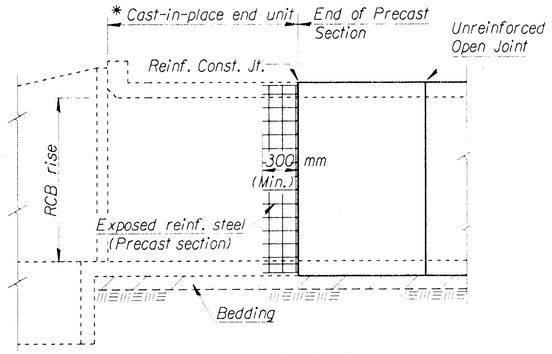
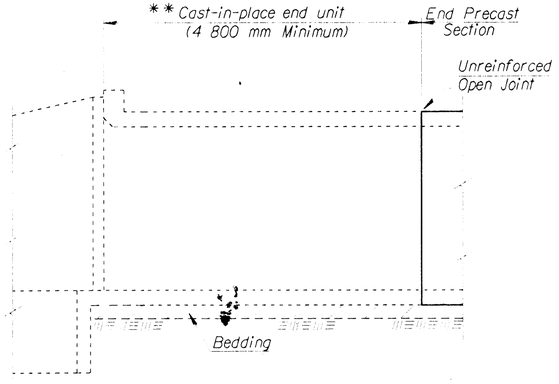
FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	87N-0094-01	1998	80	202



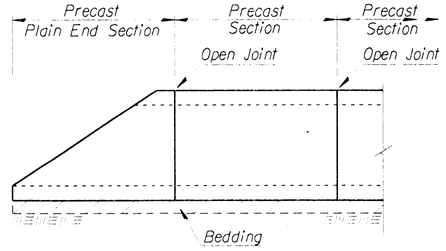
ELEVATION AT HEADWALL

* Minimum barrel length of cast-in-place end unit shall equal the RCB rise or 2 400 mm, whichever is less. This length can be used when the joint between the cast-in-place end unit and the pre-cast section is reinforced as shown.



ELEVATION AT HEADWALL

** Minimum barrel length of cast-in-place end unit shall be 4 800 mm when using an unreinforced open joint at the end of the precast section.



ELEVATION AT PRECAST END SECTION

(Precast End Sections are permitted where straight wings are shown in the plans or at the downstream end for single cell RCB with a rise of 1 830 mm or less.)

NOTE: See "Bridge Excavation" sheet, (Std. No. BR100 SI), for excavation details and basis of payment.

NOTE: Minimum length of precast section shall be 1 200 mm.

NOTE: A single cell box of equivalent area may be substituted for a double cell box with cell spans less than or equal to 1 830 mm. Two single cell boxes may be substituted for a double cell box, when approved by the Engineer.

NOTE: See respective RCB Standard Sheets for cast-in-place details.

GENERAL NOTES

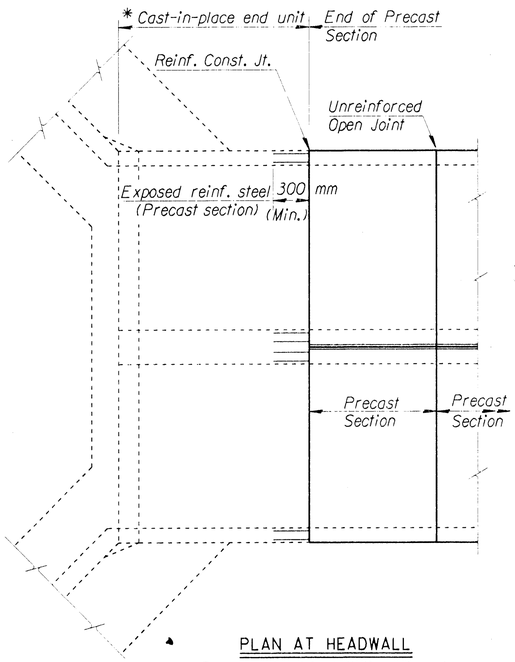
PRECAST BOX CULVERTS: If precast boxes are specified, construct them at the locations shown in the plans and according to the requirement shown on this sheet. When approved by the Engineer, precast box culverts may be used in lieu of cast-in-place box culverts. If the Contractor chooses the precast option, use the cast-in-place quantities as the cost basis. This cost includes all labor equipment, material and incidentals necessary to complete the installation.

Unless otherwise approved by the Engineer, use cast-in-place collars at horizontal and vertical changes in RCB alignment. Use cast-in-place end sections and wingwalls except as noted on this sheet. The Engineer may require cast-in-place sections at junctions of drainage structures.

Cast-in-place concrete work shall conform to the requirements of the KDOT Specifications and KDOT's "Guidelines for Structural Design and Detail of Reinforced Concrete Box Culverts". Use Class AAA concrete and Grade 400 reinforcing steel conforming to ASTM A615M for cast-in-place construction.

SPECIFICATIONS: Single-cell Precast Concrete Box Culverts shall conform to the requirements of the following specifications except as noted in the KDOT Specifications. Design multiple-cell precast boxes in accordance with the criteria used to develop the single-cell precast boxes. (See Appendices of ASTM Specification C789M and C850M and the latest AASHTO Specifications.)

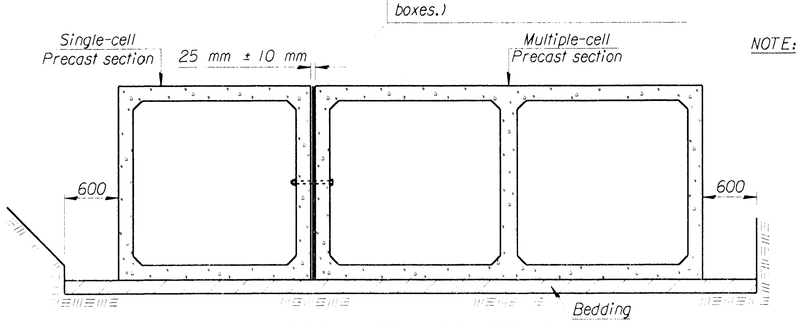
Condition	Min. Fill	AASHTO	Equiv. ASTM
≥ 600 mm fill	600 mm	M259, Table 2	C789M, Table 2
< 600 mm fill	0 mm	M273, Table 2	C850M, Table 2



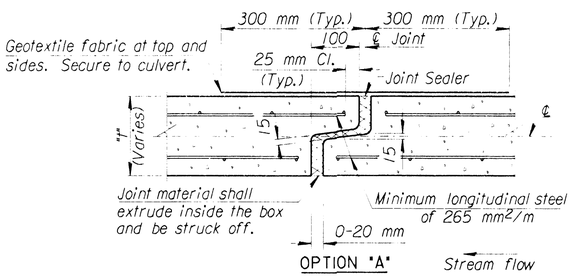
PLAN AT HEADWALL

(Double culvert installation shown)

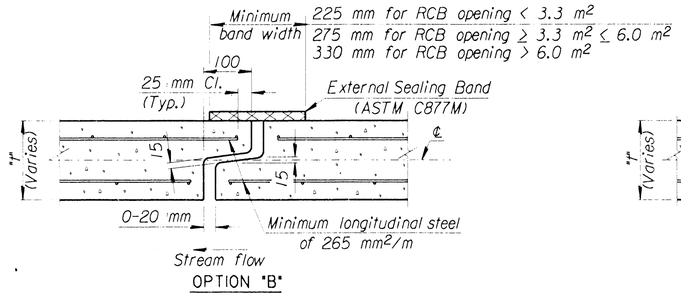
Fill space between boxes with grout. (To maintain proper joint gap, partially backfill boxes prior to grouting or provide a mechanical connection between boxes.)



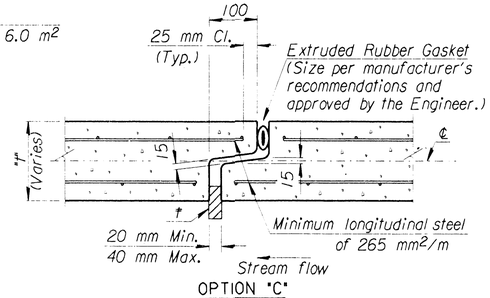
TYPICAL INSTALLATION DETAILS



OPTION "A"



OPTION "B"



OPTION "C"

OPEN JOINT DETAIL

† Insert temporary, 20 mm-25 mm wide, hardwood wedges to prevent over-compressing gasket.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1	12-20-96	Revise CIP end unit details.	RAM	KFH

KANSAS DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT DETAILS

80/202

BR031SI

FHWA APPROVAL	12-23-96 APP'D		KENNETH F HURST
DESIGNED	DETAILED JK	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK. LRR	QUAN.CK.	TRACE CK.

Plotted By : sae | Std. Base File : /usr2/stand/si/br031si.dgn
Plot File : /usr2/stand/si/br031si.ugn | Server File : /usr2/
Plot Date : 3-JAN-1997 16:25 | Server : witch
View: PLOT1