

Rehabilitation of Bridge No. B0301, Zion-Wertsville Road Over Rock Brook

Townships of Hillsborough and Montgomery | Somerset County, NJ



Van Cleef was contracted by the County of Somerset to provide engineering design services for the rehabilitation of County Bridge No. B0301, Zion-Wertsville Road over the Rock Brook. The one lane bridge, constructed in 1825, was a three span structure consisting of two stone masonry arch spans and one rolled steel I-beam span. The I-beams replaced a third original stone arch span destroyed by an 1890's flood. The bridge is individually listed in the New Jersey and National Registers of Historic Places. The project goal was to maintain the integrity of the character-defining features of the bridge to the greatest extent practicable to promote the structure's long-term preservation and ability to convey its historical significance. To meet this goal, the project proposed rehabilitation of the two arch spans to improve capacity and reduce water seepage, replacement of the structurally deficient steel I-beam span, and upgrading the substandard bridge railing and approach guide rail to meet current standards. To maintain historic elements, no widening was proposed. Van Cleef prepared a Historic Bridge Alternatives Analysis, and with the assistance of a cultural resources subconsultant, prepared an Application for Project Authorization and presented the proposed project to the New Jersey Historic Sites Council. The approved alternative was replacement of the steel beam span with a reinforced concrete slab, reinforced concrete liners constructed over the existing masonry arches, replacement of roadway fill with concrete, and installation of a new steel bridge railing system anchored into the new concrete. The proposed project was also presented to the local historic commissions of Hillsborough and Montgomery Townships.

CLIENT CONTACT

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PROJECT HIGHLIGHTS

- Bridge Rehabilitation Design
- Road Safety Improvements
- Survey/ROW Acquisitions
- NJDEP Environmental Permits
- Historic Bridge Alternatives Analysis
- New Jersey Historic Sites Council
- Permit/Plan Modifications for Flood Damage
- Community Outreach