

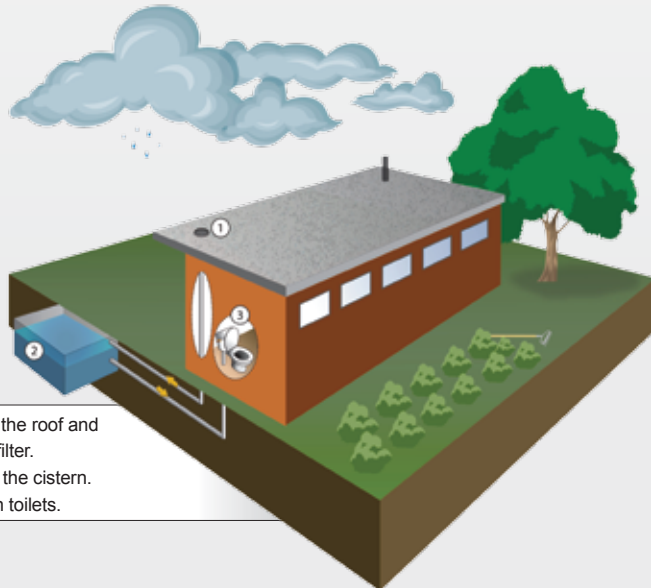
Historically green

To decrease the amount of virgin materials used in the construction of the Allstream Centre, the shell of the 1929 Automotive Building was retained. In order to make this original building more energy efficient, while preserving the historic charm of the building, replica windows were filled with argon and feature a low-emissivity coating to minimize heat transfer. Additionally, a building science professional conducted a study to determine the highest level of insulation that could be applied to the walls without damaging the historic façade.



Not a drop wasted

The Allstream Centre includes a rainwater cistern, a concrete holding container below the building. Along with water-efficient fixtures, the cistern helps the centre use a predicted 66% less water than the LEED benchmark building.



1. Rainwater is collected on the roof and sent through a drain and filter.
2. The rainwater is stored in the cistern.
3. This water is used to flush toilets.

ALLSTREAM CENTRE



Allstream Centre

The 14,900 m² Allstream Centre combines state-of-the-art technology and cutting-edge hospitality with environmental responsibility. The green highlights of the building include demand-controlled ventilation to accommodate varying room occupancies and innovative methods of encouraging alternative transportation among building staff and visitors.

LEED Consulting

Enermodal Engineering provided the LEED consulting and certification services for the Allstream Centre in addition to energy efficiency engineering and building energy monitoring. This included leading integrated design team sustainability workshops, creating computer energy models indicating possible energy efficiency measures and the amount of energy each measure would conserve, and collecting LEED documentation. After building occupancy, Enermodal building energy monitoring specialists will compile a report on the energy and water use of the Allstream Centre (as indicated by electrical and water meters) to present to the owner with recommendations for how changes in building operation could further decrease energy and water use.

Enermodal is Canada's largest consulting firm exclusively dedicated to creating green buildings, with offices in Kitchener, Calgary, Edmonton, Denver, and Toronto. With over 200 LEED projects on the go, Enermodal served as the consultant for over 40% of all LEED Canada certified buildings. In addition to LEED and energy efficiency consulting, Enermodal's services include commissioning, window simulation, and mechanical/electrical engineering.

Environmental Challenges & Opportunities

Small transportation footprint:

- located near public transit
- preferred carpool parking
- fuel-efficient hybrid vehicle available to staff
- bike racks and shower facilities for staff

Accommodating varying occupancy:

- water-loop heat pump system only provides heating and cooling to occupied spaces
- CO₂ sensors monitor number of room occupants so only necessary amount of ventilation air is provided

Minimizing the heat island effect:

- existing vegetation conserved
- highly reflective white roof

Recycling resources:

- drywall, concrete, wood, and asphalt construction waste diverted from landfill to recycling facilities
- recycled wood panels, steel, gypsum board, carpet, and furniture were used

Optimized air:

- high indoor air quality provided by low-VOC adhesives, sealants, paints, coatings, and carpets
- urea-formaldehyde-free wood used
- proper humidity levels maintained by energy recovery ventilators which transfer heat and humidity from exhaust air to ventilation air during the winter (reverse process is used in the summer)

The LEED® Canada Building Rating System

LEED (Leadership in Energy and Environmental Design) is an internationally recognized system for evaluating the sustainability of building design, construction, and operations. LEED certified buildings incorporate leading-edge features that protect the environment and promote healthy working and living conditions. LEED certification indicates that experienced professionals, working collaboratively, have arrived at a holistic building design.

The LEED Rating System awards points for meeting design and performance standards that are much higher than those used in conventional buildings. Points are awarded in six categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality and innovation and design.

LEED Rating: **SILVER Candidate**



60%
Energy Savings



37%
Indoor Water Savings



Design & Construction Team

Owner: The Board of Governors of Exhibition Place
Architect: NORR Limited
LEED, Energy Efficiency, and Building Energy Monitoring Consultant: Enermodal Engineering
Mechanical: NORR Limited
Electrical: NORR Limited
Contractor: Vanbots Construction, a division of Carillion Construction Inc.