

# CASE STUDY

BUILDING AUTOMATION CONTRACTORS

## The Tweed Courthouse

### *Restoration of a Landmark*

**H**istoric buildings represent a national legacy that is held in public trust. They represent the tangible as well as intangible presence of a way of life in big cities and small towns. They have both cultural and monetary value, as do parks, forests, and other real property assets. From an asset

took 20 years and \$14 million - or the equivalent of \$166 million today - to build.

### Renovating a Landmark

In 1999 a construction management contract was awarded for the renovation



prospective, historic buildings often possess innate qualities that reflect durable, sound investment, and long term value: high quality finishes and design, lower operating cost, high value urban locations, and high recognition value.

The Tweed Courthouse is such a landmark par excellence, one of the great legal institutions of New York, its institutional value transcending its infamous beginnings. Named after the notorious Boss Tweed of the Tammany Hall corruption scandals, the Tweed Courthouse

and modernization of the Courthouse, located in lower Manhattan adjacent to City Hall park. The \$85 million project called for the restoration of this 1881 landmark into a state of the art Museum of the city of New York.

Elements included the exterior marble facades, windows and other envelope features as well as the 100-ft.-high decorative brick rotunda, stained glass ceilings, courtrooms and circulation areas. Modernization elements of the program included the introduction of fire stairs,

## Project Team

**Owner & Developer:** New York City Economic Development Corp., NYC

**Construction Manager:** Bovis Lend Lease LMB Inc., NYC

**Mechanical, Electrical & Plumbing Engineer:** Ove Arup & Partners, Consulting Engineers, NYC

## Key Benefits

- Achieved greater energy efficiency from the mechanical system upgrades and Honeywell Excel 5000® Facility Management System.
- Increased energy tracking capabilities and system monitoring functions while maintaining system uptime.
- Increased equipment reliability, flexibility and cost effectiveness.

heating and emergency and normal power, all of which had to be woven and concealed within an historic structure. Relative to the heating, ventilation, and air conditioning (HVAC) system, T.E.C. Systems, Inc. was asked to augment an antiquated configuration, with a contemporary Building Management System (BMS) implicit of centralized monitoring and control via a state of the art front-end.

Because of its scalability and ability to interface with other building systems, Honeywell's Excel 5000® Building Automation System became the setup of choice. Notable components included Honeywell's Excel Building Supervisory (XBS) Graphical User Interface (GUI), accessible locally as well as remotely via modem. Complementary components, included thirteen factory-furnished Air Handling Units (AHU), Variable Air Volume (VAV) terminal units, LonWorks based EXCEL-10 controllers, dual water and hot water reheat systems, and Carbon Monoxide sensors to monitor the return air system.

These mechanical, electrical, and plumbing upgrades will offer a substantial energy cost saving potential as well as greatly improve productivity of the facility's operators and managers. The system was designed specifically to meet the unique needs of the courthouse, which will allow

authorize personnel to collect, organize, and view critical data across plant operations. Not only will the system help regulate heating and cooling functions, it will also afford building managers the opportunity to integrate lighting, security, and any other connected set of devices. Cohesively, the newly installed components provide a centralized solution to reliably, efficiently, and affordably manage facility operations.

Initially, under the administration of New York City Mayor Rudolph Giuliani it was understood that post renovations to the courthouse, the Museum of the City of New York would occupy the space. However, upon succeeding Giuliani, Mayor Michael R. Bloomberg revealed plans for a learning center where students from around the city will come for classes with New York themes in government, literature, architecture, economics, art and history. "The Tweed Academy will powerfully symbolize the high priority that the city government puts on education for all our students," Mr. Bloomberg said. "It will send the message that in New York City, academic excellence is available to all who seek it."

The project team ought to be complimented for the meticulous detail taken in restoring Tweed Courthouse to its original grandeur, which lends to the city of New York an extraordinary richness.



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