TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Virginia 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)* TPF-5(206)	**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: Program to Support the Development and Deployment of Connected Vehicle Applications		
Name of Project Manager(s): Michael Fontaine	**Phone Number:** 434-293-1980	**E-Mail** Michael.Fontaine@vdot.virginia.gov
Lead Agency Project ID: 97199/90712	**Other Project ID (i.e., contract #):** 133471-GS10961	**Project Start Date:** July 2009
Original Project End Date: June 2011	**Current Project End Date:** December 2021	**Number of Extensions:** 4

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
$8,760,890.33	$7,475,752	85%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
N/A	$599,536	N/A

Project Description:

The pooled fund study entitled "Program to Support the Development and Deployment of Connected Vehicle Applications" was created by a group of state and local transportation agencies and FHWA in order to provide a means to conduct the work necessary for infrastructure providers to play a leading role in advancing the connected vehicle environment.

Objective:

Through a set of pooled fund studies, the Virginia Department of Transportation (VDOT) is working with federal, state and local departments of transportation, to establish a multi-phase program to facilitate the field demonstration, and deployment of connected vehicle infrastructure applications. In Phase I, the participants are focused on modeling, development, engineering and planning activities that will aid transportation agencies in justifying and promoting the large scale deployment of a connected vehicle environment. Phases 2 through 4 of the program will continue research and development to prepare agencies to deploy connected vehicle environments.

Scope of Work:

The pooled fund study will focus on the following:

- Development and evaluation of connected vehicle large-scale system level operations applications
- Independently research and address issues that will affect the deployment of connected vehicle systems by state and local transportation agencies
- Support AASHTO's Strategic and Deployment Plans
- Support USDOT's Connected Vehicles Programs and initiatives

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

1. Pooled Fund Study Overall
   a. A monthly call was held on October 30. The November meeting was canceled for Thanksgiving holiday.
   b. The Pooled Fund Study Members met virtually for a semi-annual meeting on December 15-16, 2020.
   c. Commitments are being received for the current/new PFS (TPF-5(389)) for FY2021 and beyond.
   d. A No-Cost Extension was requested and granted for 1 year (ending in December 2021).
2. Multi-Modal Intelligent Traffic Signal System (MMITSS) Phase 3 - Deployment Readiness Enhancements
   a. Monthly calls were held on October 15 and November 19.
   b. Task 3: Several enhancements were added in Arizona and California
   c. Task 4: Field Readiness Test Planning and Demonstration initiated and underway.
   d. Task 5: Support Deployment in Wisconsin is underway.
3. V2I Queue Advisory/Warning
   a. Monthly calls were held on October 15 and November 19.
   b. Task 4: System Requirements Document finalized.
   d. Task 5: High Level Design Document drafted and finalized. A walk-through was held on December 16.
4. Using Third Parties to Deliver I2V
   a. Monthly calls were held on October 20 and November 17.
   b. A project closeout meeting was held during the December virtual meeting.
5. Creation of MAP Guidance Document
   a. Task 4: Guidance document draft completed.
   b. Task 5: Prototype Use & Pilot Testing of Draft Guidance - Volunteers to test the draft guidance document requested.

Anticipated work next quarter:

1. Pooled Fund Study Overall
   a. Monthly calls will be held in each month.
   b. Future project topics will be discussed, approved and initiated by the members.
   c. A new phase of the PFS will be initiated (Phase 5).

2. Multi-Modal Intelligent Traffic Signal System (MMITSS) Phase 3 - Deployment Readiness Enhancements
   a. A project phase closeout meeting will be held next quarter.
   b. Support for future aspects of this project will be discussed.

3. V2I Queue Advisory/Warning
   a. A project closeout presentation was held on January 21, 2021. Final deliverables were sent to members.

4. Creation of MAP Guidance Document
   a. Monthly project calls will be held in each month.
   b. A final draft Guidance document will be circulated for discussion and revision.

5. Connected Intersections Program
   a. Monthly project calls will be held in each month beginning in January.
   b. Site selection for future testing will begin in January.
   c. A plan for SCMS Engagement will begin in February.

Significant Results:

None in 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 this quarter.

Potential Implementation:

None in this quarter.