

ENERGY STAR Building Design Profile

Aiken High School Phase I – Science Classroom Building
Aiken, SC 29801



LS3P's initial project scope was to develop a campus Master Plan to ultimately replace most or all of the existing academic facilities on the campus of Aiken High School in Aiken, South Carolina. As part of Phase I of construction, a two-story classroom building houses six new science labs with prep rooms, eleven classrooms for science lectures, seven general classrooms, two teacher workrooms, and associated support space for mechanical, electrical, communication, group toilets, and staff toilets. Covered walkways and sidewalks connect this new classroom building to the other buildings on campus. The design provides flexibility for future phase additions.

Projects that achieve the Designed to Earn the ENERGY STAR certification are designed to reduce energy and CO₂ emissions. It was important that this project achieve Designed to Earn the ENERGY STAR because it signals to the market that the project is intended to perform in the top 25% of the nation's most energy efficient buildings. **Aiken County Public Schools** and **LS3P ASSOCIATES LTD.** are also helping the environment by delivering a low energy design, which in turn sets the stage for operating the building to actually earn the ENERGY STAR label. ENERGY STAR buildings have a proven track record and yield average annual energy savings of 30 percent. Projects that achieve the Designed to Earn the ENERGY STAR also promote future financial benefits from reduced energy costs over the life of the building.

Details:

- The projected annual energy and CO₂ savings of the design is **42 percent** as compared to the median building.
- The estimated total annual energy savings for this project is **2,509,176 kBtu** with an estimated cost savings of **\$19,810**.
- Sustainable design elements and energy-saving features include proper building orientation, natural daylighting, automatic lighting controls, a high-performance building envelope, high-efficiency HVAC systems, and efficient plumbing fixtures.



Architect of Record:

LS3P ASSOCIATES LTD.

Engineering Firm:

Buford Goff and Associates, Inc.

Building Owner:

Aiken County Public Schools

Design Energy Rating:

92

Percent Energy and CO₂ Reduction*:

42

Design Year/ Estimated Occupancy Date:

2012/December 2013

Space Type:

K-12 School

Floor Space:

41,854 sq ft

Estimated Energy Use Intensity:

84 kBtu/sf/yr

Estimated Total Annual Energy Use:

1,051,300 kBtu/yr

Estimated Annual Energy Cost:

\$27,723

Technologies Specified:

High-Performance Envelope
High-Efficiency HVAC System
Automatic Lighting Controls

For More Information

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*Percent Energy and CO₂ Reductions are based on comparison to a median building of similar type.

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