

SECTION 081113

HOLLOW METAL DOORS AND FRAMES

PART 1 – GENERAL

1.1 STIPULATIONS

- A. The General Conditions, Drawings and any other attached Contract Documents form a part of this Section by reference thereto and shall have the same force and effect as if printed herewith in full. The Contractor shall be strictly accountable for the cognizance of carrying out the provisions thereof.

1.2 SCOPE OF WORK OUTLINE

- A. The work under this Section shall generally consist of, but not necessarily be limited to, providing all labor, material, devices and equipment required for installation of:
 - 1. Hollow Metal Door Frames
- B. All work under this section shall be in compliance with other trades and sections of this Specification.

1.3 REFERENCES/ACRONYMS

- A. The following referenced material shall apply to this specification and have the same force and effect as if printed in full herein. All reference material shall be the latest published edition, unless otherwise noted:

- 1. SDI = Steel Door Institute (latest edition)
- 2. ASTM = American Society for Testing and Materials (latest edition)
- 3. ANSI = American National Standards Institute
- 4. BHMA = Builders Hardware Manufacturers Association
- 5. DHI = Door Hardware Institute

SDI-105-91	Recommended Erection Instructions for Steel Frames.
SDI-100-1991	Recommended Specifications: Standard Steel Doors and Frames.
ASTM A 366	Specifications for Steel Sheet, Carbon, Cold Rolled, Commercial
ASTM B 117	Standard Practice for Operating Salt Spray Apparatus
ASTM D 1735	Standard Practice for Testing Water Resistance of Coatings Using Water Fog Apparatus
ANSI A 115	Specification for Door and Frame Preparation for Hardware
BHMA A156	Door Finish Hardware
BHMA A156.7	Template Hinge Dimensions

DHI-05 Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames

1.4 SUBMITTALS

- A. Make submissions in accordance with 'SCHEDULE OF MATERIAL SUBMITTALS', attached at end of the Specifications.
- B. No deviations, substitutions or changes of materials, to be incorporated into this project, shall be made after approval by the Government, except for written direction by and the approval of the manufacturer of a specific item and re-approval by the Government.
- C. The Government retains the right to require additional items not specifically denoted, to be submitted for approval and/or additional clarification.

1.5 QUALITY ASSURANCE

- A. All materials under this Section shall be factory certified, first run material. Seconds will not be permitted.
- B. Materials shall be compatible in every way, with all other components. Substitutions will not be permitted after approved descriptive data and/or shop drawings have been acted upon and distributed.
- C. Unless otherwise specified doors and frames, under this Section, shall be the product of a single manufacturer.
- D. Also see Removal of Non-Compliant Materials, this PART.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original unopened packaging and/or containers labeled with the manufacturer's name, brand name, model number, and installation instructions.
- B. Store and protect materials from damage and weather.
 - 1. Verify storage area with Using Agency so as not to interfere with daily or monthly operations.
 - 2. The Government shall accept absolutely no liability for any materials stored on site. It shall be the complete responsibility of the Contractor to provide whatever means necessary to properly secure any and all stored materials.
- C. Any materials damaged either during shipping or storage at the site shall be replaced at Contractor's expense.

1.7 TESTING

- A. The Government retains the right to test any and/or all of the materials required under this Section.
 - 1. Cost for such testing shall be paid for by the Government unless such testing confirms that any such material is not in compliance with the requirements of this Specification in which case the Contractor shall reimburse the Government such cost and shall pay for any retesting costs.
- B. Also see Removal of Non-Compliant Materials, this PART.

1.8 REMOVAL OF NON-COMPLIANT MATERIALS

- A. Any material found not to be in compliance with the requirements of this Section, through testing and/or other means, whether installed individually and/or as a part of a system or not, shall be immediately removed from the job site and replaced with compliant materials at no additional cost to the Contract.

PART 2 – PRODUCTS

DISCLAIMER:

Items specified by specific name of a manufacturer are only to establish a standard for operation, quality, characteristics, type, performance, etc. Equal products by other manufacturers will be considered for inclusion into this project provided they are submitted with sufficient supporting data/information which to base a decision for approval. In certain cases, which will be so noted, specified items **must** be used in order to be compatible with existing systems.

2.1 HOLLOW METAL DOOR FRAME

- A. Frames shall be 16 gauge, minimum, cold rolled steel knock-down type and of the size shown on the Drawings/Door and Frame Schedule.
- B. Corners of frame shall be mitered and provided with four locking tabs.
- C. Hinge and strike locations shall be mortised, receive additional 8 gauge steel plate reinforcing welded to frame and factory tapped for finish hardware screws.
- D. Top of frame shall be reinforced, if scheduled to receive a closer.
- E. Frames shall be pre-punched for 3 each silencers on strike side of opening
- F. Frame shall be provided with a sill anchor and a minimum of three anchors per side, which shall be of a type compatible with the construction of the wall rough opening.
- G. Frame shall be phosphatized and receive one coat of factory applied primer.

2.3 EXTERIOR HOLLOW-METAL DOORS (INSULATED)

- A. Doors shall be SDI Grade II, 18 gauge, minimum, full flush type, visible edge seam and of the size and thickness shown on the Drawings/Door and Frame Schedule.
- B. Doors shall be reinforced, stiffened and sound deadened with insulated polyurethane foam core completely filling the inside of the door and laminated to the inside face of the steel panels.
- C. Top and bottom of door shall have 14 gauge steel channels shop welded within door skin.
- D. Top of door shall be provided with additional 14 gauge reinforcing if scheduled to receive a closer.
- E. Top recess of exterior doors shall receive shop welded cap to prevent accumulation of water.

- F. Hinge and strike edges of door shall be beveled $\frac{1}{8}$ " in 2"; and have vertical mechanical interlocking seams.
- G. Door shall be prepared with cutouts, additional reinforcing, etc., as required to receive finish hardware.
- H. Door shall be phosphatized and receive one coat of factory applied primer.
- I. Thermal-Rated Doors: Provide doors fabricated with thermal-resistance value R-9, min.

2.4 GLAZING

- A. Glazing shall be clear laminated safety glass, meeting ASTM C 1172, fully tempered, and of the following composition:
- B. $\frac{1}{8}$ " glass, $\frac{1}{2}$ " air gap, $\frac{1}{8}$ " glass

2.5 SILENCERS

- A. Silencers shall be rubber force fit type. Adhesive applied silencers shall not be acceptable.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Rough opening for door assemblies shall be checked for plumb, square and level, prior to start of frame installation, to insure proper installation of door. Contractor shall be responsible for any required correction necessary.

3.2 FRAME INSTALLATION

- A. All frames shall be installed in compliance with the Manufacturer's recommendations and be plumb, square, rigid and true in all directions .
 - 1. Center frames in rough openings so that all contact surfaces are of a tight and even fit without forcing or distortion of components, secure to opening sub-frame sides with appropriate anchors and to the floor with sill anchors.
- B. Frame shall be completely caulked around perimeter.
- C. Install silencers of strike side of frame.
- D. Doors shall be adjusted, if required, to allow it to swing freely, and be aligned with frame when latched.

3.3 CLEANING/PRIMER TOUCH-UP

- A. Clean surfaces of door and frame of excess sealants and other foreign matter.

- B. Immediately after complete installation of the door and frame, sand smooth any rusted and/or damaged areas of the prime coat and repaint with like primer.

3.4 PROTECTION

- A. Contractor shall employ whatever means necessary to protect doors and hardware from damage by subsequent construction operations.

END OF SECTION