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SECTION 07 42 13.26
PERFORATED METAL WALL PANELS

Morin Metal Panels
Concealed Fastener Perforated Metal Wall Panels

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Concealed fastener single skin perforated metal wall panels used as a screen wall.
- B. *[Concealed fastener soffit panels.]*
- C. Accessories including fasteners, perimeter trim and penetration treatments.

1.2 REFERENCES

A. ASTM International

- 1. ASTM A240; Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
- 2. ASTM A641; Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
- 3. ASTM A653; Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc Iron Alloy Coated (Galvannealed) by the Hot Dip Process.
- 4. ASTM A666; Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- 5. ASTM B209; Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- 6. ASTM B370; Standard Specification for Copper Sheet and Strip for Building Construction.
- 7. ASTM C645 – Standard Test Method for Nonstructural Steel Framing Members.
- 8. ASTM E1592; Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.

B. German Institute for Standardization (DIN)

- 1. DIN EN988; Specifications for zinc and zinc alloy rolled flat products for building.
- 2. DIN EN1179; Zinc and Zinc alloys – Primary Zinc.

1.3 SUBMITTALS

- A. Refer to Section [01 33 00 Submittal Procedures] [Insert section number and title].
- B. Product Data: Submit manufacturer current technical literature for each type of product.
- C. Delegated Design: Design metal wall panel assembly, submit comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- D. Shop Drawings - Submit detailed drawings showing:
 - 1. Profile
 - 2. Gauge of panel
 - 3. Location, layout and dimensions of panels
 - 4. Location and type of fasteners
 - 5. Shape and method of attachment of all trim
 - 6. Locations and type of sealants
 - 7. Installation sequence.
 - 8. Other details as may be required for a weathertight installation
- E. Samples: Provide nominal 3 x 5 inch of each color indicated. [Provide panel width by 10 inches long minimum] [Insert size].
- F. LEED Submittals:
 - 1. Material and Resources (MR)
 - a. Product Certificates for Credit [MR 4] [MR 4.1[and Credit MR 4.2]]: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content.
- G. Quality Assurance Submittals
 - 1. Manufacturer Erection Instructions: Provide manufacturer's written installation instructions including proper material storage, material handling, installation sequence, panel location(s), and attachment methods, details and required trim and accessories.
- H. Closeout Submittals
 - 1. Refer to Section [01 78 00 Closeout Submittals] [Insert section number and title].

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Pre-installation meeting: Conduct a pre-installation meeting at the job site attended by Owner, Architect, Manufacturer's Technical Representative, Panel Installer, and Contractors of related trades. Coordinate structural support requirements in relation to wall panel system, installation of any separate air/water barriers, treatment of fenestration, and other requirements specific to the project.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall have a minimum of ten (10) years experience in the production of metal wall panels. Manufacturer shall demonstrate past experience with examples of projects of similar type and exposure.
- B. Installer Qualifications: Installer shall be authorized by the manufacturer and the work shall be supervised by a person having successfully completed a manufacturer training seminar regarding proper installation of the specified product.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Refer to Section [01 60 00 Product Requirements] [Insert section number and title].
- B. Deliver panel materials and components in manufacturer's original, unopened, undamaged packaging with identification labels intact.
- C. Store wall panel materials on dry, level, firm, and clean surface. Elevate one end of bundle to allow moisture run-off, cover and ventilate to allow air to circulate and moisture to escape.

1.7 WARRANTY

- A. Refer to Section [01 78 36 Warranties] [Insert section number and title].
- B. Material Warranty: Standard form in which manufacturer agrees to repair or replace items that fail in materials or workmanship within specified warranty period. The items covered by the warranty include structural performance.
 - 1. Warranty Period: Two (2) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Morin; a Kingspan Group Company; 685 Middle Street, Bristol, Connecticut 06010; 1-800-640-9501 (Toll Free); (www.morincorp.com).
- B. Basis of Design: "Concealed Fastener Perforated Metal Wall Panels".
- C. Substitution Limitations:
 - 1. Submit written request for approval of substitutions to the Architect [a minimum of [14] days prior to the date for receipt of bids] [Insert time period]. Include the following information:
 - a. Name of the materials and description of the proposed substitute.
 - b. Drawings, cut sheets, performance and test data.
 - c. List of projects similar scope and photographs of existing installations.
 - d. Other information necessary for evaluation.
 - 2. After evaluation by Architect, approval will be issued via addendum. No verbal approval will be given.
 - 3. Substitutions following award of contract are not allowed except as stipulated in Division 01 – General Requirements.

2.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal wall panel systems designed to resist the following. Testing shall be done based on ASTM E1592:
 - 1. Wind Loads: Determine loads based on the following minimum design wind pressures:
 - a. Uniform pressure [Insert design wind pressure] [as indicated on Drawings].
 - 2. Deflection Limits: Perforated metal wall panel assemblies shall withstand horizontal deflections no greater than [L/90] [Insert deflection] of the span.

2.3 WALL PANEL MATERIALS

A. Aluminum:

1. Coil Stock meeting ASTM B209; Alloy and temper as required for forming operations.
2. Gauge: [0.040] [0.050] inch.

B. Stainless Steel Sheet:

1. ASTM A240 or ASTM A666, Type 304, dead soft, fully annealed.
2. Gauge: [22] [20]

C. Copper:

1. Sheet stock meeting ASTM B370, cold-rolled, H00 or H01 temper.
2. Thickness: 20 ounce per square foot.

D. Rheinzink Sheets:

1. Sheet stock meeting DIN EN1179, consisting of Zinc with copper and titanium additives in accordance with DIN EN988.
2. Thickness: 1.0 mm

2.4 CONCEALED FASTENER WALL PANELS

A. Wall Panel Description:

1. Panel Width: 12 inches.
2. Profile: [A-12] [F-12] [F-12-S] [N-12] [AA-12] [T-12] [U-12] [W-12] [as indicated on drawings]
3. Panel Width: 16 inches.
4. Profile: [F-16] [as indicated on drawings]
5. Panel Width: 18 inches.
6. Profile: [F-18] [as indicated on drawings]
7. Panel Width: 22 inches.
8. Profile: [F-22] [as indicated on drawings]
9. Panel Width: 24 inches.
10. Profile: [F-24] [as indicated on drawings]
11. Profile thickness: 1 ½ thick.
12. Panel joint: Tongue and groove interlock joint.
13. Texture: Perforated.
 - a. [Perforation Pattern; 1/8 inch holes: [40 percent open area – 3/16 inch hole spacing] [30 percent open area – 7/32 inch hole spacing] [23 percent open

area – 1/4 inch hole spacing] [10 percent open area – 3/16 inch hole spacing]]

- b. [Perforation Pattern; 3/16 inch holes: 33 percent open area – 5/16 inch hole spacing]
- c. [Perforation Pattern; 1/4 inch holes: 23 percent open area – 1/2 inch hole spacing]
- d. [Perforation Pattern; 3/8 inch holes: 40 percent open area – 9/16 inch hole spacing]

2.5 ACCESSORIES

- A. Wall panel accessories: Provide accessories as required for a complete installation. Accessories shall be as indicated on approved shop drawings and per manufacturer's approved standard details.
 - 1. Metal Profile Closure Strips: Shall be fabricated from same gauge, material and finish as metal panel.
 - 2. Swedged ends: Factory crimped end laps.
- B. Trim:
 - 1. Fabricate trim from same material and material thickness as wall panels. Finish to match metal wall panels.
 - 2. Locations include, but are not limited to the following: Drips, sills, jambs, corners, framed openings, parapet caps, reveals and fillers.
 - 3. [Trim shall be provided under Section 07 62 00 - Sheet Metal Flashing and Trim".]
- C. Metal Framing:
 - 1. General: ASTM C645, cold-formed metallic-coated steel sheet, [ASTM A653, G40 hot-dip galvanized] [ASTM A653, G60 hot-dip galvanized].
 - 2. Hat-Shaped, Rigid Furring Channels:
 - a. Nominal Thickness: [As indicated on Drawings] [0.025 inch] [0.040 inch] [Insert thickness].
 - b. Depth: [As indicated on Drawings] [7/8 inch] [1-1/2 inches] [Insert depth].
 - 3. Cold-Rolled Furring Channels: Minimum 1/2-inch wide flange.
 - a. Nominal Thickness: [As indicated on Drawings] [0.064 inch] [Insert thickness].
 - b. Depth: [As indicated on Drawings] [3/4 inch] [Insert depth].
 - c. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with 0.040-inch nominal thickness.

- d. Tie Wire: ASTM A641, Class 1 zinc coating, soft temper, 0.062-inch diameter wire, or double strand of 0.048-inch diameter wire.

2.6 FABRICATION

- A. Metal wall panels shall be formed to lap and interconnect with edges of adjacent panels which are then mechanically attached through panel to supports using concealed fasteners.
- B. Panels shall be factory formed. Field formed panels are not acceptable.
- C. [Trim Accessories: Fabricate steel trim accessories to comply with recommendations outlined in SMACNA's "Architectural Sheet Metal Manual".] [Provide manufacturer's standard extruded aluminum trim.]
- D. [Soffit panels shall be perforated].

2.7 FINISHES

- A. Aluminum:
 - 1. Finish and Color:
 - a. Color: [Selected from current Morin Metal Wall Panel color chart] [Custom color as selected by Architect] [Color indicated].
 - b. Panels shall be finished on exterior and interior surfaces.
 - c. Finish System:
 - 1) [1.0 mil. Fluoropolymer (PVDF) Two Coat system: 0.2 mil primer with 0.8 mil Kynar 500 (70 percent) SOLID color coat.]
 - 2) [1.0 mil. Fluoropolymer (PVDF) Two Coat system: 0.2 mil primer with 0.8 mil Kynar 500 (70 percent) MICA color coat.]
 - 3) [1.5 mil. Fluoropolymer (PVDF) Three Coat system: 0.2 mil primer with 0.8 mil Kynar 500 (70 percent) METALLIC color coat and .5 mil clear coat.]
 - 4) [2.4 mil. Fluoropolymer (PVDF) Three Coat system: 0.8 mil primer with 0.8 mil Kynar 500 (70 percent) SOLID color coat and 0.8 mil clear coat.]]
 - B. Stainless Steel: [2D (dull, cold rolled)] [2B (bright, cold rolled)] [4 (polished directional satin)]
 - C. Copper: Natural

- A. Rheinzink: [Bright Rolled – mill finish] [Pre-weathered "Graphite-Gray"] [Pre-weathered "Blue-Gray"]

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Provide field measurements to manufacturer as required to achieve proper fit of the metal wall panels to building envelope. Measurements shall be provided in a timely manner so that there is no impact to construction or manufacturing schedule.

- B. Supporting Steel: Verify that Supporting Steel members are installed within the following tolerances:
 - 1. Plus or minus 1/8 inch in 5 feet in any direction along plane of framing.
 - 2. Plus or minus 1/4 inch cumulative in 20 feet in any direction along plane of framing.
 - 3. Plus or minus 1/2 inch from framing plane on any elevation.
 - 4. Plumb or level within 1/8 inch at all changes of transverse for performed corner panel applications.
 - 5. Verify that bearing support has been provided behind vertical joints of horizontal panel systems and vertical joints of horizontal panel systems. Width of support shall be as recommended by manufacturer.

- C. Examine individual panels upon removing from the bundle; notify manufacturer of panel defects. Do not install defective panels.

3.2 PANEL INSTALLATION

- A. Installation shall be in accordance with manufacturer's installation guidelines and recommendations.

- B. Install panels plumb, level, and true-to-line to dimensions and layout indicated on approved shop drawings.

- C. Cutting and fitting of panels shall be neat, square and true. Torch cutting is prohibited.

3.3 TRIM INSTALLATION

- A. Place trim and trim fasteners only as indicated per details on the approved shop drawings.

3.4 CLEANING AND PROTECTION

- A. Remove protective film immediately after installation.
- B. Touch-up, repair or replace metal panels and trim that have been damaged.
- C. After metal wall panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.

END OF SECTION

DISCLAIMER:

Morin Metal Panels Guide Specifications have been written as an aid to the professionally qualified Specifier and Design Professional. The use of this Guideline Specification requires the sole professional judgment and expertise of the qualified Specifier and Design Professional to adapt the information to the specific needs for the Building Owner and the Project, to coordinate with their Construction Document Process, and to meet all the applicable building codes, regulations and laws. MORIN METAL PANELS EXPRESSLY DISCLAIMS ANY WARRANTY, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OF THIS PRODUCT FOR THE PROJECT.