

SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 1. Interior standing and running trim.
 2. Interior frames and jambs.
 3. Interior ornamental work.
 4. Wood cabinets.
 5. Plastic-laminate countertops.
 6. Shop finishing of interior woodwork.
- B. Related Sections include the following:
 1. Division 6 Section "Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
 2. Division 8 Section "Wood Panel Doors" for door.
 3. Division 8 Section "Glazing" for bullet resistant glass.

1.3 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.
- B. Rough carriages for stairs are a part of interior architectural woodwork. Platform framing, headers, partition framing, and other rough framing associated with stairwork are specified in Division 6 Section "Rough Carpentry."

1.4 SUBMITTALS

- A. Product Data: For panel products, high-pressure decorative laminate, adhesive for bonding plastic laminate, solid-surfacing material, fire-retardant-treated materials, cabinet hardware and accessories, handrail brackets and finishing materials and processes.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 1. Show details full size.
 2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
 3. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers and other items installed in architectural woodwork.
 4. Show veneer leaves with dimensions, grain direction, exposed face, and identification numbers indicating the flitch and sequence within the flitch for each leaf.
- C. Samples for Initial Selection:
 1. Plastic laminates.
 2. Solid-surfacing materials.
- D. Samples for Verification:
 1. Lumber with or for transparent finish, not less than 5 inches (125 mm) wide by 24 inches (600 mm) long, for each species and cut, finished on 1 side and 1 edge.
 2. Veneer leaves representative of and selected from flitches to be used for transparent-finished woodwork.
 3. Veneer-faced panel products with or for transparent finish, 12 by 24 inches (300 by 600 mm), for each species and cut. Include at least one face-veneer seam and finish as specified.

4. Lumber and panel products with shop-applied opaque finish, 50 sq. in. (300 sq. cm) for lumber and 8 by 10 inches (200 by 250 mm) for panels, for each finish system and color, with 1/2 of exposed surface finished.
 5. Plastic laminates, 8 by 10 inches (200 by 250 mm), for each type, color, pattern, and surface finish.
 6. Solid-surfacing materials, 6 inches (150 mm) square.
 7. Exposed cabinet hardware and accessories, one unit for each type and finish.
- E. Qualification Data: For Installer and fabricator.

1.5 QUALITY ASSURANCE

- A. Fabricator 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
- B. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.
- 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. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F (16 and 32 deg C) and relative humidity between 25 and 55 percent during the remainder of the construction period.
- B. Field Measurements: Where woodwork 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 woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.
 2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.8 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.
- B. Hardware Coordination: Distribute copies of approved hardware schedule specified in Division 8 Section "Door Hardware" to fabricator of architectural woodwork; coordinate Shop Drawings and fabrication with hardware requirements.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.

- B. Wood Species and Cut for Transparent Finish: White oak, plain sawn or sliced.
- C. Wood Species for Opaque Finish: Any closed-grain hardwood.
- D. Wood Products: Comply with the following:
 - 1. Hardboard: AHA A135.4.
 - 2. Medium-Density Fiberboard: ANSI A208.2, Grade MD, made with binder containing no urea formaldehyde.
 - 3. Particleboard: ANSI A208.1, Grade M-2-Exterior Glue.
 - 4. Softwood Plywood: DOC PS 1, Medium Density Overlay.
 - 5. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1, made with adhesive containing no urea formaldehyde.
- E. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard.
 - 1. Manufacturer: Subject to compliance with requirements, provide high-pressure decorative laminates by one of the following:
 - a. Formica Corporation.
 - b. International Paper, Decorative Products Div.
 - c. Lamin-Art, Inc.
 - d. Nevamar Company, LLC; Decorative Products Div.
 - e. Pioneer Plastics Corp.
 - f. Westinghouse Electric Corp.; Specialty Products Div.
 - g. Wilsonart International; Div. of Premark International, Inc.

2.2 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets, except for items specified in Division 8 Section "Door Hardware."
- B. Stationary Deal Tray: Shuresafe, Model 670100 Stationary Deal Tray, 10" x 8 1/8" x 1 5/8" deep as manufactured by Shure Manufacturing Corporation, 1901 W. Main Street, Washington, Missouri 63090 or approved equal. Brushed stainless steel finish with curved interior.
- C. File Cabinets: Vertical Files at standing counter.
 - 1. Universal Storage File Cabinets as manufactured by Steelcase or approved equal. Product contact NBS (National Business Supply Inc.) local representative Mark Badour, 701 Salzburg Avenue, Bay City, MI 48706, 989-895-8574.
 - a. 23 1/8"d x 15"w x 39"h without top and welded steel construction.
 - b. Flush steel front pull Box/Box/File/File Configuration.
 - c. Provide locks on all cabinets.
 - d. Side to side filing rails for legal sized folders.
- D. File Cabinets: Vertical Files at barrier free counter.
 - 1. Universal Storage File Cabinets as manufactured by Steelcase or approved equal. Product contact NBS (National Business Supply Inc.) local representative Mark Badour, 701 Salzburg Avenue, Bay City, MI 48706, 989-895-8574.
 - a. 23 1/8"d x 15"w x 27"h with top and welded steel construction.
 - b. Flush steel front pull Box/Box/File Configuration.
 - c. Provide locks on all cabinets.
 - d. Side to side filing rails for legal sized folders.
- E. Slatwall: as manufactured by Steelcase, Details or approved equal. Product contact NBS (National Business Supply Inc.) local representative Mark Badour, 701 Salzburg Avenue, Bay City, MI 48706, 989-895-8574.
 - 1. Details Slatwall and Accessories
 - a. WS48, 48"wide x 12" high slatwall, Champagne finish. Provide one (1) per station. Direct apply to wall construction.
 - b. Accessories:
 - 1.) Hanging Bracket: Details WHB, four stepped bracket for legal sized files, black finish. Provide one (1) per station.
 - 2.) Binder Holder: Details WBHS, 5" wide binder holder, black finish. Provide two (2) per station.
 - 3.) Pen/Pencil Cup: Details WPCS, 2 1/4" diameter cup, black finish. Provide one (1) per station.

- F. Tack Surface: 1/2" thick Guilford of Maine, FR701, Style 2100 tack board, custom size to fit. Color to be selected from manufacturer's full range of colors.
- G. Computer Holder: Provide CPU holder Model 50011090 adjustable support as manufactured by Richelieu, 800-361-6000, mounts horizontally under desk, weight capacity 66 lbs. (30 kb), adjust height 15-11/32" to 21-17/64" (390 to 540mm), adjustable width ranges 5-17/64" to 9-7/32" (134 to 234 mm), swivels 90° to 180° left to right or approved equal. Provide and install one (1) per station, field verify location with owner.
- H. Grommets for Cable Passage through Countertops: 2-inch (51-mm) OD, black, molded-plastic grommets and matching plastic caps with slot for wire passage.
 - 1. Product: Subject to compliance with requirements, provide "SG series" by Doug Mockett & Company, Inc.

2.3 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B. Column Base Supports: Simpson CC44PC, at each column location.
- C. Column Top Supports: Simpson HL33 angle, at each column location.
- D. Adhesives, General: Do not use adhesives that contain urea formaldehyde.
- E. Adhesive for Bonding Plastic Laminate: Unpigmented contact cement.
 - 1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

2.4 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Unless otherwise indicated, provide Premium-grade interior woodwork complying with referenced quality standard.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members 3/4 Inch (19 mm) Thick or Less: 1/16 inch (1.5 mm).
 - 2. Edges of Rails and Similar Members More Than 3/4 Inch (19 mm) Thick: 1/8 inch (3 mm).
 - 3. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members and Rails: 1/16 inch (1.5 mm).
- D. Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 - 1. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.
- E. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
 - 1. Seal edges of openings in countertops with a coat of varnish.

2.5 INTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

- A. Grade: Premium.
- B. Wood Species and Cut: White oak, plain sawn.
 - 1. Provide split species on trim that faces areas with different wood species, matching each face of woodwork to species and cut of finish wood surfaces in areas finished.
- C. For trim items wider than available lumber, use veneered construction. Do not glue for width.
- D. For rails wider or thicker than available lumber, use veneered construction. Do not glue for width or thickness.
- E. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.
- F. Assemble casings in plant except where limitations of access to place of installation require field assembly.

- G. Assemble moldings in plant to maximum extent possible. Miter corners in plant and prepare for field assembly with bolted fittings designed to pull connections together.

2.6 INTERIOR FRAMES AND JAMBS

- A. Grade: Premium.
- B. Finish type: Transparent.
- C. For frames or jambs wider than available lumber, use veneered construction. Do not glue for width.
- D. Finish: Frames and Jambs to be finished in the field, to match doors. Refer to Division 9 Section "Interior Painting".

2.9 WOOD CABINETS FOR TRANSPARENT FINISH

1. Quality Standard: Comply with AWI Section 400 requirements for wood cabinets.
2. Grade: Premium.
3. AWI Type of Cabinet Construction: Reveal overlay on face frame.
4. Reveal Dimension: 1/2 inch (13 mm).
5. Grain Direction: Vertically for drawer fronts, doors, and fixed panels Vertically on doors and horizontally for drawer fronts without sequence.
6. Matching of Veneer Leaves: Book match.
7. Veneer Matching within Panel Face: Center-balance match.
8. Cabinet Core Construction: 7-ply and 9-ply Veneer Core Plywood. (All casework ends, tops and bottoms)
9. Joinery for Case Body Members:
 - a. Tops, Exposed Ends and Bottoms: Stop dado, glued under pressure and either nailed, stapled or screwed (fasteners will not be visible on exposed parts); Doweled, glued under pressure (approx. 4 dowels per foot of joint) or European assembly screws (37 mm from end, 128 mm on center, fasteners will not be visible on exposed parts).
 - b. Exposed End Corner Details and Face Frame Attachment: Mitered joint: lock miter or spline or biscuit, glued under pressure (no visible fasteners) or Non-mitered joints, 90 degree applications: butt joint glued under pressure (no visible fasteners).
 - c. Cabinet Backs – Wall hung: Full bound, captured in grooves on cabinet sides, top and bottom or Full overlay, plant-on backs: Minimum 1/2-inch thick attached with minimum #12 plated (not case-hardened) screws spaced minimum 3-inches on center. Edge of back not exposed on finished ends.
 - d. Cabinet Backs – Floor Standing: Side bound, captured in grooves; glued & fastened to top and bottom or Full overlay, plant-on backs: Minimum 1/2-inch thick attached with minimum #12 plated (not case-hardened) screws spaced minimum 3-inches on center. Edge of back not exposed on finished ends.
 - e. Anchor strips (for cabinets backs less than 1/2-inch thick): Minimum 1/2-inch thick lumber or panel product, minimum 2-1/2-inch width; securely attached to the wall side of the cabinet back – top and bottom for wall hung cabinets, top only for floor standing cabinets.
10. Joinery for Face Frames and Trims:
 - a. Face Frame Stile and Rail Assembly: Glued mortise and tenon or concealed pocket screw .
 - b. Attachment of Face Frame to Body Members: Pressure glued (no nails or other visible fasteners).
11. Gap between doors, drawers, panels and frames: 1/8-inch +/- 1/32-inch .
12. Exposed Solid Lumber: Grade I (Same species, well matched for color and grain).

2.10 PLASTIC-LAMINATE COUNTERTOPS

- A. Grade: Premium.
- B. High-Pressure Decorative Laminate Grade: HGS.
- C. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 1. Provide Architect's selections from manufacturer's full range of colors and finishes in the following categories:

- a. Solid colors.
 - b. Solid colors with core same color as surface.
 - c. Wood grains.
 - d. Patterns.
- D. Grain Direction: Parallel to cabinet fronts.
- E. Core Material: Particleboard made with exterior glue.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- C. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- D. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- E. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 36 inches (900 mm) long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.
 - 1. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base if finished.
 - 2. Install wall railings on indicated metal brackets securely fastened to wall framing.
 - 3. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches (3 mm in 2400 mm).
- F. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
 - 1. Align adjacent granite countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
 - 2. Install countertops with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.
 - 3. Secure backsplashes to tops with concealed metal brackets at 16 inches (400 mm) o.c. and to walls with adhesive.
 - 4. Calk space between backsplash and wall with sealant specified in Division 7 Section "Joint Sealants."
- G. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.
- H. Refer to Division 9 Sections for final finishing of installed architectural woodwork not indicated to be shop finished.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 06402