



SECTION 12 32 16 – MANUFACTURED PLASTIC-LAMINATE-CLAD CASEWORK

PART 1 GENERAL

1.1 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Conference:
1. Attendance: [Architect,] [Owner,] [Contractor,] [Construction Manager,] [Design/Builder] installer, and related trades.
 2. Review: Project conditions, manufacturer requirements, delivery, and storage, staging and sequencing, and protection of completed work.

1.2 SUBMITTALS

- A. Action Submittals:
1. Shop Drawings: Illustrate products, installation, and relationship to adjacent construction.
 2. Product Data: Manufacturer's descriptive data and product attributes.
 3. Samples:
 - a. [Selection samples.] [Verification samples.]
 - b. [Small scale base cabinet.]
- B. Closeout Submittals:
1. Operation and Maintenance Data.
- C. Quality Control Submittals:
1. Manufacturer qualification statement.
 2. Comprehensive quality assurance standard documentation.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
1. Manufacturer has a minimum of 10 years of experience of manufacturing architectural casework for similar projects, with a cataloged product line, and can show evidence of long-lasting financial stability.
 2. Certified for chain of custody by third party group approved by Forest Stewardship Council (FSC).
 3. Licensed under Architectural Woodwork Institute (AWI) Quality Certification Program (QCP).
 4. Show independent third-party evidence that decorative thermally fused laminate is tested to Sefa 8 PL (2016).
- B. Installer Qualifications: Minimum [2] [] years' experience in work of this Section.
- C. Mockups:
1. Full-size [base cabinet] [wall cabinet] [[] cabinet] [shelf unit], and [].
 2. Countertop, minimum [4] [] feet long.
 3. Approved mockups [may] [may not] remain as part of the Work.

1.4 WARRANTIES

- A. Manufacturer's [1 year] [3 year] [5 year] [limited lifetime] warranty against defects in materials and workmanship, including non-casework accessories.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on products by Case Systems, Inc., www.casesystems.com.
- B. Substitutions: [Refer to Division 01.] [Not permitted.]

2.2 MATERIALS

- A. Panel Core: Particleboard, ANSI A208.1, Grade M-2 or higher.
- B. Surfacing: NEMA LD-3 and ANSI A161.2.
 - 1. Vertical surface decorative grade: VGS.
 - 2. Horizontal surface decorative grade: HGS.
 - 3. Cabinet decorative liner grade: CLS.
 - 4. Non-decorative backer grade: BKH.
 - 5. Decorative thermally fused laminate. White in color.
 - 6. Tango decorative thermally fused laminate.
 - 7. Chemical resistant decorative laminate.
- C. Edge Banding:
 - 1. PVC, applied utilizing hot melt adhesive and radiused by automatic trimmer.
 - 2. Adhesive: PVA type, mechanically applied, ULEF, free from VOC's.

2.3 FABRICATION

- A. General Cabinet Body Construction:
 - 1. Joinery: Concealed interlocking fasteners or dowel construction at manufacturer's discretion.
 - 2. Panels manufactured with balanced construction.
 - 3. Structural components: 3/4 inch thick for bottoms and ends of cabinets, tops of tall cabinets and tops and bottoms of wall cabinets.
 - 4. Fixed interior components: 3/4 inch thick for fixed shelves, dividers, and cubicle compartments.
 - 5. Cabinet body exterior surfaces [Tango decorative thermally fused.] [As indicated on Drawings.]
 - 6. Cabinet body interior surfaces:
 - a. Closed cabinets: [Tango decorative thermally fused.] [Tango white thermally fused]
 - b. Open cabinets: [Tango decorative thermally fused.]
 - 7. Laminate grain direction: [Combination grain.] [Vertical grain.] [Vertical grain match.]
 - 8. Cabinet body front edge: [Nominally 1 mm thick PVC.] [Nominally 3 mm thick PVC.] [As indicated on Drawings.]
 - 9. Cabinet body mounting: 3/4 inch thick stretchers, concealed by cabinet back.
 - 10. Exposed laminate back panels: Finished 3/4 inch thick back panel when cabinet rear is exposed.
 - 11. Cabinet backs: 1/2 inch thick, surfaced both sides, fully captured on both sides and bottom.
 - 12. Stretchers:
 - a. 3/4 inch thick lower stretchers located behind back panel.
 - b. 3/4 inch thick intermediate stretchers located behind back panel.
 - 13. Adjustable shelf hole pattern: 5 mm diameter holes spaced 1-1/4 inches on center for mounting adjustable shelves, hardware mounting, and replacement and relocation of cabinet components.
 - 14. Intermediate shelves: Fixed.
- B. Base Cabinet Construction:
 - 1. Sub-top: Solid 3/4 inch thick sub-top except at sink cabinets.
 - 2. Split removable back panels for sink cabinets.
- C. Wall Cabinet Construction:
 - 1. Wall cabinets over 36 inches in width: Fixed intermediate partition.
 - 2. Exterior bottoms: [Match standard interior.] [Match exterior surface.] [As indicated on Drawings.]

- D. Tall and Wall Cabinet Top Edges: [Raw top edges.] [Nominally 1 mm thick PVC at top of end panels, stretchers and back.] [As indicated on Drawings.]
- E. Door Reveals:
1. Between doors and drawers: 3 mm.
 2. Above drawer, base, wall, tall, and hutch doors: 3 mm.
- F. Cabinet Toe Bases:
1. Material: [Particleboard.] [FSC particleboard.] FSC plywood.]
 2. Height: [96 mm.] [102 mm.] [152 mm.] [As indicated on Drawings.]
 3. Type: [Attached.] [3/4 inch loose strips.] [No base.]
- G. Drawer Fronts and Solid Doors: Surfaced on both sides.
1. Component materials/surfaces: [Tango decorative thermally fused.] [Tango white thermally fused]
 2. Door and drawer front edges: [Nominally 1 mm thick PVC.] [Nominally 3 mm PVC.]
- H. Drawer Boxes:
1. Material: [Particleboard.] [Prefinished hardwood with dovetail construction]
 2. Core thickness: 1/2 inch thick.
 3. Construction: Non-racking, non-deflecting platform bottom carried by bottom mount drawer slides on non-file drawers and side-mounted ball bearing slides on file drawers.
 4. Drawer boxes with finished interiors: [Surface to match standard interior.] [Surface to match finished interior.]
 5. Sides, backs, sub-fronts, and bottoms: 1/2 inch thick.
 6. Top edges: Nominal 1 mm PVC, matching drawer color.
 7. Box corners: Joined with hardwood dowels and glue.
 8. Horizontal parting rails between drawers: 3/4 inch thick core, balanced surfaces.
 9. File drawer box construction: Full height sides supporting heavy duty support rail.
- I. Cabinet Doors:
1. Construction: Solid doors, 3/4 inch thick core.
 2. Glazed doors:
 - a. Frame thickness: 3/4 inch.
 - b. Glazing panel thickness: 1/4 inch.
 - c. Glazing panel mounting: Set into door frame secured with removable stops.
Operation: [Hinged.] [Sliding.]
 - d. Glazing type: [Clear acrylic.] [Safety glass.] [Smoked safety glass.] [Tempered glass.] [Smoked tempered glass.]
 3. Frameless glazed doors:
 - a. Thickness: 1/4 inch.
 - b. Material: Tempered glass.
 - c. Operation: Sliding.
 - d. Glass edges: Radius ground and polished.
 4. Sliding doors.
 - a. Upper track: Extruded aluminum, anodized finish.
 - b. Hardware: Two roller hanging brackets per door.
 - c. Bottom retainers.
 5. Pocket doors: Self-closing, three-way adjustable door hinge with precision steel ball bearing slides, zinc plated.
- J. Shelves:
1. Adjustable shelves: Finished on both sides.
 - a. Core material: [Particle board.]
 - b. Thickness, in closed cabinets: [3/4 inch for shelves under [24] [27] [30] [33] [36] inches wide; 1 inch for shelved over [24] [27] [30] [33] [36] inches wide.] [1 inch.]
 - c. Thickness, in open cabinets: 1 inch thick, except for special use cabinets.

- d. Edges in open cabinets: [Matching edges.] [Nominal 1 mm thick PVC] [Nominal 1 mm thick PVC] at front, [rear] [and] side] edges.
 - e. Edges in closed cabinets: [Matching edges.] [Nominal 1 mm thick PVC] [Nominal 3 mm thick PVC] at front, [rear] [and] side] edges.
 - f. Shelf surfaces in closed cabinets: [Match cabinet interior.] [Match cabinet exterior.]
 - g. Shelf surfaces in open cabinets: [Match cabinet interior.] [Match cabinet exterior.]
 - h. Setback for adjustable shelves: 15 mm from front.
2. Fixed shelves:
- a. Thickness:
 - b. All shelves: [3/4 inch thick except 1 inch at open shelves.] [1 inch.]
 - c. Shelves under [24] [27] [30] [33] [36] inches wide: 3/4 inch.
 - d. Shelves over [24] [27] [30] [33] [36] inches wide: 1 inch.
 - e. Shelf surfaces in closed cabinets: Match interior.
 - f. Shelf surfaces in open cabinets: Match interior.
3. Wall shelves: [Tango decorative thermally fused.] [Tango white thermally fused]
4. Wire shelves: White, plastic coated.
5. High-density fiberboard shelves: 1/4 inch thick.
- K. Mobile Cabinets:
- 1. Mobile backs: 1-inch-thick core.
 - 2. Maximum load rating: 500 pounds.
 - 3. Construction:
 - a. Core: 3/4 inch thick.
 - b. Core platform: 1 inch thick.
 - c. Edging for platform and mobile tops: 3 mm thick.
 - d. Mobile tops:
 - e. Overhang at front, sides and rear.
 - 4. Surface materials: [Tango decorative thermally fused.]
 - 5. Surface material color: [____.] [To be selected.]
- L. Sloped Tops: Separate unit from cabinet, set at 30-degree angle.
- M. Lockers:
- 1. Match general casework construction except fixed shelved 3/4 inch thick.
 - 2. Locker tops: [Unfinished.] [Finished edge and surface.]
- N. Plastic Laminate Countertops:
- 1. Surfacing: High-pressure decorative laminate, [grade HGS.] [Chemical resistant grade.] [As indicated on Drawings.]
 - 2. Backing: Grade BKL.
 - 3. Core thickness:
 - a. Solid: [3/4 inch.] [1 inch.] [1-1/8 inches.]
 - b. Built-up: 1-1/2 inches.
 - 4. Joints: Secured with biscuits and tight joint fasteners.
 - 5. Backsplashes: 4 inches high, thickness to match countertop thickness.
 - 6. Edges: [3 mm thick for solid. Not available in 1-1/2" build-up] [Self-edge, same material as top.]
- O. Epoxy Resin Tops: 1 inch thick with 1/32 inch chamfer on finished edges; provide drip grooves on underside at exposed edges.
- P. Phenolic Resin Tops:
- 1. Thermosetting resins, homogeneously reinforced with wood-based fibers, manufactured under high heat and high pressure.
 - 2. Non-porous, water resistant with integral anti-microbial properties.
 - 3. Thickness: [3/4] [1] inch.
 - 4. Edges: 1/8 inch thick, radius edge and drip groove on underside of top.

2.4 ACCESSORIES

A. Hardware:

1. Hinges: Five-knuckle type, reveal overlay, Institutional Grade per ANSI/BHMA A156.9; two per door except three per door for doors over 48 inches high.

**** OR ****
2. Hinges: Concealed type, flush overlay nickel plated, self-closing, minimum Grade 2 per ANSI/BHMA A156.9; two hinges for doors up to 48 inches high; three hinges for doors from 49 to 66 inches high; four hinges for doors 67 inches and higher.
3. Pulls: [Anodized aluminum wire type.] [Epoxy coated wire type.] [Brass core wire type.] [Stainless steel wire type.] [Semi-recessed type.] [Semi-recessed type, oversized.]
4. Drawer slides:
 - a. Standard drawers: Full extension, side mount, 100 pound rated, minimum Grade 1 per ANSI/BHMA A156.9.
 - b. File drawers: Full extension, side mount, 100 pound rated, minimum Grade 1 per ANSI/BHMA A156.9.
5. Wall shelving hardware:
 - a. Design: Heavy-duty wall shelving hardware.
 - b. Finish: Anochrome.
 - c. Shelf clips: Injection molded clear plastic, AWI 400-B-T-9, double pin type except single pin type with anti-tip locking tabs at hardboard shelves.
 - d. Adjustable shelf clips: AWI 400-B-T-9; double pin type except single pin type with anti-tip locking tabs at hardboard shelves.
6. Coat hooks: Zinc plated.
7. Closet rods: Chrome plated oval rod, 15 x 30 mm.
8. Mirrors: 8 x 10 inches.
9. Label holders: [None.] [At drawers.] [At doors.] [At doors and drawers.] [As indicated on Drawings.]
10. Locks:
 - a. Locations: [Drawers.] [Doors.] [As indicated on Drawings.]
 - b. Type: [Five-disc tumbler cam locks.] [Five pin lock, pin tumbler.] [Dead bolt style.] [Best - 5E.] [Olympus 100DR for doors and 200DW for drawers.]
 - c. Keying: [Key locks alike.] [Key locks differently by room and master key, minimum of 50 keying options.]
 - d. Lock cores: Removable, except at five pin locks.
11. Casters:
 - a. [Model M, 6 inch diameter.] [Model U, 4 inch diameter nominal height.]
 - b. Bearings: Ball bearing, 360-degree swivel.
 - c. Wheels: Non-marring, [locking.] [non-locking.]
12. Catches:
 - a. Chain pulls: Zinc plated.
 - b. Chain stops: Zinc plated.
 - c. Elbow catches: Chrome plated.
 - d. Roller catches: Heavy-duty, spring-loaded.
 - e. Magnetic catches: White plastic housing.
 - f. Catch types:
 - 1) [Magnetic at base and wall cabinets, single roller at tall cabinets.]
 - 2) [Single roller at base, wall, and tall cabinets.]
 - 3) [Magnetic at base and wall cabinets, two rollers at tall cabinets.]
 - 4) [Single roller at base and wall cabinets, two rollers at tall cabinets.]
 - 5) None for concealed hinges at base, wall, and tall cabinets.
13. Tote trays: Impact resistant polystyrene with label holder, supported by polycarbonate rails.
14. Countertop Supports: Powder coated, formed metal.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions and approved Shop Drawings.

END OF SECTION