

**DESCRIPTION**

This work shall consist of furnishing and installing a Stainless Steel Hand Rail in accordance with the Contract Documents and as directed by the Engineer.

**MATERIALS**

Stainless steel bars and shapes shall be Type 316, ASTM A276. Stainless Steel tubing shall be ASTM A269.

Stainless steel bolts shall be in conformance with Section 715-16, Stainless Steel Connecting Products. Stainless steel brackets shall be ASTM A666, Type 316, and shall be in conformance with Section 715-16, Stainless Steel Connecting Products.

The Contractor shall submit to the Engineer for review and approval the following items:

Shop drawings and catalogue cuts for stainless steel hand rail details and location, bracket details and location, material and size of components, method of joining various components and assemblies, finish and location, size and type of bolts. Items requiring field assembly for installation shall be marked accordingly, and installation drawings and instructions shall be furnished.

**CONSTRUCTION DETAILS**

Hand rail and brackets shall be fabricated to the design shown on the drawings. Members shall be furnished in the longest lengths commercially available within the limits shown and specified. All work shall be straight, true, free from warp and twist, and where applicable, square and in the same plane.

All surfaces and edges shall be free from sharp edges, burrs and projections, which may cause injury. Miter members at corners. All joints, corners, copes and miters shall be accurately cut, machined and fitted.

All welding shall be performed in accordance with the New York State Steel Construction Manual and all welds shall be ground smooth. Welds shall show good fusion, be free from cracks and porosity and accomplish secure and rigid joints in proper alignment. Where exposed in the finished work, welds shall be continuous for the full length of the members joined and have depressed areas filled and all protruding welds finished smooth and flush with adjacent surfaces.

Field connections shall be designed and constructed in the most practical place for appearance and ease of installation. All pieces shall fit together as required. Connections shall provide ease of assembly (and disassembly) without use of special tools. Joints shall be firm when assembled.

Joining, fitting and welding of exposed work shall be concealed as far as practical. Screws shall not show prominently on the face.

Installation of metal fabrications shall be performed by a member of the International Association of Bridge, Structural and Ornamental Iron Workers capable of installing each component in accordance with the drawings and specifications, in consideration of the field conditions, and in accordance with the shop and erection drawings. The fit of components and the alignment of holes shall eliminate the need to modify any component, use exceptional force in the assembly of any component, or use other than common tools. Each component shall be plumb, level, free of rack and twist, and set parallel or perpendicular as required to line and plane of surface.

#### **METHOD OF MEASUREMENT**

This work will be measured as the number of meters of Stainless Steel Hand Rails satisfactorily furnished and installed.

#### **BASIS OF PAYMENT**

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

DISAPPROVED BY E12-001