

SECTION 06 42 16  
FLUSH WOOD PANELING

PART 1 - GENERAL

1.1 Description

A. Section specified plastic laminate counter top

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing paneling and that are concealed within other construction before paneling installation.

1.2 REFERENCED STANDARDS

A. General:

1. The following documents form part of the Specifications to the extent stated. Bring conflicts between Specifications, Drawings, and the referenced documents to the attention of the Resident Engineer, in writing, for resolution before taking any related action. Where differences exist between codes and standards, the one affording the greatest protection shall apply.
2. If the year of the adoption or latest revision is omitted from the designation, it shall mean the specification, manual or test designation in effect the date the Notice to Proceed with the Work is given.

B. American National Standards Institute:

1. ANSI A208.2-2009 Medium Density Fiberboard (MDF) for Interior Applications

C. Architectural Woodwork Institute/Architectural Woodwork Manufacturers Association of Canada (516 4th St. West, High River, AB T1V 1B6, Canada; 403-652-7685)/Woodwork Institute:

1. Architectural Woodwork Standards. 2009.

D. ASTM International:

1. ASTM D 523-08 Test Method for Specular Gloss
2. ASTM E 84-09 Test Method for Surface Burning Characteristics of Building Materials

E. California Department of Health Services:

1. Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers. 2004.

F. Forest Stewardship Council:

1. FSC STD-01-001-2004 FSC Principles and Criteria for Forest Stewardship (available in PDF at [www.fsc.org](http://www.fsc.org))
2. FSC STD-40-004-2008 FSC Standard for Chain of Custody Certification (available in PDF at [www.fsc.org](http://www.fsc.org))
- 1.3 PREINSTALLATION MEETINGS
  - A. Preinstallation Conference: Conduct conference at Project site.
- 1.4 ACTION SUBMITTALS
  - A. Product Data: For each type of product, including panel products and finishing materials and processes.
  - B. Shop Drawings: Show location of paneling, large-scale details, attachment devices, and other components. Include dimensioned plans and elevations.
    1. Show details full size.
    2. Apply WI or AWI Certified Compliance Program label to first page of Shop Drawings.
  - C. Samples for Verification: Veneer leaves representative of and selected from flitches to be used for transparent-finished paneling.
    1. Veneer-faced panel products for transparent finish, 8 by 10 inches, for each species and cut. Include at least one face-veneer seam and finish as specified.
- 1.5 INFORMATIONAL SUBMITTALS
  - A. Qualification Data: For Installer/Fabricator.
  - B. Product Certificates: For each type of product.
  - C. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates or WI Certified Compliance Program certificates, as applicable.
- 1.6 QUALITY ASSURANCE
  - A. Fabricator/Installer Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance. Shop is a certified participant in AWI's Quality Certification Program., or is a licensee of WI's Certified Compliance Program.
  - B. Installer Qualifications:
    1. Fabricator of products.

- C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Build mockups of typical paneling as shown on Drawings.
  - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- 1.7 DELIVERY, STORAGE, AND HANDLING
  - A. Do not deliver paneling until painting and similar operations that could damage paneling have been completed in installation areas. If paneling must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.
- 1.8 FIELD CONDITIONS
  - A. Environmental Limitations: Do not deliver or install paneling until building is enclosed, wet work is complete, and HVAC system is operating and will maintain temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during the remainder of the construction period.
  - B. Field Measurements: Where paneling is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
    - 1. Locate concealed framing, blocking, and reinforcements that support paneling by field measurements before being enclosed and indicate measurements on Shop Drawings.
  - C. Established Dimensions: Where paneling is indicated to fit to other construction, establish dimensions for areas where woodwork is to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.
- 1.9 COORDINATION
  - A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that paneling can be installed as indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Plastic Laminate: NEMA LD 3.

1. Concealed backing sheet Type BKL.

2. Decorative surfaces:

a. Flat components: Type GP-HGL.

b. Post forming: Type PF-HGP.

3. Chemical Resistant Surfaces

a. Flat components: Type GP-HGL.

b. Post forming: Type PF-HGP.

c. Resistance to reagents:

1) Test with five 0.25 mil drops remaining on surface for 16 hours followed by washing off with tap water, then cleaned with liquid soap and water, dried with soft cotton cloth and then cleaned with naphtha.

2) No change in color, surface texture, and original protectability remaining from test results of following reagents:

98% Acetic Acid	Butyl Alcohol	Acetone
90% Formic Acid--	Benzine	Chloroform
28% Ammonium Hydroxide	Xylene	Carbon Tetrachlo- ride
Zinc Chloride (Sat.)	Toluene	Cresol
Sodium Carbonate (Sat.)	Gasoline	Ether
Calcium Hypochlorite (Sat.)	Kerosene	Cottonseed Oil
Sodium Chloride (Sat.)	Mineral Oil	40% Formaldehyde
Methyl Alcohol	Ethyl Acetate	Trichlorethylene
Ethyl Alcohol	Amyl Acetate	Monochlorobenzine

3) Superficial effects only: Slight color change, spot, or residue only with original protectability remaining from test results of following reagents:

77% Sulfuric Acid	37% Hydrochloric Acid	85% Phenol
33% Sulfuric Acid	20% Nitric Acid	Furfural
85% Phosphoric Acid	30% Nitric Acid	Dioxane

4) Minimum height of impact resistance: 300 mm (12 inches).

B. Molded Resin:

1) Non-glare epoxy resin or furan resin compounded and cured for minimum physical properties specified:

Flexural strength	70 MPa (10,000 psi)	ASTM D790
Rockwell hardness	105	ASTM D785

2. Material of uniform mixture throughout.

C. Stainless Steel: ASTM A167, Type 304.

D. Sheet Steel: ASTM A1008, cold rolled, Class 1 finish, stretcher leveled.

E. Particleboard: CPA A208.1, Grade 2-M-2.

F. Plywood: PS 1, Exterior type, veneer grade AC not less than five ply construction.

G. Hardwood Countertop: Solid maple, clear grade except where otherwise specified.

H. Hardboard: ANSI/AHA A135.4, Type I, tempered, fire retardant treated, smooth surface one side.

I. Adhesive

1. For plastic laminate FS A-A-1936.

2. For wood products: ASTM D4690, unextended urea resin or unextended melamine resin, phenol resin, or resorcinol resin.

3. For Field Joints:

a. Epoxy type, resistant to chemicals as specified for plastic laminate laboratory surfaces.

b. Fungi resistant: ASTM G-21, rating of 0.

J. Fasteners:

1. Metals used for welding same metal as materials joined.

2. Use studs, bolts, spaces, threaded rods with nuts or screws suitable for materials being joined with metal splice plates, channels or other supporting shape.

2.2 COUNTERTOPS

A. Fabricate in largest sections practicable.

B. Fabricate with joints flush on top surface.

- C. Fabricate countertops to overhang front of cabinets and end of assemblies 25 mm (one inch) except where against walls or cabinets.
- D. Provide 1 mm (0.039 inch) thick metal plate connectors or fastening devices (except epoxy resin tops).
- E. Join edges in a chemical resistant waterproof cement or epoxy cement, except weld metal tops.
- F. Fabricate with end splashes where against walls or cabinets.
- G. Splash Backs and End Splashes:
  - 1. Not less than 19 mm (3/4 inch) thick.
  - 2. Height 100 mm (4 inches) unless noted otherwise.
  - 3. Laboratories and pharmacy heights or where fixtures or outlets occur: Not less than 150 mm (6 inches) unless noted otherwise.
  - 4. Fabricate epoxy splash back in maximum lengths practical of the same material.
- H. Drill or cutout for sinks, and penetrations.
  - 1. Accurately cut for size of penetration.
  - 2. Cutout for VL 81 photographic enlarger cabinet.
    - a. Finish cutout to fit flush with vertical side of cabinet, allowing adjustable shelf to fit into cutout space of cabinet at counter top level. Finish cutout surface as an exposed edge.
    - b. Provide braces under enlarger space to support not less than 45 kg (100 pounds) centered on opening side along backsplash.
- I. Plastic Laminate Countertops:
  - 1. Fabricate plastic laminate on five-ply plywood or particleboard core 19 mm (3/4 inch) thick with plastic laminate backing sheet.
  - 2. Front edge over cabinets not less than 38 mm (1-1/2 inches) thick except where plastic "T" insert is used, not less than 19 mm (3/4 inch) thick.
  - 3. Exposed Surface and edges of decorative laminated plastic or laboratory chemical resistant surface.
    - a. Use chemical resistant surface on tops 6A, 6B, and 6C.
    - b. Use decorative surface tops when noted plastic laminate, for tops 10A, 10B and 10C.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Before installing countertops verify that wall surfaces have been finished as specified and that mechanical and electrical service locations are as required.
- B. Secure countertops to supporting rails of cabinets with metal fastening devices, or screws through pierced slots in rails.
  - 1. Where type, size or spacing of fastenings is not shown or specified, submit shop drawings showing proposed fastenings and method of installation.
  - 2. Use round head bolts or screws.
  - 3. Use epoxy or silicone to fasten the epoxy resin countertops to the cabinets.
  - 4. Use wood or sheet metal screws for wood or plastic laminate tops; minimum penetration into top 16 mm (5/8 inch), screw size No 8, or 10.

3.2 PROTECTION AND CLEANING

- A. Tightly cover and protect against dirt, water, and chemical or mechanical injury.
- B. Clean at completion of work.

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