1. GENERAL

1.1 Scope
Furnish labor and materials to complete hardware work indicated and as herein specified, including but not limited to: screws, bolts, expansion shields, and other devices necessary and required for proper hardware application. All necessary hardware is included herein for properly fastening and operating of movable parts, unless specifically excluded in this specification or on the drawings. Furnish all items of finishing hardware specified or required to complete the work. Items not specified but necessary to complete the work shall be furnished, matching in quality and finish the items described or specified.

1.2 Codes and Standards
All hardware shall comply with the following building and fire codes:
- Applicable Building Codes (UBC)
- Federal regulations
- National Fire Protection Association (NFPA)
- Uniform Fire Code (UFC)
- CABO/ANSI A117.1

1.3 Submittals
1.3.1 The completed hardware schedule shall be submitted to the Engineer for approval. Show location of all hardware required for the building, hands of doors, keying information, finishes and other pertinent data. Samples of hardware items shall be furnished on request.

1.3.2 After hardware schedule has been approved, furnish templates required for making proper provisions in the work for accurate fitting, finishing hardware setting. Furnish templates in ample time to facilitate progress of work. "Template books" supplied by the hardware manufacturer to the hollow metal door manufacturer will be satisfactory.

2. PRODUCTS

2.1 Approved manufacturers are Yale, Schlage, Stanley, Glynn Johnson, LCN, IVES, Hager, Von Duprin, Quality and Pemko. Locking systems shall be supplied with removable cores.

2.2 Locksets shall be Schlage with a stainless steel finish.
2.3 Wrap and protect finish hardware for shipment. Contractor shall be responsible for correct application according to factory installation instructions, leaving all hardware in proper working condition all hardware.

2.4 Unless otherwise noted, finish shall be US32D (stainless steel satin).

3. EXECUTION

3.1 General Requirements

3.1.1 Install finish hardware as required. The hardware shall be fitted prior to the painting and then removed and painting completed before final installation of the hardware.

3.1.2 The Contractor shall be responsible for arranging his work and securing delivery of all hardware, etc. so all work shall progress without delay or interruption.

3.1.3 Upon delivery of the finish hardware to the job site, the Contractor shall be responsible for this material. The hardware shall be protected from damage at all times, both prior to and after its installation.

3.1.4 Finish hardware must be neatly and properly installed in accordance with the best practices as approved by the Engineer. All hardware must be thoroughly cleaned after installation.

3.1.5 No extra cost will be allowed because of changes or corrections necessary to facilitate the proper installation of any hardware. The Contractor shall be responsible for the proper fabrication of all work or material to receive the hardware.

3.1.6 All keys shall be properly tagged and turned over to the Owner upon completion of the work.

3.2 Keys & Keying

3.2.1 All locks shall be submastered, mastered and grand mastered. Furnish four keys for each lock, and key each lock individually. Provide submaster, master, and grandmaster keys as required by the Owner.

3.2.2 All lock functions shall be checked for approval before ordering hardware.
3.2.3 Each key shall be stamped with code numbers to identify the key with the appropriate lock.

3.3 **Door Stops**
Door stops shall be furnished when ever an opened door or any item of hardware thereon can strike a wall, or other part of the building construction. Supply doorstops of wall type or floor type, as required.

3.4 **Silencers**
Each interior door shall have three silencers designed for use on hollow metal frames.

3.5 **Special Tools**
The Hardware Contractor shall furnish to the Owner two of each size and type of special tools required for adjusting items of hardware herein furnished.

3.6 **Guarantee**

3.6.1 Hardware supplier shall guarantee all products furnished against defects in manufacturing and operation for a period of one year.

3.6.2 The Contractor shall guarantee the installation of the hardware for one year in addition to the guarantee against defects in manufacturing. Improper installation shall not be an excuse for voiding the guarantee.

4. **HARDWARE SCHEDULE**
The following is a list of hardware groups for each opening as noted on the drawings. The manufacturer’s numbers are listed below. Substitutions must be approved in writing by the Engineer prior to ordering material and must be submitted with the bid for approval.

For doors to receive the following hardware groups, see door schedule. All locksets shall be Schlage six-pin locks.
Hardware

4.1 H1 (Each single exterior door)
1½ PAIR BUTTS FBB179 4½ x 4½ STANLEY
1 EACH EXIT 7100 YALE
1 EACH CYLINDER US32D
1 EACH CLOSER P4041 CUSH-N-STOP LCN
1 EACH KICKPLATE 10 x 2" LDW 32D QUALITY
1 EACH THRESH 171A PEMKO
1 EACH WEATHERSTRIP 375CR PEMKO
1 EACH DOOR SWEEP 315CN PEMKO

4.2 H2 (Each pair exterior doors)
3 PAIR BUTTS FBB179 4½ x 4½ STANLEY
2 EACH EXIT 7100 YALE
2 EACH CYLINDERS US32D
2 EACH CLOSER P4041 CUSH-N-STOP LCN
2 EACH KICKPLATE 8" X 28" 32D QUALITY
1 EACH THRESH 171A PEMKO
1 EACH WEATHERSTRIP 375CR PEMKO
1 EACH DOOR SWEEP 315CN PEMKO

4.3 H3 (Each single interior office door fire rated (20 min))
1½ PAIR BUTTS FBB179 4½ x 4½ STANLEY
1 EACH LOCKSET US32D
1 EACH CLOSER 4041 LCN
1 EACH STOP 119-ES QUALITY
1 EACH SMOKE SEAL PK55 PEMKO
## Hardware

### 4.4 H4 (Each single interior office door not rated)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1½ PAIR BUTTS FBB179</td>
<td>1</td>
<td>STANLEY</td>
</tr>
<tr>
<td>EACH LOCKSET US32D</td>
<td>1</td>
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</tr>
<tr>
<td>EACH STOP 119ES QUALITY</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EACH SILENCERS #20 IVES</td>
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<td></td>
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</table>

### 4.5 H5 (Each single door not locked not rated)

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<th>Quantity</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1½ PAIR BUTTS FBB179</td>
<td>1</td>
<td>STANLEY</td>
</tr>
<tr>
<td>EACH PASSAGE SET US32D</td>
<td>1</td>
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</tr>
<tr>
<td>EACH STOP 119ES QUALITY</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EACH SILENCERS 1337A QUALITY</td>
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<td></td>
</tr>
</tbody>
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### 4.6 H6 (Each single door locker room and toilet rooms)

<table>
<thead>
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<th>Quantity</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1½ PAIR BUTTS FBB179</td>
<td>1</td>
<td>STANLEY</td>
</tr>
<tr>
<td>EACH PUSH 3½ X 15 QUALITY</td>
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</tr>
<tr>
<td>EACH PULL 3½ X 15 QUALITY</td>
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<td></td>
</tr>
<tr>
<td>EACH CLOSER 4041 LCN</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EACH KICKPLATE 8&quot; X 28&quot; 32D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EACH STOP 119ES QUALITY</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EACH SILENCERS 1337A QUALITY</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hardware

#### 4.7 H7 (Each single door fire rated)
- 1½ PAIR BUTTS FBB179 4½ X 4½
  - STANLEY
- 1 EACH LOCKSET
  - BEST
- 1 EACH CLOSER 4041 LCN
- 1 EACH KICKPLATE 8" X 28" 32D QUALITY
- 1 EACH STOP 119-ES QUALITY
- 1 EACH SMOKE SEAL PK55 PEMKO

#### 4.8 H8 (Each pair doors)
- 3 PAIR BUTTS FBB179 4½ X 4½
  - STANLEY
- 1 EACH LOCKSET US32D QUALITY
- 2 EACH FLUSHBOLTS 1358 12" QUALITY
- 2 EACH CLOSER 4041 LCN QUALITY
- 2 EACH KICKPLATE 10 X 2" LDW QUALITY
- 2 EACH STOPS 307 QUALITY
- 2 EACH SILENCERS 1337A QUALITY

#### 4.9 H9 (Each pair storage doors)
- 3 PAIR BUTTS FBB179 4½ X 4½
  - STANLEY
- 1 EACH LOCKSET US32D QUALITY
- 2 EACH FLUSHBOLTS 1358 12" QUALITY
- 2 EACH STOPS 302 QUALITY
- 4 EACH SILENCERS 1337A QUALITY

### 5. LIMITATIONS OF HARDWARE SCHEDULE

5.1 Schedule is furnished for whatever assistance it may afford Contractors. Do not consider it as entirely inclusive. Examine drawings and specifications, to determine the extent and hardware
quantity required. Should any particular door or item be omitted in scheduled hardware groups, provide such door or item with hardware same as required for similar purposes.

5.2 Code Requirements: Meet all local codes and requirements governing this project and furnish hardware accordingly. If there are discrepancies between the hardware schedule and code requirements, notify the Engineer for resolution.

6. GUARANTEE

6.1 Hardware supplier shall guarantee all products furnished against defects in manufacturing and operation for a period of one year.

6.2 The Hardware Contractor shall guarantee the installation of the hardware for one year in addition to the guarantee against defects in manufacturing. Improper installation shall not be an excuse for voiding the guarantee.

6.3 Improper use or improper maintenance shall be cause for voiding guarantee.