Office of Bridge Design
Technical Memorandum

Date: June 15, 2011

To: All Bridge Engineering Staff

From: Steve Johnson, PE
Bridge Design Engineer

Subject: Technical Memorandum BTM11.1
Box Culvert Distribution Reinforcement

Article 12.11.2.1 of the AASHTO LRFD Bridge Design Specifications requires distribution reinforcement in the bottom of the top slab of box culverts based on a percentage of primary reinforcement. Based on past Office of Bridge Design practice and satisfactory performance of in-service cast-in-place box culvert structures, the AASHTO requirement for distribution steel for the top slab of C-I-P box culverts is waived and distribution steel shall be as follows:

> Top and Bottom Slabs: Use No. 4 reinforcing bars spaced at 12" center-to-center. In the inside faces (bottom of the top slab and top of the bottom slab), place the No. 4 bars from edge of fillet to edge of fillet. In the outside faces (top of the top slab and bottom of the bottom slab), alternate No. 4 bars with those in the inside faces.
>
> Walls: Use No. 4 reinforcing bars spaced at 18" center-to-center in both faces. Keep the No. 4 bars a minimum of 3" from the construction joint at the fillets.

Reviewed by: _____ Date: 6/20/2011

Approved by: _____, Chief Bridge Engineer, Date: 6-22-2011

cc: File

Revised 2-19-2004