

NOTCHING AND DRILLING OF FRAMING MEMBERS

ONTARIO BUILDING CODE

9.23.5.1. Holes Drilled in Framing Members

- (1) Holes drilled in roof, floor or ceiling framing members shall be not larger than one-quarter the depth of the member and shall be located not less than 50 mm (2") from the edges, unless the depth of the member is increased by the size of the hole.

9.23.5.2. Notching of Framing Members

- (1) Floor, roof and ceiling framing members are permitted to be notched provided the notch is located on the top of the member within half the joist depth from the edge of bearing and is not deeper than one third the joist depth, unless the depth of the member is increased by the size of the notch.

9.23.5.3. Wall Studs

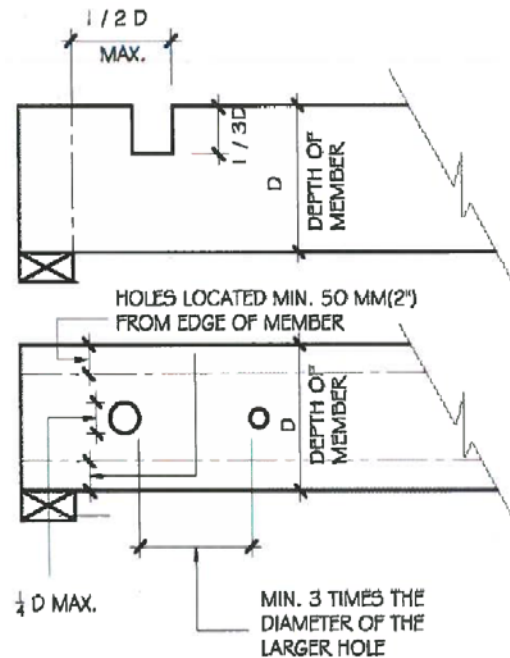
- (1) Wall studs shall not be notched, drilled or otherwise damaged so that the undamaged portion of the stud is less than two thirds the depth of the stud is load bearing or 40 mm (1 3/4") if the stud is non load bearing, unless the weakened studs are suitably reinforced.

9.23.5.4. Top Plates

- (1) Top plates in walls shall not be notched, drilled or otherwise weakened to reduce the undamaged width to less than 50 mm (2") unless the weakened plates are suitably reinforced.

OBJECTIVE

The sizes and number of holes drilled in wood framing members must be kept to a minimum. When framing members are drilled or notched for the passage of piping, cables or other services, care must be taken not to reduce the strength of the structural member. The illustrations and table below depict the size and location of holes and notches in framing members permitted by the building code.



MEMBER SIZE	MAXIMUM DISTANCE OF NOTCH FROM EDGE OF SUPPORT	MAXIMUM DEPTH OF NOTCH	MAXIMUM HOLE DIAMETER
38 x 89 mm (2x4)	44 mm (1 3/4")	30 mm (1 1/8")	NOT PERMITTED
38 x 140 mm (2x6)	70 mm (2 3/4")	46 mm (1 3/4")	35 mm (1 3/8")
38 x 184 mm (2x8)	92 mm (3 5/8")	61 mm (2 3/8")	46 mm (1 3/4")
38 x 235 mm (2x10)	117 mm (4 5/8")	78 mm (3")	58 mm (2 1/4")
38 x 286 mm (2x12)	143 mm (5 5/8")	95 mm (3 3/4")	71 mm (2 3/4")