KRIEGER SPECIALTY PRODUCTS

SCIF RATED ACOUSTICAL DOORS ASSEMBLIES

TECHNICAL SPECIFICATIONS

PART 1 GENERAL

1.1 SUMMARY

This section includes swinging steel sound control door and frame systems where shown on the drawings, as specified herein, and as needed for complete and proper installation.

1.2 RELATED SECTIONS

A. Section 09900 - Paints and Coatings.

1.3 REFERENCES

A. ASTM A 366 - Standard Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.

B. ASTM A 569 - Standard Specification for Steel, Carbon, (0.15 Maximum Percent), Hot-Rolled Sheet and Strip, Commercial Quality.

C. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot Dip Process.

D. ASTM B 117 - Standard Method of Salt Spray (Fog) Testing.

E. ASTM D 1735 - Standard Practice for Testing Water Resistance of Coating Using Water Fog Apparatus.

F. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne-Sound Transmission Loss of Building Partitions.

G. ASTM E 336 - Standard Test Method for Measurement of Airborne Sound Insulation in Buildings.

H. ASTM E 413 - Classification for Determination of Sound Transmission Class.

I. HMMA 840 - Installation and Storage of Hollow Metal Doors and Frames; Hollow Metal Manufacturers Association.

1.4 SYSTEM DESCRIPTION

A. Design requirements: Steel Acoustical door assemblies to include doors, frames, and door hardware to include gasketing systems, retainers and retainer covers, fixed door bottoms, cam-lift hinges, thresholds, and sills, required to achieve specified performance requirements.

B. Performance requirements: Field Sound Transmission Coefficient rating of

FSTC 50 for installed assembly, when tested as operable door assembly in accordance with ASTM E 336 and ASTM E 413.

1.5 SUBMITTALS

A. Submit under provisions of Section 01300.

NOTE \*\* Delete one of the following two paragraphs; first is for wood doors, second is for steel doors.

B. Quality assurance submittals:

1.Test Reports:

a. Certified laboratory reports, performed in accordance with ASTM E90 and ASTM E 413, from independent testing laboratory qualified under the National Voluntary Laboratory Accreditation Program (NVLAP) supporting compliance of assemblies to specified requirements.

b. Minimum five (5) field tests, performed in accordance with ASTM E 336 and ASTM E 413 by five separate independent testing agencies, substantiating acoustical performance when installed at no less than four five (45) FSTC rating.

2.Certificates:

a. Contractor's certification that:

1) Products of this section, as provided, meet or exceed specified requirements.

2) Manufacturer of products of this section meet specified qualifications.

3.Manufacturer's instructions: Printed installation instructions for each component.

C. Closeout submittals:

1.Warranty documents, executed by manufacturer in Owner's name.

2.Operation and maintenance data for assembly components.

3.Certified statement of manufacturer's authorized representative, as specified in FIELD QUALITY CONTROL Article of PART 3 of this section.

4.Certified test reports of independent testing agency, as specified in FIELD QUALITY CONTROL Article of PART 3 of this section.

1.6 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer: Minimum five (5) years documented experience producing systems specified in this section.

2. Installer: Minimum five (5) years documented experience producing systems specified in this section, and approved by manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store frames in accordance with requirements of HMMA 840.

NOTE \*\* Delete the following paragraph if specifying wood doors.

B. Store steel doors in accordance with requirements of HMMA 840.

C. Remove wraps or covers from doors and frames upon delivery at the building site; clean and touch-up scratches or disfigurement caused by shipping or handling promptly with rust inhibitive primer.

D. Store units on planks or dunnage in a dry location; store doors in a vertical position spaced by blocking.

E. Store units covered to protect them from damage, but permitting air circulation.

1.8 SCHEDULING

A. Furnish manufacturer's mounting templates for door hardware specified in Section 08710 to manufacturer of products of this section in time for factory preparation for door hardware.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Krieger Specialty Products, 4880 Gregg Road, Pico Rivera CA 90660; Telephone 562-695-0645, FAX 562-692-0146.

B. Unless otherwise specified for an individual product or material, supply all products specified in this section from the same manufacturer.

2.2 COMPONENTS

A. Steel doors: Fabricate in accordance with Architect-approved shop drawings, 2 1/4 inches minimum thickness, and as follows:

1. Face sheets: Doors for interior use: Steel sheet, minimum 16 gage sheet thickness.

b. Doors for exterior use: Galvanized steel sheet, minimum 16 gage sheet thickness.

c. Visible seams on face sheets not permitted.

2. Core:

a. Stiffen face sheets with continuous steel vertical sections, spot-weld stiffeners to each face sheet.

1. Fill spaces between stiffeners with acoustical material.

3. Vertical edges:

a. Join face sheets at vertical edges by continuous welding:

1) Join door faces by continuous weld on each edge, extending full door height.

2) Grind, fill, and dress welds to provide smooth flush surface.

b. Form edge profiles both vertical edges of doors with 1/8 inch in 2 inches bevel.

c. Visible seams on vertical edges not permitted.

4. Horizontal edges:

a. Close top and bottom edges of doors with continuous steel channels, 16 gage minimum; spot-weld channels to both door faces.

b. Provide openings in bottom closure of exterior doors to permit escape of entrapped moisture.

c. Provide additional flush closing channel at top of doors; spot-weld channel to both door faces.

5. Hardware preparation:

a. Mortise, reinforce, drill, and tap doors at factory for fully templated mortised hardware only, in accordance with approved hardware schedule and supplied templates.

b. Provide reinforcing plates at surface-mounted or non-templated hardware locations.

B. Frames: Fabricate in accordance with Architect-approved shop drawings, and as follows:

1. Frames for interior use: Fabricate from steel sheet, minimum 14 gage thickness.

2. Frames for exterior use: Fabricate from galvanized steel sheet, minimum 14 gage thickness.

3. Form frame members straight, and of uniform profile through lengths, as welded units with integral trim, of sizes and profiles indicated.

a. Weld contact edges of joints closed tight.

b. Miter perimeter trim faces and weld continuously.

4. Hardware preparation:

a. Mortise, reinforce, drill, and tap frames at factory for fully templated mortised hardware only, in accordance with Architect-approved shop drawings and supplied templates.

b. Provide reinforcing plates at surface-mounted or non-templated hardware locations.

5. Floor anchors:

a. Fabricate of same material as frame material; minimum 14 gage.

b. Weld anchors inside each jamb for floor anchorage.

6. Jamb anchors:

a. Fabricate of same material as frame material; weld anchors inside each jamb for wall anchorage.

b. Provide anchor types for indicated adjacent wall construction:

1) Frames for installation in masonry walls: Adjustable jamb anchors, 16 gage, T-shape type.

2) Frames for installation in stud partitions: 16 gage steel “zee” section to attach stud, welded inside each jamb.

7. Plaster guards: Fabricate from minimum 22 gage steel; weld in place at hardware mortises on frames to be set in plaster, masonry, or concrete openings.

8. Provide welded frames with temporary steel spreader welded to jamb feet for bracing during shipping and handling.

C. Door hardware:

1. Supply gasketing systems, retainers, retainer covers, automatic door bottoms, fixed door bottoms, cam-lift hinges, thresholds, and sills as indicated on Architect-approved shop drawings, or specified in manufacturer's product data for project conditions, to achieve specified performance requirements.

2. All other door hardware is specified in Section 08710.

2.4 FINISHES

A. Shop priming for door frames:

1. After fabrication, fill and sand tool marks and surface blemishes on both faces and both vertical edges smooth and free from irregularities.

2. Treat for paint adhesion, then apply primer to all accessible surfaces; allow to cure prior to shipment.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verification of conditions:

1. Prior to installation, check and correct frames for size, swing, squareness, alignment, twist and plumb.

2. Verify openings are in accordance with approved shop drawings.

B. Installer's examination:

1. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.

2. Transmit two copies of installer's report to Architect within 24 hours of receipt.

3. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.

4. Beginning construction activities of this section indicates installer's acceptance of conditions.

3.2 PREPARATION

A. Remove steel spreaders from welded frames prior to installation; use of spreaders for installation purposes not permitted.

3.3 INSTALLATION

A. Install units in accordance with approved shop drawings and manufacturer's printed installation instructions; in addition, install steel components in accordance with HMMA 840.

B. Fill voids between concealed side of frame and adjacent wall construction with lightweight gypsum plaster in accordance with approved shop drawings or manufacturer's printed installation instructions.

D. Finish surfaces having abrasion damage smooth; touch-up with rust inhibitive primer.

E. Install gasketing systems, retainers, retainer covers, automatic door bottoms, fixed door bottoms, cam-lift hinges, thresholds, and sills in accordance with manufacturer's printed instructions.

F. Installation of all other door hardware is specified in Section 08710.

G. Field painting is specified in Section 09900.

H. Site tolerances: Do not exceed the following installation tolerances:

1. Squareness: Plus or minus 1/16 inch measured on a line, 90 degrees from one jamb, at the upper corner of the frame at the other jamb.

2. Alignment: Plus or minus 1/16 inch measured on jambs on a horizontal line parallel to the plane of the wall.

3. Twist: Plus or minus 1/16 inch measured at face corners of jambs on parallel lines perpendicular to the plane of the wall.

4. Plumb: Plus or minus 1/16 inch measured on the jamb at the floor.

3.4 FIELD QUALITY CONTROL

A. Engage and pay for the field services of manufacturer's authorized representative to:

1. Inspect completed installation of door and frame assemblies.

2. Test all components through a minimum of ten complete cycles of operation.

3. Verify each component is correctly installed.

4. Direct installer in adjusting components for correct operation.

5. Issue certified statement of compliance of installed door and frame assemblies to Architect-approved shop drawings.

6. Instruct Owner's maintenance personnel in correct operation and maintenance procedures for components of door and frame assemblies.

B. Engage and pay for the services of independent testing agency to:

1. Test door and frame assemblies selected by Owner or Architect in accordance with ASTM E 336.

2. Issue certified report documenting compliance of installed door and frame assemblies to specified acoustical performance requirements.

C. Notify Architect a minimum of four (4) calendar days prior to scheduled testing dates.

 END OF SECTION