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 Connected Vehicle 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 2015	**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	$3,533,554	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	$445,510	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. 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 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. PFS monthly calls were held on July 30, August 28, and September 25.
   b. For the next Phase III, two project topics were selected and the scopes are being prepared.
      i. These projects are Basic Infrastructure Message and Cybersecurity.
   c. A face-to-face meeting is being planed for Phoenix, AZ on December 2-3.
   d. CV PFS team decided to submit a proposal (two pages) for CY 2016 of US Domestic Scan Program.

2. PFS Dynamic Mobility Application Phase II
   a. Monthly project update calls were held on August 20 and September 24.
   b. A final detailed system design document of AZ was submitted and approved.

3. Round 3 Research Program
   a. 5.9GHz Dedicated Short Range Communication Vehicle Based Road and Weather Condition Application- completed
      i. A final document binder was submitted and approved.
      ii. Synesis has sent hardware/software to NYS DOT.

4. Round 4 Research Program
   a. Surveying/Mapping for CV Applications ($150,000 / 12 months)
      i. Monthly calls were held on July 23, August 20, and September 17.
      ii. Task 2 Mobile Mapping System Enhancement, Task 3 Mapping Representation, Task 4 Map Representation Updating, and Task 5 Feature Extraction Methods are being conducted in parallel.

Anticipated work next quarter:

1. Pooled Fund Study Overall
   a. PFS monthly calls will be held in each month.
   b. CV PFS Phase III commitments will be received and a new Phase III contract will be established, starting in January 2016.
   c. Scopes for two Phase III projects will be finalized.
   d. A face-to-face meeting will be held in Phoenix, AZ on December 2-3.

2. PFS Dynamic Mobility Application Phase II
   a. This project will be completed by 12/31/2015.

3. Round 4 Research Program
   a. Surveying/Mapping for CV Applications
      i. Will be conducted as planned.

Significant Results:

1. Draft scopes of the two selected projects for next Phase III of the CV PFS are being prepared.
2. "5.9GHz Dedicated Short Range Communication Vehicle Based Road and Weather Condition Application" was completed.

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 is being deployed in the testbeds in Arizona and California.