

## **Broadway Electrical Co. Provides \$25M Electrical Construction of MIT's Ray and Maria Stata Center**

**Longstanding NECA Contractor CM: Skanska USA Building Inc., Boston, MA;  
EE: R. G. Vanderweil, Boston, MA;  
Architect: Frank O. Gehry & Associates, Inc., Santa Monica, CA**



Cambridge, MA – Broadway Electrical Co. of Boston has reached substantial completion of the \$25,000,000 electrical construction of the new Ray and Maria Stata Center at the Massachusetts Institute of Technology (MIT) in Cambridge. Broadway's project scope included shell and core electrical construction, and under separate contract, the electrical fit-out for the state-of-the-art research building. MIT is expected to take phased occupancy of the facility this Spring, with a formal dedication and opening of the building planned for May.

One of the country's most distinctive and acclaimed new educational facilities, and MIT's largest new building in the past century, the 713,000 square foot Stata Center is comprised of two main buildings: the Gates Building is the MIT Laboratory for Computer Science, and the Dreyfoos Building, which serves as the college's Artificial Intelligence Laboratory, the Laboratory for Information Decision Systems, and the Department of Linguistics and Philosophy. In addition to being a research facility, the Stata Center features a lecture hall/auditorium, four classrooms, a child-care facility, a food services facility, a fitness center, outdoor gathering spaces, and two levels of below-grade parking. The facility will accommodate about 1,000 research scientists, graduate students, and administrators.

Among the Stata Center's design highlights is a crescent-shaped "student street" on the ground level, so designed to promote student social and intellectual interaction. The building's large auditorium, is built to enable technically advanced presentations. Two tiered classrooms are equipped for distance education and the two "flexible" flat classrooms will accommodate new teaching formats.

As primary electrical contractor, Broadway provided primary and emergency power distribution systems for the facility, as well as lighting and fire alarm installations. Broadway also installed empty raceways to support the security and tel/data system provided by fellow NECA Boston Chapter Member Sullivan & McLaughlin Companies of Boston. Mass Electric Co. performed the security work in the basement and the fit-out of the child care center.

The unique layout of the structure, which has very few ceilings, necessitated Broadway's installation of 400,000 lineal feet of PVC conduit within the building's slabs. All power to the offices at the Ray and Maria Stata Center is provided via a modular wiring system, allowing for greater end-user flexibility. Modular wiring also enhanced Broadway's efficiency of installation.

The lecture hall and tiered classroom installations were particularly demanding, since power, lighting, a/v, and tel/data conduits were

predominantly run within the slab. Broadway's General Foreman performed intensive layout, design/coordination on-site using Auto-Cad Power is provided throughout the seating areas, and at the front of the lecture hall is the teaching station where the professor can control lighting and A/V equipment. At the rear of the lecture hall is the main control room for A/V and lighting dimming equipment. The lecture hall is designed to allow for wireless capabilities. In flat classrooms, a modular wiring system was installed under the floor. Lighting for flat classrooms is mounted on a custom-made unistrut grid, which has power receptacles for additional lighting. A/V system components are also mounted on this grid.

To achieve lighting effects that architect Frank O. Gehry designed, Broadway undertook certain unusual installation techniques. One example is Custom corridor lighting, for instance, is installed via fixtures set into a cable tray mounted above the doors, and which runs the length of the corridors.

At peak construction, Broadway's project team included a project manager, two general foremen, and seven foremen, who supervised a field staff of 55 IBEW journeymen and apprentice electricians from IBEW Local 103. Project manager Chris Gibson said, "Scheduling of deliveries and planning installations were demanding due to the number of trades at what is a complex structure and tight site. Thanks to the professionalism of the Skanska USA project management team and MIT, Broadway has been able to meet performance demands and achieve quality installations."

Architectural design for the Ray and Maria Stata Center was provided by world renown Frank O. Gehry, of Gehry Partners, LLP of Santa Monica, California. Broadway is handling electrical construction services in tandem with general contractor Skanska USA of Boston.

The Ray and Maria Stata Center, named in honor of the co-founder and chairman of Analog Devices, Inc., replaces the historic Building 20 site in the Massachusetts Institute of Technology campus in Cambridge, MA. Carrying on the legacy of Building 20, the Stata Center is designed to be a model for the new academic village, "a magical incubator" for the twenty-first century. The state-of-the-art facility is uniquely designed to encourage interaction among a broad group of occupants in the center and concurrently serve as a hub of student activity; a model for innovative, technologically-supported education; and a modern incubator for new ideas and technology, providing significant flexibility for multiple uses.