

## SECTION 08 71 00

### FINISH DOOR HARDWARE

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Door hardware.
  - 2. Miscellaneous finish hardware.
  - 3. Latch & lock guards
- B. Related Sections:
  - 1. Section 08 11 13 - Hollow Metal Doors and Frames.
  - 2. Section 08 14 16 - Wood Doors.
  - 3. Section 08 43 13 - Aluminum Storefront, Doors, and Exterior Fixed Units

##### 1.2 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Submit through Contractor to Architect. Prior to submitting, contact Architect to discuss door hardware/keying meeting per 1.3.A. If Architect chooses, submittal will be reviewed at time of meeting. Supplier will make corrections as determined through the course of this meeting and distribute record copies to Architect and Contractor.
- C. Hardware Schedule: Submit final hardware schedule organized by "sets", to indicate specific product to be furnished for each item required in each set.
- D. Templates: Furnish templates to each fabricator of doors and frames, as required for preparation to receive hardware.

##### 1.3 DOOR HARDWARE/KEYING MEETING

- A. Prior to ordering of hardware items, Contractor shall arrange meeting between, hardware supplier, Owner, and Architect to review and verify door hardware submittals and keying suggestions. This review meeting shall be considered as the submittal review. Any changes shall be incorporated in the hardware submittals and then resubmitted to Contractor and Architect as **record copy**. Contractor to notify all parties one (1) week prior to meeting date.

## 1.4 PRE-INSTALLATION MEETING

- A. Prior to installation of hardware items, Contractor shall arrange meeting between hardware installer, hardware supplier, and factory representatives of locks, locksets, exit devices, closers and specialty hardware items in order to review the installation requirements and procedures.

## 1.5 REFERENCES

- A. Comply with State of Arkansas Adopted ADA Accessible Guidelines in regard to accessible or handicapped features for all door hardware items used on this project. OR

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Product Quality: Hardware items are to be ANSI Grade 1 Certification.

### 2.2 HINGES

- A. Manufacturers:
  - 1. Stanley
  - 2. Hagar
  - 3. McKinney
  - 3. Approved alternate
- B. Material:
  - 1. Provide full mortise-type hinges with stainless steel pins, except steel pins with steel hinges; non-removable for exterior and public interior exposure, non-rising for non-security exposure, flat button with matching plugs. Provide stainless steel hinges on exterior applications.
  - 2. Ball-bearing Function: Swaged, inner leaf beveled, square corners.
- C. CONTINUOUS HINGES
  - 1. Roton, model 780-224 HD series by Roton, Makar, or approved alternate.
  - 2. Warranty: Manufacturer's lifetime warranty.

### 2.3 LOCKS, LATCHES, AND BOLTS

- A. Manufacturers:
  - 1. Schlage (L9000 Series Vandalgard – Mortise lockset with Rhodes style lever handle) No Substitutions.
  - 2. Special operation:
    - a. Provide mortise type privacy "OCCUPIED" indicator where called for.
  - 3. Note: Locksets and lock cylinders for aluminum doors are provided under this section.
  - 4. Warranty: L Series Mortise (3-year),

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C. Materials:

1. Strikes: Wrought box strikes, with extended lip for latch bolts, except open strike plates may be used in wood frames. Provide dustproof strikes for foot bolts.
2. Locks: Cylindrical locksets equipped with 6-pin tumbler; with interchangeable cores and keyed per keying schedule. Provide 2-3/4" backset. Provide three keys for each lock.
  - a. Interior doors are to be mortise locks with standard interchangeable Schlage keyway.
  - b. Exterior cylinders are Primus locks with removable core.

## 2.4 DOOR CONTROL DEVICES

A. Panic Device:

Manufacturer and Product:

1. Von Duprin 99 Series, XP99 Series with Ives VR Series trim at exterior doors
  - a. (Von Duprin XP-QEL99 Series where retractable latch exit device and security access control is called for). No Substitutions.
  - b. Use Ives VR910 Series on exterior doors.
2. Warranty: Provide minimum three (3) year manufacturers' warranty.
3. Unless called for otherwise, or where a fire door occurs, all panic devices will be > hex head doggable.

B. Closers:

1. Interior Doors:
  - a. LCN 1460 Series (with extra duty arm where called for on hardware schedule) (No Substitutions)
  - b. Warranty: Provide minimum 30 year warranty for closer operation.
  - c. Install per 3.2.E
2. Exterior Doors:
  - a. LCN 4040XP-Spring Cush Series. (No Substitutions)
  - b. Warranty: Provide minimum 30 year warranty for closer operation.
  - c. Install per 3.2.E
3. Provide all brackets and spacers necessary for all door and frame conditions.

C. Security Access System for security controlled doors

Security Access System:

1. Panic Device: Provide Von Duprin XP-QEL99 Series with electric retractable latch, "Request to Exit" low current feature, latch bolt monitor low current and hex-head dogging capability where security access doors are scheduled.
2. Power Supply: PS902-FA-4RL, provided by hardware supplier
3. Power Transfer: Von Duprin Model EPT-10 power transfer door-to-frame transfer device.
4. Reader Control Device: Provided by access control subcontractor
5. Electrician to provide conduit for all low voltage control wiring as required from access control device junction box to power supply and to panic device. Conceal all conduit in walls, ceilings, doorframes, etc. Wiring is to be provided by door access

control contractor. Refer to electrical drawings and door/hardware schedule for locations.

6. Electrician and hardware supplier to coordinate with door access control contractor

D. Materials:

1. Provide grey rubber exposed resilient parts.
2. Any floor stop other than that specified will not be accepted.
3. All closer cylinders to be cast iron.

## 2.5 MISCELLANEOUS HARDWARE

- A. Silencers: Provide in metal door frames, unless not permitted for fire rating, or unless bumper-type weather-stripping is provided; three for each single door frame, two for double-door frame.

1. 3M
2. Hager
3. Glynn Johnson
4. Pemko
5. Approved alternate.

B. Wall Bumper:

1. Rockwood 400 Series, Concave Style
2. Glynn-Johnson 60 Series, Concave Style
3. Approved alternate.

C. Manual Flush Bolt:

1. Rockwood #555 12"
2. H.B. Ives #458
3. Glynn-Johnson FB6
3. Approved alternate.

D. Pull and Push Manufacturers:

1. Rockwood model 111 x 70C pull plate (.125" thick x 4" x 16" plate with 10" pull); model 73C push (.125" thick x 4" x 16")
2. Approved alternate.

E. Threshold:

(Threshold height not to exceed ½" to meet ADAAG guidelines.)

1. 5" deep, ADA compliant panic threshold
  - a. NGP - Model 896HDN
  - b. Pemko 2005 Series
2. Extruded aluminum, mill finish, neoprene seal, for exterior doors only.
3. Provide saddle-type threshold where threshold is called for at interior locations.

- F. Weatherstripping:
1. Model 135N series, aluminum with neoprene seal, manufactured by National Guard , Pemko 303-PK, or approved alternate.
  2. Provide with natural anodized finish.
  3. Provide other models as required to coordinate with special door hardware items.
- G. Mullion Seal:
1. Model 5100N, gray color, manufactured by National Guard Products, or approved alternate.
    - a. Pemko 5110BL (only comes in black)
  2. Install at all removable mullions.
- H. Door Coordinator:
1. Hager, #297D Coordinator. See drawings for size.
  2. Ives CO series
  3. Rockwood 2600 Series
  4. Approved alternate.
- I. Frame-mounted Door Hold-open & stop:
1. Glynn-Johnson Series 90, surface mounted
  2. Dormakaba Series 900
  3. Norton Rixson 9 Series
  3. Approved alternate.
- J. Floor Stop:
1. Rockwood Model 463. Drill 1" dia. X 2 3/4" deep hole. Replaceable rubber bumper with torx-type screw. Epoxy grout stem into place.
  2. Approved alternate.
- K. Door Shoe (with Rain Drip & Brush Sweep)
1. 95WH Series by National Guard Products, Pemko 223NB or approved alternate.
    - a. Provide with natural anodized finish.
    - b. Provide Door Shoe assembly at each exterior door leaf.
- L. Astragal Set
1. 125N Series by National Guard Products, Pemko 305-N, or approved alternate.
    - a. One set aluminum with neoprene astragal seals with natural anodized finish.
    - b. Install on each pair of exterior doors, extending from head to threshold.
- M. Kick Plates
1. Trimco 10" kickplates, Rockwood K1050, or approved alternate
  2. Stainless Steel Finish
- N. Keyed Removable Mullion (Model as required to coordinate with each installation)
1. Von Duprin –No Substitutions

O. Latch/Lock Guard

1. Nominal 10 inches long, 13 gauge stainless steel manufactured by Ives or approved alternate.
2. Secure to door and frame per manufacturer's instruction for vandal-proof installation.
3. Provide stainless steel, US32D finish.
4. Provide type as required for door and lockset type.

P. Drip Cap

1. 2 ½" wide x 1 ½" deep, anodized aluminum.
2. NGP Model 16A, Pemko 346, or approved alternate.

Q. STC 45 door acoustic seal system items, including all items for complete system:

1. NGP 225S Mortise automatic door bottom
2. NGP 5075 Triple fin smoke seal
3. NGP 5060 Silicone fin smoke seal
4. NGP 60FP Acoustical foam pad (x3)

R. STC 50 door acoustic seal system items, including all items for complete system:

1. Pemko STC411APK automatic door bottom
2. Pemko S773 Adhesive perimeter seal
3. Pemko S44 Silicone seal
4. Pemko ACP112 Acoustical corner pad (x2)

## 2.6 FINISH

- A. All exposed interior hardware and door control devices to be furnished with US26D Finish. Exterior hardware finish to be US32D.
- B. Painted hardware items to match color of door control devices.

## 2.7 FABRICATION

- A. Finish and Base Material Designations: Number indicate BHMA Code or nearest traditional U. S. commercial finish. US26D & US32D or equivalent.

## PART 3 EXECUTION

### 3.1 COORDINATION

- A. Hardware supplier to verify and coordinate door and frame preparation, including required reinforcement in hollow metal doors and frames for hardware attachment.

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### 3.2 INSTALLATION

- A. Hardware Mounting Heights: Door and Hardware Institute Recommended Locations for Builders Hardware for Standard Steel Doors and Frames, except as otherwise indicated.
- B. Install each hardware item to comply with manufacturer's instructions and recommendations.
- C. Door closers, door coordinators, and frame-mounted overhead stops shall be installed to frames, using machine thread type screws. Holes shall be tapped in hollow metal frames to accept threaded screws. Screws shall be of a size as recommended by hardware manufacturer.
- D. All other hardware items mounted to door shall be required to be mounted to door with appropriate through bolts for wood doors and machine thread type screws for hollow metal doors. Holes shall be tapped in hollow metal door reinforcement to accept threaded screws. Screws shall be of a size as recommended by hardware manufacturer.
- E. Door closers, door coordinators, and frame-mounted overhead stops at all **exterior and interior doors** shall have through-bolt connections at door. Exposed head of bolt shall be of a flush, smooth type.
- F. **'TEK' TYPE SCREWS ARE NOT TO BE USED.** Use fasteners provided by hardware supplier for each corresponding hardware device for door and frame type and as specified in this specification.
- G. Install each hardware item per manufacturer's instructions. If any item fails to operate properly because of improper installation, it shall be the installer's responsibility to correct. If item continues to malfunction or if Contractor or Architect suspects any hardware item to be defective, hardware supplier shall examine item in question. If Supplier determines item is defective, he shall replace item at no extra cost to owner.
- H. Thresholds to be cut around jamb stops for snug fit to door jambs.

### 3.3 ADJUSTING

- A. Hardware Adjustment: Return to project one month after Owner's occupancy, and adjust hardware for proper operation and function.

### 3.4 KEYING

- A. Locksets and cylinders are to be master keyed to present schedule. Prepare and submit a detailed list of complete keying recommendations to the Architect, which will be discussed during keying meeting. Coordinate desired keying schedule with owner prior to submitting of keying recommendation. Furnish three (3) keys for each individual lock in addition to three (3) master keys.

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- B. Each key for entire project to be stamped for identification.
- C. Provide construction keying for exterior locks. When project is substantially complete, disable all construction keying.

### 3.5 LATCH/LOCK GUARDS

- A. Latch and lock guards are to be installed on each single leaf exterior door.

### 3.6 TYPICAL DOOR HARDWARE FOR EXTERIOR AND INTERIOR DOORS

- A. Each leaf of all exterior hollow metal doors, unless noted otherwise, is to receive the following hardware items:
  - 1. ADA Accessible closer.
  - 2. Continuous hinges
  - 3. Weatherstripping set
  - 4. ADA Threshold (Set in butyl rubber sealant)
  - 5. Astragal set (for pair of doors)
  - 6. Door shoe
  - 7. Mullion seal (for removable mullions)
  - 8. Drip cap
- B. Each leaf of all interior doors, unless noted otherwise, is to receive the following hardware items:
  - 1. For door leaves up to 3' 4" in width, provide three butt hinges
    - a. For leaves 3'-5" to 3'-10", provide four butt hinges.
    - b. For leaves 4'-0" or wider, provide continuous hinge as specified.
  - 2. Provide three silencers for single leafs, two silencers for double leafs.
- C. Hardware sets:
  - 1. Storeroom lockset, closer with stop, kickplate, gasketing as required at 20min fire rated door
  - 2. Storeroom lockset, closer with stop, gasketing as required at 20min fire rated door
  - 3. Storeroom lockset frame mounted overhead stop
  - 4. Classroom lockset, closer with stop, kickplate, gasketing as required at 20min fire rated door
  - 5. Classroom lockset, closer with stop, kickplate, gasketing as required at 20min fire rated door/weatherstripping, door shoe, threshold
  - 6. Push/pull, closer, wall bumper, kick plate, classroom function deadlock, double cylinder storeroom function deadlock, gasketing as required at 20min fire rated door
  - 7. Push/pull, closer, wall bumper, kick plate, classroom function deadlock, double cylinder storeroom function deadlock
  - 8. Office lockset, wall bumper, closer with stop, gasketing as required at 20min fire rated door
  - 9. Privacy lockset with indicator, closer with stop, kick plate

10. (1) rim mount panic device with vandal resistant pull and keyed cylinder lock, closer with stop and hold open, latch/lock guard, heavy duty floor stop, drip cap, kick plate, door shoe, threshold, weatherstripping
11. (1) rim mount panic device with keyed lever trim, (1) rim mount panic device with dummy trim, keyed removable mullion, (2) closers with stops, (2) wall bumper, (2) kick plates, astragal, gasketing as required at 20min fire rated door assembly
12. Push/pull, closer with stop, kick plate, classroom function deadlock, double cylinder storeroom function deadlock
13. Remove existing panic device at door with keyed cylinder trim exterior pull handle (panic device to be returned to BSD). Install new electric retractable latch rim mount panic device, power supply, power transfer. Modify or replace existing continuous hinge to allow install of power transfer
14. (1) rim mount panic device with vandal resistant pull, closer with stop and hold open, latch/lock guard, heavy duty floor stop, drip cap, kick plate, door shoe, threshold, weatherstripping
15. Classroom lockset, wall bumper
16. Classroom lockset on active leaf, dummy lever handle on inactive leaf, flush bolt at door head of inactive leaf, (2) wall bumpers, (2) kick plates
17. STC 45 double doors: Classroom lockset on active leaf, dummy lever handle on inactive leaf, flush bolt at door head of inactive leaf, (2) wall bumpers, STC 45 door acoustic seal system items
18. STC 50 single doors: Classroom lockset, wall bumper, STC 50 door acoustic seal system items

END OF SECTION

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