Case study

Benedict College

Columbia, South Carolina

Benedict College and Johnson Controls work together to achieve goals

Founded in 1870, Benedict College serves more than 2,000 students on a two-block, 532,000 square foot campus of 30 buildings in downtown Columbia.

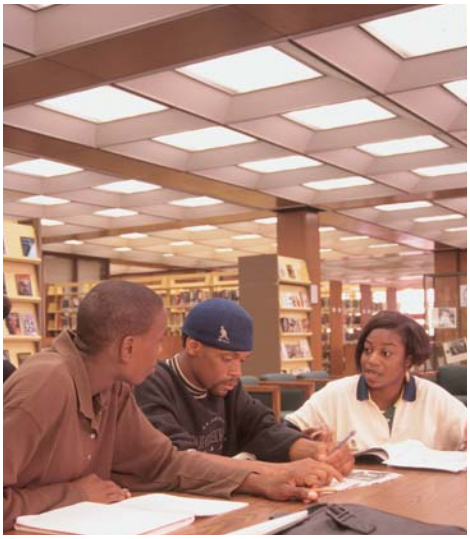
Challenges

- Improve physical comfort environments of dormitories and campus buildings for increased student recruitment and retention.
- Upgrade aging equipment; consolidate existing equipment into one building controls system for enhanced monitoring and control.
- Achieve recognition as best in its class for faculty, resources, programs and facilities.

Solutions

- Complete lighting retrofits in 13 campus buildings.
- Install Johnson Controls Metasys® Facility Management System (FMS) to provide controls and remote monitoring of all main academic and administrative buildings.
- Repair or replace equipment to improve performance of the heating, ventilating and air conditioning (HVAC) system.
- Contract with Johnson Controls for a ten-year Service Agreement to provide monitoring and maintenance of the controls system.

Johnson Controls



Lighting retrofits in public areas, such as the Learning Resource Center, provide increased comfort and energy savings.

"We have increased enrollment by 42 percent over the last two years, exceeding by three years our goal of reaching 2,000 students. I am sure that an enhanced physical environment, with better lighting and increased comfort, has played a part in recruiting these students."

Dr. David H. Swinton, President

Results

- Increased student enrollment by 42 percent since Fall 1994, from 1,500 to more than 2,100 students.
- Enhanced HVAC monitoring and control.
- Decreased electricity consumption by seven percent; decreased energy costs by 19 percent per student.
- Utilized physical plant staff more effectively through remote monitoring and control of equipment and decreased trouble calls and on-site repairs.

Strategizing for the future

In July of 1994, Dr. David H. Swinton was appointed as president of Benedict College, a historical black college with a proud tradition of educating African-Americans. After a long-range strategic planning process, the college began implementing strategies to direct Benedict toward the new millennium with a clear focus on achieving educational excellence. One major goal was to increase enrollment by 25 percent, to 2,000 students by the year 2000.

In 1995, Benedict College awarded a contract to Johnson Controls to enhance the campus living, learning and working environments based on the company's products, service and successful track record.

"We want to be the best in our class, for everything," says Swinton. "Programs, faculty, resources, facilities – we want to be number one. We look to Johnson Controls as a partner in achieving excellence in our physical plant."

Enhancing campus comfort – improving physical plant operations

Johnson Controls was contracted to complete an $870,000 project that included a lighting retrofit of all interior public areas. The installation of a Johnson Controls Metasys Facility Management System (FMS) provided control and remote monitoring of all main academic and administrative buildings on campus. Mechanical and controls repairs, including coil cleaning, valve repair, reinsulation of valves and pumps, and small equipment/parts replacement, were made to improve the performance of heating, ventilating and air conditioning (HVAC) equipment.

Due to the energy saving aspects of the lighting retrofit and improved equipment performance and monitoring, the college avoided utility costs of $152,000 during the first year. "We are guaranteed savings of $1,760,207 over a ten-year period," says Nathaniel Williams, vice president of business affairs. "Decreasing electricity consumption has a direct impact on the bottom line. Money saved on utilities can be applied toward other long-term goals, such as adding graduate programs to the curriculum."

Metasys has also had an impact on the efficiency of the physical plant staff. "It's a lot easier to remotely diagnose problems through the Metasys Operator Workstation," says Hayward Greene, director of physical plant. "I don't have people spending a lot of time manually checking problems – we can troubleshoot with the computer."

The lighting retrofit has also made maintenance easier. "One year later, I don't think we've changed a single bulb. If I had a guy dedicated only to relamping, he would be as busy as the washer repairman in the ad," says Greene.

Meeting and exceeding goals

Both Swinton and Greene have been pleased with the commitment Johnson Controls has shown in helping Benedict College achieve its goals. "Johnson Controls came in, identified our needs, and then worked with us to address those needs. The Service Agreement addresses maintenance needs, allowing us to focus on strategic issues, such as expansion," says Greene.

A technologically advanced facility management system like Metasys FMS provides the results only if its users understand how to effectively maximize its use.

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