**Jerith Manufacturing LLC**

**Jerith**® **Aero – Commercial Aluminum Fence System**

**CONSTRUCTION SPECIFICATION - SECTION 32 31 19**

# PART 1 - GENERAL

## 1.01 WORK INCLUDED

The contractor shall provide all labor, materials, and appurtenances necessary for installation of the commercial aluminum fence system defined herein at (specify project site).

## 1.02 RELATED WORK

Section \_\_ \_\_ \_\_ - Earthwork

Section \_\_ \_\_ \_\_ - Concrete

## 1.03 SYSTEM DESCRIPTION

The manufacturer shall supply a total fence system of Jerith Aero® Aluminum, (for standard picket space, specify style #000, #101, #200, #202) design, (specify standard or drop) bottom rail treatment. The system shall include all components (i.e., panels, posts, gates, and hardware) required.

## 1.04 QUALITY ASSURANCE

The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.

**1.05 REFERENCES**

* ASTM B117 – Practice for Operating Salt Spray (Fog) Apparatus
* ASTM B221 – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles & Tubes
* ASTM B85 – Standard Specification for Aluminum-Alloy Die Castings
* ASTM D2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
* ASTM F2957 – Specification for Ornamental Aluminum Fence Systems

## 1.06 SUBMITTAL

The manufacturer's submittal package including literature shall be submitted prior to installation to confirm compliance with all requirements for materials specified in this section.

## 1.07 PRODUCT HANDLING AND STORAGE

Upon receipt at the job site, all materials shall be checked to ensure that no damage occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism, and theft.

**1.08 PRODUCT WARRANTY**

All fence components (i.e., rails, pickets, and posts) shall be warranted limited lifetime as specified within the product warranty document. Warranty shall cover any defects in workmanship and material finish including cracking, peeling, chipping, blistering, or corroding.

# PART 2 - MATERIALS

## 2.01 MANUFACTURER

The manufacturer shall supply a total fence system of Jerith Aero® Aluminum, (for standard picket space, specify style #000, #101, #200, #202) design, (specify standard or drop) bottom rail treatment, manufactured by Jerith Manufacturing LLC, Philadelphia, PA.

## 2.02 MATERIAL

## A. Material for fence framework (i.e., pickets, rails, and posts) shall be extruded from HS-35™ aluminum alloy conforming to the requirements of ASTM B221. Aluminum extrusions for posts and rails shall be alloy and temper designation 6005-T5 with a minimum yield strength of 35,000 psi. The aluminum extrusions for pickets shall be alloy and temper designation 6063-T5 with a minimum yield strength of 25,000 psi. All picket, rail, and post extrusions shall have rounded edge profiles.

**B.** Pickets shall be 1” x 5/8" rectangular x .050" thick. Horizontal rails shall be 1-1/2” (.070 side wall) x 1-1/8" (.060” top wall) profile.

## C. At every picket to rail intersection, pickets shall be affixed to rails using stainless steel fasteners. Rail to post connections shall be made using stainless steel screws with heads painted to match the color of the fence.

## D. Accessories: Aluminum castings shall be used for all post caps, scrolls, finials, and other miscellaneous hardware and conforming to the requirements of ASTM B85 for superior corrosion resistance. Hinges and latches shall be fabricated from aluminum, stainless steel, or composite materials.

## 2.03 Finish

The manufactured fence system shall be subjected to the Jerith FencCoat™ coating process. This multi-phase coating process includes a three-stage pretreatment for uniform chemical conversion resulting in superior adhesion, followed by an electrostatic spray application of TGIC polyester powder for a cured minimum thickness of 2 mils (0.0508mm). The color shall be (specify Black, Bronze or White). The multi-layered powder coated fence system shall be capable of meeting the performance requirements for each quality characteristic shown in Table 2.

## 2.04 FABRICATION

**A.** Horizontal rails shall be punched to accept pickets. There shall be a minimum 3 rails for each fence section, with the exception of style #000 (4’ height). Pickets shall be pre-punched to accept rail to picket connection. Pickets shall be affixed to rails using stainless steel screws. Posts shall be pre-punched to accept fence section rails. Rails shall be affixed to post using manufacturer provided fasteners at every intersection. Die cast aluminum caps shall be provided with all posts. Fence posts and gate posts shall meet the minimum size requirements of Table 1.

**B.** Gates shall be of welded construction with welds at every picket to rail intersection and rail to gate upright intersection. Gates shall be capable of supporting a 250 lb. vertical load without permanent deformation.

**C.** Assembled sections shall be capable of supporting a 350 lb. vertical load at the midpoint of any horizontal rail without permanent deformation.

**D.** Fence system shall meet minimum requirements within ASTM F2957.

 **PART 3 - EXECUTION**

**3.01 PREPARATION**

All new installation shall be laid out by the contractor in accordance with the construction plans.

**3.02 FENCE INSTALLATION**

Fence post shall be spaced according to Table 3. For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade. Fence panels rails shall be inserted into punched posts and affixed with fasteners. Posts shall be set in concrete footers per manufacturers recommended (Note: In some cases, local restrictions of freezing weather conditions may require a greater depth). The “Earthwork” and “Concrete” sections of this specification shall govern material requirements for the concrete footer. Posts setting by other methods such as plated posts or grouted core-drilled footers are permissible only if shown by engineering analysis to be sufficient in strength for the intended application.

**3.03 FENCE INSTALLATION MAINTENANCE**

When cutting/drilling rails or posts adhere to the following steps to seal the exposed surfaces; 1) Remove all metal shavings from cut area. 2) Apply custom finish paint matching fence color. Failure to seal exposed surfaces per steps 1 & 2 above will negate warranty. Spray cans or paint pens shall be used to finish exposed surfaces; it is recommended that paint pens be used to prevent overspray. Use of non-Jerith parts or components will negate the manufactures’ warranty.

**3.04 GATE INSTALLATION**

Gate posts shall be spaced according to the manufacturers’ gate drawings, dependent on standard out-to-out gate leaf dimensions and gate hardware selected. Type and quantity of gate hinges shall be based on the application, weight, height, and number of gate cycles. The manufacturers’ gate drawings shall identify the necessary gate hardware required for the application. Gate hardware shall be provided by the manufacture of the gate and shall be installed per manufacturer’s recommendations.

**3.05 CLEANING**

The contractor shall clean the jobsite of excess materials; post-hole excavations shall be scattered uniformly away from posts.

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| **Table 1 – Jerith Aero | Minimum Post Size** |
| Fence Height | Fence Posts |
| Up to 6’ Height | 2-1/2” x 2-1/2” x .075” Aluminum |
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| Gate Leaf | Gate Height - Up to & Including 6’ height |
| Up to 6’ width | 2-1/2” x 2-1/2” x .125” Aluminum |

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| **Table 2 – Jerith Aero | Coating Performance Requirements** |
| Quality Characteristics | Method | Performance Requirements |
| Humidity resistance | ASTM D2247 | Humidity resistance over 3000 hours |
| Corrosion Resistance | ASTM B117  | Corrosion Resistance over 3000 hours  |

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| **Table 3 – Jerith Aero | Post Spacing (punched posts)** |
| Style | #101, #200, & #202 | #000 |
| Post Settings | 100-3/4” on center  | 71” on center |
| \*Note: When using adjustable wall mount brackets on either or both ends of a fence section installation, care must be taken to ensure spacing between post and adjoining pickets meets applicable codes. This may require trimming one or both ends of the panel. |