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TAR HEEL OF THE WEEK

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He blends buildings, nature

Frank Harmon specializes in sustainable design such as this classroom at Prairie Ridge, an education center in Raleigh.

By RICHARD STRADLING, Staff Writer

Raleigh architect Frank Harmon still draws inspiration from his boyhood hero, Frank Lloyd Wright. But he also takes cues from less celebrated designers, such as those who built North Carolina's simple farmhouses a century ago.

And birds.

"If you understand how birds build nests -- how carefully they place them, the materials they use -- it's really wonderful training as an architect," Harmon says.

Harmon has emerged as a leader in the growing field of environmentally friendly architecture in North Carolina. Like birds, he designs buildings of local materials - wood and stone -- that blend with the landscape. Like farmers before air conditioning, he directs sunlight and shade to keep buildings cooler in the summer and naturally lit all year.

Three Harmon projects in the works will show Triangle residents how design can help people use less water and energy and still live and work in comfort. They include:

* The visitor education center at the N.C. Botanical Garden in Chapel Hill. The garden, part of UNC-Chapel Hill, has raised more than half of the \$7.1 million cost of the project and is expected to break ground in 2006.

* The DELTA SmartHouse, a combination home and laboratory where Duke University engineering students will develop and test environmental building technology. The university plans to begin construction in March.

* Prairie Ridge, a 38-acre environmental education center developed by the N.C. Museum of Natural Sciences in West Raleigh. An outdoor classroom building is complete, and a 40-person dormitory with indoor teaching and lab space is

planned.

A half-dozen architectural firms sought the Prairie Ridge job, all with experience in "green design." But Harmon stood out, said Betsy Bennett, the museum director. His outdoor classroom overlooks a stream bottom from under a sweeping roof that also collects rainwater for use in the toilets.

"One of the things that Frank is really gifted at is understanding sustainability issues and still creating wonderful spaces that you want to be in," Bennett says.

Wright an early hero

Harmon, 63, became interested in architecture while daydreaming in Miss Dickenson's eighth-grade English class at Lindley Junior High School in Greensboro. His inspiration, visible from the window, was a Victorian mansion with big porches on three sides and oddly-shaped windows that suggested interesting things went on inside.

Harmon became enamored of Frank Lloyd Wright both for Wright's rebelliousness and his unwillingness to compromise. He remembers where he was -- on the lawn of Greensboro High School -- when he heard that Wright had died in 1959. He still admires Wright's way of designing buildings that complement the landscape rather than overwhelm it.

Harmon started his education at N.C. State University then earned a degree in architecture in London, where he saw how nature and gardens can become extensions of buildings. As a young architect back in Greensboro, he recalls being sent to a wooded building site with irises in bloom.

"I could just see the bulldozers coming," he says. "It made me feel very conflicted."

Harmon keeps the bulldozers away now by designing buildings to fit their sites. In Raleigh's Laurel Hills neighborhood, he perched a house on concrete pilings overlooking Crabtree Creek rather than scrape a flat pad into the hillside. Harmon inventories trees before he starts designing and accounts for them each step of the way.

"I'm really happy if we don't take down a tree," he says.

Harmon followed this approach with his own house, on a corner lot near NCSU. He and his wife, landscape architect Judy Harmon, built the house on pilings so the foundation wouldn't damage the towering oaks that keep the house cool in summer.

The house -- a steel, glass and pink stucco box on a street of traditional brick

and clapboard -- caused a stir when it was built in 1990. The home is more secluded now, behind a wall and the live oaks that Judy planted, and Harmon says it mostly evokes admiration from strangers who occasionally leave notes in their mailbox.

"I'm happy every morning I wake up there," he says.

The garden is one of Harmon's passions. He recently ordered his seeds for the coming year, particularly flowering vines. "I've invested heavily in morning glories this year," he says.

'Sustainable' is in

When Harmon opened his Raleigh firm in 1981, few clients thought about the environmental impact of their buildings. Now, he says, every one of his major clients wants a "sustainable" building.

"It's the next level of environmental awareness," he says. "I think most people have a consciousness of what we're doing to the Earth and want to do a better job."

Peter White, director of the N.C. Botanical Garden, was as demanding as any. White and his staff wanted their visitor center to embody their ecological mission, with photovoltaic cells generating electricity, cisterns that collect water from the roof for the gardens and a geothermal system that uses the Earth's constant temperature to help heat and cool the building.

Harmon worked the environmental gadgets into his designs but also brought a sensibility that White didn't anticipate. He divided one building into three, arranged like a "C" to cradle the gardens, and connected them with breezeways that will provide shelter.

"That was a genuine surprise," White says. "He's always got his eye on the artistic way everything comes together."

Harmon has taught design at NCSU since 1981, and that experience helped him win the job designing the DELTA SmartHouse for Duke's Pratt School of Engineering, said Mark Younger, a Pratt graduate and project coordinator.

With faculty, administrators and dozens of students involved, the project needed an architect who could handle a crowd.

"He acts not just like an architect, but like a teacher, too," Younger says. "He encourages people to be vocal with their ideas."

Harmon's firm has designed more than 50 buildings, from a simple art studio to a 70,000-square-foot addition to the N.C. Farm Bureau Federation's Raleigh headquarters off Glenwood Ave. Others include the N.C. Estuarium museum in Washington, N.C.; the N.C. Pottery Center in Seagrove and an iron-making studio at the Penland School of Crafts in the Blue Ridge Mountains.

Few of Harmon's buildings look like traditional farmhouses, but many borrow what he considers their genius. As he drove a visitor past the Lucy Daniels Foundation offices on Oberlin Road in Raleigh, Harmon noted how the long roof creates a breezeway that shades the building's south side, the way screened porches shield old homes from the hot summer sun.

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