E N E R G Y  E F F I C I E N C Y

Advanced, efficient space conditioning systems are designed to maintain a comfortable environment. Chilled beams and radiant floor systems employ convective air flows to heat or cool spaces, saving energy and reducing operational costs. Fans and pumps in the heating, ventilating, and air conditioning (HVAC) and plumbing systems are equipped with variable frequency drives (VFD), allowing fan speeds to be lowered and energy to be saved when less air is needed. To achieve a 25% savings in annual energy consumption compared to standard building performance, Evans Hall includes high-performance windows, interior and exterior solar shading, a reflective white roof, rooftop solar photovoltaic panels, additional wall and roof insulation, LED lighting, daylight-controlled lighting, light dimming controls, and garage ventilation controlled by CO sensors. No CFC refrigerants are used for cooling, reducing impacts on global warming and ozone depletion.

I N D O O R  E N V I R O N M E N T A L  Q U A L I T Y

Evans Hall offers a healthy, productive environment for students, staff, faculty, and visitors. To ensure adequate fresh air throughout the building, CO2 sensors located in all densely occupied spaces are tied to air handling systems that automatically adjust fresh air volumes according to the density of people in the space. Additionally, fresh air volumes exceed minimum requirements by more than 30% in all spaces. During construction, all air

55% of wood used in the project was certified by the Forest Stewardship Council

85% of demolition and construction debris was recycled or reused

20% of materials came from within 500 miles of the project site, reducing pollution from delivery fuel and lowering overall transportation impacts

31% reduction in annual potable water use in comparison to a conventionally equipped building is anticipated
handling systems were protected and pollutants were isolated or eliminated, and a complete building flush-out was conducted after all construction activities were completed. All adhesives, sealants, paints, coatings, and flooring systems contain low levels of volatile organic compounds (VOC), and all insulation and composite wood products contain no added urea formaldehyde. To optimize comfort in offices, most occupants have access to individual lighting and/or thermal controls. Further improving the user experience, building exterior and interior partitions were designed to provide enhanced acoustical performance—as important in the individual workspace as it is in a large assembly hall.

MATERIALS

More than 85% of construction and demolition debris was diverted from the municipal solid waste stream. Hazardous materials discovered onsite during demolition were removed and/or abated to minimize potential health risks. Building materials containing recycled content were targeted and specified, with a result of 21% recycled content in the building materials overall. More than 35% of all wood installed in the building is FSC (Forest Stewardship Council) certified as having been harvested, processed, and manufactured using sustainable forestry practices. Lastly, more than 20% of building materials were extracted and manufactured within 500 miles of Evans Hall, including CMU blocks, concrete mixes, and multiple wood products.

WATER EFFICIENCY

High-efficiency plumbing fixtures have reduced indoor water consumption by 31%. Shower heads use 2.0 gallons per minute (compared to standard 2.5), “pint-flush” urinals use 0.125 gallons per flush (compared to standard 1.0), and dual-flush toilets are expected to average 1.28 gallons per flush. In addition to installing native plant species and utilizing captured rainwater for irrigation purposes, Evans Hall eliminates the use of potable water for irrigation through rainwater reuse, hydrozoning, low-flow (drip and bubbler) irrigation, and advanced irrigation controls such as moisture and rain sensors.

SITE AND TRANSPORTATION

Measures are integrated throughout the building to not only minimize the impact on the environment but also create optimal learning, teaching, and working environments for students, faculty, and staff. To minimize the new structure’s impact on the local heat island effect and stormwater runoff, the design team incorporated several strategies including 100% underground parking, a 25,000-gallon rainwater collection tank, and multiple infiltration beds allowing excess rainwater to percolate into the water table. Expansive glazing maintains occupants’ connection to the outdoors, providing views of the native vegetation covering much of the open space on the 4.25 acre site. Covered parking for 104 bicycles was provided, and four shower/changing rooms are available. Infrastructure for seven electric vehicle charging stations has been provided in the parking garage. Finally, the project embraces the environmental sustainability priorities of the region: all four LEED Regional Priority points were awarded for the project’s site-related initiatives.