



Johnson

VT Route 100C, Bridge 4

PROJECT MILESTONES

Preliminary Plans	January 2016
Permitting	May 2016
Final Design	June 2016
Right-of-Way Complete	September 2016
Bid Advertisement	October 2016
Contract Award	November 2016
Target Construction Schedule	Aug.-Sept. 2017



Approx. 20 feet of fill over Culvert

Johnson BF0248-(7)

Project Location: In the Town of Johnson in Lamoille County on VT Route 100C carrying an unnamed brook. The culvert is located approx. 3.8 miles east of the intersection of VT Route 100C with US RT 15.

The existing 6 ft diameter culvert, originally installed in 1951, is in poor condition. It has large holes scattered along its 166 foot length and the barrel is deformed. Several alternative solutions were considered including replacement with Trenchless Technology, and replacement with an Open cut, with or without a temporary Bridge. Because of the size of the new opening required for hydraulic requirements and its steep slope of 8.9%, use of Trenchless technology was eliminated from consideration because it is a higher risk alternative. The additional cost associated with a temporary bridge, including the time and cost of additional ROW easements and possible wetland impacts, could not be justified either.

A complete culvert replacement using an open cut is the preferred alternative.

The hydraulics report confirmed that the existing culvert is significantly too small and recommended increasing the hydraulic opening to at least 3 times its original size. No change in roadway alignment or geometry is proposed. The new culvert will be long enough to accommodate two 11 foot lanes with 4 foot shoulders.

Originally, it was believed here are several possible configurations for a new structure, including an open bottom precast concrete arch or frame, or a new box culvert. Additional soil borings confirmed that the top of ledge elevation is higher than expected, so only the open bottom arch option will be feasible at this site. Design accommodations will be made for Aquatic Organism Passage (AOP) through the new structure

The Vermont Agency of Transportation's Accelerated Bridge Program focuses on faster delivery of construction plans, permitting, and Right-of-Way, as well as faster construction of projects in the field. One practice that supports this approach is closing bridges for portions of the construction period, rather than providing temporary bridges. It is anticipated that Route 100c will be closed for a maximum of 21 days, with a contractor incentive to finish early.

The official State signed detour uses VT Routes 15 and 100 and adds 5.1 miles to the existing through route. There are also a couple of possible local bypass routes, which may be signed by the Town.

Target Construction Schedule: August –September 2017.

Contractor: TBD

Estimated Total Project Cost (includes engineering & contingencies): TBD

VTrans Project Manager: Wendy Pelletier, PE

VTrans Resident Engineer: TBD

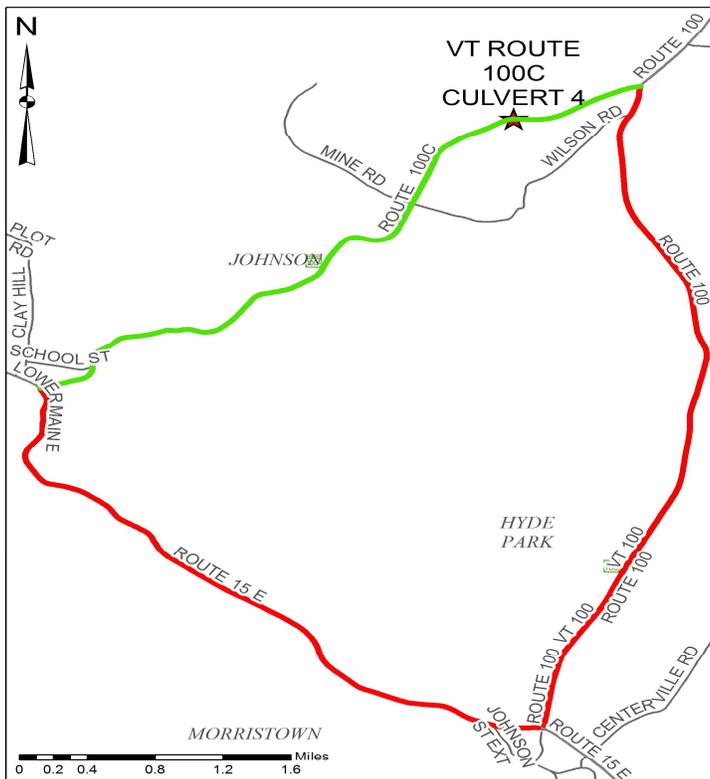
Traffic Control: VT 100C will be closed during this work. Traffic will be maintained on an off-site detour. The official signed detour, on State Routes VT 15 and VT 100 adds approximately 5.1 miles to the normal through route. There are local bypasses that may be signed by others and utilized by local traffic.



Existing Inlet



Existing Deformed Outlet



Johnson(7) Detour Map



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