08110

Steel Doors & Frames

This document provides design standards only, and is not intended for use, in whole, or in part, as a specification. Refer questions and comments regarding the content and use of this document to Bloomsburg University Project Manager.

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A. Summary

This section contains general design and installation criteria for steel doors and frames.

B. System Design and Performance Requirements

1) Frame Construction

a) Interior Frames: Profile: Form to profiles indicated on drawing. Gauge: 16 @ openings up to and including 4'-0" wide, 14 @ openings over 4'-0" wide and cased opening frames. Steel: Cold-rolled steel. Welding: Continuous face welded, dressed and ground smooth, prime paint.

b) Exterior Frames: Profile: Form to profiles indicated on drawing. Gauge: 14 Steel: A60 galvanized. Welding: Continuous face welded, dressed and ground smooth, prime paint.

c) Cover Plates: For hinge and strike plate cutouts, provide fully enclosed pressed steel cover boxes spot welded to frame behind mortises.

d) Clearances: Provide and be responsible for proper clearances at metal frames, including for weather-stripping, sound-stripping, and smoke gaskets. Glass clearance shall be thickness of glass plus clearance each side (1/8 inch minimum exterior – 1/16 inch minimum interior), adjust for installation, glass thickness to allow for glazing and sealant.

e) Where sealed double glazing is indicated, provide rebates minimum of ¾ inch and provide ¼ inch clearance at glass edges. Where units fit around concrete blocks (blocks built into frames) obtain actual dimensions of blocks being used to establish minimum clearances.

f) Joining: At frames with equal width jambs and head, neatly miter on face (except locations as at transom bars and at frames with large head members). Cope and butt stops. Weld length of face. Grind smooth. At other frames, provide same mitered joint wherever possible (at intersection of jamb-head or jamb-sill) and at other locations butt metal neatly and full weld. If tight butt joints are utilized, joints shall be neatly caulked smooth.

g) Workmanship: Fabricate so no grind marks, hollow or other out-of-plane areas are visible. At joints of intermediate members (such as mullions and transom bars), provide tight joining, neatly accomplished without holes, burned out spots,

weld build up or other defacing work. Fill to close cracks and to preserve shapes. Tightly fit loose stops to hairline joints.

2) Door and Frame Mortises and Reinforcement

a) Doors shall be internally reinforced for surface mounted hardware and cut-out, drilled and tapped to receive mortised hardware.
b) Reinforce all frames for regular arm and parallel arm surface mounted closers.
c) Reinforce frames for surface mounted hardware and cut-out, drilled and tapped to receive mortised hardware.

3) Frame Anchors

Provide standard and special anchorage items as required.

4) Frame Finish

Clean frames by degreasing process and apply thorough coating of baked-on primer, covering inside as well as outside surfaces. At galvanealed frames, coat welds and other disrupted surface with zinc-rich paint containing not less than 90 percent zinc dust by weight.

5) Door Construction

a) Interior Doors: Gauge: 18, Steel: Cold-rolled. Edges: Seamless – Continuous weld, grind smooth, fill and touch-up paint
b) Exterior Doors: Gauge: 16 gauge. Steel: A60 galvanized. Edges: Seamless – Continuous weld, grind smooth, fill and touch-up paint

6) Electrified Openings

Doors and Frames shall be pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

7) Fire Rated Doors and Frames

Provide metal applied label indicating rating designation.

C. Submittals

Shop drawings must include a schedule of doors and frames indicating:

- Gauge
- Configuration
- Fire-Label
- Ancor types and spacing
- Location of cut-outs for hardware and reinforcement
- Door elevations
- Hardware group

- Core material
- Internal reinforcement
- Closure method
- Cut-outs for glazing or louvers

D. Product Standards
Product must conform to the following standards.

- ANSI A224.1 – Test Procedure and Acceptance Procedure for Prime Painted Steel Surfaces
- ASTM A366 – Steel Carbon, Cold-Rolled Sheet, Commercial Quality
- ASTM A525 – General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process
- ASTM A526 – Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Commercial Quality
- ASTM E152 – Methods of Fire Tests of Door Assemblies
- DHI (Door Hardware Institute)
- NFPA 80 – Fire Doors and Windows
- NFPA 252 – Fire Tests for Door Assemblies
- SDI-100 – Standard Steel Doors and Frames
- SDI-105 – Recommended Erection Instructions for Steel Frames
- UL 10B – Fire Tests of Door Assemblies
- UL 10C – Standard for Positive Pressure Fire Tests of Door Assemblies

E. Approved Manufacturers & Product Catalog Series
Subject to compliance with these design requirements, manufacturers offering products that may be incorporated in the work include the following. Additions of approved manufacturers and catalog series to the list below will require a revision to this Design Standard.

Item Description	**Approved Manufacturers and Product Catalog Series**	
Hollow Metal Frames	**Curries**	M Series
	CECO	SU Series
	Steelcraft	MU Series
Hollow Metal Doors	**Curries**	707 Series 747 Series CurriStain Series
	CECO	Legion Series Medallion Series Madera Series
	Steelcraft	L Series B Series

F. Accessories or Special Features
Frame Silencers
Provide specified silencers, except where stop does not occur and at openings with smoke gaskets, three (3) per jamb at single door and one for each door at double doors.

G. Special Requirements
Maintain a maximum diagonal distortion of 1/16" from corner to corner.

H. Installation Guidelines
Install frames in accordance with HMMA 840-99, "Guide Specification for Installation and Storage of Hollow Metal Doors and Frames", published by HMMA, Hollow Metal Manufacturers Association.

I. Cleaning and Adjusting
Adjust hardware for smooth and balanced door operation.

End of Section 08110

08200

Wood Doors

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A. Summary

This section contains general design criteria for wood doors.

B. System Design and Performance Requirements

C. Submittals

Submit the following design and construction documentation to Bloomsburg University.

1) Shop Drawings
   a) Indicate elevations of each door type, location, size, fire rating, swing, undercuts, stile and rail reinforcement, internal blocking for hardware attachment, and cut-outs for glazing.
   b) Note fire-rated door frames and their rating.
   c) Indicate large-scale drawings of veneer layout.
   d) Note each frame condition.
   e) Designate the work to be provided by other trades and coordinate accordingly.
2) Product Data
   a) Provide the door manufacturer's technical product data for each type of door and frame specified, including core details, factory finishing, and fire test data.
3) Samples
   a) Provide four samples of factory finishing for color approval.
4) Notarized Certificates of Compliance
   a) Provide a notarized certificate of compliance inicating compliance with NWWDA 1A, AWI PC-5, and AWI FD requirements.
5) Closeout
   a) Provide a written warranty signed by the door manufacturer, installer, and contractor agreeing to replace defective doors. The warranty must cover the cost of refinishing, hardware installation, and re-hanging defective doors.

D. Product Standards

Products must conform to the following standards.

- ANSI/BHMA 115-W – Wood Door Preparation Standards
- ASTM E152 – Methods of Fire Tests of Door Assemblies
- AWI – Quality Standards of Architectural Woodwork Institute
- NFPA 80 – Fire Doors and Windows
- UL 10B – Fire Tests of Door Assemblies
- UL 10C – Standard for Positive Pressure Fire Tests of Door Assemblies

E. Approved Manufacturers & Product Catalog Series

Subject to compliance with these design requirements, manufacturers offering products that may be incorporated in the work include the following. Additions of approved manufacturers and catalog series to the list below will require a revision to this Design Standard.

Item Description	Approved Manufacturers and Catalog Series	
Flush Wood Doors	**Graham**	GPD PC Series GPD FD Series
	Eggers	PC Series FD Series
	Mohawk	Architectural Series 5-ply Flush Wood Doors

F. Materials

1) Flush Wood Doors
   a) Grade: Premium Grade A Faces with manufacturer's standard five (5) ply construction; minimum 1/8" thick.
   b) Faces: Book Matched Plain Sliced Select White Birch; minimum 1/50" thick at 12% moisture content after finish sanding. Deviation from this standard will require the owner's approval.
   c) Stiles: Minimum 1" stiles on the hinge stile and 13/16" minimum on the lock stile; provide hardwood stiles which match the door veneer.
   d) Conceal all required intumescent seals into the edge of the door; frame applied intumescent seals are not acceptable.
   e) Pre-fit for opening size and pre-machine for hardware as specified.
   f) Fire rated doors require metal applied label indicating rating designation.
   g) For mineral-core doors, provide composite blocking with improved screw holding capability approved for use in doors of fire ratings indicated as necessary to eliminate need for through-bolting hardware and as follows:
      i) Provide 5" top-rail blocking.
      ii) Provide 4 1/2" x 10" lock blocks.
      iii) Provide 5" mid-rail blocking, at doors indicated to have exit devices.

h) At hinge stiles, provide manufacturer's standard laminated-edge construction with improved screw-holding capability and split resistance and with outer stile matching face veneer.

G. Finish

1) Doors shall be factory pre-finished to match existing facility standard.
2) Finish shall be type TR-6 / UV cured catalyzed polyurethane.

H. Special Requirements

Electrified Openings: Doors shall be pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

I. Installation Guidelines

1) Verify doors are free of defects prior to hanging.
2) Install doors in accordance with the manufacturer's requirements and AWI quality standards.
3) Install fire-rated doors and frames in accordance with NFPA 80.

J. Quality Control

Conform to National Wood Window and Door Association industry standard I.S.1: Architectural Wood Flush Doors and the requirements of AWI Quality Woodwork Standards, Section 1300: Architectural Flush Doors, Premium Grade.

K. Cleaning and Adjusting

Adjust hardware for smooth and balanced door operation.

End of Section 08200

08710

Finish Hardware

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Contents

A. Summary
B. Materials
C. Base Metals
D. Finishes
E. Finish Schedule
F. Quality Control

A. Summary

This section contains general design and performance criteria for finish hardware.

B. Materials

Finish hardware materials must conform to the following standards. Subject to compliance with these design requirements, manufacturers offering products that may be incorporated in the work are included in the following section by product category. Additions of approved manufacturers and catalog series to the categories below will require a revision to this Design Standard.

1) Butt Hinges
   a) Approved Manufacturers and Catalog Series

Item Description	Approved Manufacturers
Butt Hinges	**McKinney**
	Hager
	Stanley

   b) Application Notes
      i) Use on all interior wood doors, interior and exterior hollow metal doors.
      ii) Out swinging lockable doors shall have Non-Removable Pin (NRP) hinges.
      iii) Exterior lockable doors shall have NRP and Safety Stud Feature (SSF) hinges.
      iv) Doors securing medicine storage, cash, or similar valuables: Use SSF hinges.
      v) Width of hinges shall be sufficient to clear trim and wall conditions as shown on the drawings.
      vi) Size: 4 ½” x 4 ½” for doors up to 3’-0” in width, 5” x 4 ½” for doors over 3’-0” in width. Provide heavy weight hinges (.180) at high traffic doors.
      vii) Electric Hinges
         (1) Provide sufficient number of concealed wires to accommodate electric function of specified hardware.

(2) Locate electric hinge at center location.
(3) Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

2) Continuous Hinges
   a) Approved Manufacturers and Catalog Series

Item Description	Approved Manufacturers
Continuous Hinges	**McKinney (MCK-FM300 Series)**
	Pemko (SPBFM Series)
	Markar (FM300 Series)

   b) Application Notes
      i) Fiberglass Reinforced Polyester (FRP) doors: Use continuous hinges.
      ii) Specify and Provide stainless steel continuous hinges. Aluminum is not acceptable.
      iii) When retrofitting new doors in existing frames and frame hinge preparations are compromised: Use half-surface continuous hinges.
      iv) Continuous hinges are not to be used on new construction except with applications noted above or with owner approval.

3) Pivot Sets
   a) Approved Manufacturers and Catalog Series

Item Description	Approved Manufacturers
Pivots	**Rixson**

   b) Application Notes
      i) High traffic interior doors with panic hardware that are subject to extreme abuse: Use pivots.
      ii) Aluminum doors: Use pivots.
      iii) Where existing floor conditions make the use of Pivots impossible, use 5” Heavy Weight Butt Hinges.
      iv) Provide (1) intermediate pivot for every additional 30” of door height over 60”.
      v) Provide 2604 Pivot Locator installation tool kit for all pivot applications.

vi) When scheduling doors with weights near or over 250 pounds, consult the Rixson factory for application consulting.

vii) Electric Pivots

(1) Provide sufficient number of concealed wires to accommodate electric function of specified hardware.

(2) Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

4) Power Transfers

a) Approved Manufacturers and Catalog Series

Item Description	Approved Manufacturers
Power Transfers	**Securitron**
	Von Duprin

b) Application Notes

i) Use at heavy use electrical openings to transfer power from frame to door.

ii) Provide at all electrical applications using continuous hinges.

5) Cylinders and Keying

a) Approved Manufacturers and Catalog Series

Item Description	Preferred Manufacturer and Catalog Series		Acceptable Alternative Manufacturers
Cylinders and Keying	**Best**	7-pin Small Format Interchangeable Core (SFIC) Type	**No Substitution**

b) Application Notes

i) Cylinders shall be keyed to an existing master key system and supplied by owner for contract projects.

ii) Furnish cylinders with construction masterkeying for use during the construction period. Permanent cores shall be installed by the owner upon completion of the project.

6) Locks and Latches
   a) Approved Manufacturers and Catalog Series

Item Description	**Type**	**Approved Manufacturers and Catalog Series**	
Locks and Latches	**Mortise Locks**	**Sargent**	8200 Series x LNL trim design
		Corbin Russwin	ML2000 Series x NSA trim design
		Best	45H 7T 15R trim design
	Cylindrical Locks	**Sargent**	FW-10-line x LL trim design
		Corbin Russwin	CL3300 Series x NZD trim design
		Best	9K x 7AB trim design

b) Application Notes

i) Mortise locks shall be used as standard of quality for all projects. Cylindrical locks to be used when existing door is to remain and upgrading existing lock to lever handle and key system is necessary.

ii) Mortise locks to include forged escutcheon trim.

iii) Locks will include housing able to accept the owner's small format interchangeable (SFIC) key system.

iv) Install custom strikes to match existing frame preparations when new lock is scheduled to be installed in existing frame. Existing frames to be modified to accept new custom strikes.

v) Doors entering occupied rooms (classrooms, offices, etc.) off corridors shall utilize the following functions for classroom security:

(1) Mortise Locksets:

(a) Use Best 45H 7T 15R as basis of design. Equals are Sargent 8225 and Corbin Russwin ML2065.

(2) Cylindrical Locksets:

(a) Use Best 93K 7AB as basis of design. Equals are Sargent 10G05 and Corbin Russwin CL3351.

7) Magnetic Locks

a) Approved Manufacturers and Catalog Series

Item Description	**Approved Manufacturers and Catalog Series**	
Magnetic Locks	**Securitron**	Magnalock
	Locknetics	Mangaforce

b) Application Notes

i) Magnetic locks are not to be specified unless approved by owner in writing.

8) Electric Strikes
   a) Approved Manufacturers and Catalog Series

Item Description	Approved Manufacturers and Catalog Series	
Electric Strikes	**HES**	9600 Series 5900 Series 5010 Series
	Folger Adam	300 Series 700 Series
	Von Duprin	6000 Series

9) Exit Devices
   a) Approved Manufacturers and Catalog Series

Item Description	Approved Manufacturers and Catalog Series	
Exit Devices	**Sargent**	80 Series x FW-ETL Trim Design
	Corbin Russwin	ED5000 Series x 900 Trim Design
	Von Duprin	99 Series x 996L BreakawayTrim Design

   b) Application Notes
      i) Single doors: Use rim exit device.
      ii) Pairs of doors: Use rim exit devices with keyed removable mullion.
      iii) Cross corridor doors / Interior: Use vertical rod exit devices, less bottom rod as preferred securing device. Concealed rods on hollow metal doors, surface rods on wood doors.
      iv) Use electric trim on fire rated stairwell doors requiring “re-entry” during fire condition. On fire rated doors with access control and “re-entry”, use HES 9500 or electric latch retraction for the latch release/access control function.
      v) Doors entering public occupied rooms off corridors, large group instruction, and any other non-fire rated interior opening with exit devices: Specify Cylinder Dogging on all exit devices. Provide a thumb-turn cylinder for the dogging feature in coordinating finish.
      vi) Specify Remote Dogging/Latch Retraction or Electric Dogging as needed by opening for security lockdown/dogging release. On openings with these features, verify the use of Cylinder Dogging, or any other dogging feature, with the owner for each opening.
      vii) Doors entering public occupied rooms off corridors: Use double cylinder exit devices on mortise and rim types. Outside trim can be locked from inside

room. Exit device on inside allows free egress, but outside trim remains locked.

viii) Exterior doors: Pull trim preferred, free wheeling lever trim when lever is used.

c) Installation Notes

i) Where concealed vertical rod exit devices are used, frames shall be prepared and reinforced for the strike as provided by the approved manufacturer. Drilled or mortised holes without proper strikes, latching surface and latching depth for top and bottom latches are unacceptable, will be considered defective installation and rejected outright.

10) Removable Mullions

a) Approved Manufacturers and Catalog Series

Item Description	**Approved Manufacturers and Catalog Series**	
Removable Mullions	**Sargent**	L980S Series
	Corbin Russwin	KM Series
	Von Duprin	4954 Series

b) Application Notes

i) Types: Lockable, steel, key removable. Key is not required to reinstall the mullion.

ii) Cylinders provided shall be compatible with those defined in the cylinders and keying section of this standard.

iii) Provide multi wire connectors when electric or monitor strikes are used. This allows mullion removal without damaging electrical connections.

iv) Preferred method of securing exterior pairs of doors when using rim exit devices.

v) Provide one (1) extra set of mullion fittings per mullion to mount nearby to secure mullion when out of the opening.

vi) Installer shall provide the necessary brackets for mounting mullion fittings in location determined by Bloomsburg University.

11) Push/Pulls
   a) Approved Manufacturers and Catalog Series

Item Description	Approved Manufacturers and Catalog Series
Push/Pulls	**McKinney**
	Rockwood
	Trimco

   b) Application Notes
      i) Mounting methods to be concealed type wherever possible.
      ii) Provide decorative thru bolts at free ends of push / pull bars and pulls when used with exit devices.
      iii) Push plate size: 4” x 16” minimum, except when limited by door stile.
      iv) Pulls shall be 45 degree offset type.
      v) Use decorative through-bolt mounting equal to McKinney type H.

12) Door Closers
   a) Approved Manufacturers and Catalog Series

Item Description	Approved Manufacturers and Catalog Series	
Door Closers	**Norton**	7500 Series
	Yale	4400 Series
	LCN	4000 Series

   b) Application Notes
      i) Closers shall have non-ferrous covers, heavy duty forged steel arms, and separate valves for adjusting backcheck, delayed action, closing and latching cycles and adjustable spring to provide sizes 1 through 6.
      ii) Provide non-sized closers, adjustable to meet maximum opening force requirements of ADA.
      iii) Do not specify closers with Delayed Action (DA) feature.
      iv) Provide drop plates, brackets, or adapters for arms as required to suit details.
      v) Verify degree of opening for every door leaf and include with submittals.
      vi) Mount closers on room side of corridor doors and inside of exterior doors. Where possible install closers on door for optimum aesthetics.

vii) Provide forged heavy duty parallel arms. Non-hold open types.

viii) For parallel arm applications, closer arms to include a cushioned stop feature, equal to the Closer Plus Spring feature by Norton.

ix) Provide forged heavy duty parallel arms. Non-hold open types.

x) Avoid the use of positive stop arm types.

c) Installation Notes

i) Door closer installation shall conform to published manufacturer's installation instructions, and shall include proper adjustment to the following features :

(1) Closer arm properly indexed

(2) Spring power control adjustments appropriate to door size, application, and opening conditions

(3) Closing speed control valve

(4) Latch speed control valve

(5) Backcheck cushion control valve

13) Floor Closers

a) Approved Manufacturers and Catalog Series

Item Description	**Approved Manufacturers and Catalog Series**	
Floor Mounted Door Closers	**Rixson**	Heavy Duty Series Floor Closer

b) Application Notes

i) Consult factory catalog to determine product application.

ii) Doors weighing over 250 and over 3/6 wide: Use floor closer.

iii) Floor Closers to have separate and independent adjustable valves to control closing speed, latch speed, and backcheck.

iv) Provide a 185 Series Quickspotter Installation Kit, by RIXSON to assist floor closer installation.

v) Provide sealed closer kit for applications where water contact may occur.

14) Low Energy Operators
   a) Approved Manufacturers and Catalog Series

Item Description	Approved Manufacturers and Catalog Series	
Low Energy Operators	**Sargent**	MP4000 Series
	Besam	PowerSwing Series
	Norton	6900 Series
	LCN	4630/4640 Series

   b) Application Notes
      i) Provide wall-mounted actuator switches by the same manufacturer as the operator. Provide weather-resistant types at exterior applications. Locate in accordance with ANSI A117.1.
      ii) Low energy door operators must satisfy all code requirements set forth in ANSI/BHMA standard A156.19 and meet UL10C standards for use on fire doors. Units must be door closer based, and function as a typical self closing door when the units are not activated. "Push and Go" operation is not acceptable as a manual mode of operation. Units must have adjustments for door closing force and backcheck, motor assist from 0 to 30 seconds, motor start up delay, vestibule interface delay, electric lock delay, and door hold open delay up to 30 seconds.
      iii) Automatic door operators to be adjusted to ANSI/BHMA standard A156.19 and checked for correct operation by AAADM certified personnel. Detailed inspection report to be provided certifying completion of Field Adjust / Inspection work. Contact Besam Service Department at 800-752-8638.
      iv) Provide handed units only.

15) Overhead Stops and Holders
   a) Application Notes
      i) Install overhead stops where conditions limit the use of wall stops and floor stops would be a tripping hazard.
      ii) Use special template closers to allow offset arms for surface applied stops.
      iii) Surface mounted type is preferred.

16) Protection Plates
   a) Application Notes
      i) Size: Kick plates 8” high, Mop plates 6” high, Armor plates 36” high.
      ii) Width: 2” less door width (LDW) at single doors when mounted on push side. 1” LDW at pairs and when mounted on pull side.
      iii) Material: Stainless steel 0.050” thick with countersunk holes, beveled four edges (B4E).

17) Wall and Floor Stops
   a) Application Notes
      i) All stops shall be cast. Wrought stops are not acceptable.
   b) Installation Notes
      i) Provide blocking in wall for wall stops in all wood and metal stud wall construction. Blocking shall cover across the entire stud cavity and be a minimum of 16” in height.

C. Base Metals
Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes.

D. Finishes
<u>Verify requirements for individual projects</u>

1. Standard: Comply with BHMA A156.18.
2. BHMA Designations: Comply with base material and finish requirements indicated by the following:
   a. BHMA 600 (USP): Primed for painting, over steel base metal.
   b. BHMA 626 (US26D): Satin chromium plated over nickel, over brass or bronze base metal.
   c. BHMA 628 (US28): Satin aluminum, clear anodized, over aluminum base metal.
   d. BHMA 630 (US32D): Satin stainless steel, over stainless-steel base metal.

e. BHMA 652 (US26D): Satin chromium plated over nickel, over steel base metal.

f. BHMA 689 (ALUM): Aluminum painted, over any base metal.

E. Finish Schedule

HARDWARE ITEM	FINISH AND BASE MATERIAL
1. Exterior Butt Hinges:	BHMA 626 (US26D)
2. Interior Butt Hinges:	BHMA 652 (US26D)
3. Continuous Gear Hinges:	BHMA 628 (US28)
4. Pivot Sets:	BHMA 626 (US26D)
5. Flush Bolts:	BHMA 626 (US26D)
6. Locks and Latches:	BHMA 626 (US26D)
7. Cylinders:	BHMA 626 (US26D)
8. Exit Devices	BHMA 630 (US32D)
9. Removable Mullions	BHMA 600 (USP)
10. Push / Pulls:	BHMA 630 (US32D)
11. Coordinators:	BHMA 600 (USP)
12. Closers:	BHMA 689 (ALUM)
13. Automatic Operators:	BHMA 689 (ALUM)
14. Protection Plates:	BHMA 630 (US32D)
15. Overhead Stops / Holders:	BHMA 626 (US26D)
16. Wall and Floor Stops:	BHMA 626 (US26D)
17. Magnetic Holders:	BHMA 628 (US28)
18. Thresholds and Gasketing:	BHMA 628 (US28)
19. Key Cabinet:	BHMA 600 (USP)
20. Electric Strikes:	BHMA 630 (US32D)
21. Magnetic Locks:	BHMA 630 (US32D)

F. Quality Control

1) When directed by the owner and/or architect, the project architect shall contact the manufacturers' representatives to arrange and hold a jobsite meeting to instruct the installing contractors' personnel on the proper installation of their respective products. Seminar shall be attended by installers of hardware (including electrical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedule, templates and physical product samples.

2) When directed by the owner and/or architect, the manufacturer's representative(s) for the life safety and security products shall inspect and approve the installation of the

products they represent. Any identified installation or product issues shall be directed to the attention of the Architect for the purpose of generating a punch list.

End of Section