

# Environmental Design+ Construction

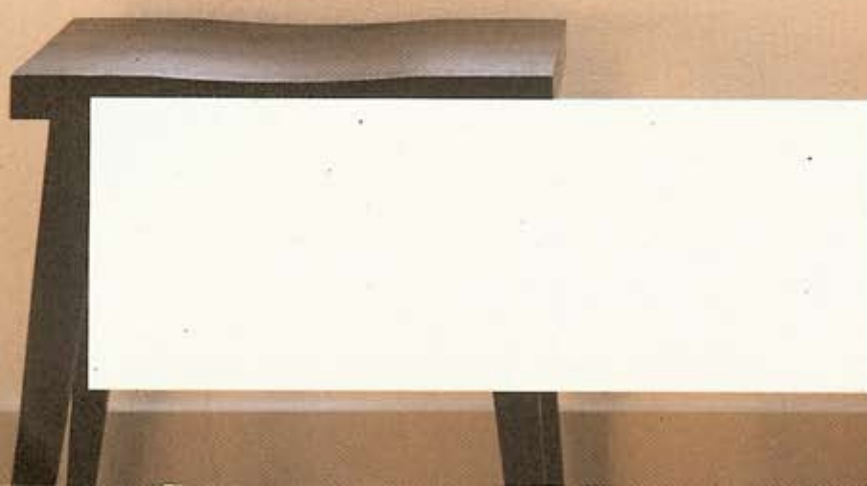
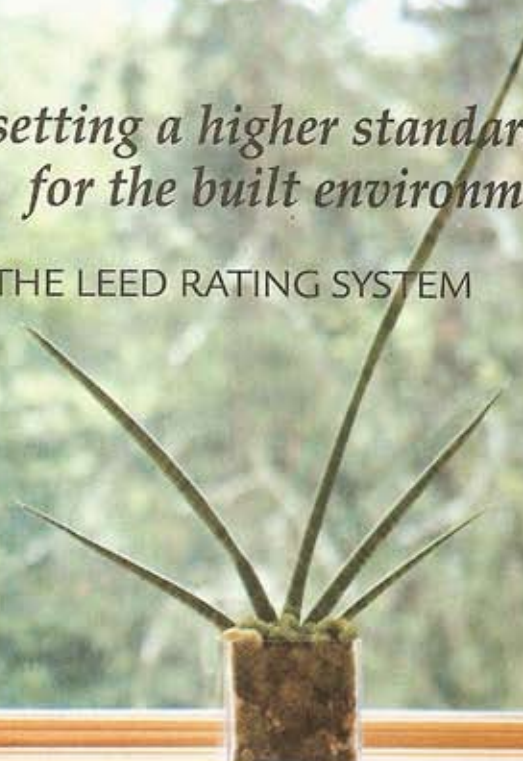
THE PREMIER SOURCE FOR INTEGRATED HIGH-PERFORMANCE BUILDING

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*setting a higher standard  
for the built environment*

THE LEED RATING SYSTEM



# Style and

# Sensibility

BY DERRICK TEAL, ED+C ASSOCIATE EDITOR

Images by Deen Wanek.



The desire for a unique home design is an American tradition. Numerous architectural firms advertise custom home designs, and plans for "unique" home designs are readily available via a quick search on the Internet. But how truly unique are these homes that can be found by anyone who types in the right keywords? Furthermore, what sustainable efforts are put into the homes?

Those are the questions designer Shane Black asked himself as he flipped through page after page of magazines searching for the right fit or the right inspiration. In

the end, however, he decided that all the inspiration needed to come from within. Picking up a pencil and paper, Black set to work on a contemporary home that exhibited his need for synergy with its Two Rivers, Wis., surroundings.

"I sketched various forms from organic styles and interconnected cubes to pyramidal shapes," says Black. "When I decided on leaning walls, everything just flowed intuitively. I didn't set out to design something totally unlike anything else. I just had so many ideas that in order to incorporate as

many of them as possible, every room turned out completely unique."

Heating and cooling is a large part of a home's energy consumption in Wisconsin. To that end, windows were strategically located to allow for maximum heat gain during the winter and prevent heat loss. The central angled wall on the south side of the house prevents all summer solar gain.

The house was well insulated to reduce the amount of heat the solar-powered radiant heating system needed to produce. Thermal mass was added by incorporating skip-trow-

eled plaster over 5/8-inch-thick wallboard. A continuous vapor barrier prevents air infiltration to further reduce heating costs, and an air-to-air heat exchanger supplies the home with fresh air.

For the summer months, no air conditioning was needed. The heated water for the radiant heating is diverted to a shunt loop buried outside in order to disperse the unneeded heat. This could even be run through an outdoor hot tub to heat it.

Those same seven 4-foot by 10-foot Heliodyne solar panels heating the water

for the home also help supply heat for the potable hot water supply. Instead of 45 degrees Fahrenheit, water sent to the hot water heater enters at 100 degrees. It's also a boon for the ENERGY STAR Kenmore clothes washer and energy-efficient Gaggenau dishwasher.

When it came to the idea of creating a home that was more attuned to the environment, Black says there was never any question about the goal.

"Growing up in a secluded area with abundant woods and animals, I always

loved nature," he says. "I wanted to show people that you could build a larger-sized, uniquely styled home that was environmentally friendly."

Visit [www.ShaneBlackDesign.com](http://www.ShaneBlackDesign.com) for more information.

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