081113-H: METAL DOORS AND FRAMES (08110-H)

GENERAL

In general, follow the guidelines below when designing and specifying steel doors and frames. Unless specifically indicated otherwise, these guidelines are not intended to restrict or replace professional judgment.

STEEL DOORS AND FRAMES

1. Materials: Steel doors and frames; hot-rolled, pickled and oiled per ASTM A 569 and A 568; cold-rolled per ASTM A 366 and A 568.
   a. Steel for exterior doors and frames, including their anchors, and interior doors and frames indicated as galvanized: ASTM A653/A653M, commercial quality, G90 coating designation.

2. Steel Doors, General: Provide doors complying with material and construction requirements of ANSI/SDI-100 for the indicated Grades and Models:
   a. Level 3, Extra Heavy-Duty; 1-3/4” thick; min. 16 gage face sheets.
   b. Model 2, Seamless Construction
   c. Provide steel doors located in exterior walls (exposed to weather) with thermally insulating core. Doors and frames to be galvanized.
   d. Continuous vertical mechanical interlocking joints with visible edge seams and continuous bead of structural epoxy in internal vertical connection are not acceptable except at offsite locations.
   e. Provide doors with continuous vertical mechanical inter-locking joints at lock and hinge edges with edge seams butted and welded, filled, and ground smooth in high traffic areas. Not required at offsite locations.
   f. Provide high frequency reinforced hinge pockets at edge of door at all hinge locations.

3. Steel Frames, Interior & Exterior, General: Provide welded frames complying with material and construction requirements of ANSI/SDI-111A, and as follows:
   a. Metal Thickness: Min. 14 gage.
   b. Provide labeled fire rated door frames at all new interior frames within inpatient and medical center facilities.

4. Fire-rated Assemblies: Provide units that are labeled and listed for rating indicated, by Underwriters’ Laboratories or Warnock-Hersey.

5. Doors used primarily by patients and the public, for example waiting rooms, toilet rooms, exam rooms, should be a minimum of 3′-2” clear to accommodate oversized wheelchairs. At offsite outpatient facilities, offset hinges on a 3′-0” wide door may be considered.

6. Knock down frames shall not be provided at any opening except under extenuating circumstances approved by UMHHHC Design Manager.

FABRICATION

1. 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.

2. Cut-Outs: Regardless of cut-out locations shown on Drawings, provide flush panel at the bottom 12” of each door, in compliance with State of Michigan barrier-free design requirements.

3. 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”.
   a. Prepare frames to receive 3 silencers on strike jambs of single-swing frames and on heads of double-swing frames.
   b. Provide 26-gage steel mortar boxes, welded to frame, at back of hardware cutouts where installed in concrete, masonry or plaster openings.

4. Locate finish hardware per DHI "Recommended Locations for Builder’s Hardware".


5. Shop paint exposed surfaces of doors and frame units, including galvanized surfaces, using mfr’s standard baked-on rust inhibitive primer.
6. Provide continuous reinforcement in doors and frames.
7. At rated doors with recessed exit devices, coordinate door and exit device to maintain required rating.

SUSTAINABLE DESIGN REQUIREMENTS

1. Steel doors and frames shall contain a minimum of 26% total recycled content. Total recycled content shall be based on post-consumer + 1/2 pre-consumer combined recycled content. Weight and cost factors are not required for projects not being submitted for LEED certification.

   Acceptable products which meet this criteria include (but not limited to) the following:
   - Curries Co., 747 Model
   - Pioneer Industries/Division of CORE Industries –C-Series
   - Steelcraft/Division of Ingersoll-Rand-L Series (specify LW for seamless full weld style)

   Provide material data for products not included in the list above for review and approval by the UMHHC Design Manager.

2. Steel doors shall contain a sound insulated core at locations which require acoustical privacy. Steel doors shall contain a STC rating to match the adjacent wall as close as possible. An STC rating of 35 minimum is required at such locations.