Bringing the Morgan Building into the 21st Century
Morgan Building Case Study


The Morgan Building, listed on the U.S. National Register of Historic Places, has all the character and charm of a historic, 100-year old building but doesn’t have some of the modern conveniences of newly constructed buildings. Control challenges included outdated controls, lack of integrated building control, and a rare three-pipe hydronic system featuring a boiler, chiller and cooling tower with one common return.

“"We needed improved building automation control and enhanced comfort throughout the building, but most of all we needed to reduce our energy consumption and costs.”

Kimberly Fuller, Principal Urban Renaissance Property Company and General Manager for the Morgan Building

THE GOALS
• Maximize energy savings
• Improve energy management data
• Integrate control of all systems and devices
• Enhance monitoring, diagnosis and system configuration

HONEYWELL PRODUCTS INSTALLED
• WEBs-AX building automation software
• WEBs-AX integration controllers
• Spyder® field controllers
• Zio® LCD wall modules
• TR21 wireless sensors
• TR20 sensors
• Valves and actuators

THE RESULTS
• Using WEBs-AX enabled integration of all systems
• Centralized control resulted in an 18.6% drop in electricity usage and a 52% decrease in BTUs
• Energy savings, improved building management, and reduced maintenance costs
• Morgan Building was awarded LEED Silver Certification by the U.S. Green Building Council
• Morgan Building achieved EPA Energy Star certification

HONEYWELL ACI CONTRACTOR
Hunter-Davisson, Inc.
1800 S.E. Pershing Street
Portland, OR 97202
503-234-0477
www.hunterdavisson.com

HONEYWELL AUTHORIZED SYSTEMS DISTRIBUTOR
MI Controls
1617 E Burnside Street
Portland, OR 97214
Centralizing Control
As part of an overall system retrofit, contractor Hunter-Davisson, a Honeywell Authorized Controls Integrator (ACI), was brought in to help plan, facilitate and execute the building system upgrades with support from Honeywell Authorized Systems Distributor (ASD) MI Controls. Knowing that a new boiler and cooling tower were part of the planned upgrade, the team assessed the building’s overall needs and developed a plan to integrate all systems — including lighting — through Honeywell WEBs-AX™.

Little Additions Make a Huge Difference
Web based control allows the facility manager to monitor and manage system set-points, parameters and independent schedules on a floor-by-floor basis. It also allows for enable or disable of local control for the individual tenants via the Zio wall modules, as needed, to better manage building comfort.

In addition, Spyder controllers were used to manage several lighting systems in the building in conjunction with motion sensors to prevent unnecessary use of common area lighting after hours. System alarms are also delivered via email to the building engineer and the Hunter-Davisson staff to provide quick responses to mechanical system failures.

Energy Savings Worthy of History
Upgrading a historic building for modern energy savings is no small task, but the team’s design and execution of the new system achieved outstanding results. Energy consumption decreased 22 percent while comfort levels throughout the building were enhanced — greatly reducing tenant complaints about hot and cold spots that are common in older buildings.

We couldn’t be happier with the upgrade... All of the architectural integrity of the building was maintained while the new systems provide the energy savings and comfort control we were seeking.”

Certified Energy Efficiency
The Honeywell systems used in the Morgan Building contributed to the achievement of the LEED Silver and ENERGY STAR® designations.

LEED
LEED is an internationally recognized green building certification system developed by the U.S. Green Building Council. It provides third-party verification that a building was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

ENERGY STAR
To qualify for the ENERGY STAR, a building must score in the top 25 percent based on the EPA’s National Energy Performance Rating System. To determine the performance of a facility, the EPA compares energy use among other, similar types of facilities on a scale of 1-100; buildings that achieve a score of 75 or higher may be eligible for the ENERGY STAR. The EPA rating system accounts for differences in operating conditions, regional weather data, and other important considerations.
About ACI and ASD

Honeywell Authorized Controls Integrators (ACI) are the highest level of Honeywell contractors, with a minimum of two trained and certified employees on staff to support the complete Honeywell portfolio of commercial building products and services. Honeywell Authorized Systems Distributors (ASD) are trained and knowledgeable on the full range of Honeywell solutions and often work in tandem with ACI contractors to provide commercial building owners with the full depth and breadth of qualified support.

“Hunter-Davisson clearly defined the scope of work for this project, which was completed very smoothly. They did all of the follow-up necessary to complete the project, and with the new system our facility engineer can be more responsive to tenant comfort issues and proactive in making system adjustments.”

Kimberly Fuller  
Principal Urban Renaissance Property Company and General Manager for the Morgan Building

Niagara® Framework and the logos used herein including such marks are registered trademarks of Tridium.