GREEN DIVIDENDS

CASE STUDY:

New Cancer Center and Living Green Roof

FACILITY PROFILE:

St. Mary's Hospital Medical Center

Green Bay, Wisconsin

St. Mary's Hospital is an 83-bed hospital that proves even small facilities can realize big benefits when they go green. The hospital's commitment to sustainability has its roots in the St. Francis Health Systems' mission statement: "Have reverence for the earth."

St. Mary's began implementing this vision more than 25 years ago, with the installation of a stormwater management system–the first of its kind in the nation. The system continues to operate today, removing 10,500 pounds of sediment annually and restoring polluted stormwater to 99 percent purity. This system was just the beginning of the journey for a facility that is now a national leader in green practices in health care–with benefits to the earth, their patients and the bottom line.

The hospital has a total recycling/re-use rate of 41.7 percent of their total waste stream (more than twice the national average of 18 percent). It is a mercury-free facility. Guided by the slogan "our hospital is as safe as its furthest corner," the hospital's chemical rounding team has helped identify a total of 4,700 pounds of unnecessary and expired hazardous chemicals for recycling, donation or safe removal.

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New Cancer Center and Living Green Roof

When St. Mary's began planning for their new 117,000 square-foot cancer center, they seized the opportunity to make it the largest environmental initiative in the hospital's 110-year history. The signature green element of the cancer center was the installation of a 22,000 square-foot "healing green roof," now the largest green roof in the Midwest north of Chicago. The cancer center and its green roof were designed to fulfill the mission of reverent stewardship of all of the hospital's resources: natural, human and financial.

Environmental Benefits:

Built to Leadership in Energy and Environmental Design (LEED) standards, the cancer center's environmental footprint is minimized through energy-conserving features such as daylighting; a rainwater collection system that collects 90 percent of rainwater and uses it for irrigation; PVC-free materials; and full construction-site recycling. Out of a total of 760 tons

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of material generated during the cancer center construction, 85 percent was recycled, and full construction-site recycling is now a standard part of every bid for each contractor and sub-contractor conducting work on the St. Mary's property.

The green roof helps moderate the building's temperature, reducing energy needs and costs for heating and cooling by 5 percent. It also reduces stormwater runoff, provides a natural habitat for birds and butterflies, reduces pollution by filtering dust and smog, and decreases the urban heat island effect (the temperature difference between urban areas and their rural surroundings.)

Patient Benefits

The vast majority of green roofs in the United States are view-only (not accessible to building occupants), but St. Mary's green roof was designed to be a healing space for use by patients, staff and community members. 16,000 of the square feet are "green" and the remaining 6,000 square feet are terraces, walking paths and seating. Susan Bellin, Chair of Friends of St. Mary's Hospital Board, explains: "The concept of a living roof has great implication for the hope that cancer patients and their families gain as they come here for healing."

Financial Benefits

The green roof is anticipated to last for a minimum of 50 years, in contrast to a 20-year life expectancy for a standard roof. Because of the visionary nature of the project, the entire $500,000 cost of the roof's construction was paid for by a community donor.

The cancer center design also included a heat reclamation system that produces a net of more than 550,000 KW of electricity per year, resulting in annual savings of $37,000.

St. Mary's has also realized additional cost savings by taking "best practices" learned with the construction of the new cancer center and implementing them throughout the campus. For example, by replacing all of the fluorescent lights in all of the buildings at St. Mary's with the more energy-efficient models identified for the cancer center, the facility saves $8,000 a year.

Lessons Learned

St. Mary's staff think aligning their construction, management and operations with their mission of reverence for the earth is a key part of the facility's success in implementing sustainability initiatives. The hospital also credits a visionary leadership team, a corporate willingness to try the unusual, a commitment to sharing success stories, and partnerships with local and federal regulators as keys to their success. They also note that by acting proactively to decrease their facility's environmental impact rather than waiting for changes to be dictated by regulatory agencies, they have been able to design sustainability solutions that work well for them, rather than having them imposed from without.