

Broward County Public Schools

Revitalized district infrastructure reduces carbon emissions and generates millions in utility and cost savings



Broward County Public Schools (BCPS) has partnered with Johnson Controls for more than 20 years as a leader in energy efficiency and environmental stewardship. District leadership looked to Johnson Controls again when some of their building infrastructure started to reach end of life. With 239 schools and with budget for capital projects tighter than ever, the sixth largest school district in the country needed to prioritize cost savings alongside upgraded equipment and systems.

BCPS leaders trusted Johnson Controls to bring their vision of a refreshed learning environment to reality while reducing deferred maintenance, improving cost and utility savings and creating a safe and productive space for their more than 250,000 students.

[A Multi-Phased Approach to Energy, Cost, and Utility Savings](#)

In May 2020, Johnson Controls was initially awarded a \$4.5 million performance contract targeting improvements at nine

schools. In this phase, Johnson Controls installed more than 24,000 LED lighting fixtures and more than 1,700 water and conservation fixtures. This resulted in a 4,039 metric ton reduction in greenhouse gas emissions annually, over \$5.8 million in utility and cost savings and over \$405k in operation and maintenance savings over the performance period. In addition, the project created nearly 200 jobs in the local community with a variety of skilled tradespeople needed to facilitate an on-time and on-budget installation.



"As a result of William Dandy Middle School being selected for the Phase 1 Program for infrastructure upgrades, the school has benefitted from modernized lighting systems installed within the school, which has resulted in a safe school environment that is more energy-efficient and sustainable for students and staff."

John W. Battle III, Assistant Principal at William Dandy Middle School

Building on the success of Phase 1, BCPS leaders awarded Johnson Controls a second performance contract of \$10.2 million in December 2021 to upgrade 21 additional schools. Like Phase 1, Phase 2 is self-funded through guaranteed savings and no additional capital, reducing the district's budget and operational risks. The project is currently in the implementation stage and will include over 55,000 LED lighting fixtures and over 3,600 water conservation fixtures. It is set to reduce the district's carbon emissions by 5,920 metric tons each year and is on track to generate \$13.1 million in benefits within the next decade, exceeding the initial 12-year timeline.

Infrastructure Improvements Creating Optimal Learning Spaces

Johnson Controls infrastructure upgrades throughout BCPS facilities led to safer and more comfortable environments for students, teachers and administration districtwide. Improved internal lighting brightened hallways and classrooms which can impact student performance. External lighting improvements contributed to campus safety and enhanced visibility after school activities wrap up at night. The district's commitment to enhanced learning environments is also ensuring

a more productive and safer school environment for both students and educators as districts nationwide continue to face staffing shortages.

"The new lighting really helps brighten the classrooms and hallways," said Ricky Chiappelli, Behavior Specialist of Stranahan High School. "The entire team was dedicated to completing the job on time. They were always respectful when interacting with students and staff."

The project has had positive feedback from school personnel with clear returns on investment. This led to a third approved phase in June 2023 totaling \$11.2 million, which will upgrade over 59,640 LED lighting fixtures and over 3,300 water conservation fixtures across 23 schools, resulting in \$15.1 million in savings over the performance term.

Johnson Controls partnership with BCPS is setting the school system up for ongoing cost savings, energy savings and improved learning environments for years to come.

Measured Returns on Investment

Phase 1

- 24,000+ LED lighting fixtures and 1,700+ water and conservation fixtures
- Year 1 cost savings totaled \$552,719, exceeding the projected guaranteed savings and putting \$108,033 back into the district's budget

Phase 2

- 55,000+ LED lighting fixtures and 3,600+ water conservation fixtures
- Estimates a \$927,004 total annual project savings

Phase 3

- 59,000+ LED lighting fixtures and 3,300+ water conservation fixtures
- Estimates a \$1,067,838 total annual project savings

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