

Fabral – HCF Horizontal Wall Panel

1.01 SUMMARY

- A. Section includes: all material, labor, and equipment to complete installation of HCF Horizontal Wall Panel siding as shown on the drawings and herein specified.
- B. Related Sections
 - 1. Metal decking
 - 2. Rough carpentry, plywood, and underlayment
 - 3. Insulation
 - 4. Membrane roofing
 - 5. Flashing and sheet metal
 - 6. Joint sealers: sealants and caulk
 - 7. Structural framing.

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM A 792: Steel Sheet, Aluminum-Zinc Alloy Coated by the Hot Dip Process.
 - 2. ASTM B 209: Aluminum and Aluminum Alloy Sheet and Plate.
- B. Sheet Metal and Air Condition Contractors National Association, Inc. (SMACNA)
 - 1. SMACNA Architectural Sheet Metal Manual, 1993 Edition.
- C. American Iron and Steel Institute (AISI)
 - 1. AISI Cold Formed Steel Design Manual
- D. Aluminum Association
 - 1. Aluminum Design Manual
- E. Metal Construction Association (MCA)
 - 1. Preformed Metal Wall Guidelines
- F. Code references
 - 1. ASCE, Minimum Loads for Buildings and Other Structures
 - 2. BOCA National Building Code
 - 3. UBC Uniform Building Code
 - 4. SBC Standard Building Code

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide concealed fastener panel that is capable of withstanding the applicable wind loads for the fastener and structural spacing used.
 - 1. The system should have less than 0.01 cfm/sf of air leakage when tested at 20 psf air pressure differential, in accordance with ASTM E283.
 - 2. The system should have no uncontrolled water leakage when tested at 20 psf air pressure differential, in accordance with ASTM E331.
- B. Structural Requirements: Engineer panels for structural properties in accordance with latest edition of American Iron and Steel Institute's *Cold Formed Steel Design Manual* using "effective width" concept and Aluminum Association's *Aluminum Design Manual*.
 - 1. The panel system shall be tested for structural capacity in accordance with ASTM E330 testing procedures for use in determining wind suction resistance of the panels. At least two different span lengths shall be tested to determine the wind resistance of the system.

1.04 SUBMITTALS

- A. Product Data: submit manufacturer's specifications, standard profile sheet, product data brochure and finish warranty.
- B. Shop Drawings: shop drawings showing wall elevations with layout of panels, screws, and sections of each flashing/trim condition shall be submitted for approval prior to fabrication. Drawings shall contain material type, metal thickness and finish. Drawings shall distinguish between factory and field fabrication.
- C. Samples:
 - 1. Submit sample 12" long x full width panel, showing proposed metal gauge, panel profile and specified finish.
 - 2. Submit manufacturers standard colors for Architect's selection.
- D. Certification: Submit manufacturer's certification that materials and finishes meet specification requirements.

1.05 QUALITY ASSURANCE

- A. Panel manufacturer shall have a minimum of ten (10) years of experience in manufacturing architectural wall in a permanent stationary indoor facility.
- B. Panel installer shall have a minimum of 5 years experience in installation of metal siding of similar size and scope.

1.06 DELIVERY, STORAGE, and HANDLING

- A. Panels and flashings shall be protected and properly packaged to protect against transportation damage in transit to the jobsite.
- B. Upon delivery, exercise care in unloading, stacking, moving, storing, and erecting panels and flashings to prevent twisting, bending, scratching, or denting.
- C. Store panels and flashings in a safe, dry environment under a waterproof covering to prevent water damage. Allow for adequate ventilation to prevent condensation. Panels and flashings with strippable film shall not be stored in direct sunlight.
- D. Upon exposure to direct sunlight, immediately remove strippable film from panels and flashings. Protect panels and flashings from foot traffic and from all other trades.

1.07 PROJECT CONDITIONS

- A. Field dimensions shall be taken prior to fabrication to verify jobsite conditions.
- B. The HCF HORIZONTAL WALL PANEL panels will be installed as wall, fascia, and/or soffit only.
- C. Maximum panel length is 20' (contact factory for longer lengths).

1.08 WARRANTIES

- A. Panel manufacturer shall provide a twenty (20) year warranty on the paint finish covering chalking, cracking, checking, chipping, blistering, peeling, flaking, and fading.
- B. Applicator shall furnish written warranty for a two (2) year period from date of substantial completion of building covering repairs required to maintain wall and flashings in watertight conditions.

2.01 PRODUCT DESCRIPTION

- A. HCF HORIZONTAL WALL PANEL, concealed fastener panel as provided by Fabral, 3449 Hempland Road, Lancaster, PA 17601, ph.: 717-397-2741; fax: 717-397-1040.
- B.1 The HCF HORIZONTAL WALL PANEL panels shall be 0.8407" deep and be (HCF12-1, HCF12-2, HCF12-3, HCF16-1, HCF16-2, HCF16-4) with a total coverage of (12", 16") per panel. The panels shall have an interlocking sidelap feature which hides the fasteners requiring no clips. Or
- B.2 The HCF HORIZONTAL WALL PANEL panels shall be 0.8407" deep and be (HCF12-1C, HCF12-2C, HCF12-3C, HCF16-1C, HCF16-2C, HCF16-4C) with a total coverage of (12", 16") per panel. The panels shall have an interlocking sidelap feature which hides the

fasteners and is installed using clips to allow for thermal movement.

C. Panels shall be attached to the substrate with concealed fasteners.

2.02 PRODUCT SUBSTITUTIONS

A. Requests to use alternate systems shall be submitted in writing to the project designer at least ten (10) days prior to bid date. Request shall demonstrate proposed substitution meets or exceeds specified performance requirements. Certified statements, samples and descriptive data shall be included in this submittal request.

B. Manufacturers listed in this section are prequalified manufacturers. Substitution of manufacturer's products for those specified shall not be allowed at anytime during construction.

2.03 MATERIALS AND FINISHES

A. Panel materials

1. (24 gauge, Grade 40: 40 ksi yield strength),(22, 20, 18 gauge, Grade 50: 50 ksi yield strength) structural steel with AZ50 (0.50 oz./ft.²) aluminum-zinc alloy coating, all conforming to ASTM A 792.

2. (.032"), (.040"), 3105-H14 or equivalent (18 ksi yield strength) aluminum alloy conforming to ASTM B 209.

B. Texture: panels shall be (smooth), (stucco embossed).

C. Finish: Refer to manufacturer's standard color card to determine appropriate finish and color. All panels shall receive a factory-applied (Kynar[®] 500/Hylar[®] 5000*) (vinyl plastisol) conforming to the following:

1. Metal preparation: all metal shall have the surfaces carefully prepared for painting on a continuous process coil coating line by alkali cleaning, hot water rinsing, application of chemical conversion coating, cold water rinsing, sealing with an acid rinse, and thorough drying.

2. Prime coating: a base coat of epoxy paint, specifically formulated to interact with the top-coat, shall be applied to the prepared surfaces by roll coating to a dry film thickness of 0.20 ± 0.05 mils. This prime coat shall be oven cured prior to application of finish coat.

3. Exterior coating: a finish coating (see above) shall be applied over the primer by roll coating to a dry film thickness of 0.80 ± 0.05 mils (3.80 ± 0.05 mils for vinyl plastisol) for a total dry film thickness of 1.00 ± 0.10 mils (4.00 ± 0.10 mils for vinyl plastisol). This finish coating shall be oven-cured.

4. Interior coating: a washcoat shall be applied on the reverse side over the primer by roll coating to a dry film thickness of 0.30 ± 0.05 mils for a total dry film thickness of 0.50 ± 0.10 mils. The washcoat shall be oven-cured.

5. Color: the color of the exterior finish shall be _____ as chosen from the manufacturer's standard color chart.

6. Physical properties: the coating shall conform to the manufacturer's standard performance criteria as listed by certified test reports for fade, chalk, abrasion, humidity, adhesion, pollution resistance, and others as required and standard within the industry.

2.04 ACCESSORIES

A. Screws

1. All screws shall be aluminum, plated steel, or stainless steel. They shall have a combination steel and EPDM washer when exposed.

2. Screws for panel to girt shall be of the type and size _____ and of sufficient length to penetrate the supporting member by 1".

3. Screws for flashings and sidelaps shall be #14 HHA x $\frac{3}{4}$ " sheet metal stitch screws. All accessories, flashings, and sidelaps shall be fastened 12" o.c.

B. Flashings shall be shop-fabricated from material that is the same thickness and finish as the HCF HORIZONTAL WALL PANEL panels to which they are attached. Where practicable, flashings shall be furnished in maximum 10' lengths. Exposed flashings shall be lapped 6".

C. Caulking shall be a polyurethane where it is exposed and there is no thermal movement. All caulking or sealing shall be done in a neat manner with excess caulking or sealant removed from exposed surfaces.

D. Caulking shall be non-skinning, non-hardening gun grade butyl sealant or butyl sealant tape with a minimum thickness of $\frac{1}{8}$ " where it is concealed and where thermal movement must be accommodated. All caulking or sealing shall be done in a neat manner with excess caulking or sealant removed from exposed surfaces.

2.05 RELATED MATERIALS

A. Refer to other sections listed in Related Sections paragraph for related materials.

2.06 FABRICATION

A. Fabricate flashings from the same material as the wall system.

2.07 SOURCE QUALITY

A. Source Quality: obtain metal panels and accessories from a single manufacturer.

B. Fabrication tolerances

1. Rib height: $7/8" \pm 1/8"$.

2. Panel shearing length: $\pm 1/4"$ maximum.

3. Follow tolerances in MCA's Preformed Metal Wall Guidelines.

3.01 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions, and product cartons for installation.

3.02 EXAMINATION

A. Installer shall:

1. Inspect girts to verify that they comply with shop drawing layout and are smooth, even, sound, and free of depressions.

2. Report variations and potential problems in writing to the architect.

3.03 INSTALLATION

A. Conform to the standard set forth in the SMACNA architectural sheet metal manuals and the approved shop drawings detailed.

B. Install panels plumb, level, and straight with the ribs parallel, conforming to the design as indicated.

C. Install panel system so it is watertight, without waves, warps, buckles or distortions.

D. When installed as wall or fascia, panels shall be applied vertically.

E. Abrasive devices shall not be used to cut on or near wall panel system.

F. Apply sealant tape or caulking as necessary at flashing and panel joints to prevent water penetration.

G. Remove any strippable film immediately upon exposure to direct sunlight.

H. Vapor retarder: The joints, perimeter, and all openings shall be sealed per the manufacturer's instructions to provide a continuous vapor retarder.

3.04 CLEANING

A. Dispose of excess materials and debris from jobsite.

B. Remove filings, grease, stains, marks, or excess sealants from wall panel system to prevent staining.

C. Protect work from damage from other trades until final acceptance.

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Hylar[®] 5000 is a registered trademark of Ausimont USA, Inc.

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