

Sterling Hall of Medicine C3



Yale University renovated the Sterling Hall of Medicine C3 Laboratory 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 this laboratory renovation, daylight-responsive controls and occupancy sensors tied to lighting are used to reduce electrical loads. All appliances and 90% of office equipment are rated Energy Star™. New temperature control systems with set points allow for individual adjustments in addition to Central Plant monitoring. No CFC-based refrigerants, which contribute to the depletion of the ozone layer, are used in the lab.

INDOOR ENVIRONMENTAL QUALITY

High indoor environmental quality contributes to the well-being and productivity of a building's occupants. Many design features of the C3 Laboratory, ranging from the positioning of the workstations to materials used in construction, make the indoor environment healthy and pleasant. The lab is constructed primarily of materials—including adhesives, sealants, paints, carpets, composite wood, and systems furniture and seating—that emit low levels of volatile organic compounds (VOCs). Within the lab, 86% of all regularly occupied spaces utilize the availability of natural daylight, and 85% of regularly occupied seating spaces have direct line of sight to the

1st Commercial Interior Gold rating in the country awarded to a laboratory

96% of the wood products used in construction were certified by the Forest Stewardship Council

22% of the total dollar value of all materials used in the project was for rapidly renewable materials with a 10-year or shorter harvesting cycle

21% of the building materials were manufactured regionally

14% of the total dollar value of materials used in this project represents recycled content

outdoors. In addition, air ventilation rates are 88% above the most stringent standards.

MATERIALS

To minimize the environmental impact of the renovation project, all aspects of the design and construction process were carefully considered, including the full life cycle of all materials used. The project diverted 85% of its demolition and construction waste from the landfill through a rigorous recycling program. Built-in recycling collection locations promote recycling by lab occupants.

WATER EFFICIENCY

Efficient use of water is an important feature of the lab. Designers incorporated low-flow fixtures to maximize water conservation, resulting in a 24% annual reduction in potable water use. Restrooms and break rooms use 34.78% less water than baseline fixture performance, and laboratories use 30% less water than baseline fixture performance.

SITE AND TRANSPORTATION

The Sterling Hall of Medicine is located in a dense urban area with close proximity to public amenities. The building is within a half mile of residential neighborhoods and ten basic services and within a quarter mile of five bus lines and a rail station. In addition, Yale parking strategies discourage automobile use by providing alternative solutions such as public transportation and car/van-pooling.

INNOVATION IN DESIGN

The innovations in design for the renovation include the use of low-flow sink faucets to reduce laboratory water usage as well as exemplary performance in the use of rapidly renewable materials.



Architect

Svigals + Partners

Total floor area

17,500 sq ft

Opening date

March 2006

Yale