

Loy Center

The five new houses in the Loy Center: N, O/P, Q, R and S were built sustainably using the LEED for Homes program and received a Platinum certification. They are the first LEED (Leadership in Energy and Environmental Design) for Homes certified structures on Elon's campus. Elon is the first college or university in North Carolina to have 6 LEED for Homes certified structures on its campus. The O/P building, a duplex, received two certifications - one for each side.



The Loy Center is the Greek Life residential area on Elon's campus. The new houses increased the number of Greek organizations housed on campus. Each home is approximately 4,500 square feet. The houses are located behind the Moseley Center and across the street from the Koury Business Center on Phoenix Drive. Construction began in April of 2010 and completed in May of 2011. They were occupied starting in the fall of 2011

Innovation and Design Process

Elon has several different methods of alternative transportation that Lakeside Dining Hall visitors and occupants can access. It is within walking distance of many commonly used buildings on campus such as Belk Library, Center for the Arts and the Koury Athletic Center. In addition, Elon BioBus stations are a short walking distance away. There, students can catch the BioBus routes, which service local apartments, shopping centers and community service locations. As with most buildings on Elon's campus, bike racks are also provided. The green space, pedestrian walkways and outdoor seating areas around the building encourage the use of outdoor space.

Locations and Linkages



The location chosen for the houses was within an existing community (Elon's campus) and avoided environmentally sensitive areas, which reduces the environmental footprint. The occupants utilize all existing Elon University services such as the Library, Colonnades Dining Hall and Koury Athletic Center among others. There is an Elon BioBus stop a short walking distance away. As with many areas on campus, the occupants of the new Loy Center houses have access to large amounts of open space, which improves quality of life.

Sustainable Sites

As noted above, the need for irrigation was eliminated by installing adaptive and drought-tolerant vegetation. During construction, erosion management controls were also implemented. The project reduced the heat island effect by carefully planning shading and using light-colored concrete.

There are designated areas for stormwater runoff control. The type of vegetation installed also helps with stormwater runoff. Managing stormwater decreases the movement of environmental contaminants through water and allows for effective relocation of displaced rainwater due to impermeable surfaces such as sidewalks or building structures. The project used methods of nontoxic pest control for pest



Water Efficiency

Many aspects of sustainable building design are interconnected. As a result, landscape irrigation practices influence a number of credit categories within the LEED for Homes program. This means that the water efficiency of the project increased with the elimination of irrigation and installation of adaptive vegetation, which eliminated the need for potable water. Within the houses, high efficiency plumbing fixtures were installed to meet the needs of the residents, while reducing potable water consumption. Dual flush toilets, low-flow showerheads and faucets were installed.



Energy and Atmosphere



Each Loy Center house is approximately 44% more efficient than a conventional house. The houses were designed and constructed to meet the Energy Star for Homes requirements including designing and selecting energy efficient systems. The houses have a high-efficiency thermal envelope to prevent any unwanted air transfer. The insulation in the houses is one component of the thermal envelope. All plumbing pipes carrying hot water were insulated appropriately to decrease loss of heat from the movement of hot water. Only non-HCFC refrigerants were used in the houses. [Click here for more information about the Energy Star Homes program.](#)

Materials and Resources



Construction was carefully planned in order to reduce the waste of building frame material. To ensure this, the team created detailed documents including an extensive cut and order list. An efficient frame design also reduced the amount of insulation needed for the building envelope. The home used regional materials where possible. Some of these materials include exterior wall framing, floor framing, foundation cement and windows. Low VOC (volatile organic compounds) products were also used including paints and adhesives. During the construction of the Loy Center houses, about 90% of the construction waste was diverted from the landfill.

Indoor Environmental Quality

Good indoor air quality promotes healthy and productive lives for residents. By eliminating a combustion heating system such as a woodstove, the Loy Center houses avoided significant energy consumption and harmful indoor air quality consequences. The houses feature a continuous venting system, and a third party inspector measured each room in the homes to ensure that the rooms receive adequate air ventilation. All air in the houses is exhausted to the outdoors and Energy Star exhaust fans with a timer are used in each bathroom.



Occupants have the ability to adjust the air flow and temperature to suit their needs. The conditioned air introduced into the houses has been filtered with high efficiency filters. The floor mats at the entrance of each house limit the movement of outdoor contaminants through the home. During construction, air handling units were covered to limit dust and contaminant build-up in the system, which allows for good indoor air quality after construction. Radon protection measures were taken in the design and construction of the houses.

Awareness and Education

In order to promote LEED and the success of the new Loy Center houses, the team created forms of public education and awareness. The house managers for these houses complete a training session on the operations and unique features of the new Loy Center houses as well as sustainable living strategies. They then teach their residents about their new residences.

This web site material is also a part of the public awareness program. In addition, there is a [Sustainable Living Guide](#), which provides information and tips on how residents can live more sustainably on campus. Educating the residents about their new residences and how they can live more sustainably is an important component of the LEED for Homes program and Elon's commitment to sustainability.