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ADVISORY HANDRAIL CONTINUITY AT STAIR WINDERS – PART 9

BUILDING CODE SERVICES



HANDRAIL CONTINUITY AT STAIR WINDERS

This advisory applies to handrail continuity at winders, for stair systems within a house or individual dwelling unit.

PURPOSE OF ADVISORY

The safest method to incorporate a turn within a stair system is to use a landing however the Ontario Building Code permits the use of winders within dwelling units, where occupants are familiar with their environment. The guidance and support provided by a handrail is particularly important throughout the turn of the winder, where the individual treads converge to a centre point. This advisory outlines handrail continuity requirements, to ensure a safe transition is provided for stair users throughout the turn of the winder.

DEFINITIONS

The Ontario Building Code does not define a winder, however 9.8.4.5.(1) notes that stairs within dwelling units are permitted to contain winders that converge to a centre point provided,

- The winders turn through an angle of not more than 90°
- Individual treads turn through an angle of not less than 30° or not more than 45°, and
- Adjacent winders turn through the same angle

Flight means a series of steps between landings.

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

LIMITATIONS AND CONDITIONS

This advisory does not apply to the following:

- Handrails in occupancies other than a house or individual dwelling unit
- Other handrails in addition to required handrails
- Angled treads (curved stair configuration)
- Spiral stairs

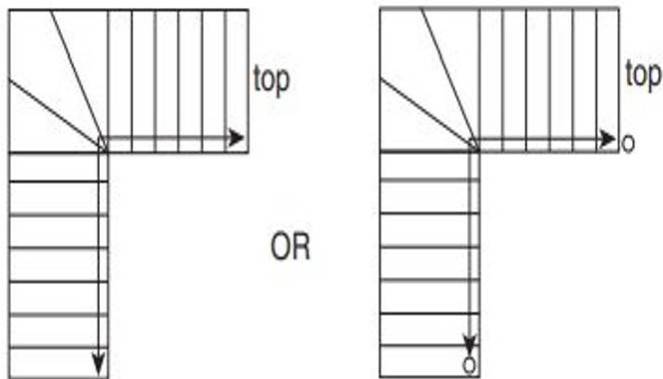
DESCRIPTION

9.8.7.2.(2) of the Ontario Building Code notes that for stairs serving a house or an individual dwelling unit, at least one required handrail shall be continuous throughout the length of the stair, except where interrupted by doorways, landings, and newel posts at changes in direction.

As per Appendix A-9.8.7.2. of the Ontario Building Code, winders are considered as a part of the stair *flight* and are not considered as a change in direction. Therefore, the required handrail at a winder shall be continuous and elements that break a handhold are not permitted.

Handrail/guard designs often incorporate a newel post at the winder for structural rigidity. The requirement for a continuous handrail at the winder may impact the overall handrail/guard design, where the required handrail is located at the narrow end of the winders. In certain stair configurations, the required continuous handrail can easily be accommodated on the wall side of the winder instead.

Figure A-9.8.7.2. from Appendix A of the Ontario Building Code illustrates handrail continuity through the length of flight, including throughout the turn at winders.



- ↔ Minimum extent of handrail where handrail is required
- Newel Post at top and bottom of stair flight