

## 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:** October 1 – December 31, 2023

**PARTICIPATING AGENCIES:** Minnesota Department of Transportation and the Clear Roads Technical Advisory Committee.  
Washington State University – Prime  
Monte Vista Associates LLC – Subcontractor  
Roadtech, Inc. - Subcontractor

<b>PROJECT MANAGER:</b> Hafiz Munir / Tom Peters  <b>LEAD AGENCY:</b> MnDOT  <b>PRINCIPAL INVESTIGATOR:</b> Xianming Shi, Ph.D., P.E., Washington State University	<b>SP&amp;R PROJECT NO:</b> MnDOT No. 1033080  Federal Project No. TPF-5(353)	<b>PROJECT IS:</b>  <div style="display: flex; justify-content: space-between;"> <span>_____ Planning</span> <span>_____ Research &amp; Development</span> </div> <div style="display: flex; justify-content: space-between;"> <span>_____</span> <span><u>X</u></span> </div>
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<b>ANNUAL BUDGET:</b> \$74,086	<b>PROJECT EXPENDITURES TO DATE:</b> \$72,094
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**WORK COMPLETED:**

*Project Management:* The PI submitted the Quarterly Progress Report in Oct. 2023. The amendment for extension was approved by MnDOT to extend this project end date to **March 31, 2024**.

**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 and delivery of the project final report.

**STATUS AND COMPLETION DATE:**

The latest version of the schedule is provided as follows.

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	08/30/2023	09/01/2022	12/31/2023	01/31/2024
6	08/01/2021	09/30/2023	08/01/2021	02/28/2023	03/31/2024