

Going Green in Colorado

Saving energy, saving money -- environmentally sound buildings take center stage

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Environmentally sensitive construction methods and products have homebuilders seeing green.

Green is the buzzword for construction that emphasizes natural resources conservation, pollution control and energy efficiency. In Colorado especially, builders are responding to an increased consumer and industry awareness that "going green" is smart -- smart for business and smart for buyers who want homes that will be healthy and energy efficient for years to come.

Savvy consumers are enjoying a growing selection of green options. Flats 15, for instance, is a small multi-family development being built on the bluff overlooking I-25 near Speer Boulevard. What makes this particular housing project unique is the insulated concrete form (ICF) construction method.

Concrete is poured into pre-made casts that contain lightweight insulation in the middle. The resulting insulated concrete walls are stronger and more durable than wood frames, resistant to inclement weather and free of chemical treatments that can give off toxic gasses.

"With ICF there's better energy efficiency and less sound transfer -- that's huge," said Liz Richards, a real estate broker with Leonard Leonard & Associates, which is marketing Dorado Construction's Flats 15 project.

Though ICF has been a patented construction method since the 1960s, it's growing in popularity with many consumers looking for ways to stem rapidly escalating energy bills. In the past ICF construction was significantly more expensive than conventional wood or steel construction, but with inflated energy prices, that gap has dropped to an average

of 10 percent.

Paying a little more for ICF is worth it to consumers for a variety of reasons ranging from wanting a quieter home environment to conservation values -- no need to cut down forests to build homes -- to durability issues, especially in areas where catastrophic weather, like hurricanes or tornadoes, can level a conventionally built home in seconds.

But lower energy costs over the long run usually hold the highest appeal for buyers.

According to www.icfhomes.com, homes built with insulated concrete forms require about 44 percent less energy to heat and 32 percent less energy to cool, a significant cost savings over the long haul.

Dorado Construction isn't stopping with its concrete solutions, however. The boutique builder is using other environmentally sensitive products, including imported Brazilian soapstone and redwood.

"They're both durable materials and very low maintenance," Richards said.

Brazilian redwood, for instance, is harder and lasts an average of three times longer than other wood-decking materials. Also, Brazilian suppliers adhere to strict industry standards that minimize impacts on that country's environment. Meanwhile, Brazilian soapstone -- often the surface of choice in science labs because it resists staining -- is mined from small quarries that minimally impact the environment.

Recycling will take on a new twist once residents move into Flats 15. At a community compost site, residents can take food items that would normally go into the garbage disposal and put them into an outdoor grinder. Once chopped up, the resulting compost is added to the soil for a community garden. The garden will be a cooperative of the residents and its use overseen by the homeowners association.

"This kind of thoughtful development is where Denver is

going right now," Richards said.

In fact, Denver and Colorado as a whole are considered pioneer locales for environmentally sensitive home construction. BuiltGreen Colorado, a nonprofit organization created in 1995 to encourage better construction methods, is the largest of its kind in the country with a membership of more than 100 builders.

Though many are small, niche builders, even the larger companies are getting into the green groove. Companies like Village Homes, John Laing Homes and McStain Communities -- as well as many custom home builders -- adhere to an extensive BuiltGreen checklist that addresses these major criteria: energy efficiency, pollution reduction, healthy indoor air quality, water conservation, natural-resource preservation and use of durable, low-maintenance construction materials.

Beyond the GreenBuilt designation, homebuilders can apply to become certified through the U.S. Environmental Protection Agency's Energy Star program. Qualified homes include features like high-performance windows, sealed construction and insulation, energy-efficient appliances and lighting, and fresh-air transfer systems. To earn the Energy Star certification, homebuilders must allow independent auditors to run a battery of tests on a sample of new homes.

Denver-based McStain Communities insists on going beyond the minimum requirements. "E Star requires a test on 15 percent of homes, but we test every house," said Eric Wittenberg, McStain Communities' president and CEO.

Like many green builders, McStain incorporates high-efficiency windows, low-flow toilets and showerheads, and low-leakage heating and air conditioning systems.

"Ducts for average heating and A/C systems typically leak up to 50 percent, so you are using more energy to heat or cool your house," Wittenberg said. "With ours it's less than 10 percent leakage."

Jim Latsis, owner of Latsis Custom Homes, has been a

longtime supporter of energy-efficient construction.

"The one thing that sets us apart is that we emphasize conservation," Latsis said.

To minimize leakage and increase energy efficiencies, Latsis puts each new home through a two-step process.

Before the drywall goes up, "we take theater smoke and put it through the duct system," Latsis said.

The smoke trail shows workers where they need to seal leaks. Once the house is finished, Latsis brings in a giant fan that is tightly positioned in the front door. Suction is created to subject the entire house to negative pressure. Again theater smoke is pumped in to determine where any remaining leaks need to be sealed.

That kind of extra effort has paid off, Latsis said.

"It's a real honor to say that we've been inducted into the BuiltGreen Hall of Fame," Latsis said.

Created in 1997 by BuiltGreen Colorado, the annual awards program honors builders, suppliers and community activists who have advanced the mission of the nonprofit organization. Latsis was inducted in 2003 for his "exemplary application" of green-building techniques.

With tight construction a new environmental hazard may emerge: the unhealthy build-up of stale or toxic air.

"You do have to worry about air quality," Wittenberg said.

McStain's mechanical fan system refreshes the indoor air in 45-minute cycles. Colorado Custom Homes uses a similar product to re-circulate air.

"It's a cool device," said David Tschetter, CEO for Colorado Custom Homes. "During the winter months, it takes air out and introduces fresh air. The fresh air is warmed through a filter so cold doesn't come back in."

Here's a look at some other green features offered by

Colorado homebuilders:

- Colorado Custom Homes installs a re-circulating water pump that delivers hot water to the faucets in a much shorter time than conventional pipe systems. The company also uses Optima Blow-In-Blanket custom-fit insulation systems that will not settle, separate or grow mold.
- Village Homes wraps all of its homes in Tyvek, a weather-resistant barrier that reduces leaks and keeps walls dry. To increase air quality and circulation, ceiling fans are standard features in all master bedrooms and great rooms.
- McStain offers designer upgrades that include bamboo flooring, recycled hardwood floors -- currently obtained from a vacated distillery in Indiana -- cabinets made from a wheat derivative, non-toxic paints and recycled glass tiles.
- Latsis Custom Homes uses a low maintenance composite rather than cedar or redwood for deck construction. Latsis also emphasizes extensive use of durable stucco and stone.
- John Laing Homes features Rinnai tankless water heaters that provide a limitless stream of hot water on demand. The Japanese-built water heaters are up to 50 percent more energy efficient than conventional water heaters.