



**THE HIGHLAND GREEN BUILDING
LOUISVILLE, KY**

#1 - LEED ranking for a U.S. dry cleaning facility

The Discovery Center, an interactive classroom, is **powered by stationary bikes** that provide the electrical power to operate the video screen.

On-site **power** generation using solar panels



LEED® Facts

The Highland Green Building
Louisville, KY

LEED for New Construction (v2009)
Certification awarded June 13, 2013

Gold 68 points*

Sustainable Sites	18/26
Water Efficiency	7/10
Energy & Atmosphere	24/35
Materials & Resources	6/14
Indoor Environmental Quality	6/15
Innovation	3/6
Regional Priority Credits	4/4

*Out of a possible 110 points

The information provided is based on that stated in the LEED® project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.

THE HIGHLAND GREEN BUILDING

Green Dry Cleaning in Green Neighborhood.

PROJECT BACKGROUND

When Highland Cleaners, an award-winning green dry cleaner, was planning a new location in a progressive urban neighborhood in Louisville, Kentucky, they wanted the new building to be a statement about the shared common values of the company and the neighborhood. After purchasing a tiny brownfield lot occupied by a dilapidated self-serve car wash, the company hired the architects at Design Plus Studios and started discussions about what to build. The result was a stunning infill project that used some traditional elements of the neighborhood, like red brick, second floor balconies and landscaped patios, while adding some amazing green features like solar panels, green screens, a vegetative roof and geothermal HVAC.

STRATEGIES AND RESULTS

As the project evolved, a small outbuilding was repurposed as a sustainable education center and community room named the Discovery Center. This 750-square-foot space houses a classroom-style space with room for 30 people. There is a large video screen visible from the sidewalk and street. Two glass walls separate the room from the busy sidewalk and street, making any presentation inside the room a totally public experience.

A series of films about the sustainable architecture and construction of both buildings were produced by the owner and are the focal point of the Discovery Center's educational presentation. They are narrated by renown Hollywood actor William Mapother, a native of Louisville. Two stationary bicycles inside the room have been engineered to produce electrical power for the presentation screen. Visitors are encouraged to hop on and pedal the bikes to provide the power, making the presentation carbon neutral.

Energy efficient construction was achieved by creating foundations that are heavily insulated reinforced concrete. Walls are 16 inches thick with a thermal resistance value of R36. Windows are two layers of glass that reflect the sun's radiant heat energy. Metal awnings are designed to reduce heat gain from the sun. Two sources of renewable energy are produced on the property: Roof solar panels generate electrical power for the buildings and a geothermal system harnesses the energy of the earth's internal heat for the HVAC. Water efficiency features include permeable pavers, a rainwater harvesting system to feed the green screens, and low-flow toilets.

Each building features a distinctive roof system. The insulated roof of the main building is covered partially with a white waterproof membrane that reflects the sun's radiant energy and partially with a blanket of photovoltaic cells designed for flat roofs. The vegetative green roof on the Discovery Center helps to insulate the roof while cooling the building, catching rainwater, providing oxygen and reducing the "heat island effect."

Located in the heart of a dense urban area, the Highland Green Building encourages sustainable transportation by hosting an electric car charging station, a handmade bike rack shaped like a hanger, and a bus stop on the premises. Not only did the owners achieve maximum design with minimal impact, but the buildings and premises reflect the sustainable ethos and services that distinguishes Highland Cleaners in the Louisville area.

ABOUT THE HIGHLAND GREEN BUILDING

The Highland Green Building (www.TheHighlandGreen.com) is a 6,500-square-foot retail and office building located at 1401 Bardstown Road in Louisville, Kentucky. The building is located in a dense urban neighborhood, and houses a dry cleaners (HighlandCleaners.com), residential real estate office (NatalieInYourNeighborhood.com), and a film production company (HLPictures.com). The building is owned by the Doric Real Estate Company, (DoricRealEstate.com).

"Highland Cleaners was born in this great neighborhood. We wanted to build an exceptional building here, one that embodies the shared progressive values of our company and the neighborhood."

- Michael Jones, Highland Cleaners



Architect: Design Plus Studios
Civil Engineer: Potter General Contracting
Commissioning Agent: Paladin Engineering
LEED Consultant: Paladin Engineering
Project Size: 6,500 square feet

Photographs Courtesy of: Willie MacLean/BirdsEyeFoto and Kentucky USGBC.

ABOUT KENTUCKY USGBC

As a non-profit, volunteer organization comprised of organizational and individual members, our goal is to improve the health and welfare of all Kentucky citizens through a sustainable and responsible built environment. Through education and awareness we encourage the use of sustainable practices that provide our residents with a healthy environment in which to live, work and learn.



www.usgbkentucky.org
 888-KY-USGBC