



CASE STUDY

BUILDING AUTOMATION CONTRACTORS

The Westin Hotel at Times Square

Facility Management is not a Luxury

What does it take to ensure the best possible guest experience? That's the evolving challenge confronting hospitality managers in the travel and tourism industry. Innumerable areas of high environmental sensitivity exist within all aspects of hospitality management. In particular, the hotel industry essentially commands a great deal of ambient control. Hoteliers need to accommodate their patrons with great service, and optimal performance from building systems and equipment. What's behind the walls of a hotel can have a direct impact on its guests. They remember how beautiful the lobby is. They also remember noise, temperature and ventilation problems.

The Westin Hotel at Times Square is New York City's newest triumph of architecture and art. Located at 43rd Street and Eight Avenue, flanking the E-Walk, a 200,000-square-foot entertainment and retail complex, the Westin is an impressive addition to the travel and tourism industry in New York. Developed, built, and owned by affiliates of Tishman Realty & Construction Corporation, and under the management of Westin Hotels & Resorts, a subsidiary of Starwood Hotels & Resorts

Worldwide Inc., it is the largest hotel development in New York City in 17 years. Designed by world-renowned Arquitectonica of Miami, the luxurious hotel offers 863 guestrooms and suites, meeting facilities, food and beverage lounges, and a health club boasting



Arquitectonica's innovative design statements.

To enhance standard amenities, T.E.C. Systems, Inc. was contracted and imparted with the responsibility of providing a comprehensive, flexible control-based solution for the economical operation of the Westin with the objective of offering

Project Team

Owner & Developer: Tishman Realty & Construction Co, Inc., NYC

Construction Manager: Tishman Westside Construction LLC, NYC

Mechanical, Electrical & Plumbing Engineer: Jaros Baum & Bolles, NYC

Hotel Operator: Westin Hotels & Resorts, White Plains, NY, subsidiary of Starwood Hotels & Resorts Worldwide Inc.

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Key Benefits

- Maximized efficiency of equipment and ensure control of environments.
- Optimized the delivery of air of moderate cleanliness, temperature, and humidity.
- Improved operator productivity and response time due to centralized control.

guests the maximum amount of safety and comfort. T.E.C. Systems isolated two primary areas of concentration.

1. Avoid cooling capacity shortfalls during peak seasons.
2. Monitor, control, and centralize multiple environments to accommodate a variety of visitors.

Post consultation with Jaros Baum & Bolles, the Mechanical, Electrical and Plumbing Engineer on the project, a solution was developed to implement a Honeywell EXCEL-5000® Building Management System (BMS) to integrate and regulate the central plant HVAC equipment. To complement the BMS, T.E.C. Systems would furnish and install an operator workstation to monitor, control, and centralize the various systems.

In instituting the specified solutions, primary, secondary chilled and hot water distribution systems were put into operation. The chilled and condenser water system consists of one electric drive chiller, two gas-fired absorption type chillers with heat generators, three cooling towers furnish with variable frequency drives, three plate-and-frame heat exchangers, three constant speed condenser water pumps, and three variable speed chilled water pumps. The secondary chilled water system, serving the guest room fan coil units, consists of two variable speed pumps. The flexibility of the overall system will allow it to operate in multiple modes as selected by the operator, based upon outdoor wet bulb temperature, and or desired condenser water set-point temperature.

The primary hot water system consists of two heat generators as part of the absorption type chillers and two variable speed hot water pumps. The secondary hot water system consists of two variable

speed pumps. Fourteen Direct Digital Controlled (DDC) Air Handling, and Heating & Ventilation units feed conditioned air to multiple meeting rooms, ballrooms, atriums, lobbies, common areas, and a fitness center. Honeywell EXCEL-10 controlled Variable Air Volume (VAV) boxes provide optimum temperature control to these areas.

To bring together the installed components, T.E.C. Systems engineered and instituted an integrated protocol system customized to the Honeywell EXCEL-5000® platform. The benefits of the system are threefold.

1. Maximize efficiency of equipment and ensure control of environments.
2. Optimize the delivery of air of moderate cleanliness, temperature, and humidity.
3. Improve operator productivity and response time due to centralized control.

The EXCEL-5000® system also provides an important life safety function for the facility. 225 fire and smoke control dampers and associated smoke exhaust fans, controlled from a fireman's smoke control panel located on the lobby level, allows for the expeditious purging of smoke in the event of a fire.

The BMS is monitored from a central location, via a Honeywell XBS-Graphical User Interface (GUI). Through the GUI, facility engineers, and maintenance staff can access alarms, display trends, and make set-point adjustments.

The Westin New York Hotel at Times Square exemplifies a certain perception of the city carried to its frenetic extremes. Thanks to its innovative design, and environmentally efficient facilities, it is destined to become a New York City landmark.

T.E.C. Systems Incorporated

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