

SECTION 06200
FINISH CARPENTRY AND MILLWORK

PART 1 - GENERAL

1.01 WORK INCLUDED (**Refer to ID Drawings**)

- A. Finish carpentry includes carpentry work which is exposed to view, is non-structural, and which is not specified as part of other sections.
- B. Types of Finish Carpentry include, but are not limited to the following:
 - 1. Wood Casework and Trim.
 - 2. Plastic Laminate Finished Casework.
 - 3. Cabinet and Shelving Hardware.

1.02 RELATED WORK

- A. ROUGH CARPENTRY: Section 06100.
- B. WOOD TREATMENT: Section 06300.
- C. FINISH HARDWARE: Section 08710.
- D. GYPSUM WALLBOARD: Section 09250.
- E. TILE WORK: Section 09300.
- F. PAINTING: Section 09900.

1.03 QUALITY ASSURANCE

- A. Pre-Installation Meeting:
 - 1. Meet at Project Site prior to delivery of finish carpentry materials, and review coordination and environmental controls required for proper installation and ambient conditioning in areas to receive work.
 - 2. Include in meeting, the Contractor, Owner, Installers of finish carpentry, wet work including plastering, other finishes, painting, mechanical work and electrical work, and firms and persons responsible for continued operation (whether temporary or permanent) of HVAC system as required to maintain temperature and humidity conditions.
 - 3. Proceed with finish carpentry on interior only when required ambient conditions can be properly maintained.

B. Applicator Qualifications:

1. Fabrication and installation shall be performed only by a qualified installer with at least five (5) years documented experience in installations of a similar nature, and as approved by the Architect.

C. Source Quality Control:

1. Factory-mark each piece of lumber and plywood with type, grade, mill and grading agency identification; except omit marking from surfaces to receive transparent finish, and submit mill certificate that material has been inspected and graded in accordance with requirements if it cannot be marked on a concealed surface.

D. Fire-Retardant Marking:

1. Mark each unit of fire-retardant treated lumber and plywood with the classification marking of Underwriters Laboratory, Inc., or other testing and inspecting agency acceptable to authorities having jurisdiction. Place marking on surfaces which will not be exposed after installation.

1.04 SUBMITTALS

A. Product Data:

1. Submit manufacturer's specifications and installation instructions for each item of factory fabricated woodwork and manufactured item.
2. Submit manufacturer's (Fabricator's) certification, stating that the fabricated work complies with quality grades and other requirements indicated.

B. Wood Treatment Data:

1. Submit chemical treatment manufacturer's instructions for handling, storage, installation and finishing treated materials.
 - a. Dip Treatment: For each type specified, include certification by treating plant stating chemical solutions used, submersion period, and conformance with specified standards.
 - b. Fire-Retardant Treatment: Include certification by treating plant, indicating type of chemicals used and fire performance characteristics achieved.

C. Shop Drawings:

1. Submit shop drawings showing location of each item, dimensioned plans and elevations, large scale details, hardware schedule, attachment devices and other components. Submit shop drawings for the following:
 - a. Casework/Cabinet Work.
 - b. Shelving.

D. Samples:

1. Submit two (2) each of the following samples for each species and cut or pattern of finish carpentry, and manufactured product:
 - a. Trim and Molding: 24 inches long x full molding width, unfinished.
 - b. Not used
 - c. Not Used
 - d. Plastic Laminate Finished Casework: 12 inches square by thickness specified.
 - e. Exposed cabinet hardware, one unit of each type and finish.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Protect finish carpentry materials during transit, delivery, storage, and handling to prevent damage, soiling and deterioration.
- B. Do not deliver finish carpentry materials until painting, wet work, grinding, and similar operations which could damage, soil, or deteriorate woodwork, have been completed in installation areas. If, due to unforeseen circumstances, finish carpentry materials must be stored in other than installation areas, store only in areas meeting requirements specified for installation areas.

1.06 PROJECT CONDITIONS

- A. Conditioning:
 1. Installer shall advise Contractor of temperature and humidity requirements for finish carpentry installation areas. DO NOT install finish carpentry until the required temperature and relative humidity have been stabilized and will be maintained in installation areas.
 2. Maintain temperature and humidity in installation area as required to maintain moisture content of installed finish carpentry within a 1.0 percent tolerance of optimum moisture content, from date of installation through remainder of construction period. The fabricator of woodwork shall determine optimum moisture content and required temperature and humidity conditions.
- B. Verify all measurements at the job site on which this work is dependent.
- C. Coordinate with Owner's equipment supplier to obtain exact sizes of all items to be built-in to cabinet work.

PART 2 - PRODUCTS

2.01 PRODUCT QUALITY STANDARDS

- A. Softwood Lumber Standards: Comply with PS 20 "American Softwood Lumber Standard" and with applicable grading rules of the respective grading and inspecting agency for the species and product indicated.
- B. Hardwood Lumber Standard: Comply with National Hardwood Lumber Association (NHLA) rules.
- C. Plywood Standard: Comply with PS 1 "U.S. Product Standard for Construction and Industrial Plywood.

- D. Hardwood Plywood Standard: Comply with PS 51.
- E. Woodworking Standard: Where indicated for a specific product, comply with specified provision of the following:
 - 1. Architectural Woodwork Institute (AWI) "Quality Standards."
- F. Plastic Laminate: Comply with AWI for type, thickness, pattern, and finish indicated for each application.

2.02 MATERIALS, GENERAL

- A. Nominal sizes are indicated, except as shown by detailed dimensions. Provide dressed or worked and dressed lumber, as applicable, manufactured to the actual sizes as required by PS 20, or to actual sizes and pattern as shown, unless otherwise indicated.
- B. Moisture Content of Softwood Lumber: Provide kiln-dried (KD) lumber having a moisture content from time of manufacture until time of installation not greater than values required by the applicable grading rules of the respective grading and inspection agency for the species and product indicated.
- C. Moisture Content of Hardwood Lumber: Provide KD lumber having a moisture content from time of manufacture until time of installation within the ranges required in the referenced woodworking standard.
- D. Pre-cut Openings: Fabricate finish carpentry work with pre-cut openings, where possible, to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams for proper size and shape. Smooth edges of cutoffs and, where located in countertops and similar exposures, seal edges of cutouts with a water-resistant coating.
- E. Measurements: Before proceeding with fabrication of finish carpentry work required to be fitted to other construction, obtain measurements and verify dimensions and shop drawing details as required for accurate fit.
 - 1. Where sequence of measuring substrates before fabrication would delay the project, proceed with fabrication (without field measurements) and provide ample borders and edges to allow for subsequent scribing and trimming for accurate fit.
- F. Where hardwood plywood edges are exposed in cabinet and shelving units, provide end caps of same species and grade as plywood veneer.

2.03 WOOD CASEWORK/TRIM AND SHELVING

- A. Quality Standard: Comply with AWI Section 400 requirements.
- B. Grade: Custom.
- C. Wood Species and Cut: As indicated.
- D. Thickness: As indicated.

2.04 PLASTIC LAMINATE FINISHED CASEWORK

- A. Quality Standards: For the following types of architectural woodwork; comply with indicated standards as applicable:
 - 1. Plastic Laminate Casework: AWI Section 400 B.
- B. Exposed Surfaces: Provide high pressure laminate in grades indicated for the following types of surfaces:
 - 1. Horizontal Surfaces: GP-50 (0.050-inch nominal thickness).
 - 2. Post Formed Surfaces: PF-42 (0.42-inch nominal thickness).
 - 3. Vertical Surfaces: GP-28 (0.028-inch nominal thickness).
- C. Semi-Exposed Surfaces: Finish semi-exposed surfaces as follows, unless otherwise indicated:
 - 1. Plastic Laminate, GP-50 for all surfaces of shelving, and GP-28 for cabinet interiors.
- D. Fabricate exposed edges of casework with matching plastic laminate, except as otherwise indicated.
- E. Plastic Laminate Products: Provide the following selections:
 - 1. Countertops: As indicated on Drawings.
 - 2. Base and Wall Cabinets: As indicated on Drawings.
- F. All plastic laminate finished casework backing shall be plywood.

2.05 CABINET AND SHELVING HARDWARE

- A. General:
 - 1. Provide cabinet hardware and accessory materials associated with architectural woodwork, except for units which are specified as "Door Hardware" in other sections of these specifications.
- B. Hardware Standards:
 - 1. Except as otherwise indicated, comply with ANSI A 156.9 "American National Standard for Cabinet Hardware".
 - a. Quality Level: Type 2 unless otherwise indicated.
 - b. Quality Certification: Where available, provide cabinet hardware bearing the BHMA certification label, affixed to either hardware or its packaging, showing compliance with BHMA Cabinet Hardware Standard 201.
- C. Cabinet Door Hardware:
 - 1. Provide European-Type concealed hinges for casework doors.
 - 2. Provide wire pulls for all drawers and doors.

D. Locks:

1. Confirm with Owner locations of locked cabinets. Furnish standard pin-type or disc-type (5 pins or discs) tumbler locks, master keyed in one system.

E. Shelf Supports:

1. Where shelving is indicated as "adjustable", provide slotted-type pilaster standards, and supports.
2. Products: Provide the following products manufactured by Knappe & Vogt Manufacturing Co.:
 - a. Pilaster Standards: 255.
 - b. Supports: 256.

F. Drawer Glides:

1. Provide full extension drawer glides, self-closing, for all drawers; 100 lbs. capacity. Positive stop design with guided rollers.
2. Product: "1429"; Knappe & Vogt Manufacturing Co.

G. Exposed Hardware Finish:

1. Except where otherwise indicated, provide exposed hardware with BHMA Code 626 satin nickel plate finish (US26D).

2.08 MISCELLANEOUS MATERIALS

A. Fasteners and Anchorages:

1. Provide nails, screws and other anchoring devices of the type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible, and complying with applicable Federal Specifications.

2.09 WOOD TREATMENT

A. Refer to Section 06300 - WOOD TREATMENT.

2.09 SHOP FINISHING OF INTERIOR ARCHITECTURAL WOODWORK (if indicated)

A. Quality Standard: Comply with AWI Section 1500, unless otherwise indicated.

B. General: The entire finish of interior architectural woodwork is specified in this Section, regardless of whether shop applied or applied after installation.

1. Shop Finishing: To the greatest extent possible, finish architectural woodwork at the fabrication shop. Defer only final touch-up, cleaning, and polishing until after installation.

C. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.

1. Back priming: Apply one coat of sealer or primer compatible with finish coats to concealed surfaces of woodwork, including backs of trim, cabinets, and ornamental work.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Condition wood materials to average prevailing humidity conditions in installation areas prior to installing.
- B. Back prime lumber for painted finish exposed to moisture and high relative humidities on the interior. Comply with requirements of Section 09900 - PAINTING for primers and their application.
- C. Deliver concrete inserts and similar anchoring devices to be built into substrates, well in advance of time substrates are to be built.

3.02 INSTALLATION

A. General:

- 1. Finish carpentry work shall be executed in accordance with drawings. Workmanship shall be of first quality and the construction of all parts shall be of the best current practice. The work shall be assembled so as to hold together with close joints, fastenings shall be concealed, and all work shall be properly and firmly backed up and blocked where and as required.
- 2. Discard units or material which are unsound, warped, bowed, twisted, improperly treated, not adequately seasoned, too small to fabricate work with minimum of joints or optimum jointing arrangements, or which are of defective manufacture with respect to surfaces, sizes or patterns.
- 3. Install the work plumb, level, true and straight with no distortions. Shim as required, using concealed shims. Install to a tolerance of 1/8 inch in 8 feet for plumb and level countertops, with 1/16-inch maximum offset in flush adjoining surfaces, and 1/8 inch maximum offsets in revealed adjoining surfaces.
- 4. Scribe and cut work to fit adjoining work, and re-finish cut surfaces or repair damaged finish at cuts.
- 5. Anchor finish carpentry work to anchorage devices or blocking built-in, or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation. Except where pre-finished, matching fastener heads are required. Use fine finishing nails for exposed nailing, countersunk and filled flush with finished surface, and matching final finish where a transparent finish is indicated.

B. Standing and Running Trim, and Molding:

- 1. Install with the minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to the greatest extent possible. Stagger joints in adjacent and related members. Cope at returns, miter at corners to produce tight fitting joints with full surface contact throughout length of joint. Use scarf joints for end-to-end joints.

C. Cabinets:

- 1. Install without distortion so that doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete the installation of hardware and accessory items as indicated.

2. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 3. Maintain veneer sequence matching of cabinets with transparent finish.
- D. Complete the finishing work specified in this Section to whatever extent not completed at shop or before installation of woodwork. Fill nail holes with matching filler where exposed. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats were applied in the shop.
- 3.03 FIRE-RETARDANT TREATED WOOD
- A. Handle, store, and install in accordance with manufacturer's directions, and as required to meet required classification or rating. Provide special fasteners, moldings, adhesives, and other accessories as tested and listed for type of fire-retardant materials indicated.
- 3.04 ADJUSTMENT, CLEANING, FINISHING AND PROTECTION
- A. Repair damaged and defective finish carpentry work wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean woodwork on exposed and semi-exposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.
1. Refer to Section 09900 - PAINTING for installed finish carpentry work to receive final finish in field.
- C. Protection: Installer of finish carpentry work shall advise Contractor of final protection and of conditions necessary to be maintained to ensure that work will be without damage or deterioration at time of acceptance.

END OF SECTION 06200