



IRC – Fuel-fired or Electric-powered Appliances in Crawl Space

The items in this handout utilize the 2018 International Residential Code ®. This handout is a guide only, and is not all-inclusive.

R302.13 FIRE PROTECTION OF FLOORS.

When a fuel fired or electric powered heating appliance (i.e. a water heater or HVAC unit) is installed in a crawl space having either floor trusses, I-joists, or floor joists less than 2x10, the floor system above must be fire protected. This may be done in one of the following three ways:

1. Install ½” moisture resistant gyp board or 5/8” structural panels over the entire floor system. Joints must be tight or caulked.
2. Enclose the equipment in a fire rated compartment or room. The interior of the enclosure must be lined with ½” moisture resistant sheetrock or other non-flammable (20 minute rated) moisture resistant material. An access panel or door must be provided for full access to the equipment. All clearances required by the manufacturer must also be adhered to. When this option is used only appliances that can be vented by manufacturer’s instructions and the code may be installed.
3. Install a sprinkler system above the unit(s). Sprinklers are not required in the remainder of the space. The use of domestic water shall be allowed for the sprinkler system. Water piping must be protected from freezing. Sprinkler discharge shall not be blocked by obstructions unless additional sprinklers are installed to protect the obstructed area. Pipe for sprinkler must be ¾” minimum undiminished in size (IRC P2904.1.1). This system must be installed by a certified installer.

