

DIVISION

08

DOORS AND WINDOWS

SECTION 08111 - STANDARD STEEL DOORS AND FRAMES

1.1 GENERAL:

- A. Submittals: With manufacturer's standard details and specifications for steel doors and frames, submit shop drawings showing application to project, as required.
- B. Standards: In addition to other specified requirements, comply with Steel Door Institute "Recommended Specifications for Standard Steel Doors and Frames" ANSI/SDI-100.

1.2 PRODUCTS:

- A. Manufacturer: One of the following:
 - 1. Amweld Building Products, Inc.
 - 2. Ceco Corp.
 - 3. Copco Door Co.
 - 4. Curries Company.
 - 5. Deansteel Manufacturing Co.
 - 6. Fenestra Corp.
 - 7. Kewanee Corp.
 - 8. Mesker Door Co.
 - 9. Pioneer Industries.
 - 10. Premier Products, Inc. (Formerly Dittco).
 - 11. Republic Builders Products.
 - 12. Steelcraft Manufacturing Co.
- B. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A 569 and ASTM A 568.
- C. Cold-Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A 366 and ASTM A 568.
- D. Galvanized Steel Sheets: **EXTERIOR DOORS/FRAMES:** Zinc-coated carbon steel sheets of commercial quality, complying with ASTM A 526, or drawing quality, ASTM A 642, hot dipped galvanized in accordance with ASTM A 525, with A60 or G60 coating designation, mill phosphatized.
- E. Supports and Anchors: Fabricate of not less than 18-gage sheet steel; galvanized where used with galvanized frames.
- F. Shop Applied Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints complying with ANSI A224.1.
- G. Fire-Rated Assemblies: Provide units that display appropriate UL or FM labels for fire-rating indicated.
- H. Fabrication: Fabricate units to be rigid, neat in appearance, and free from defects, warp or buckle. Weld exposed joints continuously, grind, dress, and make smooth, flush and invisible.
- I. Prepare steel doors and frames to receive mortised and concealed finish hardware, including cutouts, reinforcing, drilling and tapping, complying with ANSI A 115 "Specifications for Door

and Frame Preparation for Hardware."

1. Reinforce units to receive surface-applied finish hardware to be field applied.
 2. Locate finish hardware as indicated or, if not indicated, per DHI "Recommended Locations for Builder's Hardware."
- J. For fire-rated doors, provide tightly fitted, spring loaded, automatic closing louvers, with operable blades retained by fusible links. Rating label same as door units.
- K. Doors: SDI grades and models specified below or as indicated on drawings or schedules:
1. Interior Doors: ANSI/SDI-100, Grade II, heavy-duty, Model 3 or 4, minimum 18-gage cold-rolled steel faces.
 2. Exterior Doors: ANSI/SDI-100, Grade III, extra heavy-duty, Model 4, minimum 16-gage galvanized steel faces in compliance with SDI 112.
- L. Frames: Comply with ANSI/SDI-100, of the types and styles indicated, for materials quality, metal gages, and construction details.
1. Provide standard hollow metal frames for doors, transoms, sidelights, borrowed lights, and other openings as indicated.
 - a. Fabricate frames with mitered or coped corners, welded construction for exterior applications and knocked-down for field assembly at interior applications.
 2. Prepare frames to receive 2 silencers on strike jambs of single-door frames and on heads of double-door frames.
 3. Provide 26-gage steel plaster guards or mortar boxes, welded to frame, at back of hardware cutouts where installed in concrete, masonry or plaster openings.
 4. Protect inside faces of frames in plaster or masonry wall construction which are placed with anti-freeze additives, using high-build fibered asphalt emulsion coating.
 5. Form exterior frames from 16-gage galvanized steel.

1.3 EXECUTION:

- A. Installation: Install hollow-metal units in accordance with manufacturer's instructions and final shop drawings (if any). Fit doors to frames and floors with clearances specified in ANSI/SDI-100.
1. Install frames in accordance with SDI 105.
 2. Install fire-rated units in accordance with NFPA Std. No. 80.
 3. Finish hardware is specified in another Division 8 section.

END OF SECTION 08111

SECTION 08211 - FLUSH WOOD DOORS

1.1 GENERAL

- A. Submittals: In addition to product data, submit the following:
 - 1. Shop drawings indicating location and size of each door, elevation of each kind of door, details of construction, location and extent of hardware blocking, fire ratings, requirements for veneer matching and factory finishing and other pertinent data. For factory-machined doors, indicate dimensions and locations of cutouts for locksets and other cutouts adjacent to light and louver openings.
 - 2. Samples of actual materials in small sections for each face material and finish.
- B. Quality Standard: Comply with the following standard:
 - 1. NWWDA Quality Standard: I.S.1-A, "Architectural Wood Flush Doors," of the National Wood Window and Door Association.
 - 2. AWI Quality Standard: "Architectural Woodwork Quality Standards" of the Architectural Woodwork Institute.
- C. Fire-Rated Wood Doors: Provide wood doors labeled and listed by UL, Warnock Hersey, or another testing and inspection agency acceptable to authorities having jurisdiction.

1.2 PRODUCTS

- A. Manufacturers: Subject to compliance with requirements, provide doors by one of the following:
 - 1. Eggers Industries, Architectural Door Division.
 - 2. Fenestra Corporation.
 - 3. IPIK Door Co., Inc.
 - 4. Mohawk Flush Doors, Inc.
- B. Interior Solid Core Doors for Opaque Finish: As follows:
 - 1. Faces: White Ash, plain sliced.
 - 2. Grade: Premium.
 - 3. Construction: 5 plies.
 - 4. Core: Particleboard core.
 - 5. Bonding: Stiles and rails bonded to core, then entire unit abrasive planed before veneering.
- C. Interior Fire-Rated Solid Core Doors: As follows:
 - 1. Faces and Grade: Provide faces and grade to match non-fire-rated doors in same area of building, unless otherwise indicated.
 - 2. Edge Construction: Provide manufacturer's standard laminated-edge construction for improved screw-holding capability and split resistance.
 - 3. Pairs: Furnish formed-steel edges and astragals for pairs of fire-rated doors, unless otherwise indicated.
 - 4. Pairs: Provide fire-rated pairs with fire-retardant stiles that are labeled and listed for kinds of applications indicated without formed-steel edges and astragals.
- D. Veneer Matching: Provide doors with the following veneer matching:

1. Book matching.
- E. Pairs and Sets: Provide pair matching and set matching.
- F. Fabricate flush wood doors to comply with following requirements:
1. In sizes indicated for job-site fitting.
 2. Factory machine doors for hardware that is not surface applied.
 3. Openings: Cut and trim openings through doors to comply with applicable requirements of referenced standards for kind(s) of door(s) required.
 - a. Light Openings: Trim openings with moldings of material and profile indicated.
- G. Shop-seal faces and edges of doors for transparent finish with stain (if required), other required pretreatments, and first coat of finish as specified in Division 9 Section "Painting."

1.3 EXECUTION

- A. Install wood doors to comply with manufacturer's instructions and referenced quality standard and as indicated.
1. Install fire-rated doors in corresponding fire-rated frames according to requirements of NFPA 80.
- B. Align and fit doors in frames with uniform clearances and bevels. Machine doors for hardware. Seal cut surfaces after fitting and machining.

END OF SECTION 08211

SECTION 08330 – COILING DOORS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. All of the Contract Documents, including General and Supplementary Conditions, and Division 1 General Requirements, apply to the work of this Section

1.02 SUMMARY

A. The work of this Section includes overhead-coiling security grilles.

B. Related Sections: Other specification sections which directly relate to the work of this Section include, but are not limited to, the following:

1. Section 08710 - Finish Hardware; key cylinders for locks.

2. Section 16100 - Electrical; wiring.

1.03 SUBMITTALS

A. Product Data: Submit manufacturers product data and installation instructions for each type of security grille. Include both published data and any specific data prepared for this project.

B. Shop Drawings: Submit shop drawing for approval prior to fabrication. Include detailed plans, elevations, details of framing members, required clearances, anchors, and accessories. Include relationship with adjacent materials.

1.04. QUALITY ASSURANCE

A. Manufacturer: Coiling door shall be manufactured by a firm with a minimum of five years experience in the fabrication and installation of security grilles. Manufacturers proposed for use, which are not named in these specifications, shall submit evidence of ability to meet performance and fabrication requirements specified, and include a list of five projects of similar design and complexity completed within the past five years.

B. Installer: Installation of coiling door shall be performed by the authorized representative of the manufacturer.

C. Single-Source Responsibility: Provide coiling door, guides, motors, and related primary components from one manufacturer for each type of coiling door. Provide secondary components from source acceptable to manufacturer of primary components.

D. Pre-Installation Conference: Schedule and convene a pre-installation conference just prior to commencement of field operations, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials and products in labeled protective packages. Store and handle in strict compliance with manufacturers instructions and recommendations. Protect from damage from weather, excessive temperatures and construction operations.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

- A. Overhead Door Corporation
- B. Raynor Rolling Doors
- C. McKeon Rolling Steel Door Company

2.02 SECURITY GRILLES

A. Trade Reference: 620 Series Heavy-Duty Rolling Service Door by Overhead Door Corporation.

B. Curtain: Flat profile type F-265 – 18 gauge aluminum. Interlocking roll-formed slats. Endlocks shall be attached to each end of alternate slats to prevent lateral movement. Bottom bar shall be weatherstripped, extruded aluminum.

C. Finish: Aluminum: Mill finish. Clear anodized finish.

D. Guides: Roll-formed, steel shapes. Guides shall be weatherstripped with a vinyl weatherseal at each jamb, on the exterior curtain side

E. Brackets: Stainless steel to support the counterbalance, curtain, and hood.

F. Counterbalance: Adjustable Helical torsion spring type. Counterbalance shall be housed in a steel tube or pipe barrel, supporting the curtain with deflection limited to 0.03 per foot of span. Counterbalance shall be adjustable by means of an adjusting tension wheel.

G. Hood: 22 gauge Aluminum hood with intermediate supports as required. Hood shall be supplied with an internal hood baffle weatherseal.

H. Manual Operation: Manual chain hoist.

I. Electric Motor Operation: Provide UL listed electric operator, size as recommended by manufacturer to move door in either direction at not less than 2/3 foot nor more than 1 foot per second.

1. Sensing Edge Protection:

2. Operator Controls: Push-button and key operated control stations with open, close, and stop buttons for surface mounting, for interior location.

3. Emergency Egress Device: Interior flush mounted handle mechanism to automatically open rolling door part way to permit passage even if power is not available.

J. Locking: Cylinder lock for electric operation with interlock switch.

K. Framing: Guides face-of-wall mounted to adjacent construction.

PART 3 - EXECUTION

3.01 PREPARATION

A. Take field dimension and examine conditions of substrates, supports, and other conditions under which this work is to be performed. Do not proceed with work until unsatisfactory conditions are corrected.

3.02 INSTALLATION

A. Strictly comply with manufacturers installation instructions and recommendations. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance. B. Instruct Owners personnel in proper operating procedures and maintenance schedule.

3.03 ADJUSTING AND CLEANING

A. Test rolling door for proper operation and adjust as necessary to provide proper operation without binding or distortion.

B. Touch-up damaged coatings and finishes and repair minor damage. Clean exposed surfaces using non-abrasive materials and methods recommended by manufacturer of material or product being cleaned.

END OF SECTION 08330

SECTION 08710 - DOOR HARDWARE

1.1 GENERAL

- A. Submit samples of hardware items, showing each required finish from each manufacturer (for acceptance of color and texture only).
- B. Submit final hardware schedule organized by "hardware sets," to indicate specifically the product to be furnished for each item required on each door.
 - 1. Furnish templates to each fabricator of doors and frames as required for hardware preparation.
- C. For fire-rated openings provide hardware tested and listed by UL or FM (NFPA Standard 80). On panic exit devices provide UL or FM label indicating "Fire Exit Hardware."

1.2 PRODUCTS

- A. Number Designations: Numbers indicating hardware items are ANSI/BHMA standard number designations.
- B. Manufacturers: Subject to compliance with requirements, provide products by manufacturers for various products listed below. An asterisk (*) following manufacturer's name designates manufacturer whose products are indicated in Hardware Schedule. Such products are listed in the schedule by specific reference to manufacturer's catalog numbers. Except as otherwise indicated, products of equivalent quality, design, and function by other listed manufacturers may be used, subject to approval of Architect.
Hardware Allowance: Contractor shall allow \$250.00 per door leaf for materials only.
 - 1. Butts and Hinges: Bommer, Cal Royal, Hager*, McKinney, H. Soss, Stanley.
 - 2. Cylinders and Locks: Arrow, Best, Corbin & Russwin, Falcon, Sargent, Schlage, Yale*.
 - 3. Bolts: Builders Brass, Glynn-Johnson, Hager, Ives*, Quality, Stanley.
 - 4. Push/Pull Units: Brookline, Corbin & Russwin, Hager*, Hiawatha, Ives, Triangle Brass.
 - 5. Overhead Closers: Arrow, Corbin & Russwin, Dorma, LCN, International Door Closers, Monarch, Norton, Rixon-Firemark, Sargent, Yale*.
 - 6. Door Control Devices: Baldwin, Brookline, Builders Brass, Corbin & Russwin, Glynn-Johnson, Hager, Ives*, Quality, Triangle Brass.
 - 7. Sliding, Sliding Pocket, and Bifold Door Hardware: Grant*, Henderson, L. E. Johnson, Stanley.
 - 8. Door Stripping and Seals: Hager, National Guard*, Pemko, Reese, Sealeze, Ultra, Zero.
 - 9. Thresholds: Hager, National Guard*, Pemko, Reese, Sealeze, Zero.
 - 10. Auxillary Locks and Deadbolts: Lore*, Yale, Schlage.
 - 11. Door Pulls for Bi-Fold and pocket Doors: Epco*, Ives*, Tremco.
- C. Finish and base material designations are indicated in accordance with ANSI BHMA A156.18 or the nearest traditional U.S. commercial finish.
 - 1. Where base material and quality of finish are not otherwise indicated, provide at least the commercially recognized quality specified in ANSI/BHMA A156 series standards applicable to each particular type of hardware.

- D. Hinges and Pivots: Provide full-mortise butt, size, weight, and quantity in accordance with requirements established for door size, weight, and frequency of use.
1. Pins: Stainless steel, except steel pins with steel hinges; nonremovable for exterior and public interior exposure; nonrising for nonsecurity exposure; flat button with matching plugs.
 2. Ball-Bearing: Swaged, inner leaf beveled, square corners.
 3. Plain-Bearing: Swaged, inner leaf beveled, rounded corners; except provide ball-bearing for doors equipped with closers.
- E. Locks, Latches, and Bolts: Provide new masterkey system with properly sized key control system.
1. Strikes: Wrought box strikes with extended lip for latch bolts, except open strike plates may be used in wood frames. Provide dust-proof strikes for foot bolts.
- F. Equip exit devices with dogging devices where door has closer, except when door is fire-rated.
- G. Locks: Equip locks with 6-pin tumbler cylinders.
1. Bored: Standard Duty grade 2 cylindrical with standard cores.
- H. Flush Bolts: Minimum of 1/2-inch-diameter brass, bronze, or stainless steel rods with minimum 12-inch-long rod.
- I. Push/Pull Units: Manufacturer's standard type scheduled, through-bolted for matched pairs.
- J. Overhead Closers: Where parallel-arm closers are indicated, provide units one size larger than recommended for standard-arm units.
- K. Floor Closers: Provide recessed plates to receive insert of resilient, stone, or terrazzo floor finish.
- L. Combination Door Closers and Holders: Units designed to release and automatically close doors under fire conditions with integral electromagnetic holder mechanisms and UL listed fire detectors complying with UL 228.
- M. Holders, Stops, and Bumpers: Provide grey rubber exposed resilient parts.
1. Finish exposed metal to match hardware, except finish floor plates to match finish of thresholds.
 2. Size and mount units indicated or, if not indicated, to comply with manufacturer's recommendations for the exposure condition. Reinforce the substrate as recommended.
- N. Silencers: Provide silencers in metal door frames, unless not permitted for fire rating, or weatherstripping is provided; 3 per single-door frame, 4 per double-door frame.
- O. Coordinators: Provide device for pairs of doors with closers and astragal on active leaf or automatic flush bolts on inactive leaf.
- P. Miscellaneous Door Hardware: Provide plates, trim, letter box, viewers, knockers, bells, and similar units as indicated.
- Q. Edge Trim: Fabricate units 1/16 inch to 1/2 inch smaller than actual door dimension. Install with

self-tapping screws.

1. Provide .050-inch-thick (18 gage) stainless steel with beveled edges and No. 4 polish for kick plates, armor plates, and edge protection stripping (regardless of finish or other hardware).
- R. Armor, Kick, and Mop Plates: Fabricate protection plates not more than 1-1/2 inches less than door width on stop side and not more than 1/2 inch less than door width on pull side, x the height indicated.
1. Material: Stainless steel, 0.050 inch (U.S. 18 gage).
 2. Material: Brass/bronze, 0.062 inch (U.S. 16 gage).
 3. Material: Clear acrylic plastic, 1/8 inch thick.
- S. Sliding Door Hardware Sets: Provide manufacturer's standard hardware for interior sliding doors that are not furnished as a "package" complete with hardware.
- T. Bifold Door Hardware Sets: Provide manufacturer's standard hardware for interior bifold doors that are not furnished as a "package" complete with hardware.
- U. Weatherstripping: Provide type, size, and profile indicated, continuous at head and jamb edges of each exterior door opening. Provide noncorrosive fasteners.
1. Sponge Neoprene conforming to MIL R 6130, Class II (closed cell).
 2. Expanded Neoprene: Cellular rubber conforming to ASTM D 1056, Type 2 (closed cell), Class B (low swell, oil resistant), Grade 2 (compression-deflection of 3 - 9 psi), and self-extinguishing.
 3. Solid Neoprene conforming to MIL R 6855, Class II, Grade 40.
 4. Flexible vinyl hollow bulb or loop insert.
 5. Brush pile insert of polypropylene or nylon woven pile and aluminum strip backing, complying with AAMA 701.2.
- V. Thresholds: Extruded aluminum of type, design, and profile indicated, complete with replaceable resilient vinyl wiper-type insert and noncorrosive fasteners.

1.3 EXECUTION

- A. Hardware Mounting Locations: As recommended by the Door and Hardware Institute, unless indicated otherwise.
- B. Install each hardware item to comply with manufacturer's instructions and recommendations.
- C. Set thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant. Remove excess sealant and clean adjacent surfaces.
- D. Hardware Adjustment: Return to Project one month after Owner's occupancy, and adjust hardware to proper operation and function. Instruct Owner's personnel in proper maintenance and adjustment.
- E. Hardware Schedule: Provide hardware for each door as in the following list of hardware sets:

END OF SECTION 08710

