**TRANSPORTATION POOLED FUND PROGRAM**

**QUARTERLY PROGRESS REPORT**

Lead Agency (FHWA or State DOT): \_\_\_\_\_\_FHWA\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**INSTRUCTIONS:**

*Lead Agency contacts 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.*

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| **Transportation Pooled Fund Program Project #**  *TPF-5(447)* | | **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) | |
| **TPF Study Number and Title:**  TPF-5(447) Traffic Control Devices Pooled Fund Study | | | |
| **Lead Agency Contact:**  Laura Mero, FHWA | **Lead Agency Phone Number:**  (202) 493-3377 | | **Lead Agency E-Mail**  Laura.Mero@dot.gov |
| **Lead Agency Project ID:**  TPF-5(447) | **Other Project ID (i.e., contract #):** | | **Project Start Date:**  October 1, 2002 |
| **Original Project Start Date:**  October 1, 2002 | **Original Project End Date:**  N/A Continuing Effort | | **If Extension has been requested, updated project End Date:** |

Project schedule status:

🗷 On schedule □ On revised schedule □ Ahead of schedule □ Behind schedule

Overall Project Statistics:

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| **Total Project Budget** | **Total Funds Expended**  **This Quarter** | **Percentage of Work**  **Completed to Date** |
| Values indicate total commitments  2016 – $325,000  2017 – $375,000  2018 – $290,000  2019 – $335,000  2020 – $335,000  2021 – $405,000  2022 – $440,000  2023 - $395,000 | Ongoing Project (N/A) | Ongoing Project (N/A) |

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| **Project Description**:  The purpose of the TCD PFS is to assemble a consortium composed of regional, State, local entities, appropriate organizations and the FHWA to 1) establish a systematic procedure to select, test, and evaluate approaches to novel TCD concepts as well as incorporation of results into the MUTCD; 2) select novel TCD approaches to test and evaluate; 3) determine methods of evaluation for novel TCD approaches; 4) initiate and monitor projects intended to address evaluation of the novel TCDs; 5) disseminate results; and 6) assist MUTCD incorporation and implementation of results. |

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| **Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):** Traffic Control Devices Pooled Fund Study Technical Support  * Attended bi-weekly meetings with FHWA to discuss the status of the action items and activities under the task order (1/5/2023, 1/16/2023, 2/3/2023, 2/16/2023, 3/2/2023, 3/16/2023, and 3/30/2023). * Provided monthly progress reports to the TOCOR. * Developed a draft schedule for Base year. * Submitted the Q4 draft progress report and made revisions based on TOCOR feedback. Posted the final Q4 progress report to the website. * Made regular updates, as needed, to the contact lists, email list, and Teams, including Division Office representatives. Prepared to conduct full update of contact list. * Uploaded Q1 meeting documents (Q1 agenda, revised problem statements, revised Charter, and Charter comparison document) to Teams. * Obtained TCD PFS member availability for the Q1 meeting, sent calendar appointment, and prepared relevant documents for the meeting (agenda, Charter, Charter comparison document, and problem statements). Created online surveys for voting at the Q1 meeting. Attended and helped to facilitate the meeting (2/28/2023), then drafted (3/14/2023) and finalized (3/28/2023) the meeting minutes and uploaded them to Teams. * Polled TCD PFS members to obtain availability for the Q2 virtual meeting (3/28/2023). * Held preliminary discussions with the TOCOR and TCD PFS members about the Annual Meeting timeline and locations. Created and distributed surveys to TCD PFS to gather feedback on locations and availability for the Annual Meeting (3/13/2023). Sent results of the surveys to TCD PFS and began cost estimates for the top 3 locations and 2 selected timeframes. * Revised the two problem statements based on feedback from the project champions and other notes and comments provided by the TOCOR. Gathered additional input from TCD PFS members as needed, and sent final Problem Statements to TCD PFS members (2/21/2023). Reviewed, discussed, and facilitated voting on Problem Statements at the Q1 meeting. Sent voting results to TCD PFS members (3/3/2023). * Posted the Q4 progress report and OAPL Tech Brief to the website. * Revised the Charter based on meetings, notes from previous meetings, and discussions with TOCOR and created Charter Comparison document to summarize the changes. Reviewed and discussed Charter revisions at the Q1 meeting. Sent online poll to TCD PFs to determine if they were ready to hold an official vote on the Charter. Emailed TCD PFS to let them know that we will proceed with an official vote on the current revised Charter (3/28/2023).   **Pedestrian Signing at Unsignalized Crossings**   * Submitted the quarterly progress report on 1/4/23 and 3/31/23. * Held bi-weekly meeting (1/4/23, 1/25/23, 2/8/23, 2/28/23, 3/8/23) among Laura, Kay, Sue, and others to discuss the activities within the project. * Part of the 2/8/23 meeting was with members of the MUTCD team where we continued to refine the signs that are to be used in the computer-based test (CBT). * Sue provided a synopsis of the status of the project at the Pooled Fund Study (PFS) meeting on 2/28/23. Focused on presenting the current versions of the at-crossing signs. * Provided update on this project to NCUTCD Pedestrian Task Force and the Regulatory and Warning Technical Committee on 1/11-12/23. Obtained significant feedback regarding sign characteristics. * Revised the Task 2 Tech Memo with consideration of comments provided by Laura and the panel. Submitted the revised document on 1/25/23. Laura approved the Task 2 Tech Memo during 2/8/23 virtual meeting, recognizing that the signs could continue to be revised due to comments from additional discussions with MUTCD team, PFS members, and others. * Experimented with Qualtrics software to determine if photos could be shown for controlled time and response timestamps be recorded. * Continue developing the CBT including discussing within the research team potential wording for questions, methods for advertising the CBT, and optimal characteristics for the visuals. Reviewed other recent internet testing for suggestions on consent language and demographics questions. Considered options for the CBT experimental plan and how that will impact the number of respondents needed. * The search for locations for the on-road study had setbacks. Lakewood, CO has concerns and would like final approval for the signs that would be installed and Richardson, TX is undergoing staff changes. The research team will continue to talk to city representatives regarding their willingness to participate in this study. * Completed the Task 3 draft work plan and submitted on 3/30/23. The Task 3 draft work plan included draft questions for the CBT.   **Evaluation of Advisory Exit and Ramp Speed Signs**   * Continued developing stimulus materials for the laboratory study based on the approved work plan. * Met with FHWA, the MUTCD Team, and the TCD PFS Project Champion to discuss the signing conditions for the video simulations. The Team revised the signing conditions and finalized the video simulations based on final feedback. * Finalized the stimuli development for the laboratory study. * Obtained IRB approval for the laboratory study. * Pilot tested the laboratory study, ensured that data were saving properly, and begin running participants in Virginia and North Carolina. * Began identifying potential States for participation in the field study and began identifying potential exit ramp locations. * Held bi-weekly meetings with FHWA to discuss project activities.   **Sign Guidance for Zipper Merge**   * Addressed comments received from FHWA on the draft technical brief and 508 captions. * Submitted the revised technical brief and 508 figure captions. * Began addressing round 1 comments from the FHWA publications team. * Held bi-weekly meetings between the research team and FHWA to discuss project activities.   **Evaluation of Additional Alternatives of and Arrow Sizes for Overhead Arrow-per-Lane Guide Signs**   * Supported the publications process. * The Tech Brief can be found in the Documents section of the 5(447) page. * The project ended 3/9/3023. |
| **Anticipated work next quarter**: Traffic Control Devices Pooled Fund Study Technical Support  * Continue holding bi-weekly meetings to discuss the status of the task order and will prepare the list of Action   Items and Activities prior to each meeting.   * Continue providing monthly progress reports. * Submit the draft Q1 progress report; post the approved Q1 progress report. * Complete a full check of the contact list to ensure accuracy. Update the contact list as appropriate and request appropriate changes to the email list and Microsoft Teams. * Continue to maintain and/or upload documents (as appropriate) to the contact list, email group, and Microsoft   Teams private team.   * Schedule Q2 virtual meeting, provide an agenda, develop appropriate materials for the meeting, * and hold the Q2 meeting. Solicit input from TCD PFS on potential research project ideas prior to the Q2 virtual meeting and continue to track research ideas.   Draft and finalize Q2 meeting minutes.   * Complete cost estimates for the Annual Meeting, send calendar appointment for the meeting, secure a hotel   contract and begin Annual Meeting arrangements as appropriate.   * Upload documents to/update the TCD PFS website, as appropriate. * Support FHWA with outreach or other tasks, as needed and identified by the TOCOR. * Begin developing draft outreach plan for discussion with TOCOR.   **Pedestrian Signing at Unsignalized Crossings**   * Continue developing the CBT including taking the photos that will be used. Goal is to have a comprehensive draft that would be available for pilot testing in May/June timeframe. * Address comments on the Task 3 draft work plan when received. * Continue reaching out to cities regarding the potential to participate in the on-road portion of this study. * Participate in meetings, for example, bi-weekly meetings with FHWA and as needed with other groups.   **Evaluation of Advisory Exit and Ramp Speed Signs**   * Complete data collection for the laboratory study and will analyze the results. * Finalize the States for participation in the field study and will select the exit ramp locations for testing. * Finalize signing conditions by location for the field study. * Coordinate with participating States to get signposts and data collection devices installed. * Prepare for field study data collection including planning and coordinating with the TOCOR and MUTCD Team as needed. * Participate in bi-weekly meetings with the TOCOR.   **Sign Guidance for Zipper Merge**  The research team will continue to support the publications process. |

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| **Significant Results:**  The *Evaluation of Additional Alternatives of and Arrow Sizes for Overhead Arrow-per-Lane Guide Signs* project is complete. The compliant OAPLE sign configuration for a single exit performed well. Partial-width configurations may be appropriate for certain situations. Two arrow designs performed well, including the compliant design. (All novel TCDs must be approved for use through the MUTCD experimentation process.) |
| **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 at this time. |

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| **Potential Implementation:**  All results from the Traffic Control Devices Pooled Fund Study are considered by FHWA for inclusion in subsequent MUTCD versions and interim approvals. |