

A quarterly publication of the Boston Chapter of the National Electrical Contractors Association



The electrical and telecommunications industry news in Eastern MA, ME, and NH

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**POWERPOINTS**

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**Optimistic View of Region's Construction Activity in Spring 2012**

There are numerous signs that the construction industry in Greater Boston is in the midst of a turnaround, and poised for a sustainable recovery. Construction activity is more vibrant than it has been since the recession began over four years ago. It is evident throughout our region and across market sectors.



Glenn Kingsbury

**Thriving Residential Apartment Market**

Let's start by looking at the multi-unit residential apartment market. Major residential projects are planned or underway throughout Boston and beyond. Here are just a few notable ones: *Avalon Exeter* in the Back Bay; *The Merano* in Bulfinch Triangle; *Melcher Street* projects in the Innovation District; *Hayward Place* near Downtown Crossing; *The Victor* on the Greenway; and the *Inkblock* (former Boston Herald headquarters) in the South End.

**Greater Boston: The Hub for Bio-Pharma-Medical Development**

The flourishing bio-pharma-medical market in Greater Boston is another reason for the upbeat view. Key projects in Kendall Square, Cambridge include: *Novartis'* \$600 million world headquarters complex for biomedical research; *Broad Institute's* \$343 million facility; and a 230,000 sf MIT facility at which *Pfizer* has signed a 10-year lease. A sign of the times is *Skanska USA Development's* lab facility project at 150 Second Street, with NECA contractor **State Electric** providing the facility's electrical construction (see page 4). In Boston, *Vertex Pharmaceuticals* is building its headquarters at Fan Pier with NECA member **Broadway Electrical** providing electrical construction for one of two main tower buildings. In the heart of the Longwood Medical area, **J. & M. Brown** has been awarded the 11-story *Longwood Center*, at which *Dana-Farber Cancer Institute* will be the anchor tenant. That's the short list.

**Educational Market on Upswing**

The educational market drives all sectors of Boston's economy and is key to a recovery. Harvard, MIT, Northeastern, BU, and BC all have dynamic master plans with various projects underway. As the economy brightens, expect more educational projects to break ground.

**Infrastructure**

Governor Patrick recently filed a \$1.5 billion bond bill that will fund state and local infrastructure projects through private investments in the state's first infrastructure bank. The bill allots \$200 million for local road and bridge projects and \$311 million for rail and transit projects. Upcoming infrastructure projects include the restoration of Longfellow Bridge, the Green Line Extension project, and

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**INDUSTRY NEWS**

**Boston NECA at MA Building Trades Council Convention**

Plymouth, MA – Leaders from NECA Greater Boston joined industry partners from IBEW Local 103 at the Massachusetts Building Trades Council's 93rd Annual Convention in Plymouth. State and local dignitaries addressing attendees included Gov. Deval Patrick, Lt. Gov. Tim Murray, Boston Mayor Thomas Menino, Treasurer Steven Grossman, Senate President Therese Murray, Attorney General Martha Coakley, House Speaker Robert DeLeo and Auditor Suzanne Bump. DeLeo was named Public Official of the Year. Menino received the Municipal Official of the Year award. The Massachusetts Building Trades Council, headquartered in Dorchester, comprised of 74 local unions, represents over 75,000 working people. Francis X. Callahan, Jr., serves as president.

**NECA Boston Chapter Welcomes New Members**

West Newton, MA – The Boston Chapter welcomes new members **A & S Electrical** of Malden, MA; **Bruno Electric, Inc.** of Saugus, MA; **Devlin Electrical Services** of Rockland, MA; **Ody AV** of Wakefield, MA; and **Radiant Electric, LLC** of Raymond, NH. The firms were introduced at the Chapter meeting in March.

**May is National Electrical Safety Month – ESFI to Launch Buyer Beware Anti-Counterfeiting and Emerging Technologies Campaigns**

Arlington, VA – This May, during National Electrical Safety Month, Electrical Safety Foundation International (ESFI) will launch a campaign to educate the public about recognizing dangerous and defective counterfeit electrical products. A second ESFI campaign will focus on emerging technologies – electric vehicles, solar power, wind power and smart meters – and electrical hazards associated with them. Visit [www.electrical-safety.org](http://www.electrical-safety.org)

**NECA's Electrical Contractor Magazine Introduces Supplement, Integrated Systems Contractor**

Bethesda, MD – In February, NECA's *Electrical Contractor* magazine featured a new supplement, *Integrated Systems Contractor*, designed to equip electrical contractors for the "sea change" in the low-voltage market. The content reflects shifts toward building owners seeking single-source responsibility and evolving technology that enables systems and controls to be totally integrated. Visit [www.ecmag.com](http://www.ecmag.com)

**CONNECTIONS**

CONNECTIONS is a quarterly publication of the Boston Chapter of the National Electrical Contractors Association / Electrical Contractors Association of Greater Boston, Inc., 106 River Street, West Newton, MA 02465. Phone 617-969-2521.

Mission: CONNECTIONS is designed to provide information relating to current happenings in the electrical construction industry in Eastern Massachusetts, Maine, and New Hampshire and to report activities of the Boston Chapter of NECA and its members. Your comments are welcome. We can be reached via e-mail at: [info@bostonneca.org](mailto:info@bostonneca.org)



## INSTALLATIONS

An inside look at recent projects completed by NECA Greater Boston Chapter members

### J. & M. Brown Co. Completes Electrical Renovation of MIT's Historic Building W1

Project Submitted for LEED TM Gold Certification; Design-Build: Shawmut Design and Construction, Boston, MA with Architect: MDS/Miller, Boston, MA, Dyer Spears, Inc., Boston, MA, and EE: R.W. Sullivan Engineering, Boston, MA; Tel/Data Installations by Fellow NECA Contractor LCN Networks, Weymouth, MA

Cambridge, MA – J. & M. Brown Company, Inc. (JMB) has completed electrical construction for the MIT Building W1 renovation at 305 Memorial Drive in Cambridge, MA. The complex multi-phase project entailed restoration of the historic structure, MIT's oldest student residence.



Photo: Benjamin Johnson / Shawmut Design and Construction

Building W1 is a six-story, 160,000 sf residential building that houses a state-of-the-art food server and conference rooms on the first floor. Residential suites for undergraduates, RAs and housemasters are on floors two through six. The first floor is restored to its original grandeur, circa 1901.

JMB's scope included restoration of the building's electrical systems, including new primary and emergency power, energy efficient lighting and lighting control, and a new fire alarm system. JMB also provided conduit and wiring for the security system infrastructure as well as power and control wiring for the 16,000 sf kitchen facility's specialized refrigeration systems.

#### Advanced Life Safety

Building W1 is equipped with an advanced Simplex dual fire alarm system, which integrates

separate smoke evacuation controls and alarms for all 362 dormitory residences.

#### Power Monitoring

JMB's installation of the facility's electrical power monitoring system, comprised of 100 individual meters, has special application for

MIT students. Each floor is divided into sections, and students have contests to determine which section of the building is most energy efficient.

#### NECA Contractor Meets Challenge of Electrical Field Changes

The complex electrical project required JMB to incorporate numerous field changes to the renovated structure in order to retain the building's original design. Of the 350 architectural changes that were required, 179 affected the building's electrical, lighting and power systems.

JMB's Special Projects Group Division Manager and Sr. Project Manager Steve Cabral, General Superintendent Paul Arthur, Fire Alarm Division Vice President Tom Rose, and General Foreman John Mallett supervised the overall electrical project, managing an electrical field crew

of 35 IBEW Local 103 electricians.

Due to the project's complexity, design-build contractor Shawmut Design and Construction maintained an onsite field staff of senior level management and engineering personnel to oversee the project. At peak construction, Shawmut managed more than 300 skilled workers.

Management and coordination of equipment and personnel were critical to the project's success. JMB Sr. PM Cabral commented, "Through careful planning, expedited delivery of electrical equipment from our vendors, and our skilled crew of IBEW 103 electricians, JMB was able to effectively manage power and lighting installations to meet the aggressive project schedule." This included a new substation, emergency and backup generator, 104 electrical panels, and more than 4,000 light fixtures. Cabral added, "Shawmut Design and Construction deserves great credit in facilitating work on the W1 project that was condensed to a nine-month schedule."

The project commenced in Fall 2009 and was suspended due to economic conditions. In September 2010, construction began again, and the project was completed as scheduled in August 2011, when MIT took occupancy for the start of the current academic year. ■

### Broadway Electrical Completes 905kW Solar Installation for Rosebrook Farms in Wareham, MA

Wareham, MA – Broadway Renewable Strategies, a division of Broadway Electrical Co. based in Boston, has completed the design/build 905kW solar installation for Rosebrook Farms in Wareham, MA. The PV system is a ground-mounted system comprised of 3,124 Canadian Solar 290w panels. The



project also included installation of circuit combiner boxes, Satcon inverters, a data acquisition system with reporting capability. Broadway Renewable Strategies will furnish solar generated electricity under a Solar Power Purchase Agreement. Broadway's crew of electricians from IBEW Local 223 provided installation. ■

Continued from page 1 **POWERPOINTS**

#### The Optimistic View of Greater Boston Construction Activity in Spring 2012

the new *Fore River Bridge* in Quincy. Plus, ongoing major renovations at Logan International Airport.

#### Casino Developments

Recent casino legislation also promises major construction projects – either via the *Suffolk Downs/Caesars Entertainment* plan in Revere or the *Wynn Resorts* plan in Foxborough. Casinos also will be built in Western MA and Southeastern MA. Granted, these projects may be a couple years

away, but it is a solid bet that the construction industry will benefit from them, as will the tax base for our region.

#### Powering the Recovery

Most importantly, as pertains to the aforementioned projects and many others that are planned – owners, developers, and construction industry partners can rest assured that NECA Boston Chapter contractors will continue to consistently demonstrate their exemplary skills and workmanship, as well as their commitment to living up to the strongest safety standards in the industry.

In this issue, we showcase **J. & M. Brown's** historic restoration of *MIT Building W1* and *Museum of African American History*, **Broadway Electrical's** solar project at *Rosebrook Farms*; **J. F. White Electrical's** *Chelsea Street Bridge Replacement* project; and **Mass Bay Electrical's** work in restoring power to the Back Bay during the transformer fire incident.

Thanks for your trust and confidence in NECA Boston Chapter. And, here is to a brighter 2012 and beyond. ■

## INSTALLATIONS

An inside look at recent projects completed by NECA Greater Boston Chapter members

### J. F. White Contracting, Electrical Division and Local 103 In Final Stage of Chelsea Street Bridge Replacement Project

**Boston Lightning Rod Provides Lightning Protection; Mass Bay Electrical Installs Traffic Signals; Architect/EE: HNTB, Boston**

Chelsea, MA —J. F. White Contracting Co. (JFW), of Framingham, MA, is nearing completion of the Chelsea Street Bridge replacement project in Chelsea, MA. In the uniquely challenging project, JFW Electrical Division's crew, ranging from six 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 unique 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.

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, J. F. White Electrical Division Project Manager George Foley said, "The coordination of the many different electrical systems necessary for the operation of the bridge 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."

The daily operation and control of the bridge will be maintained by JFW Electrical Division's electricians during the final stages of construction and turnover to the owner. The bridge is open for boat traffic and will be open for vehicle traffic on May 9. ■

### J. & M. Brown Completes Historic Electrical Restoration of Museum of African American History on Beacon Hill in Boston

**Architect: John W. Waite Associates, Albany, NY; GC: Shawmut Design and Construction, Boston, MA;  
EE: Plus Group Consulting PLLC, New York, NY**

Boston, MA —The rededication of the restored former African Meeting House, now the Museum of African American History, on Beacon Hill in Boston, took place at the National Historic Landmark in December. The three-story structure, built in 1806, is the oldest extant national African American church building in the U.S., and was constructed primarily by free black artisans. The museum, restored to its 1855 appearances, reopened to the public on its 205th anniversary. NECA Boston Chapter contractor, J. & M. Brown Company (JMB) of Jamaica Plain, MA, provided electrical construction and restoration of the historic building as well as installations for the new adjoining structure, which houses an elevator and staircase to allow for handicap access.

The project scope encompassed providing the 5,364 sf, two-century old structure with a new electrical service, interior and exterior lighting, fire alarm system, and tel-data infrastructure.

J. & M. Brown met unique challenges at the extraordinarily tight site, among them the integration



of electrical service from the main electrical and mechanical room located in the basement of the new adjoining building into the historic structure. Accurate layout of wiring was essential, as all cables were chiseled through the brick walls of the structure, and numerous floor boxes were cut into the existing historic wood floor.

Coordination of the new electrical and mechanical room was also critical, as the compact space holds equipment for electrical, HVAC, and UPS, as well as the elevator control room. The building's small footprint and lack of storage space for equipment necessitated that all trades bring in only equipment that would be installed in the ensuing week.

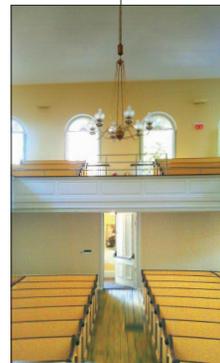
JMB's lighting installations included the revitalization of centuries-old gas powered fixtures to electrical. The grand chandelier in the sanctuary was also refurbished and converted to

electrical. JMB utilized a special motorized lift in the attic for its installation. Special wiring was required for the pulpit stanchions' light fixtures. Theatrical lighting was also installed for special events and guest speakers.

The fast-track project was completed on an aggressive 12-month schedule in November 2011. J. & M. Brown Project Manager Robert Carabia and Superintendent Dale Blue managed the firm's electrical crew, based out of IBEW Local 103. Shawmut Design and Construction of Boston provided general contracting services.

The rededication ceremony was attended by Massachusetts dignitaries, including Diane B. Patrick, First Lady of Massachusetts; Mayor Thomas Menino; and Beverly Morgan-Welch, Executive Director of the Museum of African American History. ■

*Electrical work at the museum required integrating electrical service from the new adjoining building into the historic structure.*



## INSTALLATIONS

An inside look at recent projects completed by NECA Greater Boston Chapter members

### State Electric Awarded Electrical Construction of Skanska USA's 120,000 SF Lab & Office Facility at 150 Second Street, Cambridge, MA

Cambridge, MA — State Electric Corporation, the Woburn, MA-based NECA Boston Chapter contractor, is underway with core and shell electrical construction of Skanska USA Commercial Development's new Class A laboratory and office building located at 150 Second Street in Kendall Square, Cambridge. The three-story facility, de-



signed to meet U.S. Green Building Council Gold LEED criteria by Elkus Manfredi Architects, will include approximately 120,000 square-feet of highly sustainable lab space. In addition to primary and emergency power installations, State Electric's project scope includes installation of the building's lighting, Access Control and CCTV security, and fire alarm

systems. Energy-efficient LED lighting will be installed in the main lobby and landscape lighting will accent exterior areas of the building. The facility will feature a rainwater harvesting system to enhance its sustainable footprint.

State Electric is managing a field crew of six Local 103 electricians throughout project construction, which commenced in December 2011 and is targeted for completion in November 2012. Skanska USA Building, Inc. is providing construction management. ■

## ELECTRICAL INDUSTRY NEWS

### Mass Bay Electrical and Fellow NECA Contractors Restore Power to Boston's Back Bay After Transformer Fire

When the Back Bay lost power Tuesday night, March 13, due to the transformer fire in the NStar Scotia Street substation next to the Hilton hotel, **Mass Bay Electrical** of East Boston was called early Wednesday to provide restoration to the fire-damaged substation's 115,000-volt transformer's primary connections. Mass Bay Operations Manager Dan Sullivan said, "There are two large transformers in this substation; one failed, causing the resulting catastrophe,



Photo: Courtesy Mass Bay Electrical

and the other backup unit transformer was damaged by the heat from the fire, resulting in the power outages. Specialty skill sets were required and Mass Bay's team of 10 Local 103 electricians and Local 104 linemen worked 16-hour days with multiple NStar crews to restore the damaged transformer." NStar had the substation back on line by late Thursday afternoon, when power was restored to the Back Bay.

NECA Boston Chapter contractors, **Dagle Electrical** and **Power Line Contractors**, worked in Back Bay streets throughout the crisis, providing generator support for the area.

**Mass Bay Electrical** is also providing permanent restoration of the substation with a team of 12 Local 103 electricians. Two six-man shifts are working seven days a week on the project, which includes installation of control and relay protection, lighting, security, fire alarm, DC and AC power, and station grounding.

Fellow NECA contractor, **State Electric Corporation** of Woburn, is building the substation's new GIS (Gas Insulated Switchgear). ■

## SAFESITES

NECA Boston Chapter Safety News

### 2012 NECA Safety Professionals Conference — May 21-23 in St. Louis

Event a highlight of National Electrical Safety Month in May

**The Event:** NECA 2012 Safety Professionals Conference (NSPC), the premier safety event for the electrical construction industry, will provide up-to-date information on regulation, compliance, management techniques, and standards development that impact safety and health in the industry. Rapid technology changes in the electrical industry make it imperative that electrical contractors and safety professionals keep current with industry advances that affect workplace safety and health.

**Who attends?** NECA contractors' safety professionals, risk management, human resources, project management and supervisory personnel will attend the conference.

**Educational Tracks:** The 2012 NSPC educa-



tional series will be headed by leading safety professionals throughout the U.S. Here's an overview:

• **Inside Construction Tracks** — NFPA 70E Series:

Engaging the Process, Changes 2012, Incident Energy Analysis; Electrical Safety and OSHA; and Electrical Safety Program Management

• **Line Construction Tracks** — ET&D Best Practices; Minimum Approach Distances; OSHA's New Electrical Power Transmission and Distribution: PPE Rule and ET&D Best Practices

• **Safety Management Tracks** — Fleet Management, Hazard Analysis/Risk Assessment Technique; Role of Consensus Standards in Today's SH&E Community; Worker's Compensation; Safety Management and Culture

**Keynote addresses and speakers** include:

**Human Casualty: The Effects of Arc Flash/Arc Blast Accidents** — Dr. Peter H. Grossman MD, FACS, Director of Grossman Burn Centers

**Changing the Electrical Safety Culture; Focusing on Safety not Compliance** — Kenneth Mastrullo, OSHA Region 1, Electrical Safety Expert

**Employee Motivation** — Paul Esposito, CIH, CSP, Vice President of ESIS, Inc.

**Transformational Leadership and Safety** — Major Randy Cadieux, United States Marine Corps; James Tomaseski, National Director of Safety and Health, IBEW

NECA is proud to continue in our leadership role in safety development and compliance in the construction industry. For further information and to register, visit: [necasafetyconference.com](http://necasafetyconference.com) ■

For a complete directory of NECA Greater Boston Chapter members, visit [www.bostonneca.org](http://www.bostonneca.org)