In the spring semester of 2009, fourth- and fifth-year architecture students at the University of Arizona College of Architecture were assigned a long-term real-world project that spanned over three semesters. The project goal: to create a sustainable low-income housing prototype for families earning below 80% of the median income of Tucson, Ariz., for the Department of Housing and Urban Development (HUD). Nineteen students spent a semester on the designs and building permits, followed by a year of construction three nights a week and on weekends. The entire home was constructed by the students, with guidance and instruction from a collaborative group of masonry and fabrication contractors.

With sustainability and budget both primary objectives,
design elements included a rain and gray-water harvesting system, an efficient layout positioned along a central circulation spine, and a heavily insulated Integra™ Wall System to battle the intense solar conditions of the eastern and western exposures. With rooftop weather stations and various sensors throughout the building assembly, a year's worth of data is currently being collected. The fourth U of A project for this HUD development, so far the Integra House is performing better than the others at thermal efficiency.

In a recent international competition between 119 schools conducted by the Association of Collegiate Schools of Architecture (ACSA), the project was awarded top honors, earning the coveted "ACSA Collaborative Practice Award" as the best example of collaboration between an architecture school, construction trades, and a government and/or community program.

Product: Integra™ Wall System
Architect/General Contractor: Drachman Design-Build Coalition - Tucson, AZ
Project Team: Professor Mary Hardin, AIA; Bill Taylor; U of A School of Architecture classes of 2010 and 2011

Featured Product >> Integra™ Wall System

Applicable for residential or commercial construction, the Integra™ Wall System was specifically designed to offer the benefits of a conventional masonry wall system with the added benefit of superior thermal performance. Used in either load-bearing or nonbearing conditions, masonry units are typically open on both ends with a reduced center web to reduce thermal bridging. Typically reinforced with post-tensioning technology, installed units can be filled with our propriety polyurethane insulation to achieve optimum thermal performance.

Available in a variety of colors, finishes, and shapes, Integra Wall offers sustainable design flexibility for both residential and commercial applications.

For detailed specifications and renderings, click here to view the digital catalog.

Continuing Education >> Lunch Presentation or Online Course

SUSTAINABLE SITE PAVEMENT SYSTEMS
Program Number: SS101
Credits: 1 CEU (AIA or USGBC)

Learning Objectives:
- Learn design applications for LEED® projects utilizing permeable pavement systems.
- Develop an understanding of improved land planning with use of underground storm water storage.
• Gain knowledge of proper specification for construction of a permeable pavement system.
• Determine storm water management strategies for regional soils and environmental conditions.

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OR

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Oldcastle Architectural is the leading North American manufacturer of concrete masonry, lawn, garden and paving products and a regional leader in clay brick.