**TRANSPORTATION POOLED FUND PROGRAM**

**QUARTERLY PROGRESS REPORT**

Date: \_April 30, 2019\_\_\_\_\_\_\_\_

Lead Agency (FHWA or State DOT): Texas Department of Transportation (TxDOT)\_\_\_\_\_\_\_\_\_\_\_

**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.*

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| **Transportation Pooled Fund Program Federal Project #**  SPR TPF5 (198)  \*Previously SPR-3(049) | | **Transportation Pooled Fund Program - Report Period:**  X Quarter 1 (January 1 – March 31, 2019)  □Quarter 2 (April 1 – June 30, 2019)  □Quarter 3 (July 1 – September 30, 2019)  □ Quarter 4 (October 1 – December 31, 2019) | |
| **Project Title:**  Mobility Measurement in Urban Transportation (MMUT)  FYs 2018-2019 | | | |
| **Name of Project Manager(s):**  Casey Dusza | **Phone Number:**  (512) 486-5149 | | **E-Mail**  Casey.Dusza@txdot.gov |
| **Lead Agency Project ID:** | **Other Project ID (i.e., contract #):**  TxDOT contract 50-0XXIA0012  0000007568 *(starting 9/1/15)* | | **Project Start Date:**  9/8/08 |
| **Original Project End Date:**  8/31/13 | **Current Project End Date:**  8/31/19 | | **Number of Extensions:** |

Project schedule status:

x On schedule □ On revised schedule □ Ahead of schedule □ Behind schedule

Overall Project Statistics:

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| **Total Project Budget** | **Total Cost to Date for Project** | **Percentage of Work**  **Completed to Date** |
| $ | $4,054,191 | % |

***Quarterly*** Project Statistics:

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| **Total Project Expenses**  **and Percentage This Quarter** | **Total Amount of Funds**  **Expended This Quarter** | **Total Percentage of**  **Time Used to Date** |
| $117,467 | $0 |  |

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| **Project Description**:   |  | | --- | | **Background:** This study will be a continuation of existing project SPR-3(049) – now SPR TPF5 (198) – with the same scope, objectives, and contractor (TTI). | | **Objectives:** 1) Investigation of new and emerging datasets for mobility analyses; conduct evaluations of datasets for new and traditional uses. Continued analysis of the NPMRDS. 2) Investigation of arterial route reliability estimation, estimating reference speed, and bottleneck identification in the arterial environment. Documentation of current and evolving practices related to arterial performance monitoring and reliability estimation.  3) Demonstrations of the target setting practices; provide additional support for MAP‐21/NPRM performance measure estimation.  4) Conduct syntheses on key topic areas of interest to the pooled fund sponsors. 5) Assistance to sponsoring agencies in the application of products in their operations, planning and performance measurement activities within their agency. Respond to requests for mobility data.  6) Develop and demonstrate data integration framework by illustrating how data integration can inform investment decisions and project prioritization.  7) Implementation of an annual mobility performance report that describes all the steps and processes necessary to develop a yearly performance report. | |

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| **Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):** Work is underway on all tasks for FY 2018.  MMUT FY 2018 scope includes topics from 2017 and new topics as listed in the “Objectives” above.  Task 1: Performed deeper examination for potential effects of TMC length and AADT values on differences in DOT-collected and NPMRDS speed records in Texas and Colorado. The two factors seem to have varying, and often inconclusive, degree of effect. The bias between permanent station (DOT) collected data and NPMRDS speeds is consistently positive but the magnitude of this difference varies from one location to another, often not adequately explained by just AADT or segment length values. Work also continues on the technical memorandum on the use of origin-destination data for resiliency analysis. Compiled SCDOT speed data for comparison to NPMRDS, and continued documenting the comparisons in Colorado and Texas. Completed technical memorandum discussing the use of origin-destination data for resiliency analysis.  Task 2: Began a literature review on reliability measures and project performance for use in the tech memorandum on sensitivity analysis of reliability measures to major system changes. Began literature review on the relationship between congestion and reliability benefits and will begin travel time data exploration and sensitivity on the topic next month. Continued researching and identifying actual cases of system changes with reliability data. Received documents from MnDOT projects on reliability performance measures. Extended the literature review to explore methodologies to include travel time reliability into the transportation planning and investment prioritization process. Additionally, researchers began exploring archived travel time data from Florida to perform a sensitivity/relational analysis. Explored alternate methodologies to include travel time reliability into the transportation planning and investment prioritization process in addition to archived travel time data.  Task 3: Continued the literature review on the refined topics of sketch-planning tool improvements and calculation methods by working with the TTI librarian, collecting literature on sketch-planning tools and entering the data into a literature review matrix to assemble the collected information. Also continued to collect and process congestion mitigation data from before/after studies on congestion mitigation strategies to update the FIXIT matrix. Completed review on the refined topics of sketch planning tool improvements and calculation methods, sharing relevant information with other researchers working on other tasks with relationship to FIXIT. Finalized the collection and update of congestion mitigation data from before/after studies on each of the congestion mitigation strategies to update the FIXIT matrix. Began the review and aggregation process of congestion mitigation data from before/after studies into usable ranges used by the FIXIT tool to estimate congestion benefit. Additionally, researched new congestion mitigation strategies not initially part of previous FIXIT efforts. Researchers also developed a simplified FIXIT-related sketch planning tool methodology that captures congestion benefits by functional classification.    Task 4: Began work on the "estimating planning level reliability from major projects," which will ultimately inform FIXIT methodologies in Task 2. The project team developed an outline for the memo. Completed a second (internal) draft of the “Estimating Planning Level Reliability from Major Projects” tech memo, which will inform FIXIT methodology improvements in Tasks 2 and 3. This memo has been finalized internally, and it will be delivered by mid-April. Also continued work on the technical memorandum on tools and best practices for using origin-destination data in transportation studies.  Task 5: Sponsor communication and support via telephone calls and email correspondence. Corresponding with sponsors in North Carolina, South Carolina and New York about future site visits. Also discussed with Oregon DOT staff their need for a matrix that summarizes transportation data products and services available from private companies. Began drafting a presentation around this data matrix, to be presented remotely by TTI in April to the Oregon DOT. Completed site visit to NCDOT in March and associated meeting notes.  Task 6: No work performed under this task.  Task 7: No work performed under this task. Work was completed in Fiscal Year 2018.  Task 8: Finalized corridors and priority for origin-destination data analyses. Continued assessment of the origin-destination data for the select-link analyses and resilience and redundancy corridor analyses. Continued work on the investment attraction and economic analysis. Began readying network and datasets for statewide Colorado Mobility Report analysis. Completed internal draft of the investment attraction and economic analysis, which was delivered in March to all project sponsors. Continued readying network and datasets for statewide Colorado Mobility Report analysis. Prepared for, and attended, early March project meeting with Colorado DOT staff on current deliverables and future work. Finalized and distributed March project meeting notes. Completed and distributed the investment attraction and economic analysis. |
| **Anticipated work next quarter**: Work will continue on the tasks under the contract for FY 2019.  Task 1: Continue examining high-level speed data comparisons for pool fund participating states.  Task 2: Continue to review of planning-level reliability methods to incorporate into FIXIT spreadsheet tool and examine the relationship between congestion and reliability benefits.  Task 3: Continue work on the FIXIT tool by processing congestion mitigation data from before and after studies.  Task 4: Continue to collect information related to the technical memorandum on tools and best practices for using origin-destination data in transportation studies. Submit finalized Estimating Planning Level Reliability from Major Projects technical memorandum.  Task 5: Continue to support sponsors via telephone and email. Finalize and submit meeting notes from sponsor visits to North Carolina and South Carolina. Present data matrix to the Oregon DOT in April.  Task 6: Finalize planning and attend 2019 annual meeting in Louisville, Kentucky.  Task 7: Work completed under this task.  Task 8: Finalize corridor origin-destination data analysis. Finalize the investment attraction and economic analysis based on any comments received from Colorado DOT. |

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| **Significant Results:**  See Progress; noted deliverables. |
| **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 during this quarter or expected during the next quarter. |

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| **Potential Implementation:** Work this quarter will have positive impacts (research and guidance) for all participating states with regard to evaluating datasets, arterial performance monitoring, performance measures and target setting under MAP-21 and FAST Act for system performance and freight. |