

SECTION 07 42 13

Metal Wall Panels

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes
  - 1. Factory-formed: exposed-fastener, metal wall panels.
  - 2. Finish must conform to the "Metal Construction Association Certified Premium Painted™" designation

1.3 RELATED SECTIONS

- A. Division 5 Section "Cold Formed Metal Framing"
- B. Division 7 Section "Sheet Metal Flashing and Trim"

1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide metal wall panel assemblies that comply with performance requirements specified as determined by testing manufacturers' standard assemblies similar to those indicated for this Project, by a qualified testing and inspecting agency.
- B. System shall meet performance criteria as installed. Either test data or signed and sealed engineering calculations shall document the performance of the panel system to meet design loads required.
- C. Maximum Deflection under Design Loads:
  - 1. 1/180 of span or

1.5 SUBMITTALS

- A. Product Data: Manufacturer's current product specifications and installation instructions.
- B. Shop Drawings: Include small-scale elevations, as required. Show details of trim, fastening and anchorage methods, terminations, and penetrations.
- C. Samples:
  - 1. Selection Samples: Submit actual metal chips with selected color available for Architect's approval.
  - 2. Verification Samples: Submit two samples of each type of metal panel required, not less than 12 inches (305mm), and illustrating

finished panel profile.

D. Product Test Reports: Submit copies of test reports or load tables verifying performance capability of panel system:

1. Metal Wall Panels: Include reports for UL 790/ASTM E 108, ASTM E 283, ASTM E 331, Field Tested, UL 2218, ASTM E 84 Flame Spread Rating, Paint Performance Tests.
2. Fastener test and pull-out calculations
3. Load tables
4. Maintenance Data

1.6 QUALITY ASSURANCE

- A. Installer: Company specializing in the type of work required for this project, with not less than 2 years of documented experience.
- B. Pre-Installation meeting: Convene meeting not less than one week prior to beginning installation between general contractor, installing contractor, owner's representative and manufacturer.

1.7 DELIVERY, STORAGE & HANDLING

- A. Do not deliver materials of this section to project site until suitable facilities for storage and protection are available.
- B. Protect materials from damage during transit and at project site. Store under cover, but sloped to provide positive drainage. Do not expose materials with strippable protective film to direct sunlight or extreme heat.
- C. Do not allow storage of other materials or allow staging of other work on installed metal panel system.
- D. Upon receipt of delivery of metal panel system, and prior to signing the delivery ticket, the installer is to examine each shipment for damage and for completion of the consignment.

1.8 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal cladding panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
  1. Fluoropolymer Finish Warranty Period: 30 years from date of Substantial Completion.
- B. Special Installer's Warranty: Specified form in which Wall Installer agrees to repair or replace components of custom-fabricated sheet metal wall that fail in materials or workmanship within 5 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer's Qualifications: All panels are to be factory formed and packaged per job requirements.
  - 1. Manufacturer shall have a minimum of ten (10) years' experience in the factory fabrication of metal wall panels.
  - 2. Manufacturer must be certified to ISO 9001:2000.
- B. Specification is based upon the products of ATAS International, Inc. These substitution requests must meet specifications and must be submitted a minimum of ten (10) days prior to date of bid.
- C. Secondary framing members as required for load criteria and wind requirements.

2.2 EXPOSED-FASTENER, LAP-SEAM METAL WALL PANELS

- A. Ribbed-Profile, Exposed-Fastener Metal Wall Panels
  - 1. Basis-of Design Product: ATAS International, Inc.; Belvedere™ BWR360
  - 2. Available Manufacturers:
    - a. ATAS International, Inc.
  - 3. Profile: Ribbed as indicated on drawings.
  - 4. Material: Aluminum - .050 thick
    - a. Texture: Smooth
    - b. Finish: KYNAR 5000® PDVF or HYLAR 5000® Finish
    - c. Color: Champagne (31) PREMIUM COLOR
  - 4. Panel Coverage: 36"
  - 5. Panel Height: 1-1/2"
  - 6. Panel Application Orientation: Horizontal.
  - 7. Major Rib Spacing: 7.2"

2.3 FABRICATION

- A. Panels:
  - 1. Panels to be Factory fabricated in a controlled environment.
  - 2. Panels to be tension leveled during roll forming process.
  - 3. Panels to be produced in longest lengths possible, except when modular units are utilized.
- B. Form all components true to shape, accurate in size, square and free from distortion or defects. Cut panels to precise lengths indicated on approved shop drawings or as required by field conditions.
- C. Accessories: Factory fabricates trim and flashing components in standard 12-foot lengths.

1. Form panel lines, breaks, and angles to be sharp and true, with surfaces free from warp and buckle.
2. Fabricate wall panels as required to maintain fabrication tolerances and to withstand design loads.
- D. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- E. Panels, fabrication and installation shall meet the requirements of the Metal Construction Association Preformed Metal Wall Guidelines

### PART 3 - EXECUTION

#### 3.1 PREPARATION

##### A. Field Measurements

1. Field measurements shall be taken by the installer for verification of dimensional correctness in relationship to original plans.

##### B. Delivery, Storage and Handling

1. Do not deliver materials of this section to project site until suitable facilities for storage and protection are available.
2. Protect materials from damage during transit and at project site. Store under cover, but sloped to provide positive drainage. Do not expose materials with strippable protective film to direct sunlight or extreme heat.
3. Do not allow storage of other materials or allow staging of other work on installed metal panel system.
4. Upon receipt of delivery of metal panel system, and prior to signing the delivery ticket, the installer is to examine each shipment or damage and for completion of the consignment.

##### C. Sequencing and Scheduling

1. Installer shall coordinate with general contractor as to scheduled delivery time after receipt of field verified bill of material by manufacturer as it relates to actual project scheduling.

#### 3.2 METAL WALL PANEL INSTALLATION, GENERAL

- ##### A. General:
- Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts and subgirts, unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Field cutting of metal wall panels by torch is not permitted.
  2. Rigidly fasten metal wall panels and allow for thermal expansion and contraction as required by the panel manufacturer. Pre-drill panels as required.
  3. Install screw fasteners.
  4. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
  5. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated or, if not indicated, as necessary for waterproofing and material compatibility.
- B. Fasteners: Use fasteners of size and length as required for compatibility with substrate.
1. Aluminum Wall Panels: Use stainless-steel fasteners.
  2. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal wall panel manufacturer.
  3. Coat back side of aluminum wall panels with bituminous coating where wall panels will contact wood, ferrous metal, or cementitious construction.
- C. Joint Sealers: joint fillers, and sealants where indicated.

### 3.3 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building provide for thermal expansion. Coordinate installation with other components.
1. Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual" and NRCA Waterproofing Manual. Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams as indicated.
  2. Panels, fabrication and installation shall meet the requirements of the Metal Construction Association Preformed Metal Wall Guidelines.

B. Coordinate with installation of:

1. Cold Formed Metal Framing, as noted in Section 5
2. Sheet Metal Trim, as noted in Section 7

3.4 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal wall panels are installed. Maintain in a clean condition during construction.

B. Protection:

1. Provide as required to assure completed work of this section will be without damage or deterioration at date of substantial completion.

C. Touch up minor abrasions with matching paint provided by panel manufacturer. Remove and replace panels that cannot be satisfactorily touched up. See Metal Construction Association Technical Bulletin #95-1051.

D. Sweep and remove chips, shavings and dust from roof on a daily basis during installation period. Leave installed work clean, free from grease, finger marks and stains. Remove all protective masking from material immediately after installation of product.

E. Upon completion of installation, remove scraps and debris from project site.

END OF SECTION