

# WSDOT/ACEC Structures/Geotechnical Team

## Agenda

10:00 AM -2:00 PM

05/18/2018

At

**WSDOT Bridge and Structures Office**

7345 Linderson Way SW.

*Tumwater* WA 98501

	Name	Agency/Company	Attendance
WSDOT	Jeri Bernstein, P.E., S.E.	Washington State Ferries (Co-Chair)	YES
	Brian Aldrich, P.E., S.E.	WSDOT – Bridge Design	NO
	Michael Rosa, P.E., S.E.	WSDOT – HQ Construction Office	YES
	Lou Tran, P.E.	WSDOT – Bridge Design	NO
	Tony Allen, P.E.	WSDOT – Geotech	YES
	Jim Cuthbertson, P.E.	WSDOT – Geotech	YES
	Evan Grimm, P.E., S.E.	WSDOT – Bridge Design	YES
ACEC	Paul Brallier, P.E., S.E.	HNTB Corp. (Co-Chair Retiring)	YES
	Chester Werts, P.E., S.E.	HDR (Transitioning Off)	NO
	Paul Guenther, P.E., S.E.	COWI Marine	YES
	Matthew Lengyel, P.E., S.E.	FIGG Bridge Engineers (Future Co-Chair)	YES
	Daniel Campbell, P.E.	ACEC – Geotech	YES
	Joan Zhong-Brisbois, Phd, PE, SE	WSP	YES
	Eric Herzstein, P.E., S.E.	Parsons	YES
	Mark Gaines	WSDOT Bridge Office	NO
	Bijan Khaleghi	WSDOT Bridge Design	YES

### 1. Review and Approve Meeting Minutes from March 16, 2018

- Minutes from the previous meeting were accepted.

### 2. Succession Planning

WSDOT-Jed Bingle's Replacement-WSDOT Members

- Brian Aldrich needs to step down from the ACEC/WSDOT team. Brian took a new position at the WSDOT Bridge & Structures office. Brian's efforts on the committee were greatly appreciated. Brian left from the meeting at this point. Brian and Mike Rosa will follow up with Bijan about finding replacement engineers for the team from the WSDOT Bridge and Structures office.

ACEC-Status of Advertisement for 2 ACEC members-Paul B

- Dan Campbell will ensure ACEC solicits candidates to join this committee.
  - o They will solicit two positions. One for Chester Werts and one for Paul Brallier.
  - o Current team members are free to reach out to their professional connections about interest joining the team, and interested parties can contact Dan Campbell and Richard Patterson with ACEC directly.
  - o The ACEC solicitation announcement has been published, and Dan will follow up with ACEC.
  - o Paul Guenther had agreed to stay on the team for another year.
- Dan recently accepted the chair position with ACEC.

### 3. Review of Previous Meeting's Action Items:

Status of ACEC\_WSDOT Structure/Geotechnical Website-Evan G., All

Do other ACEC Committees maintain a Web Site?

Where is Committee information currently stored?

- Evan to follow up with WSDOT HQ Communications to get a link to this ACEC subcommittee website (showing meeting minutes) directly on the Bridge Office web page. The link was removed for some reason. The website is still available through the ACEC-Washington chapter website.

### 4. IBC Funding by ACEC-Any news from ACEC Members?

- WSDOT is asking ACEC for support with the International Bridge Conference.
- This item has not yet been brought to the ACEC board.
- Paul Brallier will follow up with his contact to ensure that the funding/support request gets brought to ACEC – hopefully at the next ACEC board meeting on June 14<sup>th</sup>.
- Matt Lengyel will check on the date when the 2019 call for abstracts will be (estimated sometime this fall).

### 5. Design Build-

Work to formalize combined comments and recommendations to Improve ITP, RFQ, and RFP

Specifically RFP 2.6 Geotechnical & RFP 2.13 Bridge Structures

WSDOT BDM Design Build Chapter Attached

WSDOT now has a Draft Design Build Manual

RFP Chapters 2.6 & 2.13 Attached

Risk Management Chapter Attached

Entire Chapter 2 attached.

The link to the DB Manual SharePoint site is

<http://sharedot/eng/cn/hqconstr/dpb/Design%20Build%20Manual/Forms/AllItems.aspx>

- WSDOT Design Build Manual - Risk Management Chapter (Chapter 3)
  - o Comment. Page 3-2. "High risk items that will typically remain the responsibility of WSDOT and must be addressed prior to awarding a design-build contract include:"
    - Identification of geotechnical site conditions.
  - o The HQ Geotech office had not been asked to review this chapter.
  - o Mike Rosa will request from WSDOT that consultants on this sub-committee be granted access to the HQ Construction sharepoint site that has the current draft chapters to the Design-Build manual.
  - o Comment. 3-3 Design Issues. Should the manual identify the risk that the Design-Builder's engineer could potentially present engineering concepts to the Design-Builder that may be outside of WSDOT's best interest?
    - This risk should be addressed in the RFP. It can show up in the form of prescriptive requirements.
    - Bridge Structural Risks might include bridge, walls, buried structures. E.g. unique structures, tight highway curves, bridge widenings, monumental structures, seismic retrofit, liquefaction.
  - o Comment. 3-4.8 Construction. In the case that the contractor underfunds their QC/QA activities, it can lead to poor materials documentation.
    - Dan Campbell brought up a specific concern about RFP section 2.6.8.1 and other related text under 2.6 that was ambiguous about the responsibility for geotechnical special inspections and the qualifications or training needed for the QA inspection technician (i.e., if the inspection is not done directly by the GSI).
      - 2.6.8.2.6 gives opportunity for either the GSI or the QA Inspection Technician to perform the field inspection.

- A broader discussion was held about how to validate that any field construction work on Design-Build projects has been built according to the plans. The engineer of record's judgment is needed in certain situations, and the Design-Builder should not be allowed to utilize a QA staff member in lieu of the GSI for sensitive geotechnical construction items.
    - Tony Allen will bring this comment forward to the HQ Construction Design-Build group for a template language change.
  - << Lunch Break >>
  - RFP 2.13 section of the Design-Build manual
    - Comment. Risk Mitigation and Risk Allocation section. The first paragraph needs to be re-written, because it is inaccurate to say that the risk for bridge layouts is upon WSDOT.
    - A broad discussion was held about the intent of 2.13 in the design build manual. This section should be rewritten in the same way as 2.6 for geotechnical engineering. The purpose of the manual is understood by the group to provide instructions to the project office or GEC who is creating the project RFP.
    - Evan action to rewrite 2.13 of the Design-Build manual.
      - There is some valuable text in the current document, but it needs to be reorganized.
  - RFP 2.6 section of the Design-Build manual
    - Jim Cuthbertson wrote this section, and Tony Allen reviewed it. This text is a good starting point.
    - The intent as it has been written was to instruct the WSDOT project office how to use 2.6. The project office should not modify or edit the template without permission from the WSDOT HQ Geotechnical office.
    - A comment was to add a sentence to clarify that the HQ geotech office should review 2.6 in all project RFPs.

## 6. Discuss BDM Revised Seismic Policy and develop any combined comments.

### Policy Attached

- Bijan attended for this discussion.
- The policy requires a two-level seismic design.
  - Service level earthquake.
    - WSDOT proposes to follow Caltrans, which uses a 225 year design.
    - The 100 year approach that other DOTs and WSDOT Ferries use is an elastic strength design case.
    - WSDOT suggests using 225 year return period allowing some inelastic behavior.
    - This allows some minor cracking – some ductility but no major damage.
  - There was a question about "Limited Service" definition of allowing for three months prior to full serviceability. It is challenging to require a time period for repair, and it is better to have a performance requirement. Table 2, showing maximum displacement ductility demand values, should govern over the text about the three month timeline.
  - Comment - The term 'pile column' is confusing. It is not the same terminology as the BDM. Pile column refers to a continuous prismatic shaft and column.
  - Comment - Why did WSDOT Bridge decide to remove essential bridge designations? Bijan - this was to avoid political challenges to the life line designations. The policy text was revised recently to make designation of essential bridges a project by project decision.

## 7. Presentation-Prioritizing Projects at WSF Terminals based on Seismic Risk-5 minutes

- Seismic risk needs to be balanced against other Asset Management risks.
- The risks were presented using the Fauntleroy terminal as an example. WSF will prioritize retrofit for 100 year recurrence in lieu of 1000 year recurrence.
- WSF's seismic risk focus was for health and safety, but it is true that seismic damage could also impact ferry users and the local community.
- Bijan – There is a tsunami study that is currently underway involving other agencies and three universities. WSDOT is taking part in that study.

### OTHER ITEMS

- Paul Brallier will write up a summary for the ACEC/WSDOT annual meeting of what the structures/geotechnical committee did over the last year. This work has included:
  - o Geotechnical engineers were invited to this team.
  - o A design-build workshop was held October 2017.
  - o Construction specification revisions.
  - o WSDOT Design-Build manual and template comments.
  - o Comments to revise structural and geotechnical design calculation requirements in the RFP. There is more to be done on this item.
  - o Note: Members of this team are encouraged to provide further input on this summary to Paul.
- Tony Allen - AASHTO T-15 Ballot Items:
  - o Tony emailed this group files describing the current T-15 agenda items. Team members are encouraged to provide input to Tony via email before 6-15-18. Tony will try to make room in his T15 meeting agenda to discuss any comments received.
- Mike Rosa - ACEC Structures Team Review Request
  - o This is the first request for review, and it came in this morning.
  - o An engineer is looking into utility permits at intersections on WSDOT R/W. They would like to present their questions to this committee. They are in their permitting submittal phase.
  - o Could the requesting engineer provide a brief summary with some backup information about the project and about what exactly they are looking for? If it turns out to be beyond our team's purview, we could point them to the correct avenue to obtain answers.

## 8. Next Meeting September 21, 2018 Seattle

### Actions

- Brian Aldrich and Mike Rosa: Follow up with Bijan to obtain WSDOT Bridge Office engineers to attend as members of this subcommittee.
- Evan Grimm: Follow up with WSDOT HQ Communications to get a link to this ACEC subcommittee website directly on the Bridge Office web page.
- Dan Campbell: Ensure ACEC solicits two candidates to join this committee.
- Paul Brallier: Follow up to ensure that the IBC funding/support request gets brought to ACEC.
- Matt Lengyel: Find out date when abstracts are due in the fall for IBC 2019.
- Tony Allen: Provide edits to RFP 2.6 to clarify that the Design-Builder may not bypass GSI responsibilities by assigning those duties to the QA Inspection Technician.
- Evan Grimm: Rewrite section 2.13 of the draft WSDOT Design-Build Manual.
- All: Review Tony Allen AASHTO T-15 agenda items he recently emailed and provide comment via email.
- Mike Rosa: Respond to the ACEC Structures Team review request by asking for more information on the request.