

2009 Interim Changes Part 2



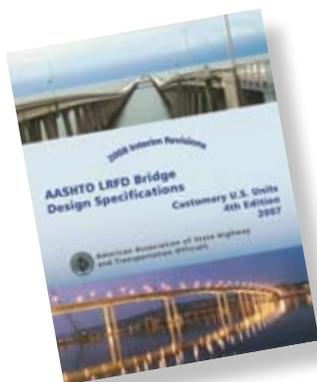
by Dr. Dennis R. Mertz

In the Winter 2009 issue of *ASPIRE*,™ three of the five 2008 concrete-structures agenda items considered and adopted by the American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Bridges and Structures (SCOBS) at their annual meeting in Omaha, Neb., in May 2008, were reviewed. These agenda items along with the complete agenda for the May 2008 SCOBS meeting can be found on the AASHTO website at <http://cms.transportation.org/?siteid=34&pageid=1484>. These agenda items represent revisions and additions to the AASHTO LRFD Bridge Design Specifications, which will become the 2009 interim changes. A review of the final two concrete-structures items, Agenda Items 61 and 62 follows.

Agenda Item 61 clarifies the provisions for prestress losses of Article 5.9.5 of the LRFD Bridge Design Specifications. Previous revisions to Article 5.9.5 were based upon NCHRP Report 496, “Prestress Losses in Pretensioned High-Strength Concrete Bridge Girders,” by Tadros et al., extending the provisions to concretes with specified compressive strengths up to 15 ksi. Agenda Item 61 provides clarification on the application of the research findings. The research only addressed normal weight concretes. Thus, this agenda item restricts the application of Article 5.9.5.3.1 to normal weight concretes. Further, the lump-sum time-dependent losses of Table 5.9.5.3-1 were not investigated in the NCHRP study. Thus, the losses in the table are not applicable to concretes with specified compressive strengths above 10 ksi. Finally, the agenda item clarifies that the losses of Table 5.9.5.3-1 may be used for structural lightweight concrete members other than those made with composite slabs provided the values in the table are increased by 5.0 ksi. In previous versions of the LRFD Specifications, the 5.0 ksi increase was mandatory.

Agenda Item 62 creates a new appendix to Section 5, Concrete Structures, titled Appendix C5—Upper Limits for Articles Affected by Concrete Compressive Strength. This new appendix is referenced in Article C5.4.2.1. Appendix C5 tabulates the articles in Section 5 that are a function of concrete compressive strength and for each indicates their applicability in terms of the upper bound of specified compressive strength, either 10 or 15 ksi, for each article. In addition, the agenda item limits the applicability of the equation of direct tensile strength of Article C5.4.2.7 to normal weight concrete with specified compressive strengths up to 10 ksi.

These two concrete-structures agenda items, along with the three discussed in the previous issue of *ASPIRE*, are included in the 2009 interim changes to the AASHTO LRFD Bridge Design Specifications. AASHTO Technical Committee, T-10, Concrete Design, continues to work during their four annual meetings on working agenda items which may potentially become revisions and additions to the AASHTO documents. As these working agenda items are moved to the subcommittee’s ballot and are subsequently considered as agenda items and adopted as interim changes, they will be discussed in this column.



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