

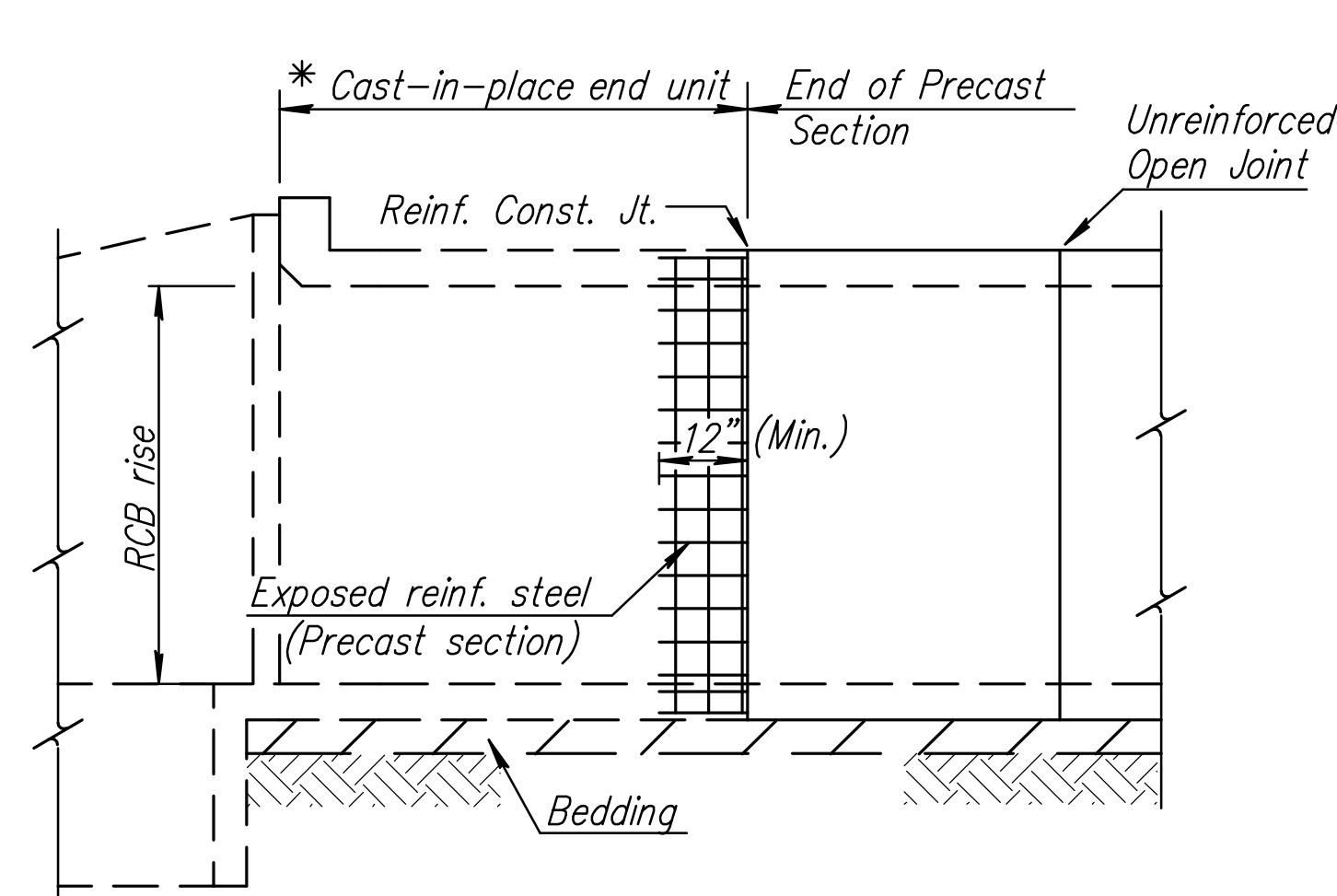
GENERAL NOTES

PRECAST BOX CULVERTS: Construct precast box storm sewer at the locations shown in the plans and according to the requirement shown on this sheet. Cost includes all labor equipment, material and incidentals necessary to complete the installation.

SPECIFICATIONS: Precast Concrete box Storm Sewers shall conform to the City of Wichita Standard specification and to ASTM C789 and C850.

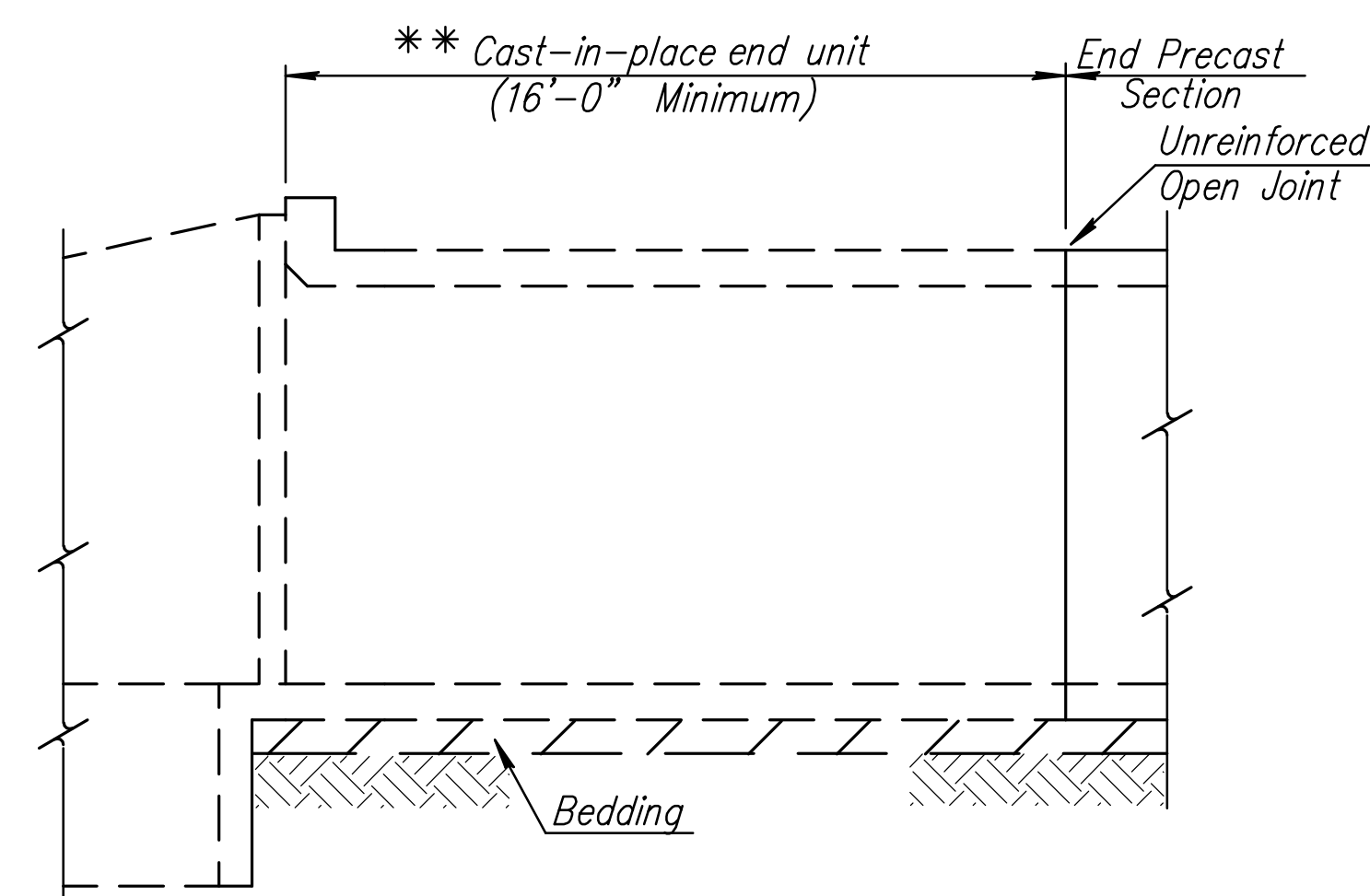
Where noted on the plan to "Conform to AREMA Specifications", the Precast Concrete Box Storm Sewers shall conform to the requirements of the following specification. The design of the precast units shall conform to the current "AREMA Manual for Railway Engineering". The design live load for the culvert shall be the Cooper E80. The specific design requirements for the precast box culvert units are contained in Chapter 8, Part 16, "Design and Construction of Reinforced Concrete Box Culverts", AREMA Manual for Railway Engineering. The minimum concrete strength use in the design shall be $F' = 4,000$ psi. Joints shall be coupled as noted in the details on this sheet and wrapped in conformance with the AREMA Specifications. Joints and Couplers shall be subsidiary to "5'x3' RCB (AREMA Specifications)".

The design shall be sealed by a licensed engineer from the state of Kansas.



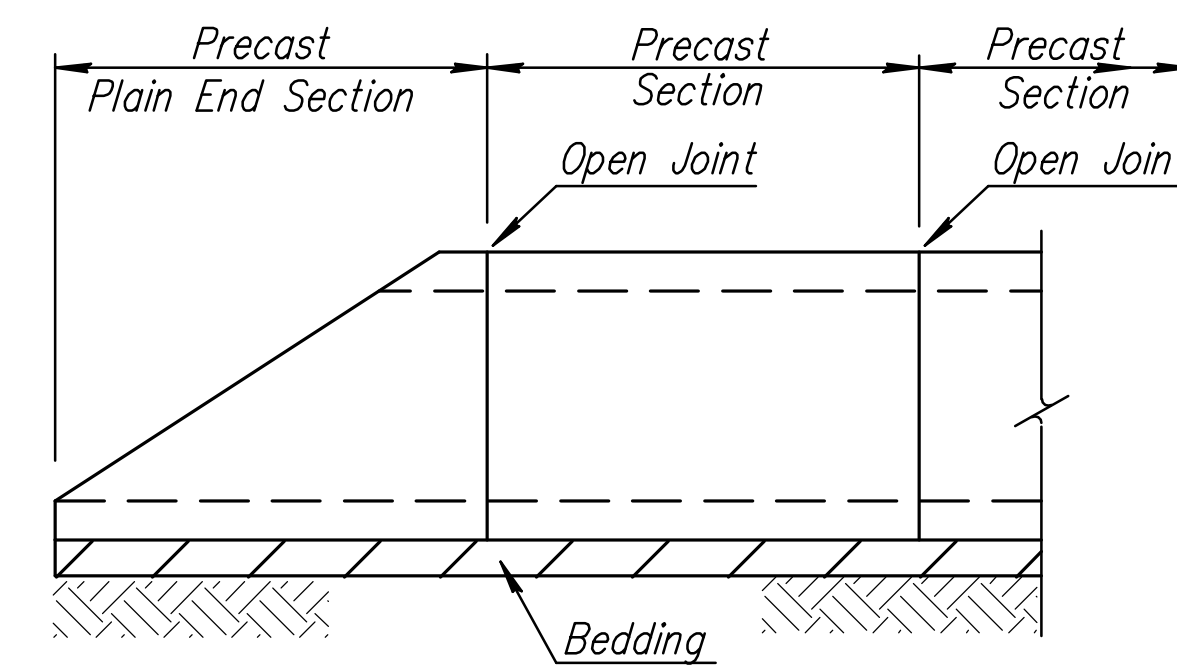
ELEVATION AT HEADWALL

* Minimum barrel length of cast-in-place end unit shall equal the RCB rise or 8'-0", whichever is less. This length can be used when the joint between the cast-in-place end unit and the precast section is reinforced as shown.



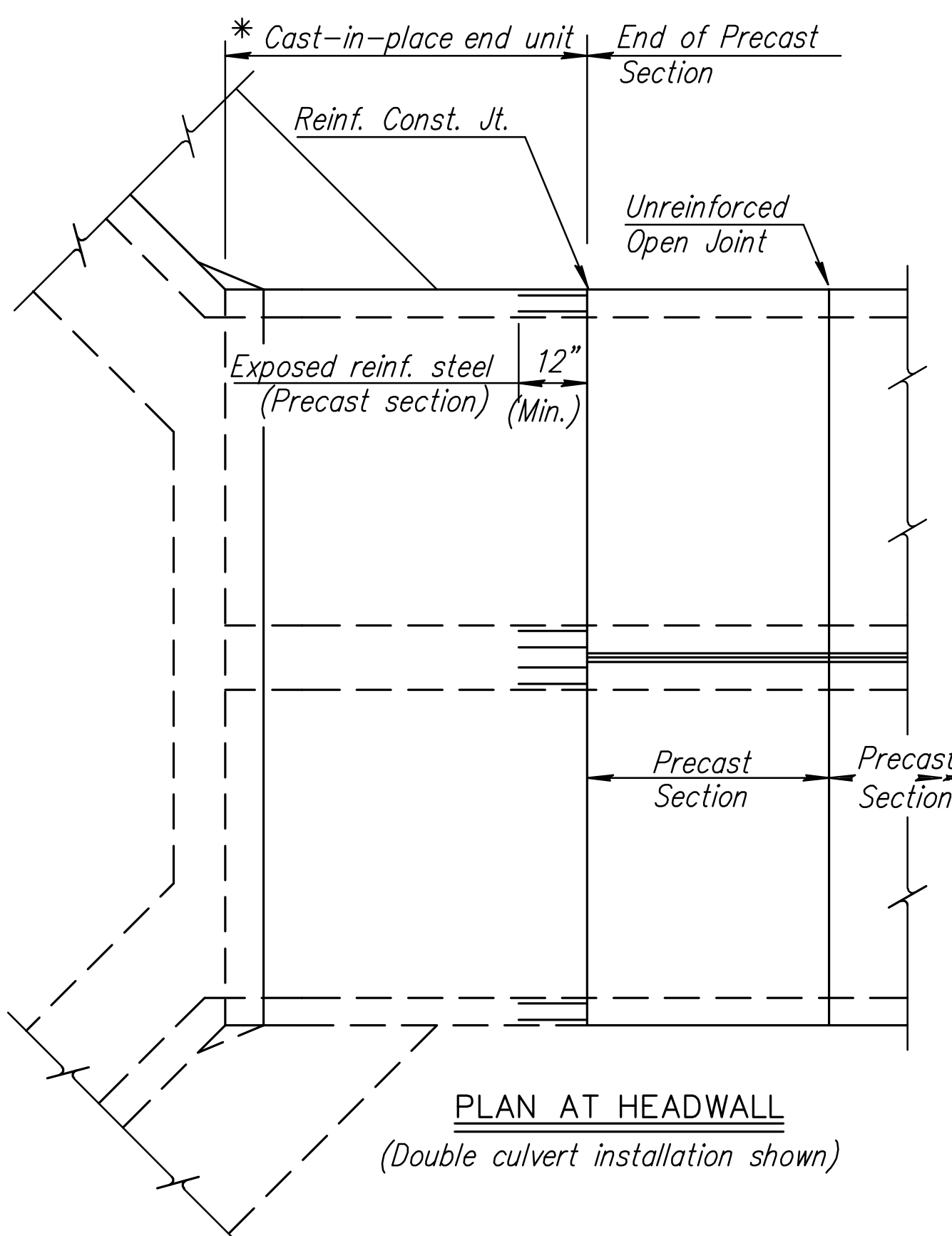
ELEVATION AT HEADWALL

** Minimum barrel length of cast-in-place end unit shall be 16'-0" when using an unreinforced open joint at the end of the precast section.



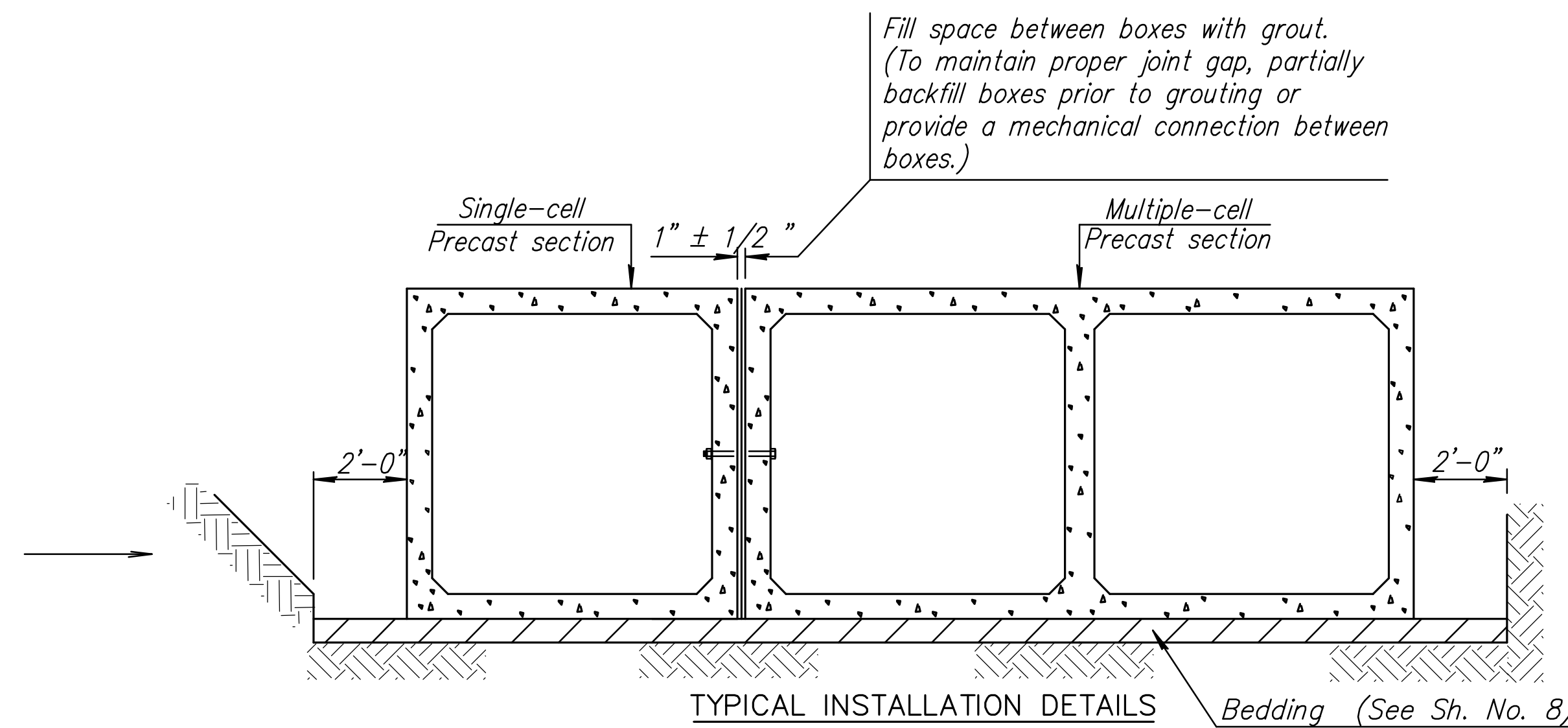
ELEVATION AT PRECAST END SECTION

(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 six feet or less.)

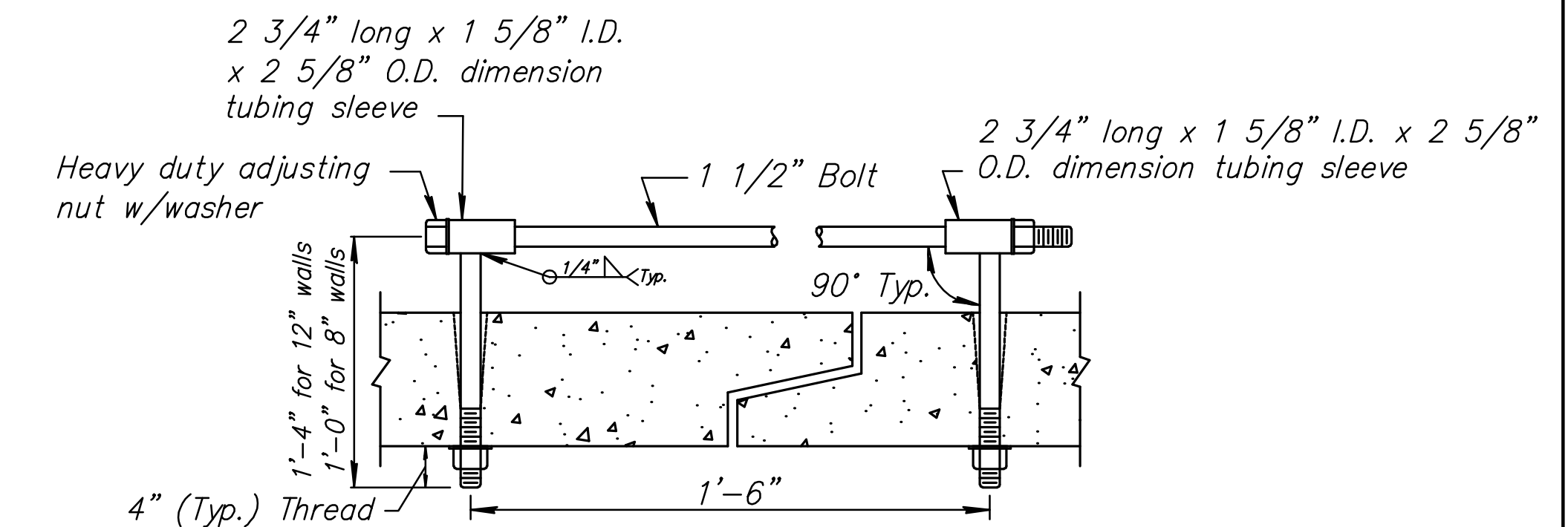


PLAN AT HEADWALL

(Double culvert installation shown)

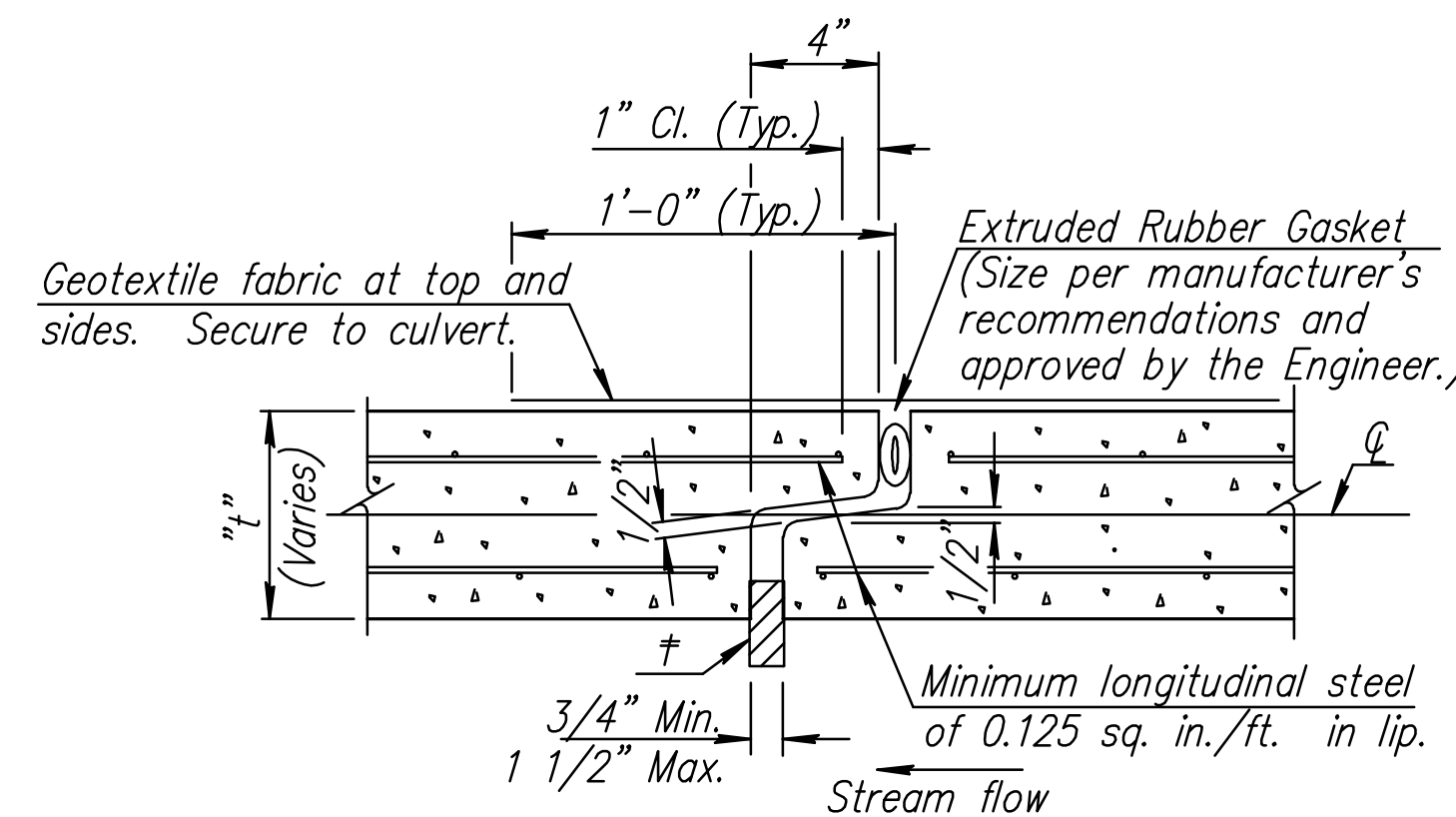
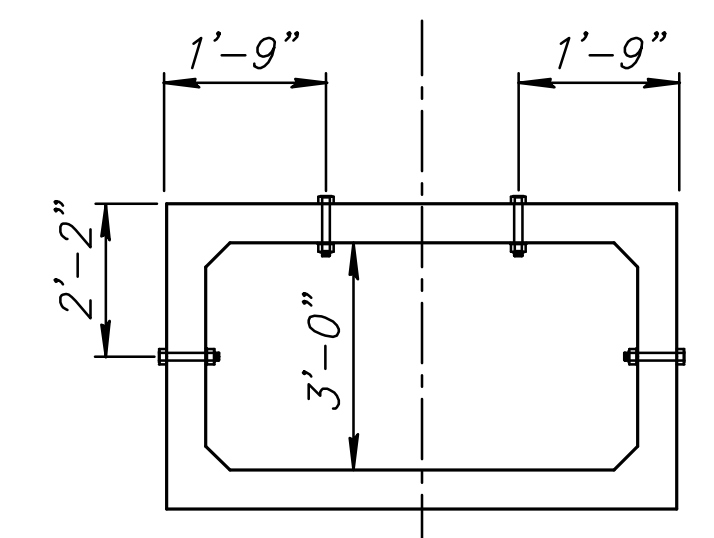


TYPICAL INSTALLATION DETAILS



HEAVY DUTY (H.D.) COUPLER

Bolts to be A-36 1 1/2" diameter. Bolts, nuts, washers and sleeves to be zinc plated. Washers to be 3 1/2" O.D. x 7 gauge. Ship with nuts and washers placed on bolts. Install 4 couplers per joint, as shown.



OPTION "C"

† Insert temporary, 3/4"-1" wide, hardwood wedges to prevent over-compressing gasket.

OPEN JOINT DETAIL

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**UTILITY IMPROVEMENTS
17TH STREET AT BSNF RAIL CORRIDOR**
PROJECT NAME

PRECAST CONCRTE BOX CULBERT DETAILS
SHEET TITLE

JRA DESIGN BY:	DPG DRAWN BY:	JRA CHECKED BY:
SEPTEMBER 2007 DATE	04177 JOB NO.	9 / 28 SHEET/OF