

Office of Bridge Design

Technical Memorandum

Date: July 23, 2013

To: All Bridge Engineering Staff

From: Steve Johnson, PE
Bridge Design Engineer

Subject: Technical Memorandum BTM13.4
Distribution of Flexural Reinforcement

For concrete sections in which the flexural tension in the section exceeds 80% of the modulus of rupture, Article 5.7.3.4 of the AASHTO LRFD Bridge Design Specifications requires the spacing of the tension reinforcement to not exceed the value given by equation 5.7.3.4-1.

When calculating the allowable reinforcing spacing, the exposure factor, γ_e , shall be taken as Class 1 for all surfaces not exposed to deicing chemicals and Class 2 for all surfaces exposed to deicing chemicals.

When calculating d_c , do not include the the ¼ inch wearing surface used for deck slabs or the 1 in. additional cover provided at the bottom of the bottom slabs of box culverts to account for uneven ground level.

Reviewed by: David J. Madden Date: 8/1/2013

Approved by: Kevin P. Cochrane, Chief Bridge Engineer, Date: 8-1-2013

cc: File