

ITEM 568.70 06 - ORNAMENTAL PICKET FENCE WITH SOLID STEEL PICKETS

DESCRIPTION:

This work shall consist of furnishing and installing Ornamental Picket Fence with Solid Steel Pickets as shown on the Contract Plans, as directed by the Engineer and in accordance with the specifications.

MATERIALS: Materials shall conform to the following requirements.

PICKETS: 25mm square solid steel bars shall meet the requirements of ASTM A-36M and be galvanized in accordance with Section 719 (Metal Coatings) of the Standard Specifications. Pickets shall be spaced 100mm maximum face to face.

RAIL: 38mm X 35mm X 38mm, 11 gage (3.05mm thick) steel channel shall meet the requirements of ASTM A-653M or ASTM A-607M and shall be galvanized in accordance with Section 719 (Metal Coatings) of the Standard Specifications. Punch rails to receive pickets and attach rails to rail brackets with 2 each 6mm Industrial Drive Rivets.

FLANGED POSTS: Square steel tubular members with flange type base plates shall meet the requirements of ASTM A-500M or A-501M and ASTM A-36M respectively and be galvanized in accordance with Section 719 (Metal Coatings) of the Standard Specifications. Minimum post size 64mm having 14 gage (1.90mm) wall thickness and weighing 4.07kg/m. The flange type base plates shall have a minimum of 4 holes for surface mounting of posts where indicated on the Contract Plans.

ACCESSORIES:

Rail Attachment Brackets: Die cast of zinc meeting the requirements of ASTM B86. Rail and socket design shall be capable of 30-degree swivel (up/down and left/right). Bracket shall fully encapsulate rail end for complete security.

Industrial Drive Rivets: 6mm rivets of sufficient length to attach items in a secure non-rattling position. Rivet shall have a minimum of 4895N holding power and a shear strength of 6675N.

Post Caps: Formed steel, cast of malleable iron or aluminum alloy, weather tight closure cap. Provide one standard style (see Contract Plans) post cap for each post.

Picket Tops: Finial tops, cast of gray iron shall meet the requirements of ASTM A-48M and be galvanized in accordance with Section 719 (Metal Coatings) of the Standard

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Specifications. Fleur-de-lis style.

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(Metal Coatings) of the Standard Specifications.

Finish: All pickets, channels, posts, fittings and accessories shall be given a polyester resin based powder coating. Color shall be green and approved by the Engineer.

Epoxy Polysulfide Grout: Shall meet the requirements of Section 721 (Concrete Adhesives and Repair Material) of the Standard Specifications.

Shop Drawings: Shop drawings shall be prepared for the Ornamental Picket Fence 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.

CONSTRUCTION DETAILS:

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

FINISHING: All pickets, channels, posts, fittings and accessories shall be given a polyester resin based powder coating individually after drilling and layout to ensure maximum corrosion protection. (Coating of assembled sections is unacceptable) All components shall be given a 4 stage "Power Wash" pre-treatment process that cleans and prepares the galvanized surfaces to assure complete adhesion of the finish coat. After surface preparation, all metal shall be given a polyester resin based powder coating applied by the electrostatic spray process, to a thickness of 2.5 mils (0.0635mm). The finish shall then be baked in a 230 degree Celsius (metal temperature) oven for 20 minutes.

INSPECTION: Prior to installation, the Ornamental Picket Fence 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 order some bending or curving to allow for minor adjustments.

INSTALLATION: The Contractor shall provide a minimum of 4 anchor bolts at the post positions specified in the Contract Plans. The Contractor has the option of drilling and grouting the anchor bolts or setting the anchor bolts with an anchor plate as shown on the Contract Plans prior to pouring the concrete barrier. Drilled and grouted anchor bolts shall be set a minimum

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150mm into the concrete or to the depth recommended by the grout manufacturer, whichever is greater. Drilling and grouting of the anchor bolts shall meet the requirement of Section 586 (Miscellaneous Structural Reconstruction) of the Standard Specifications. Posts shall be set so the posts are vertical. The posts shall be shimmed using an epoxy polysulfide grout meeting the requirements of Section 721 (Concrete Adhesives and Repair Material) of the Standard Specifications. Any excess grouting material beyond the edges of the base plate shall be neatly trimmed away before the grout has set.

TOUCH-UP PAINTING: Any damage to the paint system shall be repaired in accordance with the manufacturers recommendations and approved by the Engineer.

METHOD OF MEASUREMENT

The quantity to be measured for payment under this item shall be the number of meters of railing measured along the centerline of railing anchorage between the limits shown on the Contract Plans and installed in accordance with the Contract Plans and these specifications.

BASIS OF PAYMENT

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

No payment shall be made for those railing pieces which are replacements for those railing pieces that have been rejected.