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-(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 Cooperative Transportation Systems Applications		
Name of Project Manager(s): Catherine McGhee	**Phone Number:** 434-293-1973	**E-Mail** Cathy.McGhee@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 2014	**Number of Extensions:** 1

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
$4,360,000	$1,802,634	41%

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	$212,797	N/A

Project Description:

The pooled fund study entitled "Program to Support the Development and Deployment of Cooperative Transportation Systems 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 Cooperative Transportation Systems.

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 Transportation Systems 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 Connected Transportation Systems. Phase 2 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 Transportation Systems 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. PFS monthly calls were held on October 4th 1:00-2:00PM EDT and November 8th 1:00-2:00PM EDT.
   b. A face-to-face meeting was held on December 4-5th in Irvine, CA with the following agenda items.
      1) CTS PFS updates, 2) Member activity updates, 3) Current project discussion, and 4) Future project discussion.
2. Round 3 Research Program
   a. Traffic Management Centers in a Connected Vehicle Environment - completed.
      i. Lisa Burgess gave presentations at the PFS monthly call on 10/4 and at the face-to-face meeting on 12/4.
      ii. Task2: Investigate Expected Changes in TMCs - a final report on 10/25.
      iii. Task3: Document Future of TMCs in a Connected Vehicles Environment - a final report on 12/23.
      iv. Task4: Final Recommendations - a final report on 12/23
   b. 5.9GHz Dedicated Short Range Communication Vehicle Based Road and Weather Condition Application
      i. Kyle Garrett presented the project status at the PFS monthly call on 10/4 and at the 12/4 meeting in Irvine.
      ii. Bi-weekly project status calls were held on 10/24, 11/21, 12/19.
      iii. Task3: Application Development – on-going as planned
      iv. Task4: Application Installation and Testing – A final test plan was submitted on 12/13.
      v. Aftermarket sensor addition - a contract modification was made on 11/26 including $25,000 addition.
3. Round 4 Research Program
   a. A list of tentative topics was prepared and discussed at the 12/4 face-to-face meeting.
   b. A revised scope for the project "Tracking the Status of Connected Vehicle Testbeds Deployment" is being prepared.
4. PFS Dynamic Mobility Application Phase II
   a. Contract between UVA and U of Arizona was initiated on 10/15.
   b. A kick-off call was held on 10/31 12:00-1:00 EST.

Anticipated work next quarter:

1. Pooled Fund Study Overall
   a. PFS monthly calls will be held in each month.

2. Round 3 Research Program
   a. 5.9GHz Dedicated Short Range Communication Vehicle Based Road and Weather Condition Application
      i. Bi-weekly project status calls will continue.
      ii. Task3: Application Development – on-going as planned.
      iii. Task4: Application Installation and Testing – on-going as planned.

3. Round 4 Research Program
   a. Several topics will be selected from the list of tentative topics and further scoping for the selected will be conducted.
   b. A work will continue for the "Tracking the Status of Connected Vehicle Testbeds Deployment" project.

4. PFS Dynamic Mobility Application Phase II
   a. On-going as planned.

Significant Results:

1. Two round 3 projects have been being conducted as planned.

2. The Phase II PFS DMA project was initiated in October 2013.

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).

No problems have been encountered to date.

Potential Implementation:

The Multi-Modal Intelligent Traffic Signal System will be deployed in the selected location in the next phase of the PFS DMA program.