

STAIRS – House

ONTARIO BUILDING CODE

The Ontario Building Code requires that all stairs meet specific requirements related to the rise, run, and width. This guide does not address spiral stairs or tapered treads. Additional OBC requirements apply to these configurations.

Steps

Steps are required to be constructed with equal rise and run throughout each flight of stairs measured from the ground at the bottom of the stairs to the top of an intermediate landing or the top of the deck. The top step and bottom step are usually the most problematic due to grading changes.

Stairs are required to be a minimum 34 inches wide. A flight of stairs must be provided with a landing if the change in height exceeds 12 feet 1 inch. Each step within a flight of stairs is required to have a 1 inch nosing. Stringers must have $3\frac{5}{8}$ " between cut and bottom as per OBC.

The table below lists the minimum and maximum dimensions.

Stair Type	All Steps		Rectangular Treads	
	Rise (inches)		(Run)	
	Min.	Max.	Min.	Max.
Private*	$4\frac{15}{16}$ "	$7\frac{7}{8}$ "	$10\frac{1}{16}$ "	14"
Public**	$4\frac{15}{16}$ "	$7\frac{1}{16}$ "	11"	No Limit

*Private Stair—interior stairs within and exterior stairs serving a house or individual dwelling unit, and exterior stairs serving a garage that serves a house or a single dwelling unit

** Public Stair—all other stairs not considered to be service stairs or private stairs

Guards and Handrails

A guard is required on the stair where the stairs are higher than $23\frac{5}{8}$ inches. Guard pickets cannot be spaced more than $3\frac{15}{16}$ inches apart. Pickets are required to resist a force of 0.1Kn (22.5 lbf) applied in opposite direction the picket is installed. No horizontal members may be installed on the guard between $5\frac{1}{2}$ inches and $35\frac{7}{8}$ inches above the walking surface that could facilitate climbing.

Interior stairs (including garage stairs) with 3 or more steps, and exterior stairs that have 4 or more steps require a handrail. Handrails must be located at a height between $34\frac{1}{16}$ inches and $42\frac{1}{8}$ inches and must be graspable their entire length. On stairs serving a house, only one side of the stair is required to

The Ontario Building Code now requires that the triangular opening formed by the stair riser, stair tread, and the bottom rail of the guard to be of a size that will prevent the passage of a 150 mm (5 5/8")

Pickets within a guard are required to spread no more than 100 mm (3 15/16") when a force is applied within the guard.

