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Living 'lightly on the land'

Hereford man creates home of his energy efficient dreams

Dana Cole 18 hrs ago





More Information

For information about the U.S. Green Building Council (USGBC), visit usgbc.org.

For information about the LEED for Homes certification system, visit thegreenhomeguide.org.

Just The Facts

The following categories are part of the LEED Homes project checklist:

- Innovation and Design Process – different aspects of integrated project planning, quality management for durability and innovative or regional design.
- Location and Linkages – rates such standards as site selection, existing infrastructure, community resources such as transit and access to open space.
- Sustainable Sites – evaluates site stewardship, landscaping with an emphasis on native plants, surface water management and implementing nontoxic pest control alternatives.
Development density

HEREFORD – When Ross Lampert decided to build a custom home on his 3.5-acre property in Hereford's Wild Horse subdivision, his goal was to "live lightly on the land."

"I wanted to build an environmentally-friendly, state-of-the-art, energy efficient home with open spaces and natural lighting," said Lampert, a retired Air Force lieutenant colonel who has made the Sierra Vista area his retirement destination.

As part of that design, Lampert set out to create an aesthetically pleasing home with an innovative design that would complement the area's natural beauty.

And that's exactly what he accomplished.

Lampert moved into his home a year ago after a 26-month building process that started in June 2014. The project followed rigorous LEED (Leadership in Energy and Environmental Design) Platinum level certification standards from start to finish. Based on a LEED scoring system – where eight rating categories are considered – he will own one of two platinum-rated homes in Cochise County, should the certification be awarded.

"Both platinum-rated homes are in Wild Horse and both were built by Bill Henry, who owns Henry Design Build LLC, based out of Tucson. Bill is the only LEED-certified builder I found in this area," Lampert said.

Lampert chose Kevin B. Howard – based out of Tucson – as his architect.

Known for his streamlined design and attention to detail, Howard used a drawing that Lampert created as a starting point for the project.

with moderate, high and very high density rankings.

- Water Efficiency – water reuse through rainwater harvesting and greywater systems, indoor water use through high efficiency fixtures and fittings.
- Energy and Atmosphere – evaluated on insulation, air infiltration, windows, heating and cooling distribution system, space heating and cooling equipment, water heating and distribution system, lighting, appliances, renewable energy performance and residential refrigerant management.
- Materials and Resources – material-efficient framing, environmentally preferable products and waste management.
- Indoor Environmental Quality – ENERGY STAR programs for improved energy efficiency, combustion venting measures with specific requirements, moisture control, outdoor air ventilation, distribution of space heating and cooling with room-by-room load calculations, air filtering, contaminant control, radon protection and garage pollutant protection.

“Both Bill and Kevin were outstanding to work with,” Lampert said. “They listened to what I wanted and worked with me at every stage of the project.”

LEED homes are registered with the U.S. Green Building Council, noted Lampert.

The 3,100 square foot home is surrounded with spectacular mountain views, which are captured by high quality, energy efficient floor-to ceiling windows. Sustainable, durable, renewable materials were used throughout the construction process.

Cappy Hanson, a close friend of Lampert’s through a mutual interest in writing, described her reaction when she stepped into the home for the first time.

“I was completely wowed. It’s breathtaking. This house represents the fulfillment of a personal dream for Ross...The views are stunning, the setting is incredible, the house itself is amazing,” she said. “The floor in the great room is like walking on a star-splashed night sky. It’s a delightful house with beautiful features everywhere you look, while following those energy efficient standards that Ross wanted. I love the landscaping and the water harvesting system and the way the house blends with its surroundings.”

Another good friend, George Castle, also raved about the design, the views and the details that went into the building process for the LEED rating.

“Ross chose a fantastic location,” Castle said. “He’s got that beautiful wash behind the house and the mountain views are spectacular. Inside the house, the openness of the rooms and the incredible way it’s designed to take in the views are amazing. Ross put a lot of research into this and was very, very careful about who he chose to design and build the home. He spared no expense on the windows. They’re spectacularly green.”

- Awareness and Education – education of homeowner or tenant on basic operations training and public awareness.

The windows, which are a big part of the home's appeal, are positioned to block the summer sun, while inviting its rays in the winter months.

"I have a slotted beamed covering on the back patio which takes advantage of the sun at different times of the year," Lampert said. Other outdoor features include native, drought-tolerant landscape plants and accent boulders that were found on the property. Stone beams support the porch. There's also a water harvesting system with 3,000 gallons of water stored in gravity-fed interconnected tanks.

Inside the home, kitchen counters are made of 60 percent recycled glass and 30 percent white quartz. Other natural products found throughout the home include bamboo flooring in the office and bedrooms and recycled rubber flooring in the exercise room.

Interior water efficiency was executed by Dave Grieshop, a friend of Lampert's who has a passion for high performance plumbing design, has chaired the technical advisory committee for Cochise Water Project and has several technical articles on "smart plumbing."

Grieshop designed an energy efficient system for delivering hot water when it first comes out of the faucet, without long waits.

"The EPA hot water delivery standard is to waste no more than 9.6 cups of water while waiting for it to heat up," Grieshop said. "That comes out to about nine-tenths of a gallon. In Ross' house, most of the faucets come in at least 50 percent below the maximum hot water delivery standard. So it's an amazingly efficient system."

There are three LEED certification levels – silver, gold and platinum – with platinum as the highest. Building homes with energy efficient standards in place does not have to be an expensive project, Lampert said.

“There are long-term savings by building durable, energy efficient homes,” Lampert said. “A lot more goes into these homes because of the rigorous standards, but it’s well worth the cost in the long run.”

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