GREAT SPACE

If you think the St. John Ambulance building is a just a steel and concrete facade, then think again. Environmental folk will love the new green structure. The LEED-designed facility (Leadership in Energy and Environmental Design) brings to mind all those futuristic schemes thought up by '70s sci-fi writers that suddenly seem so voguish now. The 33,000 square-feet building has a combination of aesthetic qualities and leading-edge systems that promote sustainable site development, water saving, energy efficiency and indoor environmental quality.

Developed in the U.S., the LEED green building rating system is a voluntary national standard for developing high-performance, sustainable buildings. "LEED designs are now taking hold in the architectural community and will probably become a standard in five to 10 years," says St. John Ambulance regional president David Hook, who marvels at the energy-saving features of the building that will save his health and safety organization thousands of dollars in operational costs each year. Instead of using air conditioning, a mechanical air exchange system, in conjunction with a chiller, circulates cool air from the top of the building to the bottom. Other environmental features of this forward-thinking building include the abundant use of glass (which lessens the need for artificial lights during the day), waterless urinals, low-water fixtures and separate light controls in most offices.

Company: St. John Ambulance, west of downtown Edmonton

Function: Housing all of St. John's administrative bodies, this three-storey LEED building provides ample space for the organization's 25 employees and approximately 120 students who attend safety classes every day. The main floor houses a three-storey atrium, student lounge and museum. The second floor boasts six 1,200-square-foot classrooms large enough for lectures and practical exercises. Local and provincial staff are stationed on the third floor.

PHOTOGRAPHY BY JOHN GAUCHER
TEXT BY TRACY HYATT

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Design Challenges: Fine-tuning all of the mechanical systems of the building has been touch-and-go since the building opened six months ago. After completion, the occupants found that the east-facing atrium was too warm. The problem was addressed by installing black blinds that block out the sun's summer rays which burn through the expansive glass windows.

Dimensions: The building is three storeys tall. Each floor measures approximately 11,000 square feet and there is a 13,000-square-foot underground parking.

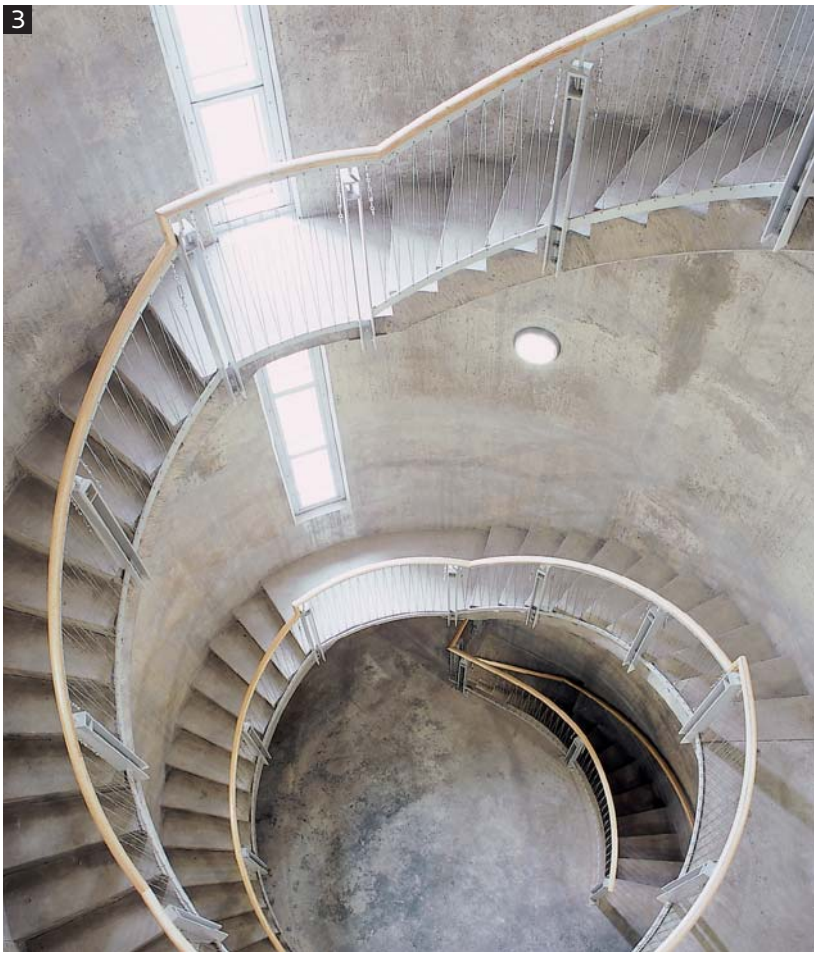
Cost: $5 million. Hooks says it took the organization 20 years to save up for the purchase of this new building. Help also came from a federal government grant, which was awarded to the non-profit association because of the building's potential for LEED certification. The certification process should be completed by this fall.

Time Factor: The one-acre lot was purchased in May of 2002. In March of the following year, the shovel went into the ground. After 13 months of construction, the building was opened in April 2004.

Credits:
General Contractor: Chandos Construction, project manager Denis Desmarais
Architect: Manasc Isaac Architects Ltd.
Mechancial and Electrical Engineer: Keen Engineering, Bill Temple
Structural Engineer: Earth Tech Canada, Bob Gillis
Civil Engineer: GPEC Consulting Ltd.
Mechanical Contractor: R.T. Taylor Plumbing and Heating
Electrical Contractor: MCL Contracting Ltd.
Landscape Architect: Carlyle and Associates

Why it works: In the old building, staff could barely manoeuvre around their cramped downtown digs. Two-thirds of the space was used for administrative purposes and one-third for instruction. This new site is the reverse. "Now, it's basically a professional school dedicated to classroom and community services. We've completely done a conceptual change in how we use the building. We've gone more to a customer focus, in terms of use of the building, rather than administrative," says Hook.

What they'd change: Hook regrets that there isn't enough parking for students. Presently, there are only 50 spaces, which can be a challenge for students who must park in the neighbouring residential area. In hindsight, Hook says a two-acre lot would have been ideal.



Unique Features

1) Low hanging lights: Office lighting points upwards to the ceiling and bounces soft light back down. Headaches and other health problems associated with the brilliance of fluorescent lighting are eliminated. Most of the lights are touchless. When a person enters an office, motion sensors turn the lights on. When there's no motion in the office, the lights turn off in two to five minutes.

2) Cable railings: Wherever possible, cost-effective materials were used without sacrificing style and attention to detail. The steel grey and maple colours are echoed throughout the building.

3) Circular tower: On the west side of the building, a circular tower that resembles an old castle echoes St. John's past, which goes back 900 years. The walls of the spiral staircase are raw concrete, again reinforcing St. John's history. The middle portion of the building, where the classrooms are located, exemplifies the organization's present and the east-facing atrium symbolizes rebirth and the future.

4) LEED certified plants: To reduce landscaping costs and help conserve water, plants that require minimal watering surround the exterior of the building. The plants, which are basically bred for the desert, can survive an extended period of time without rain and draught conditions. "We call them tumbleweeds. They look like trees but we don't have to water them," says Hook. AV