HYDRAULIC SINGLE PANEL DOOR SPECIFICATIONS

DECEMBER 2017

PART 1: GENERAL

1.1 DESCRIPTION

A. General

1. Supply Hydraulic Single Panel Door complete from one manufacturer. Provide all labors, materials, tools, and equipment to furnish the Hydraulic Door complete as specified.

1.2 RELATED WORK BY OTHERS

A. Preparation of opening including jambs and header will be by the contractor. Any deviation of site conditions contrary to approved shop drawings must be called to the attention of the architect.

B. All header, blocking, support structures, and jambs as required.

C. Finishing all trim (paint or otherwise) and other materials adjoining door.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 – Administrative Requirements.

B. Product Data: Submit manufacturer's product data and rough-in diagrams.

C. Shop Drawings: Submit shop drawings for approval prior to fabrication. Indicate plans and elevations including opening dimensions, details of framing members, required clearance, and anchorage. Include summary of forces and loads applied to the framing members.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum twenty years documented experience.

B. Provide each Hydraulic Door as a complete unit by one manufacturer, including frames, panels, brackets, hardware, power units, and installation accessories to door system.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened labeled packaging until ready for installation.

B. Protect materials from exposure to moisture and sunlight until ready for installation.

C. Store materials in a dry, ventilated, weathertight location.

1.6 WARRANTY

A. Furnish manufacturer's standard 3-year written warranty against defects in materials and workmanship, and against problems which arise through normal anticipated usage of the door during the warranty period.

PART 2: PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Midland Door Solutions, which is located at: 1021 7th Street NE; West Fargo, ND 58078; Toll Free Tel: 800-921-7008; Tel: 701-277-8836; Fax: 701-277-8961; Email: request info (info@midlanddoorsolutions.com); Web: www.midlanddoorsolutions.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 HYDRAULIC DOOR

A. Size

1. Clear Opening Width: ____
2. Clear Opening Height (Above Finished Floor Elevation): ____
3. Width and Height: As indicated on the drawings.

B. Door Design Criteria

1. The doors shall be designed to the loading requirements provided by the architect.
2. The design shall be furnished, approved, and sealed by a professional engineer registered in the jurisdiction where the project is located, when required.

C. Building Design Criteria
1. The building header shall be designed to accommodate horizontal and vertical building deflections to support the hydraulic door in all positions (with the proper lateral bracing).
2. The building's door columns shall be framed to the proper size and design to reinforce the opening (with lateral bracing) and to carry all loads and vibrations imposed thereon.

D. Electrical Requirements
1. The contractor is responsible and required to completely install the pre-wired electrical door operator, push button controls, devices, and electrical conduit to the door operator controls.
2. Differentiate between manufacturer installed and field installed wiring and between components provided by door manufacturer and those provided by others.

E. Electric Power Operator
1. Electrical controls and devices shall conform to the requirements of the current National Electrical Code 513, NEMA, and be UL approved.
2. The operator is furnished complete and consists of a motor and factory-wired control panels consisting of main fused disconnect switch, magnetic reversing starters, and push button controls, control circuit transformers, relays, and timing devices.

F. Hydraulic Door Framework
1. Door frame shall be fixture welded steel tube sections engineered by the door manufacturer to withstand all anticipated loads without bowing, sagging, or restricting its operation.
2. Framing members shall be ASTM A500 Grade B square or rectangular steel tubing.
3. Door frame shall have pre-located top hinges to align with the building truss members.

G. Hydraulic Cylinders
1. The cylinders are to be sized by manufacturer to withstand all anticipated loads and cycle door through full motion without restriction.

H. Door Truss
1. Exterior Truss – Standard
    a. Steel tube truss mounted on the exterior base of the door.
2. Interior Truss – Optional
    a. Steel tube truss mounted on the interior base of the door.

I. Electric Operator
1. Hydraulic Power Unit
    a. Service: 240 VAC, Single Phase
    b. Motor: Totally enclosed motor
        1. 2 HP
        2. 5 HP
    c. Valve: 24VDC Solenoid valve mounted on PO check valve.
    d. Control Wiring: Low voltage (24 VDC)
    e. Hoses and Fittings: Rated a minimum of 3000 psi.
    f. Reservoir: Translucent plastic to observe fluid level.
2. Hydraulic Control Panel
    a. Service: 240 VAC, single phase disconnect
    b. Enclosure: Nema 4/12

J. Finishes
1. Entire system frame and panels shall be cleaned and primed with a rust resistant gray primer.

K. Available Accessories/Options
1. Photo eyes that stops the downward movement of the door.
2. Remote receiver and transmitter
3. 3-phase electrical option

4. Walk-in door
    a. 32” x 72” nominal dimensions
    b. Inside Swing
        1. Left
        2. Right
    c. Lockset
5. Custom paint

PART 3: EXECUTION

3.1 SAFETY

A. Photo eyes optional

3.2 INSTALLATION

A. Installation of hydraulic door shall be completed by a qualified installer or by a manufacturer representative.

B. Permanent or temporary electric wiring shall be brought to the door location before installation.

C. Install door and operating equipment complete with necessary hardware, seals, anchors, and equipment supports according to shop drawings, manufacturer’s written instructions, and as specified.

D. Installer shall fasten all safety and warning labels as required by the door manufacturer.

E. After the door is installed, the general contractor assumes the responsibility of any damage to the door or door components during construction until the building is turned over to the owner.

3.3 CLEANING AND ADJUSTING

A. All surfaces shall be wiped clean and free of handprints, grease, and oil.

B. Adjust door assembly for smooth operation and maintain full contact with weather-stripping.

3.4 TRAINING

A. Installer shall demonstrate proper operation and maintenance procedures to owner's representative.

B. Operating keys and owner’s manual shall be provided to owner's representative.