**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.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)*  **TPF-5(518) Implementation of Structural Data from  Traffic Speed Deflection Devices** | | **Transportation Pooled Fund Program - Report Period:**  🗹 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:**  **Implementation of Structural Data from Traffic Speed Deflection Devices** | | | |
| **Name of Project Manager(s):**  Brian Diefenderfer | **Phone Number:**  (434) 293-1944 | | **E-Mail**  brian.diefenderfer@vdot.virginia.gov |
| **Lead Agency Project ID:** | **Other Project ID (i.e., contract #):**  467764 (VT) | | **Project Start Date:**  2/1/2024 |
| **Original Project End Date:**  9/30/2028 | **Current Project End Date:**  9/30/2028 | | **Number of Extensions:**  -- |

Project schedule status:

* On schedule 🞎 On revised schedule 🞎 Ahead of schedule 🞎 Behind schedule

Overall Project Statistics:

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| **Total Project Budget** | **Total Cost to Date for Project** | **Percentage of Work**  **Completed to Date** |
| $5,978,000\* | $ 2,245,670 | 38% |

***Quarterly*** Project Statistics:

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| **Total Project Expenses**  **and Percentage This Quarter** | **Total Amount of Funds**  **Expended This Quarter** | **Total Percentage of**  **Time Used to Date** |
| $ 429,366 (7%) | $ 429,366 | 7% |

\* Committed; the actual contracted budget is $3,803,500 (VTTI)

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| **Project Description**:  The objectives of this follow-on pooled fund study include continuation of an existing research consortium that focuses on providing participating agencies guidance on how to specify and implement TSDD data within their respective pavement management systems and processes. Specific tasks within this multi-year program will be developed in cooperation with the partner agencies. |

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| **Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):**   * Conducted TAC meeting on January 9, 2025 * Presented Phase 4 verification of TSD at TRB AKP40 committee meeting * Presented 2 papers at the TRB annual meeting (see Significant Results) * Started work on developing QA/QC procedures to verify collected TSD data * Formed a task force to develop a request for quote (RFQ) from potential TSDD service providers (Brian Diefenderfer [VDOT], DJ Berg [Montana], Nadarajah Sivaneswaran [FHWA], Gerardo Flintsch [VTTI], Samer Katicha [VTTI]) and drafted initial RFQ * Proposed to TAC members collecting repeated measurements in Virginia and the purchase of a Laser Doppler Vibrometer (LDV) that can be used to verify TSD measurements. * Identified a calibration error in delivered TSD measurements that needs to be corrected. Initiated conversation with the service provider (ARRB Systems) and the device manufacturer (Greenwood Engineering) to discuss how the data can be corrected. |

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| **Anticipated work next quarter**:   * Continue work on the QA/QC procedures * Work with ARRB Systems to develop a solution to correct the calibration error in the delivered TSD data (data collected from 2021 to 2024) * Organize a meeting with pooled fund members to inform of the calibration issue and present the proposed solution to correct the measurements * Start organizing the 4th Symposium on TSDD (planned date in September 2025) * Start work on the report detailing the verification efforts of the TSDD with the Laser Doppler Vibrometer (LDV) * Finalized the RFQ |

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| **Significant Results:**  Two papers presented at the Transportation Research Meeting in January 2025   * Katicha, S., and Flintsch, G. (2025) Enhanced AASHTO cumulative difference approach (CDA) for pavement data segmentation * Murekye, A., Katicha, S., Flintsch, G., and Diefenderfer, B. (2025) Evaluating the use of traffic speed deflectometer-based pavement structural data in VDOT’s pavement management processes for flexible pavements |

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| **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).** |

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| **Potential Implementation:** |