TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Maine DOT

INSTRUCTIONS:
Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # *(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)*	**Transportation Pooled Fund Program - Report Period:**
TPF-5(373)	☑ Quarter 1 (January 1 – March 31) ☐ Quarter 2 (April 1 – June 30) ☐ Quarter 3 (July 1 – September 30) ☐ Quarter 4 (October 1 – December 31)

Project Title:		
New England Transportation Consortium VII		
Name of Project Manager(s):	**Phone Number:**	**E-Mail**
Dale Peabody	207-624-3305	dale.peabody@maine.gov
Lead Agency Project ID:	**Other Project ID (i.e., contract #):**	**Project Start Date:**
23430.18		January 4, 2018
Original Project End Date:	**Current Project End Date:**	**Number of Extensions:**
June 30, 2022	June 30, 2022	0

Project schedule status:

☑ On schedule ☐ On revised schedule ☐ Ahead of schedule ☐ Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
$2,400,000	$862,112	36%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
$862,112 (27% of total funds spent)	$236,245	70%

Project Description:

A transportation research program, where research projects are conducted primarily by the Land Grant Universities of the New England states. This study was preceded by TPF-5(222), TPF-5(201), TPF-5(168), SPR-3(089), SPR-3(029), and SPR-3(009). Other State DOTs may participate in individual research projects by providing funds and a project technical committee member to represent their agency.

The New England Transportation Consortium (NETC) is a research cooperative between the state DOTs of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. The NETC is a valuable regional partnership for the identification, prosecution and dissemination of shared transportation research initiatives. The NETC represents:

- Financial leveraging opportunities and regional partnerships.
- Stronger partnerships between university faculty and state DOTs.
- User-defined, diverse research topics.
- Opportunities for research dissemination and training to practitioners in the field.

Now in its third decade, the NETC was developed to help New England states meet their special research needs by pooling resources and expertise. The NETC is now a well-established successful multistate partnership.

The objective of the pooled fund is to pool the financial, professional and academic resources of the region and to use them to research and develop improved methods of dealing with common problems in the planning, design, construction, maintenance, rehabilitation, reconstruction, and operation of transportation systems in the participating states. The program is intended to supplement, not to replace, ongoing state and federal research activities and other national programs such as the Cooperative Research Programs of the National Academies.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

Monthly Advisory Committee meetings held on 1/26/21, 2/16/20 and 3/17/21.

18-3: Integration of Unmanned Aircraft Systems into DOTs - WSP USA Inc.

- The project is complete. The PI is making final revisions to the final report, fact sheet and poster. The project webinar was held on 3/30/21.

19-1: Curved Integral Abutment Bridge Design project - WSP USA Inc.

- Project time line: 2/12/20 - 3/31/22. Project budget: $151,315.87
- Task 1 (Review existing structures) - Task complete.
- Task 2 (Finite element studies) - In progress. The PI requested a change to how Task 2 would be done. The TC approved the change and the PI is proceeding with the task.
- TC meetings held on 3/11/21 and 4/8/21.

19-2: Erosion Modeling - GZA Environmental Inc.

- Project time line: 2/13/20 - 2/28/22. Project budget: $148,035.42
- Task 3 (Ground truthing and monitoring) - Complete.
- Task 4 (Toolkit) - In progress. TC will meeting in June to discuss.
- TC meeting held on 1/25/21.

19-3: Deteriorated Steel Beam Ends - UMass Amherst

- Project time line: 9/18/20 - 3/31/23. Project budget: $179,995
- Task 1 (Identify common topologies) - In progress. Bridge inspection reports have been processed from all six states.

Anticipated work next quarter:

Monthly Advisory Committee meetings to be held on 4/27/21, 5/25/21 and 6/22/21.

18-3: Integration of Unmanned Aircraft Systems into DOTs
- The revised final report, fact sheet and poster will be posted on the NETC website.

19-1: Curved Integral Abutment Bridge Design
- PI will begin work on Task 2 (Finite element studies).

19-2: Erosion Modeling
- PI will continue work on Task 4 (Toolkit Development).
- TC meeting will be held in June 2021.

19-3: Deteriorated Steel Beam Ends
- PI will continue work on Tasks 1 (Identify common topologies) and Task 2 (Review of existing structures) will be in progress.
- TC meeting will be held on 5/20/21.

NETC 20-1: In-Service Performance Evaluation of NETC Bridge Railings
- PI will continue work Task 1 (Develop an inventory of NETC steel bridge railings) and Task 2 (Assemble ISPE data set)
- TC meeting will be held on 5/19/21.

NETC 20-2: Current Status of Transportation Data Analytics and AI Pilot Case Study Using Artificial Intelligence (AI)- $200,000
- Researcher conditionally awarded. ME is in contract negotiations.

NETC 20-3: Investigating Thermal Imaging Technologies and Unmanned Aerial Vehicles to Improve Bridge Inspections

Significant Results:

See Progress this Quarter.

Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).

None.

Potential Implementation:

18-1: Development of MASH Computer Simulated Steel Bridge Rail and Transition Details
• NH anticipates that the research from this project will be used to make recommendations to FHWA

18-2: Framework of Asphalt Balanced Mix Design for New England Agencies
• The project will make develop an experimental plan for future research with the goal to further refine the development, validation, and implementation of a BMD approach for New England states. State-specific recommendations will be made for CT, MA and VT, and general recommendations will be made for all states. TAAC members will forward the project webinar invitation to their Materials staff to encourage them to attend the webinar and discuss potential implementation activities.
• NH doesn't feel these particular research findings are able to be implemented for NHDOT. However, the lowest level of BMD may be realistic and beneficial for NHDOT to implement at some point in the future. T

18-3: Integration of Unmanned Aircraft Systems (UAS) into Operations Conducted by State Departments of Transportation
• NH is pursuing a UAS implementation plan that will build off the NETC project. The NETC project provided a broad base while the NHDOT plan will be specific to New Hampshire needs.