PROJECT PROFILE

Preserving a Modernist Residence

LEED Facts

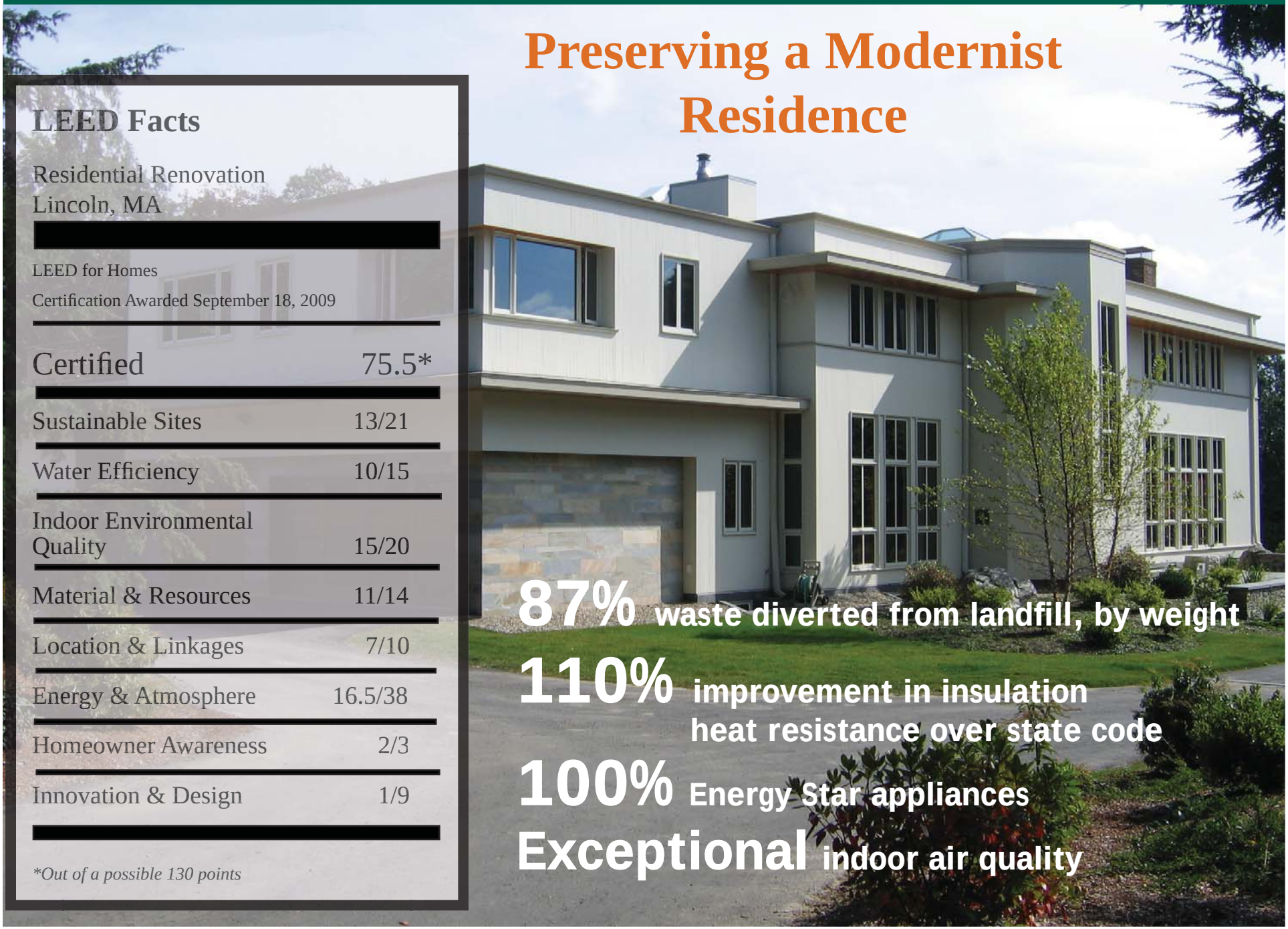
Residential Renovation
Lincoln, MA

LEED for Homes

Certification Awarded September 18, 2009

Certified	75.5*
Sustainable Sites	13/21
Water Efficiency	10/15
Indoor Environmental Quality	15/20
Material & Resources	11/14
Location & Linkages	7/10
Energy & Atmosphere	16.5/38
Homeowner Awareness	2/3
Innovation & Design	1/9

**Out of a possible 130 points*



87% waste diverted from landfill, by weight

110% improvement in insulation heat resistance over state code

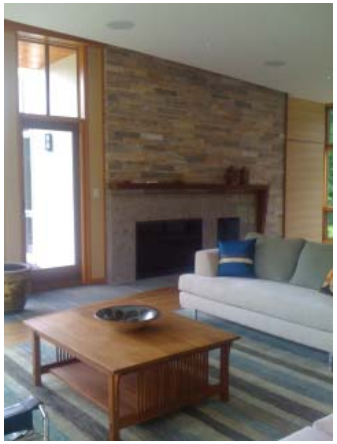
100% Energy Star appliances

Exceptional indoor air quality

A LEED certified renovation

PROJECT BACKGROUND

When Karen Clarke, set out to preserve and renovate her 10,300 sq., ft. modernist home in Lincoln MA, she knew it would be both sustainable and aesthetically pleasing.



As co-chair of the Interior Design department at New England School of Art and Design at Suffolk University. , she intended to practice what she preaches in sustainable design. The large foot-print made the property suspect for certification by an organization that discourages and penalizes bigger homes. Critics aside, Karen was certain it was indeed possible.

STRATEGIES AND RESULTS

Using LEED as a guide from the outset enabled the team to develop the environmental and performance goals in concert with the Clarkes' desire for modern amenities and a healthy, environment that has a minimum impact on the earth.

LEED also guided the team to take advantage of natural opportunities to lessen environmental impact and maximize performance. The home's site was protected for erosion and trees were wrapped to minimize long-term environmental damage. Water use is minimized with the addition of drought resistant plants which do not to need an irrigation system. Water is re-used via a rain catchment system set up for manual irrigation during hot summer months.

The homes green features are many. A large wall of windows maximizes solar gain and brings natural light in the main living areas. The roof overhang lets in the sun during the winter and keeps out the high sun in summer. Low- E windows are installed through out the house. A mix of stone and engineered wood floors, using a radiant heated system by Viega, remain warm through out the year. The wood material was minimized by using only 1/4" veneer over a sub floor vs. a typical wood floor which is ¾" thick.

Sustainable materials are used through out. The kitchen contains Valcucine cabinets which is completely recyclable, sustainable, scratch resistant, and totally emission free. Counter tops include a mix of Icestone, a recycled glass and Silesstone, a natural quartz, and engineered walnut wood. Forest Steward Certified (FSC) wood was used where possible.

Energy performance is maximized with energy efficient appliances and solar panels that assist in heating water. Iycenene, a green spray insulation, helps to minimize energy consumption caused by uncontrolled air leakage. keep the house well insulated

The indoor air quality is maintained by low –volatile organic compounds (VOC) paints and finishes and an energy recovery ventilator that introduces measured fresh air mechanically.

"Our LEED-certified home is a labor of love. We have a healthy and efficient environment for our family to live in, and one that balances sustainability and aesthetics."

Homeowner

Owner and Interior Designer: Karen Clarke
Landscape Architect: Zen Associates, Waltham, MA
Contractor: David Brooks
LEED for Homes Provider: Conservation Services Group, Waltham, MA
Project Size: 10,300 square feet
Project Duration: 2 1/2 years

About LEED

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