NECA’s Commitment to the Future

West Newton, MA — Training, education and research are important distinguishing features of the union electrical contracting industry. In 2011, NECA’s commitment to ensure our member contractors are the most up-to-date and knowledgeable, and that they manage the most skilled electricians and technicians in the industry, is as strong as ever. Our dynamic educational offerings are geared to diverse aspects of the business — from project management to foreman training to advanced degree programs. Here are just some of the educational initiatives currently in place.

• NECA Boston Chapter and Wentworth Institute of Technology are partnering in the Advanced Training for Construction Management program. It provides valuable field management training, enabling NECA contractors to be more effective project managers. The course covers such topics as contract documents, expectations and performance requirements, managing construction contracts and managing project schedules. Now in its second year, more than 70 NECA Boston Chapter project managers, foremen, and general foremen have attended the professional certificate program. Two sessions are planned for 2011.

• Wentworth has also designed a special program with IBEW Local 103, NECA and JATC Boston, offering an Associates Degree program in Applied Science in Engineering Technology (AENT) to graduates of the JATC Inside W iremen Apprenticeship Program. The program, in its second full year, has 45 journeyman actively enrolled with 27 scheduled to graduate in August.

• NECA Boston Chapter is proud to have initiated a $2000 Annual Scholarship program with Wentworth Institute, with each of five scholarships awarded annually to employees of NECA contractors (see news item on this page).

• The Boston Chapter continues to evolve what is recognized as one of the strongest Foremen Training Programs in the country. The Education Committee, headed by Ronald Koning, Jr. of State Electric, will announce plans in the coming weeks.

On page 6 of this issue, Chapter Governor Tom Driscoll of E.S. Boulos, Jr. of State E lectric, will announce plans in the coming weeks.

With This Issue

Editorial Design Library’s Understanding Your Motor Options provides owners and facility managers an overview of how motor efficiency impacts a building’s energy efficiency and bottom line.

ELECTRICAL INDUSTRY NEWS

NECA Boston Chapter, Wentworth Institute Initiate Annual Scholarship Program

Boston, MA — Five $2000 scholarships are awarded annually to employees of NECA contractors who are attending Wentworth to complete an associates, bachelors or masters degree. This year’s recipients of the merit-based awards are Andrew Campbell, Victoria Fortino, Gary Kirk, Patrick Mahoney, and Daniel Moulton.

NECA Safety Awards – Aetna Fire Alarm, Ayer Electric, E.S. Boulous, and J.F. White Electrical

Bethesda, MD – The four Boston Chapter contractors have been awarded NECA’s Zero-Injury Award for District 1 (CT, ME, MA, NH, NJ, NY and VT). E.S. Boulous was also one of only four contractors in District 1 to achieve a Safety Excellence Award.

NECA Boston Chapter Contractors at NECA 2011 Legislative Conference in Washington, DC

Boston Chapter NECA had a strong presence at the NECA 2011 Legislative Conference & Political Leadership Council Summit held May 10—12 in Washington, D.C. Visit bostonneca.org/govrelations for details.

NECA Boston Appoints Matthew Lash

West Newton, MA — Matthew A. M. Lash has joined NECA Boston Chapter as Assistant Executive Manager. He served as business development director for the IBEW Local 300 in Burlington, VT.

Understanding Your Motor Options

CONNECTIONS is a quarterly publication of the Boston Chapter of the National Electrical Contractors Association / Electrical Contractors Association of Greater Boston, Inc., 196 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
E.G. Sawyer Co. Provides $27.5M Electrical Construction of New Dana-Farber Yawkey Center for Cancer Care


Boston, MA – NECA Boston Chapter member E.G. Sawyer Co., Inc. of Weymouth, the nation's oldest continuously operating electrical contractor, has completed the $27,450,000 electrical construction of Dana-Farber’s Yawkey Center for Cancer Care.

E.G. Sawyer’s comprehensive project scope included shell and core electrical installations as well as electrical fit-out. In addition to providing primary and emergency power, the contractor installed fire alarm, lighting and lighting control, and security systems for the tower building and its 7-story below-grade parking facility. The NECA firm also provided temporary power to the site in the project’s earliest phase.

The Yawkey Center is designed to serve as a model for future cancer patient treatment facilities. The building houses 130 exam rooms, 137 infusion chairs, and numerous patient and family consultation rooms. Patients receive Dana-Farber’s advanced, innovative technology and treatments in infusion chairs, and numerous patient and family consultation rooms. Patients receive Dana-Farber’s advanced, innovative technology and treatments in infusion chairs, and numerous patient and family consultation rooms.

The Yawkey Center is designed to serve as a model for future cancer patient treatment facilities. The building houses 130 exam rooms, 137 infusion chairs, and numerous patient and family consultation rooms. Patients receive Dana-Farber’s advanced, innovative technology and treatments in infusion chairs, and numerous patient and family consultation rooms.

E.G. Sawyer has applied for and is expected to receive a Silver LEED rating for the Yawkey Center.

Primary and Emergency Power

The facility's primary power is generated via E.G. Sawyer’s integration of 15KV switchgear service feeding four (4) 13,800V transformers and two (2) main-tie-main double-ended 480V substations. The Yawkey Center is also equipped with three Cummins 800kW generators that provide emergency power.

Optimal Lighting and Lighting Control

E.G. Sawyer’s energy-efficient lighting installations include a Reflex lighting package supplied by Yale Electric. More than 7,000 light fixtures comprised of over 130 different types of fixtures are installed throughout the facility.

At the heart of the lighting system is the Crestron lighting control system, which allows ballasts to be programmed individually as needed to accomplish desired lighting levels. A state-of-the-art dimming system provides optimal lighting for the Healing Garden and all conference areas. Daylight harvesting features are incorporated within the lighting control system, as are motion occupancy sensors.

Fully Integrated Life Safety System

The Yawkey Center is equipped with an advanced Simplex life safety system which features separate nodes for the tower and the underground parking facility. According to E.G. Sawyer Senior Project Manager Joe Carey, “The installation of the facility’s fire alarm system and its integration into the Dana-Farber’s main building, the Smith Building, and Mayer Building were among the most demanding aspects of the project.” The Simplex True Site workstation ties in the fire alarm and smoke control for all facilities on the Dana-Farber campus. A Comtronics bidirectional amplifier provides communication for the Boston Fire department from all points in the facility.

Fellow NECA contractor, Boston Lightning Rod, installed the lightning protection system under subcontract to E.G. Sawyer. This system ties into the Dana-Farber Smith Building.

Advanced Security System Ties Into Life Safety

The Yawkey Center for Cancer Care is equipped with the most sophisticated of card access security systems. More than 200 cameras are installed at all garage levels and on all floors. The building also features a Rowland advanced nurse call and paging system.

Six-day Work Week to Meet Accelerated Schedule

Electrical Project Manager Carey and General Foreman Steve Franklin supervised an electrical crew of seven electrical foremen and approximately 75 electricians from IBEW Local 103 at peak construction. To meet an accelerated project schedule, E.G. Sawyer instituted six-day work weeks beginning at the rough-in stage, late 2009, through September 15, 2010, when the contractor reached substantial completion.

Impeccable Safety Record

Project Manager Carey commented on the demanding project coordination that was required. He said, “The success of the project was spearheaded by the effective project management of both Dana-Farber and Walsh Brothers from project inception through completion. They implemented procedures that ensured a clean and safe site at all times. Communication between Walsh Brothers, E.G. Sawyer and approximately 20 other subcontractors enabled us to achieve total project quality with the utmost concern for safety.” E.G. Sawyer provided more than 150,000 manhours at the Yawkey Center without a recordable incident.

Tel/Data and Network see bottom pg. 3
E.S. Boulos Awarded $27M Electrical Construction of MaineGeneral Medical Center Regional Hospital in North Augusta, Maine

E.S. Boulos has been awarded the electrical construction of MaineGeneral Medical Center’s (MGMC) new 600,000+ SF regional hospital in North Augusta, Maine. The new Kennebec Valley MaineGeneral campus will be a home to a 192-bed inpatient surgical and acute care facility.

The $32M construction project is among the largest healthcare projects currently planned for construction in the U.S. and one of the largest institutional construction projects ever undertaken in Maine. The 36-month project, scheduled to begin in spring 2011, is also one of the largest healthcare projects ESB’s history.

State-of-the-art construction methods are planned for the project, including BIM, LEAN Construction, and Multi-Trade Prefabrication. The project will be managed by ESB’s Senior Project Manager Lescar Beane, Assistant Project Manager Rob Coates, Project Engineer Tom Clements, and Superintendent John Fedorovich.

In recent years, E.S. Boulos has completed a number of capital improvement and renovation projects at the MGMC campus in Waterville, and in the late 1990s, ESB completed a major expansion of the medical center’s Augusta campus. To learn more about the MaineGeneral Regional Hospital project, visit http://www.mainegeneral.org/body.cfm?id=1825

E.S. Boulos Awarded $5M Electrical Construction of Margaret Chase Smith Federal Building Renovation Project

Bangor, ME — E.S. Boulos has been awarded and is underway with electrical construction associated with the complete renovation of the Margaret Chase (M.C.) Smith Federal Building on Harlow Street in Bangor, Maine. Construction manager Consigli Construction awarded ESB the $5M electrical contract project in a competitive bidding process against two other select Maine electrical contractors. The 200,000SF existing building will receive a complete replacement of outdated electrical and mechanical systems, interior construction renovation, a new central entrance pavilion, and landscaped plaza. Funding for this project is from the American Recovery and Reinvestment Act. The 30+ month electrical project began in the fall of 2010. Paul Brown led the estimating effort for ESB on this project. He identified alternative cost and design approaches throughout the budgeting and bidding phases, which were instrumental in ESB’s award-winning bid. Tom Nason is ESB’s Sr. Project Manager and Andy Leali, the onsite Supervisor.

Continued from bottom pg. 2

Dana-Farber Yawkey Center Network Installations by LCN, Division of E.G. Sawyer

The facility’s tel/data network installations and integration were provided by LCN, the technology division of E.G. Sawyer. The extensive network has both a fiber optic and copper backbone. In providing the facility’s 10-Gigabit network solution, LCN installed approximately 1,000,000 feet of copper cable and 7,000 feet fiber optic cable (144-strand, 12-strand and 24-strand). The project also entailed LCN’s integration of the Yawkey Center with Brigham & Women’s data network, providing the Dana-Farber with state-of-the-art patient tracking system technology. At peak construction, LCN’s Vice President, Sr. Project Manager Bob Bennett supervised a field telecom crew of 15 IBEW technicians.

J. & M. Brown Installs Complex Life Safety System at 750,000 SF Atlantic Wharf, Boston

Boston, MA — In Boston’s largest high-rise commercial construction project in the past fifteen months, J. & M. Brown Company, Inc. (JMB) of Jamaica Plain, MA has completed the building fire alarm system for Atlantic Wharf at 280 – 294 Congress Street. The project included furnishing, installing and integrating the fire alarm system for the 32-story, 750,000 square foot glass tower and six levels of underground parking.

Atlantic Wharf’s life safety system integrates advanced smoke-sensing technology comprised of nearly 2,000 HoneywellNotifier fire alarm devices, including 5 intelligent fire alarm control panels, 500+ smoke detectors, 120 duct smoke detectors, 500 signaling devices, elevator fire annunciators, and 150 sprinkler points. To meet facility requirements, JMB installed more than 200,000 feet of custom copper wire cable, color-coded for troubleshooting purposes.

J. & M. Brown also provided the custom design and configuration of the fire alarm panels, including the sophisticated graphic smoke control panel, which provides interface between the fire alarm system, smoke control system and all floors. JMB’s special field design services were provided in coordination with general contractor Moriarty and Associates’ MEP coordinator. The facility’s fire command center, located in the lobby, provides control to the entire system, including the elevator annunciators.

The project scope also included installation of a Comtronics bi-directional amplifier, which allows for Boston Fire Department communication anywhere in the facility.

Project construction started in Spring 2009 and was completed in December of 2010. To ensure all timelines were met, JMB Fire Alarm Division VP Tom Rose, Foreman John Balle and Project Manager Paul Healey assembled a highly specialized team of experienced electricians.

J. & M. Brown and Honeywell provided system testing services in November and December in preparation for final testing with the City of Boston. The system passed inspection and was accepted by the City of Boston on schedule.

Atlantic Wharf is a mixed-use development featuring its Class A office tower; 30,000 sf of retail and public spaces; 70-80 residential units; and a waterfront plaza.
State Electric Completes $1.9M Electrical Construction of Brandeis University’s Mandel Center for the Humanities

NECA Contractor Teams with GC: John Moriarty & Associates, Winchester, MA; EE: Buro Happold, New York, NY; Architect: Kallmann McKinnell & Wood Architects, Boston, MA

Woburn, MA – State Electric Corp. (SEC) of Woburn, MA has completed the $1.9M electrical construction of Brandeis University’s new 50,000 sq. ft., four-story Mandel Center for the Humanities (MCH). The facility opened as scheduled in August 2010, as Brandeis commenced conducting classes in the Center at the start of the 2010/2011 academic year.

The comprehensive electrical project parameters included State Electric’s installations for primary and emergency power, fire alarm system, interior and exterior lighting/lighting control systems, and electrical fit-up of all interior spaces. The electrical construction project was valued at $1.9 million.

The Center features a 98-seat theater/lecture hall; a 48-seat, tiered classroom; two (2) 24-seat seminar rooms; a reading room; a large, multipurpose space for talks, gatherings and special events; and, a roof garden and courtyard. It also houses faculty offices and open-office workplaces.

Planning Phase Challenges

In the earliest phase, the project required State’s extensive planning, layout and coordination efforts for conduit installation. Conduit was installed within the poured-in-place concrete structure, necessitating close cooperation with the general contractor John Moriarty and Associates, and other trades. The NECA contractor provided CAD coordination drawings and field measurements to avoid conflict with any of the facility’s other major systems, which were concurrently being planned and installed on an aggressive project schedule. SEC also installed pour-over cellular raceway systems for telecom and power, and later, raceway systems for lighting and the fire alarm system.

Primary and Emergency Power

For the building’s power requirements, State furnished and installed the primary transformer and secondary cable, as well as new switchgear. For emergency power, SEC retrofit and installed an existing unused generator from another facility on the Brandeis campus. The contractor also provided temporary power to the site in the initial project phase.

LED Lighting

A focal point of the contemporary, glass facade structure is the dynamic architectural lighting package designed in the facility’s three-story atrium lobby. Here, State Electric furnished and installed high-end Custom Metalcraft LED fixtures designed with an open-concept finish. The custom LED lighting is vibrantly accentuated by a Color Kinetics LED lighting system and controlled via a state-of-the-art Lutron lighting control system that provides programmable scene control.

State Electric’s Vice President and Sr. Project Manager Brendan Dickie and General Foreman Kevin Demarco supervised an electrical field crew of 8IBEW Local 103 electricians during the year and a half project.

The Mandel Center for the Humanities was funded principally by a $22.5 million gift from the Mandel Foundation, based in Cleveland, Ohio.

The MCH design integrates open study spaces to help promote the free exchange of ideas. According to Adam Jeffrey, Dean of Brandeis Arts and Sciences and faculty members, “The central vision of the Mandel Center for the Humanities is a commitment to integrate interdisciplinary work across the humanities and humanistic social sciences.” Mandel Center Director Ramie Targoff commented on the project, saying, “State Electric is proud to have helped build this dynamic Brandeis facility and to have worked closely with the general contractor, Moriarty, and the Brandeis project management team to meet project requirements. It required a high level of coordination and planning, and both the GC and Brandeis were key to enabling us to achieve quality electrical installations.”

State Electric Project Manager Brendan Dickie commented on the project, saying, “State Electric is proud to have helped build this dynamic Brandeis facility and to have worked closely with the general contractor, Moriarty, and the Brandeis project management team to meet project requirements. It required a high level of coordination and planning, and both the GC and Brandeis were key to enabling us to achieve quality electrical installations.”

The Mandel Center project is the fourth Brandeis facility for which State Electric has provided electrical construction services in recent years. Other projects have included the Shapiro Admissions Building (completed in 2009), the Heller Building, and Schneider Building.

LAN-TEL Communications Provides Tel/Data Structured Cabling Solution for Brandeis Mandel Center for the Humanities

Walhatham, MA – LAN-TEL Communications, Inc. of Norwood, Massachusetts provided the structured cabling telecommunication infrastructure solutions for the entire Brandeis facility. The NECA contractor installed a Berk-Tek/Ortronics Category 6E cabling solution for the voice and data systems and coax cabling for the building’s cable TV system. LAN-TEL project manager Dave Stevenson, RDCD managed a crew of 2 – 4 IBEW technicians during the 8-month project. The contractor’s telecom project was valued at approximately $90,000.

J.M. Electrical Installs Advanced, Energy Efficient Siemens Temperature Control System

Walhatham, MA – Siemens Industry, Inc. hired J.M. Electrical of Lynnfield, Massachusetts to install the Mandel Center’s energy efficient Siemens temperature control system. The system allows for accurate control of indoor air temperature for all occupants and ensures a high quality of indoor air is maintained. Many energy saving measures were used, as the system includes heat recovery wheels and night setback controls to lessen the building’s power consumption, resulting in significant cost savings for the school. J.M. Electrical’s Stephen Guaracino managed the project and work was completed on time and on budget.
Dorchester, MA – The NECA Boston / IBEW Local 103 Industry Night and Foreman Training Update was held at the Local 103 Union Hall in Dorchester, MA in February, drawing nearly 500 electrical industry professionals from Eastern Massachusetts. The event featured a trade show, product demonstrations, seminars, and a keynote address by noted construction industry motivational speaker, Mark Breslin. It was attended by electrical and telecom contractors, foremen, field supervisors, project managers, and estimators.

The diverse educational component of the event, which also served as a Foreman Training Update session, were highlighted by Appleton Electric’s product demonstration of fittings and lighting in hazardous locations; Salisbury PPE’s presentation on ARC flash protection and PPE; and DBI-Sala seminar on hands-on site-specific issues relating to fall protection equipment.

Breslin, the principal of Breslin Strategies, Inc., delivered a powerful presentation – “Foreman 101 – Our Road to The Future.” It centered on electrical industry foremen being professional leaders and performance motivators, as well as coaches and mentors. Numerous critical aspects of electrical industry projects for which foremen and women are responsible were discussed: safety, materials, labor, training, schedules, client satisfaction and work efficiency. As such, he focused on the importance to encourage innovation, boost morale, and reward productivity.

Keynote speaker Mark Breslin addresses electrical foremen and contractors; product demonstration of fittings and lighting in hazardous locations; Salisbury PPE’s presentation on ARC flash protection and PPE; and DBI-Sala seminar on hands-on site-specific issues relating to fall protection equipment.

Leading Electrical Industry Partners and Vendors Exhibited


Accu-Tech®
ERICSON®
Graybar®
SALISBURY

DBI/Sala
Appleton®
KLEIN TOOLS®
RIVERSIDE®

GREENLEE®
Honeywell
Milwaukee®
Southwire®

- ARC FLASH PROTECTION
- VDV, SECURITY
- CABLE TRAYS • LIGHTING
- CONDUIT BOXES
- WIRE & UTILITY CABLE
- CABLE CONNECTORS
- PANELBOARDS
- FALL PROTECTION • PPE

- FLAME RESISTANT APPAREL
- TEMPORARY POWER
- ELECTRICAL & TELECOM TOOLS – CABLE PULLING, WIRE & CABLE TERMINATION
- TEST & MEASUREMENT
- LED VOLTAGE DETECTORS
- CLAMP METERS

Wentworth Institute Partners with NECA and Local 103

Wentworth Institute of Technology also exhibited. The acclaimed engineering college is partnering with NECA Boston Chapter, offering an Advanced Training for Construction Management continuing education program and an annual scholarship program. Wentworth has also joined forces with IBEW Local 103, NECA and JATC Boston to offer an Associates Degree program in Applied Science in Engineering Technology (AENT) to graduates of the JATC Inside Wiremen Apprenticeship Program.
SHOPTALK

An interview conducted with electrical industry professionals on issues impacting the construction industry.

NECA Boston Chapter’s Commitment to ELECTRI International Funding Key Electrical Industry Research and Education

An important aspect of the NECA Boston Chapter mission is our commitment to the future of the electrical industry. The Chapter’s Diplomat Level pledge of $350,000 to ELECTRI International (The Foundation for Electrical Construction, Inc.) is one important way we ensure our contractors are the most qualified, up-to-date, safety conscious contractors in the industry. In this interview, Tom Driscoll, Executive Director of E.S. Boulos Company in Westbrook, Maine and the Boston Chapter NECA rep serving on the ELECTRI International Council, discusses research undertaken by the foundation. Mr. Driscoll is also a Governor of the Boston Chapter, having formerly served as President.

Q As ELECTRI International’s Boston Chapter rep, what’s your most important consideration in deciding which research projects should be funded?

A I look for studies that will have the greatest impact on large projects in our region. Studies involving new technologies and processes for construction are important. Also, studies that will assist in material handling and lead to planning innovations, especially for high-rise projects.

Q What new ELECTRI research project topics will have a strong impact on the market and future trends in construction?

A The BIM studies that are being undertaken will impact the marketplace in a major way. On most large commercial and institutional projects, you must be using BIM to be eligible. Also, the Construction Wireman – Construction Electrician (CW-CE) studies are key, as these are programs that all IBEW Locals will be adopting.

Q What specific ELECTRI International research do you see as most critical to electrical contractors’ performance in today’s construction market?

A Lessons learned from the Florida Initiative which deals with the new CW - CE classification of workers are very important. The new classifications will allow us to be much more competitive on work that we have lost to the open shop contractors. A blending of the construction wireman and construction electrician with our regular journeymen and apprentices will give us an average rate which we feel can compete.

Q Have any of the research studies influenced how E. S. Boulos is conducting business today?

A The studies on BIM have been helpful to us in getting started in the BIM process and choosing the proper software to run with. The initial software and training is very expensive. Learning from contractors who have been involved for some time is helpful.

Q Has this research and the implementation of these service areas and specialties made E.S. Boulos a better electrical construction company?

A I think so... the more we think out of the box to improve delivery methods and streamline our labor in the field the more productive we become.

Q The jury may still be out, but, have they also improved your company’s bottom line?

A We are currently involved in a very large hospital project that has months of BIM work prior to the construction. The key to it impacting our bottom line is whether we use the planning and modeling to assist us in prefabrication and planning of our field operations. If we make full use of this, our bottom line will reflect it.

Q Is safety an important component of research that is undertaken?

A All of the safety research that ELECTRI has done over the years is extremely helpful. We try to take information from all these studies and incorporate them in our day to day safety program. In the type work we do we are dealing with voltages from 345KV and down in substations, with exposed live equipment. The safety and health of our employees is of the greatest importance. We are approaching 1 million manhours in the next few weeks without a lost time accident. That record is due to the commitment and importance we place on safety. It also has a huge impact on our ability to compete.

For further information on ELECTRI International, visit www.electri.org.

Visit us at www.bostonneca.org

For a complete directory of NECA Greater Boston Chapter members, visit www.bostonneca.org

Current ELECTRI International Research

Research studies currently being undertaken include:

- Procurement Strategies for Increased Profitability
- Using Information Technology to Improve Organizational Productivity and Effectiveness
- Electrical Contracting Educational Material
- A Framework for an Integrated Materials Management System
- Flat Rate Service Pricing
- Using the Earned Value Management System to Improve Electrical Project Control
- Grounding Mobile Construction Equipment for Safety
- Emerging Photovoltaic Market
- Collectively Bargained Workers Compensation: Making NEC Chapters a Player – Phases I & II
- An Integrated Information System for Electrical Contractors
- Streamlining Home Office Operations
- Lessons from the Florida Initiative
- Measuring Safety Performance of NEC Contracting Members
- Achieving Performance Improvement through an Effective Project Management Strategy
- Role of Electrical Contractors on LEED Projects with Focus on Commissioning and Innovation and Design Credits
- Local Apprenticeship Program Best Practices
- Effectively Recruiting and Retaining the Supervisory Workforce of ECs
- ELECTRI Knowledge Network Implementation
- Building Information Modeling (BIM): Benefits, Opportunities and Challenges for EC’s
- Investigate Opportunities and Barriers of the Lean Project Delivery System (LPDS)
- Building Information Modeling for Electrical Contractors
- Post-Disaster Recovery and Reconstruction Training for Electrical Contractors
- Project Delivery Methods for Electrical Contractors in Energy Efficient Markets
- Integrating Industry into the Educational Setting to Promote Learning

To download current publications listed please go to: www.necanet.org/store/index.cfm?fuseaction=search_results&Category=344

SPRING 2011