SECTION 07469

WOOD RAINSCREEN SIDING

Display hidden notes to specifier. (Don't know how? [Click Here](http://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* Wood Haven, Inc.; wood rainscreen system.
This section is based on the products of Wood Haven, Inc., which is located at:
401 Bridge St.
Perry, KS 66073
Toll Free Tel: 800-545-8884
Tel: 785-597-5618
Email: [request info (therainscreensales@gmail.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Wood+Haven,+Inc.&coid=49367&rep=&fax=&message=RE:%20Spec%20Question%20(07469whi):%20%20&mf=)
Web: [www.rainscreenclip.com](http://www.rainscreenclip.com)
 [ [Click Here](http://www.arcat.com/arcatcos/cos49/arc49367.html) ] for additional information.
Wood Haven Inc. is a specialty lumber distributor and manufacturer in the heart of the Midwest We are an independent, family-run business in Perry, KS We have engineered and manufactured some of the finest hidden fastener products available on the market today, the Deck Clip and Rainscreen Clip™. The best hidden fasteners to use for your wood rainscreen and decking needs! In addition we also sell many beautiful Brazilian Hardwoods, domestic woods, and reclaimed lumber.
Wood Haven's experts in Exterior wood rainscreen and conventional wood siding and Interior Wood Products are available to help with all of your Custom Wood needs. Wood Haven, Inc, your source for high quality Ipe, Massaranduba, Cumaru, Garapa, Jatoba, Lamboo, Thermally Treated Wood Cedar, Cypress and so much more!

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Exterior rainscreen siding system:
			1. Rainscreen clip and starter clip hidden fastener.
			2. Pre-drilled furring board.
			3. Milled wood siding.
			4. Milled wood trim and casing.
			5. Tongue and groove soffit board.
		2. Interior wood finish system.
	1. RELATED SECTIONS

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

* + 1. Section 06200 - Finish Carpentry.
		2. Section 07130 - Sheet, Rigid, or Liquid Applied Waterproofing: Required moisture barrier for exterior system application
	1. REFERENCES

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

* + 1. National Fire Protection Association (NFPA).
		2. Uniform Building Code (UBC).
	1. SUBMITTALS
		1. Submit under provisions of Section 01300.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Shop Drawings: Provide manufacturer's standard details referenced to exterior and interior elevations of the project drawings.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples:
			1. Sample 12 inches (305 mm) boards chosen wood specie milled to rainscreen clip pattern for use on soffits and ceilings.
			2. Wood board of specie to be used with tinted finish applied 12 inches (305 mm) long.
		2. Verification Samples: For each finish product specified.

1.Sample 12 inches (305 mm) boards chosen wood specie milled to rainscreen clip pattern for use on soffits and ceilings.

* + - 1. Wood board of specie to be used with tinted finish applied 12 inches (305 mm) long.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. LEED Submittal (MR credit 7): Documentation as required.
			1. FSC Certified Wood: Chain-of-custody certificates certifying that products specified to be made from certified wood comply with forest certification requirements. Include evidence that mill is certified for chain of custody by an FSC-accredited certification body. Include statement indicating costs for each certified wood product.

\*\* NOTE TO SPECIFIER \*\* Secondary billet is available upon request. Secondary billet is run by request only. Delete if not required.

* + 1. LEED Submittal (MR credit 4.1 and 4.2): Documentation as required.
			1. Recycled Content (Aluminum Clip): The recycled content of secondary billet used by the manufacturer for the production of 6063 and 6005A alloyed aluminum extruded profiles, shall consist of approximately 75% scrap aluminum, of which 70% is post industrial press scrap and 5% post consumer.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
		2. Installer Qualifications: Minimum 2 year experience installing similar products.

\*\* 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.

* + 1. 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.
			4. Mockup of Rainscreen Clip system complete with milled siding of chosen wood specie, chosen dimension, and chosen profile, pre-drilled furring boards, Marine Grade Extruded Aluminum Starter Clips, Marine Grade Extruded Aluminum Rainscreen Clips and #10 1 inch (25 mm) Trim Head T25 Carbon Rainscreen Clip Screws, or #10 1 inch (25 mm) Trim Head T25 Stainless Steel Rainscreen Clip Screws (Stainless Steel.)
	1. PRE-INSTALLATION MEETINGS
		1. Pre-Installation meeting:
			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. Include in meeting the Contractor, Architect and other Owner Representatives, installers of finish carpentry, wet work including plastering, other finishes, painting, mechanical work and electrical work, and firms and persons responsible for continued operation (whether temporary or permanent) of HVAC systems as required to maintain temperature and humidity conditions.
			3. Proceed with finish carpentry only when everyone concerned agrees that required ambient conditions can be properly maintained.
		2. Convene minimum two weeks prior to starting work of this section.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Deliver and store products in manufacturer's packaging bearing the brand name and manufacturer's identification until ready for installation.
		2. Handle materials to avoid damage.
		3. Include in delivery of material a complete list of items shipped to include; wood grade and specie, board length, furring boards, hardware, finish and any other product accessories delivered with the wood rainscreen system.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Mark all FSC Certified wood with the CoC number on the packing list and the invoice.
		1. Protect finish Carpentry during transit, delivery, storage and handling to prevent damage, soiling, and deterioration. Wood shall be delivered on a tarped flatbed truck or an enclosed van for small quantities. Keep wood tarped or store indoors until installation.

\*\* NOTE TO SPECIFIER \*\* Interior application. Delete if not required.

* + 1. Do not deliver finish carpentry materials until painting, wet work, grinding, and similar operation which could damage, soil or deteriorate woodwork 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.
		2. Do not allow finish carpentry to get wet.
	1. PROJECT CONDITIONS
		1. 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.
	2. SEQUENCING
		1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Wood Haven, Inc., which is located at: 401 Bridge St.; Perry, KS 66073; Toll Free Tel: 800-545-8884; Tel: 785-597-5618; Email: [request info (therainscreensales@gmail.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Wood+Haven,+Inc.&coid=49367&rep=&fax=&message=RE:%20Spec%20Question%20(07469whi):%20%20&mf=); Web: [www.rainscreenclip.com](http://www.rainscreenclip.com)

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

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01600.
	1. WOOD PRODUCT QUALITY STANDARDS AND REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Softwood Lumber Standards: Comply with PS 20 and with applicable grading rules for the specie and product indicated.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Hardwood Lumber Standard: Comply with national Hardwood Lumber Association (NHLA)

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Woodworking Standard: Where indicated for a specific product, comply with specified provisions of Architectural Woodworking Institute (AWI) "Quality Standards."

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Certified Wood: Materials shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. EXTERIOR FINISH MATERlALS
		1. Wood Rainscreen Wall:
			1. Milled Wood Siding boards 1x6 with a 5 inches (127 mm) exposed face or a 1x4 with a 3 inches (76 mm) exposed face with a 3/16 inch (4.8 mm) milled groove separating the boards or milled with no groove for a closed face appearance best for use on vertical installations, Wood to be primed in factory with the initial coat of UV protectant wood sealer including tint, second coat to be applied after installation.
			2. 1x3 wood furring boards pre-drilled to chosen profile pattern.
			3. Fasteners and Anchorages: Marine grade extruded aluminum rainscreen clips with a Magni 599 corrosion resistant coating, Marine grade extruded aluminum rainscreen starter clips with a Magni 500 corrosion resistant coating, #10 1 inch (25 mm) Trim Head T25 Stainless Steel Rainscreen Clip Screws.
			4. Wood trim in the specie chosen for inside and outside corners, transition boards, and trim for door and window openings with built in furring boards for concealed fastening, wood may be primed in factory with the initial coat of UV protectant wood sealer including tint, second coat to be applied after installation.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. INTERIOR FINISH MATERIAL
		1. Wood Rainscreen Wall:
			1. Milled Wood Siding boards in random/long lengths generally ranging from 8 feet to 18 feet (2438 mm to 5486 mm), 1x6 with a 5 inches (127 mm) exposed face or a 1x4 with a 3 inches (76 mm) exposed face with a 3/16 inch (4.8 mm) milled groove separating the boards or milled with no groove for a closed face appearance best for use on vertical installations, wood may be primed in factory with the initial coat of UV protectant wood sealer including tint, second coat to be applied after installation.
			2. 1x3 wood furring boards pre-drilled to chosen profile pattern
			3. Fasteners and Anchorages: Marine grade extruded aluminum rainscreen clips with a Magni 599 corrosion resistant coating, Marine grade extruded aluminum rainscreen starter clips with a Magni 500 corrosion resistant coating, #10 1 inch (25 mm) #10 1 inch (25 mm) Trim Head T25 Stainless Steel Rainscreen Clip Screws.
		2. Tongue and Groove with Quirk:
			1. Wood boards of chosen specie boards milled to a tongue and groove pattern, 1x6 with a 5 inches (127 mm) exposed face or a 1x4 with a 3 inches (76 mm) exposed face with a 3/16 inch (4.8 mm) milled groove separating the boards or milled with no groove to mirror the rainscreen clip system application for use on ceilings, soffits and interior walls where furring is not needed, wood may be primed in factory with the initial coat of UV protectant wood sealer including tint, second coat to be applied after installation.
			2. Fastened through the back of the groove with finish nails directly into the substrate material.
	2. WOOD SPECIES

\*\* NOTE TO SPECIFIER \*\* Delete wood specie not required.

* + 1. Species: Garapa (Apuleia leiopcarpa).
			1. Brazilian Hardwood. Light golden yellow with a medium luster and a fine grain. Durable and resistant to rot and decay. Resistant to insects and fungi. Strong wood and scratch resistant.
			2. Fire Resistance:
				1. NFPA Class A.
				2. UBC Class 1.
			3. Density and Buoyancy:

\*\* NOTE TO SPECIFIER \*\* The Janka rating is a measure of the amount of force required to push a .444" diameter steel ball half way into a piece of wood.

* + - * 1. Janka Rating - 1700.
				2. Average Weight: 50 lb/cf.
				3. Specific Gravity: 0.86.
			1. Workability: Glues well and is very stable once glued. It cuts, nails, and screws well without a tremendous blunting effect on tools.
		1. Species: Massaranduba (Massa) (Manilkara Bidentata)

\*\* NOTE TO SPECIFIER \*\* Massaranduba is a cost-effective, yet highly comparable alternative to slightly denser and more costly selections such as Ipe.

* + - 1. Tropical Hardwood. Deep red hues. Effective life is over a couple of decades. Straighter grains than most of the tropical hardwoods.
			2. Fire Resistance:
				1. NFPA Class A.
				2. UBC Class 1.
				3. Flame Spread: 0.
			3. Density and Buoyancy:

\*\* NOTE TO SPECIFIER \*\* The Janka rating is a measure of the amount of force required to push a .444" diameter steel ball half way into a piece of wood.

* + - * 1. Janka Rating - 3190.
				2. Average Weight is 66 lb/cf.
				3. Specific Gravity: 0.85.
			1. Workability: Moderately easy to work with, finishes to a very smooth surface.
		1. Species: Cypress (Taxodium distichum).

\*\* NOTE TO SPECIFIER \*\* Bald Cypress grows in swampy areas along the Atlantic coast from Delaware to southern Florida, west along the Gulf Coast to southeastern Texas and along the Mississippi river valley to southeastern Illinois. About one-half of the cypress lumber comes from the Southern States and one-fourth from the South Atlantic States.

* + - 1. North America. Light colored wood with an even grain. Rot, fungi, and insect resistant.
			2. Fire Resistance:
				1. NFPA Class C.
			3. Density and Buoyancy:

\*\* NOTE TO SPECIFIER \*\* The Janka rating is a measure of the amount of force required to push a .444" diameter steel ball half way into a piece of wood.

* + - * 1. Janka Rating - 570.
				2. Average Weight: 32 lb/cf.
				3. Specific Gravity: 0.42.
			1. Workability: Works well with both hand and power tools. The wood planes easily and resists warping. Although Cypress is resinous, it glues well, sands easily and readily accepts finishes.
		1. Species: Western Red Cedar (Thuja Plicata).
			1. North American Softwood. Typically reddish to pinkish brown, often with random streaks and bands of darker red/brown areas. Straight grain and a medium to course texture. Rated as durable to very durable in regard to decay resistance, though it is not resistant to insect attack.
			2. Fire Resistance:
				1. NFPA Class B.
			3. Density and Buoyancy:

\*\* NOTE TO SPECIFIER \*\* The Janka rating is a measure of the amount of force required to push a .444 inch (11.3 mm) diameter steel ball half way into a piece of wood.

* + - * 1. Janka Rating - 350.
				2. Average Weight: 23 lb/cf.
			1. Workability: Easy to work with both hand and machine tools, though it dents and scratches very easily due to its softness. Glues and finishes well, though as is the case with most softwoods with closed pores, even staining can be a challenge.
		1. Species: Ipe (Tabebuia SPP).

\*\* NOTE TO SPECIFIER \*\* Typically used for decking and other outdoor applications,

* + - 1. Brazilian Hardwood. Often called Brazilian walnut. Exotic wood from South America. Dark brown in color. Hard, strong, and naturally resistant to rot, abrasion and weather. Twice as dense as most woods and up to five times harder.
			2. Fire Resistance:
				1. NFPA Class A.
				2. UBC Class 1.
				3. Flame Spread Index (10 minute): 0.
				4. Flame Spread Index (30 minute): 5.
				5. Smoke Developed Value (10 minute): 3.
			3. Density and Buoyancy:

\*\* NOTE TO SPECIFIER \*\* The Janka rating is a measure of the amount of force required to push a .444" diameter steel ball half way into a piece of wood.

* + - * 1. Janka Rating - 3680.
				2. Average Weight: 72 lb/cf.
				3. Specific Gravity: 0.92.
			1. Workability: Dries extremely well with little checking, twisting, or bow. Difficult to work with, especially with hand tools. It can have a blunting effect on cutting edges, pre-drilling for nails and screws is required. It comes in long lengths with limited warp. Planks do not bend well. Finishes and sands quite smoothly, with no splintering.
		1. Species: Cumaru (Dipteryx Odorata).
			1. Heartwood tends to be a medium to dark brown, sometimes with a reddish or purplish hue; some pieces may have streaks of yellowish or greenish brown. Color tends to lighten with exposure to light. Fine, uniform grain and texture, with very small open pores. Grain is nearly always interlocked to some degree. Excellent durability and weathering properties. The wood is rated very durable regarding decay resistance, though it may be susceptible to some insect attacks.
			2. Fire Resistance:
				1. NFPA Class A.
				2. UBC Class 1.
			3. Density and Buoyancy:

\*\* NOTE TO SPECIFIER \*\* The Janka rating is a measure of the amount of force required to push a .444" diameter steel ball half way into a piece of wood.

* + - * 1. Janka Rating - 3540.
				2. Average Weight: 67 lb/cf.
				3. Specific Gravity: 0.66.
			1. Workability: Due to its extreme density it can be difficult to saw and bore. The wood can be planed to a smooth surface. Because of the density and oil content the wood it can be difficult to glue.

\*\* NOTE TO SPECIFIER \*\* Refer to manufacturer's literature requiring finishing, required periodic refinishing and annual inspection by licensed professional for exterior and certain interior environments. Delete if not required.

* + 1. Engineered Bamboo:
			1. Product: Lamboo Elements™ .
			2. Use: Exterior applications.
			3. Toxicity: Low VOC adhesives, does not produce off-gassing when sanding, profiling or handling materials.
			4. Anti-Microbial Properties: Naturally anti-bacterial material; prevents mode and fungi from cultivating.
			5. Pests and Insects: Bamboo includes silica fibers which resist insects and wood eating pests such as termites.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Thermally Treated Wood:

\*\* NOTE TO SPECIFIER \*\* The thermo-treatment process is made possible by using new technology integrated into specially designed kilns. The chamber is crafted from stainless steel and is air tight allowing complete control of the internal atmosphere. The process begins by removing the chambers oxygen and raising the temperature to levels of 400 to 450 degrees F. When the target temperature is reached it remains constant or 2 to 3 hours. Steam is introduced to prevent the wood from burning or cracking and helps to create the desired changes which result in new molecular structure. The lumber is cooled with condensation, saturating it with moisture. The total process takes anywhere from 12 to 16 hours.

* + - 1. Process: Heat modified wood material. Molecular changed wood species through removal of 95% of the Polysaccharides.

\*\* NOTE TO SPECIFIER \*\* Delete wood specie not required.

* + - 1. Ash Dark.
			2. Ash Medium.
			3. Gum.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
		3. Condition wood material to average prevailing humidity conditions in installation areas prior to installing.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions.
		2. Refer to Drawings for information pertaining dimension of milled siding, treatment of corners whether that be mitered boards or wood corner boards with built-in furring for concealed fastening, trim for doors and windows with built in furring for concealed fastening.
		3. 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.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. For installation on exterior walls install over a moisture barrier.
		2. Install the work plumb, level, true and straight with no distortions. Shim as required using concealed shims.
		3. Refinish cut surfaces or repair damage finish at cuts by applying the final coat of wood finish on the entire surface of the wood wall.
		4. Anchorage of Finish Carpentry:
			1. Install vertical or horizontal pre-drilled furring boards to the substrate wall using fastener appropriate to provide a sufficient anchor to the substrate.
			2. Install corner trim, window/door trim, and transition boards prior to installation of milled siding boards.
			3. Install extruded aluminum concealed clips securing with supplied Trim Head T25 stainless steel screws at an angle into the pre-drilled points on the furring boards.
		5. Carefully coordinate electrical requirements and wiring with millwork installation.
	1. PROTECTION
		1. 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.
		2. Clean finish carpentry work on exposed and semi-exposed surfaces. Apply a complete top coat of wood finish to all exposed and semi-exposed surfaces.
		3. 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.
		4. Protect installed products until completion of project.
		5. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION