

Report to/Rapport au :
Environment Committee
Comité de l'environnement
and Council / et au Conseil

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CITY WIDE / À L'ÉCHELLE DE LA VILLE

Ref N°: ACS2012-PAI-INF-0006

SUBJECT: GREEN BUILDING POLICY – 2012 STATUS REPORT

OBJET : POLITIQUE SUR LES BÂTIMENTS ÉCOLOGIQUES – RAPPORT DE SITUATION 2012

REPORT RECOMMENDATION

That the Environment Committee receive this report for information.

RECOMMANDATION DU RAPPORT

Que le Comité de l'environnement prenne connaissance du présent rapport.

BACKGROUND

The Green Building Policy for the Construction of Corporate Buildings, approved by Council on 28 September 2005 and amended on 26 September 2007, requires an annual status update for City of Ottawa Capital Building Projects being designed and delivered in accordance with Leadership in Energy and Environmental Design (LEED™) certification rating system. The Canadian Green Building Council (CaGBC) a not-for-profit certifying body for LEED™ projects.

Green building practices reduce the environmental impact of building activities on limited renewable and non-renewable resources, and they reduce the cost of owning and operating facilities over their full life cycle.

The current levels of LEED™ certification available are Certified, Silver, Gold and Platinum.

The current City of Ottawa Green Building Policy requires that:

- All buildings with a footprint greater than 500 square metres (5,400 square feet) be designed, delivered and certified by the Canada Green Building Council (CaGBC) as meeting the LEED™ “Certified” rating at minimum; and
- Staff pursue the LEED™ “Silver” rating when it can be demonstrated that the additional investment will be paid back through a reduction in building operating costs over a period of seven years or less.

The City of Ottawa “Green Building Policy” is in line with current policies established in many other Ontario Cities as well as other municipalities and provincial bodies across the country.

Through the “Green Building Policy,” the delivery of building projects as defined by LEED™ - Canada “Certification” are able to achieve the following benefits:

- 40% to 50% annual utility cost savings over current practices;
- Reduced Greenhouse Gas emissions;
- Reduced Life Cycle costs through enhanced material selection;
- Reduced material consumption during manufacturing and transportation;
- Reduced waste generation during construction;
- Reduced water consumption resulting from more efficient systems and devices;
- Improved indoor environment;
- Healthy and productive work environment; and
- Demonstrated leadership in environment stewardship.

Sustainable building practices not only demonstrate responsible leadership practices, they also demonstrate good business practices.

DISCUSSION

This report provides an update on Green Building initiatives that have been undertaken to date, upcoming opportunities, and issues identified to date.

The City of Ottawa LEED™ projects that are completed and certified by CaGBC are:

Project	Size (Sq. Ft.)	Project Value	Completion	LEED™ Rating Achieved
Ottawa Paramedic Service Headquarters	100,000	\$18.9 M	Mar. 2006	Certified

Rideau Valley Conservation Authority Headquarters	22,000	\$5.6 M	Oct. 2007	Gold
Vars Fire Station No.73	8,800	\$2.4 M	Mar. 2007	Certified
Goulbourn Recreation Complex Expansion	22,000	\$5 M	Nov. 2008	Certified
OC Transpo Interior Fit-Up (LEED™ C.I.)	18,000	\$2.3 M	Aug. 2009	Gold
James Bartleman Centre	92,000	\$27 M	Mar. 2011	Gold
Kanata West Fire Station No. 46	12,250	\$4.4 M	June 2011	Silver
Goulbourn Recreation Complex Arena Expansion	35,000	\$9 M	Mar 2012	Silver

The CaGBC, which is a not for profit certifying body for LEED™ Projects, has had trouble with meeting the quantity of projects requiring various degrees of certification. CaGBC has recently modified the rating system and is currently amending the submittal process to streamline application for faster project reviews.

The City of Ottawa LEED projects that have completed construction and are currently submitted for review and validation by CaGBC are:

Project	Size (Sq. Ft)	Project Value	Completion	LEED™ Rating (target)	Update
Albion-Heatherington Community Centre	7,000	\$1.5 M	Dec. 2008	Silver	GaGBC Review in Progress
Orleans (Shenkman) Arts Centre	78,000	\$33 M	June 2009	Silver	GaGBC Review in Progress
Hunt Club Riverside Park Community Centre	6,000	\$3.7 M	Mar. 2010	Silver	GaGBC Review in Progress
OC Transpo Dispatch Building	10,000	\$4.5 M	May 2010	Silver	GaGBC Review in Progress
Paramedic Dispatch Building	25,000	\$6.7 M	June 2010	Silver	GaGBC Review in Progress
OC Transpo Articulated Bus	162,000	\$58 M	Sept. 2010	Silver	GaGBC Review in

Garage					Progress
Huron Early Learning Centre	5,500	\$2.97 M	Sept. 2010	Silver	GaGBC Review in Progress
Kanata Recreation Complex Expansion (LEED™ C.I.)	14,000	\$1.9 M	Sept. 2010	Silver	GaGBC Review in Progress
Centrepointe Theatre Expansion	25,600	\$9.3 M	Mar. 2011	Silver	GaGBC Review in Progress
Greenboro Community Centre Expansion	10,000	\$3.1 M	June 2011	Silver	Consultant preparing Submission
Overbrook Community Centre Expansion	10,000	\$3.1 M	Mar. 2011	Gold	GaGBC Review in Progress
Carlsbad Springs Community Centre	6,500	\$2.5 M	Dec. 2010	Certified	GaGBC Review in Progress
Barrhaven Fire Station No. 47	12,250	\$4.4 M	Dec. 2011	Silver	GaGBC Review in Progress
Conroy Works Yard	18,700	\$9.5 M	Sept. 2012	Silver	Consultant preparing Submission

The City of Ottawa LEED™ projects that are currently under construction and will be submitted to CaGBC for review and validation following completion are:

Project	Size	Value	Estimated Completion	LEED™ Rating (target)	UPDATE
Trail Road	35,000	\$13.1 M	Spring 2013	Silver	Under construction
François Dupuis Recreation Centre	38,000	\$14 M	Winter 2013	Silver	Under construction
Richcraft Complex Kanata	105,000	\$40 M	Summer 2013	Gold	Under construction
Barrhaven South Recreation Complex	160,000	\$42 M	Fall 2014	Silver	Construction to begin Nov. 2012
West District Library	24,000	\$10 M	Fall 2014	Silver	Design

Where practical, each City project has included a series of mandatory LEED™ credits that align with the environmental initiatives which are beneficial to the City's objectives. These mandatory credits have included the following.

- Construction Waste Diversion Credits: Targeting increased reduction in construction generated waste.
- Water Efficiency Credits: Reducing the reliance of municipal waste water systems and reducing the overall consumption of supply water.
- Energy and Atmosphere Credits: Optimizing the facility's overall Energy Performance through the reduction in the use of fossil fuels and electricity.
- Durable Building credit: Mandating a durability plan to minimize premature failures of the building and its components and assemblies.
- Best Practice Commissioning Credit: Verifying and ensuring that the entire building is designed, constructed and calibrated to operate as intended, including operator training for City staff.
- Measurement and Verification Credit: Ensuring on-going accountability and optimization of building energy and water consumption performance over time and dovetails with the City's Energy Management Operations team's goals.

Comparing the national average results obtained by CaGBC, there are several categories where the City is surpassing averages and creating a positive example. These credits include "Certified Wood," "Durable Building," "Low-Emitting Materials: Composite Wood & Laminate Adhesives" and "Construction Waste Management."

For the majority of the other available credits, such as "Alternative Transportation," "Water Use Reduction," "Recycled Content," and "Regional Materials" the City's scoring aligns with national averages.

Mostly as a result of the types of projects that the City is delivering, the City has not always pursued credits in areas outside of the City's priorities. The City's LEED™ project scorecards reflect lower than national average for credits in areas of "Alternative Transportation, Parking Capacity," "Heat Island Effect, Non-Roof," "Innovative Wastewater Technologies" and "Green Power."

Enhancing the current Policy

As the industry of professionals and builders gain knowledge of working with LEED™ certified buildings, the ability to improve on our current requirement of minimum "Certified" and targeting "Silver" has been reviewed to enhance ratings for specific building types. Once further building certifications have been completed by CaGBC, a further refinement to the City of Ottawa targets will be including in the 2013 Green Building Report.

Measuring performance of LEED™ constructed buildings

To determine if these newly constructed buildings are operating as designed, Infrastructure Services Department will continue to work with Public Works Building Operations and Building Engineering & Energy Management (BEEM) group, on a sample of LEED™ constructed buildings to investigate and measure actual utility and energy usage to compare against similar non- LEED™ facilities. These investigations are ongoing and the results will be part of the 2013 Green Building Report.

RURAL IMPLICATIONS

The Green Building Policy applies City wide.

CONSULTATION

Several City Departments were consulted for the preparation of this report. These include: Public Works, Building Engineering & Energy Management; Public Works, Parks, Buildings & Grounds; Community Sustainability, and Environmental Sustainability.

LEGAL IMPLICATIONS

There are no legal impediments to receiving this report.

RISK MANAGEMENT IMPLICATIONS

There are no risk implications.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

ACCESSIBILITY IMPACTS

There are no accessibility impacts.

ENVIRONMENTAL IMPLICATIONS

As outlined in the background section of the report, constructing LEED™ certified buildings benefits the community and environment by reducing utility costs, reducing greenhouse gas emissions, reducing waste generation during construction, reducing water consumption of the building and providing a healthy and productive work environment.

TECHNOLOGY IMPLICATIONS

There are no technical implications.

TERM OF COUNCIL PRIORITIES

This aligns with the following objective of the Term of Council priorities.

Objective GP3 – Make sustainable choices: Promote a sustainable, resilient and liveable future by applying a sustainability lens to decision-making that considers long-term impacts, and by aligning all City plans toward common long-term goals. In some cases the City will rethink current practices; in others, it will build on existing or past successes. In all cases, the City will make decisions and solve problems in a way that improves economic health, cultural vitality, social equity and environmental responsibility.

DISPOSITION

Infrastructure Services Department will continue to deliver building construction projects in accordance with the Green Building Policy.