



NETC Advisory Committee Meeting Minutes

Tuesday, January 23, 2023, 11:00am –12:00pm ET

Attendees:

Ulrich Amoussou-Guenou, MaineDOT	Emily Parkany, VT AOT
Colin Franco, RIDOT	Jeff Pulver, ME DOT
Ashlie Mercado, VT AOT	Kirsten Seeber, CTC & Associates
Andrew Mroczkowski, CT DOT	Hao Yin, MassDOT
Dee Nash, NH	Melanie Zimyeski, ConnDOT

1) Open Project Review (January 2024)

Project # and Title	PI, Organization AC Liaison CTC Project Manager TC Chair	Update	End Date Budget
19-3: Experimental Validation of New Improved Load Rating Procedures for Deteriorated Unstiffened Steel Beam Ends	Simos Gerasimidis, UMass Amherst N. Zavalas K. Seeber Matt Weidele, MA DOT	The research team is finalizing the final report, poster and fact sheet. The project webinar is scheduled for 3/15/24 from 10:00-10:30am. Kirsten will send an invitation to the full NETC mailing list in February.	1/31/2024 \$179,995
20-2: Current Status of Transportation Data Analytics and a Pilot Case Study Using Artificial Intelligence (AI) Speed Collection on Horizontal Curves	Yuanchang Xie, UMass Lowell E. Parkany K. Seeber Susan Klasen, NH DOT	Kirsten has received the final deliverables for this project. CTC is currently remediating the final report. The project webinar is scheduled for 2/20/23 from 1:00-1:30pm. Kirsten sent an invitation to the full NETC mailing list on 1/22/24.	12/31/2023 \$200,000
21-3: Initiating Seed Production for Effective Establishment of Native Plants on Roadsides in New England	Julia Kuzovkina, UConn D. Nash K. Seeber Arin Mills, NH DOT	The research team has sent several draft deliverables to the TC for review. The TC is meeting on 2/5/24 to discuss the deliverables. The next quarterly TC meeting is scheduled for 3/5/24.	6/30/24 \$200,000

1. Implementation/Tech Transfer

- TAAC members to report on any implementation activities for recently closed projects.

- Kirsten will send quarterly reminders to the TAAC to add information/activities to the implementation spreadsheet. Kirsten sent a reminder on 9/25/23.
- **Discussion of implementation activities related to projects 20-2, 20-3 and 20-4.**
 - ~ [20-2 Current Status of Transportation Data Analytics and Pilot Case Studies Using Artificial Intelligence \(AI\)](#)
 - Emily – This project was a mix of field studies and additional ways of using AI to analyze safety data. From a VT perspective, they don't feel it's ready to do something with it now.
 - ⇒ VT TC member response – The project has concluded, and while overall it appears to be a success, the results will not result in directly actionable outcomes for VT. The project does appear to have demonstrated that AI technology can be used successfully to track vehicle/driver behavior, which may have future benefits for the evaluation of other countermeasures and roadway features.
 - Jeff – ME is working on some things including machine learning for curve signage and speeds. They used AI to look for curve type signage. It figured out what is already out there, the correct speed for a curve and if the existing signage displays the correct speed. ME will place signs where there are none but are needed, change signs where needed and put chevrons where needed. This effort is at the implementation stage.
 - ⇒ Colin – Did AI do everything? Jeff - Yes, their profilers that drive around show images of all the roads. AI reviewed the images to get the signs, locations of the signs, etc. Determining the size of the signs proved to be an issue sometimes. Sometimes the signs were blocked. The process began in 2019/2020. It's taken more time than anticipated. They looked for speed limit data that wasn't accurate and fixed those where needed. ME didn't have a sign inventory.
 - ⇒ Colin – Any idea of reflectivity? Jeff – No, they didn't pick up on reflectivity. The effort was more about signs and location of them on curves. Are they in the correct place?
 - ⇒ Emily – VT has spent five years looking at signs. They used their profiler. A large part of this is a sign there, the location of the signs, size, etc. Their idea is to replace them and track them all at once, instead of a few at a time.
 - ⇒ Jeff – Colby has been pursuing other AI opportunities such as speed probe data throughout the state. The effort has dragged on but should be completed mid-year and will open up more opportunities to interact with other areas such as safety. This project could feed into what they are looking for big data acquisitions. They are looking at weather data, RWIS and will connect to their TMC.
 - ⇒ Colin – Has ME used it for sign compliance on construction projects? Jeff doesn't think so. Only used for curve warning signs and speed limit signs. He wants to use it for pedestrian signs. Where do they have signs and where are they needed? Wants to use it for other signs as well. Their machine learning expert left so that proved to be an issue. A new person is now in the position.
 - Dee – Reached out and will try again. May have something for next month.
 - Hao – Nicholas will follow up.
 - ~ [20-3 Investigating Thermal Imaging Technologies and Unmanned Aerial Vehicles to Improve Bridge Inspections](#)
 - VT TC member response – Hopefully VT will be taking delivery of our UAS for bridge inspection this week (January 8, 2024). We will be looking to start some level of implementation with this soon once we finish up working on finalizing work on flood remaining issues from this summer. This drone will definitely add a tool to our toolbox to perform inspections on multiple structures to save time as well as improve areas that are not easy to access. There will be some

implementation time and work on our end to make this a regular tool, but our plan is pilot one and then hopefully add to it once we figure out the best way to use it.

- ⇒ Emily – VT is interested in thermal imaging in terms of people rescue. Some debris images could be useful but for bridge inspections it may not be useful. It's more important to get the drone that can get up close to bridge then the thermal component.
- NH – Dee reached out and will get a response. They had something for the other UAS project, [18-3](#). NH did a poster at TRB on UAS, which got first place poster at TRB. The NETC project was the impetus for their project.
 - ⇒ Kirsten will NH add the poster to the 18-3 project page.
- ME – Sam Maxim is arguing to use UAS on bridge maintenance. Used it on a cable-stayed bridge and got a lot of visuals. Because it's a cable-stayed bridge and the stays are very high up, it would have been difficult to inspect them. They tried UAS on another bridge that didn't work so well. Sam will be giving an update on using UAs for bridge maintenance in February. They handed off using UAS to the aviation area. Their issue is they don't have enough licensed pilots. They want to continue to use UAS on bridge projects. ME didn't see a lot of value from the thermal imaging from this project. Could just as easy to see it so don't plan to move forward with using the thermal imaging part of it.
 - ⇒ Jeff – ME will use tethered drones for construction pilot lighting. They may use it for incident management for the camera use. It may have a use for parts of bridges that are high.

~ [20-4 Coordinating State Policies, Laws and Regulations for Automated Driving Systems Across New England](#)

- VT – Emily was the TC rep on this project. They got a research idea from PI for VT to pursue that would be the next steps. VT's SME left so there is no enthusiasm about it. Emily reached out to CT about it to see if Pete Calcaterra would be interested in pursuing the idea. CT hasn't heard from Pete on this. Emily will reach out to Pete directly.
 - MA, CT and VT were the three states most excited about this topic, but the SMEs left VT and MA so there is not much momentum. The Eastern States Coalition is still addressing this this topic.
 - ME – Their TC member is maternity leave. Hao will follow with others at ME. He heard that the momentum in 2019 to get a pilot going for a shuttle related to an airport but fell apart when COVID hit.
 - NH, MA and CT will follow up with their TC members.
- ~ Next month we will follow up with the 20- projects and add 21-1. Kirsten will send an email to the TAAC as a reminder.

2. Topical Discussion Events

- Animal Vehicle Collision Avoidance
 - ~ Event scheduled for 1/25/24 from 9:00am-3:30pm. 42 people registered as of 1/22/24.
 - ~ Subtopics
 - Mitigating the effect of collisions on reptiles and amphibians – Chris Slesar, VT
 - Implementation strategies for wildlife avoidance – Richard Bostwick, ME is too busy so we are looking for a new topic lead.
 - Road mortality data collection activities – Rebecca Martin, NH
- Geotech
 - ~ Event scheduled for 2/7/24 from 8:30am-2:15pm. The date may change as not all speakers have

- been confirmed.
 - ~ Planning Team meeting held 1/10/24.
 - ~ Subtopics
 - UAS for Geotech investigations – Krystle Pelham, NH
 - Geophysics – Steve Madden, VT
 - Geotech asset management and data management – Callie Ewald, VT and Kate Macguire, ME
 - ~ A few speakers have committed, and the planning team is reaching out to a few more.
- Advanced Air Mobility Regional Plan
 - ~ Event scheduled for 2/13/24 and 3/6/24. Dates may change as not all speakers have been confirmed.
 - ~ Planning Team meeting held 1/12/24. Next planning team meeting is scheduled for 1/29/24.
 - ~ Subtopics
 - Day 1 – Advanced Air Mobility Overview from several perspectives.
 - Day 2 – DOT AAM Plans. ME will present on their plan.
 - ~ A few speakers have committed, and the planning team is reaching out to a few more.
- e-Construction for Pavements
 - ~ Planning Team meeting held on 11/22/23. Only two planning team members showed up so we will reschedule the meeting.
 - ~ Subtopics and volunteer leads
 - Risk-Based Inspection/Automated inspection – Ryan Darling, VT
 - Materials Delivery Management System/e-Ticketing – Jarret Moore, C
 - Other topics being considered
 - ⇒ Density Profiling System, Paver-Mounted Thermal Profiler, Intelligent Compaction also is e-Construction/Smooth Ride System
 - ⇒ Ulrich – Density Profiling System is not e-Construction. If we want to talk about e-Construction then it doesn't include Density Profiling System, Paver-Mounted Thermal Profiler or Intelligent Compaction. He would consider this pavement construction but not e-construction. ME has folks to talk about these three topics. If the Paver-Mounted Thermal Profiler becomes part of the topical discussion, ME is moving towards implementation and into more projects and can speak to it. Maine has a similar number of years of experience with the Density Profiling System but they are still in research phase and it will take a couple of years for implementation.
 - Kirsten will pull the planning team back together to catch up. Emily – Call it e-construction for pavements or intelligence for pavements, whichever is more inclusive. Ask the planning team if should change the discussion to be broader. Now is the time to set a date and figure out the direction and how to make the event valuable to the planning team. Share the ACVA agenda with them to show them what it can look like. The planning team needs to resolve the topics.
 - ⇒ Hao – There is a major FHWA effort to push e-Construction and eTicketing. WSP is the lead consultant. For the NETC event, should we have a federal perspective? Emily is open to that. It's up to the planning team who they want to invite. NH and ME have eTicketing projects. VT is all in. A regional conversation on eTicketing would be good to see how it's going.
 - ⇒ Event format – Four hours
 - ⇒ Event timing – TBD

- **Action item:** Kirsten will scheduling the next planning meeting and the event date.

3. Other Business

- 508-compliance for final reports from this phase of the pooled fund
 - ~ CTC remediated the final reports for the following research projects.
 - 18-1 (report only), 18-2, 18-3, 19-1 (report and guidelines), 19-2, 19-3, 20-1, 20-2, 20-3, 20-4 and 21-1.
 - **Action item:** Kirsten will send/upload the remediated reports to TRID and Rosa-P.
- Activities if NETC website moved from CTC servers after pooled fund ends.
 - ~ Prepare site for transfer; clean up files, organization – CTC time would be two hours.
 - ~ Export files and database – CTC’s web server company time would be 30 minutes
 - ~ New site owner would need to purchase and install licenses for two WordPress plugins
 - Advanced Custom Fields Pro - \$49/year
 - Posts Table Pro - \$69/year
 - ~ Documentation on how to use site, [manage projects](#), etc. – CTC time would be 3 hours.
 - ~ Total funds = Approximately \$800.
 - ~ Questions/answers about the website.
 - ~ Description of what is currently on the NETC site:
 - The site is built on WordPress.
 - Total installation size: 7.72GB
 - Database size: 64.70MB
 - 35 published Pages
 - 47 published Posts
 - 31 published Projects (custom post type)
 - 425 published Downloads (custom post type)
 - ~ Costs for CTC to host the website for three years after the pooled fund ends.
 - There are specific monthly costs associated with the website. There are also costs spread across all of the CTC-hosted websites (some service fees and subscriptions, as well as maintenance time for our webmaster and server provider). Therefore, it isn't possible to extract the precise cost to cover NETC hosting.
 - CTC currently charges NETC \$75/month for website hosting and maintenance, which is CTC's outlay to service all aspects of the website. CTC can continue to charge \$75/month or \$900/year to maintain the website. Three years would be \$2,700.
 - If the AC approves of these costs, Maine can pay them ahead of time to avoid any additional contracting once the pooled fund ends.
 - ~ NETC Research Peer Exchange (CT, ME, NH)/NETC Closeout Event
 - The kickoff planning meeting is scheduled for 1/24/24.

2) Adjourn

Next meeting: February 27, 2024, from 11:00am–12:00pm ET