

SECTION 08710 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and the door frames on which they are installed.
- B. This Section includes the following:
 - 1. Hinges
 - 2. Continuous hinges
 - 3. Key control system
 - 4. Lock cylinders and keys
 - 5. Lock and latch sets
 - 6. Push/Pull units
 - 7. Exit Devices
 - 8. Closers
 - 9. Overhead holders
 - 10. Protection plates
 - 11. Weatherstripping for exterior doors
 - 12. Thresholds
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Section 08110: Steel Doors and Frames
 - 2. Section 08211: Flush Wood Doors
 - 3. Section 08311: Access Doors and Frames
 - 4. Section 08361: Sectional Overhead Doors
 - 5. Section 08411: Aluminum Entrances and Storefronts
- D. Products furnished but not installed under this Section include:
 - 1. Final replacement cores and keys to be installed by Owner.

1.3 REFERENCES:

- A. Standards of the following as referenced:
 - 1. American National Standards Institute (ANSI)
 - 2. Door and Hardware Institute (DHI)
 - 3. Factory Mutual (FM)
 - 4. National Fire Protection Agency (NFPA)
 - 5. Underwriters' Laboratories, Inc. (UL)
 - a. UL 10C - Fire Tests Door Assemblies
 - 6. Warnock Hersey
- B. Regulatory standards of the following as referenced:
 - 1. Department of Justice, Office of the Attorney General, *Americans with Disabilities Act*, Public Law 101-336 (ADA).
 - 2. CABO/ANSI A117.1: *Providing Accessibility and Usability for Physically Handicap People*, 1992 edition.

1.4 SYSTEM DESCRIPTION:

- A. Refer to applicable "Headings" for system description for electric and electro-pneumatic hardware products.

1.5 SUBMITTALS:

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification sections.
- B. Product data including manufacturers' technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements. For items other than those scheduled in the "Headings" of Section 3, provide catalog information for the specified items and for those submitted.
- C. Final hardware schedule coordinated with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Final Hardware Schedule Content: Based on hardware indicated, organize schedule into vertical format "hardware sets" indicating complete designations of every item required for each door or opening. Use specification Heading numbers with any variations suffixed a, b, etc. Include the following information:
 - a. Type, style, function, size, and finish of each hardware item.
 - b. Name and manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of each hardware set cross-referenced to indications on Drawings both on floor plans and in door and frame schedule.
 - e. Explanation of all abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for hardware.
 - g. Door and frame sizes and materials.
 - h. Keying information.

- E. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and tested by UL or Warnock Hersey for given type/size opening and degree of label. Provide proper latching hardware, door closers, approved-bearing hinges and seals whether listed in the Hardware Schedule or not. All hardware shall comply with standards UBC 702 (1997) and UL 10C.
 - 1. Where emergency exit devices are required on fire-rated doors, (with supplementary marking on doors' UL labels indicating "Fire Door to be equipped with Fire Exit Hardware") provide UL label on exit devices indicating "Fire Exit Hardware".

1.7 PRODUCT HANDLING:

- A. Tag each item or package separately with identification related to final hardware schedule, and include basic installation instructions with each item or package.
- B. Packaging of door hardware is responsibility of supplier. As material is received by hardware supplier from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packaged in same container.
- C. Inventory door hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.
- D. Deliver individually packaged door hardware items promptly to place of installation (shop or Project site).
- E. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.

1.8 WARRANTY:

- A. Special warranties:
 - 1. Door Closers: Ten year period
 - 2. Locks and Cylinders: Three year period

1.9 MAINTENANCE:

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS:

(*Denotes manufacturer referenced in the Hardware Headings)

A. Hinges:

1. Acceptable manufacturers:

- a. Mckinney
- b. Stanley Works
- c. Ives*

2. Characteristics:

- a. Templates: Provide only template-produced units.
- b. Screws: Provide Phillips flat-head screws complying with the following requirements:
 - 1) For metal doors and frames install machine screws into drilled and tapped holes.
 - 2) For wood doors and frames install threaded-to-the-head wood screws.
 - 3) For fire-rated wood doors install #12x 1-1/4 inch, threaded-to-the-head steel wood screws.
 - 4) Finish screw heads to match surface of hinges or pivots.
- c. Hinge pins: Except as otherwise indicated, provide hinge pins as follows:
 - 1) Out-Swing Exterior Doors: Non-removable pins.
 - 2) Interior Doors: Non-rising pins.
 - 3) Tips: Flat button and matching plug. Finished to match leaves.
- d. Size: Size hinges in accordance with specified manufacturer's published recommendations.
- e. Quantity: Furnish one pair of hinges for all doors up to 5'0" high. Furnish one hinge for each additional 2-1/2 feet or fraction thereof.

B. Continuous Hinges:

1. Acceptable manufacturers:

- a. Markar
- b. Select Products
- c. Ives*

2. Characteristics:

- a. Continuous gear hinges to be manufactured of extruded 6063-T6 aluminum alloy with factory painted finish to match storefront door finish.
- b. All hinges are to be manufactured to template. Uncut hinges shall be non-handed and shall be a pinless assembly of three interlocking extrusions applied to the full height of the door and frame without mortising.
- c. Vertical door loads shall be carried on chemically lubricated polyacetal thrust bearings. The door and frame leaves shall be continually geared together for the entire hinge length and secured with a full cover channel. Hinge to operate to a full 180°.
- d. Hinges to be milled, anodized and assembled in matching pairs. Fasteners supplied shall be 410 stainless steel, plated and hardened.
- e. Provide UL listed continuous hinges at fire doors. Continuous hinges at fire doors (suffix -FR) shall meet the required ratings without the use of auxiliary fused pins or studs.

- C. Cylinders:
1. Acceptable manufacturers:
 - a. Best Access Systems*
 2. Characteristics:
 - a. Standard System: Except as otherwise indicated, provide new master key system for Project.
 - b. Equip locksets with cylinders featuring construction master key feature.
 - c. Equip locksets with interchangeable core cylinders.
 - d. Furnish final cores and keys for installation by Owner.
 - e. Metals: Construct lock cylinder parts from brass or bronze, stainless steel, or nickel silver.
 - f. Comply with Owner's instructions for master keying and, except as otherwise indicated, provide individual change key for each lock that is not designated to be keyed alike with a group of related locks.
 - 1) Permanently inscribe each key with number of lock that identifies cylinder manufacturers' key symbol, and notation, "DO NOT DUPLICATE."
 - g. Key Material: Provide keys of nickel silver only.
 - h. Key Quantity: Furnish 3 change keys for each lock, 5 master keys, 2 control keys and 6 construction master keys.
- D. Locksets, Latchsets, Deadbolts:
1. Acceptable manufacturers:
 - a. Best Access Systems*
 2. Mortise Locksets and Latchsets: as scheduled.
 - a. Chassis: cold-rolled steel, handing field-changeable without disassembly.
 - b. Latchbolts: 3/4-inch throw stainless steel anti-friction type.
 - c. Lever Trim: through-bolted, accessible design, cast or solid rod lever as scheduled. Spindles: independent break-away.
 - d. Thumbturns: accessible design not requiring pinching or twisting motions to operate.
 - e. Deadbolts: stainless steel 1-inch throw.
 - f. Electric Operation: Manufacturer-installed continuous duty solenoid.
 - g. Strikes: 16 gage curved stainless steel, bronze or brass with 1" deep box construction, lips of sufficient length to clear trim and protect clothing.
 - h. Scheduled Lock Series and Design: Best 35H series, 15H design.
 - i. Certifications:
 - 1) ANSI A156.13, 1994, Grade 1 Security.
 - 2) ANSI/ASTM F476-84 Grade 30 UL Listed.
 3. Extra Heavy Duty Cylindrical Locks and Latches: as scheduled, fastened with through-bolts.
 - a. Chassis: cylindrical design, corrosion-resistant plated cold-rolled steel.
 - b. Locking Spindle: stainless steel, interlocking design.
 - c. Latch Retractors: forged steel. Balance of inner parts: corrosion-resistant plated steel, or stainless steel.
 - d. Lever Trim: accessible design, independent operation, spring-cage supported, minimum 2" clearance from lever mid-point to door face.
 - e. All lock functions: 7 year warranty, Vandalguard function outside lever is disengaged when in the locked mode.

- f. Rosettes: minimum 3-7/16" diameter for coverage of ANSI/DHI A115.18, 1994 door preparation, through-bolt lugs on both spring cages to fully engage this pattern.
- g. Springs: full compression type.
- h. Electric operation: Manufacturer-installed continuous duty solenoid.
- i. Strikes: 16 gage curved steel, bronze or brass with 1" deep box construction, lips of sufficient length to clear trim and protect clothing.
- j. Lock Series and Design: Best 93K series, 15D design.
- k. Certifications:
 - 1) ANSI A156.2, 1994, Series 4000, Grade 1. Tested to exceed 3,000,000 cycles.
 - 2) UL listed for A label single doors up to 4ft x 8ft.

E. Exit Devices

- 1. Acceptable manufacturers:
 - a. Von Duprin*
- 2. Characteristics:
 - a. Exit Devices shall be "UL" listed for life safety. All exit devoces for fire rated openings shall have "UL" labels for "Fire Exit Hardware."
 - b. All exit devices mounted on labeled wood doors shall be mounted on the door per the door manufacturers requirements.
 - c. All trim shall be thru-bolted to the lock stile case.
 - d. All exit devices shall be made of brass, bronze, stainless steel, or aluminum material, powder coated, anodized, or plated to the standard architectural finishes to match the balance of the door hardware.
 - e. Provide glass bead conversion kits to shim exit devices on doors with raised glass heads.
 - f. All exit devices shall be one manufacturer. No deviation will be considered.
 - g. All latchbolts top be deadlocking type. Latchbolts shall have a self-lubricating coating to reduce wear. Plated or plastic coated latchbolts are not acceptable. Plastic linkage and "dogging" components are not acceptable.
 - h. Lever trim shall be solid case material with a break-away feature to limit damage to the unit from vandalism.

F. Closers and Door Control Devices:

- 1. Acceptable manufacturers:
 - a. LCN Closers*
- 2. Characteristics:
 - a. Door closers shall have fully hydraulic, full rack and pinion action with a high strength cast iron cylinder.
 - b. All closers shall utilize a stable fluid withstanding temperature range of 120°F to -30°F without seasonal adjustment of closer speed to properly close the door. Closers for fire-rated doors shall be provided with temperature stabilizing fluid that complies with standards UBC 7-2 (1997) and UL 10C.

- c. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Spring power adjustment (LCM Fast™ Power Adjust) allows for quick and accurate power adjustment and visually shows closer power size settings by way of dial adjustment gage located on closer spring tube. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed and back check.
 - d. All closers shall have solid forged steel main arms (and forearms for parallel arm closers) and where specified shall have a cast-in solid stop on the closer shoe ("CNS"). Where door travel on out-swing doors must be limited, use "CNS" or "S-CNS" type closers. Auxiliary stops are not required when crush type closers are used.
 - e. Access-Free Manual Closers: Where manual closers are indicated for doors required to be accessible to the physically handicapped provide adjustable units complying with ADA and ANSI A-117.1 provisions for door opening force.
 - f. Closers to be installed to allow door swing as shown on plans. Doors swinging into exit corridors shall provide for corridor clear width as required by code. Where possible, mount closers inside rooms.
 - g. Powder coating finish to be certified to exceed 100 hours salt spray testing by ETL, an independent testing laboratory used by BHMA for ANSI certification.
- G. Overhead Door Holders:
- 1. Acceptable manufacturers:
 - a. Glynn Johnson*
 - b. Rixson Firemark
 - 2. Characteristics:
 - a. Provide heavy duty door holders of stainless steel.
 - b. Surface holders to be installed with the jamb bracket mounted on the stop.
- H. Floor Stops and Wall Bumpers:
- 1. Acceptable manufacturers:
 - a. Trimco
 - b. Ives*
 - c. Rockwood Manufacturing
 - 2. Characteristics: Refer to Hardware Headings.
- I. Push Plates:
- 1. Acceptable manufacturers:
 - a. Trimco
 - b. Ives*
 - c. Rockwood Manufacturing
 - 2. Characteristics:
 - a. Exposed Fasteners: Provide manufacturers standard exposed fasteners.
 - b. Material to be wrought, stainless steel, per the Hardware Headings.
 - c. Provide plates sized as shown in Hardware Headings.

- J. Door Pulls & Pull Plates:
1. Acceptable manufacturers:
 - a. Trimco
 - b. Ives*
 - c. Rockwood Manufacturing
 2. Characteristics:
 - a. Provide concealed thru-bolted trim on back to back mounted pulls, but not for single units.
 - b. Material to be extruded forged, stainless steel.
 - c. Provide units sized as shown in Hardware Headings.
- K. Push Pull Sets:
1. Acceptable manufacturers:
 - a. Trimco
 - b. Ives*
 - c. Rockwood Manufacturing
 2. Characteristics:
 - a. Provide mounting systems as shown in hardware sets.
 - b. Material to be solid rod, stainless steel.
 - c. Provide Push/Pull sets sized as shown in Hardware Headings.
- L. Protective Plates:
1. Acceptable manufacturers:
 - a. Trimco
 - b. Ives*
 - c. Rockwood Manufacturing
 2. Characteristics:
 - a. Provide manufacturers standard exposed fasteners for door trim units consisting of either machine screws or self-tapping screws.
 - b. Materials:
 - 1) Metal Plates: Stainless Steel, .050 inch (U.S. 18 gage).
 - c. Fabricate protection plates not more than 2 inches less than door width on hinge side and not more than 1 inch less than door width on pull side.
 - d. Heights:
 - 1) Kick plates to be 8 inches in height.
 - 2) Mop plates to be 8 inches in height.
- M. Thresholds:
1. Acceptable manufacturers
 - a. National Guard Products, Inc.*
 - b. Reese Industries
 - c. Zero Weatherstripping Co., Inc.
 2. Types: Indicated in Hardware Headings.
- N. Door Seals/Gasketing:
1. Acceptable manufacturers
 - a. National Guard Products, Inc.*
 - b. Reese Industries
 - c. Zero Weatherstripping Co., Inc.
 2. Types: Indicated in Hardware Headings.

- O. Silencers:
 - 1. Acceptable manufacturers:
 - a. Hager
 - b. Ives*
 - c. Rockwood Manufacturing
 - 2. Three for each single doors; four for pairs of doors.

- P. Key Cabinet and System:
 - 1. Acceptable manufacturers:
 - a. Telkee, Inc.
 - 2. Provide a key control system including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150 percent of the number of locks required for the Project.
 - a. Provide hinge-panel type cabinet for wall mounting.

2.2 MATERIALS AND FABRICATION:

- A. Manufacturer's Name Plate: Do not use manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise acceptable to Architect.
 - 1. Manufacturer's identification will be permitted on rim of lock cylinders only.

- B. Base Metals: Produce hardware units of basic metal and forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units by applicable ANSI/BHMA A156 series standards for each type of hardware item and with ANSI/BHMA A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.

- C. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
 - 1. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.
 - 2. Furnish screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
 - 3. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent no standard units of type specified are available with concealed fasteners.
 - 4. Use thru-bolts for installation of all exit devices, closers, and overhead stops. Coordinate with wood doors and metal doors and frames where thru-bolts are used, as a means of reinforcing the work, provide sleeves for each thru-bolt.

2.3 HARDWARE FINISHES:

- A. Match items to the manufacturer's standard color and texture finish for the latch and lock sets (or push-pull units if no latch or lock sets).
- B. Provide finishes that match those established by ANSI or, if none established, match the Architect's sample.
- C. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by reference standards for the applicable units of hardware.
- D. Provide protective lacquer coating on all exposed hardware finishes of brass, bronze, and aluminum, except as otherwise indicated. The suffix "-NL" is used with standard finish designations to indicate "no lacquer".
- E. The designations used to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes," including coordination with the traditional U.S. finishes shown by certain manufacturer's for their products.
 - 1. Hinges (Exterior): 630 (US32D) Satin Stainless Steel
 - 2. Hinges (Interior): 652 (US26D) Satin Chrome Plated Steel
 - 3. Continuous Hinges: 628 (US28) Clear Anodized Aluminum
 - 4. Locks: 626 (US26D) Satin Chrome Plated
 - 5. Exit Devices: 630 (US32D) Satin Stainless Steel
 - 6. Door Closers: 689 Powder Coat Aluminum
 - 7. Push Plates: 630 (US32D) Satin Stainless Steel
 - 8. Pull Plates: 630 (US32D) Satin Stainless Steel
 - 9. Protective Plates: 630 (US32D) Satin Stainless Steel
 - 10. Door Stops: 626 (US26D) Satin Chrome Plated Brass/Bronze
 - 11. Overhead Holders: 630 Satin Stainless Steel
 - 12. Thresholds/Weatherstripping: 627/628 (US27/US28) Aluminum
- F. Aluminum door hardware to be as shown on Hardware Headings.

PART 3 – EXECUTION

3.1 INSTALLATION:

- A. Mount hardware units at heights indicated in the following applicable publications, except as specifically indicated or required to comply with governing regulations and except as otherwise directed by Architect.
 - 1. "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute.
 - 2. "Recommended Locations for Builders Hardware for Custom Steel Doors and Frames" by the Door and Hardware Institute.
 - 3. NWWDA Industry Standard I.S.1.7, "Hardware Locations for Wood Flush Doors."

- B. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware on to or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in the Division 9 Sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.
- C. Set units level, plumb, and true to line location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- D. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- E. Set thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements specified in Division 7 Section "Joint Sealers".
- F. Weatherstripping and Seals: Comply with manufacturer's instructions and recommendations to the extent installation requirements are not otherwise indicated.

3.2 ADJUSTING, CLEANING, AND DEMONSTRATING:

- A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely or smoothly or as intended for the application made.
 - 1. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to function properly with final operation of heating and ventilating equipment.
- B. Clean adjacent surfaces soiled by hardware installation.
- C. Door Hardware Supplier's Field Service
 - 1. Inspect door hardware items for correct installation and adjustment after complete installation of door hardware.
 - 2. Instruct Owner's personnel in the proper adjustment and maintenance of door hardware and hardware finishes.
 - 3. File written report of this inspection to Architect.
- D. Prior to project completion, representatives of the lock, exit device and overhead closer manufacturers shall inspect all units and certify that all units are installed in accordance with the manufacturer's instructions, and are regulated properly and functioning correctly. A written report shall be provided to the Architect as to the inspection and shall include appropriate certificates.

3.3 HARDWARE SCHEDULE:

HW SET:01

DOOR NUMBER:

206A

EACH TO HAVE:

3 HINGES	5BB1
1 ENTRANCE LOCK	93K-7-B 15D
1 DOME STOP	FS438

HW SET:02

DOOR NUMBER:

002 106 111 112 113 114 211

EACH TO HAVE:

3 HINGES	5BB1HW
1 PRIVACY SET	93K-0-L 15D
1 SURFACE CLOSER	RA1461
1 KICK PLATE	8400
1 MOP PLATE	8400
1 DOME STOP	FS438 (EXCLUDE 002)
1 SET SEALS	5020
1 COAT HOOK	571MB26D

HW SET:03

DOOR NUMBER:

004

EACH TO HAVE:

6 HINGES	5BB1HW
1 PRIVACY SET	93K-0-L 15D
1 DUMMY TRIM	93K-0-1DT 15D
1 THRESHOLD	425
1 SET SEALS	5020
1 DOOR BOTTOM	154P
2 FLUSH BOLT	FB 358
1 ASTRAGAL SET	
2 KICK PLATE	8400 8" X 34" CS

HW SET:04

DOOR NUMBER:
110 117

EACH TO HAVE:

3 HINGES	5BB1
1 CLASSROOM LOCK	93K-7-R 15D
1 DOME STOP	FS438 (DOOR #110 ONLY)
1 OVERHEAD STOP	904S X SNB (DOOR #117 ONLY)

HW SET:05

DOOR NUMBER:
116A

EACH TO HAVE:

1 TOP PIVOT	7255J TOP
1 BOTTOM PIVOT	7255J BTM
2 PUSH PLATE	8200 4" X 16" CS
2 KICK PLATE	8400 8" X 34" CS
1 DOME STOP	FS438

HW SET:06

DOOR NUMBER:
101B 102B 104A 104B 115A

EACH TO HAVE:

3 HINGES	5BB1HW
1 PASSAGE SET	93K-0-N 15D
1 SURFACE CLOSER	1461 CUSH
1 KICK PLATE	8400 8" X 34" CS
1 THRESHOLD	425
1 SET SEALS	5020
1 DOOR BOTTOM	154P

HW SET:07

DOOR NUMBER:
107 108 205

EACH TO HAVE:

3 HINGES	5BB1
1 CLASSROOM LOCK	93K-7-R 15D
1 SURFACE CLOSER	1461 CUSH

HW SET:08

DOOR NUMBER:
115B

EACH TO HAVE:
3 HINGES 5BB1
1 PASSAGE SET 93K-0-N 15D
1 DOME STOP FS 438

HW SET:09

DOOR NUMBER:
003 105 207

EACH TO HAVE:
3 HINGES 5BB1
1 CLASSROOM LOCK 93K-7-R 15D
1 DOME STOP FS 438

HW SET:10

DOOR NUMBER:
001A 001B 115C 116B

EACH TO HAVE:
1 CONTINUOUS HINGE 224HD 313AN
1 EXIT DEVICE 98L-NL
1 SURFACE CLOSER 1461 SCUSH X CSS/BSS 695
1 THRESHOLD 424
1 SET SEALS DOOR MFG STANDARD
1 DOOR SWEEP C627DKB

HW SET:11

DOOR NUMBER:
109 210

EACH TO HAVE:
6 HINGES 5BB1HW
2 DUMMY TRIM 93K-0-1DT 15D
2 KICK PLATE 8400 8"X 34" CS
2 ROLLER LATCH RL 36

HW SET:12

DOOR NUMBER
101A 102A

ALL HARDWARE BY DOOR SUPPLIER

HW SET:13

DOOR NUMBER:
005

EACH TO HAVE:	
1 CONTINUOUS HINGE	224HD 313AN
1 DORMITORY W/D-LATCH	35H7FW 15H 613
1 SURFACE CLOSER	RA1461 695
1 THRESHOLD	424
1 SET SEALS	DOOR MFG STANDARD
1 DOOR BOTTOM	154PDKB

HW SET:14

DOOR NUMBER:
206B

EACH TO HAVE:	
1 CONTINUOUS HINGE	224HD 313AN
1 CLASSROOM LOCK	93K-7-R 15D
1 SURFACE CLOSER	RA1461
1 THRESHOLD	424
1 SET SEALS	DOOR MFG STANDARD
1 DOOR BOTTOM	154PDKB

HW SET:15

1 KEY CABINET	TCR-49-S
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HW SET:16

DOOR NUMBER:

103

EACH TO HAVE:

1 CONTINUOUS HINGE	224HD 313AN
1 EXIT DEVICE	98L-NL
1 PUSH/PULL SET	9190-0-NO 630
1 SURFACE CLOSER	1461 SCUSH X CSS/BSS 695
1 THRESHOLD	424
1 SET SEALS	DOOR MFG STANDARD
1 DOOR SWEEP	C627DKB

HW SET:17

DOOR NUMBER:

208

EACH TO HAVE:

1 CONTINUOUS HINGE	224HD 313AN
1 EXIT DEVICE	98L-NL
1 PUSH/PULL SET	9190-0-NO 630
1 SURFACE CLOSER	RA1461 695
1 DOME STOP	FS438 613
1 THRESHOLD	424
1 SET SEALS	DOOR MFG STANDARD
1 DOOR BOTTOM	154PDKB

HW SET:18

**DOOR NUMBER: ADD ALTERNATE
105**

EACH TO HAVE:

3 HINGES	5BB1HW
1 STOREROOM LOCK	93K7D 15D
1 ELECTRIC STRIKE	6211 FSE 24VDC
1 PROXENTRY READER	PX95 X KP78+
1 CONTROLLER	CT1000-PS-EIR
15 PROX FOBS	PF1
1 BUTTON MINI BOX	660-PB
1 SURFACE CLOSER	1461RA
1 KICK PLATE	8400
1 DOME STOP	FS438

CARD READER TO UNLOCK ELECTRIC STRIKE FROM LOBBY SIDE
PUSH BUTTON TO BE MOUNTED ON DISPATCHER DESK TO DO SAME FROM DISPATCHER SIDE
SECURITY HARDWARE TO BE WIRED BY ELECTRICAL SECTION

HW SET:19

**DOOR NUMBER: ADD ALTERNATE
206A**

EACH TO HAVE:

1 CONTINUOUS HINGE	224HD 313
1 STOREROOM LOCK	93K7D 15D 613
1 ELECTRIC STRIKE	6211AL FSE 24VDC 613
1 PROXENTRY READER	PX95 X KP78+
1 CONTROLLER	CT1000-PS-EIR
1 SURFACE CLOSER	1461 SCUSH X BSS/CSS 695
1 THRESHOLD	424
1 SET SEALS	DOOR MFG STANDARD
1 DOOR SWEEP	C627DKB

SECURITY HARDWARE TO BE WIRED BY ELECTRICAL SECTION

END OF SECTION