Sterling Hall of Medicine I2/3

Yale University completed Phase 1 of the renovation of Sterling Hall of Medicine I Wing 2nd and 3rd floors in alignment with the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) rating system at the Gold certification level for Commercial Interiors.

ENERGY EFFICIENCY

In keeping with Yale's greenhouse gas reduction goals, energy conservation is a main focus of any new project. In the renovated floors' laboratories, support spaces, offices, and auditorium, occupancy sensors tied to lighting reduce electrical loads. Use of a high-efficient lighting design has reduced the lighting power density of the project by 26% compared to the baseline ASHRAE energy code. The renovated spaces also incorporate new temperature control systems with set points that allow for individual increases and decreases along with central plant monitoring. Proper zoning and premium efficient equipment utilized in the HVAC system have reduced energy consumption from that system alone by 16.6%. In addition, no CFC-based refrigerants are used in the laboratories.

INDOOR ENVIRONMENTAL QUALITY

High indoor environmental quality contributes to the well-being and productivity of a building's occupants. Features of the I-Wing renovation, ranging from positioning of the workstations to materials used in construction, all contribute to the excellent indoor environmental quality of the space. The project exceeds the highest standards for air quality (ASHRAE 62.1-2004). Materials specified and installed, including adhesives, sealants, paints, carpets, and systems furniture and seating, emit low levels of volatile organic compounds (VOCs). Lighting design elements, from task

22.5% of the total dollar value of all materials used in construction represents postconsumer or preconsumer recycled content

87.6% of demolition and construction debris was diverted from landfills

66.8% of the wood products used in construction were certified by the Forest Stewardship Council

24.9% of building materials were manufactured regionally, within 500 miles of the project site

48.2% reduction in annual potable water use is anticipated

lighting and multi-level controls to occupancy sensors, allow occupants to have maximum control while reducing energy use for lighting. Within the regularly occupied areas, 79% of regularly occupied spaces utilize the availability of natural daylight, and 90% of regularly occupied seated spaces have direct line of sight to the outdoors.

MATERIALS

To minimize the environmental impact of the project, all aspects of the design and construction process were carefully considered, including the full life cycle of all materials used. The project diverted more than 87% of demolition and construction waste from the landfill through a rigorous recycling program. More than 22% of the total dollar value of all materials used in the renovation represents recycled content; and 24.9% of the building materials were manufactured regionally. Built-in recycling collection locations promote recycling by lab occupants.

WATER EFFICIENCY

Efficient use of water is an important feature of the renovation. Designers incorporated low-flow fixtures to maximize water conservation, resulting in a 48.2% annual reduction in potable water use.

SITE AND TRANSPORTATION

The Sterling Hall of Medicine is located in a dense urban area, close to many public amenities, including the Yale Shuttle and CT Transit bus lines. Yale parking strategies encourage the use of public transportation or car/van-pooling. For commuters traveling by train, New Haven's Union Station is within a quarter mile.

Architect
Svigals + Partners

Total floor area
21,008 sq ft

Opening date
December 2009

Yale