DAIKIN

CASE STUDY

FREDERICK COUNTY PUBLIC SCHOOLS

"When I can use OMNIA Partners and work with Daikin, I get the dream team on the project. It's so much easier to execute effectively."

– Roger Fritz, Director of Design and Construction, Frederick County Public Schools

Overview:

When Frederick County Public Schools initiated the bid process to replace an aging HVAC system at an area high school, it was surprised to learn the estimated cost for the project was between $10 and $12 million, putting the project well over budget. That's when project manager Thomas Mulligan reached out to his contacts at Daikin Applied in Washington, DC.

Given public school districts are under close scrutiny in terms of budgeting and spending, they typically employ a design-bid-build project methodology—the approach Frederick County planned to use. In this case, however, Daikin specialists persuaded Mulligan to consider a less conventional design-build model.

The methodology has some distinct advantages in that the contractors, engineers and owners work together as a team to solve challenges, often resulting in better solutions, fewer change orders and greater efficiencies on the jobsite. The design-build team also leveraged the help of OMNIA Partners, Daikin's cooperative purchasing partner in the public sector.

LOCATION:

Frederick County Public Schools – Catoctin High School

Thurmont, MD

AREA SERVED:

179,000 square feet

CHALLENGE:

Value engineer and install an electric-based HVAC solution to meet a specific budget and installation window

SOLUTION:

Daikin Maverick® II and Rebel® rooftop units in addition to Skyline® air handling units

School system leverages Daikin's membership in OMNIA Partners contract

DAIKIN REPLACES 40-YEAR-OLD HVAC SYSTEM WHILE **SAVING SCHOOL DISTRICT $4 MILLION**

Overview (cont.):

OMNIA Partners serves as a purchasing organization for state and local government, K-12 education, and colleges and universities. Daikin Applied is one of the cooperative's 310,000 members. Hallmarks of the program are economies of scale that yield transparent and value-driven pricing.

One additional complexity was that the entire solution had to be electricity-based—including heating. The school did not have a natural gas supply. The project leads also had to design and install a special steel platform to create a base for some of the HVAC system components.

Solution:

Brought together by Daikin Applied, a team of experts delivered the solution. The group included Alban Engineering, OMNIA Partners, and 13 sub-contractors. And they completed the project in two phases over two summer vacation periods, which prevented disruption during the academic year.

The centerpieces of the solution were nine Maverick and three Rebel rooftop units, as well as two Skyline air handling units. The Rebel series is Daikin's most energy efficient packaged rooftop unit. It provides owners with energy savings up to 43 percent above ASHRAE's 90.1 2016 standard, facilitating quick payback. The components also provide extremely quiet operation—ideal for learning environments. Similarly, the Daikin Maverick II rooftop units are quiet and energy efficient, meeting ASHRAE 90.1 2016. They are ideal for one- to three-story buildings and come complete, thereby minimizing design and installation costs. Both can provide electric heat as required in the specification for Catoctin High School.

The learning environment thrives when students are comfortable and the HVAC equipment supplying treated air is quiet. Air quality is also an increasingly important part of the equation and specific standards drive the movement of fresh air-handling equipment. Accordingly, the project for Catoctin High School included two Daikin Skyline air handlers. The Skyline products combat air contamination using micro-filtration and UV lights to fight bacteria. The units also feature mold-resistant drain pans and anti-microbial liners. Like the Rebel and Maverick II units, the Skyline air handlers feature high-quality, tight cabinetry and are extremely quiet.

Outcome:

The project was completed on time and on budget, one week prior to students returning for the academic year. Daikin was able to save Frederick County Public Schools $4 million, relative to the high bid, by employing value engineering, and by forming a select team of sub-contractors and engineers. The latter also helped negate any change orders—there were none. Plus, Daikin helped the school district maximize value through the company's OMNIA Partners membership. The new equipment is functioning perfectly and already providing significant energy savings.

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Daikin products and services are available on a competitively solicited and publicly awarded cooperative contract, available nationwide through OMNIA Partners. Visit www.omniapartners.com/publicsector for full contract documentation.