PART 1 - GENERAL---

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Provide design and engineering, labor, material, equipment, related services, and supervision required, including, but not limited to, manufacturing, fabrication, erection, and installation for the Work of this section, including but not limited to the following:

1. Aluminum Siding: **FastPlank® V-NOTCH plank profile, 4 inch [101.6 mm] 6 inch [152.4 mm]** or **perforated soffit 4 inch [101.6 mm]** or **custom profile [Contact a FastPlank representative for assistance]**.

1.3 REFERENCES

A. General: The publications listed within form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. The edition/revision of the referenced publications shall be the latest date as of the date of the contract documents, unless otherwise specified.

B. American Architectural Manufacturers Association (AAMA):

1. AAMA 2604 Voluntary Specification, Performance Requirements and Test Procedures for Premium Performing Organic Coatings on Aluminum Extrusions and Panels.

C. ASTM International (ASTM):

1. ASTM B117 Standard Practice for Operating Salt Spray (Fog) Apparatus.
2. ASTM D714 Standard Test Method for Evaluating Degree of Blistering of Paints.
3. ASTM D1654 Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.
4. ASTM D2247 Standard Practice for Testing Water Resistance of Coatings in 100 % Relative Humidity.
5. ASTM D3363 Standard Test Method for Film Hardness by Pencil Test.
6. ASTM D4214 Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.
7. ASTM E329 Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection.

D. US Green Building Council: LEED v 4.1

E. PREINSTALLATION CONFERENCE

1. Preinstallation Conference: Prior to installation commencing at a date and time acceptable to the Owner and the Consultant,
2. Location: Project site, at date and time acceptable to the Owner and the Consultant.
3. Attendees: At minimum, the Contractor, Installer, and trades requiring coordination with the work.
4. Agenda: Review the following:

a. Material selections, installation procedures, and coordination with other trades.
b. Finalize construction schedule, availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
c. Methods and procedures related to installation, including manufacturer's written instructions.
d. Support Conditions: Verify compliance, alignment, and attachment to structural members.
e. Governing regulations and requirements for insurance, and authorities having jurisdiction.
f. Temporary protection; during and after installation.
g. Procedures for damaged siding repair after installation.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Sufficient information to determine compliance with the Drawings and Specifications.

1. Manufacturer’s information sheets marked to include products proposed for use. This Include, but is not limited to, construction details, material descriptions, dimensions of individual components and profiles, and finishes aluminum siding and accessories.
2. Storage and handling recommendations.

C. Shop Drawings: For each product and accessory required.

1. Include information not fully detailed in manufacturer’s standard product data, including, but not limited to:

a. Installation layouts of aluminum plank siding
b. Details: Edge conditions, joints, plank profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
c. Accessories: Include details of the flashing, trim, and anchorage, at a scale of not less than 1-1/2 inches per 12 inches [38.1 mm per 304.8 mm].
d. Distinguish between factory- and field-assembled work.

D. Samples:

1. For initial color selection.
2. For each type of aluminum plank indicated with factory-applied color finishes.
3. Manufacturer’s color charts showing the full range of colors and finishes available.
4. Finishes Involving Normal Color Variations: Include samples showing the full range of variations expected.
5. Exposed Sealants: Each type and color required. Install joint sealants in 1/2 inch [12.7 mm] wide joints formed between two 6 inch [152.4 mm] long strips of material matching the appearance of metal panels adjacent to joint sealants.

E. Product Test Reports: For each product, tests are to be performed by a qualified testing agency.

F. LEED v 4.1 Submittals: Provide documentation of how the requirements of Credit will be met:

1. Product Data for Credit MR 2.1 and 2.2: For products being recycled, documentation of total weight of project waste diverted from landfill.

2. Product Data for Credit MR 4.1 and MR 4.2: For products that have recycled content, documentation including percentages by weight of post-consumer and pre-consumer recycled content.
3. Include statement indicating costs for each product having recycled content.
4. Product Data for Credit MR 5.1 and Credit MR 5.2: Submit data, including location and distance from Project of Material: manufacturer and point of extraction, harvest, or recovery for main raw material.
5. Include statement indicating cost for each regional Material: and the fraction by weight that is considered regional.

1.5 QUALITY ASSURANCE

A. Qualifications:

1. Installer Qualifications: An employer of workers trained and approved by manufacturer.

a. A minimum of 5 years of experience, and has completed systems similar in material, design, and extent to that indicated for the Project and with record of successful performance.
b. Installer's Responsibilities: Include fabricating and installing metal panel assemblies and providing professional engineering services needed to assume engineering responsibility.

B. Regulatory Requirements: Comply with applicable requirements of the laws, codes, ordinances, and regulations of Federal, State, and local authorities having jurisdiction.

1. Obtain necessary approvals from such authorities.

C. Source Limitations: Obtain each type of siding through one source from a single manufacturer.

D. Mock-Ups: Build mockups to verify selections made and to demonstrate aesthetic effects and to set quality standards for fabrication and installation.

1. Demonstrate prepared substrate, support/attachment framing, siding façade, exterior finishes, and aesthetic appearance.
2. Confirm mock-up conforms with manufacturer’s instructions and provisions of contract documents.
3. To be accepted in writing by architect or general contractor before commencement of work.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the project site in Supplier’s or Manufacturer’s original wrappings and containers, labeled with Supplier’s or Manufacturer’s name, material or product brand name, and lot number, if any.

1. Deliver aluminum plank siding, and other manufactured items according to Manufacturer’s instructions so as not to be damaged or deformed.
2. Package all materials for protection during transportation and handling.

B. Materials Storage: Store in original, undamaged packages and containers, inside a well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.

1. Unload and store aluminum plank siding in a manner to prevent bending, warping, twisting, and surface damage.

2. Aluminum Plank Siding:

a. Cover with suitable weathertight and ventilated covering.
b. Ensure dryness, with positive slope for drainage of water.
c. Do not store in contact with other materials that might cause staining, denting, or other surface damage.
d. Do not allow storage space to exceed 120 degrees F (67 degrees C).
e. Handling: Prevent damage to surfaces, edges, and ends of siding. Reject and remove damaged Material: from site.

C. Retain protective covering for period of plank installation.

1.7 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal composite material panels to be performed according to manufacturers' written instructions and warranty requirements.

B. Field Measurements: Verify locations of structural members and wall opening dimensions by field measurements before siding fabrication and indicate measurements on Shop Drawings.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, either establish framing and opening dimensions and proceed with fabricating metal panels without field measurements or allow for field trimming of siding. Coordinate wall construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

1.8 COORDINATION

A. Coordination: Coordinate siding systems with rain drainage work, flashing, trim, and construction of walls and other adjoining work to provide a leak proof, secure, and non-corrosive installation.

1.9 WARRANTY

A. FastPlank® Systems: 50-Year Product Warranty against faults and defects in materials and workmanship attributed to the manufacturer. The FastPlank® Systems warranty shall be counter-signed by the Manufacturer and the Installer.

1. Failures include, but are not limited to, the following:

a. Structural failures, including rupturing, cracking, or puncturing.
b. Deterioration of metals and other materials beyond normal weathering.

B. Special Finish Warranty: Submit a written warranty, signed by Manufacturer, covering failure of the factory-applied exterior finish within the specified warranty period. Deterioration of finish includes, but shall not be limited to, color fade, chalking, cracking, peeling, and loss of film integrity.

1. Warranty Period for Finish: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Acceptable Manufacturer: Engage Building Products Phone: 1-877-973-8746 URL: www.engagebp.com; Email: info@engagebp.com

1. Basis of Design: FastPlank® Siding and Soffit Systems V-NOTCH profile. Systems are comprised of metal cladding and accessories.

a. Substitutions: [Approved equals.] [Not permitted.] [Submit as specified in accordance with appropriate sections in Division 01.] [In accordance with Section 01 60 00.]

2.2 METAL CLADDING

A. Formed Aluminum Cladding: Tension levelled, aluminum in accordance with ASTM B209 and ANSI H35.1 alloy designation 6063 T6 and as follows:

1. Plank Sizes: 16 feet [4877 mm] [**x 4 inch [102 mm]. Weight: 0.549 lbs/ft (0.817 kg/m)**] [**x 6 inch [152 mm]. Weight: 0.691 lbs/ft (1.109 kg/m)**].
2. Profile: [**Smooth**] [**Woodgrain**].
3. Finish: Smooth Profile: [**Powder coating per AAMA 2604**] Woodgrain Profile: [**Woodgrain sublimation film as per AAMA 2604**].
4. Color: [**As selected by Owner from manufacturer's standard finish guide**] [**Custom color matched**].

2.3 TRIMS (Nominal length: 12 feet)

A. Trim Extrusions: Provide manufacturer-supplied aluminum trim components forming part of the FastPlank® System, required for a complete and coordinated installation. Trim components shall be fabricated from aluminum compatible with FastPlank® planks and finishes and shall be supplied by the system manufacturer. Trim profiles shall include the following, as required by project conditions and as indicated on Drawings:

1. **P10 – Inside/Outside Corner Trim:** Used to form finished inside and outside corner conditions.
2. **P11 – Two-Piece J Trim:** Used at window, door, and material termination conditions.
3. **P12 – Two-Piece Intermediate Trim:** Used at intermediate plank terminations and transitions.
4. **P13 – General J Trim:** Used for plank terminations at dissimilar materials and edge conditions.
5. **P41 – Perforated Starter J Trim:** Used at starter conditions and soffit applications where ventilation is required.

2.4 CLIPS & CONNECTORS

A. Provide manufacturer-supplied accessories and concealed attachment components required for a complete FastPlank® System installation, including but not limited to the following:

1. **Clips:** 1-1/2 inch (38 mm) long system clips.
2. **Plank Connectors:** Manufacturer-supplied connectors used to align and join planks at end-to-end conditions.
3. **Corner Keys:** Alignment and locking components used in conjunction with inside and outside corner trims to ensure consistent corner geometry.
4. **Plank Backers:** Backing components used to support plank edges, transitions, and accessory interfaces where required.

2.5 FASTENERS

A. Fasteners for Steel Substrates: #10 self-drilling metal screws with corrosion-resistant coating and integral EPDM sealing washers.

1. Nominal length: **1-1/2 inch [38 mm]** minimum, as required by application and component thickness.
2. Manufacturer designation: **MS200.**

B. Fasteners for Wood Substratplaes: #10 wood screws with corrosion-resistant coating and integral EPDM sealing washers.

1. Nominal length: **1-1/2 inch [38 mm]** minimum.
2. Manufacturer designation: **WS200.**

C. Fastener Heads: Hex-head fasteners compatible with installation tooling and concealed attachment requirements.

D. Compatibility: Fasteners shall be compatible with aluminum components and isolation materials to prevent galvanic corrosion.

E. Isolation Tape: Manufacturer's standard material for separating dissimilar metals from direct contact.

F. Insulation Fastenings: Corrosion-resistant screws with **pan, wafer, or truss heads** used in conjunction with **1-1/2 inch [38 mm] diameter insulation washers**, providing a **minimum 1 inch [25 mm] penetration into framing**. Fasteners shall be galvanized or coated for exterior wall applications.

G. Insulation: Rigid type

H. Sealant: Color of exposed sealant to match adjacent cladding.

I. Gaskets: Santoprene or EPDM as recommended by the manufacturer.

J. Flashing and Closures: Cap flashings, drip flashings, internal corner flashings, copings and closures for head, jamb, sill, and corners, of same material, thickness and finish as exterior cladding, brake formed to shape.

K. Bituminous Coating: Cold-applied asphalt mastic, in accordance with CGSB 1.108, compounded for 15 mil (0.38 mm) dry film thickness per coat with inert type non-corrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.6 FINISH PROPERTIES

A. High Performance Powder Coated Finish: Passes coating performance testing in accordance with AAMA 2604

1. Mechanical Test

a. Dry Adhesion per AAMA 2604.02,7.4.1.1L: Pass. GTO.
b. Abrasion Resistance per AAMA 2604.02, 7.6: Pass. Abrasion coefficient greater than 20.
c. Dry Film Hardness per AAMA 2604.02, 7.3 ASTM D3363: Pass. No rupture of film.
d. Impact per AAMA 2604.02, 7.5: Pass. No tape removal of film to substrate following 1/10 inch [2.54 mm] deformation.

2.7 Durability Testing:

a. Salt Spray per ASTM B117, AAMA 2604.02, 7.8.2, and ASTM D1654: Pass. At 3,000
b. hours, no corrosion more than 1/16 inch [1.6 mm] from scribe. Minimum blister rating 8.
c. Constant Humidity per ASTM D2247, ASTM D714, and AAMA 2604.02, 7.8.1: Pass. At 3000 hours. Blister formation less than “few” size no.8.
d. Exterior Durability: 5 years Florida Exposure AAMA 2604.02, 7.9: Excellent performance. Color Change less than 5. Gloss retention: Greater than 30 percent. Chalking: Not in excess of No.8 ASTM D4214:89.

B. High Performance Sublimation Film on Powder Coated Finish. Passes coating performance testing in accordance with AAMA 2604.

1. Powder coated finish
2. Xenon Test: Scratch Performance of 1,000 Hours.

a. Residual Gloss: 88 to 104 percent.
b. Color Variation: 0.47 to 1.67
c. Grey Scale: 4 / 5
d. Result: Pass

PART 3 - END OF SECTION

3.1 EXAMINATION

A. Verification of Conditions: Examine areas and conditions under which the work is to be installed, and notify the Contractor in writing, with a copy to the Owner and the Architect, of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.

1. Examine substrates, areas, and conditions, with the Installer present, for compliance with requirements for installation tolerances, and other conditions affecting performance of the work.
2. Examine wall framing to verify that girts, angles, channels, studs, and other support members and anchorage have been installed within alignment tolerances required.
3. Examine wall sheathing to verify that sheathing joints are supported by framing or blocking, and that installation is within tolerances required.
4. Verify that weather-resistant sheathing paper has been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
5. Examine rough-in for components and systems penetrating aluminum plank siding to verify actual locations of penetrations relative to seam locations of planks before
6. plank installation.
7. The beginning of the work shall indicate acceptance of the areas and conditions as satisfactory by the Installer.

3.2 PREPARATION

A. Coordination: Coordinate setting drawings, diagrams, templates, instructions, and directions for installation of anchorages that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to the project site.

B. Obtain dimensions from project site before fabricating wall system.

C. Ensure structural support is aligned and condition is acceptable.

D. Building surfaces shall be smooth, clean, and dry, and free from defects detrimental to the installation of the system. Notify General Contractor of conditions not acceptable for installation of system.

E. Inspect wall system and components before installation and verify that there is no shipping damage.

F. Do not install damaged planks; repair or replace as required for smooth and consistent finished appearance.

3.3 INSTALLATION OF SIDING

A. Install cladding and components in accordance with Manufacturer's written installation instructions and shop drawings.

B. Ensure continuity of building envelope air barrier and vapor retarder systems.

C. Erect components plumb and true.

D. Install continuous starter strips, inside and outside corners, edgings, soffit, drip, cap, sill, and window/door opening flashings, as indicated.

E. Install outside corners, fillers, and closure strips with carefully formed and profiled work.

F. Maintain joints in exterior cladding, true to line, tight fitting, hair-line joints.

G. Attach components in a manner not restricting thermal movement.

H. Caulk junctions with adjoining work with sealant.

I. Apply isolation coating to areas of contact between dissimilar metals.

J. Touch-Up Painting: Inspect completed wall system and apply matching touch-up paint as needed to correct minor paint flaws.

3.4 ADJUSTING AND CLEANING

A. Remove temporary protective coverings and strippable films, if any.

B. On completion of aluminum siding plank installation, clean finished surfaces with mild domestic detergent and warm water using a soft cloth. Maintain in a clean condition during construction.

C. After aluminum siding plank installation, clear all drainage channels of obstructions and/or dirt.

D. Replace aluminum planks that have been damaged or have deteriorated beyond successful repair by finish touch-up or similar minor repair procedures.

E. Any additional protection, after installation, shall be the responsibility of the general contractor to remove.

3.5 PROTECTION

A. Protect installed products and components from damage during construction.

B. Repair damage to adjacent materials caused by composite metal building panel installation.

END OF SECTION