

## **SECTION 087100 – DOOR HARDWARE**

### **PART 1 - GENERAL**

All door hardware must be coordinated with City meeting City of Delray Beach's requirements.

#### **1.1 SUMMARY**

- A. This Section includes the following:

1. Commercial door hardware for the following:
  - a. Swinging doors.
  - b. Other doors to the extent indicated.
2. Cylinders for doors specified in other Sections.
3. Electrified door hardware.
4. Access Control Vendor Coordination.

#### **1.2 RELATED DOCUMENTS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division - 1 Specification sections, apply to work of this section.

#### **1.3 DESCRIPTION OF WORK:**

- A. Definition: "Finish Hardware" includes items known commercially as finish hardware which are required for swing, sliding and folding doors, except special types of unique and non-matching hardware specified in the same section as the door and door frame.

- B. Extent of finish hardware required is indicated on drawings and in schedules.

- C. Types of finish hardware required include the following:

1. Lock and latch sets
2. Electrified Hardware
3. Lock cylinders and keys
4. Hinges
5. Closers
6. Push, Pull, Kick and Armor Plates
7. Storefront Door Pull Handles
8. Extension Flush Bolts
9. Door Stops
10. Weather-stripping for exterior doors
11. Acoustical and Fire Seals for interior doors
12. Panic Exit devices
13. Thresholds
14. Door Bottoms and Door Sweeps
15. Automatic Door Bottom

16. Door Top Rain Shield

1.4 QUALITY ASSURANCE:

- A. Manufacturer: Obtain each type of hardware (latch and lock sets, hinges, closers, etc.) from a single manufacturer, although several may be indicated as offering products complying with requirements.
- B. Supplier: A recognized architectural finish hardware supplier, with warehousing facilities, who has been furnishing hardware in the project's vicinity for a period of not less than 2 years, and who is, or who employs an experienced architectural hardware consultant who is available, at reasonable times during the course of the work, for consultation about project's hardware requirements, to City, Architect and Contractor.
- C. Fire-Rated Openings: Provide hardware for fire-rated openings in compliance with NFPA Standard No. 80 and local building code requirements. Provide only hardware which has been tested and listed by UL for types and sizes of doors required and complies with requirements of door and door frame labels.
- D. 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".
- E. Inspection: Supplier shall inspect completed installation and notify Architect that all materials furnished have been properly located and installed.

1.5 SUBMITTALS:

- A. Product Data: Submit manufacturer's technical product data for each item of hardware in accordance with Division-1 section "Submittals". Include whatever information may be necessary to show compliance with requirements and include instructions for installation and for maintenance of operating parts and finish.
- B. Hardware Schedule: Submit final hardware schedule in manner indicated below. Coordinate hardware with doors, frames and related work to ensure proper size, thickness, hand, function and finish of hardware.
- C. Final Hardware Schedule Content: Based on finish hardware indicated, organize hardware schedule into "hardware sets" indicating complete designations of every item required for each door or opening. Include the following information:
  1. Type, style, function, size and finish of each hardware item.
  2. Name and manufacturer of each item.
  3. Fastenings and other pertinent information.
  4. Location of hardware set cross-referenced to indications on drawings both on floor plans and in door and frame schedule.
  5. Explanation of all abbreviations, symbols, codes, etc. contained in schedule.
  6. Mounting locations for hardware.
  7. Door and frame sizes and materials.
  8. Keying information.
- D. Samples: Prior to submittal of the final hardware schedule and prior to final ordering of finish hardware, submit one sample of each type of exposed hardware unit, finished as required, and tagged with full description for coordination with schedule.
- E. Samples will be returned to the supplier. Units which are acceptable and remain undamaged through submittal, review and field comparison procedures may, after final check of operation, be used in the work, within limitations of keying coordination requirements.

F. Templates: Furnish hardware templates to each fabricator of doors, frames and other work to be factory-prepared for the installation of hardware. Upon request, check shop drawings of such other work, to confirm that adequate provisions are made for proper location and installation of hardware.

G. Guarantee: Submit written guarantee for all materials furnished under this section covering defects in materials and workmanship for a period of one year. Period shall begin at date of final Certificate of Acceptance.

#### 1.6 PRODUCT HANDLING:

- A. Packaging of 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 packed in same container.
- B. Inventory hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.
- C. Deliver individually packaged hardware items at the proper times to the proper locations (shop or project site) for installation.
- D. Provide secure lock-up for hardware delivered to the project, but not yet installed. Control handling and installation of hardware items which are not immediately replaceable, so that completion of the work will not be delayed by hardware losses, both before and after installation.

#### 1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace hardware components that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures.
    - b. Failure of operating components.
  - 2. Warranty Period: Five (5) years from date of Substantial Completion.
- B. Special Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components on which finishes do not comply with requirements or that fail in materials or workmanship within specified warranty period. Warranty does not include normal weathering.
  - 1. Failures on finish include, but not limited to, checking, crazing, peeling, chalking, fading and/or loss of adhesion.
  - 2. Warranty Period: Twenty (20) years from date of Substantial Completion.

#### 1.8 MAINTENANCE TOOLS

##### A. Door Hardware:

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

### PART 2 - PRODUCTS

#### A. GENERAL:

1. Hand of Door: Drawings show direction of slide, swing or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
2. 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 A156 series standard for each type hardware item and with ANSI A156.1 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.
3. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware which has been prepared for self-tapping sheet metal screws, except as specifically indicated.
4. 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 to match hardware finish or, if exposed in surfaces of other work, to match finish of such other work as closely as possible, including "prepared for paint" in surfaces to receive painted finish.
5. Provide concealed fasteners for hardware units which are exposed when door is closed, except to extent no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work, except where it is not feasible to adequately reinforce the work. In such cases, provide sleeves for each thru-bolt or use screw fasteners.
6. Tools and Maintenance Instructions for Maintenance: Furnish a complete set of specialized tools and maintenance instructions as needed for City's continued adjustment, maintenance, and removal and replacement of furnished hardware.
7. Requirements for design, grade, function, finish, size and other distinctive qualities of each type of finish hardware is indicated below. See door schedule drawing and hardware schedule.
8. Manufacturer's Product Designations: One or more manufacturers are listed for each hardware type required. Provide either the product designated, or, where more than one manufacturer is listed, the comparable product of one of the manufacturers listed which comply with requirements including those specified elsewhere in this section.
9. Provide electronic access control card readers and electronic keypads at locations shown on plan. Card readers programming and integration by City's Preferred Security System Vendor. See section 3.2 for contact information.

## 2.2 LOCKS, LATCHES AND BOLTS:

- A. Strikes: Provide manufacturer's standard wrought box strike for each latch or lock bolt, with curved lip extended to protect frame, finished to match hardware set.
  1. Provide dust-proof strikes for foot bolts, except where special threshold construction provides non-recessed strike for bolt.
  2. Provide roller type strikes where recommended by manufacturer of the latch and lock units.
- B. Lock Throw: Provide 1" minimum throw of latch and dead bolt used on pairs of doors. Comply with UL requirements for throw of bolts and latch bolts on rated fire openings.
- C. Flush Bolt Heads: Minimum of 1/2" diameter rods of brass, bronze or stainless steel, with minimum 12" long rod for doors up to 7'-0" in height. Provide longer rods as necessary for doors exceeding 7'-0" in height.

- D. Exit Device Dogging: Except on fire-rated doors, wherever closers are provided on doors equipped with exit devices, equip the units with keyed dogging device to hold the push bar down and the latch bolt in the open position.
- E. Rabbeted Doors: Where rabbeted door stiles are indicated, provide special rabbeted front on lock and latch units and bolts.
- F. Locksets – Schlage ‘L’ series Mortise Locks: ANSI / BHMA A156.13 Series 1000, Grade 1
  - 1. Location: On all metal doors except doors with electromagnetic locks, panic devices, or STC 55 rated doors.
    - a. Use Schlage ND series electrified cylinder locks for STC 55 rated doors.
  - 2. Material:
    - a. Levers: zinc base
    - b. Roses: stainless steel
    - c. Latch face plates and strikes: stainless steel
    - d. Lock chassis is steel with stainless steel cover
  - 3. Everest 6-pin interchangeable core in full size cylinder
  - 4. Levers: 06A Lever – 4 3/4" long handle
  - 5. Finish: 626 – satin chromium plated
  - 6. Mounting: 2 1/8" diameter bore for lock housing; 1" diameter for latch tube
  - 7. Strike: S3 – 4 7/8" x 11/4" with curved lip
  - 8. Door Thickness: 1 3/4" (except ballistic rated doors)
  - 9. Latch Bolt: 1" throw deadlocking latch
  - 10. Electrified Accessories:
    - a. Transformer: 8W599
    - b. AC to DC Converter: 8WCON
    - c. Temperature Control Module: 8WTCM

### 2.3 LOCK CYLINDERS AND KEYING:

- A. General: Supplier will meet with City to finalize keying requirements and obtain final instructions in writing.
- B. Equip locks with manufacturer's special 7-pin tumbler cylinder, with construction master key feature, which permits voiding of construction keys without cylinder removal.
- C. Metals: Construct lock cylinder parts from brass/bronze, stainless steel or nickel silver.
- D. Comply with City's instructions for construction master keying, grand master keying and master keying at factory. Provide keying matching City's existing keying system.
- E. Permanently inscribe each key with number or lock that identifies cylinder manufacturer key symbol, and notation "DO NOT DUPLICATE".
- F. Key Material: Provide keys of nickel silver only.
- G. Key Quantity: Furnish 15 construction master keys to Contractor. Furnish 3 individual keys for each change.
- H. All locks to be delivered to job without permanent keys.

2.4 DOOR TRIM UNITS:

- A. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units (kick plates, edge trim, viewers, knockers, mail drops and similar units); either machine screws or self-tapping screw.
- B. Fabricate edge trim of stainless steel, not more than 1/2" nor less than 1/16" smaller in length than door dimension.
- C. Fabricate protection plates (armor, kick or mop) not more than 1-1/2" less than door width on stop side and not more than 1/2" less than door width on pull side, x the height indicated.
- D. Metal Plates: Stainless steel, .050" (U.S. 18 ga.).

2.5 HINGES:

- A. Templates: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
- B. Screws: Furnish Phillips flat-head machine screws for installation of units, except furnish Phillips flat-head wood screws for installation of units into wood. Finish screw heads to match surface of hinges or pivots.
- C. Pivot Hinges: BHMA A156.4, Grade 1. (allowed for retail storefront doors only)
  - 1. Offset-Pivot Hinges: Provide top, bottom, and intermediate offset pivots at each door leaf.
- D. Butt Hinges: BHMA A156.1, Grade 1, radius corner.
  - 1. Hinges: Manufactured by Stanley, Hager, Zero, Ives
  - 2. Quantity: Use 1.5 pair 3 hinges for each door leaf up to and including 7'-6" in height and 0.5 pair 1 hinge for each additional 30 inches in door height; and 0.5 pair 1 hinge for each door leaf 40 inches to 48 inches in width.
  - 3. Ensure all doors equipped with closers are furnished with ball bearing (BB) hinges.
  - 4. Size, Type and Finish: Provide the following unless otherwise noted in the hardware set.
  - 5. Exterior Doors: FBB199, 4-1/2 inches x 4-1/2 inches with Non-Removable (stainless steel) Pins (NRP), BHMA 630 SATW stainless steel satin finish, ANSI 5111.
  - 6. Interior Doors: Offices, conference rooms, workrooms, storage rooms, mechanical rooms, janitors' closets, electrical rooms and other standard use doors use standard duty hinges F179 or FBB179, 4-1/2 inches x 4-1/2 inches BHMA652 steel satin Chromium finish for door leaf up to and including 36 inches wide. ANSI 8112.
- E. Continuous-Gear Hinges: Manufacturer's Heavy Weight with stainless-steel bearings between knuckles, fabricated to full height of door and frame.
  - 1. Ives: Full Mortise EPT 224HD 95" US28 (Aluminum)
- F. Mortise-Type Cam Hinges: Manufacturer's Heavy Weight for use with sound insulating doors utilizing acoustical seals.
  - 1. Zero: Full Mortise Z950
- G. Mortise-Type Full Swing Hinges: Manufacturer's Heavy Weight for use with doors requiring 180-degree swings.
  - 1. Ives: Full Mortise 5BB1SCHW
- H. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
  - 1. Steel Hinges: Steel pins.

2. Non-Ferrous Hinges: Stainless steel pins.
3. Exterior Doors: Non-removable pins.
4. Out-Swing Corridor Doors: Non-removable pins.
5. Interior Doors: Non-rising pins.
6. Tips: Flat button and matching plug, finished to match leaves, except where hospital tip (HT) indicated.
7. Number of Hinges: Provide number of hinges indicated but not less than 3 hinges for door leaf for doors 90" or less in height and one additional hinge for each 30" of additional height, and for leaves over 40" in width.

2.6 CLOSERS AND DOOR CONTROL DEVICES:

- A. Acceptable Product: LCN 4040 XP Series
- B. Size of Units: Except as otherwise specifically indicated, comply with the manufacturer's recommendations for size of door control unit, depending upon size of door exposure to weather and anticipated frequency of use.
  1. Where parallel arms are indicated for closers, provide closer unit one size larger than recommended for use with standard arms.
- C. Access-Free Manual Closers: Where manual closers are indicated for doors required to be accessible to the physically handicapped, provide adjustable units complying with ANSI A117.1 provisions for door opening force and delayed action closing.
  1. Opening-Force Requirements:
    - a. Egress Exterior Doors: Not more than 15 lb ft release the latch and not more than 30 lb ft set the door in motion and not more than 15 lb ft open the door to its minimum required width.
- D. Flush Floor Plates: Provide finished metal flush floor plates for floor closers except where threshold are indicated, and cover plate is specified to be an integral part of threshold. Finish floor plate to match hardware sets, unless otherwise indicated.
- E. Recessed Floor Plates: Provide recessed floor plates where no thresholds are indicated and floor closers are located in an area of resilient flooring, stone flooring or terrazzo. Recess plates to receive an insert of the floor finish material, of the normal thickness as indicated. Provide extended spindle on closer as may be necessary to accommodate thick floor finish inserts.

2.7 PUSH, PULL, KICK and ARMOR PLATES

- A. Acceptable Manufacturers:
  1. Ives.
  2. Rockwood.
  3. Trimco (Basis of Design).
- B. Fabricate protection plates (armor, kick or mop) not more than 1-1/2" less than door width on stop side and not more than 1/2" less than door width on pull side, x the height indicated.
- C. Metal Plates: Stainless steel, .050" (U.S. 18 ga.).
- D. Push Plates: Trimco 1001-9 6 inches x 16 inches, US32D Finish.
- E. Pull Plates: Trimco 1139-2 6 inches x 16 inches, US32D Finish.
- F. Kick Plates: Provide on push side of doors with closers, but not on closer/holder doors unless scheduled otherwise. 10 inches high, 0.050 thick, bevelled on all exposed edges and sized as follows:

1. Single Doors: 2 inches LDW (less door width).
  2. Pairs of Doors: 2 inches LDW (less door width).
- G. Armor Plates: 34 inches in height, 0.050 thick, beveled on all exposed edges and sized as follows:
1. Single Doors: 2 inches LDW (less door width).
  2. Pairs of Doors: 2 inches LDW (less door width).
- H. Finishes: Stainless steel, US 32D; BHMA 630.
- I. Provide stainless steel screws.
- J. Coordinate with ADA and other accessibility code requirements.
- 2.8 STOREFRONT DOOR PULL HANDLES:
- A. First Impressions International, Inc.
1. Push and Pull Handles – Model #8412 brushed stainless steel finish 1 ½" dia x 48" long
  2. (2) required per single door; (4) required at double doors.
- 2.9 EXTENSION FLUSH BOLTS:
- A. Provide extension flush bolts as manufactured by Trimco Model 3917 UL Listed, 12 inches US 32D finish.
- B. Provide Trimco Model 3915, dust proof strike 3910 with plate with screws and lead shields.
- 2.10 DOORSTOPS
- A. Wall Door Stop: Provide Trimco Model 1270CVPV-wall stop in US 32D Finish. Wall stop shall have anti-rotation pin so rubber cannot be removed. Install backing in all walls.
- B. Floor Door Stop: Provide Trimco Model 1214H-floor stop in US 32D Finish.
- 2.11 WEATHER-STRIPS AND SWEEPS
- A. General: Except as otherwise indicated, provide continuous weather-stripping at each edge of every exterior door leaf. Provide type, sizes and profiles shown or scheduled. Provide non-corrosive fasteners as recommended by manufacturer for application indicated.
- B. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strip is easily replaceable and readily available from stocks maintained by manufacturer.
- C. Weather-stripping at Jambs and Heads: Provide bumper-type resilient insert and metal retainer strips, surface-applied unless shown as mortised or semi-mortised, of following metal, finish and resilient bumper material:
1. Rigid Jamb and Head Weatherstrip: Aluminum mill finish, vinyl bulb insert, stainless steel screws. Manufacturers: Pemko 290AV, Reese 815A, Zero International 328A.
- D. Weather-stripping at Door Bottoms: Provide threshold consisting of contact type resilient insert and metal housing of design and size shown; of following metal, finish, and resilient seal strip.
1. Door Bottom Sweeps: Clear anodized aluminum finish, neoprene insert, stainless steel screws. Manufacturers: Pemko 368, Zero International 539.
- 2.12 SEALS
- A. Provide seals with the following characteristics:
1. Designed for hollow metal door and frame applications.
  2. Seal begins compressing at 3/8". Compresses to seal up to a 1/16" gap.

3. High-temperature silicone; effective between -58°F and 450°F.
  4. Self-extinguishing and non-toxic.
  5. Unaffected by sunlight, ozone and ultraviolet rays.
  6. Impervious to fungus and mildew; will not deteriorate under normal exposure.
  7. Smoke tested in accordance with UBC 7-2 and UL 1784-01
  8. Meet requirements of NFPA 105 "Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives".
  9. Air infiltration tested in accordance with ASTM E-283-04
  10. Tested and approved under UL 10C for fire; UL 1784 for smoke
  11. Tested and approved under ASTM E90 and BS EN ISO 140-3 for sound control.
- B. Acoustic Rated Door Perimeter Seals:
1. Door assembly achieved a minimum 98 percent efficiency rating.
    - a. Pemko adhesive perimeter seal: S773
    - b. Pemko automatic door bottom: 411APKL
    - c. Pemko acoustic corner pad: ACP112
- C. Smoke and Fire Seal: Pemko adhesive perimeter seal: S773
- D. Split Astragral: Zero 328; Pemco 303; or National 13
- 2.13 DOOR TOP RAIN SHIELD:
- A. Provide only when doors are exposed to rain. Provide 4 inch longer than opening width.
  - B. Clear anodized aluminum finish, neoprene insert, stainless steel screws.
  - C. Manufacturers: Pemko 346C, Reese 201A, Zero International.
- 2.14 THRESHOLDS:
- A. Thresholds: Pemko or Zero per compliance with profiles shown on drawings and Miami Dade NOA. Provide all misc. door hardware with threshold to comply with water infiltration resistance test for saddle type threshold, including but not limited to, door seal, door sweep, adjustable stop, and rain drip cap.
  - B. Threshold (exterior): Aluminum threshold with mill finish, vinyl bulb insert stainless steel screws. Manufacturers: Pemko 2005AV, Zero International #65AV, or Reese #S483AV.
  - C. Heavy Duty Threshold (exterior): Aluminum threshold with Skid Resistant Surfacing, stainless steel screws. Manufacturers: Pemko 1719AK
  - D. Barrier Free Ramp Threshold (exterior): Mill Finish Aluminum threshold with ramp to provide smooth transition, stainless steel screws. Manufacturers: Pemko 257X259A. Coordinate ramp extension with existing conditions to provide barrier free access.
  - E. Saddle Threshold: Aluminum mill finish, stainless steel screws. Manufacturers: Pemko 151A, Reese 263A, Zero International 544A.
  - F. Carpet/Special Purpose Threshold: Aluminum mill finish. Manufacturers: Pemko 2364A, Reese S562A, Zero International 1684A.
- 2.15 AUTOMATIC DOOR BOTTOM:
- A. Full Mortise Style Automatic Door Bottom: Pemko #411 (fire rated doors)
  - B. Surface Mounted Automatic Door Bottom: Pemko #411 (fire and STC rated doors)

2.16 PANIC EXIT DEVICES

- A. Exit Devices: BHMA A156.3, Grade 1
- B. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)" and ANSI A117.1.
- C. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22 N).
- D. Exit Devices for Means of Egress Doors: Comply with NFPA 101. Exit devices shall not require more than 15 lbf (67 N) to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.
- E. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.
- F. Fire Exit Devices: Devices complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252.
- G. Removable Mullions: BHMA A156.3. Von Duprin 9954 mullion.
- H. Fire-Exit Removable Mullions: Provide removable mullions for use with fire exit devices complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252. Mullions shall be used only with exit devices for which they have been tested.
- I. Panic Exit Device Dogging: Except on fire-rated doors, wherever closers are provided on doors equipped with exit devices, equip the units with keyed dogging device to hold the push bar down and the latch bolt in the open position.
- J. Electronic Exit Bars: Nonlatching electronic releasing device, activated by an adjustable capacitance sensor, with no moving parts; listed and labeled as panic exit hardware. Fabricate bar from extruded aluminum, and provide door and frame transfer device, all electronic accessories, and 20 feet of cord to route wiring off the door frame.
- K. Non-Electrified Panic Exit Device: Von Duprin 99 RIM
  - 1. Primus Everest 7-pin
  - 2. Finishes: 626 – satin chromium plated
  - 3. Latch Bolt: 3/4" throw deadlocking latch.
  - 4. Levers: 17 Lever – 4 3/4" long handle
  - 5. Concealed Vertical Rods

2.17 HARDWARE FINISHES:

- A. Provide matching 26D finishes for hardware units at each door or opening, to the greatest extent possible, and except as otherwise indicated. Reduce differences in color and textures as much as commercially possible where the base metal or metal forming process is different for individual units of hardware exposed at the same door or opening. In general, match items to the manufacturer's standard finish for the latch and lock set (or push-pull units if no latch-lock sets) for color and texture.
- B. Provide finishes which match those established by BHMA 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 for the applicable units of hardware by referenced standards.
- 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 in schedules and elsewhere to indicate hardware finishes are the industry-recognized standard commercial finishes, except as otherwise noted.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION:

- A. Mount hardware units at the following heights above finished floor to centerline of item unless otherwise indicated.
  - 1. Hinges: Standard Placement
  - 2. Cylindrical Lockset: 38"
  - 3. Deadlock or Deadlatch: 60"
  - 4. Push Plate: 48"
  - 5. Pull Plate: 42"
  - 6. Panic Bar: 42"
  - 7. Closer: Per manufacturer's template to give maximum degree of opening. Mount closers on room side of door. Provide min. overhead clearance of 80".
  - 8. Kick Plate: 1/4" from Bottom of door.
  - 9. Stop and Holders:
    - a. Wall: On wall where knob or pull hits.
    - b. Floor: On floor as far from hinge as conditions permit.
    - c. O.H. Door Holder: Per template.
    - d. Door Holder: 2" from lead edge of door.
- B. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which 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 substrate.
- C. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- D. Drill and countersink units which 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.
- F. Electronic Hardware:
  - 1. Install Electrified Magnetic Locks, Power Supply, Electric Power Transfer, and all accessories, and tie to card access control system.
  - 2. Provide card readers and keypads at locations shown on plan.
  - 3. Provide low and high voltage wiring connections.

4. Final connection to access control system and devices shall be by Security System Vendor, or their authorized agent, hired and paid for by the General Contractor.

### 3.2 ELECTRONIC HARDWARE INTEGRATION

- A. The suggested Vendor is listed below to program hardware and perform all software integration for all electrified locksets and devices:

1. A.D.T.  
Gino Ezzo  
Sr Account Executive  
10761 Marks Way, Miramar, FL 330253976  
M: 561.696.6075 E:GinoEzzo@adt.com

### 3.3 ADJUST AND CLEAN:

- A. Adjust and check each operating item or hardware and each door, for proper location and to ensure proper operation, function, and keying of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.
- B. Clean adjacent surfaces soiled by hardware installation.
- C. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work 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 compensate for final operation of heating and ventilating equipment.
- D. Instruct City's Personnel in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.
- E. Continued Maintenance Service: Approximately six months after the acceptance of hardware in each area, the Installer, accompanied by the representative of the latch and lock manufacturer, shall return to the project and re-adjust every item of hardware to restore proper function of doors and hardware. Consult with and instruct City's personnel in recommended additions to the maintenance procedures. Replace hardware items which have deteriorated or failed due to faulty design, materials or installation of hardware units. Prepare a written report of current and predictable problems (of substantial nature) in the performance of the hardware.
- F. Upon completion of project the hardware supplier shall furnish two (2) copies of the factory key bitting schedule directly to the City's Representative.

### HARDWARE COORDINATION for CONSTRUCTION of CITY FACILITIES

Materials:

External

Internal

Large Format Interchangeable Core (I/C Core) for internal & external during construction

Construction locks must be used during construction utilizing I/C Core cylinders

Process:

1. Two weeks after bid Award General Contractor to schedule a coordination meeting with Facility and City of Delray Beach staff to confirm and establish a Keying schedule for the project and overall facility.
2. Within the 15 working days after meeting, General contractor to submit Proposed Project Key schedule for City's review.

3. City will review proposed submitted key schedule and will provide comments within 15 working days.
4. General contractor will address all comments and will use to prepare hardware shop dwgs. submittal. For review and approvals from City.
5. General contractor orders and pays for all the hardware, all temporary and permanent I/C Core Primus Cylinders.
6. At project completion, City will approve, issues cylinders (no Keys) to General contractor for installation.
7. Installation of new I/C Core Primus Cylinders by General Contractor.
8. Allow approximately 10-12 weeks for Hardware & Keying Schedule.

#### PART 4 - HARDWARE SCHEDULE

- A. The following schedule is furnished for whatever assistance it may afford the contractor; do not consider it as entirely inclusive. Should any particular door or item be omitted in any scheduled hardware group, provide door or item with hardware same as required for similar purposes. Quantities listed are for each pair of doors or for each single door.
- B. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.
- C. This hardware schedule prepared by.

Allegion, PLC  
3451 Technological Ave, Suite 7  
Orlando FL 32817  
Ph: 407-571-2000  
Fax 407-571-2006

HARDWARE GROUP NO. 02 - EXTERIOR STOREFRONT - PAIR - CARD ACCESS

100A            100B            202A

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
8	EA HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC PANIC HARDWARE	RX-QEL-HH-9947-EO-304L-CON-SNB 24 VDC	626	VON
1	EA ELEC PANIC HARDWARE	RX-QEL-HH-9947-NL-OP-110MD-304L-CON-SNB 24 VDC	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
2	EA 90 DEG OFFSET PULL	8190EZHD 10" O	630-316	IVE
2	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
2	EA MOUNTING PLATE	4040XP-18	689	LCN
2	EA CUSH SHOE SUPPORT	4040XP-30	689	LCN
2	EA FLOOR STOP	FS444	626	IVE
1	EA CARD READER	CARD READER - BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
2	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

FBC NOA COMPLIANT OPENING

BALANCE OF HARDWARE BY STOREFRONT SUPPLIER

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 06 - EXTERIOR - GYM/CORRIDOR - CARD ACCESS

100C 101E 101F 101G 120

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC PANIC HARDWARE	RX-QEL-HH-9947-EO-304L-CON-SNB 24 VDC	626	VON
1	EA ELEC PANIC HARDWARE	RX-QEL-HH-9947-NL-OP-110MD-304L-CON-SNB 24 VDC	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
2	EA 90 DEG OFFSET PULL	8190EZHD 10" O	630-316	IVE
2	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
2	EA RAIN DRIP	11A	A	ZER
4	EA GASKETING	139A	A	ZER
1	EA RAIN DRIP	142AA	AA	ZER
1	SET MEETING STILE	328AA-S	AA	ZER
1	EA GASKETING	8150SBK PSA	BK	ZER
2	EA DOOR BOTTOM	FAS-SEAL		STE
1	EA THRESHOLD	566A-223	A	ZER
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

FBC NOA FL12400 BASIS OF DESIGN

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 08 - EXTERIOR - GENERATOR/ELEC. CARD ACCESS

125A            125B            127

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC PANIC HARDWARE	RX-LC-OUT-HH-9927-EO-299F-CON-SNB	626	VON
1	EA ELEC PANIC HARDWARE	RX-LC-OUT-HH-9927-L-M996-06-299F-FS-CON-SNB	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
2	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
2	EA RAIN DRIP	11A	A	ZER
4	EA GASKETING	139A	A	ZER
1	EA RAIN DRIP	142AA	AA	ZER
1	SET MEETING STILE	328AA-S	AA	ZER
1	EA GASKETING	8150SBK PSA	BK	ZER
2	EA DOOR BOTTOM	FAS-SEAL		STE
1	EA THRESHOLD	566A-223	A	ZER
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
2	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

FBC NOA FL12400 BASIS OF DESIGN

CARD READER, POWER SUPPLY AND DOOR CONTACT (DPS) BY THE OWNERS SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 09 - EXTERIOR - PAIR

130A	130C	130D	130E	130F	S113H
S131C					

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2	SURFACE BOLT	SB360 12"	604	IVE
1	STOREROOM W/DEADBOLT	LV9480T L583-363	630	SCH
1	PRIMUS CORE	20-740	626	SCH
2	SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
2	RAIN DRIP	11A	A	ZER
5	GASKETING	139A	A	ZER
1	RAIN DRIP	142AA	AA	ZER
1	SET MEETING STILE	328AA-S	AA	ZER
1	GASKETING	8150SBK PSA	BK	ZER
2	DOOR BOTTOM	FAS-SEAL		STE
1	THRESHOLD	566A-223	A	ZER

FBC NOA FL12400 BASIS OF DESIGN

ASTRAGAL BY DOOR SUPPLIER

HARDWARE GROUP NO. 11 - EXTERIOR -STORAGE ROOM - PAIR - CARD ACCESS

101B 115C1 122 123 123A

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
2	EA SURFACE BOLT	SB360 12"	604	IVE
1	EA EU MORTISE LOCK	L9492TEU L583-363 RX DM CON 12/24 VDC	630	SCH
1	EA PRIMUS CORE	20-740	626	SCH
2	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
2	EA RAIN DRIP	11A	A	ZER
5	EA GASKETING	139A	A	ZER
1	EA RAIN DRIP	142AA	AA	ZER
1	EA GASKETING	8150SBK PSA	BK	ZER
2	EA DOOR BOTTOM	FAS-SEAL		STE
1	EA THRESHOLD	566A-223	A	ZER
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

FBC NOA FL12400 BASIS OF DESIGN

ASTRAGAL BY DOOR SUPPLIER

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY  
SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 13 - EXTERIOR - MULTIPURPOSE - EXIT - CARD ACCESS

104A1 104B1

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC PANIC HARDWARE	RX-LC-HH-9975-L-M996-06-FS-CON-SNB	626	VON
1	EA MORTISE CYLINDER	20-061 ICX 36-083	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
1	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
1	EA FLOOR STOP	FS436	626	IVE
1	EA RAIN DRIP	11A	A	ZER
1	EA GASKETING	139A	A	ZER
1	EA RAIN DRIP	142AA	AA	ZER
1	EA DOOR SWEEP	328AA	AA	ZER
1	EA GASKETING	475AA	AA	ZER
1	EA DOOR BOTTOM	FAS-SEAL		STE
1	EA THRESHOLD	566A-223	A	ZER
1	EA CARD READER	CARD READER - BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

FBC NOA FL12400 BASIS OF DESIGN

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 14 - EXTERIOR - STAIR - EXIT

200A1 200A2

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA PANIC HARDWARE	CD-HH-9975-L-06-SNB	626	VON
2	EA MORTISE CYLINDER	20-061 ICX 36-083	626	SCH
2	EA PRIMUS CORE	20-740	626	SCH
1	EA SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
1	EA FLOOR STOP	FS436	626	IVE
1	EA RAIN DRIP	11A	A	ZER
1	EA GASKETING	139A	A	ZER
1	EA RAIN DRIP	142AA	AA	ZER
1	EA DOOR SWEEP	328AA	AA	ZER
1	EA GASKETING	475AA	AA	ZER
1	EA DOOR BOTTOM	FAS-SEAL		STE
1	EA THRESHOLD	566A-223	A	ZER

FBC NOA FL12400 BASIS OF DESIGN

HARDWARE GROUP NO. 15 - EXTERIOR - LIFEGUARD - CARD ACCESS

108 108A 115C 120B 121 123B

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA EU MORTISE LOCK	L9492TEU L583-363 RX DM CON 12/24 VDC	630	SCH
1	EA PRIMUS CORE	20-740	626	SCH
1	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
1	EA RAIN DRIP	11A	A	ZER
1	EA GASKETING	139A	A	ZER
1	EA RAIN DRIP	142AA	AA	ZER
1	EA DOOR SWEEP	328AA	AA	ZER
1	EA GASKETING	475AA	AA	ZER
1	EA DOOR BOTTOM	FAS-SEAL		STE
1	EA THRESHOLD	566A-223	A	ZER
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

FBC NOA FL12400 BASIS OF DESIGN

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY  
SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 18 - EXTERIOR - RESTROOM

109	110	111	112	S114A	S114B
S114C	S114D	S114E	S114F	S131A	S131B

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	FAC RESTRM W/IND	LV9486T L583-363	626	SCH
1	PRIMUS CORE	20-740	626	SCH
1	SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
1	RAIN DRIP	11A	A	ZER
1	GASKETING	139A	A	ZER
1	RAIN DRIP	142AA	AA	ZER
1	DOOR SWEEP	328AA	AA	ZER
1	GASKETING	475AA	AA	ZER
1	DOOR BOTTOM	FAS-SEAL		STE
1	THRESHOLD	566A-223	A	ZER

FBC NOA FL12400 BASIS OF DESIGN

HARDWARE GROUP NO. 19 - INTERIOR DOUBLE EGRESS - STOREFRONT

100D	200B	200C
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Provide each DE door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
8	HINGE	5BB1 4.5 X 4.5	652	IVE
2	FIRE EXIT HARDWARE	9947-EO-F-304L-SNB	626	VON
2	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
2	MOUNTING PLATE	4040XP-18	689	LCN
2	FLOOR STOP	FS444	626	IVE

BALANCE OF HARDWARE BY STOREFRONT SUPPLIER

HARDWARE GROUP NO. 20 - INTERIOR STOREFRONT – PAIR – CARD ACCESS

101H

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
8	EA HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC FIRE EXIT HARDWARE	RX-9947-EO-F-304L-SNB	626	VON
1	EA ELEC FIRE EXIT HARDWARE	RX-9947-NL-OP-F-110MD-304L	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
2	EA MAGNETIC LOCK	M490P ATS/LED 12/24 VDC	628	SCE
2	EA 90 DEG OFFSET PULL	8190EZHD 10" O	630-316	IVE
2	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
2	EA MOUNTING PLATE	4040XP-18	689	LCN
2	EA CUSH SHOE SUPPORT	4040XP-30	689	LCN
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA PUSH BUTTON	623GR 12/24 VDC	626	SCE
1	EA MOTION SENSOR	SCANII 12/24 VDC	BLK	SCE
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

BALANCE OF HARDWARE BY STOREFRONT SUPPLIER

HARDWARE GROUP NO. 21 - INTERIOR STOREFRONT – CARD ACCESS

212

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
8	EA HINGE	5BB1 4.5 X 4.5	652	IVE
2	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC PANIC HARDWARE	RX-QEL-9947-EO-304L-CON-SNB 24 VDC	626	VON
1	EA ELEC PANIC HARDWARE	RX-QEL-9947-NL-OP-110MD-304L-CON 24 VDC	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
2	EA 90 DEG OFFSET PULL	8190EZHD 10" O	630-316	IVE
2	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
2	EA MOUNTING PLATE	4040XP-18	689	LCN
2	EA CUSH SHOE SUPPORT	4040XP-30	689	LCN
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

BALANCE OF HARDWARE BY STOREFRONT SUPPLIER

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 22 - INTERIOR STOREFRONT - SGL

200A

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
4	EA HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA FIRE EXIT HARDWARE	9947-NL-OP-F-110MD-304L	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
1	EA 90 DEG OFFSET PULL	8190EZHD 10" O	630-316	IVE
1	EA SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA MOUNTING PLATE	4040XP-18	689	LCN

BALANCE OF HARDWARE BY STOREFRONT SUPPLIER

HARDWARE GROUP NO. 23 - INTERIOR STOREFRONT - SGL - CARD ACCESS

102A 116E 118A

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
4	EA HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC FIRE EXIT HARDWARE	RX-QEL-9947-NL-OP-F-110MD-304L-CON 24 VDC	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
1	EA 90 DEG OFFSET PULL	8190EZHD 10" O	630-316	IVE
1	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
1	EA MOUNTING PLATE	4040XP-18	689	LCN
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

BALANCE OF HARDWARE BY STOREFRONT SUPPLIER

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 24 - INTERIOR EXIT ONLY - RATED

200E 200F

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA HINGE	5BB1 4.5 X 4.5	652	IVE
2	EA FIRE EXIT HARDWARE	9947WDC-EO-F-304L-SNB	626	VON
2	EA SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
2	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA FIRE/LIFE WALL MAG	SEM7850 AS REQ (12/24/120V AC/DC TRI-VOLT)	689	LCN
1	EA GASKETING	328AA	AA	ZER
1	SET MEETING STILE	328AA-S	AA	ZER

HARDWARE GROUP NO. 25 - INTERIOR EXIT - NON-RATED - CARD ACCESS

204

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA HINGE	5BB1 4.5 X 4.5	652	IVE
2	EA POWER TRANSFER	EPT10 CON	689	VON
2	EA ELEC PANIC HARDWARE	RX-QEL-9947WDC-EO-CON-SNB 24 VDC	626	VON
1	EA ELEC PANIC HARDWARE	RX-QEL-9947WDC-NL-OP- 110WD-304L-CON-SNB 24 VDC	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
2	EA 90 DEG OFFSET PULL	8190EZHD 10" O	630- 316	IVE
2	EA SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
2	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA WALL STOP	WS406/407CVX	630	IVE
1	EA GASKETING	328AA	AA	ZER
1	SET MEETING STILE	328AA-S	AA	ZER
1	EA CARD READER	CARD READER - BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 26 - INTERIOR PAIR - NON-RATED - CARD ACCESS

101A 115C2

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA AUTO FLUSH BOLT	FB31P	630	IVE
1	EA EU MORTISE LOCK	LV9092TEU RX CON 12/24 VDC	630	SCH
1	EA PRIMUS CORE	20-740	626	SCH
1	EA COORDINATOR	COR X FL	628	IVE
2	EA SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
2	EA WALL STOP	WS406/407CVX	630	IVE
2	EA SILENCER	SR64	GRY	IVE
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
2	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

ASTRAGAL BY DOOR SUPPLIER

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY  
SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 28 - INTERIOR STORAGE - NON-RATED - CARD ACCESS

205B

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA AUTO FLUSH BOLT	FB41P	630	IVE
1	EA EU MORTISE LOCK	LV9092TEU RX CON 12/24 VDC	630	SCH
1	EA PRIMUS CORE	20-740	626	SCH
1	EA COORDINATOR	COR X FL	628	IVE
2	EA SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
2	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA WALL STOP	WS406/407CVX	630	IVE
2	EA SILENCER	SR64	GRY	IVE
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

ASTRAGAL BY DOOR SUPPLIER

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY  
SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 30 - INTERIOR EXIT - RATED - CARD ACCESS

118 208A 208B

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC FIRE EXIT HARDWARE	RX-99-L-F-M996-06-FS-CON-SNB	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA PRIMUS CORE	20-740	626	SCH
1	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA WALL STOP	WS406/407CVX	630	IVE
3	EA GASKETING	328AA	AA	ZER
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 31 - INTERIOR EXIT - NON-RATED – CARD ACCESS

200D 202B 216A 216D

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC PANIC HARDWARE	CD-RX-99-L-M996-06-FS-CON-SNB	626	VON
1	EA RIM CYLINDER	20-057 ICX	626	SCH
1	EA MORTISE CYLINDER	20-061 ICX 36-083	626	SCH
2	EA PRIMUS CORE	20-740	626	SCH
1	EA SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA WALL STOP	WS406/407CVX	630	IVE
3	EA GASKETING	328AA	AA	ZER
1	EA CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 33 - INTERIOR - RATED - CARD ACCESS

115            116            119            209            210            211

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA EU MORTISE LOCK	LV9092TEU RX CON 12/24 VDC	630	SCH
1	EA PRIMUS CORE	20-740	626	SCH
1	EA SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA WALL STOP	WS406/407CVX	630	IVE
1	EA GASKETING	328AA	AA	ZER
1	EA CARD READER	CARD READER - BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 35 - INTERIOR STORAGE - NON-RATED - CARD ACCESS

203B

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA EU MORTISE LOCK	LV9092TEU RX CON 12/24 VDC	630	SCH
1	EA PRIMUS CORE	20-740	626	SCH
1	EA SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA WALL STOP	WS406/407CVX	630	IVE
3	EA SILENCER	SR64	GRY	IVE
1	EA CARD READER	CARD READER - BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	EA DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

CARD READER, POWER SUPPLY AND DOOR CONTACTS FURNISHED BY THE SECURITY SYSTEMS INTEGRATOR

HARDWARE GROUP NO. 37 - INTERIOR - NON-RATED - CARD ACCESS

102B	104A2	104B2	105	106	115A
115B	116A	116B	116C	116D	120A1
120A2	120C	126	203A	204A	205A
206	210A	210B	216A1	216A2	216B
216C	217				

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	HINGE	5BB1 4.5 X 4.5	652	IVE
1	POWER TRANSFER	EPT10 CON	689	VON
1	EU MORTISE LOCK	LV9092TEU RX CON 12/24 VDC	630	SCH
1	PRIMUS CORE	20-740	626	SCH
1	SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
1	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	WALL STOP	WS406/407CVX	630	IVE
3	SILENCER	SR64	GRY	IVE
1	CARD READER	CARD READER – BY SECURITY SYSTEMS INTEGRATOR		UNK
1	POWER SUPPLY	POWER SUPPLY BY SECURITY SYSTEMS INTEGRATOR		UNK
1	DOOR POSITION SWITCH	DOOR POSITION SWITCH (DPS) BY SECURITY SYSTEMS INTEGRATOR	BLK	UNK

HARDWARE GROUP NO. 42 - INTERIOR RESTROOMS - SINGLE USE

117	120D	121A	213
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Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	HINGE	5BB1 4.5 X 4.5	630	IVE
1	PRIVACY LOCK W/ OUTSIDE INDICATOR	LV9040 06A L583-363 OS-OCC	626	SCH
1	SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
1	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	WALL STOP	WS406/407CVX	630	IVE
3	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 43 - INTERIOR RESTROOMS

101C	101D	107	113	120E	120F
214	215				

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA PUSH PLATE	8200 4" X 16"	630	IVE
1	EA PULL PLATE	8303 10" 4" X 16"	630	IVE
1	EA SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA WALL STOP	WS406/407CVX	630	IVE
3	EA SILENCER	SR64	GRY	IVE

PART 5 -

Door Numbers	HwSet#	Door Numbers	HwSet#	Door Numbers	HwSet#
100A	02	120	06	210A	37
100B	02	120A1	37	210A	37
100C	06	120A2	37	210B	37
100D	19	120B	15	211	33
101A	26	120C	37	212	21
101B	11	120D	42	213	42
101C	43	120E	43	214	43
101D	43	120F	43	215	43
101E	06	121	15	216A	31
101F	06	121A	42	216A1	37
101G	06	122	11	216A2	37
101H	20	123	11	216B	37
102A	23	123A	11	216C	37
102B	37	123B	15	216D	31
104A1	13	125A	08	217	37
104A2	37	125B	08	S114A	18
104B1	13	126	37	S114B	18
104B2	37	127	08	S114C	18
105	37	130A	09	S114D	18
106	37	130C	09	S114E	18
107	43	130D	09	S114F	18
108	15	130E	09	S131A	18
108A	15	130F	09	S131B	18
109	18	200A	22	S131C	09
110	18	200A1	14		
111	18	200A2	14		
112	18	200B	19		
113	43	200C	19		
115	33	200D	31		
115A	37	200E	24		
115B	37	200F	24		
115C	15	202A	02		
115C1	11	202B	31		
115C2	26	203A	37		
116	33	203B	35		
116A	37	204	25		
116B	37	204A	37		
116C	37	205A	37		
116D	37	205B	28		
116E	23	206	37		
117	42	208A	30		
118	30	208B	30		
118A	23	209	33		
119	33	210	33		

**END OF SECTION**