

State Planning and Research Program Quarterly Report

PROJECT TITLE: Utilization of AVL/GPS Technology: Case Studies

OBJECTIVES: The goal of this project is to help state DOTs make more informed decisions with respect to implementation of AVL/GPS technology for winter maintenance. Much is known about what winter maintenance AVL/GPS technologies are available from different vendors as well as which highway agencies are making use of them. Highway agencies will significantly benefit from a deeper examination of winter maintenance AVL/GPS implementation. Detailed agency case studies developed in this project will bring to light more nuanced issues related to winter maintenance AVL/GPS. The project will highlight the types of issues that agencies should consider, provide guidance for successful implementation, and serve as possible templates for agencies to get the best value out of different levels of AVL/GPS applications.

PERIOD COVERED: October 1, 2017 – December 31, 2017

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

PROJECT MANAGER:

Debra Fick/ Tom Peters

LEAD AGENCY: Mn/DOT

PRINCIPAL INVESTIGATOR:

Ming-Shiun Lee, PhD, PE

SP&R PROJECT NO:

MnDOT Contract No.
1026092

Federal Project Number:
TPF-5(218)

PROJECT IS:

Planning
 Research & Development

ANNUAL BUDGET: \$113,697.53
(Project Budget)

PROJECT EXPENDITURES TO DATE: \$69,292.76

WORK COMPLETED:

- Task 1: Literature Search (100% complete) – The consultant team conducted literature search and review. A literature summary report was delivered and approved in April 2017.
- Task 2: Survey (100% complete) – The consultant team developed survey questions and design. An online survey was subsequently conducted. Results were analyzed and summarized.
- Task 3: Interviews and Case Studies (75% complete) – Based on the survey results, six agencies were selected for interviews and case studies. Interview questions for each agency were developed. On-site interviews with five of the six agencies were conducted in November and December 2017. Interviews with the sixth agency were scheduled for January 2018.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- Task 3: Interviews and Case Studies – On-site interviews with Colorado DOT staff will be conducted in January 2018. Interview summaries and draft case study reports will be developed and submitted.
- Task 4: Recommendations – Finding from Tasks 1 through 3 will be synthesized and summarized in a summary document that highlights recommended best practices and key considerations for implementation and utilization of AVL/GPS for winter maintenance activities.

STATUS AND COMPLETION DATE:

Due to challenges with scheduling on-site interviews, the project is about 2 months behind schedule. The project is on budget and is expected to be completed by August 31, 2018. A request for a time-extension amendment has been submitted.