

Lake Champlain Bridge (NY Route 185/VT Route 17)

A HOCHTIEF Company

Owner

New York State Department of Transportation

Location

Essex County, N.Y. and Addison, Vt.

Value

\$74.8 million

Market

Bridges

Start - Completion Dates

5/2010 - 11/2011

- 2,200-foot-long bridge
- Basket handle modified network tied arch
- Zinc metallized corrosion protection reduces future maintenance
- Cast-in-place concrete deck supported by structural steel girders

Project Description

Flatiron constructed the new Lake Champlain Bridge in northern New York State. The new two-lane steel arch-span structure replaces a structurally deficient two-lane bridge demolished in December 2009. Spanning Lake Champlain, the new 2,200-foot-long bridge reconnects Essex County, N.Y. and Addison County, Vt.

For two years, those travelling between the two counties relied either on a 100-mile detour around the lake or a ferry system initiated after the old structure was closed. Now that construction is complete, motorists can enjoy a delay-free crossing. The impact to the local community was the driving factor for the aggressive 490-day completion schedule.

The bridge includes construction of 1,029-foot approach on the New York side and a 769-foot approach on the Vermont side. The main span is comprised of a basket handle modified network steel tied-arch that will be 402-feet-long and 80-feet-tall, supported on delta fixed frames. It has a basket handle arch with a network cable arrangement and internally redundant box tie girders supporting a composite precast deck system.

The entire main span structure was built on land at an off-site location and floated to the site on barges where strand jacks were used at each corner to complete erection. A main feature of the new bridge is the zinc metallized corrosion protection that will be applied to the structural steel. The new bridge one of the largest in North America to be completely zinc metallized.

The work also includes roadway approaches on either side of the bridge and demolition of temporary causeways and ferry docks.

Company Role

Flatiron is the general contractor.



Renderings courtesy of bridge designer HNTB.