#### **SECTION 05500**

#### **STRUCTURAL METALS**

PART 1 - GENERAL

#### 1.01 SCOPE OF WORK

1. Furnish all labor, materials, equipment, and incidentals required to fabricate all stairs, walkways, grating, frames columns, and other miscellaneous metal as shown on the drawings and specified herein. The miscellaneous metal items include, but are not limited to, the following:

#### Base Plates, Anchors or anchor bolts and structural connection bolts, washers, nuts.

* 1. Steel grating, stair treads, plates, angles, and channels as shown on the drawings or necessary modifications to existing stairs, walkways and handrails.
  2. COORDINATION

#### The work of this section shall be completely coordinated with the work of other sections. Verify at the site both the dimensions and work of items of work in this section before fabrication and delivery of items herein specified.

* + 1. Furnish to the pertinent trades all items included under this section that are to be built into the work.

#### SHOP DRAWINGS

* + 1. Detail shop drawings, as provided for in the Section 01010 and Section 01340, showing sizes of members, method of assembly, anchorage, and connection to other members shall be submitted to the Engineer for approval before fabrication.

#### FIELD MEASUREMENTS

Field measurements shall be taken at the site to verify or supplement indicated Drawing dimensions and to insure proper fitting of all items before fabrication.

#### 1.06 REFERENCE SPECIFICATIONS

Unless otherwise specified, materials shall conform to the following:

#### Structural Steel ASTM A36/A992

Steel Tubing ASTM A500

#### Welded and Seamless Steel Pipe ASTM A53

Galvanizing, general ASTM A123

#### Galvanizing, hardware ASTM A153

Galvanizing, assemblies ASTM A386

#### Bolts and Nuts ASTM A325

PART 2 - PRODUCTS

#### ANCHORS, BOLTS, AND FASTENING DEVICES

* + 1. Anchors and anchor bolts, etc., shall be furnished as necessary for installation of each of the work items of this section and will be fully identified as to where they are located on each separate catwalk assembly bring delivered.
    2. Owner furnished Catwalk segments stored on site shall be assembled and installed by Contractor in accordance with Owner furnished shop drawings and the locations as shown on the Drawings.

#### The bolts used to attach the various members to the anchors shall be the sizes shown or required.

* 1. STEEL ITEMS

#### Galvanized steel grating, stair treads, towers and bracing of non-Owner furnished catwalks, shall be fabricated and installed by Contractor as shown on Drawings.

* + 1. Structural steel shall be fabricated and installed in accordance with the drawings and shall include structure tubes, rolled sections, angles, support brackets, splice plates, anchor bolts; and any other miscellaneous steel called for on the drawings and not otherwise specified.

#### PART 3 - EXECUTION

* 1. FABRICATION

#### The fabrication shop shall have demonstrated experience in fabricating similar type catwalk assemblies. All fabrication & erection shall be per AISC Code Of Standard Practice for Steel Buildings and Bridges, latest edition.

* + 1. All structural metal work shall be formed true to detail, with clean, straight, sharply defined profiles and smooth surfaces of uniform color and texture and free from defects impairing strength or durability.
    2. Welded joints shall be continuously welded. Welding shall be in accordance with American Welding Society D1.1. All welding shall be done only by welders certified as to their ability to perform welding in accordance with the requirements of the AWS D1.1. Galvanizing shall be the hot-dip zinc process after fabrication. Following fabrication, all items shall be galvanized per ASTM A123.

#### Galvanized surfaces that are abraded or damaged shall be repaired by thoroughly wire brushing and coated with an approved brush online zinc rich compound (equal to Rustoleum 7000 system). Spray can cold galvanized products will not be acceptable.

END OF SECTION