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## **J.F. White completes Chelsea St. Bridge replacement project: project team includes HNTB and Mass Bay Electrical**

July 19, 2012 - Construction Design & Engineering

J.F. White Contracting Co. (JFW) has completed the Chelsea St. Bridge replacement project. In the project, JFW Electrical division's crew, ranging from 6 to 12 IBEW Local 103 electricians, provided the electrical systems for the new bridge span and control house.

The NECA contractor met the project's logistical and safety challenges; chief among them, was getting electrical crews, materials and equipment to the bridge's two machine rooms, located 220 feet above the ground, which house the majority of the electrical equipment. Once the old bridge was removed, the job was separated by the waterway, requiring separate crews and equipment in both towers.

The daily operation and control of the bridge was maintained by JFW Electrical Division's electricians during the final stages of construction and turnover to the owner. The bridge opened for vehicle traffic in May.

Also providing work on the project were crews from Boston Lightning Rod, installing the lightning protection system and Mass Bay Electrical, installing traffic signals. HNTB Inc. served as the architect and electrical engineer.

Meeting an accelerated schedule was critical. Crews were given just a 60-hour window to install the bridge span and raise it. After the bridge span was installed, the JFW crew had only a four-hour window to connect and test the electrical systems for the first raising of the bridge span. Tankers in the harbor were waiting for passage and electricians completed connections and testing on schedule, allowing for delivery of heating oil and gasoline to the area.

Discussing the significant challenges the project presented, JFW electrical division project manager George Foley said, "The coordination of the many different electrical systems necessary for the operation of the bridge in itself is unique to this project. It was made more demanding in that the waterway and roadway had to remain open throughout the majority of the construction process." During fuel season, October to April, the channel had to remain open, and no work was allowed in the water during fish spawning season, April to June. In addition, only six months was allowed for road closure. Foley added, "J.F. White's electrical division team, headed by general foreman Peter Rush and foreman Tom Bertochi and the JFW civil division's field team, led by Jack Pecora and Rob Nies, deserve credit in successfully meeting project requirements, including the accelerated schedule."

### **Chelsea Bridge Project Highlights**

- \* 23,440 Ft. Conduit
- \* 100,000' Multiple types of cable
- \* (2) 480 2- section Switch boards

- \* (2) 480 MCC cabinets - 6 - section
- \* (2) 480 MCC cabinets - 4 - section
- \* (3) 480 Panel boards - 42 circuit
- \* (6) 120/208 Panel boards - 42 circuit
- \* (3) 75KVA Transformer
- \* (2) 30KVA Transformers
- \* (2) 350KW Diesel Generators - 200' in the air
- \* (1) 70KW Gas Generators
- \* Fire Alarm System
- \* Gas Alarm System
- \* Access/Intrusion System
- \* GAI-Tonics System
- \* (29) CCTV cameras w/associated equipment
- \* Lightning Protection - Machine Rooms
- \* Navigational Lights
- \* (7) Aviation Lights - located 200'+ in the air
- \* (74) Low Bay Lights - located in west towers
- \* Miscellaneous Lights - located in Control House
- \* Traffic Control Devices- signals, loops, interconnection w/Traffic Controller
- \* (8) Warning/Barrier Gates
- \* Fire Suppression System - both Machine Rooms

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