

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
**Bid Receiving - PWGSC / Réception des**  
**soumissions - TPSGC**  
**11 Laurier St. / 11 rue Laurier**  
**Place du Portage, Phase III**  
**Core 0B2 / Noyau 0B2**  
**Gatineau, Québec K1A 0S5**  
**Bid Fax: (819) 997-9776**

**REQUEST FOR PROPOSAL**  
**DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

<b>Title - Sujet</b> ENVIRONMENTAL CONSULTANT FOR WMB		
<b>Solicitation No. - N° de l'invitation</b> EH900-160791/A		<b>Date</b> 2015-09-25
<b>Client Reference No. - N° de référence du client</b> 20160791		
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$FE-176-68065		
<b>File No. - N° de dossier</b> fe176.EH900-160791	<b>CCC No./N° CCC - FMS No./N° VME</b>	
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2015-11-09</b>		<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Standard Time EST
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>		
<b>Address Enquiries to: - Adresser toutes questions à:</b> Talom, Mike		<b>Buyer Id - Id de l'acheteur</b> fe176
<b>Telephone No. - N° de téléphone</b> (819) 956-3796 ( )		<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> TPSGC/PWGSC West Memorial Building 344 Wellington Street, Ottawa, ON		

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address**  
**Raison sociale et adresse du**  
**fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**  
Consultant Services Division/Division des services  
d'experts-conseils  
11 Laurier St./11 Rue Laurier  
3C2, Place du Portage  
Phase III  
Gatineau, Québec K1A 0S5

<b>Delivery Required - Livraison exigée</b> See Herein	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/</b> <b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

Solicitation No. - N° de l'invitation

EH900-160791/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

fe176

Client Ref. No. - N° de réf. du client

20160791

File No. - N° du dossier

fe176EH900-160791

CCC No./N° CCC - FMS No/ N° VME

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## **THIS PROCUREMENT CONTAINS A SECURITY REQUIREMENT REQUEST FOR PROPOSAL (RFP)**

### **TABLE OF CONTENTS**

The following is intended to clarify the general structure of the whole document.

Front Page

Supplementary Instructions to Proponents (SI)

- SI1 Introduction
- SI2 Proposal Documents
- SI3 Questions or request for clarifications
- SI4 Canada's Trade Agreements
- SI5 CERTIFICATIONS**
- SI6 Security Requirement**
- SI7 Web Sites

Terms, Conditions and Clauses

Agreement

Supplementary Conditions (SC)

**SC1 Security Requirement**

SC2 Language Requirements

Agreement Particulars

Team Identification Format (Appendix A)

Declaration/Certifications Form (Appendix B)

Price Proposal Form (Appendix C)

Doing Business with National Capital Area (Appendix D)

**Security Requirements Check List (Appendix E)**

**Information related to Security Requirement (Appendix F)**

Submission Requirements and Evaluation (SRE)

Project Brief / Terms of Reference

Description of Project (PD)

Description of Services – Project Administration (PA)

Description of Services - Required Services (RS)

## **SUPPLEMENTARY INSTRUCTIONS TO PROPONENTS (SI)**

### **SI1 INTRODUCTION**

1. Public Works and Government Services Canada (PWGSC) intends to retain an individual consulting firm or joint venture to provide the professional services for the project as set out in this Request for Proposal (RFP).
2. This is a single phase selection process. The nature of the requirement and the anticipated limited number of response by the industry leads PWGSC to believe that this approach will not unduly force a large number of firms to expend an overall unreasonable amount of effort in response to PWGSC.
3. Proponents responding to this RFP are requested to submit a full and complete proposal. The proposal will cover not only the qualifications, experience and organization of the proposed Consultant Team, but also the detailed approach to the work, and the pricing and terms offered. A combination of the technical and price of services submissions will constitute the proposal.

### **SI2 PROPOSAL DOCUMENTS**

1. All instructions, general terms, conditions and clauses identified in the RFP by number, date and title, are hereby incorporated by reference into and form part of this solicitation and any resultant contract.

All instructions, general terms, conditions and clauses identified in the RFP by number, date and title, are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

2. The following are the proposal documents:
  - (a) Supplementary Instructions to Proponents (SI);  
R1410T (2015-07-03), General Instructions (GI) – Architectural and/or Engineering Services – Request for Proposal;  
Submission Requirements and Evaluation (SRE);
  - (b) the general terms, conditions and clauses, as amended, identified in the Agreement clause;
  - (c) Project Brief / Terms of Reference;

- (d) the document entitled "Doing Business with National Capital Area";
  - (e) the **Security Requirements Check List** (SRCL);
  - (f) any amendment to the solicitation document issued prior to the date set for receipt of proposals; and
  - (g) the proposal, Declaration/Certifications Form and Price Proposal Form.
3. Submission of a proposal constitutes acknowledgment that the Proponent has read and agrees to be bound by these documents.

### **SI3 QUESTIONS OR REQUEST FOR CLARIFICATION**

Questions or requests for clarification during the solicitation period must be submitted in writing to the Contracting Authority named on the RFP - Page 1 as early as possible. Enquiries should be received no later than 10 working days prior to the closing date identified on the front page of the Request for Proposal. Enquiries received after that date may not be answered prior to the closing date of the solicitation.

### **SI4 CANADA'S TRADE AGREEMENTS**

This procurement is subject to the provisions of the North American Free Trade Agreement (NAFTA), and the World Trade Organization - Agreement on Government Procurement (WTO-AGP).

### **SI5 CERTIFICATIONS**

#### **1. Integrity Provisions – Declaration of Convicted Offences**

As applicable, pursuant to subsection Declaration of Convicted Offences, of section 01 of the General Instructions, the Proponent must provide with its bid, a completed Declaration Form, to be given further consideration in the procurement process.

#### **2. Federal Contractors Program for Employment Equity - Proposal Certification**

By submitting a proposal, the Proponent certifies that the Proponent, and any of the Proponent's members if the Proponent is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list

([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from Employment and Social Development Canada (ESDC) - Labour's website.

Canada will have the right to declare a proposal non-responsive if the Proponent, or any member of the Proponent if the Proponent is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

## **SI6 SECURITY REQUIREMENT**

1. At bid closing, the following conditions must be met:
  - (a) the Proponent must hold a valid organization security clearance as indicated in Supplementary Conditions SC1;
  - (b) the Proponent's proposed individuals requiring access to classified or protected information, assets or sensitive work site(s) must meet the security requirement as indicated in Supplementary Conditions SC1;
  - (c) the Proponent must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites.;
2. For additional information on security requirements, proponents should refer to the Canadian Industrial Security Directorate (CISD), Industrial Security Program of Public Works and Government Services Canada (<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>) website.

## **SI7 - WEBSITES**

The connection to some of the Web sites in the RFP is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Employment Equity Act  
<http://laws-lois.justice.gc.ca/eng/acts/E-5.401/index.html>

Federal Contractors Program (FCP)  
[http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/index.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/index.shtml)

Certificate of Commitment to Implement Employment Equity form LAB 1168

Request for Proposal: West Memorial Building Asset Integrity – Environmental Consultant  
Demande de propositions: Intégrité des biens de l'Édifice commémoratif de l'Ouest – l'Expert-conseil en environnement  
Solicitation No. - N° de l'invitation: EH900-160791/A - PWGSC Project No. - No. Projet TPSGC R.066170.001

<http://www.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=profile&form=lab1168&dept=sc&lang=e>

Code of Conduct for Procurement  
<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

Lobbying Act  
<http://laws-lois.justice.gc.ca/eng/acts/L-12.4/?noCookie>

Contracts Canada  
<https://buyandsell.gc.ca/>

Supplier Registration Information  
<https://srisupplier.contractsCanada.gc.ca>

Consultant Performance Evaluation Report Form  
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913-1.pdf>

Canadian economic sanctions  
<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

National Joint Council (NJC) Travel Directive  
<http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>

## TERMS, CONDITIONS AND CLAUSES

### AGREEMENT

1. The Consultant understands and agrees that upon acceptance of the offer by Canada, a binding Agreement shall be formed between Canada and the Consultant and the documents forming the Agreement shall be the following:
  - (a) the Front Page and this Agreement clause;
  - (b) the General Terms, Conditions and Clauses, as amended, identified as:
    - R1210D (2015-07-09), General Condition (GC) 1 - General Provisions – Architectural and/or Engineering Services
    - R1215D (2014-06-26), General Condition (GC) 2 - Administration of the Contract
    - R1220D (2015-02-25), General Condition (GC) 3 - Consultant Services
    - R1225D (2015-04-01), General Condition (GC) 4 - Intellectual Property
    - R1230D (2015-02-25), General Condition (GC) 5 - Terms of Payment
    - R1235D (2011-05-16), General Condition (GC) 6 - Changes
    - R1240D (2011-05-16), General Condition (GC) 7 - Taking the Services Out of the Consultant's Hands, Suspension or Termination
    - R1245D (2012-07-16), General Condition (GC) 8 - Dispute Resolution
    - R1250D (2015-02-25) R1650D (2015-02-25), General Condition (GC) 9 - Indemnification and Insurance
    - Supplementary Conditions
    - Agreement Particulars
  - (c) Project Brief / Terms of Reference;
  - (d) the document entitled "Doing Business with National Capital Area";
  - (d) the document entitled "General Procedures and Standards";
  - (e) the Security Requirements Check List (SRCL);**
  - (f) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
  - (g) the proposal, the Declaration/Certifications Form and the Price Proposal Form.
2. The documents identified above by title, number and date are hereby incorporated by reference into and form part of this Agreement, as though expressly set out herein, subject to any other express terms and conditions herein contained.

The documents identified above by title, number and date are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is



available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

3. If there is a discrepancy between the wording of any documents that appear on the following list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.
- (a) any amendment or variation in the Agreement that is made in accordance with the terms and conditions of the Agreement;
  - (b) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
  - (c) this Agreement clause;
  - (d) Supplementary Conditions;
  - (e) General Terms, Conditions and Clauses;
  - (f) Agreement Particulars;
  - (g) Project Brief / Terms of Reference;
  - (h) the document entitled "Doing Business with National Capital Area";
  - (i) the document entitled "**Security Requirement Check List**";
  - (j) the proposal.

## **SUPPLEMENTARY CONDITIONS (SC)**

### **SC1 SECURITY REQUIREMENT**

The following security requirement (SRCL and related clauses) applies and form part of the Agreement.

#### **SECURITY REQUIREMENT FOR CANADIAN SUPPLIER:**

**PWGSC FILE N° EH900-160791**

- i. The Consultant must, at all times during the performance of the Contract, hold a valid *Designated Organization Screening* (DOS), issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).
- ii. The Consultant personnel requiring access to sensitive work site(s) must **EACH** hold a valid **RELIABILITY STATUS**, granted or approved by the CISD at PWGSC.

- iii. Subcontracts, which contain security requirements, are **NOT** to be awarded without the prior written permission of the CISD at PWGSC.
- iv. The Consultant must comply with the provisions of the:
  - a) *Security Requirements Check List* and Security Guide (if applicable), attached at Appendix E;
  - b) *Industrial Security Manual* (Latest Edition).

## **SC2 LANGUAGE REQUIREMENTS**

- 1. Communication between Canada and the Consultant shall be in the language of choice of the Consultant Team, which shall be deemed to be the language of the Consultant's proposal.
- 2. The Consultant's services during construction tender call (such as addenda preparation, tenderers' briefing meetings, technical answers to questions by bidders, including translation of bidder's questions) shall be provided expeditiously in both languages, as necessary.
- 3. The Consultant's services during construction shall be provided in the language of choice of the Contractor. The successful Contractor will be asked to commit to one or other of Canada's official languages upon award of the Construction Contract and, thereafter construction and contract administration services will be conducted in the language chosen by the Contractor.
- 4. Other required services in both of Canada's official languages (such as construction documentation) are described in detail in the Project Brief.
- 5. The Consultant Team, including the Prime Consultant, Sub-Consultants and Specialists Consultants shall ensure that the services being provided in either language shall be to a professional standard.

## **AGREEMENT PARTICULARS**

The Agreement Particulars will be issued at time of award of contract and will identify the fee to be paid to the Consultant for the services determined in the Price Proposal Form.

## APPENDIX A - TEAM IDENTIFICATION FORMAT

For details on this format, please see **SRE 3.1.2 Consultant Team Identification** in the **Request For Proposal**.

The prime consultant and other members of the Consultant Team shall be, or eligible to be, licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial or territorial law.

### I. Prime Consultant (Proponent – Environmental Engineer):

Firm or Joint Venture Name: .....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

### II. Key Sub Consultants / Specialists:

#### Certified industrial Hygienist

Firm Name: .....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

## APPENDIX A - TEAM IDENTIFICATION FORMAT (CNT'D)

### **Solid Waste Management specialist**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

### **Cost Specialist**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

## APPENDIX B - DECLARATION/CERTIFICATIONS FORM

**Project Title:**

**Name of Proponent:**

**Street Address:**

**Mailing Address:**

**Telephone Number: (    )**

**Fax Number: (    )**

**E-Mail:**

**Procurement Business Number:**

<b>Type of Organization:</b>  _____ Sole Proprietorship  _____ Partnership  _____ Corporation  _____ Joint Venture	<b>Size of Organization:</b>  Number of Employees _____  Graduate Architects / Professional Engineers _____  Other Professionals _____  Technical Support _____  Other _____
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## **APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)**

### **Former Public Servant (FPS) - Certification**

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPS, proponents must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of proposals is completed, Canada will inform the Proponent of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the proposal non-responsive.

### **Definitions**

For the purposes of this clause,

"former public servant" is any former member of a department as defined in the *Financial Administration Act*, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- (a) an individual;
- (b) an individual who has incorporated;
- (c) a partnership made of former public servants; or
- (d) a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the *Public Service Superannuation Act* (PSSA), R.S., 1985, c.P-36, and any increases paid pursuant to the *Supplementary Retirement Benefits Act*, R.S., 1985, c.S-24 as it affects the PSSA. It does not include pensions payable pursuant to the *Canadian Forces Superannuation Act*, R.S., 1985, c.C-17, the *Defence Services Pension Continuation Act*, 1970, c.D-3, the *Royal Canadian Mounted Police Pension Continuation Act*, 1970, c.R-10, and the *Royal Canadian Mounted Police Superannuation Act*, R.S., 1985, c.R-11, the *Members of Parliament Retiring Allowances Act*, R.S., 1985, c.M-5, and that portion of pension payable to the *Canada Pension Plan Act*, R.S., 1985, c.C-8.

## **APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)**

### **Former Public Servant in Receipt of a Pension**

As per the above definitions, is the Proponent a FPS in receipt of a pension?

YES ( ) NO ( )

If so, the Proponent must provide the following information, for all FPS in receipt of a pension, as applicable:

- (a) name of former public servant;
- (b) date of termination of employment or retirement from the Public Service.

By providing this information, proponents agree that the successful Proponent's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

### **Work Force Adjustment Directive**

Is the Proponent a FPS who received a lump sum payment pursuant to the terms of a work force reduction program? YES ( ) NO ( )

If so, the Proponent must provide the following information:

- (a) name of former public servant;
- (b) conditions of the lump sum payment incentive;
- (c) date of termination of employment;
- (d) amount of lump sum payment;
- (e) rate of pay on which lump sum payment is based;
- (f) period of lump sum payment including start date, end date and number of weeks;
- (g) number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

## APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

### Name of Proponent:

#### DECLARATION:

I, the undersigned, being a principal of the proponent, hereby certify that the information given on this form and in the attached proposal is accurate to the best of my knowledge. If any proposal is submitted by a partnership or joint venture, then the following is required from each component entity.

.....  
name signature

.....  
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....  
name signature

.....  
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....  
name signature

.....  
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

During proposal evaluation period, PWGSC contact will be with the following person:\_\_\_\_\_.

Telephone Number: ( ) \_\_\_\_\_ Fax Number: ( ) \_\_\_\_\_

E-mail: \_\_\_\_\_

This Appendix "B" should be completed and submitted with the proposal, but may be submitted afterwards as follows: if Appendix "B" is not completed and submitted with the proposal, the Contracting Authority will inform the Proponent of a time frame within which to provide the information. Failure to comply with the request of the Contracting Authority and to provide the certifications within the time frame provided will render the proposal non-responsive.



## APPENDIX C - PRICE PROPOSAL FORM

**INSTRUCTIONS:** Complete this Price Proposal Form and submit in a **separate sealed envelope** with the Name of Proponent, Name of Project, PWGSC Solicitation Number, and the words “PRICE PROPOSAL FORM” typed on the outside of the envelope. Price Proposals are not to include Applicable Taxes.

### PROPOSERS SHALL NOT ALTER THIS FORM.

**Project Title:** West Memorial Building (WMB) Asset Integrity Project – Environmental Consultant

Name of Bidder: \_\_\_\_\_

**The following will form part of the evaluation process:**

### 1. REQUIRED SERVICES – FIXED FEE

Including all related costs, services and deliverables to complete the services as specified in the Project Brief and in the RFP documents.

ITEM	DESCRIPTION	FIXED FEE
RS1	Review of Schematic Design	\$ _____
RS2	Design Development	\$ _____
RS3	Construction Documents	\$ _____
RS4	Tender Call & Construction Contract Award	\$ _____
RS5	Construction and Contract Administration	\$ _____
RS6	Estimating and Cost Planning	\$ _____
RS7	Project Time Planning, Scheduling and Control	\$ _____
RS8	Environmental Monitoring Services	\$ _____
RS9	Bilingual Documents	\$ _____
<b>TOTAL FIXED FEE:</b>		<b>\$ _____</b>

## **TOTAL COST OF SERVICES FOR PROPOSAL EVALUATION PURPOSES**

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Total Required Services – Fixed Fee \$.....

**Total Fee to be used for evaluation purposes** \$.....

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**The following will NOT form part of the evaluation process**

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**DISBURSEMENTS**

An allowance in the amount of \$45,000 (HST excluded) will be incorporated into the contract to cover pre-authorized disbursements, at cost without allowance for mark-up or profit, supported by invoices/receipts - see clause R1230D (2012-07-16), GC 5 - Terms of Payment, section GC5.12

Reproduction and delivery costs of technical documentation in addition to that specified in the Project Brief with the prior approval and authorization of the Departmental Representative:	\$ 10,000
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Testing Disbursements:	\$ 25,000
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Other Disbursements:	\$ 10,000
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<b>MAXIMUM AMOUNT FOR OTHER DISBURSEMENTS</b>	<b>\$ 45,000</b>
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**Signature of Consultant**

**The Consultant agrees** to provide ALL services requested in the Request For Proposal.  
 If any proposal is submitted by a partnership or joint venture, then the information is required from each component entity.

.....  
 name signature

.....  
 title

I/We have authority to bind the Corporation / Partnership / Sole Proprietorship

.....  
 name signature

.....  
 title

I/We have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

## APPENDIX C - PRICE PROPOSAL FORM (CONT'D)

### THE FOLLOWING HOURLY RATES MAY BE USED FOR FUTURE CONTRACT AMENDMENTS

#### Principals

Name	\$ per hour
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....

## APPENDIX C - PRICE PROPOSAL FORM (CONT'D)

### Staff

Name / Position	\$ per hour
.....	.....
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**END OF PRICE PROPOSAL FORM**

# **APPENDIX D – Doing Business with the National Capital Area (NCA)**



Public Works and  
Government Services  
Canada

Travaux publics et  
Services gouvernementaux  
Canada

Canada



Serving  
**GOVERNMENT,**  
Serving  
**CANADIANS.**

## Doing Business with the National Capital Area (NCA)



[www.pwgsc-tpsgc.gc.ca](http://www.pwgsc-tpsgc.gc.ca)

Last updated: Apr 8, 2013

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### **Appendices**

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Appendix 'B'	Sample Addendum Format
Appendix 'C'	Sample Index for Drawings and Specifications
Appendix 'D'	User Manual on Directory Structure and Naming Conventions Standards for Construction Tender Documents on CDROM, dated May 2005
Appendix 'E'	Basic Reference Guide on Converting Construction Drawings into Portable Document Format (PDF), dated May 2005



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## **SECTION 1 INTRODUCTION**

This document must be used in conjunction with the Terms of Reference (TOR), as the two documents are complimentary. The TOR describes project-specific requirements while this document deals with information common to all projects. In case of a conflict between the two documents, the requirements of the TOR override this document.

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## **SECTION 2 PWGSC NATIONAL CADD STANDARD**

Drawings shall be in accordance with PWGSC National CADD Standards and Canadian Standards Association (CSA) B78.3.

Refer to:

<http://www.tpsgc-pwgsc.gc.ca/biens-property/cdao-cadd/index-eng.html>

The above link is subject to change. The Consultant shall check with the Project Manager to ensure that the link and related information are current and relevant with regards to PWGSC National CADD Standards.

## **SECTION 3 GUIDE TO PREPARATION OF CONSTRUCTION DOCUMENTS FOR PWGSC**

### **1 Purpose**

This document provides direction in the preparation of construction contract documents (namely specifications, drawings and addenda) for Public Works and Government Services Canada (PWGSC).

Drawings, specifications and addenda must be complete and clear, so that a contractor can prepare a bid without guesswork. Standard practice for the preparation of construction contract documents requires that:

- drawings are the graphic means of showing work to be done, as they depict shape, dimension, location, quantity of materials and relationship between building components.
- specifications are written descriptions of materials and construction processes in relation to quality, colour, pattern, performance and characteristics of materials, installation and quality of work requirements.
- Addenda are changes to the construction contract documents or tendering procedures, issued during the tendering process.

### **2 Principles of PWGSC Contract Documents**

PWGSC's contract documents are based on common public procurement principles. PWGSC does not use Canadian Construction Document Committee (CCDC) documents.

The terms and conditions are prepared and issued by PWGSC as well as other related bidding and contractual documents. For information, the clauses are available on the following web site: <http://sacc.pwgsc.gc.ca/sacc/query-e.jsp>. Any questions should be directed to the Project Manager.

### **3 Quality Assurance**

Consultants are required to undertake their own quality control process and must review, correct and coordinate (between disciplines) their documents before sending them to PWGSC.

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## **SPECIFICATIONS**

### **1 National Master Specification**

The National Master Specification (NMS) is a master construction specification available in both official languages, which is divided into 48 Divisions and used for a wide range of construction and/or renovation projects. In preparing project specifications, the Consultant must use the current edition of the NMS in accordance with the "NMS User's Guide".

The Consultant retains overriding responsibility for content and shall edit, amend and supplement the NMS as deemed necessary to produce an appropriate project specification free from conflict and ambiguity.

### **2 Specification Organization**

Narrowscope sections describing single units of work are preferred for more complex work, however, broadscope sections may be more suitable for less complex work. Use either the NMS 1/3 - 2/3 page format or the Construction Specifications Canada full-page format.

Start each Section on a new page and show Project Number, Section Title, Section Number and Page Number on each page. Specification date, project title, and consultant's name are not to be indicated.

### **3 Terminology**

Use the term "Departmental Representative" instead of Engineer, PWGSC, Owner, Consultant or Architect. "Departmental Representative" means the person designated in the Contract, or by written notice to the Contractor, to act as the Departmental Representative for the purposes of the Contract, and includes a person, designated and authorized in writing by the Departmental Representative to the Contractor.

Notations such as: "verify on site", "as instructed", "to match existing", "example", "equal to" or "equivalent to", "to be determined on site by "Departmental Representative", should not be indicated in the specifications as this promotes inaccurate and inflated bids. Specifications must permit bidders to calculate all quantities and bid accurately. If quantities are impossible to identify (i.e. cracks to be repaired) give an estimated quantity for bid purposes (unit prices). Ensure that the terminology used throughout the specifications is consistent and does not contradict the applicable standard construction contract documents.

### **4 Dimensions**

Dimensions are to be in metric only (no dual dimensioning).

### **5 Standards**

As references in the NMS may not be up to date, it is the responsibility of the consultant to ensure that the project specification uses the latest applicable edition of all references quoted. The following is a list of some of the Internet websites which provide the most current publications of standards for reference in the construction specification document.

- CSA standards: <http://www.csa.ca>
- CGSB standards: <http://www.pwgsc.gc.ca/cgsb>
- ANSI standards: <http://www.ansi.org>
- ASTM Standards: <http://www.astm.org>
- ULC standards: <http://www.ulc.ca>
- General reference of standards: <http://www.cssinfo.com>

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The NMS website (<http://www.tpsgc-pwgsc.gc.ca/biens-property/ddn-nms/index-eng.html>) also links to other documents references in the NMS under its "Links" feature.

## 6 Specifying Materials

The practice of specifying actual brand names, model numbers, etc., is against departmental policy except for special circumstances. The method of specifying materials shall be by using recognized standards such as those produced by Canadian Gas Association (CGA), Canadian General Standards Board (CGSB), Canadian Standards Association (CSA), and Underwriters' Laboratories of Canada (ULC), or by trade associations such as Canadian Roofing Contractors' Association (CRCA) and Terrazzo, Tile, Marble Association of Canada (TTMAC). Canadian standards should be used wherever possible.

If the above method cannot be used and where no standards exist, specify by a non-restrictive, non-trade name "prescription" or "performance" specifications.

In exceptional or justifiable circumstances or if no standards exist and when a suitable non-restrictive, non-trade name "prescription" or "performance" specification cannot be developed, specify by trade name. Include all known materials acceptable for the purpose intended, and in the case of equipment, identify by type and model number.

Acceptable Materials: set up the paragraph format as follows:

Acceptable Materials:

1. ABC Co. Model [\_\_\_\_\_].
2. DEF Co. Model [\_\_\_\_\_].
3. GHI Co. Model [\_\_\_\_\_].

Alternative materials to those specified may be considered during the solicitation period, however, the onus will be on the Consultant to review and evaluate all requests for approval of alternative materials.

The term "Acceptable Manufacturers" should not be used, as this restricts competition and does not ensure the actual material or product will be acceptable. A list of words and phrases that should be avoided is included in the NMS User's Guide.

Sole Sourcing: Sole sourcing for materials and work can be used for proprietary systems (ie. fire alarm systems, EMCS systems). **Substantiation and/or justification will be required.**

Wording for the sole source of work should be in Part 1 as:

"Designated Contractor

- .1 Hire the services of [\_\_\_\_\_] to do the work of this section."

Wording for the sole source of EMCS systems should be in Part 1 as

"Designated Contractor

- .1 Hire the services of [\_\_\_\_\_] or its authorized representative to complete the work of all EMCS sections."

and in Part 2 as "Materials

- .1 There is an existing [\_\_\_\_\_] system presently installed in the building. All materials must be selected to ensure compatibility with the existing [\_\_\_\_\_] system.

Wording for the sole source of materials (ie. fire alarm systems) should be in Part 2 as:

"Acceptable materials

.1 The only acceptable materials are [ ] .”

Prior to including sole source materials and/or work, the Consultant should contact the Project Manager to obtain the approval for the sole sourcing.

## 7 Unit Prices

Unit prices are used where the quantity can only be estimated (eg. earth work) and the approval of the Project Manager must be sought in advance of their use.

Use the following wording:

[The work for this section] or [define the specific work if required, e.g. rock excavation] will be paid based on the actual quantities measured on site and the unit prices stated in the Bid and Acceptance Form.

In each applicable NMS section, replace paragraph title "Measurement for Payment" with "Unit Prices".

Sample of Unit Price Table:

The Unit Price Table designates the Work to which a Unit Price Arrangement applies.

- (a) The Price per Unit and the Estimated Total Price must be entered for each Item listed.
- (b) Work included in each item is as described in the referenced specification section.

Item	Specification Reference	Class of Labour, Plant or Material	Unit of Measurement	Estimated Quantity	Price per Unit GST/HST extra	Estimated Total Price GST / HST extra
<b>TOTAL ESTIMATED AMOUNT</b>						
<b>Transfer amount to subparagraph 1)(b) of BA03</b>						

## 8 Cash Allowances

Construction contract documents should be complete and contain all of the requirements for the contractual work. Cash allowances are to be used only under exceptional circumstances (ie. utility companies, municipalities), where no other method of specifying is appropriate. Obtain approval from the Project Manager in advance to include cash allowances and then use "Section 01 21 00 - Allowances" of the NMS to specify the criteria.

## 9 Warranties

It is the practice of PWGSC to have a 12 month warranty and to avoid extending warranties for more than 24 months. When necessary to extend beyond the 12 month warranty period provided for in the General Conditions of the contract, use the following wording in Part 1 of the applicable technical sections, under the heading "Extended Warranty":

- "For the work of this Section [ ], the 12 month warranty period is extended to 24 months.
- Where the extended warranty is intended to apply to a particular part of a specification section modify the above as follows: "For [ ] the 12 month ... [ ] months."

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Delete all references to manufacturers' guarantees.

## **10 Scope of Work**

No paragraphs noted as "Scope of Work" are to be included.

## **11 Summary and Section Includes in Part -1 General of Section**

Do not use "Summary" and "Section Includes."

## **12 Related Sections**

In every section of the specification at 1.1 "Related Sections": coordinate the list of related sections and appendices. Ensure co-ordination among the sections of the specification and ensure not to reference any section or appendices which do not exist.

## **13 Index**

List all the plans and specification sections with correct number of pages, section names and correct drawing titles in the format shown in Appendix A.

## **14 Regional Guide**

The Consultant should contact the Project Manager to obtain the region's requirements for Division 01 or other short form specifications as might be appropriate. For example, it is required in the National Capital Region that regional Section 01 00 10 - General Instructions be used on all projects.

## **15 Health and Safety**

It is required that all project specifications include "Section 01 35 29.06 - Health and Safety Requirements." Confirm with the Project Manager to determine if there are any instructions to meet regional requirements.

## **16 Designated Substances Report**

Include "Section 01 14 25 - Designated Substances Report"

## **17 Subsurface Investigation Reports**

Subsurface Investigation Report(s) are to be included after Section 31 and the following paragraph should be added to Section 31:

Subsurface investigation report(s)

.1 Subsurface investigation report(s) are included in the specification following this section.

When the Project Manager determines that it is not practical to include the subsurface investigation report(s), alternate instructions will be provided.

Where tender documents are to be issued in both official languages, the subsurface investigation report(s) shall be issued in both languages.

In addition to the provision of the Subsurface Investigation Report, the foundation information required by the National Building Code of Canada 2005 (Division C, Part 2, 2.2.4.6) shall be included on foundation drawings.

## **18 Experience and Qualifications**

Remove experience and qualification requirements from specification sections.

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## **19 Prequalification and Pre-award submissions**

Do not include in the specification any mandatory contractor and/or subcontractor prequalification or pre-award submission requirements that could become a contract award condition. If a prequalification process or a pre-award submission is required, contact the Project Manager.

There should be no references to certificates, transcripts or license numbers of a trade or subcontractor being included with the bid.

## **20 Contracting Issues**

Specifications describe the workmanship and quality of the work. Contracting issues should not appear in the specifications. Division 00 of the NMS is not used for PWGSC projects.

Remove all references within the specifications, to the following:

- General Instructions to Bidders
- General Conditions
- CCDC documents
- Priority of documents
- Security clauses
- Terms of payment or holdback
- Tendering process
- Bonding requirements
- Insurance requirements
- Alternative and separate pricing
- Site visit (Mandatory or Optional)
- Release of Lien and deficiency holdbacks

## **DRAWINGS**

### **1 Title Blocks**

Use PWGSC title block for drawings and sketches (including addenda).

### **2 Dimensions**

Dimensions are to be in metric only (no dual dimensioning).

### **3 Trade Names**

Trade names on drawings are not acceptable. Refer to SECTION 3, SPECIFICATIONS, 6.0 Specifying Materials for specifying materials by trade name.

### **4 Specification Notes**

No specification type notes are to appear on any drawing.

### **5 Terminology**

Use the term "Departmental Representative" instead of Engineer, PWGSC, Owner, Consultant or Architect. "Departmental Representative" means the person designated in the Contract, or by written notice to the Contractor, to act as the Departmental Representative for the purposes of the Contract, and includes a person, designated and authorized in writing by the Departmental Representative to the Contractor.

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Notations such as: "verify on site", "as instructed", "to match existing", "example", "equal to" or "equivalent to", "to be determined on site by "Departmental Representative", should not be indicated in the specifications as this promotes inaccurate and inflated bids. Specifications must permit bidders to calculate all quantities and bid accurately. If quantities are impossible to identify (i.e. cracks to be repaired) give an estimated quantity for bid purposes (unit prices). Ensure that the terminology used throughout the specifications is consistent and does not contradict the applicable standard construction contract documents.

## **6 Information to be included**

Drawings should show the quantity and configuration of the project, the dimensions and details of how it is constructed. There should be no references to future work and no any information that will be changed by future addenda. The scope of work should be clearly detailed and elements not in contract should be eliminated or kept to an absolute minimum.

**7 Drawing Numbers:** Number drawings in sets according to the type of drawing and the discipline involved as follows (The requirements of SECTION 2 PWGSC NATIONAL CADD STANDARD will supercede these requirements, where warranted).



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During the Design Phase of the project each submission and review must be noted on the Notes block of the drawing title, but at the time of construction document preparation, all revision notes should be removed.

Discipline	Drawing
Demolition	D1, D2, etc.
Architectural	A1, A2, etc.
Civil	C1, C2, etc.
Landscaping	L1, L2, etc.
Mechanical	M1, M2, etc.
Electrical	E1, E2, etc.
Structural	S1, S2, etc.
Interior Design	ID1, ID2, etc.

- 8 Presentation Requirements:** Present drawings in sets comprising the applicable demolition, architectural, structural, mechanical and electrical drawings in that order. All drawings should be of uniform standard size.
- 9 Prints:** Print with black lines on white paper. Blue prints are acceptable for document submissions at 33%, 66% and 99% stages. Confirm with Project Manager the size of prints to be provided for review purposes.
- 10 Binding:** Staple or otherwise bind prints into sets. Where presentations exceed 20 sheets, the drawings for each discipline may be bound separately for convenience and ease of handling.
- 11 Legends:** Provide a legend of symbols, abbreviations, references, etc., on the front sheet of each set of drawings or, in large sets of drawings, immediately after the title sheet and index sheets.
- 12 Schedules:** Where schedules occupy entire sheets, locate them next to the plan sheets or at the back of each set of drawings for convenient reference. *See CGSB 33-GP-7 Architectural Drawing Practices for schedule arrangements.*
- 13 North Points:** On all plans include a north point. Orient all plans in the same direction for easy cross-referencing. Wherever possible, lay out plans so that the north point is at the top of the sheet.
- 14 Drawing Symbols:** Follow generally accepted drawing conventions, understandable by the construction trades, and in accordance with PWGSC publications.

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## **ADDENDA**

### **1 Format**

Prepare addenda using the format shown in Appendix B. No signature type information is to appear.

Every page of the addendum (including attachments) must be numbered consecutively. All pages must have the PWGSC project number and the appropriate addendum number. Sketches shall appear in the PWGSC format, stamped and signed.

No Consultant information (name, address, phone #, consultant project # etc.) should appear in the addendum or its attachments (except on sketches).

### **2 Content**

Each item should refer to an existing paragraph of the specification or note/detail on the drawings. The clarification style is not acceptable.

## **DOCUMENTATION**

### **Translation**

When required, all documentation included in the construction contract documents shall be in both official languages.

Ensure that English and French documents are equal in all respects. There can be no statement that one version takes precedence over the other.

### **Consultant shall provide:**

- Per construction document submission, a completed and signed Checklist for the Submission of Construction Documents. See Appendix 'A'.
- Specification: originals printed one side on 216 mm x 280 mm white bond paper.
- Index: as per Appendix 'C'
- Addenda (if required): as per Appendix 'B' (to be issued by PWGSC).
- Drawings: reproducible originals, sealed and signed by the design authority.
- Tender information:
  - Including a description of all units and estimated quantities to be included in unit price table.
  - Including a list of significant trades including costs. PWGSC will then determine which trades, if any, will be tendered through the Bid Depository.
  - Government Electronic Tendering System (MERX): Consultants to provide an electronic true copy of the final documents (specifications and drawings) on one or multiple CD-ROM in Portable Document Format (PDF) without password protection and printing restrictions. The electronic copy of drawings and specifications is for bidding purposes only and do not require to be signed and sealed. See Appendix 'D' and Appendix 'E'.

### **PWGSC shall provide:**

- General and Special Instructions to Bidders
- Bid and Acceptance Form
- Standard Construction Contract Documents



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## **SECTION 4 CLASSES OF CONSTRUCTION COST ESTIMATES USED BY PWGSC**

### **DESCRIPTION OF THE CLASSES OF ESTIMATES USED BY PWGSC FOR CONSTRUCTION COSTING OF BUILDINGS PROJECTS**

#### **Class 'D' (Indicative) Estimate:**

Based upon a comprehensive statement of requirements, and an outline of potential solutions, this estimate is to provide an indication of the final project cost, and allow for ranking all the options being considered.

Submit Class D cost estimates in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors with cost per m<sup>2</sup> for current industry statistical data for the appropriate building type and location. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

The level of accuracy of a class D cost estimate shall be such that no more than a 20% contingency allowance is required.

#### **Class 'C' Estimate:**

Based on a comprehensive list of requirements and assumptions, including a full description of the preferred schematic design option, construction/design experience, and market conditions. This estimate must be sufficient for making the correct investment decision.

Submit Class C cost estimates in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors with cost per m<sup>2</sup> for current industry statistical data for the appropriate building type and location. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

The level of accuracy of a class C cost estimate shall be such that no more than a 15% contingency allowance is required.

#### **Class 'B' (Substantive) Estimate:**

Based on design development drawings and outline specifications, which include the design of all major systems and subsystems, as well as the results of all site/installation investigations. This estimate must provide for the establishment of realistic cost objectives and be sufficient to obtain effective project approval.

Submit Class B cost estimates in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

The level of accuracy of a class B cost estimate shall be such that no more than a 10% design contingency allowance is required.

#### **Class 'A' (Pre-Tender) Estimate:**

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Based on completed construction drawings and specifications prepared prior to calling competitive tenders. This estimate must be sufficient to allow a detailed reconciliation/negotiation with any contractor's tender.

Submit Class A cost estimates in both elemental cost analysis format and trade divisional format latest edition issued by the Canadian Institute of Quantity Surveyors. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

The level of accuracy of a class A cost estimate shall be such that no more than a 5% design contingency allowance is required.

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## **SECTION 5 TIME MANAGEMENT**

### **1 Time Management, Planning, and Control**

The Time Management, Planning, and Control Specialist (scheduler) shall provide a Project Planning and Control System (Control System) for Planning, Scheduling, Progress Monitoring and Reporting and a Time Management, Planning, and Control Report (Progress Report). It is required that a fully qualified and experienced Scheduler play a major role in providing services in the development and monitoring of the project schedule.

The scheduler will follow good industry practices for schedule development and maintenance as recognized by the Project Management Institute (PMI).

PWGSC presently utilizes the Primavera Suite software and MicroSoft Project for its current Control Systems and any software used by the consultant should be fully integrated with these, using one of the many commercially available software packages.

#### **1.1 Schedule Design**

Project Schedules are used as a guide for execution of the project as well as to communicate to the project team when activities are to happen, based on network techniques using Critical Path Method (CPM).

When building a Control System you must consider:

1. The level of detail required for control and reporting;
2. The reporting cycle- monthly and what is identified in the Terms of Reference, but also includes Exception Reports;
3. That the duration must be in days;
4. What is required for reporting in the Project Teams Communications Plan and
5. The nomenclature and coding structure for naming and reporting requirements of activities, schedules and reports.

#### **1.2 Schedule Development**

For purposes of monitoring and reporting of project progress and ease of schedule review it is important to maintain a standard for all schedules and reports starting with the Work Breakdown Structure (WBS), identification of Milestones, naming of activities as well as schedule outputs and paper sizing and orientation.

#### **Work Breakdown Structure**

When developing the schedule the consultant needs to use PWGSC standards and practices. Two basic requirements are the National Project Management System

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(NPMS) and a Work Breakdown Structure (WBS), structured supporting the NPMS (Levels 1-4).

The WBS is as follows:

- Level 1 Project Title (NPMS)
- Level 2 Project Stage (NPMS)
- Level 3 Project Phase (NPMS)
- Level 4 Processes to meet Deliverables/Control Points Milestones (NPMS)
- Level 5 Sub-Processes and Deliverables in support of Level 4
- Level 6 Discrete activities. (Work Package)

Not all the Stages, Phases and Processes in the NPMS will be required on all the projects, however the structure remains the same.

### **Major and Minor Milestones**

The Major Milestones are standard Deliverables and Control Points within NPMS and are required in all schedule development. These Milestones will be used in Management Reporting within PWGSC as well as used for monitoring project progress using Variance Analysis. The Minor milestones are process deliverables (Level 4) or sub-process deliverables (level 5) also used in Variance Analysis.

Each Milestone will also be assigned appropriate coding for Status Reporting and Management Reporting.

Milestones must have zero duration and are used for measuring project progress.

Milestones may also be external constraints such as the completion of an activity, exterior to the project, affecting the project.

### **Activities**

All activities will need to be developed based on Project Objectives, Project Scope , Major and Minor Milestones, meetings with the project team and the scheduler's full understanding of the project and it's processes.

Subdivide the elements down into smaller more manageable pieces that organize and define the total scope of work in Levels 5-6 that can be scheduled, costed, monitored and controlled. This process will develop the Activity List for the project.

Each activity is a discrete element of work and is the responsibility of one person to perform.

Each activity will describe the work to be performed using a verb and noun combination (i.e. Review Design Development Report).

Activities should not have durations longer than 2 update cycles, with exception of activities not yet defined in a "Rolling Wave".

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Each activity will be assigned at WBS level 6 and appropriately coded for Status Reporting and Management Reporting.

These elements will become activities, interdependently linked in Project Schedules.

### **Project Logic**

Once the WBS, Milestones and Activity List have been developed the activities and milestones can be linked in a logical manner starting with a Project Start Milestone. Every activity and milestone must be linked in a logical manner using either a Finish to Start (FS), Finish to Finish (FF), Start to Start (SS) or Start to Finish (SF) relationship. There can be no open-ended activities or milestones.

A Finish to Start (FS) is the preferred relationship.

When developing relationships avoid the use of lags and constraints in place of activities and logic.

### **Activity Duration**

The activity duration (in days) is the estimated length of time it will take to accomplish a task.

Consideration needs to be taken in how many resources are needed and are available, to accomplish any activity. (Example: availability of Framers during a “Housing Boom”.) Other factors are the type or skill level of the available resources, available hours of work, weather etc.

There will be several types of lists and schedules produced from this process, which will form part of the Progress Report.

### **Activity List**

An Activity List identifies all activities including milestones required to complete the whole project.

### **Milestone List**

A Milestone List identifies all project Major and Minor milestones.

### **Master Schedule**

A Master Schedule is a schedule used for reporting to management at WBS level 4 and 5 that identifies the major activities and milestones derived from the detailed schedule. Cash Flow projections can be assigned at WBS level 5 for monitoring the Spending Plan.

### **Detailed Project Schedule**



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A Detailed Project Schedule is a schedule in reasonable detail (down to WBS Level 6 and 7) for progress monitoring and control, this will ensure that the schedule shall be in sufficient detail to ensure adequate planning and control.

### **1.3 Schedule Review and Approval**

Once the scheduler has identified and properly coded all the activities; put them into a logical order and then determined the appropriate durations. The scheduler can then analyze the schedule to see if the milestone dates meet the contractual requirements and then adjust the schedule accordingly by changing durations, resource leveling or changing logic.

When the schedule has been satisfactorily prepared the scheduler can present the detailed schedule to the Project Team for approval and be Baselined. There may be several iterations before the schedule meets with the Project Teams agreement and the contractual requirements.

The final agreed version must be copied and saved as the Baseline to monitor variances for reporting purposes.

### **1.4 Schedule Monitoring and Control**

Once Baselined the schedule can be better monitored, controlled and reports can be produced.

Monitoring is performed by, comparing the baseline activities % complete and milestone dates to the actual and forecast dates to identify the variance and record any potential delays, outstanding issues and concerns and provide options for dealing with any serious planning and scheduling issues in report form.

Analyze and report from early start sequence on all activities due to start, underway, or finished for the complete project.

There will be several reports generated from the analysis of the baseline schedule and will form part of the Time Management Report in the Required Services Sections (RS)

### **Progress Reports**

A Progress Report reflects the progress of each activity to the date of the report, any logic changes, both historic and planned, projections of progress and completion the actual start and finish dates of all activities being monitored.

#### **The Progress Report includes:**

A Narrative Report, detailing the work performed to date, comparing work progress to planned, and presenting current forecasts. This report should summarize the progress to date, explaining current and possible deviations and delays and the required actions to resolve delays and problems with respect to the Detail Schedule, and Critical Paths.

Narrative reporting begins with a statement on the general status of the project followed by a summarization of delays, potential problems and project status criticality, any

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potential delays, outstanding issues and concerns and options for dealing with any serious planning and scheduling issues.

A Variance Report, with supporting schedule documentation, detailing the work performed to date, comparing work progress to planned. This report should summarize the progress to date, explaining all causes of deviations and delays and the required actions to resolve delays and problems with respect to the Detail Schedule, and Critical Paths.

A Criticality Report identifying all activities and milestones with negative, zero and up to five days Total Float used as a first sort for ready identification of the critical, or near critical paths through the entire project.

Included in the Progress Report as attachments are: WBS chart, Activity Lists, Milestone Lists, Master Schedules, Detailed Project Schedule

### **Exception Report**

The Scheduler is to provide continuous monitoring and control, timely identification and early warning of all unforeseen or critical issues that affect or potentially affect the project.

If unforeseen or critical issues arise, the Scheduler will advise the Project Manager and submit proposed alternative solutions in the form of an Exception Report.

An Exception Report will include sufficient description and detail to clearly identify:

1. Scope Change: Identifying the nature, reason and total impact of all identified and potential project scope changes affecting the project.
2. Delays and accelerations: Identifying the nature, the reason and the total impact of all identified and potential duration variations.
3. Options Enabling a Return to the project baseline: Identifying the nature and potential effects of all identified options proposed to return the project within baselined duration.

### **1.5 Standard Submissions**

At each submission or deliverable stage provide a complete and updated Progress Report, the contents of each report will vary with requirements and at each project phase. Typically a Progress Report has:

1. Executive Summary;
2. Narrative Report;
3. Variances Report;
4. Criticality Report;
5. Exception Report (as required)
6. Work Breakdown Structure Chart;
7. Activity List;
8. Milestone List;
9. Master Schedule with Cash Flow Projections;
10. Detail Project Schedule (Network Diagram or Bar Charts);

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## **1.6 Schedule Outputs and Reporting Formats**

The sheet sizing and orientation is more a suggestion that a role, changes to the paper format may vary to accommodate the information and column information required.

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## **Progress Reports**

Paper Size: Letter

Paper Format: Portrait

Title Format: Project Title; Report Type; Print Date; Data Date; Revision Block

Body Text: Narratives for each report to match other reports generated in the D.S.S.

Variance Report Columns: Activity ID, Activity Name, Planned Finish, Revised Finish, Variance, Activity % Complete,

Criticality Report Columns: Activity ID, Activity Name, Duration, Start, Finish, Activity % Complete, Total Float.

## **Exception Reports**

Paper Size: Letter

Paper Format: Portrait

Title Format: Project Title; Report Type; Print Date; Data Date; Revision

Body Text: Narrative to match other reports generated in the D.S.S.

Paper Size: Letter

Paper Format: Landscape

Title Format: Project Title; Report Type; Print Date; Data Date; Revision

Columns: Activity ID, Activity Name, Duration, Remaining Duration, Start, Finish, Total Float.

Work Breakdown Structure (indent tree):

Paper Size: Letter

Paper Format: Portrait

Columns: WBS Code, WBS Name, Duration, Cost estimate, start and finish dates.

Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block

## **Activity Lists**

Paper Size: Letter

Paper Format: Portrait

Columns: Activity ID, Activity Name, Start, Finish, Predecessor, Successor.

Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block

Sort with Early Start, then Early Finish, then Activity ID and with the WBS.

## **Milestone Lists**

Paper Size: Letter

Paper Format: Portrait

---

Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block  
Columns: Activity ID, Activity Name, Start, Finish.

Sort with Early Start, then Early Finish, then Activity ID and without the WBS.

### **Master Schedule (Bar Chart)**

Paper Size: 11X17  
Paper Format: Landscape  
Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block  
Columns: Activity ID, Activity Name, Duration, Activity % Complete, Start, Finish,  
Total Float.

Sort with Early Start, then Early Finish, then Activity ID and with the WBS.

### **Detailed Project Schedules (Bar Chart)**

Paper Size: 11X17  
Paper Format: Landscape  
Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block  
Columns: Activity ID, Activity Name, Duration, Activity % Complete, Start, Finish,  
Total Float.

Sort with Early Start, then Early Finish, then Activity ID and with the WBS.

## APPENDIX 'A' - Checklist for the Submission of Construction Documents to PWGSC

Last updated November 21, 2012

<b>Date:</b>		
<b>Project Title:</b>	<b>Project Location:</b>	
<b>Project Number:</b>	<b>Contract Number:</b>	
<b>Consultant's Name:</b>	<b>PWGSC Project Manager:</b>	
<b>Review Stage:</b>		
66%	99%	100%

Item	Verified by:	Comments:	Action by:
<b>Specifications:</b>			
<b>1 National Master Specifications</b>			
<b>1a</b> The current edition of the NMS has been used.			
<b>1b</b> Sections have been included for all work identified on drawings and sections edited.			
<b>2 Specification Organization</b>			
<b>2a</b> Either the NMS 1/3 - 2/3 page format or the Construction Specifications Canada full page format is used.			
<b>2b</b> Each Section starts on a new page and the Project Number, Section Title, Section Number and Page Number show on each page.			
<b>2c</b> Specification date and consultant's name are not indicated.			
<b>3 Terminology</b>			
<b>3a</b> The term Departmental Representative is used instead of Engineer, PWGSC, Owner, Consultant or Architect.			
<b>3b</b> Notations such as: "verify on site", "as instructed", "to match existing", "example", "equal to", "equivalent to" and "to be determined on site by" are not used.			
<b>4 Dimensions</b>			
<b>4a</b> Dimensions are provided in metric only.			
<b>5 Standards</b>			
<b>5a</b> The latest edition of all references quoted is used.			

<b>6 Specifications Materials</b>			
<b>6a</b> The method of specifying materials uses recognized standards. Actual brand names and model numbers are not specified.			
<b>6b</b> Materials are specified using standards and performance criteria (if not, the correct form of acceptable materials has been used).			
<b>6c</b> Identify if non-restrictive, non-trade name "prescription" or "performance" specifications are used.			
<b>6d</b> Indicate if a list of acceptable materials have been used.			
<b>6e</b> The term "Acceptable Manufacturers" is not used.			
<b>6f</b> No sole sourcing has been used.			
<b>6g</b> If sole sourcing has been used, the correct wording has been used and a justification provided to RPCD for the sole sourced products.			
<b>7 Unit Prices</b>			
<b>7a</b> Unit prices are used only for work that is difficult to estimate.			
<b>8 Cash Allowances</b>			
<b>8a</b> Indicate if cash allowances have been used.			
<b>9 Warranties</b>			
<b>9a</b> Indicate if warranties extend more than a 12 or 24 months period.			
<b>9b</b> Manufacturers guarantees are not indicated.			
<b>10 Scope of Work</b>			
<b>10</b> No paragraphs noted as "Scope of Work" are included.			
<b>11 Summary and Section Includes</b>			
<b>11a</b> In part 1 of section, paragraphs "Summary" and "Section Includes" are not used.			
<b>12 Related Sections</b>			
<b>12a</b> The list of related sections and appendices are coordinated.			
<b>13 Index</b>			
<b>13a</b> The index shows a complete list of plans and specification sections with the correct number of pages and correct drawing titles and section names.			
<b>14 Regional Guide Specifications</b>			
<b>14a</b> General Instructions is included (Section 01 00 10 in the NCA).			

<b>15 Health and Safety</b>			
<b>15a</b> Section 01 35 29.06 - Health and Safety Requirements is included.			
<b>16 Designated Substances Report</b>			
<b>16 a</b> Section 01 14 25 - Designated Substances Report is included.			
<b>17 Subsurface Investigation Reports</b>			
<b>17a</b> Subsurface Investigation Reports are included in Division 31.			
<b>18 Experience and qualifications</b>			
<b>18a</b> Experience and qualification requirements do not appear in the specification sections			
<b>19 Pre-qualifications</b>			
<b>19a</b> There are no mandatory contractor and/or subcontractor pre-qualification requirements or references to certificates, transcripts or license numbers of a trade or subcontractor being included in the bid.			
<b>20 Contracting Issues</b>			
<b>20a</b> Contracting issues do not appear in the specifications.			
<b>20b</b> Division 00 of the NMS is not used.			
<b>21 Quality Issues</b>			
<b>21a</b> There are no specification clauses with square brackets “[ ]” or lines “___” indicating that the document is incomplete or missing information.			

Item	Verified by:	Comments:	Action By:
<b>Drawings:</b>			
<b>1 Title Blocks</b>			
<b>1a</b> The PWGSC title block is used.			
<b>2 Dimensions</b>			
<b>2a</b> Dimensions are provided in metric only.			
<b>3 Trade Names</b>			
<b>3a</b> Trade names are not used.			
<b>4 Specification Notes</b>			
<b>4a</b> There is no specification type notes.			
<b>5 Terminology</b>			
<b>5a</b> The term Departmental Representative is used instead of Engineer, PWGSC, Owner,			



Consultant or Architect.			
<b>5b</b> Notations such as: “verify on site”, “as instructed”, “to match existing”, “example”, “equal to”, “equivalent to” and “to be determined on site by” are not used.			
<b>6 Information to be included</b>			
<b>6a</b> Architectural and Engineering Drawings have been stamped and signed by the design authority.			
<b>6b</b> The project quantity and configuration, dimensions and construction details are included.			
<b>6c</b> References to future work and elements not in contract do not appear or are kept to an absolute minimum and clearly marked.			

---

I confirm that the plans and specifications have been thoroughly reviewed and that the items listed above have been addressed or incorporated. I acknowledge and accept that by signing, I am certifying that all items noted above have been addressed.

Consultant's Representative: \_\_\_\_\_

Firm name: \_\_\_\_\_

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

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## APPENDIX 'B' - Sample of Addendum

Last updated April 22, 2008

**ADDENDUM No.** \_\_\_\_\_

**Project Number:** \_\_\_\_\_

**The following changes in the bid documents are effective immediately. This addendum will form part of the contract documents**

### DRAWINGS

SPEC NOTE: indicate drawing number and title, then list changes or indicate revision number and date, and re-issue drawing with addendum.

- 1      A1 Architectural
- .1

### SPECIFICATIONS

SPEC NOTE: indicate section number and title.

- 1      Section 01 00 10 - General Instructions

SPEC NOTE: list all changes (i.e. delete, add or change) by article or paragraph

- .1      Delete article (xx) entirely.
  - .2      Refer to paragraph (xx.x) and change ...
- 2      Section 23 05 00 - Common Work Results - Mechanical
- .1      Add new article (x) as follows:

## APPENDIX 'C' - Sample of Index

Last updated April 22, 2008

**Project No:** \_\_\_\_\_

**Index**  
**Page 1 of** \_\_\_\_\_

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## DRAWINGS AND SPECIFICATIONS

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### DRAWINGS:

SPEC NOTE: List all Drawings by number and title.

C-1	Civil
L-1	Landscaping
A-1	Architectural
S-1	Structural
M-1	Mechanical
E-1	Electrical

### SPECIFICATIONS:

SPEC NOTE: List all Divisions, Sections (by number and title) and number of pages.

<u>DIVISION</u>	<u>SECTION</u>	<b>NO. OF PAGES</b>
		<div></div>
DIVISION 01	01 00 10 - General Instructions.....	.....XX
	01 14 25 - Designated Substances Report.....	.....XX
	01 35 30 - Health and Safety.....	.....XX
DIVISION 23	23 xx xx	
DIVISION 26	26 xx xx	

---

## APPENDIX 'D'

### USER MANUAL ON DIRECTORY STRUCTURE AND NAMING CONVENTION STANDARDS FOR CONSTRUCTION TENDER DOCUMENTS ON CD ROM

Issued by:

Real Property Contracting Directorate

PWGSC

**May 2005**

Last Updated: June 3, 2008

Version 1.0

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## PREFACE

The Government of Canada (GoC) has committed to move towards an electronic environment for the majority of the services it offers. This covers the advertisement and distribution of contract opportunities, including construction solicitations. As a result, it is necessary to obtain a copy of construction drawings and specifications (in PDF format **without** password protection) on one or multiple CD-ROM to facilitate for the GoC the transfer of the construction drawings and specifications electronically to the Government Electronic Tendering System (GETS).

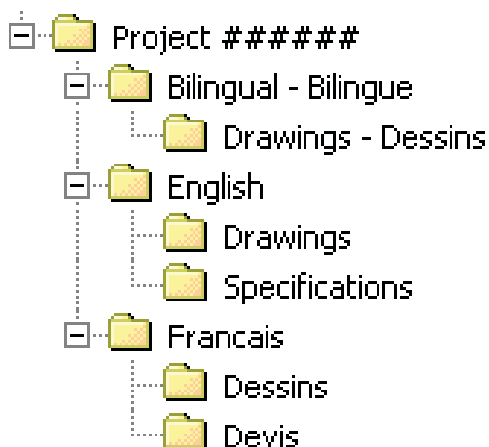
There is therefore a need to adopt a common directory structure and file-naming convention to ensure that the information made available to contractors electronically and in hard (printed) copy is in accordance with the sequence adopted in the real property industries, both for design and construction. This manual defines the standard to be followed by both consultants and print shops at time of formatting and organizing the information, whether drawings and specifications are created by scanning print documents or saved as PDF files from the native software (AutoCAD, NMS Edit, MS-Word, etc...) in which these were created.

It is important to note that the procedure described in this manual is not an indication that consultants are relieved from following the established standards for the production of drawings and specifications. The sole purpose of this manual is to provide a standard for the organization and naming of the electronic files that will be recorded on CD-ROM.

## 1. DIRECTORY STRUCTURE

### 1.1 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Tier Sub-Folders

Each CD-ROM, whether it is for the original solicitation (tender call) or for an amendment (addendum), must have the applicable elements of the following high-level Directory Structure created:



The following important points are to be noted about the Directory Structure:

- The “*Project #####*” folder is considered the 1<sup>st</sup> Tier of the Directory Structure where *#####* represents each digit of the Project Number. The Project Number must always be used to name the 1<sup>st</sup> Tier folder and it is always required. Free text can be added following the Project Number, to include such things as a brief description or the project title;
- The “*Bilingual - Bilingue*”, “*English*” and “*Français*” folders are considered the 2<sup>nd</sup> Tier of the Directory Structure. The folders of the 2<sup>nd</sup> Tier **cannot** be given any other names since GETS uses these names for validation purposes. At least one of the “*Bilingual - Bilingue*”, “*English*” and “*Français*” folders is always required, and these must always have one of the applicable sub-folders of the 3<sup>rd</sup> Tier;
- The “*Drawings - Dessins*”, “*Drawings*”, “*Specifications*”, “*Dessins*” and “*Devis*” folders are considered the 3<sup>rd</sup> Tier of the Directory Structure. The folders of the 3<sup>rd</sup> Tier **cannot** be given any other names since GETS also uses these names for validation purposes. There must be always at least one of the applicable 3<sup>rd</sup> Tier folder in each document.

**IMPORTANT:**

The applicable elements of the Directory Structure (1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Tier folders) are always required and cannot be modified.

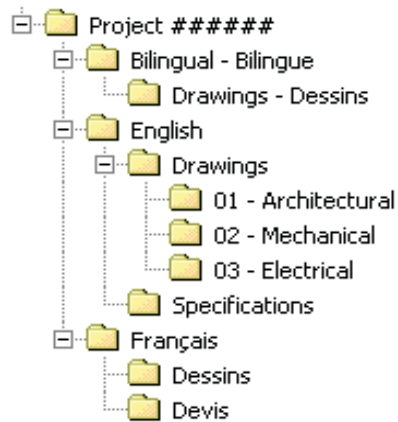
### 1.2 4<sup>th</sup> Tier Sub-Folders for Drawings

The “*Drawings – Dessins*”, “*Drawings*” and “*Dessins*” folders must have 4<sup>th</sup> Tier sub-folders created to reflect the various disciplines of the set of drawings.

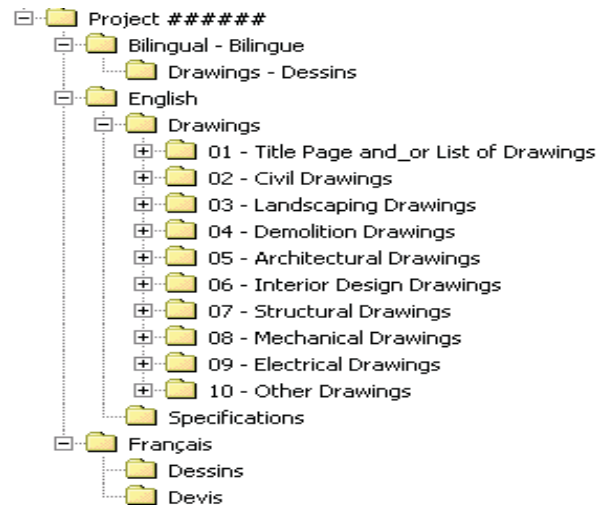
Because the order of appearance of the sub-folders on the screen will also determine the order of printing, it is necessary to start with a number the identification name of the sub-folders in the “Drawings – Dessins”, “Drawings” and “Dessins” folders.

Note: The first sub-folder must be always reserved for the Title Page and/or the List of Drawings unless the first drawing of the set is an actual numbered discipline drawing.

Examples of 4<sup>th</sup> Tier sub-folders for drawings:



or



---

### 1.2.1 Naming Convention

The 4<sup>th</sup> Tier sub-folders for drawings must adhere to the following standard naming convention.

For the “*Drawings*” and “*Dessins*” folders:

## - Y

Where:

## = A two digit number ranging from 01 to 99 (leading zeros must be included)

Y = The title of the folder

Example: 03 – Mechanical

For the “*Drawings - Dessins*” folder:

## - Y - Z

Where:

## = A two digit number ranging from 01 to 99 (leading zeros must be included)

Y = The English title of the folder

Z = The French title of the folder

Example: 04 - Electrical - Électricité

It should be noted that the numbering of the 4<sup>th</sup> Tier sub-folders is for sorting purposes only and is not tied to a specific discipline. For example, “*Architectural*” could be numbered 05 for a project where there is four other disciplines before “*Architectural*” in the set of drawings or 01 in another project where it’s the first discipline appearing in the set.

It is essential to ensure that the order of the drawings on the CD-ROM be exactly the same as in the hard copy set. GETS will sort each drawing for both screen display and printing as per the following rules:

- The alphanumerical sorting is done on an ascending order;
- The alphanumerical order of the sub-folders determines the order of appearance on the screen as well as the order of printing (as an example: all the drawing PDF files in the 01 sub-folder will be printed in alphanumerical order before the drawings in the 02 sub-folder etc...);
- Each drawing PDF file within each sub-folder will also be sorted alphanumerically. This will determine the order of appearance on the screen as well as the order of printing (i.e. Drawing A001 will be printed before Drawing A002, Drawing M02 before Drawing M03, etc...).

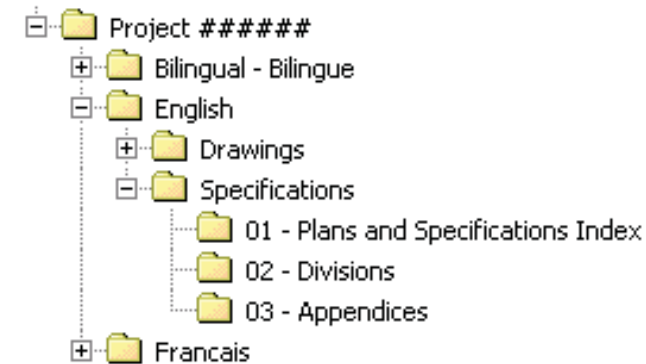
### 1.3 4<sup>th</sup> Tier Sub-Folders for Specifications

The “*Specifications*” and “*Devis*” folders must have 4<sup>th</sup> Tier sub-folders created to reflect the various elements of the specifications.

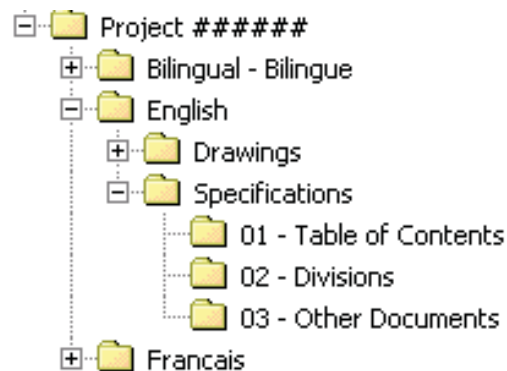


Because the order of appearance of the sub-folders on the screen will also determine the order of printing, it is necessary to start with a number the identification name of the sub-folders in the “Specifications” and “Devis” folders.

Examples of 4<sup>th</sup> Tier sub-folders for specifications:



or



### 1.3.1 Naming Convention

The 4<sup>th</sup> Tier sub-folders for specifications must adhere to the following standard naming convention.

For the “Specifications” and “Devis” folders:

## - Y

Where:

## = A two digit number ranging from 01 to 99 (leading zeros must be included)

Y = The title of the folder

**Example: 02 – Divisions**

It should be noted that the numbering of the 4<sup>th</sup> Tier sub-folders is for sorting purposes only and is not tied to an element of the specifications.

It is essential to ensure that the order of the elements of the specifications on the CD-ROM be exactly the same as in the hard copy. GETS will sort each element of the specifications for both

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screen display and printing as per the following rules:

- The alphanumerical sorting is done on an ascending order;
- The alphanumerical order of the sub-folders determines the order of appearance on the screen as well as the order of printing (as an example: all the specifications PDF files in the 01 sub-folder will be printed, in alphanumerical order before the PDF files in the 02 sub-folder, etc...);
- Each specifications PDF file within each sub-folder will also be sorted alphanumerically. This will determine the order of appearance on the screen as well as the order of printing (i.e. Division 01 will be printed before Division 02, 01 - Appendix A before 02 - Appendix B, etc...).

## 2. NAMING CONVENTION FOR PDF FILES

Each drawing, specifications division or other document that are part of the tender documents must be converted in PDF format (without password protection) in accordance with the following standard naming convention and each PDF file must be located in the appropriate sub-folder of the Directory Structure.

### 2.1 Drawings

Each drawing must be a **separate single page** PDF file. The naming convention of each drawing must be:

X### - Y

Where:

X = The letter or letters from the drawing title block ("A" for Architectural or "ID" for Interior Design for example) associated with the discipline

### = The drawing number from the drawing title block (one to three digits)

Y = **The drawing name from the drawing title block (for bilingual drawings, the name in both English and French is to appear)**

Example: A001 - First Floor Details

Each drawing that will be located in the appropriate discipline 4<sup>th</sup> Tier sub-folders must be named with the same letter ("A" for Architectural Drawings for example) and be numbered. The drawing number used to name the PDF file must match as much as possible the drawing number of the actual drawing (the exception being when leading zeros are required).

The following important points about drawings are to be noted:

- The drawing PDF files within each sub-folder are sorted alphanumerically for both displaying and printing. If there are more than 9 drawings in a particular discipline the numbering must use at least two numerical digits (i.e. A01 instead of A1) in order to avoid displaying drawing A10 between A1 and A2. The same rule applies when there are more than 99 drawings per discipline i.e. three digits instead of two must be used for the numbering (for example M003 instead of M03);

- If drawing PDF files are included in the “*Bilingual - Bilingue*” folder, these cannot be included as well in the “*English*” and/or “*Français*” folders;
- If drawings not associated with a particular discipline are not numbered (Title Page or List of Drawings for example), these will be sorted alphabetically. While this does not represent a problem if there is only one drawing in the sub-folder, it could disrupt the order when there are two or more drawings. If the alphabetical order of the drawings name does not represent the order on the hard copy set, the drawings are to be named as per the following standard convention when converted in PDF format to ensure proper display and printing order.

## - Y

Where:

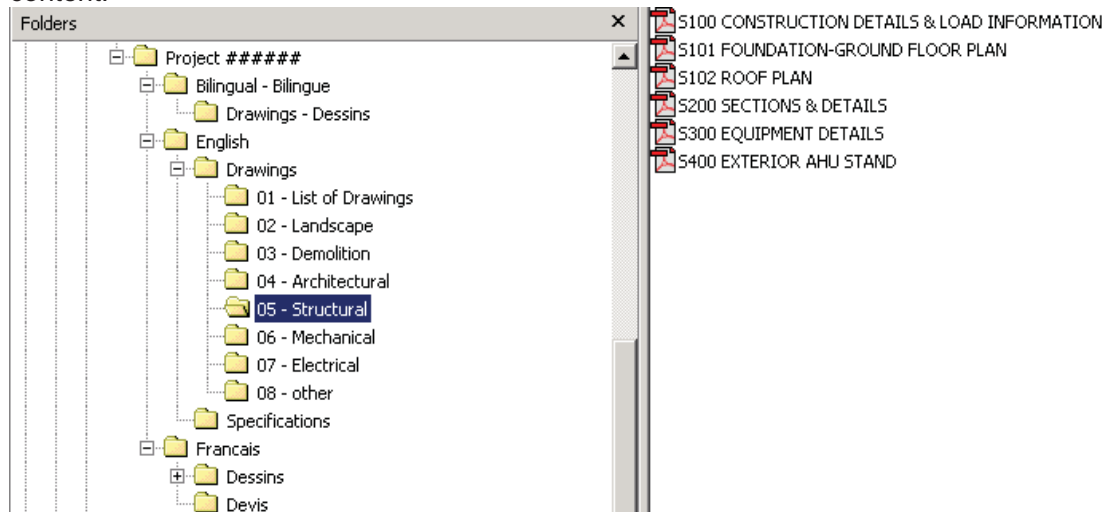
## = A two digit number ranging from 01 to 99 (leading zeros must be included)

Y = The name of the drawing

Example: 01 - Title Page  
02 - List of Drawings

If numbers are not used in the PDF files name, “*List of Drawings*” will be displayed before “*Title Page*” because “L” comes before “T” in the alphabet.

Example of a 4<sup>th</sup> Tier Drawings sub-folder's content:



## 2.2. Specifications

Each Specifications Division must be a separate PDF file and all pages contained in each PDF file must have the same physical size (height, width). The Plans and Specifications Index must

also be a separate PDF file. If there are other documents that are part of the Specifications (e.g. Appendix or other) these are to be separate PDF files as well.

### 2.2.1 Documents other than Specifications Divisions

Because PDF files within the Specifications sub-folders are sorted alphanumerically (in ascending order) for both on screen display and printing order, all files that appear in folders other than the “*Divisions*” sub-folder must be named using a number:

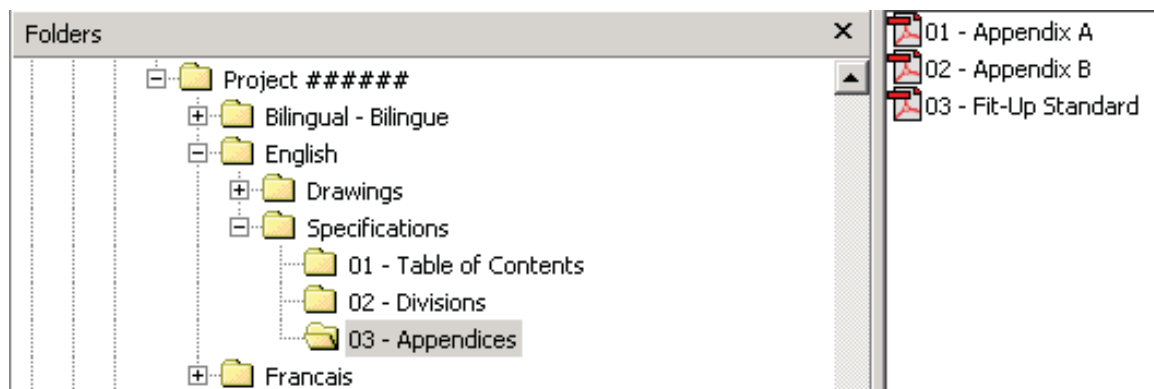
## - Y

Where:

## = Two digit number ranging from 01 to 99 with leading zeros required  
Y = Name of the document

Example: 01 - Plans and Specifications Index

Example of a sub-folder content (sub-folder other than “*Divisions*”):



### 2.2.2 Specifications Divisions

The Specifications Divisions must be named as follows:

Division ## - Y

Where:

Division ## = The actual word “*Division*” followed by a space and a two digit number ranging from 01 to 99 (with leading zeros required)

Y = Name of the Specifications Division as per **CSC/CSI MasterFormat™**

Example: Division 05 – Metals

The following important point about specifications is to be noted:

- The Numbering of the Divisions **cannot** be altered from **CSC/CSI MasterFormat™** even if some Divisions are not used in a given project. For example, Division 05 will always remain Division 05 even if Division 04 is not used for a given project.

Example of a “Divisions” sub-folder content:



### 3. CD-ROM LABEL

Each CD-ROM is to be labeled with the following information:

Project *Number* / *Numéro de projet*

Project *Title* / *Titre du projet*

Documents for Tender / Documents pour appel d'offres

CD X of/de X

Example:

Project 123456 / Projet 123456

Repair Alexandra Bridge / Réparation du pont Alexandra

---

Documents for Tender / Documents pour appel d'offres  
CD 1 of/de 1

---

## **APPENDIX 'E'**

### **BASIC REFERENCE GUIDE ON CONVERTING CONSTRUCTION DRAWINGS INTO PORTABLE DOCUMENT FORMAT (PDF)**

**Issued by:**  
**Real Property Contracting Directorate**  
**PWGSC**

May 2005 Last Updated: May 3, 2005

Version 1.0

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## **PREFACE**

Portable Document Format (PDF) is the standard format for documents that are posted on the Government Electronic Tendering System (GETS). There is therefore a need to obtain from architectural and engineering consultants an electronic copy of drawings and specifications in PDF for tendering Government of Canada (GoC) construction projects.

In order to have the highest quality in term of resolution and printing, consultants should to the greatest extent possible have the PDF drawing and specification files derived from the native software in which they were created. Scanning is permissible but only in special circumstances, for example when there is no electronic version of a drawing being included in a construction tender package.

The purpose of this document is to provide basic information on the conversion of Computer Aided Design and Drafting (CADD) drawings in PDF. Creating a PDF file from a CADD drawing is a relatively simple process once all the necessary configurations and settings are in place. It actually should not take any longer than it would take to create a plot file or to send a drawing to a printer. The information in this guide is not intended to cover all technical aspects of the conversion, which can be done using various methods, but rather to highlight important points about the process and file settings. The conversion of specifications is not covered in this basic reference guide since it does not require any special configuration or setting.

The information provided in this basic reference guide is not an indication that consultants are relieved from following the established standards for the production of drawings and specifications. The sole purpose of this guide is to provide basic information on the PDF conversion process bearing in mind that additional detailed technical information is available from the various software manufacturers.

## **1. PRINTER DRIVERS**

Adobe Acrobat provides two different printer drivers that are able to convert CADD drawing into PDF format, Acrobat PDF Writer and Acrobat Distiller. Before creating a PDF file from a CADD drawing, a choice must be made as to which one will be used.

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Acrobat PDF Writer is a non-PostScript printer driver that works best with documents that don't contain complex graphics

Acrobat Distiller is a PostScript printer driver that works best with documents that contain PostScript fills, Encapsulated PostScript (EPS) graphics, or other complex elements.

It is recommended that Acrobat Distiller be used to create PDF file of architectural and engineering drawings due to their size and complex graphical nature.

## **2. PRINTER CONFIGURATION**

Before converting a CADD drawing to PDF, an Acrobat printer configuration file for the PDF paper size needs to be created. This function can be done in the CADD software rather than using a custom paper size defined for the Acrobat distiller feature. The recommended method is to add a PostScript Adobe plotter in the CADD software and making the necessary setting in terms of media source and size, scale and orientation. The configuration can then be re-used to simplify the conversion process for future files that use the same page size.

As an alternative, although not recommended, a custom-defined size can be created in Acrobat Distiller in the *properties* menu.

## **3. CREATING PDF FILES**

Once the printer configuration has been done in the CADD software, open up Acrobat Distiller and make the necessary settings in the *preferences* and *job options* sub-menu. Ensure that the page size match the sheet size selected in the CADD software to create the file. Particular settings can be saved under different names for future use.

With the Acrobat Distiller application open, ensure the required sheet size is displayed in the *job options* window. Then it is simply a matter of bringing the CADD file into the Acrobat Distiller creation box.

A progress bar will show during the conversion and the newly converted PDF file should open up and be displayed for verification.

## **4. PDF FILES SETTINGS**

### **4.1 Security**

Adobe Acrobat contains security features that can be used to secure the files by restricting any changes to the files. However, since the files will be posted on GETS and will be used for printing copies, the files **must not** be password protected and **must** allow printing.

### **4.2 Drawing Orientation**

The final PDF drawing files must be displayed on the screen in the same direction that the users are intended to view them. This can be achieved by adjusting the setup of the plotter. If the drawing is not oriented properly after the conversion, it can be rotated manually within Adobe Acrobat.

### **4.3 Font Type**

In order to avoid any problems during the conversion and to minimize the potential for font display errors, the fonts used for the production of construction drawings must be *PostScript* or *True Type* fonts.



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#### **4.4 Resolution**

Since the PDF files will be used for printing, it is important that a proper resolution be selected. It is recommended to select 600 dots per inch (dpi).

#### **4.5 Scale**

When choosing the Plot scale in Adobe, it is important to choose the 1:1 scale to ensure the integrity of the scale from which the drawings were created in the CADD software.

#### **5. SCANNING**

Scanning is not recommended and should be done only when the drawing is not available electronically. When scanning a drawing, it is important that it be done in real size (scale 1:1) to ensure that the scale remains intact in subsequent printing. It is recommended that each scanned drawing be opened and verified to ensure that the resolution, scale and border are of an acceptable quality.

#### **6. FINAL CHECKLIST**

When the drawing file has gone through the PDF conversion, it is recommended to open it and verify the following:

- That the sheet size displayed is what was intended to be created (the size is viewable in the lower left corner of the drawing).
- That the orientation of the sheet is correct.
- That the line types, line weights and fonts match the CADD drawing.
- That the PDF file is in black and white.
- That each drawing is a single PDF file.
- That the PDF file is not password protected and printable.

If all the items are verified, the PDF file is useable

#### **7. ADDITIONAL INFORMATION**

For more information about the creation of PostScript and EPS files please refer to the User's Guide of the CADD software being used to produce the drawings. For more information about creating PDF file please refer to the Acrobat Distiller User's Guide and/or visit the Adobe Web site at [www.adobe.com](http://www.adobe.com).

# **APPENDIX E**

## **SECURITY REQUIREMENTS CHECK LIST (SRCL)**



Government  
of Canada

Gouvernement  
du Canada

RECEIVED

JUL 15 2015

CESD

Contract Number / Numéro du contrat

EH900-160791

Security Classification / Classification de sécurité  
UNCLASSIFIED

SECURITY REQUIREMENTS CHECK LIST (SRCL)

LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine		Public Works and Government Services Canada	2. Branch or Directorate / Direction générale ou Direction Real Property Branch	
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 Selective demolition and abatement. Removal of designated substances and removal of existing mechanical/electrical equipment not required to maintain the integrity of the building. PN: R.073422.427				
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 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 type="checkbox"/>		All NATO countries Tous les pays de l'OTAN <input type="checkbox"/>		No release restrictions Aucune restriction relative à la diffusion <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:		Specify country(ies): / Préciser le(s) pays:
7. c) Level of information / Niveau d'information				
PROTECTED A PROTÉGÉ A <input type="checkbox"/>		NATO UNCLASSIFIED <input type="checkbox"/>		PROTECTED A PROTÉGÉ A <input type="checkbox"/>
PROTECTED B PROTÉGÉ B <input type="checkbox"/>		NATO NON CLASSIFIÉ <input type="checkbox"/>		PROTECTED B PROTÉGÉ B <input type="checkbox"/>
PROTECTED C PROTÉGÉ C <input type="checkbox"/>		NATO RESTRICTED <input type="checkbox"/>		PROTECTED C PROTÉGÉ C <input type="checkbox"/>
CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>		NATO DIFFUSION RESTREINTE <input type="checkbox"/>		CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>
SECRET SECRET <input type="checkbox"/>		NATO CONFIDENTIAL <input type="checkbox"/>		SECRET SECRET <input type="checkbox"/>
TOP SECRET TRÈS SECRET <input type="checkbox"/>		NATO SECRET <input type="checkbox"/>		TOP SECRET TRÈS SECRET <input type="checkbox"/>
TOP SECRET (SIGINT) TRÈS SECRET (SIGINT) <input type="checkbox"/>		NATO SECRET <input type="checkbox"/>		TOP SECRET (SIGINT) TRÈS SECRET (SIGINT) <input type="checkbox"/>
		COSMIC TOP SECRET <input type="checkbox"/>		
		COSMIC TRÈS SECRET <input type="checkbox"/>		





**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 ☐ Yes  
Non 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 ☐ Yes  
Non 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 checked="" type="checkbox"/> RELIABILITY STATUS<br>COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL<br>CONFIDENTIEL           | <input type="checkbox"/> SECRET<br>SECRET           | <input type="checkbox"/> TOP SECRET<br>TRÈS SECRET               |
| <input type="checkbox"/> TOP SECRET - SIGINT<br>TRÈS SECRET - SIGINT        | <input type="checkbox"/> NATO CONFIDENTIAL<br>NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET<br>NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET<br>COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS<br>ACCÈS AUX EMPLACEMENTS              |   |   |  |

Special comments: **Only security screened personnel must be utilized.**  
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 ☐ Yes  
Non Oui  
If Yes, will unscreened personnel be escorted?  
Dans l'affirmative, le personnel en question sera-t-il escorté? ☒ No ☐ Yes  
Non 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 ☐ Yes  
Non 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 ☐ Yes  
Non 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 ☐ Yes  
Non 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 ☐ Yes  
Non 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 ☐ Yes  
Non Oui



Government  
of Canada

Gouvernement  
du Canada

Contract Number / Numéro du contrat

EH900-160791

Security Classification / Classification de sécurité  
UNCLASSIFIED

**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  CONFIDENTIEL	SECRET  TRÈS SECRET	TOP SECRET	NATO RESTRICTED  NATO DIFFUSION RESTREINTE	NATO CONFIDENTIAL  NATO CONFIDENTIEL	NATO SECRET	COSMIC TOP SECRET  COSMIC COSMIC TRÈS SECRET	PROTECTED PROTÉGÉ			CONFIDENTIAL  CONFIDENTIEL	SECRET	TOP SECRET  TRÈS SECRET
											A	B	C			
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 ☐ Yes  
Non 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 ☐ Yes  
Non 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 indiquer qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).

**APPENDIX F – INFORMATION RELATED TO SECURITY REQUIREMENT  
(APPENDIX E SRCL)**

**Project Title:** Environmental Engineering Services for Postal Station B Envelope Rehabilitation  
& Base Building Upgrade

<b>PROPONENT (Environmental Engineer)</b>	
Legal Name of Firm:	
Complete Address:	
Telephone Number:	
CISD File Number:	
Organization Security Clearance:	

## **SUBMISSION REQUIREMENTS AND EVALUATION**

- SRE 1 General Information
- SRE 2 Proposal Requirements
- SRE 3 Submission Requirements and Evaluation
- SRE 4 Price of Services
- SRE 5 Total Score
- SRE 6 Submission Requirements - Checklist

## **SUBMISSION REQUIREMENTS AND EVALUATION**

### **SRE 1 GENERAL INFORMATION**

#### **1.1 Reference to the Selection Procedure**

An 'Overview of the Selection Procedure' can be found in R1410T General Instructions to Proponents (GI3).

#### **1.2 Calculation of Total Score**

For this project the Total Score will be established as follows:

Technical Rating x 90%	=	Technical Score (Points)
<u>Phase Two Price Rating x 10%</u>	=	<u>Price Score (Points)</u>
Total Score	=	Max. 100 Points

### **SRE 2 PROPOSAL REQUIREMENTS**

#### **2.1 Requirement for Proposal Format**

The following proposal format information should be implemented when preparing the proposal.

- Submit one (1) bound original plus three (3) bound copies of the proposal
- Paper size should be - 216mm x 279mm (8.5" x 11")
- Minimum font size - 11 point Times or equal
- Minimum margins - 12 mm left, right, top, and bottom
- Double-sided submissions are preferred
- One (1) 'page' means one side of a 216mm x 279mm (8.5" x 11") sheet of paper
- 279mm x 432 mm (11" x 17") fold-out sheets for spreadsheets, organization charts etc. will be counted as two pages.
- The order of the proposals should follow the order established in the Request for Proposal SRE section



## **2.2 Specific Requirements for Proposal Format**

The maximum number of pages (including text and graphics) to be submitted for the Rated Requirements under SRE 3.2 is twenty-five (25) pages.

The following are not part of the page limitation mentioned above;

- Covering letter
- Consultant Team Identification (Appendix A)
- Declaration/Certifications Form (Appendix B)
- Price Proposal Form (Appendix C)
- Integrity Provisions – List of Names
- Front page of the RFP
- Front page of revision(s) to the RFP
- Table of Contents/Index and section dividers not containing technical information

***Consequence of non-compliance: any pages which extend beyond the above page limitation and any other attachments will be extracted from the proposal and will not be forwarded to the PWGSC Evaluation Board members for evaluation.***

## **SRE 3 SUBMISSION REQUIREMENTS AND EVALUATION**

### **3.1 MANDATORY REQUIREMENTS**

Failure to meet the mandatory requirements will render the proposal as non-responsive and no further evaluation will be carried out.

#### **3.1.1 Licensing, Certification or Authorization**

The Proponent shall be an Environmental Engineer licensed, or eligible to be licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial or territorial law in the province of Ontario.

The Cost Specialist shall be a Professional Quantity Surveyor.

#### **3.1.2 Consultant Team Identification**

The consultant team to be identified must include the following:

##### **a) Proponent (Prime Consultant)**

- Environmental Engineer

##### **b) Key Sub-consultants / Specialists**

- Certified Industrial Hygienist
- Solid Waste Management Specialist

- Cost Specialist

Information required - name of firm, key personnel to be assigned to the project. For the prime consultant indicate current license and/or how you intend to meet the provincial or territorial licensing requirements. In the case of a joint venture identify the existing or proposed legal form of the joint venture (refer to R1410T General Instructions to Proponents, GI9 Limitation of Submissions).

An example of an acceptable format (typical) for submission of the team identification information is provided in Appendix A.

### **3.1.3 Declaration/Certifications Form**

Proponents must complete, sign and submit the following:

- Appendix B, Declaration/Certifications Form as required

### **3.1.4 Integrity Provisions – List of Names**

Proponents, who are incorporated, including those submitting proposals as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Proponent. Proponents submitting proposals as sole proprietorship, including those bidding as a joint venture, must provide the name of the owner. Proponents submitting proposals as societies, firms, partnerships or associations of persons do not need to provide lists of names. If the required names have not been received by the time the evaluation of bids is completed, Canada will inform the Proponent of a time frame within which to provide the information. Failure to provide the names within the time frame specified will render the bid non-responsive. Providing the required names is a mandatory requirement for contract award.

### **3.1.5 Security Requirement**

At bid closing, the following conditions must be met:

- The Proponent (Prime Consultant) must hold a valid facility security clearance as indicated in Supplementary Conditions SC1. The Proponent must provide this security information as indicated in Appendix F.

**Security Requirement must be met at bid closing. If the required security information is not provided in Appendix F, Canada will inform the Proponent of a time frame within which to provide the information. Failure to comply with these requests will deem the proposal non-responsive.**

## **3.2 RATED REQUIREMENTS**

The following requirements will be evaluated and rated by a PWGSC Evaluation Board. The price proposal of each Proponent may or may not be opened.

### **3.2.1 Achievements of Proponent on Projects**

Describe the Proponent's accomplishments, achievements and experience as prime consultant on projects.

Select a **maximum** of three (3) projects for which construction has reached substantial performance or been completed within the last fifteen (15) years, including at least one project in a designated heritage building. Joint venture submissions are not to exceed the maximum number of projects. Only the first three (3) projects listed in sequence will receive consideration and any others will receive none as though not included.

The Proponent should clearly demonstrate experience pertinent to:

- Heritage conservation including protecting and managing heritage elements during demolition and construction, and identifying, removal and storage of heritage material
- Abatement of hazardous materials in a designated heritage building
- Solid Waste Management

#### Information that should be supplied:

- Clear indication of how this project is comparable/relevant to the requested project.
- Brief project description and intent. Narratives should include a discussion of design philosophy / approach to meet the intent, design challenges and resolutions.
- Heritage designation
- Budget control and management - i.e. construction contract price & final construction cost - explain variation
- Project schedule control and management - i.e. initial schedule and revised schedule - explain variation
- Client references - name, address, phone and fax of client contact at working level - references may be checked
- Names of key personnel responsible for project delivery
- Awards received

The Proponent (as defined in R1410T General Instructions to Proponents, GI2 Definitions) must possess the knowledge on the above projects. Past project experience from entities other than the Proponent will not be considered in the evaluation unless these entities form part of a joint venture Proponent.

Please indicate those projects which were carried out in joint venture and the responsibilities of each of the involved entities in each project.

### **3.2.2 Achievements of Key Sub-consultants and Specialists on Projects**

Describe the accomplishments, achievements and experience either as prime consultant or in a sub-consultant capacity on projects. If the Proponent proposes to provide multi-

disciplinary services which might otherwise be performed by a sub-consultant, this should be reflected here.

Select a **maximum** of two (2) projects where construction has reached substantial completion or been completed within the last fifteen (15) years per key sub consultant or specialist identified in section 3.1.2. per key sub consultant or specialist, including at least one project in a designated heritage building. Only the first two (2) projects listed in sequence (per key sub-consultant or specialist) will receive consideration and any others will receive none as though not included.

The Proponent should clearly demonstrate experience pertinent to:

- Heritage conservation including protecting and managing heritage elements during demolition and construction, and identifying, removal and storage of heritage material
- Abatement of hazardous materials in a designated heritage building
- Solid Waste Management

Information that should be supplied:

- Clearly indicate how this project is comparable/relevant to the requested project.
- Project title, location, building program, building scale (m2), year started and year completed
- Construction budget and heritage designation.
- Project description and intent. The project narratives should include a discussion of the experience gained that is relevant to this project and also describe the intent of the project;
- Names of key personnel responsible for project delivery and brief description of their role and responsibility on project
- Budget control and management
- Project schedule control and management
- Client references – name, company name and phone number of client contact at working level (i.e. having a direct knowledge of project) - references may be checked.
- Awards received

### **3.2.3 Achievements of Key Personnel on Projects**

Describe the roles, experience and performance of key personnel listed below to be assigned to this project regardless of their past association with the current Proponent firm. This is the opportunity to emphasize the strengths of the individuals on the team, to recognize their past responsibilities, commitments and achievements.

- Principal in Charge
- Lead Environmental Engineer
- Certified Industrial Hygienist
- Solid Waste Management Specialist

- Cost Specialist

All above should have at least 10 years experience in their field of expertise.

Information that should be supplied for each key personnel:

- Individuals name, title and name of firm
- Professional accreditation details (province, year, status, etc.)
- A description of expertise and experience (with number of years) relevant to this project
- A demonstration of roles, responsibilities and degree of involvement of individual on past Projects that will corroborate the person's experience and expertise.
- Special accomplishments / achievements / awards

### **3.2.4 Management of Services:**

The Proponent should describe their understanding of the goals of the project, their role in conjunction with the A&E Consultant, the functional/technical requirements, the constraints and the issues that will shape the end product, as well as how he /she proposes to perform the services and meet the constraints; how the services will be managed to ensure continuing and consistent control as well as production and communication efficiency; how the team will be organized and how it will fit in the existing structure of the firms; to describe how the team will be managed. The Proponent is also to identify sub-consultant disciplines and specialists required to complete the consultant team.

If the Proponent proposes to provide multi-disciplinary services which might otherwise be performed by a sub-consultant, this should be reflected here.

Information that should be supplied:

- Confirm the makeup of the full project team including the names of the consultant sub-consultants and specialists' personnel and their role on the project.
- Organization chart with position titles and names (Consultant team), what back-up will be committed and reporting relationships. Joint Venture business plan, team structure and responsibilities, if applicable
- Profiles of the key positions (specific assignments and responsibilities)
- Approach and methodology
- Outline of an action plan of the services with implementation strategies and sequence of main activities, incorporating a detailed breakdown of work tasks and deliverables including all required reviews and approvals; clear assignment of responsibilities for activities and deliverables to project team personnel with an estimation of levels of effort.
- Communication strategies – lines of communication and reporting structure within Proponent team and with PWGSC.
- Quality Assurance and Control
- Risk management strategy – including risk techniques applied to project budget and schedule

- Project Cost Control – proposed methodology, including an explanation of how cost control will be applied to maintain the project budget
- Project Time Control – proposed methodology, including how the schedule will be managed
- Project Response Time: demonstrate how the response time outlined in PA 1.12 requirements will be met

### 3.3 EVALUATION AND RATING

#### 3.3.1 Technical Rating

In the first instance, price envelopes will remain sealed and only the technical components of the proposals which are responsive will be reviewed, evaluated, and rated by a PWGSC Evaluation Board in accordance with the following to establish Technical Ratings:

Criterion	Weight Factor	Rating	Weighted Rating
Achievements of Proponent on Projects	3.0	0 - 10	0 - 30
Achievements of Key Sub-consultants / Specialists	2.0	0 - 10	0 - 20
Achievements of Key Personnel on Projects	2.0	0 - 10	0 - 20
Management of Services	3.0	0 - 10	0 - 30
Technical Rating	10.0		0 - 100

#### Generic Evaluation Table

PWGSC Evaluation Board members will evaluate the strengths and weaknesses of the Proponent's response to the evaluation criteria and will rate each criterion with even numbers (0, 2, 4, 6, 8 or 10) using the generic evaluation table below:

	INADEQUATE	WEAK	ADEQUATE	FULLY SATISFACTORY	STRONG
0 point	2 points	4 points	6 points	8 points	10 points

Did not submit information which could be evaluated	Lacks complete or almost complete understanding of the requirements.	Has some understanding of the requirements but lacks adequate understanding in some areas of the requirements.	Demonstrates a good understanding of the requirements.	Demonstrates a very good understanding of the requirements.	Demonstrates an excellent understanding of the requirements.
	Weaknesses cannot be corrected	Generally doubtful that weaknesses can be corrected	Weaknesses can be corrected	No significant weaknesses	No apparent weaknesses
	Proponent do not possess qualifications and experience	Proponent lacks qualifications and experience	Proponent has an acceptable level of qualifications and experience	Proponent is qualified and experienced	Proponent is highly qualified and experienced
	Team proposed is not likely able to meet requirements	Team does not cover all components or overall experience is weak	Team covers most components and will likely meet requirements	Team covers all components - some members have worked successfully together	Strong team - has worked successfully together on comparable projects
	Sample projects not related to this requirement	Sample projects generally not related to this requirement	Sample projects generally related to this requirement	Sample projects directly related to this requirement	Leads in sample projects directly related to this requirement
	Extremely poor, insufficient to meet performance requirements	Little capability to meet performance requirements	Acceptable capability, should ensure adequate results	Satisfactory capability, should ensure effective results	Superior capability, should ensure very effective results

### 3.3.2 Technical Rating

To be considered further, Proponents **must** achieve a minimum Technical Rating of sixty (60) points out of the one hundred (100) points available as specified above.

**No further consideration will be given to Proponents not achieving the pass mark of sixty (60) points.**

### SRE 4 PRICE OF SERVICES

All price proposal envelopes corresponding to responsive proposals which have achieved the pass mark of sixty (60) points will be opened upon completion of the technical evaluation. An average price is determined by adding all the price proposals together and dividing the total by the number of price proposals being opened.

All price proposals which are greater than twenty-five percent (25%) above the average price will be set aside and receive no further consideration.

The remaining price proposals are rated as follows:

1. The lowest price proposal receives a Price Rating of 100
2. The second, third, fourth and fifth lowest prices receive Price Ratings of 80, 60, 40, and 20 respectively. All other price proposals receive a Price Rating of 0.
3. On the rare occasions where two (or more) price proposals are identical, the matching price proposals receive the same rating and the corresponding number of following ratings are skipped.

The Price Rating is multiplied by the applicable percentage to establish the Price Score.

### SRE 5 TOTAL SCORE

Total Scores will be established in accordance with the following:

Rating	Possible Range	% of Total Score	Score (Points)
Technical Rating	0 - 100	90	0 - 90
Price Rating	0 - 100	10	0 - 10
Total Score		100	0 - 100

The Proponent receiving the highest Total Score is the first entity that the Evaluation Board will recommend for the provision of the required services. In the case of a tie, the Proponent submitting the lower price for the services will be selected.



## **SRE 6 SUBMISSION REQUIREMENTS - CHECKLIST**

The following list of documents and forms is provided with the intention of assisting the Proponent in ensuring a complete submission. The Proponent is responsible for meeting all submission requirements.

Please follow detailed instructions in R1410T General Instructions to Proponents, GI16 Submission of Proposal. Proponents may choose to introduce their submissions with a cover letter.

- Team Identification - see typical format in Appendix A
- Declaration/Certifications Form - completed and signed - form provided in Appendix B
- Integrity Provisions - list of directors / owners
- Integrity Provisions - declaration form (as applicable, pursuant to subsection Declaration of Convicted Offences, of section 01 of the General Instructions)
- Proposal - one (1) original plus 3 copies
- Information on security – see Appendix F
- Front page of RFP
- Front page(s) of any solicitation amendment

In a separate envelope:

- Price Proposal Form - one (1) completed and submitted in a separate envelope

# PROJECT BRIEF

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### **Terminology**

### **Description of Project (PD)**

#### **PD 1 Project Information**

##### 1.1 Project Identification

#### **PD 2 Project Identification**

- 2.1 Overview
- 2.2 Client/User
- 2.3 Classified Heritage Building
- 2.4 Environmental/Sustainable Development
- 2.5 Hazardous Materials and Demolition
- 2.6 Cost
- 2.7 Schedule
- 2.8 PWGSC A&E Consultant
- 2.9 Implementation Strategy
- 2.10 Building Envelope Investigations

#### **PD 3 Project Background**

- 3.1 Existing Building Information
- 3.2 Site
- 3.3 Building Envelope
- 3.4 Building Interior
- 3.5 Structural
- 3.6 Mechanical
- 3.7 Electrical
- 3.8 Vertical Transportation
- 3.9 Security
- 3.10 Building Connectivity & Continuity (BCC)

#### **PD 4 Existing Documentation**

- 4.1 Available to all Proponents (on Internet)
- 4.2 Available to all Proponents (CD upon request)
- 4.2 To be made available to Successful Proponent

#### **PD 5 Program**

- 5.1 Functional Program
- 5.2 Environmental / Sustainable Development Program
- 5.3 Abatement and Selective Demolition
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- 6.1 Objective One: Heritage Conservation
- 6.2 Objective Two: Cost
- 6.3 Objective Three: Schedule
- 6.4 Objective Four: Health & Safety of Construction Site
- 6.5 Objective Five: Environmental / Sustainable Development
- 6.6 Objective Six: Abatement and Selective Demolition
- 6.7 Objective Seven: Waste Management

#### **PD7 Performance Criteria**

- 7.1 Doing Business with the National Capital Area
- 7.2 Heritage Conservation
- 7.3 Cost
- 7.4 Schedule
- 7.5 Environmental Control
- 7.6 Health & Safety of Construction Site
- 7.7 Environmental / Sustainable Development

#### **PD 8 Environmental Consultant Services**

- 8.1 Engineering and Specialty Services
- 8.2 Project Control Services

#### **Description of Services (PA)**

##### **PA 1 Project Administration**

- 1.1 Departmental Representative (DR)
- 1.2 Lines of Communication
- 1.3 Media
- 1.4 Confidentiality of Information
- 1.5 General Project Deliverables
- 1.6 Acceptance Deliverables
- 1.7 Coordination by the EC
- 1.8 Meetings
- 1.9 Project Response Time
- 1.10 Submissions, Reviews and Approvals
- 1.11 Project Approvals
- 1.12 Official Languages

##### **PA 2 Project Team Organization**

- 2.1 Roles of the PWGSC Project Team

#### **Required Services (RS)**

##### **RS 1 Pre-Design**

- 1.1 Intent
- 1.2 Activities

## 1.3 Deliverables

### **RS2 Schematic Design**

- 2.1 Intent
- 2.2 Activities
- 2.3 Deliverables
- 2.4 Details
- 2.5 Rebuttal to PWGSC Quality Assurance Reports

### **RS 3 Design Development**

- 3.1 Intent
- 3.2 Activities
- 3.3 Deliverables
- 3.4 Details
- 3.5 Rebuttal to PWGSC Quality Assurance Reports

### **RS 4 Construction Documents**

- 4.1 Intent
- 4.2 General
- 4.3 Activities
- 4.4 Deliverables
- 4.5 Rebuttal to PWGSC Quality Assurance Reports

### **RS 5 Tender Call, Bid Evaluation & Contract Award**

- 5.1 Intent
- 5.2 Scope and Activities
- 5.3 Deliverables

### **RS6 Construction and Contract Administration**

- 6.1 Scope and Activities
- 6.2 Deliverables

### **RS7 Estimating and Cost Planning**

- 7.1 Scope of Services
- 7.2 Services – Basic Activities
- 7.3 Services – Project Stages and Specific Activities
- 7.4 Responsibilities to PWGSC

### **RS8 Environmental Monitoring Services**

- 8.1 Intent
- 8.2 Scope and Activities
- 8.3 Testing
- 8.4 Deliverables

### **RS 9 Bilingual Documents**

- 9.1 Scope of Services

## 9.2 Quality Standards

### **Project Brief – Appendices (Available on CD)**

PB Appendix One: Project Schedule

PB Appendix Two: Preliminary Conservation Strategy (Heritage Conservation Directorate, PWGSC) – 2014

PB Appendix Three: Conservation Guidelines (Heritage Conservation Directorate, PWGSC) – 2014

PB Appendix Four: Designated Substance Report (DST Consulting Engineers) – 2014

PB Appendix Five: Base Building Floor Plans

## TERMINOLOGY

The following terms are used in this document:

A&E Consultant	The prime consultant contracted separately by PWGSC to provide architectural and engineering services related to the planning, demolition, design and construction of the Project.
AD	Abatement of Hazardous Substances and Selective Demolition
EC	The Environmental Consultant in contract with PWGSC for the Services outlined in this Project Brief.
DR	Departmental Representative
GC	General Contractor for the Project
HCD	Heritage Conservation Directorate
NMS	National Master Specification
PMSS	The project management, cost and schedule entities in contract with PWGSC for Project Management Support Services for this project.
PM Team	The combined PWGSC Project Management and PMSS Team, responsible for project and program management.
Project Team	The combined private sector and government sector team responsible for delivering the project including the PM Team, EC, A&E Consultant, the General Contractor, representatives from PWGSC, and other government organizations.

## **DESCRIPTION OF PROJECT**

### **PD 1 PROJECT INFORMATION**

Public Works and Government Services Canada (PWGSC) intends to retain a professional engineering firm in the capacity of an Environmental Consultant (EC) for the abatement and waste management requirements for the West Memorial Building Asset Integrity Project. Construction will be implemented by a General Contractor (GC) contracted separately by PWGSC.

The Environmental Consultant (EC) must work closely and collaborate continuously with the A&E Consultant, who is responsible for the overall building rehabilitation design. The EC shall prepare and actively manage all aspects of the abatement and waste management planning associated with this Project, in conjunction and coordination with the A&E Consultant and the GC. Services shall be provided in accordance with “Doing Business with NATIONAL CAPITAL AREA”, as detailed in an annex to this RFP.

#### **PD 1.1 Project Identification**

PWGSC Project Title:	West Memorial Building (WMB) Asset Integrity Project – Environmental Consultant
Location of the Project:	344 Wellington Street, Ottawa, ON, Canada
PWGSC Project Number:	TBD
Client / User:	N/A
Senior Project Leader:	To be provided upon contract award
Project Director:	To be provided upon contract award
Senior Project Manager:	To be provided upon contract award
Project Officer/Manager:	To be provided upon contract award

### **PD 2 PROJECT IDENTIFICATION/DESCRIPTION**

#### **2.1 Overview**

The purpose of WMB Asset Integrity Project is to remove designated substances and perform selective demolition in order to prepare the building for a future base building renovation and fit-up for use by PWGSC and its client departments. Allowance should be made to maintain the building in a mothballed state until the major construction can commence.

The Asset Integrity Project is to include the following work:

- Preservation of the heritage value of this Classified Heritage Building, through protection or temporary removal of heritage elements
- Coordination of removal of designated substances in building interior with the PWGSC A&E Consultant



- Modifications of existing HVAC, electrical and life safety systems to maintain system integrity
- Removal of non-functioning or out-dated building systems;
- Selective demolition of partitions, floors, ceilings and finishes in the interior of the building;

## **2.2 Client/User**

There is no Client/User for this project. The building will remain unoccupied until a Client/User is identified and it can be fully rehabilitated. Commissionaires will remain on site for security.

## **2.3 Classified Heritage Building**

The West Memorial Building was designated a Classified Heritage Building in 1992. The West Memorial Building is connected by the Memorial Colonnade to the East Memorial Building. The heritage value of the West and East Memorial Buildings is outlined in the buildings' Heritage Character Statement, but generally resides in their monumental scale and massing, architectural design, materials and craftsmanship, and site relationships.

## **2.4 Environmental/Sustainable Development**

The Project provides the opportunity to incorporate where possible innovative, sustainable and environmentally responsive design into the rehabilitation. Specifically, sustainable design principles focussing on waste and materials management, environmental protection, and energy efficiency must be addressed throughout the Project.

This project does not have a requirement to meet Leadership in Energy and Environmental Design (LEED) Silver, 3 Green Globes Design for New Buildings and Retrofits or equivalent standard, although the future rehabilitation project (including the base building renovation and fit-up) will be required to meet certification requirements. All efforts should nevertheless be made to integrate strategies that result in a project design with minimal environmental impact and a reduced ecological footprint.

## **2.5 Hazardous Materials and Demolition**

A number of hazardous materials have been identified through various. The EC shall refer to the *Designated Substance Report* annexed to this RFP for a summary of the hazardous materials currently known to be within the building.

## **2.6 Cost**

The Project shall respect the approved class D budget of \$2,800,000 for the abatement portion of the overall WMB Asset Integrity Project. The budget is based on the cost estimate prepared by DST (see PD4 Existing Documentation) for removal of all identified hazardous materials (with the exception of removal and disposal of exterior mortar) as well as general requirements, overhead and profit, and potential additional removals. The budget is inclusive of design and construction contingencies. The budget does not include HST or professional fees. It is the EC's responsibility to define the scope

and develop strategies, in conjunction with the A&E Consultant and GC, in order to maintain and manage the scope of this mandate to remain within the approved budget.

The total approved Class D construction budget for the overall Project is \$14,610,000. The budget is inclusive of design and construction contingencies. The budget does not include HST or professional fees.

## 2.7 Schedule

The following are project milestones and durations. For more information, please see the project schedule in PD4 Existing Documentation.

### Current milestone and durations

Following the EC Award:

RS1 Pre-Design	2 months to start of RS2, plus 1 month overlap with RS2
RS2 Schematic Design	2 months to start of RS3 plus 1 months overlap with RS3
RS3 Design Development	4 months
RS4 Construction Documents	4 months
Funding Submission and Approval	TBD
RS5 Tender Call	4 months upon receiving Funding Approval
RS6 Construction	12 months
<b>TOTAL</b>	<b>28 months</b>

Warranty Review: 12 months following Certificate of Substantial Performance.

The above time allocations shall take into effect immediately after the award of a contract to the A&E Consultant. In developing a detailed schedule, the EC must ensure that activities are planned concurrently where no interdependencies exist.

Activity durations are preliminary, and the EC is responsible for verifying and confirming the feasibility of the above schedule dates as part of its scheduling mandate.

## 2.8 PWGSC A&E Consultant

The EC must work closely and collaborate continuously with the A&E Consultant, who is responsible for the overall building rehabilitation design. The EC shall prepare and actively manage all aspects of the abatement and waste management associated with this

Project, in conjunction and coordination with the A&E Consultant and the GC. Services shall be provided in accordance with “Doing Business with NATIONAL CAPITAL AREA”, as detailed in an annex to this RFP.

The EC shall coordinate with the A&E Consultant to ensure a seamless delivery of the scope of work.

## 2.9 Implementation Strategy

In this project, West Memorial Building Asset Integrity Project is to be implemented in advance of a future major rehabilitation project.

Upon contract award, the A&E Consultant and the EC must work closely to coordinate an abatement and demolition (AD) program as well as a solid waste management program. The AD program must include all temporary services required to support the building during construction operations.

While the EC will be responsible for only the abatement design and contract administration, it is mandatory that the EC co-operate with the A&E Consultant for a fully coordinated AD and waste management program of work, as defined by the A&E Consultant to meet the overall Project fit-up and rehabilitation requirements. All work by the EC shall be fully reflective of the approved demolition scope of work prepared by the A&E Consultant.

## 2.10 Building Envelope Investigations

Separate to this Project, PWGSC may implement monitoring of temperature, air pressure, and moisture in exterior walls as well as mock-ups for window restoration and masonry repair/repointing.

# PD 3 PROJECT BACKGROUND

## 3.1 Existing Building Information

The following provides a summary profile of the West Memorial Building (WMB).

Location:	344 Wellington Street
Number of Stories:	7 above-grade stories plus basement and sub-basement plus three underground tunnels, and one above-grade link to the East Memorial Building. One pedestrian link is in the Memorial Colonnade and the other two are at the basement and ground levels.
Inside Gross Area:	34,331 m2
Future Planned Building Use:	Assembly, administration and support services, occupation by staff and the public.
Current Occupancy:	N/A
Built:	1954-58 by Government of Canada

Architects:	Allward and Gouinlock
	No additions to date.
Acquired by Crown:	n/a
Heritage Designation:	Designated as “Classified” by FHBRO, 1992
Pedestrian Access:	From Wellington, Albert, Lyon and Bay Streets
Loading:	Access via Bay Street
Parking:	Parking garage in basement provides approximately 70 parking spaces
Vertical Transportation:	9 passenger elevators and 1 freight elevator
Construction:	The steel and reinforced concrete structure is clad in smooth-faced Indiana limestone with a plinth of Stanstead granite
Façade:	Original

### 3.2 Site

The site is one entire city block with Wellington, Sparks, Lyon and Bay Streets at the perimeters. There is hard and soft landscaping between the exterior walls and the public sidewalks on all four sides. The East and the West Memorial buildings as well as the linking Memorial Colonnade form an ensemble that is a memorial to Canada’s veterans of World War II.

The Memorial buildings have a prominent presence in the urban context which is reinforced by its strong visual relationship with their surroundings including the adjacent built environment and the modernist landscape (Garden of the Provinces) to the west.

In addition to the building, this project also includes the above-grade Memorial Colonnade spanning Lyon Street and three below-grade tunnels: two underground utilities tunnels from the WMB to EMB and the third to the Cliff Street Central Heating Plant.

An existing fuel tank has already been removed.

### 3.3 Building Envelope

The exterior wall is made up of limestone and granite veneers, block back-up, clay tile and plaster – providing very limited insulation value. On the whole the building envelope has performed relatively well to date – due in part to the drying effect created by low levels of interior humidity and constant heat loss through the wall. The exterior windows consist of a steel frame with multiple panes of single glazing set into steel mullions. There are two types of roofs: standard built-up tar and gravel flat roofs; and sloped copper roofs.

The building is a good example of the Classical-Modern design as is apparent in the stepped volumes, flattened details, overall austerity, and references to classical decorative elements. Decorative reliefs above the entranceways representing Canadian decorative iconography are also present. The building was designed to be viewed from all four sides. As such all four elevations of the building are character-defining elements.

The exterior of the building remains largely unchanged since its construction.

### **3.4 Building Interior**

Interior finishes, detailing and craftsmanship reflect the hierarchical importance of the various spaces, generally diminishing in richness on upper floors and in less significant spaces. A variety of marbles, often book- and end-matched, clad the floors and dados of the main entrance lobbies, elevator lobbies, and main floor corridors. Significant woodwork elements include the panelling of the former Ministers' suites on the upper floors. Other important interior finishes include bronze doors, sheet and tile linoleum, terrazzo with coved bases, acoustic tiles, plaster moulding, green enamel and brass/bronze finished elevators, bronze door hardware, glazed and quarry tiles. Despite the modifications, the interior remains largely intact and speaks to the good functional design of the building.

The green color scheme, which is a reference to the veterans, manifests itself in the use of green marble wall base, green enamel elevator cabs and doors, and green glazed tiles. Designed to the Beaux-Arts principles, symmetry, axial layout and hierarchy of spaces are explicitly expressed in the location of the entrances at all four corners, circulation along major and minor axes, and the hierarchical use of finishes diminishing from the richness on higher floors to the utilitarian spaces.

Up-to-date functional developments were incorporated in the original building such as the underground garage; semi-movable office partitions and contemporary finishes such as linoleum and acoustic tiles. Though largely removed, the remaining original lighting fixtures provide sufficient examples of the original lighting scheme.

### **3.5 Structural**

The exterior walls of the building are constructed on a concrete clad steel frame with a terra cotta block infill. The structure of the main roof and the corner tower roofs consist of structural steel beams supporting a light-weight precast concrete slab. Typical floors consist of cast-in-place reinforced concrete slabs of varying thicknesses bearing on concrete beams or joists supported on concrete columns. From the basement to the second floor on the north side of the building, there are also some steel beams and steel columns supporting the concrete slabs.

The WMB contains no “formally designed” lateral load resisting system. Currently, building is stabilized by a combination of reinforced concrete walls around elevator shafts, unreinforced clay masonry exterior infill walls and walls around stair shafts, and the inherent frame action of the cast-in-place concrete beam and column system. The seismic capacity has been assessed in a separate project.

### **3.6 Mechanical**

The Mechanical systems are original to the West Memorial Building and have long surpassed their normal acceptable life. Some of the systems are already inactive or decommissioned, since the building was previously vacated.

Steam from Cliff Street Central Heating Plant supplies steam to perimeter heating units with self contained thermostats on all floors, 100% outdoor air handling units with steam heating coils, as well as unit heaters for the 7<sup>th</sup> floor, loading dock, garage and other high heat-loss areas. Existing 100% outdoor air ventilation units supply outdoor air to the 2<sup>nd</sup> to 7<sup>th</sup> floors, the ground, basement, and garages – but some or all of these units may have been decommissioned. There is no major humidification or air conditioning equipment in the building. Cooled water from the Central Heating Plant is supplied to the East Memorial Building only, stopping at the east end of the tunnel connecting the two buildings.

The plumbing system is supplied with a 150 mm water main that enters the building through the east mechanical room. Two domestic water booster pumps increase the city water pressure to serve plumbing fixtures on the upper floors.

The control system is an assortment of electric, pneumatic, electronic and self-contained components.

The fire protection system consists of a 200 mm fire line which enters the east mechanical room and splits to serve both the standpipe and the sprinkler systems.

There are no existing mechanical as-found drawings available for the building systems.

### **3.7 Electrical**

The West Memorial Building is fed via a 15KV Hydro Vault located on the ground floor. The H.V. distribution consists of a four cell Load Break Switch which feeds three single phase 333KVA transformers. This provides a total transformation of 1,000KVA. Reducing to 600V, the H.V. transformers feed a 1600A, 600V, 3Ph, 4W Switchboard which was installed in 1994. The 1600A, 600V, 3ph, 4W Switchboard then feeds downstream transformers and panels which in turn feed end of line equipment.

Currently there is no Emergency Power Generator on site. There seems to have been a generator in the past but has since been removed. Current emergency lighting is being supplied by battery packs. That said, it is unclear if the exit signs are fed by these power packs or regular normal power. Also, the existing fire pump is only fed by normal power.

The majority of the interior lighting system is anticipated to be removed minus life safety lighting, but there are some heritage components which will need to be retained. There are also some exterior quartz lights that partially flood the building, which may need to be replaced and supplemented.

Existing connections servicing the fountain in the Garden of Provinces as well as lighting for the Place du portage bridge are to be maintained and kept operational.

The existing fire alarm system is functional and needs to remain so. Evaluation and verification of the system is required.

There are no existing electrical as-found drawings available for the building systems.

### **3.8 Vertical Transportation**

There are nine (9) gearless and one geared overhead traction passenger elevators in the building. Elevators 1-5 and 7-10 are original. They were imported from England and are considered to be character-defining elements. Elevator 6 was installed in 1997. Some modernization has been done to the elevators over the years, nonetheless there are outstanding CSA B44 Safety Code recommendations for all elevators, as well as outstanding maintenance items. At this time, 7 elevators are locked by TSSA and elevators 7 and 8, which are passenger elevators are functioning, as well as elevator 6 which is the freight elevator. These are located at the loading dock on the West (Bay Street) side of the building.

The original elevators are not to be used for construction access and only Elevator 6, the freight elevator, will be available for use.

### **3.9 Security**

The security system consists of two major components: Security Guards control the main egress manually at the front entrance; and intrusion alarms on the exterior doors. The existing system is to be maintained throughout construction.

### **3.10 Building Components and Connectivity (BCC)**

Existing BCC in the WMB includes intrusion alarms on the exterior doors (along with associated connectivity). The existing system is to be maintained throughout construction.

## **PD 4 EXISTING DOCUMENTATION**

### **4.1 Available to all Proponents (on Internet)**

- a. FHBRO Heritage Character Statement -  
([http://www.pc.gc.ca/apps/dfhd/page\\_fhbrogeng.aspx?id=3821](http://www.pc.gc.ca/apps/dfhd/page_fhbrogeng.aspx?id=3821) )
- b. Standards and Guidelines for Conservation of Historic Places in Canada  
([http://www.pc.gc.ca/docs/pc/guide/nldclpc-sgchpc/index\\_e.asp](http://www.pc.gc.ca/docs/pc/guide/nldclpc-sgchpc/index_e.asp))
- c. Treasury Board Policy on the Management of Real Property  
(<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12042&section=text>)
- d. Environmentally Responsible Construction and Demolition Handbook  
(<http://www.tpsgc-pwgsc.gc.ca/biens-property/gd-env-cnstrctn/index-eng.html>),
- e. Green Office at a Glance Handbook (<http://www.tpsgc-pwgsc.gc.ca/biens-property/env/page-1-eng.html>),
- f. Fire protection during construction shall be governed by:
  - i. Treasury Board Fire Protection Standard ( <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=17316&section=text> )
  - ii. National Fire Code and other applicable standards, regulations and

Acts.

**4.2 Available to all Proponents (by CD upon written request to the Contracting Authority)**

- Project Schedule
- Preliminary Conservation Strategy (Heritage Conservation Directorate, PWGSC) – 2014
- Conservation Guidelines (Heritage Conservation Directorate, PWGSC) – 2014
- Designated Substance Report (DST Consulting Engineers) – 2014

**4.3 To be made available to Successful Proponent**

- CADD Building Cross-Sections (Heritage Conservation Directorate, PWGSC) – 2015
- Roof Condition Assessment (Robertson Martin Architects) – 2015
- Seismic and Loading Assessment (Halsall & Associates) – 2015
- Class D Construction Cost Estimate (Turner & Townsend) – 2015
- Infrared Thermography Investigation Report Volumes 1 and 2 (Heritage Conservation Directorate, PWGSC) – 2015
- Supplemental Phase II Environmental Site Assessment (Geofirma Engineering Ltd) – 2015
- Geotechnical Report (Golder Associates) - 2014
- CADD As-Found Exterior Building Elevations (Heritage Conservation Directorate, PWGSC) – 2014
- Building Envelope Documentation Analysis (Heritage Conservation Directorate, PWGSC) – 2014
- Documentation Analysis – FHBRO Reviews (Heritage Conservation Directorate, PWGSC) - 2014
- Heritage Elements Inventory (Heritage Conservation Directorate, PWGSC) – 2015
- Interior Inventory Report (Heritage Conservation Directorate, PWGSC) – 2014
- Heritage Recording Report (Heritage Conservation Directorate, PWGSC) – 2014
- Designated Substances Report for the West Memorial Rehabilitation Project, West Memorial Building, 344 Wellington Street, Ottawa, Ontario”(DST Consulting Engineers) March 2014 and Designated Substance Report Specifications Section 011425 (DST Consulting Engineers) – 2014
- Test Plans (Peter J. Kindree Architect) – 2014
- Heritage Screening Report (Heritage Conservation Directorate, PWGSC) – 2014



- Environmental Compliance Management Program (ECMP) Checklist- 2013 and the Preliminary Identification of Environmental Services Required (PIESR) 2014.
- Building Systems Decommissioning Procedures Manual – PWGSC (CIMA+, 2008)
- CADD As-Found Floor Plans (prepared by PWGSC NCA PTS Geomatics) - 2003
- Fire and Life Safety Report – Building Condition Review (Leber-Rubes Inc) - 2001
- Geotechnical Investigation (Jacques Whitford) 1998
- Heritage Character Statement for East and West Memorial Buildings (Federal Heritage Buildings Review Office) – 1995
- Original Construction Drawings (as well as original architectural and structural specifications) are available for reference

## **PD 5 PROGRAM**

### **5.1 Functional Program**

As part of the planned work for future construction, the WMB is to be renovated for use as a swing space. Preliminary plans have been developed for this work to test the feasibility, but the Functional Program is yet to be finalized.

### **5.2 Environmental / Sustainable Development Program**

Sustainable development objectives and design strategies must be addressed throughout the evolution of the Project. Sustainable Development is defined in broad terms as a strategy that routinely and consistently includes the consideration of the environmental, economic and societal impact of every decision made for the Project. The general areas of focus for this project include but are not limited to:

- a. Energy efficiency and conservation,
- b. Pollution prevention
- c. Recycle and reuse
- d. Waste management
- e. Using and preservation of durable building material and assemblies;
- f. Using building products with recycled content where feasible;
- g. Environmentally friendly maintenance procedures and products (e.g. low Volatile Organic Compounds (VOC).

As well as the Treasury Board Policy on Management of Real Property, other guidance documentation outlining sustainable design principles to be included for federal real property projects include:

- i. The Environmentally Responsible Construction and Renovation Handbook (<http://www.tpsgcpgwsc.gc.ca/biens-property/gd-env-cnstrctn/index-eng.html>);
- ii. The Environmentally Responsible Green Office at a Glance Handbook (<http://www.tpsgcpgwsc.gc.ca/biens-property/env/page-1-eng.html>);

- iii. National Construction, Renovation and Demolition Non-Hazardous Solid Waste Management Protocol;
- iv. Strategic Framework for Sustainability in Buildings; and
- v. Green Building Implementation Guide

The EC will be directly responsible for the development and implementation of the Construction, Renovation and Demolition (CRD) Waste Management Plan for the entire project. In this regard, the Consultant must coordinate with the A&E Consultant to understand all the requirements and scope of the demolition and construction program.

The CRD Waste Management Plan includes the following elements:

- i. Waste Audit (WA);
- ii. Waste Reduction Workplan (WRW);
- iii. Waste Diversion Report (WDR).

The Consultant shall submit a draft of the CRD Waste Management Plan to A&E Consultant for review prior to being finalized. The A&E Consultant will confirm in writing to the EC that the scope of the plan is reflective of the planned construction work. The EC will confirm in writing to the A&E Consultant that the scope of the plan is feasible, as well as provide all supporting documentation required by the Consultant to implement the CRD Waste Management Plan. At the completion of the project, the EC shall also prepare a Waste Diversion Report (WDR) to measure the final diversion results against initial objectives set in the WA and WRW.

For this Project, a solid waste management program must be implemented for all phases of construction. The EC is to prepare a Consolidated Waste Inventory and Reduction Plan for final implementation by the GC. The inventory and plan shall be inclusive of the demolition scope of work prepared by the A&E Consultant. The final plan prepared by the GC shall be monitored by the EC throughout the implementation of the project.

### **5.3 Abatement and Selective Demolition Program**

Hazardous substances have been detailed in the Designated Substance Survey Report. The EC will be required to review and confirm the scope of designated substances, identify other potential locations for exploratory openings, and provide necessary testing. The EC will be required to plan, design and develop construction documents in connection with the required abatement work, as well as for any additional exploratory openings. The EC must actively provide Contract Administration with regards to all aspects of the scope of work the EC prepared, in coordination with the A&E Consultant, as well as the overall waste monitoring program.

Accordingly, the EC must provide detailed, daily on-site monitoring and assessment of the abatement and demolition construction progress.

All areas where new and temporary architectural, structural, mechanical, and electrical systems are to be installed must be abated first to allow for construction and connection

of temporary and permanent systems. A number of hazardous substances have been identified such as lead paint, asbestos, mercury, silica within concrete products and other designated substances.

Abatement shall be carried out in compliance with O. Reg. 278/05, Designated Substances O.Reg. 490/09 as amended, federal TDG and provincial waste management and disposal legislation O. Reg. 347/90.

Construction, renovation, and demolition (CRD) waste should not include any hazardous materials (i.e. waste generated from asbestos, mould, lead abatements, PCB ballasts, fuels, and other chemicals). A clear distinction is required between CRD waste and hazardous waste.

Demolition and construction will follow a construction, renovation, and demolition (CRD) waste management plan developed by the EC, coordinated with the A&E Consultant and approved by the DR.

#### **5.4 Building and Heritage Protection**

The EC is to develop the abatement scope, definition and removal methodology while coordinating with the A&E Consultant to protect the building and heritage. There will be an interactive process between the A&E Consultant, PWGSC and the EC in determining which heritage elements require protection or removal. Encapsulation of heritage fabric that may contain hazardous materials may be required. Alternatively, elements could be removed and stored as directed by the A&E Consultant after appropriate abatement of the work area is completed.

The Preliminary Conservation Strategy, Conservation Guidelines, Heritage Elements Inventory, and Interior Inventory Report will provide information with which the A&E Consultant will develop the Conservation Approach for retaining and protecting the heritage value of the building, including the character-defining elements.

The FHBRO will need to be consulted on any demolition or removal of character-defining elements. Protection of character-defining elements (materials, assemblies, spaces) during construction will require planning, documentation and storage. The A&E Consultant will assess each building element being considered for removal to determine the best approach in terms of protection on-site, removal for storage and disposal in the Heritage Materials Database (HMD).

#### **5.5 Temporary Works**

The EC will coordinate abatement with the A&E Consultant to identify, design and implement temporary architectural, structural, mechanical, and communication, electrical and fire protection requirements related to the transitional periods until subsequent construction is implemented. These temporary systems can be a combination of existing and new equipment, including:

- Temporary heat and ventilation of the interior,

- Temporary life safety systems,
- Mechanical portion of temporary fire protection systems,
- Mechanical ancillary systems required to maintain electrical systems and other life safety equipment,
- Temporary security system for intrusion alarms and monitoring,
- Temporary structural supports as required to maintain the structural integrity (including existing level of seismic resistance), and
- Temporary electrical requirements related to the construction site. Temporary partitions and interior work (while existing electrical systems are removed) such as:
  - Power, lighting, security and fire protection, and
  - Emergency power to maintain heat, life safety systems, lighting and fire protection and supply to exterior services.

## **PD6 PROJECT OBJECTIVES**

Several project objectives have been developed by PWGSC in order to ensure overall suitability and success of the project, as follows:

### **6.1 Objective One: Heritage Conservation**

The West Memorial Building has been evaluated by the Federal Heritage Buildings Review Office (FHBRO) and designated as a “Classified Heritage Building.” An important objective of this project is to preserve the building for future generations to enjoy. The Asset Integrity design will be subjected to review by the FHBRO.

### **6.2 Objective Two: Cost Management**

Cost management and control is a key objective of this project. The EC shall explore all possible options for implementation of the work so that the approved budget is respected.

### **6.3 Objective Three: Schedule**

The WMB Asset Integrity project plays a key role in preparing the site for major construction. As such, it is critical that the project be completed on schedule in order to implement subsequent major construction.

### **6.4 Objective Four: Health and Safety of Construction Site**

PWGSC recognizes the responsibility to ensure the health and safety of all persons on Crown construction projects and the entitlement of both federal employees and private sector workers to the full protection afforded them by occupational health and safety regulations. In keeping with the responsibility and in order to enhance health and safety protection for all individuals on federal construction sites, PWGSC will voluntarily comply with the applicable provincial/territorial construction health and safety acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations.

The EC and A&E Consultant shall be responsible to provide all training and protective equipment for its entire team and comply with all applicable safety standards and policies.

#### **6.5 Objective Five: Environmental / Sustainable Development**

The Project provides the opportunity to incorporate innovative, sustainable and environmentally responsive design into the project. Sustainable Development objectives of waste management, environmental protection, and energy efficiency must be addressed throughout the project through coordinating with the A&E Consultant and supporting maintaining records.

#### **6.6 Objective Six: Abatement and Selective Demolition**

To remove designated substances and perform selective demolition in order to prepare the building for a future base building renovation and fit-up for use by PWGSC and its client departments. All hazardous materials are to be removed from the building, except where it is to be encapsulated in heritage elements.

#### **6.7 Objective Seven: Waste Management**

A solid waste management program must be implemented with greater than 80% waste diversion from landfill sites.

### **PD7 PERFORMANCE CRITERIA**

#### **7.1 Doing Business with the National Capital Area**

The document “Doing Business with the National Capital Area” provides information on standards for preparation of documents and deliverables that can apply to all project objectives. This document must be used in conjunction with the Project Brief, as the two documents are complementary. The Project Brief describes project-specific requirements while this document deals with information common to all projects. In case of a conflict between the two documents, the requirements of the Project Brief override this document.

#### **7.2 Heritage Conservation**

##### **7.2.1 Authorities with Jurisdiction**

The WMB was evaluated with significant values by FHBRO in all three major theme areas: historic associations, architecture and environment. The implications of this designation are defined in the *Treasury Board Policy on the Management of Real Property* (<http://www.tbs-sct.gc.ca/rpm-gbi/doc/gmrp-ggbi/gmrp-ggbi06-eng.asp#a6.6.5>), and as such reviews of intervention will need to be requested from FHBRO. For some aspects of the project, formal reviews of intervention will need to be presented to Federal Heritage Buildings Committee (FHBC). The A&E Consultant will be provided with the Preliminary Conservation Strategy for the project to be further developed and finalised in the Conservation Approach. The conservation approach should be developed in accordance with the *Standards and Guidelines for Conservation of Historic Places in*

*Canada*, which will help guide the design process. FHBC bases its reviews of proposed interventions on the conservation approach set out in this document.

The National Capital Act makes the National Capital Commission (NCC) responsible for coordinating and approving projects related to federal lands and buildings in Canada's Capital Region.

The Government of Canada has established a legal and policy framework for the protection of heritage buildings, sites and moveable heritage assets in its care. In addition to the TB Policy on Management of Real Property the following documents affect how salvaged items are to be assessed and managed:

*Treasury Board Policy on the Management of Materiel* (<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?section=text&id=12062>)

*Guide to the Management of Movable Heritage Assets* (<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13872&section=text>)

*Standards and Guidelines for Conservation of Historic Places in Canada* (<http://www.pc.gc.ca/progs/rc/p-crhp/standards.aspx>)

#### **7.2.2 Heritage Character Statement**

The Heritage Character Statement is available on the Directory of Federal Heritage Designations website: [http://www.pc.gc.ca/apps/dfhd/page\\_fhbrogeng.aspx?id=3821](http://www.pc.gc.ca/apps/dfhd/page_fhbrogeng.aspx?id=3821).

#### **7.2.3 Conservation Guidelines**

Heritage Conservation Guidelines have been developed for the WMB. The Conservation Guidelines are to assist PWGSC in stewardship of this Classified building (site, building exterior and building interior). The Guidelines provide an understanding of the character-defining elements of the complex and are to be a guide for the development of future interventions. The guidelines seek to guide and mitigate the impact of potential changes to the building's character-defining architectural elements.

#### **7.2.3 Preliminary Conservation Strategy**

The Preliminary Conservation Strategy includes annotated floor plans by floor indicating recommended treatment for different finishes and features. The report also provides general guidelines for retention of heritage elements in situ; dismantling and storage; removal / disposal with in-kind replacement; and removal / disposal with compatible materials. This document has not been reviewed with FHBRO.

### **7.3 Cost**

The definitions of Classes of Construction Estimates used by PWGSC are incorporated into the document, "Doing Business with the National Capital Area (NCA)." In addition, the costing activities and deliverables are described throughout the Required Services section.

The cost control objective will be achieved through the following:

- A rigorous cost management system in place to both monitor and report on cost,
- Formal costing submissions for the design and construction documents, in accordance with all Required Services sections and at all stages of Contract

Document production,

- Redesign work to be undertaken to maintain the construction cost budget when required,
- Determination of appropriate contingencies,
- Iterative and continuous design analysis and adaptation to maintain cost objective in collaboration with the PWGSC's Cost Consultant,
- Strong and disciplined change control system,
- Strong communications,
- Authorities in place for approvals, and
- Management of risk fund.

#### 7.4 Schedule

Time management activities are described in the document, "Doing Business with the National Capital Area (NCA)." In addition, the Time management activities and deliverables are described throughout the Required Services section.

#### 7.5 Environmental Control

Minimum temperatures are to be maintained in order to protect the heritage fabric. The following guidelines are to be followed:

- .1 Ensure that temperature and humidity in sensitive heritage spaces are controlled to minimize fluctuations.
- .2 Ensure that air temperature and relative humidity requirements below are met throughout work:
  - At Inner face of building envelope:
    - Minimum temperature: 15°C. Maximum temperature: 20°C
    - The building doesn't have a humidification system, and the building envelope was not designed for humidification; however, ideally, a minimum relative humidity in winter conditions should be 20% RH and a maximum in the summer should be 60% RH.
- .3 PWGSC may install digital thermometers/hygrometers in sensitive heritage spaces and on the inner face of the building envelope

#### 7.6 Health & Safety of Construction Site

In general, the health and safety of the construction site is governed by:

- Canada Labour Code (<http://www.labour.gc.ca/eng/resources/laws/index.shtml>)
- Ontario Occupational Health & Safety Act (<http://www.labour.gov.on.ca/english/hs/>)

Fire protection during construction shall be governed by:

Treasury Board Fire Protection Standard ( <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=17316&section=text> )

HRSDC FC 301: Standard for Construction Operations

Field Code Changed

([http://www.hrsdc.gc.ca/eng/labour/fire\\_protection/policies\\_standards/commissioner/301/page00.shtml](http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/301/page00.shtml)),

HRSDC FC 302: Standard for Welding and Cutting

([http://www.hrsdc.gc.ca/eng/labour/fire\\_protection/policies\\_standards/commissioner/302/page00.shtml](http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/302/page00.shtml)), and

National Fire Code and other applicable standards, regulations and Acts.

Fully coordinated and continuous follow-up for implementation compliance and further site issues of this particular aspect of temporary work cannot be understated. The provision of this work will be critical to the successful completion of the project. The EC must take a leading and proactive role in this matter throughout the project.

## **7.7 Environmental / Sustainable Development**

### **7.7.1 LEED/Green Globes**

The Project provides the opportunity to incorporate innovative, sustainable and environmentally responsive design into the rehabilitation. While PWGSC policy requires that rehabilitation projects of Crown-owned buildings meet, at a minimum, Leadership in Energy and Environmental Design (LEED) Silver, 3 Green Globes Design for New Buildings and Retrofits or equivalent standard, this requirement does not apply to the Asset Integrity Project, but will be for the future major rehabilitation project. All efforts should nevertheless be made to integrate strategies that result in a project design with minimal environmental impact and a reduced ecological footprint.

Sustainable design principles focussing on waste and materials management, environmental protection, and energy efficiency must be addressed throughout the Project. Specifically, strategies should address the following throughout the project:

- a. Energy efficiency and conservation,
- b. Pollution prevention
- c. Recycle and reuse
- d. Waste management
- e. Using and preservation of durable building material and assemblies;
- f. Using building products with recycled content where feasible;
- g. Environmentally friendly maintenance procedures and products (e.g. low Volatile Organic Compounds (VOC)).

As well as the *Treasury Board Policy on Management of Real Property* other guidance documentation outlining sustainable design principles to be included for federal real property projects include:

- *Environmentally Responsible Construction and Demolition Handbook* (<http://www.tpsgc-pwgsc.gc.ca/biens-property/gd-env-cnstrctn/index-eng.html>) and
- *Green Office at a Glance Handbook* (<http://www.tpsgc-pwgsc.gc.ca/biens-property/env/page-1-eng.html>)
- *PWGSC Real Property Sustainability Framework (v 2015)*



- *PWGSC Green Building Implementation Guide.*  
[http://www.gclopedia.gc.ca/wiki/Strategic\\_framework\\_guidance\\_general](http://www.gclopedia.gc.ca/wiki/Strategic_framework_guidance_general)

### **7.7.2 Solid Waste Management**

This project requires a non-hazardous solid waste management program which must be implemented for construction and renovation. Creating the program will be the responsibility of the EC. The EC must coordinate all requirements and the scope of the demolition program with the A&E Consultant, and prepare the Waste Audit and Waste Reduction Work plan, which are elements of the non-hazardous solid waste management program. The A&E Consultant shall review a draft of the Waste Audit and Waste Reduction Work plan prior to being finalized and confirm in writing that scope of the Waste Audit is reflective of the planned construction work.

The Construction, Renovation, and Demolition (CRD) Non-hazardous Solid Waste Management Protocol to which Real Property Services (RPS) is bound, provides directions on the undertaking of non-hazardous solid waste management actions for CRD projects. The protocol is designed to meet the requirements of federal and provincial policies and the objectives of the RPS Sustainable Development Strategy (SDS) as these relate to non-hazardous solid waste generated in CRD projects.

CRD waste should not include any hazardous materials (i.e. waste generated from asbestos, mould, lead abatements, PCB ballasts, fuels, other chemicals). Therefore a clear distinction is required between CRD waste and hazardous waste.

## **PD 8 ENVIRONMENTAL CONSULTANT SERVICES**

The EC team for this project must be capable of providing the following integrated services:

### **8.1 Engineering and Specialty Services:**

The EC and personnel identified in the Project Brief submission, includes all sub-consultants and specialists. Expertise and relevant experience requirements provided by the EC include the following:

- Environmental Engineer
- Certified Industrial Hygienist
- Solid Waste Specialist

### **8.2 Project Control Services:**

- Cost Planning, Estimating and Control (PQS)

## **DESCRIPTION OF SERVICES**

### **PA 1 PROJECT ADMINISTRATION**

#### **INTENT**

The following administrative requirements apply during all phases of project delivery.

#### **1.1 Departmental Representative (DR)**

The PWGSC Senior Project Manager is the Departmental Representative (DR) and is directly concerned with the project, and is responsible for its progress and is the liaison between the EC, A&E Consultant, and the other Project Team stakeholders. PWGSC administers the project and exercises continuing control over the EC's work during all phases of the project. Unless directed otherwise by the PWGSC DR, the EC is to obtain, or cause to be obtained, all federal, municipal and other governmental or regulatory requirements and approvals necessary for the project.

#### **1.2 Lines of Communication**

All correspondence from the EC shall be distributed as directed by the PWGSC DR. The EC shall develop a correspondence protocol to be approved by the PWGSC DR and incorporated into the project.

All communications must carry the contract name/number, PWGSC project title and PWGSC Consultant contract project number and a date in a non-ambiguous format (i.e. 01/09/02 is ambiguous and is not acceptable). Automatic date fields shall not be used except when preceded by the text "Printed on."

#### **1.3 Media**

The EC shall not respond to any requests for project related information or questions from the media. Such inquiries must be directed to the PWGSC DR.

The EC shall ensure that no staff (including sub-consultants or specialist) grants interviews with the media unless requested to do so by the PWGSC DR. All contacts by reporters or others, requesting information about the project, shall be referred to the PWGSC DR immediately, without response to those requesting the information.

#### **1.4 Confidentiality of Information**

The EC and any person contracted or employed by the EC shall not discuss issues relating to the project specifically including, but not limited to building layout, design, security provisions, except as they relate to the direct provision of services related to this contract.

#### **1.5 General Project Deliverables**

Where deliverables and submissions include summaries, reports, drawings, plans, specifications and schedules, three (3) hard copies shall be provided along with three (3) soft copies in native electronic format and PDF format, unless otherwise specified.

Electronic format shall mean:

**Deliverable**

Written reports and studies:

Spreadsheets and budgets:

Presentations:

Schedules:

Change management, daily logs, etc.

Drawings:

Specifications:

Web (Internet)

**Acceptable PWGSC Format**

MS Word

MS Excel

MS PowerPoint and/or MS Visio

Microsoft Project/ Primavera

TBD

AutoCAD

NMS, in MS Word format

Adobe PDF, HTML, Macromedia Flash, etc.

Note: All drawings shall be generated and distributed in the format using layering and file transfer protocols as prescribed in 'Doing Business with NCA and PWGSC National CADD Standard (<http://www.tpsgc-pwgsc.gc.ca/biens-property/cdao-cadd/index-eng.html> ). The electronic deliverables shall be provided according to standards listed in "Doing Business with NCA."

### 1.6 Acceptance of Deliverables

Acceptances indicate that, based on a general review of material for specific issues, the material is considered to comply with governmental and departmental objectives and practices, and that overall project objectives should be satisfied. The PWGSC DR, PWGSC Environmental Services, PWGSC Heritage Conservation Directorate (HCD) and other Quality Assurance team members, as well as Authorities Having Jurisdiction, will review the EC's work product and will provide review comments. The EC shall respond formally in writing to all comments until all points are resolved.

PWGSC reserves the right to reject undesirable or unsatisfactory work; the EC must obtain the PWGSC DR's acceptance during each of the project stages before proceeding to the next stage.

No acceptance or approval by PWGSC, whether expressed or implied shall be deemed to relieve the EC of professional or technical responsibility. Neither does acceptance of an estimate by PWGSC in any way abrogate the EC's responsibility to not exceed the approved construction budget throughout the life of the project, or the requirement to redesign should the lowest acceptable bid differ significantly from the approved construction budget.

### 1.7 Coordination

The EC shall:

- a) Throughout all phases of the project, assume responsibility for completely coordinating the work products, including coordination with the A&E Consultant
- b) Ensure clear, accurate and ongoing communication of design, construction budget, and scheduling issues (including changes) as they relate to the responsibilities of EC from initial base building reviews to post construction reports,

- c) Provide input for the PWGSC DR's risk management plan,
- d) Co-ordinate quality assurance process ensuring submissions are complete and signed-off by the designated senior reviewer, and
- e) Ensure adequate and timely Site inspection Services and related reporting and
- f) Attend all required meetings.

## 1.8 Meetings

This Project will require Project Team meetings. The EC will attend Project meetings bi-weekly throughout the design and abatement contract administration phases, along with PWGSC representatives and A&E Consultant. The required attendance of EC personnel will vary depending on the nature of the meetings and will be determined by the PWGSC DR in consultation with the EC in advance. Meetings will be held in the National Capital Area, generally in the offices of PWGSC.

The meetings will be chaired by the PWGSC DR or nominated delegate. The EC shall attend meetings, record all issues and decisions where they are leading the meeting or as directed by PWGSC. Unless advised otherwise, the EC will prepare and distribute minutes of all EC lead meetings within 48 hours of the meeting.

## 1.9 Project Response Time

It is a requirement of this project that the key personnel of the EC, sub consultant and specialist firms be personally available to attend meeting or respond to inquiries within ½ day.

## 1.10 Submissions, Reviews and Approvals

### 1.10.1 Authorities Having Jurisdiction

Although the federal government does not formally recognize jurisdiction at other levels of government, voluntary compliance with the requirement of these other Authorities is required unless otherwise directed by the PWGSC DR. In areas of conflict concerning provincial requirements, federal authority prevails. Codes, regulations, by laws and decisions of authorities having jurisdiction shall be observed. In cases of overlap the most stringent will apply, as determined with the DR.

PWGSC will voluntarily comply with the applicable Ontario Construction Health and Safety Acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations.

Authority	Jurisdiction
Ontario Ministry of Labour	Employment Standards Construction Safety Designated Substance Management Workers Compensation

Ontario Ministry of the Environment	Environmental Protection Act: 3R Regulations Building Discharges into the air, water and ground Disposal of Designated Substances including Asbestos
Ontario Ministry of Consumer and Commercial Relations – TSSA	Construction Hoists, Elevators, Escalators and Dumb, Waiters, Pressure vessels
City of Ottawa	Planning and Design Submissions for Information Building, Demolition and Plumbing Permits and Inspection Fire Safety, Equipment and access for fire-fighting equipment Ottawa Built Heritage Advisory Committee, Planning Committee and City Council Occupancy Permit
Electrical Safety Authority (ESA)	Electrical Permits and Inspection

The Consultant will, with the assistance of the PWGSC DR, identify any other Authorities Having Jurisdiction and endeavor to ensure that all design work meets or exceeds all codes, regulations and standards of these other Authorities Having Jurisdiction.

#### 1.10.2 Municipal Building Permit and Other Permits

On behalf of PWGSC, the Consultant will apply for building permits from the City of Ottawa, by supplying the supporting documentation for permit application. Payment of the permit shall be the responsibility of the General Contractor. The Consultant shall participate in any negotiations and assist in resolving related issues prior to tender. Submissions will begin at the end of Design Development and will be followed by a final submission at 99% tender documents. Additional submissions/presentations may be required if requested by the City.

If required, the General Contractor will apply for interim and final Occupancy Permits and coordinate the resolution of all outstanding issues relating to obtaining the permit. Municipal authorities will have access to the site as required and will provide reporting of their findings. The Consultant shall address and respond to all issues raised by Municipal officers.

#### 1.11 Project Approvals

The project has funding to proceed with project planning and design for the EC services. After the Design Development Stage is complete, the EC will proceed with preparation of

construction documents and PWGSC will request separate funding to proceed with construction prior to calling for construction tenders.

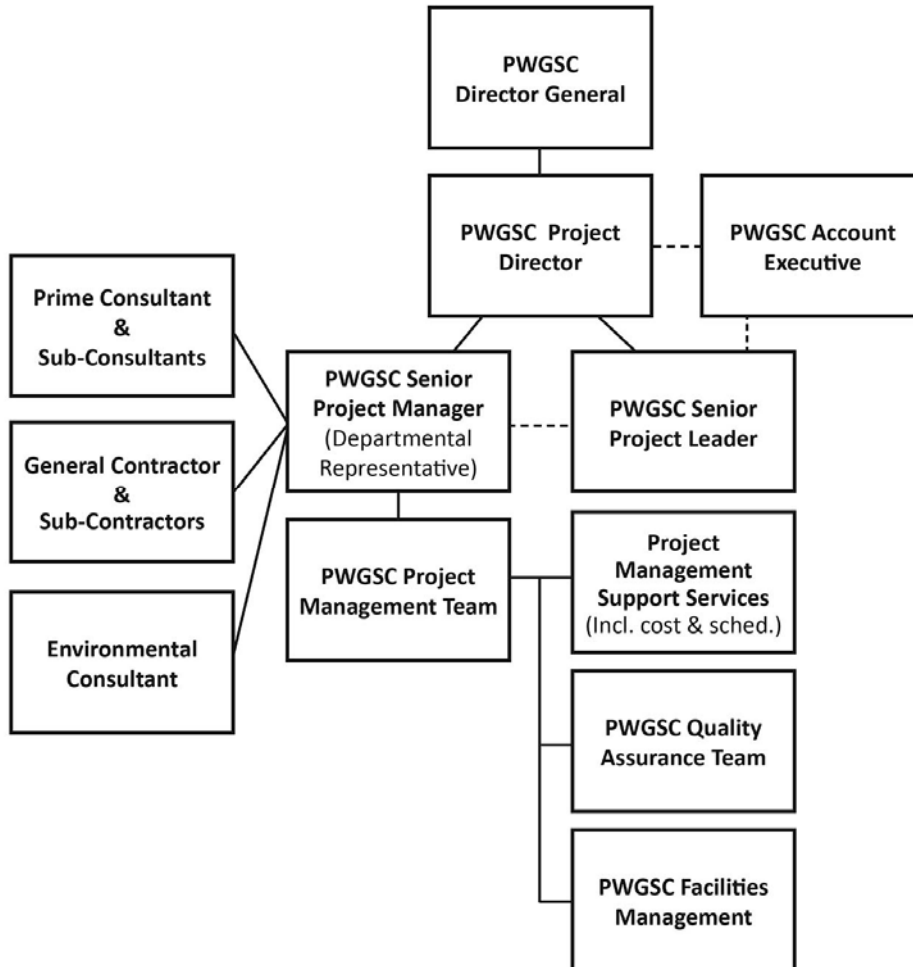
### **1.12 Official Languages**

This project requires some services in both official languages. The EC should be able to provide bilingual (English and French) services orally and in writing, as and when required. These services must include, but not be limited to presentations, interviews, and meetings. Refer to the section RS 10 Bilingual Documents of this Request for Proposal document for additional details related to bilingual deliverables.

## **PA 2 Project Team Organization**

This project is to be managed and implemented in a collaborative manner. All members of the Project Team are required to work cooperatively at every stage of the design and construction process in order to assure the creation of a successful and meaningful end result. Under the leadership of the PWGSC DR, all team members are responsible for establishing and maintaining a professional and cordial relationship.

The Project Team refers to the key representatives, involved in coordinating and delivering this project. The PWGSC Departmental Representative leads the Project Team, with membership representing those responsible for project implementation. The following chart identifies the organizational relationships. Authorities Having Jurisdiction are not indicated. Solid lines indicate functional reporting relationships. Dotted lines indicate project communication relationships.



## REQUIRED SERVICES

### General Requirements

The EC shall deliver integrated and coordinated professional services in accordance with the requirements set forth in this Request for Proposals. All services must be provided in accordance with the requirements and standards identified in *Doing Business with NCA* in Appendix D..

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## **RS 1 PRE-DESIGN STAGE**

### **1.1 Intent**

To assess existing conditions and background information, including identifying any gaps in information.

Coordinate with the A&E Consultant.

### **1.2 Activities**

#### **Scope and Activities:**

- Attend start-up and project meetings
- Analyze the project requirements/program
- Visit the building and site to verify all documentation
- Analyse existing reports and other background documentation; identify any gaps that should be addressed.
- Confirm that all necessary pre-design documentation required for this Project is available and confirm that the information is still current and up-to-date. Notify the DR of any missing and /or out-of-date reports
- Verify the cost plan/budget to confirm that the costs are realistic and achievable
- Verify the proposed project schedule to confirm that all milestone dates are achievable
- Describe and report upon the environmental project risks, mitigation measures, assumptions with stakeholder advice and endorsement;
- Outline quality management process for the EC team to ensure Comprehensive, coordinated consultant services;

### **1.3 Deliverables**

Submit to the DR a work plan for the Services to be provided for the duration of this Contract. Revise as required by the DR. Resubmit for acceptance.

The work plan will consolidate the Scope and Activities identified above and will be utilized as the benchmark project control document to monitor progress of the project. The work plan will be used as a basis for monthly reporting of progress and will require amendments to reflect changes in Project parameters from time-to-time.

Key aspects to be included in the work plan are to be submitted in a Pre-Design Report, including the following:

- Executive Summary (to provide a précis of the Pre-Design Report, including written identification of the problems, conflicts or other perceived information/clarifying assumptions for the acknowledgment of the Departmental Representative and outline any recommendations requiring PWGSC approval)
- Any gaps in documentation and site information
- Include, at a minimum, review and analysis of: abatement and demolition, previous exploratory work, and potential additional work

- Heritage protection measures
- Time, cost and risk analysis

### **1.3.1 Assessment of Mechanical and Electrical Systems**

Existing as-found drawings are limited to architectural only. The A&E Consultant is to utilize existing construction drawings as well as information obtained on-site to prepare as-found drawings for mechanical and electrical. The EC is to work with A&E Consultant to identify any additional components that may need abatement, and recommend any additional exploratory openings needed.

### **1.3.2 Time Cost and Risk Analysis**

Analysis is to include:

- Confirmed or adjusted project cost and time plans
- Review of milestone dates, critical path and project schedule logic
- Milestone dates and project schedule logic, including verification that all milestone dates are achievable and logic is practical
- Detailed WBS for all aspects of the project pertaining to the EC activities and deliverables,
- Project Risks including the identification of the problems, conflicts or absence of information; probability of occurrence and impact as well as recommended mitigation measures

### **1.4 Rebuttal to PWGSC Quality Assurance Report**

Rebuttal to PWGSC Quality Assurance Report, aspects to be included, at a minimum:

- Review and analysis of comments provided by the PWGSC Departmental Representative, and
- Written response to all comments provided by the above until the comments are resolved. Provide a response document with the previous submission comments at each submission and a final copy of response document.

## **RS 2 SCHEMATIC DESIGN**

### **2.1 Intent**

To translate the project requirements into space parameters. To develop implementation strategies and analyze them against priorities and program objectives previously identified. Out of this process, a complete implementation strategy is to be recommended to proceed to Design Development. This deliverable will become the Project Scope of Services and will be utilized throughout the project to guide the delivery.

Coordinate with the A&E Consultant.

### **2.2 Activities**

Scope and activities to include:

- Attend project meetings; record and distribute minutes
- Develop the concept design for the abatement work in close coordination with the demolition work being planned by the A&E Consultant
- Provide recommendations for additional exploratory investigation if required, in coordination with the A&E Consultant.
- Provide input to the A&E Consultant for their preparation of the initial implementation strategies for selective demolition, including heritage protection as well as any temporary building systems required
- Analyze the work described in the concept design with regard to the project goals including risk, cost and schedule
- Provide risks for incorporation into the draft risk plan being prepared by the A&E Consultant and participate in a workshop to identify and mitigate risks, including identifying project risks and recommend mitigation measures

### **2.3 Deliverables**

Provide the Schematic Design Report, including the following:

- Executive Summary (to provide a précis of the Schematic Design Report, including written identification of the problems, conflicts or other perceived information/clarifying assumptions for the acknowledgment of the Departmental Representative and outline any recommendations requiring PWGSC approval)
- Provide concept Drawings and written description of the scope of abatement planned, to be coordinated with the A&E Consultant
- Provide recommendations for additional exploratory openings, including a review of mechanical-electrical as-found drawings prepared by A&E Consultant
- Time, Cost and Risk Analysis, including the Project Schedule and Class C cost estimate
- Quality management process

### **2.4 Details**

#### **2.4.1 Initial Implementation Strategy**

The Initial Implementation Strategy is to include consideration for all building systems and scope of work, including the following:

- Identify extent of abatement locations as well as of any hazardous materials that will remain and coordinate with the A&E Consultant in their preparation of the Initial Conservation Approach

#### **2.4.2 Exploratory Openings**

- In consultation with the A&E Consultant, confirm any additional exploratory openings or destructive testing requirements needed in order to accurately incorporate existing conditions into the demolition and abatement construction documents when they are developed.
- Prepare construction documents for abatement of additional exploratory openings, coordinating with the A&E Consultant; include locations of previous and additional exploratory openings on scalable floor plans
- Provide the services described in RS8 Environmental Monitoring Services

#### **2.4.3 Time, Cost and Risk Analysis**

Analysis is to include:

- Confirmed or adjusted project cost and time plans
- Class “C” cost estimate
- Review of milestone dates, critical path and project schedule logic
- Project Risks including the identification of the problems, Conflicts or absence of information; probability of occurrence and impact as well as recommend mitigation measures

#### **2.5 Rebuttal to PWGSC Quality Assurance Report**

Rebuttal to PWGSC Quality Assurance Report, aspects to be included, at a minimum:

- Review and analysis of comments provided by the PWGSC Departmental Representative, and
- Written response to all comments provided by the above until the comments are resolved. Provide a response document with the previous submission comments at each submission and a final copy of response document.

## **RS3 DESIGN DEVELOPMENT**

### **3.1 Intent**

The EC must obtain written authorization from the PWGSC DR before proceeding with Design Development. The Design Development documents produced at this stage will be used to obtain funding approval from Treasury Board. The Design Development documents consist of drawings and other documents to describe the scope (including the full resolution of all major components), quality and cost of the project in sufficient detail to facilitate a high quality Class B/substantive, design approvals, confirmation of code compliance, detailed planning of construction and project approval. Developed designs are to be computer drawn.

While the design development is progressing, the EC shall coordinate the abatement and selective demolition work with the A&E Consultant

### **3.2 Activities**

- Attend project meetings, record and distribute meeting minutes,
- Establish and maintain a change control procedure relating to scope change from the approved Schematic Design;
- Provide input to the A&E Consultant for them to finalize the Conservation Approach and further develop the Heritage Materials Database
- Provide input to the A&E Consultant for them to finalize implementation strategies for all disciplines, including heritage conservation, structural, mechanical, electrical, life safety, and control systems
- Prepare and coordinate construction documents for abatement required for the additional exploratory openings construction documents prepared by with the A&E Consultant
- Develop abatement drawings for the project in sufficient detail and coordinate with the A&E Consultant with demolition
- Prepare final implementation strategy for abatement, coordinated with other work by A&E Consultant
- Prepare the waste management program and coordinate with the A&E Consultant
- Develop outline specifications
- Provide time, cost and risk analysis, including cost estimate and updated schedule
- Monitor quality management process

### **3.3 Deliverables**

Prepare and submit an integrated Design Development drawings package and report for review and approval by the PWGSC DR. Revise as required by the PWGSC DR. Resubmit for acceptance. The report will further develop the Schematic Design, consolidate the Scope and Activities identified above, and will be utilized as the benchmark project control document to monitor progress of the project.

The Design Development Reports shall include all services associated with the project in written narrative and drawings to a level of detail necessary to make all design decisions

and to substantively estimate the cost of the project. Aspects to be included, at a minimum, are:

- Executive Summary (The executive summary is intended to provide a précis of the Design Development Report and outline any recommendations requiring PWGSC approval)
- Outcomes from meetings with Authorities Having Jurisdiction.
- Construction documents for abatement of additional exploratory openings
- Drawings for abatement work, coordinated with selective demolition and heritage protection documents prepared by the A&E Consultant
- Final implementation strategy for abatement, coordinated with the work of the A&E Consultant
- Outline Specification
- Time, Cost and Risk Analysis, including Class “B” Cost estimate and the identification of the problems, conflicts or absence of information
- Updated quality management process

Provide all deliverables in both official languages, so they can be used for engaging the Prime Consultant for the future major rehabilitation.

### **3.4 Details**

#### **3.4.1 Final Implementation Strategy**

Detailed implementation strategy to include as a minimum:

- Written description of the final implementation strategy for abatement and solid waste management
- Detail additional exploratory openings or destructive testing requirements in order to accurately incorporate existing conditions into the abatement Construction Documents, including locations of previous and additional exploratory openings marked on scalable floor plans
- Outline Consolidated Waste Inventory and Reduction Plan, and
- Coordinate and incorporate the abatement scope into the demolition and heritage conservation scope from the A&E Consultant

#### **3.4.2 Construction, Renovation and Demolition (CRD) Waste Audit Report**

The Waste Audit Report should include the following:

- Objectives
- Background Information including Federal Policy, Provincial Regulations,
- A table with the list and amounts of all materials anticipated to be generated from the demolition including volume and weights, percentages and totals
- Relevant comments
- Landfill diversion opportunities

#### **3.4.3 Time, Cost and Risk Analysis:**

The EC shall provide, at a minimum:

- Preliminary construction schedule including long-term delivery items,

- Class 'B'/Substantive Estimate,
- Data requirements to support submissions for funding approval.
- Update risk Assessment,

### **3.5 Rebuttal to PWGSC Quality Assurance Report:**

Aspects to be included, at a minimum, are:

- Review and analysis of comments provided by the Project Team
- Prepare and submit a written response to all comments provided by the above.

## **RS 4 CONSTRUCTION DOCUMENTS**

The EC shall obtain written authorization from the Departmental Representative before proceeding with the services related to Construction Documents. PWGSC has obtained approval for proceeding with Construction Documents while funding approval for construction is obtained, but there may still be a time period before this approval is granted.

The EC shall continue to coordinate the abatement of hazardous substances and selective demolition work with the A&E Consultant.

### **4.1 Intent**

The objective of this stage is to further develop the documents to prepare coordinated drawings and specifications setting forth, in detail, the requirements for the tender, construction and pre-tender cost estimate of the project.

The construction documents shall be tendered by PWGSC to general contractor Proponents.

### **4.2 General**

It is expected to make construction documents for quality assurance reviews by PWGSC: 66 % submission, 99 % submission and pre-tender submission, as follows:

- Updated detailed Division One specification with all implementation constraints included,
- 66% indicates substantial technical development of the project - well advanced architectural and engineering plans, elevations, sections, details, schedules and specifications, possible submission to local authorities for pre-permit review; Include updated cost estimate,
- 99% is the submission of complete Construction Documents for submission to local authorities for permit purposes; Include updated cost estimate, and
- Pre-tender submission is the 100% complete construction documents sets, ready for tender call, addressing all issues identified in the PWGSC reviews.

Sign and seal one set of 100 % complete construction documents for building permit application

Services provided must be in accordance with the requirements identified in *Doing Business with NCA* in Appendix D. Prepare Construction Documents in accordance with the specification brief.

### **4.3 Activities**

#### **4.3.1 General**

- Obtain written approval from PWGSC DR to proceed to Construction Document Stage;
- Confirm format of drawings and specifications in accordance with PWGSC standards.



- Attend bi-weekly meetings, record and distribute meeting minutes of EC-led meetings, including construction site meetings.
- Ensure coordination and integration of all submissions between all disciplines prior to submission and submit letter confirming the co-ordination procedure used and testify that a detailed co-ordination of documents has been completed.
- Provide written response to all review comments, and coordinate with completion of Construction Documents.
- Submit and obtain approval on plans and specifications required by Authorities Having Jurisdiction before tender call.
- Participate in a risk management workshop
- Provide environmental engineer stamped CAD drawings according to PWGSC format and coordinate with A&E Consultant, along with hazardous material abatement specifications, waste diversion plan, waste inventory and coordinate with construction documents prepared by A&E Consultant
- Provide time, cost and risk analysis, including cost estimate and updated schedule
- Update quality management process

#### **4.3.2 Technical and Production Meetings**

- Attend Technical and Production Meetings.
- Construction Document submissions shall be presented at technical and project meetings for review and discussion with the PWGSC Project Team.
- Representatives from PWGSC Operations staff will be present as arranged by the Departmental Representative.
- EC must ensure that members of its specialist sub-consultant disciplines attend technical and project meetings as required or relevant to the agenda.
- The EC shall arrange for all necessary data, progress prints, etc. to be available to all attendees a minimum of two working days prior to the meetings.

#### **4.3.3 Conservation:**

In collaboration with all relevant disciplines,

- Coordinate with A&E Consultant in order to apply the conservation approach to specific spaces and elements

#### **4.3.4 Regulatory:**

In collaboration and coordination with all relevant disciplines prepare:

- Regulatory section for abatement for Construction Document Report.

#### **4.3.5 Site Design:**

- Provide input on plans for contractor access, lane closures, and locations of underground services/tunnels prepared by the A&E Consultant.

#### **4.3.6 Building Design**

- Provide abatement plans and coordinate with A&E Consultant for preparation of plans for the demolition work, including for repairs to affected character-defining materials and assemblies, temporary removals and salvaging.

- Optimize sustainable design opportunities and strategies that consider the following objectives; Energy efficiency and conservation for services related to the procurement and repair or modification of mechanical, electrical and life safety systems,
  - Prioritize reuse and recycling of waste materials
  - Use and preservation of durable building material and assemblies;
  - Use of building products with recycled content where feasible;
  - Use of ecologically responsible products (e.g. only low Volatile Organic Compounds (VOC) for all new materials).
- 
- The specifications shall be project specific and include sustainable procurement strategies, where possible.

#### **4.3.7 Waste Reduction Workplan (WRW)**

The WRW identifies strategies to optimize diversion through reduction, reuse and recycling of materials and comply with applicable regulations, based on information acquired from the Waste Audit. The WRW should include at a minimum the following elements:

- Applicable regulations;
- Specific goals for waste reduction, identification of existing barriers and development of strategies to overcome them. It is PWGSC best practice to divert a minimum of 75% of non-hazardous solid waste materials from Real Property projects;
- Destination of materials identified;
- Deconstruction/disassembly techniques and schedules;
- Methods to collect, separate, and reduce generated wastes;
- Location of waste bins on-site;
- Security of on-site stock piles and waste bins;
- Protection of personnel, sub-contractors;
- Clear labeling of storage areas;
- Training plan for contractor and sub-contractors;
- Methods to track and report results reliably;
- Details on materials handling and removal procedures;
- Recycler and reclaimer requirements;
- Quantities of materials to be salvaged for reuse or recycled and materials sent to landfill;
- Requirements for monitoring on-site waste management activities. The WRW should be structured to prioritize actions and follow 3R's hierarchy, with Reduction as first priority, followed by Reuse, then Recycle. The Consultant is to post the WRW or summary where workers at site are able to review content. The Consultant is to monitor and report on waste reduction by documenting total volume (in tonnes) and cost of actual waste removed from project.

#### **4.3.8 Cost/Revenue Analysis Workplan (CRAW)**

As part of the WRW, the Consultant shall prepare a CRAW which includes the following:

- Cost of current waste management practices;
- Implementation cost of waste diversion program;
- Savings and benefits resulting from waste diversion program.

#### **4.3.9 Waste Source Separation Program (WSSP)**

As part of the WRW, the Consultant shall prepare a WSSP which includes the following:

- Methodology and planned on-site activities for separation of reusable and recyclable materials from waste intended for landfill;
- Identification of sufficient locations that will be made available for sorting, collection, handling and storage of anticipated quantities of reusable and recyclable materials (including drawings);
- Training of GC and subcontractors in handling and separation of materials for reuse and/or recycling;
- Clearly and securely label containers to identify types/conditions of materials accepted and assist GC and subcontractors to ensure materials are separated accordingly;
- Monitor on-site waste management activities by conducting periodic site inspections to verify: state of signage, contamination levels, bin locations and condition, personnel participation, use of waste tracking forms and collection of waybills, receipts and invoices.

The Consultant shall submit drafts of the WRW at 66% and 99% stages for review prior to being finalized. The A&E Consultant will confirm in writing to the EC that the scope of the plan is reflective of the planned construction work.

#### **4.3.10 Time, Cost and Risk Analysis:**

In collaboration with the entire Project Team, prepare updated Construction Cost Plan, schedules and outline risk implications and mitigation strategies:

- Submit updated cost estimates and updated Construction Cost Plan for abatement with each Construction Document submission;
- Prepare a final Class 'A' estimate for abatement, in pure elemental and in trade formats. Resolve all outstanding cost issues. Reissue the revised/updated estimate to the PWGSC DR in both elemental and trade formats;

### **4.4 Deliverables**

#### **4.4.1 Interim Submissions (66%, 99%):**

Deliverables are similar at both the 66% and 99% stages, therefore only those from the final submission stage are shown. Completeness of the project development must reflect the stage of a submission.

- Complete set of fully coordinated specifications and working drawings for abatement, coordinated with that of A&E Consultant

- Drawings should clearly distinguish existing elements to be removed, and new or added elements.
- Coordinate with the overarching plan for heritage protection prepared by A&E Consultant, to ensure repairs to affected character-defining elements are incorporated throughout.
- Time, cost and risk analysis
- Updated Quality Management Process

#### **4.4.2 Final Submission (100%):**

This submission incorporates all revisions required by the review of the 99% submission. Provide the following:

- Complete set of originals of the working drawings professionally stamped, signed, and sealed drawings for abatement, coordinated with that of A&E Consultant.
- Complete set of original specifications for abatement, coordinated with that of A&E Consultant.
- Class “A” estimate. The Class “A” cost estimate shall be submitted in elemental and trade cost breakdown format. Cost estimates shall have summary plus full back-up showing items of work, quantities, unit prices, and amounts.
- Waste management audit and waste reduction work plan, coordinated with A&E Consultant
- As a safeguard against loss or damage to the originals, retain a complete set of drawings in reproducible form and one copy of specification.
- Electronic true copy of the final submission drawings and specifications on one or multiple CD-ROM in accordance with section PA 1.5 - General Project Deliverables.
- Electronic version of addenda, where needed.
- Time, cost and risk analysis

#### **4.4.3 Inspection Authorities Submission**

Submit and obtain approval on plans and specifications required by Inspection Authorities before proceeding with the activities described in section RS 4 - Tender Call, Bid Evaluation, and Construction Contract Award.

## **RS 5 TENDER CALL, BID EVALUATION & CONSTRUCTION CONTRACT AWARD**

### **5.1 Intent**

The object of this stage is to solicit and evaluate bids from qualified construction trade contractors / equipment suppliers, and to award the contracts according to the requirements as outlined in the GC's contract.

### **5.2 Scope and Activities**

#### **5.2.1 Construction Tendering**

The EC is required to provide support and advice to the Departmental Representative during construction tender stage activities to procure a General Contractor. The EC may be asked to review and advise on some procurement issues.

The EC is required to participate in pre-qualification activities as may be required, including preparing criteria for specialized trade contractors, if required.

For the tendering period, the EC is required to:

- Attend tender briefing meeting.
- Provide the Departmental Representative with written information and clarifications in response to questions from construction bidders, and as required for bidders to fully interpret the Construction Documents.
- Prepare tender addenda as required, either based on questions arising from bidders briefing meetings, for issue to all bidders following review and approval by the Departmental Representative.
- Assist the Departmental Representative in evaluating pre-qualification submissions from specialized construction sub-trades, if required.
- Examine and report on any project impacts which may arise due to the issue of tender addenda with respect to construction cost estimates, risk allowances, and to construction schedule.
- Incorporate all addenda for each tender issuance into a consolidated construction document labeled "Issued for construction".

### **5.3 Deliverables**

The EC shall provide:

- Originals of drawings and specifications, or Statements of Work, as well as electronic copies of drawings and specifications signed and stamped with professional seal.
- Addenda as required.
- Changes to the tender documents, if re-tendering is necessary.
- Summary of addenda based on questions arising out of the Bidders Briefing Meeting and requests for clarification.
- Summary of cost and schedule impact created by issue of tender documents and addenda.
- Updated construction cost plan in both elemental and trade format.

- Revised Construction Documents to bring the cost within the stipulated limits and/or for re-tendering purposes.
- Report upon risk implications and mitigation strategies.
- “Issued for construction” construction documents for each tender issuance.

## **RS 6 CONSTRUCTION AND CONTRACT ADMINISTRATION**

The object of this stage is to implement the project in accordance with the Contract Documents and to direct and monitor all necessary or requested changes to the scope of work during construction, commissioning and closeout. The EC shall work in the spirit of information sharing with PWGSC. All material specifications, mixes and test results shall be turned over to PWGSC for future maintenance purposes.

### **6.1 Scope and Activities**

The EC scope and activities shall be in collaboration with its relevant specialized sub-consultant disciplines and shall, as a minimum, include the following:

#### **6.1.1 General**

- The EC Services are to be continuously and effectively managed. Revise and update the EC work plan. Submit to the DR for approval. The updated work plan will be the control document to manage and monitor EC Services throughout the demolition, abatement and construction. If necessary, revise the work plan during the construction
- Coordinate all services of specialists and sub-consultants disciplines as applicable, and advise and consult with the Departmental Representative.
- Follow the communications protocol prepared by the A&E Consultant in consultation with the Departmental Representative.
- Update sustainability documentation to reflect changes which occur during construction.

#### **6.1.2 Site Visits**

- The EC shall conduct daily inspection services and air monitoring as and when required during abatement work. Ensure compliance with construction documents
- The EC as applicable shall conduct weekly construction inspection services. Ensure compliance with contract documents.
- Establish a written understanding with contractor as to what stages or aspect of the work are to be inspected prior to being covered up.
- Assess quality of work and identify in writing to the Departmental Representative all defects and deficiencies observed at time of such inspections.
- Inspect materials and prefabricated assemblies and components at their source or assembly plant, as necessary for the progress of the project.
- Any directions, clarifications or deficiency list shall be issued in writing to PWGSC.

#### **6.1.3 Construction Meetings**

- Immediately after award, participate in a construction briefing meeting with the successful General Contractor, the A&E Consultant, and the Departmental Representative. Ensure participation from all pertinent specialist sub-consultant disciplines.

- The General Contractor will prepare minutes of construction briefing meetings and distribute copies to all participants and to other persons agreed upon with the Departmental Representative.
- Participate in weekly construction progress meetings, commencing with the construction briefing meeting. The meetings will be chaired by the General Contractor, and will typically include the main sub-contractors, the A&E Consultant, and its specialist sub-consultant disciplines, the Departmental Representative, and various other PWGSC representatives. The Departmental Representative may invite other project Stakeholders to attend any of these meetings as necessary. Minutes of these meetings will be prepared and distributed by the General Contractor.

#### **6.1.4 On-Site Interference Meetings and Heritage Protection**

- The EC, including the A&E Consultant, at or near the commencement of construction, to resolve construction interference problems. The EC shall issue Site Instructions and, if required, Contemplated Change Notices, to the A&E Consultant, which will then be forwarded to the DR to immediately resolve interference issues and facilitate the construction process.
- Participate in a minimum of twenty (20) construction progress meetings

#### **6.1.5 Project Schedule**

- Monitor the GC's construction schedule, take necessary steps to ensure the schedule is maintained, and submit a detailed report to the Departmental Representative concerning activities that are at risk of being delayed. Submit correspondence to the Departmental Representative demonstrating that a detailed review of the schedule has been completed.
- Keep accurate records of causes of construction delays on site, as well as the actual amount of construction personnel and equipment down time resulting from delays, and submit to Departmental Representative as they occur.
- Make every effort to assist the GC in avoiding delays.

#### **6.1.6 Construction Documents**

- Carry out the review of the work at intervals appropriate to determine if the work is in conformity with the Construction Documents. Submit deficiency reports on a bi-weekly basis.
- Interpret the requirements of the Construction Documents and make findings as to the performance by the sub-contractors.
- Meet with the GC and construction sub-trades as required to clarify potential ambiguities in the Construction Documents. RFI's identified as critical to the project schedule shall be responded to promptly and with priority.
- Render interpretation in writing and graphic form as may be required with reasonable promptness on the written request of either the Departmental Representative. A maximum of five (5) working days will be tolerated for EC response to GC Request for Information.
- Render written findings within a reasonable time on all claims, disputes and other matters in question between PWGSC and the GC relating to the execution or performance of the work or the interpretation of the Construction Documents.



- Render interpretation and findings consistent with the intent of and reasonably inferable from the Construction Documents
- Provide two (2) updates to the construction document issuance “Issued for construction (plans and specifications)” incorporate all change orders in outline. Timing of each update shall be determined in coordination with DR and GC.

#### **6.1.7 Inspection**

- Assess quality of work, and compliance with the CRD Waste Management Plan and identify in writing to the GC and to the DR the degree of compliance and all defects and deficiencies observed at time of such inspections. Any directions, clarifications or deficiency list shall be issued in writing to PWGSC, the A&E Consultant, and the GC as part of the report.
- Reject work which does not conform to the Construction Documents and whenever in the EC’s opinion, it is necessary or advisable for the implementation of the intent of the Construction Documents, require special inspection or testing of work, whether or not such work has been fabricated installed or completed.
- Order minor adjustments in the construction work which are consistent with the intent of the Construction Documents, when these do not involve an adjustment in the construction contract prices and or an extension of the construction contract durations.

#### **6.1.8 Supplemental Instructions**

- Furnish supplemental instructions to the sub-contractors with reasonable promptness or in accordance with a schedule for such instructions agreed to by the Departmental Representative, the A&E Consultant, and GC.
- Keep the Departmental Representative informed of the progress and quality of the work and report any defects or deficiencies in the work observed during the course of the site review.
- Determine the amounts owing to the GC based on the progress of the work and certify payments to the GC.

#### **6.1.9 Change Control**

- The EC does not have authority to change the work or the price of any Contract(s).
- Changes which affect cost or design concept must be approved by the Departmental Representative.
- Upon the Departmental Representative’s approval, obtain quotations from the GC in detail. Review prices and promptly forward recommendations to the Departmental Representative.
- All changes, including those not affecting the cost of the project, must be covered by Change Orders.
- Utilize an existing PWGSC change control process and software for scope change, site condition change, client driven change and errors/omissions. Identify and track type of change as one of: Site Condition, Client requested, Design Condition on each submitted CCN. Departmental Representative may disagree with the chosen type of change and has the option to advise that a change may be a different type than that chosen by the EC.

- Advise the Departmental Representative of all potential changes to scope for the duration of the implementation.
- Provide project delay analysis where appropriate.
- Utilizing the established change control process and software, prepare Contemplated Change Notices (CCN) and Change Orders (CO), verify quantities, and provide justification for approval and signature by the Departmental Representative in accordance with the Contract Documents. An estimate for each submitted CCN shall be provided by the EC
- Review the Contractor's submittals within five (5) working days; prioritize review and processing to ensure the project schedule is maintained.
- Provide cost planning and estimating advice during construction.
- Assess/analyze time impact of all proposed changes, advise the Departmental Representative of impact analysis.
- Indicate any changes or material/equipment substitutions on Record Documents.
- When CCN is to be issued based on unit prices, keep accurate account of the work, recording dimensions and quantities.

#### **6.1.10 Testing**

- Provide the DR with specified and recommended list of tests to be undertaken, to ensure successful Completion of the work
- Review all test reports and take necessary action with the GC when work fails to comply with contract
- Immediately notify the DR and GC when tests fail to meet Project requirements and when corrective work will affect schedule

#### **6.1.11 Training**

The EC shall be responsible for communicating and training the project stakeholders including the A&E Consultant, GC and subcontractors about the Waste Reduction Workplan and informing them of their obligations.

#### **6.1.12 Waste Diversion Report (WDR)**

The EC shall prepare a Waste Diversion Report (WDR) which will includes the following:

- a. Project Overview and Basic Site Description
- b. Waste Audit methodology
- c. Identify final diversion results and measure success against goals of WRW;
- d. Compare final quantities/percentages diverted with initial projections in WA and WRW and explain variances;
- e. Include supporting documentation, waybills and tracking forms, and description of issues, resolutions and lessons learned.
- f. Recommendations

#### **6.1.13 Project Close Out**

- Prepare recommendations to the A&E Consultant for the Certificates of Substantial Performance and Certificates of Completion.

- During the twelve (12) month warranty period, investigate all defects and alleged defects and issue instructions to the DR. Participate in two (2) formal building walkthroughs and provide reports for each visit.
- Conduct a final warranty review with all applicable EC members, PWGSC representatives and sub-contractors. Issue instructions to the sub-contractors as may be required. Follow up as required. Complete a narrative report and submit to the Departmental Representative.

#### **6.1.14 General Contractor's Progress Claims**

- Each month the General Contractor submits a progress claim (request for progress payment) for work and materials as per the requirements of the Construction Documents. Review progress claim request in detail. Submit to the A&E Consultant, copying Departmental Representative, all concerns with the claimed levels of completion. Discuss with GC and come to agreement on any items of disagreement.
- Verify at each progress payment that sub-contractors have accurately recorded information on the site as-built set of Contract Documents.
- The claims are made by completing the following forms where applicable:
  - Request for Progress Payment – PWGSC Form 1792.
  - Cost Breakdown
  - Statutory Declaration Progress Claim – PWGSC Form 2835.
- Review and sign designated forms and promptly forward claims to the Departmental Representative for processing.
- Submit with each progress claim:
  - Updated schedule of the progress of the work.
  - Detailed photographs of the progress of the work.

#### **6.1.15 Materials On Site**

- The GC and its sub-contractors may claim for payment of material on site but not yet incorporated in work.
- Material must be stored in a secure place designated by the Departmental Representative.
- The EC shall check and verify a detailed list of materials with supplier's invoice showing price of each item which must accompany claim.
- Items shall be listed separately on progress payment forms after the break-down list and total.
- As material is incorporated in the work, the cost of this material must be added to the appropriate breakdown list and removed from the material list.

#### **6.1.16 Acceptance Board**

- Inform the Departmental Representative once satisfied that the project is substantially completed. The EC, A&E Consultant, General Contractor, and major sub-trades representatives shall form part of the Project Acceptance Board and attend all meetings as organized by the Departmental Representative.

#### **6.1.17 Interim Inspection**

- The Acceptance Board shall inspect the work and list all unacceptable and incomplete work on a designated form. The Board shall accept work from the sub-contractors subject to the deficiencies and uncompleted work listed and priced.
- The sub-contractors shall provide a work plan of actions and schedule to correct all deficiencies.
- The EC shall coordinate with the Departmental Representative and the A&E Consultant to monitor, inspect and report on the progress of deficiencies corrections.

#### **6.1.18 Substantial Completion**

- The Departmental Representative will formally issue the official Certificate of Substantial Performance forms (formerly called Interim Certificate of Completion) to the General Contractor.
- Prior to the issuance of the Certificate of Substantial Performance, the EC is to review and verify as-built marked-up drawings from the GC, that will include all remaining walls, temporary systems, and locations of all hazardous substances that have not been abated. Provide a copy to the Departmental Representative.
- Payment requires completion and signing, by the parties concerned, of the following documents:
  - Certificate of Substantial Performance – PWGSC form 1796.
  - Statutory Declaration – PWGSC form 2835.
  - Other submittals required to support the progress claim are:
  - Workman's Compensation Clearance Certificate.
  - Contractor's Invoice.
  - Cost Breakdown
  - Certificates or written approval from AHJs such as HRSDC, City of Ottawa, Electrical Safety Authority, TSSA, etc.
- Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to the Departmental Representative for processing.

#### **6.1.19 Building Occupation**

- PWGSC may occupy the building after the date of acceptance of the building by the Acceptance Board. The acceptance date is normally that of the Certificate of Substantial Performance issued to the sub-contractors. As of the acceptance date, the sub-contractors may cancel the Contract Insurance, and PWGSC assumes responsibility for:
  - Security of the work(s).
  - Fuel and utility charges.
  - Proper operation and use of equipment installed in the project.
  - General maintenance and cleaning of the work(s).
  - Maintenance of the site (except any landscaping maintenance covered by the contract).

#### **6.1.20 Take-over**

- The official take-over of the project or parts of the project, from the GC is established by the PWGSC Project Team. The date of the Certificate of Substantial

Performance signifies commencement of the twelve-month warranty period for work completed on the date of each certificate in accordance with the General Conditions of the Contract.

- Provide to the Departmental Representative with original copy of sub-contractor warranties for all materials and work covered by an extended warranty or guarantee, according to the conditions of the specifications. Verify their completeness and extent of coverage.

#### **6.1.21 Statement of Operations Manual**

- Statement of Operations Manual: Finalize and prepare four (4) copies to be submitted to Departmental Representative prior to interim acceptance.

#### **6.1.22 Keys**

- Ensure that all keys and safe combinations are delivered to the Departmental Representative.

#### **6.1.23 Final Inspection**

- Inform the Departmental Representative when satisfied that all work under the contract has been completed, including the deficiency items at all agreed completion points.
- PWGSC reconvenes the Acceptance Board which makes a final inspection of the project. If everything is satisfactory the Board issues interim and final acceptance of the project to the sub-contractors.

#### **6.1.24 Final Completion**

- The official take-over of the project is established by the official Certificate of Completion forms (formerly called Final Certificate of Completion). The Departmental Representative will formally issue these forms to the General Contractor.
- The final payment requires completion and signing, by the parties concerned, of the following documents:  
Certificate of Completion (Final) – PWGSC form 1797.
- Statutory Declaration - PWGSC form 2835.
- Submission of all project submittals including but not limited to reports and as-built drawings

Other submittals required to support the progress claim are:

- Contractor's Invoice
- Cost Breakdown
- Workmen's Compensation Clearance Certificate
- ESA Certificate
- TSSA Certificates
- Hydro Certificate(s).
- Any other applicable certificates (i.e. Building Permits, Occupancy Permits, Notice of Project Closure, etc.)

Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to the Departmental Representative for processing.

#### **6.1.25 Updated Designated Substance Survey Report**

- After completion of the AD work, prepare and submit an updated Designated Substance Survey Report to detail the location of all remaining known and unknown hazardous substances within, under or adjacent to the building. Unknown areas will include areas of the building where demolition work was not undertaken. The updated report will be used by PWGSC for ongoing building management after the Completion of the Project.
- Include as an annex to the updated Designated Substance Survey Report appropriate hazardous materials abatement and handling specifications.

#### **6.1.3 As-Built and Record Drawings and Specifications**

- Provide the A&E Consultant with drawings showing all remaining building elements and remaining locations of hazardous substances that were not abated, as well as the locations of all previous and current exploratory openings
- Check and verify sub-contractor as-built records for completeness and accuracy.
- Obtain from the sub-contractors all modification/updates to as-built records from Substantial Completion to Final Completion.
- Show deviations in construction from the original Contract Documents including changes resulting from Change Orders or from Site Instructions.
- 
- Produce CADD Record Drawings and electronic specifications, incorporating final as-built information.
- Submit a comprehensive consolidated final package of Record Drawings and As-Built Specifications within twelve (12) weeks of issuance of the Certificate of Completion.

#### **6.2 Deliverables**

The EC shall prepare and consolidate the following information:

- Updated work plan for all Services to be provided during the demolition, abatement and construction phases of the Project.
- Written reports from site visits including persons involved.
- Monthly written reports on the progress of the work and cost of construction, including updated as-built records.
- Provide cost and scheduling reports with updates at the end of each month.
- Provide additional detail drawings when required to clarify, interpret or supplement the Construction Documents.
- Written Site Instructions.
- Update the “Issued for Construction” plans and specifications with change orders
- Certificates of Substantial Performance and Certificates of Completion including respective reviews and acceptances.
- Record drawings and Record specifications based on the As-Built marked-up drawings obtained from sub-contractors.

- Waste Diversion Report (WDR) indicating the destination (reuse, recycling or landfill) and quantity (by weight or volume) of all waste materials removed from site
- Summary report confirming final sustainable development strategies and actions that were implemented to address the principles and objectives outlined in the Sustainable Development Program (PD 5.2) and to improve the environmental performance of the Project
- Warranty deficiency list.
- Final Warranty Review and Report.
- Post-Construction Evaluation.

## **RS 7 Estimating and Cost Planning**

Cost estimates are required as prescribed in *Doing Business with NCA*. Delivering this project on time and within the approved construction budget is a high priority. The purpose of cost planning and cost control is to assist in the accomplishment of project cost objectives. It is a continuous and interactive process involving planning, action, measurement, evaluation and revision.

A fully qualified cost estimating, cost planning and cost control team, referred to herein as the Cost Specialist, with a demonstrated record of successful cost management on large construction projects, with a strong heritage component, is required. At least one member of the cost sub-consultant must be a Professional Quantity Surveyor. This Cost Specialist shall be conversant with all aspects of construction cost estimating during the design stages, including the use of Elemental Cost Analysis, Risk Analysis, Life Cycle Costing and Value Engineering / Management techniques.

The EC shall maintain the project designs within the approved construction budget, including any necessary re-design, at no additional cost to PWGSC. The Cost Specialist along with the EC shall co-operate and coordinate all cost information with the DR and respond to questions with written responses.

### **7.1 Scope of Services**

The Cost Specialist shall provide an interactive and continuous cost consulting service including advising, monitoring and reporting, from the commencement of project through to construction completion, including the preparation of complete estimates and cash flows for all construction trades, escalation, inflation and contingency costs. Cost estimates shall have a summary plus full elemental backup showing item of work, quantities, unit prices and amounts. Cost estimates shall also include life cycle cost and life cycle analysis to ensure sustainable design objectives are met.

The Cost Specialist shall attend project meetings throughout the project and be prepared to present and defend the estimates directly to the PWGSC DR. Participation in working sessions with PWGSC DR to reconcile elemental cost differences within each estimate will be required.

### **7.2 Services – Basic Activities**

The Cost Specialist shall work with and advise the EC and PWGSC of the costs of individual building components and costs of various design systems. Estimates will be prepared in detail and summarized using an Elemental Analysis format as issued by the Canadian Institute of Quantity Surveyors, differentiating base building, fit up and BCC costs as directed by PWGSC.

#### **7.2.1 Progress Monitoring and Reporting**

Progress monitoring and reporting is to include the required Elemental Summaries, supported by all backup work sheets clearly detailing the process used in preparing the



estimate. The detailed work sheets shall be the prime basis on which estimates shall be reviewed by PWGSC. Cost comparisons and cost reports identifying and explaining the differences between each succeeding cost estimate and their cost effect are also required. In addition, the Cost Specialist shall fully coordinate all estimates with schedules, providing detailed cash flows, inclusive of construction, and EC fees as separate broken down categories.

A typical Milestone Cost Estimate Report will contain:

- Project Estimate Summary,
- Elemental Estimate,
- Estimate Backup Detail
- Basis for escalation, inflation and contingency calculations,
- Detailed measurement and pricing,
- Narrative:
  - Outline description of estimate basis,
  - Description of information obtained and used in the estimate including the date received,
  - Listing of notable inclusions,
  - Listing of notable exclusions; listing of items / issues carrying significant risk,
  - Listing of assumptions,
  - Notes on past and forecast Cost Specialist activity,
- Estimate Reconciliation:
  - With last submission,
  - Variance to approved project budget, and
  - Any other relevant information.

### **Exception Reporting**

The Cost Specialist is to provide continuous cost monitoring, timely identification and early warning of all changes that affect or potentially affect the estimated construction costs of the project. Reports shall be submitted to PWGSC DR in the event of identified exceptions that could have significant impact on the project budget.

### **Time Lag**

Recognizing that estimates must follow the design decisions they represent, such estimates may lag. The Milestone Cost Estimate Reports may follow the milestone, by no more than two (2) weeks unless otherwise determined by the PWGSC DR.

### **Use of all available information**

The Cost Specialist is responsible for providing a complete cost estimate even though the information provided during the concept, design development and early working drawing stages is incomplete. Where requirements are not firmly defined, the Cost Specialist shall make assumptions, confirm them with the EC and the A&E Consultant and either lists them as assumptions, or have them incorporated in outline specifications.

## **7.2.2 Techniques**

The Cost Specialist is required to be familiar with and make use of a broad range of cost techniques, especially the following.

**Risk Analysis:** All construction estimates (except the final pre-tender estimate) shall include and identify design, estimating, inflation escalation and currency exchange allowances as are deemed necessary in light of the current information available. The Cost Specialist shall provide a satisfactory explanation of the level and / or amount of all such sums included within any estimate.

**Scheduling:** The Cost Specialist shall assist the Time Specialist by providing building quantities, building systems information and other quantifiable parameters deemed appropriate to the calculation of a reasoned project time schedule. The Time Specialist shall assist the Cost Specialist by maintaining an up-to-date schedule of all design activities along with an agreed bidding and construction schedule that will be incorporated by the Cost Specialist within the estimates on a timely basis.

**Life Cycle Costing:** In advising the EC of the cost information for alternative materials, methods and systems, it is necessary that the Cost Specialist uses all available information to ensure that a complete cost picture is made available, upon which design and construction decisions will be made. It is expected that lifecycle costing shall be required on key building components such as major mechanical, roofing, windows, etc.

**Continuing Estimate Process:** A process of continual adjustment of previous estimates may be used in place of total re measurement at each milestone reporting point. This is acceptable, provided that, at each monthly reporting point, a full and up-to-date Elemental Cost Summary is provided, and that at each milestone reporting point this Elemental Cost Summary is supported by complete, detailed, stand alone back-up/support documentation, as previously described.

**Project Research:** The Cost Specialist shall visit the proposed construction site to become familiar with site conditions, site access, etc., analyze local labour and material supply conditions, local bidding practices and competition to establish pricing levels. A written report detailing each reconnaissance activity is required.

**Value Engineering / Management** PWGSC will have a Value Engineering Study to be undertaken at identified stages of the project design that will be lead by PMSS. The EC shall answer questions and provide information called for by the Value Management Team. The Cost Specialist shall assist the Value Management Team by providing copies of the latest cost estimate and any additional cost information that may be required.

### 7.3 Services - Project Stages and Specific Activities

- **Schematic Design**

Review, confirm understanding, report on, and update the approved construction budget (existing Class 'C' estimate). Do not proceed until the PWGSC DR has accepted the revised Class 'C' estimates. The revised Class "C" estimate shall become the Construction Cost Plan.

- **Design Development**

Milestone reports to be issued, to ensure the project is maintaining the budget requirements. Upon completion of design development, prepare a Class 'B'

estimate representing the increased level of design detail available. The reports shall be prepared using detailed (elemental) costs i.e. measured quantities with minimal allowances or lump sums. Upon final acceptance, the Class 'B' estimate shall become the Construction Cost Plan.

- **Construction Documents**

During the production of the Construction Documents, a process of continuous cost control that is progressively more detailed is required. With each submission of Construction Documents (66%, 99% and 100%), Updated Class B as well as Class A cost estimates shall demonstrate compliance with the construction cost plan. Non-compliance with the construction cost plan will require revisions to the Construction Documents at no cost to PWGSC.

- **Pre-Tender**

Upon completion of the Construction Documents, a pre-tender Class 'A' cost estimate shall be prepared using 100% measured quantities. Provide a trade breakdown of the pre-tender estimate for construction for use in reviewing the submitted bids and the General Contractor's estimate breakdown.

- **Tender Stage**

**Tender Award** During the tender period, examine and report on any cost impact created by the issue of Tender Documents/addenda. Incorporate the results of such addenda review into the final pre-tender estimate (both elemental and trade formats) after the close of addenda but prior to receipt of bids.

**Bid Review and Analysis** Assist the PWGSC DR, as required, by analyzing and reconciling any differences between the pre-tender estimates and the submitted bids.

**Negotiation** Should it be necessary to negotiate with any bidder prior to awarding a construction contract, the Cost Specialist shall provide cost information as needed and participate in the negotiations if requested.

**Reconciliation** After contract award of trade contracts, the Cost Specialist, if necessary, will reconcile both the elemental and trade estimates, in detail, with the agreed contract sum. The EC will use these reconciled estimates during the construction phase of the project.

- **Construction Stage**

During construction, the Cost Specialist shall provide the DR with cost advice in relation to the following:

- Evaluation of change orders.
- Evaluation of claims.
- Evaluation of work completed.
- Evaluation of cash flow.

- **Post-Construction Stage**

Provide a debriefing report on all cost related matters, including from a cost perspective, lessons learned.

#### **7.4 Responsibilities to PWGSC**

The Departmental Representative will review all aspects of the Cost Specialist's work on a continuing basis to determine the validity and completeness of the information provided. In the event the Departmental Representative may identify areas of concern including errors and omissions as well as areas of inadequate detail or areas that require further explanation, the Cost Specialist shall re-examine the estimates provided and make such revisions as are subsequently agreed to be necessary and/or provide ample acceptable evidence that such corrections or amendments are unnecessary.

##### **No Action Abrogates EC's Responsibilities**

No acceptance or approval by the Departmental Representative, whether expressed or implied shall be deemed to relieve the Cost Specialist, or the EC, of professional or technical responsibility for the estimates and cost reports.

Neither does acceptance of an estimate by the Departmental Representative in any way abrogate the EC's responsibility to maintain the agreed Construction Cost Plan throughout the life of the project, or the requirement to redesign should the lowest acceptable bid differ significantly from the agreed Construction Cost Plan, unless and until the Departmental Representative indicates otherwise in writing.

## **RS8 ENVIRONMENTAL MONITORING SERVICES**

### **8.1 Intent:**

This section must be read in the context and mandate of the EC contained within all other parts of this Project Brief. While most of these Services will be provided during the implementation of RS6 – Construction Contract Administration, the requisite planning to provide the Services of this section must be considered from the start of the Project.

Provide Services for collection and analysis of bulk sampling of materials, air monitoring, and specialized advisory Services as it relates to the designated substances within the building. These Services will be required on an ongoing daily basis during demolition work and abatement of hazardous materials.

### **8.2 Scope and Activities:**

The EC shall:

- Plan and coordinate all Type 1, Type 2 and Type 3 asbestos and lead based paint removal operations. Prepare appropriate work plans and contract specification for the implementation of hazardous materials work.
- Visit the Site to confirm details of all designated substance related work with DR.
- Participate in pre-contamination kick-off meetings with the GC to verbally communicate intent and scope of abatement activities.
- Provide full time on-Site presence for the duration of the abatement work. The work shall be carried out in accordance with the specifications and drawings.
- Provide real time air monitoring and assessment Services during removal of hazardous materials.
- Report air-monitoring results within 24-hours of sample collection, with results posted on site in accordance with prescribed regulations. Advise the DR and GC in writing immediately any conditions where the air monitoring indicates a health risk to unprotected building occupants or construction personnel.
- Provide daily site visit reports for all site visits. Reports shall include detailed project information, work-site observations, working in asbestos and hazardous substances work areas, and all contract information necessary for document tracking.
- Provide hazardous material bulk sampling and analyses for materials discovered during the implementation of hazardous materials work.
- Attend construction meetings to discuss sampling or monitoring issues as required throughout the geotechnical and abatement work.

### **8.3 Testing**

Requests for testing shall be pre-authorized by the DR only, except for emergency response situations noted below.

#### **8.3.1 Transmission Electron Microscopy**

Perform Transmission Electron Microscopy (TEM) verification analysis of any Phase Contrast Microscopy (PCM) air sample taken during the implementation of the work. A TEM verification analysis would normally occur due to occupant-worker concern or due to elevated airborne fiber concentrations noted during PCM sampling.

### **8.3.2 Polarized Light Microscopy**

Perform Polarized Light Microscopy (PLM) to determine if building materials contain asbestos. Results will be used to determine appropriate abatement methodologies. The requirement for PLM analysis may arise if previously non-sampled materials are revealed during demolition/abatement activities.

### **6.3.3 Emergency Situations**

Provide Services for emergency response to the Site. Perform PCM, TEM and or PLM sampling as required. Emergency response situations are related to sudden building systems failures that may require immediate action to save building elements from damage or destruction or to prevent human health and safety risks related to potential contamination. A response protocol must be developed collaboratively by the EC, GC and DR prior to the commencement of demolition or abatement work.

### **8.3.4 Air and Material Sampling**

For all PCM, TEM or PLM air sampling, provide at least two (2) blank field cassettes for laboratory analysis or ten percent (10%) of the total samples taken, whichever is greater. Each day following a Site visit or the collection of air samples, provide a written report that includes all findings. Submit to the DR and GC.

Ensure that an accredited operator analyzes all collected air and material samples. Use calibrated air sampling equipment only. Provide records of regular equipment calibration and proper equipment maintenance. Testing equipment shall remain at the Site. Logbooks for calibrations and calibration of testing equipment shall be provided at the EC's expense.

### **8.3.5 Laboratory Services**

Provide and maintain an on-Site laboratory to perform local testing utilizing standard testing equipment only. Testing which requires specialty equipment shall be performed at off-site laboratories. Turn-around time for off-site testing shall be agreed upon at the beginning of the work based on the most expeditious method to receive test results without impeding the advancement of the Project.

### **8.3.6 Secure Storage Space**

The GC shall provide secure storage space for air sampling equipment and materials on-site at no cost to the EC.

## **8.4 Deliverables**

The EC shall provide:

- a. Work plans and contract specifications for hazardous materials work;
- b. Emergency response protocol for all Project stakeholders;

- c. Equipment calibration reports;
- d. Test results on a daily basis; and
- e. Daily reports.

## **RS 10 BILINGUAL DOCUMENTS**

### **9.1 Scope of Services**

#### **9.1.1 Design Deliverables**

Produce Design Deliverables in accordance with the following language requirements:

- Provide all Design Development Stage deliverables in Canada's two official languages

#### **9.1.2 Construction Documents and Construction Tender Call**

Produce the Construction documents under the Terms of this Contract in Canada's two official languages. Also, prepare bilingual addenda and written responses to tender questions.

### **9.2 Quality Standards**

Ensure that the services and deliverables provided are of a professional standard in both languages when required. Assume professional responsibility for completeness and consistency of translation. Both languages are considered equal in status – neither is considered to be of lesser standing because it is a translation of the other.