

## State Planning and Research Program Quarterly Report

**PROJECT TITLE:** *Salt Shed Design Template*

**OBJECTIVES:** The purpose of this project is to develop three salt shed scalable designs that can be used as templates by agencies for a variety of sites. The designs will consider a number of factors including code adherence, incorporation of state and federal regulations associated with environmental and related concerns, pad design, material selection options, construction techniques, and easy design modification.

**PERIOD COVERED:** January 1, 2022 – March 31, 2022

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

**PROJECT MANAGER:**  
Hafiz Munir / Tom Peters

**SP&R PROJECT NO:**  
MnDOT Contract No.  
1044530

**PROJECT IS:**

Planning  
 Research & Development

**LEAD AGENCY:** MnDOT

Federal Project Number:  
TPF-5(353)

**PRINCIPAL INVESTIGATOR:**  
Wilfrid Nixon

**ANNUAL BUDGET:** \$83,326

**PROJECT EXPENDITURES TO DATE:** \$ 39,622.95

**WORK COMPLETED:**

- Task 1 – Literature Review: The draft of the literature review has been submitted to the technical advisory committee, and their comments are pending.
- Task 2 – Survey of Practice: A draft of the survey questions was submitted to the technical advisory committee. Their comments were received in early April.
- Task 3: Design Analysis and Recommendations: Using information from the literature review, the design analysis has been started. The spreadsheets for calculating pile sizes as a function of the quantity of salt to be stored are being created and their results are being verified. A list of factors that will require consideration as part of the analysis has been created and additional information on each of these factors is being developed.

**SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:**

- Task 1 – Literature Review: Upon receipt of comments from the TAC, the literature review will be edited and a draft final version will be provided.
- Task 2 – Survey of Practice: The comments from the technical advisory committee will be incorporated into the survey. The survey will be administered and the results will be compiled and shared by way of a memo to the technical advisory committee.
- Task 3 – Design Analysis and Recommendations: The sizing spreadsheets will be created and will be shared with the technical advisory committee for review. The design analysis will provide information on all factors to be considered in the scalable designs. A memorandum will be developed and submitted with all this information for review by the technical advisory committee at the end of this quarter.

**STATUS AND COMPLETION DATE:**

As noted in prior QPRs a revised schedule has been approved. The schedule is:

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	1/5/2021	5/15/2021	1/8/2021	8/31/2021	10/31/2021
2	4/1/2021	10/15/2021	7/31/2021	1/31/2022	3/31/2022
3	8/1/2021	1/15/2022	1/31/2022	6/30/2022	8/31/2022
4	1/1/2022	5/15/2022	5/1/2022	8/31/2022	10/31/2022
5	3/1/2022	7/15/2022	7/1/2022	11/1/2022	1/1/2023