

SECTION 06 41 00

ARCHITECTURAL WOOD CASEWORK

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
1. [Architectural plastic laminate (high pressure decorative laminate) casework.]
 2. [Architectural wood-veneer-faced casework [with factory applied transparent finish]and related accessories.]
 3. [Hardwood trim[with factory applied transparent finish].]
 4. Plastic laminate (high pressure decorative laminate) countertops and splashes.
 5. [Miscellaneous high pressure decorative laminate [items]—~~or~~—[items including, but not necessarily limited to]:
 - a. [Shelving and supports.]
 - b. [Shelves at pass windows.]
 - c. [Janitor's closet shelf with mop strips.]
 - d. [Coat closet shelf, hanging rod, and supports.]
 - e. [Gurney guard.]
 - f. [Cubicle partitions.]
 - g. [Windowsills.]
 - h. [Window stools.]
 - i. [Accordion door ceiling sweep strip and jamb.]
 6. [Glass and glazing related to architectural wood casework items.]
 7. Sealant joints between plastic laminate countertops and adjacent surfaces.]
 8. Architectural wood casework accessories and hardware.]
- B. Related Sections:
1. Section 06 10 00 - Rough Carpentry
 2. Section 06 61 00 - Simulated Stone Fabrications
 3. [Section 08 80 00 - Glazing: Glass and glazing related to architectural wood casework items.]
 4. Section 09 91 00 - Painting: [Transparent][and][opaque] finishing.]

1.02 REFERENCE STANDARDS

- A. American National Standards Institute:
1. ANSI A161.2 - Performance Standards for Fabricated High Pressure Decorative Countertops.
 2. ANSI A208.1 - Mat-Form Wood Particleboard.
 3. ANSI A208.2 - Medium Density Fiberboard (MDF) For Interior Applications.
- B. Builders Hardware Manufacturers Association:
1. BHMA A156.9 - American National Standard for Cabinet Hardware.
- C. National Electrical Manufacturers Association:
1. NEMA LD3 - High-Pressure Decorative Laminates.
- D. South Coast Air Quality Management District:
1. SCAQMD Rule 1168 - Adhesive and Sealant Applications.
- E. U.S. Department of Commerce National Institute of Standards and Technology:

1. DOC PS-1 - Construction and Industrial Plywood.

F. [Woodwork Institute:]

1. WI - The WI Approach.
2. AWS - Architectural Woodwork Standards.

1.03 DEFINITIONS FOR CASEWORK ITEMS

- A. Exposed Exterior: Visible surfaces of units when doors, drawers, or other closures are in closed position;
- B. Exposed Interiors: Visible exterior and interior surfaces of units without closures; visible surfaces behind clear glass doors; bottoms of units more than 4 feet above floor, closure fronts and edges; and counter tops and splashes including their edges.
- C. Semi-Exposed : Visible interior surfaces of units when closures are in open position; surfaces and edges of shelves; interior surfaces of doors and drawers; bottoms of wall hung units 4 feet or less above floor; and tops of units 6 feet 6 inches or more above floor.
- D. Concealed Surfaces: All surfaces other than exposed or semi-exposed as defined above.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 1. Coordinate details of architectural wood casework with other work supporting, adjoining, or fastening to architectural wood casework.
 2. Coordinate architectural wood casework with partition construction including backing for the placement and installation of items fastening to partitions.
 3. Coordinated architectural wood casework work with installation of associated and adjacent components, [_____,] [plumbing rough-in,] [and] [electrical rough-in].
 4. [Coordinate factory and field finishing of architectural wood casework to assure identical match.]
 5. [Coordinate details of architectural wood casework with fabrication of [_____] .]
- B. [Pre-Installation Meeting:
- C. Sequencing:
 1. Sequence architectural wood casework work to ensure utility connections are achieved in orderly and expeditious manner.
 2. [Resilient flooring is to be installed underneath built-in architectural wood casework prior to installation of built-in architectural wood casework.]
- D. Scheduling:
 1. Provide information as required for proper placement of backing.

1.05 [SUSTAINABLE CHARACTERISTICS]

- A. Section 01 35 63 - Sustainability Project Requirements: Requirements for sustainable design compliance.
- B. Materials and Resources Characteristics:
 1. [Recycled Content Materials: Furnish materials with maximum available recycled content including:

SPEC NOTE *List materials specified in this section required to have recycled content.*

- a. [_____] .]

2. [Regional Materials: Furnish materials extracted, processed, and manufactured within 500 miles of Project site.]

SPEC NOTE *List materials specified in this section required to be regional materials.*

- a. [_____.]
3. Certified Wood Materials: [Furnish wood materials] **--or--**[Use a minimum of 50 percent of wood-based materials and products] certified in accordance with FSC Guidelines.

C. Indoor Environmental Quality Characteristics:

1. [Interior] Adhesives: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.
2. [Interior] Aerosol Adhesives: Maximum volatile organic compound content in accordance with GS-36.
3. [Interior] Flat and Non-Flat Paints: Maximum volatile organic compound content in accordance with GS-11.
4. [Interior] Composite Wood and Agrifiber Products: Contain no added urea-formaldehyde resins. Composite wood and agrifiber are defined as: particleboard, medium density fiberboard (MDF), plywood, panel substrates and door cores.

1.06 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. [Certified Wood Products: Submit Forest Stewardship Council (FSC) Chain of Custody Certificate from wood supplier of each wood and panel product. Provide statement from supplier that required quantity of FSC certified wood products can be delivered to project site in timeframe that will not delay project.]
- C. Samples:
 1. [Wood Veneer: Three samples of each specified wood, 12 by 12 inches[, apply specified factory finish to 2/3's of each sample].
 2. High Pressure Decorative Laminate: Three samples of each color specified or selected, minimum 6 by 6 inches.
 3. Actual sample items of proposed pulls and hinges, demonstrating hardware design, quality, and finish.
 4. Other Samples only as requested.
- D. Shop Drawings:
 1. Indicated materials, component profiles and elevations, assembly methods, joint details, anchorage details, accessory listings, hardware locations, and schedule of finishes,
 2. Show all details full size.
 3. Show type, size, and spacing of fastenings and method of installation when not indicated on the Drawings.
 4. Show grain direction for wood.
 5. Include field measurements and indicate coordination with pertinent field conditions, such as plumbing and electrical items.
 6. Preliminary as well as final shop drawing submittals of items scheduled for WI conformance shall bear both "WI Certified Compliance Label" as well as Contractor's approval stamp before University's Representative will consider drawings for review.
- E. Certifications:
 1. Submit certification indicating that fabricator meets qualifications specified in this Section.
 2. Submit certification indicating that installer meets qualifications specified in this Section.
 3. Prior to delivery of architectural wood casework, submit copy of fabricator' "WI Certified Compliance Certificates" certifying that architectural wood casework furnished fully meets all requirements of AWS grades specified.

4. Installation Certificates: Submit copy of "WI Installation Certificate" certifying that installation complies with AWS grade specified.

1.07 [SUSTAINABLE DESIGN SUBMITTALS]

- A. Section 01 35 63 - Sustainability Project Requirements: Requirements for sustainable design submittals.
- B. Manufacturer's Certificate: Certify products meet or exceed specified sustainable design requirements.
 1. Materials Resources Certificates:
 - a. Certify source and origin for [salvaged][and][reused] products.
 - b. Certify recycled material content for recycled content products.
 - c. Certify source for regional materials and distance from Project site.
 - d. Certify lumber is harvested from Forest Stewardship Council Certified well managed forest.
 2. Indoor Air Quality Certificates:
 - a. Certify volatile organic compound content for each interior [adhesive] [and] [sealant] and related primer.
 - 1) Provide product data for adhesives, sealants, sealants primer and aerosol adhesives used in the interior of the building highlighting VOC content of each product used. Adhesives and sealants must meet or exceed the VOC limits of SCAQMD Rule #1168. Refer to the LEED 2009 for New Construction and Major Renovations for acceptable VOC limits
 - 2) Provide a listing of each indoor adhesive, sealant, sealant primer and aerosol adhesive product used in the interior of the project. Include manufacture's name, product name, specific VOC data (g/L less water) for each product, and the corresponding allowable VOC from the referenced standard.
 - b. Certify each composite wood and agrifiber product contains no added urea-formaldehyde resins.
 - 1) Provide product Data for composite wood and agrifiber product highlighting that product contain no urea-formaldehyde resin.
 - 2) Provide a listing of each composite wood and agrifiber product installed in the interior of the building. Confirm that each product does not contain any added urea-formaldehyde.
- C. Product Cost Data: Submit cost of products to verify compliance with Project sustainable design requirements. Exclude cost of labor and equipment to install products.
 1. Provide cost data for the following products:
 - a. Salvaged products.
 - b. Reused products.
 - c. Products with recycled material content.
 - d. Regional products.
 - e. Certified wood products.

1.08 QUALITY ASSURANCE

- A. Perform work in accordance with AWS [Custom]~~—or—~~[Premium] Grade.
- B. Quality Standard: Comply with AWS Sections 10 - Casework and Section 11 –Countertops with high pressure plastic laminate cladding on both exposed and semi-exposed surfaces. On Doors specified to have Plastic Laminate finishes, include Plastic Laminate on all faces and all edges.

- C. Fabricator's Qualifications: Fabricator shall be equipped for and experienced in doing work including fabricating, finishing, and installing equal to standard specified and be able to provide evidence of such experience to [Architect's] satisfaction.
 - 1. Minimum of five years experience in the manufacture of custom plastic laminate casework equal to standard specified herein.
 - 2. Minimum of 10 completed installations of similar size and requirements which can be inspected prior to approval of submittals.
 - 3. Financial and technical resources of sufficient scope to assure prompt and satisfactory performance in production and delivery of custom plastic laminate casework specified.
 - 4. Financial and technical resources of sufficient scope to assure prompt and satisfactory installation or connection of custom plastic laminate casework.

- D. Installer Qualifications:
 - 1. Installation shall be by a firm that is authorized by the manufacturer for fabrication and installation.
 - 2. Installer must demonstrate successful experience in installing finish carpentry items similar in type and quality to those required for this project with a minimum three years of documented experience.

- E. Materials used must meet minimum University's Environmental Health and Safety (EH&S) requirements for Infection Control.

- F. Millwork specified under this heading shall be manufactured in accordance with the standards established in the Manual of Millwork of the Woodwork Institute of California latest Edition in the grade or grades hereinafter specified or as shown on the Drawings. If the manufacturer of millwork is not a WIC licensee, the Contractor shall furnish to University's Representative, prior to installation, a Certificate of Reinspection by the WIC indicating that the millwork in question meets the requirements of the WIC grade specified. If the manufacturer of millwork is a WIC licensee, each unit of millwork shall bear the WIC Certified Compliance grade stamp indicating the grade specified, and by the completion of the job WIC Certified Compliance Certificates shall have been issued certifying that the products furnished fully meet the requirements for the grade specified. The foregoing shall not be construed to limit the power and authority of the University's Representative to reject any millwork which does not, in University's Representative's opinion, meet with any one or more of the specifications of this Contract.

- G. The University's Representative shall observe fabrication of cabinets at manufacturer's plant before delivery to the site at a stage when all fabrication techniques are visible. The University's Representative shall be reimbursed by Contractor for travel expenses by University's Representative in connection with this observation in the event the fabrication plant is beyond 100 miles from the Project Site.

1.09 MOCKUP

- A. Provide mockup of half size base and upper cabinets, including hardware. Mockup to include each edge, corner and intersection condition for the project.

1.10 DELIVERY, STORAGE, AND PROTECTION

- A. Comply with minimum requirements in specification Section 01 60 0 - Product Requirements.

- B. Deliver architectural wood casework items to job site only after proper facilities are available for handling, storing, and protecting items; receiving areas are broom cleaned; exterior openings are closed up; wet work and mechanical and electrical rough ins are completed.

- C. Provide temporary protective covers for items during delivery, installation, and until final acceptance of Project.

1.11 SITE CONDITIONS

- A. Environmental Requirements:
 - 1. Provide proper heat and humidity in area of storage and installation to maintain equilibrium moisture content in wood until final acceptance of the project.
 - 2. During and after installation of Work of this section, maintain same temperature and humidity conditions in building spaces as will occur after occupancy.
 - 3. [Factory Finishing: Apply finishes under adequate lighting conditions and maintain temperature near 70 degrees Fahrenheit during application.]

PART 2 PRODUCTS

2.01 COMPONENTS

- A. General:
 - 1. Material Grades: AWS [Custom]—~~or~~—[Premium] Grade [or better] unless otherwise noted.
 - 2. Lumber and plywood shall be kiln-dried to equilibrium moisture content suitable for fabrication in shop and suitable for use intended.
 - 3. [Wood used in fabrication of architectural woodwork to come from Forest Stewardship Council (FSC) certified forests.]
- B. Base Material for High Pressure Decorative Laminate:
 - 1. [Panel Core (Particleboard):]
 - a. Description: A medium density mat-formed flat panel consisting of particles of wood bonded together with a urea-formaldehyde free synthetic resin or other suitable binder, compressed to proper density and cured under heat and pressure. Particleboard shall meet the requirements of ANSI A208.2, Class MD.
 - b. Product: SierraPine Limited's "Medite II"; Temple-Inland Inc.'s "TemStock-Free"; or equal.
 - 2. [Panel Core (Particleboard):]
 - a. Description: A mat-formed flat panel consisting of particles of wood bonded together with a synthetic resin or other suitable binder, compressed to proper density and cured under heat and pressure. Particle board to urea-formaldehyde free and made of recycled content. Particleboard shall meet the requirements of ANSI A208.1, Table 1 Grade 1-M-3.
 - b. Product: Panel Source International's "PureKor Particleboard Plus"; or equal.
 - 3. [Plywood Core (Where Noted): Closed grained hardwood plywood with WI "Sound" (2) Grade face veneer, and crossband under the face veneer shall be WI "Industrial" (3) grade or better.
 - 4. Lumber (Solid Stock): Gum, Birch, or Sugar Pine.
- C. High Pressure Decorative Laminate:
 - 1. Description:
 - a. High pressure decorative laminate in wood grain or solid colors with textured surfaces.
 - b. Plastic Thickness and Grade: Meet requirements of NEMA LD3.
 - 1) Typical Horizontal Surfaces: HGS, 0.048 inch nominal thickness.
 - 2) Typical Vertical Surfaces: VGS, 0.028 inch nominal thickness.
 - 3) Typical Postforming Surfaces: HGP, 0.042 inch, PF 42.
 - 4) Door and Drawer Edges: VGP, 0.028 inch nominal thickness.
 - 5) Cabinet Liners: CLS, 0.020 inch nominal thickness.
 - 6) Balancing Sheets: BKL, 0.020 inch nominal thickness.

2. Manufacturers: Formica Corp.; Wilsonart International Inc.; Nevamar Decorative Surfaces; Abet Inc.'s; or equal.
 3. Color and Finish: As indicated on Drawings.
- D. [Wood Veneer Types for Transparent Finish: Veneers to be AWS Grade [A]—~~or~~—[AA].
1. Species: Maple.
 2. Cut Quarter sliced.
 3. Veneer Matching Within Panel: Sequence matched, booked matched.
 4. Character: Figured.
 5. Flitch: General Wood and Veneers No. 763163-sf.
 6. Color: Clear/natural with anti graffiti coating.
 7. Veneer must be approved by University's Representative.
- E. Wood Veneer for Opaque Finish: Use one of the following materials.
1. Paint grade hardwood veneer plywood or particle board.
 2. Medium density overlay plywood or particle board.
- F. Hardwood Lumber for Transparent Finish:
1. Oak: [Red,]—~~or~~—[White,] [plain]—~~or~~—[quarter]—~~or~~—[rift]s awn AWS premium grade for transparent finishing.
 2. Birch: [Select Red,]—~~or~~—[Select White,] [plain]—~~or~~—[quarter]—~~or~~—[rift]s awn AWS premium grade for transparent finishing.
 3. Maple: Plain sliced cut, AWS premium grade, horizontal grain direction, to receive transparent finishing.
 4. Cherry: Plain sliced cut, AWS premium grade, horizontal grain direction, to receive transparent finishing.
- G. [Lumber for Opaque Finish: Paint grade hardwood.]
- H. Lumber for Concealed Locations: Douglas Fir
- I. Plywood for Concealed Locations: Douglas Fir, no surface requirement.
- J. Miscellaneous Wood Items:
1. [Plywood Backing: Prod. Std. PS 1 grade structural 1, C-C exterior, with no added urea-formaldehyde resins, fire-retardant treated in accordance with requirements of Section 06100 - Rough Carpentry.]
 2. Polyester-Surfaced Flakeboard: Meet requirements of NEMA LD3 for vertical surfaces. Colors and textures as selected.
 3. Perforated Hardboard:
 - a. Description: Tempered hardboard, smooth surface one side, uniformly punched 9/32 inch diameter holes on 1 inch centers.
 - b. Product: Masonite Corp.'s "Peg-Board"; Simpson Timber Co.'s "Simpson Tempered Perforated Hardboard;" Georgia-Pacific's "Perforated Hardboard, Tempered"; or equal.
 4. Hardboard:
 - a. Description: Smooth surface both faces.
 - b. Product: Masonite Corp.'s "Tempered Duolux"; Simpson Timber Co.'s "Simpson Tempered Hardboard"; Georgia-Pacific's "Hardboard Tempered"; or equal.
- K. [Miscellaneous Steel Supports: Meet requirements of Section 05 50 00 - Metal Fabrications for materials, fabrication, and finishing.]

2.02 ACCESSORIES

- A. Concealed Fasteners:
 - 1. Typical Unfinished Bolts, Lag Bolts (Lag Screws), Nuts, and Washers: Low carbon steel standard fasteners, externally and internally threaded, ASTM A307; malleable washers.
 - 2. Nails, Typical Interior: Common wire galvanized, typical.
 - 3. Screws: Self-drilling and self-tapping type, size as noted. ITW Buildex's "TEKS Fasteners"; The Rawlplug Co., Inc.'s "Rawl Self-Drilling Screws"; or equal.
 - 4. Screws, Trim Head:
 - a. Description: Self-drilling, self-tapping screws with trim head for attaching wood trim to steel framing.
 - b. Product: United States Gypsum Co.'s "USG Trim Head Screws, Wood Trim to Interior Steel Framing Type"; ITW Buildex's "Hi-Lo Drywall Screw, Trim Head"; or equal.
 - 5. Expansion Anchors: Meet requirements of Section 05 05 23 - Standards for Anchors and Fasteners.
- B. Exposed Fasteners:
 - 1. Comply with requirements for fasteners as indicated on Drawings for type and location at semi-exposed locations.
 - 2. Provide cadmium plated finish type formed washers for all anchors whose heads are exposed in backs of cabinets
- C. Adhesive for High Pressure Decorative Laminate: Adhesive must meet the following requirements.
 - 1. [Meet or exceed VOC limits for adhesives and sealants. Adhesives must meet or exceed the VOC limits of SCAQMD #1168 by, and all sealants used as filler must meet or exceed Bay Area Air Quality Management District Reg. 8, Rule 51.]
 - 2. [Interior] Aerosol Adhesives: Maximum volatile organic compound content in accordance with GS-36.
 - 3. [Meet all applicable air quality requirements.]
 - 4. Recommended by high pressure decorative laminate manufacturer.
- D. Architectural Wood Casework Accessories:
 - 1. [Glass Products: Meet requirements of Section 08 80 00 - Glazing.]
 - a. Clear Glass: 1/8 inch double strength clear polished plate or float, glazing quality.
 - b. Clear Tempered Plate: Fully tempered, clear polished plate or float, glazing quality, with edges polished and rounded where noted.
 - c. Wall Mirror: 1/4 inch clear polished plate, mirror glazing quality, copper-backed, edges painted black with radius edges as noted.
 - 2. [Glazing Materials: Meet requirements of Section 08 80 00 - Glazing.]
 - 3. [Grommets: Wood Technology, Inc., Series 1350 or equal, 2-3/8 inches Dia., Black. Install in countertops at each electrical and data outlet location, unless otherwise noted, approximately 36 inches on center typically.

2.03 ARCHITECTURAL WOOD CASEWORK HARDWARE

- A. Heavy Duty Shelf Standards and Heavy-Duty Lock Nut Brackets: At open adjustable shelving in central work areas. Vertical slotted type, adjustable at 1", Knape & Vogt #80A48 and 12" bracket Knape & Vogt #180A12, or equal.
- B. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standard supports and coordinated shelf rests, polished chrome finish, for nominal 1 inch spacing adjustments. Knape & Vogt #255; Stanley; or equal.
- C. Shelf Brackets: Formed steel bracket, Matte Nickel Finish, Hafele #287.73.323; or equal.
- D. Drawer and Door Pulls: Hafele steel handles 117.31.632, nickel plated matte; or equal.

- E. Sliding Door Pulls: Elongated shape, tubular type 5/16-inch diameter, 4-inch centers; Stanley 4484, Ives #38; or equal.
- F. Cabinet Locks: National 8173D-26D at Doors and 8178-26D at Drawers Pin tumbler locks, 3/4 inch bolt travel, Corbin or equal. Each room keyed differently with a master key. Furnish two keys for each lock and two master keys.
- G. Catches: Magnetic type, Stanley SP46, K & V; or equal.
- H. Drawer Slides:
 - 1. Type: Standard extension
 - 2. Static Load Capacity: Heavy Duty Grade 200 pound side mounted
 - 3. Mounting: Side mounted
 - 4. Stops: Integral type
 - 5. Features: Provide self closing/stay closed type. Sequential movement, silenced open and closed, handed mounting rail.
 - 6. Manufacturers: Accuride International Inc.; or equal.
- I. Hinges: Full surface (decorative) self-closing type, Grade 1 (Institutional); Hafele Aximat Hinge; or equal. Provide 2 pair per door up to 34 inches in height: 3 pair for doors higher than 34 inches.
- J. Sliding Door Track Assemblies: (not used).

2.04 FABRICATION

- A. Preparation:
 - 1. Verify dimensions of receiving spaces at job site.
 - 2. Verify details and dimensions of equipment and fixtures integral with architectural plastic laminate casework for proper fit and accurate alignment.
- B. General:
 - 1. Shop fabricate and assemble complete architectural wood casework in complete units insofar as dimensions permit easy handling, shipment, permitting passage through building openings, and installation.
 - 2. If provisions for the AWS Grade specified are in conflict with or have been modified by Drawings and Specifications, the modifications by Drawings and Specifications shall govern.
 - 3. Conceal nailing where possible and set nail heads for putty in exposed portions.
 - 4. Plastic Laminate:
 - a. Bond plastic laminate to core material using adhesives and techniques recommended by adhesive manufacturer and ANSI A161.2.
 - b. Take care that moisture imbalance does not exist between plastic laminate and substrate before fabrication.
 - c. Provide minimum radius of 1/8 inch at inside corners of cut-outs; file edges smooth to prevent stress cracking.
 - d. Saw, drill, edge file, sand, and rout plastic laminate with decorative side up to prevent cracking or chipping of laminate surface:
 - 1) Use carbide tipped cutting edges on saws, drills, and routers.
 - 2) Drill plastic laminate with a wood backing to prevent "breakout" at bottom of drilled holes.
 - 3) Cut curved edges slightly oversize and finish by sanding, filing, or routing for smooth edges.
 - e. Apply high pressure decorative laminate finish in full uninterrupted sheets consistent with manufactured sizes.
 - f. Fit corners and joints hairline.

- g. Apply laminate by grain matching adjacent sheets to book matching.
 - h. Cap exposed plastic laminate finish edges with material of same finish and pattern.
 5. [Hardwood Trim:
 - a. Provide special attention to color and grain of wood pieces to be sure they are well matched for color and grain.
 - b. Match grain characteristics of hardwood lumber with adjacent veneer when lumber is visible in finished work.]
 6. When necessary to cut and fit onsite, fabricate materials with ample allowance for cutting. Furnish trim for scribing and site cutting.
 7. Provide cut-outs as required for mechanical, electrical, data, communications, telephone, equipment, toilet accessory and other similar items as indicated on Drawings.
 8. Cut outs to be close enough to be completely closed with cover plates and trim, including all below counter locations. Verify locations of cutouts from on-site dimensions. Prime paint cut edges.
 9. Pre-cut Openings: Fabricate casework with pre-cut openings, where possible, to receive hardware and similar items. Locate openings accurately and use templates or rough-in diagrams for proper size and shape.
 10. Perform corrective measures necessitated by nonconformance with AWS standards. [Architect's] opinion will govern discrepancies.
 11. Ease and grind smooth all edges. Curve or round corners where noted.
 12. Casework anchorage screw heads shall be visually aligned both horizontally and vertically within individual and adjacent units.
- C. [Architectural Plastic Laminate Casework:]
1. Fabricate architectural plastic laminate casework as detailed on the Drawings and in accordance with AWS [Custom]—~~or~~—[Premium] grade [or better] unless otherwise noted.
 2. Construction Style: [As indicated on the Drawings]—~~or~~—[AWS Type A flush overlay design].
 3. Apply high pressure decorative laminate to all exposed exterior, exposed interior, and semi-exposed surfaces unless otherwise noted.
 4. Door and Drawer Fronts: Apply edge laminate prior to face laminates. Face laminate shall cover the edge of the edge laminate.
 5. Interior face of drawers shall be covered with high pressure decorative laminate balancing sheet or cabinet liner.
 6. Interior faces of hinged doors shall be covered with high pressure decorative laminate cabinet liner.
 7. [Interior face of sliding doors shall be covered with high pressure decorative laminate balancing sheet or casework liner.]
 8. Shelf supports shall be recessed metal shelf standards, unless otherwise noted. Bored-hole shelf support systems are not acceptable. Cabinet material shall not contain evidence of a bored-hole system. When compliance to the CBC seismic regulations is required, provide approved means of positive shelf restraint for all open shelf cabinets. Shelves deeper than 24 inches shall have three end supports.
 9. Any hole cut for pipe or conduit penetrations into cabinet interiors shall be cleanly bored or cut with appropriate hole saw. Seal all penetrations. Provide chrome escutcheon at all sinks and drain line penetrations.
 10. Drawer Bottoms: For drawer depths less than 4 inches, 1/4-inch plywood minimum and for drawer depth of 4 inches and greater: 3/8 inch plywood minimum.
 11. Provide space at rear of casework where required for mechanical and electrical fittings.
 12. [Provide cut-outs at base of casework for foot control where noted.]
 13. Do not expose edges on face of casework.
 14. Compensate high pressure decorative laminate on one face of base material with laminate balancing sheet on opposite face.
- D. Architectural Wood-Veneer-Faced Casework:

1. Fabricate architectural wood-veneer-faced casework as detailed on the Drawings and in accordance with AWS [Custom]—~~or~~—[Premium] grade [or better] unless otherwise noted.
 2. Construction Style: [As indicated on the Drawings]—~~or~~—[Type A flush overlay design].
 3. Exposed Exterior, Exposed Interior, and Semi-Exposed Surfaces: Fabricate with [] hardwood veneer as specified in Materials Article of this section.
 4. Shelf supports shall be recessed metal shelf standards, unless otherwise noted. Bored-hole shelf support systems are not acceptable. Cabinet material shall not contain evidence of a bored-hole system. When compliance to the CBC seismic regulations is required, provide approved means of positive shelf restraint for all open shelf cabinets. Shelves deeper than 24 inches shall have three end supports.
 5. Any hole cut for pipe or conduit penetrations into cabinet interiors shall be cleanly bored or cut with appropriate hole saw. Seal all penetrations. Provide chrome escutcheon at all sink and drain line penetrations.
 6. Drawer Bottoms: For drawer depths less than 4 inches, 1/4-inch plywood minimum and for drawer depth of 4 inches and greater: 3/8 inch plywood minimum.
 7. Provide space at rear of casework where required for mechanical and electrical fittings.
 8. [Provide cut-outs at base of casework for foot control where noted.]
- E. [Miscellaneous High Pressure Decorative Laminate Items:]
1. Fabricate items as detailed on the Drawings and in accordance with AWS [Custom]—~~or~~—[Premium] grade [or better] specifications unless otherwise noted.
 2. Compensate high pressure decorative laminate on one face of base material with laminate balancing sheet on opposite face.
- F. [High Pressure Decorative Laminate Countertops:]
1. Fabricate countertops as detailed on the Drawings and in accordance with AWS [Custom]—~~or~~—[Premium] grade [or better] specifications unless otherwise noted.
 2. [Use plywood as base material for high pressure decorative laminate at countertops with sinks. Extend plywood at least 2 feet each way from sinks.]
 3. Countertops to be 3/4 inch thick unless otherwise indicated.
 4. Back splashes to be finished 3/4 inch thick unless otherwise indicated and to be secured to countertops with concealed metal fastenings and with contact surfaces set in waterproof adhesive.
 5. Provide cut outs as required for mechanical, electrical, data, communications, telephone, equipment and other similar items.
 6. [Cover exposed edges of countertops and back splashes with high pressure decorative laminate.]
 7. [Cover back splashes with high pressure decorative laminate.]
 8. Provide cut outs as required for mechanical, electrical, data, communications, telephone, equipment and other similar items.
 9. Exposed edges to have polyethylene edges unless otherwise indicated.
- G. [Architectural Plastic Laminate Casework Accessories: Make provision in accordance with requirements of items indicated.]
- H. [Architectural Plastic Laminate Casework Hardware:]
1. Make provisions in accordance with hardware manufacturer's templates.
 2. Fit hardware to architectural plastic laminate casework and attach for smooth, trouble-free nonbinding operation using hardware manufacturer's recommended fasteners.
 3. Hinges: Install two hinges on each door leaf less than 48 inches high. Install three hinges on each door leaf over than 48 inches high.

2.05 [FACTORY (SHOP) FINISHING

- A. Shop finish architectural plastic laminate casework in accordance with AWS [Custom]—~~or~~—[Premium] grade [or better] unless otherwise noted.

- B. Shop finish architectural plastic laminate casework to maximum extent possible. Any required field finishing is part of work of this section.
- C. Factory Conditions: Apply finishes under adequate lighting conditions and maintain temperature near 70 degrees Fahrenheit during application.
- D. Preparation:
 - 1. Thoroughly hand-sand wood surfaces and set exposed nails [and screws]
 - 2. Apply wood filler in exposed nail [and screws] indentations..
 - 3. On items to receive transparent finishes, use wood filler matching surrounding surfaces and of types recommended for applied finishes.
 - 4. Eliminate evidence of cross-sanding by final sanding in direction of grain.
 - 5. Ease knife-edge corners by sanding.
 - 6. Verify surfaces are dry, free from dust, glue stains, and other foreign matter, and in proper condition to receive finish.
- E. Transparent Finishing System:
 - 1. [Architectural Wood-Veneer-Faced Casework, Exposed Exterior and Exposed Interior Surfaces: AWS System [3 Lacquer, Postcatalized]—~~or~~—[_____].]
 - 2. [Architectural Wood-Veneer-Faced Casework, Exposed Exterior and Exposed Interior Surfaces: Match system specified for wood doors in Section 08 14 00 - Wood Doors.]
 - 3. Architectural Wood Casework Drawers and Interiors: Sanding sealer with clear semi-gloss lacquer top coat.
 - 4. [_____]: [AWS System [_____].]
- F. Application:
 - 1. Ensure no evidence of finish materials is present on hardware after final building clean-up with exception of prime-finished hardware attached for finish painting. Contractor may achieve this result by sequencing hardware attachment, removal after first fitting, protecting, cleaning to original hardware finish, or taking other acceptable measures.
 - 2. Do not apply finish over preceding coat unless preceding coat is completely dry.
 - 3. Sand finish between coats.
 - 4. Give free-to-warp components sufficient number of equal coats of finishing material on opposite sides and edges to preserve balance.
 - 5. Wherever complete and satisfactory coverage is not obtained by number of coats specified, apply additional coats until complete, uniform coverage is obtained.
 - 6. Ensure completed work is even, uniform, and clean.]

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine construction scheduled to receive architectural wood casework for conditions that will adversely affect installation.
- B. Verify adequacy of backing and support framing.
- C. Verify location and sizes of utility rough-in associated with work of this section.
- D. Verify that mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work
- E. Do not install work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install architectural wood casework in accordance AWS Custom]—~~or~~—[Premium] grade standards and reviewed Shop Drawings.
- B. [Hardwood Lumber and Veneers: Provide special attention to the color and grain of the wood pieces to be sure that they are installed in proper order.]
- C. Set and secure architectural wood casework items in place, rigid, plumb and level.
- D. Secure casework to floor using appropriate angles and anchorages.
- E. Use concealed joint fasteners to align and secure adjoining cabinet units.
- F. Carefully scribe architectural wood casework abutting other components with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
- G. [Miter inside and outside corners of running trim.]
- H. Fastenings:
 - 1. Use fastenings for securing work to adjoining construction as detailed on the Drawings. Where type, size, or spacing of fastenings is not shown or specified, install in accordance with reviewed shop drawings.
 - 2. Conceal nailing where possible and set nail heads for putty in exposed portions.
- I. [Thoroughly hand sand wood surfaces. Take care that cross sanding is removed by final sanding in direction of grain; ease “knife-edge” corners by sanding. Wood surfaces shall be free from dust, glue, stains, and other foreign matter and in proper condition to receive finish.]
- J. [Glass and Glazing: Meet requirements of Section 08 80 00 - Glazing.]
- K. Seal joints between high pressure decorative laminate countertops and adjacent surfaces with sealant.

3.03 ADJUSTING

- A. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

- A. See Section 01 74 00 - Cleaning.
- B. Wash finished architectural wood casework in strict accordance with product manufacturer's directions and ensure that washed surfaces do not differ from clean unwashed surfaces. Any difference will be considered unsatisfactory architectural wood casework.

3.05 PROTECTION OF INSTALLED WORK

- A. Protect installed Work under provisions of Section 01 76 00 - Protecting Installed Work.
- B. Protect architectural wood casework from damage until University's final acceptance.
- C. Remove damaged, soiled, or otherwise disfigured portions of architectural wood casework and replace with new prior to final acceptance.

END OF SECTION