

Authorized Dealer



BUILDING MANAGEMENT SYSTEMS

Market segment
Government

Location
Indianola, Iowa, United States

Total area
7,804 m² (84,000 ft²)

Project type
Retrofit

Protocol
BACnet

Installation type
HVAC

Warren County Justice Center

Project Profile

The [Warren County](#) Justice Center houses the county's jail, sheriff's office, emergency management services, district attorney, administration offices, and court services for District Court 5 of [Iowa's Judicial Branch](#). The two-story building includes office spaces, four courtrooms, a commercial kitchen, housing for at least 80 inmates, and several shell spaces for future projects.

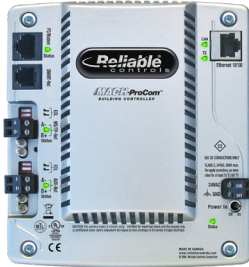


Authorized Dealer [Building Management Systems](#) installed a Reliable Controls building automation system a year after construction of the justice center. Reliable Controls products provide a central control hub for the facility's comprehensive HVAC system, which includes third-party variable refrigerant flow and dedicated outdoor air systems. Today building managers rely on the Reliable Controls system to provide optimal indoor air quality and temperature control, critical point monitoring, and monthly compliance reporting.

Total system objects
3,545

Integrated equipment
Samsung variable refrigerant flow system,
Addison dedicated outdoor units

Installed equipment



1 MACH-ProCom™
controller



7 MACH-ProZone™
controllers

Building Management Systems carefully designed the control system to achieve the following [sustainability](#) goals:

- Efficient HVAC operations: Reliable Controls software provides precise control over the variable refrigerant flow system, optimizing heating and cooling based on demand and environmental conditions.
- Dedicated outdoor air system efficiency: The Reliable Controls system enables efficient operation of a third-party dedicated outdoor air system, ensuring optimal air intake while promoting sustainable ventilation strategies.
- Critical system monitoring: By integrating sensors that monitor freezer and refrigerator temperatures and the domestic hot water system, the Reliable Controls system facilitates proactive, sustainable energy management.
- Resource conservation: The ability to monitor the sump pump and wastewater grinder status means building managers can quickly respond to potential issues, minimizing energy waste and conserving resources by addressing problems before they escalate.

Thanks to the power and flexibility of RC-Studio software, Building Management Systems seamlessly integrated 84 variable refrigerant flow units over BACnet/IP, ensuring standardized communication between Reliable Controls and third-party equipment. RC-Studio is an all-in-one engineering tool that helps facility managers improve operational efficiency, increase occupant comfort, and achieve their sustainability goals.



Installed software



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System integration also included two dedicated outdoor air system units over BACnet MS/TP. The outdoor air units lacked filter status monitoring, but Building Management Systems used controllers and sensors to provide real-time data on the status of outdoor and return air filtering. Without this, building managers were at risk of missing filter changes and potentially damaging expensive energy recovery wheels and other system components.

For control of large mechanical equipment, Building Management Systems installed a MACH-ProCom device. With its scalable inputs and outputs, extensive network routing abilities, and compact size, the MACH-ProCom controller achieves an optimum balance between form and function. Seven MACH-ProZone controllers monitor various building equipment and feed data to RC-Archive and RC-Reporter software. The MACH-ProZone BACnet Building Controller is packed with flexibility and provides highly scalable inputs and outputs with jumper-selectable relay configuration.

With RC-Archive software, Warren County owns and controls all justice center building data and benefits from a robust record of performance. RC-Reporter software extracts intelligence from that data with readable, reliable analytics that help the county find opportunities to improve operational efficiency.

Using RC-RemoteAccess software, Building Management Systems simplified IT management and optimized data communications in a way that's affordable, scalable, and secure. Today building operators can remotely access the system using RC-WebView, a time-saving browser-based building management solution that combines the power and accountability of enterprise tools with a simple interface. With RC-WebView, facility managers can remotely monitor conditions and make adjustments. Before the Reliable Controls system was installed, building staff had to travel to the site to check and address room-temperature setpoints, equipment alarms, and more.

Cybersecurity was a crucial requirement when it came to integrating the building's mechanical equipment with Reliable Controls devices. The robust encryption measures and cybersecurity features inherent in Reliable Controls software helped Building Management Systems safeguard the integrity and security of the new control system.

Construction of the Warren County Justice Center was a year past completion when Building Management Systems installed the automation system, so it was a challenge for the project team to navigate this government building during operating hours. All doors were secured via card access or central command, and team members were often accompanied by a guard when working in high-security areas.

Reliable Controls and Building Management Systems were pleased to provide Warren County with a sustainable, efficient building automation system that helps keep the justice center comfortable and secure.