

**MEMBER of PARLIAMENT SUITE
CUSTOM WOOD FURNITURE**

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PART I: GENERAL

1. PROJECT INFORMATION

Public Works and Government Services Canada (PWGSC) is renovating the Wellington Building located at 180 Wellington Street in downtown Ottawa, Ontario. The building is to be occupied by the House of Commons (HoC), Member of Parliament (MP) Office Suites.

The Wellington Building is a seven-story structure (a penthouse, a mezzanine, six [6] floors and two [2] basement levels) located on the south side of Wellington Street within the Parliamentary Precinct.

2. REQUIRED SERVICES

PWGSC requires the services of a Contractor to supply and install Custom Wood (CW) Furniture for 70 Members of Parliament Suites located at 180 Wellington Street, Ottawa, Ontario.

There are approximately 1700 pieces of Custom Wood Furniture to be delivered and installed between July 2015 and December 2015.

PART II: SCOPE OF WORK

The scope of work is for the supply, delivery and installation of Custom Wood (CW) Furniture, as per the table below, for the 70 Member of Parliament (MP) Suites. The Custom Wood Furniture is divided into five groups of like items.

The table below provides group number, drawing reference code and quantity for each piece. Drawing codes and quantities are referenced in Annex A.1: Custom Furniture Drawings and Floor Plans For MP Suites Custom Wood Furniture.

GROUP 1		
Custom Furniture Type	Drawing Code	Quantity
MP Desk	CW-1	140
MP Computer Table	CW-2	140
MP Credenza	CW-3	140
MP Administration Desk(1)	CW-15	70
MP Administration Desk(2)	CW-16	70
GROUP 2		
MP Bookcase Unit	CW-4	70
MP Bookcase	CW-5	280
MP Servery	CW-6	70
MP Wardrobe	CW-8	140
MP Meeting Table	CW-11	140
GROUP 3		
Meeting Room Table	CW-14	9
GROUP 4		
MP Coffee Table	CW-9	70
MP Side Table	CW-10	210
GROUP 5		
MP Coat Tree	CW-13	70

The Contractor will supply, deliver and install Custom Wood Furniture for the 70 MP Suites within the Wellington Building as detailed in this document.

1. GROUP 1

1. SCOPE

- 1.1. This specification is for the manufacture of Custom Wood (CW) Furniture for the Member of Parliament (MP) Suites Group 1, described below in section 1.2.
- 1.2. GROUP 1 represents the freestanding custom wood desks located in MP Suites.

GROUP 1 items are:

- 1.2.1. MP Desks;
- 1.2.2. MP Computer Tables;
- 1.2.3. MP Credenzas; and
- 1.2.4. MP Administration Desks 1 & 2.

GROUP 1		
Custom Furniture Type	Drawing Code	Quantity
MP Desk	CW-1	140
MP Computer Table	CW-2	140
MP Credenza	CW-3	140
MP Administration Desk(configuration 1)	CW-15	70
MP Administration Desk(configuration 2)	CW-16	70

- 1.3. These specifications are to be read in conjunction with the Custom Wood (CW) drawings provided in Annex A.1.
- 1.3.1. MP Desks: CW-1
- 1.3.2. MP Computer Tables: CW-2
- 1.3.3. MP Credenzas: CW-3
- 1.3.4. MP Administration Desks configuration 1: CW-15
- 1.3.5. MP Administration Desk configuration 2: CW-16

2. STANDARDS AND REGULATIONS

All products are to comply with the following standards and regulations:

2.1 Standards

2.1.1 CAN/CGSB-44.227, Free Standing Office Desk Products and Components

2.1.1.1 The MP Administration desks are exempt from meeting the Clearance Under Work Surfaces, paragraph 4.10 of CAN/CGSB-44.227, Free Standing Office Desk Products and Components, but all other requirements of CAN/CGSB-44.227, Free Standing Office Desk Products and Components MUST be met.

2.1.2 AWMAC, Architectural Woodwork Standards

2.1.3 ANSI A208.1, Particleboard, Mat-Formed Wood, Grade M2 or greater

2.1.4 CAN/CGSB-69.34-M90, Materials and Finishes

2.1.5 CAS 108-05-4, Vinyl Acetate

2.1.6 ANSI / BIFMA X5.5-2008 Desk Products

Note: Undated reference refers to the latest issue.

2.2 Regulations

2.2.1 Ontario Regulations 347 "General-Waste Management Regulation R.R.O 1990 (as amended).

2.2.2 Ontario Regulation 102/94 "Waste Audits and Waste Reduction Work Plans".

2.2.3 Ontario Regulations 103/94 "Industrial, Commercial and Institutional Source Separation Programs".

3. ENVIRONMENTAL ATTRIBUTES

3.1 Only non-solvent based adhesives MUST be used.

3.2 The furniture MUST be manufactured in such a manner that liquid surface coatings are stored in controlled storage areas as per WHMIS requirements.

3.3 The furniture MUST be exposed to ventilated open air prior to delivery for a minimum of 24 hours prior to packaging for shipping, to allow for off-gassing.

3.4 All wood used in the manufacture of office furniture MUST originate from a forest certified under PEFC International (which includes SFI, CSA) or FSC International.

3.5 The Manufacturer MUST have a hazardous and toxic material management system in place at its manufacturing facilities.

4. MATERIALS

4.1 Hardwood Lumber

- 4.1.1 All hardwood lumber MUST be kiln dried to provide a uniform moisture content value in the range of 5%-9%. All wood MUST be free from open knots (other than an occasional pin knot, not more than 3.2 mm [1/8"] in diameter) and other defects that may affect the appearance and serviceability of the finished article.
- 4.1.2 Exposed parts (visible surfaces of furniture when doors and drawers are closed) MUST be constructed from plain sawn, select and better grade wood (species to be black walnut) to AWMAC Architectural Woodwork Standards for premium grade hardwood lumber, for a transparent finish and MUST have straight grain with no bow or hook.
- 4.1.3 Semi-exposed parts (interior surfaces of furniture not visible when doors and drawers are closed) MUST be constructed from plain sawn, select and better grade (species to be black walnut) to AWMAC, Architectural Woodwork Standards for premium grade hardwood lumber, for a transparent finish.
- 4.1.4 Concealed parts (non-visible surfaces of furniture whether doors and drawers are open or closed) MUST be constructed using birch or maple species to AWMAC Architectural Woodwork Standards for custom grade or better.
- 4.1.5 Wormholes are not permitted.

4.2 Hardwood Veneer

- 4.2.1. All veneer MUST be a minimum thickness of 0.79 mm (1/32").
- 4.2.2. Veneer MUST be press dried to a uniform moisture content of 10%-12%. Red streaks, wild grain, worm holes and improper cut is not permitted. A limited number of pin knots are permitted provided they are not in clusters and do not detract from the overall appearance of the panel.
- 4.2.3. All veneer MUST be book matched; in addition MUST be center matched for horizontal surfaces and for all vertical exterior planes (which may be made up of surfaces such as doors, gables, end panels, modesty panels, drawer fronts, pedestal backs and computer table backs). Where the surfaces that make up a plane are not separated from each other by a feature such as framing, as is the case on the front of the MP Desk and MP Credenza, the veneer MUST be center matched over the entire plane. One heart MUST be provided for the vertically stacked drawer faces in each pedestal and the grain MUST be aligned from drawer face to drawer face for aesthetic grain continuity. This requirement MUST be applied to all similar vertically stacked conditions, including drawer and door combinations.
- 4.2.4. Veneer for exposed parts (visible surfaces of furniture with doors and drawers closed, modesty panels, end & back), MUST be quarter cut black walnut species. Species to be black walnut, hardwood veneer for a transparent finish. Flitches with narrow heart MUST be selected for surfaces to receive flat cut veneer.
- 4.2.5. Veneer for semi-exposed parts (interior surfaces of furniture not visible when doors and drawers are closed and including back face of parts such as gables, modesty panels, end panels, etc.) MUST be flat cut black walnut species.
- 4.2.6. Veneer for concealed parts (non-visible surfaces of furniture, whether doors and drawers are open or closed and including back face of parts where veneer is applied to provide balanced construction) MUST be flat cut hardwood veneer.

4.3 Particleboard

- 4.3.1 Particleboard used as panel core MUST conform to ANSI 208.1 Particleboard, Mat-Formed Wood, Grade M2 or greater. The particleboard MUST have uniform moisture content in the range of 6%-8% at the time of manufacture of the various components.

4.4 Adhesives

- 4.4.1 Adhesives for hardwood veneering and joinery MUST be polyvinyl acetate resin emulsion or cross-linkable polyvinyl acetate resin emulsion type complying with CAS 108-05-4, Vinyl Acetate Elastomeric solvent-dispersed adhesives are not acceptable.

4.5 Wood Finishes

- 4.5.1. An example of an acceptable finish is: Mohawk Wiping Stain, 404-D Dark Fruitwood. Colour sample to be provided to the Contractor.

Finish all solid wood surfaces to premium grade quality standards, transparent, catalyzed lacquer finish system consisting of vinyl wash coat, stain, vinyl sealer, sand (220 grit) and catalyzed lacquer top coat to match colour and sheen.

4.6 Hardware and Accessories

- 4.6.1. Adjustable heavy duty metal glides MUST be provided. Stem length to be 100mm (4"). Finish to be black.
- 4.6.2. Door and drawer pulls MUST be cast architectural bronze octagonal knob, nominal 28 mm (1 1/8") diameter by 25 mm (1") high.
 - 4.6.2.1 Finish MUST be dark oxidized satin bronze, oil rubbed, finish code 613 to CAN/CGSB-69.34-M90, Materials and Finishes.
 - 4.6.2.2 Door and drawer pulls Used: Octagonal knob 01W25.03 by Lee Valley Tools, or equivalent, to be 28mm (1 1/8") diameter by 25mm (1") high, finish MUST be as specified in 4.6.2.1.
- 4.6.3 Hinges MUST be concealed, European style, self-closing and 110 degree of opening, dark hinges satin chrome or stainless steel finish.
- 4.6.4 Drawer slides MUST be aluminum or plated steel of standard commercial manufacture, incorporating progressive extension action and steel ball bearings.
- 4.6.5 Door and drawer locks MUST be wafer tumbler type, with re-keyable cylinders and MUST have at least 50 different key combinations. Finish MUST match door and drawer pulls.
 - 4.6.5.1 Each pedestal and each bank of drawers MUST be provided with a gang locking mechanism having one (1) cylinder to lock all drawers simultaneously.
 - 4.6.5.2 All locks in each individual furniture item MUST be keyed alike and all locks in each furniture set comprising one MP Desk, one (1) MP Credenza, one (1) MP Bookcase Unit and one (1) MP Wardrobe MUST be keyed alike. Two (2) keys MUST be provided for each furniture set.

- 4.6.5.3 The locks on each MP Administration Desk are all to be keyed alike, including the hutch and the two (2) mobile pedestals. Two (2) keys MUST be provided for each MP Administration Desk.
- 4.6.5.4 Codes and depth key MUST be provided to the House of Commons locksmiths.
- 4.6.5.5 Locks used: Wafer lock type, flush mounted
 90 degree key turn
 LOC504 Lock Tenon UL-Desc-3
 Keyway L1054B
 Brass wafer, 2 ringed keys
 Provide key cuts charts to cut by code
 Key code to be stamp on the face of lock
 Key blank no.: brass
- 4.6.6 Shelf Supports for adjustable shelves MUST be nominal 5mm (3/16") diameter, metal pins having a brown colour plated finish.
- 4.6.7 Cable Grommets MUST be molded plastic assemblies with removable and re-usable covers, sized to pass a 50 mm (2") x 50 mm (2") x 12 mm (1/2") object, colour to best match veneer. Covers for cable grommets locations to leave a nominal 19mm (3/4") diameter opening, when in place. Covers for cable grommets for furniture base locations to leave a nominal 19mm (3/4") x 50mm (2") opening when in place.
- 4.6.7.1 The Contractor to suggest grommet for approval when submitting shop drawings for the following:
 - Wire Grommet 72mm (2 3/4"), hole dia. 60mm (2 1/2"), colour to best match veneer.
 - Wire Grommet 92mm (3.5/8"), hole dia. 80mm (3 1/2"), colour to best match veneer.
- 4.6.7.2 The Contractor to suggest grommet for approval when submitting shop drawings for the bases of the desks and computer tables:
 - Wire Grommet, Rectangular 102mm (4") x 51mm (2"), colour to best match veneer.
- 4.6.8 Cable management channels MUST be a minimum 38 mm (1 1/2") deep x 50 mm (2") high, to support user cabling and MUST accommodate simple lay-in routing and organization of cables and wiring. Cable management channels MUST be black.
- 4.6.8.1 Contractor to propose cable management channels, to be used, for approval when submitting shop drawings 1230mm (48") is the length desired. Lengths available are 304mm (12"), 100mm (4"), 914mm (36"), 1230mm (48"), 1525mm (60") and 1830mm (72").
- 4.6.9 Provide two (2) sets of predrilled mounting holes for power bar assembly to accommodate either right or left hand side of desk installation. (Refer to Annex A.1 – CW-1/CW-3, CW-2, CW-15, CW-16) Surge protection Power bar to be: Kensington 62691 Smart Sockets Premium Adapter 8-outlet, colour coded power strip and surge protector, or approved equivalent.
- 4.6.10 Keyboard Support Surface:
- 4.6.10.1 The keyboard platform to be QS SKATE 685mm (27") wide 'skate' platform with leather like palm support from ISE for corner surface and for straight surface.
- 4.6.10.2 The keyboard arm to be ISE- A-LSTL, Leader series articulation lever free spring assisted arm, 596mm (23.5") track and 457mm-558mm (18-22") for corner.

- 4.6.11 Casters MUST be carpet type, 360° pivot and the two front corner casters on each mobile pedestal MUST have a locking device.
- 4.6.12 Tackboard fabric MUST be plain weave, 1676 mm (66") wide, 100% polyester panel fabric weighing .34 kg per linear meter (12 ounces per linear yard) fabric: Meringue,# 6502 010 Taupe, by Designtex (or approved equivalent).
- 4.6.13 Fluorescent task light MUST be CSA approved fixture with single 1200 mm (48") long T8 Tri Phosphor, cool white, 41k lamp, clear acrylic prismatic diffuser, silver reflector and 2743 mm (108") long 3 wire power cord with molded straight plug. Wire management to be concealed.
- 4.6.13.1 Fluorescent task light used: Light Corp. model VT48 (or approved equivalent).

5. CONSTRUCTION

5.1 General

- 5.1.1 Furniture MUST be constructed in accordance with the drawings provided in Annex A.1 and MUST meet the requirements of CAN/CGSB-44.227 and AWMAC Architectural Woodwork Standards for premium grade woodwork. In case of conflict, the most stringent requirements apply.
- 5.1.2 Furniture parts, unless otherwise indicated on the drawings provided, MUST be constructed from veneered particleboard.
- 5.1.3 All veneered particleboard parts MUST be veneered both sides to provide balanced construction.
- 5.1.4 Drawer sides and backs MUST be a minimum of 11 mm (7/16") thick, with veneer on both sides and the top edge. Connection of the drawer sides to the drawer front MUST be dovetailed and glued. Connection of the drawer sides to the back MUST be tongue and groove and glued. Drawer bottoms MUST be a minimum of 3.2 mm (1/8") thick and MUST have a veneer finish and MUST be grooved into drawer sides and front.
- 5.1.5 Finger jointed solid hardwood is not acceptable for exposed and semi-exposed locations.
- 5.1.6 Edges of particleboard parts in exposed and semi-exposed locations MUST be edged with same veneer species and quality as face, except where fully concealed by solid hardwood edging or molding. Finger jointed veneer edging will not be accepted.
- 5.1.7 Bottom edges of end panels and supports MUST be reinforced and sealed with at least a 0.8 mm (1/32") thick high pressure laminate, Formica, Black #909, (or approved equivalent) to prevent moisture penetration and breakout of glide inserts.
- 5.1.8 The shelves MUST support continuous loads of books and other heavy objects without sagging. The nominal width MUST be 914 mm (36").

- 5.1.9 The shelves MUST deflect no more than their length divided by 180 (Lu 80) when tested in accordance with the following:
 - 5.1.9.1 Load the shelf surface in accordance with ANSI / BIFMA X5.5, Desk Products, functional distributed load. Along the front edge of the surface, measure the vertical height of the endpoints and center of the shelf surface. Average the height of the endpoints and subtract the height of the center. The resulting dimension is the deflection.
- 5.1.10 Adjustable shelves MUST be notched on underside to conceal the four (4) shelf support pins from view and to prevent shelf from being dislodged accidentally when objects are removed.
- 5.1.11 Adjustable shelves MUST be adjustable in increments of 32mm (1 1/4").
- 5.1.12 Each file drawer MUST be provided with letter and legal hanging-file rail system and MUST be constructed with glue blocks on the bottom of the drawer.
- 5.1.13 The top box drawer of each pedestal MUST be provided with a 100mm (4") plastic pencil tray.
- 5.1.14 Mobile pedestals MUST have five (5) carpet casters and the two front corner casters MUST have a locking device. The top, both sides and the back of each mobile pedestal MUST be veneered and finished as exposed parts. Mobile pedestals MUST not protrude beyond the front edge of the work surface with the cable management channel installed.
- 5.1.15 Tackboard surfaces on the overhead storage units for MP Administration Desks MUST comprise of a fabric finish over a tackable base material as recommended by furniture manufacturer. Fastening mechanism to be fully concealed and incorporate concealed wire management for under bin task light.
- 5.1.16 The overhead storage units are to be secured to work surface with continuous, double side tape.

5.2 Workmanship

- 5.2.1 Wood and wood veneer surfaces and edges MUST be smoothly sanded and free of blemishes or defects such as tool marks, machine marks, sanding marks, surplus glue, raised grain, delamination or water marks.
- 5.2.2 Face veneers MUST be tightly joined and properly matched and MUST be similar in grain pattern and colour throughout any given area.
- 5.2.3 Moldings and solid wood edgings MUST be cleanly run, smoothly sanded, free of machine marks and with sharply defined detail.
- 5.2.4 Drawers MUST be properly fitted and MUST operate smoothly and silently. Drawer faces in banks and pedestals MUST be aligned flush and gaps between faces, including gaps between drawer faces and adjacent doors, MUST be uniform in width and consistent throughout.
- 5.2.5 Exposed joints MUST be neatly executed, rigid, tight and flush, with no tool, machine or cross sanding marks, slivering or patching which may impair the strength or appearance of the furniture piece.

- 5.2.6 All fastenings, including knock-down type connectors, MUST be completely concealed and MUST be set flush. All connections to be metal to metal for MP Administration Desk.
- 5.2.7 The application of material, drying time, sanding, cleaning, rubbing and waxing, MUST be controlled to produce items of uniform finish without sags, runs, overspray or other defects detrimental to a smooth quality appearance.

6. FINISH

- 6.1 As a minimum, all exposed and semi-exposed solid wood and wood veneer surfaces, other than drawer interiors and sides, MUST be finished using the following process:
 - 1 coat of sub stain
 - 1 coat of wiping stain
 - 1 coat of sealer
 - 1 coat of lacquer
 - Top surfaces MUST receive a second coat of lacquer
- 6.2 All units will go through the drying oven three (3) times. Once after the wiping stained has been wiped off, once after a coat of sealer has been applied and once after the final coat of lacquer is applied. Every unit MUST be scuff sanded and cleaned of all dust particles.
 - 6.2.1 The colour value and sheen MUST match existing custom wood furniture finish and as per the validated and approved sample.
- 6.3 As a minimum, drawer interiors and sides MUST be finished with one coat of vinyl sealer and one coat of catalyzed lacquer to provide a smooth, transparent finish and to protect against warping and stains.
 - 6.3.1 Drawer interiors MUST be free of dirt, dust, shavings or any foreign matter before finishing.
- 6.4 The exposed finishes MUST enhance the beauty of the wood through colour, clarity and sheen. Finish MUST consist of at least the processing steps stated in paragraph 6.1 and MUST be resistant to minor everyday usage.
- 6.5 Edges of doors and drawers MUST have a finish compatible with the exterior finishes.
- 6.6 All interior surfaces exposed during normal use, with the exception of drawer interiors, MUST be compatible in colour with the exterior surface.

2. GROUP 2

1. SCOPE

- 1.1. This specification is for the manufacture of Custom Wood (CW) Furniture for the Member of Parliament (MP) Suites Group 2, described below in section 1.2.
- 1.2. GROUP 2 represents the freestanding custom wood storage pieces and meeting table located in MP Suites.

GROUP 2 items are:

- 1.2.1. MP Bookcase Unit;
- 1.2.2. MP Bookcase;
- 1.2.3. MP Servery;
- 1.2.4. MP Wardrobe; and
- 1.2.5. MP Meeting Table.

GROUP 2		
Custom Furniture Type	Drawing Code	Quantity
MP Bookcase Unit	CW-4	70
MP Bookcase	CW-5	280
MP Servery	CW-6	70
MP Wardrobe	CW-8	140
MP Meeting Table	CW-11	140

- 1.3. These specifications are to be read in conjunction with the Custom Wood (CW) drawings provided in Annex A.1.
 - 1.3.1. MP Bookcase Unit: CW-4;
 - 1.3.2. MP Bookcase: CW-5;
 - 1.3.3. MP Servery: CW-6;
 - 1.3.4. MP Wardrobe: CW-8;
 - 1.3.5. MP Meeting Table: CW-11.

2. STANDARDS AND REGULATIONS

All products to comply with the following standards and regulations:

2.1 Standards

- 2.1.1 CAN/CGSB-44.227, Free Standing Office Desk Products and Components
- 2.1.2 AWMAC, Architectural Woodwork Standards
- 2.1.3 ANSI A208.1, Particleboard, Mat-Formed Wood, Grade M2 or greater
- 2.1.4 CAN/CGSB-69.34-M90, Materials and Finishes
- 2.1.5 CAS 108-05-4, Vinyl Acetate
- 2.1.6 ANSI / BIFMA X5.5-2008 Desk Products

Note: Undated reference refers to the latest issue.

2.2 Regulations

- 2.2.1 Ontario Regulations 347 "General-Waste Management Regulation R.R.O 1990 (as amended).
- 2.2.2 Ontario Regulation 92/94 "Waste Audits and Waste Reduction Work Plans".
- 2.2.3 Ontario Regulations 93/94 "Industrial, Commercial and Institutional Source Separation Programs".

3. ENVIRONMENTAL ATTRIBUTES

- 3.1 Only non-solvent based adhesives MUST be used.
- 3.2 The furniture MUST be manufactured in such a manner that liquid surface coatings are stored in controlled storage areas as per WHMIS requirements.
- 3.3 The furniture MUST be exposed to ventilated open air for a minimum of 24 hours prior to packaging for shipping, to allow for off-gassing.
- 3.4 All wood used in the manufacture of office furniture MUST originate from a forest certified under PEFC International (which includes SFI, CSA) or FSC International.
- 3.5 The Manufacturer MUST have a hazardous and toxic material management system in place at its manufacturing facilities.

4. MATERIALS

4.1 Hardwood Lumber

- 4.1.1 All Hardwood lumber MUST be kiln dried to provide a uniform moisture content value in the range of 5%-9%. All wood MUST be free from open knots (other than occasional pin knot, not more than 3.2 mm [1/8"] in diameter) and other defects that may affect the appearance and serviceability of the finished article.

- 4.1.2 Exposed parts (visible surfaces of furniture when doors and drawers closed) MUST be constructed using plain sawn, select and better grade (species to be black walnut) to AWMAC Architectural Woodwork Standards for premium grade hardwood lumber, for a transparent finish and MUST have straight grain with no bow or hook.
- 4.1.3 Semi-exposed parts (interior surfaces of furniture not visible when doors and drawers are closed) MUST be constructed using plain sawn, select and better grade (species to be black walnut) to AWMAC Architectural Woodwork Standards for premium grade hardwood lumber, for a transparent finish.
- 4.1.4 Concealed parts (non-visible surfaces of furniture whether doors and drawers are open or closed) MUST be constructed from birch or maple species to AWMAC Architectural Woodwork Standards for custom grade or better.
- 4.1.5 Wormholes are not permitted.

4.2 **Hardwood Veneer**

- 4.2.1 All veneers MUST be a minimum thickness of 0.79 mm (1/32").
- 4.2.2 Veneer MUST be press dried to a uniform moisture content of 10%-12%. Red streaks, wild grain, worm holes and improper cut is not permitted. A limited number of pin knots are permitted provided they are not in clusters and do not detract from the overall appearance of the panel.
- 4.2.3 All veneer MUST be book matched; in addition, MUST be center matched for all horizontal surfaces and vertical exterior planes (which may be made up of surfaces such as doors, gables, end panels, drawer fronts and open bookcase backs). Where the surfaces that make up a plane are not separated from each other by a feature such as framing, the veneer MUST be center matched over the entire plane. One heart MUST be provided for the vertically stacked elements and the grain MUST be aligned for aesthetic grain continuity. This requirement MUST be applied to all vertically stacked conditions, including drawer and door combinations. Back of bookcases and wardrobe to be finished wood veneer.
- 4.2.4 Veneer for exposed parts (visible surfaces of furniture with doors and drawers closed), MUST be quarter cut black walnut species. Species to be black walnut hardwood veneer for a transparent finish. Flitches with narrow heart MUST be selected for surfaces to receive flat cut veneer.
- 4.2.5 Veneer for semi-exposed parts (interior surfaces of furniture not visible when doors and drawers are closed and including back face of parts such as gables, end panels, etc.) MUST be flat cut black walnut species.
- 4.2.6 Veneer for concealed parts (non-visible surfaces of furniture, whether doors and drawers are open or closed and including back face of parts where veneer is applied to provide balanced construction) MUST be flat cut, hardwood veneer.

4.3 **Particleboard**

- 4.3.1 Particleboard used as panel core MUST conform to ANSI A208.1, Particleboard, Mat-Formed Wood, Grade M2 or greater. The particleboard MUST have uniform moisture content in the range of 6%-8% at the time of manufacture of the various components.

4.4 Adhesives

4.4.1 Adhesives for hardwood veneering and joinery to be polyvinyl acetate resin emulsion or cross linkable polyvinyl acetate resin emulsion type complying with CAS 108-05.4 Vinyl Acetate. Elastomeric solvent-dispersed adhesives are not acceptable.

4.4.1.1 Adhesives for plastic laminate application MUST meet the requirements specified in CAN/CGSB-44.227 Free Standing Office Desk Products and Components.

4.5 Plastic Laminate

4.5.1 Plastic laminate used in the construction of the servery MUST meet all of the performance requirements specified in CAN/CGSB-44.227 Free Standing Office Desk Products and Components.

4.6 Wood Finishes

4.6.1 An example of an acceptable finish is the materials used in previously fabricated furniture pieces.

4.6.2 Finish all solid wood surfaces to premium grade quality standards, transparent, catalyzed lacquer finish system consisting of vinyl wash coat, stain, vinyl sealer, sand (220 grit) and catalyzed lacquer top coat to match colour and sheen Mohawk Wiping Stain, 404-D Dark Fruitwood. Colour sample to be provided to the Contractor.

4.7 Steel

4.7.1 Steel MUST be cold rolled and MUST be sufficiently flat to avoid detrimental effect to the appearance and construction of the tables. All steel surfaces MUST be suitably prepared for the application of the finishes.

4.8 Hardware and Accessories

4.8.1 Adjustable heavy duty metal glides MUST be provided. Stem length to be 100mm (4") and 127mm (5") for MP Bookcase Unit, finish to be black.

4.8.2 Door and drawer pulls MUST be cast architectural bronze octagonal knob, nominal 28 mm (1 1/8") diameter by 25 mm (1") high.

4.8.2.1 Finish MUST be dark oxidized satin bronze, oil rubbed, finish code 613 to CAN/CGSB-69.34-M90 Materials and Finishes.

4.8.2.2 Door and drawer pulls used: Octagonal knob OIW2503 by Lee Valley Tools, 28mm (1 1/8") diameter by 25mm (1") high, finish MUST be as specified in 4.8.2.1.

4.8.3 Hinges MUST be concealed, European style, self-closing and 110 degrees of opening, satin chrome or stainless, except for the wardrobe hinges, which MUST open 180 degrees.

4.8.4 Drawer slides MUST be aluminum or plated steel of standard commercial manufacture, incorporating progressive extension action and steel ball bearings.

- 4.8.5 Door and drawer locks MUST be wafer tumbler type, with re-keyable cylinders and MUST have at least 50 different key combinations. Finish MUST match door and drawer pulls.
- 4.8.5.1 All locks in each furniture item MUST be keyed alike to the furniture set located within the same office.(Furniture sets are located in Parl office, Executive Assistant office and Receipt/Admin. office. Refer to Appendix A.1 for drawings.) Two (2) keys MUST be provided for each furniture set.
- 4.8.5.2 Codes and depth key MUST be provided to the House of Commons locksmiths.
- 4.8.5.3 Locks Used: Wafer tumbler lock type, flush mounted
 90 degree key turn
 LOC504 Lock Tenon UL-Desc-3
 Keyway L1054B
 Brass wafer, 2 ringed keys
 Provide key cuts charts to cut by code
 Key code to be stamped on the face of lock
 Key blank no.: brass
- 4.8.6 Shelf Supports for adjustable shelves MUST be nominal 5mm (3/16") diameter, metal pins having a brown colour plated finish.
- 4.8.7 Cable grommets MUST be molded plastic assemblies with removable and re-usable covers, sized to pass a 50 mm (2") x 50 mm (2") x 12 mm (1/2") object, colour to best match veneer. Covers for cable grommets for shelf locations/ bookcase back to leave a nominal 20mm (3/4") diameter opening when in place.
- 4.8.7.1 The Contractor to suggest grommet for approval when submitting shop drawings for the following:
- Wire Grommet 20mm (3/4") inside dia., colour to best match veneer.
 - Wire Grommet 72mm, hole dia. 60mm (2 1/2"), colour to best match veneer.
 - Wire Grommet 92mm, hole dia. 80mm (3 3/2"), colour to best match veneer.
- 4.8.8 Mirrors MUST be standard plate glass, 6.25 mm (1/4") thick, with convex polished edges and attached to the wardrobe doors using standard metal mirror brackets.
- 4.8.9 Coat Rods MUST be nominal 25 mm (1") diameter, satin chrome or stainless steel and MUST be removable.

5. CONSTRUCTION

5.1 General

- 5.1.1 Furniture MUST be constructed in accordance with the drawings provided in Annex A.1 and MUST meet the requirements of CAN-CGSB-44.227 Free Standing Office Desk Products and Components and AWMAC Architectural Woodwork Standards for premium grade woodwork. In case of conflict, the most stringent requirements apply.
- 5.1.2 Furniture parts, unless otherwise indicated on the drawings provided, MUST be constructed from veneered particleboard.
- 5.1.3 All veneered particleboard parts MUST be veneered both sides to provide balanced construction.

- 5.1.4 Drawer sides and backs MUST be a minimum of 11 mm (7/16") thick, with veneer on both sides and the top edge. Connection of the drawer sides to the drawer front MUST be dovetailed and glued. Connection of the drawer sides to the back MUST be tongue and groove and glued. Drawer bottoms MUST be a minimum of 3.2 mm (1/8") thick and MUST have a veneer finish and MUST be grooved into the drawer sides and front.
- 5.1.5 Finger jointed solid hardwood is not acceptable for exposed and semi-exposed locations.
- 5.1.6 Edges of particleboard parts in exposed and semi-exposed locations MUST be edged with same veneer species and quality as face, except where fully concealed by solid hardwood edging or molding. Finger jointed veneer edging will not be accepted.
- 5.1.7 Bottom edges of end panels and supports MUST be reinforced and sealed with at least a 0.8 mm (1/32") thick high pressure laminate, Formica, Black #909, (or approved equivalent) to prevent moisture penetration and breakout of glide inserts.
- 5.1.8 The shelves MUST support continuous loads of books and other heavy objects without sagging. The nominal width MUST be 914 mm (36").
- 5.1.9 The shelves MUST deflect no more than their length divided by 180 (Lu 80) when tested in accordance with the following:
 - 5.1.9.1 Load the shelf surface in accordance with ANSI / BIFMA X5.5, Desk Products, functional distributed load. Along the front edge of the surface measure the vertical height of the endpoints and center of the shelf surface. Average the height of the end points and subtract the height of the center. The resulting dimension is the deflection.
- 5.1.10 Adjustable shelves MUST be notched on underside to conceal the four shelf support pins from view and to prevent shelf from being dislodged accidentally when objects are removed.
- 5.1.11 Adjustable shelves MUST be adjustable in increments of 32mm (1 1/4").

5.2 Workmanship

- 5.2.1 Wood and wood veneer surfaces and edges MUST be smoothly sanded and free of blemishes or defects such as tool marks, machine marks, sanding marks, surplus glue, raised grain, delamination or water marks.
- 5.2.2 Face veneers MUST be tightly joined and properly matched and MUST be similar in grain pattern and colour throughout any given area.
- 5.2.3 Moldings and solid wood edgings MUST be cleanly run, smoothly sanded, free of machine marks and with sharply defined detail.
- 5.2.4 Drawers MUST be properly fitted and MUST operate smoothly and silently. Drawer faces MUST be aligned flush and gaps between faces, including gaps between drawer faces and adjacent doors, MUST be uniform in width and consistent throughout.
- 5.2.5 Exposed joints MUST be neatly executed, rigid, tight and flush, with no tool, machine or cross sanding marks, slivering or patching which may impair the strength or appearance of the furniture piece.

- 5.2.6 All fastenings, including knock-down type connectors, MUST be completely concealed and MUST be set flush.
- 5.2.7 The application of material, drying time, sanding, cleaning, rubbing and waxing MUST be controlled to produce items of uniform finish without sags, runs, overspray or other defects detrimental to a smooth quality appearance.

6. FINISH

- 6.1 As a minimum, all exposed and semi-exposed solid wood and wood veneer surfaces, other than drawer interiors and sides, MUST be finished using the following process:
- 1 coat of sub stain
 - 1 coat of wiping stain
 - 1 coat of sealer
 - 1 coat of lacquer
 - Top surfaces MUST receive a second coat of lacquer
- 6.2 All units will go through the drying oven three (3) times. Once after the wiping stained has been wiped off, once after a coat of sealer has been applied and once after the final coat of lacquer is applied. Every unit MUST be scuff sanded and cleaned of all dust particles.
- 6.2.1 The colour value and sheen MUST match existing custom wood furniture finish and as per the validated and approved sample.
- 6.3 As a minimum, drawer interiors and sides MUST be finished with one coat of vinyl sealer and one coat of catalyzed lacquer, to provide a smooth, transparent finish and to protect against warping and stains.
- 6.3.1 Drawer interiors MUST be free of dirt, dust, shavings or any foreign matter before finishing.
- 6.4 Metal surfaces of meeting table base MUST be finished with a textured polyurethane finish coating system to meet performance requirements of CAN-CGSB-44.227, Freestanding Office Desk Products and Components. The colour and texture of the polyurethane finish MUST be equivalent to Inter-Spray Enterprises Ltd., finish HT212M3, Hybrid Tex Brown.
- 6.5 The plastic laminate counter top used in the servery MUST be: Arborite, Weather Hemp P-355RM (or equivalent).
- 6.6 The exposed wood finishes MUST enhance the beauty of the wood through colour, clarity and sheen. Finish MUST consist of at least the processing steps stated in paragraph 6.1 and MUST be resistant to minor everyday usage.
- 6.7 Edges of doors and drawers MUST have a finish compatible with the exterior finishes.
- 6.8 All interior surfaces exposed during normal use, with the exception of drawer interiors, MUST be compatible in colour to the exterior surface.

3. GROUP 3

1. SCOPE

- 1.1. This specification is for the manufacture of Custom Wood (CW) Furniture for the Members of Parliament (MP), Group 3, described below in section 1.2.
- 1.2. GROUP 3 represents the freestanding custom wood meeting room tables.

The GROUP 3 item is:

- 1.2.1. Meeting Room Table.

GROUP 3		
Custom Furniture Type	Drawing Code	Quantity
Meeting Room Table	CW-14	9

- 1.3. These specifications are to be read in conjunction with the Custom Wood (CW) drawings provided in Annex A.1.

- 1.3.1. Meeting Room Table: CW-14.

2. STANDARDS AND REGULATIONS

All products to comply with the following standard and regulations:

2.2 Standards

- 2.2.1 CAN/CGSB-44.227, Free Standing Office Desk Products and Components
- 2.2.2 AWMAC, Architectural Woodwork Standards
- 2.2.3 ANSI A208.1, Particleboard, Mat-Formed Wood, Grade M2 or greater
- 2.2.4 CAN/CGSB-69.34-M90, Materials and Finishes
- 2.2.5 CAS 108-05-4, Vinyl Acetate
- 2.2.6 ANSI / BIFMA X5.5-2008 Desk Products

Note: Undated reference refers to the latest issue.

2.3 Regulations

- 2.3.1 Ontario Regulations 347 "General-Waste Management Regulation R.R.O 1990 (as amended).
- 2.3.2 Ontario Regulation 92/94 "Waste Audits and Waste Reduction Work Plans".
- 2.3.3 Ontario Regulations 93/94 "Industrial, Commercial and Institutional Source Separation Programs".

3. ENVIRONMENTAL ATTRIBUTES

- 3.1 Only non-solvent based adhesives **MUST** be used.
- 3.2 The furniture **MUST** be manufactured in such a manner that liquid surface coatings are stored in controlled storage areas as per WHMIS requirements.
- 3.3 The furniture **MUST** be exposed to ventilated open air for a minimum of 24 hours prior to packaging for shipping, to allow for off-gassing.
- 3.4 All wood used in the manufacture of office furniture **MUST** originate from a forest certified under PEFC International (which includes SFI, CSA) or FSC International.
- 3.5 The Manufacturer **MUST** have a hazardous and toxic material management system in place at its manufacturing facilities.

4. MATERIALS

4.1 Hardwood Lumber

- 4.1.1 All hardwood lumber **MUST** be kiln dried to provide a uniform moisture content value in the range of 5%-9%. All wood **MUST** be free from open knots (other than an occasional pin knot, not more than 3.2 mm [1/8"] in diameter) and other defects that may affect the appearance and serviceability of the finished article.
- 4.1.2 Exposed parts (visible surfaces) **MUST** be constructed from plain sawn, select and better grade wood (species to be black walnut) to AWMAC Architectural Woodwork Standards for premium grade hardwood lumber, for a transparent finish and **MUST** have straight grain with no bow or hook.
- 4.1.3 Concealed parts (non-visible surfaces) **MUST** be constructed from birch or maple species to AWMAC Architectural Woodwork Standards for custom grade or better.
- 4.1.4 Wormholes are not permitted.

4.2 Hardwood Veneer

- 4.2.1 All veneer **MUST** be a minimum thickness of 0.79mm (1/32").
- 4.2.2 Veneer **MUST** be press dried to a uniform moisture content of 10%-12%. Red streaks, wild grain, worm holes and improper cut is not permitted. A limited number of pin knots are permitted provided they are not in clusters and do not detract from the overall appearance of the panel.
- 4.2.3 All veneer **MUST** be book matched and in addition **MUST** be center matched for all table tops and for all flat panel exterior surfaces of parts such as table base and apron.
- 4.2.4 Veneer for exposed parts (visible surfaces of furniture), **MUST** be quarter cut black walnut species. Species to be black walnut hardwood veneer for a transparent finish. Flitches with narrow heart **MUST** be selected for surfaces to receive flat cut veneer.
- 4.2.5 Veneer for concealed parts (non-visible surfaces of furniture, whether doors and drawers are open or closed and including back face of parts where veneer is applied to provide balanced construction) **MUST** be flat cut.

4.3 Particleboard

- 4.3.1 Particleboard used as panel core MUST conform to ANSI A208.1, Particleboard, Mat-Formed Wood, Grade M2 or greater. The particleboard MUST have uniform moisture content in the range of 6%-8% at the time of manufacture of the various components.

4.4 Adhesives

- 4.4.1 Adhesives for hardwood veneering and joinery MUST be polyvinyl acetate resin emulsion or cross linkable polyvinyl acetate resin emulsion type complying with CAS 108-05-4, Vinyl Acetate. Elastomeric solvent-dispersed adhesives are not acceptable.

4.5 Wood Finishes

- 4.5.1 An example of an acceptable finish is: Mohawk Wiping Stain, 404-D Dark Fruitwood. Colour sample to be provided to the Contractor.
- 4.5.2 Finish all solid wood surfaces to premium grade quality standards, transparent, catalyzed lacquer finish system consisting of vinyl wash coat, stain, vinyl sealer, sand (220 grit) and catalyzed lacquer top coat to match colour and sheen.

4.6 Hardware and Accessories

- 4.6.1 Adjustable heavy duty metal glides MUST be provided. Stem length to be 100mm (4"), finish to be black.
- 4.6.2 Power / Data Inserts MUST be designed for recessed installation, MUST be two (2) gang type with flush pivot cover and MUST be installed flush with surface of table. Power / Data inserts MUST be provided with modular screw down face plates for duplex electrical outlet and six (6) standard modular data plugs. Duplex electrical outlets MUST meet the requirements of and be certified by CSA. Power / Data inserts MUST be all metal construction and have a satin black baked on finish.
 - 4.6.2.1 Power / Data insert to be provided and installed by the HoC. A sample of the Power / Data insert to be provided to Contractor to show exact size of opening.

5. CONSTRUCTION

5.1 General

- 5.1.1 Meeting Room Tables MUST be constructed in accordance with the drawings provided in Annex A.1 and MUST meet requirements of CAN/CGSB-44.227, Free Standing Office Desk Products and Components and AWMAC Architectural Woodwork Standards for premium grade woodwork. In case of conflict, the most stringent requirements apply.
- 5.1.2 Meeting Room Table parts, unless otherwise indicated on the drawings provided, MUST be constructed from veneered particleboard.
- 5.1.3 All veneered particleboard parts MUST be veneered both sides to provide balanced construction.
- 5.1.4 Finger jointed solid hardwood is not acceptable for exposed and semi-exposed locations.
- 5.1.5 Corners of wood nosing to be mitered.

5.2 Workmanship

- 5.2.1 Wood and wood veneer surfaces and edges MUST be smoothly sanded and free of blemishes or defects such as tool marks, machine marks, sanding marks, surplus glue, raised grain, delamination or water marks.
- 5.2.2 Face veneers MUST be tightly joined and properly matched and MUST be similar in grain pattern and colour throughout any given area.
- 5.2.3 Moldings and solid wood edgings MUST be cleanly run, smoothly sanded, free of machine marks and with sharply defined detail.
- 5.2.4 Exposed joints MUST be neatly executed, rigid, tight and flush, with no tool, machine or cross sanding marks, slivering or patching which may impair the strength or appearance of the table.
- 5.2.5 The application of material, drying time, sanding, cleaning, rubbing and waxing, MUST be controlled to produce items of uniform finish without sags, runs, overspray or other defects detrimental to a smooth quality appearance.
- 5.2.6 Table tops MUST be attached squarely, without gap between the top edges of the apron.

6. FINISH

- 6.1 As a minimum, all exposed and semi-exposed solid wood and wood veneer surfaces, other than drawer interiors and sides, MUST be finished using the following process:
 - 1 coat of sub stain
 - 1 coat of wiping stain
 - 1 coat of sealer
 - 1 coat of lacquer
 - Top surfaces MUST receive a second coat of lacquer
- 6.2 All units will go through the drying oven three (3) times. Once after the wiping stained has been wiped off, once after a coat of sealer has been applied and once after the final coat of lacquer is applied. Every unit MUST be scuff sanded and cleaned of all dust particles.
 - 6.2.1 The colour value and sheen MUST match existing custom wood furniture and as per the validated and approved sample.
 - 6.2.2 The exposed finishes MUST enhance the beauty of the wood through colour, clarity and sheen. Finish MUST consist of at least the processing steps stated in paragraph 6.1 and MUST be resistant to minor everyday usage.

4. GROUP 4

1. SCOPE

- 1.1. This specification is for the manufacture of Custom Wood (CW) Furniture for the Member of Parliament (MP) Suites, Group 4, described below in section 1.2.
- 1.2. GROUP 4 represents the custom wood occasional tables for the MP suites.

GROUP 4 items are:

- 1.2.1. MP Coffee Table;
- 1.2.2. MP Side Table;

GROUP 4		
Custom Furniture Type	Drawing Code	Quantity
MP Coffee Table	CW-9	70
MP Side Table	CW-10	210

- 1.3. These specifications are to be read in conjunction with the Custom Wood (CW) drawings provided in Annex A.1.
 - 1.3.1. MP Coffee Table: CW-9
 - 1.3.2. MP Side Table: CW-10

2. STANDARDS AND REGULATIONS

All products to comply with the following standards and regulations:

2.1 Standards

- 2.1.1 AWMAC, Architectural Woodwork Standards
- 2.1.2 ANSI A208.1, Particleboard, Mat-Formed Wood, Grade M2 or greater
- 2.1.3 CAN/CGSB-69.34-M90, Materials and Finishes
- 2.1.4 CAS 108-05-4, Vinyl Acetate

Note: Undated reference refers to the latest issue.

2.2 Regulations

- 2.2.1 Ontario Regulations 347 "General-Waste Management Regulation R.R.O 1990 (as amended).
- 2.2.2 Ontario Regulation 92/94 "Waste Audits and Waste Reduction Work Plans".
- 2.2.3 Ontario Regulations 93/94 "Industrial, Commercial and Institutional Source Separation Programs

3. ENVIRONMENTAL ATTRIBUTES

- 3.1 Only non-solvent-based adhesives **MUST** be used.
- 3.2 The furniture **MUST** be manufactured in such a manner that liquid surface coatings are stored in controlled storage areas as per WHMIS requirements.
- 3.3 The furniture **MUST** be exposed to ventilated open air for a minimum of 24 hours prior to packaging for shipping, to allow for off-gassing.
- 3.4 All wood used in the manufacture of office furniture **MUST** originate from a forest certified under PEFC International (which includes SFI, CSA) or FSC International.
- 3.5 The Manufacturer **MUST** have a hazardous and toxic material management system in place at its manufacturing facilities.

4. MATERIALS

4.1 Hardwood Lumber

- 4.1.1 All hardwood lumber **MUST** be kiln dried to provide a uniform moisture content value in the range of 5%-9%. All wood **MUST** be free from open knots (other than an occasional pin knot, not more than 3.2 mm [1/8"] in diameter) and other defects that may affect the appearance and serviceability of the finished article.
- 4.1.2 Exposed parts (visible surfaces) **MUST** be constructed using plain sawn, select and better grade wood (species to be black walnut) to AWMAC Architectural Woodwork Standards for premium grade hardwood lumber, for a transparent finish and **MUST** have straight grain with no bow or hook.
- 4.1.3 Hardwood reveal: Plain sawn, Black African Ebony hardwood with no bow or hook.
- 4.1.4 Concealed parts (non-visible surfaces) **MUST** be constructed from birch or maple species to AWMAC Architectural Woodwork Standards for custom grade or better.
- 4.1.5 Wormholes are not permitted.

4.2 Hardwood Veneer

- 4.2.1 All veneer **MUST** be minimum thickness of 0.79 mm (1/32").
- 4.2.2 Veneer **MUST** be press dried to a uniform moisture content of 10%-12%. Red streaks, wild grain, worm holes and improper cut is not permitted. A limited number of pin knots are permitted provided they are not in clusters and do not detract from the overall appearance of the panel.
- 4.2.3 All veneer to be book matched, in addition, it **MUST** be center matched for all table tops.
- 4.2.4 Veneer **MUST** be quarter cut black walnut species species to be black walnut hardwood veneer for a transparent finish. Fitches with a narrow heart **MUST** be selected for surfaces to receive flat cut veneer.

4.3 Particleboard

- 4.3.1 Particleboard used as panel core MUST conform to ANSI A208.1, Particleboard, Mat-Formed Wood, Grade M2 or greater. The particleboard MUST have uniform moisture content in the range of 6%-8% at the time of manufacture of the various components.

4.4 Adhesives

- 4.4.1 Adhesives for hardwood veneering and joinery to be polyvinyl acetate resin emulsion or cross linkable polyvinyl acetate resin emulsion type complying with CAS 108-05-4, Vinyl Acetate. Elastomeric solvent-dispersed adhesives are not acceptable.

4.5 Wood Finishes

- 4.5.1 An example of an acceptable finish is: Mohawk Wiping Stain, 404-D Dark Fruitwood. Colour sample to be provided to the Contractor.
- 4.5.2 Finish all solid wood surfaces to premium grade quality standards, transparent, catalyzed lacquer finish system consisting of vinyl wash coat, stain, vinyl sealer, sand (220 grit) and catalyzed lacquer top coat to match colour and sheen.

4.6 Hardware

- 4.6.1 Nylon nail glides MUST be provided: Richelieu, MP 50260 colour brown, or equivalent.

5. CONSTRUCTION

5.1 General

- 5.1.1 The furniture MUST be constructed in accordance with the drawings provided and MUST meet the AWMAC Architectural Woodwork Standards quality for premium grade woodwork.
- 5.1.2 Furniture parts, unless otherwise indicated on the drawings provided, MUST be constructed from veneered particle board.
- 5.1.3 All veneered particleboard parts MUST be veneered both sides to provide balanced construction.
- 5.1.4 Finger jointed solid hardwood is not acceptable.

5.2 Workmanship

- 5.2.1 Face veneers to be tightly joined and properly matched and to be similar in grain pattern and colour throughout any given area.
- 5.2.2 Wood and wood veneer surfaces and edges to be smoothly sanded and free of blemishes or defects such as tool marks, machine marks, sanding marks, surplus glue, raised grain, delamination or water marks. All exposed and unexposed solid parts MUST be sound without splits, check knots, open glue lines or other defects which might affect strength or appearance.
- 5.2.3 Moldings and solid wood edgings to be cleanly run, smoothly sanded, free of machine marks and with sharply defined details.
- 5.2.4 Exposed joints to be neatly executed, rigid, tight and flush, with no tool, machine or cross sanding marks. Slivering or patching which may impair the strength or appearance of the tables is not permitted.

- 5.2.5 Table tops MUST be attached squarely, without gaps between the top edges of aprons.
- 5.2.6 All fastenings MUST be completely concealed. Screws MUST be driven to prevent stripping, splits or swelling of the joining member and MUST be flush or countersunk.
- 5.2.7 The application of material, drying time, sanding, cleaning, rubbing and waxing, MUST be controlled to produce items of uniform finish without sags, runs, overspray or other defects detrimental to a smooth quality appearance.

6. FINISH

- 6.1 As a minimum, all exposed and semi-exposed solid wood and wood veneer surfaces MUST be finished using the following process:
 - 1 coat of sub stain
 - 1 coat of wiping stain
 - 1 coat of sealer
 - 1 coat of lacquer
 - Top surfaces MUST receive a second coat of lacquer
- 6.2 All units will go through the drying oven three (3) times. Once after the wiping stained has been wiped off, once after a coat of sealer has been applied and once after the final coat of lacquer is applied. Every unit MUST be scuff sanded and cleaned of all dust particles.
 - 6.2.1 The colour value and sheen MUST match existing custom wood furniture and as per the validated and approved sample.
 - 6.2.2 The exposed finishes MUST enhance the beauty of the wood through colour, clarity and sheen. Finish MUST consist of at least the processing steps stated in paragraph 6.1 and MUST be resistant to minor everyday usage.

5. GROUP 5

1. SCOPE

- 1.1. This specification is for the manufacture of Custom Wood (CW) Furniture for the Member of Parliament (MP) Suites, Group 5, described below in section 1.2.
- 1.2. GROUP 5 represents the freestanding custom wood coat tree located in the MP Suites.
- 1.3. The GROUP 5 item is:
 - 1.3.1. MP Coat Tree

GROUP 5		
Custom Furniture Type	Drawing Code	Quantity
MP Coat Tree	CW-13	70

- 1.4. These specifications are to be read in conjunction with the Custom Wood (CW) drawings provided in Annex A.1.
 - 1.4.1. MP Coat Tree: CW-13

2. STANDARDS AND REGULATIONS

All products to comply with the following standard and regulations:

2.1 Standards

- 2.1.1 AWMAC, Architectural Woodwork Standards
- 2.1.2 ANSI A208.1, Particleboard, Mat-Formed Wood, Grade M2 or greater
- 2.1.3 CAN/CGSB-69.34-M90, Materials and Finishes
- 2.1.4 CAS 108-05-4, Vinyl Acetate

Note: Undated reference refers to the latest issue.

2.2 Regulations

- 2.2.1 Ontario Regulations 347 "General-Waste Management Regulation R.R.O 1990 (as amended).
- 2.2.2 Ontario Regulation 92/94 "Waste Audits and Waste Reduction Work Plans".
- 2.2.3 Ontario Regulations 93/94 "Industrial, Commercial and Institutional Source Separation Programs"

3. ENVIRONMENTAL ATTRIBUTES

- 3.1 Only non-solvent-based adhesives **MUST** be used.
- 3.2 The furniture **MUST** be manufactured in such a manner that liquid surface coatings are stored in controlled storage areas as per WHMIS requirements.
- 3.3 The furniture **MUST** be exposed to ventilated open air for a minimum of 24 hours prior to packaging for shipping, to allow for off-gassing.
- 3.4 All wood used in the manufacture of office furniture **MUST** originate from a forest certified under PEFC International (which includes SFI, CSA) or FSC International.
- 3.5 The Manufacturer **MUST** have a hazardous and toxic material management system in place at its manufacturing facilities.

4. MATERIALS

4.1 Hardwood Lumber

- 4.1.1 All hardwood lumber **MUST** be kiln dried to provide a moisture content value in the range of 5%-9%. All wood **MUST** be free from open knots (other than an occasional pin knot, not more than 32 mm [1 1/8 "] in diameter) and other defects that may affect the appearance and serviceability of the finished article.
- 4.1.2 Hardwood lumber **MUST** be plain sawn, select and better grade (species to be black walnut) to premium grade hardwood lumber for a transparent finish and **MUST** have straight grain with no bow or hook.
- 4.1.3 Wormholes are not permitted.

4.2 Adhesives

- 4.2.1 Adhesives for hardwood joinery to be polyvinyl acetate resin emulsion or cross-linkable polyvinyl acetate resin emulsion type complying with CAS 108-05-4, Vinyl Acetate Elastomeric solvent-dispersed adhesives are not acceptable.

4.3 Wood Finishes

- 4.3.1 An example of an acceptable finish is: Mohawk Wiping Stain, 404-D Dark Fruitwood. Colour sample to be provided to the Contractor.
- 4.3.2 Wood surfaces and edges to be smoothly sanded and free of blemishes or defects such as tool or machine marks, surplus glue, raised grain delamination or water marks.
- 4.3.3 Finish all solid wood surfaces to premium grade quality standards, transparent, catalyzed lacquer finish system consisting of vinyl wash coat, stain, vinyl sealer, sand (220 grit) and catalyzed lacquer top coat to match colour and sheen.

4.4 **Hardware and Accessories**

- 4.4.1 Coat hooks used: ILCO SP17. Finish **MUST** be dark oxidized satin bronze, oil rubbed, finish code 613 to CAN/CGSB-69.34-M90.
- 4.4.2 Recessed steel cross plate: Steel cross plate to be minimum 16 gauge steel, as per drawings provided.
- 4.4.3 Glides on legs of coat tree are Richelieu MP502-60, brown (or equivalent).

5. **CONSTRUCTION**

5.1 **General**

- 5.1.1 The furniture **MUST** be constructed in accordance with the drawings provided and **MUST** meet the AWMAC Architectural Woodwork Standards for premium grade woodwork.
- 5.1.2 Construct furniture parts from solid hardwood material.
- 5.1.3 Finger jointed solid hardwood is not acceptable.

5.2 **Workmanship**

- 5.2.1 Wood surfaces and edges to be smoothly sanded and free of blemishes or defects such as tool or-machine marks, sanding marks, surplus glue or water marks. All exposed and unexposed solid parts **MUST** be sound without splits, check knots, open glue lines or other defects which might affect strength or appearance.
- 5.2.2 Solid wood edgings to be cleanly run, smoothly sanded, free of machine marks and with sharply defined details.
- 5.2.3 Exposed joints to be neatly executed, rigid, tight and flush, with no tool, machine or cross sanding marks. Slivering or patching which may impair the strength of the coat tree is not permitted.
- 5.2.4 All fastenings **MUST** be completely concealed. Screws **MUST** be driven to prevent stripping, splits or swelling of the joining member and **MUST** be flush or countersunk.
- 5.2.5 The application of material, drying time, sanding, cleaning, rubbing and waxing, **MUST** be controlled to produce items of uniform finish without sags, runs, overspray or other defects detrimental to a smooth quality appearance.

6. **FINISH**

- 6.1 As a minimum, all exposed and semi-exposed solid wood surfaces **MUST** follow as a minimum the following process:
 - 1 coat of sub stain
 - 1 coat of wiping stain
 - 1 coat of sealer
 - 2 coats of lacquer

- 6.2 All units will go through the drying oven three (3) times. Once after the wiping stained has been wiped, once after a coat of sealer has been applied and once after the coat of lacquer is applied. Every unit MUST be scuff sanded and cleaned of all dust particles.
- 6.2.1 The colour value and sheen MUST match existing custom wood finish and as per the validated and approved sample.
- 6.2.2 The exposed finishes MUST enhance the beauty of the wood through colour, clarity and sheen. Finish MUST consist of at least the processing steps stated in paragraph 6.1 and MUST be resistant to minor everyday usage.

6. SUBMITTALS

1. GENERAL

- 1.1. The Contractor MUST, prior to final manufacturing, submit the following listed deliverables to the Project Authority: Shop Drawings and Product Data (as per section 2 below) and Prototype (as per section 3 below). Deliverables are to be submitted in accordance with the schedule in PART IV: SUPPLY, DELIVERY AND INSTALLATION REQUIREMENTS.
- 1.2. The Contractor MUST not proceed with manufacturing until review and acceptance of submittals is complete.
- 1.3. Submittals not stamped, signed, dated and identified as to specific project may be rejected.

2. SHOP DRAWINGS AND PRODUCT DATA

- 2.1. The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- 2.2. The Contractor MUST indicate materials, methods of construction and attachment or anchorage, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated. Indicate cross references to design drawings and specifications.
- 2.3. Allow ten (10) working days for Technical Authority's review of each submission.
- 2.4. The Contractor MUST make changes in shop drawings as the Technical Authority may require, consistent with the requirements. When resubmitting, notify the Technical Authority in writing of revisions other than those requested.
- 2.5. If upon review by the Technical Authority, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, MUST be performed before fabrication and installation of Work may proceed.
- 2.6. The review of shop drawings by the Technical Authority is for the sole purpose of ascertaining conformance with the detail design. The Technical Authority's review of shop drawings MUST not relieve the Contractor of responsibility for errors or omissions in the shop drawings.
- 2.7. The Contractor MUST include a transmittal letter with all submissions. The transmittal letter MUST contain the following:
 - 2.7.1 Date
 - 2.7.2 Contract title and number
 - 2.7.3 Contractor's name and address
 - 2.7.4 Identification and quantity of each shop drawing, product data and sample
- 2.8. All submissions made by the Contractor MUST include:
 - 2.8.1 Date and revision dates.
 - 2.8.2 Contract title and number.
 - 2.8.3 Name and address of:
 - 2.8.4 Contractor.
 - 2.8.5 Manufacturer
 - 2.8.6 Details of appropriate portions of Work as applicable:
 - 2.8.7 Fabrication
 - 2.8.8 Dimensions
 - 2.8.9 Performance characteristics

- 2.8.10 Standards
- 2.8.11 Relationship to adjacent components

2.9. For Technical Authority's review, the Contractor MUST submit:

- 2.9.1 Six (6) prints of shop drawings for each furniture piece in Groups 1 through 5.
- 2.9.2 Six (6) copies of product data sheets or brochures for accessories and finishes where shop drawings will not be prepared due to standardized manufacture of product.
- 2.9.3 Six (6) copies of test reports for specified materials and as requested by the Technical Authority:
 - 2.9.3.1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
 - 2.9.3.2 Testing MUST have been on or after January 1, 2011.
- 2.9.4 Six (6) copies of a statement certifying compliance with all environmental attributes detailed in the requirements.
 - 2.9.4.1 Certificates MUST be dated after award of contract complete with project name.
- 2.9.5 Six (6) copies of manufacturer's instructions for materials and components and as requested by the Technical Authority.
- 2.9.6 Pre-printed material describing the product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.

3. PROTOTYPE

- 3.1 The Contractor MUST prepare one (1) prototype for each listed Custom Wood furniture piece in Groups 1-5. The prototype MUST be built in accordance with the shop drawings. The purpose of the prototype will be to allow the Technical Authority to review and verify casework details, confirm ease of cabling installation and verify the ease of disassembly of the custom wood furniture (where required).
- 3.2 The Contractor MUST prepare prototypes for review by the Technical Authority. Prototypes MUST be delivered to a site within the National Capital Region specified by the Technical Authority. The prototypes are to be available for review and comment for ten (10) working days. Final modifications or adjustments will be examined and reviewed by Technical Authority prior to manufacturing and delivery.
- 3.3 The Contractor MUST remove the prototypes when advised in writing to do so, by the Technical Authority.
- 3.4 Prototypes may form part of final work and are to be the last items installed.

PART III: CORPORATE REQUIREMENTS

1. Corporate Background

- 1.1. Contractor MUST identify the manufacturing company, delivery company and installation company of the requirements.

2. Qualifications

- 2.1. The Furniture manufacturer MUST have a minimum of seven (7) years' experience in the manufacturing and sales of custom furniture.
- 2.2. The Lead furniture installer resource MUST have a minimum of five (5) years' of experience as a furniture installer.
- 2.3. All installers MUST be trained in the installation of the furniture specified in PART II: SCOPE OF WORK before the delivery of product to site.

3. Local Representation

- 3.1. Manufacturers MUST have a local representative available to address issues and provide Customer Service duties.

4. Warranty

- 4.1. All furniture pieces as contained within PART II: SCOPE OF WORK, MUST be warranted for a period of at least six (6) years for manufacturer's defects, from the final date of acceptance.
- 4.2. The Contractor MUST provide a plan for dealing with warranty issues. The plan MUST clearly identify what constitutes replacement or repair, timelines for service and any costs involved.
- 4.3. The Contractor MUST respond to telephone and e-mail contact by PWGSC or The House of Commons within 24 hours.
- 4.4. The Contractor MUST have a local representative available to address issues relating to warranty.

5. Quality Assurance

- 5.1. The Contractor MUST have a written quality assurance program, ISO Certification or ISO Certification equivalent.

6. Storage Services

The Contractor MUST have the ability to store the product if required.

PART IV: SUPPLY, DELIVERY AND INSTALLATION REQUIREMENTS

1.0 SUPPLY, DELIVERY AND INSTALLATION

- 1.1 The Contractor MUST supply all material and labour necessary for the supply, delivery and installation of all furniture required and detailed in PART II: SCOPE OF WORK.
- 1.2 As described in PART II: SCOPE OF WORK, Section 6. Submittals, the Contractor MUST submit shop drawings and prototypes prior to manufacturing. Below is a table that provides estimated duration for shop drawings, prototype, manufacturing and delivery by floor.

1.2.1 Activities to supply, deliver and install Member of Parliament Custom Wood furniture

Activities for Supply, Delivery and Installation	Responsible Authority	Approximate Duration in Weeks
Submit Shop Drawings and schedule	Contractor	6
Review Shop Drawings	Technical Authority	3
Production and submission of prototype	Contractor	6
Prototype Review and Acceptance	Technical Authority	3
Manufacture	Contractor	TBD
Deliver and Install	Contractor	16
Inspection Process and Deficiencies Procedure (see PART VI)	Project Authority and Technical Authority	5

- 1.3 It is the intent to install items floor by floor on the 6th, 5th and 2nd floor. Location of furniture pieces for each of these floors is available in Annex A.1.
- 1.4 Approximate installation timeframe is July 2015 to December 2015. Final schedule to be confirmed by the Project Authority four (4) months prior to delivery.
- 1.5 The Contractor will be responsible to take the necessary steps to ensure all interior finishes i.e., door frames, flooring finishes, elevators, etc. are protected against damage.
- 1.6 The minimum level of service required is detailed below:
- 1.6.1 Deliver product to loading dock
- 1.6.2 Uncrate product
- 1.6.3 Inspect product for damage
- 1.6.4 Install product
- 1.6.5 Ensure all products function properly, i.e., test lock mechanisms, level guides, etc.
- 1.6.6 Make minor adjustments/repairs as required.
- 1.6.7 Clean product once installed.
- 1.6.8 Place all waste material in designated receptacle at the loading dock.
- 1.6.9 Clean up the installation site. The site MUST present a neat and orderly appearance at all times

1.7 Delivery Services:

- 1.7.1 Deliveries are only to be scheduled between 7:00pm and 12:00am, Monday to Friday via the loading dock. All delivered materials are to be moved from the loading dock to their respective rooms by 12:00 am each day.
- 1.7.2 All deliveries to be scheduled five (5) working days in advance with the Project Authority.
- 1.7.3 At no time is Sparks Street to be used for removals, staging or deliveries.
- 1.7.4 Each driver coming to site MUST review and understand the *traffic control plan* provided by the Construction Manager in the Health and Safety Plan (refer to Annex A.2 Health and Safety Preparedness Plan, 180 Wellington Street, Wellington Building Renovation) prior to the delivery being made.
- 1.7.5 One (1) loading dock serves the entire building. Note: the loading dock is not accessible by tractor trailer. Maximum size of delivery trucks to be limited to 22' length (e.g. 5 ton truck).
- 1.7.6 There will be no opportunity for jockeying or maneuvering the contents of the delivery vehicle while at the loading dock. The item(s) to be delivered MUST be the first accessible item(s) in the delivery vehicle.
- 1.7.7 The Wellington Building has two (2) freight elevators. They will be available for transportation of materials to floors during the times noted above. Elevator: inside dimensions, Length 2675mm (105") x Width 1700mm(67") x Height 2745mm.(108") Clear opening, Width 1219mm (48") x Height 2133mm (84"). One (1) elevator has a 600mm (24") high doghouse the width of the cab.
- 1.7.8 All deliveries MUST have a packing slip that clearly identify the following:
 - 1.7.8.1 Description of item(s)
 - 1.7.8.2 Total number of item(s)

1.8 Installation Services

- 1.8.1 The site is considered a construction site. Installation will be carried out during normal working hours, which are defined as Monday to Friday, from 7:00am to 5:00pm, excluding statutory holidays. Installations will be scheduled by the Project Authority.
- 1.8.2 The Construction Manager (CM) is responsible for scheduling the use of the elevator.
- 1.8.3 Installers are required to have a designated Supervisor on site while the work is being carried out.

PART V: HEALTH AND SAFETY

1. General:

- 1.1 Until **April 2016**, the Construction Manager (CM), assumes the role of “Constructor” as defined in the Occupational Health and Safety Act and Regulations for construction Projects and is fully responsible for ensuring compliance with OSHA for all aspects of the Project.
- 1.2 The Contractor **MUST** comply with the Construction Manager Health and Safety Procedures and Policy described below and attached under Annex A.2.
- 1.3 A Site Orientation Course will be provided by the CM to all of the Contractor’s personnel required to access the worksite.
- 1.4 All personnel accessing the site (beyond the loading dock) are required to have valid WHMIS and Basics of Fall Protection training cards during their time on site. Copies of the training cards will be taken by Construction Manager at the site orientation course
- 1.5 The Construction Manager complies with and enforces the requirements of:
 - 1.5.1 The National Building Code of Canada 2005 (NBC), Part 8 Safety Measures at Construction and Demolition Sites and Provincial Regulations for Construction Projects.
 - 1.5.2 The Designated Substances Report.
 - 1.5.3 The Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials; and labeling and the provision of Material Safety Data Sheets (MSDS) acceptable to Human Resources and Skills Development Canada, Labour Program.

PART VI: INSPECTION & DEFICIENCY PROCEDURES

The Contractor MUST adhere to the following inspection process and deficiency procedure:

1. INSPECTIONS

1.1. At Manufacturer's Premises

1.1.1. The Project Authority and Technical Authority reserve the right to visit the manufacturer's premises.

1.2. Inspection Upon Delivery

1.2.1. The Project Authority will inspect all products arriving on-site.

1.2.2. There will be an inspection of the building prior to any deliveries by the Contractor. Damages will be formally documented by the Project Authority and a copy provided to the Contractor.

1.3. Inspection During Installation

1.3.1. The Project Authority and Technical Authority will inspect all products during installation.

1.4. Inspection Upon Completion of Installation

1.4.1. The Contractor MUST notify the Project Authority when the installation is completed.

1.4.2. The Project Authority and the Technical Authority will perform the inspection within five (5) business days after notification of the completed installation.;

2. DEFICIENCIES

2.1. The Project Authority will prepare a deficiency list documenting all deficiencies upon installation completion.

2.2. The deficiency list will be forwarded to the Contractor.

2.3. Within three (3) working days of receipt of this deficiency list, the Contractor MUST complete all minor deficiencies and make all adjustments not requiring new parts.

2.4. For all outstanding deficiencies, the Contractor MUST submit a deficiency rectification plan with delivery dates and completion dates, within five (5) working days from receipt of the deficiency list.

2.5. In instances where replacement furniture pieces are required before deficiency rectification can be scheduled, temporary pieces of furniture will need to be supplied. These pieces will be identified at the time of the walk-through inspections and itemized on the deficiency list.

2.6. The Contractor MUST notify the Project Authority and the Contracting Authority when all deficiencies have been rectified.

2.7. A final inspection will be coordinated by the Project Authority with the Contractor and other PWGSC stakeholders. Once all rectified deficiencies pass inspection, the Contracting Authority will provide the Contractor a final sign-off that the work is accepted.