



FOR IMMEDIATE RELEASE

CONTACT:

Kenneth Stanfield AIA
Sherman Carter Barnhart
P: 502-721-6100
F: 502-721-6111
kstanfield@scbarchitects.com
www.scbarchitects.com

**NATION'S FIRST NET ZERO PUBLIC SCHOOL
BEGINS CONSTRUCTION**

Bowling Green, Kentucky, May 15, 2009 – The Warren County Public School district recently broke ground for the nation's first total energy Net Zero public school. Net Zero is achieved when a building uses no more energy annually than is provided by on-site renewable energy sources. To reduce operating costs to that level, the new 550-student Richardsville Elementary School will utilize an R-25 rated ICF (Nudura insulated concrete form) building envelope, an R-38 rated super-insulated roof, active daylighting, occupancy and motion sensors, low-maintenance finishes, CO₂ monitoring, geothermal HVAC, wireless building technology, “green” kitchen management strategies, and a 300Kw photovoltaic array. Construction of the 72,000 square foot facility will cost \$14 million, and will be completed in Fall 2010.

While the comprehensive Net Zero designed energy strategies will profoundly reduce the school's operating costs, Dale Brown, Warren County Superintendent, adds, “This building will enable us to teach environmental responsibility by example and by actually engaging the students in these technologies.” When completed, the school will also provide a healthy, comfortable, and safe learning environment for students, staff, and the community, through the use of “green” finishes that enhance indoor air quality and provide sustainable and low maintenance environments.

“We scrutinized every aspect of the design that could potentially affect energy consumption, and found that cooperation at all levels is critical,” says Kenny Stanfield, project architect. Warren County's administrators and key staff have been closely involved at every stage of the design process, including a trip to Duke Energy's Customer Resource Center in Charlotte [NC], to look at state-of-the-art foodservice efficiencies. “The owner is making an enthusiastic commitment to innovations in school kitchen operations that have made Net Zero possible,” says Stanfield.

The finished facility will even involve students in monitoring aspects of the Net Zero design. The owner and architect agreed that the building itself should also serve as a teaching tool for the next generation, so corridors and other design elements are themed to offer students the opportunity for interactive learning.

A “geothermal hallway” exposes the piping manifolds and equips the pipes coming to and from the well field with a temperature gauge, so students can monitor the performance of the system. The “solar hallway” has a battery charging station where students can see the energy transferred from the solar panels to the laptop computer batteries. The “water conservation hallway” allows students to monitor the amount of rainwater collected and filtered through the site’s bioswales. The “recycling hallway” provides bins for all recyclable products and allows students to monitor the quantities of materials collected, and relates these to their global impact. Outside, a compact weather station gathers information 24/7, enabling students and teachers to evaluate the building’s performance throughout Kentucky’s four distinct seasons.

The photovoltaic solar panels were bid as a separate package, enabling the school board to evaluate the array’s first cost and subsequently apply for a renewable energy generation grant from the federal government to help offset the purchase of the solar panels.

As construction begins on this history-making facility, Sherman Carter Barnhart has designed the nation’s second Net Zero Energy school for the Warren County Board of Education. Bristow Elementary, a 750student, 77,000 square foot facility, is currently in the bidding phase, with construction anticipated to begin later this summer.

Attachments: Richardsville Elementary School renderings (2)
 Bristow Elementary School renderings (2)

- END -