

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, 2022) Quarter 2 (April 1 – June 30, 2022) Quarter 3 (July 1 – September 30, 2022) X Quarter 4 (October 4 – December 31, 2022)	
Project Title: Aurora Program			
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: 12/31/2023	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
\$2,240,056	\$1,333,524	

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$290,192	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:

- Managed Aurora website, including developing several RFP and specifications pages for Board review, updating news, meetings, current projects and pictures.
- Managed Aurora email list. In some cases, states requested multiple individuals be included in Aurora-related correspondence. Added and removed Aurora Board members.
- Distributed survey for Clear Roads project seeking information on Deicing Salt Additives.
- Participated with AASHTO and Clear Roads in 2025 Peer Exchange meeting.
- Distributed information about Nira road health project.
- Prepared draft 2024 support contract.
- Shared news story regarding “most dangerous winter roads” with selected Board members.
<https://fox2now.com/news/missouri/missouri-illinois-among-states-with-the-most-dangerous-winter-roads/amp/>
- Added new Friend of Aurora – Vue Robotics – and shared pertinent information with Board members.
- At request of Missouri DOT, distributed AVL questionnaire to Board, regarding possible TPF focusing on AVL.
- Updated/changed Illinois DOT representative and obtained new Nira website credentials.
- At the request of FHWA, began preparing summary of Aurora activities and accomplishments over last decade.

Facilitate Meetings and Conference Calls:

- Planned Spring 2024 Meeting in Boulder, Colorado. This included the following.
 - Investigate possible venues, including location and costs.
 - Coordinate with host state regarding possible meeting location(s) and field trips.
 - Selected and contracted with venue.
 - Prepared draft agenda.
- Facilitated or participated in all project-related meetings.
- Hosted Board member 60-Minute monthly conference calls on the following dates and requested topics from Board.
 - **Oct 12, 2023** – Nira Q & A, Demo, Project Update, Spring Meeting Planning
 - **Nov 9, 2023** - Spring 2024 Meeting Planning, 2024 Support Contract, 2025 Peer Exchange Update, RWIS Training Tool Maintenance, 2024 Research Idea Solicitation, RFP Repository Update, Project Update
 - **Dec 14, 2023** - Real Time Friction Refresher: Nira Q & A, Demo, New Member: Illinois DOT, Keith Donovan, Vice Chair Selection, RFP Repository Demo, Questionnaires – VSL, AVL, Spring Meeting Update
- Began investigating travel options/costs and possible venues for Fall 2024 meeting.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Processed travel reimbursement requests for Fall 2023 meetings.

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- Processed venue-related contract expenses.
- Processed other meeting-related expenses, e.g. group meals, van rental, etc.

Project-Specific Activities:

- Coordinated with Iowa DOT regarding new project contracting status.
- Tracked project status and prepared a summary for recently completed and active projects.
- Distributed quarterly reports.
- Reviewed and approved invoices and submitted to the Iowa DOT for payment.
- 2020-02 Roadway Ice/snow Detection using a Novel Infrared Thermography Technology
 - Coordinated with Iowa DOT regarding project end date and deliverables.
 - Requested and received project update.
 - Shared project report template.
 - Publications edited draft project report, prepared t2 and shared with research team for final feedback. Publication is expected in early 2024.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Distributed quarterly reports.
 - Reviewed and approved invoices.
 - Processed project, no cost extension upon coordination with project team and Iowa DOT SPR engineer.
 - At request of research team, held project update meeting with selected Board members and InTrans.
- 2022-07 Evaluation of Spring Load Restriction Removal Protocols
 - Distributed quarterly reports.
 - Approved invoices and shared with NDOT.
 - Coordinated with research team on two final project meetings. Obtained recordings of meetings.
 - Distributed final report for review.
 - Publications edited draft project report and t2 and shared with research. Publication is expected in early 2024.
- 2022-08 Integration of Connected Vehicle and RWIS Technologies
 - Provided feedback on draft report.
 - Final project meeting is anticipated during early 2024.
 - Draft report is anticipated for distribution to project team in January 2024.
- 2022-10 Automating Variable Speed Limits Using Weather, Traffic, and Friction Data
 - Reviewed and approved invoices.
 - Distributed quarterly report.
 - Coordinated on survey, including providing feedback on content.
- 2011-02 RWIS Training Tool
 - Processed monthly invoices for AWS hosting.
 - Discussed possible discontinuation service with Aurora Board, which was affirmed. The service was discontinued in late 2023.
 - Coordinated with Iowa DOT to obtain credentials necessary to discontinue the site.
- 2023-01 Real User Friction for Winter Maintenance Operation and Evaluation [Nira Dynamics]
 - Held meeting with selected project team members to help identify possible use cases.
 - Requested new user access for Illinois DOT.
 - Had research team provide two overview of website interface.
 - Coordinated with research team and Iowa DOT SPR engineer regarding invoicing.
- 2023-03 Road Weather Management using Connected Vehicle technology [WSP]
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- Reviewed and approved invoices.
- Distributed quarterly report.
- Addressed question from research team regarding student request.
- 2023-02 An Intelligent Human-Centric Communication System for Adverse Weather and Road Conditions [University of Iowa]
 - Reviewed and approved invoices.
 - Distributed quarterly report.
- 2023-04 Standardized Framework for Winter Weather Road Condition Indices
 - Project began.
 - Kick off meeting is anticipated for early 2024.

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 possible 2025 Peer Exchange.
- Begin work on 2024 idea solicitations.
- Distribute solicitation, facilitate Board voting and limiting of ideas, facilitate request for full proposals for selected ideas.
- Provide update about Aurora to new Illinois DOT member.
- Complete summary of Aurora activities and accomplishments for FHWA.

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 2024 meeting, including finalizing draft agenda and distributing it to Board for travel authorizations.
- Schedule and host project meetings for existing and new projects.
- Invite Friends of Aurora presentations during monthly meetings.
- Plan for Fall 2024 conference, including investigating venues and anticipated meeting travel costs.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Book flights for Spring 2024 meeting.
- Estimate anticipated Fall 2024 onsite meeting costs.

Project-Specific Activities:

- Schedule and host project meetings for existing and new 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.
- 2020-02 “Roadway Ice/snow Detection using a Novel Infrared Thermography Technology”.
 - Publish final report and tech transfer.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Track project progress.
 - Obtain draft final report and distribute it to project team for review.
- 2022-10 Automating Variable Speed Limits Using Weather, Traffic, and Friction Data
 - Track project progress.
 - Schedule a project update meeting.
- 2022-08 Integration of Connected Vehicle and RWIS Technologies
 - Track project progress.
 - Schedule a project update meeting.
- 2022-07 Evaluation of Spring Load Restriction Removal Protocols
 - Complete final report and tech transfer review and edit by Publications.
 - Publish final report and tech transfer.
- 2023-01 Real User Friction for Winter Maintenance Operation and Evaluation [Nira Dynamics]
 - Track project status.
 - Follow up on use cases.
- 2023-03 Road Weather Management using Connected Vehicle technology [WSP]
 - Track project progress.
- 2023-02 An Intelligent Human-Centric Communication System for Adverse Weather and Road Conditions [University of Iowa]
 - Track project progress.
 - Discuss involvement of other member states.
- 2023-04 Standardized Framework for Winter Weather Road Condition Indices [Iowa State University]
 - Hold kick off meeting.

Significant Results:

- Facilitated select of new, incoming Aurora vice chair.
- Investigated meeting expenses.
- Submitted proposal for 2024 Aurora support, including onsite meetings.
- Planned Spring 2024 meeting, including venue evaluation, selection and contracting and preparing draft agenda.
- Processed Fall 2023 meeting-related expenses.
- Continued monthly Board meeting calls.
- Added to Friends of Aurora membership.
- Began several new projects.
- Had two projects completed with final reports edited and publication anticipated early 2024.
- Updated Aurora website
 - Developed several RFP and specifications pages for Board review.
 - Updated news, meetings, current projects and pictures.

Circumstance affecting project or budget:

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- Recent meeting expenses.