

Request for Alternative Solution

Explanation of variance An alternative solution is written permission issued to build, install, process or otherwise act in a manner not consistent with the specific requirements of an applicable code, standard or regulation but which provides, in the opinion of the issuing Administrator or Safety Codes Officer, an equivalent or greater level of safety to persons and property. An alternative solution issued by a Safety Codes Officer is site specific. An alternative solution sets no precedent.

Date of request Date of Request: _____
Name and address of owner and/or owner's agent requesting variance Name of Applicant: _____
 Address: _____
 City, Prov, PC: _____

Code item to be varied National Building Code-2019 Alberta Edition, Division B:
9.25.3.6 Air Barrier Systems in Floors-on-ground
 2) Where the floor-on-ground is a concrete slab, the air barrier shall be
 a) installed below the slab,...

9.16.2.1. Required Installation of Granular Material
 1) Except as provided in Sentence (2), not less than 100 mm of coarse clean granular material containing not more than 10% of material that will pass a 4mm sieve shall be placed beneath floors-on-ground...

9.13.4.3. Providing for the Rough-in for a Subfloor Depressurization System
 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).

These functional and objective statements are attributed to the provisions to be varied:

Functional Statement		Objective Statement
F40 To limit the level of contaminants.	so that	OH1.1, OH1.2, OH 1.3 a person in the building or facility will be exposed to an unacceptable risk of illness due to: <ul style="list-style-type: none"> • inadequate indoor air quality • inadequate thermal comfort • contact with moisture
F60, To control the accumulation and pressure of water on and in the ground.		
F61 To resist the ingress of precipitation, water or moisture from the exterior or from the ground.		OS2.3 a person in or adjacent to the building or facility will be exposed to an unacceptable risk of injury due to damage to or deterioration of building or facility elements.

Reason for requiring a variance To allow the installation of the Polycore RFloor no-concrete basement slab system in place of the prescriptive code solution. The RFloor will provide proper soil gas control as well as superior insulation and energy efficiency, installing faster and easier for less cost than prescriptive solutions.

Details of proposed variance A variance is hereby requested with regards to the requirements indicated above, with the following alternative measures provided:

Air Barrier: The RFloor uses a 6mil poly layer as an air/soil gas barrier located below the subfloor layer with edge and penetration sealing to prevent gases entering the living area
Granular Material: The RFloor has an interconnected channel and groove system to provide a pathway for all soil gases from any point below the system to a removal vent pipe.
Depressurization Rough-In: The RFloor is installed with a connection extending into the channel and groove system for direct access to soil gasses below the air barrier layer for connection of any required depressurization system.
Energy Efficiency: The RFloor assembly provides an effective R19.97 (RSI3.517) that significantly exceeds the energy efficiency required by codes or provided by prescriptive solutions

Supporting documentation providing proof of equal or greater safety performance

Supporting documentation is provided as follows:

- - White & White, Engineers RFloor overview and general information (October 16, 2020)
- - Dwng "Design of RFloor System for Radon Collection"
- - Install manual "Floor Panel with Radon - Basic Instructions"
- .

Address and/or legal description of the property upon which the thing, process or activity which is the subject-matter of the variance is located

Address: _____
City, Prov, PC: _____
Plan _____ Block _____ Lot _____

Authority under which the variance is being issued

This alternative solution may be issued under the authority of the Safety Codes Act, Chapter S-1 and Clause 1.2.1.1 (1) (b) of Division A of 2019 National Building Code - Alberta Edition.

Declaration of understanding

By signing below, the owner or owner's agent expressly acknowledges that the owner is aware of and agrees with this request for alternative solution, which is intended to provide an alternative to specific requirement(s) of the 2019 National Building Code - Alberta Edition, and that it is the responsibility of the owner to provide and maintain safety in accordance with the alternative solution.

Advisement of offence

Non-compliance with the requirements of this alternative solution is an offence under the Safety Codes Act. _____

Identification of owner or owner's agent

Signature _____
Owner: _____
Owner's agent _____