

SECTION 06 41 00
ARCHITECTURAL WOOD CASEWORK

PART ONE: GENERAL

1.1 Summary

1.1.1 Section includes general administrative and procedural requirements governing execution of the Work for exterior and interior millwork including, but not limited to, the following:

1. Specially fabricated cabinet units.
2. Countertops.
3. Cabinet hardware.
4. Factory finishing.

1.2 Related Documents

1.2.1 Construction Documents and general provisions of the Agreement Between Owner and Construction Manager and the Guaranteed Maximum Price (GMP) Amendment, including Division 00 General Conditions of the Contract for Construction and Supplementary Conditions and other Division 01 Specification Sections, applicable to this Section. All methods herein are to follow all applicable state and local code as well as installation standards.

1.2.2 Comply with the requirements of the various specifications and standards referred to in the contract Plans and Specifications, except where they conflict with the specific requirements of these contract Plans and Specifications. Such reference specifications and standards.

1.3 Reference Standards

1.3.1 American National Standards Institute (ANSI)

- a. ANSI A208.1-2009 Particle Board
- b. ANSI A208.2, Medium Density Fibreboard (MDF).
- c. ANSI/HPVA HP-1, American National Standard for Hardwood and Decorative Plywood.

1.3.2 American Society for Testing and Materials (ASTM)

- a. E84-09 Surface Burning Characteristics of Building Materials

1.3.3 American Hardboard Association (AHA)

- a. A135.4-04 Basic Hardboard

1.3.4 American Lumber Standard Committee, Incorporated (ALSC)

- 1.3.5** AMERICAN Society of Mechanical Engineers (ASME)
 - a. B18 Square, Hex, Heavy Hex and Askew Head Bolts and Hex, Heavy Hex, Hex Flange, Lobed Head, and Lag Screws
- 1.3.6** Builders Hardware Manufacturers Association (BHMA)
 - a. A156.9-03 Cabinet Hardware
 - b. A156.11-04 Cabinet Locks
 - c. A156.16-02 Auxiliary Hardware
- 1.3.7** Hardwood Plywood and Veneer Association (HPVA)
 - a. HP1-09 Hardwood and Decorative Plywood
- 1.3.8** National Electrical Manufacturers Association (NEMA)
 - a. LD 3-05 High Pressure Decorative Laminates
- 1.3.9** Architectural Woodwork Institute (AWI)
 - a. Architectural Woodwork Quality Standards
- 1.3.10** National Hardwood Lumber Association (NHLA)

1.4 Submittals

- 1.4.1** All submittals shall be made in accordance to section 01 33 00 and as specified herein. Contractor is to submit the following to Owner and/or Consultant for approval prior to construction and fabrication:
 - 1.4.1.1** Shop Drawings indicating fabrication and installation methods, to include plans, elevations, component details and attachments to other work. Indicate required field dimensions, materials, finishes, substructure, profiles of each decorative metal member, fittings, joinery, fasteners, anchorages and additional accessory items.
 - 1.4.1.2** Millwork plans and elevations to be not less than ¼” scale
 - 1.4.1.3** Millwork Detail items to be half full size scale for sections and details (1:50)
 - 1.4.1.4** Submit three (3) samples for each exposed finish as follows:
 - 1.** For each species and cut of lumber and panel products with non-factory-applied finish.
 - 2.** For each finish system and color of lumber and panel products with factory-applied finish.
 - 1.4.1.5** Manufacturer's Certification to verify materials comply with specified requirements and suitable for intended application.
 - 1.4.1.6** List of Acceptable sealers for fire retardant treated materials
 - 1.4.1.7** Product data for each type of process, factory and non-factory-fabricated product. Indicate component materials, dimensions, profiles, textures, colors and include construction and application details.
 - 1.4.1.8** Warranty

1.5 Quality Assurance

- 1.5.1** Comply with applicable provisions for Premium Grade as defined in the latest edition of the AWI Quality Standards for all materials, fabrication and workmanship for all work of this Section.
- 1.5.2** Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- 1.5.3** Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
- 1.5.4** All work of this Section shall be performed by skilled mechanics of the trade and shall be of the highest quality. Company specializing in manufacturing the products specified in this section with minimum five years of documented experience. Comply with applicable Industry Standards for all work and materials as specified. Such Industry Standards are to include but not be limited to the applicable provisions or standards in this section.
- 1.5.5** Mock-Up: Provide a full size mock-up of typical base cabinet, wall cabinet, and countertop, including hardware, finishes, and plumbing accessories for approval prior to production. Mock-up will be provided for evaluation of surface preparation techniques and application workmanship for each type finish paneling and sanding and running trim using manufacturer approved installation methods. Do not proceed with production work until workmanship and finishes are approved by Architect and/or Owner and/or designer. Mock-up may remain as part of the work.

1.6 Coordination

- 1.6.1** Coordinate installation of decorative millwork items. Furnish shop drawings, templates, and directions for a complete installation. Deliver all required items, functional hardware and decorative hardware to Project site in time for installation.

1.7 Delivery, Storage and Handling

- 1.7.1** Protect materials against weather and contact with damp or wet surfaces. Stack lumber, plywood and other panels flat with spacers between each bundle to provide air circulation. Provide for air circulation within and around stacks and under temporary coverings.
- 1.7.2** Deliver materials only when environmental conditions meet requirements specified for installation areas. If materials must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

- 1.7.3** Environmental Limitations: Do not deliver or install materials until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART TWO: PRODUCTS

2.1 General

- 2.1.1** Acceptable manufacturer/supplier as specified in contract drawings and/or Interior Design drawing set and specifications or an Owner approved equal. Approved equals and/or substitutions will only be approved for Work if submitted and approved in accordance with provisions of Section 01 25 00.

2.2 Materials

- 2.2.1** All materials shall be furnished to the quality as specified in the construction drawings and in accordance with the Architect's/Interior Design specifications. All wood plastics and composites qualities shall meet and/or exceed industry standards for the specified application. Concealed, exposed or semi-exposed surface finishes/species are to be per Architect or Interior Designer specifications/Finish Legends or approved recommendation by manufacturer.

2.3 Lumber

- 2.3.1** All lumber shall be kiln-dried to the average moisture content as recommended by the AWI Quality Standards, latest edition appropriate for the regional climatic conditions of the project site.
- 2.3.2** Hardwood Lumber: NHLA; Graded in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Grade II/Custom.
- 2.3.3** Softwood Lumber: NIST PS 20; Graded in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Grade II/Custom

2.4 Panel materials

- 2.4.1** Veneer Faced Plywood Finish: HPVA HP-1; graded in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, core of particleboard, medium density fiberboard, strawboard, or engineered combination of core materials listed; type of glue recommended for specific application; thickness as required; face veneer as follows:
- a.** Exposed Surfaces: Grade AA, refer to finish legend for species, plain sliced, slip-matched.
 - b.** Semi-Exposed Surfaces: Grade A, refer to finish legend for species, rotary cut, random matched.

2.4.2 Medium Density Fiberboard (MDF): ANSI A208.2; type as specified in AWI/AWMAC Architectural Woodwork Quality Standards Illustrated; composed of wood fibers pressure bonded with moisture resistant adhesive to suit application; sanded faces; thickness as required.

- a. Use for painted components and concealed components.
- b. Use as backing for plastic laminate unless otherwise indicated.

2.4.3 Hardboard: AHA A135.4; Pressed wood fiber with resin binder, Class 1 - Tempered, 1/4 inch thick, smooth two sides (S2S); use for drawer bottoms, dust panels, and other components indicated on drawings.

2.5 Plastic Laminate

2.5.1 Only use specified approved manufacturers. Any substitutions or reselections must be submitted and approved prior to purchase as stated in section 01 60 00.

2.5.2 Exposed decorative surfaces including countertops, cabinet doors, and for items having plastic laminate finish type to be per specification.

2.5.3 High Pressure Decorative Laminate (HPDL) is to comply with NEMA LD 3 where specified or as approved by Architect and/or designer

2.5.4 Cover exposed edges with plastic laminate, except where aluminum, stainless steel, or plastic molded edge strips are shown or specified.

2.6 Countertops

2.6.1 Plastic Laminate Countertops: Medium density fiberboard substrate covered with HPDL, conventionally fabricated and self-edge banded.

2.7 Misc. Materials

2.7.1 Fasteners: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.

2.7.2 Concealed joint fasteners to be threaded steel.

2.7.3 Provide and install grommets in plastic, metal, painted metal or rubber for cut-outs in color to match or coordinate with adjacent surface.

2.7.4 All required hardware and accessories shall be furnished and installed by Interior Contractor and shall be as indicated on drawings and specifications. Where specific products are not specified in the Contract Documents the Interior Contractor shall recommend hardware to provide the function or condition indicated in the

Contract Documents. Hinges, screws, clips and other mounting, attachments or fasteners to be concealed unless otherwise noted on drawings.

- a. Hardware must comply with BHMA A156.9, types as recommended by fabricator for quality grade specified.
- b. Adjustable shelf supports to be standard side-mounted systems using recessed shelf standard or multiple holes for pin supports and coordinated self rests, metal pegs with metal sleeves, in nominal one (1) inch spacing adjustments; BHMA A156.9, B04013
- c. Drawer and door pull as specified
- d. Cabinet lock to be Keyed cylinder, two keys per lock, master keyed unless noted otherwise. Finish of lock to be provided by Architect and/or Interior Designer
- e. Drawer glides unless noted otherwise, are to be commercial grade, heavy-duty, full-extension glides with soft-close mechanism
- f. Hinges unless noted otherwise, are to be European style concealed self-closing type in finish as specified by Architect and/or Interior Designer.

2.7.5 Interior Contractor shall submit samples of each hardware item/type and accessory item/type to Consultant for approval.

2.7.6 Use galvanized coating on ferrous metal for exterior work unless non-ferrous metals or stainless is used.

2.7.7 Paneling Adhesive: Comply with paneling manufacturer's written recommendations for adhesives. VOC levels shall not exceed what is approved for project.

2.8 Fabrication

2.8.1 Fabrication to follow industry standards and design intent of contract documents and/or approved shop drawings.

2.8.2 Shop assembled cabinets for delivery to site in units must be easily handled and to permit passage through building openings and freight elevators

2.8.3 Exposed edging will not be acceptable. All exposed edges to be finished with one single length

2.8.4 Field cut edges including grommet, plumbing and electrical cut-outs are to be finished with one single length or prime paint in color to match/coordinate with adjacent surface.

2.8.5 Provide sequence wood grain matching across each elevation/cabinet fronts unless noted otherwise. Carry figure of cabinet front to toe kicks.

PART THREE: EXECUTION

3.1 Examination

- 3.1.1** Do not begin installation until substrates have been properly prepared.
- 3.1.2** Verify surfaces and substrates are prepared to receive products of this section.
- 3.1.3** If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of decorative metal.
- 3.1.4** Examine materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- 3.1.5** Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 Preparation

- 3.2.1** Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- 3.2.2** Clean surfaces thoroughly prior to installation.
- 3.2.3** Before installing, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours.

3.3 Installation

- 3.3.1** Install in accordance with the manufacturers recommendations and the approved shop drawings and in proper relationship with adjacent construction.
- 3.3.2** Where appropriate, supply products of this section for installation by installers of products of other sections.
- 3.3.3** Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
- 3.3.4** Install level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer. Countersink fasteners, fill surface flush, and sand where face fastening is unavoidable.

- 3.3.5** Nailing: Blind nail where possible. Use fine finishing nails where exposed. Set exposed nail heads for filling except for exterior wood which is to receive a natural finish (if any).
- 3.3.6** Paneling: Select and arrange panels on each wall to minimize noticeable variations in grain character and color between adjacent panels. Leave 1/4-inch gap to be covered with trim at top, bottom, and openings. Install with uniform tight joints between panels.
 - a. Attach panels to supports with manufacturer's recommended panel adhesive and fasteners. Space fasteners as recommended by panel manufacturer.
 - b. Conceal fasteners to greatest practical extent.
- 3.3.8** All shelving shall be adjustable unless indicated otherwise on drawings and specifications. Shelving standards shall be concealed unless otherwise noted.
- 3.3.9** Coordinate with plumbing and electrical work for installation of fixtures and service connections in millwork items.

3.4 Protection, Cleaning and Repairs

- 3.4.1** Unless otherwise indicated, clean interior finish carpentry per manufacturer instructions
- 3.4.2** Protect finishes from damage during construction period with temporary protective coverings approved by fabricator/manufacturer. Remove protective covering at time of Substantial Completion.
- 3.4.3** Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.
- 3.4.4** Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 - a. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - b. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION