



Metal Magicians at Work....creating Doorways of Distinction for the Pathways of Tomorrow

Specification Sections noted are based on MasterSpec 2004/2010. It is intended as an "editable" proprietary specification, not necessarily following the individual paragraph numbering of any other source.

Specifier note: Include, add, or delete items marked "select" as applicable to this individual building. Items marked (other) allow the addition of relevant, specific requirements. Specifier notes or selections are for reference only and should be edited out of the finished specification, retaining only the pertinent selection.

SECTION 08 34 63 DETENTION DOORS AND FRAMES

PART 1 GENERAL

1.1 SECTION INCLUDES

Special Function Door and Frame Components for use in local detention facilities.

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).

05 12 00 Structural Steel.

08 71 63 Detention Door Hardware.

08 74 00 Access Control Hardware.

08 88 00 Special Function 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, 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.

ANSI/NAAMM HMMA 863 Detention Security Hollow Metal Doors and 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.

ANSI/NFPA 252 Standard Methods of Fire Tests of Door Assemblies.

ANSI/UL10B Fire Tests of Door Assemblies.

ANSI/UL10C Standard for Positive Pressure Fire Tests of Door Assemblies.



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1.4 DESIGN and PERFORMANCE REQUIREMENTS

Where noted on the door schedule, Hollow Metal Detention Doors and Frames shall have been evaluated, certified, or physically tested to meet static load, impact, and rack/twist performance of ANSI/NAAMM HMMA 863.

(Specifier: Delete the following sentence if not applicable) Where noted on the door schedule, Hollow Metal Detention Doors and Frames shall have been evaluated, certified, or physically tested to meet fire protection rating specified.

If any door or frame product cannot meet these requirements because of design, hardware or any other reason, the Architect shall be so advised in the submittal documents. If hardware, glazing, or other options are unknown at the time of submittal document preparation, the architect shall be advised prior to fabrication.

Hollow Metal Detention doors and frames shall incorporate recycled materials in at least 30% by weight.

1.5 SUBMITTALS

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 Hollow Metal Detention doors and frames, including the specialized hardware required.

Fabricate products to tolerances in compliance with HMMA 863.

1.7 DELIVERY, STORAGE, AND HANDLING

Store and handle products in accordance with HMMA 863, or HMMA 840-TN01 in manufacturer's original, unopened, undamaged containers.

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

Protect materials, including accessories, in a secure area protected from adverse temperature and humidity conditions.

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

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.

The Hollow Metal Detention door and frame manufacturer shall be provided with the final approved hardware schedule along with current templates for ALL hardware items prior to beginning any manufacturing.

Assure that the Hollow Metal Detention door and frame manufacturer is notified in writing of expected preparation (example: drilling and tapping) for all detention grade hardware.

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

Where glazing occurs, coordinate removable stop side, clearly indicated on shop drawings.

1.9 WARRANTY

Submit written copy of manufacturer's standard warranty documents.



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PART 2 PRODUCTS

2.1 MANUFACTURER

Hollow Metal Detention doors and frames shall be manufactured by:
MEGAMET INDUSTRIES, INC.
P.O. BOX 635 (3228 6th. Avenue North) BIRMINGHAM, AL 35201
WEBSITE: www.megametusa.com
PHONE: (205) 322-7700 TOLL FREE: (888) 322-7750
FAX: (205) 322-4600
Substitutions: Not permitted.

2.2 HOLLOW METAL DETENTION DOORS

Provide "MegaGard" Hollow Metal Detention doors not less than 2" 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 **(select)** (14 gage) (12 gage) face thickness. 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. Internal stiffeners shall be continuous (interrupted only in the areas of hardware, visions, or other such devices) formed steel sections spanning the full interior thickness between door faces. These stiffeners shall be as required by performance and shall be no less than 18 gage minimum thickness. Stiffeners shall be spaced so that the vertical interior webs are no more than 4 in. apart. Stiffeners shall be fastened to both face sheets by welds spaced a maximum of 3 in. on center. Spaces between stiffeners shall be filled with fiberglass or mineral rock wool batt-type material. Top and bottom of doors shall be closed flush either by inverted steel channels or by the addition of non-removable capping channels. Hardware Preparation: Mortise, reinforce, drill, and tap to receive templated mortise hardware using reinforcement thicknesses in accordance with HMMA 863. Reinforce only for specified surface hardware or hardware mounted to top/bottom channels using reinforcement thicknesses in accordance with HMMA 863. Where detention locks with mounting plates occur, prepare lock pockets in accordance with templates designed for surface mounted (not flush mounted) cover plates. Where doors are scheduled to include vision panels, fabricate vision framing integrally welded on the prisoner-accessible side of the door and removable angle or zee shaped stop on opposite side with dimensions as required to suit glazing material. Removable stops shall be welded at corners into 4-sided frame. Preparation for glazing detail shall be shown on shop drawings. Removable stops shall be temporarily attached with pan or button head screws of size and spacing to meet impact requirements. Glazier shall remove temporary screws and install glazing with detention grade screws. Glazing material shall be as required to meet impact requirements and shall be **(select)** (furnished and installed by glazier) (furnished by door manufacturer and installed by glazier) (furnished and installed by door manufacturer).



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2.3 HOLLOW METAL DETENTION FRAMES

Provide "MegaGard" Hollow Metal Detention frames as 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. Jamb or head profiles requiring unequal face frames shall be indicated on shop drawings.

Fabricate frames from **(select)** (14 gage) (12 gage) material.

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.

Continuously weld frame faces, rabbets, soffits, and stops 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 using reinforcement thicknesses in accordance with HMMA 863. Reinforce only for specified surface hardware using reinforcement thicknesses in accordance with HMMA 863. Where detention locks with mounting plates occur, prepare lock pockets in accordance with templates designed for surface mounted (not flush mounted) cover plates.

Provide frames with one welded-in floor anchor per jamb and wall anchors to suit the substrate located in accordance with HMMA 863.

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-863.

2.6 HOLLOW METAL DETENTION WINDOW FRAMES (BORROWED LIGHTS)

Where shown or scheduled, provide "MegaGard" detention 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 impact requirements of glazing material specified. Removable stops shall be angle or channel shaped with dimensions as required to suit glazing material. Preparation for glazing detail shall be shown on shop drawings. Removable stops shall be temporarily attached with pan or button head screws of size and spacing to meet impact requirements. Glazier shall remove temporary screws and install glazing with detention grade screws.

Glazing material shall be as required to meet impact requirements and shall be **(select)** (furnished and installed by glazier) (furnished by door manufacturer and installed by glazier) (furnished and installed by door manufacturer).

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.



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PART 3 EXECUTION

3.1 EXAMINATION

Before beginning installation contractor shall verify that substrate conditions are acceptable for supporting completed assemblies; adequately protect any areas of frames from grout penetration or for mounting screws where frames are fully grouted. Refer to HMMA 820-TN01.

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.

END OF SECTION