SECTION 12370
RESIDENTIAL CABINETS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Remove existing cabinets and countertops.
   2. Normal/Elderly Use:
      a. Kitchen wall and base cabinets and countertops.
      b. Bathroom vanity cabinets and countertops.
   3. HUSe Severe Use:
      a. Kitchen wall and base cabinets and countertops.
      b. Bathroom vanity cabinets and countertops.
   4. Metal grease splash.
   5. Wood soffits above wall cabinets.

B. Related Requirements: Comply with requirements of following sections:
   1. Contractor Use of Premises and Work Sequence: Section 01010 - Summary of Work.
   2. Section 01120 - Alteration Project Procedures.

C. Related Sections:
   1. Bathroom Renovation Requirements: Section 01010 - Summary of Work.
   4. Gypsum Board or Plaster Soffits above Cabinets: Section 01120 Alteration Project Procedures.

1.2 REFERENCES

A. Reference Standards: See Section 01091. Comply with following:
   1. Cabinets:
      a. HUD Minimum Property Standards for Housing, 1984 Edition (with changes).
      c. Plywood:
         (1) ANSI/HPMA HP - Hardwood and Decorative Plywood, 1983.
         (2) US Product Standard PS 1-83 - Softwood Plywood, Construction and Industrial.
   4. Cultured Marble Countertops:
      b. HUD Use of Materials Bulletin No. UM 73a.
   5. Joint Sealant:
      b. ASTM C820 - Elastomeric Joint Sealants.
6. Certification:

1.3 DEFINITIONS

A. Supply and Delivery Only: Include supply and delivery to site(s) FOB destination freight prepaid. Unless otherwise specified or scheduled, unloading and handling at site is by PHA/IHA.

1.4 SYSTEM DESCRIPTION

A. Performance Requirements:
      a. Tests: Performed on standard 760 mm (30 inch) wall and base cabinets.
   2. Drawers and Drawer Hardware for HUD Severe Use: Apply 330 N (75 pound) point load to exterior edge of drawer extended 150 mm (6 inches) from its closed position for period of 15 minutes.
      a. Successful Test: No failure in any part of drawer assembly or operating system and drawer remain operable with no mechanical interference with any part of cabinet assembly.

1.5 SUBMITTALS

A. Product Data: Submit product data for cabinets and countertops to Contracting Officer.

B. Shop Drawings: Submit Shop Drawings for cabinets and countertops to Contracting Officer for each type of kitchen.

C. Samples: Submit samples of following to Contracting Officer for selection:
   1. Wood veneers with stain finishes.
   2. Plastic laminate patterns and colors.

D. Quality Assurance/Control Submittals: Submit following to Contracting Officer:
   1. Certificates: Manufacturer's written certification that cabinets and countertops meet or exceed specified requirements.

1.6 QUALITY ASSURANCE

A. Certifications:
   1. Cabinets: Continuously tested, certified and display label or seal of Kitchen Cabinet Manufacturer's Association (KCMA) or Southern California Association of Cabinet Manufacturers Association in accordance with ANSI Z34.1.
      a. HUD Severe Use Cabinets: Bear KCMA Certification Seal and additional label indicating conformance to HUD Severe Use specifications.

B. Regulatory Requirements: Comply with following:
   1. Accessibility:
         (1) Uniform Federal Accessibility Standards (UFAS).
      c. Fair Housing Accessibility Guidelines (24 CFR Chapter 1).
C. Mock-ups:
   1. Install mock-up of cabinets and countertops in kitchen as part of kitchen renovation mock-up. See Section 01010.
   2. Install mock-up of cabinets and countertops in bathroom as part of bathroom renovation mock-up. See Section 01010.
   3. Locations: As directed by Contracting Officer
   4. Approved Mock-up: Standard for rest of work.
   5. Approved Mock-up: May remain part of completed project.

1.7 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.

1.8 SCHEDULING

A. Scheduling and Completion: Comply with requirements of Section 01010.

1.9 PROJECT CONDITIONS

A. Field Measurements: Field measure spaces to receive cabinets before beginning fabrication.
   1. Cabinets: Conform to building lines and neatly fitted around openings, pipes, and other obstructions.

PART 2 - PRODUCTS

2.1 NORMAL/ELDERLY USE CABINETS

A. Cabinets: Standard size factory manufactured, assembled and finished for normal/elderly and severe use as scheduled. Comply with:
   1. HUD Minimum Property Standards for Housing, Paragraph 611-1.
   2. ANSI/KCMA A161.1.

B. Cabinet Construction: Hardwood face frames and reveal overlay construction.
   1. Base and Wall Cabinets: Same construction and same appearance.

C. Cabinet Materials:
   2. Particleboard, ANSI A205.1, medium density.

D. Vanity Cabinets: Sizes as indicated on drawings.
   1. Size if Not Indicated: 460 mm (18 inches) to 610 mm (24 inches) wide and 410 mm (16 inches) to 530 mm (21 inches) deep.

E. Cabinet Finish: Comply with ANSI/KCMA A161.1 finish test and performance requirements.
   1. Exposed Surfaces and Interior of Cabinet: Factory finished consisting of stain, sealer and top coat, lightly sanded between application.
   a. Sealer and Top Coats: Oven dried.
   b. Stain Color: Selected by Contracting Officer from manufacturer's standard colors.
2. Toe Kick: Painted as directed by Contracting Officer.
3. Alternate Finish: High-pressure Decorative Laminates (HPDL) may be supplied in lieu of finish described above.
   a. HPDL: Comply with NEMA LD 3, Type GP 28, 0.7 mm (0.028 inch) thickness.

F. Fillers and Molding: Use scribe mould and fillers to assure accurate job fit.
1. Molding and Fillers: Outside corners, scribes, cove molding, and trim molding.
2. Fillers: Include corner base fillers, base fillers, and wall fillers.

G. Joint Sealant: Mildew resistant one-component silicone; FS TT-S-001543A, Class A; ASTM C920, Type S, Grade NS, Class 25, Uses NT, G, and A.
   1. Color: As selected by Contracting Officer from manufacturer's standard line.

2.2 HUD SEVERE USE CABINETS

A. Wall and Base Cabinets: Comply with requirements under Cabinets - General above.
   1. Construct 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.
   3. Base Cabinets:
      a. Parts Touching Floor: Pressure treated solid lumber.
      b. Provide integral toe space of minimum 75 mm (3 inches) by 75 mm (3 inches).
      c. Toe Kicks: 19.1 mm (3/4 inch) net thickness, pressure treated solid lumber.

B. Face Frames: 19.1 mm (3/4 inches) net thick kiln dried solid hardwood, free of knots and selected for light uniform color suitable for stain finish.
   1. Frames: Mortised and tenoned, dovetailed or doweled, glazed and stapled under pressure and filled and sanded.
   2. Vertical End Members (Stiles): Minimum 38 mm (1-1/2 inch) net width.
   3. Vertical Center Members between Doors and Drawers (Mulls): Minimum 50 mm (2 inches) net width.
   4. Horizontal Members (Rails): 44 mm (1-3/4 inches) net width.
   5. Stiles and Top and Bottom Rails: Dadoed to receive ends, bottoms and tops.

C. Doors and Door Hardware:
   1. Doors: 19.1 mm (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.
   3. Edges: Filled and sanded smooth prior to finish.
   4. Edges: May be treated with hot foil transfer.
   5. Edges: May be covered with 9.5 mm (3/8 inch) by 19.1 mm (3/4 inch) reverse shaped hardwood bands.
   6. Acceptable Hardwoods: Beech, birch, maple or oak suitable for stain finish.
   7. Hinges: Manufacturer's standard heavy duty with self closing feature, face mount or semi-concealed type.

D. Drawers and Drawer Hardware:
   1. Fronts Construction and Finish: Same as doors.
   2. Sides and Backs: Minimum 17.4 mm (11/16 inch) net thickness Grade C solid lumber with sides dovetailed or mortised and tenoned into fronts.
4. Bottoms: Minimum 6.4 mm (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 34 kg (75 pound) loading capacity.
7. Cabinet Members or Guides: Attached at rear to 19.1 mm (3/4 inch) solid lumber hanging rail or 12.7 mm (1/2 inch) solid lumber or plywood block which is attached to 19.1 mm (3/4 inch) solid lumber hanging rail by use of metal rear mount brackets or by continuous wrap-around method.

E. Installation Cleats: Minimum 19.1 mm (3/4 inch) by 89 mm (3-1/2 inches) net thickness S4S, Grade C, klin dried solid lumber, dadoes 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 12.7 mm (1/2 inch) thick plywood or wood block which is rigidly attached to top cleat. See "Drawers" paragraph above for alternate mounting.

F. End Panels:
   1. Exposed End Panels: Minimum 2-2 Grade, 12.7 mm (1/2 inch) thick 5-ply exterior hardwood plywood, selected for light uniform color.
   2. Ends Not Exposed: May be 12.7 mm (1/2 inch) exterior softwood plywood, Grade A-D, with Grade A side to inside of cabinet.
   3. Ends: Dadoed minimum of 6 mm (1/4 inch) deep to receive shelves, bottoms and tops.
   4. Ends: Let into dado in face frame.
   5. Base Cabinet End Panels: Slop 89 mm (3-1/2 inches) above floor and supported by 19.1 mm (3/4 inch) by 89 mm (3-1/2 inch) pressure treated solid lumber member.

G. Shelves and Wall Cabinet Bottoms: 12.7 mm (1/2 inch) thick Grade 2-2 exterior hardwood plywood or Grade A-D exterior softwood plywood with wood banded front edge or 19.1 mm (3/4 inch) net thickness solid lumber.
   1. Shelves: Let into dadoes of end panels and braced behind mulls.
   2. Bottoms: Let into (rabbet or dado, manufacturers choice) ends, cleats and front frames.
   4. Optional Adjustable Shelves: 19.1 mm (3/4 inch) thick Grade 2-2 exterior hardwood plywood of Grade A-D exterior softwood plywood with wood banded front edge or 19.1 mm (3/4 inch) net thickness solid lumber.
      a. Shelves: Support as necessary to comply with shelf deflection provisions of ANSI/KCMA A161.1.
      b. Shelves: When loaded at 73.3 kg/sq m (15 PSF) for seven days shall not deflect more than 1.6 mm (1/6 inch) per 305 mm (linear foot) between supports.
      c. Maximum Deflection: 6.4 mm (1/4 inch) between supports.

H. Backs: Provide on cabinets (optional on sink bases depending on job conditions).
   1. Backs: Minimum 6.4 mm (1/4 inch) thick Grade 2-2 exterior hardwood plywood or A-D grade exterior softwood plywood.
   2. Backs: Securely glued and stapled to ends, 89 mm (3-1/2 inch) cleats and shelves of cabinet.
   3. Backs: May be let into dado of ends and cleats or may be applied flush with ends and cleats.

I. Base Bottoms: 12.7 mm (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.
   2. Bottom: Supported by 19.1 mm (3/4 inch) net thickness pressure treated solid lumber braces 610 mm (24 inches) OC running front to rear of cabinet and resting on finished floor.
2.3 COUNTERTOPS

   1. Type: Post-formed with integral backsplashes.
      a. Front Edges: No-drip.
      b. Backsplashes: Minimum 100 mm (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 side walls.
   2. Materials: High pressure plastic laminated to 19.1 mm (3/4 inch) thick exterior plywood.
      a. Particleboard, flakeboard, fiberboard, or hardboard not allowed.
   3. Plastic Laminate: NEMA LD 3, Type PF42, 1.1 mm (0.042 inch) thickness.
      a. Colors, patterns, finishes as selected from manufacturer's standard offering.

B. Cultured Marble Countertops: ANSI Z124.3 and HUD UM 73a.
   1. Cast in molds with integral lavatory bowls to achieve required shape and configuration in
      coordination with vanity cabinets and plumbing trim.
   2. Integral Lavatory Bowls: Recessed oval shape.
   3. Holes for Plumbing Trim: Coordinate with Section 15400.
   4. Provide radius corners and edges.
   5. Backsplashes: Provide where counters meet walls including at back and at sides.

2.4 METAL GREASE SPLASH MATERIAL

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.

2.5 WALL CABINET SOFFIT MATERIAL

A. Gypsum Board or Plaster: See Section 01120.

B. Wood:
   1. Exposed Wood Soffit Face: 6.4 mm (1/4 inch) 3-ply birch-faced cabinet grade plywood.
   2. Blocking: Hemlock-Fir No. 2.

2.6 SOURCE QUALITY CONTROL

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

PART 3 - EXECUTION

3.1 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.
Fair Housing Accessibility Guidelines, March 6, 1991 available from HUD, FHEO/Office of Program Training and Technical Assistance, 451 7th Street SW, Room 5240, Washington, DC 20410, 202/708-0870 or Fair Housing Information Clearinghouse, PO Box 6991, Rockville, MD 20850, 1/800/343-3442 or 301/251-5161. Fair Housing Accessibility Guidelines are available in the NIBS CCB program.

U.S. Department of Housing and Urban Development (HUD), HUD USER, PO Box 6091, Rockville, MD 20850, 1/800/245-2691, 301/251-5254.


HUD Minimum Property Standards for Housing, 1984 Edition (with changes).

Builders Hardware Manufacturers Association (BHMA), 355 Lexington Avenue, 17th Floor, New York, NY 10017, 212/661-4261

A156.9 Cabinet Hardware, 1988.

Construction Specifications Institute (CSI), 601 Madison Street, Alexandria, Virginia, 22314, 703/684-0300.

SpecGUIDE G12370 Residential Casework.

Kitchen Cabinet Manufacturers Association (KCMA), 1899 Preston White Drive, Reston, Virginia, 22091-4326, 703/264-1690.


National Electrical Manufacturers Association (NEMA), 2101 L Street, NW, Washington, DC, 20037, 202/457-8400

LD 3 High-Pressure Decorative Laminates, 1991.

OTHER GUIDE SPECIFICATIONS

AIA MASTERSPEC Section 12372 Kitchen Casework.

CSRF/CSI SPECTEXT Section 12370 Residential Casework.


US Army Corps of Engineers (COE) Section 12390 Kitchen Cabinets.

END OF SPECIFICATION AID

HUD GUIDE SPECIFICATIONS (9/93) 12370SA-7 RESIDENTIAL CABINETS