TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Date: 1/20/2021

Lead Agency (FHWA or State DOT): Washington State Department of Transportation

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 # TPF-5(343) Roadside Safety Research for MASH Implementation	**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: MASH Implementation		
Name of Project Manager(s): **Mustafa Mohamedali**	**Phone Number:** **360-704-6307**	**E-Mail:** mohamem@wsdot.wa.gov
Lead Agency Project ID: **N/A**	**Other Project ID (i.e., contract #):** **GCB**	**Project Start Date:** **2016**
Original Project End Date: **Dec 31, 2021**	**Current Project End Date:** **Dec 31. 2023**	**Number of Extensions:** **1**

Project schedule status:

☐ On schedule ☒ On revised schedule ☐ Ahead of schedule ☐ Behind schedule

Overall Project Statistics: (follow link to TTI project website for more information on the funding, etc.):
https://www.roadsidepooledfund.org/

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
Approximately $1m annually		

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date

Project Description:

The Roadside Safety Research for MASH Implementation program is designed to conduct research on roadside safety priorities for research projects aligned with the MASH implementation completion schedule. The compliance dates for MASH roadside safety hardware are:

- December 31, 2017: W-beam barriers and cast-in-place concrete barriers
- June 30, 2018: W-beam tangent terminals
- December 31, 2018: Crash cushions
- December 31, 2019: Bridge rails, transitions, all other longitudinal barriers (including portable barriers installed permanently), all other terminals, sign supports, other breakaway hardware, cable barriers, cable barrier terminals
- Also, temporary work zone devices, including portable barriers, manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH.

Washington State Department of Transportation is the lead agency for this pooled fund study. Texas A&M Transportation Institute (TTI) is the lead Principal Investigator and crash test site. A website is available to those interested in completed and ongoing research as well as the work plan for new inquiries.
https://www.roadsidepooledfund.org/

Progress these Quarters (includes meetings, work plan status, contract status, significant progress, etc.):

The following tasks were completed in this quarter:

- The following new Task Orders were issued this quarter:
  1. T4541-EB: 2021 Administrative Support
  2. T4541-EC: Develop Non-Proprietary MASH-Compliant Three-Pound and Four-Pound Post Systems
  3. T4541-ED: Develop Guidelines for Attaching MASH-Compliant Thrie-Beam Transitions to Rigid Concrete Barriers Other than the Rigid Barrier Tested when Evaluating the Thrie-Beam Transition
  4. T4541-EE: Exploration into Variations in Beam Guard Approach Transitions to Rigid Barrier
  5. T4541-EF: Engineering Support Services and Recommendations for Roadside Safety Issues/Problems for Member States
  6. T4541-EG: 2021 Program Development and MASH Coordination Effort
- Work continued on the following projects:
  1. T4541-CV: Testing and Evaluation of the MGS System with Maximum Flare at MASH Test
  2. T4541-CW: Testing of Midwest Guardrail Systems with Reduced Post Spacing for MASH Compliance
  3. T4541-CZ: Thrie/W-Beam/Tubular Barrier Gap Rail for MASH TL-3
  4. T4541-DG: MASH TL-4 Investigation and Testing of the Critical Flare Rate for Cast-in-Place Single Slope 42” Concrete barrier Flaring Around a Fixed Object
  5. T4541-DJ: Testing and Evaluation of Large Signs Slipbase Support on Slope at MASH TL-3 Impact Conditions
  6. T4541-DL: A Study of Guardrail Placement on 6:1 Slope
  7. T4541-DN: MASH TL-4 Testing and Evaluation of a Concrete Median Barrier with Fence Mounted on Top
  8. T4541-DO: Shorter TL-3 MASH W-Beam Transition
  9. T4541-DQ: 2019 MASH Coordination Effort
  10. T4541-DV: Study of Acceptable Sidewalk Heights and Widths
  11. T4541-DW: Design and Testing of a Thrie-Beam Guardrail System at a Fixed Object
  12. T4541-DX: Design and Testing of a MASH TL-3 Thrie-Beam System for Roadside and Median Applications
  13. T4541-DY: MASH TL-3 Transition Design with a Storm Drain Inlet
  14. T4541-DZ: Determination of the Length-of-Need for Guardrail without Anchorage: Phase 2
  15. T4541-EA: Development of a Thrie-Beam Retrofit for Upgrading Obsolete Bridge Railings
- Work was completed on the following projects:
  1. T4541-DB: Engineering Support Services and Recommendations for Roadside Safety Issues/Problems for Member States

Additional project information and project activities is available by visiting the pooled fund web site:
https://www.roadsidepooledfund.org/.

Anticipated work next quarter:

- Continue carrying out the research plan for testing projects approved at the Fall 2020 Roadside Safety Pooled Fund Annual Meeting.
- Plan the logistics, agenda, etc. of the Fall 2021 Roadside Safety Pooled Fund Meeting.

Significant Results:

TBD

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 issues at this time.

Potential Implementation: