

SCOPE

These code provisions apply to commercial buildings and building sites, systems, and equipment. An italicized term in the IECC means the word or phrase has a specific meaning in code language and that a specific definition is used to clarify the meaning of that term. Chapter 2 of the IECC lists 85 words and specific definitions to establish the common vocabulary for the commercial energy regulations. *Commercial buildings* in this code are defined as “all buildings that are not included in the definition of *residential building*.” Although this may not seem to provide enough information, those familiar with codes recognize this as a pointer to the definition of *residential building*. In the IECC, a residential building “includes detached one- and two-family dwellings and multiple single-family dwellings (townhouses) as well as group R-2, R-3, and R-4 buildings three stories or less in height above grade plane. [Ref. 202] This definition is specific to the IECC and is different than the definitions in the IRC and IBC.

As another example, the term *story above grade plane* can be defined by working through several definitions in the IBC. A story more than 6 feet above the average grade around the exterior wall of the building or more than 12 feet above grade at any point is considered a *story above grade plane* (Figure 3-1). A *story* is defined as “that portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above.” The *grade plane* is “a reference plane representing the average of finished ground level adjoining the building at *exterior walls*.” This measurement is used to determine building height. A basement is a story that is mostly below finished ground level.

Classifications of residential occupancies, which are defined as units where people live, eat, and sleep, are found in the IBC. Apartment and condominium buildings are multifamily structures and represent a typical R-2 occupancy. Common R-4 buildings are group homes, small assisted-living facilities, and halfway houses. The shared attribute of these residential uses is that the occupants are “non-transient.” A three-story apartment building is not regulated by the commercial energy provisions (Figure 3-2). A three-story hotel is an R-1 building and must comply with the commercial energy provisions.

Thus, if the building uses do not fit into any of the defined descriptions of “residential” or the building is more than three stories in height, the IECC commercial provisions must be applied. Common commercial uses are offices, banks, clothing stores, restaurants, bars, retail sales, automobile

Code Basics

2012 International Building Code in Chapter 3 classifies buildings into 10 main Occupancy Classifications of Assembly (A), Business (B), Educational (E), Factory and Industrial (F), High Hazard (H), Institutional (I), Mercantile (M), Residential (R), Storage (S) and Utility and Miscellaneous (U) ●

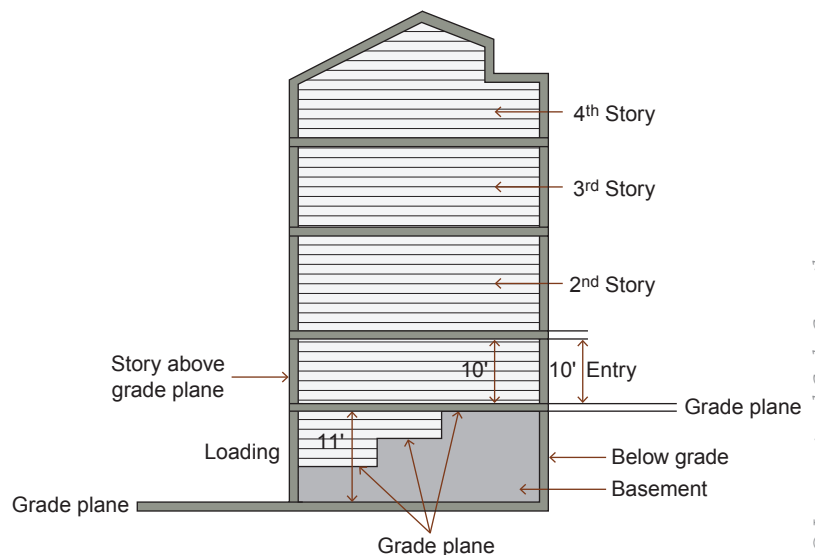


FIGURE 3-1 Story above grade plane



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FIGURE 3-2 A three-story apartment building is not regulated by the commercial energy provisions

repair shops, and gyms. The IBC commercial occupancy groups are Assembly, Business, Educational, Factory, High-hazard, Institutional, Mercantile, Residential, Storage and Utility, and Miscellaneous. A four-story hotel (Figure 3-3), tall office building (Figure 3-4), fire station (Figure 3-5), and corner store (Figure 3-6) are all regulated by the commercial energy code provisions. [Ref. C101.5]



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FIGURE 3-3 Four-story hotel



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FIGURE 3-4 Office building



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FIGURE 3-5 Fire station



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FIGURE 3-6 Corner store