

REDEFINING QUALITY

LOCAL BUILDER FORGES AFFORDABLE HOME CONSTRUCTION
THAT IS GREEN THROUGH AND THROUGH

BY LORI MCFERRAN



When Brian, James and Scott Baker formed "studio26 homes," a company based in Orefield, they were determined to approach their enterprise as no other home construction company in the Lehigh Valley so far has done. Their mission, defined as building "uniquely designed, sustainable and highly energy-efficient homes at competitive prices, through the use of innovative architectural design and advanced building science knowledge," has been actualized in a demonstration home, completed this year.

The company, a partner in the Department of Energy's "Building America" program, which accepts only firms that can prove a commitment to 40 percent energy efficiency per house, conceived its exceptional demo in a "whole-home approach."

"Every piece makes up the whole," says Brian Baker, noting everything from location on the home site, to window placement, depth of overhang, ventilation systems and even choice of paint, come to bear on

the final energy efficiency and "health" of the house.

In addition, the home is monitored through sensors that report energy consumption and efficiency for several years as the spaces become "lived in." The result from the demonstration home so far is 54-55 percent efficiency above current code requirements.

So pleased with its model endeavor, studio26's latest plans are a "Building America" community on 44 acres in Bucks County, "that employs all the great elements of the Orefield house," notes Baker.

While he describes the first demonstration home as the "Rolls Royce" of green building and energy efficiency, Baker holds that conscious, sustainable construction absolutely doesn't have to be prohibitively expensive.

"This may be the Rolls Royce of green homes," he says, "but we can build a nice Lexus, too."

For more information, visit www.studio26homes.com.

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Hub Willson photos

Designed to fit its site and take advantage of solar gain, studio26's home, left, utilizes fiber cement board siding because it's highly durable and low-maintenance. Above: Hardwood floors in the great room are made with Forest Stewardship Council (FSC)-certified Brazilian Cherry, which ensures the wood comes from properly managed forests.



Planning a layout to make best use of natural elements is part of green design. The bathroom is situated so that the morning sun lights the room; glass block transfuses the light to adjacent areas.

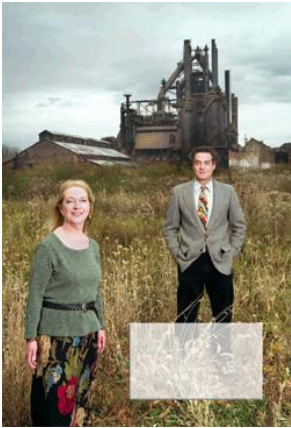


For the kitchen, right, studio26 chose only Energy Star-rated appliances and an induction-heat cook-top that warms food fast, saves energy and is safe for children's wandering fingers.



BUILDING MORE SUSTAINABLE FUTURES

BY LENORA DANDELKE



Environmentally sensitive development encompasses both innovative technologies and some strikingly simple earth-friendly practices. As public interest in ecologically viable living grows, local professionals—including architects, developers, contractors and landscape designers— are leading the way to a greener future.

Beyond benefiting the planet, energy-efficient homes produce immediate energy cost-savings for owners, who also gain a more healthful indoor environment — a strong focus of the Baker Development Group's studio26 demonstration home in Orefield.

"The air cleaning system protects against dust and micro-organisms, helping to minimize problems with asthma and allergies," says Brian Baker, architect and co-founder the custom-building company. Replacing carpets with hardwood flooring, including sustainably harvested Brazilian cherry, reduces the risk of dust-mites, and advanced HVAC and ductwork systems help prevent the growth of health-hazardous mold. The super-stylish showhouse is among the highest-rated LEED (Leadership in Energy

and Environmental Design) certified homes in the country.

A variety of organizations, including the Alliance for Sustainable Communities — Lehigh Valley, facilitate exploration of environmentally responsible lifestyle choices. The Lehigh Valley Green Builders Forum, a non-profit education and advocacy organization founded three years ago by contractor Bruce Wilson and his wife, Annie Prince, a writer and social entrepreneur, networks "green" industry professionals and acts as a clearing house for information on green building.

"It's possible to build a home that's 50 times more energy efficient than a standard home," Wilson says. However, choosing an architect, engineer, contractor and other specialists that can function as a team is key to the successful execution of a green building project—whether a conventional-looking home or a more progressive style of housing such as earth berm or straw-built construction.

For guidance in updating an existing home, Wilson recommends a professional energy audit.

"That can provide a roadmap for improvements," he says. "Learning the approximate cost and ease of projects helps set priorities." Even a choice as simple as exterior paint can have a huge impact on energy efficiency. Wilson also notes that self-audit guidelines are available from the EPA.

NATURAL CONSIDERATIONS

Jerry Reilly supervises the farm where Ashley Development raises trees for its construction projects.

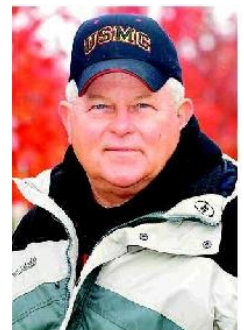
Landscaping plays a crucial role in sustainable development, and several forward-thinking initiatives of Ashley Development Corporation distinguish this Bethlehem firm as an environmental role model. Company president Lou Pektor has established a 40-acre tree nursery that will ensure a supply of healthy, mature trees for land improvements.

"A 5- to 6-inch caliper tree provides instant shade," he says. A 1 1/2-inch caliper tree, which is typical for developments, would take 10 years to grow to that size. Deeper root systems of 25- to 30-foot tall trees— versus the typical 8-foot size— contribute to improved water retention. Additionally, large trees serve as wind breaks and create an aesthetic appeal.

Tree farm supervisor Jerry Reilly, who selects the best stock from across the country, currently has 3,000 deciduous and 4,000 evergreen trees planted on 10 acres, and will add another 1,500 saplings in spring.

"We'll keep going right up the hill," he says. "Our first trees will be ready to transplant in fall. The growth has been phenomenal."

In 2007, Ashley Development will implement an "afforestation" project under the guidance of Carl Martin, director of stewardship at Doylestown's Heritage Conservancy. Long Ridge, an upscale housing community, will incorporate wildlife-sustaining wooded areas— incorporating shrubs, berry bushes and native plants— on inactive agricultural land.



"This project is the first of its kind in the state," Martin says. "In Pennsylvania, 300,000 acres are developed each year. If ten percent of that land could be forested, it would have a huge impact."

The company also works with Plantique, an Allentown landscaping firm, to replace unsightly, quarry-like retention ponds with a more natural, cat-tail pond-style approach. "A water collection basin in nature is a beautiful thing," says Bruce Fritzinger, registered landscape architect and Plantique partner. "Municipalities are used to hiding retention ponds behind chain-link fences — like junk yards — and covering them up with forsythias."

Fritzinger explains that by creating wetland areas combining rocks and plants tolerant of different water levels, "You take an unpopular area and turn it into a beautiful park-like green space."

Although he's encountered resistance to change, Fritzinger comments, "People are becoming more enlightened. It just takes some education."



Saplings take root.

RESOURCES

Alliance for Sustainable Communities — Lehigh Valley

1966 Creek Road, Bethlehem

610-838-7666

www.sustainlv.org

Ashley Development

559 Main St., Third Floor, Bethlehem

610-332-3300

www.ashleydevelopment.com

Heritage Conservancy

85 Old Dublin Pike, Doylestown

215-345-7020

www.heritageconservancy.org

Lehigh Valley Green Builders Forum

PO Box 1191, Bethlehem

610-797-6200

www.lvgreenbuilders.com

Plantique, Inc.

6344 Shantz Rd., Allentown

610-395-6940

www.plantique.com

studio26 homes

by Baker Development Group LLC

1748 Central Park, Orefield

610-391-0100