

# PROJECT PROFILE



## ST. NORBERT GEHL-MULVA SCIENCE CENTER DE PERE, WI

**98%** of construction waste was diverted from the landfill

**40%** less water use

**21%** of materials were regionally extracted, harvested and manufactured

### LEED® Facts

St. Norbert Gehl-Mulva  
Science Center  
De Pere, WI

Awarded: June 15, 2015

**Gold 68/110\***

**Sustainable Sites 23/26**

**Water Efficiency 8/10**

**Energy & Atmosphere 12/35**

**Materials & Resources 8/14**

**Indoor Environmental Quality 8/15**

**Innovation & Design 5/6**

**Regional Priorities 4/4**

\*Out of a possible 110 points

The information provided is based on that stated in the LEED® project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.

# PROJECT PROFILE

## ST. NORBERT GEHL-MULVA SCIENCE CENTER

### PROJECT BACKGROUND

The original 6-story, 99,838 square foot, 1967 John R. Minahan Science Hall has been transformed into the Gehl-Mulva Science (GMS) Center; a 160,313 square foot, state-of-the-art learning and modern interdisciplinary scientific research facility that promotes seamless, flexible, hands-on learning thru top quality curriculum rich in laboratory and field-based experiences in combination with lecture to support faculty, undergraduates, graduates and researchers fluidly across the science disciplines of chemistry, biology, physics, psychology, geology, natural sciences, environmental science and math, to collaboratively uncover facts and create leading-edge solutions, preparing students for ever-changing demands of science and medicine in today's world. The new home of SNC's science departments, the facility includes 36 labs for research and teaching, an anatomy lab, faculty/student collaborative research and interaction spaces, group lounges and study rooms, classrooms, offices, conference rooms, work rooms, a large lecture hall, psychology computer labs, an animal learning lab, a science gallery, and a roof-top greenhouse. The GMS Center is also home to the new 6,600 square foot northeast Wisconsin campus of the Medical College of Wisconsin (MCW), which will jointly share many of SNC's spaces. It brings post-graduate medical education to northeast Wisconsin in response to projects of a significant physician shortage in the state, and minimizes the costs of establishing and operating the Community Medical Education Program.

### STRATEGIES AND RESULTS

Serving as the beacon of sustainability for SNC, the Gehl-Mulva Science Center achieved LEED Gold certification for implementing practical and measurable strategies and solutions aimed at achieving high performance in: sustainable site development, water savings, energy efficiency, materials selection, indoor environmental quality and innovation. Located on the banks of the Fox River in the City of De Pere, the landscape around the existing Science Hall was restored with native/adaptive vegetation, differing from the College's "standard" landscape design. The walkable and social campus setting has encouraged alternative transportation not only by walking, but also by biking and offering free public transportation to all students and staff via the public bus service, which has consequently decreased the need for on-campus parking. Additionally, SNC provides preferred parking for low-emitting and fuel-efficient vehicles as well as carpool parking. By requiring students to live on-campus, providing enhanced amenities and using the facilities for social uses during non-school hours, SNC has created a sense of campus community and is well connected to the De Pere community.

The east-west orientation of the existing building made it ideal for the installation of the 12 kW roof-mounted photovoltaic (PV) system, which produces 15,150 kWh/year, and the 203,500 kBtu solar thermal hot water system which preheats domestic hot water to 140° F, minimizes steam use, which saves the College 2,035 therms per year. Together, these renewable energy systems generate 74,776 kWh per year, saving \$3,834 annually, representing approximately 1% of the estimated total annual energy costs. The roof, consisting of "cool roof" Energy Star products is also home to the state-of-the-art greenhouse and a vegetated roof. The renovation also included the replacement of the existing small windows with larger, energy efficient windows to introduce more daylight into the space.

Inside, the renovation focused on reusing the existing (86%) the structural elements and abating hazardous and chemical waste. A sound construction waste management plan resulted in diverting 98% of the waste from the landfill. To maintain a high level of indoor air quality, a construction indoor air quality management plan was implemented, MERV 13 filtration media is used in the ventilation system to capture particulates, and the materials used inside the facility are all low- or zero-VOC materials. To minimize waste and maximize resources, the installed materials have a high recycle content, 23% based on material cost, and 21% of the materials were harvest, extracted and manufactured within a 500 mile radius of the jobsite. To conserve water, the project has installed low-flow flush and flow plumbing fixtures, which has resulted in a 40% water savings.

The mechanical system strategies focused on minimizing energy consumption in the laboratory spaces by optimizing ventilation thru the controls system and occupancy sensors by providing full air flow when the fume hoods are being used and to meet the cooling loads. The controls reduce the supply air when the fume hoods are not being used as sensed by the fume hoods' occupancy sensors allowing the exhaust air flow from the hoods to be reduced while maintaining containment in the hoods. When the space occupancy sensor determines the space is unoccupied, the fume hood exhaust is further reduced to a standby mode, reducing the space's supply air to a minimum that maintains the room at a negative pressure. Other energy saving strategies include utilizing heat pipe in lieu of a glycol system in the air handling units that provide 100% outside air to the labs and animal rooms, installing air-cooled chillers, continuous temperature reheat coils, heat recovery, and smaller, low pressure drop ductwork designed for low velocity air volume that has reduced motor horsepower required to move the air. The high performance lighting system includes daylight sensors and automatic step-dimming LED and T8 light fixtures. Combined, these strategies along with the renewable energy technologies reduce energy costs 19% compared to a code-compliant laboratory, saving the College thousands of dollars annually. To ensure the systems and equipment are optimally performing, the building envelope, and all energy-consuming mechanical-, electrical-, plumbing- renewable energy systems and fume hoods were commissioned.

### ABOUT ST. NORBERT COLLEGE

St. Norbert College, founded in 1898, the only Norbertine College in the world, recently ranked among the top 10 Catholic liberal arts college in the nation by U.S. News & World Report. Committed to the time-honored wisdom found in the Norbertine, the forward-thinking college is dedicated to providing an education that fosters intellectual, spiritual and personal development offering more than 40 undergraduate programs and graduate studies leading to master's degrees in Liberal Studies, Business Administration, Education and Theological Studies. The college has 2,200 students enrolled, 14:1 student-faculty ratio, and 20 NCAA Division III sport teams. Signatory to the President's Climate Commitment, SNC has an Environmental Sustainability Advisory Committee who advises the president on environmental stewardship strategies, such as the Green Initiative Fund, and a student Environmental Club who promote sustainable projects on campus. For more information, visit [snc.edu](http://snc.edu).

### ABOUT MIRON CONSTRUCTION CO., INC.

Miron Construction Co., Inc., headquartered in Neenah, Wisconsin, with regional offices in Madison, Wausau and Milwaukee, Wis., and Cedar Rapids, Iowa, is recognized as an industry leader and one of the nation's premier construction firms. Recently ranked as the largest Wisconsin-based contractor in the Midwest by ENR Midwest, Miron is a forward-thinking, fast-growing private company and is listed among the top 100 general contractors in the United States by Engineering News Record (based on posted revenue of \$685 million for 2013) and has the distinction of being the only Wisconsin-based company to be named to ENR's Top 100 Green Building Contractors list. Miron provides innovative pre-construction, construction management, design-build, industrial and general construction services. For more information, visit [miron-construction.com](http://miron-construction.com).



**Owner:** St. Norbert College  
**LEED® Project Admin:** Miron Construction Co., Inc.  
**Construction Mgr:** Miron Construction Co., Inc.  
**Energy Modeler:** Sustainable Engineers  
**Commissioning Agent:** Sustainable Engineers  
**MEP Engineers:** Performa, Inc.  
**Architect & Interior Design:** Performa, Inc.  
**Landscape Architect:** Adler Design Associates  
**Civil Engineer:** Raasch Associates  
**Project Size:** 160,313 square feet  
**New Construction:** 60,475 square feet  
**Renovated:** 99,838 square feet  
**Total Project Cost:** \$42,575,000  
**Photography:** Gary Parker



### ABOUT LEED

LEED, or Leadership in Energy & Environmental Design, is a third-party independent green building verification and certification program that recognizes best-in-class building strategies, features and practices, allowing for the design, construction, operations and maintenance of resource-efficient, high-performing, healthy, cost-effective buildings. LEED certification is recognized across the globe as the premier mark of achievement in green building. For more information, visit [usgc.org/leed..](http://usgc.org/leed..)

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