

SECTION 08 71 00

FINISH HARDWAREPART 1 - GENERAL1.1 SECTION INCLUDES

- A. All items known commercially as Finish or Door Hardware.
- B. Thresholds and Weatherstripping/Door Seals.

1.2 RELATED SECTIONS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Related work specified elsewhere includes the following:
 - 1. Section 08110 – “Steel Doors and Frames”

1.3 REFERENCES

- A. BHMA (Builders Hardware Manufacturers Association) A156 series.
- B. DHI (Door and Hardware Institute) A115 series.
- C. SDI – 107 – 84 – Hardware on Steel Doors (Reinforcement – Application.)
- D. SDI – 109 – 88 – Hardware for Standard Steel Doors & Frames.
- E. NFPA – 80 – Fire Doors and Windows.
- F. NFPA – 101-2000 - Life Safety Code.
- G. ADA-AG – Americans with Disabilities Act - Accessibility Guidelines.

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product Data – Submit two (2) copies of manufacturer’s catalog sheets describing each item of hardware to be supplied.
- C. Schedules: Submit six (6) copies of hardware schedules for Architect’s approval. Schedules are to include quantity, type, location, finish and manufacturer of each item of hardware for each opening. Schedule may be horizontal or vertical format. No material is to be ordered until the submittal is approved. After approval, no substitutions will be allowed without the written approval of the Architect.

- D. Samples: If requested by the Architect, submit a sample of each hardware item in the design and finish to be used on the project. Samples may be used on the project provided they are undamaged during the submittal process.
- E. Templates: Furnish template information to the General Contractor for use by other trades in fabricating related materials.
- F. Project Closeout: On completion of the project, furnish one (1) copy of the "as furnished" hardware schedule along with one (1) copy each of the keying schedule, manufacturer's maintenance instructions and any special tools which may be required to maintain or adjust the hardware. In addition, furnish copies of all manufacturer's warranties for the owner's records.

1.5 QUALITY ASSURANCE

- A. Manufacturers and model numbers listed in the hardware sets portion of this specification are for the purpose of establishing a standard of quality. Similar products by approved manufacturers that are equal in design, function and quality will be acceptable upon prior approval of the Architect provided the required physical samples and data are submitted in accordance with Section 01015.
- B. The hardware supplier shall be a firm specializing in finish hardware. The firm shall have been engaged in this business for a period of not less than five (5) years and shall have in its employ a full time, certified Architectural Hardware Consultant (AHC) or person of equivalent experience. This person shall be available to the Architect at reasonable times for consultation regarding this project. This supplier shall be a direct, factory authorized distributor for the manufacturer of the materials being furnished.
- C. The hardware manufacturer shall be a recognized firm regularly engaged in the manufacture and sale of finished hardware items.
- D. If required, the hardware supplier shall furnish certification and documentation that his materials meet all physical and environmental requirements of the project.
- E. As near as possible, obtain each type of hardware (hinges, locks, closers, etc.) from a single manufacturer.
- F. Provide hardware for fire rated openings that complies with the requirements of NFPA 80 and authorities having jurisdiction. Provide only items of door hardware that have been tested and listed by UL, FM, Warnock-Hersey or other testing organizations acceptable to the authorities having jurisdiction.
- G. Products and installation under the work of this Section shall be in compliance with applicable provisions of published U. S. Justice Department Regulations for the "Americans with Disabilities Act of 1990" (ADA; ADA-AG); ANSI A117.1; and the "Uniform Federal Accessibility Standards" (UFAS), 1988 Edition; And revisions and amendments thereto.
 - 1. Where this requires any substitution of products specified herein, advise Architect in writing for necessary approvals.

1.6 DELIVERY, STORAGE AND PROTECTION

- A. Refer to Division 1 Sections "Summary of Work" and "Special Conditions" for additional information and requirements regarding transportation, handling and storage of project materials.

- B. Package each item individually. Label and clearly identify each package with item nomenclature and door opening. Correlate all making and opening numbers to match the hardware schedule.
- C. The General Contractor is to provide a secure, locked storage area for all items delivered to the jobsite.
- D. The General Contractor shall inventory all items delivered to the jobsite within forty-eight hours and advise the supplier immediately of any shortages.

1.7 PROJECT CONDITIONS

- A. The General Contractor will coordinate the work between this supplier and other related sections such as hollow metal and wood door suppliers to insure proper manufacturer and fabrication of doors to receive the approved hardware.

1.8 WARRANTY

- A. Provide manufacturers warranties from hardware supplier as follows:
 - 1. Closers: Ten years
 - 2. Exit Devices & Locksets: Three years
 - 3. Locksets: Three Years.
 - 4. All other Hardware: Two years.
- B. Warranties shall cover failure due to manufacturing defects or material failure only. They shall not cover abuse, vandalism, improper installation or maintenance. Defective materials are to be replaced at no cost to the owner.
- C. The above warranties shall be in addition to, shall be in effect simultaneously with, and shall not alter other project or product warranties or guarantees, nor shall they serve as a limitation to other remedies available to the Owner.

PART 2 - PRODUCTS
(COORDINATE WITH DRAWING SPECIFICATIONS)

2.1 MANUFACTURERS

- A. Acceptable products and their manufacturers are listed below. Specific information regarding functions, sizes, mounting and types is found in the hardware sets at the end of the section.
 - 1. Hinges:

	MFG'R	FINISH	TYPE/SERIES
a.	Stanley	26D/CL	FBB179/661HD
b.	McKinney	26D/CL	TA2714/MCK-12HD
 - 2. Exit Devices:

	MFG'R	FINISH	SERIES/DESIGN
a.	Stanley	32D	2100 Series x 1700 & 4900 Trim
b.	Sargent	32D	8800 Series x FLW & ETL Trim
c.	Von Duprin	32D	98 Series x 697 & 996L Trim

Note: All exit devices for exterior openings to meet hurricane codes.
 - 3. Locks, Latches and Dummy Trim:

	MFG'R	FINISH	SERIES/DESIGN
a.	Best	26D	93K14D
b.	Sargent	26D	63-10-Line x LP Trim
c.	Schlage	26D	ND Series x IC Core X SPA Trim
4.	Cylinders, Deadlocks & Misc. Locks:		
	MFG'R	FINISH	SERIES/DESIGN
a.	Best	26D	48H
5.	Closers:		
	MFG'R	FINISH	SERIES/DESIGN
a.	Stanley		
6.	Push/Pulls/Kickplates:		
	MFG'R	FINISH	TYPE/SERIES
a.	Rockwood	32D	70F/107 x 70C/K1050
b.	Hager	32D	30S/33J/190S
c.	Ives	32D	8200/8300-8/8400
7.	Bolts/DP Strikes/Misc.:		
	MFG'R	FINISH	TYPE/SERIES
a.	Rockwood	26D	555/570
b.	Hager	26D	282D/280X
c.	Ives	26D	FB458/DP2
8.	Stops and Miscellaneous Items:		
	MFG'R	FINISH	ITEM
a.	Rockwood	32D	408/443
b.	Hager	32D	232W/243F
c.	Ives	32D	WS408/FS438
d.	LCN	689	SEM7840
9.	Thresholds and Weatherstripping:		
	MFG'R	FINISH	TYPE/ITEM
a.	Pemko	AL	As Specified
b.	Hager	AL	Equal
c.	Natl Guard	AL	Equal

B. Substitutions: Substitutions from the listed manufacturers and products without prior approval of the architect are not permitted. Suppliers desiring to bid products not listed must make written application to the architect no less than seven (7) working days prior to the bid date. Applications must be accompanied by manufacturer's complete literature and/or samples to allow the Architect to make an informed decision. Verbal requests will not be considered. Approval of alternate manufacturer's products will only be in writing or by addendum to insure an equitable competitive situation for all bidders.

2.2 MATERIALS AND FABRICATION

- A. 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 for finish designations indicated.
- B. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.
- C. Furnish stainless steel screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Furnish 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.
- D. 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. Do not use thru-bolts for installation where bolt heads or nuts are exposed on opposite face unless their use is the only means of adequately securing the hardware or where required on labeled doors. In no case are thru-bolts to be used as a substitute for proper reinforcement of doors or frames.

2.3 FINISHES

- A. Finishes for all items are as listed in the hardware schedule at the end of this section.
- B. Finish designations are as listed in ANSI/BHMA A156.18 "American Standards for Materials and Finishes: and are the industry recognized standard commercial finishes.

2.4 KEYING

- A. Key all cylinders into the existing system or a new MK system as required. Furnish the following:
 - 1. 6 Master Keys per new group.
 - 2. 3 Change Keys per cylinder.
 - 3. Temporary cores for all cylinders
- B. Meet with owner's representative to determine exact keying requirements. Ship permanent cores and keys direct from factory to owner.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Mount hardware units at heights indicated in 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. WDMA Industry Standard I.S. 1.A-97, "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 onto 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 Section “Painting”. Do not install surface-mounted items until finishes have been completed on the substrates involved.
- 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 that are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- E. Set thresholds in 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 AND CLEANING

- 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 and smoothly or as intended for the application made.
- B. 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 functions and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- C. Clean adjacent surfaces soiled by hardware applications.

3.3 HARDWARE SCHEDULE

A. Hardware Sets

Group 1

Doors 100A, 100B, 100C, 100D, 100E, 100F, 100G

Hinges	By Aluminum Storefront manufacturer
Lockset / Cylinder	Cylinder by Aluminum Storefront manufacturer
Closer	By Aluminum Storefront manufacturer
Threshold	Pemko 2008APK, 72”
Weatherstrip	Pemko S442BL

Group 2

Doors 109, 110, 111, 112, 116, 117, 118, 123

Hinges	By Manufacturer
Push/Pull	By Manufacturer
Floor Stop	

Group 3

Doors 121, 122

Hinges	1 1/2 Pr. 3 1/2" x 3 1/2" NRP 626
Door frame silencers	1 set
Closer	QDC211
Push / Pull	Push Plate & Pull Plate
Floor Stop	

Group 4

Doors 114, 127, 200A, 200B, 200C, 200D, 200E

Hinges	1 1/2 Pr. 3 1/2" x 3 1/2" NRP 626
Door frame silencers	1 set
Lockset	Storage
Floor Stop	

Group 5

Doors 115, 115A, 120, 129A

Hinges	1 1/2 Pr. 3 1/2" x 3 1/2" NRP 626
Door frame silencers	1 set
Closer	QDC211
Lockset	Storage
Floor Stop	

Group 6

Doors 124, 126

Hinges	1 1/2 Pr. 3 1/2" x 3 1/2" NRP 626
Door frame silencers	1 set
Lockset	Passage
Floor Stop	

Group 7

Doors 125

Hinges	1 1/2 Pr. 3 1/2" x 3 1/2" NRP 626
Door frame silencers	1 set
Lockset	Office
Floor Stop	

Group 8

Doors 129D

Hinges	1 1/2 Pr. 3 1/2" x 3 1/2" NRP 626
Closer	QDC211
Lockset	Entry Lockset / Deadbolt
Threshold	Pemko 2008APK, 72"

Weatherstrip

Pemko S442BL

HARDWARE SCHEDULE TO BE FINALIZED DURING SHOP DRAWING PHASE

NOTES:

1. Mount all closers inside; away from exterior, lobbies, corridors etc.
2. Furnish 3 silencers, Rockwood 608, for each hollow metal frame and 2 for each double.
3. Determine required voltage for magnetic holders, where required, before ordering (if any).

END OF SECTION