



# GUARDIAN SECURITY STRUCTURES

Delivering the Best  
High Security Doors - Safe Room Doors  
Blast Resistant Doors - Bullet Resistant Doors

## SECTION 08 34 53 SECURITY (BULLET RESISTANT) DOORS AND FRAMES (R-3)

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

Bullet Resisting (Ballistic) Door and Frame Components rated for Handgun protection Level (**select**) (1) (2) (3) in accordance with UL 752.

#### 1.2 RELATED SECTIONS (**Delete items not applicable to project**)

03 30 00 Cast-in-place Concrete.

03 40 00 Precast Concrete.

03 60 00 Grouting.

04 00 00 Masonry (including 04 05 16 and 04 00 20).

08 71 00 Door Hardware.

08 88 56 Ballistics-Resistant Glazing.

09 00 00 Finishes.

09 20 00 Plaster and Gypsum Board.

08 10 00 Doors and Frames.

09 90 00 Painting and Coating.

#### 1.3 REFERENCES (**Delete items not applicable to project**)

ASTM A 568/A 568M Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled.

ASTM A 653/A 653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

**(Specifier: Delete this reference if not applicable)** ASTM A 666/666M Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Bar.

ASTM A 924/A 924M Standard Specification for General Requirements for Sheet Steel, Metallic-Coated by the Hot-Dip Process.

ASTM A 1008/A 1008M, Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High Strength Low-Alloy, High Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable

ASTM A 1011/A 1011M, Specification for Steel, Sheet, and Strip, Hot-Rolled, Carbon, Structural, High Strength Low-Alloy and High Strength Low-Alloy with Improved Formability

ANSI/SDI A250.10 Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.

ANSI/SDI A250.11 Recommended Erection Instructions for Steel Frames.

HMMA 820-TN01 Grouting Hollow Metal Frames.

HMMA 840-TN01 Painting Hollow Metal Products.

HMMA 840 Installation and Storage of Hollow Metal Doors and Frames.

HMMA 841 Tolerances and Clearances for Commercial Hollow Metal Doors and Frames.

UL 752 Bullet-Resisting Equipment

#### 1.4 ASSEMBLY DESIGN and PERFORMANCE REQUIREMENTS

Bullet Resisting Doors and Frames shall have been evaluated, certified, or physically tested to meet ballistic performance levels in accordance with UL 752.

Where noted on the door schedule, doors, frames, and fire windows shall have been tested or otherwise evaluated by Underwriters Laboratories, Inc for the fire protection rating noted. Material shall be under a factory Follow-Up services Program of Underwriters Laboratories, Inc.

If any door or frame product specified by the Architect to be fire-rated cannot qualify for labeling because of design, hardware or any other reason, the Architect shall be so advised in the submittal documents. If hardware, glazing, or other options affect the fire-rating and are unknown at the time of submittal document preparation, the architect shall be advised prior to fabrication.

Bullet Resisting doors and frames shall incorporate recycled materials in at least 30% by weight.

**(Select one of the following three sentences and delete others):**

Bullet Resisting Doors and Frames shall be manufactured to meet Level 1 (Medium power handgun) having a 9 mm full copper jacket with lead core projectile.

Bullet Resisting Doors and Frames shall be manufactured to meet Level 2 (High power handgun) having a .375 Magnum jacketed lead soft point projectile.

Bullet Resisting Doors and Frames shall be manufactured to meet Level 3 (Super power handgun) having a .44 Magnum lead projectile.

### 1.5 SUBMITTALS

Unless mutually agreed due to small quantity, submit shop drawings showing profiles, product components, anchors, and accessories. Details deemed to be proprietary by the manufacturer may be identified as such.

Submit installation instructions and installation tolerances if other than as specified in ANSI/SDI A250.11 or HMMA 840.

Submit jobsite storage and protection requirements if other than as specified herein or in HMMA 861 or HMMA 840-TN01.

Provide certification of compliance with specified performance level.

### 1.6 QUALITY ASSURANCE

Installer shall have documented experience in installation of Bullet Resisting door assemblies.

Fabricate products to tolerances in compliance with HMMA 841.

### 1.7 DELIVERY, STORAGE, AND HANDLING

Store and handle products in accordance with HMMA 861, or HMMA 840-TN01 in manufacturer's original, unopened, undamaged containers.

Assure that protection for glazing (if applicable) is intact.

Protect materials from adverse temperature and humidity conditions.

Store doors and frames upright on wood planking, protected at corners to prevent damage.

Store accessories such as hinges, gaskets, and thresholds in a secure area protected from adverse temperature and humidity conditions.

Do not store in non-vented plastic or canvas shelters.

### 1.8 COORDINATION

Coordinate work with other directly affected trades, wall construction, and hardware installation.

Coordinate hardware locations with Sections 08 11 13 and 08 12 13.

Coordinate placing of material orders and fabrication schedules with construction progress.

### 1.9 WARRANTY

Submit written copy of manufacturer's standard warranty documents.

### 2.2 BULLET RESISTING DOORS

Provide "MegaSafe" Bullet Resisting doors not less than 1 3/4" nominal thickness as listed in the door schedule and indicated on the Drawings in accordance with this specification. Opening sizes, configurations and types shall be as indicated on the Drawings and/or door schedule.

Fabricate doors with face thickness as required by ballistic performance level.

Cold and hot rolled steel for door faces and reinforcing shall comply with ASTM A568, A1008 or A1011.

Hot-dip galvanized steel, where indicated on the door schedule, shall comply with ASTM A653 or A924. Coating thickness shall be **(select)** (Class A40) (Class A60).

**Specifier: select or delete this paragraph:** Stainless steel for door faces, where indicated on the door schedule, shall comply with ASTM A 666 and shall be **(select)** (type 304) (type 316). Finish shall be **(select)** (# 4 grained) (# 2B mill finish). Grain for # 4 finish shall run vertically.

Fabricate faces and edges as seamless doors from two sheets of steel with no visible seams on either face or vertical edges; continuously weld door edges, fill and finish smooth.

All doors shall be handed with either square or bevel edges (at manufacturer's option).

Vertical edges shall be reinforced with continuous channels at hinge and lock edges. Channel shall be formed from one member; spliced channels are not permitted.

Door internal construction shall be proprietary design to meet the requirements of the ballistic performance level specified. All reinforcing plates required to meet the ballistic performance level shall be internal; surface mounted plates shall not be allowed.

Hardware Preparation: Mortise, reinforce, drill, and tap to receive templated mortise hardware; reinforce for specified surface hardware in accordance with HMMA 861.

Where doors are scheduled to include vision panels, fabricate vision framing integrally welded on the **(select)** (attack side) (protected side) of the door and removable stop opposite with dimensions as required to suit glazing material.

Glazing material shall be rated at not less than the ballistic performance level of the door and shall be **(select)** (furnished and installed by glazier) (furnished by door manufacturer and installed by glazier) (furnished and installed by door manufacturer).

Where pairs of doors (double doors) are scheduled, the meeting edges shall be protected with two overlapping astragals fabricated of no less than 14 gage steel screw-applied to both the attack side and the protected side of doors. Astragals shall project no less than 5/8" from the door edge.

### 2.3 BULLET RESISTING FRAMES

Provide "MegaSafe" frames for Bullet Resisting doors listed in the door schedule and indicated on the Drawings in accordance with this specification. Opening sizes, profiles, anchors, and types shall be as indicated on the Drawings. Profiles may differ based on configurations required to achieve ballistic performance level specified.

Fabricate frames from material no less than as required by ballistic performance level.

Cold and hot rolled steel for frames and reinforcing shall comply with ASTM A568, A1008 or A1011.

Hot-dip galvanized steel for frames shall comply with ASTM A653 or A924. Coating thickness shall be **(select)** (Class A40) (Class A60)

**Specifier: select or delete this paragraph:** Stainless steel for frames, where indicated on the door schedule, shall comply with ASTM A 666 and shall be **(select)** (type 304) (type 316). Finish shall be **(select)** (# 4 grained) (# 2B mill finish). Grain for # 4 finish shall run vertically on head and jambs.

Fabricate frames with tightly fitting mitered corners and butted stops. Tabs and slots at heads and jambs may be incorporated for factory alignment of assembly.

Continuously weld frame faces at corners internally or externally, fill, and finish smooth. Provide temporary shipping spreader welded to jambs at bottom.

Mortise, reinforce, drill, and tap to receive templated mortise hardware and reinforce for specified surface hardware in accordance with HMMA 861. Hinge and strike reinforcements shall comply with requirements of HMMA 861.

Provide frames with one welded-in floor anchor per jamb and wall anchors to suit the substrate located in accordance with HMMA 861.

### 2.4 OPERATING CLEARANCES

Doors shall be undersized from frame opening sizes at head, jamb, and threshold in accordance with HMMA-841.

### 2.5 HARDWARE LOCATIONS

Unless otherwise specified, hinges and locks shall be located in accordance with HMMA-861.

### 2.6 BULLET RESISTING WINDOW FRAMES (BORROWED LIGHTS)

Where shown or scheduled, provide "MegaSafe" frames for window frames (borrowed lights) fabricated in accordance with Section 2.3. Profiles, height of stops, and rabbet size may differ based on configurations required to achieve the ballistic performance level of glazing material specified.

Glazing material shall be **(select)** (furnished and installed by glazier) (furnished by door manufacturer and installed by glazier).

**Specifier: delete the following paragraph only if unpainted stainless steel is required:**

### 2.7 PRIMER FINISH

Clean and treat exposed surfaces of doors and frames to ensure prime paint adhesion; apply one shop coat of "low VOC" gray rust-inhibitive primer meeting acceptance criteria of ANSI A250.10.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

Before beginning installation contractor shall verify that substrate conditions are acceptable for assuring ballistic protection specified.

Select fasteners of adequate type, number, and quality to perform intended functions.

**Specifier: select this sentence only if stainless steel is required:**

Remove protective wrappings only after construction is sufficiently completed so that doors and frames will not be scratched or damaged.

### **3.2 INSTALLATION**

Install frames plumb, straight, and true, rigidly secured in place and properly braced; comply with ANSI/SDI A250.11, and HMMA-841.

Grout fill frames in new masonry in accordance with ANSI/SDI A250.11, and HMMA 820-TN01.

Secure any bolted connections to adjacent construction using bolts suitable for the substrate.

Install accessories, doors, and hardware in accordance with manufacturers' templates and instructions.

**Specifier: delete the following two sentences only if unpainted stainless steel is required:**

Touch-up exposed surfaces, scratches or bare edges with a rust inhibitive Direct to Metal primer.

Prepare surfaces for field painting as recommended by door and frame manufacturer and as specified in Section 09 90 00.

### **3.3 PROTECTION**

Protect installed products and finished surfaces from damage during construction.

**Specifier: select this sentence only if stainless steel is required:**

Remove protective wrappings only after construction is sufficiently completed so that doors and frames will not be scratched or damaged.

### **3.4 FINAL ADJUSTMENTS**

After construction work has been completed in the area, clean and adjust hinges, locks, and closers to assure proper operation prior to turn-over to Owner.