

JONES COUNTY K-12 SCHOOL TRENTON, NORTH CAROLINA

KEY PARAMETERS

- Type of Facility – New Construction
- Function – PK-12 Education
- Area – 125,000 sq. ft.
- Cost \$47.8 million
- Project Completed – August 2019

Challenge: Energy-positive sustainable design as part of a public-private partnership project combining kindergarten through high schools within one state-of-the-art facility. The new school replaces schools that were decimated by Hurricane Florence in 2018. Designers wanted to keep energy costs and maintenance costs down while offering the best possible learning environment. State and county governments provided roughly 70% of the funding and Firstfloor Energy Positive, a real estate development firm specializing in design, architecture, construction and property management, provided the balance. Firstfloor owns the building for the next seven years and leases it to the school district before ownership transfers to local government.



Solution: Dynamic V8 Air Cleaning Systems were installed in the HVAC system. The air cleaners clean both outside ventilation air and recirculated indoor air and allow a reduction in outdoor ventilation air which saves the energy required to condition that outdoor air.

Results: “This building was designed to be the most efficient building - probably the most efficient school that there is,” according to Jerry Marshall, energy manager for Firstfloor. “In a few months, the building will generate all the energy it needs and about 70 percent more.”

At the building’s dedication, junior Briana Powell from the Jones High School Energy Wise Club proudly showed off the facility. “So I’ve basically been walking people through the lungs and the heart of the school,” first pointing out the Dynamic Air Cleaner. “It basically takes in all the bad air and cleans it really good and then puts it out,” Powell explained.



Referring to the project success, “This is something that shouldn’t just be possible in Raleigh or Charlotte, this should be in every county in North Carolina,” said State School Superintendent Mark Johnson.

TEAM

- Owner – Firstfloor Energy Positive
- Architect –sfL+a Architects
- Design-Builders – Metcon Construction and Building Clarity
- EMP Engineers – Optima Engineering
- Maintenance – Brady Services

MECHANICAL SYSTEMS

- HVAC – Hybrid Geothermal with Central Air

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