



## Delgard Aluminum Aero Fences & Gates

Decorative Metal Fences and Gates

Section 32 31 19

### **PART 1 GENERAL**

#### 1.01 Description

- A. Furnish and install aero grade aluminum ornamental fence and accessory materials as manufactured by Delgard Premier Aluminum Fencing and as indicated on the drawings and as specified. The work includes, but is not limited to the following:
  - 1. Fences, gates and related hardware.
- B. Related Sections:
  - 1. Section 03 11 13 - Structural Cast-in-Place Concrete Forming

#### 1.02 Quality Assurance

- A. Tests
  - 1. AAMA 603 - Covers test procedures for pigmented organic coatings on extruded aluminum.
  - 2. AAMA 605 – Covers high performance organic coatings on architectural extrusions and panels.
  - 3. ASTM D2247 – Humidity resistance of 1000 hours.
  - 4. ASTM B117 – Salt spray resistance of 1000 hours.
  - 5. Accelerated weathering for 500 hours under Method 6152 of Federal Test Method 141 shall show no adhesion loss, with only slight fading, chalking and water staining.
  - 6. Outdoor weathering shall show no adhesion loss, checking of crazing, with only slight fade and chalk when exposed for one year in Florida facing south at a 45 degree angle.
  - 7. Minimum hardness of 2H using ASTM D3363

#### 1.03 Submittals

- A. Manufacturer's product literature and certification
- B. Shop drawings in sufficient detail to show fabrication, anchorage and interface of the work. Include plan layout, accessories, fittings and hardware.

#### 1.04 Warranty

- A. The entire fence system shall have a limited lifetime warranty against defects in workmanship and material while the finish must also carry a limited lifetime warranty against cracking, chipping or peeling.

## **PART 2 PRODUCTS**

### 2.01 Manufacturers

- A. Delgard Premier Aluminum Fencing  
8600 River Road  
Delair, New Jersey 08110  
Phone: (800) 235-0185  
Fax: (856) 663-1297  
[www.delgard.com](http://www.delgard.com)

### 2.02 Materials

- A. Aluminum Extrusions: The structural Members of the fence shall be extruded from 6061-T6 (or an equivalent performing alloy registered and recognized in the Aluminum Standards and Data book produced by the Aluminum Association) with minimum ultimate strength of 38,000 PSI and a minimum yield strength of 35,000 PSI. Pickets shall be extruded Aluminum manufactured from 6061-T6 (or an equivalent performing alloy registered and recognized in the Aluminum Standards and Data book produced by the Aluminum Association) with minimum ultimate strength of 36,000 PSI and a minimum yield strength of 32,000 PSI.
- B. Fasteners: All fasteners shall be stainless steel with a zinc dichromate coating for enhanced corrosion resistance. Phillips head screws shall be used to attach the pickets to the rails while self-drilling, self-tapping (Phillips) head screws shall be used to connect the rails to the post. All screws shall be painted to match the finish of the fence.
- C. Accessories: All castings used for post caps, finials, scrolls, rail/base attachments and latches shall be made from zinc or aluminum. Only stainless steel fasteners may be used with these accessories. All accessories will be painted to match the finish of the fence.

### 2.03 Finish

- A. Pretreatment: Before the finish is applied, a five-stage pretreatment must be applied to assure maximum adhesion and corrosion resistance.
  - 1. Stage 1: High alkaline cleaner to prepare the surface
  - 2. Stage 2: Water rinse
  - 3. Stage 3: Combination of chromatic, phosphoric and hydrofluoric acids that produce the chrome-phosphate conversion coating for maximum adhesion and corrosion.
  - 4. Stage 4: Water rinse
  - 5. Stage 5: Water rinse
- B. Coating: After the pretreatment, the metal is dried and the paint is then applied. The fence system shall have an electrostatically applied baked-on acrylic finish that meets or exceeds industry standard tests.
- C. Color: The color to be selected by the architect from the manufacturer's standard color selections.

## 2.04 Construction

### A. Aero Series

1. Horizontal Rails shall be 1-1/2" x 1-1/8" "U" channels. Pickets shall pass through holes punched in the top rail. The rails shall have a top wall thickness of 0.60" and a side wall thickness of .070". The number of rails shall vary according to manufacturer specifications.
2. Pickets shall be fastened to the rails using zinc-coated stainless steel screws painted to match the color of the fence. Screws shall be used on only one side of the rail leaving the other side with a clean appearance. Pickets shall be 1" x 5/8" with a .050" wall thickness. Welding the pickets to the rails will not allow the fence to rake and is unacceptable.
3. Posts shall be 2-1/2" square with a .060" wall thickness with a .100" power corner.
4. Gate posts shall be 2-1/2" square with a .125" wall thickness. A gate requires a gate post on both sides. A cast aluminum cap is to be used on all posts.
5. Spacing shall be 3-31/32" between pickets.
6. Installed Centers shall be 100-13/16" on center (2-1/2" posts) and 71" on center for Sentry (2-1/2" posts)

*Specifier Note: Select height that applies.*

7. Height shall be [48"] [54"] [60"] [72"]

*Specifier Note: Select color that applies.*

8. Color shall be [white] [black] [bronze] [hunter green] [sandstone]
9. Horizontal Rails shall be 2 on 48" Sentry; 3 on 48", 54", 60"; and 4 on 72" height.

#### 10. Swing Gates

- a. Shall be fabricated to manufacturer's standard methods.
- b. Framework shall be 2-1/2" square with a .125" wall thickness
- c. "U" Frame strengthener shall be used for openings greater than 60"
- d. Standard latches shall be used.
  1. Standard Walk Gate: Z-Lokk Latch
  2. Standard Drive Gate: Lokk Latch
  3. Pool Specific: Magna Latch
- e. Standard hinges shall be used.
  1. 36" wide thru 71" wide (self-closing)
  2. 72" wide thru 96" wide (barrel)

11. Strength: Assembled sections should be able to support a minimum of 500 pounds of vertical load at the mid-point of any horizontal rail without permanent deformation.

#### 2.05 Concrete

- A. Comply with requirements specified in Section 03 11 13 - Structural Cast-in-Place Concrete Forming

### **PART 3 EXECUTION**

#### 3.01 Surface Conditions

- A. Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of work. Do not proceed until unsatisfactory conditions are corrected.

#### 3.02 Installation

- A. Follow manufacturer's instructions for the installation of all gates and fencing.
- B. All material must be checked upon receipt at the job site prior to installation to check for damage that may have occurred during transport. The fence system must be stored in a safe place and dry environment so as to protect it from any potential damage. The fence system must be installed with manufacturer's standard procedures.

#### 3.03 Setting Posts

- A. Remove loose and foreign materials from sites and bottoms of holes and moisten soil prior to pouring concrete. Center and align posts in holes. Place concrete around posts in a continuous pour and vibrate or tamp for consolidation.
- B. Check each post for vertical and top alignment. Hold in position during placement and finishing operation. Trowel tops of footings and slope or dome to direct water away from posts.
- C. Set keeps, stops, sleeves and other accessories into concrete as required. Keep exposed concrete surfaces moist for at least seven days after placement, or cure with a membrane curing material. Grout-in those parts which are set into sleeved holes, concrete constructions or rock excavations using non-shrink Portland cement grout.

#### 3.05 Installing Gates

- A. Install gates plumb, level and secure for full opening without interference. Install ground-set items in concrete for anchorage in accordance with manufacturer's recommendations as approved by the architect. Lubricate and adjust the hardware for smooth operation.

**END OF SECTION**