

**AMENDMENTS TO THE
INTERNATIONAL RESIDENTIAL CODE FOR
ONE- AND TWO-FAMILY DWELLINGS**

The International Residential Code for One- and Two-Family Dwellings, 2000 edition, and amendments, adopted by the Town of Talty, Texas, is amended as follows. All references to section numbers in the text of this division shall be construed as if followed by the words “of the Residential Code”, unless clearly indicated to the contrary.

1. Section R102.4; is amended to provide 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. 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 ICC Electrical Code shall mean the Electrical Code as adopted.

Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

Exception: Where enforcement ... [*remainder of exception unchanged.*]...

2. Section R105.2, item #1; is amended provide as follows:

1. One-story detached accessory structures, provided the floor area does not exceed 120 square feet (11.15 M²).

3. Section R109.1.3; is amended to provide as follows:

R109.1.3 Floodplain inspections. For construction permitted in areas prone to flooding as established by Table R301.2(1), upon ... {bulk of section unchanged} ... construction, the building official may require submission ... {remainder of section unchanged}.

4. Section R110 (R110.1 through R110.4); is deleted.

5. Section R112.2.2; is deleted.

6. Section R202; is amended to provide as follows:

TOWNHOUSE. A single-family dwelling unit constructed in a group of attached units separated by property lines in which each unit extends from foundation to roof and with open space on at least two sides.

7. Table R301.2(1); is amended to provide as follows:



8. Section R302.1; is amended to add a second exception as follows:

Exceptions:

1. Tool and storage sheds, playhouses and similar structures exempted from permits by Section R105.2 are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line.
2. Open metal carport structures may be constructed within zero (0) feet of the Property line without fire-resistive or opening protection when the location of such is approved as required by other adopted ordinances.

9. Section R303.3, exception; is amended to provide as follows:

Exception: The glazed areas shall not be required where artificial light and a mechanical ventilation system, complying with one of the following are provided:

1. The minimum ventilation rates shall be 50 cfm (23.6 L/s) for intermittent ventilation or 20 cfm (9.4 L/s) for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside.
2. Bathrooms that contain only a water closet, lavatory or combination thereof may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

10. Section R303.6; is amended to provide as follows:

R303.6 Required heating. Every dwelling unit shall be provided with heating facilities capable of maintaining a minimum room temperature of 68 degrees F (20 degrees C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms at the design temperature.

11. Section R314.8; is amended to provide as follows:

R314.8 Under stair protection. Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with 5/8-inch (15.8 mm) fire-rated gypsum board or one-hour fire-resistive construction.

12. Section R321.1; is amended to add a second exception to provide as follows:**Exceptions:**

1. *{existing exception unchanged}*
2. Two-family dwelling units that are also divided by a property line through the structure shall be separated as required for townhouses.

13. Section R322. 1; is amended to provide as follows:

R322.1 Moisture control. In all framed walls, floors and roof/ceilings comprising elements of the building thermal envelope, a vapor retarder, when installed, shall be installed in a manner so as to not trap moisture.

{delete the exceptions}

14. Section R327.1; is amended to provide as follows:

R327.1 General. All buildings and structures, when permitted to be erected in areas prone to flooding ... *{bulk of section unchanged}* ... areas (including V-Zones), shall be constructed and elevated as required by the provisions contained in this section or by other local provisions as applicable.

15. Section R703.7.4.1; is amended to add a second paragraph to provide as follows:

For 3 1/4 square feet (0.302 M²) of wall area, the following dimensions shall be adhered to:

1. When ties are placed on studs 16" o.c., they shall be spaced no further apart than 29" vertically starting approximately 15" from the foundation.
2. When ties are placed on studs 24" o.c., they shall be spaced no further apart than 19" vertically starting approximately 10" from the foundation.

16. Section R703.7.4.2; is amended to add a second paragraph to provide as follows:

When using ties that will flex when pushed, spot bedding of cement mortar shall be installed on all ties.

17. Section R902.3 is added to provide as follows:

R902.3 Minimum Roof Class. All roof coverings shall be a minimum Class C. All individual replacement shingles or shakes shall be a minimum Class C.

Exception: Non-classified roof coverings shall be permitted on buildings of U occupancies having not more than 120 sq. ft. of projected roof area. When exceeding 120 sq. ft. of protected roof area, buildings of U occupancies may use non-rated non-combustible coverings.

18. Section R907.1; is amended to add a sentence to provide as follows:

All individual replacement shingles or shakes shall comply with Section R902.3.

19. Section R1005.2; is amended to provide as follows:

R1005.2 Exterior air intake. The exterior air intake shall be capable of providing all combustion air from the exterior of the dwelling or from spaces within the dwelling ventilated with outside air such as attic spaces. The ... *{remainder of section unchanged}*.

20. Section N1101.1 and N1101.2; are amended to provide as follows:

N1101.1 Scope. This chapter sets forth energy-efficiency-related requirements for the design and construction of buildings regulated by this code. Enforcement of this chapter will begin on September 1, 2002.

N1101.2.1 Residential Buildings, Type A-1. Compliance shall be demonstrated by one of the following:

1. Meeting the requirements of this chapter for buildings with a glazing area that does not exceed 15 percent of the gross area of exterior walls;
2. Meeting the requirements of this chapter for buildings with a glazing area that is greater than 15 percent but not exceeding 20 percent of the gross area of exterior walls and air conditioning equipment rated 12 SEER or higher;
3. Meeting the requirements of this chapter for buildings with a glazing area that is greater than 20 percent but not exceeding 25 percent of the gross area of exterior walls and air conditioning equipment rated 14 SEER or higher: or
4. Meeting the requirements of the International Energy Conservation Code for residential buildings, Type A-1.

21. Section N1101.3.4 is added to provide as follows:

N1101.3.4 Exterior basement or slab insulation. When susceptibility to termite damage is classified as "very heavy" according to Table R301.2(l), designs employing basement or slab exterior insulation capable of harboring termites shall not be utilized.

22. Section N1102.1 is amended to provide as follows:

N1102.1 Thermal performance criteria. The minimum required insulation R-value or maximum required U-factor for each element in the building thermal envelope (fenestration, roof/ceiling, opaque wall, floor, slab edge, crawl space wall and basement wall) shall be in accordance with the criteria in Table N1102.1.

Residential building, Type A-1, with greater than 25-percent glazing area; residential buildings, Type A-2, with greater than 25-percent glazing area; and any building in climates with HDD equal to or greater than 13,000; shall determine compliance using the building envelope requirements of the *International Energy Conservation Code*.

23. Table N1102.1 is amended to replace the table to provide as follows:

TABLE N1102.1

SIMPLIFIED PRESCRIPTIVE BUILDING ENVELOPE THERMAL COMPONENT CRITERIA MINIMUM REQUIRED THERMAL PERFORMANCE (U-FACTOR AND R-VALUE)

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24. Section N1102.2 is amended to provide as follows:

N1102.2 Maximum solar heat gain coefficient for fenestration products. The area-weighted- average solar heat gain coefficient (SHGC) for glazed fenestration installed in climate zones with less than 3,500 HDD shall not exceed 0.40.

25. Section M1304.2 is added to provide as follows:

M1304.2 Minimum burial depth. Underground fuel piping systems shall be installed a minimum depth of 18 inches (458 mm) below grade.

26. Section M1305.1.3; is amended to provide as follows:

M1305.1.3 Appliances in attics. Attics containing appliances requiring access shall be provided ... *{bulk of paragraph unchanged}* ... sides of the appliance where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger where such dimensions are not large enough to allow removal of the largest appliance. As a minimum, access to the attic space shall be provided by one of the following:

1. A permanent stair.
2. A pull down stair.
3. An access door from an upper floor level.

Exception: The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.

27. Sections M1305.1.5 and M1305.1.5.1; are added to provide as follows:

M1305.1.5 Water heaters above ground or floor. When the mezzanine or platform in which water heater is installed is more than eight (8) feet (2438 mm) above the ground or floor level it shall be made accessible by a stairway or permanent ladder fastened to the buildings.

M1305.1.5.1 Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet shall be provided in accordance with Section M1305.1.3.1.

28. Section M1305.1.3.1; is amended to add a sentence to provide as follows:

Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

29. Section M1305.1.4.1; is amended to provide as follows:

M1305.1.4.1 Ground clearance. Appliances supported from the ground shall be level and firmly supported on a concrete slab or other approved material extending above the adjoining grade a minimum of 3 inches (76 mm). Appliances suspended from the floor shall have a clearance of not less than 6 inches (152 mm) above the ground.

30. Section M1305.1.4.3; is amended to add a sentence to provide as follows:

Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

31. Section M1307.3.1; is deleted.

32. Section M1501.2; is amended to provide as follows:

M1501.2 Exhaust duct size. The minimum diameter of the exhaust duct shall be as recommended by the manufacturer, shall be at least the diameter of the appliance outlet and shall be a minimum nominal size of 4 inches (102 mm) in diameter. The size of duct shall not be reduced along its developed length nor at the point of termination.

33. Section M1501.3; is amended to provide as follows:

M1501.3 Length limitation. The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location to the wall or roof termination with not

more than two bends. When extra bends are installed, the maximum length of the duct shall be reduced 2.5 feet (762 mm) for each 45-degree (0.79 rad) bend and 5 feet (1524 mm) for each 90-degree (1.6 rad) bend that occur after the first two bends, measuring in the direction of airflow. The maximum length of the exhaust duct does not include the transition duct.

{Exception is unchanged}

34. Section M1601.3.4, item #1; is amended to provide as follows:

1. Duct insulation shall conform to the requirements of Table M1601.3.4 and Section N1101.2. Should there be any conflicts between this section and the energy efficiency provisions, the energy efficiency provisions shall take precedence.

A vapor retarder in accordance with Table M1601.3.4, or aluminum foil having a minimum thickness of 2 mils (0.051 mm), shall be installed on the exterior of insulation on cooling supply ducts that pass through non-air conditioned spaces conducive to condensation.

Insulations having a permeance of 0.05 perms [$2.87 \text{ ng}/(\text{Pa} \cdot \text{S} \cdot \text{M}^2)$], or less shall not be required to be covered.

35. Table M1601.3.4 is added to provide as follows:

Table M1601.3.4 - Insulation of Ducts

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Note. Where ducts are used for both heating and cooling, the minimum insulation shall be as required for the most restrictive condition.

¹Heating Degree Days:

Zone I below 4,500 D.D.

Zone II 4,501 to 8,000 D.D.

Zone III over 8,000 D.D.

²Vapor retarders shall be installed on supply ducts in spaces vented to the outside in geographic areas where the summer dew point temperature based on the 2 1/2 percent column of dry-bulb and mean coincident wet-bulb temperature exceeds 60 degrees F. (15.4 degrees).

³Insulation may be omitted on that portion of a duct which is located within a wall- or a floor-ceiling space where:

3.1 Both sides of the space are exposed to conditioned air.

3.2 The space is not ventilated.

3.3 The space is not used as a return plenum.

3.4 The space is not exposed to unconditioned air.

Ceilings which form plenums need not be insulated.

INSULATION TYPES⁴:

A -- A material with an installed conductance of 0.48 [2.72 W/(m*K)] or the equivalent thermal resistance of 2.1 [0.367 (m*K)/W].

Example of materials capable of meeting the above requirements:

1-inch (25 mm), 0.60 lb./cu.ft. (9.6 kg/m³) mineral fiber, rock, slag or glass blankets.

1/2-inch (13 mm), 1.5 to 3 lb./cu.ft. (24 to 48 kg/M³) mineral fiber blanket duct liner.

1/2-inch (13 mm), 3 to 10 lb./cu.ft. (48 to 160 kg/M³) mineral fiberboard.

B -- A material with an installed conductance of 0.24 [1.36 W/(m*K)] or the equivalent thermal resistance of 4.2 [0.735 (m*K)/W].

Example of materials capable of meeting the above requirements:

2-inch (51 mm), 0.60 lb./cu.ft. (9.6 kg/m³) mineral fiber blankets.

1-inch (25 mm), 1.5 to 3 lb./cu.ft. (24 to 48 kg/M³) mineral fiber blanket duct liner.

1-inch (25 mm), 3 to 10 lb./cu.ft. (48 to 160 kg/m³) mineral fiberboard.

C -- A material with an installed conductance of 0.16 [0.9 W/(m*K)] or the equivalent thermal resistance of 6.3 [1.1 (m*K)/W].

Example of materials capable of meeting the above requirements:

3-inch (76 mm), 0.60 lb./cu.ft. (9.6 kg/m³) mineral fiber blankets.

1 1/2-inch (38 mm), 1.5 to 3 lb./cu.ft. (24 to 48 kg/m³) mineral fiber blanket duct liner.

1 1/2-inch (38 mm), 3 to 10 lb./cu.ft. (48 to 160 kg/m³) mineral fiber board.

V -- Vapor Retarders: Material with a perm rating not exceeding 0.05 perm [29 ng/Pa*s*m²].

All joints to be sealed.

W -Approved weatherproof barrier.

⁴The example of materials listed under each type is not meant to limit other available thickness and density combinations with the equivalent installed conductance or resistance based on the insulation only.

36. Section M2005.2; is amended to provide 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. Direct-vent water heaters are not required to be installed within an enclosure.

37. Section G2403; is amended to add a sentence to provide as follows:

For the purpose of installation, this definition shall also include "Unvented Decorative Appliances."

38. Section G2407.15, item #1; is amended to provide as follows:

Exception: Unobstructed stud and joist spaces within dwelling units shall not be prohibited from conveying combustion air, provided that not more than one required fireblock is removed.

39. Section G2408.3; is deleted.40. Section G2411.5; is amended to add a second paragraph to provide as follows:

Both ends of each section of medium pressure corrugated stainless steel tubing (CSST) 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"

41. Section G2412.3; is amended to add an exception to provide as follows:

Exception: Corrugated stainless steel tubing (CSST) shall be a minimum of 1/2".

42. Section G2414.6; is amended to provide as follows:

G2414.6 (404.6) Piping in solid floors. Piping in solid floors shall be laid in channels in the floor and covered in a manner what will allow access to the piping with a minimum amount of damage to the building. Where such piping is subject to exposure to excessive moisture or corrosive substances, the piping shall be protected in an approved manner. As an alternative to installation in channels, the piping shall be installed in accordance with Section G2414.11 (404.11).

43. Section G2414.9; is amended to provide as follows:

G2414.9 (404.9) Minimum burial depth. Underground piping systems shall be installed a minimum depth of 18 inches (458 mm) below grade.

44. Section G2414.9.1; is deleted.45. Section G2416.4; is amended to add a sentence to provide as follows:

The equipment used shall be of an appropriate scale such that pressure loss can be easily

determined.

46. Section G2416.4.1; is amended to provide as follows:

G2416.4.1 (406.4.1) Test pressure. The test pressure to be used shall be not less than 10 psig (68.9 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. For welded piping carrying gas at pressure in excess of fourteen (14) inches water column pressure (3.48 kPa), the test pressure shall not be less than sixty (60) pounds per square inch (413.4 kPa).

47. Section G2416.4.2; is amended to provide as follows:

G2416.4.2 (406.4.2) Test duration. Test duration shall be held for a length of time satisfactory to the Code Official, but in no case for less than 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 Code Official, but in no case for less than thirty (30) minutes.

48. Section G2419.1.4 is added to provide as follows:

G2419.1.4 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.

50. Section G2420.1; is amended to add a second paragraph and exception to provide as follows:

Access to regulators shall comply with the requirements for access to appliances as specified in Section MI305.

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.

51. Section G2437.5; adds a sentence to provide as follows:

The size of duct shall not be reduced along its developed length nor at the point of termination.

52. Section G2437.5.1; is amended to provide as follows:

G2437.5.1 (613.6.1) Maximum length. The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location to the outlet terminal with not more than two bends. When extra bends are installed, the maximum length of the duct shall be reduced 2 1/2 feet (762 mm) for each 45-degree (0.79 rad) bend and 5 feet (1 524 mm) for each 90-degree (1.6 rad) bend that occur after the first two bends, measuring in the direction of airflow.

{exception is unchanged}

53. Section G2443.2; is amended to provide as follows:

G2443.2 (620.2) 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 heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when approved by the Code Official unless an unsafe condition is determined to exist as described in *International Fuel Gas Code* Section 108.7.

54. Section G2446.1.1; is amended to provide as follows:

G2446.1.1 (623.1.1) 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.

55. Section P2503.5.1, item 1; adds a second paragraph to provide as follows:

Shower receptors shall be tested for water tightness by filling with water to the level of the rough threshold. The drain shall be plugged in a manner so that both sides of pans shall be subjected to the test at the point where it is clamped to the drain.

56. Section P2503.7.2; is amended to provide as follows:

P2503.7.2 Testing. Reduced pressure principle ... {bulk of section unchanged} ... at the time of installation, immediately after repairs or relocation and at regular intervals as required by applicable state or local provisions.

57. Section P2603.6.1 is added to provide as follows:

P2603.6.1 Sewer depth. Building sewers shall be a minimum of 12 inches (304 mm) below grade.

58. Section P2708.1; is amended to provide as follows:

P2708.1 General. Shower compartments shall. . . {bulk of section unchanged}. . . shall be constructed as per Section R307.2. Such walls shall ... *{remainder of section and exception unchanged}*.

59. Section P2708.1; adds a sentence to provide as follows:

Thresholds shall be of sufficient width to accommodate a minimum twenty-two (22) inch (559 mm) door.

60. Section P2709.1; adds an exception to provide as follows:

Exception: Showers designed to comply with ICC/ANSI A117.1.

61. Section P2710.1; is amended to provide as follows:

P2710.1 Finished. Shower walls shall be finished in accordance with Section R307.2.

62. Section P2803.6.1; is amended to provide as follows:

P2803.6.1 Requirements for discharge. The outlet of a pressure relief valve, temperature relief valve or combination thereof, shall not be directly connected to the drainage system. The discharge from the relief valve shall be piped full size separately to the outside of the building or to an indirect waste receptor located inside the building.

In areas subject to freezing, the relief valve shall discharge through an air gap into an indirect waste receptor located within a heated space, or by other approved means. The discharge pipe shall not discharge into the pan required in Section P2801.5.

The discharge shall be installed in a manner that does not cause personal injury or property damage and that is readily observable by the building occupants. The discharge from a relief valve shall be trapped. The diameter of the discharge piping shall not be less than the diameter of the relief valve outlet.

The discharge pipe shall be installed so as to drain by gravity flow and shall terminate atmospherically. When discharging outside the buildings the point of discharge shall be with the end of the pipe not more than two (2) feet (610 mm) nor less than six (6) inches (152 mm) above the ground or the floor level of the area receiving the discharge and pointing downward.

The end of the discharge pipe shall not be threaded.

63. Table P2904.4.1; deletes "Polybutylene (PB) plastic pipe and tubing"64. Sections P2904.5, 2904.5.1 and 2904.12; are amended to delete reference to "PB" plastic pipe.65. Section P3005.2.6; is amended to provide as follows:

P3005.2.6 Upper terminal. Each horizontal drain shall be provided with a cleanout at its upper terminal.

Exception: Cleanouts may be omitted on a horizontal drain less than five (5) feet (1524 mm) in length unless such line is serving sinks or urinals.

66. Section P3103.1; is amended to provide as follows:

P3103.1 Roof extension. All open vent pipes which extend through a roof shall be terminated at least six (6) inches (152 mm) above the roof, except that ... {remainder of section unchanged}.

67. Sections P3105.2 and P3105.3 and Figure P3105.3; are deleted.

68. Section P3111.1; is amended to provide as follows:

P3111.1 Type of fixture. A combination waste and vent system shall not serve fixtures other than floor drains, standpipes, and indirect waste receptors. Combination drain and vent systems shall not receive the discharge of a food waste grinder.

69. Section P3111.2 is amended to provide as follows:

P3111.2 Installation. The only vertical pipe of a combination drain and vent system shall be the connection between the fixture drain of a standpipe, and the horizontal combination waste and vent pipe. The maximum vertical distance shall be 8 feet (2438 mm).

70. Section E3301.1; adds a sentence to provide as follows:

All references to NFPA 70 shall mean the Electrical Code as adopted.

71. Section E3306.3; is amended to provide as follows:

E3306.3. Minimum size of conductors. The minimum size of conductors for feeders and branch circuits shall ... {remainder of section unchanged}.

72. Section E3306.6; is amended to provide as follows:

E3306.6 Conductors in parallel. Circuit conductors that are electrically joined at each end to form a single conductor shall be limited to sizes No.1/0 and larger {remainder of section unchanged}.

73. Section E3802.8; is amended to provide as follows:

E3802.8 Exempt receptacles. Receptacles installed under exceptions to Sections E3802.2 and E3802.5 shall not be considered as meeting the requirements of Section E3801.9.