

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>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i> <p style="text-align: center;">TPF-5(490)</p>	Transportation Pooled Fund Program - Report Period: <input checked="" type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input type="checkbox"/> 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 FeldpauschE1@michigan.gov
Lead Agency Project ID: OR17-101	Other Project ID (i.e., contract #): 2018-0172	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:

<input checked="" type="checkbox"/> On schedule	<input type="checkbox"/> On revised schedule	<input type="checkbox"/> Ahead of schedule	<input type="checkbox"/> Behind schedule
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Overall Project Statistics:

Total Project Budget	Total Funds Expended This Quarter	Percentage of Work Completed to Date
\$1,255,980.00	\$94,184.39	92%

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 has selected the following 13 research projects for this phase of the pooled fund study.

Primary Projects

1. State of the Art Roadway Sensors – Phase 1
2. New Methods of Traffic Data Collection
3. Potential Approaches for Wrong Way Driving Applications – Phase 2
4. Procurement Specification for Physical Security of ITS
5. Novel Uses of Unmanned Aerial Systems in ITS
6. State of the Art of Roadway Sensors – Phase 2

Secondary Projects

7. Administration of Communications
8. ITS Simple Innovations
9. Uncontrolled Pedestrian Crossing ITS Countermeasures
10. Defining and Advancing Digital Infrastructure
11. Role of AI in ITS
12. Alternate Methods of Traffic Data Analysis
13. Truck Parking Technologies

Progress this Quarter

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

Board teleconferences held on January 15, February 19 and March 19, 2025. CTC & Associates developed the agenda, documented the meeting, and finalized, distributed and posted meeting minutes.

CTC & Associates began planning for the hybrid in-person/virtual Board meeting in Houston, TX from April 2-3, 2025. Tasks included setting up the virtual platform, agenda development, booking flights, securing a hotel and meeting logistics.

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 7: Administration of Communications

- Task 3: Draft report – Prepared the draft report and met with the project champion to review initial results. Waiting for approval from one of the agencies interviewed.

Project 8: ITS Simple Innovations

- Task 1: Gather Agency Examples – Task complete.
- Task 2: Select Innovations of Interest and Document Case Studies – Created a sortable spreadsheet to document ITS simple innovations. Task Complete.
- Task 3: Draft report – Continued preparing the draft project summary report.

Project 9: Uncontrolled Pedestrian Crossing ITS Countermeasures

- Task 3: Identify Needs and Gaps – Finalized the needs and gaps analysis. Task complete.
- Task 4: Draft Report - Finalized the draft report and routed it to all agencies who participated in the research, for review and comment. Prepared and presented results to the Board in March. Task complete.

Project 10: Defining and Advancing Digital Infrastructure

- Task 1: Definition and Strategy for RDI – Scheduled monthly webinars for members to present and discuss specific RDI topics. Webinars held in January, February, and March.

Project 11: Role of AI in ITS

- Task 1: Concluded search to identify available national materials, and begin to document them.
- Task 2: Concluded search to identify transportation agency policies for using AI in operations, and begin to document them.
- Task 3: Shared draft report with ENTERPRISE Board for review and comment.
- Task 4: Updated draft report based on comments received and submitted final report to be posted on ENTERPRISE webpage.

Project 12: Alternate Methods of Traffic Data Analysis

- Task 1: Gather Agency Examples – Continued conducting research to identify alternative methods of traffic data analysis.
- Conducted interview with FHWA BTS.

Project 13: Truck Parking Technologies

- Task 1: Research and Interviews with Selected Agencies – Task complete.
- Task 2: Document Lessons Learned, Best Practices, and Emerging Technologies or Approaches – Task complete.
- Task 3: Draft Report – Continued preparing the draft project summary report.

Project 14: Documenting Current Road Weather Information System (RWIS) Technologies Related to ITS and Operations

- Task 2: Conduct Practitioner Survey – Summarized findings for input to Task 4.
- Task 3: Document Available RWIS Solutions – initiated based on findings from Task 2.
- Task 4: Draft Report – Developed draft report and shared with project champion.

See “Schedule of Current Projects” at the end of this quarterly report for graphical information depicting the schedule of research activities for each current research project.

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

- **Completed December 2023:** 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:** 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
- **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>

Anticipated work next quarter:

The Board will hold teleconferences on May 21 and June 18, 2025. CTC & Associates will create agendas, document the meeting, and finalize, distribute and post meeting minutes for monthly Board meetings.

CTC will complete the planning for and attend the hybrid in-person/virtual meeting taking place from April 2-3, 2025 in Houston, TX. Activities will include 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 MDOT with members' pooled fund commitments and transfers.

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 7: Administration of Communications

- Task 3: Draft Report – Finalize the draft report, per final input expected from one agency interviewed for the project. Prepare and present results to the ENTERPRISE Board.
- Task 4: Final Report – Incorporate comments into the final report.

Project 8: ITS Simple Innovations

- Task 3: Draft Report – Finalize draft report and distribute for review.
- Task 4: Final Report – Incorporate comments into the final report.

Project 9: Uncontrolled Pedestrian Crossing ITS Countermeasures

- Task 5: Final Report – Incorporate comments into the final report and package it for web hosting.

Project 10: Defining and Advancing Digital Infrastructure

- Task 1: Definition and Strategy for RDI – Complete monthly webinars for members to present and discuss specific RDI topics.
- Task 2 :Next Steps to Advancing RDI Support and Use – Incorporate Task 1 findings into next steps.
- Task 3: Draft Report – Begin to draft report.

Project 11: Role of AI in ITS

- Project completed.
- Present project findings to ENTERPRISE Board at April in-person Board Meeting in Houston, TX.

Project 12: Alternate Methods of Traffic Data Analysis

- Task 1: Gather Agency Examples – Continue to research alternative methods of traffic data analysis.
- Task 2: Use Cases – Begin to identify and document use cases.

Project 13: Truck Parking Technologies

- Task 3: Draft Report – Finalize draft report and distribute for review.
- Task 4: Final Report – Incorporate comments into the final report

Project 14: Documenting Current RWIS Technologies

- Task 4: Draft Report – resent draft report and project findings to ENTERPRISE Board at April in-person Board Meeting in Houston, TX. Distribute draft report to ENTERPRISE Board Members for review and comment.
- Task 5: Final Report – update draft report based on comments received and submit final report to be posted on ENTERPRISE webpage.

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:

None