

# DESIGN AND CONSTRUCTION GUIDELINES AND STANDARDS

DIVISION 8 • OPENINGS

## 08 10 00 • DOORS AND FRAMES

### SECTION INCLUDES

Exterior Doors & Frames  
Interior Doors & Frames  
Storm Door/Screen

### RELATED SECTIONS

03 30 00 Concrete  
06 10 00 Rough Carpentry  
06 20 00 Finish Carpentry  
08 40 00 Entrances and Storefront  
08 70 00 Hardware

### INVESTIGATION AND RESEARCH

If the contract is just for door replacement without frame replacement, insist on field measurement of every door before fabrication.

### REFERENCE STANDARDS

Northeast Window & Door Association [www.nwda.net](http://www.nwda.net)  
American National Standards Institute [www.ansi.org](http://www.ansi.org)  
Window & Door Manufacturers Association [www.wdma.com](http://www.wdma.com)  
National Fenestration Rating Council [www.nfrc.org](http://www.nfrc.org)

**AWI** Architectural Woodwork Institute "Quality Certification"  
[www.awinet.org](http://www.awinet.org)  
Section 1300 (flush)  
Section 1400 (style and rail) and  
Section 1500 (factory finishing),

**NEMA** National Electrical Manufacturers Association [www.nema.org](http://www.nema.org)

**NFPA** National Fire Protection Association [www.nfpa.org](http://www.nfpa.org)



Accessible Entrances: Comply with: Massachusetts Architectural Access Board and the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."

### EXTERIOR ENTRIES & FRAMES

### MATERIALS

For exterior unit entries (including barrier free units), pre-hung, set-up door units in wood frames with standard thresholds are preferred (See 03 30 00 • Concrete for depressed foundation wall illustration for installing at barrier free entries).

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Fiberglass doors are preferred, although insulated steel is acceptable if custom sizes are required or if there are security concerns. In specifying steel or fiberglass doors, identify locations for reinforcing to accept hardware, including door closers. For fiberglass doors specify vinyl composite frames. Also specify Energy Star certified products if available.

Specify the thresholds, especially if the door will be used as an accessible entry.

Steel doors are made in various gauges of metal and with various insulating values. Steel doors should be a minimum of 16 gauge over a closed cell slab. Include these requirements in the specifications, as well as requirements for reinforcing to accept hardware.

Avoid applied plastic trim and mail slots.

Wood doors are not recommended for exterior use. If wood doors must be used, specify factory finish.

Egress Doors: Not more than 30 lb./ft. required to set door in motion and not more than 15 lb./ft. required to open door to minimum required width. Operating force requirements shall conform with requirements of all applicable codes.

Fiberglass doors in vinyl composite frames are preferred. Use metal frames (welded, galvanized, prefinished) if heavy use is anticipated.

### SCREEN & STORM DOORS

#### MATERIALS

For exterior unit entries, provide highly durable extruded, heavy gauge aluminum framed screen doors with:

- solid bottom panels
- factory-welded or brazed frame joints
- aluminum wire or fiberglass fabric screens
- solid core

Avoid Slab Doors

DHCD has had good experience with the following manufacturer's product line for family housing and DDS units:

- Harvey Building Products, Lifetime Storm Doors;
- Anderson Windows & Doors, EMCO Dual Vent Storm Doors and
- Larsen Solid Core Storm Door.

With insulated exterior doors, storm doors are not necessary, and may void metal door warranties. Provide screen doors (without glass insert) for ventilation.

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Combination storm doors/screen doors do not hold up over time for some uses, such as at DDS residences. In these buildings provide screen doors (without glass insert) with solid bottom panel.

If combination screen/storm doors are used, they should be self-storing. DHCD has had good experience with the following manufacturers' products of self-storing doors for elderly housing units:

- Harvey Building Products, Estate Series Doors;
- Anderson Windows & Doors, EMCO 400 Series and
- Pella Self-Storing Storm Doors.

### PATIO DOORS

#### MATERIALS

Patio doors should be swinging, insulated steel, vinyl, fiberglass or clad wood, with insulated tempered glass, and include the manufacturer's sliding screen door.

Due to operating force requirement for elderly tenants and the fact that sliders fail over time, DHCD suggests avoiding sliders unless there are no other choices

### INTERIOR UNIT DOORS & FRAMES

#### MATERIALS

Interior unit entries: solid core, 1-3/4 inch doors with 16 ga. metal frames (welded if required for fire rating) set up for hardware at the factory fire rated per code. Knock-down, field assembled door frames have been problematic.

Provide a UL certification label on all rated doors.

### CORRIDOR DOORS & DOORS OFF PUBLIC AREAS

Interior doors, within units, should be solid core doors: 1-3/8 inch; pre-hung in wood frames; (metal frames for solid core doors are typically only used with metal studs); 6-panel, pre-finished hardboard (such as Legacy or Colonist by Masonite) or field finished 6-panel wood veneer are both acceptable. Prefinished all interior veneered wood doors.

### INTERIOR DOORS

Avoid interior hollow core doors.

#### Execution

Install frames, if doors are not pre-hung, using the door as a template to assure perfect alignment of the door and frame. Provide a fastener at each clip.

### CLOSET DOORS & VENTILATING CLOSETS

#### MATERIALS

Louvers may be required in some interior doors, such as for closet doors in elderly housing and 689 developments. Although wood louvers are



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costly, they are used in order to maintain air circulation in the closet and reduce the possibility of mold accumulation.

Louvers should not be used in family housing because they are susceptible to damage and undercutting the doors is preferred.

Bifold doors should be avoided in all family and accessible units. Sliding doors, if specified, should be solid core wood with heavy gauge steel tracks designed to prevent doors from becoming dislodged from impact.

### **FIRE DOORS**

Fire doors assemblies must meet positive pressure testing requirement of UL 10c. Specify fire rated doors includes specifying gasketing to maintain positive pressure.

### **ACCESS DOORS**

The location and specific requirements of access panels and doors should be considered ~ exterior requires insulation, interior requires security, etc.

Heavy duty steel access panels and doors may exceed the requirements for the certain locations. The specifications should be developed to meet the application.

### **DOOR & FRAME SCHEDULE**

Provide a door and frame schedule in the plans.