

SECTION 08 12 13 – HOLLOW METAL FRAMES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Hollow metal frames.
- B. Coordination of frames for gypsum board and flush wood doors.

1.02 RELATED WORK

- A. Section 08 14 16 – Flush Wood Doors
- B. Section 08 71 00 – Door Hardware
- C. Section 09 91 00 – Paint (field-painting of hollow metal frames)

1.03 QUALITY ASSURANCE

- A. Conform to the requirements of Underwriters' Laboratory for fire-rated doors and frames. See Schedule.

1.04 SUBMITTALS

- A. Submit four (4) copies of shop drawings and product data to the Architect.
- B. Indicate frame and door elevations, internal reinforcement, and closure method.

1.05 COORDINATION

- A. Field-verify all opening dimensions and installation conditions prior to ordering steel doors and frames.
- B. Coordinate door/frame preparation with the approved finish hardware schedule, wall types, door types, and alternates.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Steelcraft or approved equal.

2.02 HOLLOW METAL FRAMES

- A. Interior frames: 16 gauge cold-rolled steel.
- B. All frames shall be welded.
- C. Furnish with pressure-applied rubber silencers.
- D. All frames shall have 9 gauge steel hinge reinforcement plates and 14 gauge strike reinforcement plates.

- E. Furnish a minimum of six (6) anchors per opening. All frames shall have an integral or welded-on sill anchor. Anchors at drywall partitions shall be “z” clips welded to the frames.
- F. All frames shall be thoroughly cleaned, phosphatized, and finished as standard with one (1) coat of baked-on, rust-inhibiting gray prime coat.

PART 3 - EXECUTION

3.01 STORAGE

- A. Stack and store frames properly to protect material from harmful elements and damage while stored at the job site.
- B. Upon delivery, touch up damaged areas of the finish with a rust-inhibitive metal primer.

3.02 INSTALLATION

- A. Carefully coordinate installation of doors and hardware.

3.03 ADJUSTMENT AND CLEANING

- A. Remove dirt and excess sealants from exposed surfaces.
- B. Touch up marred or abraded surfaces to match the original finish.
- C. Adjust doors for smooth and balanced movement.

END OF SECTION

SECTION 08 14 16 – FLUSH WOOD DOORSPART 1 - GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Solid core, flush wood doors.
- B. Related sections:
 - 1. Section 06 10 00 – Rough Carpentry
 - 2. Section 08 12 13 – Hollow Metal Frames
 - 3. Section 08 71 00 – Door Hardware
 - 4. Section 08 81 00 – Glass Glazing

1.02 REFERENCES

- A. WDMA – Window and Door Manufacturers Association: IS 1-A 1997 Industry Standard for Architectural Flush Wood Doors.
- B. NFPA-80 Standards for Fire Doors, latest edition.
- C. NFPA-105 Recommended Practice for Installation for Smoke-Control Door Assemblies, latest edition.
- D. AWI – Quality Standards of Architectural Woodwork Institute.

1.03 SUBMITTALS

- A. Shop drawings and product data: Indicate door elevations, general construction, stile and rail enforcement, core composition jointing methods, hardware and louver locations, internal blocking for hardware attachment, and locations of cutouts for glass. Indicate thickness of veneers.
- B. Samples: Submit samples of wood veneer and factory finishing in accordance with WDMA Quality Standards I.S. 1-A, latest edition.
- C. Certification: Submit certification that doors and frames comply with specified fire ratings and UL listings.

1.04 QUALITY ASSURANCE

- A. Provide wood doors which are identical in materials and construction to units tested in door and frame assemblies with local code standards and which are labeled and listed for ratings indicated by ITS – Warnock Hersey, UL, or other testing and inspection agency acceptable to authorities having jurisdiction.
- B. WDMA: Window and Door Manufacturers Association Quality Standards for grade of door, core, construction, finish, and other requirements.

1.05 DELIVERY, STORAGE, AND PROTECTION

- A. Protect doors during transit, storage, and handling to prevent damage, soiling, moisture damage, or deterioration. Store doors flat on a level surface in a dry, well ventilated building.
- B. Doors should not be subject to abnormal heat, extreme dryness, or relative humidity less than 30% or more than 60%.

1.06 WARRANTY

- A. Wood doors shall be warranted for one (1) year from the date of substantial completion.

1.07 COORDINATION

- A. Take special care to coordinate door preparation with the requirements of the approved finish hardware schedule.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Marshfield.
- B. Or equal.

2.02 MATERIALS

- A. AWI Premium Grade, book matched veneers.
- B. Seven-ply construction using three-ply hardwood faces.
- C. Thickness: 1¾".
- D. Stiles: 1½" hardwood to match face veneer over structural composite lumber glued to core.
- E. Rails: Mill option hardwood or structural composite lumber. Top and bottom: 2½" before trim or factory fit.
- F. Facing: Wood veneer cut and species as specified shall conform to WDMA.
- G. Hardware: Pre-routed for butts, machined for lockset. Coordinate with the requirements of the approved finish hardware schedule.
- H. Wood veneer:
 - 1. Door face veneers shall meet quality standards conforming to WDMA "A" grade or "AA" grade for transparent or semi-transparent finish. Minimum face veneer thickness: 1/50" at 12% moisture content after finish sanding.
 - 2. Face material: Nevamar W8294 Crown Cherry.
- I. Adhesives: Face-to-core adhesives shall be Type II as appropriate for the location in the building. Adhesives must be classified Type II per WDMA's specification for "Adhesive Bond Test Method." Type II adhesives shall be used for doors in interior applications.

J. Core:

1. Non-rated and 20-minute doors: Solid particleboard.

2.03 ACCESSORIES

- A. Vision panels shall be metal beveled frames with fire and impact glass as required. Refer to Section 08 81 00 – Glass Glazing.

2.04 FABRICATION

- A. Fabricate wood doors in accordance with the requirements of WDMA's Quality Standards.
- B. Fabricate fire-rated doors in accordance with the requirements of ITS – Warnock Hersey or Underwriters' Laboratories with metal label on each door.
- C. Provide doors with minimum ¼" thick edge strips of wood species to match face veneers except as required for fire rating.
- D. Make cutouts and provide stops for glass and louvers. Install metal door louvers. Seal cutouts prior to installation of moldings.
 1. For full light doors, provide cutout from flush wood door, with vertical grain direction.
- E. Bevel lock and hinge edges of single acting doors 3° or ⅛" in 2". Radius the strike edge of double-acting swinging doors as required by the hinge manufacturer.
- F. Prepare doors to receive hardware. Refer to Section 08 71 00 – Door Hardware.
 1. Pre-fit and bevel to net opening size less approximately ¼" in width on single swing doors, 3/16" in width for paired doors. Provide ¼" clearance above the finished floor unless otherwise indicated on the drawings. Provide ⅛" clearance at the top of the door.
 2. Slightly ease vertical edges.
 3. Machine-cut relief for hinges and machining for handsets. Coordinate with the requirements of Sections 08 12 13 and 08 71 00.
- G. On fire-rated pairs of doors greater than 20 minutes, supply overlapping astragals or metal edge sets only as required by NFPA or by the door manufacturer's fire door authorities. If an astragal is required, to comply with fire-rated labeling requirements for pairs of doors, provide the door manufacturer's standard tested astragal.

2.05 FACTORY FINISHING

- A. Comply with the referenced WDMA specification for factory finishing for premium grade factory finish systems.
- B. Pre-finish wood doors at the factory.
- C. Face material: Nevamar W8294 Crown Cherry.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine installed door frames before hanging doors.
- B. Verify that frames comply with the indicated requirements for type, size, location, and swing characteristics and that they have been installed with plumb jambs and level heads.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Handle doors in accordance with the recommendations of WDMA's "Care and Installation at Job Site."
- B. Condition doors to average temperature and humidity in the area of installation for not less than forty-eight (48) hours prior to installation. Store doors per the recommendations of WDMA's "Care and Installation at Job Site."
- C. Install doors in a neat and workmanlike manner, free from hammer or tool marks and open joints or slivers.
- D. Install doors in accordance with the manufacturer's instructions.
- E. Set doors plumb, level, square, and true. Install work after the building humidity is at an acceptable level.
- F. Remove and replace all doors that are warped, twisted, bowed, or otherwise damaged. Do not install doors that cannot be properly fitted to their frames.
- G. Adjust doors and hardware and other moving or operating parts to function smoothly and correctly.
- H. Ensure that smoke gaskets are in place before the installation of doors.
- I. Prepare doors to receive finish hardware in accordance with AWI requirements. Coordinate door preparation with the requirements of the finish hardware schedule.
- J. Conform to AWI requirements for fit tolerances.
 - 1. Maximum diagonal distortion: 1/8" measured with a straight edge, corner to corner.

3.03 ADJUSTING AND CLEANING

- A. Adjust for smooth and balanced door movement.
- B. Clean all doors, glass, and hardware. Remove all markings.
- C. Replace doors damaged during installation.

END OF SECTION

SECTION 08 41 13 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. New aluminum storefront entrances, clear anodized finish.
- B. New aluminum framing, clear anodized finish.

1.02 RELATED WORK

- A. Section 07 92 00 – Joint Sealants
- B. Section 08 71 00 – Door Hardware
- C. Section 08 81 00 – Glass Glazing

1.03 WARRANTY

- A. Provide a five-year manufacturer's warranty on glazing and one-year warranty on parts, material, and installation. Warranty shall include coverage of sealed glass units from seal failure, interpane dusting or misting, and replacement of same.

1.04 SUBMITTALS

- A. Shop drawings:
 - 1. Showing construction of all parts, metal thicknesses, and installation and erection details including connections, anchorage, and fastening and sealing methods.
 - 2. Sections of typical members, dimensioned elevations, frame sizes, spacing of anchors and fasteners, and details of accessories.
 - 3. The Contractor is responsible for all field-dimension coordination.
 - 4. Coordinate preparation of frames with the approved finish hardware schedule.

PART 2 - PRODUCTS

2.01 ACCEPTABLE PRODUCTS

- A. Kawneer Trifab VG 450.

2.02 ALUMINUM FRAMING

- A. Kawneer Trifab VG 450.
- B. 1¾" x 4½" at interior.
- C. Sub-sill is required.
- D. Glazing: ¼" clear, tempered glass.
- E. Aluminum infill panels: ¼" to match the existing finish.

- F. Finish: Clear anodized.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Assure that window openings conform to the dimensions and tolerances shown on the plans. All dimensions shall be field-verified prior to fabrication.
- B. Check that surfaces to contact windows are free of debris.
- C. Do not proceed with installation until unsatisfactory conditions are corrected.

3.02 ASSEMBLY

- A. Window wall frames shall be accurately joined at corners with unexposed screws in extruded splines, which are an integral part of all horizontal members. All joints shall be sufficiently caulked to achieve a watertight seal.
- B. Where aluminum comes in contact with masonry, concrete, mortar, plaster, or dissimilar material, apply a heavy coat of bituminous paint.

3.03 ERECTION

- A. All openings shall be prepared plumb and square by others and the window wall frames shall be of sufficient size to provide the required clearances at head, jambs, and sill. Installation and glazing shall be performed by experienced technicians. All units shall be securely anchored and ready for operation. Sub-sill is to be set in two (2) heavy beads of sealant and an interior bead between sub-sill back-let and sill or floor. Sub-sill ends shall be filled with sealant to insure no water penetration to corners.
- B. Furnish and apply sealant that is compatible with window systems to provide a completely watertight installation at all joints. Wipe off excess sealant and leave exposed surfaces and joints clean, uniform, and smooth.

3.04 CLEANING

- A. Final cleaning of window frames and glass shall be performed by the General Contractor.

END OF SECTION

SECTION 08 71 00 – DOOR HARDWAREPART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Hardware for all new interior doors.
2. Refer to finish hardware and Door and Frame Schedule

B. Related sections:

1. Section 08 12 13– Hollow Metal Frames
2. Section 08 14 16 – Flush Wood Doors

1.02 SUBMITTALS

A. Submit four (4) copies of the following:

1. A schedule indicating the type, manufacturer's name, manufacturer's number, location, and finish of each item required.
2. Photographic/graphic cut sheets for every item specified.
 - a. Bind cut sheets in a neat booklet.
 - b. Bind product cut sheets in the order the products are listed in Part 2 of this section.
 - c. Clearly mark appropriate options or highlight options for the Architect's selection.

B. Submittals failing to meet the above requirements will be rejected until all requirements are met.

C. In addition to the requirements above, the Contractor may be requested to provide additional technical literature, samples, drawings, and/or performance data to assist in the evaluation of proposed equals.

D. Secure the approval of the Owner and the Architect before ordering hardware or templates.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Provide storage and protection for finish hardware when delivered and install it when ready.

1.04 QUALITY ASSURANCE

A. Meet the requirements and recommendations of the applicable portions of the standards listed.

1. American Society for Testing and Materials (ASTM).

2. Commercial Standards (CS).
 3. 2012 International Building Code (IBC).
 4. Federal Specifications (FS).
 5. Americans with Disabilities Act, Accessibility Guidelines (ADAAG).
- B. The supplier of finish hardware shall strictly comply with the following requirements:
1. The supplier shall have been in the full-time business of selling finish hardware for a minimum of ten (10) consecutive years.
 2. The supplier shall employ a full-time certified architectural hardware consultant (AHC).
 3. The supplier shall be a member in good standing with DHI.
 4. The supplier shall be a factory-authorized dealer of the approved hardware.
 5. The supplier shall be approved by the Owner and the Architect.

1.05 GENERAL REQUIREMENTS

- A. Properly tag, index, and file keys as directed and deliver all keys at completion of the work.
- B. Fire underwriters' labels: Provide only hardware having the same UL label and fire exposure time rating as doors and frames to which they are applied. This provision supersedes any hardware schedule provisions to the contrary.
- C. Any revisions of the hardware schedule to conform to the details shall be provided. Items not specifically mentioned but necessary for the completion of the work shall be furnished. In those places where specific hardware is not mentioned, it shall be the Contractor's responsibility to furnish hardware of a quality equal to that of other openings used for the same general purpose. The cost of any such hardware shall be included in the original bid.

1.06 KEYING

- A. Key as directed by the Owner.
- B. Furnish four (4) master keys and/or four (4) grand master keys. Furnish two (2) keys per lock otherwise.

1.07 COORDINATION

- A. Strictly coordinate the machining of wood doors and the preparation of hollow metal doors/frames with the approved finish hardware schedule.

1.08 FINISHES

- A. Generally shall be dull chrome (26D) unless otherwise noted in the Schedule.

PART 2 - PRODUCTS

2.01 DOOR HARDWARE

- A. Hinges: Equal to square-edged, full mortise McKinney, TA 2714, 4½" x 4½".
- B. Locksets:
 - 1. At interior doors: Corbin-Russwin ML2051 x NSM with cylinder.
 - 2. Function as per the hardware schedule.
 - 3. Lever type design (ADA-compliant equal to Corbin-Russwin NSM lever).
 - 4. Complete with strike.
- C. Closers: Equal to Corbin Russwin DC 8000.
- D. Stops and holders: Rixson, Heavy Duty, 9 Series.
- E. Doorstops (floor-mounted):
 - 1. Manufacturer: Rockwood.
 - 2. Type: Equal to Rockwood #440 Series. Provide complete with #449 riser if required for stable installation.
- F. Doorstops (wall-mounted):
 - 1. Manufacturer: Rockwood.
 - 2. Type: Equal to Rockwood #406 Series, stainless steel.
- G. Access: HES Electric Strike – 8500, 852K HES Smart Pac III, 2005 M3 Securitron, Power Supply, BPS-24-1, HID Reader, Prox Pro II 5455, 752F 929, Charcoal.
- H. Silencers are required at all hollow metal frames. Rockwood 608.

2.02 SCHEDULE

- A. The hardware schedule is as follows:

MK – McKinney
PE – Pemko
RO – Rockwood
RU – Corbin Russwin
SU – Securitron

Set: 1.0
Doors: 256, 275, 282
Description: CORR – ALUM

1	Continuous Hinge	CFMXXHD1 SERXX	CL	PE
1	Access Control Exit Device (RNE1)	ED5200AN N9605 24AD	630	RU
1	Door Closer	DC8210 A4	689	RU
1	Door Stop	409/446 [as req]	US32D	RO

1	Gasketing	by door/frame mfg		
1	ElectroLynx Harness	QC-C1500 [PS to hinge]		MK
1	ElectroLynx Harness	QC-CXXP [lock/exit to hinge]		MK
1	Power Supply	BPS-Series [volt & amp as req]		SU

Notes: Presenting a valid credential retracts the latchbolt to allow free entry; door relocks upon closing. REX (request to exit) switch in device rail allows for free exit at all times. Entry by key override at all times.
Door is fail secure.
Confirm that door stile width will accept panic device.

Set: 2.0

Doors: 280A, 280B
Description: TENANT

1	Continuous Hinge	CFMXXHD1 SERXX	CL	PE
1	Electrified Mortise Lock	ML20608 x NAC-SEC NSM	626	RU
1	Door Closer	DC8200/8210	689	RU
1	Door Stop	409/446 [as req]	US32D	RO
1	Gasketing	by door/frame mfg		
1	ElectroLynx Harness	QC-C1500 [PS to hinge]		MK
1	ElectroLynx Harness	QC-CXXP [lock/exit to hinge]		MK
1	Power Supply	BPS-Series [volt & amp as req]		SU

Notes: Presenting a valid credential releases the lever to allow free entry; door relocks upon closing. REX (request to exit) switch in the lock allows for free exit at all times. Entry by key override at all times.
Door is fail secure.
Confirm that door stile width will accept lockset.

Set: 3.0

Doors: 278
Description: STOR

3	Hinge	TA2714 4½" x 4½"	US26D	MK
1	Mortise Lock (storeroom)	ML2057 NSM	626	RU
1	Door Stop	409/446 [as req]	US32D	RO
3	Silencer	608		RO

Set: 4.0

Doors: 253, 271, 279, 283
Description: OFFICE

3	Hinge	TA2714 4½" x 4½"	US26D	MK
1	Mortise Lock (office)	ML2051 NSM	626	RU
1	Door Stop	409/446 [as req]	US32D	RO
1	Gasketing	S773D		PE

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Provide storage and protection for finish hardware when delivered and install when ready.
- B. Fit all hardware accurately, apply securely, and adjust properly. Leave in good working order, free of defects.
- C. Properly tag, index, and file keys as directed and deliver all keys at completion of the work.
- D. Apply hardware in accordance with the manufacturer's instructions; fit accurately, apply securely, and adjust carefully. Use care not to injure work when applying hardware. When necessary, remove and replace doors so they may have all surfaces painted.

3.02 APPLICATION OF HARDWARE

- A. Receive, store, and be responsible for all finish hardware. Properly tag, index, and file all keys in the key cabinet or as directed. Apply hardware in accordance with the manufacturer's instructions; fit accurately, apply securely, and adjust carefully. Use care not to injure work when applying hardware. When necessary, remove and replace doors so they may have their tops and bottoms painted or stained.
- B. The location of hardware in connection with wood doors and metal door bucks shall be as follows unless otherwise shown on the drawings:
 - 1. Center door knobs and levers 38" above the finished floor.
 - 2. Center door pulls 40" above the finished floor.
 - 3. Center push plates 45" above the finished floor.
 - 4. Center cylinder dead bolt locks 52" above the finished floor.
 - 5. Center single push bars 48" above the finished floor.
 - 6. Locate the upper edge of top hinges 5" below the head of the frame.
 - 7. Locate the lower edge of bottom hinges 10" above the finished floor.
 - 8. Space center hinges equal distance between top and bottom hinges.

END OF SECTION

SECTION 08 81 00 – GLASS GLAZING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Glass and glazing.

1.02 RELATED WORK

- A. Section 08 14 16 – Flush Wood Doors
- B. Section 08 41 13 – Aluminum-Framed Entrances and Storefronts

1.03 CODES AND STANDARDS

- A. Glass and glazing procedures must comply with the requirements of the 2012 International Building Code (IBC).
- B. Furnish/install tempered glass in all locations.

1.04 WARRANTY

- A. Provide a one-year warranty on parts, material, and installation.

PART 2 - PRODUCTS

2.01 GLAZING SCHEDULE

- A. All single glazing shall be ¼" thick, tempered, clear.
- B. All interior glazing shall be clear.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Assure that openings conform to the dimensions and tolerances shown on the plans. All dimensions shall be field-verified prior to fabrication.
- B. Check that surfaces to contact windows are free of debris.
- C. Do not proceed with installation until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Furnish and apply sealant that is compatible with window systems to provide a completely watertight installation at all joints. Wipe off excess sealant and leave exposed surfaces and joints clean, uniform, and smooth.

3.03 CLEANING

- A. Final cleaning of all glass shall be performed by the General Contractor.

END OF SECTION