
SECTION 12 32 00
PLASTIC LAMINATE FACED CASEWORK

PART 1 - GENERAL

1.01 SUMMARY:

- A. Work Included: Furnish and install all architectural woodwork, including casework as shown on the Drawings and specified herein, or as required to complete the Work. Cabinet hardware is specified in this Section.
- B. Related Sections:
 - 1. Section 06 10 00 - Rough Carpentry: Blocking
 - 2. Section 06 61 16 - Solid Surface Fabrication

1.02 SYSTEM DESCRIPTION:

- A. Design Requirements: Where indicated, cabinetry shall be custom fabricated to adapt to the science room layouts.

1.03 REFERENCES:

- A. Applicable Publications: The publications listed below form a part of the Specification to the extent referenced.
 - 1. Architectural Woodwork Institute (AWI) "Quality Standards", current edition.
- B. National Woodwork Manufacturer's Association (NWMA).

1.04 SUBMITTALS:

- A. General: Submit the following in accordance with the General Conditions of Contract and Division 1 Specification Section 01300.
- B. Product data and cut sheets for each type of furniture or fixture specified, including details of construction-related materials, dimensions, profiles, component parts, accessories, finishes, and data required for coordination with wiring and cabling.
- C. Shop drawings for each type of furniture or fixture, indicating layout, details, individual unit dimensions, required clearances, component parts, method of field assembly, blocking types, locations, and anchorage to surrounding construction.
 - 1. Plan Dimensions: Provide plan drawings (at a scale of not less than 1/2"=1'-0") showing actual dimensions including, but not limited to shelves, bases, end panels, tops, aisles, cross-aisles, and clearances to surrounding construction; plus locations of grommets, raceways, and adjacent building, electrical and communications outlet devices, and the coordination with any Owner-furnished equipment.

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2. Sectional Dimensions: Provide sectional and elevation drawings (at a scale not less than 1/2"=1'-0") showing the actual dimension. The drawings should show all of the component parts of each item including, but not limited to, the construction of the piece, sizes and grain direction for all exposed wood work (solid or veneer), the integration and/or sizes of any required hardware or mechanical connections, and the location of all lighting, electrical, and/or communication devices affecting or inherent in the work. In addition, show floor substrate conditions when applicable.
 3. Details: Show full scale detail drawings of connections, joinery, edge banding, etc., needed to describe the construction and appearance of the work, plus any required provisions for power and communication cabling.
 4. Coordinate shop drawings with the work of the General Contractor. Show proposed construction on submittals for unbuilt portions of the building. Investigate field conditions as construction progresses and periodically update and resubmit shop drawings to reflect as-built conditions.
 5. Submit Shop Drawings for all millwork items required.
 6. Key Shop Drawings to drawing and section number as shown on the Architectural Drawings.
- D. Samples:
1. One full size finished base cabinet and/or wall cabinet unit complete with hardware, doors, and drawer without finish top if requested by the Architect.
- E. Test Data: Show compliance with all tests and standards identified in the Contract Documents. Provide test results based on current manufacturing facilities and production methods.
- F. Certification of Qualifications: Submit certification that the manufacturer, Contractor and installer meet such qualifications as set forth in the Contract Documents.
- G. Maintenance Instructions: Submit manufacturer's written instructions for adjustment, relocation and maintenance of installed products. Include frequency and methods recommended for cleaning and maintaining each product in optimum condition under anticipated use conditions; plus precautions against materials and methods which may be detrimental to finishes and performance.
- H. Warranty: Submit a written warranty in accordance with requirements of the Contract Documents.
- I. Provide evidence that personnel meet requirements of Contract Documents.

1.05 QUALITY ASSURANCE:

- A. Qualifications:
 - 1. Fabricator and Installer: Company specializing in the fabrication and installation of custom casework with a minimum five (5) years satisfactory experience.
 - 2. Submit documentation of experience.
 - 3. Warranty: A Warranty shall be required for a period of two years for all components of work. This period shall commence upon acceptance by the owner as defined in the General Conditions.

1.06 DELIVERY, STORAGE AND HANDLING:

- A. Protect millwork materials during transit, delivery, storage and handling to prevent damage, soiling and deterioration.
- B. Do not deliver millwork, until painting, wet work, grinding and similar operations which could damage, soil or deteriorate woodwork have been completed in installation areas.
- C. If, due to unforeseen circumstances, millwork must be stored in other than installation areas, store only in areas meeting requirements specified for installation areas.

PART 2 - PRODUCTS

2.01 ACCEPTABLE PLASTIC LAMINATE MANUFACTURERS:

- A. Formica: www.formica.com.
- B. Wilsonart: www.wilsonart.com
- C. Nevamar: www.nevamar.com
- D. Laminart: www.laminart.com
- E. Approved substitute.

2.02 MATERIALS:

- A. Use 3 mm PVC edging for door and drawer front edges.
- B. Use 3 mm PVC edging for all front and backsplash edges of countertops.
- C. Use 1 mm PVC edging for cabinet body edges and coatbox edges.

- D. All countertops 1-1/8-inch medium density particleboard - with 0.050-inch plastic laminate top and backer sheet on underside of countertop.
- E. All particleboard - 45 lbs. per cubic foot
- F. Interior cabinet liner to be 0.020-inch thick thermally fused melamine laminate.
- G. Sub-tops and bottoms of cabinets shall be particleboard, 3/4-inch thick. Bottom shall be laminated on the interior with melamine laminate with a backer sheet on the unexposed surface. The bottom surface of upper cabinets shall be melamine laminate cabinet liner.
- H. Cabinet ends shall be particleboard, 3/4-inch thick. Concealed exterior with a melamine backer sheet. Exposed cabinets ends shall be laminated with vertical grade decorative plastic laminate, 0.030-inch thick. Holes shall be drilled for interior adjustable shelf clips.
- J. Standard recessed cabinet back shall be 1/4-inch thick prefinished hardboard glued into cabinets. Laminate to match cabinet interior. All sink cabinets shall have split back, removable from inside. Exposed exterior back on fixed cabinets shall be particleboard, 3/4-inch thick, laminated with high pressure, vertical grade, 0.030-inch thick, High Pressure Decorative Laminate.
- K. Cabinet Doors and Drawer Fronts: Particleboard, 3/4-inch thick, shall be laminated with vertical grade decorative plastic laminate on the exposed surface and melamine laminate cabinet liner on the interior surface.
- L. Drawers: Sides, back and sub-front, shall be particleboard, 1/2-inch thick, laminated with melamine laminate. The back and sub-front shall be doweled and glued into the sides. No staples or nails permitted. Drawer bottom to be 1/4-inch thick, prefinished hardboard let into sub-front, sides and back.

2.03 JOINERY:

- A. Tops and bottoms shall be joined to cabinet ends using a minimum of six (6) dowels for twenty-four (24) inch deep cabinets and a minimum for four (4) dowels for twelve (12) inch deep cabinets. All dowels shall be hardwood laterally fluted, with chamfered end. Internal cabinet components such as fixed horizontals, rails, and vertical shall be doweled in place. Dowels shall be securely glued and cabinets clamped under pressure during assembly to assure secure joints and cabinet squareness.

2.04 HARDWARE:

- A. Hinges: 5 knuckle 2-3/4-inch, recessed in box wall type, 0.095-inch thick steel with standard color epoxy powder coat or metallic finish. Hinges shall have a minimum of 8 leaf and edge fastening locations. Doors 48-inches and over in height shall have three (3) hinges per door.
- B. Door and Drawer Pulls: Epoxy powder coat on metallic finish metal wire pulls.
- C. Drawer Suspensions: Each drawer equipped with one pair of ball bearing nylon roller suspensions which shall be self-closing from a four (4) inch extension, have a minimum load capacity of one hundred (100) pounds and be of zinc coated rolled steel.
- D. Drawer Stops: Drawers shall be equipped with two (2) drawer stops attached to the cabinet ends. The cabinet drawer stops shall be metal with attached rubber bump and be installed to prevent the drawer face from touching the cabinet body when the drawer is in a closed position.
- E. Door Catches: Magnetic type with a minimum ten (10) pound pull, attached with screws and slotted for adjustment. Provide thumb latch on inactive leaf on pair of doors.
- F. Door and Drawer Locks: Five (5) disc tumbler, cam type, keyed alike or differently and master keyed as directed by School District. Each different lock shall be furnished with two (2) keys. Fifty (50) lock changes available. All drawers and doors to have locks.

PART 3 - EXECUTION

3.01 INSPECTION:

- A. Prior to starting work, examine and determine conditions of preceding work for suitability and adequacy of performance to insure compliance with quality of workmanship of this Section.
- B. Notify Contractor and Architect in writing if any surfaces are not in a suitable condition to receive this work.

3.02 PREPARATION:

- A. Verify all dimensions in the field and take particular care to align with all joints and recesses, where required, with the building module lines. All shop drawings shall be prepared from field verified backgrounds.
- B. Coordinate the work with that of other trades affected by installation of wood ground, nailers and blocking to avoid delay in job progress.

- C. Treat all blocking and grounds in accordance with AWP. Brush coat surfaces that have been cut after treatment. Air season all lumber for not less than 30 days before covering with finishing materials.

3.03 FABRICATION:

- A. Workmanship shall equal in all respect to the standards of custom quality furniture work as described by AWI. Perform all work by qualified and fully competent workmen.
- B. Fabricate and finish all millwork work at the shop and assemble in single and complete units, insofar as the dimensions thereof will permit shipment to and installation at the building. Construct large pieces requiring sectional construction so their several parts are accurately fitted and aligned with each other, using fasteners that will be concealed in the finished work.
- C. Provide ample screws, glue and bolt blocks, tongues, grooves and splines, dowels, mortises and tenons, screws bolts, clip angles, braces, anchors, or suitable means rigid and permanently secured in proper position to each related section.
- D. Allow sufficient additional material to permit:
 - 1. Accurate scribing to walls, floors, and related work.
 - 2. Provide for shrinkage that may develop after installation.
 - 3. Scribe bases of all cabinets to the floor, soffit panels to the ceiling, and edge panels to walls.
- E. Provide all single and sectional units with adequate cleating, blocking, crating and other forms of protection as required to preclude damages thereto during shipping and handling.
- F. Assemble framing and blocking members with concealed bolted and screwed connections, and secure to the structural backings with cinch, expansion screws, or toggle bolts, as required, so spaced and installed as to insure ample strength and rigidity.
- G. Accurately construct all members plumb, square, level and permanently secured in precise position as indicated. Construct moldings true to detail, cleanly cut and sharp.
- H. All screws shall be driven snugly into lead holes. No screws shall be hammer driven. Any member with a split or crack of any description caused by fastener application or other cause shall be replaced. If dowels are used only spirally grooved non-compressed dowels shall be used.

3.04 APPLICATION OF HARDWARE:

- A. Fit hardware for drawers and doors so that it will permit items to close without forcing or rattling. Carefully fit and adjust all doors as required to insure smooth and noiseless operation. Remove and replace hardware items necessary to prevent damage, soiling and staining during finishing operation.
- B. Provide all drawers with drawer slides, and pulls.
- C. Provide hardware for all swing doors, including hinges, door catches and pulls. Hinges installed side-by-side shall align horizontally and vertically.
- D. Provide adjustable standards and shelf brackets for all shelving.

3.05 INSTALLATION:

- A. Quality Standard: Install woodwork to comply with AWI Section 1700 for the same grade specified in Part 2 of this Section for type of woodwork involved.
- B. 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 backsplashes to tops with concealed metal brackets at 16 inches o.c. or to walls with adhesive.
 - 4. Calk space between backsplash and wall with sealant specified in Division 7 Section "Joint Sealants."

3.06 CLEANING:

- A. Remove soil, stains, paint, prints and adhered matter from exposed parts of hardware and wood surfaces. Remove foreign matter that could affect operation of hardware.
- B. Clean adjacent surfaces for soiling incurred during installation of hardware. Repair or replace defective materials.
- C. Repair or replace damage to adjacent surfaces caused by installation of millwork.

END OF SECTION 06 40 00