

Architectural Woodwork Standards

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ABRASION RESISTANCE: Resistance to friction wear.

ABS: Abbreviation for “Acrylonitrile butadiene styrene,” a synthetic decorative coating or edgebanding.

ACRYLIC COATING CURED WITH RADIATION PROCESS: A coating over particleboard.

ACRYLIC LACQUER: In finishing, a high-quality clear system for finishing furniture.

ADHESION: The degree of attachment between a finish step and the underlying material.

ADHESIVE: A substance capable of bonding materials together by surface attachment. It is a general term and includes all cements and glues.

ADHESIVE, COLD PRESS AND HOT PRESS: “Cold press” means no heat is applied to the press and will include the use of pinch rollers. “Hot press” means heat is applied at the time the press is in operation.

ADHESIVE, TYPE I FULLY WATERPROOF: Forms a bond that will retain practically all of its strength when occasionally subjected to a thorough wetting and drying; bond shall be of such quality that specimens will withstand shear and the two-cycle boil test specified in ANSI/HPVA HP (latest edition).

ADHESIVE, TYPE II WATER-RESISTANT: Forms a bond that will retain practically all of its strength when occasionally subjected to a thorough wetting and drying; bond shall be of such quality that specimens will withstand the three-cycle cold soak test specified in ANSI/HPVA HP (latest edition).

ADJUSTABLE SHELVES: Generally accomplished through the use of multiple holes with either plastic or metal pins to hold the shelves. Some metal or plastic shelf standards are still in use. The adjustment method is the manufacturer’s option unless otherwise specified.

AGROFIBER: Refers to core products made from the residual material from a grain crop similar in composition to particleboard.

AIR DRIED: Seasoned by controlled exposure to the atmosphere, in the open or under cover, without artificial heat.

ALL-HEART: Of heartwood throughout; free of sapwood.

ANCHOR STRIPS: Used to mount woodwork; other names include nailers, mounting cleats, hanging strips, and wall cleats.

ANILINE DYE: A synthetic dye often used to impart enhanced clarity of color to wood.

APRON: For purposes of these standards, means a horizontal trim member below the countertop typically at knee spaces or open sink areas.

ARCHITECTURAL WOODWORK: Fine custom woodworking, so varied in design and complexity that it becomes difficult to define; specified for special applications and functions by design professionals and created by manufacturers. It includes all exterior and interior woodwork exposed to view in a finished building (except specialty items of flooring, shingles, exposed roof decking, ceiling, siding, structural wood trusses and rafters, and overhead-type doors), including all exposed wood, plywood, high- and low-pressure decorative laminates, and wood doors. Items made of other materials are included only if called for in the specifications. Finishing may be included if specified. Site installation may also be included if specified.

ARRIS: In architecture, a sharp edge formed by the meeting of two flat or curved surfaces.

ARTICULATED JOINT: In architectural paneling, joint details that allow for field variations.

ASSEMBLY-1: A wall-mounted method of HPDL back and end splash construction.

ASSEMBLY-2: A deck-mounted method of HPDL back and end splash construction.

BACK: The side reverse to the face of a panel, or the poorer side of a panel in any Grade of plywood calling for a face and a back.

BACK-PRIMING: A finish coating typically applied to concealed surfaces of architectural woodwork to minimize moisture penetration.

BACK PUTTY: After the glass has been face-puttied, it is turned over and putty is run into any voids that may exist between the glass and the wood parts.

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BACK VENEER: The veneer placed on the semi-exposed or concealed face of a veneered panel construction to balance the construction. Also, the side reverse to the face of a panel, or the poorer side of panel in any Grade calling for a face and a back.

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BACKED OUT: Wide, shallow area machined on the back surface of wide solid moldings and some frames. Allows the item to span irregular surfaces.

BACKING SHEET: Backing sheet placed on the underside of high-pressure laminate plastic tops to give dimensional stability and to minimize the absorption of moisture into the substrate.

BALANCED CONSTRUCTION: To achieve balanced construction, panels should be absolutely symmetrical from the center line; i.e., use materials on either side that contract or expand, or are moisture-permeable, at the same rate. Balanced finishing coats on the back of veneered panels are also highly recommended. Balancing sheet requirements for HPDL fabrication vary with the product. Doors and free-hanging or freestanding panels should have the same laminate on the back as on the face and be applied in the same machine direction. Tops or cabinet members, on the other hand, merely require some form of balancing material.

BALANCED-MATCH: A common term in book-matching that uses two or more leaves of uniform width on the face of a panel, wherein the two outermost leaves in a panel or face are of the same width.

BALANCING SPECIES: A species of similar density to achieve balance by equalizing the rate of moisture absorption or emission.

BALUSTER: One of the repetitive vertical members below a handrail or guardrail to provide support and a functional barrier.

BALUSTRADE: The assembly of newels, balusters, and rails that make up the safety barrier along balconies and open sides of stairways and ramps.

BANDED: Usually refers to the application of a similar material to the edge of a built-up member to cover or hide the otherwise exposed core, such as on plywood.

BARBER POLE: An effect in book-matching of veneers resulting from tight and loose sides of veneers causing different light reflections when finished.

BARK POCKET: Comparatively small area of bark around which normal wood has grown. Also a patch of bark partially or wholly enclosed in the wood. Classified by size, as with pitch pockets.

BASE BLOCK: The square block terminating a molded baseboard at a doorway; a plinth block.

BASE MOLDINGS OR BASEBOARD: Moldings used to trim the intersection of a wall or cabinet and the floor.

BASE SHOE: A small molding combined with a base molding to complete the trimming of the wall and floor intersection.

BEDDING IN PUTTY: Glazing whereby a thin layer of putty or bedding compound is placed in the glass rabbet, and the glass is inserted and pressed onto this bed.

BELT AND BASE COURSES: Horizontal flat members, either decorative or protective, on the exterior of a building. Typically, a belt course is approximately mid-range in height and a base course is at the bottom of the siding.

BEVEL: A machine angle other than a right angle; e.g., a 3-degree bevel, which is equivalent to a 1/8" (3.2 mm) drop in a 2" (50.8 mm) span. Also, in flooring or wall paneling, a V-shaped groove between strips, planks, or panels.

BEVELED EDGE: An edge of the door that forms an angle of less than 90 degrees with the wide face of the door, such as a 3-degree beveled edge.

BIRD'S EYE: Decorative figure due to small conical depressions in the outer annual rings, which appear to follow the same contour in subsequent growth rings, probably for many years. Rotary slicing cuts the depressions crosswise, exposing a series of circlets called bird's eyes.

BISCUIT SPLINE: A concealed oblong-shaped spline used to join adjacent members.

BLEACHING: The chemical process used to remove color or whiten solid wood or wood-veneered panels. This process may be used to lighten an extremely dark wood or to whiten a lighter-colored wood. Most woods do not turn completely white when bleached.

BLEEDING: When the color of one coating material migrates up through the finishing layer to the succeeding coat, imparting some of its characteristics.

BLENDING: Color change that is detectable at a distance of 6' to 8' (1829 mm to 2438 mm) but that does not detract from the overall appearance of the panel.

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BLIND CORNER: The space created by abutting cabinets at an approximate 90-degree angle.

BLISTERING: The formation of bubbles on the surface of a coating, caused by trapping air or vapors beneath the surface; an area where veneer does not adhere; a figure resembling an uneven collection of rounded or blister-like bulges caused by the uneven contour of annual growth rings.

BLOCK-FREE: In finishing, when material has dried sufficiently so that finished items do not stick together when stacked.

BLOCKING: Commonly understood as the wooden support material placed within or upon gypsum board and plaster walls to support casework.

BLUEPRINT-MATCHED PANELS AND COMPONENTS: Each panel for walls and components (e.g., desk, doors) is custom-manufactured to the specific size required. All panels are balanced-matched and sequenced-matched to the adjoining panels.

BLUSHING: The whitish, cloud-like haze that occurs in fast-drying finishes, especially lacquer, when they are sprayed in very humid conditions. Blushing is most often due to moisture (water vapor) trapped in the film or to resin precipitating out of solution.

BOARD: A piece of lumber before gluing for width or thickness.

BOARD FOOT: A unit of measurement of lumber represented by a board 12" (305 mm) long, 12" (305 mm) wide, and 1" (25.4 mm) thick. Abbreviated BF, Bf, bf. When stock is less than 1" (25.4 mm) thick, it is usually calculated as if it were a full 1" (25.4 mm) thick.

BOOK-MATCH: Matching between adjacent veneer leaves on one panel face. Every other piece of veneer is turned over so that the adjacent leaves are "opened" as two pages in a book. The fibers of the wood, slanting in opposite directions in the adjacent leaves, create a characteristic light and dark effect when the surface is seen from an angle.

BOOK SIZE: The height and width of a door prior to prefitting.

BOW: A deviation, flatwise, from a straight line drawn from end to end of a piece. It is measured at the point of greatest distance from the straight line.

BOX STRINGER: See *closed stringer*.

BRASHNESS: A condition of wood characterized by a low resistance to shock and by abrupt failure across the grain without splintering.

BRATTISHING: An ornamental crest along a top of a cornice or screen, often carved with leaves and flowers.

BUCKS: Blocking used for the installation of door/window jambs and other woodwork in conjunction with metal framing and/or block walls.

BUGLE-HEAD SCREW: Is similar to countersunk; however, there is a smooth progression from the shaft to the angle of the head, similar to the bell of a bugle. This term is generally used in referencing drywall screws.

BULLNOSE: A convex, rounded shape such as the front edge of a stair step.

BURL: A figure created by abnormal growth or response to injury that forms an interwoven, contorted, or gnarly mass of dense woody tissue on the trunk or branch of the tree. Burls are usually small and characterized by eye-like markings surrounded by swirls and clusters of distorted tissues. The measurement of the burl is the average of the maximum and minimum dimensions of the burl.

BURL, BLENDING: A swirl, twist, or distortion in the grain of the wood that usually occurs near a knot or crotch but does not contain a knot and does not contain abrupt color variation.

BURL, CONSPICUOUS: A swirl, twist, or distortion in the grain of the wood that usually occurs near a knot or crotch. A conspicuous burl can often be associated with abrupt color variation and/or a cluster of small dark piths caused by a cluster of adventitious buds. Burl is also used to describe a figure in wood.

BUTCHER BLOCK: Generally refers to face-laminate hardwoods (usually Maple) forming a work surface in which the edge grain is exposed to wear.

BUTT JOINT: A joint formed by square-edged surfaces (ends, edges, faces) coming together; end butt joint, edge butt joint.

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CABINET LINER: As used within these standards, shall describe 0.020" (0.5 mm) high-pressure decorative laminate (HPDL).

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CANTILEVER: A projecting structure that is attached or supported at only one end, such as an extended countertop.

CANT STRIP: A triangular-shaped or beveled strip of material used to ease the transition from a horizontal plane to a vertical plane.

CASEWORK: Base and wall cabinets, display fixtures, and storage shelves. The generic term for both “boxes” and special desks, reception counters, nurses stations, and the like. Generally includes the tops and work surfaces.

CASING: Generally, a molding placed around a door frame or window frame.

CATALYZED: In finishing, an ingredient added to a basic product to provide additional performance characteristics.

CATHEDRAL GRAIN: A grain appearance characterized by a series of stacked and inverted “V” or cathedral type of springwood (early wood)/summerwood (late wood) patterns common in plain-sliced (flat-cut) veneer.

CAULK: Either the action of making a watertight or airtight seal between two adjacent surfaces by filling the area between the surfaces with a sealant, or the sealant itself.

CENTER-MATCHED: A form of book-matching that uses two or more even-numbered leaves of equal width, matched with a joint occurring in the center of the panel. A small amount of the figure is lost.

CHAIR RAIL: A decorative molding placed at a height on the wall comparable to the place where the back of a chair would impact the wall surface.

CHALK: White or other color chalk marks used by the mills for some form of identification to the mill or for marking defects for repair.

CHAMFER: To cut away the edge where two surfaces meet in an exterior angle, leaving a bevel at the junction.

CHARACTER MARK: As an element of nature, a distinctive feature in a hardwood surface produced by minerals and other elements that are absorbed as a tree grows.

CHARACTERISTICS: The natural irregularities found in wood, whether solid or veneered. Their acceptance is a function of each particular Grade.

CHATTER: Lines appearing across the panel or board at right angles to the grain, giving the appearance of one or more corrugations resulting from bad setting of sanding equipment or planing knives.

CHECKING: Cracks that appear in a finishing film due to lack of cohesion, often caused by too heavy of a coat being applied or a poor grade of finish being used. Also called cold-checking.

CHECKS: Small slits running parallel to the grain of wood, caused chiefly by strains produced in seasoning and drying.

CHICKEN TRACKS: Expression denoting scars that give the particular effect of a chicken’s footprint, caused by air roots or vines. Small sections of chicken tracks appear to be part of the wood when highly dense. Chicken tracks that generally follow the grain, and are of an individual line rather than a series of lines merging on each other, are not considered to be a defect.

CHIP CORE: See *particleboard core*.

CHIP MARKS: Shallow depressions or indentations on or in the surface of dressed lumber caused by shavings or chips getting embedded in the surface during dressing.

CHIPPED GRAIN: A barely perceptible irregularity in the surface of a piece caused when particles of wood are chipped or broken below the line of cut.

CLEATS: In closet and utility shelving, the wood members furnished to support the shelf.

CLOSE GRAIN AND OPEN GRAIN: The size and distribution of the cellular structure of the wood influences the appearance and uniformity. Open-grain hardwoods, such as Elm, Oak, Ash, and Chestnut, are “ring-porous” species. These species have distinct figure and grain patterns. Close-grain hardwoods, such as Cherry, Maple, Birch, and Yellow Poplar, are “diffuse-porous” species. Most North American diffuse-porous woods have small, dense pores resulting in less distinct figure and grain. Some tropical diffuse-porous species (e.g., Mahogany) have rather large pores.

CLOSED STRINGER: In stairwork, a stringer that boxes in the treads and risers.

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CLUSTERED: When a defect described in the grading rule is sufficient in number and sufficiently close together to appear to be concentrated in one area.

COFFER: A sunken, decorative panel in a ceiling.

COMB GRAIN: Comb grain is selected from rift for its exceptionally straight grain and closely spaced growth increments. Allowable medullary ray flake is limited.

COMBINATION CORE: Typically, these cores are constructed of three or five plies of veneer sandwiched between thin laminations of a composite product such as MDF, particleboard, hardboard, etc. Another variation utilizes a wafer board (randomly oriented wafers, typically Aspen) center. Typically, these cores result in a lightweight, strong, dimensionally stable panel with increased screwholding ability compared to particleboard and superior surface flatness compared to typical veneer core panels.

COMPATIBLE EDGE BAND (CE): When relating the door edge to face appearance, the edge is not the same species as the face; however, it must be similar in overall color, grain, character, and contrast to the face. See self-edge (SE).

COMPATIBLE FOR COLOR AND GRAIN: For purposes of these standards, means members shall be selected so that:
a) lighter-than-average color members will not be adjacent to darker-than-average color members, and there will be no sharp contrast in color between the adjacent members, and b) the grain of adjacent members shall not vary widely or be dissimilar in grain, character, and figure.

COMPATIBLE SPECIES: For purposes of these standards, means different species which are able to exist in a harmonious combination of color and grain.

COMPONENT (OF FACE): An individual piece of veneer that is jointed to other pieces to achieve a full length and width face. The terms "piece" and "leaf" are used interchangeably with "component" in the context of face.

COMPOSITION FACE PANELS: A door face panel composed of a wood derivative.

CONCEALED SURFACE: Surface not normally visible after installation.

CONSPICUOUS: Detectable; readily visible with the naked eye when observed in normal light at a distance stated within these standards.

CONSTRUCTION, TYPE A: Frameless construction, where the front edge of the cabinet body components are simply edgebanded.

CONSTRUCTION, TYPE B: Face-frame construction, where the front edge of the cabinet body components is overlaid with a frame.

CONTACT ADHESIVE: Normally used for bonding high-pressure decorative laminates to a substrate.

CONTRACTOR: A general contractor, normally holding the legal agreement for construction of an owner's building project.

CONVERSION VARNISH: In finishing, a class of coatings that are tough and exhibit excellent resistance to household chemicals.

COPE/COPED: To cut the end of one member to match the profile of another molded member.

CORE: The material (typically, veneer, lumber, particleboard, medium-density fiberboard, or a combination of these) on which an exposed surface material (typically, veneer or HPDL) is applied.

CORE, HOLLOW: A core assembly of strips or other units of wood, wood derivative, or insulation board with intervening hollow cells or spaces that support the outer faces.

CORE, MINERAL: A fire-resistant core material generally used in wood doors requiring fire ratings of 3/4 hours or more.

CORE, SOLID: The innermost layer or section in flush door construction. Typical constructions are as follows:

PARTICLEBOARD - A solid core of wood or other lignocellulose particles bonded together with a suitable binder, cured under heat, and pressed into a rigid panel in a flat-platen press.

STAVE - A solid core of wood blocks or strips.

WOOD BLOCK, LINED - A solid core of two parts; a central wood block core bonded to two core liners of wood or other lignocellulose materials.

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CORNICE: A finishing detail along the top edge of a piece of furniture or a building.

COVE MOLDINGS: Similar to crown moldings, often smaller in size and less decorative.

CRATERING: The formation of small depressions in a finish, sometimes called fish eye. Often caused by the contamination of the finish material or the substrate with silicone, oil, or other substances.

CRAWLING: The tendency of a wet film to creep or crawl away from certain areas of a substrate. Very sharp corners or contamination is often the cause (see *cratering*).

CREEP: Is the increase in shelf deflection over time, which fluctuates with temperature, humidity, and load stress.

CROOK: A deviation, edgewise, from a straight line drawn from end to end of a piece. It is measured at the point of greatest distance from the straight line.

CROSSBANDING: A ply placed between the core and face veneer in 5-ply construction, or a ply placed between the back and face of a 3-ply skin in 7-ply construction. When the crossbanding has directional grain, it is placed at right angles to the grain of the face veneer. When used with laminate face doors, crossbanding may consist of more than one ply.

CROSS BAR: Irregularity of grain resembling a dip in the grain running at right angles, or nearly so, to the length of the veneer, caused chiefly by strains produced in seasoning.

CROSS BREAK: Separation (break) of the wood cells across the grain. Such breaks may be due to internal strains resulting from unequal longitudinal shrinkage, or to external forces.

CROSS FIGURE: A series of naturally occurring figure effects characterized by mild or dominant patterns across the grain in some faces. For example, a washboard effect occurs in fiddle-back cross figure; and cross wrinkles occur in the mottle figure.

CROSSFIRE: Figure extending across the grain, such as fiddleback, raindrop, and mottle.

CROSS GRAIN: Applied to wood in which the grain is not running lengthwise of the material in one direction. The irregularity is due to interlocked fiber, uneven annual rings, or to the intersection of branch and stem.

CROTCH: Comes from the portion of a tree just below the point where it forks into two limbs. The grain is crushed and twisted, creating a variety of plume and flame figures, often resembling a well-formed feather. The outside of the block produces a swirl figure that changes to full crotch figure as the cutting approaches the center of the block.

CROWN MOLDINGS: Used to accent ceiling intersections and traditional pediments and casework tops.

CUP: A deviation in the face of a piece from a straight line drawn from edge to edge of that piece. It is measured at the point of greatest distance from the straight line.

CURB STRINGER: See *closed stringer*.

CURING: The complete drying of a finish to the ultimate development of its properties.

CURLY: Figure that occurs when the fibers are distorted, producing a wavy or curly effect in the lumber or veneer. Primarily found in Maple or Birch.

CUSTOM GRADE: The middle or normal Grade in both material and workmanship, and intended for high-quality, conventional work.

CUSTOM SEQUENCE-MATCHED PANELS: All panels are custom manufactured to a uniform width and/or height according to each elevation. All panels are balanced-matched and sequence-matched to the adjoining panels.

DADO, BLIND, OR STOPPED JOINT: A dado that is not visible when the joint is completed.

DADO JOINT: A rectangular groove across the grain of a wood member into which the end of the joining member is inserted; also a housed joint. Variations include "mortise and tenon" and "stopped or blind dado" joints.

DART: A conventionalized arrowhead shape, often alternating with egg or other forms in moldings.

DEAD KNOTS (OPEN KNOTS): Openings where a portion of the wood substance of the knot has dropped out or where cross checks have occurred to present an opening.

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DECAY: Disintegration of wood due to the action of wood-destroying fungi; “doze”, “rot”, and “unsound wood” mean the same as “decay.”

DECORATIVE COMPOSITE PANELS: For the purposes of these standards, a thermally fused panel flat-pressed from a thermoset polyester or melamine resin-impregnated paper (minimum 30%); see *low pressure decorative laminates*.

DEFECT: Fault that detracts from the quality, appearance, or utility of the piece. Handling marks and/or grain raising due to moisture shall not be considered a defect.

DEFECT, OPEN: Open joints, knotholes, cracks, loose knots, wormholes, gaps, voids, or other openings interrupting the smooth continuity of the wood surface.

DEFLECTION: Is the measured distance from a straight line that a shelf will deflect under load.

DELAMINATION: Separation of plies or layers of wood or other materials through failure of the adhesive joint.

DESIGN PROFESSIONAL: An architect, interior designer, specification writer, or other individual qualified by virtue of education and/or training to provide services for the design of buildings, interiors, and furnishings.

DIMENSION LUMBER: Material that is precut in width and thickness to a standard size.

DISCOLORATIONS: Stains in wood substances. Common veneer stains are sap stains, blue stains, stains produced by chemical action caused by the iron in the cutting knife coming in contact with the tannic acid of the wood, and those resulting from exposure of natural wood extractives to oxygen and light, to chemical action of vat treatments or the adhesive components, and/or to the surface finish.

DISTRESSING: In finishing, either a mechanical or chemical special effect.

DISTRIBUTOR: A person or organization that provides products on a wholesale basis to a manufacturer of woodwork.

DOVETAIL, BLIND JOINT: A dovetail joint that is not visible when the joint is completed.

DOVETAIL JOINT: A joint formed by inserting a projecting wedge-shaped member (dovetail tenon) into a correspondingly shaped cut-out member (dovetail mortise); variations include the “dovetail dado” and the “blind dovetail dado.”

DOWEL: Cylindrical peg or a metal screw used to strengthen a wood joint.

DOWELED JOINT: A joint using “dowels” (doweled construction); also “doweled edge joint.”

DOWEL SCREW: For purposes of these standards, means a smooth shouldered screw used in lieu of wood dowels for casework joinery.

DOZE: A form of incipient decay characterized by a dull and lifeless appearance of the wood, accompanied by a loss of strength and softening of the wood substance.

DRAWINGS: Part of the project documents put in place by the owner and/or design professionals, which, in combination with written specifications, define the scope, quality assurance, requirements, submittals, field dimensions, product handling, and product specifications to the manufacturer. Shop drawings are detailed engineering drawings produced by the manufacturer for the fabrication of the architectural woodwork products, and are often submitted to the owner and/or design professional for approval.

EASED EDGES: For the vast majority of work, a sharp arris or edge is not permitted. Such edges are traditionally “eased” by lightly striking the edge with a fine abrasive. Less often, or as a design element, such edges are machined to a small radius.

EASEMENTS: Short curved segments of handrail that provide for changes in pitch, elevation, or direction.

ECONOMY GRADE: The lowest Grade in both material and workmanship, and intended for work where price outweighs quality considerations.

EDGEBAND, CONCEALED: Not more than 1/16” (1.6 mm) of the band shall show on the face or edge of the plywood or particleboard.

EDGE GRAIN (EG) OR VERTICAL GRAIN (VG): A piece or pieces sawn at approximately right angles to the annual growth rings so that the rings form an angle of 45 degrees or more with the surface of the piece.

EDGE JOINT: When the edges of boards are glued together to increase the width.

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EFFECT: The final result achieved in a finished wood surface, after the application of a clearly specified series of finishing procedures (steps) have been completed. Successfully achieving a specified "effect" requires the active participation of the design professional and the woodwork finisher.

END BUTT JOINT: 1. When one end is glued to an edge or face of another board to form an angle (e.g., stiles and rails of a face frame). 2. When the end of one board is fastened to the end of another to increase its length (e.g., running trim).

END GRAIN: The grain seen in a cut made at a right angle to the direction of the fibers in a board.

END MATCH: Matching between adjacent veneer leaves on one panel face. Veneer leaves are book-matched end to end as well as side to side. Generally used for very tall panels or for projects in which only short length veneers are available.

ENGINEERED VENEER: Veneers that are first peeled, normally from Obeche or Poplar logs. The peeled veneer leaves are dyed to a specified color, then glued together in a mold to produce a large laminated block. The shape of the mold determines the final grain configuration. The block is then sliced into leaves of veneer with a designed appearance that is highly repeatable.

EQUILIBRIUM MOISTURE CONTENT: The moisture content at which wood neither gains nor loses moisture when surrounded by air at a given relative humidity and temperature.

ESCUTCHEON: A protective fitting around a keyhole; also a shield-like ornament.

EVOLUTE: A design of recurrent waves used for borders or other linear elements.

EXPIRE: To lapse or become inactive without cause of termination or cancellation.

EXPOSED EXTERIOR SURFACES: For purposes of these standards, specifically casework, means all exterior surfaces exposed to view.

EXPOSED FASTENERS: Any mechanical fastening device, filled or unfilled, that can be seen on exposed or semi-exposed surfaces of woodwork.

EXPOSED INTERIOR SURFACES: For purposes of these standards, specifically casework, means all interior surfaces exposed to view in open casework or behind transparent doors.

EXPOSED SURFACES: Surfaces normally visible after installation.

FACE: The better side of any panel in which the outer plies are of different veneer grades; also either side of a panel in which there is no difference in veneer grade of the outer plies.

FACE-FRAME CONSTRUCTION: Construction Style B.

FACE JOINT: When the faces of boards are glued together to increase the thickness.

FACE VENEER: The outermost exposed wood veneer surface of a veneered wood door, panel, or other component exposed to view when the project is completed.

FASTENER, MECHANICAL: The generic term for securing devices that are used in the fabrication and/or installation of architectural woodwork, such as dowels, dowel screws, splines, nails, screws, bolts, shot pins, etc.

FEATHERED SHEETS: The top outer sheets of some flitches, generally containing sapwood, that do not run full length.

FEW: A small number without regard to their arrangement in the panel.

FIBER: One of the long, thick-walled cells that give strength and support to hardwoods.

FIBERBOARD CORE: Manufactured from wood reduced to fine fibers mixed with binders and formed by the use of heat and pressure into panels.

FIDDLEBACK: A fine, strong, even ripple figure as frequently seen on the backs of violins. The figure is found principally in Mahogany and Maple, but occurs sometimes in other species.

FIELD: With reference to work location, meaning in the field or jobsite versus in the manufacturing plant or shop.

FIGURE: The natural pattern produced in the wood surface by annual growth rings, rays, knots, and natural deviations from the normal grain, such as interlocked and wavy grain, and irregular coloration.

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FILL (PUTTY REPAIRS): A repair to an open defect, usually made with fast-drying plastic putty. Should be well-made with nonshrinking putty of a color matching the surrounding area of the wood. To be flat and level with the face and panel and to be sanded after application and drying.

FILLER: In finishing, ground inert solids specifically designed to fill pores or small cavities in wood as one step in the overall finishing process. In casework, paneling, ornamental work, stairwork, frames, and some other architectural woodwork applications, an additional piece of trim material between woodwork members or between woodwork and some other material used to create a fill or transition between the members.

FINGER JOINT: When the ends of two pieces of lumber are cut to an identically matching set. Used most commonly to increase the length of the board. A series of interlocking fingers are precision-cut on the ends of two pieces of wood that mesh together and are held rigidly in place with adhesive.

FIRE RATED: Fire-retardant particleboard is available with an Underwriters' Laboratory (UL) stamp for Class 1 fire rating (Flame Spread 20, Smoke Developed 25). Fire-rated doors are available with particleboard and mineral cores for ratings up to 1-1/2 hours. It is the responsibility of the specifier to indicate which fire-retardant classification is required for a particular product. In the absence of such a specified rating, the manufacturer may supply unrated product.

FIRE-RATED DOOR: A door that has been constructed in such a manner that when installed in an assembly and tested will pass ASTM E-152 "Fire Test of Door Assemblies," and can be rated as resisting fire for 20 minutes (1/3 hour), 30 minutes (1/2 hour), 45 minutes (3/4 hour) (C), 1 hour (B), or 1-1/2 hours (B). The door must be tested and carry an identifying label from a qualified testing and inspection agency.

FIRE-RETARDANT TREATMENT: Only a few species are treated with chemicals to reduce flammability and retard the spread of flame over the surface. This usually involves impregnation of the wood, under pressure, with salts and other chemicals. White Oak is untreatable.

FIRST-CLASS WORKMANSHIP: For architectural woodwork, the finest or highest class of workmanship for the Grade specified, and shall be free of manufacturing and natural defects covered under grading rules in these standards.

FLAKE: More properly called "fleck," and sometimes referred to as "silver grain." Created when the veneer knife of saw passes through the medullary rays, wood rays, or pith rays in such a manner as to reveal the natural wavy, pencil-like stripes in the wood.

FLAKEBOARD: See *particleboard*.

FLAMESPREAD CLASSIFICATION: The generally accepted measurement for fire rating of materials. It compares the rate of flamespread on a particular species with the rate of flame spread on untreated Red Oak.

FLAT GRAIN (FG) OR SLASH GRAIN (SG): A piece or pieces sawn approximately parallel to the annual growth rings so that all or some of the rings form an angle of less than 45 degrees with the surface of the piece.

FLAT SLICING: See *plain slicing*.

FLECK, RAY: Portion of a ray as it appears on the quartered or rift-cut surface. Fleck is often a dominant appearance feature in oak.

FLITCH: A hewn or sawn log made ready for veneer production or the actual veneer slices of one half log, kept in order, and used for the production of fine plywood panels.

FLUSH CONSTRUCTION: Cabinet construction in which the door and drawer faces are set within and flush with the body members or face frames of the cabinet with spaces between face surfaces sufficient for operating clearance.

FLUSH OVERLAY: Cabinet construction in which door and drawer faces cover the body members of the cabinet with spaces between face surfaces sufficient for operating clearance.

FLUTE: One of a series of parallel, lengthwise channels or grooves in a column, cornice molding, band, or furniture leg.

FRAMELESS CONSTRUCTION: Construction Style A.

FRETWORK: A repeated, symmetrical, interlaced design of small bars.

FURRING: Material added to a wall surface to create a true plane.

GLOSSARY

GABLE: Aside from the traditional usage referring to the end of a building, in casework the end or side of a cabinet.

GAP: An unfilled opening in a continuous surface or between adjoining surfaces.

GARLAND: A sculptural ornament, usually in relief, in the form of a swag or festoon of flowers or fruit.

GENERAL CONTRACTOR: See *contractor*.

GLAZING: In finishing, an added step for achieving color or to heighten grain appearance.

GLOSS: See *sheen*.

GLUE BLOCK: A wood block, usually triangular in cross-section, securely glued to an angular joint between two members for a greater glue bond area.

GLUE SPOTS: The discoloration or barrier to finish penetration caused by the bleedthrough or unremoved glue on an exposed or semi-exposed wood surface.

GLUED, SECURELY: The bonding of two members with an adhesive forming a tight joint with no visible delamination at the lines of application.

GRADE: Unless otherwise noted, this term means Grade rules for Economy, Custom, and/or Premium Grade.

GRADING RULES: Most hardwoods are graded utilizing the rules established by the National Hardwood Lumber Association. Softwoods, on the other hand, are graded by several grading associations. The three primary softwood grading associations are Western Wood Products Association, Southern Pine Inspection Bureau, and Redwood Inspection Service.

Although lumber must be purchased by the manufacturer according to these grading rules, these rules should not be used to specify lumber for architectural woodwork. Specify the Grade of Work for the fabricated products under these standards.

Softwood plywood is graded by the American Plywood Association (APA, The Engineered Wood Association). Grade markings are stamped on the back or edge of each sheet. Hardwood plywood is made under the standards of the Hardwood Plywood and Veneer Association (HPVA). These Grades are rarely marked on the panels.

GRAIN: The fibers in wood and their direction, size, arrangement, appearance, or quality. When severed, the annual growth rings become quite pronounced and the effect is referred to as "grain".

FLAT GRAIN (FG) or SLASH GRAIN (SG) - lumber or veneer is a piece sawn or sliced approximately parallel to the annual growth rings so that some or all of the rings form an angle of less than 45 degrees with the surface of the piece.

MIXED GRAIN (MG) - is any combination of vertical or flat grain in the same member. Vertical grain lumber or veneer is a piece sawn or sliced at approximately right angles to the annual growth rings so that the rings form an angle of 45 degrees or more with the surface of the piece.

QUARTERED GRAIN - is a method of sawing or slicing to bring out certain figures produced by the medullary or pith rays, which are especially conspicuous in Oak. The log is flitched in several different ways to allow the cutting of the veneer in a radial direction. Rift or comb grain is lumber or veneer that is obtained by cutting at an angle of about 15 degrees off of the quartered position. Twenty-five percent (25%) of the exposed surface area of each piece of veneer may contain medullary ray flake.

GRAIN CHARACTER: A varying pattern produced by cutting through growth rings, exposing various layers. It is most pronounced in veneer cut tangentially or rotary.

GRAIN FIGURE: The pattern produced in a wood surface by annual growth rings, rays, knots, or deviations from natural grain, such as interlocked and wavy grain and irregular coloration.

GRAIN SLOPE: Expression of the angle of the grain to the long edges of the veneer component.

GRAIN SWEEP: Expression of the angle of the grain to the long edges of the veneer component over the area extending one-eighth of the length of the piece from the ends.

GROOVE: Rectangular slot of three surfaces cut parallel with the grain of the wood.

GROUND: A narrow strip of wood that serves as a guide for plaster as well as a base to which trim members are secured. Grounds are applied to rough interior openings especially doors and windows; along interior walls at the finish floor line; and wherever wainscot may be installed. The thickness of a ground is that of the combined lath and plaster, while the width varies from 1" (25.4 mm) to 3" (76.2 mm), which is often called plaster grounds (around interior or exterior openings) and base grounds (when used around base of rooms).

GLOSSARY

GROWTH RINGS: The layer of wood added by a tree in a single growing season, the markings of which contribute to the figure in finished woods.

GUM POCKETS: Well-defined openings between rings of annual growth, containing gum or evidence of prior gum accumulations.

GUM SPOTS AND STREAKS: Gum or resinous material or color spots and streaks caused by prior resin accumulations sometimes found on panel surfaces.

HAIRLINE: A thin, perceptible line showing at the joint of two pieces of wood.

HALF LAP JOINT: A joint formed by extending (lapping) the joining part of one member over the joining part of another.

HALF ROUND: A method of cutting veneers on an off-center lathe that results in modified characteristics of both rotary and plain-sliced veneers; often used in Red and White Oak.

HANDLING MARKS: Scratches, dents, blemishes, mars, or scuffs left or created by physical handling or packaging

HANDRAIL: In stairwork, the member that follows the pitch of the stair for grasping by the hand.

HAND-RUBBED FINISH: In finishing, a manual step performed to smooth, flatten, or dull the topcoat.

HARDBOARD: A generic term for a panel manufactured primarily from inter-felted lignocellulose fibers consolidated under heat and pressure in a hot press and conforming to the requirements of ANSI/AHA A 135.4 (latest edition).

HARDBOARD, TEMPERED: Hardboard that has been coated or impregnated with an oil and then baked to give it more impact resistance, hardness, rigidity, tensile strength, and more resistance to scratches and moisture. Tempered hardboard is typically smooth on both sides and may have a dark smooth finish.

HARDNESS: The property of a coating that causes it to resist denting or penetration by a hard object.

HARDWOOD: General term used to designate lumber or veneer produced from temperate zone deciduous or tropical broad-leaved trees in contrast to softwood, which is produced from trees that are usually needle-bearing or coniferous. The term does not imply hardness in its physical sense.

HEARTWOOD: The wood extending from the pith or the center of the tree to the sapwood, usually darker in color than sapwood.

HEAT-RESISTANCE TEST: A sample of the laminated plastic approximately 12" x 12" (305 x 305 mm), glued to the substrate for a minimum of 21 days shall be used for this test. A hot-air gun rayed at 14 amperes, 120 volts, with a nozzle temperature of 500° F or 274° C shall be directed at the test panel. A thermometer set at the panel surface shall register 356° F or 180° C for an exposure time of 5 minutes. The formation of a blister or void between the overlay and the substrate shall constitute a failure of the adhesive. A metal straightedge shall be used to determine if a blister has occurred. This determination shall be made within 30 seconds of heat removal.

HIGH-DENSITY OVERLAY: The standard grades of high-density overlay shall be as listed in PS 1, latest edition. The surface of the finished product shall be hard, smooth, or uniformly textured, although some evidence of underlying grain may appear. The surface shall be of such a character that further finishing by paint or protective coating is not necessary.

HIGH-PRESSURE CABINET LINER: Conforms to NEMA LD-3 (latest edition), has a color or pattern sheet to enhance its appearance, and is intended for use in cabinet interiors.

HIGH-PRESSURE DECORATIVE LAMINATE (HPDL): Laminated thermosetting decorative sheets intended for decorative purposes. The sheets consist essentially of layers of a fibrous sheet material, such as paper, impregnated with a thermosetting condensation resin and consolidation under heat and pressure. The top layers have a decorative color or a printed design. The resulting product has an attractive exposed surface that is durable and resistant to damage from abrasion and mild alkalies, acids, and solvents, meeting the requirements of the National Electrical Manufacturers Association (NEMA) LD-3 (latest edition).

HOLE: Applies to holes from any cause.

HOLES, WORM: Holes resulting from infestation by worms greater than 1/16" (1.6 mm) in diameter.

HPDL: See high-pressure decorative laminate.

G HPDL COMPACT: See *solid phenolic*.

GLOSSARY

HUMIDITY: The common term for relative humidity; the amount of moisture in an atmosphere in relation to temperature.

INCONSPICUOUS: Not readily visible without careful inspection (as a measurement of natural or machining characteristics).

INDENTATIONS: Areas in the face that have been compressed as the result of residue on the platens of the hot press or handling damage through the factory.

INLAY: A surface decoration composed of small pieces of contrasting woods or other materials set flush with a wood surface.

INNER PLIES: Plies other than face or back plies in a panel construction. Crossbands and centers are classed as inner plies (see core).

INSTALLER: A person or organization that regularly engages in the practice of installing architectural woodwork.

INTARSIA: A surface decoration of wood consisting of wood inlays in contrasting colors.

INTUMESCENT COATINGS: Can be applied to the surface of flammable products to reduce flammability.

JOINT: The line of juncture between the edges or ends of two adjacent pieces of lumber or sheets of veneer, such as butt, dado (blind, stopped), dovetail, blind dovetail, finger, half lap, lock, miter (shoulder, lock, spline), mortise and tenon (blind-slotted, stub, or through), rabbet, scarf, spline, and tongue-and-groove joint.

JOINT, OPEN: Joint in which two adjacent pieces of lumber or veneer do not fit tightly together.

JOINTS TIGHT, FACTORY: Any joints or a combination of joints and/or mechanical fasteners, that are used to join two members in the shop. Distance between members shall not exceed those set forth in these standards.

JOINTS TIGHT, FIELD: Any joints or a combination of joints and/or mechanical fasteners that are used to join two members in the field. Distance between members shall not exceed those set forth in these standards.

KCPI: Stands for "knife cuts per inch"; generally used when describing the result of molded profiles or S4S materials.

KERF: The groove or notch made as a saw passes through wood; also the wood removed by the saw in parting the material.

KILN-DRIED: Lumber dried in a closed chamber in which the removal of moisture is controlled by artificial heat and usually by controlled relative humidity.

KNIFE MARKS: The imprints or markings of the machine knives on the surface of dressed lumber.

KNOCKED DOWN (KD): Unassembled, as contrasted to assembled.

KNOT: A portion of a branch/limb whose growth rings are partially or completely intergrown on the board's face, with the growth shaped so that it will retain its place in the piece. The average dimension of the exposed knot surface shall be used in determining the size.

KNOT, CONSPICUOUS PIN: Sound knots 1/4" (6.4 mm) or less in diameter containing dark centers.

KNOT HOLES: Openings produced when knots drop from the wood in which they were embedded.

KNOT, OPEN: Opening produced when a portion of the wood substance of a knot has dropped out, or where cross-checks have occurred to produce an opening.

KNOTS, SOUND TIGHT: Knots that are solid across their face and fixed by growth to retain their place.

KNOTS, SPIKE: Knots cut from 0° to 45° to the long axis of limbs.

LACQUER: A coating composed of synthetic film forming materials such as nitrocellulose, ethylcellulose, natural and synthetic resins, which are dissolved in organic solvents and are dried by solvent evaporation.

LEAF: The individual pieces of wood veneer that make up a flitch.

LIFTING: In finishing, the softening of a dried film by the solvents of a succeeding coat, which causes raising and wrinkling of the first coat.

LIGHTS (LITES): In door construction, beaded openings to receive glazing.

GLOSSARY

LINENFOLD: In decorative woodwork, a carved surface that imitates drapery.

LOCK BLOCK: A concealed block the same thickness as the door stile or core that is adjacent to the stile at a location corresponding to the lock location and into which a lock is fitted.

LOCK JOINT: Interlocking machine joint between two members.

LOCKING JOINT: There are many variations of this joint. The joint is produced when the adjoining pieces are machined into a locking form.

LONGWOOD: Wood produced from the bole or stem, from stump to first branch or fork, where the majority of wood is taken from the tree.

LOOSE SIDE: In knife-cut veneer, that side of the leaf that was in contact with the knife as the veneer was being cut, and containing cutting checks (lathe checks) because of the bending of the wood at the knife edge.

LOUVERS: In door construction, openings fitted with metal or wood louver panels.

LOW-PRESSURE DECORATIVE LAMINATE: A general term referring to a variety of melamine or polyester-enhanced surface papers and foils laminated to a core, typically referred to as melamine or polyester overlays.

LPDL: See *low-pressure decorative laminate*.

LUMBER: Pieces of wood no further manufactured than by sawing, planing, crosscutting to length, and perhaps edge-machining.

LUSTER: See *sheen*.

MACHINE BITE: A depressed cut of the machine knives at the end of a piece.

MACHINE BURN: A darkening of the wood due to overheating by machine knives or rolls when pieces are stopped in the machine.

MAHOGANY: The term "Mahogany" should not be specified without further definition. It must be understood that there are different species of Mahogany that should be specified.

African, Central and South American, or Tropical American, including Honduras Mahogany, are genuine and true Mahoganies. True or genuine Mahogany varies in color from light pink to light red; reddish brown to golden brown or yellowish tan. Some Mahogany turns darker and some lighter in color after machining.

The figure or grain in genuine Mahogany runs from plain-sliced, plain stripe to broken stripe, mottled, fiddleback, swirl, and crotches. As uniform color is not a natural characteristic of this species, if a uniform color is desired it is recommended that the finishing specification include a statement that toner or tint must be applied so that color variation shall be kept to a minimum.

Lauan White and Red, Tanguile, and other species are native to the Philippine Islands and are sometimes referred to as Philippine Mahogany. Those species are not a true Mahogany.

When only the word "Mahogany" is specified, it usually (but not always) means a true Mahogany as selected by the manufacturer unless a specific species is called for in the specifications. When Philippine Mahogany is specified, it nearly always means Lauan, Tanguile, and other natural Philippine species of wood.

MANUFACTURER: A person or organization that regularly engages in the practice of manufacturing, prefinishing, and/or installing architectural woodwork.

MARQUETRY: A mosaic of multicolored woods, sometimes interspersed with other materials, such as mother-of-pearl.

MATCHING EDGE BAND: See *self-edge*.

MATCHING WITHIN PANEL FACE: The individual leaves of veneer in a sliced flitch increase or decrease in width as the slicing progresses. Thus, if a number of panels are manufactured from a particular flitch, the number of veneer leaves per panel face will change as the flitch is utilized.

MECHANICAL FASTENER: The generic term for securing devices that are used in the fabrication and/or installation of architectural woodwork such as dowels, dowel screws, spline, nails, screws, bolts, pins, shot pins, etc.

MEDIUM-DENSITY FIBERBOARD (MDF): See particleboard for a basic description. As used in these standards, whether as MDF alone or as core material, the MDF shall meet the requirements of ANSI A-208.2 (latest edition).

GLOSSARY

MEDIUM-DENSITY OVERLAY (MDO): A panel product particularly well-suited for opaque (paint) finishes; most versions are highly weather-resistant.

MEDIUM-DENSITY PARTICLEBOARD: Generally refers to particleboard manufactured to an approximate density of 45 lbs per cubic foot (20.41 kg per cubic cm); the type of particleboard used for architectural woodworking substrates.

MEDULLARY RAY: Extends radially from the center of a log toward the outer circumference. These rays serve primarily to store food and transport it horizontally. These rays vary in height from a few cells in some species to an excess of 4" (102 mm) in Oaks. In Oak, it produces the flake effect common to quarter-sawn lumber.

MELAMINE: Resin-impregnated paper used in decorative composite panel products (see *thermally fused decorative laminate panel*).

MEMBER: An individual piece of solid stock or plywood that forms an item of woodwork.

METAMERISM: An apparent change in color when exposed to differing wavelengths of light; the human perception of color.

MILL RUN: Molding run to pattern only, not assembled, machined for assembly, or cut to length. The terms "material only" and "loose and long" mean the same as "mill run."

MILLWORK: See *architectural woodwork*.

MINERAL STREAK: An olive to greenish-black or brown discoloration of undetermined cause in hardwoods.

MIRROR POLISH FINISH: In finishing, several steps of wet sanding, mechanical buffing, and polishing.

MISMATCH: An uneven fit in worked lumber when adjoining pieces do not meet tightly at all points of contact or when the surfaces of adjoining pieces are not in the same plane.

MITERFOLD: Made from a single panel in one machining process; includes placement of tape, machining, application of adhesive, folding, glue, clamp, and clean.

MITER JOINT: The joining of two members at an angle that bisects the angle of junction.

MITER, LOCK JOINT: A miter joint employing a tongue and groove to further strengthen it.

MITER, SHOULDER JOINT: Any type of miter joint that presents a shoulder, such as a lock miter or a splined miter.

MODULAR CASEWORK: Casework produced from a manufacturer's standard details adapted to use for a particular project.

MODULUS OF ELASTICITY: Deformations produced by low stress are completely recoverable after loads are removed. Plastic deformation or failure occurs when loaded to higher stress levels.

MOISTURE CONTENT: The weight of the water in the wood expressed in percentage of the weight of the oven-dry wood.

MOLDED EDGE: Edge of piece machined to any profile other than a square or eased edge.

MOLDING: A decorative strip, usually having a curved or projecting surface. Some common moldings include:

ANGLE BEAD - A vertical molding that protects or decorates the projecting angle of a wall or partition.

ASTRAGAL - A molding with a half-round profile; also the strip covering the junction of a pair of doors.

BACKBAND - The outer molding element of a door window casing.

BAGUETTE - A simple, narrow, convex molding.

BASE CAP - A molding used to trim a baseboard.

BEAD - A narrow half-round molding that is continuous or divided into bead-like forms.

BEAD AND REEL - A molding with a profile of half a circle or more, in which beads form alternate design forms seen edge-on.

BILLET - A molding made of several bands of raised cylinders or rectangular segments.

BOLECTION MOLDING - Unusually designed with large and broad convex projection.

GLOSSARY

CABLE MOLDING - Carved spirally to resemble a rope or cable.

CHAIR RAIL - Applied along a wall for protection or as a design element between wall treatments, such as paneling, wallpaper, or paint.

COVE MOLDING - Features a quarter round channel along the face and a square back.

CROWN MOLDING - The decorative molding that conceals the joint between the wall and ceiling.

CYMA MOLDING - Has an S-shaped profile.

DENTIL MOLDING - Composed of a series of small rectangular blocks.

DOVETAIL MOLDING - Carved with interlocked triangles.

EGG AND ANCHOR MOLDING - Composed of alternating oval and anchor-like shapes.

EGG AND DART MOLDING - Composed of alternating egg and arrowhead shapes.

EGG AND TONGUE MOLDING - Composed of alternating egg and pointed elements.

FILLET - A thin molding used to separate or decorate larger moldings.

LATTICE - A thin, flat molding, rectangular in cross-section, used to build decorative screening or conceal joinery.

LEAF AND DART MOLDING - Composed of alternating leaf-like and arrowhead shapes.

OGEE - A molding with reverse-curved face that is concave above and convex below.

PEARL MOLDING - Carved to imitate a string of pearls.

PELLET MOLDING - Carved in a series of discs, with the flat surfaces facing the viewer.

QUARTER ROUND - A molding with a convex, quarter-cylindrical shape.

REED, REEDING - A molding made of closely spaced, parallel, half-round convex profiles.

ROPE MOLDING - Carved to imitate the twisted strands of cordage.

ROUNDEL - One of the series of elements in a bead molding.

SCOTIA MOLD - A deep concave molding, more than a quarter round in section, also called a "cove mold."

SHOE MOLDING - A small molding with a concave channel and a square back.

THUMB MOLDING - A convex molding with a flattened cross-section.

MORTISE AND TENON, BLIND JOINT: A mortise and tenon joint in which the tenon does not extend through the mortise and does not remain visible once the joint is completed; also "blind tenoned."

MORTISE AND TENON, SLOTTED JOINT: A mortise and tenon right-angle joint in which the tenon is visible on two edges once the joint is completed.

MORTISE AND TENON, STUB JOINT: A short tenon inserted in a plow or groove.

MORTISE AND TENON, THROUGH JOINT: A mortise and tenon joint in which the inserted tenon extends completely through the mortise and the end of the tenon remains visible once the joint is completed.

MOTTLE: Broken wavy patches across the face of the wood that give the impression of an uneven, although smooth, surface caused by a twisted interwoven grain with irregular cross figure, which is the mottle. The effect is due to reflected light on the uneven arrangement of the fibers. Other terms used to describe variations include bee's wing, fiddle, peacock, plum, ram, block, or stop mottle.

NAILED: Members secured together with nails, including power-driven nails or staples. On exposed surfaces, staples and tee nails shall run parallel to the grain.

NATURAL: When referring to color and matching, veneers containing any amount of sapwood and/or heartwood.

GLOSSARY

NEWEL POST: In stairwork, an upright post that supports or receives the handrail at critical points of the stair, such as starting, landing, or top; the central vertical support of a spiral staircase.

NGR STAINS: Refers to non-grain-raising stains.

NOMINAL: The average sizes (width and thickness) of lumber just out of the sawmill before being processed into usable board stock. Always larger than “finished” dimensions. Also, a term that designates a stated dimension as being approximate and subject to allowances for variation.

NOSING: A rounded convex edge, as on a stair step.

OCCASIONAL: A small number of characteristics that are arranged somewhat diversely within the panel face.

OPAQUE FINISH: A paint or pigmented stain finish that hides the natural characteristics and color of the grain of the wood surface and is not transparent.

OPEN GRAIN AND CLOSE GRAIN: The size and distribution of the cellular structure of the wood influences the appearance and uniformity. Open-grain hardwoods, such as Elm, Oak, Ash, and Chestnut are “ring-porous” species. These species have distinct figure and grain patterns. Close-grain hardwoods, such as Cherry, Maple, Birch, and Yellow Poplar, are “diffuse-porous” species. Most North American diffuse-porous woods have small, dense pores resulting in less distinct figure and grain. Some tropical diffuse-porous species (e.g., Mahogany) have rather large pores.

ORANGE PEEL: The description of a coating that does not flow out smoothly, exhibiting the texture of an orange.

ORIENTED STRAND BOARD (OSB): is an engineered wood product formed by layering strands (flakes) of wood in specific orientations. In appearance it may have a rough and variegated surface with the individual strips lying unevenly across each other.

OVERLAP: A condition where the veneers comprising plywood are so misplaced that one piece overlaps the other and does not make a smooth joint.

OVERLAY: To superimpose or laminate a wood veneer of various species or a decorative item, such as melamine, polyester, or high-pressure decorative laminate to one or both sides of a given substrate, such as plywood, particleboard, or medium-density fiberboard.

OVERSPRAY: The dry, pebble-like surface caused when the sprayed finish begins to dry in the air before it hits the surface.

PANEL MATCH: Establishes the leaf layout in each individual panel.

PANELWORK: Includes stile-and-rail paneling and all kinds of flush-panel work made of lumber, panel products, and high-pressure decorative laminates.

PARTICLEBOARD: A generic term for a panel manufactured from lignocellulosic materials (usually wood), primarily in the form of discrete pieces of particles, as distinguished from fibers, combined with a synthetic resin or other suitable binder, and bonded together under heat and pressure in a hot-press by a process in which the entire interparticle bond is created by the added binder, and to which other materials may have been added during manufacturing to improve certain properties. Particles are further defined by the method of pressing. When pressure is applied in the direction perpendicular to the faces as in a conventional multi-platen hot-press, they are defined as flat-platen pressed; and when the applied pressure is parallel to the faces, they are defined as extruded.

PARTICLEBOARD, FIRE-RETARDANT TREATED: Particleboard treated to obtain Class I or Class II fire rating.

PATCH: A repair made by inserting and securely gluing a sound piece of wood of the same species in place of a defect that has been removed. The edges shall be cut clean and sharp and fit tight with no voids. “Boat” patches are oval-shaped with sides tapering in each direction to a point or to a small rounded end; “router” patches have parallel sides and rounded ends; “sled” patches are rectangular with feathered ends.

PECKY: Pockets of disintegrated wood caused by localized decay or wood areas with abrupt color change related to localized injury such as bird peck. Peck is sometimes considered a decorative effect, such as bird peck in Pecan and Hickory or pecky in Cypress.

PEDIMENT: A triangular ornament above a cornice.

PENETRATING OIL: In finishing, an oil-based material designed to penetrate the wood.

GLOSSARY

PERFORMANCE-BASED: With reference to these standards, and in contrast to prescriptive-based, refers to the lack of dictated or specifically required technical processes in lieu of a concept that allows innovation as long as the required outcomes are achieved.

PHENOL FORMALDEHYDE RESIN: Typically used for exterior-type construction. Plywood and doors bonded with this adhesive have a high resistance to moisture. The most common types require high temperatures during pressing to aid in the curing process.

PHOTODEGRADATION: The effect on the appearance of exposed wood faces caused by exposure to both sun and artificial light sources. Obviously, if an entire face is exposed to a light source, it will photodegrade somewhat uniformly and hardly be noticeable; whereas partially exposed surfaces or surfaces with shadow lines may show nonuniform photodegradation. Some woods, such as American Cherry and Walnut, are more susceptible than others to photodegradation.

PILASTER: A fluted or carved, flat, decorative column attached to a building or furniture.

PIN HOLES: All circular or nearly circular holes in the exposed surface.

PITCH: An accumulation of resin that occurs in separations in the wood or in the wood cells themselves.

PITCH POCKET: A well-defined opening between the annual growth rings that contains pitch.

PITCH STREAK: A well-defined accumulation of pitch in the wood cells in a more or less regular streak.

PITH: A small, soft core occurring in the center of the log.

PLAIN-SAWN: A hardwood figure developed by sawing a log lengthwise at a tangent to the annual growth rings. It appears as U-shaped or straight markings in the board's face.

PLAIN SLICING: Most commonly used for hardwood plywood. The log is cut in half, and one half is placed onto a carriage and moved up and down past a fixed knife to produce the veneers. Veneer is sliced parallel to the pith of the log and approximately tangent to the growth rings to achieve flat-cut veneer. Each piece is generally placed in a stack and kept in order. One half log, sliced this way, is called a "flitch."

PLANK: A board, usually between 1-1/2" to 3-1/2" (38.1 to 88.9 mm) thick and 6" (152 mm) or more wide, laid with its wide dimension horizontal and used as a bearing surface.

PLASTIC BACKING SHEET: A thin sheet, usually phenolic, applied under pressure to the back of a laminated plastic panel to achieve balance by equalizing the rate of moisture absorption or emission.

PLASTIC LAMINATE FINISH: See *high-pressure decorative laminate*.

PLEASING-MATCHED: A face containing components that provide a pleasing overall appearance. The grain of the various components need not be matched at the joints, but will not be widely dissimilar in character and/or figure. Sharp color contrasts at the joints of the components are not permitted. Members are selected so that lighter-than-average color members are not placed adjacent to darker-than-average members.

PLOW: A rectangular groove or slot of three surfaces cut parallel to the grain of a wood member, in contrast to a dado, which is cut across the grain.

PLY: A single sheet of veneer or several strips laid with adjoining edges that may or may not be glued, which forms one veneer laminate in a glued panel (see layer). In some constructions, a ply is used to refer to other wood components such as particleboard or MDF.

PLYWOOD: A panel composed of a crossbanded assembly of layers or plies of veneer, or veneers in combination with a lumber core or particleboard core, that are joined with an adhesive. Except for special constructions, the grain of alternate plies is always approximately at right angles, and the thickness and species on either side of the core are identical for balanced effect. An odd number of plies is always used.

POLYESTER: In finishing, a very high solids-content plastic coating, leaving a deep, wet look.

POLYURETHANE: A very hard and wear-resistant finish, which is very difficult to repair. Most commonly used as a two-component system, comprising multifunctional isocyanate or moisture-cured urethane, with a higher solids content than lacquers. Single component (excluding moisture-cured) products are usually composed of precatalyzed urethane.

G POMELE: A trade term for a small blister figure in Mahogany and Sapele.

GLOSSARY

PREMANUFACTURED SETS: Each panel, usually 4' x 8' (1219 mm x 2438 mm) or 4' x 10' (1219 mm x 3048 mm), is part of a sequenced set of balanced-matched, premanufactured panels to be installed full width with the sequencing maintained. The panel's balanced-match becomes unequal at the start, end, and any other opening or change in plane when trimmed.

PREMIUM GRADE: The highest Grade available in both material and workmanship intended for the finest work. This is naturally the most expensive Grade.

PREQUALIFICATION: Prior review and approval of a bidder's qualifications to perform specified work.

PRESCRIPTIVE-BASED: With reference to these standards, and in contrast to performance-based, refers to the manner in which regulations are expressed that dictate the technical processes by which the required outcomes are to be achieved.

PRESERVATIVE: (n.) A treating solution that prevents decay in wood; (adj.) having the ability to preserve wood by inhibiting the growth of decay fungi.

PROFILE: A trim that has a shaped detail along one or more edges. Eased edges are included in profiles. Ends or faces may also have profiles.

PUTTIED: See *fill*.

PUTTY SMEAR: Where putty has been incorrectly placed in a surrounding area of wood as well as into the open defect that the putty was intended to repair. Putty smears are not allowed where the expression "well-puttied" is used.

PVC: Abbreviation for "polyvinyl chloride," a synthetic decorative coating or edgebanding.

PVC EDGING: A polyvinyl chloride edging, usually in seamless rolls, typically applied by edgebanding machines using hot-melt adhesives. Available in a variety of solid colors, patterns, and wood-grain designs, in both textured and smooth finish.

QUARTER-SAWN (QUARTERED LUMBER): Refers to solid lumber cutting. Available in limited amounts in certain species. Yields straight-grain, narrow boards with "flake" or figure in some species (particularly in Red and White Oak).

QUARTER SLICING: Produces a striped grain pattern, straight in some woods, varied in others. Veneer produced by cutting in a radial direction to the pith to the extent that fleck or ray flake is produced, and the amount may be unlimited. In some woods, principally Oak, fleck results from cutting through the radial medullary rays.

QUARTERS: The commercial thicknesses usually associated with the purchase or specification of hardwoods, such as "five quarter" (5/4's of 1"), meaning 1-1/4" (31.8 mm) in thickness.

QUILTED: A highly figured pattern of folds or waves, somewhat resembling the appearance of rectangular blisters.

QUIRK: For purpose of these standards, means a sharp incision in moldings or trim that can hide the use of a mechanical fastener.

RABBET: Rectangular cut on the edge of a member; a "rabbet" has two surfaces, and a "plow" has three.

RABBET JOINT: A groove cut across the grain of the face of a member at an edge or end to receive the edge or end thickness of another member.

RAIL: The cross or horizontal pieces of a stile-and-rail assembly or the cross pieces of the core assembly of a wood flush door or panel.

RAILING: In stairwork, the member that follows the pitch of the stair for grasping by the hand.

RAISED GRAIN: Roughened condition of the surface of dressed lumber on which hard summerwood is raised above the softer springwood, but is not torn loose from it.

RAISED PANEL: Traditional door or wall panel with a bevel edge captured in a stile-and-rail frame.

RANDOM MATCH: Matching between adjacent veneer leaves on one panel face. Random selection in the arrangement of veneer leaves from one or more flitches producing a deliberate mismatch between the pieces of veneer.

RAY: One of the radial structures in a tree that stores nourishment and transports it horizontally through the trunk. In quarter-sawn Oak, the rays form a figure called fleck.

RED/BROWN: When referring to color and matching, veneers containing all heartwood, ranging in color from light to dark.

GLOSSARY

RED BIRCH: The heartwood of the Yellow Birch tree.

REGLET: Defines a flat, narrow molding, used chiefly to separate the parts or members of compartments or panels from one another.

RELIEF: Defined as the difference in elevation between the high and the low parts of an area or where a form is raised (or alternatively lowered) from a flattened background without being disconnected from it.

REPAIRS, BLENDING: Wood or filler insertions similar in color to adjacent wood so as to blend well.

RESORCINOL FORMALDEHYDE RESIN: For woodworking, formulated into highly water-resistant glues, usually purple in color and difficult to work.

RETURN: Continuation in a different direction of a molding or projection, usually right angles.

REVEAL OVERLAY: Cabinet construction in which the door and drawer faces partially cover the body members or face frames of the cabinet with spaces between face surfaces creating decorative reveals.

RIFT CUT: Usually referring to veneers, but can be applied to solid lumber (usually as rift-sawn); this method is similar to quarter slicing, but accentuates the vertical grain and minimizes the fleck of the finished material. Veneer produced by cutting at a slight right angle to the radial to produce a quartered appearance.

RING, ANNUAL GROWTH: The growth layer put on in a growth year.

RISER: The board at the back of a tread that “rises” to the bottom of the next tread above. In an “open riser” stair, this element is left out, and the gap between the treads is open. Open-riser stairs are prohibited by code in many circumstances.

ROOM MATCH: Refers to the matching of panel faces within a room.

ROTARY SLICING: Most common method for preparing veneers for softwood plywood. The log is placed in a lathe and rotated against a stationary knife. This produces a more-or-less continuous sheet of veneer, similar to pulling a long sheet off a roll of paper towels.

RUBBER MARKS: A raised or hollowed cross-grain cut caused by a sliver between the knife and pressure bar when slicing veneers.

RUNNING MATCH: Each panel face is assembled from as many veneer leaves as necessary. Any portion left over from one panel may be used to start the next.

RUNNING TRIM: Generally combined in the term “standing and running trim” and refers to random, longer length trims delivered to the jobsite (e.g., baseboard, chair rail, crown molding).

RUNS: The result of spraying a heavier coat on a vertical, or nearly vertical, surface than the viscosity of the finish will allow to hold without movement; when in close multiples are also called “sags”.

RUPTURED GRAIN: A break or breaks in the grain or between springwood and summerwood caused or aggravated by excessive pressure on the wood by seasoning, manufacturing, or natural processes. Ruptured grain appears as a single or a series of distinct separations in the wood, such as when springwood is crushed, leaving the summerwood to separate in one or more growth increments.

S4S: Means “Surfaced Four Sides”, and generally refers to the process of reducing nominal-sized rough lumber to finished widths and thicknesses.

SAGS: In finishing, partial slipping of finish film creating a “curtain” effect.

SAND-TROUGH: A defect on the exposed visible surface, such as depressions, bumps, marks, or core usually caused by thin veneers or over-sanding.

SANDED, CROSS: Sanded across, rather than parallel to, the grain of a wood surface.

SANDED, MACHINE: Sanded by a drum or equivalent sander to remove knife or machine marks. Handling marks and/or grain raising due to moisture shall not be considered a defect.

GLOSSARY

SANDED, SMOOTHLY: Sanded sufficiently smooth so that all machining, machine-sanding marks, cross-sanding, and other sanding imperfections will be concealed by the painter's applied finish work. The proper sanding grit varies with the species of material; however, it generally runs in the 120- to 150-grit range. Handling marks and/or grain raising due to moisture shall not be considered a defect.

SAPWOOD: The outer layers, or living wood, that is between the bark and the heartwood of a tree. Sapwood is generally lighter in color than heartwood.

SASH: A single assembly of stiles and rails into a frame for holding glass, with or without dividing bars, to fill a given opening. It may be either open or glazed.

SCARF JOINT: When the ends of two boards are cut on an angle and glued together to increase the length of the board.

SCL: See *structural composite lumber*.

SCRIBE: To mark and cut an item of woodwork so that it will abut an uneven wall, floor, or other adjoining surface.

SEALERS: Compounds that provide a sandable coating and a smooth surface for final topcoat application, provide system toughness and holdout, provide moisture resistance, and contribute to build and clarity.

SECURELY ATTACHED: The attachment of one member to another by means of approved joinery, adhesive, mechanical fasteners, or by a combination of these means. Members shall not be considered securely attached if they disassemble during standard usage and stress.

SECURELY FASTENED OR BONDED: See *securely attached*.

SELECT: A lumber grading term. Also, in architectural specifications, the term "select" is frequently used to describe, clarify, or qualify specific characteristics of the hardwood lumber being specified; for example, Select White Maple or Select White Birch -- by using "select" as a descriptor, Natural, Brown, and Red Maple/Birch are excluded.

SELF-EDGE: Application of an edge that matches the face.

SEMI-EXPOSED SURFACES: Surfaces that are only visible under closer examination.

SEQUENCE - MATCHED: When referring to paneling, the veneer matching of one panel to another.

SERPENTINE: A wave-like design alternating concave and convex lines.

SHADING: In finishing, transparent color used for highlighting and uniform color.

SHAKE: A separation or rupture along the grain of wood in which the greater part occurs between the rings of annual growth (see ruptured grain).

SHARP CONTRAST: For the purpose of this standard, this term applies to woodwork such as veneer of lighter-than-average color joined with the veneer of darker-than-average color. Two adjacent pieces of woodwork should not be widely dissimilar in grain, figure, and natural character markings.

SHEEN: Finish shine or brightness; luster, patina, and radiance. The sheen or gloss level of a cured finish is traditionally measured with a 60-degree gloss meter. The words used to describe various sheens are not standardized between companies.

SHELF DEFLECTION: Shelf deflection is the deviation from true flat of a shelf when placed under load.

SHELLAC: A coating made from purified lac, a secretion from an insect (*laccifera lacca*) that is dissolved in alcohol and often bleached white. It was first used in 1590 and was most popular in the 1920s and 1930s.

SHIM SHEETS: One or more sheets of veneer in a flitch where one side varies significantly in thickness from the other.

SHOP DRAWINGS: See *drawings*.

SHOW-THROUGH: Irregular surfaces visible on the face of a veneered panel (such as depressions, bumps, mechanical marks, or core or frame outlines).

SKIN: The hardwood plywood (usually 3-ply), hardboard, or composition panel, whether flat or configured, that is used for facings for flush wood doors, bending laminations, finished end panels, and the like.

GLOSSARY

SKIRT BOARD: A trim member similar to base, run on the rake along the wall adjoining a stairway. The skirt board covers the joint between the treads and risers and the wall. Also, the similar member below the treads at the open side of a stairway. A wall routed to receive the treads and risers may replace a skirt board.

SLEEPER, BASE: A support member, usually vertical in placement, between the front and rear members of a non-integral toe base or kick assembly.

SLICED: Veneer produced by thrusting a log or sawed flitch into a slicing machine that shears off the veneer in sheets.

SLIGHT: Barely perceptible, but not to the extent as to detract from the overall appearance of the product (as a measurement of natural or machining characteristics).

SLIP-MATCHED: A sheet from a flitch is slid across the sheet beneath and, without turning, spliced at the joints.

SMOOTH, TIGHT CUT: Veneer cut to minimize lathe checks.

SOFTWOOD: General term used to describe lumber or veneer produced from needle- and/or cone-bearing trees (see hardwood).

SOLID PHENOLIC: A composite of solid phenolic resins molded with a homogenous core of organic fiber-reinforced phenolic and one or more integrally cured surfaces of compatible thermoset nonabsorbent resins.

SOLID STOCK: Solid, sound lumber (as opposed to plywood), that may be more than one piece of the same species, securely glued for width or thickness.

SOUND: Absence of decay.

SP: See *solid phenolic*.

SPANDREL: The triangular element in a staircase between the stringer and the baseboard.

SPECIES: A distinct kind of wood.

SPECIFIC GRAVITY: The ratio of the weight of a certain volume of a substance to the weight of an equal volume of water, the temperature of which is 39.2 degrees Fahrenheit (4 degrees Celsius).

SPLINE: A thin narrow strip forming a key between two members, usually of plywood, inserted into matching grooves that have been machined in abutting edges of panels or lumber to ensure a flush alignment and a secure joint.

SPLINE JOINT: A joint formed by the use of a "spline." Splines customarily run the entire length of the joint.

SPLIT: A separation of the wood due to the tearing apart of the wood cells.

SPLIT HEART: A method of achieving an inverted "V" or cathedral type of springwood (earlywood)/summerwood (latewood), plain-sliced (flat-cut) figure by joining two face components of similar color and grain.

SPLITS: Separations of wood fiber running parallel to the grain.

STAIN: A variation (normally blue or brown) from the natural color of the wood. It should not be confused with natural red heart. In finishing, produces the desired undertone color with proper distribution, depth, and clarity of grain. Selection of the type of stain used is governed by the desired artistic result. In natural wood, a variation in the color tending toward blue or brown, but not to be confused with naturally occurring heartwood.

STAINING: An optional operation in wood finishing to achieve the desired undertone color and complement the wood with proper distribution of color, depth of color, and clarity of grain.

STAIRWORK: Wood material to form a stair or to clad stair parts constructed of materials other than wood, and that are custom-manufactured to a design for a particular project.

STANDARD LACQUER: In finishing, a nitrocellulose-based lacquer without additives.

STANDING TRIM: Generally combined in the term "standing and running trim" and refers to the trims of fixed length delivered to the jobsite (e.g., door jambs and casings, premachined window stools).

GLOSSARY

STAPLED: Members secured together with nails, including power-driven nails or staples. On exposed surfaces, staples shall run parallel to the grain.

STAVED CORE: Typically refers to a core used in flush doors made up of end- and edge-glued wood blocks.

STICKING: A term used to describe shaped or molded solid wood members.

STILE-and-RAIL CONSTRUCTION: A technique often used in the making of doors, wainscoting, and other decorative features for cabinets and furniture. The basic concept is to capture a panel within a frame, and in its most basic form it consists of five members: the panel and the four members that make up the frame. The vertical members of the frame are called stiles, while the horizontal members are known as rails.

STILES/VERTICAL EDGES: The upright or vertical pieces of stile-and-rail assemblies; the vertical members of the core assembly of a wood flush door.

STOPS: Generally a molding used to “stop” a door or window in its frame.

STREAKS, MINERAL: Natural colorations of the wood substance.

STRETCHER: An upper support member of base cabinet fabrication, used in lieu of a solid top, to space the end panels.

STRINGER: A diagonal element supporting the treads and risers in a flight of stairs.

STRINGER TURNOUT: In stairwork, that portion of a stringer that curves or angles away from the basic run, typically used at the beginning tread.

STRIPE: Stripe figure is a ribbon grain:

BROKEN STRIPE - A modification of ribbon stripe. The figure markings taper in and out, due to twisted or interlocked grain, so that the ribbon stripe is not continuous as it runs more or less the full length of the flitch.

PLAIN STRIPE - Alternating darker and lighter stripes running continuously along the length of a piece, due to cutting wood with definite growth rings on the quarter.

ROE - Also called “roey”. Short, broken ribbon or stripe figure in quarter-sliced or -sawn wood, due to the spiral formation of the fibers, or interlocked grain, in the growth rings. The irregular growth produces alternate bands of varying shades of color and degrees of luster.

RAINDROP - When the waves of the fibers occur singly or in groups with considerable intervals between, the figure looks like streaks made by raindrops striking a window pane at a slant.

RIBBON STRIPE - In some wood with interwoven grain, such as Mahogany, wide unbroken stripes can be produced by cutting on the quarter.

STRIPPING: For purposes of these standards, means the process of removing an old or existing finish from a surface.

STRUCTURAL COMPOSITE LUMBER (SCL): A man-made composite that utilizes stranded wood fibers from a variety of tree species, providing an alternative to dimension lumber. The material is engineered for strength and stability. While not really “lumber”, it is marketed as a lumber substitute to be used in place of stave lumber core materials.

SUB-FRONT: A front drawer box member over which another front is placed.

SUBSTRATE: Generally used to describe a panel product (see also core) upon which a decorative finish material is applied.

SUBTOP: A separate support member for countertops.

SUGAR: Color streaks or spots attributed to discoloration involving sap in Maple veneer.

SURFACE CHECK: The separation of a wood, normally occurring across the rings of annual growth; usually as a result of seasoning, and occurring only on one surface of the piece.

SWIRL: Figure obtained from that part of a tree where the crotch figure fades into the figure of the normal stem.

TAMBOUR: A rolling top or front in casework enclosing a storage space. It consists of narrow strips of wood fastened to canvas or a similar material.

GLOSSARY

TANNIN BLEED: The tendency of waterborne coatings to turn Maple and Red Oak pink. Naturally occurring tannic acids are water soluble, and the higher pH of waterborne coatings will tend to create this problem. One can get tannin bleed with solvent-based coatings as well, but it is more prevalent in waterborne coatings.

TAPE: Strips of gummed paper or cloth sometimes placed across the grain of large veneer sheets to facilitate handling and sometimes used to hold the edges of veneer together at the joint prior to gluing.

TELEGRAPH OR TELEGRAPHING: In veneer or laminated work, the variations in surface refraction as a result of the stile, rail, core, core laps, glue, voids, or extraneous matter show through to the face of a panel or a door. The selection of high-gloss laminates and finishes should be avoided because they tend to accentuate natural telegraphing.

TENON: The projecting tongue-like part of a wood member to be inserted into a slot (mortise) of another member to form a mortise-and-tenon joint.

TEXTURE: A term used to describe relative size and distribution of the wood elements. Coarse texture in veneer is associated with fast growth and harder, more difficult wood to cut. Soft or fine texture in veneer is associated with slower growth and with less summerwood, resulting in wood fibers that are easier to cut.

THERMALLY FUSED DECORATIVE LAMINATE PANEL: A polyester or melamine resin-impregnated paper, thermally fused under pressure to a composite core.

THICK PHENOLIC: See *solid phenolic*.

TIGHT: Set together so that there is no opening between members.

TIGHT SIDE: In knife-cut veneer, that side of the leaf that was farthest from the knife as the veneer was being cut and containing no cutting checks (lathe checks).

TONERS: Transparent or semitransparent colors used in wood finishing to even the color or tone of the wood.

TONGUE: Projection on the edge or end of a wood member that is inserted into the groove or plow of a similar size to form a joint.

TONGUE-AND-GROOVE JOINT: A joint formed by the insertion of the "tongue" of one wood member into the "groove" of the other.

TOPCOAT: The final protective film of a finish system. There are various topcoats with different properties.

TOP FLAT SURFACE: The flat surface that can be sanded with a drum sander.

TORN GRAIN: A roughened area caused by machine work in processing.

TRANSPARENT FINISH: A stain or a clear finish that allows the natural characteristics and color of the grain of the wood surface to show through the finish.

TREAD: The horizontal surface of a staircase step.

TREAD RETURN: A narrow piece of tread stock applied to the open end of a tread so that the end grain is not exposed. The leading corner of the return is mitered to the leading edge of the tread with a shoulder miter.

TREENAIL: A hardwood pin, peg, or spike used to fasten beams and planking, usually made of dry compressed lumber so that it will expand when moistened; sometimes pronounced and spelled "trunnel."

TWIST: A distortion caused by the turning or winding of the edges of the surface, so that the four corners of any face are no longer in the same plane.

UNDRESSED: Lumber that is not planed smooth.

UREA FORMALDEHYDE RESIN: Commonly used for Type I assemblies; relatively water-resistant. Often requires curing by heat, but will cure at room temperature over time.

V-GROOVED: Narrow and shallow V- or U-shaped channels machined on a surface to achieve a decorative effect. V-grooving is most commonly encountered in mismatched or random-matched wall panels as the grooves fall on the edge joints of the pieces of veneer, making the face appear as planking.

GLOSSARY

VARNISH: An oil-based finished used to coat a surface with a hard, glossy film.

VENEER: A thin sheet or layer of wood, usually rotary cut, sliced or sawn from a log or flitch. Thickness may vary from 1/100" (0.3 mm) to 1/4" (6.4 mm).

VENEER CORE: Plywood constructed using a core of an odd number of veneer plies, with face and back veneers of overlays adhered thereto.

VENEER, RIFT CUT: Veneer in which the rift or comb grain effect is obtained by cutting at an angle of about 15 degrees off of the quartered position. Twenty-five percent (25%) of the exposed surface area of each piece of veneer may contain medullary ray flake.

VENEER, ROTARY CUT: Veneer in which the entire log is centered in a lathe and is turned against a broad cutting knife that is set into the log at a slight angle.

VENEER, SLICED: Veneer in which a log or sawn flitch is held securely in a slicing machine and is thrust downward into a large knife that shears off the veneer in sheets.

VENEERING: Veneering and laminating thin pieces of wood dates back to the Egyptian pyramid-building era. Since that period, this area of woodworking has become a highly technical business. Veneering is still common today, but production techniques have changed considerably. Modern adhesives, for example, are used instead of hard-to-handle glues. See rotary slicing, plain slicing, rift cut, quarter slicing, and half round.

VERGE BOARD: An exposed member attached along the rake of a gable-end roof open cornice; also implies the larger rake member of an exterior cornice; sometimes referred to as a "barge board".

VERTICAL GRAIN: Produced by cutting perpendicular to a log's growth rings, where the member's face is no more than 45 degrees to the rings. This produces a pleasing straight grain line. Vertical grain is defined as having no less than an average of five growth rings per inch on its exposed face.

VINE MARK: Bands of irregular grain running across or diagonally to the grain, which are caused by the growth of climbing vines around the tree.

VINYL: Heavy film, minimum of 4 mils in thickness, opaque or reverse printed.

VINYL LACQUERS: In finishing, catalyzed lacquers with a plastic rather than a nitrocellulose base.

VISCOSITY: The property of a fluid that causes it to resist flowing.

VOLUTE: The spiral decorative element terminating the lower end of a stair rail.

WAFERBOARD: See *particleboard*.

WAINSCOT: A lower interior wall surface that contrasts with the wall surface above it. Unless otherwise specified, it shall be 48" (1219 mm) in height above the floor.

WANE: Defect in lumber defined as bark or lack of wood from any cause on the edge or corner, except eased edges.

WARP: Any deviation from a true or plane surface, including bow, crook, cup, twist, or any combination thereof. Warp restrictions are based on the average form of warp as it occurs normally, and any variation from this average form, such as short kinks, shall be appraised according to its equivalent effect. Pieces containing two or more forms of warp shall be appraised according to the combined effect in determining the amount permissible.

BOW - A deviation flatwise from a straight line drawn from end to end of a piece. It is measured at the point of greatest distance from the straight line.

CROOK - A deviation edgewise from a straight line drawn from end to end of a piece. It is measured at the point of greatest distance from the straight line.

CUP - A deviation in the face of a piece from a straight line drawn from edge to edge of a piece. It is measured at the point of greatest distance from the straight line.

TWIST - A deviation flatwise, or a combination of flatwise and edgewise, in the form of a curl or spiral, and the amount is the distance an edge of a piece at one end is raised above a flat surface against which both edges at the opposite end are resting snugly.

In passage doors, any distortion in the door itself and not its relationship to the frame or jamb in which it is to be hung, measured by placing a straight edge or a taut string on the concave face.

GLOSSARY

WASH COATS: Thin solutions applied as a barrier coat to wood. Used prior to wiping stains for color uniformity.

WATER-REPELLENT: A wood-treating solution that deposits waterproof or water-resistant solids on the walls of wood fibers and ray cells, thereby retarding their absorption of water; having the quality of retarding the absorption of water by wood fibers and ray cells.

WAVY: Curly grain with large undulations; sometimes referred to as “finger roll” when the waves are about the width of a finger.

WAX FINISH: Wax finishes are designed for cosmetic purposes only and provide no long-term protection. They are commonly used for low-performance, low-abuse parts and in some areas for Pine furniture as a specialty appearance. No test data has been established.

WELL HOLE: In stairwork, the open space in which the stair is set.

WELL-MATCHED FOR COLOR AND GRAIN: For the purpose of these standards, means that the members that make up the components of an assembly and components of an adjacent assembly are: a) similar and nearly uniform in color, and b) have similar grain, figure, and character. Adjacent members must be of the same grain type whether flat grain (plain-sliced), vertical grain (quarter-cut), rift grain, or mixed grain.

WHITE: When referring to color and matching, veneers containing all sapwood ranging in color from pink to yellow.

WHITE BIRCH: Term used to specify the sapwood of the Yellow Birch tree.

WINDOWS: In architectural woodwork, all frames and sashes for double-hung, casement, awning, sidelights, clerestory, and fixed windows. Stock and name-brand units are not included.

WIPING STAINS: Refers to pigmented oils or solvents applied to wood.

WOOD FILLER: An aggregate of resin and strands, shreds, or flour of wood, which is used to fill openings in wood and provide a smooth, durable surface.

WOOD FLUSH DOOR: An assembly consisting of a core, stiles and rails, and/or edgebands, with two or three plies of overlay on each side of the core assembly. All parts are composed of wood, wood derivatives, or high-pressure decorative laminates.

WOODWORK: See *architectural woodwork*.

WOODWORKER: See *manufacturer*.

WORKMANSHIP: See *first-class workmanship*.

WORMHOLES: Holes resulting from infestation of worms or marks caused by various types of wood attacking insect and beetle larvae. Often appears as sound discolorations running with or across the grain in straight to wavy streaks. Sometimes referred to as “pith flecks” in certain species of Maple, Birch, and other hardwoods because of a resemblance to the color of pith.

WORM TRACK OR SCAR: The groove or resulting scar tissue in the wood caused by worms or other borers. Often appears as sound discolorations running with or across the grain in straight to wavy streaks. Sometimes referred to as pith flecks in certain species of Maple, Birch, and other hardwoods because of a resemblance to the color of pith.