



SURTREAT®

**SOUTH RAILTON VERMONT
BRIDGE REHABILITATION**

CASE STUDY

PROBLEM

Bridge concrete deterioration.
Surface deterioration,
Corrosion of the embedded
rebar, & Delamination

STRUCTURE

“South Railton”, Vermont.
Rail bridge, Rehabilitation

PROBLEM

The rail bridge was inspected and found to have major deterioration within the concrete and corrosion within the embedded rebar. The concrete deterioration and the corrosion were leading to delamination, spalls, and other visual damage on the bridge's concrete elements.

The deterioration and corrosion of this structure were most likely due to the location of the bridge, the freeze / thaw seasonal cycle, and the penetration of chlorides from environmental contaminants. This led to the chemical and physical breakdown of the structure.

OUR PROCESS

First the bridge was inspected to accurately record the damage and formulate a treatment plan. This inspection included looking at all structural components of the bridge, including each wall of the bridge. Next, demolition of the spalled and delaminated concrete was completed. This removal of the corroded and spalled concrete is important to provide a more level and smooth surface for application of the chosen Surtreat system.

After this preparation of the concrete surfaces, the application of Surtreat's corrosion inhibitor and rust converter begins. These products are applied to specifically designated repair areas and the surrounding concrete around these hotspot areas. The application of these products not only treat the current corrosion that is located within the embedded and exposed rebar, but these products protect against future corrosion to the structure.

After the application of the corrosion inhibitor and the rust converter, SurCoat, Surtreat TPS Repel, and TPS II are all applied to the structure to finish the revitalization project. SurCoat and the cement paste are applied to the structure, then the TPS Repel and TPS II system is surface applied using a sprayer.

PROJECT RESULTS AND MEASUREMENTS

The project was completed on time with specified results.



Photo Caption Legend:

- 1) *Delaminated Concrete West End*
- 2) *Application South Railton East*
- 3) *Prepped Wall West End TPS II Application*
- 4) *Entire Bridge half completed at South Railton*

We invite your comments, questions, and inquiries.
Reach us at one of the below.