

NHDOT SPR2 PROGRAM

RESEARCH PROGRESS REPORT

Project # SPR 42372J		Report Period Year 2022 <input type="checkbox"/> Q1 (Jan-Mar) <input checked="" type="checkbox"/> Q2 (Apr-Jun) <input type="checkbox"/> Q3 (Jul-Sep) <input type="checkbox"/> Q4 (Oct-Dec)	
Project Title: Concrete Slab Jacking			
Project Investigator: Chris Turgeon Phone: 603-448-8951		E-mail: Christopher.L.Turgeon@dot.nh.gov	
Project Start Date: 4/22/2021	Project End Date: 12/31/2022	Project schedule status: <input checked="" type="checkbox"/> On schedule <input type="checkbox"/> Ahead of schedule <input type="checkbox"/> Behind schedule	

Brief Project Description:

NHDOT's concrete road sections are a chronic problem to our maintenance Districts. The prime culprit for these conditions is poor quality base materials. The deteriorated base conditions result in excessive vibrations and noise from vehicles driving over these roadway sections. Surficial repair is virtually pointless and driver satisfaction is zero.

Discussions with URETEK, a company that specializes in subsurface injection of polyurethane foam for jacking and sealing purposes, indicate that it is feasible to treat the existing bases through the pavement. Polymer injection would fill the void spaces under the concrete slab. Expectations are similar to the benefits of cement-stabilization of soils, but without the need for total reconstruction of the roadway. In an atmosphere of pavement preservation, a reasonable initial cost to improve these roadways will save money long term, while improving its service to the public.

The purpose of this project is to evaluate the effectiveness of injectable polyurethane foam (such as that used for subsurface jacking applications) as a means of stabilizing unconstructed roadway base materials.

Progress this Quarter (include meetings, installations, equipment purchases, significant progress, etc.):

URETEK has completed the injection.

Items needed from NHDOT (i.e., Concurrence, Sub-contract, Assignments, Samples, Testing, etc.):

Pavement resurfacing and ride van & vibration data collected post re-surfacing.

Anticipated research next three(3) months:

Collection of post-construction data and compare to pre-construction data.

Circumstances affecting project:

Tasks (from Work Plan)	Planned % Complete	Actual % Complete
Schedule initial technical data	100	100
Complete polyurethane foam injection	100	100
Schedule post-injection tech data collected by the ride quality van	50	0

Barriers or constraints to implementing research results

None anticipated