



Jason Boyle, a partner in Green Valley Builders, built an EarthCraft-certified home for himself.

Putting words into action

By Sarah Cox

It's one thing to promote yourself as a builder of energy-efficient structures. It's another to construct a home of one's own that demonstrates the ideal. Justin and Jason Boyle, brothers and partners in Green Valley Builders in the New River Valley, have put the finishing touches on Jason's house in Blacksburg. The house, which has more than 5,000 square feet, is EarthCraft-certified.

"It was our first [EarthCraft] home," said Justin. "We also have two spec homes in Blacksburg that have gone through the final inspection for EarthCraft as well."

It isn't necessarily the gadgets and gizmos that you choose to put into a house, but the way that it's built that makes it energy efficient, Jason said.

For instance, the home was framed using advanced techniques; insulation was spray foam polyurethane; and the heating and cooling system was placed within the build-

ing envelope.

"It's a geothermal unit," explained Justin of the HVAC system. "But what's also important is the location of it that makes it energy efficient. The building envelope means that it is within the conditioned space of your house and not subject to outside temperatures."

Justin said the challenge in building such a big house was keeping the cost down; green products are more expensive, he admitted.

The house ended up being 5,700 square feet, with a master suite on the main level, five bedrooms and five and a-half bathrooms. The exterior is brick, the base siding is wood and concrete wood, and the kitchen appliances are all Energy Star-rated. More than 80 percent of the lights in the house are either fluorescent or contain fluorescent bulbs.

Sustainability is part of being EarthCraft-certified. The brothers explained that a quality house is naturally sustainable.

"It's built to last," said

Justin. When something lasts, that translates into being good for the environment, he explained.

"You don't have to buy replacement products. A house built with standard materials used today can last a lifetime — it's the method, not the materials."

In addition, the two homes they have built in Blacksburg are not only reasonable because of their cost, but because the Boyles are counting on the houses not requiring repairs in the immediate future.

"Is something you have to fix in two years affordable?" asked Justin. "That has to be taken into consideration. If someone knows they won't have to make repairs to the house, then it is affordable from the very minute you buy it."

Some EarthCraft services for affordable housing clients include design reviews, energy modeling, HVAC load calculations, pressure testing of building envelopes and duct systems, energy auditing and rate

analysis, mold and moisture assessment, and Energy Star facilitation and certification. If a house isn't tight and has air and water leakage, then mold and mildew invade and heat and cool air escape.

"All that leads to poor quality," said Justin. And, it leads to costly maintenance.

When an EarthCraft inspector comes to the building site, he or she conducts a blower test for air leakage. The EarthCraft inspector makes two visits to a site. The first visit occurs before the drywall is put up in a house, and the second and final inspection is when the house is finished.

According to EarthCraft, "The four biggest advantages to becoming an EarthCraft House builder are reducing callbacks, differentiating your homes, increasing profits and accessing special mortgage products."

In the end, an EarthCraft house gives as much benefit to the environment as it does to the homeowner and builder, said the Boyles.