
FIRE PREVENTION AND BUILDING SAFETY COMMISSION
Department of Homeland Security**Written Interpretation of the State Building Commissioner****Interpretation #:** CEB-2023-24 [2020 IRC-R302.2.3]**Building or Fire Safety Law Interpreted**

675 IAC 14-4.4 2020 Indiana Residential Code, Section R302.2.3 Continuity. The fire-resistance rated wall or assembly separating *townhouses* shall be continuous from the foundation to the underside of the roof sheathing, deck or slab. The fire-resistance rating shall extend the full length of the wall or assembly, including wall extensions through and separating attached *accessory structures*.

Issue

Whether Section R302.2.3 of the *2020 Indiana Residential Code* (IRC) requires the fire-resistance rated separation between townhouse dwelling units to include the foundation level of the structure, or if it requires the fire-resistance rated separation to begin at the top of the foundation level of the structure.

Interpretation of the State Building Commissioner

Section R302.2.3 of the *2020 IRC* requires the fire-resistance rated separation between townhouse dwelling units to include the foundation level of the structure.

Rationale

This request centers on a multiple-dwelling unit townhouse design that sits atop a single crawl space located beneath the entire structure. The foundation system does not consist of walls, but of beams that span between piers that carry the loads to pad footings. As a result, the crawl space is not divided in line with the dwelling separations, but rather is continuous beneath them all.

The phrasing of Section 302.2.3 of the *2020 IRC* is impacted by statute, which rule cannot supersede. The section's language may appear less precise than desired in its description of the required starting point of the rated assembly, but the separation requirement the language represents is clear – in rule and in statute – that there must be a compliant fire-resistance rated separation between units in a townhouse structure.

The need for distinct and complete fire-separation between townhouse dwelling units in Indiana dates to at least 2014 when statutory changes codified townhouses as Class 2 structures¹, the dwelling units of which extend whole "from foundation to roof"² without any spaces above or below a dwelling unit that are not part of that unit. The historic principle is that a townhouse unit is its owner's to control, from ground to sky, and that its immunity from interference or hazard from adjoining units is and must remain paramount. That characteristic is the primary design distinction between a townhouse and an apartment in the state of Indiana and was a key driver in the legislature's decision to grant such townhouse structures Class 2 status. As a result, the need for a continuous and effective full-height fire barrier between townhouse dwelling units is critical. These are separated dwelling units. A crawl space that is not similarly separated in line with the junction between contiguous dwelling units is antithetical to this principle. The hazard presented by a continuous crawl space is further compounded if the design also lacks a fire separation between the crawl space and the lowest level of the townhouse above it. In such instances there is nothing to prevent the easy spread of fire and combustion byproducts from one unit to the next.

As to the question of language, it is true that the IRC does not define the term "foundation." Nevertheless, the word is a commonly used building term that is understood to describe the portion of the structural system that transfers the loads of the building superstructure to the footing (a structural component distinct from the foundation), from which the loads are then transferred to the earth.³

The question then remains whether the phrase "from the foundation," used in statute and rule, intends to place the fire-resistance rated construction atop the foundation, or if it intends for the foundation itself to be included in the rated construction. Since the rule clearly describes the top termination of the rated separation assembly as the *underside* of the roof construction and not the roof construction itself (saying the separation assembly extends "to the underside of the roof sheathing, deck or slab"), logic suggests that if the bottom of the assembly was intended to be similarly constrained, similar language would be used, saying the rated construction must begin immediately atop the foundation, as in "from the top of the foundation." And yet it does not. Nothing in the phrase "from the foundation" suggests the intent is to exclude the foundation itself.

When this language is viewed in conjunction with the historic intent of constructing townhouses that are autonomous units "from ground to sky," it is clear that the building's foundation system must be included as part of the rated assembly. In addition, a common crawl space shared below disparate dwelling units prevents just such autonomous separation and is therefore prohibited.

¹ [IC 22-12-1-5\(c\)](#)

² [IC 22-12-1-5\(c\)\(1\)](#)

³ It is worth noting that in lay language the whole substructure of a building – foundation components and footings – is often referred to simply as the building's "foundation," but this should not obscure the distinction between the two words as they are used in architecture, construction and building regulation.

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