

Special Specification 4099

Ornamental Steel Fence



1. DESCRIPTION

Furnish and install ornamental fence in conformance with the details shown on the plans and as directed.

2. MATERIALS

Provide new materials conforming to the pertinent requirements of the following items.

- Item 421, "Hydraulic Cement Concrete,"
- Item 441, "Steel Structures,"
- Item 442, "Metal for Structures,"
- Item 445, "Galvanizing,"
- Item 446, "Field Cleaning and Painting Steel,"
- Item 447, "Structural Bolting," and
- Item 448, "Structural Field Welding."

- 2.1. **Steel Members.** Provide High Yield Carbon (HYC) structural steel specified for ornamental fence meeting the requirements of ASTM A36.

3. SUBMITTALS AND SHOP DRAWINGS

Provide the following.

- Product data for components and accessories.
- Shop drawings showing layout, dimensions, spacing of components, and anchorage and installation details. Include details for steel fabrication including structural field welding, finishing, and fastening.
- Sample: 8 in. by 10 in. minimum size sample of fence panel illustrating design, fabrication workmanship, and selected color coating.
- 10 year warranty for factory finish against cracking, peeling, and blistering under normal use.

4. MANUFACTURERS

- "Blockade Design" AMETCO Manufacturing Corporation, 4326 Hamann Parkway, P.O. Box 1210, Willoughby, OH 44096, Phone: 1-800-321-7042; www.ametco.com,
- "Omega10 Orsogrill" Omega Fence Systems, 1735 St-Elzear Blvd. West, Laval (Quebec) Canada H7L3N6; 1-800-836-6342; www.omegafence.com, or
- Approved Equal.

5. FINISH

- 5.1. **Steel Fence Panels.** Provide steel fence panels and posts that are hot-dip galvanized with 1.25 oz. per square foot minimum zinc coating in accordance with ASTM A123. Provide standard size components with polyester powder coating. Provide a black color.
- 5.2. **Polyester Powder Coating.** Provide an electrostatically applied colored polyester powder coating that is heat-cured to chemically bond the finish to the metal substrate, meeting the following requirements:
- Minimum hardness measured in accordance with ASTM D3363: 2H.

- Direct impact resistance tested in accordance with ASTM D2794. Able to withstand 160 in.-lb.
- Flexibility tested in accordance with ASTM B522: 1/8 in. conical mandrel.
- Adhesion tested in accordance with ASTM D3359: Applying and removing pressure sensitive tape over cuts.
- Salt spray resistance tested in accordance with ASTM B117: No undercutting, rusting, or blistering after 500 hours in 5% salt spray at 95°F and 95% relative humidity and after 1,000 hours, less than 3/16 in. undercutting.
- Weatherability tested in accordance with ASTM D822: No film failure and 88% gloss retention after 1 year exposure in South Florida with test panels tilted at 45 degrees.

6. CONSTRUCTION

Erect Ornamental Fence to the lines and grades shown on the plans. The overall height of the fence when erected is the height above the grade as shown.

Before fabrication, field verify required dimensions. Install fencing in accordance with manufacturer's installation instructions and approved shop drawings.

Install fence posts plumb and level by setting the post in the hole cored in concrete and grouting it solid. Temporarily brace fence posts with 2 in. by 4 in. wood supports until the grout is set. Do not install bent, bowed, or otherwise damaged panels. Remove damaged components from the site and replace. Secure fence panels with standard stainless steel bolts to fence posts after the posts have been set on the bridge rail. Touch-up damaged finish with paint supplied by the manufacturer and matching the original coating.

7. MEASUREMENT

Ornamental Fence will be measured by the foot of fence, complete and in place.

This is a plans quantity measurement item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2, "Plans Quantity Measurement." Additional measurement or calculations will be made if adjustments of quantities are required.

8. PAYMENT

The work performed and materials furnished in accordance with this item and measured as provided under "Measurement" will be paid for at the unit price bid for "Ornamental Fence." This price is full compensation for fabricating, shipping, handling, and installing galvanized fence steel bars, rods, fence panels, posts, fasteners, and other components; for concrete footings of fence posts; for repairs to painted surfaces; and for furnishing labor, tools, equipment, and incidentals.