

# ACEC/Maine DOT Bridge Design Subcommittee

## MEETING MINUTES

March 26, 2019

### Location

MaineDOT, Room # 317 A-B

### Time

1:00 PM to 3:00 PM

### Purpose of Meeting

2nd Meeting in the 1<sup>st</sup> Quarter of 2019

### Invitees

- Wayne Frankhauser, MaineDOT
- Jeff Folsom, MaineDOT
- Leanne Timberlake, MaineDOT
- Rich Myers, MaineDOT
- Garrett Gustafson, MaineDOT
- Laura Krusinski, MaineDOT
- Kathy Parlin, MaineDOT

- Ben Foster, MaineDOT
- Theresa McAuliffe, McFarland Johnson
- Bob Blunt, VHB
- Jenn MacGregor, Kleinfelder
- Jaime French, Fuss & O'Neill
- Adam Stockin, WSP

---

### 1. Introductions

#### a. Approval of January 2019 Meeting Minutes

- Laura asked for a couple of changes to the minutes from last meeting. Bob to incorporate.
- Jeff also had some comments to the notes on some edits to name spellings. Bob to incorporate

#### b. Bob Blunt will be rotating off of the committee. This is his last meeting.

- Discussion of 3 yrs for a term instead of 2 years. Jeff will bring up to the transportation committee.

#### c. Theresa McAuliffe will be the committee co-chair moving forward.

#### d. Josh Olund- HNTB Rotating on

- Bob to request resume to give to the committee. *Subsequent to this meeting, Josh has provided his resume.*

### 2. Information Dissemination by MaineDOT

#### a. Contracting /workload

- 2020 work plan update- JSF
  - Not much change since last time
  - Projects have been uploaded and assigned to teams, not quite ready to be active
  - Mid-April estimated to be activated

- Station 46 Bridge- This project is a 2019 BUILD grant candidate (former TIGER grant program) the expected construction cost is \$30 million with half the cost funded by MaineDOT.
  - Awaiting proposal from consultant
  - Notice of funding coming out any time
  - Last year BUILD grant came out end the of April
  - Application due in mid-July
  
- Bundled Bridges- Two bundles have been developed; one in Franklin County and one for interstate bridges in the Yarmouth area. Funding will be split 80/20. Projects will be funded 50% in next program. Total available funding is \$225 million; Department hopes to receive \$10 to \$15 million and projects will target lower population areas.
  - Waiting patiently to hear back
  - Leanne has started projects in I-295 area
  - Will be Locked into Sept 2021 to deliver
  
- The Department-wide RFQ has been postponed until Fall of 2019.

b. MaineDOT Staffing Update:

- New Positions
    - Added a couple of technicians
      - a. Team North – Richard Mayer
      - b. Team South – Jeremiah Brunelle
      - c. New Admin Assistant - Tom Furrow
  
  - New Employees
  
  - Retirements
- c. Cost Increases - Wayne/Jeff/ obtaining feedback from contractors. Lessons learned. Wayne to finalize in a white paper for final design.
- d. Electronic Bridge Design Guide – similar to what the Highway Program has put together to bring guidance up to date – Beginning steps over the next year.

3. Summary of Designer Meetings (Garrett)

- a. 1/16/19 - presentation by Erik Thorpe of Vector Corrosion Technologies – discussed options to prevent or alleviate corrosion issues
- b. Upcoming - PCI NE workshop 4/23 8AM – Noon at Elks Lodge - 4 hr. session Best Practices for Precast bridge construction.
- c. 107 Special Provisions - Rich and Garrett put out guidance for 107 Special Provisions to be used as a starting point for all projects – they would like to have further input for specific projects – Consultants should draft 107SPs around PIC so design team can all be on board so the Area Construction Engineer (ACE) and Eric Shepherd can review before the TAME committee.

- d. Feedback Survey – MaineDOT to lead effort – so far zero responses – email 2/2ish. Please still do submit comments or share with Garrett.
- e. Submittals Guidance memo - Still in progress. Intent is to lay out clearer expectations on PDRs PIC etc.

#### 4. Discussion Topics

##### Geotechnical (Laura K.)

- EDC5:, Laura will update when there's news to share.
- Cohesive Soil Scour: FHWA is looking for a site to do in-situ testing to improve ability to predict scour at locations with cohesive soils.
  - Selected site – Scarborough Maintenance Lot
  - Seeking funding

Drilled Shafts: DFI/GRL have partnered and are looking for a piece of property to install a drilled shaft that has defects in it to support testing and exhuming to review results. Laura will update when there's news to share.

- a. Continuation of previous discussion
  - ACEC NH- Knowledge Share- Adam Stockin
    - MaineDOT is ok with sharing ACEC-ME Bridge Subcommittee Meeting minutes
    - Will look to set up a joint meeting between both subcommittees.
    - Adam highlighted several items from the 3/8/19 ACEC-NH Bridge Subcommittee minutes (included with these minutes)
      - a. Use of Metallizing on steel girders
      - b. Allowing Contractors to self-perform non prestressed precast concrete.
      - c. Use of synthetic fiber macro reinforcing – currently used in approach slabs and expanding use into coping and moment slabs.
  - Drilled Shafts use in New England
    - Adam Provided a document to the group for discussion (included with these minutes) of advantages and limitations.
  - Drilled shaft training
    - This training is on hold pending future needs
  - Strut & Tie Training
    - The Department plans to host a strut and tie seminar 5/29/19 & 5/30/19. The course is a 1.5 day NHI course for \$970. Consultants were invited.
    - [https://www.nhi.fhwa.dot.gov/course-search?course\\_no=130126](https://www.nhi.fhwa.dot.gov/course-search?course_no=130126)
  - MaineDOT Hosting- PCINE- Best Practices Precast Concrete Bridges
    - April 23<sup>rd</sup>, 2019- 8am to 12pm Augusta, Elks Lodge

- Ideas for streamlining project development & delivery
  - Issue with receiving incomplete and inconsistent submittals. The Department is working on a new guidance memo to outline the submittal expectations.
  - Please call Garrett/Rich if there are issues to discuss
- Updates to construction cost estimating data & methods
  - 20% increase in bridge costs from late summer, early fall
  - 5% pavement cost increase
  - Look at last 6 months of data. If no data, add 20% and engineering judgement
- PIC submittals and Utility \ ROW Coordination
  - 652 and 107 SPs at PIC
  - PIC most important milestone – Needs to occur 8 months prior to PSE.

b. New discussion items

- A possible query of Bridge GCA firms to solicit feedback on items that would benefit from greater clarity and to identify common challenges was discussed. Questions could include:
  - No Respondents to the e-mail to date. Therefore the final set of questions has not been finalized
- MaineDOT CADD standards and deliverables – no update
  - No update.
  - May be able to send this to CADD committee – Brian Kittridge

c. Potential future discussion topics

- Low Shrinkage Concrete – Durability testing is being completed on the Jonesport-Beals Bridge. Virginia DOT currently uses a 3000 psi mix for their deck concrete. UMaine has a new lab to investigate concrete durability (partnering with MaineDOT and VTrans).
  - Bob to provide technical paper from Jonesport-Beals Bridge. Using Type II low alkali cement.
  - Jeff to encourage Mike to obtain more data
  - Note, VTrans was at 3500psi but is back to 4000psi mix. – This is an excerpt from an email explaining why (*“There was some discussion about this with our materials folks and I believe that the specification was changed based on discussions with industry.”*)

*We were anticipating using pay factors with this specification that would allow for the acceptance of concrete strengths below 4,000 psi. I believe industry was opposed to this for reasons we did not consider (i.e. incentives going to the prime contractor and disincentives being passed on to the concrete producers). In the end the decision was made to leave the 28 day compressive strength at 4,000 psi."*

- Utah uses UAV to map cracks.
  - Computer simulation for MASH crash testing - RFP won by RoadSafe; study will cover NETC style rail, 3-bar, 4-bar, NH style (steel) transitions and Maine style (concrete) transitions. No concrete barrier will be included in the study.
    - FEA model of 2 bar is built to calibrate and compared results to previous crash test.
    - FEA model of 3 bar built– final test results on 3 Bar in a few days.
    - Feds moving forward with all MASH certified which requires a crash test by the end of this year.
    - Hoping to get 3 Bar MASH TL4 certified with FEA models and calibration, if not, then state DOTs will have it be crash tested.
    - Within month or two Jeff will have information to share.
  - MaineDOT moving toward single slope concrete barrier.
    - Many MASH tested single slope – MaineDOT to pick one that they like.
  - New composite beam – The Department is currently using a composite beam in a project in Hampden on the Grist Mill Bridge; There is no offsetting grant funding, and the bid prices should be reasonably reflective of actual cost. Bill Davids and representatives will be giving a presentation to the Department; the ACEC consultant community may be invited.
    - A presentation was done for designer and AGC
    - Project to advertise in late March.
  - Detail-build projects: No update.
- d. Training Areas
- Nothing else designated at this time
5. Subcommittee Rotation for Consultants
- (2-yr rotations for new members joining 2014 and later)
- |   |                      |
|---|----------------------|
| a. Theresa McAuliffe, McFarland Johnson         | Q1 2018 thru Q4 2019 |
| b. Jennifer McGregor, Kleinfelder (Geotech Rep) | Q2 2018 thru Q2 2020 |
| c. Jaime French, Fuss & O'Neill                 | Q2 2018 thru Q2 2020 |
| d. Adam Stockin, WSP                            | Q4 2018 thru Q3 2020 |
| e. Josh Olund, HNTB                             | Q2 2019 thru Q1 2021 |
6. The Next Meeting is set for Tuesday, June 18, 2019 at 1 p.m.