

**SECTION 08710****FINISH HARDWARE****PART 1 - GENERAL****1.01 SCOPE OF WORK**

The work included in this Section consists of providing all finish hardware as herein tabulated and as shown on the Drawings.

**1.02 SUBMITTALS**

- A. Before ordering any hardware, samples shall be submitted of every different item of "Finish Hardware" to the Engineer of Record for inspection as to quality, finish and design, and obtain written approval for each item before delivering any hardware. In case the samples are disapproved, other samples shall be submitted until satisfactory samples are approved.
- B. Complete Hardware Schedule of Finish Hardware shall be submitted for the review of the Engineer of Record. Each item listed in such schedule shall be in accordance with the approved samples. Each item listed in the Hardware Schedule shall be identified with respect to manufacture, brand, catalog, number, materials, finish, dimensions and operation, as well as location, operation and use in the buildings. The Engineer of Record will check the Hardware Schedule for quality and types only, but the Contractor shall be solely responsible for any errors, omissions and conformance with the Hardware Schedule.
- C. Templates: Promptly following approval of the Hardware Schedule by the Engineer of Record, the Contractor shall furnish and deliver template information to the fabricators of items of metal work to which finishing hardware is to be applied, and such deliveries shall be made in ample time to avoid delays in such work of said fabricators. Drawings, schedules and detailed information shall be provided to other trades as necessary for them to accommodate and prepare their work to receive the finishing.

**1.03 DELIVERY, STORAGE AND HANDLING**

Finish hardware shall be packed in approved manufacturer's containers, complete with trimmings, bolts, screws, washers, etc., as required for application and securement. Each container shall bear a suitable label which shall state the quantity and kind of contents of said container, as well as identifying marks relating to the approved Hardware Schedule and its location in the building.

**PART 2 - PRODUCTS****2.01 ACCEPTABLE MANUFACTURERS**

Catalog numbers refer to Sargent, Ives, Pemko and Stanley and are for the purpose of establishing quality. The products of Hager, McKinney, Schlage, Russwin, LCN, Brookline, or Rockwood shall be acceptable as approved alternates for the named products.

## 2.02 MATERIALS

### A. Hardware Requirements

- 1) All hardware shall be new and free from defects affecting serviceability or appearance. All working parts shall be well fitted and smooth working. All hardware shall be made of materials as called for.
- 2) Hardware application to metal shall be made to standard templates. Template information shall be furnished to door and frame fabricators and other trades requiring same, in order that they may cut, reinforced or otherwise shop prepared for receiving hardware. Be fully responsible for checking all details such as wall trim clearance, bevels, rabbets, backsets, etc., in order that all items of hardware shall fit properly.
- 3) Complete locksets shall be supplied from a single manufacturer.
- 4) Hardware shall be furnished complete with all fastenings.
- 5) All keys shall be master keyed. Six master keys shall be furnished.
- 6) Box strikes for all metal frames shall be furnished.
- 7) Finishes shall be US 32D, satin stainless steel, unless otherwise noted.

### B. Doors:

All doors with locksets shall be keyed alike. Provide 1-3/4 inch thick aluminum flush doors. Doors shall be 5 ply, Endure-A-Dor Model 10 Institutional Doors, as manufactured by Endure-A-Lifetime Products, Inc., the equivalent as manufactured by Cline Aluminum Doors, Inc., or approved equal, constructed with the materials and features as follows:

- 1) Full perimeter reinforcing tube of extruded aluminum alloy 6063-T5, 4-inches wide by 1/8-inch thick minimum, anodized.
- 2) Core, 11% minimum phenolic resin impregnated Kraft honeycomb, 80 pound weight minimum.
- 3) Shock plate, each side of 1/8-inch minimum thickness tempered hardboard, bonded to the core.
- 4) Interior and exterior facings of stretcher-quality ribbed aluminum sheet, single piece only, each side, alloy 3105, 0.040 inch minimum thickness. Facings shall be anodized and then laminated to the shock plates.
- 5) Entire perimeter furnished with a channel shaped extruded aluminum edging, alloy 6063-T5, anodized, to receive the aluminum skin and hardboard. Facing and shock plates of sufficient size so that they will be concealed under the doors edging, 1/2-inch minimum.

- 6) Integral weather stripping as required.
- 7) Complete hardware preparation for the hardware selected by the Contractor and approved by the Engineer.
- 8) Fastening devices such as screws, bolts and rivets of aluminum or stainless steel.

C. Frames:

Aluminum Model D31, with continuous vinyl weatherstripping, as manufactured by Endure-A-Lifetime Products, Inc., the equivalent as manufactured by Cline Aluminum Doors, Inc., or an approved equal, constructed with the materials and features as follows:

- 1) Extruded aluminum alloy 6063-T5, with integral door stop and weatherstripping groove, and shaped to receive "T" type masonry anchors.
- 2) Mechanically fastened corners. Fastening devices of aluminum or stainless steel.
- 3) Furnished completely weatherstripped, and provided with required "T" type masonry anchors and floor feet in the number and size recommended by the manufacturer.
- 4) By the same manufacturer of the selected and approved.

D. Hardware Items:

Heavy-duty and of prime quality. Manufacturers listed below are listed as a standard for quality required.

- 1) Hinges: Hinges shall be 1-1/2 pair butts-single door (3 pair butts-double door), 4-1/2 inches by 4-1/2 inches, Hager Hinge Co. Model BB 1279, AMS-US 26D finish, equivalent by Stanley Hardware or approved equal. All butts shall have stainless steel pins. Butts shall have non-removable pins where scheduled herein.
- 2) Locksets: Locksets shall be latch bolt by knob inside, outside knob rigid. Dead locking latch, heavy duty, cylindrical, Russwin, Stilemaker Series No. SS 414 Cosmic, US32D finish, AMS-SS, equivalent by Schlage Lock Co. or approved equal. Furnish all keys (2 minimum) to the Department.
- 3) Keying
  - (a) All locks and keys for this Project shall be of the same lock series. All locks for all types of doors shall be 1-1/8 inch diameter cylinders; all unit locks and all cylinders shall have the same keyways.
  - (b) Two change keys plus 2 extra key blanks shall be provided for each cylinder, six masterkeys for each set. Three Grand masterkeys. All keys shall be stamped, "Do not Duplicate."
  - (c) Cylinders shall be provided with construction masterkey system and 8 construction masterkeys shall be furnished.

- (d) Where keys are to be provided for regional and booster pump stations, they shall be in accordance with the Departments existing master key.
  - 4) Thresholds (as required by design): Thresholds shall be extruded aluminum, alloy 6061-T6 or 6063-T5, anodized with an integral weatherstripping groove, where required. Manufactured by Pemko Manufacturing Co., National Guard Products, Inc., or approved equal.
  - 5) Astrangals (for double doors): Astrangals shall be extruded aluminum alloy 6061-T6 or 6061-T5, with integral weatherstripping groove, anodized, Pemko Manufacturing Co. No. 355AV, equivalent by National Guard Products, Inc., or approved equal.
  - 6) Flush bolts (for double doors): Pair, 12 inches long, brass levers, aluminum plates US 28, wrought brass guide and strikes, steel rods and boltheads, Russwin No. 298, or equivalent by Brookline Industries, Inc.
  - 7) Fasteners (except as previously specified): Aluminum or stainless steel.
  - 8) Exit Devices: Exit devices shall be Corbin as specified, equals Von Duprin or Russwin.
  - 9) Fastenings: All panic devices and door holders shall be installed with thru bolts or hex nuts and bolts. Fastenings shall be aluminum or stainless steel.
- C. Weatherstripping:

Weatherstripping shall be elastomeric type, conforming to Federal Specifications CS230-60, such as Neoprene, or vinyl extruded from finest quality virgin vinyl.

### **PART III - EXECUTION**

#### **3.01 INSTALLATION**

- A. Install hardware and adjust for proper operation and function. Cover door knobs and other surfaces during finishing. Clean paint from exposed surfaces thoroughly before building is accepted.
- B. Fasteners
  - 1) Supply and install items incidental to work of this Section.
  - 2) Type: As required by job conditions.
  - 3) Visible Surfaces: To match finish of material being fastened.
- C. Install stops and holders at approved locations.
  - 1) On concrete and solid masonry with lead shields (rawl plugs not acceptable).

- 2) On hollow masonry, with toggle bolts.
- 3) To doors with through bolts and grommet nuts, or hex bolts, as applicable.
- D. Exit Device: Install with hex bolts (or through bolts). There shall be 4 hex bolts at each end of the device.
- F. Install finish hardware after operations causing dampness have been completed. At final completion, leave hardware clean and free from disfigurement.

END OF SECTION