2024 Significant Code Changes for the IRC

This summary includes significant changes to the International Residential Code (IRC) building provisions (Chapters 1-10 and 44), electrical, mechanical and plumbing provisions (Chapters 12-43) and appendices. Changes to the energy efficiency provisions (Chapter 11) are addressed as part of the 2024 IECC Adoption Kit. This is not all the changes that were approved.

IRC Section R104 Duties and Powers of the Building Official: The 2024 IRC sees an entire replacement of Section R104 Duties and Powers of the Building Official. Most sections do not have significant technical changes. One area of concern is R104.2.1 that would allow a Building Official to require equipment, materials, products, or service listings to be provided to the Building Official at cost to an applicant.

> ***A note regarding IRC Chapter 3.*** *In the 2024 IRC, Chapter 3 has been reorganized; all the sections related to structural, or fire resistance are grouped first, followed by the sections related to fire and CO detection and fire sprinklers, followed by the sections on configurations of rooms or spaces, followed by the means of egress and accessibility provisions, followed by sections relating to the indoor environment, and finally solar and other on-site energy systems.*

IRC Section R302.1 Exterior walls: Where a lot line doesn't already exist between townhouses, a lot line is required to be assumed for purposes of fire separation distance measurement. The proposal is meant to address interior corners where there is no existing or possible future structure measured perpendicular to the wall--a large departure from how fire separation distance has been used.

IRC Section R318.7 Stairways: Several changes were made to requirements for stairways, as noted below.

IRC Section R318.7.5.3 (was R311.7.5.3) Nosings: This change limits the 3/8" minimum/maximum uniformity requirement for nosing projections from applying across the entire stairway to application individual flights of stairs and their upper landings.

IRC Section R318.7.6 (was R311.7.6) Landings for stairways: New and revised exceptions for landings allow:

- The top landing of an interior stairway, including those in an enclosed garage, to be on the other side of a door located at the top of the stairway.
- At an enclosed garage, the top landing at the stair can be up to 7 ¾ inches below the top of the door's threshold.
- At exterior doors, a top landing is not required for an exterior stairway of not more than two risers.
- Where not serving the required egress door, exterior stairways to grade with three or fewer risers serving a deck, porch or patio shall have a bottom landing width of not less than 36 inches, regardless of the width of the stairs.

IRC Section R318.7.9 Stairways in existing buildings: Alterations to existing stairways are no longer required to comply with the requirements for new stairs when the existing space and construction does not allow a reduction in stairway pitch or slope.

IRC Section R329.6.4 (was R324.6.4) Building-integrated photovoltaic (BIPV) systems: A new section is added requiring reflective markings beneath eaves where installed BIPV systems create hidden electrical hazards. An exception is provided for systems listed to UL 3741 as they do not present a hazard.

IRC Section R401.4.1 Geotechnical evaluation: The existing Table R405.1 of soil classifications is moved to a more logical location early in Chapter 4 near where it is first referenced. The table is expanded to enable the use of USDA data and textural descriptions to ensure builders select a proper soil classification where a geotechnical investigation isn't done and clarifies what soil types are unsuitable for backfill due to their poor drainage characteristics.

IRC Section R502.3, R802.4.1 & R802.5 Framing Member Splices: Adds new text in the sections for floor joists, rafters and ceiling joists requiring that all splices in framing members occur over vertical supports or shall be designed by a registered design professional.

IRC Section R502.11 Floor framing supporting guards: Prescriptive options area added for framing at the open edge of a floor supporting a required guard assembly. Prescriptive options are included for conventional and timber edge framing. Floor trusses and I joists used as edge members supporting guards shall specifically consider the guard loads in their design.

IRC Section R506.3.3 Vapor retarder: A 6-mil construction-grade polyethylene vapor retarder is allowed to be placed under a concrete floor slab instead of a 10-mil vapor retarder complying with ASTM E1745 Class A requirements. This reverses the change from last cycle requiring the 10-mil proprietary vapor retarder under floor slabs.

IRC Section 507.9.1.5 Ledger Flashing: Prescriptive requirements are added for deck ledger flashing. The water-resistive barrier must run continuous behind the ledger and lap over a vertical leg of the ledger flashing. Exceptions from the flashing and lapping requirements are provided where the deck ledger is spaced off the building at least 1/4 inch.

IRC Section R602.10.3.1 Wall Height for Wood Framing: A definition of "light-frame stud wall height" is added for the determination of braced wall and panel adjustment factors. The term “story height" is changed to "wall height" in the adjustment factor tables and an error in Tables R602.10.3(2) & R602.10.3(4) for wind adjustment factors is corrected.

IRC Section R703.7.3 Water-resistive barriers: Requires the water resistive barrier and drainage requirements for stucco to be applicable to all sheathing types behind stucco, not just wood-based sheathing, except where accumulation, condensation or freezing of moisture will not damage the materials.

IRC Section M1411 Refrigerants: This section now includes provisions for the use of

HVAC systems with new A2L refrigerants, which are becoming available for residential installations.

IRC Section M1602.2 Return Air Openings: Provides new prescriptive requirements for return air taken from mechanical, boiler and furnace rooms and closets.

IRC Section P2503.5.2 Drainage and vent final test: The requirement for a gas-tight test of finished plumbing systems is removed at the option of the local building official. A final visual inspection proof that trap and fixture connections are watertight is required.

IRC Section P2603.2: The distance is reduced between piping installed through framing members and the face of the framing before shield plates are required.

> ***A note regarding IRC Appendices.*** *In the 2024 IRC, a reorganization of the appendices was undertaken, resulting in nearly all being redesignated with new section numbering and order. Appendices are now generally grouped to provide administrative provisions in group A (appendices AA-AC), building planning and construction provisions in group B (appendices BA-BO) and MEP provisions in group C(CA-CH).*

Appendix BO Existing Buildings and Structures: Appendix AJ Existing Buildings and Structures is renumbered Appendix BO and extensively revised to address structural requirements for work on existing buildings. Existing sections on repairs and alterations are revised and expanded and new sections on additions and relocated buildings are added Significant changes include the following:

- Removing the requirement for a preliminary meeting with the building official and permit applicant.
- Removing the provision allowing a building official to require an evaluation by a registered design professional for a house undergoing reconstruction.
- Removing the requirement for wall and ceiling finishes in areas being reconstructed to comply with flame spread and smoke development requirements and for area separation walls between attached dwelling units to comply with Chapter 3.
- Allowing the loads required at the time of construction to be used for existing elements and just require current loads for new elements or for existing elements found to be unsafe.
- Adding a requirement to provide CO alarms where required existing dwellings. by IRC R311.
- Adding requirements for alterations that increase the structural loads on a building (say, by adding a heavier floor or roof material) or decrease structural capacity (say, by removing portions of a wall serving as braced wall panels). Affected structural elements must be shown to comply or be altered to comply with the prescriptive structural provisions of the IRC. An engineered design may be required if the prescriptive provisions cannot be met.
- Adding a requirement wall anchors and bracing be provided for unreinforced

masonry parapets in high-seismic areas when more than 25 percent of the roof is reroofed, and a reroofing permit is issued.

- Adding a requirement for a wall-mounted switch controlling lighting outlets when a room is altered. The switch must be located near an entrance to the room.
- Adding requirements to provide stairway illumination and code-compliant handrails and guards when stairs are altered.
- Adds requirements for horizontal and vertical additions to an existing dwelling. For horizontal additions, the new portions and altered elements of the existing dwelling must comply with the structural code requirements for new construction. For vertical additions, the existing dwelling and new construction together must be shown to comply with the structural requirements of the code for new construction,