



Leadership in Energy and Environmental Design

The Roderick Mah Centre for Continuous Learning at Mount Royal University LEED® Gold certified. It is 43% more energy-efficient than conventional buildings of similar size.

Green Credentials

The Roderick Mah Centre for Continuous Learning meets:

- The Canadian Federal Government's Commercial Building Incentive Program (CBIP), which requires that a building's energy performance be a minimum of 25% better than an equivalent building designed to meet the Canadian Model National Code for Building.
- The Canadian Green Building Council's Leadership in Energy and Environmental Design (LEED®) Gold standard.

What is LEED?

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria.

LEED is a third-party certification program and an internationally accepted benchmark for the design, construction and operation of high performance green buildings. It provides building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance.

LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health:

- sustainable site development
- energy efficiency
- indoor environmental quality
- water efficiency
- materials selection

(from CaGBC.org)

Environmentally Friendly Features

Built with Recycled Materials

- Pressed straw ceiling tiles & baffles
- Wheat board paneling
- Recycled paint
- Carpet made with recycled wool

Reduced Use of Municipal Water

- Natural ventilation reduces requirement for cooling
- Building pre-cooled during the night using fresh air
- Potable water cools building through air handling units
- Heated through hot water boiler and exterior panels
- Heating coils placed in air handling units to heat air

Natural Cooling and Heating

- Rain water collected and stored in a water tank
- Treated then pumped to toilets and outside irrigation system
- Water employed in heating and cooling of building



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How Does a Green Building Work?

As a LEED® Gold certified building, the Roderick Mah Centre for Continuous Learning has specialized mechanical systems that help to make it a Green Building, using a little more than half the energy and water of a typical building of comparable size.

A Green Building is a high-performance building, with more spent on the building envelope and less on the mechanical (cooling/ventilation) systems.

Selected Mechanical Concepts in a Green Building:

Capitalizing on the building mass of the structure

Thermal mass, which can be increased by the amount of exposed concrete, moderates the temperature of occupied spaces. Storing and dispelling energy in a day-and-night cycle results in the downsizing of cooling and ventilation systems.

Municipal Water Cooling

Water from the municipal lines is used in a closed loop to take heat from the building and deliver it to the ground.

Displacement Ventilation System

Air enters near the floor at extremely low velocity and moves across the floor until it rises naturally as it is warmed by people, lights, computers, etc. Benefits of this system include better indoor air quality, reduced cooling requirements and improved effective ventilation.

Conditioned air is supplied to offices and other smaller areas through recessed wall diffusers and to larger spaces such as classrooms and boardrooms through surface-mounted wall diffusers.

Operable windows and Solar Chimneys

Windows are opened to introduce fresh air into the facility, supporting the displacement of stale air into the system. To ensure that open windows draw air into the building, there are three solar chimneys in the atrium area. These chimneys draw in air from the atrium via negative air pressure, replacing the need for a return air fan.

The building's ventilation system is connected to the outside more than in a conventional building. This brings more fresh air to the occupants as well as more effective cooling/heating of the building, depending on the outside temperature.

Waterless Urinals

As part of the sustainable building design initiative, waterless urinals have been installed. They have a replaceable cartridge that controls odors.

100% Spaces Day-Lit

The building is designed to take advantage of the sun's light to minimize the need for conventional artificial lighting. 100% of the regularly occupied spaces in the building are adequately lit by sunlight alone on a sunny day.

Website: www.mtroyal.ca/mrevents

E-mail: mrevents@mtroyal.ca

Information: 403.440.8890

or toll-free 1.866.226.1801