

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24	1
		ILLINOIS	CONTRACT NO. 78233	

*F.A.S. RTE. 2869 & F.A.I. RTE. 57

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

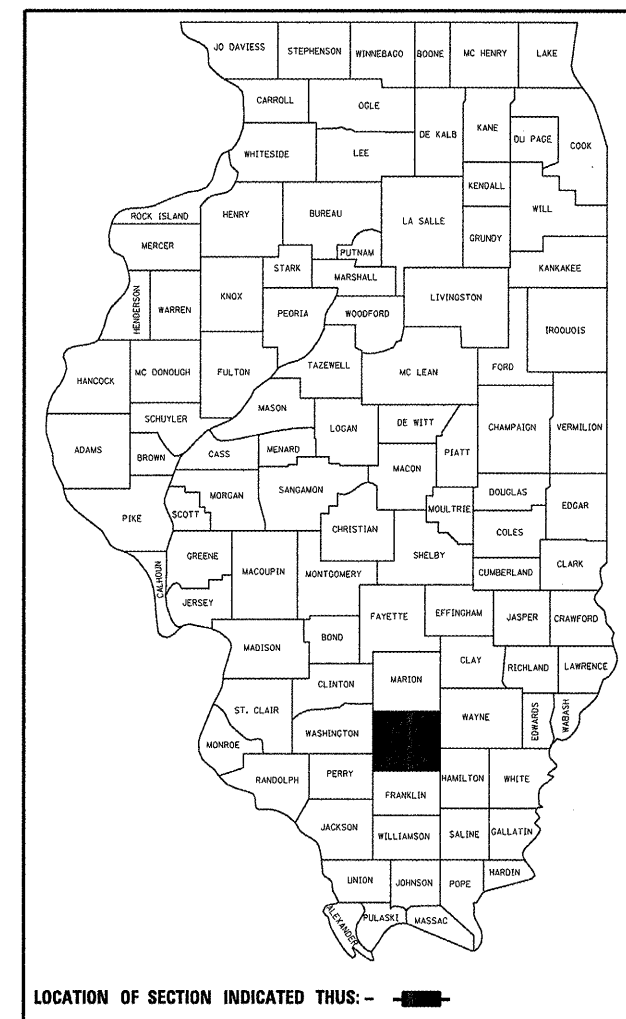
**PROPOSED
HIGHWAY PLANS**

F.A.S. 2869 (IL 37) & F.A.I. 57 (I-57)
D9 CM BRIDGE REPAIR 2011-2

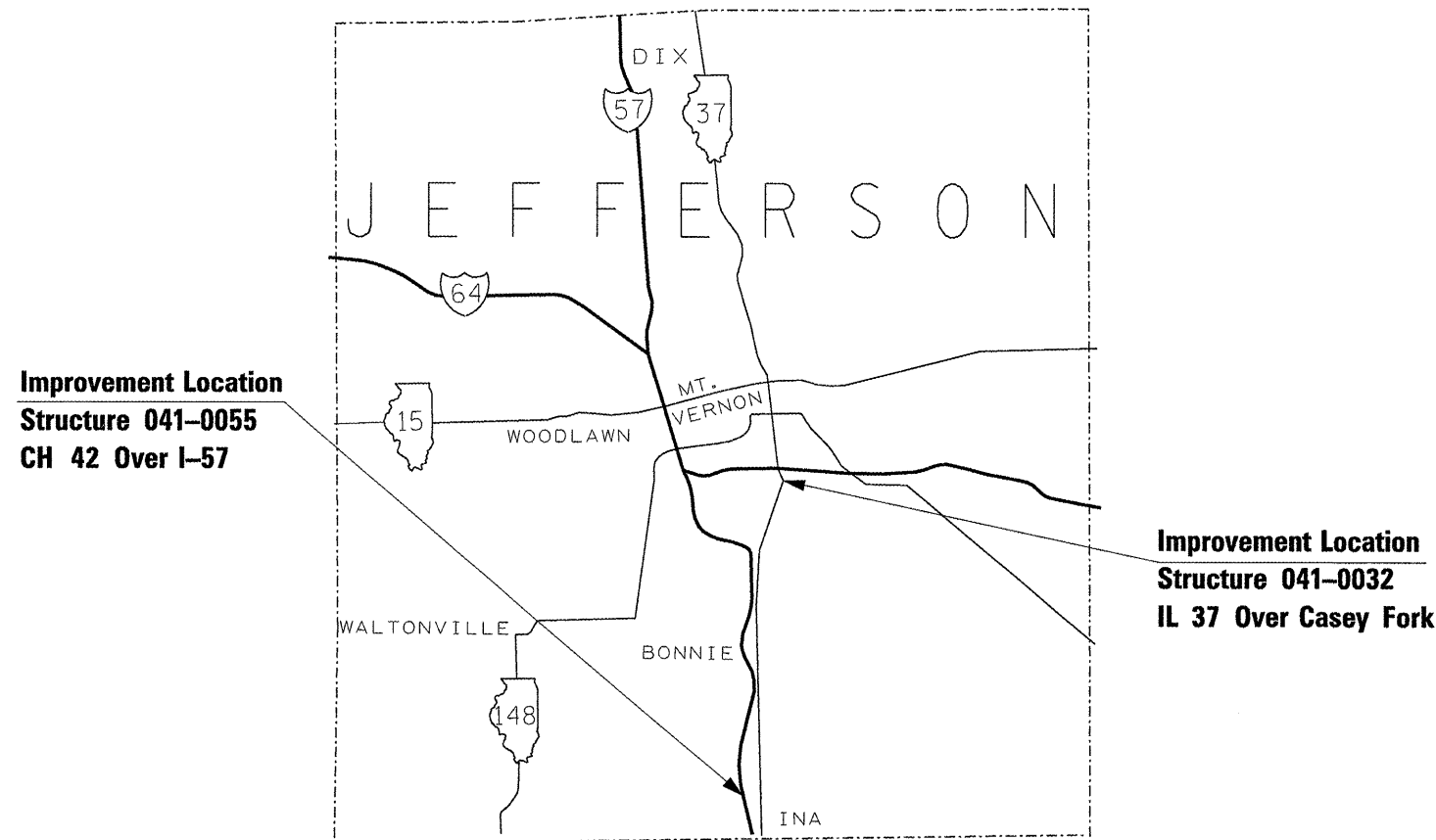
BRIDGE JOINTS & BEARINGS
JEFFERSON COUNTY

FOR INDEX OF SHEETS, SEE SHEET NO. 2

D-99-010-11



C-99-012-11



MAP IS NOT TO SCALE

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

PROJECT ENGINEER DAVID PICHE
DESIGNER RITA GAUTNEY

CONTRACT NO. 78233

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan 4 20 11
Mary C. Jamie
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
February 4 20 11
Scott E. Stett, P.E. / SC
acting ENGINEER OF DESIGN AND ENVIRONMENT
February 4 20 11
Christine M. Reed / CR
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

GENERAL NOTES

COMMITMENTS: NONE AS OF DECEMBER 17, 2010.

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- 631031-09 TRAFFIC BARRIER TERMINAL TYPE 6
- 701001-02 LANE CLOSURE 2 LANE, 2 WAY, DAY ONLY
- 701006-03 OFFRD 2L, 2W, 15' MIN FROM EDGE OF PAVEMENT
- 701201-04 OFFRD 2L, 2W, 15' TO EDGE OF PAVEMENT
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- 701406-06 LANE CLOSURE FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
- 701901-01 TRAFFIC CONTROL DEVICES
- BLR 21-8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES

701011-02

Prepared By: *[Signature]*
DISTRICT STUDIES & PLANS ENGINEER

Examined By: *[Signature]*
DISTRICT LAND ACQUISITION ENGINEER

Examined By: *[Signature]*
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: *[Signature]*
DISTRICT OPERATIONS ENGINEER

Examined By: *[Signature]*
DISTRICT CONSTRUCTION ENGINEER

Examined By: *[Signature]*
DISTRICT MATERIALS ENGINEER

Examined By: *[Signature]*
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: *[Signature]*
ASSISTANT REGIONAL ENGINEER

Approved By: *[Signature]*
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

Jan 4 2011
DATE

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PLOT DATE = 12/22/2010	DATE - ---	REVISED - ---

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INDEX OF SHEETS, GENERAL NOTES, STANDARDS

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

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24	2
*F.A.S. 2869 & F.A.I. 57			CONTRACT NO. 78233	
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE: 0014		JEFFERSON CO.			
		RURAL			
		100% STATE			
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	IL 31 041-0032	IL 51 041-0055
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	7		7
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	18		18
42001300	PROTECTIVE COAT	SQ YD	1417	1372	45
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	164		164
50102400	CONCRETE REMOVAL	CU YD	33.2	23.4	9.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	33.6	22.8	10.8
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	6150	4920	1230
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4980	3560	1420
52000110	PREFORMED JOINT STRIP SEAL	FOOT	242	176	66
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	24	24	
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	24	12	12
52100520	ANCHOR BOLTS, 1"	EACH	96	72	24
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	2	
63200310	GUARDRAIL REMOVAL	FOOT	112	112	
63302700	REMOVE AND RE ERECT TRAFFIC BARRIER TERMINALS, TYPE 6	EACH	2	2	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2	1	1
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1		1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	0.5	0.5
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2	1	1
X5017305	PROTECTIVE SHIELD (PERMANENT)	SQ YD	93		93
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	48	36	12
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	22.6		22.6
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	7	7	
Z0049790	RELOCATING NAME PLATES	EACH	2	1	1

*SPECIALTY ITEM

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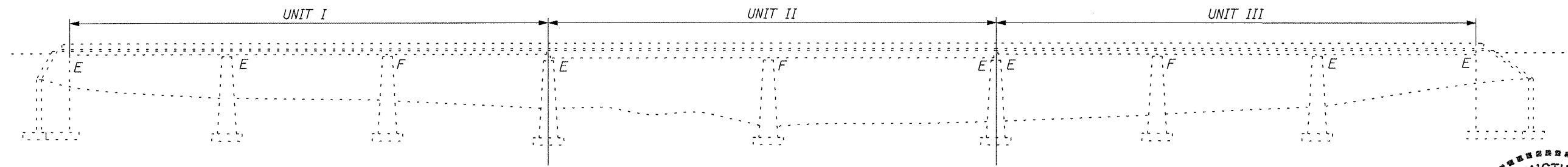
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	DATE - ---	REVISED - ---

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

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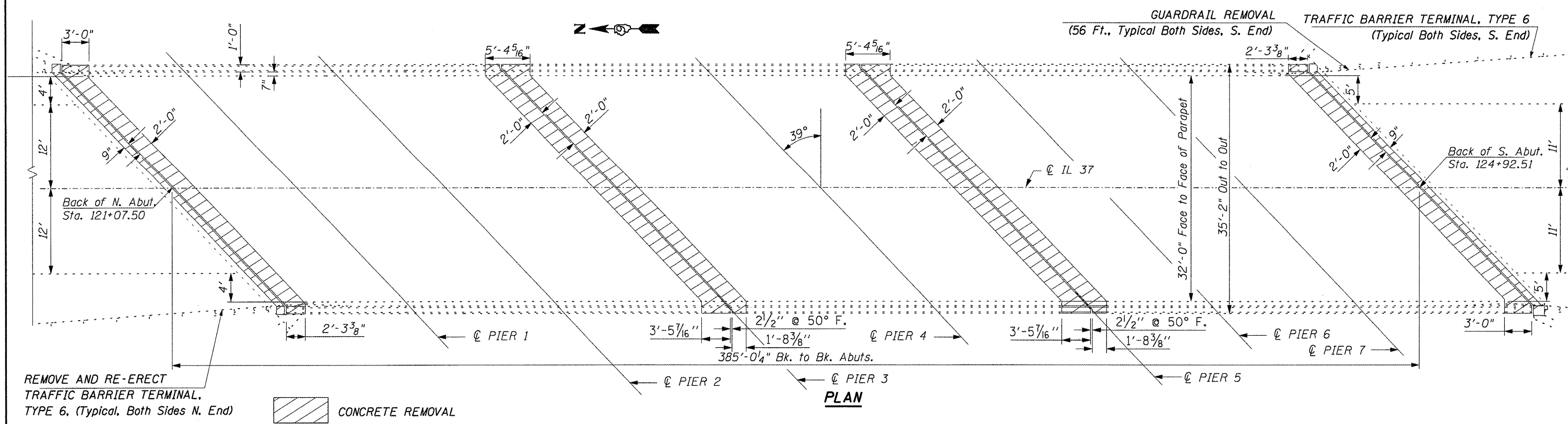
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•	D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24	3
*F.A.S. 2869 & F.A.I. 57		CONTRACT NO. 78233		
ILLINOIS FED. AID PROJECT				



ELEVATION



David Carl Puzey
Expires 11/30/2012



REMOVE AND RE-ERECT
TRAFFIC BARRIER TERMINAL,
TYPE 6, (Typical, Both Sides N. End)

CONCRETE REMOVAL

Note: Protective coat shall be applied to the entire surface of the bridge deck and all new concrete.

FILE NAME =	USER NAME = geutneyrk	DESIGNED - RKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & ELEVATION STRUCTURE NO. 041-0032	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 12/22/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____										

GENERAL NOTES

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

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

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

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

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

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

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

The approach slab shall be patched according to the special provision "Deck Slab Repair".

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

Reinforcement bars designated (E) shall be epoxy coated.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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

In addition to the requirements of article 107.16 the contractor shall protect the surface of all bridge decks and bridge approach pavements in a manner satisfactory to the engineer before any equipment is allowed to cross the structure. Protection shall be provided for all equipment as defined in article 101.16 regardless if track mounted or wheeled.

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

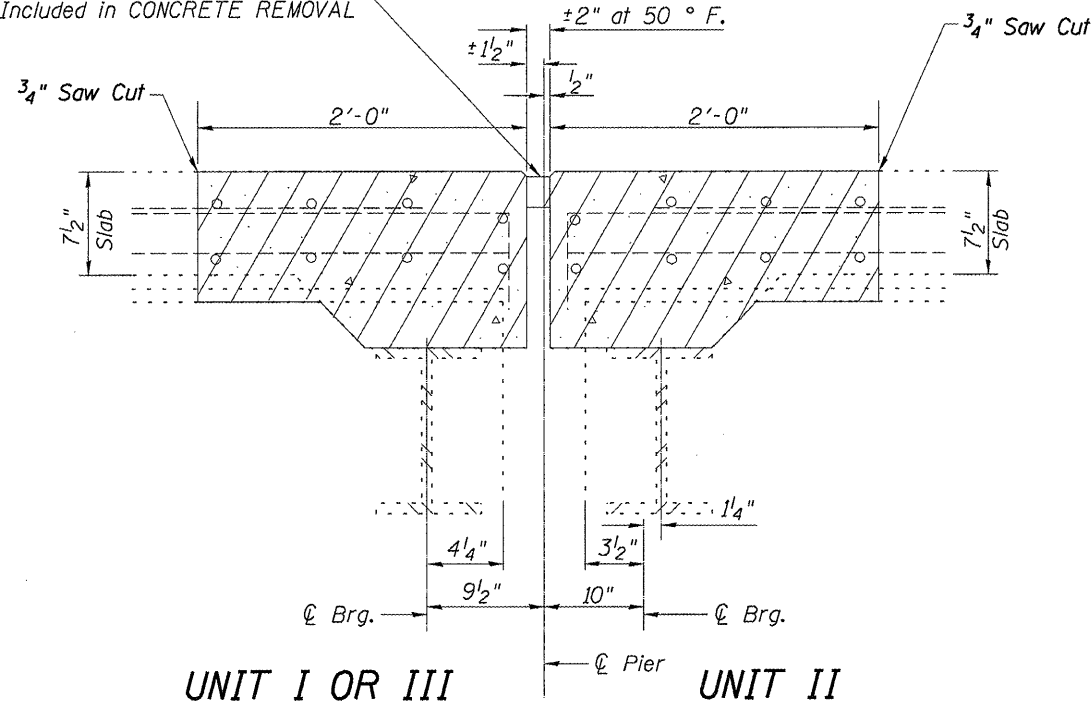
Existing nameplate located in the parapet removal area shall be removed, cleaned, stored and reinstalled at the same location. Cost of all labor and materials required to complete this task is included in the unit cost each for RELOCATING NAME PLATES.

**TOTAL BILL OF MATERIAL
STRUCTURE NO. 041-0032**

ITEM DESCRIPTION	UNIT	QUANTITY
PROTECTIVE COAT	SQ YD	1372
CONCRETE REMOVAL	CU YD	23.4
CONCRETE SUPERSTRUCTURE	CU YD	22.8
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4920
JACK AND REMOVE EXISTING BEARINGS	EACH	36
REINFORCEMENT BARS, EPOXY COATED	POUND	3560
RELOCATING NAME PLATES	EACH	1
PREFORMED JOINT STRIP SEAL	FOOT	176
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	24
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12
ANCHOR BOLTS, 1"	EACH	72
TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2
GUARDRAIL REMOVAL	FOOT	112
REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2
DECK SLAB REPAIR (PARTIAL)	SQ YD	7

FILE NAME =	USER NAME = gautneyrk	DESIGNED - RKC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, BILL OF MATERIAL STRUCTURE NO. 041-0032	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 12/22/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
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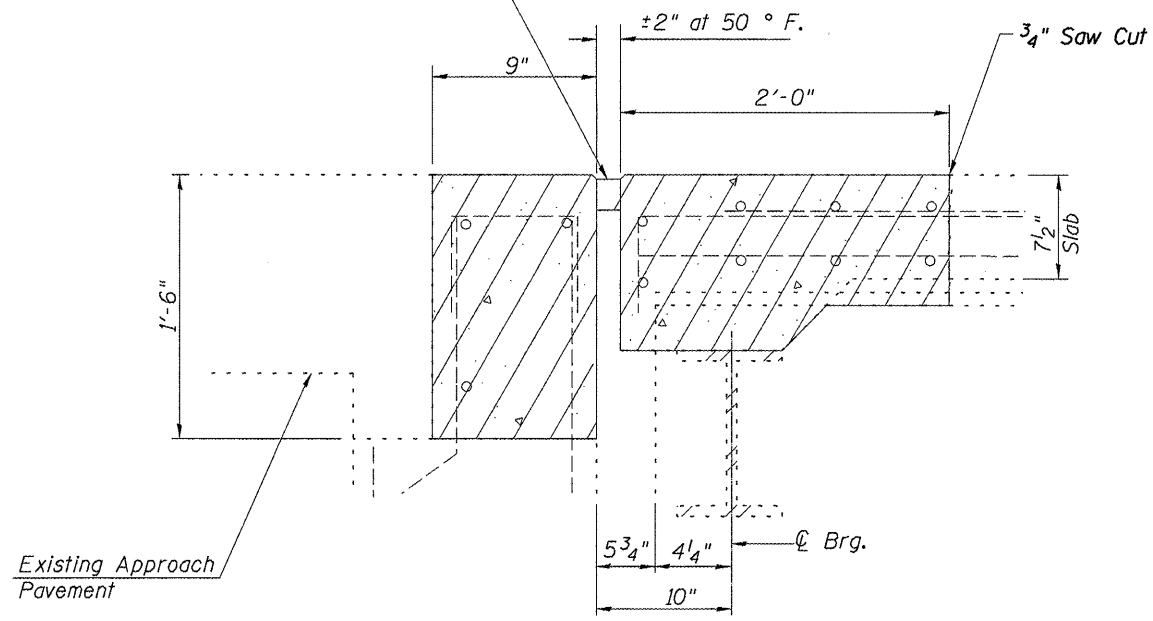
Removal of Existing Silicone Joint
Included in CONCRETE REMOVAL



UNIT I OR III **UNIT II**
EXISTING SECTION AT PIERS 3 & 5

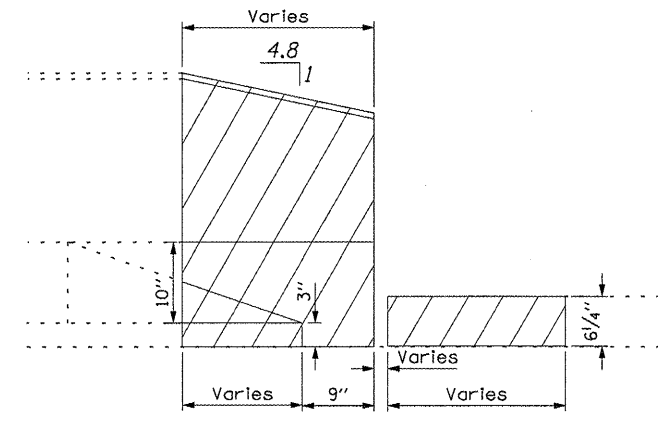
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Removal of Existing Silicone Joint
Included in CONCRETE REMOVAL



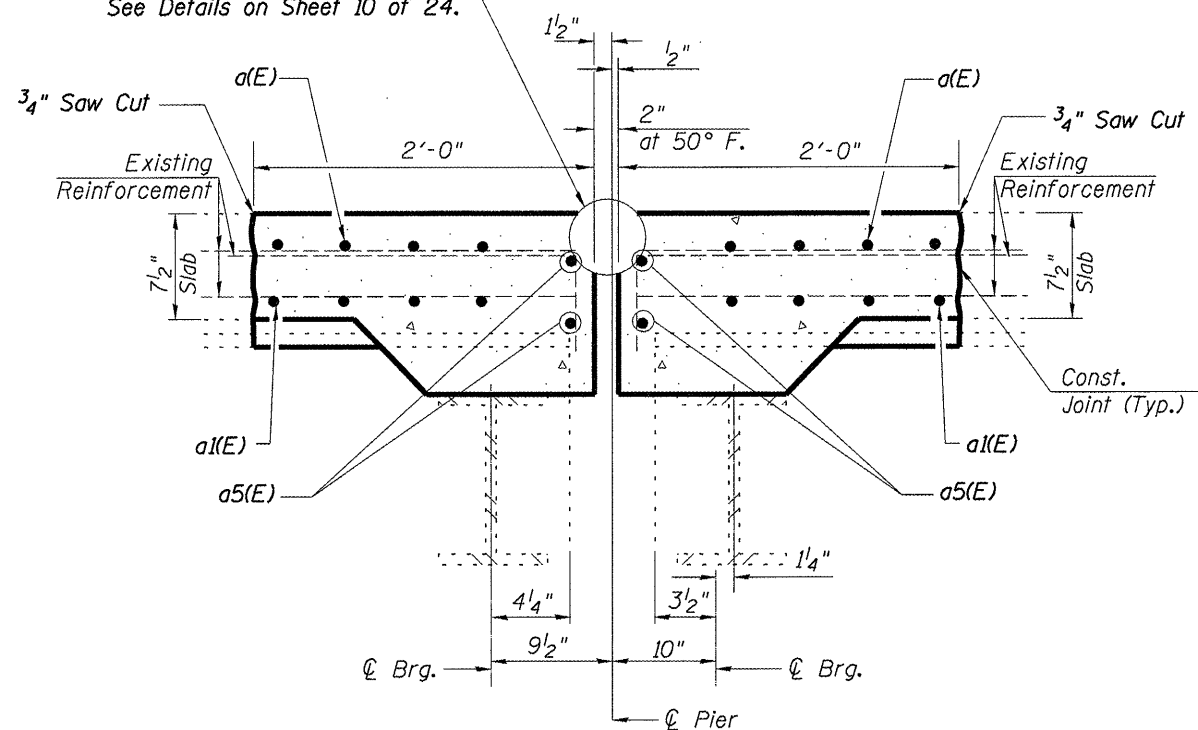
EXISTING SECTION AT ABUTMENTS

All dimensions at right L s.



ELEVATION
END OF PARAPET AT ABUTMENTS

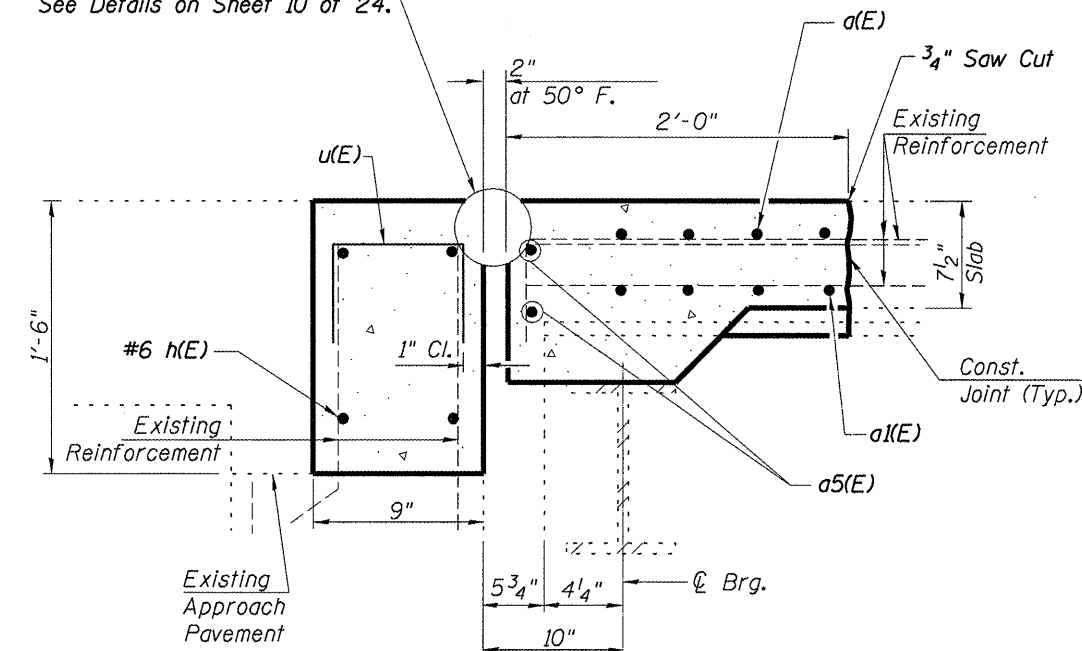
PREFORMED JOINT STRIP SEAL
See Details on Sheet 10 of 24.



UNIT I OR III **UNIT II**
PROPOSED SECTION AT PIERS 3 & 5

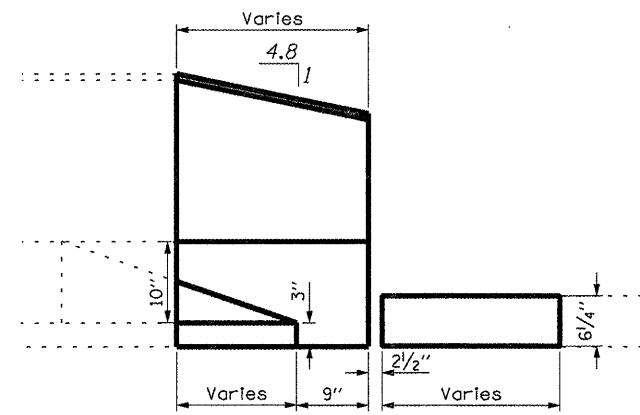
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PREFORMED JOINT STRIP SEAL
See Details on Sheet 10 of 24.



PROPOSED SECTION AT ABUTMENTS

All dimensions at right L s.



ELEVATION
END OF PARAPET AT ABUTMENTS

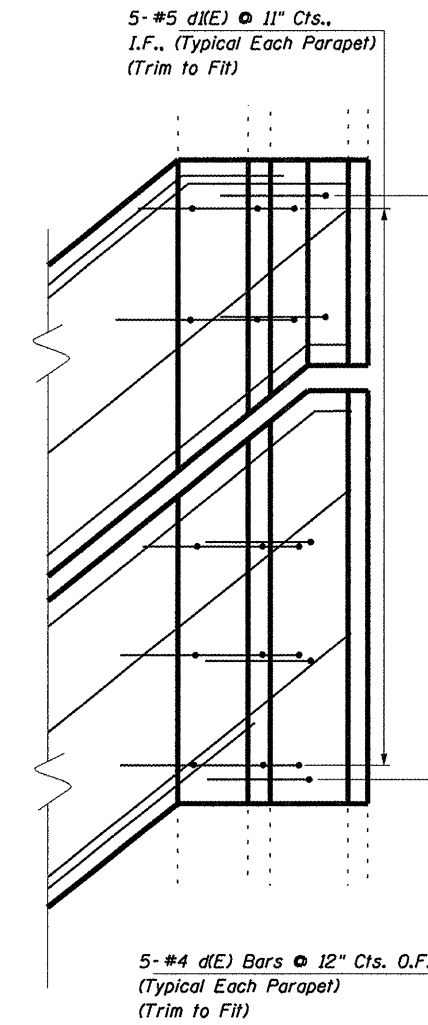
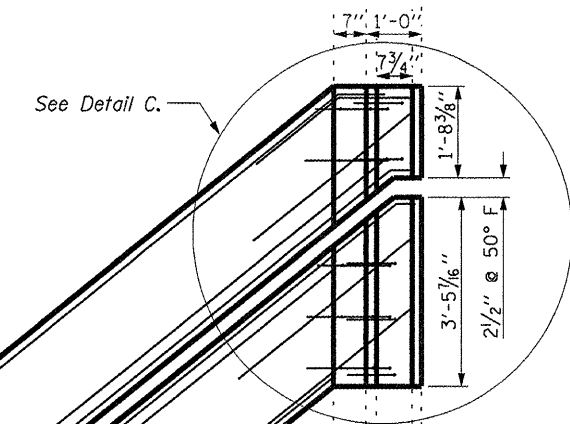
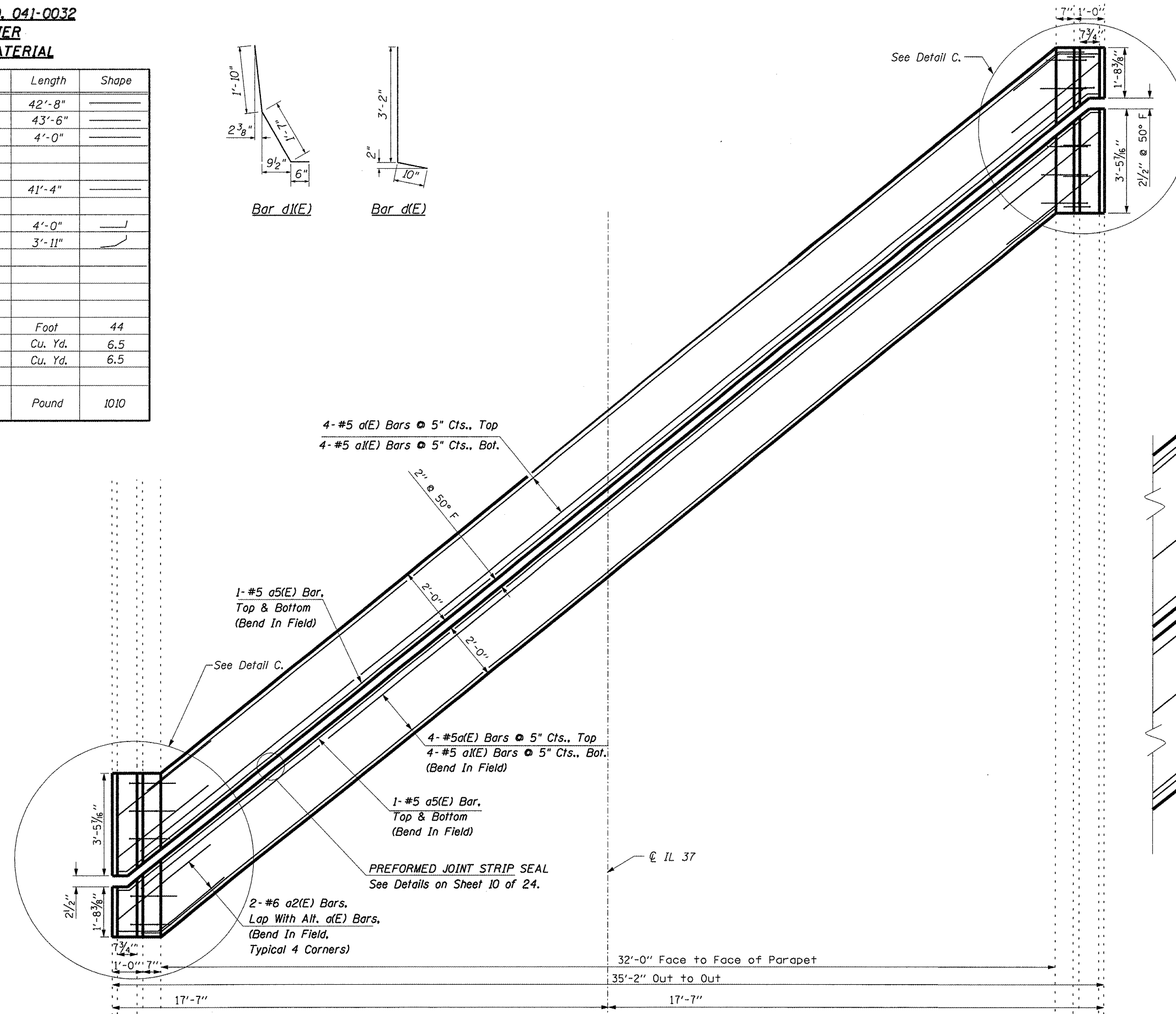
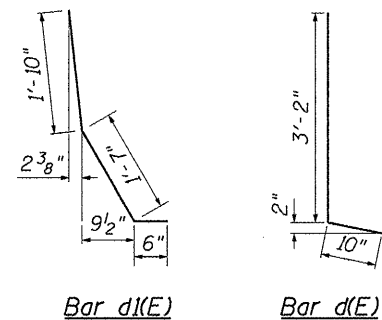
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PLOT DATE = 12/22/2010	PLOT DATE = 12/22/2010	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____										

STRUCTURE NO. 041-0032

ONE PIER

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#5	42'-8"	
a1(E)	8	#5	43'-6"	
a2(E)	8	#6	4'-0"	
a5(E)	4	#5	41'-4"	
d(E)	10	#4	4'-0"	
d1(E)	10	#5	3'-11"	
Preformed Joint Strip Seal		Foot	44	
Concrete Removal		Cu. Yd.	6.5	
Concrete Superstructure		Cu. Yd.	6.5	
Reinforcement Bars, Epoxy Coated		Pound	1010	



PLAN

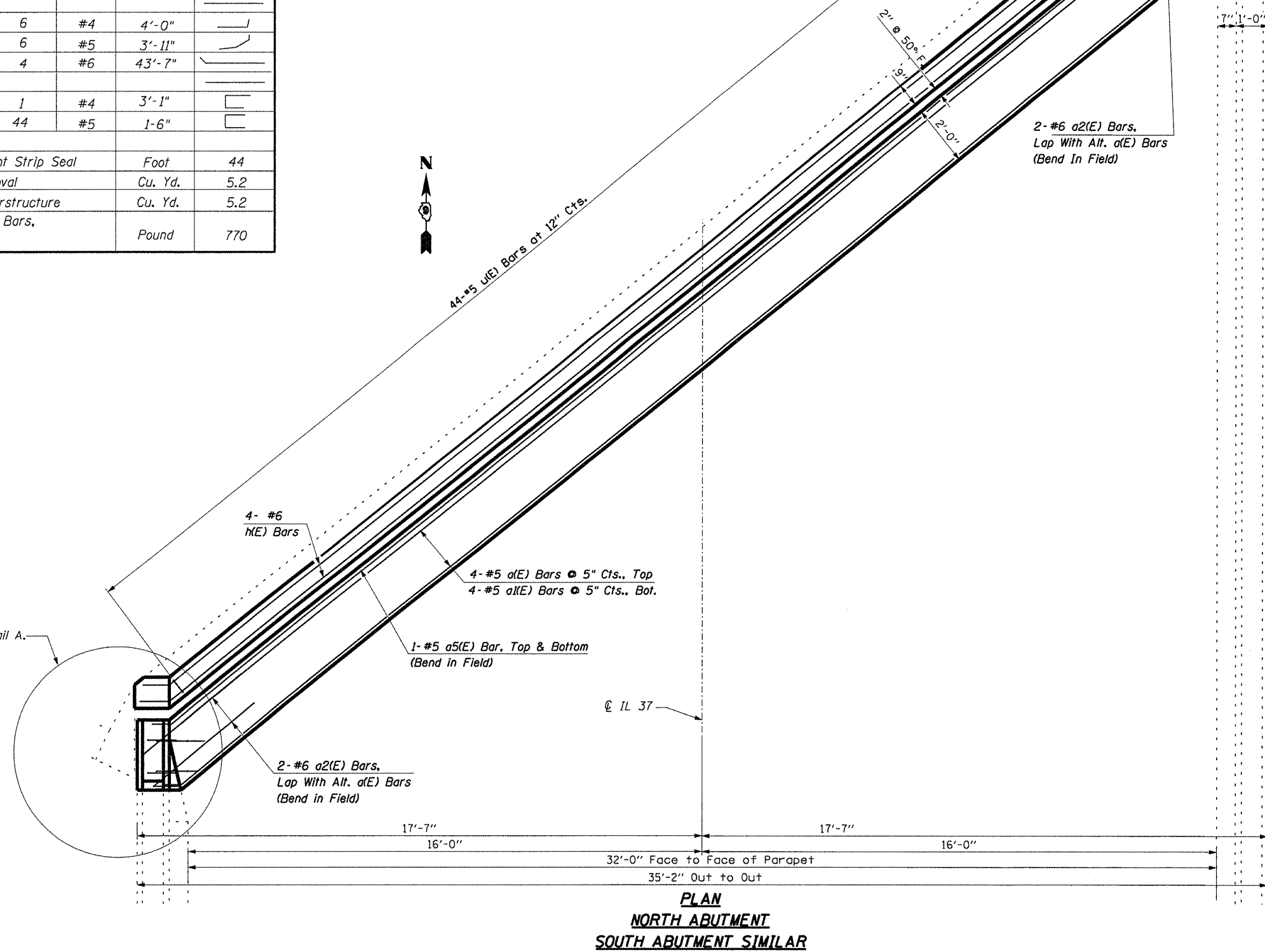
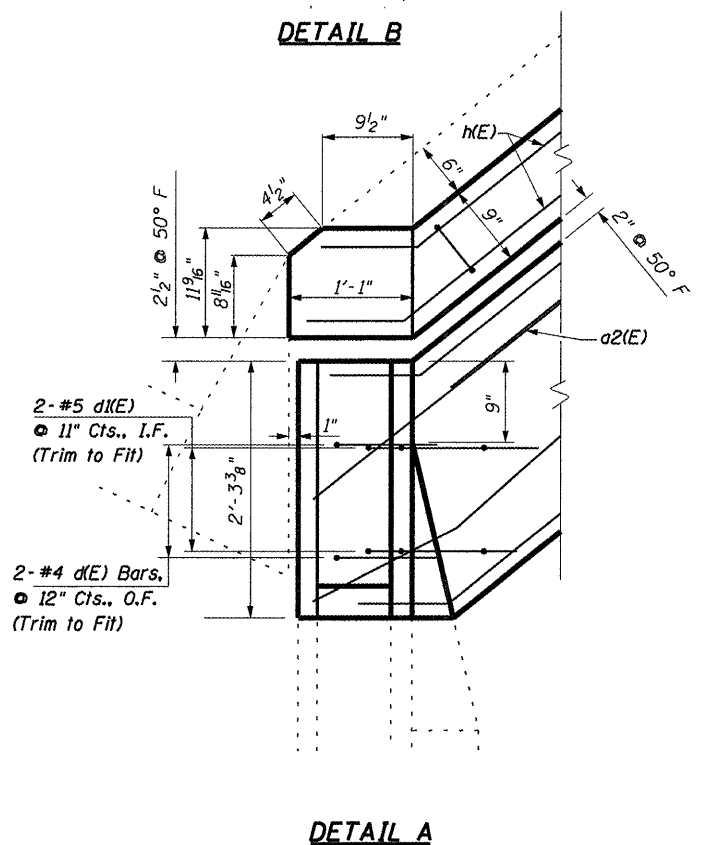
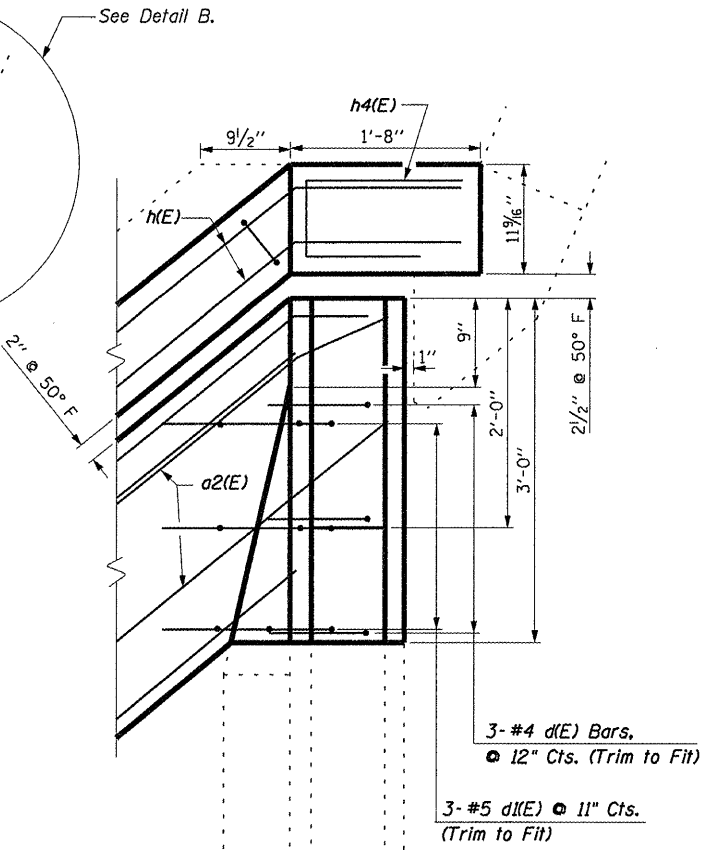
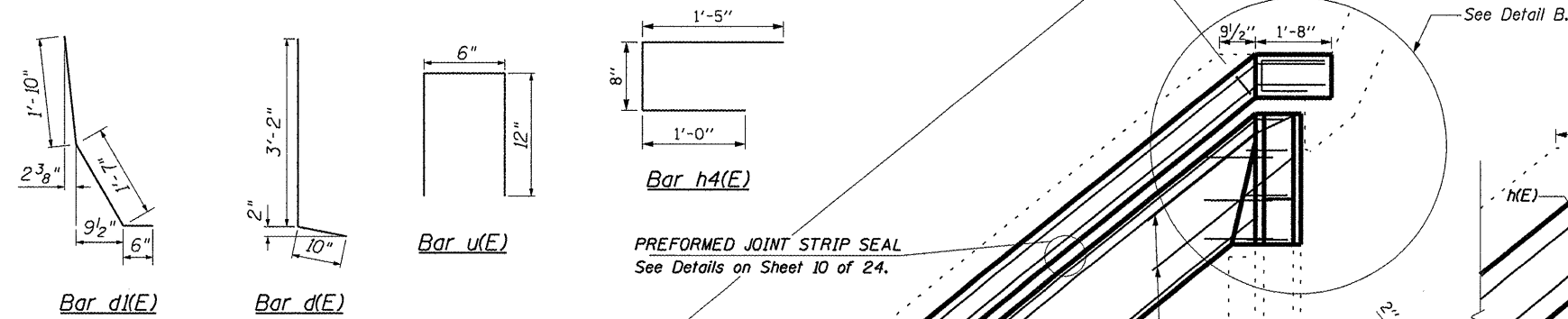
DETAIL C

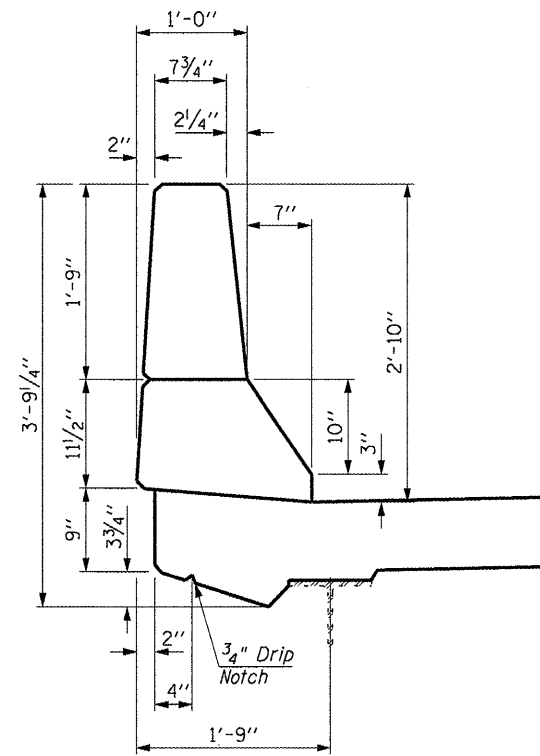
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STRUCTURE NO. 041-0032

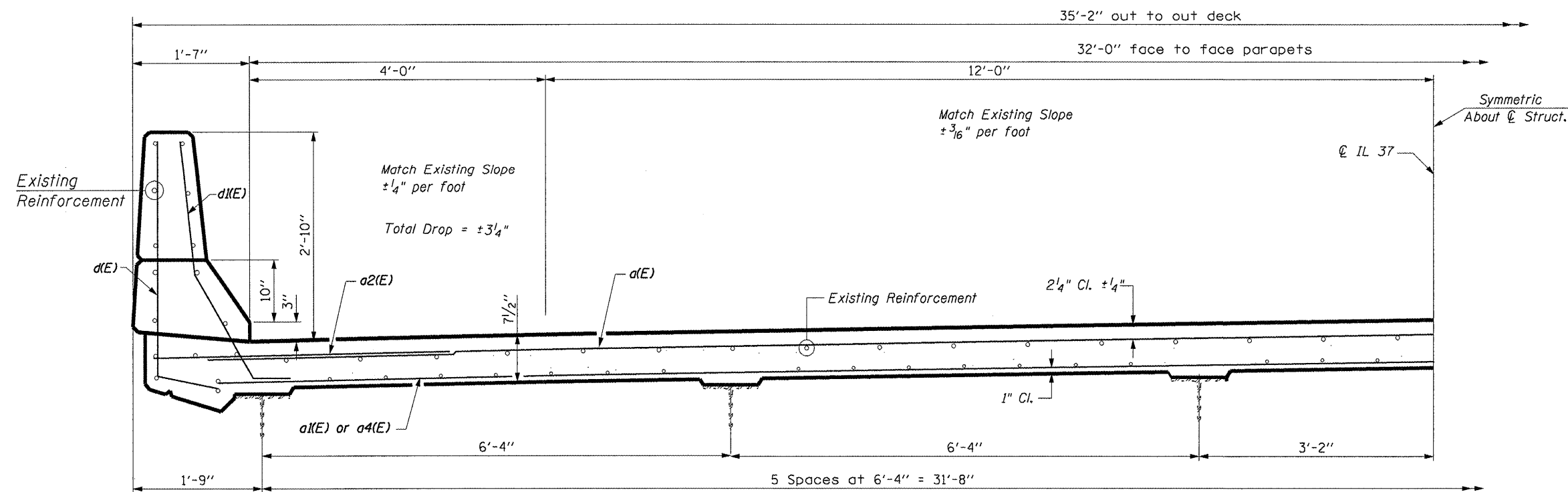
**ONE ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	4	#5	42'-8"	
a1(E)	4	#5	43'-6"	
a2(E)	4	#6	4'-0"	
a5(E)	2	#5	41'-4"	
d(E)	6	#4	4'-0"	
d1(E)	6	#5	3'-11"	
h(E)	4	#6	43'-7"	
h4(E)	1	#4	3'-1"	
u(E)	44	#5	1'-6"	
Preformed Joint Strip Seal	Foot		44	
Concrete Removal	Cu. Yd.		5.2	
Concrete Superstructure	Cu. Yd.		5.2	
Reinforcement Bars, Epoxy Coated	Pound		770	



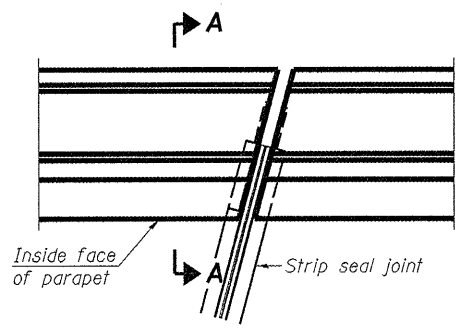


PARAPET SECTION

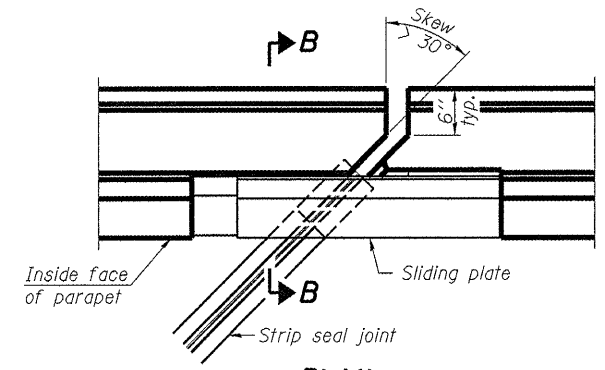


**DECK TYPICAL SECTION
LOOKING NORTH**

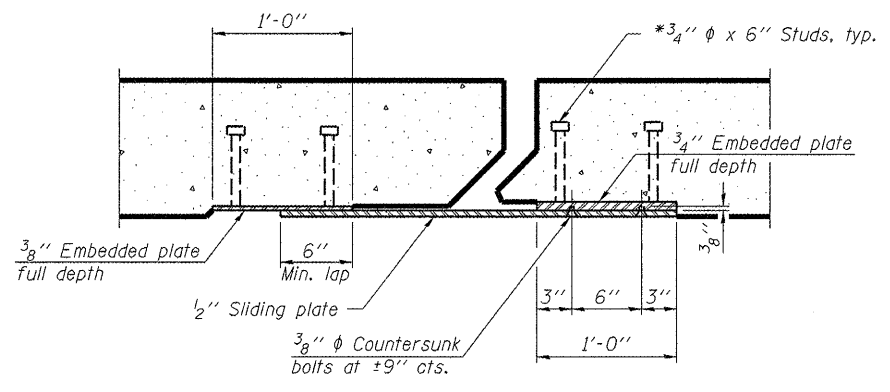
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PLOT DATE = 12/22/2010		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____										



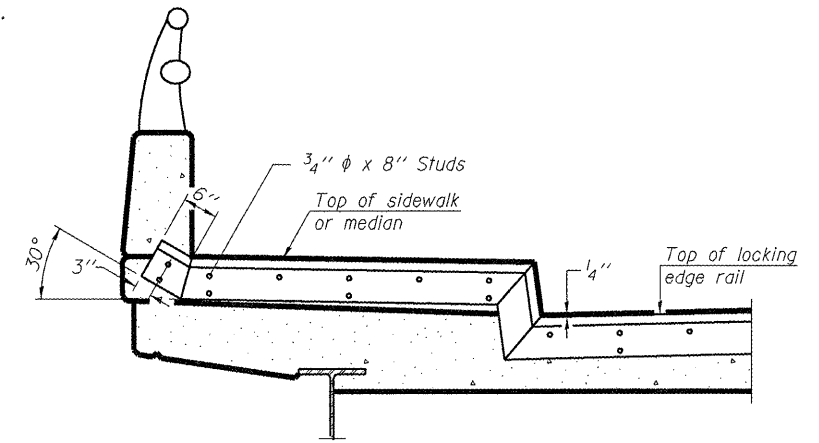
PLAN
(For skews $\leq 30^\circ$)



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

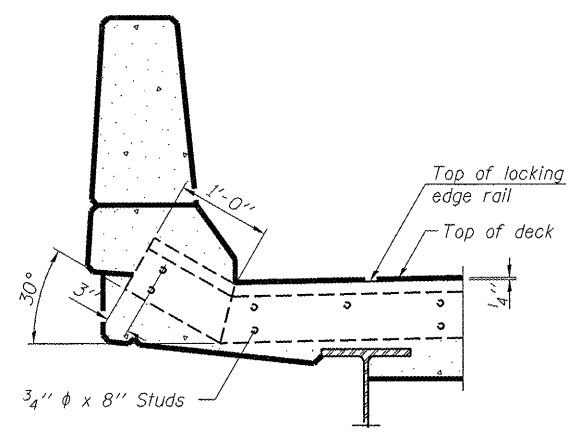


SECTION C-C

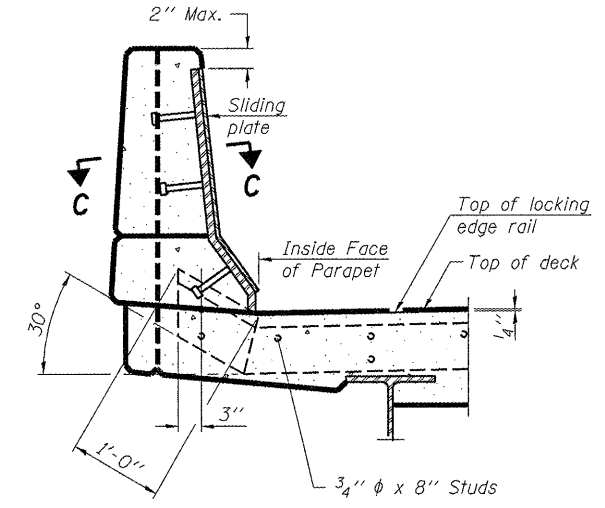


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

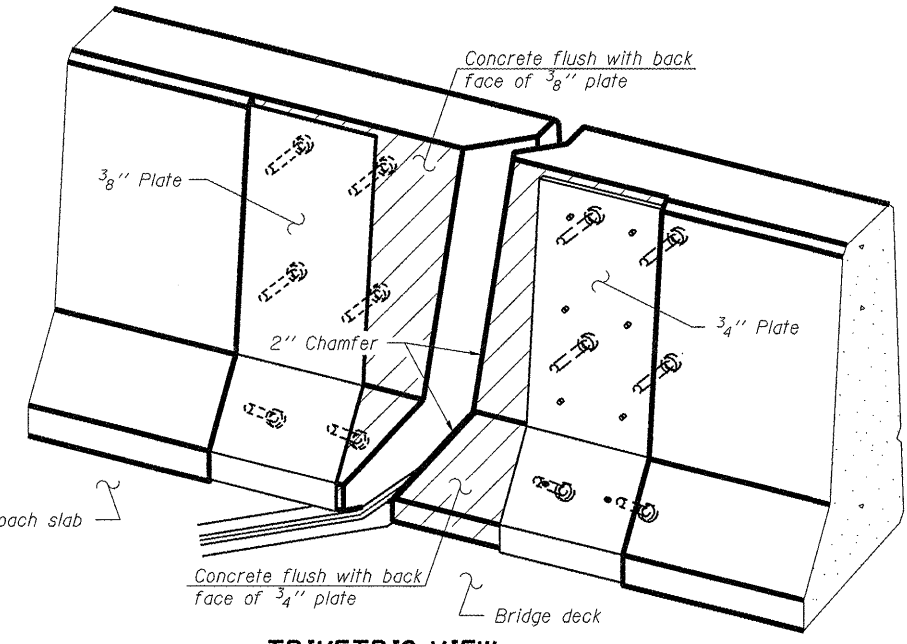
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



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.

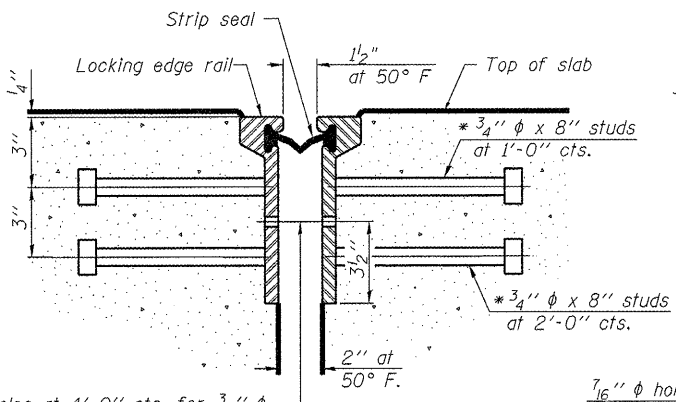
The manufacturer's recommended installation methods shall be followed.

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.

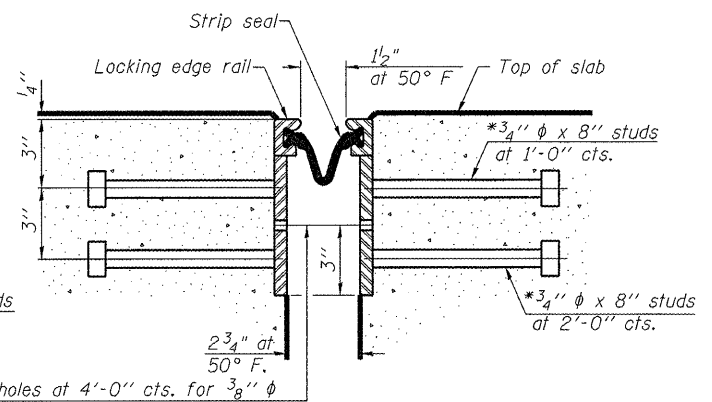
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

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

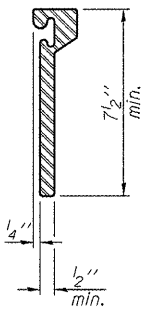


SECTION THRU WELDED RAIL JOINT

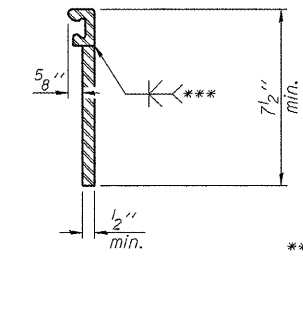
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

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.

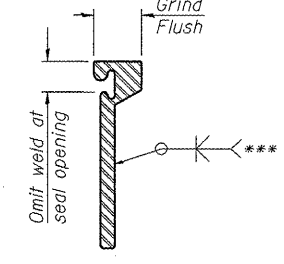
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

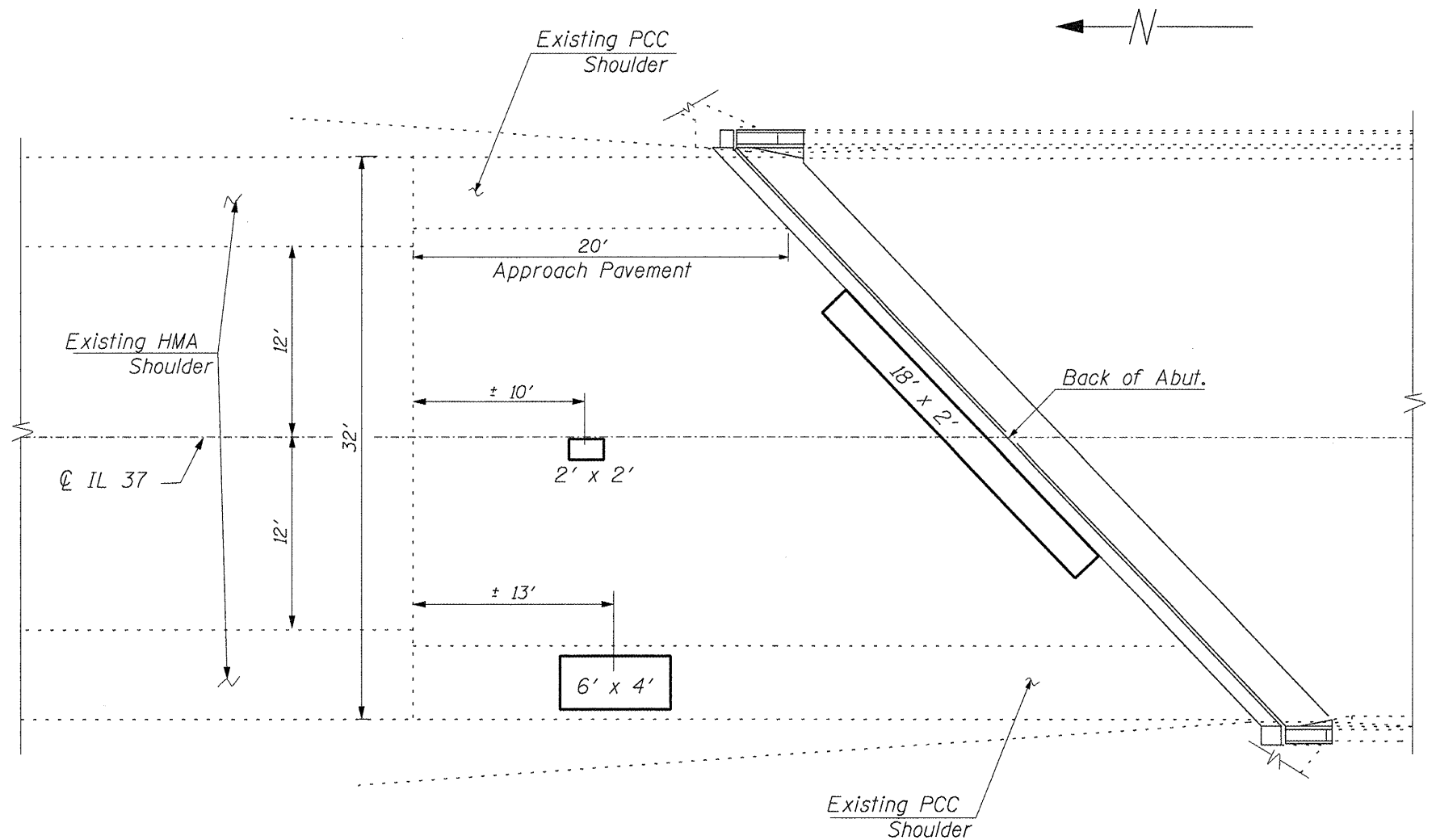
The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.

PREFORMED JOINT STRIP SEAL STRUCTURE NO. 041-0032

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	176

RTE.	SECTION		SHEETS	SHEET NO.
*	D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24	10
*F.A.S. 2869 & F.A.I. 57		CONTRACT NO. 78233		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT				

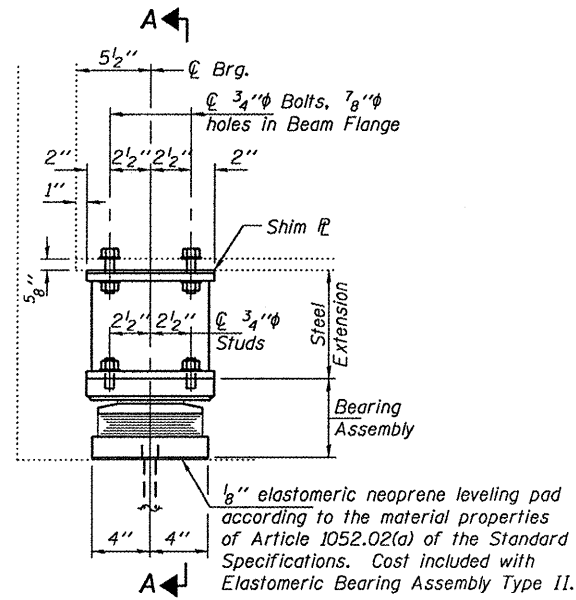


PARTIAL PLAN

□ DECK SLAB REPAIR (PARTIAL)

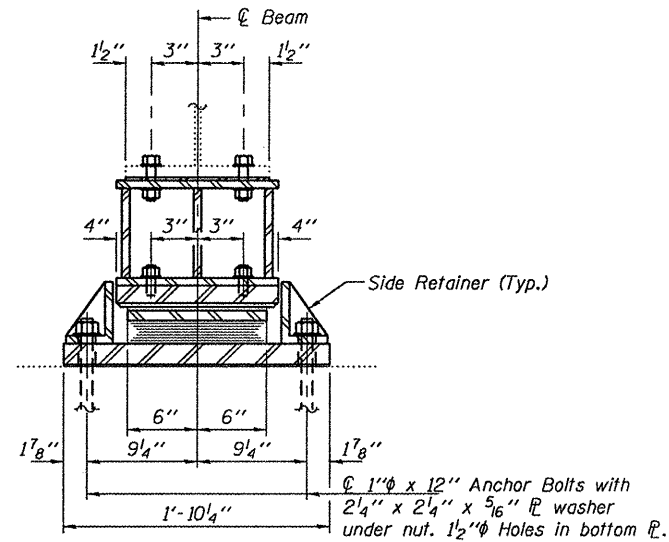
Exact locations and sizes of pavement patches to be determined by the Engineer.

FILE NAME =	USER NAME = geutneyrk	DESIGNED - QKc	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	APPROACH SLAB PATCHING STRUCTURE NO. 041-0032	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ci:\pwork\pwork\geutneyrk\d0190470\78233	12-shr-plan.dgn	DRAWN -	REVISED -			•	D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24	11
	PLOT SCALE = 2:8:0 1" / IN.	CHECKED -	REVISED -			*F.A.S. 2869 & F.A.I. 57	CONTRACT NO. 78233			
	PLOT DATE = 12/22/2010	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				
				SCALE: _____	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____				



ELEVATION AT ABUTMENT

TYPE II TFE ELASTOMERIC EXP. BRG.

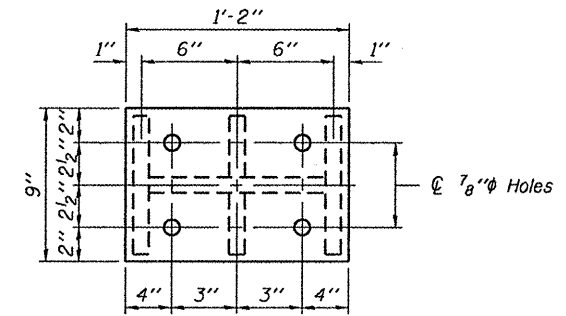


SECTION A-A

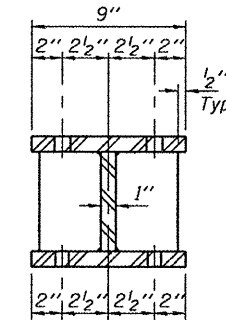
BEAM REACTIONS

R _P	19.2
R _L	31.4
Imp.	9.3
R (Total)	59.9

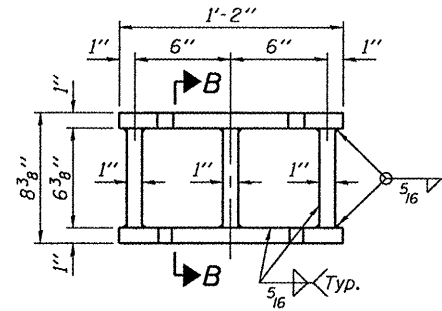
Notes:
 Diaphragm removal and installation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 35 Tons.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
 Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
 Drilled and set anchor bolts shall be installed according to Article 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.



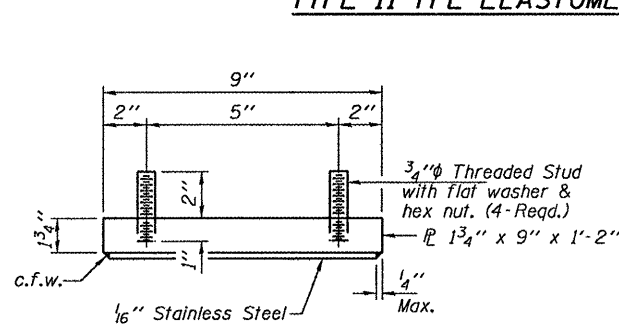
PLAN TOP AND BOTTOM PLATE



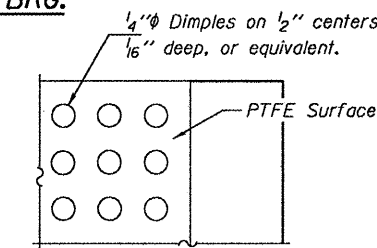
SECTION B-B



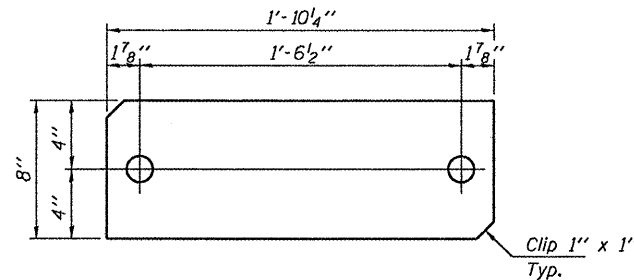
STEEL EXTENSION DETAIL



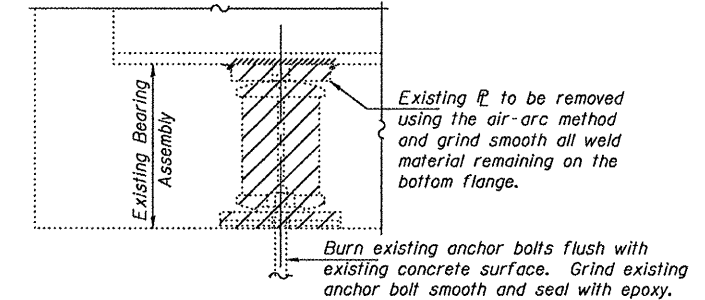
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE

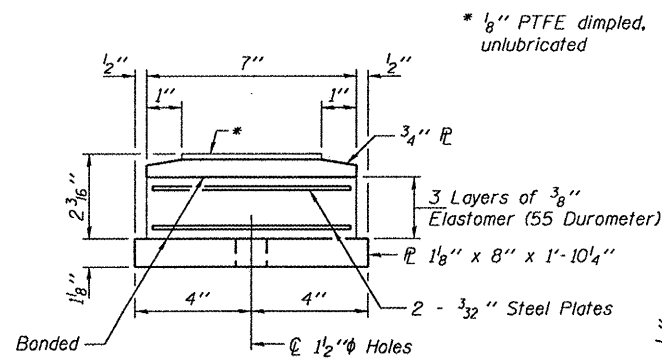


PLAN BOTTOM BEARING PLATE

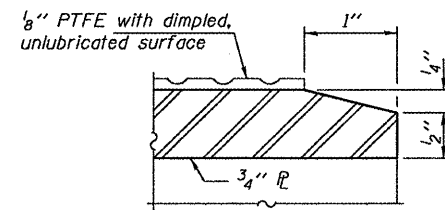


EXISTING BEARING REMOVAL DETAIL

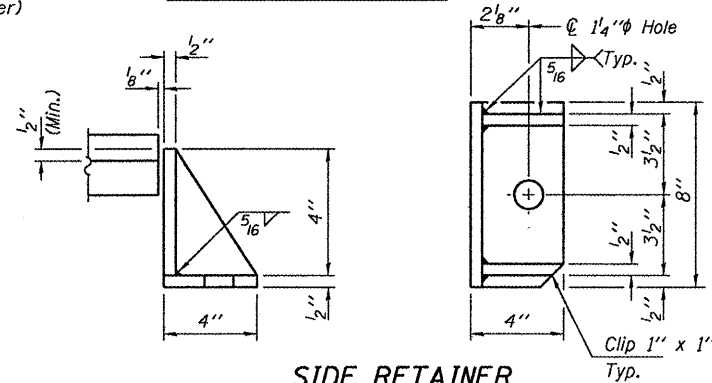
Cost included with Jack and Remove Existing Bearings.



BOTTOM BEARING ASSEMBLY

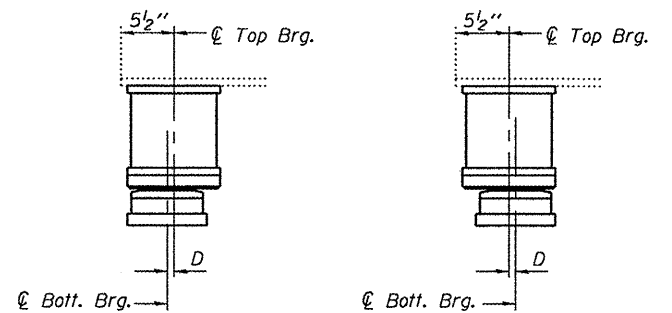


SECTION THRU PTFE



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

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	1620
Anchor Bolts 1"φ	Each	24

DESIGNED IJL	EXAMINED
CHECKED ATH	PASSED
DRAWN boliva	
CHECKED IJL ATH	

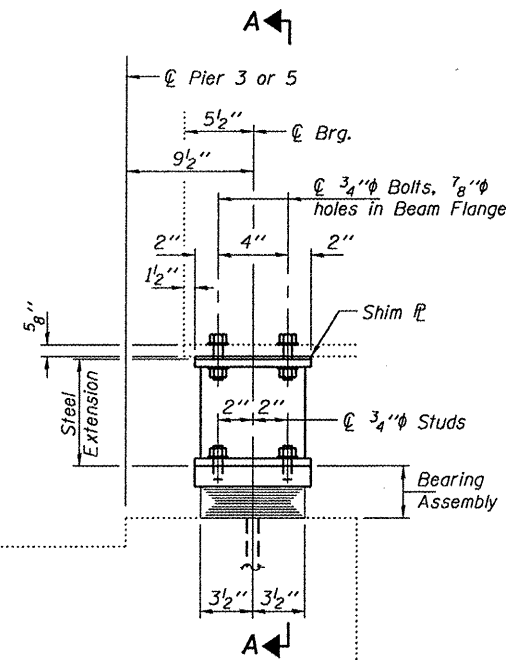
DATE - JANUARY 28, 2011	ACTING ENGINEER OF STRUCTURAL SERVICES
	ACTING ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS
 ABUTMENTS
 SN 041-0032

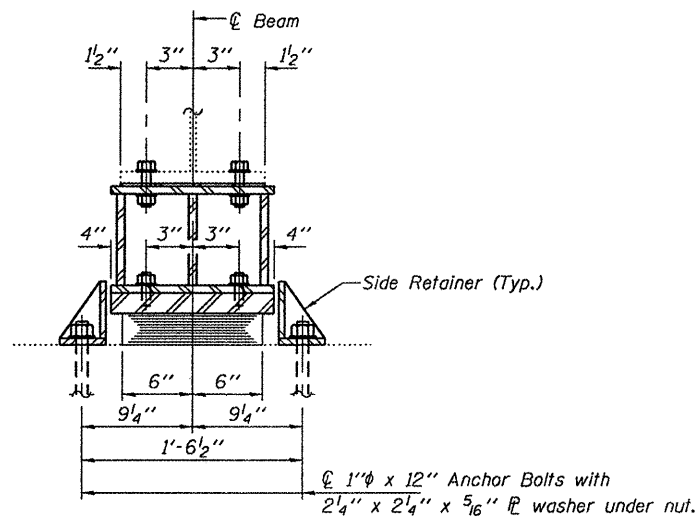
F.A.S. RTE. 2869	SECTION D9 CM BRIDGE REPAIR 2011-2	COUNTY JEFFERSON	TOTAL SHEETS 24	SHEET NO. 12
CONTRACT NO. 78233			ILLINOIS FED. AID PROJECT	

SHEET NO. 1 OF 3 SHEETS



ELEVATION AT PIERS 3 & 5

TYPE I ELASTOMERIC EXP. BRG.

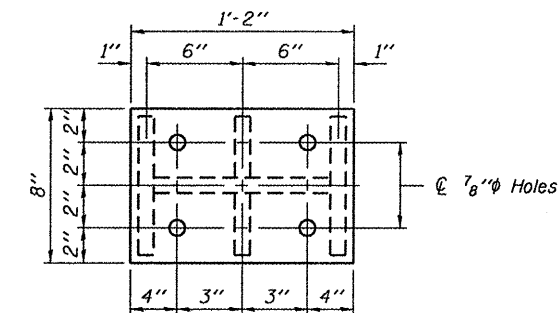


SECTION A-A

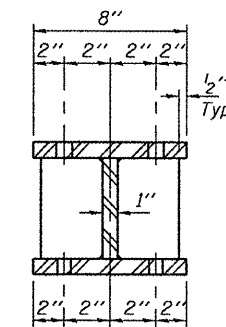
BEAM REACTIONS

R _P	(K)	19.2
R _L	(K)	31.4
Imp.	(K)	9.3
R (Total)	(K)	59.9

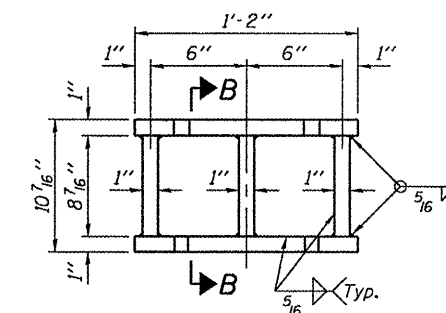
Notes:
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 35 Tons.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



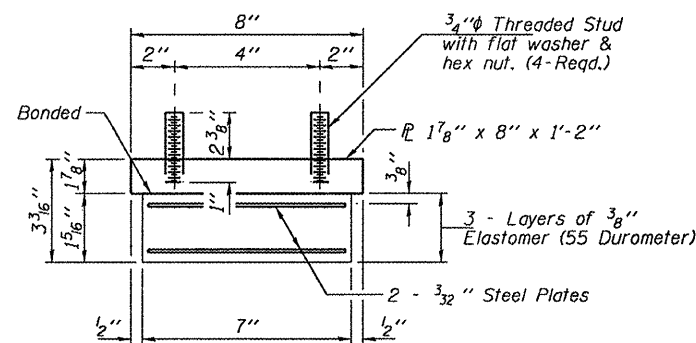
PLAN TOP AND BOTTOM PLATE



SECTION B-B

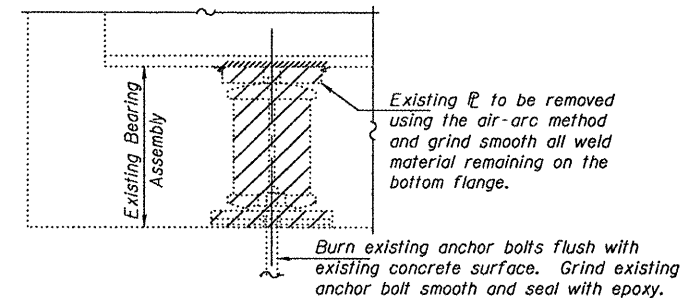


STEEL EXTENSION DETAIL



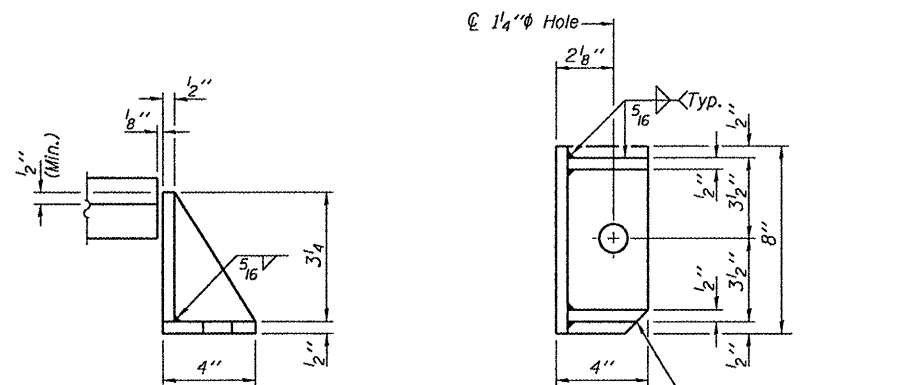
BEARING ASSEMBLY

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



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



SIDE RETAINER

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	1680
Anchor Bolts 1"φ	Each	24

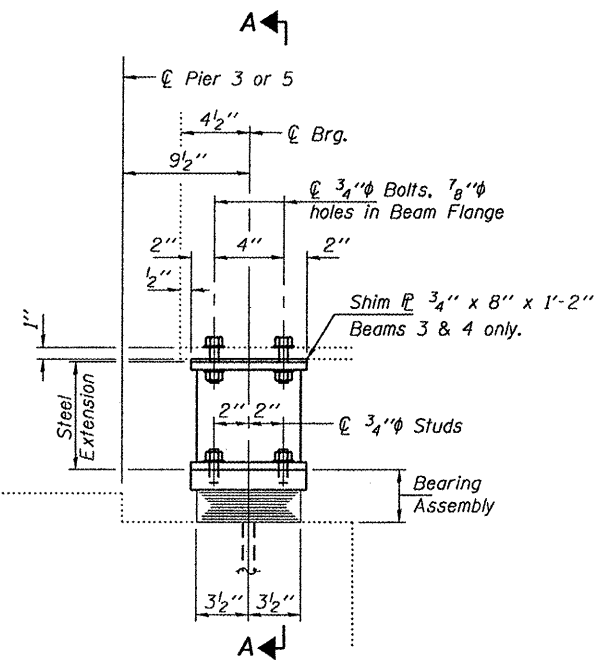
DESIGNED IJL	EXAMINED	DATE - JANUARY 28, 2011
CHECKED ATH	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN baliva	PASSED	
CHECKED IJL ATH	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

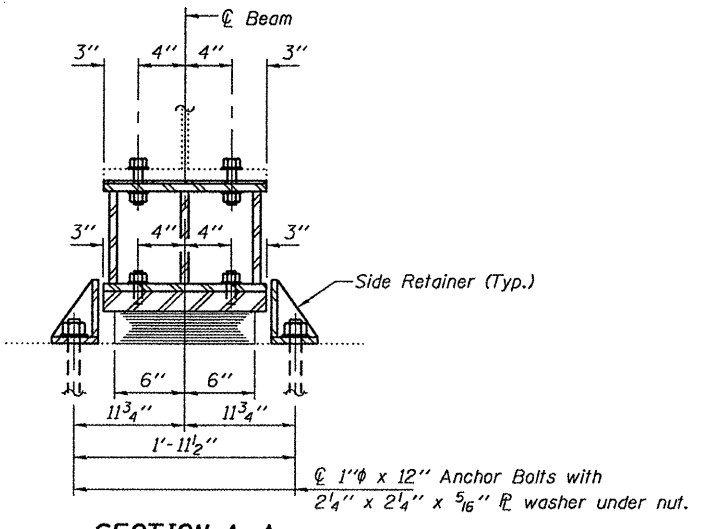
BEARING REPLACEMENT DETAILS
 PIERS 3 & 5 - UNITS I & III
 SN 041-0032

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2869	D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24	13
			CONTRACT NO. 78233	
ILLINOIS FED. AID PROJECT				

SHEET NO. 2 OF 3 SHEETS



ELEVATION AT PIERS 3 & 5

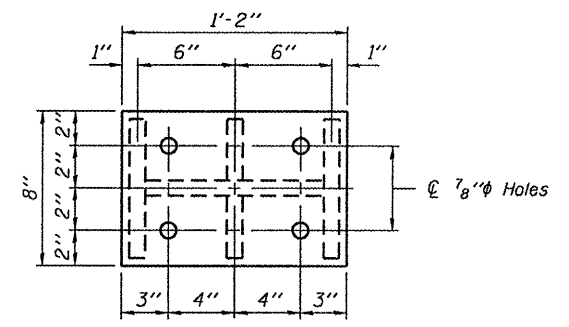


SECTION A-A

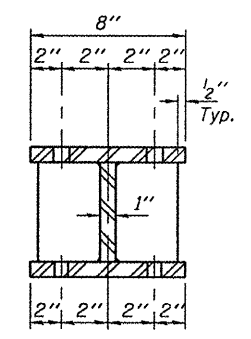
BEAM REACTIONS

R _l	(K)	25.7
R _r	(K)	33.9
Imp.	(K)	9.2
R (Total)	(K)	68.8

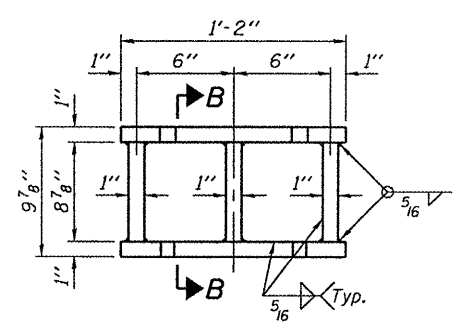
Notes:
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 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 at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



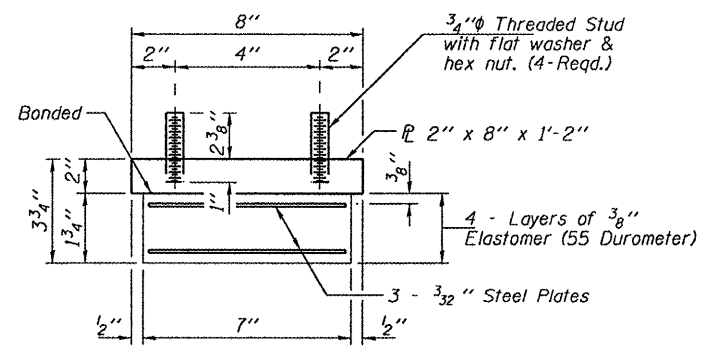
PLAN TOP AND BOTTOM PLATE



SECTION B-B

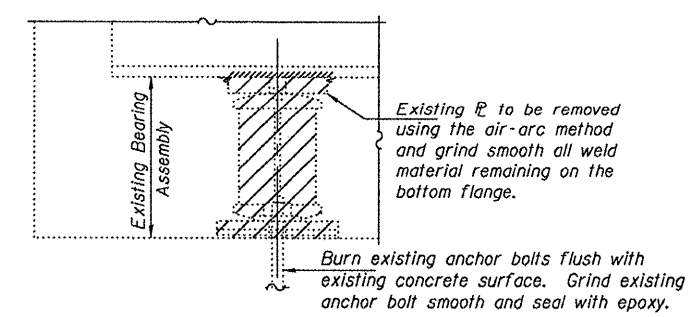


STEEL EXTENSION DETAIL



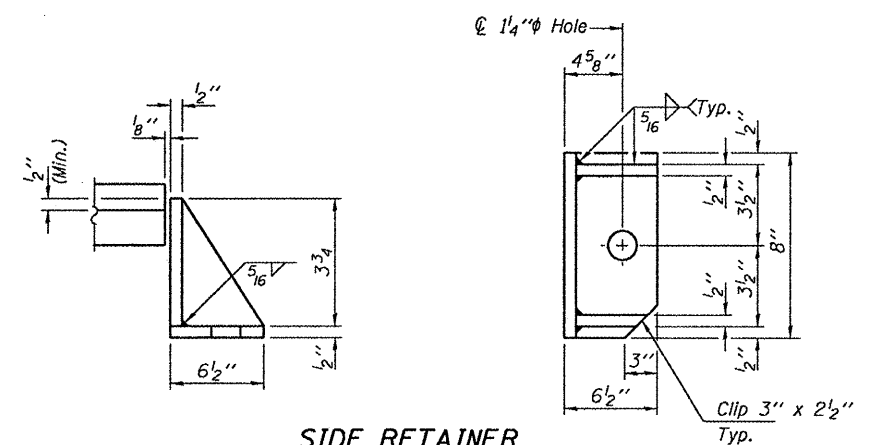
BEARING ASSEMBLY

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



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



SIDE RETAINER

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

BILL OF MATERIAL

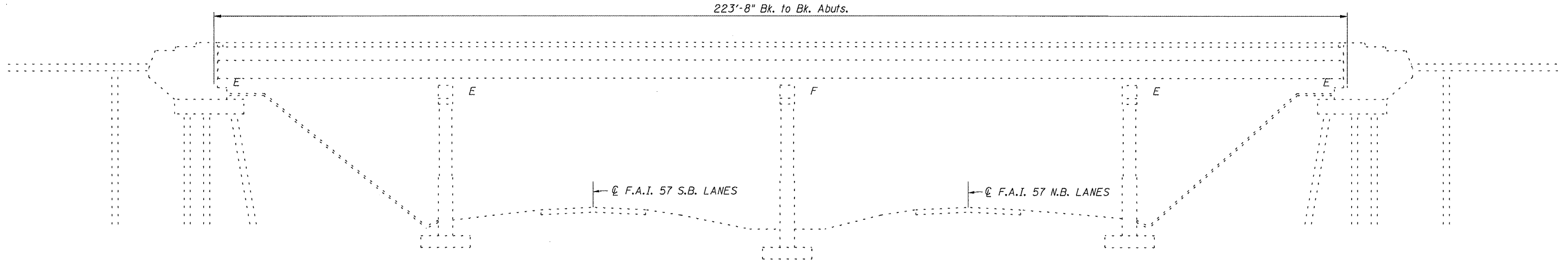
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	1620
Anchor Bolts 1"φ	Each	24

DESIGNED I.J.L.	EXAMINED	DATE - JANUARY 28, 2011
CHECKED ATH	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN baliva	PASSED	
CHECKED I.J.L. ATH	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

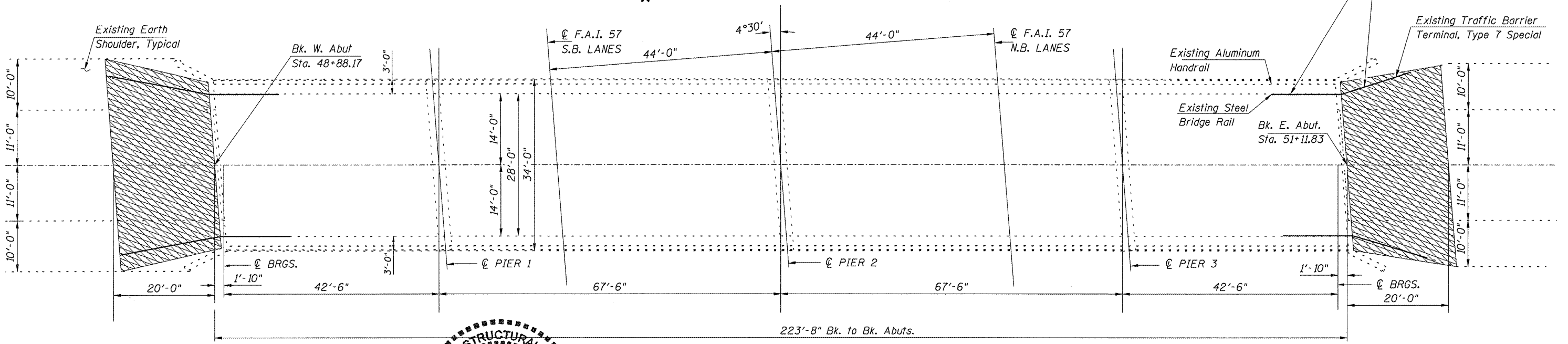
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS
 PIERS 3 & 5 - UNIT II
 SN 041-0032

F.A.S. RTE. 2869	SECTION D9 CM BRIDGE REPAIR 2011-2	COUNTY JEFFERSON	TOTAL SHEETS 24	SHEET NO. 14
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78233	

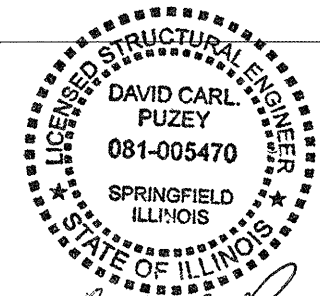


ELEVATION



PLAN

HMA SURFACE REMOVAL, 2"
 INCIDENTAL HOT-MIX SURFACING
 BITUMINOUS MATERIALS (PRIME COAT)



David Carl Puzey
 Expires 11/30/2012

Remove and Re-erect Existing
 Railing and Traffic Barrier Terminal.
 Cost included in Concrete
 Superstructure, Typical Each
 Corner of Bridge

Existing Traffic Barrier Terminal, Type 7 Special

Existing Aluminum Handrail

Existing Steel Bridge Rail

Bk. E. Abut.
Sta. 51+11.83

FILE NAME =
c:\pwork\pwsdot\goutneyr\0190470\78212-sht-plan.dgn

USER NAME = goutneyr
 PLOT SCALE = 1/8" = 1'-0" / IN.
 PLOT DATE = 12/22/2010

DESIGNED - RKG
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 041-0055

SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D9	CM BRIDGE REPAIR 2011-2	JEFFERSON	24	15
*F.A.S. 2869 & F.A.I. 57		CONTRACT NO. 78233		
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

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

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

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

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

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

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

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

Reinforcement bars designated (E) shall be epoxy coated.

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

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

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Existing nameplate located in the parapet removal area shall be removed, cleaned, stored and reinstalled at the same location. Cost of all labor and materials required to complete this task is included in the unit cost each for RELOCATING NAME PLATES.

The thickness of hot-mix asphalt mixture shown on the plans is the nominal thickness. Deviations from the nominal thickness will be permitted when such deviations occur due to Irregularities in the existing surface or base on which the hot-mix asphalt mixture is placed.

Factors used for estimating plan quantities are as follows and shall not be used for The basis of final quantities:

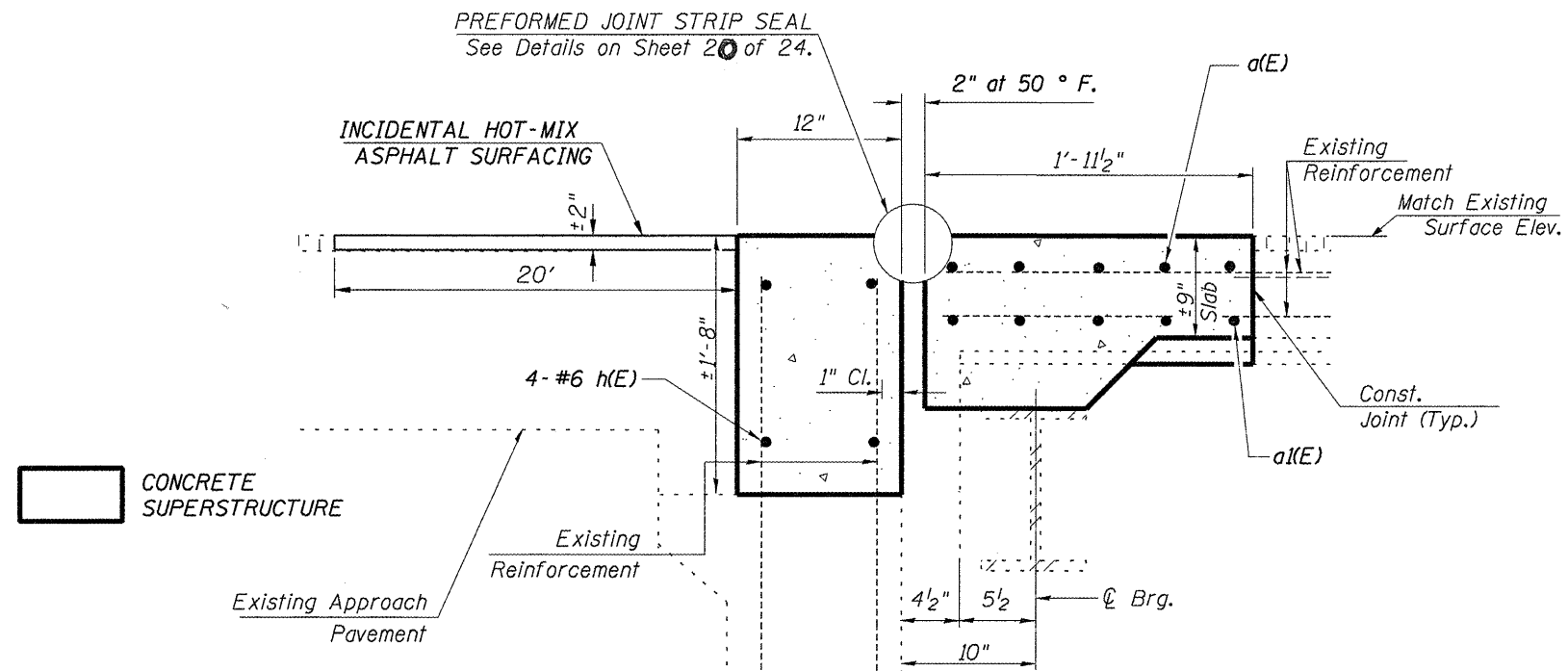
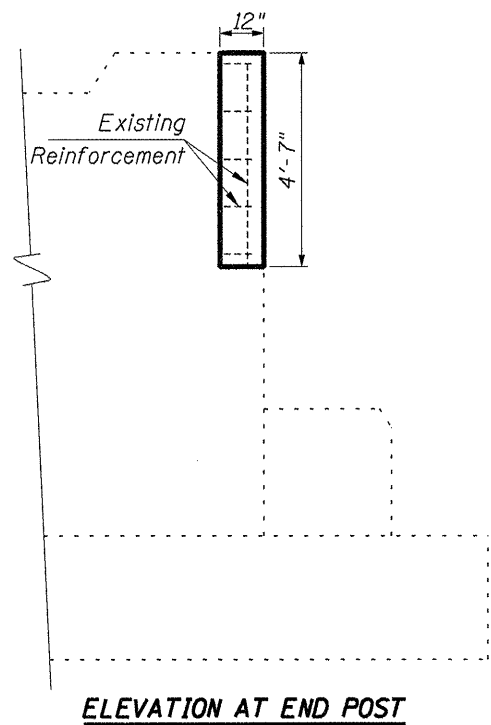
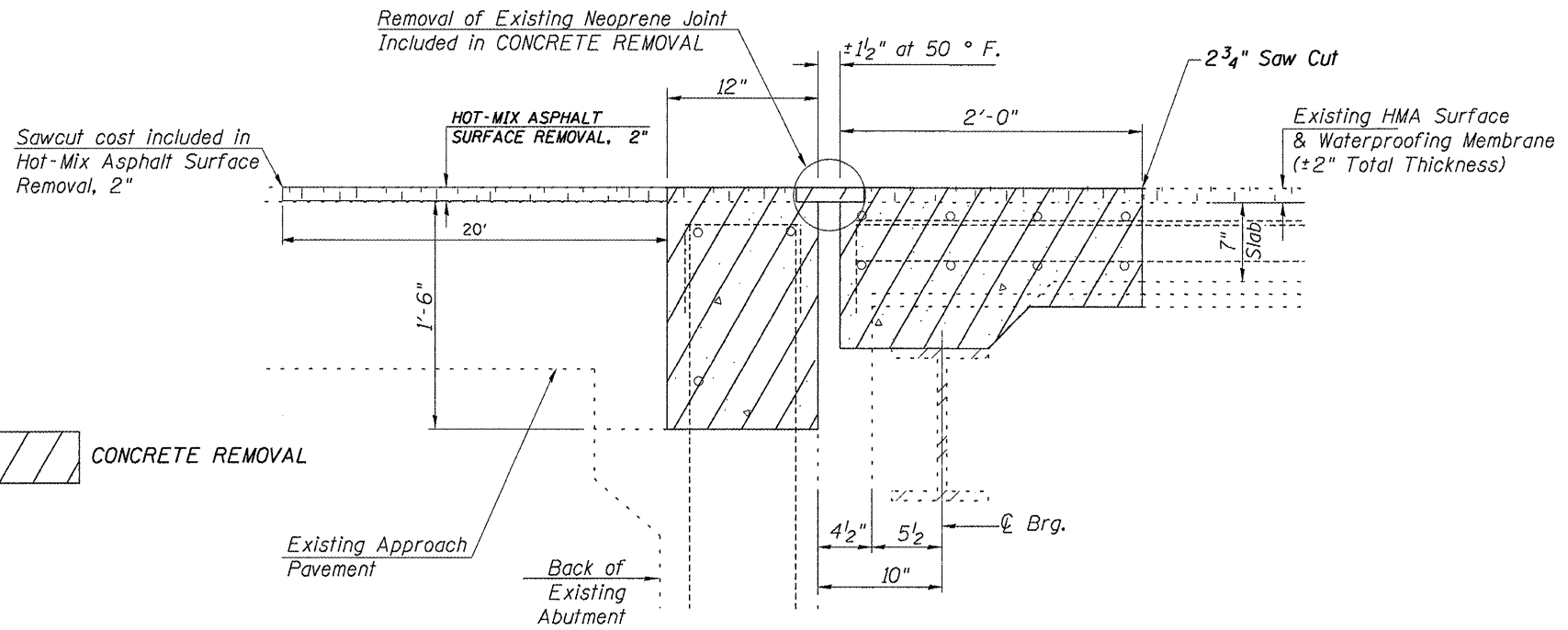
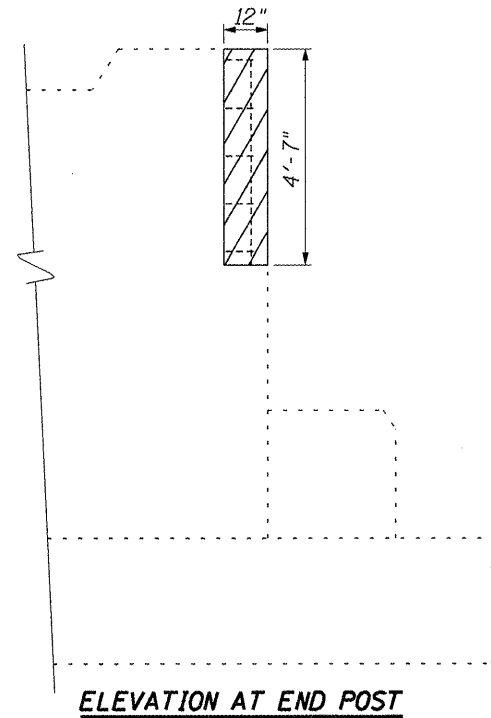
All hot mix asphalt	2.016 tons/cu yd
Bituminous materials On pavement	0.09 gal/sq yd
Intermediate lifts (fog coat)	0.04 gal/sq yd

In addition to the requirements of article 107.16 the contractor shall protect the surface of all bridge decks and bridge approach pavements in a manner satisfactory to the engineer before any equipment is allowed to cross the structure. Protection shall be provided for all equipment as defined in article 101.16 regardless if track mounted or wheeled.

**TOTAL BILL OF MATERIAL
STRUCTURE 041-0055**

CONCRETE REMOVAL	CU YD	9.8
CONCRETE SUPERSTRUCTURE	CU YD	10.8
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1230
JACK AND REMOVE EXISTING BEARINGS	EACH	12
REINFORCEMENT BARS, EPOXY COATED	POUND	1420
RELOCATING NAME PLATES	EACH	1
PREFORMED JOINT STRIP SEAL	FOOT	66
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12
ANCHOR BOLTS, 1"	EACH	24
PROTECTIVE SHIELD, (PERMANENT)	SQ YD	93
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	22.6
PROTECTIVE COAT	SQ YD	45

FILE NAME =	USER NAME = gautneyrk	DESIGNED - RKC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, BILL OF MATERIALS STRUCTURE NO. 041-0055	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwwork\pwwork\gautneyrk\d0190470\78233\12-shr-plan.dgn	DRAWN -	REVISED -	* D9 CM BRIDGE REPAIR 2011-2			JEFFERSON	24	16		
PLOT SCALE = 410:57 13/16 "/ IN.	CHECKED -	REVISED -	*F.A.S. 2869 & F.A.I. 57			CONTRACT NO. 78233				
PLOT DATE = 12/22/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
				SCALE: _____	SHEET NO. ____ OF ____ SHEETS	STA. _____ TO STA. _____				



FILE NAME =
c:\pwork\pwork\gautneyrk\d0190470\782

USER NAME = gautneyrk
12-sht-plan.dgn
PLOT SCALE = 2:8:0 1' / IN.
PLOT DATE = 12/22/2010

DESIGNED - *RKG*
DRAWN - *RKG*
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

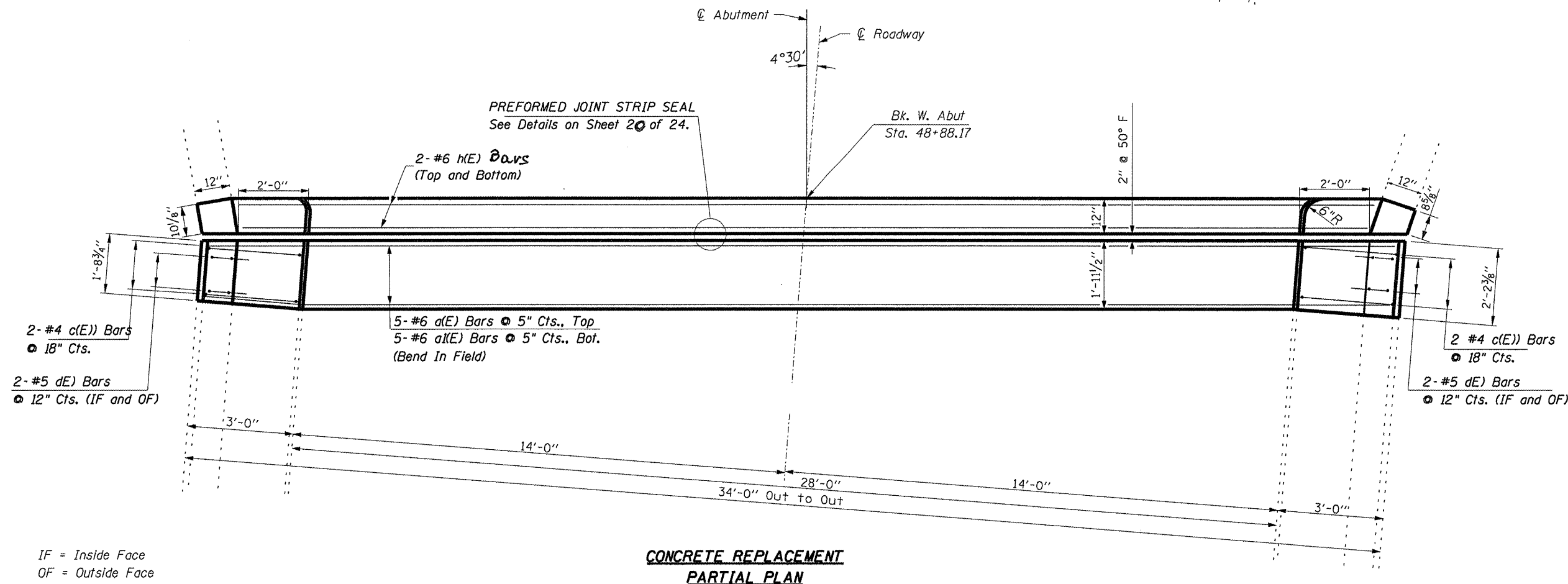
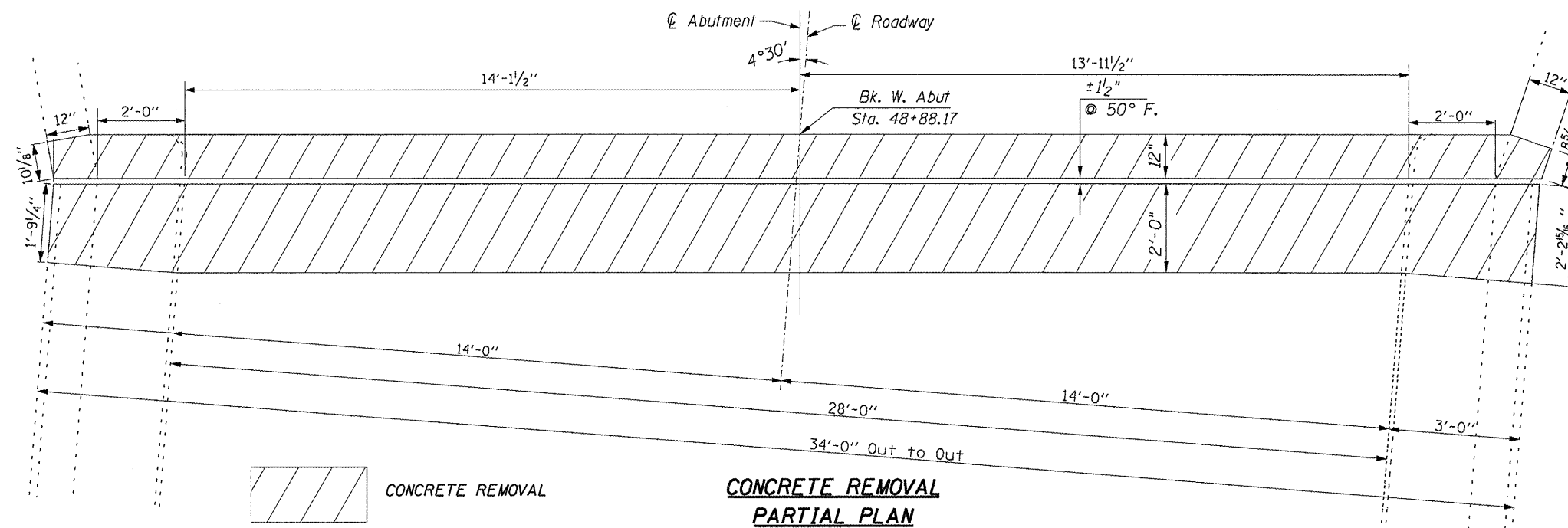
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CONCRETE REMOVE & REPLACE
STRUCTURE NO. 041-0055**
SCALE: SHEET NO. OF SHEETS STA. TO STA.

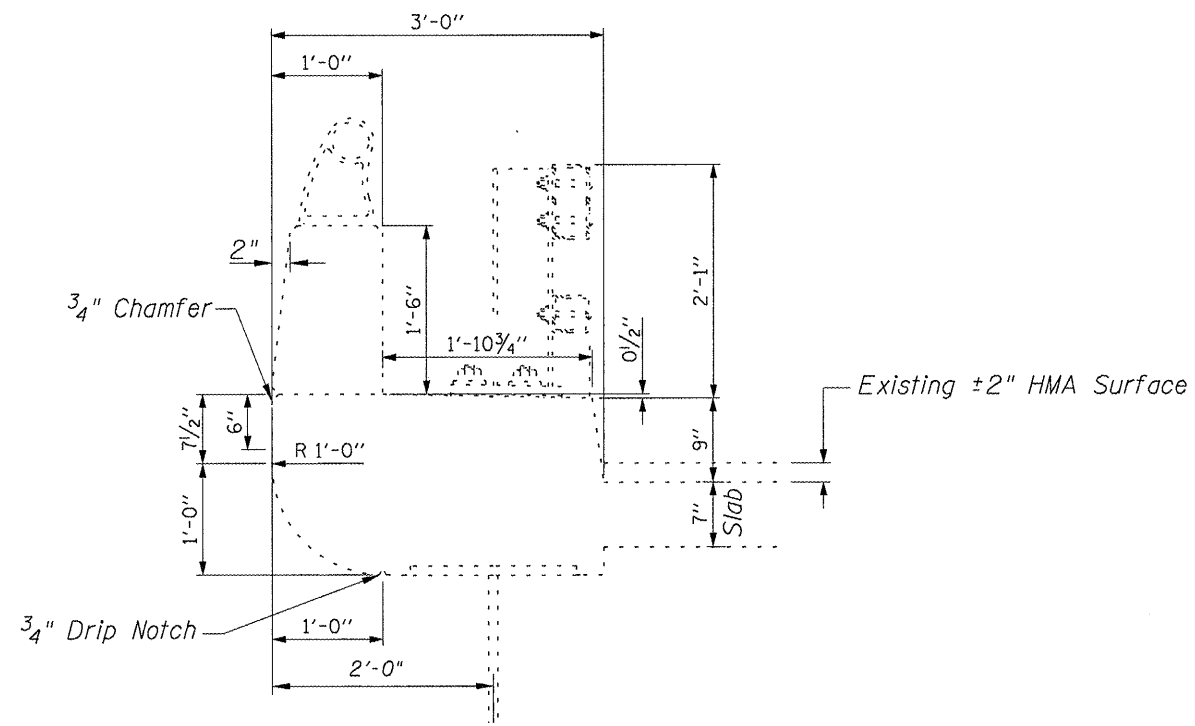
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24	17
*F.A.S. 2869 & F.A.I. 57			CONTRACT NO. 78233	
ILLINOIS FED. AID PROJECT				

STRUCTURE NO. 041-0055
ONE ABUTMENT
BILL OF MATERIAL

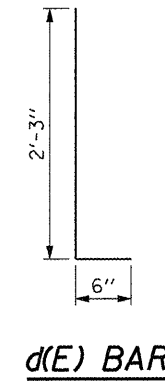
Bar	No.	Size	Length	Shape
a(E)	5	#6	33'-7"	————
a(E)	5	#6	33'-1"	————
c(E)	4	#4	5'-9"	┌
d(E)	8	#5	2'-9"	└
h(E)	4	#6	27'-9"	————
Preformed Joint Strip Seal			Foot	33
Concrete Removal			Cu. Yd.	4.9
Concrete Superstructure			Cu. Yd.	5.4
Reinforcement Bars, Epoxy Coated			Pound	710



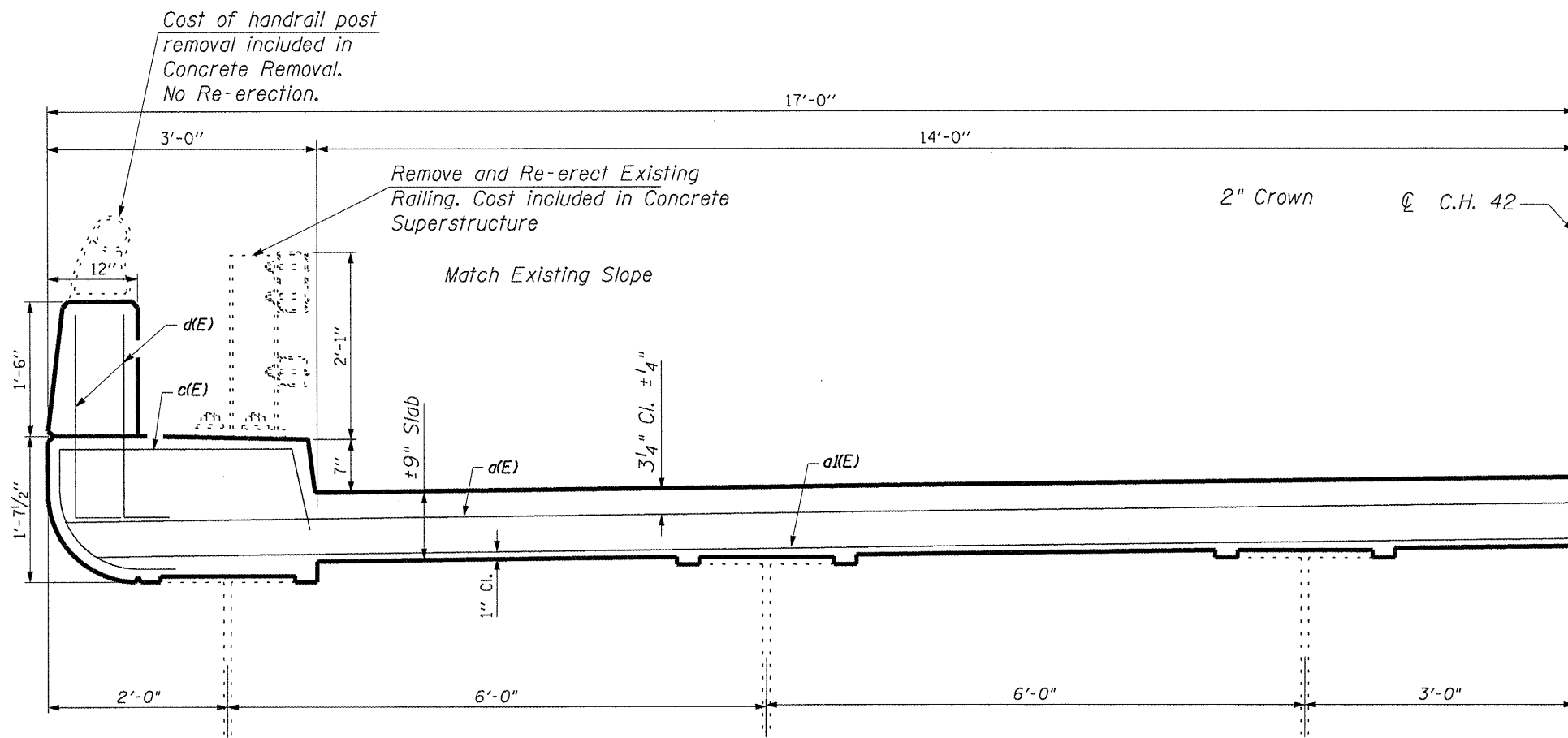
IF = Inside Face
 OF = Outside Face



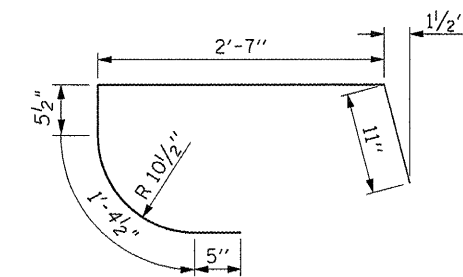
SIDEWALK SECTION



d(E) BAR

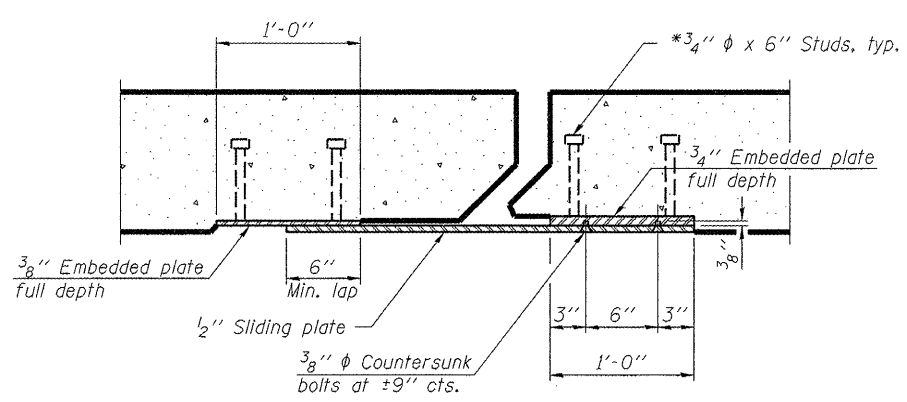
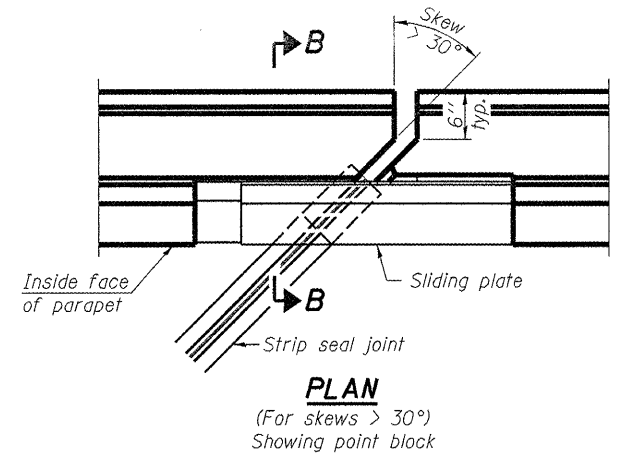
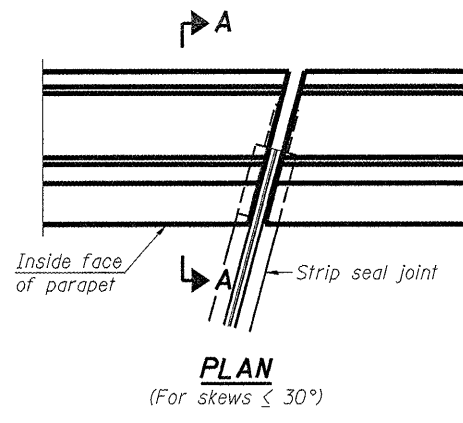


DECK SECTION AT JOINT

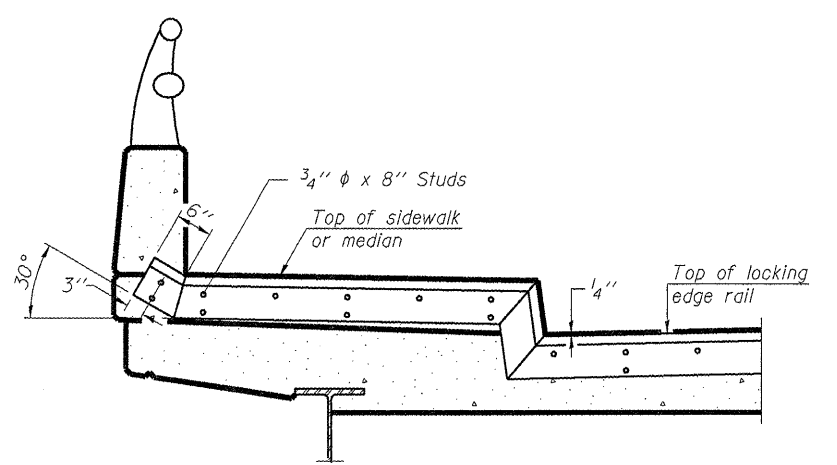


c(E) BAR

FILE NAME =	USER NAME = gautneyrk	DESIGNED - RK6	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE REPLACE STRUCTURE NO. 041-0055	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct\pwwork\pwwork\gautneyrk\d0190470\78212-sht-plendgn	DRAWN -	REVISED -	•			D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24	19	
PLOT SCALE = 1:866 1/8" = 1' IN.	CHECKED -	REVISED -	*F.A.S. 2869 & F.A.I. 57			CONTRACT NO. 78233				
PLOT DATE = 12/22/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____										

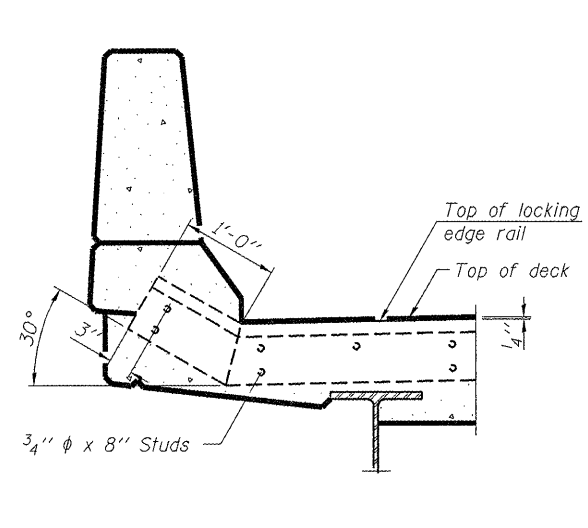


SECTION C-C

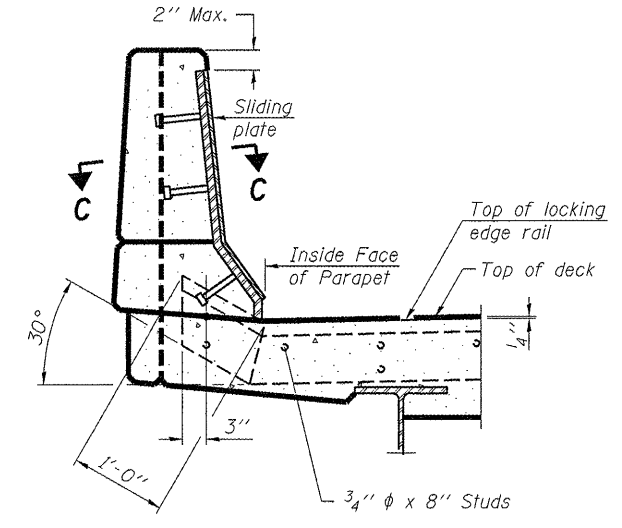


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

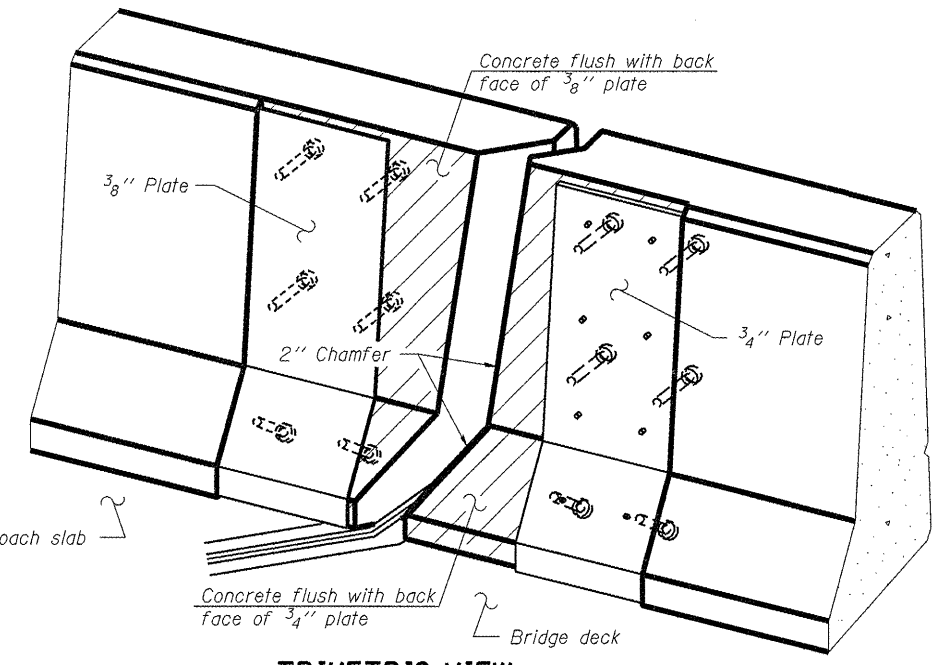
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



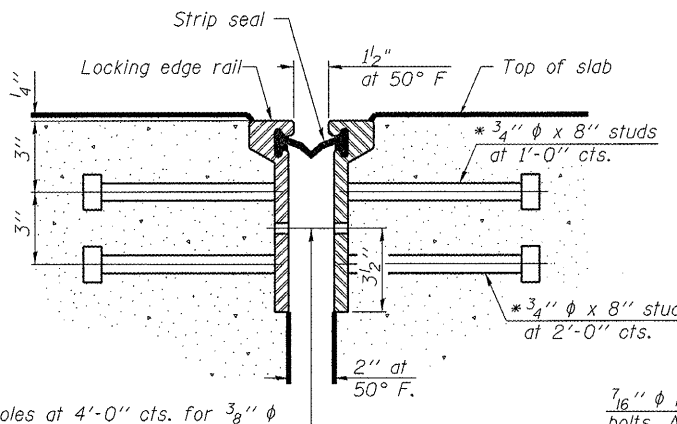
SECTION A-A



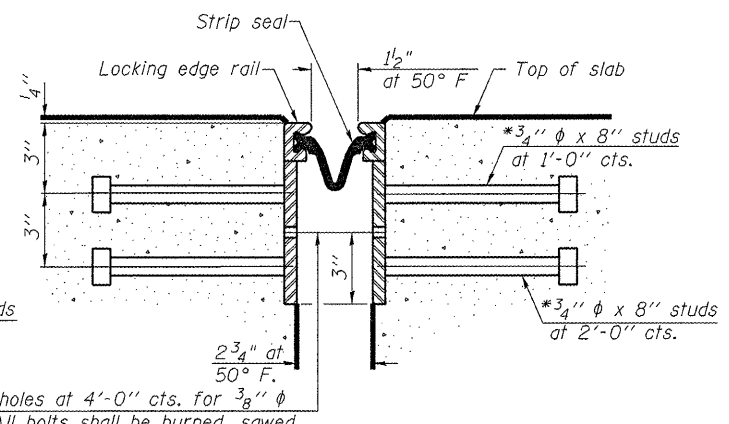
SECTION B-B



TRIMETRIC VIEW (Showing back plates only)



SECTION THRU ROLLED RAIL JOINT

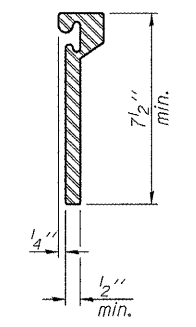


SECTION THRU WELDED RAIL JOINT

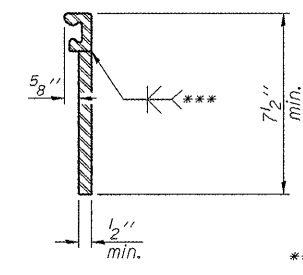
7/16" phi holes at 4'-0" cts. for 3/8" phi bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

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.

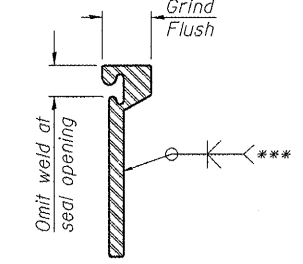
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

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

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

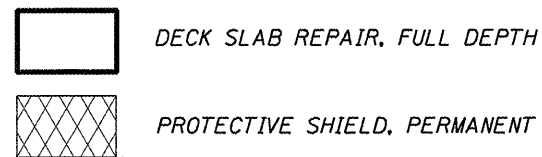
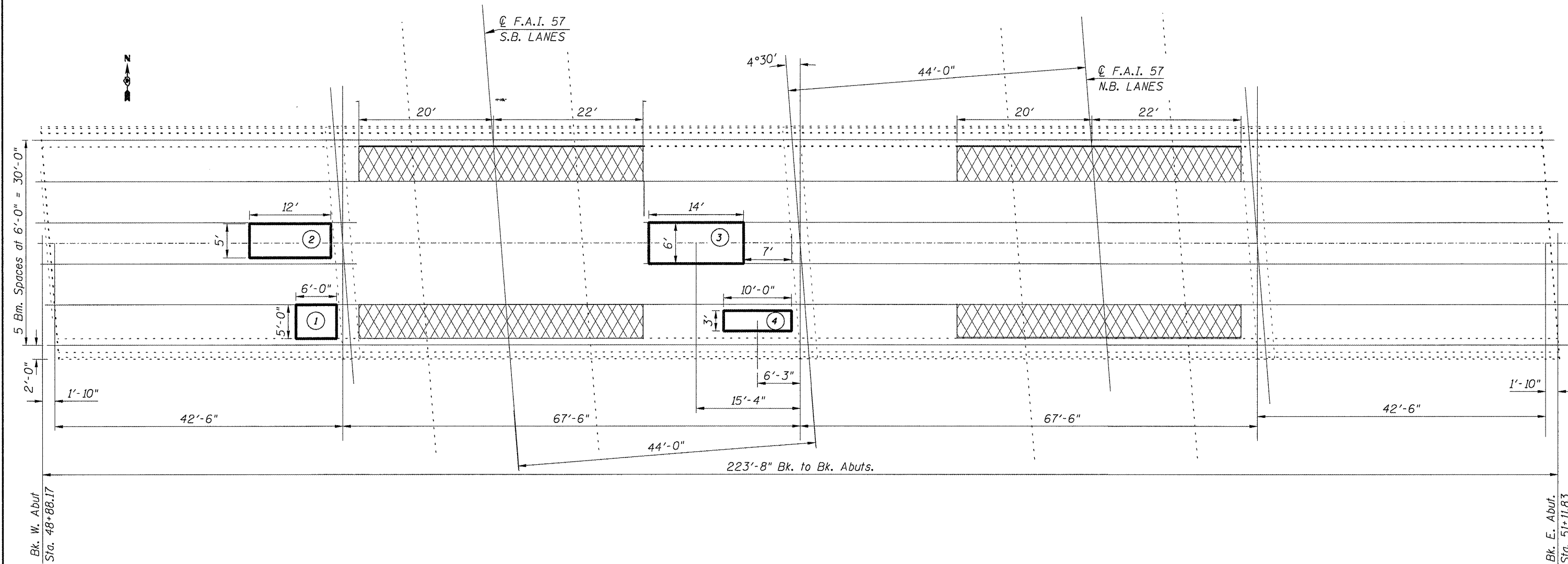
BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	66

LOCKING EDGE RAILS

PREFORMED JOINT STRIP SEAL STRUCTURE NO. 041-0055

RTE.	SECTION	SHEETS	SHEET NO.
•	D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24 20
•F.A.S. 2869 & F.A.I. 57		CONTRACT NO. 78233	
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			



Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-built Plans.

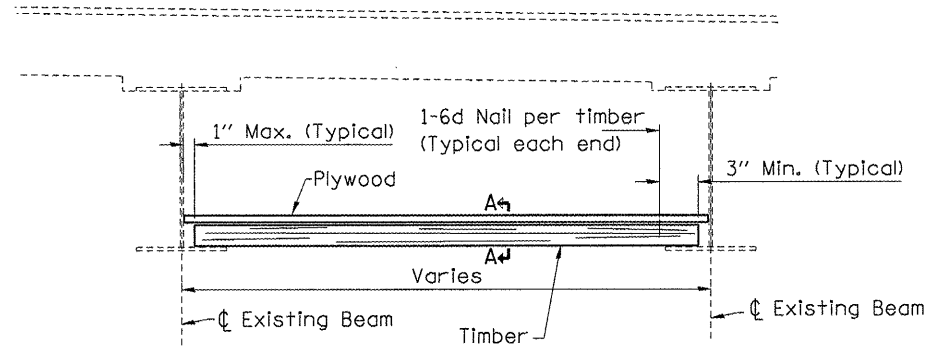
Protective Coat shall be applied to all new concrete.

**DECK SLAB REPAIR
FULL DEPTH**

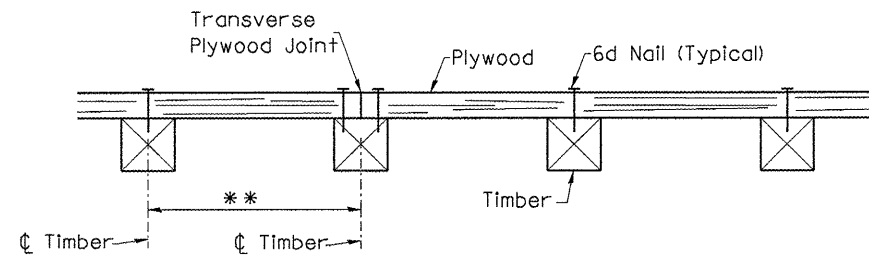
Patch No.	Area (Sq. Yd.)
1	3.3
2	6.7
3	9.3
4	3.3
TOTAL	22.6

FILE NAME =	USER NAME = gautneyrk	DESIGNED - RKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK SLAB REPAIR STRUCTURE NO. 041-0055	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pwwork\pwwork\gautneyrk\d0190470\78212-shr-plan.dgn	DRAWN -	REVISED -	* D9 CM BRIDGE REPAIR 2011-2			JEFFERSON	24	21		
PLOT SCALE = 1/4" = 1'-0"	CHECKED -	REVISED -	*F.A.S. 2869 & F.A.I. 57			CONTRACT NO. 78233				
PLOT DATE = 12/22/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____										

THE CONTRACTOR HAS THE OPTION OF SUBMITTING AN ALTERNATE PROTECTIVE SHIELD DESIGN FOR APPROVAL BY THE ENGINEER. THE DESIGN SHALL MEET OR EXCEED THE REQUIREMENTS SHOWN IN THESE DETAILS AND INCLUDED IN THE SPECIAL PROVISION "PERMANENT PROTECTIVE SHIELD SYSTEM." DETAILS AND COMPUTATIONS SHALL BE SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.



PROTECTIVE SHIELDING (PERMANENT)



** See Table for Typical Spacing

SECTION A-A

TIMBER SPACING

Beam Spacing (ft.)	Timber Sizes (in.)		
	4" x 4" with min. Fb = 775 psi Fv = 135 psi	4" x 6" with min. Fb = 775 psi Fv = 135 psi	6" x 6" with min. Fb = 575 psi Fv = 125 psi
	Maximum Timber Spacing (in.)		
4.5	16	16	16
4.75	16	16	16
5.0	16	16	16
5.25	16	16	16
5.5	16	16	16
5.75	16	16	16
6.0	16	16	16
6.25	12	16	16
6.5	12	16	16
6.75	12	16	16
7.0	8	16	16
7.25	8	16	16
7.5	8	16	16
7.75	8	16	16
8.0	8	12	16
8.25	8	12	16
8.5	6	12	12
8.75	6	12	12
9.0	6	8	12

Notes:

See special provision for Permanent Protective Shield System.
 Timber sizes shown are nominal sizes. Rough sawn timber of the dimensions shown will also be considered acceptable.
 The minimum Fb and Fv values shown are the tabulated design values given in the National Design Specification for Wood Construction for No. 2 Spruce-Pine-Fir without adjustment factors applied. Better grades or other species with equal or higher allowable stresses will also be considered acceptable.
 The timber spacings shown have been determined using allowable stresses with all adjustment factors necessary for the anticipated service conditions.
 Plywood shall be 5/8" exterior, by APA, type plywood. Plywood shall be placed such that the face grain is perpendicular to the timber supports. When less than a full sheet (4' width) of plywood is used, the width of the strip used shall not be less than 2'.
 Transverse plywood joints shall be supported by timbers.
 When 4" x 6" timbers are used, they shall be placed such that the wide face is horizontal and the narrow face is vertical. All timber shall be treated.
 Design Load = 200 psf.

REVISIONS	
NAME	DATE
RKG	12/20/10
Added "by APA"	

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS:
PROTECTIVE SHIELDING (PERMANENT);
TIMBER SPACING

SCALE: VERT. NONE
 HORIZ. DATE
 DRAWN BY CNH
 CHECKED BY

PLOT DATE = 12/22/2010
 PLOT SCALE = 25:0:10
 USER NAME = gautneyrk

USER NAME = gautneyrk	DESIGNED - RKG	REVISED -
DRAWN -	CHECKED -	REVISED -
PLOT SCALE = 25:0:10	DATE -	REVISED -
PLOT DATE = 12/22/2010		

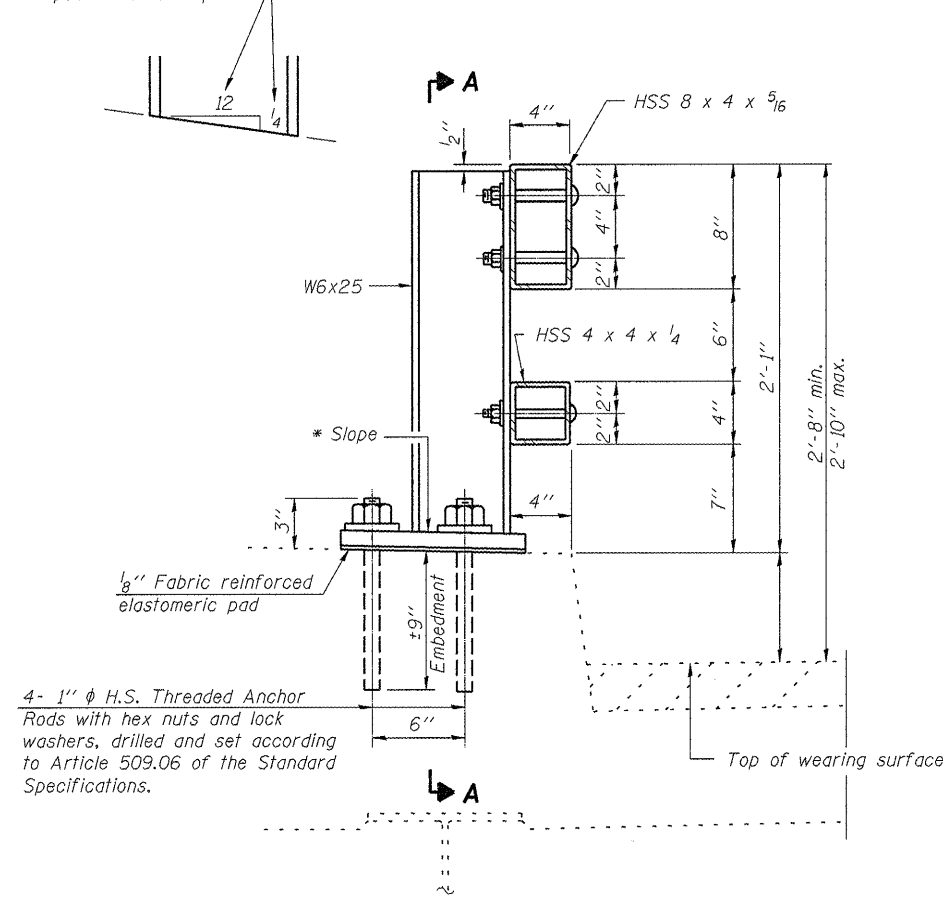
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROTECTIVE SHIELDING (PERMANENT)
STRUCTURE NO. 041-0055

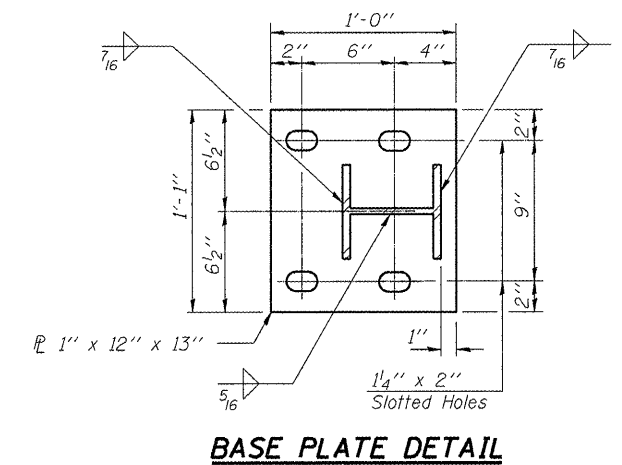
SCALE: SHEET NO. OF SHEETS STA. TO STA.

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D9	CM BRIDGE REPAIR 2011-2	JEFFERSON	24	22
*F.A.S. 2869 & F.A.I. 57			CONTRACT NO. 78233	
ILLINOIS FED. AID PROJECT				

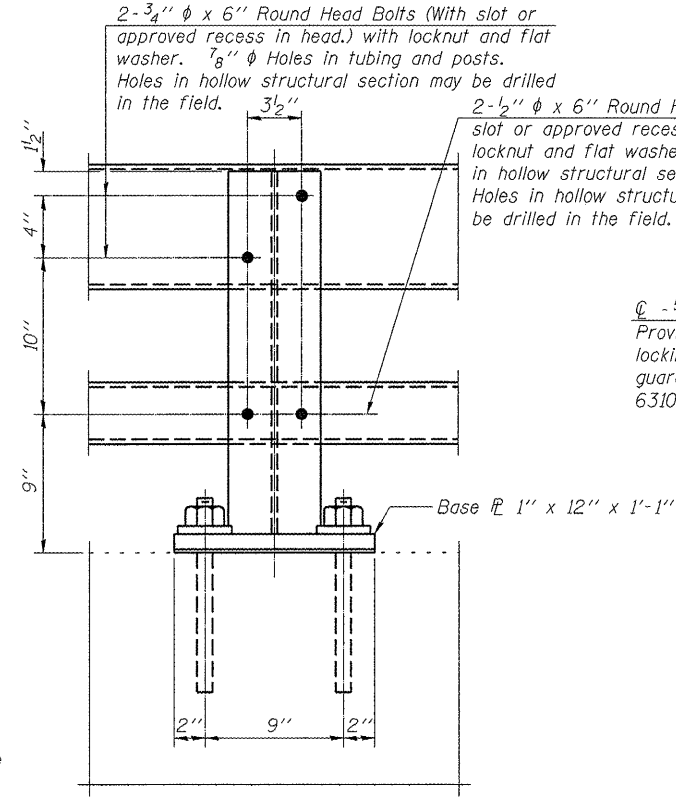
* Cut bottom end of post to curb slope.



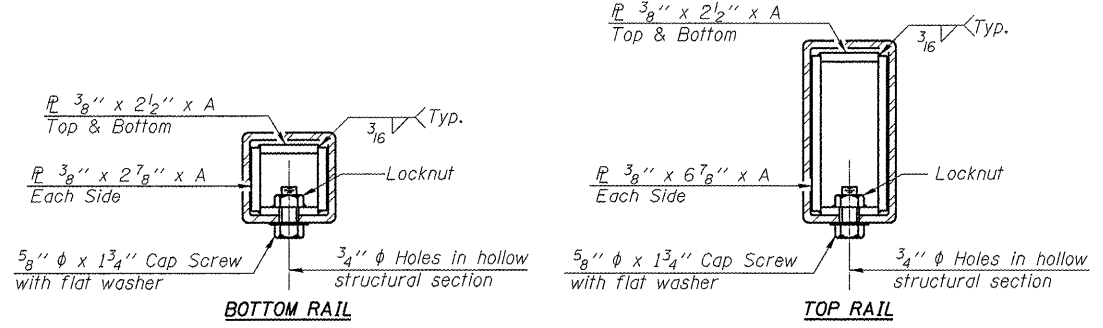
SECTION AT RAIL POST



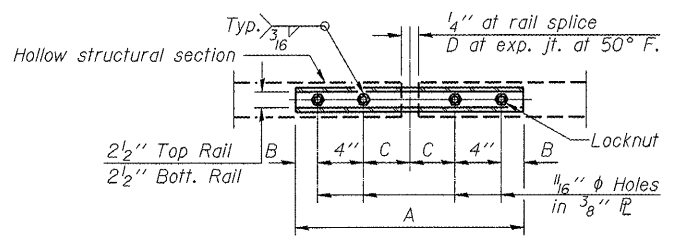
BASE PLATE DETAIL



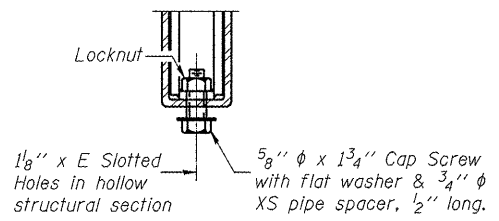
SECTION A-A



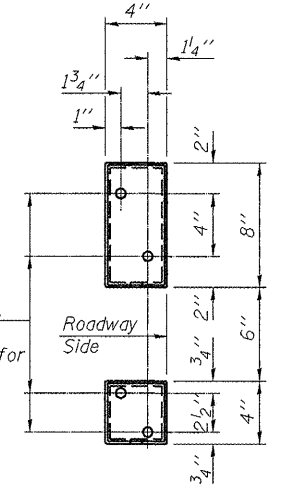
SECTIONS AT RAIL SPLICE



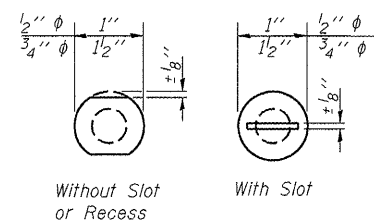
PLAN-BOTT. SPLICE TYPICAL



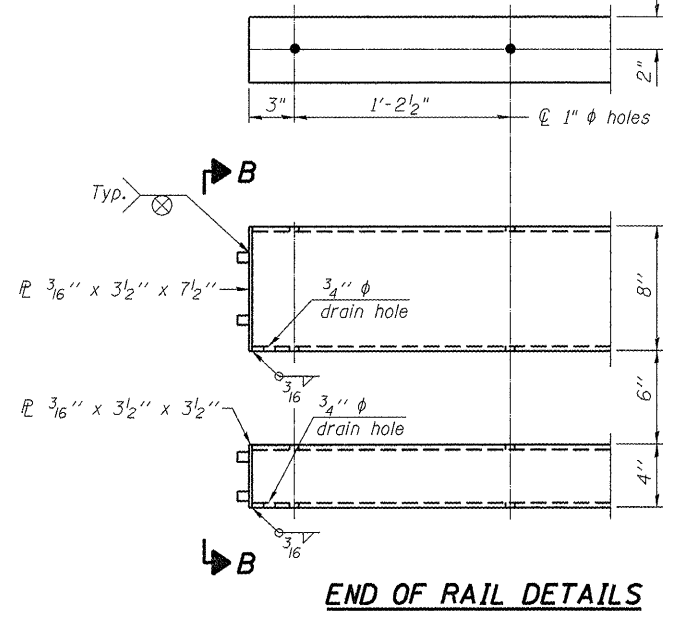
RAIL SPLICE CONNECTION AT EXPANSION JT.



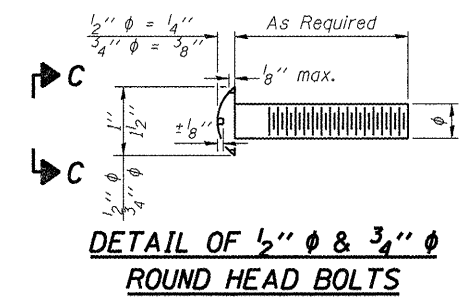
VIEW B-B



VIEW C-C



END OF RAIL DETAILS



DETAIL OF 1/2" & 3/4" ROUND HEAD BOLTS

Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2 1/2"	1'-8"	2"	4"	2 1/2"
>4" ≤6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
>6 1/2" ≤9"	5"	2'-4"	3 1/2"	6 1/2"	9"
>9" ≤13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

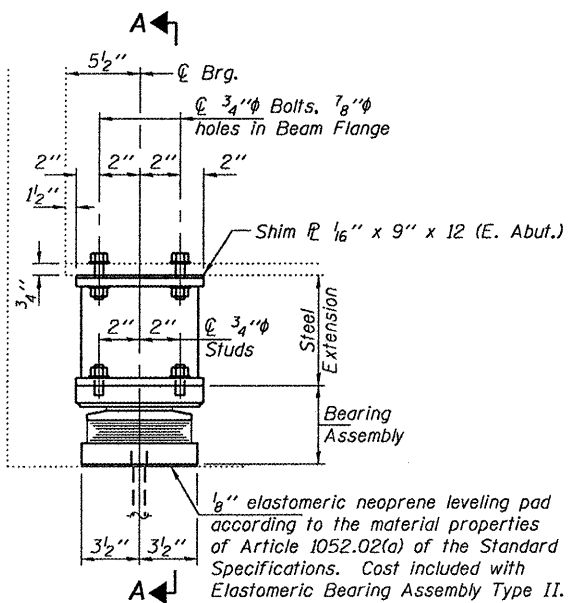
Item	Unit	Quantity
Steel Railing, Type 2399	Foot	

FOR INFORMATION ONLY

R-31

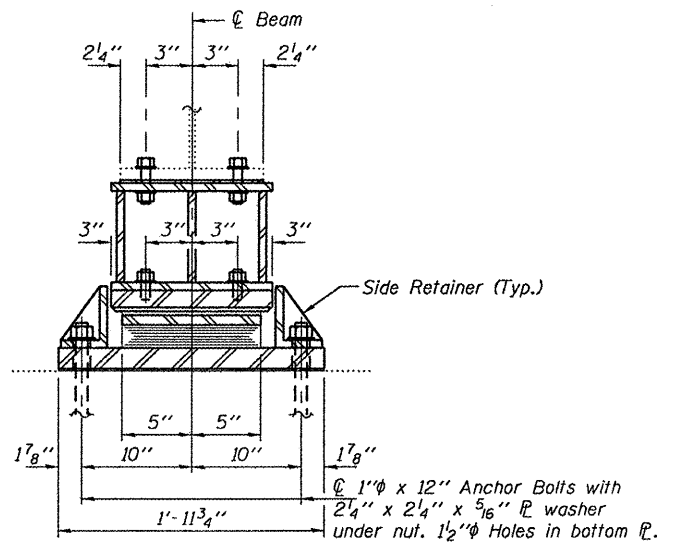
7-1-10

(6'-3" Maximum Post Spacing)



ELEVATION AT ABUTMENT

TYPE II TFE ELASTOMERIC EXP. BRG.

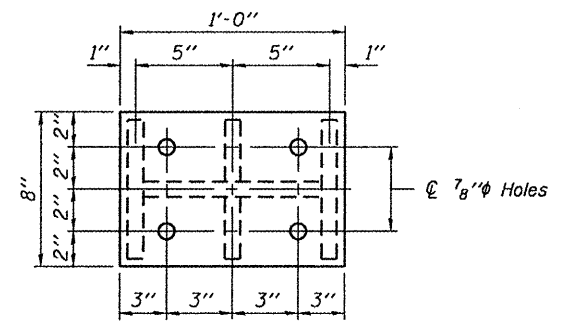


SECTION A-A

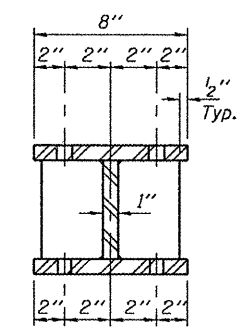
BEAM REACTIONS

R ₂	16.0
R ₄	28.9
Imp.	8.6
R (Total)	53.5

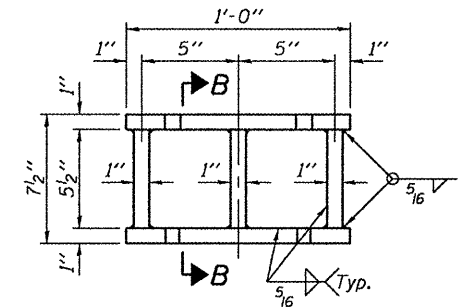
Notes:
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
 Prior to ordering any material, 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 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
 Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
 Drilled and set anchor bolts shall be installed according to Article 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.



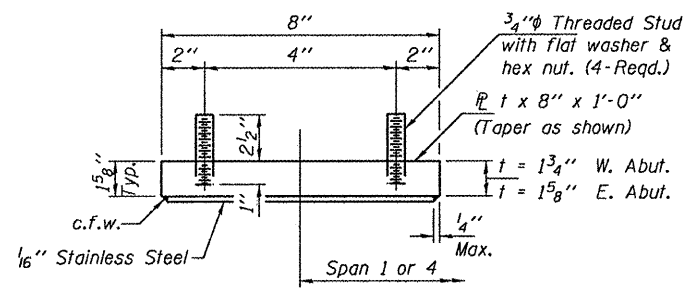
PLAN TOP AND BOTTOM PLATE



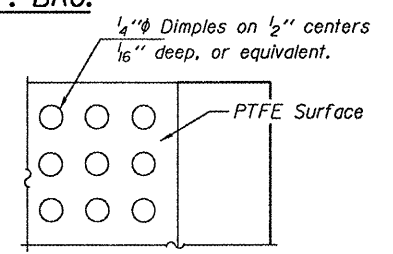
SECTION B-B



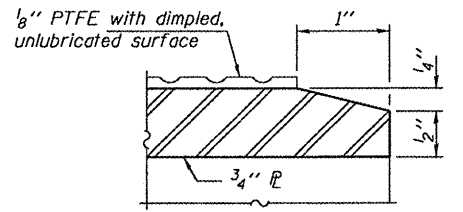
STEEL EXTENSION DETAIL



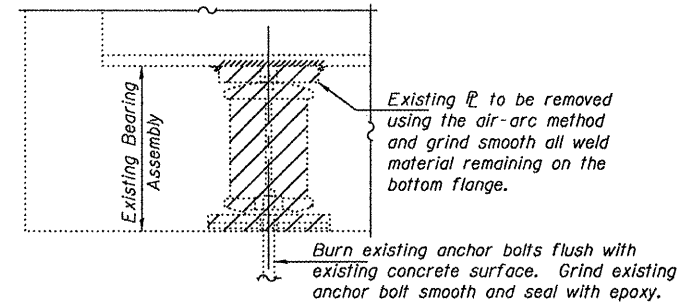
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE

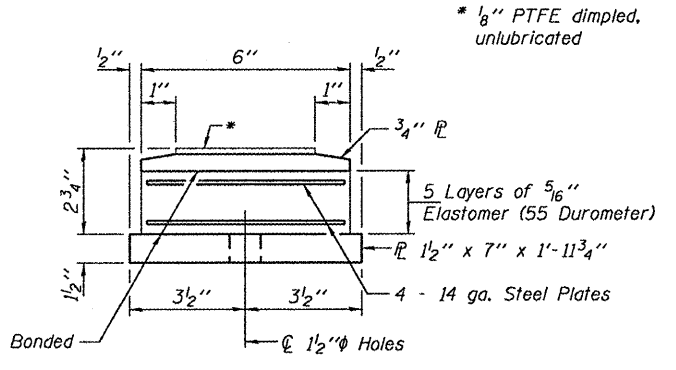


SECTION THRU PTFE

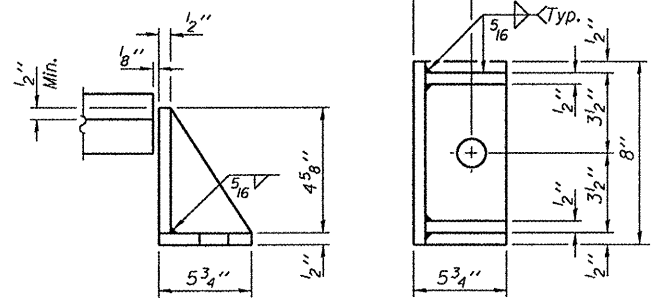


EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

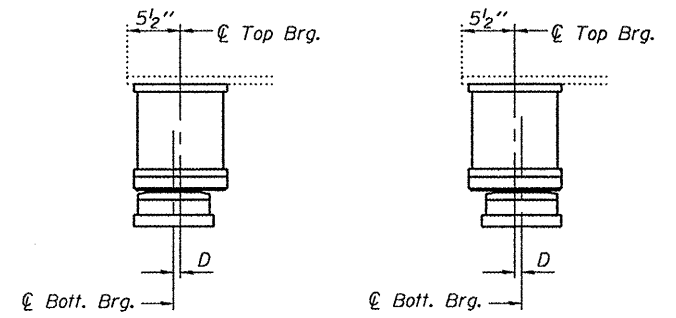


BOTTOM BEARING ASSEMBLY



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.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	1230
Anchor Bolts 1"φ	Each	24

DESIGNED I.J.L.	EXAMINED	DATE - JANUARY 28, 2011
CHECKED ATH	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN balva	PASSED	
CHECKED I.J.L. ATH	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS
 SN 041-0055

F.A.S. RTE. 2869	SECTION D9 CM BRIDGE REPAIR 2011-2	COUNTY JEFFERSON	TOTAL SHEETS 24	SHEET NO. 24
CONTRACT NO. 78233			ILLINOIS FED. AID PROJECT	

SHEET NO. 1 OF 1 SHEETS