

# Screen Doors and Doors in a Series

By Lori Greene, AHC/CDC, FDAI, FDHI, CCPR

**Screen doors are sometimes used in commercial or institutional occupancies, where air transfer through the opening is desired. One example of this would be a door leading from a commercial kitchen to the exterior. In some areas of the country where the climate is temperate, this is a common application which consists of two doors in the same opening, one inswinging and one outswinging. It can be very difficult for people with certain disabilities to maneuver through this type of opening, and the inswinging door can create an egress problem.**

The International Building Code (IBC) requires the space between two doors to be 48 inches minimum plus the width of the door swinging into the space (if applicable). Doors in a series are required to swing either in the same direction or away from the space between the doors. There are a few exceptions, including horizontal sliding power-operated doors and storm/screen doors in some residential dwelling units (see IBC-2015 *section 1010.1.8 Door Arrangement*).

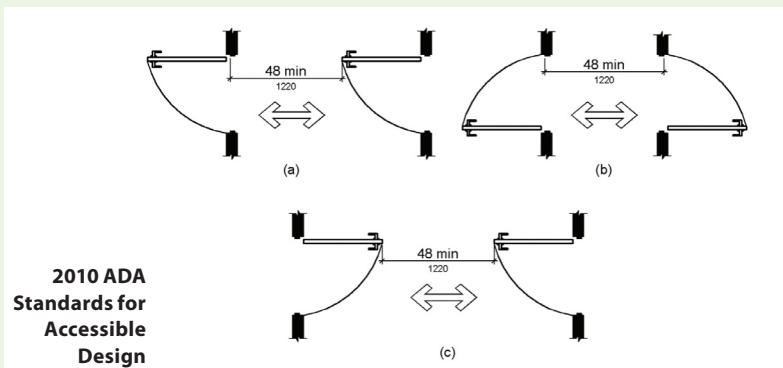
The 2010 ADA Standards for Accessible Design and ICC/A117.1 – *Accessible and Usable Buildings and Facilities* both include requirements consistent with the IBC. In addition, A117.1 also requires a compliant turning space within the vestibule. Push-side and pull-side maneuvering clearances for doors on an accessible route would typically apply as well.

## Doors in Series

The IBC requires doors to swing in the direction of egress travel when the door is serving an occupant load of 50 people or more. For High Hazard occupancies, the door must swing in the direction of egress travel when serving any occupant load.

NFPA 101 – *The Life Safety Code* includes requirements similar to those in the IBC, but also requires doors serving an exit enclosure (regardless of occupant load) to swing in the direction of egress except when it is serving an individual living unit that opens directly into the stairwell. The inswinging door in a screen door application would not be compliant with the egress requirements if the opening was serving one of these locations.

For a small vestibule that does not provide the minimum depth of 48 inches plus the width of a door swinging into the vestibule, installing automatic operators may seem to meet the intent of the standard by removing the need for maneuvering. However, the accessibility standards specifically require automatic doors to comply with the section for *Doors in Series* as outlined above. The IBC section *Door Arrangement* also applies to manual doors and automatic doors, so using automatic operators does not reduce the minimum vestibule size.



Although the Authority Having Jurisdiction (AHJ) might allow a modification to the adopted codes, the local AHJ would not typically have the authority to modify the ADA, which is a federal law.

A screen door used in conjunction with another door in the same opening would be considered two doors in a series, and would not provide the required space between the two doors. One argument could be that our example of a commercial kitchen door may not be on an accessible route and is not required to meet the accessibility requirements. This will depend on how the accessibility standards are adopted and enforced locally, but the IBC Commentary includes some good insight into this issue:

The fundamental philosophy of the code on the subject of accessibility is that everything is required to be accessible. This is reflected in the basic applicability requirement (see Section 1103.1). The code's scoping requirements then address the conditions under which accessibility is not required in terms of exceptions to this general mandate.

In the early 1990s, building codes tended to describe where accessibility was required in each occupancy, and any circumstance not specifically identified was excluded. The more recent codes represent a fundamental change in approach. Now one must think of accessibility in terms of "if it is not specifically exempted, it must be accessible."

There are several areas listed in the IBC which are exempt from the accessibility requirements, including one called *Employee Work Areas*. Although a commercial kitchen may be considered an employee work area, the IBC requires the space to be designed and constructed so that individuals with disabilities can approach, enter and exit the work area. If another accessible route is provided, the door with the screen door may not be part of a required accessible route, but can still create difficulties in operation.

One compromise for improving functionality in existing facilities could be to always hold one door open so there is only one door to maneuver through at any time, but this would not be compliant with the ADA standards. For new installations, there are products that eliminate the need for two doors. The separate storm



Photo courtesy of Lori Greene

**Two doors installed in the same frame do not meet the accessibility requirements for doors in a series, and may create a non-compliant egress situation.**

door would be omitted, and the remaining door would be equipped with a screen that can be closed by a secure cover or bifolding panels when the airflow is not needed.

The best course of action to take if these products do not meet the needs of the facility is to consult the AHJ to determine whether the opening is required to be accessible, and whether an egress problem is created by the installation of a screen door. ■



**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](mailto:Lori.Greene@allegion.com) or [iDigHardware.com](http://iDigHardware.com).