AUGUST 2015

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WHAT'S SHAKING WITH LOCAL MIXOLOGISTS

DINING OUT AT LONE HAWK FARM

WILD ABOUT SOUR BEERS

HOMEGROWN HOPS

FUNCTION MEETS *Beauty*

A RIGHT-SIZED GREEN HOME

FARMHOUSE PUSHES THE LIMITS OF SUSTAINABLE DESIGN

ARTICLE CAMILLE WILSON
PHOTOGRAPHY ALIVE STUDIOS

Boulder has long been a hotbed in the area of sustainable architectural design and green building. The healthy competition that exists between its architectural firms encourages envelope pushing and attracts attention from other markets, thus affecting change throughout the country.

The Farmhouse project recently completed by Rodwin Architecture + Skycastle Construction in Boulder represents the pinnacle of the firm's work in sustainability thus far. With LEED Platinum certification, it is the firm's first regenerative home, meaning it produces more energy than it consumes. And it is beautiful and eminently functional to boot.

CONNECTED TO NATURE

Pete and Laura Terpenning's passion for plants, flowers and all things gardening is evident throughout their property, from the raised beds full of edible foods to gorgeous xeriscaping and permaculture gardens. Ready to build their "forever" home tailored to their lifestyle and personalities, they knew they wanted a green home that was uncomplicated and could help them feel connected to the outdoors.

The couple turned to Rodwin Architecture for the firm's expertise in sustainable design. Another draw was the combined design/build service offering, which lends the ability to better predict and control costs through close coordination and preserves the original design intent throughout the process.

A modern interpretation of the arts and crafts style was chosen for the home that sits in the center of the property. The theme plays out in details such as the use of tapered columns, barn-like brackets and half-round gutters. Inside, the simple, solid, natural style

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gives a very cohesive feel to the home and its furnishings. Connection to the landscape is achieved through careful planning and flow of the rooms, including an open view through the home and off the back porch while standing at the front door. The ability to reconnect with the landscape is architectural, but also functional by allowing a cross-breeze.

"We really wanted a warm and cozy home and loved the idea of feeling surrounded by all of the gardens," Laura says. "Now that it's done, it's so what we wanted."

SIZE MATTERS

The Farmhouse size is among its green features since smaller homes are naturally more sustainable. At just 2,800 sq. ft. of living space after removing the double wall system, the design had to include creative built-in shelving and multi-tasking of the rooms.

The upstairs sewing room, for example, doubles as an extra guest bedroom and includes a custom wall bed that, when in the closed position, has pieces that fold out to create the sewing table. The design also includes creative built-in shelving, such as shoe cubbies under the stairs in the entryway, shelves in the kitchen's center island and bookshelves in a reading nook at the top of the stairs.

Lead Designer and Project Manager Kirsten Snobeck, Assoc. AIA, LEED AP, compares the built-ins to a ship's design.

"Each square foot was maximized by creating spaces and little nooks and crannies for the things Pete and Laura needed," says Snobeck.

HOW GREEN IS GREEN?

Although there are several scales to evaluate green building practices, the U.S. Green Building Council's LEED, or Leadership in Energy and Environmental Design, certification system is widely recognized as the most established and robust measurement. It evaluates projects based on things like site design, use of native species, water reduction, air quality, use of recycled materials, deconstruction of the existing structure and diversion of materials from the landfill. The Platinum designation of the Farmhouse is exceptionally hard to achieve, and only a handful of homes have achieved this in the country.

Perhaps an even more impressive outcome for the project is the Home Energy Rating System (HERS) rating of negative eight. A rating of 100 would mean the home uses 100 percent of the energy per square foot allowed in building code. A negative number means the home is truly generating much more than it uses.

"This allows the Terpennings to charge their new electric car from the home's extra energy and still get a check from the utility company each month," says Snobeck.

IMPACTING PEOPLE AND PLANET

Principal Architect Scott Rodwin, AIA, LEED AP, has been personally involved in driving change in the building sector since arriving in Boulder in 1992 and opening his firm in 1999. The USGBC reports that buildings are the largest single sector consumers of energy and the largest producers of waste, more than both transportation and industry.

"What we do with buildings has perhaps the single largest impact on the planet," says Rodwin.

"With this project, as with any, we're not just looking at the architecture," says Rodwin. "We look at the clients' total life goals and see how what we build for them can support that."

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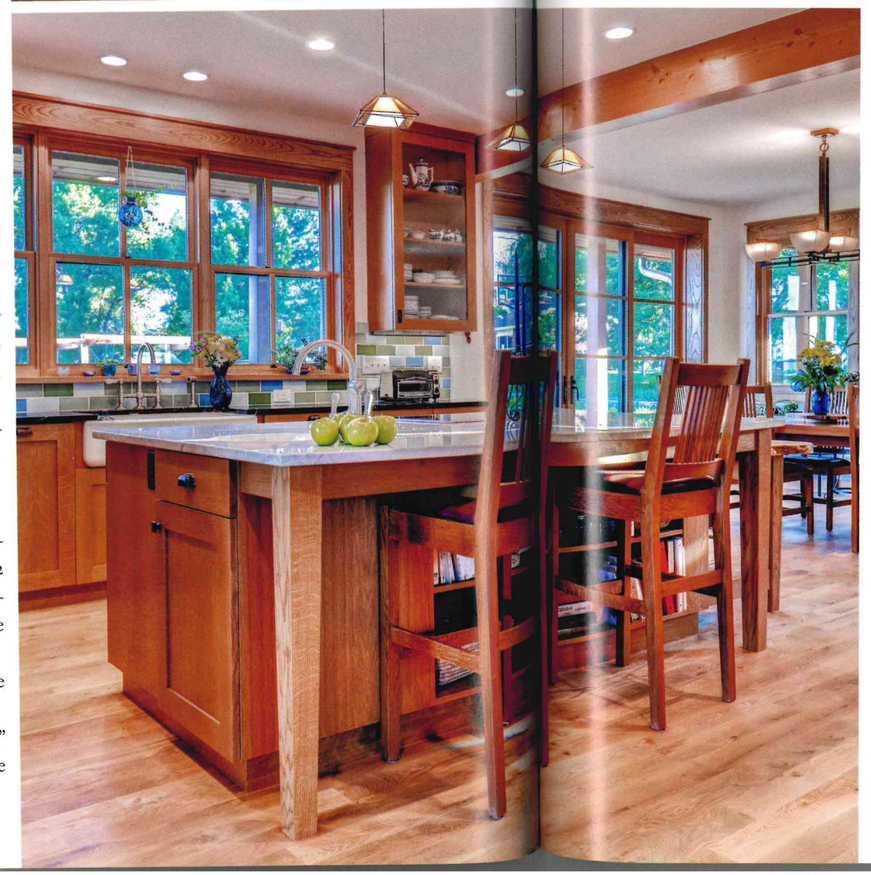

GREEN DESIGN *Features*

- Passive solar orientation design
- 10.2kW PV solar system
- Double cavity wall system with 2x6-inch exterior wall, 2x4-inch interior stud walls and one-inch gap
- Ground source heat pumps
- Bosch two-stage, three-ton pump to forced air
- R-49 open cell spray foam roof insulation
- Triple pane large stairway window, all windows U factor -.29
- No VOC paint
- 80 percent LED lighting
- Use of beetle-kill pine, reclaimed wood and Forest Stewardship Council-certified wood throughout home
- Diverted 84 percent of construction waste from landfill
- Passive solar chicken coop/greenhouse