

## Richardsville Elementary School - Bowling Green, Kentucky, U.S.



© CMTA Engineering Consultants  
Architects: Sherman Carter Barnhart



### PROJECT DESCRIPTION:

- A high-performance building envelope with NUDURA Insulated Concrete Forms for interior and exterior walls. The 72,285 sq. ft. school is the **First Net-Zero Insulated Concrete Form School in the United States.**
- Designed to use only 18 kBtu/sq. ft.—annually 75% less than the ASHRAE 90.1 design standard for elementary schools.
- Utilized NUDURA forms for sound resistance in the gymnasium, cafeteria, music media centre and between classrooms. NUDURA forms allowed the building to be constructed quickly during winter and other inclement weather.
- Other key aspects utilized in this project include: solar panels, active daylighting, Geothermal HVAC with CO2 monitoring, sunshade devices, motion sensors, Energy Star - rated kitchen, and an efficient operation and maintenance plan. The gymnasium floor is made mostly from bamboo and hardwood sections salvaged from the old gymnasium.



Watch our Richardsville video to hear from the Architect and Engineer behind this high performance school.

## NET-ZERO

**PROJECT TYPE**  
Educational Facility

**STATUS**  
Complete

**DISTRIBUTOR**  
Holdfast Technologies, LLC

### DECIDING FACTORS

Energy Efficiency  
Durability  
Safety  
Sound Attenuation  
LEED contributions  
Speed of Construction

### Energy Savings - A Comparison

The average U.S. Elementary School's utility bill for one month is approx. \$7000. Richardsville generated enough solar energy (in 8 sunny days in the course of a month) that they covered over \$4300 in utility charges and received a credit of \$300 for selling the energy back to the electric company.



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