

# Public Review

## Vancouver Building By-law (VBBL)

### Proposed change to Occupant Load Seating

**Topic:** Determination of occupant load for seasonal patio seating areas

**Code change number:** 23-0010

**Code reference:** 3.7.2.1.(5);

Consequential changes to 3.7.2.1.(1), and a new explanatory note A-3.7.2.1.(5).

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## Description of the proposed change

The proposed change adds a new provision that clarifies how occupant load is to be assessed for patio seating areas that are seasonal and ancillary to interior building area.

A clarifying note is added to identify the intent of the provisions and their intended application.

## Justification

It has been frequently raised by owners and tenants of buildings, and the business improvement associations that current minimum washroom requirements are overly demanding, particularly for temporary seasonal patios.

It has further been stated that seasonal use patios are only used during fair weather and spaces in the buildings are not used as much during fair weather where patio seating is available.

It has also been identified that the current washroom minimum stated only reference the building and are based on an occupant load referencing only the floor area of the building, which is limited to interior floor space only. Therefore, the patio is not explicit regulated.

It is understood, however that interior washroom will nonetheless be utilized by tenant/building occupants, and so should be sized appropriately.

It is expected that there will be little anticipated implications as current minimum washroom requirements for health purposes, particularly for assembly use, are generally understood to be smaller than the current minimum washroom requirements for buildings. Current washroom requirements consider the availability time of a washroom fixtures (a measure of convenience) which leads to high washroom minimums.

In research by D.N. Henning (1977), it was documented that in certain assembly occupancies, there are scheduled periods of high peak usage due to the nature of the occupancy (such as theatres) that lead to situations where washroom usage was maximized, and queuing would occur. By comparison, in other occupancy types, where usage is better distributed and not time limited, code compliant washrooms provide more than ample capacity in most cases.

In addition, washroom counts in other North American standards references lower washroom counts to satisfy minimum health requirements, which suggest that excess capacity exists solely to increase washroom availability. Under the ICC (2021) this is 1:75 for restaurants and assembly food service, in contrast to 1:40 for assembly use where surge loads could be expected.

Work by Henning also seems to suggest that the ratios of washrooms could be adjusted to increase efficiency. In this regards, a move towards gender neutral washrooms might help increase efficiency of washroom usage thus enabling the reduction of elimination fixtures as a whole. This is not specifically considered as part of this proposal since gender neutral washrooms are not yet mandated, but this may be an offsetting factor for smaller assembly uses, which have frequently been observed to be using the existing Vancouver unique provision to use gender neutral washrooms for a slightly more favourable washroom count.

Based on a data from the market research NPD Group (2020), parties of three represent about 14% of occurrences, and the most common table size is for four. As a very broad extrapolation, this suggests that at least one unoccupied seat is available for each table about 14% of the time, thereby freeing up the equivalent amount of washroom capacity based on the assumed full occupant load.

Further to this, Council has previously adopted a provision for allowance of up to 12 seats for temporary patios in 2017, and this would a logical complement to this existing policy. (Ref.: <https://council.vancouver.ca/20170614/documents/cfsc4.pdf>)

## Proposed VBBL content

### Legend

Black Text – 2019 Vancouver Building By-law content

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#### **3.7.2.1. Plumbing and Drainage Systems**

1) Except as provided in Sentence (2) and (5), for the purpose of this Subsection, the *occupant load* shall be determined in accordance with Subsection 3.1.17.

2) For the purpose of this Subsection, the *occupant load* for *floor areas* that are classified as an *industrial occupancy* is permitted to be based solely on the total number of staff for which the *floor area* is

designed, where the *floor area* is only intermittently occupied or where the presence of occupants is transitory. (See Note A-3.7.2.1.(2).)

3) Except as permitted in Sentence (4), if the installation of a *sanitary drainage system* is not possible because of the absence of a water supply, sanitary privies, chemical closets or other means for the disposal of human waste shall be provided.

4) Waterless urinals are permitted to be used in *buildings* provided with a water supply.

5) For the purposes of this Subsection, patio seating areas that are only seasonally occupied and ancillary to the use of interior restaurant and food services, shall have an occupant load determined in accordance with Subsection 3.1.17., that may be reduced by the greater of

a) 12 persons, or

b) 25% of the total number of persons for which the patio is designed.

(See Note A-3.7.2.1.(5).)

<b>3.7.2.1. Plumbing and Drainage Systems</b>	
(3)	[F72-OH2.1]
(4)	[F72-OH2.1]

**A-3.7.2.1.(5) Washrooms Units serving Seasonal Patios.** Many commercial occupancies, include permanent or semi-permanent patio spaces intended for ancillary seating area during fair weather days. During good weather, it is expected that occupants will preferentially choose to occupy exterior open-air patio seating, and that interior seating will not reach full utilization. Where it can be demonstrated that the patio design is intended to facilitate occasional, fair weather use, the occupant load used to establish of washroom capacity may be determined on the basis of a reduced occupant load. Features promoting occasional fair weather use could include the use of substantially open roof or wall designs, which would limit the use of such spaces during poor inclement weather.