

## 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> Quarter 1 (January 1 – March 31, 2025)  Quarter 2 (April 1 – June 30)  Quarter 3 (July 1 – September 30)  X Quarter 4 (October 1 – December 31)	
<b>Project Title:</b> Midwest Smart Work Zone Deployment Initiative		
<b>Name of Project Manager(s):</b> Brian Worrel	<b>Phone Number:</b> 515-23901471	<b>E-Mail</b> Brian.worrel@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, 2024	<b>Current Project End Date:</b> September 30, 2026	<b>Number of Extensions:</b> 7

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
\$1,300,000	\$1,145,506	95%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$117,516		2%

**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 December 31, 2025 (Overall)**

During this quarter, work continued on two PY 2024 projects and another additional supplemental project for PY 2024. Other work continued under the new SWZDI funding number is summarized in another quarterly report.

The following is a summary of accomplishments provided by the project principal investigators for the October to December 2025 time period for their individual research projects underway with fund account TPF-5(438).

**2024 Program Year Projects**

- The Effect of Nighttime Lighting Systems on Workers' Visibility and Safety – University of Nebraska – Lincoln, Chun-Hsing Ho as PI.

The team has completed all tasks before 11/30/2025. A draft report was sent to the sponsor for review in October 2025. The team received feedback from editors in early November 2025. The team addressed all comments and sent a final version of project report to the editors for their final review in middle of November. The editors informed us that the final report and summary were published in the web page of SWZDI on 12/02/2025.

This project has been contracted to start on September 1, 2024 and end on November 30, 2025. The project is 100 percent complete. We have received the draft final report for review by the SWZDI board.

- Improving Work Zone Management and Safety through AI-Powered Connected Vehicle Data Analysis – Iowa State University, Anuj Sharma as PI (Meenakshi Sumeet Arya was the original PI, but has resigned).

Final report draft has been circulated for the review by the TAC.

This project was contracted to start on March 1, 2024 and end on June 30, 2025. However, an extension has been granted to the project until December 31, 2025. Another extension to June 30, 2026 was also requested and granted. This project is 99 percent complete.

- Accommodation of Vulnerable Road Users – Wayne State University, Steven Lavrenz as PI.

No quarterly report was submitted for this project by the PI. The PI was contacted by the SWZDI program manager about quarterly report contractual requirements and also the approaching end date of the contract

(December 31, 2025). An additional contact was made by the Iowa DOT and a response received for an extension that was submitted and approved.

This project was contracted to start on May 1, 2024 and end on April 30, 2025. An extension has been requested to October 31, 2025 and another to December 31, 2025. An additional extension was granted this quarter with an end date of June 30, 2026. This project was reported as 40% complete two quarters ago (April to June 2025).

**Anticipated work next quarter:** Work will continue on the completion of the two projects above that are still under contract using this SWZDI funding number (other work is starting on the newer SWZDI funding number). It is anticipated that one will be completed in the next quarter.

**Significant Results:** One of these three projects noted above was completed and posted.

**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).**

**Potential Implementation:**