Monroe Community College
STATE UNIVERSITY OF NEW YORK

Louis S. and Molly B. Wolk Center for Excellence in Nursing

Project Highlights

Resource Savings:

- Energy usage: 18.4% reduction from ASHRAE Standard 90.1, 2004 Edition.
- Water usage: 33% reduction from Energy Policy Act of 1992 Fixture Performance Requirements.
- Increased level of individual controllability of HVAC system.

Construction Goals:

- 10% Recycled Materials content for construction materials (exclusive of mechanical/electrical systems).
- 10% Regional Materials content of construction materials (exclusive of mechanical/electrical systems).
- Divert construction waste away from landfills: recycling of material waste, use of excavated soils for landfill cap.

- Promote maintaining Indoor Air Quality during construction, and before occupancy.

Project Location:

The Louis S. and Molly B. Wolk Center for Excellence in Nursing is an addition to the west end of Building 9 on Monroe Community College's Brighton Campus, immediately east of Parking Lot K and south of Building 8.

Program:

Monroe Community College's growing nursing program needed a new home – the program was growing, its graduates in high demand from local and regional healthcare providers, and many of its facilities were outdated or inadequate for new teaching methods, optimum class section sizes, and current/future technology. There was not enough area available in the existing Building 9 on MCC's Brighton Campus where the program was housed, but Nursing was in an optimum location in regard to related programs and support.

A grant from the Wolk Foundation made the addition of new space for this program at the west end of Building 9 a possibility, allowing the Nursing program to expand into state-of-the-art facilities, which then affords swing space that will make the future major renovation of the existing building possible. This expansion and renovation is consistent with MCC's Facilities Master Plan, last updated in 2007-2008.

The Design Team of SWBR Architects, M/E Engineering, P.C., and Parrone Engineers was retained to provide program verification, design, and construction administration services for this project, which also included associated renovations at the west end of the existing Building 9, some re-roofing, and installation of a large self-enclosed rooftop Air-Handling Unit that serves both the Wolk addition and an area of existing space.

The following are the features included in the two-story, 22,560 Square Foot addition:

- Six Nursing Classrooms
- A Bed Lab and a Fundamentals Lab with simulated patient bed area setups
- A Nursing Learning Center
- Nursing Departmental and faculty offices
- A Nursing Lounge for students, faculty and staff
- Two 900 SF General-Use Classrooms
- New western building entrance near student and staff parking
- Stair, elevator, and additional toilet rooms

The LEED Rating System:

The Louis S. & Molly B. Wolk Center for Excellence in Nursing is pursuing LEED Certification through the U.S. Green Building Council (USGBC). LEED, which stands for

Leadership in Energy and Environmental Design, is a third-party certification program and the nationally accepted benchmark for the design, construction and operation of high performance green buildings.

The Wolk Center project was designed and constructed using the LEED for New Construction rating System, Version 2.2. Monroe County and MCC challenged the Design Team to produce a project that would earn, at a minimum basic LEED Certification from the USGBC. Collectively, all involved had a goal of achieving LEED Silver as the desired final outcome. The required documentation for certification was submitted to the USGBC in late February, 2009, and is currently under review.

This new 22,800 SF addition to the MCC Brighton Campus has replaced the original nursing program classrooms, labs and faculty offices that were built in the1960's; and these new modular labs will allow for changes in technology, program, and teaching methods in the future, assuring a longer life-cycle for the facility.

The Wolk Center provides a high degree of thermal controllability for its occupants, having installed a variable air volume system for each of the offices in the new addition.

First cost investments in Sustainable Design Strategies such as additional HVAC systems or high-efficiency lighting will be returned in approximately only three years. However, this up front investment can save the County of Monroe over $230,000 in Energy Costs over the next twenty years.

Sustainable Design:

The Wolk Center building incorporates many economical and environmental, energy-saving aspects, including the following:

Sustainable Site Design

- The Wolk Center is pursuing 9 of 14 possible rating system credits for Sustainable Site Design.
- MCC followed required standard practices to manage erosion and runoff during construction.
- MCC has designed an exceptional pond system to manage the quantity and quality of its stormwater for the Wolk Center and all of its Brighton Campus construction. This system increases on-site filtration of stormwater, improving water quality, and also reduces the quantity of water leaving the site, lessening the impacts to our municipal systems. This pond also serves to provide a significant, natural, beautiful open space for the campus.
- MCC has terrific capability to accommodate bicyclists. The project has supplied sufficient showers and changing facilities for those cyclists that require them.
- MCC's Brighton Campus has excellent public transportation opportunities. The campus is served by several public bus lines that bring students to and from the main campus entrance, lessening the pollution and land development impacts associated with automobile use.
- The Wolk Center has installed a white roof system, or "Cool Roof", to lessen the detrimental environmental impacts of "Urban Heat Island Effect" caused by dark roof surfaces.

Water Efficiency

- The Wolk Center is pursuing 4 of 5 possible rating system credits for Water Efficiency.
- While many parts of the United States are currently finding water in short supply, Monroe County has a tremendous asset in its affordable, clean, municipal water system. Seeking to preserve this resource, the Wolk Center has invested in high-performance water fixtures that will save one-third of the annual water usage for this facility.
- No irrigation systems were installed as a part of this project.

Energy Efficiency

- This classroom and office building will save 18.4% in energy annually through the sustainable design strategies it has incorporated. These include: Improved Levels of Building Envelope Insulation, High Performance Window Glazing, Exterior Solar Sunshades, High-Efficiency Lighting, Daylighting Harvesting Controls in Lounge Area, Occupancy Sensors to reduce HVAC use, and others.

- The Wolk Center has installed a white roof system, or “Cool Roof”, to lessen the detrimental environmental impacts of “Urban Heat Island Effect” caused by dark roof surfaces.

Materials & Resources

- The Wolk Center has a recycling program that allows its occupants to sort paper, cardboard, glass, and metal from waste materials, keeping recyclable products out of the waste stream.
- 10.7% of the total materials cost for the project was comprised of recycled content. This increases demand for building products that incorporate recycled content materials, reducing the impacts resulting from extraction and processing of virgin materials.
- 11.9% of the products used in this project were manufactured and harvested within 500 miles of the site. This supports regional businesses and reduces the costs and environmental impacts related to transportation.
- MCC will use the Wolk Center as a teaching tool; a part of the Campus Curriculum that students can experience first-hand and study the building’s performance and systems design.

Indoor Environmental Quality

- The Wolk Center is pursuing 13 of 15 possible rating system credits for Indoor Environmental Quality.
- Volatile Organic Compounds (VOCs) are emitted as gases from certain products and are particularly noticeable in new construction. They can be odorous and irritating, but some of these airborne chemicals may have also produce short- and long-term adverse health affects. In the design of the Wolk Center, low VOC paints, adhesives and carpet products were specified with the intent to prevent indoor air quality problems from arising.
- An Indoor Air Quality Management Plan was in place during construction and was used to prepare the building for occupancy. This reduced dust and particulates brought into the construction site, managed the quality of materials stored on the site and assured a cleaner ventilation system once the building systems were in operation. This complemented the use of Low VOC materials used in construction to permit a building with improved air quality for its occupants.
- Permanent Entryway systems were installed at each entrance to the facility. These slotted systems allow for drainage and cleaning underneath, helping to capture dirt and particulates at the entrance to the building where it is directly connected to the outdoors.
- Where hazardous gases or chemicals may be present or used (i.e. custodial areas) each space is exhausted sufficiently to create negative pressure with respect to adjacent spaces with the doors to the room closed. Self-closing doors and deck to deck partitions are provided.
- High filtration media is provided in the HVAC systems. Filtration is applied to process both return and outside air that is to be delivered as supply air.

Cost:

LEED fees as a percentage of construction cost, including site work & FF& E: 0.8%

Project Team:

Owner Representatives:

MCC: Dick Degus, Valarie Avalone, Bob Cunningham, Blaine Grindle, Laurel Sanger, Frank Rinehart, Kevin Walton

MC DES: Reinhard Gsellmeier Programming Consultant: Scott Blackwell Page

Architecture, Interior Design, LEED, and Structural Engineering: SWBR Architects Mechanical and Electrical Engineering: M/E Engineering, P.C.

Site/Civil Engineering: Parrone Engineers Environmental Engineering: Lu Engineers Geotechnical Engineering: Foundation Design, P.C. Construction Manager: The Pike Company