

SECTION 12357 - FEDERAL SEVERE USE CASEWORK

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes:
 - 1. Wood-faced kitchen cabinets.
 - 2. Plastic-laminate countertops.
 - 3. Wall mounted metal grease splash.
- B. Related sections include the following:
 - 1. Division 11 section "Residential Appliances" for appliances mounted in kitchen casework.
 - 2. Division 15 section "Plumbing Fixtures" for sink units mounted in countertops.

1.03 REFERENCE STANDARDS

- A. Comply with the following Reference Standards:
 - 1. Cabinets:
 - a. HUD Minimum Property standards for Housing.
 - b. ANSI/KCMA A161.1 - Recommended Performance and Construction Standards for Kitchen and Vanity Cabinets.
 - c. Plywood:
 - 1) ANSI/HPMA HP - Hardwood and Decorative Plywood
 - 2) US Product Standard PS 1 - Softwood Plywood, Construction and Industrial
 - d. Pressure Treating Lumber: AWWA Standard C2 - Lumber, Timbers, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Process.
 - 2. Cabinet Hardware: ANSI/BHMA A156.9 Cabinet Hardware.
 - 3. Plastic Laminate Countertops: ANSI 161.2 - Performance Standards for Fabricated High Pressure Decorative Laminate Countertops.
 - a. Plastic Laminate: NEMA Standards Publication No. LD 3 - High-Pressure Decorative Laminates.
 - 4. Joint Sealant:
 - a. Federal Specification (FS) TT-S-001543A - Sealing Compound: Silicone Rubber Base (For Calking, Sealing, and Glazing in Buildings and other Structures).
 - b. ASTM C920 - Elastomeric Joint Sealants.
 - 5. Certification:
 - a. ANSI Z34.1 - Certification, Third party Certification Program.

1.04 SYSTEM DESCRIPTION

- A. Performance Requirements:
 - 1. Comply with test procedures and required performances of ANSI/KCMA A161.1.
 - a. Perform tests on standard 30-inch wall and base cabinets.
 - 2. Drawers and Drawer Hardware for Federal Severe Use: Apply 75-pond point load to exterior edge of drawer extended 6-inches from its closed position for a period of 15 minutes.

- a. Successful Test: No failure in any part of drawer assembly or operating system, and drawer remains operable with no mechanical interference with any part of cabinet assembly.

1.05 SUBMITTALS

- A. Submit the following to the Owner in accordance with the Division 1 Section "Submittals":
 1. Product Data for cabinets, countertops and hardware.
 2. Shop Drawings for cabinets and countertops for each type of kitchen. Include plans, elevations, details, and attachments to other work. Show materials, finishes, filler panels, hardware, edge and backsplash profiles, cutouts for plumbing fixtures, and methods of joining countertops.
 3. Samples of following for selection:
 - a. Wood veneers with stain finishes.
 - b. Plastic laminate patterns and colors.
 - c. Cabinet hardware.
 - d. Metal grease splash.
 4. Product Certificates: Written certification signed by manufacturer certifying that products furnished comply with requirements.

1.06 QUALITY ASSURANCE

- A. Source limitations for cabinets: Obtain cabinets through one source from a single manufacturer.
- B. Product Designations: Drawings indicate size, configurations, and finish material of casework by referencing designated manufacturer's catalog numbers. Other manufacturers' casework of similar sizes, similar door and drawer configurations, same finish material, and complying with the Specifications may be considered.
- C. Quality Standards: Comply with standards listed in the Article "Reference Standards" above.
- D. Certifications:
 1. Cabinets: Continuously tested, certified and displaying label or seal of Kitchen Cabinet Manufacturers Association (KCMA) or Southern California Association of Cabinet Manufacturers Association in accordance with ANSI Z34.1.
 - a. Federal Severe Use Cabinets: Bear KCMA Certification Seal and additional label indicating conformance to Federal Severe Use specifications.
- E. Regulatory Requirements: Comply with following:
 1. Accessibility:
 - a. Architectural Barriers Act of 1968 as amended (42 USC 4152-4157) and HUD implementing regulations (24 CFR Part 40).
 - 1) Uniform Federal Accessibility Standards (UFAS).
 - b. Section 504 of the Rehabilitation Act of 1973 as amended (29 USC 794) and HUD implementing regulations 24 CFR Part 8.
 - c. Fair Housing Accessibility Guidelines (24 CFR Chapter 1).
 - d. Americans with Disabilities Act of 1990 (ADA) (28 CFR Part 35).
- F. Mock-ups:
 1. Install mock-up of cabinets and countertops in kitchen designated by Owner.
 2. Approved Mock-up shall establish the Standard for rest of work.
 3. Approved Mock-up may remain part of completed project.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Packing, Shipping, Handling, and Unloading:
 - 1. Do not deliver cabinets until building or storage area is enclosed and sufficiently dry to prevent damage from excessive changes in moisture content.
 - 2. Protect casework and equipment from damage during delivery, storage, installation and subsequent building operations.

1.08 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Establish Dimensions: Where casework is indicated to fit to other construction, establish dimensions for areas where casework is to fit. Coordinate construction to ensure that actual dimensions correspond to established dimensions. Provide fillers and scribes to allow for trimming and fitting.
- C. Field Measurements: Where casework is indicated to fit to existing construction, verify dimensions of existing conditions by field measurements before fabrication and indicate measurements on Shop Drawings. Provide fillers and scribes if necessary.
- D. Field Measurements for Countertops: Verify dimensions of countertops by field measurements after base cabinets are installed but before countertop fabrication is complete. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.09 COORDINATION

- A. Coordinate layout and installation of blocking and reinforcement in partitions for support of casework.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - 1. Casework:
 - a. Republic Industries, Inc, Marshall, Texas.
 - b. Evans Cabinet Corporation, Dublin Georgia.
 - c. Armstrong World Industries, Inc., Lancaster PA
 - 2. Plastic Laminate for Countertops:
 - a. Formica Corp.
 - b. Nevamar Corp.
 - c. Wilson Plastics Co., Wilsonart.
- B. Available Products: subject to compliance with requirements, cabinets that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Crown II; Republic Industries, Inc.
 - a. Cabinet Style, Reveal Overlay
 - b. Wood Species: Birch
 - c. Finish: Light
 - 2. HUD/CSP; Evans Cabinet Corporation.
 - a. Cabinet Style, Reveal Overlay

- b. Wood Species: Birch
- c. Finish: 648-Wheat-Birch
- 3. Extreme; Armstrong World Industries, Inc.
 - a. Cabinet Style: Coronet
 - b. Wood Species: Plantation Hardwood
 - c. Finish: Honey

2.02 FEDERAL SEVERE USE CABINETS

- A. Wall and Base Cabinets: Comply with requirements under Article "System Description" above.
 - 1. Construct cabinets as necessary to produce sturdy and rigid construction.
 - 2. Wall and Base Cabinets and Countertops: Constructed of solid lumber and/or exterior grade plywood with wood veneer core.
 - a. Particleboard, flakeboard, fiberboard, or hardboard not allowed.
- B. Base Cabinets:
 - 1. Parts Touching Floor: Pressure treated solid lumber.
 - 2. Provide integral toe space of minimum 3-inches by 3-inches.
 - 3. Toe Kicks: 3/4-inch net thickness, pressure treated solid lumber.
- C. Face Frames: 3/4-inches net thick kiln dried solid hardwood, free of knots and selected for light uniform color suitable for natural finish.
 - 1. Frames: Mortised and tenoned, dovetailed or doweled, glued and stapled under pressure and filled and sanded.
 - 2. Vertical End Members (Stiles): Minimum 1-1/2-inch net width.
 - 3. Vertical Center Members between Doors and Drawers (Mulls): Minimum 2-inches net width.
 - 4. Horizontal Members (Rails): 1-3/4-inches net width.
 - 5. Stiles and Top and Bottom Rails: Dadoed to receive ends, bottoms and tops.
- D. Doors and Door Hardware:
 - 1. Doors: 3/4-inch thick 7-ply A-D grade exterior hardwood plywood with no more than one veneer joint on face.
 - 2. Edges: Reversed shaped to form continuous finger grip around sides. Filled and sanded smooth prior to finish. May be treated with hot foil transfer. May be covered with 3/8-inch by 3/4-inch reverse shaped hardwood bands.
 - 3. Acceptable Hardwoods: Beech, birch, maple or oak suitable for natural finish.
 - 4. Hinges: Manufacturer's standard heavy duty with self-closing feature, face mount or semi-concealed type.
- E. Drawers and Drawer Hardware:
 - 1. Fronts Construction and Finish: Same as doors.
 - 2. Sides and Backs: Minimum 5/8-inch net thickness Grade C solid lumber with sides dovetailed or mortised and tenoned into fronts.
 - 3. Backs: Dadoed into sides.
 - 4. Bottoms: Minimum 1/4-inch softwood or hardwood exterior plywood let into front, sides and back.
 - 5. Drawer Parts: Glued and nailed or stapled together.
 - 6. Mount drawers on metal side rails with 75-pound loading capacity.
 - 7. Cabinet Members or Guides: Attached at rear to 3/4-inch solid lumber hanging rail or 1/2-inch solid lumber or plywood block which is attached to 3/4-inch solid lumber hanging rail by use of metal rear mount brackets or by continuous wraparound method.
- F. Installation Cleats: Minimum 3/4-inch by 3-1/2-inches net thickness S4S, Grade C, kiln dried

solid lumber, dados to receive bottoms and tops.

1. Provide two horizontal members running full length of cabinet at top and bottom.
2. Base Cabinets with Drawers: Side mount drawer slide bracket(s) rigidly attached to 1/2-inch thick plywood or wood block, which is rigidly attached to top cleat. See Drawers paragraph above for alternate mounting.

G. End Panels:

1. Exposed End Panels: Minimum 2-2 Grade, 1/2-inch thick 5 ply exterior hardwood plywood, selected for light uniform color.
2. Ends Not Exposed: May be 1/2-inch exterior softwood plywood, Grade A-D, with Grade A side to inside of cabinet.
3. Ends: Dadoed minimum of 1/4-inch deep to receive shelves, bottoms and tops. Let into dado in face frame.
4. Base Cabinet End Panels: Stop 3-1/2-inches above floor and supported by 3/4-inch by 3-1/2-inch pressure treated solid lumber member.

H. Shelves and Wall Cabinet Tops and Bottoms: 1/2-inch thick Grade 2-2 exterior hardwood plywood or Grade A-D exterior softwood plywood with wood banded front edge or 3/4-inch net thickness solid lumber.

1. Shelves: Let into dados of end panels and braced behind mulls.
2. Bottoms: Let into (rabbet or dado, manufacturers' choice) ends, cleats and front frames.
3. Shelves and Bottoms: Glued and stapled.
4. Optional Adjustable Shelves: 3/4-inch thick Grade 2-2 exterior hardwood plywood or Grade A-D exterior softwood plywood with wood banded front edge or 3/4-inch net thickness solid lumber.
5. Shelves: Support as necessary to comply with shelf deflection provisions of ANSI/KCMA A161.1.
6. Shelves: When loaded at 15 PSF for seven days shall not deflect more than 1/16-inch per linear foot between supports.
7. Maximum Deflection: 1/4-inch between supports.

I. Backs: Provide on cabinets (optional on sink bases depending on job conditions).

1. Backs: Minimum 1/4-inch thick Grade 2-2 exterior hardwood plywood or A-D grade exterior softwood plywood. Securely glued and stapled to ends, 3-1/2-inch cleats and shelves of cabinet. May be let into dado of ends and cleats or may be applied flush with ends and cleats.

J. Base Bottoms: 1/2-inch thick Grade 2-2 exterior hardwood plywood or A-C Grade exterior softwood plywood.

1. Bottoms: Let into (rabbet or dado, manufacturers choice) end panels, front rails and installation cleats. Supported by 3/4-inch net thickness pressure treated solid lumber braces 24-inches on-center running front to rear of cabinet and resting on finished floor.

2.03 COUNTERTOPS

A. Plastic Laminate Countertops: ANSI A161.2.

1. Type: Post-formed with integral backsplashes.
 - a. Front Edges: 180° front nose, 1-1/2 inch thick, 1/2 inch top and bottom radius.
 - b. Backsplashes: Minimum 4-inches high with cove beveled molding with Type A curved top and scribe edge.
 - c. Provide backsplashes at juncture of countertop with back and sidewalls.
2. Materials: High-pressure plastic laminated to 3/4-inch thick exterior plywood.
 - a. Particleboard, flakeboard, fiberboard, or hardboard not allowed.
3. Plastic Laminate: NEMA LD 3, Type PF42, 0.042-inch thickness.

- a. Colors, patterns, finishes as selected from manufacturer's standard offering.
- 4. Perimeter of Bottom of Countertops and Sink Cutouts: Sealed with varnish.
- 5. Bathroom counter tops shall be cultured marble with overflow opening.

2.04 WALL MOUNTED METAL GREASE SPLASH

- A. Stainless Steel: AISI Type 304, nonmagnetic sheets, free of buckles, waves, and surface imperfections, No. 4 polished finish on exposed surfaces, 24-gage, sanded edges.

2.05 SOURCE QUALITY CONTROL

- A. Testing: Performed under Third Party Administrator in compliance with ANSI Z34.1.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Site Verification of Conditions:
 - 1. Existing Conditions: Examine spaces to verify that they are ready to receive cabinets and countertops.
 - 2. Verify grounds, blocking and supports for proper location and support of cabinets before beginning installation. Verify location of mechanical and electrical rough-ins to assure proper match with installed equipment.
 - 3. Survey each kitchen and bath to verify dimensions for cabinets and countertops.

3.02 PREPARATION

- A. Protection: Protect adjacent elements from damage and disfiguration in accordance with Division 1 Section "Execution Requirements."

3.03 INSTALLATION

- A. General: Deliver, uncrate, place in proper location and assemble cabinets and countertops in accordance with manufacturer's recommendations and approved Shop Drawings.
- B. Install casework with no variations in flushness of adjoining surfaces; use concealed shims. Where casework abuts other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match casework face.
- C. Install casework without distortion so doors and drawers fit openings and are aligned. Complete installation of hardware and accessories.
- D. Install casework and countertop level and plumb to a tolerance of 1/8-inch in 8 feet (3-mm in 2.4-m).
- E. Fasten cabinets to adjacent units and to backing.
 - 1. Fasten cabinets through back, near top and bottom, at ends and not less than 24-inches (600mm) on center with No. 10 wafer-head screws sized for 1-inch (25-mm) penetration into wood framing, blocking, or hanging strips
- F. Fasten plastic-laminate countertops by screwing through corner blocks of base units into underside of countertop.
 - 1. Form seams using splines to align adjacent surfaces, and secure with glue and concealed clamping devices designed for this purpose.
 - 2. Miter inside corner joints.
 - 3. Seal cut edges of plywood at sink opening with spar varnish.
 - 4. Seal joints between countertops and walls with joint sealant.

- G. Sinks, Lavatories, and Trim: Provided and installed under Division 15 Section “Plumbing Fixtures.”

3.04 ADJUSTING AND CLEANING

- A. Adjust casework and hardware so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.
- B. Clean exposed and semiexposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

END OF SECTION 012357

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