

9.13.4.3. Providing for the Rough-in for a Subfloor Depressurization System
From National Building Code-2019 Alberta Edition NBC(AE) Division B

- 1) Floors-on-ground shall be provided with a rough-in for subfloor depressurization consisting of
 - a) a gas-permeable layer, an inlet and an outlet as described in Sentence (2), or
 - b) clean granular material and a pipe as described in Sentence (3).
- 2) The rough-in referred to in Clause (1)(a) shall include
 - a) a gas-permeable layer installed in the space between the air barrier and the ground to allow the depressurization of that space,
 - b) an inlet that allows for the effective depressurization of the gas-permeable layer (see A-9.13.4.3.(2)(b) and (3)(b)(i)), and
 - c) an outlet in the conditioned space that
 - i) permits connection to depressurization equipment,
 - ii) is sealed to maintain the integrity of the air barrier system, and
 - iii) is clearly labelled to indicate that it is intended only for the removal of radon from below the floor-on-ground.
- 3) The rough-in referred to in Clause (1)(b) shall include
 - a) clean granular material installed below the floor-on-ground in accordance with Sentence 9.16.2.1.(1), and
 - b) a pipe not less than 100 mm in diameter installed through the floor, such that
 - i) its bottom end opens into the granular layer required Clause (a) at or near the centre of the floor and not less than 100 mm of granular material projects beyond the terminus of the pipe measured along its axis (see A-9.13.4.3.(2)(b) and (3)(b)(i) in Appendix A),
 - ii) its top end permits connection to depressurization equipment and is provided with an airtight cap, and
 - iii) the pipe is clearly labelled near the cap and, if applicable, every 1.8 m and at every change in direction to indicate that it is intended only for the removal of radon from below the floor-on-ground.

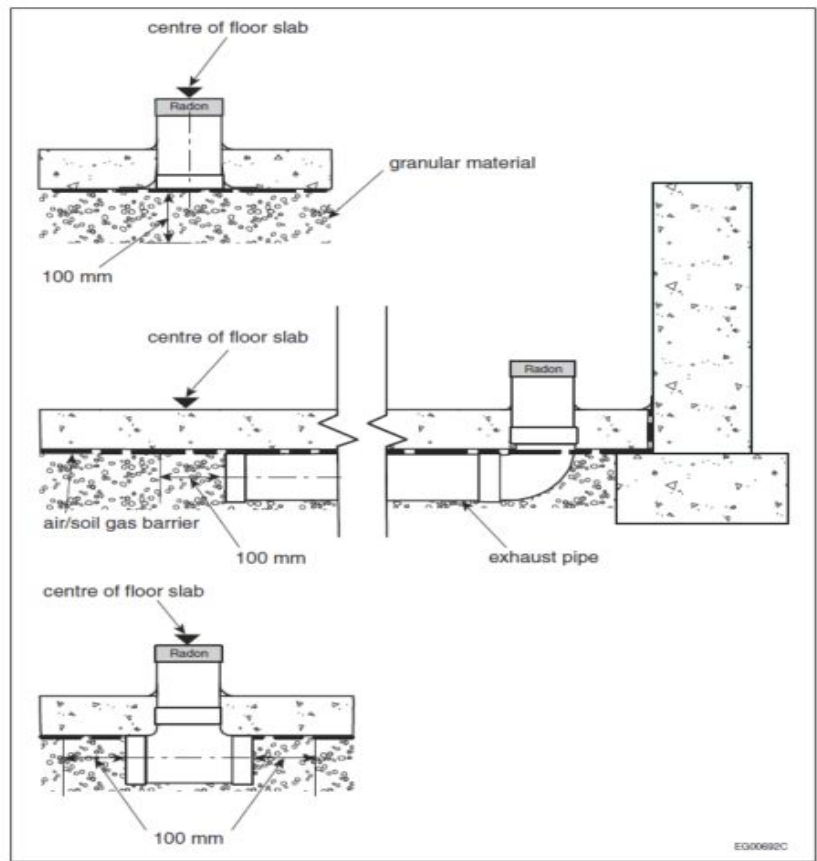
A -9.13.4.3. Providing Performance Criteria for the Depressurization of the Space Between the Air Barrier and the Ground

...Sentence (2) describes the criteria for subfloor depressurization systems using performance-oriented language, while Sentence (3) describes one particular acceptable solution using more prescriptive language. In some cases, subfloor depressurization requires a solution other than the one described in Sentence (3), for example, where compactable fill is installed under slab-on-grade construction.

Completion of a Subfloor Depressurization System

The completion of a subfloor depressurization system may be necessary to reduce the radon concentration to a level below the guideline specified by Health Canada. Further information on protection from radon ingress can be found in the following Health Canada publications:

- “Radon: A Guide for Canadian Homeowners” (CMHC/HC), and
- “Guide for Radon Measurements in Residential Dwellings (Homes).”



NBC(AE): Figure A-9.13.4.3.(2)(b) and (3)(b)(i) Acceptable configurations for the extraction opening in a depressurization system