



Middlesex

VT 12 Bridge 77

Middlesex Bridge 77 – BRF 024-1(37)

Project Location: Town of Middlesex in Washington County on VT 12 over an Unnamed Brook. The bridge is located approximately .53 miles north of the Montpelier-Middlesex town line and extending approximately .06 miles in a northerly direction.

PROJECT MILESTONES

- Preliminary Plans
October 28, 2013
- Final Design
July 24, 2014
- Right-of-Way Complete
December 24, 2014
- Bid Advertisement
March 6, 2015
- Contract Award
March 13, 2015
- Target Construction Schedule
Summer 2015

The Middlesex VT 12 Bridge 77 project will replace the existing bridge, with a new bridge that meets current design standards. The existing Middlesex VT 12 Bridge 77 is a single span, two lane structure which was constructed in 1919 and rehabilitated in 1981. The bridge is 44-feet in length and 31-feet, 5-inches wide. The bridge superstructure is composed of a concrete deck supported by steel rolled beams. The rolled beams are in fair condition and have minor rusting and deterioration. Both abutments have severe cracking and settlement issues. Settlement at Abutment #2 has resulted in failure and the superstructure is now supported by a concrete stub with steel H-piles at that end.

VTrans has evaluated various alternatives for the replacement of Middlesex VT 12 Bridge 77. The criteria assessed for the proposed design included the roadway alignment, right of way impacts, wetland and archaeological resources, aesthetic requirements, hydraulics, and a nearby dam. Since Abutment #2 has failed due to settlement issues, and the support system in place was only intended as a temporary fix, it was recommended that a full bridge replacement be undertaken with a temporary bridge around the construction.

The new bridge superstructure will be composed of a concrete bridge deck supported by four steel rolled beams. The new bridge will be 47-feet in length and 35-feet wide including two, 11-foot travel lanes and two, 4.5-foot shoulders. The new bridge will feature a 2-Rail Box Beam steel bridge guardrail. The substructure will be composed of concrete integral abutments on steel H-piles. All of the existing superstructure and substructure components will be removed prior to the new bridge construction.

The bridge will be constructed during the summer of 2015. Since there is ample space at the bridge location, a temporary bridge will be constructed to avoid the closure of the road, allowing thru traffic on VT 12 around the bridge location.



Existing Bridge Elevation View



Target Construction Schedule: Construction activities will take place during the spring and summer of 2015. Since a temporary bridge will be in place, the construction period will last the majority of the construction season. The project is expected to be completed by September 2, 2015.

Contractor: A.L. St. Onge Contractor, Inc.

Cost: \$934,674.95

VTrans Resident Engineer: Bob Suckert

Detour Route: Since a temporary bridge will be constructed, there will be no need for a detour around the project site. VT 12 Thru traffic will continue through the project location.



Bridge Location Map

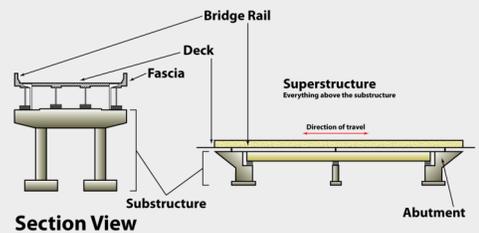
For more details, click here.



Existing Bridge With Steel H-Pile Support



Settlement Failure at Abutment #2



Section View



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