

MINUTES OF DOT-AGC BRIDGE DESIGN SUBCOMMITTEE MEETING

The DOT-AGC Joint Bridge Design Subcommittee met on December 13th, 2006. Those in attendance were:

Greg Perfetti	State Bridge Design Engineer (Co-Chairman)
Ron Hancock	State Bridge Construction Engineer
Randall Gattis	Sanford Contractors
George White	Blythe Construction
Bryan Long	Dane Construction, Inc.
Greg Canniff	Rea Contracting LLC
Erick Frazier	S.T. Wooten Corporation
Chris Britton	Taylor & Murphy Construction Co.
Allen Raynor	Asst. State Bridge Design Engineer
Tom Koch	Structure Design Project Engineer
Paul Lambert	Structure Design Project Engineer
Chris Kreider	Regional Operations Engineer – Geotech. Eng. Unit
David Greene	Structural Members Engineer – Materials & Tests Unit
Gichuru Muchane	Structure Design Engineer

During the review of the October 11th meeting minutes, the following items were discussed:

1. *New AGC-DOT Committee Members*

Mr. White noted that there were some errors in the contact information shown on the AGC-DOT committee web page on Structure Design's web site. Mr. Muchane stated that the web page would be corrected.

The minutes of the October 11th, 2006 meeting were approved.

The following items of new business were discussed:

1. *Crane on Bridge Submittals*

Mr. Lambert distributed a draft of a new Crane on New Bridge submittal form. He discussed the information requested on the form. He noted that in addition to the form, the complete submittal would require other attachments, such as crane fly sheets. He emphasized that the form was not required for the submittal, but rather it is an aid to assist contractors, especially new contractor personnel, in preparing their crane submittals.

Mr. Lambert requested contractor feedback on the form noting that the number of variables involved complicates crane submittals. He added that the final Crane Submittal form and associated general notes would be available via Structure Design's web site.

2. *High Strength Bolts*

Mr. Hancock informed the Contractors that a new Special Provision for High Strength Bolts, which amends Section 440-8(A) of the Standard Specifications, would be effective with the February 2007 letting for any project using the 2002 specifications. The 2006 specifications have captured this change under Section 1072-7B(2). Contractors were provided a copy of the provision, which will require nuts for high strength bolts to be pre-waxed. Mr. Hancock added that the Department anticipated that pre-waxing would add very little cost to the bolt assembly.

3. *PCI Certification*

Mr. Green distributed a draft of a Special provision for Prestressed Concrete Members, which will amend Section 1078 – 1(A) of the Standard Specifications. The special provision will require producers of prestressed concrete members, and their subcontractors, to maintain PCI Certification. Mr. Greene noted that practically all of North Carolina's producers were currently PCI Certified, and therefore the Department did not anticipate any problems with producers complying with the new requirement. He added that the PCI web site has a list of all certified plants.

Contractors were in agreement that this requirement would not be a problem. However, they inquired if the new requirement would affect plants that are set up on the project site. Mr. Hancock noted that this practice is generally seen on very large projects where the prestressed members producer involved is usually PCI certified. As such, the certification requirement would still apply.

4. *Other*

- i. Mr. White, speaking on behalf of the contractors, stated that the price of concrete with fly ash was rising dramatically. He noted that the concrete suppliers are finding it difficult to meet the Department's air entrainment requirements in concrete with fly ash, adding that in some cases there is no consistency in field air content measurements of the same batch of concrete when measured with 2 or 3 different air pots. As such, the rise in price was attributed to the risk assumed by the concrete suppliers.

During the discussion of this topic the following was noted:

- Fly ash mitigates drying shrinkage cracking and chloride permeability.
- Fly ash mitigates alkali-silica reactivity (ASR) observed in certain aggregates.
- Microsilica fume and granulated ground blast furnace slag (GGBFS) are possible alternates to fly ash, but occasionally there are problems with availability.
- Concrete suppliers would prefer utilizing high range water reducers to reduce the mix design water content, which mitigates drying and shrinkage cracks.

Mr. Hancock noted that the Department would be meeting with the Ready Mix Concrete suppliers in January 2007. Further discussion was deferred to that meeting, and the contractors were invited to the meeting.

- ii. Mr. Gattis inquired if there was a process for ensuring structures built by developers, that are scheduled to be turned over to the State, meet the Department's design standards. Mr. Perfetti noted that the Department maintains a Subdivision Roads Manual that outlines the minimum design and construction standards, and state of maintenance prior to addition to the State system. Mr. Hancock added that there is an existing design and construction review process to ensure developers meet the Department's standards.
- iii. Mr. Britton inquired if language could be included in the contract regarding bridge deck crack repairs. He also suggested that such repairs could be covered under a supplemental agreement. Mr. Hancock responded by stating that crack repair is typically handled on a case-by-case basis depending on the nature and extent of cracking. He noted that the Department has introduced measures to mitigate bridge deck cracks, such as the alternate pour sequence.

5. *Next Meeting*

2007 meeting dates for are as follows: Feb. 14th, Apr. 11th, Jun. 13th, Aug. 8th, Oct. 10th, and Dec. 12th. The next meeting is scheduled for February 14th, 2007 in Structure Design Conference Room C.