

Radon Mitigation Checklist

This checklist is applicable for wood frame residential structures. They do not include all code requirements. Therefore, they do not waive any specific code requirements not listed or allow for the decrease in the requirements of an engineered design. It also does not add requirements where the minimum of the code has been met.

Passive system (ORSC AF103.5)

Option 1 (ORSC AF103.5.1)

Item	ORSC Reference
Ventilation 1sq ft/1500 sq ft (underfloor)	R408.1
Soil-gas-retarder: 6-mil polyethylene or equivalent with 12” laps at joints	R408.1; AF103.5.1.2
Seal all penetrations through the floor system	AF103.4.1; AF103.4.9
Gasket any access into the crawl space to prevent air leakage	AF103.4.10
3” or 4” diameter plumbing Tee inserted horizontally under the Soil-gas-retarder	AF103.5.1.3
3” or 4” diameter vertical vent piping attached to the Tee and extended at least 12” above the roof level and 10’ away from openings	AF103.5.1.3
All exposed interior radon piping shall be clearly marked “Radon Reduction System” and shall be accessible for future fan installation	AF103.9; AF103.8
Electrical box shall be provided in attic or in anticipated location fans to provide for future installation of an active depressurization system and system failure alarm	AF103.12

Option 2 (ORSC AF103.5.2)

Item	ORSC Reference
Ventilation 1sq ft/150 sq ft (no reduction allowed)	AF103.5.2.1
Operable louvers, dampers or other means to temporarily stop the ventilation are not allowed	AF103.5.2.2
Seal all penetrations through the floor system	AF103.4.1; AF103.4.9
Gasket any access into the crawl space to prevent air leakage	Af103.4.10
Building tightness: the dwelling shall pass a blower door test. The dwelling shall exhibit no more than 5 air change per hour	AF103.5.2.3
The dwelling mechanical ventilation shall comply with Table N1101(3) or ASHRAE 62.2	AF103.5.2.3
Electrical box shall be provided in attic or in anticipated location fans to provide for future installation of an active depressurization system and system failure alarm	AF103.12

ORSC 2011
TABLE N1101.1(3)
VENTILATION AIR REQUIREMENTS, cfm

FLOOR AREA (FT ²)	BEDROOMS				
	0-1	2-3	4-5	6-7	>7
<1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
>7501	105	120	135	160	185

Mechanical Ventilation System (ORSC AF103.5 exception)

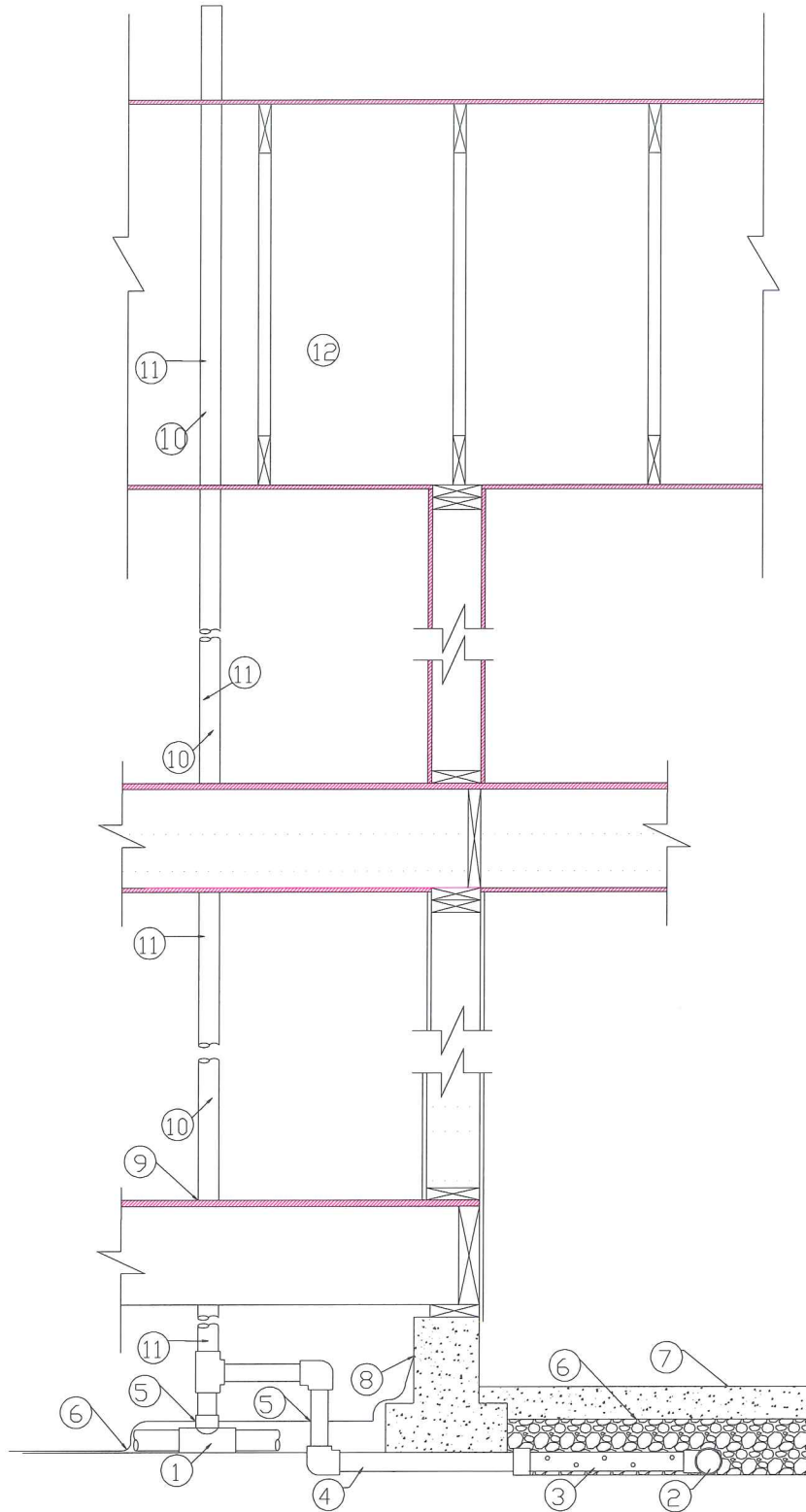
Item	ORSC Reference
Ventilation 1.0 cfm/50 sq ft	R408.1 exception 2
Seal all penetrations through the floor system	AF103.4.1; AF103.4.9
Gasket any access into the crawl space to prevent air leakage	AF103.4.10

Slab on grade (ORSC AF103.6)

Basement and concrete slab on grade building or garage with living space above.

Item	ORSC Reference
4" of clean aggregate 2"-1/4"+ or sand covered by drainage matting material	AF103.2
Soil-gas-retarder: 6-mil polyethylene or equivalent sheeting material on top of material listed in item 1	AF103.3
3" or 4" diameter plumbing Tee inserted horizontally embedded in sub-slab aggregate	
3" or 4" diameter vertical vent piping attached to the Tee or to 3" or 4" fitting and extended at least 12" above the roof level and 10' away from openings	AF103.6.1

Note: Combination basement/Crawl space or slab on grade/crawl space shall have separate radon vent pipes installed in each type of foundation area. Each radon vent pipe shall terminate above the roof or shall be connected to a single vent that terminates above the roof. (ORSC AF103.10)



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RADON PASSIVE
 MITIGATION SYSTEM

Revised:	Sheet:
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NOTES:

- ① 3" OR 4" PLUMBING TEE UNDER 6-MIL VAPOR BARRIER
- ② 3" OR 4" PLUMBING TEE IN 4" CLEAN AGGREGATE UNDER SLAB MAXIMUM SIZE OF AGGREGATE-MINIMUM SIZE OF AGGREGATE 2"-1/4"+ RESPECTIVELY.
- ③ 3" OR 4" PERFORATED PIPE
- ④ 3" OR 4" PIPE VENT OF UNDER CONCRETE SLAB. THIS VENT SHALL BE EXTENDED AND TERMINATED 12" ABOVE THE ROOF OR CONNECTED TO PIPE VENT FROM CRAWL SPACE.
- ⑤ SEAL VENT TO VAPOR BARRIER BY TAPING OR OTHER MEANS SUCH AS A HOSE CLAMP
- ⑥ 6-MIL POLYETHYLENE OR EQUIVALENT FLEXIBLE SHEETING MATERIAL. THE JOINTS SHALL BE LAPPED 12" AND SEALED OR TAPED.
- ⑦ CONCRETE SLAB ON GRADE
- ⑧ MEMBRANE SHALL BE SEALED AGAINST WALL WITH BEAD OF CAULK OR ADHESIVE.
- ⑨ SEAL THE PENETRATION
- ⑩ 3" OR 4" PIPE VENT SHALL BE EXTENDED AND TERMINATED 12" ABOVE THE ROOF
- ⑪ ALL EXPOSED AND VISIBLE INTERIOR RADON VENT PIPES SHALL BE IDENTIFIED WITH AT LEAST ONE LABEL AT EACH FLOOR AND IN AN ACCESSIBLE ATTIC. THE LABEL SHALL READ: "RADON REDUCTION SYSTEM"
- ⑫ PROVIDE AN ELETRICAL CIRCUIT TERMINATED IN AN APPROVED BOX FOR FUTURE INSTALLATION OF AN ACTIVE RADON MITIGATION SYSTEM AND A SYSTEM FAILURE ALARM.

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RADON PASSIVE
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Revised:	Sheet:
Project No.:	SK-2
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