

State Planning and Research Program Quarterly Report

PROJECT TITLE: *Standardized Test Procedures for Ice Melting Capacity of Deicers*

OBJECTIVES: The goal of this research is to evaluate the suitability of the mechanical rocker test as a standardized laboratory test that can realistically and robustly assess the performance of deicers, which is needed to allow DOTs to make data-driven procurement decisions.

PERIOD COVERED: July 1 – September 30, 2023

PARTICIPATING AGENCIES: The Minnesota Department of Transportation, Clear Roads Pooled Fund, Washington State University (Prime), Monte Vista Associates LLC (Subcontractor), and Roadtech, Inc. (Subcontractor).

PROJECT MANAGER: Hafiz Munir / Tom Peters LEAD AGENCY: MnDOT PRINCIPAL INVESTIGATOR: Xianming Shi, Ph.D., P.E., WSU	SP&R PROJECT NO: MnDOT No. 1033080 Federal Project No. TPF-5(353)	PROJECT IS: <div style="text-align: center;"> <input type="checkbox"/> Planning <input checked="" type="checkbox"/> Research & Development </div>
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ANNUAL BUDGET: \$74,086	PROJECT EXPENDITURES TO DATE: \$72,094
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WORK COMPLETED:

Project Management: The PI submitted the Quarterly Progress Report in July 2023. The amendment for extension (beyond the current end date of September 30, 2023) is written and in for review, and the cover sheet has been sent on to MNDOT for approval. Once approved, the amendment will be routed for signatures.

Task 1. Mechanical Rocker Test Procedure Evaluation (100% complete).

Task 2. Interim Report (100% complete).

Task 3. Standard Test Procedure Development (100% complete).

Task 4. Standard Test Procedure Presentation (100% complete).

Task 5. AASHTO Balloting Assistance (100% complete). Note that the AASHTO Committee on Pavement and Materials decided to officially vote on the provisional standardization of this IMC test protocol in *November 2022 and that concurrent AASHTO balloting occurred in summer of 2023. The research team has provided technical assistance to the Clear Roads and addressed the review comments raised during the AASHTO Balloting process, in September 2023.* The support also included revision of the IMC test method to be potentially adopted by AASHTO for standardization.

Task 6. Final Report (75% complete).

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

The work in the coming quarter will consist of project management.

STATUS AND COMPLETION DATE:

The latest version of the schedule is provided as follows. The amendment for extension (beyond the current end date of September 30, 2023) was submitted to MnDOT on 9/12/2023.

Task	Current Task Start Date	Current End Date for Task Approval	Revised Task Start Date	Revised Due Date to Submit Draft Deliverables	Revised End Date for Task Approval
1	02/01/2020	02/28/2022	No change		
2	11/01/2020	02/28/2022	No change		
3	02/01/2021	04/30/2022	No change		
4	05/01/2022	09/30/2022	No change		
5	09/01/2022	12/31/2022	09/01/2022	07/31/2023	08/30/2023
6	08/01/2021	02/28/2023	08/01/2021	07/31/2023	09/30/2023