

## 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.*

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

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*	\$251,704	14%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$125,766 (7%)	\$125,766	7%

\* Committed; includes direct transfer from Arkansas DOT. The actual contracted budget is \$499,980 (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 continue 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.):

- The Pooled Fund TAC members had two activities this quarter on the following topics:
  - ✓ From April 24-28, several members participated with different equipment in the Rodeo comparisons in the Illinois Certification and Research Track (ICART) near Highland, Illinois. At this event, the following states and equipment companies participated with the following equipment:
    - Skid Testers: Kansas, South Carolina, and West Virginia (invited). All these state testers used the ribbed tire. The skid tester from Mississippi could not participate because of equipment malfunctions which forced its withdrawal. (There were two skid testers from Illinois DOT, apart from the one from ARA, numbers T59506 and T59507).  
Additionally, there was another skid tester from ARA that tested with both smooth and ribbed tires.
    - CFME: SCRIM trucks from VTTI (FHWA), WDM, and ARRB Systems. There was also participation from a Dynamic Friction Tester from ICC, the Halliday RT-3, and the NIRA vehicle system. ARA also participated with a CFME Dynatest Runway Friction Tester.
    - Macrotexture: two walk-behind TM2 units and three high-speed units from Pathways, ISS, and Mandli.
  - ✓ From May 1-4, 16 members representing 12 states from the pooled fund participated in the *2023 Road Profiler's Users Group (RPUG) Conference* in O'Fallon, Illinois. During the conference, several presentations were made by CSRI:
    - Gerardo Flintsch made two presentations on Tuesday May 2, 2023 on the following topics:
      - *Relationship of Asphalt Mix Gradation to Macrotexture and Safety – Preliminary Results,*
      - *Quantifying the Impact of Friction and Macrotexture on Roadway Crashes.*
    - Edgar de León Izeppi made a presentation on Wednesday May 3, 2023, reporting on *the Evaluating the relationships between different testing systems used on roadways to measure friction and macrotexture on state highway agencies to assess similar friction characteristics (microtexture and macrotexture)*, which dealt with the results of the Pooled Fund Rodeo results in the Smart Road in 2022.
    - Also on May 3, the Pooled Fund's chair, John Senger made a presentation on the new ICART test track for Pavement Evaluation Tests.
    - On May 4, the pooled fund held the Technical Advisory Committee meeting to discuss several TAC topics and listen to the following presentations:
      - Jeff Shaw from FHWA and Priscilla Tobias from ARORA: *CPFM and PFM for Safety*
      - Taehoon Lim from Texas DOT: *Texas Safety Program.*
      - Bjorn Zachrisson from NIRA: *Crowdsourcing data, pavement friction from connected vehicles*
- The FHWA SCRIM was used by the Pavement Friction Management (PFM) and Continuous Pavement Friction Measurement (CPFM) to Intersection Safety Focus States project to make two demonstrations of the CPFM equipment in Phoenix, Arizona and Las Vegas, Nevada, where around 150 miles were surveyed in each state. These results will be presented to the DOTs after merging the data with crashes and pavement surface mix types, and other relevant information.
- CSRI is working with the Maryland SHA and a couple of vendors to organize a friction event that will take place this year in the DOT's headquarters in Baltimore and will be open to all Pooled Fund members. This event will continue the theme of implementing PFMP for Safety Performance Analysis.
- CSRI continued processing the data collected in Illinois and is finishing up the final report for this project.

**Anticipated work next quarter:**

- The Rodeo results will be processed and analyzed and presented to the TAC members following its completion.
- Delays due to supply chain issues have prevented the completion of the installation of the new macrotexture line laser and the new accelerometers that will enable us to measure the IRI in the FHWA CPFM truck. This new tool is expected to begin making measurements in the third quarter of the year.
- CSRI is also working with the Maryland SHA trying to organize a friction event that will take place this year in their headquarters and will be open to all Pooled Fund members.

**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:**