

**08700 HARDWARE**

## 1.0 General

- A) The University of California, Santa Barbara, uses IR Security & Safety Consultants (AHC) (626 585-9927) as its consultant for doors and door hardware. Contacts with the firm are Chris Clark or Loren Studley. We recommend that you contact them to write the finish hardware specification for University projects. There is no fee for this service. University personnel are trained in the installation and maintenance of the hardware listed in the Campus Hardware Standards and Physical Facilities maintains considerable stock of material for repair work.
- B) The University shall check the installation of finish hardware at the completion of the Project.
- C) Warranty: Furnish a written guarantee against defective materials and workmanship for a period of ten (10) years for door closers and two (2) years for the remainder of the hardware.
- D) Shop drawing review of hardware submitted shall be accomplished only after all aspects influencing hardware can be reviewed at the same time. No partial submittal reviews will be performed.
- E) All building exterior doors and general assignment classroom doors shall be controlled by the Campus Access Control System. (division 13850).
- F) Doors may require power-assisted door operators with interior and exterior actuator buttons. Coordinate with adjacent materials/systems to conceal conduit and/or wiring.  
For example, if a main entry is in a curtain wall system, coordinate the placement of wiring and control or activation devices to conceal wiring within curtain wall, and mount actuator on curtain wall. The University will not accept exposed conduit or surface mounted raceway for installation of devices. Power-assisted doors shall be provided at:

- 1) Main entry for ADA accessibility
- 2) As required by the Project Program

## 2.0 Products

- A) Fasteners
  - 1) Fasten thresholds with machine screws, anchors and caulk around the perimeter with a clear silicon sealant.

- 2) Only fasteners provided by the hardware manufacturer shall be used.
- 3) Provide through-bolts for closers and exit devices on wood doors.

B) Hinges

- 1) Provide heavy weight geared hinges on exterior openings with school top cap, full concealed for new construction; full concealed for existing frames with new doors; or full surface for existing doors and frames.
- 2) For interior openings, provide three-knuckle, button tip, full mortise ball bearing template butts with non-rising stainless steel pins.
- 3) Provide out-swinging door hinges with non-removable pins.
- 4) Provide out-swinging exterior door hinges with non-removable pins and security studs.
- 5) Provide heavy weight butts for doors over 42” in width; more than 1-3/4” thick, and over 7’-6” in height
- 6) Provide three hinges per leaf up to 7’-6” in height, and then four hinges up to 9’-6” in height
- 7) Provide anchor hinges on doors with exit device and classroom doors. For each electrical hinge provide a junction box that is fastened to the frame jamb. Provide electrical hinges with the number of wires required by the electrical hardware feed, plus two extra wires. Continuous circuit hinges shall have wires concealed.
- 8) At high use doors in areas such as vivariums, loading docks, and selected areas within laboratories, provide heavy duty full mortise hinge.
- 9) Hinges shall be provided from the following products:

<b>DESCRIPTION</b>	<b>HAGER PRODUCT NUMBER</b>	<b>STANLEY PRODUCT NUMBER</b>
Steel-Standard Weight Butt-Ball Bearing	AB700	CB1900
Steel Heavy Weight Butt-Ball Bearing	AB750	CB1901
Non-ferrous Standard Weight Butt-Ball Bearing	AB800	CB1960
Non-ferrous Heavy Weight Butt-Ball Bearing	AB850	CB1961
Anchor Hinges – Heavy Weight Steel	AB7508	CB1909
Anchor Hinges – Heavy Weight Stainless Steel	AB5392	CB1969
Gear Hinge, Heavy Duty – Double Bearing – Half Surface		920A DB-SC

Gear Hinge, Heavy Duty – Double Bearing Surface

930A DB-SC

C) Locks and Trim

- 1) Provide wrought strike boxes and curved lip strikes with proper lip length to protect trim of the frame, with a projection of no more than 1/8” beyond frame trim or the inactive leaf of a pair of doors. Provide cast cylinder collars.
- 2) Provide latch protectors for the type of lock on exterior out swinging doors. Provide electrical mortise locksets, with solenoid operation, concealed within the lock body.
- 3) Locks and trim shall be provided from the following products:

<b>LOCK TYPE</b>	<b>SCHLAGE</b>	<b>BEST</b>
<b>Mortise</b>	L9000 Series	35H Series
<b>Cylindrical</b> Schlage D-Lever series. Use in retro-fit cylinder lock applications as required, otherwise use mortise lock	D Series	93K Series

D) Keying and Cylinders

- 1) Schlage Everest “D” Interchangeable Core Patented Key System or Best keyway as directed by the University. All keys to be stamped: “University of Santa Barbara California – Do Not Duplicate” on one side of the key head an the other side will be blank.
- 2) Provide cylinders and lockset from one manufacturer, prepared for interchangeable core. Provide construction cores
- 3) Provide permanent cores to University at least six (6) weeks prior to job completion.
- 4) Permanent cores will be combined by the University.
- 5) Consult with Cesar Lugo, Lead Locksmith for additional and specific instructions.

E) Exit Devices

- 1) Provide rim exit devices on single doors; rim exit devices on pairs of doors with mullions where egress requirements allow.

- 2) Provide heavy duty exit devices that have quiet return of push bar, heavy chassis mounting design, with one piece removable covers, and interchangeable removable core cylinders of the lockset manufacturer. Exit devices shall be Von Duprin series 99 , no known equal. Devices shall be NL function with VR900 series pull except rated doors that shall have 994L-F trim
  - 3) Provided cylinder dogging on non-labeled exit devices. Thru-bolted trim to the lock stile chassis. Use the same type of lever on the locksets with the break-a-way feature.
  - 4) Provide keyed removable mullions with interchangeable removable core cylinders. Von Duprin KR series with MT54 storage bracket approved by the campus. No known equal.
  - 5) When provided, electronic exit devices, power supplies and electronic access controls shall be of one manufacturer. Provide manufacturer's complete wiring illustration.
- F) Magnet hold open units shall be provided with through bolts and back plates.
- G) Door Closers
- 1) Surface door closers to be heavy duty, full cover, hydraulic type with high strength cast iron case, full rack and pinion construction of heavy steel.
  - 2) Surface closers to have adjustable spring power. Supply closer with separate, regulating screw valves for closing speed, latching speed, and backcheck control.
  - 3) Closer arms; heavy duty forged steel, rectangular shape the full length of the arm, painted to match the finish of the closer
  - 4) Mount the closer body and arms on the non-public side of the opening; on the interior side of the exterior openings. Provide LCN Heavy Duty Use model 4040/41 surface closers, no known equal.
  - 5) Use electronic low energy door operator where required for ADA access. Provide LCN Electric Auto-Equalizer series 4630/4640, no known equal.
  - 6) Floor closer not acceptable for campus.
- H) Door Stops and Holders

- 1) Door stops shall be provided for each door leaf. Provide for every door either:
  - a) Floor stop: (first choice): Ives, Hagar or equal. Ives FS436 Series for interior use and Ives FS444 for heavy duty use or equal
  - b) Wall stop (second choice) Ives, Hagar or equal. Ives WS406/WS407 Series or equal.
  - c) Overhead stop (third choice). Glynn Johnson 900 & 100 series, Hagar or equal. Use only where floor or wall stops are inadvisable. When used, use heavy duty hinges or continuous hinges. No hold open stops
  
- I) Kickplates
  - 1) Provide kick plates on high use doors, non-labeled lab doors, classrooms, janitor's closets, storage rooms and rest room doors.
  - 2) Provide 16 gauge stainless steel, beveled three sides, kickplates 10" high by 2" less than door width on single openings, and 12" high by 1" less than door width, on paired openings.
  
- J) Flushbolts
  - 1) Ives FB50-60 Series flushbolts or equal
  
- K) Thresholds and Seals
  - 1) Provide stainless steel thresholds with a non-slip coating at exterior doors. Thresholds shall cover the full width of the opening, and wrap the frame from face to face. Cover expansion joints, floor differences and floor rises with the properly configured threshold, cutting and notching for the frame stop/soffit/rabbets. Exterior thresholds shall have beveled side edges. Thresholds shall match the wall width.
  - 2) Provide aluminum thresholds for interior openings. Provide finish to match hardware.
  - 3) Provide labeled openings with "soft puff" intumescent seals.
  - 4) Where automatic door bottoms are requested; they shall be surface mounted. Concealed automatic door bottoms shall not be used.
  - 5) Provide seals with screw-on fasteners; no adhesive applied seals.

6) Manufacturers: Pemko, Zero or equal

M) Finishes

1) Provide 626, Satin Chromium plated, 630, Stainless Steel or 613, per the choice of the University Representative.

N) Supply to the University the following attic stock items:

1) Two locksets of each function with cylinders in the keyway used for the Project.

2) Two surface mounted door closers. One set of instruction sheets for each item provided.

3) One set of parts lists for each item provided

4) One each of non-standard tool required for installation of each item provided.

5) 500 key blanks. Schlage Everest "D", part number 35-015

6) Key Cabinet with 100% expansion.

**END OF SECTION**