DIVISION 12

FURNISHINGS

Part 1 General

1.1 RELATED SECTIONS

.1 Division 22 - Plumbing: plumbing services.

.2 Division 26 - Electrical: electrical services.

1.2 REFERENCES

.1 American Society for Testing and Materials International, (ASTM)
- .1 ASTM A167, Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- .2 ASTM A240/A240M, Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels.
- .3 ASTM A653/A653M, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .4 ASTM B117, Standard Practice for Operating Salt Spray (Fog) Apparatus.
- .5 ASTM B456, Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.

1.3 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

.2 Indicate:
- .1 Details of casework construction and related and dimensional position, with sections.
- .2 Location of each casework unit.
- .3 Location for rough-in of plumbing, including sinks, faucets, strainers and cocks and electrical services.

.3 Include test reports by independent testing laboratories indicating results of furniture finish tests.

1.4 SAMPLES

.1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit duplicate samples of:
- .1 Each countertop material, 300 x 300 mm.
- .2 Each standard colour of cabinet finish on 300 x 300 mm steel sheet.
- .3 Each item of cabinet hardware.

Part 2 Products

2.1 CONSTRUCTION PERFORMANCE

.1 Floor supported base cabinets: Construct to support a static load of 745 kg/linear metre of width including working surface without distortion or interference with door and drawer.

.2 Wall Cabinets: Construct each shelf and cabinet bottom to support 75 kg/linear metre of width with load evenly distributed on all shelves and cabinet bottom over full width and depth.

.3 Base Cabinets: Construct to support 45 kg evenly distributed load over full width and depth.

.4 Drawer construction and performance shall allow a minimum of 325 mm clear when in an extended position and suspension system shall prevent friction contact with any other drawer or door during opening or closing. All drawers shall operate smoothly, a minimum of 10,000 cycles with a 45 kg interior static load. Drawer shall be removable without the use of tools. Drawers shall be self closing.

.5 Design swing doors on base cabinets' casework to support 70 kg suspended at a point 13 mm from hinged side, with door swung through an arc of 160º. Weight load test shall allow only a temporary deflection, without permanent distortion or twist. Door shall operate freely after the test and assume a flat plane in a closed position. Door hinges shall perform minimum 100,000 openings and closing cycles with no static load added to door.

.6 Tables: Construct free- standing tables to support a total load of 275 kg evenly distributed over full width and depth.

2.2 MATERIALS

.1 Galvanized steel sheet: commercial quality to ASTM A653 with Z275 zinc coating.

.2 Stainless steel sheet: to ASTM A240/A240M, Type 316, with #4 finish.

.3 Stainless steel tubing: AISI Type 304, commercial grade, seamless welded.

2.3 CONSTRUCTION

.1 Epoxy Resin Countertop

- .1 Material shall be a monolithic modified epoxy resin product and shall consist of a cast resin material formulated to provide a work surface with high chemical resistance characteristics. A combination of epoxy resin and inert materials, oven cured in moulds to obtain maximum chemical resistance then removed from the moulds and oven tempered to achieve maximum physical strength and stability. Surface shall have a uniform high gloss surface and the finished material shall be extremely hard and resistant to scratches and abrasion.
- .2 Thickness: 25 mm thick, unless otherwise noted.
- .3 Edge: Exposed edges shall be furnished with a standard 3 mm chamfered or a 6 mm radius edge as specified.
- .4 Color: Black.
- .5 Backsplash and Sidesplash: Materials shall be 25 mm thick. Supply loose for field application and to be the same materials as countertop.
- .6 Top lengths and widths as shown. Provide factory cut-out to match specified service fixtures.
- .7 Adhesives: Do not use adhesives that contain added urea formaldehyde.
- .8 Sealer: Water resistant sealer or glue recommended by manufacturer.
- .9 Sealants: acid resistant type suitable for application. Color to match adjoining materials.

.2 Metal Casework

- .1 Floor mounted and Wall cabinet assemblies as indicated on drawings.
- .2 Flush Face Construction, with doors and drawers in the same plane as the cabinet face frame, without overlap.
- .3 Doors and Drawers: Double pan construction, 20 mm thick, square edge.

.4 Provide reinforcement for hardware attachment on doors and drawer front to inner pan and conceal.

.5 Drawer of one piece body:

.1 Provide nylon roller channel suspension with front rollers set into drawer channels. Case channels shall maintain alignment and provide an integral drawer stop to prevent the inadvertent removal of the drawer.

.2 Case channels shall be die-formed and inserted into case suspension slot and clipped securely in slot provided in inner flange of front end upright. Apply case channels so that they may be removed for decontamination or replacement purposes.

.6 Provide the following casework units. Refer to drawings for locations.

.1 Base Cabinets

.1 Combination/Door-Drawer Unit:

.1 457 mm W x 559 mm D x 883 mm H.

2.4 CABINET HARDWARE AND ACCESSORIES

.1 Provide manufacturer's standard finish on all hardware unless noted otherwise.

.2 Door and drawer pulls: 100 mm flush Aluminum pull mottLAB Option 62 or approved equal in accordance with B7.

.3 Hinges: Institutional type, five knuckle, stainless steel mottLAB option 23 or approved equal in accordance with B7. Provide one pair for doors less than 1200 mm high and 1-1/2 pair for doors over 1200 mm high.

.4 Door Catches: Nylon roller spring catch or dual self aligning, permanent magnet type. Provide two catches on doors over 1200 mm high.

.5 Drawer Glides: Manufacturer's recommended product.

.6 Drawer Stops: Designed to permit easy removal, and yet prevent inadvertent drawer removal. Provide on all drawers, located on the inside.

.7 Closure Strips: Quantities as required. mottLAB Catalogue numbers:

.1 FFC1004 – for use with Base Cabinets

2.5 FINISH

.1 Pre-treatment: After assembly, clean surfaces of grease, dirt, oil, flux and other foreign matter by physical and chemical means. Treat entire unit with metallic phosphate process leaving surfaces with uniform, fine grained, crystalline phosphate coating.

.2 Top coats: One coat high bake primer followed by one or more coats of high bake chemical resistant epoxy/urethane, to provide a hard and smooth, satin luster finish, applied to treated surfaces. All surfaces, including hidden, shall be coated.

.3 Allow for one color to be selected by the Contract Administrator from the manufacturer's standard color card.

Part 3 Execution

3.1 INSTALLATION

.1 Install plumb, level, true and aligned with no distortions, Shim, using concealed shims. Where casework abuts other finished work, scribe and apply filler strips for accurate fit with fasteners concealed. Fit scribe strips to irregularities of adjacent surfaces. Maximum gap opening shall be 0.5 mm.

.2 Ensure base cabinets are level by adjusting levelling screws.

.3 Fit closure strips and scribe to irregularities of adjacent surfaces.

.4 Support wall cabinets' vertical post. Coordinate with contractor location of blocking.

.5 Adjust casework and hardware so that doors and drawers operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

.6 Hinges: Attach hinges to both doors and case with a minimum of two screws through each leaf. Welding of doors to hinges of metal casework is not acceptable.

.7 Install all hardware and accessories.

3.2 INSTALLATION OF WORK SURFACES

.1 Verify field dimension and that adjacent walls are square prior to installation.

.2 Field Jointing: Make in same manner as factory jointing using dowels, splines, adhesives and fasteners recommended by manufacturer. Locate field joints as shown on accepted shop drawings, factory prepared so the is no job site processing of top and edge surfaces.

.3 Workmanship: Abut top and edge surfaces in one true plane, with internal supports placed to prevent deflection. Provide flush hairline joints in top units using clamping devices.

.4 Tolerances: Provide joint widths not more than 1.5 mm wide, filled and flush with abutting edges. Horizontal alignment of top surface of joints for their entire length shall be within 0.5 mm. Align front edges of abutting pieces.

.5 Surface Finish: After installation, dress joints smooth, remove surface scratches, clean and polish entire surface.

3.3 PROTECTION

.1 Casework and counters shall not be used as workbenches or work platforms for any portion of the Work by any trade.

.2 Protect installed casework and fixtures from damage.

.3 Replace or repair of any damage casework.

3.4 CLEANING

.1 On completion, touch up marred or abraded finished surfaces.

.2 Clean and polish work surfaces.

.3 Wipe down surfaces to remove fingerprints and markings and leave in clean condition.

END OF SECTION