

2009 IRC CODE CHANGES

BUILDING

1. R202 Added a definition of habitable attic space. It must meet all of the requirements for habitable spaces and is not considered as a story.
2. R301.3 & Exception. Limits story heights depending on the type of construction.
3. R301.5 & Table R301.5. (pp. 47 & 48) 2) Requirements for live load design for attics.
4. Table R302.1 Fire separation distances are amended to less than or equal to 3 feet.
5. R302.2. Changes fire separation requirements for townhouses.
6. R302.5.3 Delete a section and replace with the following: Penetrations through the separation required in Section R302.6 shall be protected with approved materials to resist the passage of flame and products of combustion. The material filling this annular space shall be required to meet the ASTM E 814 or U L 1479.
7. R302.6 Garages shall be separated from a dwelling unit and its attic area, including supporting members with no less than one layer of 5/8 inch Type X Gypsum Board or equivalent on the garage side. If there is habitable or any conditioned space above or below a garage space, the garage side of the floor/ceiling assembly shall be protected with no less than two layers of 5/8 inch Type X Gypsum Board or equivalent. If a common door is provided, it shall be a self-closing, tight-fitting solid-wood door 1 3/8 inches in thickness, or a self-closing, tight-fitting 20-minute fire-rated door, or solid or honeycomb steel doors not less than 1 3/8 inches (34.9 mm) thick. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted.
8. R302.11. Fire blocking requirements in combustible construction.
9. R303.7. Specifications for required glazed openings located under decks.
10. R310.1 & Exception. Egress floor landing requirements.
11. R311. Exterior balconies less than 60 square feet only accessible from a door do not require a landing.
12. R311.2. Egress door requirements.

13. R311.5 and R502.2.2.1 Exterior landings, decks, balconies, stairs and similar facilities have changed, as well as deck ledger connections and guard attachments; they must be designed to resist lateral and vertical forces See these sections for the details. Positive attachment of exterior landings, decks, balconies & stairs is required.
14. R312 Vertical measurement of guards, including fixed seating above adjacent walking surfaces.
 - a. R312.1 For the purposes of determining if a guard is required, this section was clarified by stating that the 30 inch measurement from an open sided walking surface to an adjacent grade is extended to any point within 36 inches horizontally to the walking surface.
 - b. R312.2 Requires that the 36 inch height of guards includes the surface of fixed bench seating (on decks).
15. R315 Requires carbon monoxide alarms in new construction and existing construction with an attached garage where work requiring a permit occurs and fuel fire appliances exist.
16. R317.1 (5) Requires wood siding, sheathing, and wall framing that is less than 2 inches from horizontal concrete surfaces and exposed to weather such as patios, steps, etc. shall be pressure treated.
17. R319.1 Address numbers shall contrast with the background, be a minimum of 4 inches in height with a ½ inch minimum brush stroke width and be plainly visible from the road fronting the property. When the address can't be viewed from the public way, a monument, pole or other sign shall be used to identify the structure.
18. R401.3 Where 10' of yard is not available, slope away from foundation with a swale is allowed. Impervious surfaces require 2% slope away from structure.
19. R403.1.6 Anchor bolt grouting specifications.
20. R404.1.2.2 In all cases, concrete foundation walls shall be laterally supported at the top and bottom. Minimum placement of reinforcing bars for foundation walls which do not exceed 4 feet in height shall be: No greater than 24 inches on center and within 6 inches of the top and bottom of the stem wall horizontally and 48 inches on center vertically. Minimum placement of reinforcing bars for foundation walls exceeding 4 feet in height shall be: No greater than 18 inches on center and within 6 inches of the top and bottom of the stem wall horizontally and 18 inches on center vertically. All vertical reinforcement shall be embedded into the footings without ground contact. Minimum reinforcement for all continuous footings shall be two continuous horizontal reinforcing bars. Minimum reinforcing bar size shall be #4.

21. R404.1.2.3.7.4 Minimum cover of rebar cast against the earth is 3 inches; minimum cover of #5 and smaller rebar in removable forms is 1 ½ inches.
22. R404.1.2.3.7.5 Minimum lap splices of grade 40 rebar is: #4 – 20”, #5 – 25”, #6 – 30”.
23. R408.1 Under-floor ventilation openings are required as follows: 1 square foot for each 1,500 square feet of area when the ground surface is covered with a Class I vapor retarder. At least one ventilating opening is required within 3 feet of each corner of the building.
24. R408.1.2 The ground surface of all under-floor spaces shall be provided with a continuous Class I vapor retarder.
25. R502.2.2.3 Requires a minimum lateral load connection of two hold down tensioning devices with a minimum capacity of 1500 pounds.
26. R506.2 Exception. Minimum 6 mil polyethylene or approved vapor barrier can be omitted at detached garages, patios etc.
27. Manufactured or engineered lumber lateral restraint requirements. IRC R502.7.1 Exception. (pp.114)
28. R602.3 Studs are required to be continuous from support at the bottom plate to a support at the top plate to resist loads perpendicular to the wall. The support shall be a foundation or floor, ceiling or roof diaphragm, or engineered. Stacked framing is no longer allowed.
29. R602.6.1 Drilling and notching of top plates by more than 50% now has requirements on the strapping to be used, its length past each side of the notch and the attachment thereof.
30. R602.10 and associated Tables. There are several requirement changes. Resistance to wind forces has been added. R 602.10.6.2 Requirements are now included for the attachment of braced wall panels to roof framing. It is strongly suggested that everyone involved in design or construction of residential buildings read the IRC Code Section for complete information.
 - a. The ICC has developed a book in partnership with APA to help in the understanding of the wall bracing provisions. It is available online for purchase at:
<http://www.iccsafe.org/Store/Pages/Product.aspx?id=7102S09>
 - b. APA has an informational web page: <http://www.wallbracing.org/>
 - c. Simpson Strong-Tie has two useful tools on their website with the following links: <http://www.strongtie.com/ftp/bulletins/T-SWPDG10/T-SWPDG10.pdf> and <http://www.strongtie.com/products/strongwall/wallbracing/intro.asp?newsletter=Nov10>

31. R612.1. Performance and construction requirements for exterior windows & doors.
32. R612.3 Opening windows more than 6 feet above grade or surface below are required to have the bottom of the opening a minimum of 24 inches above the floor; unless the opening does not allow the passage of a 4 inch sphere, the opening is provided with a fall prevention device that allows emergency escape and rescue per ASTM F 2090, the window is provided with a self acting opening limitation device that does not allow the passage of a 4 inch sphere and has a release mechanism to allow emergency escape and rescue as described in the Code.
33. R612.4. Specifications for window opening limiting device; when required
34. R613 Prescriptive provisions are now included in the code for structural insulated panels.
35. R703.7.3 Lintels for masonry veneer now have requirements within the code.
36. R703.7.4 Masonry veneer anchorage requirements have changed covering embedment of masonry veneer ties.
37. R703.7.4.2. Requirements for masonry veneer water resistive barrier.
38. R703.9 EIFS is now listed in the code, not just as an alternate, and shall comply with ASTM E2568; no more ES reports required.
39. R703.11.1.1. Requirements for vinyl soffit installation.
40. R703.11.2 Requirements for vinyl siding over foam.
41. R806.4. Requirements for unvented attic assemblies.
42. Ceiling joist to parallel rafters. IRC Table R802.5.1 (9) for nailing schedule. (pp 397)
43. R806 wire mesh no longer mandatory for attic ventilation openings, and 1/16" openings are now allowed for roof ventilation requirements.
44. R905 3-tab shingles now include minimum attachment requirement, and step-flashing dimensions are specified, and require kick-outs for asphalt shingle classes and fastening requirements. IRC R 905.2.4.1 & table 905.2.4.1 (1).

ENERGY

45. Table N1102.1 Minimum prescriptive wall insulation requirements have been changed.
46. N1102.2.3. Requirements for construction and insulation of attic hatches & doors.
47. N1102.4.1 Add attic access openings and rim joist junctions to the list of other nine conditions where air seal is required.
48. N1102.4.2 Building envelope air tightness and insulation installation is required to be demonstrated by either a blower door test or visual inspection per Table N1102.4.2 criteria.
49. N1102.4.3 Wood burning fireplaces required gasketed doors.
50. N1103.1.1 If a forced air heating system is involved, at least one programmable thermostat is required. It must be capable of controlling the heating and cooling system on a daily schedule to maintain different temperature set points at different times of the day.
51. N1103.2.2 If the air handler and all ducts are not located within conditioned space, duct leakage testing must be performed and approved.
52. N1103.2.3 Building framing cavities are no longer allowed as air supply ducts.
53. N1103.3 & N1103.4. Pipe insulation requirements.
54. N1104.1 A minimum of 50% of the bulbs in permanently installed lighting fixtures are required to be High Efficacy bulbs.
 - a. High Efficacy – Compact fluorescent lamps, T-8 or smaller diameter linear fluorescent lamps or lamps with a minimum efficacy of:
 - i. 60 lumens per watt for lamps over 40 watts.
 - ii. 59 lumens per watt for lamps over 15 watts to 40 watts.
 - iii. 40 lumens per watt for lamps 15 watts or less.

MECHANICAL

55. M1411.6 Locking access caps are required for refrigerant circuit access ports located on exterior of a building for air conditioner condensers.
56. M1307.3.1 Now requires approved impact protection for equipment located in garages.
57. Table M1502.4.4.1 A new table to be used for determining clothes dryer duct equivalent length.

- 58. M1502.4.5 When a clothes dryer duct is concealed, the equivalent length is required to be identified on a permanent tag within 6 feet of the duct connection.
- 59. M1502.5 Protective nail plates are required for clothes dryer ducts if within 1 ¼ inches of the framing surface.
- 60. M1503.4 Exhaust systems capable of exhausting 400 cfm are required to be provided with automatic make up air which must be interlocked with the operation of the exhaust hood.
- 61. M1601.3 Spray-applied polyurethane foam insulation is now approved for the insulation and sealing of ducts in attic and crawl spaces when it complies with three requirements.
- 62. N1103.2. & M1601.4.1 Requirements for duct insulation.
- 63. M2103.2 Thermal barriers (insulation) are required for all radiant floor heating systems.

GAS

- 64. G2411.1 CSST gas piping systems are required to be bonded to the electrical service grounding electrode system at the point where the service enters the building, or check manufacturers' installation requirements.
- 65. G2422.1.2.1 has increased the maximum length of all gas appliance connectors from 3' to 6'.
- 66. G2447.5 Now requires a minimum clearance over a gas stove; 30" to unprotected cabinets, or 24" to a listed cooking appliance or microwave.

PLUMBING

- 67. P2503.6 now requires testing of shower pan liners.
- 68. P2705.1 Now includes clearance dimensions for water closets, lavatories and bidets equal to those in the IPC.
- 69. P2719.1 Floor drains are to be placed so that there is not an appliance placed over them, such as furnaces and washing machines.
- 70. P3005.2.6 There is now a cleanout required at the base of each waste or soil stack; you can no longer just use the exterior cleanout located within 3' of the dwelling for this purpose.

71. P3007 The requirements for sumps and ejectors in the IPC has now been mirrored in the IRC.
72. P3108.1 Requires that each fixture drain must connect independently to a horizontal wet vent.
73. P3108 A water closet is now permitted upstream of the dry vent connection to the horizontal wet vent.

ELECTRICAL

74. E3405.4 The working space about a panelboard shall now include the stud space in the wall; nothing foreign to the electrical system may be placed there.
75. E3603 Electrical supply to a building, even an outbuilding, is now required to contain an equipment grounding conductor; even if there is only one circuit.
76. E3605.5 Above-ground service-entrance cables subject to physical damage shall be protected. Previously only the gas meter and mechanical equipment had this requirement, and now it is extended to electrical service cables.
77. E3609 An intersystem bonding termination shall now be provided external to enclosures at the service equipment and at the disconnecting means for any additional building or structure, and shall be accessible for connection and inspection. Three methods are approved:
- a. a set of terminals listed for grounding and bonding securely mounted to the meter enclosure, and electrically connected thereto,
 - b. a bonding bar near the service equipment enclosure, meter enclosure, or raceway for service conductors, connected with a minimum 6 AWG CU wire connection to a EGC in the enclosure, or
 - c. a bonding bar near the GEC with a minimum 6 AWG CU conductor. This is provided for the bonding of telephone, telecable, etc.
78. E3901 Switched electrical outlets are no longer considered as meeting the required outlet spacing unless one-half is not switched.
79. E3705.4.4 Now requires NM conductors penetrating top or bottom plates which are draftstopped (which all penetrations are required to be) must maintain spacing between conductors or be derated.

80. E3901.7 Now requires receptacle outlets for all balconies, decks, or porches 20 square feet and larger, located not more than 6'-6" above the floor surface.
81. E3902.2 Has changed the garage outlet provisions to require they all be GFCI protected. The exception for dedicated appliances has been removed; this includes the garage door opener. The reasoning is that the appliances now all include safeguards which eliminate nuisance tripping.
82. E3902.5 Has removed the exception from GFCI protection in unfinished basements for all but installed fire and burglar alarm systems.
83. E4002.14 Now requires all 125 v 15- and 20-amp receptacles listed in 3901.1 within dwelling units to be tamper resistant.
84. E4003.12 Adds provisions for LED luminaries (lights) within clothes closets. If the fixture is identified for clothes closets, it may meet the clearances for fluorescent fixtures; otherwise it must meet the clearances for incandescents.
85. E4209.1 Requires a dedicated hydromassage tub circuit, and it must have readily accessible GFCI protection.
86. E3901.7. Required outdoor outlets required for decks, balconies and porches over 20 Sq. Ft.
87. E3902.2 & E 3902.5 Exceptions eliminated for garage & unfinished basement receptacles.
88. .E3902.11. Requirements for ARC fault protection and ARC fault circuit breakers
89. E4002.14 Requirements for tamper resistant receptacles.
90. E4003.12 Requirements for luminaries in clothes closets.