

WSDOT/ACEC Structures/Geotechnical Team

MEETING NOTES

March 15, 2024 -- 9:00 AM – 12:00 PM

MS Teams Meeting

WSDOT	Evan Grimm, PE/SE	WSDOT – Bridge Design (co-chair)	x
	Katie Olleman, PE	WSDOT - Bridge Design	x
	Doug Olson, PE	WSDOT – Bridge Design	x
	Richard Brice, PE	WSDOT – Bridge Design	x
	Jeri Bernstein, PE/SE	Washington State Ferries	-
	Julie Heilman, PE	WSDOT – Hydraulic Office	x
	Andrew Fiske, PE	WSDOT – Geotechnical Office	x
ACEC	Joan Zhong-Brisbois, PE/SE	Jacobs (co-chair)	x
	Lee Andrews, PE/SE	HDR	x
	Matt Barber, PE	WSP	x
	Matt Baughman, PE/SE	COWI	x
	Stan Boyle, PE	Shannon & Wilson	-
	Brice Exley, PE	Haley & Aldrich	-
	Eric Herzstein, PE/SE	Parsons	x
	Yang Jiang, PE/SE	HNTB	-
	Scott Phelan, PE/SE	Systra-IBT	x
	Reza Sehhati, PE	TY Lin	x

1. Review meeting agenda (5 minutes) – All
[Andrew Fiske proposed an additional agenda on Legislative Update](#)
2. Review minutes from January 19th meeting (5 minutes) – All
[Minutes approved.](#)
3. Use of ArcGIS for WSDOT Bridge Management (25 minutes) – Dani Troupe
[Dani presented the GIS application in bridge preservation to ensure public safety, including Scour Plan of Action Map, Lidar Scanning Map Tool, Bridge Vertical Clearance Trip Planner and WSDOT Geoportal. GIS application in design realm is not yet implemented.](#)
<https://www.wsdot.wa.gov/data/tools/bridgeclearance/>
<https://www.wsdot.wa.gov/data/tools/geoportal/>
4. SR 520 Program Lessons Learned (30 minutes) – Robyn Boyd, Chong Chong
[Robyn and Chong walked through the SR 520 Montlake Project](#)
 - [Overview of the project timeline and scope](#)

- Innovative usage of bridge gantry crane for construction above the waterway
- Use precast element to expedite construction, control quality, and reduce environmental impact
- Remediation measures used in this project for
 - Voluntary Cleanup Program for site cleanup
 - Set up contract for shoring along ROW line
 - Underground utilities
 - Ground settlement

Break (10 minutes)

5. Legislative Update on Funding Gap (10 minutes) – Andrew Fiske
 Andrew shared with the group the legislative update on
 - Highway preservation funding gap and projection (2003-2029)
 - Investments needed for the state of good repair (2024)
 - Illustrative map on bridges and pavement preservation due today and due in 10 years
 - Projected detour in miles as the result of delayed bridges needs due today and due in the next 10 years

6. NTSB Findings on Fern Hollow Bridge Pittsburgh (20 minutes) – Evan/All
 Evan walked through the findings on the condition-related-collapse of Fern Hollow Bridge and discussed in details the possible cause of collapse in three categories (1) most significant (2) less significant and (3) unknown. These are lessons-learned for future practice in bridge maintenance, accurately quantifying remaining materials of bridge elements, correctly categorizing fracture critical elements and rating the general bridge condition.
 Rick suggested use technology to assist with bridge maintenance schedule and minimize human error.
<https://www.youtube.com/watch?v=J-VnWB4fiFk>
<https://www.youtube.com/watch?v=QP7eJQ59onE>

7. Geotechnical On-site Testing and Scheduling (25 minutes) – Andrew Fiske
 Andrew reviewed the Scoping Level Subsurface Information which is very informative and highlighted the associated risks related to
 - Time to acquire permits, project footprint changes, project elements move, or additional elements are identified;

- Dynamic schedule due to various reasons including priority change, emergency, weather condition, traffic condition, unexpected soil/rock conditions, equipment or crew availability and underground utilities etc.
- Geotechnical drill mobilizing on-site and in operation.

Shear wave velocity is often very site-specific. To characterize site classes and to establish seismic response spectra, Andrew discussed ways to derive shear wave velocity, such as Seismic Cone Penetration Test and P-S logging system.

8. Question of the month Good Practice to Provide Technical Training of EITs (15 minutes) – All
Ran out of time and deferred this item to the next meeting.

9. Adjourn
The meeting adjourned at 11:50 am.

Future meeting dates:

May 17, 2024