MINUTES OF DOT-AGC BRIDGE DESIGN SUBCOMMITTEE MEETING

(Approved: 6/11/14)

The DOT-AGC Joint Bridge Design Subcommittee met on October 16th, 2013. Those in attendance were:

Greg Perfetti	State Structures Engineer (Co-Chairman)
Berry Jenkins	Manager of Highway Heavy Division, Carolinas Branch AGC (Co-Chairman)
Allen Raynor	Assistant State Structures Engineer
Ron Hancock	State Construction Engineer
Ron Shaw	Lee Construction Co. of the Carolinas
Larry Cagle	Thompson-Arthur Div., APAC-Atlantic, Inc.
Don Tutterow	D.H. Griffin Construction
Bill Heston	Balfour Beatty Infrastructure
Ben Bishop	Crowder Construction Company
Dan Nickel	Carolina Bridge Company
Philip Creasman	NHM Constructors
Adam Holcomb	Dane Construction, Inc.
Chris Britton	Buckeye Bridge, LLC
Brian Hanks	Structures Management Project Engineer
Scott Hidden	Support Services Supervisor – Geotechnical Eng. Unit
Paul Garrett	State Bridge Program Manager
Gichuru Muchane	Structures Management Analysis & Permits Engineer

The following items were discussed during the review of the August 14th, 2013 minutes:

1. *Cap on Fuel Adjustment*

   Contractors expressed their appreciation for the revisions to the special provision for *Submittal of Quantities, Fuel Base Index and Opt-Out Option,* and they requested the Department consider eliminating the cap on fuel adjustment except when Contractors exercise the opt-out option.

The minutes of the August 14th, 2013 meeting were approved.

The following items of new business were discussed:

1. *Alternate Integral End Bent Details*

   Mr. Heston stated that the standard end bent details for integral abutment bridges show a horizontal construction joint between the lower portion of the wing wall which is poured with the end bent cap and the upper portion of the wing wall which is poured with the integral abutment diaphragm. He noted that the standard details show a fabric wall which also functions as the bridge approach fill. He proposed the Department permit an optional vertical construction joint between the integral abutment diaphragm and the upper portion of the wing wall. He suggested that the optional vertical construction joint would facilitate the possibility of placing the approach slab simultaneously with the bridge deck end closures.

   There was a brief discussion during which Mr. Heston showed drawings which illustrated the proposal. The Structures Management Unit stated they will consider the proposal and report back to the committee.

2. *Skewed Approach Slab Concrete Quantity*

   Mr. Tutterow stated that some contract plans for skewed bridges show concrete quantities for the bridge approach slab without a skew. He noted that the skew can significantly increase the concrete quantity

depending on the severity of the skew. He requested the skewed concrete quantity be shown in the plans.

Mr. Hanks responded by stating that the Structures Management Unit's practice is to show quantities for the skewed approach slab. He offered to look into specific projects where the approach slab concrete quantity was incorrectly shown. However, specific project information was not available at the meeting.

3. *Using Recycled Concrete as Fill*

   Mr. Nickel discussed the benefits of recycling concrete from removal of an existing bridge by using the material as roadway fill. He inquired if Contractors could get paid for recycled material as borrow.

   Mr. Hancock responded by stating the Department encourages Contractors to repurpose all construction materials and document this activity as described in the special provision for *Resource Conservation, Reuse and Recycling*. He noted that there are mutual benefits to the Department and the Contractor when recycled concrete is used as fill material.

   There was some discussion on quantifying the recycled material, various uses of the recycled material and the respective protocols for payment. After some discussion, Mr. Hancock stated that this topic would require internal discussions to examine and address all of the issues raised by the discussion.

4. *Holes Near the Top of H-Piles*

   Mr. Nickel stated that Contractors often cut holes in the top 1-foot of H-piles for ground release shackles. He noted that the top foot of pile is typically embedded in the concrete cap. He inquired if the section of pile with the hole needs to be cut off below the hole or can the hole be left and welded back prior to embedding in the cap. Contractors added that the heat applied to cut-off the pile in addition to the heat applied for torch-cutting the hole could potentially damage the pile.

   Mr. Hancock responded by stating that the Standard Specifications and the Construction Manual address the size of holes permitted, methods for forming holes in piles and when pile cut-offs are required. He encouraged Contractors to familiarize themselves with the current policies and suggest revisions if necessary.

5. *Temporary Access – Top-Down Construction*

   Mr. Perfetti showed pictures of an existing timber bridge that a Contractor chose to use as a temporary work-bridge during construction of the foundation for the replacement structure. The crane used to construct the foundation exceeded the load carrying capacity of existing bridge. The bridge was load posted, but the posted sign was overlooked.

   Mr. Perfetti stated that he wanted to raise Contractors' awareness when using existing bridges for construction access. Mr. Hancock added that Contractors should carefully consider temporary access for construction of replacement structures when preparing bids and any permit applications.

   During the discussion it was suggested that the plans highlight when the existing bridge is posted and include notes alerting the Contractor that shoring or strengthening may be required if construction equipment is placed on the existing bridge.

6. *Other*

   i. Contractors discussed general concerns regarding construction and performance of integral abutment bridges. They stated that they experience more construction delays on the end bents of integral abutment bridges than non-integral bridges. In addition, integral abutment bridges approach slabs tend to crack more.

      Mr. Hancock responded by stating that the Department had not noticed a statewide problem with integral abutment bridges. However, he will request the Area Bridge Construction Engineers

review some bridge sites to determine if there is a widespread problem. In addition, the Structures Management Unit will review the integral abutment details for improvement opportunities.

ii. Mr. Jenkins remarked that the recent State budget increased the procurement for informal bids from $1.2 to $2.5 million annually, which will possibly result in more Division-let bridge projects.

iii. Mr. Nickel revisited the proposal to allow emailing bids for Division-let projects. After a brief discussion, it was agreed that discussion of this topic was more appropriate during the upcoming AGC-DOT Joint Cooperative Committee meeting.

iv. Mr. Jenkins notified the committee of the dates for the Contractor/DOT Training Workshops:

- Raleigh – February 10-11
- Atlantic Beach – February 25-26
- Asheville – March 11-12

The workshops will begin at noon on the first day and conclude at 4:00 pm on the second day.

He invited Contractors to submit topics for discussion to Mr. Hancock or himself. In addition, he encouraged Contractors to serve on panels and break-out sessions. He noted that there will be a presentation on the Design-Build process.

v. Mr. Jenkins advised that a Contractor had been recently indicted on DBE related issues. He noted that this case serves as a reminder to maintain and document DBE compliance.

7. *Next Meeting*

The next meeting is scheduled for Wednesday, December 11, 2013 in the Structures Management Conference Room.

Post meeting Note:

Due to a limited agenda, the December 2013, February 2014 and April 2014 meetings were cancelled. The next meeting is scheduled for Wednesday, June 11, 2014.