

PART 1 – GENERAL

- 1) SCOPE:
 - a) Scope - The scope of this section provides guidelines and standards for the manufacturing of plastic laminated casework and any accompanying accessory items.
- 2) CONDITIONS:
 - a) General Conditions, Supplementary Conditions and General Requirements shall apply to all work in this section.
- 3) RELATED WORK INCLUDED:
 - a) Furnish plastic laminated casework and accessories. Including all countertops, splashes, supports, shelving, and filler panels necessary for a complete casework installation.
 - b) Field verification of dimensions prior to fabrication. Fabrication to dimensions requiring 3" or less of total filler at wall-to-wall elevations.
- 4) RELATED WORK, NOT INCLUDED:
 - a) Division 6: Rough Carpentry-blocking within walls to adequately support casework. Finish Carpentry/Millwork. Architectural Woodwork.
 - b) Division 7: Joint Sealants-Caulking of casework and/or countertops to abutting walls.
 - c) Division 8: Finish Hardware-cabinet locks keyed or master keyed to building locks.
 - d) Division 9: Resilient Base
 - e) Division 15: Mechanical-finishing, installation, and hook-up of sinks, fixtures, outlets, strainers, tailpieces, traps, vacuum breakers, stops, etc., shall be performed by the Mechanical Contractor to state and local codes. In all cases, sink cutouts shall be by the Casework Contractor. Furnishings, installation, and final connections of all ductwork and range hoods shall be by the Mechanical Contractor.
 - f) Division 16: Electrical-furnishing, installation, and final connections of wiring, conduit, and/or electrical items within casework shall be performed by the Electrical Contractor to state and local codes.
- 5) QUALIFICATIONS
 - a) Plastic laminated casework shall be manufactured by Advanced Cabinet Systems, Marion, Indiana 46953. Specifications and procedures to meet or exceed the minimum requirements established by Architectural Woodworking Institute (AWI) Quality Standard.
- 6) SUBMITTALS:
 - a) Shop Drawings: Submit 6 sets showing casework finish schedules, hardware and construction specifications. Shop Drawings shall include floor plan, elevation, accessory callouts, and section cuts as needed.
 - b) Samples: Upon award of contract, and upon request color samples and actual material cuts shall be submitted for selection and supplier coordination.
- 7) DELIVERY, STORAGE, AND HANDLING
 - a) Manufacture of casework only after submittal data approval and field dimensions are verified.
 - b) Deliver casework only after building has been sealed; secured and wet work is completed. HVAC system in operation and maintaining temperature and relative humidity at levels planned for building occupancy.
 - c) Protruding objects such as wire pulls are to field attached to insure against handling damage.
- 8) WARRANTY
 - a) All materials shall be warranted for a minimum period of 1 year from date of installation for manufacturing defects and workmanship.

PART 2 – PRODUCTS

1) CASE CORE AND BASE MATERIALS

- a) Cabinet core components shall be constructed using:
- (1) Industrial Grade Particleboard. Minimum density of 47 lbs, a graduated, three-layer board shall meet or exceed the requirements of ANSI A 208. 1-1999 Grade M3.
 - (2) Superior quality medium density fiberboard. At 48 pcf exceed product standards specified in ANSI A208-1-1986 as tested by ASTM D-1037-78 methods.

2) Density	3) 48 lb/cu ft	4) 770 kg
5) Internal bond	6) 120 psi	7) 0.83 Mpa
8) Modulus of rupture	9) 4500 psi	10) 31.0 Mpa
11) Modulus of elasticity	12) 400,000 psi	13) 2760 Mpa
14) Face screw holding	15) 350 lbs	16) 1560 N

2) SURFACE FINISHES/LAMINATED PLASTICS

- a) Interior finish specifications
- (1) Exposed interior case surfaces shall be finished with a white permanently fused melamine resin. Melamine finish and resin shall meet NEMA LD-3-2000 GP28 standards.
 - (2) All unexposed surfaces shall be balanced with the standard melamine finish.
 - (3) Interior door and drawer fronts shall be balanced with white plastic laminate matching the thickness and standard of the external finish specifications.
- b) External finish specifications:
- (1) Exposed external vertical surfaces shall be finished with a decorative high-pressure plastic laminate, .028 in thickness. Lamination shall meet NEMA LD-3 VGS.028 standards.
 - (2) Exterior door and drawer fronts shall be finished with a decorative high-pressure plastic laminate, .028 in thickness. Lamination shall meet NEMA LD-3 VGS.028 standards.
 - (3) Color selection for the external vertical surfaces, drawer and door fronts consist of standard priced colors depicted in the manufacturers color selection guides as published by either Formica, Nevamar, Pionite and WilsonArt.
 - (4) Decorative laminates or laminates with wood grains will be vertical on all exposed exterior surfaces, with the exception of aprons and ledgers which will be horizontal. Exceptions may be custom ordered.
- c) Counter top finish
- (1) Exposed counter top surfaces shall be finished with a decorative high-pressure plastic laminate, .050 in thickness. Lamination will conform NEMA LD-3 VGS.050 standard.
 - (2) Color selection for the counter top surfaces consist of standard priced colors depicted in the manufacturers color selection guides as published by Formica, Nevamar, Pionite and WilsonArt.
 - (3) Solid Surface counter tops may be custom ordered. Style and color selections shall be as published by Cerata, Corian, Formica Brand, and Gibraltar Solid Surface Products.

3) EDGING MATERIAL

- a) Exposed exterior cabinet edges, cabinet shelving and divider components, door and drawer edges, shall be finished with PVC solid body edge banding. Standard banding application shall be:
- (1) Flat edge specifications; .018 thick PVC extrusion.
 - (2) Round edge specifications; 3mm thick PVC extrusion.
 - (3) PVC edging shall be solid color, high impact, resistant to chipping and cracking.
 - (4) Edging shall be applied through an automated edging system which utilizes hot melt glue for bonding and systematic trimming of face, back and corners for uniform repeatability.
- b) Cabinet body, shelving inserts and divider insert edges receive flat edge PVC.
- c) Door and drawer front edges receive round edge PVC.
- d) Edging style and color selections shall be as published by manufacturers selection guides.

- 4) **HARDWARE:**
- a) All specifications to meet or exceed the minimum requirements established by Architectural Woodworking Institute (AWI) certification for sections 1600.
 - b) Standard concealment door hinge specifications
 - (1) Concealed, 165° Opening radius, Snap-On, 35mm “European” style hinges. Fitted with two 8mm Nylon insert dowels to increase the screw holding rating and added attachment strength. Hinge shall meet the requirements of ANSI/BHMA A156.9-2003.
 - (2) Fully adjustable +/- 2mm for side, depth and height.
 - (3) Doors up to 35 ½” or 20 pounds receive 2 hinges. Doors up to 63” or 40 pounds receive 3 hinges. Doors up to 78 ¾” or 60 pounds receive 4 hinges. Doors up to 94 ½” receive 5 hinges.
 - (4) Winged base plates attached with 5x13mm Euro screws and 2 #6-woodscrews.
 - c) Institutional style door hinge specifications.
 - (1) Heavy duty, five knuckle, 270° opening radius, 2¾” institutional style hinge. Constructed of .090 steel, with hospital tips. Hinge shall meet the requirements of ANSI/BHME A156.9-2003 standards.
 - (2) A Grass, Atlas 9603 Grade 1 Institutional Barrel Hinge meeting the requirements of ANSI/BHME A156.9-2001 is available as a standard option.
 - (3) Finish selection shall be as defined by manufacturers selection guide.
 - d) Door catch specifications
 - (1) Standard with institutional hinging, consisting of heavy-duty spring loaded roller and metal strike plate.
 - e) Pull specifications
 - (1) Standard wire design, 8mm x 96mm pulls, shall be available in brush chrome.
 - (2) Other style pulls of various contour, finish and designs shall be available as defined by manufacturers selections.
 - f) Drawer slide specifications:
 - (1) Drawer slides shall meet the requirements of ANSI/BHMA A156.9-2003 4.11. See ANSI A156.9-2003 for specific grades and minimum requirements.
 - (2) Standard drawers:
 - (a) A metal integrated drawer side with built-in slides. Fitted with 8mm dowelled system incorporating built-in drawer front adjustment and bumpers.
 - (b) Load rating of 100 pounds.
 - (c) Equipped with in and out drawer stops, quiet ride/smooth rollers.
 - (d) Available in a white baked-on epoxy finish.
 - (3) File drawers:
 - (a) Equipped same as standard drawers
 - (b) Additionally equipped with 3-part full extension slide and top mounted side rail to support standard hanging file folders.
 - (4) Pencil drawers:
 - (a) Equipped same as standard drawers.
 - (b) Load rating of 100 pounds.
 - (5) Extension slides
 - (a) 3-part full extension slides; Load rating shall be 100 pounds.
 - g) Shelf Support/Adjustable System
 - (1) Standard 32mm system holes.
 - (2) Double pin, clear, locking shelf support. Constructed of injection mold polycarbonate resin with screw slot and integral snap latch to prevent shelf uplift of ¾” or 1” shelving.
 - (3) Must comply with Grade 3 requirements per the ANSI/BHMA A156.9-2003 specification. Able to withstand load levels to 300 pounds.
 - h) Locks
 - (1) Standard interchanging lock plug system consisting of a Satin Nickel small diameter 5-disc tumbler mechanism. Keying systems shall meet the requirements of ANSI/BHMA A156.9-2003.
 - (2) Keying options; Different, keyed alike, and master keying options available.

- (3) Locks provided as an option; Optional lock styles and finishes shall be available as defined by manufactures selections.
- i) Hanger Rods
 - (1) Chrome 1 1/16" rod, secured with matching flanges attached to cabinet verticals.
- 5) CONSTRUCTION
 - a) All cabinet body components shall be secured utilizing concealed interlocking mechanical fasteners as approved by the Architectural Woodwork Quality Standards 7th Edition – 1999 Section 1600.
 - b) Sub-Base
 - (1) Sub-Base to be ladder type construction consisting of continuous front and back (as length permits) with intermediate cross bracing.
 - (2) Constructed using a combination of water resistant 3/4" medium density fiber board and 3/4" industrial grade particleboard.
 - (3) Separate sub-base assembled with moisture resistant glue and fasteners. Minimizing the transition of floor moisture through to the untreated cabinet ends.
 - c) Case Body Structure
 - (1) Specifications for all joinery grade case body components shall meet or exceed the minimum requirements for Premium as established by Architectural Woodworking Institute (AWI) certification, section 400B-S-9.
 - (2) Cabinet components shall be:
 - (a) Body; 3/4" minimum thickness
 - (b) Shelves: 3/4" minimum, stepping to 1" for spans over 27".
 - (c) Backs; 1/2" minimum, capping the rear of the body construction.
 - d) Case Ends
 - (1) Drilled to support the 32mm adjustable shelf system. Exposed case ends shall be fully laminated to cover edge of the case back.
 - e) Drawers
 - (1) Face and end plates shall be 3/4" white melamine, bottom shall be 1/2" white melamine, constructed with 4 corner 8mm dowelling while incorporating interlocking epoxy coated formed metal sides. Bottom plate supported by formed metal sides, snip fit and interlocked with 4-side trapping eliminating movement.
 - f) Counter tops and splashes
 - (1) Counter tops shall be constructed of 1 1/2" build-up. Set-on back splash 3/4". Laminated on all exposed surfaces with .050" high-pressure decorative laminate.

PART 3 – EXECUTION

- 1) COORDINATION/PROGRESSION
 - a) Coordination and intermingling of work between the various Sections (i.e....6000, 9000, 12000 etc.) is necessary to insure proper installations.
 - b) Workmanship and communications are best achieved if the installing contractor or sub-contractor has provided adequate all inclusive quoting and has been contracted to complete the cabinetry work defined under the various Sections.
 - c) Monitoring work progression and verifying site dimensions of the cabinet installation areas are to be completed before cabinet fabrication.
- 2) INSTALLATION
 - a) Proper attention and accuracies must be given to alignments and installation to insure against warping or bending.
 - b) Install sub-base plumb and true, secure to building structure using appropriately sized supports and fasteners.
 - c) Install casework onto the sub-base structure, secure, scribe casework fillers as needed to insure tight fit.
 - d) Install wall cabinets onto solid support structure. If existing conditions do not provide adequate blocking support do not attempt to install wall cabinetry.

- e) Install countertops and back splash utilizing the smart clip system.
- f) Make final alignment and adjustment to door and drawer fronts, insuring smooth operation of hinge and slide hardware.
- g) Clean work area removing excess debris, clean cabinet components, inspecting for damage, misalignment or malfunctions.
- h) Fix any problems, surface damage or usage problems before leaving casework ready for intended use. If continuing construction is to be completed in surrounding area cover the casework installation with appropriate covering and advise attending contractor of the casework installation.