

# Green Buildings:

## Manitoba's Perspective

**Presenter:**

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**With Much Appreciation:**

**Friesen Tokar Architects, Winnipeg,  
Manitoba**

**Manitoba Hydro, Winnipeg, Manitoba**

**Gerry Humphreys, Milestone Project  
Management, Winnipeg, Manitoba**

**The Town of Gladstone, Gladstone,  
Manitoba**

# Overview

- Green Buildings – Discussion
- Manitoba Examples
- Crystal Ball Gazing

# What's a Green Building?

- What's LEED
- What's wrong with other colours?
- The characteristics
- The benefits

# LEED

- Leadership in Energy and Environmental Design
- Manitoba just announced official Chapter Status as the third provincial Chapter of CaGBC

# Characteristics

- Green buildings are usually created as a result of an integrated design process
  - Think of it as “The Knights of the Round Table”!
- Resource Efficient
  - Energy
  - Water
  - Materials
- Healthier

# Benefits

- Lower operating costs
- Higher level of occupant comfort
  - Fewer drafts
- Better air quality
- Lower GHG emissions

# Manitoba's Moving Ahead!

- MEC
- RRC – downtown campus
- Friesen Tokar example
- MB Hydro

# And more from Manitoba...

- West End Cultural Centre
- Dalnavert
- Youth for Christ Skate Park
- Grand Rapids
- Fraserwood Community Hall
- Gladstone

# MEC

- Awarded LEED Gold in April, 2005
- Why? Because:
  - 47% less energy than National Model Energy Code
  - Reduces GHG by at least 30 tonnes compared with conventional buildings
  - 97% recycled materials
  - Composting toilets
  - Green roof

# Red River College Downtown Campus

- Reuse and recycle materials from original buildings
  - Wood trim, doors, ceramic tile, glass, brick, stone, cast iron columns, and lumber
  - Building Integrated Photovoltaic solar powered electricity generating system

# The Strand

## **The Strand on Waterfront Drive**

Location: Winnipeg, Manitoba.

Area: 44,000 ft<sup>2</sup>

Budget: \$5,000,000.00

Completion Date: August 2006

The Strand will be situated in the new residential-commercial development along Waterfront Drive in the historically rich East Exchange District. The design incorporates geothermal heating/cooling and environmentally sensitive building materials including recycled components. Friesen Tokar believes that densification and housing is the key to urban renewal. The building site enriches the existing urban environment without contributing to sprawl.

# The Strand

The Strand will target LEED Gold standing and this will be achieved by including:

- water efficient fixtures
- reflective roofing materials
- use of local and reclaimed building materials
- use of natural daylighting and energy efficient lighting and daylight/occupancy sensors
- heat recovery ventilation
- building configuration to maximize natural daylighting

## Project Team

Architect:	Friesen Tokar Architects
Interior Design:	Friesen Tokar Architects
Structural Consultant:	Crosier Kilgour & Partners LTD
Mechanical Consultant:	TPR Mechanical Consultants LTD.
Electrical Consultant:	MCW/AGE Engineering
Construction Manager:	Crystal Construction LTD
Energy Modelling:	Sustainable Solutions

# MB Hydro

- Manitoba Hydro's Downtown Office Project as of May 10, 2005
- Environmental Target: LEED Gold
- Energy Efficiency Target: 60% more energy efficient than the Model National Energy Code for Buildings (MNECB)

# MB Hydro

- Energy Efficiency & Sustainable features of project:
  - Site selection
  - Site Preparation:
  - Building design (use the Integrated Design Process to achieve the following)

# Gladstone

- Earth Roof
- Radiant Heat
  - Using municipal domestic water
- Radiant Cooling
- Thermal Chimney
- Embodied Energy
- Plumbing
- New Building Materials

# Gladstone



# Where Should We Go?

- Zero Impact
- Restorative

# How You Too Can Be Green

- Integrated Design
- Sustainable Materials
- Low/no VOC emissions from materials
- Rethink – what is really important?

For more information,  
just Google  
“Green Building”

You'll be reading about all kinds  
of innovative and interesting  
projects for weeks from all over  
the world!!