

## **SECTION 07 4213**

### **METAL WALL PANELS**

#### **PART 1 GENERAL**

##### **1.1 SECTION INCLUDES**

- A. Manufactured metal panels for walls, soffits and screens, with insulation, related flashings, and accessory components.

##### **1.2 RELATED REQUIREMENTS**

- A. Section 05 4000 - Cold-Formed Metal Framing: Wall panel substrate.
- B. Section 07 2500 - Weather Barriers: Weather barrier under wall panels.
- C. Section 07 9200 - Joint Sealants: Sealing joints between metal wall panel system and adjacent construction.
- D. Section 06 1000 - Rough Carpentry: Screen panel substrate.

##### **1.3 REFERENCE STANDARDS**

- A. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document); 2015.
- B. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- C. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate [Metric]; 2014.

##### **1.4 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate dimensions, layout, joints, construction details, and methods of anchorage. Document compliance with design loads.
- C. Samples:
  - 1. Color Selection: Provide metal chips, finished in Manufacturer's full range of colors, for Architect to make color selection.
  - 2. Submit two samples of wall panel and soffit panel, 12 inch (305 mm) by 12 inch (305 mm) in size illustrating finish sheen, and texture.

##### **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
- B. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.
- C. Prevent contact with materials that may cause discoloration or staining of products.

##### **1.6 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a 20 year period after the Date of Substantial Completion for degradation of panel finish, including color fading caused by exposure to weather.

- C. Correct defective work within a five year period after Date of Substantial Completion, including defects in water tightness and integrity of seals.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Metal Wall Panels - Concealed Fasteners:
  - 1. Dimensional Metals, Inc.; HWP12: [www.dmimetals.com](http://www.dmimetals.com).
  - 2. Firestone Building Products; Delta CFP-12F: [www.firestonebpco.com](http://www.firestonebpco.com).
  - 3. Merchant & Evans, Inc.; Expression Series, EX120C: [www.ziprib.com](http://www.ziprib.com).
  - 4. Petersen Aluminum Corporation; Precision Series HWP Wall Panels, HWP 12: [www.pac-clad.com/#sle](http://www.pac-clad.com/#sle).
  - 5. Substitutions: See Section 01 6000 - Product Requirements.
- B. Metal Soffit Panels, solid and vented as indicated on drawings: (Allow for 10% of soffit panels to be vented.)
  - 1. Dimensional Metals, Inc.; FP10, 12 inch: [www.dmimetals.com](http://www.dmimetals.com).
  - 2. Firestone Building Products; UC-500 Flush, 12 inch : [www.firestonebpco.com](http://www.firestonebpco.com).
  - 3. Mercant & Evans, Inc.; Flush-Lock Series 311: [www.ziprib.com](http://www.ziprib.com).
  - 4. Petersen Aluminum Corporation; Flush Panels, 12 inch: [www.pac-clad.com](http://www.pac-clad.com).
  - 5. Substitutions: See Section 01 6000 - Product Requirements.
- C. Metal Screen Panels, perforated:
  - 1. Basis of Design Product: 7/8" Corrugated Exposed Fastener Panels, perforated, manufactured by Pac Clad.
  - 2. Other Manufacturers:
    - a. Dimensional Metals, Inc., [www.dimensionalmetals.com](http://www.dimensionalmetals.com).
    - b. Firestone Building Products, [www.firestonebpco.com](http://www.firestonebpco.com).
    - c. Merchant & Evans, Inc., [www.ziprib.com](http://www.ziprib.com).
  - 3. Substitutions: See Section 01 6000 - Product Requirements.

### **2.2 MANUFACTURED METAL PANELS**

- A. Wall Panel System: Factory fabricated prefinished metal panel system, site assembled.
  - 1. Provide exterior panels, soffit panels, subgirt framing assembly, and screen panels.
  - 2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
  - 3. Design Pressure: In accordance with with project structural drawings.
  - 4. Maximum Allowable Deflection of Panel: 1/180 of span.
  - 5. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
  - 6. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.

7. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.

B. Exterior Wall Panels:

1. Profile: Vertical; style as indicated.
2. Side Seams: Double-interlocked, tight-fitting, sealed with continuous gaskets.
3. Material: Precoated aluminum sheet, 18 gage, 0.0403 inch (1.02 mm) minimum thickness.
4. Panel Width: 12 inches (305 mm).
5. Panel Length: As indicated on drawings.
6. Color: As selected by Architect from manufacturer's full line of solid colors. Allow for two colors as indicated on drawings.

C. Soffit Panels:

1. Profile: Flush.
2. Panel Width: 12 inches.
3. Material: Precoated aluminum sheet, 20 gage, 0.032 inch (0.81 mm) minimum thickness.
4. Color: As selected by Architect from manufacturer's full line. Allow for two colors as indicated on drawings.

D. Screen Panels:

1. Profile: 7/8 Inch Corrugated.
2. Panel Width: 39-3/4 inch.
3. Material: Aluminum sheet, 0.040 inch minimum thickness, perforated with 1/4 inch holes on 3/8 inch staggered centers, 40% open area.
4. Finish: Powder coat corrugated panels after after perforation, color to be selected by Architect from manufacturer's full range. Powder coat subgirt framing to match.

E. Subgirt Framing Assembly:

1. Hat or Zee profile, 7/8 inch thick aluminum or as indicated on drawings, to attach panel system to building.

F. Trim, Closure Pieces, Caps, Flashings, and Infills: Same material, thickness and finish as exterior sheets; brake formed to required profiles.

G. Anchors: Stainless steel.

## 2.3 MATERIALS

- A. Precoated Aluminum Sheet: ASTM B209 (ASTM B209M), smooth surface texture; continuous-coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.

- B. Insulation: Mineral Fiber type specified in Section 07 2100.

## 2.4 FINISHES

- A. Exposed Surface Finish: Panel manufacturer's standard polyvinylidene fluoride (PVDF) coating, top coat over epoxy primer.

- B. Panel Backside Finish: Panel manufacturer's standard siliconized polyester wash coat.

## 2.5 ACCESSORIES

- A. Gaskets: Manufacturer's standard type suitable for use with system, permanently resilient; ultraviolet and ozone resistant.
- B. Concealed Sealants: Non-curing butyl sealant or tape sealant.
- C. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
- D. Fasteners: Manufacturer's standard type to suit application; stainless steel with galvanic barrier coating.
  - 1. Metal-to-Metal Fasteners: Self-drilling, self-tapping screws.
- E. Field Touch-up Paint: As recommended by panel manufacturer.

## **PART 3 EXECUTION**

### 3.1 EXAMINATION

- A. Verify that building framing members are ready to receive panels.
- B. Verify that weather barrier has been installed over substrate completely and correctly.

### 3.2 PREPARATION

- A. Install subgirts perpendicular to panel length, securely fastened to substrates and shimmed and leveled to uniform plane. Space at intervals indicated.

### 3.3 INSTALLATION

- A. Install panels on walls and soffits in accordance with manufacturer's instructions.
- B. Install screen panels and subgirt assembly on wood post frame as indicated on drawings.
- C. Fasten panels to structural supports; aligned, level, and plumb.
- D. Locate joints over supports.
- E. Provide expansion joints where indicated.
- F. Use concealed fasteners unless otherwise approved by Architect.
- G. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

### 3.4 TOLERANCES

- A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch (1.6 mm).
- B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4 inch (6.4 mm).

### 3.5 CLEANING

- A. Remove site cuttings from finish surfaces.
- B. Remove protective material from wall panel surfaces.
- C. Upon completion of installation, thoroughly clean prefinished aluminum surfaces in accordance with AAMA 609 & 610.

## **END OF SECTION**