

**SECTION 08112 - METAL DOORS AND FRAMES****PART 1 GENERAL****A. RELATED DOCUMENTS**

1. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
2. Section 06100, Rough Carpentry
3. Section 06200, Finish Carpentry
4. Section 08710, Hardware
5. Section 09900, Painting

**B. SUMMARY**

1. This Section includes the following products manufactured in accordance with SDI Recommended Standards:
  - a. Exterior Doors and Frames: Insulated Steel Entry System including doors, sidelights and hollow metal frames.
  - b. Exterior entrance trim.
  - c. Interior Fire Rated Doors and Frames: Insulated Fire Rated Steel doors and hollow metal frames.

**C. SUBMITTALS**

1. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
2. Product data for each type of door and frame specified, including details of construction, materials, dimensions, hardware preparation, core, sound ratings, profiles, and finishes.
3. Label Construction Certification: For door assemblies required to be fire-rated and exceeding limitations of labeled assemblies, submit manufacturer's certification that each door and frame assembly has been constructed to conform to design, materials and construction equivalent to requirements for labeled construction.

**D. QUALITY ASSURANCE**

1. Warranty: Manufacturer's standard 25 year.
2. Fire-Rated Door Assemblies: Units that comply with NFPA 80, are identical to door and frame assemblies whose fire resistance characteristics have been determined per ASTM E 152 and which are labeled and listed by UL, Factory Mutual, Warnock Hersey, or other testing and inspecting organization acceptable to authorities having jurisdiction.

**E. DELIVERY, STORAGE, AND HANDLING**

1. Deliver doors and frames cardboard-wrapped or crated to provide protection during transit and job storage. Provide additional protection to prevent damage to finish of factory-finished doors and frames.
2. Inspect doors and frames upon delivery for damage. Minor damages may be repaired provided refinished items are equal in all respects to new work and acceptable to Architect; otherwise, remove and replace damaged items as directed.
3. Store doors and frames at building site under cover. Place units on minimum 4 inch high wood blocking. Avoid use of non-vented plastic or canvas shelters that could create a humidity chamber. If cardboard carton on door becomes wet, remove carton immediately. Provide 1/4 inch spaces between stacked doors to promote air circulation.

**PART 2 PRODUCTS**

## A. ACCEPTABLE MANUFACTURERS

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering insulated steel doors and frames which may be incorporated in the work include; but are not limited to, the following:
  - a. Brockway Smith (BROSCO)
  - b. Riverside Millwork (RIVCO)
2. Design Intent
  - a. Based on products supplied by BROSCO for the establishment of design intent only.
    - (1) Entry Doors:
    - (2) Sidelights:
    - (3) Exterior Wood Main Entrance Trim:
    - (4) Interior Doors:
      - (a) Therma-Tru, Steel Fire-Rated Doors: 45 min.
        1. Insulated 6 Panel: PS-510
        2. Insulated Flush: PS-500
  - b. Door units are to be prehung in adjustable "Split Steel" 45 fire rated frames, 20-minute fire rated wood frame, or standard wood frame system as indicated in Drawings, with hardware.

## B. MATERIALS

1. Steel thickness: 24 gauge face sheets on doors. 18 gauge steel frames with 14 gauge reinforcements.
2. Galvanization: Hot Dip.
3. Stiles/Rails: Steel unitized.
4. Core: Polyurethane.
5. R value: minimum 10.
6. Fire Rating: As indicated on Drawings.
7. Hinge Reinforcement: 20 ga.
8. Hinge Type: Fixed.
9. Primer: Standard white, factory applied.
10. Finish: Field painted.
11. Lockguard: Prep per schedule.
12. Weatherstripping: Manufacturer's standard compressible.

## C. DOOR STYLE

1. As indicated on the Drawings.

## D. FRAMES

1. Provide metal frames for fire rated doors, of types and styles in locations as shown on Drawings and schedules.
2. Weatherstripping: Manufacturer's standard compression weatherstripping system.
3. Thresholds: Provide sills in accordance with ADA requirements for accessibility throughout as indicated on the Drawings.
4. Door Silencers: At metal frames, except on weatherstripped frames, drill stops to receive and install 3 manufacturer's standard silencers on strike jambs.

## E. FABRICATION

1. Fabricate steel door and frame units to be rigid, neat in appearance and free from defects, warp or buckle. Wherever practicable, fit and assemble units in manufacturer's plant. Clearly identify work that

cannot be permanently factory-assembled before shipment, to assure proper assembly at project site. Comply with ANSI/SDI-100 requirements.

2. Clearances: Not more than 1/8 inch at jambs and heads except between non-fire-rated pairs of doors not more than 1/4 inch. Not more than 3/4 inch at bottom.
3. Tolerances: Comply with SDI 117 "Manufacturing Tolerances for Standard Steel Doors and Frames."
4. Shop Painting: Clean, treat, and paint exposed surfaces of steel door and frame units, including galvanized surfaces.
  - a. Clean steel surfaces of mill scale, rust, oil, grease, dirt, and other foreign materials before application of paint.
  - b. Apply shop coat of prime paint of even consistency to provide a uniformly finished surface ready to receive finish paint.

F. HARDWARE

1. Hinges: Provide manufacturer's standard hinges, brass finish, 1 1/2 pair per leaf.
2. Other Hardware: See hardware section.

**PART 3 EXECUTION**

A. INSTALLATION

1. General: Install standard doors, frames, and accessories in accordance with manufacturer's data, and as herein specified.
2. Placing Frames: Comply with provisions of SDI-105 "Recommended Erection Instructions for Steel Frames," unless otherwise indicated.
  - a. Install fire-rated frames in accordance with NFPA Standard No. 80.
3. Door Installation: Fit hollow metal doors accurately in frames, within clearances specified in ANSI/SDI-100.
  - a. Install fire-rated doors with clearances as specified in NFPA Standard No. 80.

B. ADJUST AND CLEAN

1. Prime Coat Touch-up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.
2. Final Adjustments: Check and readjust operating hardware items, leaving steel doors and frames undamaged and in complete and proper operating condition.

**END OF SECTION 08112**