

## SECTION 07 46 23 - ENGINEERED BAMBOO RAINSCREEN, CLADDING AND SIDING SYSTEM

## PART 1 GENERAL

## I.1 SECTION INCLUDES

- A. Exterior Lamboo Rainscreen Cladding System:
  - 1. Concealed Rainscreen Lamboo Titanclips and starter rail.
  - 2. Pre-drilled furring board (if applicable)
  - 3. Milled Lamboo cladding/siding.
  - 4. Milled Lamboo corner trim and termination trim.

## I.2 RELATED SECTIONS

- A. Section 012300 - Alternates
- B. Section 04200 - Masonry Units
- C. Section 05400 - Cold Formed Metal Framing.
- D. Section 06201 - Exterior Finish Carpentry.
- E. Section 07060 - Rainscreen Drainage Mat.
- F. Section 07600 - Flashing and Sheet Metal.
- G. Section 07620 - Sheet Metal Flashing and Trim.
- H. Section 07650 - Flexible Flashings.
- I. Section 07900 - Joint Sealers.
- J. Section 08500 - Exterior Windows.

## I.3 REFERENCES

- A. ASTM International (ASTM):
  - 1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

## I.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data:
  - 1. Manufacturer's data sheets on each product to be used.
  - 2. Preparation instructions and recommendations.
  - 3. Storage and handling requirements and recommendations.
  - 4. Installation methods.
- C. Verification Samples: Two representative units of each finish product specified.
  - 1. Sample Size: 12 inches (305 mm) boards of chosen wood species milled to rainscreen clip pattern for use on soffits and ceilings.
  - 2. Rainscreen system to be used with tinted finish applied to 12-inches (305 mm) long sample.

- D. Shop Drawings: Provide manufacturer's standard details referenced to exterior and interior elevations of the project drawings; include details of materials, construction and finish. Include relationship with adjacent construction.

#### I.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum 8 years documented experience.
- B. Installer Qualifications: Company specializing in performing Work of this section with minimum 5 years documented experience with projects of similar scope and complexity.
- C. Source Limitations: Each type of product from a single manufacturing source to ensure uniformity.

#### I.6 PREINSTALLATION CONFERENCE

- A. 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.
  - 1. Meet at project site prior to delivery of finish carpentry materials and review condition and environmental controls required for proper installation and ambient conditioning in areas to receive work.
  - 2. Proceed with finish carpentry when everyone concerned agrees that required ambient conditions can be properly maintained.
  - 3. Sequencing: Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

#### I.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's packaging bearing the brand name and manufacturer's identification until ready for installation.
  - 1. Include in delivery of material a complete list of items shipped to include Lamboo Rainscreen, board length, hardware, finish and any other product accessories delivered with the rainscreen system.
  - 2. Rainscreen system shall be delivered on a tarped flatbed truck or an enclosed van for small quantities. Keep rainscreen tarped or store indoors until installation.
  - 3. Do not deliver finish carpentry materials until painting, wet work, grinding, and similar operation which could damage, soil or deteriorate rainscreen have been completed in installation areas. If finish carpentry must be stored in other than the installation areas, store only in areas meeting requirements specified for installation areas.
- B. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
- C. Protect from damage due to weather, excessive temperature, and construction operations.
  - 1. Protect finish carpentry during transit, delivery, storage and handling to prevent damage, soiling, and deterioration.
  - 2. Do not allow finish carpentry to get wet.

#### I.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

#### I.9 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's standard limited warranty against defects in materials and workmanship.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Lamboo, which is located at: P. O. Box 195; 311 West Edwards Street; Litchfield, IL 62056; ASD Toll Free: 866-966-2999; Fax: 866-966-2999; Email: [sales@lamboo.us](mailto:sales@lamboo.us); Web: [www.lamboo.us](http://www.lamboo.us)
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

### 2.2 WOOD MATERIALS

- A. Engineered Bamboo: Lamboo Rainscreen for exterior and interior applications.
  1. Fire Resistance: ASTM E84 Class A.
  2. Toxicity: Low VOC adhesives, does not produce off-gassing when sanding, profiling or handling materials.
  3. Anti-Microbial Properties: Naturally anti-bacterial materials.
  4. Pests and Insects: Bamboo includes silica fibers to help resist insects and wood eating pests.
  5. Density and Buoyancy:
    - a. Janka Rating: 1,900 lbf (8.45 kN).
    - b. Average Weight: 44 lbs/cubic foot (704 kg/cubic meter).
    - c. Specific Gravity: 0.60.
  6. Workability: Adhesives, binders and treatments specific to application as recommended by manufacturer.

### 2.3 EXTERIOR RAINSCREEN WALL CLADDING AND SIDING SYSTEMS

- A. Exterior Finished Rainscreen Cladding Boards: Lamboo Exterior Rainscreen Wall Cladding and Siding Systems as manufactured by Lamboo.
  1. Milled groove separating cladding boards.
  2. Board Length: 8 ft (2438 mm) lengths; EXT-8.
  3. Board Length: 10 ft (3048 mm) lengths; EXT-10.
  4. Board Length: 12 ft (3858 mm) lengths; EXT-12.
  5. Board Length: 16 ft (4879 mm) lengths; EXT-16.
  6. Board Thickness: 1 1/16 inch (17 mm) thick for all board widths.
  7. Rainscreen Cladding: 5 inches (127 mm). Face Width: 4-3/4 inches (120 mm). Finish to be selected from options below:
    - a. Finish: LAMRSH-106-EXT Finished Vertical Hazel.
    - b. Finish: LAMRSG-106-EXT Finished Vertical Golden Honey.
    - c. Finish: LAMRSA-106-EXT Finished Vertical Deep Amber.
    - d. Finish: LAMRSF-106-EXT Finished Vertical Butternut.
    - e. Finish: LAMRSO-106-EXT Finished Vertical Fawn.
  8. Aluminum Fasteners:
    - a. Architectural grade extruded aluminum rainscreen 'wall clips' with a T6-6063 corrosion resistant coating; TitanClip0716.
    - b. Architectural grade extruded aluminum rainscreen 'starter rail' with a T6-6063 corrosion resistant coating; TitanRail0716.
  9. Anchorages for Exterior Rainscreens: Pan Head No. 3 Square Drive Stainless Steel Rainscreen Clip Screws, No. 10 x 1 inch (25 mm); SS-3SQ-10x1.
- B. Trim System: Lamboo Trim System as manufactured by Lamboo.
  1. Inside Corners: 8 ft (2438 mm) lengths; LAMRS-IC-EXT-8.

2. Inside Corners: 10 ft (3048 mm) lengths; LAMRS-IC-EXT-10.
  3. Inside Corners: 12 ft (3858 mm) lengths; LAMRS-IC-EXT-12.
  4. Inside Corners: 16 ft (4879 mm) lengths; LAMRS-IC-EXT-16.
  1. Outside Corners: 8 ft (2438 mm) lengths; LAMRS-OC-EXT-8.
  2. Outside Corners: 10 ft (3048 mm) lengths; LAMRS-OC-EXT-10.
  3. Outside Corners: 12 ft (3858 mm) lengths; LAMRS-OC-EXT-12.
  4. Outside Corners: 16 ft (4879 mm) lengths; LAMRS-OC-EXT-16.
- C. Touch-up Finishing:
1. Stain: LAMRS-TU-(finish selected from standard finishes), 1 Quart

## PART 3 EXECUTION

### 3.1 EXAMINATION AND PREPARATION

- A. Prepare substrates using the methods recommended by the manufacturer for achieving best result for the substrates under project conditions. Clean surfaces thoroughly prior to installation.
- B. Condition wood material for a minimum of 48 hours to average prevailing humidity conditions in installation areas prior to installing.
- C. Do not begin installation until substrates have been properly constructed and prepared.
- D. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.

### 3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions, approved submittals and in proper relationship with adjacent construction.
  1. Refer to Drawings for information pertaining to dimensions of milled siding, treatment of corners; mitered boards or wood corner boards with built-in furring for concealed fastening, and trim for doors and windows with built in furring for concealed fastening.
  2. Discard units of material which are unsound, warped, bowed, twisted, not adequately seasoned, or which are of defective manufacture with respect to surface, size, or pattern.
  3. Install the work plumb, level, and true with no distortions. Shim as required using concealed shims.
  4. Install inside and outside corners with fasteners through the attached flanges directly to sheathing. Fasteners provided by others.
    - a. Starter rail.
    - b. Siding Ventilation System.
    - c. Initial bottom board.
  5. Wall Clips: Add to anchor top of initial bottom board at 20 inches (508 mm) on center for 3 and 5 inch (76 and 127 mm) Rainscreen system and 16 inches (406 mm) on center for 7 inch (178 mm) Rainscreen system.
    - a. Add second board.
    - b. Add wall clips and repeat until reaching the top of the wall.
    - c. Add Siding Ventilation System to top of wall termination for entire length of Rainscreen.
    - d. Add Last board and face fasten through Lamboo and Siding Ventilation System then into sheathing.
  6. Use Finish Touch-Up on field cut ends of the rainscreen cladding, transition boards, inside and outside corners.
- B. Anchorage of Finish Carpentry:

1. Install engineered corners and window/door trim prior to installation of milled siding boards.
2. Exterior Installation: Install extruded aluminum concealed clips securing with supplied pan head square drive stainless steel rainscreen clip screws, No. 10 1 inch (25 mm).
3. Interior Installation: Install extruded aluminum concealed clips securing with supplied pan head, zinc coated steel, Phillips drive, rainscreen rail screws, No. 10, 3/4-inch (19 mm).

C. Coordinate electrical requirements and wiring with millwork installation.

### 3.3 FIELD QUALITY CONTROL

A. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

### 3.4 CLEANING AND PROTECTION

A. Clean and protect products in accordance with the manufacturer's recommendations. Clean finish carpentry work on exposed and semi-exposed surfaces. Apply a complete topcoat of wood finish to all exposed and semi-exposed surfaces.

B. Repair damaged and defective finish carpentry work wherever possible to eliminate defects functionality and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.

C. Protect installed products until completion of project. Installer of finish carpentry shall advise Contractor of final protection and maintained conditions necessary to ensure that work will be without damage or deterioration at the time of acceptance.

D. Touch-up, repair or replace damaged products before Substantial Completion.

E. Refinish field cuts by applying the final coat of wood finish directly on the cut ends prior to abutting an additional panel and before adding corner trim system.

END OF SECTION