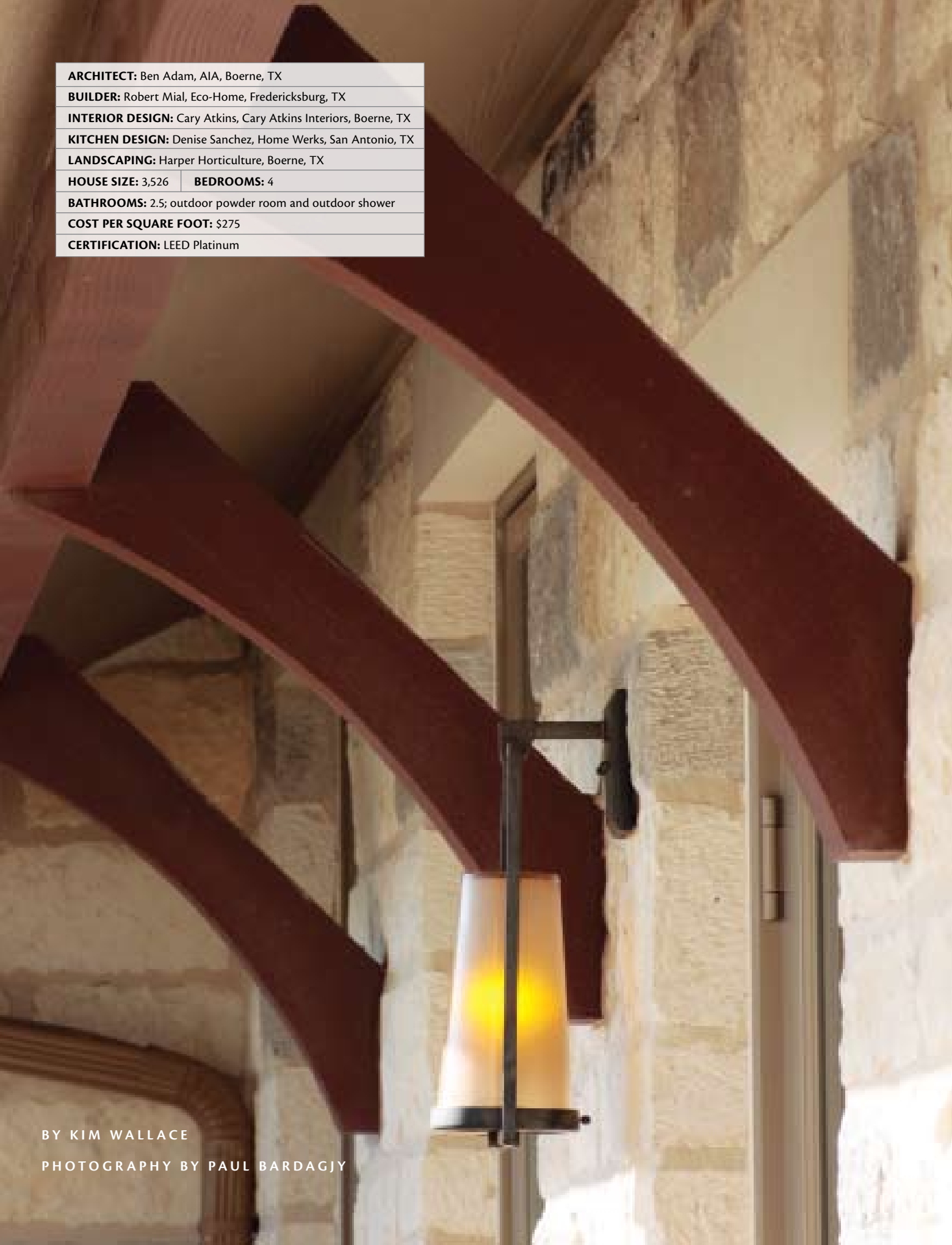
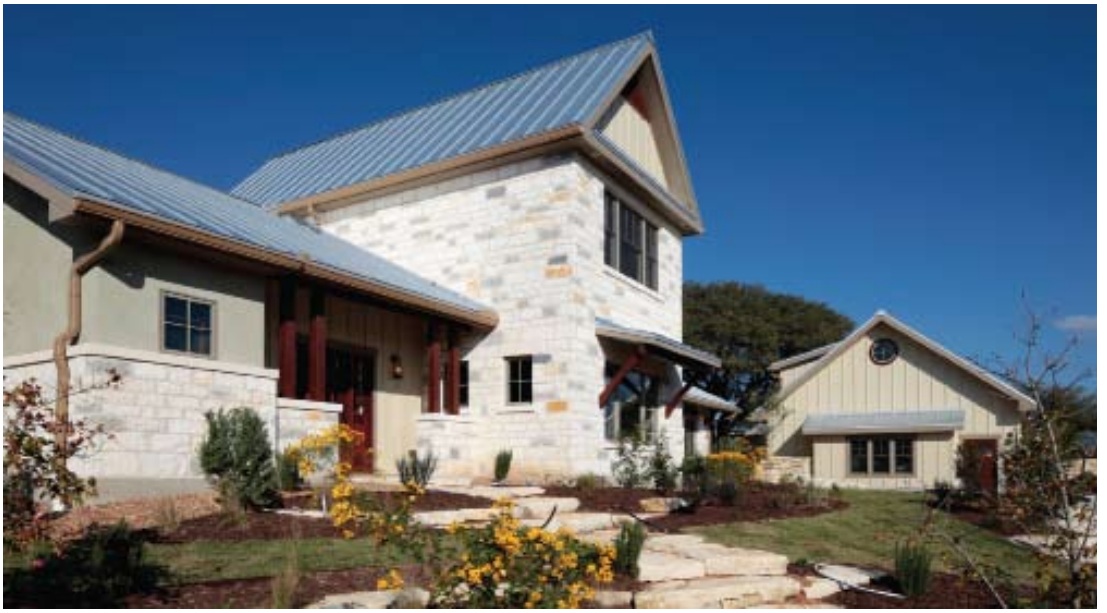


ARCHITECT: Ben Adam, AIA, Boerne, TX	
BUILDER: Robert Mial, Eco-Home, Fredericksburg, TX	
INTERIOR DESIGN: Cary Atkins, Cary Atkins Interiors, Boerne, TX	
KITCHEN DESIGN: Denise Sanchez, Home Werks, San Antonio, TX	
LANDSCAPING: Harper Horticulture, Boerne, TX	
HOUSE SIZE: 3,526	**BEDROOMS:** 4
BATHROOMS: 2.5; outdoor powder room and outdoor shower	
COST PER SQUARE FOOT: $275	
CERTIFICATION: LEED Platinum	

BY KIM WALLACE

PHOTOGRAPHY BY PAUL BARDAGJY



GREEN *on the* GREENS

Natural Home's Show House in Boerne, Texas, is a shining example of just how sustainable suburban housing can be.

Karen and Griz Adams' Craftsman-inspired stucco and limestone home fits right into its golf-course community outside San Antonio—with a few exceptions. Designed by Boerne, Texas, architect Ben Adam, the 3,526-square-foot home takes full advantage of its site, with natural ventilation and south-facing windows overlooking long Hill Country views.

The roof sports a solar hot water heater, and a detached three-car garage is equipped for future photovoltaic panels. Hidden underground, a vertical, closed-loop geothermal system quietly heats and cools the home, while two buried 20,000-gallon rainwater harvesting tanks keep it completely off the water grid.

The home's many forward-thinking features earned it the U.S. Green Building Council's Leadership in Energy and Environmental Design Platinum certification, the highest award given—a first for this Texas town. "It's not the place where you would look for something like this," Adam says of the home's very traditional surroundings. "But we thought, 'Wouldn't it be neat if we did this another way?'"

A Tall Texas Tale

What was it like to build a traditional-looking, suburban home to Leadership in Energy and Environmental Design (LEED) Platinum standards? Read about Karen and Griz Adams' journey: www.naturalhomemagazine/texas-showhouse

LEFT: Local limestone and reclaimed wood beams helped the home earn points for LEED Platinum certification.

ABOVE: Strategically placed windows and overhangs and a heat-deflecting metal roof cool the house naturally.

CONSTRUCTION METHODS: advanced-framing techniques such as two-stud corners and wider spacing for studs and rafters; Georgia-Pacific DensGlass Gold Exterior Sheathing; Forest Stewardship Council-certified lumber; reclaimed materials for doors, wall treatments, stair treads

EXTERIOR MATERIALS: locally quarried stone, stucco

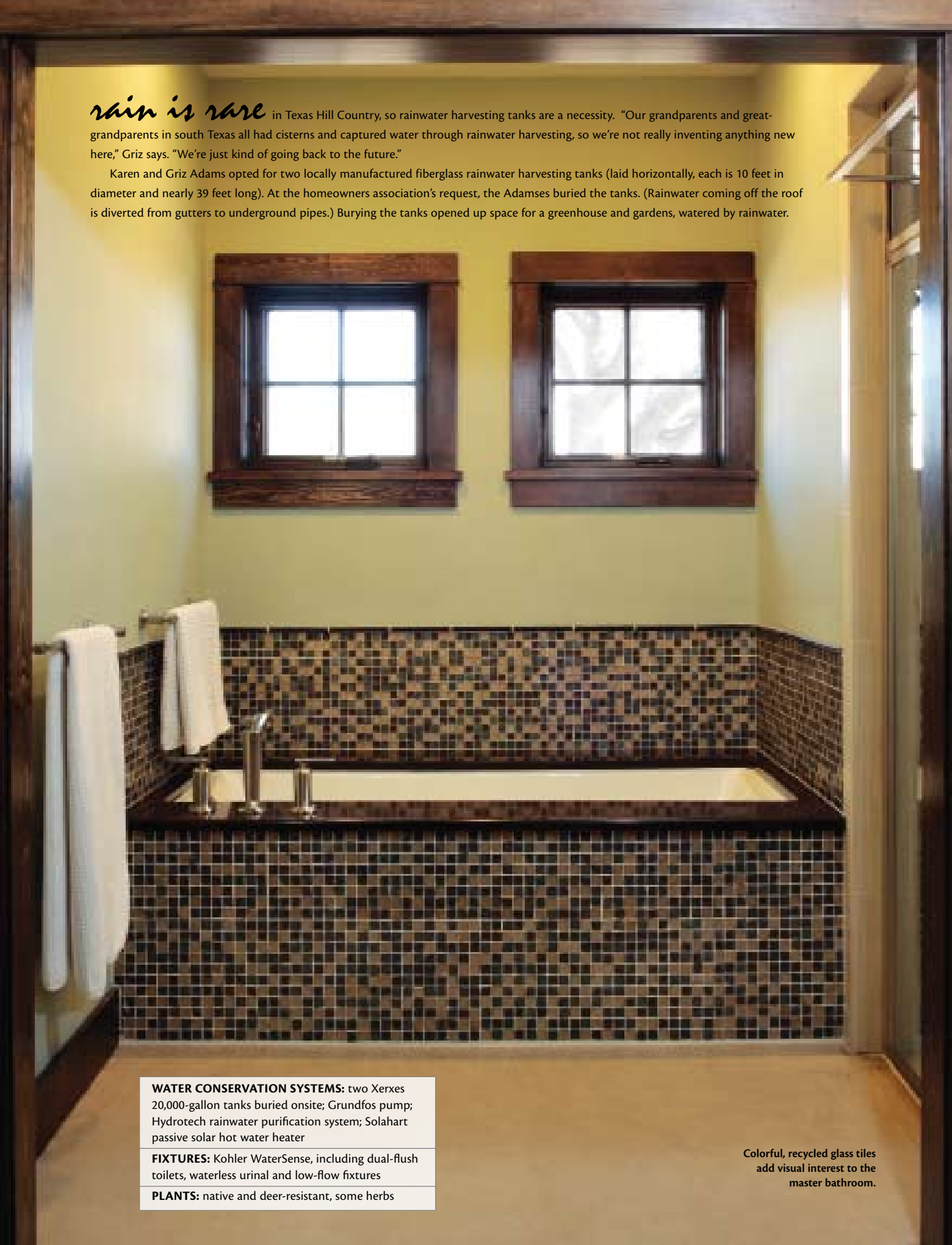
EXTERIOR LIVING SPACE: Loll recycled plastic patio furniture; Velux skylights; Solar Gem Greenhouse; energy-efficient Hot Spring Portable Spa made with recycled materials

INTERIOR MATERIALS: FLOR carpet tiles; Lee Industries furniture; reclaimed oak mantel; reclaimed Texas farmhouse beadboard from Discovery Architectural Antiques in Gonzales, TX; custom front door from Chaparral Custom Cabinetry; Sherwin-Williams no-VOC paint; Think and Leap ergonomic, recycled home office chairs by Steelcase; reclaimed beadboard wall, pantry door and wood flooring; reclaimed cypress wood cabinets; Cambria natural quartz countertops; Beam whole-house vacuum; handmade concrete tiles from Riverbed Concrete of Boerne; recycled master bath tiles; custom concrete sink by Riverbed Concrete; pebble flooring; custom open vanities; Solatube Natural Lighting Systems

Karen Adams and interior designer Cary Atkins found this rustic, reclaimed pantry door at Discovery Architectural Antiques in Gonzales, Texas.

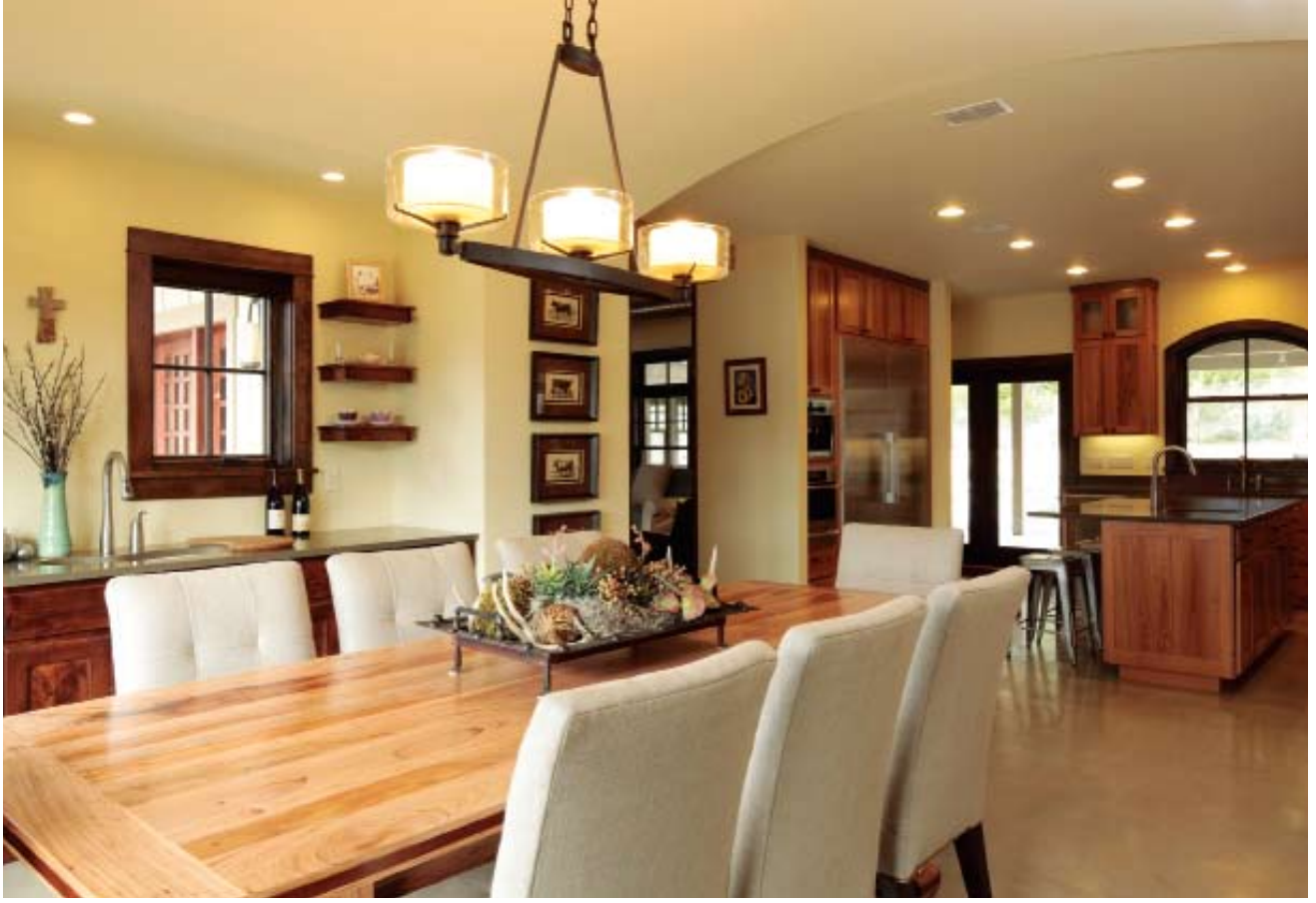
rain is rare in Texas Hill Country, so rainwater harvesting tanks are a necessity. "Our grandparents and great-grandparents in south Texas all had cisterns and captured water through rainwater harvesting, so we're not really inventing anything new here," Griz says. "We're just kind of going back to the future."

Karen and Griz Adams opted for two locally manufactured fiberglass rainwater harvesting tanks (laid horizontally, each is 10 feet in diameter and nearly 39 feet long). At the homeowners association's request, the Adamses buried the tanks. (Rainwater coming off the roof is diverted from gutters to underground pipes.) Burying the tanks opened up space for a greenhouse and gardens, watered by rainwater.



WATER CONSERVATION SYSTEMS: two Xerxes 20,000-gallon tanks buried onsite; Grundfos pump; Hydrotech rainwater purification system; Solahart passive solar hot water heater
FIXTURES: Kohler WaterSense, including dual-flush toilets, waterless urinal and low-flow fixtures
PLANTS: native and deer-resistant, some herbs

Colorful, recycled glass tiles add visual interest to the master bathroom.



HEATING/COOLING SYSTEM: WaterFurnace geothermal system installed by Southwest Mechanical Services in San Antonio; three 250-foot wells provide heating and cooling year-round
ELECTRICITY SOURCE: Bandera Electric Cooperative
LIGHTING: Leviton occupancy-sensor LED and CFL lighting
APPLIANCES: ultra energy- and water-efficient Miele
INSULATION: Optima BIBB fiberglass blown-in blanket by CertainTeed in 2 x 6 walls; Atlas CrossVent RB insulated/radiant barrier/cross-ventilated roof decking panels; additional spray foam insulation in mechanical space

PUTTING THE PIECES TOGETHER

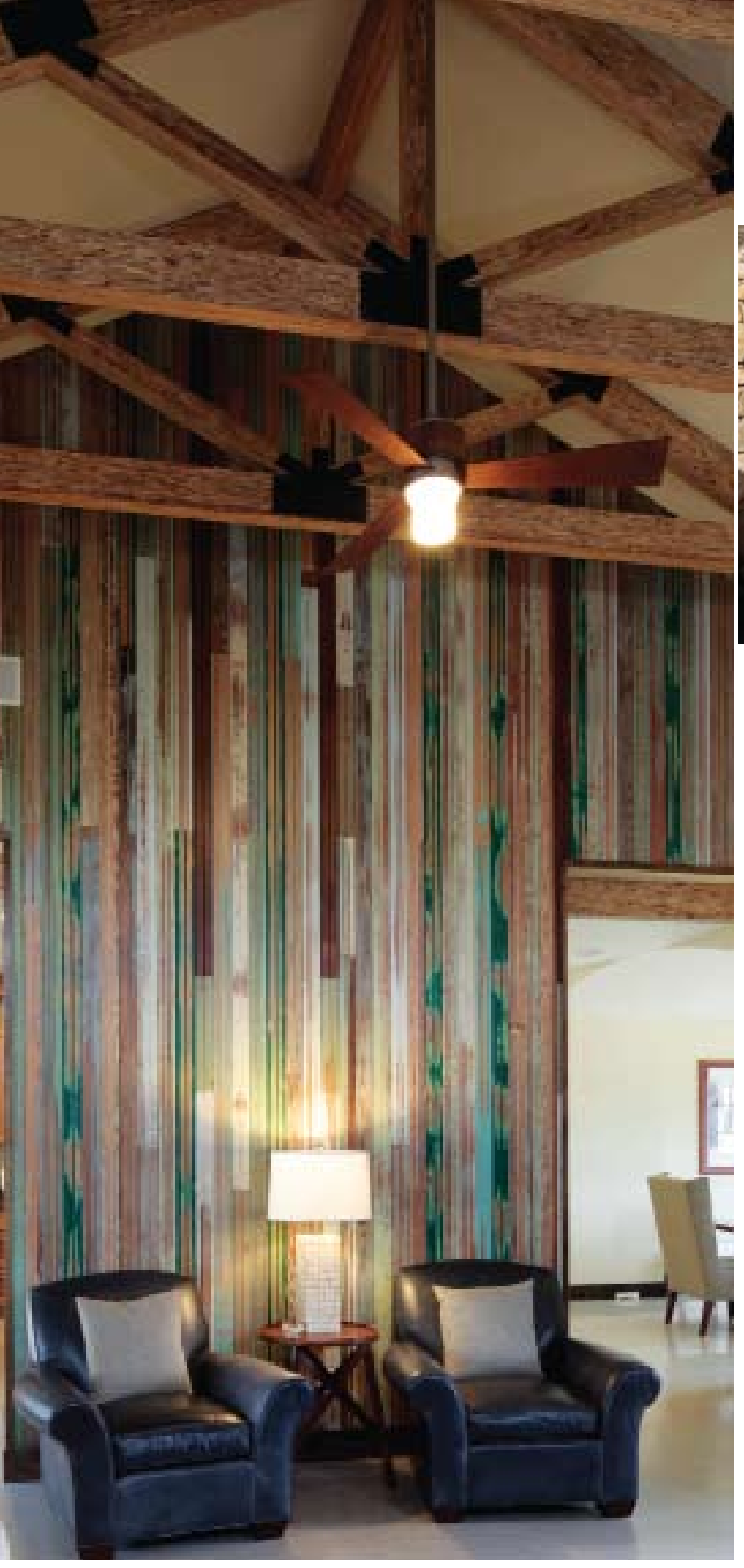
Living in a small town made finding talented local contractors easy. "There is a great cabinet maker, a standout concrete guy, and many local craftspeople," Karen says. Once they assembled their team, Adam and the Adamses conducted a pre-construction charrette—an intense period of design collaboration—to devise an efficient home-building plan that considered every discipline involved. "The most important lesson we learned was that collaborating with other professionals during the planning phase is essential," Karen says.

The Adamses' builders used advanced-framing techniques, such as two-stud corners and wider spacing for studs and rafters, which saved wood and allowed for additional insulation. Instead of traditional plywood, the Adamses chose commercial-grade exterior gypsum and fiberglass sheathing. "It's a wood-sparing approach and is used extensively in commercial buildings," Griz says. They chose native reclaimed limestone from a nearby quarry for the house's façade, backyard retaining walls and indoor fireplace.

When their budget allows, the Adamses plan to install photovoltaic panels over the pre-wired garage. For now, their solar water heater and ground source heat pump, which warms and cools the house efficiently, keep their utility bills low. "The electric bill here consistently runs around $200 per month, so it's significantly cheaper to operate," says Griz, who was paying $450 per month for utilities at a much smaller rental before he and his family moved in. "It's one of the huge advantages of green construction."

TOP: Local craftsman Bruce Calder made the dining room table from a salvaged pecan tree.

BOTTOM: The Adamses are eligible for a rebate on their Solahart passive solar hot water heater.



A Chat with the Homeowners

IF YOU COULD INVITE ANYONE TO DINNER, WHO WOULD IT BE?

Karen: Family and friends we haven't seen in a long time. I come from a family with European roots, so it would be fun to meet those who made the trek to America.

Griz: James Adams, my great-great-great-grandfather. He was a lieutenant colonel in the Confederate Army. I would invite him and his wife, Lucy, to dinner.

WHAT DO YOU ALWAYS KEEP IN YOUR PANTRY OR REFRIGERATOR?

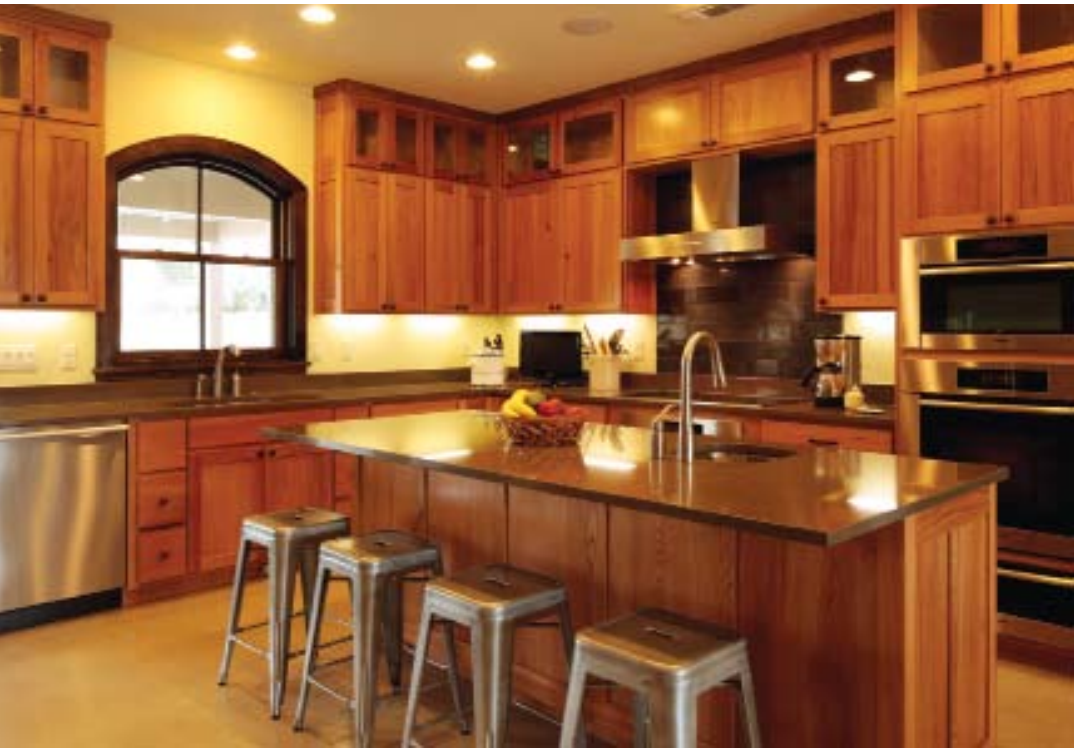
Karen: Cold beer is high on the list. We also like to have cocktails on the patio. Griz is a big griller, so we have lots of spices and rubs in the pantry.

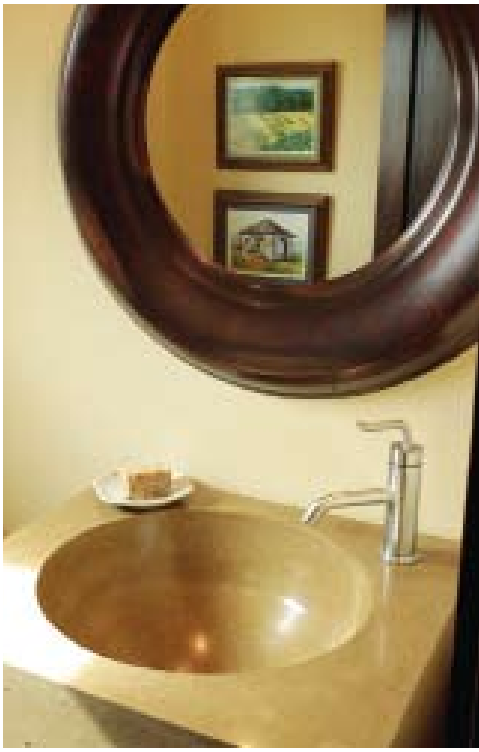
WHERE DO YOU UNWIND AFTER A LONG DAY?

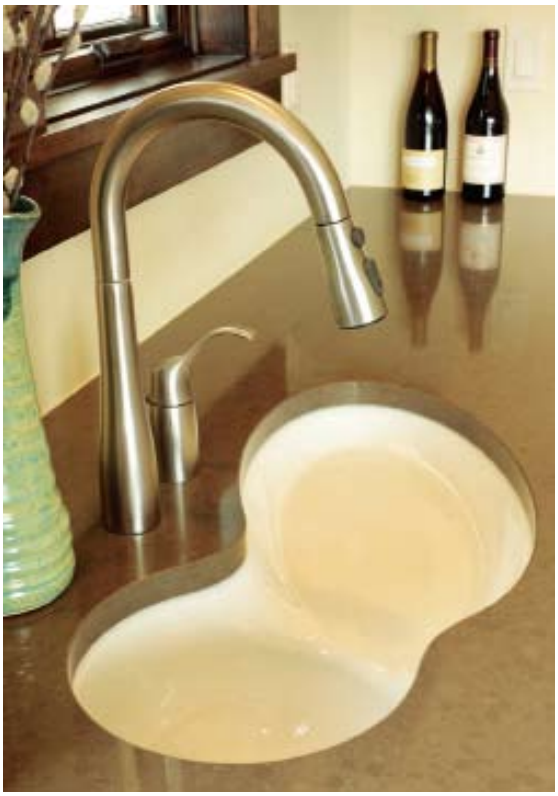
Griz: Some of my favorite times with the family are just around the kitchen island, talking about what happened during the day, finding out what the boys did that day at school and such.

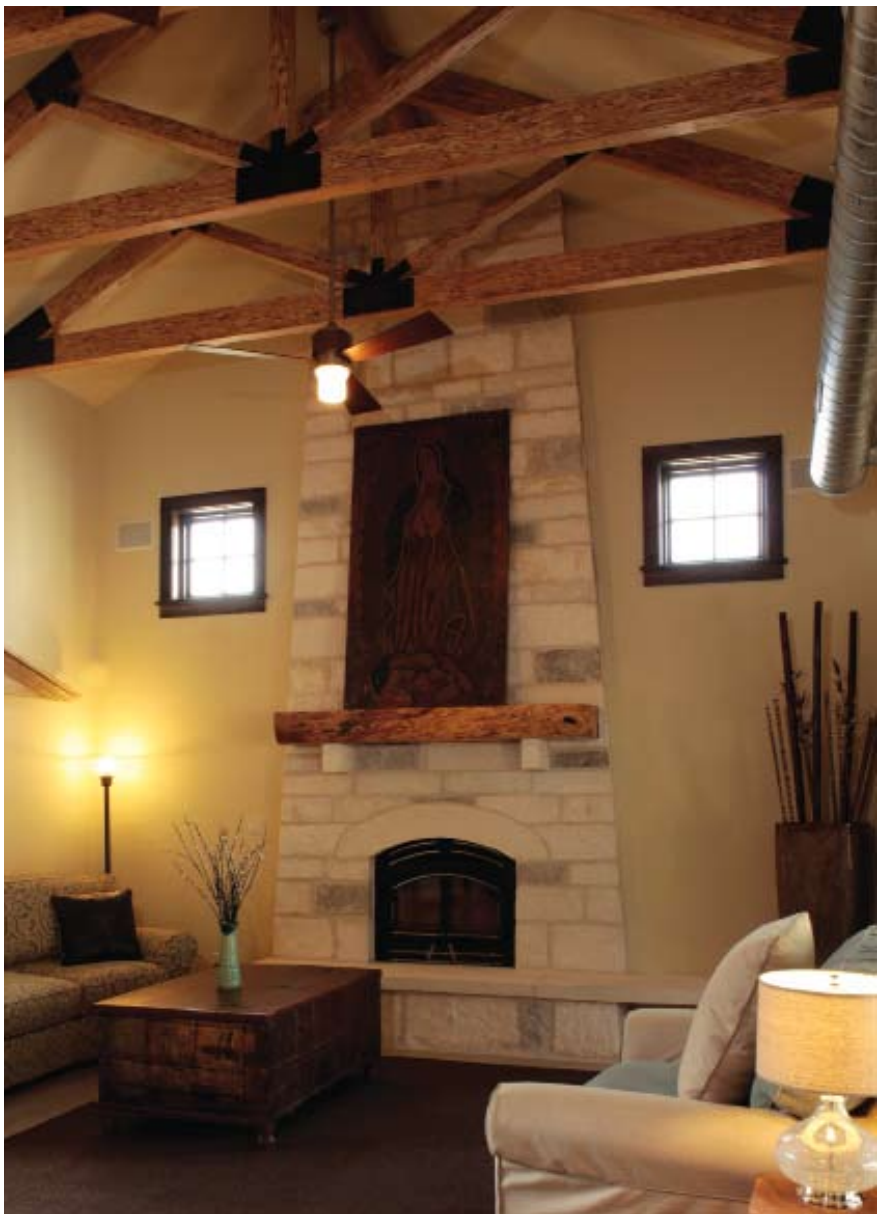
LEFT: Reclaimed beadboard accents a living room wall. Support beams made from Weyerhaeuser iLevel engineered lumber add visual interest to the ceiling.

ABOVE: Karen Adams enjoys the warm Texas sun on her back porch with Boo, her black Labrador retriever.

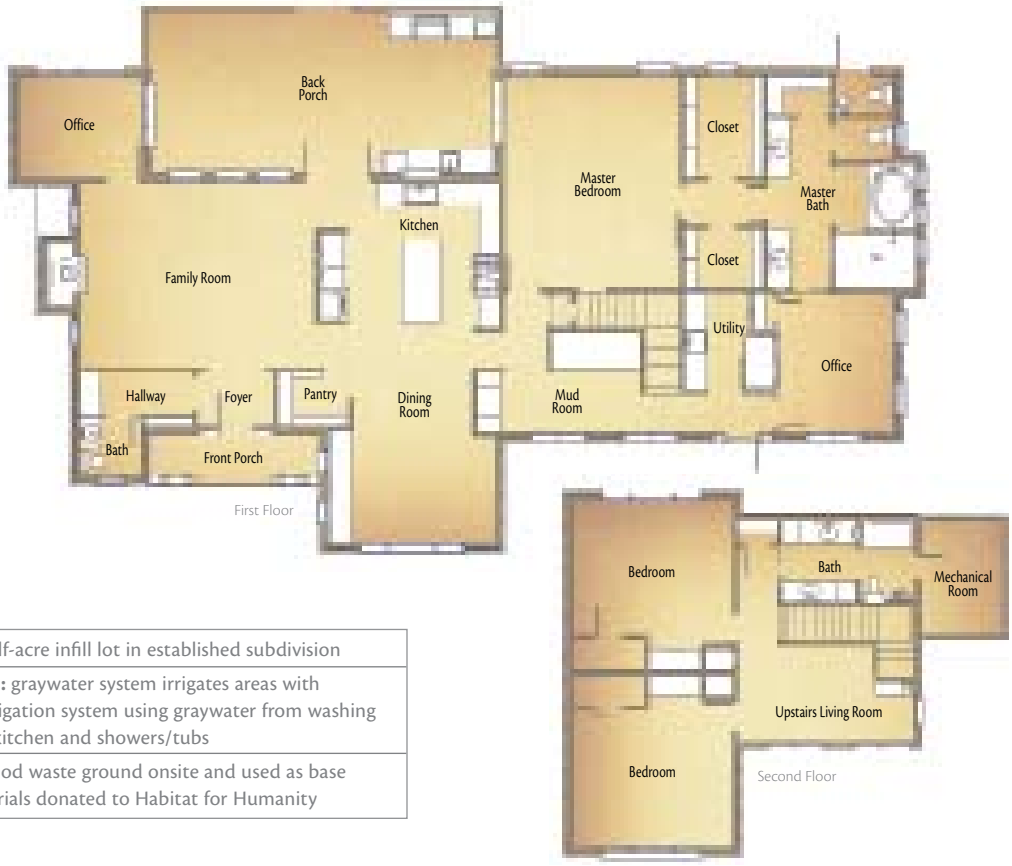








CLOCKWISE FROM TOP LEFT: Reclaimed cabinetry adds personality to the energy-efficient kitchen. The powder room's concrete sink was handcrafted locally. Local craftsman Bruce Calder made the living room's fireplace mantle from the one tree that had to be cleared from the site. Cambria quartz adorns the dining room's wet bar.



SITE AND LAND USE: half-acre infill lot in established subdivision
WATER CONSERVATION: graywater system irrigates areas with KISSS-brand subterrain irrigation system using graywater from washing machine, all sinks except kitchen and showers/tubs
WASTE REDUCTION: wood waste ground onsite and used as base mulch layer; unused materials donated to Habitat for Humanity

SHARING THE DREAM

A key part of the Adamses' vision was to demonstrate good green building practices. For Griz, a Boy Scout Scoutmaster, building the home was an opportunity to teach his sons about resource stewardship, a Scouting principle. As she learned more about green building, Karen shared her knowledge in her blog on the *Natural Home* website and through workshops at the local nature center.

In August 2009, the Adamses opened their home for 10 days of public tours, and more than 900 people walked through. "When people visited, they immediately latched on to something," Karen says. "So many people were interested in geothermal. Others were interested in solar hot water and insulation techniques. If they can incorporate just one green element into their new construction or renovation, then we feel like we had some impact."

After the public tours, architects and builders eager to learn more asked for private tours so they could have the opportunity to design and build green houses in their respective communities. "The project continues to teach us," Griz says. "We will continue to share what we learn with other people to spread the message about stewardship and how building green can have a positive impact."

Natural Home assistant editor KIM WALLACE would love to have a cocktail with the Adamses on their patio.

Tracking Asthma Symptoms

Griz and Karen Adams' 12-year-old son, Jack, was diagnosed with moderate asthma at age 6. Before they moved into their new home, the Adamses lived in two homes that were "poster children for dirty houses," Griz says. "They had carpet, traditional air-handling systems, were leaky and letting in lots of dust."

Convinced that living in a healthy, green-built house would make a difference, Griz began tracking Jack's asthma symptoms before they moved into their new home. Jack, who is sensitive to mold, grass, weeds and dust mites, was tested at baseline while living in the previous house. Now allergist David Fuentes of Boerne, Texas, tests Jack's blood levels for allergens every quarter.

Once Jack's case study is complete, the Adamses hope to have a set of data that could help researchers study the correlation between asthma symptoms and living in a green home. "We've seen improvement, but it is only a one-person study," Griz says. "We are doing this as a case study to throw the research question out there and hope that someone will conduct a larger study."