

**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 Section 07 92 00 – Joint Sealants
- .2 Section 09 90 00 - Painting

**1.2 REFERENCES**

- .1 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-11.3-M87, Hardboard.
- .2 CSA International
  - .1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
  - .2 CSA O112 Series-M1977(R2006), CSA Standards for Wood Adhesives.
  - .3 CSA O121-08, Douglas Fir Plywood.
  - .4 CSA O141-05(R2009), Softwood Lumber.
  - .5 CSA O151-09, Canadian Softwood Plywood.
  - .6 CSA O153-M1980(R2008), Poplar Plywood.
  - .7 CSA O325-07, Construction Sheathing.
- .3 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber 2007.
- .4 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
  - .1 SCAQMD Rule 1113-A2007, Architectural Coatings.
  - .2 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data: Submit manufacturer's instructions, printed product literature and data sheets for wood products and accessories and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings: Submit drawings stamped and signed by professional engineer registered or licensed in Province of Manitoba, Canada.

**1.4 QUALITY ASSURANCE**

- .1 Work shall be conducted in accordance with but not restricted to latest edition of The Manitoba Building Code.
- .2 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .3 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.

## **1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to Site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
  - .1 Store materials off ground in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect wood from nicks, scratches, and blemishes.
  - .3 Replace defective or damaged materials with new.
- .4 Waste Management and Disposal:
  - .1 Separate waste materials for reuse and recycling in accordance with requirements of Contract Administrator.

## **Part 2 Products**

### **2.1 FRAMING STRUCTURAL AND PANEL MATERIALS**

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:
  - .1 CSA O141.
  - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Framing and board lumber: in accordance with NBC, except as indicated or specified otherwise
- .3 Furring, blocking, nailing strips, grounds, rough bucks, cants, curbs, fascia backing and sleepers:
  - .1 Board sizes: "Standard" or better grade.
  - .2 Dimension sizes: "Standard" light framing or better grade.
  - .3 Post and timbers sizes: "Standard" or better grade.
- .4 Douglas fir plywood (DFP): to CSA O121, standard construction.
- .5 Canadian softwood plywood (CSP): to CSA O151, standard construction.
- .6 Poplar plywood (PP): to CSA O153, standard construction.

### **2.2 ACCESSORIES**

- .1 Sealants: in accordance with Section 07 92 00 – Joint Sealants.
  - .1 Sealants: VOC limit 250 g/L maximum to SCAQMD Rule 1168.
- .2 General purpose adhesive: to CSA O112 Series.
  - .1 VOC limit 70g/L maximum to SCAQMD Rule 1168.
- .3 Nails, spikes and staples: to CSA B111.
- .4 Bolts: ½" (12.5mm) diameter unless indicated otherwise, complete with nuts and washers.

- .5 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.
- .6 Nailing discs: flat caps, minimum 25 mm diameter, minimum 0.4 mm thick, sheet metal, formed to prevent dishing. Bell of cup shapes not acceptable.
- .7 Fastener Finishes: Galvanizing: to ASTM A123/A123M, ASTM A653, use galvanized fasteners for interior highly humid areas, pressure-preservative fire-retardant, treated, lumber.
- .8 Wood Preservative: CCA or other water-born salt, free of petroleum solvents and oils, applied by pressure treatment in accordance with CSA 080-M89 "Wood Preservation."

### **2.3 WOOD PRESERVATIVES**

- .1 Pressure treated: Chromated Copper Arsenate type to 0.38 lb/ft<sup>3</sup> (6kg/m<sup>3</sup>) retention or refusal in accordance with CSA 080 Series.

## **Part 3 Execution**

### **3.1 EXAMINATION**

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Contract Administrator.
  - .2 Inform Contract Administrator of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Contract Administrator.

### **3.2 ERECTION**

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.

### **3.3 PREPARATION**

- .1 Treat surfaces of material with wood preservative, before installation.
- .2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.
- .3 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.

### **3.4 MATERIAL USAGE**

- .1 Material usage in accordance with 3.2 for pressure treated.
- .2 BLOCKING FRAMING- No. 2 Douglas Fir or No. 2 S-P-F

**3.5 INSTALLATION**

- .1 Install members true to line, levels and elevations, square and plumb.
- .2 Construct continuous members from pieces of longest practical length.
- .3 Install spanning members with "crown-edge" up.
- .4 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.
- .5 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .6 Countersink bolts where necessary to provide clearance for other Work.

**3.6 FURRING AND BLOCKING**

- .1 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, siding electrical equipment mounting boards, and other work as required.
- .2 Align and plumb faces of furring and blocking to tolerance of 1:600.

**3.8 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 – Cleaning
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

**3.9 PROTECTION**

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by rough carpentry installation.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 Section 06 40 00 - Architectural Woodwork
- .2 Section 08 70 05 – Cabinet and Miscellaneous Hardware
- .3 Section 09 90 00 - Painting

**1.2 REFERENCES**

- .1 Architectural Woodwork Manufacturers Association of Canada (AWMAC)
  - .1 Architectural Woodwork Standards Edition 1 2009.
- .2 Canadian Standards Association (CSA)
  - .1 CSA B111-74 (R2003), Wire Nails, Spikes and Staples.
  - .2 CAN/CSA-G164-[M92(R2003)], Hot Dip Galvanizing of Irregularly Shaped Articles.
  - .3 CSA O121-[M89(R2003)], Douglas Fir Plywood.
  - .4 CAN/CSA O141-[91(R1999)], Softwood Lumber.
  - .5 CSA O151-[04], Canadian Softwood Plywood.
  - .6 CSA O153-[M1980(R2003)], Poplar Plywood.
  - .7 CSA Z760-[94], Life Cycle Assessment.

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop drawings Submittals: in accordance with Section 01 33 00 – Submittal Procedures.
  - .1 Indicate details of construction, profiles, jointing, fastening and other related details.
  - .2 Indicate materials, thicknesses, finishes and hardware.
- .3 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
  - .1 Submit duplicate samples.

**1.4 QUALITY ASSURANCE**

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.

**1.5 DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 - Common Product Requirements.
  - .1 Protect materials against dampness during and after delivery.
  - .2 Store materials in ventilated areas, protected from extreme changes of temperature or humidity.
- .2 Waste Management and Disposal:
  - .1 Separate waste materials for reuse and recycling in accordance with requirements of Contract Administrator.

**Part 2 Products**

**2.1 LUMBER MATERIAL**

- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 19% or less in accordance with following standards:
  - .1 CAN/CSA-O141.
  - .2 NLGA Standard Grading Rules for Canadian Lumber.
  - .3 AWMAC custom grade, unless noted otherwise, moisture content as specified. Reception Desk to be AWMAC premium grade construction.
  - .4 Forest Stewardship Council (FSC) certified.
- .2 Machine stress-rated lumber is acceptable.
- .3 Hardwood lumber: moisture content 9 % or less in accordance with following standards:
  - .1 AWMAC custom grade, unless noted otherwise, moisture content as specified. Reception Desk to be AWMAC premium grade construction.

**2.2 PANEL MATERIAL**

- .1 Douglas fir plywood (DFP): to CSA O121, standard construction.
  - .1 Forestry Stewardship Council (FSC) certified.
  - .2 Urea-formaldehyde free.
- .2 Canadian softwood plywood (CSP): to CSA O151, standard construction.
  - .1 Forestry Stewardship Council (FSC) certified.
  - .2 Urea-formaldehyde free.
- .3 Hardwood plywood: conforming to requirements of CSA 0115; graded in accordance with AWMAC QSI AA face veneer; MDF core, type of glue recommended for application, face species select birch for transparent finish.
- .4 Particleboard: to ANSI A208.1.
  - .1 Forestry Stewardship Council (FSC) certified.

□

- .2 Urea-formaldehyde free.
- .5 MDF (medium density fibreboard) core: to AWMAC custom grade, thickness as indicated, density 769 kg/m<sup>2</sup> custom.
- .6 Solid Surfacing: Refer to Section 06 65 10.

### 2.3 ACCESSORIES

- .1 Fasteners type and size to suit application.
- .2 Nails and staples: to CSA B111; galvanized to CAN/CSA-G164 for exterior Work and interior humid areas and for treated lumber; stainless steel finish elsewhere.
- .3 Wood screws: stainless steel, type and size to suit application.
- .4 Splines: wood.
- .5 Adhesive: recommended by manufacturer.
  - .1 Adhesives: maximum VOC limit 30g/L, SCAQMD Rule 1168 - Adhesives and Sealants Applications.

### 2.4 SCHEDULE

- .1 Plywood bases under new and salvaged lockers. Base to be 4" high (100mm) with top constructed of ¾" plywood. Finish front with steel. Refer to Section 05 50 00 – Metal Fabrications.
- .2 Plywood at window frames to have 1/8" PVC edge banding to exposed edges.

## Part 3 Execution

### 3.1 INSTALLATION

- .1 Do finish carpentry to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), except where specified otherwise.
- .2 Scribe and cut as required, fit to abutting walls, and surfaces, fit properly into recesses and to accommodate piping, columns, fixtures, outlets, or other projecting, intersecting or penetrating objects.
- .3 Form joints to conceal shrinkage.

### 3.2 CONSTRUCTION

- .1 Fastening
  - .1 Position items of finished carpentry Work accurately, level, plumb, true and fasten or anchor securely.
  - .2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.

- .3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round cleanly cut hole and plug with wood plug to match material being secured.
- .4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.
- .3 Shelving:
  - .1 Install shelving on ledgers shelf brackets.

**END OF SECTION**



**Part 1            General**

**1.1                RELATED SECTIONS**

- .1        Section 05 50 00 – Metal Fabrications.
- .2        Section 06 60 00 – Plastic Fabrications.
- .3        Section 06 65 10 – Solid Surface Fabrications.
- .4        Section 07 92 00 – Joint Sealants.
- .5        Section 08 70 05 – Cabinet and Miscellaneous Hardware.
- .6        Section 08 80 50 – Glazing.

**1.2                REFERENCES**

- .1        American National Standards Institute (ANSI)
  - .1        ANSI A208.2-[94], Medium Density Fiberboard (MDF).
  - .2        ANSI/ICPA SS-1-2001, Performance Standard for Solid Surface Materials.
- .2        American Society for Testing and Materials (ASTM)
  - .1        ASTM E 1333-[96], Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.
  - .2        ASTM D 5116-[97], Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products.
- .3        Architectural Woodwork Manufacturers Association of Canada (AWMAC)
  - .1        AWMAC Quality Standards for Architectural Woodwork [Latest Edition].
- .4        Canadian General Standards Board (CGSB)
  - .1        CAN/CGSB-71.20-[M88], Adhesive, Contact, Brushable.
- .5        Canadian Standards Association (CSA)
  - .1        CSA B111-[74(R1998)], Wire Nails, Spikes and Staples.
  - .2        CSA O112.4-[M1977(R1999)], Standards for Wood Adhesives.
  - .3        CSA O112.5-Series-M-[1977(R1999)], Urea Resin Adhesives for Wood

- (Room- and High-Temperature Curing).
- .4 CSA O112.7-Series M-[1977(R1999)], Resorcinol and Phenol-Resorcinol Resin Adhesives for Wood (Room- and Intermediate-Temperature Curing).
  - .5 CSA O115-[M1982(R2001)], Hardwood and Decorative Plywood.
  - .6 CSA O121-[M89(R1998)], Douglas Fir Plywood.
  - .7 CAN/CSA O141-[91R1999], Softwood Lumber.
  - .8 CSA O151-[M1978(R1998)], Softwood Plywood.
  - .9 CSA O153-[M1980(R1998)], Poplar Plywood.
  - .10 CSA Z760-[94], Life Cycle Assessment.
- .6 Environmental Choice Program (EPC)
- .1 ECP-44-[92], Adhesives.
  - .2 ECP-45-[92], Sealants and Caulking Compounds.
  - .3 ECP-76-[98], Surface Coatings.
- .7 National Electrical Manufacturers Association (NEMA)
- .1 NEMA LD-3-[95].
- .8 National Hardwood Lumber Association (NHLA)
- .1 Rules for the Measurement and Inspection of Hardwood and Cypress [January 1996].
- .9 National Lumber Grades Authority (NLGA)
- .1 Standard Grading Rules for Canadian Lumber [Latest Edition].

### **1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit shop drawings: Indicate details of construction, profiles, jointing, fastening and other related details. Show laminate seams on millwork drawings. Seam locations to be approved by the Architect.
- .3 Scales: profiles, details 1/2 full size.
- .4 Indicate materials, thicknesses, finishes and hardware.
- .5 Indicate locations of service outlets in casework, typical and special installation conditions, and connections, attachments, anchorage and location of exposed fastenings.
- .6 Submit duplicate colour samples of laminated plastic for colour selection.

- .7 Submit duplicate samples of laminated plastic joints, edging, cutouts and profiles.

## 1.4 QUALITY ASSURANCE

- .1 Mock-ups:
  - .1 Construct mock-ups in accordance with Section 01 45 00 - Quality Control.
    - .1 Shop prepare one base cabinet unit, wall cabinet, counter top, shelving unit, complete with, and install on project in designated location.
    - .2 Allow 24 hours for inspection of mock-up by Contract Administrator before proceeding with this Work.
    - .3 When accepted, mock-up will demonstrate minimum standard for this Work. Mock-up may remain as part of finished Work.
  - .2 Delivery, Storage, and Handling:
    - .1 Deliver, handle, store and protect materials of this section in accordance with Section 01 61 00 - Common Product Requirements.
      - .1 Protect millwork against dampness and damage during and after delivery.
      - .2 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.
    - .2 Waste Management and Disposal:
      - .1 Separate waste materials for reuse and recycling in accordance with requirements of Contract Administrator.

## Part 2 Products

### 2.1 MATERIALS

- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 19 % or less in accordance with following standards:
  - .1 CAN/CSA-O141.
  - .2 NLGA Standard Grading Rules for Canadian Lumber.
  - .3 AWMAC custom or premium grade, moisture content as specified.
- .2 Machine stress-rated lumber is acceptable for all purposes.
- .3 Hardwood lumber: moisture content in accordance with following standards:
  - .1 National Hardwood Lumber Association (NHLA).
  - .2 AWMAC custom or premium grade, moisture content as specified.
- .4 Douglas fir plywood (DFP): to CSA O121, standard construction.
- .5 Canadian softwood plywood (CSP): to CSA O151, standard construction.
- .6 Hardwood plywood: to CSA O115.

- .7 Poplar plywood (PP): to CSA O153, standard construction.
- .8 Interior mat-formed wood particleboard: to ANSI A208.1.
- .9 Birch plywood: to AWMAC Paint Grade.
- .10 MDF (medium density fibreboard) core: to ANSI A208.2, Industrial Grade. Thickness as shown on drawings or as listed in Part 2 of this specification. Density 48 lbs/ft<sup>3</sup> (769 kg/m<sup>3</sup>).
  - .1 Medium density fibreboard must:
    - .1 Meet the performance requirements of ANSI A208.2.
    - .2 Be manufactured such that formaldehyde emissions do not exceed 0.15 ppm when tested in accordance with ASTM E 1333.
  - .2 Contain at least 15 % recycled materials by weight.
- .11 Laminated plastic for flatwork: to NEMA LD3, Grade VGL, based on solid, woodgrain, printed pattern, metallic colour range with finish specific to each manufacturer and as identified on Colour and Finish Schedule.
- .12 Laminated plastic for countertops: to NEMA LD3, Grade HGP, based on solid, woodgrain, printed pattern, metallic colour range with finish specific to each manufacturer and as identified on Colour and Finish Schedule.
- .13 Laminated plastic backing sheet: Grade BKL, not less than 20 mil (0.5 mm) thick, same colour as face laminate.
- .14 Laminated plastic liner sheet: Grade GP, Type S.
- .15 Solid polymer components: cast, nonporous, filled polymer, not coated, laminated or composite construction with through body colors meeting ANSI/ICPA SS-1-2001.
- .16 Nails and staples: to CSA B111.
- .17 Wood screws: type and size to suit application.
- .18 Splines: type and size to suit application.
- .19 Sealant: Refer to Section 07 92 00 Joint Sealants.
- .20 Laminated plastic adhesive: as recommended by manufacturer.
  - .1 Test for acceptable VOC emissions in accordance with ASTM D 2369 and ASTM D 2832.

## **2.2 MANUFACTURED UNITS**

- .1 Plastic Laminate Finished Casework to AWMAC Custom Quality Grade.
  - .1 Where a wood grain or directional pattern is used the grain is to run in the same direction unless otherwise noted.

- .2 Where substrate will be exposed to excessive water or chemicals substitute plywood for medium density fibreboard. Of note are the panels around the BiCarb unit and the Hopper.
- .3 Where filler panels are used at the end of an upper cabinet millwork run provide bottom and top closer panels to match in finish to the remainder of the cabinet undersides and top sides.
- .4 Furring, blocking, nailing strips, grounds and rough bucks and sleepers.
  - .1 Board sizes: "Standard" or better grade.
  - .2 Dimension sizes: "Standard" light framing or better grade.
- .2 Case bodies (ends, gables, divisions, fixed shelves and bottoms)
  - .1 MDF,  $\frac{3}{4}$ " thickness.
  - .2 Laminated plastic: as indicated, grade and type as specified.
  - .3 Interior: laminated plastic. Enclosed cabinet interiors to be PLAM2.
  - .4 Exposed edges to have  $\frac{1}{8}$ " pvc edge banding in colour as selected by the Contract Administrator.
- .3 Backs
  - .1 MDF:  $\frac{1}{2}$ " thickness.
  - .2 Laminated plastic: as indicated, grade and type as specified.
  - .3 Colour to match to exposed faces of cabinets where open and interior colour on closed cabinets to be PLAM2. Colours to be selected by Contract Administrator.
- .4 Shelving:
  - .1 Open Shelving;  $\frac{3}{4}$ " thick MDF for shelves of 36 inches width or less and 1" thick for shelves greater than 36". Colour to match to exterior face of shelving.
  - .2 Closed shelving to be same as above. Colour PLAM2.
  - .3 Laminated plastic: as indicated, grade and type as specified.
  - .4 Edge banding:  $\frac{1}{8}$ " PVC edge banding to exposed edges.
- .5 Drawers
  - .1 Fabricate drawers to AWMAC custom grade supplemented as follows:
  - .2 Sides and Backs, bottoms:
    - .1 Melamine:  $\frac{3}{4}$ " thick, interior, PLAM2.
    - .2 Edge banding: Melamine all exposed edges.
    - .3 Laminated plastic as indicated.
      - .1 Edge banding: laminated plastic all exposed edges.
  - .3 Fronts
    - .1 MDF  $\frac{3}{4}$ " thick.
    - .2 Laminated plastic: grade and type as specified.
    - .3 Edge banding:  $\frac{1}{8}$ " PVC edge banding to edges.
    - .4 Grain Direction: Run laminated plastic with a distinct grain or pattern in same direction on drawer fronts as the remainder of the vertical faces.
- .6 Doors:

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- .1 Fabricate doors to AWMAC custom grade supplemented as follows:
    - .1 MDF ¾" thickness.
    - .2 Laminated plastic: grade and type as specified.
    - .3 Laminate exposed and semi exposed surfaces to be same colour as front of door.
    - .4 Interior: Laminated plastic as indicated.
  
  - .7 Countertops and Backsplash
    - .1 Fabricate caseworks to AWMAC custom quality grade.
      - .1 Laminated plastic: grade and type specified, self edge unless noted otherwise.
      - .2 All exposed surfaces laminated.
      - .3 Core ¾" thick, MDF. ¾" thick fir plywood where sinks are called for in counter top.
      - .4 Adhesive: as recommended by laminate manufacturer.
  
  - .8 Toe Kicks
    - .1 Millwork kicks to be ¾" plywood to receive finish as noted on drawings.
    - .2 Flooring subtrade to provide wall base to kicks unless noted otherwise. Refer to drawings.
  
  - .9 Edge banding:
    - .1 Provide matching colour in 1/8" PVC for doors, gables, drawer fronts, fixed and exposed adjustable shelves. Strips to match thickness of finished component.
  
  - .10 Casework fabricated to Premium Quality of AWMAC.
    - .1 Reception desk:
      - .1 Plastic laminate shall have the same colour face as core.
      - .2 Translucent panels shall be fabricated of acrylic resin panel. Refer to Section 06 60 00 Plastic Fabrications.
    - .2 Base shall be stainless steel. Refer to Section 05 50 00 Metal Fabrications.
  
  - 2.3 SOLID WOOD**
    - .1 Benches:
      - .1 Solid cedar. Size and shaped to profile indicated on drawings.
      - .2 Solid maple. Size and shaped to profile indicated on drawings.
  
  - 2.4 FABRICATION**
    - .1 Set nails and countersink screws apply wood filler to indentations, sand smooth and leave ready to receive finish.
    - .2 Shop install cabinet hardware for doors, shelves and drawers. Recess shelf standards unless noted otherwise.
    - .3 Shelving to cabinetwork to be adjustable unless otherwise noted.

- .4 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures.
- .5 Shop assemble work for delivery to Site in size easily handled and to ensure passage through building openings.
- .6 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.
- .7 Ensure adjacent parts of continuous laminate work match in colour and pattern.
- .8 Veneer laminated plastic to core material in accordance with adhesive manufacturer's instructions. Ensure core and laminate profiles coincide to provide continuous support and bond over entire surface. Use continuous lengths up to 96". Keep joints 24" from sink cutouts. Note that in some instances the location of the seam will be critical and should be located in discussion with the Contract Administrator.
- .9 Form shaped profiles and bends as indicated, using postforming grade laminate to laminate manufacturer's instructions.
- .10 Use straight self-edging laminate strip for flatwork to cover exposed edge of core material. Chamfer exposed edges uniformly at approximately 20 degrees. Do not mitre laminate edges.
- .11 Apply laminate backing sheet to reverse side of core of plastic laminate work.
- .12 Apply laminated plastic liner sheet to interior of cabinetry where indicated.

### **Part 3 Execution**

#### **3.1 INSTALLATION**

- .1 Do architectural woodwork to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), except where specified otherwise.
- .2 Install prefinished millwork at locations shown on drawings. Position accurately, level, plumb straight.
- .3 Fasten and anchor millwork securely. Provide heavy duty fixture attachments for wall mounted cabinets.
- .4 Use draw bolts in countertop joints.
- .5 Scribe and cut as required to fit abutting walls and to fit properly into recesses and to accommodate piping, columns, fixtures, outlets or other projecting, intersecting or penetrating objects.
- .6 Apply water resistant building paper over wood framing members in contact with masonry or cementitious construction.

- .7 Fit hardware accurately and securely in accordance with manufacturer's written instructions.

### **3.2 INSTALLATION LAMINATES**

- .1 Install work plumb, true and square, neatly scribed to adjoining surfaces.
- .2 Make allowances around perimeter where fixed objects pass through or project into laminated plastic work to permit normal movement without restriction.
- .3 Use draw bolts and splines in countertop joints. Maximum spacing 18" oc, 3" from edge. Make flush hairline joints.
- .4 Provide cutouts for inserts, grilles, appliances, outlet boxes and other penetrations. Round internal corners, chamfer edges and seal exposed core.
- .5 At junction of laminated plastic counter back splash and adjacent wall finish, apply small bead of sealant.

### **3.3 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Clean millwork and cabinet work inside cupboards and drawers, and outside surfaces.
- .3 Remove excess glue from surfaces.

### **3.4 PROTECTION**

- .1 Protect millwork and cabinet work from damage until final inspection.

**END OF SECTION**



**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 Section 05 50 00 – Metal Fabrications
- .2 Section 06 65 10 – Solid Surface Fabrications
- .3 Section 06 40 00 – Architectural Woodwork

**1.2 SUMMARY**

- .1 This Section includes plastic fabrications for the panels at reception area.

**1.3 SUBMITTALS**

- .1 Samples
  - .1 Submit samples in accordance with Section 01 33 00 – Submittal Procedures.
  - .2 Submit duplicate samples minimum 4-inch by 4-inch of plastic fabrications specified and used.
- .2 Maintenance Data
  - .1 Provide cleaning and maintenance data for plastic surfaces for incorporation into Operating and Maintenance Manual as specified in Section 01 33 00 – Submittal Procedures.
- .3 Shop Drawings:
  - .1 Include plans, elevations, sections, panel dimensions, details, and attachments to other Work.

**1.4 QUALITY ASSURANCE**

- .1 Store finishing hardware in locked, clean and dry area.
- .2 Package each item of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location.
- .3 Qualifications
  - .1 Shop that employs skilled workers who custom fabricate products similar to those required for this project and whose products have a record of successful in-service performance.
  - .2 Materials and systems shall be manufactured by a company continuously and regularly employed in the manufacture of specified materials for a period of at least three (3) consecutive years and which can show evidence of those materials being satisfactorily used on at least three (3) projects of similar size, scope and location. At least one (1) of the projects shall have been successful for use one year or longer.
  - .3 Manufacturer must have documented training and qualification program for fabrication and installation of plastic fabrications.
- .4 Fabricator/Installer qualifications

- .1 Work of this section shall be by a certified fabricator/installer, certified in writing by the manufacturer.

## **1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver Plastic Fabrications, systems and specified items in manufacturer's standard protective packaging.
- .2 Do not deliver Plastic Fabrications, system, components and accessories to project Site until areas are ready for installation.
- .3 Store materials in a flat orientation in a dry place that is not exposed to exterior elements. Materials are to be protected against damage from moisture and direct sunlight.
- .4 Store 3form Chroma in area of installation minimum of 24 hours prior to installation.
- .5 Handle materials to prevent damage to finished surfaces. Provide protective coverings to prevent damage or staining following installation for duration of project.
- .6 Before installing Plastic Fabrications, permit them to reach room temperature.

## **1.6 WARRANTY**

- .1 Provide manufacturer's warranty against defects in materials.
  - .1 Warranty shall provide material and labour to repair or replace defective materials.
  - .2 Damage caused by physical or chemical abuse or damage from excessive heat will not be warranted.

## **1.7 MAINTENANCE**

- .1 Provide maintenance requirements as specified by the manufacturer.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 Engineered acrylic resin panel.
- .2 Panels shall contain a minimum of 30% recycled content.
- .3 Performance characteristics:
  - .1 Rate of Burning (ASTM D 635). Material must attain CC2 Rating for a nominal thickness of 1.5 mm (0.060 in.) and greater.
  - .2 Self-Ignition Temperature (ASTM D 1929). Material must have a Self-ignition temperature greater than 850°F.
  - .3 Density of Smoke (ASTM D 2843). Material must have a smoke density less than 10%.
  - .4 Color infusion must use water soluble dyes and penetrate at least 150 microns into material.

- .5 Applied coatings must be low-VOC, contain non-toxic pigments, not contain any heavy metals and be approved for exterior use.
- .6 Matte surface should be completely renewable onsite.
- .7 Sheet material size and thickness: 48" X 96" X 1/2" thick.
- .4 Acceptable product: 3form Chroma. Contract Administrator to select colour from manufacturer's Diffusion and Effects colour range.

## 2.2 MISCELLANEOUS MATERIALS

- .1 General: Provide products of material, size, and shape required for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- .2 Cleaner: Type recommended by manufacturer.
- .3 Fasteners: Use screws designed specifically for plastics. Provide threaded metal inserts for applications requiring frequent disassembly such as light fixtures.
- .4 Bonding Cements: Manufacturer's standard solvents or adhesives, suitable for use with product and application.
- .5 Sealant: Manufacturer's standard mildew-resistant, FDA-compliant, NSF 51 compliant (food zone - any type), UL-listed silicone sealant in colours matching components.

## 2.3 FABRICATION

- .1 Shop assembly
  - .1 Fabricate components to sizes and shapes indicated, in accordance with approved shop drawings and manufacturer's printed instructions and technical bulletins.
  - .2 Machining: Acceptable means of machining are listed below. Ensure that material is not chipped or warped by machining operations.
    - .1 Sawing: Select equipment and blades suitable for type of cut required.
    - .7 Drilling: Drills specifically designed for use with plastic products.
    - .8 Milling: Climb cut where possible.
    - .9 Routing.
    - .10 Tapping.

## Part 3 Execution

### 3.1 EXAMINATION

- .1 Examine substrates and conditions, with fabricator present for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- .2 Proceed with installation only after unsatisfactory conditions have been corrected.

**3.2 INSTALLATION**

- .1 Install components plumb, level and rigid, scribed to adjacent finishes, in accordance with approved shop drawings and product data.
  - .1 Provide product in the largest pieces available.
  - .2 Utilize fasteners, adhesives and bonding agents recommended by manufacturer for type of installation indicated. Material that is chipped, warped, hazed or discolored as a result of installation or fabrication methods will be rejected.
  - .3 Anchor securely to base cabinets or other supports.
  - .4 Form field joints using manufacturer's recommended procedures. Locate seams in panels so that they are not directly in line with seams in substrates.

**3.3 REPAIR**

- .1 Repair or replace damaged work which cannot be repaired to Contract Administrator's satisfaction.

**3.4 CLEANING AND PROTECTION**

- .1 Keep components clean during installation.
- .2 Remove adhesives, sealants and other stains.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 Section 06 40 00 – Architectural Woodwork

**1.2 SAMPLES**

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit duplicate samples of solid surface fabrications specified and used.
- .3 Maintenance Data
  - .1 Provide cleaning and maintenance data for solid surfaces for incorporation into Operating and Maintenance Manual as specified in Section 01 78 00 – Closeout Submittals.

**1.3 DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver no components to project Site until areas are ready for installation.
- .2 Store components indoors prior to installation.
- .3 Handle materials to prevent damage to finished surfaces.
  - .1 Provide protective coverings to prevent physical damage or staining following installation for duration of project.

**Part 2 Products**

**2.1 MANUFACTURERS**

- .1 Subject to compliance with the requirements, the following products are acceptable for use on this project:
  - .1 Corian surfaces from the DuPont company.

**2.2 MATERIALS**

- .1 Material
  - .1 Solid polymer components. Cast nonporous, filled polymer, not coated, laminated or of composite construction with through body colours meeting ANSI-Z124.3 or ANSI Z124.6, having minimum physical and performance properties specified.
  - .2 Superficial damage to a depth of 0.010 inch shall be repairable by sanding and/or polishing.
- .2 Thickness: 1/4" and 1/2" thick. Refer to drawings.
- .3 Edge Treatment: Squared.

- .4 Seam Width: 1/8" unless otherwise specified.
- .5 Lavatory : Dupont Corian solid polymer model 815 large-capacity oval bowl (20 1/2" x 14 1/2" x 6 1/4"). Coordinate with Corian vanity top for a seamless edge. Refer to Color and Material Schedule for finish.

## **2.3 ACCESSORIES**

- .1 Joint adhesive: Manufacturer's stand one or two part adhesive kit to create inconspicuous, nonporous joints.
- .2 Sealant: Manufacturer's standard mildew-resistant, FDA-compliant, NSF 51-compliant, UL-listed silicone sealant in colours matching components.

## **2.4 FABRICATION**

- .1 Weight of product is approximately 10-15 PSI and is typically field assembled.
- .2 Shop assembly:
  - .1 Fabricate components to greatest extent practical to sizes and shapes indicated, in accordance with approved shop drawings and manufacturer's printed instructions and technical bulletins.
  - .2 Form joints between components using manufacturer's standard joint adhesive joints. Reinforce as required.
  - .3 Rout and finish component edges with clean, sharp returns.
    - .1 Rout cutouts, radii and contours to template.
    - .2 Smooth edges.

## **2.5 FINISHES**

- .1 Contract Administrator to select from the manufacturer's standard colour chart.

## **Part 3 Execution**

### **3.1 INSTALLATION**

- .1 Install components plumb and level, in accordance with approved shop drawings and product installation details.
  - .1 Provide product in the largest pieces available.
  - .2 Tops: Flat and true to within 1/8" (3 mm) of a flat surface over a 10' length.
- .2 Form field joints using manufacturer's recommended adhesive, with joint widths no greater than 1/8" (3 mm) in finished work.
- .3 Exposed joints/seams shall not be allowed.

- .4 Anchor securely to base cabinets or other supports.
- .5 Connections: Make electrical and data connections in accordance with Division 2.

**1.2 CLEANING AND PROTECTION**

- .1 Keep components clean during installation. Remove adhesives, sealants and other stains.
- .2 Protect surfaces from damage until date of substantial completion. Replace damaged work.

**END OF SECTION**