



## NETC Advisory Committee Meeting Minutes

Tuesday, November 15, 2022, 11:00am – 12:30pm ET

### Attendees:

Ulrich Amoussou-Guenou, MaineDOT	Emily Parkany, VTrans
Alex Bernier, UConn	Dale Peabody, MaineDOT
Tanya Miller, VTrans	Kirsten Seeber, CTC & Associates
Andrew Mroczkowski, ConnDOT	Jo Sias, UNH
Dee Nash, NHDOT	Nicholas Zavalas, MassDOT
Lily Oliver, MassDOT	

### 1) Open Project Review (November 2022)

Project # and Title	PI, Organization AC Liaison CTC Project Manager TC Chair	Update	End Date Budget
<a href="#">19-1: Curved Integral Abutment Bridge Design</a>	Adam Stockin, WSP E. Parkany K. Seeber Alex Bardow, MA DOT	The next TC meeting to discuss the guidelines and the draft final report is scheduled for 12/1/22. The PI was originally going to turn in the draft materials on 11/15/22 but has indicated that they will be submitted on 11/21/22. New schedule for review: <ul style="list-style-type: none"> <li>• 11/21/22 – WSP to submit revised report/guidelines</li> <li>• 12/1/22 – Committee call (6 business days for review)</li> <li>• 12/14/22 – Formal comments due from the committee (15 business days for review)</li> </ul>	1/31/23 \$225,255
<a href="#">19-3: Experimental Validation of New Improved Load Rating Procedures for Deteriorated Unstiffened Steel Beam Ends</a>	Simos Gerasimidis, UMass Amherst N. Zavalas K. Seeber Matt Weidele, MA DOT	The PI will submit the amendment request to MaineDOT soon. MaineDOT will process at the end of the year. The research team has tested a total of seven beams (two from CT and five from ME) and are preparing for the eighth experiment. Additionally, they are using LiDAR scanning and developing new algorithms and protocols for deterioration and capacity estimation.	3/31/2023 \$179,995

Project # and Title	PI, Organization AC Liaison CTC Project Manager TC Chair	Update	End Date Budget
<a href="#">20-2: Current Status of Transportation Data Analytics and a Pilot Case Study Using Artificial Intelligence (AI)</a>	Yuanchang Xie, UMass Lowell E. Parkany K. Seeber Susan Klasen, NH DOT	Work has started on the on vehicle trajectory data collection and modeling pilot project. The PI is working with NH on test sites and will send a list of potential sites to the TC for approval. He is testing the sensors that will be used in the project. The PI is preparing to submit the no cost time extension, previously approved by the TC, to ME. He is requesting a new end date of 12/31/23.	3/31/2023 \$179,995
<a href="#">20-3: Investigating Thermal Imaging Technologies and Unmanned Aerial Vehicles to Improve Bridge Inspections</a>	Kevin Ahearn, AECOM D. Peabody K. Seeber John "Sam" Maxim, ME DOT	The PI will submit the DFR by Thanksgiving. A TC meeting is scheduled on 1/9/23 to discuss.	3/31/2023 \$174,931
<a href="#">21-1: Quality Review and Assessment of Pavement Condition Survey Vehicle. Data Across New England</a>	Gonzalo Rada, WSP A. Mroczkowski K. Seeber John Henault, CT DOT	The TC members are submitting additional suggestions for desired control site characteristics to be included in the project tool. The PI will send the draft of the tool and the associated guidelines document to the TC in early December.	7/31/23 \$174,932
<a href="#">21-3: Initiating Seed Production for Effective Establishment of Native Plants on Roadsides in New England</a>	Julia Kuzovkina, UConn D. Nash K. Seeber Arin Mills, NH DOT	<p>This project was paused on 10/31/22. The TC met on 10/31/22 to discuss the future of the project. On 11/14/22 the TC decided that the project should move forward as long as the research team has a clear understanding of what the TC is looking for.</p> <ul style="list-style-type: none"> <li>• Three demo plots will be established across NE in 2023 using the seed mixes the research team creates. a different mix will be created for each plot. The TC will approve the plot locations prior to planting.</li> <li>• The research team will monitor the plots in 2023 and through the end of the contract in 2024. Since the research team will not be able to monitor the plots for three growing seasons, due to the shortened timeframe of the project, they will deliver a plan the DOTs can use to monitor the plots after the project ends.</li> <li>• Monthly project updates via email.</li> </ul> <p>The next quarterly TC meeting is scheduled for 12/6/22.</p>	6/30/24 \$200,000

## 2) Implementation

- TAAC members to report on any implementation activities for recently closed projects.
- Kirsten sent the implementation spreadsheet to the TAAC on 9/26/22. New projects added:
  - [NETC 20-4: Coordinating State Policies, Laws and Regulations for Automated Driving Systems Across New England](#)
- Kirsten sent a full implementation spreadsheet to the TAAC with all projects, including the in progress projects, on 10/25/22.

- How can additional states use/implement the results of completed NETC projects?
  - Could NETC hold a webinar featuring a category of projects? TAAC could members invite SMEs from their agencies to attend the webinar.
  - **Action item: Kirsten will review the completed projects to find some that have implementation activities, and or a category of projects, that might make a good webinar.**
- If TAAC members knows of Tech Transfer Activities for any project, please let Kirsten know so she can add them to the project's web page.
- Dale – Has there been any conversation with Loretta Doughty, NHDOT, who asked for NETC Composite Bridge Drain drawings. What is the prognosis of NH using the NETC specs for those drains? **Action item: Emily will follow up with Loretta and copy Dale and Dee on the email.**

### 3) Wrapping up the pooled fund study – ongoing topic

- TAAC members to discuss ways to utilize the remaining funds prior to the end of the pooled fund on 12/31/24.
- There is \$48,000 in unallocated funds in the pooled fund, leftover from CTC's unexpended funds from years three and four.
  - CTC's current contract is \$250,000 but there will probably be at least \$50,000 available to spend on new activities.
- On 10/27/22 Kirsten sent the TAAC members a survey to send to their staff to generate ideas on how to use NETC funds. The hope would be to gather ideas of activities that NETC could undertake to assist agency staff prior to the ending of the pooled fund.
- We have received 27 responses. **The survey results can be accessed [here](#).** Below are the number of responses we've received by state.
 

○ CT – 3	○ NH – 7
○ MA – 5	○ RI – 1
○ ME – 4	○ VT – 7
- *Syntheses* – Suggested topics and number of votes
  - Low-Carbon Concrete – 8
    - ~ Include research for "cementless" concrete that uses hydrated lime (calcium hydroxide) + pozzolan + water.
  - Hydrogen Fuel Cell Vehicles - State of Practice – 6
  - Solar Electric Generating Systems in ROWs – 6
  - UAS Programs – 5
  - Electric Vehicle Fire and EMT Response – 5
  - eBike Rebates – 1
  - Knowledge sharing platforms and knowledge base best practices in DOTs – 1
  - Electronic format and storage of geotechnical information for database of geotechnical information – 1
  - Successful implementation of FHWA aGame technologies for site investigation (UAS, MWD, geophysics, CPT) and/or guidelines for DOT implementation - to include in a geotechnical manual – 1

- Amphibian Crossings: Placement and Features, Funding Opportunities in the BIL (IIJA) for Wildlife Crossing, How to Apply
- Winter Operations Performance Metrics: Is there a current body of research that examines a relationship between a roadway's grip level (as sensed by Road Weather Information Systems) and motorist speed? – 1
- *Symposiums/Workshops* – Suggested topics and number of votes
  - Climate Change Resiliency – 6
  - Work Zone Safety – 9
  - Drone Use – 5
  - CAV/ADAS – 5
  - Electric Grid – 3
  - Knowledge sharing platforms and knowledge base best practices in DOTs – 1
  - Electronic format and storage of geotechnical information for database of geotechnical information – 1
  - Wildlife Passage Improving Wildlife Vehicle Collision Data Collection – 1
  - Successful implementation of FHWA aGame technologies for site investigation (UAS, MWD, geophysics, CPT) – 1
  - Regional event concentrating on modern winter roadway maintenance techniques. Often State DOTs have access to the latest technologies and equipment and use them to increase winter operations program efficiency. Local governments sometimes lag in this area and can benefit from being exposed to modern treatment techniques and equipment. – 1
  - Performance measures using virtually collected data – 1
  - Cultural Resources and Tribal coordination in New England – 1
  - Most respondents prefer either a virtual or an in-person symposium.
- *NETC Scans* – Suggested topics and number of votes
  - E-Construction – 11
    - ~ Relationship between eConstruction and Asset Management. How do we use the data we collect? How to take the information gathered and serve it up using GIS. – 1
  - Climate Change - Resiliency Design & Construction – 10
  - Safety – 9
  - Drone Use – 5
  - CAV/ADAS – 5
  - Accelerated Bridge Construction - 1
  - Use of dash cams on DOT vehicles, work zone cameras, quick clearance and measuring time to full roadway recovery – 1
  - Successful implementation of FHWA aGame technologies for site investigation (UAS, MWD, geophysics, CPT) – 1
  - Permitting load limits based on numbers of axles vs total GVW and actual dimensions. Having sliding permit allowances based on numbers of axles rather than considering the dimensions of the vehicle appears to be benefitting the Specialty Crane industry by ignoring the fact that highway capable mobile cranes are extremely heavy when compared to their

- relatively small envelope. – 1
- *Peer exchanges* – Suggested topics and number of votes
    - Construction – 12
    - Bridge Maintenance – 9
      - ~ Better performing materials to be used for bridge maintenance for longer service life – 1
    - Asset Management – 9
      - ~ Include all Transportation assets – 1
      - ~ Include geotech asset management (explorations, rock slopes, etc.); or peer exchange on a minimum of two aGame technologies with a field day (ie. MWD use and geophysics) – 1
    - Highway Maintenance – 4
    - Traffic – 0
    - Electronic format and storage of geotechnical information for database of geotechnical information – 1
    - Environmental topics. A similar peer exchange occurred a few years back (pre-covid) and was hugely beneficial in understanding how other state's approach different environmental topics – 2
    - Occupational health and safety – 1
    - Resilience (and implementing the new PROTECT program) - At the recent AASHTO conference on Risk and Resilience (Oct 20), Rhode Island shared that they had recently conducted a very successful peer exchange. They spoke highly of how valuable it was to have a meeting of the minds to exchange ideas, learn from their peers in other states and collaboratively tackle the resilience topic, which is far-ranging and sometimes unwieldy. – 1
    - Concrete, snow and ice, maintaining infrastructure – 1
    - Most respondents prefer either a virtual or an in-person peer exchange.
  - *Other activities* – Suggested topics and number of votes
    - Successful implementation of FHWA aGame technologies for site investigation (UAS, MWD, geophysics, CPT) – 1
    - Guidelines for developing standard scopes of work for consultant task orders for geotech work – 1
    - Information on maintenance and rehabilitation of existing bridge structures to assist with better bridge decisions – 1
    - IIJA - What are your plan if Research units are allotted IIJA money? – 1
    - Animal Vehicle Crash (AVC) avoidance – 1
    - Traffic data collection and use and storage- peer exchange \$29K Peer exchange on several operational questions (physical security of assets, ITS architecture, safety patrol, dispatch operations, asset management and tracking and to what level of detail) \$29K – 1
    - Transfer to Transportation Infrastructure Durability Center (TIDC) for a project to be selected and funded by the NETC States through these funds. With TIDC's 50% match requirement, this will become \$198,000 and could fund a project that the NETC Advisory Board selects. – 1

- *Priority topics*
  - Low Carbon Concrete
  - Alternative Supplemental Cementitious Materials for Concrete
  - Ultra High Performance Concrete
  - Climate resiliency
  - AVC Construction methodologies
  - UAV
    - ~ UAV Training for Bridge Inspectors
    - ~ UAV Training for Emergency Response Teams
    - ~ UAV Data Processing
  - Wildlife Crossings: A review of the available funding in IJJA, how to apply and pre-filled examples of applications would be helpful.
  - eConstruction, eTicketing, Digital Inspection, Digital As-builts: A solid solution that provides a "how-to" that goes from Design, to Construction, to completion, to as-builts, to GIS so that the information is consumable, durable, and retrievable.
  - Geotechnical: Geotechnical items are fairly underrepresented by NETC. It would be welcome to collaborate with the NESGE (northeast states geotechnical engineers) workshop participants to support issues of common concern or advancing our practice. – 1
    - ~ Implementation of FHWA aGame technology offers wonderful overlap to the already listed UAS/drone suggestion.
- *Priority activities*
  - Peer Exchange – 7
    - ~ For the NETC members
    - ~ Small Scale Accelerated Bridge Construction
    - ~ Host three peer exchanges with different topics
  - NETC Scan – 2
    - ~ Small Scale Accelerated Bridge Construction
  - Symposium – 1
  - Syntheses – 1
    - ~ Low carbon concrete or reducing carbon footprint of construction
  - NETC pooled fund final report – 1
  - Training opportunities – 1
- **Options to consider for spending the remaining funds (\$98,000)**
  - Option A—Give funds to the Transportation Infrastructure Durability Center for a project to be selected by NETC. With TIDC's 50% match requirement, this will become a \$196,000 project.
  - Option B—Fund a peer exchange (\$32,000) and a Symposium (\$45,000) = \$77,000 (highest estimates)
  - Option C—Fund a Symposium (\$45,000) and two syntheses (\$35,000) = \$80,000 (highest

- estimates)
- Option D—Fund two peer exchanges (\$64,000) and a NETC Scan (\$12,000) = \$76,000 (highest estimate)
  - Others?
  - Emily – Would the peer exchange for NETC include NETC TAAC members only? Kirsten – Yes, Melanie suggested this peer exchange.
  - Dale – Option A is intriguing but there is not enough time to execute because the money needs to be spent by 6/24/22.
  - Emily – Two peer exchanges and a synthesis or scan.
    - The difference between peer exchange and symposium is that a peer exchange is more intimate and a symposium involves inviting a wider range of attendees.
  - Emily – On-person symposium costs includes room rental and food.
  - Jo Sias – States should focus on what would be the most beneficial to them and then which type of activity would meet those needs.
    - Jo – With NETC ending, it is important for states to touch base on various topics and how the states will move forward research-wise. Which topics could move to the TIDC so they can support upcoming projects that might be coming up through the regional UTC or another regional mechanism?
  - Nicholas – Near the end of the pooled fund, leave time and resources to help people understand that NETC is ending and how to stay in touch with NETC research/where to go for further information.
    - Dale – Agrees. The next step could be the New England states work together to complete the project.
  - Nicholas – Could a peer exchange or symposium be global topic in the morning and then three concurrent specific topics in the afternoon? Can we do a mix and match of activities? This would allow SMEs to attend meetings with very specific technical information and then have a global topic such as climate resiliency. Emily – Would the SMEs be interested in the global topic?
  - Lily likes Option D the most.
    - Emily – This could take the form of concurrent peer exchange topics, one right after the other.
    - Nicholas – Can you have two on-person symposiums in one day? Virtually, could stretch it over a two-day period. Emily – Both can have breakouts. How much is programmed vs. open discussion?
  - Dale – Option E – Do nothing. We don't have to spend the money. He is not in favor of this one.
  - Dale – What topics might be good one? This may drive the format.
    - Emily – The struggle with construction and bridge maintenance is that it's hard to get SMEs to help guide the activities that we do, such as a peer exchange or symposium. Need to find staff that are willing to help with those activities.
    - Dale – All good topic areas. Whatever we do topic-wise, it won't be wrong. It's a matter of finding the SMEs to help, as Emily said.
  - Nicholas – Identify the topics first and then be concerned with which staff will help out.
    - Nicholas's vision for a daylong symposium would be to focus on the top three topics

concurrently (climate, work zone safety, drone use). It would be easier on NETC to pick these top topics and provide a way to say NETC is ending but let's continue to be in touch. Review these topics with panelists that have more experience and do a panel, break, breakouts.

~ Emily – What about attendees that are only interested in one of the topics. Would they want to stay for all topics? Would it worth the trip? Nicholas – Those who only want to attend one topic could tune it virtually. Kirsten – Technology would be crucial.

- Dale – Are there topics, such as climate resiliency or drone usage, where groups are already meeting regionally to discuss? Emily – Yes. Could NETC do something unique or help convene staff on popular topics? Is NETC the right place to discuss some of these topics?
  - Kirsten – Are the groups that are already meeting on some of these topics hitting the DOT staff, meaning are staff attending these? Dale – ME staff involved with it. But staff would be willing to meet with their peers.
- A small group of the Advisory Committee will meet to discuss and come up with options – Nicholas, Dale, Emily, Dee, Jo Sias if she wants. **Action item: Kirsten will send a poll to schedule the meeting.**
  - Emily – members should reach out with your favorite topics or SME that might be willing to help.

#### 4) Other Business

#### 5) Adjourn

**Next meeting:** December 20, 2022 from 11:00am – 12:30pm ET