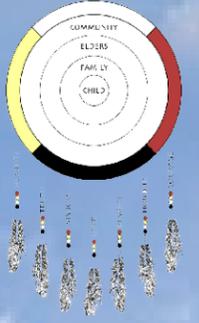




Makoonsag

Intergenerational Children's Centre



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The building is targeting LEED Certification in 2013.

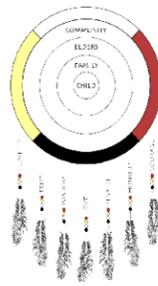
Eco•Facts written and designed by Prairie Architects Inc.

Prairie Architect Inc. was commissioned to design a new 960 m² Daycare Centre and Childcare Education Centre for 52 children of students at Urban Circle Training Centre and the Inner City Campus of U of M. The facility is located in Winnipeg's Inner City and will focus on Best Practice training for Aboriginal childcare teacher training and will have a curriculum that is centred around Aboriginal teachings and traditions. In order to create a positive learning environment for the larger community and transfer Aboriginal teachings, the daycare was designed for intergenerational learning with elders and parents integrated into the daycare setting.

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The following is a summary of the health, performance and environmental features of the building based on the LEED (Leadership in Energy and Environmental Design) criteria:



Sustainable Sites

Makoonsag reused an existing building located near **two frequent bus routes** to encourage alternative transportation for staff and students. In addition, **shower facilities and bike storage** have been provided to encourage cycling to work. More **open space** than required by zoning has been provided for the children to enjoy the natural environment. Using light coloured hardcape material **mitigated the heat island effect**. Careful thought and planning was put into interior and exterior lighting design so as to **reduce light pollution** into the night sky or adjacent properties.



Water Efficiency

The building maximizes water efficiency by the use of **aerator faucets and dual flush toilets**. These measures contributed to a total **water use reduction of 49%**. There is no permanent irrigation equipment installed for the site's vegetation, as the landscape design incorporates **native, drought-tolerant species** to reduce irrigation requirements.



Energy & Atmosphere

Elements of the building design were selected to minimize energy consumption. Makoonsag achieved an **energy cost savings of 44.5%** compared to a baseline building designed with the Model National Energy Code for Buildings' standards. Increased energy efficiency reduces environmental impact in relation to energy consumption and building systems emissions.

To minimize the impact of the building on the depletion of the ozone layer, **all systems are CFC and HCFC free** and the fire suppression system **contains no halons**.



Materials & Resources

Reusing an existing building conserves resources by reducing the amount of new materials required and conserving the embodied energy of the existing building. **89% of the structure and building shell were reused** as well as 43% of the interior elements. Over **7.5%** of new materials, including ceiling tile, drywall and steel, contained **recycled content**.



Indoor Environmental Quality

Makoonsag is a non-smoking building and has been designed with optimal ventilation that includes a **100% fresh air ventilation system**, to provide excellent indoor air quality for staff and students. All carpet, adhesives, sealants, paints, and coatings used in the building were specifically chosen to have a **low level of Volatile Organic Compounds (VOC)**. VOC's can cause irritating effects or health issues for the installers as well as the building occupants. All composite wood used including plywood, MDF, and particleboard contains **no added urea-formaldehyde**.

An **Indoor Air Quality Management Plan** was in effect during construction including measures such as covering openings in ductwork, keeping a clean worksite, and scheduling, to protect the indoor air quality of the building during construction. After construction but prior to being occupied, the building was flushed with fresh air to ensure a high level of indoor air quality for the occupants.



Innovation & Design Process

Makoonsag is committed to sustainability including social and cultural sustainability. Their mission was to create a space that was not just for childcare but instead for the community. Makoonsag is a centre for intergenerational learning and has built space provided for elders and the community. They also want the children to develop a relationship with the natural environment so instead of constructing a typical play yard they opted for a natural playground. The natural playground features rolling hills, native plants, rocks, water and other elements for the children to explore and learn from. The building also received an innovation credit for exceptional water use reduction by reducing water consumption by 49%.

