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: April 1 to June 30, 2023

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 _X_ Research & Development
ANNUAL BUDGET: $125,377.84	**PROJECT EXPENDITURES TO DATE**: $55,829.25	

WORK COMPLETED:

- Task 1: Project Management
  - Prepared progress reports and invoices.
- Task 4: Methodology – Plow Cycle Time
  - Refined cycle time calculation methodology per subcommittee comments.
  - Prepared a hypothetical case study illustrating the use of the methodology.
- Task 5: Online Tool Framework
  - Worked on developing a tool/dashboard framework.
  - Created use cases and workflows for the online tool/dashboard framework.
  - Worked on developing tool/dashboard design.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- Task 1: Project Management
  - Conduct a check-in meeting with project subcommittee to review draft outline for tool framework and sample tool layout.
- Task 5: Online Tool Framework
  - Develop and present a tool/dashboard framework to the subcommittee.
  - Finalize use cases and workflows for the online tool/dashboard framework.
  - Finalize online tool/dashboard design.
- Task 6: Final Report and Webinar
  - Initiate the development of a final report.

STATUS AND COMPLETION DATE:

Project is on budget and is approximately one month behind schedule. Expected project completion November 30, 2023.