

## SECTION 08710

### FINISH HARDWARE

#### PART 1--GENERAL

##### 1.01 RELATED DOCUMENTS

- A. All of the Contract Documents, including General and Supplementary Conditions and Division 1 General Requirements, apply to the work of this section.

##### 1.02 DESCRIPTION OF WORK

- A. The work of this section includes, but is not limited to, the following:
  1. Providing hardware for all doors, except doors provided with their own hardware.
  2. Providing lock cylinders for all work requiring cylinders.
  3. Providing the services of a qualified hardware consultant to prepare detailed schedules of hardware required for the project.

##### 1.03 RELATED WORK

- A. Carefully examine all of the Contract Documents for requirements that affect the work of this section. Other specifications sections that directly relate to the work of this section include, but are not limited to, the following:
  2. Section 08110 - Steel Doors and Frames; work requiring template coordination, metal astragals for fire-rated doors.
  3. Section 08211 - Wood Doors; work requiring template coordination, metal astragals for fire-rated doors.
  4. Section 08411 - Aluminum Framed Entrances and Storefronts; work requiring lock cylinders.
  5. Division 16 for security system wiring.

##### 1.04 INTENT

- A. A major intent of the work of this section is to provide hardware for every door in the project, except as indicated, so that each door functions correctly for its intended use. Provide only hardware that complies with applicable codes and requirements of authorities having jurisdiction including requirements for barrier-free accessibility.

##### 1.05 QUALITY ASSURANCE

- A. Hardware supplier shall have in his employ one or more members of the Door and Hardware Institute to include at least one Certified Architectural Hardware Consultant in good standing, who shall be responsible for preparation of the Finish Hardware Schedule. This Consultant shall be acceptable to the Architect and is to ensure that the intent requirement of this specification is fulfilled, and to certify that the work of this section meets or exceeds the requirements specified in this section and the requirements of authorities having jurisdiction.
- B. Hardware supplier shall warrant and guarantee, in writing, that hardware supplied is free of defective material and workmanship. Supplier shall further warrant and guarantee for a period of one year from Owner's Use and Occupancy that the hardware shall function in a satisfactory manner without binding, collapse, or dislodging of its parts, provided the installation is made to the manufacturer's recommendations.
- C. The hardware supplier shall repair or remedy, without charge, any defect of workmanship or material for which he is responsible hereunder.

##### 1.06 SUBMITTALS

- A. Submit the following in accordance with Section 01300-Submittals:

1. Schedule: Submit to the Architect six (6) copies of the complete hardware schedule within fourteen (14) days after receipt of contract award. Submit therewith complete catalog cuts and descriptive data of all products specifically scheduled therein. No materials shall be ordered or templates issued until the hardware schedule has been approved by the Architect. Form and detail of hardware schedule shall be in vertical format in conformance to the door and hardware industry standards. All hardware sets shall be clearly cross-referenced to the hardware set numbers listed in this specification.
2. Samples: If requested, submit to the Architect for approval, a complete line of samples as directed. Samples shall be plainly marked giving hardware number used in this specification, the manufacturer's numbers, types and sizes. The Architect will deliver approved samples to the project site to be stored. Samples will remain with the Architect until delivery of all hardware to the project is complete, after which time they will be turned over to the General Contractor for incorporation into the work.
3. Keying System Submission: Before cylinders are ordered, submit a complete proposed keying system for approval. This should be done after a keying meeting has been held with the owner's representative.

#### 1.07 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Delivery of hardware shall be made to the project by the Hardware Supplier in accordance with the instructions of the General Contractor.
- B. The finish hardware shall be delivered to the jobsite and received there by the General Contractor. The General Contractor shall prepare a locked storage room with adequate shelving, for all hardware. Storage room shall be in a dry, secure area, and shall not include storage of other products by other trades.
- C. The General Contractor shall furnish the Hardware Supplier with receipts for all hardware and accessory items received, and shall send copies of these receipts to the Architect, if requested.

#### 1.08 REGULATORY REQUIREMENTS

- A. Conform to all applicable codes. Provide all throws, projections, coatings, knurling, opening and closing forces, and other special functions required by State and Local Building Codes, and all applicable Handicap Code requirements.
- B. For fire rated openings provide hardware complying with NFPA 80 and NFPA 101 without exception. Provide only hardware tested by UL for the type and size of door installed and fire resistance rating required.

#### 1.09 SPECIAL REQUIREMENTS

- A. Hardware Supplier shall determine conditions and materials of all doors and frames for proper application of hardware.
- B. The Hardware Schedule shall list the actual product series numbers. Bidders are required to follow manufacturers' catalog requirement for the actual size of door closers, brackets and holders. All door opening sizes are as noted on the Door Schedule and all hardware shall be in strict accordance with requirements of height, width, and thickness.

### PART 2 - PRODUCTS

#### 2.01 ACCEPTABLE MANUFACTURERS

Hinges	McKinney Stanley	Scranton, PA New Britain, CT
Locksets	Sargent Schlage	New Haven, CT Colorado Springs, CO

Door Closers	Sargent LCN	New Haven, CT Princeton, IL
Flush Bolts	Glynn Johnson Door Controls Rockwood	Indianapolis, IN Dexter, MI Rockwood, PA
Door Stops	Glynn Johnson Ives Rockwood	Indianapolis, IN New Haven, CT Rockwood, PA
Push /Pulls	Rockwood Burns Ives	Rockwood, PA Erie, PA New Haven, CT
Protective Plates	Rockwood Burns Ives	Rockwood, PA Erie, PA New Haven, CT
Thresholds / Weatherstripping / Rain Drips	NGP Pemko Reese	Memphis, TN Memphis, TN Rosemount, MN
Silencers	Ives Glynn Johnson Rockwood	New Haven, CT Indianapolis, IN Rockwood, PA
Key Cabinet	Telkee Key Control Systems Lund	Glen Riddle, PA Bechtelsville, PA Bath, OH

## 2.02 MATERIALS AND QUALITY

- A. All hardware shall be of the best grade of solid metal entirely free from imperfections in manufacturer and finish.
- B. Qualities, weights, and sizes given herein are the minimum that will be accepted. It is the responsibility of the Hardware Supplier to supply the specified size and weight of hardware and the proper function of hardware in each case and to provide UL approved hardware at all fire-rated doors.
- C. Provide, as far as possible, locks of one lock manufacturer and hinges of one hinge manufacturer. Modifications to hardware that are necessary to conform to construction shown or specified shall be provided as required for the specified operation and functional features.

## 2.03 HARDWARE DESIGNATIONS

- A. All items of hardware are referenced by manufacturer's names and numbers. The manufacturer's names and numbers are used to define the function, design, and quality of the material to be supplied.

Substitution of products other than those listed shall be submitted to the Architect at least ten (10) days **PRIOR** to the bid date. The Architect shall be the sole judge of any proposed substitution.

## 2.04 TEMPLATES

- A. Hardware supplier shall immediately, but not later than three (3) days after approval of his Schedule by the Architect, furnish General Contractor with complete template information necessary for fabrication of doors, frames, etc. No templates shall be furnished prior to the approval of the hardware schedule.

## 2.05 HARDWARE FOR LABELED FIRE DOORS, EXIT DEVICES AND SMOKE DOORS

- A. Hardware shall conform to requirements of NFPA 80 for labeled fire doors and to NFPA 101 for exit doors, as well as to other requirements specified. Labeling and listing by UL Building Materials Directory, for class of door being used will be accepted as evidence of conformance to these requirements. Install minimum latch throw as specified on label of individual doors. Provide hardware listed by UL except where heavier materials, larger sizes, or better grades are specified herein under paragraph entitled "Hardware Sets". In lieu of UL labeling and listing, test reports from a nationally recognized testing agency may be submitted showing that hardware has been tested in accordance with UL test methods and that it conforms to NFPA requirements. Specific hardware requirements of door or frame manufacturers which exceed sizes or weights of hardware herein listed shall be provided with no additional charge.

## 2.06 KEYS AND KEYING

- A. Hardware supplier shall review the specific hardware functions with the Architect and Owner at time of the keying review, to assure the appropriateness of each of the hardware functions. Failure to make this review does not relieve the hardware supplier from providing the proper functions.
- B. Key System: All cylinders shall be Masterkeyed and/or Grandmaster Keyed to a new key removable core system as directed.
  - 1. Master Keys, Grandmaster Keys: Furnish six (6) keys for each set, if required.
  - 2. Furnish cylinders for use at the Aluminum doors, as well as the cylinders being used with the Exit Devices. These cylinders are to be furnished complete with temporary removable construction cores for use by the contractor during the construction period. These construction cores are to be operated by the same construction key that is established for the balance of the locksets, cylinders.
  - 3. Furnish three (3) change keys for each cylinder keyed differently; six (6) change keys for each set keyed alike, and in sets where only (2) cylinders are keyed alike, four (4) change keys shall be required.
  - 4. All keying is to be done at the factory to avoid duplication of the new cylinders. Furnish manufacturers job number to the architect.
  - 5. Master keys and two control keys shall be sent to the Owner by registered mail, return receipt required.
  - 6. Supply a factory bitting list for all change keys and master keys to the Owner.
  - 7. All lock cylinders shall be set to a Construction key for use by the Contractor during construction period. Furnish ten (10) Construction keys and two (2) keys for voiding the Construction key feature.

## 2.07 FASTENERS

- A. Manufacture hardware to conform to published templates, generally prepared for machine screw installation.
- B. Furnish screws for installation, with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Furnish exposed screws to match the hardware finish, or, if exposed in surfaces of other work, to match the finish of such other work as closely as possible, except as otherwise indicated.
- C. Provide concealed fasteners for hardware units which are exposed when the door is closed, except to the extent no standard manufactured units of the type specified are available with concealed fasteners. Do not use thru-bolts unless specifically approved by the Architect.
- D. All hardware shall be installed only with fasteners supplied by manufacturers of specific products.

## 2.08 PACKING AND MARKING

- A. All hardware shall have the required screws, bolts and fastenings necessary for proper installation and shall be wrapped in the same package as the hardware item for which it is intended and shall match finish of hardware with which to be used.
- B. Each package shall be clearly labeled indicating the portion of the work for which it is intended.

2.09 ENVIRONMENTAL CONCERN FOR PACKAGING

- A. The hardware shipped to the jobsite is to be packaged in biodegradable packs such as paper or cardboard boxes and wrapping. If non-biodegradable packing such as plastic, plastic bags or large amounts of styrofoam is utilized, then the Contractor will be responsible for the disposal of the non-biodegradable packing to a licensed or authorized collector for recycling of the non-biodegradable packing.

2.10 FINISH HARDWARE DESCRIPTION

- A. Hardware items shall conform to respective specifications and standards and to requirements specified herein.
- B. Materials and Finish: Materials and finishes shall be:
  - 1. Interior Butts: US26D (BHMA 652)
  - 2. Door Closers: Sprayed to match hardware finish
  - 3. Exit Devices: US26D (BHMA 626)
  - 4. Kick, Push Plates: US32D (BHMA 630)
  - 5. All other hardware shall be: US26D (BHMA 626), or as scheduled.
- C. Hinges and Pivots:
  - 1. Number of hinges or pivots per door: two hinges or pivots are intended to be provided for doors up to and including five feet in height, and an additional hinge for each two-and-one-half feet or fraction thereof, of the height of the door. Dutch doors are to be provided with four hinges.
  - 2. Hinges on interior doors shall be oil-impregnated bearings, steel and sized as follows, unless other wise specified in the hardware sets below:

Door thickness	Door width	Hinge Weight	Hinge
1-3/4"	40" and under	Regular	4-1/2"
1-3/4"	Over 40"	Extra heavy	4-1/2"

Width of hinge shall be determined by trim conditions

- 3. All bearing hinges shall have flush bearings and button tips.
- 4. Hinges shall be McKinney or Stanley as follows:

McKinney	Stanley
T2714	F179
TA2714	FBB179
T4A3786	FBB168
TA2314	FBB191
T4A3386	FBB199

- D. Door Closers:
  - 1. Door closers shall have fully hydraulic, full rack and pinion action. Cylinder body shall be 1-1/2" in diameter, and double heat treated pinion shall be 11/16" in diameter.
  - 2. Hydraulic fluid shall be of a type requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
  - 3. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and hydraulic back-check.
  - 4. All closers shall have solid forged steel main arms (and forged forearms for parallel arm closers).
  - 5. Closer arms (and metal covers when specified) shall have a powder coating finish.
  - 6. Provide drop, mounting plates where required.
  - 7. Do not locate closers on the side of doors facing corridors, passageways or similar type areas. Where it is necessary, due to certain conditions and approval of the Architect, to have closers in corridors, provide such closers with parallel or track type arms.

8. All door closers shall be adjusted by the installer in accordance with the manufacturer's templates and written instructions. Closers with parallel arms shall have back-check features adjusted prior to installation.
9. Closers shall conform to all applicable code requirements relative to setting closing speeds for closers and maximum pressure for operating interior and exterior doors.
10. Door closers meeting this specification are as follows:

	LCN	Sargent
Exterior	4111S-CUSH	281 - CPS
	4111S-H-CUSH	281 - CPSH
Interior	4011	281 - 0
	4111	281 - P10
	4040SE	2407 Series
	4000T	281 - OT x spec. Temp.
	4310ME-SF	2980
	4040SE-DE	2477

E. Electrically - Powered Door Operator

1. Referenced Standard: Provide unit that conforms to AAMA/BHMA A156.19 low energy operation, and to ADA Architectural Guidelines for opening force and time to close standards.
2. Products: Subject to compliance with requirements, furnish one of the following products:
  - a. Horton 4000 LE
  - b. LCN 4610/20 (Electrically powered "Auto-Equalizer" system).
  - c. Keane-Monroe Corporation, "Access Two" Series 3100.
3. General: Furnish complete system, including electro-mechanical swinging door operator and solid-state electronic control, aluminum header matching door frame, connecting hardware, and power on/off switch.
4. Operator: Opening by means of a fractional HP DC motor, through reduction gears, splined spindle, door arm and linkage assembly. If door encounters an obstacle, operator shall stop the door in the open position by electrically reducing the motor voltage and stalling. Spring closing, with closing speed controlled by the motor operating as a dynamic brake. Operator shall function as a manual door closer in the direction of swing, with or without electrical power.
  - a. Operator shall be removable from the header as a unit, for servicing and replacement.
  - b. Door Speed and Timing:
    - 1) Door opening time: Adjustable but not less than 4 seconds.
    - 2) Door closing time: Adjustable but not less than 4.5 seconds.
    - 3) Hold Open: Adjustable from 6 to 60 seconds, to allow safe passage between series of doors at entrance and vestibule.
  - c. Furnish unit without power assist ("Push-N-Go") feature, or with device that allows Owner to activate or disconnect the feature after the door has been installed.
5. Header: 0.125 minimum wall thickness extruded aluminum.
6. Metal Finish: Finish covers, mounting plates, and arm system with manufacturer's standard powder-coat finish. Match finish of storefront framing system.
7. Push-Plate Control: Nominal 4 inch square or 4-1/2 inch diameter round push-plate control; stainless steel with No. 4 satin finish; with international accessibility symbol engraved and painted blue.
  - a. Furnish wall-mounted or jamb mounted type, as appropriate to mounting conditions indicated on Drawings. Project requires both types.

F. Flush Bolts:

1. Shall be self-latching or automatic type at label doors, manual flush bolts at non-label doors.

		Glynn Johnson	Door Controls	Rockwood
Manual	HM	FB6	780	555
	WD	FB6W	790	557
Self Latching	HM	FB51P	845	1845
	WD	FB61P	945	1945
Automatic	HM	FB31P	842	1842
	WD	FB41P	942	1942

2. Dust Proof Strikes shall be furnished at all floor locations.

G. Locksets, Latch Sets:

1. Mortise type shall be heavy-duty ANSI A156.13, Series 4000, Grade 1 Operational, 2-3/4" backset, six pin cylinder with lever handles

Manufacturer	Series	Lever Design
Schlage	D Series	RHO
Sargent	10 Line	LL

2. Lock functions as indicated in the hardware schedule shall be as follows:

Function	Schlage	Sargent
A (Storeroom)	80	04
B (Office)	50	05
C (Passage)	10	15
D (Vestibule)	60	16
E (Classroom)	70	37
F (Spec Classroom)	71	38
G (Privacy)	40	65

H. Push Plates, Door Pulls, Push/Pull Bars:

1. Shall be as manufactured by Rockwood, Burns or Ives.
  - a. Push plates shall be 4" x 16" x .050 thickness unless otherwise listed in hardware sets.

Rockwood	70 Series
Burns	50 Series
Quality	40 Series

- b. Door pulls shall be 1" x 10"

Type A

Rockwood	BF111
Burns	BF26C
Quality	BF163-10"

Type B

Rockwood	157
Burns	39C
Quality	521

- c. Push/Pull bars

Type A (Wide Stile Doors)

Rockwood	BF11147 x T1006 Mounting
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Burns	BF26C x 442 x Sim. Mounting as Above
Quality	BF482 x Sim. Mounting as Above
Type B (Narrow Stile Doors)	
Rockwood	15747 x T1006 Mounting
Burns	39C x 442 x Sim. Mounting as Above
Quality	484 x 10" Sim. Mounting as Above

I. Kick Plates, Armor Plates, Mop Plates:

1. Kick plates shall be 8 in. high. Armor plates shall be 34 in. high. Mop plates shall be 4 in. high. All plates shall be 2 in. less the width of door. Plates shall be .050 thickness, bevel 4 edges, screws shall be oval head counter-sunk.

J. Stops:

1. Shall be furnished at all doors. Wherever an opened door or any item of hardware thereon strikes a wall, at 90 degrees. Provide wall bumpers, unless otherwise indicated in hardware sets.
2. Where wall bumpers cannot be effectively used, a floor stop shall be furnished and installed.
3. Provide roller bumpers for each door where two doors interfere with each other in swinging.

Manufacturer	Wall Bumpers	Floor Stops	Roller Bumpers
Rockwood	409	440,442	456
Ives	407 1/2	436B, 438B	470 Series
Glynn Johnson	WB 50XT	FB13, FB14	RB-3

K. Access Control System:

1. Compass Technologies, SafeAxis System software, setup at designated PC.
  - a. Controllers: Intelligent Reader Module (IRM) 211 and 411.
  - b. Card Reader: Thin Line II HID proximity reader.
2. Power Supply: Altronix SMP7PMCTX.
3. Request to Exit: International Electronics, Inc., IEI DS150I detector.
4. Electric Strikes: Von Duprin 6211 with monitoring switch, fail secure.
5. Cards: HID cards, quantity 50.
6. Alarm Horn: Sargent 43808, single gang.

L. Thresholds, Weatherstrip, Seal:

1. Thresholds shall be as detailed and furnished on all doors where shown on drawings. Thresholds shall be aluminum unless otherwise indicated. Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
2. Weatherstripping shall be furnished on all exterior doors unless otherwise indicated.

Product	NGP
Threshold as detailed	
Brush Seal	A626A
Auto. Door Bottom	420
Door Sweep	101AV
Set Astragals	140 x 140P
Astragal	139SP
Rain Drip	16AD
Gasketing	600A

M. Silencers:

1. Provide silencers on all metal and wood frames. Silencers shall be Ives 20/21, Glynn Johnson 64/65 or Rockwood 608/609.

N. Key Cabinet:

1. Furnish one (1) Aristocrat wall cabinet as manufactured by Telkee, Inc., Key Control Systems, Lund or approved equal. Cabinet shall be complete with all hooks, tags, index cards and other accessories for a complete Dual System.



2. Cabinet size shall be sufficient to accommodate all locks related to this Contract, based on two keys per lock, with an allowance for expansion of not less than 50%.
3. Key systems which are construction keyed shall have all permanent keys affixed to hooks with all index cards filled out for the complete cross references. The cabinet shall be delivered to the Contractor only when requested and shall be completely set up.

### PART 3 - EXECUTION

#### 3.01 INSPECTION

- A. It shall be the general contractor's responsibility to inspect all door openings and doors to determine that each door and door frame has been properly prepared for the required hardware. If errors in dimensions or preparation are encountered, they shall be corrected by the responsible parties prior to the installation of hardware.

#### 3.02 PREPARATION

- A. All doors and frames, requiring field preparation for finish hardware, shall be carefully mortised, drilled for pilot holes, or tapped for machine screws for all items of finish hardware in accordance with the manufacturers templates and instructions.

#### 3.03 INSTALLATION/ADJUSTMENT/LOCATION

- A. All materials shall be installed in a workmanlike manner following the manufacturer's recommended instructions.
- B. Exit Devices shall be carefully installed so as to permit friction free operation of crossbar, touch bar, lever. Latching mechanism shall also operate freely without friction or binding.
- C. Door Closers shall be installed in accordance with the manufacturer's instructions. Each door closer shall be carefully installed, on each door, at the degree of opening indicated on the hardware schedule. Arm position shall be as shown on the instruction sheets and required by the finish hardware schedule.
- D. Adjustments for all door closers shall be the installer's responsibility and these adjustments shall be made at the time of installation of the door closer. The closing speed and the latching speed valves, shall be adjusted individually to provide a smooth, continuous closing action without slamming. The delayed action feature or back check valve shall also be adjusted so as to permit the correct delayed action cycle or hydraulic back check cushioning of the door in the opening cycle. All valves must be properly adjusted at the time of installation. Each door closer has adjustable spring power capable of being adjusted, in the field, from size 1 thru 6. It shall be the installers responsibility to adjust the spring power for each door closer in exact accordance with the spring power adjustment chart illustrated in the door closer installation sheet packed with each door closer.
- E. Installation of all other hardware, including locksets, push-pull latches, overhead holders, door stops, plates and other items, shall be carefully coordinated with the hardware schedule and the manufacturer's instruction sheets.
- F. Locations for finish hardware shall be in accordance with dimensions listed in the pamphlet "Recommended locations for Builders' Hardware" published by the Door and Hardware Institute.

#### 3.04 PROTECTION

- A. All exposed portions of finish hardware shall be carefully protected, by use of cloth, adhesive backed paper or other materials, immediately after installation of the hardware item on the door. The finish shall remain protected until completion of the project. Prior to acceptance of the project by the Architect and Owner, the General Contractor shall remove the protective material exposing the finish hardware.

### 3.05 CLEANING

- A. It shall be the responsibility of the General Contractor to clean all items of finish hardware and to remove any remaining pieces of protective materials and labels.

### 3.06 INSTRUCTIONS AND TOOLS

- A. It shall be the responsibility of the General Contractor to provide installation and repair manuals and adjusting tools, wrenches, etc... for the following operating products:
  - 1. Locksets (all types)
  - 2. Exit Devices (all types)
  - 3. Door Closers
- B. These items are included with the factory supplied material – General Contractor to collect these items and give to owner.

### 3.07 HARDWARE SETS

- A. Each Hardware Set listed below represents the complete hardware requirements for one opening (single door or pair of doors). Furnish the quantities required for each set for the work.

#### Heading 1

Doors: 101A

Each Leaf Shall Have: Cylinder, Door Operator with Push Pads, Push/Pull Bar  
Balance of Hardware by Aluminum Door Supplier

#### Heading 2

Doors: 103, 203

Each Leaf Shall Have: Hinges, Lockset (Function A), Closer, Kick Plate, Stop, Silencers

#### Heading 3

Doors: 100, 101B, 200, 213, 300

Each Leaf Shall Have: Hinges, Lockset (Function E), Closer, Kick Plate, Stop, Silencers

#### Heading 4

Doors: 204, 335

Each Opening Shall Have: Hinges, Lockset (Function A), Flush Bolts, Stops, Silencers

#### Heading 5

Doors: 114

Each Leaf Shall Have: Hinges, Lockset (Function C), Exit Sign (Emergency Exit Only – Alarm Will Sound), Closer, Alarm Horn, Request to Exit, Door Position Switch, Kick Plate, Stop, Silencers, Weatherstripping, Threshold

#### Heading 6

Doors: 214, 314

Each Leaf Shall Have: Hinges, Lockset (Function E), Card Reader, Electric Strike, Closer, Kick Plate, Stop, Silencers

#### Heading 7

Doors: 201

Each Leaf Shall Have: Hinges, Lockset (Function E), Card Reader, Request to Exit, Electric Strike, Alarm Horn, Closer, Kick Plate, Stop, Silencers, Exit Sign (Emergency Exit Only – Alarm Will Sound), Weatherstripping, Threshold

#### Heading 8

Doors: 212B

Each Leaf Shall Have: Hinges, Lockset (Function E), 2 Card Readers, Electric Strike, Alarm Horn, Closer, Kick Plate, Stop, Silencers, Exit Sign (Emergency Exit Only – Alarm Will Sound), Weatherstripping, Threshold

#### Heading 9

Doors: 212A

Each Leaf Shall Have: Hinges, Lockset (Function A), Card Reader, Electric Strike, Closer, Kick Plate, Stop, Silencers, Weatherstripping, Threshold

#### Heading 10

Doors: 304, 319

Each Leaf Shall Have: Hinges, Lockset (Function E), Stop, Silencers

#### Heading 11

Doors: 305, 306, 307, 308, 309, 311B, 322, 328

Each Leaf Shall Have: Hinges, Lockset (Function C), Stop, Silencers

#### Heading 12

Doors: 301, 310, 312

Each Leaf Shall Have: Hinges, Lockset (Function G), Stop, Silencers

#### Heading 13

Doors: 311A, 315, 316, 324, 325, 326, 327, 329, 330, 331

Each Leaf Shall Have: Hinges, Lockset (Function B), Stop, Silencers

#### Heading 14

Doors: 332

Each Leaf Shall Have: Lockset (Function B)

Balance of Hardware by Aluminum Door Supplier

#### Heading 15

Doors: 333

Each Opening Shall Have: Hinges, Door Pulls, Roller Bumpers, Silencers

END OF SECTION