

# LIFE REFINED

living life well

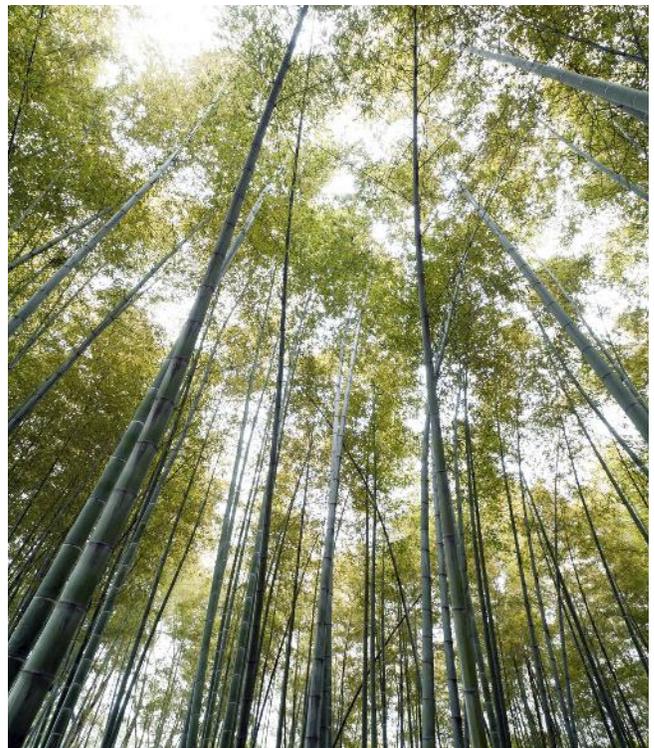
spring 2014



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# Living The Green Life

By Mindy Pantiel



The good news about green architecture is there is no bad news. Gone are the days of awkward straw bale construction and unsightly solar panels protruding from rooftops. Once identified as alternative, sustainable design has gone mainstream and the notion that energy savings could only be realized by sacrificing aesthetics is thankfully a thing of the past. In the hands of the right architect, today's green homes offer a seamless blend of style and performance that's unbeatable, and beyond the obvious physical beauty a well-constructed energy conscious home takes luxury to a whole new level.

Stephanie Horowitz, architect and principal at ZeroEnergy Design, and Jordan Goldman, Engineering Principal, say it's what you don't see that makes the critical difference. "People have developed an unnecessary tolerance for what you should feel like in a home with an acceptance of things like cold drafts and overly dry air," says Horowitz. "We believe health and thermal comfort should be two primary factors in home design."

For a Cape Cod beach house the duo used a combination of triple-glazed windows and a state-of-the-art heat recovery ventilation system to ensure constant temperatures, clean air, and a building so efficient it uses about two thirds less energy than a comparable home built to meet the building code. "To maximize efficiency we strive to get a house as air tight as possible and utilize a heat recovery system that provides fresh air throughout the year while exchanging heat between the incoming and outgoing air steams," says Goldman.

"You can actually sit down to read next to a window in this house and not feel a draft," adds Horowitz.

The high performance home also features a super-insulated building envelope, ground source (geothermal) heat pump, and 11.7 kilowatts (KW) of solar energy on the roof. "Aside from the personal satisfaction of lower energy bills and being environmentally aware, when it comes to day-to-day comfort these houses are vastly superior to standard construction," says Goldman.

And these homes hardly lack for high-end amenities. In this case, the 6,200 square feet includes seven bedrooms, eight baths, a chef's kitchen, private gym and home theater. "The owners wanted a place big enough to accommodate all of their children, including their significant others and grandchildren when the entire family gathers over the summer and holidays," says Horowitz noting that green features will work in any architectural genre from traditional to modern.



This spread: Truro Residence by ZeroEnergy Design.  
Photos by Eric Roth



To accommodate the extreme variation in occupancy (the couple uses the home alone on weekends) and dispelling the notion that green building equals small, she split the building into a “Living Bar” and “Sleeping Bar,” the latter being an expansion module with numerous bedrooms and bathrooms to accommodate the entire family. The Living Bar includes the living and dining areas, as well as a second master bedroom – all that the couple needs when the children are away. “This programmatic zoning allows the Sleeping Bar to be shut down during the majority of the year to decrease energy use,” she explains.

When architect Harvey Hine designed a net zero energy home (meaning it generates enough energy to meet its own needs) for a couple in Boulder, Colo., he sought a similar balance of good looks and thermal comfort starting with the building envelope. “Often it’s the smaller changes that provide the biggest bang for the buck and I look to things like insulation and air lock entries to keep the air from entering in the first place,” he says.





This Spread: Colorado home by Architect, Harvey Hine.  
Photos by Joel Hill Pictures

As for materials, Hine claims quality sustainable products from building materials, paints and windows, to flooring and countertops are readily available. “Today it’s so mainstream pretty much everyone has green information and all products can be evaluated,” says Hine who subscribes to a durable over sustainable philosophy. “Bamboo is a highly renewable material but it doesn’t hold up that well while maple takes more energy to harvest but it will last for 20 years so I prefer the latter.” With that in mind he chose solid cherry cabinets and porcelain tile floors for the kitchen. “Porcelain is one of the most durable materials available and it’s good looking and cost effective as well,” he adds.

Many architects and designers also acknowledge that if a material like Italian marble has to be shipped, expending large amounts of fossil fuels to get the product here, it quickly loses its environmental viability. The solution is to look for beautiful products closer to home. Case in point, while granite can definitely bring a unique pop of color to a room, an environmentally friendly alternative like Cambria is a great granite look-alike and it’s made in Minnesota.

Increasingly popular in high-end design are smart home systems. Who hasn’t been on their way out of town when that nagging questions occurs: “Did I leave the lights on?” Thanks to systems like Smart Home Group ([smarthomegroup.com](http://smarthomegroup.com)) you can not only turn off your lights from your smart phone you can crank up the water

temperature in your pool on your way back from the airport and take a comfortable swim when you get home. You can even program your home’s longitude and latitude so the system knows exactly when sunrise and sunset occur throughout the year, turning lights on or off accordingly.

Homeowners looking for the final frontier in luxurious house design need only look up, the icing on the cake, so to speak: energy efficient vegetated roof systems. They last longer than conventional roofs and, according to a University of Michigan study, more than 50 percent of the cost associated with installing a green roof will be returned in the form of lower maintenance and reduced energy usage over the lifetime of the green roof system. Nearly two-thirds of these savings would come from reduced energy needs for the building with the green roof.

“What could be more wonderful than looking out from your upper level bedroom window and seeing a green oasis?” says landscape architect Karla Dakin and co-author of “The Professional Design Guide to Green Roofs,” who claims the centuries-old practice is experiencing a renaissance as a multi-faceted problem solver. “Depending on where you live, a green roof can reduce storm water run-off by absorbing excess rain water, bring plant and animal biodiversity into the built environment, and provide insulation throughout the year to reduce heating and cooling costs. It’s a win-win for homeowners and the environment,” she says.

