

SPRING CREEK ELEMENTARY SCHOOL



STATE COLLEGE, PENNSYLVANIA

EDUCATION

OVERVIEW

Spring Creek Elementary School was designed to meet the State College Area School District goal of providing collaborative education through the incorporation of technology, flexible learning areas, and sustainability. The new building accommodates approximately 450 elementary students.

PROJECT DETAILS

Reliable Controls Authorized Dealer Nexgen Automation successfully installed a MACH-System™ during construction of this LEED Platinum-certified facility.

An instance of RC-WebView operates on a central server in the district office and is connected through Ethernet to MACH-System devices distributed throughout the school that control mechanical equipment and regulate the temperature, humidity, and CO₂ levels in each classroom. Building operation data is delivered to RC-Archive and managed in RC-Reporter, allowing operators to easily monitor energy consumption. Nexgen used RC-Studio to configure the entire building automation system.

Individual heat pumps are installed in each classroom, with dedicated energy recovery units that maximize CO₂ control and minimize energy consumption. A central plant maintains water at optimal temperatures.

The project received LEED Platinum certification and an Alternative and Clean Energy program grant from the State of Pennsylvania. Rooftop solar arrays supply 20 percent of the school's electricity; compared to the old building, Spring Creek's energy usage is reduced by 58 percent. The building also conserves water with low-flow toilets, bathroom sinks, and kitchen equipment, along with sensors that automatically shut off fixtures.

"Nexgen was integral in the construction of three elementary schools for the State College Area School District. These projects involved new construction and renovation that were occurring simultaneously. Nexgen staff were very responsive to the issues that arose over the course of the three projects. All projects opened on time and Nexgen's staff was instrumental in meeting their tight schedules."

The State College Area School District Facilities department depends on the Reliable Controls MACH-System to facilitate a healthy learning environment for its young students. Reliable Controls and Nexgen Automation are pleased with the outcome of this project.

To learn more about projects using Reliable Controls visit
www.reliablecontrols.com/projects/overview



PROJECT TYPE
New construction

INSTALLATION TYPE
Boiler, CO₂ monitoring, heat pump, HVAC, power

TOTAL AREA
76,072 ft² (7,067 m²)

NETWORK
EIA-485, Ethernet

PROTOCOL
BACnet, Modbus

BACNET
Lochinvar boilers

EQUIPMENT INSTALLED
4 MACH-Pro2™ controllers
51 MACH-ProAir™ controllers
3 MACH-ProCom™ controllers
5 MACH-ProPoint™ expansion modules
12 MACH-ProZone™ controllers
11 SMART-Space™ controllers
RC-Archive® software
RC-Reporter® software
RC-Studio® software
RC-WebView® software

TOTAL SYSTEM POINTS
1,126 points

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Nexgen Automation Inc.

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