**SECTION 061516 – WOOD ROOF DECKING TILES**

1. GENERAL
	1. SECTION INCLUDES
		1. Wood roof deck tiles.
		2. Pedestal supports and pads for roof deck tiles.
	2. RELATED REQUIREMENTS

Specifier: Edit list of related requirements to correspond to Project.

* + 1. Division 07 waterproofing section for protection mats for waterproofing membrane at pedestal support locations.
		2. Division 07 roofing section for protection mats for roof membrane and insulation cover boards at pedestal support locations.
		3. Section 076200 "Sheet Metal Flashing and Trim" for sheet metal flashing, edge closure, and roof drainage items.
		4. Section 077273 "Vegetated Roof Systems" for vegetated roof assemblies.
		5. Section 077616 “Roof Decking Pavers”
		6. Section 077613 "Roof Ballast Pavers" for precast concrete roof ballast pavers.
		7. Section 112429 "Facility Fall Protection" for roof-mounted fall protection equipment.
		8. Section 129300 "Site Furnishings" for roof-mounted unit planters.
	1. REFERENCE STANDARDS
		1. American Society of Civil Engineers (ASCE) Structural Engineering Institute (SEI):
			1. ASCE/SEI 7 - Minimum Design Loads for Buildings and Other Structures.
		2. ASTM International (ASTM):
			1. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings
			2. ASTM E 1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces
	2. PREINSTALLATION MEETINGS
		1. Preinstallation Conference: Conduct conference at Project site as part of roofing conference in coordination with installers of related work.
			1. Coordinate roof substrate protection installation, roof drain locations, and other elements affecting installation of roof deck tiles.

Verify compatibility of roofing system installation with load-bearing requirements of deck tile supports.

* 1. QUALITY ASSURANCE
		1. Installer Qualifications: Experienced Installer with record of successful in-service performance of similar installations, and approved in writing by deck tile manufacturer.

Specifier: Retain "Mockups" Paragraph if scope or complexity of roof deck tile installation warrants a mockup. Edit requirements to suit Project.

* + 1. Mockups: Build mockup in size and location indicated on Drawings, or if not indicated, not less than eight wood deck tiles and deck tile supports plus edge condition. Demonstrate methods and details of installation.
			1. Approval of mockup does not relieve Contractor of responsibility to comply with all requirements of contract documents.
			2. Approved mockup may become part of installation if approved by Architect.
	1. ACTION SUBMITTALS
		1. Product Data: Manufacturer’s product data for specified products indicating compliance with requirements.
		2. Shop Drawings: Provide shop drawings. Include full plans showing deck tiles and deck tile supports layout, adjacent construction and penetrations, and details of each condition of installation and attachment.
			1. Include data indicating compliance with performance requirements.

Indicate points of supporting structure and other construction elements that must coordinate with deck tile installation.

Specifier: Retain and edit below to comply with Project requirements for LEED or other sustainable design requirements.

* + 1. Sustainable Design Submittals:
			1. Product data indicating the following:
				1. Percentages by weight of post-consumer and pre-consumer recycled content.
				2. Total weight of products provided.
			2. Product Test Reports: For roof materials, documentation indicating that roof materials comply with Solar Reflectance Index requirements.
		2. Samples for Initial Selection: For each product specified, when selection is specified.
		3. Samples for Verification: Provide manufacturer's standard size wood deck tile samples.
	1. INFORMATIONAL SUBMITTALS
		1. Installer qualifications.
		2. Product Test Reports: Indicating compliance of products with performance requirements, from a qualified independent testing agency.
		3. Manufacturer's Warranty: Submit sample warranty.
	2. CLOSEOUT SUBMITTALS
		1. Maintenance data.
		2. Executed warranty.
	3. MAINTENANCE MATERIAL SUBMITTALS
		1. Furnish extra materials matching installed products, packaged with protective covering, with labels indicating contents.
			1. Wood Deck Tiles: Furnish full size units in quantity equal to 3 percent of number of units installed for each size.
			2. Deck Tile Supports: Furnish units in quantity equal to 3 percent of number of units installed, for each type and size. Include manufacturer-furnished adjustment tool.
	4. DELIVERY, STORAGE, AND HANDLING
		1. Protect products during shipping, handling, and storage to prevent staining, deterioration of components or other damage.
	5. WARRANTY
		1. Manufacturer's Warranty: On Manufacturer's standard form, in which Manufacturer and Installer jointly agree to replace wood roof decking and roof deck supports that fail in materials or workmanship within three years of substantial completion.
1. PRODUCTS
	1. MANUFACTURERS
		1. Basis of Design: Provide listed Ipe wood roof decking tiles meeting requirements of this Section from Archatrak Inc., 2 Wisconsin Circle, Suite 700, Chevy Chase MD 20815; (866) 206‑8316; archinfo@archatrak.com; [www.archatrak.com](http://www.archatrak.com) [or comparable products of a manufacturer listed in this Section].
			1. <Insert manufacturer name>.
		2. Substitutions: [In accordance with Instructions to Bidders and Division 01 General Requirements] [Not allowed].
		3. Source Limitations: Obtain Ipe wood deck tiles and deck tile support products from a single source with resources to provide materials and products of consistent quality in appearance and physical properties.
	2. PERFORMANCE REQUIREMENTS
		1. Delegated Design: Engage a qualified professional engineer to design roof deck installation.

Specifier: Retain "Structural Performance" Paragraph below along with "Delegated Design" Paragraph above when Contractor is required to take responsibility for structural design of installation. Edit to correspond to requirements of authorities having jurisdiction.

* + 1. Structural Performance: Wood roof deck system shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
			1. Floors: Uniform load of 125 lbf/sq. ft. or concentrated load of 2000 lbf, whichever produces the greater stress.
			2. Walkways and Elevated Platforms Other Than Exits: Uniform load of 60 lbf/sq. ft.
			3. Walkways and Elevated Platforms Used as Exits: Uniform load of 100 lbf/sq. ft.

Specifier: Retain subparagraph below and delete three remaining subparagraphs if roof wind uplift pressures are indicated on Drawings.

All Roof Zones (Corner, Perimeter, and Field-of-Roof) Uplift Pressures: As indicated on Drawings.

* + - 1. Roof Zone 1 (Field-of-Roof) Uplift Pressure: <Insert pressure> lbf /sq. ft.
			2. Roof Zone 2 (Perimeter) Uplift Pressure: <Insert pressure> lbf /sq. ft., located within <Insert dimension> feet of roof perimeter.
			3. Roof Zone 3 (Corners) Uplift Pressure: <Insert pressure> lbf /sq. ft., located within <Insert dimension> feet of roof outside corner.
		1. Combustion Characteristics: Wood roof deck installation shall meet Class A flame spread requirements of ASTM E 108 when tested by a qualified independent testing laboratory acceptable to authorities having jurisdiction.
	1. WOOD ROOF DECKING
		1. Ipe Wood Deck Tiles intended for exterior use laid on specified deck tile supports.
			1. Basis of Design: [Archatrak Inc](https://www.architrex.com/products/structural-wood-tiles/structural-wood-tiles/).
			2. Wood species: Ipe (Tabebuia sp.)
			3. Tile size: [24 by 24 inches] [24 by 48 inches], nominal.
			4. Tile thickness: 1.65 inch, nominal.
			5. Tile weight: 6 lb/sq. ft.
			6. Surface finish: smooth
	2. PAVER SUPPORTS

Specifier: Retain one or both of the following "Supports" paragraphs based upon support types required for Project.

* + 1. Adjustable Height Pedestal Supports: Continuously variable adjustable height high-density copolymer polypropylene screw-jack-type supports accommodating height adjustments from 1-1/8 inch to 21-3/4 inches and slope substrate compensation up to five percent, with cushioned SBR rubber top fitting providing support for specified pavers, and adjustable fittings as required to provide level tile installation as indicated.
			1. Basis of Design Product: [Archatrak, Eterno Adjustable Pedestal System](https://www.architrex.com/products/pedestal-system/se-pedestals/).

Load Capacity: Not less than 2,000 lb.

Tile Spacer Tabs: 5/32 inch (4 mm).

Shims: Support manufacturer's standard.

* + 1. Fixed Height Pad Supports: SBR rubber cushioning pads of varying thickness with shims and spacers, accommodating height adjustments from 3/8 inch to 1-1/2 inch, with top fitting providing support for specified tiles.
			1. Basis of Design Product: [Archatrak Fixed Height Paver Supports](https://www.architrex.com/products/pedestal-system/fixed-height-pedestals/).

Load Capacity: Not less than 1,500 lb.

Tile Spacer Tabs: 5/32 inch (4 mm).

Shims: Support manufacturer's standard.

1. EXECUTION
	1. EXAMINATION
		1. Examine substrates and conditions, with Installer present, for compliance with manufacturer's requirements for installation tolerances and other conditions affecting performance of the Work.
		2. Proceed with installation only after unsatisfactory conditions have been corrected.
	2. PREPARATION
		1. Coordinate placement of protection sheet at roof deck supports with work of roofing section.
		2. Lay out roof deck tiles and roof deck support locations and mark for application of protection sheet.
	3. INSTALLATION, ROOF DECK SUPPORTS
		1. General: Set roof deck tile supports in locations coordinated with approved roof deck layout. Install in accordance with support manufacturer's written instructions and approved submittals. Adjust roof deck tile support heights prior to, and following, installation of roof deck tiles. Shim where fine adjustment is necessary using manufacturer-provided shims.
		2. Tolerances for Roof Deck Tile Supports:
			1. Maximum of 1/16 inch height variation between adjacent roof deck tiles.
			2. Maximum 3/16 inch spacing between each tile and at perimeter walls
			3. Individual roof deck tiles shall not vary more than 1/16 inch from level across width of the tiles.
			4. Tiled areas shall not vary more than 1/4 inch from level in a distance of 10 feet measured at any location and in any direction.
	4. INSTALLATION, WOOD TILES
		1. Install wood deck tiles according to manufacturer's written instructions and approved shop drawings. Set in place using placement methods that result in stable installation free from rocking using sound wood deck tiles with no surface damage. Make final in-place height adjustments using manufacturer's furnished tool.
	5. CLEANING AND PROTECTION
		1. Remove and replace loose or otherwise damaged wood deck tiles, or if tiles do not match adjoining units or pattern indicated on Drawings.
		2. Cleaning: Wash tiles with water or use a pressure washer (max 1200 PSI) to remove dust or dirt.
		3. If left to weather naturally, wood deck tiles will fade to a silver-grey color. A penetrating oil finish with UV blocker may be applied to provide some degree of UV protection as well as mold and mildew protection.

END OF SECTION