

# ENR New York

NEWS, DATA AND ANALYSIS FOR THE CONSTRUCTION INDUSTRY IN NEW YORK, NEW JERSEY AND CONNECTICUT

**REGION'S BEST PROJECTS**

## MassDOT's I-93 Fast 14 Takes Top Honors



## BEST CIVIL WORKS/INFRASTRUCTURE

## Lake Champlain Bridge Overcomes Rough Weather

The bridge that spanned the southern end of Lake Champlain between Vermont and New York served as a critical transportation link for the region; many people who live on one side of the lake work on the other. Built in 1929, the bridge was razed in 2009 after it was found to be on the verge of collapse. Drivers were greatly inconvenienced as commutes that once took 40 minutes grew to two hours with 100-mile detours around the lake.

Initially, some engineers estimated a new Lake Champlain Bridge would take eight years to build. But realizing that local residents couldn't wait that long, the project team managed to do the job in just 20 months, a feat that included enduring difficult weather conditions.

The new arched steel span is one of the largest bridges in North America to be completely zinc metalized, which aids in weatherproofing, says project submitter Flatiron Construction Corp., Firestone, Colo.

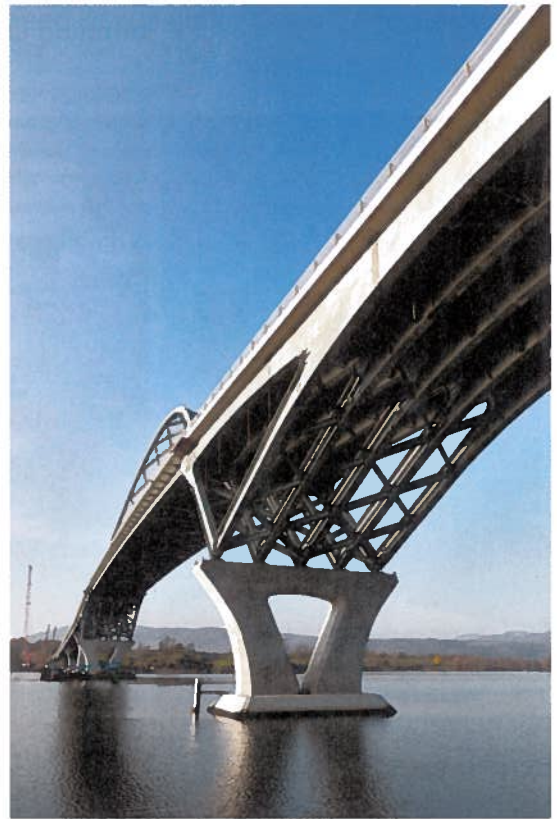
The pier footings are faced with granite to protect the concrete substructures from ice damage.

The bridge measures 2,200 ft and includes a 1,029-ft approach on the New York side and a 769-ft approach in Vermont. The main span includes a basket handle modified network steel tied arch. Wide lanes accommodate farm equipment, and there are also sidewalks for people and bicycles. A 75-ft clearance enables ships to pass below through a 300-ft-wide channel.

Helping fast-track the \$81-million project was the fact that the 900-ton structure was built off site and then floated into place; that approach also minimized disruption to ship traffic. But workers had to contend with massive floods in May 2011 that pushed water levels to 103 ft, which is 6 in. higher than the previous record.

Overall, eight workers had to be trained in rescue operations, including for ice rescues, as the lake was frozen over much of the time. The project had no fatalities.

"I think this is everything you're looking for in a winning project: a gorgeous structure, done on an impossible schedule," one ENR New York judge said. "And it's very important to the community.



### LAKE CHAMPLAIN BRIDGE

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

#### KEY PLAYERS

**Owner/Developer:** New York State Dept. of Transportation

**Lead Designer:** HNTB Corp.

**General Contractor/Construction Manager:** Flatiron Construction Corp.

**Construction Engineer:** Erdman Anthony

**SUBMITTED BY** Flatiron Construction Corp.



PHOTOS COURTESY OF FLATIRON CONSTRUCTION CORP.