

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

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### **08100 METAL DOORS AND FRAMES**

1. Exterior doors shall be not less than 16 gauge steel. The top channel of each metal door shall be solid without pockets which collect dirt and water. All exterior doors and frames shall be galvanized.
2. Interior doors shall be not less than 18 gauge steel.
3. All door frames shall be 16 gauge. Knock-down frames are prohibited unless specifically approved in writing by Office of Facilities Design.

### **08200 WOOD AND PLASTIC DOORS**

1. Exterior wood doors are prohibited except when replacement of existing doors on historical buildings require wood doors.
2. All interior wood doors shall be solid core, either mineral core where a fire rating is required, high density particle board core, or wood stave core.
3. Wood doors which are to receive clear or stained finish shall be factory finished and pre-machined for hardware. Specify that the door edges are fabricated of matching wood to the face.
4. Doors to rooms storing high value items such as computers, scientific equipment, etc. shall have solid doors without vision panels and without adjacent sidelights.
5. The A/E must review door manufacturer list early in the design process and receive approval for the list from the Project Manger.

### **08400 ENTRANCES AND STOREFRONTS**

1. Aluminum doors shall have minimum 5" stiles, 5" stop rail and 6-1/2" bottom rail (wide stile doors).
2. All hardware, with the exception of cylinders, shall be provided and installed by the aluminum door manufacturer. Cylinders shall be provided under finish hardware section of the Specifications.

3. Hardware: The following hardware shall be provided (No substitutions except those indicated):

ITEM	MANUFACTURER	MODEL NO.
Hinge	Roton Continuous or Stanley	FBB-199 US32D
Closer	LCN	4041 x CUSH x Alum.
Panic Device	Von Duprin or Precision	99 x 996L (RHRB Door) 1103 x 17 (RHRB Door) 1102 x 17 (LHRB Door)
Mullion	Von Duprin	KR-4954-SP28
Threshold	Reese, or Approved Equal	

Weather-strip by door manufacturer

4. All finish hardware shall be supplied US26D, with the exception of door closers which shall be sprayed aluminum finish.
5. Overhead concealed door closers, floor closers, pivot hung doors and door manufacturer's pull trims are not acceptable.
6. Typical door schedule follows:
- A. Pair Aluminum Entry Doors:
- Each Leaf;
- 1 - Hinge Roton 780-053HD X Alum.  
1 - Panic Device Von Duprin 99 X 996L X US26D  
1 - Door Closer LCN 4041 X CUSH X Alum.
- Per Pair;
- 1 - Removable Mullion KR-4956-SP28  
1 - Threshold Zero or Approved Equal.
- B. Single Aluminum Entry Door
- 1 - Hinge Roton 780-053HD X Alum.  
1 - Panic Device Von Duprin 99 X 996L X US26D  
1 - Door Closer LCN 4041 X CUSH X Alum.  
Threshold Zero or Approved Equal  
Silencers GJ-64

## **08425 AUTOMATED HANDICAPPED DOOR OPERATORS**

<b>ITEM</b>	<b>MANUFACTURER</b>	<b>MODEL NO.</b>
Hinge	Roton or Select Products Limited. No Substitution	
Automatic Operator	LCN, 4600 Series No Substitutions	
(*) Electric Strike	Von Duprin 6000 Series 24VDC Fail secure	Model to suit application. No Substitution
(*) Panic Device	Von Duprin	99NL-F x US26D No Substitutions
Threshold	Zero (or) Approved Equal.	
Weather Strip	Zero (or) Approved Equal	

NOTE: (\*) May not be required depending on application.

1. Hinge and Panic Device shall be installed with thru-bolts. All exposed screw and bolt heads shall be spanner head.
2. Sufficient reinforcement shall be provided for overhead surface mounted door operators.
3. 120VAC power shall be supplied to each operator.
4. Door operator controls: A self contained solid state circuit shall control the operations and switching of the swing power operator. The electronic control shall provide low voltage power supply for all means of actuation. No external or auxiliary low voltage power source will be allowed. The control shall also include time delay 1-60 seconds, for normal cycle, as well as the following built-in features:
  - Torque limiting for controlled forces on opening,
  - Acceleration control for smooth starts and recycle,
  - Special circuitry for reducing power to the motor when door is in “Hold-Open” mode, extending longevity and assuring reliability.

5. Safety Sensors: VISONPULSE: The swing door presence sensor shall be mounted to each side of the swing door approach and swing path and shall be complete in all respects consisting of the following:
  - Extruded Aluminum housing of 6063-T52 alloy sized to run full width of door, integral high impact, tinted acrylic lenses and injection molded end caps.
  - Solid state electronics interfaced to alternating rows of light emitting diodes and receivers contained within the extruded aluminum housing.
  - Long/short range switch and flexible cable.
  - Sensor shall be capable of operation within temperature ranges of -20F and 160F. Vision pulse shall detect presence not motion and shall not be restricted in application due to door design, construction, material or glass type. Ambient light and radio frequencies shall not interfere with the sensors performance.

## **08500 WINDOWS**

1. Wherever possible, windows should be specified that have the muntins installed between the panes of glass.
2. Exterior sills at all windows and clerestory units shall be designed to provide a 15 degree slope (minimum) to drain water away from the window frame.

## **08651 SECURITY SCREENS**

1. All first floor and fire escape windows on dormitory buildings shall be equipped with "Crime Shield" security screen as manufactured by "Exeter" in Wyoming, PA. 18644 or approved equal.

## **08700 HARDWARE**

1. Specifying hardware by allowance is prohibited. Hardware sets shall be developed for each unique condition for the building.

2. The New Jersey Uniform Construction Code, Barrier Free Subcode requires that door handles be easily grasped by handicapped persons. This necessitates lever handles on virtually all doors in University buildings.
3. Delayed egress devices are prohibited unless approved in writing by the Office of Design and Construction Technology and the Construction Code Official, for the specific application and location.

4. Typical Door Schedules are as follows:

A.. Non-Public Toilet:

- 1-1/2 pr. Butts
- 1 - Stanley FBB179 X US26D
- 1 - Privacy Set Schlage L9040 LX03 X US26D
- 1 - Door Closer LCN 4041 X Alum.
- Silencers GJ-64

B. Storage Room, Custodial Closets

Note: Same set shall apply to Mechanical and Electrical Rooms. However, lever trim shall not be used (knurled knob trim required).

- 1-1/2 pr. Butts Stanley FBB179 X US26D
- 1 Lockset Schlage L9080 LX03 X US26D
- Silencers GJ-64

C. Office Doors

- 1-1/2 pr. Butts Stanley FBB179 X US26D
- 1 Lockset Schlage L9050 LX03 X US26D
- 1 Door Closer LCN 4041 X Alum. (optional)
- Silencers GJ-64

D. Public Toilet

- 1-1/2 pr. Butts Stanley FBB179 X US26D
- 1 - Lockset Yale 313ST X US26S
- 1 Pull Plate Rockwood or approved equal
- 1 Push Plate Rockwood or approved equal
- 1 Kickplate Rockwood or approved equal
- 1 Mop Plate Rockwood or approved equal
- 1 Closer LCN 4041
- Silencers GJ-64

E. Classrooms, Laboratories

- 1-1/2PR. Butts Stanley FBB179 X US26D
- 1 - Lockset Schlage L9070L X 03 X US26D
- 1 - Closer LCN 4041 (optional)
- Silencers GJ-64

5. Hardware: The following hardware for the types of buildings indicated shall be provided. (No substitutes except those indicated in the table below.)

ITEM	MANUFACTURER	MODEL NO. ACADEMIC BUILDINGS	MODEL NO. HOUSING FACILITIES
Butts (Int.)	Stanley	FBB-179 4-1/2 USP or approved equal	FBB-179 4-1/2 USP
Butts (Ext.)	Stanley	FBB-199 4-1/2 US32D or Approved Equal	FBB-199 4-1/2 US32D
Hinges	Roton or Zero	Continuous (to suit application)	
Locksets & Latch Sets	Yale Schlage		CRR 8000 Series L9000 Series x 03 Trim
Key Cylinders		Yale	Russwin
Flush Bolts	Ives	457-B26D or Approved Equal	457-B26D
Panic Devices	Von Duprin or Precision	99x990NL x US26D 1103 x 17	99 Series 1100 Series
Removable Mullions	LCN	KR-4956—SP28	KR-4956—SP28
Door Closers	LCN	4041 x Sprayed Alum.	4041 Series
Door Stops / Holders	Glynn - Johnson	500 Series Non H. O.	500 Series Non H. O.
Wall Bumpers	Ives	407 - 1/2 x B26D or Approved Equal	407 - 1/2 x B26D
Push Plates	Rockwood	70 3-1/2 x 15 US26D	70 3-1/2 x 15 USD26D
Pull Plates	Rockwood	123 x 73 3-1/2 x 15	123 x 73 3-12 x 15
Mop Plates	Rockwood	18-8"	18-8"
Kick Plates	Rockwood or	18-12"	18' 12"

Approved Equal

Silencers

Glynn-Johnson or  
Approved Equal

No. 64

No. 64

6. Mop plates and kick plates shall be 1" less than width of door on hinge side, 1-1/2" less than width of door on stop side.
7. Hardware items, not set forth herein, shall be subject to verification by application, on a per project basis.
8. Floor type or overhead Concealed door closers are NOT acceptable.
9. Vertical Rod Type Panic Devices are NOT acceptable unless authorized by the Security tech. manager. Panic devices by manufacturers other than specified above are NOT acceptable. Panic devices by the specified manufacturers, shall be acceptable ONLY in the SERIES specified herein
8. Removable Mullions, as specified herein, shall be used on entry doors, where doors are paired.
10. Hardware applications may vary, due to special requirements, or code restrictions. These applications shall be considered on a per project basis.
11. At drywall or plaster walls, use closers with CUSH function. Wall bumpers on drywall or plaster are prohibited. Floor bumpers are prohibited.
12. Exterior doors which are not the main access point to the building shall be exit only, and shall be connected to the fire alarm system. Such doors shall be clearly marked on the inside that opening the door will sound an alarm.

## **08725 CARD ACCESS CONTROL SYSTEM**

1. Card Access Control (CAC) systems where required shall meet the following criteria:

The CAC system shall be low voltage, flexible and expandable. It shall employ state of the art digital and coding technologies, be designed and manufactured for high speed processing and maximum reliability. It shall be of modular design capable of interfacing with compatible type PC's. All CAC systems must be approved by the Security Tech. Manager.

Software programs employed in the system(s) shall be capable of controlling from one (1) to eight hundred (800) access points per site. All access attempts are to be recorded, printed and/or displayed at the operators' option.

The CAC system shall be designed to operate in automatic and command programming modes, respond to alarm generated reports and modify the data base configuration with all activities available to be stored, printed or displayed at the operators' option.

Operator interface with the system shall be through a video display monitor and/or automatic printer and/or IBM or compatible type PC's. Monitor displays and printed information shall use clear, complete English language descriptions and shall not require the operator to interpret numeric or coded data.

2. Main entrance doors to all dormitories shall be equipped with card access control systems. Generally there shall be only one main entrance to a dormitory.
3. Elevators in dormitories shall be equipped with card key access control to restrict unauthorized use.
4. If a card key access control system is required for the building, specific specifications may be obtained from the Project Manager.
5. The card key system shall be coordinated with the Rutgers University Security Systems Manager from Business Administrative Services.