SECTION 07 42 43

WOOD PLASTIC COMPOSITE WALL PANELS

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\*\* NOTE TO SPECIFIER \*\* Fiberon, LLC; composite, decking, railing, and cladding.  
This section is based on the products of Fiberon, LLC, which is located at:181 Random Dr.New London, NC 28127Toll Free Tel: 800-573-8841Email: [request info (info@fiberoncladding.com)](https://arcat.com/rfi?action=email&company=Fiberon%252C%252B%252BLLC&message=RE%253A%2520Spec%2520Question%2520(07460fbr)%253A%2520&coid=46896&spec=07460fbr&rep=&fax=)  
Web: <https://www.fiberoncladding.com>   
 [ [Click Here](https://arcat.com/company/fiberon-llc-46896) ] for additional information.  
Founded in New London, North Carolina in 1997, Fiberon built its business selling high-quality, eco-friendly composite decking, railing, and fencing. In 2007, after a period of rapid growth, Fiberon expanded operations to Meridian, Idaho, enabling efficient bi-coastal manufacturing and distribution. Today, Fiberon employs more than 500 people, each one working to extend the company's legacy of quality, innovation, and sustainability.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Wood plastic composite (WPC) board cladding for use in commercial rainscreen applications to provide a rear-ventilated facade system (RVFS).
    2. Finishing Accessories and Trim.
    3. Exterior wood plastic composite (WPC) board cladding for use in commercial soffit applications.
    4. Interior wood plastic composite (WPC) board cladding for use in commercial interior ceiling applications.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 01 33 13 - Certificates0 - Subnmittals
    2. Section 05 40 00 - Cold-Formed Metal Framing0 - Cold-Formed Metal Framing. For corrosion-resistant metal furring supporting WPC board cladding.
    3. Section - 0 - Structural Metal Stud Framing. For traditional commercial rainscreen systems.
    4. Section 06 10 00 - Rough Carpentry0 - Rough Carpentry.
    5. Section 06 16 36 - Wood Panel Product Sheathing0 - Sheathing. Keep glass matt.
    6. Section - 0 - Exterior Wall Framing Support System.
    7. Section 07 21 19 - Foam-In-Place Building Insulation0 - Thermal Insulation
    8. Section 07 21 19 - Foam-In-Place Building Insulation3 - Board Insulation
    9. Section 07 27 00 - Air Barriers0 - Weather Barriers.
    10. Section - 3 - Modified Bituminous Sheet Air Barriers.
    11. Section - 5 - Non-bituminous Self-Adhering Sheet Air Barriers.
    12. Section 07 27 00 - Air and Moisture Barriers6 - Fluid-Applied Membrane Air Barriers.
    13. Section 07 41 63 - Fabricated Roof Panel Assemblies0 - Rainscreen Attachment System
    14. Section 07 91 23 - Backer Rods0 - Joint Sealants.
    15. Section - 0 - Gypsum Board
    16. Division 21 - Fire Suppression. For ceilings.
    17. Division 23 - HVAC. For ceilings.
    18. Division 25 - Electrical. For ceilings.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM International (ASTM):
       1. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
       2. ASTM C1002 - Standard Method for Laboratory Evaluation to Determine Resistance to Subterranean Termites.
       3. ASTM D792 - Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
       4. ASTM D1037 - Standard Tests Method For Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
       5. ASTM D1413 - Standard Test Method for Wood Preservatives by Laboratory Soil-Block Cultures.
       6. ASTM D1761 - Standard Test Methods for Mechanical Fasteners in Wood.
       7. ASTM D1929 - Standard Test Method for Determining Ignition Temperature of Plastics.
       8. ASTM D2565 - Standard Practice for Xenon-Arc Exposure of Plastics Intended for Outdoor Applications.
       9. ASTM D6109 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastic Lumber and Related Products.
       10. ASTM D6341 - Standard Test Method for Determination of the Linear Coefficient of Thermal Expansion of Plastic Lumber and Plastic Lumber Shapes Between minus 30 and 140 degrees F (34.4 and 60 degrees C).
       11. ASTM D6662 - Standard specification for Polyolefin-Based Plastic Lumber Decking Boards.
       12. ASTM D7031 - Standard Guide for Evaluating Mechanical and Physical Properties of Wood-Plastic Composite Products.
       13. ASTM D7032 - Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails).
       14. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
       15. ASTM E330 - Standard Tests Methods for Structure Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniformed Static Air Pressure.
       16. ASTM G154 - Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Non-Metallic Materials.
    2. American Wood Protection Association (AWPA):
       1. AWPA E1 - Standard Method for Laboratory Evaluation to Determine Resistance to Subterranean Termites.
       2. AWPA E10 - Standard Method of Testing Wood Preservatives by Laboratory Soil-Block Cultures.
    3. Engineering Judgement:
       1. Use of WPC Commercial Cladding in Type II buildings up to 40 ft, and Type IV Buildings.
    4. Environmental Product Declaration (EPD):
       1. UNSPSC 30151800, SCS-EPD-08200.
    5. ICC Testing Application Standards (TAS):
       1. TAS 201 - Impact Test Procedures.
       2. TAS 202 - Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure.
       3. TAS 203 - Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.
    6. ICC Evaluation Service (ICC-ES)
       1. ICC-ES AC92-16 - Acceptance Criteria for Polymer-Based, Polymer-Modified and High-Pressure Laminate Exterior and Interior Wall Cladding.
       2. ICC- ESR 4944 Evaluation Report.
    7. Florida Building Code (FBC):
       1. DBPR Approval.
    8. California Office of the State Fire Marshal (SFM):
       1. CA SFM 12-7A-1 - Exterior Wall Siding and Sheathing. Criteria for system testing products for use in Fire Hazard Severity Zones in WUI designated areas of California.
    9. National Fire Protection Association (NFPA):
       1. NFPA 268 - Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source.
    10. SCS Global Services - Recycled Content Certification (SCS-RC):
        1. SCS-RC-06376.
    11. Underwriters Laboratories (UL):
        1. UL 723: Standard Test Method for Surface Burning Characteristics of Building Materials.
  1. DEFINITIONS
     1. Rainscreen: An exterior open-joint cladding system incorporating a continuous air cavity created by furring, a water-resistive barrier to manage water intrusion through drainage and ventilation, and a physical air barrier (e.g., sheathing) to prevent air leakage into the building.
     2. Closed Loop Production (Manufacturing) Process - Production (manufacturing) processes that reuse material waste created during the production process for additional products, as well as use the recycled products to create new items.
     3. WPC: Wood and plastic composite material. Wood plastic composite is panel or lumber product made from recycled plastic and small wood particles or fibers
  2. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements0 - Submittals.
     2. Product Data: For each product specified. Include the following:
        1. Technical product data, including component descriptions, details, and performance criteria.
        2. Manufacturer's printed surface preparation and installation instructions.
        3. Safety Data Sheets (SDS).
     3. Sustainable Design Submittals:
        1. Product Data: For recycled content, indicating post-consumer and preconsumer recycled content.
        2. Production Data: verification manufacturing uses a closed loop production (manufacturing) via submission of a 3rd party reviewed assessment or report.
     4. Selection Samples: Full range of samples for color selection or as selected by the architect.
     5. Verification Samples: For selected colors. 4 inch (100 mm) long by 6 inch (150 mm) wide sample of wood plastic composite cladding.
     6. Informational Submittals:
        1. Product Test Reports: For each product, tests performance by a qualified testing agency.
        2. Sample Warranty.
     7. Quality Assurance Submittals:
        1. Manufacturer Qualifications
        2. Certified test reports showing compliance with specified performance criteria.
        3. Specimens copy of specified material warranties.
        4. Installer Qualifications
     8. Deflection Design: Design calculations, certified by a registered professional engineer, licensed in the State of \_\_\_\_, shall be submitted to verify load carrying capability of panel system.
     9. Manufacturer Details: Submit Drawings (dwg. rvt, and or pdf formats), including plans, sections, showing installation details that demonstrate product dimensions, edge/termination conditions/treatments, corners, openings, and penetrations.
     10. Closeout Submittals: Maintenance data for installed system.
     11. Submit Environmental Product Declaration (EPD) on the Wood Plastic Composite System.
  3. QUALITY ASSURANCE
     1. Manufacturer Qualifications: All Wood Plastic Composite (WPC) panels specified in this section must be supplied by a company with a minimum of 10 years of experience in the manufacturer and supply of Wood Plastic Composite (WPC) products.
        1. WPC boards should be manufactured via a close loop production (manufacturing) process (see SCS Recycled Content Certification), where 94 percent of the raw materials used to manufacture the boards some from recycled materials.
     2. Installer Qualifications: A firm with a minimum of three years documented experience installing rear ventilated commercial rainscreen cladding solutions.
     3. Source Limitations: Provide components and materials specified in this Section from a single manufacturer for a complete and compatible system assembly

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mockups: Build mockups to verify selections made under the Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation
       1. Build mockup of typical wall area including corner, trim, supports, attachments, and accessories.
          1. Build mockup as indicated on the Drawings. Size: \_\_\_\_\_\_\_\_.
       2. Water-Spray Test: Conduct water-spray test of composition, siding system mock-up, testing for water penetration in accordance with AAMA 501.2
       3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
       4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of substantial completion.
  1. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
     2. Coordinate wood plastic composite siding installation with flashings, trim, and construction of other adjoining work to ensure proper sequencing and to provide a leak-proof, secure, and non-corrosive installation.
  2. DELIVERY, STORAGE, AND HANDLING
     1. General: Deliver, handle, and store materials in manufacturer's original packaging and clearly identified. Protect materials from harmful environmental elements, construction dust and other potentially detrimental conditions in a suitable dry, well-ventilated, weathertight storage location.
     2. Unload: Unload, store, and erect assembly system components in a manner to prevent bending, warping, twisting and surface damage
     3. Storage: Store assembly system components on platforms or pallets, covered with suitable weathertight and ventilated covering.
  3. ENVIRONMENTAL CONDITIONS
     1. Do not apply add rainscreen materials when the air temperature or relative humidity is outside the manufacturer's range limitations.
     2. Weather limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of composition siding system to be performance in accordance with manufacturers' written instructions and warranty requirements.
  4. WARRANTY
     1. Manufacturer's Performance Warranty: Manufacturer's written materials warranty for long-term performance against manufacturing defects, including checks, splinters, and delamination, or damage from rot and fungal decay.
        1. Warranty Period: 50 years from date of Substantial Completion.
     2. Manufacturer's Stain and Fade Warranty: Manufacturer's written materials warranty for long-term performance against staining and color fade.
        1. Color Fade: Color change from light and weathering exposure not to exceed Delta E (Hunter) units.
        2. Warranty Period: 50 years from date of Substantial Completion.
     3. Warranty Provides for the Original Purchaser. See Warranty for detailed information on terms, conditions, and limitations.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Fiberon, LLC, which is located at:181 Random Dr.New London, NC 28127Toll Free Tel: 800-573-8841Email: [request info (info@fiberoncladding.com)](https://arcat.com/rfi?action=email&company=Fiberon%252C%252B%252BLLC&message=RE%253A%2520Spec%2520Question%2520(07460fbr)%253A%2520&coid=46896&spec=07460fbr&rep=&fax=);Web: <https://www.fiberoncladding.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements0.
  1. PERFORMANCE AND DESIGN REQUIREMENTS
     1. Structural Performance Criteria for WPC Board Cladding Assembly:
        1. Comply with the following Codes:

\*\* NOTE TO SPECIFIER \*\* Delete code options not required.

* + - * 1. International Building Code.
        2. Florida Building Code.
        3. Local and Regional Codes governing at the Project location.
      1. Composition Siding System: Tested in accordance with ASTM E330/E330M. Certified to be without permanent deformation or failure of structural members in accordance with design wind velocities for Project's geographic location and probability of occurrence based on data from wind velocity maps provided in ASCE 7 an as approved by authorities having jurisdiction (AHJ).

\*\* NOTE TO SPECIFIER \*\* Delete design load options not required.

* + - 1. Design Loads: As indicated on drawings.
      2. Design Loads: \_\_\_\_\_\_\_\_.
      3. Wind-Borne Debris Impact Resistance: Cladding assembly tested according to TAS 201, TAS 202, and TAS 203 for High Velocity Hurricane Zone (HVHZ) applications, by an accredited testing laboratory. Passes the specified TAS Test Protocols for large missile impact.

\*\* NOTE TO SPECIFIER \*\* Structural performance testing for wind-borne debris impact resistance is based on Testing Application Standard (TAS) test protocols developed for the Florida Building Code (FBC). Specific requirements are described in Chapter 16 Structural Design of the FBC.

* + - 1. Specific Gravity: 1.10; ASTM D792.
      2. Maximum Load Deflection: Less than 0.120 inch (3 mm); ASTM D7032.
      3. Wind Load:
         1. Panels designed to withstand the Design Wind Load based upon local building codes. Wind load testing to be conducted in accordance with ASTM 330 to obtain the following results:

Normal to the plane of the wall between supports, deflection of secured perimeter-framing members shall not exceed L/175 or 3/4 inch (19 mm), whichever is less.

Normal to the plane of the wall, the maximum panel deflection shall not exceed L/60 of the full span.

Maximum anchor deflection shall not exceed 1/16 inch (1.6 mm)

A 1-1/2 times design pressure, permanent deflections of framing members shall not exceed L/100 of the span length and components shall not experience failure or gross permanent distortion. At connection points of framing members to anchors, permanent set shall not exceed 1/16 inch (1.6 mm).

* + 1. Air Water System Test:
       1. If system tests are not available, mock-ups shall be constructed and test performed under the direction of any independent third-party laboratory, which show compliance to the following minimum standards.
          1. Air Filtration: Where tested in accordance with ASTM E 283, Air infiltration at 1.57 lbs per sq ft must not exceed 0.06 ft per 3 minutes per sq ft of wall area.
          2. Water Infiltration: Water infiltration is defined as uncontrolled water leakage through the exterior face of the assembly. Systems shall not be designed to drain any water leakage occurring at the joints. No water infiltration shall occur in any system under a differential static pressure of 6.24 lbs per sq ft after 15 minutes of exposure in accordance with ASTM E 331.
    2. Fire Resistant Performance:
       1. Surface Burning Characteristics: Maximum 200 Flame Spread Index (Class C) and maximum 350 Smoke Development Index; ASTM E84 and UL 723.
       2. Self-Ignition Temperature: not less than 884 degrees F (473 degrees C); when tested in accordance with ASTM D1929.
       3. Flash-Ignition Temperature: no less than 754 degrees F (401 degrees C): when tested in accordance with ASTM D1929.
    3. Thermal Movement Performance:
       1. Coefficient of Thermal Expansion: 1.67 x 10-5 inches per inch per degree F, when tested in accordance with ASTM D6341.
       2. Modulus of Elasticity: 338,000 psi, when tested in accordance with ASTM D6109.
       3. Modulus of Rupture: 4790 psi, when tested in accordance with ASTM D6109.
       4. Creep Recovery: 84 percent average recovery with maximum unrecovered deflection, not to exceed 1/16 inch for 151 lbs test load, when tested in accordance with ASTM 7032.
    4. Exposure Performance:
       1. UV Resistance: Successfully passed after 2000 hours of Xenon-Arc exposure. Tested in accordance with ASTM D2565 Cycle 1.
       2. Fungus Decay Resistance: No significant decay; AWPA E10.
       3. Termite Resistance: Passes; AWPA E1.
       4. Fastener Performance: Minimum 367 lbs.; ASTM D1761.
       5. Delamination: Submersion Test: No delamination after 30 days when tested fully in submerged water at 70 and 150 degrees F.
       6. Delamination High Heat and High Humidity Test: No delamination after 30 days suspended directly above, but not immersed into, 150 degrees F water.
       7. Delamination Soak/Freeze/Thaw Test: No delamination after 50 hours soak/freeze/thaw cycles. Soak in room temperature water, freeze for a minimum 4 hours, thaw and repeat.

\*\* NOTE TO SPECIFIER \*\* Delete article not required.

* 1. WOOD PLASTIC COMPOSITE WALL PANELS

\*\* NOTE TO SPECIFIER \*\* Fiberon Wildwood Cladding is used in continuous insulation rainscreen assemblies, including polyiso, mineral wool and multipurpose nonstructural rigid board insulation systems. The specification included herein addresses the cladding, rainscreen system secondary metal framing, trim, and fasteners. Other rainscreen components are addressed in related sections above.

* + 1. Basis of Design: Wildwood Composite Claddingas Manufactured by Fiberon Cladding.
    2. Composition: Wood and plastic composite (WPC) core boards with "PermaTech," a patented polyethylene-based capping material for superior stain, fade, and scratch resistance. Manufactured through a continuous co-extrusion process. WPC boards should be manufactured via a close loop production (manufacturing) process (see EPD and Recycled content report), where 94 percent of the raw materials used to manufacture the boards some from recycled materials.
    3. Board Dimensions:
       1. Thickness: 0.75 (19 mm) inches. Capping Material: 0.02 inch (0.5 mm).

\*\* NOTE TO SPECIFIER \*\* Delete width and length options not required.

* + - 1. Width: 6 inches (125 mm) with 1/8 inch (3 mm) radius edges.
      2. Width: 7.25 inches (184 mm) with 1/8 inch (3 mm) radius edges.
      3. Width: 11.15 inches (285 mm) with 1/8 inch (3 mm) radius edges.
      4. Length: 12 ft 93.6 m).
      5. Length: 16 ft (4.8 m).
      6. Length: 20 ft (6.1 m).
    1. Water Resistant Barrier for Open Joint Wall Panel Systems: Manufacturers standard water resistant barrier with tear resistant thermo-bonded, non-polyester woven substrate and waterproof acrylic polymeric coating stabilized against oxidation and UV degradation

\*\* NOTE TO SPECIFIER \*\* Delete the adhesive strips are optional. Delete if not required.

* + - 1. Factory applied adhesive edge strips.

\*\* NOTE TO SPECIFIER \*\* Delete color option not required.

* + - 1. Color: Match cladding system.
      2. Color: As selected by the Architect.
    1. Finishing Accessories and Trim: Finish to match cladding system.

\*\* NOTE TO SPECIFIER \*\* Delete options not required.

* + - 1. Manufacturer's standard trim, angles, and similar components at corners, transitions, and rough openings meeting the performance requirements.
      2. Fabricated trim, angles, and similar components at corners, transitions, and rough openings meeting the performance requirements.
    1. Fasteners: Self-tapping screws, minimum No. 9, complying with ASTM C1002 as recommending in writing by wood plastic composite cladding wall panel manufacturer suitable and compatible with system materials.
       1. Material: Type 304 stainless steel.
       2. Material: Type 316 stainless steel.

\*\* NOTE TO SPECIFIER \*\* Delete product paragraph not required and delete color options nor required.

* + 1. Product: Eden Collection.
       1. Color: Wenge.
       2. Color: Meranti.
       3. Color: Tupelo.
       4. Color: Mora.
       5. Color: Koa.
       6. Color: As indicated or scheduled on Drawings.
       7. Color: As selected by Architect.
    2. Product: Sahara Collection.
       1. Color: Mulga.
       2. Color: Palo.
       3. Color: Sumac.
       4. Color: Bamboo.
       5. Color: As indicated or scheduled on Drawings.
       6. Color: Color as selected by Architect.
  1. SECONDARY METAL FRAMING

\*\* NOTE TO SPECIFIER \*\* Keep this section if secondary Metal Framing will be required under work of this section. Secondary framing by design professional based on conditions.

* + 1. Miscellaneous Metal Framing Rainscreen Components: Cold-Formed Steel Framing
       1. Hat Channels
       2. Sill Channels
       3. Metal Studs
  1. MISCELLANEOUS MATERIALS
     1. General: Provide miscellaneous materials as recommended by the RVFS manufacturer.
     2. Fasteners:
        1. Decking screw fasteners.
           1. Polymer-coated composite decking screw complying with ASTM C1002. Minimum No. 8 by 2-1/2 inch (64 mm) length for face fasteners and No. 8 by 2-3/4 inch (70 mm) length for WPC board ends.
           2. Screw Fastener: Type 304 stainless steel.
           3. Screw Fastener: Type 316 stainless steel.
        2. ACQ Rated Screw Fasteners: Provide fasteners acceptable for alkaline copper quaternary (ACQ) pressure preservative treated wood attachment substrates.
        3. Screw Fastener: Polymer-coated composite complying with ASTM B117 for corrosion-resistance.

1. EXECUTION
   1. EXAMINATION
      1. Examine substrates, areas, and conditions with Installer present, for compliance with requirements for installation tolerances, composition siding system supports, and other conditions affecting performance of the work.
         1. Examine Wall Framing: Verify support members and anchorage have been installed with alignment tolerances by composite siding manufacturer.
         2. Examine Wall Sheathing: Verify sheathing joints are supported by framing or blocking, and installation is within flatness tolerances provided by composition siding manufacturer.
      2. Verify:
         1. Wall sheathing is in place and properly installed.
         2. WRB, or air barrier, is in place, continuous, and properly installed.
         3. Air cavity is continuous with unobstructed dimension between 3/8 and 3/4 inch (9 and 19 mm) for full height of wood plastic composite cladding.
      3. Examine roughing-in for components and systems penetrating composition siding systems to verify actual locations of penetrations relative to seam locations of fabricated wall panel assemblies before installation.
      4. Proceed with installation only after unsatisfactory conditions have been corrected.
   2. PREPARATION
      1. Comply with manufacturer's printed installation instructions.
      2. Clean substrate services thoroughly prior to installation. Prepare substrate surfaces using methods recommended in writing by cladding support systems manufacturer.
      3. Prepare sub framing and provide anchorage for substrate type and exterior cladding type in accordance with cladding support systems written instructions.
   3. INSTALLATION
      1. General: Comply with open joints for back ventilated rainscreen system in accordance with manufacturer's printed installation instructions and approved shop drawings.
         1. Shim or otherwise plumb substrates receiving composition siding system.
         2. Flash composition siding at perimeter of all openings.
         3. Locate and space fastenings in uniform vertical and horizontal alignment.
         4. Install flashing and trim and wood plastic composite panel work proceeds.
         5. Align bottoms of wood plastic composite siding.
         6. Provide weathertight escutcheons for pipe and conduit penetrating composite siding system.
      2. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by fabricated wall panel manufacturer.
      3. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
      4. Flashing and Trim: Comply with performance requirements, manufacturers written installation instructions and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible and set units true to line and level. Install work with laps, joints, and seams, that are permanently watertight.
         1. Install exposed flashing and trim that is without buckling and tool markets and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to achieve waterproofing performance.
         2. Expansion Provisions: For thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 ft (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped expansion provisions cannot be used or work not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).
         3. Install insect screens to prevent intrusions of pests into air cavity space behind composition siding.
      5. Horizontal WPC Board Orientation:
         1. Determine and begin at lowest point of cladding installation.
         2. Butt joints to occur only over vertical furring and centered on furring. As WPC board courses are added, stagger butt joints in a consistent "stair step" manner.
         3. Board lengths to span a minimum of three furring members.
         4. Gapping: Provide minimum 3/16 inch spacing between board edges. Spacing at end of boards is temperature dependent; refer to RVFS manufacturer's published technical data for spacing dimensions.
      6. Vertical WPC Board Orientation:
         1. Prior to installation, verify required horizontal and vertical furring strips are in place to receive vertically orientated board installation.
         2. For walls exceeding available board lengths, separate boards with a non-corrosive metal z-flashing. Allow 1/4 inch clearance between top of lower cladding boards to underside of z-flashing. Maintain 1/2 inch clearance between z-flashing and start of upper cladding boards.
         3. Start cladding board installation by first securing the top of the board and then working downward.
         4. Using 3/16 inch spacers to maintain gapping, secure the next WPC board course starting from the top and working downward.
         5. Where a balanced symmetrical WPC board layout design requires less-than-full-width end boards, maintain a minimum 3 inch width for ripped boards. Increase board-to-board gapping to accommodate; not to exceed 5/16 inch.
      7. Diagonal WPC Board Orientation:
         1. Prior to installation, verify required horizontal and vertical furring strips are in place to receive diagonally orientated board installation.
         2. For walls, soffits or ceilings exceeding available board lengths, separate boards with a non-corrosive metal z-flashing. Allow 1/4 inch clearance between top of lower cladding boards to underside of z-flashing. Maintain 1/2 inch clearance between z-flashing and start of upper cladding boards.
         3. Start cladding board installation by first securing the top of the board and then working diagonally downward.
         4. Using 3/16 inch spacers to maintain gapping, secure the next WPC board course starting from the top and working downward.
         5. Where a balanced symmetrical WPC board layout design requires less-than-full-width end boards, maintain a minimum 3 inch width for ripped boards. Increase board-to-board gapping to accommodate; not to exceed 5/16 inch.
      8. Soffit installation should follow the instructions included in this Article, aligned with the specific orientation desired.
      9. Ceiling installation should follow the instructions included in this Article, aligned with the specific orientation desired.
   4. CLEANING AND PROTECTION
      1. Clean WPC boards according to manufacturer's printed maintenance instructions. Use only cleaning materials and methods acceptable to RVFS manufacturer.
      2. Repair any damage to adjacent substrates and surfaces due to work of this Section.
      3. Upon completion of RVFS work, protect for remainder of construction period.

END OF SECTION