

PROPOSED CHANGE: No Spiral Stairs and Mixed Flights in Dwelling Units

CHANGE NUMBER: 2018-BCBC-14-Stairs-No Spiral Stairs

RELATED CHANGES: 2018-BCBC-12-Stairs Dimensions of Tapered Treads and
2018-BCBC-13 Handrails in Curved Stairs

CODE REFERENCE: 2015 National Building Code - Division B - Article 9.8.3.1., Article 9.8.4.5.,
Article 9.8.4.7.

DESCRIPTION OF THE PROPOSED AMENDMENT:

It is proposed not to adopt the permissions in the 2015 National Building Code (NBC) for spiral stairs and mixed flights containing both curved and straight stairs within a dwelling unit.

PROBLEM/BACKGROUND:

The British Columbia Building Code (BCBC) is based substantially on the model NBC. The NBC is updated about every five years and British Columbia adopts most of the NBC requirements into the next edition of the BCBC. The 2018 BCBC will be based on the 2015 NBC with some changes specific to British Columbia.

The code language shown below is the proposed final code language that will appear in the 2018 BCBC. Comments submitted should focus on the changes noted. Changes from the 2012 BCBC to the 2015 NBC are not identified.

2018 PROPOSED BRITISH COLUMBIA CODE LANGUAGE (~~Deleted text~~ / Added text):

9.8.3.1. Permitted Configurations

(See Notes ~~A-9.8.3.1.~~ and A-9.8.4.)

1) Stairs in *buildings* other than *dwelling units* shall consist of

- a) straight *flights*, ~~or~~
- b) except as provided in Sentence (4), curved *flights*, ~~or~~
- ~~c) except as provided in Sentence 9.8.4.7.(2), spiral stairs.~~

2) Stairs within *dwelling units* shall consist of

- a) straight *flights*,
- b) except as provided in Sentence (4), curved *flights*, ~~or~~
- c) ~~Reserved~~ ~~except as provided in Sentence 9.8.4.7.(2), spiral stairs,~~
- d) except as provided in Sentence (3), *flights* with rectangular treads and winders, ~~or.~~
- ~~e) *flights* with a mix of rectangular and tapered treads.~~

- 3) Only one set of winders described in Article 9.8.4.6. shall be permitted between floor levels.
- 4) Curved *flights* in *exits* shall comply with Sentence 3.4.6.9.(2).
- 5) All *tapered treads* within a *flight* shall turn in the same direction.

9.8.4.5. **Reserved Uniformity of Runs in Flights with Mixed Treads within Dwelling Units**

- 1) Except as provided in Sentence (2) and Article 9.8.4.6., where a *flight* of stairs consists of both *tapered treads* and rectangular treads, all the treads shall have a uniform *run* when measured at a point 300 mm from the centre line of the inside handrail.
- 2) Where *tapered treads* are located at the bottom of a mixed-tread *flight*, the *run* of the *tapered treads* when measured at a point 300 mm from the centre line of the inside handrail is permitted to exceed the *run* of the rectangular treads.

9.8.4.7. **Reserved Spiral Stairs**

(See Note A-9.8.4.7.)

- 1) Spiral stairs shall have
 - a) handrails on both sides, the outer handrail being not less than 1 070 mm high,
 - b) a clear width not less than 660 mm between the handrails,
 - c) risers that are not more than 240 mm high,
 - d) treads that
 - i) are a minimum of 190 mm deep at a point 300 mm from the centre line of the handrails at the narrower edge,
 - ii) have a consistent angle and uniform dimension, and
 - iii) turn in the same direction, and
 - e) not less than 1 980 mm clear height.
- 2) Spiral stairs conforming to Sentence (1) are permitted to be used as the only *means of egress* where they serve not more than 3 persons.
- 3) Spiral stairs shall not serve as an *exit*.

~~A-9.8.3.1. Permitted Stair Configurations.~~

Table A-9.8.3.1. Permitted Stair Configurations					
Location/Use of Stairs	Configuration of Stair Treads				
	Straight Flight with Rectangular Treads	Curved Flight with Tapered Treads	Winders	Flight with a mix of Rectangular Treads and Tapered Treads	Spiral Stairs
Stairs within dwelling units	Permitted ⁽¹⁾	Permitted ⁽²⁾	Permitted ⁽²⁾	Permitted ⁽⁴⁾	Permitted ⁽⁵⁾
Public stairs			Not permitted	Not permitted	
Exit stairs		Permitted ⁽⁶⁾			

Notes to Table A-9.8.3.1.:

⁽¹⁾ See Articles 9.8.4.1. and 9.8.4.2.

⁽²⁾ See Articles 9.8.4.1. and 9.8.4.3.

⁽³⁾ See Article 9.8.4.6.

⁽⁴⁾ See Article 9.8.4.5.

⁽⁵⁾ See Article 9.8.4.7.

⁽⁶⁾ See Articles 3.4.6.9. and 9.8.4.3.

RATIONALE FOR CHANGE:

Research shows, in general terms, rectangular tread runs that are smaller than an average foot or shoe (less than about 200 mm or 10”) are hazardous and lead to increased trips, falls, and injuries. Changes in stair rise and/or run are also proven to be hazardous, unless a landing is provided between the changes in height.

A stair that is safer and easier to navigate not only benefits all users, but is of greater importance to users with physical or sensory limitations. The changes to the 2015 NBC allow short tread runs and changes in stair run within a flight by allowing spiral stairs and mixed flights, which may reduce the level of safety for users.

JUSTIFICATION/EXPLANATION:

The above noted requirements of the NBC do not align with the Provincial objective of increasing the accessibility of buildings.

CODE REFERENCE (2015 NBC)	SUMMARY OF CHANGE
Sentence 9.8.3.1.(2)	Permissions for spiral stairs and mixed flights in dwelling units are deleted.
Article 9.8.4.5.	Requirements for mixed flights are deleted.
Article 9.8.4.7.	Requirements for spiral stairs are deleted.