

**SECTION 07 41 13  
METAL ROOF PANELS**

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**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Metal roof panel system of preformed steel panels.

**1.2 SUBMITTALS**

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Storage and handling requirements and recommendations.
  - 2. Installation methods.
  - 3. Specimen warranty.
- B. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
  - 1. Show work to be field-fabricated or field-assembled.
- C. Selection Samples: For each roofing system specified, submit color chips representing manufacturer's full range of available colors and patterns.
- D. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

**1.3 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section and with at least three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

**1.4 DELIVERY, STORAGE, AND HANDLING**

- A. Provide strippable plastic protection on prefinished roofing panels for removal after installation.
- B. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

**1.5 WARRANTY**

- A. Finish Warranty: Provide 5-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking. Complete forms in Owner's name and register with warrantor.

**PART 2 PRODUCTS**

**2.1 MANUFACTURERS**

- A. Structural Metal Roof Panel Manufacturers:
  - 1. ATAS International, Inc., Dutch Seam Panel.
  - 2. Metal Roofing Systems, Inc.
  - 3. Or approved equal.

**2.2 PERFORMANCE REQUIREMENTS**

- A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
  - 1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/180 of span length(L) when tested in accordance with ASTM E1592.

- 1           2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
- 2           3. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement
- 3           over ambient temperature range of 100 degrees F (56 degrees C).

4   **2.3 STRUCTURAL METAL ROOF PANELS**

- 5    A. General: Provide complete engineered system complying with specified requirements and capable of remaining
- 6    weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing
- 7    system.
- 8    B. Structural Metal Panels: Factory-formed panels with factory-applied finish.
- 9      1. Steel Panels:
- 10       a. Zinc-coated SS (structural steel) sheet complying with ASTM A653/A653M; minimum G60 (Z180)
- 11       galvanizing.
- 12       b. Steel Thickness: Minimum 24 gauge, 0.024 inch (0.61 mm).
- 13      2. Length: Full length of roof slope, without lapped horizontal joints.
- 14      3. Width: Maximum panel coverage of 19 1/4 inches.

15   **2.4 ATTACHMENT SYSTEM**

- 16   A. Concealed System: Provide manufacturer's standard stainless steel concealed anchor clips designed for specific
- 17   roofing system and engineered to meet performance requirements, including anticipated thermal movement.

18   **2.5 FINISHES**

- 19   A. Fluoropolymer Coil Coating System: Polyvinylidene fluoride (PVDF) multi-coat superior performing organic coatings
- 20   system complying with AAMA 2605, including at least 70 percent PVDF resin, and at least 80 percent of coil coated
- 21   metal surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch (0.023 mm); color and gloss as
- 22   selected by Architect from manufacturer's standard line.

23   **2.6 ACCESSORIES**

- 24   A. Miscellaneous Sheet Metal Items: Provide flashings, trim, moldings, closure strips, preformed crickets, caps, and
- 25   equipment curbs of the same material, thickness, and finish as used for the roofing panels. Items completely
- 26   concealed after installation may optionally be made of stainless steel.
- 27   B. Sealants:
- 28      1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
- 29      2. Concealed Sealant: Non-curing butyl sealant or tape sealant.

30   **PART 3 EXECUTION**

31   **3.1 PREPARATION**

- 32   A. Remove protective film from surface of roof panels immediately prior to installation; strip film carefully to avoid
- 33   damage to prefinished surfaces.
- 34   B. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other
- 35   permanent method approved by metal roof panel manufacturer.

36   **3.2 INSTALLATION**

- 37   A. Overall: Install roofing system in accordance with approved shop drawings and metal roof panel manufacturer's
- 38   instructions and recommendations, as applicable to specific project conditions; securely anchor components of
- 39   roofing system in place allowing for thermal and structural movement.
- 40      1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by
- 41      manufacturer for specific circumstances.
- 42      2. Minimize field cutting of panels. Where field cutting is required, use methods that will not distort panel
- 43      profiles. Use of torches for field cutting is prohibited.
- 44   B. Accessories: Install necessary components that are required for complete roofing assembly, including flashings,
- 45   trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar
- 46   roof accessory items.

- 1 C. Roof Panels: Install metal roof panels in accordance with manufacturer's installation instructions, minimizing  
2 transverse joints except at junction with penetrations.

3 **3.3 CLEANING**

- 4 A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer,  
5 handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases,  
6 waves, scratch marks, or other damage to the finish.

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**END OF SECTION**

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**SECTION 10 73 13  
ALUMINUM CANOPIES**

3 **PART 1 - GENERAL**

4 **1.1 SUMMARY**

- 5 A. Section Includes:  
6 1. Building supported, pre-engineered metal canopies including fascia channels, decking, tension rods, and  
7 attachment hardware.

8 **1.2 SUBMITTALS**

- 9 A. Shop Drawings: Indicate system components, dimensions, attachments, and accessories.  
10 B. Samples.  
11 C. Sustainable Design Submittals:  
12 1. Documentation indicating percentage by weight of post consumer and pre consumer recycled content.  
13 Include statement indicating cost for each product having recycled content.  
14 2. Indicate location of product manufacturer, distance from manufacturer to project site, and mill test report for  
15 origination of materials.

16 **1.3 QUALITY ASSURANCE**

- 17 A. Installer Qualifications: Minimum 5 years experience in installation of MASA products.

18 **PART 2 - PRODUCTS**

19 **2.1 MANUFACTURERS**

- 20 A. MASA Architectural Canopies, Extrudeck Series – Basis-of-design.  
21 B. Baraboo Awning, Architectural Canopy System (BA-ACS).  
22 C. Or approved equal.

23 **2.2 MATERIALS**

- 24 A. Aluminum Extrusions  
25 1. ASTM B221 and ASTM B429 6063-T5 alloy and temper.  
26 B. Hardware:  
27 1. All fasteners shall be stainless steel or zinc coated for corrosion resistance.

28 **2.3 COMPONENTS**

- 29 A. Framing:  
30 1. Type: Extruded aluminum "J" channel fascia.  
31 2. Size: 8 inch by 1/8 inch.  
32 B. Canopy Supports: Extruded Aluminum Canopy Support "I" Beam.  
33 C. Decking: 3 inch by 6 inch by 0.9 inch interlocking extruded aluminum flat soffit decking.  
34 D. Attachment: 1.05 inch diameter steel hanger rod, finished to match canopy.  
35 E. Other Components: Other components as indicated or as required for system attachment and performance.

36 **2.4 ACCESSORIES**

- 37 A. Diverter scupper.

1 **2.5**

**FABRICATION**

- 2 A. Fabricate canopy system in accordance with approved Shop Drawings.  
3 B. Kit canopies to be mechanically assembled with shear stress strength as per engineering. Pre-assembled canopies  
4 are shop welded by manufacturer approved personnel.

5 **2.6**

**FINISHES**

- 6 A. Aluminum:  
7 1. Pre-Treatment: Pre-treat to ASTM D1730 type B, Method 5 using a multi stage chromate process or an  
8 approved chrome-free pretreatment process approved by powder coating manufacturer for optimized weather  
9 resistance.  
10 2. Finish Coat: AAMA 2603 Thermosetting polyester resin-based powder.  
11 3. Source: Tiger Drylac powder coating or equivalent.  
12 4. Color: As selected by Architect from MASA full color range.

13 **PART 3 - EXECUTION**

14 **3.1**

**FIELD DIMENSIONS**

- 15 A. Field verify dimensions of supporting structure at site of installation prior to fabrication.

16 **3.2**

**INSTALLATION**

- 17 A. Install in accordance with manufacturer's instructions and approved Shop Drawings.  
18 B. Install components plumb and level, in proper plane, free from warp and twist.  
19 C. Anchor system to building components; provide adequate clearance for movement caused by thermal expansion  
20 and contraction and wind load.

21 **3.3**

**ADJUSTING**

- 22 A. Touch up minor scratches and abrasions on finished surfaces to match original finish.  
23 B. Clean with mild, non-abrasive solution and a cotton cloth under low pressure.  
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**END OF SECTION**

**SECTION 11 30 13  
RESIDENTIAL APPLIANCES**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Kitchen appliances.

**1.2 RELATED REQUIREMENTS**

- A. Section 22 11 16 – Domestic Water Piping: Plumbing connections for appliances.
- B. Section 26 27 26 - Wiring Devices: Electrical connections for appliances.

**1.3 SUBMITTALS**

- A. Product Data: Manufacturer's data indicating dimensions, capacity, and operating features of each piece of residential equipment specified.

**PART 2 PRODUCTS**

**2.1 KITCHEN APPLIANCES**

- A. Provide Equipment Eligible for Energy Star Rating: Energy Star Rated.
- B. Manufacturers:
  - 1. Frigidaire Home Products.
  - 2. GE Appliances.
  - 3. Whirlpool Corp.
- C. Refrigerator: Free-standing, bottom-mounted freezer, and frost-free.
  - 1. Capacity: Total minimum storage of 20 cubic ft (0.57 cu m); minimum 15 percent freezer capacity.
  - 2. Features: Include glass shelves, automatic icemaker, light in freezer compartment, and in-door water and ice dispenser.
  - 3. Exterior Finish: As selected by Architect from manufacturer's full range.
- D. Refrigerator: Free-standing, undercounter.
  - 1. Exterior Finish: As selected by Architect from manufacturer's full range.
- E. Waste Disposer: Standard type, overload protection, direct wired, dishwasher connection, drain elbow, drain connector, and sound reduction features.
  - 1. Power: 1/2 HP.
  - 2. Capacity: Large.
  - 3. Controls: Wall switch.
- F. Dishwasher: Undercounter.
  - 1. Wash Levels: Three (3).
  - 2. Features: Include rinse aid dispenser, optional no-heat dry, and optional water temperature boost.
  - 3. Exterior Finish: As selected by Architect from manufacturer's full range.

**PART 3 EXECUTION**

**3.1 EXAMINATION**

- A. Verify utility rough-ins are provided and correctly located.

**3.2 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Anchor built-in equipment in place.

**3.3 ADJUSTING**

- A. Adjust equipment to provide efficient operation.

**3.4 CLEANING**

- A. Remove packing materials from equipment and properly discard.
- B. Wash and clean equipment.

**END OF SECTION**