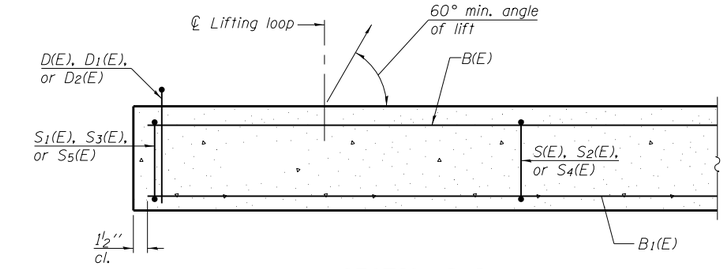
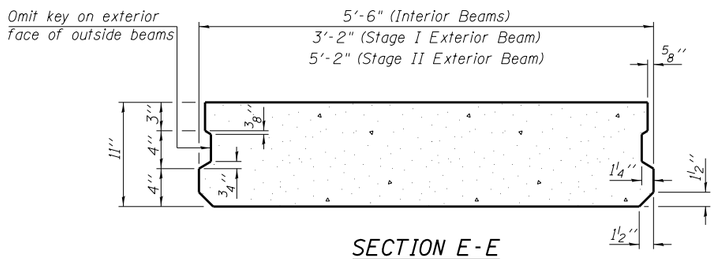
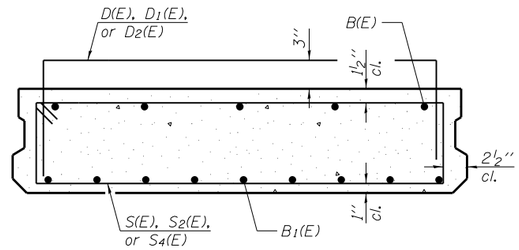


SECTION D-D



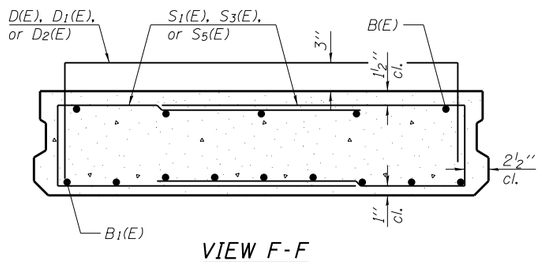
SECTION E-E

(Showing dimensions)



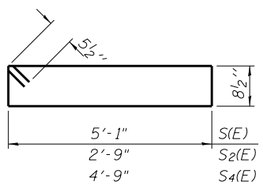
SECTION E-E

(Showing reinforcement)

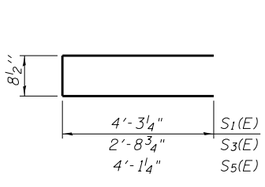


VIEW F-F

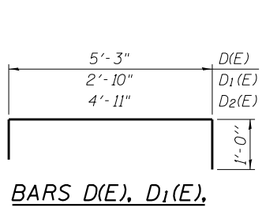
(Showing reinforcement)



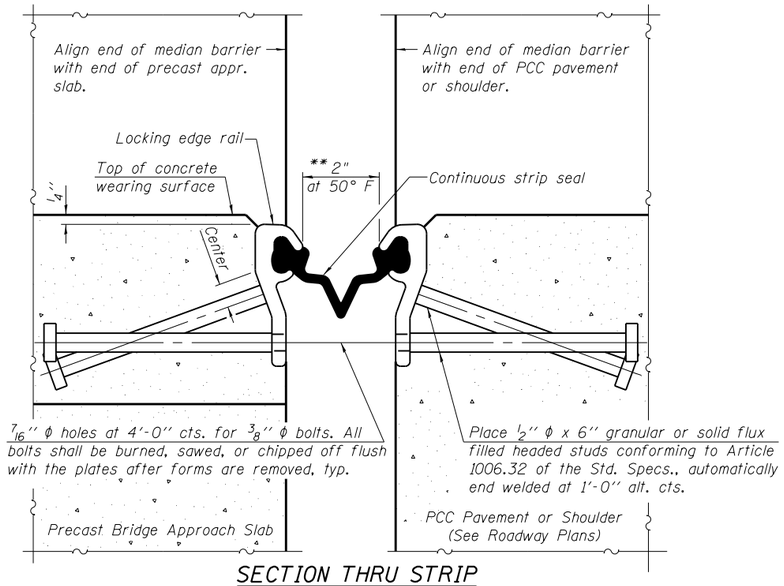
BARS S(E), S2(E), & S4(E)



BARS S1(E), S3(E), & S5(E)

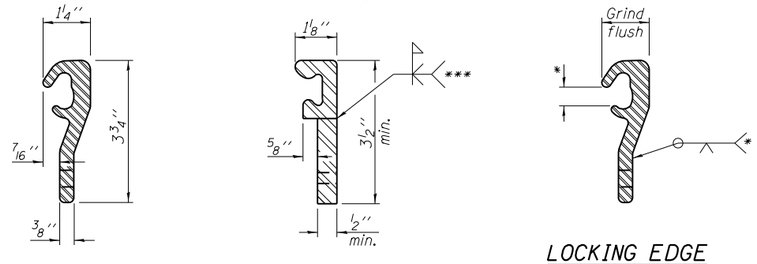


BARS D(E), D1(E), & D2(E)



SECTION THRU STRIP SEAL JOINT

(at rt. angles)



ROLLED (EXTRUDED) RAIL

WELDED RAIL

LOCKING EDGE RAIL SPLICE

Rolled rail shown, welded rail similar.

LOCKING EDGE RAIL

* Omit weld at seal opening.

** The joint opening shall be determined per Article 520.04 except that the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as the distance, measured along the girders, from Pier 2 to the end of approach slab. The minimum dimension shall be 1 1/2" for installation purposes.

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

Notes:

The precast bridge approach slab shall be according to Section 504 of the Standard Specifications and shall be paid for at the contract unit price per square foot for Precast Bridge Approach Slab.

Cast-in-place substitution of Precast Bridge Approach Slab is not allowed.

Parapet and median barrier concrete shall be paid for as Concrete Superstructure.

Parapet, median barrier, and wearing surface reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.

Approach footing concrete shall be paid for as Concrete Structures.

The top surface of precast bridge approach slabs shall be roughened to a depth of 1/4" according to the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."

After precast bridge approach slab has been erected, holes shall be drilled into abutment concrete diaphragm and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and allowed to cure fully prior to grouting the longitudinal shear keys.

Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. Cost included with Precast Bridge Approach Slab.

A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling.

Compressive strength of precast concrete, f'c shall be 6,000 psi.

For additional parapet and median barrier details, see Sheets S-16 and S-17.

Any concrete poured monolithically with the wearing surface, such as curbs, will not be paid for separately, but will be included in the cost of Concrete Wearing Surface, 5".

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The strip seal shall extend 6" beyond the edge of the approach slab on each end. 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.

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.

The strip seal gland shall be sized for a maximum rated movement of 4". Open or "webbed" strip seal gland configurations are not permitted.

The strip seal joint shall extend level between faces of the median barrier without any joints in the gland.

BAR LIST EACH INTERIOR BEAM

(For information only)

Bar	No.	Size	Length	Shape
B(E)	6	#5	29'-8"	
B1(E)	13	#9	29'-8"	
D(E)	22	#4	7'-3"	
S(E)	58	#5	12'-6"	
S1(E)	10	#5	9'-3"	

BAR LIST STAGE I EXTERIOR BEAM

(For information only)

Bar	No.	Size	Length	Shape
B(E)	4	#5	29'-8"	
B1(E)	7	#9	29'-8"	
D1(E)	31	#4	4'-10"	
S2(E)	58	#5	7'-10"	
S3(E)	10	#5	6'-2"	

BAR LIST STAGE II EXTERIOR BEAM

(For information only)

Bar	No.	Size	Length	Shape
B(E)	6	#5	29'-8"	
B1(E)	12	#9	29'-8"	
D2(E)	31	#4	6'-11"	
S4(E)	58	#5	11'-10"	
S5(E)	10	#5	8'-11"	

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a 10 (E)	248	#4	24'-10"	
a 11 (E)	86	#4	7'-5"	
b 10 (E)	174	#4	29'-8"	
b 11 (E)	2	#4	21'-1"	
b 12 (E)	2	#4	8'-5"	
b 13 (E)	2	#4	19'-9"	
b 14 (E)	2	#4	9'-3"	
d 10 (E)	92	#5	5'-11"	
d 11 (E)	92	#5	6'-10"	
d 12 (E)	136	#5	2'-0"	
d 13 (E)	136	#5	5'-0"	
e 10 (E)	16	#4	20'-8"	
e 11 (E)	2	#8	20'-8"	
e 12 (E)	16	#4	19'-9"	
e 13 (E)	2	#8	19'-9"	
e 14 (E)	4	#4	29'-8"	
e 15 (E)	4	#8	29'-8"	
e 16 (E)	28	#4	14'-8"	
t 10 (E)	356	#4	10'-0"	
w10 (E)	160	#5	24'-10"	
w11 (E)	240	#5	17'-8"	
Bridge Deck Grooving			Sq. Yd.	527
Protective Coat			Sq. Yd.	656
Concrete Superstructure			Cu. Yd.	27.0
Concrete Structures			Cu. Yd.	56.5
Reinforcement Bars, Epoxy Coated			Pound	22,550
Precast Bridge Approach Slab			Sq. Ft.	5,120
Concrete Wearing Surface, 5"			Sq. Yd.	586
Preformed Joint Strip Seal			Foot	184

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbandainc.com

USER NAME =	DESIGNED - TL	REVISED -
	CHECKED - BAK	REVISED -
PLOT SCALE =	DRAWN - TL	REVISED -
PLOT DATE = 03/29/2013	CHECKED - BAK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST BRIDGE APPROACH SLAB DETAILS IV
STRUCTURE NO. 016-2440
SHEET NO. S-23 OF S-47 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	2012-059-BR	COOK	631	451
		CONTRACT NO. 60J12		
	ILLINOIS FED. AID PROJECT			