

# **CHAPTER V**

## **TECHNICAL DESIGN & PERFORMANCE STANDARDS**



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## **DIVISION 8 - DOORS AND WINDOWS**

### **08000 Entrances - General**

All doors, hardware, closers, etc., shall provide means for easy access and use by the physically handicapped.

### **08100/08200 Doors - Wood and Metal**

#### **Interior Doors**

Except in special situations, the minimum door opening is 36".

Use flush doors wherever practical.

Transparent finished wood doors shall be satin finished where practical. Seal tops and edges with Water-Lox or equivalent immediately after trimming.

For non-fire rated doors, use only solid-core wood doors similar and equal to Weyerhaeuser, Code DSC-1.

Fire rated doors which are required to be B-label should be metal, in order to minimize the weight which the hinges and closers must carry. However, if B-label wood doors are specified, they shall have hinges and door closers installed using through-bolt hardware. Hardware, otherwise capable of handling the unusual weight.

On labeled fire doors, all closers shall be UL listed non-hold open type.

Doors which open to corridors and which contain glass, shall use either 1/4" UL fire-rated tempered glass or 1/4" wire glass set in rated metal frames with wire strands running diagonally.

Where exterior automatic door openers are provided, equip at least one interior door with an automatic operator.

Whenever possible, avoid fire shutter doors. If fire shutter doors are required, they shall be motor operated Up and Down. Provide access to the controls and all reset features from floor level. The test and reset connections to the fire alarm system should be key operated.

#### **Exterior Doors**

All exterior doors shall have a minimum of 36" opening and 7'0" height.

Double doors generally should not be used because of the problems involved in securing these doors. Where double doors are required, provide a keyed removable mullion such as Von duprin #5754.

All exterior doors and jambs should be hollow metal (steel) or aluminum and glass (storefront systems). Wood and frameless glass exterior doors present a severe maintenance problem and should be avoided. Steel doors shall be a minimum of 16 gauge steel; jambs shall be a minimum of 14 gauge. Aluminum doors in store front systems shall be medium or wide stile; narrow stile doors are not acceptable.

At each accessible entrance to a building equip at least one door with an automatic door operator.

Completely protect all exterior automatic door operator activators provided at accessible entrances from the weather. This shall include not only the use of weatherproof electrical boxes and enclosures, but also must contain a

weatherproof activator (rubber seal or push button) or housing which will prevent water from entering around the switch and prevent sticking during freezing weather.

### **08305 Access Doors**

Provide access doors equal to Milcor Style 'K' or 'DW'.

### **08500/08600 Windows - Wood and Metal**

Construct window sections to enable cleaning of outside glass surfaces from inside the building (in-swing, removable, or pivoted) except for windows accessible from the ground and windows no higher than forty feet (40') above grade. Equip window sections with concealed locks and removable keys. (For fire department access and emergency escape certain buildings and windows are required to be operable from within, without special use of a key.) Turn all keys over to Facilities Services with a minimum of one key per each 30 windows. Provide double-glazed windows with vacuum seal and 1/4" minimum, clear, polished glass.

### **08710 Door Hardware**

#### **Hinges**

To be no smaller than 4 ½ x 4 1/2

No less than three per door leaf

Ball Bearing hinges to be used on all exterior doors that are not store-front.

1. McKinney\*
2. Stanley
3. Ives

#### **Continuous Hinges**

1. Markar\*
2. Select
3. Ives

#### **Keying System and Cylinders**

For new construction and complete building renovations furnish removable core Corbin-Russwin cylinders in a the keyway unique to UNC-CH. All locks shall be furnished with permanent cores with 2 key blanks per core when ordering for permanent cores. In partial renovations to existing building the keyway for additional cylinders will match the existing keyway. Construction cores and keying will be provided by the University for new construction and complete building renovations. Construction cores will be returned to the University by the contractor at project completion. In all construction cylinder shells to be installed by the hardware installation sub-contactor. The Access Control shop will furnish temporary removable core cylinders in consultation with the general contractor and the end user for use during construction or renovation. Permanent cylinder cores with two (2) keys per cylinder will be delivered to the Access Control shop zero bitted for keying and installation for the end user upon acceptance of the building by the University and DOI.



### **Door Closers**

-to be equal to LCN 4000 and 4100 series. No floor closers to be used.

1. LCN \*
2. Norton
3. Dorma

### **Mortise Locks**

-trim to be equal to Schlage L-series X 93 X US26D

1. Schlage\*
2. Corbin-Russwin
3. Best

### **Cylindrical Locks and Latch sets**

-equal to Schlage AL series with removable core Primus cores X SAT X 626

1. Schlage\*
2. Corbin-Russwin
3. Best

### **Silencers, Stops and Flushbolts**

1. Rockwood
2. Glynn-Johnson
3. Ives

### **Kick plates, Armor plates, Door edges and Misc.**

1. Rockwood
2. Don-Jo
3. Ives
- 4.

### **Weather-stripping, Seals and Thresholds**

1. Pemko
2. Zero
3. National Guard

### **Push/Pulls**

1. Rockwood
2. Glynn-Johnson
3. Ives

### **Exit Devices**

-to be equal to Von Duprin 99 series. No concealed or vertical rod units to be used.

1. Von Duprin\*
2. Precision
3. Sargent

### **Overhead Stops/holders**

1. Glynn-Johnson\*
2. ABH
3. Rixon

### **Automatic/Accessible Door Operators**

-to be equal to LCN 4630/4640

1. LCN\*
2. Dorma
3. Beasom

### **Electronics**

1. Von Duprin\*
2. HES
3. Locknetics

Keying for all projects will be done by the university Access Control shop in coordination with the end user's needs.  
All lock cylinders in new construction and total building renovations to be removable core Corbin-Russwin.

\* Preferred

### **Building Card Access System**

If the scope of this project includes card access the following guidelines apply.

The Access Control shop will purchase material used for card access to maintain continuity with existing and future card reader projects on the UNC-CH campus. The Access Control shop will then supply the contractor and other University departments with material as needed to complete the work on the project. Here are listed the responsibilities of the general contractor and the subcontractors:

1. The general contractor shall furnish, install and paint one 8' X 4' X ¾" exterior grade sheet of plywood as instructed by the Access Control shop in the designated card access control room. It is the responsibility of the general contractor or his representative to coordinate the work of all subcontractors and communicate any scheduling dates, delays, problems or needs to the proper University personnel.
2. The electrical subcontractor shall furnish and install all necessary conduit, 2 X 2 Panduit and two-gang boxes in all locations as designated by the project plans and instructions of the general contractor. This subcontractor shall also furnish and install one 12" X 12" junction box with one two-inch nipple and in a separate location 110 volt power on a dedicated circuit terminating on the plywood mounted by the general contractor in the designated access control room as instructed. This contractor shall then pull and label all necessary wire furnished by the University Access Control shop from the access control room to all card reader locations as indicated without splices. If any locations are designated for future installation of card readers the contractor shall install boxes, conduit and labeled pull tape in the wall and install a cover plate as directed by the plans and the general contractor.

Each new construction project and/or complete building renovation shall include the installation of a Traka key control cabinet in a designated mechanical space for Facilities Services. The cabinet and ancillary equipment shall be supplied, installed, maintained and PM'ed by the Access Control shop. A dedicated circuit, conduit and 110 volt power for the key cabinet and conduit and low-voltage wire for a card reader shall be supplied by the Access Control shop and installed by a designated electrical shop. An internet connection and IP address shall be supplied by campus IT.





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