

An inside look at the new admin centre

Building incorporates a variety of energy saving and sustainable features

BY TED HANDY AND ASSOCIATES

The site and building have been configured to take maximum advantage of orientation and site features. The building incorporates a variety of energy saving and sustainable features. A LEED Silver standard is being sought. All sustainable features are to be expressed in the character, the form, and the finishes throughout the building.

SITE DEVELOPMENT

The new administration centre for the Township of Springwater is located on township-owned lands located off Nursery Road, immediately north of Highway 26. The building is part of a master plan for the site prepared by the township which includes existing soccer pitches and future ball diamonds, a recreation centre and potential library.

The lands were previously owned by the Ministry of Natural Resources and used as a nursery for nurturing trees for plantation projects. The



The building is a two-storey masonry structure which has been set into the ground in response to the natural grades to provide two levels of administrative space.

existing trees that were planted to protect the young shoots, create a natural series of exterior 'rooms'. It was in one of these 'rooms' that the new building is to sit with visitor parking located in an adjacent 'room'.

BUILDING

The building is a two-storey ma-

sonry structure which has been set into the ground in response to the natural grades to provide two levels of administrative space. Gently sloping walks and steps are being provided to access the main entrance and the two stairs. An elevator is provided to serve the main and lower floors to ensure accessibility throughout.

The exterior finish will be primarily brick (to recall the traditional township neighbourhoods), with stone highlights and lots of glazing to take advantage of views and daylighting.

The roof is a long-lasting pre-finished standing seam metal roof that is light coloured to reflect the intense summer sun. Large skylights

over the main office areas provide additional daylighting to promote well being and minimize the need for artificial lighting.

A special sun-tracking skylight is provided over the meeting area to flood the area with glare-free daylight.

Solar orientation and predominant wind patterns were reviewed – the building was rotated with the longitude facade placed roughly perpendicular to due south to take maximum advantage of natural ventilation and the mid-day sun (easiest to control). Large windows were provided to again maximize views and the use of available daylight. The orientation also created ease of access with minimal disruption of existing grades that helped to preserve existing trees, providing not only a setting linked to nature but also a sense of place and protection.

A terraced staff area with pergola was created for outdoor breaks, indigenous plants are to be introduced that will be easy to care for and selected to attract native birds.

BUILDING Page 7

**Congratulations
and Best Wishes**
to the Residents of
Springwater Township,
Mayor and
Members of Council
and Staff on the
**GRAND
OPENING**
of your new
Administration
Centre.



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Building maximizes sunlight

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A large glazed foyer links the tree-lined entrance with the public service areas. The foyer provides direct access and views into the Council chambers and a glass wall can be rolled aside to extend the Council chambers into the Foyer for those special public meetings that require additional space.

Options were explored for ways to maximize sunlight penetration and take maximum advantage of daylighting to all areas of the building. Detailed daylight studies for anticipated year-round conditions confirmed that supplemental lighting will be required only rarely during normal working hours. Lighting controls are intended to minimize the energy consumption and create an advantageous working environment, which balances the use of artificial light with available daylight. A substantial body of evidence has been developed that links improved performance with the availability of significant daylight and views

to natural environments.

Operable windows in all occupied spaces are provided to allow for natural ventilation when conditions permit. An innovative mechanical system, which uses the cast-in-place concrete floors, not only delivers the heating where it is most effective and useable, but also contributes to cooling in the warmer seasons. These slabs also act as a gigantic heat sink that provides a flywheel effect for heating and cooling. The durable materials that were selected, such as the concrete structure, concrete floors, and masonry walls all contribute to this effective measure.

A dispersement system was used for the distribution of conditioned air at floor level to minimize drafts and help create a microclimate of conditioned space that correlates with normal body height. An enthrapy wheel will transfer precious heat from the exhausted air being exchanged with fresh incoming air (in the winter and the reverse in the summer). High-efficiency pumps and fans are intended to minimize

the amount of energy required to operate the mechanical systems.

A philosophy was adopted to expose, as much as possible, all materials and systems that are present within the building. Concrete floors were polished rather than introducing additional resources to provide an additional finish. The result is a relatively maintenance free, durable finish that requires fewer resources to care for it. Acoustical ceilings were avoided where practical that normally conceal the working parts of a building. They would have inhibited the full effect of the heat wheel. To compensate, acoustical panels were used extensively on the walls of the Council chambers.

Simple details and natural durable materials were selected throughout. A clay brick was chosen to compliment the historical brick used throughout the township. All interior woodwork, cabinetry, interior doors and maple were Forest Stewardship Council (FSC)-certified wood.

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