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Green from the ground up: Building an eco-friendly home in Andover

By Brian Messenger

Billed as the most environmentally friendly and energy-efficient home in the area, even the "for sale" sign outside 11 Bateson Drive is made from recycled materials. The 4,100 square-foot Colonial is expected to consume a third of the energy of a similarly sized home built to code once construction is completed this spring, according to Andover resident Leland DiMeco, owner of Boston Green Realty.

"This whole project, from start to finish, is a green home," said DiMeco. "Why buy something that's going to be outdated? This is where the future's heading."

The home is heavily insulated from basement to attic, enveloped in an air-tight, water, mold and insect-proof wall panel system, and filled with green windows and appliances.

But the energy-efficient perks that dominate the construction of this home come at a price.

Contractor Dean Chongris, owner of the North Andover-based West Meadow Construction, said his budget for materials is 25 percent higher than for a comparable building project.

But with the promise of paying lower utility bills for decades to come, Chongris said the return on such an investment typically takes just five to seven years.

"It's going to pay off for the homeowner," said Chongris.

The current asking price for 11 Bateson Drive is \$958,000. The average assessed property value on the street is about \$630,000, according to town records.

While two other green homes that Chongris built in Georgetown sold for about \$700,000 each, the contractor said he is working on a similarly efficient affordable housing project.

"We've taken this concept and brought it down to the \$300,000 price range," he said.

Chongris said no green home construction project in Andover or in surrounding communities is as "advanced" as the one at 11 Bateson Drive. Among the eco-friendly features there include:

Extra-thick wooden framing with offset studs to ensure maximum insulation

A "thermal envelope" wall panel system, which Chongris compared to the design and efficiency of a freezer

Thermal interior walls able to store heat during the day and release it at night An attic insulated four times greater than required under building code

A reflective barrier beneath roof shingles to reduce solar heat transfer Insulated ventilation system

Energy-efficient hot water heater, furnace and air conditioner

Compact fluorescent lighting and motion sensors in hallways and bathrooms

Energy Star windows

Water-saving plumbing fixtures

Recycling stations built into the kitchen and garage

A 1,500-gallon underground cistern to collect and reuse rain water from roof

Landscaping designed to eliminate storm water runoff

Minimal use of harsh chemicals in paints and adhesives

"These are the kind of houses you want to be in," said DiMeco. "There's a lot of major benefits to building green. And I find people are willing to pay more for it."

As work continues on the roughly half-acre lot, Chongris said he and his crew will continue to recycle excess wood, plastic, metal and cardboard.

Unneeded tile, concrete and wallboard will also be ground up and reused, he said.

Aside from its greater efficiency, Chongris said there will be little difference between 11 Bateson Drive and a home built using conventional construction methods, once work is done there.

"When people ask, I tell them, 'It's not different, it's just better,'" said Chongris.

Added DiMeco, "It doesn't have to look different to be green."

Home specs

Price: \$958,000

Size: 4,100 square feet

Style: Colonial

Rooms: 12 rooms, 2.5 baths, 3-car garage

How green is it?

Estimated \$100 a month for heat, hot water and electricity \$32,000 in additional, energy-efficient construction costs Expected payback within five to seven years

