

This section includes AMBICO Bullet Resistant Steel Doors and Frames which meet the UL752 "Standard for Bullet-Resisting Equipment". This section relies on both the Canadian Steel Door Manufacturers Association (CSDMA.org) industry standard, as well as on the Hollow Metal Manufacturers Association (NAAMM.org) industry standard for steel doors. This section includes proprietary, descriptive and performance type specifications. Edit to avoid conflicting requirements.

Part 1 General

1.1 SECTION INCLUDES

This article includes a summary of the content of this section which will not be included in other sections. This article is NOT intended to be used as a trade or other form of jurisdictional content.

- .1 [Non-rated] [Fire-rated] Bullet-resistant pressed steel frames.
- .2 [Non-rated] [Fire-rated] Bullet-resistant pressed steel doors [and panels].

Bullet resistant glazing can not be supplied on a fire rated bullet resistant assembly.

- .3 Glazed lite bullet resistant frames
- .4 [Bullet-resistant glazing.]

1.2 RELATED SECTIONS

This article references other specification sections that inter-rely on this section. This listing should include those sections that describe subjects or products that affect this section directly.

- .1 Section [_____ - _____]: Masonry mortar fill of metal frames.
- .2 Section 07 92 00 - Joint Sealing: Caulking between doors and adjacent construction.
- .3 Section 08 71 10 - Door Hardware - General.
- .4 Section 09 91 15 - Painting: Field painting of [doors] [frames] [doors and frames].

1.3 REFERENCES

Edit this article after editing this section. Only list reference standards below that are included within the text of this section, when edited for a project specification. Delete references that do not apply to this project.

- .1 ASTM A653/A653M-06 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .2 Canadian Steel Door Manufacturers Association (CSDMA), Selection and Usage Guide for Steel Doors and Frames, 1990.
- .3 HMMA 802-92 - Manufacturing of Hollow Metal Doors and Frames.
- .4 HMMA 840-99 - Installation and Storage of Hollow Metal Doors and Frames.
- .5 HMMA 841-07 - Tolerances and Clearance for Commercial Hollow Metal Doors and Frames.

- .6 NFPA 80-07 - Standard for Fire Doors and Other Opening Protectives.
- .7 ULC 752-05 - Standard for Bullet Resisting Equipment.

1.4 PERFORMANCE REQUIREMENTS

Include this article if all doors should meet the same ballistic requirement; otherwise, specify individual performance for door types in Part 2 or in a schedule. AMBICO doors can be manufactured to meet the bullet resistant requirement of handguns as well as high powered rifles.

- .1 Ballistic Resistance: Conform to UL 752, Level [1] [8] [].

1.5 REGULATORY REQUIREMENTS

Include the following article only if fire rated doors are specified. AMBICO can supply steel doors with 45 or 90 minute fire rating label.

- .1 Installed Door and Frame Assembly: Conform to [NFPA 80] [UL 10C] [] for fire rated class [as scheduled.] [as indicated.].

1.6 SUBMITTALS

- .1 Section [01 33 00]: Submission procedures.
- .2 Product Data: Provide product data on door construction and [].
- .3 Shop Drawings: Indicate door and frame elevations, internal reinforcement, anchor types, closure methods, [finishes] location of cut-outs for hardware, and cut-outs for [glazing] [louvres].
- .4 Samples: Submit manufacturer's door finish samples, as well as manufacturer's frame corner sample.
- .5 Test Data: Submit independent test data from a recognized licensed laboratory indicating compliance with ballistic performance requirements.
- .6 Installation Instructions: Submit manufacturer's installation instructions.

1.7 QUALITY ASSURANCE.

- .1 Perform Work to requirements of [CSDMA (Canadian Steel Door Manufacturers Association)] [HMMA (Hollow Metal Manufacturers Association)].
- .2 Manufacturer: Minimum 5 years documented experience manufacturing security door assemblies.

1.8 DELIVERY, STORAGE AND PROTECTION

- .1 Section [01 61 00]: Transport, handle, store, and protect products.
- .2 Comply with HMMA 840.
- .3 Weld minimum two temporary jamb spreaders per frame prior to shipment.

- .4 Remove doors and frames from wrappings or coverings upon receipt on site and inspect for damage.
- .5 Store in vertical position, spaced with blocking to permit air circulation between components.
- .6 Store materials out of water and covered to protect from damage.
- .7 Clean and touch up scratches or disfigurement caused by shipping or handling with zinc-rich primer.

1.9 WARRANTY

- .1 Manufacturer's Limited Warranty: Five (5) years from date of supply, covering material and workmanship.

Part 2 Products

2.1 MANUFACTURERS

List the manufacturers acceptable for this project. Edit the subsequent descriptive specifications of Part 2, to identify project requirements and to eliminate any conflict with specified manufacturer's products.

- .1 AMBICO Limited
 1120 Cummings Avenue
 Ottawa, Ontario, Canada K1J 7R8

Toll Free Phone	888-423-2224
Phone	613-746-4663
Toll Free Fax	800-465-8561
Fax	613-746-4721

- .2 Other Acceptable Manufacturers:
 - .1 [_____].
 - .2 [_____].

.3 Substitutions: [Refer to Section 01 60 00.] [Not permitted.]

2.2 MATERIALS

- .1 Sheet Steel: Galvanized steel to ASTM A653/A653M, Z275.

[OR]

- .2 Stainless Steel: to ASTM A480 Type [304] [316]
- .3 Reinforcement [Channel]: To CSA G40.20/G40.21, coating designation to ASTM A653/A653M, [ZF75] ([A25]).

2.3 ACCESSORIES

AMBICO steel bullet resistant doors and frames are prepared for heavy weight builders hardware to be supplied by Section # 08 71 10. All other accessories specified in this section shall be supplied by the door and frame supplier.

- .1 Hinges: Heavy weight butt type by section # 08 71 10
- .2 Glazing Stops: Formed galvanized steel channel, [butted] [mitred] corners; prepared for countersink style [tamperproof] screws.
- .3 Glass: Type as tested to achieve ballistic ratings.
- .4 Primer: Rust inhibitive zinc chromate.
- .5 Astragal: To be supplied loose ready for field assembly by others
- .6 [Removable] Mullion: To be provided at [paired] [multiple leaf] openings, where occasional access is required. Mullion to comply with the bullet resistant rating of the entire assembly.

2.4 FABRICATION

- .1 Manufacture doors and frames to Level [1] [8] [] bullet resistance rating in accordance with UL 752.
- .2 Steel Doors:
 - .1 Sheet steel faces, thickness, design, and core suitable to achieve specified ballistic performance.
 - .2 Laminated core construction, longitudinal edges [mechanically inter-locked] [welded, filled and sanded] with [no] visible edge seams.
 - .3 Top and Bottom Channels: Inverted, recessed, welded steel channels.
 - .4 Astragals: Metal [Z] [T] shaped astragals for double doors.
 - .5 Weld hardware reinforcement plates in place.
 - .6 Fabrication Tolerances: To HMMA 841.
- .3 Steel Frames:
 - .1 Sheet steel, metal thickness and appropriate to maintain ballistic door ratings, mitred corners.
 - .2 Factory assemble and weld frames.
 - .3 Mullions for Double Doors: [Fixed] [Removable] type.
 - .4 Reinforce frames wider than 1200 mm (48 inches) with roll formed steel channels welded tightly into frame head, flush with top.

- .5 Provide three single silencers for single doors [and mullions of double doors] on strike side, and two single silencers on frame head at double doors without mullions.

- .4 Factory install glazing: shall be in conformance with bullet resistant rating of door and frame assembly.

- .5 Affix permanent metal nameplates to door and frame, indicating manufacturer's name, door tag, model number, and ballistic rating.

2.5 FINISHES

This article may be a simple statement of a finish or may require a more elaborate identification of expected finishes. Edit the following paragraphs for special finishes other than galvanized.

- .1 Factory Finish: Factory applied zinc chromate primer [to be applied to all exposed surfaces] [touch-up only, where product had been welded and ground smooth].
- [OR]**
- .2 Standard Stainless Steel Finish: [#2B Mill Finish] [#4 Satin] [#6 Matte] [#8 Mirror] [Colored] [Hairline].

Part 3 Execution

3.1 INSTALLATION

- .1 Install components to manufacturer's written instructions.
- .2 Install doors and frames to [CSDMA] [HMMA 840] standards.
- .3 Coordinate with [masonry] [gypsum board] [concrete] [_____] wall construction for anchor placement.
- .4 Set frames plumb, square, level and at correct elevation.
- .5 Allow for deflection to ensure that structural loads are not transmitted to frame.
- .6 Adjust operable parts for correct clearances and function.
- .7 Finish paint in accordance with Section 09 91 15.

3.2 ERECTION TOLERANCES

- .1 Section 01 73 00: Tolerances.

- .2 Installation tolerances of installed frame for squareness, alignment, twist and plumbness are to be no more than ± 1/16in (1.5mm) in compliance with HMMA 841.

3.3 FIELD QUALITY CONTROL

- .1 Provide qualified manufacturer's representative to instruct installers on the proper installation and adjustment of door assemblies.
- .2 Provide manufacturer's representative to inspect door installation, and test minimum ten (10) cycles of operation. Correct any deficient doors and frames.

3.4 SCHEDULE

Include this article to identify variations of products or installation requirements specified. If door and/or frame schedules are listed on drawings or on separate schedule sheets, do not repeat statements in this article.

- .1 Bullet Resistant Steel Door and Frame Schedule:

Tag	Room	Nominal Size	Thickness	Glazing	Fire Rating	Ballistic Level (UL 752)	Comments
D-1	100	750mm x 2100mm	44mm	A	NFR	1	Glazing to be factory pre-installed
D-2	101	3'0" x 7'0"	1 3/4"	D	FR	8	
<ul style="list-style-type: none"> • Glazing types: A = Half-lite, B = Full-lite, C = Narrow-lite D=Flush • Fire Label types: FR= Fire rated to 90 minutes, NFR= Non-fire rated 							

END OF SECTION