

MINUTES OF DOT-AGC BRIDGE DESIGN SUBCOMMITTEE MEETING

The DOT-AGC Joint Bridge Design Subcommittee met on June 10th, 2009. Those in attendance were:

Berry Jenkins	Manager of Highway Heavy Division, Carolinas Branch AGC (Co-Chairman)
Mike Robinson	State Bridge Construction Engineer
George White	Blythe Construction, Inc.
Randall Gattis	Sanford Contractors, Inc.
Chris Britton	Taylor & Murphy Construction Co.
Mark Johnnie	Balfour Beatty
Pete Weber	Dane Construction, Inc.
Larry Cagle	Thompson-Arthur APAC
Erik Frazier	S.T. Wooten Corp.
Allen Raynor	Asst. State Bridge Design Engineer
Brian Hanks	Structure Design Project Engineer
Paul Lambert	Structure Design Project Engineer
Scott Hidden	Support Services Supervisor – Geotech. Eng. Unit
Chris Kreider	Regional Operations Engineer – Geotech. Eng. Unit
Gichuru Muchane	Structure Design Engineer

During the review of the April 15th, 2009 meeting minutes, the following items were discussed:

1. *Pile Restrikes*

Mr. Krieder noted that the previous meeting minutes stated that the Department would seldom request pile restrikes, but he wanted Contractors to understand that the decision to request pile restrikes is based on driving conditions. He explained that the Department has to consider payments for piles beyond the plan pile lengths with a goal of controlling pile over-runs. He stated that in some situations it would be cheaper to request a restrike.

There was an extended discussion on the decision to employ pile restrikes in lieu of over-running piles to achieve bearing, and the associated costs and payments. Contractors also expressed concerns over requirements to accommodate pile driving analyzers (PDAs) and test piles because they often affect project schedules and compensation is not always well defined. In responses to questions on the true cost of PDAs and test piles, Contractors suggested the Department require no more than one per bent, to obtain a more accurate data in the bid.

The discussion noted that the Department is primarily interested in achieving bearing and avoiding pile over-runs. The plan pile lengths are estimates, which assist Contractors in preparing bids, but Contractors are ultimately responsible for determining the final pile lengths. Contractors felt that since they are responsible for pile lengths, they should have the choice to determine when to employ pile restrikes or continue driving piles to bearing. It was agreed that neither party had an interest in over-running piles, and Contractors suggested the Department consider alternate methods for payment for restrikes.

Mr. Robinson recognized that the recent revisions to the Piles Special Provision had not resolved the issues being discussed. As such, he stated that more internal discussions are needed.

2. *Erosion Control*

Contractors stated that the heavy matting allowed for erosion control is very effective, and they reiterated that leaving the sediment basins in place would be beneficial.

The minutes of the April 15th, 2009 meeting were approved.

The following items of new business were discussed:

1. *Rock Construction Entrances*

Mr. Robinson provided clarification on payment for rock construction entrances by stating that rock entrances are usually required for temporary bridges for the purpose of keeping construction material/debris out of sensitive environments (e.g. streams and wetlands). He added that, in general, the Department prefers the Contractor propose the erosion control measures they will employ. However, if the Department deems the Contractor's erosion control plan is inadequate, and directs the Contractor to provide additional measures, such as a rock construction entrance, then the Department would pay for the additional measures.

Contractors noted that requirements for rock construction entrances often depend on whether the temporary bridge is used for hauling or building the new bridge. They suggested the Department revise the special provision for Construction, Maintenance and Removal of Temporary Access to require and pay for rock construction entrances as determined by the Resident Engineer.

Mr. Robinson stated that he would look into revising the special provisions.

2. *Temporary Detour Bridges*

Mr. Robinson noted that the Department typically provides the minimum temporary bridge length based on the centerline of the temporary bridge and no skew (90°). He inquired if there was anything fundamentally wrong with the information the Department provides, and he requested feedback on additional information that would be helpful to Contractors when determining the required temporary bridge length.

Contractors responded by stating that any information provided to them is helpful. The suggested providing the limits for the toe-of-fill, and information on anything that is not permitted would be useful. Similarly, if anything is required, such as a wall, or shoring, then they would like to know that too. Other suggestions included using single-lane temporary bridges to minimize cost and impacts, whenever possible.

3. *Pile Splicers*

Mr. Robinson noted that the list of approved pile splicers is available via the approved products web page. He also distributed a catalog cut-sheet of the most commonly used H-pile splicer, and drew Contractors attention to a note on the sheet that stated special welding procedures are required to develop the full value of the pile in bending. As such, he stated that the Department may need to revise the special provision for *Piles* (Pile Accessories) and resort back to submittals for pile splicers.

4. *Special Provision for Elastomeric Concrete*

Mr. Robinson distributed the final draft of the special provision for *Elastomeric Concrete*. He provided an overview of the revisions to the provision, which was the product of a Department funded research project conducted by UNC-Charlotte. He stated that in preparation for implementation of the special provision, the Department will be requesting elastomeric concrete manufacturers submit their products for prequalification. He requested Contractors encourage their elastomeric concrete manufacturers/suppliers submit their products for preapproval.

5. *Other*

i. Closed Drainage Systems

Mr. Hanks stated that the current mechanisms for accommodating thermal movement of closed drainage systems have been found to be inadequate. As a result, the Working Drawings Group is recommending significant revisions to the hardware and fit-up details for closed drainage submittals.

Contractors responded by stating that closed drainage systems were difficult to construct, and their use should be avoided whenever possible.

ii. Box Beam Camber

Mr. Hanks stated that the Department has documented an increasing number of cases where the camber in box beams and cored slabs is not consistent with the predicted camber shown on the plans. He added that the Department had funded a research project that will update the camber prediction model utilized by the Department.

iii. New Jersey Shaped Barrier Rail

Contractors stated that in some situations they are having difficulty scheduling barrier rail slip-formers. As such, they inquired if it is acceptable to substitute a New Jersey shaped barrier rail with a vertical concrete parapet rail.

The discussion noted that the Department considers several factors when selecting the appropriate barrier rail. In addition, it was noted that box beams and cored slabs have reinforcing steel for a particular rail type embedded in the units. The conclusion was that it is not feasible to substitute rail types without a revision to the plans.

6. *Next Meeting*

The next meeting is scheduled for Wednesday, August 12th, 2009 in Structure Design Conference Room C.