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INNOVATIVE HOMES

The results of some forward-thinking minds, these three homes truly get back to nature—one floats on a river, another earned Texas' first LEED Platinum rating and the third blends in harmony with its surroundings.



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www.oshatz.com

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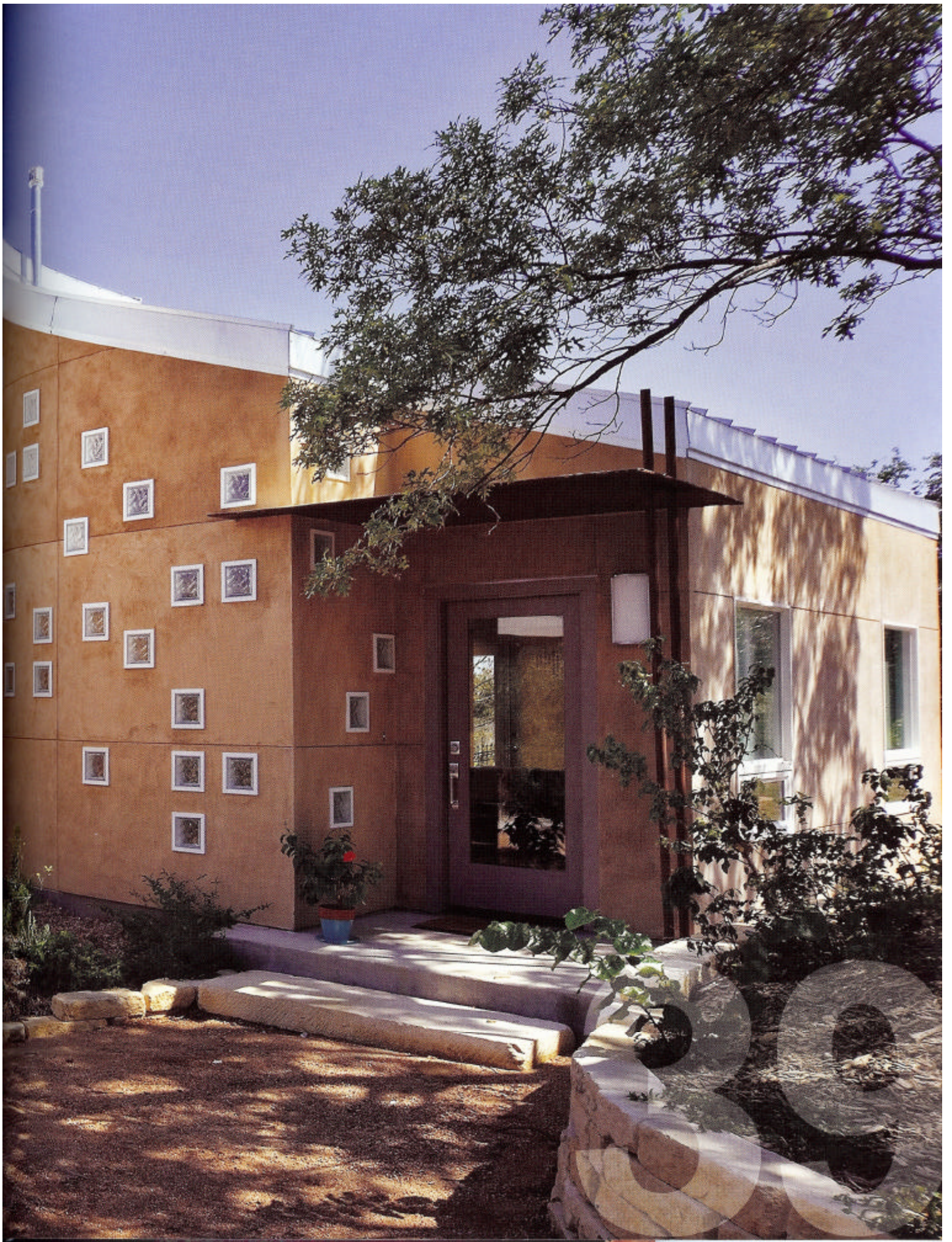
Award-Winning Green

Mixing cost-efficiency with eco-friendly design, this Texas home is the first dwelling in the Lone Star state to garner the prestigious LEED for Homes Platinum rating.

» by **RACHELDANIELS**
Images by **TERRIGLANGER**

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The south-facing, 1-acre lot encourages solar heat gain in this environmentally friendly home.





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AFTER HIS OWN HOME RECEIVED ONE OF THE HIGHEST HOME ENERGY RATING SYSTEM (HERS) SCORES IN NORTH TEXAS, IT WAS NO SURPRISE THAT GARY OLP, PRINCIPAL OF THE DALLAS-BASED FIRM GGOARCHITECTS, BECAME INTERESTED IN DESIGNING A DWELLING TO BE SUBMITTED FOR CERTIFICATION IN THE U. S. GREEN BUILDING COUNCIL'S (USGBC) LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED) FOR HOMES PROGRAM. Designed to provide professionals with an industry standard measuring a structure's green components, LEED certification is highly coveted among eco-conscious designers and builders. There are four LEED for Homes ratings: Certified, Silver, Gold and Platinum. The rating system is based on eight criteria: innovation and design, location and linkages, sustainable sites, water use, energy use, materials and resources, indoor environmental quality, and homeowner/tenant education.

Olp, who desired to attain the first platinum-rated home in Texas, tapped Don Ferrier, president of Ferrier Custom Homes in Fort Worth, Texas, with the task of building the dwelling. Following a

brief conversation about the project, the two men happened upon a new direction when Ferrier's daughter, Heather, suggested they design a home for her. The premise behind Heather's suggestion: If a young, single, working woman could afford an energy-efficient, environmentally responsible home, then nearly anyone could. Besides playing an integral role in the design process, Heather was also responsible for securing financing and finding the lot.

After a short search, Heather chose a 1-acre sparsely wooded plot. The south-facing lot would also encourage solar heat gain. In January 2006, following 10 months at the drawing board, Olp and Ferrier broke ground on Heather's home. The home was completed a brief four months later.

The result is a scaled-down version of Olp's own HERs award-winning dwelling that is nestled into the somewhat unlikely backdrop of small-town Weatherford, Texas. While Olp's home weighs in at 3,600 square feet, Olp and Ferrier fashioned Heather's three-bedroom, two-bath abode as a 2,038-square-foot residence. The total cost, sans the price of the site, was a mere \$115,000.



This page: InterFlor adhesive modular carpet tiles created from corn husks provide soft footing in the living room. **Opposite page:** Much of the first floor flooring is stained concrete, and the stairs are bamboo.





This page: Low-flow faucets and a dual-flush toilet that uses rainwater helps conserve water. **Opposite page: (Top)** Energy Star-rated appliances and Formica countertops created with low-VOC adhesives further the home's earth-friendly features. **(Bottom left)** Solar daylighting illuminates the master bedroom. **(Bottom right)** Square windows spread sporadically above the staircase provide unexpected light.



GOING GREEN » With Olp's own home serving as the inspiration, Heather's dwelling features a bounty of eco-friendly elements. In addition to passive solar heating and a solar water heater, vinyl windows provide maximum thermal performance. The roof, which features an inch of air space sandwiched between structure insulated panels and a metal roof, eliminates 75 percent of heat gained from the sun. A rainwater catchment system reduces sewage and pumpable water demand.

Outside, the landscaping furthers the conservation efforts. Native post oaks, which were protected during construction, dot the area. According to Olp, protection of natural vegetation is the key to green landscaping. "I always chuckle when someone says we can't have water restrictions or we can't cut irrigation back," said Olp. "Why not plant what grows in Texas without irrigation and then not worry about it?"

Inside the home, Olp was careful to select local materials, which reduced the amount of fossil fuels used in transportation. Much of the first-floor flooring features stained concrete, while the trim and treads on the stairs are composed of bamboo. Where soft footing was needed, Olp opted for InterFlor adhesive modular carpet tiles made of corn husks. He intermixed this with polyethylene terephthalate (PET) carpet. PET carpet is commonly known as Pop Bottle Carpet since its yarn is created from the reclaimed polyester resins of two-liter soda and ketchup bottles. Made by Beaulier, the product is reportedly thicker and more luxurious than nylon carpet, with superior stain resistance.

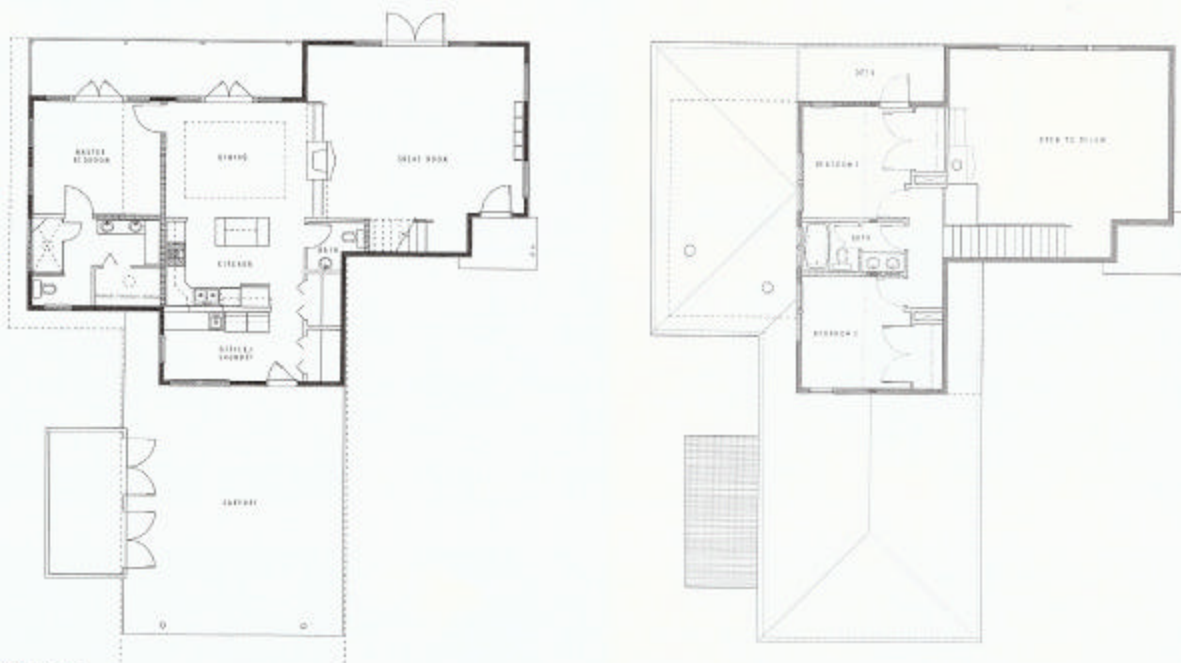
Regarding the interior design, Olp encouraged his client to

think creatively, wanting her to refrain from the traditional use of "heavy crown molding, dark oak drawn floors and rooms with 12-inch wide trims around the doors and windows." Large windows and French doors on the south side of the home open up the structure and utilize the techniques of passive solar heating. The French doors lead out from the kitchen and dining areas to a slender porch overlooking a side yard. On the north side of the house, glass block windows provide a unique aesthetic, as well as natural daylight.

In the kitchen, super-efficient appliances further the green initiative. In addition to being Energy Star rated, the Kenmore Elite appliances do not have digital read offs and they feature a kill switch to save ample energy. Greenguard-certified Formica using low-VOC adhesives tops the counters. The grenadine-colored countertops add a brilliant vibrancy to the island. Cabinetry composed of regionally grown white ash helped reduce transportation and decrease CO2 emissions. In fact, the majority of Heather's

3900 LAKE SHORE DRIVE

DESIGN TEAM: Gary Gene Olp, AIA, LEED AP, NCARB **ENGINEER:** Frank Neal and Associates **PRE-SCHEMATIC:** GGOArchitects **LANDSCAPE ARCHITECT:** Howard Garrett
INTERIORS: GGOArchitects **GENERAL CONTRACTOR:** Ferrier Custom Homes **OWNER:** Heather Ferrier **DESIGN:** November 2004 – August 2005 **CONSTRUCTION:** January 2006 – April 2006 **STRUCTURAL SYSTEM:** Structural Insulated Panels by FischerSIPS **EXTERIOR COMPOSITION:** Hard plank, synthetic stucco, galvalume metal standing seam on sloped roofs; TPO white membrane on flat roofs **INTERIOR COMPOSITION:** Gyp wall board, painted with no or low voc paint; bamboo trim, stair treads; curved tracings of the scored concrete match the curve of the radius roof; InterFlor adhesive modular carpet tiles; polyethylene terephthalate (PET) carpet **CABINETRY:** Locally grown white ash **DOORS, HARDWARE:** Jeldwen ThermoTrue doors **WINDOWS:** Vinyl Jeldwen windows **FIXTURES:** Delta Brizo in kitchen **APPLIANCES, EQUIPMENT:** High efficiency AC unit with attic fans; Kenmore Elite line of kitchen appliances **SQUARE FOOTAGE:** 2,038 **COST:** \$115,000 **AWARDS:** USGBC LEED for Homes Platinum Certification (1st in Texas; 3rd in the United States); Energy Star certified; American Lung Association Healthy House Award; International Builders Organization; Energy Value Housing Award; Gold Award 2006; Hot Humid Climate, Custom Category **FOR MORE INFORMATION:** GGOArchitects, 718 N. Buckner Blvd., Ste. 316, Dallas, TX 75218, 214.328.9091, www.ggoarchitects.com



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furniture, which she found at IKEA, is made of locally grown white ash and helps complete the home's creative contemporary styling.

In the master bedroom, daylighting continues the bright, open feel, and the master closet employs a Solatube Daylighting System, which are used as a smart alternative to skylights. The Solatube system helps bring natural light into what would be an otherwise dark space. Low-flow faucets and dual-flush toilets, which are flushed using rain water from the catchment tank, exist in both the master and the Jack-and-Jill bath. In the master bath, vessel sinks sit atop a Formica countertop in Jute Gauze, and copper-colored mosaic tiles from Daltile complement the California slate of the floor. Recycled glass tiles and low- or no-VOC paints complete the contemporary, eco-friendly design.

EARNING ACCOLADES » Since its completion, the home has been awarded the first-ever Platinum LEED rating for a home in Texas. It is currently only the third dwelling in the United States to be awarded this high honor. It also scored a 55 on the new HERs rating system and is considered 65 percent more energy

efficient than a conventional home. These ratings are reflected in Heather's average heating and cooling bill, totaling an average of \$50 a month.

Though the awards are commendation enough, perhaps the most important seal of approval has come from a source outside the architectural community. Heather's neighbors, who were initially skeptical, have turned their skepticism into admiration and appreciation. Opened for three tours during construction and four after completion, visitors who were asked to complete a survey surmising their thoughts had similar responses. "People would say, 'Now that I've walked in this house, I hate my house. It's dark. I live in a box that has boxes inside of it,'" said Olp. "They would all comment on how wonderful the natural light was. People were taken aback by the simple details that were done reasonably, modestly, affordably and how warm those touches were."

Through attention to detail and a strong concern for the home's environmental impact, Olp and Ferrier's warm, welcoming green home is a testimony to the truth that building eco-friendly does not have to mean building beyond one's means. **14**



Top: Low- or no-VOC paint decorates the walls of the home.
Bottom: Vessel sinks rest atop a Formica countertop in the master bathroom; California slate graces the floor.

