PART I - GENERAL

1.01 DESCRIPTION
A. Scope: Work under this Section shall include all materials and installation necessary to provide Finish Hardware as shown and detailed on the Drawings and specified herein.

1.02 QUALITY ASSURANCE
A. References:
   1. General: Satisfy current applicable fire, building and accessibility codes and rules.
   2. Accessibility Standards:
      a. General: ANSI A117.1 and the California Building Code section 11-B
      b. Americans with Disabilities Act (ADA): Standards
   5. Underwriters Laboratories: UL 10B and 305

1.03 QUALIFICATIONS:
A. Supplier:
   1. General: A firm specializing in the supply and servicing of institutional and commercial door hardware for at least five (5) years.

1.04 SUBMITTALS
A. Hardware Schedule:
   1. General: Submit completely detailed finish hardware schedule in vertical format. Reference headings to hardware groups specified and clearly indicate door type, or mark, describe its location, hand, size, door and frame material, and fire rating, if applicable. Organize all doors with the exact same hardware group under one heading, either per building, or per project. If per project, list doors per building in numerical order.
   2. Non-Acceptance: Coded, or keyed hardware scheduling, creating a separate heading for every door and requiring reference to master lists of products is not acceptable, and will be rejected without review.
B. Manufacturers List:

1. General: List manufacturer's names and product numbers for items used in hardware schedule to facilitate checking for compliance.

2. Product Source: Furnish each type of lock and latchset from a single manufacturer, unless more than one manufacturer's products are specified.

3. Substitutions: Refer to Division 1, Section 01610 – Product Requirements. If substitutions are offered, list both the specified product and the proposed substitution.

   a. Samples:

      1) General: Submit, with hardware schedule, physical sample of each item proposed to be substituted for specified item.

      2) Label: Clearly mark each sample to indicate name of item, brand name, manufacturer's catalog number and item for which it is proposed to be substituted.

      3) Disposition: Approved samples may be used in work; rejected samples will be returned.

1.05 PRODUCT HANDLING

A. General: Refer to Division 1, Section 01310 – Coordination.

B. Packaging: Mark all materials so as to identify door number, hardware type, location and hand of door.

C. Keys: Label and deliver all keys to University's Representative.

D. Coordination:

   1. General: Hardware applied to aluminum or metal doors and frames and factory prepared wood doors and frames shall be made to template; provide two copies of approved finish hardware schedule for use by door and frame suppliers.

   2. Distribution: Furnish two copies of each template to those manufacturers who are not listed as current registered template book holders; furnish two copies of each template for items whose manufacturers do not provide registered template book.

1.06 MAINTENANCE

A. Guarantee:

   1. General: Provide in required form for a period of one (1) year from date of final acceptance by University.

   2. Door Closers: Twenty-five (25) years.

   3. Exit Devices: Five (5) years.
PART II - PRODUCTS

2.01 MATERIALS

A. SPECIFIED PRODUCTS AND ACCEPTABLE MANUFACTURERS Catalog numbers used below are those of the following specified manufacturers. Acceptable alternate manufacturers are as listed; items produced by acceptable manufacturers, comparable to those specified in material, weight, size, function, design and finish will be considered accepted equals to those items specified and will not require submittal of physical sample or request for substitution. Any other manufacturers other than those listed as “Specified” or “Acceptable Manufacturer” will be considered as “or equal” subject to requirements for substitution requests or required by Division 1. University's Representative’s decision regarding any item submitted for approval as equal to that specified shall be final.

<table>
<thead>
<tr>
<th>Product</th>
<th>Specified</th>
<th>Acceptable Manufacturers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hinges:</td>
<td>Hager</td>
<td>Stanley, Ives</td>
</tr>
<tr>
<td>Special control hinges:</td>
<td>Rockford Process</td>
<td>No known equal</td>
</tr>
<tr>
<td>Interior Doors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locks and Cylinders:</td>
<td>Schlage “ND” series</td>
<td>No known equal</td>
</tr>
<tr>
<td>Exterior Doors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locks and Cylinders:</td>
<td>Schlage Primus L series</td>
<td>No known equal</td>
</tr>
<tr>
<td>Closers:</td>
<td>LCN 4040</td>
<td>Dorma, Yale</td>
</tr>
<tr>
<td>Floor/Wall Stops:</td>
<td>Glynn Johnson</td>
<td>Brass; Quality</td>
</tr>
<tr>
<td>Exit Devices:</td>
<td>Von Duprin</td>
<td>No known equal</td>
</tr>
<tr>
<td>Astragals:</td>
<td>Pemko</td>
<td>National Guard, Zero</td>
</tr>
<tr>
<td>Thresholds and Weatherstrip:</td>
<td>Pemco</td>
<td>National Guard; Zero</td>
</tr>
<tr>
<td>Silencers:</td>
<td>Brass</td>
<td>Quality, Signature</td>
</tr>
<tr>
<td>Trim:</td>
<td>Signature Brass</td>
<td>Door Controls Int’1; Quality</td>
</tr>
<tr>
<td>Overhead Stops and Holders:</td>
<td>Glynn-Johnson</td>
<td>Rixon, Sargent</td>
</tr>
<tr>
<td>Flush Bolt Coordinators:</td>
<td>Ives</td>
<td>No known equal</td>
</tr>
<tr>
<td>Electronic strikes:</td>
<td>Von Duprin 6100/6300 series</td>
<td>No known equal</td>
</tr>
<tr>
<td>Electronic Locksets:</td>
<td>Schlage L9080 series/ ND 96 series</td>
<td>No known equal</td>
</tr>
<tr>
<td>Electromagnet holders:</td>
<td>LCN</td>
<td>Rixon</td>
</tr>
<tr>
<td>Electromagnet locks:</td>
<td>SDE</td>
<td>Locknetics</td>
</tr>
<tr>
<td>Bifold Hardware:</td>
<td>Grant</td>
<td>Haefele; L.E. Johnson</td>
</tr>
</tbody>
</table>
Key Cabinet: Door Controls Intl. H.B.Ives; Telkee; Lund; Key Control Systems, Inc.

B. Manufactured Units:

1. Locks:
   a. General: Provide wrought boxes for strikes.
   b. Keys: Furnish three (3) uncut blanks for each lockset, in keyways to match project system.

2. Closers: Key valve type or screw type; furnish one key for each five (5) closers. Fasten with four (4) sex bolts per closer. Provide 180° opening where indicated. Provide parallel arms with jamb attachment for all out-swinging doors. Supply drop plates at narrow top rail doors, as required.

3. Screws, Bolts, and Fastening Devices: Exposed head oval Phillips type in countersunk holes, unless otherwise specified or required. Use screws, bolts, washers, grommets, nuts, and other fastening devices of appropriate length, type, head, metal and finish, as necessary for proper match and application of hardware. See Division 5, Section 05500 – Miscellaneous Metal Fabrications.

4. Fire Rated Doors: Equip fire rated doors with UL listed hardware meeting requirements of CBC Chapter 43 and Fire Protection Equipment list of Underwriters Laboratories, Inc.

5. Padlock: Schlage PL4741 padlock or equal keyed as directed for roof hatches, gates, traffic barrier bollards and roof access ladder security covers.

6. Thresholds: Provide all thresholds, door bottoms and seals as specified, or detailed. Provide thresholds with non-standard custom-drilled screw holes where details indicate this requirement.

7. Butt Hinges:
   a. General Locking reverse bevel doors shall be furnished with NRP feature butts. All doors with closers shall be furnished with ball, or oilite bearing butts.
   b. Exterior: Butts for reverse bevel exterior doors shall be of equivalent model listed, but shall be of nonferrous metal.
   c. Size: Unless otherwise specified, the size of the butts will be determined by the following rules:
      1) Doors 1-¾” thick and up to 2'-4” wide: 3-½” butts.
      2) Doors 1-¾” inch thick over 2'-4” to 3'-0” Wide: 4” butts.
      3) Doors 1-¾” thick up to 3'-0” wide: 4-½” butts.
      4) Doors 1-¾” thick over 3'-0” wide: 5” butts.
5) Note: All butts shall be of proper width to clear trim in projection to allow 180° swing and that width shall be determined by the following rules:

6) For doors up to 2-¼" thick: twice the door thickness, plus trim projection, less ½", equals the proper hinge width. For doors 2-¼” to 3” thick: twice the door thickness, plus trim projection, less ¾” equals the proper hinge width. Furnish three butts for each door leaf up to 7'-0" high. Furnish an additional butt for each 2'-0" of door height over 7'-0".

2.02 KEYING

A. General: All keyed locks shall have temporary cylinders or plugs during construction. Provide following:

1. Grand Master Key System:
   a. General: Key to University’s existing Primus Controlled Access Grand Master Key System; provide six (6) cut GMK and six (6) cut Master Keys per set; allow for four (4) Master Key sets.
   b. Keying: All final keying to be performed by UCDMC Lock Shop. Deliver interior and exterior cylinders to University’s Representative for final re-keying.

2. Key Control System: Visual; stamp keys with key set symbols.

3. Construction Master Key System: Furnish twenty (20) construction master keys, and four (4) extractor keys.


2.03 FINISHES

A. General: Provide finishes as follows, unless otherwise indicated:

<table>
<thead>
<tr>
<th>Component</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hinges</td>
<td>Exterior 630 (32D);</td>
</tr>
<tr>
<td>Interior</td>
<td>652 (26D)</td>
</tr>
<tr>
<td>Locks</td>
<td>626 (26D)</td>
</tr>
<tr>
<td>Closers</td>
<td>689 (Aluminum finish)</td>
</tr>
<tr>
<td>Floor Closers</td>
<td>626 (26D)</td>
</tr>
<tr>
<td>Stops</td>
<td>626 (26D)</td>
</tr>
<tr>
<td>Exit Devices</td>
<td>626 (26D)</td>
</tr>
<tr>
<td>Thresholds/Weatherstripping</td>
<td>628 (28)</td>
</tr>
<tr>
<td>Trim</td>
<td>626 (26D)</td>
</tr>
<tr>
<td>Protection Plates</td>
<td>63G (32D)</td>
</tr>
<tr>
<td>Special Items</td>
<td>As Noted</td>
</tr>
<tr>
<td>Key Cabinet</td>
<td>Manufacturer’s standard</td>
</tr>
</tbody>
</table>
PART III - EXECUTION

3.01 APPLICATION

A. General: Install in strict conformance with referenced standards, the manufacturer’s written directions, as shown, and as herein specified.

B. Floor Clearances: Unless detailed otherwise on Drawings, provide following clearances:

1. Labeled Doors: ⅜” maximum over floor or threshold.
2. No Threshold: ¾” maximum for metal doors; ⅝” maximum for wood doors.
3. Threshold: ⅛” typical.
4. Carpet: ⅛” over top of nap, unless otherwise shown.

C. Hardware Placement: Except for hinges, do not install hardware until completion of painting and finishing work. Unless detailed otherwise, place hardware at following height above finish floor:

1. Strike (Centerline) for Locks and Latches: Between 40” and 42”.
2. Hinges: Manufacturer’s standard.
3. Door Pull (Centerline): 42”.
4. Push Plate (Centerline): 44”.
5. Deadlocks (Centerline of Cylinder): 44”.

D. Installation:

1. General: Install hardware in precise manner; door clearance and hardware placement as specified. Predrill pilot holes in wood for screws. Drill and tap for surface mounted hardware on metal.
2. Hinges: Set hinge leaves snug and flat in mortises; turn screws to flat seat (do not drive). Drive hinge pins down and tighten setscrews.
3. Closers: Mount door closers for maximum swing of door before setting stops.
4. Silencers: Set in place before adjusting strikes.
5. Locksets: Install locks with keyways in proper position, and levers, roses and escutcheons firmly affixed.
6. Thresholds: Set in waterproof sealant and secure with lead shields and countersunk screws of same finish as threshold. In heavy traffic areas use Hilti Countersunk Kwik Bolt II, size dependant on height of threshold, or equal.
E. Reinstallation Of Existing Doors:

1. General: Remove existing doors noted to have swing reversed, alter door and hardware as required, and reinstall door with new swing as indicated.

2. Hardware: Provide new hardware where existing cannot be altered to suit new conditions. New hardware, when required, of quality specified herein and function to match that of existing door.

3.02 ADJUSTMENT AND MAINTENANCE

A. General: Prior to acceptance, adjust all moveable parts to assure smooth operation.

B. Door Closers: Adjust for closing speed, latching speed, back checking, and adjust hold-open devices for full control of door. Maximum effort to operate doors shall not exceed 5.0 lbs. for exterior doors, 5.0 lbs. for interior doors, and 15 lbs. for fire doors.

3.03 CLEANING

A. General: Upon completion, thoroughly clean all exposed surfaces per manufacturer’s instructions.

3.04 SCHEDULES

A. Hardware Groups:

***CONSULTANT TO EDIT***

1. Group # 1
2. Group # 2
3. Group # 3

END OF SECTION 08710