

Looking Ahead to the 2024 IRC

While the International Residential Code is in use or adopted by reference in 49 out of the 50 U.S. states (hello, Wisconsin?), the edition and amendments that apply to you are up to your state or local government. That's because while the International Code Council cyclically updates the IRC and other model codes every three years, state and local governments don't often adopt new codes as regularly as the model codes are created. As a result, there are a variety of editions of the IRC that have been adopted across the U.S.

Because state- and local-government-adopted codes are the ones that ultimately affect builders the most, I am often asked, "Why should I care about a future edition of the model IRC?" The answer is simple—the present used to be the future, so the future will become the present. How can I encourage your American civic duty to participate in your governments' future code adoption choices if you aren't aware of what they are choosing from?

As of this writing, the final version of the 2024 IRC is awaiting committee certification. The information presented in this article isn't going to be entirely useful to you until tomorrow becomes today, or until you decide to help guide your government toward what tomorrow will become. Building codes follow the will of society, and society always has trends. Code proposals are created by people, and those people often address current social trends in the codes.

AFFORDABILITY

Though it may elicit a cynical eye roll, the IRC does attempt to defend the affordability of construction and housing. While code requirements can often increase the cost of construction, many efforts were made in the 2024 edition to address the issue of affordable housing across the U.S.

For example, headroom and ceiling-height minimums have been reduced in certain conditions to help homeowners maximize the use and function of their existing homes. Many older homes are designed around stairways that don't meet current geometric requirements, and replacing those aging stairs often creates problems with headroom due to the size of the existing framed opening for the stairway in the floor system. A new section has been added to Section R502 in the 2024 IRC that permits existing stairs to be reconstructed without changing their width, headroom, geometry, or landings when restricted by surrounding existing construction.

Once you've made it to a basement or habitable attic on those stairs, more exceptions are permitted. When a previously unfinished basement or non-habitable attic is converted into habitable

living space, the minimum ceiling height has been reduced from 7 feet to 6 feet 8 inches. This will allow more owners to expand the living space of their older homes, without the often-inhibiting cost of lowering a basement floor or raising a house.

Sleeping lofts. In the 2015 IRC, an appendix chapter with reduced requirements for tiny homes was added, which included a provision that allowed for sleeping lofts. In the 2024 edition, tiny homes are still covered in an appendix, but sleeping lofts will now be permitted in standard IRC dwellings as described in a new section in Chapter Three. The details in these provisions are specific and more extensive than can be explained in depth in this article, though to provide an example, distinctions are made between sleeping lofts and plant shelves or other features that could appear to be like a sleeping loft. These sleeping loft regulations are intended to keep a loft from being used as a normal habitable space or a standard mezzanine.

The code requirements keep them small: Sleeping lofts must be less than 70 square feet, with a ceiling height not more than 7 feet for 50% of the loft area and not less than 3 feet. They can be accessed with a ship's ladder or alternating tread devices, just like all other mezzanines, but they are also provided their own reduced allowances for stairway width, height, and landings. A typical ladder can also provide access but must be inclined between 70 and 80 degrees and be within other geometric limitations. This new allowance is a perfect example of a code provision based on personal responsibility. If you can't safely go to the sleeping loft, then don't go (see photo, following page).

For new construction, there are a few more allowances added to help maximize space. A shared room can now be more easily designed into a two-family dwelling (duplex) with new language that makes it clear that the shared room—perhaps for storage or laundry—must be separated from both dwelling units with the same drywall separation that is required for garages.

ADUs. Accessory dwelling units have always been something the IRC allowed but never considered as anything other than a second dwelling on a property, whether stand-alone or attached. Typically, it has been local zoning ordinances that have prohibited the construction of a second dwelling on the property, or a second kitchen within a dwelling for creating a mother-in-law suite. In 2024, a new appendix chapter for ADUs has been added that provides specific limitations on an ADU such that it is not considered as a full second dwelling or as a duplex when attached.

Under the IRC's new guidelines, an ADU can be within, adjacent

to, or detached from the primary dwelling, but cannot be less than 190 square feet or more than 1,200 square feet in area. To keep an ADU subordinate to the primary dwelling, it cannot be greater than 50% of the larger dwelling's area and must have its own means of egress from the exterior or from a common hallway within a single building. In addition, an ADU can have no more than two bedrooms.

Access to the main electrical shut-off for a single building containing both dwellings must be accessible to occupants of both dwellings, and overcurrent protection and disconnects for each dwelling must be accessible to that dwelling's occupants. Requirements are similar for water service and shut-offs.

One important feature in these new provisions is that when the ADU shares a building with the primary dwelling, the standard one-hour fire separation required between units in a duplex is not required between the ADU and primary dwelling. However, to take this allowance, the smoke and carbon monoxide alarm systems must alarm in both dwellings when detection occurs in either dwelling. If not interconnected, the one-hour separation is required. As with all the subjects I'm sharing here, there are additional details you should seek out if interested.

GUARDS

In addition to having new code provisions for exterior guards on decks, the 2024 IRC also addresses interior guards. When they are fastened to the edge joist of a floor, conventional floor construction is not designed or suitable for the transfer of guard loads into the floor framing. Fastening a post to only the floor sheathing and a narrow edge of the floor framing can often cause the outer floor framing member to rotate.

New sections in Chapter 5 require roll blocking or a joist, depending on the joist direction, to be installed at the edge of floor framing at every guard post location, and the edge joist must be at least equivalent to a double 2x10. If roll blocks or joists are not located at each guard post location, the outer member must be a minimum of 6x10 sawn timber or 5¹/₈x9¹/₄ glued-laminated timber with joists or roll blocks every 48 inches. The roll blocking must be at least as deep as the joist and fastened according to the section.

VAPOR RETARDERS

Vapor management methods have been modified and expanded over the last decade of code development. A change to the 2021 edition upped the longtime standard of 6-mil poly under a concrete slab to a 10-mil product that is compliant with an ASTM standard. This was successfully challenged in the 2024 code cycle as an unnecessary measure with limited market choices for products that met that standard. As a result, this provision was revised back to the 2018 language.

Another proposal simplifies the use of other vapor retarder products that have particular characteristics. For example, some vapor retarders become more vapor permeable under wet conditions, a characteristic measured by the "wet cup" ASTM method of testing vs. the "dry cup" method that's used to determine a product's listed perm rating. In the 2024 IRC, a new definition has been included for



New provisions in the 2024 edition of the IRC allow for sleeping lofts of less than 70 square feet, with access through a ship's ladder or alternating-tread staircase, as shown here.

"responsive vapor retarder" that applies to retarders with a Class I or II dry cup permeance and a Class III wet cup.

Among other expected changes to the 2024 IRC are new standards for smoke/fire detectors that will reduce nuisance alarms, and a requirement that they be installed in accordance with the manufacturer's instructions (surprisingly, this is not already required by code). There are new prescriptive truss bracing provisions and new appendices for hemp-lime construction and extended plate construction, while the energy, electrical, plumbing, and mechanical chapters will all have their share of upgrades, corrections, clarifications, and new recognitions.

Because the model IRC is often a starting point for what the administered code in each community becomes, making yourself aware of the changes in the next model code strengthens your ability to contribute your voice to your local codes, the ones a lot closer to home.

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Photo: Roe Osborn