

## Guide Specifications- Section 084105

LaCantina IMPACT RATED ALUMINUM THERMALLY CONTROLLED Folding Door System

### PART 1 – GENERAL

#### 1.01 SECTION INCLUDES

- A. Impact Rated Thermally Controlled Aluminum and glass door system including thermally controlled aluminum frame, threshold, thermally controlled panels, folding system and locking hardware and weather stripping.
- B. Glass and glazing.
- C. [Optional] Horizontal, retractable screen and blind system and load balancing technology.
- D. System designed to provide a folding door system with sizes and configurations as per drawings and specified herein, with LaCantina Impact Rated Aluminum Thermally Controlled Folding Door System as supplied by LACANTINA DOORS, INC.

#### 1.02 RELATED SECTIONS

- A. Section 01 33 00 - Submittal Procedures.
- B. Section 01 60 00 – Product Requirements: Requirements for recycled content possibly affecting the products of this Section
- C. Section 01 61 16 – Volatile Organic Compound (VOC) Content Restrictions.
- D. Section 06 10 00 - Rough Carpentry: Installation and requirements for rough door opening.
- E. Section 06 20 00 - Finish Carpentry: Installation and requirements for door frame and casing and trim.
- F. Section 07 92 00 - Joint Sealers.
- G. Section 08 71 00 - Door Hardware.

#### 1.03 REFERENCES

- A. TAS 201-94, Impact Test Procedures
- B. TAS 202-94, Static Air Pressure Tests
- C. TAS 203-94 Cyclic Wind Pressure Loading
- D. AAMA 611.98, Voluntary Specification for Anodized Architectural Aluminum.
- E. AAMA 1303.5, Voluntary Specifications for Forced Entry Resistant Aluminum Sliding Glass Doors.
- F. AAMA 1304, Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems.
- G. AAMA 2603.02, Voluntary Specifications, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
- H. AAMA 2604, Voluntary Specifications, Performance Requirements and Test Procedures for Pigmented for High Performance Organic Coatings on Aluminum Extrusions and Panels.
- I. ANSI Z97.1, Safety Performance Specifications and Methods of Test for Safety Glazing Material Used In Buildings.
- J. ASTM E 283, Test Method for Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
- K. ASTM E 330, Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
- L. ASTM E 547, Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential.4. ASTM E 331, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
- M. CPSC 16CFR-1201, Safety Standard for Architectural Glazing Materials.

#### 1.04 SUBMITTALS

- A. Detailed Order Documentation: Indicate outside net frame dimensioning, direction of swing (outswing or inswing), number of panels, folding configuration of panels left or right, identify main entry swing panel [if applicable based on configuration selected], typical head, side jamb, sill and panel details and type of glazing material per vertical plan and elevation view drawings
- B. Product Data: Manufacturer's literature including independently certified testing results, installation instructions, warranty and care and maintenance instructions.
- C. LEED Submittals: Submit recycled content of each material containing such content and submit thermal performance (i.e. U-value) for each door and glazing type.

#### 1.05 QUALITY ASSURANCE

- A. Manufacturer: Supply complete, engineered and high quality folding door system by a single source manufacturer with at least 8 years experience manufacturing folding door systems in the U.S.
- B. Performance Requirements: The Impact Rated Aluminum Thermally Controlled Folding Door system to comply with applicable manufacturer's independently certified testing results. Testing results in accordance with Miami Dade County test protocols, TAS 201 (large and small missile impact) TAS 202 (structural pressure, air infiltration, water infiltration and forced entry) and TAS 203 (cyclic pressure).  
**\*\*SPECIFIER NOTE:** *Outswing system is recommended for weather exposed areas and best weather performance. Air infiltration and water penetration testing results can only be applicable if the door system matches the test door system in the direction of opening and the type of sill. Structural load testing results are only applicable for the test door system panel size with top and bottom locking points and type of mounting. See manufacturer's latest published data. An HVHZ DP 70 rating pending final approval from Miami Dade County for any number of panels 36 3/16" wide and 96" high. A folding door system with either a weather resistant raised, weather resistant or flush sill (with no water ratings) is approved. [OR as a supplement to the pending Dade County approval or in areas not subject to Dade County approval, provide from manufacturer independently certified testing results including air infiltration in accordance with ASTM 283, water penetration in accordance with ASTM 547 and ASTM E 331 and structural load in accordance with ASTM E 330.*
- C. Installer Qualifications: Installer experienced in the installation of manufacturer's folding door systems or similar and screening system preferred. Installer to follow installation instructions supplied by manufacturer and to provide warranty against defects in workmanship.

#### 1.06 WARRANTY

- A. Include manufacturer's standard limited warranty for defects in materials and workmanship.
- B. Warranty Period: Up to ten (10) years for aluminum panel and frame components, product finishes, folding system hardware and weather stripping. Five (5) years for locking hardware. One (1) year for anodized finishes. Ten (10) years for insulated glass against failure of the air seal and that each unit will be free from material obstruction of vision as a result of fogging or film formation on the internal surfaces. For product used outside of the United States, up to two (2) years on glass and components and then ten (10) years on folding system hardware from date of delivery by manufacturer. Normal and regular maintenance is required per manufacturer's instructions, to maintain the appearance and extend the finish life and maintain proper operations.

## 1.07 SITE CONDITIONS, DELIVERY, STORAGE AND HANDLING

- A. In addition to general delivery, storage and handling requirements specified in Section 016000, comply with the following:
1. Deliver door system to job site in manufacturer's packaging. When forklift is not available, remove panels from packaging and carefully transfer panels to a secure jobsite area. Protect stored product from damage. Store product flat in dry, well ventilated area out of direct sunlight, under cover, protected from weather, moisture and excessive dryness and construction activities.

## PART 2 – PRODUCTS

### 2.01 SUPPLIER

- A. LACANTINA DOORS, INC.  
3270 Corporate View, Suite D, Vista, CA 92081  
Telephone: (888) 221-0141  
Fax: (760) 734-1591  
Website: [www.lacantinadoors.com](http://www.lacantinadoors.com)  
Email: [info@lacantinadoors.com](mailto:info@lacantinadoors.com)

### 2.02 MATERIALS

- A. Frame and Panels: From manufacturer's standard profiles, provide complete folding door system with all hardware and consisting of head, side jambs, threshold and aluminum thermally controlled panels with dimensions shown on drawings.
1. Provide aluminum thermally controlled panels with standard one lite up to 36 3/16" wide and 96" tall. Panel thickness is 2 1/4". Panel with horizontal mullion not required.
  2. Provide standard 2 15/16" stile and rail profile [OR alternative 10" bottom rail].
  3. Aluminum Finish: Clear anodized [OR bronze anodized] [OR white paint] [OR select from range of finishes available from manufacturer] [OR custom kynar, powdercoat or decoral finish]. Same [OR different] finishes on inside and outside of frame and panels. Threshold is clear anodized [OR bronze anodized].
- B. Glass: Provide manufacturer's standard insulated glass structurally glazed with Dow Corning 995. All glass to comply with safety glazing requirements of ANSI Z97.1 and CPSC 16CFR 1201. Dry glaze will not be allowed.
1. 1 1/8" IG
  2. 7/16" Monolithic
  3. Low E 366 option
- C. Locking Hardware and Handles: Provide manufacturer's standard handle and concealed two point locking hardware operated by 90 degree turn of handle between each pair of folding panels and on any secondary swing panel.
1. On the main entry panel for configurations with a swing panel, provide manufacturer's standard trimset and lever handles on the inside and outside, a Schlage compatible lockset multi-point locking with dead bolt and multi-point concealed locking rods at the top and bottom of the door panel. Locking rods and mechanism cannot be edge or surface mounted. Depressing the handles withdraws the latch. Lifting the handles engages the rods and a turn of key or thumb turn engages the deadbolt and operates lock.  
**SPECIFIER'S NOTE:** *Key operation from the inside may not meet egress requirements.* [OR for locking/handle operation from inside only (for even/even panel configurations or window applications where manufacturer's standard lever handle and lockset is not provided), on all swing panels or pair of folding panels to be opened first, provide manufacturer's standard flat handle and concealed two point locking hardware operated by 90 degree turn of handle.]

2. Concealed aluminum locking rods to be capped with solid stainless steel tips that lock into the frame's top and bottom locking channels.
  3. Handle Finish: Brushed satin [OR bronze].
  4. Provide main entry handle height centered at 36" [OR as specified] from bottom of panel.
- D. Folding Hardware: Include manufacturer's standard folding hardware integrated with manufacturer's engineered thermally-broken head track, side jambs and threshold frame system. Weight of panels to be borne by the top of the track only. Hardware system carrying capacity to be 220 lbs per panel.
1. Hardware system to operate with an upper wheel carrier that rolls on the aluminum head track. A lower track incorporated into the threshold to guide the door panels. Upper carrier and lower guide are attached to door panel hinges. Jamb panels are attached with top and bottom pivots. Panels are connected with hinges including top and bottom hinges attached to top carrier and lower guide. Handles to assist with opening and close of door included. Carrier pins at the top pivots, intermediate and end carrier support the full door weight and this is where panels are adjusted. A pin locking system is used to lock vertical adjustment once heights are set. Pivots at the jamb allow simple screwdriver adjustment of the system horizontally up to 3/8" (10mm). All screws fully concealed for external security. Architectural grade stainless steel used for hinge pins, carrier pins and carrier bogeys.
  2. Hardware sets: Provide five (5) hinges on all panels. 2 additional wall pivots available for jamb side pivot panels for or high-wind environments.
  3. Hardware finish: Stainless steel [OR bronze].
  4. Threshold: Provide bronze anodized, [OR clear anodized] weather resistant raised engineered weeping thermally-broken threshold (reversible outswing or in swing) [OR weather resistant sill] [OR flush sill].  
**SPECIFIER'S NOTE:** Standard outswing engineered threshold can be recessed to level out the top of the threshold's weather stop with the interior finish flooring to minimize transition from interior to exterior floor levels while maintaining best weather performance. Outside patio/floor level shall be lower than the bottom of the threshold. The flush sill is the manufacturer's solution for applications with same finish floor levels inside and outside. The flush sill is installed with channels below exterior floor level and is recommended for protected openings and requires a drainage system (by others) to be installed to remove any water from the floor channels. See manufacturer's drawings.
  5. Adjustment: Provide system capable of adjustments without removing panels from tracks, 3/8" (7 mm) both vertically and horizontally with flat head and Phillips head screwdriver.
  6. Gaps between folding panels that accommodate weather-stripping and hinges to be 3/16" (5mm) or less when panels are closed.
- E. [Optional] Screen and Blind: Provide horizontal, retractable, non-pleated insect and solar control screen and blind system up to 24' wide and 10' tall with fingertip operation, load-balancing and tensioning adjustment, with anodized finish in manufacturer's standard color [OR alternative custom color] [OR alternative wood veneer from manufacturer's selection]. Screen mechanism to be concealed within frame and integrated with installation of door system [OR as stand-alone unit]. From manufacturer's standard profiles, provide head jamb, side jambs and threshold with dimensions and screen function direction. Operation to be single function [OR double function] [OR multi-function screen and blind system]. Screen Mesh: Provide fiberglass/PVC mesh from manufacturer's available selection for insect protection, control heat gain or loss, UV protection or projector screen. Pleated screen will not be allowed.

- F. Other Components:
1. Weather stripping: Provide manufacturer's standard hinge gaskets with qlon seals at the inner and outer edge of door panels or on frame for sealing between panels and between panel and frame.
  2. Provide manufacturer's standard brush seal located between head track and top of the panel.
  3. Provide screws for connecting panels and frame components.
  4. Provide magnetic door stop for main entry swing panel for stacking of folding panels.

### **2.03 FABRICATION**

- A. Use extruded aluminum exterior and interior profiles, hinges, folding hardware, locking hardware and handles, threshold and track, glass and weather stripping as specified herein to make a folding door system. Factory pre-assembled as is standard for manufacturer and ship with all components and installation instructions.
- B. Sizes and Configurations: See drawings for selected custom dimensions within maximum frame sizes possible as shown in manufacturer's literature. See drawings for selected number of panels and configuration.
- C. Swing/stacking direction: Outswing [opening unit].
- D. Define as window system for net frame heights 72" or less.

### **2.04 ACCESSORIES**

- A. Provide manufacturer's non-integral nail fin utilized in conjunction with standard flashing, weather resistant barriers (house wrap) and compatible sealants.
- B. Provide screen system in conjunction with manufacturer's impact rated thermally controlled aluminum glass folding door system.

## **PART 3 - EXECUTION**

### **3.01 ERECTION**

- A. Due to the size dimensions, weight and movement of the panels, confirm the structural header requirements. Specifically, the maximum deflection of the header with the live load cannot exceed the lesser of  $L/720$  of the span and  $1/4"$ . Structural support for lateral loads (both wind load and when the panels are stacked open) must be included.
- B. Confirm the dimensions of rough opening will fit the net frame dimensions of door system; confirm the rough openings are level, plumb, and square, with no unevenness in the floor.
- C. Installation of folding door system denotes acceptance of existing conditions.

### **3.02 INSTALLATION**

- A. Install the door system frame and panels in compliance with the manufacturer's installation instructions. Properly flash and waterproof around the perimeter of the opening and frame. Adequate overhangs to avert the effects of sheeting water from above are recommended.
- B. Installer to provide sufficient anchorage devices and to securely fit frame in place, absolutely level, straight, plumb and square. Install frame in proper elevation, plane and location, and in proper alignment with other work. Head section of frame must be installed with a  $1/8"$  upward crown at the center of the opening.
- C. If necessary, drill weep holes in the floor track and provide drain connectors to allow water to escape from tracks recessed into finish floors. Recessing tracks into the floor are not recommended for areas exposed to weather.
- D. Verify doors are adjusted at time of installation for proper operation.
- E. Protect installed product from construction activities, especially thresholds and floor channels.

- F. Accessories: Install the screen system in compliance with the manufacturer's recommendations and installation instructions.

**END OF SECTION**