

LEED SOLAR Affordable Housing

By Paul Haggard

ON THE NEAR EAST SIDE OF COLUMBUS, green design is being used to develop a high standard, energy efficient home in an urban neighborhood, the first of its kind in the country.

In more than 20 years of operation, nonprofit Columbus Housing Partnership has developed more than 2,000 units of affordable housing in Central Ohio. Its charge: connect quality housing with financial education and supportive programs in an effort to help people up and out of poverty for good.

In the last two years, Columbus Housing Partnership has been thinking differently about its mission by exploring environmentally friendly and sustainable design applications in its North of Broad neighborhood, a mixed income homeownership neighborhood in Columbus' near east side.

“Green design, at its best, not only limits the impact on the environment but creates lower costs for the homeowner and creates a healthier home living environment,” said Craig Murphy, Director of Homeport, Columbus Housing Partnership’s homeownership arm. “By providing these advantages for low and moderate income homebuyers, we are clearly able to enhance their quality of life not just immediately, but for the long term.”

As part of its green development, Columbus Housing Partnership was asked by the City of Columbus, the Columbus Green Building Forum and Worthington Kilbourne High School Home B.A.S.E. to help develop a high standard, energy efficient home at North of Broad, a first of its kind in the country for an urban neighborhood.

The project, located at 258 North 21st Street in Columbus, is designed to meet the United States Green Building Council’s LEED (Leadership in Energy and Environmental Design) standard. The U.S. Building Council’s LEED standard is a voluntary rating system that promotes the design and construction of high performance green homes, ranking projects from the lowest ranking of certified to the highest of platinum.

Columbus Green Building Forum, a local organization dedicated to promoting energy efficient and environmentally friendly building practices in Central Ohio, and Home B.A.S.E., an educational initiative focused on teaching high school students the building trade, collaborated to design the home and create the LEED application. Columbus Housing Partnership is providing technical expertise to Home B.A.S.E., who also lead construction on the home, and project financing to help ensure the affordability and marketability of the home to low and moderate income clients.

The home, which will use up to 60 percent less energy than a traditional house of a similar design, features an Apricus solar thermal system, advanced framing that diminished the amount of wood used for construction, a rain garden to keep storm runoff on site and out of the watershed, triple pane high performing windows, low flow toilets, green cabinetry, and landscaping that includes native drought resistant plants.

The addition of two renewable energy systems on the home’s roof will mean onsite generation of all necessary electricity by using the sun.

Increasing the neighborhood’s overall green appeal, the City of Columbus and the State of Ohio partnered together to resurface 21st Street in North of Broad with a mixture of asphalt and recycled tires, the first of its kind on a residential street in Columbus. A communal green space is also planned for the neighborhood.



Another outstanding solar energy feature of this high performance home and showcase project is the on-site generation of electricity using the sun that was used to satisfy all of the electricity needed for the construction of this house. This site-based solar electrical generation system, or “solar container,” was the inspiration for two other solar photovoltaic projects including the solar electric system that was put on the Ohio governor’s residence.



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—Carl English
Chief Operating Officer for American Electric Power


To highlight all of the attributes of this project, funder American Electric Power has plans to work with Columbus Housing Partnership to educate the state’s consumers, real estate professionals, developers, government leaders and others about the benefits of green building through showcasing the LEED home.

“The LEED home at North of Broad is a great example of innovative thinking by Columbus Housing Partnership and their partners,” said Carl English, Chief Operating Officer for American Electric Power. “We are proud to help them share this best practice with

the state and help them translate elements of the home into the affordable housing they develop in the future.”

The LEED home is one of five green homes being built at Columbus Housing Partnership’s North of Broad neighborhood being funded through financial support from American Electric Power, City of Columbus, Columbus Green Building Forum, Home Depot, Limited Brands, and Neighbor Works America. Among the green homes being built is a historic, green rehab that is now for sale.

In 2008, Columbus Housing Partnership plans to create all new housing for sale with energy efficient components similar to those in the North 21st Street LEED home.

“Going forward, when we plan for neighborhoods like North of Broad our first thought will be toward developing energy efficient, sustainable housing,” said Murphy. “We plan to use the knowledge gained in the North 21st Street LEED home to inform our development activities for years to come.” 

For more information on this project, visit www.NorthofBroad.com or visit the project’s blog at homebase07.blogspot.com