Pre-closure summary

Vermont Route 155 Bridge 7 Replacement

Mt. Holly, VT

June 17th, 2020

Accelerated Bridge Program
VTRANS

Presented By:

- **Rob Young, PE**

  Project Manager – VTrans

- **Christopher Mooney,**

  Lead Design Engineer – Vtrans

Agenda

- Existing Bridge Condition
- Proposed Replacement Structure
- Remaining Project Schedule
- Proposed Detour Route
- Questions

Bridge Site – Existing

Existing Bridge

- Originally constructed in 1969
- Bridge is structurally deficient
- Bridge Rating
  - Culvert rating: 4 (Poor)
  - Culvert Corrosion Indicator: 4 (Poor)
  - Culvert Headwall Rating: 6 (Satisfactory)

Existing Bridge Deficiencies

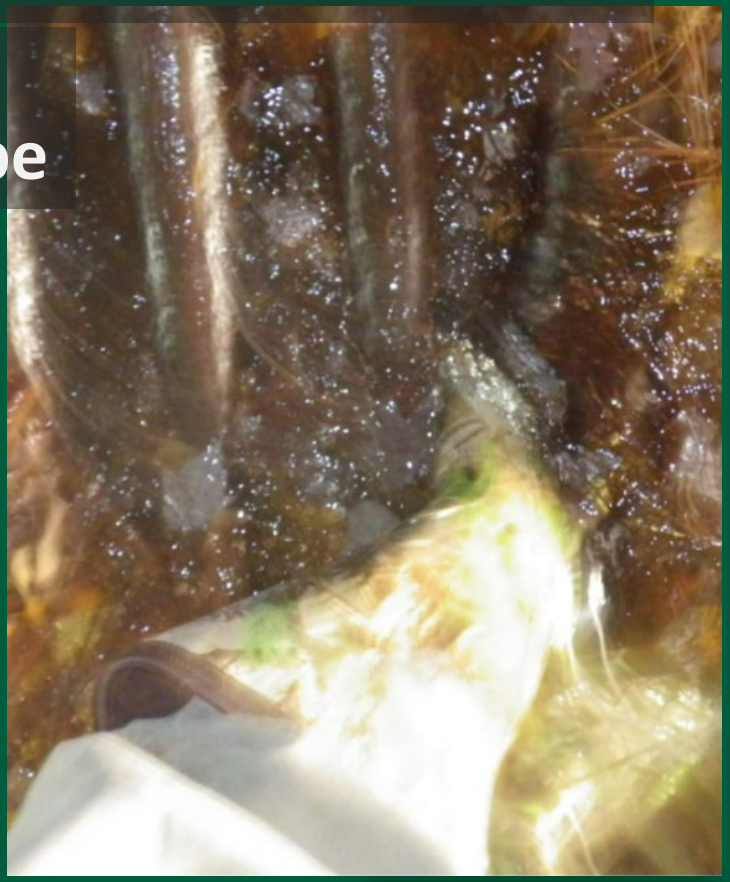
Bolt Line Cracking

Existing Bridge Deficiencies

The culvert has settled 1’ to 3’ from the mid-span to the outlet due to scour /undermining.

Existing Bridge Deficiencies

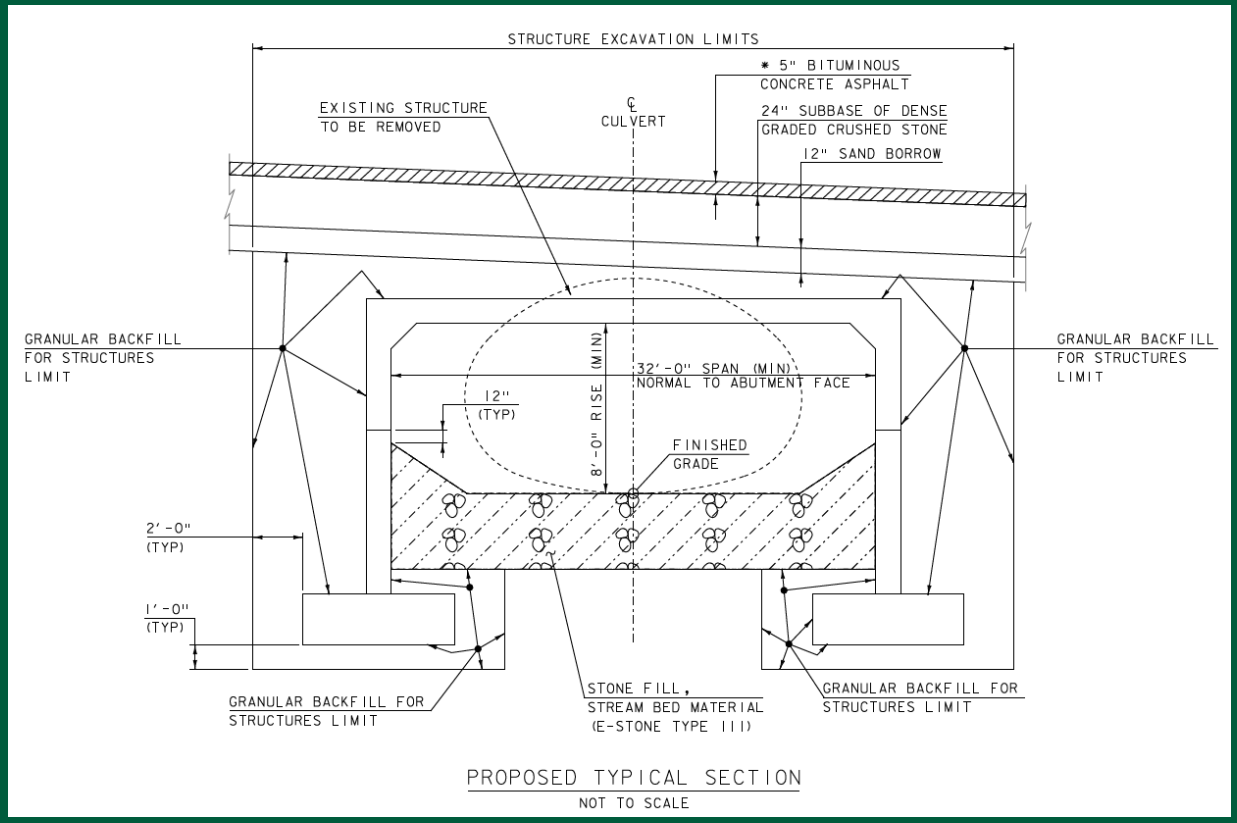
There are holes located throughout the invert of the pipe



Proposed Bridge

- Precast Concrete Rigid Frame
- Spread Footings
- Larger Bridge Width (32’ from 15’-4”)
- Larger Overall Opening
- Open Bottom Provides Aquatic Organism Passage
- Replace Laid Up Stone Outlet with a Concrete Headwall

Proposed Bridge Typical Section



PROPOSED TYPICAL SECTION

NOT TO SCALE

* BITUMINOUS CONCRETE PAVEMENT MATERIAL
SECTION VT-155
1½" TYPE IVS OVER
1½" TYPE IVS OVER
2" TYPE IIIS

MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROWS	+/- 1"

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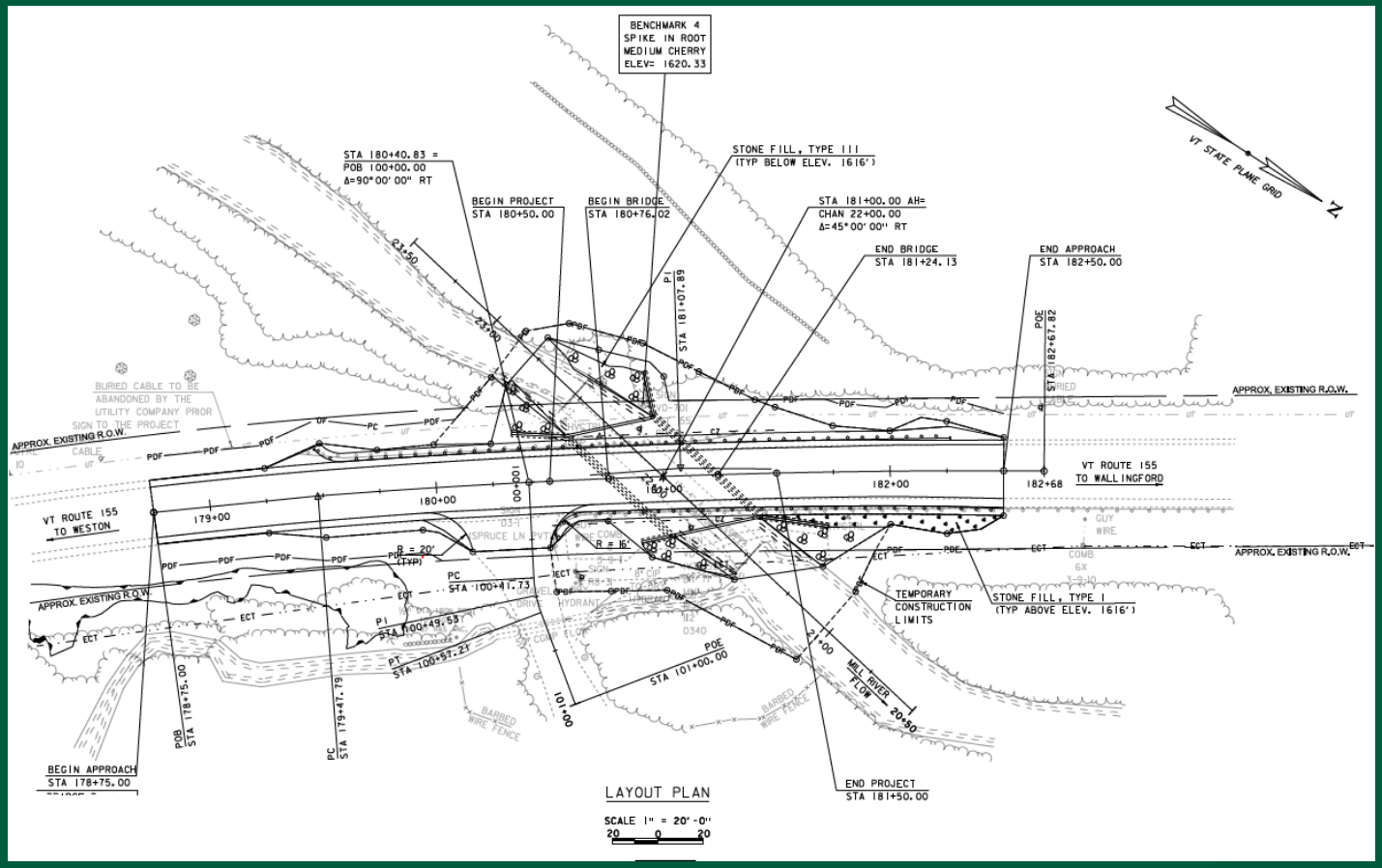
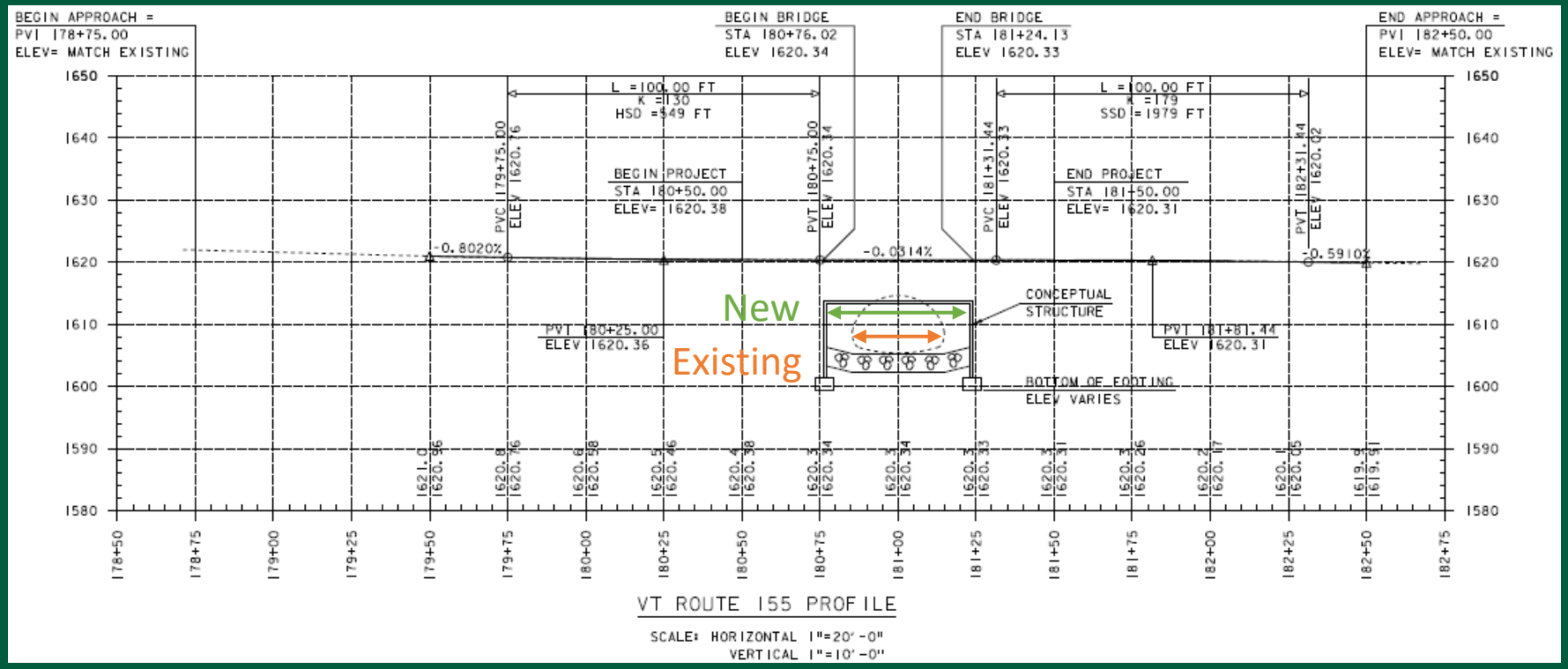
Proposed Bridge



Proposed Bridge Alignment Change



Increased Waterway Opening

Methods of Construction

Accelerated Bridge Construction

- **Overall Goals:**
  - **Implement Accelerated and Conventional Components Efficiently**
  - **Maximum Closure Duration of 28 Days**
- **Accelerated Elements**
  - **Precast Footings, Headwalls, Wingwalls, and Rigid Frame Units**
  - **Rapid Setting Concrete**

Accelerated Elements

Precast Footings

Accelerated Elements

Precast Rigid Frame Units

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Accelerated Elements

Precast Wingwall & Headwall Units

Accelerated Elements

Joint Filling and Sealing

Conventional Process

Back Fill

Conventional Process

Re-Establish the Channel

Water Level Rises to Normal as the Stream Bed Material Saturates

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Final Bridge Will Look Similar To:

This project was located on a town road in Shrewsbury VT

Project Schedule

Project Advertised
- October 2019

Begin Construction Activities
- June 2020

Bridge Closure
- Close: July 21st , 2020, 7 A.M.
- Open: August 18th, 2020, 7 A.M.

Project Completion
- September 18th, 2020

Special Schedule Details:

- ***Allowed Bridge Closure Duration – 28 Days***
- ***Financial Incentives and Disincentives included in Contract to encourage early completion***

Contractor and Work Hours

Contractor:

Bazin Brothers Trucking, Inc., Westminister Vermont

Work Hours:

Pre Closure (June 22nd thru July 20th)

Anticipated to Work 5 Days a Week

Anticipated Daily Work Hours; 7am to 5:30pm

Bridge Closure (July 21st thru August 18th)

Anticipated to Work 7 Days a Week

Anticipated Daily Work Hours; 7am to 5:30pm

Detour

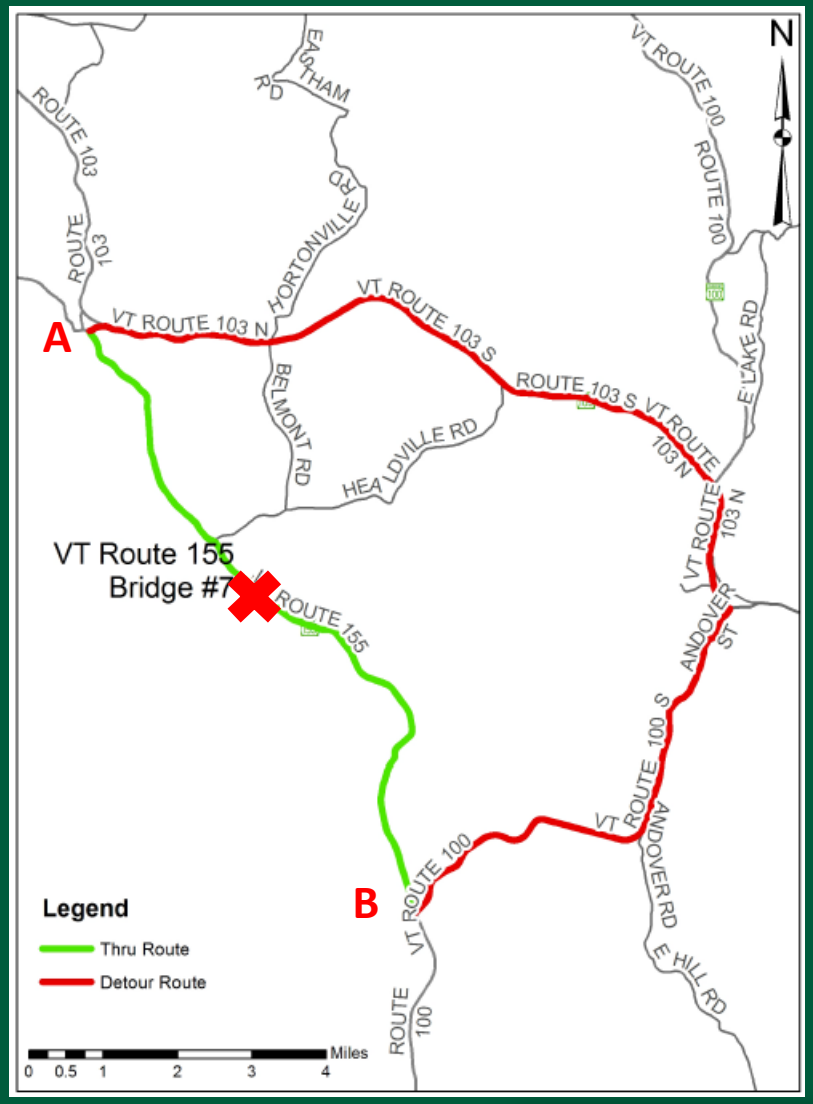
Summary

A to B current: 10.4 Miles

A to B detour: 18.5 Miles

Added: 8.1 miles

End to End 28.9 miles



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Anticipated Local Bypass

Summary

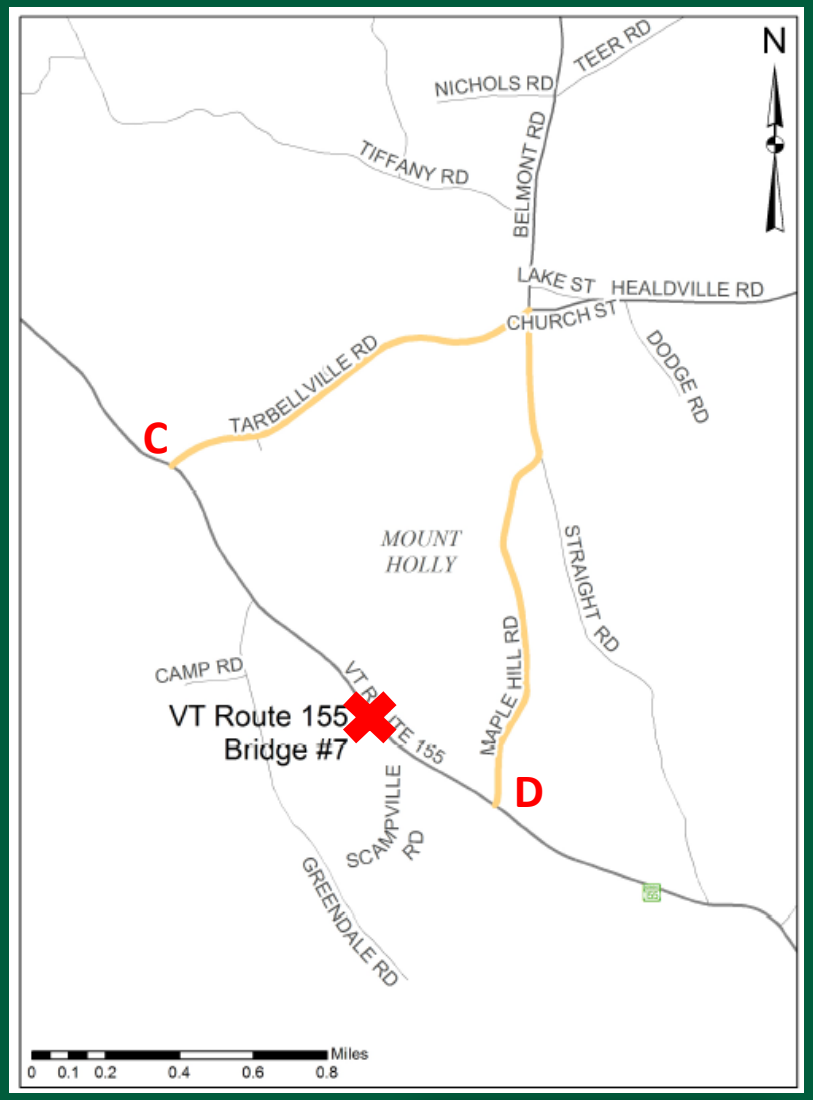
C to D current: 1.3 Miles

C to D detour: 2.5 Miles

Added: 1.2 miles

End to End 3.8 miles

Note: While this is not part of our project, increased traffic should be expected along this route



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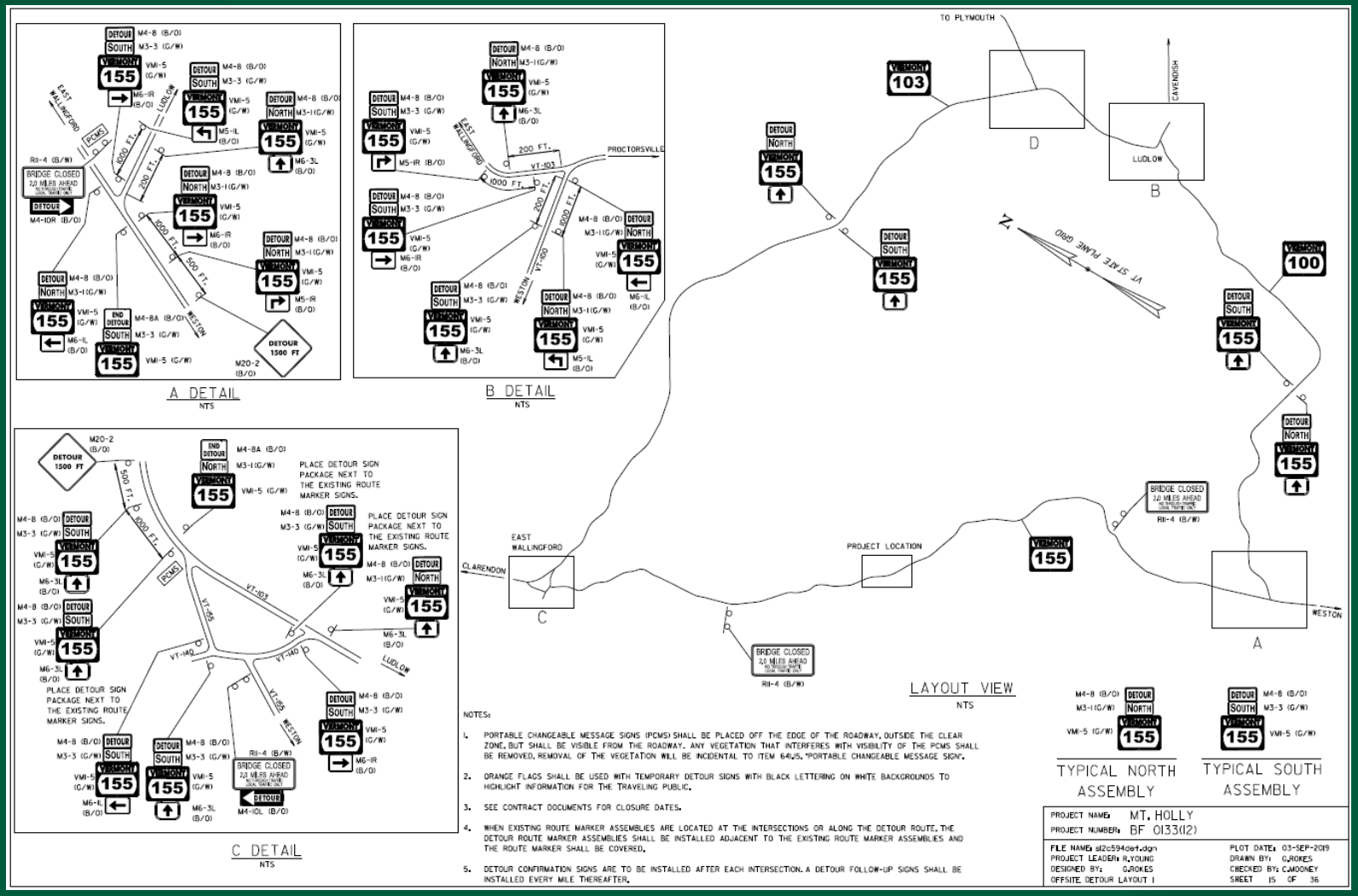
Traffic Control Plan



Questions?

VTrans Project Manager **Rob Young, PE**

Direct Phone #: (802)-595-2358

Email: Rob.Young@vermont.gov