

**State Planning and Research Program
Quarterly Report**

PROJECT TITLE: *Defensive Driving for Snowplow Operators*

OBJECTIVES: Develop two comprehensive and engaging winter maintenance operator training modules on defensive driving and safe driving.

PERIOD COVERED: January 1, 2020 to March 31, 2020

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

PROJECT MANAGER:
Debbie Sinclair / Tom Peters

LEAD AGENCY: MnDOT

PRINCIPAL INVESTIGATOR:
Matthew Camden, VTTI

SP&R PROJECT NO:
MnDOT Contract No.
1031541

Federal Project Number:
TPF-5(353)

PROJECT IS:

Planning
 Research & Development

ANNUAL BUDGET: \$70,000 (total project budget)

PROJECT EXPENDITURES TO DATE: \$44,956.10

WORK COMPLETED:

- **Task 7: Draft Modules.** VTTI developed the two draft training modules based on the recommendations developed in Task 6. One training included general safe driving strategies that snowplow operators may use to prevent crashes (e.g., reducing distraction, fatigue management, wearing a seat belt, etc.). A second training included defensive driving strategies that snowplow operators may use to prevent crashes (e.g., hazard identification, situational awareness, visual scanning, etc.). The draft modules were submitted to Clear Roads on February 3, 2020. VTTI presented these modules to the Clear Roads subcommittee on February 21, 2020. VTTI revised the modules based on comments from the subcommittee and submitted the revised modules to Clear Roads on March 23, 2020. Additionally, VTTI developed the instructional guides and post-training evaluation for both modules.
- **Task 8: Develop Draft Video of Safe and Defensive Driving Strategies.** The VTTI team created draft simulations/videos to accompany both training modules. These simulations/videos were designed to recreate the common crash types and recommend safe and defensive driving strategies that winter maintenance operators should use to prevent these crashes. These crash scenario simulations/videos were tailored to match roadway and environmental conditions identified in Task 6. VTTI integrated these simulations/video into the Draft Modules. VTTI submitted the draft simulations/videos to Clear Roads on March 31, 2020.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- **Task 8: Develop Draft Video of Safe and Defensive Driving Strategies.** VTTI will revised the simulations/videos based on comments received from the Clear Roads subcommittee.
- **Task 9: Finalize Modules and Video.** Using the feedback received from the Subcommittee in Tasks 7 and 8, the VTTI team will revise (if needed) the training modules and videos. The revised training modules and videos will be presented to the Subcommittee for review and approval.
- **Task 10: Draft Final Report and Final Briefing.** A draft final report detailing the literature view, questionnaire and interview methods, crash data, results, and recommendations will be developed and delivered to MnDOT and the Advisory Board. This draft final report will document the process used to identify common crash types and safe and defensive driving strategies for winter maintenance operators.

STATUS AND COMPLETION DATE:

This project is ongoing and ends on August 31, 2020.