FIBERGLASS REINFORCED PLASTIC (FRP) DOORS AND FRP / STAINLESS STEEL DOOR FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section Includes The Following:
   1. Fiberglass Reinforced Plastic (FRP) Doors
   2. Molded Fiberglass and Stainless Steel Door Frames

1.2 RELATED SECTIONS

A. Related Sections Include The Following:

   1. Division 4 - Unit Masonry
   2. Division 6 – Rough Carpentry
   3. Division 8 - Finish Hardware
   4. Division 8 - Glazing

1.3 QUALITY ASSURANCE

A. Doors to be acceptable based on review of chemical constituents against appropriate USDA and FDA regulations, for incidental food contact, if applicable to this project.
B. Manufacturer Qualifications: A company specialized in the manufacture of fiberglass reinforced plastic (FRP) doors and frames as specified herein with a minimum of 35 years documented experience and with a record of successful in-service performance for the applications as required for this project.
C. Installer Qualifications: An experienced installer who has completed fiberglass door and frame installations similar in material, design, and extent to those indicated and whose work has resulted in construction with a record of successful in-service performance.
D. Source Limitations: Obtain fiberglass reinforced plastic doors and stainless steel frames through one source fabricated from a single manufacturer.
E. Source Limitations: Hardware and accessories for all FRP doors as specified in Section 08710 should be provided and installed by the fiberglass door and frame manufacturer.
F. Source Limitations: Glass for windows in doors shall be furnished and installed by door and frame manufacturer in accordance with related section, Division 8, Glazing.

1.4 SUBMITALS

A. Submit shop drawings and product data under provisions of Section 01300.
B. Indicate frame configuration, anchor types and spacing, location of cutouts for hardware, reinforcement and finish.
C. Indicate door elevations.
D. Submit manufacturer's product literature, fabrication descriptions and installation instructions under provision of Section 01300.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packing, Shipping, Handling and Unloading: Package door opening assemblies in manufacturer's standard containers.

B. Store door assemblies in manufacturer's standard containers, on end, to prevent damage to face, corners and edges.

1.6 WARRANTY

Manufacturer's Warranty: Weiland offers a limited lifetime warranty on molded fiberglass door panels against failure due to corrosion from the specified environment and delamination of the fiberglass exterior from the internal door collar. Refer to full warranty document for more details.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

Weiland, Inc., Norfolk, Nebraska. Telephone: (402) 454-2106. Fax: (402) 454-6508. Website: www.weilanddoors.com.

2.2 DOORS

Fiberglass door exterior to be built starting with 25 mils of premium white gel coat (custom colors available upon request) molded into a continuous layer of fiberglass that completely surrounds all sides of the interior structure of the door. The entire door is to be molded at once for truly seamless fiberglass. Fiberglass thickness (not including gel coat) to be at least 3/16" on the face of the door and 3/8" on the edge of the doors.

The internal door structure to consist of a composite lumber collar to provide perimeter strength and moisture-resistant backing for hinges and entry / exit hardware (SPF or balsa wood hinge and hardware backing not acceptable as it absorbs moisture and swells). The core of the door to be 2 lb / cu foot closed cell polyurethane foam (balsa wood and honeycomb cores are not acceptable).

2.3 RTM MOLDED FIBERGLASS DOOR FRAMES

The exterior of the molded fiberglass door frame is made up of 25 mils of premium white gel coat (custom colors available upon request) molded into a continuous layer of fiberglass and polyester resin that completely surrounds the frame core. Fiberglass thickness to be 1/4" thick on the face. The interior of the frame to be made up of closed-cell polyurethane foam with screw retention backing for hinges and hardware. Frame corners are to be miter cut and joined by Weiland using mechanical fasteners and advanced adhesives (which permanently seal the mitered corner). Hinges and strike plates to be

mortised into the frame using CNC machinery. Painted / pultruded fiberglass frames are not acceptable as they do not withstand repeated chemical wash down. Consult factory on a variety of installation and fastener options.

2.4 STANDARD STAINLESS STEEL DOOR FRAMES

A. Door frames to be manufactured from 16-gauge 304-4 stainless steel. Frames to be welded at corners. 316 stainless steel availableupon request.
B. Jamb Depth: 5-3/4" standard. Widths over/under 5-3/4" available upon request, refer to frame schedule for exact sizes.
C. Face Dimension: 2" standard. 4" headers available upon request.
D. Corner Miter: Head and Jamb members shall be standard 45-degree miter,providing a neatly mitered corner connection.

2.4 2-PART FRAMES

A. Fabricated specifically for insulated metal panel wall or other wrap-around installation.
B. Door frames to be manufactured from 16-gauge 304-4 stainless steel. Frames to be welded at corners.
C. Jamb Depth: 4", 5", and 6" standard. Depths up to 12" available upon request. Refer to frame schedule for exact sizes.
D. Face Dimension: 2" standard. Headers available in 2" only.
E. Corner Miter: Head and Jamb members shall be standard 45-degree miter,providing a neatly mitered corner connection.

2.5 METAL CLAD FRAMES

A. Fabricated specifically for insulated metal panel wall or other wrap-around installation.
B. Door frames to be clad with 304-4 stainless steel, white painted galvanized steel.
F. Jamb Depth: Up to 12" standard. Refer to frame schedule for exact sizes.
G. Face Dimension: 5 1/2" standard for stainless steel. 5-5/8" standard for white painted galvanized steel
H. Polyurethane foam core is standard for stainless steel and non-wood core (HDPE) is standard for white pained galvanized steel.

2.6 HARDWARE

A. See Section 08710.
B. Due to the special nature of the material in this section, all related hardware as specified must be furnished and mounted by the door and frame manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION CONDITIONS

A. Verification of Conditions
   1. Openings are correctly prepared to receive doors and frames.

2. Openings are correct size and depth in accordance with shop drawings or submittals.

B. Installer's Examination
   1. Have the installer examine conditions under which construction activities of this section are to be performed and submit a written report if conditions are unacceptable.
   2. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.

3.2 INSTALLATION

A. Install door-opening assemblies in accordance with shop drawings and manufacturer's installation instructions, using installation methods and materials specified in installation instructions.
B. Field alteration of doors or frames to accommodate field conditions is strictly prohibited.
C. Site tolerances: Maintain plumb and level tolerance specified in manufacturer's installation instructions.

3.3 ADJUSTING

A. Adjust doors in accordance with door manufacturer's maintenance instructions to swing open and shut without binding and to remain in place at any angle without being moved by gravitational influence.
B. Adjust door hardware to operate correctly in accordance with hardware manufacturer's maintenance instructions.

3.4 CLEANING

Clean surfaces of door opening assemblies and exposed door hardware in accordance with respective manufacturer's maintenance instructions.

3.5 PROTECTION OF INSTALLED PRODUCTS

Protect door opening assemblies and door hardware from damage by subsequent construction activities until final inspection.

END OF SECTION