

Bison Innovative Products

2395 West 4th Avenue
Denver, CO 80223
info@BisonIP.com
www.BisonIP.com

Phone 303-892-0400
Toll Free 800-333-4234
Fax 303-825-5988

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Bison Wood Tiles for use with Bison Deck Supports Specification SECTION 07760 DECK PEDESTALS

Ideal for use with Bison Deck Supports, Wood tiles can be laid in a parquet pattern or mixed with other paving stones for a unique look. These woods give warmth, excellent resistance to weather and architectural charm to roof decks and more. All Bison Wood Tiles are made from tropical hardwoods and are the ideal long-lasting, low maintenance decking alternative.

PART 1 GENERAL

1.1 SECTION INCLUDES

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

- A. Wood Tiles for use with Adjustable Deck Pedestals or traditional joist systems.

1.2 RELATED SECTIONS

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

- A. Section 06150 - Wood Decking.
- B. Section 07500 - Membrane Roofing.
- C. Section 07720 - Roof Walkways.
- D. Section 07760 - Roof Pavers.
- E. Section 09690 - Access Flooring.

1.3 REFERENCES

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

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Storage and handling requirements and recommendations.
 - 2. Installation methods.
- C. Shop Drawings: Submit shop drawings detailing the installation methods. Coordinate placement with locations noted on the Contract Drawings.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. All primary products specified in this section will be supplied by a single manufacturer with a minimum of five (5) years experience.
- B. Installer Qualifications:
 - 1. The installer must have a minimum of two (2) years proven construction experience, be capable of estimating and building from blueprint plans and details, determine elevations, and properly handle materials. All Work must comply with the Bison installation application procedures for deck support work specified herein.
- C. Special Considerations:
 - 1. The contractor assumes the responsibility for and must take into consideration the structural capability and adequacy of the structure to carry the dead and live load weight(s) involved, and when appropriate that the density of any insulation is satisfactory to resist crushing and damaging the waterproofing membrane.

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

- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship is approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store Bison Wood Tiles and system components with labels intact and legible.
- B. Inspect all delivered materials to insure they are undamaged and in good condition.
- C. Store and dispose of solvent-based materials such as construction adhesive, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

- A. There are no temperature restriction guidelines prescribed by Bison Innovative Products that limit deck installation work other than the practical considerations of working in unsafe or inclement weather.
- B. Bison wood tiles and deck supports listed in this section are for use with pedestrian traffic only.



1.8 WARRANTY

- A. At project closeout and upon request, Bison Deck Supports can provide to the Owner or Owners Representative, an executed copy of the manufacturer's standard document outlining the terms, conditions and limitations of their limited warranty against manufacturing defect for a period of three (3) years.
- B. The Contractor warrants that his work will remain free from defects of labor and materials used in conjunction with his work in accordance with the General Conditions for this project or a maximum of three (3) years.
- C. It is the responsibility of the Contractor installing the product listed in this section to coordinate warranty requirements with any related sections or adjacent Work. Notify the Architect immediately of any potential lapses or limitations in warranty coverage.
- D. Bison Ipê Wood Tiles are covered by a limited three year warranty. Bison Ipê Wood Tiles are warranted to the original owner to be free of defects in material and workmanship for the period of three years from the date of purchase. This warranty also extends to defects caused by wood rot and insect infestation for the same period. Defects are defined as imperfections that impair the utility of the product. This warranty applies to conditions of normal use, and does not apply to damage resulting from abuse, excess weight or acts of nature. Bison Ipê Wood Tiles are for pedestrian use only. Use of wheeled or motorized traffic voids the warranty. This warranty does not apply to non-structural surface cracks or to variations in wood color due to weathering. If a tile is deemed defective within the terms of the warranty, Bison Deck Supports may make repairs or provide for repair services at no cost to the customer. If a repair cannot be made, a replacement tile will be furnished at no cost to the customer. Bison Deck Supports must approve all warranty related repairs, and unauthorized repairs void this warranty. This warranty does not cover shipping damage. Shipping damage must be reported directly to Bison Deck Supports immediately upon receipt of products. Please save all product packaging for a short period of time in the event that return shipping is required.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Wood Tile Manufacturer: Bison Innovative Products; 2395 West 4th Avenue, Denver, CO 80223. Toll Free 800-333-4234. Phone 303-892-0400. Fax 303-825-5988. Email: Sales@BisonIP.com. Web: www.BisonIP.com.

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

- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 APPLICATIONS/SCOPE

- A. Furnish and install a wood tile deck system over adjustable pedestals or joist/plank installation.
- B. Wood tiles are not designed for supporting decks that carry vehicular traffic or equipment including but not limited to snow removal equipment, ATV's, forklifts, or any motorized vehicles.
- C. Decks must be restrained by perimeter blocking or walls on all sides. Lateral movement greater than 3/16 inch is unacceptable and will be rejected.
- D. Consult the Manufacturer and/or an Engineer regarding the following:
 1. When design requires spacing between Bison Wood Tiles other than the standard spacing required by the manufacturer.
 2. When considering use for other than a raised decks (e.g. interior floors, stairs, etc.).
 3. When load capacity exceeds the maximums listed in this section
 4. When using Bison Wood Tiles pedestals on grade (soil).

2.3 BISON WOOD TILES: Weight Bearing Capacity 1,250 lbs./ per tile FS:3

1. Model:WT-IPE-24RIBBED Ipê Wood Tile
 - a. Dimensions: 23 7/8" x 23 7/8" x 1.69" nominal
 - b. Weight per tile: 24 lbs Weight per square foot: 6 lbs.
 - c. Fire Rating: Class A – meets & exceeds ASTM E108-07a Spread of Flame Test
 - d. Color: Brown Note: Tiles are a natural product and have variations in color and grain.
 - e. Surface: Ribbed
2. Model:WT-IPE-24SMOOTH Ipê Wood Tile
 - a. Dimensions: 23 7/8" x 23 7/8" x 1.69" nominal
 - b. Weight per tile: 24 lbs Weight per square foot: 6 lbs.
 - c. Fire Rating: Class A – meets & exceeds ASTM E108-07a Spread of Flame Test
 - d. Color: Brown Note: Tiles are a natural product and have variations in color and grain.
 - e. Surface: Smooth
3. Model:WT-IPE-48 Ipê Wood Tile
 - a. Dimensions: 47 7/8" x 23 7/8" x 1.69" nominal
 - b. Weight per tile: 48 lbs Weight per square foot: 6 lbs.
 - c. Fire Rating: Class A – meets & exceeds ASTM E108-07a Spread of Flame Test
 - d. Color: Brown (Note: Tiles are a natural product and have variations in color and grain.)
 - e. Surface: Ribbed, Smooth by Special Order
4. Model: WT-FSC-MAS -24 Massaranduba Wood Tile (FSC Certified SCS-COC-002585)
 - a. Dimensions: 23 7/8" x 23 7/8" x 1.69" nominal
 - b. Weight per tile: 24 lbs Weight per square foot: 6 lbs..
 - c. Fire Rating: Class A – meets & exceeds ASTM E108-07a Spread of Flame Test
 - d. Color: Reddish Brown (Note: Tiles are a natural product and have variations in color and grain.)
 - e. Surface: Ribbed
5. Model: WT-FSC-IPE -24 Ipe Wood Tile (FSC Certified SCS-COC-002585)
 - a. Dimensions: 23 7/8" x 23 7/8" x 1.69" nominal
 - b. Weight per tile: 25 lbs Weight per square foot: 6.25 lbs.
 - c. Fire Rating: Class A – meets & exceeds ASTM E108-07a Spread of Flame Test
 - d. Color: Reddish Brown (Note: Tiles are a natural product and have variations in color and grain.)
 - e. Surface: Smooth
6. Model:FS-1 Fastening Kit for Bison Wood Tile Wood Tile Fastening Kit:

- a. Model: FS1 Fastening Kit REQUIRED for use with Bison Pedestals and Bison Wood Tiles ONLY.
- b. Materials: FS1 Washer (Patent Pending) and FS1 Pedestal Screw Fastens Wood tiles to the pedestals without penetrating or damaging wood.

2.4 CARE & MAINTENANCE OF WOOD TILES:

1. Bison Wood Tiles are a natural material and can absorb or loose moisture in different climates.
2. Wood Characteristics: Bison Wood Tiles are made of Ipê and Massanduba hardwoods which contain a rich variety of graining and coloration and are exceptionally dense and resistant to insects. The natural shading, coloration and graining variations add to the architectural character and overall visual appeal of the finished product.
3. Storage: Keep product out of direct sunlight until it is ready to be installed. Wood tiles should not be stored tightly wrapped in plastic. Bison wood tiles will adjust to the climate where they are installed and may have or develop some slight cracking or checking.
4. General Safety Precautions when working with Bison Wood Tiles: Wear safety glasses with side shields when handling, cutting, sanding, or grinding this material. Use a face shield for processes that may generate excessive dusts and splinters. Wear puncture resistant work gloves, such as leather when handling. Respirators must be worn if the ambient concentration of airborne contaminants exceeds prescribed exposure limits. Dust masks may be worn to avoid the inhalation of nuisance dust. Dust masks are not adequate protection in environments above the occupational exposure limit. Cutting, Grinding, or Sanding should be done outdoors or in a well-ventilated area. Refer to product MSDS for more information.
5. Cutting: Carbide or diamond tipped blades are highly recommended. Bison wood tiles have a very high density and a slower feed rate is recommended when cutting tiles. In order to minimize checking (small cracks) the installer must seal any cut ends with Anchorseal® or other equivalent product. Apply sealer with a foam brush to the cut ends only, being very careful to not get any on the top surface of the wood. Reassembly: To reassemble tiles after cutting, the installer must pre-drill holes from the bottom, using a carbide drill bit designed to extract stock during drilling. Exercise caution to not drill through the top surface. In addition, use only stainless steel screws which are durable and provide maximum fastening power.
6. Fastening: Bison strongly recommends the use of Bison Deck Supports and the FS1 Fastening Kit* (*patent pending) when installing Bison Wood Tiles. The Bison pedestal/wood tile system installs quickly and securely and allows for removal later if required. The FS1 Fastening Kit, available exclusively from Bison, fastens wood tiles to the pedestals without penetrating or damaging the wood.
7. Cleaning & Sealing: If desired, Bison Wood Tiles can be periodically cleaned and sealed. Wood stabilizers or sealants can help mitigate the loss of moisture on the top of the boards and minimize checking and splitting. The installer can lightly wax the ends of the wood if desired. *Note: small checks and splits are normal and a natural part of the wood.* The following manufacturers offer cleaning and sealing products specifically designed for use with exotic hardwoods: Cabots, Penofin, Messmers. *Important: Bison Innovative Products recommends that you test any cleaners or sealants in an inconspicuous area first before applying them to the installed deck.*
8. Sanding: If you plan to seal your deck and desire a more uniform appearance, a light sanding is highly recommended. Use 80 grit sandpaper to lightly sand the wood tiles and thus reduce the appearance of any minor marks, scratches or surface imperfections. After sanding, sweep the tiles and use water to rinse away any remaining dust and allow to dry thoroughly before applying sealer. Exercise caution when sanding wood with the scuff resistant surface. *Important: Always test any product you apply in an inconspicuous place to make sure it performs as you expect.*
Maintaining Tile Color: To better maintain the rich coloration of the tiles, you can apply a penetrating oil finish with UV blocker. These products offer UV protection as well as mold and mildew protection. Before applying any finish, first clean and remove any residue from the wood tile as described above. After your initial coat is applied, an annual maintenance coat will help keep the coloration vibrant for years to come. *Important: Always test any product you apply in an inconspicuous place to make sure it performs as you expect.*
9. Natural Aging: Left to weather naturally and, depending on climatic conditions, Bison wood tiles will develop a silvery-gray patina. If you prefer this look, Bison recommends that a coat of wood stabilizer be applied after installation. Some products provide UV protection, allowing your wood tiles to acclimate more uniformly as weather and environmental conditions season the deck. *Note: each board has unique characteristics and will weather at different rates. The amount of direct and indirect sunlight, temperature, humidity, moisture and other local conditions will factor into the time and shading of the deck.*
10. Periodic Cleaning: Commercial Cleaning Products: Bison recommends using a deck cleaning product which safely cleans the wood and also kills mold spores. The deck tiles are ready to re-seal once they are cleaned. *Important: Always test any product you apply in an inconspicuous place to make sure it performs as you expect.*
11. Pressure Washing: You may also use a pressure washer to remove built-up dirt, mold or mildew from your wood tiles. *Caution: use the lowest PSI for the species of wood you are cleaning. A maximum of 1200 PSI is suggested for Bison Wood Tiles. Bison also recommends using a professional deck cleaning contractor. Important: Test an inconspicuous area first and be careful to use the wand in even strokes to avoid lap marks.*

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify all elevations and deck dimensions before commencing work.

3.2 PREPARATION

- A. Establish accurate lines, levels, pattern, and perimeter containment.
- B. The substrate surface that will receive the deck supports must be well compacted (on grade) and structurally capable of carrying the dead and live loads anticipated.
- C. The substrate must be clean and free of projections and debris that could impair the performance of the pedestals or the total deck system.

**** NOTE TO SPECIFIER **** Delete the next paragraph if Pedestals are not installed in conjunction with roof systems.

3.3 INSTALLATION

- A. Installation on Adjustable Pedestals. Refer to Bison Level.it or Bison Versadjust Pedestal Specification for pedestal installation specifications.
- B. Installation on Joist Systems: Install in accordance with Engineer's design and manufacturer's instructions
- C. Wood Tile Fastening Kit:
 1. Model: FS1 Fastening Kit REQUIRED for use with Bison Deck Supports and Bison Wood Tiles ONLY.
 2. Install one at each corner of 4 tiles to fastens Wood tiles to the pedestals without penetrating or damaging wood.

3. Materials: FS1 Washer (Patent Pending) and FS1 Pedestal Screw
 - D. Joist and Plank Installation
 1. On Pedestals: Use Bison Model JT, Joist Top Attachment for Level.it or Versadjust Pedestals
 2. Attach wood tiles to joists using Model FS1 Fastening Kit.
 - E. Cutting & Installing Bison Wood Tiles
 1. Fasteners: If needed use high grade stainless or coated fasters. Always pre-drill holes.
 2. Tools: Carbide tip saw blades, Titanium Drill Bits
 - F. Safety
 1. Always use proper safety equipment, such as gloves, safety glasses, hearing protection (if using power tools) and dust masks. It is always recommended to wear a mask and safety glasses when working around saw dust and have good ventilation.
- 3.4 FIELD QUALITY CONTROL
- A. Inspect often during installation to assure that lines are being maintained in a straight and consistent pattern and that deck panels or pavers are level and not rocking.
 - B. Unless otherwise specified in writing to allow for expansion, inspect to assure that all paver spacing between tiles and at perimeter walls does not exceed 3/16 inch width. Particular attention should be made to assure that all pedestrian entry or access points to the deck are level and that the deck surface tiles are not randomly raised or uneven creating a tripping or safety hazard.
- 3.5 PROTECTION
- A. Protect installed products until completion of project.
 - B. Touch-up, repair or replace damaged products before Substantial Completion.
- 3.6 IMMEDIATELY FOLLOWING INSTALLATION
- The Owner, or the Owner's Agent, shall carefully inspect the deck system to be positive that:
1. The new deck system is adequately blocked on all sides to contain the surface decking and related components.
 2. There is no more than 3/16 inch width spacing between any deck panels and at all sides of the deck perimeter.
 3. There is no ballasting rock is used to fill in any perimeter voids.
 4. There is no 'rocking' of deck panels as foot traffic is applied to the surface decking.
 5. When used, all required spacer tabs are in place and visible.
- 3.7 ROUTINE MAINTENANCE AND CARE
- Installer and/or Architect has a duty to instruct the deck owner about performing routine maintenance of the deck. Check for rocking deck panels and adjust or shim immediately. Failure to do so can cause a tripping hazard. Periodically check spacer tabs and immediately replace broken tabs to limit deck movement. Make sure the edge restraint stays intact and structurally sound.

END OF SECTION

<p style="text-align: center;">IPÊ WT-ipe-24</p> 	<p style="text-align: center;">WT-ipe-24RIBBED Or WT-ipe-24SMOOTH</p> <p>Dimensions: 23⁷/₈" x 23⁷/₈" x 1.69" nominal Tile Weight: 24 lbs Weight PSF: 6 lbs Color: Brown Class A: ASTM E108-07a</p>	<p style="text-align: center;">IPÊ WT-ipe-48</p> 	<p style="text-align: center;">WT-ipe-48RIBBED Or WT-ipe-48SMOOTH (Special Order Only)</p> <p>Dimensions: 47⁷/₈" x 23⁷/₈" x 1.69" nominal Tile Weight: 48 lbs Weight PSF: 6 lbs Color: Brown Class A: ASTM E108-07a</p>	<p style="text-align: center;">FS1 Wood Tile Fastening Kit* *Patent Pending</p> 
 <p style="text-align: center;">IPÊ WT-FSC-ipe-24</p> 	<p style="text-align: center;">WT-FSC-ipe-24</p> <p>Dimensions: 23⁷/₈" x 23⁷/₈" x 1.69" nominal Tile Weight: 25 lbs Weight PSF: 6.25 lbs Color: Brown Class A: ASTM E108-07a</p>	 <p style="text-align: center;">Massaranduba WT-FSC-MASS-24</p> 	<p style="text-align: center;">WT-FSC-Mass-24 Ribbed Surface</p> <p>Dimensions: 23⁷/₈" x 23⁷/₈" x 1.69" nominal Tile Weight: 24 lbs Weight PSF: 6 lbs Color: Brown Class A: ASTM E108-07a</p>	