Welcome & Administration

Mike Seiling

Chief Building Official/Director

Agenda

Start of LIVE Teams Event

1:00 Administration

1:20 Part 9 - Plans Exam Updates/Code Changes

1:50 Part 9 - Inspection Code Changes/Updates

2:00 Part 3 - Plans Exam Updates

2:15 Part 3 - Code Changes

2:45 Part 4 - Code Changes

2:50 Wrap-up

Questions

During the presentation you are free to post a question in the Q & A

We will pause at the end of each section to answer questions asked during that portion

We will also provide time at the end of the presentation for any outstanding questions

Presentation Info

We are recording today's presentation and will post to our web-site by December 1, 2021

The slide deck along with the record of Q & A will also be posted

https://www.kitchener.ca/en/development-and-construction/building-and-industry-updates

DC Freeze & Deferrals (Bill 108)

- New DC Info Sheet to be filled out and submitted with building permit application for “qualifying” new buildings & additions
- DSD BUILD DC Deferrals Bill 108
- Building Permit invoice will be sent after Site Plan Approval granted
- Educational Development Charges (EDC) are under the Education Act and therefore the new changes under Bill 108 do not apply to EDC’s

DC Information Sheet

Development Charges Information Sheet

For Use by Principal Authority:

Building Permit Application Number:

DEV Folder Number:

Address:

In Date:

Project Information:

Building Use:

Work Proposed:

Existing non-res GFA:

Proposed non-res GFA:

Number of residential units – existing:

Number of Residential Units proposed:

Applicable exemption?

If yes what?

Applicable Re-development allowance?

Demolition Permit #:

GFA Demolished:

Residential Units Demolished:

List business name of who will be paying for the development charges:

Name:

Address:

Email: Phone #:

DC Information Deferred

Deferred Payments

- Applies to:
- Rental housing
- Institutional use
- Non-profit housing
- Can choose to pay DCs upfront with Early Payment Agreement
- First payment is collected on date of first occupancy permitted in building

26.1 Deferred Payments

☐ The project does not qualify for deferred payments.

☐ I intend on entering into an agreement to pay the Development Charges in full at the time of Building Permit issuance as permitted by Section 27 of the Development Charges Act.

I am applying for a project that meets the definition of:

☐ Rental housing development as defined by the Development Charges Act, 1997, S.O. 1997, c. 27 (Provide a description in the space below)

☐ Institutional development as defined by the Development Charges Act, 1997, S.O. 1997, c. 27 (Provide a description in the space below and submit any corroborative documentation)

☐ Non-profit housing development as defined by the Development Charges Act, 1997, S.O. 1997, c. 27 (Submit any corroborative documentation)

Provide Description of Rental Housing or Institutional Development if applicable:

☐ I acknowledge that the installments will begin on the date of the first occupancy permitted in the building and continue for;

☐ 5 years for rental and institutional (6 Payments in total)

☐ 20 years for non-profit (21 payments in total)

☐ If at any time prior to the payment of the Development Charge in full the type of development changes and would no longer be eligible for deferred payments, the full DC is payable with interest, less any installments already made.

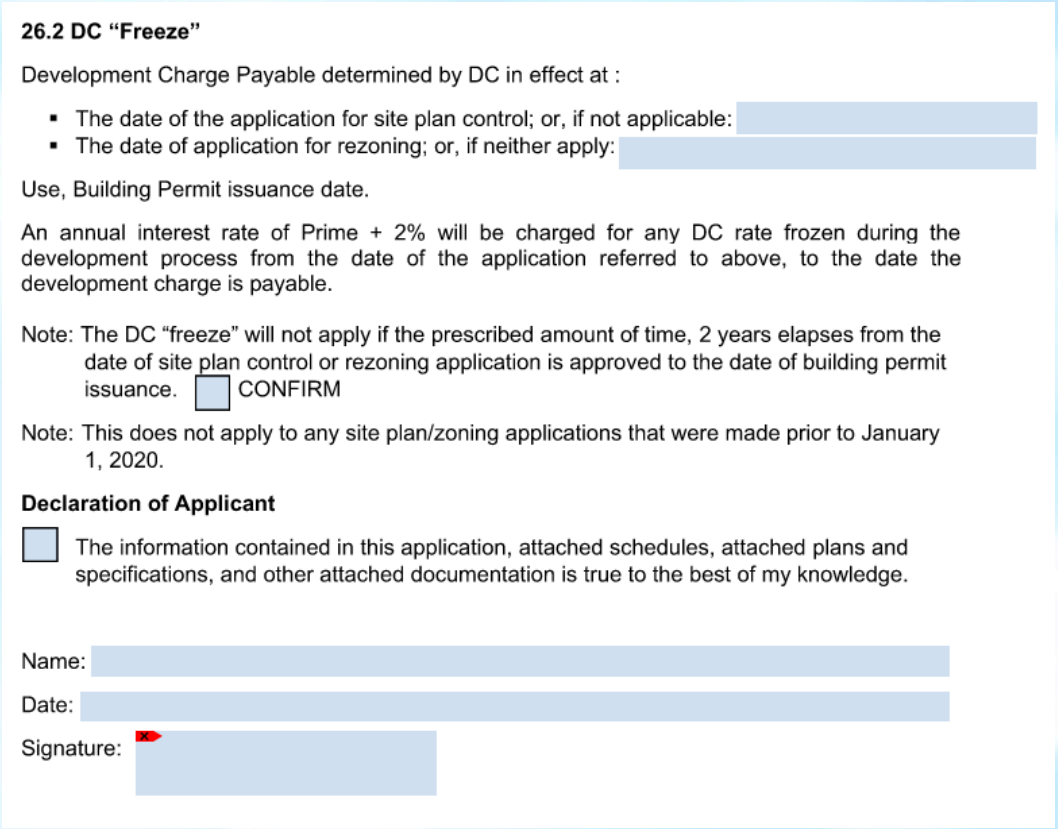
The City's policy regarding rates for DC Deferrals includes:

a) An annual interest rate of Prime + 2% will be charged for any DC charges deferred in relation to:
   i. Rental housing development (that is not non-profit)
   ii. Institutional development
b) The Prime interest rate to be used will be the rate in effect at the time of building permit issuance as noted in Subsection 26.1(7) of the DCA.
c) No annual interest rate will be charged for any DC charges deferred in relation to non-profit housing development

DC Information Freeze

DC "Freeze"

- DC payable determined by DC rate in effect at date of complete Planning Application if applicable
- Interest charged if there is a DC rate increase
- DC "freeze" does not apply if a time of 2 years has lapsed from date of approved planning application to date of permit issuance



26.2 DC "Freeze"

Development Charge Payable determined by DC in effect at :

- The date of the application for site plan control; or, if not applicable:
- The date of application for rezoning; or, if neither apply:

Use, Building Permit issuance date.

An annual interest rate of Prime + 2% will be charged for any DC rate frozen during the development process from the date of the application referred to above, to the date the development charge is payable.

Note: The DC "freeze" will not apply if the prescribed amount of time, 2 years elapses from the date of site plan control or rezoning application is approved to the date of building permit issuance. ☐ CONFIRM

Note: This does not apply to any site plan/zoning applications that were made prior to January 1, 2020.

Declaration of Applicant

☐ The information contained in this application, attached schedules, attached plans and specifications, and other attached documentation is true to the best of my knowledge.

Name:

Date:

Signature:

Development Charge Increase

2022 Development Charge Rates

- City of Kitchener (7.7% increase from current)*
- Region of Waterloo (7.7% increase from current)*
- School Boards (WRDSB & WCDSB) rates remain unchanged until June 1, 2022 (unless amended)

Complete applications for 10 business day (new Single Detached Dwelling) review must be applied for by end of day Tuesday November 16th, 2021

The new development charge rates will apply to all singles issued after December 1, 2021

2022 Permit Fees

NO CHANGE from 2021 rates;

- Singles, semis, towns - $1.07/sq. ft.
- Apartment Building - $1.07/sq. ft.
- Interior Finishes - $0.37/sq. ft.
  (basement finishes & major renovations)
- Deck - $95.00 each
- Solar Panels - $ 95.00 for singles and duplex's
- Residential Revisions -$0.20/sq. ft. (min. $106.00), will be charged for each revision submitted

Questions

Part 9 - Plan Review Update

Jordan MacLaughlin

MBO II

Permit Application Notes

All new residential (Part 9) permit applications are to be submitted through the online portal.

Online Permits Portal

These applications are reviewed by the Dispatcher/Digital Permit Assistant (Nada Djuric) for complete application requirements. Should something be missing, you will be contacted to provide this before the permit is changed to 'under review'

All resubmissions are to be uploaded to the public portal as the Plans Examiner assigned to the file will be notified that new files have been uploaded

Fire Breaks

5.1 Fire Breaks During Construction (Appendix 10)

a) Each builder is required to submit a plan or policy of designating fire break lots in accordance with 5.1.

b) The fire break lot designation will be noted on the building permit application, in the tracking system and on the building permit.

c) The construction of the building upon the foundation of the fire break lot cannot commence until the roofing and exterior cladding has been completed on the buildings located to the sides and rear (if less than a 7.5m rear yard).

d) It is the responsibility of the Building Inspector to monitor compliance with the fire break lot policy.

e) The Building Inspector has the discretion to alter the designated fire break lot on site; provided the principle of a maximum of six framed singles or semi-detached dwelling units or two townhouse blocks is not compromised.

f) Fire break lots shall be provided so that:

   i. for single family homes and semi-detached homes – not more than six buildings are grouped adjacent to each other,
   ii. for townhomes – not more than two buildings or townhouse blocks are grouped adjacent to each other.

g) Buildings on properties with side and rear yards greater than 7.5 meters are not required to be provided with fire breaks.

Fire Breaks

5.1 (a) requires “plan or policy of designating fire break lots…”

This plan is to be submitted to Plans Examiner prior to commencing building within a sub-division

5.1 (b) “will be noted on building permit…”

Plans Examiners will mark these properties in AMANDA and a special condition will appear on the issued building permit

5.1 (d) “responsibility of the Building Inspector to monitor compliance…”

Any changes to your plan should be addressed with the Building Inspector on-site as they have the discretion to alter the designated fire break lots

Fire Breaks - Street Facing Towns

5.2 Fire Breaks For Fire Fighting – Street Fronting Townhomes
(Appendix 11)

a) In residential occupancies, it is important to have access between buildings for emergency situations.

b) In **street fronting townhomes**, designers shall ensure a fire break between townhome blocks is provided every 8 units.

c) Fire breaks between these blocks shall not be less than 3 meters.

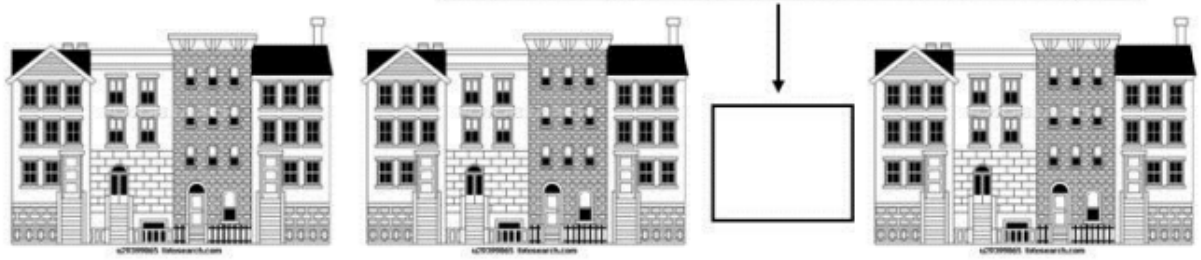
d) Firewalls will not be considered as an acceptable solution to providing the firebreaks.

Fire Breaks

Appendix 10

Not more than 6 houses or semis under construction.
Empty Lot,
Side or rear yard distance greater than 7.5m,
Capped Foundation, or
Building complete with exterior cladding and roofing.

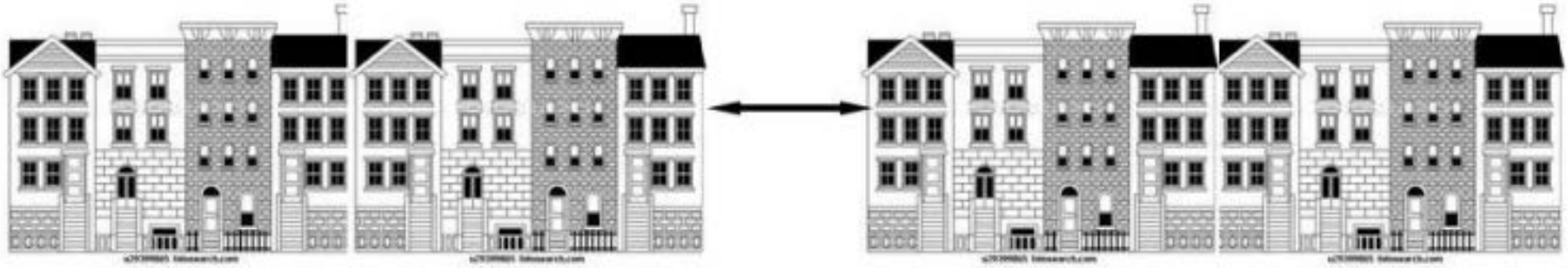
Not more than 2 townhome blocks under construction.
Empty Lot,
Side or rear yard distance greater than 7.5m,
Capped Foundation, or
Building complete with exterior cladding and roofing.



Fire Breaks - Street Facing Towns

Appendix 11

Street fronting townhomes will be provided with a minimum 3 meter fire break every 8 units.

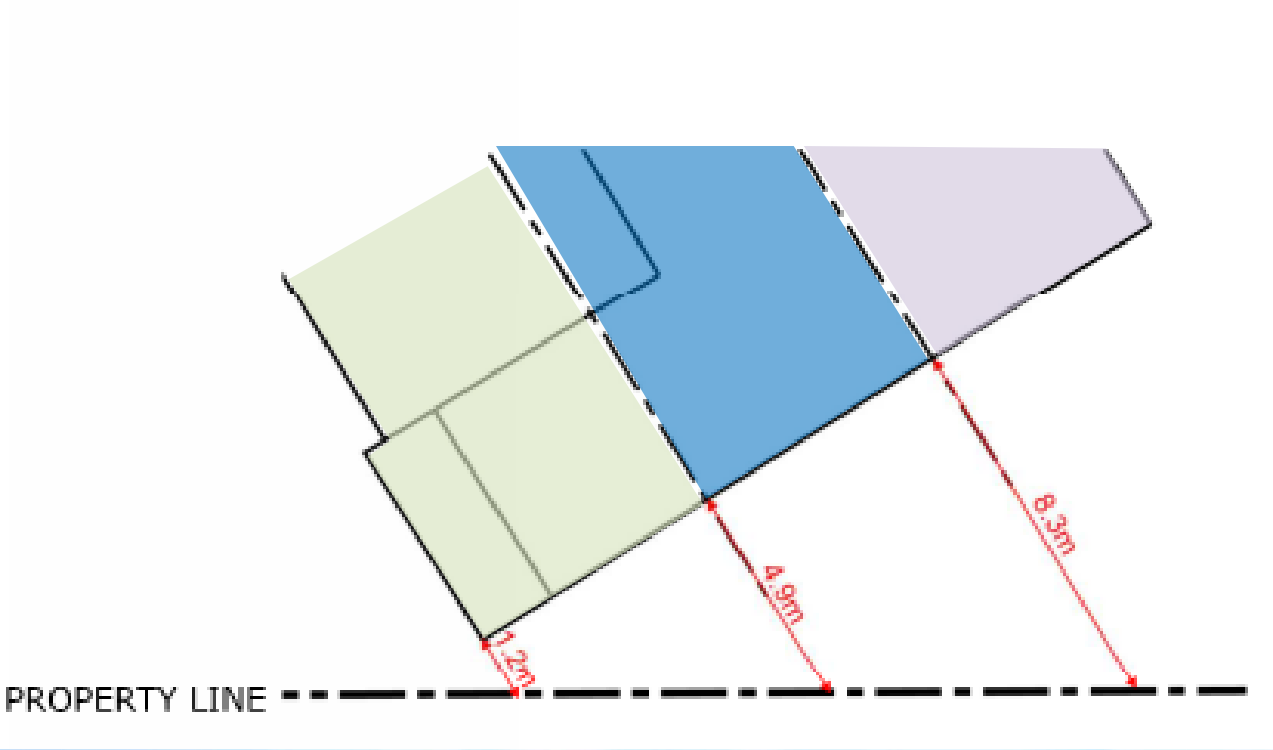


[Fire Department - Emergency Services Policy Webpage]

Unprotected Opening Calculations

Appendix A in the Ontario Building Code provides excellent examples for calculating the maximum allowable area of glazed openings in an exposed building face on staggered/skewed walls using 9.10.15.

Example:



Unprotected Opening Calculations

Table 9.10.15.4.
Maximum Area of Glazed Openings in Exterior Walls of Houses
Forming Part of Sentences 9.10.15.4.(1) and (2)

Maximum Total Area of *Exposing Building Face*, m²	Maximum Aggregate Area of Glazed Openings, % of *Exposing Building Face* Area													
	Limiting Distance, m													
	Less than 1.2	1.2	1.5	2	2.5	3	4	6	8	10	12	16	20	25
10	0	8	12	21	33	55	96	100	—	—	—	—	—	—
15	0	8	10	17	25	37	67	100	—	—	—	—	—	—
20	0	8	10	15	21	30	53	100	—	—	—	—	—	—
25	0	8	9	13	19	26	45	100	—	—	—	—	—	—
30	0	7	9	12	17	23	39	88	100	—	—	—	—	—
40	0	7	8	11	15	20	32	69	100	—	—	—	—	—
50	0	7	8	10	14	18	28	57	100	—	—	—	—	—
100	0	7	8	9	11	13	18	34	56	84	100	—	—	—
Over 100	0	7	7	8	9	10	12	19	28	40	55	92	100	—
Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Example:

1.2m = 7%

4.9m = 15% (interpolated)

8.3m = 28%

Steps:

1. Determine the full wall area that is facing the property line
2. That wall area locks in the row of the Table 9.10.15.4 that will be used for the calculation
3. Determine the limiting distance for each section of the wall
4. Go to that column in the Table to determine the amount of glazing that is permitted for that section of the wall. (Only move left and right on the table, not up and down)

Unprotected Opening Calculations

Example:

Unprotected Opening Calculations

9.10.14. vs. 9.10.15.

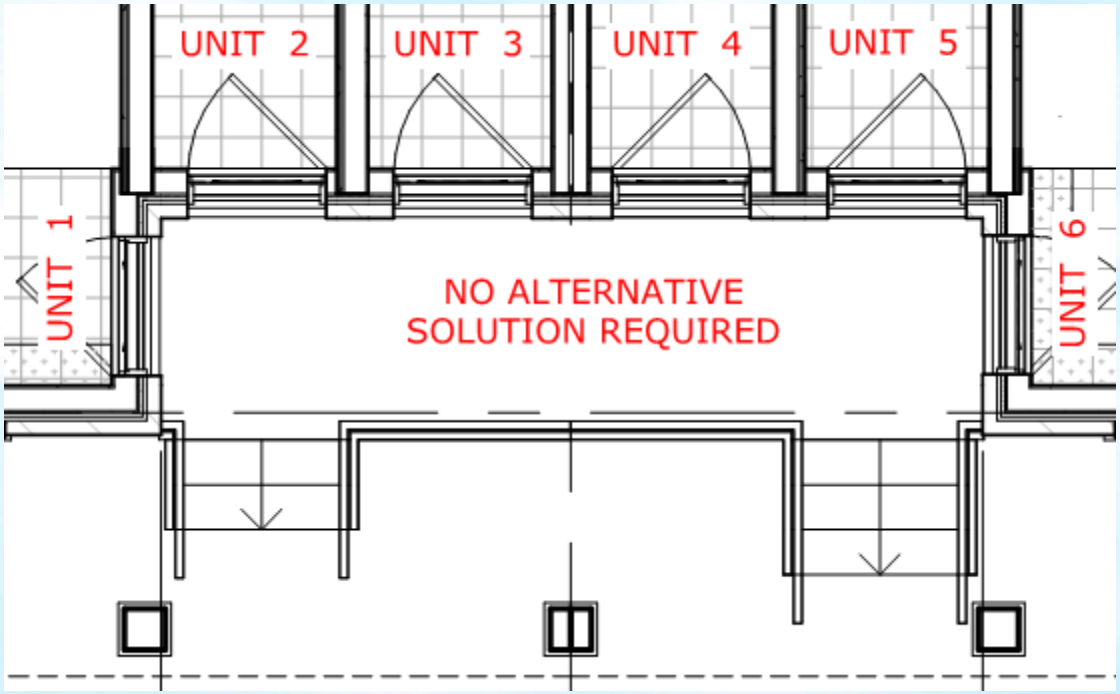
9.10.14. – Spatial Separation Between Buildings

- To be used for any building containing more than 2 dwelling units (stacked townhouses)
- The Rough Stud Opening is to be used in the calculations
- The wall face may be broken out into fire compartments that have a separation of at least 45 minutes.
- Limiting distances used are to be shown on a site plan (limiting distance may not overlap)
- The construction of the exterior wall is to conform to Table 9.10.14.5

9.10.15. – Spatial Separation Between Houses

- may be used for any building containing up to two units (single detached house, duplexes, stacked townhouses containing only 2 units stacked on each other)
- the glazed area from the manufacturer may be used in the calculation
- Fire resistance rating, type of construction and type of cladding is not a concern

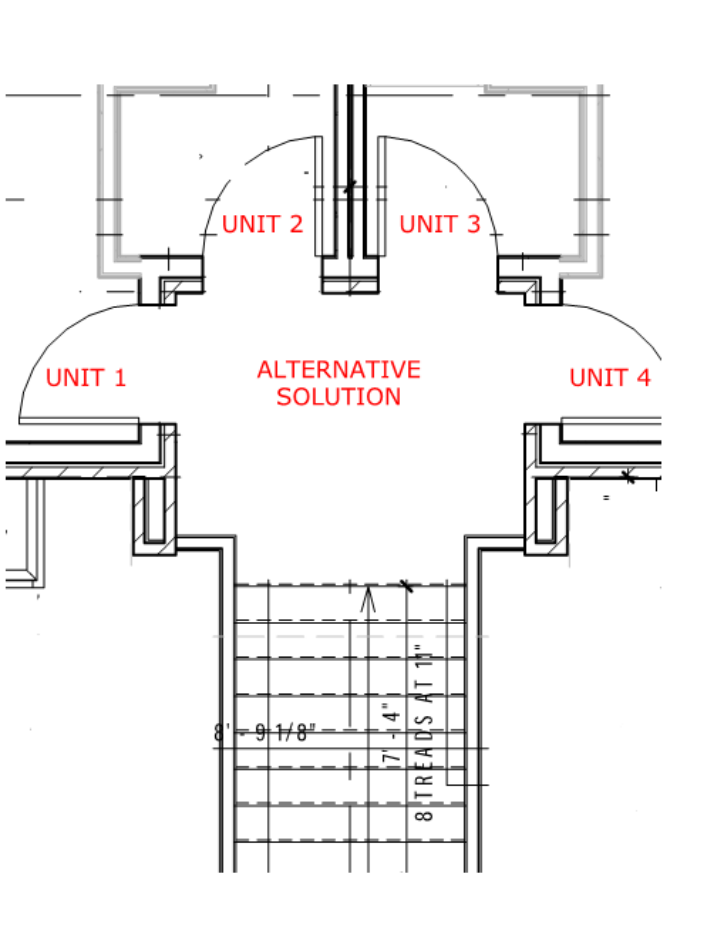
Stacked Townhouse Exiting



9.9.9.2. Two Separate Exits

(1) Except as provided in Sentence 9.9.7.3.(1), where an egress door from a *dwelling unit* opens onto a *public corridor* or exterior passageway it shall be possible from the location where the egress door opens onto the corridor or exterior passageway to go in opposite directions to two separate *exits* unless the *dwelling unit* has a second and separate *means of egress*.

Stacked Townhouse Exiting



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(1) Except as provided in Sentence 9.9.7.3.(1), where an egress door from a *dwelling unit* opens onto a *public corridor* or exterior passageway it shall be possible from the location where the egress door opens onto the corridor or exterior passageway to go in opposite directions to two separate *exits* unless the *dwelling unit* has a second and separate *means of egress*.

Typical Alternative solution proposal for stacked townhouse exiting:

- Double wide stair
- Non-combustible stairs with guards along either side
- The requirement of opposite directions is achieved when the occupant reaches the centre point of the landing; they have a choice of left or right within a 90-degree angle. This opposite direction interpretation provides the remaining relief required for Division B. 9.9.9.2.
- The extra wide stair is now considered to provide two exits off the exterior passage way for the above grade units and as such the requirements of Division B. 9.9.4.4. and 9.9.9.3. are no longer a concern.

Sound Transmission – 9.11.

[2019 Annual Industry Workshop Presentation]

9.11.1.1. Required Protection

(1) Except as provided in Sentence (2), a *dwelling unit* and a *suite* in *hotels* shall be separated from every other space in a *building* in which noise may be generated by,

(a) a separating assembly and adjoining construction, which, together, provide an *apparent sound transmission class* rating of not less than 47, or

(b) a separating assembly that provides a *sound transmission class* rating of at least 50 and adjoining construction that conforms to Article 9.11.1.4.

(See Appendix Note A-9.11.1.4.)

(2) Construction separating a *dwelling unit* or *suite* in a *hotel* from an elevator shaft or refuse chute shall have an *STC* rating of at least 55.

Sound Transmission – 9.11.

9.11.1.2. Determination of Sound Transmission Ratings

(1) The *STC* ratings shall be determined in accordance with ASTM E413, "Classification for Rating Sound Insulation", using the results from measurements carried out in accordance with ASTM E90, "Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements".

(2) The *ASTC* ratings shall be,
(a) determined in accordance with ASTM E413, "Classification for Rating Sound Insulation", using the results from measurements carried out in accordance with ASTM E336, "Measurement of Airborne Sound Attenuation between Rooms in Buildings", or
(b) calculated in accordance with Article 5.8.1.4. or Article 5.8.1.5.

9.11.1.3. Compliance with Required Ratings

(1) Compliance with the required *STC* ratings shall be demonstrated through,
(a) measurements carried out in accordance with Sentence 9.11.1.2.(1), or
(b) the construction of separating assemblies conforming to Table 1 or 2 of MMAH Supplementary Standard SB-3, "Fire and Sound Resistance of Building Assemblies", as applicable.

(2) Compliance with the required *ASTC* ratings shall be demonstrated through,
(a) measurements or calculations carried out in accordance with Sentence 9.11.1.2.(2), or
(b) the construction of separating assemblies conforming to Table 1 or 2 of MMAH Supplementary Standard SB-3, "Fire and Sound Resistance of Building Assemblies", as applicable, that have an *STC* rating of not less than 50 in conjunction with flanking assemblies constructed in accordance with Article 9.11.1.4. (See Appendix A.)

Sound Transmission – 9.11.

9.11.1.4. Adjoining Construction (See Appendix A.)

(1) This Article applies where the required protection is provided in accordance with Clause 9.11.1.1.(1)(b) and compliance is demonstrated in accordance with Clause 9.11.1.3.(2)(b).

(2) Flanking wall assemblies connected to a separating floor or ceiling assembly shall be constructed with,
(a) concrete or concrete block having a mass per area greater than 200 kg/m^2, or
(b) gypsum board finish that,
  (i) is supported on wood or steel framing, and
  (ii) ends or is interrupted where it meets the structure of the separating floor or ceiling assembly.

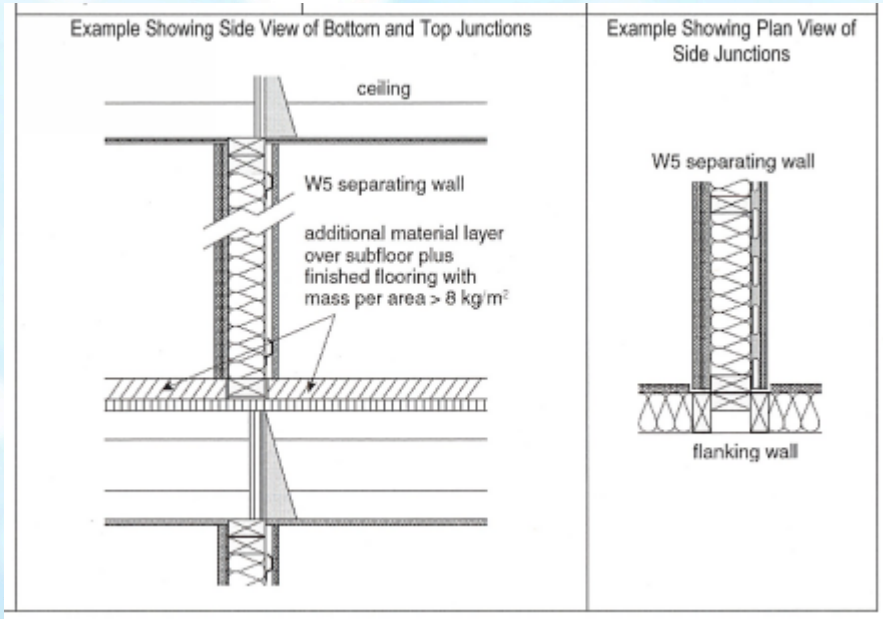
(3) Flanking wall and ceiling assemblies connected to a separating wall assembly shall be constructed with,
(a) concrete or concrete block having a mass per area greater than 300 kg/m^2, or
(b) gypsum board finish that,
  (i) is supported on wood or steel framing, and
  (ii) ends or is interrupted where it meets the structure of the separating wall assembly or, for double-stud walls, where it meets the space between the two lines of studs.

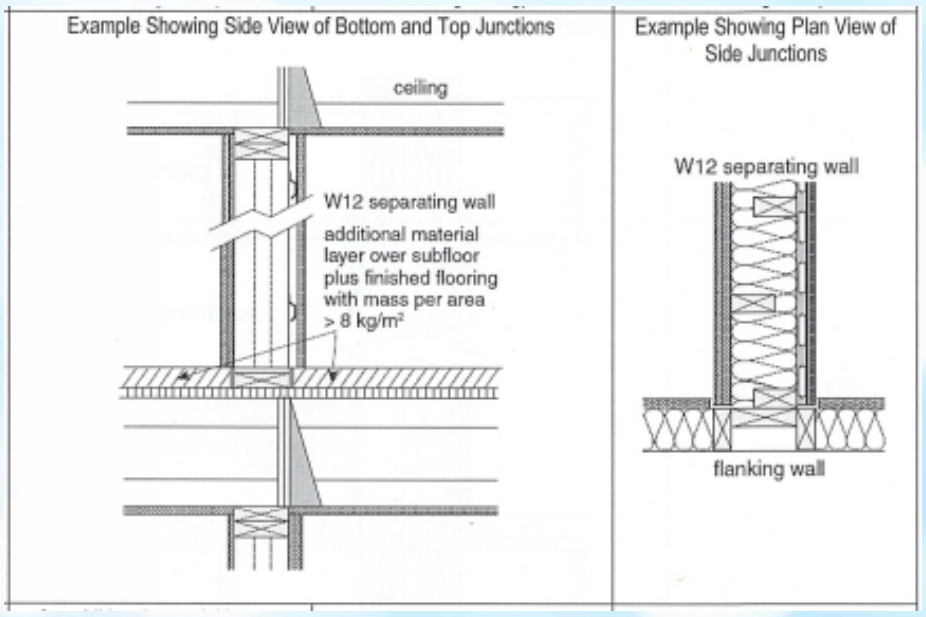
(4) Flanking floor assemblies connected to a separating wall assembly shall be,
(a) constructed,
  (i) with concrete having a mass per area greater than 300 kg/m^2, or
  (ii) in accordance with Section 9.16., or
(b) supported on joists or trusses that are not continuous across the junction and are covered with floor treatments in accordance with Table 9.11.1.4. for the applicable wall construction.

Sound Transmission – 9.11.

a10.1 A-9.11.1.4. Adjoining Construction.

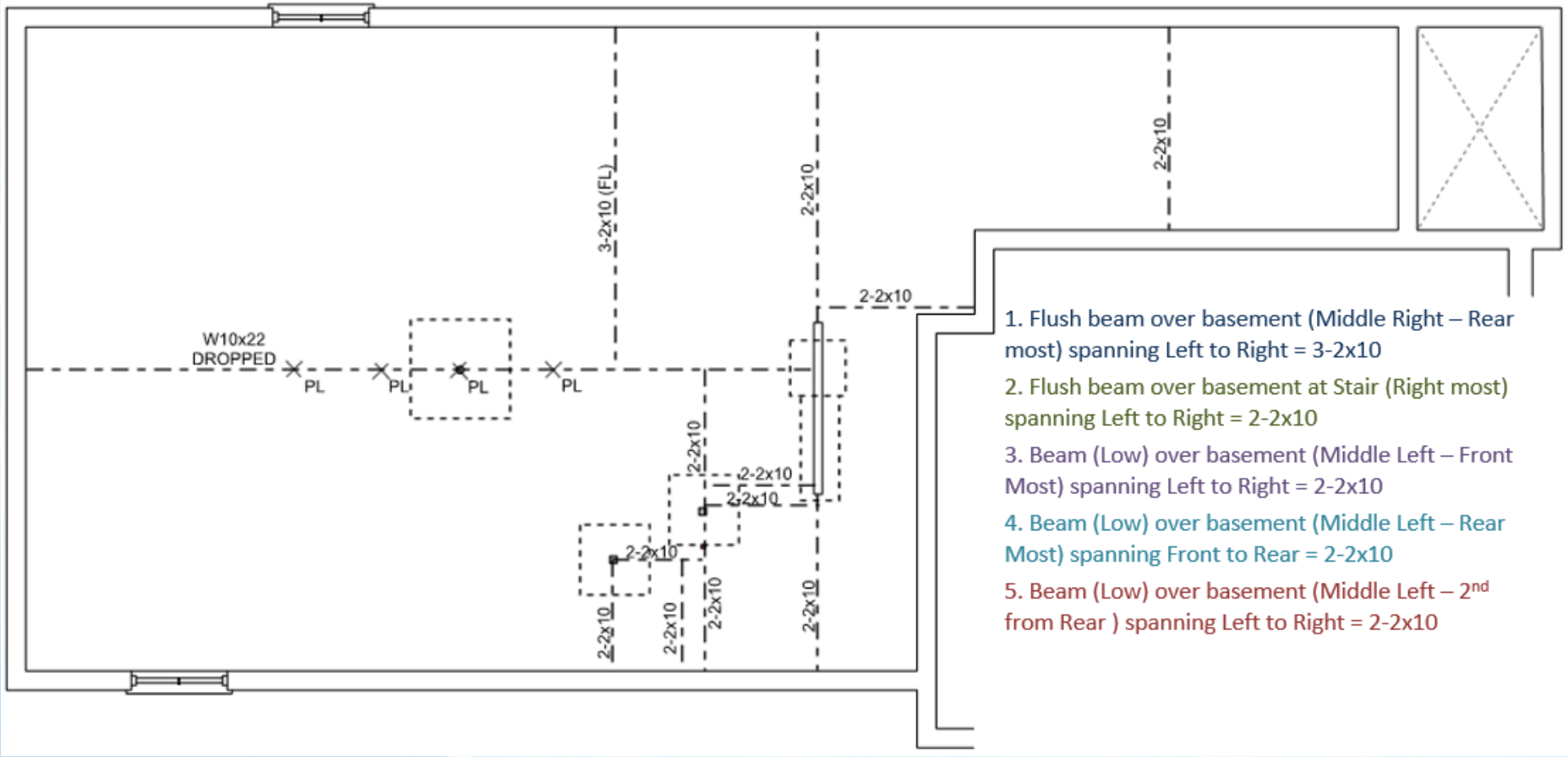
Tables A-9.11.1.4.A. to A-9.11.1.4.D. present generic options for the design and construction of junctions between separating and flanking assemblies. Constructing according to these options is likely to meet or exceed an ASTC rating of 47. Other designs may be equally acceptable if their sound resistance can be demonstrated to meet the minimum ASTC rating or better on the basis of tests referred to in Article 9.11.1.2., or if they comply with Subsection 5.8.1. However, some caution should be applied when designing solutions that go beyond the options provided in these Tables: for example, adding more material to a wall could negatively impact its sound performance or have no effect at all.





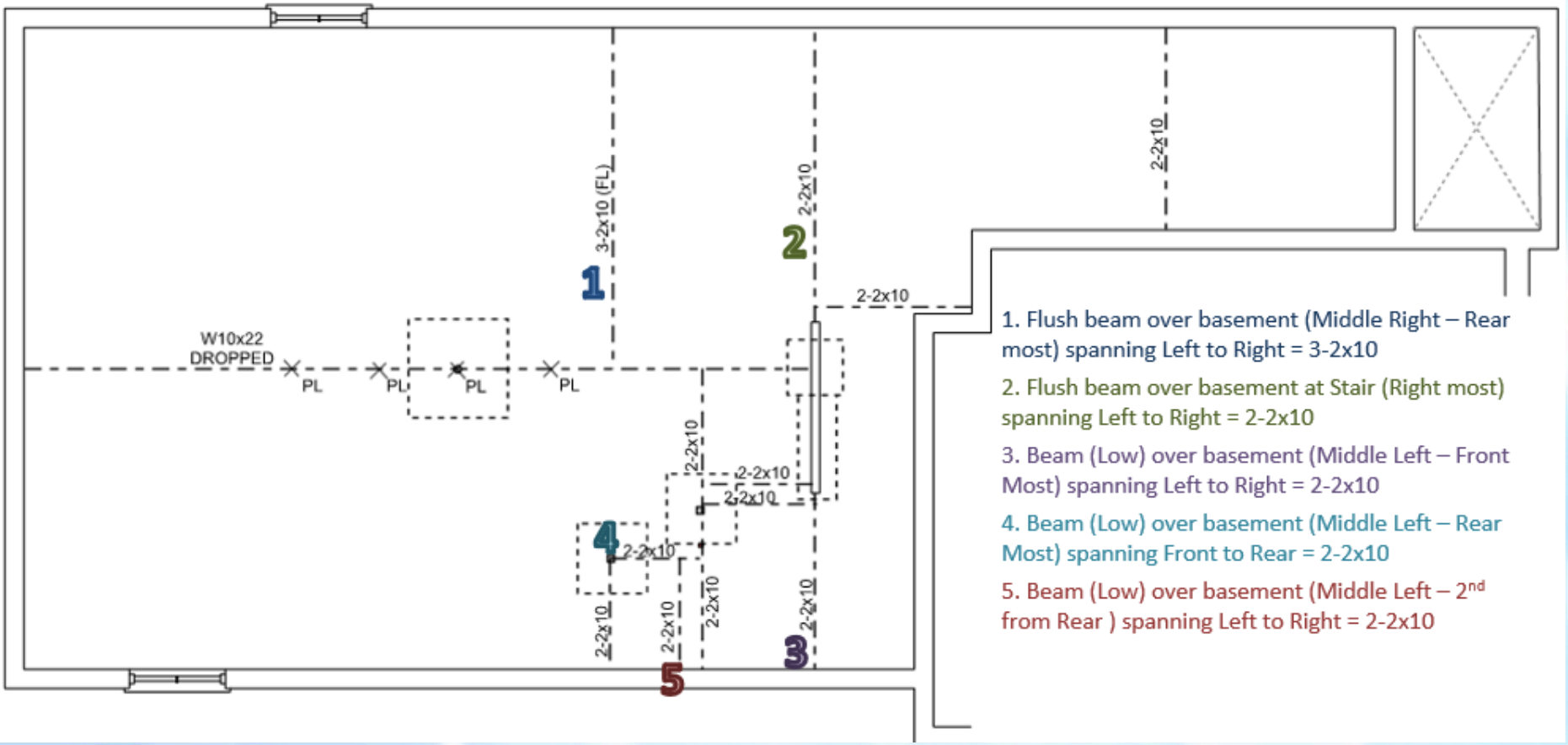
Identifying Engineered Items

Guess That Beam!



Identifying Engineered Items

Guess That Beam!



Open Terrain

Table 9.6.1.3.A.
Maximum Glass Area for Areas for which the 1-in-50 Hourly Wind Pressure (HWP) is Less than 0.55 kPa[1]
Forming Part of Clause 9.6.1.3.(2)(a)

Glass Thickness, mm	Maximum Glass Area, m^2			
	Annealed Glass	Factory-Sealed Insulated Glass (IG) Units[2]	Heat-Strengthened or Tempered Glass	Wired Glass
2.5	0.58	1.02	1.24	0.27
3	0.96	1.71	1.93	0.45
4	1.47	2.68	2.60	0.68
5	2.04	3.74	3.18	0.93
6	2.84	5.24	3.99	1.31
8	4.74	7.93	5.55	2.15
10	6.65	9.92	6.99	3.07
12	9.74	13.92	9.74	5.03
Column 1	2	3	4	5

Notes to Table 9.6.1.3.A.:

(1) The maximum hourly wind pressure with one chance in fifty of being exceeded in any one year, as provided in MMAH Supplementary Standard SB-1, "Climatic and Seismic Data".

(2) Maximum glass area values apply to IG units of two identical lites (annealed, heat-strengthened or tempered) spaced at 12.7 mm.

Questions

Part 9 – Code Changes

KITCHENER

Jordan MacLaughlin

MBO II

Transition

[1.1] **4.1.7. Transition, January 2022**

4.1.7.1. Transition Rule

(1) Subject to Sentence (2), this Regulation, as it read on December 31, 2021, is deemed to continue in force with respect to *construction* for which a permit has been applied for before January 1, 2022.

(2) Sentence (1) does not apply unless the *construction* is commenced within six months after the permit is issued.

Amendment package #8 (January 1, 2020 update) to The 2012 Building Code Compendium

https://www.publications.gov.on.ca/510167_U

Subscribe to Code News for future updates

https://www.iaccess.gov.on.ca/BCNewsWeb/subscribe.xhtml

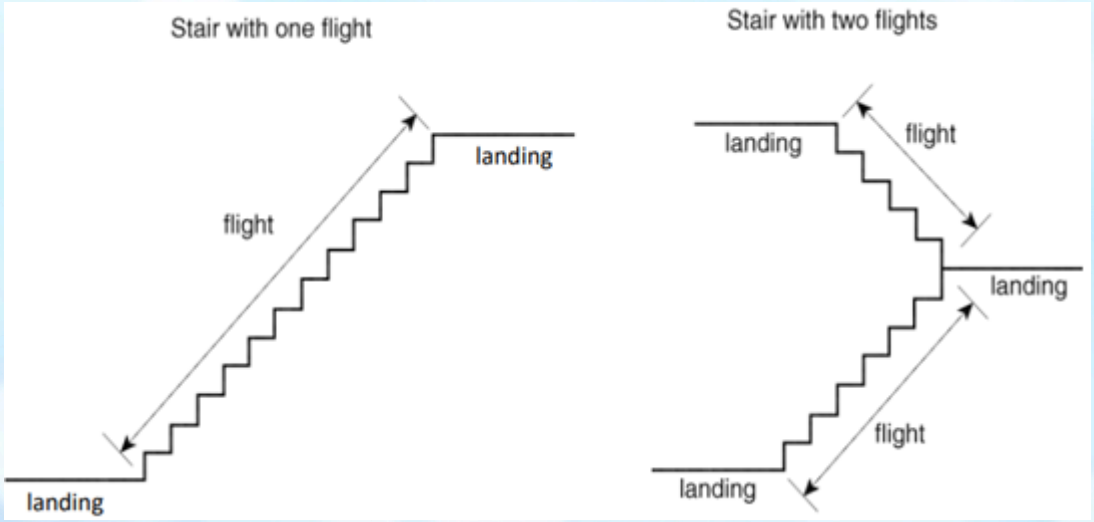
Stair Configurations - 9.8.3.

New Defined terms added to Division A - Part 1 - 1.4.1.2

r11.2 *Flight* means a series of steps between landings.

r11.2 *Run* means the horizontal distance between two adjacent tread nosings on a stair.

r11.2 *Tapered tread* means a tread with non-parallel edges that increases or decreases its *run* uniformly over its width.



Stair Configurations - 9.8.3.

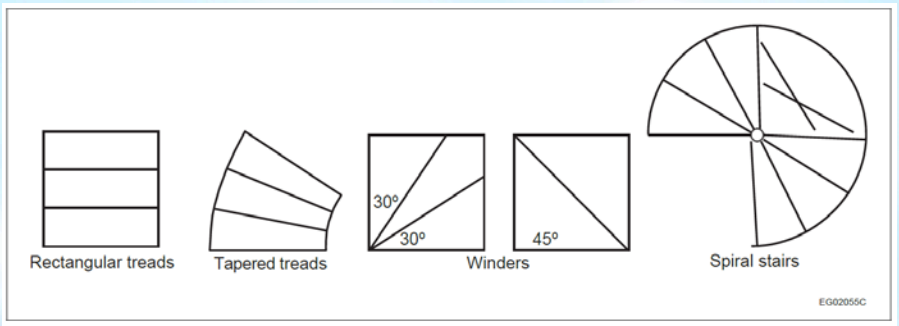
r11.2 **9.8.3.1. Straight and Curved Runs in Stairs** (See Appendix A and A-9.8.4. in Appendix A.)

(1) Except as permitted in Sentence (2), stairs shall consist of,
(a) straight *flights*,
(b) curved *flights*, or
(c) spiral stairs.

(2) Stairs within *houses* and individual *dwelling units* may consist of,
(a) *flights* with rectangular treads and winders provided winders as described in Article 9.8.4.5. are installed between floor levels, or
(b) *flights* with a mix of rectangular and *tapered treads* provided all *tapered treads* within a *flight* turn in the same direction.

(3) Curved *flights* in *exits* shall comply with Sentence 3.4.6.9.(2).

(4) Spiral stairs shall comply with Article 9.8.4.5A.



Stair Configurations - 9.8.3.

a10.2 **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(3)	Permitted(4)	Permitted(5)
Public stairs	Permitted(1)	Permitted(6)	Not permitted	Not permitted	Permitted(5)
Exit stairs	Permitted(1)	Permitted(6)	Not permitted	Not permitted	Not permitted

Notes to Table A-9.8.3.1.:

1. See Articles 9.8.4.1. and 9.8.4.2.
2. See Article 9.8.4.1. and 9.8.4.3.
3. See Article 9.8.4.5.
4. See Article 9.8.4.4A.
5. See Sentence 9.8.4.5A.
6. See Articles 3.4.6.9. and 9.8.4.3.

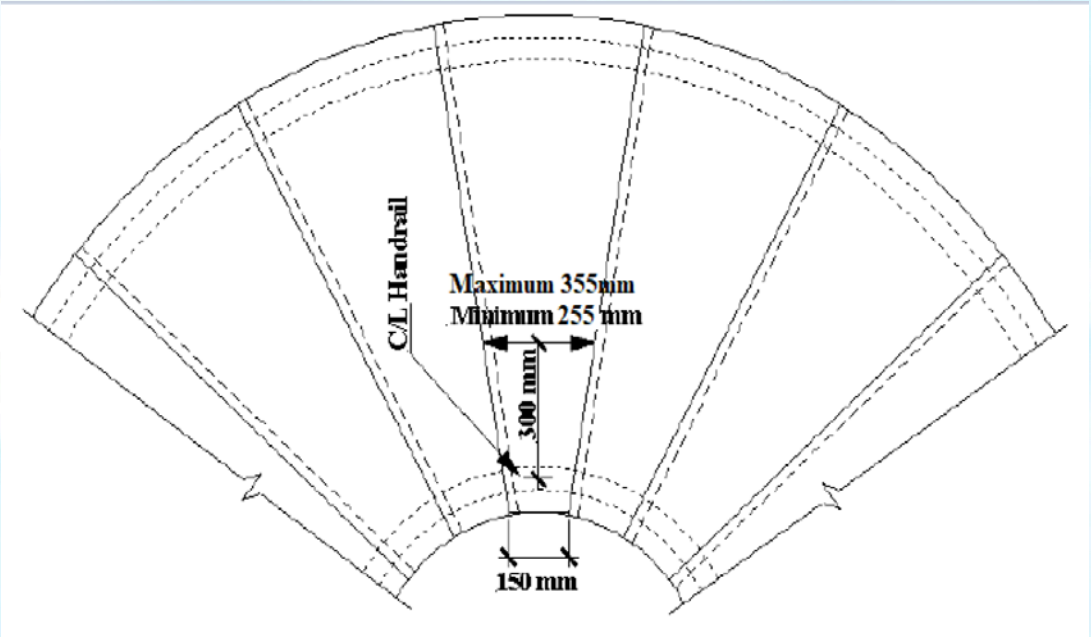
Step Dimensions - 9.8.4.

r11.2

Table 9.8.4.1.
Rise for Rectangular Treads, Tapered Treads and Winders and Run for Rectangular Treads
Forming Part of Sentences 9.8.4.1.(1) and 9.8.4.2.(1)

Stair Type	Max. Rise, mm, for All Steps	Min. Rise, mm, for All Steps	Max. *Run*, mm, for Rectangular Treads	Min. *Run*, mm, for Rectangular Treads
Private stairs(1)	200	125	355	255
Public stairs(2)	180	125	no limit	280
Service stairs(3)	no limit	125	355	no limit
Stairs to unoccupied attic space(4)	no limit	125	355	no limit
Stairs to crawl spaces	no limit	125	355	no limit
Stairs that serve *mezzanines* not exceeding 20 m² within *live/work units*	no limit	125	355	no limit
Column 1	2	3	4	5

Dimensions for Tapered Treads - 9.8.4.3.



r11.2 **9.8.4.3. Dimensions for Tapered Treads** (See A-9.8.4. in Appendix A.)

(1) Except as provided in Sentence (2) and Articles 9.8.4.5. and 9.8.4.5A., *tapered treads* shall have a *run* that,

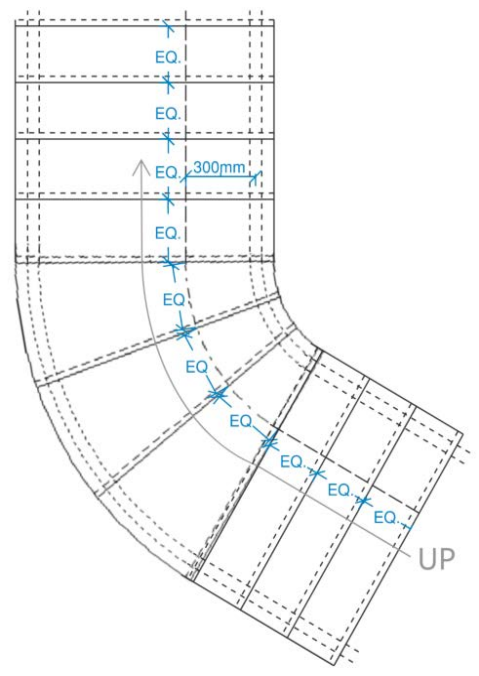
(a) is not less than 150 mm at the narrow end of the tread, and

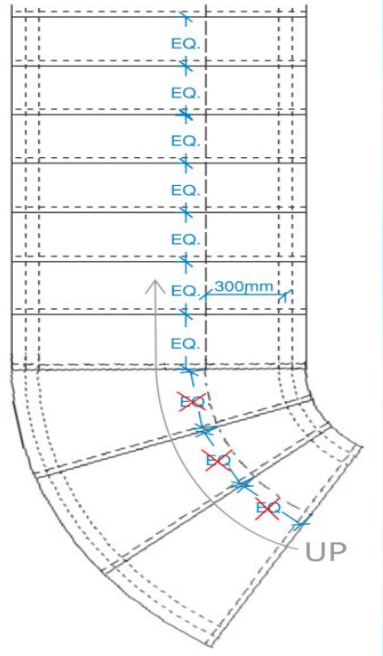
(b) complies with the dimensions for rectangular treads specified in Table 9.8.4.1. when measured at a point 300 mm from the centre line of the inside handrail.

(2) *Tapered treads* in required *exit* stairs shall conform to the requirements in Article 3.4.6.9.

(3) The depth of a *tapered tread* shall be not less than its *run* at any point and not more than its *run* at any point plus 25 mm.

Uniformity of Runs in Flights with Mixed Treads within a House or Dwelling Unit – 9.8.4.4A.



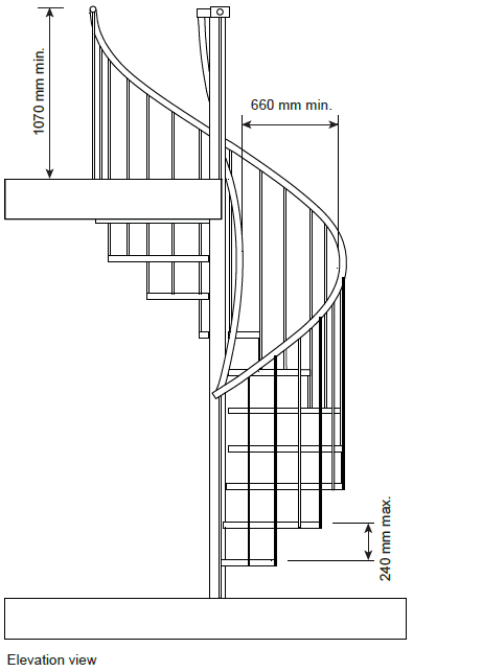


r11.2 **9.8.4.4A. Uniformity of Runs in Flights with Mixed Treads within a House or Dwelling Unit**

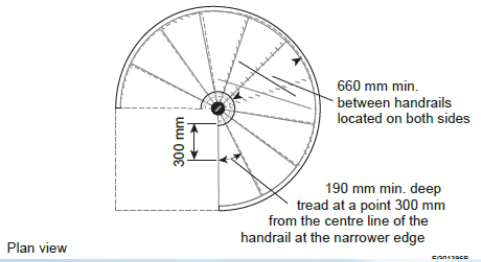
(1) Except as provided in Sentence (2) and Article 9.8.4.5., where a *flight* within a *house* or individual *dwelling unit* consists of both *tapered treads* and rectangular treads, all the treads shall have a uniform *run* when measured at a point 300 mm from the centre line of the inside handrail.

(2) Where *tapered treads* are located at the bottom of a mixed-tread *flight* described in Sentence (1), 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.

Spiral Stairs – 9.8.4.5A.



Elevation view



Plan view

r11.2 **9.8.4.5A. Spiral Stairs** (See Appendix A.)

(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 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 inside handrail,
  (ii) have a consistent angle and uniform dimension, and
  (iii) turn in the same direction, and
(e) a clear height not less than 1 980 mm.

(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) Except as permitted by Sentence (2), spiral stairs shall not serve as an *exit*.

Questions

Part 9 - Code Changes

KITCHENER

Dillon LaRose

MBO II

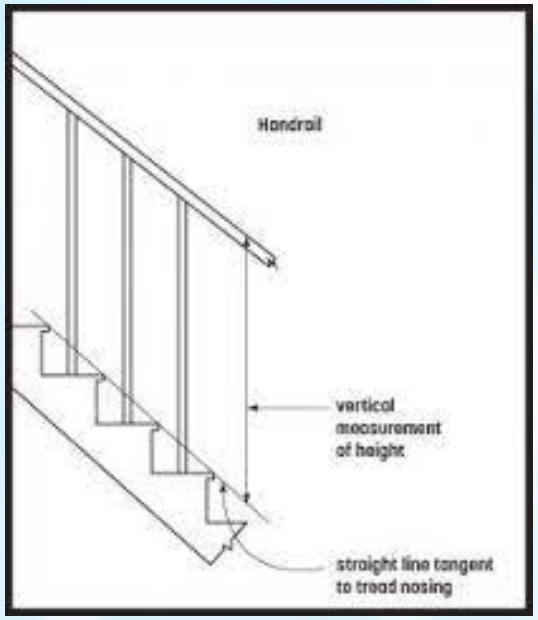
Height of Handrails

9.8.7.4. Height of Handrails (See Appendix A.)

(1) The height of handrails on stairs and ramps shall be measured vertically from the top of the handrail to,
(a) a straight line drawn tangent to the tread nosings of the stair served by the handrail, or
(b) the surface of the ramp, floor or landing served by the handrail.

r11.2 **(2)** Except as provided in Sentence (3), Clause 3.8.3.4.(1)(e) and Sentence 9.8.4.5A.(1), handrails shall be 865 mm to 1 070 mm high.

r11.2 **(3)** Handrails installed in addition to required handrails need not comply with Sentence (2).



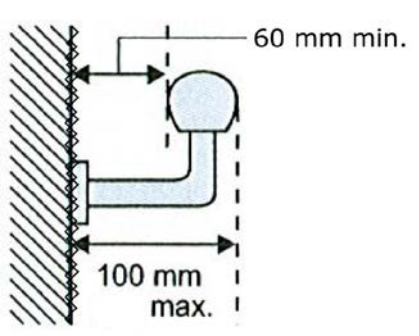
Ergonomic Design (handrails)

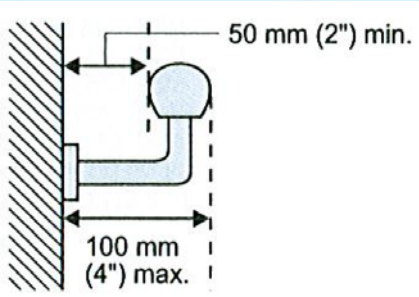
r11.2 **9.8.7.5. Ergonomic Design**

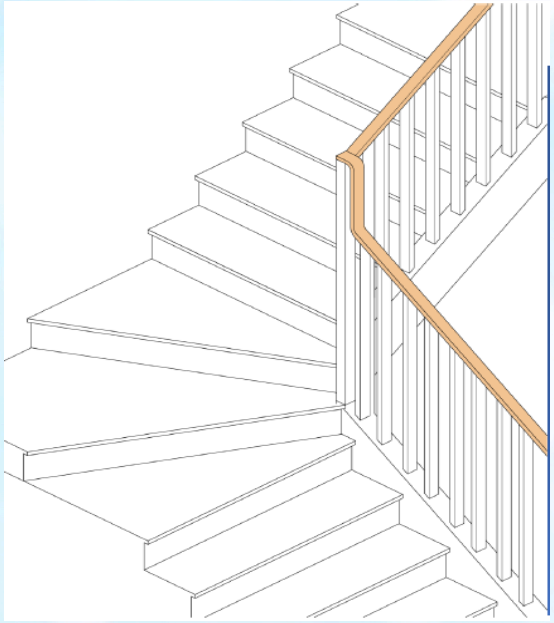
(1) The clearance between a handrail and any surface behind it shall be not less than,
(a) 60 mm, if the surface behind the handrail is rough or abrasive, or
(b) 50 mm, in all other cases.

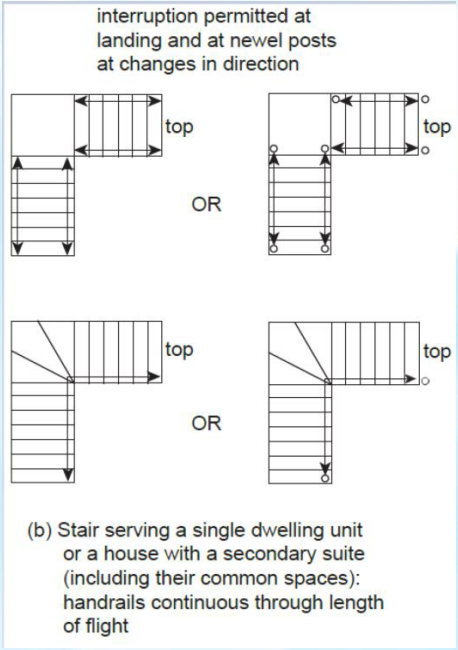
(2) All handrails shall be constructed so as to be continually graspable along their entire length with no obstruction on or above them to break a handhold. (See Appendix A.)

Winders are part of a stair flight and **not** considered a change in direction









Handrails

r11.2 **9.8.7.7. Design and Attachment of Handrails** (See Appendix A.)

(1) Handrails and their supports shall be designed and constructed to withstand the following loads, which need not be considered to act simultaneously:

(a) a concentrated load of not less than 0.9 kN applied at any point and in any direction for all handrails, and

(b) for handrails other than those serving a *house* or an individual *dwelling unit*, a uniform load of not less than 0.7 kN/m.

(2) Where exterior or interior handrails serving a *house* or an individual *dwelling unit* are attached to wood studs or blocking, the attachment shall be deemed to comply with Sentence (1), where,

(a) the attachment points are spaced not more than 1.2 m apart measured on the horizontal plane,

(b) the first attachment point at either end is located not more than 300 mm from the end of the handrail, and

(c) the fasteners consist of no fewer than two No. 8 wood screws at each point, penetrating not less than 32 mm into solid wood.

Change aligns with NBC

Required Guards

9.8.8.1. Required Guards

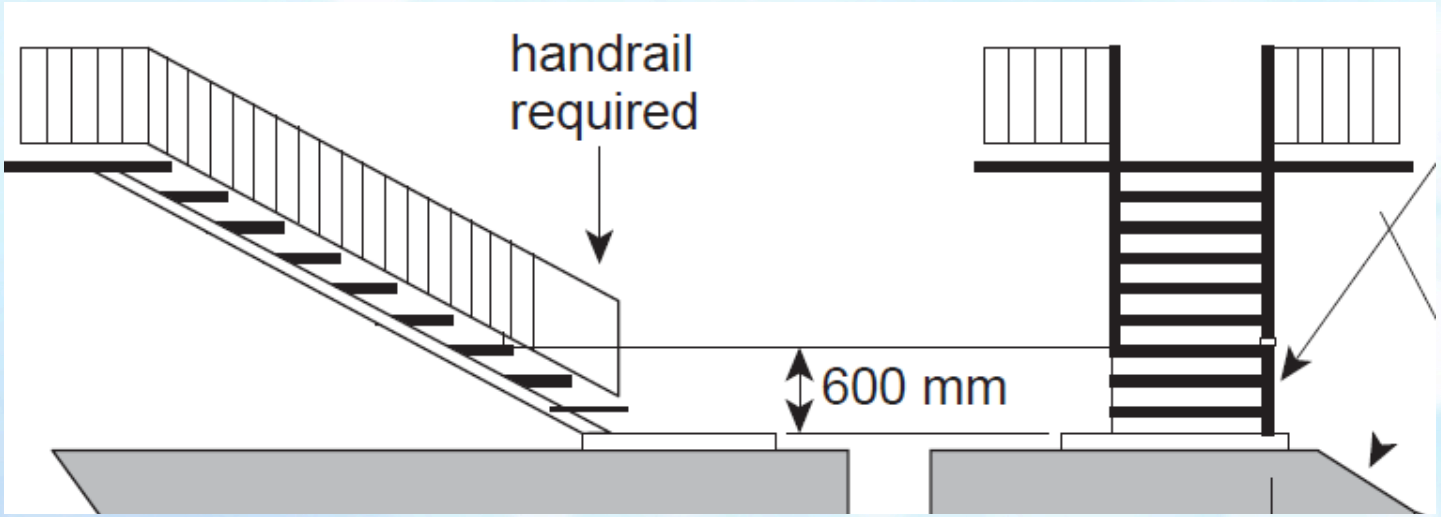
When a guard is required changed from;

- “more than 2 risers” for stairs
- 400mm ramp rise

to;

- 600mm elevation difference

So with a 125mm rise you could have the bottom 4 steps without a guard.
Handrail still required



Height of Guards

9.8.8.3. Height of Guards (See Appendix A.)

r11.2 **(1)** Except as provided in Sentences (2), (3), (4) and (6), all *guards* shall be not less than 1 070 mm high.

r11.2 **(2)** All *guards* within *dwelling units*, other than *guards* serving spiral stairs, shall be not less than 900 mm high.

r6 **(3)** Exterior *guards* serving a *house* or an individual *dwelling unit* shall be not less than 900 mm high where the walking surface served by the *guard* is not more than 1 800 mm above the finished ground level.

r11.2 **(4)** *Guards* for *flights*, except in required *exit* stairs, shall be not less than 900 mm high.

r11.2 **(5)** Reserved

(6) The height of *guards* for exterior stairs and landings more than 10 m above adjacent ground level shall be not less than 1 500 mm.

r11.2 **(7)** The height of *guards* for *flights* shall be measured vertically from the top of the *guard* to a straight line tangent to tread nosings served by the *guard*.

Guards for Floors and Ramps in Garages

9.8.8.4. Guards for Floors and Ramps in Garages

(1) Except for floors of garages referred to in Section 9.35., where garage floors or ramps are 600 mm or more above the adjacent ground or floor level, every opening through a garage floor and the perimeter of floors and ramps that have no exterior walls shall be provided with,

r11.2 (a) a continuous curb not less than 140 mm in height, and

(b) a *guard* not less than 1 070 mm above the floor level.

r11.2 **(2)** Vehicle guardrails shall be designed and constructed to withstand the loading values specified in Sentence 4.1.5.15.(1).

Change aligns with NBC

Opening in Guards

r11.2 **9.8.8.5. Openings in Guards**

(1) Except as permitted in Sentences (2) and (3), openings through *guards* shall be of a size that prevents the passage of a spherical object having a diameter of 100 mm. (See Appendix A.)

(2) Except where they serve *storage garages*, *guards* in *industrial occupancies* are permitted to consist of,
(a) a top railing, and
(b) one or more horizontal intermediate rails spaced such that the size of the openings through the *guard* prevents the passage of a spherical object having a diameter of 535 mm.

(See Appendix A.)

(3) Openings through any *guard* that is not required by Article 9.8.8.1. and that serves an *occupancy* other than *industrial occupancy*, shall be of a size that,
(a) prevents the passage of a spherical object having a diameter of 100 mm, or
(b) permits the passage of a spherical object having a diameter of 200 mm.

(See Appendix A.)

Change aligns with NBC

Questions

Part 9 - Inspection Update

Dillon LaRose

MBO II

Stud cutting

Studs being cut / notched to fix bow in wall. More commonly seen when there is a shortage in lumber.

9.23.5.3. Wall Studs

(1) Wall studs shall not be notched, drilled or otherwise damaged so that the undamaged portion of the stud is less than two-thirds the depth of the stud if the stud is ***loadbearing*** or 40 mm if the stud is non-***loadbearing***, unless the weakened studs are suitably reinforced.

Interior Blanket Insulation

Interior blanket insulation is becoming the most common system for insulating basements.

It is **recommended** a low vapor permeance membrane (moisture barrier) is installed behind the insulation blanket against the concrete foundation wall

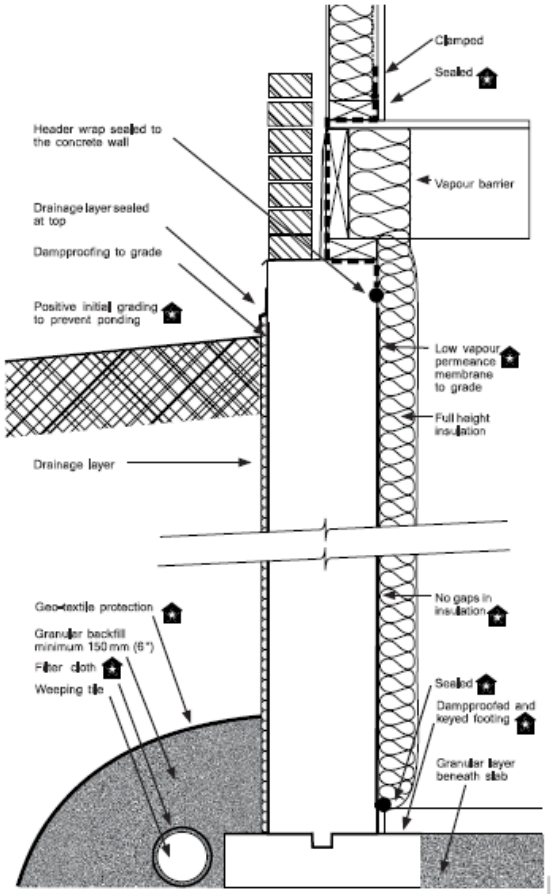
Interior Blanket Insulation

Interior Blanket System

Blanket insulation has become among the most common basement insulation systems. Blanket systems (Fig. 33) are cost effective, easily installed, and have good insulative potential, and as such they are a favoured system of builders. At the same time, steps must be taken to avoid potential condensation problems that can progress from nuisance to callback.

Insulation blankets are placed against the foundation wall and held in place by the tension of a 0.15 mm (6 mil) polyethylene sheet (which acts as a vapour barrier) and that is usually mechanically fastened to the concrete. Batts can extend any distance from joist to slab, and can be cut in long sections for easy installation.

As a best practice, the installation of a blanket system should ensure that the fibreglass or mineral wool insulation maintains continuous contact with the foundation wall, as even a small gap can create convective loops that can short circuit the insulation layer. This means that sufficient tension must be maintained by the polyethylene covering. Placing a low vapour permeance material behind the blanket (such as polystyrene) can reduce the incidence of summer condensation.



Section: Blanket system **Fig. 33**

Garbage Disposals / Garburator

Not permitted to be installed, except for as noted below.

Chapter 930 - Sewage System

(l) any garbage, provided that garbage from garbage disposal units or grinders, and food waste which has been properly shredded so that all particles will be carried freely under flow conditions normally prevailing in public sewers shall be permitted if the disposal unit or grinder was installed prior to the 26th day of April, A.D. 1973.

Duplex Handout

Duplex handout being updated to include:

- Typical Inspections required
- Common details
- Fire separation clarity
- Approved products
- Frequently asked questions

Once completed, handout will be available on the City of Kitchener website

Questions

Part 3

Plans Exam

Rob Schipper, Manager of Building

Permit Application Notes

- For new applications or status letter resubmissions, contact Permit Expeditor (permit.expeditor@kitchener.ca) for link to sharefile where submission can be uploaded

- Do not upload resubmissions to the public portal as the Plans Examiner will not be notified if files have been uploaded

- Ensure all submitted drawings / documents / forms are not locked or secured

Tips to Expedite your Permit

- Take the time needed up front;
  - Ensure the application is complete
  - Ensure the design complies with the OBC and OFC
  - Ensure re-submissions address ALL status letter items and only submit complete re-submissions.

- Staff want to be able to issue all permits in the least amount of reviews as possible, ideally the first review. This is easier and quicker for the Plans Examiner than putting a permit on hold.

Tips to Expedite your Permit

- Ensure to include all relevant information with your permit submission.
  - Is the building sprinklered?
  - Is there a fire alarm?
  - What is the area of renovated floor area?
  - What is the existing building area (if change of use)
  - Spatial separation calculations and site plan drawing (if new openings)
  - Fire Separations (note SB-2, ULC #, etc)
- Be cautioned on including information that is not relevant to the permit submission.
  - More information is not necessarily good if it is not correct

Tips to Expedite your Permit

- Limit the calls, emails and meeting requests
- Constant calls / emails slow the process down vs. speeding it up.
  - Takes time to read/listen to the message
  - Takes time to return the message
  - Disrupts the work flow and takes time to get back into the permit we were reviewing, taking longer to get to your permit review

Tips to Expedite your Permit

- When a disagreement in interpretation arises, call the plans examiner to discuss your side first vs. issuing a response letter discounting the plans examiners comments.
  - just issuing a response slowing the process down.
- We want to work as a team (Building Officials + Consultants + Owners, etc.)
- Working together will result in more efficient processing of your permit and expediting its approval.


ANY QUESTIONS?

Part 3

Code Changes

Jenny Taylor, Municipal Building Official

Tapered Treads in a Curved Flight

ARTICLE REVISED

3.3.1.15. Tapered Treads in a Curved Flight

(1) *Flights* shall consist solely of,

(a) straight *flights*, or

(b) curved *flights* complying with Sentence (2).

(2) *Tapered treads* in a curved *flight* that is not required as an *exit* shall have,

(a) a minimum *run* of 150 mm,

(b) a *run* not less than 280 mm when measured at a point 300 mm from the centre line of the inside handrail, and

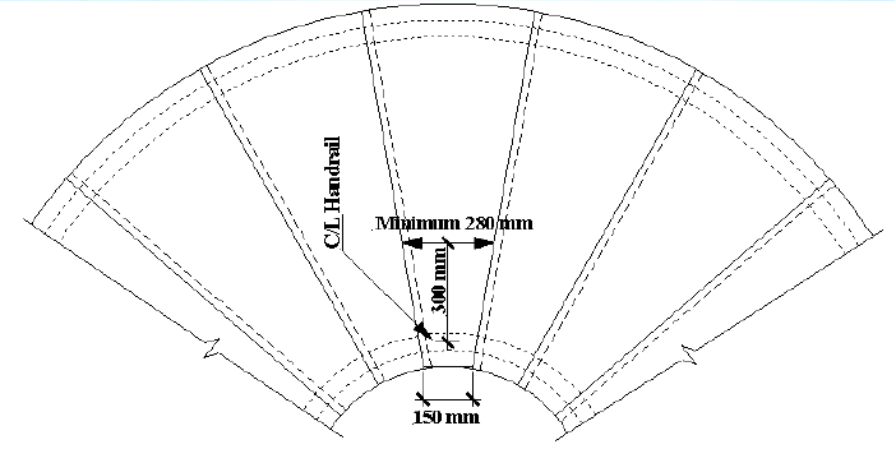
(c) a riser conforming to Sentence 3.4.6.8.(2).

(3) *Tapered treads* shall have a consistent angle and uniform *run* and rise dimensions in accordance with the construction tolerances described in Article 3.4.6.8. when measured at a point 300 mm from the centre line of the inside handrail.

(4) All *tapered treads* within a *flight* shall turn in the same direction.

Tapered Treads in a Curved Flight

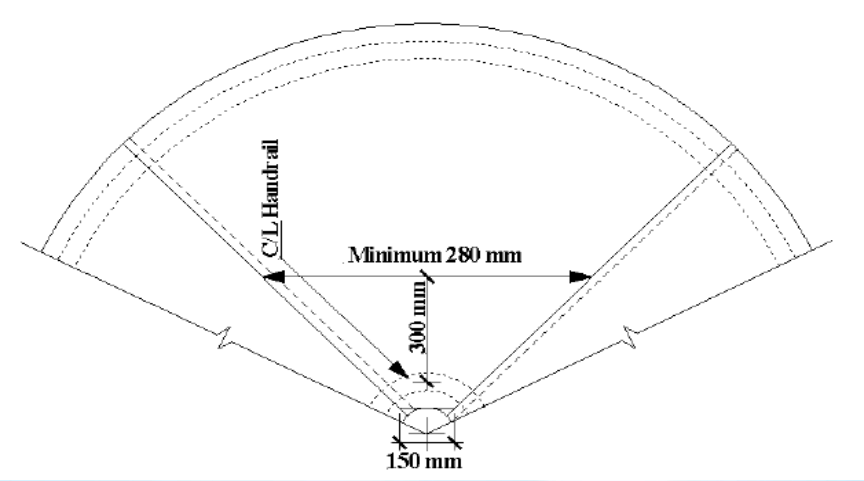
New provisions are introduced for tapered treads in a curved stair.



Minimum dimensions for curved stair **not used as an exit** and **not within a house or serving a single dwelling unit.**

Tapered Treads in a Curved Flight

There is no maximum run dimension for curved stair **not** used as an exit and **not** within a house or serving a single dwelling unit.



Curved stairs for **exits** shall comply with 3.4.6.9.

Curved stairs for **dwelling units** shall comply with 9.8.4.5.

- per 3.3.1.13. → 3.3.4.7. → 9.8.

Guards

3.3.1.17. Guards

(1) Except as provided in Sentence (6) and Articles 3.3.2.8. and 3.3.4.7., a *guard* not less than 1 070 mm high shall be provided,

(a) around each roof to which access is provided for other than maintenance,

(b) at openings into smoke shafts referred to in Subsection 3.2.6. that are less than 1 070 mm above the floor, and

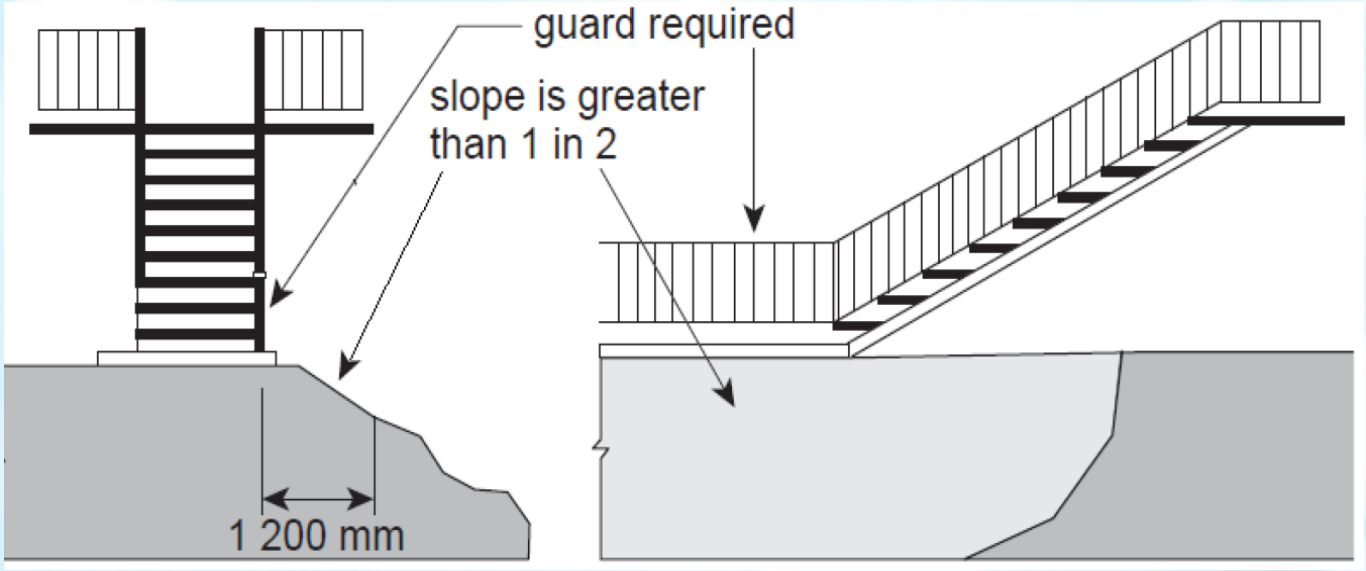
(c) at each raised floor, *mezzanine*, balcony, gallery, interior or exterior vehicular ramp, and at other locations where,

(i) the difference in level is more than 600 mm between the walking surface and the adjacent surface, or

(ii) the adjacent surface within 1 200 mm of the walking surface has a slope of more than 1 in 2 away from the walking surface.

Guards

Added provisions for adjacent sloped surfaces for when guards are required.



Provides further clarity and now aligns with Part 9.

Guards

3.3.1.17. Guards

(3) Except as permitted by Sentence 3.3.5.9.(1), openings through any *guard* that is required by Sentence (1) and that is installed in a *building* of *industrial occupancy* shall be of a size which will prevent the passage of a sphere having a diameter more than 200 mm unless it can be shown that the location and size of openings that exceed this limit do not represent a hazard.

Provides new cross reference for omission from these guard requirements for guards in industrial occupancies.

Guards

3.3.1.17. Guards

(6) Sentence (1) does not apply,

(a) to the front edges of *stages*,

(b) to loading docks,

(c) to floor pits in *repair garages*, or

(d) where access is provided for maintenance purposes only.

The structure of sentence has been reformatted and a new exemption has been added.

Handrails in Aisles with Steps

3.3.2.8A. Handrails in Aisles with Steps

(1) Handrails shall be provided in aisles with steps in conformance with Table 3.3.2.8A.

Table 3.3.2.8A.
Types and Location of Handrails in Aisles with Steps
Forming Part of Sentences 3.3.2.8A.(1) and (2)

Aisle Width	Handrail Requirements Aisle Serving Seating on One Side	Handrail Requirements Aisle Serving Seating on Both Sides
Less than 1 100 mm	A continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12).	A handrail that is located on one side at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).
1 100 mm or more	(a) A centre line handrail that conforms to Sentence (2), or (b) a continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12), and, in addition to that continuous handrail, a handrail that is located at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).	A centre line handrail that conforms to Sentence (2).

(2) Handrails installed along aisle centre lines as required by Table 3.3.2.8A. shall,

(a) comply with Sentences 3.4.6.5.(3) to (5), (7) and (12),

(b) have gaps not less than 560 mm and not more than 915 mm wide, measured horizontally, at intervals not exceeding five rows of seats,

(c) comply with Sentence 3.4.6.5.(11) at terminations and required gaps, and

(d) have an intermediate rail located 305 mm below the principal handrail.

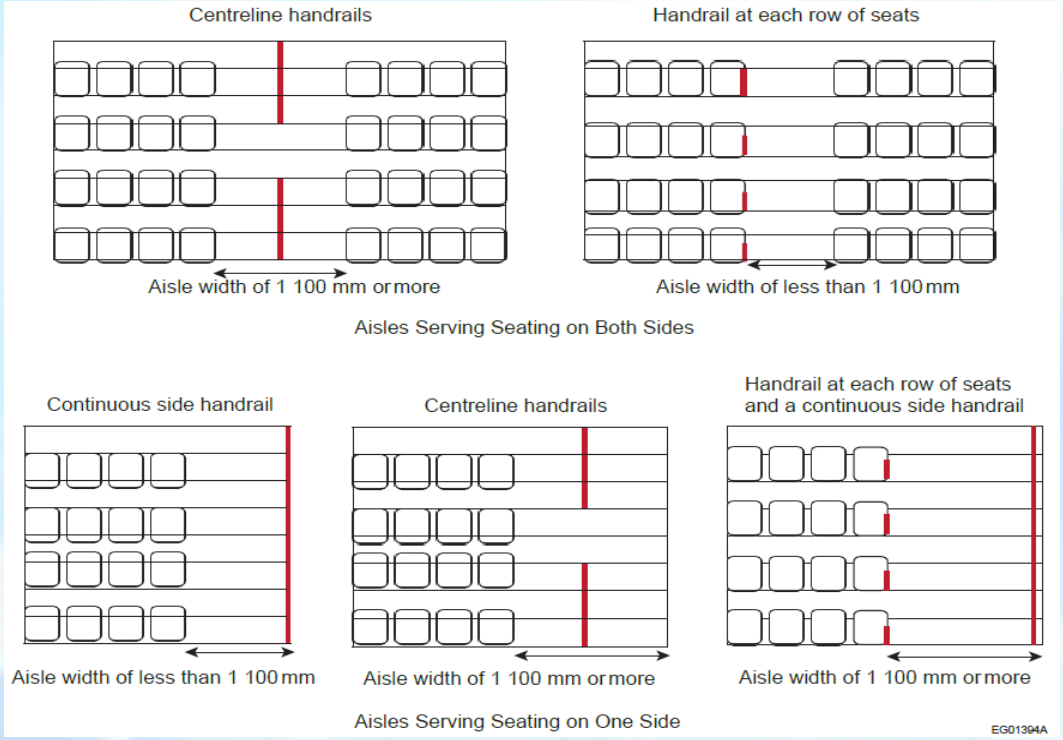
Note: The reference to sentences 3.4.6.5. both in the Table and sentence (2) are incorrect and are being updated by the Ministry.

Handrails in Aisles with Steps

APPENDIX A

A-3.3.2.8. Installation Configurations of Handrails in Aisles with Steps.

Figure A-3.3.2.8. illustrates possible installation configurations of handrails serving aisles with steps.



Handrails in Aisles with Steps

3.3.2.8A. Handrails in Aisles with Steps

(1) Handrails shall be provided in aisles with steps in conformance with Table 3.3.2.8A.

Table 3.3.2.8A.
Types and Location of Handrails in Aisles with Steps
Forming Part of Sentences 3.3.2.8A.(1) and (2)

Aisle Width	Handrail Requirements Aisle Serving Seating on One Side	Handrail Requirements Aisle Serving Seating on Both Sides
Less than 1 100 mm	A continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12).	A handrail that is located on one side at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).
1 100 mm or more	a) A centre line handrail that conforms to Sentence (2), or b) a continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12), and, in addition to that continuous handrail, a handrail that is located at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).	A centre line handrail that conforms to Sentence (2).

(2) Handrails installed along aisle centre lines as required by Table 3.3.2.8A. shall,

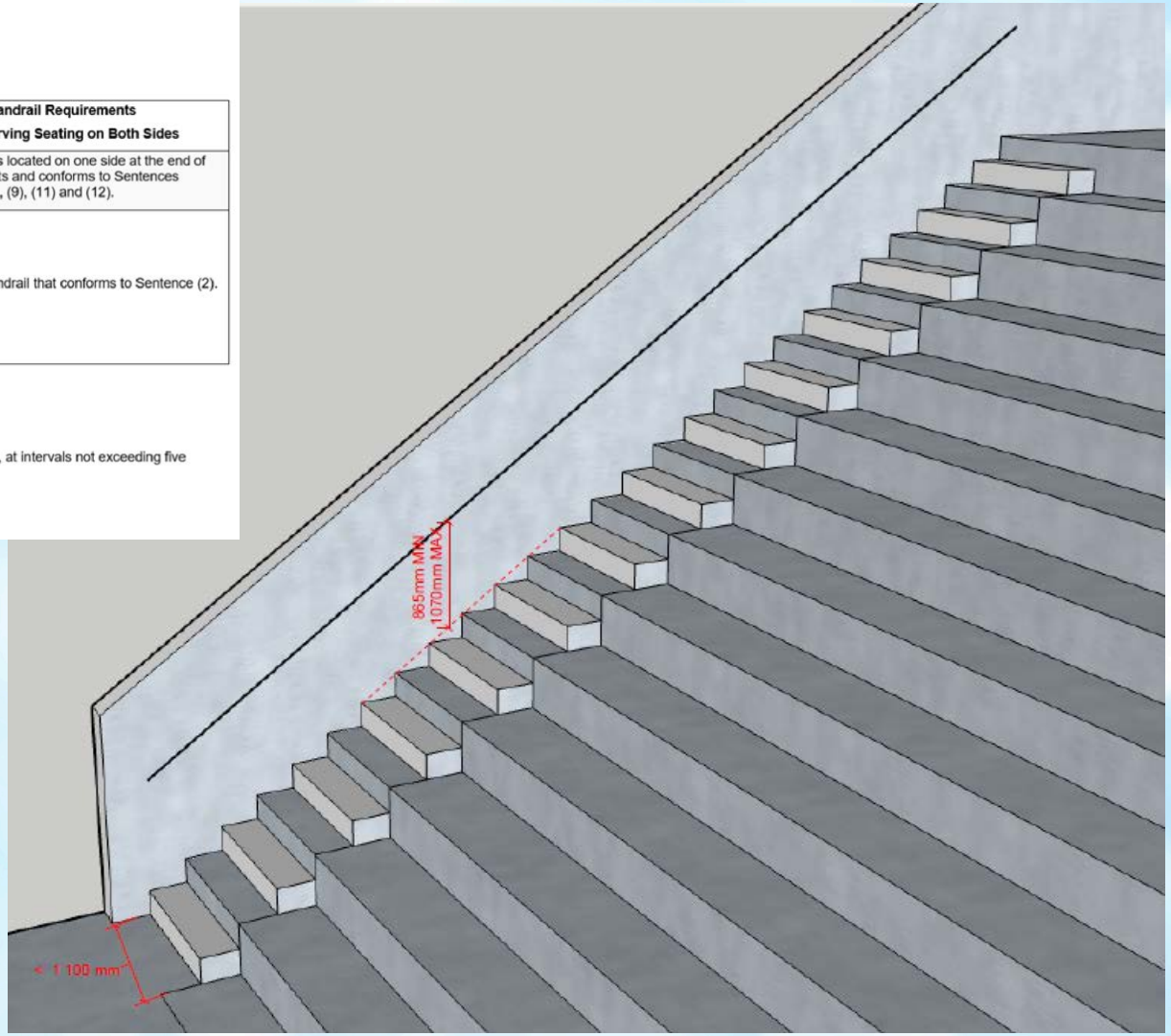
(a) comply with Sentences 3.4.6.5.(3) to (5), (7) and (12),

(b) have gaps not less than 560 mm and not more than 915 mm wide, measured horizontally, at intervals not exceeding five rows of seats,

(c) comply with Sentence 3.4.6.5.(11) at terminations and required gaps, and

(d) have an intermediate rail located 305 mm below the principal handrail.

Note: The reference to sentences 3.4.6.5. both in the Table and sentence (2) are incorrect and are being updated by the Ministry.



Aisle less than 1100mm wide with seating on one side

Handrails in Aisles with Steps

3.3.2.8A. Handrails in Aisles with Steps

(1) Handrails shall be provided in aisles with steps in conformance with Table 3.3.2.8A.

Table 3.3.2.8A.
Types and Location of Handrails in Aisles with Steps

Forming Part of Sentences 3.3.2.8A.(1) and (2)

Aisle Width	Handrail Requirements Aisle Serving Seating on One Side	Handrail Requirements Aisle Serving Seating on Both Sides
Less than 1 100 mm	A continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12).	A handrail that is located on one side at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).
1 100 mm or more	a) A centre line handrail that conforms to Sentence (2), or b) a continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12), and, in addition to that continuous handrail, a handrail that is located at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).	A centre line handrail that conforms to Sentence (2).

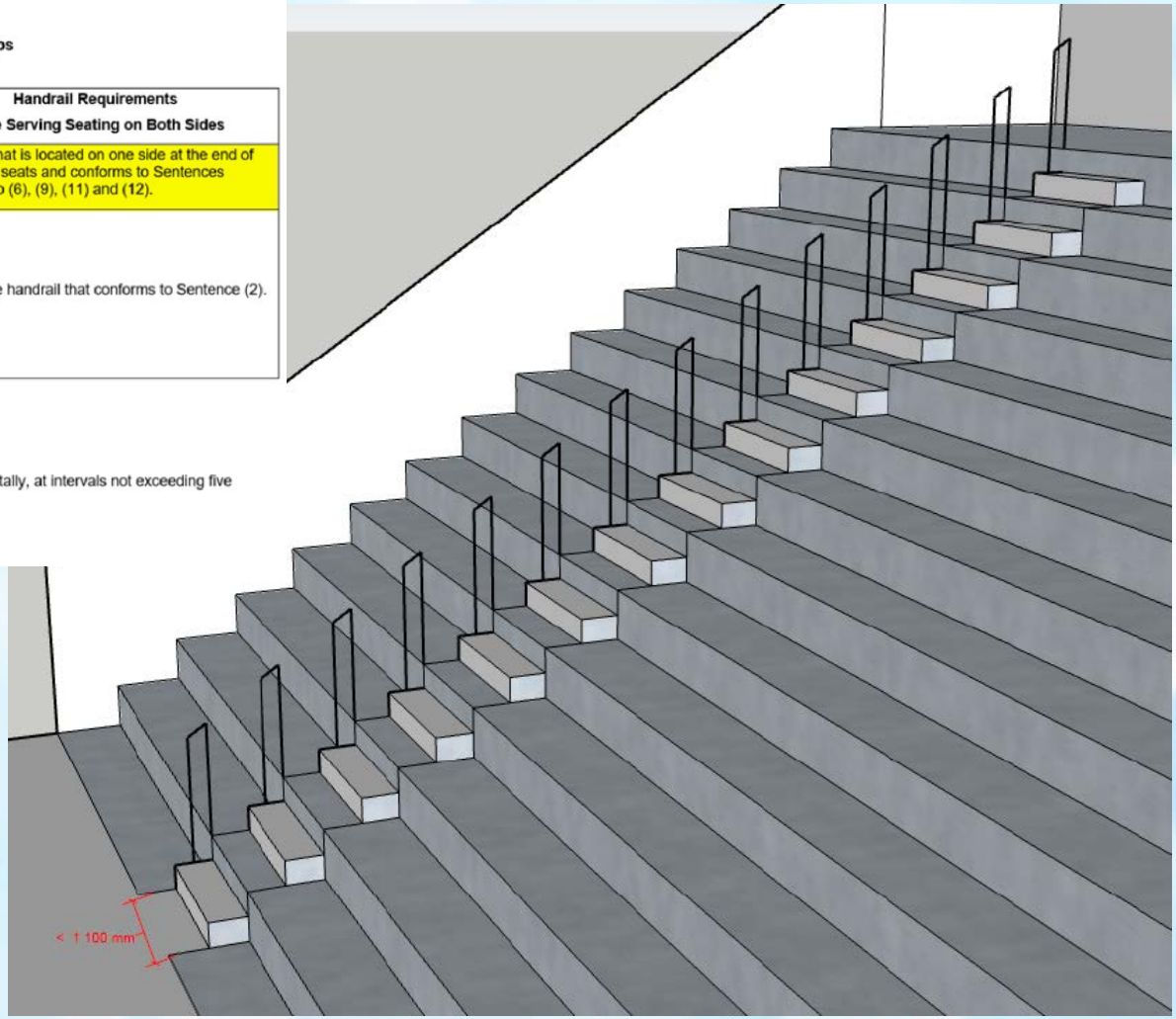
(2) Handrails installed along aisle centre lines as required by Table 3.3.2.8A. shall,

(a) comply with Sentences 3.4.6.5.(3) to (5), (7) and (12),

(b) have gaps not less than 560 mm and not more than 915 mm wide, measured horizontally, at intervals not exceeding five rows of seats,

(c) comply with Sentence 3.4.6.5.(11) at terminations and required gaps, and

(d) have an intermediate rail located 305 mm below the principal handrail.



Aisle less than 1100mm wide with seating on both sides

Note: The reference to sentences 3.4.6.5. both in the Table and sentence (2) are incorrect and are being updated by the Ministry.

Handrails in Aisles with Steps

3.3.2.8A. Handrails in Aisles with Steps

(1) Handrails shall be provided in aisles with steps in conformance with Table 3.3.2.8A.

Table 3.3.2.8A.
Types and Location of Handrails in Aisles with Steps
Forming Part of Sentences 3.3.2.8A.(1) and (2)

Aisle Width	Handrail Requirements Aisle Serving Seating on One Side	Handrail Requirements Aisle Serving Seating on Both Sides
Less than 1 100 mm	A continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12).	A handrail that is located on one side at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).
1 100 mm or more	a) A centre line handrail that conforms to Sentence (2), or b) a continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12), and, in addition to that continuous handrail, a handrail that is located at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).	A centre line handrail that conforms to Sentence (2).

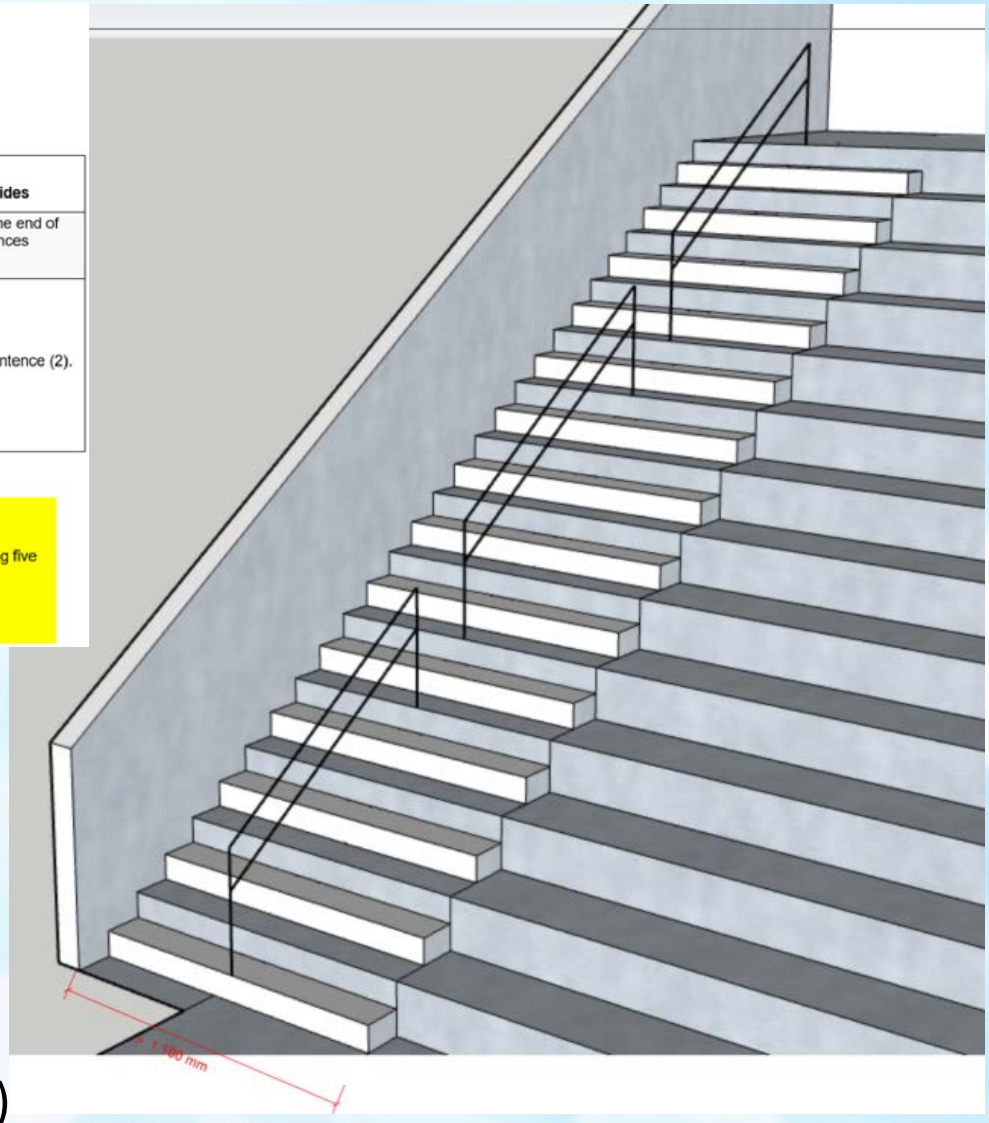
(2) Handrails installed along aisle centre lines as required by Table 3.3.2.8A. shall,

(a) comply with Sentences 3.4.6.5.(3) to (5), (7) and (12),

(b) have gaps not less than 560 mm and not more than 915 mm wide, measured horizontally, at intervals not exceeding five rows of seats,

(c) comply with Sentence 3.4.6.5.(11) at terminations and required gaps, and

(d) have an intermediate rail located 305 mm below the principal handrail.



Note: The reference to sentences 3.4.6.5. both in the Table and sentence (2) are incorrect and are being updated by the Ministry.

Aisle 1100mm or more in width with seating on one side (Option 1)

Handrails in Aisles with Steps

3.3.2.8A. Handrails in Aisles with Steps

(1) Handrails shall be provided in aisles with steps in conformance with Table 3.3.2.8A.

Table 3.3.2.8A.
Types and Location of Handrails in Aisles with Steps
Forming Part of Sentences 3.3.2.8A.(1) and (2)

Aisle Width	Handrail Requirements Aisle Serving Seating on One Side	Handrail Requirements Aisle Serving Seating on Both Sides
Less than 1 100 mm	A continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12).	A handrail that is located on one side at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).
1 100 mm or more	a) A centre line handrail that conforms to Sentence (2), or b) a continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12), and, in addition to that continuous handrail, a handrail that is located at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).	A centre line handrail that conforms to Sentence (2).

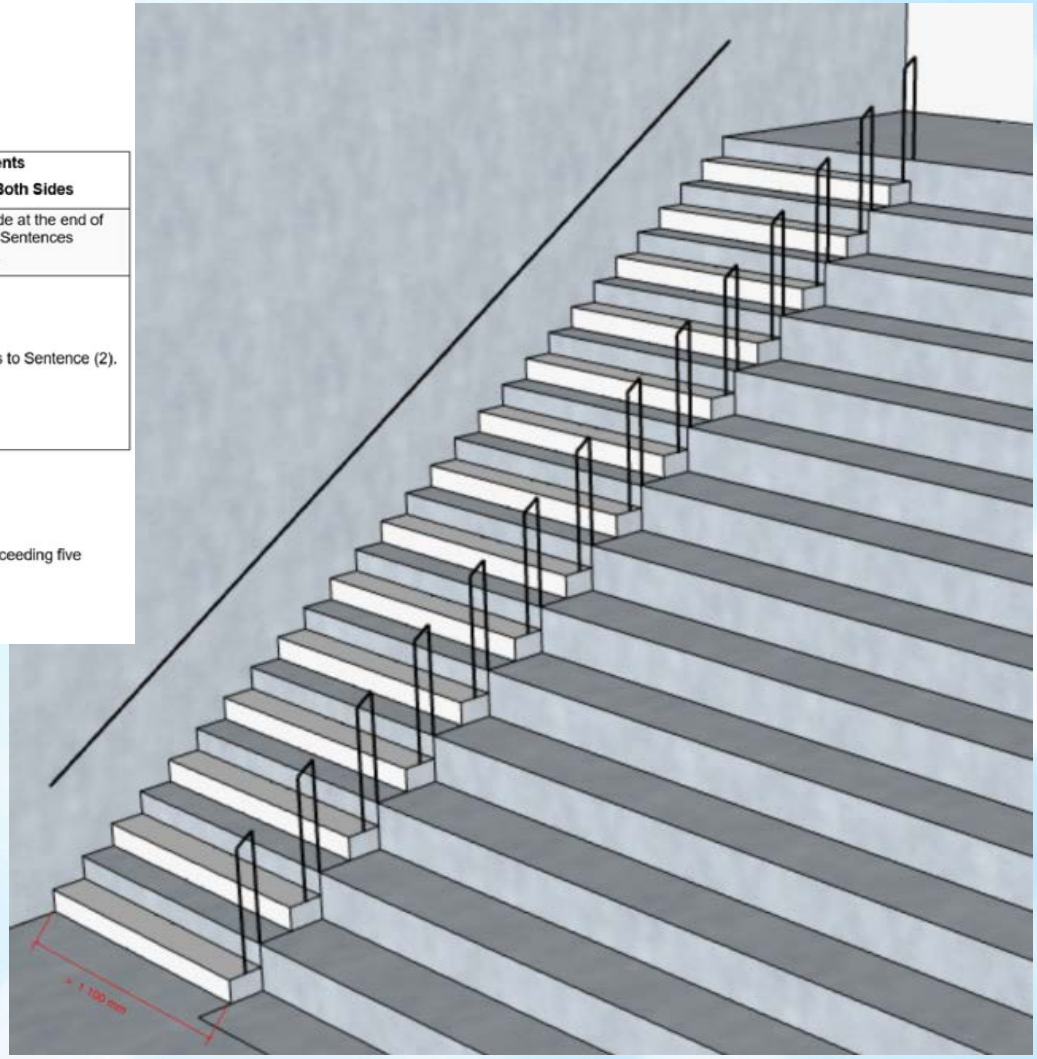
(2) Handrails installed along aisle centre lines as required by Table 3.3.2.8A. shall,

(a) comply with Sentences 3.4.6.5.(3) to (5), (7) and (12),

(b) have gaps not less than 560 mm and not more than 915 mm wide, measured horizontally, at intervals not exceeding five rows of seats,

(c) comply with Sentence 3.4.6.5.(11) at terminations and required gaps, and

(d) have an intermediate rail located 305 mm below the principal handrail.



Note: The reference to sentences 3.4.6.5. both in the Table and sentence (2) are incorrect and are being updated by the Ministry.

Aisle 1100mm or more in width with seating on one side (Option 2)

Handrails in Aisles with Steps

3.3.2.8A. Handrails in Aisles with Steps

(1) Handrails shall be provided in aisles with steps in conformance with Table 3.3.2.8A.

Table 3.3.2.8A.
Types and Location of Handrails in Aisles with Steps
Forming Part of Sentences 3.3.2.8A.(1) and (2)

Aisle Width	Handrail Requirements Aisle Serving Seating on One Side	Handrail Requirements Aisle Serving Seating on Both Sides
Less than 1 100 mm	A continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12).	A handrail that is located on one side at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).
1 100 mm or more	a) A centre line handrail that conforms to Sentence (2), or b) a continuous handrail that is located on the side of the aisle opposite the seats and conforms to Sentences 3.4.6.5.(3) to (7), (9), (11) and (12), and, in addition to that continuous handrail, a handrail that is located at the end of each row of seats and conforms to Sentences 3.4.6.5.(3) to (6), (9), (11) and (12).	A centre line handrail that conforms to Sentence (2).

(2) Handrails installed along aisle centre lines as required by Table 3.3.2.8A. shall,

(a) comply with Sentences 3.4.6.5.(3) to (5), (7) and (12),

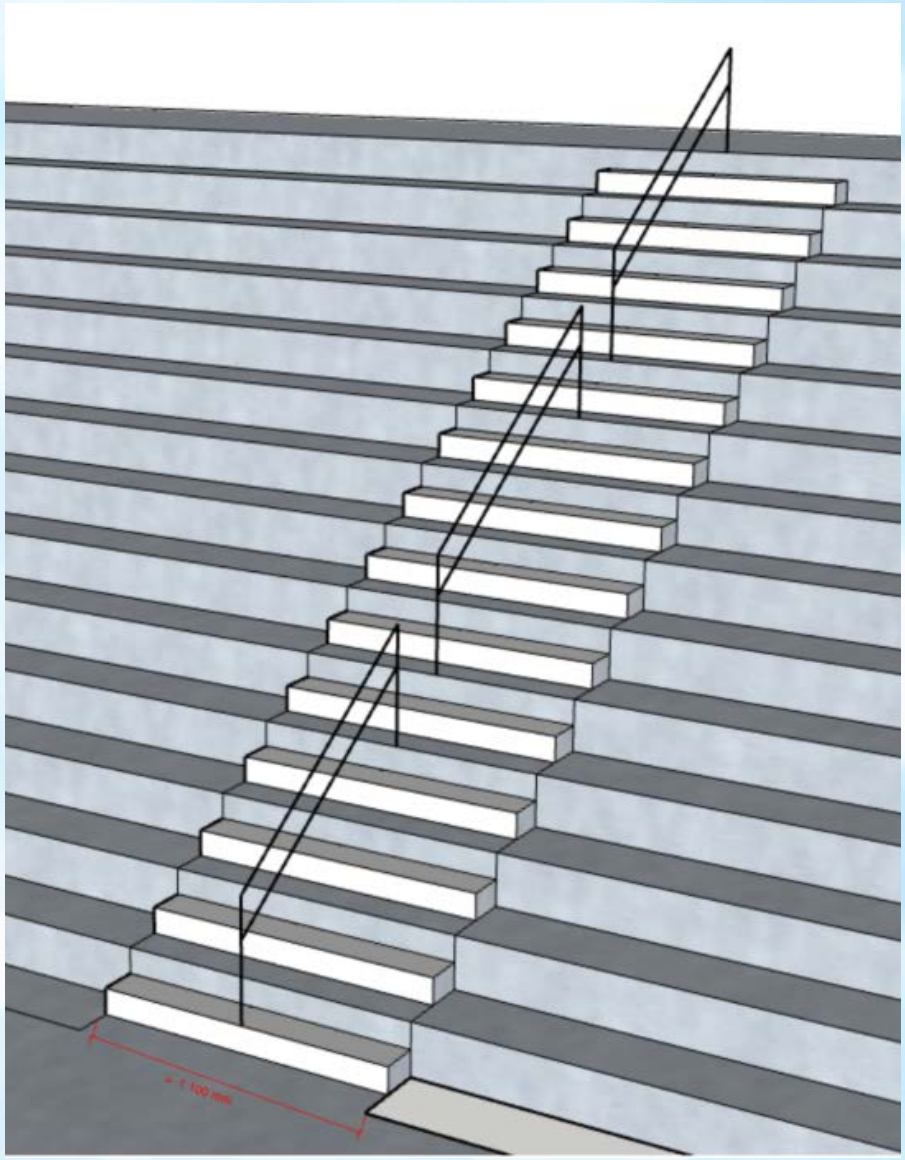
(b) have gaps not less than 560 mm and not more than 915 mm wide, measured horizontally, at intervals not exceeding five rows of seats,

(c) comply with Sentence 3.4.6.5.(11) at terminations and required gaps, and

(d) have an intermediate rail located 305 mm below the principal handrail.

Note: The reference to sentences 3.4.6.5. both in the Table and sentence (2) are incorrect and are being updated by the Ministry.

Aisle 1100mm or more in width with seating on both sides



Handrails in Aisles with Steps

(2) Handrails installed along aisle centre lines as required by Table 3.3.2.8A. shall,

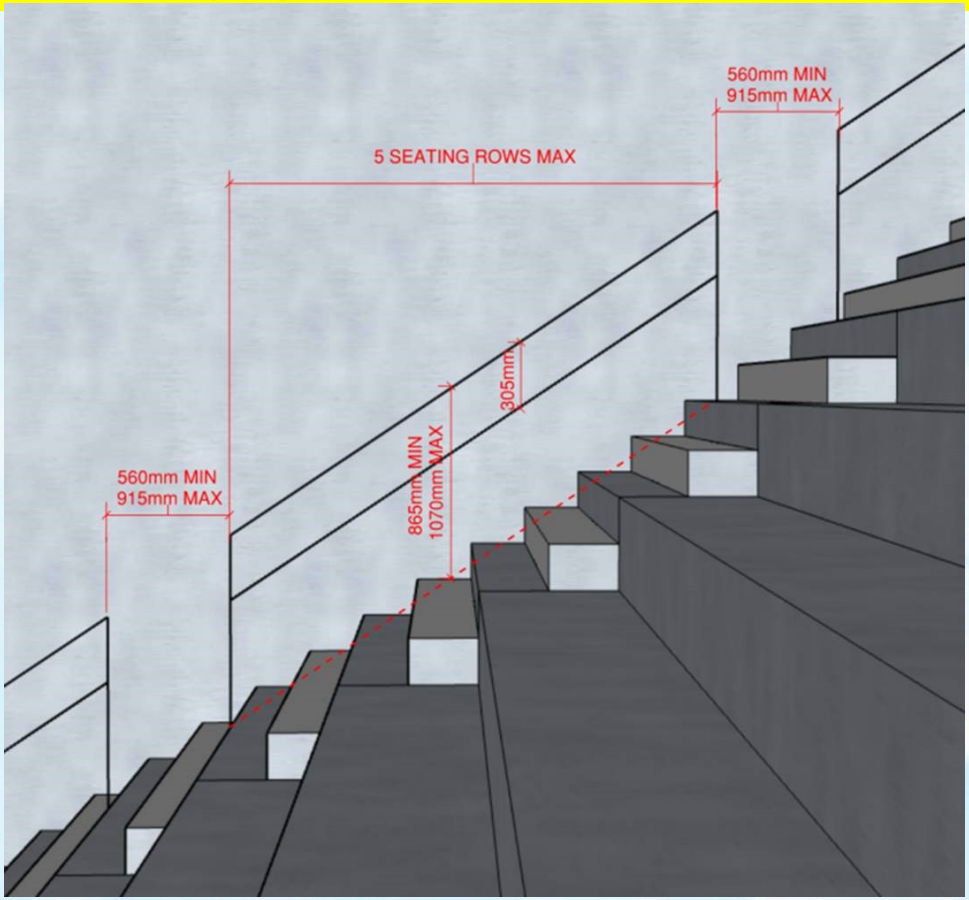
(a) comply with Sentences 3.4.6.5.(3) to (5), (7) and (12),

(b) have gaps not less than 560 mm and not more than 915 mm wide, measured horizontally, at intervals not exceeding five rows of seats,

(c) comply with Sentence 3.4.6.5.(11) at terminations and required gaps, and

(d) have an intermediate rail located 305 mm below the principal handrail.

Note: The reference to sentences 3.4.6.5. both in the Table and sentence (2) are incorrect and are being updated by the Ministry.



Repair and Storage Garages

SENTENCE REVISED

3.3.5.4. Repair and Storage Garages

(6) Where *storage garage* or *repair garage* floors or ramps are 600 mm or more above the adjacent ground or floor level, every opening through such floors and the perimeter of such floors and ramps shall be provided with,

(a) a continuous curb not less than 140 mm high, a *guard* not less than 1 070 mm high and a vehicle guardrail not less than 500 mm high conforming to Sentence (6.1), or

(b) a full-height wall conforming to Sentence (6.1).

(6.1) Vehicle guardrails and full-height walls required by Sentence (6) shall be designed and constructed to withstand the loading values specified in Sentence 4.1.5.15.(1).

Reduced curb height from 150mm to 140mm and provision added for vehicle guard rails.

Guards

NEW ARTICLE

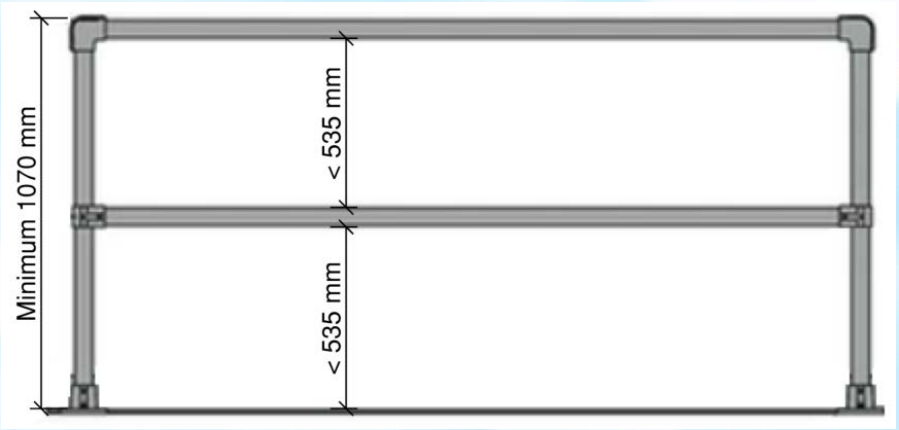
3.3.5.9. Guards

(1) *Guards* in *industrial occupancies*, other than *guards* in *storage garages*, are permitted to consist of,

(a) a top rail, and

(b) one or more intermediate rails spaced such that the openings through the *guard* are of a size that prevents the passage of a spherical object having a diameter of 535 mm.

New provision to allow pipe rail style guards in industrial occupancies.



Exit Width Reduction

3.4.3.4. Exit Width Reduction

(4) Handrails and construction below handrails, including handrail supports and stair stringers, are permitted to project into the required width of means of egress but the projections shall be not more than 100 mm on each side of the required width.

Clarifies that in addition to handrails the **handrail supports and stair stringers** are permitted to project into the required stair width.

Dimensions of Landings

ARTICLE REVISED AND NEW SENTENCES ADDED

3.4.6.4. Dimensions of Landings

(1) Except as permitted in Sentences (2) and (6), a landing shall be,

(a) at least as wide as the width of the stair or ramp in which it occurs, and

(b) at least as long as the width of the stair or ramp in which it occurs.

(2) Where a landing in a stair or ramp does not turn or turns less than 90°, the length of the landing need not be more than the lesser of,

(a) the required width of the stair or ramp, or

(b) 1 100 mm.

(3) Where a landing in a stair or ramp turns less than 90°, the length of the landing shall be measured perpendicular to the nosings of adjacent steps or to the end of the ramp, at a distance equal to half the length required by Sentence (2) from the narrow edge of the landing.

Dimensions of Landings

APPENDIX A

A-3.4.6.4. Dimensions of Landings.

A landing is a floor area provided at the top or bottom of a flight of stairs or a ramp, or a platform built as part of a stairway or ramp. Landings provide a safe surface for users to rest upon, allow design flexibility, and facilitate a change in direction.

Figure A-3.4.6.4. illustrates how to measure the length of a landing for various landing configurations turning less than 90°, including straight landings.

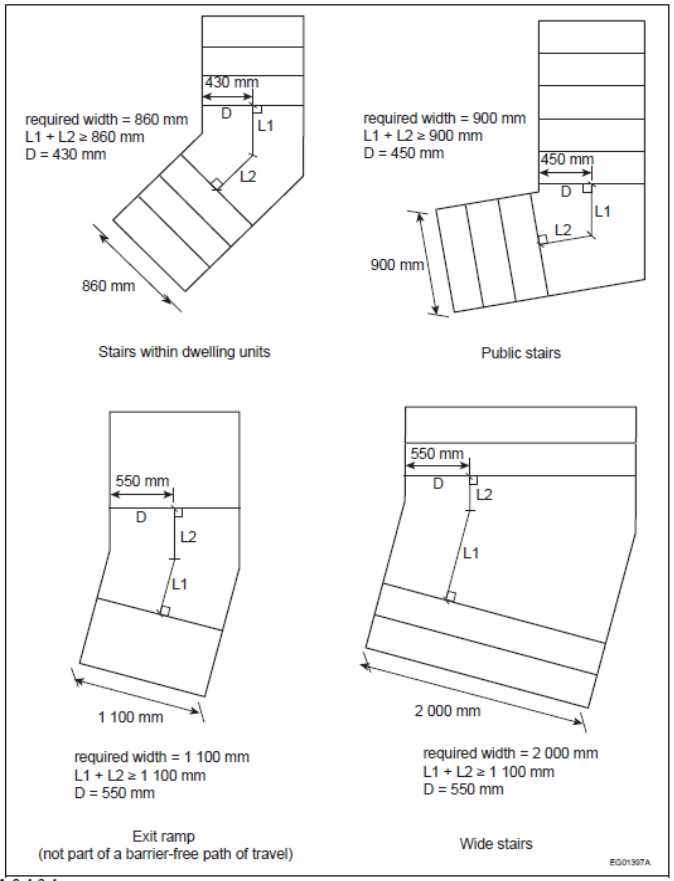


Figure A-3.4.6.4.
Landing configurations
Notes to Figure A-3.4.6.4.:
(1)
L1 + L2 = length of the landing
= the lesser of the required width of the stair or ramp, or 1 100 mm
See Sentences 3.4.6.4.(2) and 9.8.6.3.(2).
(2)
D = distance from the narrow edge where the length of the landing is measured
= half the required length of the landing
See Sentences 3.4.6.4.(3) and 9.8.6.3.(3).

Handrails

ARTICLE REVISED AND NEW SENTENCES ADDED

3.4.6.5. Handrails

(1) At least one handrail shall be provided on straight *flights* that are less than 1 100 mm in width.

(2) One handrail shall be provided on each side of,

(a) straight *flights* that are 1 100 mm or more in width,

(b) curved *flights*, and

(c) ramps.

Handrails

(3) In addition to Sentence (2), intermediate handrails shall be provided so that,

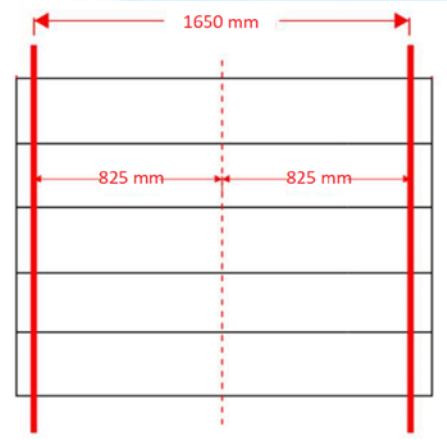
(a) a handrail is reachable within 825 mm of all portions of the required *exit* width, and

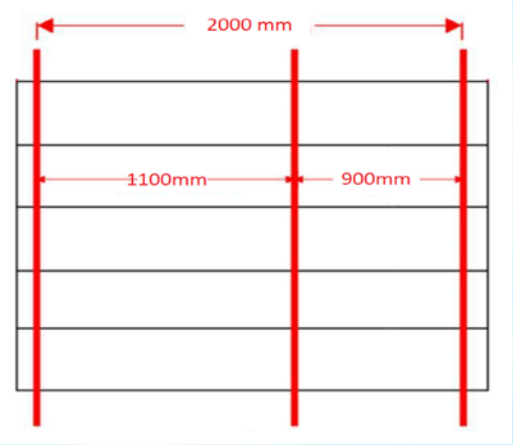
(b) at least one portion of the stair or ramp between two handrails is the required *exit* width for stairs or ramps as described in Sentences 3.4.3.2.(7) and 3.4.3.4.(4) .

(4) Where a stair or ramp is wider than its required *exit* width, handrails shall be located along the most direct path of travel.

Handrails

An intermediate handrail is required if the required stair width exceeds 1650mm (825mm x2).





Minimum required exit width for at least one portion between handrails.

Handrails

3.4.6.5. Handrails

(7) Except as provided by Sentence (8) and Clause 3.8.3.4.(1)(e), the height of handrails on stairs, on aisles with steps and on ramps shall be,

(a) not less than 865 mm, and

(b) not more than 1070 mm

The maximum handrail height increased from 965mm to 1070mm.

This change aligns with the guard height and therefore top of guard can now double as the handrail (similar to Part 9).

Handrails

3.4.6.5. Handrails

(9) Required handrails shall be continuous throughout the length of,

(a) a ramp, and

(b) a *flight*, from the bottom riser to the top riser.

*All required handrails must now be continuous in a flight of stairs

(Previously only one handrail was required to be continuous when more than one required.)

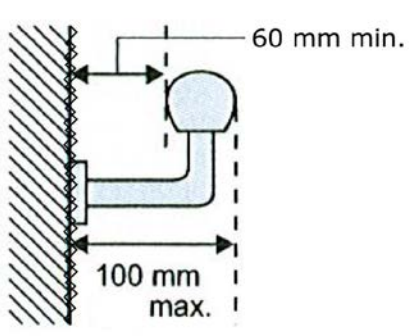
Handrails

3.4.6.5. Handrails

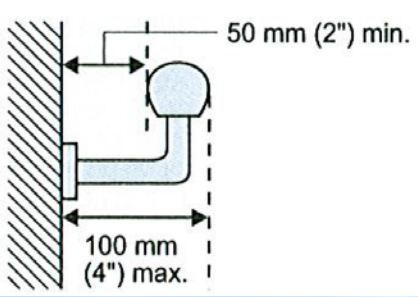
(13) The clearance between a handrail and any surface behind it shall be not less than,

(a) 60 mm, if the surface behind the handrail is rough or abrasive, or

(b) 50 mm, in all other cases.



The clearance between a handrail and wall has been increased to 60mm if the wall is rough or abrasive.



Note: There is no increase in the total projection into the stair (3.4.3.4.(4)). Therefore, a 40mm dia or less sized handrail would be required.

Handrails

3.4.6.5. Handrails

(14) Handrails and their supports shall be designed and constructed to withstand the loading values specified in Sentence 4.1.5.14.(7).

Loading values for handrails previously listed in Sentence 3.4.6.5.(14) have been moved to Part 4.

Guards

ARTICLE REVISED

3.4.6.6. Guards

(1) Every *exit* shall have a wall or a well-secured *guard* on each side where,

(a) the difference in level is more than 600 mm between the walking surface and the adjacent surface, or

(b) the adjacent surface within 1 200 mm of the walking surface has a slope of more than 1 in 2 away from the walking surface.

(2) Except as required by Sentence (4), the height of *guards* for *exit* stairs and *exit* ramps, as well as their landings, shall be not less than 1 070 mm.

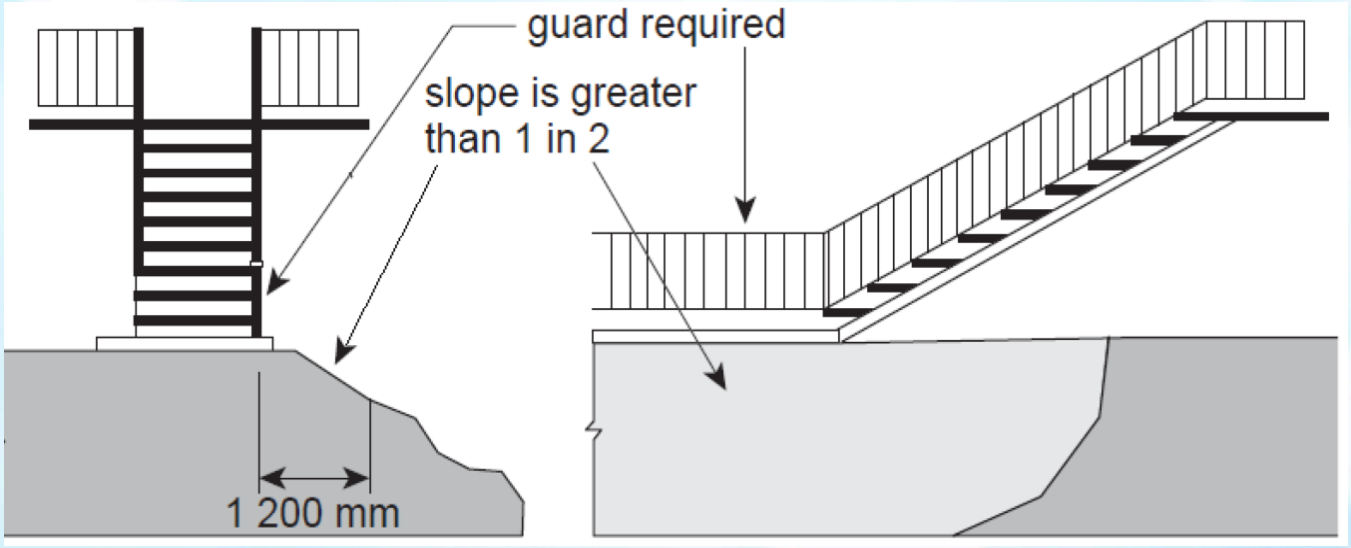
(3) The height of *guards* shall be measured vertically to the top of the *guard* from,

(a) a line drawn through the outside edges of the tread nosings, or

(b) the surface of the ramp or landing.

Guards

Revised to align with other parts of code (ie >600mm or adjacent sloped surface).



Height of required guards for exit stairs and ramps now 1070mm. (previously 920mm).

Ramp Slope

3.4.6.7. Ramp Slope

(1) Except as required for aisles by Article 3.3.2.4., the maximum slope of a ramp shall be,

(a) 1 in 10 in any *assembly*, *care*, *care and treatment*, *detention* or *residential occupancy*,

(b) 1 in 6 in an *industrial occupancy*,

(c) 1 in 8 in all other *occupancies*, and

(d) 1 in 10 for an exterior ramp.

Mercantile occupancies are now grouped with more restrictive occupancies and must now meet a maximum slope of 1 in 8, resulting in a longer ramp.

Note: this applies to non-barrier free ramps only.

Treads and Risers

3.4.6.8. Treads and Risers
(1) Except as permitted for *dwelling units* and by Sentence 3.4.7.5.(1) for fire escapes, steps in *flights* shall have a *run* of not less than 280mm and not more than 355 mm between successive steps.

Minimum stair run increased from 255mm to 280mm. The length of the stair will now be longer.

Note: this now aligns with Part 9 – Table 9.8.4.1. which changed a few years back.

Treads and Risers

3.4.6.8. Treads and Risers

(2) Steps referred to in Sentence (1) shall have a rise between successive treads not less than 125 mm and not more than 180 mm.

Maximum stair rise has decreased from 200mm to 180mm, therefore stairs will be longer (more runs/treads required).

Note: this now aligns with Part 9 – Table 9.8.4.1. which changed a few years back.

Treads and Risers

NEW SENTENCE

3.4.6.8. Treads and Risers

(2.1) Steps in *flights* shall have no open risers,

(a) except as provided in Article 3.3.4.7 ., and

(b) except for the following stairs:

(i) fire escape stairs,

(ii) stairs that are principally used for maintenance and service, and

(iii) stairs that serve *industrial occupancies* other than *storage garages*.

Curved Flights in Exits

NEW ARTICLE

3.4.6.9. Curved Flights in Exits

(1) *Flights* used as an *exit* shall consist solely of,

(a) straight *flights*, or

(b) curved *flights* complying with Sentence (2).

(2) A curved *flight* used as an *exit* shall have,

(a) a handrail on each side,

(b) treads with a minimum *run* of 240 mm,

(c) treads with a *run* that conforms to Article 3.4.6.8 . when measured at a point 300 mm from the centre line of the inside handrail, and

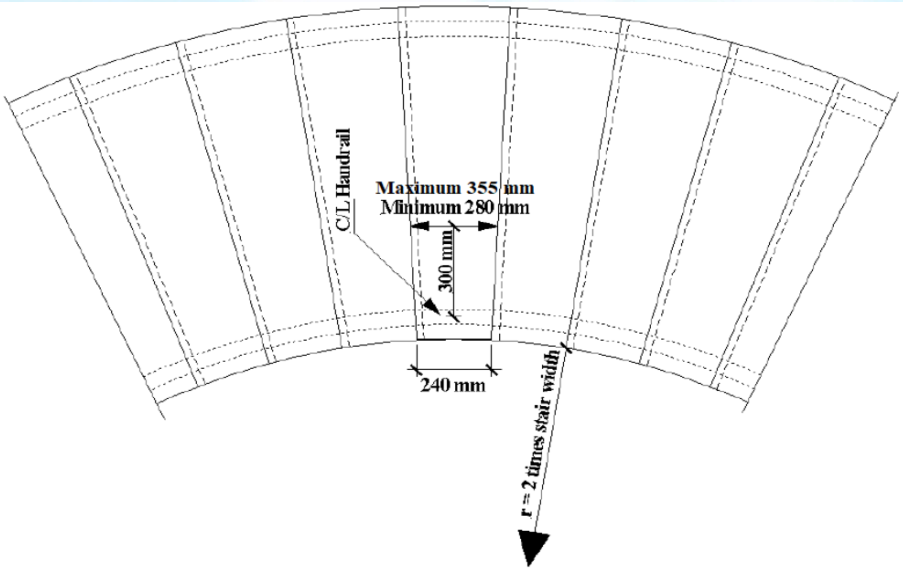
(d) an inside radius that is not less than twice the stair width.

Curved Flights in Exits

(3) *Tapered treads* shall have a consistent angle and uniform *run* and rise dimensions in accordance with the construction tolerances described in Article 3.4.6.8. when measured at a point 300 mm from the centre line of the inside handrail.

(4) All *tapered treads* within a *flight* shall turn in the same direction.

Curved stair dimension measurements changed, and further impacted by the changes made under Article 3.4.6.8.



Tapered Treads for *Exits*

Part 4

Code Changes

Jenny Taylor, Municipal Building Official

Loads on Guards and Handrails

4.1.5.14. Loads on Guards and Handrails

(2) The minimum specified horizontal load applied inward at the minimum required height of every required *guard* shall be half that specified in Sentence (1).

(3) Individual elements within the *guard*, including solid panels and pickets, shall be designed for a load of 0.5 kN applied outward over an area of 100 mm by 100 mm located at any point in the element or elements so as to produce the most critical effect.

Loads on Guards and Handrails

4.1.5.14. Loads on Guards and Handrails

(4) The size of the opening between any two adjacent vertical elements within a *guard* shall not exceed the limits required by Part 3 when each of these elements is subjected to a specified *live load* of 0.1 kN applied in opposite directions in the in-plane direction of the *guard* so as to produce the most critical effect.

(7) Handrails and their supports shall be designed and constructed to withstand the following loads, which need not be considered to act simultaneously:

(a) a concentrated load not less than 0.9 kN applied at any point and in any direction for all handrails, and

(b) a uniform load not less than 0.7 kN/m applied in any direction to handrails not located within *dwelling units*.

Note: Sentence (4) and (7) are not new to the Code. They have been relocated from Part 3.

Loads on Vehicle Guardrails

4.1.5.15. Loads on Vehicle Guardrails

(1) Vehicle guardrails shall be designed for a concentrated load of 22 kN applied horizontally outward at any point 500 mm above the floor surface so as to produce the most critical effect.

NEW SENTENCE

(2) The loads described in Sentence (1) need not be considered to act simultaneously with the loads provided for in Article 4.1.5.14.


ANY QUESTIONS?

Closing Remarks

Tim Benedict

Manager, Building

In the works….

- CLEVEST
- Repeat Houses (pilot)
- Determination of grade

  Creating internal Standard Practice to assist with consistency in determining ‘finished ground’ adjoining a building as it relates to localized depressions and projections, retaining walls, sunken terraces, etc. for establishing average grade.
- Alternative Solution Process

  Being reviewed internally, likely no or minimal impact to industry however, updated forms are likely to follow.
- Next Edition of the Ontario Building Code currently open for public consultation.

  Industry stakeholders are encouraged to review and provide comments
  https://www.ontariocanada.com/registry/view.do?postingId=39287&language=en

Questions

Thank You

Contact Info

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