

## **SECTION 102400**

### **Louver Grilles**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### **1.2 SUMMARY**

- A. Provide materials, labor, equipment and services necessary to furnish, deliver and install all work of this Section as shown on the drawings and as specified..
- B. The Drawings show the extent of the work, the dimensioned profile and depth of the sunshade to be provided.

**\*\*\*\* List by number and full title reference standards referred to in remainder of specification section. Delete non-applicable references. \*\*\*\***

- C. Related sections:
  - 1. Section 03 40 00 - Precast Concrete
  - 2. Section 04 20 00 - Unit Masonry
  - 3. Section 05 10 00 – Structural Metal Framing
  - 4. Section 06 10 00 – Rough Carpentry
  - 5. Section 07 42 13 – Metal Wall Panels
  - 6. Section 07 60 00 – Flashings and Sheet Metal
  - 7. Section 07 92 00 – Joint Sealants
  - 8. Section 09 91 00 - Painting

##### **1.3 REFERENCES**

**\*\*\*\* List by number and full title reference standards referred to in remainder of specification section. Delete non-applicable references. \*\*\*\***

- A. American Society for Testing and Materials (ASTM) Publications:
  - 1. AAMA 2604 – High Performance Organic Coatings on Architectural Extrusions and Panels.
  - 2. AAMA 2605 – High Performance Organic Coatings on Architectural Extrusions and Panels.
  - 3. AMCA 500-L – Test Methods for Louvers.
  - 4. AMCA 511 – Certified Ratings Program for Air Control Devices.
  - 5. ASCE 7 – Minimum Design Loads for Buildings and Other Structures
  - 6. ASTM B209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
  - 7. ASTM B221 – Standard Specifications for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
  - 8. ASTM D822 – Standard Practice for Filtered Open-Flame Carbon-Arc Exposure of Paint and Related Coatings.
  - 9. ASTM D4214 – Standard Test Method for Evaluating the Degree of Chalking of Exterior Paint Films.
  - 10. ASTM D2244 – Standard Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.

11. ASTM E330 – Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.

#### **1.4 SUBMITTALS**

- A. Product Data: Submit specifications, data and installation instructions for required products from the manufacturer of the grilles, including finish.
- B. Shop Drawings: Submit drawings for the system, indicating materials, construction, dimensions, accessories and installation details in plan, elevation, section and details as required.
- C. Samples: Submit one 12” x 12” sample to show sufficient detail of the grilles. Submit one color chip sample for the units with factory-applied coating.

#### **1.5 QUALITY ASSURANCE**

- A. The manufacturer shall have implemented the management of quality objectives, continual improvement and monitoring of customer satisfaction to assure that customer needs and expectations are met.

#### **1.6 WARRANTY**

- A. Manufacturer shall provide a standard limited warranty for louver systems for a period of 1 year from date of installation, no more than 18 months after shipment from manufacturing plant. When notified in writing from the Owner of a manufacturing defect, manufacturer shall promptly correct deficiencies without cost to the owner.
- B. Manufacturer shall provide 20 year limited warranty for fluoropolymer-based finish on aluminum substrates.
  1. Finish Coating shall not peel, blister, chip, crack, or check.
  2. Chalking, fading, or erosion of finish when measured by the following tests:
    - a. Finish coating shall not chalk in excess of 8 numerical ratings when measured in accordance with ASTM D4214.
    - b. Finish coating shall not change color or fade in excess of 5 NBS units as determined by ASTM D2244 and ASTM D822 Finish coating shall not erode at a rate in excess of .01 mils/year confirmed by Florida test samples.

## **PART 2 - PRODUCTS**

### **2.1 ACCEPTABLE MANUFACTURERS**

- A. OGi Architectural Metal Solutions (800.321.9800) **LG SERIES** fabricated louver grilles of required components, or equal as approved by architect.
- B. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01 25 13 - Product Substitution Procedures.

### **2.2 MATERIALS**

- A. Aluminum Extrusions: Alloy and temper recommended by sunshade manufacturer for strength, corrosion resistance, and application of required finish and not less than 0.07” wall thickness at any location for the main frame and complying with ASTM b211: 6063-T6, 6063-T52 or 6061-T6 alloy and temper.
- B. Sheet aluminum: ASTM B209 6063, Temper T-6.
- C. Clip Angles: Structural grade aluminum.

- C. Fasteners: Fasteners shall be aluminum or stainless steel. Provide types, gauges and lengths to suit unit installation conditions.
- D. Anchors and inserts: Use non-Ferrous metal, stainless steel or hot-dipped galvanized anchors and inserts for installation and elsewhere as required for carrion resistance. Use stainless steel or lead expansion bolt devices for drill-in place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

### **2.3 GENERAL FABRICATION**

- A. Provide LG80 screen and accessories of design, and arrangement as indicated or as required for optimum performance with respect to strength, durability and uniform appearance.
- B. Include anchors and other applicable accessories as needed for complete assembly.

### **2.4 LOUVER GRILLE CONSTRUCTION**

- A. Description: LG80 decorative grille as manufactured by OGi Architectural Metal Solutions shall be fabricated by assembling solid aluminum cross bars through square holes in extruded aluminum profiles that are then permanently locked in place by swaging.
  - 1. LG series Louver Profile bars swage locked at 1-7/8" O.C. to manufacturer standard cross bars.
  - 2. Cross bars per manufacturer standards at 4" O.C., unless otherwise noted.
  - 3. Trim end conditions as noted on drawings.

### **2.5 FACTORY FINISH**

- A. General: Comply with NAAMM 'Metal Finishes Manual' for finish designations and application recommendations, except as otherwise indicated. Apply finishes in factory after products assembly. Protect finishes on exposed surfaces prior to shipment. Remove scratches and blemishes from exposed surfaces which will be visible after completing finishing process.

Provide color as indicated or, if not otherwise indicated, as selected by architect from standard color range of PVDF or super-durable polyester powder coatings from selected vendor.

**\*\*\*\* List by number and full title reference standards referred to in remainder of specification section. Delete non-applicable references. \*\*\*\***

- B. Fluorocarbon Coating: Inhibitive thermo-cured primer, 0.2 mil minimum dry film thickness, and thermo-cured fluorocarbon coating.
- C. Super-durable Polyester Powder Coating: Electro-static applied and thermo-cured, 2-3 mil dry film thickness polyester powder coating.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Prior to fabrication, field-verify all required dimensions.
- B. Examine openings to receive the work. Do not proceed until any unsatisfactory conditions have been corrected.

### **3.2 INSTALLATION**

- A. Install decorative grilles in accordance with manufacturer's installation instructions and approved shop drawings.
- B. Verify dimensions of supporting structure at the site by accurate field measurements so that the work will be accurately designed, fabricated and fitted to the structure.
- C. Anchor grilles to building substructure as indicated on architectural drawings.
- D. Erection Tolerances:
  - 1. Variation from level: +/- 1/8" maximum in any column to column space or 20'-0" runs, non-cumulative.
  - 2. Offsets in end-to-end or edge-to-edge alignment of consecutive members 1/32".
- E. Corners: Miter grille frame assembly at outside corner as shown on drawings if required.
- F. Cut and trim component parts during erection only with the approval of the manufacturer and in accordance with his recommendations. Restore finish completely. Remove and replace members where cutting and trimming has impaired the strength or appearance of the assembly as directed.
- G. Do not erect warped, bowed, deformed or otherwise damaged or defaced members. Remove and replace any members damaged in the erection process as directed.
- H. Set units level, plumb and true to line, with uniform joints.

**END OF SECTION 107113**