



Judith Lennox stands on the second floor of the home she is renovating to have a minimal impact on the environment.

BY ANNE HADDAD

The Greening of Roland Park

Otis Rolley III, director of the Baltimore City Department of Planning.

“The city supports and is looking for ways to encourage new, innovative, environmentally and economically feasible approaches to architecture and construction,” Rolley says. “A ‘greener’ Baltimore is a better Baltimore.”

Applicants might have to be patient with city government, however, as permit and planning staff educate themselves in the latest advancements, says city planner Duncan Stuart.

Some of the concepts Lennox is building into her home are in use by factories and other industries—because it saves them money, says Mary L. Mosner of Twine Designs, the interior designer Lennox recruited.

“Factories are discovering it’s actually beneficial to their process to capture waste, and sell it to other companies,” Mosner says.

Environment-friendly construction is a goal for many, but they don’t know how to carry it out. Here’s how Lennox did it:

Step 1: Develop a Philosophy

“We should be giving back to the earth instead of taking, taking, taking,” says Lennox. Her green education started when her children attended Waldorf School of Baltimore, and continued as they grew into environmentally sensitive adults who taught her more about “permaculture,” which refers to caring for the earth and its inhabitants, and reinvesting all surplus to those ends.

Step 2: Establish Financial Priorities

The cost of renovating the home Lennox bought on Colorado Avenue in the Wyndhurst neighborhood is more than a regular renovation might cost. But the house will use less water, energy and other natural resources. The cost of a society that destroys more than it builds is one that Lennox considers too high.

Step 3: Assess How the Renovation Fits Your Life

This investment of surplus also will care for Lennox: Her new home will be her oasis, from which she hopes to derive serenity and harmony after a difficult time. Her husband, Dennis, died of a brain tumor in 2002.

The entrance will feature a fountain and curved wall. “So when you come in here, you are restored from the craziness of the world,” she says.

After her husband died, she says, she thought about selling her large Greenleaf Road home, moving to Vermont and building a Malcolm Wells house—which is partially underground for energy efficiency.

“But it was too much to think about moving,” she says. Children Matthew, 28, Noah, 25, and Allison, 22, were here.

She knew she wanted a green home and decided she wanted to renovate an older city home into one. The next hurdle was how to do it.

Step 4: Find an Architect or Contractor Committed to Green Principles

About a year ago, Lennox met Birx, because his daughter Laura dates Matthew Lennox.

Birx was the key Lennox needed to begin. He recruited Hagan, who was excited about adapting green principles he used for commercial spaces into a residential project.

“It’s the right thing to do,” Hagan says. He believes that green concepts will be the standard in construction.

“It may not be in my lifetime,” he says. “But this is the future of construction. We have to change the way we do things, or there won’t be anything left for our children and grandchildren.”

Step 5: Build a Team

Lennox met Mosner at a green building event in the city, and brought her in to help design an interior that would create the kind of soothing and nurturing environment she wanted—and comply with the principles of using green materials and achieving a functional design.

Step 6: Choose a Location Wisely

Lennox took walks through the Wyndhurst neighborhood to scout for appropriate houses. She had determined that she wanted to stay in the neighborhood because of its closeness to a commercial hub on Roland Avenue for maximum convenience and minimum driving.

She looked for houses that faced north, so that the back and main public areas would get maximum sunlight for passive heating in the winter and for the option of installing photovoltaic panels—which convert sunlight to electricity—in the future.

Step 7: Get Necessary Permits

All the permits for this job are the same permits needed for any rehabilitation and addition—except plumbing, Hagan says. The composting toilet and reuse of rainwater and gray water is unusual for a city home.

“That’s the one where they’re going to say, ‘This is out there,’” Hagan says. Because he and Birx know city officials will scrutinize the proposal, they wanted to have the plan completely drawn, designed and planned before officially applying.

While Lennox is excited to be the first to undertake such a large-scale green project, she and her team don’t want to maintain sole status. Green renovation works best when a critical mass of people adopt it, says Birx.

“This house is going to use a lot less water. It’s going to put a lot less sewage into the city system,” says Birx. “If everyone did that, we could dramatically reduce the stress on the earth’s limited resources.”

Mary Mosner, principal of Twine Designs, works to achieve functional interior design using “green” materials.



PHOTOGRAPHY: HELEN SAMPSON

Dan Hagan (kneeling), principal of Shackleton Enterprises, reviews plans to install a composting toilet and rainwater reuse system with project architect Glenn Birx.

What Green Means

Judith Lennox’s home should be completed in the fall—at least enough for her to move in. Her home will include:

- A two-story addition in the back, featuring a rooftop garden, for temperature control and to reduce water runoff. This isn’t a garden for tending flowers or vegetables, however. The layer of soil is kept to a minimum thickness and plants are chosen for being no-maintenance and drought tolerant.

- Rebuilt walls in the first floor for a new floor plan that puts most-used parts of the house toward the back, to take advantage of passive solar heat from the south.

- A stove that burns pellets made from recycled wood, olive pits and other organic waste. The stove will provide most of the heat for the house.

- One “composting” toilet, in which human waste doesn’t get flushed into the city sewer system, but goes to an underground composting tank.

- A plumbing system that channels rainwater from gutters and “gray” water from sink drains and the washing machine for use as irrigation and for flushing toilets.

What materials make a home green?

Here are building supplies the architect, contractor and interior designer are using:

Insulation: After considering various materials—including one made from recycled blue jeans treated with fire retardant—Lennox and her team decided on soy-based polyurethane expandable foam insulation.

Foundation: For the foundation contractor Dan Hagan built for the addition, he obtained blocks made of recycled slag from the steel industry. The blocks look like concrete, and are about as heavy.

“A concrete block uses cement, which is stone and aggregate. The aggregate comes out of the ground. Instead of doing that, we don’t take anything out of the ground” to make the slag block, Birx says. “Can you imagine if the whole industry did this?”

Floor tile: This category offers a nice selection of products that don’t have to cost more to be green—and might cost less, Mosner says.

Exterior sheathing: Hagan chose Homasote, which can be used like plywood but is made of postindustrial trash and costs less.

Hardware: Instead of throwing away wood and hardware from the old section that was torn down on the back of the house, Hagan’s crew reused the old studs and lag bolts.

Windows: Lennox’s windows were chosen for peak efficiency.

Roof: Roofing material will be made of 50 percent recycled steel, designed to reflect heat instead of absorb it.

For homeowners thinking about incorporating green principles, here are a few sources:

Insulation information for consumers is available at the U.S. Department of Energy, Energy Efficiency and Renewable Energy home page: www.eere.energy.gov

U.S. Green Building Council, whose members are contractors and other professionals: www.usgbc.org/

For information on photovoltaics, the National Center for Photovoltaics: www.nrel.gov/ncpv/