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(483)*	**Transportation Pooled Fund Program - Report Period:** Quarter 1 (January 1 – March 31) Quarter 2 (April 1 – June 30) Quarter 3 (July 1 – September 30) XQuarter 4 (October 4 – December 31)
Project Title: Implementation of New Traffic Signal Actuation Concepts using Enhanced Detector	

Project Manager:	**Phone:**	**E-mail:**
Chris Poole	515-239-1513	chris.poole@iowadot.us
Project Investigator:	**Phone:**	**E-mail:**
Chris Day	515-294-3015	cmday@iastate.edu

Lead Agency Project ID:	**Other Project ID (i.e., contract #):**	**Project Start Date:**
	Addendum 791	02/01/2022
Original Project End Date:	**Project End Date:**	**Number of Extensions:**
02/28/2026		

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
$595,032	$193,549	%35

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
$32,612		%2

Project Description: The objective of this research is to develop field-tested methods of integrating vehicle trajectory data into actuated signal control that can be directly implemented in traffic signal controllers. This research will identify the practical requirements and limitations of establishing trajectory-assisted actuated signal control, including requirements for acquisition, storage, and communication of vehicle trajectory data. The findings will be developed into a resource toolkit that will permit implementation and further development of the methods conceived during the course of the research.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):
The team worked on the Phase 1 interim report. We had previously run a test for three volume scenarios to examine the operation of four proposed green-extension methods. In the last quarter of 2023, we ran another set of tests that spanned a wider range of volumes to further explore the sensitivity of the proposed methods to the overall level of congestion. All data required for the interim report was obtained by the end of the quarter.

Anticipated work next quarter: The research team will complete the Phase 1 interim report in the first quarter of 2024. We previously anticipated completion of the report by the end of 2023, but additional time is needed to integrate the most recent results. This should be completed within the first quarter of 2024.

Significant Results: At this point we have developed and tested control concepts for green extension that map to specific operational objectives. Five distinct actuation methods were tested, as outlined in previous quarterly reports. We have observed that each of these methods is able to attain its operating objectives under a range of volume conditions included in the most recent test results. Details will be included in the draft interim report in preparation.