

Allegany County Human Resources Development Commission

Cumberland, Maryland

SYNTHEON™

ACCEL-E®
STEEL THERMAL EFFICIENT PANEL

"In a conventionally built building, the mixed use utility costs in a building such as ours typically run about \$3.15 per square foot annually. But after a year of occupancy, we found our costs were running at about \$2.15."

Dan Lewellen
Deputy Director, HRDC

PROJECT FACTS

SIZE: 20,000 square feet

PURPOSE:

Offices, meeting/community service space

MAXIMUM WALL HEIGHT: 15 feet infill

PANEL DEPTH: 8 inches

WALL TYPE: Non-load bearing exterior infill and bypass walls

OWNER: Human Resources Development Commission of Allegany County

ARCHITECT: Moshier Studio

CONTRACTOR: Rycon Construction



PROJECT PROFILE

Building a new facility was not an easy decision for the Human Resources Development Commission (HRDC) of Allegany County, Maryland. The private, not-for-profit organization operates and assembles funding for a wide range of programs aimed at improving the lives of the young, poor, elderly and disabled.

Its board of directors decided to build a new headquarters only after an in-depth study revealed that a new building would be the most cost-effective long-range solution to its needs. In particular, the organization needed its new headquarters to decrease its occupancy costs – something they could achieve by erecting a LEED® Gold certified facility that was both cost-effective and environmentally friendly.

That made the SYNTHEON® ACCEL-E® Steel Thermal Efficient Panel wall system an attractive choice for architect Gary Moshier.

"I have always liked products that give you a better quality building envelope, and this seemed like a good way to go," said Moshier, a partner in Moshier Studio of Pittsburgh, which designed the 20,000-square-foot multi-story facility.

SYNTHEON SOLUTION

ACCEL-E overcomes many common causes of poor energy efficiency by fusing specially designed steel studs and expanded polystyrene (EPS) insulation together into a single continuous panel system. This eliminates air gaps and irregularities that can greatly diminish the performance of conventional framing and insulation.

Slots in the framing members allow insulation to mold through the steel, which further reduces thermal bridging and heat transference, blocks air intrusion, and adds thermal resistance. As a



LEED® Gold
Certified Project

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We Value Engineered Sustainability™

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Energy Efficiency and Long-Term Savings

"I think it's got a great future... we're going to see more of it."

Bud Curry, Partner, Rycon Construction

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result, the ACCEL-E panels offer tested insulating values that far surpass traditional framing, sheathing and batt wall assemblies. For its recycled content, minimized waste, and energy performance, ACCEL-E contributes points to as many as four LEED categories – a fact that greatly influenced the HRDC board's decision.

"The ACCEL-E system was part of a coordinated approach that included a planted roof, ground source heat pump and other factors," Dan Lewellen, deputy director of HRDC explains. "ACCEL-E forms part of an energy conservation package that has allowed us to realize those savings and achieve LEED Gold designation."

IMMEDIATE LONG-TERM BENEFITS DURING CONSTRUCTION

Replacing conventional framing, sheathing and insulation with the ACCEL-E wall system streamlines the construction process and reduces labor and onsite disposal costs. Window and door openings are pre-cut, and the open cavity simplifies the installation of electrical, plumbing and mechanical systems.

"A competing system offered a solid foam design, but we would have had to cut channels for the electrical and plumbing subcontractors later in the process," explained Bud Curry, superintendent for Rycon Construction, the general contractor on the project. "ACCEL-E allows us to do all the conduits for plumbing and electrical without cutting foam. That was a great help to us."

Curry expects to use the system again. "I think it's got a great future, and I'm sure we're going to see more of it," he said, adding, "The manufacturer gave us a lot of help, were always courteous, and always took the time to walk us through things and answer any questions. The technical support has been fantastic."

Additionally, ACCEL-E has provided immediate and tangible benefits with a long-term promise for the HDRC facility.

"In a conventionally built building, the mixed use utility costs in a building such as ours typically run about \$3.15 per square foot annually. But after a year of occupancy, we

found our costs were running at about \$2.15," says Lewellen. "So while there was a little more front-end investment in some of these systems, there's a pretty rapid return on investment, particularly when you're saving a third on your utility costs."

PRODUCT PROFILE

The SYNTHEON ACCEL-E Steel Thermal Efficient Panel is a lightweight, easy-to-install, high performance wall system that shortens construction time, optimizes crew use, greatly improves energy efficiency – and does it all in just one step. The secret behind the exceptional construction efficiency of ACCEL-E is an exclusive manufacturing process that combines the strength and performance of cold-formed steel framing with the superior insulation properties of expanded polystyrene (EPS). This unique fusion process provides each panel with the highest levels of engineered performance, yet delivers thermal efficiency so exceptional it exceeds new ASHRAE 2007 90.1 and IECC 2009 requirements for the building envelope. Plus, the materials used in the panels resist mold and mildew. No other wall system combines framing, cavity insulation and continuous rigid foam insulation in such an easy, one-step installation process.

The ACCEL-E panels are produced in thicknesses of 5-1/2, 6 and 8 inches, and can be manufactured in virtually any height, limited only by the mode of transport.



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