

## Radon Vent Pipe Installation

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- A) All joints and connections in radon mitigation systems using plastic vent pipes shall be permanently sealed with adhesives as specified by the manufacturer of the pipe material used, with 2 exceptions:
- i) If secondary suction points are installed in sump pits, the system shall be designed with removable or flexible couplings to facilitate removal of the sump pit cover and for sump pump maintenance; and
  - ii) To facilitate maintenance and future replacement, radon vent fans shall be installed in the vent pipe using removable couplings or flexible connections that can be tightly secured to both the fan and the vent pipe.
- B) All joints and connections in radon mitigation systems using a 3-inch by 4-inch metal downspout on the exterior of a building shall be permanently sealed with appropriate sealants.
- C) Vent stack discharge points shall be directed vertically with no obstruction in the discharge except for a rodent screen of wire mesh no smaller than  $\frac{1}{4}$  inch. The rodent screen or wire mesh shall be installed in a manner that allows for easy removal for cleaning. Rain caps shall not be installed on the discharge.
- D) Radon vent pipes shall be fastened to the structure of the building with hangers, strapping, or other supports that will permanently secure the vent material. Existing plumbing pipes, ducts, or mechanical equipment shall not be used to support or secure a radon vent pipe.
- E) Radon vent pipes shall be supported as follows:
- i) Supports for radon vent pipes shall be installed at least every 6 feet on non-vertical runs.
  - ii) Vertical runs shall be secured either above or below the points of penetration through floors, ceilings and roofs.
  - iii) Vertical runs shall be secured at least every 8 feet on runs that do not penetrate floors, ceilings or roofs.
- F) To prevent blockage of air flow into the bottom of radon vent pipes, these pipes shall be supported or secured in a permanent manner that prevents their downward movement to the bottom of suction pits or sump pits, or into the soil beneath an aggregate layer under a slab.
- G) Radon vent pipes shall be installed in a configuration that ensures that any rain water or condensation within the pipes drains downward into the ground beneath the slab or soil gas retarder membrane.
- H) Radon vent pipes shall not block access to any areas requiring maintenance or inspection. Radon vents shall not be installed in front of or interfere with any light, opening, door, window or equipment access area required by code.
- I) When a radon mitigation system is designed to draw soil gas from a perimeter drain tile loop (internal or external) that discharges water through a drain line to daylight or a soakaway, a one-way flow valve, water trap, or other control device shall be installed if diagnostic testing indicates that outside air is entering the system.
- 4) Vent Stack Discharge Point. The discharge from vent stack pipes of active soil depressurization systems shall prevent re-entrainment of radon, prevent vent stack blockage due to heavy snowfall and prevent the direct exposure of individuals outside of buildings to high levels of radon by meeting all the following requirements:
- A) Above the highest eave of the roof and as close to the roof ridge line as possible, unless an attached garage may be used for vent stack pipe discharge and all the following additional conditions are met:

- i) The vent stack point penetrates the highest point on the roof that maximizes distance from people using the house, yard, patio, deck, etc.;
- ii) There are no windows in the direct line of sight from the vent stack point;
- iii) The vent stack point penetrates the farthest point on the roof that maximizes distance from the nearest opening (such as windows, doors, etc.) into the house and garage that is less than 2 feet below the exhaust point; and
- iv) The reason for routing through an attached garage shall be documented and maintained for inspection by the Agency;

B) 10 feet or more above ground level;

C) 10 feet or more from any window, door or other opening into conditioned spaces of the structure that is less than 2 feet below the exhaust point. The 10 feet may be measured either directly between the 2 points or be the sum of measurements made around intervening obstacles;

D) 10 feet or more from any opening into an adjacent building;

E) For vent stack pipes that penetrate the roof, at least 12 inches above the surface of the roof; and

F) For vent stack pipes attached to or penetrating the sides of buildings, vertical and at least 12 inches above the edge of the roof and in a position to prevent blockage from snow or other materials and from being filled with water from the roof or an overflowing gutter.