PART I GENERAL

1.01 SUMMARY:

A. Description: This section includes Steel Doors, Frames, Sidelights, Transom and Window Frames where shown on the drawings and as specified herein
B. Related work not included in this section:
   1. Builders Finish Hardware including Gaskets and Weather-stripping
   2. Glass and Glazing
   3. Sealant and Caulking at Joints

1.02 QUALITY ASSURANCE:

A. Applicable standards of the following as referenced herein:
   1. AAMA, American Architectural Manufacturers Association
   2. ANSI, American National Standards Institute
   3. ASTM, American Society for Testing and Materials
   4. ADA, Americans with Disabilities Act
   5. NFPA 80, National Fire Protection Association
   6. NAAMM / HMMA, National Association of Architectural Metals Manufacturers
   7. UL 10C, Standards for Positive Fire Tests of Door Assemblies
B. Manufacturer shall have been regularly engaged in manufacturing steel doors, frames and window assemblies for a period of ten years. Doors and frames shall be fabricated by a single manufacturer. The manufacturer must have an effective quality control system in place.
C. Provide current test reports to substantiate that all products have been tested to meet the following criteria
   1. Fire Labeled doors and frames, ASTM E2074, UBC 7.2, UL 10C
   2. Performance test, ANSI A250.4
   3. Wind Load, Deflection / ASTM E330, Air Infiltration / ASTM E283, Water Penetration / ASTM E331
D. Allowable Tolerances as stated in NAAMM / HMMA Technical Manual

1.03 SUBMITTALS: Submittal Drawings: Show door and frame elevations and sections. Show listing of opening descriptions including locations, gages, and anchors. Show location and details of all openings. Include test reports on the following: Cycle test, Air and Water Infiltration.

1.04 WARRANTY: All hollow metal work shall be warranted from defects in workmanship and quality for a period of one (1) year from shipment.

PART II PRODUCTS

2.01 DOORS:

A. The Steel Doors are based on Stiles Custom Metal, Inc. Model ***Alpha** and shall be of the types and sizes shown on the approved submittal drawings and shall be constructed in accordance with the specifications.
   **See Catalog DOORS Section, or www.stilesdoor.com for details*
B. Construction:
   1. Door Core: The door shall be stiffened by 22 gage min., continuous, vertical, formed steel sections spanning the full thickness of the interior space between door faces. Stiffeners spaced so that the vertical interior webs shall be no more than 6" apart. Spot welded maximum of 4" o.c. vertically. Spot welds shall be sanded smooth to eliminate spot weld marks as much as possible. Spaces between stiffeners shall be filled with fiberglass sound deadening material.
   2. Vertical Edges: Door face sheets shall be joined at center of vertical edges and continuously welded full height of the door with no visible seams on their faces or vertical edges. Welds shall be finished smooth. Single acting doors - beveled 1/8” in 2" profile. Double acting doors - rounded on 2-1/8" radius. All hardware furnished by the hardware contractor for single acting doors shall be designed for beveled edges as specified herein.

3. Integral Astragal: Where required astragals shall be formed as an integral part of the doors skin with corresponding recessed area formed into adjacent door. Surface mounted flat plate or Z shaped astragals shall not be accepted.
4. Door thickness shall be 1 ¾". Doors shall be neat in appearance and free from warpage or buckle. Edge bends shall be true and straight and of minimum radius for the gage of metal used.
5. Materials: Doors shall be made of commercial quality, cold-rolled steel per ASTM A1008 / A1008M.
    a. Interior doors: Face sheets shall be 0.042 in. (18 gage) min. thickness cold rolled steel.
    b. Exterior doors: Face sheets shall be 0.053 in. (16 gage) min. thickness with zinc coating A 60.
6. The top and bottom edges shall be closed with a continuous channel, 16 gage minimum, spot welded to both face sheets maximum 4" o.c. Top of exterior doors shall be fitted with an additional flush closing channel and sealed water-tight.
7. Door opening tag number shall be permanently engraved into the center hinge reinforcement using a programmable engraver. The engraving shall be deep enough to be read after the hinge reinforcement bar is painted. The use of paper stickers only is not acceptable.
8. Glass moldings and stops: Where specified, doors shall be provided with internal channel type, flush glass moldings, to secure glazing in accordance with glass sizes and thickness shown on approved submittal drawings. Molding channels minimum 18 gauge steel, securely spot welded, maximum 4"o.c., to the inside face of the door skin. Removable glass channel stops shall be minimum 18 gage, A60 galvanized steel, butted at corner joints, secured to the door with zinc plated #8 oval head, countersunk, sheet metal screws. Door lights that are cut out of the door after the door is built are not acceptable. Externally mounted lite kits that protrude from the door face are not acceptable.
9. Louvers: Louvers shall be sight proof, with [embossed, security type kick proof] or [V or Y type] blades, minimum 18 gage, secured to door with sheet metal screws. Louvers at exterior locations shall be A60 galvanized and be provided with Insect screens. Door skins at louver cutouts shall be reinforced with continuous channel reinforcement, full door thickness and perimeter, spot welded to door face 4" o.c.
10. Finish: After fabrication, all tool marks and surface imperfections shall be removed, and exposed faces of all welded joints shall be dressed smooth.

2.02 STEEL PANELS: Steel panels shall be made of the same material and construction and finished in the same way as specified for doors.

2.03 FRAMES:

A. Provisions of this section are applicable to door frames, transom lights, sidelights and window assemblies.
1. Materials: Frames shall be constructed of 16 gage, 0.053 in. (1.3mm) minimum thickness. Exterior frames shall have an A60 zinc coating.
2. Construction: Frames shall be welded units of the sizes and types shown on approved shop drawings. Knocked-down frames shall not be accepted. Jamb, header; mullion and sill profiles shall be in accordance with the frame schedule and as shown on the approved submittal drawings.
3. Mitered corner joints shall have all contact edges closed tight with faces mitered and stops butted. Faces and soffits shall be continuously welded. The use of gussets or splice plates shall not be acceptable. All other joints shall have faces continuously welded. Faces shall be finished smooth. Mineral fillers are not permitted.
4. Exterior windows: Window installer and glazer shall follow Stiles instructions to prevent air and water penetration.
5. Exterior door frames shall have *Seal-Tek integral weather-strip kerf provided.
   **See Catalog FRAMES Section, or www.stilesdoor.com for details*
6. When shipping limitations so dictate, frames for large openings shall be fabricated in sections designated for assembly in the field by installer. Field joints shall be made in accordance with approved submittal drawings and shall be field welded by installer.

2.04 FINISH HARDWARE: Doors and frames shall be mortised, reinforced, drilled and tapped at the factory for completely templated mortised hardware only, in accordance with the final approved hardware schedule and templates provided by the hardware supplier. Where surface mounted, anchor hinges, or non-template mortise hardware is to be applied, doors shall be reinforced, with all drilling and tapping done by others in the field. Reinforcement steel shall comply with NAAMM / HMMA 830 and 861.

2.05 FINISH: Doors and frames shall be treated to insure maximum paint adhesion and shall be painted on all accessible surfaces with one coat of a rust inhibitive, modified Alkyd, Zinc compound, gray primer that meets or exceeds all ANSI A250.10-98 performance criteria. Primer coat shall be fully cured prior to shipment. Red or brown colored primers shall not be permitted.

PART III EXECUTION

3.01 CLEARANCES AND TOLERANCES shall be in compliance with NAAMM / HMMA standards.

3.02 SITE STORAGE AND PROTECTION OF MATERIALS

A. Deliver and store materials to prevent damaging and marring finishes.
B. Protection: Protect metal surfaces from contact with lime, mortar, cement, acids, and other harmful surfaces and from careless handling, storage or machining.

3.03 INSTALLATION:

A. It shall be the responsibility of the installation contractor to perform the following:
B. Installation and tolerances shall meet the requirements of HMMA 840 and as further specified here in. Prior to installation, all frames must be checked and corrected for size, swing, square, alignment, twist and plumb.
C. Any grout or other bonding material shall promptly be cleaned off of frames or doors following installation. Hollow metal surfaces shall be kept free of grout, tar, or other bonding material or sealer.
D. Plaster guards and junction boxes are intended to protect hardware mortises and tapped mounting holes from masonry grout of 4" maximum slump consistency which is hand troweled in place. Grouting materials such as gypsum products which require air to dry (cure) shall not be used in any closed section, such as a mullion.
E. Hardware must be applied in accordance with hardware manufacturer's templates and instructions.
F. Primed or painted surfaces which have been scratched or otherwise marred during installation including field welding and/or cleaning shall be promptly finished smooth, cleaned, treated for maximum paint adhesion and touched up with a rust inhibitive primer.

End of Section