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Southgate Community Schools Implements Energy-management Program

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Southgate Community Schools in Michigan is partnering with ABM Building Solutions to take a proactive approach to implement district-wide facility improvements funded through an energy-management program. Once fully implemented, the program will improve the overall learning environment for the students, faculty and community.

The improvement project, which began in April 2012, is entirely self-funded; therefore it has no additional tax burden on the community or future borrowing capacity of the district. Southgate Community Schools is expected to achieve significant energy and operational savings from the measures and systems implemented within their schools through ABM's Bundled Energy Solutions Program, generating more than \$2.7 million in asset modernization.



“ABM Building Solutions is proud to partner with Southgate Community Schools to not only make a difference in their district, but the community and city as well,” said Bill Vaillancourt, General Manager of ABM Building Solutions—Detroit. “Improvements will be made to each school within the district to ensure they are all operating at optimal conditions, saving tax dollars, and providing highly efficient learning environments.”

The project will be implemented in three phases, with an estimated final completion date of February 2013. The first phase, scheduled to be complete by September to coincide with the new school year, will provide upgrades to 11 schools and buildings in the district: Allen

Elementary School, Anderson High School, Chormann Elementary School, Davidson Middle School, Fordline Elementary School, Gersich Middle School, Grogan Elementary School, North Pointe Elementary, Shelters Elementary School, Asher Adult Education, and a maintenance and transportation building. The wide range of upgrades will include new high-efficiency boilers, high-efficiency lighting, weather stripping and caulking the windows and doors, new demand-controlled ventilation and retro-commissioning the HVAC systems.

“As a deficit school district, we look for the best ways to stay financially viable while trying to address the continuous needs of our district,” explained Dan Phillips, Director of Business and Finance for Southgate Community Schools. “Some of the needs that had not received adequate attention were those of energy savings and capital outlay pertaining to district lighting, doors, windows, roofing, and most notably, HVAC.”

Key highlights of the project include providing solutions to eliminate the persistent water leakage at Davidson Middle School and Gersich Middle School. The windows inside the media center at Davidson

Middle School will be re-glazed to resist water leakage resulting from infiltrating rain water. At Gersich Middle School, a ground-water management system will be installed around the perimeter foundation base of the auditorium to prevent rain-water seepage in the sunken portion of the seating area. Due to ABM Building Solutions' effort to foster the local economy, they will utilize Jabro Carpet One for the auditorium carpet replacement.

During the second and third phase, ABM Building Solutions will install a district-wide, web-based HVAC-control system that will give the district better control of building temperature and time schedules. Aiding the district's management of the amount of energy used, the control system will also allow the district to detect arising equipment problems and notify appropriate staff.

Several lighting upgrades will also be made; most notably, the lighting in the gymnasiums will be upgraded to high-efficiency, low-maintenance T5HO fixtures, lamps and ballasts. In addition, a three-year energy and operational assurance program will be utilized to ensure Southgate Community Schools is achieving optimal savings.

Here's a look at how Southgate will improve the educational experience of students and faculty while upgrading an aging infrastructure, without increasing taxpayer burden:

Solution

- Retrocommission the HVAC systems;
- Install five Fulton PWH2000 Pulse boilers rated at 90% efficiency with five stages of burner-firing capability. The new burner firing capability will allow the system to operate on a range from as low as 400 MBh to a high of 6,000 MBh to more closely match the building heating requirements;
- Replace five existing single-stage boilers rated at 80% efficiency;
- Install a district-wide, web-based HVAC-control system; and
- Implement a new ground-water management system to fix water-seepage problems.

Benefits

- Guaranteed energy savings from the reduction of energy consumption;
- District-wide facility improvements entirely self-funded with no additional tax burden;
- Maximize the life cycle of their assets; and
- Improve the learning environment for the students.

Bottom line

Southgate Community Schools is able to reallocate \$2.7 million in energy-management savings to go toward critical asset modernization for 11 schools and buildings in the district.

For more information, visit www.abm.com.