

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Virginia DOT (VDOT).

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.

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| Transportation Pooled Fund Program Project # <i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i> TPF-5(463) Pavement Surface Properties Consortium: Phase III - Managing the Pavement Properties for Improved Safety | | Transportation Pooled Fund Program - Report Period: <input type="checkbox"/> Quarter 1 (January 1 – March 31) <input checked="" type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input type="checkbox"/> Quarter 4 (October 1 – December 31) | |
| Project Title: <div style="text-align: center;">Pavement Surface Properties Consortium Phase III</div> | | | |
| Name of Project Manager(s): Brian Diefenderfer | Phone Number: (434) 293-1944 | E-Mail Brian.Diefenderfer@VDOT.Virginia.gov | |
| Lead Agency Project ID: 82650 | Other Project ID (i.e., contract #): 467191 (VT) | Project Start Date: 1/01/2021 | |
| Original Project End Date: 9/30/2026 | Current Project End Date: 9/30/2026 | Number of Extensions: -- | |

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 |
|----------------------|--------------------------------|--------------------------------------|
| \$1,840,000* | \$386,214 | 21% |

Quarterly Project Statistics:

| Total Project Expenses and Percentage This Quarter | Total Amount of Funds Expended This Quarter | Total Percentage of Time Used to Date |
|--|---|---------------------------------------|
| \$134,510 (7%) | \$134,510 | 7% |

* Committed; includes direct transfer from Arkansas DOT. The actual contracted budget is \$939,981 (VTTI)

Project Description:

This applied research effort focuses on enhancing the level of service provided by the roadway transportation system by optimizing pavement surface characteristics. Phases I and II included regular verification and validation of the participants' equipment, opportunities for technology transfer, and the accumulation of a significant body of knowledge on the measurement of pavement surface properties and the integration of these measurements into the next generation of pavement asset management systems. The objective this phase is: (1) to continuing to support the implementation of asset management approaches and tools that help improve the safety of our road networks by reducing the number of crashes and related fatalities, and (2) to bring pavement design and evaluation experts together with maintenance and safety professionals to maximize the contribution of the pavement community Towards Zero Deaths on US highways.

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

- CSRI is supporting the organization of a workshop at the January 2024 TRB meeting in Washington DC, related with CPFM. This workshop will have the participation of several members (4) from the Pooled Fund and the collaboration of several TRB standing committees: AKP50, ACS20, and AKP10. It is expected that the workshop will be approved by TRB.
- Edgar de León Izeppi participated in the ATSSA Midyear Meeting in Chicago, Illinois on August 16-18, 2022, at the High Friction Surface Treatment (HFST) Council. He made a presentation on the updates to all the FHWA CPFM Friction Related Research reporting about the two new documents that have been published: Characterizing Road Safety Performance using Pavement Friction (FHWA-SA-23-006) and Pavement Friction for Road Safety: Primer on Friction Measurement and Management Methods (FHWA-SA-23-007). He also offered to the council the possibility of working together on the Research Needs Statements (RNS) that were proposed by the Pavement Surface Properties Pooled Fund Project TPF-5(345/463). FHWA Safety reported that it is looking to get some funding to cover some of these topics in a new study proposed to FHWA HQ.
- The Pooled Fund TAC members and other invited guests held a virtual meeting on Monday August 21st related to the RNS task forces that are pending and discussed the possibility of organizing a certification comparison and Rodeo, which will be done again at the ICART facility in 2024.
- The FHWA SCRIM will be used by the Arkansas DOT to make a demonstration of the CFM equipment measuring 3,000+ miles. Members of CSRI and ARORA will start this work as agreed at their kick-off meeting in Little Rock on August 29th. CSRI will start measurement of the roadways as soon as the changes required for the installation of the new line laser and the transitioning to the new viewing software is complete. The final report results will be presented to ARDOT after merging the data with crashes and pavement surface mix types, and the respective Safety Performance Analysis.
- The final report of Illinois PFMP was presented on August 28th to the state DOT executive staff before it was scheduled with the districts. This project started in 2020 when IDOT started a project with Virginia Tech Transportation Institute (VTTI) to collect 2,000 miles of continuous pavement friction measurements in Illinois. The project included the analysis of 3 years of crash data to evaluate their relationship with the pavement friction data collected with the SCRIM. VTTI completed the safety analysis and evaluation presented their findings, potentially offering an opportunity to reduce crashes in Illinois.
- CSRI is also collaborating with an event that will be offered to all the pooled fund members that is being organized with the Maryland SHA as the leading agency and to be held in October in Baltimore.
- CSRI continued the processing and analysis of the data collected during the 2023 Rodeo in ICART in Illinois.
- Members of CSRI and ARORA held a kick-off meeting for the Arkansas demonstration (which includes measuring 3,000+ miles of CFM) in Little Rock on August 29th.
- The following papers were submitted for presentations at the 2024 Annual TRB Meeting:
 - ✓ Using the Estimated Available Friction at the Posted Speed as a Pavement Safety Performance Measure on Freeways
 - ✓ Estimating Potential Crash Reduction for Friction Enhancement Treatments
 - ✓ Predicting Crash Reduction with Crash Modification Factors for Friction and Macrotecture

Anticipated work next quarter:

- CSRI staff will continue processing the Rodeo data to present to the TAC group and all other participants before the end of the year.
- The FHWA SCRIM will be used by the demonstration for Arkansas DOT. CSRI will start measurement of the roadways as soon as the changes required for the installation of the new line laser and the transitioning to the new viewing software is complete.

Significant Results:

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

Potential Implementation: