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Joliet Junior College

Location:
Joliet Junior College
Joliet, IL

Architects:
Legat Architects
Chicago, IL

Project:
Garden Walkways
5,375 Sq Ft

Solution:
VAST Composite
Landscape Pavers

Completed:
2010



VAST Composite Landscape Pavers Help Put the Green in the Greenhouse Project at Joliet Junior College



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Joliet Junior College (JJC), Joliet, IL, has become the first junior college in the nation to boast a greenhouse registered for LEED-NC (New Construction) certification. The greenhouse facility, which had its grand opening in April 2010, includes three separate greenhouses, a multi-purpose classroom, gardens with a courtyard and walkways, and bioswales for stormwater management.

The greenhouses, which total 9,000 square feet, are Proline Aeromax models manufactured by Stuppy Inc., Kansas City, MO. Green building elements of the structures include twin wall polycarbonate construction, passive ventilation from the roofs, and recycled content in the steel framework and the concrete slabs on grade. A climate control system from Priva monitors and adjusts the environment in the greenhouses every six seconds.

Jason Lembke, Legat Architects, Chicago, IL, explained that the design for the facility features walkways and a small courtyard, which all together total 5,375 square feet.

"It was Illinois Brick that suggested VAST Composite Pavers because of their recycled content," said James Ethridge, Ph.D., greenhouse management instructor, Joliet Junior College. *"As soon as I saw these pavers, I knew they were perfect for the project."*

Illinois Brick Company, Palos Hills, IL, a leading brick distributor with the largest available inventory in the Midwest, was a major supplier for the project. *"With the growth of green building and more and more projects seeking LEED certification, we want to fulfill our customers' demands for green building products. That's why we decided to distribute VAST Composite Pavers,"* said Kevin Terven, hardscape manager, Illinois Brick. *"We thought that VAST is a green material just right for the JJC project."*



"I'm third generation in landscaping. I grew up on clay pavers. Concrete pavers just don't have the real color of clay bricks. The first thing I noticed when I saw VAST pavers was the deep, rich color. Based on color alone, concrete pavers can't compete with VAST."

Phil Rausch
K&D Landscape Management

VAST Enterprises is the material science research and manufacturing company that invented composite masonry for green building. VAST produces green building products with its patented technology that transforms recycled, post-consumer rubber and plastics into composite masonry: an advanced, highly engineered, and environmentally friendly construction material for hardscapes and landscapes. VAST's composite material is a proprietary blend of up to 95 percent recycled tires and plastic containers.

"The VAST Composite Landscape Pavers used in the Joliet Junior College project amount to 2,685 car tires and 86,000 plastic containers," said Andy Vander Woude, chief executive officer, VAST Enterprises. *"That's a significant amount of material recycled instead of ending up in U.S. landfills."*

The VAST manufacturing process requires 94 percent less energy and releases 89 percent less carbon dioxide than concrete product production. VAST production emits no mercury, generates no volatile organic compounds, yields zero scrap, and creates products that are 100 percent recyclable. All VAST composite masonry products are cradle-to-cradle green and can help projects earn more LEED credits than any other pavers. For the JJC greenhouse facility project, VAST contributed to several LEED credits, including 4.1-2 (Recycled Content).

"I first learned about VAST from Jim Ethridge at the college," said Lembke. *"I liked the product aesthetically. It was a strong material choice for the project — all the more so given its recycled content."*

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pavers just don't have the real color of clay bricks," said Phil Rausch, [K&D Landscape Management](http://www.kanddlandscape.com), Rockdale, IL. *"The first thing I noticed when I saw VAST pavers was the deep, rich color. Based on color alone, concrete pavers can't compete with VAST."*

VAST Composite Pavers are one-third the weight of concrete pavers, and features a patented grid system. The grid sections are set out on the base that has been prepared for pavers. Then the pavers are inserted into the grid, and they are automatically spaced and aligned. With the combination of the grid system and weight advantage, contractors can reduce paver installation time by 65 percent or more.

"Once the crew got the hang of it, we were plugging and chugging right along, especially since the light weight of the VAST pavers makes them so easy to handle," said Rausch.

Two colors were used: Redwood and Boardwalk. Greg Pierceall, landscape design instructor in the horticultural sciences program at Joliet Junior College, created a pattern with a running bond in Redwood with a soldier course in Boardwalk.

"The 4x8-inch paver size was appropriate for the scale of the project," said Lembke. *"The size, colors and paver pattern harmonize architecturally with the design and look of the garden."*

"For our horticultural sciences students at Joliet Junior College, the new greenhouse facility is an ideal learning environment," said Ethridge. *"One of the lessons they learn is the importance of considering green materials and techniques from the start of project planning."*



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