

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Iowa Department of Transportation

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 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 (435)		Transportation Pooled Fund Program - Report Period: Quarter 1 (January 1 – March 31, 2024) Quarter 2 (April 1 – June 30, 2024) Quarter 3 (July 1 – September 30, 2024) XQuarter 4 (October 4 – December 31, 2024)	
Project Title: Aurora Program – Addendum 731			
Project Manager: Tina Greenfield		Phone: 515-233-7746	E-mail: tina.greenfield@dot.iowa.gov
Project Investigator: Zach Hans		Phone: 515-294-8103	E-mail: zhans@iastate.edu
Lead Agency Project ID:	Other Project ID (i.e., contract #): Addendum 731		Project Start Date: January 1, 2020
Original Project End Date: December 31, 2021	Current Project End Date: 12/31/2024		Number of Extensions:

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	Total Percentage of Work Completed
\$2,425,000	\$1,853,720	

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$99,682	N/A	

Project Description:

The Aurora Program is a consortium of public agencies focused on collaborative research, evaluation, and deployment of technologies for detailed road weather monitoring and forecasting. Members seek to implement advanced road weather information systems (RWIS) that fully integrate state-of-the-art roadway and weather forecasting technologies with coordinated, multi-agency weather monitoring infrastructures; ultimately lessening adverse impacts of inclement weather.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.). These efforts are identified below.

Program Administrative Activities:

Reviewed financial details.

Managed the Aurora website. An ongoing task is to finalize the RFP and specifications page.

Managed the Aurora email list. This included changing and updating representatives and alternates.

Upon Board member request, shared link to Adaptive Route Optimization (ARO) for Winter Maintenance Operations webinar.

Discussed anticipated changes to RFP process with Iowa DOT.

Responded to request from Connect Management, LLC regarding a potential VirtualRWIS update to the Board. Update was held during the November monthly meeting and follow up material distributed.

Upon Board member request, invited BAM to the Fall 2024 meeting.

Upon Board member request, shared Aurora overview presentation.

Upon Board member request, provided budget for an ongoing Aurora research project.

Upon Board member request, provided information on the annual state commitment to Aurora.

Coordinated between Clear Roads research team and appropriate Aurora Board members.

Shared information with Board member from FOA member.

Upon request, shared resource with FOA member and research team member regarding how to submit map updates for each of the major companies (HERE Technologies, TomTom, Waze, TrafficCast, Bing, Google, Apple, MapQuest, and INRIX).

Coordinated with Iowa DOT and Board regarding request from FOA member to sign an OEM petition or provide a letter of support. The decision was left to individual states.

Upon request, distributed "TRB Road Weather Committee Survey for Weather-Based Boundary Conditions for Connected and Autonomous Vehicle (CAV) Technologies" survey.

Upon Board member request, prepared Aurora overview presentation for Road Weather Management meeting.

Coordinated with Iowa DOT regarding state interest in possibly joining Aurora.

Prepared scope of work and budget, including Board travel and meeting expenses, for 2025.

Tracked commitments for new pooled fund cycle.

Coordinated with Iowa DOT regarding commitments for 2025 – 2029, including contacting representatives from existing member state who had not committed.

Facilitate Meetings and Conference Calls:

A primary meeting-related activity this quarter was organizing and holding the Fall 2024 Meeting in Madison, Wisconsin. This included contracting with venue, preparing the agenda, arranging field trips and presentations, assisting with Board travel arrangements, reaching out to FOA, planning joint meeting with FOA, preparing FOA registration website and addressing questions by FOA.

Planning also continued for the Spring 2025 meeting in Anchorage, Alaska.

Distributed draft Fall 2025 meeting minutes to Board for review and feedback.

Hosted Board member 60-Minute monthly conference calls on the following dates and requested topics from Board. No call was held in October due to the fall meeting.

November 14, 2024. Topics included: Fall meeting (feedback, minutes); 2025 Joint Meeting Update; OEM Petition Request; Pooled Fund Questionnaire Status; Project Updates; VirtualRWIS Update

December 12, 2024. Topics included: Fall Meeting (minutes feedback, expense reimbursement); Spring 2025 Meeting; Fall 2025 Joint Meeting; Aurora Program (2025-2029) TPF-5(543) [Commitments, Support Contract]; Road Weather Stakeholder Meeting; Project Updates

Shared monthly meeting invitation with alternate member state representatives.

Coordinated various project-related meetings.

Coordinated with Clear Roads and AASHTO regarding Fall 2025 joint meeting.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

Processed expenses for Fall 2024 meeting.

Upon request, investigated Board member request to possibly move the dates of the Spring 2025 meeting.

Project-Specific Activities:

Addressed project invoices, coordinated project-related meetings.

Reviewed and approved invoices and submitted to the Iowa DOT for payment.

Tracked project status and prepared a summary for recently completed and active projects.

Distributed quarterly reports to project teams and requested reports from researchers if/when not provided.

Clarified/confirmed receipt of project deliverables with Iowa DOT.

2021-05 Optimal RWIS Sensor Density and Location Ph IV [University of Alberta]

- Held final project presentation during Fall 2024 meeting.
- Coordinated report review, editing and updated between InTrans publications and research team.
- Published final report and t2, <https://aurora-program.org/research/completed/optimal-rwis-sensor-density-and-location-phase-4/>.

2022-10 Automating Variable Speed Limits Using Weather, Traffic, and Friction Data [NCAR, WTI, Rutgers]

TPF Program Standard Quarterly Reporting Format

- Coordinated with Iowa DOT regarding researcher request to use project funds for travel to a conference to present research findings.
- Coordinated with research team, Iowa DOT, project team, Aurora Board and conference board regarding researcher request to present and publish material prior to vetting.
- Coordinated with the Iowa DOT regarding research team agency request for a no cost extension until July 31, 2025. The request was approved.
- Coordinated with the Iowa DOT regarding PI change.

2023-01 Real User Friction for Winter Maintenance Operation and Evaluation [Nira Dynamics]

- Confirmed with Iowa DOT that deliverables were provided.

2023-02 An Intelligent Human-Centric Communication System for Adverse Weather and Road Conditions [University of Iowa]

- Held project update presentation during Fall 2024 meeting.

2023-04 Standardized Framework for Winter Weather Road Condition Indices

- Addressed question from research team regarding quarterly report.
- Held project update presentation during Fall 2024 meeting.
- Followed up with Aurora project team with questions from the research team, following up as necessary to receive feedback. Shared project team responses with the research team.

2024-01 Roadway Friction Forecasting using Stationary and Mobile Friction Data

- Project kickoff meeting was held during the Fall 2024 meeting.

Anticipated work next quarter:

Program Administrative Activities:

Continue Aurora website updates.

Manage budget.

Update the Aurora Charter, Work Plan and Associate Members, as needed.

Address requests, as needed.

Coordinate with Clear Roads regarding 2025 joint meeting.

Manage Friends of Aurora.

Finalize RFP and specifications webpage.

Facilitate Meetings and Conference Calls:

Continue monthly Board meeting calls to generate research ideas, discuss important issues and have vendor presentations.

Continue preparing for Spring 2025 meeting.

Schedule and host project meetings for existing and new projects.

Invite Friends of Aurora presentations during monthly meetings.

Coordinate with Clear Roads and AASHTO regarding 2025 joint meeting.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

Contract with Spring 2025 venue, when possible.

Schedule travel for the Spring 2025 meeting.

Project-Specific Activities:

Schedule and host project meetings for projects.

Track project status and timelines.

Request quarterly reports from research teams.

Distribute project materials/updates to project teams.

Maintain list of project champions and team members.

For all current projects:

- Facilitate project activities as needed.
- Continue to receive and distribute project updates.
- Coordinate updates, if necessary.
- Review invoices.
- Edit and publish pertinent final reports and t2.

2022-10 Automating Variable Speed Limits Using Weather, Traffic, and Friction Data

- Track project progress.
- Hold project update meeting as necessary.

2023-02 An Intelligent Human-Centric Communication System for Adverse Weather and Road Conditions [University of Iowa]

- Track project progress.
- Hold project update meeting as necessary.

2023-04 Standardized Framework for Winter Weather Road Condition Indices [Iowa State University]

- Track project progress.
- Continue to coordinate between research team and Aurora project team regarding project direction.
- Hold project update meeting as necessary.

2024-01 Roadway Friction Forecasting using Stationary and Mobile Friction Data [NCAR]

- Track project progress.
- Hold project update meeting as necessary.

Significant Results:

Published 2021-05 Optimal RWIS Sensor Density and Location Ph IV [University of Alberta] final report

Held Fall 2024 meeting, including joint meeting with FOA, field trips and research project updates.

Continued to work with venue for Spring 2025 meeting.

Continued monthly Board meeting calls.

Addressed Board, FOA and other requests.

TPF Program Standard Quarterly Reporting Format

Circumstance affecting project or budget:

Recent meeting and publication expenses.