

ITEM 568.10 16 PICKET FENCE RAILING

DESCRIPTION:

This work shall consist of furnishing and installing Picket Fence Railing as shown in the Contract Documents.

MATERIALS: Materials shall conform the following requirements:

PICKETS: Galvanized 25 mm square steel tubular members, manufactured per ASTM A-787 (with the only option of galvanizing after welding) having a 310 MPa yield strength and a G90 zinc coating of 0.27 kg/m² (min.) or 25 mm square steel tubes meeting ASTM A500 Grade B galvanized in accordance with Section 719-01. Pickets shall be spaced 100 mm face-to-face (max.).

RAILS: 38 mm X 35 mm X 38 mm, 3.05 mm thick steel channel shall meet the requirements of ASTM A-653M or ASTM A-607M and galvanized in accordance with § 719-01. The rails shall be punched to receive pickets and rivets.

POSTS: 63.5 mm X 63.5 mm, 2.03 mm thick steel tubes meeting ASTM A500 Grade B galvanized in accordance with § 719-01 or manufactured as per ASTM A-787 having a 310 Mpa yield strength and G90 zinc coating of 0.27 kg/m² (min.). Only option of galvanizing after welding is allowed. Both inside and outside will be zinc coated (posts zinc coated outside and painted inside are unacceptable).

RIVETS: Rivets shall be industrial drive. The rivets shall have a minimum of 4894 N holding power and a shear strength of 6674 N, and be made from stainless steel.

RESIN COATING: Railing parts shall be coated with a 64 µm (min.) baked polyester resin based powder coating. All pickets, channels, posts, fittings and accessories shall be polyester coated individually after drilling and layout, to ensure maximum corrosion protection. (Coating of the assembled sections is unacceptable). All components shall be degreased and prepared prior to coating. Color shall be as shown on the Plans.

RAIL ATTACHMENT BRACKETS: These brackets attach the rails to the posts. The brackets shall be die cast of zinc (ZAMAK #4 Alloy) per ASTM B86-83Z 33521. Ball and socket design capable of a 30 degree swivel (up/down-left/right). Bracket to fully encapsulate rail end for complete security.

POST CAPS: Caps shall be made by casting them using malleable iron or aluminum alloy. They shall be weathertight.

ANCHOR BOLTS, NUTS and WASHERS: Shall meet the requirements of ASTM F568M Class 4.6, A563M Grade DH and F436M and be galvanized in accordance with section 719-01 Galvanized

Coatings and Repair Methods.

SHOP DRAWINGS: Shop drawings shall be prepared by the fabricator, and supplied as part of this work. The shop drawings shall be prepared in accordance with the N.Y.S. Steel Construction Manual and submitted to the D.C.E.S. for approval at least 45 working days prior to fabrication

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CONSTRUCTION DETAILS:

FABRICATION: The railing shall be fabricated to the requirements shown on the Contract Plans and in compliance with these specifications.

INSPECTION: Prior to installation the railing shall be inspected for damage, bends or kinks in the railing not specifically called for in the Contract Plans. Any of these defects shall constitute sufficient cause for rejection. Straightening of such bends or kinks shall not be allowed. The Engineer may allow some bending or curving to allow for minor adjustments.

INSTALLATION: The Contractor shall install the railing in accordance with in the Contract Documents, and the fabricators instructions. To install the posts vertical, the contractor may shim the base plate using a non-shrink grout meeting the requirements of §701-04 or §701-05 or §701-09.

TOUCH-UP PAINTING: Any section of railing requiring more than 1000 square millimeters of touch-up painting shall be rejected.

Damage to the polyester resin coating shall be repaired in the following manner:

1. Clean area to be touched up using a wire brush, and a fine grade of sandpaper.
2. Rinse area with water, and let dry.
3. Apply liquid polyester paint via spray, or brush making sure to overlap existing coating by at least 13 mm. Apply first coat and let dry for two hours. Then apply the second coat and let dry for four hours.
4. The thickness of the touch- up shall be a min. of 75 µm.

If the color of the touch- up resin paint does not match the base polyester resin it shall be rejected.

WARRANTY: The manufacturer shall warranty the coating system for a period often year. Any element of the railing exhibiting peeling, debonding, or blistering of the resin coating shall be replaced by the manufacturer at no cost to the owner.

METHOD OF MEASUREMENT:

The quantity to be measured for payment under this item will be the number of meters of railing, including the transition sections, measured along the centerline of the railing anchorages between the limits shown on the Contract Plans and installed in accordance with the Contract Documents.

BASIS OF PAYMENT:

The unit price bid per meter of railing shall include the cost of furnishing all labor, materials and equipment necessary to complete the work.