

# GPTQ Bridge Subcommittee meeting

Date: 4/30/14

## Attendees:

Ben Rabun – GDOT (Co-Chair)  
Al Bowman – Baker (Co-Chair)  
Bill Duvall – GDOT  
Stanley Kim – GDOT  
Steve Gaston – GDOT  
Doug Franks – GDOT  
Lyn Clements – GDOT  
Ted Cashin - GDOT  
David Stricklin – Kimley-Horn  
Greg Grant – RS&H  
Tom Tran – Gresham Smith  
John McWhorter – Transystems

Mintues by: John McWhorter

Prior to discussing the agenda items, a few other topics were discussed:

- The use of Florida BT beams. They have been used in Georgia on the SR 316 in Gwinnett project currently under construction and Bill preferred to design them the same way as Florida does (using debonding rather than draping.)
- Debonding vs draping: GDOT is concerned about assuring the debonding is achieved.
- Steel diaphragms: GDOT is considering allowing their use for PSC beams with vertical clearance over 20 ft, but is also concerned for the fit tolerances.
- Ben asked how often we should meet as a committee. First impression is that quarterly would be a good fit.

## Agenda topics:

### 1) LRFD Slab Charts -

- Doug stated that there are too many variables and as a result the charts would be 30 plus pages. The Bridge Office has developed a Mathcad file that they use and attempted to make it available but an IT issue prevented its posting. GDOT will revisit this. The MathCad slab design has been uploaded to the website in a “zip” file under PC-Based Bridge Design Software. Navigating the website does not flow well.
- Greg pointed out that NC has a table and will forward that to the Bridge Office for their information.
- Bill stated that following the design manual and using the Mathcad file should lead to the same design as in-house.
- Ben wanted to make sure that the version of the Mathcad file is apparent. Stanley stated that that is being done.
- Ben/Bill reiterated the need to make the Mathcad file available to consultant and to have a mechanism for notifying users of any updates. If a consultants “subscribe” on the

webpage then notifications should be received for any updates however this has not been confirmed.

## 2) Conspan and RCpier

- Bill stated that Conspan can be used on LRFD projects. If a consultant chooses to use other software on LRFD projects they need to request approval in writing to the Bridge Office.
- Greg asked about older LFD projects and Bill stated that it was fine to use Conspan as a check but they would still want to see their programs used on older LFD design projects.
- Bill stated that GDOT has LEAP and he is encouraging the internal use of the program.
- Al asked about the need for a document that lists the recommended settings/switches to ensure the consistent application of the program with the Bridge office.
- Ted stated that they have such documentation for their old in house programs.
- Ben wanted to be careful with setting policy versus a users forum.
- Al suggested compiling a list of “tweaks” and having it posted through GDOT website

## 3) Standardize neoprene bearings

- David started by stating that NCDOT has a table with guidance that establishes a starting point for bearing design (still check).
- Al questioned the benefit considering the number of design variables with each bearing pad.
- Ben stated that they strive to have uniformity within a particular bridge but not necessarily across multiple bridges.
- Bill stated that bearing costs are running about \$0.65/cubic inch. Bill stated that with each bearing size, one must be tested and tossed so for each size used, one is lost.
- David suggested a test using the NCDOT table on prestressed beams.
- David will assemble the NCDOT bearing pad design information to share with the committee.
- Ben wondered if bearing were more standardized, would the suppliers stock pile specific sizes? Bill thought they might.
- Al stated this was a good discussion because he was not aware that GDOT preferred the use of the same bearing thickness, and had always provided the least material bearing design.

## 4) Ambiguity in design manual regarding Design Build

- Greg stated by stating that there are grey areas within the manual where certain things may be allowed with bridge office approval but with design build there is no GDOT communication, which introduces risk. For example: the max beam spacing without approval is 9 ft up to a max of 10 ft. What if you need 9'-2"?
- Ben stated that GDOT is mainly concerned with the lifespan of the bridges. No three beam bridges!
- David suggested asking for permission based on the preliminary layout.
- Al suggested that specific clauses be identified and revised as appropriate.
- Ben stated that they would consider it.
- Greg reiterated that it does matter whether something is approved or not. Just need to know and have the other teams play by the same rules.

- 5) 404 permit for bridge construction/access
  - Environmental used to show w/o bridge and construction. Now PFPR considers construction access and removal.
  - Bill stated that there are to be no changes past 38 weeks prior to letting. The bridge office has assisted in the process but these items will not be shown in the bridge plans.
  - Tom stated that they are shown in the roadway staging plans.
  - Ben stated that the purpose of the field review should be to determine whether or not the project is buildable.
  - Al stated that the designer must reach the right person when looking for answers on this topic. More guidance is needed.
  - Ben added that the construction methods to be used on a particular project are dependent on what the winning contractor has (barge, crane etc.).
  - Ben stated that the goal needs to be that there at least one way to build the project within the confines of the environmental document. Ben agreed that this topic should be in the roadway plans.
  
- 6) Typical section included with preliminary layout
  - Al started by asking if we need to include it.
  - Bill stated that is typically only provided when there is staging involved.
  - Ted stated concern for an increase in hours on preliminary without a similar decrease on final.
  - Al felt like it was helpful and it gives consultants a chance to get the bridge office blessing on beam spacing, etc. He also said that this does not require any additional work because the beam spacing must be known to calculate vertical clearance.
  - Ben stated that they would consider it.
  - Bill still like just one sheet except where staging exists.
  
- 7) EOR responsibility for temporary construction
  - Al stated that the way it is currently written, the EOR is responsible for everything including falsework and shoring, that the engineer may not know the contractor is going to use.
  - Bill stated that the contractor has to have someone and the bridge office needs to know that these items have been checked.
  
- 8) 100% (Class C) lap splices
  - Al stated that he had plans marked up that required Class C splices everywhere, when Class B splices are acceptable in places.
  - Steve stated that any splice can be used as long as it is properly detailed.
  - Al suggested adding a section to the policy manual clearly stating where Class B splices can be used.
  
- 9) Use of standard walls without a WFI
  - Al started by asking, "do you need a WFI w/standard wall".  
The answer was no.  
Al asked "without a WFI, how do you know that you have the soil parameters required on the standards?"

- Ben suggested the soil survey. Al said that the soil survey does not include the wall design parameters shown on the standards.
- Al stated that he has seen cases where the walls were drilled but did not pass the bearing requirements for the standard walls.
- Greg suggested a note that the contractor should confirm that standard wall could be used.
- Al asked if a policy could be introduced stating no WFI for standard walls, to help with project scoping.
- Ben: No.
- Al added that the issue is of particular concern with walls on slopes.

10) Under bridge lighting requirements

- Al stated that consultants are regularly required to consider under deck lighting on bridges, but there is a lack of guidance in this area.
- Lyn stated that there is no policy in the bridge office
- This falls under Brent's group

11) Greater guidance on fencing requirements

- Al requested greater guidance on what constitutes "urban areas".  
Lyn said any place there is a sidewalk.
- Ben suggested discussing this with the GDOT PM.
- Al suggested this would not be possible during design build procurement.
- Ben stated that bridges inside the limited access would not have fencing.
- Ted added that bridge over RR have fencing.

Action Items:

- Greg will forward the NC LRFD slab table to the Bridge Office for their information.
- David will assemble the NCDOT bearing pad design information to share with the committee.

The next meeting is currently set for Wednesday July 9<sup>th</sup>