

VAUGHAN CITY HALL ENVIRONMENTAL FEATURES

Energy Conservation & Solar Shading:

- Energy and atmosphere were two primary design elements for the new City Hall. Features, such as the stairs within the atrium which will help reduce elevator use, are integrated throughout the facility to minimize energy use.
- The design of the City Hall creates an airy space with maximum light exposure.
- The columns found throughout the building with the architect designed capital (head) helps support the structure to eliminate any end wall reinforcements and a dropped ceiling to hide the top of the column. This again is a unique feature to this building designed by KPMB.
- The use of full-height glass windows, for example, provide maximum exposure to natural light, limiting the use of artificial light, and creating a feeling of space and openness throughout the building. The internal windows also open to let in fresh air, reducing the need to rely on internal heating and cooling systems. This in particular is a great difference from the old civic centre next door.
- From about calf-height to mid- waist, clear materials have be used throughout the building to allow light to penetrate through. The building's full height windows provide maximum light exposure and eliminate the need for artificial light.
- The exterior of the building is mainly glass curtain walls and interior glass that brings in light. 90% of the building's occupants have a view to the outdoors.
- The building has terracotta solar shading on several faces of the building. These panels absorb heat and reflect the sun's rays, without obstructing the view of outside. Each of the panels weighs about 75 lbs and it is estimated that each floor is outfitted with two tonnes of solar shading panes.
- This terracotta innovation is the first time it has ever been implemented in a building in Ontario.
- As a result of its design this building is expected to save approximately 25% per year in energy consumption compared to a standard building of this size.

Waste Management:

- Recycling is a priority for the City of Vaughan.
- A three stream waste management collection system is located throughout the building.
- The three streams consist of green bin organics, blue box recyclables and residual waste/garbage.
- There are sinks with filtered, cold water faucets to encourage consumption of city water instead of bottled water. The use of plastic water bottles is prohibited for corporate events and meetings.

- Members of the public can drop off batteries and cell phones to be recycled at the entrance information desk.

Water Conservation:

- A large cistern underneath this site captures rainwater via a series of swales along the roof and building and is channeled to the below-grade cistern. The cistern system also filters ground water contaminants and reduces water usage.
- The water is used to provide natural irrigation for site landscaping and the building's green roofs.
- Low flow toilets, urinals, lavatory faucets and showerheads at City Hall uses results in 30% less water usage than a comparable conventional building.
- Reducing water consumption is good for the environment, protects a natural resource and reduces the waste to municipal water supply and wastewater systems.

Green Roof:

- Approximately 50% of the buildings roof consists of low-growth vegetation in the form of a green roof. Green roofs provide many environmental benefits, both to the building and to the surrounding community.
- The four green roofs on the new City Hall provide insulation, create a habitat for wildlife, and help to lower urban air temperatures by combating the heat island effect.
- Green roofs increase the energy efficiency of the building by reducing the buildings dependency on heating and cooling systems.
- The green roof will also aid in the natural filtration of storm water which will be reused onsite irrigation.