
SECTION 05 70 00

DECORATIVE METAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide decorative (ornamental) metal items including attachment devices and accessories, as required for complete, finished installation.
 - 1. Provide custom decorative aluminum screens.
 - 2. Provide custom decorative aluminum shade structures.
 - 3. Provide custom decorative aluminum canopy.
 - 4. Provide custom decorative aluminum screens.
 - 5. Provide custom decorative aluminum gates with gate hardware.
- B. Related Work:
 - 1. Section 05 50 00: Metal fabrications including steel supports for screens.
 - 2. Section 05 51 00: Steel railings at stairs.
 - 3. Section 05 73 00: Decorative aluminum railings with perforated panels at decks.
 - 4. Section 14 21 00: Decorative metal at elevators.
 - 5. Section 32 31 20: Decorative steel fences and gates.

1.2 REFERENCES

- A. National Association of Architectural Metal Manufacturers: Metal Finishes Manual.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Design/Build: Provide special engineering to ensure compliance with applicable codes and Contract Documents.
- B. Pre-Installation Meeting: Convene not less than one week prior to commencing work of this Section. Require attendance of those directly affecting work of this Section.
 - 1. Review installation procedures and coordination required with related work.

1.4 SUBMITTALS

- A. Product Data: Furnish manufacturer's literature including recommendations for cleaning.
- B. Shop Drawings: Show detailing including anchorage, accessories, and supporting members.
- C. Samples: Furnish samples of each exposed metal finish and perforated metal, with finish.
- D. Design/Build Certificates: Submit engineer certification by California licensed structural engineer indicating decorative metal complies with Contract Documents and applicable code requirements.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Firm with minimum five years successful experience fabricating decorative metal items similar to those required for Project.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. System Description: Provide decorative (ornamental) metal items specified including attachment devices and accessories.
- B. Design Requirements: Drawings indicate decorative metal sizes and shapes; unless otherwise specifically indicated, design components and fabrications of gages and thicknesses to withstand anticipated loads.
- C. Rail Regulatory Requirements:
 - 1. Access: Comply with California Building Standards Code and Americans with Disabilities Act (ADA) Standards for railing design to provide access for persons with disabilities.
 - 2. Building Code: Comply with requirements of applicable building codes for railing design, except where more restrictive codes are specified.
- D. Aluminum: Provide alloy and temper recommended by aluminum producer or finisher for type and use and finish indicated; sized for strength and durability consistent with application involved.
 - 1. Materials: Comply with following minimum standards for aluminum.
 - a. Extruded Bar and Shapes: ASTM B221, 6063-T6.
 - b. Extruded Pipe and Tube: ASTM B429, 6063-T6.
 - c. Drawn Seamless Tube: ASTM B483, 6063-T832.
 - d. Plate and Sheet: ASTM B209, 6061-T6.
 - e. Die and Hand Forgings: ASTM B247, 6061-T6.
 - f. Castings: ASTM B26, 356.0-T6.
 - 2. Finish: Comply with following finishes as designated by NAAMM "Metal Finishes Manual" and referenced standards.
 - a. High Performance Organic Coating Finish: AA-C12C42R1x, prepared, pretreated, and coated with minimum two coat Kynar 500 or Hylar 5000 system; AAMA 2605; color as selected by Architect.
 - 1) Colors: Custom colors as selected by Architect.
- E. Concrete Inserts: Threaded or wedge type; galvanized ferrous castings, either malleable iron ASTM A47, or cast steel ASTM A27.
 - 1. Provide bolts, washers and shims as required, hot-dip galvanized, ASTM A153.

- F. Grout: Non-shrink meeting ASTM C1107, non-metallic, pre-mixed, factory-packaged, non-staining, non-corrosive; type specifically recommended by manufacturer as applicable to job condition.
- G. Brackets and Anchors: Unexposed plates, angles and supports may be steel; exposed items to match decorative metal type and finish.
- H. Fasteners: Type required for specific usage; provide concealed fasteners except where specifically approved; where exposed match type and finish of metal being fastened.
 - 1. Concealed Steel Fasteners: Hot-dipped galvanized minimum G90 where built into exterior walls or subject to high humidity.

2.2 FABRICATION

- A. Fabricate component connections to support specified design loads.
- B. Select materials for straightness, free of defects and irregularities.
 - 1. Exposed-to-view surfaces exhibiting pitting, seam marks, roller marks, "oil canning," stains, discolorations, and imperfections on finished units are not acceptable.
- C. Make exposed joints flush butt type, hairline joints where mechanically fastened; provide concealed connection devices with hidden fasteners.
 - 1. Fabricate continuous items with joints neatly fitted and secured.
 - 2. Ease exposed edges to approximate 1/32" uniform radius.
 - 3. manner to exclude water or provide weep holes where water could accumulate.
- D. Comply with AWS for recommended practices in welding each type of material; provide welds behind finished surfaces without distortion or discoloration on exposed side; dress exposed and contact surfaces.
- E. Exposed Mechanical Fastenings: Flush countersunk fasteners unobtrusively located, consistent with design of structure.
- F. Fit and shop assemble in largest practical sections for site delivery.
- G. Separate dissimilar materials with bituminous paint where concealed, with preformed separators, or similar method to prevent corrosion.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible; do not delay job progress; allow for trimming and fitting where necessary.

3.2 INSTALLATION

- A. Install decorative metal items in accordance with manufacturer's recommendations, installation instructions, and approved shop drawings.
- B. Install plumb, true and in correct relation to adjacent work, free from distortion or defects detrimental to appearance and performance.
- C. Prior to securing continuous items, adjust to ensure proper matching at butt joints and correct alignment throughout their length.
- D. Tolerances: Accurately align and locate components to column lines and floor levels; adjust work to conform to following tolerances.
 - 1. Plumb: 1/8" in 10'-0"; 1/4" in 40'-0"; non-cumulative.
 - 2. Level: 1/8" in 20'-0"; 1/4" in 40'-0"; non-cumulative.
 - 3. Alignment: Limit offset to 1/16" where surfaces are flush or less than 1/2" out of flush, and separated by less than 2" (by reveal or protruding work); otherwise limit offsets to 1/8".
 - 4. Location: 3/8" maximum deviation from measured theoretical location (any member, and location).
- E. Install sufficient anchorage devices to securely and rigidly fasten system to building.
- F. Provide anchors to be installed in other work, and setting details, in time for proper installation by trades concerned; verify correct placement.

3.3 CLEANING

- A. Clean decorative metal surfaces promptly after installation of components, exercising care to avoid damage of finish.
- B. Remove excess sealant compounds, dirt and other foreign substances.

3.4 PROTECTION

- A. Repair or replace items damaged or marred during construction.

END OF SECTION