LEED®-NC Silver Certified

Owner:
Brock University

Design Architect:
MacKay-Lyons Sweetapple Architects Limited

Project Architect:
Rounthwaite, Dick & Hadley Architects Inc.

LEED Consultant:
Enermodal Engineering Ltd.

Project Coordinator:
David Premi Architect

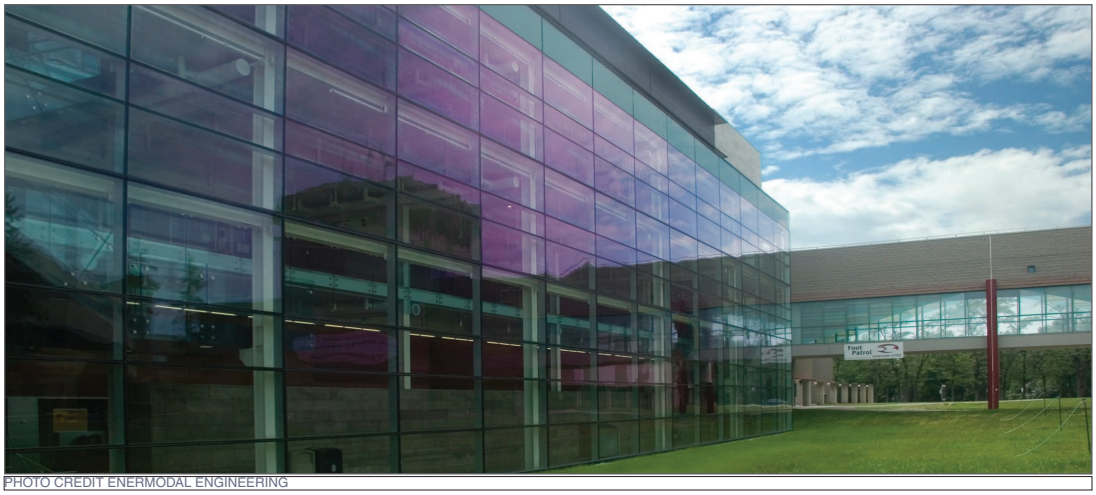
M/E Engineers:
Jain & Associates

Commissioning Agent:
CFMS West Consulting

Contractors:
Merit Contractor

Brock University Plaza 2006

St. Catharines, Ontario



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When Brock University began planning an expansion of campus facilities, environmental responsibility was made a top priority. Setting a LEED Silver designation as a project goal helped the university realize the financial benefits of advanced energy conservation technologies and strategies. And by incorporating green design and operation into building design, staff, faculty, and students enjoy a beautiful and healthy indoor environment.

The Brock University Plaza 2006 is a 7,880 m² building located in St. Catharines, Ontario, and is the new home of the university book store and other retail uses. Plaza 2006 also provides office, classroom, and laboratory spaces. The building consists of a structural steel frame with an envelope of copper cladding and stone masonry.

Xeriscaping and Rainwater Harvesting: 60% Water Savings

Brock University committed to using xeriscaping for all the landscaping at Plaza 2006—landscaping planned to minimize irrigation, pest control, and fertilizing requirements. The use of drought-resistant native species entirely eliminated the need for outdoor watering, a 100% savings in outdoor water use. These species include fescue grasses, serviceberry, and pin oak.

A 45 m³ cistern stores rainwater collected from the building roof. This water is used for non-potable uses such as toilet flushing and non-irrigation outdoor use. Water-conserving plumbing fixtures include dual-flush toilets, and low-flow urinals and faucets. Together, these strategies provide a 60% savings in the use of potable water.

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Hollow Core Floor Provides Thermal Mass and Ducting

Plaza 2006 features several innovative approaches to building heating and cooling. These approaches result in a 33% energy cost savings.

The building floor is constructed of hollow-core concrete slabs. Air from air handling systems is directed into the "holes" in the hollow core and from there into each room of the building. This eliminates the need for conventional distribution ductwork in each room. In addition, the thermal mass of the floor evens out the peak heating and cooling demands on the building HVAC systems and thus saves energy and reduces heating and cooling equipment size.

Other energy-related building features include the following:

- a well-insulated building envelope
- high performance windows
- occupancy sensors to control lighting
- a condensing gas boiler

Resource Conservation from Start to Finish

A rigorous construction waste management plan resulted in over 75% of all construction waste being diverted from landfill. The building design team emphasized the use of building materials with high recycled content (17% of materials) and regionally extracted or manufactured materials (33% of materials).

Transportation Planning Reduces Automobile Usage

Plaza 2006 builds on a University policy that aims to reduce the use of cars. A comprehensive transportation plan features the following:

- subsidized bus passes for students
- bike racks with nearby showers for cyclists
- passenger drop-off for car pool vehicles
- an online car pool matching system for staff and students

For more information, contact
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