

CASEWORK

PART ONE: GENERAL

1.1 Description

1.1.1 Work of this Section, as shown or specified, shall be provided by the Interior Contractor and shall be in accordance with the requirements of the Contract Documents.

1.1.2 Work includes coordination, fabrication, delivery, and installation of all Casework as shown on the drawings and as specified herein.

1.1.3 Related work in other Sections:

- a. Millwork - Section 06410

1.2 Submittals

1.2.1 All submittals shall be made according to Section 01300 and as described herein.

1.2.2 Submit the following for each item of Casework:

- a. Shop Drawings, indicating fabrication and, where applicable, installation methods, to include plans and elevations at not less than 1/2" = 1'-0" (or 1:20) scale and details at not less than 3" = 1'-0" (1:5) scale. Indicate required anchorage and blocking, accessory items, field dimensions, materials and finishes. Indicate compliance with specification requirements.
- b. Manufacturer's Product Data for all specialty items not manufactured by the Casework Fabricator.
- c. Two samples of each species and finish of exposed wood specified. Samples shall be minimum 12" x 12" (300 x 300 mm) (or full member width and thickness) finished as specified on one face, one edge, and one end. Samples shall be fire-retardant treated wood where such has been specified or required by codes. Review will be for color and texture only; compliance with other requirements is responsibility of Interior

Contractor. Samples of finishes shall be applied on the appropriate wood or base material as will occur in the final Casework item when installed.

- d. A minimum of three different flitches of any and all veneers specified shall be submitted to the Consultant for approval unless veneers have been previously selected by Consultant and herein specified.
- e. Where variations in wood and finish may occur, a minimum of three variations showing the extremes which may be expected of any and all wood and finishes as specified shall be submitted to the Consultant for approval. Minimum size: 12" x 20" (300 x 500 mm).
- f. When requested by Consultant, provide one complete working model (full size) of each Casework item. Sample shall be provided prior to fabrication of final items and shall be for approval by Consultants. Submittal procedure shall be as required in Section 01300. If approved, sample may become one of required project quantity of items. All items of Casework delivered to job site shall match the approved sample(s) applicable to that item.

1.3 Quality Assurance

1.3.1 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.

1.3.2 All work of this Section shall be performed by skilled mechanics of the trade and shall be of the highest quality. 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 of the following:

- a. American Society for Testing and Materials (ASTM):
 - E-84-70 Test for Surface Burning Characteristics of Building Materials.

- b. Federal Specifications (Fed Spec):
FF-N-105B (2) Nails, Brads, Staples and
Spikes: Wire Cut and Wrought.
FF-S-111C (1) Screws, Wood
- c. U.S. Department of Commerce:
Product Standard (PS) 1-66 Softwood Plywood,
Construction and Industrial.
Product Standard (PS) 20-70 American Softwood
Lumber Standard.
- d. Architectural Woodwork Institute (AWI):
Quality Standards and Guide Specification, latest
edition.
- e. National Electrical Manufacturers Assoc. (NEMA):
LD-3-1975 Laminated Plastic Specification.
- f. National Hardwood Lumber Association (NHLA).
- g. National Particleboard Association (NPA).
- h. American Plywood Association (APA) plywood grades:
1. For softwood plywood: Product Standard PS-1.
2. For hardwood plywood: Product Standard PS-51.

1.3.3 The Interior Contractor shall be responsible for accurately obtaining all field dimensions related to his work prior to fabrication. Where discrepancies are found, he shall notify the Consultant immediately in writing.

1.3.4 All Casework materials and completed Casework shall be stored in a dry, ventilated place, protected from the weather and complying with the temperature and humidity conditions specified by AWI Quality Standards.

1.3.5 Protect sanded and finished surfaces from soiling and damage during handling and installation.

1.3.6 Maintain requirements for heating, cooling and ventilation in fabrication areas as required to reach relative humidity necessary to maintain optimum moisture content specified for Casework by AWI Standards.

PART TWO: PRODUCTS

2.1 Materials

2.1.1 All woodwork materials shall be new and shall conform to the Premium Grade requirements of the AWI Quality Standards, latest edition.

2.1.2 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. Wood shall be free of all stresses and case hardening. Proper precautions shall be taken to maintain specified moisture content during Casework manufacture.

2.1.3 All solid wood elements shall be clear, straight-grain lumber of the best grade of specified species as listed by the NHLA. Lumber shall be free of any defects, which might impair serviceability, aesthetics, and/or finish. Solid wood elements shall also be according to the following, unless indicated otherwise on drawings and/or specifications:

- a. Species of Face Woods receiving transparent finishes shall be as specified on the drawings and shall be selected for specified grain with uniform color and grain suitable for use with the finished plywood with which it is used.
- b. Face Woods receiving opaque finishes shall be Birch or Poplar, Custom Grade but otherwise shall have same specification as solid stock for Face Woods above.
- c. Unexposed woods shall be Custom Grade Poplar, Kiln dried. Where unexposed woods come into contact with drawers, they shall be Birch or Maple, unselect.

2.1.4 All veneer core elements shall be clear straight-grain lumber of the best grade of the specified species as listed by the N.H.L.A. Lumber shall be free of any defects, which might impair serviceability, aesthetics, and/or finish. Where veneer differs

on two sides, veneers shall be of similar thickness, density, and characteristics to prevent any warp age. Veneer core elements shall also be according to the following, unless indicated on drawings or specifications:

- a. Adhesives shall be water-resistant resin or approved equal; process shall be hot plate method using the following number of plys to achieve specified thickness:
 - 1. 1/4" (6 mm) overall thickness shall be of 3-ply veneer core construction.
 - 2. 3/8" (9 mm) overall thickness shall be of 5-ply veneer core construction.
 - 3. 1/2" (12 mm) overall thickness shall be of 5-ply veneer core construction.
 - 4. 3/4" (20 mm) overall thickness shall be of 7-ply veneer core construction.
 - 5. 1" (25 mm) overall thickness shall be of 9-ply veneer core construction.

- b. Provide Douglas fir or Poplar V-type solid edge trim on all exposed edges of plywood not designated to be surfaced by plastic laminate.
- c. For Face Woods receiving transparent finishes, Species shall be as specified on drawings; faces shall be selected and matched by the Interior Contractor with respect to cutting lengths, uniformity of color, figure, and grain character. Face veneers shall not contain open joints, face depressions, glue stain or other manufacturing irregularities.
- d. Face Woods receiving opaque finishes shall have custom grade (face veneer) Birch or Poplar, select, but otherwise shall have same specification as Plywood for Face Woods (Paragraph 2.1.4.a).
- e. Unexposed woods shall be Birch, Poplar or Douglas Fir, rotary cut, Unselect, good one side, interior type plywood, one side Grade A and one side Grade B; Grade A faces shall not contain plugs, knots, pitch pockets, splits, rough grain or other open defects.
- f. Wood for plastic lamination shall be minimum 3/4" (20 mm) Mahogany face core plywood, good one side.

2.1.5 All particle board shall be resin impregnated wood flakes of high density construction as manufactured by U. S. Plywood Corporation, Shasta Division, Redding, California, or approved equal, and shall be 3/4" (20 mm) minimum thickness, unless otherwise specified.

- a. For Enameled Face Woods: High-density particleboard may be substituted for plywood panels, unless specified otherwise on drawings.
- b. For Unexposed Woods: High-density particleboard may be substituted for plywood panels, unless specified otherwise on drawings.

2.1.6 All Masonite shall be 1/8" (3 mm) thick tempered as manufactured by Masonite Corporation, Chicago, Illinois, or an approved equal.

2.1.7 All pegboard shall be 1/8" (3 mm) thick tempered as manufactured by Masonite Corporation, Chicago, Illinois, unless otherwise specified.

2.1.8 All casework shall be finished as indicated on drawings and specifications. Transparent and Opaque Finishes shall match approved samples submitted according to Section 01300 and paragraph 1.2 above.

2.2 Hardware and Accessories

2.2.1 All Casework hardware and accessories shall be furnished and installed by Interior Contractor and shall be as indicated on drawings and specifications.

2.2.2 Interior Contractor shall submit samples of each hardware item/type and accessory item/type to Consultant for approval according to Paragraph 1.2 above and Section 01300.

2.2.3 All Casework hardware and accessories shall be installed in accordance with manufacturer's recommendations.

2.2.4 All hardware shall be provided with necessary facilities for locking, unless otherwise specified. All locks shall be furnished with two (2) keys and all locks shall be master keyed unless otherwise specified. Doors with die-stamped door pulls shall not require locking devices, unless otherwise specified.

2.2.5 Manufacturer shall supply all hardware brackets, cleats, toggle bolts and other parts required for installation of Casework (where attached to walls).

2.2.6 Unless specified otherwise, all drawers shall have side mounted metal drawer slides with ball bearing nylon rollers. Slide shall be rated for pound load appropriate for the indicated use. Approved manufacturers are as follows:

- a. Accuride
- b. Grant

- c. Grass
- d. Hafele
- e. Knape and Vogt
- f. Blum

2.2.7 Unless specified otherwise, all legs of casework to have nylon carpet glides.

2.3 Other Materials

2.3.1 Interior Contractor shall be responsible for providing and installing all items and materials as indicated on drawings and specifications comprising all or part of the Casework shown. Such items and materials shall be fabricated and/or installed according to manufacturer's recommendations and comply with applicable AWI Quality Standards and Industry Standards.

2.3.2 Such items and materials may include but not be necessarily limited to the following and shall comply with the requirements indicated, unless indicated otherwise or drawings and specifications:

- a. All legs on Casework (except headboards) shall be provided with plastic glides, 3/4" (20 mm) minimum single prong.

- b. Marble: Shall be provided as specified. Unless indicated otherwise on drawings, marble shall be 3/4" (20 mm) thick, type as specified, with polished edges on exposed sides. Interior Contractor shall submit sample prior to fabrication according to Section 01300; sample shall show proposed finish and edge detail and shall be sufficient size (12" x 12" [300 x 300 mm] minimum) to show full range of color and pattern.
- c. Glass and related items: Unless specified otherwise in drawings and specifications shall be as follows:
 - 1. All glass shall bear the label of its manufacturer and shall conform in all respects with the pertinent requirements of Fed. Spec DD-G-1403 for tempered and heat strengthened glass and DD-G-451 for flat and wire glass.
 - 2. Float Glass Cement and/or mirror mastic shall be as recommended by the Glass and/or Mirror manufacturer respectively and shall be compatible with the surfaces contacted.
 - 3. Provide putty, gaskets and glazing sealant as specified and as recommended by the manufacturer for the required application and condition of installation in each case. Provide only compounds, which are known (proven) to be fully compatible with surfaces contacted. Color shall be as specified on drawings and specifications; submit 3, 12" (300 mm) long samples of each color required for each type of glazing sealant exposed to view. Install sample between two strips of material similar to or representative of channel surfaces where sealant will be used, held apart to represent typical joint widths. Samples will be reviewed by Consultant for color and texture only. Compliance with other requirements is the exclusive responsibility of the Interior Contractor.
 - 4. Provide only laminated or tempered glass when using glass for tabletops.
 - 5. Interior Contractor to coordinate with

Operator and Owner in providing warnings in guestrooms where laminated or tempered glass top tables are in use.

- d. Conduit, Flexible: Shall be fabricated of zinc-coated steel used in continuous runs with approved fittings at connections to ballast or utility boxes.
- e. Conduit, Rigid: Shall be fabricated of steel, zinc-coated inside and out by sherardizing, hot-dipping or metallic process. Conduit shall be attached to ballast or utility boxes with double lockouts, bushings, or approved fittings.
- f. Outlet Boxes and Plates: Shall be one piece pressed steel, zinc or cadmium plates, knock-out type and shall be provided with necessary extension and/or plaster rings. Cover plates shall be as specified. Switch handles shall match cover plates.
- g. Receptacles: Shall be 3-wire polarized type Switch-Lock design as manufactured by Harvey-Hubbell, Inc., Bridgeport, Connecticut, or approved equal. Maximum load for duplex receptacle shall be 10 amps. Total. Maximum load for single receptacle shall be 20 amps. Receptacle plates and receptacles to have finished as specified by Consultant.
- h. Junction Boxes: Shall be minimum 4" (100 mm) octagon or square and in no case smaller than size required by local ordinance.

- i. Lights: Shall be U.L. approved. Unless specified otherwise, lamps shall be slim-line type T-6 furnished and installed in reflector as shown on drawings. All slim-line lamps shall be deluxe warm white, unless otherwise specified.
- j. Ballasts: Shall be U.L. approved 430 MA for all areas except cocktail lounge area, which shall be 120 MA. Ballast shall be located in an accessible area, or as indicated on drawings and specifications.
- k. Gaskets: For low temperature seal shall be replaceable extruded or molded live rubber of such nature as not to absorb moisture or harden at low temperatures. Gaskets shall be shaped with flat mounting surfaces and sealed to prevent harborage of vermin. Gaskets used in conjunction with magnetic doors shall be as per drawings and as specified.
- l. All adhesives, glues, and mastic shall be as recommended for the required application and condition of installation in each case by the manufacturer of the material/item being adhered and meet Premium Grade/Best Quality Industry Standards. Only compounds which are proven to be fully compatible with surfaces contacted shall be used. Conditions, which must be accommodated, with approved adhesives, may include but not be limited to the following:
 - 1. Mirror and Glass Setting: Mirror-Mastic as manufactured by 3M Company.
 - 2. Sealant: Formula EC-152 as manufactured by 3M Company, "butter-test" and shall be non-odorous.
 - 3. Load Bearing: Weldwood Plastic Resin Glue as manufactured by U. S. Plywood Corporation.
 - 4. Moisture Areas: Weldwood Plastic Resin Glue as manufactured by U. S. Plywood Corporation.
 - 5. Plastic Laminating: As recommended by

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Laminate manufacturer.

- m. Insulation shall be as required by the application and condition of installation in each case. Provide material, type, and density for the required insulating as recommended by the insulation manufacturer for the use indicated. Fiberglass may be used for insulation against heat; Rigid Polystyrene Foam may be used for insulation against cold; Approved manufacturers are as follows:

- 1. Manville
- 2. Owens-Corning
- 3. Dow

All insulation shall meet all applicable codes, standards, and regulations for the Millwork use indicated.

- n. All resilient covering materials shall be as specified and shall be applied as per manufacturer's recommendations.
- o. Upholstery material shall be as indicated on the drawings and specifications.
- p. Wall covering material shall be as indicated on the drawings and specifications and shall be applied as per manufacturer's recommendations.

2.3.3 All paint and other finish material shall be pure, unadulterated and best quality from specified manufacturer as indicated on the drawings and specifications.

2.3.4 All finish materials shall be treated with flame-retardant process where required by local code. Should flame-retardant process cause change in color and effect on finish material, Interior Contractor shall notify the Consultant.

PART THREE: EXECUTION

3.1 Fabrication

3.1.1 All work shall be performed in such manner as to fulfill the intent of the drawings and specifications.

3.1.2 All items to be mill fabricated per AWI Premium Grade specifications and according to the sizes and designs indicated on the drawings and specifications, and assembled in single and complete units insofar as the dimensions thereof will permit shipment to and installation at the building. Large pieces requiring sectional construction shall have their several parts accurately fitted and aligned with each other and be provided with ample screws, glue and bolt blocks, tongues, grooves and splines, dowels, mortises and tenons, screws, bolts, or suitable means of concealed fastening, as required to render the work substantial, rigid and permanently secured in proper position to each related section. All single and sectional units shall be provided with adequate cleating, blocking, crating, and other forms of protection as required to preclude damages thereto during shipping and handling.

3.1.3 Framing and blocking members shall be assembled with bolted and screwed connections, and shall be secured to the structural backings with expansion screws, or toggle bolts, as required, spaced and installed so as to insure ample strength and rigidity. Rails and stiles shall be mortised and tenoned, work neatly mitered and membered, all butt joints made flush and smooth, and all permanent joints made up with water-resistant glue. All casework shall be assembled without face screws or nails, except where it may be necessary to attach trim items. All face screws or nails, which are necessary to attach trim items shall be countersunk and plastic wood or wood plugs used to cover heads, and the plug neatly touched up. The heads of all screws used in any assembly shall be countersunk below the surface.

3.1.4 Joints shall be splined, mortised and tenoned, tongued, or

dowelled, or full length blocked, glued, and screwed in two directions, following the best practice of construction. All joints shall be set up for perfect gluing. All work shall be carefully corner blocked, well fitted, glued and reinforced with wood screws. Joint glue shall be of the best quality hide glue.

3.1.5 Drawer fronts shall be as specified. Drawer sides shall be indicated or approved equal, and shall be dovetailed or butterfly jointed and glued to the drawer front and back. The dovetails shall be milled true and even. Drawer bottoms shall be white marlite, unless specified otherwise. Drawer interiors shall be sanded smooth, lacquered, and waxed.

3.1.6 All shelving shall be adjustable unless indicated otherwise on drawings and specifications.

3.1.7 Where dust proofing is specified, Casework shall be constructed with dust proofing frames between drawers. Frame members are to be not less than 3/4" (20 mm) thick and 1-3/4" (45 mm) wide of hardwood. Dust panels are to be not less than 1/8" (3 mm) hardboard.

3.1.8 Where scoring or "V" grooving is indicated on drawings, scoring shall be approximately 1/16" (2 mm) deep routed groove with edges sanded smooth, unless otherwise specified.

3.1.9 On Casework whose face is to receive a transparent finish, all exposed surfaces of wood and/or plywood behind closed doors (i.e. millwork interior) shall be sanded smooth, given one coat of transparent finish, and two coats of clear polyurethane varnish unless otherwise specified in the mill before shipping to job site. The transparent finish shall match the face finish unless indicated otherwise on drawings and specifications.

3.1.10 On Casework whose face is to receive an opaque finish, or to be finished with plastic laminate, all exposed surfaces of wood and/or plywood behind closed doors (i.e. Casework interior) shall be

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sanded smooth and given two coats of semi-gloss paint in the mill before shipping to job site. The color of the paint shall match the opaque face finish or plastic laminate face finish unless indicated otherwise on drawings or specifications.

- 3.1.11 All items where paint is required shall be shop spray finished except where impractical or otherwise specified.
- 3.1.12 All Casework finishes shall be shop applied except where impractical or otherwise specified.
- 3.1.13 Plastic Laminate edges shall be as indicated on drawings unless otherwise noted acceptable. Metal trim is not acceptable. Edges shall be neatly beveled; joints shall be minimized in quantity and be made to a smooth hairline and puttied. Appearance of unsightly or excessive joints will be cause for rejection.

3.2 Installation

- 3.2.1 All Casework items shall be labeled, tagged, or otherwise identified on both the item and any non-transparent protective covering with their respective locations, consultants item number as per specification and/or room numbers. (Example: GF-20 Dresser, Room 642)
- 3.2.2 Unless each item is tagged it will not be accepted at warehouse or job site. Should items not tagged be accepted, the Interior Contractor shall be back charged the additional labor costs (including Overhead) involved in determining the identity and room location of the items involved.
- 3.2.3 For Casework items, which are to be attached, attach Casework securely in place with uniform joints providing for thermal and building movements. Attach to substrates' by anchoring and fastening as shown, as required by recognized standards, and as follows:
 - a. 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).

- b. Anchoring: Secure Casework to anchors or blocking built-in or directly attached to substrates.

3.3 Cleaning and Protection

3.3.1 Clean shop finished Casework, touch-up finish as required and remove and refinish damaged or soiled areas of finish.

3.3.2 Provide temporary covering as required and protect installed Casework from damage by work of other trades until Owner's acceptance of the work. Subcontractor to advise Interior Contractor of procedures and precautions for protection of materials and installed Casework from damage and of the required temperature/humidity conditions which must be maintained during the remainder of the construction period in areas of Casework installations.

END OF SECTION