Passive Radon Control System for New Construction

Architectural Drawings of:
1) Passive radon control system
2) Crawlspace radon control system
3) Additional fan for active system

for one and two-family dwellings

These architectural drawings are intended for use by architects, home builders, designers, radon mitigators and others interested in the installation of passive radon control systems in one and two-family dwellings. For more information on radon and radon-resistant new construction call 1-800-55RADON or see the EPA web page:
www.epa.gov/iaq
PASSIVE SUB-SLAB DEPRESSURIZATION RADON
CONTROL SYSTEM FOR NEW CONSTRUCTION

NOTES:
1. ALL CONCRETE SLABS THAT COME IN CONTACT WITH THE GROUND SHALL
BE LAYED OVER A GAS PERMEABLE MATERIAL MADE UP OF EITHER A MINIMUM
4" THICK UNIFORM LAYER OF CLEAN AGGREGATE, OR A MINIMUM 4" THICK
UNIFORM LAYER OF SAND, OVERLAIN BY A LAYER OR STRIPS OF MANUFACTURED
MATING DESIGNED TO ALLOW THE LATERAL FLOW OF SOIL GASES.

2. ALL CONCRETE FLOOR SLABS SHALL BE DESIGNED AND CONSTRUCTED
IN ACCORDANCE WITH LOCAL BUILDING CODES. ADDITIONAL REFS:
AMERICAN CONCRETE INSTITUTE PUBLICATIONS, "ACI302.1R" &
"ACI323R", OR THE POST TENSIONING INSTITUTE MANUAL, "DESIGN
AND CONSTRUCTION OF POST-TENSIONED SLABS ON GROUND".

3. ALL OPENINGS, GAPS AND JOINTS IN FLOOR AND WALL ASSEMBLIES IN
CONTACT SOIL OR GAPS AROUND PIPES, TOILETS, BATHTUBS OR
DRAINS PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED
WITH MATERIALS THAT PROVIDE A PERMANENT AIR-TIGHT SEAL. SEAL
LARGE OPENINGS WITH NON-SHRINK MORTAR, GROUTS OR EXPANDING
FOAM MATERIALS AND SMALLER GAPS WITH AN ELASTOMERIC JOINT
SEALANT, AS DEFINED IN ASTM C920-87.

4. VENT PIPES SHALL BE INSTALLED SO THAT ANY RAINWATER OR
CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE
SLAB OR SOIL-GAS-RETARDER MEMBRANE.

5. CIRCUITS SHOULD BE A MINIMUM 15 AMP, 115 VOLT.
ADDITIONAL COMPONENTS REQUIRED FOR ACTIVATION
OF PASSIVE SUB-SLAB DEPRESSURIZATION OR
CRAWLSPACE RADON CONTROL SYSTEM

NOTES:
1. INSTALL THE VENT FAN IN THE VERTICAL RUN OF THE VENT PIPE. THE SIZE AND AIR MOVEMENT CAPACITY OF THE VENT FAN SHALL BE SUFFICIENT TO CREATE AND MAINTAIN A PRESSURE FIELD BENEATH THE SLAB OR CRAWLSPACE MEMBRANE THAT IS LOWER THAN THE PRESSURE ABOVE THE SLAB OR MEMBRANE.

2. ALL POSITIVELY PRESSURED PORTIONS OF THE VENT PIPE AND FAN SHALL BE LOCATED OUTSIDE THE HABITABLE SPACE OF THE BUILDING.

3. PROVIDE A VISIBLe OR AUDIBLE WARNING SYSTEM TO ALERT THE BUILDING OCCUPANT IF THERE IS A LOSS OF PRESSURE OR AIR FLOW IN THE VENT PIPE.
PASSIVE RADON CONTROL SYSTEM IN CRAWL SPACE FOR NEW CONSTRUCTION

NOTES:
1. INSTALL A LENGTH OF 3" OR 4" DIAMETER PERFORATED DRAIN TILE HORIZONTALLY BENEATH THE SHEETING AND CONNECT TO THE "T" FITTING WITH THE VERTICAL STANDPIPE THROUGH THE SOIL-GAS-RETARDER MEMBRANE. THIS HORIZONTAL PIPE SHOULD NORMALTY BE PLACED PARALLEL TO THE LONG DIMENSION OF THE HOUSE AND SHOULD EXTEND NO CLOSER THAN 6 FEET TO THE FOUNDATION WALL.

2. VENTILATE CRAWLSPACES IN CONFORMANCE WITH LOCAL CODES: VENTS SHALL BE OPEN TO THE EXTERIOR AND BE OF NONCLOSEABLE DESIGN.

3. CIRCUITS SHOULD BE A MINIMUM 15 AMP, 115 VOLT.