

9.13.4. Soil Gas Control

(See Note A-9.13.4.)

9.13.4.1. Application and Scope

- 1) This Subsection applies to
 - a) wall, roof and floor assemblies separating *conditioned space* from the ground, and
 - b) the rough-in of a radon vent pipe to allow the future protection of *conditioned space* that is separated from the ground by a wall, roof or floor assembly.
- 2) This Subsection addresses the leakage of *soil gas* from the ground into the *building*.

9.13.4.2. Protection from Soil Gas Ingress

- 1) All wall, roof and floor assemblies separating *conditioned space* from the ground shall be protected by an *air barrier system* conforming to Subsection 9.25.3.
 - 2) Except as permitted by Sentence (4), unless the space between the *air barrier system* and the ground is designed to be accessible for the future installation of a subfloor depressurization system, *dwelling units* and *buildings* containing *residential occupancies* shall be provided with the rough-in for a radon extraction system conforming to Article 9.13.4.3.
 - 3) Except as permitted by Sentence (4) or (5), where *buildings* are used for *occupancies* other than those described in Sentence (2) and are intended to be occupied on average for greater than 4 hours within a 24 hour period, protection from radon ingress and the means to address high radon concentrations in the future shall conform to
 - a) Article 9.13.4.3., or
 - b) Parts 5 and 6 (see Article 5.4.1.1. and 6.2.1.1.).
- (See Note A-9.13.4.2.(3).)
- 4) Locations requiring radon rough-ins shall be determined in accordance with Article 1.1.3.3. of Division A.
 - 5) *Buildings* described in Clause 9.16.2.1.(2)(b) need not conform to Sentence (3).

9.13.4.3. Rough-in for a Subfloor Depressurization System

(See Note A-9.13.4.3.)

- 1) Floors-on-ground shall be provided with a rough-in for subfloor depressurization consisting of
 - a) a gas-permeable layer and a radon vent pipe as described in Sentence (2), or
 - b) a gas-permeable layer consisting of coarse clean granular material and a radon vent pipe as described in Sentence (3).
- 2) Where a rough-in referred to in Clause (1)(a) is provided, the rough-in shall include
 - a) a gas-permeable layer installed in the space between the *air barrier system* and the ground to allow the depressurization of that space,

- b) reserved, and
 - c) a radon vent pipe that
 - i) has one or more inlets that allow for the effective depressurization of the gas-permeable layer (see Notes A-9.13.4.3.(2)(c)(i) and (3)(b)(i)),
 - ii) terminates outside the *building* in a manner that does not constitute a hazard, and
 - iii) is clearly labeled "RADON VENT PIPE".
- 3)** Where a rough-in referred to in Clause (1)(b) is provided, the rough-in shall include
- a) a gas-permeable layer, consisting of not less than 100 mm of clean granular material containing not more than 10% of material that will pass a 4 mm sieve, installed below the floor-on-ground, and
 - b) a radon vent pipe not less than 100 mm in diameter that is constructed so as to be airtight and installed through the floor-on-ground, such that
 - i) it opens into each contiguous area of the granular layer required by Clause (a) and not less than 100 mm of granular material projects beyond the terminus of the pipe measured along its axis (see Note A-9.13.4.3.(2)(c)(i) and (3)(b)(i)),
 - ii) it terminates not less than 1 m above and not less than 3.5 m in any other direction from any air inlet, door or openable window,
 - iii) it terminates not less than 2 m above and not less than 3.5 m in any other direction from a roof that supports an *occupancy*,
 - iv) it terminates not less than 1.8 m from a property line,
 - v) it is shielded from the weather in accordance with Sentence 6.3.2.9.(4),
 - vi) it is protected from frost closure by insulating the pipe or by some other manner, if subject to frost closure,
 - vii) the accumulation of moisture in the pipe is prevented, and
 - viii) it is clearly labelled "RADON VENT PIPE" every 1.2 m and at every change in direction.

(See Note A-9.13.4.3.(3))