SECTION 12000 - KITCHEN CABINETS AND BATHROOM VANITIES

PART 1 - GENERAL

REQUIREMENTS INCLUDED

A. Provide all labour, materials, equipment and related services to completely supply and install all kitchen and bathroom vanity cabinets as indicated on the plans and specifications contained herein.

B. Drawings and general provisions of the Contract, including General and Supplementary Conditions, and including Divisions 01 to 16 Specification Sections (if applicable), apply to this Section.

C. The work in this section includes the supply and installation of the following:
   1. Kitchen manufactured casework.
   2. Vanity manufactured casework.
   3. Casework consists of: closed door wall casework, closed door and drawer base casework, and closed door full height casework, with or without glass panels.
   4. All associated glass related to the kitchen or bathroom vanity cabinetry work(s) if applicable.
   5. All matching casework finished flush filler and base pieces as applicable.
   6. All plywood and metal supports as required for support of suspended kitchen and bathroom vanity cabinets.
   7. All fastening hardware, glues, and caulking as required securing kitchen and bathroom vanity cabinets.
   8. All protective wrapping of all finished items during storage or delivery to site.
   9. Drilling and cutting of all holes (“neat”) as required for installation of all sinks and related plumbing fittings, plumbing fixtures, appliances and related electrical fittings and electrical fixtures.

D. Related Sections include the following:
   1. 06100, Carpentry; for wood blocking and nailers (plywood and/or wood) built into wall before installation of Casework.
   2. 06400, Architectural Woodwork; for all related finishes installed to base casework including all solid surface and granite type countertop finishes.
   3. 01015, Sustainability and LEED Canada Requirements (if applicable) including but not limited to waste management, recyclability, indoor air quality and VOC compliance, certification woods and wood products, and confirmation of local and regional materials. Each trade contractor shall provide submissions (product literature and MMDS literature) of such for review and approval by the Sustainability Coordinator.
   4. 01560, Construction Waste Management.
   5. 09310, Ceramic Tile work.
   6. 09110, Non-Load-Bearing Steel framing; for installation of metal backing plates required for wall hung casework.
   7. 11451, Residential Appliances; for appliances if included in these specifications.
   8. 08800, Glass and Glazing including mirrors.
   9. Section 15, all sinks, plumbing fixtures, and ductwork to exhausting hoods.
   10. Division 16, Electrical fittings and fixtures in cabinets.
DEFINITIONS

A. Exposed Surfaces of Casework: Surfaces visible when doors and drawers are closed, including visible surfaces in open casework.

B. Semi-exposed Surfaces of Casework: Surfaces behind doors or drawer fronts, including interior faces of doors and interiors and sides of drawers. Bottoms of wall casework are defined as "semi-exposed."

C. Concealed Surfaces of Casework: Surfaces not usually visible after installation, including sleepers, web frames, dust panels, bottoms of drawers, and ends of casework installed directly against and completely concealed by walls or other Casework. Tops of wall casework and tall casework are defined as "concealed."

SUBMITTALS

A. Product Data: For the following:

1. Casework.
2. Casework hardware.

B. Shop Drawings: For casework, include plans, elevations, details, sections, and attachments to other work. Show materials, finishes, filler panels, “plant on fillers”, and hardware. Shop drawings including all dimensions from design drawings and filed measures. Shop drawings to also include extent of countertops, details of cut outs, methods of construction and installations, and shall specify and show all finish materials and related hardware. Shop drawings shall also contain design and layouts according to established appliances as specified by the designer and/or developer.

C. Samples for Verification:

1. Particle board/plywood panels (cabinet cases) with melamine finish, 8-inches by 10-inches, for each species.
2. As specified cabinet fronts (drawer and door front) 50 square inches, for each species or type.
3. Exposed hardware, for each type of item.
4. One full-size, exact size of finished base casework complete with hardware, doors, and drawers but without countertop. Sample will be returned to Trade Contractor for use on Project.
5. One full-size, exact size of finished wall casework complete with hardware, doors, and adjustable shelves. Sample will be returned to Trade Contractor for use on Project.

D. LEED® Submittals:

1. Product Data for adhesives and composite wood products, documentation indicating that product contains no added urea formaldehyde.
2. Product Data for products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content.
   a. Include statement indicating costs for each certified wood product. (if applicable)

E. Product Certificates: Signed by manufacturers of casework certifying that products furnished comply with requirements.
QUALITY ASSURANCE

A. Manufacturer Qualifications: All casework provided by a qualified manufacturer shall conform to CSA A278 Kitchen Cabinets and Bathroom Vanities (latest edition) as a minimum standard.

PROJECT OR JOB CONDITIONS

A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet work is complete, and HVAC system is operating (if applicable) and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Established 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 to a maximum of 1 ½”.

C. Field Measurements: Where casework is indicated to fit to existing construction, verify dimensions of existing construction by field measurements before fabrication and indicate measurements on Shop Drawings. Provide fillers and scribes, matching finish and composition of casework being installed, to allow for trimming and fitting.

D. Check all related surfaces (substrates and adjacent surfaces) are ready for installation and all unsuitable conditions are to be reported to the Construction Manager for remedies. All such surfaces to be clean, level, plumb, smooth and free from projections.

E. Protect other trades work as needed to avoid damages to same. Such damages shall be made good by this trade.

F. Full coordination with Construction Manager and all other related trades in advance is required and this trade shall make provisions for such if required.

G. This trade is responsible to examine all drawings and specifications and site conditions to coordinate installation procedures in a timely and coordinated manner. Trade also to accommodate installation of members to facilitate a neat and orderly installation into finished walls and openings according to actual site conditions.

COORDINATION

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

WARRANTY

A. Special Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of casework that fail in materials or workmanship within 2 years from Substantial Completion.

B. Warranty shall not deprive Owner of other rights Owner may have under other provisions of Contract Documents and will be in addition to, and run concurrent with, other warranties made by Contractor under requirements of Contract Documents.
2.1 WOOD CASEWORK – Level 1

A. Wood Materials:
1. Casework for cabinets are manufactured from certified wood for LEED, which has minimum of 50 percent of wood-based materials be certified and are manufactured with Zero-emitting materials compliant with LEED for Level 1. Adhesives: Do not use adhesives that contain urea formaldehyde.
2. Hardwood Lumber: Kiln-dried to 7 percent moisture content, used for exposed materials. Select materials for compatible color and grain. Do not use two adjacent exposed surfaces that are noticeably dissimilar in color, grain, figure, or natural character markings. Use clear hardwood lumber of species indicated, free of defects.
3. The term "plywood" in the subparagraph below refers to a wood-based panel with veneers applied to both faces; the core may be made up of veneers or glued-up lumber. Low-emitting materials are required for LEED, while the product specified below prohibits use of added urea formaldehyde.
4. Hardwood Plywood: HPVA HP-1, made with bonding adhesive containing no added urea formaldehyde (NAF). Hardwood plywood with Grade A face veneer of species matching hardwood lumber, with Grade A natural birch for semi-exposed or concealed surfaces. Natural birch shall be shop-finished with a Zero-emitting UV clear finish.

B. Casework Hardware:
1. Hinges: Concealed European-style self-closing clip-on hinges, minimum 110 degree opening, six-way adjustable nickel coated zinc alloy. All hinges to be Blum, Richelieu, Hettich or equivalent. All hinges to be soft close and shall be fully adjustable (4 screw type). Minimum 2 hinges per door are required up to 39 inches high, 3 hinges for doors up to 51 inches high, and 4 hinges for doors up to 92 inches high.
2. All pulls and handles to match design and specifications as provide by designer and/or developer.
3. Standard Drawers and Guides: Epoxy-coated-metal, self-closing soft close full extension drawer guides designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers, 88-lb. (40 kg) capacity at full extension. All drawer boxes to be constructed with 5/8” melamine faced particle board/plywood bottoms and backs complete with metal sides.
4. All cabinetry handles and pulls to match specification as provided by the designer and/or developer.
5. Edge Banding: Edge banding to match cabinet casework through-color with satin finish, 2 mm thick at doors, drawer fronts and PVC 0.5mm color matching to all casework. Color as indicated by manufacturer's designation.

C. Casework Construction:
1. All cabinetry casework to be frameless and manufactured from ¾” melamine faced particle board or plywood and have structural capacity complete with and including horizontal plywood frame to underside of granite or solid surface counters and under mount sinks. Casework to be complete with glued wood dowel and screws. Note: Bottom shelf of wall cabinets to be constructed from 1” melamine faced particle board or plywood. Stretcher rails at kitchen and vanity sinks to receive vertical 4” door matched panel.
2. All cabinetry box interiors to be finished with melamine surfaces (allowance of 2 colors, grey or white) All cabinets to receive ½” matching painted hardboard backs.
3. Casework Style: Full access (frameless), flush overlay, complete with fillers and corner panels for wall casework. All exposed exterior surfaces of cabinetry boxes to be case finished with wood veneers, all stained and color matched to meet owner/designer specifications (mock up samples of veneers to be provided) and manufacturer to provide
for 2 wood veneer options. Minor variations in grain pattern or grain flaws are permitted. Allowance to be made for natural characteristics of wood products. Trade contractor through mock up procedures will have allowance of such verified by designer and/or developer.

4. All 36” wide and smaller vanity cabinets to receive 2 doors and 1 drawer under. Vanity cabinets to be a minimum of 24” in width.

5. All vanities wider than 36” to receive 2 doors and bank of 3 drawers.

6. **Note: If vanities are wall hung type, they are to be complete with all metal reinforcements to case work to accommodate structural aspects of this support system – no cabinet support legs or base is permitted.**

7. All regular kitchen cabinets to receive a “bank” of drawers and kitchen islands to receive a 24” wide “bank” (3) of pot drawers.

8. All range hood cabinets to receive melamine boxing to inside of upper cabinet to cover venting pipes.

9. All upper cabinets to receive raceways or provision for under cabinet “puck” style lighting.

10. Refrigerator and dishwasher door panels are to be included in all kitchen layouts (if applicable.) Case work to fully match adjacent finishes. (Supply only, installation by others)

11. Door and Drawer Fronts: Construction: Solid-wood lumber or particle board/plywood complete with veneers. All doors and drawers to be constructed of solid wood lumber or particle board/plywood complete with case matching wood veneer finishes. Doors to be full height in kitchens, all 24” wide cabinets to receive 2 doors, maximum door width to be 21”. Species and Style to match designer and/or developer specifications.

12. Exposed End Finish (Wall and Base): 3/4-inch thick, particle board or plywood core complete with case matching wood veneer finishes.

13. End Construction: 3/4-inch thick particle board or plywood complete with matching wood veneer finishes.

14. All cabinetry, doors, drawer fronts, fillers, gables, dishwasher gables, bar backs, and panel supports including cabinet base kicks to be all case matched wood veneers.

15. Maximum cabinet width of 42”. Cabinet style and rails to receive case matching finish and to be installed with no seams and cut to suit for proper finish.

16. All kitchen and bathroom vanities to receive case matching regular fillers (maximum 1 ½” wide) and “plant-on” fillers where abutting a wall and between cabinetry boxes where applicable to conceal all vertical cabinetry box seams and connections to adjacent finishes or walls.

17. Upper cabinet bottom shelves: 1-inch thick particle board or plywood to all wall cabinets.

18. Underside of Wall Casework: Flush with each element (end panel edges and casework bottoms) finished individually.


20. Shelves: Fully adjustable in base, wall, and tall casework. 3/4-inch thick particle board or plywood with melamine faces on all surfaces and matching edge banding on front edge. Shelves are fully adjustable using 0.19 inch metal post shelf clips fitted into holes bored at 1-1/4-inch intervals. Note: Any shelving larger than industry standard to lower base cabinets will come with adequate vertical support as no shelving will be permitted to sag.

21. Hanging Rails: 4-inch by 3/4-inch thick, dowel-and-adhesive fitted into end panels, flush with casework ends on top and bottom.

22. Stretchers: 4-inch by 3/4-inch thick hardwood plywood for base casework, full-width to provide support and solid mounting surface for countertops.

23. Stain Color: To precisely match designer and/or developer specifications.
PART 3 - EXECUTION

INSTALLATION

A. Install casework with no variation 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 face of casework.

B. Install casework without distortion so doors and drawers fit openings and are aligned. Complete installation of hardware and accessories as indicated.

C. Install casework level and plumb to a tolerance of 1/8-inch in 8-feet.

D. All installations to be square, vertical, and finished as required and inspected by Construction Manager (or duly authorized representative).

E. All ceiling scribes are included.

F. There shall be no open void spaces at underside of upper cabinets and all surfaces to be completely finished.

G. All access holes for plumbing and electrical to be neatly drilled to allow plumbing and electrical escutcheon or plates to cover.

H. Trade Contractor is to thoroughly clean work areas to ensure glues and fasteners will function as intended.

I. Trade Contractor to provide his own daily clean up.

J. Trade contractor to provide his own delivery and protection throughout the delivery process.

K. Fasten casework to adjacent units and to backing.

1. Fasten wall casework through back, through hanging rails not less than 16-inches on center with No. 10 wafer-head screws sized for minimum 1-inch penetration into wood framing or blocking.

ADJUSTING AND CLEANING

A. Adjust casework and hardware so doors and drawers are centered in openings and operate smoothly without warp or bind.

B. Clean casework on exposed and semi-exposed surfaces. Touch-up factory-applied finishes, using material recommended by casework manufacturer, to restore damaged or soiled areas.

END OF SECTION 12000