

**TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT**

Lead Agency (FHWA or State DOT): Michigan DOT

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.

Transportation Pooled Fund Program Project # (i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)) TPF-5(490)	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(490) ENTERPRISE-Phase III (Phase II Continuation)		
Lead Agency Contact: Michigan Department of Transportation	Lead Agency Phone Number: 517-636-0036	Lead Agency E-Mail SpinksM@michigan.gov
Lead Agency Project ID: OR22-204	Other Project ID (i.e., contract #): 2024-0826	Project Start Date: 3/6/2023
Original Project Start Date: 3/6/2023	Original Project End Date: 9/30/2028	If Extension has been requested, updated project End Date: Click or tap to enter a date.

Project schedule status:

☒ On schedule	☐ On revised schedule	☐ Ahead of schedule	☐ Behind schedule
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Overall Project Statistics:

Total Project Budget	Total Funds Expended This Quarter	Percentage of Work Completed to Date
\$1,165,980.00	\$57,353.63	67%

Project Description:

TPF-5(490) is a continuation of TPF-5(359) led by the Michigan Department of Transportation. This pooled fund federal project originated under the project titled "ENTERPRISE Group" that was established in 1991. Each year, partner members contribute funds in support of ITS projects of mutual interest.

Selected research studies/projects typically involve private sector partners contracted to work with designated member agencies. An administrative contract, currently with CTC & Associates LLC, covers project management, meeting planning, website and other tasks. Over time ENTERPRISE has grown into a multi-national consortium dedicated to the advancement of ITS. The consortium provides a focus for coordinating ITS developments and sharing results within and outside the ENTERPRISE program.

Primary Focus:

To enhance innovation in highway operations and intelligent transportation systems through research and technology transfer, as well as to continue assessing transformational technologies and their impact on the transportation industry.

Objectives: The Board initially selected 13 research projects for this phase of the pooled fund study. Additionally, the Board amended the Athey Creek contract and added

New projects for second round

15. ITS Simple Solutions – Phase 2
16. Information Technology Support Models for ITS
17. Evaluation Process for ITS Systems
18. Deterrents for Rodents Chewing into Fiber and Cabinets
19. ITS Device Communications Using WiFi Connections
20. Leveraging Video from Maintenance Vehicle Cameras for Innovative DOT Uses
21. Lease Agreements for ITS Services Using Transportation Agency Assets
22. Engaging Mapping Companies

Progress this Quarter

(includes meetings, work plan status, contract status, significant progress, etc.):

Board teleconferences held on May 20 and June 17, 2026. CTC & Associates developed the agenda, documented the meeting, and finalized, distributed and posted meeting minutes.

CTC & Associates finalized the planning for a hybrid in-person/virtual Board meeting in Bloomington, MN from April 14-16, 2026. Tasks included setting up the virtual platform, agenda finalization, booking flights, securing a hotel, meeting logistics, meeting facilitation and notetaking, posting meeting materials on the ENTERPRISE website and processing traveler reimbursements.

CTC & Associates began planning a hybrid in-person/virtual meeting taking place from September 9-10, 2026 in Madison, WI. Planning activities will include drafting an agenda development, securing a meeting location, and researching potential guest room hotels.

CTC & Associates developed a poster based on the Simple ITS Innovations project for presentation and display at the 2026 Joint ITE International and Great Lakes District Annual Meeting and Exhibition.

CTC & Associates developed and submitted an abstract on the Simple ITS Innovations project to the ITS Texas 2026 Annual Meeting.

CTC & Associates assisted MDOT with members' pooled fund commitments and transfers.

CTC & Associates updated the website with current information. (<http://enterprise.prog.org>)

CTC & Associates assisted Athey Creek with activities related to individual research projects.

Research projects

Project 15: ITS Simple Solutions – Phase 2

- Task 1: Review and Prioritize Three Innovations to Advance for Implementation – Developed and executed a prioritization plan and selected three innovations.
- Task 2: Document Next Steps to Implement the Prioritized Innovations – Began documenting next steps for the three innovations selected.
- Task 3: Continue to Gather Examples of ITS Innovations – Continued to gather and document innovations.

Project 16: Information Technology Support Models for ITS

- Task 1: Conduct Research – Continued to schedule, contact and summarize interviews with ENTERPRISE members.

Project 17: Evaluation Process for ITS Systems

- Task 1: Define ENTERPRISE Member Evaluation Test – Conducted literature search on project focus: Wrong Way Driving Alert Systems, DMS, Over-height Detection Warning Systems, and Ramp Meters. Documented evaluation impacts and measures. Continued to document evaluation impacts and measures.

Project 18: Deterrents for Rodents Chewing into Fiber and Cabinets

- Task 1: Online Search – Completed an online search to identify deterrents for rodents that cause damage to fiber and cabinets.
- Task 2: Outreach – Developed a survey to investigate practices for deterring rodents at fiber and cabinets. Sent the survey to ENTERPRISE Board members and to AASHTO for their use in distributing to the ITS Working Group.

Project 19: ITS Device Communications Using Wi-Fi Connections

- Kicked off project in April 2026.
- Task 1: Research Wi-Fi – Began research on Wi-Fi as an initial communications tool (short-range communication) and other communications used (e.g. radios).
- Task 2: Research Long Distance Wi-Fi – Began research on long-distance Wi-Fi use and potential for Li-Fi as a communications tool.

Project 20: Leverage Video from Maintenance Vehicle Cameras for Innovative DOT Uses

- Kicked off project in April 2026.
- Task 1: DOT Maintenance Vehicle Camera Use – Created survey questions to learn from states that have DOT maintenance vehicle cameras.

The following research projects are complete, and the final report is posted to the ENTERPRISE PFS website:

- **Completed December 2023:** Project 1: State of the Art Roadway Sensors – Phase 1: <https://enterprise.prog.org/wp-content/uploads/ENT-Roadway-Sensors-Phase-1-Final-Report.pdf>
- **Completed March 2024:** Project 2: New Methods of Traffic Data Collection (Comparison of Emerging Traffic Data Collection Methods to Traditional Methods): <https://enterprise.prog.org/wp-content/uploads/ENT-Comparison-Traffic-Data-Collection-Methods-Final-Report.pdf>
- **Completed April 2024:** Project 5: Novel Uses of Unmanned Aerial Systems (UAS) in ITS: <https://enterprise.prog.org/projects/novel-uses-of-unmanned-aerial-systems-uas-in-its/>
- **Completed June 2024:** Project 4: Procurement Specification for Physical Security of ITS: (Posted to the ENTERPRISE members only website.)
- **Completed June 2024:** Project 6: State of the Art of Roadway Sensors – Phase 2: <https://enterprise.prog.org/projects/state-of-the-art-roadway-sensors-phase-2/>
- **Completed July 2024:** Project 3: Potential Approaches for Wrong-Way Driving Applications – Phase 2: <https://enterprise.prog.org/projects/potential-approaches-for-wrong-way-driving-applications-phase-2/>
- **Completed March 2025:** Project 11: Role of Artificial Intelligence in Intelligent Transportation Systems: <https://enterprise.prog.org/wp-content/uploads/ENT-AI-in-ITS-Final-Report-Mar-2025.pdf>

- **Completed April 2025:** Project 9: Uncontrolled Pedestrian Crossing ITS Countermeasures: <https://enterprise.prog.org/projects/uncontrolled-pedestrian-crossing-its-countermeasures/>
- **Completed April 2025:** Project 13: Truck Parking Technologies: <https://enterprise.prog.org/projects/truck-parking-technologies/>
- **Completed April 2025:** Documenting Current Road Weather Information System (RWIS) Technologies Related to ITS and Operations: <https://enterprise.prog.org/projects/documenting-current-road-weather-information-system-rwis-technologies-related-to-its-and-operations/>
- **Completed June 2025:** Project 7: Administration of Communications: <https://enterprise.prog.org/projects/administration-of-communications/>
- **Completed July 2025:** Project 8: ITS Simple Innovations <https://enterprise.prog.org/projects/its-simple-innovations/>
- **Completed October 2025:** Project 10: Defining and Advancing Roadway Digital Infrastructure (RDI) <https://enterprise.prog.org/projects/defining-and-advancing-digital-infrastructure/>
- **Completed February 2026:** Project 12: Alternate Methods of Traffic Data Analysis <https://enterprise.prog.org/projects/defining-and-advancing-digital-infrastructure/>

Anticipated work next quarter:

The Board will hold teleconferences on July 15 and August 19, 2026. CTC & Associates will create agendas, take notes, and finalize, distribute and post meeting minutes for monthly Board meetings.

CTC will complete the planning and hold a hybrid in-person/virtual meeting taking place from September 9-10, 2026 in Madison, WI. Activities will include securing booking flights, finalizing meeting logistics and documenting the meeting. Post-meeting activities will include finalizing and posting meeting notes and member reimbursements.

CTC & Associates will develop and submit abstracts to highlight ENTERPRISE projects at ITS-related meetings and conferences at Board members' requests.

CTC & Associates will assist MDOT with members' pooled fund commitments and transfers, including reaching out to members to request they make their FFY26 transfers to MDOT.

CTC & Associates will update the website with current information. (<http://enterprise.prog.org>).

CTC & Associates will monitor the research projects schedules and assist Athey Creek with activities related to individual research projects.

Research projects - Athey Creek (Project updates are presented at monthly Board meetings.)

Project 15: ITS Simple Solutions – Phase 2

- Task 2: Document Next Steps to Implement the Prioritized Innovations – Continuing documenting next steps for the three innovations selected.
- Task 3: Continue to Gather Examples of ITS Innovations – Continue gathering and documenting innovations.

Project 16: Information Technology Support Models for ITS

- Task 1: Conduct Research – Continue to conduct interviews with ENTERPRISE members, continue documenting interview summaries, and summarize key findings from existing resources..
- Task 2: Draft Report – Begin draft report.

Project 17: Evaluation Process for ITS Systems

- Task 1: Define ENTERPRISE Member Evaluation Test – Continue to document evaluation impacts and measures.

Project 18: Deterrents for Rodents Chewing into Fiber and Cabinets

- Task 2: Outreach – Distribute the survey to state DOTs through the AASHTO CTSO ITS Working Group to gather information on practices for deterring rodents at fiber and cabinets. Summarize survey results.
- Task 3: Draft Report – Begin draft report.

Project 19: ITS Device Communications Using Wi-Fi Communications

- Task 1: Research Wi-Fi – Continue research on Wi-Fi as an initial local communications tool (short-range communication) and other communications used (e.g. radios).
- Task 2: Research Long Distance Wi-Fi – Continue research on long-distance Wi-Fi use and potential for Li-Fi as a communications tool.

Project 20: Leverage Video from Maintenance Vehicle Cameras for Innovative DOT Uses

- Task 1: DOT Maintenance Vehicle Camera Use – Disseminate survey questions to learn from states that have DOT maintenance vehicle cameras.

Significant Results:

See Progress This Quarter section.

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

Potential Implementation:

Member agencies can put project findings to use in their home agencies. The research results can also inform follow-up activities or research studies for this pooled fund study.