TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): FHWA

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(176) --Traffic Analysis and Simulation Pooled Fund Study		**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: Transportation System Simulation Manual		
Name of Project Manager(s): John Halkias	**Phone Number:** 202-366-2183	**E-Mail** John.Halkias@dot.gov
Lead Agency Project ID: DTFH61-16-D-00030-T0012	**Other Project ID (i.e., contract #):**	**Project Start Date:** September 21, 2016
Original Project End Date: February 28, 2019	**Current Project End Date:** February 28, 2019	**Number of Extensions:** 0

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
$489,576	$454,993	93%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
18%	88,539	93%

Project Description:

Traffic analysis and simulation tools have emerged as one of the most efficient methods to optimize, evaluate, and simulate the operations of transportation facilities and systems. These tools assist transportation professionals in evaluating strategies that best address the transportation needs for their jurisdiction. Specifically, these tools help practitioners:

- Evaluate innovative transportation management concepts;
- Improve the decision-making process;
- Decrease time and cost for evaluation and design;
- Reduce risk and disruption to traffic caused by field experimentation;
- Provide better relative evaluation of design and operational improvements; and
- Gauge the operation and monitor the performance of transportation facilities and systems.

The recently enacted Fixing America's Surface Transportation (FAST) Act recognized the importance of traffic analysis tools, stating that modeling and simulation technology should be applied "to the fullest and most economically feasible" extent, to ensure projects will "(1) increase transportation capacity and safety, alleviate congestion, and reduce travel time and environment impacts, and (2) are as cost effective as practicable".

Due to the growing use, need, and acceptance of traffic analysis and simulation tools, this project aims to develop the first edition of the Transportation System Simulation Manual (TSSM) – delivering to users the concepts, guidelines, and procedures of simulation modeling. The development and advancement of the TSSM will help advance analysis for professionals lacking a centralized, unbiased, authoritative source of theory, best practices, and lessons learned. The ultimate goal of TSSM is to address at a minimum the following: the differing scales of modeling, integration of models, model inputs and data formats, data summary and analysis, data storage and model reuse, calibration/validation of simulation, alternative analysis, post processing of model data and interpretation.

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

Volume III case study chapters were finalized and submitted. Research needs statements were finalized and submitted. The team submitted a complete copy of TSSM Volumes I, II, and III. All chapters were revised and reformatted to achieve a consistent format and voice. The project team held Stakeholder Webinar #6 to present the TRB 2019 TSSM meeting materials and obtain stakeholder feedback. The team held discussions with TRB leadership about the future of TSSM publication and maintenance. At the end of Q4 in 2018, all project deliverables had been submitted except for the TRB 2019 meeting minutes. Regarding contract status, the contracting team is holding discussions with FHWA to determine the extent to which section 508 remediation, FHWA Public Affairs review, FHWA Chief Counsel review, and FHWA technical review must take place before the end of the project. The TSSM is a special-case publication, because it will be transferred to TRB for publication and maintenance. If significant amounts of 508 remediation and/or FHWA reviews are needed, the project period of performance may need to be extended.

Anticipated work next quarter:

• Give several TSSM presentations at TRB 2019
* Determine whether or not the project period of performance must be extended
* Submit the TSSM TRB 2019 meeting minutes

Significant Results:

* Submitted the Volume III case study chapters
* Submitted a complete copy of TSSM Volumes I, II, and III to achieve a consistent format and voice
* Finalized and submitted the TSSM research needs statements
* Developed the TSSM TRB 2019 meeting materials
* Presented the TSSM TRB 2019 meeting materials to the stakeholders

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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All deliverables have been submitted on-time, and in accordance with the original contract schedule. If the project period of performance is extended, the purpose of the extension would be to conduct more thorough reviews (and, potentially, edits) of the existing TSSM.

Potential Implementation:

The TSSM is intended to become a long-standing source of guidance for practitioners of traffic simulation.