

DECODED:

Use Groups and Occupancy Classifications



From the well-known blog **idighardware.com**, Lori Greene brings some much-needed clarity to codes.

BY LORI GREENE, AHC/CDC, FDAI, FDHI, CCPR

WHEN I'M WORKING THROUGH A CODE QUESTION, THE FIRST THING to determine is which code I should be referencing. If it's a project in the design or construction phase, it's typically the building code that was in effect when the building permit was granted. In most states, the building code is an edition of the *International Building Code* (IBC), often with state modifications. If the question is regarding an existing building, the prevailing code typically is the fire code for the project's location—possibly NFPA 1 (which references NFPA 101, *Life Safety Code*) or the *International Fire Code* (IFC).

Sometimes my question is more specific and requires the use of a referenced standard, but I still start with the building code or fire code to find out which edition of the standard has been adopted. Referencing the wrong edition of a code or standard can result in incorrect information, as the code requirements may change from one edition to the next.

The next thing I consider is the use group or occupancy classification for the building or space where the door opening is located. In Chapter 3, the IBC defines each "use group," and NFPA 101's Chapter 6 describes each "classification of occupancy." Both terms describe how the building or a portion of the building will be used, and each of these codes contains requirements specific to certain uses.

For example, the egress and fire protection requirements of an Educational occupancy that would typically be occupied by a large number of children is different from the requirements of a Health Care occupancy where occupants may be incapable of self-preservation.

The IBC includes the following use groups, many of which are divided into subgroups. In some cases, the subgroups are classified in order from highest hazard to lowest, although this is not the case for every occupancy type.

- Assembly: Groups A-1, A-2, A-3, A-4, A-5
- Business: Group B
- Educational: Group E
- Factory and Industrial: Groups F-1, F-2
- High Hazard: Groups H-1, H-2, H-3, H-4, H-5
- Institutional: Groups I-1, I-2, I-3, I-4
- Mercantile: Group M
- Residential: Groups R-1, R-2, R-3, R-4
- Storage: Groups S-1, S-2
- Utility and Miscellaneous: Group U

NFPA 101 defines the following classifications of occupancy and includes detailed requirements for each occupancy type in Chapters 12-42. Examples of each occu-

pancy classification can be found in Annex A of NFPA 101.

- Assembly
- Educational
- Day-Care
- Health Care
- Ambulatory Health Care
- Detention and Correctional
- Residential
- Residential Board and Care
- Mercantile
- Business
- Industrial
- Storage

When two or more occupancies are present in the same building, the code requirements for each type must be addressed, depending on the building's floor plan. NFPA 101 defines two types of Multiple occupancies. A Mixed occupancy is where occupancies are intermingled, and the most restrictive fire and life safety requirements apply to the whole building. A Separated occupancy is where two or more occupancies exist, and the occupancies are separated by fire-resistance-rated assemblies; in that case, each part of the building is treated as the applicable occupancy classification.

NFPA 101 also classifies the level of hazard presented by the contents of a building as either low hazard (unlikely to sustain fire), ordinary hazard (expected to burn with some rapidity or to create a substantial amount of smoke), or high hazard (likely to burn rapidly or explode). The vast majority of buildings are considered to have ordinary hazard contents.

You should understand which occupancy classification applies to your project because the requirements often vary by occupancy. For example:

- Panic hardware is required for egress doors that lock or latch


when serving a certain occupant load (50 occupants for recent editions of the IBC, 100 occupants for NFPA 101). However, this requirement only applies to Assembly and Educational Occupancies (and Day-Care per NFPA 101). Panic hardware is also required for High Hazard occupancies. Other occupancies are not usually required to have panic hardware even if they have a high occupant load. For example, panic hardware is not typically required by these codes for a retail store because that would be a Mercantile occupancy.

- Delayed egress locks are not allowed by the IBC on doors serving Assembly, Educational, or High Hazard use groups. NFPA 101 has varying limitations on the use of delayed egress locks, depending on the occupancy classification. In Assembly occupancies, for example, delayed egress locks may be used on doors other than the main entrance door. (Consult the pertinent occupancy chapter in NFPA 101 for other limitations.)
- Residential dwelling units are typically allowed to have a latchset and a separate security device (deadbolt, door guard, security chain), which would require two motions to unlatch, as long as no key, tool, or special knowledge or effort is required. For means of egress doors in almost all other occupancies, one operation must unlatch the door.

It can sometimes be difficult to determine the correct occupancy, so the applicable code must be consulted. The same building may be considered different occupancy types by the IBC and NFPA 101, or a

space may change functions based on the occupant load:

- According to NFPA 101, a college classroom building is a Business occupancy, but if a college classroom holds 50 occupants or more, it is an Assembly occupancy.
- Ambulatory health care facilities must comply with the requirements for Ambulatory Health Care occupancies in addition to the requirements for Business occupancies.
- Child daycare centers are considered Day-Care occupancies per NFPA 101, but they may be Group I (Institutional) or Group E (Educational) per the IBC.
- A training room within an office building is not considered an Assembly use group by the IBC unless it has an occupant load of 50 or more or is over 750 square feet in area.
- NFPA 101's Health Care, Board & Care, and Detention & Correctional are all I (Institutional) use groups per the IBC.

After determining the relevant code, be sure to identify the occupancy classification(s) or use group(s) that apply to the project in question before attempting to apply the code requirements. This information is usually available from the architect, since there are many aspects of a building's design and construction that are based on the occupancy type. Consult state and local codes for information pertinent to your project's jurisdiction, as requirements may vary. As always, the Authority Having Jurisdiction (AHJ) has the final say in matters of code compliance. 

About the Author: Lori Greene, AHC/CDC, FDAI, FDHI, CCPR, is the manager of codes and resources for Allegion. She can be reached at Lori.Greene@allegion.com or online at iDigHardware.com.