

SECTION 06400
ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:

1. Custom millwork.
2. Custom cabinets.
3. Cabinet hardware.
4. Wood paneling.
5. Shop and job site application of millwork finishes.

B. Related Sections:

1. Section 06200 - Finish Carpentry: Plastic laminates and countertops; wood trim; window stools; shelving.
2. Section 06650 - Solid Polymer Fabrications.
3. Section 12304 - Plastic Laminate Faced Casework.
4. Section 12345 - Metal Laboratory Casework.
5. Section 12346 - Wood Laboratory Casework.
6. Section 12348 - Laboratory Tops, Sinks and Accessories.

1.2 REFERENCES:

A. Applicable Publications: The publications listed below form a part of the Specification to the extent referenced.

1. Architectural Woodwork Institute (AWI) "Quality Standards", latest edition.

1.3 SUBMITTALS:

A. Submit shop drawings, product data, and samples under provisions of Section 01300.

B. Shop Drawings:

1. Submit Shop Drawings for all millwork items required.

C. Samples:

1. Plastic Laminate (three 2" x 3" samples):
 - a. Each color specified
2. Cabinet Hardware:
 - a. Each type and finish required.

3. Other materials as required per project.

D. LEED MRc7: Certified Wood

All wood based products shall come from "FSC Certified Wood" sources certified by the Forest Stewardship Council. Certificates and chain of custody documentation must be provided.

E. LEED EQc4: Low Emitting Materials

Provide documentation from the manufacturer identifying the VOC and chemical component limits for the adhesives provided.

1.4 QUALITY ASSURANCE:

A. Standards:

1. Except as otherwise shown or specified, comply with specified provisions of the Architectural Woodwork Institute (AWI) "Quality Standards". In event of dispute as to performance under AWI standards, Owner may call upon AWI for an inspection and report by AWI Quality Certification Program. All parties agree to abide by AWI decisions. Costs for this service will be paid by Owner unless AWI determines that specified standards have not been met, in which cases costs will be paid by Contractor.

1. Wood Casework: AWI Section 400, Custom Grade. Premium grade will be considered only in specific applications with the recommendation of the design consultant and with the concurrence of the university.
2. Plastic Laminate Casework: AWI Section 400, Custom Grade.
3. Wood Paneling: AWI Sections 200 and 500, Custom Grade. Premium recommendation of the design consultant and with the concurrence of the university.
4. Sop Finishing: AWI Section 1500, Custom Grade.
5. Installation: AWI Section 1700, Custom Grade.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

A. As indicated for various products hereunder.

B. Approved substitutes under provisions of Section 01600.

2.2 MATERIALS:

A. Veneers:

1. Plain sliced, narrow heart. Architectural panel grade veneer.

Matching between adjacent veneers: Bookmatch.

Matching between individual panel faces: Balanced to panel.

Matching or adjacent panels: Sequenced.

2. Species: As scheduled.
3. Sapwood not acceptable.

4. LEED MRc7: Certified Wood

The source of wood based materials must be certified by the Forest Stewardship Council, and wood must be classified as "certified wood."

B. Hardwood Lumber:

1. Graded in accordance with AWI grading standards for Premium Grade Solid Stock.
2. Species: Design Consultant selection.
3. Sapwood not acceptable.

4. LEED MRc7: Certified Wood

The source of wood based materials must be certified by the Forest Stewardship Council, and wood must be classified as "certified wood."

C. Hardwood Plywood:

1. Comply with PS 51, Premium Grade hardwood face veneers.
2. Face and back veneers grade selected in accordance with AWI Standards for Premium Grade, select for color.
3. Species: Design Consultant selection.

4. LEED MRc7: Certified Wood

The source of wood based materials must be certified by the Forest Stewardship Council, and wood must be classified as "certified wood."

D. Particleboard:

1. Medium density (45 lbs./cu. ft. minimum) board fabricated from wood chips and phenolic resin binders, compressed board, 3/4" thickness unless otherwise indicated complying with ANSI A208.1, Grade 1-M-3.

LEED EQc4: Low-Emitting Materials

Urea-Formaldehyde resin binders are unacceptable.

NOTE: (1) RED OAK IS CAMPUS PREFERENCE. (2) APPALACHIAN WHITE OAK (RIFT SAWN) IS USED AT THEATRE. (3) ASM - USED AT HALE SCIENCE. AVOID RAINFOREST / ENVIRONMENTALLY SENSITIVE SELECTIONS.

E. Hardboard:

1. PS 58, Class 1 (tempered), smooth one side or both sides where indicated, 1/4" thickness unless as otherwise indicated.

LEED EQc4: Low-Emitting Materials
Urea-Formaldehyde resin binders are unacceptable.

F. MDO Plywood:

1. Medium Density Overlay (MDO) plastic faced plywood.
2. Finish: One face finish, smooth paint grade.
3. **LEED MRc7: Certified Wood**
The source of wood based materials must be certified by the Forest Stewardship Council, and wood must be classified as "certified wood."

G. Plastic Laminate:

1. Provide plastic laminate for all cabinet work complying with Section 06200 requirements.

2.3 MISCELLANEOUS ACCESSORIES:

A. Nails:

1. Do not use nails for gluing pressure.
2. Nails may be used only for temporary, concealed anchorage.

B. Wood Screws:

1. Exterior: Brass, Fed. Spec. FF-S-111D.
2. Interior: Steel, ANSI B18.6.1.

C. Adhesives:

1. Adhesive for plastic laminate and hardwood veneer shall conform to the recommendations of AWI 100-G-12.
2. **LEED EQc4: Low-Emitting Materials**
All adhesives must meet or exceed the VOC limits of South Coast Air Quality Management District Rule #1168. Provide low VOC, FS MMM-A-125C, Type II, water and mold resistant adhesives.

2.4 MOISTURE CONTENT:

- A. At the time lumber and other materials are delivered and when installed in the work, their moisture content shall be 19 percent maximum for treated and untreated lumber 2 inches or less in thickness.

2.5 CUSTOM CABINETS:

- A. Custom (Mill Built) Cabinetry: AWI Section 400, Premium Grade.
- B. Cabinet Work Surfacing:
 - 1. Interior sides of particleboard core doors shall be faced with balancing sheets.
 - 2. Cabinet doors and drawer edges shall be edged to match veneer.
- C. Frame cabinets in a substantial manner with all necessary blocking, braces, bottoms, etc.
 - 1. Cross supports under countertops shall be sufficiently heavy to carry a 200 pound weight without sagging.
 - 2. Frame shall be pinned, glued, or screwed together in accordance with AWI Standards indicated.
- A. Some cabinet backs not exposed to view may be hardboard.

DESIGN TEAM SHALL DECIDE WITH UNIVERSITY REPRESENTATIVE.

2.6 CABINET HARDWARE:

- A. 3/4" Doors: Invisible type, self closing overlay 120 degree opening similar to Grass America, Inc. model # VS8-3800 with 2 hinges per door. Anchor with 1000 Series baseplate and 5.2 mm sleeve screws. Other Approved Manufacturers: Prameta or Hafele.
- B. Adjustable Shelf Standards:
 - 1. Knappe and Vogt No. 255 with No. 256 supports.
 - 2. Predrilled holes at 32 mm o.c. with 2 pin self-locking nylon clips capable of supporting a minimum of 250 lbs. each. Provide four per shelf.
- C. Drawer Slides:
 - 1. Typical Drawer Slide:
 - a. Grass 6610, 100 pound capacity.
 - b. Blum No. 230E, 100 pound capacity.
 - 2. File Drawer and Lateral File Drawer Slide:
 - a. Accuride No. 3832, 100 pound capacity.
 - b. Blum No. 430E, 100 pound capacity.

D. Cabinet Locks:

1. Provide cabinet locks for doors and drawers as required by the Owner.
2. Locks shall accept cylinders keyed to master key system.

2.7 WALL PANELING:

- A. Construct wall paneling from 1/4", 1/2" or 3/4" resin-wood panels or 3/4" thick exterior grade plywood, scarf-jointed at the mill to make one piece integral panel. Panels shall have a UL flame spread rating of 75 or less.
- B. Construct face veneers to AWI Custom Grade.
- C. LEED EQc4: Low-Emitting Materials
Urea-Formaldehyde resin binders are unacceptable.

2.8 FINISHES:

A. Natural Finish:

1. AWI Finish System No. TR-4 Catalyzed Vinyl (Custom Grade).
 - a. Filler (For Open Grain Woods: Filled finish).
 - b. Washcoat.
 - c. Stain (To be selected by the Architect).
 - d. Sealer.
 - e. Sand (220 grit steared paper).
 - f. Topcoat.
 - g. Sand (220 grit sandpaper).
 - h. Topcoat.
2. Satin-medium rubbed effect.

NOTE: SECTION 2.8 FINISHES APPLY FOR FACTORY FINISHES ONLY.

B. Waterproof Finish:

1. AWI Finish System No. TR-6 Catalyzed Polyurethane (Premium Grade).
 - a. Filler (For Open Grain Woods: Filled finish) used only in tabletops.
 - b. Washcoat.
 - c. Stain.
 - d. Sealer.
 - e. Sand (220 grit steared paper).
 - f. Topcoat.
 - g. Sand (220 grit sandpaper).
 - h. Topcoat.

C. Paint: Refer to Section 09900.

D. All indoor sealant and paint shall meet the limits of Green Seal's Standard GS-11 requirements for VOC and chemical components.
(Applies to LEED EQc4: Low-Emitting Materials)

PART 3 - EXECUTION

3.1 PREPARATION:

A. Verify all dimensions in the field and take particular care to align with all joints and recesses, where required, with the building module lines.

3.2 FABRICATION:

A. Workmanship shall equal in all respect to the standards of Premium quality furniture work as described by AWI. Perform all work by qualified and fully competent workmen.

B. Allow sufficient additional material to permit.

1. Accurate scribing to walls and related work.
2. Provide for shrinkage that may develop after installation.
3. Scribe casework edge panels to walls.

3.3 APPLICATION OF HARDWARE:

A. Fit hardware for drawers and doors:

1. To permit items to close without forcing or rattling.
2. Carefully fit and adjust as required to ensure smooth and noiseless operation.
3. Remove and replace hardware items necessary to prevent damage, soiling and staining during finishing operation.

3.4 APPLICATION OF FINISHES:

A. Visual Tests Applicable to Exposed Surfaces:

1. Variations in Color: Must match approved samples.
2. Orange Peel:
3. Runs: None.
4. Sags: None.
5. Finish Sanding Scratches: None.
6. Blistering: None.

7. Glue Spots: None.
8. Checking, Crazing or Cracking: None.
9. Filled Nail Holes:

3.5 INSTALLATION:

- A. Custom Grade per AWI Standards, Section 1700.

END OF SECTION 06400