

## TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Iowa 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.*

<b>Transportation Pooled Fund Program Project #</b> TPF-5(438)	<b>Transportation Pooled Fund Program - Report Period:</b> X Quarter 1 (January 1 – March 31, 2022)  Quarter 2 (April 1 – June 30)  Quarter 3 (July 1 – September 30)  Quarter 4 (October 1 – December 31)	
<b>Project Title:</b> Midwest Smart Work Zone Deployment Initiative		
<b>Name of Project Manager(s):</b> Dan Sprengeler	<b>Phone Number:</b> 515-239-1823	<b>E-Mail</b> Dan.Sprengeler@dot.iowa.gov
<b>Lead Agency Project ID:</b> Keith Knapp	<b>Other Project ID (i.e., contract #):</b> Addendum 733	<b>Project Start Date:</b> January 1, 2020
<b>Original Project End Date:</b> December 31, 2020	<b>Current Project End Date:</b> December 31, 2022	<b>Number of Extensions:</b> None

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
\$500,000	\$215,319.86	25%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$40,117.28		

**Project Description:**

The Smart Work Zone Deployment Initiative (SWZDI) was initiated in 1999 as a Federal Highway Administration (FHWA) Pooled Fund Study intended to coordinate and promote research among the participating states related to safety and mobility in highway work zones.

The program is an ongoing cooperative effort between State Departments of Transportation, universities, and industry. The studies completed have consisted of evaluations of various work zone related products, various innovative topics, and several synthesis studies. Completed reports and descriptions of ongoing projects can be obtained at the Iowa State University's Institute for Transportation (InTrans) website ([www.intrans.iastate.edu/smartwz/](http://www.intrans.iastate.edu/smartwz/)) link to the Smart Work Zone Deployment Initiative. InTrans currently operates as the program manager of the pooled fund efforts and completes administrative tasks related to request for ideas and proposals, meetings, project files, quarterly reports, and recommending reimbursement.

**Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):****Quarter Ending March 31, 2022 (Overall)**

During this quarter, work on three PY 2020 and two PY 2021 projects continued. In addition, two PY 2022 projects were selected and work is ongoing at the Iowa DOT to get them contracted. Projects supported by the previous pooled fund account number ended last quarter. Work on the Michigan State Project related to DADs was finished last quarter and the project ended. The report was posted to the SWZDI website in early January.

The SWZDI Board met on March 23, 2022 and discussed the content of a request for problem statement for PY 2023. Five topics were suggested and described for further discussion and potential advertising. It was also decided by the Board that planning should start for an on-site Board meeting in the fall or in 2023. The request for problem statements should be released in the next quarter.

The following is a summary of accomplishments provided by the project principal investigators for the January to March 2022 time period for their individual research projects underway with fund account TPF-5(438).

**2022 Program Projects**

- Mobility and Safety Impacts of Work Zone Lane and Shoulder Widths, University of Wisconsin-Madison, David Noyce as PI

Project has not started. Negotiations continued between the University and Iowa DOT.

- Analysis of Improvements in the Effectiveness of Speed Feedback Trailers. Michigan State University, Tim Gates as PI

Project has not started. Negotiations continued between the University and Iowa DOT.

**2021 Program Projects**

- Evaluation of Messaging Techniques to Increase Vehicle Spacing at Work Zones, Iowa State University, Jing Dong as PI

Analyze headway data to identify tailgating behavior and the associated traffic measurements  
Drafted anti-tailgating messages and discussed with the TAC.

This project was contracted to start on March 1, 2021 and end on June 30, 2022. This contract has also been extended to December 31, 2022. The project is 20% complete.

- Work Zone Speed Limits and Motorist Compliance, Michigan State University, Peter Savolainen as PI

Task 0: Formation of the Technical Advisory Committee – Task complete.

Task 1: Synthesis of Existing Practices – The University of Missouri has completed its review of the research literature. A state agency survey was developed and reviewed by the TAC. The survey was launched in March 2022.

Task 2: Site Selection and Data Collection – Data have been collected at five freeway work zone locations: I-69 Imlay City, I-69 Capac, I-75 Bay City, I-75 Saginaw, I-275 Wayne County. These work zones were used to assess the impacts of four factors: (1) rumble strips; (2) speed feedback signs; (3) targeted enforcement; and (4) worker presence. Data collection was completed in the fall of 2021.

Task 3: Data Analysis – Detailed speed profiles have been obtained for more than 1200 vehicles and analysis results to date show significant impacts based upon the presence of enforcement, as well as with respect to the presence and location of the speed feedback signs. The research team presented preliminary results to the TAC and is currently conducting additional analyses, which will culminate in guidance and recommendations.

Task 4: Develop and Submit Deliverables - No progress to report.

This project was contracted to start on March 1, 2021 and end on September 30, 2022. It is 65% complete.

**Anticipated work next quarter:**

The project contracts for 2022 should be finalized and started next quarter. Projects from PY 2021 will continue. Request for problem statements for the PY 2023 RFP should be distributed with desirable July 15 RFP release.

**Significant Results:**

The projects under this administrative contract continued toward completion. The report of a project finished last quarter was posted early this quarter.

**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, with recommended solutions to those problems).**

None of the projects under this funding account number appear to be encountering any unusual challenges at this time.

**Potential Implementation:**

Potential implementation includes project report posting when completed.