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.

Transportation Pooled Fund Program Project # *TPF-5(545)*	**Transportation Pooled Fund Program - Report Period:** X Quarter 1 (January 1 – March 31, 2025) Quarter 2 (April 1 – June 30) Quarter 3 (July 1 – September 30) Quarter 4 (October 1 – December 31)
Project Title: Midwest Smart Work Zone Deployment Initiative	

Name of Project Manager(s): Brian Worrel	**Phone Number:** 515-239-1471	**E-Mail** brian.worrel@dot.iowa.gov
Lead Agency Project ID: Keith Knapp	**Other Project ID (i.e., contract #):** Addendum 915	**Project Start Date:** January 1, 2025
Original Project End Date: December 31, 2025	**Current Project End Date:** December 31, 2029	**Number of Extensions:** 1

Project schedule status:

X 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
$750,000	$75,505	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
$35,804		3%

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 (swzdi.intrans.iastate.edu) 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)

As part of this project funding number, two PY 2025 research projects are currently under contract and are summarized below. Two other, for PY 2026, are under negotiation for contracts. During this quarter, the proposals received for two topics, residential driveway temporary signals (RDTS) and the evaluation of positive protection in work zones, were reviewed and ranked by the SWZDI board state representatives. The highest ranked proposals were communicated to the board and it was agreed to fund both. These contracts are currently being negotiated between those selected for each project and the Iowa DOT. Work also continued during this quarter, on two PY 2024 projects and another additional supplemental project for PY 2024, as part of the old SWZDI project account (See that 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(545).

Quarter Ending March 31, 2026 (Overall)

As part of this project funding number, two PY 2025 research projects are currently under contract and are summarized below. Two others, for PY 2026, had their contracted negotiated this quarter (i.e., they have not yet begun work). During this quarter, the SWZDI advisory board met and discussed topics for the 2027 PY request for problem statements. The topics were summarized the notes to the meeting were provided to the board for review. These topics will be ranked and request for problem statement released in the next quarter. Work continued on the PY 2025 projects (summarized below) and will begin on the PY 2026 projects next quarter. In addition, work continued on two PY 2024 projects as part of the old SWZDI pooled fund account (See that quarterly report).

The following is a summary of accomplishments provided by the project principal investigators for the January to March 2026 time period for their individual research projects underway with fund account TPF-5(545).

2025 Program Year Projects

- Mobility and Safety Impacts of Work Zone Lane and Shoulder Widths – Part 2 – University of Wisconsin – Madison, Madhav Chitturi as PI.

  Incorporating signal strength info into the algorithm to refine the vehicle edges and estimate lateral distance and speed.

Developing an algorithm to process the images and identify the vehicle make/model and obtain vehicle width. Reached out to TAC to obtain information on potential WZs for data collection in 2026.

This project has been contracted to start on July 1, 2025 and end on January 31, 2027. It is 25% complete.

- Traffic Control for Work Zones in Alternative Intersections – University of Missouri, Henry Brown as PI.

  A draft chapter for the literature review is being finalized.

  Analysis of survey results is in progress. Responses were received from 44 state DOTs for a response rate of 86%.

  Temporary traffic control plans were reviewed for 18 projects with alternative intersections.

  Interviews were conducted with the following DOTs: Indiana, Minnesota, Missouri, North Carolina, Oregon. Interviews are pending with the following DOTs: Iowa, Washington. The following DOTs were contacted for interviews but were not able to participate: Alaska, Michigan.

  For the next quarter, the summary of survey results and literature review will be finalized, interview summaries will be prepared, guidance will be developed, and draft final report will be prepared.

  A TAC meeting is scheduled for April 13, 2026.

  This project has been contracted to start on April 1, 2025 and end on September 30, 2026. It is 45% complete.

2026 Program Year Projects

- Evaluation of Positive Protection in Work Zones – University of Missouri, Henry Brown as PI.

  On March 30 the Iowa DOT communicated with Iowa State University and PI for the latter to reach out to the technical advisory committee members for the project (Keith Knapp did not request a quarterly report and wrote this summary).

  This project has been contracted to start on March 16, 2026 and end on July 31, 2027. It is 0% complete.

- Evaluation of Expanded Uses of Residential Driveway Temporary Signals (RDTS): Turn Lane Volumes and Storage – Michigan State University, Tim Gates as PI.

  On March 30 the Iowa DOT communicated with Iowa State University and PI for the latter to reach out to the technical advisory committee members for the project. PI indicated the TAC was formed.

  This project has been contracted to start on March 23, 2026 and end on December 31, 2027. It is 0% complete.

Anticipated work next quarter: Work will start and/or continue on the two currently contracted projects. The projects for PY 2026 that were selected for funding will also begin work. Problem statement topics will be selected and a request for problem statement distributed.

Significant Results: Work continued on the two PY 2025 projects. And the contracts for the two PY 2026 projects were finalized.

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: