

## GUIDELINES FOR PROFESSIONAL SERVICES

### DIVISION 8 – OPENINGS

The following items are to be included on the drawings and in the specifications by the Design Professional:

#### I. STOREFRONTS , CURTAIN WALLS, & DOORS

- A. Aluminum framed storefronts and curtain walls shall not be used without the express written authorization of the Owner. Follow the procedure in the Division 1 Guidelines for approval of non-compliant items.
- B. Heads of exterior steel doors shall have a closure channel to preclude water entering it and shall be watertight.
- C. Steel door frames shall be fabricated of high grade cold rolled galvanized steel, no less than 16 gauge, except in areas of high use such as cafeterias, gyms, locker rooms, auditoriums, gang toilets, and exterior hallway entrances, which shall be no less than 14 gauge. Head joints shall be mitered and welded through and through across the entire frame section to the frame and shall be of sufficient size to stiffen frame and to support the loads imposed. Reinforcement shall be not less than 10 gauge.
- D. Wood doors shall be five (5) ply or seven (7) ply frames laminated block or strip wood core, solid flush construction. The bond between the veneer plies and between veneer, frame and core unit shall be Type 2 (water-resistant bond) for interior doors. Interior doors shall be guaranteed for the life of the building, and a certificate furnished for each type door.
- E. Except where required to pass large equipment or furniture the use of double doors or pairs will not be permitted. All doors shall be single doors with full frames for each door. Where double doors are approved, a key-controlled, removable steel mullion shall be used of a type that will preclude forcible entry.
- F. Each kitchen and food service room shall have at least one ceiling height door adequate to pass refrigerators and other high equipment. These doors shall be double (2-3/0) width doors, with a key-controlled, removable mullion or a single 4/0 door.
- G. The design of the kitchen/serving area shall avoid the use of the fire-rated roll-up doors.

II. WINDOWS

- A. Hopper vents or projecting vents of windows within 6'-0" of the floor shall not extend into passages or room beyond the wall line at jambs.
- B. The Media Center design shall not have windows with a sill height that prevents the installation of 48" high wall mounted shelving units.
- C. Where hurricane shutters are used internal to the window, they shall be white or a highly reflective color. Dark or medium bronze shall not be used.

III. HARDWARE

- A. Finish hardware shall be as specified in attached Specification Section 08 71 00.
- B. The Contractor shall complete hardware schedule, including catalog sheets for each item of hardware. A complete set of instructions for installation and adjustment shall be furnished following final approval.
- C. A new school or remodeled office area shall be furnished with a key cabinet. The cabinet shall be "The Key Control System, Inc." model 22 40 PLR, that may be expanded when necessary. This cabinet shall be equipped with three (3) removal panels of 80 keys capacity each.
- D. On main exit doors, kitchen, storerooms, and other doors subject to heavy use, extra large kick plates shall be used.

SECTION 08710

FINISH HARDWARE

PART I - GENERAL

**1.01 WORK INCLUDED**

- A. The work in this section shall include furnishing of all items of finish hardware as hereinafter specified or obviously necessary to complete the building, except those items that are specifically excluded from this section of the specification.

**1.02 RELATED WORK SPECIFIED ELSEWHERE**

- A. Hollow Metal Doors and Frames
- B. Aluminum Doors and Frames
- C. Wood Doors and Frames

**1.03 DESCRIPTION OF WORK**

- A. Furnish labor and material to complete hardware work indicated, as specified herein, or as may be required by actual conditions at building.

- B. Include all necessary screws, bolts, expansion shields, other devices, if necessary, as required for proper hardware application. The hardware supplier shall assume all responsibility for correct quantities.
- C. Hardware shall meet the requirements of Federal, State and Local codes having jurisdiction over this project, notwithstanding any real or apparent conflict therewith in these specifications.
- D. Fire-rated openings:
  - 1. Provide hardware for fire-rated openings in compliance with A.I.A. (NBFU) Pamphlet No. 80, NFPA Standards NO. 101, UBC 702 (1997) and UL10C. This requirement takes precedence over other requirements for such hardware. Provide only hardware that has been tested and listed by UL for the types and sizes of doors required, and complies with the requirements of the door and door frame labels.
  - 2. Panic exit devices are required on fire-rated doors, provide supplementary marking on door UL label indicating Fire Door to be equipped with fire exit hardware and provide UL label on exit device indicating "Fire Exit Hardware".
- E. Exterior Openings
  - 1. Provide hardware for hurricane openings in compliance with local jurisdiction. This requirement takes precedence over other requirements for such hardware. Provide only hardware that has been tested and listed by local authority for the types and sizes of doors required, and complies with the requirements of the door and door frame.
- F. Fasteners:
  - 1. Hardware as furnished shall conform to published templates generally prepared for machine screw installation.
  - 2. Furnish each item complete with all screws required for installation. Typically, all exposed screws installation.
  - 3. Insofar as practical, furnished concealed type fasteners for hardware units that have exposed screws shall be furnished with Phillips flat head screws, finished to match adjacent hardware.
  - 4. Door closers (4 each) and exit devices ( 2 each) to be installed with closed head through bolts (sex bolts).

#### **1.04 QUALITY ASSURANCE**

- A. The supplier to be a directly franchised distributor of the products to be furnished and have in their employ an AHC (Architectural Hardware Consultant). This person is to be available for consultation to the architect, owner and the general contractor at reasonable times during the course of work.
- B. The finish hardware supplier shall prepare and submit to the architect six (6) copies of a complete schedule identifying each door and each set number, following the numbering system and not creating any separate system himself. He shall submit the schedule for review, make corrections as directed and resubmit the corrected schedule for final approval. Approval of schedule will not relieve Contractor of the responsibility for furnishing all necessary hardware, including the responsibility for furnishing correct quantities.
- C. No manufacturing orders shall be placed until detailed schedule has been submitted to the architect and written approval received.

- D. After hardware schedule has been approved, furnish templates required by manufacturing contractors for making proper provisions in their work for accurate fitting, finishing hardware setting. Furnish templates in ample time to facilitate progress of work.
- E. Hardware supplier shall have an office and warehouse facilities to accommodate the materials used on this project. The supplier must be an authorized distributor of the products specified.
- F. The hardware manufactures of locks, panic devices and closers are to supply both a pre-installation class as well as a post-installation walk-thru with installer and school board locksmith. This is to insure proper installation and provide for any adjustments or replacements of hardware as required.
- G. Wiring diagrams and elevation for electronic hardware to be provided with submittals.**

#### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Wrap, protect finishing hardware items for shipment. Deliver to manufacturing contractors hardware items required by them for their application; deliver balance of hardware to job; store in designated location. Each item shall be clearly marked with its intended location.

#### **1.06 WARRANTY**

- A. The material furnished shall be warranted for one year after installation or longer as the individual manufacturer's warranty permits.
- B. The manufacturer against failure due to defective materials and workmanship shall warrant overhead door closers in writing for a period of ten (10) years. Commencing on the Date of Final Completion and Acceptance, and in the event of failure, the manufacture is to promptly repair or replace the defective with no additional cost to the Owner.

## **PART II - PRODUCTS**

#### **2.01 ACCEPTABLE MANUFACTURERS**

- A. To the greatest extent possible, obtain each kind of hardware from only one manufacturer.

B. All numbers and symbols used herein have been taken from the current catalogues of the following manufacturers.

PRODUCT	ACCEPTABLE MANUFACTURER	ACCEPTABLE SUBSTITUTE
1) Hinges	Ives	McKinney, Hager, Bommer
2) Locks & Latches	Schlage	None (Owners Standard)
<b>3) Electronic Locks</b>	<b>Schlage AD-Series</b>	
4) Cylinders, Keys, Keying (Owners Standard )		Schlage Primus None
5) Exit Devices	Von Duprin XPCD98 and XP98	None (Owners Standard)
6) Removeable Mullions KR4954	None (Owners Standard)	Von Duprin KR9954,
7) Door Closers	LCN	Norton
8) OH Stops/holders	Glynn Johnson	Rixson
9) Magnetic Hold Opens		LCN Dor-O-Matic
10) Stops, Flushbolts	Wall Stops/Floor	Ives DCI, Rockwood
11) Kick Plates		Ives Quality, Rockwood
12) Threshold/Weather-strip Zero		National Guard Pemko,
13) Silencers		Ives Rockwood, GJ
14) Key Cabinet	Telkee, Lund	Key Control 2240PLR

C. If material manufactured by other than that specified or listed herewith as an equal, is to be bid upon, permission must be requested from the architect seven (7) days prior to bidding. If substitution is allowed, it will be so noted by addendum.

**2.02 FINISH OF HARDWARE:**

A. Exterior Hinges to be Stainless Steel (32D), Interior Hinges to be Satin Chrome (26D). Door Closers to be Aluminum. Locks to be Satin Chrome (26D), Exit Devices to be Satin Chrome (26D). Overhead Holders to be Satin Chrome (26D), Flat Goods to be Satin Chrome (26D) or Stainless Steel (32D) and the Thresholds to be Mill Finish Aluminum.

**2.03 HINGES AND PIVOTS:**

A. Exterior butts shall be Stainless Steel. Butts on all out swinging doors shall be furnished with non-removable pins (NRP).  
 B. Interior butts shall be as listed.  
 C. Doors 5' or less in height shall have two (2) butts. Furnish one (1) additional butt for each 2'6" in height or fraction thereof. Dutch door shall have two (2) butts per leaf.

**2.04 KEYING:**

A. Locks and cylinders shall be 11 Pin Schlage Primus key system level III, with ID card for duplication.

- B. Provide Three (3) each keys per **KEY CHANGE**, balance of keys "0" bitted. All keys to be Patent Restricted.
- C. **Provide 100 % expansion bitting list.**
- D. Hardware supplier to provide temporary cylinders or cores during the construction phase with 30 construction keys supplied. Owner to change out the temporary cylinders for the permanent cylinders.
- E. Locks on rollup doors and elevators shall be keyed to the school system with interchangeable core.
- F. Permanent keying shall be done by Sarasota County School Board Locksmith. Electrical, Mechanical and Data rooms are to have NON Primus classic cylinders keyed to the schools master key system.
- G. Deliver all Primus keys and permanent cores to:  
Sarasota County School Board - Locksmith  
**Arthur Kessinger – JR Miller**  
7889 Fruitville Road  
Sarasota, FL 34240  
1-941-361-6311 x **68851**  
SARASOTA COUNTY SCHOOL BOARD TO PROVIDE KEYING

**2.05 LOCKSETS:**

- A. Locksets shall be heavy-duty Cylindrical type, Grade 1, series 4000 unless specified otherwise, in "ND" series, Rhodes design as manufactured by Schlage Lock Company.
- B. Deadbolts shall be heavy-duty Grade 1, B700 series IC core by Schlage Lock Company.
- C. Rim and Mortise cylinders are to be IC core.

D. LOCK FUNCTIONS	SCHLAGE NUMBER
Exterior Classrooms	ND75PD
Interior Classrooms Corridor	ND75PD
<b>Corridor Staff Toilet</b>	<b>ND73PD</b>
Classroom interior	ND70PD
Storeroom	ND80PD
Office	ND70PD
Mechanical, Electrical	ND80PD
Bathroom – elementary	ND44S K thru 3
Bathroom	ND40S
Passage	ND10S
Gang toilets	B763R

- 1. Acceptable substitutions:
  - A. None (Owners Standard)

**E. Electronic Locks - AD-300 Hardwired**

- 1. panic trim - AD-300-993S-70-PR-RHO-LC**
- 2. lock trim - AD-300-CY-70-PR-RHO-PD**
- AD-400 Wireless**
- 1. panic trim - AD-300-993S-70-PR-RHO-LC**

## **2. lock trim - AD-300-CY-70-PR-RHO-PD**

### **2.06 EXIT DEVICES:**

- A. Exit devices shall be Von Duprin CD98 and CDXP98 Series in types and functions specified. All devices must be listed under "Panic Hardware" in accident equipment list of Underwriters Laboratories. All labeled doors with "Fire Exit Hardware" must have labels attached and be in strict accordance with Underwriters Laboratories.
- B. All exit devices shall be tested to ANSI/BHMA A156.3 test requirements by a BHMA certified testing laboratory. A written certification showing successful completion of a minimum of 1,000,000 cycles must be provided.
- C. All surface strikes shall be roller type and come complete with a plate underneath to prevent movement. And shall be provided with a dead-latching feature to prevent latchbolt tampering.
- D. Exit devices shall have deadlatching and cylinder dogging.
- E. VonDuprin XP series at exterior openings
  - 1. Acceptable substitutions:
    - A. None (Owners Standard)

### **2.07 DOOR CLOSERS:**

- A. All closers shall be LCN 4011/4111 series having non-ferrous covers, forged steel arms separate valves for adjusting backcheck, closing and latching cycles and adjustable spring to provide up to 50% increase in spring power. Closers shall be furnished with parallel arm mounted on all doors opening into corridors or other public spaces and shall be mounted to permit 180 degrees door swing wherever wall conditions permit. Furnish with non-hold open arms unless otherwise indicated.
- B. Door closer cylinders shall be of high strength construction to provide low wear operating capabilities of internal parts throughout the life of the installation. All door closers shall be tested to ANSI/BHMA A156.4 test requirements by a BHMA certified testing laboratory. A written certification showing successful completion of a minimum of 10,000,000 cycles must be provided.
- C. Door closers shall utilize temperature stable fluid capable of withstanding temperature ranges of 120 degrees Fahrenheit to -30 degrees Fahrenheit, without requiring 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 the standards UBC 7-2 (1997) and UL 10C.
- D. Door closers shall incorporate tamper resistant non-critical screw valves of V-slot design to reduce possible clogging from particles within the closer. Closers shall have separate and independent screw valve adjustments for latch speed, general speed, and hydraulic backcheck. Backcheck shall be properly located so as to effectively slow the swing of the door at a minimum of 10 degrees in advance of the dead stop location to protect the door frame and hardware from damage. Pressure relief valves (PRV) are not acceptable.
  - 1. Acceptable substitutions:
    - B. Norton PR7500

**2.08 TRIM AND PLATES:**

- A. Kick plates, mop plates, and armor plates, shall be .050 gauge with 32D finish. Kick plates to be 10" high, mop plates to be 4" high. All plates shall be two (2) inches less full width of door.
- B. On main exit doors, kitchen, storerooms and other doors subject to heavy use, extra large armored plates shall be used. Push plates, pull plates, door pulls, and miscellaneous door trim shall be shown in the hardware schedule.

**2.09 DOOR STOPS:**

- A. Doorstops shall be furnished for all doors to prevent damage to doors or hardware from striking adjacent walls or fixtures. Wall bumpers equal to IVES WS407 Series are preferred, but where not practical furnish floor stops equal to IVES FS436 or FS438 series. Where conditions prohibit the use of either wall or floor type stops, furnish surface mounted overhead stops equal to Glynn Johnson, 450 Series.

**2.10 THRESHOLDS AND WEATHERSTRIP:**

- A. Thresholds and weather-strip shall be as listed in the hardware schedule.

**2.11 DOOR SILENCERS:**

- A. Furnish rubber door silencers equal to IVES SR64 for all new interior hollow metal frames, (2) per pair and (3) per single door frame.

**PART III - EXECUTION**

**3.01 INSTALLATION:**

- A. All hardware shall be applied and installed in accordance with the Finish Hardware schedule. Care shall be exercised not to mar or damage adjacent work.
- B. Contractor to provide a secure lock-up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items that are not immediately replaceable, so that the completion of the work will not be delayed by hardware losses both before and after installation.
- C. The hardware manufactures of locks, panic devices and closers are to supply both a pre-installation class as well as a post-installation walk-thru with installer and school board locksmith. This is to insure proper installation and provide for any adjustments or replacements of hardware as required

**3.02 ADJUSTING AND CLEANING:**

- A. Contractor shall adjust all hardware in strict compliance with manufacturer's instructions. Prior to turning project to owner, contractor shall clean and make any final adjustments to the finish hardware.

**3.03 PROTECTION:**

- A. Contractor shall protect the hardware, as it is stored on construction site in a covered and dry place.



- B. Contractor shall protect exposed hardware installed on doors during the construction phase.

**3.04 KEY CABINET:**

- A. Set up and index one (1) Key Cabinet that allows room for expansion for 150% of the number of keys for the project. Key cabinet to be indexed and “set up” by the Direction of Construction Services.

**3.05 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. This hardware schedule was prepared by.

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END OF SECTION