

2021 IRC AMENDMENTS – CHAPTER 1

****Section R101.1; amend to read as follows:**

R101.1 Title. These regulations shall be known as the *Residential Code for One- and Two-family Dwellings* of the City of Carrollton, and shall be cited as such and will be referred to herein as “this code.”

****Section R102.4; amend to read as follows:**

R102.4 Referenced codes and standards. The *codes*, when specifically adopted, and standards referenced in this *code* shall be considered part of the requirements of this *code* to the prescribed extent of each such reference and as further regulated in Sections R102.4.1 and R102.4.2. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference made to NFPA 70 or the *Electrical Code* shall mean the *Electrical Code* as adopted.

****Sections R103 and R103.1; amend to read as follows:**

SECTION 103 BUILDING INSPECTION

R103.1 Creation of enforcement agency. The Building Inspection Division of the Development Services Department is hereby created and the official in charge thereof shall be known as the *building official*. [Remainder Unchanged]

****Section R104.10.; delete.**

****Section R105.2, Item 1; amend to read as follows:**

1. Other than *storm shelters*, one-story detached *accessory structures*, provided that the floor area does not exceed 120 square feet (11.15 m²).

****Section 105.2, Item 2; amend to read as follows:**

2. Fences less than 20 feet in length.

****Section 105.2, Item 5; amend to read as follows:**

5. Sidewalks not more than 30 inches (762 mm) above adjacent grade and not over any basement below.

****Section R105.3.1.1; delete.**

****Section R106.1.4; delete.**

****Section R110; delete.**

2021 IRC AMENDMENTS – CHAPTER 2

******Section R202; amend definition of "Townhouse Unit" to read as follows:***

TOWNHOUSE UNIT. A single-family dwelling unit separated by property lines in a townhouse that extends from foundation to roof and that has a yard or public way on not less than two sides.

2021 IRC AMENDMENTS – CHAPTER 3

*****Table R301.2 (1); fill in as follows:**

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY ^f	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP ^e	ICE BARRIER UNDERLAYMENT ^h	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
	Speed ^d (mph)	Topographic effects ^k	Special wind region ^l	Windborne debris zone ^m		Weathering ^a	Frost line depth ^b	Termite ^c					
5 psf	115 (3-sec gust) / 76 fastest mile	No	No	No	A	Moderate	6"	Very Heavy	22°F	No	Local Code	150	64.9°F

Delete remainder of table Manual J Design Criteria and footnote N

****Section R302.1; add Exception 6 to read as follows:**

R302.1 Exterior walls.

[Existing text to remain]

6. Open non-combustible carport structures may be constructed when also approved within adopted ordinances.

*****Section R302.2.6; delete Exception 6.**

****Section R302.3; add Exception 3 to read as follows:**

R302.3 Two-family dwellings.

[Existing text to remain]

3. Two-family dwelling units that are also divided by a property line through the structure shall be separated as required for townhouses.

****Section R302.5.1; amend to read as follows:**

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors. ~~Doors shall be self-latching and equipped with a self-closing or automatic-closing device.~~

****Section R303.3, Exception; amend to read as follows:**

Exception: *[Existing text unchanged]* Spaces containing only a water closet or water closet and a lavatory may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

*****Section R307.3; add to read as follows:**

R307.3 Blocking. Required at one water closet at grade level. Blocking per Section R307.4 and Figure R307.4 shall be installed at rear wall and one wall adjacent to toilet at the lowest living level where a toilet is provided.

*****Section R307.4; add to read as follows and insert Figure R307.4:**

R307.4 Blocking. Blocking may be 1/2" plywood or equivalent or 2 x solid wood blocking flush with wall.

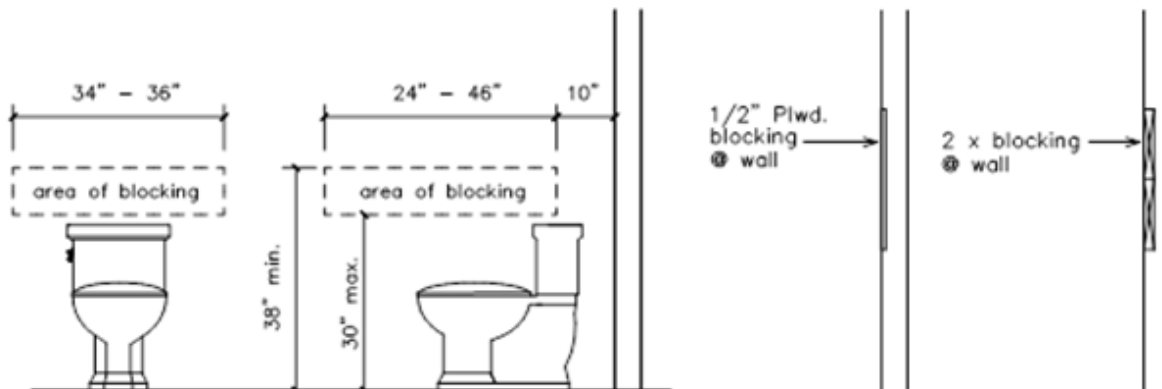


FIGURE R307.4 BLOCKING AT WATER CLOSET

****Section R313.2 and R313.2.1; delete.**

*****Section R315.2.2; amend to read as follows:**

R315.2.2 Alterations, repairs and additions.

[Existing text to remain]

Exceptions:

1. *[Existing text to remain]*
2. Installation, alteration or repairs of all electrically powered mechanical systems or plumbing appliances.
3. *[Delete]*

****Section R322; delete.**

****Section R327.1.1; add to read as follows:*

R327.1.1 Adjacency to Structural Foundation. Depth of the swimming pool and spa shall maintain a ratio of 1:1 from the nearest building foundation or footing of a retaining wall.

Exception: A ratio of less than 1:1 may be *approved* where supported by sealed engineered design drawings of the proposed new structure.

2021 IRC AMENDMENTS – CHAPTER 4

****Section R401.2; amend to read as follows:**

R401.2. Requirements. *[Existing text unchanged]*

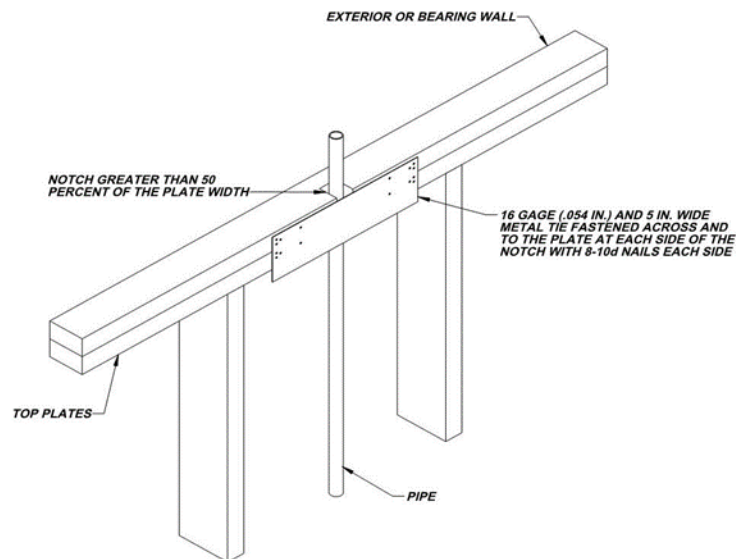
Every foundation and/or footing, or any size addition to an existing post-tension foundation regulated by this code shall be designed and sealed by a Texas-registered engineer.

2021 IRC AMENDMENTS – CHAPTER 6

****Section R602.6.1; amend to read as follows:**

R602.6.1 Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior *load-bearing* wall, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 ga) and ~~1½ inches (38 mm)~~ 5 inches (127 mm) wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) nails having a minimum length of 1½ inches (38 mm) at each side or equivalent. Fasteners shall be offset to prevent splitting of the top plate material. The metal tie must extend not less than 6 inches past the opening. See Figure R602.6.1. *[Remainder unchanged]*

****Figure R602.6.1; delete the figure and insert the following figure:**



2021 IRC AMENDMENTS – CHAPTER 7

****Add Section R703.8.4.1.2 to read as follows:**

R703.8.4.1.2 Vener Ties for Wall Studs. In stud framed exterior walls, all ties may be anchored to studs as follows:

1. When studs are 16 in (407 mm) o.c., stud ties shall be spaced no further apart than 24 in (737 mm) vertically starting approximately 12 in (381 mm) from the foundation; or
2. When studs are 24 in (610 mm) o.c., stud ties shall be spaced no further apart than 16 in (483 mm) vertically starting approximately 8 in (254 mm) from the foundation.

2021 IRC AMENDMENTS – CHAPTER 9

****Section R902.1; amend to read as follows:**

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B, or C roofing shall be installed ~~in jurisdictions designated by law as requiring their use or where the edge of the roof is less than 3 feet (914 mm) from a lot line.~~
[Remainder unchanged]

Exceptions:

1. [Existing text unchanged]
2. [Existing text unchanged]
3. [Existing text unchanged]
4. [Existing text unchanged]
5. Non-classified roof coverings shall be permitted on one-story detached accessory structures used as tool and storage sheds, playhouses, and similar uses, provided the floor area does not exceed 120 square feet (11.15 m²).

2021 IRC AMENDMENTS – CHAPTER 11

****Chapter 11 [RE] – Energy Efficiency is deleted in its entirety; Reference the 2021 IECC for energy code provisions and recommended amendments.**

2021 IRC AMENDMENTS – CHAPTER 13

****Section M1305.1.2; amend to read as follows:**

M1305.1.2 Appliances in attics. *[Existing text to remain]* As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.
2. A pull-down stair with a minimum 300-lb (136 kg) capacity.
3. An access door from an upper floor level.

Exceptions: *[Remaining text unchanged]*

2021 IRC AMENDMENTS – CHAPTER 14

****Section M1411.3; amend to read as follows:**

M1411.3 Condensate disposal. Condensate from all cooling coils or evaporators shall be conveyed from the drain pan outlet to ~~an approved place of disposal~~ a sanitary sewer through a trap, by means of a direct or indirect drain. *[Remaining text unchanged]*

****Section M1411.3.1, Items 3 and 4; add text to read as follows:**

M1411.3.1 Auxiliary and secondary drain systems.

[Existing text to remain]

1. *[Existing text unchanged]*
2. *[Existing text unchanged]*
3. *[Existing text to remain]* A water level detection device may be installed only with prior approval of the building official.
4. *[Existing text to remain]* A water level detection device may be installed only with prior approval of the building official.

****Section M1411.3.1.1; add text to read as follows:**

M1411.3.1.1 Water-level monitoring devices. *[Existing text unchanged]* A water level detection device may be installed only with prior approval of the building official.

2021 IRC AMENDMENTS – CHAPTER 15

****Section M1503.6; amend to read as follows:**

M1503.6 Makeup air required. Where one or more gas, liquid or solid fuel-burning appliance that is neither direct-vent nor uses a mechanical draft venting system is located within a dwelling unit's air barrier, each exhaust system capable of exhausting in excess of 400 cubic feet per minute (0.19 m³/s) shall be mechanically or passively provided with makeup air at a rate approximately ~~equal~~ to the difference between exhaust air rate and 400 cubic feet per minute. Such makeup air systems shall be equipped with not fewer than one damper complying with Section M1503.6.2.

Exception: Makeup air is not required for exhaust systems installed for the exclusive purpose of space cooling and intended to be operated only when windows or other air inlets are open. Where all appliances in the house are of sealed combustion, power-vent, unvented, or electric, the exhaust hood system shall be permitted to exhaust up to 600 cubic feet per minute (0.28 m³/s) without providing makeup air. Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute (0.28 m³/s) shall be provided with a makeup air at a rate approximately to the difference between the exhaust air rate and 600 cubic feet per minute.

2021 IRC AMENDMENTS – CHAPTER 20

****Section M2005.2; amend to read as follows:**

M2005.2 Prohibited locations. Fuel-fired water heaters shall not be installed in a room used as a storage closet. Water heaters located in a bedroom or bathroom shall be installed in a sealed enclosure so that *combustion air* will not be taken from the living space. Access to such enclosure may be from the bedroom or bathroom when through a solid door, weather-stripped in accordance with the exterior door air leakage requirements of the *International Energy Conservation Code* and equipped with an *approved* self-closing device. Installation of direct-vent water heaters within an enclosure is not required.

2021 IRC AMENDMENTS – CHAPTER 24

****Section G2408.3 (305.5); delete.**

****Section G2415.2 (404.2); add a second paragraph to read as follows:**

Both ends of each section of medium pressure gas piping shall identify its operating gas pressure with an approved tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

"WARNING: 1/2 to 5 psi gas pressure - Do Not Remove"

****Section G2415.12 (404.12); amend to read as follows:**

G2415.12 (404.12) Minimum burial depth. Underground *piping systems* shall be installed a minimum depth of ~~12 inches (305 mm)~~ 18 inches (457 mm) below grade, ~~except as provided for in Section G2415.12.1.~~

****Section G2415.12.1 (404.12.1); delete.**

****Section G2417.1 (406.1); amend to read as follows:**

G2417.1 (406.1) General. Prior to acceptance and initial operation, all piping installations shall be inspected and pressure tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of this code. The permit holder shall make the applicable tests prescribed in Sections 2417.1.1 through 2417.1.5 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the building official when the piping system is ready for testing. The equipment, material, power and labor necessary for the inspections and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

****Section G2417.4; amend to read as follows:**

G2417.4 (406.4) Test pressure measurement. Test pressure shall be measured with a monometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. ~~Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.~~

****Section G2417.4.1; amend to read as follows:**

G2417.4.1 (406.4.1) Test pressure. The test pressure to be used shall be no less than 3 psig (20 kPa gauge), or at the discretion of the Code Official, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge, irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe. For tests requiring a pressure of 3 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one half inches (3 ½”), a set hand, 1/10 pound incrementation and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 ½”), a set hand, a minimum of 2/10 pound incrementation and a pressure range not to exceed 20 psi. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing.

****Section G2417.4.2; change to read as follows:**

G2417.4.2 (406.4.2) Test duration. The test duration shall be held for a length of time satisfactory to the Building Official, but in no case for ~~be not~~ less than ~~10~~ fifteen (15) minutes. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the Building Official, but in no case for less than thirty (30) minutes.

****Section G2420.1 (406.1); add Section G2420.1.4 to read as follows:**

G2420.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel (CSST) piping systems shall be supported with an approved termination fitting, or equivalent support, suitable for the size of the valves, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration but in no case greater than 12-inches from the center of the valve. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings, and valves between anchors. All valves and supports shall be designed and installed so they will not be disengaged by movement of the supporting piping.

****Section G2420.5.1 (409.5.1); add text to read as follows:**

G2420.5.1 (409.5.1) Located within the same room. *[Existing text to remain]* A secondary shutoff valve must be installed within 3 feet (914 mm) of the firebox if appliance shutoff is located in the firebox.

****Section G2421.1 (410.1); add text and Exception to read as follows:**

G2421.1 (410.1) Pressure regulators. *[Existing text to remain]* Access to regulators shall comply with the requirements for access to appliances as specified in Section M1305.

Exception: A passageway or level service space is not required when the regulator is capable of being serviced and removed through the required attic opening.

****Section G2422.1.2.3 (411.1.3.3) Prohibited locations and penetrations; delete Exception 1 and Exception 4.**

****Section G2445.2 (621.2); add Exception to read as follows:**

G2445.2 (621.2) Prohibited use. One or more *unvented room heaters* shall not be used as the sole source of comfort heating in a *dwelling unit*.

Exception: Existing approved unvented room heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when approved by the building official unless an unsafe condition is determined to exist as described in International Fuel Gas Code Section 108.7 of the Fuel Gas Code.

****Section G2448.1.1 (624.1.1); amend to read as follows:**

G2448.1.1 (624.1.1) Installation requirements. The requirements for *water heaters* relative to access, sizing, *relief valves*, drain pans and scald protection shall be in accordance with this *code*.

2021 IRC AMENDMENTS – CHAPTER 26

****Section P2603; add to read as follows:**

P2603.3 Protection against corrosion. Metallic piping, except for cast iron, ductile iron and galvanized steel, shall not be placed in direct contact with steel framing members, concrete or cinder walls and floors or other masonry. Metallic piping shall not be placed in direct contact with corrosive soil. Where sheathing is used to prevent direct contact, the sheathing shall have a thickness of not less than 0.008 inch (8 mil) (0.203 mm) and the sheathing shall be made of approved material ~~plastic~~. Where sheathing protects piping that penetrates concrete or masonry walls or floors, the sheathing shall be installed in a manner that allows movement of the piping within the sheathing.

****Section P2603.5.1 Sewer Depth; amend to read as follows:**

P2603.5.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of 12 inches (304 mm) below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 12 inches (304 mm) below grade.

*****Section P2604.2.1; add to read as follows:**

P2604.2.1 Plastic sewer and DWV piping installation. Plastic sewer and DWV piping installed underground shall be installed in accordance with the manufacturer's installation instructions. Trench width shall be controlled to not exceed the outside the pipe diameter plus 16 inches or in a trench which has a controlled width equal to the nominal diameter of the piping multiplied by 1.25 plus 12 inches. The piping shall be bedded in 4 inches of granular fill and then backfilled compacting the side fill in 6-inch layers on each side of the piping. The compaction shall be to minimum of 85 percent standard proctor density and extend to a minimum of 6 inches above the top of the pipe.

2021 IRC AMENDMENTS – CHAPTER 28

****Section P2801.6; amend to read as follows:**

P2801.6 Required pan.

Where a storage tank-type water heater or a hot water storage tank is installed in a location where water leakage from the tank will cause damage, the tank shall be installed in a pan constructed of one of the following:

1. Galvanized steel or aluminum of not less than 0.0236 inch (0.6010 mm) in thickness.
2. Plastic not less than 0.036 inch (0.9 mm) in thickness.
3. Other *approved* materials.

~~A plastic pan beneath a gas-fired water heater shall be constructed of material having a flame spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL 723.~~

****Section P2801.6.1; amend to read as follows:**

Section P2801.6.1 Pan size and drain. The pan shall be not less than 1 1/2 inches (38 mm) in depth and shall be of sufficient size and shape to receive all dripping or condensate from the tank or water heater. The pan shall be drained by an indirect waste pipe having a diameter of not less than 3/4 inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table P2906.5.

Multiple pan drains may terminate to a single discharge piping system when *approved* by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions. [Remainder unchanged]

****Section P2804.6.1; amend to read as follows:**

Section P2804.6.1 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

1. [Existing text to remain]
2. Discharge through an air gap ~~located in the same room as the water heater.~~
3. [Existing text to remain]
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.

Exception: Multiple relief devices may be installed to a single T & P discharge piping system when approved by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

5. Discharge to the floor, ~~to the pan serving the water heater or storage tank, to a waste receptor~~ an *approved* location or to the outdoors.

[Remainder unchanged]

2021 IRC AMENDMENTS – CHAPTER 29

****Section P2902.5.3; amend to read as follows:**

P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double-check assembly or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

2021 IRC AMENDMENTS – CHAPTER 30

****Section P3003.9; amend to read as follows:**

P3003.9.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent cement joints shall be permitted above or below ground.

~~Exception: A primer is not required where both of the following conditions apply:~~

- ~~1. The solvent cement used is third-party certified as conforming to ASTM D 2564~~
- ~~2. The solvent cement is used only for joining PVC drain, waste, and vent pipe and fittings in not pressure applications in sizes up to and including 4 inches (102mm) in diameter.~~

2021 IRC AMENDMENTS – CHAPTER 31

****Section P3111; delete.**

****Section P3112.2 Vent Connection; delete and replace with the following:**

P3112.2 Installation. Traps for island sinks and similar equipment shall be roughed in above the floor and may be vented by extending the vent as high as possible, but not less than the drainboard height and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical fixture drain. The return vent shall be connected to the horizontal drain through a wye-branch fitting and shall, in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye-branch immediately below the floor and extending to the nearest partition and then through the roof to the open air or may be connected to other vents at a point not less than six (6) inches (152 mm) above the flood level rim of the fixtures served. Drainage fittings shall be used on all parts of the vent below the floor level and a minimum slope of one-quarter (1/4) inch per foot (20.9 mm/m) back to the drain shall be maintained. The return bend used under the drain-board shall be a one (1) piece fitting or an assembly of a forty-five (45) degree (0.79 radius), a ninety (90) degree (1.6 radius) and a forty-five (45) degree (0.79 radius) elbow in the order named. Pipe sizing shall be as elsewhere required in this Code. The island sink drain, upstream of the return vent, shall serve no other fixtures. An accessible cleanout shall be installed in the vertical portion of the foot vent.

END OF IRC AMENDMENTS