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AGENCY OF TRANSPORTATION

Johnson

VT 15 Bridge 32

Johnson Bridge 32 – BRF 030-2(26)

Project Location: Town of Johnson in Lamoille County on VT 15 over the Smith Brook. The bridge is located approximately 1.75 miles easterly of the Cambridge/Johnson town line, and extending east 0.057 miles easterly.

The Johnson VT 15 Bridge 32 project will replace the existing bridge, with a new bridge that meets current design standards. The existing bridge is a single span, two lane structure which was constructed in 1926 and rehabilitated in 1969. The bridge is 24-feet in length and 33-feet wide. The bridge superstructure (deck and beams) are composed of concrete T-beams and are in poor condition. Four additional steel rolled beams were installed in 1969 to help reinforce the superstructure and are showing signs of deterioration. There are multiple areas on the underside of the deck with exposed reinforcement.

VTrans has evaluated various alternatives for the replacement of Bridge 32. The criteria assessed for the proposed design included the roadway alignment, right of way impacts, wetland and archaeological resources, aesthetic requirements, and hydraulics. Several alternatives were considered including no action, repair and rehabilitation, superstructure replacement, and full bridge replacement. Due to the extremely poor condition of the superstructure 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 Concrete NEXT F Beams. NEXT F Beams are precast concrete beams that are fabricated in a shop and shipped to the site. They are composed of a partial depth flange, with a cast-in-place concrete deck. The new bridge will be 58-feet in length and 35.33-feet wide including two, 12-foot travel lanes and two, 4-foot shoulders. The new bridge will feature a 3-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 allow thru traffic on VT 15 around the bridge location. The temporary bridge was installed in the fall of 2014.

PROJECT MILESTONES

Preliminary Plans
March 26, 2012

Final Design
January 31, 2014

Right-of-Way Complete
May 16, 2014

Bid Advertisement
August 8, 2014

Contract Award
August 20, 2014

Target Construction Schedule
Summer 2015

Existing Bridge Elevation View

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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 18, 2015.

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

Cost: $1,105,182.45

VTrans Resident Engineer: Jeff Cota

VTrans Project Manager: Carolyn W. Carlson, P.E.

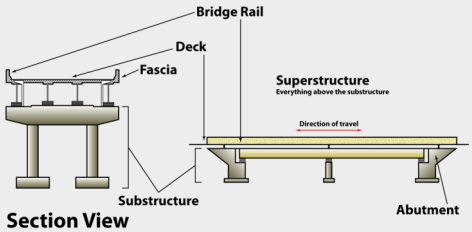
Detour Route: Since a temporary bridge will be utilized, there will be no need for a detour around the project site. VT 15 Thru traffic will continue through the project location.

Bridge Location Map

For more details, click here.

Deterioration of Fascia Rolled Beam

Exposed Rebar Under the Bridge Deck



Section View

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