SECTION 06 42 00

INTERIOR HARDWOOD PANELS

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\*\* NOTE TO SPECIFIER \*\* States Industries LLC; hardwood panel products.
This section is based on the products of States Industries LLC, which is located at:P. O. Box 41150Eugene, OR 97404Toll Free Tel: 800-626-1981Tel: 541-688-7871Fax: 541-689-8051Email: [request info (info@Statesind.com)](https://arcat.com/rfi?action=email&company=States%252BIndustries%252BLLC&message=RE%253A%2520Spec%2520Question%2520(06420sta)%253A%2520&coid=35742&spec=06420sta&rep=&fax=541-689-8051)
Web: <https://www.statesind.com>
 [ [Click Here](https://arcat.com/company/states-industries-llc-35742) ] for additional information.
States Industries LLC is a privately held, hardwood panel producer located in Eugene, Oregon, in the heart of America's wood products manufacturing region. We have established a reputation for innovation by consistently introducing products and processes targeted to improve our customer's capabilities and the value of their products.
Each workday at States Industries, more than three hundred individuals bring their skill, ingenuity and dedication to the task of creating and supplying quality, hardwood panel products to North American woodworkers. Millwrights, electricians, press operators, finish line technicians and all of States' employees create a culture that supports and encourages the fulfillment of our customer's requests. States maintains bills-of-material for more than 400,000 constructions and typically adds 10 new ones daily, each to meet a customer's very specific application. No other manufacturer in our industry is more responsive to the specialized needs of woodworking.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Hardwood veneered panels for interior applications.
	1. RELATED SECTIONS

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

* + 1. Section 06 41 14 - Plastic Laminate Faced Architectural Cabinets.
	1. REFERENCES

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

* + 1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
	1. DEFINITIONS
		1. Hardwood Plywood Terms:
			1. Backs: Some plywood panels are specified with different grades of veneer on each side. The lower grade side of a plywood panel is called the Back.
			2. Bark Pocket: An area on a sheet of veneer where a tree branch grew, thus trapping a small amount of bark, usually around a knot. Core: Inner plies of a panel product, usually composed of veneer. Alternatively, cores can be made of particleboard, MDF or lumber.
			3. Crossbar: A defect in panel manufacturing where a piece of veneer runs perpendicular to the length of the board.
			4. Crossbanding: Crossbanding refers to the orientation of successive layers of veneer layup by placing them perpendicular to the face and back of a plywood panel.
			5. Defects: Any number of imperfections in a panel product's appearance or surface, including splits, stains, voids, holes, open knots, bark pockets and other issues.
			6. Delamination: Panel separation caused by adhesive failure.
			7. Face: Some plywood panels are specified with different grades of veneer on each side. The higher grade side of a plywood panel is called the Front.
			8. Flitch: The complete bundle of thin sheets of veneer after cutting, laid together in sequence as they were sliced or sawn.
			9. Grain: The distinctive, natural pattern, size and direction of the fibers in sliced or sawn wood.
			10. Gum Spots: Sap or resin left on wood from veneer sawing or slicing. Gum spots can usually be removed by sanding.
			11. Half-Round Slicing: When a log is cut tangential to its growth rings, the result is a plain sliced or rotary grain pattern.
			12. Hardwood: Any species of deciduous tree lumber or veneer. Coniferous tree lumber is called Softwood. The term Hardwood has no relationship to the density of the wood.
			13. Heartwood: The oldest part of a log radiating from the center, consisting of mature
			14. Knot (Pin): Very small knots less than 1/4" in diameter.
			15. Knot (Sound): Knots that have not separated from the surrounding fiber during the drying process.
			16. Knothole: A void in lumber or veneer created when a knot is missing from its original location.
			17. Lap: Orientation of two pieces of veneer next to one another in the same layer of ply.
			18. Medium Density Fiberboard (MDF): A wood flour material made from pressure-cooked wood fiber, resin and wax.
			19. Mineral Streak: A discoloration of hardwood and hardwood veneer.
			20. Particleboard: A panel or core material manufactured from pressed sawmill shavings, resin and wax.
			21. Patches: Material placed onto defects in veneers to repair voids and other imperfections.
			22. Plain Sliced: When a log is cut tangential to the tree's annual growth rings.
			23. Ply: One layer in a wood panel product. Varying numbers of plies make up a sheet of plywood.
			24. Plywood, Hardwood: A panel product with a hardwood face veneer. The back veneer is usually hardwood as well. Hardwood plywood may or may not have softwood inner plies.
			25. Quarter Slicing: A veneer cutting method in which a log is sliced at right angles to the annular growth rings.
			26. Rift Cut: A veneer cutting method in which a log is cut into quarters and then at a 90-degree angle to the grain direction.
			27. Rotary Cut: A peeling process whereby a whole log is set in a lathe and turned against a large knife.
			28. Sapwood: The youngest, newest wood in a lumber or veneer, located between the heartwood and the bark.
			29. Slip Matched: When veneer is carefully aligned to form a whole sheet with a pleasing grain appearance.
			30. Splits: Cracks in the wood fiber running parallel to the grain in veneer, usually from drying.
			31. Veneer: Peeled or sliced sheets of thin wood used to make the layers of plywood. Wood that has stopped growing. Usually, heartwood is darker than sapwood.
			32. Knot: The place on lumber or veneer where a branch once emerged from the trunk of the tree.
			33. Knot (Open): The condition of a knot that has separated from the fibers surrounding it due to the drying process.
	2. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		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.

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

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
		2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.
	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.
	1. PRE-INSTALLATION MEETINGS
		1. Convene minimum two weeks prior to starting work of this section.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
		2. Handling: Handle materials to avoid damage.
	3. 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.
	4. 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: Acceptable Manufacturer: States Industries LLC, which is located at: P. O. Box 41150; Eugene, OR 97404; ASD Toll Free Tel: 800-626-1981; Tel: 541-688-7871; Fax: 541-689-8051; Email: [request info](http://admin.arcat.com/users.pl?action=UserEmail&company=States+Industries+LLC&coid=35742&rep=&fax=541-689-8051&message=RE:%2520Spec%2520Question%2520(06420sta):%2520%2520&mf=); Web: <https://www.statesind.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 01 60 00 - Product Requirements.
	1. HARDWOOD PANELING - GENERAL
		1. Panels shall comply with California Air Resources Board (CARB) 93120.

\*\* NOTE TO SPECIFIER \*\* Decorative face veneers are the reason hardwood plywood is specified as a material and the primary determinant of panel costs. Learning to specify the wood specie, cut, match and grade of veneers that achieve precisely the desired appearance is an art unto itself, and can require much study and experience. What we hope to accomplish here is a brief overview of veneer types and characteristics and their impact on appearance. While there are a multitude of wood species to select from, we are concerned here with commercially available veneers, both domestic and imported.

* + 1. Hardwood Panel Face Veneers:
			1. Veneers shall comply with cutting, matching and grading as scheduled or required.
			2. Panels shall be factory finished with 100% solids UV-cured acrylate systems of epoxy, polyester and urethanes to comply with exposure and application.

\*\* NOTE TO SPECIFIER \*\* 1 Step Veneer, or Conventional Construction is the least expensive way to manufacture a veneer core panel because all laminations including the face and back veneers are assembled and pressed at one time. The drawback to this method is that imperfections in the core veneers can transfer to the surface as high or low spots on the face and back. Delete core not required.

* + 1. Veneer Cores:
			1. Cores shall be Class A fire rated where required or scheduled.

\*\* NOTE TO SPECIFIER \*\* Available Forest Stewardship Council certified. Delete if not required.

* + - 1. Provide Forest Stewardship Council certified construction.

\*\* NOTE TO SPECIFIER \*\* Delete hardwood veneer core if not required.

* + - 1. Cores shall be hardwood veneer innerplies as scheduled constructed using formaldehyde-free soy adhesive.
				1. Core: ApplePly as manufactured by States Industries.

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

* + - * 1. Cores shall be certified No Added Formaldehyde (NAF).
				2. Adhesive: SoyStrong as manufactured by States Industries.

\*\* NOTE TO SPECIFIER \*\* Delete composite crossband core if not required.

* + - 1. Cores shall be composite crossbands with veneer innerplies as scheduled constructed using formaldehyde-free soy adhesive.
				1. Core: ArmorCore as manufactured by States Industries.

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

* + - * 1. Cores shall be certified No Added Urea Formaldehyde (NAUF).
				2. Adhesive: SoyStrong as manufactured by States Industries.

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

* + - 1. Cores shall be composite crossbands as scheduled constructed using formaldehyde-free soy adhesive.
				1. Core: Veneer Core as manufactured by States Industries.

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

* + - * 1. Cores shall be certified No Added Urea Formaldehyde (NAUF).
				2. Adhesive: SoyStrong as manufactured by States Industries.

\*\* NOTE TO SPECIFIER \*\* Particleboard is perhaps the least expensive core for hardwood plywood because its particles are less refined than MDF, yet it is perfect for many applications. It is smoother and more uniform than veneer cores and available in Class A fire ratings as well as no-added-urea-formaldehyde constructions. Particleboard is generally available 1/2 inch (13 mm) or thicker. While some hardwood plywood producers manufacture their own particleboard, most outsource this core material. Delete if not required.

* + 1. Composite Cores:
			1. Cores shall be Class A fire rated where required or scheduled.

\*\* NOTE TO SPECIFIER \*\* Available Forest Stewardship Council certified. Delete if not required.

* + - * 1. Provide Forest Stewardship Council certified construction.
			1. Cores shall be particleboard or medium density fiberboard (MDF) with density as scheduled constructed using formaldehyde-free soy adhesive.
				1. Core: Composite Core as manufactured by States Indiustries.

\*\* NOTE TO SPECIFIER \*\* Available NAUF certified. Delete if not required.

* + - * 1. Cores shall be certified No Added Urea Formaldehyde (NAUF).
				2. Adhesive: SoyStrong as manufactured by States Indiustries.

\*\* NOTE TO SPECIFIER \*\* SoyStrong™ is your mark of assurance that hardwood plywood from States Industries meets the most rigorous standards for indoor air quality. States' total commitment to soy-based adhesives means that all veneer-core panels are free from formaldehyde resins and are designated NAF for No-Added-Formaldehyde.

* + 1. Formaldehyde-Free Soy Adhesive:
			1. SoyStrong as manufactured by States Industries.

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

* 1. PANEL CORE PERFORMANCE

\*\* NOTE TO SPECIFIER \*\* ApplePly® is a uniquely designed States hardwood panel product. Constructed from uniform laminations of solid grade 1/16 inch (1.6 mm) birch, this all hardwood core panel is strong and lightweight with a minimum number of voids and a naturally attractive edge. Delete if not required.

* + 1. Birch Veneer Core:
			1. Product: ApplePly as manufactured by States Industries.

\*\* NOTE TO SPECIFIER \*\* Available Forest Stewardship Council certified. Delete if not required.

* + - 1. Provide Forest Stewardship Council certified construction.
			2. Construction: 1/16 inch (1.6 mm) uniform laminations. Tolerances comply with American National Standards Institute (ANSI/HPVA) grade rules, HP-1-2004.
			3. Performance: 1/4 inch (6 mm) ApplePly.
				1. Modulus of Rupture (PSI):

Parallel: 7,477.

Perpendicular: 5,199.

* + - * 1. Modulus of Elasticity (PSI)

Parallel: 745,716.

Perpendicular: 443,927.

* + - * 1. Screw Withdrawal (Lb. Force)

Perp. to Face: 649

Perp. to Edge: 516

* + - 1. Performance: 1/2 inch (13 mm) ApplePly.
				1. Modulus of Rupture (PSI):

Parallel: 8,855.

Perpendicular: 8,380.

* + - * 1. Modulus of Elasticity (PSI)

Parallel: 830,436.

Perpendicular: 910,679.

* + - * 1. Screw Withdrawal (Lb. Force)

Perp. to Face: 649.

Perp. to Edge: 516.

* + - 1. Performance: 3/4 inch (19 mm) ApplePly.
				1. Modulus of Rupture (PSI):

Parallel: 8,731.

Perpendicular: 9,429.

* + - * 1. Modulus of Elasticity (PSI)

Parallel: 1,026,885.

Perpendicular: 1,048,433.

* + - * 1. Screw Withdrawal (Lb. Force)

Perp. to Face: 649.

Perp. to Edge: 516.

\*\* NOTE TO SPECIFIER \*\* Lighter, tougher, flatter, harder, and stronger are the key attributes of States ArmorCore® substrates. For applications demanding superior performance, ArmorCore® is just what you're looking for. ArmorCore® combines the low weight and high strength advantages of veneer cored panels with the superior flatness and higher density of MDF.

* + 1. Composite Core:
			1. Construction: Cores shall be composite crossbands with veneer innerplies as scheduled constructed using formaldehyde-free soy adhesive.
			2. Product: ArmorCore as manufactured by States Industries.

\*\* NOTE TO SPECIFIER \*\* Where tolerances tighter than the ANSI standard of +0 - 3/64" are required, such as in some automated machining operations, ArmorCore manufactured as a calibrated blank can achieve critical tolerances of +0 - 1/32". Delete tolerance not required.

* + - 1. Construction Tolerance: Core tolerances of +0 - 3/64 inch (0 to 1.2 mm).
			2. Construction Tolerance: Core critical tolerances of +0 - 1/32 inch (0 to 0.79 mm).
			3. Performance:
				1. Modulus of Elasticity (PSI): 630,200.
				2. Modulus of Rupture (PSI): 4,922.
				3. Screw Holding, edge: 271.
				4. Screw Holding, face: 324.

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

* 1. PREFINISHED PANELS
		1. Panels shall be factory finished with 100% UV-cured acrylate finish system.

\*\* NOTE TO SPECIFIER \*\* States Industries now offers Versa hardwood panels with thermofused melamine backs. The panels are available in most domestic and select import species. Versa panels bring together natural hardwood exteriors and durable synthetic interiors that can be easily cleaned. This versatile combination makes them perfect for the construction of cabinets and closets. We have selected six popular melamine patterns for our initial offering. Other colors and patterns are available by special order. Delete if not required,

* + 1. Thermofused Melamine Backed Panels.
			1. Product: Veras panels as manufactured by States Industries.
			2. Panels are available from 1/2 inch (13 mm) through 1-1/4 inches (32 mm) with ArmorCore, MDF or Particleboard cores as scheduled.
			3. Fire Rated MDF or Particleboard and FSC Certified constructions are available.
			4. Finish: NOVA finishes as manufactured by States Industries.

\*\* NOTE TO SPECIFIER \*\* Delete melamine backer color not required.

* + - 1. Color: Almond.
			2. Color: Black.
			3. Color: Hard Rock Maple.
			4. Color: International White.
			5. Color: Galaxy White.
			6. Color: Natural maple.

\*\* NOTE TO SPECIFIER \*\* Eight-foot cross grained panels allow cabinet and fixture makers to span longer runs of vertically grained hardwood surfaces without joinery. States' UpFront cross grain panels are available in most popular wood species and may be ordered unfinished or prefinished with NOVA clear finishes. Delete if not required.

* + 1. Cross Grained Hardwood Plywood Panels:
			1. Product: UPFRONT cross grained panels as manufactured by States Industries.
			2. Finish: Clear NOVA finish as manufactured by States Industries.
			3. Cores include Lauan, Fir veneer, MDF, Particleboard and ArmorCore. Not all cores are available in all thicknesses. Cross Grain panels are 96 inches X 48 inches (2438 mm X 1219 mm) or optionally oversized and are fully sanded.
			4. States Industries offer most domestic hardwood species in 96 inches X 48 inches (2438 mm X 1219 mm) counterfront, or cross grain configurations.
			5. MDF and ArmorCore: Thicknesses run from 5/32 inch to 1-1/2 inches (4 mm to 38 mm).
			6. Panels conform to ANSI/HPVA HP-1-2004 Standards for Hardwood and Decorative Plywood.

\*\* NOTE TO SPECIFIER \*\* States Industries offer 27 distinct styles in 96 inches X 48 inches (2438 mm X 1219 mm) sheets ranging from 5/32 inch to 1-1/2 inches (4 mm to 38 mm) thick. Delete if not required.

* + 1. Wall Paneling:
			1. Product: INNOVA Collection as manufactured by States Industries.
			2. Species: Oak.
			3. Panel Thickness; 1/4 inch (6 mm).
			4. Core: MDF.
			5. Finish and Color: INNOVA collection.

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

* + - 1. Surface: Buck Sawn detail.

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

* + 1. Wall Paneling:
			1. Product: LEGACY Collection as manufactured by States Industries.

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

* + - 1. Panel: LIGHTLINE 5/32 inch (4 mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel face not required.

* + - * 1. Butterwood Birch. 1/8 inch (3 mm) groove. Orangeburg
				2. Legacy Oak. 1/8 inch (3 mm) groove. Orangeburg
				3. Aromatic Cedar. No groove.
			1. STATELINE 1/4 inch (6 mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel face not required.

* + - * 1. Minnesota Birch. 1/8 inch (3 mm) groove. Orangeburg
				2. Wisconsin Birch. 1/8 inch (3 mm) groove. Orangeburg
				3. Rustic Cedar. No groove.
				4. Connecticut Oak. 1/8 inch (3 mm) groove. Orangeburg
			1. COASTLINE 3/8 inch (9.5 mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel face not required.

* + - * 1. Snow White Fir. 3/8 inch (9.5 mm) Mark V.
				2. Newport Oak. 3/8 inch (9.5 mm) 8 inches (203 mm) o.c.
				3. Westport Oak. 3/8 inch (9.5 mm) 8 inches (203 mm) o.c.
				4. Natural Oak. 3/8 inch (9.5 mm) Mark V.
			1. BEADED 5/32"

\*\* NOTE TO SPECIFIER \*\* Delete panel face not required.

* + - * 1. Beaded Finished Birch. Beaded 1-1/2 inches (38 mm) o.c.
				2. Beaded Finished Oak. Beaded 1-1/2 inches (38 mm) o.c.
				3. Empress Unfinished Pine. Beaded 3 inches (76 mm) o.c.
				4. Paint Grade. Mill option. Beaded 1-1/2 inches (38 mm) o.c.
			1. BEADED 1/4"

\*\* NOTE TO SPECIFIER \*\* Delete panel face not required.

* + - * 1. Stamford Finished Oak. Beaded 1-1/2 inches (38 mm) o.c.
				2. Stamford Unfinished Oak. Beaded 1-1/2 inches (38 mm) o.c.
				3. MDF Raw 1.5". FSC Certified. Beaded 1-1/2 inches (38 mm) o.c.
				4. MDF Primed 1.5". FSC Certified. Beaded 1-1/2 inches (38 mm) o.c.
				5. MDF Primed 3". FSC Certified. Beaded 3 inches (76 mm) o.c.
			1. AMBASSADOR 1/4 inch (6 mm)
				1. American Cherry. 1/4 inch (6 mm) beaded. Orangeburg
			2. BRUSHED
				1. Frosted Barnwood.

\*\* NOTE TO SPECIFIER \*\* States Industries is proud to offer Xtra a family of hardwood panel products tailored specifically to individual applications. When the need for special panel lengths and thicknesses becomes a problem, Xtra is the solution. The Xtra product line includes over- and under-length panels as well as panels that are thick and thin. Xtra Long are 10 foot panels that are often used in architectural interior wall applications. The long panels eliminate the need for seams in rooms with high ceilings. They can also be used to improve the yield when component parts are cut from a single panel. Xtra Shorts consist of 6 and 7 foot panels that are almost always specified to improve yield. Many popular face veneer species and grades are available in Xtra Short. Xtra Thick panels are frequently used in desk, countertop and shelf applications. Retail fixtures and furniture can also benefit from the visual weight of panels up to 1 1/2 inches thick. Xtra Thin panels come in seven different thicknesses under 1/4 inch. These sizes are perfect for cabinet door inserts, drawer dividers and wall panels. Delete if not required.

* + 1. SPECIALTY DIMENSIONAL PANEL PRODUCT

\*\* NOTE TO SPECIFIER \*\* Composite, ArmorCore® and veneer cored panels, and most face and back species are available in 120 inches (3048 mm) lengths. Some constructions permit an additional 1/2 inch (13 mm) oversize beyond 120 inches (3048 mm). Composite cored 120 inches (3048 mm) panels are limited to 1-1/8 inches (29 mm) or less in thickness, while ArmoreCore® and veneer cored panels are available up to 1-1/4 inches (32 mm).

* + - 1. 120 inches (3048 mm) Lengths:

\*\* NOTE TO SPECIFIER \*\* Short panels can improve yields, particularly with point-to-point machining operations. Not all face and back veneers are available in 6 feet (1829 mm) or 7 feet (2134 mm), but many of the more common species and grades are. As with 120 inches (3048 mm) panels, composite, ArmorCore and veneer cores are available.

* + - 1. 6 feet (1829 mm) or 7 feet (2134 mm) Lengths:

\*\* NOTE TO SPECIFIER \*\* Case good backs, drawer bottoms, wall panels and cabinet door inserts are the primary applications for thin panels. Door inserts require precise tolerances to fit dados accurately. For that reason we offer panels of 1/8 inch (3.2 mm), 5/32 inch (4.0 mm), 5.2mm, 5.3 mm, 5.4 mm, 5.5 mm, 7/32 inch (5.6 mm) and 1/4 inch (6.4 mm).

* + - 1. 1/4 inch (6.4 mm) and Thinner:

\*\* NOTE TO SPECIFIER \*\* 96 inches (2438 mm) veneer cored panels, including ApplePly® are available up to 1-1/2 inches (38 mm) thick and 120 inches (3048 mm) to 1-1/4 inches (32 mm), while 96 inches (2438 mm) composite panels may be up to 1-1/4 inches (32 mm) thick and 120 inches (3048 mm) to 1 1/8 inches (29 mm). Shelves, countertops, furniture and store fixtures are the primary applications. Delete if not required.

* + - 1. 1 inch (25.4 mm) and Thicker:

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

* 1. COMPONABILITY
		1. The following components of the scheduled wood veneered fabrications shall be provide by States Industries and not by the fabricator.
		2. Pre-cut, finished and edge banded components.

\*\* NOTE TO SPECIFIER \*\* Panels are manufactured from the finest plywood construction in a wide range of wood veneers with matching wood edge banding. Each item is precision engineered for consistency in fabrication when it arrives on your shop floor. This precision reduces waste and assures you a simpler bidding process with clearly defined prices for every component. Our integrated manufacturing process enables us to tailor components to your unique specifications and applications, from panel construction through finish.

* + 1. Components: Provide by States Industries to the fabricator/Contractor.

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

* + - 1. Carcass assemblies.
			2. Cabinet skins and backs.
			3. Wall and base cabinet end panels.
			4. Drawer boxes.
			5. Drawer fronts.
			6. Loose fixtures.
			7. Flat panel doors.
			8. Shelving Tops.
		1. Edge Banding: Treatments shall be:

\*\* NOTE TO SPECIFIER \*\* Delete edge banding not required.

* + - 1. Natural veneer (unfinished, clear or color matched).
			2. PVC and polyester.
			3. 3 mm wood or lumber banding.
			4. clear or woodgrain foils.

\*\* NOTE TO SPECIFIER \*\* The majority of the components we supply are ordered finished. Ultraviolet cured NOVA® finishes from States Industries have set the standard in pre finished hardwood panels. These are available in clear, standard colors, custom color matches, opaque colors and printed woodgrains. Three standard gloss levels or custom gloss matches are available.

* + 1. Finishes: Match panel finish scheduled for each application or area.
		2. Ready to Assemble Drawers: Provide by States Industries to the fabricator/Contractor.
			1. The Componabilty program offers drawer sides in a wide variety of cores and veneers. Options from aromatic cedar to Baltic birch are available in a full range of heights and edge treatment options.

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

* + - 1. Joinery; Dovetail.
			2. Joinery: Bore and dowel.
			3. Joinery: Rabbet.

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

* + - 1. Finish: Clear finish is standard.
			2. Finish: Custom color drawer sides and matching color bottoms.
		1. Machining: As required for the component.
			1. Production cutting (Rip and crosscutting).
			2. Drilling/boring (Horizontal and vertical 8 mm).
			3. Line boring (32 mm O.C. 5 mm diameter).
			4. Horizontal drilling (Pilots, countersinks and cam locks).
			5. Grooving/notching (Dados, T-moulds, and kick plates).
			6. Contour cutting (Circles, ellipses, arches, angles to 145 degrees).
	1. FINISHES

\*\* NOTE TO SPECIFIER \*\* High quality and beautiful finishes bring out the natural warmth of real wood-grain surfaces. States NOVA® prefinished hardwood panels are custom tailored to bring out that radiance in every application.
NOVA® offers unsurpassed prefinish options with clear, translucent, opaque and printed finishes. Select from satin, medium, and high gloss, or a custom gloss level with precise color matching for your specific application. Delete if not required.

* + 1. NOVA Finishes
			1. VOC free to comply with LEED IEQ Credit 4.2 Low Emitting Materials.

\*\* NOTE TO SPECIFIER \*\* Delete finish system not required.

* + - 1. Finish System: UV Curable Epoxy.
			2. Finish System: UV Curable Polyester.
			3. Finish System: UV Curable Urethanes.

\*\* NOTE TO SPECIFIER \*\* Delete color finish not required.

* + - 1. Color Finish: Clear.
			2. Color Finish - Translucent.
			3. Color Finish - Opaque.
			4. Color Finish - Printed.

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

* + - 1. Sheen: Satin.
			2. Sheen: Medium.
			3. Sheen: High.
			4. Sheen: Custom.

\*\* NOTE TO SPECIFIER \*\* States' NOVA PEAK panels represent 10 contemporary wood colors matched to four natural hardwood species including Maple, Oak, Cherry and Mahogany. These panels carry high grade veneers and matching finishes on both sides. They are available in 1/4 inch (6 mm) MDF core and 3/4 inch (19 mm) veneer core panels. Both are packaged in 10 piece units. All colors and species shown are available in small quantities. Delete if not required.

* + 1. NOVA PEAK Color Pre-finished Panels:

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

* + - 1. Panel: Matching finishes on both sides. 1/4 inch (6 mm) MDF core panels.
			2. Panel: Matching finishes on both sides. 3/4 inch (19 mm) veneer core panels.
			3. Finish System: ultraviolet cured epoxy acrylate topcoat.

\*\* NOTE TO SPECIFIER \*\* Delete species and grade not required.

* + - 1. Species and Grade: B whole piece faced Maple.
			2. Species and Grade: B plain sliced Golden Oak.
			3. Species and Grade: A plain sliced Cherry.
			4. Species and Grade: A plain sliced African Mahogany.

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

* + - 1. Finish: Mount Mazama Maple.
			2. Finish: Diamond Peak Oak.
			3. Finish: Steens Mountain Cherry.
			4. Finish: Mount Jefferson Maple.
			5. Finish: Paulina Peak Oak.
			6. Finish: Tumalo Mountain Cherry.
			7. Finish: Mount Hood Maple.
			8. Finish: Cinnamon Butte Mahogany.
			9. Finish: Powell Butte Mahogany.
			10. Finish: Hart Mountain Cherry.

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

* + 1. INNOVA Finishes:

\*\* NOTE TO SPECIFIER \*\* Inspired by glassy lava flows, this rich black color is reminiscent of Wenge. Delete if not required.

* + - 1. Finish: Obsidian Shadow.

\*\* NOTE TO SPECIFIER \*\* Taking a cue from reclaimed barn wood, Silver Starlight provides a patina and coziness to any interior it touches. Delete if not required.

* + - 1. Finish: Silver Starlight.

\*\* NOTE TO SPECIFIER \*\* Our most popular russet color, Umber Odyssey lends a contemporary hue to complement twenty-first century design. Delete if not required.

* + - 1. Finish: Umber Odyssey.

\*\* NOTE TO SPECIFIER \*\* The muted tones of the far north are the inspiration for this soft, clear and inviting wall treatment. Delete if not required.

* + - 1. Finish: Tranquil Tundra.

\*\* NOTE TO SPECIFIER \*\* Honey chroma warms any space that Sienna Sunrise touches. Candlelight and craftsmanship complement this interior accent. Delete if not required.

* + - 1. Finish: Sienna Sunrise.

\*\* NOTE TO SPECIFIER \*\* Silver Ion technology is a proven inhibitor against microbes pathogens and bacteria. This environmentally friendly finish is safe for people, animals, plants and food.
How does NOVA SI work? Inorganic silver ions in NOVA SI permeate the actual wood finish with a self decontaminating coating. This protective coating works in a unique fashion. In the presence of moisture, the silver ions are released. This disrupts cellular respiration, preventing the spread of bacterial contaminants. Delete if not required.

* + 1. Antimicrobial Finish:
			1. Finish System: NovaSI finish system as manufactured by Sates Industries.
			2. System: Silver nanoparticles are suspended in the actual finished 100 percent solid, ultraviolet cured epoxy acrylate. In the presence of moisture, silver ions in the finish are released. This release disrupts cellular respiration, preventing the spread of bacterial contaminants

\*\* NOTE TO SPECIFIER \*\* States NOVA LAB panels are specifically formulated for applications requiring enhanced chemical resistance. Nova Lab finishes have been formulated and applied to meet Scientific Equipment and Furniture Association (SEFA) standards for chemical resistance. They are appropriate to use anywhere interior vertical surfaces are exposed to harsh chemicals, including laboratories, commercial kitchens, work rooms and testing centers. Delete if not required.

* + 1. Enhanced Chemical Resistance Finish:
			1. Finish System: NovaLab finish system as manufactured by States Industries.
			2. SEFA compliant laboratory grade finishes
			3. Panel finish shall comply with the Scientific Equipment and Furniture Association's 8.0 Cabinet Surface Finish Tests. These include the 8.1 Chemical Spot Test, 8.2 Hot Water Test and 8.3 Impact Test.
			4. Finish: 100% solid, ultraviolet cured acrylate. Clear finish.

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

* 1. FABRICATION - CUSTOM

\*\* NOTE TO SPECIFIER \*\* Decorative face veneers are the reason hardwood plywood is specified as a material and the primary determinant of panel costs. While there are a multitude of wood species to select from, we are concerned here with commercially available veneers, both domestic and imported.
Available species include Bamboo, Birch, Cedar, Cherry, Kaudamu, Oak and Pecan and stain colors run the gamut from light to dark. Certain paneling products use individual veneer components between each vertical groove to achieve a more authentic "plank" effect called random matching.

* + 1. Paneling: Provide panels having the following characteristics and construction.

\*\* NOTE TO SPECIFIER \*\* Choose Your Substrate from States Industries specified products.

* + - 1. Core: ApplePly hardwood veneered core as manufactured by States Industries.
			2. Core: ArmorCore composite/hardwood innerply veneered core as manufactured by States Industries.
			3. Core: Veneer Core laminated core as manufactured by States Industries.
			4. Core: Composite MDF in density required as manufactured by States Industries.
			5. Core: Composite Particleboard in density required as manufactured by States Industries.

\*\* NOTE TO SPECIFIER \*\* Select Your Veneer.

* + - 1. Species: \_\_\_\_\_\_\_\_.
			2. Veneer Matching: Pleasing match.
			3. Veneer Matching: Book match.
			4. Veneer Matching: Slip match.
			5. Veneer Matching: Random match.
			6. Veneer Matching: Whole piece.
			7. Face Grade: AA grade.
			8. Face Grade: A grade.
			9. Face Grade: B grade.
			10. Face Grade: C grade.
			11. Face Grade: D grade.
			12. Face Grade: E grade.
			13. Back Grade: Grade 1.
			14. Back Grade: Grade 2.
			15. Back Grade: Grade 3.
			16. Back Grade: Grade 4.
			17. Cut: Rotary.
			18. Cut: Rift cut.
			19. Cut: Plain sliced.
			20. Cut: Quarter sliced.

\*\* NOTE TO SPECIFIER \*\* Choose Unfinished or Prefinished.

* + - 1. Finish: Unfinished.

\*\* NOTE TO SPECIFIER \*\* Panel Finishing Process
Choose Pigmented or Natural Finish

* + - 1. Finish Color: Pigmented.
			2. Finish Color: Clear/natural.

\*\* NOTE TO SPECIFIER \*\* Choose from various NOVA grades

* + - 1. Gloss: Satin.
			2. Gloss: Medium.
			3. Gloss: High.
			4. Gloss: Custom.

\*\* NOTE TO SPECIFIER \*\* Choose additional machining processes

* + - 1. Provide antimicrobial finish.
			2. Provide enhanced chemical resistance finish
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. INSTALLATION
		1. Install in accordance with manufacturer's instructions and approved submittals.
	4. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION