



## Estate Ornamental Fence Section 32 31 19

### **PART 1 3 GENERAL**

#### 1.01 SECTION INCLUDES:

Ornamental welded steel fence system.

#### 1.02 Related Sections:

Section 03 30 00      Cast-in-Place Concrete  
Section 31 30 00      Earthwork

#### 1.03 REFERENCES:

ASTM A123              Hot Dip Electroplating  
ASTM A500              Seamless Grade A Metal Tubing  
ASTM B117-97          Salt Spray Corrosion Test  
ASTM F593-02e2        Stainless Steel Fasteners  
ASTM F1908             Residential Outdoor Swimming Pools  
ASTM F2049             Standard Safety Performance for Fence  
ASTM F2408             Standard Specification for Ornamental Fences

#### 1.04 WARRANTY

Fortress Fence ESTATE products include a 10 year limited warranty, from the date of purchase, for defects in material and workmanship, including protection against cracking, peeling, blistering and corrosion (rusting). Refer to 10 Year Warranty Sheet.

### **PART 2 PRODUCTS**

#### 2.01 MANUFACTURER:

Fortress Fence Products  
1720 North First Street  
Garland, TX 75040  
Phone: (844) 909-1999 Fax: (972) 644-3720  
Website: [www.FortressFence.com](http://www.FortressFence.com)  
Email: [Specifications@FortressFence.com](mailto:Specifications@FortressFence.com)

#### 2.02 MATERIALS:

Rails are Grade A cold rolled steel formed and welded tubing and Pickets are Grade A cold rolled steel formed and welded tubing, both conforming to ASTM A500 with G 60 zinc coating (0.60 oz/ft<sup>2</sup>) total inside and outside surfaces in accordance with the ASTM A123 hot dipped electroplating process.

#### 2.03 COMPONENTS:

##### Panels:

- A. Rails: 16-gauge ASTM 500 galvanized welded steel tubing, 1.5-inch square.
- B. Pickets: ¾" square 18 ga. ASTM A500 galvanized welded and formed steel tubing.
- C. Horizontal Supports: ¾" square 16 ga. ASTM A500 galvanized welded and formed steel tubing.
- D. Posts: 3" square 14 ga. ASTM A500 galvanized formed and welded steel tubing with powder coated factory finish.
- E. Fasteners: All nuts, bolts, and sheet metal screws are stainless steel conforming to ASTM F593-02e2 standard.

##### Gates:

- F. Rails: 16-gauge ASTM 500 galvanized welded steel tubing, 2-inch square.
- G. Uprights: 16-gauge ASTM 500 galvanized welded steel tubing, 2-inch square.
- H. Pickets: ¾" square 18 ga. ASTM A500 galvanized welded and formed steel tubing.
- I. Horizontal Supports: ¾" square 16 ga. ASTM A500 galvanized welded and formed steel tubing.
- J. Posts: 3" 14-gauge for residential and light commercial application. ASTM A500 galvanized formed and welded steel tubing with powder coated factory finish.
- K. Hardware: Pro Series hinges, Pro Series latch and Pro Series drop rod.
- L. Fasteners: All nuts, bolts, and sheet metal screws are stainless steel conforming to ASTM F593-02e2 standard.

##### Infill Material:

- M. Fortress composite pickets: available colors:
- N. Wood infill by others.

#### 2.04 STYLE:

- A. Fortress Fence Product's ESTATE Fence is made in: Flat Top Flat Bottom (ESTATE).
- B. 6 1/16" air space between pickets.

#### 2.05 FABRICATION:

- A. Fence panels are fully assembled and fabricated in standard length of 94 5/8" and standard heights of 75 1/8". All panels comply with requirements indicated for materials, thickness, design and details of construction.
- B. All welded connections comply with AWS standards for recommended practice in shop welding.
- C. All components are accurately cut and drilled to receive hardware, fasteners and accessories.

#### 2.06 FINISH:

- A. Materials are coated with the FortressShield process including galvanization, zinc phosphate, electrodeposition (E-coat), and architectural grade powder coat.
- B. Metal parts are assembled and finished individually prior to shipment.
- C. Galvanized steel fence components are cleaned with a non-petroleum solvent followed by the application of a sealing zinc phosphate coating.

D. Immediately after sealing, a thermosetting carboxyl polyester resin top coat with a minimum dry film thickness of 60 to 70 microns. This coating will be applied by the electrostatic spray process.

### **PART 3 EXECUTION**

#### **3.01 PREPARATION**

Stake layout showing locations of all gates and posts. Contact "CALL BEFORE YOU DIG" prior to beginning any excavation work.

#### **3.02 INSTALLATION**

A. Install fences in accordance with written instructions and in accordance with authorities having jurisdiction.

B. Concrete Set Posts: Drill hole in firm soil. Posts holes will be a minimum of 30" for line posts (environmental conditions or local codes may require a greater depth). Fence post shall be spaced 97 3/4" on-center to accommodate installation of brackets on 3" square post.

C. Installation is to conform to the specifications referenced in Section 1.02 of this specification.

D. Install Fortress brackets onto fence section and posts as indicated in printed instructions for specific fence style. Attach fence sections to brackets with approved fasteners and techniques to insure that fence sections are perpendicular to the posts.

E. Gate Installation: Install in accordance with printed instructions. Do not mount gate from wall of a structure. Provide gate post on both sides of a gate. For double drive gate installation, provide concrete center drop to foundation depth and drop rod retainers at center. Lubricate to insure smooth operation and verify proper latch operation.

#### **3.03 CLEANING**

A. Remove all cutting and drilling chips that are attached to the fencing, post, brackets or additions to prevent corrosion.

B. Repair scratches and other installation-incurred damage. Using a spray paint of the appropriate color that includes a zinc additive, repaint and seal any scratches or holes drilled in the fencing, post, brackets, or additions to prevent rust from forming.

C. Clean up debris and unused material, and remove from site.