

## Avoiding Common Code Violations With Sliding Doors

by Kevin Tish

### Ensure the hardware is accessibility compliant.

In recent years, sliding and pocket doors have been popular design choices in many vertical markets. Healthcare, hospitality, education, commercial, and multifamily are using these styles of doors with more frequency because of the design and functional benefits.

Some key benefits include:

**Floor space** - slides against a wall or disappears into a wall cavity instead of swinging out or into a room. With the right application, it is no longer necessary for architects and designers to incorporate floor space to accommodate a swing door.

**Acoustic privacy** - With sliding doors used more in healthcare facilities, it is important to adhere to 45 CFR Part 160 of the 1996 Health Insurance Portability and Accountability Act (HIPAA). It requires "appropriate safeguards to protect the privacy of personal health information and sets limits and conditions on the uses and disclosures that may be made of such information without patient authorization." By sealing all four sides of the door leaf, some sliding door assemblies can provide sound attenuation to help reduce noise.

**Open space and flow** - When sliding doors are open, it creates an open flow to the room and generates the perception of more square footage, which is appealing to occupants. Additionally, when glass doors are used, even when closed, the stream of natural light is maximized - reducing the need for artificial lighting. Natural light has also been proven to enhance overall health.

In conjunction with the benefits of sliding doors, new challenges have emerged with accessibility applications and the proper use of sliding door hardware.

"I'm seeing many different vertical types, from churches to high-end multifamily projects, that are including sliding doors on their door schedules," says Sheryl Simon, CSI, CDT, Manager of Architectural Specifications for Hager Companies. "Part of my job is to confirm that any accessible door opening implementing sliding doors is specifying the appropriate code-compliant hardware."

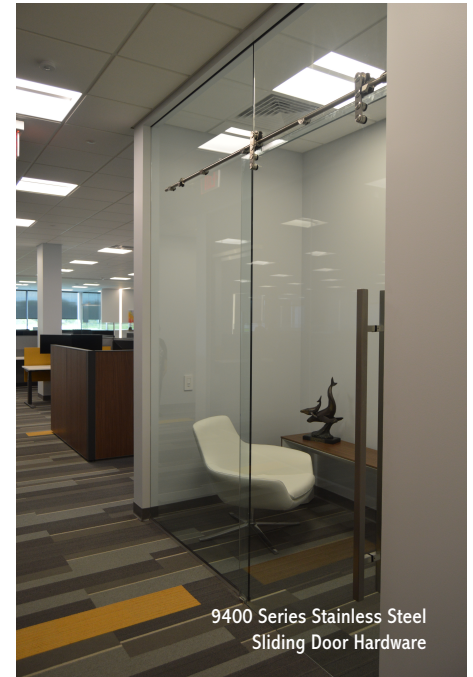
### Accessibility Applications

While sliding doors can be ADA (Americans with Disabilities Act) compliant, the most common code violation culprit is overlooking compliant door hardware in designated accessible rooms.

Items to keep in mind when specifying door hardware for these types of openings are the pull type, opening size and door weight. All these can contribute to the opening meeting accessibility standards.

### Pull Type and Opening Size

For sliding doors to be considered accessible, common types of operating trim include surface pulls and ADA-compliant flush cup pulls. Any door pull used must be able to be accessed without any special gripping or grasping per ICC A117.1-2017 404.2.6:



9400 Series Stainless Steel Sliding Door Hardware

*404.2.6 Door and gate hardware. Handles, pulls, latches, locks, and other operable parts on doors and gates shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate.*

The backset of the door pull also affects how far the door can open and still leave the pull accessible. The United States Access Board recommends 1.5-inch clearance around the pull handle. This means that when the door is full opened, the door will still project 4 to 5 inches into the opening to allow for a one-handed operation with a loose grip or closed fist.

Additionally, door openings require to be accessible for egress need to provide 32 inches minimum clear width per IC 201 1010.1.1:

*1010.1.1 Size of doors. The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear width of 32 inches (813mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear width of 32 inches (813mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32 inches (813mm). The maximum width of a swinging door leaf shall be 48 inches (1219mm) nominal. Means of egress doors in a Group I-2 occupancy used for movement of beds shall provide a clear width not less than 41 1/2 inches (1054mm). The height of door openings shall be not less than 80 inches (2032mm).*

The pull size, backset and the clearance around the door pull to the frame all come into play when determining the width of the door. With this in mind, we recommend using a 42-inch-wide door rather than the standard the extra space needed to install the hardware and ensure that there is a 32-inch-clear-opening width when the door is fully open.

"This is a common code violation, as more new construction and retrofit projects are designed with sliding doors," observes Brian Clarke, DHT, AHC, DHC, CFDAI, CDT, CSI, Director of Specifications at Hager Companies.

"For instance, in a hotel, only a percentage of the rooms must be accessible. The floor plans are often drawn to allow for a 32-inch-clear-opening width using recessed hardware but installing surface-mounted accessible hardware creates a code violation. When surface-mounted hardware is required, it creates the need for a wider door."



This sliding door pull is installed with appropriate clearance.



Attention to installation instructions is important. This pocket door privacy latch was installed up

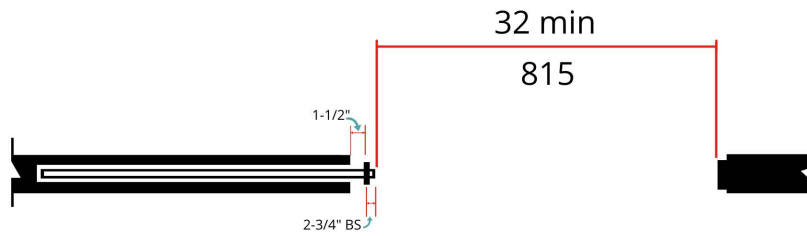
Hospitals and other health care facilities that are moving patient beds have a different code concern when it comes to the size of doors. IBC 2015 1010.1.1 states: "Means of egress doors in Group I-2 occupancy used for the movement of beds shall provide a clear width not less than 41 1/2 inches." If using a sliding door in this case, the door width is usually adjusted to 48 inches to accommodate the door pull, and the door track most likely must also be specified for a heavier door.

Until recently privacy has also been an issue with sliding doors, but privacy locks are now available. "Should a lock be necessary, make sure an ADA-compliant thumb-turn privacy lock is specified," Clarke advises. "This lock has a longer turn-piece, which makes it easier to lock and unlock the door."

### Door Weights

Door tracks, just like any other handing device, are rated for certain weights, and an issue can occur when the sliding door hardware track does not support the weight. Door material type and whether it is solid or hollow core can play a big part in the smooth operation of the sliding door. Making sure the sliding door track can withstand the weight is critical.

During an accessibility inspection, a door pressure gauge is used to measure the required 5 pounds of operating force to the door. This inspection happens to all doors, not just sliding doors. According to the Department of Justice's 2010 ADA Standards for Accessible Design Advisory 404.2.9, "the maximum force pertains to the continuous application of force necessary to fully open a door, not the initial force needed to overcome the inertia of the door."



Sliding door hardware pull clearance diagram.

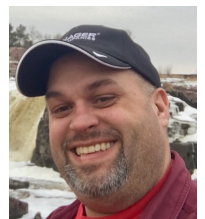
## Hardware Finishes

While not a code violation, it is important to note that in light of COVID-19, many new construction projects and existing facilities will consider ways to reduce the spread of germs. Using an antimicrobial coating on door hardware, including sliding doors, may be an option. This coating is formulated with ionic silver that slows the growth of bacteria, mold and mildew. It is important to help educate your customers that it is not a viable solution for viruses, such as COVID-19.

Barn door hardware has traditionally been powder-coated black for a rustic look. But with its widespread use in healthcare and corporate settings, stainless steel has become a popular option. As a bonus, stainless steel is an easier finish to keep clean and therefore reduces the spread of germs.

Sliding doors can elevate the look of any room, and we expect the architectural and design community to continue to amaze us in the ways they are integrating these doors into their projects.

As new projects become available, our advice is to seek out the expertise of your hardware architectural specifications consultant. He or she can help you select the appropriate hardware that matches the design and meets code requirements.



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