



City of Vancouver *Planning - By-law Administration Bulletins*

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FLOOR SPACE EXCLUSION TO ACCOMMODATE IMPROVED BUILDING PERFORMANCE (ENVELOPE AND THERMAL INSULATION)

Authority - Director of Planning

Effective March 14, 2000

Amended December 14, 2004 and January 20, 2009 and July 13, 2011

1 Introduction

On March 14, 2000, City Council enacted amendments to various schedules of the Zoning and Development By-law to allow floor space exclusions to provide construction incentives to control building envelope leaks. On June 10, 2008, Vancouver City Council recommended the removal or mitigation of disincentives to greener building design practices, and on January 20, 2009 City Council enacted amendments to various schedules of the Zoning and Development By-law to allow floor space exclusions to facilitate better thermal performance. On May 31, 2011, Council enacted further amendments to allow for increased floor space exclusions for thermal performance in order to accommodate interest in building thicker walls.

These amendments permit exclusion of portions of exterior walls which are thicker than the minimum thickness frame walls currently permitted, which are typically 152 mm thick. This allows exclusion of the wall thickness that is in excess of 152 mm, to a maximum exclusion of:

152 mm as recommended by a Building Envelope Professional to control building envelope leaks, and:

- (a) up to 51 mm in walls that fall under Part 9 of the Building By-law which provide RSI 2.88 (R-16) thermal insulation, *OR*
- (b) up to 333 mm in walls that fall under Part 9 of the Building By-law which provide greater than effective RSI 3.85 (R-22) thermal insulation, or up to 533 mm in walls that fall under Part 9 of the Building By-law which provide greater than effective RSI 3.85 (R-22) of thermal insulation and have been defined and verified by a Registered Professional, *OR*
- (c) up to 127 mm in walls that fall under the Part 3 requirements of the Vancouver Building By-Law that provide RSI 2.65 (R-15) of thermal insulation in the overall wall surface as verified by a Registered Professional

It should be noted that other regulations which are used to control bulk and massing, including height, yards and setbacks, remain unchanged and will not be relaxed to accommodate the aforementioned FSR exclusions for thermal insulation. However, for

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upgrades to repair leaky walls, required relaxations to setbacks can be considered by the Director of Planning or the Board of Variance.

2 Exclusion from Floor Area for Insulation in Walls in Buildings that Fall Under the Part 9 Requirements of the Vancouver Building By-Law

This floor space exclusion is intended to remove the disincentive of loss of usable floor area to construct thicker walls on new buildings.

- 2.1 A Registered or Building Envelope Professional is not required where the exclusion sought is only for an increased thickness of wall to provide the required thermal insulation in wood frame walls, provided that the wall assembly is listed in the City of Vancouver's *Floor Space Exclusions: Schedule of Wall Assemblies*.

Submission Requirements

To apply for an exclusion, the following will be required in addition to standard submission materials:

- (a) A schedule of wall assemblies indicating materials and dimensions, with reference to applicable standards.
- (b) A summary table for each floor indicating the requested floor space exclusion.

- 2.2 For walls not appearing in the *Floor Space Exclusions: Schedule of Wall Assemblies* (as explained in Section 5 of this bulletin), an exclusion up to the maximum thickness of the wall to a total maximum of 533 mm may be sought.

Submission Requirements

- (a) A schedule of wall assemblies indicating materials and dimensions, with reference to applicable standards.
- (b) A summary table for each floor indicating the requested floor space exclusion.
- (c) A sealed and signed letter from a Registered Professional, as defined in the Building By-law, recommending the proposed wall types, as well as an illustration detailing and verifying the RSI factor for the overall wall surface and noting the requested exclusion. For example details, see the above-noted document *Floor Space Exclusions: Schedule of Wall Assemblies*.

3 Exclusion from Floor Area for Insulation in Walls in Buildings that Fall Under the Part 3 Requirements of the Vancouver Building By-Law

This floor space exclusion is also intended to remove the disincentive of loss of usable floor area to construct thicker walls on new buildings.

The thermal performance of walls other than wood frame shall be calculated as a net R-value for a wall section taken from the floor level to the next floor level immediately above, including glazing, framing components, structure and all other elements that contribute to the overall wall surface. Walls with a thickness up to and including 152 mm will continue to be included in floor space. Only the thickness in excess of 152 mm will be excluded, to a maximum exclusion of 279 mm where both building envelope and thermal insulation criteria are met.

Submission Requirements

To apply for an exclusion, the following will be required in addition to standard submission materials:

- (a) Additional information, including a schedule of floor to floor wall sections indicating materials, dimensions and reference to applicable standards, identification of the location and extent of each wall section, a summary table for each floor indicating the requested

floor space exclusion by wall type, and a summary total. Applicants must also demonstrate the required RSI factor.

- (b) A letter from a Registered Professional, as defined in the Building By-law, sealed and signed, recommending the proposed wall types, and verifying the RSI factor for the overall wall surface.

4 Exclusion from Floor Area to Control Building Envelope Leaks

This floor space exclusion is intended to facilitate the repairs and replacement of walls on buildings which have been subject to leaks and water damage.

Submission Requirements

To apply for an exclusion, the following will be required in addition to standard submission materials:

- (a) Sections indicating materials, dimensions, and reference to applicable standards, identification of the location and extent of each wall section, a summary table for each floor indicating the requested floor space exclusion by wall type, and a summary total.
- (b) A letter from a Building Envelope Professional, as defined in the Building By-law, sealed and signed, recommending the proposed wall types to control building envelope leaks.

5 Schedule of Assemblies

A separate document entitled *Floor Space Exclusions: Schedule of Wall Assemblies* contains 10 drawings that illustrate those typical wall assemblies that are eligible for exclusions, and the exclusion associated with each. This document can be found on-line at www.vancouver.ca or at the Enquiry Centre information desk.