

SECTION 06402

INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Interior standing and running trim.
 2. Interior frames and jambs.
 3. Wood cabinets.
 4. Plastic-laminate cabinets.
 5. Plastic-laminate countertops.
 6. Solid surfacing countertops, with integral sink bowls where indicated.
 7. Closet and utility shelving.
 8. Shop finishing of interior woodwork.
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
1. Section 06100 - ROUGH CARPENTRY for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
 2. Section 08211 - FLUSH WOOD DOORS.
 3. Section 11461 – PREFABRICATED CABINETS.
 4. Section 15200 - PLUMBING FIXTURES AND EQUIPMENT.

1.2 SUBMITTALS

- A. Product Data: For each type of product specified, including cabinet hardware and accessories, and finishing materials and processes.
1. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
 2. Manufacturers' product data for installation adhesives, including printed statement of VOC content.
 3. Composite wood manufacturer's product data for each composite wood product used indicating that the bonding agent contains no urea formaldehyde. Adhesive manufacturer's product data for each adhesive used indicating that the adhesive contains no urea formaldehyde.
 4. Certificates of chain-of-custody signed by manufacturers certifying that products specified to be made from certified wood were made from wood obtained from

forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria." Include evidence that mill is certified for chain-of-custody by an FSC-accredited certification body.

- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
 - 2. Show locations and sizes of cutouts and holes for plumbing fixtures, electrical components and other items installed in architectural woodwork.
 - 3. 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 Verification:
 - 1. Lumber with or for transparent finish, not less than 5 inches wide by 12 inches 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. Lumber and panel products with shop-applied opaque finish, 5 inches wide by 12 inches long for lumber and 8 by 10 inches for panels, for each finish system and color, with 1/2 of exposed surface finished.
 - 4. Plastic laminates, 8 by 10 inches for each type, color, pattern, and surface finish, with 1 sample applied to core material, and specified edge material applied to 1 edge.
 - 5. Solid-surfacing materials, 6 inches square.

- D. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

- E. Qualification Data: For Installer and fabricator.

- F. Proof of Purchase: Submit proof of purchase for chemical resistant plastic laminate at least six weeks prior to scheduled installation of countertops. Pay \$3,000 to the Owner for installations without proof of purchase submittals in order that Owner may have materials tested and replaced if necessary.

1.3 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. Shop is a certified participant in AWI's Quality Certification Program.

- B. Installer Qualifications: Certified participant in AWI's Quality Certification Program.

- C. Source Limitations: Engage a qualified woodworking firm to assume undivided responsibility for production of interior architectural woodwork with sequence-matched wood veneers.
- D. 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.
 - 1. Provide AWI Quality Certification Program labels and certificates indicating that woodwork, including installation, complies with requirements of grades specified.
- E. Fire-Test-Response Characteristics: Where fire-retardant materials or products are indicated, provide materials and products with specified fire-test-response characteristics as determined by testing identical products per test method indicated by UL, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify with appropriate markings of applicable testing and inspecting agency in the form of separable paper label or, where required by authorities having jurisdiction, imprint on surfaces of materials that will be concealed from view after installation.
- F. Forest Certification: Provide interior architectural woodwork produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria."
- G. 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.
- H. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.

1.4 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.
- B. Long Lead Items: Order long lead time materials with sufficient time to comply with manufacturers' delivery schedule, without causing delay to the construction schedule.

1.5 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 and relative humidity at occupancy levels 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.

1.6 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.

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: Birch, rotary or 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.
 - 6. Softwood Plywood: DOC PS 1, Medium Density Overlay.

- E. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated.
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering high-pressure decorative laminates that may be incorporated into the Work include:
 - a. Wilsonart International; Div. Of Premark International, Inc.
- F. Chemical-Resistant, High-Pressure Decorative Laminate: NEMA LD 3, Grade HGP, and as follows:
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include:
 - a. Wilsonart International; Div. of Premark International, Inc.; Chemsurf.
- G. Solid-Surfacing Material: For use on all countertops except the dialysis countertops. Homogeneous solid sheets of filled plastic resin complying with ISSFA-2.
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - a. E. I. du Pont de Nemours and Company; Corian.
 - b. LG Hi-Macs
 - c. Formica Solid Surfacing
 - d. Wilsonart Gibraltar
- H. Custom Solid Surface Sink - **Not Applicable to this project – Reference plumbing specifications and utilize drop-in stainless steel sinks.**
1. Supplier/Fabricator:
 - a. Sterling Surfaces
76 Leominster Road
Sterling, MA 01564
Ph. 978.422.3321
Fax. 978.422.0152
Contact: Mike Pandiscio
mike@sterlingsurfaces.com
 2. Product Specifications:
 - a. Material:
 - 1) Corian® #871 bowl in “Bone” color;
 - 2) Sink bowl cut down to overall height of 5-3/16”;
 - 3) New 1” flange attached at perimeter of sink;
 - b. Cost and Shipping:
 - 1) Sink finishing and taxes are not included.

- 2) Refer to National Accounts Pricing Form for current cost and shipping information.

I. Dialysis Counters: Chemical Resistant, High Pressure Decorative Laminate

1. Framing: Provide 2 x 2, 2 x 4 and 1 x 3 wood frames with 3/4" plywood gussets as detailed.
2. Top with Shop Applied Trim: One layer 1/2", 40 lb. Density particle board over 3/4" construction grade plywood with chemically resistant plastic laminate ship applied with adhesive under pressure. Front edge of counter shall be finished with half round, 2" diameter birch trim. Provide 3/4" radius birch quarter round applied where top counter meets adjacent walls.
3. Panels: Both fixed and removable panels shall be 3/4" thick birch plywood with solid hardwood edge banding. Joints between panels shall be uniformly 1/16" to allow for removal without binding.
4. Hinged Access Panels: 3/4" thick birch plywood with solid hardwood edge banding. Install continuous stainless steel piano hinge with stainless steel spring-loaded magnetic catch.
5. Finishing:
 - a. Exposed framing and panel fronts, including all panel edges:
Paint type: P-5 Acrylic Benjamin Moore 023-Fresh Start primer and (2) coats acrylic semi-gloss Benjamin Moore M-29 D.T.M paint.
 - b. Birch bullnose and quarter round:
Paint type P-6; (2) coats stain and (2) coats polyurethane.
 - c. Interior cavity of counter including framing, gypsum board and electric raceways and boxes: Paint type P-15; (1) coat Acrylic direct to metal self priming semi-gloss Benjamin Moore M-29 D.T.M. paint.
6. Finish Schedule: Construct counter framing and install electrical raceways and boxes. Paint P-15 on cabinet interior including gypsum board face. Paint exterior frame and panel fronts / edges Paint P-5. Finish exposed birch trim with Paint P-6

J. Solid Surface Dividers: Provide 1/2 inch thick solid surface material. Ease all edges and hold divider back from front of counter 2". Provide profile as indicated on the drawings with a 2" radius at front edge. Notch divider at back splash and secure to upper cabinet and countertop with aluminum channel, caulked all around. Color options as indicated below.

1. For laminate countertop installations, use the following colors:
 - a. DuPont Corian Solid Surfacing. Color: Glacier White.
 - b. Wilsonart "Gibraltar" Solid Surfacing. Color: D354-SL Designer White.
 - c. Formica Solid Surfacing. Color: 108 Sail White.
2. For solid surface countertop installations:
 - a. Match countertop color.

2.2 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this Article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified.
 - 1. Do not use treated materials that do not comply with requirements of referenced woodworking standard or that are warped, discolored, or otherwise defective.
 - 2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
 - 3. Identify fire-retardant-treated materials with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.

- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Comply with performance requirements of AWWPA C20 (lumber) and AWWPA C27 (plywood). Use the following treatment type:
 - 1. Exterior Type: Organic-resin-based formulation thermally set in wood by kiln drying.
 - 2. Mill lumber before treatment and implement special procedures during treatment and drying processes that prevent lumber from warping and developing discolorations from drying sticks or other causes, marring, and other defects affecting appearance of treated woodwork.
 - 3. Kiln-dry materials before and after treatment to levels required for untreated materials.

- C. Fire-Retardant Particleboard: Panels complying with the following requirements, made from softwood particles and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 25 or less per ASTM E 84.

2.3 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets, except for items specified in Section 08710 - DOOR HARDWARE.

- B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602,100 degrees of opening, self-closing.

- C. Back-Mounted Pulls: BHMA A156.9, B02011.
 - 1. Provide white vinyl coated wire pulls for all operating drawers and panel fronts.

- D. Catches: Push-in magnetic catches, BHMA A156.9, B03131.

- E. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081] [BHMA A156.9, B04102; with shelf brackets, B04112.
- F. Drawer Slides: BHMA A156.9, B05091; side mounted and extending under bottom edge of drawer; full-extension type; epoxy-coated-steel with steel ball-bearings; of the following grades:
 - 1. Box Drawer Slides: Grade 1.
 - 2. File Drawer Slides: Grade 1HD-100.
 - 3. Keyboard Slides: Grade 1.
- G. Aluminum Slides for Sliding Glass Doors: BHMA A156.9, B07063.
- H. Door Locks: BHMA A156.11, E07121.
- I. Drawer Locks: BHMA A156.11, E07041.
- J. Grommets for Cable Passage through Countertops: Molded-plastic grommets and matching plastic caps with slot for wire passage.
- K. Utility Hooks: Stainless steel Type 304, Model EP, by Sugatsune America, Inc.
- L. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
 - 1. Satin Stainless Steel: BHMA 630 - Unless noted otherwise.
- M. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.4 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- C. Handrail Brackets: Cast from malleable iron with wall flange drilled [for exposed anchor and with support arm for screwing to underside of rail. Sized to provide 1-1/2-inch clearance between handrail and wall.
- D. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

- E. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

- 1. Wood Glues: 30 g/L.
- 2. Contact Adhesive: 250 g/L.

2.5 FABRICATION, GENERAL

- A. 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.
- B. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- 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 and Rails: 1/16 inch.
- D. Complete fabrication, including assembly, finishing, 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.
- 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.

2.6 INTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

- A. Grade: Custom.
- B. Wood Species and Cut: Match species and cut indicated for other types of transparent-finished architectural woodwork located in same area of building, unless otherwise indicated.
 - 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.

2.7 INTERIOR FRAMES AND JAMBS FOR TRANSPARENT FINISH

- A. Grade: Custom.
- B. Wood Species and Cut: Match species and cut indicated for other types of transparent-finished architectural woodwork located in same area of building, unless otherwise indicated.
- C. For frames or jambs wider than available lumber, use veneered construction. Do not glue for width.
- D. Fire-Rated Interior Frames and Jambs Where Indicated: Products fabricated from fire-retardant particleboard or fire-retardant medium-density fiberboard with veneered, exposed surfaces and listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.
 - 1. Fire Rating: 20 minutes.

2.8 PLASTIC-LAMINATE CABINETS

- A. Grade: Custom.
- B. AWI Type of Cabinet Construction: [Flush overlay].
- C. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:
 - 1. Horizontal Surfaces Other Than Tops: Grade HGS.
 - 2. Postformed Surfaces: Grade HGP.
 - 3. Vertical Surfaces: Grade HGS.
 - 4. Edges: Grade HGS.
- D. Materials for Semi-exposed Surfaces:

1. Surfaces Other Than Drawer Bodies: High-pressure decorative laminate, Grade VGS.
 - a. Edges of Plastic-Laminate Shelves: PVC tape, 0.018-inch minimum thickness, matching laminate in color, pattern, and finish.
 - b. For semi-exposed backs of panels with exposed plastic-laminate surfaces, provide surface of high-pressure decorative laminate, Grade VGS.
 2. Drawer Sides and Backs: Solid-hardwood lumber.
 3. Drawer Bottoms: Hardwood plywood.
- E. Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Grade BKL.
- F. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
1. As selected by Architect from laminate manufacturer's full range in the following categories:

2.9 PLASTIC-LAMINATE COUNTERTOPS

- A. Grade: Custom.
- B. High-Pressure Decorative Laminate Grade: HGS typically; HGP for chemical-resistant.
- 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. As selected by Architect from manufacturer's full range.
- D. Edge Treatment: As indicated, and if not indicated provide 4 inch postformed backsplash with integral side splashes and no-drip leading edge..
- E. Core Material: Exterior-grade plywood.
- F. Backer Sheet: Provide plastic-laminate backer sheet, Grade BKL, on underside of countertop substrate.

2.10 SOLID-SURFACING-MATERIAL COUNTERTOPS, WITH INTEGRAL SINK BOWLS WHERE INDICATED

- A. Grade: Custom.
- B. Solid-Surfacing-Material Thickness: 1-1/4 inch thick at countertops, 3/4 inch elsewhere.

- 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. Refer to the Materials and Color Selection Form for approved colors.
- D. Edge Treatment: Provide non-drip edge at all open countertop sides and fronts.
- E. Fabricate tops in one piece, unless otherwise indicated. Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication, and finishing.
 - 1. Fabricate tops with shop-applied edges of materials and configuration indicated.
 - 2. Fabricate tops with shop-applied, integral backsplashes.
 - 3. Fabricate tops with shop-installed sinks.
 - 4. Side splashes to be field-installed.
- F. Drill holes in countertops for plumbing fittings in shop.
- G. Integral Sink Bowls: Where indicated on the Drawings provide countertops with integral sink bowls. Install integral sink bowls in countertops in shop. Sink dimensions shall comply with applicable ADAAG regulations for undercounter clearances. Coordinate with size requirements, and drains and faucets specified in Section 15200 - Plumbing Fixtures and Equipment.
 - 1. ADA Requirement: Sink and piping shall not protrude into knee space from a location 27 inches high at a distance of 8 inches from the face of the countertop, to a location 9 inches high at a distance of 6 inches from the wall.

2.11 SOLID-SURFACING-MATERIAL DIVIDERS

- A. Grade: Custom.
- B. Solid-Surfacing-Material Thickness: 1/2 inch.
- 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. For plastic laminate installations:
 - a. Corian by DuPont, Glacier White, unless indicated otherwise on the Drawings.
 - b. Formica Solid Surfacing, 108 Sail White, by Formica unless indicated otherwise on the Drawings.
 - c. Gibraltar, #D354-SL Designer White, by Wilsonart unless indicated otherwise on the Drawings.
 - 2. For solid surface installations:
 - a. Match countertop color.

2.12 CLOSET AND UTILITY SHELVING

- A. Grade: Custom.
- B. Shelf Material: 3/4-inch (veneer-faced panel product with solid-lumber edge or hardwood edgeband as indicated).
- C. Cleats: 3/4-inch solid lumber.
- D. Wood Species: Any closed-grain hardwood.
- E. Field Painting: Paint Type P-5. Refer to Section 09900 - PAINTING for material and application requirements.

2.13 SHOP FINISHING

- A. Grade: Provide finishes of same grades as items to be finished.
- B. General: Finish architectural woodwork at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.
- C. Shop Priming: Shop apply the prime coat including backpriming, if any, for transparent-finished items specified to be field finished. Refer to Section 09900 - PAINTING for material and application requirements.
- D. Preparation 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. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to back of paneling and to end-grain surfaces.
- E. Transparent Finish: Comply with requirements indicated below for grade, finish system, staining, and sheen with sheen measured on 60-degree gloss meter per ASTM D 523:
 - 1. Grade: Custom.
 - 2. AWI Finish System TR-4: Conversion varnish.
 - 3. Staining: Match approved sample for color.
 - 4. Wash Coat for Stained Finish: Apply wash-coat sealer to woodwork made from closed-grain wood before staining and finishing.
 - 5. Open Finish for Open-Grain Woods: Do not apply filler to open-grain woods.
 - 6. Sheen: [Flat, 10-25] [Satin, 30-50] [Semigloss, 55-75] gloss units.
- F. Opaque Finish: Comply with requirements indicated below for grade, finish system, color, effect, and sheen, with sheen measured on 60-degree gloss meter per ASTM D 523.

1. Grade: Custom.
2. AWI Finish System OP-4: Conversion varnish.
3. Color: As selected by Architect from manufacturer's full range.
4. Sheen: [Flat, 10-25] [Satin, 30-50] [Semigloss, 55-75] gloss units.

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. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- C. 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.
- D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions, including those for adhesives used to install woodwork.
- F. 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 stainless steel finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- G. 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 60 inches 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.
- H. Cabinets: Install without distortion so 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 installation of hardware and accessory items as indicated.
1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 2. Trim cabinet bases to achieve handicap accessible height as noted on the drawings.
- I. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
1. Align adjacent solid-surfacing-material 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 sag, bow, or other variation from a straight line.
 3. Secure sidesplashes to tops with concealed metal brackets at 16 inches and to walls with adhesive.
 4. Calk space between backsplash and wall with sealant specified in Section 07920 - JOINT SEALANTS.
- J. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.

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