



SELECTION OF APPROPRIATE MATERIALS AND RESOURCES

- To boost local industries and reduce the production of air pollutants generated during the transportation of building materials, over 40% of the construction materials were extracted and manufactured locally.
- More than 20% of the materials used during the construction of the building have recycled content. For example, concrete, structural steel, cladding, insulation, flooring, and rebar. Using materials with recycled content reduces the amount of resources that need to be extracted and also reduces the amount of waste sent to landfills.
- Over 50% of the wood-based products used in the building are certified by the Forest Stewardship Council (FSC). The FSC certification is a “seal of approval” awarded to forest managers who adopt environmentally and socially responsible forest management practices, and to companies that manufacture and sell products made from certified wood.
- Over 98% of the waste generated during construction was diverted from the landfill by recycling or reusing construction materials. Waste such as concrete, metal, paper and wood was sorted into different bins during construction and shipped to various recycling stations.
- A durable building plan was created during the design of the centre to ensure that materials and finishes selected for both interior and exterior of the building are durable, practical and easy to maintain.

INNOVATIVE DESIGN FEATURES

- A healing garden is located at the ground floor of the Centre. The garden has space to sit and relax and also offers a covered pavilion for patient and family use. The vegetation is native to the North. Many of the plants have been selected by First Nations traditional healers from the region for their healing characteristics.
- A patient patio and a staff patio are located on the second floor with views out onto the green roof.
- A scent-free policy has been implemented to improve air quality. Approximately 15-20% of the population has breathing problems (asthma, emphysema, bronchitis, allergies etc.), and these individuals can be adversely affected by the chemicals found in scented products. Please do not use scented products before visiting the centre.



BC CANCER AGENCY CENTRE FOR THE NORTH A Green Building



BC CANCER AGENCY FOR THE NORTH

PHONE: (250) 645.7300

WWW.CENTREFORTHENORTH.PLENARYPROJECTS.COM



Welcome to the new “green” BC Cancer Agency Centre for the North. This sustainable facility has been designed to promote a healing atmosphere while minimizing the environmental impacts of constructing and operating the building.

THE CONSTRUCTION OF THE BC CANCER AGENCY CENTRE FOR THE NORTH USED NEARLY 656,000 BOARD FEET OF WOOD WHICH, IF LAID END TO END, WOULD STRETCH FROM PRINCE GEORGE TO MACKENZIE.



WHAT IS LEED? We have used the framework of the Leadership in Energy and Environmental Design (LEED®) Green Building Rating System to guide the design of the BC Cancer Agency Centre for the North. Using the LEED system, we have reduced water and energy use, selected building materials in an environmentally responsible manner, created a healthy indoor environment for patients, and minimized the cancer centre's overall ecological footprint. The Centre for the North was designed and built to achieve LEED Gold certification.

The LEED Green Building Rating System provides standards for environmentally sustainable construction. It was developed in 1998 by the U.S. Green Building Council (USGBC) and has been modified by the Canada Green Building Council (CaGBC) to suit Canadian climates, construction practices and regulations.

The overall objective has been to design, build and operate the BC Cancer Agency - Centre for the North in an environmentally responsible manner. LEED certification is one means of demonstrating this. For more information on LEED, please visit the CaGBC website: www.cagbc.org.

DID YOU KNOW THAT THE BC CANCER AGENCY CENTRE FOR THE NORTH HAS BEEN DESIGNED TO ACHIEVE LEED® GOLD CERTIFICATION BY THE CANADA GREEN BUILDING COUNCIL?

WHAT MAKES THIS BUILDING GREEN?

WATER EFFICIENCY

- Through the use high-efficiency showers and faucets and low-flow toilets, the building is designed to save 819,956 litres of water per year when compared to a standard building design. This represents a 36% reduction in water use, which will reduce building operating costs and lessen the load on the City's sanitary sewer systems and local sewage treatment plant.
- Permanent irrigation systems are not required for the landscape design, which uses local, drought-tolerant trees, shrubs and ground cover. No drinking water will be used to water the vegetation after the first two years of planting the surrounding garden areas.

SUSTAINABLE SITE DESIGN

- A storm water management system has been incorporated into the overall site design that includes a perforated storm water infiltration system that collects runoff from the building and the surrounding parking areas and landscape. The system manages both the quantity, rate and quality of the water that enters the city's storm sewer system.
- To reduce the urban heat island effect caused by the centre and the adjacent sidewalks and asphalt, the design includes a rooftop garden on the second floor and a white, reflective roof on the top of the mechanical room. Both of these roof elements reflect sunlight and reduce the amount of energy needed to cool the building in the summer. The rooftop garden is made up of local plants and will provide several other benefits to the building including capturing rainwater, providing insulation, and offering staff and visitors an attractive place to relax while enjoying a beautiful view.
- Secure bicycle storage has been provided for all hospital staff in the neighbouring parkade to encourage the use of alternative methods of transportation. Shower and change facilities have also been provided for staff working in the centre.
- The exterior and interior lighting was designed to minimize light pollution in the evening while maintaining safely lit public spaces.
- An extensive erosion and sedimentation control plan was implemented during the construction of the building to ensure that dust and mud were not carried into the city sewer system and were not brought out onto the city streets and surrounding community by construction trucks.

ENERGY EFFICIENCY AND GREENHOUSE GAS REDUCTION

- The building's energy consumption will be reduced by 47% when compared to a base line building design. Several design features contribute to these energy savings:
 - The high-performance windows control the energy needed to heat and cool the building.
 - Occupancy and daylight sensors will turn off the lights automatically in areas that are not being used or that have sufficient daylight from neighbouring windows.
 - Energy-efficient lighting has been used both inside and outside the centre.
 - Efficient mechanical and electrical systems consume less energy.
- Building equipment was selected that does not use chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs) or halons. These chemicals are ozone depleting, contribute to climate change, and are harmful to the environment.
- A "commissioning authority" was involved throughout the design and construction of the building to ensure that it operates in the manner in which it was intended.

INDOOR AIR QUALITY

- Smoking is prohibited inside the cancer centre and on the cancer centre grounds.
- To promote the health of patients, staff and visitors, materials used inside the centre (e.g. paint, carpets, adhesives, sealants and wood products) were specified to reduce levels or no volatile organic compounds (VOCs). VOCs can have a negative effect on air quality and can potentially harm humans.
- Before the cancer centre opened, it was flushed with fresh air for several days to ensure that the air is clean and contaminants reduced.
- A strategy has been implemented to ensure that the new cancer centre attains a high level of indoor air quality, including the adoption of voluntary industry guidelines and frequent changes of air filters.
- A system will be installed to monitor and provide rapid feedback to the building operator for temperature, airflow and humidity levels throughout the centre to provide maximum comfort to the staff, patients and visitors.
- Photocopier rooms are separately vented to prevent air pollutants from spreading throughout the building.
- Grates in the floor at the entrances trap dirt and prevent it from being tracked through the building and creating dust.

