

Supplementary Report: Motion Controlled Apartment Building Corridor Lighting

Date:	November 23, 2009
To:	Licensing and Standard Committee
From:	Executive Director, Municipal Licensing and Standards
Wards:	All
Reference Number:	P:\2009\Cluster B\MLS\Ls09024mls

SUMMARY

In considering the October 19th, 2009 report, “Motion Controlled Apartment Building Corridor Lighting” at its meeting of November 5, 2009, the Licensing and Standards Committee directed that the Executive Director, Municipal Licensing and Standards report to City Council on a recommendations adopted by the Licensing and Standards Committee to amend the Toronto Municipal Code Chapter 629, Property Standards, §629-36, to permit owners of existing multi-residential apartment buildings to install and use motion controlled switches for the operation of corridor and garage lighting and thereby realize energy savings.

This report also addresses concerns voiced by City Councillors regarding safety issues, and by the lighting industry and representative of the rental apartment industry, regarding energy efficiency issues.

RECOMMENDATIONS

The Executive Director, Municipal Licensing and Standards, recommends that:

1. City Council request that the Province amend Ontario Building Code Articles 12.2.2.1 and 12.3.4.9. as they relate to motion sensor controlled lighting in multi-residential buildings (exceeding three storeys or having a building area over 600 square metres) to require:

- a. That emergency lighting levels of 10 lux be maintained in all common areas of a multi-residential building, when the lighting system is dormant and where motion sensor controlled lighting is used.
- b. That all zones/areas of an underground garage of a multi-residential building, be fully lighted when occupied, for safety purposes (where motion sensor controlled lighting is used in a particular zone); and
- c. Emergency lighting levels of 10 lux, be maintained in the underground garage of a multi-residential building, to address the issue of "no null zones", when the motion sensor controlled lighting system is dormant.

Financial Impact

There are no financial impacts beyond what has already been approved in the current year's budget.

DECISION HISTORY

A report dated October 19, 2009 regarding Motion Controlled Apartment Building Corridor Lighting (see the link below) was tabled at the November 5, 2009 meeting of the Licensing and Standards Committee.

<http://www.toronto.ca/legdocs/mmis/2009/ls/bgrd/backgroundfile-24444.pdf>

As a result of the depositions and debate at this meeting the Licensing and Standards Committee requested the Executive Director, Municipal Licensing and Standards to report directly to City Council at its meeting on November 30, 2009 on the following:

- a. a review by Municipal Licensing and Standards Division of:
 - i. Section H(1) of the proposed amendments to Toronto Municipal Code, Chapter 629, Property Standards, to address the issue of there being "no null zones";
 - ii. Section H(3)(b) of the proposed amendments to Toronto Municipal Code, Chapter 629, Property Standards, to address the issue of the definition of "minimum average level";
- b. the requirement for a minimum lighting level of 10 lux for safety purposes; and
- c. suggested amendments raised in communications LS25.3.1 to LS25.3.4 and depositions heard at the meeting.

ISSUE BACKGROUND

In June 2006, the Ontario Provincial Government passed regulation 349/06, which amended the Ontario Building Code with Article 12.2.2.1, permitting motion sensor controlled lighting in the common areas of apartment buildings, which would facilitate corridor, garage and other common element lighting to be turned off when the area is not in use. In the case of existing buildings, the Toronto Municipal Code Chapter 629, Property Standards, does not permit the level of illumination present to fall below a defined minimum.

In December 2008, Municipal Licensing and Standards was approached by owners of existing buildings to amend the City of Toronto Municipal Code, Chapter 629, Property Standards, to permit the use of motion sensor controlled lighting in the common areas of existing apartment buildings. A review of the Municipal Code was conducted and bearing in mind safety and security concerns, a number of amendments are recommended.

COMMENTS

Ontario Building Code

Article 12.2.2.1, of the Ontario Building Code's primary concern is energy efficiency. Although the automatic control of lighting in some buildings is beneficial from an energy conservation perspective, there are safety and security considerations with respect to reducing the level of illumination. In this regard, the requirements of the Ontario Building Code, restricts the use of motion sensor controlled lighting in exits and stairs, including lobby areas.

Conflict with the Ontario Building Code

The Ontario Building Code regulates new construction, whereas the purpose of the City's Property Standards By-law is to prescribe ongoing minimum standards regarding property maintenance and occupancy, which includes matters related to health and safety.

While the City has an interest in maintaining a minimum level of illumination in areas where the general lighting is motion sensor controlled, the Ontario Building Code is silent on the matter. The code does not prescribe a minimum level of lighting or state that complete darkness is acceptable. From a safety and security perspective, it is considered desirable to maintain a minimum level of illumination at all times, in all areas. It is recommended that this minimum level of illumination be the same as that prescribed by the City's Property Standards By-law for emergency lighting, namely 10 lux.

The recommended changes to the Ontario Building Code were developed in consultation with the City of Toronto's Chief Building Official.

Environmental/Energy Efficiency Concerns

Representatives of the apartment building industry expressed concerns that if the City's Property Standards By-law requires that all lighting within a large area of a multi-residential apartment buildings is activated to full illumination when any motion sensor within that area is activated, it would be costly due to excess energy usage and may cause problems with the electrical systems due to an electrical surge.

Lighting Systems in Underground Garages

In addition to this the apartment building industry has concerns regarding energy usage in large underground garages, as it would be wasteful to have all lights active when only a small part of the garage is occupied. The suggestion of the apartment building industry is that lighting zones be permitted.

If lighting zones are to be considered appropriate then a number of issues need to be addressed, these include but are not necessarily limited to:

- The size of a lighting zone.
- The number of motion sensors and motion sensor controlled light fixtures within a lighting zone.
- If motions sensors located within a lighting zone may control light fixtures outside of that lighting zone.

Once again the Ontario Building Code is silent on these issues and therefore there is a need for the City of Toronto to request that the Province amend the Ontario Building Code as per the recommendations in this report.

Personal Safety Concerns

While the City of Toronto is supportive of initiatives which will reduce overall electrical power consumption, concerns were raised by members of the Licensing and Standards Committee regarding the safety of occupants and visitors to buildings where motion sensor controlled lighting is utilized. Therefore, the City of Toronto wishes to attempt to reconcile these safety concerns with the most energy efficient technology available today in order to provide savings to the apartment building industry.

In order to address the concerns expressed in this report it is recommended that staff of the Municipal Licensing and Standards Division meet with representatives from the Province, tenants groups, building owners and the Toronto Environment Office.

This report was prepared in consultation with the City of Toronto's Chief Building Official, the Greater Toronto Apartment Association (GTAA) and representatives of the commercial lighting industry.

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