

2018 International Residential Code Significant Changes

The Cities of Montgomery, New Waverly, Panorama Village and Shepherd have adopted the 2018 International Code series and 2017 National Electric Code effective on or before 1 September 2019. The State Energy Conservation Office has adopted the Energy Efficiency Chapter 11 of the 2015 International Residential Code (IRC) effective 1 Sep 2016.

(<https://comptroller.texas.gov/programs/seco/code/single-family.php>).

HB 2858 (86th Session) adopted the 2018 International Swimming Pool & Spa. HB 2439 (86th Session) prohibits municipalities from amending model codes. Here are some significant changes from the 2006 - 18 codes or deficiencies that have been commonly observed during inspections.

1. R301.2.1 - Ultimate design wind speed values replace basic wind speed values for 3-sec gust wind speeds. The ATC Wind Speed website enable a user to input an address to determine wind zone.
www.atcouncil.org/windspeed
2. R302.5.1 - Doors from attached garages into residences shall be equipped with **self-closing** devices.
3. R302.6 - Dwelling-garage fire separation not less than ½" gypsum wallboard, any penetrations (i.e. **plumbing manifold panels** or **attic access stairs**) shall comply with R302.5 and R302.11 Item 4.
4. R308.4.2 Glazing Adjacent to Doors - Glazing installed perpendicular to a door in a closed position within 24" of door requires safety glazing if the door swings in toward the glazing.
5. R311.7.3 - **Maximum Stair Rise** between Landings shall not have a vertical rise larger than 151" (12'-7" = 20 risers).
6. R312.1.1 - **Guards** [guardrail] shall be provided for those portions of open-sided walking surfaces, including stairs, ramps and landings that are located more than 30 inches vertically to the floor or grade below at any point within 36 inches.
7. R314.3 #4 - **Smoke** alarms shall be installed **not less that 3'** horizontally from the door of a bathroom that contains a tub or shower (for bedrooms with attached bathroom).
8. R315 - **Carbon monoxide** alarms shall be located in hallways outside sleeping rooms in homes with attached garage and/or fuel-fired appliance and now require connection to the house wiring system with battery backup.

9. R319.1 Address identification - Buildings shall be provided with approved (permanent) numbers visible from the street, contrast with background, >4" height, >0.5" stroke width.
10. R403.1.6 Foundation Anchorage - Anchor bolts are required to be placed in the middle 1/3 of the bottom plate – bolts or approved anchor straps shall be spaced a maximum of 6', at least two per plate, not more than 12" from the end of each section.
11. Table R602.3(6) Alternate Stud Height - prescriptive requirement for 12 foot tall walls (non-engineered).
12. Tables R502.3.1(1), R502.3.1(2) and Tables R802.4, R802.5 - Changes to Southern Pine (SP), Douglas Fir-Larch (DFL), and Hemlock Fir (HF) lumber capacities have changed the joist and rafter span length in the prescriptive tables of the IRC. Span lengths for Southern Pine have decreased & lengths for DFL and HF joists have increased due to revisions in 2012.
13. R507 Decks - Deck provisions have been relocated.
14. R602.10. Wall Bracing - describes wall bracing, including narrow garage door opening walls.
15. N1101.14 - Permanent Energy Certificate posting requirement.
16. N1102.2.1.2 - R-38 Attic Insulation
17. N1102.2.4 - Access Hatches and Doors shall be weather-stripped and insulated to the same level as insulation on the surrounding surfaces.
18. N1102.3 - Fenestration (windows/door glazing) minimum 0.40 U-Factor & minimum 0.25 SHGC
19. N1102.4.1.2 - The code requires a blower door test to be performed on all dwelling units to determine compliance with the maximum air leakage rate for the applicable climate zone.
20. N1103.3.1 - R-8 A/C Ducts
21. N1103.3.5 (R403.3.5) Building framing cavities are no longer permitted to be used for ducts or plenums.
22. N1104.1 - High-efficacy lamps are required in at least 90 percent of permanent lighting fixtures.
23. N1102.4.1.1 - Insulation at Wall Corners & Headers - shall be insulated to an R-3 minimum.
24. M1305.1.2 Appliances in attics. Attics containing appliances requiring access shall have with an opening and a clear and unobstructed passageway large enough to allow removal of the largest appliance, but not less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) long

when measured along the centerline of the passageway from the opening to the appliance. The passageway shall have continuous solid flooring in accordance with Chapter 5 not less than 24 inches (610 mm) wide. A level service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present along all 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), where such dimensions are large enough to allow removal of the largest appliance.

Exceptions:

1. The passageway and level service space are not required where the appliance can be serviced and removed through the required opening.

2. Where the passageway is unobstructed and not less than 6 feet (1829 mm) high and 22 inches (559 mm) wide for its entire length, the passageway shall be not more than 50 feet (15 250 mm) long. (Exception 2 allows the walkway to be up to 50' if headroom is 6 feet. Note Chapter 5 requires minimum ¾" plywood)

25. M1502.4.5.1 - The maximum length of dryer exhaust ducts has been increased to **35 feet**. G2439.4 & G2439.7 Provide for dryer exhaust duct power ventilators (DEDPV or "booster fan").
26. M1506.3 - A minimum clearance of 3 ft is required between air exhaust terminations and openings into the building.
27. G2411.2 & .3 - Electrical bonding required for **CSST** piping.
28. G2419.4 - A figure illustrates the correct configuration of a **sediment trap**. Gas-fired decorative vented appliances installed in vented fireplaces and gas fireplaces are not required to be equipped with a sediment trap.
29. G2420.5.1 - **Shutoff valves** serving moveable appliances, such as cooking appliances and clothes dryers, shall be considered to be provided with access where installed behind such appliances.
30. P2503.5 - The head pressure for a water test on drain, waste, and vent (DWV) systems has been reduced from 10ft to 5ft.
31. P2713.3 Bathtub valves - Hot water supplied to tubs shall be limited to 120° by a **water-temperature limiting device**.
32. P2903.5 **Water hammer arrestors** - required where quick-closing valves are used (dishwashing & clothes washing machines and ice makers).
33. E3609.3.1.5 - An **intersystem bonding termination** (IBT) device for connecting bonding conductors shall be provided.

34. E3703.5 - Garage receptacle outlets must now be served by a **20-amp** branch circuit. An exception permits supplying exterior receptacles. At least one receptacle outlet is required for each vehicle bay in a garage.
35. E3902.8-10 - Adds receptacles within 6' of bathtub/shower; laundry areas; and dishwashers to the list of required GFCI protection.
36. E3902.16 - **Arc Fault** protection is required for outlets in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas and similar rooms.
37. Appendix Q - A new appendix covers provisions for **tiny homes** defined as dwellings with a maximum floor area of 400 square feet.

Rick Hanna, CBO

Certified Building Official

rhanna@rickhanna.com

www.rickhanna.com

www.synergyinspectiongroup.com

September 2, 2019

Documents/Code Docs/2018 International Residential Code Significant Changes