

New building practices can clean indoor environments

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Emory University's new \$40 million Math and Science Center has a planetarium, a rooftop classroom and an observatory. It doesn't have that new-building smell.

That's by design.

The building is vying for certification by the U.S. Green Building Council -- a rating system that mostly rewards energy and conservation measures. But there's also a category that promotes good indoor air quality.

The green building movement is one of many remedies employers, school systems, home builders and community groups are using to create healthy indoor environments.

Quietly, industry has also responded to growing worry about indoor air quality. Paints are made with lower volatile organic compound content, and new office furniture is tested for the compounds. Carpet makers have adopted a "Green Label" campaign, reducing chemical emissions in their products. Pest control companies are spraying fewer chemicals indoors, using more insect baits.

Emory's Math and Science Center used the low-VOC paints and less toxic cleaning products. Janitor closets and copy rooms are isolated from occupants and are ventilated separately. Water-based adhesives were used for flooring, and carpet was certified for low emissions.

Emory's Whitehead Research Building became the first in the Southeast last year to win the Green Building Council's Leadership in Energy and Environmental Design status. Eight other Emory buildings, including a renovated library, are seeking the designation. Less than 1 percent of the Emory building costs went to green features.

In 2002, 331 buildings nationally registered for green certification, vs. 230 the year before.

One of the greenest office projects is in Sacramento, where the state of California, developing a \$392 million complex, required suppliers of furniture, carpet and other materials to meet strict limits on emissions of gases. For ventilation, one of its buildings was turned upside down, with air vents in the floor and return-air vents in the ceiling.

Each public school built in Minneapolis since 1997 has been designed to minimize chemical odors and maintain good ventilation.

Minnesota requires its school districts to have indoor air plans and indoor air coordinators. Schools must evaluate building systems for air quality or jeopardize state funding. The result: fewer complaints about indoor pollution.

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An estimated 10,000 schools nationwide have adopted the Environmental Protection Agency's voluntary indoor air guide called Tools for Schools. Tools is both practical and inexpensive, noted Kenny Foscue, health educator with the Connecticut Department of Public Health.

"One problem we see is when school buses are idling, diesel fumes get into the school," Foscue said. The solution is no cost: Just turn off the buses until they're needed.

DeKalb and Rockdale County schools are the only two metro Atlanta systems using Tools.

The American Lung Association of Washington state sends trained volunteers into homes at a family's request to help reduce exposure to tobacco and wood smoke, mold, dust mites, animal dander, cockroaches and other asthma triggers.

A similar program in Washington state has cut by half the severity of asthma complications in children, said John Roberts, a Seattle research engineer who helped design the Lung Association program.

Home asthma programs are offered elsewhere, including in inner city Atlanta. But Zap Asthma here is expected to run out of funding Aug. 31.

A few home builders have embraced indoor air protections.

Michele Myers eagerly shows off the crawl space of a Durham, N.C., house where thick black polyethylene is spread on the ground to block moisture and gases from rising toward the living space. The foundation, inside and out, is waterproofed.

"The crawl space is a major source of degradation of home and of health, so you must seal moisture away from the home," said Myers, president of M Squared Builders, who built the house. "We're in the Mold and Rot Belt."

Myers' creation is a Health House, certified by the American Lung Association. It features paints that don't emit VOCs; kitchens designed to minimize formaldehyde and glue and resin odors; carbon monoxide detectors; and continuous fresh air intake.

Houses at almost any price can use indoor air safeguards, which add 5 percent to 25 percent to the cost, Myers said.

Locally, the Greater Atlanta Home Builders Association and Southface Energy Institute have teamed up to run the Earthcraft program for energy-efficient, environmentally healthy homes. More than 1,000 have been built.

The Gregory family moved into an Earthcraft house in Buckhead two years ago. JoAnn Gregory, her son and daughter had sinus or ear infections or allergies that have almost disappeared in the Earthcraft house, she said.

"It really works," Gregory said.

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