

ONTARIO BUILDING CODE

3.1.9.4. Combustible Piping Penetration

- (2) Combustible piping that is part of a system described in Sentence (1) shall not be located in a vertical service space
- (3) Except as provided by Sentences (4) to (7), combustible piping is permitted to penetrate a fire separation required to have a fire resistance rating or is permitted to penetrate a membrane that forms part of an assembly required to have a fire resistance rating, provided the piping is sealed at the penetration by a fire stop that has an F rating not less than the fire resistance rating required for the fire separation when subjected to the fire test method in CAN/ULC-S115, "Fire Tests of Fire stop Systems", with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side.
- (4) Except as required by sentence (7), combustible drain piping is permitted to penetrate a horizontal fire separation, provided it leads directly from non combustible water closet through a concrete floor slab and the piping is sealed at the penetration by a fire stop in conformance with Clause 3.1.9.1.(1)(a).
- (5) Except as required by Sentence (7), combustible piping is permitted to penetrate a vertical or horizontal fire separation, provided the fire compartments on each side of the fire separation are sprinklered and the piping is sealed at the penetration by a fire stop in conformance with Clause 3.1.9.1.(1)(a).
- (6) Except as required by Sentence (7), combustible piping not more than 25mm in diameter containing chlorine gas is permitted to penetrate a fire separation between a chlorine gas service room built in conjunction with a public pool or public spa and the remainder of the building, provided the piping is sealed at the penetration by a fire stop in conformance with Clause 3.1.9.1(1) (a)
- (7) Where combustible piping penetrates a firewall or a horizontal fire separation described in Sentence 3.2.1.2.(1) the piping shall be sealed at the penetration by a fire stop that has a FT rating not less than the fire resistance rating required for the fire wall or horizontal fire separation when subjected to the fire test method in CAN/ULC-s115, "Fire Test of Firestop Systems", and
 - (a) The fire stop shall have been tested with a pressure differential of 50 Pa between the exposed and unexposed sides with the higher pressure on the exposed side, or
 - (b) The fire compartments on each side of the fire wall or horizontal fire separation shall be sprinklered.
- (8) Combustible piping for central vacuum cleaning system is permitted to penetrate a fire separation provided the installation conforms to the requirements that apply to combustible piping specified in Sentence (3).

OBJECTIVES

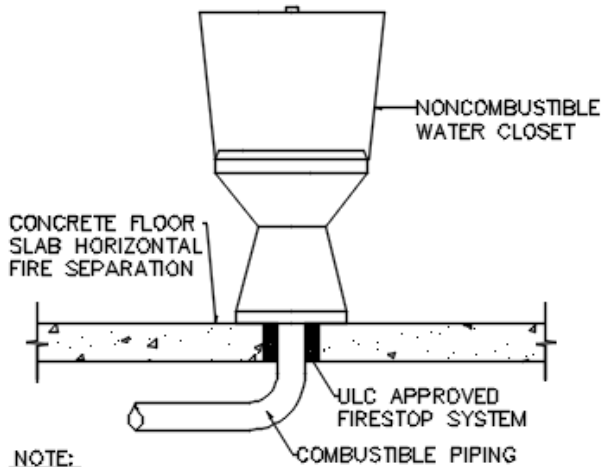
When combustible piping penetrates a fire separation the melting of the pipe caused by a fire may allow fire and smoke to enter another fire compartment. For this reason the code requires all service penetrations to be fire stopped. This minimizes the amount of smoke entering another fire compartment. See diagram (C).

A reinforced concrete floor acting as a horizontal fire separation is permitted to be penetrated by a combustible piping if the pipe leads directly to a non combustible water closet and is fire stopped with a fire stop material with an F rating not less than the fire-protection rating required for closures in the fire separation in conformance with Table 3.1.8.4. See diagram (A). Vertical or horizontal firewall separations similar to parking garages require FT rating.

When transitioning from ferrous material to non-metallic material below the horizontal fire separation, see diagram (B), the minimum distances as shown must be maintained for the non-metallic material in order to comply with the Building Code and the applicable Building Code reference standard. Professional consultant are required to submit a Fire Stop information form listing all fire stop systems for approval prior to commencement of project. Consult your building inspector for a copy of the Fire Stop information form.

Builder Tip

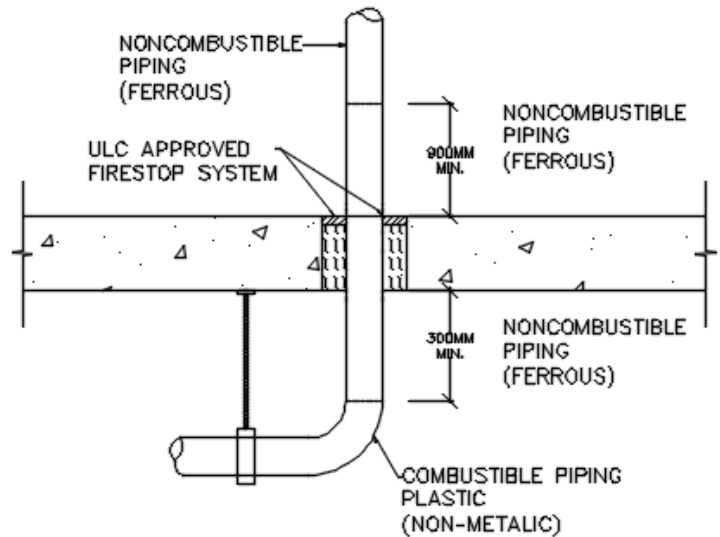
FIRE STOPPING OF COMBUSTIBLE PIPING PENETRATIONS



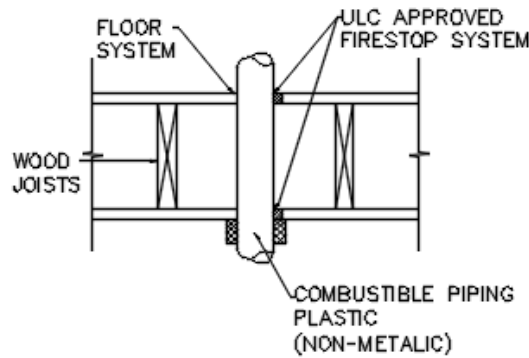
NOTE:
 IF NONCOMBUSTIBLE PIPING IS USED THE ANULAR OPENING IS REQUIRED TO BE FIRESTOPPED WITH AN F RATING FIRESTOPPING SYSTEM

DIA. A

TRANSITION FROM NON-COMBUSTIBLE TO COMBUSTIBLE PIPING



DIA. B



DIA. C