

VT Agency of Transportation: Paving Program Overview

House Transportation Committee – February 19, 2020

Presented by:

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PAVING PROGRAM GENERAL OVERVIEW

FEBRUARY 19, 2020

VT AGENCY OF TRANSPORTATION – HIGHWAY SAFETY & DESIGN SECTION
PAVING PROGRAM OVERVIEW

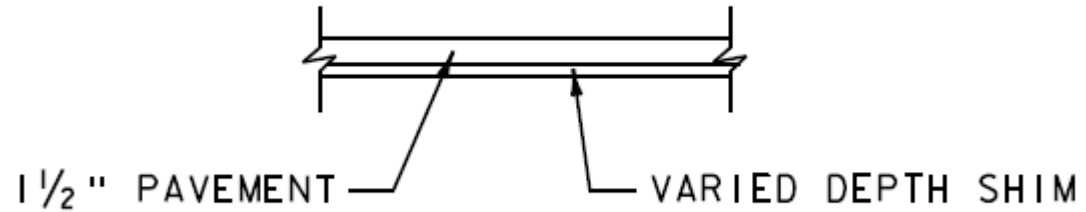


Assets are the physical elements of the transportation system, such as pavements, bridges, culverts, guardrail, signs, and traffic signals. The VTrans Asset Management Bureau works to keep assets in a state of good repair, and balancing the costs associated with doing so, across various asset types.

Regarding pavement condition, VTrans collects updated network level pavement data, the condition of the roadway is rated based on rutting, cracking, and roughness. This information is utilized, considering budget and traffic volumes, to identify projects and pavement treatments that serve to improve the condition of the network as a whole.

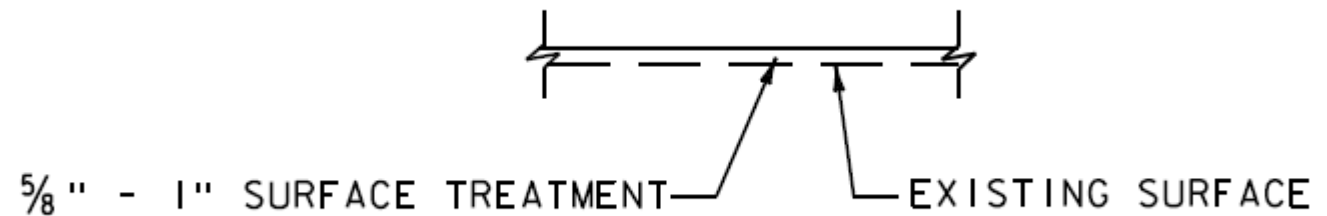
ASSET MANAGEMENT BUREAU

PAVEMENT TREATMENTS



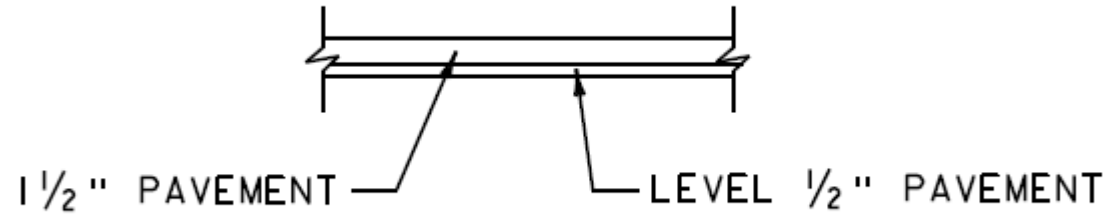
District Leveling: \$100,000 - \$125,000 per mile

Federal Leveling: \$200,000 - \$250,000 per mile

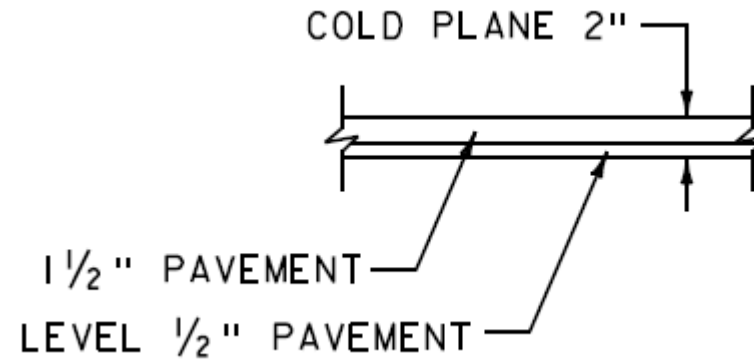


Preventative Maintenance: \$150,000 - \$250,000 per mile

PAVEMENT TREATMENTS



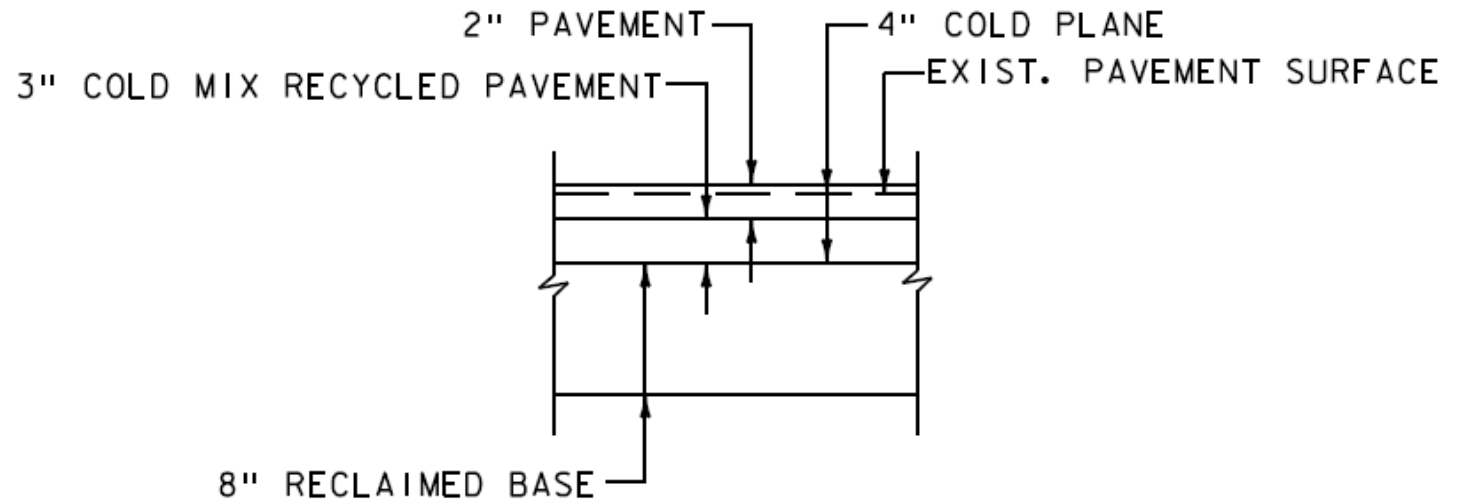
Level & Overlay: \$300,000 - \$400,000 per mile



Mill & Fill (State System): \$400,000 - \$500,000 per mile

Mill & Fill (Class I TH): \$750,000 - \$1,250,000 per mile

PAVEMENT TREATMENTS



Reclaim: \$1,000,000 - \$1,500,000 per mile

Once a project location and pavement treatment have been defined, the Asset Management group, in coordination with the design team work to produce a project data package for most projects.

This document serves to provide background information to be considered, or included, during the project's design. Information, and recommendations are included in the project data package as follows:

- Pavement Recommendation
- Budget
- Geometric Considerations
- Traffic Volumes
- Vehicular Speed
- Crash Data
- Bicycle Usage
- Pedestrian Considerations
- Guardrail Conditions
- Culvert Conditions
- Ledge/Slope Conditions
- Bridge Conditions
- Other Regional Projects
- Local Outreach
- Regional Planning Commission Outreach

PROJECT DATA PACKAGES

Upon completion of the project data package, the design of the project begins:



- Our design teams work to promote flexibility in design and context sensitive solutions
- Understand the needs of users
 - Safety
 - Mobility
 - Use
 - Connectivity
 - Quality of life
- Understand project constraints
 - Cost
 - Environmental Impacts
 - Acquisition of ROW
 - Time
 - Define project elements that meet project scope, schedule, and need.

PROJECT DESIGN



PAVEMENT CONDITION / SHOULDER IMPROVEMENTS

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MODIFIED SIGNAGE AND PAVEMENT MARKINGS

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MODIFIED ROADWAY LAYOUT / ROAD DIETS

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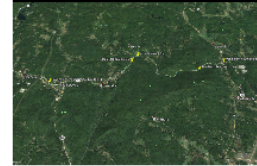
- Culvert replacement
- Slope stabilization
- Guardrail improvements
- Centerline rumble stripe installation
- Intersection layout improvements
- Signage updates and/or improvements

ASSET & SAFETY IMPROVEMENTS

- Increased communication
 - Participating in working meetings with Local Motion
 - Identify design elements that are working upon implementation
 - Identify design elements that require improvement
 - Identify guidance documents that require updates and/or modifications
- Reinforced emphasis on “Complete Streets”
 - Consider the needs of all facility users
 - Consider those needs throughout a project’s development
 - Seek input early in a project’s development
- Education
 - Clearly convey the many different project types produced by VTrans
 - Clearly convey the types of improvements that may or may not be feasible within the differing project types



PROCEDURAL IMPROVEMENTS



Cavendish-Weathersfield Aerial Map

Project Milestones

Preliminary Plans

April 3, 2017

Permitting

December 7, 2018

Right-of-Way Clear

September 5, 2019

Bid Advertisement

January 15, 2020

Contract Award

Spring 2020

Target Construction Schedule

Spring 2020 - Fall 2021



Cavendish Eastbound Begin Project MM 0.004 VT 131 and VT 103 Intersection



Weathersfield Westbound End Project MM 1.306 VT 131 and VT 106 Intersection



CAVENDISH-WEATHERSFIELD

ER STP 0146(14)

REHABILITATION OF VT131 IN CAVENDISH AND WEATHERSFIELD, BEGINNING AT THE VT103 INTERSECTION AND EXTENDING EASTERLY 8.974 MILES TO THE VT106 INTERSECTION. INCLUDES IMPROVEMENTS TO AREAS THAT SUSTAINED SUBSTANTIAL DAMAGE AS A RESULT OF TROPICAL STORM IRENE.

Project Description:

Work to be performed under this project includes coarse-milling, full depth reclamation (FDR) and paving of the existing highway, replacement of an existing box culvert, slope stabilization system, ledge removal, stone fill for river bank stabilization, pavement markings, guardrail, signs and other highway related items.

Project Timeline:

New drainage, slope stabilization (soil nail system), pre-cast box culvert installation, ledge removal and river bank restoration improvements will occur during the spring, summer and fall months of 2020. Coarse-milling, full depth reclamation (FDR), major roadway rehabilitation, grading and all other final paving will occur in 2021.

Box Culvert Installation:

The box culvert installation is located on VT Route 131 and approximately 300 feet west of Stone Way in the Town of Cavendish. This work entails the removal of an existing box culvert and the installation of a new 8 foot wide x 6 foot high x 59 foot long pre-cast concrete box culvert. This work will also require a segment of new sewerline. The existing sewer will be temporarily diverted and will be serviceable throughout the duration of construction. There will be a three day Tuesday-Thursday closure period of VT Route 131 to minimize disruption to traffic and to accelerate construction of the pre-cast box culvert. The time of the closure period will be determined at a later date. See detour information below.

Slope Stabilization System (Soil Nail):

The work begins at the intersection with Brook Road and VT Route 131 within the Town of Cavendish. The work extends westerly approximately 1/4 mile and is located on the northern side of VT Route 131. This work will entail removal of vegetation and ledge along the face of the slope, followed by installation of a series of soil nails which will be inserted approximately 20 feet into the existing ground surface. A wire mesh system will be installed following the installation of the soil nails. It is anticipated that this work zone will require one-way alternating traffic with a temporary traffic signal.

Riverbank Restoration:

This work begins at the Cavendish/Weathersfield town line and progresses easterly 300 feet along VT Route 131 and within area of the river bank of the Black River. This area was heavily damaged previously by Tropical Storm Irene. The intent of this work is to provide a long lasting treatment which will protect and stabilize the river bank during heavy rain events. This work includes the

VTransparency – Public Information Portal

<https://vtrans.vermont.gov/vtransparency>

- Project Description
- Project Location
- Project Timeline
- Project Contact Information
- Project Traffic Impacts

WHERE TO FIND ADDITIONAL PROJECT INFORMATION

