

# Build It Green™ HOME TOUR

Marin and Sonoma Counties



**SUNDAY, SEPTEMBER 25, 2005**  
**10<sup>AM</sup> - 4<sup>PM</sup>**  
**Marin and Sonoma Counties**

HOME TOUR ORGANIZERS:



4

## REBUILD

## Keohane Residence

5164 Paradise Drive, Corte Madera

# GREENING ON THE BAY

*Marin couple rebuilds green for bay front property*



Owners Jack and Kay Keohane were hoping to remodel their Corte Madera home, but it just wasn't in the cards. During the planning process, the Keohanes quickly learned that in order to comply with FEMA flood protection requirements for their waterfront home, it would be more cost-effective to rebuild. Therefore, to keep their environmental goals intact, the Keohanes decided to minimize the impacts of replacing their home by building green.

Their new home, at 2,000 square feet, is modestly bigger than the original, which the couple views as a key green feature. With just a few additional expansions to the living room and master bedroom, the new house plan mirrors the original plan. The Keohanes wanted to recycle and reuse as many materials as possible. The couple reused redwood exterior siding and decking, interior wood finishes, and an existing sink from their previous home. An old bed frame found new life as a mirror frame. The couple was able to donate salvaged materials from the existing home to their local Habitat for Humanity program.

The main home and an onsite work studio with green building features of its own will be open for the tour. The work studio has extensive daylighting and energy efficient hydronic radiant heat flooring installed in a concrete bed. The concrete does double duty as the finished floor with exposed aggregate added for aesthetics.

*"I am pleased that we built a small home and maintained the intimacy of a small one story house. We can hear one another, and we are in constant connection with each other. To me, this is the greenest feature of our home, not building more space than we needed into the plans."*

—Kay Keohane, homeowner

## GREEN at a GLANCE

### ENERGY EFFICIENCY & RENEWABLE ENERGY

- Structural Insulated Panel (SIP) roof construction
- Insulation exceeds Title 24 requirements
- Insulated floor over crawl space
- Overhangs on south facing windows
- Dimmer controlled lighting (Lutron Maestro)
- Double-pane, low-E wood clad windows (Marvin)
- High-efficiency gas furnace (Carrier WeatherMaker)
- Hydronic radiant-floor heat in studio
- High efficiency water heater
- ENERGY STAR® dishwasher and refrigerator (Kitchen Aid)

### RESOURCE CONSERVATION

- Existing home deconstructed for salvage and recycling
- Engineered lumber
- OSB for subfloors and SIPs
- Salvaged redwood exterior siding and stairs (Black's Farmwood)
- Reused existing deck for new deck
- Salvaged Black Acacia wood counter and table (Evin Shivley)
- FSC-certified Brazilian cherry flooring (EcoTimber)
- Exposed concrete as finished floor in work studio
- Water and energy efficient clothes washer (Whirlpool Duet)
- Built-in recycling center
- High efficiency irrigation for organic, native and drought-tolerant landscaping
- Permeable paving
- Protected existing trees, plants and topsoil during construction

### INDOOR ENVIRONMENTAL QUALITY

- Fiberglass batt insulation with no added formaldehyde (Johns Manville Comfort Therm)
- Radiant-floor heat in work studio eliminates forced-air vents
- Low-VOC interior paint (Benjamin Moore EcoSpec)

## SITE PLANNING

**Smart construction zone.** The Keohanes employed a number of techniques to protect their extensive mature gardens and disturb the site as little as possible during construction and demolition work. Construction staging areas were kept small and positioned further up the driveway to protect landscaping and the waterfront. Many of the plants were transplanted to nursery pots during construction. The existing gardens were zoned off with protective barriers due to their close proximity to the home. Hedges just a few feet away from the home survived without damage due to temporary wire fencing and the crew carefully working around them. Additionally, a significant amount of construction waste was diverted from landfills by recycling.

## PROTECTING THE BAY

**Gardening Smart.** The Keohanes went to great lengths to preserve their organic garden and plants, which are part of an overall landscaping plan that is sensitive to the impact their waterside property might have on the bay. The fertilizers and pesticides that are utilized in many home gardens wash into urban streams eventually making their way to the San Francisco Bay, thereby degrading water quality and damaging aquatic life. By choosing to garden organically, the Keohanes avoid such chemicals and their negative impacts. The Keohanes have also chosen to use permeable paving for most of their hardscaped spaces, including spaced paving stones for patios and a gravel drive. Increasing the permeability of the landscape decreases the amount of runoff that is flushed into the bay.

## ENERGY EFFICIENCY

**ENERGY STAR®.** The Keohanes chose ENERGY STAR appliances for their home. ENERGY STAR, a program administered by the U.S. Department of Energy (DOE) and Environmental Protection Agency (EPA), helps businesses and individuals protect the environment through improved energy efficiency. ENERGY STAR products must meet strict energy efficiency criteria set by the EPA or DOE. ENERGY STAR appliances save money, water and energy. Most of these products are superior in quality and performance to unqualified models, and are readily available.

*"Collaborating with Jack and Kay was a lively and fun process that often yielded surprising and interesting results. The final design is a reflection of the Keohanes' values and aesthetic sensibilities, as well as a graceful response to the gardens and surrounding environment."*

—Michael Heacock, designer

**ORIGINALLY BUILT:** 1940s

**ORIGINAL SIZE:** 1800 SF

**REBUILD COMPLETED:** 2004

**SIZE AFTER REBUILD:**

home: 2000 SF

work studio: 865 SF

**DESIGNERS:**

home: Michael Heacock, LEED™ AP

work studio: Fu Tung Chang

**CONTRACTOR:**

Creative Spaces, Inc

### DIRECTIONS

**From US-101 North**

Take the TAMALPAIS DR exit toward PARADISE DR

Turn RIGHT on TAMALPAIS DR

Turn RIGHT on PARADISE DR

**From US-101 South**

Take the TAMALPAIS DR exit toward PARADISE DR

Turn LEFT on TAMALPAIS DR

Turn RIGHT on PARADISE DR

### ADDRESS

5164 Paradise Dr, Corte Madera

### PARKING

Parking on the street or at the Montessori school next door.

