

# Memo



**Date:** April 19, 2010  
**File:** 163432  
**To:** City Manager  
**From:** Mo Bayat, Building & Permitting Branch Manager  
**Subject:** Requirements for Green Roof Technology

---

**Recommendation:**

THAT Council receive, for information, the report of the Building & Permitting Branch Manager dated April 19<sup>th</sup>, 2010.

**Purpose:**

Council resolution from the March 8<sup>th</sup>, 2010 Regular Meeting directed staff to provide a report on what the City may need to do to prepare for new green roof technology and if there are any requirements in the Building Code and Bylaws that require consideration.

**Background:**

There is no specific compliance provision or technical requirement in the current edition of the British Columbia Building Code (BCBC) with respect to green roof technology. However, given the City's overall commitment to sustainability in our community, Development Services staff have been supporting and encouraging the installation of green roofs by making the review process simple and technically balanced.

The basic technical requirements such as the installation of a CSA approved roofing membrane, flashing, ventilation, and roof drainage remains the same for both conventional & green roof assemblies. However, features of a green roof create a need to address additional design considerations such as;

- a) roof structural capacity resulting from an increased dead load caused by the saturated growing medium (soil),
- b) root prevention membrane,
- c) water filter layer,
- d) additional waterproofing membrane, and
- e) possible high efficiency irrigation system.

To deal with the additional design considerations for green roofs, staff will require the applicant to have a structural engineer and an envelope consultant who specialize in green roof technology to design and supervise the construction and installation of the green roof. At completion, the responsible consultants would provide the City with letters of assurances for each discipline prior to issuance of an occupancy permit.

This process is consistent with all other add-on building features and is an acceptable method used to evaluate innovative building designs, and to make sure that the integrity and function of related building systems are handled appropriately while encouraging sustainable construction in our community.

The above process has already been implemented in the construction of a green roof within the City of Kelowna and it was a straightforward process for staff, the designers and the applicant.

A handwritten signature in black ink, appearing to be the name of the author, Mo Bayat.

**Internal Circulation:**

Land Use Management Department  
Policy and Planning Department  
Utility Services - Civic Operations Department

**Legal/Statutory Authority:**

City of Kelowna Building Bylaw 7245

**Considerations not applicable to this report:**

**Legal/Statutory Procedural Requirements:**

**Existing Policy:**

**Financial/Budgetary Considerations:**

**Personnel Implications:**

**External Agency/Public Comments:**

**Community & Media Relations Comments:**

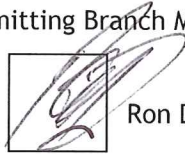
**Alternate Recommendation:**

Submitted by:

A handwritten signature in black ink, consisting of a stylized 'M' and 'B' followed by the initials 'MS'.

M. Bayat, Building & Permitting Branch Manager

Approved for inclusion:

A handwritten signature in black ink, appearing to be 'Ron Dickinson', enclosed in a rectangular box.

Ron Dickinson, Director Development Services