

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4BI-1	BOND	35	1
		ILLINOIS	CONTRACT NO. 76E23	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

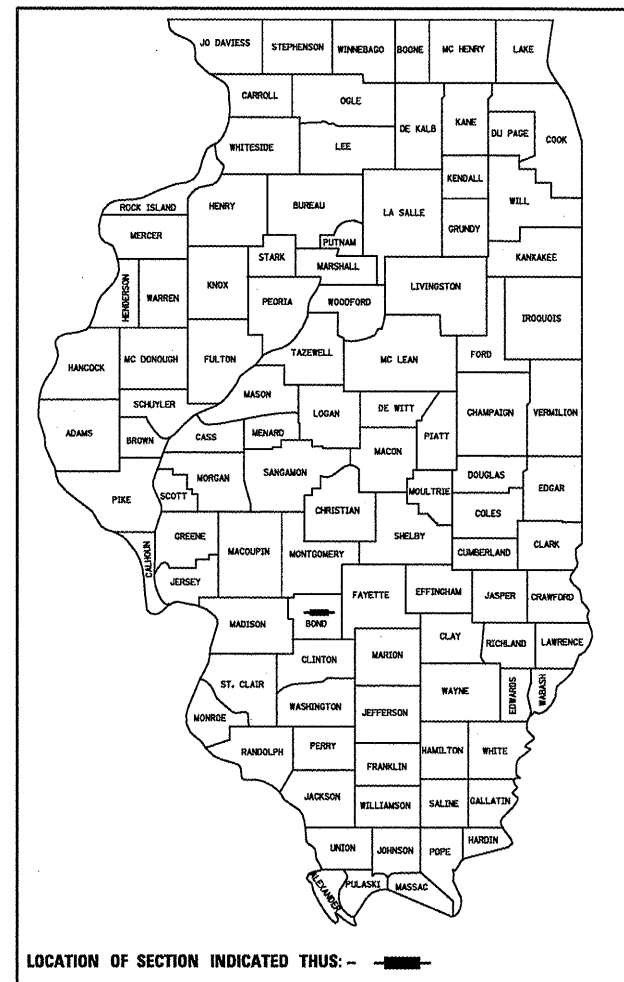
**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 70 (I-70)
SECTION 3-4BI-1

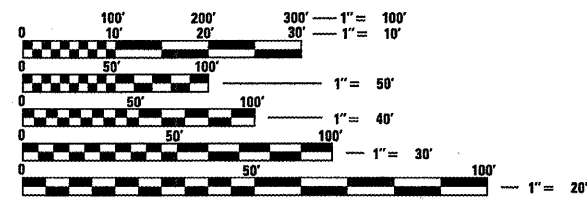
REPLACEMENT OF BRIDGE APPROACHES
BOND COUNTY

C-98-116-10

D-98-092-10



- INDEX OF SHEETS
- 1 COVER SHEET
 - 2 STANDARDS, GENERAL NOTES, & COMMITMENTS
 - 3 SUMMARY OF QUANTITIES
 - 4-35 BRIDGE PLANS

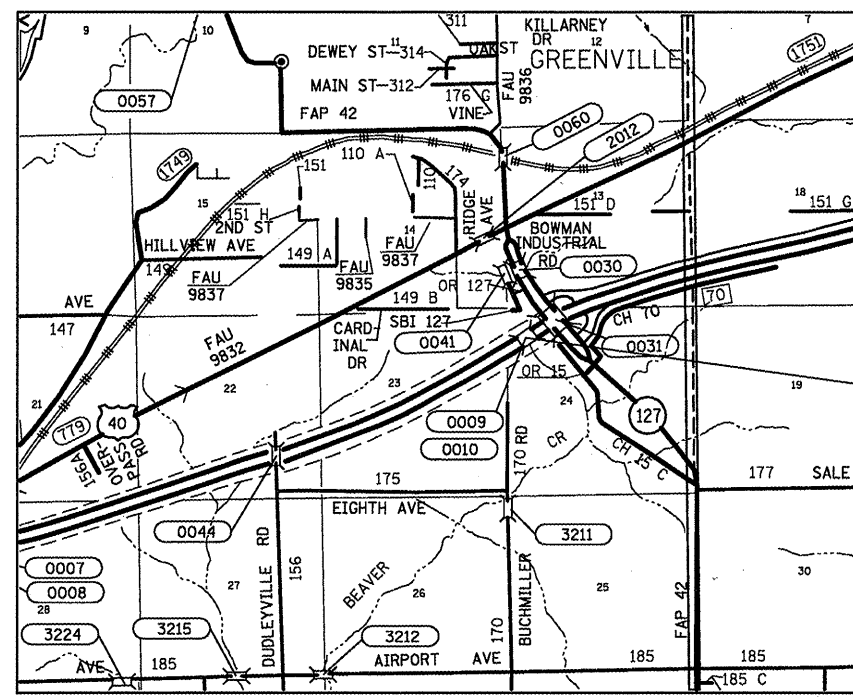


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

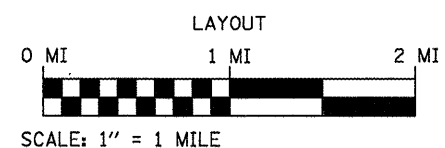
PROJECT ENGINEER: PATTI LeBEAU (618)-346-3179
PROJECT MANAGER: ARTHUR MUEHLFELD (618)-346-3209
CONTRACT NO. 76E23

T 5 N



SN 003-0009 AND 003-0010
DUAL 3 SPAN STRUCTURES
CARRYING FAI 70 OVER BEAVER CREEK
STATION 2622+90

ADT = 9850 (2009)
ADT = 122,500 (3031)
SU = 4.3%
MU = 33.0%



GROSS LENGTH = 182 FT. = 0.034 MILE
NET LENGTH = 182 FT. = 0.034 MILE

LAT: 38.8699
LONG: -89.3881

DESIGN DESIGNATION
NA

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Feb 17 2011
W. J. Lamm
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

March 25 2011
Scott E. Still, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

March 25 2011
Christine M. Reedler
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

STANDARDS

- 000001-06
- 001001-02
- 442101-07
- 635011-02
- 701400-05
- 701402-08
- 701901-01
- 704001-06

GENERAL NOTES

1. THE STANDARDS AND REVISION NUMBERS SHALL APPLY TO THIS PROJECT.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
3. A QUANTITY OF 2050 FEET OF "TEMPORARY PAVEMENT MARKING - LINE 6" WHITE HAS BEEN INCLUDED IN THE PLANS FOR PAINTING THE BOTTOM 6" OF THE TEMPORARY CONCRETE BARRIER ACROSS THE STRUCTURES AND APPROACHES FOR BOTH STAGES.
4. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
 - * AT&T ILLINOIS
 - * CITY OF GREENVILLE

MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY *. NON- J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.
5. "ROAD CONSTRUCTION AHEAD" SIGNS SHALL BE PLACED AT THE BEGINNING AND ENDING OF THE PROJECT AND AT ALL INTERSECTING SIDE ROADS AND WILL BE INCLUDED IN THE TRAFFIC CONTROL PAY ITEMS. ALL CONSTRUCTION SIGNS SHALL BE FLUORESCENT ORANGE.
6. THE RE/RT SHALL RECORD AND DOCUMENT ALL EXISTING PAVEMENT MARKINGS AND THEIR LOCATIONS PRIOR TO REMOVAL OF APPROACH PAVEMENT. AFTER APPROACH PAVEMENT HAS BEEN COMPLETED, THE PROPOSED PAVEMENT MARKING SHALL BE PLACED AT THE EXISTING DOCUMENTED LOCATIONS.

STAGE CONSTRUCTION NOTES

STAGE I WESTBOUND: PLACE 425 FEET OF TEMPORARY CONCRETE BARRIER AND 1 EACH IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3 AS SHOWN ON STANDARD 701402-08.

STAGE II WESTBOUND: RELOCATE 425 FEET OF TEMPORARY CONCRETE BARRIER. RELOCATE 1 EACH IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3 AS SHOWN ON STANDARD 701402-08.

STAGE I EASTBOUND: PLACE 400 FEET OF TEMPORARY CONCRETE BARRIER AND 1 EACH IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3 AS SHOWN ON STANDARD 701402-08.

STAGE II EASTBOUND: RELOCATE 400 FEET OF TEMPORARY CONCRETE BARRIER. RELOCATE 1 EACH IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3 AS SHOWN ON STANDARD 701402-08.

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STANDARDS, GENERAL NOTES & COMMITMENTS			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -					70	3-481-1	BOND	35	2
	PLOT DATE = #DATE#	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 76E23			
								FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	URBAN		CONSTRUCTION TYPE CODE	
			TOTAL QUANTITIES	0014 100% STATE		
42001300	PROTECTIVE COAT	SQ YD	590	590		
44201011	CLASS B PATCHES, TYPE III, 13 INCH	SQ YD	109.8	109.8		
44201007	CLASS B PATCHES, TYPE II, 13 INCH	SO YD	124	124		
44201294	CLASS B PATCH - EXPANSION JOINT	FOOT	165	165		
44213208	TIE BARS 1 1/4"	EACH	159	159		
44201296	DEFORMED BARS - EXPANSION JOINT	EACH	67	67		
44201299	DOWEL BARS 1 1/2"	EACH	159	159		
50102400	CONCRETE REMOVAL	CU YD	210.8	210.8		
50300225	CONCRETE STRUCTURES	CU YD	23.3	23.3		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	202.8	202.8		
50300260	BRIDGE DECK GROOVING	SQ YD	526	526		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	35370	35370		
50800515	BAR SPlicERS	EACH	186	186		
52000110	PREFORMED JOINT STRIP SEAL	FOOT	165	165		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6		
67100100	MOBILIZATION	L SUM	1	1		
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2	2		
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1217	1217		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	400	400		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2012.5	2012.5		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2012.5	2012.5		
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	472	472		
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	745	745		
Z0030250	IMPACT ATTENUATORS TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	EACH	2	2		
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2		

*SPECIALTY
ITEM

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
#FILE#		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4B1-1	BOND	35	3
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 76E23	

GENERAL NOTES

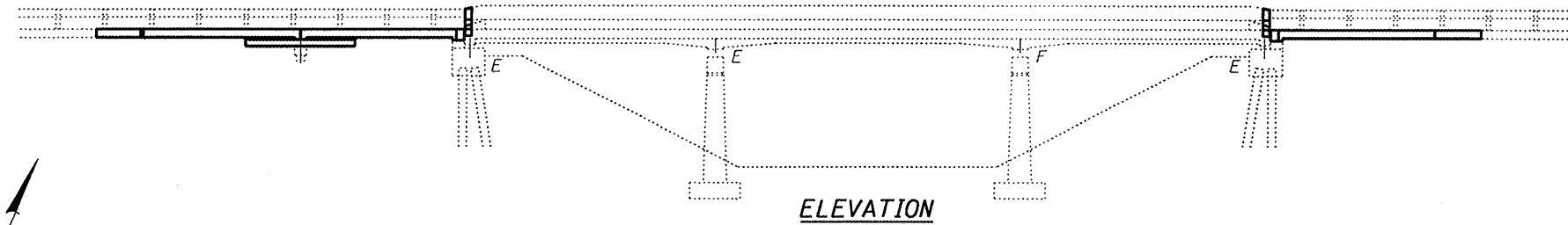
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

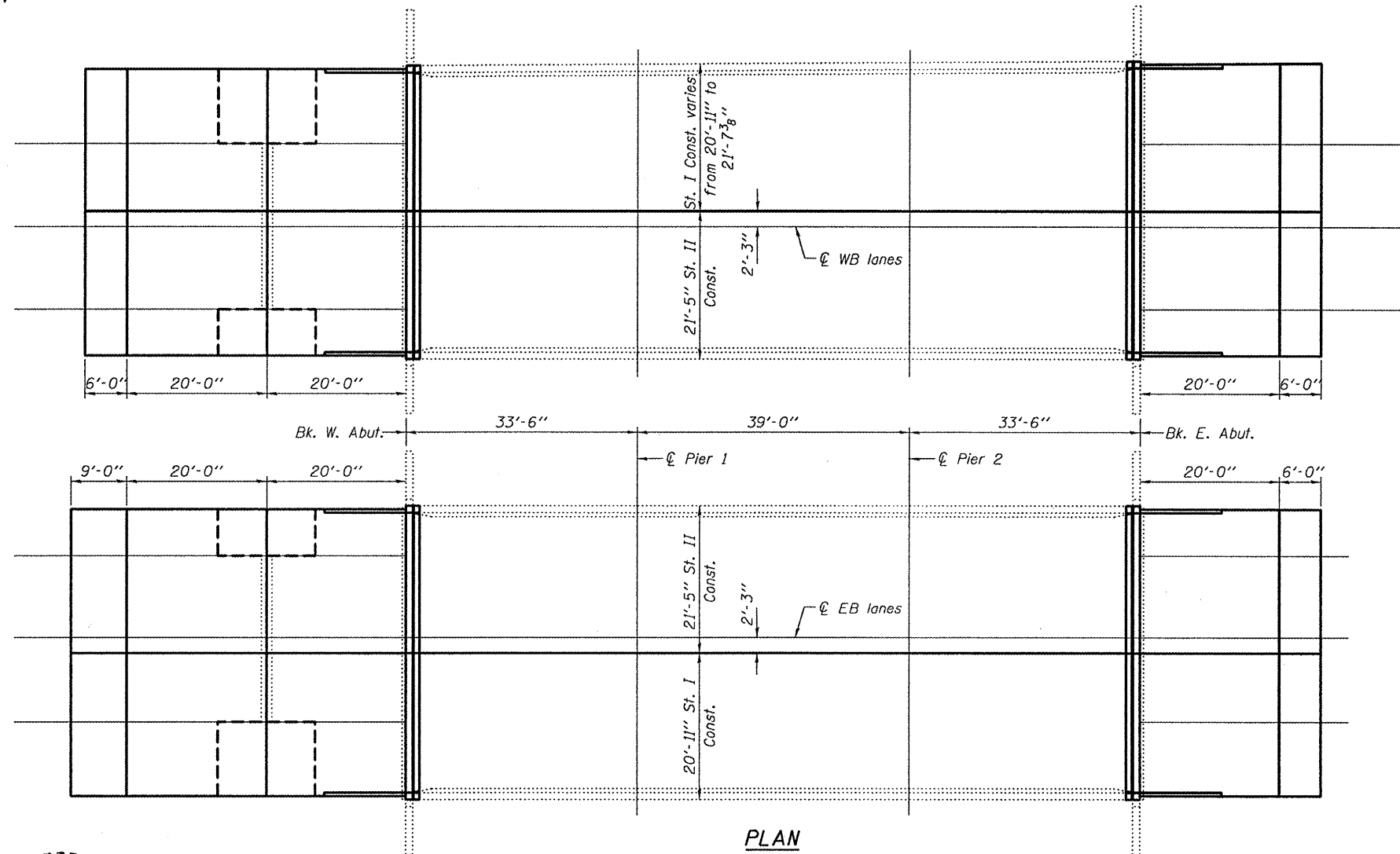
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

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 Specifications when the deck is poured at an ambient temperature other than 50° F.



ELEVATION



PLAN

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi

$f_y = 60,000$ psi (Reinforcement)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB		TOTAL
			Appr. Ftg.	Abuts.	
Bridge Deck Grooving	Sq. Yd.	526			526
Concrete Structures	Cu. Yd.		15.0	8.2	23.2
Concrete Superstructure	Cu. Yd.	202.8			202.8
Protective Coat	Sq. Yd.	590			590
Concrete Removal	Cu. Yd.	202.6		8.2	210.8
Reinforcement Bars, Epoxy Coated	Pound	31720	2640	1010	35370
Bar Splicers	Each	170		16	186
Preformed Joint Strip Seal	Foot	165			165
Class B Patches, Type II, 13 inches	Sq. Yd.	124			124
Class B Patche-Expansion Joint	Foot	166			166
Dowel Bars 1 1/2"	Each	159			159
Tie Bars 1/4"	Each	159			159



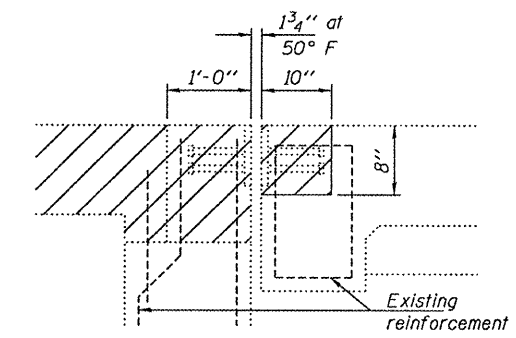
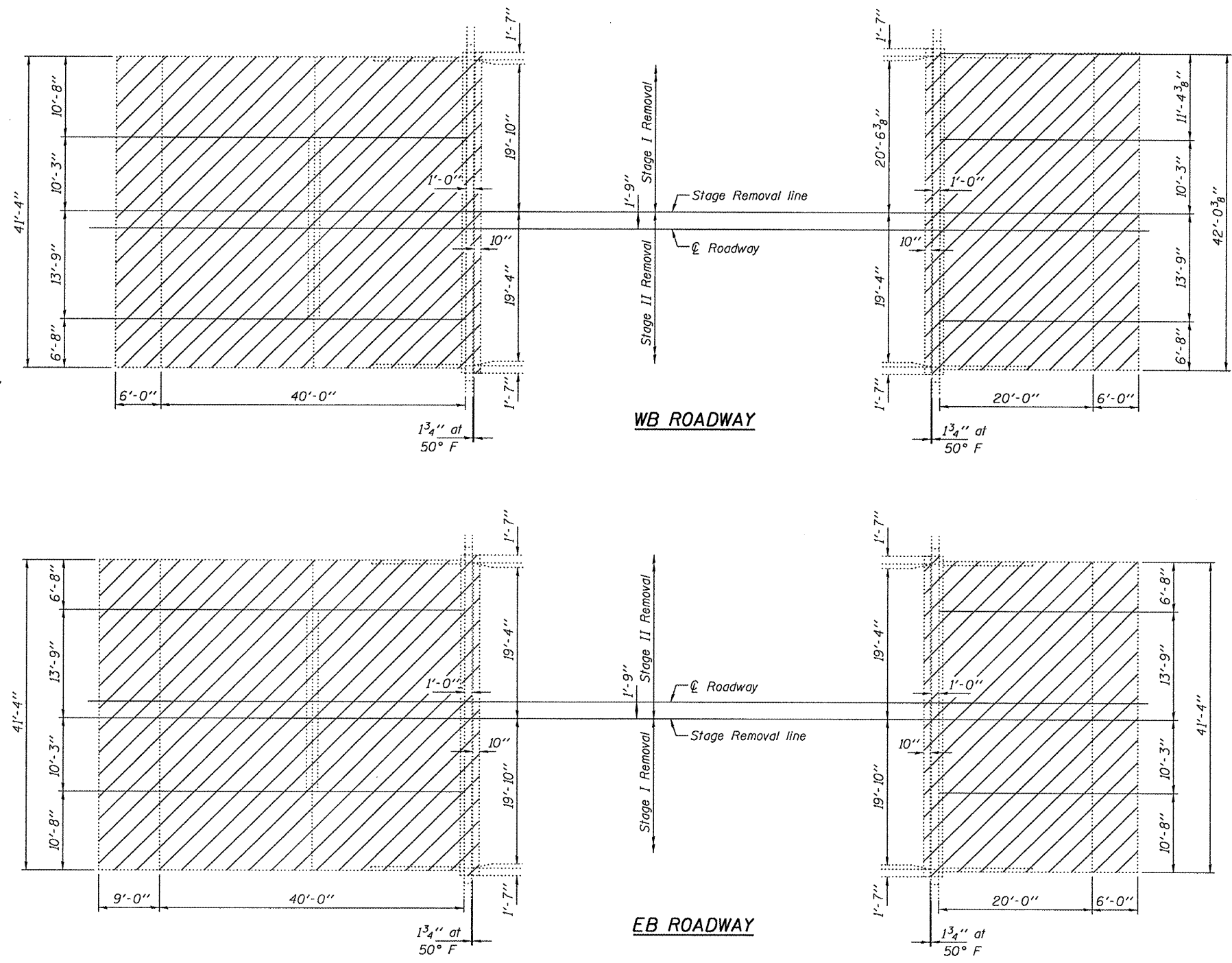
EXPIRES 11-30-2012

DESIGNED <i>David Carl Puzey</i>	EXAMINED <i>John F. [Signature]</i>	DATE MARCH 16, 2011
CHECKED <i>Adam F. Holloway</i>	PASSED <i>John F. [Signature]</i>	
DRAWN <i>baliva</i>		
CHECKED <i>JFH</i>		

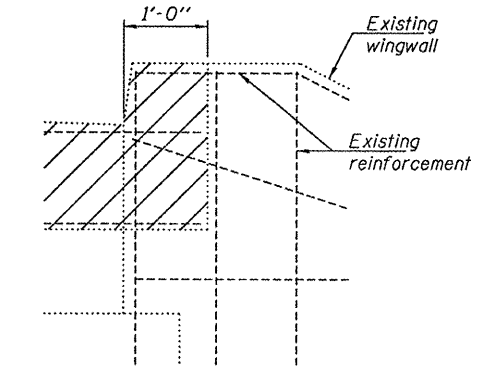
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION
FAI 70 OVER BEAVER CREEK
SN 003-0009 (EB) & 003-0010 (WB)

F.A.I. RTE. 70	SECTION 3-4BI-1	COUNTY BOND	TOTAL SHEETS 35	SHEET NO. 4
CONTRACT NO. 76E23			ILLINOIS FED. AID PROJECT	



SECTION THRU JOINT



REMOVAL AT WINGWALL

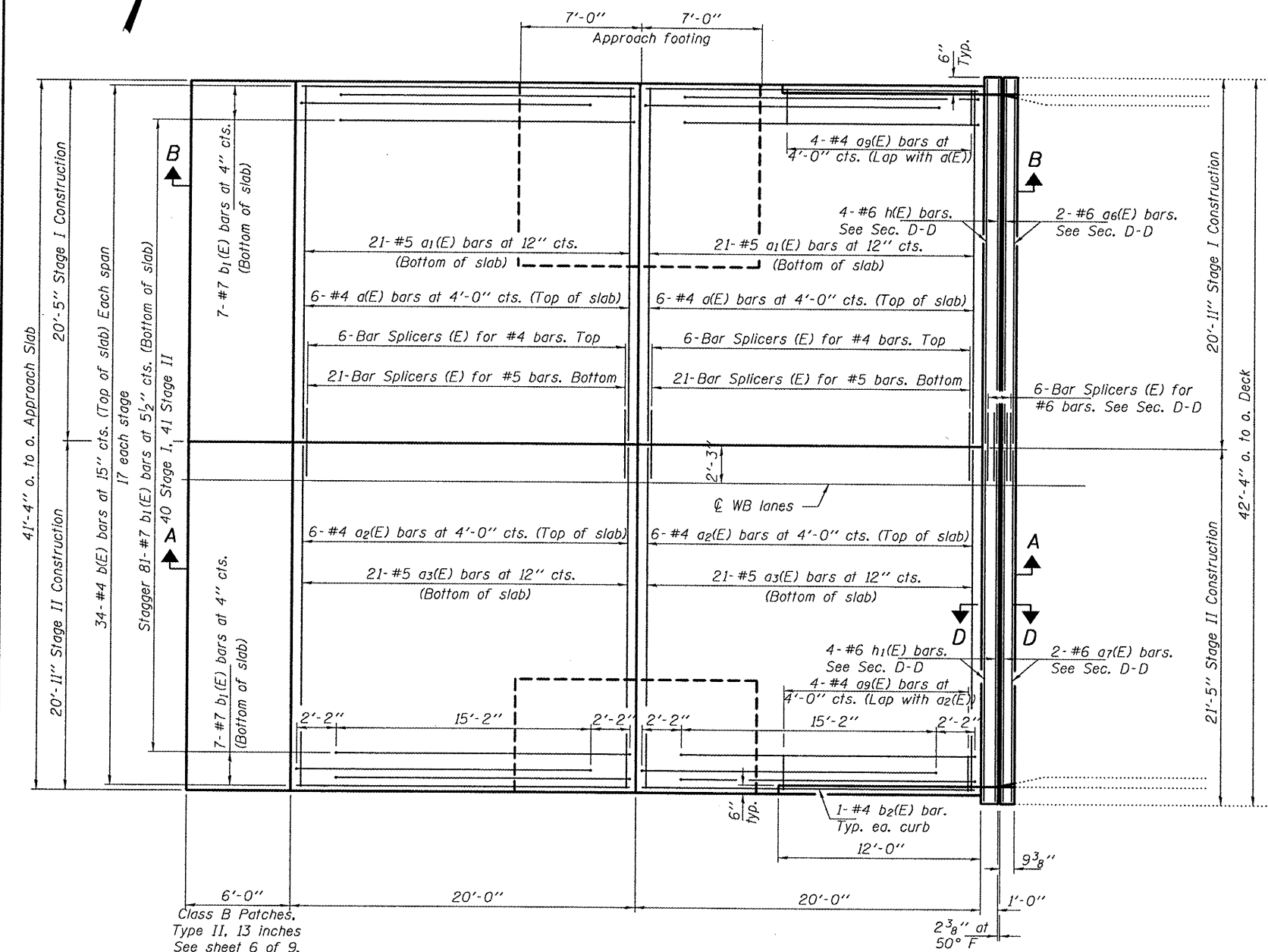
DESIGNED <i>I.J.L.</i>	EXAMINED <i>James F. J...</i>	DATE <u>MARCH 16, 2011</u>
CHECKED <i>ATH</i>	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN <i>baliva</i>	PASSED <i>Carl King</i>	
CHECKED <i>I.J.L. ATH</i>	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

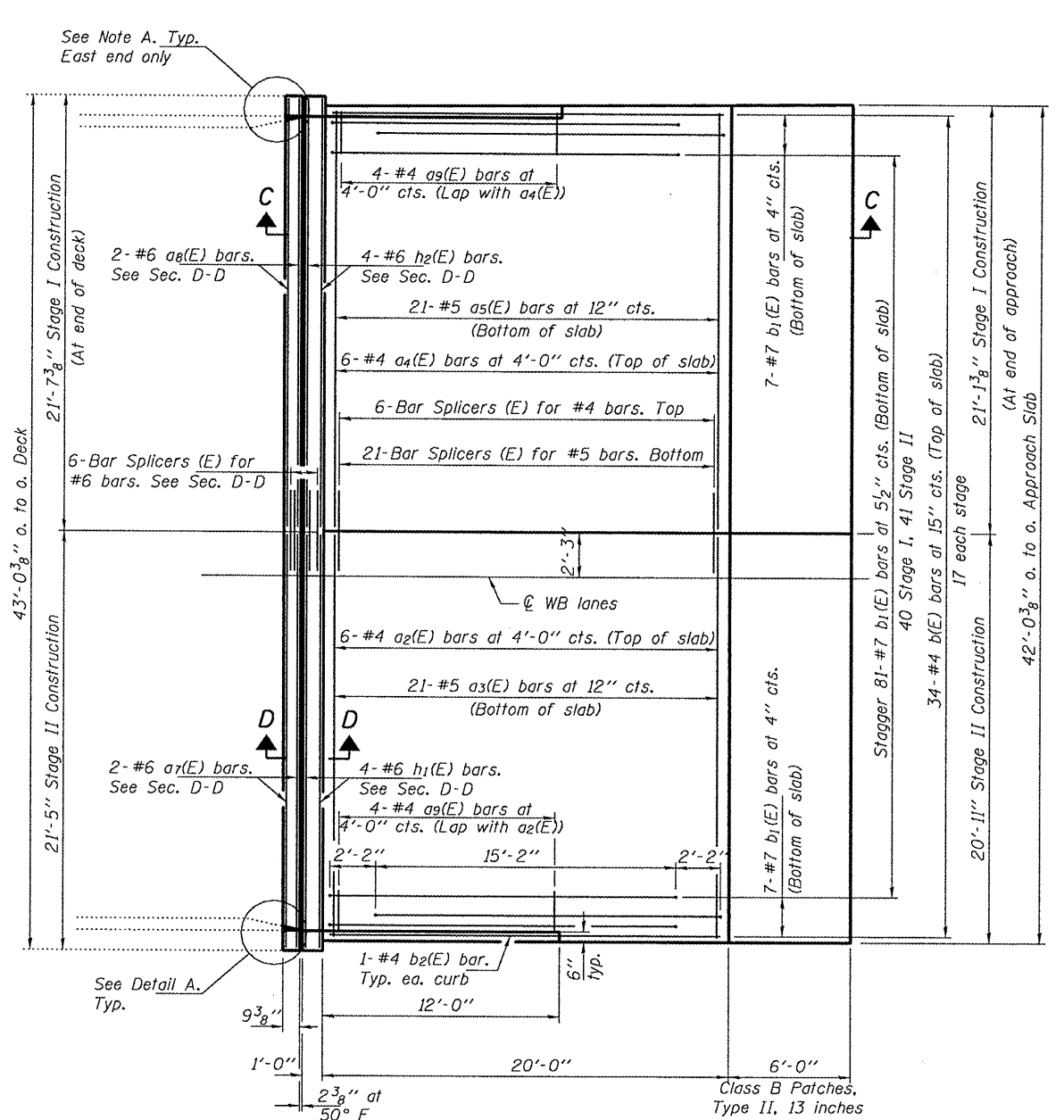
**REMOVAL PLAN
SN 003-0009 (EB) & 003-0010 (WB)**

SHEET NO. 2 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4B1-1		35	5
BOND			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



PLAN
West approach



PLAN
East approach

Tilt #7 b1(E) bars as required to maintain clearance.

Note A:
Existing guardrail at this location may need to be removed and reinstalled.
Existing attachment hardware to be reused.
Cost included with Concrete Superstructure

For Sections A-A, B-B, C-C & D-D & Detail A, see sheet 5 of 9.

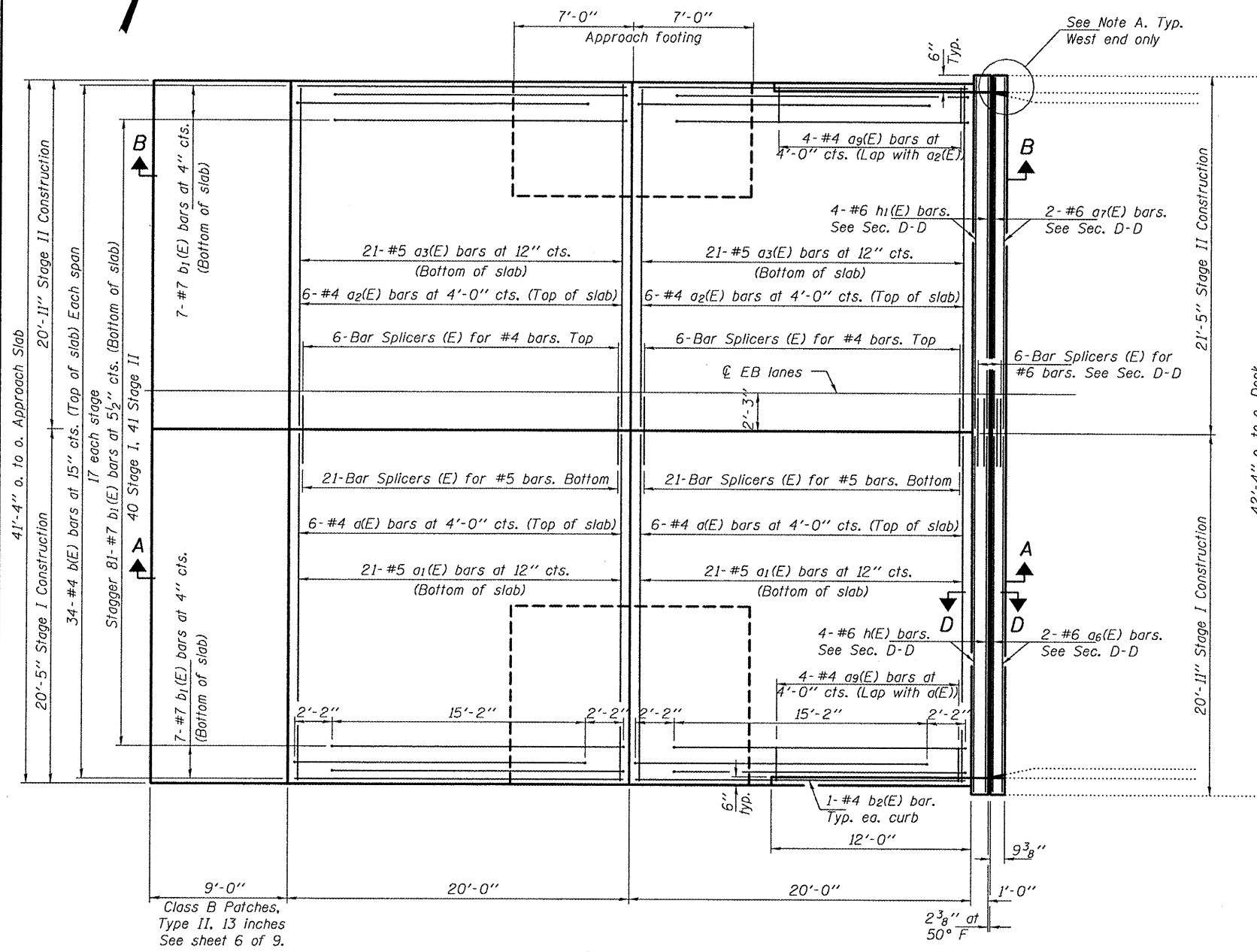
DESIGNED IJL	EXAMINED <i>Jayne F. [Signature]</i>	DATE MARCH 16, 2011
CHECKED ATH	PASSED <i>[Signature]</i>	
DRAWN Daliva	ACTING ENGINEER OF STRUCTURAL SERVICES	
CHECKED IJL ATH	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

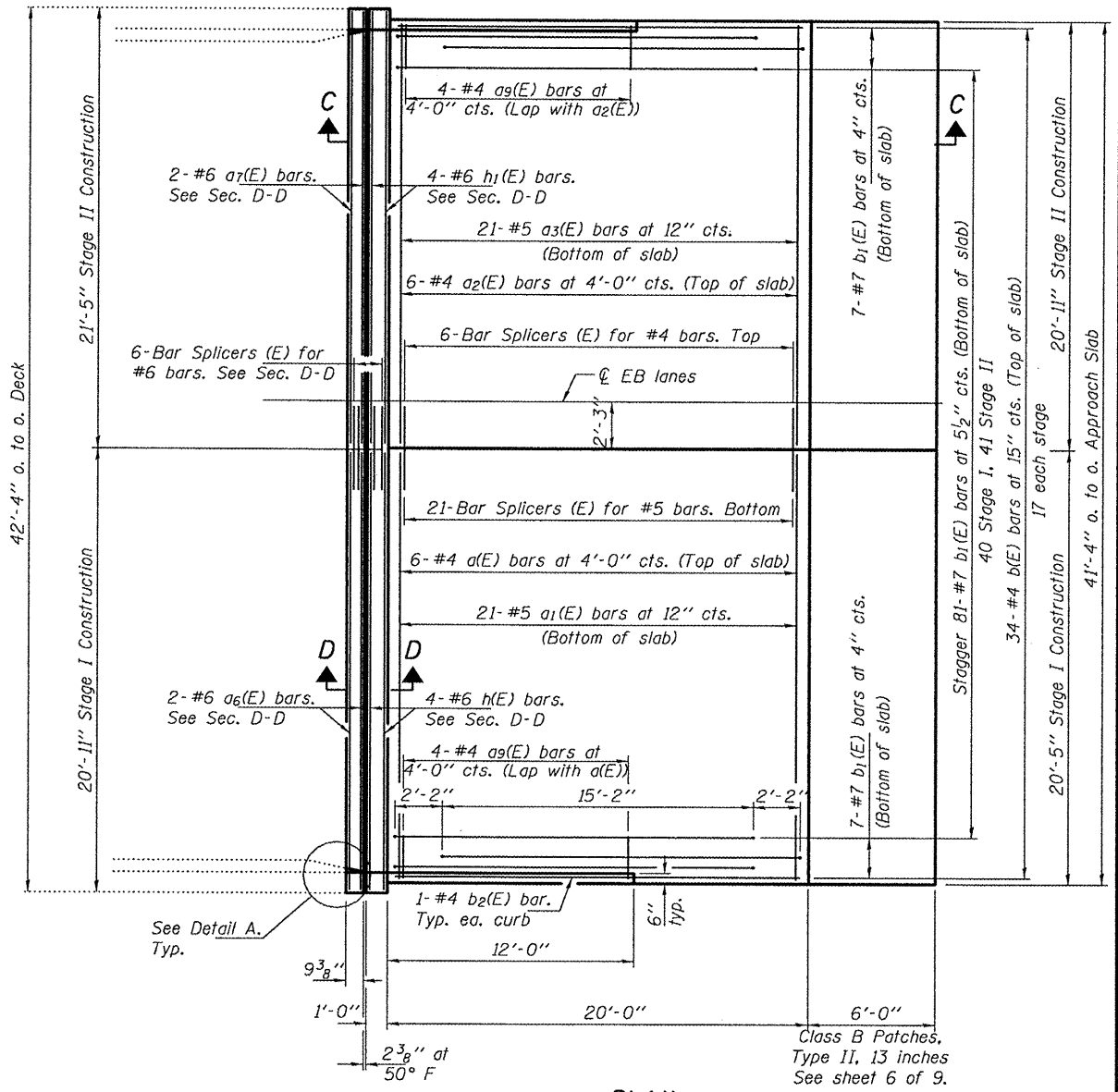
**REPLACEMENT PLAN
003-0010 (WB)**

SHEET NO. 3 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4B1-1	BOND	35	6
CONTRACT NO. 76E23			ILLINOIS FED. AID PROJECT	



PLAN
West approach



PLAN
East approach

Tilt #7 b₁(E) bars as required to maintain clearance.

Note A:
Existing guardrail at this location may need to be removed and reinstalled.
Existing attachment hardware to be reused.
Cost included with Concrete Superstructure

For Sections A-A, B-B, C-C & D-D & Detail A, see sheet 5 of 9.

DESIGNED	IJL
CHECKED	ATH
DRAWN	baliva
CHECKED	IJL ATH

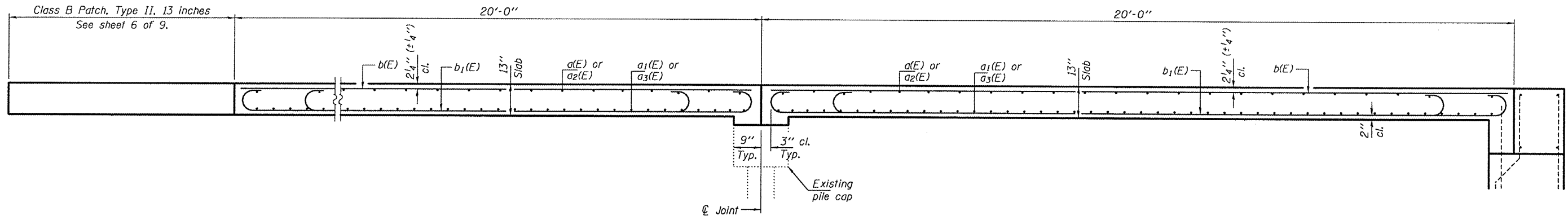
EXAMINED	<i>James F. J...</i>	DATE	MARCH 16, 2011
PASSED	ACTING ENGINEER OF STRUCTURAL SERVICES		
	ACTING ENGINEER OF BRIDGES AND STRUCTURES		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

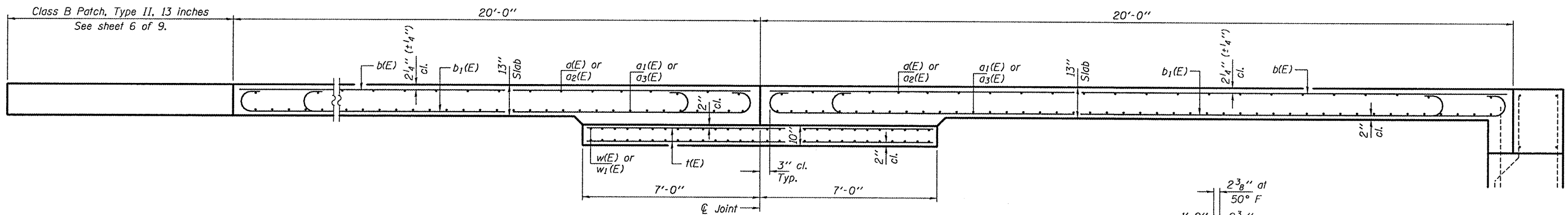
**REPLACEMENT PLAN
003-0009 (EB)**

SHEET NO. 4 OF 9 SHEETS

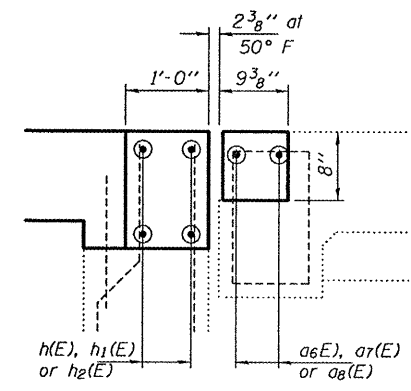
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70	3-4B1-1	BOND	35	7
CONTRACT NO. 76E23			ILLINOIS FED. AID PROJECT	



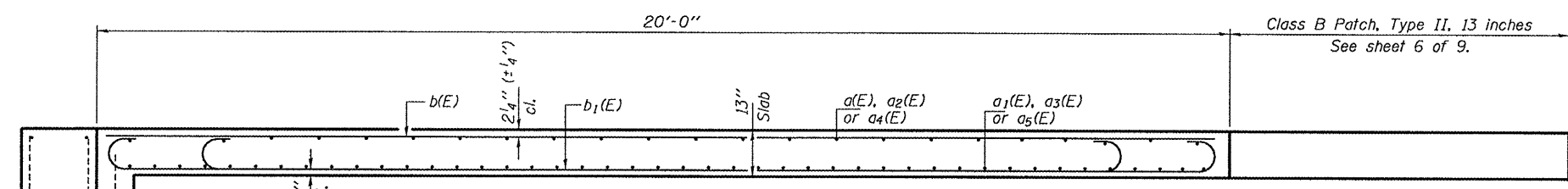
SECTION A-A



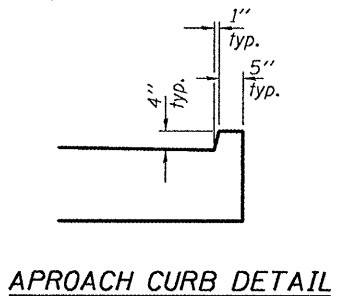
SECTION B-B



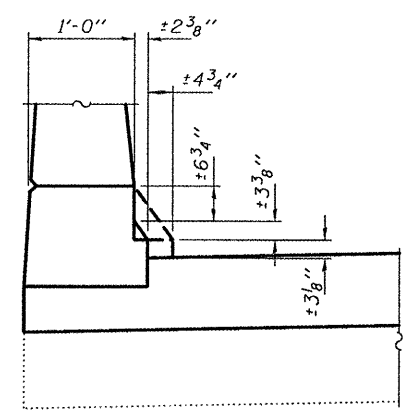
SECTION D-D



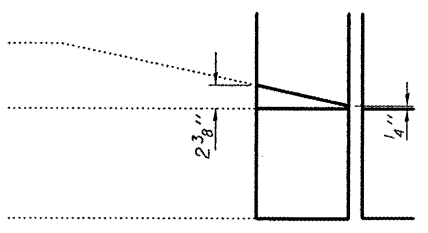
SECTION C-C



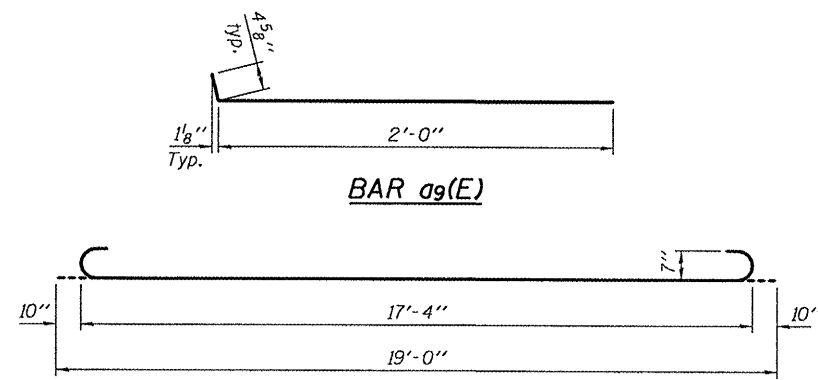
APPROACH CURB DETAIL



PARAPET DETAIL



DETAIL A



BAR a9(E)

BAR b1(E)

TWO STRUCTURES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	30	#4	19'-11"	—	
a1(E)	105	#5	19'-11"	—	
a2(E)	36	#4	20'-5"	—	
a3(E)	126	#5	20'-5"	—	
a4(E)	6	#4	20'-8"	—	
a5(E)	21	#5	20'-8"	—	
a6(E)	6	#6	20'-7"	—	
a7(E)	8	#6	21'-1"	—	
a8(E)	2	#6	21'-3"	—	
a9(E)	32	#4	2'-5"	—	
b(E)	204	#4	19'-8"	—	
b1(E)	570	#7	19'-0"	—	
b2(E)	8	#4	11'-8"	—	
h(E)	12	#6	20'-7"	—	
h1(E)	16	#6	21'-1"	—	
h2(E)	4	#6	21'-3"	—	
h(E)	72	#4	13'-9"	—	
w(E)	116	#5	10'-2"	—	
w1(E)	116	#5	6'-2"	—	
Reinforcement Bars, Epoxy Coated				Pound	35370
Concrete Superstructure				Cu. Yds.	202.8
Concrete Removal				Cu. Yds.	210.8
Concrete Structures				Cu. Yds.	23.2

DESIGNED IJL
 CHECKED ATH
 DRAWN baliva
 CHECKED IJL ATH

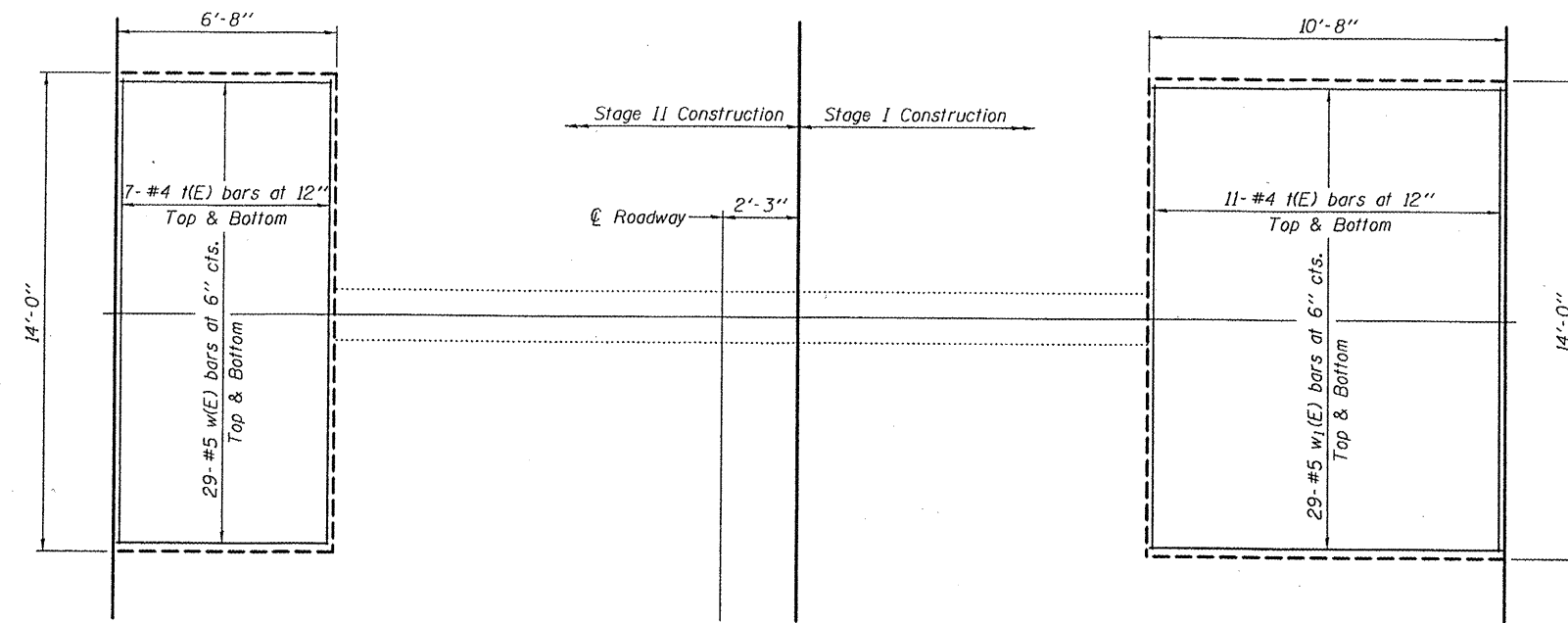
EXAMINED *James F. Jolly*
 PASSED *Carl Perry*

DATE MARCH 16, 2011
 ACTING ENGINEER OF STRUCTURAL SERVICES
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

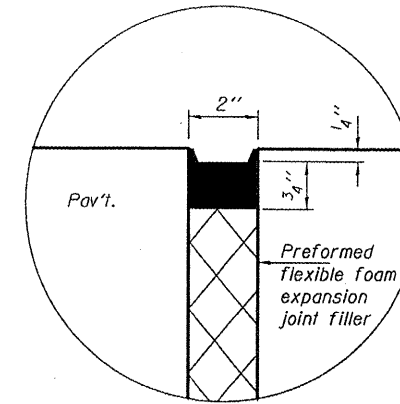
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
 003-0009 (EB) & 003-0010 (WB)

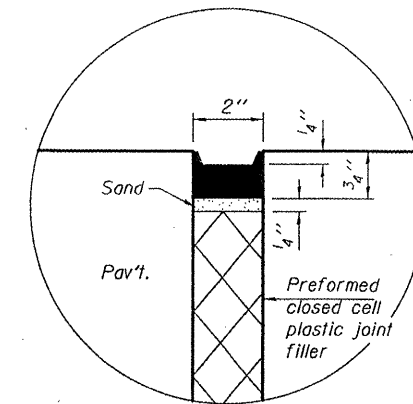
F.A.I. SECTION COUNTY TOTAL SHEET SHEET NO.
 RTE. TO 3-4B1-1 BOND 35 8
 CONTRACT NO. 76E23
 ILLINOIS FED. AID PROJECT



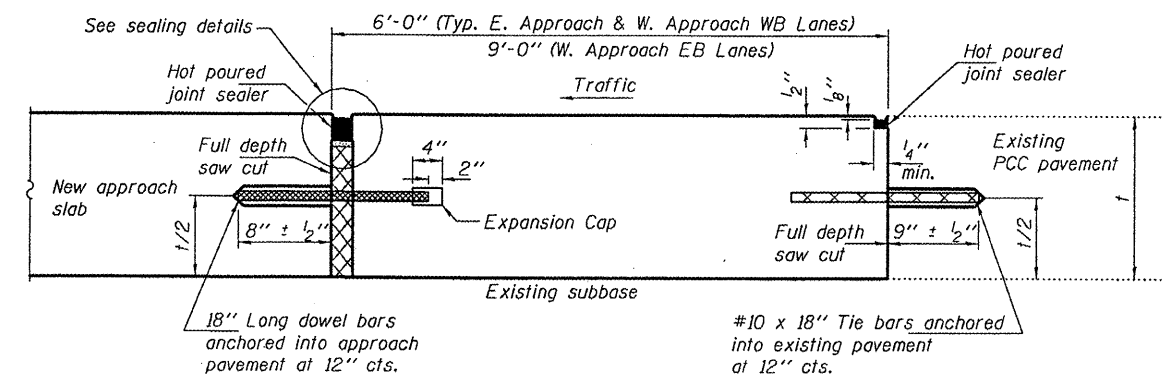
PLAN



SEALING DETAIL



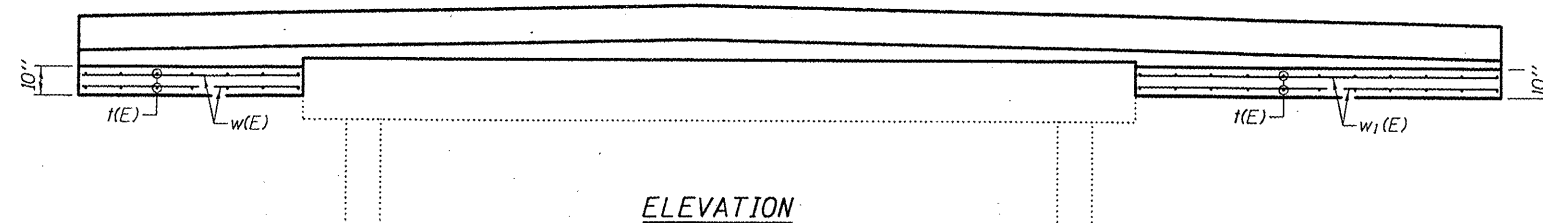
SEALING DETAIL



CLASS B PATCH, TYPE II, 13 INCHES

METHOD I
(See Standard 442101-7)

Tie Bars and Dowel Bars are to be installed in accordance with the applicable portions of Art. 442 of the Standard Specs. Cost of all labor and material is included in the unit cost EACH for Tie Bars 1 1/4" or Dowel Bars 1 1/2".



ELEVATION

WB Looking West
EB Looking East

DESIGNED	IJL
CHECKED	ATH
DRAWN	baliva
CHECKED	IJL ATH

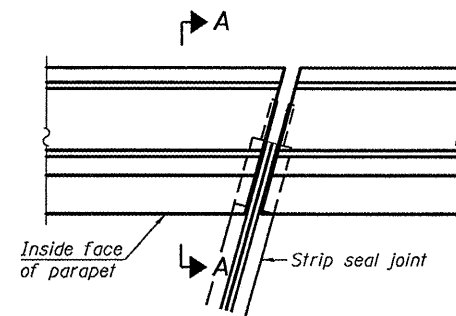
EXAMINED	<i>James F. Kelly</i>	DATE	MARCH 16, 2011
PASSED	ACTING ENGINEER OF STRUCTURAL SERVICES		
	<i>Carl Perry</i>		
	ACTING ENGINEER OF BRIDGES AND STRUCTURES		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

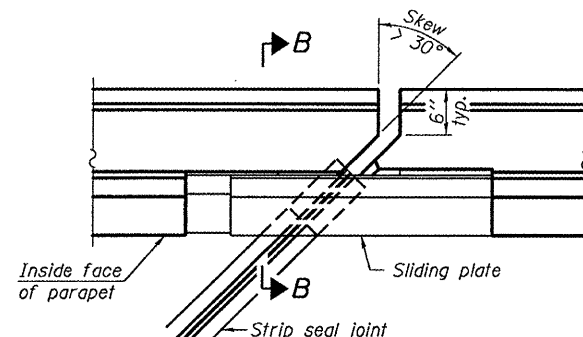
REPAIR DETAILS
SN 003-0009 (EB) & 003-0010 (WB)

SHEET NO. 6 OF 9 SHEETS

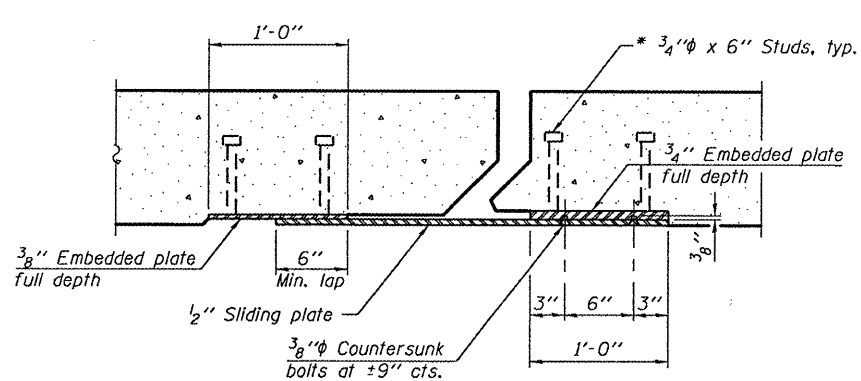
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-461-1		35	9
BOND			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



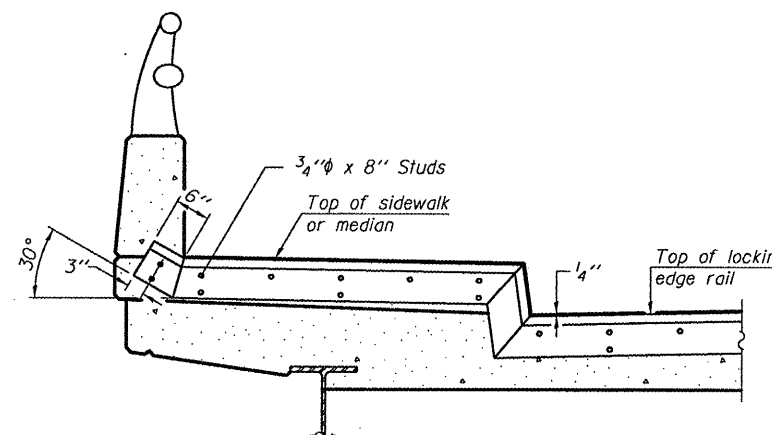
PLAN
(For skews $\leq 30^\circ$)



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

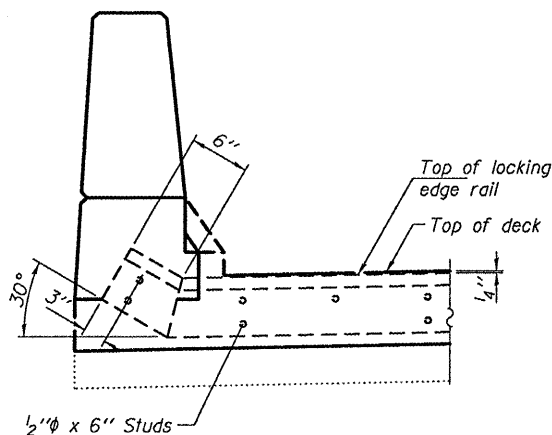


SECTION C-C

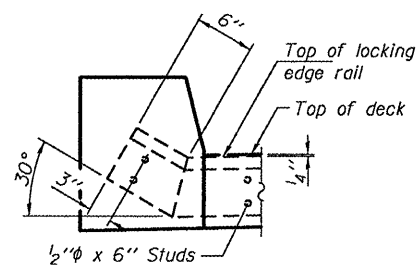


**TYPICAL END TREATMENT
AT SIDEWALK OR MEDIAN**

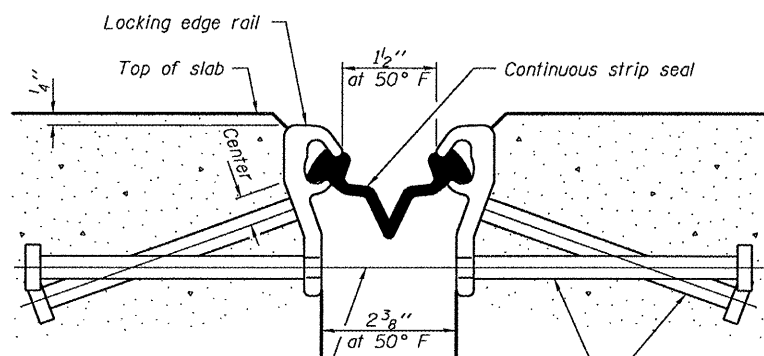
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A



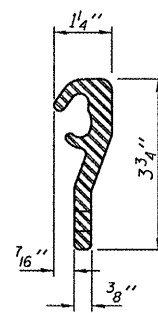
SECTION AT WINGWALL



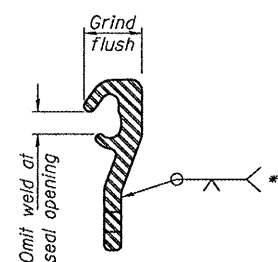
SECTION THRU STRIP SEAL JOINT

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

Place $1/2$ " ϕ 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

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of $1/4$ ". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	165

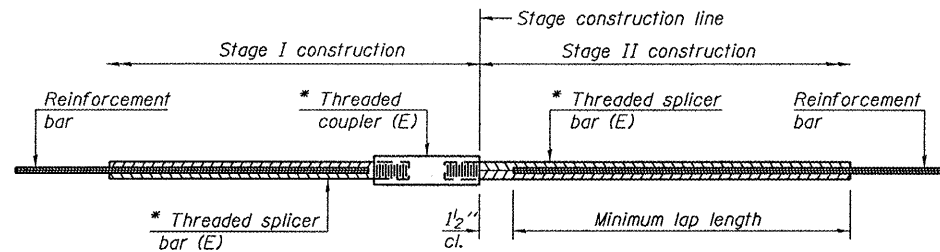
DESIGNED <i>I.J.L.</i>	EXAMINED <i>Joanne F. J. [Signature]</i>	DATE <u>MARCH 16, 2011</u>
CHECKED <i>ATH</i>	PASSED <i>[Signature]</i>	
DRAWN <i>baliva</i>		
CHECKED <i>I.J.L. ATH</i>		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL
SN 003-0009 (EB) & 003-0010 (WB)**

SHEET NO. 7 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-481-1	BOND	35	10
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

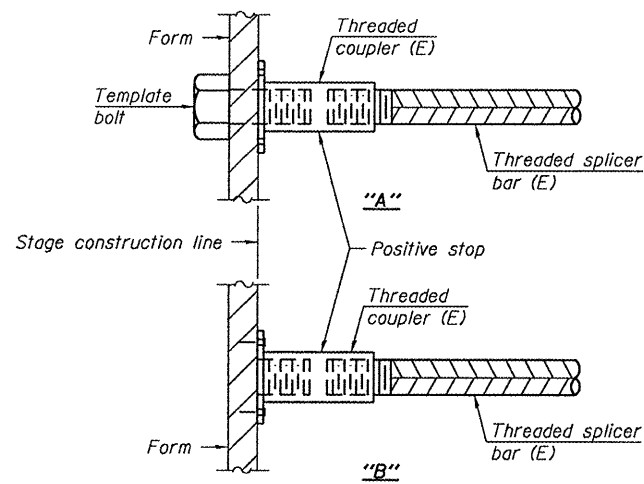
Bar size to be spliced	Minimum Lap Lengths				
	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- 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 + 1/2" + thread length

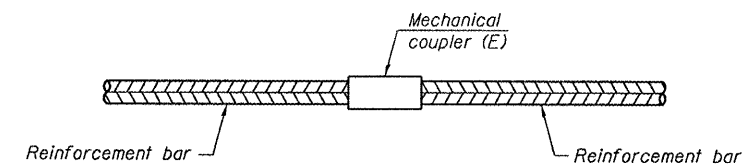
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Appr. Slab	#5	126	3
Appr. Slab	#4	36	3
Hatch Block	#6	16	4
Deck	#6	8	4



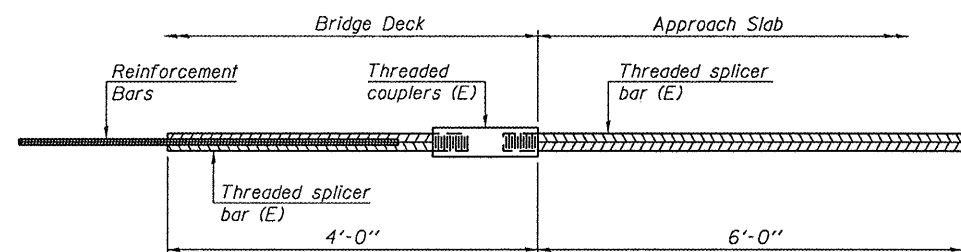
INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



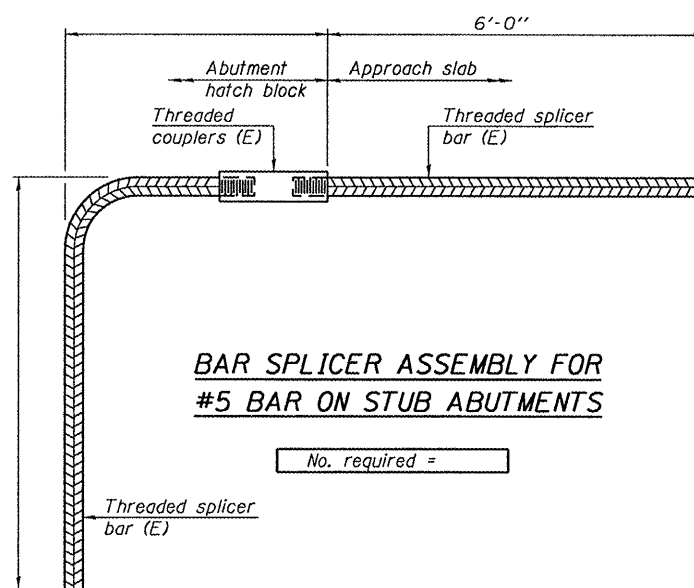
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

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

BSD-1

7-1-10

DESIGNED IJL	EXAMINED	DATE MARCH 16, 2011
CHECKED ATH	PASSED	
DRAWN baliva		
CHECKED IJL ATH		

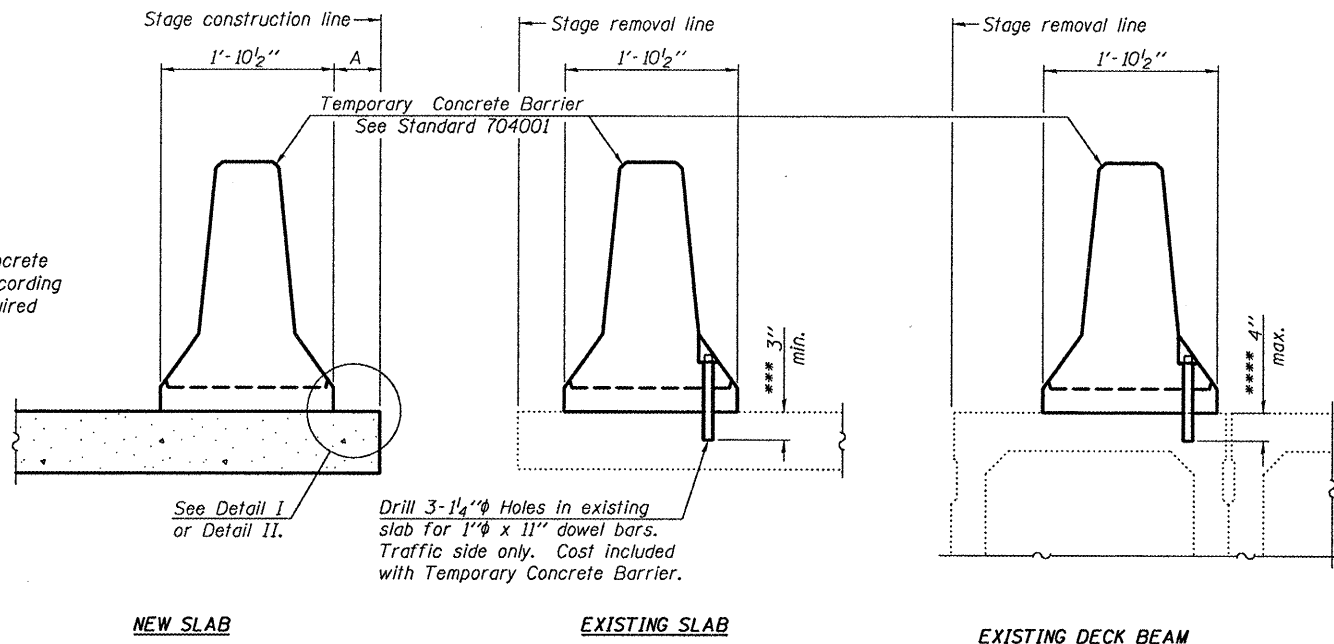
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY & MECHANICAL SPLICER DETAILS
SN 003-0009 (EB) & 003-0010 (WB)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4B1-1	BOND	35	11
CONTRACT NO. 76E23			ILLINOIS FED. AID PROJECT	

SHEET NO. 8 OF 9 SHEETS

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

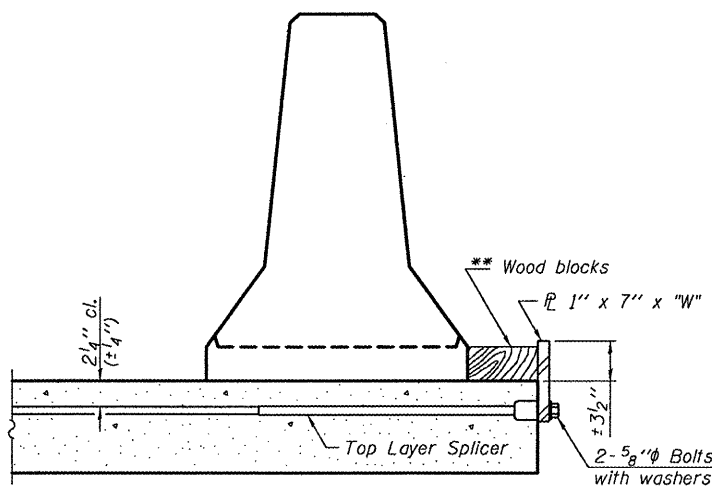
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel \bar{P} to the top layer of couplers with 2- $\frac{5}{8}$ " ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel \bar{P} to the concrete slab or concrete wearing surface with 2- $\frac{5}{8}$ " ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

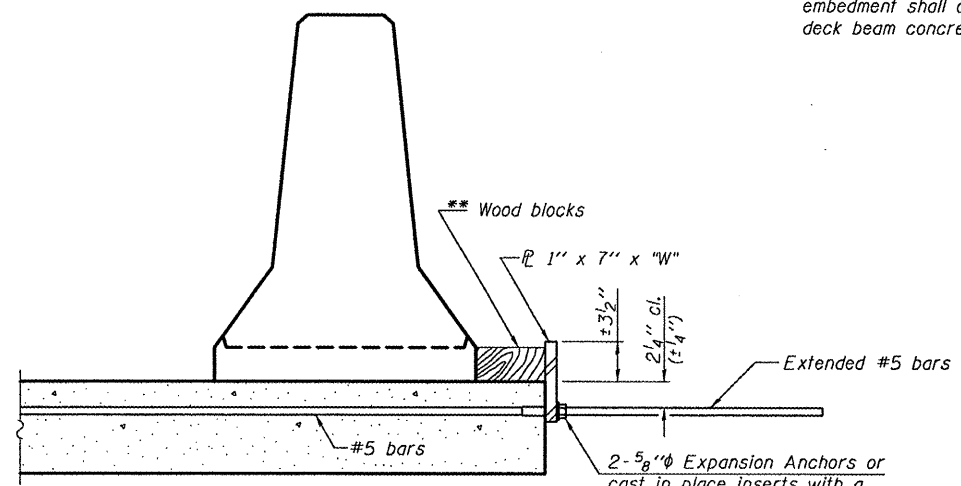
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



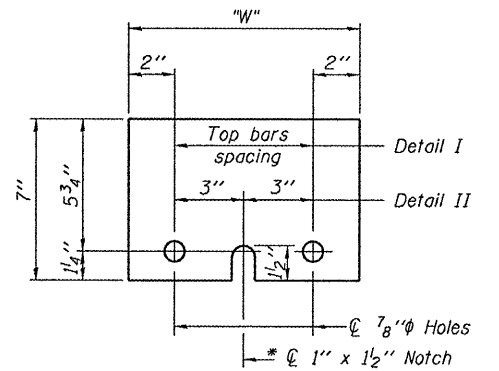
DETAIL I



DETAIL II

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

"W" = Top bars spacing + 4"



STEEL RETAINER \bar{P} 1" x 7" x "W"

* Required only with Detail II

R-27

7-1-10

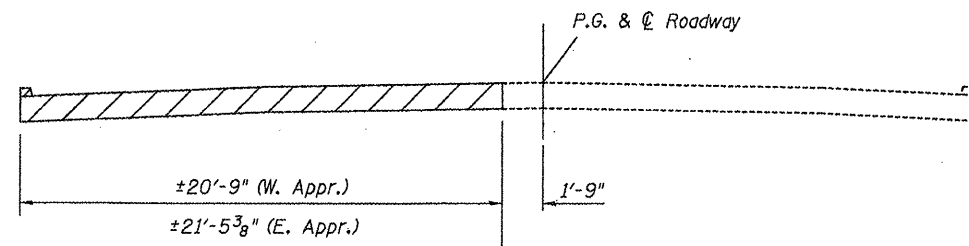
DESIGNED IJL	EXAMINED	DATE MARCH 16, 2011
CHECKED ATH	<i>Jaime F. J...</i>	
DRAWN balva	ACTING ENGINEER OF STRUCTURAL SERVICES	
CHECKED IJL ATH	<i>Carl...</i>	
	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
SN 003-0009 (EB) & 003-0010 (WB)

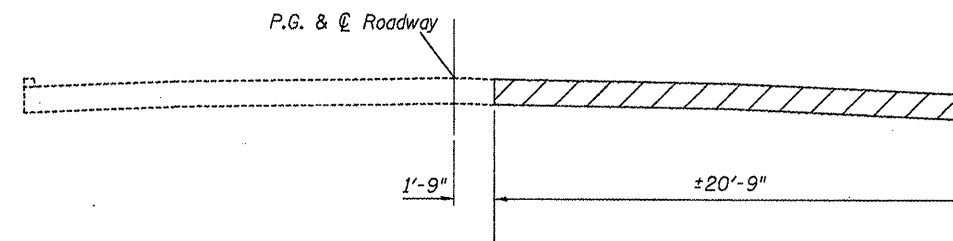
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4B1-1		35	12
BOND			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				

SHEET NO. 9 OF 9 SHEETS



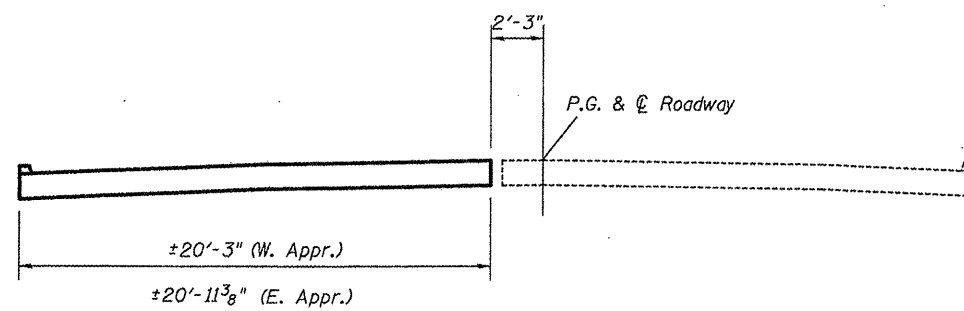
STAGE I REMOVAL (APPROACH PAVEMENT) (W.B.)

Looking East



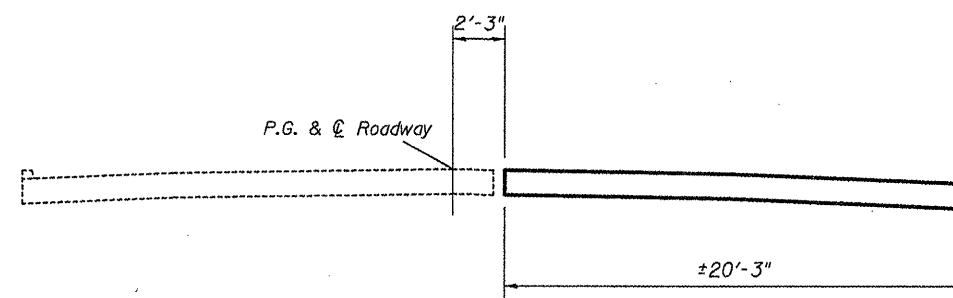
STAGE I REMOVAL (APPROACH PAVEMENT) (E.B.)

Looking East



STAGE I CONSTRUCTION (APPROACH PAVEMENT) (W.B.)

Looking East



STAGE I CONSTRUCTION (APPROACH PAVEMENT) (E.B.)

Looking East

Match existing X-section slopes

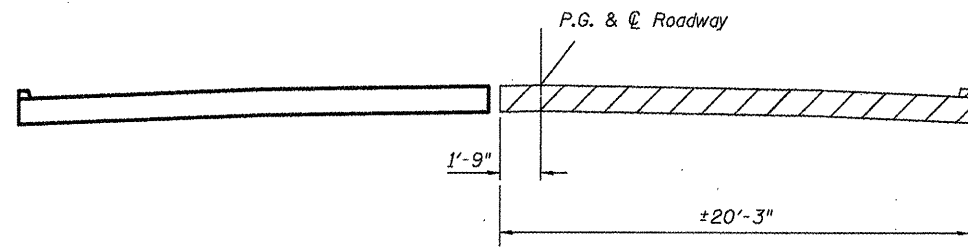
DESIGNED - AYV	EXAMINED	DATE - February 18, 2011
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

X-SEC (STAGE I REMOVAL & CONSTRUCTION OF APPROACH PAVEMENT)

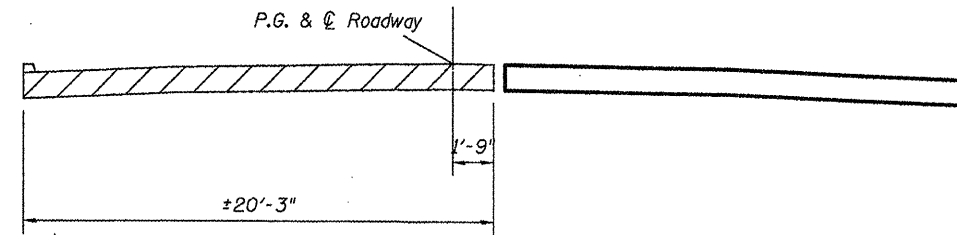
SHEET NO. 10 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-481-1	Bond	35	13
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



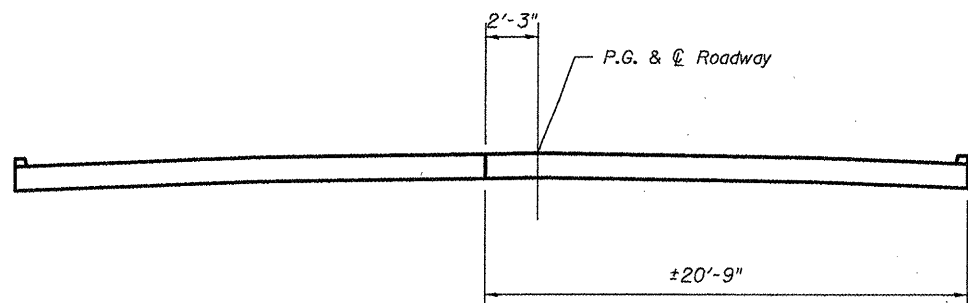
STAGE II REMOVAL (APPROACH PAVEMENT) (W.B.)

Looking East



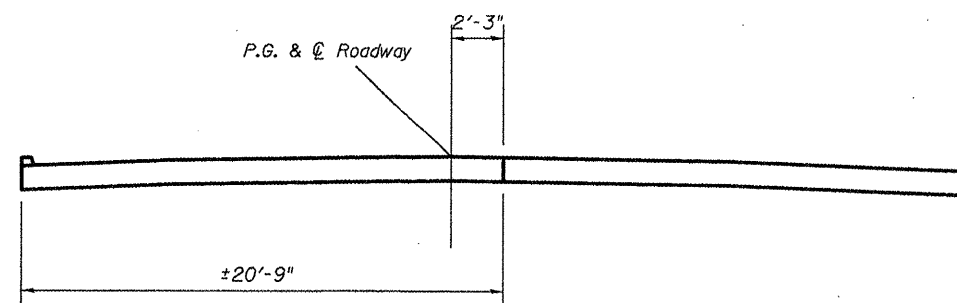
STAGE II REMOVAL (APPROACH PAVEMENT) (E.B.)

Looking East



STAGE II CONSTRUCTION (APPROACH PAVEMENT) (W.B.)

Looking East



STAGE II CONSTRUCTION (APPROACH PAVEMENT) (E.B.)

Looking East

Match existing X-section slopes

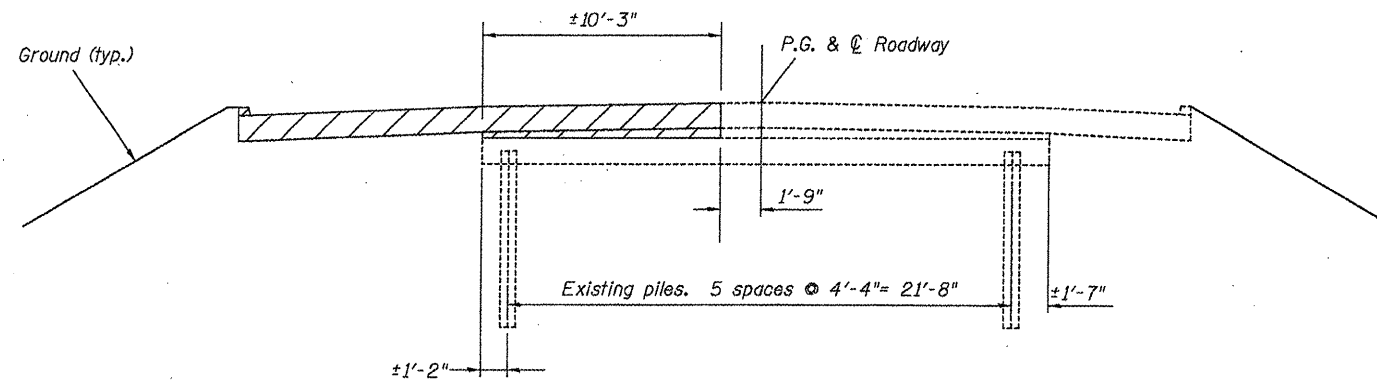
DESIGNED - AYW	EXAMINED
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES
DRAWN - AYW	PASSED
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES

DATE - February 18, 2011

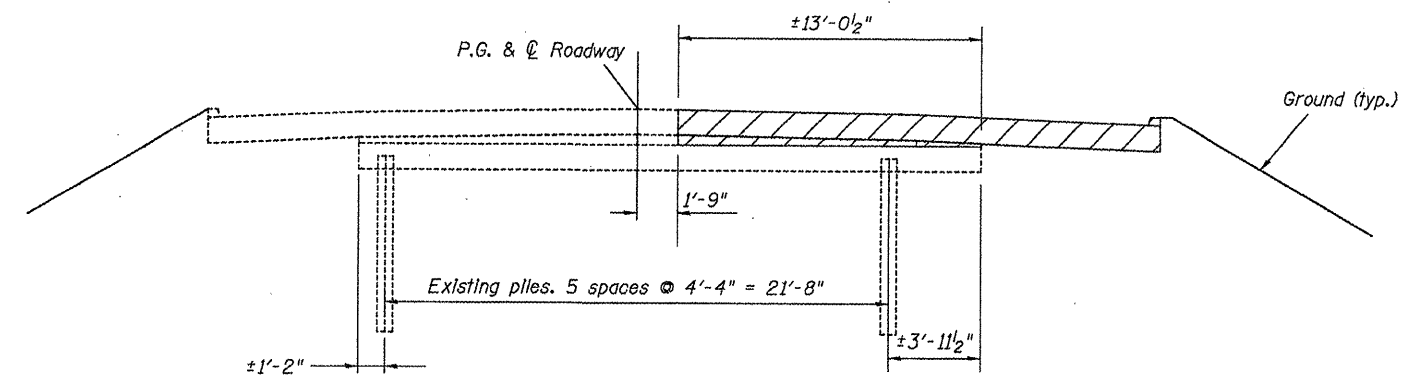
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

X-SEC (STAGE II REMOVAL & CONSTRUCTION OF APPROACH PAVEMENT)

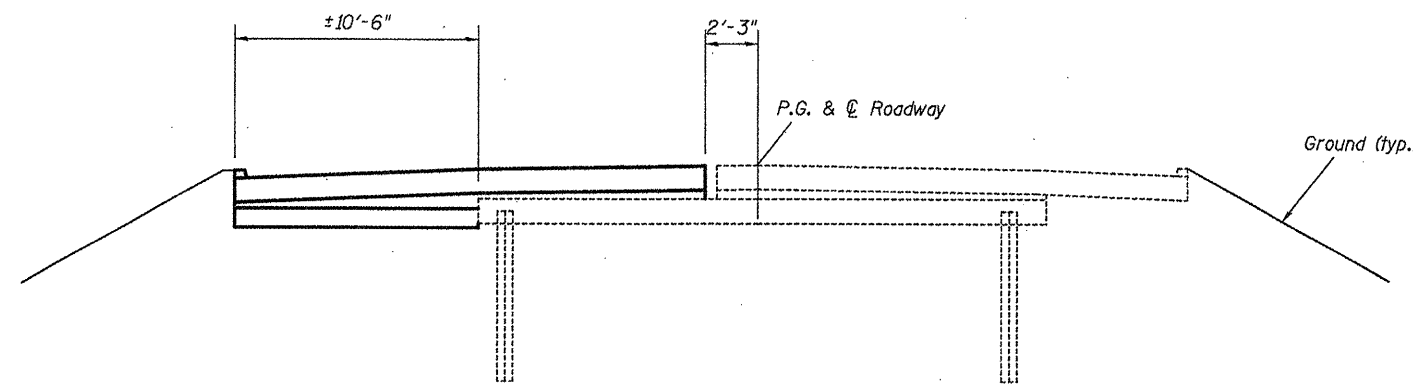
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4BI-1	Bond	35	14
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



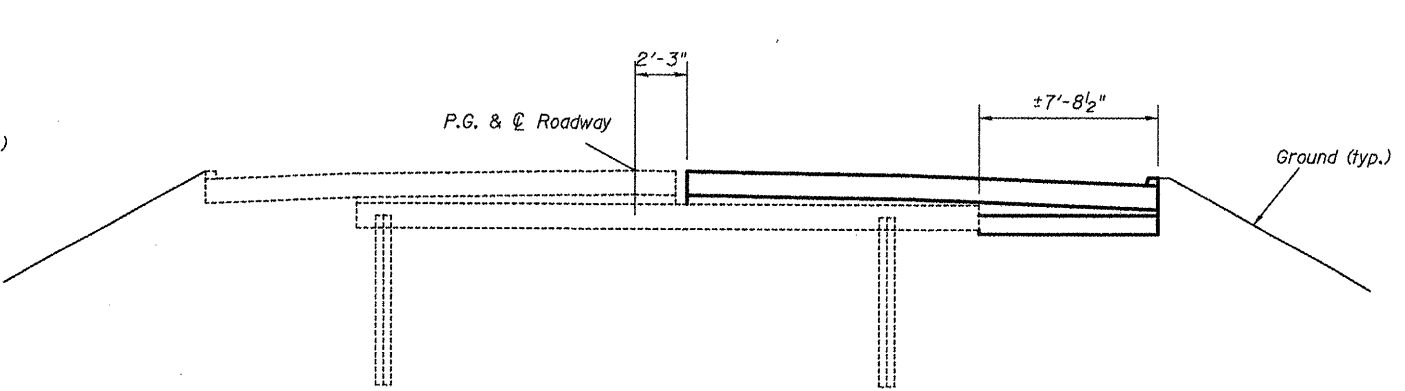
STAGE I REMOVAL (X-SEC @ APPROACH FOOTING) (W.B.)
Looking East



STAGE I REMOVAL (X-SEC @ APPROACH FOOTING) (E.B.)
Looking East



Sec C-C
STAGE I CONSTRUCTION (X-SEC @ APPROACH FOOTING) (W.B.)
Looking East



Sec D-D
STAGE I CONSTRUCTION (X-SEC @ APPROACH FOOTING) (E.B.)
Looking East

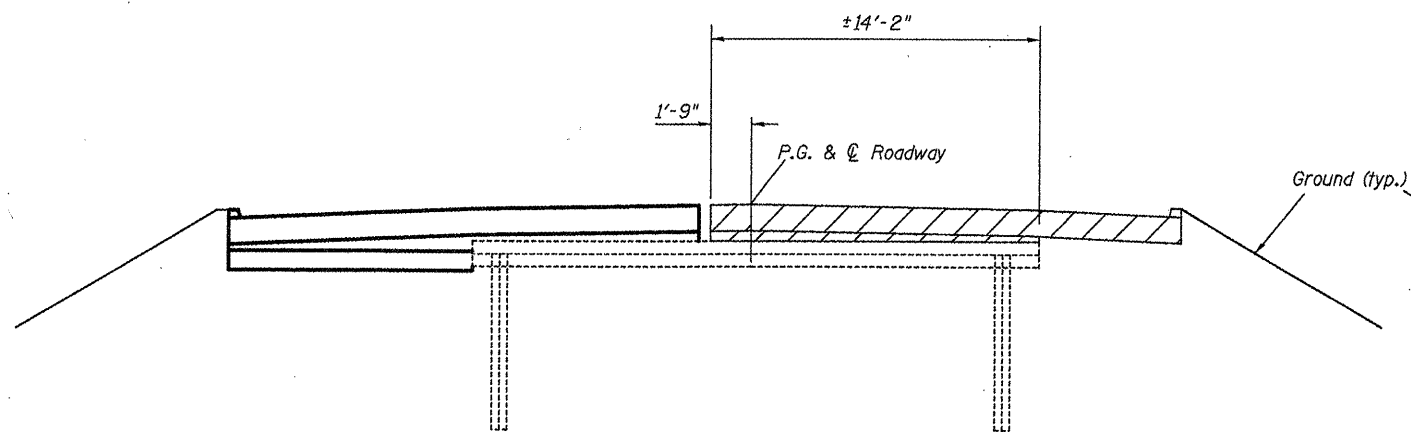
Match existing X-section slopes

DESIGNED - AYY	EXAMINED _____	DATE - February 18, 2011
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYY	PASSED _____	
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

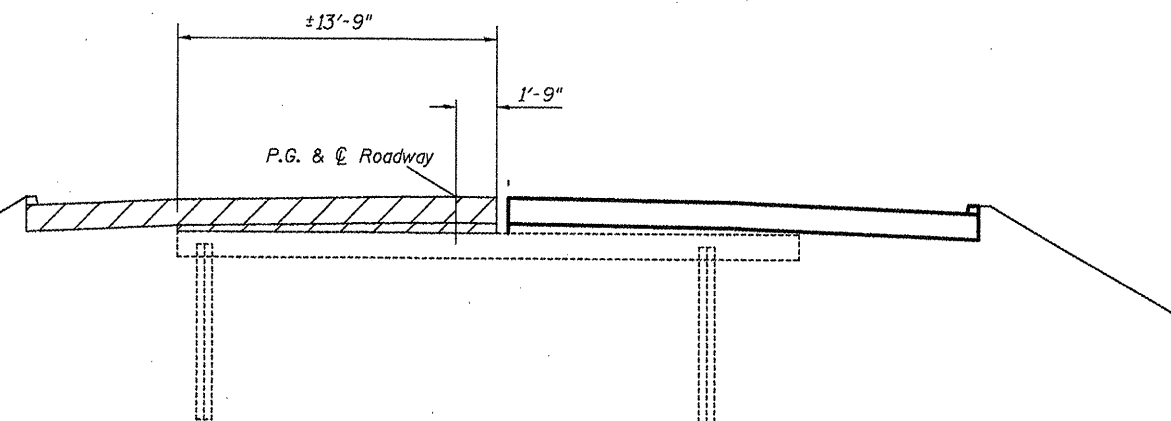
STAGE I REMOVAL & CONSTRUCTION (X-SEC @ APPROACH FOOTING.)
SHEET NO. 12 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	3-4BI-1	Bond	35	15
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



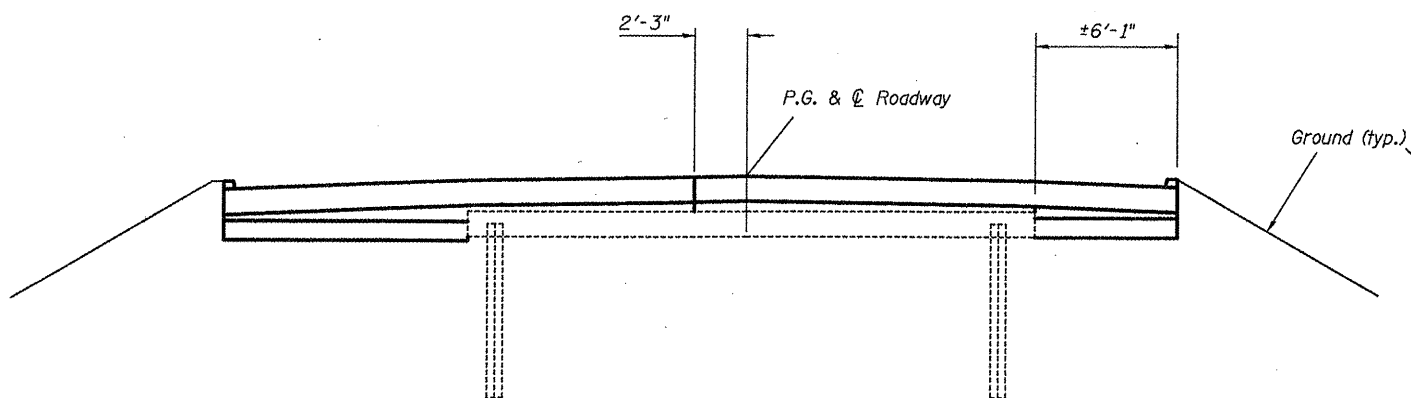
STAGE II REMOVAL (X-SEC @ APPROACH FOOTING) (W.B.)

Looking East



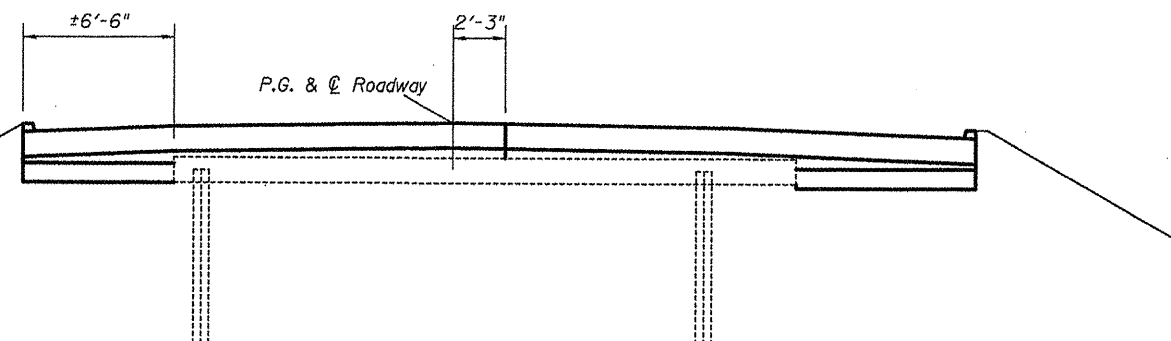
STAGE II REMOVAL (X-SEC @ APPROACH FOOTING) (E.B.)

Looking East



STAGE II CONSTRUCTION (X-SEC @ APPROACH FOOTING) (W.B.)

Looking East



STAGE II CONSTRUCTION (X-SEC @ APPROACH FOOTING) (E.B.)

Looking East

Match existing X-section slopes

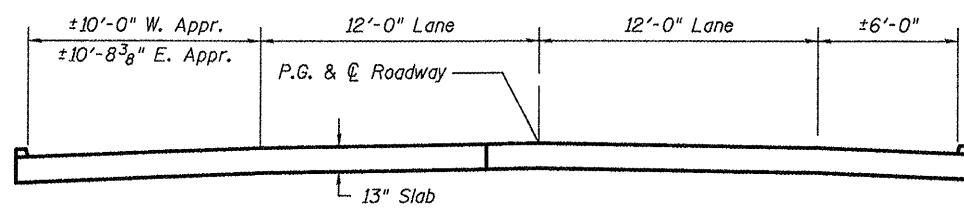
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CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

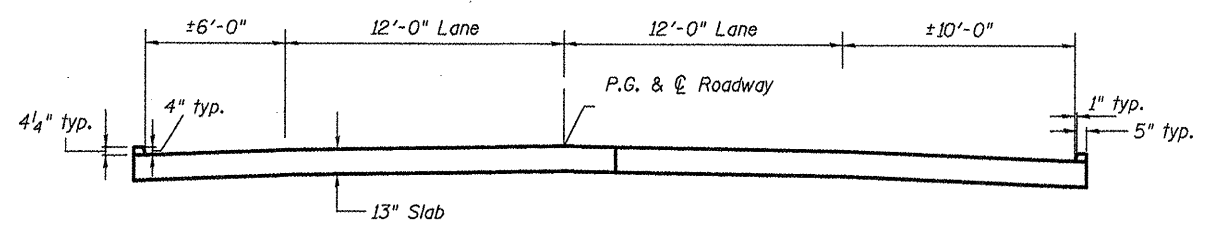
STAGE II REMOVAL & CONSTRUCTION (X-SEC @ APPROACH FOOTING)

SHEET NO. 13 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	3-4BI-1	Bond	35	16
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



003-0010 (W.B.)
Looking East



003-0009 (E.B.)
Looking East

Match existing X-section slopes

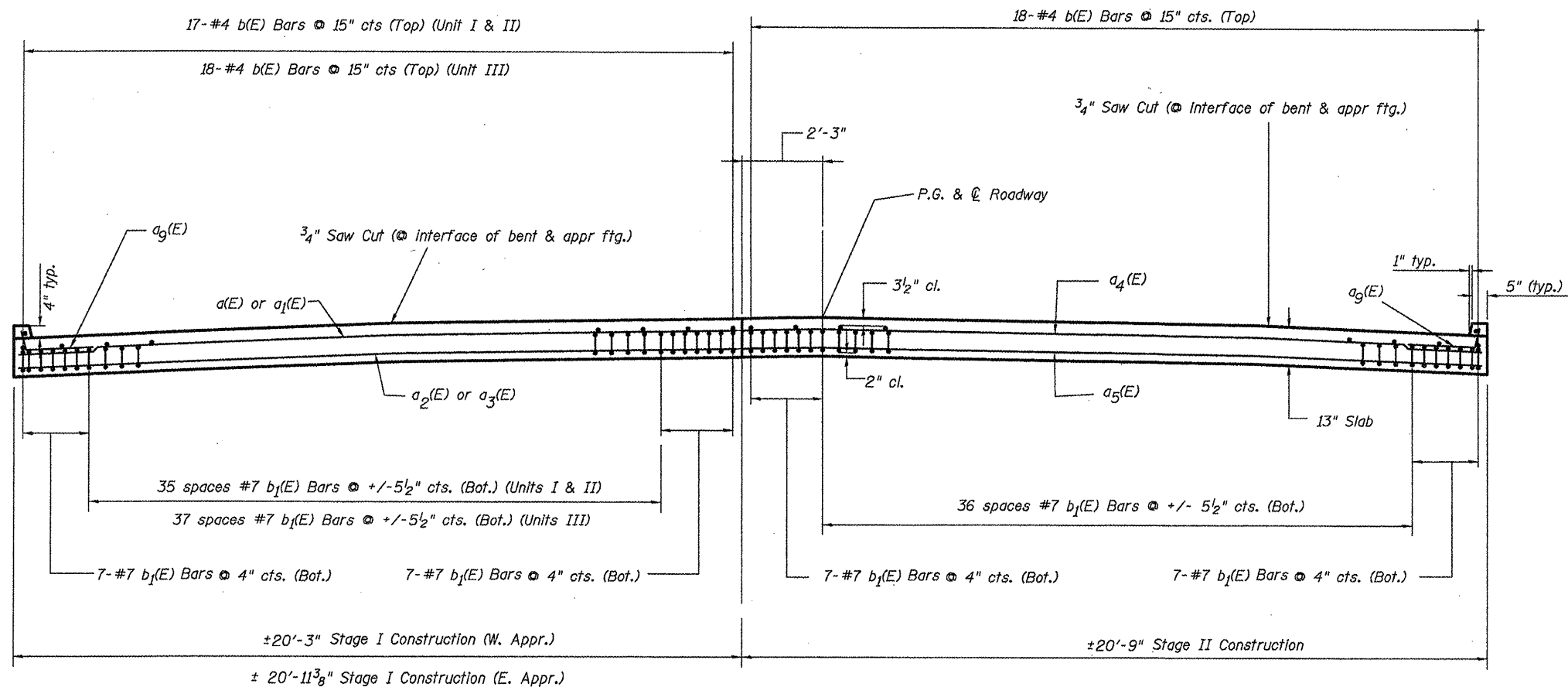
DESIGNED - AYW	EXAMINED _____	DATE - February 18, 2011
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED _____	
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

X-SECTION PROPOSED APPROACH

SHEET NO. 14 OF 32 SHEETS

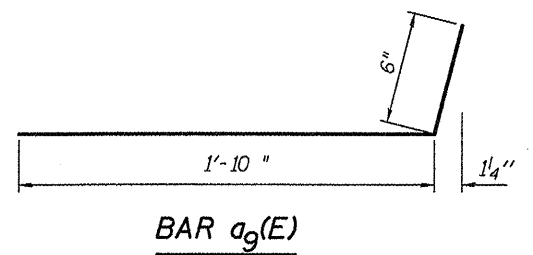
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4BI-1	Bond	35	17
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



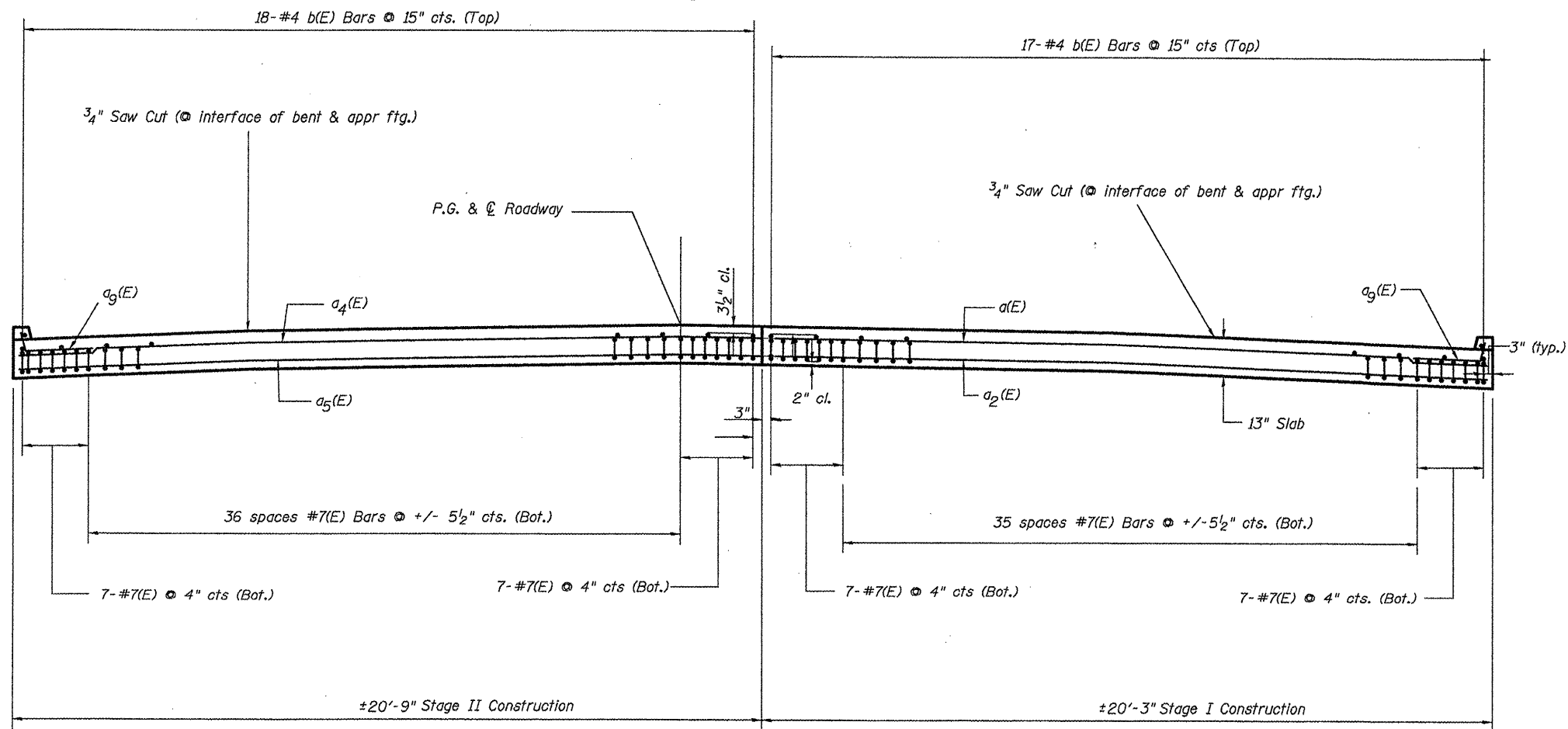
STAGE I & II CONSTRUCTION (W.B.)

Looking East
(Match existing X-section slopes)

MIN. BAR LAPS
#4 bar = 1'-9"



DESIGNED - AYV	EXAMINED	DATE - February 18, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED APPROACH X-SEC	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED -	PASSED	ENGINEER OF STRUCTURAL SERVICES			70	3-4BI-1	Bond	35	18	
DRAWN - AYV	ENGINEER OF BRIDGES AND STRUCTURES				SHEET NO. 15 OF 32 SHEETS		CONTRACT NO. 76E23		ILLINOIS FED. AID PROJECT	
CHECKED -										



STAGE I & II CONSTRUCTION (E.B.)

Looking East

(Match existing X-section slopes)

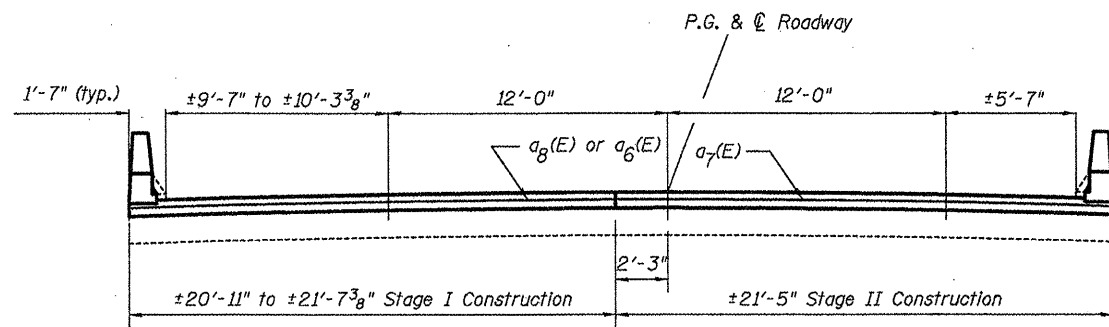
DESIGNED - AYW	EXAMINED _____	DATE - February 18, 2011
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED _____	
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

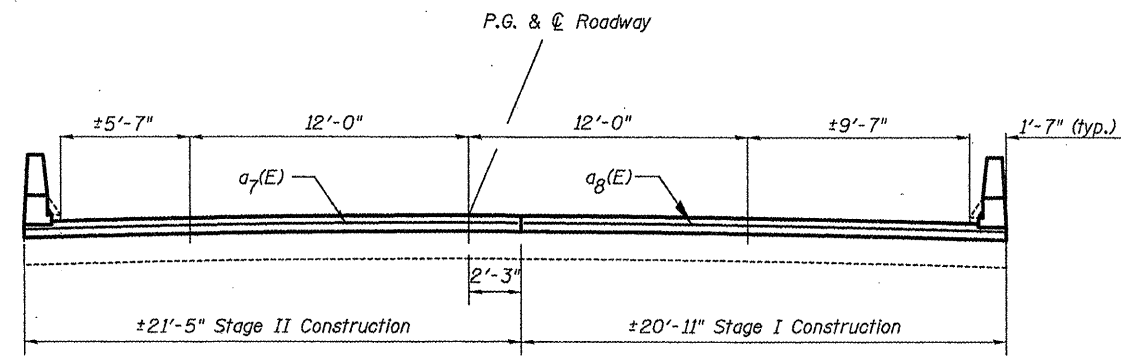
PROPOSED APPROACH X-SEC

SHEET NO. 16 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-461-1	Bond	35	19
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



SN 003-0010 (W.B.)
Looking East



SN 003-0009 (E.B.)
Looking East

Match existing X-sections slopes

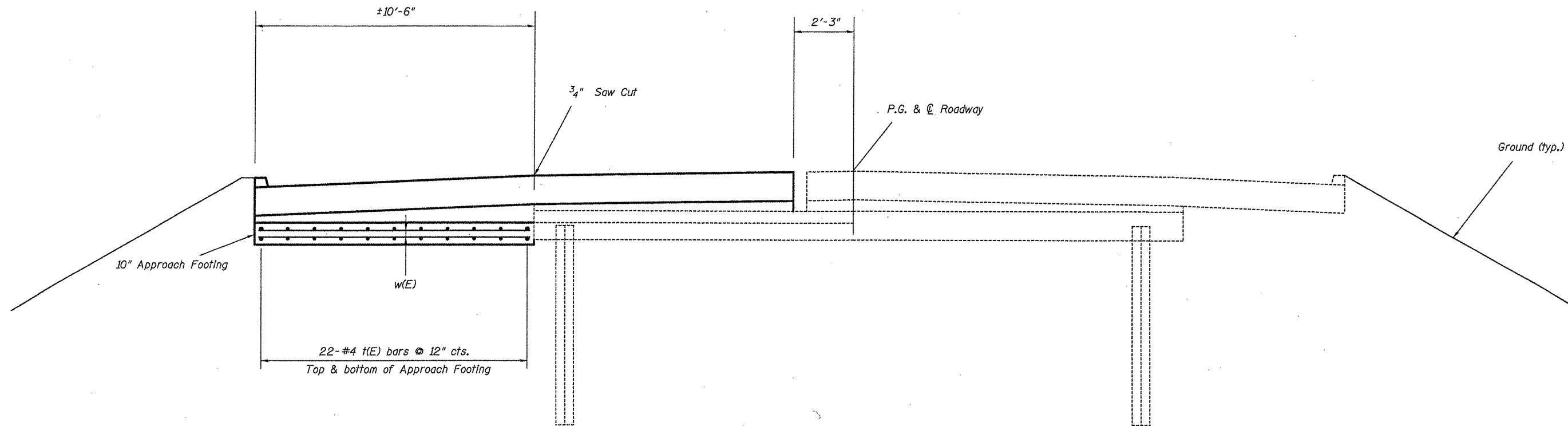
DESIGNED - AYW	EXAMINED	DATE - February 18, 2011
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED BRIDGE X-SEC

SHEET NO. 17 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4B1-1	Bond	35	20
CONTRACT NO. 76E23			ILLINOIS FED. AID PROJECT	



Sec C-C

X-SEC @ APPROACH FOOTING (W.B.) STAGE I CONSTRUCTION

Looking East

Match existing X-section slopes

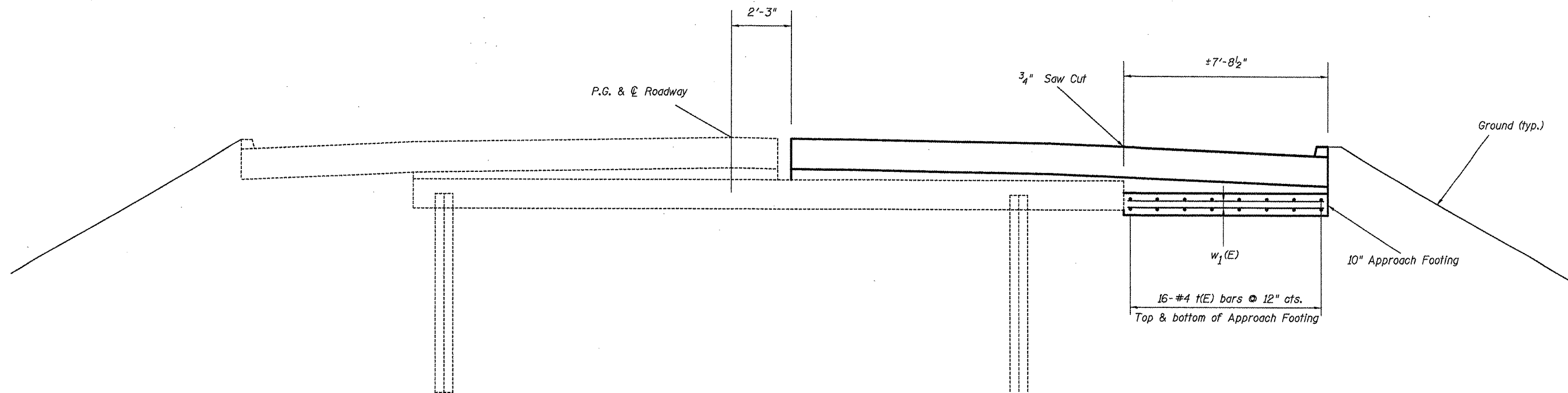
DESIGNED - AYW	EXAMINED	DATE - February 18, 2011
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED	
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

X-SEC @ APPROACH FOOTING (W.B.) (STAGE I CONSTRUCTION)

SHEET NO. 18 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4BI-1	Bond	35	21
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



Sec D-D
X-SEC @ APPROACH FOOTING (E.B.) (STAGE I CONSTRUCTION)

Looking East

Match existing X-section slopes

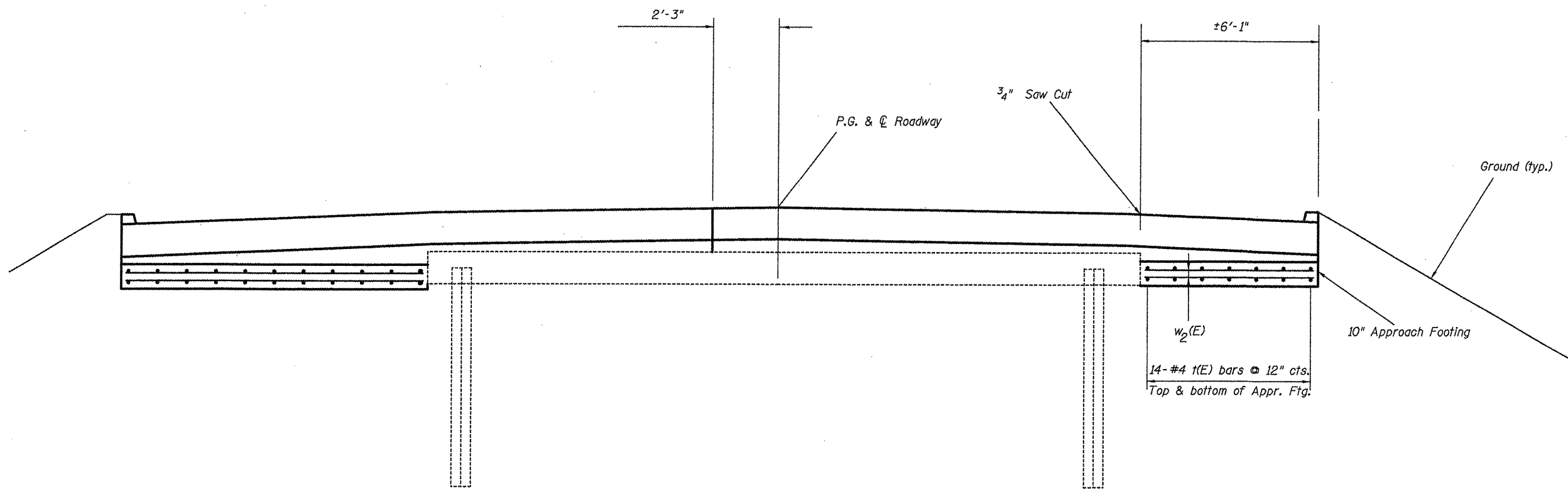
DESIGNED - AYV	EXAMINED _____	DATE - February 18, 2011
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

X-SEC @ APPROACH FOOTING (E.B.) (STAGE I CONSTRUCTION)

SHEET NO. 19 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4BI-1	Bond	35	22
			CONTRACT NO. 76E23	
<small>ILLINOIS FED. AID PROJECT</small>				



Sec E-E

X-SEC @ APPROACH FOOTING (W.B.) (STAGE I CONSTRUCTION)

Looking East

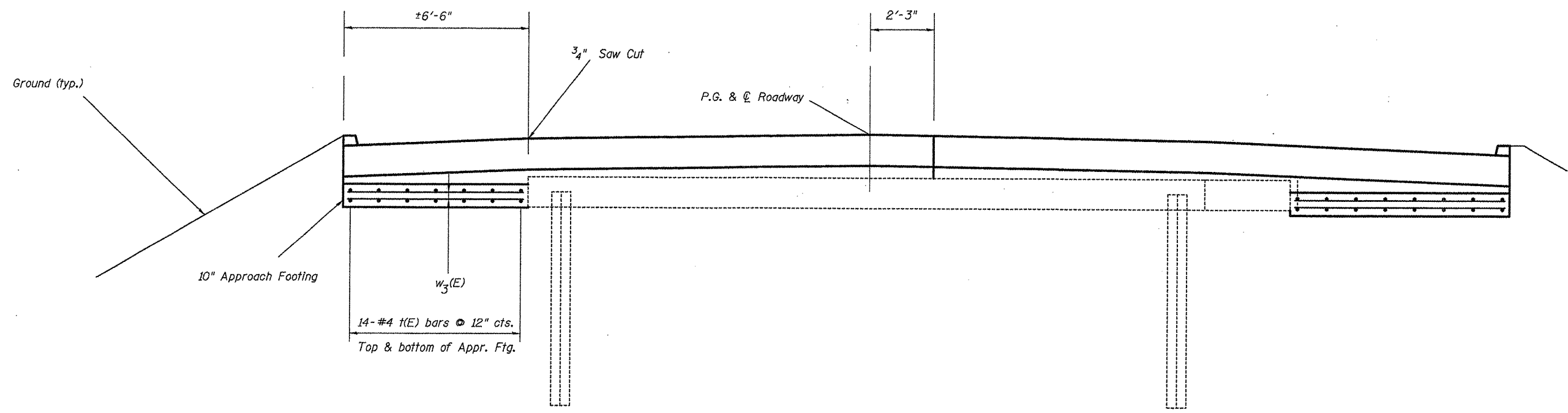
Match existing X-section slopes

DESIGNED - AYW	EXAMINED	DATE - February 18, 2011
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED	
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

X-SEC @ APPROACH FOOTING (W.B.) (STAGE II CONSTRUCTION)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4BI-1	Bond	35	23
			CONTRACT NO. 76E23	
			ILLINOIS FED. AID PROJECT	



Sec F-F

X-SEC @ APPROACH FOOTING (E.B.) STAGE II CONSTRUCTION

Looking East

Match existing X-section slopes

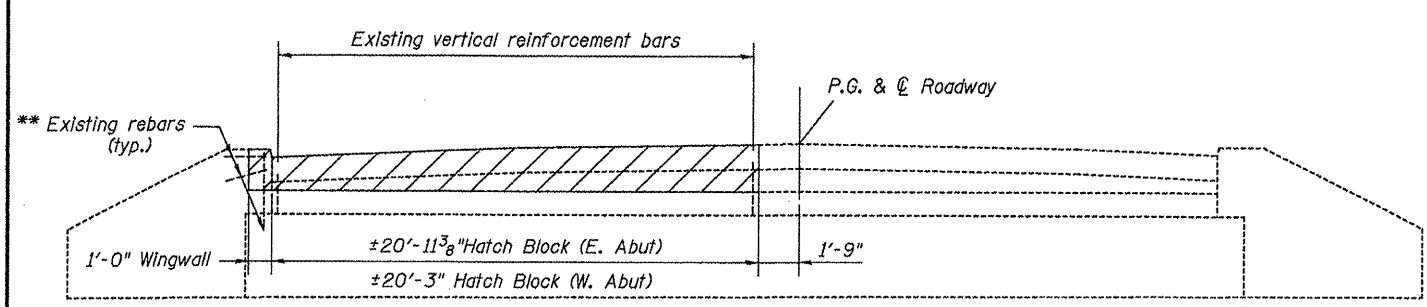
DESIGNED - AYW	EXAMINED _____	DATE - February 18, 2011
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED _____	
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

X-SEC @ APPROACH FOOTING (E.B.) (STAGE II CONSTRUCTION)

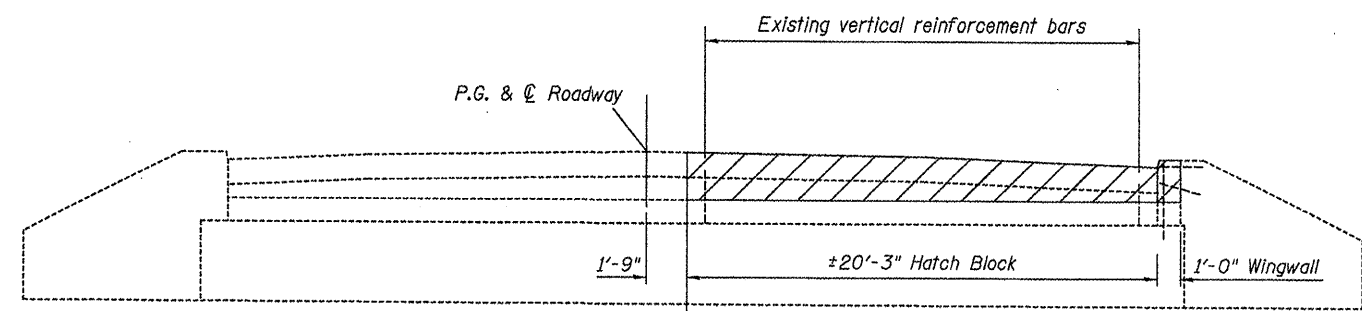
SHEET NO. 21 OF 32 SHEETS

F.A.I. RTE. 70	SECTION 3-4B1-1	COUNTY Bond	TOTAL SHEETS 35	SHEET NO. 24
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



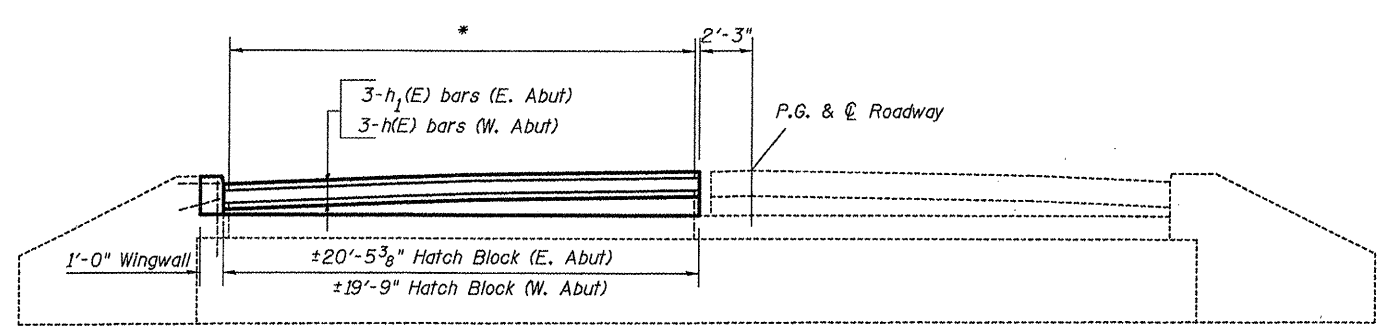
STAGE I REMOVAL (HATCH BLOCK & WINGWALL) (W.B.)

Looking East



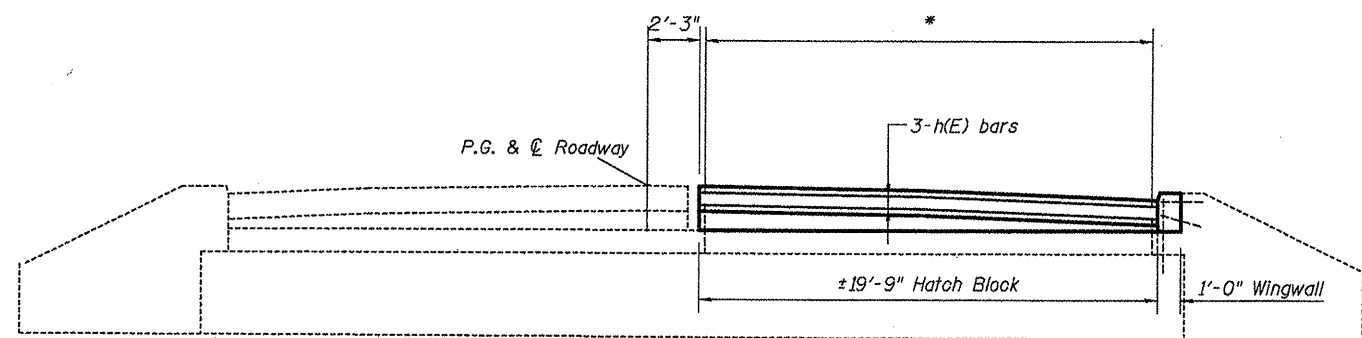
STAGE I REMOVAL (HATCH BLOCK & WINGWALL) (E.B.)

Looking East



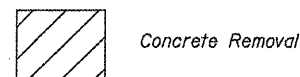
STAGE I CONSTRUCTION (HATCH BLOCK & WW) (W.B.)

Looking East



STAGE I CONSTRUCTION (HATCH BLOCK & WINGWALL) (E.B.)

Looking East



Match existing X-section slopes

* Existing vertical reinforcement bars in the abutment backwall extending into the removed area shall be cleaned, straightened and incorporated into the new construction.

**Existing reinforcement bars in the removed area shall be cleaned, straightened and incorporated into the new construction.

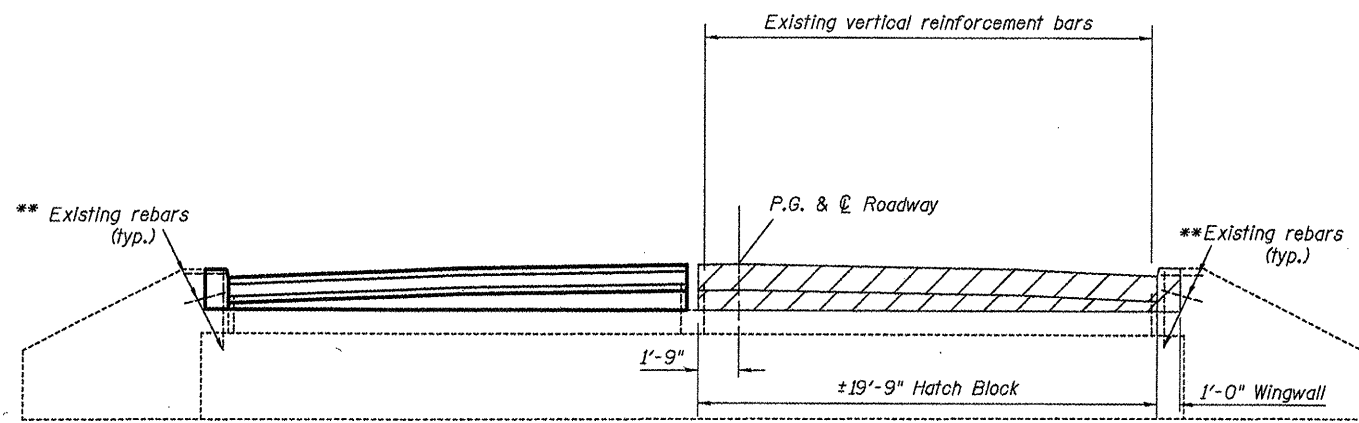
DESIGNED - AYV	EXAMINED	DATE - February 18, 2011
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

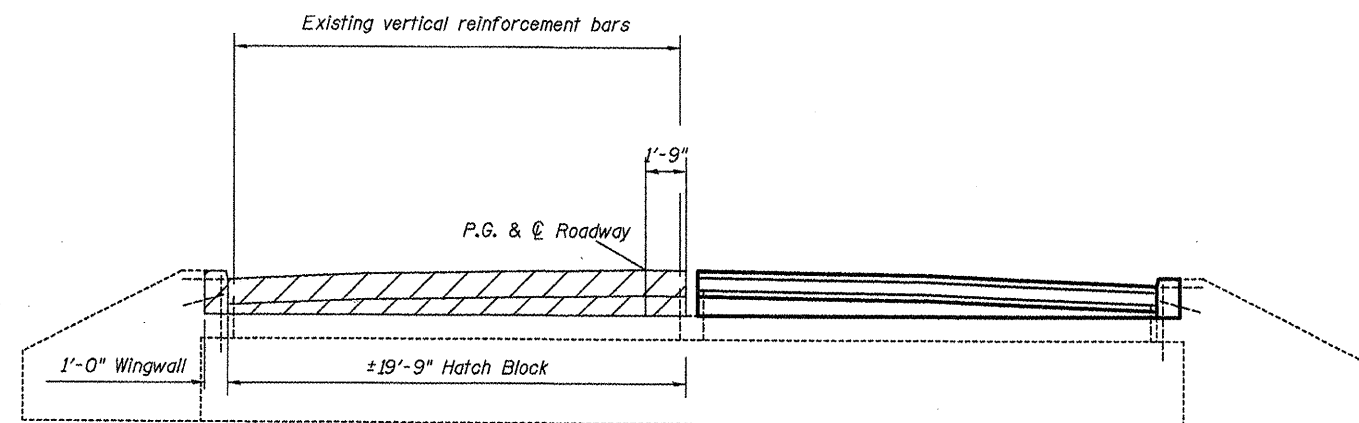
ELEV. HATCHBLOCK & WINGWALL (STAGE I REMOVAL & CONSTRUCTION)

SHEET NO. 22 OF 32 SHEETS

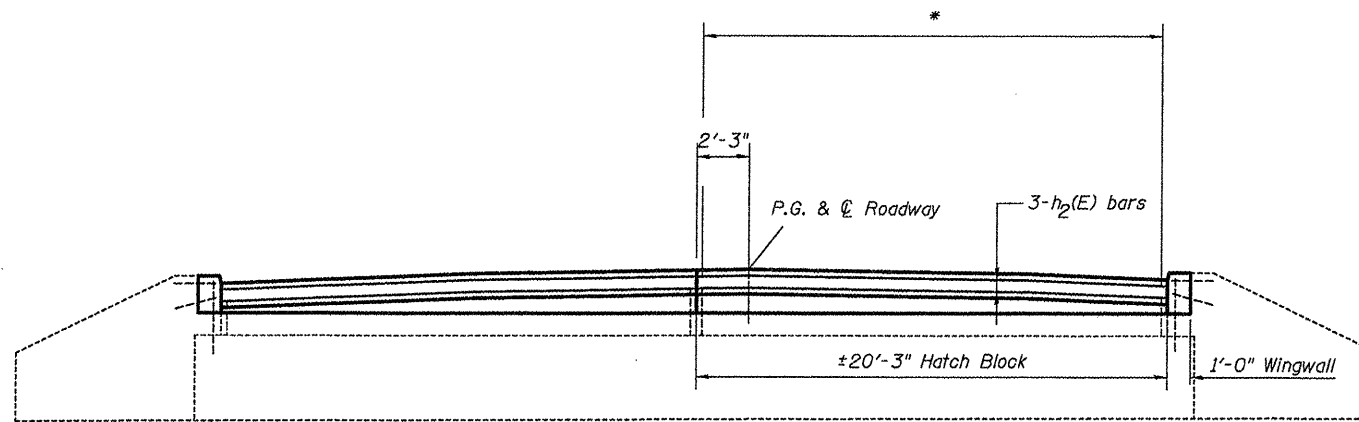
F.A.I. RTE. TO	SECTION 3-4BI-1	COUNTY Bond	TOTAL SHEETS 35	SHEET NO. 22
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				



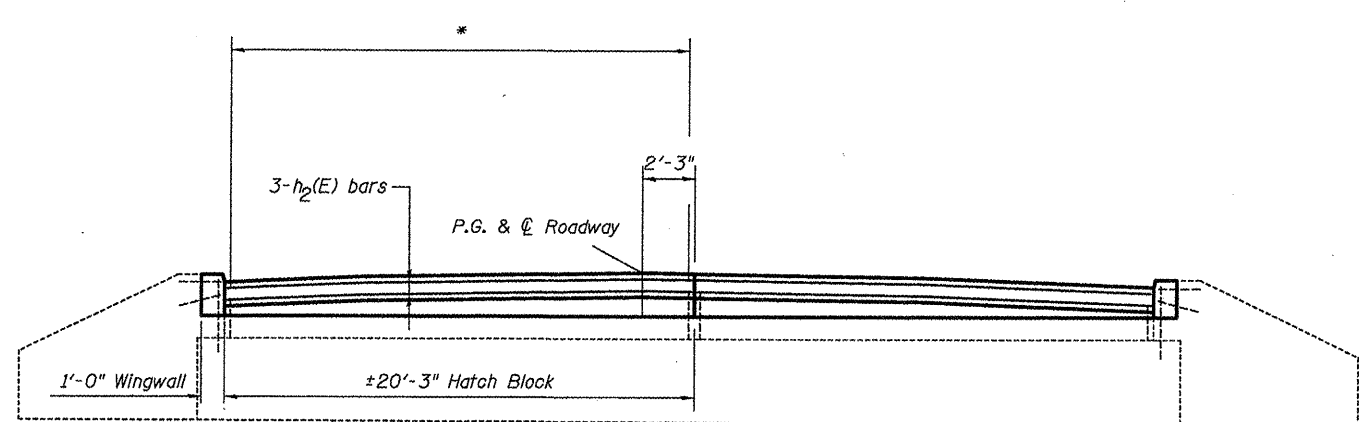
STAGE II REMOVAL (HATCH BLOCK & WINGWALL) (W.B.)
Looking East




STAGE II REMOVAL (HATCH BLOCK & WINGWALL) (E.B.)
Looking East



STAGE II CONSTRUCTION (HATCH BLOCK & WINGWALL) (W.B.)
Looking East



STAGE II CONSTRUCTION (HATCH BLOCK & WINGWALL) (E.B.)
Looking East

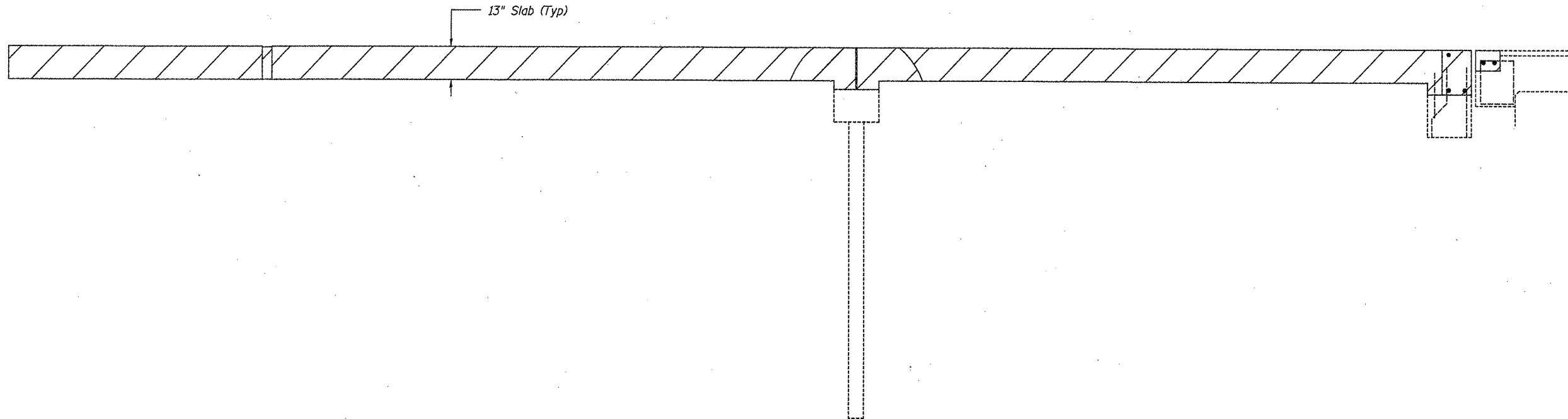
 Concrete Removal

Match existing X-section slopes

* Existing vertical reinforcement bars in the abutment backwall extending into the removed area shall be cleaned, straightened and incorporated into the new construction.

**Existing reinforcement bars in the removed area shall be cleaned, straightened and incorporated into the new construction.

DESIGNED - AYV	EXAMINED	DATE - February 18, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HATCHBLOCK & WINGWALL (STAGE II REMOVAL & CONSTRUCTION)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES				TO	3-481-1	Bond	35	26	
DRAWN - AYV	PASSED				SHEET NO. 23 OF 32 SHEETS		CONTRACT NO. 76E23			
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES						ILLINOIS FED. AID PROJECT			



SEC I-I

DESIGNED - AYV	EXAMINED _____	DATE - February 18, 2011
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES	

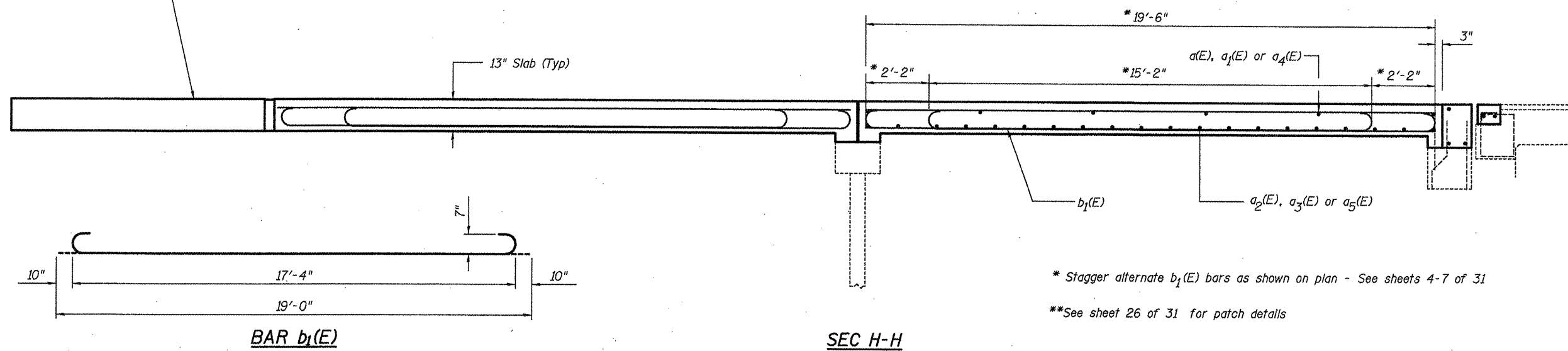
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REMOVAL OF EXISTING WEST APPROACH

SHEET NO. 24 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4BI-1	Bond	35	27
			CONTRACT NO. 76E23	
ILLINOIS FED. AID PROJECT				

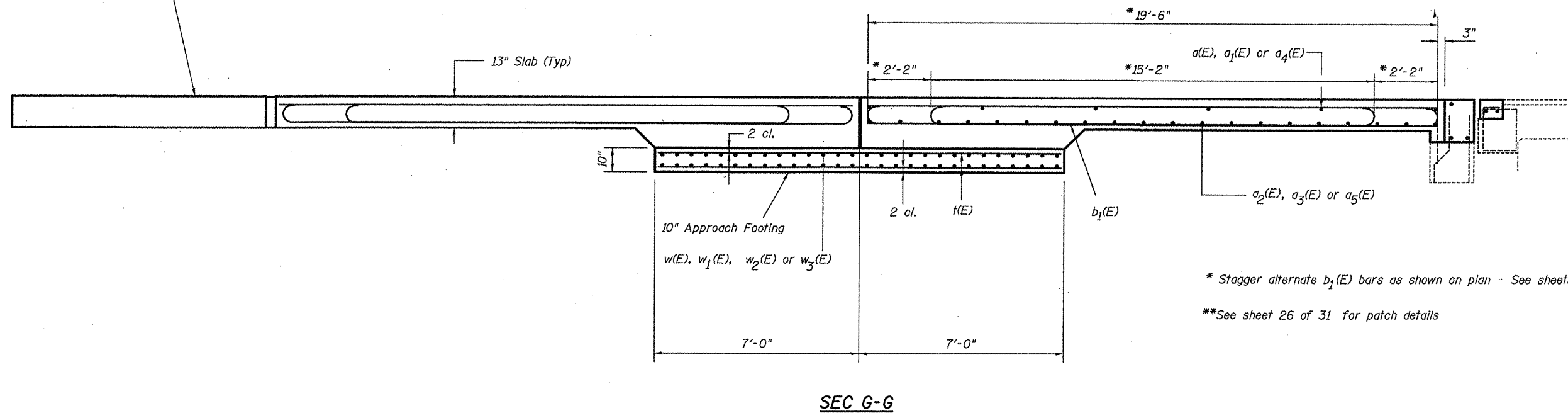
**Class B Patches, Type II, 13"



* Stagger alternate $b_1(E)$ bars as shown on plan - See sheets 4-7 of 31

**See sheet 26 of 31 for patch details

**Class B Patches, Type II, 13"



* Stagger alternate $b_1(E)$ bars as shown on plan - See sheets 4-7 of 31

**See sheet 26 of 31 for patch details

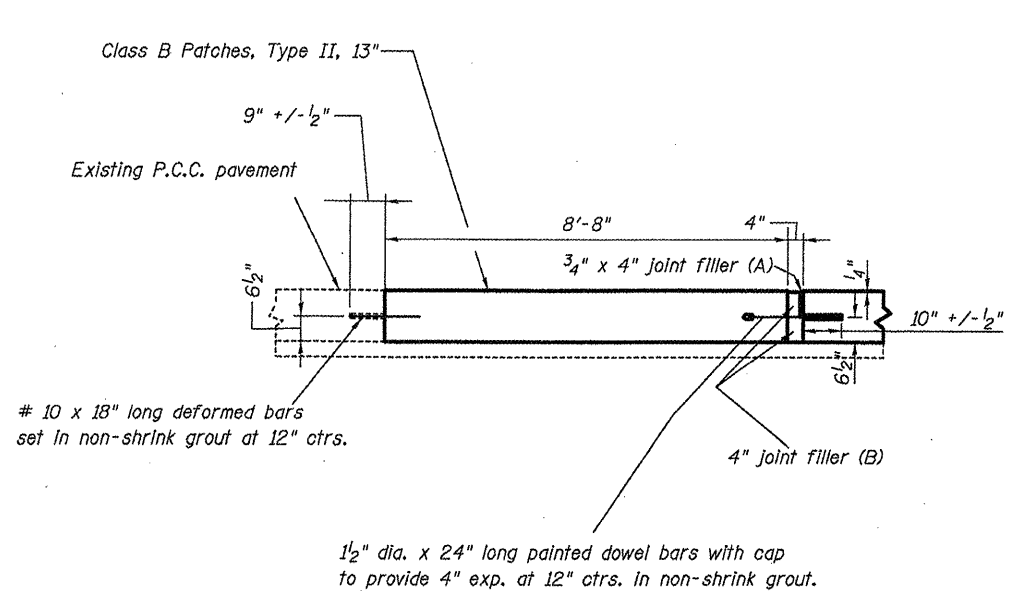
DESIGNED - AYW	EXAMINED	DATE - February 18, 2011
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED WEST APPROACH

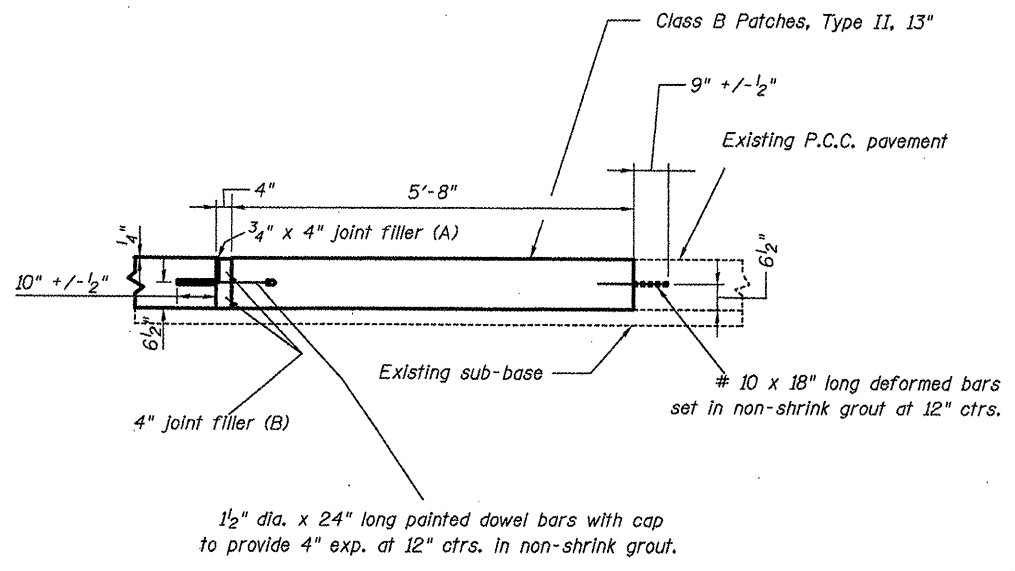
SHEET NO. 25 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4BI-1	Bond	35	28
			CONTRACT NO.	76E23
ILLINOIS FED. AID PROJECT				



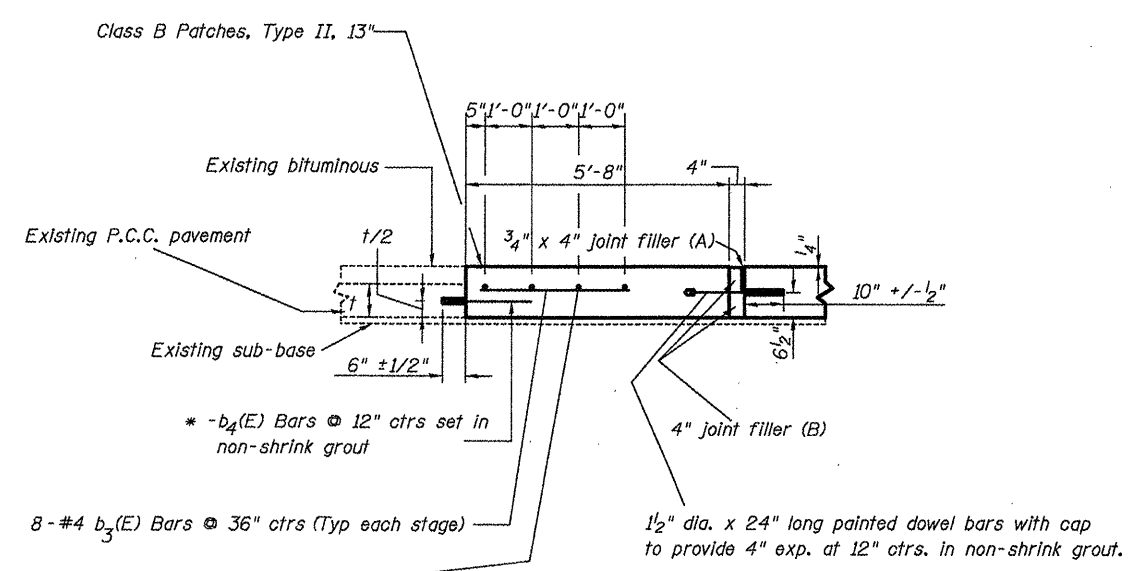
CLASS B PATCHES, TYPE II, 13"

(EB W Appr)
(Looking North)



CLASS B PATCHES, TYPE II, 13"

(E Appr)
(Looking North)



CLASS B PATCHES, TYPE II, 13"

(WB W Appr)
(Looking North)

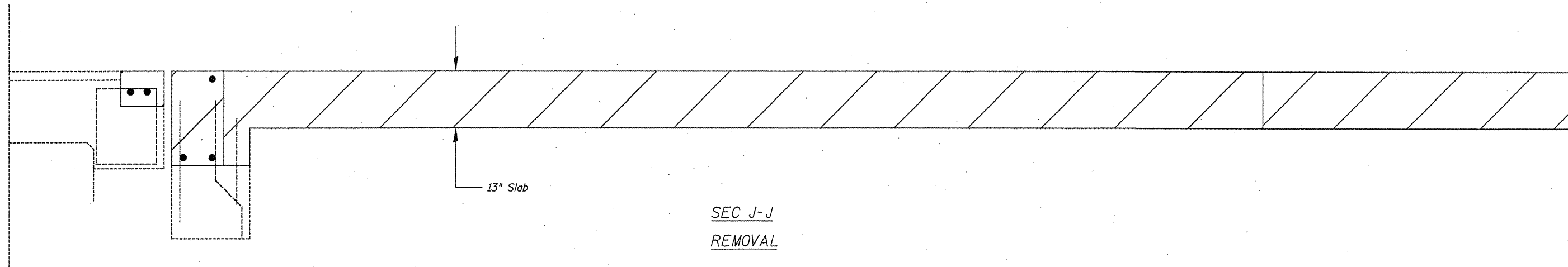
****Bar List (Patch)**

Bar	No.	Size	Length	Shape
b ₃ (E)	16	#4	3'-2"	_____
b ₄ (E)	43	#10	1'-9"	_____
a ₁₀ (E)	4	#5	19'-11"	_____
a ₁₁ (E)	4	#5	20'-7"	_____

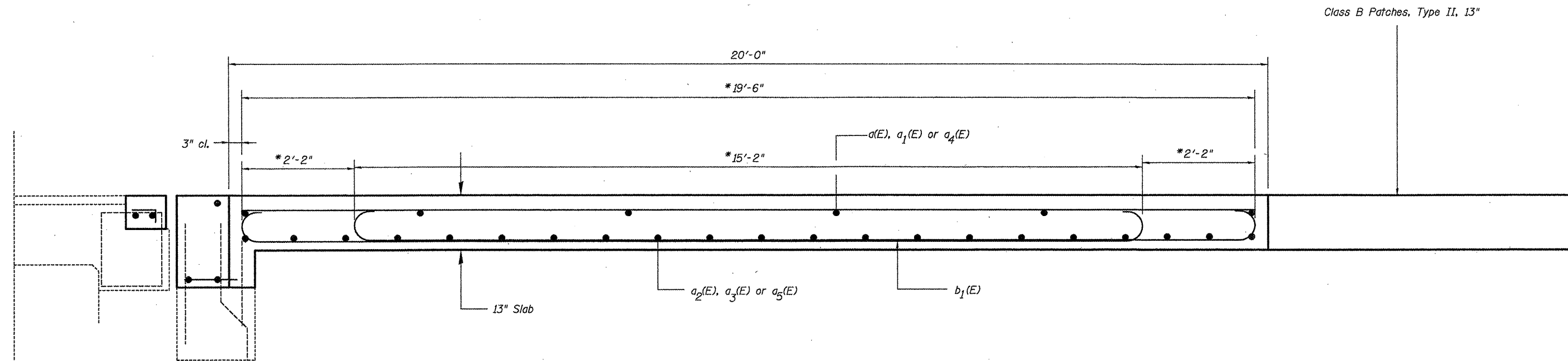
* 21 bars in Stage I
22 bars in Stage II

** Include in the cost of "Class B Patches, Type II"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SEC J-J
REMOVAL



Class B Patches, Type II, 13"

* Stagger alternate $b_1(E)$ bars as shown on plan - See sheets 4-7 of 31
See sheet 26 of 31 for patch details
See sheet 25 of 31 for $b_1(E)$ bar details

SEC K-K
CONSTRUCTION

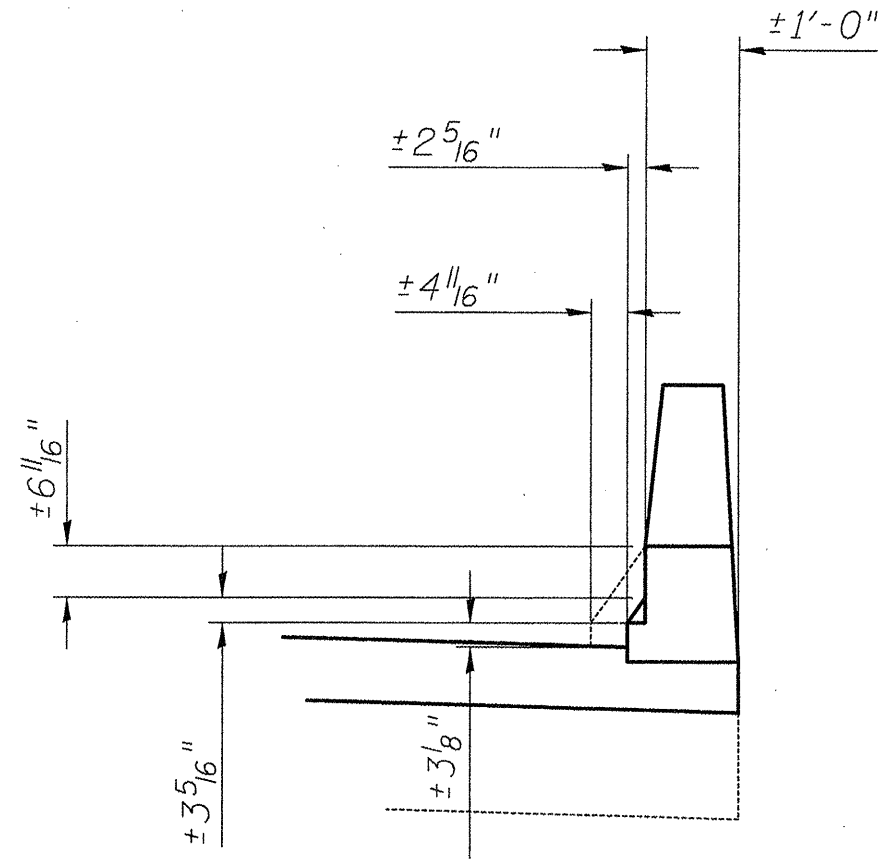
DESIGNED - AYV	EXAMINED _____	DATE - February 18, 2011
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

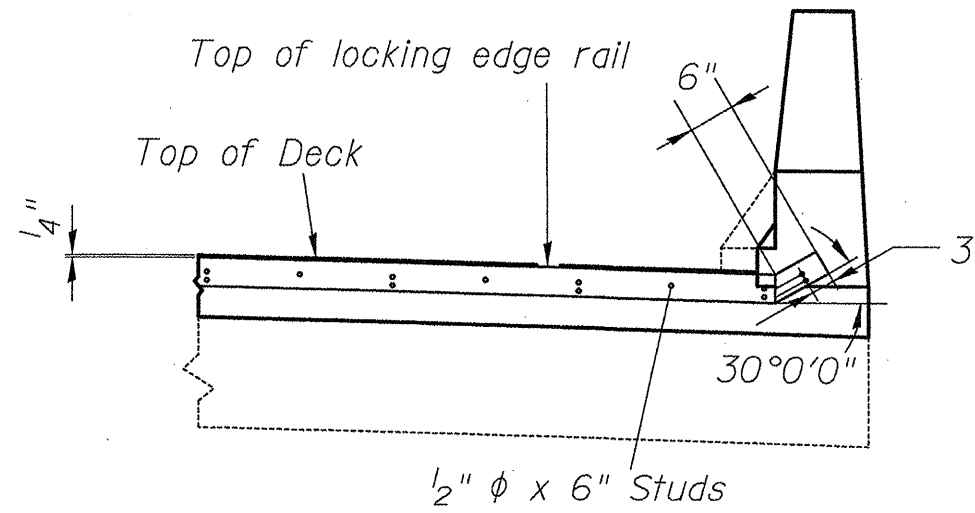
EAST APPROACH

SHEET NO. 27 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-481-1	Bond	35	30
CONTRACT NO. 76E23			ILLINOIS FED. AID PROJECT	



PARAPET DETAIL



TYPICAL END TREATMENT

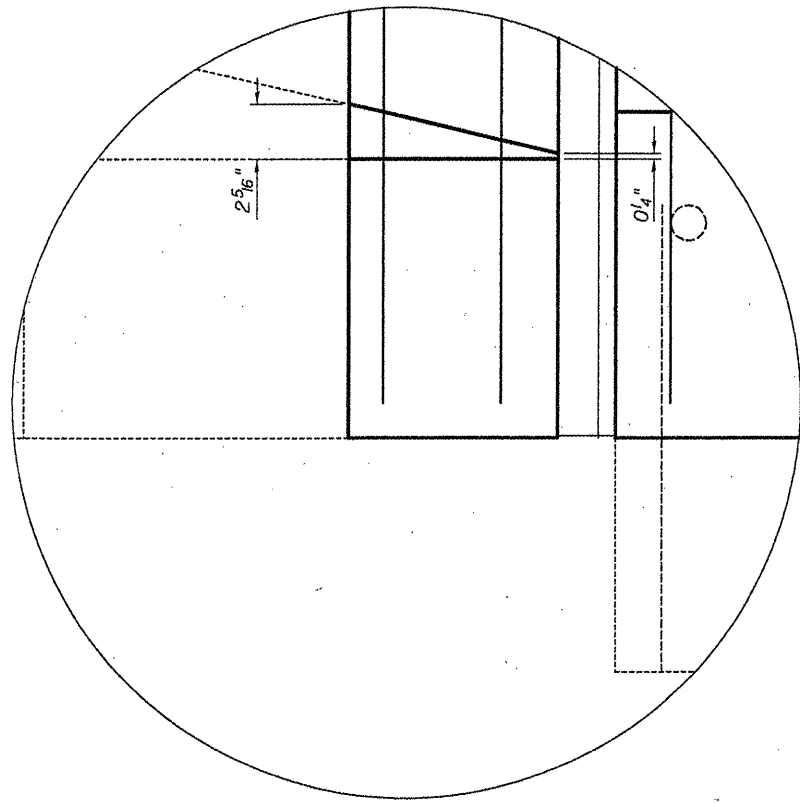
DESIGNED - AYW	EXAMINED	DATE - February 18, 2011
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED	
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET

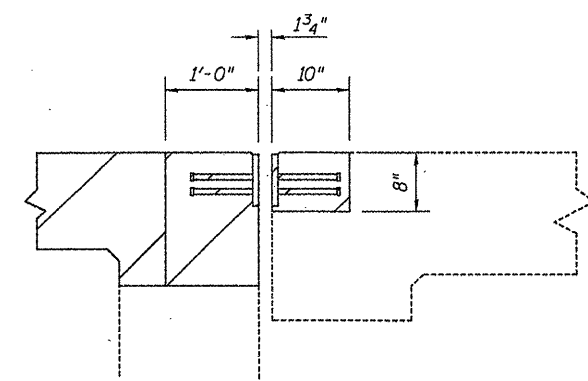
SHEET NO. 28 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4BI-1	Bond	35	31
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76E23	

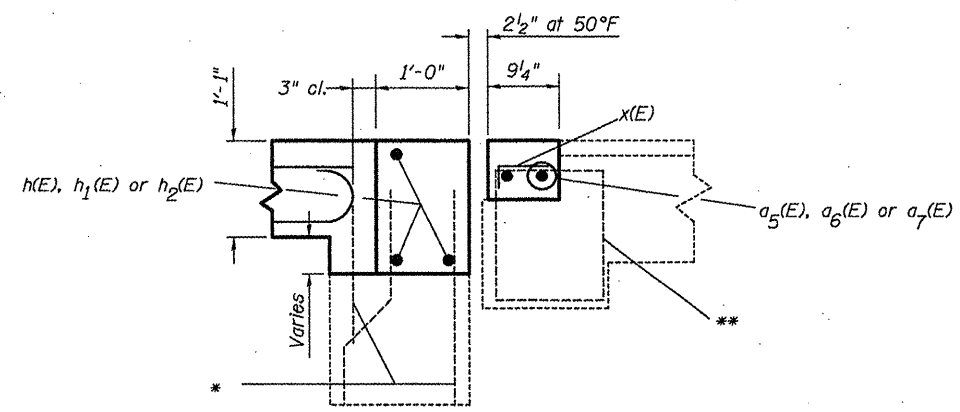


DETAIL A

For locations see sheets 4-7 of 31



SEC A-A



Bonded Const. Jt. (Typ.)

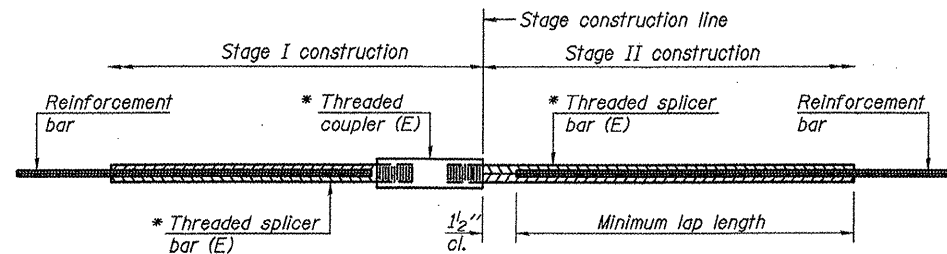
SEC B-B

* Existing vertical reinforcement bars in the abutment backwall extending into the removed area shall be cleaned, straightened and incorporated into the new construction.
 ** Existing stirrups in deck extending into the removed area shall be cleaned, straightened and incorporated into the new construction.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	30	#4	20'-0"	—
a ₁ (E)	6	#4	20'-8"	—
a ₂ (E)	105	#5	20'-0"	—
a ₃ (E)	21	#5	20'-8"	—
a ₄ (E)	36	#4	20'-6"	—
a ₅ (E)	126	#5	20'-6"	—
a ₆ (E)	2	#5	20'-4"	—
a ₇ (E)	8	#5	21'-2"	—
a ₈ (E)	6	#5	20'-8"	—
a ₉ (E)	32	#4	2'-4"	—
b(E)	211	#4	19'-8"	—
b ₁ (E)	584	#7	19'-8"	—
b ₂ (E)	8	#4	11'-8"	—
h(E)	9	#6	20'-8"	—
h ₁ (E)	3	#6	21'-4"	—
h ₂ (E)	12	#6	21'-2"	—
x(E)	160	#5	9"	—
t(E)	66	#4	13'-9"	—
w(E)	56	#5	10'-3"	—
w ₁ (E)	56	#5	7'-5"	—
w ₂ (E)	56	#5	5'-10"	—
w ₃ (E)	56	#5	6'-3"	—
Reinforcement Bars, Epoxy Coated		Pound	36250	
Concrete Superstructure		Cu. Yds.	219.2	
Concrete Removal		Cu. Yds.	259.3	
Concrete Structures		Cu. Yds.	19.8	

Reinforcement bars designated (E) shall be epoxy coated.



STANDARD BAR SPLICER ASSEMBLY

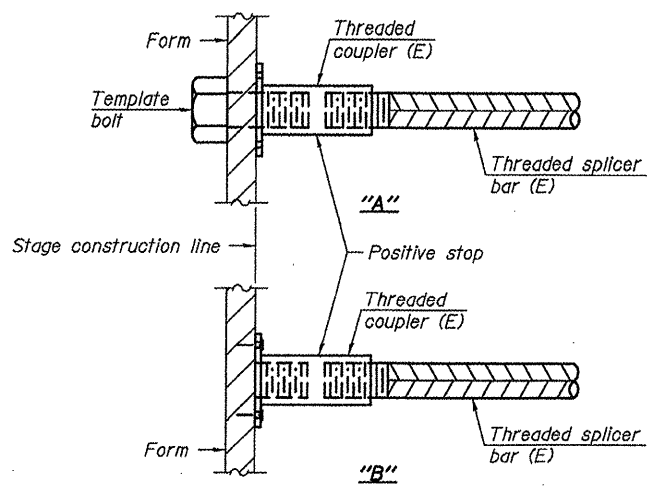
Bar size to be spliced	Minimum Lap Lengths				
	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- 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 + 1/2" + thread length

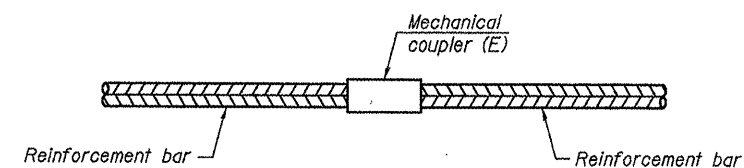
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Appr. Slab	#5	126	3
Appr. Slab	#4	36	3
Hatch Block	#6	12	4
Deck	#5	8	4



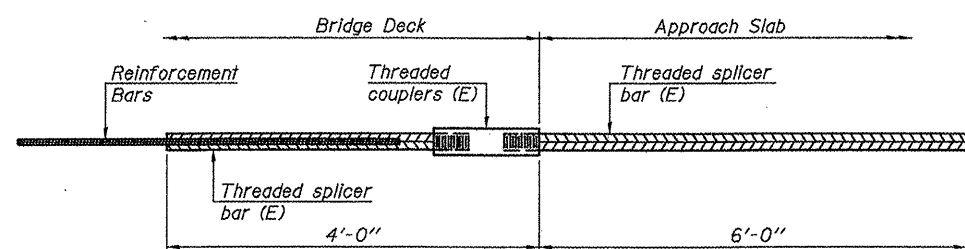
INSTALLATION AND SETTING METHODS

- "A": Set bar splicer assembly by means of a template bolt.
- "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
- (E) : Indicates epoxy coating.



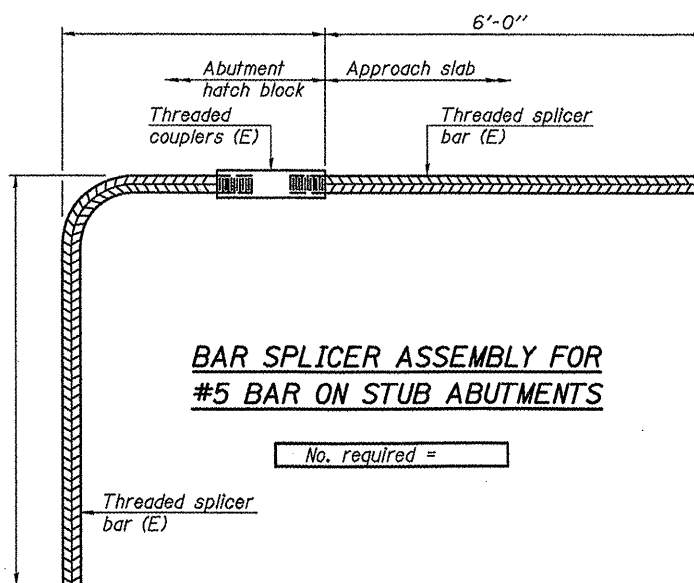
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

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

BSD-1

7-1-10

DESIGNED -	EXAMINED	DATE - February 18, 2011
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN -	PASSED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

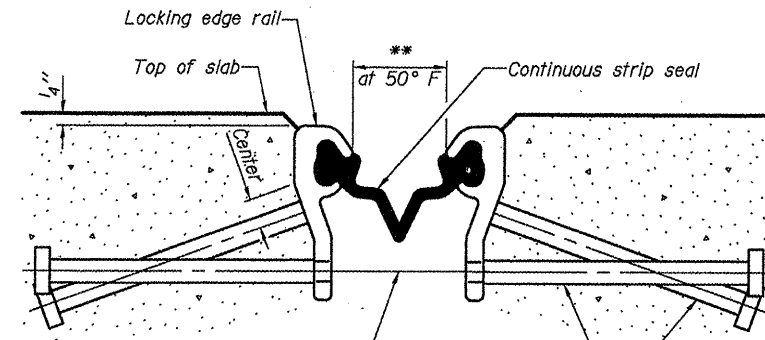
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO.

SHEET NO. 30 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	3-481-1	BOND	35	33
			CONTRACT NO. 7423	
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

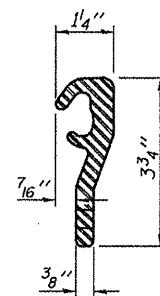
*Omit weld at seal opening.
**When joint is fixed, dimension is set at 1/2".



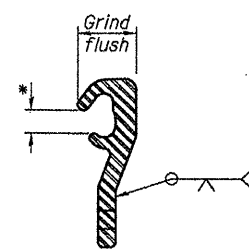
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

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

SECTION THRU STRIP SEAL JOINT



LOCKING EDGE RAIL



LOCKING EDGE RAIL SPLICE

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

DESIGNED - AYV	EXAMINED
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES
DRAWN - AYV	PASSED
CHECKED - ---	ENGINEER OF BRIDGES AND STRUCTURES

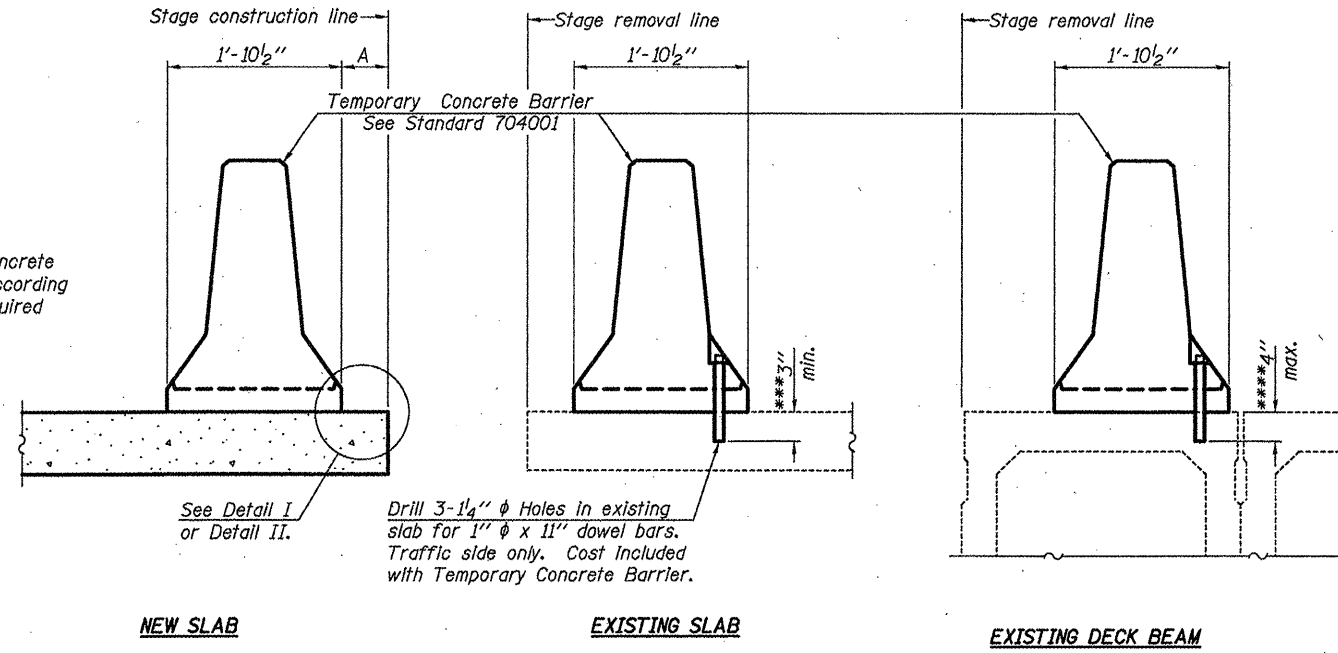
DATE - February 18, 2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRIP SEAL
SHEET NO. 31 OF 32 SHEETS

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-4B1-1	Bond	35	34
CONTRACT NO. 76E23				ILLINOIS FED. AID PROJECT

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

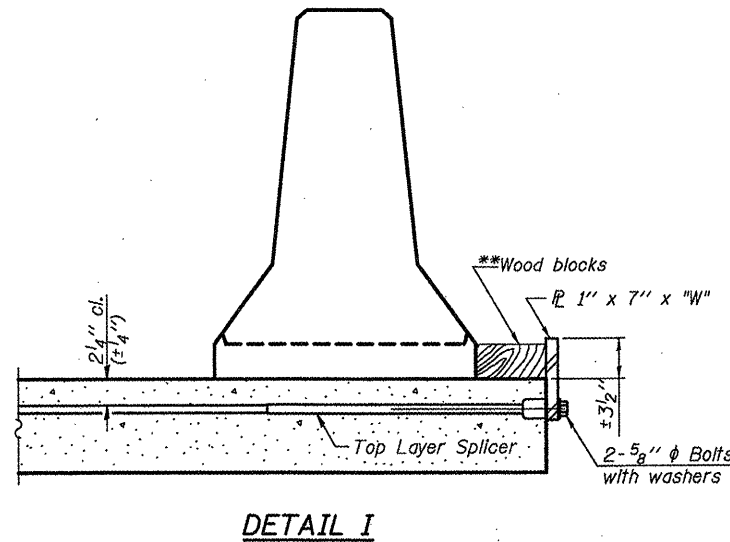
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

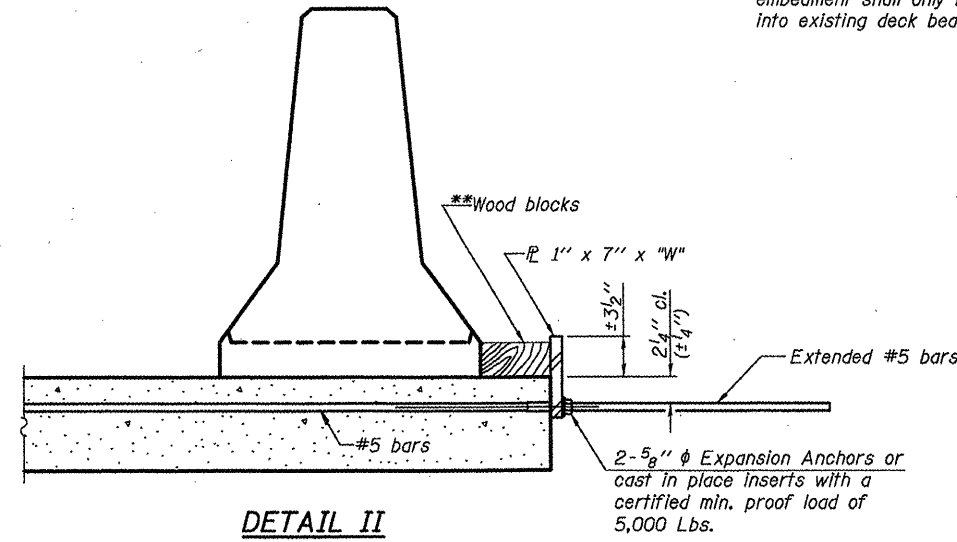
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



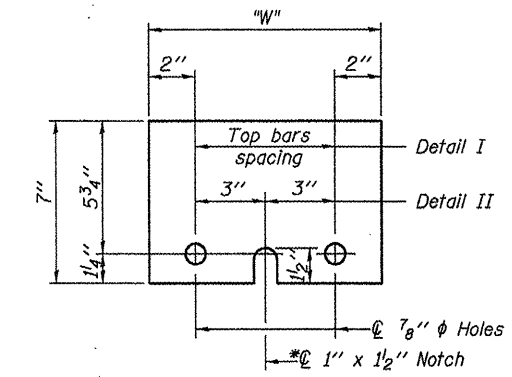
DETAIL I



DETAIL II

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

"W" = Top bars spacing + 4"



STEEL RETAINER \bar{L} 1" x 7" x "W"

* Required only with Detail II

R-27

7-1-10

DESIGNED -	EXAMINED	DATE - February 18, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 003-0009 & 0010	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED -	ENGINEER OF STRUCTURAL SERVICES				TO	3-4BI-1	BOND	35	35	
DRAWN -	PASSED				CONTRACT NO. 76E23					
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES				ILLINOIS FED. AID PROJECT					
					SHEET NO. 32 OF 32 SHEETS					