

1. TEXT AMENDMENTS: Regulation Redesign – Amendments to Zoning & Development and Parking By-laws

Date Received	Time Created	Position	Content	Name	Organization	Contact Info	Neighbourhood	Attachment
06/24/2020	11:53	Support	<p>Dear Mayor and Council My name is Norm Shearing, Chair of the Regulation Redesign External Advisory Group. It was my intention to speak at the Public Hearing but unfortunately that will not be possible due to competing obligations. The Advisory Group is made up of individuals representing a broad spectrum of the building industry. Our purpose is to ?provide guidance to staff on identifying key issue, develop options and directions for a revised land use regulation framework and implementation strategy?. From our first meeting in the fall of 2018 we have worked collaboratively with staff to: 1. Create user-friendly land use regulations and policies by improving format and applying consistent terminology; 2. Reconcile competing objectives and conflicts between policies and regulations; 3. Ensure land use regulations and policies advance City policies and priorities 4. Improve communication and information sharing regarding regulations, policies and processes Our final, and perhaps most important objective, is to take all our work to help streamline the application process. With over 8,000 amendments made to the Zoning and Development By-law since 1956 it is a mind-numbing process to wade through all the district schedules, policies, guidelines, administrative bulletins, etc. to find any clarity answering the simple question; ?What do I need to know to build this shop, this housing, this office?. The application process has been gradually getting worse over the years, I?m sure many of you have heard from old folks like me talking about the ?good old days, when things got done?! That doesn?t matter, you have an opportunity here to make the process better than it has ever been as a result of your support and the work being done by the dedicated staff team lead by Gil Kelly, Theresa O?Donnell and Marco D?Agostini. I would also like to commend Council for supporting this critically important work through their ongoing funding. This is particularly important as wrestling this beast will not happen overnight. The recommended changes contained in the Referral Report, Amendments to Zoning and Development and Parking By-law, is an important first step to unraveling years of contradictory policies and regulations. I hope to see more changes coming before Council, and to the Public, on a regular basis. Your support for these changes will signal to the building and development communities that you are serious about improving the application process for all users, big and small. Thank you, Norm</p>	Norm Shearing		"s. 22(1) Personal	Unknown	No web attachments.
06/24/2020	12:47	Other	<p>I am strongly in support of the this Regulation Redesign. However, since a key aspect is the regulations related to balconies, I would like the City to approve a minor modification to clarify that fully retractable balcony glass panel systems can be installed on open balconies without any impact on the FSR calculations. This type of system significantly improves the function and long-term sustainability of balconies by improving energy performance, reducing wind and noise, and pollutants when balconies located along busy streets. They can also contribute to weatherproofing and longevity. Many cities across Canada and Metro Municipalities allow such systems without any impacts on FSR. The City of Vancouver also allows the installation of such systems, but to date, the resulting balcony has been deemed to be 'enclosed' and therefore included in FSR calculations. As a result, most architects and developers are reluctant to include them in their projects, despite their many benefits. While staff have indicated they would prefer to further study whether balconies containing retractable glass panels can be installed without FSR ramifications, this Regulation Redesign provides a perfect opportunity to clarify such systems are permitted for balconies in new buildings without impact on FSR. This can be achieved through a minor revision to the balcony definition. It is agreed however, that further study should be undertaken to allow installations in existing buildings.</p>	Michael Geller		"s. 22(1) Pe"s. 22(1)	Dunbar-Southlands	Appendix B

"s. 22(1) Personal and Confidential"

June 24, 2020

Mayor and Council
City of Vancouver
c/o City Clerk's office

Re: Item 1, Public Hearing Agenda June 25, 2020 Regulation Redesign

I believe this modernization of Vancouver's zoning bylaws and regulations is long overdue and compliment the council and staff for undertaking the redesign. I am therefore writing in support of the Regulation Redesign package of Zoning Bylaw amendments before you, with one small modification.

In past years, as an architect and planner, I have written to and appeared before Council in support of, or seeking approval for various innovations. These have included rezonings to allow low-rise apartments along arterial roads, laneway housing, lock-off suites, fee-simple rowhouses, and most recently relocatable modular housing for the homeless.

Each of these concepts was somewhat controversial, and often resulted in split votes on Council, but time has proven that all were beneficial and worthwhile.

I am now writing to Council to seek your approval for yet another innovation, namely the installation of fully retractable, transparent, glass panels on balconies, without the balcony being deemed to be 'enclosed' and therefore excluded from FSR calculations.

This type of system allows a balcony to be completely open when the weather is good, but protected when it is raining, excessively windy or noisy. Although the panels have air gaps between them and are not sealed, they can improve energy performance, reduce wind, especially at higher levels, attenuate road and transit noise, and to address a point raised by Councillor Swanson at Tuesday's meeting, address the health impact of excessive traffic fumes for balconies located along busy streets.

This type of balcony system was first invented in Europe more than 30 years ago, but is now being manufactured, tested, and approved for use in Canada. It has been installed in over 20 countries worldwide, and many Canadian cities, including Toronto, Montreal, and other cities too numerous to mention, without the area of the balcony being included in FSR.

This is the key issue I wish to address.

Given numerous government testing approvals, retractable balcony glass systems are approved for installation in Vancouver. However, to date, the planning department has deemed the balcony to be enclosed, and therefore its area included in FSR, except where enclosed balcony exemptions are permitted.

We have been told that planning staff could support the inclusion of this type of glass panels without regard for FSR when a rezoning is being undertaken. However, as you well know, we collectively want to

reduce the number of rezonings processed in the city. That is why the Regulation Redesign provides an excellent opportunity to clarify the city's support for this type of system, without FSR repercussions.

Over the past two years, I have been meeting with planning staff in Vancouver and many Metro municipalities to seek similar approvals. Some municipalities, including the City of North Vancouver, Langley Township, City of Langley, and Abbotsford now allow such installations without any FSR implications.

In these instances, the municipalities have not modified their zoning bylaws. Instead, they have determined that since the system does not create a sealed, exterior wall, and the balcony can remain an open balcony, and is not conditioned interior space, it can be approved without impact on FSR.

However, other municipalities are now considering bylaw modifications to clarify that such systems do not create an enclosed balcony or interior space and the balcony can be excluded from FSR.

Since this Regulation Redesign is specifically proposing to clarify the city's definition of a balcony and an enclosed balcony, now is the time to make it clear to architects, developers and the general public, that retractable balcony glass systems can be installed in new buildings in Vancouver without FSR implications.

While we would like to see this system approved for both new and older buildings, we appreciate some further work may be required to address fire safety and building envelope issues before any blanket approval can be given for existing buildings. However, this is not the case with new buildings.

While staff have advised me they prefer to further study the implications of allowing such retractable balcony glass systems without FSR implications, I would point out that the system is already permitted in Vancouver buildings, (albeit with FSR implications) and has been installed in more than 20 countries around the world and cities across Canada, without being counted in the FSR.

A major goal of this regulation redesign is to modernize the zoning bylaw. This product was not invented when the Vancouver zoning bylaws were first drafted and not available in Canada when the most recent drafts were prepared. Consequently, this Regulation Redesign is the right time to clarify the situation.

While many would like to see this product allowed in both existing and new buildings, tonight I am seeking your approval to instruct staff to modify the zoning bylaw definitions for a balcony so that transparent, retractable glass panels can be installed in new buildings without any impact on FSR, on the understanding that further study be carried out with respect to installations in existing buildings.

I hope you will support a minor amendment to the definitions and FSR exclusions as set out in the Zoning Bylaw so that many more people Vancouverites can enjoy their balconies when it is wet, windy, noisy, or somewhat polluted outside.

Thank you for your consideration of this request.

"s. 22(1) Personal and Confidential"



Michael Geller Architect AIBC, FCIP, RPP, MLAI

Improving the livability and sustainability of balconies without impacting FSR calculations



A proposal to City of Vancouver in conjunction with Regulation Redesign

June 2020

Michael Geller Architect AIBC, FCIP, RPP, MLAI
Adjunct Professor, SFU Centre for Sustainable Development

There was a time when all Vancouver balconies were included in FSR calculations

Prior to the 1960s, most multi-family residential buildings in Vancouver and other Metro municipalities did not provide balconies since their area was included in FSR calculations



This typical early 1960s apartment building has no balconies

Open balconies were subsequently exempted from FSR in 1964

To encourage developers to construct balconies, Vancouver City Council introduced an FSR exemption for residential open balconies to a maximum of 8 per cent of the gross floor area.

Buildings in Vancouver and throughout Metro soon began to incorporate balconies



Balconies started to appear once they were excluded from FSR

For a while, enclosed balconies were also exempted from FSR!

In 1985, Vancouver City Council adopted “Balcony Enclosure Guidelines” to control enclosures on existing buildings.

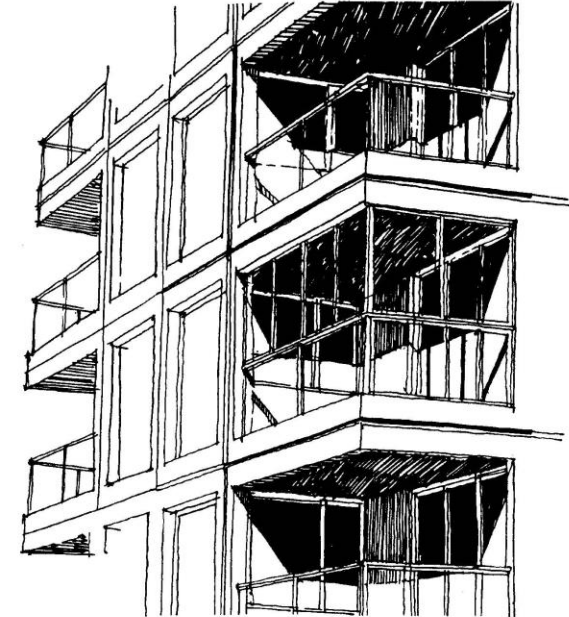
Subsequently, Council permitted balcony enclosures in new construction, provided the balcony continued to be separate and distinct from the interior of the dwelling.



BALCONY ENCLOSURE GUIDELINES

Adopted by City Council April 23, 1985

Amended October 8, 1985, September 30 and November 4, 1986, August 11, 1987, October 3 and December 19, 1989, and January 9, 1996



General Design Considerations

- “The purpose of an enclosed balcony is to afford year-round enjoyment of those uses normally enjoyed in fair and warm weather. An enclosed balcony may also offer noise buffering in certain locations such as on busy arterial streets.”
- “Careful attention should be given to preserving the design integrity of facades in existing buildings and new construction to create an identifiable architectural element...”

Figure 3. Example of Balcony Enclosures Retaining Existing Railings

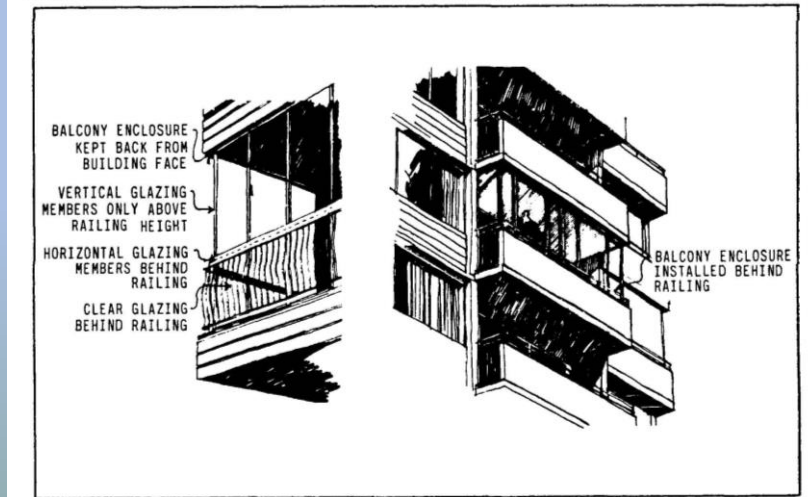
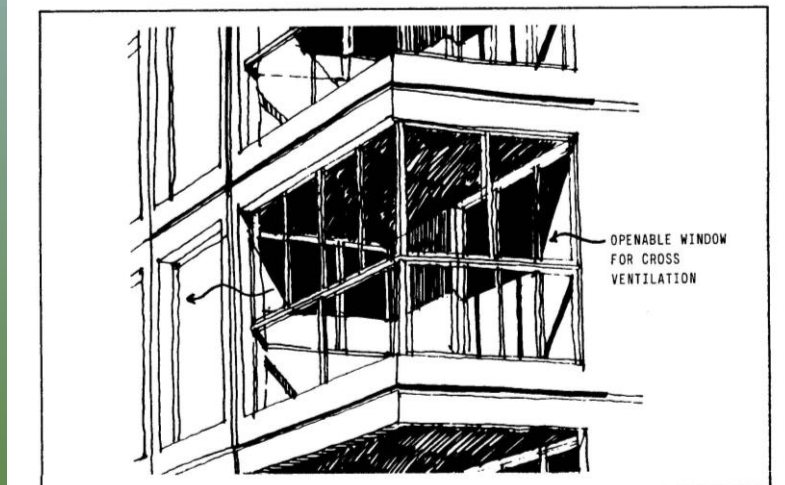


Figure 7. Example of an Enclosed Balcony Enclosure that Retains the Building's Exterior Wall Glazing (for Smoke Isolation) between the Main Living Area and Enclosed Balcony



Subsequently,
Vancouver reduced the
area of enclosed
balconies that could be
excluded from FSR

In 1995, since too many
developers were enclosing
virtually all of the 8%
balcony exclusion, Council
amended the balcony
enclosure policy to restrict
enclosed balconies to no
more than 50% of the total
balcony area.



Many condominium buyers did not want open balconies. They preferred the additional living space.



BALCONY ENCLOSURE FOR NEW BUILDINGS

Authority - Director of Planning
Effective January 24, 2012

This Bulletin, including illustrations, demonstrates how enclosed balconies will be considered as part of a requested floor area exclusion through the rezoning and development application processes. Applicants should recognize that the illustrations provided are not intended to suggest a singular formulaic solution. Applicants must refer to the Balcony Enclosure Guidelines - Adopted by Council 1995, Amended up to 1996, to ensure that all aspects of the guidelines, applicable to their building proposal, have been addressed.

There are two principal design aspects of the enclosed balcony which are assessed when consideration is given for a requested floor area exclusion:

- the construction and interior relationship of the enclosed balcony within the unit layout; and
- the exterior appearance and character.

The following text in normal face are excerpts, from the Balcony Enclosure Guidelines. *Italicised text within this bulletin clarifies further the intent of the Guidelines.*

General Design Considerations

The purpose of an enclosed balcony is to afford an occupant the year round enjoyment of those uses to which an open balcony normally would be used in fair and warm weather.

While a balcony enclosure may provide many attractive uses for the occupant, careful attention should be given to creating an identifiable architectural element such as through a distinctive shape and a predominance of clear glass.

- Enclosed balconies seeking FSR exemptions should be positioned, configured and finished to function similar to an open balcony (solarium or indoor garden) rather than as a den or bedroom.
- Balcony enclosures should be designed to be distinct but integrated within the overall architecture of the building.
- In plan, enclosed balconies should have their own discrete identity, from neighbouring façade elements and not intrude into the unit's living space layout.

February 2012

Figure E - not supportable
- enclosed balconies (longer dimension of enclosed balcony should be along the exterior wall)

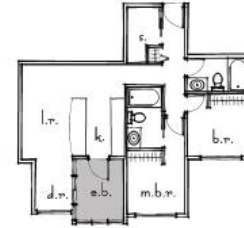


Figure F - not supportable
- inverted

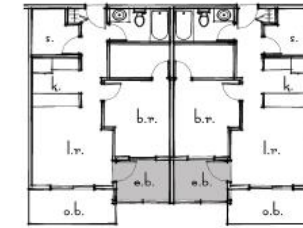
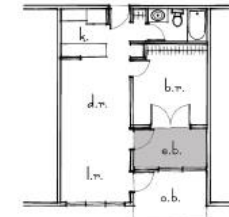


Figure G - not supportable
- tandem open and enclosed balconies (inverted enclosed balconies)



Elevations

Figure H - supportable
- an identifiable architectural element with a distinctive shape and a predominance of clear glass



Figure I - supportable
- balcony enclosures to be distinct but integrated with the overall architecture of the building



In 2012 Vancouver introduced revised guidelines for new buildings

Balcony and Deck Exclusions: C, H, I, M Districts

District	Current Exclusions					
	Residential Balconies		Open Balconies - Any Use	Patios, Roof Decks		Open Residential Sundecks
	Open	Enclosed		Residential	All uses	
C-1	Max 8%	Max. 50% of 8%		No limit		
C-2	Max 8%	Max. 50% of 8%			No limit	
C-2B	Max 8%	Max. 50% of 8%		No limit		
C-2C	Max 8%	Max. 50% of 8%		No limit		
C-2C1	Max 8%	Max. 50% of 8%		No limit		
C-3A	Max 8%	Max. 50% of 8%				
C5, C-5A, C-6	Max. 12%				No limit	
C-7 and C-8	Max 8%	Max. 50% of 8%			No limit	
FC-1	Max 8%	Max. 50% of 8%			No limit	
FC-2			Max 12%		No limit	
HA-1			Max 12%		No limit	
HA-2						
HA-3					No limit	No limit
I-1	Max 8%				No limit	
I-1A	Max 8%				No limit	
I-1B	Max 8%				No limit	
I-2			Max 12%		No limit	
I-3			Max 12%		No limit	
I-4						
IC-1,2	Max 8%				No limit	
IC-3			Max 12%		No limit	
M-1	Max 8%				No limit	
M-1A	Max 8%				No limit	
M-1B	Max 8%				No limit	
M-2	Max 8%				No limit	
MC-1, 2		Max 50% of 8%	Max 12%		No limit	

Key Proposed Amendments:

- provide floor area exclusion for open balconies and decks for any use in C, I, M Districts, not just residential
- increase combined open balconies and deck exclusion from 8% to 12% in districts which don't allow enclosed balconies (similar to what is currently allowed in newer I Districts)

Balcony and Deck Exclusions - R Districts

District	Current Exclusions			
	Patios/ Roof Gardens	Open Residential Balconies or Sundecks (SFD)	Open Residential Balconies or Sundecks (MFD)	Enclosed Balconies
RA-1	No limit	No limit		
R5-1	No limit	Max. 8%		
R5-1A	No limit	Max. 8%		
R5-1B	No limit	Max. 8%		
R5-2	No limit	Max. 8%		
R5-3 / R5-3A	No limit	Max. 8%		
R5-5	No limit	Max. 8%		
R5-6	No limit	Max. 8%		
R5-7	No limit	Max. 8%		
RT-1	No limit	Max. 8%		
RT-2	No limit	Max. 8%		
RT-3	No limit	Max. 8%		
RT-4	No limit	Max. 8%		
RT-5	No limit	Max. 8%		
RT-6	No limit	Max. 8%		
RT-7	No limit	Max. 8%		
RT-8	No limit	Max. 8%		
RT-9	No limit	Max. 8%		
RT-10	No limit	Max. 8%		
RT-11	No limit	Max. 8%		
RM-1	No limit	Max. 8%		
RM-2	No limit	Max. 8%		
RM-3	No limit	Max. 8%		Max 50% of 8%
RM-3A	No limit	Max. 8%		Max 50% of 8%
RM-4+	No limit	No limit		
RM-5+	No limit	Max. 12%		
RM-6	No limit	Max. 8% (includes porches)		Max 50% of 8%
RM-7 +	No limit	Max. 8%	Max 12%	
RM-8, RM-8N	No limit	Max. 8%	Max 12%	
RM-9+	No limit	Max. 8%	Max 12%	
RM-10+	No limit	Max. 8%	Max 12%	
RM-11	No limit	Max. 8%	Max 12%	
RM-12	No limit	Max 12%		
FM-1	No limit	No limit		

Key Proposed Amendments:

- increase floor area exclusion for open balconies and decks in RM districts which don't allow enclosed balconies - from 8% to 12% for multi-family dwellings (similar to what is currently allowed in newer RM districts)

Today, Vancouver has a myriad of regulations for open and 'enclosed' balconies. In some zones, maximum balcony area is 8% of GFA and 50% can be 'enclosed'. In others, maximum is 8% and none of the area can be 'enclosed'.

In other zones, balconies can be up to 12% of GFA but none of the area can be 'enclosed'.

This Regulation Redesign provides an excellent opportunity to rationalize and update regulations

Since so many balconies are not used when it is rainy, windy, noisy or polluted, what is needed is a way to make balconies more usable without being considered 'enclosed' and included in FSR calculations

We need a system that can:

- improve energy performance
- attenuate noise
- reduce wind buffeting
- improve weather protection

while allowing balconies to be completely opened during good weather.



*Noise levels from SkyTrain have increased as tracks have aged.
As a result nearby balconies become less enjoyable to use.*



Fortunately, European-style retractable, transparent, balcony glass systems are now being manufactured around the world



They are manufactured by various companies. Lumon is a Finnish company that has developed a retractable glass wall balcony system used in 20 countries worldwide, including Canada where it has a manufacturing plant.



Given the system's frameless panels and transparency, it does not significantly alter the exterior appearance of buildings

- This system has numerous product tests and approvals, including wind load, seismic, and NRC and Canadian Construction Materials approval.
- Provides additional insulation. While not sealed, up to 14.9% energy savings.
- Lowers noise levels between 8db and 18db, equal to up to 50% reduction.
- Prevents premature balcony degradation by keeping rain, snow, wind, dust and birds away from balcony.



Evaluation Report CCMC 13640-R Lumon Glazing System

MasterFormat:	08 57 00
Evaluation issued:	2012-12-11
Re-evaluated:	2016-05-19
Revised:	2017-09-22
Re-evaluation due:	2018-12-11

1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that "Lumon Glazing System", when used as a balcony windbreak glazing system in accordance with the conditions and limitations stated in Section 3 of this Report, complies with the National Building Code 2015:

- Clause 1.2.1.1.(1)(a), Division A, using the following acceptable solutions from Division B:
 - Article 4.1.5.14., Loads on Guards
 - Article 4.1.7.1., Specified Wind Load
 - Sentence 4.1.7.5.(5), External Pressure Coefficients (wind load)
 - Sentence 4.1.8.3.(5), General Requirements (earthquake load and effects)
 - Sentence 4.1.8.18.(14), Elements of Structures, Non-structural Components and Equipment (earthquake load and effects)
 - Article 4.3.5.1., Design Basis for Aluminum
 - Section 9.6., Glass
 - Article 9.8.8.2., Loads on Guards
 - Article 9.8.8.3., Height of Guards
 - Article 9.8.8.6., Design of Guards to Not Facilitate Climbing
 - Article 9.8.8.7., Glass in Guards
 - Article 9.10.17.1., Flame Spread Rating of Interior Surfaces
 - Article 9.20.16.1., Corrosion Resistance of Connectors

This opinion is based on CCMC's evaluation of the technical evidence in Section 4 provided by the Report Holder.

2. Description

The product consists of an operable glass panel portion and a guard portion which forms a balcony windbreak glazing system. The system is not hermetically sealed as there are ventilation gaps between the operable glass panels.

The operable glass panel portion consists of an upper extruded aluminum telescoping loadbearing track, a lower extruded aluminum glide track and 10-mm-thick tempered glass panels. The upper telescoping track is attached to the perimeter of the concrete slab ceiling of the balcony using drop-in anchors and stainless steel bolts while the lower extruded aluminum track is secured directly to the Lumon railing system. Each glass panel is attached to the upper track with two ball bearing rollers that serve as the upper hinge/upper rail guide, and to the lower track with an alloy hinge and plastic guide that rides inside the lower track. All glass panels can slide and be opened, except for one hinged panel at the end of the glass portion, which is fixed in place, but can be opened by swinging it inward. A plastic latch mechanism keeps the fixed-in-place glass panel closed or partially opened for ventilation. The other glass panels can be moved laterally, swung open at 90° and locked in place with the hinges of adjacent panels. To fully open the system, the movable glass panels can all be shifted to the end with the fixed-in-place panel. A webbed nylon tether strap secures the glass panels while they are in the open position. Extruded aluminum channel profiles (glazing beads) are fastened to the upper and lower edges of the panels. The glazing beads are cut wider than the glass panels to prevent glass-to-glass contact when in the closed position and to provide ventilation between the glass panels.

No Balcony Glazing

Balcony Glazing

Balcony glazing,
1 glass open

Balcony glazing
+ blinds
1 glass open



No Balcony.
No Balcony glazing.
Really Hot!

Balcony glazing with
blinds is the best
option.

Country	min	max
Canada	4,4 %	14,9 %
French	5,1 %	21,8 %
Germany	4 %	15,7 %
Norway	4 %	12,6 %
Russia	3,9 %	11,4 %
Spain	9,1 %	34,5 %
Sweden	3,9 %	11,8 %
Switzerland	4,9 %	14,8 %



- Energy saving effects of balcony glazing ranged between 4.4 and 14.9 % in Canada. Average savings were 7.9 %.

Energy savings



According to studies, balcony glazing reduces traffic noise by 8 – 18 dB depending on the glazing solution.

Noise reduction



Since glass panels can be completely opened, you can even use the BBQ, although some jurisdictions discourage this


The Lumon Retractable Balcony Glass System


- is designed to be open, partially open, or closed
- since frameless, does not significantly impact exterior appearance of the building
- includes narrow air gaps at top & bottom and between panels, therefore not completely sealed
- the glass does not become an outside wall. Balcony remains an 'unconditioned space'



Many municipalities across Canada have approved the Lumon retractable glass system without impacting FSR calculations

<https://eplans.mississauga.ca/ProjectDox/Integration>

BUILDING PERMIT NOTICE				City of Mississauga Planning and Building Department 300 City Centre Drive MISSISSAUGA, ON L5B 3C1 Inspections: (905) 896-5660 Insp Fax: (905) 896-6688	
Permit#	BP 3ALT 16 1553	Web Access ID	M0C203MW	Issuance Date	2016-06-20
Municipal Address	220 FORUM DR		Bldg	Unit 211 & 410	
Legal Description	PSCP 843 - FORMERLY CON 1 EHS PT LT 1, 43R16109 PT 1, PL M-1013 BLK 5				
Type	APARTMENT (> 6 UNITS)				
Scope	ALTERATION TO EXISTING BLDG				
Class	STRUCTURAL COMPONENT MECHANICAL COMPONENT				
Owner Information	1566038 ONTARIO INC 102-8000 JANE ST CONCORD, ON				
Builder/Contractor	LUMON CANADA INC 5-600 ZENWAY BLVD VAUGHAN, ON				
Description	INSTALLATION OF BALCONY GLAZING SYSTEM				
Air Cond Req'd	N/A				
Comments	HEATING - AS PER APPROVED DRAWINGS PLUMBING - NOT INCLUDED IN THIS PERMIT				
REQUIRED INSPECTIONS Notice of the readiness for inspection shall be given to the Chief Building Official at prescribed stages of construction. Refer to Schedule "E" of the Building By-law at http://www7.mississauga.ca/documents/bylaws/building_by-law_2014.pdf for prescribed stages.					
SCHEDULING INSPECTIONS Inspections can be scheduled any time online at www.mississauga.ca/inspections using the Permit # and Web Access ID noted above, or during business hours at 905-896-5660 for Building, Plumbing, HVAC, and Sign inspections, and 905-896-5908 for Fire inspections. Inspections must be scheduled at least two days in advance.					
CONSTRUCTION MUST COMPLY Construction must be completed in accordance with the issued building permit documents and the Ontario Building Code.					
BUILDING PERMIT DOCUMENTS ON SITE Building Permit Notice and all supporting documents and drawings must be kept and maintained on site at all times. No person shall amend the building permit documents without authorization from the Chief Building Official.					
OCCUPANCY OR USE AFTER COMPLETION No person shall occupy or use a building unit notice of completion is given to the Chief Building Official, and the building has been inspected and approved.					
REVOCATION OF BUILDING PERMIT The Chief Building Official may revoke permit if issued on mistaken, false or incorrect information; if construction is not commenced within six months after date of permit issuance; or, if construction is suspended or discontinued for a period of more than one year.					
This permit conveys no right to occupy any street or sidewalk or any part thereof, either temporarily or permanently. Encroachments on public property not specifically permitted under the Building Code must be approved by the Commissioner of Transportation and Works. Street or lot grades as well as depth and location of public sewers may be obtained from Transportation and Works Department. The issuance of this permit does not release the Permit holder from the conditions of any applicable subdivision restrictions.					

		North York District 5100 Yonge Street Toronto, ON M2N 5V7 Tel: 4163957541 Fax: 4163957589	
From: Diane Damiano [mailto:damiano@toronto.ca] Sent: October-21-13 2:16 PM To: Olli Vanska Cc: Peter Au Subject: Balcony Enclosures			
Hello Olli,			
It has taken some time I know but the zoning team has made a final interpretation on zoning requirements for balcony enclosures as follows:			
Any retractable glazing, which when it is in its fully retracted state, occupies less than 50% of the perimeter of the balcony would not be deemed to be enclosed and would not be considered Gross Floor Area, provided the glazing at no point provides a complete seal/separation from the exterior (ie. an air gap must be provided). The above type of enclosure is not subject to Site Plan Approval.			
Hope this what you require.			
Diane Damiano Manager, Plan Review Toronto Building, North York District Tel. No.: 416-395-7561 Fax No.: 416-395-7589			



Locally, Langley City and Township, and other Metro municipalities have approved installation of the Lumon system without any impact on FSR calculations

These municipalities allow retractable balcony glass systems without any FSR ramifications since they recognize they don't create an exterior wall

ABBOTSFORD ZONING BYLAW, 2400-2014

Bylaw Interpretation

No. 38

Date: July 17, 2017

From: Darren Braun, Director of Development Planning

Subject: Balcony Enclosures and Floor Space Ratio calculation

This interpretation attempts to address what constitutes enclosure of a balcony so as to provide clarity as to whether or not it becomes included in the Floor Space Ratio (FSR) of a property.

The Zoning Bylaw No. 2400-2014 currently defines "Floor Space Ratio (FSR)" as follows:

- 1) for single detached dwellings and duplexes, the figure obtained by dividing the gross floor area by the lot area; or
- 2) for all other uses, the figure obtained by dividing the net floor area of all buildings and structures on a lot by the gross lot area.

"Floor Area, Net" means gross floor area, less any of the following:

- 1) areas used for off street parking and loading within the building envelope or underground.
- 2) building areas with a ceiling less than 1.2 m in height;
- 3) common indoor amenity areas up to 100 m² in area for multi-unit residential uses only; and/or
- 4) bicycle parking areas and mechanical rooms located in underground parking structures.

"Floor Area, Gross" means the total area of all storeys in all buildings on a lot measured to the outside of the exterior walls of the building. For single detached dwellings and duplexes, this shall exclude an accessory building, with a maximum size of 10 m².

The determining factor for when a balcony enclosure becomes subject to FSR calculation is whether (or not) the enclosure forms an "exterior wall" of a building. The Zoning Bylaw does not define exterior wall, which is often referred to as an outer wall or vertical enclosure. Enclosure is commonly defined as "an area that is sealed off with an artificial or natural barrier" or "containment behind airtight, impenetrable, permanent barriers".

Whereas the Lumon type system used on LaGalleria project employs a typical railing with an air gap/space at the bottom between the bottom of the railing and the top of the balcony, and the glass windows can fully slide away to the side, fully opening up the balcony space like a conventional balcony. The glass panes, according to my understanding, have a 1/8" air gap between them further confirming that the Lumon system doesn't enclose the balcony and shouldn't be counted towards FSR (i.e. the railing isn't a wall – see example image below).



DARREN BRAUN
Print Name


Signature

"The determining factor for when a balcony enclosure becomes subject to FSR calculation should be whether (or not) the enclosure forms an 'exterior wall' of the building...."



It is difficult to see on which balconies the system has been installed in this apartment building on Keith Road, North Vancouver



Following discussions with Vancouver city staff, a Lumon retractable glass balcony was installed as a temporary 'demonstration' in The National condominium development at the east end of False Creek.

To demonstrate its sustainability benefits and transparency!



Even when its location is pointed out it is difficult to see the panels, even when closed.

In addition to keeping out the rain, despite the air gaps, the single-pane glass improves energy performance and helps reduce sound and wind impacts



Finnish company Lumon claims its glass-panel system can result in 34-per-cent energy savings and reduce noise levels significantly.

MAKING BETTER USE OF OUR BALCONIES

To enclose or not — it's been a highrise issue in Vancouver for 50 years



THE VANCOUVER SUN

MICHAEL GELLER

As apartments become increasingly smaller, it is important to make the best possible use of every square foot of space. However, anyone looking down from a drone flying above Metro Vancouver will observe a significant portion of many apartments is often com-

the dwelling.

As written in the 1985 guidelines, "the purpose of an enclosed balcony is to afford an occupant the year-round enjoyment of those uses to which an open balcony normally would be used in fair and warm weather."

To address exterior design, the guidelines stated that "careful attention should be given to preserving the design integrity of facades through a distinctive shape and a predominance of clear glass."

Unfortunately, it did not take long before some developers were enclosing all the balconies, to increase salable area. As a result, buildings became bulkier and less attractive. Consequently, in 1995, council amended the balcony enclosure policy to restrict enclosed balconies to no more than 50 per cent of the permitted balcony area. North-facing balconies and those along busy streets often were enclosed, while others remained open.

Today, Vancouver allows balconies up to 12 per cent of the building area to be excluded from the FSR, but new enclosed balconies are generally included in the FSR. Other municipalities continue to allow open balconies up to eight per cent of the total building area, without counting in the FSR area calculation.

Over the years, throughout Metro, individual condominium owners often have enclosed their balconies. Sometimes this was done with the formal approval of the strata council and the requisite municipal permits. However, in other cases, no approvals were obtained.

I recently became aware of one

This building in West Vancouver is a bit of a mixed bag — some of its balconies have been enclosed, and others have not.

Vancouver building where 11 owners who enclosed their balconies decades ago without permits are now being asked to remove their enclosures. No doubt many others soon could find themselves in a similar position.

To address complaints about the lack of variety in highrise building design, architects increasingly are using balconies to add articulation and interest to building facades. One of my favourite examples is architect Jeanne Gang's Aqua Tower, an 82-storey mixed-use building in Chicago. Its curvilinear balconies vary in depth from two to 12 feet, resulting in wavelike forms on all sides of the building. The effect is marvellous.

Other equally creative solutions are beginning to appear around

Vancouver.

While these balconies certainly will improve building appearance, often they, too, will remain unused, especially those in taller buildings where wind buffeting can be so extreme one can hardly leave anything on a balcony without the risk of the wind sucking it off.

While many apartment owners do not use their balconies, they insist on having them because they want to be able to get outside without riding the elevator or because they're afraid their unit will be harder to sell without a balcony.

One Toronto realtor called the balcony the architectural equivalent of the NordicTrack machine. "You buy it because you want to see yourself using it, but seldom do; though at least an exercise machine is usable in winter."

A few years ago, while traveling through Europe, I saw an elegant, transparent, retractable glass system that made balconies more usable year-round without fully enclosing them. It consisted of sliding glass panels that could be opened completely and folded against the wall. When it started to rain, the panels could be quickly closed.

Since the glass was frameless, the exterior design of the building was not really altered. Furthermore, since there was a small air gap at the top and bottom and between the glass panels, the balcony was not completely sealed off like it would be with an enclosed balcony. Several European companies

The Aqua Tower in Chicago is an 82-storey mixed-use building with curvilinear balconies that create a wavelike look.

are manufacturing these systems. They include Solarlux, (solarlux.com) a German company, and Airclos (airclos.com) based in Spain.

Perhaps the best known is Lumon (lumon.com), a Finnish company that has set up a manufacturing plant in Canada. It claims its glass-panel system can result in 34-per-cent energy savings and reduce noise levels significantly. It also prevents premature balcony degradation by keeping rain, snow, wind, dust and birds away from the balcony.

Architects and developers in several Metro municipalities are starting to incorporate retractable balcony glass into their upcoming multi-family projects.

It is a trend that I expect to become increasingly popular with prospective apartment buyers and renters.

However, while the Lumon system now can be installed in new buildings in Abbotsford, Langley City and Langley Township without counting in the building area calculation, to have wider application in B.C., it will be necessary for all municipalities to update their zoning bylaws.

The reality is, when these bylaws were drafted, balconies could either be open and excluded from FSR calculations, or fully enclosed and included in FSR.

No one expected that one day a system would be designed that allows balconies to be both completely open or partly closed and evolve into a more sensible and useful space.

But then again, we weren't expecting Amazon's Alexa, Uber or autonomous cars either.

Michael Geller is a Vancouver-based architect, planner, developer and educator. He is an adjunct professor at SFU's Centre for Sustainable Development and can be reached at geller@sfu.ca.



Finland's Lumon, which now has a manufacturing plant in Canada, makes sliding-folding balcony enclosures.

As a result of Lumon's marketing efforts and articles such as this Vancouver Sun column, there is significant interest from architects, developers and consumers



As part of its Regulation Redesign for balconies, the city should clearly allow retractable balcony glass systems in new buildings without any impact on FSR, since the glass does not create an exterior wall or 'conditioned space'



Full height sliding glass panels behind a conventional metal railing

I hope staff & Council agree that given what we have learned during the pandemic, this would be a timely modification to enhance the design and use of balconies