

CASE STUDY

**Siena University
Nobel Hall**

Loudonville, NY



INTUITIVE CONTROLS ADVANCE SCIENCE LEARNING

THE CHALLENGE

- **An Unintuitive Legacy System:** *The existing science building ran on a control system staff found unintuitive, slowing routine adjustments and limiting visibility.*
- **Laboratory Airflow Complexity:** *Ten laboratories, two research labs and a vivarium required continuously balanced supply and exhaust airflow across the lab suite.*
- **Continuity Across a Live Campus:** *The new hall had to join the campus-wide WebCTRL front end and share a hot water plant with renovated Roger Bacon Hall.*

Project Objectives

Siena University's Nobel Hall, in Loudonville, New York, adds 40,000 square feet of specialized laboratories and active learning space to the university's science complex. Three occupied floors sit above a basement and beneath a mechanical penthouse, housing ten laboratories, two research labs, a vivarium, and faculty offices for Environmental Sciences, Biology, Chemistry and Nursing.

Funded by a transformative gift from the Nobel family, the building is the centerpiece of the university's goal of becoming the region's leading institution for the sciences. That ambition set the bar for the mechanical systems: laboratories, a vivarium and active learning spaces all sharing one envelope, each with its own airflow, pressurization and comfort requirements, running year-round in an Upstate New York climate.

Siena had one governing requirement, and it was not a technical one. The controls in the new building had to be easier for facilities staff to operate than the system in the existing science building. The university specified Automated Logic with no other acceptable bidders — a decision drawn directly from its own experience with previous ALC installations and service on campus.

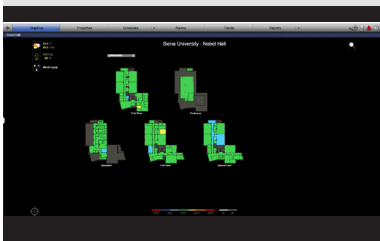
The Solution

Eastern Heating and Cooling, the authorized ALC dealer in New York, deployed the Automated Logic **WebCTRL® building automation system (BAS)** as the single control platform for Nobel Hall — integrating the new building into the university's existing campus-wide WebCTRL front end.

The building's laboratory load drove the design. A dedicated Laboratory Air Control System holds room pressurization across the lab suite, while a makeup air unit with energy recovery reclaims heat from the exhaust stream before it leaves the building.

- One 25,000 CFM air handling unit with optimal supply-air setpoint selection and optimized static pressure control.
- Three BACnet® variable-frequency lab exhaust fans with isolation dampers and endswitch feedback.
- Integration to 29 Phoenix Controls supply air valves and 33 exhaust air valves for lab pressurization.
- A 25,000 CFM makeup air unit with energy recovery unit, heat wheel and heat recovery coil.
- Thirty-six VAV boxes with hot water reheat and CO₂ sensing for demand-controlled ventilation.
- Hot water plant with three boilers on outside-air and demand reset, serving Nobel Hall and Roger Bacon Hall.
- Chilled water plant with two BACnet® chillers, variable-speed pumping and flow metering.
- Fifteen fin tube zones for perimeter heating, with color-coded floorplan graphics for every level.

Automated Logic's open platform model provides customers full access to WebCTRL tools, empowering them to self-perform modifications and maintain long-term control of their systems.



Color-coded floorplans put all five levels of Nobel Hall on one screen, with the building's Environmental Index™ reading 99 percent and nearly every zone green.





Nobel Hall adds 40,000 square feet of laboratories and active learning space to Siena University's science complex.

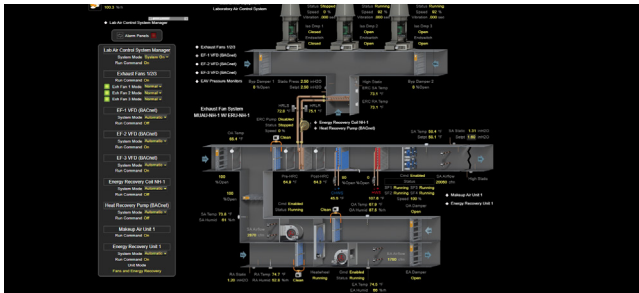
The Result and Future Plans

Siena got what it asked for: a system its own staff can run. Facilities personnel came up to speed quickly on WebCTRL, and the graphics give them immediate visibility into equipment that previously required interpretation. Nobel Hall's Environmental Index™ reads 99 percent, with virtually every zone within its ideal range.

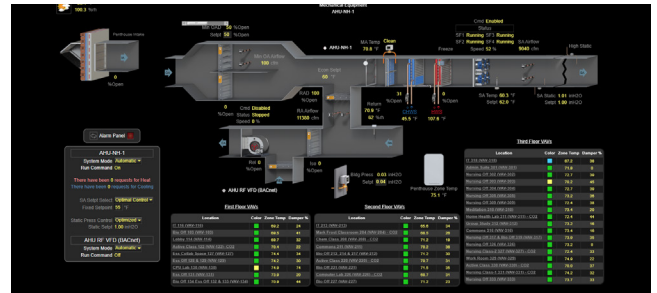
Laboratories, classrooms and offices hold their conditions without manual intervention, and occupant comfort across the building improved over the university's previous science facility. Siena has already committed to further Automated Logic installations as the science complex expands into its next phase.

“Based on over 20 years of experience with Automated Logic with different employers and industries, I was pleased that the Siena Facilities team chose to specify Automated Logic with no substitutions. The relationships I've built over the years with my sales engineers, technicians and Eastern's management team have been a key to the success in implementing this first class BMS system. We now have a modern graphical interface that allows us to quickly see building conditions and easily troubleshoot issues. We look forward to converting the entire campus to Automated Logic.”

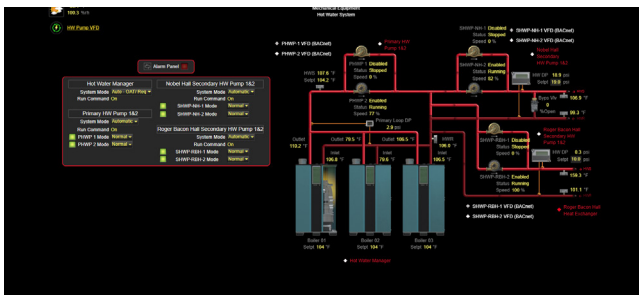
- Paul Serafini
Director of Facilities Operations
Siena University



Three variable-speed exhaust fans, isolation dampers and heat-wheel energy recovery.



One screen pairs the air handler with every VAV zone by floor, temperature and damper position.



Three boilers on outside-air and demand reset serve Nobel Hall and neighboring Roger Bacon Hall.



Chilled water, hot water, air handling and laboratory exhaust all report to one mechanical overview.

The WebCTRL system gives Siena University's facilities team a single, familiar platform for laboratory airflow, pressurization, heating, cooling and energy recovery across Nobel Hall — and one consistent way to operate it alongside the rest of campus.

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For more information, visit [automatedlogic.com](https://www.automatedlogic.com).



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