

Architectural Woodwork Standards

SECTION - 11 COUNTERTOPS

SECTION 11 ♦ COUNTERTOPS
(Including Tops, Wall Caps, Splashes, and Sills of High-Pressure Decorative Laminate, Wood, Solid Surface, Solid Phenolic, Epoxy Resin, and Natural/Manufactured Stone)

GENERAL

1 INFORMATION

1.1 GRADES

- 1.1.1 These standards are characterized in three Grades of quality that may be mixed within a single project. Limitless design possibilities and a wide variety of lumber and veneer species, along with overlays, high-pressure decorative laminates, factory finishes, and profiles are available in all three Grades.
- 1.1.2 **ECONOMY GRADE** defines the minimum quality requirements for a project's workmanship, materials, or installation and is typically reserved for woodwork that is not in public view, such as in mechanical rooms and utility areas.
- 1.1.3 **CUSTOM GRADE** is typically specified for and adequately covers most high-quality architectural woodwork, providing a well-defined degree of control over a project's quality of materials, workmanship, or installation.
- 1.1.4 **PREMIUM GRADE** is typically specified for use in those areas of a project where the highest level of quality, materials, workmanship, and installation is required.
- 1.1.5 **MODIFICATIONS** by the contract documents shall govern if in conflict with these standards.

1.2 BASIC CONSIDERATIONS

- 1.2.1 **ACCEPTABLE REQUIREMENTS** of lumber and/or sheet products used within this woodwork product section are established by Sections 3 and 4, unless otherwise modified herein.
- 1.2.2 **CONTRACT DRAWINGS** and/or **SPECIFICATIONS**, furnished by the design professional, shall clearly indicate or delineate all material, fabrication, installation and applicable building code/regulation requirements.
- 1.2.3 **EXPOSED SURFACES**
 - 1.2.3.1 All visible surfaces of an installed countertop.
- 1.2.4 **SEMI-EXPOSED SURFACES** - N/A
- 1.2.5 **CONCEALED SURFACES**
 - 1.2.5.1 The underside surface 42" (1067 mm) or less off the finished floor.
 - 1.2.5.2 All non-visible surfaces attached to and/or covered by another.
 - 1.2.5.3 All non-visible blocking, spacers, etc., used for attachment.
- 1.2.6 **GRADE LIMITATIONS**
 - 1.2.6.1 **SOLID-SURFACE** countertops are offered only in **CUSTOM GRADE** and **PREMIUM GRADE**.
 - 1.2.6.2 **SOLID PHENOLIC, EPOXY RESIN, and NATURAL/MANUFACTURED STONE** countertops are offered only in **PREMIUM GRADE**.
- 1.2.7 **CHEMICAL- or STAIN-RESISTANCE** requirements for surfaces must be specified.
 - 1.2.7.1 Consider the chemical and staining agents that might be used on or near the surfaces.
 - 1.2.7.1.1 Chemical and stain resistance is affected by concentration, time, temperature, humidity, housekeeping, and other factors; it is recommended that actual samples are tested in a similar environment with those agents.
 - 1.2.7.2 Common guidelines can be found by referring to:
 - 1.2.7.2.1 NEMA LD3 (latest edition) for chemical resistance.
 - 1.2.7.2.2 ASTM D3023 and C1378 (latest editions) for stain resistance.
 - 1.2.7.2.3 SEFA #3 - Recommendations for work surfaces.

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1.2 BASIC CONSIDERATIONS (continued)

1.2.8 ABRASION-RESISTANCE requirements for countertop surfaces shall be specified.

1.2.8.1 When abrasion-resistance requirements are a concern, users should consider the abrasive elements that might be used on or near the countertop surfaces.

1.2.8.2 Common guidelines can be found in:

1.2.8.2.1 ASTM C501 (latest edition)

1.2.8.2.2 NEMA LD3-3.13 (latest edition)

1.2.8.2.3 NEMA LD3.7 (latest edition)

1.2.9 HIGH-PRESSURE DECORATIVE LAMINATE (HPDL) countertops

1.2.9.1 Some HPDLs utilize a **WHITE BACKGROUND** paper to achieve the high-fidelity, contrast, and depth of color of their printed pattern, leaving a white line at exposed edges that is extremely noticeable with darker colors.

1.2.9.2 **FIRE RATED** - Class I Fire-Rated Architectural HPDL countertops are available.

1.2.9.2.1 Countertops desired to be certified as a fire-rated assembly (versus simply having been built with a fire-rated laminate surface) shall be specified as a "Class I Fire-Rated HPDL Countertop."

1.2.9.2.2 The term "Class I Fire-Rated HPDL Countertop" shall mean that the entire countertop assembly -- including surface HPDL, backer, core, and adhesive -- has been tested and certified as to its Class I Fire Rating by an authorized organization, such as Underwriters Laboratories, and must be manufactured by an approved company of the certifying agency.

1.2.9.2.3 Manufacturers of "Class I Fire-Rated Countertop Assemblies" require specific methods of installation and trimming in order to label and certify their product. Design professionals desiring to use a "Class I Fire-Rated Countertop Assembly" should coordinate with an approved manufacturer during the design stage.

1.2.10 SOLID-SURFACE, NATURAL/MANUFACTURED STONE, and EPOXY RESIN countertops

1.2.10.1 **COLOR and PATTERN MATCH:** Some slight color variation may exist from sheet-to-sheet, sheet-to-bowl, or sink products. In sheet stock, use of the same batch material will lessen these variations.

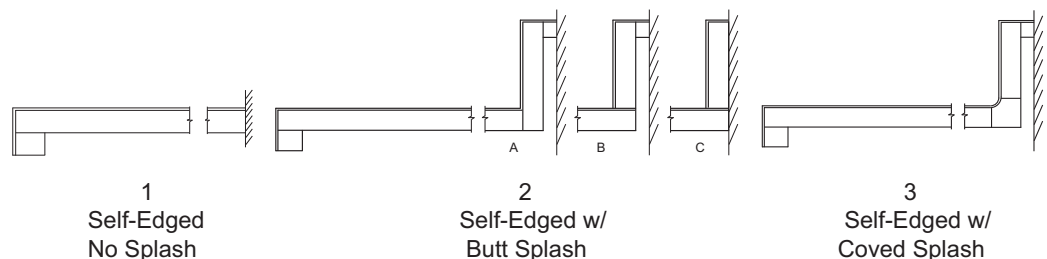
1.2.10.2 **REPAIRS:** When allowed, reparability varies from material to material and may be visible.

1.2.10.3 **PRECAUTIONS:** Product dimensions are nominal. If tolerances are critical, review them with your manufacturer and/or installer.

1.2.10.4 **MACHINABILITY** is an issue with some materials and shall be taken into consideration on selection.

1.2.11 DESIGN CONSIDERATIONS

1.2.11.1 Typical **HPDL** countertop configuration options:

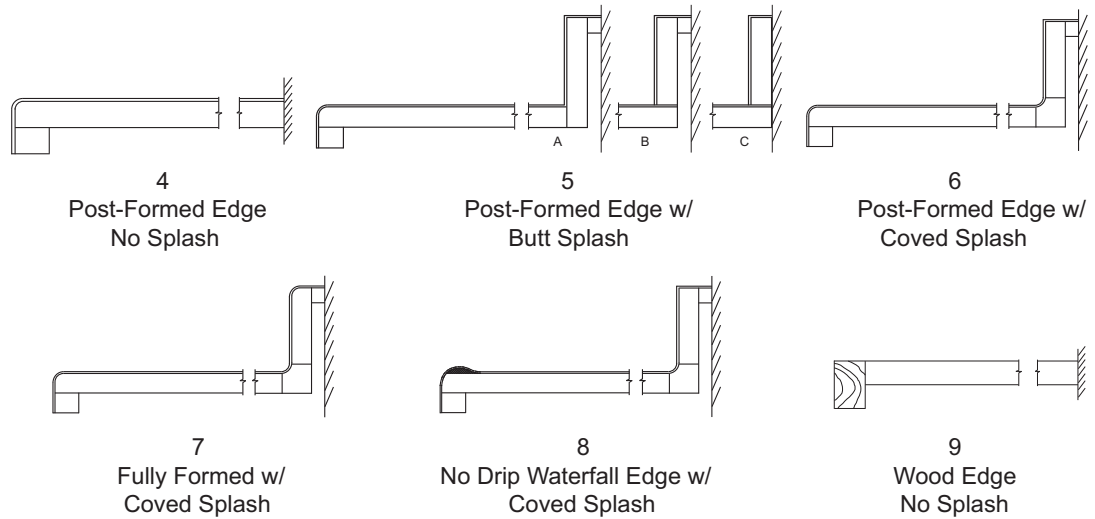


GENERAL

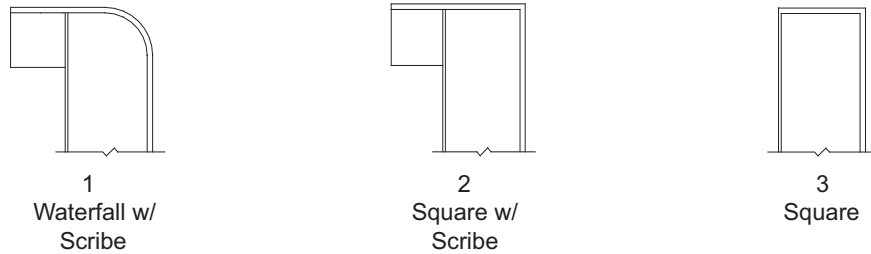
1.2 **BASIC CONSIDERATIONS** (continued)

1.2.11 **DESIGN CONSIDERATIONS** (continued)

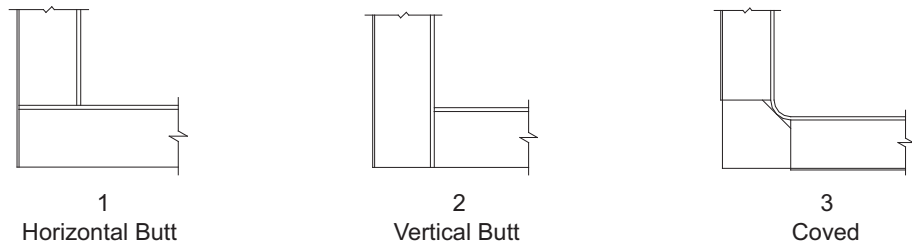
1.2.11.1 Typical **HPDL** countertop (continued)



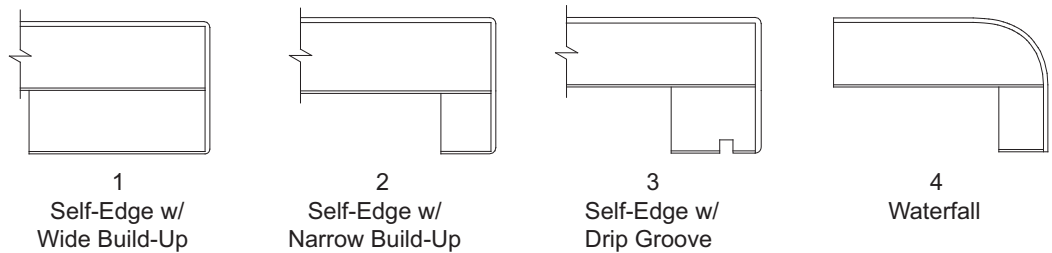
1.2.11.2 **HPDL** top options at splash:



1.2.11.3 **HPDL** deck options at splash:



1.2.11.4 **HPDL** front edge options:

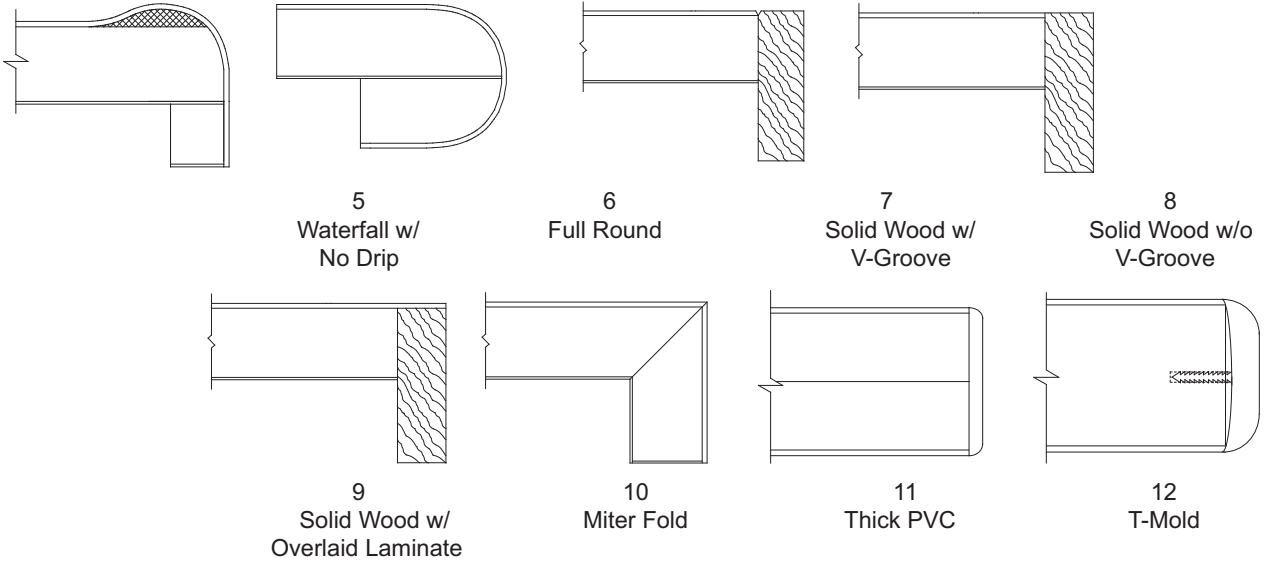


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1.2 BASIC CONSIDERATIONS (continued)

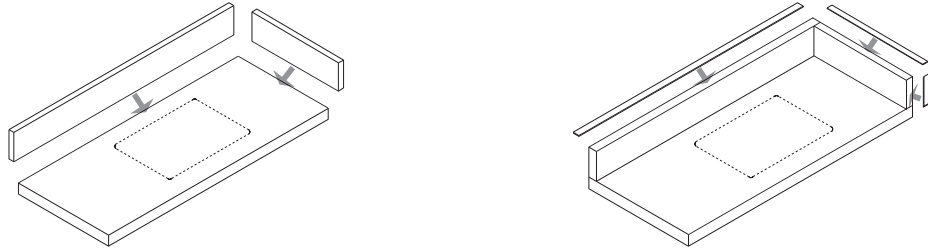
1.2.11 DESIGN CONSIDERATIONS (continued)

1.2.11.4 HPDL front edge options (continued)



1.2.11.5 HPDL BACK and END SPLASH construction types:

1.2.10.5.1 If not otherwise specified, it shall be the manufacturer's option.

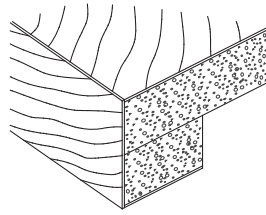


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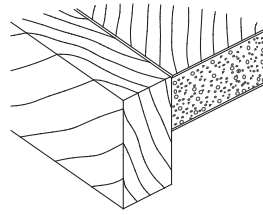
1.2 BASIC CONSIDERATIONS (continued)

1.2.11 DESIGN CONSIDERATIONS (continued)

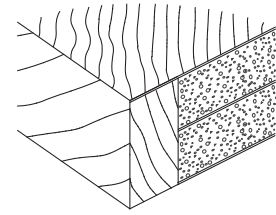
1.2.11.7 WOOD countertop configuration (continued)



4
Veneer-Banded

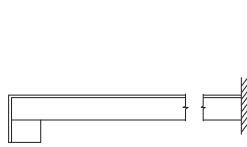


5
Solid-Banded

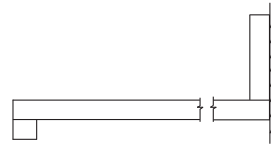


6
Solid-Banded w/
Overlaid Veneer

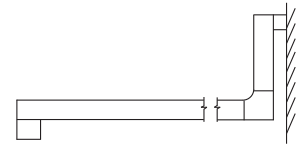
1.2.11.8 SOLID-SURFACE countertop configuration options:



1
Built-Up Edge

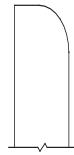


2
Built-Up Edge w/
Butt Splash



3
Built-Up Edge w/
Coved Splash

1.2.11.9 SOLID-SURFACE top options at splash:

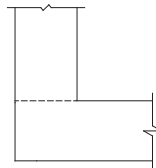


1
Waterfall

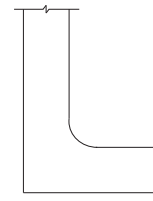


2
Square

1.2.11.10 SOLID-SURFACE deck options at splash:

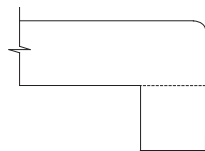


1
Butt

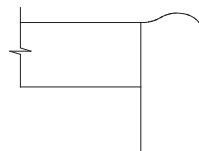


2
Coved

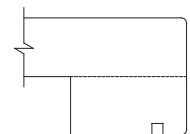
1.2.11.11 SOLID-SURFACE edge options:



1
Waterfall



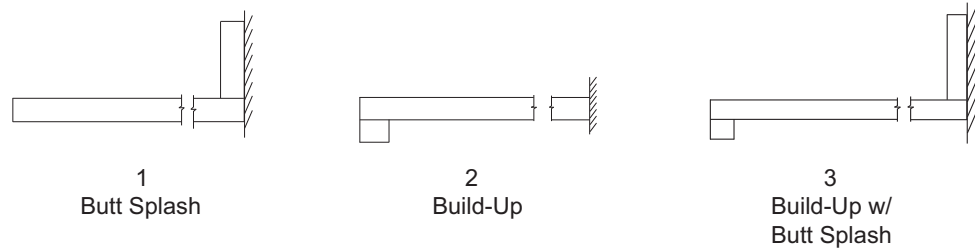
2
No-Drip



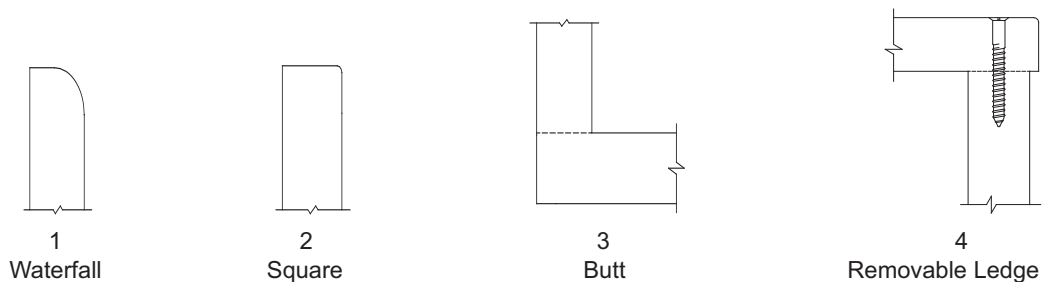
3
Build-Up w/
Drip Groove

GENERAL**1.2 BASIC CONSIDERATIONS** (continued)**1.2.11 DESIGN CONSIDERATIONS** (continued)

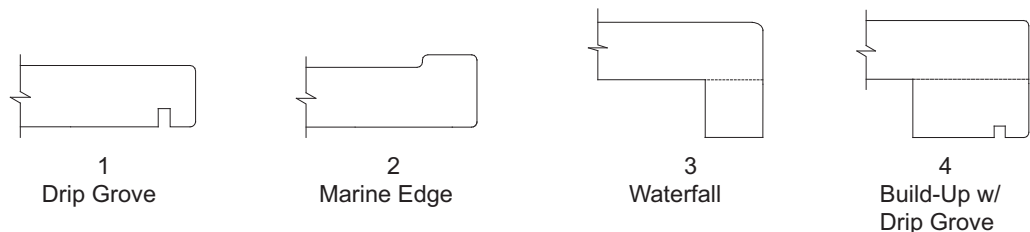
1.2.11.12 SOLID PHENOLIC, EPOXY RESIN, and NATURAL/MANUFACTURED STONE countertop configuration options:



1.2.11.13 SOLID PHENOLIC, EPOXY RESIN, and NATURAL/MANUFACTURED STONE top and deck options at splash:



1.2.11.14 SOLID PHENOLIC, EPOXY RESIN, and NATURAL/MANUFACTURED STONE edge options:

**1.3 RECOMMENDATIONS****1.3.1 INCLUDE IN THE DIVISION 09 OF THE SPECIFICATIONS:**

1.3.1.1 For **JOBSITE FINISHING** - Before finishing, all exposed portions of woodwork shall have handling marks or effects of exposure to moisture removed with a thorough, final sanding over all surfaces of the exposed portions using an appropriate grit sandpaper, and shall be cleaned before applying sealer or finish.

1.3.1.2 At **CONCEALED SURFACES** - Architectural woodwork that may be exposed to moisture, such as those adjacent to exterior concrete walls, etc., shall be back-primed.

1.3.1.3 The underside of all wood countertops shall be sealed with at least one coat of primer or sealer.

1.3.2 THOROUGHLY REVIEW Sections 2 and 4, especially Basic Considerations, Recommendations, Acknowledgements, and Industry Practices within Part 1 for an overview of the characteristics and minimum acceptable requirements of lumber and/or sheet products that might be used herein.

1.3.3 CONTRACT DOCUMENTS (plans and/or specifications) shall require that all structural members, grounds, blocking, backing, furring, brackets, or other anchorage which becomes an integral part of the building's walls, floors, or ceilings, required for the installation of architectural woodwork is not to be furnished or installed by the architectural woodwork manufacturer or installer.

1.3.4 SPECIFY requirements for:

1.3.4.1 Back- and end-splash **ASSEMBLY** type.

GENERAL

1.3 RECOMMENDATIONS (continued)

1.3.4 SPECIFY requirements (continued)

1.3.4.1 Fire-rating requirements.

1.3.4.2 Laboratory use, such as:

1.3.4.2.1 Chemical-resistant work-surface material requirements or finish.

1.3.4.2.2 Abrasion-resistant work-surface material requirement.

1.3.4.2.3 Removable splash ledger.

1.3.4.3 Special splash/deck or top or edge profiles.

1.3.5 With **HPDL SINK TOPS**, use of under-mount sinks is not recommended because of the potential for moisture problems, even with proper preparation and installation.

1.3.5.1 Use of veneer core plywood with Type II adhesive, industrial-grade particleboard or fiberboard with a 24-hour thickness swell factor of 5% or less, and a 24-hour water-absorption factor of 10% or less is required.

1.3.5.2 Either self-rimming sinks or sinks with surface-mounted metal retention rings are recommended.

1.4 ACKNOWLEDGEMENTS

1.4.1 Use of **CONTINUOUS-PRESSURE LAMINATES** (melamine and polyester-based) as an alternative to HPDL is permitted, provided that they conform to the same physical properties and thickness as required for HPDL.

1.4.2 Use of **LOW-PRESSURE DECORATIVE OVERLAY** or other film-finish products is not covered by these standards and Grade rules.

1.5 INDUSTRY PRACTICES

1.5.1 **STRUCTURAL MEMBERS**, grounds, blocking, backing, furring, brackets, or other anchorage that becomes an integral part of the building's walls, floors, or ceilings, required for the installation of architectural woodwork is not furnished or installed by the architectural woodwork manufacturer or installer.

1.5.2 **WALL, CEILING**, and/or opening variations in excess of 1/4" (6.4 mm) or **FLOORS** in excess of 1/2" (12.7 mm) in 144" (3658 mm) of being plumb, level, flat, straight, square, or of the correct size are not acceptable for the installation of architectural woodwork, nor is it the responsibility of the installer to scribe or fit to tolerances in excess of such.

1.5.3 **BACK-PRIMING** of architectural woodwork is not the responsibility of the manufacturer and/or installer, unless the material is being furnished prefinished.

1.5.4 **BUILD-UP** or spacing materials required for installation of a countertop are the responsibility of the countertop manufacturer.

1.5.5 Countertop surfaces with a defined **GRAIN** and/or **PATTERN** are installed running with the length of the top.

1.5.6 At base cabinets with countertops, the **HORIZONTAL REVEAL** between the lower edge of the countertop and the upper edge of the adjacent door or drawer front shall be consistent. Coordination of such is the responsibility of the cabinet manufacturer.

PRODUCT

2 SCOPE

2.1 All HPDL, including Class I Fire-Rated and Chemical-Resistant, Solid-Surface, Natural/Manufactured Stone, Epoxy Resin, Solid Phenolic, and wood facings, tops, splashes, and reagent shelves.

2.2 TYPICAL INCLUSIONS

2.2.1 HPDL, Class I Fire-Rated HPDL, Chemical-Resistant HPDL, Solid-Surface, Natural/Manufactured Stone, Epoxy Resin, Solid Phenolic, and Wood Countertops with approved backing sheet, as applicable.

2.2.2 Splashes and reagent shelves.

PRODUCT

MATERIAL, MACHINING, AND ASSEMBLY RULES (continued)

2 SCOPE (continued)

2.2 TYPICAL INCLUSIONS (continued)

- 2.2.3 Solid lumber, metal, or self-edge trim; cutouts for sinks; electrical boxes; and fixtures indicated on drawings.
- 2.2.4 Installation, if specified.
- 2.2.5 Solid-surface and/or epoxy sinks.
- 2.2.6 Window sills.
- 2.2.7 Support members that are surface-mounted.

2.3 TYPICAL EXCLUSIONS

- 2.3.1 Stripping, furring, blocking, or grounds.
- 2.3.2 Furnishing or installation sink rims or sinks not listed above.
- 2.3.3 In-wall support members.
- 2.3.4 All grounds, backing members, or other items unrelated to the furnishing and installation of countertops and sinks.
- 2.3.5 Fixtures, plumbing, and data equipment.
- 2.3.6 Sink outlets and fittings, except at epoxy sinks.

3 DEFAULT STIPULATIONS

- 3.1 **HPDL COUNTERTOPS** - Unless otherwise specified or detailed, all work shall be **CUSTOM GRADE** (unless the related casework is Premium Grade, then the countertops shall be **PREMIUM GRADE**); of desired HPDL colors selected from the manufacturer's non-premium-priced standard patterns and readily available sheet sizes; with standard self-edge, square butt splash a minimum of 4" (102 mm) above deck of Assembly Type 1 or 2 with square self-edge.
- 3.2 **WOOD COUNTERTOPS** - Unless otherwise specified or detailed, all work shall be **CUSTOM GRADE** (unless the related casework is Premium Grade, then the countertops shall be **PREMIUM GRADE**) hardwood plywood intended for an opaque finish.
- 3.3 **SOLID-SURFACE COUNTERTOPS** - Unless otherwise specified or detailed, all work shall be **CUSTOM GRADE** with the manufacturer's option of brand name and edge treatment; desired colors selected from the manufacturer's standard, non-premium-priced line with standard matte finish; a minimum of 1/2" (12.7 mm) thick; with a minimum of a 3" (76 mm) high splash above the deck surface.
- 3.4 **SOLID PHENOLIC, EPOXY RESIN, and NATURAL/MANUFACTURED STONE COUNTERTOPS** - Unless otherwise specified or detailed, all work shall be **CUSTOM GRADE** with the manufacturer's option of brand name and edge treatment; colors to be selected from the manufacturer's standard, non-premium-priced line with standard satin finish, and with compatible sink and accessories.

4 RULES - The following RULES shall govern unless a project's contract documents require otherwise.

These rules are intended to provide a well-defined degree of control over a project's quality of materials and workmanship.

Where E, C, or P is not indicated, the rule applies to all Grades equally.

ERRATA, published on the Associations' websites at www.awinet.org, www.awmac.com, or www.woodworkinstitute.com, shall **TAKE PRECEDENCE OVER THESE RULES**, subject to their date of posting and a project's bid date.

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DESCRIPTION		E	C	P
4.1	GENERAL			
	4.1.1	AESTHETIC GRADE RULES apply only to exposed and semi-exposed surfaces visible after installation.		
	4.1.2	LUMBER shall conform to the requirements established in Section 3.		
↓	4.1.3	SHEET PRODUCTS shall conform to the requirements established in Section 4.		
	4.1.4	BACKING SHEET shall conform to the requirements established in Section 4.		

