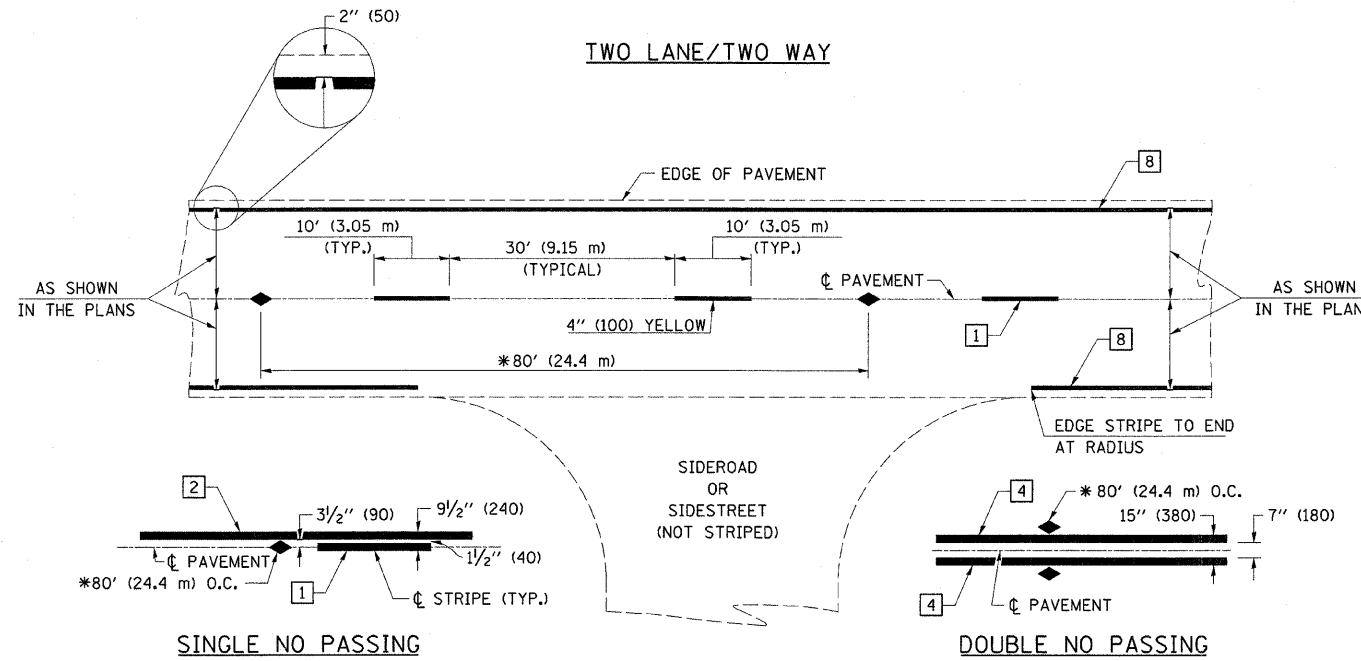


**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

**NOTES**

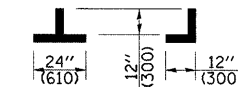
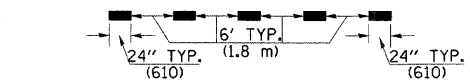
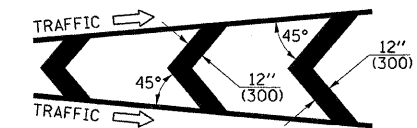
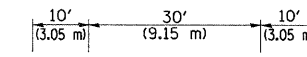
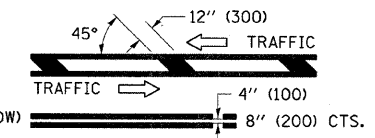
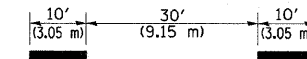
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See special provision for Mechanical Splicers.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.



\* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

**PAVEMENT MARKING LEGEND**

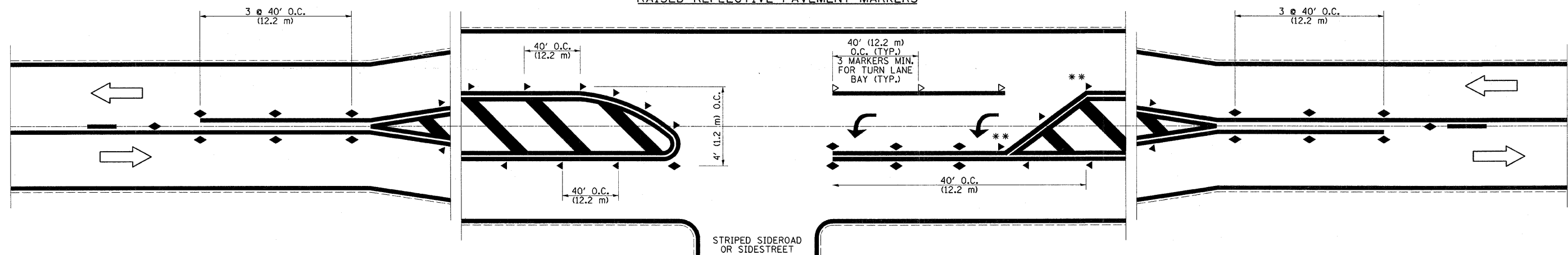
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 6" (100) LANE LINE EXTENSIONS
- 14 4" (100) PARKING WHITE



**TYPICAL PAVEMENT MARKERS LEGEND**

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

**RAISED REFLECTIVE PAVEMENT MARKERS**

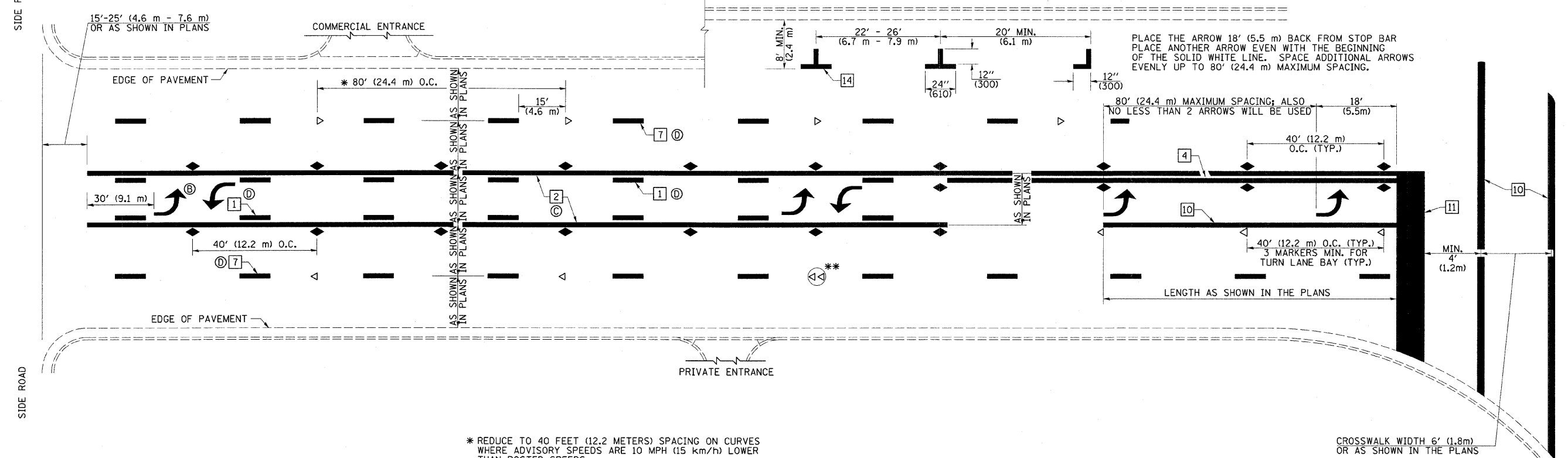


\*\* REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

NOT TO SCALE  
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = swartzk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL &amp; URBAN APPLICATIONS)</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
o:\pw_work\p\dot\swartzk\d0209308\d77	485-shr-details.dgn	DRAWN -	REVISED -			821	D7 BRIDGE REPAIRS 2011-1	WAYNE	23	20	
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -			CONTRACT NO. 74485					
	PLOT DATE = 2/3/2011	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

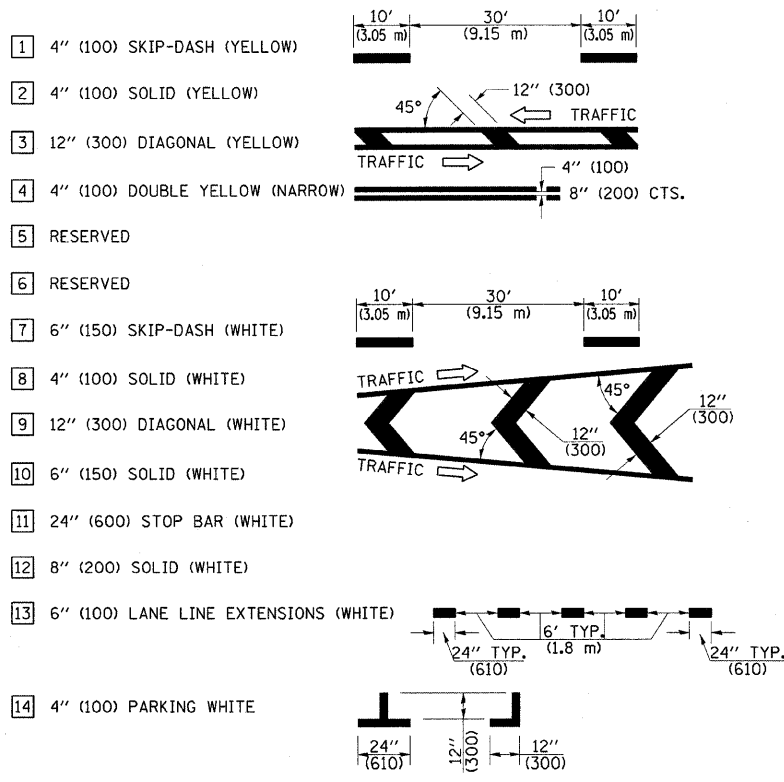
**URBAN LEFT TURN**



\* REDUCE TO 40 FEET (12.2 METERS) SPACING ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

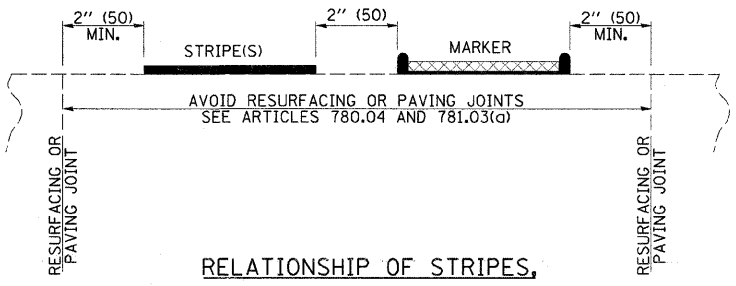
\*\* DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

**PAVEMENT MARKING LEGEND**

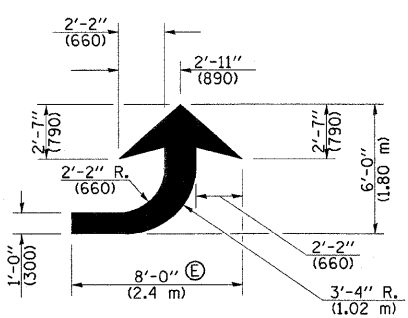


**GENERAL NOTES**

- (B) TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE. USE A MINIMUM OF TWO PAIRS PER BLOCK.
- (C) THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
- (D) THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER.
- (E) USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)

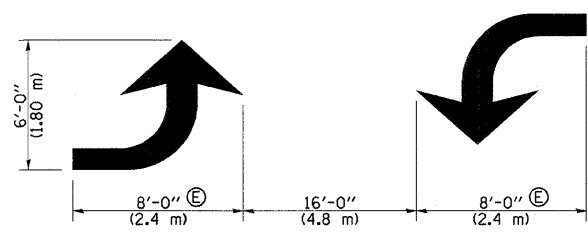


**RELATIONSHIP OF STRIPES, MARKERS AND JOINTS**



**LEFT ARROW**

REVERSE FOR RIGHT ARROW  
AREA = 15.6 SQ. FT. (1.47 m<sup>2</sup>)  
(WHITE)

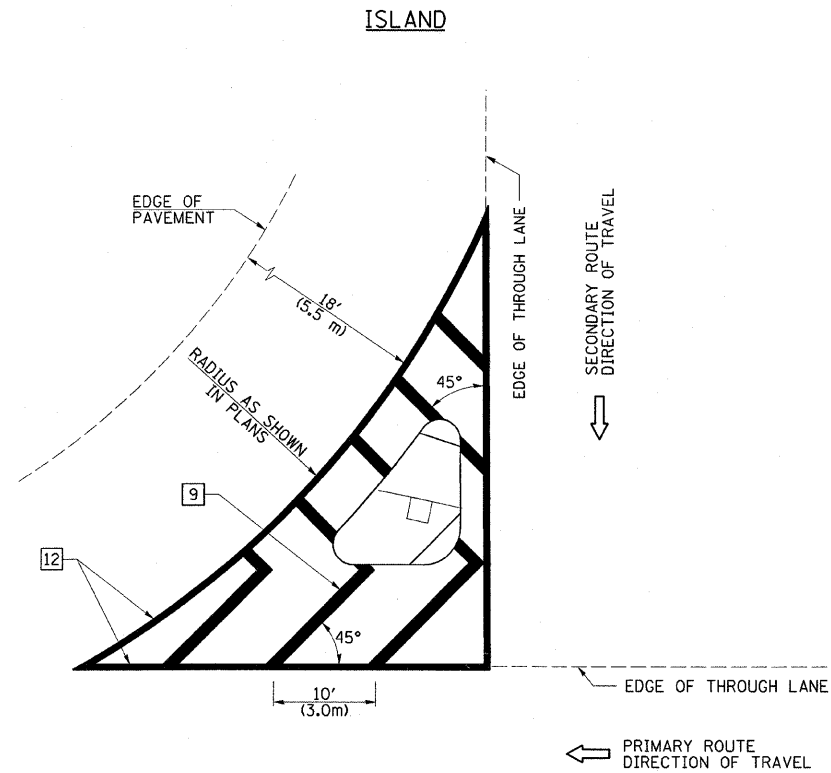


**TYPICAL DOUBLE TURN ARROWS (WHITE)**

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL &amp; URBAN APPLICATIONS)</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pw\work\p\dot\swartzw\d0209308\d77485-sht-details.dgn	485-sht-details.dgn	DRAWN -	REVISED -			821	DT BRIDGE REPAIRS 2011-1	WAYNE	23	21	
PLOT SCALE = 50.0000 "/td> <td>IN.</td> <td>CHECKED -</td> <td>REVISED -</td> <td colspan="6" style="text-align: center;">CONTRACT NO. 74485</td>	IN.	CHECKED -	REVISED -			CONTRACT NO. 74485					
PLOT DATE = 2/3/2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					



**GENERAL NOTES**

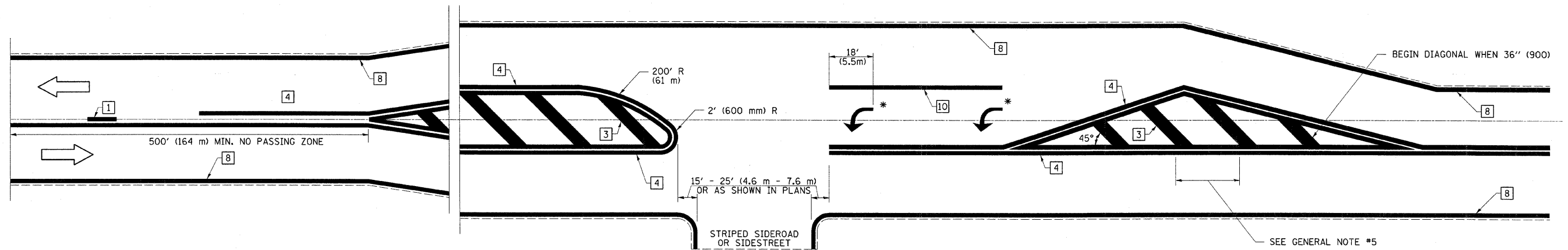
1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2] IF PRESENT.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING:

< 30 MPH (< 50 km/h)	15' (4.5 m)
30-45 MPH (50-75 km/h)	20' (6.0 m)
> 45 MPH (> 75 km/h)	30' (9.0 m)

**PAVEMENT MARKING LEGEND**

- [1] 4" (100) SKIP-DASH (YELLOW)
  - [2] 4" (100) SOLID (YELLOW)
  - [3] 12" (300) DIAGONAL (YELLOW)
  - [4] 4" (100) DOUBLE YELLOW (NARROW)
  - [5] RESERVED
  - [6] RESERVED
  - [7] 6" (150) SKIP-DASH (WHITE)
  - [8] 4" (100) SOLID (WHITE)
  - [9] 12" (300) DIAGONAL (WHITE)
  - [10] 6" (150) SOLID (WHITE)
  - [11] 24" (600) STOP BAR (WHITE)
  - [12] 8" (200) SOLID (WHITE)
  - [13] 6" (100) LANE LINE EXTENSIONS
  - [14] 4" (100) PARKING WHITE
- 

**RURAL LEFT TURN STRIPING**



\* PLACE AN ARROW 18' (5.5 m) BACK FROM STOP BAR. PLACE ANOTHER ARROW EVEN WITH THE BEGINNING OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING. USE MINIMUM OF 2 ARROWS.

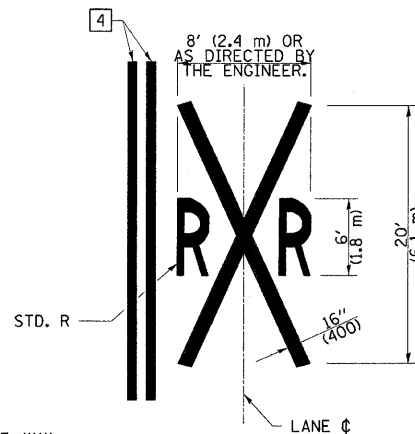
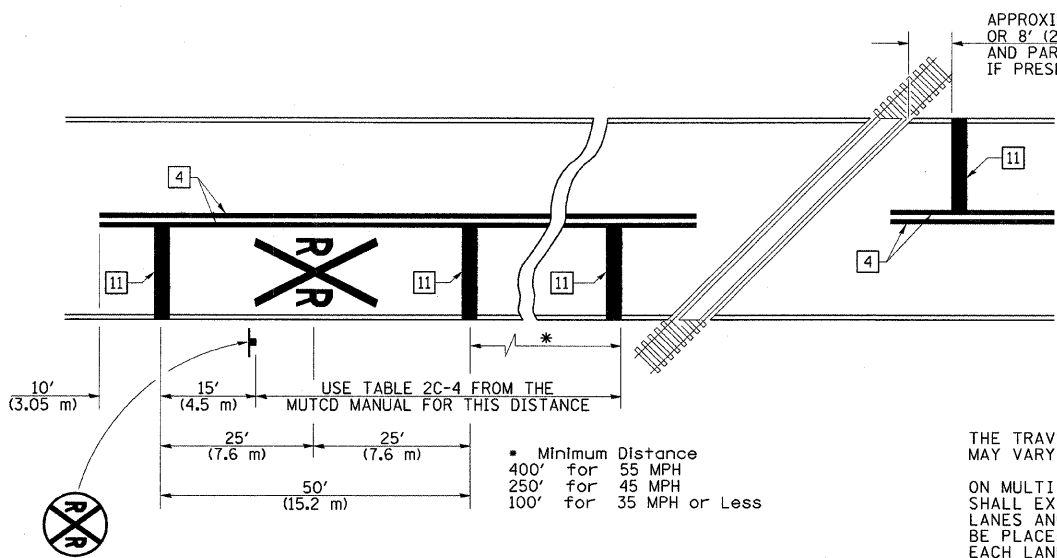
NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME = c:\pwwork\pwwidat\swartzw\d0209308\vd77485-sht-details.dgn	USER NAME = swartzw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL & URBAN APPLICATIONS)	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50,0000 1/16"	CHECKED -	REVISED -			821	D7 BRIDGE REPAIRS 2011-1	WAYNE	23	22
PLOT DATE = 2/3/2011	DATE -	REVISED -	REVISED -	SCALE:	SHEET NO. 3 OF 4 SHEETS	STA.	TO STA.	DISTRICT 7 DETAIL NO. 7800001 CONTRACT NO. 74485 ILLINOIS FED. AID PROJECT		

PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

PAVEMENT MARKING LEGEND



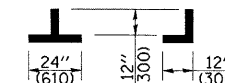
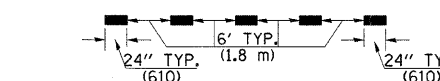
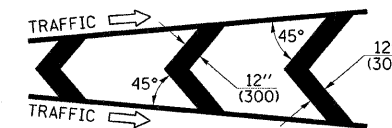
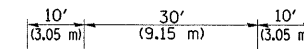
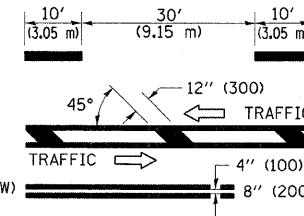
NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

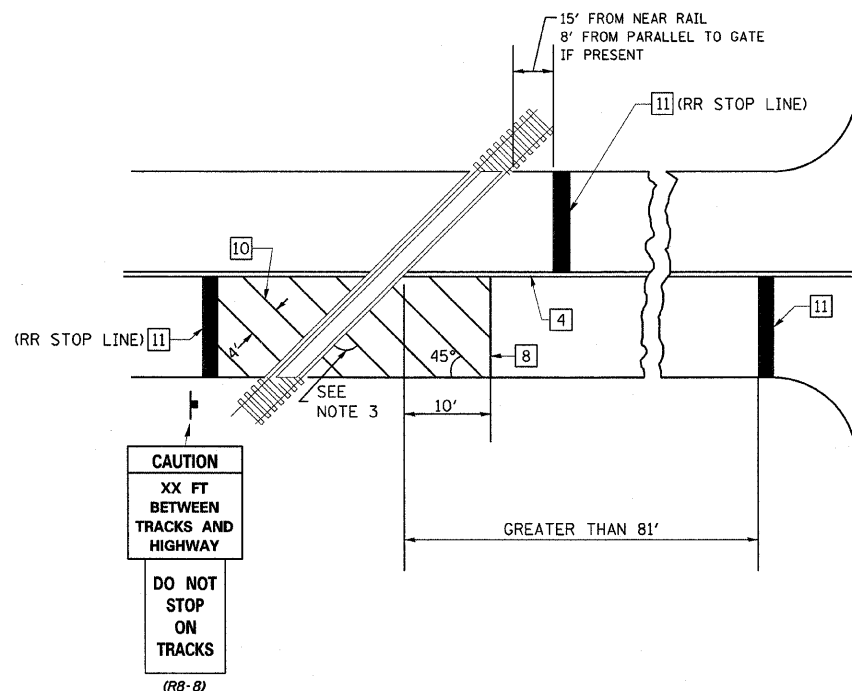
ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

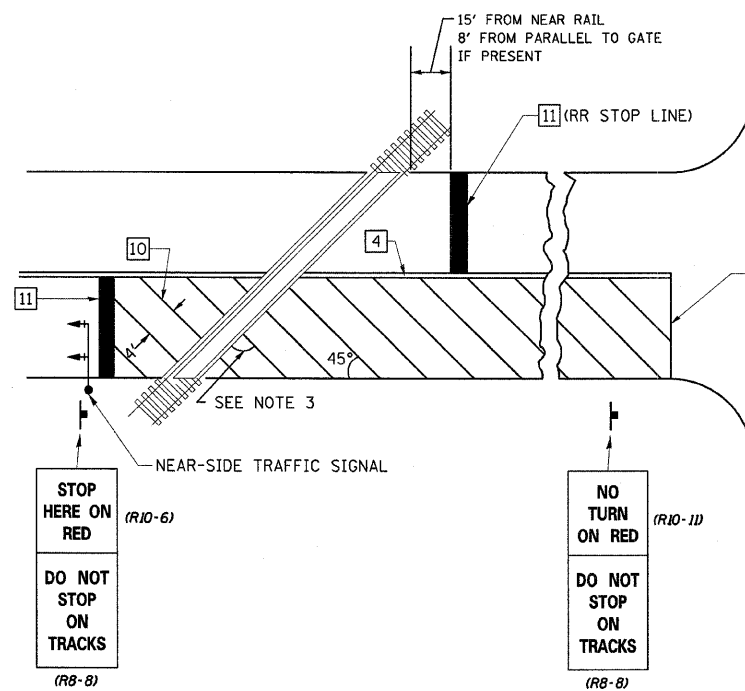
- 1 4" (100) SKIP-DASH (YELLOW)
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- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 6" (100) LANE LINE EXTENSIONS
- 14 4" (100) PARKING WHITE



RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



GENERAL NOTES

- SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
- WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.

SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -
ct:\pw_work\pav\swartzrw\02093001.dwg	485-shr-details.dgn	DRAWN -	REVISED -
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/3/2011	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS  
(RURAL & URBAN APPLICATIONS)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	D7 BRIDGE REPAIRS 2011-1	WAYNE	23	23
				CONTRACT NO. 74485
ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.