

Mr. Bamboo, Inc. - BamStrand®
Prefinished Strand Woven Bamboo Flooring
CSI Masterformat 3-Part Specification

Part 1 – General

1.1 SUMMARY

A. This section Includes: Prefinished, {pre-stained} solid Strand Woven bamboo strip flooring installed by the {nail-down method.}, {glue down method.} or {nail and glue-down method} as selected by contractor.

B. Other Related sections

List other specification sections dealing with work directly related to this section and for other types of flooring materials bordering the bamboo flooring and any finished trim.

1. 00115 – Green Building Requirements: LEEDS requirements.
2. 03300 – Concrete slab.
3. 06100 – Rough Carpentry: Wood subfloor.
4. _____ - _____.

1.2 SUBMITTALS

A. Submit under provisions Section 01330- Submittal Procedures the following items:

Mr. Bamboo, Inc. - BamStrand® strand woven pre-finished solid bamboo flooring

1. Product Data
 - a. Flooring:
Include selected color
Adhesive used in manufacture of flooring
Finish data: type, composition and manufacturer
 - b. Accessories
 - c. Installation guidelines
 - d. Warranty
2. Shop Drawing: Include direction of flooring, fastening method, flooring patterns and color layout. Also include large scale sectional details of accessories and transitions to other flooring.
3. Samples:
 - a. 6" (150mm) long strip of pre-finished bamboo flooring material in stock or custom color-match color.
 - b. Fasteners/Nails.
 - c. One of each specified accessory, minimum 6" (150 mm) long.
4. Quality Assurance/Control Submittals:
 - a. Qualification: Proof of manufacturer and installer qualifications.
 - b. Test Reports: Reports for specified Physical Property Performance Requirements.
 - c. Manufacturer's Installation Instructions.

B. Closeout Submittals: Reference to Section 01780-Closeout Submittals the following items:

1. Maintenance Instructions
2. Warranty

C. LEED Submittals:

1. Credit EQ 4.1: Wood flooring adhesive manufacturer's product data indicating that the adhesive used has a VOC of less than 100 g/L less water.
2. Credit WQ 4.2: Wood flooring coating data indicating finish used has a VOC of less than 100 g/L.
3. Credit MR 6: Rapidly renewable material.

1.3 QUALITY ASSURANCE

1. Manufacturer Qualifications:
 - a. Minimum ten years experience in the manufacture and distribution of bamboo flooring.
 - b. Member of US Green Building Council, National Wood Flooring Association
2. Installer Qualifications:
 - a. Minimum of three years experience in hardwood and/or bamboo flooring installation.
 - b. Minimum three years experience in installation of hardwood and/or bamboo flooring over radiant heating systems.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Reference Section 01660-Product Storage Handling Requirements.
- B. Deliver Bamboo flooring to project site in original packaging not less than 5 days prior to installation start date to allow floor to acclimate to site conditions.

1.5 PROJECT OR SITE CONDITIONS

NOTE FOR RADIANT HEAT: For a radiant floor heating system specify 5 days in the paragraph below.

Environmental Requirements: All installation and receiving areas of bamboo flooring and adhesive must be maintained at normal occupancy temperature and humidity levels for minimum 5 days prior to, during, and continuously following installation. It is important the HVAC system be operating and controlling temperature and humidity levels. Maintain humidity level between 40 and 60 percent.

1.6 WARRANTY

FOR COMMERCIAL PROJECTS, USE WARRANTY ARTICLES A. AND B.

FOR RESIDENTIAL PROJECTS, USE WARRANTY ARTICLES A. AND C.

- A. Mr. Bamboo BamStrand® 30 Year Structural Warranty against delaminating, separation, buckling or cupping as a result of a manufacturing defect when installed and maintained in accordance with manufacturer's installation instructions.
- B. Mr. Bamboo BamStrand® 10 Years Finish Warranty against wear through to the underlying bamboo flooring or separation from the flooring when installed and maintained in accordance with manufacturer's installation and maintenance instructions in commercial installations.
- C. Mr. Bamboo BamStrand® 25-Year Finish Warranty against wear through to the underlying bamboo flooring or separation from the flooring when installed and maintained in accordance with manufacturer's installation and maintenance instructions in residential installations.

PART 2 PRODUCTS

2.1 MANUFACTURER INFORMATION

- A. Mr. Bamboo, Inc. Toll Free (888) 672-2628
712 County Line Rd Tel: (630) 227-6600
Bensenville, IL 60106 Fax: (630) 227-6601
Website: www.mrbambooflooring.com e-mail info@mrbambooflooring.com

Insert name, address and phone numbers of local distributor/dealer below.

1. Distributor/Dealer _____

- B. BamStrand® Bamboo Flooring
1. Color: Natural, Coffee or Auburn
2. Thickness: 9/16" or 14mm
3. Joint: Tongue and groove joint with 1/4"
4. Edge: Small bevel on edge and ends

- C. Substitutions: None Permitted

2.2 MATERIALS

- A. Bamboo Flooring
1. Species: Moso
 2. Size: 3-3/4" (95 mm) wide by 9/16" (14 mm) thick 72" (1830 mm) long.
 3. Edge: Small bevel-edged tongue and groove.
 4. Back: Channeled and factory finished.
 5. Chemical Treatment: Natural borate solution and hydrogen peroxide to eliminate pests and mildew
 6. Factory finish: Six coats of Klumpp finish for high traffic use.
 7. Bamboo Harvest – Bamboo is harvested in 5-6 years.
 8. Physical Property Performance Requirements:
 - a. Hardness: ASTM D 1037, Janka Ball: 3080 for Natural and 2302 for Coffee.
 - b. Dimensional Stability: ASTM D 1037: Dimensional length change: Natural: 0.004%, Coffee: 0.008%. Width change: for both Natural and Coffee color there was no measurable change. Thickness change: for both Natural and Coffee color there was no measurable change.
 - c. Flammability: ASTM E 648: Class 1 Interior Floor Finish rating per NFPA 101.
 - d. Smoke Density: ASTM E 622: Maximum Natural - 239 in flaming mode: and Coffee 161 in non-flaming mode
 - e. Moisture Content: ASTM D 4442, Oven Dry Method: 6% percent average.
 - f. Formaldehyde Emissions: ASTM E 1333: Formaldehyde emission well below E1 standard requirements. Formaldehyde content Natural at 0.002mg/100g and Coffee at 0.003mg/100g (E1 standard is 1.5mg).

- B. Installation Adhesive: One-part moisture-cured urethane premium wood floor adhesive.
- C. Fasteners:
 - 1. 1-1/2" (38 mm) Thick Subfloor: 2" (50 mm) nails.
 - 2. 3/4" (19 mm) Thick Subfloor: 1-1/2" (38 mm) nails.
 - 3. 1" (25 mm) Thick Plywood Subfloor over Concrete: 1-1/4 (32 mm) nails.
- D. Subfloors
 - 1. Concrete Subfloor
 - a. Concrete shall be checked for flatness prior to installation, low spots and voids shall be filled to a minimum of 3/16" in a 10ft. radius or 1/8" in a 6 foot radius.
 - b. Surface should be smooth, clean and free of contaminants.
 - 2. Wood Subfloor
 - a. 3/4" CDX plywood for 24" on center floors.
 - b. 5/8" CDX plywood for 12" on center and 16" on center floors.

2.3 ACCESSORIES

- A. Treads: 11-3/4" (297 mm) wide by 1" (25 mm) thick in 48" (1220 mm) lengths and 72" (1830 mm) length. Match color.
- B. Stair Riser: 7-1/2" (190 mm) wide by 7/16" (12 mm) thick in 48" (1220 mm) lengths and 72" (1830 mm). Match color.
- C. Stair Nosing: 3-5/8" (93 mm) wide by 9/16" (14 mm) thick. Match color.
- D. Reducer: 2-1/4" (54 mm) wide by 3/4" (20 mm) thick. Match color.
- E. T-Molding: 1-3/4" (44 mm) wide by 5/8" (16 mm) thick. Match color.
- F. Base Shoe: 3/4" (19 mm) high by 1/2" (13 mm) thick. Match color.
- G. Base Board: 3" (77 mm) high by 1-1/4" (30 mm) thick. Match color.
- H. T-Threshold: 1-15/16" (50 mm) wide by 13/16" (22 mm) thick in 72" (1830 mm) lengths. Match color.

Insert additional accessories such as metal or wood feature items here. Coordinate installation of transition strips to other flooring materials and finished floor heights, if applicable, and determine which flooring installer should provide transition materials.

If transition strips to other flooring materials are required, verify which flooring installer.

Provide the transitions and include below or in another section as appropriate.

Part 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates upon which bamboo flooring will be installed.
 - 1. Verify that subfloor is structurally sound, clean, dry, and free of contaminants that would interfere with bonding of the flooring adhesive (such as concrete curing compounds, waxes or oils).
 - 2. In wood frame structures, do not begin installation of bamboo flooring until structure has been dried out, with moisture content of wood subfloor between 6 and 10 percent.

The following paragraphs apply only to bamboo flooring installed over concrete substrates.

3. Test concrete floors for moisture vapor emission using a Calcium Chloride test. Do not install bamboo flooring if vapor pressure exceeds 3 lbs per 1,000 square feet (15 g per m²) in 24 hours.
4. Verify that HVAC system is operating and maintaining occupancy level temperature and humidity conditions. Report unsatisfactory conditions to Architect and/or General Contractor and correct before proceeding. Commencement of work by installer is considered an acceptance of substrate conditions. Prior to installation, the installer shall examine all material and determine that it matches the work order.

3.2 PREPARATION

- A. Acclimatization: Open bamboo flooring boxes and remove packaging a minimum 6 days prior to start of installation.
- B. Grind and fill subfloor using methods and materials appropriate to the subfloor construction to eliminate humps and depressions. For best results, neither humps nor depressions shall exceed 1/8" (3 mm) in a 6 foot (1830 mm) radius or 3/16" (4.7 mm) in a 10 foot (3048 mm) radius.
- C. Clean surface thoroughly prior to installation.
- D. Due to the physical characteristics of bamboo, it is a natural fiber. Variations in color occur naturally. Each box should be inspected for differences in color and color variance should be staggered throughout the floor.

3.3 INSTALLATION

Under normal installation conditions, the manufacturer's installation instructions are sufficient. Unusual or unique site or design conditions may demand supplementary information in this article.

- A. Bamboo Flooring: Install in accordance with manufacturer's complete installation instructions by [nailing or stapling to substrate] [gluing to substrate.] Details below are a summary only.
- B. Lay bamboo flooring in the direction (s) / pattern (s) as shown on Drawings.
- C. For a blended appearance select pieces randomly from several boxes.
- D. Allow 1/4" (5 mm) space for expansion and movement of bamboo flooring at walls and permanent obstructions.

Include the following paragraphs if adhesive installation method is used.

- E. Do not use the "wet lay" or "loose lay" installation method. This method will trap moisture under the floor and could cause the bamboo flooring to warp. Spread adhesive as can be covered with an appropriate notched trowel at 45 degree angle. Spread as much adhesive as can be covered by flooring in one hour (or as recommended by your adhesive instruction.) Once adhesive has tacked, lay the first row of bamboo flooring and continue laying flooring until adhesive is covered.

- F. Adhere bamboo flooring strips without gaps. Ensure that each floor strip is completely adhered to substrate.
- G. Immediately remove excess adhesive from pre-finished surface of bamboo flooring.

Include the following paragraphs if nail-down installation method is used.

- H. Lay strip bamboo flooring over wood subfloor parallel with length of room.
- I. Nail down bamboo flooring to subfloor with power driver. Space fasteners at 6-10" (152-254 mm) and 2" (51 mm) from end of boards. Stagger end joints from row to row by minimum of 12" (305 mm).
- J. Accessories: Install using methods appropriate to the accessory and flooring system.
- K. Accommodate thermal expansion. Install transitions, trim and base molding, as identified in manufacturer's installation guidelines and as required to accommodate site conditions.

3.4 CLEANING

- A. Reference Section 01740- Maintenance.
- B. Follow manufacturer's recommended maintenance instruction.

3.5 PROTECTION

Cover and protect completed Mr. Bamboo flooring from further construction traffic with heavy kraft-paper or other suitable covering. Do not use non-breathable sheet or film that could cause condensation to form. Maintain covering throughout remainder of construction period.

END OF SECTION