

## PLYMOUTH BRIDGE BR#114

### BF 013-3(17) Plymouth

#### Project Milestones

Contract Award  
March 23, 2021

Target Construction Schedule  
Fall 2021

Closures  
August 16, 2021 - October 1, 2021

Contractor  
WILLEY EARTHMOVING CORPORATION

Estimated Cost  
\$629,192.10

**Replacement of existing culvert along with related approach roadway and channel work, BR114 on VT100 over Reservoir Brook.**

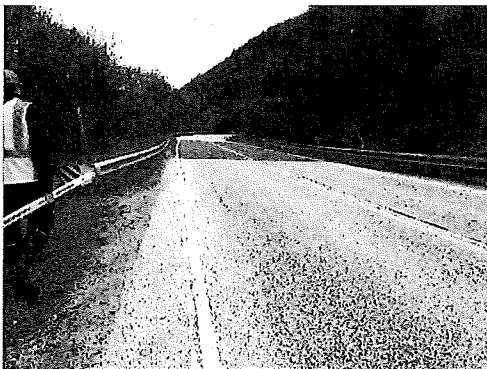
**Project Location:** Town of Plymouth in Windsor County on Vermont Route 100 over Reservoir Brook. Culvert 114 is located approximately 1.7 miles south of the intersection of VT Route 100 and US Route 4 in Bridgewater, VT.

**Background:** The Plymouth Culvert 114 project includes the replacement of the existing corrugated galvanized metal plate pipe culvert. The existing culvert was installed in 1971, and is 66 feet in length. The structure has a clear span of 7 feet. The structure currently has a rating of 3, "serious", with deterioration in the form of large perforations throughout the entire length of the structure. It was also determined that the structure does not meet hydraulic standards.

**Engineering Study:** VTrans evaluated alternatives for the rehabilitation or replacement of the culvert in an engineering study completed in March, 2020. This study assessed the proposed design criteria for the structure, right-of-way, rare/threatened/endangered species impacts, hydraulics, archeological resources, and wetland impacts. Several alternatives were considered, including: no action, rehabilitation, and replacement with a bridge or buried structure. Complete replacement alternatives were considered for different traffic maintenance options: short term road closure with detour, temporary bridge, or phased construction with traffic maintained.

**Recommendation:** Based on the age of the structure, site constraints, and current conditions, the engineering study recommended replacement of the culvert with a precast concrete box, with traffic maintained on an official signed detour. The closure duration will be approximately 7 days, during which time the detour will add 7.2 miles to the thru route. There is no local bypass route. If bedrock is found during boring operations, the closure duration will be extended to 3 weeks. **Update: Project will be contracted with Bridge 115 with a 28 day closure period to include both bridges.**

**Roadway:** The existing roadway meets most of the geometric provisions of the Vermont State Standards. The only known roadway deficiency in the project area is the lane and shoulder widths for the approach and bridge lanes. This is not a high crash location, therefore no changes to the approach lanes are proposed. However, the replacement will include building out the lane and shoulder widths over the structure, to accommodate any future increase of approach roadway width.



Looking North on VT Route 100 over Bridge 114



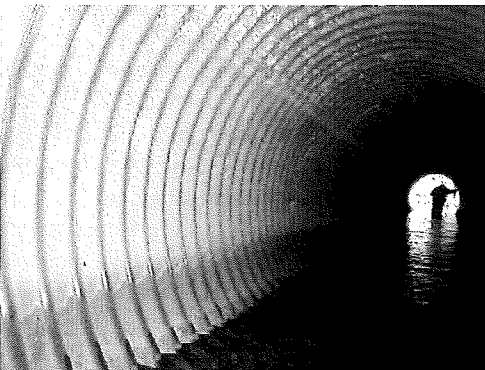
Looking South on VT Route 100 over Bridge 114



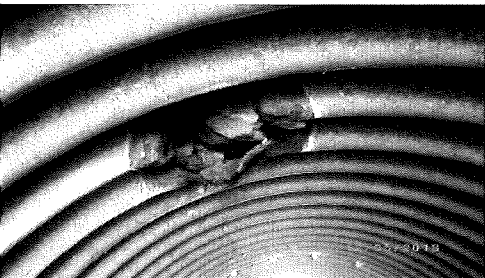
Culvert Outlet



Culvert Inlet



Culvert Barrel



Perforation in Culvert Barrel

**Detour Route:** Traffic will be rerouted from the south side of the project site south on VT Route 100 to VT Route 100A. Traffic will continue the length of VT Route 100A, turn left on US Route 4, travel 5.6 miles and turn left on VT Route 100 back to the north end of the project site.

Link to project website:  
<https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/19B216>  
(<https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/19B216>)

#### **Closures:**

- VT-100 will be closed at Bridge 114 over RESERVOIR BROOK for 28 days between August 16, 2021 and October 1, 2021.

#### **Contact Information**

\*\*Please note: Contractors are to direct all inquiries to Contract Administration (<https://vtrans.vermont.gov/contract-admin>) during project advertisement.

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Contact VTrans (<https://vtrans.vermont.gov/contact-us>)



Looking Downstream



Looking Upstream