

Blenheim Covered Bridge Replacement

Town of Blenheim, Schoharie County, NY

Brief Project Summary

The Blenheim Covered Bridge was once the world's longest single-span covered bridge, a National Landmark and National Historic Civil Engineering Landmark. On August 28, 2011, the historic Blenheim Covered Bridge was destroyed by the flooding events following Hurricane Irene. Schoharie County, the owning entity, the Blenheim Long Term Community Recovery Committee (BLTCRC), and its team of consultants worked tirelessly for seven years to secure funding and ultimately construct a sustainable, yet historically accurate replica of the bridge – a landmark which is considered to be a large part of the Town's identity. The Blenheim Covered Bridge Replacement Project involved the construction of a 228-ft long, 27-ft tall and 26-ft wide clear-span wood covered bridge over the Schoharie Creek. The new Blenheim Covered Bridge was designed and built to replicate as close as possible to the original historic bridge; however, the new bridge was elevated above the 500-year Base Flood Elevation with 2-ft of freeboard to protect it from future flooding.

GPI, the prime consultant, with assistance from Hoyle, Tanner & Associates Engineers, P.C., provided preliminary and final design services that included preparation of design plans, specifications, construction cost estimates and construction bid documents. Once the project was under construction, GPI provided construction support and inspection services that included a full-time Resident Engineer. Hoyle, Tanner & Associates was also involved during construction to address any timber design related issues.

The new abutments are solid reinforced concrete, designed to look like the original abutments, which were laid-up stone. The new covered bridge was built out of Oregon Douglas Fir, with sawtooth joints being the backbone of each truss. Where possible, salvaged pieces of the original bridge were incorporated into the design of the new bridge to memorialize the historical structure, and to symbolize a community's strength to rise above the destruction of Irene.

The prime contractor, Economy Paving Co. Inc., led the construction effort. The timber framer, 3G Construction of New Hampshire, constructed the bridge due to their three generations of experience in building and restoring covered bridges. The company used a combination of power tools and historically accurate hand tools, such as handsaws, mallets, and chisels dating back to the 1,800's to construct the bridge. The timber framer constructed the bridge on dry land approximately 400-ft from its proposed location. The bridge then was moved and raised. This was led by Jerry Matyiko of Expert House Movers, Inc., the same company hired to transport the Cape Hatteras Lighthouse to higher ground. The bridge was jacked, placed on powered dollies and rolled across a temporary bridge upstream of the abutments. It was then jacked up again, this time, higher than the newly constructed abutments. The contractor then used beams, rollers and hydraulic jacks to roll the bridge sideways (downstream) over the abutment. New jacks were installed on the abutments to lower it down until it rested on the new abutments.

The project received international attention when the documentary "Operation Bridge Rescue" aired on PBS | NOVA on October 3, 2018.

Due to the overall management and guidance of the project team, this \$6.7M project was efficiently managed and came in under budget. Overall, the project was completed on schedule, with an approximate savings of \$200,000.

Schoharie County NY, Blenheim Covered Bridge Replacement Project



Economy Paving Co. employees two cranes to lift south truss

*Photos courtesy of Rebecca Andre of MountainGirlPhotographyandDesign.com

Blenheim Covered Bridge 2019 ABCD Bridge Award



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Blenheim Covered Bridge 2019 ABCD Bridge Award



New covered bridge ready to slide onto temporary bridge

Blenheim Covered Bridge 2019 ABCD Bridge Award



New covered bridge, turning the tight corner on to the onto temporary bridge

*Photo courtesy of Rebecca Andre of MountainGirlPhotographyandDesign.com

Blenheim Covered Bridge 2019 ABCD Bridge Award



New covered bridge getting lowered onto the new abutments

Blenheim Covered Bridge 2019 ABCD Bridge Award



Completed Covered Bridge (East Side)

Blenheim Covered Bridge 2019 ABCD Bridge Award



Completed Covered Bridge (West Side)

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