



# GLOSSARY

# GLOSSARY

**ABRASION RESISTANCE:** Resistance to friction wear.

**ACRYLIC COATING CURED WITH RADIATION PROCESS:** Is a coating over particleboard.

**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 two cycle boil test specified in ANSI/HPVA HP (2000).

**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 (2000).

**AIR-DRY:** To prepare lumber for use by allowing it to dry in the open air.

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

**ANTEFIX:** An ornament covering a corner joint.

**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.

**BACKING OUT:** Wide, shallow groove, machined in back surface of members.

**BACKING SHEET:** Backing sheet placed on the underside of high pressure laminate plastic tops to give dimensional stability and to minimize absorption of moisture into the substrate. The following are approved for specific grades (see Section 15).

## ECONOMY GRADE

1. Hot melt coat; brown colored; .002" minimum thickness factory applied to particleboard core; coat of blended wax petroleum, copolymer resins and anti-oxidants and swipe controlling agents.
2. Low pressure polyester or melamine laminate (ALA 851) (to PB 1-M-2).
3. Man-made wood-fiber veneers that are impregnated with acrylic melamine fortified high load resin system, a minimum of .020".
4. Synthetic polymer treated backing sheet .017" - .019" nominal thickness designed for use with decorative high pressure laminate.
5. Dark brown colored, .015" nominal thickness, phenolic resin impregnated craft paper.
6. Thermoset resin treated wood-fiber, brown color, 3-ply construction a minimum thickness of .020".
7. A minimum of .020" thickness conforming to NEMA LD-3 (2000).

## CUSTOM GRADE

1. Man-made wood-fiber veneers that are impregnated with acrylic melamine fortified high load resin system, a minimum of .020".
2. Synthetic polymer treated backing sheet .017" - .019" nominal thickness designed for use with decorative high pressure laminate.
3. Dark brown colored .015" nominal thickness, phenolic resin impregnated craft paper.
4. Thermoset resin treated wood-fiber, brown color, 3-ply construction a minimum thickness of .020".
5. A minimum of .020" thickness conforming to NEMA LD-3 (2000).

## PREMIUM GRADE

1. A minimum of .020" thickness conforming to NEMA LD-3 (2000).

**BALANCED CONSTRUCTION:** Is achieved by creating a panel or component that is symmetrical from the center line; i.e., materials on either side that expand or contract, or are moisture permeable at the same rate.

**BALANCED MATCH:** The most common type of book matching is "balanced matching," which uses two or more leaves of uniform width on the face of a panel, wherein the two outer most 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 which make up the safety barrier along balconies and open sides of stairways and ramps.
- BANDED:** Usual 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.
- BASE or BASEBOARD:** A molding used to trim the intersection of a wall or cabinet and the floor.
- BASE BLOCK:** The square block terminating a molded baseboard at a doorway; a plinth block.
- BEDDING IN PUTTY:** Glazing whereby a thin layer of putty or bedding compound is placed in the glass rabbet, the glass inserted and pressed onto this bed.
- BELT & BASE COURSES:** Are 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:** In flooring or wall paneling, a V-shaped groove between strips, planks, or panels. Also a change in corner angle from 90 degrees where two edges meet.
- BIRDSEYE:** A small central spot with wood fibers arranged around it, so as to give the appearance of an eye.
- 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:** A finishing technique used to create a more uniform appearance between heartwood and sapwood.
- BLIND CORNER:** The space created by abutting cabinets at an approximate ninety degree angle.
- BLISTERING:** Formation of bubbles on the surface of a coating, caused by trapping air or vapors beneath the surface.
- BLOCKING:** Commonly understood as the wooden support material placed within or upon gypsum board and plaster walls to support cabinetry.
- 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 1 foot long, 1 foot wide, and 1 inch thick. Abbreviated BF, Bf, bf.
- BOOK MATCHED:** In book matching, every other leaf of veneer is turned over as the leaves are taken in sequence from the flitch, similar to turning or unfolding the pages of a book. Since one leaf will be loose side up and the next tight side up, book matching produces a color shading.
- BOW:** A deviation, flat-wise, 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.
- 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 millwork in conjunction with metal framing and/or block walls.
- BULLNOSE:** Convex rounded shape such as the front edge of a stair step.
- BURL:** In softwoods, a distortion of the grain due to injury of the tree. In hardwoods, a swirl or twist of the grain near a knot, but does not contain a knot. It must have a sound center. The measurement of the burl is the average of the maximum and minimum dimensions of the burl.

**VERY SMALL**  
**SMALL**  
**MEDIUM**

does not exceed 1/2" in diameter.  
does not exceed 3/4" in diameter.  
does not exceed 1" in diameter.

- BUTT JOINT:** A joint formed by square-edged surfaces (ends, edges, faces) coming together; end butt joint, edge butt joint (see Appendix for illustration).
- CABINET LINER:** As used within this Manual shall describe 0.020" HPL (high pressure laminate).
- CASEWORK:** All the parts that constitute a finished case or cabinet, inclusive of doors, drawers, shelves, and hardware.
- CATHEDRALGRAIN:** A grain appearance characterized by a series of stacked and inverted "V", or cathedral type of spring-wood (early-wood)/summer-wood (late-wood) patterns common in plain-sliced (flat-cut) veneer (see split heart).
- CENTER MATCHED:** "Center matching" is another form of book matching which uses two or more even numbered leaves of equal width, matched with a joint occurring in the center of the panel.
- 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:** Are the natural irregularities found in wood, whether solid or veneered. Their acceptance is a function of each particular grade.
- CHECKING:** Cracks which appear in a paint 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.
- 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 like MDF, particleboard, hardboard, etc. Another variation utilizes a wafer board (randomly oriented wafers, typically Aspen) center. Typically, these cores result in a light weight, strong, dimensionally stable panel with increased screw holding ability compared to particleboard and superior surface flatness compared to typical veneer core panels.
- COMPATIBLE FOR COLOR AND GRAIN:** For purposes of this Manual, this phrase means that members shall be selected so that 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. Two adjacent members shall not be widely dissimilar in grain, character and figure.
- CONSTRUCTION, STYLE A:** Frameless construction.
- CONSTRUCTION, STYLE B:** Face frame construction.
- CONSTRUCTION, TYPE I:** Multiple self-supporting units fastened together to form a larger unit.
- CONSTRUCTION, TYPE II:** Single length section as required or in such sections as access openings will permit.
- 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 HPL) is applied.
- CORNICE:** A finishing detail along the top edge of a piece of furniture or a building.
- 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).
- 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:** In the construction of flush doors, the veneer which is placed between the core and face veneers with the direction of the grain at right angles to that of the face veneer.

**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 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.

**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.

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

**DADO, BLIND, OR STOPPED JOINT:** A dado that is not visible when the joint is completed (see Appendix for illustration).

**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 (see Appendix for illustration).

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

**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 "Thermoset Decorative Laminate Panel."

**DEFECT:** Fault which 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.

**DELAMINATION:** The separation of layers in an assembly because of failure of the adhesive, either in the adhesive itself or at the interface between the adhesive and the lamination. For plywood, if separation between the plies is greater than 2" in continuous length, over 1/4" in depth at any part, and .003" in width, it shall be considered delamination. For solid stock, if the separation between the members is greater than 1/4" deep and more than .005" in width and the total length of all such delamination is more than 5% of the total length of the glue line, it shall be considered delaminated. If more than one delamination occurs in a single glue line, the total length of all such delamination shall determine whether or not it is considered to be delaminated.

**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, stain 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.

**DOVETAIL, BLIND JOINT:** A dovetail joint that is not visible when the joint is completed (see Appendix for illustration).

**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" (see Appendix for illustration).

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

**DOWELED JOINT:** A joint using "dowels" (doweled construction); also "doweled edge joint" (see Appendix for illustration).

**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.

**EASED EDGE:** Slightly rounded edge not to exceed 1/16" radius, to remove sharp corners.

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

**EDGE BAND, CONCEALED:** Not more than 1/16" of the band shall show on the face or edge of the plywood or particleboard.

**EMISSION LEVEL:** The formaldehyde concentration in testing wood panel products using ASTM E 1333, "Determining Formaldehyde Levels From Wood Products Under Defined Test Conditions Using A Large Chamber."

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

**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.

**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.

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

**EXPOSED SURFACES:** Surfaces visible after installation, except for some exposed portions of casework (see **DEFINITIONS, SECTIONS 14 and 15, PART 1**).

**FACE FRAME CONSTRUCTION: CONSTRUCTION STYLE B.**

**FASTENER, MECHANICAL:** Is the generic term used for securing devices used in the fabrication and/or installation of millwork such as dowels, dowel screws, splines, nails, screws, bolts, shot pins, etc.

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

**FIDDLEBACK GRAIN:** A fine, wavy grain pattern found in some maples and other hardwoods; traditionally used for the backs of fiddles.

**FIGURE:** The pattern produced, usually across the grain, by natural deviations from the normal grain.

**FILLER (in finishing):** Used to fill, or partially fill, the pores of wood in order to advance the final build and smoothness of the finish.

**FINGER JOINT:** A series of fingers machined on the ends of two pieces of wood to be joined, which mesh together and are securely glued in position (see Appendix for illustration).

**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:** The veneer slices (leaves) of one half of a log, kept in order and used for the production of panel faces.

**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.

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

**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 bleed through 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 **MANUAL OF MILLWORK GRADE RULES** for **ECONOMY, CUSTOM, PREMIUM, or LABORATORY**. When these terms are used, they mean **GRADE** unless otherwise noted.

**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 (F.G.) or SLASH GRAIN (S.G.)** 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 (M.G.)** is any combination of Vertical or Flat Grain in the same member. Vertical Grain (M.G.) 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.
- GROOVE:** Rectangular slot of three surfaces cut parallel with the grain of the wood.
- GROUND:** A narrow strip of wood which 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 one to three inches, which is often called plaster grounds (around interior or exterior openings) and Base Grounds when used around base of rooms.
- GROWTH RINGS:** The layer of wood added by a tree in a single growing season. Its markings 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 the other member (see Appendix for illustration).
- HARDBOARD:** A generic term for a panel manufactured primarily from inter-felted ligno-cellulose fibers consolidated under heat and pressure in a hot press and conforming to the requirements of ANSI/AHA A 135.4, latest edition.
- HARDNESS:** The property of a coating which 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 which are usually needle bearing or coniferous. The term does not infer 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", 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 (2000) has a color or pattern sheet to enhance its appearance, and is intended for use in cabinet interiors.
- HIGH PRESSURE LAMINATE (HPL):** 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 which 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, or latest revision thereof.
- HOLE:** Applies to holes from any cause. A pin hole is approximately 1/16" in diameter.
- HPL:** See High Pressure Laminate.
- HPL COMPACT:** See Solid Phenolic Core (SPC).
- HUMIDITY:** The common term for Relative Humidity, which is to say, 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). When used for determining the acceptance of **PREMIUM GRADE**, installation defects shall not be readily visible without careful inspection when observed from a distance of 60" in normal lighting.

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

**INNER PLYS:** Plys other than face or back plys in a panel construction. Crossbands and centers are classed as inner plys (see core).

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

**JOINTS:** 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, Tongue And Groove Joint (see Appendix for illustration).

**JOINTS TIGHT, FACTORY:** Distance between members shall not exceed those set forth in the following table.

**INTERIOR USE, EXPOSED:**

|                      |       |   |
|----------------------|-------|---|
| <b>PREMIUM GRADE</b> | .007" | Not to exceed 15% of the length of the joint. |
| <b>CUSTOM GRADE</b>  | .010" | Not to exceed 15% of the length of the joint. |
| <b>ECONOMY GRADE</b> | .030" | Not to exceed 15% of the length of the joint. |

**INTERIOR USE, SEMI-EXPOSED:**

|                      |       |   |
|----------------------|-------|---|
| <b>PREMIUM GRADE</b> | .030" | Not to exceed 30% of the length of the joint. |
| <b>CUSTOM GRADE</b>  | .040" | Not to exceed 30% of the length of the joint. |
| <b>ECONOMY GRADE</b> | .060" | Not to exceed 30% of the length of the joint. |

**EXTERIOR USE, EXPOSED:**

|                      |       |   |
|----------------------|-------|---|
| <b>PREMIUM GRADE</b> | .015" | Not to exceed 30% of the length of the joint. |
| <b>CUSTOM GRADE</b>  | .025" | Not to exceed 30% of the length of the joint. |
| <b>ECONOMY GRADE</b> | .040" | Not to exceed 30% of the length of the joint. |

**JOINTS TIGHT, FIELD:** Any of the typical joints (see Appendix) or a combination of typical joints and/or mechanical fasteners, which are used to join two members in the field. The following indicates the minimum distance between members which have been field joined for interior exposed use:

|                      |       |                                       |
|----------------------|-------|---------------------------------------|
| <b>PREMIUM GRADE</b> | 1/64" | Not to exceed 15% of length of joint. |
| <b>CUSTOM GRADE</b>  | 1/32" | Not to exceed 15% of length of joint. |
| <b>ECONOMY GRADE</b> | 3/64" | Not to exceed 15% of length of joint. |

**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.

**KNOCKED DOWN:** Unassembled, as contrasted to assembled or built-up.

**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, 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.

**KNOTHOLES:** Openings produced when knots drop from the wood in which they were embedded.

**LACQUER:** A coating comprised of synthetic film forming materials such as nitrocellulose, ethylcellulose, natural and synthetic resins, which are dissolved in organic solvents, and dry 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.

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

**LOCK JOINT:** Interlocking machine joint between two members (see Appendix for illustration).

**LOOSE SIDE:** In knife-cut veneer, that side of the sheet 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.

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

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

**MEDIUM DENSITY FIBERBOARD (MDF):** See particleboard for basic description. As used in this Manual, whether as MDF alone or as core material, the MDF shall meet the requirements of ANSI A-208.2. (1999).

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

**MEDULLARY RAY:** Extends radially from the center of a log towards 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 four inches 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 which forms an item of millwork.

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

**MILL RUN:** Run to pattern only. Not assembled, nor machined for assembly, nor cut to length. The terms "material only" and "loose and long" mean the same as "mill run".

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

**MITER JOINT:** The joining of two members at an angle that bisects the angle of junction (see Appendix for illustration).

**MITER, LOCK JOINT:** Is a miter joint employing a tongue and groove to further strengthen it (see Appendix for illustration).

**MITER, SHOULDER JOINT:** Any type of a miter joint that presents a shoulder, such as a lock miter or a splined miter (see Appendix for illustration).

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

**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" (see Appendix for illustration).

**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 (see Appendix for illustration).

**MORTISE AND TENON, STUB JOINT:** A short tenon inserted in a plow or groove (see Appendix for illustration).

**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 (see Appendix for illustration).

**MOLDED EDGE:** Edge of piece machined to any profile other than 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 moulding used to trim a baseboard.

**BEAD:** A narrow half-round molding that's 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.

**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 moulding that conceals the joint between the wall and ceiling.

**CYMA MOLDING:** Has a S-shaped profile.

**DENTAL MOLDING:** Composed of a series of small rectangular blocks.

**DOVETAIL MOLDING:** Carved with interlocked triangles.

**EGG and ANCHOR MOLDING:** Comprised of alternating oval and anchor-like shapes.

**EGG and DART MOLDING:** Comprised of alternating egg and arrowhead shapes.

**EGG and TONGUE MOLDING:** Comprised 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:** Comprised of alternating leaflike 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.

**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.

**NEWEL:** A structural post which supports the handrail or guardrail in a balustrade. The central vertical support of a spiral staircase.

**NOMINAL DIMENSION:** Refers to the width and thickness of a rough board, before dressing.

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

**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.

**ORANGE PEEL:** The description of a coating which does not flow out smoothly; exhibiting the texture of an orange.

**OVERLAY:** To superimpose or laminate a wood veneer of various species or a decorative item such, as melamine, polyester, or high pressure 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 sprayed finish begins to dry in the air before it hits the surface.

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

**PARTICLEBOARD:** A generic term for a panel manufactured from ligno-cellulosic 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 entire inter-particle 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 flatplaten pressed and when the applied pressure is parallel to the faces, they are defined as extruded. As used in this Manual, whether as particleboard alone or as core material, the particleboard shall meet the requirements of ANSI A-208.1 (latest edition) Grade M-2. Grade M-3 is acceptable and provides some higher structural values; however is typically less readily available. When used for core material for flush veneered doors in Section 12, it shall meet the requirements of ANSI A-208.1 (latest edition) Grade LD-1 or 2.

**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. No patch shall exceed 1-1/2" X 3-1/2" in size.

**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 as a decorative effect, such as bird peck in pecan and hickory or pecky in cypress.

**PEDIMENT:** A triangular ornament above a cornice.

**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 non-uniform 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.

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

**PITCH POCKET:** A well defined opening between the annual growth rings, which contains pitch.

|                   |  |
|-------------------|--|
| <b>VERY SMALL</b> | is a maximum of 1/16" in width x 3" in length, or 1/8" in width x 2" in length.  |
| <b>SMALL</b>      | is a maximum of 1/16" in width x 6" in length, or 1/8" in width x 4" in length.  |
| <b>MEDIUM</b>     | is a maximum of 1/16" in width x 12" in length, or 1/8" in width x 8" in length. |

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

|                   |  |
|-------------------|--|
| <b>VERY SMALL</b> | is a maximum of 1/16" in width x 12" in length, or 1/8" in width x 6" in length. |
| <b>SMALL</b>      | is a maximum of 1/8" in width x 12" in length, or 1/4" in width x 6" in length.  |
| <b>MEDIUM</b>     | is a maximum of 1/4" in width x 16" in length, or 3/8" in width x 12" in length. |

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

**PLAIN SAWN:** Is 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 SLICED:** Is where a half log is sliced parallel to the center of the log from the heart side producing a variegated figure.

**PLANK:** Is a board, usually between 1-1/2 to 3-1/2 inches thick and six or more inches 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.

- PLEASING MATCHED:** A face containing components which provides a pleasing overall appearance. The grain of the various components need not be matched at the joints. Sharp color contrasts at the joints of the components are not permitted.
- PLOW:** A rectangular groove or slot of three surfaces cut parallel with 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 lamina 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 identical for balanced effect. An odd number of plies is always used.
- PVC EDGING:** A polyvinyl chloride edging, usually in seamless rolls, typically applied by edge banding machines using hot-melt adhesives. Available in a variety of solid colors, patterns, and wood grain designs, in both textured and smooth finish. Approved PVC shall be chop proof, flame resistant, impervious to moisture, 0.40mm to 0.60mm in thickness, with tear minimum 1800 lbs. per sq. in tear strength, anti-static and equipped with an adhesive (priming) agent for bonding.
- POLYURETHANE:** A very hard and wear-resistant finish, which is very difficult to repair. Most commonly used as a two-component system, comprised Multi-functional isocyanate or moisture cured urethane, with a higher solids content than lacquers. Single component (excluding moisture cured) products are usually comprised of pre-catalyzed urethane.
- PRESERVATIVE:** A treating solution which prevents decay in wood (Noun). Having the ability to preserve wood by inhibiting the growth of decay fungi (Adjective).
- 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 (particular in Red & White Oak).
- RABBET:** Rectangular cut on the edge of a member. A "rabbet" has two surfaces and a "plow" has three.
- RABBET JOINT:** A joint formed by the rabbet(s) on one or both members; also rabbeted edge joint; rabbeted right angle joint (see Appendix for illustration).
- RAIL:** A horizontal element in woodwork that connects two vertical elements.
- RAISED GRAIN:** Roughened condition of surface of dressed lumber on which hard summerwood is raised above the softer springwood, but is not torn loose from it.
- RAY:** One of the radial structures in a tree that stores nourishment and transports it horizontally through the trunk. In quartersawn 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.
- REPLUM:** The panel of a framed door.
- RETURN:** A right-angled change of direction in a molding or other lineal element.
- RIFT CUT:** Usually applying to veneer, it is a method of cutting the veneer that is similar to Quarter Slicing, but accentuates the vertical grain appearance and minimizes the "flake". Similar cut in solid lumber is called Rift Sawn.
- RING, ANNUAL GROWTH:** The growth layer put on in a growth year.
- RISER:** The board at the back of a tread which "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 CUT:** Is the most common method of veneer slicing, typically used for softwood plywood, though used in some types of hardwood veneer. The log is placed in a lathe and rotated against a stationary knife.
- 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.

- 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 series of distinct separations in the wood such as when springwood is crushed, leaving the summerwood to separate in one or more growth increments.
- 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 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.
- 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 - 150 grit range. Handling marks and/or grain raising due to moisture shall not be considered a defect.
- SAPWOOD:** Wood occurring between the bark and the heart of the tree.
- 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:** End joint formed by having the two ends of the members beveled to form sloping plane surfaces (see Appendix for illustration).
- SCRIBE:** To mark and cut an item of millwork so it will abut an uneven wall, floor or other adjoining surface, without any gaps.
- 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 ATTACHED/FASTENED:** The joining of two or more members to one another by means of approved joinery, adhesive, mechanical fasteners, or by a combination of these means. Members shall not be considered securely fastened together if they disassemble during standard usage and stress.
- SELF-EDGE:** Application of wood veneer to the edge of plywood or particleboard of the same species. Application to the edge of plywood or particleboard of a plastic laminate of the same pattern as the face surface.
- SERPENTINE:** Is a wave-like design alternating concave and convex lines.
- 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).
- SHELLAC:** A coating made from purified lac, a secretion from an insect, *laccifera lacca*, which is dissolved in alcohol and often bleached white. It was first used in 1590, and was most popular in the 1920's and 30's.
- 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.
- SLICED:** Veneer produced by thrusting a log or sawed flitch into a slicing machine which 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.
- SOFTWOOD:** General term used to describe lumber or veneer produced from needle and/or cone bearing trees (see hardwood).

**SOLID PHENOLIC CORE (SPC):** 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 non-absorbent resins.

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

**SOUND:** Absence of decay.

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

**SPC:** See Solid Phenolic Core

**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 4 degrees Celsius (39.2 degrees Fahrenheit).

**SPLINE:** A thin strip forming a key between two boards, fitting into slots along their edges and locking them together.

**SPLINE JOINT:** A joint formed by the use of a "spline". A spline is a thin, narrow strip, usually of plywood, inserted into matching grooves which have been machined in abutting edges of panels or lumber to insure a flush alignment and secure joint. Splines customarily run the entire length of the joint (see Appendix for illustration).

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

**VERY SHORT** is approximately as long as one-half the width of the piece.  
**SHORT** is approximately as long as the width of the piece.

**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. A cathedral type figure must be achieved by a single component in "AA" grade; the split heart method is allowed in grades "A" through "E". Each half of a split heart shall be subject to the minimum component width requirements for grade "A" and "B" faces.

**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.

**SLIGHT** is a light color, barely perceptible.  
**MEDIUM** is a pronounced discoloration.  
**HEAVY** is the darkest color that develops in lumber.

**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.

**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.

**STRAWBOARD:** Typically refers to the new generation of core products made from wheat and rice straw, similar in composition to particleboard.

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

**SUBTOP:** A separate support member for tile or granite 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.

**FINE** is not longer than 4".  
**SMALL** is over 4" and not longer than 6".  
**MEDIUM** is over 6" but not longer than 8".

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

**TELEGRAPH:** As defined in woodworking, any surface imperfection in a veneered core that can be felt through the finish surface of the veneer. Typically, an indentation or raise in the core's surface. A telegraph becomes a defect when it varies from the true plane of the door face 1/100" or more in any 3" span.

**TENON:** 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.

**THERMALLY FUSED DECORATIVE LAMINATE PANEL:** A Polyester or Melamine resin impregnated paper, thermally fused under pressure to a composite core as approved by the **WOODWORK INSTITUTE**. Minimum acceptable standards are based on the "old" ALA's (American Laminators Association) "ALA 1985" and the current NEMA "LD-3" test methods. Acceptable results shall be as listed herewith:

**MINIMUM ACCEPTABLE REQUIREMENTS FOR**

|                         |   |   |
|-------------------------|---|---|
| <b>Test for:</b>        | <b>Solid Color</b>                        | <b>Wood Grain</b>                         |
| <b>Wear</b>             | 400 Cycles                                | 125 Cycles                                |
| <b>Scuff</b>            | No Effect                                 | No Effect                                 |
| <b>Stain</b>            | No Effect 1-23, Moderate 24-29            | No Effect 1-23, Moderate 24-29            |
| <b>Cleanability</b>     | No Effect, Cleaned in 25 or Fewer Strokes | No Effect, Cleaned in 25 or Fewer Strokes |
| <b>Light</b>            | Slight                                    | Slight                                    |
| <b>High Temperature</b> | Slight                                    | Slight                                    |
| <b>Radiant Heat</b>     | No Effect After 60 Seconds                | No Effect After 60 Seconds                |
| <b>Boiling Water</b>    | No Effect                                 | No Effect                                 |
| <b>Impact</b>           | 15" Without Fracture                      | 15" Without Fracture                      |

**THICK PHENOLIC:** see "Solid Phenolic Core (SPC)"

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

**TIGHT SIDE:** In knife-cut veneer, that side of the sheet that was farthest from the knife as the sheet 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 (see Appendix for illustration).

**TOP COAT:** The final protective film of a finish system. There are various top coats 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 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 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.

**TYPE I CONSTRUCTION:** Multiple self-supporting units fastened together to form a larger unit.

**TYPE II CONSTRUCTION:** Single length section as required or in such sections as access openings will permit.

**UNDRESSED:** Lumber that is not planed smooth.

**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" to 1/4".

**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 which 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 which shears off the veneer in sheets.

**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; or sometimes referred to as a barge board.

**VERTICAL GRAIN:** Is 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.

**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.

**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 reversed printed with the following average property requirements:

| <u>PROPERTY</u>     | <u>VALUE</u>  | <u>TEST PROCEDURE</u>                  |
|---------------------|---|--|
| Mil Thickness       | 4-6-7-8 Mil   | Caliper Gauge                          |
| Light Stability     | 300 hrs. - no change  | Fadeometer ASTM-E-42-64                |
| Flame Retardance    | (Free Film) Self Extinguishing                                | ASTM E-82-67                           |
| Gloss Level         | 10-45   | Gardner Glossmeter                     |
| Abrasion Resistance | Reverse Prints 30-45<br>Sandwich Types 45-60<br>Opagues 25-60 | MG loss / 1000 Cycles on CS 10 Wheel   |
|                     | Reverse Prints 6000-11000<br>Sandwich Types 4000-8000         | Cycles to Print Failure<br>CS 17 Wheel |

**SURFACE APPEARANCE SHALL NOT BE AFFECTED WHEN EXPOSED TO THE FOLLOWING AGENTS:**

|               |         |                                |               |         |
|---------------|---------|--------------------------------|---------------|---------|
| Water         | Coffee  | Olive Oil                      | Beet Juice    | Vinegar |
| Alcohol       | Mustard | Shoe Polish                    | Mercurochrome |         |
| Inks,Washable | Crayon  | Household Detergents and Soaps | Tea           |         |

**VISCOSITY:** The property of a fluid which causes it to resist flowing. Measured at a certain temperature through a certain size opening or orifice.

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

**WAINSCOT:** A lower interior wall surface that contrasts with the wall surface above it. Unless otherwise specified, it shall be 4'-0" 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 crook, bow, cup twist, or any combination thereof.

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

**WATER REPELLENT:** A wood-treating solution which in the treating process 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.

**WELL MATCHED FOR COLOR AND GRAIN:** For the purpose of this Manual, this phrase means that the members shall be selected so that the color of adjacent members is similar and nearly uniform in appearance. The grain figure or other natural character markings shall be similar in character and appearance. Members with only flat grain shall not be permitted adjacent to members with only vertical grain. Members with mixed grain are only permitted adjacent to members with similar grain at the adjacent edge.

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

**WINDOW:** A window consists of two single sashes to fill a given opening. It may be either open or glazed.

**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.

**WOODWORK:** See millwork.

**WORKMANSHIP, FIRST CLASS:** For Architectural Millwork, 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 this Manual, defined as but not limited to the following:

- A. All joints shall be tight, true, flush, and securely glued where required by **GRADE** rules.
- B. All parts shall be uniform, square, level, plumb, flush, and in alignment.
- C. Plastic or veneer surfaces and joints shall be tight and show no sign of delamination or exposed glue.
- D. The face veneer of hardwood plywood shall be of sufficient thickness so as not to permit show-through of under ply after sanding.
- E. Nails or staples (where permitted) on exposed or semi-exposed surfaces shall be countersunk. Staples shall run parallel with the grain.
- F. Nails or staples are not permitted on exposed surfaces of plastic.
- G. All nail, staple or screw holes for factory finished or plastic covered millwork shall be filled with color compatible material.
- H. All nail, staple or screw holes for unfinished millwork shall be filled by the finisher prior to applying finish.
- I. Hardware:
  - 1. Shall be neatly installed with no tear-outs.
  - 2. All screws shall be squarely in place in hinges, catches, latches, pulls, locks, adjustable shelf standards, etc.
  - 3. All cabinet hardware, including pulls, hinges, and drawer slides must be adjusted for smooth operation.
  - 4. Door and drawer gaps must be uniform and not exceed the tolerances between adjacent doors or drawers, as set forth in **SECTIONS 14 and 15**.
- J. Exposed or semi-exposed surfaces shall be free of:
  - 1. Splits.
  - 2. Torn or chipped plastic.
  - 3. Torn or chipped wood grain.
  - 4. Glue and over-spray of adhesive.
  - 5. Tool marks.
  - 6. Gouges.
  - 7. Dents.
  - 8. Nicks.
  - 9. Over/under filing.
  - 10. Sand-troughs.
  - 11. Cross sanding.
  - 12. Visible machining defects.
  - 13. Sharp edges of metal, plastic, or wood.
  - 14. Poorly fitted edging.
  - 15. Other similar defects within the permissible defect tolerances listed below.

| <b>GRADE</b> | <b>MAXIMUM SIZE</b> | <b>MAXIMUM DEFECTS FOR ANY TEN SQUARE FEET OF EXPOSED SURFACE</b> |
|--------------|---------------------|---|
| Economy      | 1/16"               | 8   |
| Custom       | 1/32"               | 5   |
| Premium      | None                | None  |

**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 HOLES, PIN:** 1/4" or less in diameter.

**WORM HOLES, LARGE:** Over 1/4" in diameter.

**YELLOWING:** The yellowing effect of a wood finish is often a result of using amber binders or vehicles for the stains and/or topcoats

# NOTES