



## **LEED for Homes Mid-rise Multifamily Buildings Program**

The LEED for Homes program was developed by the United States Green Building Council (“USGBC”) [USGBC: U.S. Green Building Council](#). It is a voluntary program encouraging the conversion of conventional home-building production towards more sustainable practices. It is providing a necessary instrument for home buyers, local governments and builders to construct environmentally sound, healthy and energy-efficient places to live.

Habitat for Humanity - New York City's recent project—the Atlantic Avenue Residences—is in the LEED for Homes program with the USGBC. As a four-story, multifamily residential complex, it falls within the Mid-rise Multifamily Buildings Pilot Program. The project was entered into the LEED program to ensure a better quality of life for Habitat-NYC Family Partners, not only for today, but for years to come. Habitat-NYC went well beyond the minimum requirements of a LEED certified building in order to create homes that are as affordable, sustainable and healthy as possible for our families.

As a responsible nonprofit developer, Habitat-NYC is interested in the effect that our buildings have on the community and the earth. We have made efforts to reduce our environmental impact through minimizing construction waste, using sustainable and recycled building materials and making smart design choices to conserve water and energy.

To mention a few of our accomplishments on this project:

### **Use of Environmentally Preferable Building Products**

Many products used in the construction of these buildings have environmentally preferred contents, which are sustainable, recycled and/or non-toxic. For instance, recycled blue-jean insulation fill many of the walls of these homes. The kitchen cabinet, and trim throughout the units are constructed of Forest Stewardship Council (“FSC”) certified wood products, assuring that the wood originates from sustainable and well-managed forests. The kitchen countertops are a concrete composite of recycled paper and glass and fly-ash (a byproduct of coal production). Linoleum composite flooring, made from natural and rapidly renewable materials, including linseed oil and wood flour, cover the public hallways. All paints and caulk used in the units have low or no volatile organic compounds (“VOCs”).

In addition, we used materials that were extracted and manufactured within 500 miles of the site. Using local products not only benefits our local producers, but also saves energy and decreases pollution caused by transportation.

### **Providing Healthy Environments**

We have made every effort to use products with low or no emissions in these buildings. Toxins in building products pollute indoor air, which can lead significantly to health problems. By using low-VOC and formaldehyde-free products, we can improve and prevent respiratory, allergic or immune health conditions, especially in small children and infants. This is particularly important in New York City, and for the families we serve, as New York City has some of the highest asthma rates in the country.

Proper ventilation is another crucial factor for healthy indoor air quality. In typical multifamily construction, ductwork from each unit joins into a central shaft that runs vertically through the building and exhausts out the roof. This type of system can allow for bad air from one apartment to “back-draft” into another. In the Atlantic Avenue Residences, each unit is thoroughly air-sealed and is exhausted independently. Fresh air is brought in through trickle vents in the windows, creating a much cleaner and healthier indoor environment for the families.

### **Energy and Water Efficiency**

To achieve substantial energy efficiency, all relevant appliances, lighting fixtures and windows are Energy Star labeled. Common area lighting is on occupancy sensors and 85% energy-efficient boilers heat the buildings. Increased insulation values were designed in the roofs and walls, and the insulation was placed on the *exterior* of the buildings (traditionally it's placed on the *interior*) to reduce thermal breaks and to create a more efficient thermal barrier. Water savings are achieved through low-flow plumbing fixtures, faucets and showerheads, including, for example, high-efficiency Toto toilets. One of the largest benefits of these measures is that it reduces utility costs for the homeowners and helps to keep their homes affordable.

### **Controlled Waste Management**

Ninety-seven percent of all waste leaving the worksite during the construction of this project was diverted from landfills and recycled. The minimization and disposal of waste has become one of the most important environmental topics in recent years, due to the fact that today's buildings and construction sites are some of the largest contributors to the amount of waste and pollution on earth. Habitat-NYC has done, and will continue to do, our part to reduce construction waste as much as possible.

### **Ensuring Sustainability**

Habitat-NYC has done our best to minimize long-term environmental damage, both during and after the construction process. One way this is being achieved is through the management of surface water. More than 98% of the unbuilt site is permeable. Storm water runoff—which can contribute to the contamination of the city's waterways—is reduced through the installation of permeable paving and vegetative landscape. In addition, all of the plantings on the site are non-invasive, native and drought-tolerant species, minimizing the demand for water and synthetic chemicals. Water demands are further reduced by the absence of conventional turf and through the installation of a water-efficient underground drip irrigation system. In creating a sustainable site, our homeowners can enjoy a lush and beautiful landscape today and for years to come, and the community and environment benefit as well.