Discovery Green Conservancy

See. Touch. Hear. Taste. Explore.

PROJECT DESCRIPTION

Driven by a passionate commitment to sustainable design and operation, the Conservancy retained PageSoutherlandPage to manage the LEED certification process for Discovery Green. LEED credits are earned based on site sustainability, water efficiency, energy and atmosphere, materials and resources used in construction, indoor environmental quality and innovation in the design process. Discovery Green's high performance green buildings were built to adhere to the strict LEED standards set forth by the U.S. Green Building Council at the Gold Level. Discovery Green has also achieved Corporate Lands for Learning (CLL) certification from the American Wildlife Council for the establishment and documentation of site-based education programs through providing exemplary conservation education experiences for the community.

SUSTAINABLE SITES (9/14)

Credits are earned for the site's location in a dense urban center and access to public transportation, complete remediation of a brownfield site, provision of facilities for cyclists, and prevention of pollution during construction. Credits also are earned for maximizing open space and stormwater management procedures. Buildings are oriented to maximize natural air flow through the park and to minimize solar heat gain for interior spaces, including use of "open-air verandas" to help shade interior areas of the buildings. A dozen mature trees, including four large live oaks, were relocated to the property during construction from sites threatened with development.

WATER EFFICIENCY (0/5)

The park's efficient irrigation system, recycling groundwater from the garage to help fill Kinder Lake, and use of high tech, highly-efficient restroom fixtures are important green features as well. A credit is earned for use of an efficient irrigation system. The design provides flexibility in terms of use of groundwater being pumped from the garage dewatering system so that it can be used for pond make-up water and possibly irrigation, but the LEED program does not recognize this strategy except possibly for its innovation.

ENERGY & ATMOSPHERE (6/17)

Enhanced HVAC refrigerants and air conditioning units are being used; the Conservancy has committed to secure at least 35% of its power from "green" sources; solar panels and other efficient technologies are being used to heat water; solar panels are being used to generate electricity on-site; and all buildings are designed to reduce summer solar heat gain.
Solar panels sponsored by BP, along with other efficient technologies, are being used to heat water and to generate electricity on-site. Two arrays totaling 256 solar panels, added to the Alkek Building and The Lake House buildings generate enough power for the park office.

MATERIALS & RESOURCES (6/13)

Construction materials for the park have been recycled for use in future projects. Additionally, 20% of the materials used came from regional sources, and more than 60% of Ipe the wood used to construct the park came from sustainably-harvested forests. Ipe wood is a safe choice for children and adults, because it is amazingly strong and dense and naturally resistant to rot, insects and fire. The exposed structural elements on the buildings were included to conserve construction materials by eliminating the need for additional surface covering.

INDOOR ENVIRONMENTAL QUALITY (13/15)

Lighting and air conditioning levels in all buildings are consistently monitored, and all buildings allow maximum access to daylight and views for natural sources of light to create healthy indoor environments. And, finally, the Conservancy has committed to an education program and use of green housekeeping and landscape maintenance products.

INNOVATION IN DESIGN (5/5)

The Conservancy has committed to an education program and use of green housekeeping products once the park opens. The Conservancy's commitment to involving PageSoutherlandPage Architects team of LEED professionals also is considered.

"Because of the support of Mayor White, BP and now the entire community, Discovery Green has by far exceeded our expectations. This achievement of LEED Gold Certification is the result of the efforts of our entire team to develop and now operate a park that is a model of environmental sustainability for Houston."

Guy Hagstette
President & Park Director 2008- June 2010

Owner: Discovery Green Conservancy
Architect: PageSoutherlandPage
Lead Designer: Larry Speck
Landscape Architect: Hargreaves Associates & Lauren Griffith Associates
MEP Engineer: PageSoutherlandPage
Structural Engineer: Henderson + Rogers & Walter P Moore
Electrical Engineer: Hunt & Hunt
Civil Engineer: TSC Engineering
Contractor: Miner-Dederick Construction
Project Size: 11.78 acres
Total Project Cost: $125 million
Completion: April 2008

Photography: Katya Horner

ABOUT LEED

The LEED Green Building Rating System is the national benchmark for the design, construction, and operations of high-performance green buildings. Visit the U.S.Green Building Council's Web site at www.usgbc.org to learn more about how you can make LEED work for you.

PROJECT PROFILE

Discovery Green
Houston, Texas

LEED for New Construction

20% Local / regional construction materials

60% Ipe wood from sustainably-harvested forests

100% Of off-site energy used is from green sources

LEED® Facts

Discovery Green
Houston, TX

LEED for New Construction
Certification Awarded October 2009

Gold	39*
Sustainable Sites	9/14
Water Efficiency	0/5
Energy & Atmosphere	6/17
Materials & Resources	6/13
Indoor Environmental Quality	13/15
Innovation & Design	5/5

*Out of a possible 69 points

Photo: James LaCombe