

## SECTION 06400 ARCHITECTURAL CABINETS

### 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Work required to complete the manufactured casework indicated by the Contract Documents, and the items necessary for its proper installation.

#### 1.2 REFERENCES

- A. American Nation Standards Institute (ANSI)
- B. American Society For Testing And Materials (ASTM)
  - 1. ASTM D1037, Standard Methods of Evaluating the Properties of Wood-Base Fiber and Particle Panel Materials.
- C. Architectural Woodwork Institute (AWI)
  - 1. AWI, Architectural Woodwork Quality Standards, Eight Edition, Version 1.0.
    - a) Section 400, Architectural Cabinets.

#### 1.3 SUBMITTALS

- A. Comply with Section 01330.
- B. Shop Drawings: Indicate dimensions, descriptions of materials and finishes, general construction, specific modifications, component connections, anchorage methods, hardware and installation procedures, including specific requirements where indicated.
  - 1. Show work in related and dimensional position with section shown.
  - 2. Indicate material and wood species, component profiles, fastening, jointing, details, finishes and accessories.
  - 3. Indicate locations of plumbing and electrical service field conditions.
- C. Samples: Submit samples of factory finish on wood veneer and factory finish on solid wood in accordance with AWI Standard Section 1500. Submit sample of finish on high-pressure laminate for color and finish selection.
  - 1. Component Samples: Two sets of samples in 8-inch by 10-inch size, unless otherwise indicated, for each of the following items:
    - a) High-pressure laminate for color and texture/finish selection.
    - b) Grommets for color.
    - c) Thermoset decorative overlays.
    - d) Hardware sample for appearance.
    - e) Work surface for appearance review.

#### 1.4 QUALITY ASSURANCE

- A. Quality Standards: Comply with 2003 Quality Standards of Architectural Woodwork Industry.
- B. Fabricator's Qualifications: Not less than 5 years experience in the actual production of specified products.

- C. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurement before fabrication and indicate measurements on shop drawing. Coordinate fabrication schedule with construction progress to avoid delaying the work.
  - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurement before being enclosed and indicate measurements on shop drawings.
  - 2. Cabinetry shall be Custom Grade or Premium Laminate, as specified by Architect.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle products in exact accordance with the manufacturer published instructions and requirements. Store materials out of the weather.
- B. Deliver materials in the original unopened packages with manufacturer's name, labels, product identification and lot numbers where appropriate.

## 1.6 WARRANTY

- A. Manufacturer shall provide a 10-year materials and workmanship warranty for the replacement of any defective part.

## 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Competence: Woodwork shall be manufactured by well-established and experienced firm acceptable to Owner and Architect, with satisfactory record of similar size and quality installations.
  - 1. Manufactured casework shall be "Techline" as manufactured by Techline USA.

### 2.2 MATERIALS

- A. Particleboard
  - 1. Particleboard shall be 48-pound per cubic foot density, industrial grade M-2, conforming to ASTM D1037. Product shall meet requirements of ANSI A208.1-1999.
    - a) 1-1/8-inch thick particleboard as used for countertop core.
    - b) 1-inch thick particleboard as used for shelves, wall cabinet tops and bottoms.
    - c) 3/4-inch thick particleboard as used for cabinet sides, full sub-tops of base cabinets, bottoms, screw attachment strips and door/drawer fronts.
    - d) 5/8-inch thick particleboard as used for drawer bodies.
    - e) 1/2-inch thick particleboard as used for internal dividers.
    - f) 1/4-inch thick particleboard as used for cabinet backs and drawer bottoms.
- B. High-pressure laminate (HPL) for exposed cabinetry surfaces shall be Vertical Grade GP-28, with 0.030-inch nominal thickness as defined by NEMA - LD3-1995 vertical surfacing grade. Product shall be adhered to substrate with thermosetting water based multi-bond adhesive, under 200-psi at no more than 200-degree Fahrenheit. Colors shall be as indicated on the drawings.
- C. (HPL) for countertop surfaces shall be Horizontal Grade GP-50, with 0.050-inch nominal thickness as defined by NEMA - LD3-1995 horizontal surfacing grade. Product shall be adhered to substrate with thermosetting water based multi-bond adhesive, under 200-psi at no more than 200-degree Fahrenheit. Colors shall be as indicated on the drawings.
- D. Edging shall be rigid polyvinyl chloride (PVC), 0.5-millimeter, 1.4-millimeter or 3mm thick, as selected by architect. Edging shall be attached with a hotmelt thermoplastic adhesive.

- E. Therm-fused melamine laminate shall be thermally fused to substrate under 400-psi at 380-degree Fahrenheit. Product shall have been tested in accordance with NEMA - LD3-1995.
- F. (HPL) for laboratory countertop surfaces shall be "Chemsurf Type" for horizontal surfaces with a nominal 0.038-inch thickness. Finish shall be a fine beaded texture, which minimizes smudges, and finger marks and offers optimum scratch resistance properties. Edging shall be of the same material. Product shall be adhered to substrate with thermosetting water based multi-bond adhesive, under 200-psi at no more than 200-degree Fahrenheit. Colors shall be as indicated on the Drawings.

### **2.3 CABINET HARDWARE AND ACCESSORIES**

- A. Hinges shall be concealed 120-degree swing, six-way adjustable clip-on. Nickel-plated metal. Two hinges per door up to 40 inches, three hinges per door on tall cabinets. (standard)
  - 1. Concealed 170-degree swing, six-way adjustable clip-on. Nickel-plated metal. Two hinges per door up to 40-inches, three hinges per door on tall cabinets. (optional)
  - 2. Fixed pin, five knuckle, with hospital tip, US26D finish, 2-1/2-inch inch fastened with 4 screws each let into faces, no edge fastening allowed. (optional)
- B. Drawer slides shall be zinc-plated steel with steel roller ball bearings, side mounted, full-extension on all drawers. Pencil drawers and box drawers are rated at 100-pound with full extension and file drawers are rated at 150-pound.
- C. All file drawers have an integrated, metal hanging file system to allow for front-to-back or side-to-side filing.
- D. Pulls shall be steel, nickel-plated or powder coated in a variety of styles.
- E. Shelf supports shall be positive locking pin support of 5-millimeter nickel-plated metal. Shelves are adjustable in all cabinets.
- F. Grommets shall be solid PVC.
- G. Lock systems allow for all single or ganged locked drawers or individual single/double doors. Locks shall be metal and zinc alloy composition, bright nickel finish, with 5-pin cylinder type tumbler, two keys per lock. Individually keyed, keyed alike, master keyed, and grand master keyed are optional, as required.

### **2.4 INSTALLATION MATERIALS**

- A. Fasteners
  - 1. Screws shall be of selected material, type, size, and finish as required for use, conforming to FS FF-S-11a.
  - 2. Nails shall be of selected material, type, size, and finish as required for use, conforming to FS FF-N-105.
  - 3. Male and female threaded connectors shall be used for runs of cabinets.
- B. Anchors shall be selected material, type, size, and finish as required for each substrate for secure anchorage.
- C. Expansion shields, expansion nails and anchoring drive screws shall conform to FS FF-S-325.
- D. Adhesive shall be as manufactured by Franklin Construction Adhesives and Glue; or approved equal.
- E. Adhesive for solid surfacing materials shall be one-part, moisture curing, structural, silicone elastomeric conforming to ASTM C 920, Type S, Grade NS, Class 25, Use NT, M, G, A, and O. Adhesive shall be "795" as manufactured by Dow Corning Corporation; or approved equal.

## 2.5 CASEWORK FABRICATION

- A. Base cabinets are constructed of 3/4-inch thick sides, tops and bottoms. Wall cabinets are constructed of 3/4-inch thick sides and 1-inch thick top and bottom. Tops and bottoms are glued and doweled to cabinet sides and fixed internal dividers.
- B. Door and drawer cabinet fronts are 3/4-inch thick with vertical grade GP28 laminate on both sides.
- C. Finished end panels are either vertical grade GP28 laminate or thermally fused melamine to match cabinet color, whichever is specified.
- D. All exterior and interior surfaces are finished in thermally fused laminate and all internal parts are finished to match cabinet color.
- E. Cabinet shelves are 1-inch thick and sealed completely with all sides edged.
- F. Cabinet backs 1/4-inch thick laminated with thermally fused melamine to match cabinet finish, trapped in a 1/4-inch wide groove and stapled in place. Screw strips are 3/4-inch thick and doweled to side panels.
- G. Drawer boxes are 5/8-inch thick laminate, 4-sided and finished in maple.
- H. Cabinets are edged on all sides including back edge. Base cabinets, except sink base, have a full sub top. Sink base units have an open top with steel supports in front and back concealed behind front panel.
- I. Cabinet base may be ordered as finished or unfinished and attached. Cabinets can be ordered with no base in applications where a ladder base is appropriate.

## 2.6 COUNTERTOP FABRICATION

- A. Countertops shall be 1 1/4-inch total thickness made from 1 1/8-inch particleboard with .050-inch or 3mm high-pressure laminate covering. Countertops shall be machine-edged in colored 1.4-millimeter PVC banding eased with 2-millimeter radius.
- B. Backsplashes shall be 3/4-inch particleboard, with high-pressure laminate covering. Tops shall be machine-edged in colored 1.4-millimeter PVC banding eased with 2-millimeter radius.
- C. Secure backsplashes to countertops with concealed fastening methods. Seal all joints by setting backsplash into a continuous bead of silicone sealant prior to attachment.

## 2.7 LABORATORY COUNTERTOP FABRICATION

- A. Countertops shall be 1 1/4-inch total thickness made from 1 1/8-inch particleboard with .050-inch or 3mm laminate covering. Countertops shall be machine-edged in similar material.
- B. Backsplashes shall be 3/4-inch particleboard, with laminate covering. Tops shall be machine-edged in similar material.
- C. Secure backsplashes to countertops with concealed fastening methods. Seal all joints by setting backsplash into a continuous bead of silicone sealant prior to attachment.

## 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine all adjoining work, verify all governing dimensions, and report any unsatisfactory conditions.

### 3.2 INSTALLATION

- A. Install materials and systems in accordance with manufacturer published instructions and requirements. Install materials with uniform appearance and in proper relation with adjacent construction.

- B. Accurately set all cabinets plumb, square level, and permanently secure in position as indicated on the drawings. Install casework to a tolerance of 1/8-inch in 96-inches for plumb and level.
- C. Install casework without distortion so that doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operations.
- D. Exercise extreme care to avoid damaging casework finish during the handling and erecting of all members.
- E. Field fabrications and modifications of casework required for completion of units shall be performed with extreme care to avoid damage to casework finish. Scribe casework and fillers as required for a tight fit.
- F. Wall cabinets shall be securely fastened to studs or blocking in the wall.
- G. All exposed cabinetry surfaces shall be of vertical grade high-pressure decorative laminate. Exposed cabinetry sides shall be covered with an end panel of vertical grade high-pressure decorative laminate.
- H. Install countertops on base cabinets and other support systems with screws. Secure backsplashes to tops with concealed fastening methods.
- I. Install solid surfacing material countertops on base cabinets and other support systems with approved silicone sealant/adhesive. Secure backsplashes to tops with approved silicone sealant/adhesive.

### **3.3 CLEANING**

- A. Clean all materials provided under this section and all adjacent materials, which may have become soiled from this work.
- B. Wipe out casework interiors and empty drawers of dirt and debris. Remove pencil marks and other blemishes from casework surfaces.
- C. Remove foreign matter that could affect operation or appearance of hardware.
- D. Make final adjustments to drawers and doors. Doors shall swing freely. All doors shall be aligned both vertically and horizontally. Drawers shall open and close smoothly, without binding or excessive slide and play.
- E. Remove from the site all debris resulting from the work of this section.

**END OF SECTION**