SECTION 05 70 00

DECORATIVE METAL FABRICATIONS

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies items and assemblies fabricated from decorative metal, including the following.
   1. Expanded metal sheet.
   2. Woven wire mesh.
   3. Metal trim.

1.2 RELATED WORK

A. Supports and fasteners for decorative metal fabrications: Section 055000, METAL FABRICATIONS.

1.3 SUBMITTALS

A. Submit in accordance with Section 013400, SAMPLES AND SHOP DRAWINGS.

B. Manufacturer’s Literature and Data:
   1. Expanded metal sheet.
   2. Woven wire mesh.

C. Shop Drawings:
   1. Each item specified, showing complete detail, location in the project, material and size of components, method of joining various components and assemblies, finish, and location, size and type of anchors.
   2. Mark items requiring field assembly for erection identification and furnish erection drawings and instructions.
   3. Provide rough-in measurements as required.

1.4 QUALITY ASSURANCE

A. Each manufactured product shall meet, as a minimum, the requirements specified, and shall be a standard commercial product of a manufacturer regularly presently manufacturing items of type specified.

B. Each product type shall be the same and be made by the same manufacturer.

C. Assemble product to the greatest extent possible before delivery to the site.

D. Include additional features, which are not specifically prohibited by this specification, but which are a part of the manufacturer's standard commercial product.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Stainless steel sheet: ASTM A 666, cold-rolled, Type 304 No. finish, tension-leveled to a flatness of 5 I-units or less.

B. Extruded aluminum bar, rod and wire: ASTM B 221.

2.2 MANUFACTURED UNITS

A. Expanded metal mesh: Flattened expanded metal fabricated from standard expanded metal that has been rolled through a flattening machine in the expanding process.
   1. Material: Stainless steel sheet.
   2. Long Way of the Opening (LWO): 1-1/8-inch.
   3. Short Way of the Opening (SWO): 3/4--inch.
   4. Roll expanded metal sheet after fabricating to match Project Engineer's design reference (target) sample.

B. Woven wire mesh:
   1. Material: 0.125--inch diameter extruded aluminum wire.
   2. Mesh size: One-inch by one-inch to match Project Engineer's design reference (target) sample.
   3. Finish: Mill finish.

2.3 FABRICATION GENERAL

A. Material:

   1. Use material as specified. Use material of commercial quality and suitable for intended purpose for material that is not named or its standard of quality not specified.
   2. Use material free of defects which could affect the appearance or serviceability of the finished product.

C. Size:

   1. Size and thickness of members as shown.
   2. When size and thickness is not specified or shown for an individual part, use size and thickness not less than that used for the same component on similar standard commercial items or in accordance with established shop methods.

D. Fasteners and Anchors:
   1. Use methods for fastening or anchoring metal fabrications to building construction as shown or specified.
   2. Where fasteners and anchors are not shown, design the type, size, location and spacing to resist the loads imposed without deformation of the members or causing failure of the anchor or fastener, and suit the sequence of installation.
   3. Use material and finish of the fasteners compatible with the kinds of materials which are fastened together and their location in the finished work.

D. Workmanship:
   1. Fabricate items to design shown.
   2. Furnish members in longest lengths commercially available within the limits shown and specified.
   3. Fabricate straight, true, free from warp and twist, and where applicable square and in same plane.
   4. Provide holes, sinkages and reinforcement shown and required for fasteners and anchorage items.
   5. Provide openings, cut-outs, and tapped holes for attachment and clearances required for work of other trades.
   6. Prepare members for the installation and fitting of hardware.
   7. Fabricate surfaces and edges free from sharp edges, burrs and projections which may cause injury.

2.4 SUPPORTS

A. Fabricate ASTM A36 structural steel shapes as shown, and in accordance with the requirements of Section 055000, METAL FABRICATIONS.
B. Use clip angles or make provisions for welding hangers and braces to overhead construction.
C. Field connections may be welded or bolted.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

A. Set work accurately, in alignment and where shown, plumb, level, free of rack and twist, and set parallel or perpendicular as required to line and plane of surface.
B. Install anchoring devices and fasteners as shown and as necessary for securing decorative metal fabrications to building construction as specified.
C. Isolate aluminum from dissimilar metals and from contact with concrete and masonry materials as required to prevent electrolysis and corrosion.

3.2 CLEANING

A. After installation clean exposed pre-finished and plated items, and items fabricated from stainless steel, aluminum and copper alloys, as recommended by the metal manufacturer. Protect from damage until completion of the project.

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