

State Planning and Research Program Quarterly Report

PROJECT TITLE: *Calculating Plow Cycle Times from AVL Data*

OBJECTIVES: To develop a methodology to calculate plow cycle times, considering various relevant factors; and use the methodology to create the framework for a visualization tool that agencies can format with their own electronic data.

PERIOD COVERED: October 1 to December 31, 2022

PARTICIPATING AGENCIES: Minnesota Department of Transportation and the Clear Roads Technical Advisory Committee

PROJECT MANAGER:
Hafiz Munir / Tom Peters

LEAD AGENCY: MnDOT

PRINCIPAL INVESTIGATOR:
Ming-Shiun Lee, PhD, PE
AECOM Technical Services, Inc.

SP&R PROJECT NO:
MnDOT Contract No.
1047791

Federal Project Number:
TPF-5(353)

PROJECT IS:

Planning
 Research & Development

ANNUAL BUDGET: \$125,377.84

PROJECT EXPENDITURES TO DATE: \$27,870.01

WORK COMPLETED:

- Task 1: Project Management
 - Conducted a check-in meeting with the project subcommittee to review revised literature summary, draft survey summary, AVL data samples and draft user stories.
- Task 2: Information Research
 - Finalized the literature summary.
 - Gathered and analyzed survey responses and AVL data samples.
 - Prepared draft Survey and AVL Data Summary report.
 - Finalized the Survey Summary report.
- Task 3: User Stories Development
 - Drafted operational scenario user stories.
 - Created additional user stories per subcommittee comments.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- Task 1: Project Management
 - Conduct a check-in meeting with project subcommittee to review draft cycle time calculation methodology.
- Task 2: Information Research
 - Gather additional AVL data samples and update the AVL Solutions/Data Summary.
- Task 3: User Stories Development
 - Finalize operational scenario user stories.
- Task 4: Methodology – Plow Cycle Time
 - Identify variables for calculating plow cycle times.
 - Develop cycle time calculation methodology.
 - Prepare a hypothetical case study illustrating the use of the methodology.

STATUS AND COMPLETION DATE:

On schedule and budget. Contract expiration is April 1, 2024.