

2017 Research Symposium

& STIC Annual Meeting

SHRP2 R07: The Use of Performance Specifications for Rapid Renewal Solutions

STIC PROJECT TITLE

*SHRP2 R07: Performance
Specifications for Rapid Renewal*

STUDY TIMELINE

06/15 – Current

PRINCIPAL CHAMPION

Mark Woolaver, VAOT
Victor (Lee) Gallivan, PI/SME

VTRANS CONTACT(S)

Mark Woolaver, VAOT
Construction Paving Engineer

MORE INFORMATION

*Actively Under Development –
Contact Mark Woolaver for Latest
Information*

This fact sheet was prepared for the 2017 VTrans Research Symposium & STIC Annual Meeting held on **September 28, 2017** at National Life in Montpelier, VT. 8:00 am– 12:00 pm.

Fact sheets can be found for additional projects featured at the 2017 Symposium at <http://vtrans.vermont.gov/planning/research/2017symposium>

Additional information about the **VTrans Research Program** can be found at <http://vtrans.vermont.gov/planning/research>

Additional information about the **VTrans STIC Program** can be found at <http://vtrans.vermont.gov/boards-councils/stic>

Introduction to the Proposal.

By developing a performance specification for reclaimed pavements and bases that are stabilized with cement, the VTrans expects to be able to make acceptance decision for this material based on the measurement of the finished products using fundamental engineering properties that predict the long term performance of the structure. VTrans has utilized in-place recycling technology for years, but due to compounding events over the past few years including reduced pavement performance, doubts regarding the effectiveness of the technology have led to their participation in the IAP program.

Methodology or What was done?

Specifications were developed by VTrans and incorporated into a 2015 project that partially addressed the move to performance specifications for Full Depth Reclamation with Cement. The project was a continuing effort in improving the specifications for and the constructed results of a cement stabilized FDR project. Certain past projects utilizing the technology had shown some signs of premature distress and a concerted effort was made within the project Contract documents, to improve accountability and strive towards a more performance based set of criteria.

The specifications were further revised to include Percent-Within-Limits acceptance (PWL) criteria, Intelligent Compaction, lots and sublots as well as changes to the compaction requirements and equipment requirements. VTrans then further advanced the specifications as a shadow project to allow the VTrans and Contractor representatives' additional time to adjust prior to the new requirements being implemented. The performance specifications were developed to address all the original VTrans objectives and the additional factors of the Agency.

Conclusion or What are the next steps?

Performance specifications FDR operations with cement to be finalized and utilized in a future project as a shadow specification will full implementation to follow in the future.

What are potential impacts? What is the benefit to VTrans?

Results of testing during the first project construction proved promising in that key target specification requirements were met. The Contractor acted as a partner in the project and make some modification to the contract with VTrans support to ensure the goals of the project were met.

In addition to obtaining key specification requirements periodic on site discussions concerning project QC / QA requirements were held at various junctures throughout the construction season to further emphasize construction criteria and the required attention to detail. From a construction perspective on the part of the VTrans and the Contractor, the project can most certainly be termed a success by way of achieving all of the specified requirements. The successes of the project will lead to further improvements in the specifications and future projects.