

Reconstruction of Bridge No. 16044, Valley Rd. over Pohatcong Creek

Township of Mansfield | Warren County, NJ



Van Cleef provided services to the County of Warren for the Replacement of existing deteriorated 16.8 feet (23.8 feet along the skew of 45 degrees) single span, precast concrete solid slab superstructure with an asphalt wearing surface, supported on a combination of an original stone masonry abutment and widened concrete abutment sections at the ends. The bridge was reported to be originally constructed in 1910, with superstructure replacement in 1957. The bridge was listed as in overall physical “Poor” condition due to the condition of the Superstructure. Concrete scour toes had been constructed to protect the original footings from streambed scour.

The new bridge structure is a Longitudinal Glue Laminated Timber Panel Deck with hot-mix asphalt wearing surface. The substructure is Cast-in-Place Reinforced Concrete Abutments and Wingwalls on spread footings. The spread footings were protected against streambed scour with stay-in-place steel sheeting. The proposed bridge will provide two (2) 13 foot wide lanes for a roadway width of 26 feet and an out to out deck width of 28.0 feet. A timber post and rail system attached to the sides of the Glue Laminated Timber Deck Panels is provided along both sides. Clear opening between abutments (perpendicular) is approximately 16.8 feet, with a center to center bearing of approximately 26.67 feet (along the beams). The project included approximately 150 Linear Feet of approach roadway reconstruction. Approach guide rail and end terminals were installed at all four corners to meet current standards. Work included accommodation for a field entrance immediately adjacent to end of the bridge and along one of the upstream wingwalls.

ect included topographic survey, alternatives analysis (for preferred alignment and structure type with cost considerations), geotechnical engineering design, roadway and bridge design, obtaining NJDEP Flood Hazard Area and Freshwater Wetlands permits, detour plan, preparation of cost and quantity estimates, specifications, coordination with utilities, Working Drawing review and addressing contractors RFI’s.

CLIENT CONTACT

Warren County Engineers Office
Belvidere, NJ

PROJECT HIGHLIGHTS

- ☞ County Client
- ☞ Complete Bridge Replacement
- ☞ NJDEP Flood Hazard Permits
- ☞ Freshwater Wetlands Permits
- ☞ Glue-Laminated Timber Superstructure and Bridge Railing