



Public Works and  
Government Services  
Canada

Travaux publics et  
Services gouvernementaux  
Canada

**RETURN BIDS TO:****RETOURNER LES SOUMISSIONS A:**

See Section 1.

Voir Section 1.

**STANDARD REQUEST FOR BID****INVITATION A SOUMISSIONNER - STANDARD**

The Bidder offers to provide to Canada the goods, services or both listed in the bid solicitation in accordance with the conditions set out in the bid solicitation and the prices set out in the bid.

This bid solicitation is issued in accordance with the conditions of the Supply Arrangement E60PQ-140003/.../PQ.

Le soumissionnaire offre de fournir au Canada les biens, services ou les deux énumérés dans la demande de soumissions aux conditions prévues dans la demande de soumissions et aux prix indiqués dans la soumission.

Cette demande de soumissions est émise conformément aux conditions de l'arrangement en matière d'approvisionnement E60PQ-140003/PQ

Solicitation No. - N° de la demande	Amendment No. - N° de modification
17-22066	

Solicitation closes – La demande prend fin :	File No. - N° de dossier
at – à See Section 1 Voir Section 1	
on – le See Section 1 Voir Section 1	

**Date of Solicitation – Date de la demande**

Sept 26, 2017

**Address inquiries to – Adresser toute demande de renseignement à :**

See Section 2, Article 4.1.

Voir Section 2, Article 4.1

**Destination**

See Section 2, Annex A.

Voir Section 2, Annexe A.

**Instructions:**

Municipal taxes are not applicable.

Unless otherwise specified in the bid solicitation, all prices quoted must be net prices in Canadian funds including Canadian customs duties, excise taxes, must be FOB, including all delivery charges to destination(s) as indicated. The amount for Applicable Taxes is to be shown as a separate item.

**Instructions:**

Les taxes municipales ne s'appliquent pas.

Sauf indication contraire dans la demande de soumissions, tous les prix indiqués doivent être des prix nets, en dollars canadiens, comprenant les droits de douane canadiens, la taxe d'accise et doivent être FAB, y compris tous frais de livraison à la (aux) destination(s) indiqué(s). Le montant des taxes applicables doit apparaître séparément.

**Supplier Name and Address – Nom et adresse du fournisseur**

Telephone No. - N° de téléphone

Facsimile No. - N° de télécopieur

**Name and title of person authorized to sign on behalf of supplier (type or print)**

Nom et titre de la personne autorisée à signer au nom du fournisseur (caractère d'impression)

Signature : \_\_\_\_\_ Date : \_\_\_\_\_

**TABLE OF CONTENTS**

Section 1 – Invitation and Instructions to Bidders

Section 2 – Resulting Contract including a list of required goods and services

**SECTION 1 – INVITATION AND INSTRUCTIONS TO BIDDERS****Step 1. For Tier 2 and Tier 3 only (If Tier 1, skip this step and proceed with step 2)**

Is this a Manufacturer Product Specific Procurement? If yes, the IU must complete and submit the Manufacturer Product Specific form to AB. If form approved, keep copy on file and proceed with the step 2.

**Step 2.  Competitive or  Non-Competitive**

For Competitive Requirements:

The Bidder must provide the following information AFTER bid closing, if requested to do so by Canada:

- One or more of the following price justifications:
  1. a current published price list indicating the percentage discount available to Canada; or
  2. a copy of paid invoices for the like quality and quantity of the goods, services or both sold to other customers;  
or
  3. a price breakdown showing the cost of direct labour, direct materials, purchased items, engineering and plant overheads, general and administrative overhead, transportation, etc., and profit; or
  4. any other supporting documentation as requested by Canada.

**Step 3.  General or  PSAB**

**Terms of the RFB:**

This RFB is issued pursuant to the Supplier's Furniture for Workspaces Supply Arrangement (SA) that forms part of the series of SAs issued by PWGSC with the number E60PQ-140003/PQ. The terms and conditions in the Supplier's SA apply to and form part of this RFB. Bidders who submit a bid agree to be bound by those terms and conditions as well as the terms and conditions in this RFB.

The Bidder must provide the following information WITH the bid:

- The information requested by Canada in Annex A herein.

The Bidder must also provide the information at article 4. below at the time indicated in article 3.  
Security Requirement

- Conditions
  - the Bidder must hold a valid organization security (VOS) clearance as indicated in Annex B;
  - the Bidder's proposed individuals requiring access to classified or protected information, assets or sensitive work site(s) must meet the security requirement as indicated in Annex B.
- For additional information on security requirements, bidders should refer to the Canadian Industrial Security Directorate (CISD), Industrial Program of Public Works and Government Services Canada (<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>) website.
- The conditions in article 1 above must be met by the Bidder (the checked box applies):
  - by the closing date of the bid;
  - before the award of a contract. Bidders are reminded to obtain the required security clearance promptly. Any delay in the award of a contract to allow the successful bidder to obtain the required clearance will be at the entire discretion of the Contracting Authority.
- Bidders are to supply the following information, as a minimum, to demonstrate compliance with the Security Requirement.
  - The Bidder's valid VOS clearance number issued by CISD;
  - The name of all individuals who will require access to classified or protected information, assets or sensitive work sites. It is desirable to also include their date of birth, their middle name, and their security clearance number issued by CISD.

**RFB Closing - Submit Bid:**

Bids must be submitted to the Contracting Authority on the date and at the time indicated below.

By no later than date and time:	a. Oct 5, 2017 b. 2:00 PM EDT
- To physical location (if applicable)	National Research Council 1200 Montreal Rd, M-22 Ottawa, Ontario K1A 0R6
- To e-mail address (if applicable)	Steve.Cassidy@nrc-cnrc.gc.ca

**RFB Enquiries**

Unless a different period is listed in the adjacent column, Bidders may submit enquires about the RFB to the Contracting Authority two business days prior to

\_\_\_\_\_ business days

the RFB closing date. Enquiries received after the timeline indicated may not be answered.	
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**SECTION 2 - RESULTING CONTRACT CLAUSES**

<b>1.</b>	<b>Terms and Conditions of the Contract</b>	
	The terms and conditions of Parts 6A and 6C of the Supplier's SA within the series E60PQ-140003/PQ apply to and form part of this Contract.	
<b>2.</b>	<b>Security Requirement</b> (Applies if article a. or b. is checked)	
2.1	The applicable security requirement(s) is (are) set out in the Security Requirement Check List attached as Annex B of this contract. The Contractor must fulfill the security requirements by meeting the terms below (the checked article applies).	
a.	<input type="checkbox"/>	<b>Contractor may be escorted; possession of security clearance not required.</b> Contractor personnel MAY NOT ENTER NOR PERFORM WORK ON sites where PROTECTED or CLASSIFIED information or assets are kept, without an escort provided by the department or agency for which the work is being performed.
b.	<input checked="" type="checkbox"/>	<b>Possession of security clearance(s) is required.</b> The Contractor must meet the security clearance requirements contained in the clausing in Annex B herein.
c.	<input type="checkbox"/>	<b>There is no security requirement associated with this contract.</b>
<b>3.</b>	<b>Requirement</b>	
3.1	The Contractor must perform the Work listed in Annex A herein.	
<b>4.</b>	<b>Authorities</b>	
4.1	<b>Contracting Authority (IU)</b>	
	Name:	Steve Cassidy
	Title:	Senior Contracting Officer
	Department/Agency/Crown Corporation:	National Research Council
	Address:	1200 Montreal rd
	Telephone No.:	613-993-0851
	Facsimile No.:	
	E-mail address:	Steve.Cassidy@nrc-cnrc.gc.ca
4.2	<b>Project Authority [To be left blank for RFB. IU to complete only when awarding contract]</b>	
	Name:	
	Title:	
	Department/Agency/Crown Corporation:	
	Address:	
	Telephone No.:	
	Facsimile No.:	
	E-mail address:	
4.3	<b>Contractor's Representative</b>	
	As set out in Annex A, Table 10 below.	
<b>5.</b>	<b>Payment</b>	
	Method of Payment	
	The checked box applies. If the Contractor's SA indicates acceptance for payment by credit card, that method may be used in conjunction with the following.	
	<input type="checkbox"/>	Single Payment
	<input type="checkbox"/>	Multiple Payment
<b>6.</b>	<b>Invoicing</b> (optional)	

	Further to the Invoicing terms of the WTCM document, the Contractor will deliver the original and one copy of the invoice to the following address for certification and payment:
	Name of the organization and contact: Janis Bigras 613-993-1158
	Address: National Research Council 1200 Montreal Rd, M-22 Ottawa, Ont K1A 0R6 Email: <a href="mailto:nrc.invoice-facture.cnrc@canada.ca">nrc.invoice-facture.cnrc@canada.ca</a>
7.	<b>Defence Contract. This clause applies if the box below is checked.</b>
	<input type="checkbox"/> The Contract is a defence contract within the meaning of the <i>Defence Production Act</i> , R.S.C. 1985, c. D-1.

**ANNEX A  
REQUIREMENT and BASIS OF PAYMENT**

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- 1. IU to complete an Annex A for each category with the exception of the rules specified herein.**  
**2. For Tier 2 and 3 competitive requirements, Conforming Suppliers must acquire the bid solicitation document from GETS and IUs are not to identify the Conforming Suppliers in the solicitation or NPP.**
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**1. Category Selection**

The requirement includes the following category (ies) of work (*check applicable box(es)*):

- a.  Category 1 – Interconnecting Panels and Freestanding Systems

**RULE: Metal Storage**

Identified Users may procure metal storage products forming part of Category 1 when combined with interconnecting panels and/or freestanding systems and if the total sum of metal storage products represent less than 20% of the requirement. If this rule does not apply to the requirement, Category 3 must be used for the metal storage products forming part of this category.

- Category 1 Non-SA (NSA) products forming part of this requirement, refer to Annex D of this RFB (approval by AB required before adding to requirement)

- b.  Category 2 – Freestanding Height Adjustable Desk / Table Products

**RULE: Category 1 and 2**

Category 1 and 2 can be combined for tier 2 and tier 3 requirements when Category 2 surfaces comprise no more than 50% of the total sum of work surfaces.

- Category 2 Non-SA (NSA) products forming part of this requirement, refer to Annex D of this RFB (approval by AB required before adding to requirement)

- c.  Category 3 – Metal Filing and Storage Cabinets

**RULE: High Storage Products**

Identifying the maximum height of the Personal Storage Towers, Wardrobes and Storage Cabinets is acceptable when the requirement is to match existing panel systems heights forming part of an existing inventory. Additional storage forming part of the same requirement not incorporated into an existing panel system workstation must not specify maximum heights and added as a separate line item at article 3 of this Annex.

Maximum Height for product #(s) PSTxW2FCxxx2424Lxxx and PSTxW2FCxxx2424Rxxx at article 3 of this Annex is 54 inches or 1372 mm

- Category 3 Non-SA (NSA) products forming part of this requirement, refer to Annex D of this RFB (approval by AB required before adding to requirement)

- d.  Category 4 – Wood Veneer – Freestanding Products

- Category 4 Non-SA (NSA) products forming part of this requirement, refer to Annex D of this RFB (approval by AB required before adding to requirement)

- e.  Category 5 – Ancillary and Lighting Products  
 Category 5 Non-SA (NSA) products forming part of this requirement, refer to Annex D of this RFB (approval by AB required before adding to requirement)
- f.  Category 6 - Support Space – Collaborative Furniture  
 Category 6 Non-SA (NSA) products forming part of this requirement, refer to Annex D of this RFB (approval by AB required before adding to requirement)
- g.  Product Related Services

## 2. GoCUID identification and/or floor plan(s)

2.1 For Product Related Services requirements

2.2 For Categories 1-6:

Scenario a.  Does not include a floor plan – Category(ies) \_\_\_\_\_

Scenario b.  Includes floor plan(s) WITH identification of product information in Annex C of this RFB. Category(ies) \_\_\_\_\_.

Floor plan(s) and Scope of Work are used for information purposes under appendix “C”

## 3. Product and Pricing Tables

**Bidder to complete:** Sections B of the tables identified by the IU in article 3 of this Annex as well as Tables 9 and 10. In a resulting contract, the term “Bid” means the Supplier’s commitment, the term “Bidder” means “Contractor”.

**Product Category:** \_\_1B\_\_

**Table 1 – Product (Only applicable for Scenario A procurements)**

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
#	GoCUID	Description of Product (optional field)	Qty	Supplier Part Number	Firm Price** \$	Extended Total [Qty x Price] \$
1	WSxxPMLHRxxxxxxxxx2424	Panel Mounted / Monté sur cloison	6			
2	WSxxPMLHRxxxxxxxxx4824	Panel Mounted / Monté sur cloison	6			

3	PSTxW2FCxxx2424Lx xx	Personal Storage Towers/ Armoires de rangement personnel	3			
4	PSTxW2FCxxx2424Rx xx	Personal Storage Towers/ Armoires de rangement personnel	3			
5	PEDSFSD22xxBBFxxx xx	Pedestals/ Caissons	2			
<p>Non-SA (NSA) products forming part of this requirement not to exceed 20% of the firm quantity from the products above in this table.</p> <p>The Supplier signs, and certifies that all the NSA products offered will conform to all specifications and meet the testing requirements detailed at Annex D.</p>						
	NON SA product(s)	Description of Non SA	QTY			
<p>**Must not exceed ceiling unit price in SA.</p> <p>Add more rows if necessary.</p>					Product Total	\$

Table 2 - Delivery

Section A - IU REQUIREMENT				Section B - SUPPLIER'S BID		
Product Item # from Table 1	Location	Desired Date (Y/M/D)	Desired Time: Normal Business Hours (Normal) Or Outside Normal Business Hours (Outside)*	Supplier will deliver on the date and at the time below*	Firm Price \$	Extended Total (Qty x Firm Unit Price) \$



1	NRC, Building U-72 500 Aileron Private Ottawa, Ontario K1V 2B1	2017/11/12	[Normal]	(Y) (M) (D)		
*If no dates and times are added by the Supplier, the Supplier agrees to deliver on the Desired Date and Time. [Normal Business Hours 8:00 – 17:00, as per SA, Annex A, article 5] Add more rows if necessary.				Delivery Total:		\$

Table 3 – Installation

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
Product Item # from Table 1	Location	Desired Date (Y/M/D)	Desired Time: Normal Business Hours (Normal) Or Outside Normal Business Hours (Outside)*	Supplier will install on the date and at the time below*	Firm Price \$	Extended Total (Qty x Firm Unit Price) \$
1	NRC, Building U-72 500 Aileron Private Ottawa, Ontario K1V 2B1	2017/11/12	[Normal] or [Outside Normal]	(Y) (M) (D)		
*If no dates and times are added by the Supplier, the Supplier agrees to install on the Desired Date and Time. [Normal Business Hours 8:00 – 17:00, as per SA, Annex A, article 5] Add more rows if necessary.				Installation Total:		\$

Table 9 - Bid Evaluation and Contract Total (Canada may complete if not completed by the Bidder)

1	Product Total (Table 1) or Annex C Total	\$
2	<b>Optional</b> Product Total (Table 4)	\$
3	Delivery Total (Table 2)	\$
4	<b>Optional</b> Delivery Total (Table 5)	\$
5	Installation Total (Table 3)	\$
6	<b>Optional</b> Installation Total (Table 6)	\$
7	Product Related Services Total (if applicable) (Table 7)	\$
8	NSA Total (if applicable)	\$
9	Hardware Total as per article 1.5 of Annex A-1 of SA (if applicable)	\$
10	<b>Total Evaluated (Bid) Price* (1 + 2 + 3 + 4 + 5 + 6+ 7+8+9):</b>	\$\$
11	Applicable Tax(es):	\$

12	Total Estimated Cost (10+11):	\$
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**Table 10 – Bidder's Authorized Representative**

Table 6 – Bidder's Authorized Representative		
1.	Bidder's Authorized Representative for the Bid and the Contract	
	Name:	Telephone:
		E-Mail:
		Other:

\*At contract award, "Total Evaluated (Bid) Price" becomes "Contract Price".

Product Category:   2  

**Table 1 – Product (Only applicable for Scenario A procurements)**

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
#	GoCUID	Description of Product (optional field)	Qty	Supplier Part Number	Firm Price** \$	Extended Total [Qty x Price] \$
1	FSCAEA4830	Sit/Stand Range Height Adjustable Work Surfaces/Surface de travail à hauteur d'une plage de hauteurs en position assise ou debout	6			
<p>Non-SA (NSA) products forming part of this requirement not to exceed 20% of the firm quantity from the products above in this table.</p> <p>The Supplier signs, and certifies that all the NSA products offered will conform to all specifications and meet the testing requirements detailed at Annex D.</p>						
	NON SA product(s)	Description of Non SA	QTY			
				Product Total		\$
<p>**Must not exceed ceiling unit price in SA.</p> <p>Add more rows if necessary.</p>						

**Table 2 - Delivery**

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
Product Item # from	Location	Desired Date (Y/M/D)	Desired Time:	Supplier will deliver on the date	Firm Price	Extended Total

Table 1			Normal Business Hours (Normal) Or Outside Normal Business Hours (Outside)*	and at the time below*	\$	(Qty x Firm Unit Price) \$
1	NRC, Building U-72 500 Aileron Private Ottawa, Ontario K1V 2B1	2017/11/12	[Normal]	(Y) (M) (D)		
*If no dates and times are added by the Supplier, the Supplier agrees to deliver on the Desired Date and Time. [Normal Business Hours 8:00 – 17:00, as per SA, Annex A, article 5] Add more rows if necessary.					Delivery Total:	\$

Table 3 – Installation

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
Product Item # from Table 1	Location	Desired Date (Y/M/D)	Desired Time: Normal Business Hours (Normal) Or Outside Normal Business Hours (Outside)*	Supplier will install on the date and at the time below*	Firm Price \$	Extended Total (Qty x Firm Unit Price) \$
1	NRC, Building U-72 500 Aileron Private Ottawa, Ontario K1V 2B1	2017/11/12	[Normal] or [Outside Normal]	(Y) (M) (D)		
*If no dates and times are added by the Supplier, the Supplier agrees to install on the Desired Date and Time. [Normal Business Hours 8:00 – 17:00, as per SA, Annex A, article 5] Add more rows if necessary.				Installation Total:		\$

Table 9 - Bid Evaluation and Contract Total (Canada may complete if not completed by the Bidder)

1	Product Total (Table 1) or Annex C Total	\$
2	Optional Product Total (Table 4)	\$
3	Delivery Total (Table 2)	\$
4	Optional Delivery Total (Table 5)	\$

5	Installation Total (Table 3)	\$
6	<b>Optional</b> Installation Total (Table 6)	\$
7	Product Related Services Total (if applicable) (Table 7)	\$
8	NSA Total (if applicable)	\$
9	Hardware Total as per article 1.5 of Annex A-1 of SA (if applicable)	\$
10	<b>Total Evaluated (Bid) Price* (1 + 2 + 3 + 4 + 5 + 6+ 7+8+9):</b>	<b>\$\$</b>
11	Applicable Tax(es):	\$
12	Total Estimated Cost (10+11):	\$

**Table 10 – Bidder's Authorized Representative**

<b>Table 6 – Bidder's Authorized Representative</b>		
1.	Bidder's Authorized Representative for the Bid and the Contract	
	Name:	Telephone:
		E-Mail:
		Other:

\*At contract award, "Total Evaluated (Bid) Price" becomes "Contract Price".

Product Category:   5  

**Table 1 – Product (Only applicable for Scenario A procurements)**

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
#	GoCUID	Description of Product (optional field)	Qty	Supplier Part Number	Firm Price** \$	Extended Total [Qty x Price] \$
1	MADME	Monitor Arms/ Bras de moniteur	12			
2						
Non-SA (NSA) products forming part of this requirement not to exceed 20% of the firm quantity from the products above in this table.						
The Supplier signs, and certifies that all the NSA products offered will conform to all specifications and meet the testing requirements detailed at Annex D.						
	NON SA product(s)	Description of Non SA	QTY			
**Must not exceed ceiling unit price in SA. Add more rows if necessary.				Product Total		\$

**Table 2 - Delivery**

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
Product Item # from Table 1	Location	Desired Date (Y/M/D)	Desired Time: Normal Business Hours (Normal) Or Outside Normal Business Hours (Outside)*	Supplier will deliver on the date and at the time below*	Firm Price \$	Extended Total (Qty x Firm Unit Price) \$
1	NRC, Building U-72 500 Aileron Private Ottawa, Ontario K1V 2B1	2017/11/12	[Normal]	(Y) (M) (D)		
*If no dates and times are added by the Supplier, the Supplier agrees to deliver on the Desired Date and Time. [Normal Business Hours 8:00 – 17:00, as per SA, Annex A, article 5] Add more rows if necessary.				Delivery Total:		\$

**Table 3 – Installation**

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
Product Item # from Table 1	Location	Desired Date (Y/M/D)	Desired Time: Normal Business Hours (Normal) Or Outside Normal Business Hours (Outside)*	Supplier will install on the date and at the time below*	Firm Price \$	Extended Total (Qty x Firm Unit Price) \$
1	NRC, Building U-72 500 Aileron Private Ottawa, Ontario K1V 2B1	2017/11/12	[Normal] or [Outside Normal]	(Y) (M) (D)		
*If no dates and times are added by the Supplier, the Supplier agrees to install on the Desired Date and Time. [Normal Business Hours 8:00 – 17:00, as per SA, Annex A, article 5] Add more rows if necessary.				Installation Total:		\$

Product Category:   1B

**Table 1 – Product (Only applicable for Scenario A procurements)**

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
#	GoCUID	Description of Product (optional field)	Qty	Supplier Part Number	Firm Price** \$	Extended Total [Qty x Price] \$
1	WSxxPMLHRxxxxxxxxx2424	Panel Mounted / Monté sur cloison	6			
2	WSxxPMLHRxxxxxxxxx4824	Panel Mounted / Monté sur cloison	6			
<p>Non-SA (NSA) products forming part of this requirement not to exceed 20% of the firm quantity from the products above in this table.</p> <p>The Supplier signs, and certifies that all the NSA products offered will conform to all specifications and meet the testing requirements detailed at Annex D.</p>						
	NON SA product(s)	Description of Non SA	QTY			
				Product Total		\$
<p>**Must not exceed ceiling unit price in SA.</p> <p>Add more rows if necessary.</p>						

**Table 2 - Delivery**

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
Product Item # from Table 1	Location	Desired Date (Y/M/D)	Desired Time: Normal Business Hours (Normal) Or Outside Normal Business Hours (Outside)*	Supplier will deliver on the date and at the time below*	Firm Price \$	Extended Total (Qty x Firm Unit Price) \$
1	NRC, Building U-72 500 Aileron Private Ottawa, Ontario K1V 2B1	2017/11/12	[Normal]	(Y) (M) (D)		

*If no dates and times are added by the Supplier, the Supplier agrees to deliver on the Desired Date and Time. [Normal Business Hours 8:00 – 17:00, as per SA, Annex A, article 5] Add more rows if necessary.	Delivery Total:	\$
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**Table 3 – Installation**

Section A - IU REQUIREMENT				Section B – SUPPLIER'S BID		
Product Item # from Table 1	Location	Desired Date (Y/M/D)	Desired Time: Normal Business Hours (Normal) Or Outside Normal Business Hours (Outside)*	Supplier will install on the date and at the time below*	Firm Price \$	Extended Total (Qty x Firm Unit Price) \$
1	NRC, Building U-72 500 Aileron Private Ottawa, Ontario K1V 2B1	2017/11/12	[Normal] or [Outside Normal]	(Y) (M) (D)		
*If no dates and times are added by the Supplier, the Supplier agrees to install on the Desired Date and Time. [Normal Business Hours 8:00 – 17:00, as per SA, Annex A, article 5] Add more rows if necessary.				Installation Total:		\$

**Table 8 – Standard Finishes and Canada's Facilities to Accommodate the Delivery and Certifications**

<b>1.</b>	<b>Standard Finishes</b>	
1.1	IU is to consult the Supplier's Website identified in Part 6A of the SA to view the available finishes.  Within ten business days of the contract award, the Contracting Authority will provide the Contractor with a written notice of Canada's finish choices for each of the product(s) in Annex A.  The Contractor will deliver the products corresponding to Canada's choice of specific finishes(s). No additional charge will be applied to Canada.	
<b>2.</b>	<b>Canada's Facilities to Accommodate the Delivery</b>	
2.1	Loading Dock/Location	
A	Location	NRC, Building U-72 500 Aileron Private Ottawa, Ontario K1V 2B1
B	Dock	NRC, Building U-72 500 Aileron Private

		Ottawa, Ontario K1V 2B1
C	Lift	No
D	Door	Standard
2.2	Freight Elevator	Ground Floor
2.3	Other (specify, if any)	
<b>Continuance of Certifications</b>		
The Bidder certifies that by submitting a bid in response to the RFB, the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, continues to comply with all of the certifications listed in Parts 6A and 6B of the Bidder's SA for Work Spaces, as follows:		
3.1	Integrity Provisions	
3.2	Federal Contractor's Program for Employment Equity	
3.4	Product Conformance	
3.5	Price Certification (In accordance with the SA, Part 6B)	

**Table 9 - Bid Evaluation and Contract Total (Canada may complete if not completed by the Bidder)**

1	Product Total (Table 1) or Annex C Total	\$
2	<b>Optional</b> Product Total (Table 4)	\$
3	Delivery Total (Table 2)	\$
4	<b>Optional</b> Delivery Total (Table 5)	\$
5	Installation Total (Table 3)	\$
6	<b>Optional</b> Installation Total (Table 6)	\$
7	Product Related Services Total (if applicable) (Table 7)	\$
8	NSA Total (if applicable)	\$
9	Hardware Total as per article 1.5 of Annex A-1 of SA (if applicable)	\$
10	<b>Total Evaluated (Bid) Price* (1 + 2 + 3 + 4 + 5 + 6+ 7+8+9):</b>	<b>\$\$</b>
11	Applicable Tax(es):	\$
12	Total Estimated Cost (10+11):	\$

**Table 10 – Bidder's Authorized Representative**

<b>Table 6 – Bidder's Authorized Representative</b>		
1.	Bidder's Authorized Representative for the Bid and the Contract	
	Name:	Telephone:
		E-Mail:
		Other:

\*At contract award, "Total Evaluated (Bid) Price" becomes "Contract Price".



**ANNEX B  
SECURITY REQUIREMENTS**

B. The security requirements set out in the attached Security Requirements Check List (SRCL) and in the terms below apply to and form part of the Contract.

See attached SRCLform

## ANNEX C FLOOR PLAN(s)

### Instructions to Bidder(s):

For scenario B procurements Bidders must provide:

- a) completed floor plan(s) with proposed SA approved products;
- b) a product listing of proposed SA approved products offered at floor plan(s).  
As a minimum the product listing must include the following information:
  - Supplier part numbers;
  - brief product descriptions;
  - quantities;
  - firm unit prices.

By submitting a bid, the Bidder certifies that their submission includes all components and quantities required and identified in the floor plan(s) in accordance with the product descriptions, the product configurations and panel matrices or workstation layouts stipulated at Annex C.

**\*At contract award, "By submitting a bid, the Bidder..." becomes "The Contractor..."**

### 1) Floor Plan(s) in PDF or AutoCAD version

*As a minimum, the IU must identify the following information on their approved floor plan provided as part of this RFB:*

- a) *All and only the required furniture (sizes and dimensions must be accurate in the plan);*
- b) *Furniture location and critical dimensions required to ensure conformance with all applicable codes, standards and regulations;*
- c) *Workstations and room numbers;*
- d) *Indications of Panel Matrices (which panels are powered, non-powered, panels with glazed elements, etc) or include Workstation Layouts (in the form of Typical Data Sheets or 3 Dimensional drawings) for every station variances.*
- e) *Indications of power feed locations;*
- f) *Electrical outlet locations within workstations;*
- g) *Telecommunications/data symbols;*
- h) *Lighting components requirements;*
- i) *Clearly indicate which work surfaces are freestanding height adjustable and which surfaces are panel hung.*

### 2) Product Descriptions

*As a minimum, the IU must identify the following product information below for requirements containing panel matrices or on the Workstation Layouts:*

- a. *All required panel heights: Base Height, Work Surface Privacy Add-on Height, Seated Privacy Add-on Height;*
- b. *When power is required, whether the power is located below or above work surface height; should a grouping of workstation types include shared panels and one side is identified as powered and the other side is non powered, those panels affected must be powered.*
- c. *Type of power feed (either base feed or power poles).*

**3) Product Configurations**

#	GoCUID	Description of Product
1	SAPBNPxxxFAxxxFAxxxFAxxxFA48  Qty 8	Seated Privacy Height Add On / Panneau additionnel pour intimité en position assise Powered outlet(s) Below Work Surface / Prise(s) électrique(s) au dessous de la surface de travail - Fabric / tissu
2		
3		

**4) Workstation Layout(s) or Panel Matrix****b. Workstation Layout(s)**

1. Workstation Layouts replace the Panel Matrix and must include the following information listed in item #1- \_Floor Plan(s) in PDF or AutoCAD version, instructions *a, e, f, g, h, and i.*
2. *The floor plan takes precedent over any discrepancies.*
3. *When two or more typical workstation types share a common panel spine, the finishes of the interior side of the workstation panel as outlined in the Typical Data Sheets must be followed and **NO PANELS SHALL BE DOUBLED.** Where no workstation exists adjacent to typical workstation, refer to Data Sheet for finish.*
4. *Should one typical workstation identify power and the other does not – power will be required for both.*

**5. Product and Pricing**

1	Product Total	INSERT \$ AT ANNEX A, ARTICLE 3, TABLE 9, LINE 1 FOR THE RESPECTIVE CATEGORY
2	Delivery Total	INSERT \$ AT ANNEX A, ARTICLE 3, TABLE 9, LINE 3 FOR THE RESPECTIVE CATEGORY
3	Installation Total	INSERT \$ AT ANNEX A, ARTICLE 3, TABLE 9, LINE 5 FOR THE RESPECTIVE CATEGORY



Government of Canada / Gouvernement du Canada

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**SECURITY REQUIREMENTS CHECK LIST (SRCL)  
LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)**

<b>PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE</b>		
1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine	2. Branch or Directorate / Direction générale ou Direction	
3. a) Subcontract Number / Numéro du contrat de sous-traitance	3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant	
4. Brief Description of Work / Brève description du travail U-72, Supply and Install Furniture		
5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?	<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui	
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?	<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui	
6. Indicate the type of access required / Indiquer le type d'accès requis		
6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)	<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui	
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.	<input type="checkbox"/> No / Non <input checked="" type="checkbox"/> Yes / Oui	
6. c) Is this a commercial courier or delivery requirement with no overnight storage? S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit?	<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui	
7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès		
Canada <input checked="" type="checkbox"/>	NATO / OTAN <input type="checkbox"/>	
Foreign / Étranger <input type="checkbox"/>		
7. b) Release restrictions / Restrictions relatives à la diffusion		
No release restrictions / Aucune restriction relative à la diffusion <input checked="" type="checkbox"/>	All NATO countries / Tous les pays de l'OTAN <input type="checkbox"/>	
Not releasable / À ne pas diffuser <input type="checkbox"/>		
Restricted to: / Limité à: <input type="checkbox"/>	Restricted to: / Limité à: <input type="checkbox"/>	
Specify country(ies): / Préciser le(s) pays:	Specify country(ies): / Préciser le(s) pays:	
7. c) Level of information / Niveau d'information		
PROTECTED A / PROTÉGÉ A <input type="checkbox"/>	NATO UNCLASSIFIED / NATO NON CLASSIFIÉ <input type="checkbox"/>	PROTECTED A / PROTÉGÉ A <input type="checkbox"/>
PROTECTED B / PROTÉGÉ B <input type="checkbox"/>	NATO RESTRICTED / NATO DIFFUSION RESTREINTE <input type="checkbox"/>	PROTECTED B / PROTÉGÉ B <input type="checkbox"/>
PROTECTED C / PROTÉGÉ C <input type="checkbox"/>	NATO CONFIDENTIAL / NATO CONFIDENTIEL <input type="checkbox"/>	PROTECTED C / PROTÉGÉ C <input type="checkbox"/>
CONFIDENTIAL / CONFIDENTIEL <input type="checkbox"/>	NATO SECRET / NATO SECRET <input type="checkbox"/>	CONFIDENTIAL / CONFIDENTIEL <input type="checkbox"/>
SECRET / SECRET <input type="checkbox"/>	COSMIC TOP SECRET / COSMIC TRÈS SECRET <input type="checkbox"/>	SECRET / SECRET <input type="checkbox"/>
TOP SECRET / TRÈS SECRET <input type="checkbox"/>		TOP SECRET / TRÈS SECRET <input type="checkbox"/>
TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) <input type="checkbox"/>		TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) <input type="checkbox"/>



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**PART A (continued) / PARTIE A (suite)**

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?  
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS?  No / Non  Yes / Oui

If Yes, indicate the level of sensitivity:  
Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets?  
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate?  No / Non  Yes / Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :  
Document Number / Numéro du document :

**PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)**

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

<input type="checkbox"/> RELIABILITY STATUS COTE DE FIABILITÉ	<input type="checkbox"/> CONFIDENTIAL CONFIDENTIEL	<input type="checkbox"/> SECRET SECRET	<input type="checkbox"/> TOP SECRET TRÈS SECRET
<input type="checkbox"/> TOP SECRET-SIGINT TRÈS SECRET - SIGINT	<input type="checkbox"/> NATO CONFIDENTIAL NATO CONFIDENTIEL	<input type="checkbox"/> NATO SECRET NATO SECRET	<input type="checkbox"/> COSMIC TOP SECRET COSMIC TRÈS SECRET
<input type="checkbox"/> SITE ACCESS ACCÈS AUX EMPLACEMENTS			

Special comments:  
Commentaires spéciaux : \_\_\_\_\_

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.  
REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work?  
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail?  No / Non  Yes / Oui

If Yes, will unscreened personnel be escorted?  
Dans l'affirmative, le personnel en question sera-t-il escorté?  No / Non  Yes / Oui

**PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)**

**INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS**

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?  
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS?  No / Non  Yes / Oui

11. b) Will the supplier be required to safeguard COMSEC information or assets?  
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC?  No / Non  Yes / Oui

**PRODUCTION**

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?  
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ?  No / Non  Yes / Oui

**INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)**

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?  
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS?  No / Non  Yes / Oui

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?  
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale?  No / Non  Yes / Oui



**PART C - (continued) / PARTIE C - (suite)**

For users completing the form **manually** use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.  
Les utilisateurs qui remplissent le formulaire **manuellement** doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form **online** (via the Internet), the summary chart is automatically populated by your responses to previous questions.  
Dans le cas des utilisateurs qui remplissent le formulaire **en ligne** (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

**SUMMARY CHART / TABLEAU RÉCAPITULATIF**

Category / Catégorie	PROTECTED / PROTÉGÉ			CLASSIFIED / CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL	SECRET	TOP SECRET	NATO RESTRICTED	NATO CONFIDENTIAL	NATO SECRET	COSMIC TOP SECRET COSMIC TRÈS SECRET	PROTECTED / PROTÉGÉ			CONFIDENTIAL	SECRET	TOP SECRET
				CONFIDENTIEL		TRÈS SECRET	NATO DIFFUSION RESTREINTE	NATO CONFIDENTIEL			A	B	C	CONFIDENTIEL		TRÈS SECRET
Information / Assets / Renseignements / Biens / Production																
IT Media / Support TI																
IT Link / Lien électronique																

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?  
La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?  No / Non  Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".  
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?  
La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?  No / Non  Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).  
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquez qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).



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**PART D - AUTHORIZATION / PARTIE D - AUTORISATION**

**13. Organization Project Authority / Chargé de projet de l'organisme**

Name (print) - Nom (en lettres moulées) Bruno Vallieres	Title - Titre Engineering Services Manager	Signature 
Telephone No. - N° de téléphone 613-991-5586	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel bruno.vallieres@nrc-cnrc.gc.ca
		Date Aug 30 <sup>th</sup> / 2017

**14. Organization Security Authority / Responsable de la sécurité de l'organisme**

Name (print) - Nom (en lettres moulées) Richard Bramucci	Title - Titre Analyst, Security in Contracting	Signature 
Telephone No. - N° de téléphone (613) 991-1093	Facsimile No. - N° de télécopieur (613) 990-0946	E-mail address - Adresse courriel richard.bramucci@nrc-cnrc.gc.ca
		Date AUG 31 2017

15. Are there additional instructions (e.g. Security Guide, Security Classification Guide) attached?  
Des instructions supplémentaires (p. ex. Guide de sécurité, Guide de classification de la sécurité) sont-elles jointes?

No / Non     Yes / Oui

**16. Procurement Officer / Agent d'approvisionnement**

Name (print) - Nom (en lettres moulées) Steve Cassidy	Title - Titre Senior Contracting Officer	Signature 
Telephone No. - N° de téléphone 613-993-0857	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel Steve.Cassidy@NRC.gc.ca
		Date Sept 21, 2017

**17. Contracting Security Authority / Autorité contractante en matière de sécurité**

Name (print) - Nom (en lettres moulées)	Title - Titre	Signature
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel
		Date





**Specifications:**

<b><u>DIVISION</u></b>	<b><u>SECTION</u></b>	<b><u>NO. OF PAGES</u></b>
Division 00	Section 00 01 10 - Table of Contents .....	1
	Section 00 10 00 - General Instructions .....	13
	Section 00 15 45 - General and Fire Safety Requirements.....	6
Division 12	Section 12 50 00 - Furniture .....	6
	Section 12 59 13 - Panel Hung Component System Furniture.....	10

**END**

**1. SCOPE OF WORK**

- .1 Work under this contract covers the supply and installation of furniture in the Council's Building U-72 of the National Research Council.

**2. DRAWINGS**

- .1 The following drawings illustrate the work and form part of the contract documents:
  - .1 FURNITURE FLOOR PLAN AND DETAILS – 5127-FURN-A01

**3. COMPLETION**

- .1 Complete all work within eight (8) weeks after receipt of notification of acceptance of tender.

**4. GENERAL**

- .1 The word "provide" in this Specification means to supply and install.
- .2 Provide items mentioned in either the drawings or the specification.

**5. SPECIFIED ACCEPTABLE & ALTERNATIVE EQUIPMENT & MATERIALS**

- .1 Materials and equipment scheduled and/or specified on the drawings or in the specifications have been selected to establish a performance and quality standard. In most cases, acceptable manufacturers are stated for any material or equipment specified by manufacturer's name and model number. Contractors may base their tender price on materials and equipment supplied by any of the manufacturers' names as acceptable for the particular material or equipment.
- .2 In addition to the manufacturers specified or named as acceptable, you may propose alternative manufacturers of materials or equipment to the Departmental Representative for acceptance. For a product to be considered as an alternative product substitute, make a written application to the Departmental Representative during the tender period, not later than ten (10) working days before tender closing.
- .3 Certify in writing that the alternative meets all requirements of the specified material or equipment. In addition, it shall be understood that all costs required by or as a result of acceptance or proposed alternatives, will be borne by the contractor.
- .4 Approval of alternatives will be signified by issue of an Addendum to the Tender Documents.
- .5 Any alternative manufacturers or materials submitted which are incomplete and cannot be evaluated, or are later than ten (10) working days before tender closing date or after the tender period, will not be considered.

**6. MINIMUM STANDARDS**

- .1 Conform to or exceed minimum acceptable standards of the various applicable federal, provincial and municipal codes such as The National Building Code, The National Fire Code, Canadian Plumbing Code, Canadian Electrical Code, Canadian Code for Construction Safety and the Provincial Construction Safety Act.
- .2 Work to conform to referenced standards and codes as reaffirmed or revised to date of specification.

**7. WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS)**

- .1 The general contractor shall comply with Federal and Provincial legislation regarding the WHMIS. The contractor's responsibilities include, but are not limited to the following:
  - .1 To ensure that any controlled product brought on site by the contractor or sub-contractor is labeled;
  - .2 To make available to the workers and the Departmental Representative, Material Safety Data Sheets (MSDS) for these controlled products;
  - .3 To train own workers about WHMIS, and about the controlled products that they use on site;
  - .4 To inform other contractors, sub-contractors, the Departmental Representative, authorized visitors and outside inspection agency personnel about the presence and use of such products on the site.
  - .5 The site foreman or superintendent must be able to demonstrate, to the satisfaction of the Departmental Representative, that he/she has had WHMIS training and is knowledgeable in its requirements. The Departmental Representative can require replacement of this person if this condition or implementation of WHMIS is not satisfactory.

**8. REQUIREMENTS OF BILL 208, SECTION 18(a)**

Under the requirements of Bill 208 of the Ontario Ministry of Labour Occupational Health & Safety Act, the following designated substances may be encountered while performing the work described in these contract documents:

- .1 Acrylonitrile, Isocyanates, Arsenic, Lead, Asbestos, Mercury, Benzene, Silica, Vinyl Chloride, and Ethylene Oxide
  - .1 It is the responsibility of the general contractor to ensure that each prospective subcontractor for this project has received a copy of the above list.

**9. COST BREAKDOWN**

- .1 Submit, for approval by the Departmental Representative, a cost breakdown of tender 72 hours after the contract is awarded.
- .2 Use the approved cost breakdown as the basis for submitting all claims.
- .3 Request Departmental Representative's verbal approval to amount of claim prior to preparing and submitting the claim in its final form.

**10. SUB-TRADES**

- .1 Submit no later than 72 hours after tender closing, a complete list of sub trades for the Departmental Representative's review.

**11. PERSONNEL SECURITY AND IDENTIFICATION**

- .1 All persons employed by the contractor, or by any subcontractor and present on the site must be security cleared in accordance with the requirements of the Section entitled Special Instructions to Tenderers.
- .2 All such persons must wear and keep visible identification badges as issued by the Security Office of NRC.

**12. WORKING HOURS AND SECURITY**

- .1 Normal working hours on the NRC property are from 8:00 a.m. until 4:30 p.m., Monday to Friday inclusive, except statutory holidays.
- .2 At all other times, special written passes are required for access to the building site.
- .3 Before scheduling any work outside normal working hours, obtain permission from the Departmental Representative to perform the specific tasks.
- .4 An escort may be required whenever working outside normal hours. Contractor to bear the associated costs.

**13. SCHEDULE**

- .1 The contractor shall prepare a detailed schedule, fixing the date for commencement and completion of the various parts of the work and update the said schedule. Such schedule shall be made available to the Departmental Representative not later than two weeks after the award of the contract and prior to commencement of any work on site.
- .2 Notify Departmental Representative in writing of any changes in the schedule.
- .3 Five (5) days before the scheduled completion date, arrange to do an interim inspection with the Departmental Representative.

**14. PROJECT MEETINGS**

- .1 Hold regular project meetings at times and locations approved by the Departmental Representative.
- .2 Notify all parties concerned of meetings to ensure proper coordination of work.
- .3 Departmental Representative will set times for project meetings and assume responsibility for recording and distributing minutes.

**15. SHOP DRAWINGS**

- .1 Submit to Departmental Representative for review, shop drawings, product data and samples specified within two (2) weeks after contract award.
- .2 Submit to Departmental Representative for review a complete list of all shop drawings, product data and samples specified and written confirmation of corresponding delivery dates within one (1) week after shop drawings, product data and samples approval date. This list shall be updated on a weekly basis and any changes to the list shall be immediately notified in writing to the Departmental Representative.
- .3 Review shop drawings, data sheets and samples prior to submission.
- .4 Submit electronic copy of all shop drawings and product data and samples for review, unless otherwise specified.
- .5 Review of shop drawings and product data by the Departmental Representative does not relieve the contractor of the responsibility for errors and omissions and for the conformity with contract documents.

**16. SAMPLES AND MOCK-UPS**

- .1 Submit samples in sizes and quantities as specified.
- .2 Where colour, pattern or texture is criterion, submit full range of samples.
- .3 Construct field samples and mock-ups at locations acceptable to Departmental Representative.
- .4 Reviewed samples or mock-ups will become standards of workmanship and material against which installed work will be checked on the project.

**17. MATERIALS AND WORKMANSHIP**

- .1 Install only new materials on this project unless specifically noted otherwise.
- .2 Only first class workmanship will be accepted, not only with regard to safety, efficiency, durability, but also with regard to neatness of detail and performance.

**18. WORK & MATERIALS SUPPLIED BY OWNER**

- .1 Work and materials not included in this contract are described on drawings and in this specification.
- .2 Deliver to a storage place, as directed by the Departmental Representative, all materials returned to the Owner.
- .3 Unless otherwise specified, accept owner-supplied materials at their storage location and provide all transportation as required.
- .4 General Contractor's duties:

- .1 Unload at site.
- .2 Promptly inspect products and report damaged or defective items.
- .3 Give written notification to the Departmental Representative for items accepted in good order.
- .4 Handle at site, including uncrating and storage.
- .5 Repair or replace items damaged on site.
- .6 Install, connect finished products as specified.

**19. SITE ACCESS**

- .1 Make prior arrangements with the Departmental Representative before starting work or moving materials and equipment on site.
- .2 Obtain approval of Departmental Representative for regular means of access during the construction period.
- .3 Obtain approval of Departmental Representative before temporarily suspending operations on site; before returning to the site and before leaving the site at the end of the job.
- .4 Provide and maintain access to site.
- .5 Build and maintain temporary roads and provide snow removal during period of work.
- .6 Provide snow clearing and removal as required during the contract period.
- .7 Make good any damage and clean up dirt, debris, etc., resulting from contractor's use of existing roads.

**20. USE OF SITE**

- .1 Restrict operations on the site to the areas approved by the Departmental Representative
- .2 Locate all temporary structures, equipment, storage, etc., to the designated areas.
- .3 Restrict parking to the designated areas.

**21. ACCEPTANCE OF SITE**

- .1 Inspect the site before commencing work, review any unexpected conditions with the Departmental Representative.
- .2 Commencement of work will imply acceptance of existing conditions.

**22. SITE OFFICE & TELEPHONE**

- .1 Contractor to erect a temporary site office at his own expense.
- .2 Install and maintain a telephone, if necessary.
- .3 Use of NRC phones is not permitted unless in the case of an emergency.

**23. SANITARY FACILITIES**

- .1 Obtain permission from the Departmental Representative to use the existing washroom facilities in the building.

**24. TEMPORARY SERVICES**

- .1 A source of temporary power will be made available in the area. Bear all costs to make connections to the power source and perform distribution on site.
- .2 Provide all load centres, breakers, conduit, wiring, disconnects, extension cords, transformers, as required from the source of power.
- .3 Power is to be used only for power tools, lighting, controls, motors, and not for space heating.
- .4 A source of temporary water will be made available if required.
- .5 Bear all costs associated with distributing the water to the required locations.
- .6 Comply with NRC requirements when connecting to existing systems in accordance with the articles entitled "Co-operation" and "Service Interruptions" of this section.

**25. DOCUMENTS REQUIRED AT WORK SITE**

- .1 The contractor shall keep on the site, one (1) up-to-date copy of all contract documents, including specifications, drawings, addenda, shop drawings, change notices, schedule and any reports or bulletins pertaining to the work, in good order, available to the Departmental Representative and to his / her representatives at all times.
- .2 At least one (1) copy of specifications and drawings shall be marked by the contractor to show all work "As Built" and shall be provided to the Departmental Representative with the Application for Payment and for the Final Certificate of Completion.

**26. CO-OPERATION**

- .1 Co-operate with NRC staff in order to keep disruption of normal research work to an absolute minimum.
- .2 Work out in advance, a schedule for all work which might disrupt normal work in the building.
- .3 Have schedule approved by the Departmental Representative.
- .4 Notify the Departmental Representative in writing, 72 hours prior to any intended interruption of facilities, areas, corridors, mechanical or electrical services and obtain requisite permission.

**27. PROTECTION AND WARNING NOTICES**

- .1 Provide all materials required to protect existing equipment.

- .2 Erect dust barriers to prevent dust and debris from spreading through the building.
- .3 Place dust protection in the form of cover sheets over equipment and furniture and tape these sheets to floors, to ensure no dust infiltration.
- .4 Repair or replace any and all damage to Owner's property caused during construction, at no cost to the Owner and to the satisfaction of the Departmental Representative.
- .5 Protect the buildings, roads, lawns, services, etc. from damage which might occur as a result of this work.
- .6 Plan and co-ordinate the work to protect the buildings from the leakage of water, dust, etc.
- .7 Ensure that all doors, windows, etc., that could allow transfer of dust, noise, fumes, etc., to other areas of the building are kept closed.
- .8 Be responsible for security of all areas affected by the work under the Contract until acceptance by NRC. Take all necessary precautions to prevent entry to the work area by unauthorized persons and guard against theft, fire and damage by any cause. Secure working area at the end of each day's work and be responsible for same.
- .9 Provide and maintain adequate safety barricades around the work sites to protect NRC personnel and the public from injury during the construction.
- .10 Post warnings, in all instances where possible injury could occur such as Work Overhead, Hard Hat Areas, etc. or as required by the Departmental Representative.
- .11 Provide temporary protective enclosures over building entrances and exits to protect pedestrians. All enclosures to be structurally sound against weather and falling debris.

**28. BILINGUALISM**

- .1 Ensure that all signs, notices, etc. are posted in both official languages.
- .2 Ensure that all identification of services called for by under this contract are bilingual.

**29. LAYOUT OF WORK**

- .1 Location of equipment, fixtures, outlets and openings indicated on drawings or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with the manufacturer's recommendations for safety, access and maintenance.
- .3 Employ competent person to lay out work in accordance with the contract documents.

**30. DISCREPANCIES & INTERFERENCES**

- .1 Prior to the start of the work, examine drawings and specifications. Report at once to the Departmental Representative, any defects, discrepancies, omissions or interferences affecting the work.



- .2 Contractor to immediately inform the Departmental Representative in writing, of any discrepancies between the plans and the physical conditions so the Departmental Representative may promptly verify same.
- .3 Any work done after such a discovery, until authorized, is at the contractor's risk.
- .4 Where minor interferences as determined by the Departmental Representative are encountered on the job and they have not been pointed out on the original tender or on the plans and specifications, provide offsets, bends or reroute the services to suit job conditions at no extra cost.
- .5 Arrange all work so as not to interfere in any way with other work being carried out.

**31. MANUFACTURER'S INSTRUCTIONS**

- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
- .2 Notify the Departmental Representative in writing of any conflict between these specifications and manufacturer's instruction. Departmental Representative will designate which document is to be followed.

**32. TEMPORARY HEATING AND VENTILATING**

- .1 Bear the costs of temporary heat and ventilation during construction including costs of installation, fuel, operation, maintenance, and removal of equipment.
- .2 Use of direct-fired heaters discharging waste products into the work areas will not be permitted unless prior approval is given by the Departmental Representative.
- .3 Furnish and install temporary heat and ventilation in enclosed areas as required to:
  - .1 Facilitate progress of work.
  - .2 Protect work and products against dampness and cold.
  - .3 Reduce moisture condensation on surfaces to an acceptable level.
  - .4 Provide ambient temperature and humidity levels for storage, installation and curing of materials.
  - .5 Provide adequate ventilation to meet health regulations for a safe working environment.
- .4 Maintain minimum temperature of 10 °C (50 °F) or higher where specified as soon as finishing work is commenced and maintain until acceptance by the Departmental Representative. Maintain ambient temperature and humidity levels as required for comfort of NRC personnel.
- .5 Prevent hazardous or unhealthy accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction including also, storage areas and sanitary facilities.
  - .1 Dispose of exhaust materials in a manner that will not result in a harmful or unhealthy exposure to persons.

- .6 Maintain strict supervision of operation of temporary heating and ventilating equipment.
  - .1 Enforce conformance with applicable codes and standards.
  - .2 Comply with instructions of the Departmental Representative including provision of full-time watchman services when directed.
  - .3 Enforce safe practices.
  - .4 Vent direct-fired combustion units to outside.
- .7 Submit tenders assuming existing or new equipment and systems will not be used for temporary heating and ventilating.
- .8 After award of contract, Departmental Representative may permit use of the permanent system providing agreement can be reached on:
  - .1 Conditions of use, special equipment, protection, maintenance, and replacement of filters.
  - .2 Methods of ensuring that heating medium will not be wasted and in the case of steam, agreement on what is to be done with the condensate.
  - .3 Saving on contract price.
  - .4 Provisions relating to guarantees on equipment.

**33. CONNECTIONS TO AND INTERRUPTIONS TO EXISTING SERVICES**

- .1 Where work involves breaking into or connecting to existing services, carry out work at times and in the manner agreed to by the Departmental Representative and by authorities having jurisdiction, with minimum disruption to NRC Personnel and vehicular traffic and minimum service interruption. Do not operate any NRC equipment or plant.
- .2 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.
- .3 Submit a schedule to and obtain approval from the Departmental Representative for any shut-down or closure of active service or facility; allow minimum 72 hours notice. Adhere to approved schedule and provide notice to the Departmental Representative.
- .4 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .5 Provide detours, bridges, alternate feeds, etc., as required to minimize disruptions.
- .6 Protect existing services as required and immediately make repairs if damage occurs.
- .7 Remove any abandoned service lines as indicated on the contract documents and as approved by the Departmental Representative; cap or otherwise seal lines at cut-off points. Record and provide a copy to the Departmental Representative of locations of maintained, re-routed and abandoned service lines.

**34. CUTTING AND PATCHING**

- .1 Cut existing surfaces as required to accommodate new work.

- .2 Remove all items as shown or specified.
- .3 Patch and make good with identical materials, the surfaces that have been disturbed, cut or damaged, to the satisfaction of the Departmental Representative.
- .4 Where new pipes pass through existing construction, core drill an opening. Size openings to leave 12mm (1/2") clearance around the pipes or pipe insulation. Do not drill or cut any surface without the approval of the Departmental Representative.
- .5 Obtain written approval of the Departmental Representative before cutting openings through existing or new structural members.
- .6 Seal all openings where cables, conduits or pipes pass through walls with an acoustic sealant conforming to CAN/CGSB-19.21-M87.
- .7 Where cables, conduits and pipes pass through fire rated walls and floors, pack space between with compressed glass fibres and seal with fire stop caulking in accordance with CAN/CGSB-19.13-M87 AND NBC 3.1.7.

**35. FASTENING DEVICES**

- .1 Do not use explosive actuated tools, without first obtaining permission from the Departmental Representative.
- .2 Comply with the requirements of CSA A-166 (Safety Code for Explosive Actuated Tools).
- .3 Do not use any kind of impact or percussion tool without first obtaining permission from the Departmental Representative.

**36. OVERLOADING**

- .1 Ensure that no part of the building or work is subjected to a load which will endanger safety or cause permanent deformation or structural damage.

**37. DRAINAGE**

- .1 Provide temporary drainage and pumping as required to keep excavations and site free of water.

**38. ENCLOSURE OF STRUCTURES**

- .1 Construct and maintain all temporary enclosures as required to protect foundations, sub-soil, concrete, masonry, etc., from frost penetration or damage.
- .2 Maintain in place until all chances of damage are over and proper curing has taken place.
- .3 Provide temporary weather tight enclosures for exterior openings until permanent sash and glazing and exterior doors are installed.

- .4 Provide lockable enclosures as required to maintain the security of NRC facilities and be responsible for the same.
- .5 Provide keys to NRC security personnel when required.
- .6 Lay out the work carefully and accurately and verify all dimensions and be responsible for them. Locate and preserve general reference points.
- .7 Throughout the course of construction, keep continuously acquainted with field conditions, and the work being developed by all trades involved in the project. Maintain an awareness of responsibility to avoid space conflict with other trades.
- .8 Conceal all services, piping, wiring, ductwork, etc., in floors, walls or ceilings except where indicated otherwise.

**39. STORAGE**

- .1 Provide storage as required to protect all tools, materials, etc., from damage or theft and be responsible for the same.
- .2 Do not store flammable or explosive materials on site without the authorization of the Departmental Representative.

**40. GENERAL REVIEW**

- .1 Periodic review of the contractor's work by the Departmental Representative does not relieve the contractor of the responsibility of making the work in accordance with contract documents. Contractor shall carry out his own quality control to ensure that the construction work is in accordance with contract documents.
- .2 Inform the Departmental Representative of any impediments to the installation and obtain his / her approval for actual location.

**41. INSPECTION OF BURIED OR CONCEALED SERVICES**

- .1 Prior to concealing any services that are installed, ensure that all inspection bodies concerned, including NRC, have inspected the work and have witnessed all tests. Failure to do so may result in exposing the services again at the contractor's expense.

**42. TESTING**

- .1 On completion, or as required by local authority inspectors and/or Departmental Representative during progress of work and before any services are covered up and flushing is complete, test all installations in the presence of the Departmental Representative.
- .2 Obtain and hand to the Departmental Representative all acceptance certificates or test reports from authority having jurisdiction. The project will be considered incomplete without the same.

**43. PARTIAL OCCUPANCY**

- .1 NRC may request partial occupancy of the facility if the contract extends beyond the expected completion date.
- .2 Do not restrict access to the building, routes, and services.
- .3 Do not encumber the site with materials or equipment.

**44. DISPOSAL OF WASTES**

- .1 Dispose of waste materials including volatiles, safely off NRC property. Refer to the section entitled "General and Fire Safety Requirements" included as part of this specification.

**45. CLEAN-UP DURING CONSTRUCTION**

- .1 On a daily basis, maintain project site and adjacent area of campus including roofs, free from debris and waste materials.
- .2 Provide on-site dump containers for collection of waste materials and rubbish.

**46. FINAL CLEAN-UP**

- .1 Upon completion do a final clean-up to the satisfaction of the Departmental Representative.
- .2 Clean all new surfaces, lights, existing surfaces affected by this work, replace filters, etc.
- .3 Clean all resilient flooring and prepare to receive protective finish. Protective finish applied by NRC

**47. WARRANTY AND RECTIFICATION OF DEFECTS IN WORK**

- .1 Refer to General Conditions "C", section GC32.
- .2 Ensure that all manufacturers' guarantees and warranties are issued in the name of the **General** Contractor and the National Research Council.

**48. MAINTENANCE MANUALS**

- .1 Provide two (2) bilingual copies of maintenance manuals or two English and two French maintenance manuals and one electronic copy of same immediately upon completion of the work and prior to release of holdbacks.
- .2 Manuals to be neatly bound in hard cover loose leaf binders.
- .3 Manuals to include operating and maintenance instructions, all guarantees and warranties, shop drawings, technical data, etc., for the material and apparatus supplied under this contract.

END OF SECTION

**1. GENERAL CONSTRUCTION SAFETY REQUIREMENTS**

- .1 The Contractor shall take all necessary steps to protect personnel (workers, visitors, general public, etc.) and property from any harm during the course of the contract.
- .2 The Contractor shall be solely responsible for the construction safety of both its employees and those of its sub-contractors at the work site, and for initiating, maintaining and supervising safety precautions, programs and procedures in connection with the performance of the work.
- .3 The Contractor shall comply with all Federal, Provincial and Municipal safety codes and regulations and the Occupational Health and Safety Act and the Workplace Safety and Insurance Board. In the event of any conflict between any provisions in legislation or codes, the most stringent provisions shall apply.
- .4 Periodic review of the contractor's work by the Departmental Representative, using the criteria of the contract documents, does not relieve the contractor of his safety responsibilities in carrying out the work in accordance with the contract documents. The contractor shall consult with the Departmental Representative to ensure that this responsibility is carried out.
- .5 The Contractor shall ensure that only competent personnel are permitted to work on site. Throughout the term of the contract, any person will be removed from the site who is not observing or complying with the safety requirements.
- .6 All equipment shall be in safe operating condition and appropriate to the task.
- .7 Following a project and site hazard assessment, the Contractor shall develop a Site Specific Safety Plan based on the following minimum requirements:
  - .1 Provide a safety board mounted in a visible location on the project site, with the following information included thereon:
    - .1 Notice of Project
    - .2 Site specific Safety Policy
    - .3 Copy of Ontario Health and Safety Act
    - .4 Building Schematic showing emergency exits
    - .5 Building emergency procedures
    - .6 Contact list for NRC, Contractor and all involved sub-contractors
    - .7 Any related MSDS sheets
    - .8 NRC Emergency phone number
- .8 The Contractor shall provide competent personnel to implement its safety program and those of any Health and Safety Act legislation applicable at this project location, and to ensure they are being complied with.
- .9 The Contractor shall provide safety orientation to all its employees as well as those of any subcontractors under its jurisdiction.

- .10 The Departmental Representative will monitor to ensure that safety requirements are met and that safety records are properly kept and maintained. Continued disregard for safety standards can cause the contract to be cancelled and the Contractor or sub-contractors removed from the site.
- .11 The Contractor will report to the Departmental Representative and jurisdictional authorities, any accident or incident involving Contractor or NRC personnel or the public and/or property arising from the Contractor's execution of the work.
- .12 If entry to a laboratory is required as part of the work of the Contractor, a safety orientation shall be provided to all his employees as well as those of any subcontractors regarding lab safety requirements and procedures, as provided by the Researcher or the Departmental Representative.

## **2. FIRE SAFETY REQUIREMENTS**

### **.1 Authorities**

- 1. The Fire Commissioner of Canada (FC) is the authority for fire safety at NRC.
- 2. For the purpose of this document, "Departmental Representative" will be deemed as the NRC person in charge of the project and who will enforce these Fire Safety Requirements.
- 3. Comply with the following standards as published by the Office of the Fire Commissioner of Canada:
  - a. Standard No. 301 - June 1982 "Standard for Construction Operations";
  - b. Standard No. 302 - June 1982 "Standard for Welding and Cutting".

### **.2 Smoking**

- .1 Smoking is prohibited inside all NRC buildings, as well as roof areas.
- .2 Obey all "NO SMOKING" signs on NRC premises.

### **.3 Hot Work**

- .1 Prior to commencement of any "Hot Work" involving welding, soldering, burning, heating, use of torches or salamanders or any open flame, obtain a Hot Work Permit from the Departmental Representative.
- .2 Prior to commencement of "Hot Work", review the area of hot work with the Departmental Representative to determine the level of fire safety precautions to be taken.

### **.4 Reporting Fires**

- .1 Know the exact location of the nearest Fire Alarm Pull Station and telephone, including the emergency phone number.
- .2 REPORT immediately, all fire incidents as follows:
  - .1 Activate nearest fire alarm pull station and;

.2 Telephone the following emergency phone number as appropriate:

**FROM AN NRC PHONE**                      **333**  
**FROM ANY OTHER PHONE**                **(613) 993-2411**

4. When reporting a fire by phone, give the location of fire, building number and be prepared to verify location.
5. The person activating fire alarm pull station must remain at a safe distance from the scene of the fire but readily available to provide information and direction to the Fire Department personnel.

**.5 Interior and Exterior Fire protection & Alarm Systems**

- .1 DO NOT OBSTRUCT OR SHUT OFF FIRE PROTECTION EQUIPMENT OR SYSTEMS, INCLUDING BUT NOT LIMITED TO FIRE ALARM SYSTEMS, SMOKE/HEAT DETECTORS, SPRINKLER SYSTEM, PULL STATIONS, EMERGENCY CALL BUTTONS AND PA SYSTEMS, WITHOUT AUTHORIZATION FROM THE DEPARTMENTAL REPRESENTATIVE.
- .2 WHEN ANY FIRE PROTECTION EQUIPMENT IS TEMPORARILY SHUT DOWN, ALTERNATIVE MEASURES AS PRESCRIBED BY THE DEPARTMENTAL REPRESENTATIVE SHALL BE TAKEN TO ENSURE THAT FIRE PROTECTION IS MAINTAINED.
- .3 DO NOT LEAVE FIRE PROTECTION OR ALARM SYSTEMS INACTIVE AT THE END OF A WORKING DAY WITHOUT NOTIFICATION AND AUTHORISATION FROM THE DEPARTMENTAL REPRESENTATIVE. THE DEPARTMENTAL REPRESENTATIVE WILL ADVISE THE (FPO) OF THE DETAILS OF ANY SUCH EVENT.
- .4 DO NOT USE FIRE HYDRANTS, STANDPIPES AND HOSE SYSTEMS FOR OTHER THAN FIRE FIGHTING PURPOSES UNLESS AUTHORISED BY DEPARTMENTAL REPRESENTATIVE.

**.6 Fire Extinguishers**

- .1 Provide a minimum of 1-20 lb. ABC Dry Chemical Fire Extinguisher at each hot work or open flame location.
- .2 Provide fire extinguishers for hot asphalt and roofing operations as follows:
  - a. Kettle area - 1-20 lb. ABC Dry Chemical;
  - b. Roof - 1-20 lb. ABC Dry Chemical at each open flame location.
- .3 Provide fire extinguishers equipped as below:
  - c. Pinned and sealed;
  - d. With a pressure gauge;
  - e. With an extinguisher tag signed by a fire extinguisher servicing company.



- .4 Carbon Dioxide (CO<sub>2</sub>) extinguishers will not be considered as substitutes for the above.

**.7 Roofing Operations**

**.1 Kettles:**

- .1 Arrange for the location of asphalt kettles and material storage with the Departmental Representative before moving on site. Do not locate kettles on any roof or structure and keep them at least 10m (30 feet) away from a building.
- .2 Equip kettles with 2 thermometers or gauges in good working order; a hand held and a kettle-mounted model.
- .3 Do not operate kettles at temperatures in excess of 232°C (450 °F).
- .4 Maintain continuous supervision while kettles are in operation and provide metal covers for the kettles to smother any flames in case of fire. Provide fire extinguishers as required in article 2.6.
- .5 Demonstrate container capacities to Departmental Representative prior to start of work.
- .6 Store materials a minimum of 6m (20 feet) from the kettle.

**.2 Mops:**

- .1 Use only glass fibre roofing mops.
- .2 Remove used mops from the roof site at the end of each working day.

**.3 Torch Applied Systems:**

- .1 DO NOT USE TORCHES NEXT TO WALLS.
- .2 DO NOT TORCH MEMBRANES TO EXPOSED WOOD OR CAVITY
- .3 Provide a Fire Watch as required by article 2.9 of this section.

- .4 Store all combustible roofing materials at least 3m (10 feet) away from any structure.

- .5 Keep compressed gas cylinders a minimum of 6m (20 feet) away from the kettle, protected from mechanical damage and secured in an upright position.

**.8 Welding / Grinding Operations**

- .1 Contractor to provide fire blankets, portable fume extraction devices, screens or similar equipment to prevent exposure to welding flash, or sparks from grinding.

**.9 Fire Watch**

- .1 Provide a fire watch for a minimum of one hour after the termination of any hot work operation.
- .2 For temporary heating, refer to General Instructions Section 00 010 00.
- .3 Equip fire watch personnel with fire extinguishers as required by article 2.6.

**.10 Obstruction of access/egress routes-roadways, halls, doors, or elevators**

- .1 Advise the Departmental Representative in advance of any work that would impede the response of Fire Department personnel and their apparatus. This includes violation of minimum overhead clearance, erection of barricades and the digging of trenches.
- .2 Building exit routes must not be obstructed in any way without special permission from the Departmental Representative, who will ensure that adequate alternative routes are maintained.
- .3 The Departmental Representative will advise the FPO of any obstruction that may warrant advanced planning and communication to ensure the safety of building occupants and the effectiveness of the Fire Department.

**.11 Rubbish and Waste Materials**

- .1 Keep rubbish and waste materials to a minimum and a minimum distance of 6m (20 feet) from any kettle or torches.
- .2 Do not burn rubbish on site.
- .3 Rubbish Containers
  - .1 Consult with the Departmental Representative to determine an acceptable safe location for any containers and the arrangement of chutes etc. prior to bringing the containers on site.
  - .2 Do not overfill the containers and keep area around the perimeter free and clear of any debris.
- .4 Storage
  - .1 Exercise extreme care when storing combustible waste materials in work areas. Ensure maximum possible cleanliness, ventilation and that all safety standards are adhered to when storing any combustible materials.
  - .2 Deposit greasy or oily rags or materials subject to spontaneous combustion in CSA or ULC approved receptacles and remove at the end of the work day or shift, or as directed.

**.12 Flammable Liquids**

- .1 The handling, storage and use of flammable liquids is governed by the current National Fire Code of Canada.
- .2 Flammable Liquids such as gasoline, kerosene and naphtha may be kept for ready use in quantities not exceeding 45 litres (10 imp gal), provided they are stored in approved safety cans bearing the ULC seal of approval and kept away from buildings, stockpiled combustible materials etc. Storage of quantities of flammable liquids exceeding 45 litres (10 imp gal) for work purposes, require the permission of the Departmental Representative.

- .3 Flammable liquids are not to be left on any roof areas after normal working hours.
- .4 Transfer of flammable liquids is prohibited within buildings.
- .5 Do not transfer flammable liquids in the vicinity of open flames or any type of heat producing device.
- .6 Do not use flammable liquids having a flash point below 38 °C (100 °F) such as naphtha or gasoline as solvents or cleaning agents.
- .7 Store flammable waste liquids for disposal in approved container located in a safe, ventilated area. Waste flammable liquids are to be removed from the site on a regular basis.
- .8 Where flammable liquids, such as lacquers or urethane are used, ensure proper ventilation and eliminate all sources of ignition. Inform the Departmental Representative prior to, and at the cessation of such work.

**3. Questions and/or clarifications**

- .1 Direct any questions or clarification on Fire or General Safety, in addition to the above requirements, to the Departmental Representative.

**END OF SECTION**

**Part 1            General**

**1.1            REFERENCES**

- .1    American National Standards Institute (ANSI).
  - .1    ANSI A208.1-2009, Standard for Particleboard.
- .2    American National Standards Institute / Business & Institutional Furniture Manufacturers Association
  - .1    ANSI/BIFMA X5.5-2014 Desk Products
- .3    Canadian General Standards Board (CGSB).
  - .1    CAN/CGSB-44.227-2008 Free-Standing Office Desks and Components
  - .2    CAN/CGSB-44.232-2002, Task Chairs for Office Work with Visual Display Terminals.
- .4    Underwriters' Laboratories Canada (ULC).
  - .1    CAN/ULC-S102-10, Standard Method of Test for Surfaces Burning Characteristics of Building Materials and Assemblies.
- .5    Underwriters' Laboratories (UL).
  - .1    UL 1286 2008, Standard for Office Furnishings.

**1.2            SUBMITTALS**

- .1    Submit product data in accordance with submittal procedures of Section 00 10 00 – General Instructions. Indicate conformance to specified reference standards and specifications.
- .2    Submit WHMIS MSDS - Material Safety Data Sheets in accordance with submittal procedures of Section 00 10 00 – General Instructions. WHMIS MSDS acceptable to Health Canada.
- .3    Supply part numbers of furniture to allow for replacement of worn or damaged furniture parts.
- .4    Supply instructions detailing procedures for repairing or replacing worn furniture parts.
- .5    Submit samples in accordance with submittal procedures of Section 00 10 00 – General Instructions.

**1.3            DELIVERY, HANDLING AND STORAGE**

- .1    Deliver, store and handle furniture in accordance with manufacturer's recommendations, using means and methods as necessary to prevent all damage, deterioration and loss.
- .2    Schedule delivery to minimize time of storage at site and to prevent overcrowding of construction areas. Do not deliver furniture until all painting, flooring and overhead work is complete and products are required for installation.

- .3 Deliver products in manufacturer's original sealed containers or wrappings, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
- .4 Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are free from damage and deterioration and are properly protected.

#### 1.4 **WARRANTY**

- .1 Provide written assurance that replacement parts will be available for minimum of 5years following discontinuation of product manufacture.
- .2 Ensure warranties provide for repair rather than replacement.

### Part 2 **Products**

#### 2.1 **FURNITURE PRODUCTS**

- .1 Specification is based on products as listed by a stated manufacture. Equivalent products with similar design and function must be submitted to the Departmental Representative for review, conformance to design concept and accommodation requirements according to Section 00 10 00 – General Instructions.
- .2 Provide all finished products specified in this section as the products of a single manufacturer with a minimum of ten (10) years experience in the manufacturing of office furniture.
- .3 Products shall conform to applicable requirements of CAN/CGSB-44.227, CAN/CGSB-44.232, and UL 1286.
- .4 Surface burning characteristics shall conform to requirements of National Building Code of Canada when tested in accordance with CAN/ULC-S102.

#### 2.2 **FIXED TABLE: FLC Control Room 118**

- .1 Dimensions:
  - .1 Width: 750mm
  - .2 Depth: 1220mm
- .2 Table Top:
  - .1 Table top construction: manufacturer's standard core with high-pressure wood grain laminate finish,
    - .1 Color selected by Departmental Representative from manufacturer's full range.
    - .2 Rectangular shape.
    - .3 Edge: Square
      - .1 3 mm thermoplastic polymer edge banding.
      - .2 Silver edge.
  - .2 Table Base:
    - .1 Metal T-Leg

- .3 Glides:
  - .1 VCT (tile)
  - .2 Finish:
    - .1 Metallic silver
- .4 Similar product to:
  - .1 Everywhere Table as manufactured by Herman Miller, or approved equal.

**2.3 DUAL MONITOR ARM – FCL Control Room 118 and Office 104 (workstations)**

- .1 Features:
  - .1 600 mm maximum monitor size.
  - .2 546 mm arm reach.
  - .3 240 mm arm height adjustment range. (450 mm maximum height)
  - .4 145° monitor tilt.
  - .5 360° monitor rotation with 180° limiter.
  - .6 Silver with black accents.
- .2 Similar product to:
  - .1 Flo Dual Monitor Support manufactured by Merman Miller, or approved equal.

**2.4 MOBILE PEDESTAL – FCL Control Room 118**

- .1 Dimensions:
  - .1 Width: 381mm
  - .2 Depth: 457mm
  - .3 Height: 630mm
- .2 Pull Type:
  - .1 Arc pull
- .3 Mobile:
  - .1 Concealed castors
- .4 Type of finish: laminate
  - .1 Color selected by Departmental Representative from manufacturer's full range.
- .5 Configuration:
  - .1 Box, box, file
  - .2 File drawer includes file hanging rails
  - .3 Full extension ball-bearing slides on drawers
  - .4 File drawers to accommodate front to back filing of letter size files
- .6 Casters: minimum of four carpet casters with locking device on the front casters
- .7 Lockable

- .8 Pedestal Cushion Top
  - .1 High: 25mm
  - .2 Depth: 457mm
  - .3 Fabric:
    - .1 Color selected by Departmental Representative from manufacturer's full range.

**2.5 TASK CHAIR - FLC Control Room 118 and Office 104, (workstations)**

- .1 Dimensions:
  - .1 Seat height: 419 - 527 mm.
  - .2 Overall height: 1016 - 1124 mm.
  - .3 Overall depth: 711 mm.
  - .4 Overall width: 711 mm.
  - .5 Seat width: 470 mm.
  - .6 Seat depth: 470 mm.
  - .7 Back height: 597 mm.
  - .8 Back width: 482 mm.
- .2 Features
  - .1 Frame: 22 mm solid steel frame, constructed for strength and durability.
  - .2 Seat: Upholstered with foam pad.
    - .1 Color selected by Departmental Representative from manufacturer's full range.
    - .2 Upholstery: Grade 2
  - .3 Back: Highback, mesh.
    - .1 Color selected by Departmental Representative from manufacturer's full range.
  - .4 Control Mechanism: Synchro tilt.
  - .5 Casters:
    - .1 65mm carpet casters:
      - .1 Office 104,
      - .2 Interview Room 105 & 106,
      - .3 Screening room 109
    - .2 65mm VCT (tile) casters:
      - .1 FCL Control Room 118.
  - .6 Frame finish: Polished Aluminum
  - .7 Chair Style:
    - .1 Arms: Conference Arm.
    - .2 Base: 5 prong base with casters, chrome finish.
    - .3 Arms: Fixed conference arms.
- .3 Similar product to:

- .1 Inertia Conference Highback Chair as manufactured by Allseating, or approved equal.

**2.6 KIOSK STOOL – Waiting Lounge 108 and Airport Terminal 115.**

.1 Dimensions:

- .1 Seat height: 508 - 711 mm.
- .2 Overall height: 1041 - 1245 mm.
- .3 Overall depth: 711 mm.
- .4 Overall width: 711 mm.
- .5 Seat width: 470 mm.
- .6 Seat depth: 457 mm.
- .7 Back height: 533 mm.
- .8 Back width: 482 mm.

.2 Features

- .1 Frame: 22 mm solid steel frame, constructed for strength and durability.
- .2 Seat: Upholstered with foam pad.
  - .1 Color selected by Departmental Representative from manufacturer's full range.
  - .2 Upholstery: Grade 2
- .3 Back: Highback, mesh.
  - .1 Color selected by Departmental Representative from manufacturer's full range.
- .4 Control Mechanism: 19 – basic.
- .5 Foot ring.
- .6 10 inch stool package.
- .7 Adjustable width brackets (knob).
- .8 Casters: 65mm carpet Casters Standard.
- .9 Frame finish: Polished Aluminum
- .10 Chair Style:
  - .1 Arms: 4 dimensional.
  - .2 Base: 5 prong base with casters, chrome finish.

.3 Similar product to:

- .1 Inertia Mesh Stool as manufactured by Allseating, or approved equal.

**2.7 PAPER STORAGE CABINET – Office 104 and FLC Control Room 118.**

.1 Dimensions:

- .1 Width: 900 mm.
- .2 Depth: 500 mm.
- .3 Height: 914 mm.



- .2 Laminate finish
  - .1 Color selected by Departmental Representative from manufacturer's full range
- .3 Edge:
  - .1 3 mm thermoplastic polymer edge banding.
  - .2 Color selected by Departmental Representative from manufacturer's full range.
- .2 Features:
  - .1 Doors
    - .1 Locks
    - .2 Hinges allow for 135° opening.
  - .2 One adjustable shelf
  - .3 Rear mounted grommets.
  - .4 Handles, cubic, anodized aluminum.
- .3 Similar product to:
  - .1 Quorum Bookcase Credenza as manufactured by Lacasse Office Furniture Solutions, or approved equal.

**END OF SECTION**

**PART 1 GENERAL**

**1.1 REFERENCES**

- .1 American National Standards Institute / Business & Institutional Furniture Manufacturers Association
  - .1 ANSI/BIFMA X5.5-2014 Desk Products
  - .2 ANSI/BIFMA X5.6-2010 Panel Systems
  - .3 ANSI/BIFMA X5.9-2012 Storage Units
  - .4 ANSI/BIFMA X7.1-2011 Standard for Formaldehyde & TVOC Emissions.
- .2 Canadian General Standards Board
  - .1 CAN/CGSB-44.227-2008 Free-Standing Office Desks and Components
  - .2 CAN/CGSB-44.229-2008 Inter-connecting Panel Systems and Supported Components.
- .3 Underwriters Laboratories
  - .1 UL 1286 Standard for Office Furnishings

**1.2 SCOPE OF WORK**

- .1 Include all panels and furniture components as indicated on the drawings.
- .2 Panel systems to include base and/or stackable units, separate and/or in combination to provide an architectural look and function as specified and as indicated.
- .3 Panels to be wired by installers for hook-up by others. Panels are to have desk height or base accessible data, telephone and power, as outlined on drawings. The raceway to be accessible from one or both sides.

**1.3 MANUFACTURERS & PRODUCTS**

- .1 The standard of performance for manufacturer's products and panels are as specified herein and as generally described by the latest edition of CAN/CGSB-44.229 for Inter-connecting Panel Systems and Supported Components. Free-Standing Components to meet CAN/CGSB-44.227.
- .2 Local representation with a local sales office and locally available factory trained and certified installers is a requirement.
- .3 Submit all design and associated design material including shop drawings for review in accordance with submittal requirements of Section 00 10 00.
- .4 Manufacturers are to demonstrate by mock-ups the ability to meet the technical specifications, stability without the support of furniture components and load bearing ability with stacking components without changing base units. Mock-up should also show a typical side-by-side workstation with and without work surfaces and accessories.

- .5 Demonstrations and mock-ups of product shall be carried out locally at supplier showroom, on site or other local installation.

#### 1.4 SUBMITTALS

- .1 Submit all necessary test reports, samples and other information required to demonstrate that the products to be installed meet all performance criteria specified herein. Systems certification to CAN/CGSB-44.229 Standard. Assembled panels to meet Flame Spread and Smoked Developed Index of the National Building Code of Canada.
- .2 Provide test reports from a recognized testing laboratory or agency.
- .3 Show complete plans of the work at 1:100 or a scale sufficient to indicate:
  - .1 Widths and heights of all panels.
  - .2 Locations of panel joins, vertical and horizontal.
  - .3 Finish of each side of each panel,
  - .4 Locations of all components,
  - .5 Heights of work surfaces and accessories indicated.
  - .6 Points of connection of powered panels to hard-wired circuits,
  - .7 Locations of all electrical and telephone and data outlets
- .4 Update shop drawings upon completion of installation to show completed (as-built) layout in AutoCAD format, as requested by Departmental Representative and in accordance with Department CAD Standards.

#### 1.5 WARRANTY

- .1 Provide a written warranty, signed and issued in the name of National Research Council of Canada by the manufacturer stating that the post and panel demountable partitions system is guaranteed against defects in materials and workmanship of the systems as a whole or of any component for a period of five (5) years and against obsolescence for a period of ten (10) years from the date of Substantial Completion.
- .2 Replacement of defective material to be provided at no cost for parts, labourer, and transportation for first five (5) years.
- .3 Provide replacement parts, including transportation, for five (5) years after initial five (5) years from date of Substantial Completion at no cost to the National Research Council of Canada.

#### 1.6 TOOLS

- .1 Supply two (2) sets of tools required for disassembly, reassembly, and reupholstery for use by maintenance personnel, in accordance with closeout procedures of Section 01 00 10.

**1.7 MAINTENANCE DATA**

- .1 Provide two (2) sets of Maintenance and Operations Manuals in accordance with closeout procedures of Section 00 10 00, including assembly, disassembly, refinishing and reupholstering and maintenance data.

**1.8 DIMENSIONS**

- .1 Provide panels as dimensioned on drawings.
- .2 Panel heights shall consist of a base panel with or without added stacking panels to achieve panel division heights as indicated on drawings.
- .3 Dimensions noted on the drawings are critical minimums required to accommodate specific furniture and provide adequate corridor and exit widths that meet NBCC, latest edition, Exit Requirements.
- .4 Dimensions of workstations shall not be scaled from the drawings. Workstations are to be constructed using the minimum number of standard panels yielding the total length of the dimension provided such that specified and future components or furniture can be installed in the indicated location. Layouts to accommodate future or specified furniture layouts as shown by combination panel hung and floor supports without having to be reconfigured.
- .5 Panels and workstation components to the manufacturer's nearest standard size to the metric dimensions indicated.
- .6 Panels and panel ends delineating corridors to fall on straight lines.

**1.9 SCHEDULING**

- .1 Departmental Representative to approve installation schedule. Schedule time for inspections and training.

**1.10 MAINTENANCE MATERIALS**

- .1 Provide maintenance material listed and in accordance with closeout procedures of Section 00 10 00.
- .2 Provide 15 m2 of each type and colour of upholstery fabric used as surface covering for partition panels.
- .3 Provide 150 ml quantity of touch-up fluid for the repair of paint-type surfaces. Supply touch-up fluid in small containers.
- .4 Maintenance materials to be of the same production run, and dye lot as the installed materials.

**PART 2 PRODUCTS****2.1 ACCEPTABLE PRODUCTS AND MANUFACTURERS**

- .1 Specification is based on Canvas as manufactured by Herman Miller. Equivalent products with similar design and function must be submitted to the Departmental Representative for review, conformance to design concept and accommodation requirements.
- .2 The following products and manufacturers are acceptable, subject to conformance with the specification and drawings:
  - .1 Canvas as manufactured by Herman Miller.
  - .2 Compose as manufactured by Haworth.
  - .3 Answer as manufactured by Steelcase.
  - .4 Leverage as manufactured by Teknion
  - .5 Cosmopolitan as manufactured by Tayco.
- .3 Provide all primary products specified in this section as the products of a single manufacturer with a minimum of ten (10) years experience.

**2.2 PANELS**

- .1 Panel Types:
  - .1 Panel thickness: 75 mm +/- 5 mm.
  - .2 Standard panel width +/- 25mm:
    - .1 915 mm
    - .2 610 mm
    - .3 1219 mm
    - .4 1524 mm
    - .5 Other panel sizes for closure panels may be required.
  - .3 Standard panel heights:
    - .1 1270 or 1447 mm
    - .2 1676 or 1727 mm
  - .4 Use combinations of panel widths and heights listed above to achieve workstation layouts indicated on drawings. Max panel and glass topper height 1727mm,
    - .1 Panel height of 1447 mm plus glass topper height 280 mm = 1727 mm,
    - .2 Panel height of 1270 mm plus glass topper height 406mm = 1676 mm.
- .2 Architectural glazed elements: single pane 6.0 mm clear tempered glass, frameless, for panels as indicated.
  - .1 Glass panel-topper height:
    - .1 280 mm or 406 mm.
- .3 Panel construction: Panels to be capable of providing telephone, data and power as indicated. Manufacturer to provide power from building connection to receptacle

locations. Cover panels with the specified fabric, attached to allow field re-upholstery without removing the panel. Trim panels with durable top and side rail. If caps are required by manufacturer to provide trim look, caps are to be metal or PVC unless noted otherwise. Trim to be finished with the manufacturer's standard powder coated finish, colour to be selected by Departmental Representative. Panels to be load bearing up to 1700 mm.

- .4 Panel frames:
  - .1 Frames shall consist of four roll-formed cold rolled steel tubes welded together at the corners into a rectangular frame and finished using an e-coating process. Frames shall be load bearing.
  - .2 Panels shall be reinforced to accommodate cantilevered work surfaces, shelves and storage units.
- .5 Panel core: no-added formaldehyde molded fiber-pad insert.
- .6 Panel joints: Panels shall be jointed with manufacturer's standard closure providing a sight and sound seal as tight as possible (maximum allowable gap of 3 mm). Provide equal sight and sound, seal at existing construction, where wall mounts are used.
  - .1 Panels shall have the capability to stack up to 90" and be connect to one another via a bolted connection.
  - .2 Panel connectors must be universal for use in all 90 degree conditions (2-,3- and 4-way conditions shall be orderable as a single line item).
- .7 Support: Manufacturer's standard, to permit up to 38 mm +/- 5 mm adjustment. Provide two (2) corrosion resistant supports per panel and provide grippers for each support leg for the finished floor. Provide extended leg support to meet site conditions at no extra cost. Provide support for panels independent of work surfaces. Provide stabilizing panels as required, where wall attachment is not possible.
- .8 Fabric: Fabric pattern/style as selected by Departmental Representative from manufacturers full range, meeting this specification. Several colors or patterns may be used throughout, limited to three (3) different colors or patterns. Fabric to meet the following minimum requirements;
  - .1 Content: 100% polyester (may contain recycled material)
  - .2 Weight: Between 275 and 400 g per linear m
  - .3 Width: min 1675 mm
  - .4 Directional: Non-directional
  - .5 Fabric to meet the Association of Contract Textiles (ACT), Fabric Performance Guidelines.
- .9 Adjustment: Panels to allow for work surface components and accessories to be adjusted in height in 25 mm increments.

### 2.3 FURNITURE COMPONENTS

- .1 Manufacturer's standard systems furniture as shown on the drawings.

- .2 Provide standard supports and accessories required for proper installation and functioning of the furniture components. Provide accessories for optimum rigidity of work surfaces and other items without attaching panel bottoms or legs to building structure. Where support legs are necessary provide corrosion resistant supports and two (2) per panel.
- .3 Colours as selected by the Departmental Representative from the manufacturer's full range.
- .4 Provide numbers and types of units indicated:
- .5 Work Surfaces:
  - .1 Straight and corner styles, depths and lengths as shown.
    - .1 Fixed height work surface with panel mounted bracket supports.
    - .2 Freestanding electric height adjustable (simple up down) work table with 686 mm to 1173 mm range on L-shaped legs.
      - .1 Typical Workstation – Surface Size:
        - .1 762 mm X 1220 mm.
        - .2 Similar product to:
          - .1 Renew Sit-To-Stand Tables as manufactured by Herman Miller.
    - .2 Manufacturers standard, constructed of high pressure plastic laminate bonded to high pressure particle board, with a high pressure laminate backer sheet on the underside work surfaces and pre-drilled for support devices.
      - .1 Thickness: 25 mm to 30 mm.
    - .3 Edges to be rounded and trimmed with a PVC T-moulding in a colour to be selected by Departmental Representative.
    - .4 Support brackets to be self-locking where mounted to panels. Colour and finish to match the panel trim.
    - .5 Each work surface may be supported using pedestals, panels, brackets or cantilever brackets or a combination thereof.
    - .6 Work surfaces may be hung from panels in an off modular manner.
    - .7 Design work surfaces to support up to 200 kg as per ANSI-BIFMA 5.5, 1998, Functional Load Test, tested for 60 minutes fully loaded with less than 1/180 of span deflection.
    - .8 Extra support to be provided for work surfaces 1500 mm and over in length.
    - .9 Provide a clearance envelope under work surfaces 610 mm in depth or greater, to meet CSA Z412 Guidelines for Office Ergonomics.
    - .10 Colour to be selected by the Departmental Representative from manufacturer's full range.
    - .11 Floor supports to have adjustable capability for levelling with a vertical adjustment of 25 mm.
  - .6 Open Shelves:
    - .1 Construction and finish: to match work surfaces.

- .2 Shelf depth: 337 mm.
- .3 Shelf end height: 204 mm.
- .4 Shelf length 1220mm
- .5 With 1220 mm LED light below.
- .7 Storage tower:
  - .1 Typical Workstation:
    - .1 Dimensions:
      - .1 Width: 610 mm.
      - .2 Depth: 610 mm.
      - .3 Height: 1727 mm.
    - .2 Drawer configuration: Drawers in box/box/file.
    - .3 Closed bookcase with hinged door and one adjustable shelf.
    - .4 Colours as selected by Departmental Representative from manufacturer's full range.
- .8 User Adjustable Tool Bar: Provide one option per workstation,
  - .1 Option#1 Panel Integrated User Adjustable Tool Bar
    - .1 Manufacturer's standard sizes to match panel width.
    - .2 Qty two X 610 mm user adjustable tool bar.
    - .3 Constructed from heavy duty extruded aluminium, Colour finish to match panel trim.
    - .4 Provide all necessary accessories for proper attachment to building components to provide support for panel.
  - .2 Option #2 Panel integrated slat tile:
    - .1 Manufacturer's standard sizes to match panel height and width.
    - .2 Constructed from heavy duty extruded aluminum, Colour finish to match panel trim.
    - .3 Tracks to be 12 mm slotted on 25 mm centers to match panel side rails.
    - .4 Provide all necessary accessories for proper attachment to building components to provide support for panel.
- .9 Electrical Feed modules:
  - .1 Provide for routing of communications and data cables, and access to power receptacles.
  - .2 Manufacturers standard sizes as indicated. Modules to provide power to the panel's raceway from wall or ceiling connections.
    - .1 Panel base raceway covers shall have factory installed knockouts (4 per panel, 2 each side).
    - .2 External base in feed modules shall be capable of mounting into every base receptacle outlet location.
  - .3 Provide leads length as required for connection to the building electrical system.
  - .4 Leads to be in CSA protective covering, as per the Canadian Electrical Code.



- .10 Ceiling Feeds:
  - .1 Provide ceiling poles when required and where indicated. Finish to match metal finish on exposed panel trim.
    - .1 Five station or less clusters require one ceiling pole, with power and a minimum data capacity of 24 CAT6.
      - .1 With metal separation between power and data.
    - .2 Five to eight station clusters require two ceiling poles. One power ceiling feed pole and one data pole with minimum of 24 CAT6 capacity.
  - .2 Power pole widths shall be equal to the thickness of the panels.
  - .3 Power pole shall be capable of being opened along the length of the vertical of the pole to permit lay-in of wiring.
- .11 Wiring:
  - .1 Wiring for panel systems shall have preconnectorized cable assemblies for connection of duplex receptacles and meet the following requirements:
    - .1 Voltage: 120/208 VAC
    - .2 Circuit capacity: three circuits with not less than six wires providing one circuit having the common ground and having its own neutral.
    - .3 One circuit for dedicated/isolated use of the computer
    - .4 Tamper proof connectors.
    - .5 Flexible cable to the Canadian Electrical Code, approved for use in systems furniture. The complete electrical system in the panels and the components to meet CSA-C22.2, No. 23.
- .12 Receptacles:
  - .1 Manufacturer's standard single sided duplex style, 15 Amp CSA configuration 5-15R configuration.
  - .2 Coordinate actual locations in the panels on site by the Departmental Representative's Representative.
  - .3 Provide two duplex receptacles for general use and one isolated/dedicated duplex per workstation, receptacles may be a combination of duplex or simplex providing six (6) plug-in locations.
    - .1 One general use duplex outlet along spine.
    - .2 One general use duplex outlet and one isolated/dedicated duplex outlet under the electric height adjustable table.
- .13 Raceway systems:
  - .1 Manufacturer's standard raceway to accommodate both electrical, telephone/data distribution, be an integral part of the base panel and ULC approved.
  - .2 Panels without power shall be capable of field installation without changing or removing panel raceways and carry up to three separate 120 volt A.C. 15 amp circuits.
  - .3 Location of duplexes as shown on drawings. Wiring shall move easily through raceways and around corners in both vertical and horizontal directions.

- .4 Raceways to be accessible from at least one side, located at desk or base height.
- .14 Cutouts:
  - .1 Provide factory cut-outs as required for all outlets and replacement cover plates.
- .15 Miscellaneous: In addition to the products specified and listed herein, provide all additional products, hardware, trims and accessories needed for a proper, operable and complete installation.

### **PART 3 EXECUTION**

#### **3.1 INSTALLATION**

- .1 Install panels, componentry, accessories and systems furniture in accordance with the manufacturers' instructions and reviewed shop drawings and adjust for proper performance.
- .2 Install panels over finished floor.
- .3 Adjust panel heights as necessary to suit unevenness of floors and ensure horizontal lines of panels are level and continuous.
- .4 Install and adjust seals between panels and existing construction for proper performance.
- .5 Supply maintenance inventory parts list.
- .6 Replace all damaged panels, componentry, accessories and systems furniture or repair to the approval of the Departmental Representative. Obtain approval to repair in each instance before beginning repair work, and at completion of repair work.
- .7 Provide Departmental Representative with maintenance material at the time of Certificate of Final Completion.

#### **3.2 ELECTRICAL**

- .1 Install all panel electrical work to meet the requirements of the Canadian Electrical Code Latest Edition and to the approval of authorities having jurisdiction.
- .2 Co-ordinate connection of panel electrical system with the building electrical system installers.
- .3 Co-ordinate with the work of the data cable installers and telephone installers.

#### **3.3 CLEANING**

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Clean surfaces after installation using manufacturer's recommended cleaning procedures.

- .3        Upon completion of installation remove surplus materials, rubbish, tools and equipment.

**END OF SECTION**