Schar Center

Schar Center is the new home for Phoenix basketball and volleyball. It is the largest facility on Elon's campus and is used for convocations, speakers and other major campus events. The 160,000 square feet facility includes the main arena, entry atrium, practice gym, locker rooms, athletic training room, weight room, offices, conference rooms and hospitality room.

Per the University's Green Building Policy, the building was designed and constructed using the principles of the LEED program and achieved LEED Gold certification. LEED stands for Leadership in Energy and Environmental Design and is the preeminent green building rating system internationally.

Sustainable Sites

The facility is located within walking distance of many commonly used buildings on campus, such as Center for the Arts and Koury Athletic Center. Stormwater is managed on the site with a wet detention basin to reduce the amount of stormwater runoff leaving the site and to improve the quality of stormwater on site. The amount of open space on the project site exceeds the requirement for the project. The roof reduces the heat island effect because the majority of it is a highly reflective material.

Water Efficiency

All of the plumbing fixtures in the building are low-flow. The lavatory faucets use 0.5 gallons of water per minute, and the shower heads are 1.6 gallons of water per minute. The toilets have dual-flush handles, and the urinals use only 1 pint of water per flush. These fixtures are expected to reduce the building's potable water usage by about 38%. The landscaping around the building is designed to minimize the need for irrigation.

Energy Efficiency

Energy efficient systems were integral in the design and construction of Schar Center. Compared to standard energy code performance, the energy cost savings for the facility is 39%. Among the energy efficiency strategies there are variable speed drives on pumps and fans, energy recovery wheels, variable air volume air handling units and high efficiency condensing type boilers. The central chilled water system employs dual, variable capacity, high efficiency water cooled chillers with water side economizing. Through a combination of switching and occupancy sensors lighting is controlled by a building-wide lighting automation system that is integrated with the building automation system. All lighting is LED, including specialty event lighting, which does not contain mercury. There is metering for water, natural gas and electricity, including submeters for HVAC, lighting and plug loads, which allows for improved monitoring and tracking of consumption. Electricity consumption information will be viewable on the Building Dashboard.

Materials and Resources

During construction, 85% of the waste was recycled or reused, which kept it out of the landfill.
In addition, building materials with recycled content (pre and post-consumer) were used, about 27% based on cost. Using recycled content reduces the need for virgin materials. Specific examples include the drywall, which contains over 85% recycled content and the primary steel products, which contain at least 50% recycled content.
To support the regional economy and reduce the impact of transportation, regional materials were used as much as possible. In the LEED system, regional materials are those that are extracted, harvested, recovered and manufactured within 500 miles of the project site. Based on cost, about 17% of the building materials are regional. Specific examples include the cement, steel and drywall.
Many of the furniture pieces contain recycled content and have earned sustainability-related certifications, such as LEVEL.
As in all buildings at Elon, recycling containers are located throughout the building for single stream recycling. Cardboard and battery recycling is also available. Schar Center also has compost bins located throughout the facility.

Indoor Environmental Quality

Providing excellent indoor environmental quality was another essential component in the design and construction of Schar Center as it contributes to the health and productivity of building occupants.
Great care was taken during construction to ensure the building and systems were kept clean and free of contaminants benefiting the construction workers and the eventual building occupants and users.
For example, duct work was kept covered to prevent debris from accumulating and a special sweeping compound or wetting agent was used to minimize dust.
The adhesives, sealants, paints, flooring systems and composite wood products used in the building contain a low or no amount of volatile organic compounds (VOCs). Low VOC products allow for better air quality during and after construction. The entry way systems also help provide good indoor air quality be preventing dust and other contaminants on shoes from entering the building.
Many of the full-time offices have a window. Studies have shown that natural light improves occupant well-being and productivity.
Several of the furniture pieces have earned designations that verify low chemical emissions, which supports good indoor air quality, such as GREENGUARD and SCS Indoor Advantage. A green cleaning program is also used in the building, which benefits occupants and maintenance personnel. Green cleaning improves air quality, occupant health and well-being and is better for the environment.

Innovation and Design

This category within LEED recognizes exceptional performance and innovative strategies not covered in standard credits. One strategy used in the Schar Center that earned an Innovation in Design credit is the use of low mercury lighting. The facility also has a Solid Waste Management Plan that earned recognition in this category. It identifies how waste will be treated and diverted from the landfill. The project also exceeded the open space requirement, which was recognized. An educational program to educate building occupants, visitors and the greater community on the sustainable building features and their benefits also received credit. If you would like a tour focusing on the sustainable features of this building, please contact us.