

By Carol Shobrook

JT CLEARY REPLACES FENDER SYSTEMS AT NY'S 127-YEAR-OLD BRIDGE

New York, NY





JOB STORY



New York City can never be accused of not getting its money's worth out of infrastructure. Take, for example, the long suffering and neglected 127-year-old Macombs Dam Bridge over the Harlem River, which still serves as

a major truck connection between upper Manhattan and the Bronx, and also as a route from Manhattan to Yankee Stadium. Completed in 1890 for \$1.3 million dollars, it is one of the three oldest bridges in New York City, surpassed only by the Brooklyn Bridge and the Washington Bridge.

Robert Macombs built a dam at the site with state permission in 1814 to power a grist mill. A bridge was built as part of the structure. Eventually, the dam and bridge were torn down in an act of civil disobedience by citizens frustrated with its obstruction of navigation. Later, in 1890 the current

bridge was constructed and named after the dam that once operated there. JT Cleary was contracted to replace the existing marine fender systems attached to the 127-year-old rock crib supporting the fender system. The first phase of the project involved grouting the existing, unstable crib

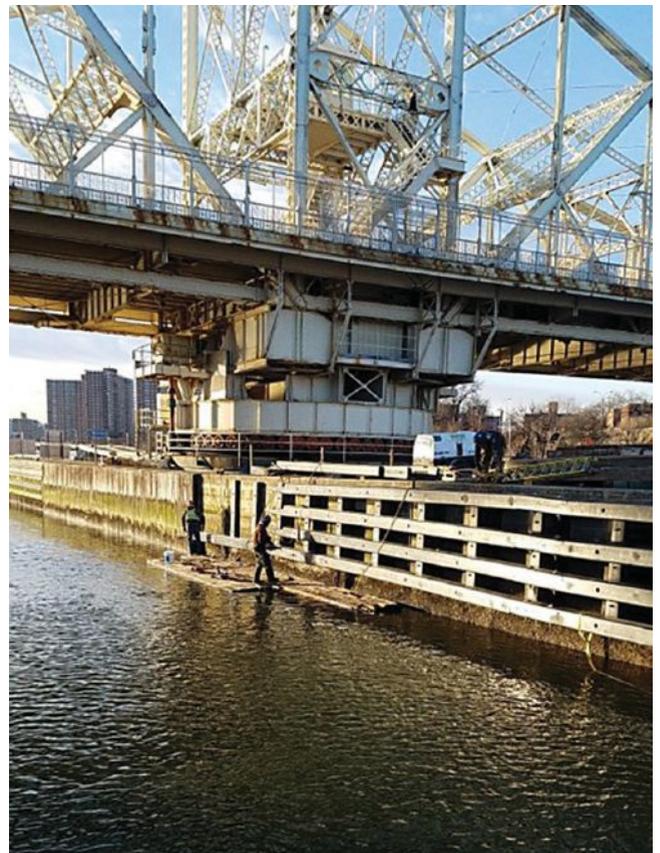
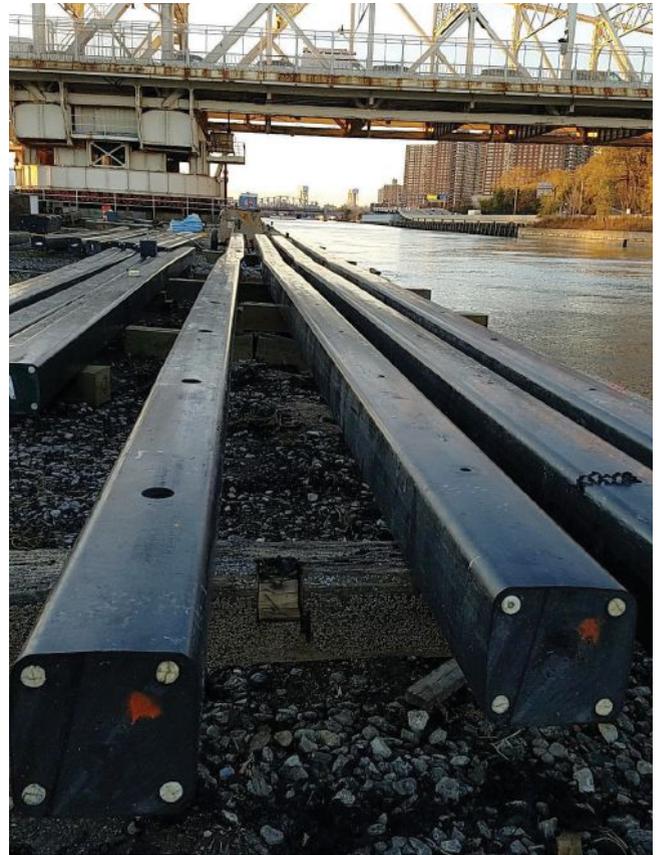
JOB STORY

system and was performed under a separate contract by Nicholson Construction.

JT Cleary replaced the timber fender system with a fiberglass reinforced plastic (FRP). Because the existing fender system was not in alignment with the channel, JT Cleary had to build buttresses to correct the alignment. Timber crib subsidence also created alignment

issues, which were overcome by custom fabrication.

Working with FRP lumber requires special tooling, because of the fiberglass rods embedded in the lumber. In addition, the modulus of the material makes it sensitive to temperature, so it can be brittle in cold weather and gooey in hot weather. As a result, it is generally harder to work than timber and can



JOB STORY

sometimes contain large voids, due to the cooling process of the plastic.

Despite the grouting operation, large sections of the timber crib remain exposed. JT Cleary anticipates that in just a few more years, the crib will likely collapse, due to marine borer activity.

The City's policy of patching up its aging bridges is penny wise and pound foolish. Jim Cleary, President, comments, "High-rises are going up every month without corresponding spending on infrastructure. The disconnect is unsustainable. New York City cannot remain relevant in the 21st Century with 19th century infrastructure." ■



ad·van·tage

noun

a condition or circumstance that puts one in a favorable or superior position.

MARINE
CONSTRUCTION
SUPPLY



GREENHEART | SHEET PILE | HARDWARE
marineconstructionsupply.com 770.363.6745

