

# BHMA<sup>®</sup> CODES IN CONTEXT™

## 2021 IBC and IFC Updates Affecting Doors, Door Hardware, and Door Operations

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**Doors, and how doors function, are integral components of life safety and security provided by buildings we occupy. As expected, doors are highly regulated by building codes, fire codes, and life safety codes.**

BHMA's mission is to enhance public safety and the security of buildings through standards, code advocacy and a commitment to fostering innovations that lead to the continuous improvement of builders hardware. BHMA takes its leadership role in code advocacy seriously by actively participating in the International Code Council's (ICC) model code development process. Our goals are to help craft technically appropriate requirements for life safety and security that are clear, concise, and consistently interpreted, applied, and enforced. BHMA achieves these goals via active participation in ICC's code development activities by authoring proposals to improve the model codes, by assisting other stakeholders with their proposals, and by advocating for proposals which are aligned with BHMA's goals.

The ICC has published the latest editions of the most commonly adopted model codes in the U.S.: the 2021 International Building Code (IBC) and 2021 International Fire Code (IFC). Some states, counties, and cities across the country are already updating their building codes based on the 2021 IBC and 2021 IFC, which will shape future building and fire codes of many jurisdictions. To see the status, by state, of the adoption of ICC's model codes, see [ICC's code adoptions](#) web page.

Below is a brief summary of updates to the 2021 IBC and IFC which affect doors, door hardware, and/or door operations.

### Clarifying One Releasing Motion for Doors in the Means of Egress

Previous editions of the IBC and IFC required not more than one releasing **operation** to unlatch a door for egress. The 2021 IBC and IFC were revised to require doors to be operable with not more than one releasing **motion**. Further, the 2021 IBC and IFC clarified the one releasing motion is required to be in a single linear direction (pushing or pulling motion), or in a single rotational direction; and the single motion is to release all latching and all locking devices.

### Door Hardware Maximum Operating Forces, and Maximum Door Opening Forces

The IBC and IFC have long required panic hardware to be operable with a maximum of 15 pounds of force – this requirement has not changed with the 2021 IBC and IFC. However, the 2021 IBC and IFC clarified the maximum force for hardware operated by a rotational motion is 28 inch-pounds. These requirements are consistent with the latest edition of ICC A117.1.

Additionally, the 2021 IBC and IFC clearly separate, without changing, the maximum forces permitted to open doors from the maximum forces permitted to unlatch the door.

## Doors Serving Electrical Rooms and Refrigeration Machinery Rooms

Panic hardware has been required in specific locations per the IBC and IFC and per the National Electrical Code (NFPA 70). However, the IBC and IFC requirements didn't quite match the NEC requirements. The 2021 IBC and IFC requirements are now more consistent with NFPA 70 requirements regarding panic hardware on doors serving rooms containing electrical equipment. In addition, both the 2021 IBC and IFC require panic hardware on the egress side of doors serving refrigeration rooms larger than 1,000 square feet.

## Door Hardware Projecting Into the Door Opening Height

Some of the common door hardware items that typically encroach into the clear opening height of a doorway were not explicitly permitted by the IBC to project slightly into the door opening at the head. The 2021 IBC and IFC were revised to add power door operators and electromagnetic locks to the provisions addressing door closers and door stops. These hardware items are permitted to project into the clear opening height, provided they are a minimum of 78 inches above the floor.

## Power Operated Doors Required at Accessible Public Entrances

The IBC has long required many public entrances to buildings to be accessible. The 2021 IBC includes requirements for power-operated doors on public entrances required to be accessible, when those accessible public entrances are serving buildings of certain use groups and occupant loads.

## Terminated Stops on Door Frames of Fire Door Assemblies

Past editions of the IBC were silent as to where door frames with terminated stops (i.e. sanitary stops or hospital stops) were permitted and/or prohibited. The 2021 IBC addresses specific locations where door frames with terminated stops are prohibited: in several applications related to elevator lobby doors and elevator hoistway doors. This clarifies that terminated stops are allowed in other locations where they are not specifically prohibited by the code, including frames that are part of fire door assemblies.

**DISCLAIMER:** BHMA provides this information as a service. Refer to the jurisdiction's building codes and the project requirements. If questions, consult the Authority Having Jurisdiction (AHJ).

## Egress Doors Serving Exterior Spaces

The 2021 IBC includes new provisions which permit the locking of doors serving exterior spaces such as courtyards and roof terraces, if the criteria listed in the code are met. This change also addresses the means of locking exterior balconies for residential buildings and offices with private balconies.

## Locking of Doors Permitted in Health Care Facilities

The 2021 IBC and IFC now permit the use of locks on doors in some healthcare facilities where the clinical needs of the patients require containment or pose a security risk, provided the clinical staff have the keys, codes or credentials required for egress and can unlock the doors at all times.

## Rearrangement of IBC Section 1010 Means of Egress

The grouping and order of the requirements in Section 1010.1 of the IBC and IFC, which includes most of the provisions for doors in the means of egress, were rearranged and renumbered – without technical changes – to group like items together for ease of using the model codes. Provisions which were in Section 1010.1 of the IBC and IFC are now in Sections 1010.1, 1010.2, and 1010.3. Provisions for gates are now in Section 1010.4, and requirements for turnstiles have moved to Section 1010.5.

## About BHMA

The Builders Hardware Manufacturers Association (BHMA®) is the trade association for North American manufacturers of commercial builders' hardware. BHMA® is involved in standards, codes and life safety regulations and other activities that specifically impact builders' hardware performance standards for locks, closers, exit devices and other builders' hardware. It is the only organization accredited by the American National Standards Institute (ANSI) to develop and maintain builders' hardware performance standards.